RCA

INDUSTRIAL TUBES
Product Guide

for
- Broadcast
- Research
- Military
- Industrial
- Space
- Educational Applications

RADIO CORPORATION OF AMERICA
ELECTRONIC COMPONENTS AND DEVICES, HARRISON, N.J.

Booklet TPG-200

SCOPE

An RCA Industrial Tube is available for your application. Manufactured to critical design specifications, subjected to extensive performance tests, and inspected to meet stringent quality criteria, RCA Industrial Tubes cover the gamut in broadcasting, communications, military, educational, and research systems.

The data provided in this brochure is intended only as a guide in narrowing the possible choice of tube types for specific applications. Final choice should be based on complete ratings and characteristics of the types being considered. For your convenience in obtaining this detailed technical information, catalogs and other published information covering specific products are described on page 22.

CONTENTS

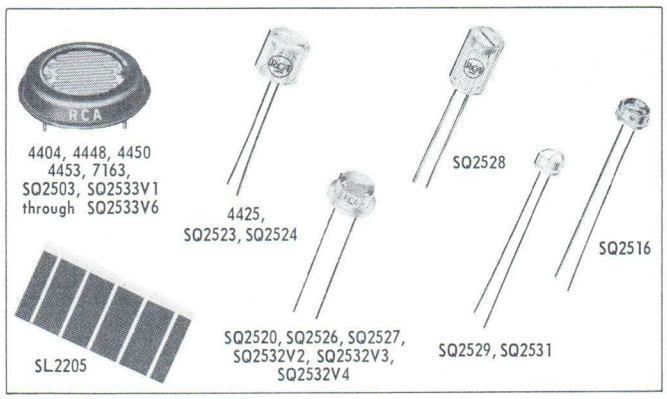
RCA SOLID-STATE PHOTOCELLS

(PHOTOCONDUCTIVE, PHOTOJUNCTION, PHOTOVOLTAIC)

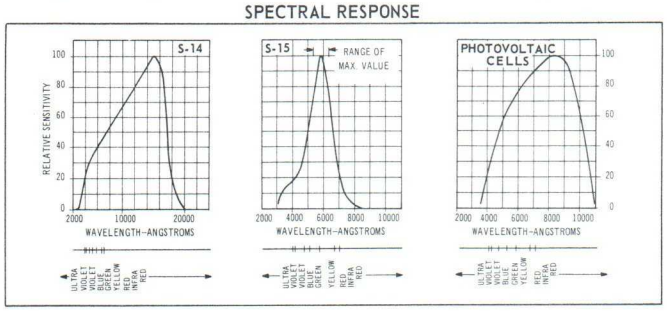
BROAD-AREA CADMIUM-SULFIDE PHOTOCONDUCTIVE CELLS are available from RCA in three basic package designs. Glass-Metal and All-Glass Types are hermetically sealed and may be subjected continuously to high humidity and high temperature without adverse effects on cell performance. Plastic-Filled Types, on the other hand, are inexpensive photocells designed for applications where adverse environmental conditions are not of prolonged duration. These cells have S-15 spectral response and are characterized by high sensitivity to visible radiation and moderate speed of response to changes in illumination.

Typical Applications:

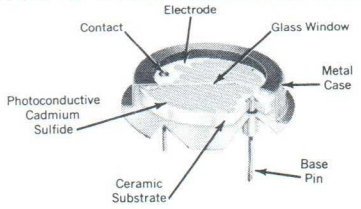
- Control Circuits
- Logic Circuits
- Street-and-Yard-Light Controls
- Iris Controls
- Switches
- Light Flashers
- Level Indicators
- Remote Potentiometers
- Annunciator Systems



SPECTRAL RESPONSE



CUTAWAY OF TYPICAL PHOTOCONDUCTIVE CELL



BROAD-AREA CADMIUM-SULFIDE PHOTOCELLS
Glass-Metal Types

1"-Diameter Types

Type	Max. Voltage DC or Peak AC Volts	Power Dissip. Watt Continuous Service	Resistance at 2 footcandles Ohms	Maximum Dimensions Overall Length In.	Maximum Dimensions Diameter In.
4451	600	0.75	160,000	0.9	1.26
4450	600	0.75	25,000	0.9	1.26
SQ2503	600	0.75	17,500	0.9	1.26
7163	600	0.75	10,000	0.9	1.26
4448	600	0.75	8,000	0.9	1.26
4404	600	0.75	5,500	0.9	1.26
SQ2502	600	0.75	5,500	1.74	1.275
4453	600	0.75	4,000	0.9	1.26
4403	250	0.75	1,800	0.9	1.26

1/2"-Diameter Types

SQ2525	250	0.2	14,000	0.270	0.615
SQ2521	250	0.2	8,000	0.270	0.615
SQ2526	110	0.2	3,000	0.270	0.615
SQ2527	110	0.2	1,600	0.270	0.615
SQ2520	110	0.2	700	0.270	0.615

1/4"-Diameter Types

SQ2529	300	0.05	800,000	0.190	0.385
SQ2508	200	0.05	60,000	0.190	0.385
SQ2519	300	0.05	9,000	0.190	0.385

All-Glass Types

1/2"-Diameter Types

SQ2500	250	0.2	14,000	0.550	0.500
4423	250	0.2	8,000	0.550	0.500
SQ2523	110	0.2	3,000	0.550	0.500
SQ2524	110	0.2	1,600	0.550	0.500
4425	110	0.2	700	0.550	0.500

BROAD-AREA CADMIUM-SULFIDE PHOTOCELLS
All-Glass Types (Cont'd)

1/4"-Diameter Types

Type	Max. Voltage DC or Peak AC Volts	Power Dissip. Watt Continuous Service	Resistance at 2 footcandles Ohms	Maximum Dimensions Overall Length In.	Maximum Dimensions Diameter In.
SQ2528	300	0.05	800,000	0.580	0.30
7412	200	0.05	60,000	1.35	0.30
4413	110	0.05	18,000	0.580	0.30
4402	300	0.05	9,000	0.580	0.30

Glass-Metal Plastic-Filled Types

1"-Diameter Types

SQ2533	600	0.75	160,000	0.865	1.26
SQ2533V1	600	0.75	25,000	0.865	1.26
SQ2533V2	600	0.75	17,500	0.865	1.26
SQ2533V3	600	0.75	10,000	0.865	1.26
SQ2533V4	600	0.75	8,000	0.865	1.26
SQ2533V5	600	0.75	5,500	0.865	1.26
SQ2533V6	600	0.75	4,000	0.865	1.26
SQ2533V7	250	0.75	1,800	0.865	1.26

1/2"-Diameter Types

SQ2532	250	0.2	14,000	0.255	0.615
SQ2532V1	250	0.2	8,000	0.255	0.615
SQ2532V2	110	0.2	3,000	0.255	0.615
SQ2532V3	110	0.2	1,600	0.255	0.615
SQ2532V4	110	0.2	700	0.255	0.615

1/4"-Diameter Types

SQ2531	300	0.05	800,000	0.205	0.385
SQ2531V1	200	0.05	80,000	0.205	0.385
SQ2531V2	200	0.05	60,000	0.205	0.385
SQ2531V3	110	0.05	18,000	0.205	0.385
SQ2531V4	300	0.05	9,000	0.205	0.385
SQ2531V5	110	0.05	3,200	0.205	0.385
SQ2531V6	110	0.05	2,000	0.205	0.385

GERMANIUM P-N ALLOY-PHOTOJUNCTION CELLS have good sensitivity that is intermediate between vacuum and gas photodiodes and photoconductive cells and a speed of response to changes in incident light that extends well beyond the audio range. Cells of this type have S-14 spectral response.

Typical Applications:

- Sound Pickup from Motion Picture Film
- Near-Infrared Systems
- Tape Reading

PHOTOJUNCTION CELLS
Germanium P-N Alloy Head-On Types

Type	Characteristics at 25° C Voltage Between Terminals DC Volts	Illum. Sensitivity μAmp/Footcandle	Max. Dark Current μAmp	Maximum Dimensions Overall Length In.	Maximum Dimensions Diameter In.
SQ2516	45	0.7	35	0.190	0.385

PHOTOVOLTAIC CELLS -- SILICON N ON P TYPES have rise and decay characteristics of 1 to 10 microseconds, a spectral response which peaks at about 8600 angstroms, good stability, and do not require an external power supply.

Typical Applications:

- Direct Conversion of Solar Radiant Power into Electrical Power
- Near-Infrared Laser Detectors
- Light Measurement
- Sound Pickup from Motion Picture Film
- Control Systems
- Tape Reading

PHOTOVOLTAIC CELLS
Silicon N on P Types

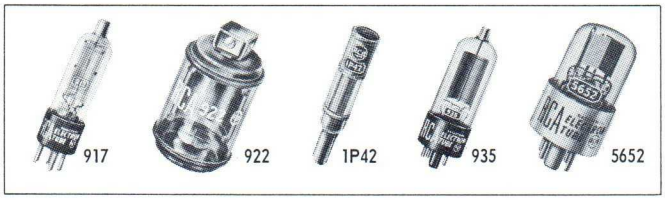
Type	Characteristics at 27° ± 10° C Minimum Current mA	Minimum Power Output Mw	Minimum Efficiency Per Cent	Maximum Dimensions Length In.	Maximum Dimensions Width In.
SL2205	48	17.9	10.0	0.399	0.795
SL2206	101.5	37.8	10.0	0.791	0.791

Detailed data for these devices are given in catalog CSS-800 "RCA Photocells" and in technical bulletins for the specific devices. For information on these publications, see page 22.

VACUUM PHOTODIODES have excellent response to pulsed light, good stability, and are characterized by photocurrent response which is linear over a wide range of incident light level. These tubes are frequently used for light comparison measurements.

Typical Applications:

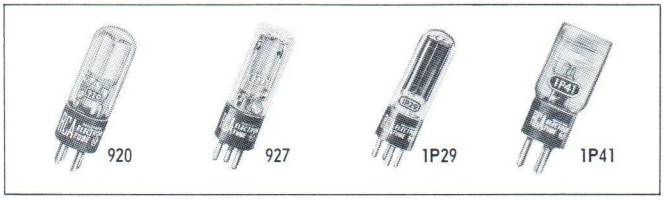
- Photometry
- Spectrophotometry
- Industrial Controls
- Facsimile
- Colorimetry



GAS PHOTODIODES have a response to pulsed light that covers the audio frequency range. They are 3 to 5 times more sensitive than vacuum photodiodes.

Typical Applications:

- Industrial Controls
- Sound Reproduction



VACUUM PHOTODIODES

Side-On Types

Type	Spectral Response	Characteristics: Luminous Sensitivity (2870° K) μAmp/Lumen	Characteristics: Max. Anode Dark Current at 25° C μAmp	Maximum Dimensions: Overall Length In.	Maximum Dimensions: Diameter In.
1P39	S-4	52	0.005	3-1/16	1-9/32
917	S-1	20	0.005	4-7/16	1-1/8
919	S-1	20	0.005	4-7/16	1-1/8
925	S-1	20	0.0125	2-5/8	1-9/32
929	S-4	52	0.0125	3-1/16	1-9/32
934	S-4	30	0.005	2-13/32	0.669
935	S-5	35	0.0005	4-1/4	1-9/32
5653	S-4	45	0.25	3-1/16	1-9/32
6570	S-1	30	0.013	4-7/16	1-1/8

Side-On Cartridge Types

922	S-1	20	0.005	1-23/32	0.890
926	S-3	6.5	0.005	1-23/32	0.890

Side-On Composite Anode Types

5652	S-4	45	0.01	2-7/8	1-9/32

Side-On Non-Directional Types

7043	S-4	45	0.0125	3-5/16	1-9/32

Head-On Types

1P42	S-9	37	0.005	1-13/32	1/4

GAS PHOTODIODES

Side-On Types

Type	Spectral Response	Characteristics: Luminous Sensitivity (2870° K) μAmp/Lumen	Characteristics: Max. Gas Amplification Factor	Maximum Dimensions: Overall Length In.	Maximum Dimensions: Diameter In.
1P29	S-3	40	9.0	4-1/8	1-1/8
1P37	S-4	135	5.5	4-1/8	1-1/8
1P40	S-1	135	10.0	3-1/16	1-9/32
868	S-1	90	8.0	4-1/8	1-1/8
918	S-1	150	10.5	4-1/8	1-1/8
923	S-1	135	10.0	3-9/16	1-3/16
927	S-1	125	10.0	2-13/32	0.669
930	S-1	135	10.0	3-1/16	1-9/32
4409	S-4	135	5.5	3-3/16	1-9/32
5581	S-4	135	5.5	3-1/16	1-9/32
5583	S-4	135	5.5	2-13/32	0.669
6405/1640	S-1	35	2.5	4-7/16	1-1/8
6953	S-1	200	10.0	3-3/16	1-9/32

Side-On Cartridge Types

921	S-1	135	10.0	1-23/32	0.890
5582	S-4	120	5.5	1-23/32	0.890

Side-On Twin-Unit Types

920	S-1	100	9.0	4	1-3/16

Side-On Non-Directional Types

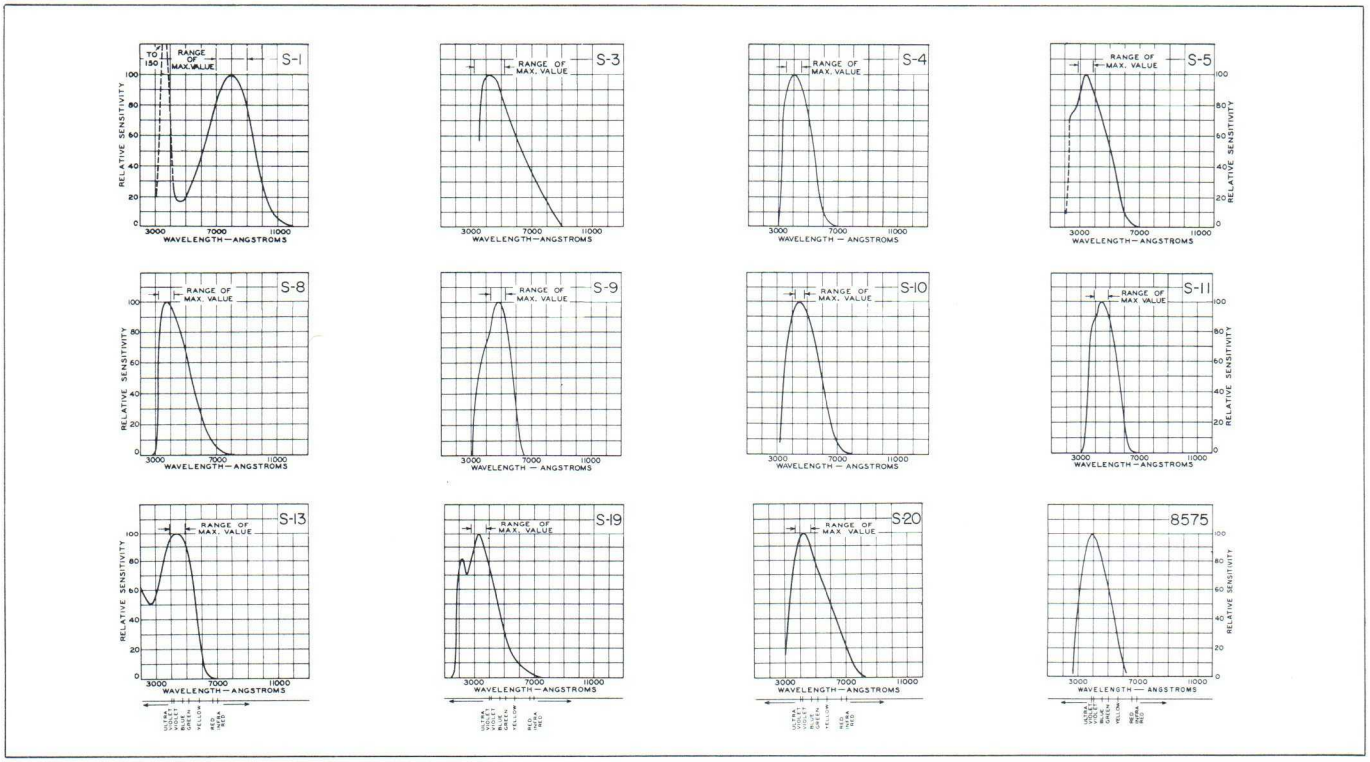
928	S-1	65	10.0	3-9/16	1-3/16

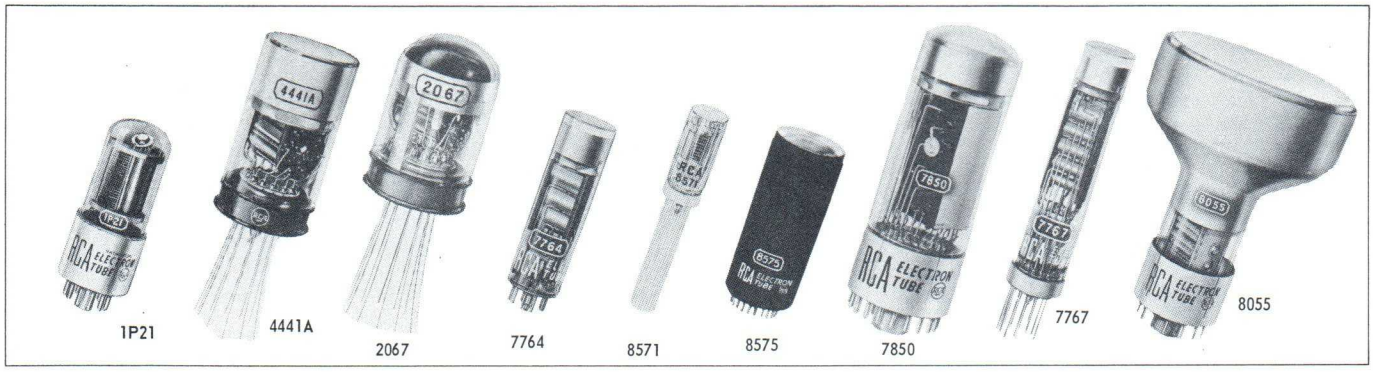
Head-On Types

1P41	S-1	90	8.5	2-1/16	13/16

Detailed data for these devices are given in catalog PIT-700 "RCA Photomultiplier and Image Tubes". For information on this publication, see page 22.

