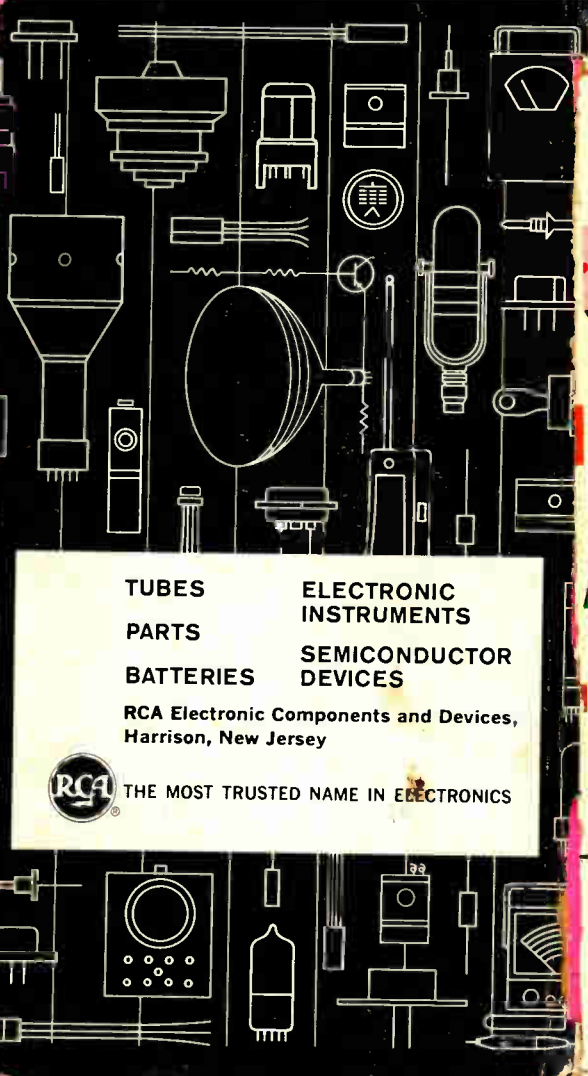

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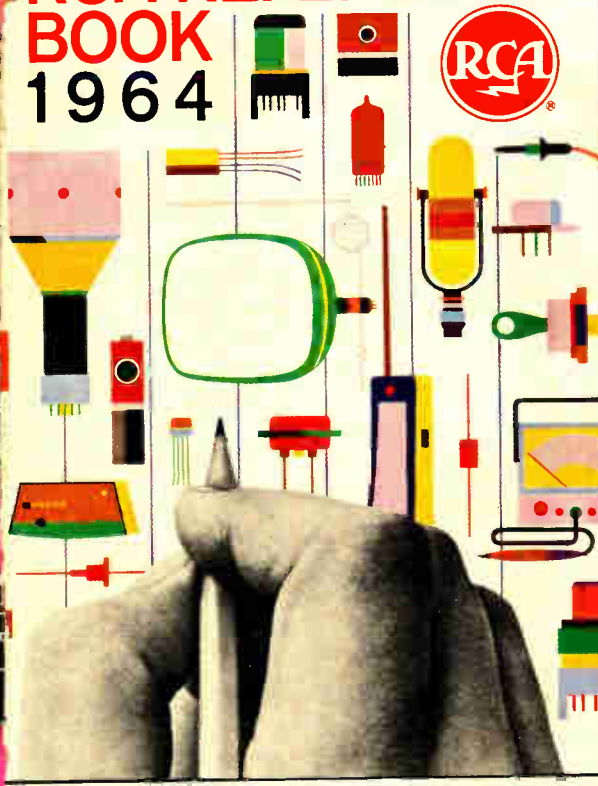

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RCA MAGAZINES

• **RCA RADIO & TELEVISION SERVICE NEWS**—This publication is designed to keep the dealer and service technician informed on the latest television and radio sales and servicing techniques. Read it regularly for interesting articles as well as for helpful hints on new merchandising procedures, new products, and new promotions. Published quarterly. Available free of charge from your RCA Electron Tube Distributor.

• **RCA TUBE TIPS**—This popular newsletter keeps the broadcast engineer up to date on the latest developments in broadcast tubes. It is a timely publication containing valuable application information, technical tips, and new product data. Published quarterly. Sent free of charge to broadcast station personnel by the RCA Electronic Components and Devices Division.

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Ask your RCA Distributor for these publications, or write directly to Commercial Engineering, Radio Corporation of America, Harrison, New Jersey. When ordering from Commercial Engineering, make remittance payable in U.S. dollars to Radio Corporation of America.

NOTE: All prices are optional list prices and apply in the U.S.A. They are subject to change without notice.

ELECTRON TUBES

• **RCA ELECTRON TUBE HANDBOOK**—HB-3 (7⅜" x 5⅝"). Five deluxe 2¼-inch-capacity black binders imprinted in gold. The "bible" of the industry—contains over 5000 pages of loose-leaf data and curves on RCA receiving tubes, transmitting tubes, cathode-ray tubes, picture tubes, photocells, phototubes, camera tubes, ignitrons, vacuum and gas rectifiers, magnetrons, traveling-wave tubes, premium tubes, pencil tubes, and other miscellaneous types for special applications. Available on subscription basis. Price $20.00 including service for first year. Also available with RCA SEMICONDUCTOR PRODUCTS HANDBOOK HB-10 at special combination price of $25.00. Write to Commercial Engineering, RCA, Harrison, N. J., for Descriptive Flyer and Order Form.

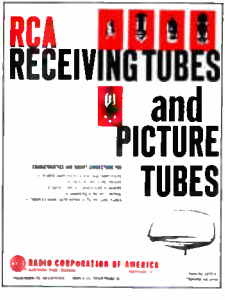
RCA RECEIVING TUBES

Technical Publications

Copies of the publications listed below may be obtained from your RCA Distributor or from Commercial Engineering, Radio Corporation of America, Harrison, N. J.

• **RADIOTRON® DESIGNER'S HANDBOOK** — 4th Edition (8¾" x 5½") — 1500 pages. Comprehensive reference thoroughly covering the design of radio and audio circuits and equipment. Written for the design engineer, student, and experimenter. Contains 1000 illustrations, 2500 references, and cross-referenced index of 7000 entries. Edited by F. Langford-Smith of Amalgamated Wireless Valve Company Pty. Ltd. in Australia. Price $7.00.

• **RCA RECEIVING TUBE MANUAL** — RC-22 (8¼" x 5⅜") — 544 pages. Revised and expanded. Contains technical data on more than 1000 receiving tubes and picture tubes. Features tube theory written for the layman, application information, and circuits section. Features lie-flat binding. Price $1.25.



• **RCA RECEIVING TUBES AND PICTURE TUBES** — 1275K (10⅞" x 8⅜") — 64 pages. New, enlarged, and up-to-date booklet contains classification chart, application guide, characteristics chart, and base and envelope connection diagrams on more than 1050 entertainment receiving tubes and picture tubes. Price 50 cents.

Technical Publications (Cont'd)

• **RCA INTERCHANGEABILITY DIRECTORY OF FOREIGN vs. U.S.A. RECEIVING-TYPE ELECTRON TUBES** — 1CE-197B (10⅞" x 8¾") — 8 pages. Covers approximately 800 foreign tube types used principally in AM and FM radios, TV receivers, and audio amplifiers. Indicates U.S.A. direct replacement type or similar type if available. Price 10 cents.

• **TV SERVICING** — TVS-1030 (10⅞" x 8¾")—48 pages. Contains articles on TV troubleshooting, TV tuner alignment, and TV circuit analysis by RCA's expert in the field of TV servicing and test equipment: John R. Meagher. Price 35 cents.

• **TV SERVICING, SUPPLEMENT** — TVS-1031 (10⅞" x 8¾") — 12-page booklet by John R. Meagher on solving troubleshooting problems in those hard-to-service TV receivers known to service technicians as "tough" sets or "dogs." Price 15 cents.

• **TECHNICAL BULLETINS** — Authorized information on RCA transmitting tubes and other tubes for communications and industry. Be sure to mention tube-type bulletin desired. Single copy on any type free on request.

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RECEIVING TUBE CHART SECTION

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RCA RECEIVING TUBE CHART

Miniature, Metal, GT, and other Receiving Types

Type	Tube Dimensions and Basing Diagram	
	Dim.	B.D.
00-A	K8	4D
D1-A	K8	4D
0Y4	F2	4BU
0Z4	E2	4R
0Z4-G	F2	4R
1A3	A2	5AP
1A4-P	K5	4M
1A5-GT	F6	6X
1A6	K5	6L
1A7-GT	F7	7Z•
1AC5	K1	8CP
1AD2	L5	12DQ
1AD5	K1	8CP
1AX2	B8	9Y
1B3-GT	F20	3C
1B4-P	K5	4M
1B5 25S	K4	6M
1B7-GT	F7	7Z•
1C5-GT	F6	6X
1C6	K5	6L
1C7-G	F24	7Z
1D5-GP	F24	5Y
1D5-GT	F24	5R
1D7-G	F24	7Z
1D8-GT	F6	8AJ
1DN5	A2	6BW
1E5-GP	F24	5Y
1E7-GT	F6	8C
1E8	K1	8CN
1F4	K8	5K
1F5-G	F28	6X
1F6	K5	6W
1F7-G	F24	7AF
1G3-GT/ 1B3-GT	F12	3C
1G4-GT	F6	5S
1G5-G	F28	6X
1G6-GT	F6	7AB
1H4-G	F21	5S
1H5-GT	F7	5Z•
1H6-G	F21	7AA
1J3	F20	3C
1J5-G	F28	6X
1J6-G	F21	7AB
1J6-GT	F12	7AB
1K3	F12	3C
1L6	A2	7DC
1LA4	J2	5AD
1LA6	J2	7AK
1LB4	J2	5AD
1LC5	J2	7AD
1LC6	J2	7AK
1LD5	J2	6AX
1LE3	J2	4AA
1LG5	J2	7AD
1LH4	J2	5AG
1LN5	J2	7AD
1N2	F17	3C
1N2-A	F11	3C
1N5-GT	F7	5Y•
1N6-G	F18	7AM
1P5-GT	F7	5Y•
1Q5-GT	F6	6AF
1R5	A2	7AT
1S4	A2	7AV
1S5	A2	6AU
1T4	A2	6AR
1T5-GT	F6	6X
1T6	K1	8DA
1U4	A2	6AR
1U5	A2	6BW
1V	K4	4G
1V2	B2	9U
1X2-A	B13	9Y
1X2-B	B8	9Y
2A3	K11	4D
2A4-G	F21	5S
2A5	K8	6B
2A6	K5	6G
2A7	K5	7C
2AF4-A•	A2	7DK
2AF4-B•	A1	7DK
2AH2	L5	12DG
2AS2	L6	12EW
2B7	K5	7D
2BN4•	A2	7EG
2BN4-A•	A2	7EG
2CW4	D1	12AQ
2CY5•	A2	7EW
2DS4•	D1	12AQ
2DV4•	D1	12EA
2DZ4•	A1	7DK
2E5	K4	6R
2EN5•	A2	7FL
2ER5	A2	7FP
2FH5•	A2	7FP
2FS5	A2	7GA
2G K5•	A2	7FP
3A2	B5	9DT
3A3	F20	8EZ
3A8-GT•	F14	8AS
3AF4-A•	A1	7DK
3AL5•	A1	6BT
3AT2	L6	12EX
3AU6•	A2	7BK
3AV6•	A2	7BT
3AW3	F12	8EZ
3B2	F38	8GH
3BA6•	A2	7BK
3BC5•	A2	7BD
3BE6•	A2	7CH
3BN4•	A2	7EG
3BN4-A•	A2	7EG
3BN6•	A3	7DF
3BU8•	B4	9FG
3BY6•	A2	7CH
3BZ6•	A2	7CM
3C2•	F22	8FV
3CB6•	A2	7CM
3CE5	A2	7BD

Note: Discontinued types are shown in lightface.

Note: For footnotes, see page 18.

Type	Tube Dimensions and Basing Diagram	
	Dim.	B.D.
3CF6•	A2	7CM
3CS6•	A2	7CH
3CY5•	A2	7EW
3DG4	F25	5DE
3DK6•	A2	7CM
3DT6•	A2	7EN
3DT6-A•	A2	7EN
3DZ4•	A1	7DK
3EA5•	A2	7EW
3EH7	B7	9AQ
3EJ7	B7	9AQ
3ER5	A2	7FP
3FH5	A2	7FP
3GK5•	A2	7FP
3GS8 3BU8•	B4	9LW
3GS8•	B4	9LW
3HA5	A1	7GM
3JC6•	B2	9PM
3JD6•	B2	9PM
3LF4•	J2	6BA
3Q4•	A2	7BA
3Q5-GT•	F6	7AP
3S4•	A2	7BA
3V4•	A2	6BX
4AU6•	A2	7BK
4AV6•	A2	7BT
4BC5•	A2	7BD
4BC8•	B2	9AJ
4BL8	B2	9DC
4BN6•	A3	7DF
4BQ7-A•	B2	9AJ
4BS8•	B2	9AJ
4BU8•	B4	9FG
4BZ6•	A2	7CM
4BZ7•	B2	9AJ
4CB6•	A2	7CM
4CS6•	A2	7CH
4CY5•	A2	7EW
4DE6•	A2	7CM
4DT6•	A2	7EN
4DT6-A•	A2	7EN
4EH7	B7	9AQ
4EJ7	B7	9AQ
4ES8•	B2	9AJ

Type	Tube Dimensions and Basing Diagram	
	Dim.	B.D.
4EW6•	A2	7CM
4GK5•	A2	7FP
4GS8/ 4BU8•	B4	9LW
4GZ5•	A2	7CV
4HM6•	B2	9PM
4HS8•	B4	9FG
4HT6•	B2	9PM
4JC6•	B2	9PM
4JD6•	B2	9PM
5AM8•	B2	9CY
5AN8•	B2	9DA
5AQ5•	A3	7BZ
5AS4	F36	5T†
5AS4-A	F22	5T†
5AS8•	B2	9DS
5AT8•	B2	9DW
5AU4	F30	5T
5AV8•	B2	9DZ
5AW4	F37	5T
5AZ4	J3	5T
5B8•	B2	9EC
5BC3	C7	9QJ
5BE8•	B2	9EG
5BK7-A•	B2	9AJ
5BQ7-A•	B2	9AJ
5BR8•	B2	9FA
5BT8•	B2	9FE
5BW8•	B2	9HK
5CG8•	B2	9GF
5CL8•	B2	9FX
5CL8-A•	B2	9FX
5CM8	B2	9FX
5CQ8•	B2	9GE
5CZ5•	B10	9HN
5DH8•	B2	9EG
5DJ4	F25	8KS
5EA8•	B2	9AE
5EU8•	B2	9JF
5EW6•	A2	7CM
5FG7•	B2	9GF
5FV8•	B2	9FA
5GH8•	B2	9AE
5GM6•	A2	7CM

Type	Tube Dimensions and Basing Diagram	
	Dim.	B.D.
5GX6•	A2	7EN
5J6•	A2	7BF
5KE8•	B2	9DC
5T4	F23	5T
5T8•	B2	9E
5U4-G	F39	5T†
5U4-GB	F25	5T†
5U8•	B2	9AE
5V3	F25	5T
5V3-A	F25	5T
5V4-G	F28	5L†
5V4-GA	F17	5L†
5V6-GT•	F6	7AC
5W4	E4	5T
5W4-GT	F8	5T†
5X4-G	F39	5Q
5X8•	B2	9AK
5Y3-G	F28	5T†
5Y3-GT	F8	5T†
5Y4-G	F28	5Q
5Y4-GA	F25	5Q
5Y4-GT	F8	5Q
5Z3	K11	4C
5Z4	E4	5L
6A3	K11	4D
6A4 LA	K8	5B
6A6	K8	7B
6A7	K5	7C
6A7S	K5	7C
6A8	E3	8A
6A8-G	F24	8A†
6A8-GT	F7	8A
6AB4	A2	5CE
6AB5/6N5	K3	6R
6AB7	E2	8N
6AC5-GT	F6	6Q†
6AC7	E2	8N
6AD6-G	F41	7AG
6AD7-G	F28	8AY
6AE5-GT	F6	6Q†
6AE6-G	F21	7AH
6AE7-GT	F6	7AX
6AF3	B8	9CB
6AF4	A2	7DK
6AF4-A	A1	7DK

Note: For Key to Tube Dimensions, and Basing Diagrams, see pages 19-21.

Type	Tube Dimensions and Basing Diagram	
	Dim.	B.D.
6AF6-G	F1	7AG
6AF11	L2	12DP
6AG5	A2	7BD
6AG7	E4	8Y
6AH4-GT	F6	8EL
6AH6	A2	7BK
6AK5	A1	7BD
6AK6	A2	7BK
6AL3	B12	9CB
6AL5	A1	6BT
6AL7-GT	F6	8CH
6AL11	L2	12BU
6AM4	B1	9BX
6AM8	B2	9CY
6AM8-A•	B2	9CY
6AN4	A1	7DK
6AN8	B2	9DA
6AN8-A•	B2	9DA
6AQ5	A3	7BZ
6AQ5-A•	A3	7BZ
6AQ6	A2	7BT
6AQ7-GT	F6	8CK
6AQ8	B2	9AJ
6AR5	A3	6CC
6AR11	L1	12DM
6AS5	A3	7CV
6AS8	B2	9DS
6AS11	L2	12DP
6AT6	A2	7BT
6AT8	B2	9DW
6AT8-A•	B2	9DW
6AU4-GT	F15	4CG
6AU4-GTA	F15	4CG
6AU5-GT	F6	6CK
6AU6	A2	7BK
6AU6-A•	A2	7BK
6AU7•	B2	9A
6AU8•	B4	9DX
6AU8-A•	B4	9DX
6AV5-GA	F19	6CK
6AV5-GT	F6	6CK
6AV6	A2	7BT
6AW8	B4	9DX
6AW8-A•	B4	9DX
6AX3	L3	12BL
6AX4-GT	F6	4CG
6AX4-GTB	F6	4CG
6AX5-GT	F6	6S
6AX8	B2	9AE
6AY3	C4	9HP
6AZ8	B2	9ED
6B4-G	F39	5S
6B5	K8	6AS
6B6-G	F24	7V†
6B7	K5	7D
6B7S	K5	7D
6B8	E3	8E
6B8-G	F24	8E†
6B10•	L1	12BF
6BA3	C2	9HP
6BA6	A2	7BK
6BA7	B4	8CT
6BA8-A•	B4	9DX
6BA11	L2	12ER
6BC4	B1	9DR
6BC5	A2	7BD
6BC7	B2	9AX
6BC8	B2	9AJ
6BD4	F38	8FU
6BD4-A	F38	8FU
6BD6	A2	7BK
6BE3	L4	12BL
6BE6	A2	7CH
6BF5	A3	7BZ
6BF6	A2	7BT
6BG6-G	F40	5BT
6BG6-GA	F33	5BT
6BH3	C4	9HP
6BH6	A2	7CM
6BH8•	B4	9DX
6BJ6	A2	7CM
6BJ7	B2	9AX
6BJ8•	B4	9ER
6BK4	F34	8GC
6BK5	B4	9BQ
6BK7-A	B2	9AJ
6BK7-B•	B2	9AJ
6BL4	F26	8GB
6BL7-GT	F6	8BD
6BL7-GTA	F6	8BD
6BL8	B2	9DC
6BN4	A2	7EG
6BN4-A	A2	7EG
6BN6	A3	7DF
6BN8•	B4	9ER
6BQ5	B10	9CV
6BQ6-GT	F16	6AM
6BQ6-GTB/ 6CU6	F16	6AM
6BQ7	B2	9AJ
6BQ7-A	B2	9AJ
6BR8	B2	9FA
6BR8-A•	B2	9FA
6BS3	C4	9HP
6BS8	B2	9AJ
6BU8	B4	9FG
6BV8•	B2	9FJ
6BW4	B4	9DJ
6BW8	B2	9HK
6BX7-GT	F6	8BD
6BY5-GA	F17	6CN
6BY6	A2	7CH
6BY8•	B4	9FN
6BZ6	A2	7CM
6BZ7	B2	9AJ
6BZ8	B2	9AJ
6C4	A2	6BG
6C5	E2	6Q
6C5-GT	F7	6Q•
6C6	K9	6F
6C7	K5	7G
6C8-G	F24	8G
6C9	G1	10F
6CA4	B10	9M
6CA5	A3	7CV
6CB5	F36	8GD
6CB5-A	F34	8GD
6CB6	A2	7CM
6CB6-A•	A2	7CM
6CD6-G	F40	5BT
6CD6-GA	F33	5BT
6CE5•	A2	7BD
6CF6	A2	7CM
6CG7•	B4	9AJ

Note: Discontinued types are shown in lightface.

Note: For footnotes, see page 18.

Type	Tube Dimensions and Basing Diagram	
	Dim.	B.D.
6CG8	B2	9GF
6CG8-A•	B2	9GF
6CH8	B2	9FT
6CK4	F9	8JB
6CL6	B4	9BV
6CL8•	B2	9FX
6CL8-A•	B2	9FX
6CM6	B4	9CK
6CM7•	B4	9ES
6CM8•	B2	9FZ
6CN7*•	B2	9EN
6CQ4	F15	4CG
6CQ8•	B2	9GE
6CR6	A2	7EA
6CS6	A2	7CH
6CS7•	B4	9EF
6CU5	A3	7CV
6CU6	F22	6AM
6CU8•	B2	9GM
6CW4	D1	12AQ
6CX8	B4	9DX
6CY5	A2	7EW
6CY7	B4	9EF
6CZ5	B10	9HN
6D6	K9	6F
6D7	K9	7H
6D8-G	F24	8A†
6DA4	F6	4CG
6DB5	B6	9GR
6DC6	A2	7CM
6DC8	B4	9HE
6DE4	F15	4CG
6DE6	A2	7CM
6DE7	B4	9HF
6DG6-GT	F6	7S
6DK6	A2	7CM
6DM4	F15	4CG
6DN6	F33	5BT
6DN7	F4	8BD
6DQ4	F9	4CG
6DQ5	F33	8JC
6DQ6-A	F22	6AM
6DQ6-B	F22	6AM
6DR7	B4	9HF
6DS4	D1	12AQ
6DS5	A3	7BZ
6DT5	B4	9HN
6DT6	A2	7EN
6DT6-A	A2	7EN
6DT8	B2	9DE
6DV4	D1	12EA
6DW4	C4	9HP
6DW5	B10	9CK
6DX8	B4	9HX
6DZ4	A1	7DK
6DZ7	F17	8JP
6E5	K3	6R
6E6	K8	7B
6E7	K9	7H
6EA5	A2	7EW
6EA7	F4	8BD
6EA8•	B2	9AE
6EB8	B2	9DX
6EH5	A3	7CV
6EH7	B7	9AQ
6EH8•	B2	9JG
6EJ7	B7	9AQ
6EM5	B10	9HN
6EM7	F3	8BD
6EQ7	B4	9LQ
6ER5	A2	7FP
6ES5	A2	7FP
6ES8	B2	9AJ
6EU7	B2	9LS
6EU8•	B2	9JF
6EV5	A2	7EW
6EV7	B4	9LP
6EW6	A2	7CM
6EW7	H1	9HF
6EX6•	F33	5BT
6EY6•	F9	7AC
6EZ5	F9	7AC
6EZ8	B2	9KA
6F5	E3	5M
6F5-GT	F6	5M†
6F6	E4	7S
6FG-G	F28	7S†
6F6-GT	F9	7S†
6F7	K5	7E
6F8-G	F24	8G
6FA7	B4	9MR
6FD7	H1	9HF
6FE5	F15	8KB
6FG6	B4	9GA
6FG7•	B2	9GF
6FH5	A2	7FP
6FH8	B2	9KP
6FJ7	L2	12BM
6FM7	L2	12EJ
6FM8	B2	9KR
6FQ5-A	A2	7FP
6FQ7•	B4	9LP
6FS5	A2	7GA
6FV6	A2	7FQ
6FV8•	B2	9FA
6FV8-A•	B2	9FA
6FW5	F17	6CK
6FW8	B2	9AJ
6FY7	L4	12ED
6G11	L2	12BU
6G6-G	F21	7S†
6GC5	H2	9EU
6GE5	L7	12BJ
6GF5	L4	12BJ
6GF7	C1	9QD
6GH8•	B2	9AE
6GJ5	C6	9QK
6GJ7	B14	9QA
6GJ8•	B2	9AE
6GK5	A2	7FP
6GK6	B10	9GK
6GL7	F4	8BD
6GM6	A2	7CM
6GN8•	B4	9DX
6GT5	C5	9NZ
6GU7•	B4	9LP
6GV5	L8	12DR
6GV8	B10	9LY
6GW6•	F22	6AM
6GW6 6DQ6•	F22	6AM
6GX6•	A2	7EN
6GY6•	A2	7EN

Note: For Key to Tube Dimensions, and Basing Diagrams, see pages 19-21.

Type	Tube Dimensions and Basing Diagram	
	Dim.	B.D.
6GY8	B2	9MB
6H6	E1	7Q
6H6-GT	F6	7Q•
6HA5	A1	7GM
6HB6	B10	9NW
6HE5	L4	12EY
6HF5	L9	12FB
6HF8	B4	9DX
6HG8	B2	9MP
6HJ8•	B2	9CY
6HL8•	B2	9AE
6HR6•	A2	7BK
6HS6•	A2	7BK
6HS8	B4	9FG
6HZ6•	A2	7EN
6J5	E2	6Q
6J5-GT	F7	6Q•
6J6	A2	7BF
6J6-A•	A2	7BF
6J7	E3	7R
6J7-G	F24	7R•
6J7-GT	F7	7R•
6J8-G	F24	8H
6JB6	C6	9QL
6JC6	B2	9PM
6JC8•	B2	9PA
6JD6	B2	9PM
6JE6	C8	9QL
6JH6	A2	7CM
6JH8	B4	9DP
6JK8	B2	9AJ
6JT8	H3	9DX
6JU8	B4	9PQ
6JV8•	B4	9DX
6K5-GT	F7	5U
6K6-GT	F6	7S†
6K7	E3	7R
6K7-G	F24	7R†
6K7-GT	F7	7R•
6K8	E3	8K
6K8-G	F24	8K†
6K8-GT	F12	8K•
6K11•	L1	12BY
6KA8•	B4	9PV

Type	Tube Dimensions and Basing Diagram	
	Dim.	B.D.
6KD8	B2	9AE
6KL8	B4	9LQ
6KM8	B4	9QG
6KT8	B2	9QP
6KV8	B4	9DX
6L5-G	F21	6Q†
6L6	E5	7AC
6L6-G	F39	7AC†
6L6-GB	F22	7AC
6L6-GC	F22	7AC
6L7	E3	7T
6L7-G	F24	7T†
6N6-G	F28	7AU
6N7	E4	8B
6N7-GT	F6	8B†
6P5-GT	F6	6Q†
6P7-G	F24	7U
6Q7	E3	7V
6Q7-G	F24	7V†
6Q7-GT	F7	7V•
6Q11•	L1	12BY
6R7	E3	7V
6R7-G	F24	7V†
6R7-GT	F6	7V†
6S4	B4	9AC
6S4-A•	B4	9AC
6S7	E3	7R
6S7-G	F24	7R†
6S8-GT	F6	8CB
6SA7	E2	8R
6SA7-GT	F6	8AD
6SB7-Y	E2	8R
6SC7	E2	8S
6SF5	E2	6AB
6SF5-GT	F6	6AB†
6SF7	E2	7AZ
6SG7	E2	8BK
6SH7	E2	8BK
6SJ7	E2	8N
6SJ7-GT	F7	8N•
6SK7	E2	8N
6SK7-GT	F7	8N•
6SL7-GT	F6	8BD
6SN7-GT	F6	8BD
6SN7-GTA	F6	8BD
6SN7-GTB•	F6	8BD

Type	Tube Dimensions and Basing Diagram	
	Dim.	B.D.
6SQ7	E2	8Q
6SQ7-GT	F7	8Q•
6SR7	E2	8Q
6SS7	E2	8N
6ST7	E2	8Q
6SZ7	E2	8Q
6T4	A1	7DK
6T7-G	F24	7V†
6T8	B2	9E
6T8-A•	B2	9E
6U5	K3	6R
6U7-G	F32	7R†
6U8	B2	9AE
6U8-A•	B2	9AE
6V3-A	B8	9BD
6V6	E4	7AC
6V6-GT	F6	7AC†
6V6-GTA•	F6	7AC†
6V7-G	F24	7V†
6W4-GT	F6	4CG
6W6-GT	F6	7AC†
6W7-G	F24	7R†
6X4	A3	6BS
6X5	E4	6S
6X5-GT	F6	6S†
6X8	B2	9AK
6Y5	K4	6J
6Y6-G	F28	7AC†
6Y6-GA	F19	7AC†
6Y7-G	F21	8B†
6Z4	K4	9D
6Z5•	K4	6K
6Z7-G	F21	8B†
6ZY5-G	F21	6S†
7A4	J2	5AC
7A5	J3	6AA
7A6	J2	7AJ
7A7	J2	8V
7A8	J2	8U
7AD7	J3	8V
7AF7	J2	8AC
7AG7	J2	8V
7AH7	J2	8V
7AU7••	B2	9A
7B4	J2	5AC

Note: Discontinued types are shown in lightface.
Note: For footnotes, see page 18.

Type	Tube Dimensions and Basing Diagram	
	Dim.	B.D.
7B5	J3	6AE
7B6	J2	8W
7B7	J2	8V
7B8	J2	8X
7C5	J3	6AA
7C6	J2	8W
7C7	J2	8V
7E6	J2	8W
7E7	J2	8AE
7EY6•	F9	7AC
7F7	J2	8AC
7F8	J2	8BW
7G7	J2	8V
7H7	J2	8V
7J7	J2	8BL
7K7	J2	8BF
7L7	J2	8V
7N7	J3	8AC
7Q7	J2	8AL
7R7	J2	8AE
7S7	J2	8BL
7V7	J2	8V
7W7	J2	8BJ
7X7	J3	8BZ
7Y4	J2	5AB
7Z4	J3	5AB
8AU8	B4	9DX
8AW8-A•	B4	9DX
8B10•	L1	12BF
8BA8-A•	B4	9DX
8BH8	B4	9DX
8BN8	B4	9ER
8BQ5•	B10	9CV
8CG7•	B4	9AJ
8CM7•	B4	9ES
8CN7••	B2	9EN
8CS7•	B4	9EF
8CX8•	B4	9DX
8EB8•	B4	9DX
8EM5•	B10	9HN
8ET7•	B4	9LT
8FQ7•	B4	9LP
8GN8•	B4	9DX

Type	Tube Dimensions and Basing Diagram	
	Dim.	B.D.
8JV8•	B4	9DX
8KA8•	B4	9PV
8SN7-GTB•	F6	8BD
9AU7••	B2	9A
9BR7••	B2	9CF
9CL8•	B2	9FX
9U8-A•	B2	9AE
10	K11	4D
10C8•	B2	9DA
10DE7•	B4	9HF
10DR7•	B4	9HF
10DX8	B4	9HX
10EG7•	F4	8BD
10EM7•	F3	8BD
10GN8•	B4	9DX
10HF8•	B4	9DX
10JA8•	B4	9DX
11	K2	4F
11AR11•	L1	12DM
11CY7•	B4	9LG
11JE8	B4	9DX
11KV8	B4	9DX
12	K7	4D
12A5•	K4	7F
12A7	K5	7K
12A8-GT	F7	8A-
12AB5•	B4	9EU
12AC6•	A2	7BK
12AD6•	A2	7CH
12AE6•	A2	7BT
12AE6-A•	A2	7BT
12AE7•	B2	9A
12AF3•	B8	9CB
12AF6•	A2	7BK
12AH7-GT	F6	8BE
12AJ6•	A2	7BT
12AL5	A1	6BT
12AL8•	B4	9GS
12AL11•	L2	12BU
12AQ5	A3	7BZ
12AT6	A2	7BT
12AT7•	B2	9A
12AU6	A2	7BK

Type	Tube Dimensions and Basing Diagram	
	Dim.	B.D.
12AU7•	B2	9A
12AU7-A•	B2	9A
12AV5-GA•	F19	6CK
12AV6	A2	7BT
12AV7•	B2	9A
12AW6	A2	7CM
12AX3•	L3	12BL
12AX4-GT	F6	4CG
12AX4-GTA•	F6	4CG
12AX4-GTB•	F6	4CG
12AX7•	B2	9A
12AX7-A•	B2	9A
12AY3•	C4	9HP
12AY7•	B2	9A
12AZ7•	B2	9A
12AZ7-A••	B2	9A
12B4-A••	B4	9AG
12B8-GT	F13	8T
12BA6	A2	7BK
12BA7	B4	8CT
12BD6	A2	7BK
12BE6	A2	7CH
12BF6	A2	7BT
12BH7••	B4	9A
12BH7-A••	B4	9A
12BK5•	B4	9BQ
12BL6•	A2	7BK
12BQ6-GTB/ 12CU6•	F16	6AM
12BR7•	B2	9CF
12BS3•	C4	9HP
12BV7•	B4	9BF
12BY7••	B4	9BF
12BY7-A••	B4	9BF
12BZ6	A2	7CM
12BZ7•	B4	9A
12C8	E3	8E
12CA5•	A3	7CV
12CN5•	A3	7CV
12CR6	A2	7EA
12CT8•	B4	9DA
12CU5/12C5•	A3	7CV
12CX6•	A2	7BK
12D4•	F6	4CG

Note: For Key to Tube Dimensions, and Basing Diagrams, see pages 19-21.

Type	Tube Dimensions and Basing Diagram	
	Dim.	B.D.
12DB5•	B4	9GR
12DE8♦	B2	9HG
12DK6	A2	7CM
12DK7♦	B2	9HZ
12DL8♦	B4	9HR
12DM4•	F15	4CG
12DQ6-A•	F22	6AM
12DQ6-B•	F22	6AM
12DQ7*•	B4	9BF
12DS7♦	B4	9JU
12DS7-A♦	B4	9JU
12DT5•	B4	9HN
12DT8	B2	9DE
12DU7♦	B2	9JX
12DV8♦	B4	9HR
12DW7*	B2	9A
12DY8♦	B2	9JD
12DZ6♦	A2	7BK
12EA6♦	A2	7BK
12EC8♦	B2	9FA
12ED5•	A3	7CV
12EG6♦	A2	7CH
12EH5•	A3	7CV
12EK6♦	A2	7BK
12EL6♦	A2	7FB
12EM6♦	B4	9HV
12EN6•	F6	7AC
12EQ7	B4	9LQ
12F5-GT	F6	5M†
12F8♦	B2	9FH
12FK6♦	A2	7BT
12FM6♦	A2	7BT
12FQ8	B2	9KT
12FR8♦	B3	9KU
12FV7*	B4	9A
12FX5•	A3	7CV
12FX8♦	B3	9KV
12GA6♦	A2	7CH
12GC6	F22	8JX
12GE5•	L7	12BJ
12GJ5•	C6	9QK
12GN7*•	B4	9BF
12GT5•	C5	9NZ
12GW6•	F22	6AM

Type	Tube Dimensions and Basing Diagram	
	Dim.	B.D.
12H6	E1	7Q
12J5-GT	F7	6Q†
12J7-GT	F7	7R•
12J8♦	B2	9GC
12JB6•	C6	9QL
12K5♦	A3	7EK
12K7-GT	F7	7R•
12K8	E3	8K
12KL8•	B4	9LQ
12L6-GT•	F6	7AC†
12Q7-GT	F7	7V•
12R5•	A3	7CV
12S8-GT	F6	8CB
12SA7	E2	8R
12SA7-GT	F6	8AD
12SC7	E2	8S
12SF5	E2	6AB
12SF5-GT	F6	6AB†
12SF7	E2	7AZ
12SG7	E2	8BK
12SH7	E2	8BK
12SJ7	E2	8N
12SJ7-GT	F7	8N•
12SK7	E2	8N
12SK7-GT	F7	8N•
12SL7-GT	F6	8BD
12SN7-GT	F6	8BD
12SN7-GTA	F6	8BD•
12SQ7	E2	8Q
12SQ7-GT	F7	8Q•
12SR7	E2	8Q
12SR7-GT	F6	8Q•
12U7♦	B2	7CK
12V6-GT	F6	7AC†
12W6-GT•	F6	7AC†
12X4	A3	5BS
12Z3	K4	4G
13CW4	D1	12AQ
13DE7•	B4	9HF
13DR7•	B4	9HF
13EM7•	F3	8BD
13FD7•	H1	9HF
13GB5	K2	9NH
13GF7•	C1	9QD
13J10•	L2	12BT

Type	Tube Dimensions and Basing Diagram	
	Dim.	B.D.
14A4	J2	5AC
14A5	J2	6AA
14A7	J2	8V
14AF7	J2	8AC
14B6	J2	8W
14B8	J2	8X
14C5	J3	6AA
14C7	J2	8V
14E6	J2	8W
14E7	J2	8AE
14F7	J2	8AC
14F8	J2	8BW
14GT8	B2	9KR
14H7	J2	8V
14J7	J2	8BL
14N7	J3	8AC
14Q7	J2	8AL
14R7	J2	8AE
15	K5	5F
15AF11•	L2	12DP
15FY7•	L4	12ED
15HB6•	B10	9NW
15KY8•	C3	9QT
16AQ3	B12	9CB
17AX3•	L3	12BL
17AX4-GT•	F6	4CG
17AX4-GTA•	F6	4CG
17AY3•	C4	9HP
17BH3•	C4	9HP
17BQ6-GTB•	F16	6AM
17BS3•	C4	9HP
17C9	G1	10F
17CU5•	A3	7CV
17D4•	F6	4CG
17DE4•	F15	4CG
17DM4•	F15	4CG
17DQ6-A•	F22	6AM
17DQ6-B•	F22	6AM
17GE5•	L7	12BJ
17GJ5•	C6	9QK
17GT5•	C5	9NZ
17GV5•	L8	12DF
17GW6•	F22	6AM
17H3•	B4	9FK

Note: Discontinued types are shown in lightface.

Note: For footnotes, see page 18.

Type	Tube Dimensions and Basing Diagram	
	Dim.	B.D.
17JB6•	C6	9QL
17JZ8•	L2	12DZ
18A5•	F9	6CK
18FW6	A2	7CC
18FW6-A•	A2	7CC
18FX5	A2	7CH
18FX6-A•	A2	7CH
18FY5	A2	7BT
18FY5-A•	A2	7BT
18GD6-A•	A2	7BK
19	K4	6C
19AU4•	F15	4CG
19AU4-GTA•	F15	4CG
19BG6-G	F40	5BT
19BG6-GA	F33	5BT
19CL8-A•	F1	9FX
19EA8•	B2	9AE
19HR6•	A2	7BK
19HS6•	A2	7BK
19HV8	B2	9FA
19J6	A2	7BF
19JN8	B2	9FA
19T8	B2	9E
19X8	B2	9AK
20	F18	4D
20EQ7	B4	9LQ
20EZ7	B2	9PG
21EX6•	F33	5BT
21GY5•	L8	12DR
22	K10	4K
22BH3•	C4	9HP
22DE4•	F15	4CG
22JG6•	C5	9QU
24A	K10	5E
25A6	E4	7S
25A6-GT	F6	7St
25A7-GT	F6	8F
25AC5-GT	F6	6Qt
25AV5-GA	F19	6CK
25AX4-GT	F6	4CG
25B5	K6	6D
25B6-G	F28	7St
25B8-GT	F6	8T
25BK5	B4	9BQ

Type	Tube Dimensions and Basing Diagram	
	Dim.	B.D.
25BQ6-GT	F16	6AM
25BQ6-GTB/25CU6	F16	6AM
25C5	A3	7CV
25C6-G	F28	7ACt
25CA5	A3	7CV
25CD6-GA•	F40	5BT
25CD6-GB•	F33	5BT
25DN6•	F33	5BT
25EC6•	F29	5BT
25EH5	A3	7CV
25F5-A•	A3	7CV
25L6	E4	7AC
25L6-GT	F6	7ACt
25N6-G	K5	7W
25W4-GT	F6	4CG
25Y5	K4	6E
25Z5	K4	6E
25Z6	E4	7Q
25Z6-GT	F6	7Qt
26	K8	4D
27	K4	5A
30	K4	4D
31	K4	4D
32	K10	4K
32ET5	A3	7CV
32ET5-A•	A3	7CV
32L7-GT	F7	8Z
33	K8	5K
34	K10	4M
34GD5	A3	7CV
34GD5-A•	A3	7CV
35	K10	5E
35A5	J3	6AA
35B5	A3	7BZ
35C5	A3	7CV
35DZ8	B10	9JE
35EH5	A3	7CV
35GL6	A3	7FZ
35L6-GT	F6	7ACt
35W4	A3	5BQ
35Y4	J3	5AL
35Z3	J3	4Z
35Z4-GT	F6	5AA

Type	Tube Dimensions and Basing Diagram	
	Dim.	B.D.
35Z5-GT	F6	6AD
36	K5	5E
36AM3	B1	5BQ
36AM3-A	A3	5BQ
36AM3-B•	A3	5BQ
37	K4	5A
38	K5	5F
39 44	K5	5F
40	K8	4D
41	K4	6B
42	K8	6B
43	K8	6B
45	K8	4D
45Z3	A2	5AM
45Z5-GT	F6	6AD
46	K11	5C
47	K11	5B
48	K11	6A
49	K8	5C
50	K12	4D
50A5	J3	6AA
50B5	A3	7BZ
50C5	A3	7CV
50C6-G	F28	7AC
50DC-4	A3	5BQ
50EH5	A3	7CV
50FE5	A3	8KB
50FK5	A3	7CV
50HK6	A3	7FZ
50L6-GT	F6	7ACt
50X6	J3	7DX
50Y6-GT	F6	7Qt
50Y7-GT	F6	8AN
5027-G	F21	8AN
53	K8	7B
55	K5	6G
56	K4	5A
57	K9	6F
58	K9	6F
59	K11	7A
60FX5	A3	7CV
70L7-GT	F9	8AA
71-A	K8	4D

ote: For Key to Tube Dimensions, and Basing Diagrams, see pages 19-21.

Type	Tube Dimensions and Basing Diagram	
	Dim.	B.D.
75	K5	6G
76	K4	5A
77	K5	6F
78	K5	6F
79	K5	6H
80	K8	4C
81	K12	4B
82	K8	4C
83-V	K8	4AD
84/6Z4	K4	5D
85	K5	6G
89	K4	6F

Type	Tube Dimensions and Basing Diagram	
	Dim.	B.D.
117L7-GT	F9	8AO
117M7-GT		
117L7/M7-GT	F9	8AO
117N7-GT	F9	8AV
117P7-GT	F9	8AV
117Z3	A3	4CB
117Z4-GT	F42	FAA
117Z6-GT	F6	7Q†
5879	B2	9AD
5881	F10	7AC
6973	B4	9EU

Type	Tube Dimensions and Basing Diagram	
	Dim.	B.D.
7025*	B2	9A
7027	F26	8HY
7027-A	F26	8HY
7189	B10	9BL
7199	B2	9JT
7247*	B2	9A
7355	F9	8KN
7408	F6	7AC
7543	A2	7BK
7591	F6	8KQ
7695	H2	9PX
7868	C3	9NZ
EM84/6FG6	B8	9GA

EXPLANATION OF FOOTNOTES

▲ This diagram is like the one having the same designation except that base sleeve is connected to Pin No. 1.

† This diagram is like the one having the same designation except that Pin No. 1 has no connection.

● This diagram is like the one having the same designation except that Pin No. 1 is connected to internal shield.

■ Heater with controlled warm-up time.

* Two-section heater or filament. Heater or filament may be series or parallel connected.

◆ Heater volts = 10.0 to 15.9 from a 12-volt storage battery.

KEY TO TUBE DIMENSIONS

Symbol	Maximum Overall Length	x	Diameter	Description
A1	1–3/4″	x	3/4″	7-Pin Miniature Types
A2	2–1/8″	x	3/4″	
A3	2–5/8″	x	3/4″	
B1	1–3/4″	x	7/8″	9-Pin Miniature Types
B2	2–3/16″	x	7/8″	
B3	2–7/16″	x	7/8″	
B4	2–5/8″	x	7/8″	
B5	2–11/16″	x	7/8″	
B6	2–3/4″	x	7/8″	
B7	2–13/32″	x	7/8″	
B8	2–27/32″	x	7/8″	
B9	2–7/8″	x	7/8″	
B10	3–1/16″	x	7/8″	
B11	3–9/32″	x	7/8″	
B12	3–1/2″	x	7/8″	
B13	2–13/16″	x	7/8″	
B14	2″	x	7/8″	
C1	3.00″	x	1.188″	Novar Types
C2	3.08″	x	1.188″	
C3	3.110″	x	1.188″	
C4	3.410″	x	1.188″	
C5	3.410″	x	1.562″	
C6	3.55″	x	1.562″	
C7	4.160″	x	1.562″	
C8	4.60″	x	1.562″	
D1	0.800″	x	0.440″	Nuvistor Type
E1	1–3/4″	x	1–5/16″	Octal-Metal Types
E2	2–5/8″	x	1–5/16″	
E3	3–1/8″	x	1–5/16″	
E4	3–1/4″	x	1–5/16″	
E5	4–5/16″	x	1–5/8″	
F1	2–5/16″	x	1–5/16″	Octal-Glass Types
F2	2–5/8″	x	1–1/16″	
F3	2–7/8″	x	1–9/32″	

KEY TO TUBE DIMENSIONS

Symbol	Maximum Overall Length	x	Diameter	Description
F4	3″	x	1–9/32″	Octal-Glass Types
F5	3–1/16″	x	1–9/32″	
F6	3–5/16″	x	1–9/32″	
F7	3–5/16″	x	1–5/16″	
F8	3–3/8″	x	1–9/32″	
F9	3–7/16″	x	1–9/32″	
F10	3–15/32″	x	1–7/16″	
F11	3.562″	x	1.562″	
F12	3–9/16″	x	1–9/32″	
F13	3–9/16″	x	1–5/16″	
F14	3–5/8″	x	1–9/32″	
F15	3–13/16″	x	1–9/32″	
F16	3–7/8″	x	1–9/32″	
F17	3–7/8″	x	1–9/16″	
F18	4″	x	1–3/16″	
F19	4″	x	1–9/16″	
F20	4–1/16″	x	1–9/32″	
F21	4–1/8″	x	1–9/16″	
F22	4–1/4″	x	1–9/16″	
F23	4–5/16″	x	1–5/8″	
F24	4–15/32″	x	1–9/16″	
F25	4–5/8″	x	1–9/16″	
F26	4–5/8″	x	1–5/8″	
F27	4–5/8″	x	1–23/32″	
F28	4–5/8″	x	1–13/16″	
F29	4–3/4″	x	1–9/16″	
F30	4–3/4″	x	1–11/16″	
F31	4–3/4″	x	1–23/32″	
F32	4–7/8″	x	1–9/16″	
F33	5″	x	1–9/16″	
F34	5″	x	1–23/32″	
F35	5–1/8″	x	1–23/32″	
F36	5–1/8″	x	2–1/16″	
F37	5–3/16″	x	1–1/2″	

KEY TO TUBE DIMENSIONS

,mbol	Maximum Overall Length	x	Diameter	Description
F38	5–7/32″	x	1–23/32″	
F39	5–5/16″	x	2–1/16″	
F40	5 11/16″	x	2–1/16″	Octal-Glass Types
F41	2–7/8″	x	1–5/16″	
G1	2.190″	x	0.875″	10-Pin Miniature Type
H1	2.90″	x	1.188″	9-Pin
H2	3.23″	x	1.188″	T9-Bulb Types
H3	2.630″	x	1.188″	
J1	2–9/32″	x	1–3/16″	
J2	2–25/32″	x	1–3/16″	Lock-In Types
J3	3–5/32″	x	1–3/16″	
K1	1–3/4″	x	0.400″	
K2	4–1/8″	x	1–3/16″	
K3	4–3/16″	x	1–3/16″	
K4	4–3/16″	x	1–9/16″	
K5	4–17/32″	x	1–9/16″	
K6	4–19/32″	x	1–9/16″	Other Types
K7	4–11/16″	x	1–7/16″	
K8	4–11/16″	x	1–13/16″	
K9	4–15/16″	x	1–9/16″	
K10	5–1/32″	x	1–13/16″	
K11	5–3/8″	x	2–1/16″	
K12	6–1/4″	x	2–7/16″	
L1	1.875″	x	1.188″	
L2	2.375″	x	1.188″	
L3	2.625″	x	1.188″	
L4	2.875″	x	1.188″	12-Pin Types
L5	3.375″	x	1.188″	
L6	3.625″	x	1.188″	
L7	2.875″	x	1.563″	
L8	3.625″	x	1.563″	
L9	4.125″	x	1.563″	

LEGEND FOR BASE AND ENVELOPE CONNECTION DIAGRAMS

Bottom Views

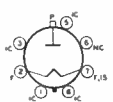
Subscripts B, D, HP, HX, P, T, and TR indicate, respectively, beam unit, diode unit, heptode unit, hexode unit, pentode unit, triode unit, and tetrode unit in multi-unit types.

