

RCA Industrial Receiving-Type Tube Application Guide

1. AF Amplifier
2. Automatic Gain Control
3. Balanced Modulator/
Balanced Mixer
4. Cathode-Coupled,
Direct-Drive (RF)
5. Cathode Drive (RF)
(Grounded Grid)
6. Cathode Follower
7. Clipper
8. Converter
9. DC Amplifier
10. Delay Circuit
11. Demodulator
12. Detector, Audio
13. Driver
14. Frequency Converter
15. Frequency Divider
16. Frequency Multiplier
17. Gated Amplifier
18. Grid-Controlled Rectifier
19. Indicator, Voltage
20. IF Amplifier
21. Inverter
22. Limiter
23. Low-Plate-Voltage
Nuvistor Type
24. Mixer
25. Modulator
26. Multivibrator
27. Oscillator, RF
28. "On-Off" Control
29. Phase Inverter
30. Pulse Amplifier
31. Pulse Modulator
32. RF Power Amplifier
33. RF Voltage Amplifier
34. Rectifier
35. Relay
36. Sweep-Circuit Oscillator
37. Switching
38. Transducer
39. Tubes Operating from
Battery Supplies
40. Video Amplifier
41. Voltage Reference
42. Voltage Regulator
43. Voltage Regulator, Series
44. Volume-Expander-Compressor

1 AF Amplifier

CLASS - A₁

Twin Diode - Med.-Mu Triodes

12SW7 26C6

High-Mu Triode - 5719

Power Triodes

955 5718 9002

Medium-Mu Twin Triodes

▲5670 5692 ▲6189
5687 6072

High-Mu Twin Triodes

6112 6681/12AX7A

Twin Power Triode - 3A5

Sharp-Cutoff Pentodes

6AH6WA 1620

Power Pentodes

3A4 5672
6AG7Y 6677/6CL6
6AK6 7054
1621 8077/7054

Beam Power Tubes

12A6 ▲6005
1622 6550
5686 6550/V1
5824 6669/6AQ5A
5881 7061
5902

Twin Beam Power Tube

26A7GT

Pentagrid Amplifier - 1612

Beam-Deflection Tube - 7360



**Electronic
Components**

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CLASS - AB₁

Medium-Mu Twin Triode

▲5670

Beam Power Tubes

1614 6669/6AQ5A

1619 7551

▲6005 7558

Twin Beam Power Tube

26A7GT

CLASS - B

Twin Power Triode - 1635

2 Automatic Gain Control

Remote-Cutoff Pentode

▲5749

**3 Balanced Modulator/
Balanced Mixer**

Beam-Deflection Tube

7360

**4 Cathode-Coupled,
Direct-Drive (RF)**

Medium-Mu Twin Triodes

6DJ8/ECC88

6922/E88CC

**5 Cathode Drive (RF)
(Grounded Grid)**

High-Mu Triodes

6J4

■8058

▲8532

6 Cathode Follower

Medium-Mu Triodes

6814

■8056

Medium-Mu Twin Triodes

▲5670 6350 7044

5687 6922/E88CC 7308

5965

7 Clipper

Twin Diodes

▲5726

705

8 Converter

Pentagrid Converters

12SY7

26D6

5750

9 DC Amplifier

Sharp-Cutoff Pentode - 5693

Medium-Mu Twin Triode - 5692

High-Mu Twin Triode - 5691

10 Delay Circuit

Sharp-Cutoff Pentodes

6AS6

5636

▲5725

11 Demodulator

Beam-Deflection Tube - 7360

12 Detector Audio

Twin Diode - Med.-Mu Triodes

12SW7

26C6

VHF

Twin Diodes

▲5726

5896

6663/6AL5

6887

7055

UHF

Diodes

9005

9006

Electronic
Components

APPLICATION
GUIDE 1

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13 Driver

Beam Power Tubes

5763	7551	7905
6417	7558	

14 Frequency Converter

High-Mu Triode - 6664/6AB4

High-Mu Twin Triode

6679/12A7

Beam-Deflection Tube - 7360

15 Frequency Divider

Medium-Mu Twin Triodes

▲5670	5964	6350
5687	6211	7044
5963		

Power Pentode - 6197

16 Frequency Multiplier

FREQUENCY DOUBLER

High-Mu Triode

■8808

Power Triode

■8203 ■8627

Twin Tetrode - 6360A

Power Pentodes

7054 8077/7054

Beam Power Tubes

5763	7551	7905
6417	7558	

FREQUENCY TRIPLER

Beam Power Tubes

5763 6417 7905

Twin Power Pentode - 6939

17 Gated Amplifier

Sharp-Cutoff Pentodes

6AS6 ▲5725

5636

Pentagrid Amplifier - 5915

18 Grid-Controlled Rectifier

Triodes (Thyratron)