SPECTRAL RESPONSE CURVES FOR PHOTOTUBES





PHOTOMULTIPLIER TUBES are designed for use with extremely low levels of radiation in the ultraviolet, the visible, and the near-infrared regions of the spectrum. Both electrostatically focused and venetian-blind types are available. Tubes of this type are characterized by high current amplification, extremely fast response to pulsed light, low dark current, high sensitivity, and a broad choice of spectral response, tube size, and tube construction.

Typical Applications:

- Scintillation Counting
- Photometry
- Spectrophotometry
- Flying-Spot Generator
- Star Tracking
- Cerenkov Radiation Measurement
- Laser Detection
- Industrial Controls
- Colorimetry
- Timing Measurements

PHOTOMULTIPLIER TUBES
Side-On Types

1-1/8"-Diameter Tubes

Type	Spectral Response	Characteristics: Luminous Sensitivity (2870° K) Amp/Lumen	Characteristics: Max. Equiv. Anode-Dark-Current Input (25° C) Lumen	Maximum Dimensions: Overall Length In.	Maximum Dimensions: Diameter In.
1P21	S-4	80	5×10^{-10}	3-11/16	1-5/16
1P22	S-8	1	3.75×10^{-7}	3-11/16	1-5/16
1P28	S-5	50	1.25×10^{-9}	3-11/16	1-5/16
931A	S-4	24	2.5×10^{-9}	3-11/16	1-5/16
4471	S-4	100	2.5×10^{-9}	3-11/16	1-5/16
4472	S-4	100	2.5×10^{-9}	3-11/16	1-5/16
4473	S-4	160	5×10^{-10}	3-11/16	1-5/16
6328	S-4	35	-	3.12	1.31
6472	S-4	35	-	2-3/4	1-3/16
7117	S-4	35	-	3.12	1.31
7200	S-19	40	2×10^{-9}	5.69	1.31

Head-On Types

3/4"-Diameter Tubes

7764	S-11	0.6	3×10^{-8}	2.75	0.78
7767	S-11	16	5×10^{-9}	4.0	0.78

1-1/2"-Diameter Tubes

6199	S-11	27	2.5×10^{-9}	4.57	1.56
7102	S-1	4.5	1.5×10^{-6}	4.57	1.56

2"-Diameter Tubes

2020	S-11	6	2.25×10^{-9}	5-13/16	2-5/16
4459	S-20	100	1.3×10^{-9}	6.31	2.06
4463	S-20	25	1×10^{-9}	5.81	2.31
5819	S-11	100	2×10^{-9}	5-13/16	2-5/16
6217	S-10	100	2.5×10^{-8}	5.81	2.31
6342A	S-11	31	2×10^{-9}	5.81	2.31
6655A	S-11	90	2×10^{-9}	5.81	2.31
6810A	S-11	3000	1.5×10^{-9}	7.5	2.38
6903	S-13	90	2×10^{-9}	6-9/16	2-5/16
7264	S-11	4200	2×10^{-9}	7.5	2.38
7265	S-20	3000	8×10^{-10}	7.5	2.38
7326	S-20	22.5	1.4×10^{-9}	6.78	2.38
7746	S-11	1200	3.5×10^{-9}	6.12	2.31
7850	S-11	26000	2.5×10^{-9}	6.31	2.06
8053	S-11	19	7.2×10^{-10}	5.81	2.31
8575	-	2800	5×10^{-12} (typ.)	5.71	2.10

3"-Diameter Tubes

4464	S-20	25	1×10^{-9}	6.31	3.06
8054	S-11	19	7.2×10^{-10}	6.31	3.06

5"-Diameter Tubes

4465	S-20	25	1×10^{-9}	7.69	5.31
7046	Extended S-11	1750	1.2×10^{-8}	11-1/8	5-1/4
8055	S-11	19	7.2×10^{-10}	7.69	5.31

RUGGEDIZED PHOTOMULTIPLIER TUBES
Side-On Types

1/2"-Diameter Tubes

Type	Spectral Response	Characteristics: Luminous Sensitivity (2870° K) Amp/Lumen	Characteristics: Max. Equiv. Anode-Dark-Current Input (25° C) Lumen	Maximum Dimensions: Overall Length In.	Maximum Dimensions: Diameter In.
8571	S-4	75	1×10^{-10}	1.37	0.53

Head-On Types

3/4"-Diameter Tubes

4460	S-11	7.5	2×10^{-9}	3.38	0.78

1-1/2"-Diameter Tubes

2067	S-11	15	3×10^{-9}	2.80	1.56
4438	S-11	27	2.5×10^{-9}	3.91	1.56
4439	S-11	27	2.5×10^{-9}	3.91	1.56
4440	S-11	27	2.5×10^{-9}	4.12	1.56
4441	S-11	27	2.5×10^{-9}	3.18	1.56
4441A	S-11	27	2.5×10^{-9}	3.18	1.56
4461	S-11	10	2×10^{-9}	3.18	1.56

For spectral-response curves, see page 5.

NEW DEVELOPMENTAL PHOTOMULTIPLIER TUBES
C70145 and C70150

New 10-stage, venetian-blind head-on types employing bialkali photocathodes having very high quantum efficiency, and translucent aluminum-oxide windows and metal envelopes to provide minimum radioactive content in tube packages.

The C70145 and the C70150 are 3"-diameter and 2"-diameter types, respectively. Peak spectral response occurs at about 4000 ± 500 angstroms. These tubes are especially useful in the near- and middle-ultraviolet regions of the spectrum.

Typical radiant sensitivity is 1.5×10^{4} amperes/watt at 4000 angstroms and typical equivalent anode-dark-current input at 4000 angstroms is 5.5×10^{-13} watt for both types.

Detailed data for these tubes are given in catalog PIT-700 "RCA Photomultiplier and Image Tubes" and in technical bulletins for the specific devices. For information on these publications, see page 22.

RCA IMAGE-CONVERTER TUBES

IMAGE-CONVERTER TUBES are used with suitable optical systems for viewing scenes irradiated with either near-infrared or near-ultraviolet radiation. Photographic shutter types employ electrostatic focus and deflection for imaging single or multiple images. They have a shutter speed capability as short as 10^{-8} second.

Typical Applications

- Electron and Field Ion Microscopes
- Telescopes for Astronomy
- Night Viewing Devices
- Near-Infrared Laser Detectors
- High-Speed Photography

IMAGE-CONVERTER TUBES
Infrared Sensitive Tubes

Single-Stage Electrostatic-Focus Types

Type	Phosphor	Magnification Factor	Min. Cathode Resolution Line Pairs/Mm	Maximum Dimensions	
				Overall Length In.	Diameter In.
6032A	P20	0.5	18	4-17/32	2-1/8
6381	P20	0.58	25	4-25/32	2.115
6914	P20	0.76	35	2.975	1.905
6914A	P20	0.76	50	2.975	1.905
6929	P20	0.75	50	2.335	1.375

IMAGE-CONVERTER TUBES
Ultraviolet Sensitive Tubes

Single-Stage Electrostatic-Focus Types

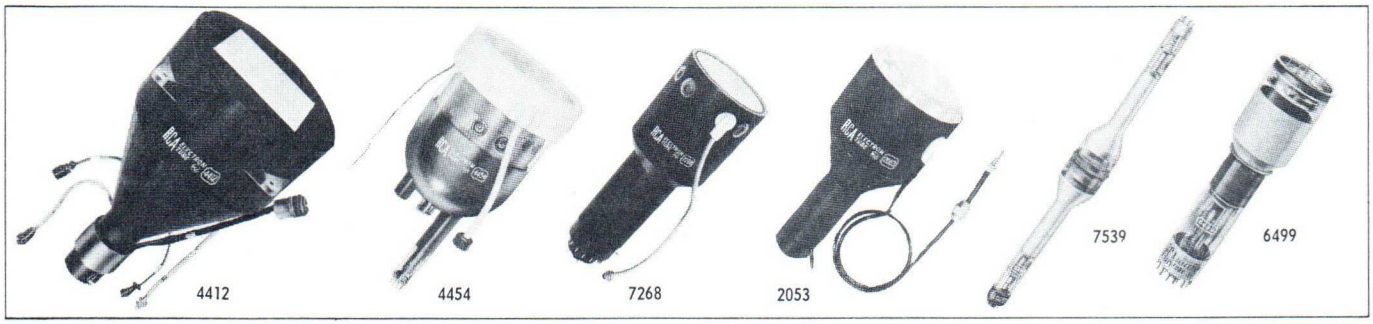
Type	Phosphor	Magnification Factor	Min. Cathode Resolution Line Pairs/Mm	Maximum Dimensions	
				Overall Length In.	Diameter In.
7404	P20	0.75	50	2.33	1.38

Photographic-Shutter Types

4449A	P11	0.74	25	9.93	4.04

Detailed data for these tubes are given in catalog PIT-700 "RCA Photomultiplier and Image Tubes" and in technical bulletins for the specific devices. For information on these publications, see page 22.

RCA STORAGE TUBES



DISPLAY STORAGE TUBES are designed to provide bright, high-contrast displays of stored information containing half-tones for relatively long periods of time. They provide displays having brightness from 30 to 3000 footlamberts, information storage from less than a second to minutes, and scanning speeds from 300 in/sec to 300,000 in/sec. All types employ electrostatic focus.

Typical Applications

- Airborne Fire Control
- Sonar
- Navigation Displays
- Oscillograph Displays of Non-Recurrent Transients
- Shipborne Missile Control
- Surveillance Radar (PPI) Displays
- Airborne Weather Radar

DISPLAY-STORAGE TUBES

5"-Diameter Types

Type	Integral Magnetic Shield	Deflection Method	No. of Writing Guns	Maximum Dimensions	
				Overall Length In.	Diameter In.
2028	No	Elec.	1	15-1/2	5-1/16
4454	No	Mag.	1	11.62	5.640
6866	No	Elec.	1	15-1/2	5-1/16
7183	No	Mag.	1	11-5/8	5.19
7315	No	Elec.	1	13.64	5.31

DISPLAY-STORAGE TUBES FOR USE IN SEVERE ENVIRONMENTS

10"-Diameter Types

Type	Integral Magnetic Shield	Deflection Method	No. of Writing Guns	Maximum Dimensions	
				Overall Length In.	Diameter In.
4412	Yes	Elec.	1	20.75	10.88

5"-Diameter Types

2053	Yes	Elec.	1	13.64	5.562
7268	Yes	Elec.	2	16	5.28

SCAN-CONVERSION TUBES and **RADECHONS** are electrical-signal input, electrical-signal output storage devices designed for data processing systems.

SCAN-CONVERSION TUBES

Type	Description	Maximum Dimensions	
		Overall Length In.	Diameter In.
7539	Designed for data processing applications where information is to be continuously transformed from one time base or scanning presentation to another.	26	3.40

RADECHONS

1858	A variant of 6499 designed for binary memory systems in computers.	12-7/32	3.35
6499	Designed for digital-data storage, signal delay, fixed signal cancellation, and time-base conversion applications.	12-7/32	3.35

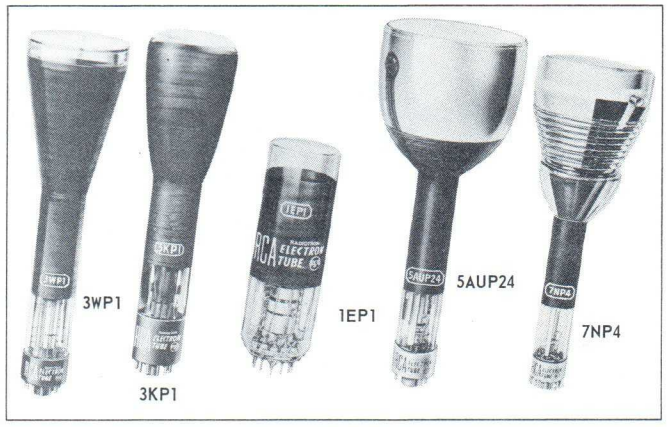
Detailed data for these tubes are given in catalog STC-900 "RCA Storage Tubes and Cathode-Ray Tubes" and in technical bulletins for the specific devices. For information on these publications, see page 22.

RCA CATHODE-RAY TUBES and SPECIAL-PURPOSE KINESCOPES

OSCILLOGRAPH-TYPE CATHODE-RAY TUBES provide bright displays of recurrent and non-recurrent electrical phenomena. All types, except for the 3AP1A, have 6.3-volt, 0.6-amp heater ratings. The 3AP1A has a 2.5-volt, 2.1-amp heater rating. A broad choice of spectral energy emission and persistence characteristics is available.