BC = Base Sleeve
BS = Base Shell
DJ = Deflecting Electrode
ES = External Shield
F = Filament
F_M = Filament Mid-Tap

FT = Fluorescent Target
G = Grid
H = Heater
H_L = Heater Tap for Panel Lamp
H_M = Heater Mid-Tap

HS = Heater Shield
IC = Internal Connection-Do Not Use
IS = Internal Shield
K = Cathode
NC = No Connection

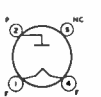
P, = Plate (Anode)
RC = Ray-Control Electrode
S = Shell
TA = Target
U = Unit
● = Gas-Type Tube



3C

4AA

4AD



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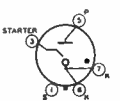
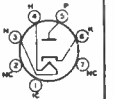


4BU

4C



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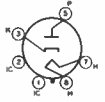
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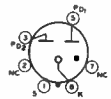
4D


4F


4G


4K


4M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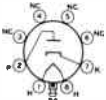
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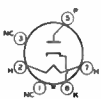
5A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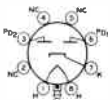
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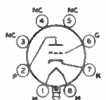
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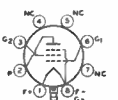
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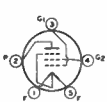
5AG


5AL


5AM


5AP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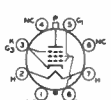
5BQ


5BS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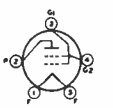
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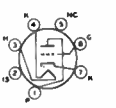
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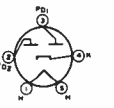
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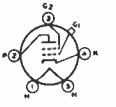
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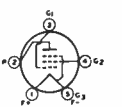
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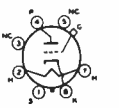
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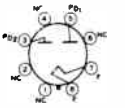
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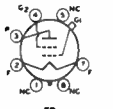
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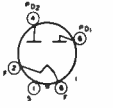
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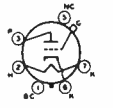
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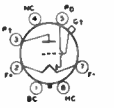
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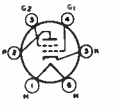
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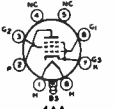
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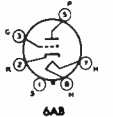
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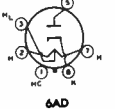
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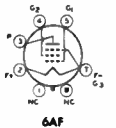
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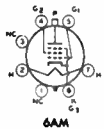
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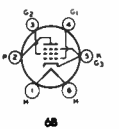
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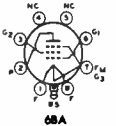
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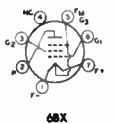
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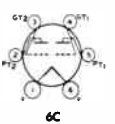
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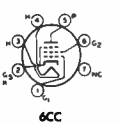
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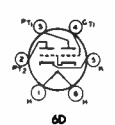
6CK


6CN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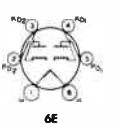
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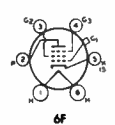
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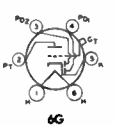
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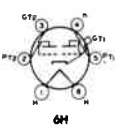
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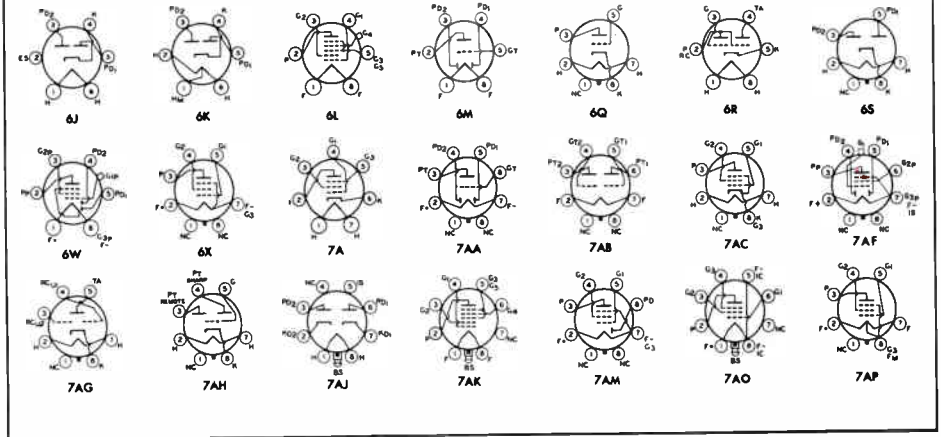
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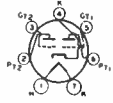
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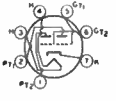
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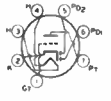
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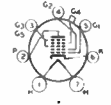
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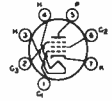
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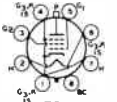
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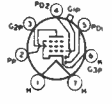
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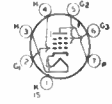
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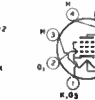
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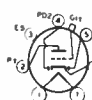
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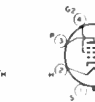
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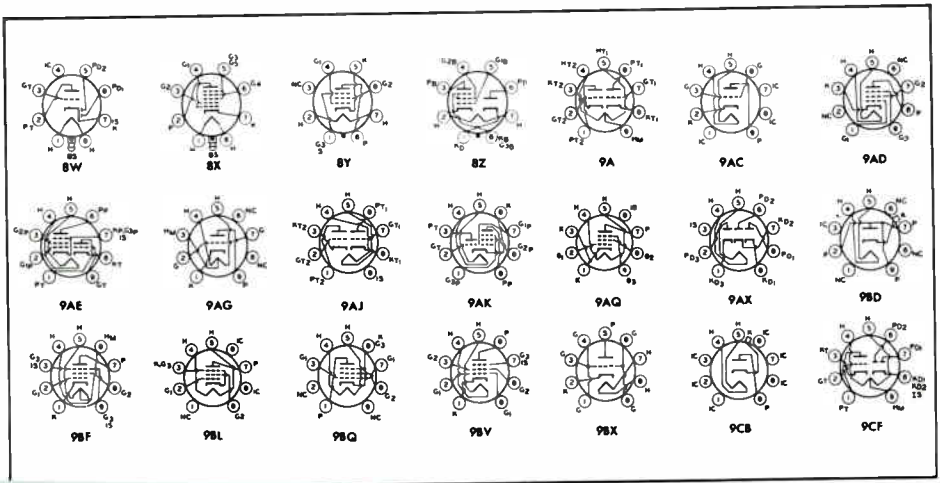
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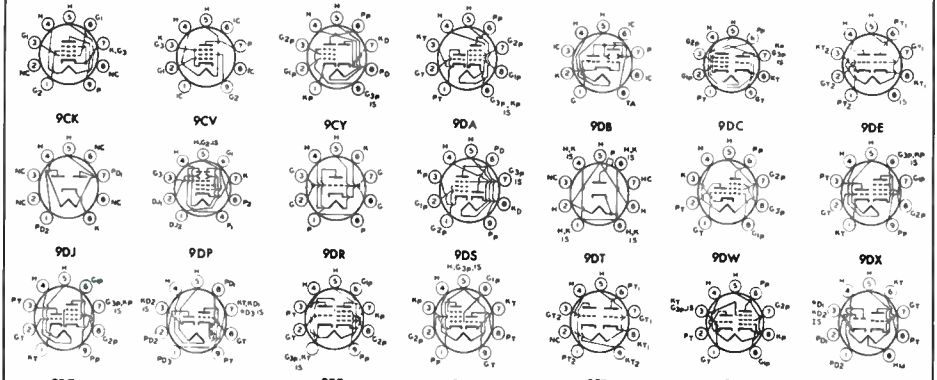
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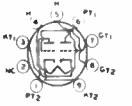
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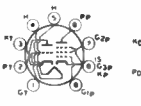
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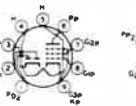
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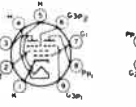
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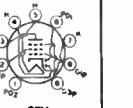
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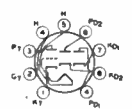
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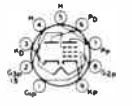
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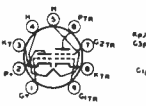
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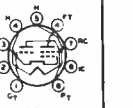
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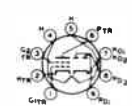
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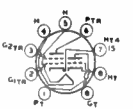
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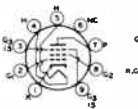
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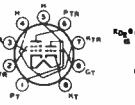
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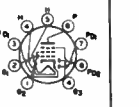
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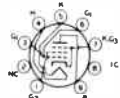
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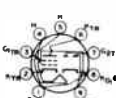
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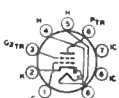
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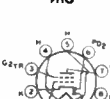
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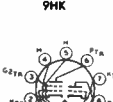
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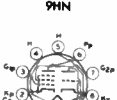
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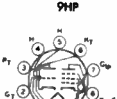
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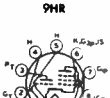
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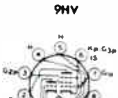
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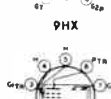
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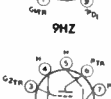
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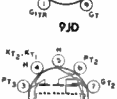
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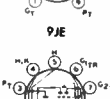
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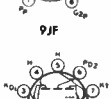
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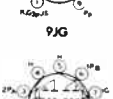
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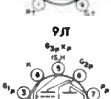
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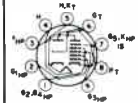
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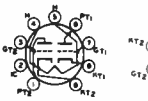
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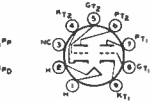
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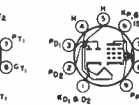
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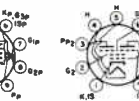
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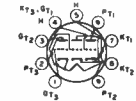
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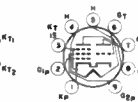
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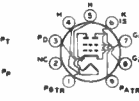
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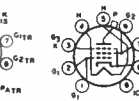
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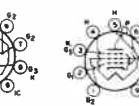
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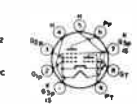
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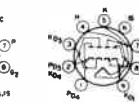
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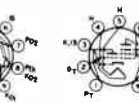

9PV


9PX


9QA


9QD


9QG


9QJ


9QK


9QL


9QP


9QT


9QU


9U


9Y


10F


12AQ


12BF


12BJ

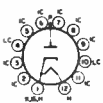

12BL


12BM


12BT


12BU


12BY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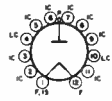
12DM


12DP


12DQ


12DR


12DZ


12EA


12EJ


12EO


12ER


12EW


12EX


12EY


12FB

APPLICATIONS:

1. Audio-Frequency Amplifiers
2. Automatic Gain Control (AGC and AVC) Circuits
3. Burst Amplifiers
4. Cathode-Drive RF Amplifiers (Grounded-Grid)
5. Color Killers
6. Color Matrixing Circuits
7. Complex-Wave Generators
8. Converters
9. Dampers
10. Demodulators (Color TV)
11. Detectors
12. DC Restorers
13. Discriminators
14. Frequency Dividers
15. FM Detectors
16. Gated Noise, AGC, and Sync Amplifiers
17. Harmonic Generators
18. Horizontal-Deflection Circuits
19. Intermediate-Frequency Amplifiers
20. Limiters
21. Mixers—RF
22. Mixer-Oscillators—RF
23. Multivibrators
24. Noise Inverters
25. Oscillators
26. Phase Inverters
27. Phase Splitters
28. Radio-Frequency Amplifiers
29. Reactance Circuits
30. Rectifiers
31. Regulators
32. Relay Control Circuits
33. Sync Amplifiers
34. Sync Clippers
35. Sync Separators
36. Tuning Indicators
37. Vertical-Deflection Circuits
38. Video Amplifiers

1. AUDIO-FREQUENCY AMPLIFIERS

VOLTAGE AMPLIFIERS

Medium-Mu Triode with Twin Diode

● 6BF6	● 12BF6	○ 12SR7
○ 6SR7		

Medium-Mu Triode—Sharp-Cutoff Pentode

● 7199†		

Medium-Mu Twin Triode

● 5J6	● 7AU7	○ 12SN7GTA
● 6J6A	● 9AU7	● 19J6
○ 6SN7GTB	● 12AU7A	

High-Mu Triode

○ 12SF5		

High-Mu Triode with Twin Diode

● 3AV6	● 6CN7	○ 12SQ7
● 4AV6	○ 6SQ7	○ 12SQ7GT
● 6AT6	○ 6SQ7GT	● 14GT8
● 6AV6	● 12AT6	● 18FY6
● 6BN8	● 12AV6	● 18FY6A

High-Mu Triode with Triple Diode

● 5T8	● 6T8A	● 19T8

For footnotes, see page 55.

High-Mu Twin Triode

- ● 6EU7†
- ○ 6SL7GT
- ● 12AX7†
- ● 12AX7A†
- ● 12AZ7
- ● 12AZ7A
- ● 12BZ7
- ○ 12SL7GT
- ● 20EZ7
- ● 7025†

Sharp-Cutoff Pentode

- ● 3DT6A*
- ● 4DT6A*
- ● 5GX6*
- ● 6DT6A*
- ● 6GX6*
- ● 6HZ6*
- ● 5879†
- ● 7543†

Remote-Cutoff Pentode with Diode

- ● 12CR6

POWER AMPLIFIERS

Power Triode

2A3

Beam Power Tube

- ● 5AQ5
- ● 5CZ5
- ○ 5V6GT
- ● 6AQ5A
- ● 6AS5
- ● 6CM6
- ● 6CU5
- ● 6CZ5
- ○ 6DG6GT
- ● 6DS5
- ■ 6GC5
- ○ 6FE5
- ○ 6L6
- ○ 6L6GB†
- ○ 6L6GC†
- ○ 6V6
- ○ 6V6GTA
- ○ 6W6GT
- ○ 6Y6G
- ● 12AB5
- ● 12AQ5
- ● 12CA5
- ● 12CU5/12C5
- ○ 12L6GT
- ○ 12V6GT
- ○ 12W6GT
- ● 25C5
- ● 25F5A
- ● 34GD5
- ● 34GD5A
- ● 35B5
- ● 35C5
- ○ 35L6GT
- ● 50B5
- ● 50C5
- ○ 50FE5
- ○ 50L6GT
- ● 6973†
- ○ 7027A†
- ○ 7408†

Power Pentode

- ● 6BQ5
- ● 6EH5
- ○ 6F6
- ● 6GK6
- ○ 6K6GT
- ● 8BQ5
- ● 12EH5
- ● 25EH5
- ● 35EH5
- ● 50EH5
- ● 50FK5
- ● 60FX5
- ● 7189†
- ■ 7868†

2. AUTOMATIC GAIN CONTROL CIRCUITS (AGC & AVC)

Diode—Sharp-Cutoff Pentode

- ● 6KL8
- ● 12KL8

Diode—Remote-Cutoff Pentode

- ● 6EQ7
- ● 12EQ7
- ● 20EQ7

For footnotes, see page 55.

Twin Diode—Medium-Mu Triode

● 6BF6	● 12BF6	○ 12SR7
○ 6SR7		

Twin Diode—High-Mu Triode

● 3AV6	○ 6SQ7	○ 12SQ7
● 4AV6	○ 6SQ7GT	○ 12SQ7GT
● 6AT6	● 12AT6	● 18FY6
● 6AV6	● 12AV6	● 18FY6A

Medium-Mu Triode—Sharp-Cutoff Pentode

● 5AN8	● 6BA8A	● 6CU8
● 5GH8	● 6BH8	● 6GH8
● 6AN8A	● 6CH8	● 6GH8A
● 6AZ8		

High-Mu Triode—Sharp-Cutoff Pentode

● 6AW8A	● 8AW8A	● 8JV8
● 6JV8		

Sharp-Cutoff Twin Pentode

● 3BU8	● 4BU8	● 6BU8
● 3GS8	● 4GS8	● 6HS8

3. BURST AMPLIFIERS

Medium-Mu Triode– Sharp-Cutoff Pentode

● 5EA8	● 6EA8	● 6GH8A
● 5GH8	● 6GH8	

High-Mu Triode with Twin Diodes

● 6BN8

4. CATHODE-DRIVE RF AMPLIFIERS (GROUNDED-GRID)

Medium-Mu Triode

● 6BC4

Medium-Mu Twin Triode

● 4BC8	● 5BK7A	● 6BQ7A
● 4BQ7A	● 5BQ7A	● 6BS8
● 4BS8	● 6BC8	● 6BZ7
● 4BZ7	● 6BK7A	● 6FW8

High-Mu Triode

△ 2CW4	● 6AB4	△ 6DS4
△ 2DS4	△ 6CW4	

For footnotes, see page 55.

High-Mu Twin Triode

- ● 6DT8
- ● 12AT7
- ● 12AZ7
- ● 12AZ7A
- ● 12DT8

5. COLOR KILLERS

Quadruple Diode

- ● 6JU8

6. COLOR MATRIXING CIRCUITS

Medium-Mu Twin Triode

- ● 6CG7
- ● 6FQ7
- ● 6GU7
- ● 8CG7
- ● 8FQ7
- ● 12BH7A

7. COMPLEX-WAVE GENERATORS

High-Mu Twin Double-Plate Triode

- ● 12FQ8

Sharp-Cutoff Twin-Plate Tetrode—Diode

- ● 6FA7

Sharp-Cutoff Three-Plate Tetrode—Diode

- ● 6KM8

Three-Plate Tetrode—Medium-Mu Triode

- ● 6FH8

8. CONVERTERS

Medium-Mu Triode—Sharp-Cutoff Pentode

- ● 5EA8
- ● 5GH8
- ● 5KE8
- ● 5U8
- ● 5X8
- ● 6EA8
- ● 6GH8
- ● 6GH8A
- ● 6KE8
- ● 6U8A
- ● 6X8
- ● 19X8

High-Mu Twin Triode

- ● 6DT8
- ● 12AT7
- ● 12AZ7
- ● 12AZ7A
- ● 12DT8

Sharp-Cutoff Pentode

- ● 6AU6
- ● 12AU6
- ● 18GD6A

Pentagrid

- ● 6BA7
- ● 6BE6
- ○ 6SA7
- ○ 6SA7GT
- ● 12BA7
- ● 12BE6
- ○ 12SA7
- ○ 12SA7GT
- ● 18FX6
- ● 18FX6A

For footnotes, see page 55.

9. DAMPERS

Half-Wave (Diode)

- ○ 6AU4GTA
- ○ 6AX4GT
- ○ 6AX4GTB
- ■ 6AY3
- ■ 6BA3
- ■ 6BH3
- ■ 6BS3
- ○ 6CQ4
- ○ 6DA4
- ○ 6DE4
- ○ 6DM4
- ■ 6DW4
- ○ 6W4GT
- ○ 12AX4GTA
- ○ 12AX4GTB
- ■ 12AY3
- ■ 12BS3
- ○ 12D4
- ○ 12DM4
- ○ 17AX4GT
- ○ 17AX4GTA
- ■ 17AY3
- ■ 17BH3
- ■ 17BS3
- ○ 17D4
- ○ 17DE4
- ○ 17DM4
- ○ 19AU4
- ○ 19AU4GTA
- ■ 22BH3
- ○ 22DE4
- ○ 25AX4GT

10. DEMODULATORS (COLOR TV)

Medium-Mu Twin Triode

- ● 12BH7A

High-Mu Twin Triode

- ● 12AZ7
- ● 12AZ7A

Sharp-Cutoff Pentode

- ● 6GY6

Pentagrid Amplifier

- ● 6BY6

11. DETECTORS

Diode—Sharp-Cutoff Pentode

- ● 5AM8
- ● 5AS8
- ● 6AM8A
- ● 6AS8
- ● 6KL8
- ● 12KL8

Diode Remote-Cutoff Pentode

- ● 6EQ7
- ● 12CR6
- ● 12EQ7
- ● 20EQ7

Twin Diode

- ● 3AL5
- ● 6AL5
- ○ 6H6
- ● 12AL5
- ○ 12H6

Twin Diode—Medium-Mu Triode

- ● 6BF6
- ○ 6SR7
- ● 12BF6
- ○ 12SR7

For footnotes, see page 55.

Twin Diode—High-Mu Triode

- ● 3AV6
- ● 4AV6
- ● 6AT6
- ● 6AV6
- ● 6BN8
- ● 6CN7
- ○ 6SQ7
- ○ 6SQ7GT
- ● 12AT6
- ● 12AV6
- ○ 12SQ7
- ○ 12SQ7GT
- ● 14GT8
- ● 18FY6
- ● 18FY6A

Triple Diode

- ● 6BJ7

Triple Diode—High-Mu Triode

- ● 5T8
- ● 6T8A
- ● 19T8

Quadruple Diode

- ● 6JU8

Sharp-Cutoff Pentode

- ● 3DT6A*
- ● 4DT6A*
- ● 5GX6*
- ● 6DT6A*
- ● 6GX6*
- ● 6HZ6*

12. DC RESTORERS

Diode—Sharp-Cutoff Pentode

- ● 5AM8
- ● 5AS8
- ● 6AM8A
- ● 6AS8

Triple Diode

- ● 6BJ7

13. DISCRIMINATORS

FM

Twin Diode

- ● 3AL5
- ● 6AL5
- ● 12AL5

Twin Diode—High-Mu Triode

- ● 6BN8
- ● 14GT8

Triple Diode—High-Mu Triode

- ● 5T8
- ● 6T8A
- ● 19T8

Beam Tube

- ● 3BN6
- ● 4BN6
- ● 6BN6

FM QUADRATURE-GRID

Sharp-Cutoff Pentode

- ● 3DT6A*
- ● 4DT6A*
- ● 5GX6*
- ● 5GY6*
- ● 6DT6A*
- ● 6GX6*
- ● 6GY6*
- ● 6HZ6*

For footnotes, see page 55.

Beam Tube

● 3BN6 ● 4BN6 ● 6BN6

HORIZONTAL AFC

Twin Diode—High-Mu Triode

● 6BN8 ● 6CN7

14. FREQUENCY DIVIDERS

High-Mu Twin Double-Plate Triode

● 12FQ8

15. FM DETECTORS

(See 13. Discriminators)

16. GATED NOISE, AGC, AND SYNC AMPLIFIERS

High-Mu Triode Sharp-Cutoff Pentode

● 6KA8 ● 8KA8

Sharp-Cutoff Pentode

● 6GY6*

Pentagrid Amplifier

● 3BY6 ● 6BY6 ● 6CS6

● 3CS6

17. HARMONIC GENERATORS

(See 7. Complex-Wave Generators)

18. HORIZONTAL-DEFLECTION CIRCUITS

OSCILLATORS

Medium-Mu Triode—Sharp-Cutoff Pentode

● 5GH8 ● 6GH8 ● 6GH8A

Medium-Mu Twin Triode

● 6CG7 ● 8CG7 ● 12AU7

● 6FQ7 ● 8FQ7 ● 12BH7A

○ 6SN7GTB ● 9AU7 ○ 12SN7GTA

● 7AU7

For footnotes, see page 55.

AMPLIFIERS

Beam Power Tube

- ○ 6AU5GT
- ○ 6AV5GA
- ○ 6BG6A
- ○ 6BQ6GTB/6CU6
- ○ 6CB5A
- ○ 6CD6GA
- ○ 6DN6
- ○ 6DQ5
- ○ 6DQ6B
- ○ 6EX6
- ■ 6GJ5
- ■ 6GT5
- ○ 6GW6
- ■ 6JB6
- ■ 6JE6
- ○ 12AV5GA
- ○ 12BQ6GTB/12CU6
- ○ 12DQ6A
- ○ 12DQ6B
- ■ 12GJ5
- ■ 12GT5
- ○ 12GW6
- ■ 12JB6
- ○ 17BQ6GTB
- ○ 17DQ6B
- ■ 17GJ5
- ■ 17GT5
- ○ 17GW6
- ■ 17JB6
- ■ 22JG6
- ○ 25AV5GA
- ○ 25BQ6GTB/25CU6
- ○ 25CD6GB
- ○ 25DN6

19. INTERMEDIATE-FREQUENCY AMPLIFIERS

Medium-Mu Triode—Sharp-Cutoff Tetrode

- ● 5CQ8
- ● 6CQ8

Medium-Mu Triode—Sharp-Cutoff Pentode

- ● 5AN8
- ● 6AN8A
- ● 6AU8A
- ● 6AZ8
- ● 6BH8
- ● 6CH8
- ● 6CU8
- ● 6CX8
- ● 8CX8

High-Mu Triode—Sharp-Cutoff Pentode

- ● 6AW8A
- ● 6GN8
- ● 6HF8
- ● 6JV8
- ● 6KV8
- ● 8AW8A
- ● 8GN8
- ● 8JV8
- ● 10HF8
- ● 11KV8

Sharp-Cutoff Pentode

- ● 3AU6
- ● 3CB5
- ● 3CB6
- ● 3CF6
- ● 3DK6
- ● 3JC6
- ● 3JD6▲
- ● 4AU6
- ● 4CB6
- ● 4EW6
- ● 4JC6
- ● 4JD6▲
- ● 5EW6
- ○ 6AB7
- ○ 6AC7
- ● 6AG5
- ● 6AH6
- ● 6AK5
- ● 6AU6
- ● 6AU6A
- ● 6BC5
- ● 6CB6
- ● 6CB6A
- ● 6CF6
- ● 6DC6
- ● 6DE6
- ● 6DK6
- ● 6EJ7
- ● 6EW6
- ● 6HS6
- ● 6JC6
- ● 6JD6▲
- ● 12AU6
- ● 12AW6
- ● 18GD6A
- ● 19HS6

Sharp-Cutoff Pentode with Diode

- ● 5AM8
- ● 5AS8
- ● 6AM8A
- ● 6AS8
- ● 6KL8
- ● 12KL8

For footnotes, see poge 55.

Semiremote-Cutoff Pentode

● 3BZ6	● 6EH7	● 6JH6
● 4BZ6	● 6GM6	● 12BZ6
● 5GM6	● 6HR6	● 19HR6
● 6BZ6		

Remote-Cutoff Pentode

● 6BA6	● 12BA6	● 18FW6
○ 6SK7	○ 12SK7	● 18FW6A
○ 6SK7GT	○ 12SK7GT	

Remote-Cutoff Pentode with Diode

● 6EQ7	● 12EQ7	● 20EQ7

20. LIMITERS

Beam Tube

● 3BN6	● 4BN6	● 6BN6

Sharp-Cutoff Pentode

● 3AU6	● 6GX6	● 12AU6
● 4AU6	● 6HS6	○ 12SH7
● 5GX6	● 6HZ6	● 19HS6
● 6AU6A	○ 6SH7	

Sharp-Cutoff Pentode with Diode

● 6KL8	● 12KL8

21. MIXERS—RF

Medium-Mu Twin Triode

● 5J6	● 12AV7	● 19J6
● 6J6A		

High-Mu Triode

△ 2CW4	● 6AB4	△ 6CW4

22. MIXER-OSCILLATORS—RF

Medium-Mu Triode—Sharp-Cutoff Tetrode

● 5CL8A	● 6CL8A	● 6CQ8
● 5CQ8		

Medium-Mu Triode—Sharp-Cutoff Pentode

● 5AT8	● 5U8	● 6FG7
● 5B8	● 5X8	● 6KE8
● 5BR8	● 6AT8A	● 6U8A
● 5CG8	● 6BR8A	● 6X8
● 5EA8	● 6CG8A	● 19EA8
● 5KE8	● 6EA8	● 19X8

For footnotes, see page 55.

High-Mu Twin Triode

● 6DT8 ● 12AT7 ● 12DT8

Triode-Hexode

○ 6K8 ○ 12K8

23. MULTIVIBRATORS

Medium-Mu Triode -Sharp-Cutoff Pentode

● 5GH8 ● 6GH8 ● 6GH8A

Medium-Mu Twin Triode

● 6CG7 ● 7AU7 ○ 12SN7GTA
● 6GU7 ● 9AU7
○ 6SN7GTB ● 12AU7A

High-Mu Twin Triode

● 12AX7 ● 12AX7A

24. NOISE INVERTERS

High-Mu Triode -Sharp-Cutoff Pentode

● 6KA8 ● 8KA8

Sharp-Cutoff Pentode

● 6GY6*

25. OSCILLATORS

RADIO FREQUENCY—UHF

Medium-Mu Triode

● 2AF4B ● 3AF4A ● 6AF4A
△ 2DV4 ● 3DZ4 △ 6DV4
● 2DZ4 ● 6AF4 ● 6DZ4

RADIO FREQUENCY—VHF

Medium-Mu Twin Triode

● 5J6 ● 12AV7 ● 19J6
● 6J6A

High-Mu Triode

● 6AB4

Power Triode

● 6C4 (Class C)

For footnotes, see page 55.

LOW FREQUENCY, SWEEP TYPE

Medium-Mu Triode—Sharp-Cutoff Pentode

● 5AN8 ● 6BA8A ● 6CU8
● 6AN8A ● 6BH8 ● 6CX8
● 6AU8A ● 6CH8 ● 8CX8
● 6AZ8

High-Mu Triode with Twin Diode

● 6BN8 ● 6CN7

High-Mu Triode—Sharp-Cutoff Pentode

● 6AW8A ● 8AW8A

High-Mu Twin Triode

● 12AX7 ● 12AX7A

26. PHASE INVERTERS

Medium-Mu Triode—High-Mu Triode

● 12DW7

Medium-Mu Twin Triode

● 6CG7 ● 7AU7 ○ 12SN7GTA
● 6GU7 ● 9AU7
○ 6SN7GTB ● 12AU7A

High-Mu Triode—Sharp-Cutoff Pentode

● 6AW8A ● 6HF8 ● 8GN8
● 6EB8 ● 8AW8A ● 10HF8
● 6GN8 ● 8EB8

High-Mu Twin Triode

○ 6SC7 ● 12AX7A ○ 12SL7GT
○ 6SL7GT ○ 12SC7 ● 7025
● 12AX7

27. PHASE SPLITTERS

Medium-Mu Triode—Sharp-Cutoff Tetrode

● 5CQ8 ● 6CQ8

Medium-Mu Triode—Sharp-Cutoff Pentrode

● 5AN8 ● 6BA8A ● 6CU8
● 6AN8 ● 6CH8 ● 7199
● 6AZ8

High-Mu Triode—Sharp-Cutoff Pentode

● 6AW8A ● 8AW8A

For footnotes, see page 55.

28. RADIO-FREQUENCY AMPLIFIERS

Medium-Mu Triode

- ● 2BN4A
- ● 3BN4A
- ● 6BC4
- ● 6BN4A

Medium-Mu Triode–Sharp-Cutoff Tetrode

- ● 5CQ8
- ● 6CQ8

Medium-Mu Twin Triode

- ● 4BC8
- ● 4BQ7A
- ● 4BS8
- ● 5BZ7
- ● 5BK7A
- ● 5BQ7A
- ● 5J6
- ● 6BC8
- ● 6BK7B
- ● 6BQ7A
- ● 6BS8
- ● 6BZ7
- ● 6FW8
- ● 6J6A
- ● 12AV7
- ● 19J6

High-Mu Triode

- △ 2CW4
- △ 2DS4
- ● 2FH5
- ● 3GK5
- ● 6AB4
- △ 6CW4
- △ 6DS4
- ● 6ER5
- ● 6FH5
- ● 6FQ5A
- ● 6GK5
- △ 13CW4

High-Mu Twin Triode

- ● 6DT8
- ● 12AZ7
- ● 12AZ7A
- ● 12DT8

Power Triode

- ● 6C4 (Class C)

Sharp-Cutoff Tetrode

- ● 2CY5
- ● 3CY5
- ● 6CY5
- ● 6FV6

Sharp-Cutoff Pentode

- ● 3AU6
- ● 3BC5
- ● 3CB6
- ● 3CF6
- ● 4AU6
- ● 4CB6
- ○ 6AB7
- ○ 6AC7
- ● 6AG5
- ● 6AK5
- ● 6AU6A
- ● 6BC5
- ● 6BH6
- ● 6CB6
- ● 6CB6A
- ● 6CF6
- ● 6DC6
- ● 6DE6
- ○ 6SH7
- ○ 6SJ7
- ● 12AU6
- ● 12AW6
- ○ 12SH7
- ○ 12SJ7
- ● 18GD6A

Sharp-Cutoff Pentode with Diode

- ● 6KL8
- ● 12KL8

Semiremote-Cutoff Pentode

- ○ 6SG7
- ○ 12SG7

For footnotes, see page 55.

Remote-Cutoff Pentode

● 3BA6	○ 6SK7GT	○ 12SK7GT
● 6BA6	● 12BA6	● 18FW6
● 6BJ6	○ 12SK7	● 18FW6A
○ 6SK7		

Remote-Cutoff Pentode with Diode

● 6EQ7	● 12EQ7	● 20EQ7

29. REACTANCE CIRCUITS

Medium-Mu Triode—Sharp-Cutoff Pentode

● 5AN8	● 6AZ8	● 6CH8
● 6AN8A	● 6BA8A	● 6CU8

High-Mu Triode with Twin Diodes

● 6CN7

High-Mu Triode—Sharp-Cutoff Pentode

● 6AW8A	● 8AW8A

30. RECTIFIERS

POWER-SUPPLY TYPES—VACUUM

Half-Wave (Diode)

● 35W4	● 36AM3A	● 50DC4
○ 35Z5GT	● 36AM3B	

Full-Wave (Twin Diode)

○ 3DG4	○ 5V3A	○ 5Z4
○ 5AS4A	○ 5VG4	○ 6AX5GT
■ 5BC3	○ 5V4GA	● 6CA4
○ 5DJ4	○ 5XG4	● 6X4
○ 5U4G	○ 5Y3GT	○ 6X5GT
○ 5U4GB	○ 5Y4GT	● 12X4

HIGH-VOLTAGE TYPES (For rf-rectifier or pulsed low-current applications) **—VACUUM**

Half-Wave (Diode)

○ 1B3GT	○ 1K3	● 3A2
○ 1G3GT/1B3GT	● 1V2	○ 3A3
○ 1J3	● 1X2B	○ 3B2

31. REGULATORS

HIGH-VOLTAGE, LOW CURRENT

Sharp-Cutoff Beam Triode

○ 6BK4

For footnotes, see page 55.

32. RELAY CONTROL CIRCUITS

Medium-Mu Twin Triode
- 12FV7

High-Mu Twin Triode
- 6EV7

33. SYNC AMPLIFIERS

Medium-Mu Triode—Sharp-Cutoff Pentode
- 6AU8A
- 6CX8
- 8CX8
- 6AZ8

Medium-Mu Twin Triode
- 6CG7
- 7AU7
- 12AU7A

High-Mu Triode with Twin Diode
- 6CN7

High-Mu Triode—Sharp-Cutoff Pentode
- 6AW8A
- 8AW8A
- 8JV8
- 6JV8

High-Mu Twin Triode
- 12BZ7

34. SYNC CLIPPERS

Medium-Mu Triode—Sharp-Cutoff Tetrode
- 5CQ8
- 6CQ8

Medium-Mu Triode—Sharp-Cutoff Pentode
- 5AN8
- 6AZ8
- 6CX8
- 6AN8A
- 6CH8
- 8CX8
- 6AU8A
- 6CU8

High-Mu Triode—Sharp-Cutoff Pentode
- 6AW8A
- 6JV8
- 8GN8
- 6EB8
- 8AW8A
- 8JV8
- 6GW8
- 8EB8
- 10HF8
- 6HF8

High-Mu Twin Triode
- 12BZ7

Sharp-Cutoff Twin Pentode
- 3BU8
- 4BU8
- 6BU8
- 3GS8
- 4GS8
- 6HS8

For footnotes, see page 55.

Pentagrid Amplifier

● 3BY6 ● 6BY6 ● 6CS6
● 3CS6

35. SYNC SEPARATORS

Medium-Mu Triode—Sharp-Cutoff Tetrode

● 5CQ8 ● 6CQ8

Medium-Mu Triode—Sharp-Cutoff Pentode

● 5AN8 ● 6AZ8 ● 6GH8
● 5GH8 ● 6CH8 ● 6GH8A
● 6AN8A ● 6CU8 ● 8CX8
● 6AU8A ● 6CX8

Medium-Mu Twin Triode

● 6CG7 ● 7AU7 ● 12AU7A

High-Mu Triode with Twin Diode

● 6CN7

High-Mu Triode—Sharp-Cutoff Pentode

● 6AW8A ● 6KA8 ● 8JV8
● 6EB8 ● 6KV8 ● 8KA8
● 6GN8 ● 8AW8A ● 10HF8
● 6HF8 ● 8EB8 ● 11KV8
● 6JV8 ● 8GN8

High-Mu Twin Triode

● 12BZ7

Sharp-Cutoff Twin Pentode

● 3BU8 ● 4BU8 ● 6BU8
● 3GS8 ● 4GS8 ● 6HS8

Pentagrid Amplifier

● 3BY6 ● 6BY6 ● 6CS6
● 3CS6

36. TUNING INDICATORS

Indicator with Triode Unit

6E5 6U5

Twin Indicator Units

○ 6AF6G

For footnotes, see page 55.

37. VERTICAL-DEFLECTION CIRCUITS

OSCILLATORS AND AMPLIFIERS (COMBINED)

Medium-Mu Triode—Low-Mu Triode

- ● 6DE7
- ● 6EW7
- ● 10DE7
- ● 13DE7

Medium-Mu Dual Triode

- ● 6CM7
- ● 6CS7
- ● 8CM7

High-Mu Triode—Low-Mu Triode

- ● 6CY7
- ● 6DR7
- ● 6EA7
- ○ 6EM7
- ■ 6FD7
- ■ 6GF7
- ○ 6GL7
- ● 10DR7
- ○ 10EM7
- ■ 10GF7
- ○ 13EM7
- ■ 13FD7
- ■ 13GF7

High-Mu Triode—Beam Power Tube

- ■ 15KY8

AMPLIFIERS

Low-Mu Triode

- ● 12B4A

Medium-Mu Triode

- ● 6S4A

Beam Power Tube

- ● 5AQ5
- ● 5CZ5
- ○ 5V6GT
- ● 6AQ5A
- ● 6CM6
- ● 6CZ5
- ● 6EM5
- ● 8EM5

Power Pentode

- ○ 6K6GT

38. VIDEO AMPLIFIERS

Medium-Mu Triode—Sharp-Cutoff Pentode

- ● 5AN8
- ● 6AN8A
- ● 6AU8A
- ● 6AZ8
- ● 6BA8A
- ● 6BH8
- ● 6CH8
- ● 6CU8
- ● 6CX8
- ● 8CX8

High-Mu Triode—Sharp-Cutoff Pentode

- ● 6AW8A
- ● 6EB8
- ● 6GN8
- ● 6HF8
- ● 6JV8
- ● 6KV8
- ● 8AW8A
- ● 8EB8
- ● 8GN8
- ● 8JV8
- ● 10HF8
- ● 11KV8

For footnotes, see page 55.

Sharp-Cutoff Pentode

● 12BY7A

Sharp-Cutoff Pentode with Diode

● 5AM8 ● 6AM8A ● 6AS8
● 5AS8

Beam Power Tube

● 25BK5

Power Pentode

○ 6AG7 ● 6CL6 ● 6GK6

● Miniature

○ Octal

△ Nuvistar

■ Navar

▲ Approaches semiremate-cutaff characteristics; used in first-if amplifier applicatians

* Dual-cantral grids

† Far high-fidelity equipment

RECEIVING-TUBE CLASSIFICATION CHART

The Receiving-Tube Classificatian Chart is prepare ta permit a quick identificatian af tubes according t structure and characteristic. It alsa serves as a guid for selecting types with similar characteristics.

The chart has faur main sectians: Voltage Ampl fiers, Pawer Amplifiers, Rectifiers, and Electran-Rc Tubes. In each main sectian the tube types a grauped according ta a significant tube characterist such as cutaff and amplificatian factar. Within ea grauping tubes are arranged according ta heater filament valtage, the number af units in the tube, ar according ta the type af base they utilize.

Tubes having the same filament ar heater valta and similar characteristics and maximum ratings a bracketed. However, types in brackets may have m chanical differences, and differences in basi arrangement. Multi-unit tubes are crass-referenced the appropriate sectians af the chart, and tubes hc ing heaters with cantralled warm-up time far serie string aperatian are shawn in baldface.

HOW TO USE THE CLASSIFICATION CHART

1. Determine the class af tube desired such as tria pentade, etc.
2. Lacate the class af tube in the chart.
3. Select a tube ar graup af tubes having the quired heater ar filament valtage.
4. Review the pertinent data far the selected t ar graup af tubes ta determine if the data me yaur specific requirements.

1. RECEIVING-TUBE CLASSIFICATION CHART

VOLTAGE AMPLIFIERS

Unit	Filament or Heater Volts	Miniature		Octal	Novar or Nuvistor†	Other
TRIODES Types shown in boldface have controlled warm-up time heaters for series-string operation.						
LOW-MU						
Single	2.5					27
	6.3	**12B4A**		6AH4GT 6CK4		
	12.6	12B4A				
Single with Twin Diode	13.5*	12FK6				
Single with Triode	6.3					6EW7
	9.7	**10DE7**	**10EG7**			10EW7
	13	**13DE7**	[13FD7		**13GF7**]	
	13.5*	12AE7				
	14.7					**15FY7**
Single with Pentode	6.3			6AD7G		6F7
MEDIUM-MU						
Single	1.4–3.2	[**2AF4B** **2BN4A** [**3AF4A**	**2DZ4**] **3BN4A** **3DZ4**]		**2DV4†**	1LE3
	6.3	[6AF4 6AF4A 6DZ4 6BC4]	6BN4A 6S4A 6T4	[6C5 6J5 [6J5GT]	6DV4†	7A4
	12.6			12J5GT		
Single with Twin Diodes	6.3	**6BJ8** **6BV8**	[6BF6	6R7 6SR7]		
	12.6		[12BF6	12SR7]		
	13.5*	12AE6A	12FM6			
Single with Triode	6.3	6DE7 7247	12DW7			6EW7
	9.7	**10DE7**	**10EG7**			10EW7
	12.6	12DW7	7247			
	13	**13DE7**	13FD7			
	13.5*	12AE7				

Note: For footnote, see page 73.

VOLTAGE AMPLIFIERS

TRIODES

Types shown in boldface have controlled warm-up time heaters for series-string operation.

MEDIUM-MU — Continued

Unit	Filament or Heater Volts	Miniature	Octal	Novar or Nuvistor†	Other
Single with Tetrode	4.7	**5CL8A** **5CQ8**			
	6.3	**6CL8A** **6CQ8**			
	9.5	**9CL8**			
	13.5*	12DY8			
	18.9	**19CL8**			
Single with Three-Plate Tetrode	6.3	6HF8			
Single with Pentode	4.6—5.6	4BL8, **5AN8**, **5AV8**, **5B8**, **5EA8**, **5AT8**, **5CG8**, 5X8, **5BE8**, **5BR8**, **5U8**, **5FV8**, **5EU8**, **5FG7**, **5GH8**, **5KE8**			
	6.3	**6ANBA**, 6CH8, **6AT8A**, **6CG8A**, **6JC8**, 6X8, **6AU8A**, 6AX8, 6AZ8, **6BA8A**, 6BL8, **6BR8A**, 6KD8, **6CU8**, 6CX8, **6EA8**, **6EU8**, **6EH8**, **6FG7**, **6FV8**, **6FV8A**, **6GH8**, 6GJ7, 6HG8, 6HL8, **6U8A**, 7199			
	8—9.45	**8AU8**, **8BH8**, **9U8A**, **8BA8A**, **8CX8**			
Single with Pentode	12.6	**12CT8**			
	13.5*	12EC8			
	16.8—18.9	**19EA8**, 19JN8, 19X8			**17JZ8**
Single with Twin Pentode	6.3				**6BA11**
Single with Pentode and Diode	13.5*	12FR8			
Single with Pentode and Triode	6.3				6AF11, 6AS11,
	14.7				**15AF11**

Note: For footnote, see page 73.

VOLTAGE AMPLIFIERS

Unit	Filament or Heater Volts	Miniature	Octal	Novar or Nuvistor†	Other
TRIODES Types shown in boldface have controlled warm-up time heaters for series-string operation.					
MEDIUM-MU — Continued					
Single with Pentagrid	13.5*	12FX8			
Twin	3.5	**7AU7**			
	4.2—5.6	[**4BC8** **4BZ7** 4BS8 5J6] [4BQ7A **5BK7A** 5BQ7A 9AU7]			
	6.3	[6BC8 6BS8 **6BK7B** 6FW8 **6GU7** 12AU7A 12AV7 12FV7] [6BQ7A 6BZ7 6BZ8 6FQ7 **6CG7** 6J6A 12AV7 **12BH7A**]	6BL7GTA 6BX7GT 6C8G 6F8G 6SN7GTB		7AF7 7F8 7N7
	7—9.4	[8CG7 8FQ7] [7AU7 9AU7]			
	12.6	12AU7A 12AV7 12FV7 12AV7 12BH7A	12AH7GT 12SN7GTA		14AF7 14F8
	13.5*	12U7			
	18.9	19J6			
Twin with Twin Diode	6.3—8.5				**6B10** **8B10**
Dual	**6.3**	**6CM7** **6CS7**	[6DN7		6FJ7]
	8.4	**8CM7** **8CS7**			
Single with Dual Triode	6.3				**6K11** **6Q11**
HIGH-MU					
Single	2.1—2.8	2ER5 2GK5 **3FH5** 2FH5 3ER5 [**3GK5** 3HA5]		[2CW4† **2DS4†**]	
	6.3	6AB4 6AN4 6ES5 6FQ5A 6AM4 6ER5 6FH5 [6GK5 6HA5]	6F5 [6SF5 6SF5GT]	[6CW4† 6DS4†]	7B4
	12.6—13.5		12SF5	13CW4†	
Single with Diode	1.4		1H5GT		1LH4

Note: For footnote, see page 73.

VOLTAGE AMPLIFIERS

TRIODES

Types shown in boldface have controlled warm-up time heaters for series-string operation.

HIGH-MU — Continued

Unit	Filament or Heater Volts	Miniature		Octal	Nuvistor†	Other
Single with Twin Diode	3.15	**3AV6**	**6CN7**			
	4.2—4.7	**4AV6** **9BR7**	**8CN7**			
	6.3	**6BN8** 6FM8 12BR7	6CN7 6AQ6 6AT6 6AV6	6AQ7GT 6Q7 6Q7GT 6SQ7 6SQ7GT		7B6 7C6 7K7 7X7 75
	8.4—9.4	**8BN8** 9BR7	8CN7			
	12.6	12AT6 12BR7	12AV6	12Q7GT 12SQ7 12SQ7GT		14B6
	13.5*	12AJ6	12EL6			
	14—18	14GT8 18FY6	**18FY6A**			
Single with Three Diodes	4.7	**5T8**				
	6.3	**6T8**		6S8GT		
	18.9	19T8				
Single with Pentode	4.7—5.2	**5CM8**	**5DH8**			
	6.3	**6AW8A** 6EB8 6HF8 6DX8 6JT8 **6JV8**	**6CM8** 6GN8 **6KA8** 6KT8 6KV8			
	8—10.9	**8AW8A** 8GN8 **8JV8** **10C8** **10GN8** **10JA8**	8EB8 **8KA8** **10HF8** **11KV8**			
	18.9	19HV8				
	35	35DZ8				
Single with Triode	6.3	6FD7 6EA7 6DR7 6CY7 12DW7	7247	6EM7 6GL7	6GF7	6FM7 6FY7
	9.7—11	**10DR7**	**11CY7**	**10EM7**		
	12.6	12DW7	7247			
	13—14.7	**13FD7**		**13EM7**	**13GF7**	**15FY**

Note: For footnote, see page 73.

VOLTAGE AMPLIFIERS

Unit	Filament or Heater Volts	Miniature	Octal	Novar or Nuvistor†	Other
TRIODES					
Types shown in boldface have controlled warm-up time heaters for series string operation.					
HIGH-MU — Continued					
Single with Pentode and Triode	6.3				[6AF11 6AS11]
	14.7				**15AF11**
Single with Beam Power Tube	15			**15KY8**	
Twin	6.3	[6AQ8 6EV7 6DT8 6EU7 12AT7 12AX7 12AX7A **12AZ7A** 7025 12BZ7]	6SC7 6SL7GT		7F7
	12.6	[12AT7 12AX7 12AX7A 7025 12AZ7A 12DT8 12BZ7]	12SC7 12SL7GT		14F7
	20	**20EZ7**			
Twin Each Unit with Double Plate	12.6	12FQ8			
Dual with Third Triode	6.3				**6K11 6Q11**
Triple	6.3	6EZ8 6GY8			
VARIABLE-MU					
Twin	4	**4ES8**			
	6.3	6ES8			
SHARP-CUTOFF BEAM					
Single	6.3		6BK4		
TETRODES					
Types shown in boldface have controlled warm-up time heaters for series-string operation.					
REMOTE-CUTOFF					
Single with Triode	13.5*	12DY8			
SHARP-CUTOFF					
Single	2.4—3.5	**2CY5** 3CY5 **3EA5**			24A

Note: For footnote, see page 73.

VOLTAGE AMPLIFIERS

Unit	Filament or Heater Volts	Miniature	Octal	Novar or Nuvistor†	Other
TETRODES					
Types shown in boldface have controlled warm-up time heaters for series-string operation.					
SHARP-CUTOFF — Continued					
Single	4.5	**4CY5**			
	6.3	[6CY5 6FV6] 6EA5 6EV5			
Single with Triode	4.7	[**5CL8A** **5CQ8**]			
	6.3	[6CL8A 6CQ8]			
	9.5	**9CL8**			
	18.9	**19CL8A**			
Twin-Plate with Diode	6.3	6FA7			
Three-Plate with Diode	6.3	6KM8			
Three-Plate with Triode	6.3	6FH8			
Dual	6.3	6C9			
	16.8	**17C9**			
PENTODES					
Types shown in boldface have controlled warm-up time heaters for series-string operation.					
REMOTE-CUTOFF					
Single	1.4—3.15	1T4 **3BA6**			1LG5
	6.3	6BA6	[6K7 6K7GT 6S7 6SK7 6SK7GT 6SS7]		78 [6D6 7A7 7B7]
		6BJ6 [6BD6]			
	12.6	12BA6 [12BD6]	12K7GT 12SK7 12SK7GT]		14A7
	13.5*	12AC6 12AF6 12BL6 12CN5 12CX6 12DZ6 12EA6 12EK6			
	18	[18FW6 **18FW6A**]			
Single with Diode	6.3	6CR6 6EQ7	6SF7		
	12.6	12CR6 12EQ7	12SF7		
	13.5*	12DE8			
	20	20EQ7			

Note: For footnote, see page 73.

VOLTAGE AMPLIFIERS

Unit	Filament or Heater Volts	Miniature	Octal	Novar or Nuvistor†	Other
PENTODES Types shown in boldface have controlled warm-up time heaters for series-string operation.					
REMOTE-CUTOFF — Continued					
Single with Twin Diode	6.3	6DC8			7E7 7R7
	12.6				14R7
	13.5*	12F8			
Single with Triode	6.3				6F7
Single with Triode and Diode	13.5*	12FR8			
SEMIREMOTE-CUTOFF					
Single	3.15—3.4	**3BZ6** **3EH7**			
	4.2—5.6	**4BZ6** **5GM6** 4EH7 **4HT6**			
	6.3	[6JH6 6BZ6] 6EH7 6GM6 **6HR6**	6SG7		
	12.6	12BZ6	12SG7		
	18.9	**19HR6**			
Single with Diode	1.4	1DN5			
Single with Twin Diode	6.3		6B8		
	12.6		12C8		
Single with Triode	6.3	6AX8			
	13.5*	12EC8			
Twin	6.3				6AR11
	11.2				**11AR11**
SHARP-CUTOFF					
Single	1.4—3.5	1U4 **3AU6** [**3BC5** 3CE5 **3CB6** 3EJ7 **3CF6** **3DT6A** **3DK6** [**3JC6** **3JD6**]	1N5GT		1LN5
	4.2—5.6	**4AU6** **4BC5** [**4CB6** **4DE6**] 4EJ7 **4DT6A** **4EW6** [**4JC6** **4HM6** **4JD6**] **5GX6** **5EW6**			

Note: For footnote, see page 73.

VOLTAGE AMPLIFIERS

PENTODES

Types shown in boldface have controlled warm-up time heaters for series-string operation.

SHARP-CUTOFF — Continued

Unit	Filament or Heater Volts	Miniature	Octal	Novar or Nuvistor†	Other
Single	6.3	[6AG5 6BC5] 6BH6 [6CB6 6CF6] 6DC6 [6JC6 6JD6] 6AH6 6AK5 **6AU6A** 6DK6 **6CB6A** **6CE5** 6DE6	6AB7 6AC7 [6J7 6J7GT] 6SH7 6SJ7 6SJ7GT		6C6 7AG7 7AH7 7C7 7G7 7V7 7W7
		6EJ7 [6DT6A 6GX6] **6HS6** 12BV7 5879 6EW6 **6HZ6** 6GY6 **12GN7** **12BY7A** 7543			
	12.6	12AU6 12BV7 12DK6 12AW6 12BY7A 12GN7	12J7GT 12SH7 12SJ7		14C7
	18—18.9	**18GF6A** **19HS6**			
Single with Diode	1.4	1S5 1U5			
	4.7	**5AM8** **5AS8**			
	6.3	**6AM8A** **6BY8** 6AS8 **6HJ8**			
Single with Twin Diode	4.7	**5BT8** **5BW8**			
	6.3	6BW8			
	8	**8ET7**			
Single with Triode	4.6—5.2	48L8 [5AN8 5AV8 5B8] [5AT8 5CG8 5X8] [5BE8 5BR8 5U8 5EA8] 5CM8 5DH8 5EU8 [5FV8 5FG7] 5GH8 5KE8			
	6.3	[6AN8 6AT8A 6CG8A 6JC8 6X8] [6EA8 6EU8 6E88 6EH8 6FG7] [6AU8A 6AW8A 6BA8A] [6FV8 6FV8A 6GH8] 6AZ8 6BH8 6BL8 [6BR8A 6KD8 6U8A] 6GJ7 6GN8 6HF8 6HG8 **6HL8** **6JB8**			

Note: For footnote, see page 73.

VOLTAGE AMPLIFIERS

Unit	Filament or Heater Volts	Miniature	Octal	Novar or Nuvistor†	Other
PENTODES Types shown in boldface have controlled warm-up time heaters for series-string operation.					
SHARP-CUTOFF — Continued					
Single with Triode	6.3	6CH8 6JT8 **6CM8 6KA8** **6CU8** 6KT8 6CX8 6KV8 6DX8 7199			
	8—10.9	**8AU8 8JV8** **8BH8** [**8AW8A** **8CX8** [**8BA8A**] **8GN8 8EB8** **9U8A 8KA8** **10HF8 10CS** **10GN8 11KV8**			
	12.6	**12CT8**			
	18.9	19EA8 19X8 19HV8 19JN8			
Single with Dual Triode	6.3				[6AF11 6AS11]
	14.7				**15AF11**
Single with Beam Power Tube	6.3				6AL11 6G11
	12.6				**12AL11**
Twin	3.15	[**3BU8** **3GS8**]			
	4.2	[**4BU8** **4GS8**] **4HS8**			
	6.3	[6BU8 6GS8] 6HS8			
Twin with Triode	6.3				**6BA11**
BEAM TUBES — PENTAGRIDS Types shown in boldface have controlled warm-up time heaters for series-string operation.					
BEAM TUBES					
Single	3.15	**3BN6**			
	4.2	**4BN6**			
	6.3	6BN6 6JH8			
PENTAGRIDS					
Single	1.4—3.15	1L6 1R5 **3BE6** **3BY6** **3CS6**	1A7GT		1LA6 1LC6

Note: For footnote, see page 73.

VOLTAGE AMPLIFIERS

Unit	Filament or Heater Volts	Miniature	Octal	Novar or Nuvistor†	Other
PENTAGRIDS—HEXODES—HEPTODES—OCTODES					
Types shown in boldface have controlled warm-up time heaters for series-string operation.					
PENTAGRIDS — Continued					
Single	4.2	**4CS6**			
	6.3	6BY6 6CS6 [6BE6 6BA7]	[6A8 6A8G 6A8GT 6L7 6SA7 6SA7GT 6SB7Y]		[6A7] 7B8 7Q7
	12.6	12BA7 [12BE6]	[12A8GT 12SA7 12SA7GT]		14Q7
	13.5*	12AD6 12GA6	12EG6		
	18	[18FX6	**18FX6A**]		
Single with Triode	13.5*	12FX8			
HEXODES					
Single	2.4—6.3	**2FS5** 6FS5			
Single with Triode	6.3		6K8		
	12.6		12K8		
HEPTODES					
Single with Triode	6.3				7J7
OCTODES					
Single	6.3				7A8

POWER AMPLIFIERS

Unit	Filament or Heater Volts	Miniature	Octal	Novar or Nuvistor†	Other
TRIODES					
Types shown in boldface have controlled warm-up time heaters for series-string operation.					
LOW-MU					
Single	2.5—6.3		6CK4		2A3
Single with Triode	6.3	6CY7 6DE7 [6FD7 6EA7 6DR7]	6EM7 6GL7	6GF7]	[6EW7 6FM7 6FY7]

Note: For footnote, see page 73.

POWER AMPLIFIERS

TRIODES

Types shown in boldface have controlled warm-up time heaters for series-string operation.