6D4 884

Tetrodes (Thyratron)

2D21 2050A ▲5727

2050

5696

6012

19 Indicator, Voltage

Electron-Ray Tubes

1629 6977

20 IF Amplifier

VHF

Medium-Mu Triodes

■7586 ■8056

Medium-Mu Twin Triodes

5687 6922/E88CC

6386

7308

Sharp-Cutoff Pentodes

▲6AU6WB[†] 6676/6CB6A

▲5654

7056

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Remote-Cutoff Pentodes

▲5749 6660/6BA6

Sharp-Cutoff Tetrode - ■7587

High-Mu Triode - ■7895

UHF

Sharp-Cutoff Pentodes

5840 ▲6186

Semiremote-Cutoff Pentodes

5899 6206

Remote-Cutoff Pentode - 9003

21 Inverter

Medium-Mu Triode - 6814

Medium-Mu Twin Triodes

6350 7044

22 Limiter

High-Mu Twin Triode - 7898

23 Low-Plate-Voltage Nuvistor Type for Hybrid Equipment

Medium-Mu Triode - ■8056

24 Mixer

VHF

Medium-Mu Twin Triodes

407A ▲5814A 6922/E88CC
▲5670 6386

High-Mu Twin Triodes

▲12AT7WA† 7898

▲12AT7WB†

Medium-Mu Triode -
Sharp-Cutoff Pentodes

6678/6U8A 7059

Sharp-Cutoff Tetrode - ■7587

Sharp-Cutoff Pentodes

6AS6 ▲5725

Pentagrid Converters

12SY7 26D6 5750

UHF

Diode - 9005

Medium-Mu Twin Triode

▲6J6WA

Sharp-Cutoff Pentodes

5636 9001

Remote-Cutoff Pentode - 9003

25 Modulator

Twin Tetrode - 6360A

Beam Power Tubes

7551 7558

Power Pentodes

7054 8077/7054

26 Multivibrator

Medium-Mu Twin Triodes

407A ▲6189
▲5670 6350
5687 6680/12AU7A
5692 6922/E88CC
▲5814A 7044

High-Mu Twin Triodes

▲12AT7WA† ▲5751



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27 Oscillator, RF

VHF

Power Triode - ■ 8203

High-Mu Triode - 6664/6AB4

Medium-Mu Twin Triodes
 407A ▲ 5814A 6680/12AU7A
 ▲ 5670 6111

High-Mu Twin Triodes
 ▲ 12AT7WA† 7898
 ▲ 12AT7WB†

Medium-Mu Triode -
 Sharp-Cutoff Pentodes
 6678/6U8A 7059

Twin Tetrode - 6360A

Beam Power Tubes
 3B4WA† 5763 7558
 1614 6417 7905
 1619 7551

Power Pentodes
 1613 7054 8077/7054

Medium-Mu Triode -
 Power Pentode
 7060

Pentagrid Converters
 12SY7 26D6 5750

UHF

Medium-Mu Triodes
 6F4 ■ 8056 ■ 8393
 ■ 7586

High-Mu Triodes
 ■ 7895 ■ 8058 ■ 8808

Power Triodes
 955 ■ 8627 9002
 5718

Medium-Mu Twin Triodes
 ▲ 6J6WA† 6021

Sharp-Cutoff Tetrode - ■ 7587

Twin Power Pentode - 6939

28 "On-Off" Control

(Involving Long
 Periods of Operation
 Under Cutoff Conditions)

Twin Diode - 6887

Medium-Mu Triode - 6814

Medium-Mu Twin Triodes
 5844 5965 6922/E88CC
 5963 6211 7044
 5964 6350

Sharp-Cutoff Pentode - 6AS6

Power Pentode - 6197

Pentagrid Amplifier - 5915

29 Phase Inverter

Medium-Mu Triode - 6814

Medium-Mu Twin Triodes
 ▲ 5670 6350
 5687 6680/12AU7A
 ▲ 5814A 6922/E88CC
 ▲ 6189 7044