Typical Applications

• Laboratory, Industrial, and Military Oscilloscopes • Radar • Photographic Recording



OSCILLOGRAPH-TYPE CATHODE-RAY TUBES

Electrostatic Focus and Deflection Types

Flat-Faceplate Types

Type	Anode Volts	Deflection Factor Volts dc/in.		Maximum Dimensions	
		DJ1 & DJ2	DJ3 & DJ4	Overall Length In.	Diameter In.
1EP1	1000	210-310	240-350	4-1/16	1-5/16
1EP2	1000	210-310	240-350	4-1/16	1-5/16
1EP11	1000	210-310	240-350	4-1/16	1-5/16
3RP1A	2000	146-198	104-140	9-3/8	3-1/16
3WP1	2000	83-101	57-70	11-5/8	3-1/16
3WP11	2000	83-101	57-70	11-5/8	3-1/16

Curved-Faceplate Types

2AP1A	1000	195-265	167-225	7-5/8	2-1/16
2BP1	1000	115-155	74-100	7-13/16	2-1/16
2BP11	1000	115-155	74-100	7-13/16	2-1/16
3AP1A	1500	91-137	87-131	11-7/8	3-1/16
3AQP1	1000	73-99	26-35	9-3/8	3-1/16
3BP1A	2000	170-230	125-170	10-1/4	3-1/16
3KP1	2000	100-136	76-104	11-3/4	3-1/16
3KP7	2000	100-136	76-104	11-3/4	3-1/16
3KP11	2000	100-136	76-104	11-3/4	3-1/16
3RP1	2000	146-198	104-140	9-3/8	3-1/16
5BP1A	2000	70-96	64-88	17-1/8	5-5/16
5UP1	2000	56-77	46-62	15-1/8	5-11/32
5UP7	2000	56-77	46-62	15-1/8	5-11/32
5UP11	2000	56-77	46-62	15-1/8	5-11/32
7VP1	3000	93-123	75-102	14-7/8	7-1/8
7VP31	3000	93-123	75-102	14-7/8	7-1/8
902A	600	110-166	96-141	7-5/8	2-1/16

Post-Deflection Accelerator, Electrostatic Focus and Deflection Types

Flat-Faceplate Types

5ABP1	4000	53-72	36-48	17-1/8	5-11/32
5ABP7	4000	53-72	36-48	17-1/8	5-11/32
5ABP11	4000	53-72	36-48	17-1/8	5-11/32
5ADP1	4000	53.4-66.6	40.6-50	16-15/16	5-11/32

Curved-Faceplate Types

3JP1	4000	170-230	125-170	10-1/4	3-1/16
3JP7	4000	170-230	125-170	10-1/4	3-1/16
5CP1A	4000	78-106	66-90	17-1/8	5-11/32
5CP11A	4000	78-106	66-90	17-1/8	5-11/32
5CP12	4000	78-106	66-90	17-1/8	5-11/32

Magnetic Focus and Deflection Types

Curved-Faceplate Types

Type	Anode Volts	Deflection Angle Approx.	Maximum Dimensions	
			Overall Length In.	Diameter In.
5FP7A	7000	53°	11-1/2	5-1/32
5FP15A	5000	53°	11-1/2	5-1/32
7BP7A	7000	53°	13-5/8	7-1/8
7MP7	7000	50°	13-1/8	7-5/16

SPECIAL-PURPOSE KINESCOPES are designed for specific display applications. All types employ electrostatic focus and magnetic deflection, except for the 5FP4A which is a magnetic-focus-and-deflection tube, and have 6.3-volt, 0.6-amp heater ratings.

SPECIAL-PURPOSE KINESCOPES

Transcriber Kinescopes

Type	Faceplate	Anode Volts	Deflection Angle Approx.	Maximum Dimensions	
				Overall Length In.	Diameter In.
5WP11	flat	27000	50°	11-13/16	5-1/8

View-Finder Kinescopes

5FP4A	curved	6000	53°	11-1/2	5-1/32

Monitor Kinescopes

7CP4	curved	6000	57°	13-13/16	7-1/8
7TP4	curved	10000	50°	13-1/2	7-5/16
8HP4	curved	11000	90°	10-1/4	8-1/2
8NP4	curved	16000	90°	9-15/16	8-1/2
8QP4	curved	16000	90°	10-1/8	8-1/2
10SP4	curved	14000	50°	17	10-9/16
14BAP4	curved	18000	70°	17-5/32	13-13/16
17DWP4	curved	18000	70°	19-9/16	16-3/4
21EYP4	curved	18000	72°	23-13/32	21-1/2

Flying-Spot Cathode-Ray Tubes

3KP16	curved	2000	–	11-3/4	3-1/16
5AUP24	flat	27000	40°	12-7/8	5-1/8
5WP15	flat	27000	50°	11-13/16	5-1/8
5ZP16	flat	27000	40°	14-3/4	5-1/8

Projection Kinescopes

5AZP4	curved	36000	50°	12-9/16	5-1/8
7NP4	curved	75000	35°	20-1/8	7-3/16
7WP4	curved	75000	35°	20-1/16	7-3/16

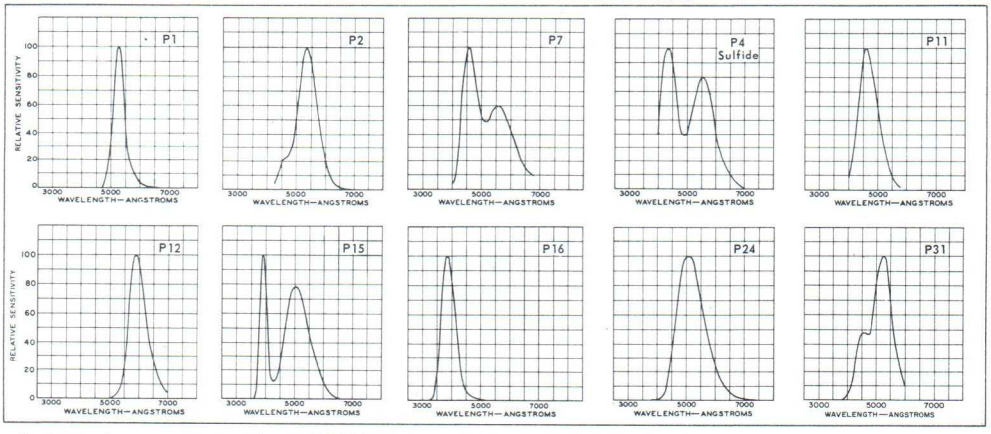
Monoscopes

2F21	Indian Head Pattern types for supplying signal to test video performance of TV transmitters and receivers.	12-11/16	5-1/16
1699	Custom built type like 2F21 but pattern is individually styled to customer requirements.	12-11/16	5-1/16

PERSISTENCE CHARACTERISTICS

PHOSPHOR	DESCRIPTION
P1	Medium
P2	Medium Short
P4 -- Sulfide	Medium Short
P7	Purplish-blue -- Medium Short Yellowish green -- Long
P11	Medium Short
P12	Long
P15	Visible-Short Near Ultraviolet -- Very Short
P16	Very Short
P24	Short
P31	Medium Short

SPECTRAL ENERGY EMISSION CHARACTERISTICS



Detailed data for these tubes are given in catalog STC-900 "RCA Storage Tubes and Cathode-Ray Tubes" and in technical bulletins for the specific devices. For information on these publications, see page 22.

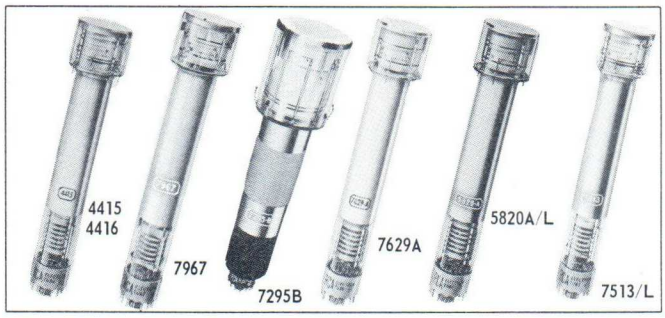


IMAGE ORTHICONS are designed primarily for outdoor and studio, black-and-white or color, live broadcast TV pickup. They are also employed extensively in many military, industrial, and scientific research television systems. A broad choice of tube design features are available: field or non-field mesh design; glass, thin-film semiconductive, or special long-life targets; precision construction; anti-ghost image section design; micro-damp construction; tube size; and matched sets for color pickup.

Typical Applications

- Broadcast Television Live Pickup
- Military and Industrial TV Systems
- Studio Videotape Service

IMAGE ORTHICONS FOR LIVE BLACK-AND-WHITE TELEVISION

3"-Diameter Types

Type	Typical Faceplate Illum. Footcandles	Amplitude Response at 400 TV Lines Per Cent	Typical Signal-to-Noise Ratio Bandwidth 4.5 Mc	Maximum Dimensions	
				Overall Length In.	Diameter In.
4401V1	1.4×10^{-2}	60	40:1	15.45	3.06
4414/7611	2×10^{-2}	40	45:1	15.45	3.06
5820A	2×10^{-2}	60	45:1	15.45	3.06
5820A/L	2×10^{-2}	60	45:1	15.45	3.06
7293A	2×10^{-2}	60	45:1	15.45	3.06
7293A/L	2×10^{-2}	60	45:1	15.45	3.06
7629A	4×10^{-3}	50	32:1	15.45	3.06
8092A	7×10^{-3}	60	37:1	15.45	3.06
8093A	4×10^{-2}	60	50:1	15.45	3.06
8093A/L	4×10^{-2}	60	50:1	15.45	3.06
4-1/2"-Diameter Types					
7295B	6×10^{-2}	75	75:1	19.685	4.594
7389B	7×10^{-2}	75	95:1	19.685	4.594

IMAGE ORTHICONS FOR LIVE COLOR TELEVISION

3"-Diameter Types

4415-4416	1×10^{-2}	55	37:1	15.45	3.06
7513	3×10^{-2}	55	55:1	15.45	3.06
7513/L	3×10^{-2}	55	55:1	15.45	3.06
8092A	3.5×10^{-3}	65	37:1	15.45	3.06

IMAGE ORTHICONS FOR LOW-LIGHT LEVEL APPLICATIONS

3"-Diameter Types

Type	Typical Faceplate Illum. Footcandles	Limiting Resolution TV Lines	Typical Signal-to-Noise Ratio Bandwidth 4.5 Mc	Maximum Dimensions	
				Overall Length In.	Diameter In.
7967	1×10^{-5}	625	3:1	15.45	3.06
Ruggedized 3"-Diameter Types					
7198	1×10^{-2}	650	30:1	15.45	3.06

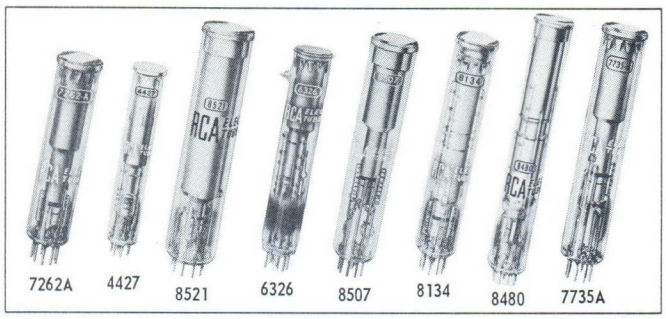
2"-DIAMETER IMAGE ORTHICONS — DEVELOPMENTAL TYPES C21016 and C74081A

C21016 is designed for operation with 16-mm film camera optics. Sensitivity is equivalent to photographic film having an ASA exposure index of 1600. Tube has a maximum length of 10.25" and a maximum diameter of 2.1". Has S-10 spectral response and uses long-life target and "dark heater".

C74081A is designed specifically for low-level light applications. Limiting resolution, with 10^{-6} footcandles on the photocathode, is 100 TV lines. Tube has S-20 spectral response and uses a thin-film semiconductive target which results in high sensitivity, improved resolution, and extended useful tube life. Also employs a low-power "dark heater" requiring only 0.6 watt.

IMAGE-INTENSIFIER ORTHICONS

Type	Typical Faceplate Illum. Footcandles	Limiting Resolution TV Lines	Typical Signal-to-Noise Ratio Bandwidth 4.5 Mc	Maximum Dimensions	
				Overall Length In.	Diameter In.
4470	1×10^{-6}	500	3:1	22.44	5.016



VIDICONS are designed primarily for TV film studio pickup service and closed-circuit TV applications. Among the choice of tube design features available are deflection and focus methods, ruggedized or non-ruggedized tubes, conventional or low power "dark heaters", photoconductive surfaces, and tube size.

Typical Applications

- Broadcast Studio Color and Black-and-White Film Pickup
- Space Exploration
- Data Transmission
- Education, Industrial, and Military Closed-Circuit TV
- Oceanographic Surveys
- Remote Monitor Systems

VIDICONS FOR BROADCAST-STUDIO FILM-PICKUP

Magnetic Focus-and-Deflection Tubes

1"-Diameter Types

Type	Typical Faceplate Illum. Footcandles	Typical Signal-Output Current μAmp	Limiting Resolution TV Lines	Maximum Dimensions	
				Overall Length In.	Diameter In.
6326	100	0.2	750	6.50	1.135
7038	100	0.3	750	6.50	1.135
8572	100	0.3	1000	6.375	1.135
1-1/2"-Diameter Types					
8051	50	0.4	1500	8.00	1.60

Electrostatic-Focus, Magnetic-Deflection Tubes

1"-Diameter Types

8134	50	0.2	750	6.35	1.135
1-1/2"-Diameter Types					
8480	50	0.5	1400	10.375	1.60

VIDICONS FOR LIVE PICKUP IN INDUSTRIAL SERVICE

Magnetic Focus-and-Deflection Tubes

1"-Diameter Types

7262A	1	0.2	750	5.18	1.135
7697	1	0.15	750	6.313	1.135
7735A	1	0.2	750	6.50	1.135
8507	1	0.2	1000	6.375	1.135
8573	1	0.2	1000	5.18	1.135

Electrostatic-Focus, Magnetic-Deflection Tubes

1"-Diameter Types

8134	1	0.2	750	6.35	1.135
8567	1	0.2	750	6.35	1.135

VIDICONS FOR SPECIAL MILITARY AND INDUSTRIAL SERVICE

Magnetic Focus-and-Deflection Tubes

1/2"-Diameter Types

4427	0.4	0.08	400	3.40	0.574
1-1/2"-Diameter Types					
8051	8	0.3	1500	8.00	1.60
8521	3	0.4	1500	8.00	1.60

Electrostatic-Focus, Magnetic-Deflection Tubes

1-1/2"-Diameter Types

8480	10	0.45	1400	10.375	1.60

Ruggedized Magnetic Focus-and-Deflection Tubes

1"-Diameter Types

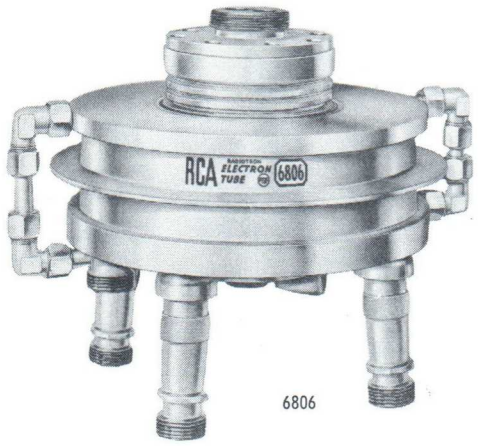
7263A	1	0.2	750	5.18	1.135

Ruggedized Electrostatic-Focus, Magnetic-Deflection Tubes

1"-Diameter Types

8567	1	0.2	750	6.35	1.135

Detailed data for these tubes are given in catalog CAM-600 "RCA Camera Tubes", and in technical bulletins for the specific devices. For information on these publications, see page 22.



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6166


8122

VACUUM POWER TUBES are designed for high-power CW and RF pulse applications and for modulator and regulator service in communication, industrial, and military systems. Types are available providing up to nearly a megawatt of CW power (over 10 megawatts of RF pulse power) at frequencies up to 3000 Mc. Variants of the listed types providing additional choices in electrical and mechanical ratings and in cooling methods are also available. Cermolox types are designed for the most critical and demanding applications. Beam power tubes of this type have precision-aligned grids, unitized electrode-and-terminal coaxial configuration, and ceramic-metal construction.