LOW-MU — Continued

Unit	Filament or Heater Volts	Miniature		Octal	Nuvistor†	Other
Single with Triode	9.7—11	10DE7	10DR7 11CY7	10EM7 10EG7		
	13—14.7	13DE7 13DR7	13FD7	13EM7	13GF7	15FY7
Single with Pentode	6.3					6F7

MEDIUM-MU

Unit	Filament or Heater Volts	Miniature		Octal	Nuvistor†	Other
Single	2.1—3.2	2DZ4 3AF4A	2AF4B 3DZ4		2DV4†	
	6.3	6AF4 6AF4A 6DZ4 6DE7	6C4 6T4		6DV4†	6EW7
Single with Triode	9.7	10DE7	10EG7			
	13	13DE7				
Single with Tetrode	4.7	6CL8A	5CQ8			
	6.3	6CL8A	6CQ8			
	9.5	9CL8				
	18.9	19CL8				
Single with Pentode	4.7—5.6	5AN8 5AV8 5B8 5AT8 5CG8 5X8 5FG7	5BE8 5BR8 5U8 5EA8 5EU8 5FV8 5KE8			
	6.3	6AT8A 6CG8A 6KD8 6FV8 6FV8A 6EH8 6FG7 6GJ7	6JC8 6X8 6BR8A 6EA8 6EU8 6U8A 6HG8			
	9.45	9U8A				
	13.5*	12EC8				
	16.8					17JZ8
	18.9	19EA8	19X8			
Single with Twin Pentode	6.3					6BA11
Single with Hexode	6.3			6K8		
	12.6			12K8		
Single with Heptode	6.3					7J7

Note: For footnote, see page 73.

POWER AMPLIFIERS

TRIODES

Types shown in boldface have controlled warm-up time heaters for series-string operation.

MEDIUM-MU — Continued

Unit	Filament or Heater Volts	Miniature		Octal	Novar or Nuvistor†	Other
Twin	3.5—4.7	7AU7	9AU7			
	6.3	6CG7, 12AU7A	6FQ7, 6J6A, 12BH7A	6BL7GTA, 6BX7GT, 6N7, L6N7GT, 6SN7GTA		
	7—9.4	8CG7, 8FQ7	7AU7, 9AU7			
	12.6	12AU7A	12BH7A	12SN7GTA		
	18.9	19J6				
Twin with Twin Diode	6.3					6B10
	8.5					8B10
Dual	6.3	6CM7	6CS7	6DN7		6FJ7
	8.4	8CM7	8CS7			

HIGH-MU

Single	6.3			6AC5GT		
Single with Pentode	10.5	10C8				
Single with Triode	6.3	6CY7	6FD7, 6EA7, 6DR7	6EM7, 6GL7	6GF7	6FM7, 6FY7
	9.7—11	10DR7	11CY7	10EM7		
	13—14.7	13DR7	13FD7	13EM7	13GF7	15FY7
Single with Beam Power Tube	15				15KY8	

TETRODES

Types shown in boldface have controlled warm-up time heaters for series-string operation.

Single	13.5*	12K5				
Single with Twin Diode	13.5*	12DK7, 12DS7, 12DV8	12DL8, 12DU7, 12J8			
Single with Triode	13.5*	12AL8				

Note: For footnote, see page 73.

POWER AMPLIFIERS

BEAM POWER TUBES

Types shown in boldface have controlled warm-up time heaters for series-string operation.

Unit	Filament or Heater Volts	Miniature	Octal	Novar or Nuvistor†	Other
Single	1.4—2.8		3Q5GT		3LF4
	4.7	5AQ5 5CZ5	5V6GT		
	6.3	**6AQ5A** 6AS5 6BF5 6BK5 6CA5 6CM6 6CU5 **6CZ5** 6DB5 6DS5 6DT5 6DW5 6EM5 6973	6AU5GT 6CB5A 6BG6G **6BG6GA** 6BQ6GTB/ 6CU6 6AV5GA 6DG6GT 6CD6GA 6DN6 6DQ5 6DQ6A 6DQ6B 6FW5 **6GW6** **6EX6** **6EY6** 6EZ5 6FE5 6L6 6L6GB 6L6GC 5881 7027A 6V6 6V6GTA 7408 6W6GT 6Y6G 6Y6GA 7591	6JE6 6JB6 6GT5 6GJ5	7A5 7C5 6GC5 6GV5 6GE5 6GF5 6HE5 6HF5
Single	7.2—8.4	8EM5	7EY6		
	12.6	12CA5 12CU5/ 12C5 12DB5 12ED5 12DT5 12R5	**12AV5GA** **12BQ6GTB** /12CU6 **12DQ6A** **12DQ6B** **12GW6** **12GC6** **12EN6** **12L6GT** 12V6GT **12W6GT**	**12JB6** **12GJ5** 12GT5	**12GE5**
	13.5*	12AB5 12AQ5 12BK5			
	16.8—50	25BK5 25C5 25CA5 17CU5 34GD5 34GO5A 35B5 35C5 35GL6 25F5A 50B5 50C5	**17BQ6GTB** **17DQ6B** **17GW6** **18A5** **19BG6GA** **21EX6** 25AV5GA 25BQ6GTB /25CU6	**17JB6** 17GJ5 17GT5 **22JG6**	35A5 50A5 **17GE5** **17GV5** **21GY5** 7695

Note: For footnote, see page 73.

POWER AMPLIFIERS

Unit	Filament or Heater Volts	Miniature	Octal	Nuvar or Nuvistor†	Other
BEAM POWER TUBES —Continued Types shown in boldface have controlled warm-up time heaters for series-string operation.					
Single	16.8—50		**25CD6GB** **25DN6** **25EC6** [25L6 25L6GT] 35L6GT 50FE5 50L6GT		
Single with Diode	70—117		70L7GT 117L7GT/ 117M7GT 117N7GT 117P7GT		
Single with Triode	15			15KY8	
Single with Sharp-Cutoff Pentode	6.3				6AL11 6G11
	12.6				**12AL11**
Single with Power Pentode	13.2				**13J10**
PENTODES Types shown in boldface have controlled warm-up time heaters for series-string operation.					
Single	1.4—4.2	[1S4 3S4] [3Q4† 3V4† **4GZ5**	1A5GT 1C5GT		1LB4 47
	6.3	6AR5 [6BQ5 6GK6 7189 6HB6 [6CL6 6EH5 **12DQ7**	[6AG7 6F6 6F6G 6F6GT] 6G6G [6K6GT 7355	1000	100 42 41]
	8	**8BQ5**			
	12.6—14.7	12DQ7 **12FX5** 12EH5 15HB6			
	25—60	25EH5 35EH5 50FK5 60FX5 [32ET5 **32ET5A** 50EH5 50HK6			
Single with Triode	6.3—16.8	6GV8 **10JA8**	6AD7G		**17JZ8**
	35	35DZ8			
Single with Beam Power Tube	13.2				**13J10**
Twin	6.3		6DZ7		

Note: For footnote, see page 73.

POWER AMPLIFIERS

PENTAGRIDS

Types shown in boldface have controlled warm-up time heaters for series-string operation.

Unit	Filament or Heater Volts	Miniature		Octal	Novar or Nuvistor†	Other
Single	1.4—3.15	1L6 3BE6	1R5	1A7GT		1LA6 1LC6
	6.3		[6BE6 6BA7]	[6A8 6A8G 6A8GT 6L7 6SA7 6SA7GT 6SB7Y]		[6A7] 7B8 7Q7
	12.6	12BA7	[12BE6]	[12A8GT 12SA7 12SA7GT]		14Q7
	13.5*	12AD6	12GA6			
	18	[18FX6	18FX6A]			

RECTIFIERS

VACUUM TYPES

Types shown in boldface have controlled warm-up time heaters for series-string operation.

SINGLE DIODES

Filament or Heater Volts	Miniature		Octal		Novar	Other
1.25—3.15	[1A3* 1V2 1X2A 3A2]	1AX2 [1X2B]	[1B3GT 1G3GT/1B3GT 1K3 3A3 3AW3]	1J3 1N2A 3B2		[1AD2] 3AT3 [2AH2 2AS2]
6.3	6AF3 6V3A	6AL3	6AU4GTA 6CQ4 6DA4 [6DM4	[6AX4GT 6AX4GTB] 6DE4 6W4GT 6DQ4]	[6BH3 6DW4 6AY3 6BS3 6BA3]	1-v [6BE3] [6AX3]
12.6		[12AF3]	[12AX4GTA 12D4]	[12AX4GTB 12DM4]	[12AY3 12BS3]	12AX3

Note: For footnote, see page 73.

RECTIFIERS

Filament or Heater Volts	Miniature	Octal	Novar	Other
VACUUM TYPES				
Types shown in boldface have controlled warm-up time heaters for series-string operation.				
SINGLE DIODES — Continued				
16.4—35	**17H3** 35W4 **36AM3B** 36AM3A 16AQ3 50DC4 117Z3	**17AX4GT** **19AU4** **17AX4GTA** **19AU4GTA** 17D4 17DE4 17DM4 22DE4 25AX4GT 25W4GT 35Z4GT 35Z5GT	**17AY3** **17BS3** 17BH3 22BH3	**17AX3** 35Y4 35Z3
SINGLE DIODES WITH BEAM POWER TUBE				
70—117		70L7GT 117L7GT/117M7GT 117N7GT 117P7GT		
TWIN DIODES				
2.1—3.3	2EN5* 3AL5*	3DG4		
5		5AS4A 5T4 5U4G 5U4GB 5X4G 5AU4 5AW4 5DJ4 5V3A 5V4G 5V4GA 5Y3GT 5Y4GA 5Y4GT 5Z4	5BC3	5Z3 5AZ4 80
6.3	6AL5* 6BW4 6CA4 6X4	6AX5GT 6BY5GA 6H6* 6X5GT		7A6* 7Y4 7Z4 84/6Z4
12.6	12AL5* 12BW4 12X4	12H6*		
25—117		50Y6GT 25Z6GT 50Y7GT 117Z6GT		25Z5 50X6
TRIPLE DIODES				
6.3	6BC7* 6BJ7*			
QUADRUPLE DIODES				
6.3	6JU8*			

Note: For footnote, see poge 73.

RECTIFIERS

Unit	Filament or Heater Volts	Miniature	Octal	Novar or Nuvistor†	Other
GAS TYPES Types shown in boldface have controlled warm-up time heaters for series-string operation.					
TWIN DIODES					
Ionically-Heated Cathode			0Z4 0Z4G		

ELECTRON-RAY TUBES

Filament or Heater Volts	Miniature	Octal	Novar	Other
SINGLE INDICATORS WITH TRIODE				
6.3	EM84/6FG6			6AB5/ 6N5 6E5 6U5
TWIN INDICATORS				
6.3		6AF6G		
TRIPLE INDICATORS				
6.3		6AL7GT		

EXPLANATION OF FOOTNOTES

NOTE: Types having similar characteristics and the same filament or heater voltage are bracketed.

NOTE: For diode detectors with amplifier units, see Voltage and Power Amplifiers.

* For use in mobile receivers with electrode voltages supplied directly from a 6-cell storage battery, having a heater range from 10 to 15.9 volts.

‡ Filament arranged for either 1.4- or 2.8-volt operation.

ª Detector type.

1964 Interchangeability Directory of Foreign

Foreign Type to be Replaced	U.S.A. Type for Use as Replacement	
	Direct*	Similar†
1C2	1AC6	
1D13	1A3	
1F2	1L4	
1F3	1T4	
1FD1	1AH5	1S5
1FD9	1S5	
1H35		
1LA6E		1LA6
1LN5E		1LN5
1M1		1M3
1N5VG		1N5GT
1P10	3S4	
1P11	3V4	
1R5SF	1AQ5	1R5
1R6		
1S5SF	1AR5	1S5
1T4SF	1AM4	1T4
1U5SF	1AS5	1U5
3A4T		3A4
3S4SF	3W4	3S4
3Y4		
4R-HH2	4BQ7A	
4R-HH8	4KN8	
5M-HH3	5J6	
5MK4		
5MK9		
5RK16		
5Y3GB		5Y3GT
5Y4SG		5Y3GT
6A7E		6A7
6AT7		
6B8EG		6B8
6BS4		6AF4
		6AF4A
6BV7		
6C10		6CU7
6C12	6AJ8	
6C16	6BL8	
6CF8		
6CN5		
6CW7		
6D2	6AL5	
6E8	6A8	
6F7B		6F7
6F7E		6F7
6F12	6AM6	6BH6
6F15		
6F16	6CJ5	
6F18	6EC7	
6F19	6BY7	
6F20		
6F21	6CQ6	6BJ6
6F22	6267	5879
6F23		6EL7
6F24		6EJ7
6F25		6EH7
6F26	6BY7	
6F29	6EH7	
6F30	6EJ7	
6FX4		
6G8G		
6J6L		6J6A
6J6R		6J6A
6J8EG		6J8G
6J8GA		6J8G
6L12	6AQ8	
6L13	12AX7A	
	7025	
6L16	6CW7	
6L34	6AQ4	
6LD3	6CV7	
6LD12	6AK8	6T8A
6LD13	6BD7	
6M1		
6M2	6CD7	
6M-HH3	6J6A	
6N8K		
6P9	6BM5	

Note: Types shown in bold face are RCA types.

vs. U.S.A. Receiving-Type Electron Tubes

Foreign Type to be Replaced	U.S.A. Type for Use as Replacement		Foreign Type to be Replaced	U.S.A. Type for Use as Replacement	
	Direct*	Similar†		Direct*	Similar†
6P15	6BQ5		24/76		6P5G
6P17	6AM5				6P5GT
6Q8		6A8	24/78		6K7
		6A8G			6K7GT
		6A8GT			
6R-HH2	6BQ7A		30C1	9A8	9U8A
6R-HH8	6KN8		30F5		
			20L1	7AN7	
7D9	6AM5		30P4		25BQ6GTB
7D10	6CH6	6BQ5	30P16	16A5	
7H16	6CJ5				
8A8			30P18	15CW5	
			30PL13	16GK8	
8D3	6AM6	6BA6	41E		41
			41M		6K6GT
8D4			42E		42
8D5	6BR7	5879	50F2		
8D7	6BS7	5879			
8AB4			52KU		5V4GA
8D6	6CQ6	6BJ6	53KU		5V4GA
			62DDT	6CV7	
9P9	9BM5		62TH	6CU7	7J7
0C14	19D8		62VP	6CJ5	
0L14	26AQ8				
0LD3	14L7		63ME		6U5
0LD12	28AK8		63SPT		
			63TP	6AB8	
0P18	45B5		64ME	6CD7	
0PL12	50BM8		64SPT	6BX6	
1L6		6L6			
		6L6GC	65ME	6BR5	
2AJ8			66KU	6BT4	
2AU7R		12AU7A	67PT	6CK5	
			77E		6C6
2AX7R		12AX7	77M		6J7
		12AX7A			6J7GT
		7025			
2DA6			80HK		
3D2	6SN7GTB		80S		5Z4
7N8		17C8	85A1	OE3	
9A3			85A2	OG3	5651A
9AJ8	19D8		85A3		
9BR5			86M		6P5
9SU	19Y3				6P5GT
9U3		19X3	88M		6SK7
			89RS		6B8
					6B8G

or footnotes * †, see page 84.

Foreign Type to be Replaced	U.S.A. Type for Use as Replacement	
	Direct*	Similar†
90C1		
108C1	OB2	
121VP	12AC5	
141DDT	14L7	
141TH	14K7	
150B2		
150C1	OA2	
150C2	OA2	
150C3	OD3	
150C4		OA2
171DDP	17C8	
311SU	31A3	
451PT	45A5	
5928		
A676		76
A678		78
A863		6J7
		6J7GT
A1834	6AS7G	
	6080	
A5210		OB2
		OB2WA
A5211		OA2
		OA2WA
AA91E	5726	
	6AL5W	
AG5209	OG3	5651A
B36	12SN7GTA	
B63	6A6	
B65	6SN7GTB	
B109	26AQ8	
B152	12AT7	
B309	12AT7	
B319		7AN7
B329	12AU7A	
B339	12AX7	
	12AX7A	
	7025	
B719	6AQ8	
B739		12AT7
B749		12AU7A

Foreign Type to be Replaced	U.S.A. Type for Use as Replacement	
	Direct*	Similar†
B759		12AX7
		12AX7A
		7025
BF61	6CK5	6CL6
BPM04	6AQ5A	
CC81E	6201	
D2M9	6AL5	
D61		6CT7
D63		6H6
D77	6AL5	
D152	6AL5	
DA90	1A3	
DAC32	1H5GT	
DAF91	1S5	
DAF92		1U5
DAF96	1AH5	1S5
DAF191		1S5
DC70	6375	1E3
DC80		1E3
DCC90	3A5	
DCF60		1V6
DD6		6AL5
DD7	6AM5	
DDR7	6AM5	
DF33	1N5GT	
DF60	5678	
DF62	1AD4	
DF91	1T4	
DF92	1L4	
DF96	1AJ4	1T4
DF97	1AN5	
DF904		1U4
DH63	6Q7	
DH63M		6Q7
		6Q7GT
DH76		12Q7GT
DH77	6AT6	
DG81		7B6

Note: Types shown in bold face are RCA types.

vs. U.S.A. Receiving-Type Electron Tubes

Foreign Type to be Replaced	U.S.A. Type for Use as Replacement	
	Direct*	Similar†
DH109	28AK8	
DH118		14L7
DH142		14L7
DH147		6Q7
		6Q7GT
DH149		7C6
DH150	6CV7	
DH719	6T8A	
DH817	6CV7	
DK32	1AB6	1A7GT
	1AC6	
DK91	1R5	
DK92	1AC6	
DK96	1AB6	
DK97	1AB6	
DL29		3D6
DL31		1A5GT
DL33	3Q5GT	
DL35	1C5GT	
DL36		1Q5GT
DL63		6R7
DL67	6007	
DL70	6373	
DL74M		12Q7GT
DL82		7B6
DL91	1S4	
DL92	3S4	
DL93	3A4	
DL94	3V4	
DL95	3Q4	
DL96	3C4	3V4
DL98	3B4	
DL193		3A4
DL620	5672	
DM70	1M3	
DM71	1N3	
DM160	6977	
DP61	6AK5	

Foreign Type to be Replaced	U.S.A. Type for Use as Replacement	
	Direct*	Similar†
DS77		6AL5
DY30		1B3GT
DY70	5642	
DY80		1X2B
DY86	1S2	
DY87	1S2A	
E1T	6370	
E80CC	6085	
E80CF	7643	
E80F	6084	
E80L	6227	
E81CC	12AT7WA	
	6201	
E81L	6686	
E83F	6689	
E88CC	6922	
E90CC	5920	
E90F		6661/
		6BH6
		6BH6
E91AA	5726	
E91H	6687	5915
E91N	5727	
E95F	5654	6AK5
E99F		6BJ6
E130L	7534	
E180CC	7062	
E180F	6688	
E182CC	7119	7044
E182F	5847	
E188CC		6922
EA50		
EA52	6923	
EA76	6489	
EAA91	6AL5	
EAA171		6AL5
EAA901S	5726	6AL5
EABC80	6T8A	
EAF42	6CT7	
EB34		6H6

or footnotes * †, see page 84.

Foreign Type to be Replaced	U.S.A. Type for Use as Replacement	
	Direct*	Similar†
EB91	6AL5	
EBC33		6Q7
		6Q7GT
EBC41	6CV7	
EBC80	6BD7	
EBC81		6BD7
EBC90	6AT6	
EBC91	6AV6	
EBF32		6B8
EBF80	6N8	
EBF81	6AD8	
EBF83	6DR8	
EBF89	6DC8	
EBF171		6N8
EBF175		6DC8
EBL31		
EC70	5718	
EC71	5718	
EC80	6Q4	6BC4
EC81	6R4	
EC84	6AJ4	
EC86	6CM4	
EC90	6C4	
EC91	6AQ4	
EC92	6AB4	
EC93	6BS4	6AF4
		6AF4A
EC94	6AF4	
	6AF4A	
EC95	6ER5	
EC97	6FY5	6FQ5A
ECC32		6SN7GTB
ECC33		6SN7GTB
ECC34		
ECC35		6SL7GT
ECC40		6N7GT
ECC70	6021	
ECC81	12AT7	

Foreign Type to be Replaced	U.S.A. Type for Use as Replacement	
	Direct*	Similar†
ECC82	12AU7A	
ECC83	12AX7A	
	7025	
ECC84	6CW7	
ECC85	6AQ8	
ECC86	6GM8	
ECC88	6DJ8	6922
ECC89	6FC7	6ES8
ECC91	6J6A	
ECC180	6BQ7A	
ECC186	7316	
ECC189	6ES8	
ECC230	6080	
ECC801	12AT7WA	
	6201	
ECC801S	12AT7WA	
	6201	
ECC802	6189/	
	12AU7WA	
ECC802S	6189/	
	12AU7WA	
ECC803	12AX7A	
	7025	
ECC803S	12AX7A	
	7025	
ECC960	5920	
ECF80	6BL8	
ECF82	6U8A	
ECF86	6HG8	
ECF801	6GJ7	
ECH3G		6K8
ECH35		6K8
ECH42	6CU7	7J7
ECH80	6AN7	
ECH81	6AJ8	
ECH83	6DS8	
ECH113	6CU7	7J7
ECH171		6AJ8
ECL80	6AB8	
ECL82	6BM8	
ECL83		6BM8
ECL84	6DX8	

Note: Types shown in bold face are RCA types.

vs. U.S.A. Receiving-Type Electron Tubes

Foreign Type to be Replaced	U.S.A. Type for Use as Replacement		Foreign Type to be Replaced	U.S.A. Type for Use as Replacement	
	Direct*	Similar†		Direct*	Similar†
ECL85	6GV8		EF183	6EH7	
ECL86	6GW8		EF184	6EJ7	
ED7		6AL5	EF730	5636	
EF5	6DA6		EF731	5899	
EF9		6K7	EF732	5840	
		6K7GT			
			EF734	6205	
EF13	6DA6		EF811		6EH7
EF22	7G7	7B7	EF812		6EL7
EF36		6J7	EF814		6EJ7
		6J7GT	EF861	6688	
EF37A		6J7GT	EF905	5654	6AK5
		1620	EH90	6CS6	
EF39		6K7	EH900		5915
		6K7GT			
			EK90	6BE6	
EF40		5879	EL32		6V6GTA
EF41	6CJ5		EL33		6V6
EF42		6EW6			6V6GTA
EF50			EL34	6CA7	7027A
EF55			EL35		6Y6G
EF70	6487		EL36	6CM5	
EF73	6488		EL37		6L6GC
EF74	6391				7027A
EF80	6BX6		EL38	6CN6	6CB5A
EF81	6BH5		EL41	6CK5	6CL6
			EL42		
EF82	6CH6	6BQ5			
EF85	6BY7		EL71	5902	
EF86	6267	5879	EL80	6M5	6BQ5
EF89	6DA6		EL81	6CJ6	
EF89F	6DG7		EL82	6DY5	
			EL83	6CK6	6CL6
EF91	6AM6				
EF92	6CQ6		EL84	6BQ5	
EF93	6BA6		EL85	6BN5	
EF94	6AU6A		EL86	6CW5	
	7543		EL90	6AQ5A	
EF95	6AK5		EL91	6AM5	
EF96		6AG5	EL95	6DL5	
EF97	6ES6		EL360		6CM5
EF98	6ET6		EL500	6GB5	
F174		6BS6	EL803		6CK6
F175		6BY7	EL821	6CH6	6BQ5

or footnotes * †, see page 84.

Foreign Type to be Replaced	U.S.A. Type for Use as Replacement	
	Direct*	Similar†
EL822		6BQ5
EL861	6686	
ELL80	6HU8	
EM34	6CD7	
EM35		
EM80	6BR5	
EM81	6DA5	
EM84	EM84/ 6FG6	
EM85	6DG7	
EM87	6HU6/ EM87	
EM840		EM84/ 6GF6
EN32	2050A	
EN91	2D21	
EN92		5696
EN93	6D4	
EQ80	6BE7	
EY51	6X2	
EY80	6U3	
EY81	6R3	6AF3
EY82	6N3	
EY83		6S2
EY84		6374
EY86	6S2	
EY87	6S2A	
EY88	6AL3	
EY91		
EZ3	6V4	6CA4
EZ4	6CA4	
EZ11	6V4	6CA4
EZ35	6X5GT	
EZ40	6BT4	
EZ41		
EZ80	6V4	6CA4
EZ81	6CA4	
EZ90	6X4	

Foreign Type to be Replaced	U.S.A. Type for Use as Replacement	
	Direct*	Similar†
GZ30	5Z4	
GZ31		5U4G
		5U4GB
GZ32		5V4GA
GZ33		5AR4
GZ34	5AR4	
H63		6F5
HAA91		12AL5
HABC80		19T8
HBC90	12AT6	
HBC91	12AV6	
HCC85	17EW8	
HCH81	12AJ7	
HD14		1H5G
		1H5G
HD30		3B4
HD51	OA2	
HD52	OB2	
HD94	6BQ6GTB/ 6CU6	
HD96	25BQ6GTB/ 25CU6	
HF61	6CJ5	
HF93	12BA6	
HF94	12AU6	
HF121	12AC5	
HK90	12BE6	
HL90		19AQ
HL92	50C5	
HL94	30A5	35C5
HM04	6BE6	
HT90	35W4	
HZ90	12X4	
KD21		OA3
KD24		OC3
KD25		OD3
KL35		1F5G
KT32		25L6
		25L6
KT61	6AG6G	6V6
		6V6

Note: Types shown in bold face are RCA types.

vs. U.S.A. Receiving-Type Electron Tubes

Foreign Type to be Replaced	U.S.A. Type for Use as Replacement	
	Direct*	Similar†
KT63		6F6 6F6G 6F6GT
KT66		7027A
KT71		50L6GT
KT77		7027A
KT81		7C5
KTW61		6S7
KTW63		6K7 6K7GT
KTW74M		12K7GT
KTZ63	6J7GT	
L63	6J5	
L63B	6J5GT	
L77	6C4	
LN119	50BM8	
LN152	6AB8	
LZ319		9A8 9U8A
LZ329	9A8	9U8A
M8079	5726	6AL5
M8080		6C4
M8081	6101	6J6A
M8082		6AM5
M8083		6AM6
M8096	5763	
M8098	OG3	5651A
M8100		6AK5 5654
M8136	6189/ 12AU7WA	12AU7
M8137	12AX7A 7025	
M8161	6065	
M8162	12AT7WA	12AT7
M8196	5725	6AS6
M8204	5727	2D21
M8212	5726	6AL5
M8214		12AX7A 7025
M8223	OA2WA	OA2
M8224	OB2WA	OB2
M8232	6J4WA	6J4
M8245	6005	6AQ5A
N14		1C5GT
N15		3Q5GT
N16		3Q5GT
N17	3S4	
N18	3Q4	
N19	3V4	
N25	3C4	
N77		6AM5
N78	6BJ5	
N119	45B5	
N142	45A5	
N144	6AM5	
N147	6AG6G	6V6 6V6GTA
N148		7C5
N150	6CK5	6CL6
N152	21A6	
N153	15A6	
N154	16A5	
N155	6BN5	
N308		25E5
N309		15A6
N329	16A5	
N359	21A6	
N369	16A8	
N379	15CW5	
N707		6BQ5
N709	6BQ5	
N727	6AQ5A	
OBC3		12SQ7
OF1		6S7
OH4		12A8GT
OM4		6Q7 6Q7GT
OM6		6K7 6K7GT
OSW2190		6AC7
OSW2192		6AG7

or footnotes * †, see page 84.

1964 Interchangeability Directory of Foreign

Foreign Type to be Replaced	U.S.A. Type for Use as Replacement	
	Direct*	Similar†
OSW2600		6AC7
OSW3104		6SA7
OSW3105		6SQ7
OSW3106		6V6
OSW3109		6H6
OSW3110	6E5	
OSW3111		6SK7
OSW3112		6J5
PABC80	9AK8	
PC86	4CM4	
PC95	4ER5	
PC97	3FY5	
PCC84	7AN7	
PCC85	9AQ8	
PCC88	7DJ8	
PCC89	7FC7	
PCC189	7ES8	
PCF80	9A8	9U8A
PCF82		9U8A
PCF86		7HG8
		8HG8
PCL82	16A8	
PCL83		
PCL84	15DQ8	
PF9		6K7
PH4		6A8
PL21		2D21
PL36	25E5	
PL81	21A6	
PL82	16A5	
PL83	15A6	
PL84	15CW5	
PL500	27GB5	
PL820		21A6
PLL80	12HU8	
PM04	6BA6	
PM05	6AK5	
PM07	6AM6	
PY32		
PY80	19X3	
PY81	17Z3	
PY82	19Y3	
PY83		17Z3
PY88		30AE3
QA2400	6065	6CQ6
QA2401		6C4
QA2402		6AM5
QA2403		6AM6
QA2404		6AL5
QA2406		12AT7
QA2407		6X4
QA2408		6SN7GTB
QE03/10	5763	
QQE02/5	6939	
QQV02-6	6939	
QS150/40	OD3	
QS1205	OA3	
QS1206	OC3	
QS1207	OA2	
QS1208	OB2	
QS1209	OG3	5651A
QS1210	OA2WA	OA2
QS1211	OB2WA	OB2
QS1212		OG3
		5651WA
QV03-12	5763	
R12	6X2	
R12A	6X2	
R17		6N3
R19		1X2B
R52		5Z4
R144	6AM6	
REL39		6AC7
RL21	2D21	
S856	OA2	
S860	OB2	
SP6	6AM6	
SU61	6X2	
T2M05	6J6A	
TM12		6J4

Note: Types shown in bold face are RCA types.

vs. U.S.A. Receiving-Type Electron Tubes

Foreign Type to be Replaced	U.S.A. Type for Use as Replacement	
	Direct*	Similar†
U17		1T4
U26	6S2	
U41		1B3GT
U43	6X2	
U49	6S2	
U50	5Y3GT	
U52	5U4G	
	5U4GB	
U70		6X5GT
U74		35Z4GT
U76		35Z4GT
U78	6X4	
U82		7Y4
U119	38A3	
U142	31A3	
U145		31A3
U147		6X5GT
U149		7Y4
U150	6BT4	
U151	6X2	
U152	19X3	
U153	17Z3	
U154	19Y3	
U192	19Y3	
U309		19X3
U319		19Y3
U381	38A3	
U404		31A3
U709	6CA4	
UABC80	28AK8	
UAF42	12S7	
UBC41	14L7	
UBC80	14G6	
UBF80	17C8	
UC92	9AB4	
UCC85	26AQ8	
UCH42	14K7	
UCH80	14Y7	
UCH81	19D8	
UCL82	50BM8	
UF6A7		6A7
UF41	12AC5	
UF89	12DA6	
UL41	45A5	
UL84	45B5	
UM80	19BR5	
UU9		6BT4
UU12	6CA4	
UY24B		24A
UY27		27
UY27A		27
UY35B		35
UY36		36
UY36A		36
UY37		37
UY37A		37
UY41	31A3	
UY42		
UY47		47
UY76		76
UY82	55N3	
UY85	38A3	
UY92		
UY224		24A
V2M70		6X4
V61	6BT4	
V311		31A3
V741	6C4	
V884	6CQ6	6BJ6
V886	6AM5	
VP6	6CQ6	6BJ6
VP12D	12C8	
W17	1T4	
W25	1AJ4	1T4
W61		6K7
		6K7GT
W63		6K7
		6K7GT
W76		12K7GT
W77	6CQ6	6BJ6
W81		7H7

For footnotes * †, see page 84.

1964 Interchangeability Directory of Foreign vs. U.S.A. Receiving-Type Electron Tubes

Foreign Type to be Replaced	U.S.A. Type for Use as Replacement		Foreign Type to be Replaced	U.S.A. Type for Use as Replacement	
	Direct*	Similar†		Direct*	Similar†
W81M		7H7	XC97	2FY5	
W142	12AC5		XCC82	7AU7	
			XCC189	4ES8	
W143		7B7			
W147		6K7	XCF80	4BL8	
		6K7GT	XCH81	3AJ8	
W148		7H7	XCL82	8B8	
W149		7B7	XF80	3BX6	
W150	6CJ5		XF85	3BY7	
W719	6BY7		XF183	3EH7	
W727	6BA6		XF184	3EJ7	
W729		6BY7	XFR1		1AD4
W739		6DA6	XL36	13CM5	
WD142	12S7		XL84	8BQ5	
WD150	6CT7		XL86	8CW5	
WD709	6N8		XY88	16AQ3	
X14		1A7GT	Y25	1N3	
X17		1R5	Y61		6U5
X18	1AC6		Y63		6U5
X20	1AC6		Y119	19BR5	
X25	1AB6		YC95	3ER5	
X63		6A8	YF183	4EH7	
X63(M)		6A8	YF184	4EJ7	
X64		6L7	Z14		1N5GT
X77	6BE6		Z63	6J7	
X79	6AE8		Z77	6AM6	
X81		7S7	Z152	6BX6	
X119	19D8		Z300T		OA4G
X142	14K7		Z329		6BX6
X144		1A7GT	Z719	6BX6	
X147		6K8	Z729	6267	5879
X148		7S7	Z900T	5823	
X150		6CU7	ZD9		
X719	6AJ8		ZD17	1S5	
X727	6BE6		ZD25	1AH5	1S5
XC95	2ER5		ZD152	6N8	

*DIRECT REPLACEMENT TYPES—RCA types shown in this column are direct replacements for corresponding types to be replaced.

†SIMILAR REPLACEMENT TYPES—RCA types shown in this column are not direct replacements for the corresponding types to be replaced because of mechanical and/or electrical differences. For more information as to the degree of similarity, refer to tube data.

RCA PICTURE TUBES

* Silverama Types

* Colorama Types

NOTICE: ALL MATERIALS AND PARTS USED IN THE MANUFACTURE OF RCA SILVERAMA PICTURE TUBES ARE NEW EXCEPT FOR THE ENVELOPE WHICH, PRIOR TO RE-USE, WAS CAREFULLY INSPECTED TO MEET THE STANDARDS OF THE ORIGINAL NEW ENVELOPE.

RCA COLORAMA PICTURE TUBES CONTAIN USED MATERIALS WHICH, PRIOR TO RE-USE, ARE CAREFULLY INSPECTED TO MEET RCA'S HIGH QUALITY STANDARDS.

For More Information on a Specific Tube Type, Write to

RCA COMMERCIAL ENGINEERING
HARRISON, N. J.

RCA PICTURE TUBE CHARACTERISTICS CHART

RCA Type	Heater Volts/Ma	Envelope[a]	Greatest Deflection Angle[b] (Approx.) Degrees	Focusing Method	Approx. Tube Weight Pounds	Maximum Overall Length Inches	Basing	Design Maximum Anode Voltage Volts	PM Ion-Trap Magnet Required
SILVERAMA TYPES FOR BLACK-AND-WHITE TV									
5TP4[d]	6.3/600	● G	50	E	1.2	12⅛	12C	29500	No
7JP4	6.3/600	● G	(e)	E	3	14⅞	14R	6500	No
8DP4	6.3/600	■ G	90	E	3	10¾	12AB	9000	Yes
10BP4A	6.3/600	● G	50	M	10	18	12N	13000	Yes
10FP4A	6.3/600	● G	50	M	10	18	12N	13000	No
12KP4A	6.3/600	● G	54	M	12	18	12N	13000	No
14ATP4	8.4/450	■ G	90	E	8½	13½	12L	15500	No
14EP4	6.3/600	■ G	70	M	10	16⅞	12N	15500	Yes
14QP4B	6.3/600	■ G	70	E	10	16 17/32	12L	12000	No
14WP4	6.3/600	■ G	90	E	8½	13½	12L	15500	No
16AP4A	6.3/600	● M	53	M	11	22 5/16	12D	15500	Yes
16AYP4	6.3/450	■ G	114	E	8½	10.50	8HR	20000	No

16DP4A	6.3/600	● G	60	M	15	21	12D	16500	Yes
16GP4B	6.3/600	● M	70	M	11	17 11/16	12D	15500	Yes
16LP4A	6.3/600	● G	52	M	14½	22⅝	12N	15500	Yes
16RP4B	6.3/600	■ G	70	M	16	19⅛	12N	17500	No
16TP4	6.3/600	■ G	70	M	16	18½	12N	15500	Yes
16WP4A	6.3/600	● G	70	M	16½	18⅛	12N	17500	Yes
17BJP4	6.3/600	■ G	90	E	15	15	12L	17500	No
17BP4D	6.3/600	■ G	70	M	18	19 9/16	12N	17500	No
17CDP4	8.4/450	■ G	110	E	10	12 13/16	8HR	17500	No
17CFP4	6.3/600	■ G	90	E	10	15⅜	12L	17500	No
17CP4	6.3/600	■ M	70	M	10	19	12D	17500	Yes
17CSP4	6.3/600	■ G	110	E	10	12⅝	7FA	17500	No
17CYP4	6.3/600	■ G	90	E	10	14⅜	12L	17500	No
17DAP4	2.68/450	■ G	110	E	10	10⅞	8JK	17500	No
17DKP4	6.3/600	■ G	110	E	10	10 15/16	8JR	23000	No
17DQP4[/]	6.3/450	■ G	110	E	10	12⅜	7FA	17500	No
17DRP4[v]	2.68/450	■ G	110	E	10	11	8JK	17500	No

For footnotes, see page 93.

RCA PICTURE TUBE CHARACTERISTICS CHART

RCA Type	Heater Volts/Ma	Envelope[a]	Greatest Deflection Angle[b] (Approx.) Degrees	Focusing Method	Approx. Tube Weight Pounds	Maximum Overall Length Inches	Basing	Design Maximum Anode Voltage Volts	PM Ion-Trap Magnet Required
SILVERAMA TYPES FOR BLACK-AND-WHITE TV									
17DSP4	6.3/600	■ G	110	E	10	11 7/16	8HR	20000	No
17DXP4	6.3/450	■ G	110	E	10	10 15/16	8JR	17500	No
17GP4	6.3/600	■ M	70	E	10	19 5/16	12M	17500	Yes
17HP4C	6.3/600	■ G	70	E	18	19 9/16	12L	17500	No
17LP4B	6.3/600	■ G[h]	70	E	19	19 9/16	12L	17500	No
17QP4B	6.3/600	■ G[h]	70	M	19	19 9/16	12N	20000	No
17TP4	6.3/600	■ M	70	E	10	19 5/16	12M	17500	Yes
19ABP4	2.68/450	■ G	114	E	14	11 1/8	8JK	20000	No
19AHP4[f]	6.3/450	■ G	114	E	13 1/2	11 5/8	8HR	17500	No
19AJP4[f]	6.3/450	■ G	114	E	14	11 5/8	7FA	20000	No
19AP4B	6.3/600	● M	66	M	14	22	12D	17500	Yes
19AUP4	6.3/600	■ G[j,k]	114	E	18 1/2	11 15/16	8HR	20000	No

19AVP4	6.3/600	■ G	114	E	14	11⅝	8HR	23000	No
19AYP4	6.3/450	■ G	114	E	14	11⅝	8HR	23000	No
19BTP4	6.3/600	■ G	114	E	14	11 1/16	8JR	23000	No
19CHP4/	6.3/600	■ G	114	E	14	11⅞	8HR	20000	No
20DP4D	6.3/600	■ G	70	M	30	22⅛	12N	20000	No
20HP4E	6.3/600	■ G	70	E	30	22⅛	12L	17500	No
21AMP4B	6.3/600	■ G	90	M	24	20⅜	12N	20000	No
21AP4	6.3/600	■ M	70	M	18	22⅝	12D	20000	Yes
21AVP4C	6.3/600	■ G	72	E	24	23 13/32	12L	22000	No
21AWP4A	6.3/600	■ G	72	M	24	23 13/32	12N	20000	No
21CBP4A	6.3/600	■ G	90	E	24	18⅜	12L	22000	No
21CQP4	6.3/600	■ G	110	E	20	14 13/16	7FA	20000	No
21DEP4A	6.3/600	■ G	110	E	20	15	8HR	22000	No
21DFP4	6.3/600	■ G	110	E	24	14¾	8HR	20000	No
21DLP4	6.3/600	■ G	90	E	24	17⅜	12L	22000	No
21DSP4/	6.3/600	■ G	90	E	24	18⅜	12L	22000	No
21EP4C	6.3/600	■ G[A]	70	M	29	23 13/32	12N	20000	No

For footnotes, see page 93.

RCA PICTURE TUBE CHARACTERISTICS CHART

RCA Type	Heater Volts/Ma	Envelope[a]	Greatest Deflection Angle[b] (Approx.) Degrees	Focusing Method	Approx. Tube Weight Pounds	Maximum Overall Length Inches	Basing	Design Maximum Anode Voltage Volts	PM Ion-Trap Magnet Required
SILVERAMA TYPES FOR BLACK-AND-WHITE TV									
21EQP4	6.3/600	■ G	110	E	24	12⅞	8JR	20000	No
21EVP4[d]	2.68/450	■ G	110	E	20	13 1/16	8JK	20000	No
21FAP4	6.3/600	■ G	110	E	20	13⅛	8JR	22000	No
21FDP4	6.3/600	■ G	110	E	20	13⅜	8KW	20000	No
21FP4D	6.3/600	■ G[h]	70	E	29	23 13/32	12L	20000	No
21MP4	6.3/600	■ M	70	E	18	22⅝	12M	17500	Yes
21WP4B	6.3/600	■ G	70	M	24	22 13/16	12N	20000	No
21XP4B	6.3/600	■ G	70	E	24	22 13/16	12L	20000	No
21YP4B	6.3/600	■ G	70	E	24	23 13/32	12L	20000	No
21ZP4C	6.3/600	■ G	70	M	24	23 13/32	12N	20000	No
23AHP4	6.3/600	■ G	92	E	25	18⅜	12L	22000	No
23ALP4	6.3/450	■ G	114	E	25	14¾	8HR	22000	No

23ASP4	6.3/600	■ G	92	E	25	17⅜	12L	22000	No
23BJP4 /	6.3/600	■ G	92	E	25	18½	12L	25000	No
23BLP4 /	6.3/600	■ G*jk*	92	E	35	18⅞	12L	25000	No
23CBP4	6.3/450	■ G*jk*	110	E	32½	15⁹⁄₁₆	8HR	23000	No
23CP4	6.3/600	■ G*j*	110	E	33	15⁹⁄₁₆	8HR	22000	No
23DAP4 /	6.3/600	■ G	94	E	27	17²⁵⁄₆₄	8HR	23000	No
23DBP4 /	6.3/600	■ G	110	E	24	15⅓₁₆	8HR	22000	No
23EP4 /	6.3/600	■ G*j*	110	E	33	15⁹⁄₁₆	8KP	22000	No
23FP4A	6.3/600	■ G	114	E	25	14	8HR	23500	No
23JP4 /	6.3/450	■ G*j*	110	E	33	15⅞	7FA	22000	No
23NP4 /	6.3/600	■ G	114	E	24	14¹¹⁄₁₆	8HR	22000	No
23YP4	6.3/600	■ G*j*	92	E	34½	18¾	12L	22000	No
24AEP4	6.3/600	■ G	90	E	35	19½	12L	22000	No
24AHP4	6.3/600	■ G	110	E	28	16⅓₁₆	8HR	22000	No
24ATP4 /	6.3/600	■ G	90	E	35	19½	12L	22000	No
24AUP4	6.3/600	■ G	90	E	35	18½	12L	22000	No
24BEP4	6.3/600	■ G	110	E	26½	15⅛	8KW	20000[m]	No

For footnotes, see page 93.

RCA PICTURE TUBE CHARACTERISTICS CHART

RCA Type	Heater Volts/Ma	Envelope[a]	Greatest Deflection Angle[b] (Approx.) Degrees	Focusing Method	Approx. Tube Weight Pounds	Maximum Overall Length Inches	Basing	Design Maximum Anode-Voltage Volts	PM Ion-Trap Magnet Required
SILVERAMA TYPES FOR BLACK-AND-WHITE TV									
24BAP4[c]	6.3/600	■ G	110	E	28	16 3/16	8HR	22000	No
24CP4B	6.3/600	■ G	90	M	35	21 1/2	12N	22000	No
27MP4	6.3/600	■ M	90	M	30	22 3/16	12D	20000	Yes
27RP4A	6.3/600	■ G	90	M	44	23 7/16	12N	22000	No
COLOR PICTURE TUBES									
15GP22[A]	6.3/1800p	● G	45	E	25	26 1/8	20A	22000	No
21AXP22A	6.3/1800p	● M	70	E	28	25 5/16	14AH	27500	No
21CYP22A	6.3/1600p	● G	70	E	36 1/2	25 13/32	14AL	27500	No
21FBP22	6.3/1800p	● G	70	E	36 1/2	25 13/32	14AU	27500	No
21FJP22	6.3/1800p	● G[kq]	70	E	43	25 21/32	14AU	27500	No

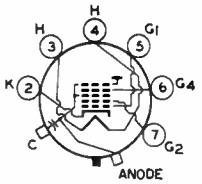
TEST PICTURE TUBES									
5AXP4	6.3/600	● G	53	E[r]	1½	11	12S	20000	No
8XP4	6.3/600	■ G	90	E[r]	2¾	11¼	12S	22000[m]	No
8YP4	6.3/600	■ G	110	E[r]	2⅛	9	7FG	22000[m]	No

RCA PICTURE TUBE CHARACTERISTICS CHART
EXPLANATION OF FOOTNOTES

BOLD-FACE Type Indicates an Aluminized Tube

■ G Glass rectangular.
■ M Metal rectangular.
E Electrostatic.
● G Glass round.
● M Metal round.
M Magnetic.

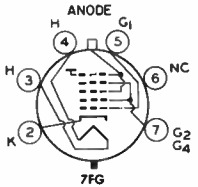
[a] Faceplate is spherical, unless otherwise specified.
[b] All types utilize magnetic deflection except for type 7JP4 which employs electrostatic deflection.
[r] The anode is defined as the electrode, or the electrode in combination with one or more additional electrodes connected within the tube to it, to which is applied the highest dc voltage for accelerating the electrons in the beam prior to its deflection.
[d] Projection type.
[e] Typical deflection factors (volts dc/in.) for anode voltage of 6000 volts:
DJ1 & DJ2 (nearer screen) 186 to 246
DJ3 & DJ4 (nearer base) 150 to 204
[f] Has low grid—No. 2 voltage rating; for Cathode-Drive Service.
[g] This type has an internal magnetic shield.
[h] Cylindrical faceplate.
[j] Bipanel type.
[k] Treated to reduce specular reflection.
[m] Absolute-Maximum Value.
[n] This type has a flat, aluminized, filterglass phosphor-dot screen plate.
[p] Three heaters paralleled internally.
[q] This type has an integral protective window.
[r] Automatic.



7FA

ANODE = $G_3 + G_5 + CL$

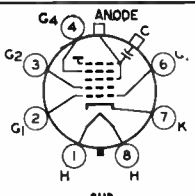
FOCUSING ELECTRODE = G_4



7FG

ANODE = $G_2 + G_3 + CL$

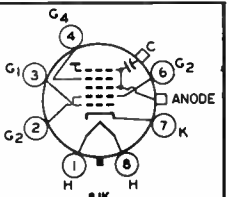
AUTOMATIC FOCUSING



8HR

ANODE = $G_3 + G_5 + CL$

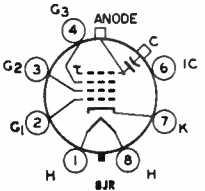
FOCUSING ELECTRODE = G_4



8JK

ANODE = $G_3 + G_5 + CL$

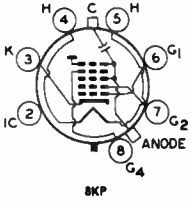
FOCUSING ELECTRODE = G_4



8JR

ANODE = $G_4 + CL$

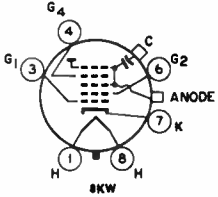
FOCUSING ELECTRODE = G_3



8KP

ANODE = $G_3 + G_5 + CL$

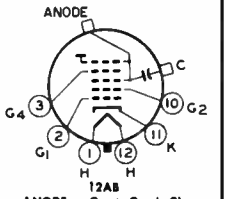
FOCUSING ELECTRODE = G_4



8KW

ANODE = $G_3 + G_5 + CL$

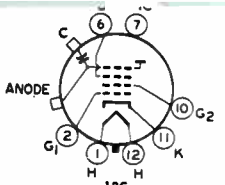
FOCUSING ELECTRODE = G_4



12AB

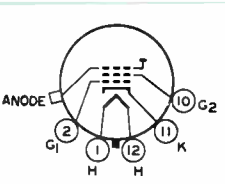
ANODE = $G_3 + G_5 + CL$

FOCUSING ELECTRODE = G_4



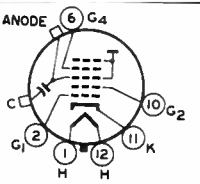
12C

ANODE = G_4 + CL
FOCUSING ELECTRODE = G_3



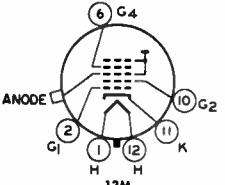
12D

ANODE = G_3 + CL



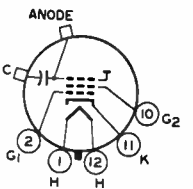
12L

ANODE = G_3 + G_5 + CL
FOCUSING ELECTRODE = G_4



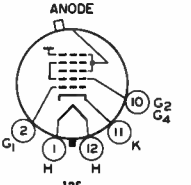
12M

ANODE = G_3 + G_5 + CL
FOCUSING ELECTRODE = G_4



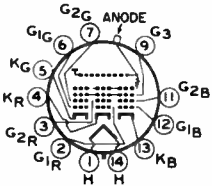
12N

ANODE = G_3 + CL



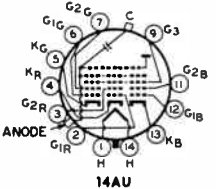
12S

ANODE=G_3+G_5+CL
AUTOMATIC FOCUSING



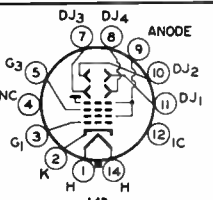
14AH

ANODE = $G_4 + G_5 + CL + R$
FOCUSING ELECTRODE = G_3



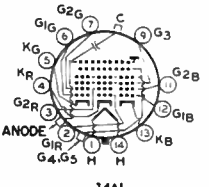
14AU

ANODE = $G_4 + G_5 + CL$
FOCUSING ELECTRODE = G_3



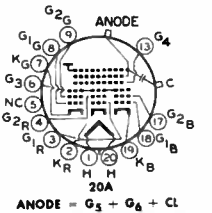
14R

ANODE = $G_2 + G_4 + CL$
FOCUSING ELECTRODE = G_3



14AL

(14AL)
CAP OVER PIN No. 1
= $G_4 + G_5$
CAP OVER PIN No. 2 = ANODE = G_6 + CL & HIGH-VOLTAGE TERMINAL. Connect High-Voltage Supply to this Cap and also connect 50,000-ohm resistor between this Cap and the Cap over Pin No. 1.
FOCUSING ELECTRODE = G_3



20A

ANODE = $G_5 + G_6 + CL$
FOCUSING ELECTRODE = G_3

INDUSTRY REPLACEMENT AND INTERCHANGEABILITY

SILVERAMA® PICTURE TUBES

With only 91 types of RCA Universal Replacement Picture Tubes, the serviceman can replace 385 different industry picture tube types. These charts list the RCA direct replacement type, or the RCA similar type when one or the other is available.

IMPORTANT INSTRUCTIONS — READ CAREFULLY

1. Replacement information supplied in this chart is based primarily on electrical and mechanical similarity of the picture-tube types covered. The serviceman should make certain that replacement is in accord with all safety precautions required by the TV receiver for picture-tube insulation or mechanical mounting.

2. In the case of an RCA similar type, its basing arrangement is the same as that of the type to be replaced, but its listed differences must be considered in using it as a replacement.

3. When a glass picture tube has an external conductive coating, this coating, in combination with the internal conductive coating, provides a capacitor for use in filtering the high voltage power supply. When replacing a picture tube without a conductive coating by one having such a coating, provision should be made to ground the coating. Connection to the coating may be made by using a soft brush-type contact, preferably attached to the deflecting-yoke support. A contact area of at least ¼ square inch is required.

4. Additional information on RCA Silverama Picture Tubes is contained in the booklet 1275-K — RCA Receiving Tubes and Picture Tubes — and in the RCA Receiving Tube Manual. These publications may be purchased from your RCA Distributor or from RCA Commercial Engineering, Harrison, New Jersey.

REPLACEMENT CLASSIFICATION KEYS

*Replacement information is based primarily on electrical and mechanical similarity of the picture-tube types covered. The technician should make certain that replacement is in accord with all safety precaution required by the TV receiver for picture-tube insulation or mechanical mounting.

