RCA RADIO TUBE CHART

RADIO TUBES

TYPE	NAME	BASE	SOCKET CONNECTIONS	DIMENSIONS MAXIMUM OVERALL LENGTH × DIAMETER	CATHODE TYPE ■	RATING: FILAMENT OR HEATER VOLTS	RATING: FILAMENT OR HEATER AMPERES	RATING: PLATE MAX. VOLTS	RATING: SCREEN MAX. VOLTS	USE (Values to right give operating conditions and characteristics for indicated typical use)	PLATE SUPPLY VOLTS	GRID VOLTS ■	SCREEN VOLTS	SCREEN MILLIAMP.	PLATE MILLIAMP.	A-C PLATE RESISTANCE OHMS	MUTUAL CONDUCTANCE MICROMHOS	VOLTAGE AMPLIFICATION FACTOR	LOAD FOR STATED POWER OUTPUT OHMS	POWER OUTPUT WATTS	TYPE
1A6	PENTAGRID CONVERTER ●	SMALL 6-PIN	FIG. 26	4 13/32" × 1 1/16"	D-C FILAMENT	2.0	0.06	180	67.5	CONVERTER	180	−3.0 min.	67.5	2.4	1.3	500000	Anode-Grid (● 2) 135 max. volts, 2.3 ma. Oscillator Grid(● 1) Resistor, 50000 ohms. Conversion conductance, 300 micromhos.				1A6
1B5-25S	DUPLEX-DIODE TRIODE	SMALL 6-PIN	FIG. 28	4 1/4" × 1 1/16"	D-C FILAMENT	2.0	0.06	125	—	TRIODE UNIT AS CLASS A AMPLIFIER	125	−3.0	—	—	0.8	35000	375	20	—	—	1B5-25S
1C6	PENTAGRID CONVERTER ●	SMALL 6-PIN	FIG. 28	4 1/32" × 1 9/16"	D-C FILAMENT	2.0	0.12	180	67.5	CONVERTER	180	−3.0 min.	67.5	2.0	1.5	750000	Anode Grid (● 2) 135 max. volts, 3.3 ma. Oscillator Grid(● 1) Resistor, 50000 ohms. Conversion conductance, 325 micromhos.				1C6
2A3	POWER AMPLIFIER TRIODE	MEDIUM 4-PIN	FIG. 1	5 3/4" × 2 1/16"	FILAMENT	2.5	2.5	250	—	CLASS A AMPLIFIER	250	−45	—	—	60.0	800	5250	4.2	2500	3.5	2A3
								300	—	PUSH-PULL AMPLIFIER	300	−62	Self-bias Fixed-bias		40.0	Power Output is for 2 tubes at stated load, plate-to-plate	5000	10.0	3000	15.0	
											300	−62			40.0		3000	15.0			
2A5	POWER AMPLIFIER PENTODE	MEDIUM 6-PIN	FIG. 15A	4 11/16" × 1 13/16"	HEATER	2.5	1.75	250	250	CLASS A AMPLIFIER	250	−16.5	250	6.5	34.0	100000	2200	220	7000	3.0	2A5
2A6	DUPLEX-DIODE HIGH-MU TRIODE	SMALL 6-PIN	FIG. 13	4 1/32" × 1 1/16"	HEATER	2.5	0.8	250	—	TRIODE UNIT AS CLASS A AMPLIFIER	250 ✖	−1.35	—	—	0.4	—	—	Gain per stage = 50-60			2A6