VACUUM POWER TUBES FOR CW APPLICATIONS
Beam Power Tubes

Natural-Cooled Types

Type	Filament (f) or Heater Volts/Amp	Typical Class C Telegraphy Service (CCS)		Maximum Dimensions	
		Frequency Mc	Approx. Power Output Watts	Overall Length In.	Diameter In.
2E24	6.3f/0.65	125	20	3-21/32	1-5/16
2E26	6.3/0.8	125	20	3-21/32	1-5/16
4E27A/5-125B	5f/7.5	For existing equipment		6-3/16	2-3/4
807	6.3/0.9	60	40	5-3/4	2-1/16
813	10f/5	30	275	7-1/2	2-9/16
814	10f/3.25	30	130	7-11/16	2-1/16
815	6.3/1.6 12.6/0.8	125	44	4-9/16	1-3/16
828	10f/3.25	30	150	7-11/16	2-1/16
1624	2.5f/2	60	35	5-3/4	2-1/16
1625	12.6/0.45	60	40	5-3/4	2-1/16
4604	6.3f/0.65	175	30	3-13/16	1-21/32
6146A	6.3/1.25	60	52	3-13/16	1-21/32
6146B/8298A	6.3/1.125	60	63	3-13/16	1-21/32
6146W/7212	6.3/1.25	60	52	3-13/16	1-21/32
6159	26.5/0.3	60	52	3-13/16	1-23/32
6159B	26.5/0.3	60	63	3-13/16	1-21/32
6159W/7357	26.5/0.3	60	52	3-13/16	1-21/32
6883	12.6/0.625	60	52	3-13/16	1-21/32
6883B/8032A/8552	12.6/0.562	60	85	3-13/16	1-21/32
6893	12.6/0.4	125	20	3-21/32	1-5/16
8032	13.5/0.585	60	52	3-13/16	1-21/32

Water-Cooled Types

6448	1.35f/1000	900	11,000	8.02	11.38
6806	1.35/1000	900	13,500	8.02	11.38

Conduction-Cooled Types

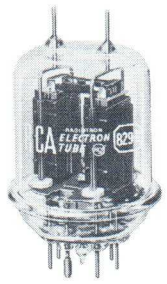
8072	13.5/1.3	470	85	2.26	1.44
8462	2.9f/4.6	470	85	2.26	1.44

VACUUM POWER TUBES FOR CW APPLICATIONS
Beam Power Tubes

Forced-Air Cooled Types

Type	Filament (f) or Heater Volts/Amp	Typical Class C Telegraphy Service (CCS)		Maximum Dimensions	
		Frequency Mc	Approx. Power Output Watts	Overall Length In.	Diameter or Radius (r) In.
4-125A/4D21	5f/6.5	For existing equipment		5-11/16	2-7/8
4-250A/5D22	5f/14.5	For existing equipment		6-3/8	3-9/16
4X500A	5f/12.2 to 13.7	For existing equipment		4-3/4	2-5/8
827R	7.5f/25	110	1050	6-3/8	4-11/16r
4618	5.5/17.3	600	1350	3.34	3.75
4624	6.3/3.5	890	300	2.19	2.26
6076	6.3/32.5	For existing equipment		6-3/4	3-5/8
6155	5f/6.5	For existing equipment		5-5/64	2-7/16
6156	5f/14.1	For existing equipment		5-31/32	3-37/64
6166	5f/168	216	9000	11.63	6.38
6166A/7007	5f/174	216	10,000	11.50	6.38
6181	120 max./1.6	900	600	7-1/4	5-1/32
7034/4X150A	6/2.6	150	370	2.404	1.640
7035/4X150D	26.5/0.58	150	370	2.404	1.640
7094	6.3/2.85	60	255	5	2.56
7203/4CX250B	6/2.6	500	250	2.464	1.640
7204/4CX250F	26.5/0.58	500	250	2.464	1.640
7271	13.5/1.25	60	160	4.73	2.06
7580	6/2.6	500	360	2.464	1.640
7580W/4CX250R	Refer to MIL-E-1/1385B			2.404	1.640
7609	Refer to MIL-E-1/1331 (Navy)			2.404	1.640
8121	13.5/1.3	470	235	2.20	1.48
8122	13.5/1.3	470	300	2.26	1.64
8165/4-65A	6/3.2 to 3.8	For existing equipment		4-3/16	2-3/8
8166/4-1000A	7.5f/20 to 22.7	For existing equipment		9-5/8	5-1/4
8167/4CX300A	6.0/2.2 to 3.2	For existing equipment		2.500	1.640
8168/4CX1000A	6.0/8.1 to 9.9	For existing equipment		4.8	3.37
8170/4CX5000A	7.5/73 to 78	For existing equipment		9.125	4.938
8171/4CX10000D	7.5/73 to 78	For existing equipment		9.125	7.050
8281/4CX15000A	6.3/152 to 168	For existing equipment		9.440	7.580
8438/4-400A	5/14.5	For existing equipment		6-3/8	3-9/16

Detailed data for these tubes are given in catalog PWR-506A "Product Guide for RCA Power Tubes" and in technical bulletins for the specific devices. For information on these publications, see page 22.



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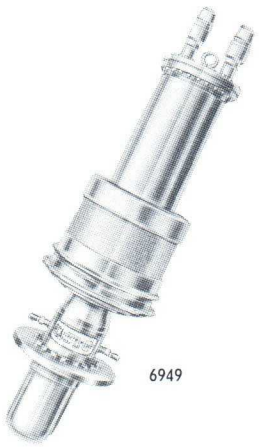
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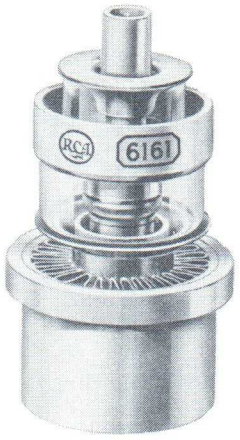

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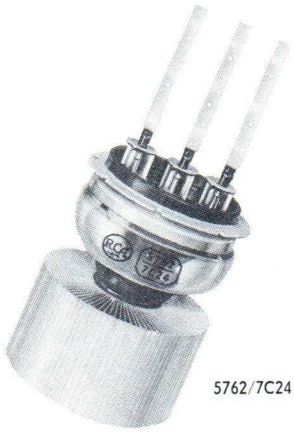

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VACUUM POWER TUBES FOR CW APPLICATIONS

Twin-Beam Power Tubes

Natural-Cooled Types

Type	Filament (f) or Heater Volts/Amp	Typical Class C Telegraphy Service (CCS)		Maximum Dimensions	
		Frequency Mc	Approx. Power Output Watts	Overall Length In.	Diameter or Radius (r) In.
829B	6.3/2.25 12.6/1.125	200	70	4-5/16	2-3/8
832A	6.3/1.6 12.6/0.8	200	26	3-5/16	2-5/16
6524	6.3/1.25	100	46	3-9/16	1-11/16
6850	12.6/0.625	100	46	3-9/16	1-11/16

Forced-Air-Cooled Types

829B	6.3/2.25 12.6/1.125	200	90	4-5/16	2-3/8

Triodes

Natural-Cooled Types

801A	7.5f/1.25	60	25	5-3/8	2-1/16
805	10f/3.25	30	215	8-1/2	2-5/16
809	6.3f/2.5	60	55	6-9/16	2-7/16
810	10f/4.5	30	375	8-3/4	2-1/4r
811A	6.3f/4	30	135	6-15/32	2-7/16
812A	6.3f/4	30	130	6-15/32	2-7/16
830B	10f/2	15	90	6-11/16	2-1/16
833A	10f/10	30	1,000	8-13/16	4-19/32
834	7.5f/3.1	100	75	6-11/16	2-11/16
845	10f/3.25	AB Audio only	115	7-7/8	2-5/16
5556	4.5f/1.1	For existing equipment		4-1/2	1-5/8
8000	10f/4.5	30	375	8-3/4	2-1/4r
8005	10f/3.25	60	170	6-11/16	2-7/16

Water-Cooled Types

9C21	19.5f/415	15	100,000	24-1/2	9-1/2
207	22f/52	1.6	15,000	20-1/4	6-15/32r
880	12.6f/320	1.5	50,000	11-3/8	7
889A	11f/125	50	10,000	10-11/16	3-5/8
891	22f/60	1.6	10,000	20-7/8	6-15/32r
892	22f/60	1.6	14,000	20-7/8	6-15/32r
5770	11f/285	20	105,000	24-1/2	9-1/2
5771	7.5f/170	1.6	53,000	11-5/16	7

Forced-Air-Cooled Types

2C39A	6.3/1	For existing equipment		2-3/4	1-17/64
2C39WA	6.0/1.0	Refer to MIL-E-1/778E		2.701	1.264
9C22	19.5f/415	5	65,000	25	17
9C25	6f/285	30	29,500	17-3/8	14-1/4

VACUUM POWER TUBES FOR CW APPLICATIONS

Triodes (Cont'd)

Forced-Air-Cooled Types (Cont'd)

Type	Filament (f) or Heater Volts/Amp	Typical Class C Telegraphy Service (CCS)		Maximum Dimensions	
		Frequency Mc	Approx. Power Output Watts	Overall Length In.	Diameter or Radius (r) In.
833A	10f/10	20	1440	8-13/16	4-19/32
889RA	11f/125	40	10,000	11-7/8	5-15/32r
891R	22f/60	1.6	10,000	22	6-15/32r
892R	22f/60	1.6	10,000	22	6-15/32r
5671	11f/285	1.6	70,000	25	17
5713	3.3/11.5	220	290	4-7/8	2-1/16
5762/7C24	12.6f/29	30	7000	7-1/8	4-11/16
5786	11f/12.5	160	1000	9-5/8	2.895
6161	6.3/3.4	900	180	3-13/32	1.76
8239/ 3X3000F1	7.5/49 to 54	For existing equipment		10.539	4.156

Shielded-Grid Beam Triodes

Water-Cooled Types

6949	7.3 to 7.8f 1120 to 1160	0.425	500,000	40	10.06

Lighthouse Triodes

Natural-Cooled Types

2C40	6.3/0.75	For existing equipment		2-9/16	1.312
2C40A	6.3/0.75	For existing equipment		2-9/16	1.312
2C43	6.3/0.9	For existing equipment		2.6875	1.312

Forced-Air-Cooled Types

6897	6.3/1.03	For existing equipment		2-3/4	1-17/64

Tetrodes

Natural-Cooled Types

860	10f/3.25	30	165	8-3/4	4-1/4r

Twin-Tetrodes

Water-Cooled Types

8D21	3.2f/125	300	6500	12-9/32	5-3/4

Pentodes

Natural-Cooled Types

802	6.3/0.9	30	16	5-3/4	2-1/16
803	10/5	20	210	9-1/4	2-9/16
837	12.6/0.7	20	22	5-3/4	2-1/16

Klystrons

2K26	Typical operation as CW oscillator: Frequency—6600 Mc, Power Output—100 mw			3.5	1-55/64r

Detailed data for these tubes are given in catalog PWR-506A "Product Guide for RCA Power Tubes" and in technical bulletins for the specific devices. For information on these publications, see page 22.

RCA VACUUM POWER TUBES


7801


6816

8501


6950/2039

VACUUM POWER TUBES FOR CW APPLICATIONS

Cermolox Tubes

Forced-Air-Cooled Types

Type	Filament (f) or Heater Volts/Amp	Typical Class C Telegraphy Service (CCS)		Maximum Dimensions	
		Frequency Mc	Approx. Power Output Watts	Overall Length In.	Diameter In.
4618	5.5/17.3	600	1350	3.34	3.75
6816	6.3/2.1	1215	40	1.930	1.265
6884	26.5/0.52	1215	40	1.930	1.265
7213	5.5/17.3	600	1350	3.34	3.75
7457	6.3/3.2	1215	40	1.930	1.265
7650	6.3/7.5	400	800	2.40	2.09
8226	6.3/3.2	400	340	2.71	1.64
8437	8.5/88	400	10,000	6.188	6.170
8501	4.5/125	900	5500	5.65	6.17
8596	6.3/3.2	1215	40	2.036	1.327

Conduction-Cooled Types

7801	12.6/0.5	400	27	1.195	0.740
7842	6.3/3.2	1215	40	1.1930	1.119
7843	26.5/0.52	1215	40	1.1930	1.119
7844	6.3/2.1	1215	40	1.1930	1.119
7870	6.3/1	400	27	1.195	0.740

VACUUM POWER TUBES FOR RF PULSE APPLICATIONS

Beam Power Tubes

Liquid-Cooled Types

Type	Filament (f) or Heater Volts/Amp	Typical Class C Telegraphy Service (CCS)		Maximum Dimensions	
		Frequency Mc	Peak Power Output Kw	Overall Length In.	Diameter In.
2041	1.35f/1000	450	300	8.93	11.25
6952	0.95f/495	425	2000	8.93	11.25
8587/4605V2	0.95f/495	425	2000	9.50	11.25

Water-Cooled Types

4616	0.95f/495	425	2000	8.93	11.25

Forced-Air-Cooled Types

4621	6.3/3.2	1215	17	2.13	1.265

VACUUM POWER TUBES FOR RF PULSE APPLICATIONS

Triodes

Water-Cooled Types

Type	Filament (f) or Heater Volts/Amp	Typical Class C Telegraphy Service (CCS)		Maximum Dimensions	
		Frequency Mc	Peak Power Output Kw	Overall Length In.	Diameter In.
2054	3.1 to 4.5f / 6600 to 7200	440	5000	17.00	14.100
4612	1.5f/1800	475	300	19.5	23.5
4617	1.5f/1800	425	8000	17	24
7835	3.1 to 4.2f / 6600	250	10,000	17	24

Forced-Air-Cooled Types

5946	6.3/3.4	1250	14	3-13/32	1.76

Shielded-Grid Beam Triodes

Water-Cooled Types

4603	7.3 to 7.8f / 1120 to 1160	50	1500	40	10.06
6950/2039	7.3 to 7.8f / 1120 to 1160	200	1500	37.24	20.50

Lighthouse Triodes

Natural-Cooled Types

2C40A	6.3/0.75	3000	0.3	2-9/16	1.312

Cermolox Tubes

Forced-Air-Cooled Types

7214	5.5/17.3	1215	65	3.34	3.75
7649	6.3/3.2	1215	4.5	1.930	1.265
7651	6.3/7.5	1215	39	2.40	2.09
8184	22/12.6	500	—	7.24	5.56
8227	6.3/3.2	1215	17	2.52	1.265

Conduction-Cooled Types

4622	6.3/3.2	1215	4.5	1.930	1.115

Detailed data for these tubes are given in catalog PWR-506A "Product Guide for RCA Power Tubes" and in technical bulletins for the specific devices. For information on these publications, see page 22.

RCA INDUSTRIAL RECEIVING-TYPE TUBES FOR CLASS C RF POWER APPLICATIONS

RF POWER AMPLIFIERS, OSCILLATORS, OR FREQUENCY MULTIPLIERS — CLASS C

Type	Heater or Filament Volts/mA	Useful Power Output Watts	Frequency Mc	Base	Maximum Overall Length In.
3A4	1.4/200	1.2	10	Miniature 7-Pin	2-1/8
3B4WA	For data, refer to MIL Specification.			–	–
1613	6.3/700	9	45	Octal	3-1/4
1614	6.3/900	21	80	Octal	4-5/16
1619	2.5/2000	19.5	45	Octal	4-5/16
1626	12.6/250	4	30	Octal	4-1/8

Type	Heater or Filament Volts/mA	Useful Power Output Watts	Frequency Mc	Base	Maximum Overall Length In.
5618	3/460	5.2	80	Miniature 7-Pin	2-5/8
5763	6/750	8	50	Miniature 9-Pin	2-5/8
6360	6.3/820	16	200	Miniature 9-Pin	3-1/16
6417	12.6/375	8	50	Miniature 9-Pin	2-5/8
7558	6.3/800	8.5	175	Miniature 9-Pin	2-5/8
7905	6.3/650	7	175	Miniature 9-Pin	2-5/8

Detailed data for these tubes are given in catalog RIT-104D "RCA Industrial Receiving-Type Tubes" and in technical bulletins for the specific devices. For information on these publications, see page 22.

HIGH-POWER TYPES

REGULATORS
Twin-Triode Tubes

Natural-Cooled Types

Type	Plate Dissipation Watts	Peak AC Plate Volts	DC Plate mA	Maximum Dimensions	
				Overall Length In.	Diameter In.
3C33	15	±2000	120	3-11/16	2-3/8

REGULATORS
Cermolox Tubes

Forced-Air-Cooled Types

Type	Plate Dissipation Watts	Peak DC Plate Volts	DC Plate mA	Maximum Dimensions	
				Overall Length In.	Diameter In.
4600A	1750	3500	1000	3.405	3.76
4614	400	2500	500	2.40	2.09

Detailed data for these tubes are given in catalog PWR-506A "Product Guide for RCA Power Tubes" and in technical bulletins for the specific devices. For information on these publications, see page 22.