A. RCA type does not require an external ion-trap magnet.
B. The ball-type anode contact must be replaced with cavity-type contact.
C. Neck length and/or overall length of RCA type is slightly greater.
D. External conductive coating must be grounded
E. Maximum anode voltage of RCA type is slightly less.
F. The RCA replacement type has a 6.3-volt/600-milliampere heater. The type to be replaced has a 2.35-volt/600-milliampere heater

INDUSTRY REPLACEMENT AND INTERCHANGEABILITY

Type to be Replaced	Replace by RCA Type	Replacement Information*
5TP4	**5TP4**	Direct
7JP4	7JP4	Direct
8DP4	8DP4	Direct
10BP4 10BP4A	10BP4A	Direct
10BP4C **10BP4D**	**10FP4A**	A
10CP4	10FP4A	BCD
10EP4	10BP4A	B
10FP4 **10FP4A**	**10FP4A**	Direct
12JP4	**12KP4A**	BCD
12KP4 **12KP4/** **12ZP4** **12KP4A**	**12KP4A**	Direct
12LP4 12LP4A	**12KP4A**	A
12LP4C	**12KP4A**	AD
12QP4 12QP4A	**12KP4A**	ABCD
12TP4	**12KP4A**	AD
12ZP4 **12ZP4A**	**12KP4A**	A
14ATP4	**14ATP4**	Direct
14BP4 14BP4A 14CP4 **14CP4A**	14EP4	Direct
14DP4	14EP4	D
14EP4 14EP4/ 14CP4 14EP4/ 14CP4/ 14BP4	14EP4	Direct
14HP4	**14QP4B**	ADE
14NP4 **14NP4A**	**14WP4**	A
14QP4 **14QP4A**	**14QP4B**	A
14QP4B	**14QP4B**	Direct
14RP4 **14RP4A** **14SP4**	**14WP4**	A
14WP4 **14WP4/** **14ZP4** **14ZP4** **14ZP4/** **14WP4**	**14WP4**	Direct
16AP4 16AP4A	16AP4A	Direct
16AYP4	**16AYP4**	Direct
16CP4	16LP4A	CDE
16DP4 16DP4A	16DP4A	Direct
16GP4 16GP4A 16GP4B 16GP4C	16GP4B	Direct
16KP4 **16KP4A**	**16RP4B**	A
16LP4 16LP4A	16LP4A	Direct
16QP4	**16RP4B**	AD
16RP4 16RP4/ 16KP4 **16RP4A** **16RP4A/** **16KP4A**	**16RP4B**	A
16RP4B	**16RP4B**	Direct
16SP4 16SP4A	16WP4A	CD
16TP4	16TP4	Direct
16UP4	**16RP4B**	ACD
16VP4	16WP4A	CD

Bold Face Type indicates Aluminized Tube.

SILVERAMA PICTURE TUBES

Type to be Replaced	Replace by RCA Type	Replacement Information*
16WP4 16WP4/ 16YP4	16WP4A	D
16WP4A **16WP4B**	16WP4A	Direct
16XP4	**16RP4B**	AD
16YP4	16WP4A	CD
16ZP4	16LP4A	DE
17AP4	**17BP4D**	ACD
17ATP4 17ATP4/ 17AVP4 **17ATP4A** **17ATP4A/** **17AVP4A** 17AVP4/ 17ATP4 17AVP4 **17AVP4A** **17AVP4A/** **17ATP4A**	**17BJP4**	A
17BJP4	**17BJP4**	Direct
17BP4	**17BP4D**	AD
17BP4A **17BP4B** 17BP4C	**17BP4D**	A
17BP4D	**17BP4D**	Direct
17BRP4	**17DSP4**	A
17BUP4	**17BJP4**	AE
17BVP4	**17CSP4**	A
17BWP4	**17CSP4**	Direct
17BZP4 **17BZP4/** **17CAP4/** **17CKP4** **17BZP4/** **17CAP4/** **17CKP4/** **17BRP4** **17CAP4**	**17DSP4**	Direct

Type to be Replaced	Replace by RCA Type	Replacement Information*
17CBP4	**17BJP4**	AE
17CDP4	**17CDP4**	Direct
17CFP4	**17CFP4**	Direct
17CKP4	**17DSP4**	Direct
17CLP4	**17BJP4**	AD
17CP4 17CP4A	17CP4	Direct
17CSP4	**17CSP4**	Direct
17CWP4	**17DSP4**	Direct
17CYP4	**17CYP4**	Direct
17DAP4	**17DAP4**	Direct
17DKP4	**17DKP4**	Direct
17DLP4	**17DSP4**	Direct
17DQP4	**17DQP4**	Direct
17DRP4	**17DRP4**	Direct
17DSP4	**17DSP4**	Direct
17DTP4	**17DKP4**	Direct
17DXP4 **17DZP4**	**17DXP4**	Direct
17GP4	17GP4	Direct
17HP4 17HP4/ 17RP4 17HP4A **17HP4B** **17HP4B/** **17RP4C**	**17HP4C**	A
17HP4C	**17HP4C**	Direct
17JP4	**17BP4D**	AE
17LP4 17LP4/ 17VP4 **17LP4A** **17LP4A/** **17VP4B**	**17LP4B**	A
17LP4B	**17LP4B**	Direct

Replacement Classification Keys explained on page 98.

INDUSTRY REPLACEMENT AND INTERCHANGEABILITY

Type to be Replaced	Replace by RCA Type	Replacement Information*
17QP4 **17QP4A**	**17QP4B**	A
17QP4B	**17QP4B**	Direct
17RP4 **17RP4C**	**17HP4C**	A
17TP4	17TP4	Direct
17UP4	**17QP4B**	A
17VP4 17VP4/ 17LP4 **17VP4B**	**17LP4B**	A
17YP4	**17QP4B**	A
19ABP4	**19ABP4**	Direct
19ACP4	**19CHP4**	Direct
19AFP4	**19AUP4**	Direct
19AHP4	**19AHP4**	Direct
19AJP4	**19AJP4**	Direct
19AP4 19AP4A 19AP4B **19AP4C** 19AP4D	19AP4B	Direct
19AUP4	**19AUP4**	Direct
19AVP4	**19AVP4**	Direct
19AXP4 **19AYP4**	**19AYP4**	Direct
19BHP4	**19AVP4**	Direct
19BLP4	**19AVP4**	C
19BTP4	**19BTP4**	Direct
19BVP4	**19AVP4**	E
19BWP4	**19AYP4**	E
19CFP4	**19CHP4**	C
19CHP4	**19CHP4**	Djrect
19CKP4	**19CHP4**	E
19XP4	**19AVP4**	Direct
19YP4	**19BTP4**	Direct
19ZP4	**19AVP4**	Direct
20CP4	**20DP4D**	ACD
20CP4A	**20DP4D**	AC
20CP4B 20CP4C	**20DP4D**	ACD
20CP4D	**20DP4D**	AC
20DP4	**20DP4D**	AD
20DP4A/ 20CP4A 20DP4A	**20DP4D**	A
20DP4B	**20DP4D**	AD
20DP4C **20DP4C/** **20CP4D**	**20DP4D**	A
20DP4D	**20DP4D**	Direct
20HP4	**20HP4E**	AD
20HP4A 20HP4A/ 20LP4 20HP4A/ 20MP4	**20HP4E**	A
20HP4B **20HP4C**	**20HP4E**	AD
20HP4D	**20HP4E**	A
20HP4E	**20HP4E**	Direct
20LP4 20MP4	**20HP4E**	A
21ACP4 21ACP4/ 21AMP4 **21ACP4A** **21ACP4A/** **21AMP4A** **21ACP4A/** **21BSP4** **21ACP4A/** **21BSP4/** **21AMP4A**	**21AMP4B**	A

Bold Face Type indicates Aluminized Tube.

SILVERAMA PICTURE TUBES

Type to be Replaced	Replace by RCA Type	Replacement Information*
21AFP4	21YP4B	AD
21ALP4 21ALP4A 21ALP4B 21ALP4B/ 21ALP4A	21CBP4A	AD
21AMP4 21AMP4A	21AMP4B	A
21AMP4B	21AMP4B	Direct
21ANP4 21ANP4A	21CBP4A	AD
21AP4	21AP4	Direct
21AQP4 21AQP4A	21AMP4B	AD
21ASP4	21XP4B	AD
21ATP4 21ATP4A 21ATP4A/ 21ATP4 21ATP4B	21CBP4A	AD
21AUP4 21AUP4A 21AUP4B 21AUP4B/ 21AUP4A	21AVP4C	A
21AUP4C	21AVP4C	Direct
21AVP4 21AVP4/ 21AUP4 21AVP4A 21AVP4B 21AVP4B/ 21AVP4A 21AVP4B/ 21AUP4B/ 21AVP4A/ 21AUP4A	21AVP4C	A
21AVP4C	21AVP4C	Direct
21AWP4	21AWP4A	A
21AWP4A	21AWP4A	Direct
21AYP4	21XP4B	Direct
21BAP4	21CBP4A	Direct
21BCP4	21YP4B	ACE
21BDP4	21AVP4C	Direct
21BNP4	21CBP4A	Direct
21BSP4	21AMP4B	A
21BTP4	21CBP4A	A
21CBP4 21CBP4A 21CBP4A/ 21CBP4/ 21CMP4 21CBP4B	21CBP4A	Direct
21CEP4	21DFP4	Direct
21CEP4A	21DFP4	E
21CMP4	21CBP4A	A
21CQP4	21CQP4	Direct
21CUP4	21AMP4B	A
21CVP4	21CBP4A	Direct
21CWP4	21CBP4A	A
21CXP4	21DSP4	Direct
21CZP4	21DEP4A	A
21DAP4 21DEP4 21DEP4A 21DEP4A/ 21DEP4/ 21CZP4	21DEP4A	Direct
21DFP4	21DFP4	Direct
21DLP4	21DLP4	Direct
21DMP4	21FAP4	Direct
21DNP4	21CBP4A	AD
21DQP4	21DLP4	Direct
21DSP4	21DSP4	Direct
21EAP4	21FDP4	F
21EMP4	21EQP4	Direct
21EP4	21EP4C	AD

Replacement Classification Keys explained on page 98.

INDUSTRY REPLACEMENT AND INTERCHANGEABILITY

Type to be Replaced	Replace by RCA Type	Replacement Information*
21EP4A 21EP4B	21EP4C	A
21EP4C	21EP4C	Direct
21EQP4	21EQP4	Direct
21ESP4	21FAP4	Direct
21EVP4	21EVP4	Direct
21FAP4	21FAP4	Direct
21FDP4	21FDP4	Direct
21FLP4	21CBP4A	Direct
21FP4	21FP4D	AD
21FP4A 21FP4C	21FP4D	A
21FP4D	21FP4D	Direct
21MP4	21MP4	Direct
21WP4 21WP4A	21WP4B	A
21WP4B	21WP4B	Direct
21XP4 21XP4A	21XP4B	A
21XP4B	21XP4B	Direct
21YP4 21YP4A	21YP4B	A
21YP4B	21YP4B	Direct
21ZP4	21ZP4C	AD
21ZP4A 21ZP4B	21ZP4C	A
21ZP4C	21ZP4C	Direct
23AFP4	23YP4	E
23AHP4	23AHP4	Direct
23ALP4	23ALP4	Direct
23ANP4	23BLP4	Direct
23ASP4	23ASP4	Direct
23ATP4	23BLP4	Direct
23AUP4	23AHP4	E
23AVP4	23CP4	C
23AWP4	23BJP4	C
23BDP4	23YP4	Direct
23BJP4	23BJP4	Direct
23BKP4	23BLP4	Direct
23BLP4	23BLP4	Direct
23BNP4	23CP4	Direct
23BQP4	23CBP4	Direct
23BTP4	23YP4	E
23BVP4	23YP4	E
23CBP4	23CBP4	Direct
23CP4	23CP4	Direct
23CP4A	23CP4	E
23CZP4	23AHP4	E
23DAP4	23DAP4	Direct
23DBP4	23DBP4	Direct
23EP4	23EP4	Direct
23FP4 23FP4A	23FP4A	Direct
23GP4 23HP4	23CP4	Direct
23JP4	23JP4	Direct
23KP4 23KP4A	23FP4A	C
23MP4 23MP4/ 23MP4A/ 23WP4 23MP4A	23FP4A	Direct
23NP4	23NP4	Direct
23UP4	23CBP4	Direct
23WP4	23FP4A	Direct
23XP4 23YP4	23YP4	Direct

Bold Face Type indicates Aluminized Tube.

SILVERAMA PICTURE TUBES

Type to be Replaced	Replace by RCA Type	Replacement Information*
24ADP4 24ADP4/ 24VP4A/ 24CP4A/ 24TP4	24CP4A	Direct
24AEP4	24AEP4	Direct
24AHP4 24ALP4	24AHP4	Direct
24ANP4	24AEP4	A
24ATP4	24ATP4	Direct
24AUP4	24AUP4	Direct
24AVP4	24BEP4	F
24BAP4	24BAP4	Direct
24BEP4	24BEP4	Direct
24CP4 24CP4A	24CP4B	A
24CP4B	24CP4B	Direct
24DP4 24DP4A 24DP4A/ 24YP4	24AEP4	A
24QP4	24CP4B	AD
24TP4 24VP4 24VP4A	24CP4B	A
24XP4	24CP4B	AD
24YP4	24AEP4	A
24ZP4	24AEP4	Direct
27EP4	27RP4A	AD
27GP4	27RP4A	ADE
27MP4	27MP4	Direct
27NP4 27RP4	27RP4A	A
27RP4A	27RP4A	Direct
SG10FP4A	10FP4A	Direct
SG12KP4A	12KP4A	Direct
SG14QP4A	14QP4B	Direct
SG14WP4	14WP4	Direct
SG16KP4A	16RP4B	Direct
SG17BJP4	17BJP4	Direct
SG17BP4B	17BP4D	Direct
SG17BWP4	17CSP4	Direct
SG17CKP4	17DSP4	Direct
SG17HP4B	17HP4C	Direct
SG17LP4A	17LP4B	Direct
SG17QP4A	17QP4B	Direct
SG20CP4D	20DP4D	C
SG20HP4D	20HP4E	Direct
SG21ACP4A	21AMP4B	Direct
SG21AUP4B	21AVP4C	Direct
SG21AWP4	21AWP4A	Direct
SG21DEP4A	21DEP4A	Direct
SG21EP4B	21EP4C	Direct
SG21FLP4	21CBP4A	Direct
SG21FP4C	21FP4D	Direct
SG21WP4A	21WP4B	Direct
SG21XP4A	21XP4B	Direct
SG21YP4A	21YP4B	Direct
SG21ZP4B	21ZP4C	Direct
SG24AEP4	24AEP4	Direct
SG24CP4A	24CP4B	Direct
SG27RP4	27RP4A	Direct

COLORAMA PICTURE TUBES

15GP22	15GP22	Direct
21AXP22 21AXP22A 21AXP22A/ 21AXP22	21AXP22A	Direct
21CYP22 21CYP22A	21CYP22A	Direct
21FBP22	21FBP22	Direct
21FJP22 21FKP22	21FJP22	Direct

Replacement Classification Keys explained on page 98.

RCA PICTURE TUBES
&
THE TYPES THEY REPLACE

- **Silverama Types**
- **Colorama Types**

RCA SILVERAMA®

The Universal Replacement Picture Tube.
RCA Calarama Picture Tubes

In most instances, a single RCA Universal Replacement Picture Tube replaces many other types. RCA picture tubes and the types they replace are listed in this section.

RCA Type	Replaces
5TP4	**5TP4**
7JP4	7JP4
8DP4	8DP4
10BP4A	10BP4 10BP4A 10EP4
10FP4A	**10BP4C** **10BP4D** 10CP4 **10FP4** **10FP4A** **SG10FP4A**
12KP4A	12JP4 **12KP4** **12KP4/** **12ZP4** **12KP4A** 12LP4 12LP4A **12LP4C** 12QP4 12QP4A 12TP4 **12ZP4** **12ZP4A** **SG12KP4A**

RCA Type	Replaces
14ATP4	**14ATP4**
14EP4	14BP4 14BP4A 14CP4 **14CP4A** 14DP4 14EP4 14EP4/ 14CP4 14EP4/ 14CP4/ 14BP4
14QP4B	14HP4 14QP4 **14QP4A** **14QP4B** **SG14QP4A**
14WP4	14NP4 **14NP4A** 14RP4 **14RP4A** **14SP4** **14WP4** **14WP4/** **14ZP4** **14ZP4** **14ZP4/** **14WP4** **SG14WP4**

RCA Type	Replaces
16AP4A	16AP4 16AP4A
16AYP4	**16AYP4**
16DP4A	16DP4 16DP4A
16GP4B	16GP4 16GP4A 16GP4B 16GP4C
16LP4A	16CP4 16LP4 16LP4A 16ZP4
16RP4B	16KP4 **16KP4A** 16QP4 16RP4 16RP4/ 16KP4 **16RP4A** **16RP4A/** **16KP4A** **16RP4B** 16UP4 16XP4 **SG16KP4A**

Bold Face Type indicates an Aluminized Tube

RCA Type	Replaces
16TP4	16TP4
16WP4A	16SP4 16SP4A 16VP4 16WP4 16WP4/ 16YP4 16WP4A **16WP4B** 16YP4
17BJP4	17ATP4 17ATP4/ 17AVP4 **17ATP4A** **17ATP4A/** **17AVP4A** 17AVP4 17AVP4/ 17ATP4 **17AVP4A** **17AVP4A/** **17ATP4A** **17BJP4** **17BUP4** 17CBP4 **17CLP4** **SG17BJP4**
17BP4D	17AP4 17BP4 17BP4A **17BP4B** 17BP4C **17BP4D** 17JP4 **SG17BP4B**
17CDP4	17CDP4
17CFP4	17CFP4
17CP4	17CP4 17CP4A
17CSP4	**17BVP4** **17BWP4** **17CSP4** **SG17BWP4**
17CYP4	17CYP4
17DAP4	17DAP4
17DKP4	17DKP4 17DTP4
17DQP4	17DQP4
17DRP4	17DRP4
17DSP4	17BRP4 17BZP4 17BZP4/ 17CAP4/ 17CKP4 17BZP4/ 17CAP4/ 17CKP4/ 17BRP4 17CAP4 17CKP4 17CWP4 17DLP4 17DSP4 SG17CKP4
17DXP4	17DXP4 17DZP4
17GP4	17GP4
17HP4C	17HP4 17HP4/ 17RP4 17HP4A 17HP4B 17HP4B/ 17RP4C 17HP4C 17RP4 17RP4C SG17HP4B
17LP4B	17LP4 17LP4A/ 17VP4 17LP4A 17LP4A/ 17VP4B 17LP4B 17VP4
17LP4B (Cont'd)	17VP4/ 17LP4 17VP4B SG17LP4A
17QP4B	17QP4 17QP4A 17QP4B 17UP4 17YP4 SG17QP4A
17TP4	17TP4
19ABP4	19ABP4
19AHP4	19AHP4
19AJP4	19AJP4
19AP4B	19AP4 19AP4A 19AP4B 19AP4C 19AP4D
19AUP4	19AFP4 19AUP4
19AVP4	19AVP4 19BHP4 19BLP4 19BVP4 19XP4 19ZP4
19AYP4	19AXP4 19AYP4 19BWP4
19BTP4	19BTP4 19YP4
19CHP4	19ACP4 19CFP4 19CHP4 19CKP4
20DP4D	20CP4 20CP4A 20CP4B 20CP4C

Bald Face Type indicates an Aluminized Tube

AND THE TYPES THEY REPLACE

RCA Type	Replaces
20DP4D (Cont'd)	**20CP4D** 20DP4 20DP4A 20DP4A/ 20CP4A **20DP4B** **20DP4C** **20DP4C/** **20CP4D** **20DP4D** **SG20CP4D**
20HP4E	20HP4 20HP4A 20HP4A/ 20LP4 20HP4A/ 20MP4 20HP4B **20HP4C** **20HP4D** **20HP4E** 20LP4 20MP4 **SG20HP4D**
21AMP4B	21ACP4 21ACP4/ 21AMP4 **21ACP4A** **21ACP4A/** **21AMP4A** **21ACP4A/** **21BSP4** **21ACP4A/** **21BSP4/** **21AMP4A** 21AMP4 **21AMP4A** **21AMP4B** 21AQP4 **21AQP4A** **21BSP4** **21CUP4** **SG21ACP4A**
21AP4	21AP4
21AVP4C	21AUP4 **21AUP4A** **21AUP4B**
21AVP4C (Cont'd)	**21AUP4B/** **21AUP4A** **21AUP4C** 21AVP4 21AVP4/ 21AUP4 **21AVP4A** **21AVP4B** **21AVP4B/** **21AVP4A** **21AVP4B/** **21AUP4B/** **21AVP4A/** **21AUP4A** **21AVP4C** **21BDP4** **SG21AUP4B**
21AWP4A	**21AWP4** **21AWP4A** **SG21AWP4**
21CBP4A	21ALP4 **21ALP4A** **21ALP4B** **21ALP4B/** **21ALP4A** 21ANP4 **21ANP4A** **21ATP4** **21ATP4A** **21ATP4/** **21ATP4** 21ATP4B **21BAP4** **21BNP4** **21BTP4** **21CBP4** **21CBP4A** **21CBC4A/** **21CBP4/** **21CMP4** **21CBP4B** **21CMP4** **21CVP4** **21CWP4** **21DNP4** **21FLP4** **SG21FLP4**
21CQP4	**21CQP4**
21DEP4A	**21CZP4** **21DAP4** **21DEP4** **21DEP4A** **21DEP4A/** **21DEP4/** **21CZP4** **SG21DEP4A**
21DFP4	**21CEP4** **21CEP4A** **21DFP4**
21DLP4	**21DLP4** **21DQP4**
21DSP4	**21CXP4** **21DSP4**
21EP4C	21EP4 21EP4A **21EP4B** **21EP4C** **SG21EP4B**
21EQP4	**21EMP4** **21EQP4**
21EVP4	**21EVP4**
21FAP4	**21DMP4** **21ESP4** **21FAP4**
21FDP4	**21EAP4** **21FDP4**
21FP4D	21FP4 21FP4A **21FP4C** **21FP4D** **SG21FP4C**
21MP4	21MP4
21WP4B	21WP4 **21WP4A** **21WP4B** **SG21WP4A**

Bold Face Type indicates an Aluminized Tube

RCA SILVERAMA
AND THE TYPES THEY REPLACE

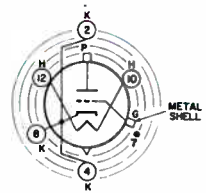
RCA Type	Replaces
21XP4B	21ASP4 21AYP4 21XP4 21XP4A 21XP4B SG21XP4A
21YP4B	21AFP4 21BCP4 21YP4 21YP4A 21YP4B SG21YP4A
21ZP4C	21ZP4 21ZP4A 21ZP4B 21ZP4C SG21ZP4B
23AHP4	23AHP4 23AUP4 23CZP4
23ALP4	23ALP4
23ASP4	23ASP4
23BJP4	23AWP4 23BJP4
23BLP4	23ANP4 23ATP4 23BKP4 23BLP4
23CBP4	23BQP4 23CBP4 23UP4
23CP4	23AVP4 23BNP4 23CP4 23CP4A 23GP4 23HP4
23DAP4	23DAP4
23DBP4	23DBP4
23EP4	23EP4
23FP4A	23FP4 23FP4A 23KP4 23KP4A 23MP4 23MP4/ 23MP4A/ 23WP4 23MP4A 23WP4
23JP4	23JP4
23NP4	23NP4
23YP4	23AFP4 23BDP4 23BTP4 23BVP4 23XP4 23YP4
24AEP4	24AEP4 24ANP4 24DP4 24DP4A 24DP4A/ 24YP4 24YP4 24ZP4 SG24AEP4
24AHP4	24AHP4 24ALP4
24ATP4	24ATP4
24AUP4	24AUP4
24BAP4	24BAP4
24BEP4	24AVP4 24BEP4
24CP4B	24ADP4 24ADP4/ 24VP4A/ 24CP4A/ 24TP4 24CP4 24CP4A 24CP4B 24QP4 24TP4 24VP4 24VP4A 24XP4 SG24CPA4
27MP4	27MP4
27RP4A	27EP4 27GP4 27NP4 27RP4 27RP4A SG27RP4

COLORAMA TYPES

15GP22	15GP22
21AXP22A	21AXP22 21AXP22A 21AXP22A/ 21AXP22
21CYP22A	21CYP22 21CYP22A
21FBP22	21FBP22
21FJP22	21FJP22 21FKP22

Bold Face Type indicates an Aluminized Tube

RCA NUVISTOR TUBES
For Industrial and Military Applications



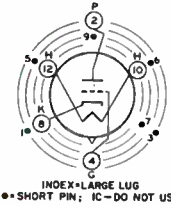
INDEX • LARGE LUG
• • SHORT PIN; IC—DO NOT USE

12CT

Type

8058

Double-ended nuvistor triode



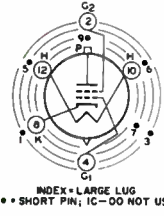
INDEX • LARGE LUG
• • SHORT PIN; IC—DO NOT USE

12AQ

Types

7586
7895
8056

Nuvistor triode



INDEX • LARGE LUG
• • SHORT PIN; IC—DO NOT USE

12AS

Type

7587

Nuvistor tetrode

RCA NUVISTOR TUBES
For Industrial and Military Applications

TYPE	CLASSIFICATION	INTENDED APPLICATIONS AND FEATURES	SPECIAL TESTS AND CONTROLS							LIFE TEST				RCA DARK HEATER Rated Center Values		MAXIMUM DIMENSIONS Inches	
			Shock	Fatigue	Variable-Frequency Vibration	Low-Pressure Voltage Breakdown	Heater Cycling	Intermittent Shorts	Interelectrode Leakage	Early-Hour Stability	100-Hour Performance	1000-Hour Performance	1000-Hour Standby	Volts	Amp	Lgth	Diam
7586	Medium-Mu Triode	General-purpose type capable of providing high gain with low noise in amplifier applications up to 400 Mc. Excellent stability as oscillator tube over a wide range of frequencies. Reliable performance in "on-off" control applications involving long periods of standby operations.	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	6.3	0.135	0.800	0.440
JAN-7586	Medium-Mu Triode	Same as 7586 but, in addition, designed to meet indicated Military Specification.	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	6.3	0.135	0.800	0.440
7587	Sharp-Cutoff Tetrode	Double-ended, general-purpose type for rf-, if-, and video-amplifier,	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	6.3	0.150	1.050	0.440

JAN-7587	Sharp-Cutoff Tetrode	Same as 7587 but, in addition, designed to meet indicated Military Specification.	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	6.3	0.150	1.050	0.440
7895	High-Mu Triode	General-purpose type capable of providing high gain with low noise in amplifier applications up to 400 Mc. Excellent stability as oscillator tube over a wide range of frequencies. Also "on-off" control applications.	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	6.3	0.135	0.800	0.440
JAN-7895	High-Mu Triode	Same as 7895 but, in addition, designed to meet indicated Military Specification.	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	6.3	0.135	0.800	0.440
8056	Medium-Mu Triode	Low-plate-voltage (12 to 50 volts) type for low-noise rf- and if-amplifier, control, multivibrator, and cathode-follower applications.	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	6.3	0.135	0.800	0.440
USN-8056	Medium-Mu Triode	Same as 8056 but, in addition, designed to meet indicated Military Specification.	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	6.3	0.135	0.800	0.440
8058	High-Mu Triode	Double-ended type for cathode-drive-amplifier applications up to 1200 Mc. Has excellent stability as an ocsillator tube over a wide range of frequencies.	✓	—	✓	✓	✓	✓	✓	—	—	—	✓	6.3	0.135	0.985	0.440
USN-8058	High-Mu Triode	Same as 8058 but, in addition, designed to meet indicated Military Specification.	✓	—	✓	✓	✓	✓	✓	—	—	—	✓	6.3	0.135	0.985	0.440

Additional characteristics cont'd on following page.

RCA NUVISTOR TUBES
For Industrial and Military Applications

TYPE	CHARACTERISTICS, CLASS A_1 AMPLIFIER										MAXIMUM RATINGS Absolute-Maximum Values For Operation at Any Altitude								Maximum Grid-Circuit Resistance[d] Megohms	
	Plate Supply Volts	Plate Volts	Grid Supply Volts	Cathode Resistor Ohms	Grid Resistor Ohms	Amplification Factor	Plate Resistance Ohms	Transconductance μmhos	Plate ma.	Cutoff Grid Volts at plate $\mu a = 10^n$	Plate Supply Volts	Plate Volts	Grid Neg Bias	Volts Pos. Peak	Grid ma.	Cathode ma.	Plate Dissipation Watts	Peak Heater-Cathode Volts	Fixed Bias	Cathode Bias
7586	75 — —	— 40 26.5	0 0 0	100 — —	— 0.5M 0.5M	35 35 31	3000 3000 4400	11500 11500 7000	10.5 7.5 2.8	−7 — —	330	110	55	4	2	15	1	±100	0.5	1
JAN-7586	For data, refer to MIL-E-1 1397A, 5 July 1962[b]																			
7587	125 Grid-No. 2 supply volts = 50	—	0[c]	68	— Grid-No. 2 ma. = 2.7	—	0.2M Grid-No. 2 supply volts = 330, grid-No. 2 volts = 110, grid-No. 2 input = 0.2 watt	10600	10	−4.5[c]	330	250	55[c]	2[c]	2[c]	20	2.2	±100	0.5[c]	1[c]
JAN-7587	For data, refer to MIL-E-1/1434A, 11 June 1963[b]																			
7895	110	—	0	150	—	64	6800	9400	7	−4	330	110	55	2	2	15	1	+100	0.5	1
JAN-7895	For data, refer to MIL-E-1/1433A, 11 June 1963[b]																			
8056	24	—	0	100	—	11.5	1530	7500	8.7	−5(@50μa	—	50	55	2	2	15	0.45	±100	10[c]	10[c]
USN-8056	For data, refer to MIL-E-1/1490, 19 July 1963[b]																			
8058	110	—	0	47	—	70	5600	12400	10	−5	330	150	55	0	0	15	1.5	±100	0.5	1
USN-8058	For data, refer to MIL-E-1/1491, 23 July 1963[b]																			

[a] Unless otherwise specified.
[b] A copy of this specification may be obtained from:
Specifications Division
Naval Supply Depot

[c] Grid No. 1.
[d] For operation at metal-shell temperature of 150°C unless otherwise specified.

RCA TUBES FOR

- Communications
- Industry
- Military Uses

RCA QUICK-SELECTION GUIDE
To Tubes for Communications, Industry, and Military Uses
VACUUM POWER TUBES

Type	Description (Cooling)*	Filament(F) or Heater Volts	Max. Dimensions Inches		Max. Plate Ratings†	
			Length	Diam.	Volts	DC Input Watts
2C39A	Tri.(FA)	6.3	2¾	1 11/64	1000	—
2C39WA	Tri.(FA)	For data, refer to Mil-E-1 778E (Navy) specification.				
2C40	Tri.(N)	6.3	2 9/16	1.312	500	—
2C40A	Tri.(N)	6.3	2 9/16	1.312	500	—
2C43	Tri.(N)	6.3	2.6875	1.312	500	—
2E24	Quick-Heating BPT(N)	6.3F	3 21/32	1 5/16	600 •	40 •
2E26	BPT(N)	6.3	3 21/32	1 5/16	600 •	40 •
4-125A/ 4D21	BPT(FA)	5F	5 11/16	2 1/8	3000	—
4-250A/ 5D22	BPT(FA)	5F	6 1/8	3 9/16	4000	—
4-400A	BPT(FA)	5F	6 1/8	3 9/16	4000	—
4E27/ 8001	BPT(N)	5F	6 1/16	2¼	4000	300
4E27A/ 5-125B	BPT(N)	5F	6 1/16	2¼	4000	—
4X500A	BPT(FA)	5F	4¾	2⅝	4000	—
8D21	Twin Tet.(W)	3.2F	12 9/32	5¾	6000	10000
9C21	Tri.(W)	19.5F	24½	9½	17000	150000
9C22	Tri.(FA)	19.5F	25	8½	17000	100000
9C25	Tri.(FA)	6F	17⅜	7½	11500	40000
207	Tri.(W)	22F	20½	6 13/32	15000	30000
801A	Tri.(N)	7.5F	5⅜	2 1/16	600	42
802	Pen.(N)	6.3	5¼	2 1/16	600 •	33 •
805	Tri.(N)	10F	8½	2 5/16	1500	315
807	BPT(N)	6.3	5¼	2 1/16	750 •	75 •
809	Tri.(N)	6.3F	6 5/16	2 1/16	1000 •	100 •
810	Tri.(N)	10F	8¾	2¼	2500 •	750 •
811A	Tri.(N)	6.3F	6 15/32	2 1/16	1500 •	260 •
812A	Tri.(N)	6.3F	6 15/32	2 1/16	1500 •	260 •
813	BPT(N)	10F	7½	2 5/16	2250 •	500 •
814	BPT(N)	10F	7 11/16	2 1/16	1500 •	225 •
815	Twin	6.3	4 5/16	1 3/16	500 •	75 •
	BPT(N)	12.6				
827R	BPT(FA)	7.5F	6 3/8	4 11/16	3500	1500
828	BPT(N)	10F	7 11/16	2 1/16	1500 •	270 •
829B	Twin	6.3				
	BPT(N)	12.6	4 5/16	2 1/8	750 •	120 •
830B	Tri.(N)	10F	6 11/16	2 1/16	1000	150
832A	Twin	6.3				
	BPT(N)	12.6	3 5/16	2 1/16	750 •	50 •
833A	Tri.(N)	10F	8 13/16	4 15/32	3300 •	1500 •
	Tri.(FA)	10F	8 13/16	4 15/32	4000 •	2000 •
834	Tri.(N)	7.5F	6 11/16	2 11/16	1250	125
837	Pen.(N)	12.6	5¾	2 1/16	500	32
845	Tri.(N)	10F	7⅛	2 5/16	1250	150

See page 117 for explanation of footnotes.

RCA Quick Selection Guide
VACUUM POWER TUBES

Type	Description (Cooling)*	Filament(F) or Heater Volts	Max Dimensions Inches		Max. Plate Ratings†	
			Length	Diam.	Volts	DC Input Watts
880	Tri.(W)	12.6F	11⅜	7	10500	60000
889A	Tri.(W)	11F	10¹¹⁄₁₆	3⅝	8500	16000
889RA	Tri.(FA)	11F	11⅜	5¹⁵⁄₃₂	8500	16000
891	Tri.(W)	22F	20⅞	6¹⁵⁄₃₂	12000	18000
891R	Tri.(FA)	22F	22	6¹⁵⁄₃₂	10000	15000
892	Tri.(W)	22F	20⅞	6¹⁵⁄₃₂	15000	30000
892R	Tri.(FA)	22F	22	6¹⁵⁄₃₂	12500	18000
1624	BPT(N)	2.5F	5¾	2¹⁄₁₆	600	54
1625	BPT(N)	12.6	5¾	2¹⁄₁₆	Same as 807 except for heater rating, base, and dimensions.	
2029	BPT(L)	2-Section 1.35F•	8.25	11.38	9000	60000
4604	Quick-Heating BPT(N)	6.3F	3¹³⁄₁₆	1²¹⁄₃₂	750 •	90 •
4615	Ruggedized Cer.(FA)	6.3	1.930	1.327	Same as 7457 except for radiator type.	
4618	Cer.(FA)	Same as 7213 except for omitted grid-No. 2-to-plate shield.				
5556	Tri.(N)	4.5F	4½	1⅝	350	14
5618	Pen.(N)	3.0 6.0	2⅝	¾	300 •	7.5 •
5671	Tri.(FA)	11F	25	8.5‡	15000	100000
5713	Tri.(FA)	3.3	4⅞	2¹⁄₁₆	1500	450
5762/ 7C24	Tri.(FA)	12.6F	7⅛‡	4¹¹⁄₁₆	6200	8700
5762A	Tri.(FA)	12.6F	7⅛‡	4¹¹⁄₁₆	6200	8700
5763	BPT(N)	6	2⅝	⅛	350 •	17 •
5770	Tri.(W)	11F	24½	9½	17000	150000
5771	Tri.(W)	7.5F	11⅝	7	12500	60000
5786	Tri.(FA)	11F	9⅝	2.895	3000	1500
6146	BPT(N)	6.3	3¹³⁄₁₆	1²¹⁄₃₂	750 •	90 •
6146A	BPT(N)	6.3	3¹³⁄₁₆	1²¹⁄₃₂	Same as 6146 except for base controlled zero-bias plate current and controlled power output at reduced heater voltage.	
6146W/ 7212	Ruggedized BPT(N)	6.3	3¹³⁄₁₆	1²¹⁄₃₂	750 •	90 •
6155	BPT(FA)	5F	5¾	2¹⁄₁₆	3000	625
6156	BPT(FA)	5F	5³¹⁄₃₂	3¹⁷⁄₆₄	4000	1250
6159	BPT(N)	26.5	Same as 6146 except for heater rating.			
6159W/ 7357	Ruggedized BPT(N)	26.5	Same as 6146W/7212 except for heater rating.			
6161	Tri.(FA)	6.3	3¹³⁄₃₂	1.76	1600	400
6166	BPT(FA)	5F	11.63	6.38	6900	18000
6166A/ 7007	BPT(FA)	5F	11.50	6.38	7500	20000
6181	BPT(FA)	120 Max.	7⅛	5¹⁄₃₂	2000	2500
6417	BPT(N)	12.6	Same as 5763 except for heater rating.			
6448	BPT(L)	2-Section 1.35F•	8.02	11.38	8500	45500
6524	Twin BPT(N)	6.3	3⅝	1¹¹⁄₁₆	600 •	85 •

See page 117 for explanation of footnotes.

RCA Quick Selection Guide
VACUUM POWER TUBES

Type	Description (Cooling)*	Filament(F) or Heater Volts	Max. Dimensions Inches		Max. Plate Ratings†	
			Length	Diam.	Volts	DC Input Watts
6806	BPT(W)	2-Section 1.35F‡	8.02	11.38	9000	60000
6816	Cer.(FA)	6.3	1.930	1.265	1000	180
6850	Twin BPT(N)	12.6	Same as 6524 except for heater rating.			
6883	BPT(N)	12.6	3 3/16	1 21/32	Same as 6146 except for heater rating, base and dimensions.	
6884	Cer.(FA)	26.5	Same as 6816 except for heater rating.			
6893	BPT(N)	12.6	Same as 2E26 except for heater rating.			
6897	Tri.(FA)	6.3	2¾	1 11/64	1000	—
6939	Twin Pen.(N)	6.3 12.6	2⅛	0.875	250 •	14 • ‹
6949	Tri.(W)	7.3 to 7.8F	40	10.06	20000	1000000
7034/ 4X150A	BPT(FA)	6	2.404	1.640	2000	—
7035/ 4X150D	BPT(FA)	26.5	Same as 7034/4X150A except for heater rating.			
7054	Pen.(N)	13.5	2⅛	0.875	300	10
7060	Pen.— Tri.(N)	13.5	2 1/16	0.875	300	6
7094	BPT(FA)	6.3	5	2.56	1500 •	500 •
7203/ 4CX250B	BPT(FA)	6	2.464	1.640	2000	—
7204/ 4CX250F	BPT(FA)	26.5	Same as 7203/4CX250B except for heater rating.			
7213	Cer.(FA)	5.5	3.34	3.75	2500	2500
7271	BPT(FA)	11.8 to 14.85	4.73	2.06	1350 •	315 •
7457	Ruggedized Cer.(FA)	6.3	1.930	1.265	1000	180
7551	BPT(N)	13.5	2⅝	⅛	300 •	24 •
7558	BPT(N)	6.3	2⅝	⅛	300 •	24 •
7580	BPT(FA)	6	2.464	1.640	2000	—
7650	Ruggedized Cer.(FA)	6.3	2.40	2.09	2500	1250
7801	Cer.(C)	12.6	1.195	0.740	750	52.5
7842	Ruggedized Cer.(C)	6.3	Same as 7844 except for heater rating			
7843	Cer.(C)	26.5	Same as 7844 except for heater rating			
7844	Cer.(C)	6.3	1.930	1.119	1000	180
7870	Cer.(C)	6.3	Same as 7801 except for heater rating			
8000	Tri.(N)	10F	8¼	2¼	2500 •	750 •
8005	Tri.(N)	10F	6 11/16	2 1/16	1500 •	300 •
8032	BPT(FA)	13.5	3 11/16	1 21/32	Same as 6146 except for heater rating	
8072	BPT(C)	12 to 15	2.26	1.44	2200	660

See page 117 for explanation of footnotes.

RCA Quick Selection Guide
VACUUM POWER TUBES

Type	Description (Cooling)*	Filament(F) or Heater Volts	Max. Dimensions Inches		Max. Plate Ratings†	
			Length	Diam.	Volts	DC Input Watts
8121	BPT(FA)	13.5	2.20	1.48	2200	660
8122	BPT(FA)	13.5	2.26	1.64	2200	660
8165/ 4-65A	BPT(FA)	6F	4 3/16	2 3/8	3000	—
8166/ 4-1000A	BPT FA)	7.5F	9 3/8	5 1/4	6000	—
8168/ 4CX1000A	BPT(FA	6	4.75	3.36	3000	—
8170/ 4CX5000A	BPT(FA)	7.5	9.125	4.938	6500	—
8226	Cer. FA)	6.3	2.71	1.64	2500	625
8239/ 3X3000F1	Tri.(FA)	7.5	10.539♪	4.156	6000	—
8437	Cer.(FA)	8.5F	6.19	6.24	7000	28000
8462	Quick-Heating BPT(C	2.4F	Same as 8072 except for heater rating.			

FOOTNOTES:
† Unless otherwise specified all values shown are for Continuous Commercial Service.
• Intermittent Commercial and Amateur Service.
• Tri. —Triode
Tet.—Tetrode
Pen.—Pentode
BPT—Beam Power Tube
Cer.—Cermolox Tube
Kly.—Klystron
N —Natural
FA —Forced-Air
C —Conduction
W —Water
L —Liquid
a Per Section.
b DC Plate Voltage
c Both Sections.
r Maximum Radius.
♪ Excluding flexible leads.
§ Points taken from Plate Current Versus Duty Factor rating chart.

VACUUM POWER TUBES for RF-Pulse Applications

Type	Description (Cooling)*	Filament(F) or Heater Volts	Max. Dimensions Inches		Max. Plate Ratings †	
			Length	Diam.	Peak Volts	Peak Amp.
2C40A	Tri.(N)	6.3	2 9/16	1.312	1400	2.0
2041	BPT(L)	2-Section 1.35F‹	8.93	11.25	40000	15
2054	Tri.(W)	3.1 to 4.5F	17.00	14.100	34000	300
4603	Tri.(W)	7.3 to 7.8F	40	10.06	40000	90
4605V2	BPT(L)	Same as 6952 except for coolant separator.				
4612	Tri.(W)	1.5F	19.5	23.5	16000◊	100
4616	BPT(W)	0.95F	8.93	11.25	55000	80
4617	Tri.(W)	1.5F	17	24	40000	500
4621	BPT(FA)	Same as 8227 except for shorter radiator.				
4622	Ruggedized Cer.(C)	Same as 7649 except for conduction cylinder.				
5946	Tri.(FA)	6.3	3 13/32	1.76	7500	4.5
6950/ 2039	Tri.(W)	7.3 to 7.8F	37.24	20.50	40000	92
6952	BPT(L)	0.95F	8.93	11.25	55000	80
7214	Cer.(FA)	5.5	3.34	3.75	10000	18
7649	Ruggedized Cer.(FA)	6.3	1.930	1.265	3000	3
7651	Ruggedized Cer.(FA)	6.3	2.40	2.09	8000	9
7835	Tri.(W)	3.1 to 4.2F	17	24	65000	325
8184	Cer.(FA)	22	7.24	5.56	25000	80
8227	Cer.(FA)	6.3	2.52	1.265	7000	6

HARD-TUBE MODULATORS

Type	Description (Cooling)*	Heater Volts	Max. Dimensions Inches		Max. Plate Ratings †	
			Length	Diam.	DC Plate Volts	Peak Plate Amp.§
3E29	Twin BPT(N)	6.3 12.6	4 5/16	2 3/8	5000	10 5 0.25
4610	Twin Tri.(N)	6.3 12.6	4 5/16	2 3/8	Max. Plate Volta = 3000 volt	
			Max. Plate Dissipation = 30 watt and Max. DC Plate Current = 100 m			
6293	BPT(N)	6.3	3 13/16	1 21/32	3500	3 1 0.2

See page 117 for explanation of footnotes.

VACUUM GAUGE TUBES

Type	Description	Filament(F) or Heater Volts	Max. Dimensions Inches		Pressure Range Torr
			Length	Diam.	
1946	Thermocouple Type	1	6¼	1 11/16	1 to 10^{-4}
1947	Pirani Type	10F	7 9/16	1 3/16	0.5 to 10^{-2}
1949	Ionization Type	5F	11½	2 3/16	10^{-3} to 10^{-7}

See page 117 for explanation of footnotes.

VACUUM POWER TUBES For Special Applications

Type	Description (Cooling)*	Heater Volts	Max. Dimensions Inches Length	Diam.	Maximum Ratings
2K26	Kly. (N) C W Oscillator	6.3	3.5	$1\frac{55}{64}$	DC Resonator Volts, 330; DC Reflector Voltage: Positive Value, 0 Volts; Negative Value, 350 Volts; DC Resonator Current, 35 ma; Typical Power Output at 6600 Mc, 100 mw.
3C33	Twin Tri.(N) Voltage Regulator	12.6	$3\frac{11}{16}$	$2\frac{3}{8}$	Max. Values per Unit: Peak Plate Volts, ±2000; Peak Cathode ma, 500; Average Plate ma, 120; Plate Dissipation, 15 watts.
4600A	Cer. (FA) Voltage Regulator	5.5	3.405	3.76	Max. Values: DC Plate Volts, 3500; DC Plate Amperes, 1; Plate Dissipation, 1750 watts; Grid-Circuit Resistance, 30000 ohms.
4614	Cer.(FA) Voltage Regulator	6.3	2.40	2.09	Max. Values: DC Plate Volts, 2500; DC Plate Amperes, 0.5; Dissipation, 400 watts; Grid-Circuit Resistance, 15000 ohms.

FOOTNOTES:
Tri —Triode
Cer—Cermolox Tube
N —Natural
FA —Forced-Air

RCA Quick Selection Guide

Microwave Tubes

PENCIL TUBES

Type	Heater Volts	Maximum Dimensions Inches		Amplification Factor	Typical Operating Conditions		
		Length	Diam.		Class of Service	Useful Power Output Watts	Frequency Mc
DIODES—For Pulse Detection Service							
6173	6.3	2.227	0.320	Max. Values: Peak Inverse Plate Volts, 1000; Peak Pulse Plate Volts, 150; Peak Pulse Plate Amperes, 1; Average Plate ma, 1.			
TRIODES—Class C Telegraphy Service							
4037	6.3	3.125	1.312	30	Osc.	0.45	2000
5675	6.3	2.252	0.817	20	Osc.	0.05	3000
5876	6.3	2.252	0.817	56	Ampl.	5	500
5876A	6.3	2.252	0.817	56	Ampl.	5	500
5893	6.0	2.297	0.817	27	Plate-pulsed Osc.	1200 peak	3300
6263A	6.0	2.63	1.010	27	Ampl.	7	500
6264A	6.0	2.63	1.010	40	Ampl.	7.5	500
7552	6.3	1.620	0.557	80	Class A Ampl.	16.5db	550
7553	6.3	1.620	0.557	80	Class A Ampl.	17db	700
7554	6.3	1.620	0.557	70	Ampl.	1.4	1000
TRIODES—Integral-Cavity Types For Oscillator Service							
6562/-5794A	6.0	3.256	0.98	—	Osc.	0.6	1680
7533	6.0	3.23	0.98	—	Osc.	0.575	1680

TRAVELING-WAVE TUBES

Type	Maximum Dimensions Inches		Frequency Range Gc	Min. Power Output Watts	Min. Small Signal Gain db	Max. Noise Figure db
	Lgth.	Diam.				
4009	15⅜	1½	2–4	0.01	33	—
4010	15⅜	1½	2–4	1	33	—
4015	15⅜	1¾	8–12	1	33	—
4017	16	1½	2–4	0.01	30	16
4019	17⅜	1½	1–2	0.01	28	17
4020	16	1½	4–7	0.01	28	18
4021	16	1 5/16 x 1 5/16	1–2	1	27	—
6861	19⅜	1⅜	2.7–3.5	0.00025	20	7

RCA Quick Selection Guide

MAGNETRONS
FOR PULSED-OSCILLATOR SERVICE

Type	Heater Volts	Maximum Dimensions Inches			Frequency Range Gc	Min. Peak Power Output Kw	Type of Tuning Adj.
		Lgth.	Wdth.	Hght.			
4011A	13.75	7 11/16	4 5/8	6 5/32	8.75 — 9.6	215	Hand
6521	10	7 1/8	4 1/2	7 1/32	5.4 ± .02	75	None
6865A	13.75	7 11/16	6	6 5/32	8.75 — 9.6	190	Hand
7008	13.75	7 11/16	4 3/4	8 1/4	8.5 — 9.6	200	Servo
7111	13.75	7 11/16	6	6 5/32	8.5 — 9.6	200	Hand

GLOW-DISCHARGE (COLD-CATHODE) TUBES

Type	Maximum Dimensions Inches		Operating Volts	Operating Current DC Ma.	
	Length	Diam.		Min.	Max.
VOLTAGE-REGULATOR TYPES					
OA2	2 5/8	3/4	151	5	30
OA3	4 1/8	1 9/16	75	5	40
OB2	2 5/8	3/4	108	5	30
OC2	2 5/8	3/4	75	5	30
OC3	4 1/8	1 9/16	108	5	40
OD3	4 1/8	1 9/16	150	5	40
991	1 9/16	5/8	59	0.4	2
5651*	2 1/8	3/4	87	1.5	3.5
6073	2 5/8	3/4	151	5	30
6073/OA2	2 5/8	3/4	151	5	30
6074	2 5/8	3/4	108	5	30
6074/OB2	2 5/8	3/4	108	5	30

Type	Dimensions Inches		Max. Ratings		
	Length	Diam.	Peak Anode Volts	Peak Cathode Ma.	Av. Cathode Ma.
RELAY TYPES					
OA4G	4 1/8	1 9/16	225	100	25
1C21	2 5/8	1 5/16	180	100	25
5823	2 1/8	3/4	200	100	25

*Voltage reference type.

RCA Quick Selection Guide

RECTIFIERS

Type	Heater or Filament Volts	Maximum Dimensions Inches		Max. Plate or Anode Ratings	
		Length	Diam.	Peak Inv. Volts	Amp. Av.
VACUUM TYPES					
2X2A	2.5	4 17/32	1 9/16	12500†	0.0075†#
5R4GY□	5	5 5/16	2 1/16	2400	0.175†
5R4GYB□	5	4 1/4	1 9/16	2650△	0.250△
579B	2.5	7 7/16	2 1/16	20000	0.025
836	2.5	6 9/16	2 7/16	5000	0.25
1616	2.5	6 13/16	2 1/16	6000	0.13
5825	1.6	5 27/32	2 1/16	60000	0.002
8013A	2.5	6 1/16	2 1/16	40000	0.020
8020	5	8	2 5/16	40000	0.100
MERCURY-VAPOR TYPES					
83□	5	5 3/8	2 1/16	1550†	0.225†
575A	5	11 1/8	3 1/8	15000	1.5
604/7014□	2.5	7 1/2	2 1/16	900	2.5
615/7018	2.5	6 3/8	2 1/16	2000	2.5
635/7019	2.5	9 1/2	2 1/16	1000	6.4
635L/7020	2.5	9 1/2	2 3/16	1000	6.4
673	5	11 7/16	3 1/8	15000	1.5
816	2.5	4 11/16	1 9/16	7500	0.125
857B	5	19 3/8♦	7 1/8	22000	10
866A	2.5	6 9/16	2 7/16	10000	0.25
869B	5	14 7/16	5 1/8	20000	2.5
872A	5	8 1/2	2 5/16	10000	1.25
5558	5	7	3	5000	2.5
5561	5	11 1/4	3 13/16	3000	6.4
6894	5	10 17/32	2 5/8	20000	1.8
6895	5	10 13/32	2 5/8	20000	1.8
8008	5	8 3/4	2 5/16	10000	1.25
GAS TYPES					
3B25	2.5	6 5/16	2 1/16	4500	0.5
3B28	2.5	6 5/32	2 1/16	10000	0.25

THYRATRONS

TRIODES					
C1K/6014	2.5	4 1/4	1 9/16	1250	1.0
C3J/5632	2.5	6	1 9/16	1250	2.5
C3JA/5684	2.5	6	1 9/16	1250	2.5
C3JL	2.5	6 3/4	2 3/16	1250	2.5
C6J/5C21	2.5	9 1/2	2 1/32	1250	6.4
C6JA/5685	2.5	9 1/2	2 1/32	1250	6.4
C16J/5665	2.5	10 1/2♦	2 11/16	1250	18

♦Excluding flexible leads.
#Per plate.
†Design center values.
□Full-Wave Type.
△Abs. Max. values

RCA Quick Selection Guide

THYRATRONS (cont'd)

Type	Heater or Filament	Maximum Dimensions Inches		Max. Plate or Anode Ratings	
		Length	Diam.	Peak Inv. Volts	Av. Amp.
TRIODES (cont'd)					
3C23	2.5	6⅛	2 1/16	1250	1.5
627	2.5	7	2 7/16	2500	0.64
629	2.5	4¼	1 9/16	350	0.04
676	5	11¾	3 13/16	2500	6.4
677	5	11¾	3 13/16	10000	4.0
710/6011	2.5	6¼	1⅝	1500	2.5
714/7021	2.5	6⅛	2 1/16	1250	1.0
716/6855	2.5	4⅜	1 9/16	1250	1.0
760/6858	2.5	9½	2 9/16	1500	6.4
884	6.3	4⅛	1 9/16	350△	0.075⊕
885	2.5	4 3/16	1 9/16	350△	0.075⊕
5557	2.5	6⅛	2 1/16	5000	0.5
5559	5	7¼	3	1000	2.5
5563A	5	10 17/32	2⅝	20000	1.6
6130/3C45	6.3	5 3/16	1 9/16	3000	0.045
TETRODES					
2D21	6.3	2⅛	¾	1300	0.1⊕
3D22A	6.3	4⅜	2⅜	1500	0.8
105	5	11¼ #	2½ •	2500	6.4
172	5	10 27/32	2⅝ •	2000	6.4
502A	6.3	2⅝	1 5/16	1300	0.1⊕
632B	5.0	8 5/16	1¾ •	1500	2.5
672A	5	8⅛	2 5/16	2500	3.2
2050	6.3	4⅛	1 9/16	1300	0.1⊕
2050A	6.3	3 1/16	1 9/32	1300	0.1⊕
5560	5	7 13/16	2¼ •	1000	2.5
5696	6.3	1¾	¾	500	0.025⊕
5727	6.3	2⅛	¾	1300	0.1⊕
6012	6.3	3⅛	1 23/32	1300	0.5⊕

IGNITRONS

Type	Maximum Dimensions Inches			Max. Anode Ratings††		Max. Anode Rating*†	
	Size	Approx. Length	Radius	KVA Demand	Corresponding Av. Anode Amp.	Peak Inv. Volts	Av. Amp.
5550	(A)	10#	1⅜	300	12.1	—	—
5551A	(B)	13½#	2⅞	600	30.2	1500¶	18¶
5552A	(C)	15¼#	3⅝	1200	75.6	—	—
5553B	(D)	20#	4 1/16	2400	192.	1500¶	112¶
5555		18½#	4 5/16	—	—	2100	150

□Full-Wave Type.
*Maximum Radius.
†Design Center Values.
#Excluding Flexible Leads.
△Forward Peak Anode Volts.
⊕Average Cathode Amp.
¶For frequency-changer resistance-welding service.