2A7	PENTAGRID CONVERTER ●	SMALL 7-PIN	FIG. 20	4 1/32" × 1 9/16"	HEATER	2.5	0.8 *	250	100	CONVERTER	250	−3.0 min.	100	2.2	3.5	360000	Anode Grid (● 2) 200 max. volts, 4.0 ma. Oscillator Grid(● 1) Resistor, 50000 ohms. Conversion conductance, 520 micromhos.				2A7
2B7	DUPLEX-DIODE PENTODE	SMALL 7-PIN	FIG. 21	4 1/32" × 1 9/16"	HEATER	2.5	0.8	250	125	PENTODE UNIT AS R-F AMPLIFIER	100	−3.0	100	1.7	5.8	300000	950	285	—	—	2B7
											250	−3.0	125	2.3	9.0	650000	1125	730	—	—	
										PENTODE UNIT AS A-F AMPLIFIER	250‡	−4.5	50	—	0.65	—	—	—	—	—	
6A4 also LA	POWER AMPLIFIER PENTODE	MEDIUM 5-PIN	FIG. 6	4 11/16" × 1 1/16"	FILAMENT	6.3	0.3	180	180	CLASS A AMPLIFIER	100	−6.5	100	1.6	9.0	83250	1200	100	11000	0.31	6A4 also LA
											180	−12.0	180	3.9	22.0	45500	2200	100	8000	1.40	
6A7	PENTAGRID CONVERTER ●	SMALL 7-PIN	FIG. 20	4 1/32" × 1 9/16"	HEATER	6.3	0.3	250	100	CONVERTER	250	−3.0 min.	100	2.2	3.5	360000	Anode Grid (● 2) 200 max. volts, 4.0 ma. Oscillator Grid(● 1) Resistor, 50000 ohms. Conversion conductance, 520 micromhos.				6A7
6B7	DUPLEX-DIODE PENTODE	SMALL 7-PIN	FIG. 21	4 1/32" × 1 9/16"	HEATER	6.3	0.3	250	125	PENTODE UNIT AS R-F AMPLIFIER	100	−3.0	100	1.7	5.8	300000	950	285	—	—	6B7
											250	−3.0	125	2.3	9.0	650000	1125	730	—	—	
										PENTODE UNIT AS A-F AMPLIFIER	250‡	−4.5	50	—	0.65	—	—	—	—	—	
6C6	TRIPLE-GRID DETECTOR AMPLIFIER	SMALL 6-PIN	FIG. 11	4 13/16" × 1 1/16"	HEATER	6.3	0.3	250	100	SCREEN GRID R-F AMPLIFIER	250	−3.0	100	0.5	2.0	exceeds 1.5 meg.	1225	exceeds 1500	—	—	6C6
										BIAS DETECTOR	250	−1.95	50	Cathode current 0.65 ma.		—	Plate coupling resistor 250000 ohms. Grid coupling resistor 250000 ohms.**			
6D6	TRIPLE-GRID SUPER-CONTROL AMPLIFIER	SMALL 6-PIN	FIG. 11	4 13/16" × 1 1/16"	HEATER	6.3	0.3	250	100	SCREEN GRID R-F AMPLIFIER	250	−3.0 min.	100	2.0	8.2	800000	1600	1280	—	—	6D6
										MIXER IN SUPERHETERODYNE	250	−10.0	100	—	—		Oscillator peak volts = 7.0.				
6E5	ELECTRON-RAY TUBE	SMALL 6-PIN	FIG. 29	4 1/2" × 1 1/16"	HEATER	6.3	0.3	250	—	TUNING INDICATOR	250	Grid Volts: 0 approx. at 90° shadow angle; −6.8 approx. at 0° angle. Plate Resistor, 1 megohm. Current: plate at 0 grid volts, 0.25 ma.; target, 4.5 ma. approx.									6E5