LOW- AND INTERMEDIATE-POWER TYPES

TUBES FOR STABILIZATION OF DC VOLTAGE SUPPLIES
Voltage-Regulator Tubes

Type	DC Operating Volts	DC Operating Current mA	Maximum Regulation Volts	Base	Maximum Overall Length In.
OA2	150	5 to 30	6	Miniature 7-Pin	2-5/8
OA2WA (Premium)	For data, refer to MIL Specification.			-	-
OA3	75	5 to 40	6.5	Octal	4-1/8
OA3A	75	5 to 40	6.5	Octal	3-1/16
OB2	105	5 to 30	4	Miniature 7-Pin	2-5/8
OB2WA (Premium)	For data, refer to MIL Specification.			-	-
OC2	75	5 to 30	4.5	Miniature 7-Pin	2-5/8
OC3	105	5 to 40	4	Octal	4-1/8
OC3A	105	5 to 40	4	Octal	3-1/16
OD3	150	5 to 40	5.5	Octal	4-1/8
OD3A	150	5 to 40	5.5	Octal	3-1/16
991	59	0.4 to 2	8	Candelabra 2-contact	1-9/16
6073 (Premium)	150	5 to 30	6	Miniature 7-Pin	2-5/8
6073/OA2 (Premium)	150	5 to 30	6	Miniature 7-Pin	2-5/8
6074 (Premium)	105	5 to 30	4	Miniature 7-Pin	2-5/8
6074/OB2 (Premium)	105	5 to 30	4	Miniature 7-Pin	2-5/8
6626/OA2WA (Premium)	150	5 to 30	5	Miniature 7-Pin	2-5/8

SERIES-VOLTAGE-REGULATOR TUBES

Type	Heater Volts/Amp	Plate Current mA	Plate Resistance Ohms	Base	Maximum Overall Length In.
6AS7G	6.3/2.5	125	280	Octal	4-5/8
6080	6.3/2.5	125	280	Octal	4-1/16
6080WA (Premium)	For data, refer to MIL Specification.			-	-
6082	26.5/0.6	125	280	Octal	4-1/16
6336A	6.3/5	400	200	Octal	4-3/4

5651A PREMIUM MINIATURE VOLTAGE-REFERENCE TUBE

- Excellent Voltage Stability
- Small Initial-Drop Variation, 4 V Maximum at Any Current

Interchangeable with the popular 5651, but has greater voltage stability at all current values. During the first 300 hours (from initial dc operating voltage) -- voltage drift is no greater than 0.1%; between 300 and 1300 hours (from dc operating voltage at 300 hours) -- voltage drift is no greater than 0.1%; and during any 100-hour period (between 300 and 1300 hours of operation) -- voltage drift is no greater than 0.05%.

Voltage-Reference Tubes

Type	DC Operating Volts	DC Operating Current mA	Maximum Regulation Volts	Base	Maximum Overall Length In.
5651 (Premium)	87	1.5 to 3.5	3	Miniature 7-Pin	2-1/8
5651A (Premium)	85.5	1.5 to 3.5	3	Miniature 7-Pin	2-1/8
5651WA (Premium)	For data, refer to MIL Specification.			-	-
5783	86	1.5 to 3.5	3	Subminiature	1.625

Detailed data for these tubes are given in catalog RIT-104D "RCA Industrial Receiving-Type Tubes" and in technical bulletins for the specific devices. For information on these publications, see page 22.

8532/6J4WA — HIGH-MU TRIODE

- High Vibration Resistance
- Cathode-Drive Amplifier to 500 Mc
- Frame-Grid Construction

Premium version of popular 6J4 is unilaterally interchangeable with types 6J4, 6J4WA, and 6J4WB and may be used to replace these types in existing equipment where use of a more rugged tube is desirable.

5734 — MECHANO-ELECTRONIC TRANSDUCER

- Compact (1.300"L x 0.328"D)
- Light Weight (1/16 oz.)
- Useful to 12 kc/s

Medium-mu triode which translates mechanical motion, such as vibration, applied to low-inertia coupling rod into corresponding plate-current variations which can be observed or measured by conventional methods. Maximum-permissible transverse displacement of coupling rod from tube longitudinal axis = 0.5°; deflection sensitivity = 40 V/° (or 2300 V/rad).

7360 — MINIATURE TWO-PLATE BEAM-DEFLECTION TUBE

- Useful in SSB and DSB Suppressed-Carrier Equipment to 100 Mc
- Balanced Push-Pull Output with Single-Ended or Push-Pull Input
- High Transconductance and Input Impedance

The total plate current is determined by the control-grid and accelerating-grid potentials; the portion of the total plate current collected by each plate is determined by the voltage difference between two deflecting electrodes. Useful in balanced-modulator, demodulator, balanced-mixer, and frequency-converter applications. Balanced modulator, push-pull, peak-to-peak, double-sideband output volts = 4; carrier suppression of 60 dB. Balanced mixer, push-pull, peak-to-peak, single-sideband output volts = 40; oscillator-signal suppression of 40 dB. Also useful in a wide variety of other switching and gating applications.

Detailed data for these tubes are given in catalog RIT-104D "RCA Industrial Receiving-Type Tubes" and in technical bulletins for the specific devices. For information on these publications, see page 22.

RCA MODULATOR TUBES

HIGH-POWER TYPES

MODULATORS
Beam Power Tubes

Natural-Cooled Types

Type	Plate Dissipation Watts	Peak Plate Volts	Peak Plate Amp.	Maximum Dimensions	
				Overall Length In.	Diameter In.
6293	4	2000	3	3-13/16	1-23/32

Twin-Beam Power Tubes

Natural-Cooled Types

3E29	15	5750	10	4-5/16	2-3/8
3E29A	15	7500	10	4-5/16	2-3/8

MODULATORS
Twin Triodes

Natural-Cooled Types

Type	Plate Dissipation Watts	DC Plate Volts	DC Plate Amp.	Maximum Dimensions	
				Overall Length In.	Diameter In.
4610	30	3000	1	4-5/16	2-3/8

Detailed data for these tubes are given in catalog PWR-506A "Product Guide for RCA Power Tubes" and in technical bulletins for the specific devices. For information on these publications, see page 22.

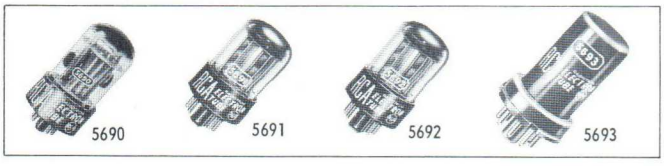
LOW- AND INTERMEDIATE-POWER TYPES

AF POWER AMPLIFIERS OR MODULATORS

Type	Description and Intended Application	Heater or Filament Volts/mA	Plate Dissipation Watts	Base	Maximum Overall Length In.
3A4	Power Pentode. Class A1 af power amplifier.	2.8/100 1.4/200	2	Miniature 7-Pin	2-1/8
6AK6	Power Pentode. Class A1 af power amplifier.	6.3/150	2.75	Miniature 7-Pin	2-1/8
12A6	Beam Power Tube. Class A1 af power amplifier.	12.6/150	7.5	Octal	3-1/4
1614	Beam Power Tube. Class AB1 af power amplifier or modulator.	6.3/900	21	Octal	4-5/16
1619	Beam Power Tube. Class AB1 af power amplifier or modulator. Quick-heating filament.	2.5/2000	15	Octal	4-5/16
1621	Power Pentode. Class A1 single-tube or push-pull af power amplifier. Similar to 6F6. Has special test for noise.	6.3/700	8.3	Octal	3-1/4
1622	Beam Power Tube. Class A1 single-tube or push-pull af power amplifier. Similar to 6L6. Has special test for noise.	6.3/900	13.8	Octal	4-5/16
1631	Beam Power Tube. Class A1 single-tube or push-pull af power amplifier; AB1 or AB_2 push-pull af power amplifier. Except for heater and lower plate-dissipation ratings, identical to 6L6.	12.6/450	16	Octal	4-5/16
1635	Twin Power Triode. Class B push-pull af power amplifier.	6.3/600	3	Octal	3-5/16
5618	Power Pentode. Class A1 af power amplifier or modulator. For intermittent operation only in emergency or other stationary or mobile communications equipment requiring a filament warm-up time of less than one second.	6/230 3/460	5	Miniature 7-Pin	2-5/8
5824	Beam Power Tube. Class A1 af power amplifier identical to 25B6G.	25/300	12.5	Octal	3-5/16
5881	Beam Power Tube. Class A1 single-tube or push-pull af power amplifier; class AB1 or AB_2 push-pull af power amplifier.	6.3/900	23	Octal	3-15/32
6360	Twin Power Tetrode. Class AB1 or AB_2 push-pull af power amplifier or modulator.	12.6/410 6.3/820	7	Miniature 9-Pin	3-1/16
6550	Beam Power Tube. Class A1 single-tube or push-pull af power amplifier.	6.3/1600	35	Octal	4-3/4
6550V1	Matched pair of types 6550.			-	-
7558	Beam Power Tube. Class AB1 af power amplifier or modulator. Except for heater ratings, identical to 7551.	6.3/800	10	Miniature 9-Pin	2-5/8

Detailed data for these tubes are given in catalog RIT-104D "RCA Industrial Receiving-Type Tubes" and in technical bulletins for the specific devices. For information on these publications, see page 22.

RCA INDUSTRIAL RECEIVING-TYPE SPECIAL RED TUBES

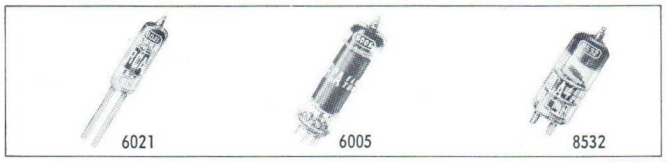


SPECIAL RED TUBES are a select category of Premium Tubes for use where 10,000-hour life, extreme dependability, and exceptional stability are paramount.

Type	Description	Prototype	Heater or Filament Volts/mA	Plate Dissipation Watts	Amplification Factor	Transconductance μmhos	Base	Maximum Overall Length In.
5690	Full-Wave Vacuum Rectifier	-	12.6/1200 6.3/2400	PIV = 1120 V; $I_{o(av)}$ = 74 mA			Octal	4-1/4
5691	High-Mu Twin Triode	6SL7GT	6.3/600	1	70	1600	Octal	2-7/8
5692	Medium-Mu Twin Triode	6SN7GT	6.3/600	1.75	20	2200	Octal	2-7/8
5693	Sharp-Cutoff Pentode	6SJ7	6.3/300	2	-	1650	Octal	2-5/8

Detailed data for these tubes are given in catalog RIT-104D "RCA Industrial Receiving-Type Tubes" and in technical bulletins for the specific devices. For information on these publications, see page 22.

RCA INDUSTRIAL RECEIVING-TYPE PREMIUM TUBES



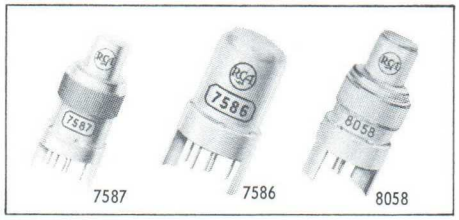
PREMIUM TUBES. For critical industrial and other equipment requiring exceptional stability of tube characteristics, long tube life, and reliable performance. RCA Premium Tubes, superior to their corresponding commercial prototypes, are subjected to special tests and controls on critical characteristics, environmental tests (such as shock, fatigue, vibration, altitude) and also to special life tests.

PREMIUM TUBES

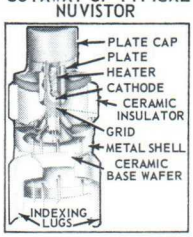
Type	Description	Prototype	Heater or Filament Volts/mA	Plate Dissipation Watts	Amplification Factor	Transconductance μmhos	Base	Maximum Overall Length In.
OA2WA	Voltage Regulator, 150 V	OA2	For data, refer to MIL Specification				-	-
OB2WA	Voltage Regulator, 105 V	OB2	For data, refer to MIL Specification				-	-
2D21W	Thyratron, Tetrode	2D21	6.3/600	PIV = 1300 V; $I_{k(av)}$ = 100 mA			Miniature 7-Pin	2-1/8
3B4WA	Beam Power Tube	3B4	For data, refer to MIL Specification				-	-
6AC7W	Sharp-Cutoff Pentode	6AC7	6.3/450	3.3	-	9000	Octal	2-5/8
6AU6WA	Sharp-Cutoff Pentode	6AU6	6.3/300	3.3	-	5200	Miniature 7-Pin	2-1/8
6AU6WB	Sharp-Cutoff Pentode	6AU6	For data, refer to MIL Specification				-	-
6J4WA	High-Mu Triode	6J4	For data, refer to MIL Specification				-	-
6J6WA	Medium-Mu Twin Triode	6J6	For data, refer to MIL Specification				-	-
6X4W	Full-Wave Vacuum Rectifier	6X4	For data, refer to MIL Specification				-	-
12AT7WA (Command)	High-Mu Twin Triode	12AT7	For data, refer to MIL Specification				-	-
12AT7WB	High-Mu Twin Triode	12AT7	For data, refer to MIL Specification				-	-
407A	Medium-Mu Twin Triode	2C51	40/50 20/100	1.35	35	5500	Miniature 9-Pin	1-3/4
408A	Sharp-Cutoff Pentode	6AK5	20/50	1.7	-	5000	Miniature 7-Pin	1-3/4
5636	Sharp-Cutoff Pentode	-	6.3/150	1.1	-	3200	Subminiature	1-3/8
5639	Sharp-Cutoff Pentode	-	6.3/450	4	-	9000	Subminiature	1-3/4
5651	Voltage-Reference Tube	-	Operates at 87 V, 1.5 to 3.5 mA; Regulation max. = 3 V				Miniature 7-Pin	-
5651A	Voltage-Reference Tube	5651	Operates at 85.5 V, 1.5 to 3.5 mA; Regulation max. = 3 V				Miniature 7-Pin	-
5651WA	Voltage-Reference Tube	5651	For data, refer to MIL Specification				-	-
5654 (Command)	Sharp-Cutoff Pentode	6AK5	6.3/175	1.85	-	5100	Miniature 7-Pin	1-3/4
5654/6AK5W	Sharp-Cutoff Pentode	6AK5	For data, refer to MIL Specification				-	-
5654/6AK5W/6096	Sharp-Cutoff Pentode	6AK5	6.3/175	1.65	-	5000	Miniature 7-Pin	1-3/4
5670 (Command)	Medium-Mu Twin Triode	2C51	6.3/350	1.35	35	5500	Miniature 9-Pin	1-3/4
5670WA	Medium-Mu Twin Triode	2C51	6.3/350	1.65	35	5500	Miniature 9-Pin	1-3/4
5686	Beam Power Tube	-	6.3/350	8.25	-	3100	Miniature 9-Pin	2-3/16
5718	Power Triode	-	6.3/150	3.3	27	6500	Subminiature	1-3/8
5719	High-Mu Triode	-	6.3/150	0.55	70	2300	Subminiature	1-3/8
5725	Sharp-Cutoff Pentode	6AS6	6.3/175	1.65	-	3200	Miniature 7-Pin	1-3/4
5726	Twin Diode	6AL5	6.3/300	PIV = 360 V; $I_{o(av)}$ = 10 mA			Miniature 7-Pin	1-3/4
5726/6AL5W	Twin Diode	6AL5	For data, refer to MIL Specification				-	-
5726/6AL5W/6097	Twin Diode	6AL5	6.3/300	PIV = 360 V; $I_{o(av)}$ = 10 mA			Miniature 7-Pin	1-3/4
5727	Thyratron, Tetrode	2D21	6.3/600	PIV = 1300 V; $I_{k(av)}$ = 100 mA			Miniature 7-Pin	2-1/8
5727/2D21W	Thyratron, Tetrode	2D21	For data, refer to MIL Specification				-	-
5749	Remote-Cutoff Pentode	6BA6	6.3/300	3	-	4400	Miniature 7-Pin	2-1/8
5749/6BA6W	Remote-Cutoff Pentode	6BA6	For data, refer to MIL Specification				-	-
5750	Pentagrid Converter	6BE6	6.3/300	1.1	-	-	Miniature 7-Pin	2-1/8
5751 (Command)	High-Mu Twin Triode	12AX7	12.6/175 6.3/350	0.8	70	1200	Miniature 9-Pin	2-3/16
5751WA	High-Mu Twin Triode	12AX7	12.6/175 6.3/350	0.8	70	1200	Miniature 9-Pin	2-3/16
5814A (Command)	Medium-Mu Twin Triode	12AU7	12.6/175 6.3/350	3	17	2200	Miniature 9-Pin	2-3/16
5814WA	Medium-Mu Twin Triode	12AU7	12.6/175 6.3/350	3	17	2200	Miniature 9-Pin	2-3/16
5840	Sharp-Cutoff Pentode	-	6.3/150	1.1	-	5000	Subminiature	1-3/8
5842/417A	Medium-Mu Triode	417A	6.3/300	4.5	43	25000	Miniature 9-Pin	1-3/4
5847/404A	Sharp-Cutoff Pentode	404A	6.3/300	3.3	-	12500	Miniature 9-Pin	1-3/4
5896	Twin Diode	-	6.3/300	PIV = 460 V; $I_{o(av)}$ = 10 mA			Subminiature	-
5899	Semiremote-Cutoff Pentode	-	6.3/150	1.1	-	4500	Subminiature	1-3/8
5902	Beam Power Tube	-	6.3/450	4	-	4200	Subminiature	1-3/4
6005	Beam Power Tube	6AQ5	6.3/450	11	-	4100	Miniature 7-Pin	2-5/8
6005/6AQ5W	Beam Power Tube	6AQ5	For data, refer to MIL Specification				-	-
6005/6AQ5W/6095	Beam Power Tube	6AQ5	6.3/450	11	-	4100	Miniature 7-Pin	2-5/8
6021	Medium-Mu Twin Triode	-	6.3/300	1.1	35	5400	Subminiature	1-3/8
6072	Medium-Mu Twin Triode	12AY7	12.6/175 6.3/350	1.65	44	1750	Miniature 9-Pin	2-3/16
6073	Voltage Regulator, 150 V	OA2	5 to 30 mA; similar to respective prototype but intended for applications critical to shock and vibration.				Miniature 7-Pin	2-5/8
6073/OA2	Voltage Regulator, 150 V	OA2					Miniature 7-Pin	2-5/8
6074	Voltage Regulator, 105 V	OB2					Miniature 7-Pin	2-5/8
6074/OB2	Voltage Regulator, 105 V	OB2					Miniature 7-Pin	2-5/8
6080WA	Twin Power Triode	6AS7G	For data, refer to MIL Specification				-	-
6101	Medium-Mu Twin Triode	6J6	6.3/450	0.85	38	6000	Miniature 7-Pin	2-1/8
6101/6J6WA	Medium-Mu Twin Triode	6J6	6.3/450	1.6	38	6000	Miniature 7-Pin	2-1/8
6111	Medium-Mu Twin Triode	-	6.3/300	1.1	20	5000	Subminiature	1-3/8
6112	High-Mu Twin Triode	-	6.3/300	0.55	70	2500	Subminiature	1-3/8
6136 (Command)	Sharp-Cutoff Pentode	6AU6	6.3/300	3.3	-	5200	Miniature 7-Pin	2-1/8
6186	Sharp-Cutoff Pentode	6AG5	6.3/300	2.5	-	5000	Miniature 7-Pin	2-1/8
6186/6AG5WA	Sharp-Cutoff Pentode	6AG5	For data, refer to MIL Specification				-	-
6189/12AU7WA	Medium-Mu Twin Triode	12AU7	For data, refer to MIL Specification				-	-
6201	High-Mu Twin Triode	12AT7	12.6/150 6.3/300	2.75	60	5500	Miniature 9-Pin	2-3/16
6205	Sharp-Cutoff Pentode	5840	6.3/150	1.1	-	5000	Subminiature	1-3/8
6206	Semiremote-Cutoff Pentode	5899	6.3/150	1.1	-	4500	Subminiature	1-3/8
6386	Medium-Mu Twin Triode	2C51	6.3/350	1.5	17	4000	Miniature 9-Pin	1-3/4
6626/OA2WA	Voltage Regulator, 150 V	OA2	5 to 30 mA; similar to OA2WA but has elevated-bulb-temp. (150°C) life test.				Miniature 7-Pin	2-5/8
6922	Medium-Mu Twin Triode	-	6.3/300	1.5	33	12500	Miniature 9-Pin	2-3/16
7308	Medium-Mu Twin Triode	6922	6.3/335	1.65	33	12500	Miniature 9-Pin	2-3/16
8532	High-Mu Triode	6J4	For data, refer to MIL Specification				-	-
8532/6J4WA	High-Mu Triode	6J4	6.3/400	2.5	52.5	11000	Miniature 7-Pin	2-1/8