High-Mu Twin Triodes
 5691 7058
 ▲ 5751

30 Pulse Amplifier

Medium-Mu Triode - 6814

Medium-Mu Twin Triodes
 ▲ 5670 6350 7044
 5687

31 Pulse Modulator

Twin Diode
 ▲ 5726

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32 RF Power Amplifier

VHF

Power Triode - ■8203

Twin Power Triode - 3A5

Beam Power Tubes

3B4WA†	5686	7551
1614	5763	7558
1619	6417	7905

Medium-Mu Triode -
Power Pentode

7060

Power Pentodes

3A4	6AN5	7054
6AG7Y	1613	8077/7054

UHF

High-Mu Triode

■8808

Power Triodes

955	■8627	9002
5718		

Twin Power Tetrode - 6360A

Twin Power Pentode - 6939

33 RF Voltage Amplifier

VHF

Medium-Mu Triodes

5842/417A	■8056	■8393
■7586		

High-Mu Triodes

6664/6AB4	■7895	■8628
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Medium-Mu Twin Triodes

6DJ8'ECC88	6386
407A	6922/E88CC
6111	7057

High-Mu Twin Triode

6679/12AT7

Sharp-Cutoff Tetrodes

■7587	7717/6CY5
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Sharp-Cutoff Pentodes

1L4	5693
6AC7W	5847/404A
6AH6WA	▲6186
▲6AU6WB	6661/6BH6
6SJ7Y	6676/6CB6A
408A	6688A
▲5654	7056
5678	

Remote-Cutoff Pentodes

26A6	6660/6BA6
▲5749	6662/6BJ6

Medium-Mu Triode -
Power Pentode

7060

UHF

High-Mu Triodes

6J4	▲8532
■8058	

Sharp-Cutoff Pentodes

959	5840	9001
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Semiremote-Cutoff Pentodes

5899	6206
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Remote-Cutoff Pentode - 9003

34 Rectifier

POWER

Full-Wave Gas Type - 83

Full-Wave Vacuum Types

5R4GYB	2076/5R4GYB
6X4W	6202

LOW CURRENT

Twin Diodes

▲5726	6663/6AL5
5896	7055



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<p>Single Diodes 9005 9006</p> <p style="text-align: center;">PULSE</p> <p>Half-Wave Vacuum Type - 5642</p> <p>35 Relay</p> <p>Glow-Discharge (Cold-Cathode) Tubes OA4G 1C21 5823</p> <p>Triodes (Thyratron) 6D4 884</p> <p>Tetrodes (Thyratron) 2D21 5663 ▲ 5727 2050 5696 6012 2050A</p> <p>36 Sweep-Circuit Oscillator</p> <p>Triode (Thyratron) - 884</p> <p>37 Switching</p> <p>Twin Diode - 6887</p> <p>Beam-Deflection Tube - 7360</p> <p>38 Transducer</p> <p>Mechano-Electronic Transducer 5734</p> <p>39 Tubes Operating from Battery Supplies</p> <p>NOMINAL-12-VOLT STORAGE BATTERY SYSTEMS</p> <p>Twin Diode - 7055</p> <p>Twin Diode - High-Mu Triode 7724/14GT8</p> <p>Medium-Mu Twin Triode - 7057</p>	<p>High-Mu Twin Triodes 7058 7898</p> <p>Medium-Mu Triode - Sharp-Cutoff Pentodes 7059 7258</p> <p>Medium-Mu Triode - Power Pentode 7060</p> <p>Sharp-Cutoff Pentode - 7056</p> <p>Power Pentodes 7054 8077/7054</p> <p>Beam Power Tubes 7061 7551</p> <p>NOMINAL-6-VOLT STORAGE BATTERY SYSTEMS</p> <p>Twin Diode - 6663/6AL5</p> <p>High-Mu Triode - 6664/6AB4</p> <p>Medium-Mu Twin Triode 6680/12AU7A</p> <p>High-Mu Twin Triodes 6679/12AT7 6681/12AX7A</p> <p>Medium-Mu Triode - Sharp-Cutoff Pentode 6678/6U8A</p> <p>Twin Tetrode - 6360A</p> <p>Remote-Cutoff Pentodes 6660/6BA6 6662/6BJ6</p> <p>Sharp-Cutoff Pentodes 6661/6BH6 6676/6CB6A</p> <p>Power Pentode - 6677/6CL6</p> <p>Beam Power Tubes 6669/6AQ5A 7905</p>
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NOMINAL-24-VOLT STORAGE BATTERY SYSTEMS