● Grids #3 and #5 are screen. Grid #4 is signal-input control-grid.

‡Applied through plate coupling resistor of 200000 ohms. **For grid of following tube.

✖ Applied through plate coupling resistor of 250000 ohms.

6F7	TRIODE-PENTODE	SMALL 7-PIN	FIG. 27	4 3/32" × 1 9/16"	HEATER	6.3	0.3	100	—	TRIODE UNIT AS AMPLIFIER	100	−3.0	—	—	3.5	17800	450	8	—	—	6F7
								250	100	PENTODE UNIT AS AMPLIFIER	250	−3.0 min.	100	1.5	6.5	850000	1100	900	—	—	
								250	100	PENTODE UNIT AS MIXER	250	−10.0	100	0.6	2.8	Oscillator peak volts = 7.0. Conversion conductance = 300 micromhos.					
'00-A	DETECTOR TRIODE	MEDIUM 4-PIN	FIG. 1	4 1/16" × 1 1/32"	D-C FILAMENT	5.0	0.25	45	—	GRID LEAK DETECTOR	45	Grid Return to (−) Filament			1.5	30000	666	20	—	—	'00-A
01-A	DETECTOR★ AMPLIFIER	MEDIUM 4-PIN	FIG. 1	4 11/16" × 1 13/16"	D-C FILAMENT	5.0	0.25	135	—	CLASS A AMPLIFIER	90	−4.5	—	—	2.5	11000	725	8.0	—	—	01-A
											135	−9.0			3.0	10000	800	8.0			
10	POWER AMPLIFIER TRIODE	MEDIUM 4-PIN	FIG. 1	5 3/4" × 2 1/16"	FILAMENT	7.5	1.25	425	—	CLASS A AMPLIFIER	350	−31.0	—	—	15.0	5150	1550	8.0	11000	0.9	10
											425	−39.0			18.0	5000	1600	8.0	10200	1.6	
11 12	DETECTOR★ AMPLIFIER TRIODE	WD 4-PIN MEDIUM 4-PIN	FIG. 12 FIG. 1	4 1/4" × 1 1/2" 4 11/16" × 1 13/16"	D-C FILAMENT	1.1	0.25	135	—	CLASS A AMPLIFIER	90	−4.5	—	—	2.5	15500	425	6.6	—	—	11 12
											135	−10.5			3.0	15000	440	6.6			
19	TWIN-TRIODE AMPLIFIER	SMALL 6-PIN	FIG. 25	4 1/4" × 1 1/16"	D-C FILAMENT	2.0	0.26	135	—	CLASS B AMPLIFIER	135	0	—	—	Power output value is for one tube at stated load, plate-to-plate.				10000	2.1	19
											135	−3.0							10000	1.9	
20	POWER AMPLIFIER TRIODE	SMALL 4-PIN	FIG. 1	4 1/8" × 1 3/16"	D-C FILAMENT	3.3	0.132	135	—	CLASS A AMPLIFIER	90	−16.5	—	—	3.0	8000	415	3.3	9600	0.045	'20
											135	−22.5			6.5	6300	525	3.3	6500	0.110	
22	R-F AMPLIFIER TETRODE	MEDIUM 4-PIN	FIG. 4	5 3/4" × 1 13/16"	D-C FILAMENT	3.3	0.132	135	67.5	SCREEN GRID R-F AMPLIFIER	135	−1.5	45	0.6*	1.7	725000	375	270	—	—	22
											135	−1.5	67.5	1.3*	3.7	325000	500	160			
24-A	R-F AMPLIFIER TETRODE	MEDIUM 5-PIN	FIG. 9	5 3/4" × 1 13/16"	HEATER	2.5	1.75	275	90	SCREEN GRID R-F AMPLIFIER	180	−3.0	90	1.7*	4.0	400000	1000	400	—	—	24-A
											250	−3.0	90	1.7*	4.0	600000	1050	630			
										BIAS DETECTOR	250●	−5.0 approx.	20 to 45	—	Plate current to be adjusted to 0.1 milliampere with no signal.					
26	AMPLIFIER TRIODE	MEDIUM 4-PIN	FIG. 1	4 1/4" × 1 13/16"	FILAMENT	1.5	1.05	180	—	CLASS A AMPLIFIER	90	−7.0	—	—	2.9	8900	935	8.3	—	—	26
											180	−14.5			6.2	7300	1150	8.3			
27	DETECTOR★ AMPLIFIER TRIODE	MEDIUM 5-PIN	FIG. 8	4 1/4" × 1 3/16"	HEATER	2.5	1.75	275	—	CLASS A AMPLIFIER	135	−9.0	—	—	4.5	9000	1000	9.0	—	—	27
											250	−21.0			5.2	9250	975	9.0			
										BIAS DETECTOR	250	−30.0 approx.	—	—	Plate current to be adjusted to 0.2 milliampere with no signal.					
30	DETECTOR★ AMPLIFIER TRIODE	SMALL 4-PIN	FIG. 1	4 1/4" × 1 3/16"	D-C FILAMENT	2.0	0.06	180	—	CLASS A AMPLIFIER	90	−4.5	—	—	2.5	11000	850	9.3	—	—	30
											135	−9.0			3.0	10300	900	9.3			
											180	−13.5			3.1	10300	900	9.3			