Detailed data for these tubes are given in catalog RIT-104D "RCA Industrial Receiving-Type Tubes" and in technical bulletins for the specific devices. For information on these publications, see page 22.

RCA INDUSTRIAL RECEIVING-TYPE NUVISTOR TUBES



CUTAWAY OF TYPICAL NUVISTOR



NUVISTOR TYPES are all-ceramic-metal electron tubes which feature small size, low drain, exceptional uniformity of characteristics, high reliability, and high resistance to nuclear-radiation, shock, and vibration. They are intended for use in low-noise, high-gain industrial applications.

NUVISTOR TUBES

Type	Description and Intended Application	Plate Dissipation Watts	Transconductance μmhos	Base	Maximum Overall Length In.
7586	Medium-Mu Triode. General-purpose type; amplifier to 400 Mc; oscillator to 1000 Mc; "on-off" control. 6.3 V/135 mA heater.	1	11500	Nuvistor 5-Pin	0.800
7587	Sharp-Cutoff Tetrode. Double-ended, general-purpose type; rf, if, and video amplifier; mixer; "on-off" control. Amplifier to 250 Mc; oscillator to 850 Mc. 6.3 V/150 mA heater.	2.2	10600	Nuvistor 5-Pin	1.050
7895	High-Mu Triode. General-purpose type; amplifier to 400 Mc; oscillator to 1000 Mc; "on-off" control. 6.3 V/135 mA heater.	1	9400	Nuvistor 5-Pin	0.800

NUVISTOR TUBES

Type	Description and Intended Application	Plate Dissipation Watts	Transconductance μmhos	Base	Maximum Overall Length In.
8056	Medium-Mu Triode. Low-plate-voltage (12 to 50 V) type; rf and if amplifier; multivibrator; cathode follower; "on-off" control. Amplifier to 300 Mc; oscillator to 800 Mc. 6.3 V/135 mA heater.	0.45	7500	Nuvistor 5-Pin	0.800
8058	High-Mu Triode. Double-ended type; cathode-drive amplifier to 1200 Mc; oscillator to 2000 Mc. 6.3 V/135 mA heater.	1.5	12400	Nuvistor 5-Pin	0.985
8203	Power Triode. Class C rf amplifier, rf oscillator, or frequency multiplier to 250 Mc. 6.3 V/160 mA heater.	1.5	6000	Nuvistor 5-Pin	0.800
8393	Medium-Mu Triode. General-purpose type; amplifier to 400 Mc; oscillator to 1000 Mc; "on-off" control. 13.5 V/60 mA heater.	1	11500	Nuvistor 5-Pin	0.800

RCA INDUSTRIAL RECEIVING-TYPE TUBES FOR UHF APPLICATIONS

TUBES FOR UHF APPLICATIONS

Type	Description and Intended Application	Plate Dissipation Watts	Transconductance μmhos	Base	Maximum Overall Length In.
6F4	Power Triode. Class C rf power amplifier or oscillator to 1200 Mc.	2	5800	Acorn 7-Pin	1-3/8
6J4	High-Mu Triode. Cathode-drive amplifier to 500 Mc.	2.25	12000	Miniature 7-Pin	2-1/8
6J4WA (Premium)	High-Mu Triode. Cathode to 500 Mc.	For data refer to MIL Specification			
6L4	Medium-Mu Triode. RF amplifier to 1200 Mc.	1.7	6400	Acorn 7-Pin	1-3/8
955	Power Triode. Class C rf power amplifier or oscillator to 600 Mc.	1.6	2200	Acorn 5-Pin	1-3/8
956	Remote-Cutoff Pentode. RF or if amplifier, or mixer to 430 Mc.	1.7	1800	Acorn 5-Pin with 2 leads	1-7/8
957	Medium-Mu Triode. RF amplifier.		650	Acorn 5-Pin	1-3/8
958A	Power Triode. Class C rf power amplifier or oscillator to 350 Mc.	0.6	1200	Acorn 5-Pin	1-3/8
959	Sharp-Cutoff Pentode. RF amplifier.		600	Acorn 5-Pin with 2 leads	1-7/8
5636 (Premium)	Sharp-Cutoff Pentode. RF, gated, or gain-controlled amplifier, mixer, or in delay circuits to 400 Mc.	1.1	3200	Subminiature	1-3/8
5718 (Premium)	Power Triode. Class C rf power amplifier or oscillator to 1000 Mc.	3.3	6500	Subminiature	1-3/8
5840 (Premium)	Sharp-Cutoff Pentode. Rf or if amplifier to 400 Mc.	1.1	5000	Subminiature	1-3/8

TUBES FOR UHF APPLICATIONS

Type	Description and Intended Application	Plate Dissipation Watts	Transconductance μmhos	Base	Maximum Overall Length In.
5896 (Premium)	Twin Diode. Detector or low-current rectifiers.	PIV = 460 V $I_{o(av)}$ = 10 mA		Subminiature	1-3/8
5899 (Premium)	Semiremote-Cutoff Pentode. RF or if amplifier to 400 Mc.	1.1	4500	Subminiature	1-3/8
6206 (Premium)	Semiremote-Cutoff Pentode. RF or if amplifier to 400 Mc.	1.1	4500	Subminiature	1-3/8
6939	Twin Power Pentode. Class C push-pull rf power amplifier, oscillator, or frequency multiplier to 500 Mc.	6	10500	Miniature 9-Pin	2-5/8
7586	Medium-Mu Triode. General-purpose nuvistor type; amplifier to 400 Mc; oscillator to 1000 Mc.	1	11500	Nuvistor 5-Pin	0.800
7587	Sharp-Cutoff Tetrode. General-purpose nuvistor type; oscillator to 850 Mc.	2.2	10600	Nuvistor 5-Pin	1.050
7895	High-Mu Triode. General-purpose nuvistor type; amplifier to 400 Mc; oscillator to 1000 Mc.	1	9400	Nuvistor 5-Pin	0.800
8056	Medium-Mu Triode. Low-plate-voltage (12 to 50 V) nuvistor type; oscillator to 800 Mc.	0.45	7500	Nuvistor 5-Pin	0.800
8058	High-Mu Triode. Double-ended nuvistor type; cathode-drive amplifier to 1200 Mc; oscillator to 2000 Mc.	1.5	12400	Nuvistor 5-Pin	0.985

Detailed data for these tubes are given in catalog RIT-104D "RCA Industrial Receiving-Type Tubes" and in technical bulletins for the specific devices. For information on these publications, see page 22.

RCA INDUSTRIAL RECEIVING-TYPE TUBES FOR UHF APPLICATIONS

TUBES FOR UHF APPLICATIONS

Type	Description and Intended Application	Plate Dissipation Watts	Transconductance μmhos	Base	Maximum Overall Length In.
8393	Medium-Mu Triode. General-purpose nuvistor type; amplifier to 400 Mc; oscillator to 1000 Mc.	1	11500	Nuvistor 5-Pin	0.800
8532/ 6J4WA (Premium)	High-Mu Triode. Cathode-drive amplifier to 500 Mc.	2.5	11000	Miniature 7-Pin	2-1/8
9001	Sharp-Cutoff Pentode. RF amplifier or mixer.	0.5	1400	Miniature 7-Pin	1-3/4
9002	Power Triode. Class C rf power amplifier or oscillator to 500 Mc.	1.6	2200	Miniature 7-Pin	1-3/4

TUBES FOR UHF APPLICATIONS

Type	Description and Intended Application	Plate Dissipation Watts	Transconductance μmhos	Base	Maximum Overall Length In.
9003	Remote-Cutoff Pentode. RF or if amplifier, or mixer to 430 Mc.	1.7	1800	Miniature 7-Pin	1-3/4
9005	Diode. Detector or low-current rectifier. Resonant frequency = 1500 Mc.	PIV = 165 V $I_{o(av)}$ = 1 mA		Acorn 5-Pin	1-3/8
9006	Diode. Detector or low-current rectifier. Resonant frequency = 700 Mc.	PIV = 750 V $I_{o(av)}$ = 5 mA		Miniature 7-Pin	1-3/4

Detailed data for these tubes are given in catalog RIT-104D "RCA Industrial Receiving-Type Tubes" and in technical bulletins for the specific devices. For information on these publications, see page 22.

RCA INDUSTRIAL RECEIVING-TYPE TUBES FOR VOLTAGE AMPLIFICATION

VOLTAGE AMPLIFIERS

Type	Description and Intended Application	Plate Dissipation Watts	Transconductance μmhos	Base	Maximum Overall Length In.
6AS6	Sharp-Cutoff Pentode. Gated amplifier, gain-controlled amplifier, mixer, and in delay circuits. 6.3V/175 mA heater.	1.7	3200	Miniature 7-Pin	1-3/4
6DJ8	Medium-Mu Twin Triode. RF and if amplifier, cascode amplifier, mixer, and phase inverter. 6.3V/365 mA heater.	1.8	12500	Miniature 9-Pin	2-3/16
12SW7	Twin Diode--Medium-Mu Triode. Combined detector and voltage amplifier. Metal type capable of operating from 24-V storage-battery systems. 12.6V/150 mA heater.	2.5	1900	Octal	2-5/8

Type	Description and Intended Application	Plate Dissipation Watts	Transconductance μmhos	Base	Maximum Overall Length In.
12SX7GT	Medium-Mu Twin Triode. Capable of operating from 24-V storage-battery systems. 12.6V/300 mA heater.	2.5	2600	Octal	3-5/16
5687	Medium-Mu Twin Triode. 12.6V/450 mA heater having mid-tap.	4.2	5400	Miniature 9-Pin	2-3/16
6688A	Sharp-Cutoff Pentode. For wide-band applications. 6.3V/300 mA heater.	3	16500	Miniature 9-Pin	1-3/4

RCA INDUSTRIAL RECEIVING-TYPE TUBES FOR "ON-OFF" CONTROL APPLICATIONS

TUBES FOR "ON-OFF" CONTROL APPLICATIONS
(Involving Long Periods of Operation Under Cutoff Conditions)

Type	Description and Intended Application	Heater Volts/mA	Plate Dissipation Watts	Base	Maximum Overall Length In.
6AS6	Sharp-Cutoff Pentode. Gated amplifier, gain-controlled amplifier, mixer, and in delay circuits. Two control grids. RF amplifier to 400 Mc.	6.3/175	1.7	Miniature 7-Pin	1-3/4
5915	Pentagrid Amplifier. Gated amplifier. Two control grids.	6.3/300	1	Miniature 7-Pin	2-1/8
5963	Medium-Mu Twin Triode. Frequency divider.	12.6/150 6.3/300	2.5	Miniature 9-Pin	2-3/16
5964	Medium-Mu Twin Triode. Frequency divider.	6.3/450	1.5	Miniature 7-Pin	2-1/8
5965	Medium-Mu Twin Triode. Frequency divider.	12.6/225 6.3/450	2.4	Miniature 9-Pin	2-3/16
6197	Power Pentode. Frequency divider, pulse amplifier.	6.3/650	7.5	Miniature 9-Pin	2-5/8
6211	Medium-Mu Twin Triode. Frequency divider.	12.6/150 6.3/300	1	Miniature 9-Pin	2-3/16

Type	Description and Intended Application	Heater Volts/mA	Plate Dissipation Watts	Base	Maximum Overall Length In.
6350	Medium-Mu Twin Triode. Frequency divider, pulse amplifier, inverter, cathode follower, multivibrator.	12.6/300 6.3/600	4	Miniature 9-Pin	2-5/8
6814	Medium-Mu Triode. Pulse amplifier, inverter, or cathode follower.	6.3/150	2.2	Subminiature	1-3/8
6887	Twin Diode. Switching circuits.	6.3/200	PIV = 360 V $I_{o(av)}$ = 10 mA	Miniature 7-Pin	1-5/8
6922 (Premium)	Medium-Mu Twin Triode. RF or if amplifier, mixer, phase inverter, or in cascode circuits.	6.3/300	1.5	Miniature 9-Pin	2-3/16
7044	Medium-Mu Twin Triode. Frequency divider, pulse amplifier, inverter, cathode follower, or multivibrator.	12.6/450 6.3/900	4.5	Miniature 9-Pin	2-5/8

Detailed data for these tubes are given in catalog RIT-104D "RCA Industrial Receiving-Type Tubes" and in technical bulletins for the specific devices. For information on these publications, see page 22.