- Twin Diode -
Medium-Mu Triode
26C6
- Twin Power Triode - 60B2
- Remote-Cutoff Pentode - 26A6
- Pentagrid Converter - 26D6
- Twin Beam Power Tube
26A7G†

FILAMENTARY-CATHODE TYPES OPERATING FROM DRY-CELL BATTERY SUPPLIES

- Half-Wave Vacuum Rectifier
5642
- Twin Power Triode - 3A5
- Sharp-Cutoff Pentode - 1L4
- Power Pentode - 3A4
- Beam Power Tube - 1619

40 Video Amplifier

- Sharp-Cutoff Tetrode - 7587
- Sharp-Cutoff Pentode - 5639

Power Pentodes

- 6AG7Y 6677/6CL6
6AN5

41 Voltage Reference

- Glow Discharge
(Cold-Cathode) Tubes
- 5651A ▲5651WA† 5783

42 Voltage Regulator

- Glow Discharge
(Cold-Cathode) Tubes
- | | | |
|---------|------|----------|
| OA2 † | OC2 | 6073 |
| ▲OA2WA† | OC3 | 6073/OA2 |
| OA3 | OC3A | 6074 |
| OA3A | OD3 | 6074/OB2 |
| OB2 | OD3A | 6626/ |
| ▲OB2WA† | 991 | OA2WA |

43 Voltage Regulator, Series

- Low-Mu Twin Triodes
- | | | |
|-------|---------|-------|
| 6AS7G | ▲6080WA | 6336A |
| 6080 | 6082 | |

- Beam Power Tube - 5902

44 Volume Expander- Compressor

- Pentagrid Mixer - 1612

▲ Premium Type. Premium types are subjected to more rigorous tests and controls than other types.

■ Nuvistor Type.

† For data on this type, refer to Military Specification. A copy of the applicable Military Specification may be obtained from: Specification Division, Naval Supply Depot, 5801 Tabor Avenue, Philadelphia, Pa. 19120.

Note:

For data on types in this guide which do not appear in the *Index of Types*, refer to RCA publication RIT-104G. A copy of this publication may be obtained from: RCA Commercial Engineering, Harrison, N.J. 07029.

Socket & Connector Information for RCA Nuvistor Tubes

The sockets listed below by manufacturer's or distributor's part number have contacts and an annular groove designed to mate, respectively, with the base pins and the 2 indexing lugs of the bases utilized on RCA nuvistor tubes. Information on sockets having different casting materials, contact materials, or finishes may be obtained from the manufacturers.

Sockets having mechanical and electrical characteristics comparable to those listed may be available from other component manufacturers.

Socket Description			Manufacturer or Distributor and Part No.		
Application	Mounting	For Types Having JEDEC Base No.	Cinch Mfg. Co. ^a	Cinch-Jones Sales Division ^b Distributors	Industrial Electronic Hardware Corp. ^c
General Purpose	Crimp	E5-65 E5-79	133 65 10 001	5NS	MSN 0905-1 MSN 0905-2 MSN 0905-3
	Flange	E5-65 E5-79	133 65 10 003	5NS-1	-
	Printed board ("Stand-off")	E5-65 E5-79	133 65 10 009	5NS-2	-
UHF (Heat-Dissipating)	Crimp	E5-65 E5-79	133 65 10 041	5NS-3	-
UHF	Crimp	E7-77	133 67 90 040	5NS-4	-
	Crimp	E7-83	-	-	MSN 0907-1 MSN 0707-1

Connector (Top Caps)

RCA Double-Ended Nuvistor Tubes: These types utilize a JEDEC No. C1-44 top cap. Cinch Mfg. Co. Part Nos. 6005 or 422 03 22 017, 6014 or 422 03 22 024, or equivalent "1/4-inch" connectors, may be used.

^a 1026 South Homan Avenue, Chicago 24, Illinois.

^b Cinch-Jones Sales Division of Cinch Mfg. Co.

^c 109 Prince Street, New York 12, N.Y.