RCA Quick Selection Guide
PHOTOTUBES

Type	Spectral Response	Maximum Dimensions Inches		Characteristics	
		Length	Diam.	Anode-Supply Volts	Luminous Sensitivity Microamp per lumen
VACUUM TYPES					
1P39	Same as 929 except non-hygroscopic base				
1P42	S-9	1 13/32	1/4	180	37
917	S-1	4 7/16	1 1/8	250	20
919	S-1	4 7/16	1 1/8	250	20
922	S-1	1 11/16	0.890	250	20
925	S-1	2 5/8	1 9/32	250	20
926	S-3	1 23/32	0.890	250	6.5
929	S-4	3 1/16	1 9/32	250	45
934	S-4	2 13/32	0.669	250	30
935	S-5	4 1/4	1 9/32	250	35
5652*	S-4	2 1/8	1 9/32	250	45
5653	S-4	3 1/16	1 9/32	250	45
6570	S-1	4 7/16	1 1/8	250	30
7043	S-4	3 5/16	1 9/32	250	45
* Composite anode-cathode type.					
GAS TYPES					
1P29	S-3	4 1/8	1 1/8	90	40
1P37	S-4	4 1/8	1 1/8	90	135
1P40	Same as 930 except has non-hygroscopic base				
1P41	S-1	2 1/16	1 1/16	90	90
868	S-1	4 1/8	1 1/8	90	90
918	S-1	4 1/8	1 1/8	90	150
920*	S-1	4	1 3/16	90	100
921	S-1	1 23/32	0.890	90	135
923	S-1	3 9/16	1 3/16	90	135
927	S-1	2 13/32	0.669	90	125
928	S-1	3 9/16	1 3/16	90	65
930	S-1	3 1/16	1 9/32	90	135
4409	S-4	3 1/16	1 9/32	90	135
5581	S-4	3 1/16	1 9/32	90	135
5582	S-4	1 23/32	0.890	90	120
5583	S-4	2 13/32	0.669	90	135
5584*	S-4	4	1 3/16	90	120
6405/1640	S-1	4 7/16	1 1/8	50	35
6953	S-1	3 3/16	1 9/32	90	200
* Twin-unit type.					

RCA Quick Selection Guide
MULTIPLIER PHOTOTUBES

Type	Spectral Response	Maximum Dimensions Inches		Characteristics	
		Length	Diam.	Anode-Supply Volts	Luminous Sensitivity amp/lumen
1P21	S-4	3 11/16	1 5/16	1000	80
1P22	S-8	3 11/16	1 5/16	1000	1.0
1P28	S-5	3 11/16	1 5/16	1000	50
931A	S-4	3 11/16	1 5/16	1000	24
2020	S-11	5 13/16	2 5/16	1250	6
2067	S-11	2.80	1.56	1000	15
4438	S-11	3.91	1.56	1000	27
4439	S-11	3.91	1.56	1000	27
4440	S-11	4.12	1.56	1000	27
4441	S-11	3.18	1.56	1000	27
5819	S-11	5 13/16	2 5/16	1000	25
6199	S-11	4.57	1.56	1000	27
6217	S-10	5 13/16	2 5/16	1000	24
6328	S-4	3.12	1.31	1000	35
6342A	S-11	5 13/16	2 5/16	1250	18
6472	S-4	2 3/4	1 3/16	1000	35
6655A	S-11	5 13/16	2 5/16	1000	50
6810A	S-11	7.5	2.38	2000	3050
6903	S-13	6 9/16	2 5/16	1000	24
7029	S-17	3.75	1.56	1000	40
7046	*	11 1/8	5 1/4	2800	180
7102	S-1	4.57	1.56	1250	4.5
7117	S-4	3.12	1.31	1000	35
7200	S-19	5.69	1.31	1000	40
7264	S-11	7.5	2.38	2000	875
7265	S-20	7.5	2.38	2400	3000
7326	S-20	6.78	2.38	1800	22.5
7746	S-11	6.12	2.31	2000	1200
7764	S-11	2.75	0.78	1200	0.3
7767	S-11	4	0.78	1250	16
7850	S-11	6.31	2.06	2300	6000
8053	S-11	5.81	2.31	1500	19
8054	S-11	6.31	3.06	1500	19
8055	S-11	7.69	5.31	1500	19

* Extended S-11, with response 2500 to 6500 angstroms.

RCA Quick Selection Guide

PHOTOCONDUCTIVE CELLS

CADMIUM-SULFIDE TYPES

Type*	Maximum Ratings		Characteristics at 25° C		
	Voltage between Terminals dc or peak ac	Power Dissipation	Voltage between Terminals	Photocurrent at one footcandle ma	
	volts	watt	volts	Min.	Max.
4402	200	0.05	12 (dc)	1.6†	—
4403	250	0.3	50 (ac)	7	16
4404	600	0.3	50 (ac)	2.5	5
4413	110	0.05	12 (dc)	1†	2.75†
4423	250	0.2	50 (ac)	1.5	4
4424	110	0.2	12 (dc)	3.6	14.5
4425	110	0.2	12 (dc)	3.6	14.5
4448	600	0.3	50 (ac)	1.5	4
4453	600	0.3	50 (ac)	3♁	7♁
6694A‡	150	0.03	90 (dc)	0.057	0.65
7163	600	0.3	50 (ac)	1	3
7412	200	0.05	12 (dc)	0.065	0.275
7536	200	0.05	12 (dc)	0.065	0.275
SQ2500	250	0.2	12 (dc)	0.24	0.8
SQ2502▲	600	0.5	50 (ac)	2.5	5
SQ2504	600	0.3	50 (ac)	1.5	4
SQ2505	250	0.3	50 (ac)	7	16
SQ2506	600	0.3	50 (ac)	1	3
SQ2508	200	0.05	12 (dc)	0.065	0.275

PHOTOJUNCTION CELLS

GERMANIUM P-N ALLOY TYPES

Type¶	Maximum Ratings		Characteristics at 25° C		
	Voltage between Terminals	Power Dissipation	Voltage between Terminals	Illumination Sensitivity	Max. Dark Current
	dc volts	watt	dc volts	μa/fc	μa
4420	50	0.03	45	0.7	35
7467	50	0.03	45	0.7	35

* All cadmium-sulfide photocell types have S-15 spectral response except for type 6694A which has S-12 spectral response.
† At 10 footcandles.
‡ Single crystal.
▲ For renewal use.
¶ Types have S-14 spectral response.
♁ At 30 foot candles.

SILICON N ON P PHOTOVOLTAIC TYPES

Type§	Characteristics at 27° ± 1° C		
	Minimum Current ma	Minimum Power Output mw	Minimum Efficiency per cent
SL2205	48	17.9	10.0
SL2206	101.5	37.8	10.0

§ Wavelength of maximum spectral response is 8600 ± 750 angstroms. The approximate spectral range at the 20 per cent points is from 4000 to 10,600 angstroms.

IMAGE-CONVERTER TUBES

Type	Spectral Response	Phosphor	Average Characteristics at 25° C.			
			Supply Voltage kilovolts	Min. Infrared Conversion Index	Magnification Factor	Min. Cathode Resolution line-pairs/mm
4449	S-11	P11	15	—	0.77	17
6032A*	S-1	P20	20	10	0.5	18
6381	S-1	P20	16	10	0.58	25
6914	S-1	P20	16	15	0.76	25
6914A*	S-1	P20	16	15	0.76	25
6929	S-1	P20	12	10	0.75	25
7404	S-21	P20	12	—	0.75	25

* Controlled for threshold visibility.

IMAGE ORTHICONS

Type	Illumination on Tube Face footcandles	Typical Resolution at Operating Light Level		Typical Signal-to-Noise Ratio-Bandwidth 4.5 Mc-Target Volts Above Cutoff	
		Amp. Response at 400 TV Lines per cent	Limiting Resolution TV Lines	2	2.3
FOR COLOR PICKUP					
4415, 4416	1.5×10^{-2}	55	675	37:1	—
7513	3×10^{-2}	55	675	55:1	—
7513/V1	3×10^{-2}	55	675	55:1	—

IMAGE ORTHICONS (cont'd)

Type	Illumination on Tube Face footcandles	Typical Resolution at Operating Light Level		Typical Signal-to-Noise Ratio-Bandwidth 4.5 Mc-Target Volts Above Cutoff	
		Amp. Response at 400 TV Lines per cent	Limiting Resolution TV Lines	2	2.3
FOR BLACK-AND-WHITE PICKUP					
4401V1	1.4×10^{-2}	60	625	40:1	—
4414/7611	2×10^{-2}	50	625	40:1	—
5820A	2×10^{-2}	60	625	40:1	—
7198*	1×10^{-2}	—	625	30:1	—
7293A	2.4×10^{-2}	60	675	40:1	—
7295B†	4×10^{-2}	75	800	—	75:1
7389B†	4.5×10^{-2}	75	800	—	95:1
7629A	7×10^{-3}	65	700	32:1	—
7967	1×10^{-5}	—	650	3:1	—
8092A	7×10^{-3}	65	700	37:1	—
8093A	4×10^{-2}	60	675	48:1	—

*"Ruggedized" type. † 4½"-diameter type.

VIDICONS

Type	Operating Mode	Illumination on Tube Face footcandles	Typical Resolution at Light Level	
			Amp. Response at 400 TV Lines per cent	Limiting Resolution TV Lines
½"-DIAMETER TYPES				
4427	Max. Sens.	0.4	5	400
4429	Av. Sens.	0.3	—	350
1"-DIAMETER TYPES				
2048A*	Av. Sens.	1	30	750
6326	Min. Lag	100	—	750
7038	Av. Sens.	15	30	750
7262A	Av. Sens.	1	30	750
7263A*	Av. Sens.	1	30	750
7697	Av. Sens.	5	30	750
7735A	Av. Sens.	1	30	750
8134†	High Sens.	0.1	20	600
½"-DIAMETER TYPE				
8051	Av. Sens.	8	60	1200

*"Ruggedized" type. † Electrostatic-focus, magnetic-deflection type.

RCA Quick Selection Guide

Cathode-Ray Tubes

ELECTROSTATIC FOCUS AND DEFLECTION TYPES

Type*	Max. Overall Length in.	Min. Screen Diameter in.	Characteristics: Final Electrode Volts	Volts DC/in.† Deflection Factors: DJ_1-DJ_2	Volts DC/in.† Deflection Factors: DJ_3-DJ_4
OSCILLOGRAPH TYPES—Medium Persistence:					
1EP1	4 1/16	1 1/16	1000	210–310	240–350
2AP1A	7 5/8	1 3/4	1000	195–265	167–225
2BP1	7 13/16	1 3/4	2000	230–310	148–200
3AP1A	11 7/8	2 3/4	1500	91–137	87–131
3BP1A	10 3/4	2 3/4	1500	127–173	94–128
3JP1‡	10 1/4	2 3/4	4000	170–230	125–170
3KP1	11 3/4	2 3/4	1000	50–68	38–52
3RP1	9 3/8	2 3/4	2000	146–198	104–140
3RP1A	Same as type 3RP1, except has flat face.				
3WP1	11 5/8	2 3/4	2000	83–101	57–70
5ABP1‡	17 1/8	4 9/16	4000	53–72	36–48
5ADP1‡	16 15/16	4 1/2	4000	53.4–66.6	40.6–50
5BP1A	17 1/8	4 1/2	2000	70–96	64–88
5CP1A‡	17 1/8	4 1/2	4000	78–106	66–90
5UP1	15 1/8	4 1/2	2000	56–77	46–62
7VP1	14 3/8	6	3000	93–123	75–102
902A	7 5/8	1 3/4	600	110–166	96–141
Medium-Short Persistence:					
1EP11	Same as type 1EP1, except for phosphor				
2BP11	Same as type 2BP1, except for phosphor				
3KP11	Same as type 3KP1, except for phosphor				
3WP11	Same as type 3WP1, except for phosphor				
5ABP11‡	Same as type 5ABP1, except for phosphor				
5CP11A‡	Same as type 5CP1A, except for phosphor				
5UP11	Same as type 5UP1, except for phosphor				

Type*	Max. Overall Length in.	Min. Screen Diameter in.	Characteristics: Final Electrode Volts	Characteristics: Deflection Angle approx. degrees
OSCILLOGRAPH TYPES				
Very-Short Persistence:				
5FP15A▲	11½	4¼	5000	53
Medium-Short Persistence:				
1EP2	Same as type 1EP1, except for phosphor			

For footnotes, see page 132.

RCA Quick Selection Guide

ELECTROSTATIC FOCUS AND DEFLECTION TYPES

Type*	Max. Overall Length in.	Min. Screen Diameter in.	Characteristics: Final Electrode Volts	Characteristics: Deflection Angle approx. degrees
OSCILLOGRAPH TYPE (Cont.)				
Long Persistence:				
5CP12‡	Same as type 5CP1A, except for phosphor			
Very-Long Persistence:				
3JP7‡	Same as type 3JP1, except for phosphor			
3KP7	Same as type 3KP1, except for phosphor			
5ABP7‡	Same as type 5ABP1, except for phosphor			
5AHP7¶	11⅜	4¼	7000	53
5CP7A‡	Same as type 5CP1A, except for phosphor			
5FP7A▲	11½	4¼	7000	53
5UP7	Same as type 5UP1, except for phosphor			
7BP7A▲	13⅝	6	7000	53
7MP7▲	13⅜	6	7000	50
16ADP7▲	22	14⅜	12000	53

ELECTROSTATIC FOCUS AND MAGNETIC DEFLECTION TYPES

Type*	Max. Overall Length in.	Min. Screen Diameter in.	Characteristics: Final High Electrode Volts	Characteristics: Focusing Electrode Volts	Characteristics: Deflection Angle approx. degrees
Flying-Spot Types					
3KP16●	Same as type 3KP1, except for phosphor				
5AUP24	12⅞	4¼	27000	4600–5800	40
5WP15	11 13/16	4¼	27000	4000–5200	50
5ZP16	14¾	4¼	27000	5500–7100	40
Transcriber Kinescope					
5WP11	11 13/16	4¼	27000	4200–5400	50

For footnotes, see page 132.

RCA Quick Selection Guide

ELECTROSTATIC FOCUS AND MAGNETIC DEFLECTION TYPES

Type*	Max. Overall Length in.	Min. Screen Diameter in.	Characteristics		
			Final High Electrode Volts	Focusing Electrode Volts	Deflection Angle approx. degrees
View-Finder Kinescopes					
5FP4A▲	11½	4¼	6000	—	53
Projection Kinescopes (for theater television)					
5AZP4	12 9/16	4½	36000	6650–8100	50
7NP4§	20⅛	5x3¾	75000	15000–17000	35
7WP4#	20 1/16	5x3¾	75000	15000–17000	35
Monitor Kinescopes					
7CP4	13 13/16	6½	6000	912–1368	57
7TP4	13½	6	10000	1170–1590	50
8HP4	10¼	7 13/16	11000	0–300	90
10SP4	17	9⅛	14000	1640–2225	50
14BAP4	17 3/32	11½x8⅝	18000	0–400	70
17DWP4	19 9/16	14 5/16x11⅛	18000	0–400	70

* All have 6.3-v heaters, except for the 3AP1A which has a 2.5-v heater.

† Per KV of final electrode volts except for post-deflection accelerator types.

‡ Post-deflection accelerator type.

▲ Magnetic focus and deflection type.

¶ Electrostatic focus and magnetic deflection type.

● Electrostatic focus and deflection type.

§ Projection-throw distance = 60 feet.

Projection-throw distance = 80 feet.

RCA Quick Selection Guide

Storage Tubes

DISPLAY-STORAGE TUBES

Type	Nominal Diameter inches	No. of Writing Guns	Typical Brightness footlamberts	Typical Resolution lines/in.
2053*	5	1	1900	50
4412*	10	1	200	44
4454	5	1	1300	—
6866	5	1	2500	50
7183	5	1	1200	50
7268*	5	2	2500	50
7315	5	1	2500	50
7448	5	1	2500	50

* "Ruggedized" type.

MONOSCOPES

Type	Maximum Dimensions		Typical Operation			
	Length Inches	Diam. Inches	Pattern Electrode Volts	Grid No. 3 Volts for Focus (Approx.)	Grid No. 2 Volts	Grid No. 1 Volts for Visual Cutoff of Monitor Raster (Approx.)
2F21	12 11/16	5 1/16	1000	240 to 360	1000	−10 to −70
1699	Custom-built type. Like 2F21, except pattern is individually styled to customer's requirements.					

GRAPHECHON

Type	Maximum Dimensions		Min. Number of Discernible Output Signal Levels	Resolution at 50% Response range rings/display radius
	Length Inches	Diameter Inches		
7539	26	3.40	4	150

RADECHON

6499	Useful in digital or analogue information processing systems.

COMPUTER STORAGE TUBE

6571	Useful in binary-digital computer systems.

RCA
INTERCHANGEABILITY DIRECTORY OF INDUSTRIAL-TYPE ELECTRON TUBES

This Interchangeability Directory of Industrial electron tubes has been prepared to assist distributors, dealers, servicemen, and other users in selecting the proper RCA tube type as a replacement. This directory covers more than 1600 basic tube types. Classes of tubes included are shown below in the *Key to Symbols*.

The primary means of identifying a tube type is the basic designation. The designation may consist of a number, or a combination of letters and digits. In addition, many manufacturers utilize prefixes composed of one or more letters.

Because the majority of industrial tube types employ industry-assigned type designations, this directory has been prepared without distinctive manufacturers' identification prefixes. A tube having an industry-assigned type designation, made by one manufacturer is directly interchangeable with a type having the same designation made by another manufacturer, regardless of the manufacturer's prefix. In those cases where manufacturers have assigned their own type numbers, one manufacturer may have assigned the same designation to a tube type as that of another manufacturer for an entirely different tube type. In such cases, the manufacturer's prefix is retained to distinguish between the types. For example, the number 54 is used by one manufacturer to identify a phototube, and by another manufacturer to identify a power tube. Therefore, to permit product identification, it is necessary to retain the manufacturer's prefix as an essential part of the basic type number. Hence, the phototube is identified as CE54, and the power tube as HK54.

Identifying information about the Type to be Replaced, including the associated prefix when necessary, is given in the first column, followed by a symbol in the second column denoting the class of tube. The last two columns show the RCA Direct Replacement Type or the RCA Similar Type, respectively, when one or the other is available. In some cases the usefulness of the list is further extended by showing both a Direct Replacement Type and a Similar Type.

Basic designations shown in the first column of the tabulation are listed in numerical-alphabetical sequence. Those starting with a digit are given first; those starting with a letter appear at the end of the tabulation.

HOW TO USE

1. Look in Column 1 for the basic designation of the type to be replaced.

2. Look in Column 2 for the corresponding RCA Direct Replacement Type.

3. If no RCA Direct Replacement Type is shown, look in Column 3 for an RCA Similar Type. Such a type usually is not directly interchangeable with the type to be replaced because of mechanical and/or electrical differences. Tube data should, therefore, be checked before using an RCA Similar Type as a replacement.

EXPLANATIONS OF COLUMNS

RCA types shown in this column are direct replacements for corresponding types to be replaced.

RCA types shown in this column are not directly interchangeable with the types to be replaced because of differences in mechanical and/or electrical characteristics. For more information as to degree of interchangeability, refer to respective tube data.

INTERCHANGEABILITY DIRECTORY

TYPE TO BE REPLACED	REPLACE BY RCA TYPE●	SIMILAR RCA TYPE▲
0A2	0A2	0D3, 0A2WA, 6073, 6073/0A2
0A2WA	0A2WA	0A2, 0D3, 6073, 6073/0A2
0A3	0A3	0C2
0A3/VR75	0A3	0C2
0A4G	0A4G	
0B2	0B2	0C3, CB2WA, 6074, 6074/0B2
0B2WA	0B2WA	0B2, 0C3, 6074, 6074/0B2
0C2	0C2	0A3
0C3	0C3	0B2, 0B2WA, 6074, 6C74/0B2
0C3/VR105	0C3	0B2, 0B2WA, 6074, 6074/0B2
0C3W		0C3, 0B2, CB2WA, 6074, 6074/0B2
0D3	0D3	0A2, 0A2WA, 6073, 6073/0A2
0D3/VR150	0D3	0A2, 0A2WA, 6073, 6073/0A2
0D3W		0D3, 0A2, 0A2WA, 6073, 6073/0A2
1C21	1C21	
1EP1	1EP1	
1EP2	1EP2	
1EP11	1EP11	
1L4	1L4	
1P21	1P21	
1P22	1P22	
1P23	868	
1P28	1P28	
1P29	1P29	
1P29/FJ401	1P29	
1P32	927	
1P37	1P37	
1P39	1P39	
1P40	1P40	
1P41	1P41	
1P42	1P42	

TYPE TO BE REPLACED	REPLACE BY RCA TYPE●	SIMILAR RCA TYPE▲
2-1500		802C
2AP1	2AP1A	
2AP1A	2AP1A	
2BP1	2BP1	
2BP11	2BP11	
2C22		6J5
2C38	2C39A	
2C39	2C39A	
2C39A	2C39A	
2C39B		2C39A
2C39WA	2C39WA	
2C40	2C40, 2C40A	4037
2C40A	2C40A	4037
2C43	2C43	
2C51	5670	5670WA
2D21	2D21	2D21W, 5727, 5727/2D21W
2D21W	2D21W	2D21, 5727/2D21W
2E24	2E24	
2E25		2E24
2E26	2E26	
2E30		5618
2F21	2F21	
2K26	2K26	
2X2/879	2X2A	
2X2A	2X2A	
3-25A3		809
3-50Au		811A
3-50G2	834	
3-75A3		8005
3-450Au		833A
3Au	3Au	
3A5	3A5	
3AP1	3AP1A	
3AP1A	3AP1A	
3AQP1	3AQP1	
3B4WA	3B4WA	
3B24W		8020
3B25	3B25	
3B27		836
3B28	3B28	
3BP1	3BP1A	
3BP1A	3BP1A	
3C23	3C23	
3C33	3C33	
3C45	613G/3C45	
3CX100A5		2C39A

RCA INDUSTRIAL TUBES

TYPE TO BE REPLACED	REPLACE BY RCA TYPE●	SIMILAR RCA TYPE▲
3D22	3D22A	
3D22A	3D22A	
3E29	3E29	
3JP1	3JP1	
3JP7	3JP7	
3KP1	3KP1	
3KP7	3KP7	
3KP11	3KP11	
3KP16	3KP16	
3RP1	3RP1	
3RP1A	3RP1A	
3WP1	3WP1	
3WP2	3WP2	
3WP11	3WP11	
3X100A5	2C43A	
3X2500A3		5762/7C24
4-65A	4-65A	
4-125A	4-125A/ 4D21	
4-125A/ 4D21	4-125A/ 4D21	
4-250A	4-250A	
4-250A/ 5D22	4-250A/ 5D22	
4-400A	4-400A	
4-750A		4-1000A
4-1000A	4-1000A	
4AP10	4AP10	
4B24		604/7014
4B32		872A
4C21		8005
4C22		8005
4C25		812A
4X250B	7203/ 4CX250B	
4CX250F	7204/ 4CX250F	
4D21	4-125A/ 4D21	
4D21/ 4-125A	4-125A/ 4D21	
4D21A		4-125A/ 4D21
4D32		4-125A/ 4D21
4E27/8001	4E27/8001	
4E27A	4E27A/ 5-125B	
4E27A/ 5-125B	4E27A/ 5-125B	

TYPE TO BE REPLACED	REPLACE BY RCA TYPE●	SIMILAR RCA TYPE▲
4X150A	7034/ 4X150A, 4X150A	
4X150D	7035/ 4X150D, 4X150D	
4X150G		7034/ 4X150A, 4X150A
4X250B	7203/ 4CX250B	
4X250F	7204/ 4CX250F	
4X500A	4X500A	
5-125B	4E27A/ 5-125B	
5ABP1	5ABP1	
5ABP7	5ABP7	
5ABP11	5ABP11	
5ADP1	5ADP1	
5ADP7		5ABP7
5ADP11		5ABP11
5AGP1		5ABP1
5AGP7		5ABP7
5AGP11		5ABP11
5AHP7	5AHP7	
5AHP7A		5AHP7
5AUP4	5AUP4	
5AYP4	5AYP4	
5A/P4	5A/P4	
5BP1	5BP1A	
5BP1A	5BP1A	
5C21	C6J/5C21	760/6858
5C21/C6J	C6J/5C21	
5C24		8000
5CHP16		5ZP16
5CP1	5CP1A	
5CP1A	5CP1A	
5CP7	5CP7A	
5CP7A	5CP7A	
5CP11A	5CP11A	
5CP12	5CP12	
5D22	4-250A/ 5D22	
5DEP1		5UP1
5DEP7		5UP7
5DEP11		5UP11
5FP4A	5FP4A	
5FP7A	5FP7A	
5FP7B		5FP7A
5FP14	5FP14A	
5FP14A	5FP14A	
5FP15A	5FP15A	

INTERCHANGEABILITY DIRECTORY

TYPE TO BE REPLACED	REPLACE BY RCA TYPE●	SIMILAR RCA TYPE▲
5HP1A		5BP1A
5R4GY	5R4GY	5R4GYB
5R4GYB	5R4GYB	5R4GY
5TP4	5TP4	
5UP1	5UP1	
5UP7	5UP7	
5UP11	5UP11	
5WP11	5WP11	
5WP15	5WP15	
5ZP16	5ZP16	
5ZP2A		5AUP2A
6AC7W	6AC7W	
6AC7Y	6AC7W	
6AG5WA	6186/ 6AG5WA	6186
6AG7Y	6AG7Y	
6AK5W	5654/ 6AK5W	5654 5654/ 6AK5W/ 6096
6AK6	6AK6	
6AR6		6BG6GA
6AS6	6AS6	5725
6AS7G	6AS7G	6080, 6080WA
6AS7GTB		6AS7G, 6080, 6080WA
6AU6WA	6AU6WA	6136
6AU6WB	6AU6WB	
6B		5561
6BA6W	5749/ 6BA6W	5749
6C2A		5786
6D22		4X500A
6F4	6F4	
6J4	6J4	6J4WA
6J4WA	6J4WA	6J4
6J6WA	6J6WA	5964, 6101, 6101/ 6J6WA
6L4	6L4	
6Q5G	884	
6SJ7WGT		6SJ7Y 5693
6SJ7Y	6SJ7Y	5693
6SL7WGT		5691
6SN7GTY	6SN7GTY	5692
6X4W	6X4W	
7BP7	7BP7A	
7BP7A	7BP7A	
7BP7B		7BP7A
7C2A	5762/7C2A	

TYPE TO BE REPLACED	REPLACE BY RCA TYPE●	SIMILAR RCA TYPE▲
7C25		5762/7C2A
7C27		5762/7C2A
7C30		5762/7C2A
7CP4	7CP4	
7JP1	7VP1	
7MP7	7MP7	
7NP4	7NP4	
7TP4	7TP4	
7VP1	7VP1	
7WP4	7WP4	
8D21	8D21	
8HP4	8HP4	
8JP4		8HP4
8MP4		8HP4
8YP4		8HP4
9C21	9C21	
9C22	9C22	5671
9C25	9C25	
10AKP7		10KP7
10KP7	10KP7	
10KP7A	10KP7	
10KP7B		10KP7
10SP4	10SP4	
10Y	801A	
12A6	12A6	
12AT7WA	12AT7WA	6201
12AT7WB	12AT7WB	
12AU7WA	6189/ 12AU7WA	5814A, 5814WA
12DP7	12DP7A	
12DP7A	12DP7A	
12DP7B	12DP7A	
12DP7C		12DP7A
12SW7	12SW7	
12SX7GT	12SX7GT	
12SY7	12SY7	
16ADP7	16ADP7	
17	5557	
24G		812A
25T		809
26A6	26A6	26FZ6
26A7GT	26A7GT	
26C6	26C6	
26D6	26D6	
26FZ6	26FZ6	
30Z		809
35T		812A
35TG		812A
40		812A
51T		8005
75PC11		7295A
75TH		8005

RCA INDUSTRIAL TUBES

TYPE TO BE REPLACED	REPLACE BY RCA TYPE●	SIMILAR RCA TYPE▲
83	83	
100R	8020	
100TH		810
100TL		8000
104	5561	
105	105	
111H		812A
143D		2X2A
150T		8000
152TH		8000
152TL		8000
172	172	
203A		8005
203H		8005
205D		801A
205E		801A
207	207	
211		8005
211B		8005
211D		8005
213E		8005
213H		8005
214E		836
217A		80
217C		836
220C		892
220CA		892R
232C		892
233		880
241B		833A
242A		8005
242B		8005
242C		8005
249A		866A
249B		866A
249C		866A
250TH		833A
250TL		833A
254B		810
255A		869B
255B		869B
256B		866A
260A		860
266B		857B
266C		857B
267B		872A
274A		801A
274A		5R4GY
274B	5R4GY	
274A		845
274B		845
274D		845

TYPE TO BE REPLACED	REPLACE BY RCA TYPE●	SIMILAR RCA TYPE▲
295A		8005
300		8005
301A		83
303A		8005
304B	834	
304H		833A
304T		833A
307A		807
310		801A
310A		6C6
310B		1620
312A		878
313C		1C21
315A		673
319A		872A
320B		892
321A		673
322A	803	
323B		3C23
328A		6C6
331A	805	
339A		807
341AA		891R
342A		892
342B		8005
343A		892
348A		1620
349A		6F6
350A	807	
350B		807
351A		6X5GT
352A		6R7
353A	872A	
354C		8000
354E		810
356		5771
356A		807
356B		812A
357A		833A
357B		833A
359A		1C21
363A		892
367A		673
369B		869B
371B		8020
375A		575A
381	2C39A	
384D		845
393A		3C23
394A		627
395A		5823
403A	6AK5	6AK5W
		5654

INTERCHANGEABILITY DIRECTORY

TYPE TO BE REPLACED	REPLACE BY RCA TYPE●	SIMILAR RCA TYPE▲
408A (cont'd)	*6AK6 (cont'd)*	5654/ 6AK5W.
		5654/ 6AK5W/ 6096
4038		6AK5, 6AK5W, 5654, 5654/ 6AK5W, 5654/ 6AK5W/ 6096
404A	5847/404A	
407A	407A	
408A	408A	
415	5550	
417A	5842/417A	
421A		6AS7G, 6080, 6080WA
423A		5651
450TH		833A
451	8020	
460		8000
463		8000
468		810
471		8005
473		5762/7C24
481		8013A
4818		6013A
502A	502A	
546		5696
575A	575A	
578		8020
579B	579B	
604	604/7014	
604/7014	604/7014	
604L		604/7014
615	615/7018	555B
615/7018	615/7018	
618		5561
618L		5561
618P		5561
627	627	
629	629	
630	2050	2050A
630A	2050	2050A
631	5559	
632A	632B	
632B	632B	
635	635/7019	5561
635/7019	635/7019	

TYPE TO BE REPLACED	REPLACE BY RCA TYPE●	SIMILAR RCA TYPE▲
635L	635L/7020	
635L/7020	635L/7020	
635P		635/7019
651	5552A	
651/656	5552A	
652	5551A	
652/657	5551A	
653B	5555	
655	5553B	
655/658	5553B	
656	5552A	
657	5551A	
658	5553B	
672	672A	
672A	672A	
673	673	
676	676	
677	677	
678		5563A
681	5550	
681/686	5550	
686	5550	
710	710/6011	676
710/6011	710/6011	
710L		710/6011
714	714/7021	5557
714/7021	714/7021	
715	5557	
715/5557	5557	
715/5557/ FG17	5557	
716	716/6885	
716/6885	716/6885	
760	760/6858	
760/6858	760/6858	
760L		760/6858
760P		760/6858
778		760/6858
778L		760/6858
778P		760/6858
800		812A
801	801A	
801A	801A	
801A/801	801A	
802	802	
804		814
805	805	
806		8000
807	807	
808		812A
809	809	

RCA INDUSTRIAL TUBES

TYPE TO BE REPLACED	REPLACE BY RCA TYPE●	SIMILAR RCA TYPE▲
810	810	
811	811A	
811A	811A	
812	812A	
812A	812A	
813	813	
814	814	
814/RK47	814	
815	815	
816	816	
826		812A,8298
827R	827R	
828	828	
829	829B	
829A	3E29	
829B	829B	
830	830B	
830B	830B	
832	832A	
832A	832A	
833	833A	
833A	833A	
834	834	
836	836	
837	837	
838		812A
841		809
845	845	
854H		833A
857	857B	
857B	857B	
859		9C21
860		8072
861		4-400A
865		807
866	866A	
866A	866A	
866A/866	866A	
866AX		866A
866JR		816
868	868	
868/PJ23	868	
869A	869B	
869B	869B	
872	872A	
872A	872A	
872A/872	872A	
878		8013A
879	2X2A	
880	880	
884	884	
885	885	

TYPE TO BE REPLACED	REPLACE BY RCA TYPE●	SIMILAR RCA TYPE▲
889	889A	
889A	889A	
889R	889RA	
889RA	889RA	
891	891	892
891R	891R	
892	892	
892R	892R	
893		9C21
893A		9C21
893AR		5671
902	902A	
902A	902A	
906P1	3AP1A	
917	917	
918	918	
919	919	
920	920	
921	921	
922	922	
923	923	
924		1P41
925	925	
926	926	
927	927	
928	928	
929	929,1P39	
930	930,1P40	
931	931A	
931A	931A	
931VA	931VA	
934	934	
935	935	
955	955	
957	957	
958A	958A	
959	959	
967	5557	
991	991	
1051	5551A	
1051A	5551A	
1052	5552A	
1052A	5552A	
1266		5823
1267		2A3
1280		14C7
1337		8134
1603		1620,5879
1612	1612	

INTERCHANGEABILITY DIRECTORY

TYPE TO BE REPLACED	REPLACE BY RCA TYPE●	SIMILAR RCA TYPE▲
1613	1613	
1614	1614	
1616	1616	
1619	1619	
1620	1620	
1621	1621	
1622	1622	
1623		809
1624	1624	
1625	1625	
1629	1629	
1631	1631	
1635	1635	
1640	6AD5/1640	
1645A	1645A	
1699	1699	
1701	5557	
1702		5563A
1802P1	5BP1A	
1852	6AC7	
1853	6AB7	
1854		7513
1855		7539
1858	1858	
1899		2F21
1946	1946	
1947	1947	
1949	1949	
1950		1949
2020	2020	
2022	2022	
2028	2028	
2029	2029	
2039	6050/2039	
2041	2041	
2048	2048	2048A
2048A	2048A	
2050	2050	2050A
2050A	2050A	2050
2051	2050	2050A
2054	2054	
2054V1	2054V1	
2067	2067	
2525A5	5BP1A	
4009	4009	
4010	4010	
4011	4011A	
4011A	4011A	
4015	4015	
4017	4017	
4019	4019	
4020	4020	
4021	4021	

TYPE TO BE REPLACED	REPLACE BY RCA TYPE●	SIMILAR RCA TYPE▲
4036	4036	
4037	4037	
4401	5820A	
4401V1	4401V1	
4402	4402	
4403	4403	
4404	4404	
4408	4408	
4409	4409	
4412	4412	
4414	4414	
4415	4415	
4415V1	4415V1	
4416	4416	
4420	4420	
4423	4423	
4424	4424	
4425	4425	
4427	4427	
4429	4429	
4438	4438	
4439	4439	
4440	4440	
4441	4441	
4447	4447	
4448	4448	
4449	4449	
4452	4452	
4457	SQ2500	
4600A	4600A	
4602	4602	
4603	4603	
4604	4604	
4605		4605V3
4605V1		4605V3
4605V2		4605V3
4605V3	4605V3	
4606	5762A	
4612	4612	
4614	4614	
4800	SL2206	
4801	SL2205	
5514		811A
5516		2E24
5530		5762, 7C24
5550	5550	
5550/GL415	5550	
5550/681	5550	
5550/681/686	5550	
5551	5551A	
5551/652	5551A	

RCA INDUSTRIAL TUBES

TYPE TO BE REPLACED	REPLACE BY RCA TYPE●	SIMILAR RCA TYPE▲
5551/FG271	5551A	
5551A	5551A	
5551A/652	5551A	
5552	5552A	
5552/651	5552A	
5552/ FG235A	5552A	
5552A	5552A	
552A/651	5552A	
5553	5553B	
5553/655	5553B	
5553/ FG258A	5553B	
5553A	5553B	
5553B	5553B	
5553B/655	5553B	
5555	5555	
5555/653B	5555	
5555/ FG236B	5555	
5556	5556	
5556/PJ8	5556	
5557	5557	
5557/17	5557	
5557/715	5557	
5557/FG17	5557	
5557/FG17/ 1701	5557	
5558	5558	
5558/32	5558	
5558/FG32	5558	
5559	5559	
5559/57	5559	
5559/FG57	5559	
5560	5560	
5560/FG95	5560	
5561	5561	
5561/10W	5561	
5561/FG10W	5561	
5563	5563A	
5563A	5563A	
5581	5581	
5582	5582	
5583	5583	
5584	5584	

TYPE TO BE REPLACED	REPLACE BY RCA TYPE●	SIMILAR RCA TYPE▲
5590/4018		6AK5W, 5654, 5654/ 6AK5W, 5654/ 6AK5W/ 6096
5591/4038		6AK5W, 5654, 5654/ 6AK5W, 5654/ 6AK5W/ 6096
5592	5592	9C25
5604		9C25
5604A		9C25
5604		892
5618	5618	
5632	C3J/5632	
5632/C3J	C3J/5632	
5636	5636	
5636A		5636
5639	5639	
5642	5642	
5651	5651	5651WA
5651WA	5651WA	5651
5652	5652	
5653	5653	
5654	5654	6AK5W, 5654/ 6AK5W, 5654/ 6AK5W/ 6096
5654/6AK5W	6J4/ 6AK5W	6AK5W, 5654/ 6AK5W/ 6096
5654/ 6AK5W/ 6096	6J4/ 6AK5W/ 6096	5654, 5654/ 6AK5W
5658		880
5659		12A6
5660		12C8
5661		12SK7
5663	696	
5664		3C23
5665	16J/5665	
5665/C16J	16J/5665	
5666		889A
5667		889RA
5668		892
5669		892R

INTERCHANGEABILITY DIRECTORY

TYPE TO BE REPLACED	REPLACE BY RCA TYPE●	SIMILAR RCA TYPE▲
5670	5670	5670WA
5670WA	5670WA	5676
5671	5671	
5675	5675	
5679		7A6
5683		716/6855
5683/C1JA		716/6855
5684	C3JA/5684	3C23
5684/C3JA	C3JA/5684	
5685	C6JA/5685	
5685/C6JA	C6JA/5685	
5686	5686	
5687	5687	
5690	5690	
5691	5691	
5692	5692	
5693	5693	6SJ7Y
5695		816
5696	5696	
5713	5713	
5718	5718	
5718A	5718	
5719	5719	
5719A	5719	
5725	5725	6AS6
5726	5726	5726/ 6AL5W, 5726/ 6AL5W/ 6097
5726/6AL5W	5726/ 6AL5W	5726, 5726/ 6AL5W/ 6097
5726/ 6AL5W/ 6097	5726/ 6AL5W/ 6097	5726, 5726/ 6AL5W
5727	5727	2D21, 2D21W, 5727/ 2D21W
5727/2D21W	5727/ 2D21W	2D21, 2D21W
5734	5734	
5736		5762/7C24
5741		8020
5743		5556
5749	5749	5749/ 6BA6W
5749/6BA6W	5749/ 6BA6W	5749
5750	5750	6BE6
5751	5751	5751WA
5751WA	5751WA	5751
5762	5762/7C24, 5762A	
5762/7C24	5762/7C24, 5762A	
5762A	5762A	
5763	5763	
5770	5770	
5771	5771	
5786	5786	
5788		5555
5794		6562/ 5794A
5794A	6562/ 5794A	
5812		5763
5814	5814A	5814WA, 6189/ 12AU7WA
5814A	5814A	5814WA, 6189/ 12AU7WA
5814WA	5814WA	5814A, 6189/ 12AU7WA
5819	5819	
5820	5820A	
5820A	5820A	
5820B		5820A
5823	5823	
5825	5825	
5840	5840	
5840A		5840
5842	5842/417A	
5842/417A	5842/417A	
5844		5964
5847	5847	
5847/404A	5847/404A	
5868/ AX9902		833A
5876	5876, 5676A	
5876A	5876A	5876
5891		5671
5892		635/7019
5893	5893	
5896	5896	
5897	5718	
5898	5719	
5899	5899	
5899A	5899	
5902	5902	
5915	5915	
5915A		5915

RCA INDUSTRIAL TUBES

TYPE TO BE REPLACED	REPLACE BY RCA TYPE●	SIMILAR RCA TYPE▲
5917		5762/7C24
5918		5770
5919		5671
5920		5964, 6101, 6J6WA
5930		2A3
5931		5U4GB
5932		7027A
5933		807
5933WA		807
5934		5798
5936		9C21
5946	5946	
5963	5963	12AU7WA, 5814A, 5814WA
5964	5964	6J6WA, 6101
5965	5965	
5965A		5965
6005	6005	6005/6AQ5W
6005/6AQ5W	6005/6AQ5W	6005, 6005/6AQ5W/6095
6005/6AQ5W/6095	6005/6AQ5W/6095	6005, 6005/6AQ5W
6011	710/6011	
6011/710	710/6011	
6012	6012	2021, 2021W, 5727, 5727/2021W
601a	C1K/601a	
601a/C1K	C1K/601a	
6021	6021	
6028	408A	
6028/408A	408A	
6032	6032A	
6032A	6032A	
6057		5751
6058		5726
6060		6201
6062		5763
6067		5814A
6072	6072	
6073	6073	6073/0A2, 0A2, 0A2WA, 003
6073/0A2	6073/0A2	6073, GA2.

TYPE TO BE REPLACED	REPLACE BY RCA TYPE●	SIMILAR RCA TYPE▲
		0A2WA, 003
6074	6074	6074/0B2, 0B2, 0B2WA, 0C3
6074/0B2	6074/0B2	6074, 0B2, 0B2WA, 0C3
6080	6080	6080WA, 6AS7G
6080WA	6080WA	6080, 6AS7G
6082	6082	
6082A		6082
6084		5879
6085		5692
6087		5690
6094		6005, 6005/6AQ5W/6095, 6005/6AQ5W
6095	6005/6AQ5W/6095	6005, 6005/6AQ5W
6096	5654/6AK5W/6096	5654, 5654/6AK5W, 6AK5W
6097	5726/6AL5W/6097	5726, 5726/6AL5W
6099	6099	6J6WA, 5964, 6101, 6101/6J6WA
6101	6101	5964, 61C1/6J6WA
6101/6J6WA	6101/6J6WA	5964, 6101
6106		5690
6111	6111	
6112	6112	
6130	6130/3C45	
6130/3C45	6130/3C45	
6136	6136	6AU6WA
614C/423A		5651, 5651WA
6146	6146	
6146A		6146
6146W	6146W/7212	
6146W/7212	6146W/7212	

INTERCHANGEABILITY DIRECTORY

TYPE TO BE REPLACED	REPLACE BY RCA TYPE●	SIMILAR RCA TYPE▲
6155	6155	
6156	6156	
6159	6159	
6159A		6159
6159W	6159W/ 7357	
6159W/ 7357	6159W/ 7357	
6161	6161	
6166	6166	
6166A	6166A/ 7007	
6166A/ 7007	6166A/ 7007	
6173	6173	
6180		5690
6181	6181	
6186	6186	6186/ 6AG5WA
6186/ 6AG5WA	6186/ 6AG5WA	6186
6189/ 12AU7WA	6189/ 12AU7WA	5814A, 5814WA, 5963
6197	6197	
6198		7038
6198A		7038
6199	6199	
6201	6201	12AT7WA
6205	6205	
6206	6206	
6211	6211	
6211A		6211
6217	6217	
6263	6263, 6263A	
6263A	6263A	
6264	6264A	
6264A	6264A	
6267		5879
6291		6199
6292		6342A, 8053
6293	6293	
6326	6326	
6326A		7038
6328	6328	
6333		892
6336		6336A
6336A	6336A	
6337		6336A
6342	6342A	
6342A	6342A	

TYPE TO BE REPLACED	REPLACE BY RCA TYPE●	SIMILAR RCA TYPE▲
6346		5551A
6347		5552A
6348		5553B
6350	6350	
6362		7767
6363		8054
6364		8055
6365		7764
6381	6381	
6385		5670
6394		6082
6405/1640	6405/1640	
6414		5965
6417	6417	7551
6445		892R
6446		892
6447		892R
6448	6448	6806
6467		6199
6472	6472	
6474		7513
6474/1854		7513
6486		5725
6486A		5725
6499	6499	
6509		5555
6514		5555
6520		6AS7G
6521	6521	
6524	6524	
6528		6080
6549		4-65A
6550	6550	7027A
6562	6562/ 5794A	
6562/ 5794A	6562/ 5794A	
6570	6570	
6571	6571	
6576		5771
6626	6626/ 0A2WA	0A2WA,0A2, 0D3
6626/0A2WA	6626/ 0A2WA	0A2WA,0B2 0C3
6655	6655A	
6655A	6655A	
6660	6660/6BA6	
6660/6BA6	6660/6BA6	
6661	6661/6BH6	
6661/6BH6	6661/6BH6	
6662	6662/6BJ6	
6662/6BJ6	6662/6BJ6	

RCA INDUSTRIAL TUBES

TYPE TO BE REPLACED	REPLACE BY RCA TYPE●	SIMILAR RCA TYPE▲
6663	6663/6AL5	
6663/6AL5	6663/6AL5	
6664	6664/6AB4	
6664/6AB4	6664/6AB4	
6669	6669/6AQ5A	
6669/6AQ5A	6669/6AQ5A	
6676	6676/6CB6A	
6676/6CB6A	6676/6CB6A	
6677	6677/6CL6	
6677/6CL6	6677/6CL6	
6678	6678/6U8A	
6678/6U8A	6678/6U8A	
6679	6679/12AT7	
6679/12AT7	6679/12AT7	
6680	6680/12AU7A	
6680/12AU7A	6680/12AU7A	
6681	6681/12AX7A	
6681/12AX7	6681/12AX7A	
6681/12AX7A	6681/12AX7A	
6687		5915
6806	6806	
6810	6810A	
6810A	6810A	
6810B		6810A
6814	6814	
6816	6816	
6829		5965
6849	6849	7198
6850	6850	
6853		5690
6855/716	716/6855	
6858/760	760/6858	
6861	6861	
6865	6865A	
6865A	6865A	
6866	6866	7448
6883	6883	
6883A		6883
6884	6884	
6887	6887	
6893	6893	

TYPE TO BE REPLACED	REPLACE BY RCA TYPE●	SIMILAR RCA TYPE▲
6894	6894	
6895	6895	
6896/1855		7539
6897	6897	
6901		3C23
6903	6903	
6911		7102
6914	6914	
6914A	6914A	
6922	6922	
6929	6929	
6935		7767
6939	6939	
6949	6949	
6950/2039	6950/2039	
6952	6952	
6953	6953	
6957	6957	
6991		7448
7007	6166A/7007	
7008	7008	
7014	6014/7014	
7018	6157/7018	
7019	6357/7019	
7020	6357/7020	
7021	7141/7021	
7029	7029	
7034/4X150A	7034/4X150A	
7035/4X1500	7035/4X1500	
7036		5915
7038	7038	
7038A		7038
7043	7043	
7044	7044	
7046	7046	
7054	7054, 8077/7054	
7055	7055	
7056	7056	
7057	7057	
7058	7058	
7059	7059	
7060	7060	
7061	7061	
7062		5965
7064		6655A
7065		6655A
7079		6111
7085		5771
7094	7094	
7102	7102	

INTERCHANGEABILITY DIRECTORY

TYPE TO BE REPLACED	REPLACE BY RCA TYPE●	SIMILAR RCA TYPE▲
7105		6080, 6080WA, 6A57G
7111	7111	
7117	7117	
7136		575A
7163	7163	
7183	7183	
7198	7198	
7200	7200	
7203/ 4CX250B	7203/ 4CX250B	
7204/ 4X250F	7204/ 4CX250F	
7204/ 4CX250F	7204/ 4CX250F	
7212	6146W/ 7212	
7213	7213	
7214	7214	
7216	C3JL	
7225		6499
7226		7262A
7226A		7263A
7244		6101, 6101/ 6J6WA, 6J6WA
7244A		6101, 6101/ 6J6WA, 6J6WA
7245		6JHWA, 6JH
7245A		6JHWA, 6JH
7262		7262A
7262A	7262A	
7263		7263A
7263A	7263A	
7264	7264	
7265	7265	
7268	7268	
7270		8121
7271	7271	
7291A		7038
7293	7293A	
7293A	7293A	
7295	7295A	
7295A	7295A	
7307	710/6011	676
7308	6922	
7315	7315	
7318		5814A
7325		7735A
7326	7326	
7336		7038
7351		7735A
7357	6159W/ 7357	
7358		6293
7360	7360	
7370		5687
7386		760/6011
7389	7389A	
7389A	7389A	
7404	7404	
7412	7412	
7448	7448	
7457	7457	
7459		5762/7C24 9C25
7465		
7467	7467	
7509		710/6011
7513	7513	
7513/V1	7513/V1	
7533	7533	
7536	7536	
7539	7539	
7551	7551	
7552	7552	
7553	7553	
7554	7554	
7558	7558	
7566		6499
7580	7580	
7586	7586	
7587	7587	
7607		7580
7609		7035/ 4X150D
7611	4411	
7642	7642	
7649	7649	
7650	7650	
7651	7651	
7669		5551A
7671		5552A
7675		1949
7696		6342A
7697	7697	
7701		7551
7717	7717/6CY5	
7717/6CY5	7717/6CY5	
7724	7724/ 14GT8	

RCA INDUSTRIAL TUBES

TYPE TO BE REPLACED	REPLACE BY RCA TYPE●	SIMILAR RCA TYPE▲
772u/14GT8	772u/ 14GT8	
7728	6201	
7729		
7730	6189/ 12AU7WA	12AX7A
7731		6678/6U8A
7732		6CB6
7733		581Wu, 5963
7735	7735A	
7735A	7735A	
7746	7746	
7764	7764	
7767	7767	
7801	7801	
7819		8055
7835	7835	
7838		5671
7842	7842	
7843	7843	
7844	7844	
7850	7850	
7870	7870	
7895	7895	
7898	7898	
7900		5762A
7905	7905	
8000	8000	
8001	4E27/8001	
8005	8005	
8008	8008	
8013A	8013A	
8014A		5786
8020	8020	
8020/100R	8020	
8032	8032	
8051	8051	
8053	8053	
8054	8054	
8055	8055	
8056	8056	
8057		1949
8058	8058	
8062		7102
8072	8072	
8077	8077/7054	7054
8077/7054	8077/7054	7054
8093	8093A	
8093A	8093A	
8100		4423
8121	8121	
8122	8122	

TYPE TO BE REPLACED	REPLACE BY RCA TYPE●	SIMILAR RCA TYPE▲
813u	813u	
8142		4425
8143		4423
8149		6146, 6883, 8032
8150		6146, 6883, 8032
8172		703W/ 4X150A
8177		7213
8179		4-1000A
8184	8184	
8245		7203
8295		4-1000A, 7213
8295A		4-1000A, 7213
8298		6146
8346		4425
8347		4423
8392	8392	
8398	8398	
9001	9001	
9002	9002	
9003	9003	
9005	9005	
9006	9006	
10667F		7038
10667G		7735A
10667M		7038
10667S		7735A
10667SC		7735A
10667T		7735A
55850F		7038
55850N		7735A
55850S		7038, 7735A
AX9911		6130/3C45
B935		4410
BW11	834	
C18		3C23
C18/A		3C23
C1J/A		3C23
C1K	C1K/6014	
C1K/6014	C1K/6014	
C3J	C3J/5632	
C3J/5632	C3J/5632	
C3J/A	C3JA/5684	
C3JA/5684	C3JA/5684	
C3JL	C3JL	
C6J	C6J/5C21	
C6J/5C21	C6J/5C21	