RCA INDUSTRIAL RECEIVING-TYPE TUBES OPERATING FROM BATTERIES OR BATTERY-CHARGER SYSTEMS

Nominal-6-V Storage-Battery Types

Type	Description and Intended Application	Plate Dissipation Watts	Transconductance μmhos	Base	Maximum Overall Length In.
6660/ 6BA6	Remote-Cutoff Pentode. Wide-band hf amplifier.	3.3	4400	Miniature 7-Pin	2-1/8
6661/ 6BH6	Sharp-Cutoff Pentode. Wide-band hf amplifier.	3.3	4600	Miniature 7-Pin	2-1/8
6662/ 6BJ6	Remote-Cutoff Pentode. Wide-band hf amplifier.	3.3	3600	Miniature 7-Pin	2-1/8
6663/ 6AL5	Twin Diode. Detector or low-current rectifier.	PIV = 275 V $I_{o(av)}$ = 10 mA		Miniature 7-Pin	
6664/ 6AB4	High-Mu Triode. Cathode-drive rf amplifier, frequency converter, or oscillator to 300 Mc.	2.9	10900	Miniature 7-Pin	2-1/8
6669/ 6AQ5A	Beam Power Tube. AF power amplifier.	12	4100	Miniature 7-Pin	2-5/8
6676/ 6CB6A	Sharp-Cutoff Pentode. RF or if amplifier.	2.3	8000	Miniature 7-Pin	2-1/8
6677/ 6CL6	Power Pentode. AF power amplifier.	8.5	11000	Miniature 9-Pin	2-5/8
6678/ 6U8A	Medium-Mu Triode -- Sharp Cutoff Pentode. Combined oscillator-mixer in receivers having 40-Mc if stages.	3T 3P	8500T 5200P	Miniature 9-Pin	2-3/16
6679/ 12AT7	High-Mu Twin Triode. Cathode-drive amplifier or frequency converter to 300 Mc.	2.8	5500	Miniature 9-Pin	2-3/16
6680/ 12AU7A	Medium-Mu Twin Triode. General-purpose amplifier, oscillator, phase inverter, or multivibrator.	3	2200	Miniature 9-Pin	2-3/16
6681/ 12AX7A	High-Mu Twin Triode. General-Purpose amplifier, oscillator, phase inverter, or multivibrator.	1.1	1600	Miniature 9-Pin	2-3/16
7717/ 6CY5	Sharp-Cutoff Tetrode. RF amplifier at vhf frequencies.	2	8000	Miniature 9-Pin	2-1/8
7905	Beam Power Tube. Class C rf power amplifier, oscillator, or frequency multiplier to 175 Mc. Filament warm-up time less than one second.	10	6700	Miniature 9-Pin	2-5/8

Nominal-12-V Storage-Battery Types

Type	Description and Intended Application	Plate Dissipation Watts	Transconductance μmhos	Base	Maximum Overall Length In.
7054	Power-Pentode. Class C rf power amplifier, oscillator, or frequency multiplier to 40 Mc; af power amplifier or modulator.	5	11500	Miniature 9-Pin	2-5/8
7055	Twin Diode. Detector or low-current rectifier.	PIV = 350 V $I_{o(av)}$ = 10 mA		Miniature 7-Pin	
7056	Sharp-Cutoff Pentode. RF or if amplifier to 45 Mc.	2	6200	Miniature 7-Pin	2-1/8
7057	Medium-Mu Twin Triode. RF amplifier in cascode-type circuits to 200 Mc.	2.2	6800	Miniature 9-Pin	2-3/16
7058	High-Mu Twin Triode. Useful in phase-inverter, resistance-coupled-amplifier, and low-frequency-oscillator applications.	1	1650	Miniature 9-Pin	2-3/16
7059	Medium-Mu Triode-- Sharp-Cutoff Pentode. Combined oscillator-mixer in receivers having 40-Mc if stages.	2.5T 2.8P	8500T 5200P	Miniature 9-Pin	2-3/16

Nominal-12-V Storage-Battery Types (Cont'd)

Type	Description and Intended Application	Plate Dissipation Watts	Transconductance μmhos	Base	Maximum Overall Length In.
7060	Medium-Mu Triode -- Power Pentode. Combined triode class A1 amplifier and pentode class C 40-Mc rf power amplifier or oscillator.	2.5T 3P	4900T 7000P	Miniature 9-Pin	2-3/16
7061	Beam Power Tube. AF power amplifier.	9	4200	Miniature 9-Pin	2-5/8
7167	Sharp-Cutoff Tetrode. Voltage amplifier.	2	8000	Miniature 7-Pin	2-1/8
7551	Beam Power Tube. Class C rf power amplifier, oscillator, or frequency multiplier to 175 Mc; af power amplifier or modulator.	10	5300	Miniature 9-Pin	2-5/8
7724/ 14GT8	Twin Diode--High-Mu Triode. Combined fm detector and voltage amplifier.	1.1T	1000T	Miniature 9-Pin	2-3/16
7898	High-Mu Twin Triode. Oscillator, mixer, limiter, or dc amplifier.	2.75	5500	Miniature 9-Pin	2-3/16
8077/ 7054	Power Pentode. Class C rf power amplifier, oscillator, or frequency multiplier to 40 Mc; af power amplifier.	0.575	11500	Miniature 9-Pin	2-3/16

Nominal-24-V Storage-Battery Types

26A6	Remote-Cutoff Pentode. RF amplifier.	3	2000	Miniature 7-Pin	2-1/8
26A7GT	Twin Beam Power Tube. Push-pull af power amplifier.	2	5700	Octal	3-13/16
26C6	Twin Diode--Medium-Mu Triode. Combined detector and voltage amplifier.	2.5T	1100T	Miniature 7-Pin	2-1/8
26D6	Pentagrid Converter. Combined oscillator-mixer. g_c = 475 μmhos at E_b = 250 volts	1		Miniature 7-Pin	2-1/8
6082	Twin Power Triode. Series voltage regulator for high-current dc voltage supplies. Max.-rated I_b = 125 mA	13	7000	Octal	4-1/16

Dry-Cell-Battery Types

1L4	Sharp-Cutoff Pentode. RF amplifier. 1.4V/ 50 mA filament.		1025	Miniature 7-Pin	2-1/8
3A4	Power Pentode. Class C rf power amplifier to 10 Mc; af power amplifier. 2.8V/100 mA filament having mid-tap.	2	1900	Miniature 7-Pin	2-1/8
3A5	Twin Power Triode. Class C rf power amplifier or oscillator to 40 Mc; af power amplifier. 2.8V/110 mA filament having mid-tap.	1	1800	Miniature 7-Pin	2-1/8
1619	Beam Power Tube. Class C rf power amplifier or oscillator to 45 Mc; Class AB1 af power amplifier or modulator. 2.5V/2A filament.	15	4500	Octal	4-5/16
5642	Half-Wave Vacuum Rectifier. Pulsed rectifier, 1.25 V/200 mA filament.	PIV = 10 kV $I_{o(av)}$ = 0.25 mA		Subminiature	2.380
5672	Power Pentode. Class A power amplifier, 1.25V/50 mA filament.	0.065	650	Subminiature	1-1/2
5678	Sharp-Cutoff Pentode. Voltage amplifier. 1.25V/50 mA filament.		1150	Subminiature	1-1/2

Detailed data for these tubes are given in catalog RIT-104D "RCA Industrial Receiving-Type Tubes" and in technical bulletins for the specific devices. For information on these publications, see page 22.

HIGH-POWER TRIGGER TUBES

THYRATRONS
Triodes

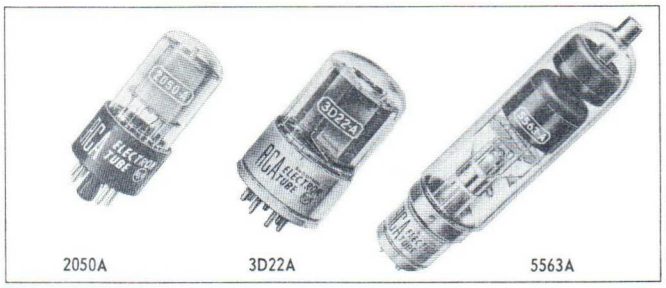
Gas Types

Type	Peak Forward Anode Volts	Peak Anode or Cathode (k) Amps	Average Anode Amperes	Maximum Dimensions	
				Overall Length In.	Diameter In.
629	350	0.2	0.04	4-1/4	1-9/16
6130/3C45	3000	35	0.045	5-3/16	1-9/16
C1K/6014	1000	8	1	4-5/16	1-9/16
C3J/5632	900	30	2.5	6	1-5/8
C3JA/5684	1000	30	2.5	6	1-5/8
C3JL	900	30	2.5	6-3/4	2-3/16
C6J/5C21	750	77	6.4	9-1/2	2-1/16
C6JA/5685	1000	77	6.4	9-1/2	2-1/32
C16J/5665	1000	100	18	10-1/2	2-9/16

Mercury-Vapor Types

Type	Peak Forward Anode Volts	Peak Anode or Cathode (k) Amps	Average Anode Amperes	Maximum Dimensions	
				Overall Length In.	Diameter In.
3C23	1250	6	1.5	6-1/8	2-1/16
627	2500	2.5	0.64	6-5/8	2-1/16
676	750	77 k	2.5	11-3/4	3-13/16
677	10,000	16 k	4	11-11/16	3-13/16
710/6011	1500	30 k	2.5	6-1/4	1-5/8
714/7021	1250	3	1.0	6-1/8	2-1/16

Detailed data for these tubes are given in catalog PWR-506A "Product Guide for RCA Power Tubes" and in technical bulletins for the specific devices. For information on these publications, see page 22.



THYRATRONS
Triodes (Cont'd)

Mercury-Vapor Types

Type	Peak Forward Anode Volts	Peak Anode or Cathode (k) Amps	Average Anode Amperes	Maximum Dimensions	
				Overall Length In.	Diameter or Radius (r) In.
716/6855	1250	8.0 k	1.0	4-3/8	1-9/16
760/6858	1500	77 k	6.4	9-1/2	2-7/16
5557	5000	1	0.25	6-1/8	2-1/16
	2500	2	0.5		
	1250	3	1.0		
5559	1000	15 k	2.5	7-1/4	3
5563A	15,000	10	1.8	10-17/32	2-5/8

Tetrodes

Gas Types

3D22A	650	8	0.8	4-5/8	2-3/8

Mercury-Vapor Types

105	10,000	16	4	11-1/4	2-1/2 r
172	750	77	2.5	10-27/32	2-5/8 r
632B	1500	30	2.5	8-5/16	1-3/4 r
672A	2500	40 k	3.2	8-3/8	2-5/16
5560	1000	150 k	2.5	7-15/16	2-1/4 r

LOW AND INTERMEDIATE-POWER TRIGGER TUBES

THYRATRONS
Triodes

Type	Heater Volts/Amp	Peak Anode Volts	Average Anode Amperes	Base	Maximum Overall Length In.
884	6.3/0.6	±350	0.075	Octal	4-1/8
885	2.5/1.5	±350	0.075	Small 5-Pin	4-3/16

Tetrodes

2D21	6.3/0.6	+650 -1300	0.1	Miniature 7-Pin	2-1/8
2D21W (Premium)	6.3/0.6	+650 -1300	0.1	Miniature 7-Pin	2-1/8
502A	6.3/0.6	+650 -1300	0.1	Octal	2-5/8
2050	6.3/0.6	+650 -1300	0.1	Octal	4-1/8
2050A	6.3/0.6	+650 -1300	0.1	Octal	3-1/16
5696	6.3/0.15	±500	0.025	Miniature 7-Pin	1-3/4

THYRATRONS
Tetrodes (Cont'd)

Type	Heater Volts/Amp	Peak Anode Volts	Average Anode Amperes	Base	Maximum Overall Length In.
5727 (Premium)	6.3/0.6	+650 -1300	0.1	Miniature 7-Pin	2-1/8
5727/2D21W (Premium)	For data, refer to MIL Specification.				
6012	6.3/2.6	+650 -1300	0.5	Octal	3-7/8

COLD-CATHODE TYPES

OA4G	-	±225	0.025	Octal	4-1/8
1C21	-	-	0.025	Octal	2-5/8
5823	-	±200	0.025	Miniature 7-Pin	2-1/8

Detailed data for these tubes are given in catalog RIT-104D "RCA Industrial Receiving-Type Tubes" and in technical bulletins for the specific devices. For information on these publications, see page 22.

IGNITRONS

Water-Cooled Types

Type	Resistance-Welding Control Service			Maximum Dimensions	
	Demand Power KVA	Peak Amp.	Avg. Amp.	Overall Length In.	Diameter or Radius (r) In.
5550	50	282	9	9-13/16	2-1/2
	150	846	4.86		
	100	564	22.4		
	300	1692	12.1		
5551A	200	1130	56	13	2-7/8 r
	600	3400	30.2		
	200	466	56		
	600	1410	30.2		

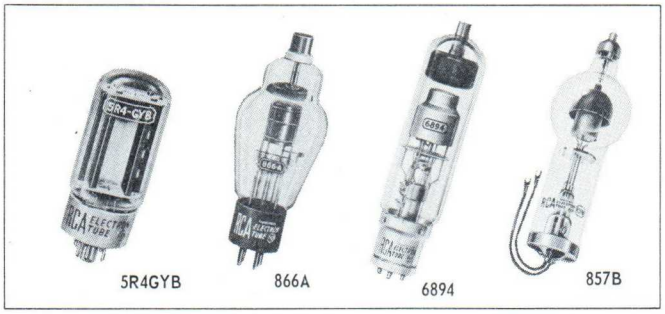
IGNITRONS

Water-Cooled Types

Type	Resistance-Welding Control Service			Maximum Dimensions	
	Demand Power KVA	Peak Amp.	Avg. Amp.	Overall Length In.	Diameter or Radius (r) In.
5552A	400	2260	140	14	3-5/8 r
	1200	6800	75.6		
	400	945	140		
	1200	2830	75.6		
5553B	800	4530	355	19-1/2	4-11/16 r
	2400	13,600	192		
	800	1890	355		
	2400	5660	192		

Detailed data for these tubes are given in catalog PWR-506A "Product Guide for RCA Power Tubes" and in technical bulletins for the specific devices. For information on these publications, see page 22.

RCA RECTIFIERS



HIGH-POWER RECTIFIERS

RECTIFIERS
Vacuum Types

Half-Wave Types

Type	Peak Inverse Anode Volts	Peak Anode Amp	Average Anode Amp	Maximum Dimensions	
				Overall Length In.	Diameter In.
2X2A	12,500	0.06	0.0075	4-17/32	1-9/16
579B	20,000	0.27	0.025	7-7/16	2-1/8
836	5000	1.0	0.25	6-9/16	2-7/16
1616	6000	0.8	0.13	6-13/16	2-1/16
5825	60,000	0.04	0.002	5-27/32	2-1/16
8013A	40,000	0.15	0.02	6-1/16	2-1/16
8020	40,000	1.5	0.1	8	2-5/16

Gas Types

Half-Wave Types

3B25	4500	2	0.5	6-5/16	2-1/16
3B28	10,000	1	0.25	6.15	2-1/16
	5000	2	0.5		

RECTIFIERS
Mercury-Vapor Types

Half-Wave Types

Type	Peak Inverse Anode Volts	Peak Anode Amp	Average Anode Amp	Maximum Dimensions	
				Overall Length In.	Diameter In.
575A	15,000	6	1.5	11-1/16	3-1/8
	10,000	7	1.75		
615/7018	2000	10	2.5	6-3/8	2-1/16
635/7019	1000	77	6.4	9-1/2	2-1/16
635L/7020	Same as 635/7019			9-1/2	2-3/16
673	Refer to 575A			11-3/8	3-1/8
816	7500	0.5	0.125	4-11/16	1-9/16
857B	22,000	40	10	19-7/8	7-1/8
	10,000	40	10		
866A	10,000	1	0.25	6-9/16	2-7/16
	5000	1	0.25		
	2500	2	0.5		
869B	20,000	10	2.5	14-7/16	5-1/8
	15,000	10	2.5		
	10,000	10	2.5		
872A	10,000	5	1.25	8-1/2	2-5/16
	5000	5	1.25		
4620	Refer to 857B			19-7/8	7-1/8
5558	5000	15	2.5	7	1-9/16
	2000	15	2.5		
5561	3000	40	6.4	11-1/4	3-13/16
	10,000	16	4.0		
6894	20,000	8.3	1.8	10-17/32	2-5/8
	15,000	8.3	1.8		
	10,000	8.3	1.8		
6895	Refer to 6894			10-13/32	2-5/8
8008	Refer to 872A			8-3/4	2-5/16

Full-Wave Types

604/7014	900	10	2.5	7-1/2	2-1/16

Detailed data for these tubes are given in catalog PWR-506A "Product Guide for RCA Power Tubes" and in technical bulletins for the specific devices. For information on these publications, see page 22.