★For Grid-leak Detection—plate volts 45, grid return to + filament or to cathode.

● Applied through plate coupling resistor of 250000 ohms or 500-henry choke shunted by 0.25 megohm resistor. *Maximum

31	POWER AMPLIFIER TRIODE	SMALL 4-PIN	FIG. 1	4 1/4" × 1 3/16"	D-C FILAMENT	2.0	0.13	180	—	CLASS A AMPLIFIER	135	−22.5	—	—	8.0	4100	925	3.8	7000	0.185	31
											180	−30.0			12.3	3600	1050	3.8	5700	0.375	
32	R-F AMPLIFIER TETRODE	MEDIUM 4-PIN	FIG. 4	5 3/32" × 1 13/16"	D-C FILAMENT	2.0	0.06	180	67.5	SCREEN GRID R-F AMPLIFIER	135	−3.0	67.5	0.4*	1.7	950000	640	610	—	—	32
											180	−3.0	67.5	0.4*	1.7	1200000	650	780			
										BIAS DETECTOR	180▼	−6.0 approx.	67.5	—	Plate current to be adjusted to 0.2 milliampere with no signal.					
33	POWER AMPLIFIER PENTODE	MEDIUM 5-PIN	FIG. 6	4 11/16" × 1 13/16"	D-C FILAMENT	2.0	0.26	180	180	CLASS A AMPLIFIER	180	−18.0	180	5.0	22.0	55000	1700	90	6000	1.4	33
34	SUPER-CONTROL R-F AMPLIFIER PENTODE	MEDIUM 4-PIN	FIG. 4A	5 3/32" × 1 13/16"	D-C FILAMENT	2.0	0.06	180	67.5	SCREEN GRID R-F AMPLIFIER	135	−3.0 min.	67.5	1.0	2.8	600000	600	360	—	—	34
											180		67.5	1.0	2.8	1000000	620	620			
35	SUPER-CONTROL R-F AMPLIFIER TETRODE	MEDIUM 5-PIN	FIG. 9	5 3/4" × 1 13/16"	HEATER	2.5	1.75	275	90	SCREEN GRID R-F AMPLIFIER	180	−3.0 min.	90	2.5*	6.3	330000	1920	305	—	—	35
											250		90	2.5*	6.5	400000	1050	420			
36	R-F AMPLIFIER TETRODE	SMALL 5-PIN	FIG. 9	4 1/2" × 1 7/16"	HEATER	6.3	0.3	250	90	SCREEN GRID R-F AMPLIFIER	100	−1.5	55	—	1.8	550000	850	470	—	—	36
											180	−3.0	90	—	3.1	500000	1050	525			
											250	−3.0	90	1.7*	3.2	550000	1080	595			
										BIAS DETECTOR	100●	−5.0	55	—	Plate current to be adjusted to 0.1 milliampere with no signal.					
											250●	−8.0	90								
37	DETECTOR★ AMPLIFIER TRIODE	SMALL 5-PIN	FIG. 8	4 1/4" × 1 7/16"	HEATER	6.3	0.3	250	—	CLASS A AMPLIFIER	90	−6.0	—	—	2.5	11500	800	9.2	—	—	37
											180	−13.5			4.3	10200	900	9.2			
											250	−18.0			7.5	8300	1150	9.2			
										BIAS DETECTOR	90	−10.0	—	—	Plate current to be adjusted to 0.2 milliampere with no signal.					
											250	−25.0									
38	POWER AMPLIFIER PENTODE	SMALL 5-PIN	FIG. 9A	4 13/32" × 1 7/16"	HEATER	6.3	0.3	250	250	CLASS A AMPLIFIER	100	−9.0	100	1.2	7.0	140000	875	120	15000	0.27	38
											180	−18.0	180	2.4	14.0	115000	1050	120	11600	1.00	
											250	−25.0	250	3.8	22.0	100000	1200	120	10000	2.50	
39-44	SUPER-CONTROL R-F AMPLIFIER PENTODE	SMALL 5-PIN	FIG. 9A	4 13/32" × 1 7/16"	HEATER	6.3	0.3	250	90	SCREEN GRID R-F AMPLIFIER	90	−3.0 min.	90	1.4	5.8	375000	960	360	—	—	39-44
											180		90	1.4	5.8	750000	1000	750			
											250		90	1.4	5.8	1000000	1050	1050			