INTERCHANGEABILITY DIRECTORY

TYPE TO BE REPLACED	REPLACE BY RCA TYPE●	SIMILAR RCA TYPE▲
C6J/A	C6JA/5685	
C6JA/5685	C6JA/5685	
C16J	C16J/5665	
C16J/5665	C16J/5665	
CdS-9		7163
CdS-9F		4404
CE1A/B		918
CE1C	918	
CE1D	868	
CE1VA/B		917, 919
CE2C		6953
CE20		1P40, 930
CE4A/B		1P40, 930
CE4C		1P40, 930
CE40	1P40, 930	
CE5A/B		927
CE5C		927
CE5D		927
CE11VA/B		917
CE11VC		917
CE11VD	917	
CE21A/B		920
CE21C		920
CE21D	920	
CE22		1P41
CEB22C		1P41
CEB22D	1P41	
CE23A/B		923
CE23C		923
CE23D	923	
CE25A/B		927
CEB25A/B		927
CE25C		927
CEB25C		927
CE25D	927	
CEB25D	927	
CE29Q		5653
CE29R	929	
CE30A/B		930
CE30C		930
CE30D	930	
CE30VA/B		925
CE30VC		925
CE30VD	925	
CE31VA/B		919
CE31VC		919
CE31VD	919	
CE34Q		934
CE34R	934	
CE36A/B		927
CE36C		927
CE36D	927	
CE41	921	

TYPE TO BE REPLACED	REPLACE BY RCA TYPE●	SIMILAR RCA TYPE▲
CE42	922	
CE54		1P41
CE59R	5581	
CE64Q		5583
CE64R	5583	
CE91Q		1P37
CE91R	1P37	
CE98	5582	
CE213	615/7018	5558
CE224		604/7014
CE302		3C23
CE306		C6JA/5685
CE309	5557	
CE311	3C23	
CL402		7412
CL402S		7536
CL407		7412
CL407S		7536
CL505		4423
CL505L		4425
CL602		4402
CL605		4402
CL605L		4402
CL607		4402
D-1767		4448
DR17	5557	
DR200		8000
EL3C		604/7014
EL6B	635/7019	
EL6BL	635L/7020	
F123A		8000
F127A		810
F129B		889A
F307A	207	
F872B		872A
FG17/5557/ NL715	5557	
FG27A		5559
FG32	5558	
FG57	5559	
FG81A		3C23
FG95	5560	
FG235A	5552A	
FG238B	5555	
FG258A	5553B	
FG258B	5553B	
FG271	5551A	
FJ401	1P29	
FJ405		935
FP85		8020
FP85A		8020
FV20		8000
GL35T		812A

RCA INDUSTRIAL TUBES

TYPE TO BE REPLACED	REPLACE BY RCA TYPE●	SIMILAR RCA TYPE▲
GL146		805
GL152		805
HD203A		805
HF60		8005
HF100		8005
HF120		8005
HF125		8005
HF140		8005
HF200		8000
HF201		8000
HF201A		8000
HF220R		5671
HF250		8000
HK54		812A
HK254		810
HK257	4E27/8001	
HK257B	4E27/8001	
HK354D		8000
HK354F		810
HV12		8000
HV18		810
HY25		809
HY402		811A
HY518		8005
HY51Z		838
HY57		812A
HY60		807
HY61/807	807	
HY69		1624
K20		6957
K1927		7326
KU23		810
KU42	6130/3C45	
KU628		5559
KU634	677	
KL1001		5550
KL1005		5551A
KL1022	5822A	
KL1053	5553B	
KL1053A	5553B	
KSL-5		7163
KSL-6		4404
KSL-7		4403
KSL-45		7163
KSL-46		4404
KSL-47		4453
KRP-11		4425
KRP-30		6957
KRP-60		7412
KRP-61		7536
S20		866A
S20F		866A
807		866A

TYPE TO BE REPLACED	REPLACE BY RCA TYPE●	SIMILAR RCA TYPE▲
P810		6326
P811		7295A
P812		7389A
P813		6326
P817		7513
P822		7389A
PB201		7412
PB204		4425
PB205		4423
PD401		7412
PJ8	5556	
PJ21		5556
PJ22		917,919
PJ23	868	
PL172		4-1000A
PL175A		4-400A
PL177A		4-65A
PR-7		7536
PTW135		4427
PTW255		6326
R50A		1P41
R51A		927
R51B		5583
R51BV		929
R59A		918
R59B		1P37
R59TAV		917
R60A		920
R61A		930
R61AV		925
R61B		5581
R61BV		1P39
R71A		930
R71AV		925
R85A		928
R1111		1947
RK11		809
RK12		809
RK20A	804	
RK23		802
RK25	802	
RK25B	802	
RK28	803	
RK28A	803	
RK31		8308
RK36		8000
RK37		812A
RK38		810
RK39	807	
RK41		807
RK45		837
RK46		804

INTERCHANGEABILITY DIRECTORY

TYPE TO BE REPLACED	REPLACE BY RCA TYPE●	SIMILAR RCA TYPE▲
RK47	814	
RK48A		815
RK51		8308
RK52		811A
RK57	805	
RK58	838	
RK63		8000
RK63A		8000
RX21		872A
SK60		868
SL2205	SL2205	
SL2206	SL2206	
SQ2500	SQ2500	
SR50		917
SR53		917
T55		8005
T60		8005
T125		810
T200		8000
T822		810
T875A	575A	
TGRA		575A
TGRB		872A
TT17	5557	
TVTA		892
TVTB		833A
TVTC		889A
TVTE		889A
TZ20		809
TZ40		811A
UE100		810
UE311		8005
UE311CH		8000
UE317C		836
UE812H		8005
UE893RA		9C22
UE905	805	
UE930	8308	
UE930B	8308	
UE945	845	
UE966	866A	
UE966A	866A	
UE972	872A	
UE972A	872A	
UE973		5559
UE975A		575A
UEX22		1616
UH50	834	
V70D		8005
VC1258		6130/3C45
WL32	5558	
WL57	5559	
WL734		917

TYPE TO BE REPLACED	REPLACE BY RCA TYPE●	SIMILAR RCA TYPE▲
WL735	868	
WL741	923	
WL762		1947
WL767		935
WL773		935
WL775		935
WT6	6L6	
WT210-0001	2D21	2021W, 5727, 5727/ 2021W
WT210-0003	884	
WT210-0004	2050	
WT210-0006	6N6	
WT210-0007		6L6
WT210-0008	866A	
WT210-0009	8U/6Z4	
WT210-0011	0C3	
WT210-0012	80	
WT210-0013	5Z3	
WT210-0015	5557	
WT210-0018	0D3	
WT210-0019	83	
WT210-0021	6X5GT	
WT210-0025	117Z6GT	
WT210-0027	872A	
WT210-0028	3Q5GT	
WT210-0029	6C5	
WT210-0031	902A	
WT210-0037	117L7/ M7GT	
WT210-0038	172	
WT210-0040	6X4	
WT210-0042	5Y3GT	
WT210-0043	C3J/5632	
WT210-0044	575A	
WT210-0045	892	
WT210-0048	5U4G	
WT210-0052	2AP1A	
WT210-0053	3AP1A	
WT210-0056	5559	
WT210-0057	5560	
WT210-0058	676	
WT210-0060	0Z4	
WT210-0061		117N7GT
WT210-0062	5557	
WT210-0067		3C23
WT210-0069	5557	
WT210-0070	5550	
WT210-0071	5551A	
WT210-0072	5552A	
WT210-0073	5553B	
WT210-0074	105	

RCA INDUSTRIAL TUBES

TYPE TO BE REPLACED	REPLACE BY RCA TYPE●	SIMILAR RCA TYPE▲
WT210-0078	172	
WT210-0079	105	
WT210-0081	6SJ7	
WT210-0082	6V6	
WT210-0083	7K7	
WT210-0084	6N7, 6N7GT	
WT210-0085	5085	
WT210-0086	833A	
WT210-0087	6K8	
WT210-0088	6J5, 6J5GT	
WT210-0089	6G6G	
WT210-0090	6C6	
WT210-0106	C3J/5632	710/6011
WT210-0116	5560	
WT210-0147	5552A	
WT210-0149	5551A	
WT210-0152	5553B	
WT210-0158	5551A	
WT210-0159	5552A	
WT210-0165	5553B	
WT210-0179	760/6858	
WT210-0188	C1K/6014	
WT210-0234	C16J/5665	
WT262	866A	
WT270	80	
WT270X	523	
WT272	5557	
WT294	0D3	
WT301	83	
WT308	6X5GT	
WT377	117Z6GT	
WT389	3Q5GT	
WT390	6C5	

TYPE TO BE REPLACED	REPLACE BY RCA TYPE●	SIMILAR RCA TYPE▲
WT699	5550	
WTT-100	6X8	
WTT-102	5Y3GT	
WTT-103	6H6	
WTT-104	575A	
WTT-106	C3J/5632	
WTT-108	3C23	
WTT-111	5559	
WTT-112	6328, 5560	
WTT-113	676	
WTT-117	5557	
WTT-118	105	
WTT-119	172	
WTT-122	6SJ7	
WTT-123	6V6	
WTT-124	7K7	
WTT-125	6N7GT	
WTT-126	5085	
WTT-127	833A	
WTT-128	6K8	
WTT-129	6J5GT	
WTT-130	6G6G	
WTT-131	6C6	
WTT-132	0A4G	
WTT-133		3C23
WTT-134	C16J/5665	
WTT-135	5U4G	
WTT-136	2AP1A	
WTT-137	3AP1A	
WTT-139		760/6858
WTT-149	172	
WTT-439	172	
Z225/866A		866A
Z2946		4410
ZP572	2C39A	

● **DIRECT REPLACEMENT TYPES**—RCA types shown in this category are direct replacements for corresponding types to be replaced.

▲ **SIMILAR REPLACEMENT TYPES**–RCA types shown in this category are not directly interchangeable with the types to be replaced because of differences in mechanical and/or electrical characteristics. For more information as to degree of interchangeability, refer to respective tube data or write to RCA Commercial Engineering, Harrison, New Jersey.

RCA INDUSTRIAL TUBES

MILITARY APPROVED TYPES

RCA TYPE	Mil. Spec. E-1/
0A2WA	290B
0A3	17B
0A4G	790A
0B2	18
0B2WA	940D
0C3	193
0D3	196
1C21	791A
1EP1	1342A (NAVY)
1P21	28E
1P37	401
1P39	402
1P40	403
1P42	405A
2AP1A	588
2BP1	272B
2BP11	272B
2E24	336
2E26	338D
2X2A	749A
3A4	108A
3A5	33B
3AP1A	589
3B4WA	1358 (Sig C)
3B28	753D
3BP1A	594
3C33	799
3D22A	798A
3E29	212
3JP1	36B
3JP7	36B
3KP1	501A
3RP1	390B
5ADP1	689C
5AHP7	972B
5CP1A	273E
5CP7A	273E
5CP12	273E
5FP7A	43F
5R4GY	344A
5UP1	498A
5UP7	498A
6AB7Y	352
6AG7Y	45C
6AK6	47A
6AS7G	49C
6AU6WB	952D
6F4	424
6J4WA	619D
6J6WA	243B
6SA7Y	60A
6SG7Y	365A
6SJ7Y	521
6V6GTY	126B
6V6Y	126B
6X4W	64A
7BP7A	66A
7MP7	67E
12AT7WA	3D
12AT7WB	1079B (NAVY)
12K8Y	JAN
12SA7Y	60A
12SG7Y	365A
12SK7Y	61B
12SW7	125
12SX7GT	63A
12SY7	60A
26A6	439A
26A7GT	71A
26C6	646A
26D6	671A
83	581A
575A	JAN
801A	926
803	927A
805	921
807	99A
809	JAN
810	JAN
811A	871A
813	928A
814	JAN
815	929
816	JAN
829B	853
830B	JAN
832A	215
833A	933
836	912
837	934
868	561
880	950A
884	894B
891R	1007
902A	593
918	562
920	408
921	409A
922	410A
925	412B
927	414
929	416
930	417
931VA	597C
955	457
1613	460
1616	915
1619	649
1624	461
1625	99A
1631	699
1635	462
2031	1273 (NAVY
2041	1383 (NAVY
5651WA	825A
5652	419A
5654/ 6AK5W	4D
5670	5E

RCA INDUSTRIAL TUBES

MILITARY APPROVED TYPES

RCA TYPE	Mil. Spec. E-1/
5675	78C
5691	133A
5692	134B
5693	81A
5696	917B
6726/	
6AL5W	7E
6727/	
2D21W	83C
6749/	
6BA6W	8C
751	10E
763	85A
814A	12E
819	943B
876	94D
876A	1043 (USAF)
893	96E
915	470
963	1035 (NAVY)
964	472B
005/	
5AQ5W	13F
012	714C
032A	606A (NAVY)
080	209
080WA	510D
099	241

RCA TYPE	Mil. Spec. E-1/
6146	380C
6146W/	
7212	1362 (NAVY)
6159	863 (NAVY)
6159W/	1364
7357	(NAVY)
6186/	
6AG5WA	244A
6189/	
12AU7WA	246D
6197	904B (NAVY)
6211	905C (NAVY)
6263A	1044 (USAF)
6264A	1045 (USAF)
6293	381B
6562/	
5794A	180E
6816	1239B
6884	1239B
6914	1049C
6914A	1049C
6950/2039	1332A (USAF)
6952	1106A (NAVY)
7008	MDNE-PD-66

RCA TYPE	Mil. Spec. E-1/
7034/	
4X150A	160H
7035/	
4X150D	160H
7111	1243 (NAVY)
7203/	
4CX250B	889B
7204/	
4CX250F	889B
7268	1307D (NAVY)
7315	1274A (NAVY)
7448	1274A (NAVY)
7533	1311 (Sig C)
7554	1325A (NAVY)
7580	1318 (USAF)
7586	1397 (Sig C)
	1397A
7587	1434 (Sig C)
7895	1433 (Sig C)
8005	JAN
8013A	JAN
9001	652A
9002	653A
9003	654A
9005	655A
9006	476A

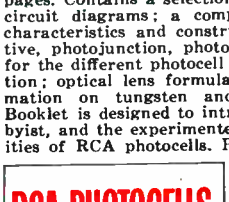
RCA INDUSTRIAL TUBES

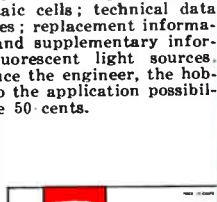
Technical Publications

Copies of the publications listed below may be obtained from your RCA Distributor or from Commercial Engineering, Radio Corporation of America, Harrison, N. J.

• **RCA PENCIL TUBES**—1CE-219 (10⅞" x 8⅜")—28 pages. Contains operating theory for pencil tubes, electrical and mechanical circuit-design considerations, environmental considerations, application considerations, and data for commercial types. Price 50 cents.

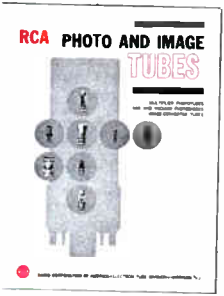
• **RCA PHOTOCELLS** — 1CE-261A (10⅞" x 8⅜") — 32 pages. Contains a selection of representative photocell-circuit diagrams; a complete section describing the characteristics and construction of RCA photoconductive, photojunction, photovoltaic cells; technical data for the different photocell types; replacement information; optical lens formulas, and supplementary information on tungsten and fluorescent light sources. Booklet is designed to introduce the engineer, the hobbyist, and the experimenter to the application possibilities of RCA photocells. Price 50 cents.

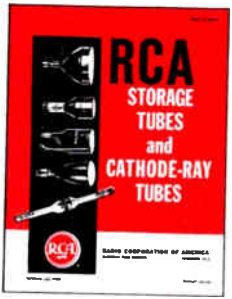




• **RCA CAMERA TUBES**—1CE-262 (10⅞" x 8⅜")—2 pages. Technical information on RCA image orthicon and vidicons aimed at helping the camera tube use select the most appropriate tube for his applicatior Includes concise data on all commercially availabl RCA camera tubes as well as typical curves and infor mation defining the most important characteristics c camera tubes. Also contains cutaway views of vidicon and image orthicon illustrating constructio features. Price 75 cents.

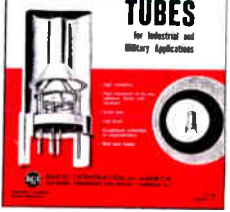
• **RCA PHOTO AND IMAGE TUBES** — 1CE-269 (10⅞" x 8⅜") — 32 pages. Contains technical data on RCA multiplier phototubes, vacuum and gas photodiodes, and image-converter tubes; quick selection charts for RCA phototubes; spectral sensitivity and spectral-energy emission curves; and socket and shield information for the different phototube types. Price 60 cents.





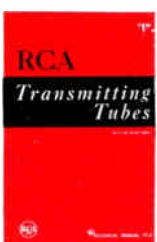
RCA STORAGE AND CATHODE-RAY TUBES — 1CE-270 (10¾" x 8⅜") — 12 pages. Contains technical information on RCA storage, special-purpose kinescopes and oscillograph-type cathode-ray tubes including display-storage tubes, computer-storage tubes, radechons, graphecons, flying-spot tubes, monitor, projection, transcriber, and view-finder kinescopes; as well as information on fluorescent screens. Price 20 cents.

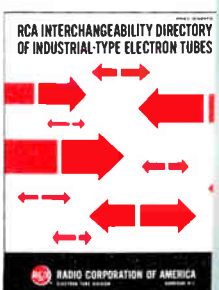
RCA NUVISTOR TUBES FOR INDUSTRIAL AND MILITARY APPLICATIONS — 1CE-280 (10⅞" x 8⅜") — 16 pages. Describes unique features of nuvistors and includes tubular data, dimensional outlines, curves, terminal diagrams, and socket information. Price 25 cents.



• **RCA POWER TUBES** — PG-101F (10⅞" x 8⅜") — 36 pages. Contains technical data and quick-selection charts on over 200 RCA vacuum power tubes, rectifier tubes, thyratrons, ignitrons, and vacuum gauge tubes. Highlights Cermolox tubes and RCA power tubes for single-sideband applications. Price 60 cents.

• **RCA TRANSMITTING TUBES**—TT-5 (8¼" x 5⅜")—320 pages. Written for the engineer, technician, radio amateur, and student, this new larger edition has been comprehensively revised and updated. Gives data on over 180 tube types, including cermolox, ceramic-and-metal, pencil, and pulse-rated types. Provides basic tube information on generic types, parts and materials installation and application, and interpretation of data. Includes maximum ratings, typical operating values and characteristics curves for power tubes having plate-input ratings up to 4 kw and for associated rectifier tubes. Contains material on power-tube circuit design considerations and rectifier circuits and filters as well as new application tables for quick, easy selection of tubes, and circuit diagrams for transmitting and industrial applications. Also gives new design information on linear rf amplifiers for single sideband applications. Features lie-flat binding. Price $1.00.





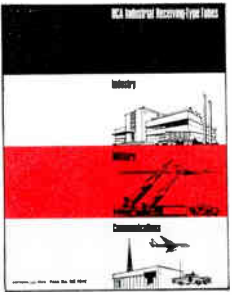
• **RCA INTERCHANGEABILITY DIRECTORY OF INDUSTRIAL-TYPE ELECTRON TUBES** — 1D-1020D (10⅞" x 8⅜") — pages. Lists more than 1600 basic type designations for 20 classes of industrial tube types; shows the RCA Direct Replacement Type or the RCA Similar Type when available. Price 35 cents.

Technical Publications (cont'd)

• **RCA PHOSPHORS**—TPM-1508A (10⅞" x 8⅜")—20 pages. Contains defining data for over 25 different industrial phosphors, spectral-energy emission curves, persistence curves, and quick-reference classification charts. Price 75 cents.

• **RCA MAGNETRONS AND TRAVELING-WAVE TUBES**—MT-301A (10⅞" x 8⅜")—48 pages. Operating theory for magnetrons and traveling-wave tubes, application considerations, and techniques for measurement of electrical parameters. Price 60 cents.

• **RCA RECEIVING-TYPE TUBES FOR INDUSTRY AND COMMUNICATIONS** — RIT-104C (10⅞" x 8⅜") — 44 pages. Technical information on over 190 RCA "special red" tubes, premium tubes, nuvistors, computer tubes, pencil tubes, glow-discharge tubes, small thyratrons, low-microphonic amplifier tubes, vacuum-gauge tubes, mobile communications tubes, and other special types. Includes socket-connection diagrams. Price 35 cents.



• **TECHNICAL BULLETINS**—Authorized information on RCA transmitting tubes and other tubes for communications and industry. Be sure to mention tube-type bulletin desired. Single copy on any type free on request.

NOTE: All prices are optional list prices and apply in the U.S.A. They are subject to change without notice.

Minireed Dry-Reed Switch

RCA-RE2100 Gas-Filled, Glass-Capsule Type

RCA-RE2100 Minireed is a small dry-reed switch hermetically sealed in a gas-filled glass capsule. This switch, specifically designed to have exceptional uniformity, is a single-pole, single-throw type having normally open contacts and containing two magnetically actuated reeds made of very low reluctance material. The RE2100 is provided with leads which can be formed for ease of installation in relays and other switching devices.

The RE2100 features: • conservative ratings—to permit continuous operation at full ratings in applications requiring high reliability under severe operating conditions • exceptional uniformity of characteristics—31 ±11 ampere-turns for "pull-in"; 14 ±6 ampere-turns for "drop-out" • minimum life expectancy when operated at full ratings—5 million cycles, greatly extended useful life when operated at voltages and currents below maximum ratings • minimum breakdown voltage at any altitude—300 volts peak • maximum contact ratings (with resistive load)—26 volts dc, 125 milliamperes • wide operating temperature range—−55 to +150°C • very fast actuating time—1 millisecond maximum, including contact bounce • high operating speeds—up to 500 closures per second • high resistance to shock and vibration • utilizes controlled atmosphere and gold-diffused contacts—to minimize oxidation of contact areas and thus insure long life • extreme compactness—only 0.85" long (excluding leads), 0.135" diameter and weighs only 0.01 ounce (0.3 gram) • high insulation resistance—25,000 megohms minimum

RCA
SEMICONDUCTOR
DEVICES

TRANSISTORS

TUNNEL DIODES

MICROCIRCUITS

RECTIFIERS

SILICON CONTROLLED RECTIFIERS

RCA SEMICONDUCTOR DEVICES

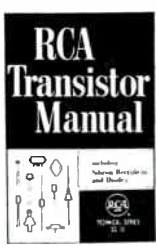
Technical Publications

The technical publications listed below are packed with up-to-the-minute information logically arranged for ready reference and application to your needs.

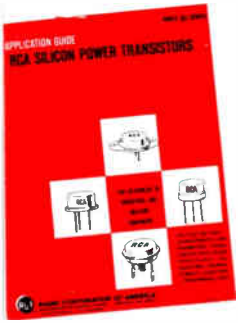
Ask your RCA Distributor for these publications, or write directly to Commercial Engineering, Radio Corporation of America, Harrison, New Jersey. When ordering from Commercial Engineering, make remittance payable in U.S. dollars to Radio Corporation of America.

NOTE: All prices are optional list prices and apply in the U.S.A. They are subject to change without notice.

• **RCA SEMICONDUCTOR PRODUCTS HANDBOOK** — HB-10. Two binders, each 7⅜" L x 5⅝" W x 2⅞" D, having gold-imprinted red covers. Contains over 1000 pages of loose-leaf data and curves on RCA semiconductor devices such as transistors, silicon rectifiers, silicon controlled rectifiers, tunnel diodes, and tunnel rectifiers. Available on subscription basis. Price $10.00 including service for first year. Also available with RCA Electron Tube Handbook HB-3 at special combination price of $25.00. Write to Commercial Engineering for descriptive flyer and order form.



• **RCA TRANSISTOR MANUAL** — SC-10 (8¾" x 5¾")— 304 pages. Contains detailed technical data on RCA semiconductor devices. Easy-to-read text includes information on basic theory, application, and installation of transistors, silicon rectifiers, and semiconductor diodes. Includes circuit diagrams and parts lists for many typical applications. Features lie-flat binding. Price $1.50



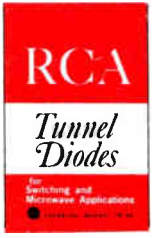
• **RCA SILICON POWER TRANSISTORS APPLICATION GUIDE** — 1CE-215 (10⅞" x 8¾") — 28 pages. Describes outstanding features of RCA silicon power transistors and their use in many critical industrial and military applications. Includes construction details, discussion of voltage ratings, thermal stability conditions, and equivalent circuits for these transistors. Price 50 cents.

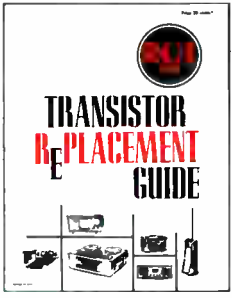
• **RCA SILICON VHF TRANSISTORS APPLICATION GUIDE** — 1CE-228 (10⅞" x 8¾") — 20 pages. Describes unique capabilities of RCA silicon vhf transistors and their use in critical industrial and military application up to 300 Mc. Price 50 cents.

TRANSISTORIZED VOLTAGE REGULATORS APPLICATION GUIDE — 1CE-254 (10⅞" x 8¾")—12 pages. Discusses transistorized voltage regulators of the series and shunt types. Included are design considerations, step-by-step design procedures, and the solutions to sample design problems. An appendix contains the derivation of design equations. Price 5 cents.

• **RCA SEMICONDUCTOR PRODUCT GUIDE** — 60-S-16R5 (10⅞" x 8¾") — 12 pages. Contains application guide, index, and ratings and characteristics arranged for easy access to RCA's entire line of semiconductor products, as well as digital microcircuits, memory products, and photocells. Single copy free on request.

• **RCA TUNNEL DIODE MANUAL** — TD-30 (8¾" x 5¾") 160 pages. Describes the microwave and switching capabilities of tunnel diodes. Contains information on theory and characteristics, and on tunnel-diode applications in switching circuits and in microwave oscillator, converter, and amplifier circuits. Includes data for over 40 RCA germanium and gallium arsenide tunnel diodes and tunnel rectifiers. Price $1.50.





• **RCA TRANSISTOR REPLACEMENT GUIDE** — 1L1115 (10⅞" x 8¾") — 36 pages. Contains RCA transistor and rectifier replacement data for more than 1000 portable radio receivers, table radio receivers, tape recorders and portable equipment of 145 manufacturers. Price 35 cents.

Technical Publications (Cont'd)

• **RCA SILICON RECTIFIER INTERCHANGEABILITY DIRECTORY** — 1CE-229A (10¾" x 8⅜") — 16 pages. Contains replacement information, ratings, characteristics, and physical dimensions for more than 400 silicon and selenium rectifiers. Price 25 cents.

• **TECHNICAL BULLETINS** — Authorized information on RCA semiconductor products. Be sure to mention type-number bulletin desired. Single copy on any type free on request.

NOTE: All prices are optional list prices and apply in the U.S.A. They are subject to change without notice.

RCA SEMICONDUCTOR DEVICES

Numerical Listing of Types

Explanation of footnotes for following pages:

(R) Reverse-polarity version available.
(X) Not recommended for new equipment design.
** Contact your RCA Field Office.
† Military version available.

RCA SEMICONDUCTOR DEVICES

TRANSISTORS

2N104
2N109
2N139
2N140
2N173

2N174†
2N175
2N176
2N215
2N217

2N218
2N219
2N220†
2N269
2N270

2N274†
2N277
2N278
2N301
See 2N2869/2N301

2N301A
See 2N2870/2N301A
2N307 (X)
2N351
2N357 (X)
2N370

2N371
2N372
2N373 (X)
See 2N1638
2N374 (X)
See 2N1639
2N376

2N384†
2N388†
2N388A
2N395
2N396

2N396A
2N397
2N398†
2N398A
2N3988

2N404†
2N404A
2N405
2N406
2N407

2N408
2N409
2N410
2N411
2N412

2N414
2N441
2N442
2N443
2N457 (X)

2N578
2N579
2N580
2N581
2N582
2N583

2N584
2N585
2N586
2N591
2N640 (X)
See 2N1637

2N641 (X)
See 2N1638
2N642 (X)
See 2N1639
2N643
2N644
2N645

2N646**
2N647
2N649
2N656 (X)
2N696

2N697
2N699
2N705
2N706
2N706A

2N708
2N709
2N710
2N711
2N718A

2N720A
2N794
2N795
2N796
2N828

2N834
2N914
2N934
2N955
2N955A

2N960
2N961
2N962
2N963
2N964
2N965

2N966
2N967
2N1010
2N1023
2N1066

2N1067
2N1068
2N1069
2N1070
2N1090

2N1091
2N1092
2N1099
2N1100
2N1169

2N1170
2N1177
2N1178
2N1179
2N1180

2N1183†
2N1183A†
2N1183B†
2N1184†
2N1184A†

2N1184B†
2N1213
2N1214
2N1215
2N1216

2N1224†
2N1225†
2N1226
2N1285**
2N1300

2N1301
2N1302†

For footnotes, see poge 165.

NUMERICAL LISTING OF TYPES

2N1303†
2N1304†
2N1305†

2N1306†
2N1307†
2N1308†
2N1309†
2N1319

2N1358
2N1384
2N1395
2N1396
2N1397

2N1412†
2N1425
See 2N1524
2N1426
See 2N1526
2N1450
2N1479†

2N1480†
2N1481†
2N1482†
2N1483†
2N1484†

2N1485†
2N1486†
2N1487†
2N1488†
2N1489†

2N1490†
2N1491
2N1492
2N1493
2N1511†

2N1512†
2N1513†
2N1514†
2N1524
2N1525

2N1526
2N1527
2N1605
2N1605A
2N1613

2N1631
2N1632

2N1633 (X)
See 2N1638
2N1634 (X)
See 2N1638
2N1635 (X)
See 2N1639

2N1636 (X)
See 2N1639
2N1637
2N1638
2N1639
2N1683

2N1700
2N1701
2N1702
2N1703
2N1708

2N1711
2N1768
2N1769
2N1853†
2N1854†

2N1893
2N1905
2N1906
2N2015
2N2016

2N2102
2N2147
2N2148
2N2205
2N2206

2N2208**
2N2210**
2N2270
2N2273†
2N2304**

2N2305**
2N2338
2N2339
2N2405
2N2475

2N2476
2N2477
2N2482
2N2594**
2N2613

2N2614
2N2631
2N2708
2N2869/2N301
2N2870/2N301A
2N2873

2N2876
2N2938
3907/2N404
40050
40051
40053
40084

SILICON CONTROLLED RECTIFIERS

2N681
2N682
2N683
2N684
2N685

2N686
2N687
2N688
2N689
2N1842A

2N1843A
2N1844A
2N1845A
2N1846A
2N1847A

2N1848A
2N1849A
2N1850A

RECTIFIERS & DIODES

20G001 (X)
30G001 (X)
1N248A, (R)
1N248B, (R)
1N248C, (R)

1N249A, (R)
1N249B, (R)
1N249C, (R)
1N250A, (R)
1N250B†

eck page 198 for new RCA types not included in this list.

NUMERICAL LISTING OF TYPES (CONT.)

1N2508, (R)
1N250C, (R)
1N440B
1N441B
1N442B

1N443B
1N444B
1N445B
1N536
1N537

1N538†
1N539
1N540†
1N547†
1N1095

1N1183A, (R)
1N1184A, (R)
1N1186A, (R)
1N1187A, (R)
1N1188A, (R)

1N1189A, (R)
1N1190A, (R)
1N1195A, (R)
1N1196A, (R)
1N1197A, (R)

1N1198A, (R)
1N1199†
1N1199A, (R)
1N1200†
1N1200A, (R)

1N1201†
1N1202†
1N1202A, (R)
1N1203†
1N1203A, (R)

1N1204†
1N1204A, (R)
1N1205†
1N1205A, (R)
1N1206†

1N1206A, (R)
1N1612, (R)
1N1613, (R)
1N1614, (R)
1N1615, (R)

1N1616, (R)
1N1763

1N1764
1N2135A†
1N2326

1N2858
1N2859
1N2860
1N2861
1N2862

1N2863
1N2864
1N3128
1N3129
1N3130

1N3138 (X)
1N3193
1N3194
1N3195
1N3196

1N3253
1N3254
1N3255
1N3256
1N3563

1N3754
1N3755
1N3756
1N3847
1N3848

1N3849
1N3850
1N3851
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1N3853

1N3854
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1N3856
1N3857
1N3858

1N3859
1N3860
1N3861
1N3862
1N3863

CR101
CR102
CR103
CR104
CR105

CR106
CR107
CR108
CR109
CR110

CR201
CR203
CR204
CR206
CR208

CR210
CR212
40054
40055
40056

40057
40058
40059
40060
40061

40062
40063
40064
40065
40066

40067
40068
40069
40070
40076

40077
40078
40079
40108, (R)
40109, (R)

40110, (R)
40111, (R)
40112, (R)
40014, (R)
40015, (R)

40016, (R)
40208, (R)
40209, (R)
40210, (R)
40211, (R)

40212, (R)
40214, (R)

For footnotes, see page 165.
Check page 198 for new RCA types not included in this

RCA TRANSISTORS
"BY APPLICATION" LISTING

AUDIO-FREQUENCY APPLICATIONS

SMALL SIGNAL—Class A

2N104	2N215	2N1010	2N2613
2N175	2N220	2N2102▲	2N2614

DRIVER

2N405	2N406	2N591	●2N2102▲

LARGE SIGNAL—Classes A and B

2N109	2N270	2N408	2N649
2N217	2N407	2N647	●2N2102▲

POWER AMPLIFIER

Dissipations—Up to 4.9 Watts

●2N497	●2N1049	●2N1492	●2N1613
●2N656	●2N1491	●2N1493	●2N1711
●2N699			

Dissipations—5 to 49.9 Watts

2N176	2N1183A	●2N1482	●2N1769
2N301	2N1183B	●2N1483	●2N2102
2N301A	2N1184	●2N1484	2N2147
2N351	2N1184A	●2N1485	2N2148
2N376	2N1184B	●2N1486	●2N2270
●2N1067	●2N1479	●2N1700	●2N2339
●2N1068	●2N1480	●2N1701	
2N1183	●2N1481	●2N1768	

Dissipations—50 Watts and Higher

2N173	●2N1070	●2N1490	2N1906
2N174	2N1099	●2N1511	●2N2015
2N277	2N1100	●2N1512	●2N2016
2N278	2N1358	●2N1513	●2N2338
2N441	2N1412	●2N1514	
2N442	●2N1487	●2N1702	
2N443	●2N1488	●2N1703	
●2N1069	●2N1489	2N1905	

RADIO-FREQUENCY APPLICATIONS

HF AMPLIFIER

2N384	2N1066	2N1396	●2N1492
●2N699	2N1177	2N1397	●2N1493
●2N914	2N1225	●2N1491	2N2482
2N1023			●2N2708

F AMPLIFIER

2N274	2N1066	2N1396	2N1631
2N370	2N1224	2N1397	2N1632
2N384	2N1225	●2N1491	2N1637
●2N708	2N1226	●2N1492	2N2273
2N1023	2N1395	●2N1493	

or footnotes, see page 171

RCA TRANSISTORS
"BY APPLICATION" LISTING

RADIO-FREQUENCY APPLICATIONS (Cont'd)

MIXER

2N274	2N1066	2N1225	2N1396
2N372	2N1179	2N1226	2N1397
2N384	2N1224	2N1395	●2N2708
2N1023			

OSCILLATOR

2N274	2N1066	2N1225	2N1396
2N372	2N1178	2N1226	2N1397
2N384	2N1224	2N1395	●2N2708
2N1023			

CONVERTER

2N140	2N411	2N1225	2N1526
2N219	2N412	2N1226	2N1527
2N274	2N1023	2N1395	2N1639
2N374	2N1066	2N1396	
2N384	2N1224	2N1397	

IF AMPLIFIER

2N139	2N409	2N1224	2N1397
2N218	2N410	2N1225	2N1524
2N274	2N1023	2N1226	2N1525
2N373	2N1066	2N1395	2N1638
2N384	2N1180	2N1396	

VIDEO-AMPLIFIER APPLICATIONS

2N274	2N1066	2N1395	●2N1492
2N384	2N1224	2N1396	●2N1493
2N699	2N1225	2N1397	●2N2102
2N1023	2N1226	●2N1491	

COMPUTER SWITCHING APPLICATIONS

Stage Delays Greater than 300 Nanoseconds[a]

2N398	2N398A	2N398B	2N586

Stage Delays of 100 to 300 Nanoseconds[a]

2N269	2N414	2N1090	2N1307
2N388	2N578	2N1091	2N1308
2N388A	2N579	2N1169[b]	2N1309
2N395	2N580	2N1170[b]	2N1319
2N396	2N581	2N1302	2N1605
2N396A	2N582	2N1303	2N1605
2N397	2N583	2N1304	3907/2N404
2N404	2N584	2N1305	
2N404A	2N585	2N1306	

Check page 198 for new RCA types not included in this lis

RCA TRANSISTORS
"BY APPLICATION" LISTING

Stage Delays of 30 to 100 Nanoseconds[a]

●2N696	2N1213[c]	2N1300	2N1853
●2N697	2N1214[c]	2N1301	2N1854
2N794	2N1215[c]	2N1384	●2N2476
2N795	2N1216[c]	2N1683	●2N2477
2N796			

Stage Delays of 10 to 30 Nanoseconds[a]

2N643	●2N706	2N711	2N1450
2N644	●2N706A	2N828	●2N1708
2N645	●2N708	●2N834	●2N2205
2N705	2N710	●2N914	●2N2206

Stage Delays of 5 to 10 Nanoseconds[a]

●2N709	2N955	2N955A	●2N2475

POWER SWITCHING APPLICATIONS

Dissipations—Up to 4.9 Watts

●2N497	●2N706	●2N1092	●2N2206
●2N656	●2N706A	●2N1613	●2N2476
●2N696	●2N708	●2N1708	●2N2477
●2N697	●2N834	●2N1711	
●2N699	●2N914	●2N2205	

Dissipations—5 to 49.9 Watts

●2N1067	2N1184A	●2N1483	●2N1768
●2N1068	2N1184B	●2N1484	●2N1769
2N1183	●2N1479	●2N1485	●2N2102
2N1183A	●2N1480	●2N1486	●2N2270
2N1183B	●2N1481	●2N1700	●2N2339
2N1184	●2N1482	●2N1701	

Dissipations—50 Watts and Higher

2N173	●2N1069	●2N1488	●2N1702
2N174	●2N1070	●2N1489	●2N1703
2N277	2N1099	●2N1490	2N1905
2N278	2N1100	●2N1511	2N1906
2N441	2N1358	●2N1512	●2N2015
2N442	2N1412	●2N1513	●2N2016
2N443	●2N1487	●2N1514	●2N2338

● Silicon type. [A] Industrial and Military Applications. [a] Measured in resistor-capacitor-transistor logic circuit except for drift-transistor types 2N643, 2N644, 2N645, and 2N1450 which are measured in transistor-current-steering logic circuit. Nanoseconds = 10^{-9} seconds. [b] Bidirectional type. [c] Thyristor type.

CHARACTERISTICS CHART

RCA POWER SWITCHING TRANSISTORS

RCA Type p-n-p	Material and Const.		JEDEC Pkg.	Max. P_T (case)	CHARACTERISTICS				
					Min. V_{CEX}	Min. V_{CE} (sus)	Min. h_{FE}	Max. V_{CE} (sat)	Typ. f_T
				Watts	Volts	Volts	h_{FE} @ I_C Amp	Volts@ I_C Amp	Mc
MEDIUM-POWER TYPES								P_T: 2 to 5 watts	
2N1092†	Si	DJ	TO-5	2	60○	-	15 @ 0.2 a	2 @ 0.2 a	1.5■
2N699†	Si	♠	TO-5	2	80⊛	80	40 @ 0.15a	5 @ 0.15 a	50↓
2N1613†	Si	♠	TO-5	3	50	-	35 @ .01 a	1.5 @ 0.15 a	60↓
2N656†	Si	DJ	TO-5	4	60★	-	30 @ 0.2 a	13.5 @ 0.2 a	-
2N1067†	Si	DJ	TO-8	5	60○	-	15 @ 0.2 a	2 @ 0.2 a	1.5■
2N1479†▲	Si	DJ	TO-5	5	60	40	20 @ 0.2 a	1.4 @ 0.2 a	1.5■
2N1481†▲	Si	DJ	TO-5	5	60	40	35 @ 0.2 a	1.4 @ 0.2 a	1.5■
2N1700†	Si	DJ	TO-5	5	60	40	20 @ 0.1 a	1 @ 0.1 a	-
2N2270†	Si	♠	TO-5	5	60	45	35 @ .001a	0.9 @ 0.15 a	60↓
2N1480†▲	Si	DJ	TO-5	5	100	55	20 @ 0.2 a	1.4 @ 0.2 a	1.5■
2N1482†▲	Si	DJ	TO-5	5	100	55	35 @ 0.2 a	1.4 @ 0.2 a	1.5■
2N2102†	Si	♠	TO-5	5	80	65	35 @ .01 a	0.5 @ 0.15 a	60↓
INTERMEDIATE POWER TYPES								P_T: 7.5 to 40 watts	
2N1183▲	Ge	Alloy	TO-8	7.5✠	-45	-	20 @ -0.4a	-0.5 @ -0.4 a	0.5■↓
2N1184▲	Ge	Alloy	TO-8	7.5✠	-45	-	40 @ -0.4a	-0.5 @ -0.4 a	0.5■↓
2N1183A▲	Ge	Alloy	TO-8	7.5✠	-60	-	20 @ -0.4a	-0.5 @ -0.4 a	0.5■↓
2N1184A▲	Ge	Alloy	TO-8	7.5✠	-60	-	40 @ -0.4a	-0.5 @ -0.4 a	0.5■↓
2N1183B▲	Ge	Alloy	TO-8	7.5✠	-80	-	20 @ -0.4a	-0.5 @ -0.4 a	0.5■↓

RCA POWER SWITCHING TRANSISTORS

RCA Type p-n-p	Material and Const.	JEDEC Pkg.	Max. P_T (case)	CHARACTERISTICS: Min. V_{CEX}	Min. V_{CE} (sus)	Min. h_{FE}	Max. V_{CE} (sat)	Typ. f_T
			Watts	Volts	Volts	h_{FE} @ I_C Amp	Volts @ I_C Amp	Mc
INTERMEDIATE POWER TYPES							P_T: 7.5 to 40 watts	
2N1184B▲	Ge	Alloy	TO-8	7.5[3]	-80	-	40 @ -0.4a	-0.5 @ -0.4 a	0.5■1
2N1068†	Si	DJ	TO-8	10	60[O]	-	15 @ 0.2 a	2 @ 0.75 a	1.5■
2N2147	Ge	Drift Field	TO-3	12.5	-50	-	100 @ 1 a	-70 μa max.♦	4
2N2148	Ge	Drift Field	TO-3	12.5	-40	-	40 @ 1 a	-100 μa max.♦	3
2N1483†▲	Si	DJ	TO-8	25	60	40	20 @ 0.75a	2 @ 0.75 a	1.25■
2N1485†▲	Si	DJ	TO-8	25	60	40	35 @ 0.75a	0.75 @ 0.75 a	1.25■
2N1701†	Si	DJ	TO-8	25	60	40	20 @ 0.3 a	1.5 @ 0.3 a	-
2N1484†▲	Si	DJ	TO-8	25	100	55	20 @ 0.75a	2 @ 0.75 a	1.25■
2N1486†▲	Si	DJ	TO-8	25	100	55	35 @ 0.75a	0.75 @ 0.75 a	1.25■
2N1768†	Si	DJ	Offset Stud	40	60	40	35 @ 0.75a	0.75 @ 0.75 a	1.25■
2N2339†	Si	DJ	Offset Stud	40	60	40	20 @ 0.3 a	1.5 @ 3 a	-
2N1769†	Si	DJ	Offset Stud	40	100	55	35 @ 0.75a	0.75 @ 0.75 a	1.25■
HIGH POWER TYPES							P_T: 50 to 150 watts	
2N1069†	Si	DJ	TO-3	50	60[O]	-	10 @ 1.5 a	3 @ 1.5 a	1.2■
2N1070†	Si	DJ	TO-3	50	60[O]	-	20 @ 1.5 a	1 @ 1.5 a	1.2■
2N1487†	Si	DJ	TO-3	75	60	40	15 @ 1.5 a	3 @ 1.5 a	1■
2N1489†	Si	DJ	TO-3	75	60	40	25 @ 1.5 a	3 @ 1.5 a	1■
2N1511†	Si	DJ	TO-36	75	60	40	15 @ 1.5 a	3 @ 1.5 a	1■
2N1513†▲	Si	DJ	TO-36	75	60	40	25 @ 1.5 a	1 @ 1.5 a	1■

For footnotes, see page 175.

CHARACTERISTICS CHART

RCA POWER SWITCHING TRANSISTORS

RCA Type p-n-p	Material and Const.	JEDEC Pkg.	Max. P_T (case)	CHARACTERISTICS: Min. V_{CEX}	Min. V_{CE} (sus)	Min. h_{FE}	Max. V_{CE} (sat)	Typ. f_T
			Watts	Volts	Volts	h_{FE} @ I_C Amp	Volts @ I_C Amp	Mc
HIGH POWER TYPES CONT'D			P_T: 50 to 150 watts					
2N1702†	Si	DJ	TO-3	75	60	40	15 @ 0.8 a	3.2 @ 0.8 a	-
2N1703†	Si	DJ	TO-36	75	60	40	15 @ 0.8 a	3.2 @ 0.8 a	-
2N1488†	Si	DJ	TO-3	75	100	55	15 @ 1.5 a	3 @ 1.5 a	1■
2N1490†	Si	DJ	TO-3	75	100	55	25 @ 1.5 a	1 @ 1.5 a	1■
2N1512†	Si	DJ	TO-36	75	100	55	15 @ 1.5 a	3 @ 1.5 a	1
2N1514†▲	Si	DJ	TO-36	75	100	55	25 @ 1.5 a	1 @ 1.5 a	1
2N277	Ge	Alloy	TO-36	150*	-40	-	35 @ -5 a	-0.7 @ -12 a	10◆
2N441	Ge	Alloy	TO-36	150*	-40	-	20 @ -5 a	-0.7 @ -12 a	10◆
2N278	Ge	Alloy	TO-36	150*	-50	-	35 @ -5 a	-0.7 @ -12 a	10◆
2N442	Ge	Alloy	TO-36	150*	-50	-	20 @ -5 a	-0.7 @ -12 a	10◆
2N173	Ge	Alloy	TO-36	150*	-60	-	35 @ -5 a	-0.7 @ -12 a	10◆
2N174▲	Ge	Alloy	TO-36	150*	-60	-	25 @ -5 a	-0.7 @ -12 a	10◆
2N443	Ge	Alloy	TO-36	150*	-60	-	20 @ -5 a	-0.7 @ -12 a	10◆
2N1099	Ge	Alloy	TO-36	150*	-	-	35 @ -5 a	-0.3 @ -12 a	10◆
2N1100	Ge	Alloy	TO-36	150*	-	-	25 @ -5 a	-0.3 @ -12 a	10◆
2N1358	Ge	Alloy	TO-36	150*	-	-	25 @ -0.5a	-0.7 @ -12 a	100◆↓
2N1812	Ge	Alloy	TO-36	150*	-	-	25 @ -0.5a	-0.7 @ -12 a	10◆
2N2338†	Si	DJ	TO-36	150	60	40	15 @ 3 a	1.5 @ 3 a	-
2N2015†	Si	DJ	TO-36	150	100	50†	15 @ 5 a	1.25 @ 5 a	25 kc◆
2N2016†	Si	DJ	TO-36	150	130	65†	15 @ 5 a	1.25 @ 5 a	25 kc◆

RCA POWER SWITCHING TRANSISTORS

Type p-n-p	Material and Const.	JEDEC Pkg.	Max. P_T (case)	CHARACTERISTICS: Min. V_{CEX}	Min. $V_{CE(sus)}$	Min. h_{FE}	Max. $V_{CE(sat)}$	Typ. f_T
			Watts	Volts	Volts	h_{FE} @ I_C Amp	Volts@ I_C Amp	Mc
VHF AMPLIFIER TRANSISTORS						P_T: 0.2 watt & 3 watts Frequency: to 500 Mc		
2N1491†	Si	DDM	TO-39	3	30	-	50* @ .015a	15db●●	250■
2N1492†	Si	DDM	TO-39	3	60	♠	50* @ .015a	15db▲▲	275■
2N1493†	Si	DDM	TO-39	3	100	-	50* @ .015a	16db●●	300■
2N2708†	Si	DDPE	TO-18	.2**	35★	-	30** @ .015a	15db●	700↓

▲ military version also available

† n-p-n type

● at 200 Mc

★ BV_{CED}

○ V_{CES}

⊕ V_{CER}

♠ triple-diffused planar

▲▲ typical power gain at 70 mc for 100 mw output

** typical small-signal current transfer ratio

●● typical power gain at 70 mc for 10 mw output

DJ = diffused-junction

⊕ heat sink

↑ maximum

↓ minimum

♦ beta-cutoff frequency

■ alpha-cutoff frequency

I_{CBO} (sat)

DDM = double diffused mesa

CHARACTERISTICS CHART
RCA TRANSISTORS FOR RF, IF, SMALL-SIGNAL, LARGE-SIGNAL, AMPLIFIER APPLICATIONS

RCA Type	Material and Const.	JEDEC Pkg.	TYPICAL OPERATING FREQUENCY and Max. P_g		Typ. f_{hfb}	Typ. h_{fe} @ I_C		Max V_{CB}
			Mc	db	Mc	h_{fe}	ma	volt
TYPES FOR IF AND RF AMPLIFIER SERVICE					Frequency of Application: 0.262 to 200 M			
2N2708†	Si DDEP	TO-18	200	15	700*	30↓	2	35
2N2482†	Ge Mesa	TO-18	100	12	300*	25↓	2	20
2N2273	Ge Mesa	TO-18	100	12	300*	20↓	-1	-25
2N1177	Ge Drift Field	TO-45	100	14	140	100	-1	-30
2N1023	Ge Drift Field	TO-44	50	24	120	60	-1	-40
2N1066	Ge Drift Field	TO-33	50	24	120	60	-1.5	-40
2N1397	Ge Drift Field	TO-33	50	24	120	90	-1.5	-40
2N384	Ge Drift Field	TO-44	50	21	100	60	-1	-40
2N1225	Ge Drift Field	TO-33	50	21	100	60	-1.5	-40
2N1396	Ge Drift Field	TO-33	50	21	100	90	-1.5	-40
2N370	Ge Drift Field	TO-7	20	17	60	100	-1	-20
2N274	Ge Drift Field	TO-44	12.5	27	30	60	-1.5	-40
2N1224	Ge Drift Field	TO-33	12.5	27	30	60	-1.5	-40
2N1226	Ge Drift Field	TO-33	12.5	27	30	60	-1.5	-60
2N1395	Ge Drift Field	TO-33	12.5	27	30	90	-1.5	-40
2N1180	Ge Drift Field	TO-45	10.7	35	100	80	-1.5	-30
2N1631	Ge Drift Field	TO-40	1.5	47.7	45	80	-1	-30
2N1632	Ge Drift Field	TO-1	1.5	47.7	45	80	-1	-30
2N1637	Ge Drift Field	TO-1	1.5	47.7	45	80	-1	-30
2N139	Ge Alloy	TO-40	0.455	37	4.7	48	-1	-1
2N218	Ge Alloy	TO-1	0.455	37	4.7	48	-1	-

RCA TRANSISTORS FOR RF, IF, SMALL-SIGNAL, LARGE-SIGNAL, AMPLIFIER APPLICATIONS

TYPES FOR LARGE-SIGNAL AMPLIFIER APPLICATIONS - Classes A & B P_T: 0.1 to 50 watts

RCA Type p-n-p	Material and Const.		JEDEC Pkg.	MAXIMUM RATINGS			CHARACTERISTICS			
				P_T @25°C	V_{CB}	I_C	Typ. h_{FE} @ I_C (ma)		Typ. f_{hfb}	Typ. f_T
				Watts	Volts	Amp	h_{FE}	ma	Mc	Mc
2N647†	Ge	Alloy	TO-1	0.1	25	0.05	70	50	-	-
2N649†	Ge	Alloy	TO-1	0.1	20	0.05	65	50	-	-
2N109	Ge	Alloy	TO-40	0.15	-25	-0.07	75	-50	1	-
2N217	Ge	Alloy	TO-1	0.15	-25	-0.07	75	-50	1	-
2N407	Ge	Alloy	TO-40	0.15	-20	-0.07	65	-50	-	-
2N408	Ge	Alloy	TO-1	0.15	-20	-0.07	65	-50	-	-
2N270	Ge	Alloy	~TO-7	0.25	-25	-0.075	70	-150	1	-
2N176	Ge	Alloy	~TO-3	10	-40	-3	63	-500	-	-
2N351	Ge	Alloy	~TO-3	10	-40	-3	65	-700	-	-
2N376	Ge	Alloy	~TO-3	10	-40	-3	78	-700	-	-
2N301	See 2N2869/2N301									
2N301A	See 2N2870/2N301A									
2N2147	Ge	Drift-Field	TO-3	12.5+	-75	-5	150	-1000	-	4
2N2148	Ge	Drift-Field	TO-3	12.5+	-60	-5	80	-1000	-	3
2N1905	Ge	Drift-Field	~TO-3	50+	-60	-10	90	-1000	-	7.5
2N1906	Ge	Drift-Field	~TO-3	50+	-100	-10	125	-5000	-	7.5

For footnotes, see page 179.