LOW AND INTERMEDIATE-POWER RECTIFIERS AND DETECTOR DIODES

RECTIFIERS AND DIODES

Power Rectifiers

Type	Filament or Heater Volts/Amp	Peak Inverse Volts	Average Output Current mA	Base	Maximum Overall Length In.
OZ4A		880	110	Octal	2-5/8
5R4GY	5/2	2400	175	Octal	5-5/16
5R4GYB	5/2	2650	147	Octal	4-1/4
6X4W (Premium)	For data, refer to MIL Specification.				
83	5/3	1550	225	Small 4-Pin	5-3/8
5690	12.6/1.2	1120	74	Octal	4-1/4
	6.3/2.4				
6202	6.3/0.6	1250	50	Miniature 7-Pin	2-5/8

Pulsed Rectifier

5642	1.25/0.200	10000	0.25	Subminiature	2.380

Twin Diode For "On-Off" Control

6887	6.3/0.200	360	10	Miniature 7-Pin	1-5/8

Detector Diodes or Low-Current Rectifiers

Type	Filament or Heater Volts/Amp	Peak Inverse Volts	Average Output Current mA	Base	Maximum Overall Length In.
5726	6.3/0.300	360	10	Miniature 7-Pin	1-3/4
(Premium)					
5726/6AL5W (Premium)	For data, refer to MIL Specification.				
5726/6AL5W/6097 (Premium)	6.3/0.300	360	10	Miniature 7-Pin	1-3/4
5896 (Premium)	6.3/0.300	460	10	Subminiature	1-3/8
6663/6AL5	6.3/0.300	275	10	Miniature 7-Pin	1-3/4
7055	13.5/0.155	350	10	Miniature 7-Pin	1-3/4
9005	3.6/0.165	165	1	Acorn 5-Pin	1-3/8
9006	6.3/0.150	750	5	Miniature 7-Pin	1-3/4

Detailed data for these tubes are given in catalog RIT-104D "RCA Industrial Receiving-Type Tubes" and in technical bulletins for the specific devices. For information on these publications, see page 22.

RCA VACUUM GAUGE TUBES


1946

Type 1946

- Range: 1 to 10^{-4} Torr
- Thermocouple Type
- Hard Glass Envelope
- Maximum Operating Temperature of 50° C
- Bakeable to 375° C


1947

Type 1947

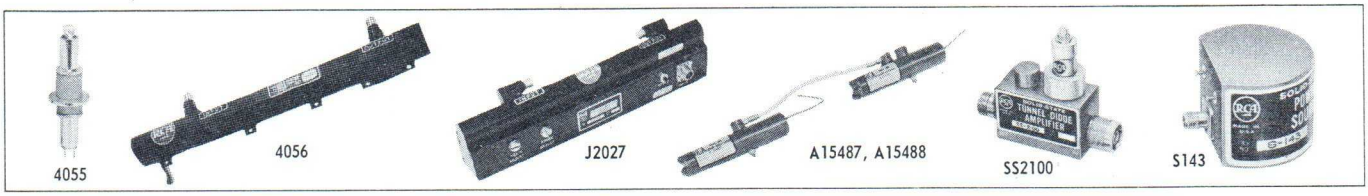
- Range: 0.5 to 10^{-2} Torr (Lower at Reduced Sensitivity)
- Pirani Type
- Soft Glass Envelope
- Maximum Operating Temperature of 60° C


1949

Type 1949

- Range: 10^{-3} to 5×10^{-7} Torr
- Ionization Type
- Hard Glass Envelope
- Maximum Operating Temperature of 100° C
- Tungsten Filament (With Spare)
- Bakeable to 375° C

Detailed data for these tubes are given in technical bulletins for the specific devices. For information on these publications, see page 22.



PENCIL TUBES are small, light-weight microwave devices incorporating coaxial-electrode construction which results in low heater power, fast warm-up time, and good thermal stability. They are especially suitable for cavity-type circuits.

Typical Applications

- Communications Equipment
- Receivers and Transmitters
- Radiosondes and Rocketsondes
- Telemetry Equipment
- Transponders
- Radar
- Test Equipment

PENCIL TUBES

Ceramic-Metal Triodes

Type	Class of Service	Typical		Maximum Dimensions	
		Frequency Gc	Power Output Watts	Overall Length In.	Diameter In.
4028A	Pulsed Oscillator	3.3	250 Peak	1.620	0.557
4055	Pulsed Oscillator	3.3	1800 Peak	1.77	0.557
7552	A1 Amplifier	0.55	16.5 db gain	1.620	0.557
7553	A1 Amplifier	0.7	17 db gain	1.620	0.557
7554	Amplifier	1	1.4	1.620	0.557

Glass-Metal Triodes

4037A	Oscillator	2	0.45	3.125	1.312
5675	Oscillator	1.7	0.475	2.252	0.817
5876A	Amplifier	0.5	5	2.252	0.817
5893	Pulsed Oscillator	3.3	1200 Peak	2.297	0.817
6263A	Amplifier	0.5	7	2.63	1.010
6264A	Amplifier	0.5	7.5	2.63	1.010

Glass-Metal Diode

Type	Class of Service	Peak Inverse Plate Volts	Average Plate Ma	Maximum Dimensions	
				Overall Length In.	Diameter In.
6173	Pulse Detector Rectifier	1000	1	2.227	0.320
		375	5.5		

Integral-Cavity Triodes

Type	DC Power Input Watts	Typical		Maximum Dimensions	
		Frequency Gc	Power Output Watts	Overall Length In.	Diameter In.
6562/5794A	4	1.68	0.6	3.256	0.98
7533	4	1.68	0.575	3.23	0.98
A15487 - A15488	-	1.09	500 Peak	4-3/8	7/8

PACKAGED SOLID-STATE MICROWAVE DEVICES are integral microwave circuits with associated solid-state components. They provide sources of microwave power, amplification, frequency multiplication, and down conversion.

Typical Applications

- Driver Chains for Radar
- Radio-Relay Equipment
- Signal Sources for Parametric Amplifiers
- Highly Stable Local Oscillators
- Telemetry Equipment

SOLID-STATE DEVICES

Tunnel-Diode Amplifier

Type	Frequency Range Gc	Gain Db	Max. Noise Figure Db	Maximum Dimensions In.
SS2100	5.4-7.1	13.5	4.5	4 X 2 X 3.25

Varactor Frequency Multiplier

Type	Multiplication Factor	Output Freq. Range Gc	Power Output Watts	Maximum Dimensions In.
SS1032	X48	4.9-5.1	0.4	4 X 4 X 2

Power Sources — Varactor Frequency Multipliers with Integral Oscillators

Type	Type of Oscillator	Frequency Range Gc	Power Output Watts	Maximum Dimensions	
				Overall Length In.	Diameter In.
S127	Transistor	1.5-1.8	1	1.7	1.8
S139	Crystal Controlled	2.375-2.625	2.5	4-1/4 X 4-1/8 X 2-1/8	
S143	Transistor	1.5-1.8	0.25	1.25	1.8

TRAVELING-WAVE TUBES are characterized by extremely wide bandwidth, large dynamic range, and high-gain capability.

Typical Applications

- Communication Equipment
- Electronic Counter Measures
- Radar
- Satellites
- Telemetry Equipment

TRAVELING-WAVE TUBES

Low-Noise Types — With Solenoid Focusing

Type	Frequency Range Gc	Min. Power Output Mw	Max. Noise Figure Db	Maximum Dimensions	
				Overall Length In.	Diameter In.
6861	2.7-3.5	0.25	7	19-3/8	1.390
8379	2.32-2.68	1.0	5	19.50	1.390
A1056	1.1-1.4	0.25	9	19-3/8	1-3/8
A1078V1	2.5-4	0.25	8	19-3/8	1-3/8
A1078V10	2.09-2.41	0.25	8	19-3/8	1-3/8
A1207V17	2.7-3.5	1.0	5	19-3/8	1-3/8
A1207V26	2.19-2.31	1.0	5	19-3/8	1-3/8
A1207V29	3.5-4	1.0	5	19-3/8	1-3/8
A1217	1.1-1.4	0.5	5	19-3/8	1-3/8

Intermediate-Noise Types — With Periodic-Permanent-Magnet Focusing

4017	2-4	10	16	16	1-1/2
4019	1-2	10	16	17-3/8	1-1/2
A1294	1-2	10	12	17 X 2 X 2	
A1295	2-4	10	13	14-1/2 X 2 X 2	

Low-Power Types

Type	Frequency Range Gc	Min. Power Output Watts	Min. Small-Signal Gain Db	Maximum Dimensions	
				Overall Length In.	Diameter In.
4053	1-2	10	25	20-1/2	1-5/8
4054	1.7-2.7	17	28	19	1-5/8
4056	2.2-3	13	33	13 X 1-1/4 X 1.8	
7642	1.7-2.3	18	28	20-1/2	1-5/8
A1113	2.7-3.5	0.1	30	15-3/8	1-1/2
A1243	2-4	2	30	16-3/4	1-3/4
A1297	2-4	0.005	14	6-1/2	1-1/2
A1308	1.5-4.5	0.01	33	12	1-1/2
A1309	1.9-4.1	1	35	13	1-3/4
A1310	2.6-5.2	3	35	15-1/2	2
A1311	1.9-4.1	1	35	15-1/2	2

Amplifier Subsystems — Includes Power Supplies

J2027	1.5-4.5	0.01	33	12 X 3-1/4 X 1-9/16
J2028	1.7-2.3	18	28	

Pulse Types

Type	Frequency Range Gc	Min. Peak Power Output Watts	Duty Factor	Maximum Dimensions	
				Overall Length In.	Diameter In.
A1179	2-4	100	0.1	19-3/4	2-1/2

MAGNETRONS are of the fixed-frequency, pulsed oscillator type.

Typical Applications

- Weather and Other Radar
- Beacons
- Missile Guidance Systems

MAGNETRONS

Type	Frequency Gc	Min. Peak Power Output Kw	Duty Factor	Maximum Dimensions In.
6521	5.4±.02	75	0.001	7-1/8 X 7-7/32 X 4-1/2

Italics indicate a developmental type.

Detailed data for these devices are given in the MWD-100 Series catalogs "RCA Microwave Devices" and in technical bulletins for the specific devices. For information on these publications, see page 22.

TECHNICAL PUBLICATIONS ON RCA INDUSTRIAL TUBE PRODUCTS

■ **RCA PHOTOCELLS – CSS-800 –** 36 pages. Contains technical data on RCA solid-state photoconductive, photojunction, and photovoltaic cells. Features photoelectric measurements of both visible and radiant energy, construction and electrical characteristics of RCA photocells, representative circuits, replacement guide, and supplementary information for the user of light-controlled and light-detection systems. Price 40 cents.*

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■ **RCA PENCIL TUBE CLASSIFICATION CHARTS — MWD-102 —** 1 page. Contains catalog type data for pencil tubes. Single copy free from RCA, Commercial Engineering, Harrison, N.J.

■ **RCA INTERCHANGEABILITY DIRECTORY OF INDUSTRIAL-TYPE ELECTRON TUBES – ID-1020E –** 12 pages. Lists more than 2100 basic type designations for 20 classes of industrial tube types; shows the RCA direct replacement type or RCA similar type, when available. Price 20 cents.*

■ **RCA PHOTOMULTIPLIER AND IMAGE TUBES — PIT-700 —** 36 pages. Includes concise data on RCA photomultiplier tubes, gas and vacuum photodiodes, and image-converter tubes. Includes response curves for photo and image tubes, sockets and shields for phototubes, and dimensional outlines for photo and image tubes. Price 60 cents.*

■ **RCA CAMERA TUBES – CAM-600 –** 16 pages. Contains classification charts, defining data and typical characteristic curves for RCA image orthicons and vidicons. Camera tubes recommended for new equipment design are highlighted. Price 50 cents.*

■ **RCA INDUSTRIAL RECEIVING-TYPE TUBES — RIT-104D —** 52 pages. Concise technical data on more than 200 types used in military, industrial, and commercial equipment. Includes application guide, chart of prototype versus similar RCA industrial type, interchangeability list of domestic versus RCA replacements, terminal diagrams, and socket and connector information. Price 40 cents.*

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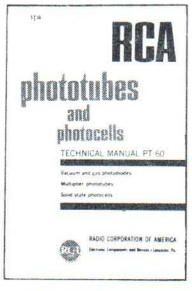

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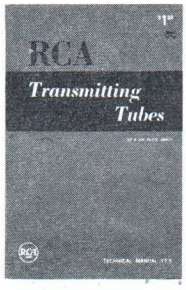

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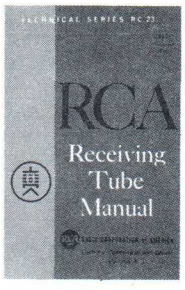

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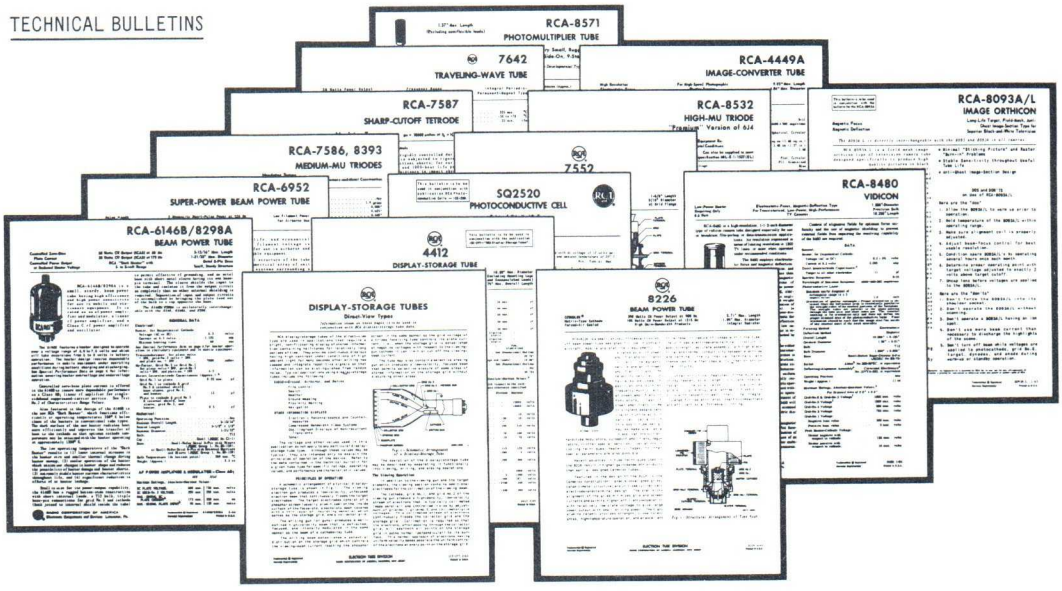
The listed catalogs and manuals are generally available from your RCA Industrial Tube Distributor. All of the listed publications may be obtained by writing to RCA, Commercial Engineering, Harrison, N.J.

* Suggested retail price.

TECHNICAL PUBLICATIONS ON RCA INDUSTRIAL TUBE PRODUCTS

TECHNICAL BULLETINS



INDEX TO TYPES

INDEX TO TYPES

[a] The type number identifies a particular developmental device. The type number and tentative data are subject to change. No obligations are assumed for notice of change or future manufacture of the product unless otherwise arranged.

[b] Types limited to extent of inventory.

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