CHARACTERISTICS CHART
RCA TRANSISTORS FOR RF, IF, SMALL-SIGNAL, LARGE-SIGNAL, AMPLIFIER APPLICATIONS

Type	Material and Const.	JEDEC Pkg.	TYPICAL OPERATING FREQUENCY and Max. P_g		Typ. f_{hfb}	Typ. h_{fe} @ I_C		Max. V_{CB}
			Mc	db	Mc	h_{fe}	ma	volts
TYPES FOR IF AND RF AMPLIFIER SERVICE					Frequency of Application: 0.262 to 200 Mc			
2N409	Ge Alloy	TO-40	0.455	37.8	6.7	48	-1	-13
2N410	Ge Alloy	TO-1	0.455	37.8	6.7	48	-1	-13
2N1425	See 2N1524	TO-7	0.455	51	33	50	-1	-24
2N1524	Ge Drift Field	TO-1	0.455	54.4	33	60	-1	-24
2N1525	Ge Drift Field	TO-40	0.455	54.4	33	60	-1	-24
2N1638	Ge Drift Field	TO-1	0.262	61.5	40	75	-1	-34
TYPES FOR CONVERTER, OSCILLATOR, AND MIXER SERVICE					Frequency of Application: 1 to 120 Mc			
2N1178	Ge Drift Field	TO-45	120	Local Oscillator Service	140	40	-1	-30
2N1179	Ge Drift Field	TO-45	100	17	140	80	-1	-30
2N371	Ge Drift Field	TO-7	23	Local Oscillator Service	30	80	-1	-24
2N372	Ge Drift Field	TO-7	10	26.2	30	80	-1	-24
2N1426	See 2N1526	TO-7	1.5	43.5	33	130	-1	-24
2N1526	Ge Drift Field	TO-1	1.5	48.9	33	130	-1	-24
2N1527	Ge Drift Field	TO-40	1.5	48.9	33	130	-1	-24
2N1639	Ge Drift Field	TO-1	1.5	37	45	75	-1	-34
2N140	Ge Alloy	TO-40	1	32	10	75	-0.6	-16
2N219	Ge Alloy	TO-1	1	32	10	75	-0.6	-16
2N411	Ge Alloy	TO-40	1	32	10	75	-0.6	-13
2N412	Ge Alloy	TO-1	1	32	10	75	-0.6	-13

RCA TRANSISTORS FOR RF, IF, SMALL-SIGNAL, LARGE-SIGNAL, AMPLIFIER APPLICATIONS

TYPES FOR SMALL-SIGNAL AMPLIFIER APPLICATIONS — P_T: 20 to 150 mil watts

RCA Type p-n-p	Material and Const.		JEDEC Pkg.	MAXIMUM RATINGS			CHARACTERISTICS			
				P_T at 25° C	V_{CB}	I_C	Typ. h_{fe} @ I_C (ma)		Typ. f_{hfb}	Max. I_{CBO}
				mw	Volts	ma	h_{fe}	ma	Mc	μa
2N175	Ge	Alloy	TO-40	20	-10	-2	65	-0.6	0.85	-12
2N220▲	Ge	Alloy	TO-1	20	-10	-2	65	-0.5	0.85	-12
2N1010†	Ge	Alloy	TO-1	20	10	2	35	0.3	2	10
2N591	Ge	Alloy	TO-1	50	-32	-20	70	-2	0.7	-7
2N2613††	Ge	Alloy	TO-1	100	-30	-50	200	-0.5	10	-5
2N2614	Ge	Alloy	TO-1	100	-40	-50	160	-1	10	-5
2N104	Ge	Alloy	TO-40	150	-30	-50	44	-1	0.7	-10
2N215	Ge	Alloy	TO-1	150	-30	-50	44	-1	0.7	-10
2N405	Ge	Alloy	TO-40	150	-20	-35	35	-1	0.65	-14
2N406	Ge	Alloy	TO-1	150	-20	-35	35	-1	0.65	-14

▲ military version also available ♦ conversion power gain

†† low-noise type: NF = 5 db max. † n-p-n type

* with heat sink • Gain-bandwidth product

max. minimum DDEP = Double-diffused epitaxial planar

CHARACTERISTICS CHART
RCA COMPUTER SWITCHING TRANSISTORS

RCA Type p-n-p	Material and Construction	JEDEC Pkg.	CHARACTERISTICS: Min. f_T or f_{hfe} (Mc)	CHARACTERISTICS: Min. h_{FE} @ I_C (h_{FE})	CHARACTERISTICS: Min. h_{FE} @ I_C (ma)	CHARACTERISTICS: Max. C_{ob} (pf)	MAXIMUM RATINGS: P_T (mw)	MAXIMUM RATINGS: V_{CE} (volts)
TYPES FOR HIGH VOLTAGE SWITCHING APPLICATIONS						V_{CE}: to 105 volts		
2N398▲	Ge Alloy	TO-5	-	20	-5	-	50	-105●
2N398A	Ge Alloy	TO-5	-	20	-5	-	150	-105●
2N398B	Ge Alloy	TO-5	-	20	-5	-	250	-105●
2N586	Ge Alloy	TO-7	-	30	-250	-	250	-45●
TYPES FOR MEDIUM-SPEED SWITCHING APPLICATIONS						f_{hfe}: 3 to 15 Mc		
2N578	Ge Alloy	TO-9	3■	10	-400	-	120	-14+
2N585†	Ge Alloy	TO-9	3■	20	20	25§	120	15
2N1319	Ge Alloy Bidirectional	TO-5	3■	15	-400	19§	120	-21●
2N395	Ge Alloy	TO-5	3■	20	-10	20	150	-15+
2N1302†▲	Ge Alloy	TO-5	3■	20	10	20	150	25●
2N1303†▲	Ge Alloy	TO-5	3■	20	-10	20◇	150	-30●
2N583	Ge Alloy	TO-1	3■	20	-20	20◇	120	-15+
2N404▲	Ge Alloy	TO-5	3■	24	-24	20◇	150	-24+
2N404A	Ge Alloy	TO-5	3■	24	-24	20◇	150	-35+
2N581	Ge Alloy	TO-5	3■	20	-20	20◇	150	-15+
2N1603†	Ge Alloy	TO-5	4■	24	24	20	150	24+
2N1605A†	Ge Alloy	TO-5	4■	24	24	20	200	40+
2N1169†	Ge Alloy Bidirectional	TO-5	4.5■●	20	200	19§	120	18
2N1170†	Ge Alloy Bidirectional	TO-5	4.5■	20	200	19§	120	20
2N579	Ge Alloy	TO-9	4■	20	400	-	120	-14
2N1090†	Ge Alloy	TO-9	4■	30	20	25	120	15
2N388†▲	Ge Alloy	TO-5	4■	30	200	-	150	20
2N388A†	Ge Alloy	TO-5	4■	30	200	-	150	20
2N396	Ge Alloy	TO-5	5■	30	-10	20	150	-20
2N1304†▲	Ge Alloy	TO-5	5■	40	10	20	150	25
2N1305▲	Ge Alloy	TO-5	5■	40	-10	20	150	-30
2N396A	Ge Alloy	TO-5	5■	30	-10	20◇	200	-20
2N414	Ge Alloy	TO-5	8■§	80*	★★	11§	150	-15
2N580	Ge Alloy	TO-9	1■	30	-400	-	120	-14
2N1091†	Ge Alloy	TO-9	1■	40	20	25	120	12

RCA COMPUTER SWITCHING TRANSISTORS

Type p-n-p	Material and Construction	JEDEC Pkg.	CHARACTERISTICS: Min. f_T or f_{hfe} (Mc)	Min. h_{FE}	Min. @ I_C (ma)	Max. C_{ob} (pf)	MAXIMUM RATINGS: P_T (mw)	V_{CE} (volts)
TYPES FOR MEDIUM-SPEED SWITCHING APPLICATIONS			f_{hfe}: 3 to 15 Mc					
2N397 †▲	Ge Alloy	TO-5	10■	40	-10	20	150	-15⊛
2N1306 †▲	Ge Alloy	TO-5	15■	60	10	20	150	25●
2N1307▲	Ge Alloy	TO-5	15■	60	-10	20	150	-30●
2N269	Ge Alloy	TO-1	15■&	24	-24	20◇	120	-24+
2N582	Ge Alloy	TO-5	15■	40	-24	20◇	150	-14+
2N584	Ge Alloy	TO-1	14■	40	-24	12◇	120	-14+
2N1308 †▲	Ge Alloy	TO-5	15■	80	10	20	150	25●
2N1309 †▲	Ge Alloy	TO-5	15■	80	10	20	150	-30●
	3907/2N404 Premium version of 2N404							
TYPES FOR HIGH SPEED SWITCHING APPLICATIONS			f_T: 20 to 1000 Mc					
2N1450	Ge Drift-Field	TO-9	-	20	-10	-	120	-20
2N643	Ge Drift-Field	TO-9	20	20	-5	5	120	-29+
2N1384	Ge Drift-Field	TO-11	20	20	-200	-	240	-30
2N794	Ge Mesa	TO-18	25	30	-10	12◇	150	-13●
2N1300	Ge Mesa	TO-5	25	30	-10	12◇	150	-12
2N795	Ge Mesa	TO-18	35	30	-10	12◇	150	-12
2N934	Ge Mesa	TO-18	35	40	-40	12	150	-13
2N1301	Ge Mesa	TO-5	35	30	-10	12◇	150	-12
2N644	Ge Drift-Field	TO-9	40	20	-5	5	120	-29+
2N1853▲	Ge Mesa	TO-5	-	30	-6	-	150	-6
2N1854▲	Ge Mesa	TO-5	40	40	-20	12◇	150	-6
2N796	Ge Mesa	TO-18	50	50	-10	12◇	150	-12
2N1683	Ge Mesa	TO-5	50	50	-10	12◇	150	-12
2N645	Ge Drift-Field	TO-9	60	20	-5	5	120	-29+
2N1613 †•	Si Triple-Diffused Planar	TO-5	60	20	0.1	25	800	50⊛
2N2102 †•	Si Triple-Diffused Planar	TO-5	60	10	0.1	15	1000	80⊛
2N2270 †•	Si Triple-Diffused Planar	TO-5	60	150	150♡	15	1000	60●

For footnotes, see page 183.

CHARACTERISTICS CHART
RCA COMPUTER SWITCHING TRANSISTORS

RCA Type p-n-p	Material and Construction	JEDEC Pkg.	CHARACTERISTICS				MAXIMUM RATINGS	
			Min. f_T or f_{hfe}	Min. h_{FE} @ I_C		Max. C_{ob}	P_T	V_{CE}
			Mc	h_{FE}	ma	pf	mw	volts
TYPES FOR HIGH SPEED SWITCHING APPLICATIONS (Cont'd)							f_T: 20 to 1000 Mc	
2N1711†*	Si Triple-Diffused Planar	TO-5	70	100♡	150	25	800	50⊕
2N696†▲	Si Diffused Junction	TO-5	80§	20	150	35	600	40⊕
2N697†▲	Si Diffused Junction	TO-5	100§	40	150	35	600	40⊕
2N711	Ge Mesa	TO-18	200§	20	-10	5♡	150	-12
2N706†▲	Si Mesa	TO-18	200	20	10	6	300	20⊕
2N706A†▲	Si Mesa	TO-18	200	20	10	-	300	20⊕
2N1708†	Si Planar-Epitaxial	TO-46	200	20	10	6	300	25●
2N2205†	Si Planar-Epitaxial	TO-18	200	20	10	6	300	25●
2N2206†	Si Planar-Epitaxial	TO-46	200	40	10	6	300	25●
2N2476†	Si Planar-Epitaxial	TO-5	250	20	150	10	600	20
2N2477†	Si Planar-Epitaxial	TO-5	250	40	150	10	600	20
2N705	Ge Mesa	TO-5	300§	25	-10	5♡	150	-15
2N710	Ge Mesa	TO-18	300§	25	-10	5♡	150	-15
2N828	Ge Mesa	TO-18	300	25	-10	6	150	-15♡
2N914†	Si Planar-Epitaxial	TO-18	300	30	10	6	360	15
2N834†	Si Planar-Epitaxial	TO-18	350	25	10	4	300	30♡
2N709†	Si Planar-Epitaxial	TO-18	600	15	30	3	300	6
2N2475†	Si Planar-Epitaxial	TO-18	600	20	50	3	300	6
2N955†	Ge Mesa	TO-18	1000§	30	30	6	150	8
2N955A†	Ge Epitaxial	TO-18	1000§	30	30	6	150	8
2N708†	Si Planar	TO-18	-	30	10	6	360	20⊕

RCA COMPUTER SWITCHING TRANSISTORS

THYRISTOR (BISTABLE) TYPES

RCA Type	Material and Construction	JEDEC Pkg.	MAXIMUM RATINGS				CHARACTERISTICS		
			V_{CB}	I_C	$I_{C(sus)}$	P_d	Max. I_b for		
			Volts	ma	ma	mw	"Turn-On" Forward ma	"Turn-off" Reverse Ma at Indicated I_C(ma)	
2N1213	Germanium Diffused-Junction Mesa	TO-5	-25	-100	-8	75	-0.5	3	-10
2N1214		TO-5	-25	-100	-18	75	-1.0	7	-20
2N1215		TO-5	-25	-100	-26	75	-1.5	10	-30
2N1216		TO-5	-25	-100	-45	75	-5.0	-	-

DIGITAL MICROCIRCUITS

RCA Type	CHARACTERISTICS						
	Max. Number		Typ. t_r	Typ. t_f	Typ. Stage Delay	Noise Immunity	
	Inputs	Outputs	nsec	nsec	nsec	Off Volts	On Volts
DMC-100	15	5	11	10	7	1.5	1.5
DMC-101	6	2	2	-	-	-	-

■alpha-cutoff frequency
◇collector capacitance
+BV_{CEX}, V_{BE} = -1 v
▲military version available
σtypical collector transition capacitance
§typical
••I_E = 1 ma
†n-p-n type
▽pulsed
○V_{CES}
⊕V_{CER}
●BV_{CBO}

CHARACTERISTICS CHART
RCA TUNNEL DIODES

RCA Type	Material and Construction		CHARACTERISTICS			
			Max. I_p ± Tolerance		Min. I_p/I_v	Max. C
			Amp	%		pf
FOR SWITCHING AND MICROWAVE APPLICATIONS			I_p: 0.001 to 200 Amperes			
*0079	GaAs	Diffused-Junction	200	10	10:1	1.25 μf
*0070	Ge	Epitaxial	100	10	8:1	0.5 μf
*0069	Ge	Epitaxial	20	10	8:1	0.09 μf
*0068	Ge	Epitaxial	10	10	8:1	.045 μf
*0067	Ge	Epitaxial	5	10	8:1	.016 μf
*0066	Ge	Epitaxial	1	10	8:1	.002 μf
*0076	GaAs	Diffused-Junction	0.2	10	15:1	25
1N3851	Ge	Epitaxial	0.1	10	6:1	40
1N3856	Ge	Epitaxial	0.1	5	8:1	25
*0059	GaAs	Diffused-Junction	0.05	10	10:1	40
1N3850	Ge	Epitaxial	0.05	10	6:1	40
1N3138	GaAs	Diffused-Junction	0.05	5	13:1	30
1N3130	Ge	-	0.05	5	8:1	25
1N3855	Ge	Epitaxial	0.05	5	8:1	25
*0058	GaAs	Diffused-Junction	0.05	5	12:1	20
1N3860	Ge	Epitaxial	0.05	5	8:1	12
*0061	GaAs	Diffused-Junction	0.02	10	9:1	30
1N3849	Ge	Epitaxial	0.02	10	6:1	30
1N3854	Ge	Epitaxial	0.02	5	8:1	20
1N3129	Ge	-	0.02	5	8:1	20
*0060	GaAs	Diffused-Junction	0.02	5	11:1	15
1N3859	Ge	Epitaxial	0.02	5	8:1	10
*0063	GaAs	Diffused-Junction	0.01	10	8:1	25
1N3848	Ge	Epitaxial	0.01	10	6:1	25
1N3853	Ge	Epitaxial	0.01	5	8:1	15
*0062	GaAs	Diffused-Junction	0.01	5	10:1	10
1N3858	Ge	Epitaxial	0.01	5	8:1	8
*0065	GaAs	Diffused-Junction	0.005	10	7:1	20
1N3847	Ge	Epitaxial	0.005	10	6:1	25
1N3852	Ge	Epitaxial	0.005	5	8:1	15
1N3128	Ge	-	0.005	5	8:1	15
1N3857	Ge	Epitaxial	0.005	5	8:1	8
*0064	GaAs	Diffused-Junction	0.005	5	8:1	8
*0078	Ge	-	0.001	10	5:1	10
*0077	Ge	-	0.001	10	6:1	5

RCA TUNNEL RECTIFIERS

Type	Material	CHARACTERISTICS				
		Min. I_p	Max. V_R mv		Min. V_F @ I_F = 1 ma	Max. C
		ma	I_R=30ma	I_R=10ma	volts	pf
FOR COUPLING APPLICATIONS					Ip: 0.5 & 1.0 Milliampere	
40055	GaAs	0.5	200 I_R = 5ma	350	950	6
40057	GaAs	0.5	250 I_R = 5ma	275	950	6
40054	GaAs	1.0	160 I_R = 5ma	300	950	6
40056	GaAs	1.0	180 I_R = 5ma	225	950	6
1N3861	Ge	1.0	-	170	400	6
1N3862	Ge	1.0	300	150	420	4
1N3863	Ge	1.0	300	150	435	4

RCA MEMORY PRODUCTS
RCA FERRITE MEMORY CORES

Type	Size OD/ID mil	I_m ma	Max. t_s μ sec	Max. dV_z mv	Min. uV_1 mv
FOR COINCIDENT-CURRENT, WORD-ADDRESS APPLICATIONS					
225M1	50/30	230	2.50	6	20
250M1	50/30	350	1.25	12	50
249M1	50/30	350	1.40	8	54
242M1	50/30	350	1.40	10	45
246M1●	50/30	360	1.30	5	48
248M1	50/30	360	1.35	6	55
222M2	80/50	360	3.00	14	45
253M1	50/30	370	1.25	10	40
226M1	50/30	380	1.40	8	60
241M1	80/50	380	2.35	10	50
236M1	80/50	380	2.35	12	60
230M1	50/30	400	1.30	11	50
239M1	50/30	445	1.15	10	45
254M1	30/18	440	0.43	11	45
245M1	50/30	450	1.05	12	54
244M1	50/30	450	1.25	12	40
224M1	50/30	460	1.25	12	50
232M1	50/30	460	1.25	12	50
227M1	50/30	470	0.80	22	70
234M1	50/30	485	1.15	12	55

For footnotes, see page 187.

CHARACTERISTICS CHART
RCA MEMORY PRODUCTS
RCA FERRITE MEMORY CORES

Type	Size OD/ID mil	I_m ma	Max. t_s μsec	Max. dV_z mv	Min. uV_1 mv
FOR COINCIDENT-CURRENT, WORD-ADDRESS APPLICATIONS					
237M1	50/30	500	0.90	11	75
238M1	50/30	512	0.75	20	115
263M1●	30/18	550	1.25	4	20
228M1	80/50	560	1.25	30	100
240M1	80/50	567	1.30	28	100
243M1	50/30	725	0.75	20	95
223M1	80/50	740	1.25	30	100
231M1	80/50	740	1.25	30	100
229M1	50/30	800	0.55	20	145
233M1	50/30	800	1.25	8	55
FOR IMPULSE-SWITCHING APPLICATIONS					
400M1	30/18	380	0.2	8	50°
401M1	50/30	570	0.2	18	120°

TRANSFLUXOR (Two-Aperture) TYPES

Type	Size OD/ID mil	I_m ma	Max. t_s μsec	Max. dV_z mv	Min. uV_1 mv
FOR MAGNETIC-MEMORY and MAGNETIC CHANNEL-SELECTION APPLICATIONS					
500M1	OD 206	580▲ 300	2.1	22	55
501M1	OD 126	360▲ 160	2.5	10	30

RCA MEMORY PRODUCTS

RCA FERRITE-CORE MEMORY PLANES

M7165-1 Utilizes 1024 RCA-230M1's in a 32 x 32 arrangement. Length, 3.1"; Width, 3.1"; Height, 0.25"

M7097-1 Utilizes 4096 RCA-230M1's in a 64 x 64 arrangement. Length, 5.1"; Width, 5.1"; Height, 0.25"

M7166-1 Wide-temperature-range (-55°C to +85°C) type. Utilizes 1024 RCA-233M1's in a 32 x 32 arrangement. Length, 3.1"; Width, 3.1"; Height, 0.25"

M7190-1 Wide-temperature-range (-55°C to +85°C) type. Utilizes 4096 RCA-233M1's in a 64 x 64 arrangement. Length, 5.1"; Width, 5.1"; Height, 0.25"

CUSTOM PLANES AVAILABLE IN A WIDE RANGE OF MATERIALS —OPERATING CYCLE TIMES TO 375 NANOSECONDS

RCA MEMORY SYSTEMS — a complete design, production, and test facility for memory systems with operating cycle times to 375 nanoseconds.

*uV_{R_1} = "Undisturbed Read-1" response voltage

dV_z = "Disturbed-0" response voltage

uV_1 = "Disturbed-1" response voltage

● temperature-stable (wide temperature-range) type

▲ I_s = setting current

I_m = full drive current

t_s = switching time

CHARACTERISTICS CHART
RCA SILICON DIFFUSED-JUNCTION RECTIFIERS

RCA Type	JEDEC Pkg.	MAXIMUM RATINGS					CHARACTERISTICS	
		PRV	$I_{F(av)}$* @ T_{FA} = °C		I_F peak rep.	I_F peak surge	Max. E_{FWD}	Max. I_R**
		Volts	Amp	T	Amp	Amp	Volts	ma
TUBULAR SINGLE-ENDED TYPES FOR CONSUMER-PRODUCT APPLICATIONS							PRV: 100 to 400 Volts	
1N3754	TO-1	100	0.125	65	1.3	30	1	0.3
1N3755	TO-1	200	0.125	65	1.3	30	1	0.3
1N3756	TO-1	400	0.125	65	1.3	30	1	0.3
AXIAL-LEAD TYPES FOR INDUSTRIAL AND CONSUMER-PRODUCT APPLICATIONS							PRV: 50 to 1000 Volts	
1N2858	DO-1	50	0.75 / 0.5□	75	-	40	1.2	0.4
1N2859	DO-1	100	0.75 / 0.5□	75	-	40	1.2	0.4
1N3193	TO-1	200	0.75 / 0.5□	75	6	35	1.2	0.2
1N3253		Insulated version of 1N3193						
1N2860	DO-1	200	0.75 / 0.5□	75	-	40	1.2	0.4
1N2861	DO-1	300	0.75 / 0.5□	75	-	40	1.2	0.3
1N3194	TO-1	400	0.75 / 0.5□	75	6	35	1.2	0.2
1N3254		Insulated version of 1N3194						
1N2862	DO-1	400	0.75 / 0.5□	75	-	40	1.2	0.3
1N2863	DO-1	500	0.75 / 0.5□	75	-	40	1.2	0.3
1N2864	DO-1	600	0.75	75	-	40	1.2	0.3
1N3195	TO-1	600	0.75 / 0.5□	75	6	35	1.2	0.2
1N3255		Insulated version of 1N3195						
1N3196	TO-1	800	0.75 / 0.4□	75	5	35	1.2	0.2
1N3256		Insulated version of 1N3196						
1N3563	TO-1	1000	0.4 / 0.3□	75	4	35	1.2	0.2

For footnotes, see page 193.

RCA SILICON DIFFUSED-JUNCTION RECTIFIERS

RCA Type	JEDEC Pkg.	MAXIMUM RATINGS					CHARACTERISTICS	
		PRV	$I_{F(av)}$* @ T_{FA} = °C		I_F peak rep.	I_F peak surge	Max. E_{FWD}	Max. I_R**
		Volts	Amp	T	Amp	Amp	Volts	ma
HIGH-VOLTAGE TYPES					PRV: 1200 to 12000 Volts			
CR101	Special RCA Pkg.	1200	0.85	60	5	15	1.2	0.3
CR201		1500	0.3	60	3	9	1.8	0.1
CR102		2000	0.825	60	5	15	2.4	0.3
CR103		3000	0.725	60	5	15	3	0.3
CR203		3000	0.3	60	3	9	3	0.1
CR104		4000	0.625	60	5	15	4.2	0.3
CR204		4500	0.3	60	3	9	3.6	0.1
CR105		5000	0.625	60	5	15	4.8	0.3
CR106		6000	0.575	60	5	15	6	0.3
CR206		6000	0.3	60	3	9	6	0.1
CR107		7000	0.55	60	5	15	7.2	0.3
CR108		8000	0.55	60	5	15	7.8	0.3
CR208		8000	0.3	60	3	9	6	0.1
CR109		9000	0.55	60	5	15	9	0.3
CR110		10000	0.55	60	5	15	9.6	0.3
CR210		10000	0.3	60	3	9	7.2	0.1
CR212		12000	0.3	60	3	9	9	0.1

RCA Type	JEDEC Pkg.	MAXIMUM RATINGS					CHARACTERISTICS	
		$I_{F(av)}$* @T_C = °C		PRV	I_F peak rep.	I_F peak surge	Max. E_{FWD}	Max. I_R**
		Amp	T_C	Volts	Amp	Amp	Volts	ma
AXIAL-LEAD TYPES FOR TV AND RADIO RECEIVER APPLICATIONS						I_F: 0.5 Ampere		
1N1763	DO-1	0.5□	75	400	5	35	3	0.1‡
1N1764	DO-1	0.5□	75	500	5	35	3	0.1‡
AXIAL-LEAD TYPES FOR MILITARY AND INDUSTRIAL APPLICATIONS						I_F: 0.65 to 0.75 Ampere		
1N4448	DO-1	0.65	50*	500	3.5	15	1.5	1.75 μa‡
1N4458	DO-1	0.65	50*	600	3.5	15	1.5	2 μa‡
1N536	DO-1	0.75	50*	50	-	15	1.1	5 μa‡
1N540B	DO-1	0.75	50*	100	3.5	15	1.5	0.3 μa‡
1N537	DO-1	0.75	50*	100	-	15	1.1	5 μa‡

CHARACTERISTICS CHART

RCA SILICON DIFFUSED-JUNCTION RECTIFIERS

RCA Type	JEDEC Pkg.	MAXIMUM RATINGS					CHARACTERISTICS	
		$I_{F(av)}$* @T_C = °C		PRV	I_F peak rep.	I_F peak surge	Max. E_{FWD}	Max. I_R**
		Amp	T_C	Volts	Amp	Amp	Volts	ma
AXIAL-LEAD TYPES FOR MILITARY AND INDUSTRIAL APPLICATIONS (Cont'd) I_F: 0.65 to 0.75 Ampere								
1N441B	DO-1	0.75	50*	200	3.5	15	1.5	0.75 μa‡
1N538A	DO-1	0.75	50*	200	-	15	1.1	5 μa‡
1N442B	DO-1	0.75	50*	300	3.5	15	1.5	1 μa‡
1N539	DO-1	0.75	50*	300	-	15	1.1	5 μa‡
1N443B	DO-1	0.75	50*	400	3.5	15	1.5	1.5 μa‡
1N540A	DO-1	0.75	50*	400	-	15	1.1	5 μa‡
1N1095	DO-1	0.75	50*	500	-	15	1.2	5 μa‡
1N547A	DO-1	0.75	50*	600	-	15	1.2	5 μa‡
STUD-MOUNTED TYPES FOR MILITARY AND INDUSTRIAL APPLICATIONS I_F: 5 to 40 Amperes								
1N1612, 1N1612R	DO-4	5	135	50	15	-	1.5	1
1N1613, 1N1613R	DO-4	5	135	100	15	-	1.5	1
1N1614, 1N1614R	DO-4	5	135	200	15	-	1.5	1
1N1615, 1N1615R	DO-4	5	135	400	15	-	1.5	1
1N1616, 1N1616R	DO-4	5	135	600	15	-	1.5	1
40108	DO-4	10	150	10	40	140	.60	2
40109	DO-4	10	150	100	40	140	.60	2
40110	DO-4	10	150	200	40	140	.60	1.5
40111	DO-4	10	150	300	40	140	.60	1.5
40112	DO-4	10	150	400	40	140	.60	1
40114	DO-4	10	150	600	40	140	.60	0.75
40115	DO-4	10	150	800	40	140	0.6	0.65
40116	DO-4	10	150	1000	40	140	0.6	0.5
1N1199A	DO-4	12	150	50	50	240	0.55	3
1N1199RA	DO-4	12	150	50	50	240	0.55	3
1N1200A	DO-4	12	150	100	50	240	0.55	2.5
1N1200RA	DO-4	12	150	100	50	240	0.55	2.5
1N1202A	DO-4	12	150	200	50	240	0.55	2
1N1202RA	DO-4	12	150	200	50	240	0.55	2

RCA SILICON DIFFUSED-JUNCTION RECTIFIERS

Type	JEDEC Pkg.	MAXIMUM RATINGS					CHARACTERISTICS	
		$I_{F(av)}$* @T_C = °C		PRV	I_F peak rep.	I_F peak surge	Max. E_{FWD}	Max. I_R**
		Amp	T_C	Volts	Amp	Amp	Volts	ma
STUD-MOUNTED TYPES FOR MILITARY AND INDUSTRIAL APPLICATIONS						I_F: 5 to 40 Amperes		
1N1203A	DO-4	12	150	300	50	240	0.55	1.75
1N1203RA	DO-4	12	150	300	50	240	0.55	1.75
1N1204A	DO-4	12	150	400	50	240	0.55	1.5
1N1204RA	DO-4	12	150	400	50	240	0.55	1.5
1N1205A	DO-4	12	150	500	50	240	0.55	1.25
1N1205RA	DO-4	12	150	500	50	240	0.55	1.25
1N1206A	DO-4	12	150	600	50	240	0.55	1
1N1206RA	DO-4	12	150	600	50	240	0.55	1
40208	DO-5	18	150	50	72	250	0.65	3
40209	DO-5	18	150	100	72	250	0.65	3
40210	DO-5	18	150	200	72	250	0.65	2.5
40211	DO-5	18	150	300	72	250	0.65	2.5
1N1195	DO-5	18	150	300	-	220	2.35	5
1N1195R	DO-5	18	150	300	-	220	2.35	5
40212	DO-5	18	150	400	72	250	0.65	2.0
1N1196	DO-5	18	150	400	-	220	2.35	5
1N1196R	DO-5	18	150	400	-	220	2.35	5
1N1197	DO-5	18	150	500	-	220	2.35	5
1N1197R	DO-5	18	150	500	-	220	2.35	5
40214	DO-5	18	150	600	72	250	0.65	1.5
1N1198	DO-5	18	150	600	-	220	2.35	5
1N1198R	DO-5	18	150	600	-	220	2.35	5
1N248A	DO-5	20	150	50	90	250	1.5	5
1N248RA	DO-5	20	150	50	90	250	1.5	5
1N248B	DO-5	20	150	55	90	250	1.5	5
1N248RB	DO-5	20	150	55	90	250	1.5	5
1N248C	DO-5	20	150	55	90	350	0.6	3.8
1N248RC	DO-5	20	150	55	90	350	0.6	3.8
1N249A	DO-5	20	150	100	90	250	1.5	5
1N249RA	DO-5	20	150	100	90	250	1.5	5

For footnotes, see poge 193.

CHARACTERISTICS CHART
RCA SILICON DIFFUSED-JUNCTION RECTIFIERS

RCA Type	JEDEC Pkg.	MAXIMUM RATINGS					CHARACTERISTICS	
		$I_{F(av)}$* @T_C = °C		PRV	I_F peak rep.	I_F peak surge	Max. E_{FWD}	Max. I_R**
		Amp	T_C	Volts	Amp	Amp	Volts	ma
STUD-MOUNTED TYPES FOR MILITARY AND INDUSTRIAL APPLICATIONS							I_F: 5 to 40 Amperes	
1N249B	DO-5	20	150	110	90	250	1.5	5
1N249RB	DO-5	20	150	110	90	250	1.5	5
1N249C	DO-5	20	150	110	90	350	0.6	3.6
1N249RC	DO-5	20	150	110	90	350	0.6	3.6
1N250A	DO-5	20	150	200	90	250	1.5	5
1N250RA	DO-5	20	150	200	90	250	1.5	5
1N250B[A]	DO-5	20	150	220	90	350	1.5	5
1N250RB	DO-5	20	150	220	90	350	1.5	5
1N250C	DO-5	20	150	220	90	350	0.6	3.4
1N250RC	DO-5	20	150	220	90	350	0.6	3.4
1N1195A	DO-5	20	150	300	90	350	0.6	3.2
1N1195RA	DO-5	20	150	300	90	350	0.6	3.2
1N1196A	DO-5	20	150	400	90	350	0.6	2.5
1N1196RA	DO-5	20	150	400	90	350	0.6	2.5
1N1197A	DO-5	20	150	300	90	350	0.6	2 2
1N1197RA	DO-5	20	150	400	90	350	0.6	2.2
1N1198A	DO-5	20	150	500	90	350	0.6	1.5
1N1198RA	DO-5	20	150	600	90	350	0.6	1.5
1N1187	DO-5	35	140	300	130	500	1.7	10
1N1187R	DO-5	35	140	300	130	500	1.7	10
1N1188	DO-5	35	140	400	130	500	1.7	10
1N1188R	DO-5	35	140	400	130	500	1.7	10
1N1189	DO-5	35	140	500	130	500	1.7	10
1N1189R	DO-5	35	140	500	130	500	1.7	10
1N1190	DO-5	35	140	600	130	500	1.7	10

RCA SILICON DIFFUSED-JUNCTION RECTIFIERS

RCA Type	JEDEC Pkg.	MAXIMUM RATINGS					CHARACTERISTICS	
		$I_{F(av)}$* @T_C = °C		PRV	I_F peak rep.	I_F peak surge	Max. E_{FWD}	Max. I_R**
		Amp	T_C	Volts	Amp	Amp	Volts	ma
STUD-MOUNTED TYPES FOR MILITARY AND INDUSTRIAL APPLICATIONS							I_F: 5 to 40 Amperes	
1N1190R	DO-5	35	140	600	130	500	1.7	10
1N1183A	DO-5	40	150	50	195	800	0.65	2.5
1N1183RA	DO-5	40	150	50	195	800	0.65	2.5
1N1184A	DO-5	40	150	100	195	800	0.65	2.5
1N1184RA	DO-5	40	150	100	195	800	0.65	2.5
1N1186A	DO-5	40	150	200	195	800	0.65	2.5
1N1186RA	DO-5	40	150	200	195	800	0.65	2.5

▲ military version also available

♣ free-air temperature

□ with capacitive load

‡ static characteristic

** dynamic

• with resistive load except as noted

RCA GERMANIUM COMPENSATING DIODE		1N2326
V_R(max) = -1 volt	I_F(max) = 10 ma	E_{FWD} @ 25°C = 135 mv

CHARACTERISTICS CHART
RCA SILICON CONTROLLED RECTIFIERS

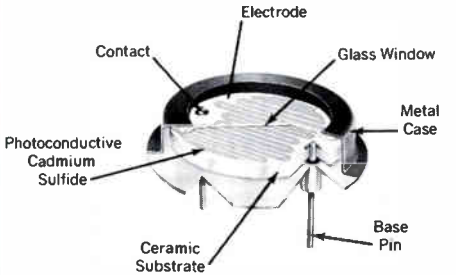
Type (TO-48 CASE)	MAXIMUM RATINGS						CHARACTERISTICS	
	I_F (rms) @stated temperature		V_{RM} (non-rep)	V_{RM} (rep) and V_{FBOM} (rep)	I_{FM} (peak surge)	T_C	Max. V_{GT} @ I_{GT} T_C = 125°C	
	amp	°C	volts	volts	amp	°C	volts	ma
2N681	25	65	35	25	150	125	3	25
2N682	25	65	75	50	150	125	3	25
2N683	25	65	150	100	150	125	3	25
2N684	25	65	225	150	150	125	3	25
2N685	25	65	300	200	150	125	3	25
2N686	25	65	350	250	150	125	3	25
2N687	25	65	400	300	150	125	3	25
2N688	25	65	500	400	150	125	3	25
2N689	25	65	600	500	150	125	3	25

Type (TO-48 CASE)	MAXIMUM RATINGS						CHARACTERISTICS	
	I_F (rms) @stated temperature		V_{RM} (non-rep)	V_{RM} (rep) and V_{FBOM} (rep)	I_{FM} (peak surge)	T_C	Max. V_{GT} @ I_{GT} T_C = 125°C	
	amp	°C	volts	volts	amp	°C	volts	ma
2N1842A	16	80	35	25	125	125	3.5	45
2N1843A	16	80	75	50	125	125	3.5	45
2N1844A	16	80	150	100	125	125	3.5	45
2N1845A	16	80	225	150	125	125	3.5	45
2N1846A	16	80	300	200	125	125	3.5	45
2N1847A	16	80	350	250	125	125	3.5	45
2N1848A	16	80	400	300	125	125	3.5	45
2N1849A	16	80	500	400	125	125	3.5	45
2N1850A	16	80	600	500	125	125	3.5	45

RCA PHOTOCONDUCTIVE, PHOTOJUNCTION, AND PHOTOVOLTAIC CELLS

Cadmium-Sulfide Types

RCA Type[a]	MAXIMUM RATINGS		CHARACTERISTICS @ 25° C		
	Voltage Between Terminals DC or Peak AC	Power Dissipation	Voltage Between Terminals	PHOTOCURRENT ma	
	Volts	Watt	Volts	Min.	Max.
4402	200	0.05	12 (dc)	1.6	
4403	250	0.3	50 (ac)	7	16
4404	600	0.3	50 (ac)	2.5	5
4413	110	0.05	12 (dc)	1	2.75
4423	250	0.2	50 (ac)	1.5	4
4424	110	0.2	12 (dc)	3.6	14.5
4425	110	0.2	12 (dc)	3.6	14.5
4448	600	0.3	50 (ac)	1.5	4
4453	600	0.3	50 (ac)	3	7
6694A[b]	150	0.03	90 (dc)	0.057	0.65
7163	600	0.3	50 (ac)	1	3
7412	200	0.05	12 (dc)	0.065	0.275
7536	200	0.05	12 (dc)	0.065	0.275
SQ2500	250	0.2	12 (dc)	0.24	0.8
SQ2502[c]	600	0.5	50 (dc)	2.5	5
SQ2504	600	0.3	50 (ac)	1.5	4
SQ2505	250	0.3	50 (ac)	7	16
SQ2506	600	0.3	50 (ac)	1	3
SQ2508	200	0.05	12 (dc)	0.065	0.275



Cutaway View of a Typical Cadmium-Sulfide Photoconductive Cell.

CHARACTERISTICS CHART

RCA PHOTOCONDUCTIVE, PHOTOJUNCTION, AND PHOTOVOLTAIC CELLS

Silicon N on P Photovoltaic Types

RCA Type[f]	CHARACTERISTICS @ 27° ± 1° C		
	Minimum Current ma	Minimum Power Output mw	Minimum Efficiency per cent
SL2205	48	17.9	10.0
SL2206	101.5	37.8	10.0

Germanium P-N Alloy Types

RCA Type[d]	MAXIMUM RATINGS		CHARACTERISTICS @ 25° C		
	Voltage Between Terminals dc volts	Power Dissipation watt	Voltage Between Terminals dc volts	Illumination Sensitivity μa/fc	Maximum Dark Current μa
4420	50	0.03	45	0.7	35
7467[e]	50	0.03	45	0.7	35

[a] All photocell types have S-15 spectral response except for type 6694A which has S-12 spectral response.

[b] Single crystal. [c] For renewal use. [d] S-14 spectral response

[e] Type 7467 has maximum length of 0.875 inch and type 4420 has maximum length of 1.10 inches (excluding flexible leads).

[f] Wavelength of maximum spectral response is 8600 ± 750 angstroms. The approximate spectral range at the 20 per cent points is from 4000 to 10,600 angstroms.

RCA MILITARY-SPECIFICATION TYPES

Transistors and Rectifiers

USA	1N249B
USA	1N250B
JAN	1N538
JAN	1N540
JAN	1N547
USAF	1N1199
USAF	1N1200
USAF	1N1201
USAF	1N1202
USAF	1N1203
USAF	1N1204
USAF	1N1205
USAF	1N1206
USA	1N2135A
JAN	2N174
JAN	2N220
USA	2N274
JAN	2N384
USN	2N388
USN	2N398
USAF	2N404
USA	2N1183
USA	2N1183A
USA	2N1183B
USA	2N1184
USA	2N1184A
USA	2N1184B
USA	2N1224
USA	2N1225
USN	2N1302
USN	2N1303
USN	2N1304
USN	2N1305
USN	2N1306
USN	2N1307
USN	2N1308
USN	2N1309
USN	2N1412
USA	2N1479
USA	2N1480
USA	2N1481
USA	2N1482
USA	2N1483
USA	2N1484
USA	2N1485
USA	2N1486
USA	2N1487
USA	2N1488
USA	2N1489
USA	2N1490
USA	2N1511
USA	2N1512
USA	2N1513
USA	2N1514
USN	2N1853
USN	2N1854
USA	2N2273M

RCA SEMICONDUCTOR DEVICES *(New types not included in foregoing data)*

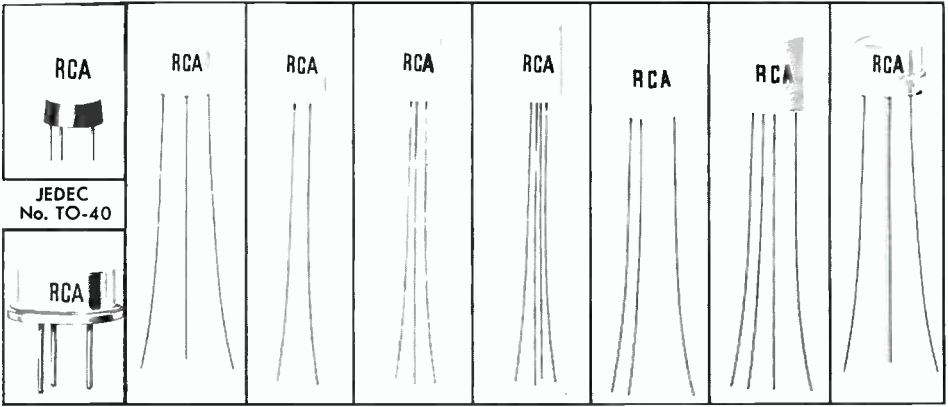
RL 1 Type	MAXIMUM RATINGS V_{CBO} Volts	I_C Amp	P_T Watts	NOTES
NEW FOR AUDIO POWER				
2N2869/ 2N301	-60	-10	30	These new versions offer triple the current and dissipation of original type. (pnp germanium)
2N2870/ 2N301A	-80	-10	30	
NEW FOR VHF				
2N2873	-35	-0.01	0.115	Diffused - dot mesa germanium pnp 17 db neutralized power gain; 5 db noise typical at 175 Mc.
2N2876	80	2.5	17.5	10 watts output at 50 Mc (Si, npn) 3 watts output at 150 Mc
2N2631	80	1.5	8.75	7.5 watts output at 50 Mc - 3 watts output at 150 Mc (Si, npn)
NEW HIGH-SPEED SWITCHES				
2N960 through 2N967				Germanium Epitaxial Mesa PNP types: Low saturation voltages, high min f_T (250 - 300 Mc) at I_E = 20 ma
2N2938	25	0.25	1	Silicon npn type h_{FE} = 30 min at I_C = 50 ma; f_T = 690 Mc typ.
NEW FOR SMALL-SIGNAL MEDIUM-POWER & HIGH-SPEED SWITCHING				
2N718A	75	0.5	1.8	f_T min= 60 Mc; pulsed beta= 20 min at I_C = 0.5 amp (Si, npn)
2N720A	120	0.5	1.8	High-Voltage type; f_T min = 60 Mc; V_{CER} = 100 volts for R_{BE} = 10 ohms
2N1893	120	0.5	3	Triple-diffused silicon npn planar type similar to RCA 2N2405
2N2405	120	1	5	Triple-diffused silicon npn planar type f_T = 120 Mc min; V_{CEO} (sus) controlled for R_{BE} = 0 ohms to 100K ohms; Min V_{CEO} (sus) = 90 volts
NEW ECONOMY TRANSISTORS				
40050	-40	-5	12.5	15 watts power output, class B push-pull
40051	-50	-5	12.5	15 watts power output, class B push-pull
40053	60	1	5	RCA triple-diffused silicon npn at an extremely low price (version of RCA 2N2102) min f_T = 100 Mc.

RCA'S NEW 2N2102 FAMILY

	TO-5	TO-18	TO-46
High-Voltage Type	2N2405	2N2895	2N2898
Multiple Beta-Control Type	2N2102	2N2896	2N2899

NEW 40-AMPERE STUD RECTIFIERS

1N1187A	DO-5	PRV = 300
1N1188A	DO-5	PRV = 400
1N1189A	DO-5	PRV = 500
1N1190A	DO-5	PRV = 600


RCA
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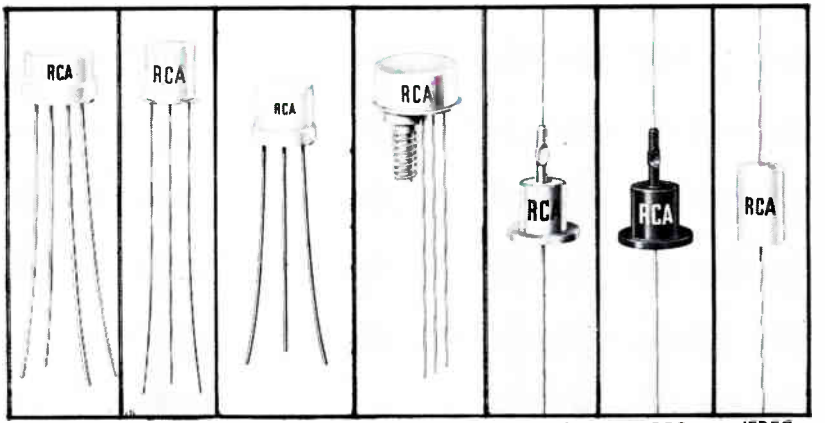
JEDEC
No. TO-40
JEDEC
No. TO-8
JEDEC
No. TO-9
COMPENSATING
DIODE
(TO-1 CASE)
JEDEC
No. TO-1
JEDEC
No. TO-44
SIMILAR
TO JEDEC
No. TO-7
JEDEC
No. TO-7
JEDEC
No. TO-5

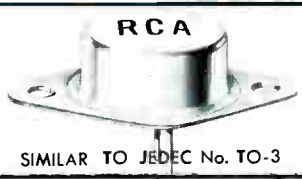
RCA SEMICONDUCTOR DEVICES—ACTUAL SIZE



JEDEC | JEDEC | JEDEC | OFFSET-STUD | JEDEC | JEDEC | JEDEC
No. TO-1

RCA SEMICONDUCTOR DEVICES—ACTUAL SIZE

JEDEC No. TO-3



SIMILAR TO JEDEC No. TO-3

JEDEC No. DO-5

JEDEC No. DO-4

JEDEC No. TO-36

JEDEC No. TO-39

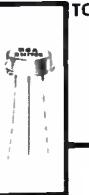
JEDEC No. TO-45

TUNNEL DIODE

(2½ X ACTUAL SIZE)

CR-201
SERIES

TO-46

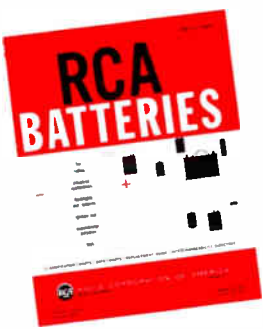


TO-48

CR-101 SERIES
1″ x 1″ x 2⅜″
TO 1″ x 1″ x 5½″

RCA BATTERIES
Technical Publications

• **RCA BATTERY MANUAL**—BDG-111 (10⅞" x 8⅜")—64 pages. Contains information for the designer, application engineer, experimenter, and student on dry cells and batteries [carbon zinc (Leclanché), mercury, and alkaline types]. Included in this manual are battery theory and applications, detailed electrical and mechanical characteristics, a classification chart, dimensional outlines and terminal connections on each battery type. Price 50 cents.



RCA BATTERIES—BAT-134F (10⅞" x 8¾"— 24 pages. Technical data on 115 Leclanché, alkaline, and mercury-type dry batteries, for radios, industrial applications, flashlights, lanterns, electronic toys, and for photoflash service. Price 35 cents.

INDEX OF RCA BATTERIES

SINGLE-VOLTAGE TYPES

Terminal Volts	Suggested Current Range Ma.	Type		
		Mercury	Alkaline	Zinc-Carbon (Leclanché)
1.4	0–7	VS145		
	0–20	VS147		
	0–50	VS150 VS401		
	0–100	VS143		
	0–200	VS313		
	0–250	VS144		
1.5	0–20			VS073 VS074
	0–25			VS034A VS334* VS734†
	0–80			VS035A VS335* VS735†
	0–150		VS1073	VS036 VS336* VS736†
	0–250			VS070
	0–300		VS1334	VS069
	0–500		VS1335	VS101 VS141
	0–1000		VS1336	VS004C VS106
	0–1500			VS006C VS006S
2.8	0–100	VS148		
3	0–25			VS134
	0–250			VS100
	0–500			VS136
	0–1000			VS138

* Special Radio Mix
† For photoflash service

SINGLE-VOLTAGE TYPES (Continued)

Terminal Volts	Suggested Current Range Ma.	Type		
		Mercury	Alkaline	Zinc-Carbon (Leclanché)
4.2	0–50	VS163		
	0–60	VS400		
	0–100	VS149		
4.5	0–25			VS142
	0–40			VS324
	0–50			VS028 VS133
	0–100		VS1149	
	0–150			VS072
	0–200			VS321
	0–250			VS067
5.6	0–50	VS164		
6	0–25			VS068 VS325
	0–250			VS009 VS040C VS040S
	0–500			VS317
	0–1000			VS103
	0–1500			VS039
7	0–50	VS165		
7.5	0–50			VS129
	0–70			VS065
	0–80			VS315
	0–1000			VS139
8.4	0–30	VS312		
	0–50	VS328		

SINGLE-VOLTAGE TYPES (Continued)

Terminal Volts	Suggested Current Range Ma.	Type		
		Mercury	Alkaline	Zinc-Carbon (Leclanché)
9	0–7			VS327
	0–8			VS323
	0–9			VS300A
	0–15			VS305
	0–20			VS322 VS326
	0–30			VS306
	0–1000			VS140
9.8	0–10	VS309A		
12	0–9			VS329
15	0–1.5			VS704†
	0–2.5			VS083
22.5	0–1.5			VS705†
	0–2.5			VS084
	0–40			VS102
30	0–2.5			VS085
45	0–4			VS086
	0–10			VS055
	0–40			VS013 VS014
	0–70			VS012
67.5	0–3			VS318
	0–6			VS082
	0–8			VS218
	0–10			VS016
75	0–10			VS217
90	0–8			VS219
	0–10			VS090 VS316
300	0–2.5			VS093

† For photoflash service

MULTIPLE-VOLTAGE TYPES

Terminal Volts	Suggested Current Range Ma.	Type			
		Mercury	Alkaline	Zinc-Carbon (Leclanché)	
—4.5	0–150			VS130	Taps at —1.5 and —3 volts
—7.5	0–50			VS029	Taps at —1.5, —3, —4.5, and —6 volts
9	0–150			VS301	Taps at 3 and 6 volts
13.5	0–10			VS304	Tap at 9 volts
—22.5	0–50			VS131	Taps at —3, —4.5, —6, —9, —10.5, —16.5, and —17 volts
45	0–20			VS114	Tap at 22½ volts
	0–25			VS015	
	0–50			VS112	
	0–250			VS127W	
	0–300			VS157W	

VS 304

VS 130

INDEX OF RCA BATTERIES

A-B BATTERY PACKS

Terminal Volts	Suggested Current Range Ma.	Type		
		Mercury	Alkaline	Zinc-Carbon (Leclanché)
A 6 A 7.5 B 75	0–50 0–50 0–12			VS050
A 7.5 B 75	0–50 0–12			VS060
A 1.5 B 90	0–300 0–12			VS022
A 1.5 B 90	0–300 0–14			VS064
A 7.5 A 9 B 90	0–50 0–50 0–12			VS057W VS119
A 7.5 A 9 B 90	0–50 0–50 0–15			VS019
A 9 B 90	0–50 0–12			VS059
A 9 B 90	0–50 0–15			VS047 VS058

VS 019

RCA BATTERIES—QUICK SELECTION GUIDE

RCA Type	Volts	Suggested Current Range Ma.	Max. Dimensions Inches L.	W. or Dia.	Overall Ht.	NEDA* Type No.
TYPES FOR TRANSISTOR APPLICATIONS						
VS143♦	1.4	0-100	—	0.625	0.650	1100
VS144♦	1.4	0-250	—	0.640	1.968	1101
VS145♦	1.4	0-7	—	0.455	0.135	1106
VS147♦	1.4	0-20	—	0.615	0.238	1104
VS148♦	2.8	0-100	—	0.662	1.315	—
VS149♦	4.2	0-100	—	0.662	1.965	1304
VS150♦	1.4	0-50	—	0.625	0.440	1105
VS163♦	4.2	0-50	—	0.662	1.327	1305
VS164♦	5.6	0-50	—	0.662	1.767	1404
VS165♦	7	0-50	—	0.662	2.217	1500
VS300A■	9	0-9	—	1	$1^{15}/_{16}$	1600
VS301	3, 6, 9	0-150	8	$2^{13}/_{16}$	$1^{9}/_{16}$	1601
VS304	9, 13½	0-10	$1^{11}/_{32}$	$1^{1}/_{32}$	$2^{11}/_{16}$	1900
VS305■	9	0-15	$1^{13}/_{32}$	$1^{11}/_{32}$	$2^{3}/_{4}$	1602
VS306	9	0-30	$2^{9}/_{16}$	$2^{1}/_{32}$	$3^{5}/_{32}$	1603
VS309A■	9.8	0-10	—	$^{9}/_{16}$	$1^{29}/_{32}$	1606
VS312■	8.4	0-30	$1^{1}/_{32}$	$^{5}/_{8}$	2	1604
VS313♦	1.4	0-200	—	0.550	1.968	1103
VS321	4½	0-200	$2^{13}/_{16}$	$1^{3}/_{4}$	$8^{11}/_{32}$	1303
VS322■	9	0-20	$1^{13}/_{16}$	$1^{13}/_{16}$	$2^{7}/_{16}$	1605
VS323■	9	0-8	$1^{1}/_{32}$	$^{21}/_{32}$	$1^{29}/_{32}$	1604
VS324■	4½	0-40	$1^{13}/_{32}$	$1^{11}/_{32}$	$2^{3}/_{4}$	1610
VS325■	6	0-25	$1^{13}/_{32}$	$^{3}/_{4}$	$4^{11}/_{16}$	1403
VS326■	9	0-20	$1^{13}/_{32}$	$^{3}/_{4}$	$4^{11}/_{16}$	1613
VS327♦	9	0-7	—	$^{3}/_{4}$	2	1611
VS328♦	8.4	0-50	—	$^{3}/_{4}$	2	1611
VS329■	12	0-9	—	1	$2^{7}/_{16}$	1810
VS332	4.5	0-12	—	0.662	1.965	1306
VS334♦	1½	0-25	—	$^{9}/_{16}$	$1^{31}/_{32}$	15
VS335♦	1½	0-80	—	$1^{1}/_{32}$	$1^{15}/_{16}$	14
VS336♦	1½	0-150	—	$1^{11}/_{32}$	$2^{13}/_{32}$	13
VS400■	4.2	0-60	—	$1^{1}/_{32}$	$1^{31}/_{32}$	1300
VS401♦	1.4	0-50	—	0.460	1.130	1102
VS675	1.4	0-10	—	0.455	0.210	—
VS1073♦	1½	0-150	—	0.470	1.130	910
VS1074♦	1½	0-25	—	0.410	1.745	24
VS1149♦	4½	0-100	—	0.662	1.965	1306
S1334♦	1½	0-300	—	0.550	1.960	815
S1335♦	1½	0-500	—	$1^{1}/_{32}$	2	814
S1336♦	1½	0-1000	—	$1^{5}/_{16}$	$2^{3}/_{8}$	813

*National Electronic Distributors Association.
♦Flashlight-type terminals.
■2-snap fastener terminals.

RCA BATTERIES—QUICK SELECTION GUIDE

RCA Type	Volts	Suggested Current Range Ma.	Max. Dimensions Inches L.	W. or Dia.	Overall Ht.	NEDA* Type No.
PORTABLE "A" TYPES						
VS004	1½	0-1000	2⅝	2⅝	3 27/32	4
VS009	6	0-250	2⅝	2⅝	3 27/32	6
VS034A◆	1½	0-25	—	9/16	1 31/32	815
VS035A◆	1½	0-80	—	1 1/32	1 15/16	814
VS036◆	1½	0-150	—	1 11/32	2 13/32	813
VS065	7½	0-70	2 5/32	1 15/16	3 1/32	9
VS067	4½	0-250	3 15/16	1 5/16	4 3/32	3
VS068◆	6	0-25	1 7/32	1 7/32	2 11/32	2
VS069	1½	0-300	2 25/32	1 13/32	3 1/32	18
VS070	1½	0-250	—	1 11/32	4 1/16	23
VS072	4½	0-150	4 3/32	1 7/16	2 15/16	19
VS129	7½	0-50	3 29/32	27/32	2 27/32	8
VS141	1½	0-500	2 19/32	1⅜	4¼	11
VS236◆	1½	0-300	—	1 11/32	4 3/16	20
VS315■	7½	0-80	2 9/16	2 1/32	2 13/16	26
VS1334◆	1½	—	—	0.550	1.968	815
VS1335◆	1½	—	—	1 1/32	2	814
VS1336◆	1½	0-1000	—	1 5/16	2⅜	813
PORTABLE "B" TYPES						
VS012	45	0-70	3 31/32	2 17/32	5 5/16	207
VS013	45	0-40	3 19/32	1 27/32	5½	202
VS014	45	0-40	3 9/16	2¼	4½	206
VS015	22½,'45	0-25	3	2 5/16	4⅛	205
VS016■	67½	0-10	2 13/16	1⅜	3 23/32	200
VS055■	45	0-10	2 21/32	1	3 1/16	201
VS082■	67½	0-6	2 13/16	1⅜	2½	203
VS084◆	22½	0-2.5	1 1/32	⅝	2	215
VS086■	45	0-4	1 1/16	⅝	3 1/16	213
VS090■	90	0-10	3 23/32	1⅜	3 23/32	204
VS217■	75	0-10	1 15/16	1 15/32	6 15/32	212
VS218■	67½	0-8	1 29/32	1	5 7/16	211P
VS219■	90	0-8	1 31/32	1 1/32	7 15/32	214
VS316■	90	0-10	1 15/16	1 15/32	7⅞	216
VS318■	67½	0-3	1 11/32	1	3½	217

*National Electronic Distributors Association.
◆Flashlight-type terminals.
■2-snap fastener.

RCA BATTERIES—QUICK SELECTION GUIDE

Type	Volts A	Volts B	Volts C	Suggested Current Range Ma.	Max. Dimensions Inches L.	W. or Dia.	Overall Ht.	NEDA* Type No.
INDUSTRIAL AND SPECIAL-PURPOSE TYPES								
VS006C	1½	—	—	0-1500	—	2⅝	6 21/32	906
VS006S	1½	—	—	0-1500	—	2⅝	6 21/32	905
VS028	—	—	—4½	0-50	2 7/16	27/32	3	714
VS029§	—	—	—7½	0-50	3 29/32	27/32	3	713
VS039	6	—	—	0-1500	10 7/16	2 23/32	7 7/32	907
VS040C	6	—	—	0-250	2⅝	2⅝	4 13/32	908
VS040S	6	—	—	0-250	2⅝	2⅝	4⅜	915
VS070	1½	—	—	0-250	—	1 11/32	4 1/16	23
VS083♦	—	15	—	0-2.5	1½	⅝	1 15/32	208
VS084♦	—	22½	—	0-2.5	1½	⅝	2	215
VS085♦	—	30	—	0-2.5	1½	⅝	2 9/16	210
VS093	—	300	—	0-2.5	2 1/16	2 7/32	3 29/32	722
VS100	3	—	—	0-250	2 21/32	1 11/32	4 9/16	701
VS101	1½	—	—	0-500	2 21/32	1 11/32	4¾	700
VS102	—	22½	—	0-40	3½	2 3/32	3 1/16	710
VS103	6	—	—	0-1000	8 5/16	2 1/16	6 7/16	902
VS106	1½	—	—	0-1000	2⅝	2⅝	4⅜	900
VS112	—	22½, 45	—	0-50	4 3/32	2 9/16	5 7/16	709
VS114	—	22½, 45	—	0-20	3 1/32	1⅞	4 31/32	711
VS127W	—	22½, 45	—	0-250	8 1/32	4 1/16	7⅝	724
VS130	—	—	—4½	0-150	4 1/16	1 13/32	3 1/32	712
VS131	—	—	—22½	0-50	4	2 7/16	3⅛	708
VS133	4½	—	—	0-50	2 7/16	27/32	3 1/16	706
VS134	3	—	—	0-25	1 7/32	⅝	2 21/32	704
VS136*	3	—	—	0-500	2⅝	2⅝	4 9/16	703
VS138	3	—	—	0-1000	3⅞	2 11/16	5 13/16	901
VS139	7½	—	—	0-1000	7¼	4 1/16	6 7/16	903
VS140*	9	—	—	0-1000	8 19/32	4 1/16	6 7/16	904
VS142*	4½	—	—	0-25	1 25/32	⅝	2 21/32	705
VS143♦	1.4	—	—	0-100	—	0.625	0.650	1100
VS144♦	1.4	—	—	0-250	—	0.640	1.968	1101
VS145♦	1.4	—	—	0-7	—	0.455	0.135	1106
VS147♦	1.4	—	—	0-20	—	0.615	0.238	1104
VS148♦	2.8	—	—	0-100	—	0.662	1.315	—
VS149♦	4.2	—	—	0-100	—	0.662	1.965	1304
VS150♦	1.4	—	—	0-50	—	0.625	0.440	1105
VS157W*	—	22½, 45	—	0-300	8⅛	4 7/16	7 11/16	715
VS163♦	4.2	—	—	0-50	—	0.662	1.327	1305
VS164♦	5.6	—	—	0-50	—	0.662	1.767	1404
VS317	6	—	—	0-500	5 11/32	2 27/32	4 15/16	918
VS1149♦	4½	—	—	—	—	0.662	1.965	1306

*National Electronic Distributors Association.
♦Flashlight-type terminals.
*Available on special order only.
§5-screw terminals and 1 pigtail.

RCA BATTERIES—QUICK SELECTION GUIDE

Type	Volts	Suggested Current Range Ma.	Max. Dimensions Inches L.	W. or Dia.	Overall Ht.	NEDA* Type No.
FLASHLIGHT AND LANTERN TYPES						
VS034A♦	1½	0-25	—	9/16	1 31/32	815
VS035A♦	1½	0-80	—	1 1/32	1 15/16	814
VS036♦	1½	0-150	—	1 11/32	2 13/32	813
VS040C	6	0-250	2⅝	2⅝	4 13/32	908
VS040S	6	0-250	2⅝	2⅝	4⅜	915
VS073	1½	0-20	—	0.445	1.180	910
VS074	1½	0-20	—	13/32	1¾	24
VS138	3	0-1000	3⅜	2 11/16	5 13/16	901
VS317	6	0-500	5 11/32	2 27/32	4 15/16	918
VS1073♦	1½	0-150	—	0.470	1.130	910
VS1334♦	1½	0-300	—	0.550	1.968	815
VS1335♦	1½	0-500	—	1 1/32	2	814
VS1336♦	1½	0-1000	—	1 5/16	2⅛	813
PHOTOFLASH TYPES						
VS704^	15	0-1.5	⅝	19/32	1⅜	220
VS705†	22½	0-1.5	⅝	19/32	2	221
VS734♦	1½	0-25	—	9/16	1 31/32	—
VS735♦	1½	0-80	—	1 1/32	1 15/16	—
VS736♦	1½	0-150	—	1 11/32	2 13/32	—
VS1073♦	1½	0-150	—	0.470	1.130	910
VS1334♦	1½	0-300	—	0.550	1.968	1815
VS1335♦	1½	0-500	—	1 1/32	2	1814
VS1336♦	1½	0-1000	—	1 5/16	2⅛	1813

Type	Volts A	Volts B	Suggested Current Range Ma. A	Range Ma. B	Max. Dimensions Inches L.	W. or Dia.	Overall Ht.	NEDA* Type No.
PORTABLE "A-B" PACKS								
VS019	7½, 9	90	0-50	12-15	9 7/32	2 23/32	4 5/16	401
VS047	9	90	0-50	12-15	14 1/16	2 1/16	4 1/16	400
VS050	6, 7½	75	0-50	0-12	8 9/16	2 7/16	3¾	403
VS057W	7½, 9	90	0-50	8-12	8⅞	2⅛	3 25/32	405
VS058	9	90	0-50	12-15	9 7/32	2 23/32	4 7/32	406
VS059	9	90	0-50	8-12	8⅞	2⅛	3 25/32	428
VS060	7½	75	0-50	0-12	8⅜	3⅝	2¼	431
VS064	1½	90	0-300	10-14	3 27/32	2 7/32	7 13/16	425
FARM "A-B" PACKS								
VS022	1½	90	0-300	8-12	15 11/16	4 1/32	6 15/16	413
VS119	7½, 9	90	0-50	10-12	7 27/32	4⅛	9⅞	415

^Flat-projecting terminals, one at each end. *National Electronic Distributors Association
†Flat-recessed terminals, one at each end.
♦Flashlight-type terminals.

A Cross Reference of Comparative and Interchangeable Numbers

Type to be Replaced	Replace by RCA Type
Bright Star	
0197	VS036
0198	VS035A or VS1335
0199	VS034A or VS1334
03-17	VS133
03-17S	VS028
0918	VS300A
0920	VS312 or VS323
6 Ign.	VS006S
6 Tel.	VS006C
10M	VS1336, VS036, or VS336
10P	VS736
11M	VS035, VS335, or VS1335
11P	VS735
12P	VS084
15-03W	VS131
15-50W	VS102
15P	VS704
22P	VS705
30-03	VS012
30-03BP	VS112
30-33	VS013
30-55	VS014
30-59	VS015
30-61	VS157W
45N	VS016
50-17	VS134
51-03	VS029
51-17	VS142
58	VS074
59-1	VS034A, VS1334, or VS334
59P	VS734
60N	VS090
61-05	VS022
61R	VS236
66-03	VS047
66-50	VS019
66-52	VS050
66-53	VS057W
66-54	VS058
71-17S	VS130

Type to be Replaced	Replace by RCA Type
Bright Star (cont'd)	
126	VS138
146	VS039
155	VS139
158	VS317
260	VS100
305	VS072
360	VS067
361	VS067
460	VS040C
460S	VS040S
462	VS004
464	VS106
591	VS065
646	VS009
675	VS218
Burgess	
A30	VS014
AL-1	VS035A or VS1335
AL-7	VS1074
AL-9	VS034A or VS1334
AL-133	VS1149
AL-N	VS073 or VS1073
B5	VS129
B30	VS012
C5	VS065
D3	VS072
D5	VS315
D6	VS306
D6BP	VS132
D6PI	VS301
F2BP	VS100
F3	VS067
F4BP	VS040S
F4H	VS040C
F4PI	VS009
F6A60	VS019
F6A60P	VS058

A Cross Reference of Comparative and Interchangeable Numbers

Type to be Replaced	Replace by RCA Type
Burgess (cont'd)	
G3	VS067
G6B60	VS047
H126	VS327 or VS328
H132R	VS148
H133	VS149 or VS1149
H133R	VS149 or VS1149
H146	VS312 or VS323
H163	VS163
H164	VS164
H165	VS165
H177	VS309A
H233	VS400
Hg-1R	VS143
Hg-9	VS313
Hg-12R	VS144
Hg-400R	VS145
Hg-401	VS401
Hg-630	VS147
Hg-640	VS150
Hg-675	VS675
K45	VS082
L6	VS327 or VS328
M6	VS322
M30	VS013
N	VS073 or VS1073
N60	VS090
N60X	VS316
NE	VS073
P6	VS300A
P6M	VS300A
P45	VS218
P45M	VS218
P60	VS219
S6D60	VS119
S461	VS039
T5Z50	VS050
T5Z50P	VS060
T6Z60	VS057W
T6Z60P	VS059
TW1	VS317
U10	VS083

Type to be Replaced	Replace by RCA Type
Burgess (cont'd)	
U15	VS084
U20	VS085
U30	VS086
U200	VS093
UX45	VS318
V45	VS016
XX9	VS304
XX30	VS055
XX45	VS016
XX50	VS217
Y6	VS309A
Y10	VS704
Y15	VS705
Z	VS034A or VS1334
Z4	VS068
Z30	VS015
Z30NX	VS114
ZMR	VS313 or VS334
1	VS035A or VS1335
2	VS036 or VS1336
2D	VS069
2F	VS141
2F2H	VS136
2F4	VS010
2FBP	VS101
2N6	VS305
2R	VS336
2U6	VS312 or VS323
2Z3	VS324
4F	VS004
4F2H	VS138
4F4H	VS103
4F5H	VS139
4F6H	VS140
4FH	VS106
4FP1	VS009
4TZ60	VS064
6 Ign.	VS006S
6 Tel.	VS006C
7	VS074

A Cross Reference of Comparative and Interchangeable Numbers

Type to be Replaced	Replace by RCA Type
rgess (cont'd)	
R	VS070
7GD60	VS022
1R	VS236
20	VS735
30	VS335 or VS1335
20	VS736
30	VS336
22	VS134
32	VS142
32	VS133
20	VS734
10	VS334 or VS1334
170ST	VS130
56	VS102
56SC	VS131
08	VS112
60	VS028
40	VS029
308SC	VS127W
308SCpr	VS127W
308SC	VS157W
eready	
00	VS336
9	VS036 or VS1336
	VS143
	VS313 or VS334
2	VS144
1	VS1334
2	VS1074
3	VS1335
26	VS327 or VS328
32	VS148
33	VS149 or VS1149
33N	VS149
46	VS312 or VS323
53	VS163
54	VS164
55	VS165

Type to be Replaced	Replace by RCA Type
Eveready (cont'd)	
E177	VS309A
E233	VS400
E400	VS145
E401	VS401
E630	VS147
E640	VS150
E675	VS675
W350	VS114
W352	VS100
W353	VS141
W354	VS101
W356	VS136
W357	VS138
W359	VS014
W363F	VS127W
W364F	VS157W
6 "Gray Label"	VS006C
6 "Ignitor"	VS006S
206	VS327 or VS328
216	VS312 or VS323
226	VS300A
228	VS329
239	VS304
243	VS324
246	VS305
266	VS322
276	VS306
333	VS332
409	VS040C
411	VS083
412	VS084
413	VS085
415	VS086
416	VS318
437	VS217
455	VS055
457	VS082
467	VS016
468	VS016
477	VS218
479	VS219

A Cross Reference of Comparative and Interchangeable Numbers

Type to be Replaced	Replace by RCA Type
Eveready (cont'd)	
482	VS013
484	VS012
490	VS090
493	VS093
495	VS316
504	VS704
505	VS705
509	VS040C
510S	VS040S
515	VS034A or VS1334
523	VS1149
528	VS323 or VS312
635	VS335 or VS1335
703	VS133
706	VS103
707	VS315
713	VS129
715	VS139
716	VS140
717	VS065
718	VS010
720	VS069
724	VS068
726	VS072
727	VS059
729	VS064
731	VS317
735	VS106
736	VS067
738	VS015
742	VS004
744	VS009
746	VS067
750	VS134
751	VS142
752	VS047
753	VS019
755	VS050
756	VS057W
757	VS058

Type to be Replaced	Replace by RCA Type
Eveready (cont'd)	
759	VS0
761T	VS1
762S	VS1
763	VS1
773	VS0
776	VS1
778	VS1
781	VS0
785	VS0
815	VS7
835	VS7
850	VS7
904	VS073 or VS1
912	VS
915	VS034A or VS1
935	VS035A or VS1
950	VS036 or VS1
960P	VS
964	VS
1015	VS334 or VS1
1461	VS
2506	VS
2709	VS
2713	VS
2731	VS
Mallory, P. R.	
M2	VS
M3	VS
M4	VS
M6	VS
M8	VS
M9	VS
M11	VS
M13F	VS036 or VS
M13P	VS
M13R	VS

A Cross Reference of Comparative and Interchangeable Numbers

Type to be Replaced	Replace by RCA Type
Mallory, P. R. (cont'd)	
M14F	VS035A or VS1335
M14P	VS735
M14R	VS335 or VS1335
M15F	VS034A or VS1334
M15P	VS734
M15R	VS334 or VS1334
M18	VS069
M19	VS072
M20	VS236
M23	VS070
M24F	VS074
M26	VS315
M200	VS016
M201	VS055
M202	VS013
M203	VS082
M204	VS090
M205	VS015
M206	VS014
M207	VS012
M208	VS083
M210	VS085
M211P	VS218
M212	VS217
M213	VS086
M214	VS219
M215	VS084
M216	VS316
M217	VS318
M400	VS047
M401	VS019
M405	VS057W
M406	VS058
M413	VS022
M504	VS704
M505	VS705
M900	VS106
M902	VS103
M903	VS139
M904	VS140

Type to be Replaced	Replace by RCA Type
Mallory, P. R. (cont'd)	
M905	VS006S
M906	VS006C
M907	VS039
M908	VS040C
M910F	VS073 or VS1073
M914	VS006S
M915	VS040S
M916	VS040C
M918	VS317
M1600	VS300A
M1602	VS305
M1603	VS306
M1604	VS312 or VS323
M1605	VS322
M1611	VS327
M1900	VS304
Mn1300	VS036 or VS1336
Mn1306	VS1149
Mn1400	VS1335 or VS035A
Mn1500	VS1334 or VS034A
Mn1604	VS323 or VS312
Mn2400	VS1074
Mn9100	VS1073 or VS073
RM1	VS143
RM1R	VS143
RM12	VS144
RM12R	VS144
RM400	VS145
RM400R	VS145
RM401	VS401
RM630	VS147
RM640	VS150
RM675	VS675
TR126	VS327 or VS328
TR132R	VS148
TR133	VS149 or VS1149
TR133R	VS149
TR146	VS312 or VS323
TR163	VS163
TR164	VS164
TR165	VS165

A Cross Reference of Comparative and Interchangeable Numbers

Type to be Replaced	Replace by RCA Type
Mallory, P. R. (cont'd)	
TR165R	VS165
TR177	VS309A
TR233	VS400
ZM9	VS313
Ray-O-Vac	
A1	VS010
A2	VS068
A3	VS067
A4	VS004
A6	VS009
A7	VS067
A210	VS085
A400	VS047
A710	VS102
A716	VS127W
AB82	VS022
1LP	VS035A or VS1335
2LP	VS036 or VS1336
5LP	VS036 or VS1336
6 Ign.	VS006S
6 Ign. S	VS006S
6 Tel. C	VS006C
7LP	VS034A or VS1334
7R	VS034A or VS1334
8	VS129
9	VS065
11	VS141
13	VS336
14	VS335 or VS1335
15	VS334 or VS1334
15M	VS313 or VS1334
18	VS069
19	VS072
20	VS236
23	VS070

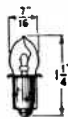
Type to be Replaced	Replace by RCA Type
Ray-O-Vac (cont'd)	
26	VS315
110LP	VS735
200	VS016
201	VS055
202	VS013
203	VS082
204	VS090
205	VS015
206	VS014
207	VS012
208	VS083
210LP	VS736
211M	VS218
211P	VS218
212	VS217
213	VS086
214	VS219
215	VS084
217	VS318
220	VS704
221	VS705
400	VS074
401	VS019
403	VS050
405	VS057W
406	VS058
413	VS022
415	VS119
425	VS064
428	VS059
431	VS060
641	VS039
700	VS101
701	VS100
703	VS136
704	VS134
705	VS142
706	VS133
708	VS131
709	VS112

A Cross Reference of Comparative and Interchangeable Numbers

Type to be Replaced	Replace by RCA Type
Ray-O-Vac (cant'd)	
7710LP	VS734
7711	VS114
7712	VS130
7713	VS029
7714	VS028
7715	VS157W
7716	VS073 or VS1073
7722	VS093
7724	VS127W
8300	VS106
8301	VS138
8302	VS103
8303	VS139
8304	VS140
8318	VS317
941	VS040C
941RR	VS040C
941SC	VS040S
1304M	VS149 or VS1149
1600	VS300A
1600M	VS300A
1601	VS301
1602	VS305
1603	VS306
1604	VS312 or VS323
1604M	VS312 or VS323
1605	VS322
1606	VS309A
1611M	VS327 or VS328
1810M	VS329
1900	VS304
R401	VS401

RCA MINIATURE LAMPS

TYPE NO.	VOLTS	AMPS	BULB	BASE	BEAD COLOR
FLASHLIGHT					
PR-2	2.4	0.5	B-3½	Min. Flg.	Blue
PR-3	3.6	0.5	B-3½	Min. Flg.	Green
PR-6	2.5	0.3	B-3½	Min. Flg.	Brown
13	3.8	0.3	G-3½	Min. Scr.	Green
14	2.5	0.3	G-3½	Min. Scr.	Blue
112	1.1	0.22	TL-3	Min. Scr.	Pink
222	2.2	0.25	TL-3	Min. Scr.	White
233	2.3	0.27	G-3½	Min. Scr.	Purple
RADIO PANEL AND MISCELLANEOUS					
40	6.8	0.15	T-3¼	Min. Scr.	Brown
41	2.5	0.5	T-3¼	Min. Scr.	White
42	3.2	0.5	T-3¼	Min. Scr.	Green
43	2.5	0.5	T-3¼	Min. Bay.	White
44	6-8	0.25	T-3¼	Min. Bay.	Blue
45	3.2	0.5	T-3¼	Min. Bay.	Green
46	6-8	0.25	T-3¼	Min. Scr.	Blue
47	6-8	0.15	T-3¼	Min. Bay.	Brown
48	2.0	0.06	T-3¼	Min. Scr.	Pink
49	2.0	0.06	T-3¼	Min. Bay.	Pink
50	6-8	0.2	G-3½	Min. Scr.	White
51	6-8	0.2	G-3½	Min. Bay.	White
55	6-8	0.4	G-4½	Min. Bay.	White
291	2.9	0.17	T-3¼	Min. Bay.	White
292	2.9	0.17	T-3¼	Min. Scr.	White
1490	3.2	0.16	T-3¼	Min. Bay.	White
1891	12-16	2 C.P.	T-3¼	Min. Bay.	
1892	14	1 C.P.	T-3¼	S.C. Bay.	



B-3½ Bulb
Min. Flange Base

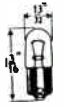
TL-3 Bulb
Min. Screw Ba

G-3½ Bulb
Min. Screw Base

T-3¼ Bulb
Min. Screw Base

G-3½ Bulb
Min. Bayonet Base

G-4½ Bulb
Min. Bayonet Base



T-3¼ Bulb
Min. Bayonet B

RCA SPECIAL COMMUNICATIONS PRODUCTS

Two-Way Radios

Mark VIII Radio-Phone

Description: Inexpensive two-way radio for operation in the 27-megacycle Citizens Band. Operates on any of nine crystal-controlled transmitting and receiving channels. Transceiver has built in ac power supply. Separate 6- or 12-volt dc power supplies available for mobile applications. Includes squelch control to eliminate background noise. The basic ac unit is supplied with an internal speaker and plug-in microphone. Highly selective superheterodyne receiver with tunable control dial permits reception of any desired channel. 5-watt* transmitter.

Features: • frequency range 26.965-27.225 Mc • transmitter power output 3 watts (nominal) • audio output 2½ watts • receiver sensitivity (6 db signal to noise ratio) 0.4 microvolt

W 11¼", H 3½", D 8"; Weight 8 lbs. (including microphone)

*Maximum allowable plate input power to final radio-frequency stage as defined by FCC regulations.

RCA Microphones for Broadcasting, Public Address and Recording Applications.

	Polydirectional Ribbon	Non-Directional Pressure	Uniaxial Ribbon	Direct Pressure Lavalier	Bi-Directional Ribbon
					
ORDER NUMBER	MA 2311—Chrome MA 2312—TV Gray	MA 2313	MA 2314	MA 2315	MA 2316
TYPE	77 DX	BK-1A	BK-5B	BK-6B	BK-11A
DIRECTIONAL CHARACTERISTICS	Directional (Cardiod) Bi-Directional Poly-Directional	Non-directional (vertical) Semi-directional (horizontal)	Uni-directional Cardiod	Semi-directional	Bi-directional
ELEMENT TYPE	Ribbon	Dynamic	Ribbon	Dynamic	Ribbon
FREQUENCY RANGE	50-15,000 cps	60-10,000 cps	50-15,000 cps	80-12,000 cps	30-15,000 cps
OUTPUT IMPEDANCE OHMS	30, 150, 250	30, 150, 250	30, 150, 250	30/150, 250	30, 150, 250
EFFECTIVE OUTPUT LEVELS AT 1000 CPS	—56 dbm	—52 dbm	—56 dbm	—67 dbm	—56 dbm
HUM PICKUP 1 m gauss field	—128 dbm	—102 dbm	—128 dbm	—112 dbm	—130 dbm
Gm—db	—150	—148	—150	—158	—147

APPLICATIONS	AM, FM TV broadcast, recording studio, outdoors or indoors to cover varying pickup conditions. Use with stand.	AM, FM TV broadcast, studio remote pickup. Outdoor and indoor use. Stand or hand held P.A. work & audience participation.	AM, FM TV broadcast & recording studio, high fidelity sound systems.	General FM, AM, & TV broadcast use or high quality P.A. use when a lightweight or concealed mike is useful. Excellent for audience participation shows "on-the-spot interviews," etc.	AM, FM, TV broadcast & recording studio where highest quality reproduction is required, general program & announce.
SIZE	11½" L, 3¾" W, 2½" D	7¾" L, 1⅛" D	7" L, 2¾" H, 2⅞" W	2 9/16" L, 1 15/16" dia.	8" H, 2⅛" W, 2⅛" D
WEIGHT less cable	3 lbs.	18 oz.	1 lb. 11 oz.	2.3 oz.	2 lbs.
CHARACTERISTICS AND ADVANTAGES	3-position Voice-Music switch to select best operating characteristics, exceptionally well shielded against hum, 3 position shutter switch to select best directional pattern, shock mounted, high quality reproduction over entire audio range. ½" pipe thread mounting.	Rugged, insensitive to wood & vibration, smooth frequency response, ball and socket swivel mount for desk stand or hand held, ½" pipe thread mounting.	3-position voice-music switch to select best operating characteristics, blast filter protection against loud noises, operates in high hum fields, shock mounted, wide frequency range & smooth response. Boom mount (MA 2324) and special outdoor windscreen (MA 2325) available. ½" pipe thread mounting. MA 2305 Stand extra.	Wide frequency range, excellent speech balance, rugged construction, neck lanyard included. Suitable for goose neck stands; use MA 2307 Holder (⅜"-27 thread).	3-position Voice-Music switch to select best operating characteristics, high quality reproduction over entire audio range, operates well in high hum fields. Stainless screens, swivel mounted for 45 degree tilt. ½" pipe thread mounting, MA 2306 Stand extra.
CABLE	30 feet, 3-conductor tinned cadmium bronze wire (for longer life). No plug.	30 feet, 3-conductor tinned cadmium bronze wire (for longer life). No plug.	30 feet, 3-conductor tinned cadmium bronze wire (for longer life). No plug.	30 feet, 2-conductor cadmium bronze cable for hi flexibility & life, special shielding external jacket, no plug.	30 feet, 3-conductor tinned cadmium bronze wire (for longer life). No plug.

RCA Microphones for Broadcasting, Public Address and Recording Applications.

	Non-Directional Pressure	Non-Directional Pressure	Bi-Directional Ribbon	Uni-Directional Hi-Output Ribbon	Vari-Directional Condenser
					
ORDER NUMBER	MA 2317	MA 2318	MA 2319	MA 2320	MA 2321
TYPE	SK-39A	SK-45B	SK-46B	KU-3A	M1-10006A
DIRECTIONAL CHARACTERISTICS	Non-directional	Non-directional (below 3000 cps) Semi-directional (over 3000 cps)	Bi-directional	Uni-directional	Vari-directional Cardiod
ELEMENT TYPE	Dynamic	Dynamic	Ribbon	Ribbon	Condenser
FREQUENCY RANGE	70-9,000 cps	70-12,000 cps	50-10,000 cps	50-15,000 cps	30-18,000 cps
OUTPUT IMPEDANCE OHMS	250	150/200/15,000	200 and 15,000	30/150/250	30/150/250
EFFECTIVE OUTPUT LEVELS AT 1000 CPS	−55 dbm	−56 dbm/−58 dbm below 1 v.	−58 dbm/−60 dbm below 1 v.	−51 dbm	−36 dbm
HUM PICKUP 1 m gauss field	−95 dbm	−106 dbm	−113 dbm	−128 dbm	−128 dbm
Gm—db	−150	−147	−150	−143	−128

APPLICATIONS	remote pickup and mobile use, indoor or outdoor P.A. work, home recording amateur radio, individual soloist use. May be panel mounted.	Paging, PA indoors or outdoors, voice or music, suitable for "close talk."	AM, FM & TV studio & control room announcing or any indoor application requiring excellent response. Minimum feedback & background noise. Not recommended outdoors.	TV & motion picture live pickup or wherever boom operation used.	TV & motion picture live pickup, long distance pickup, used on boom.
SIZE	3¼" H, 2⅞" W, 2¼" D	5½" H, 1⅜" W, 2" D	5⅛" H, 1 15/16" W, 1⅜" D	8" L, 3" W, 3½" D	6" L, 1½" D
WEIGHT less cable	15 oz.	15 oz.	13 oz.	2 lbs. 13 oz.	1 lb. 2 oz.
CHARACTERISTICS AND ADVANTAGES	Rugged, insensitive to shock, wind & vibration. Relatively insensitive to humidity & temperature Low cost. Floor or desk stand may be used. ⅝"-27 thread.	Rugged, lightweight, small size, hi or low impedance, swivel mount 45° tilt ⅝"-27 thread.	Rugged construction, small size, excellent fidelity, swivel mounting to 85 degree tilt. ⅝"-27 thread.	Very uniform frequency output, response over normal pickup angle, rugged, time tested. Comes complete with Voice-Music switch, and resilient mounting.	Uses small lightweight dry cell battery. Ultra directional attachment (MA 2322) & windscreen (MA 2323) available. With MA 2322, mike is effective at 4 times the distance of conventional mikes. Rugged design.
CABLE	25 feet, 2-conductor, no plug.	25 feet, 2-conductor, no plug.	25 feet, 2-conductor, no plug.	12" cable pigtail, no plug.	Plug receptacles with mating plug & 25' boom cord.

RCA SPECIAL COMMUNICATIONS PRODUCTS

Intercoms

"MASTERCOM"

"SWITCHBOARD"

"MASTERCOM" (Master Intercom)

Description: Extremely sensitive amplifier, ideal for use in home as well as in factory or office. High sensitivity permits picking up voices from across the room.

Features: • volume control with ac "on-off" switch • five individual station-selector slide switches • three-position talk switch and system-selector switch for either all-master or master-to-remote hook-up • 110-120 volts ac or dc, 50 or 60 cycles • power output 2½ watts • power consumption 20 watts • speaker: 3½" Alnico V magnet, 3.2-ohm voice coil

H 4⅛", W 8 7/16", D 4 9/16"

"SWITCHBOARD" (Master Intercom)

Description: An all-new master intercom station that offers many features of a telephone switchboard.

Features: • master can speak to any one, several, or all remote intercom stations • "switchboard" feature enables master to set-up direct remote-to-remote communications • remote stations can originate calls to the "switchboard" master at will • master can monitor any one or all remote stations at will • master can set up any one or more remotes to monitor any station in system • "busy" light flickers whenever conversations take place • 110-120 volts ac or dc, 50 or 60 cycles • power output 2½ watts • power consumption 20 watts • speaker 3½" Alnico V magnet, 3.2-ohm voice coil

H 4⅛", W 8 7/16", D 4 9/16"

RCA SPECIAL COMMUNICATIONS PRODUCTS

"REMOTE STATION"

Description: Can be used with either the RCA "Mastercom" or "Switchboard" unit. For private or non-private operation. When private, call switch must be used, without interception by master. When non-private, remote may reply to master from a distance without using switch. "Remote Station" can also be installed so that the call switch is inoperative and, thereby, unable to originate calls.

"WIRELESS" Intercom System

Description: Makes use of existing power lines for transmission of voice. Does not require wires nor installation—"just plug in and talk." Comes complete with two identical stations. Several additional stations may be added to any system.

Features: • two- or three-wire line selector switch to match every type of house wiring • advanced circuitry eliminates interference from power lines • uses as little current as a night lamp • neon pilot light indicates when in operation • 105-125 volts ac or dc, 50 or 60 cycles • power consumption 30 watts • audio power output 2½ watts • speakers 3½" Alnico V, 3.2-ohm voice coil • frequency 200 Kc

H 4⅛", W 8$\frac{7}{16}$", D 4$\frac{9}{16}$"

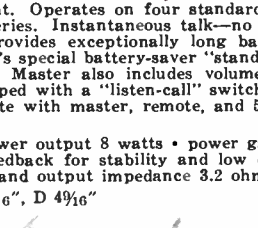
RCA SPECIAL COMMUNICATIONS PRODUCTS

"TRANSISTORIZED" Intercom System

Description: Can be installed anywhere independent of line current. Operates on four standard 1½-volt penlight batteries. Instantaneous talk—no warm-up necessary. Provides exceptionally long battery life due to master's special battery-saver "standby-listen-talk" switch. Master also includes volume control. Remote equipped with a "listen-call" switch. System comes complete with master, remote, and 50 feet of cable.

Features: • power output 8 watts • power gain 70 db • negative feedback for stability and low distortion 6 db • input and output impedance 3.2 ohms

H 4⅛", W 8⁷⁄₁₆", D 4⁹⁄₁₆"



"PARTYLINER" (Intercom System)

Description: Combines smart, new styling with outstanding performance. Economically priced to fit everyone's budget. As many as four remotes can be added to the system. Remotes can answer call without operating switch and can be closed for privacy but still receive calls. Ideal for use in factories, warehouses, and loading docks.

Features: • range of master to any remote is about 500 feet • master has its own volume control with "on-off" switch • heavy-duty, 3-position "talk" switch • pilot light • extremely low hum and noise level • 110-120 volts ac or dc, 50 or 60 cycles • power consumption 20 watts • power output 2 watts • speaker master and remote both contain 3½" Alnico V, 3.2-ohm voice coil

H 4⅛", W 8⁷⁄₁₆", D 4⁹⁄₁₆"

HIGH FIDELITY EQUIPMENT

RCA MX-7 Music Control Center

Built-in FM Multiplex circuitry. 30-watt stereo amplifier (40-watt IHF rating). Keyboard type function controls. Dual volume controls. Separate balance control. Visual tuning indicator. Multiplex signal indicator. Nuvistor FM tuner. Surge limiter. Tape Monitor. Local-Distant sensitivity switch. AFC switch. Dual program operation. Optional remote control.

Frequency response . . . 30 to 30,000 cps with gradual roll-off. Harmonic Distortion . . . less than 1% at 30-watts. Useable Sensitivity . . . Better than 2.5 Mv for 20 db of quieting (300 ohm antenna) FM detector bandwidth . . . 700 Kc. Audio hum . . . —60 db. AM suppression . . . 55 db. FM if stages . . . 4. FM limiting stages . . . 2.

Input for phono, Tape, Auxiliary (microphone or TV).

RCA ELECTRONIC INSTRUMENTS

for servicing • production • research • training

RCA VoltOhmyst®

Kit or Wired

Available as a kit or wired instrument. Measures ac and dc voltage to 1500 volts; resistance from 0.2 ohm to 1000 megohms. • Features 1.5 volts rms and 4 volts peak-to-peak ranges for low ac voltage measurements • ±3% accuracy on dc; ±5% accuracy on ac • Meter electronically protected against burnout • Aluminum panel with permanent etched lettering.

WV-77E

RCA Senior VoltOhmyst®

Kit or Wired

Permits direct reading of peak-to-peak voltages of complex wave forms found in video sync, and deflection circuits of black-and-white and color TV receivers; rms values of sine-waves; dc voltages; and resistance. • 0.5-volt dc range for checking transistor circuits • Provides accuracy of ±3% full scale on BOTH ac and dc measurements with less than 1% tracking error • Separate color-coded peak-to-peak and rms voltage scales • Meter electronically protected against burnout.

WV-98C

RCA Volt-Ohm-Milliammeter

Kit or Wired

The V-O-M with extra value. 0.25-volt and 1.0-volt dc ranges. Response is flat to 800,000 cps on 2.5- and 10-volt ranges. Easy to read 5½" meter. Non-breakable sealed plastic case. Jacks located below switches to keep leads out of way. Spring clips on handle to hold leads.

WV-38A

WV-77E

WV-98C

WV-38A

RCA Color Bar/Dot/Crosshatch Generator

For checking overall operation of Color-TV receivers. A "must" for adjusting and trouble-shooting color phasing and matrixing circuits. Generates signals for producing ten bars of different colors simultaneously. Also provides extremely stable fine-line crosshatch and dot patterns free from "jitter" and "crawl."

WR-64A

RCA 3-Inch Oscilloscope — Kit or Wired

Available as kit or wired instrument. Weighs only 14 lbs. Its compact size plus high gain and wide band width offers wide versatility in classroom or laboratory use. Voltage-calibrated, frequency compensated, 3-to-1 step attenuator • Scaled graph screen and calibrating voltage source allow direct reading of peak-to-peak voltages • "Plus-Minus" internal sync • Includes shielded input cable with direct/low cap probe.

WO-33A

RCA 5-Inch Oscilloscope

High-performance, wide-band oscilloscope for color-TV, black-and-white TV, and other electronic applications. Used to measure color burst signals and for trouble-shooting wideband color circuits. Multi-scale graph screen makes peak to peak voltage measurements as simple as with a VTVM.

WO-91A

WR-64A

WO-33A

WO-91A

RCA ELECTRONIC INSTRUMENTS

RCA RF Signal Generator

Designed for maintenance, troubleshooting and instructional purposes, this versatile RF Signal Generator provides an accurate source of CW or amplitude-modulated signals in the fundamental range of 85 KC to 40 MC. It is particularly well suited for aligning and signal tracing AM, FM, Hi-Fi and Citizens' Band receivers.

WR-50A

RCA Stereo FM Signal Simulator

A compact, lightweight instrument designed to generate the signals necessary for complete service and maintenance of stereo multiplex FM receivers and adaptors. The instrument features a special phase-test signal (L+R) for accurate phase adjustment of subcarrier transformers, eight pre-set sine-wave frequencies, center frequency trim adjustment, zero-center meter for checking receiver stereo balance.

WR-51A

RCA Sine/Squore Wave Audio Generator

Designed for use in testing electronic equipment and other applications requiring sine-wave or square-wave signals in the range from 20 cps to 200,000 cps. Weighs only 10½ lbs. • Switch selection of sine-wave or square-wave output • Simple one-scale dial • Separate 60 cps output for intermodulation distortion measurements • Wide frequency range, 20 cps to 200,000 cps • Less than ¼ of 1% distortion over the audio-frequency range.

WA-44C

WR-51A

WR-50A

WA-44C

TEST AND MEASURING EQUIPMENT

RCA AC Vacuum-Tube Voltmeter — Kit or Wired

A high-sensitivity AC VTVM for Hi-Fi and other audio applications. Designed for measuring ac voltages from 0.0001 volt to 500 volts over the frequency range of 10 to 1,500,000 cycles. Offers nine overlapping ac voltage ranges from 10 millivolts to 100 volts full scale. Comes with Direct/Low Capacitance Probe and Cable.

WV-76A

RCA DC Microammeter

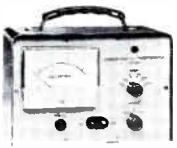
This ultra-sensitive, battery-operated vacuum-tube microammeter is designed for measuring minute direct currents. When used as a voltmeter it is especially suited to measurements in circuits where loading is a critical factor. Can also be used as an Ohmeter to measure extremely high resistances such as leakage and insulation resistance. Six dc ranges permit current measurements from 0.0002 to 1000 microamperes. Measures resistance in the order of billions of ohms.

WV-84C

RCA Electron-Tube Micromhometer

Precision laboratory instrument that tests tubes under typical operating conditions as specified in tube manufacturers' technical data or conditions under which the tube is expected to operate.

WT-100A



WV-84C

WV-76A

WT-100A

RCA ELECTRONIC INSTRUMENTS

RCA Television/FM Sweep Generator

For visual alignment and troubleshooting of TV RF/IF/VF circuits and other electronic equipment. IF/video frequency ranges 50 Kc to 50 Mc, TV channels 2 to 13, plus FM range 88 to 108 Mc. Sweep width continuously adjustable to 12 Mc.

WR-69A

RCA RF/IF/VF Marker Adder

For rf, if and video sweep alignment of both color and black-and-white TV receivers. Eliminates or reduces distortion of sweep curve by the marker. Permits trap alignment without marker "suckout". Hi-Q markers—high in amplitude, narrow in width. Four marker choices: positive peak, negative peak, positive and negative peaks (wide band), positive and negative peaks (narrow band). Voltage stabilized for rock-steady trace display.

WR-70A

RCA Crystal-Calibrated Marker Generator

Supplies a fundamental frequency rf carrier of crystal accuracy for aligning and trouble-shooting color-TV, black-and-white TV, FM receivers and other electronic equipment operating in the 19 Mc to 260 Mc range.

WR-99A

WR-70A

WR-69A

WR-99A

EDUCATIONAL DEVICES

RCA V-O-M Dynamic Demonstrator Kit

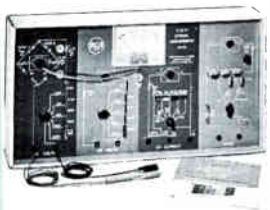
WE-95A(K)

RCA's production type Volt-Ohm-Milliammeter (WV-38A) converted into an easy-to-assemble kit especially designed for classroom instruction. Simplifies and speeds the teaching of electronic V-O-M measurement techniques. Once assembled it becomes an actual test instrument that can be used to test and service TV, AM, FM, and shortwave radios, hi-fi and stereo sound equipment.

Transistor Radio Dynamic Demonstrator Kit

WE-93A(K)

The RCA WE-93A(K) is an AM superheterodyne transistor radio receiver converted into kit form for educational and instructional purposes. Once assembled it becomes an actual operating AM receiver. • Special silver-plated spring connectors provide mechanical and electrical connection . . . assure easy component installation. • Each circuit function is color-coded for easy identification. • Inherent operational simplicity assures ease of service checks and tests . . . exceptionally easy component substitution. • Solid mahogany frame and stand (unfinished).



WE-95A(K)

WE-93A(K)

RCA ELECTRONIC INSTRUMENTS

Accessories

WG-360A Phase Checker

Used for a dynamic check of phasing in any audio system from input to the output of the speakers

Features: • sound powered; requires no external voltage source • any VOM, VTVM, or oscilloscope may be used as the indicator

WG-304B RF Modulator

For checking frequency adjustment of color TV receivers for use in conjunction with a crystal calibrated signal generator, sweep frequency generator, and a marker source

Provides: • rf output signal to TV antenna leads amplitude-modulated by signal from video sweep generator

WG-295D Video Multimarker

For sweep alignment and troubleshooting of color TV receivers

Provides: • absorption markers at 0.5, 1.5, 2.5, 3.0, 3.58, 4.1, and 4.5 Mc for marking video response curves

Features: • easy identification of the desired marker • insertion loss 1 db or less

WV-120A Power Line Monitor

For constant indication of power line voltage

Features: • expanded scale 100 to 140 volts indicates true rms values • accuracy ±2% at 120 volts, ±3% at 100 and 140 volts • readable from 10 feet or more • plugs in to power line outlet • wide frequency range 25 to 400 cps
H 3 15/16", W 5", D 3 1/16"; Weight 1½ lbs.

WP-25A TV Isotap

Provides: • output voltages of 130, 115, and 105 volts ac, up to 275 volt-amperes, with 4% regulation

Features: • tapped to match line voltages from 105 to 130 in 6 steps, switch selector • auto transformer and isolation transformer windings • separate outlet for each output voltage

WG-307B TV Bias Supply — Kit or Wired

Provides: • three separate adjustable voltages, 0 to —15 volts minimum for rf, if, and agc bias circuits in color and black-and-white TV receivers

Features: • separate potentiometers for adjusting 0- to —15-volt outputs

Probes

For Voltmeter-Type Instruments

WG-301A Crystal-Diode Probe • slips on to probe WG-299D to increase frequency range to 250 Mc

WG-351A Crystal-Diode Probe • extends frequency range of WV-77C and WV-77E(K) to over 100 Mc. Alligator clips at input

WG-289 High Voltage Probe • extends dc voltage range to 50,000 volts—RCA VoltOhmysts WV-98A, WV-98B, WV-98C, WV-77A, WV-77B, WV-77C, WV-97A, WV-87A, WV-87B • microphone type connector

WG-297 High Voltage Probe • extends dc voltage range to 50,000 volts—RCA voltmeters WV-77E and WV-77E(K) and WV-38A • banana plug connectors

WG-206, WG-210, WG-211 Multiplier Resistors

For use in WG-289 and WG-297 high-voltage probes
WG-206—1090 megohms multiplies 11 megohm input resistance by 100

WG-210—900 megohms multiplies 5000-volt range of 20,000 ohms/volt VOM's by 100

WG-211—495 megohms multiplies 250-volt range of 20,000 ohms/volt VOM's by 100

WG-299D DC/AC-Ohms Probe and Cable • for use with VoltOhmysts except WV-77E and WV-77E(K) • shielded from connector to tip • finger-tip switch to select dc or ac-ohms operation

Probes for Oscilloscopes

WG-300B Direct/Low-Capacitance Probe and Cable • for use with RCA oscilloscopes WO-33A and WO-91A • increases input impedance to 10 megohms/11 $\mu\mu f$ • finger-tip switch to select direct or low-cap operation

WG-349A Direct/Low-Capacitance Probe • for use with WO-33A and WO-33A(K) scopes • increases input impedance to 10 megohms/12 $\mu\mu f$

WG-302A RF/IF/VF Signal Tracing Probe •slips on to probe WG-300B, demodulates signal permitting display on WO-91A scope

WG-350A Demodulator Probe • for use with WO-33A and WO-33A(K) scopes, demodulation and signal tracing of radio, TV rf and if signals

WG-354A Capacitance-Type Voltage Divider • slips on to probe WG-300B. Extends voltage range for measuring signal pulses up to 5000 volts.

• **INSTRUCTION BOOKLETS,** containing specifications, operating and maintenance data, application information, schematic diagrams, and replacement parts lists, are available for all RCA test instruments.

NOTE: All prices are optional list prices and apply in the U.S.A. They are subject to change without notice.

WA-44	(Audio Signal Generator)	$0.50
WA-44C	(Sine-Square Wave Audio Generator)	1.00
WE-93A(K)	(Transistor Radio Dynamic Demonstrator Kit)	.10
WE-95A(K)	(VOM Dynamic Demonstrator Kit	.10
WO-33A	(Super-Portable Oscilloscope)	1.00
WO-88A	(5-in. Oscilloscope)	.50
WO-91A	(5-in. Oscilloscope)	1.00
WR-36A	(Dot-Bar Generator)	.50
WR-39C	(TV Calibrator)	.50
WR-46A	(Video Dot/Crosshatch Generator)	.75
WR-49A	(RF Signal Generator)	.50
WR-49B	(RF Signal Generator)	1.00
WR-50A	(RF Generator)	1.00
WR-51A	(Stereo FM Signal Simulator)	1.00
WR-61B	(Color-Bar Generator)	1.00
WR-64A	(Color-Bar/Dot/Crosshatch Generator)	1.00
WR-67A	(Test-Oscillator)	.25
WR-69A	(TV-FM Sweep Generator)	1.00
WR-70A	(RF-IF-VF Marker Adder)	.75
WR-86A	(UHF Sweep Generator)	.50
WR-99A	(Marker Calibrator)	1.00
WV-37B	(Radio Battery Tester)	.25
WV-38A	(Volt-Ohm-Milliammeter)	.50
WV-65A	(*VoltOhmyst*®)	.25
WV-74A	(High-Sensitivity AC VTVM)	.75
WV-75A	(*VoltOhmyst*®)	.25
WV-76A	(High Sensitivity AC VTVM)	.75
WV-77B	(*VoltOhmyst*®)	.25
WV-77E	(*VoltOhmyst*®)	1.00
WV-84C	(Ultra-Sensitive DC Microammeter)	.75
WV-87B	(Master *VoltOhmyst*®)	.75
WV-95A	(*VoltOhmyst*®)	.25
WV-97A	(*VoltOhmyst*®)	.50
WV-98A	(*VoltOhmyst*®)	1.00
WV-98B	(Senior *VoltOhmyst*®)	1.00
WV-98C	(Senior *VoltOhmyst*®)	.50
WV-120A	(Power Line Monitor)	.10
195-A	(*VoltOhmyst*®)	.25
WT-100A	(Electron-Tube MicroMhoMeter, Ser. No. 1001 and over)	2.00
WT-100A	(Tube Chart 1CE-163)	3.00
WT-110A	(Automatic Electron-Tube Tester)	1.00
WT-110A	(1CE-234 Card Punch Data)	1.00
WT-110A	(Supplement 3 to 1CE-234)	.50