★For Grid-leak Detection—plate volts 45, grid return to + filament or to cathode.

■ Either A. C. or D.C. may be used on filament or heater, except as specifically noted. For use of D. C. on A-C filament types, decrease stated grid volts by 1½ (approx.) of filament voltage.

● Applied through plate coupling resistor of 250000 ohms or 500-henry choke shunted by 0.25 megohm resistor.

▼Applied through plate coupling resistor of 100000 ohms. *Maximum.

40	VOLTAGE AMPLIFIER TRIODE	MEDIUM 4-PIN	FIG. 1	4 11/16" × 1 13/16"	D-C FILAMENT	5.0	0.25	180	—	CLASS A AMPLIFIER	135 ✖	−1.5	—	—	0.2	150000	200	30	—	—	40
											180 ✖	−3.0			0.2	150000	200	30			
41	POWER AMPLIFIER PENTODE	SMALL 6-PIN	FIG. 15A	4 1/4" × 1 7/16"	HEATER	6.3	0.4	250	250	CLASS A AMPLIFIER	100	−7.0	100	1.6	9.0	103500	1450	150	12000	0.33	41
											180	−13.5	180	3.0	18.5	81000	1850	150	9000	1.50	
											250	−18.0	250	5.5	32.0	68000	2200	150	7600	3.40	
42	POWER AMPLIFIER PENTODE	MEDIUM 6-PIN	FIG. 15A	4 1/4" × 1 1/2"	HEATER	6.3	0.7	250	250	CLASS A AMPLIFIER	250	−16.5	250	6.5	34.0	100000	2200	220	7000	3.00	42
43	POWER AMPLIFIER PENTODE	MEDIUM 6-PIN	FIG. 15A	4 1/4" × 1 1/2"	HEATER	25.0	0.3	135	135	CLASS A AMPLIFIER	90	−15.0	90	4.0	20.0	45000	2000	90	4500	0.90	43
											135	−20.0	135	7.0	34.0	35000	2300	80	4000	2.00	
45	POWER AMPLIFIER TRIODE	MEDIUM 4-PIN	FIG. 1	4 1/2" × 1 1/2"	FILAMENT	2.5	1.5	275	—	CLASS A AMPLIFIER	180	−31.5	180	—	31.0	1650	2125	3.5	2700	0.82	45
											250	−50.0	250		34.0	1610	2175	3.5	3900	1.60	
											275	−56.0	275		36.0	1700	2050	3.5	4600	2.00	
46	DUAL-GRID POWER AMPLIFIER	MEDIUM 5-PIN	FIG. 7	5 3/8" × 2 1/16"	FILAMENT	2.5	1.75	250	—	CLASS A AMPLIFIER □	250	−33.0	—	—	22.0	2380	2350	5.6	6400	1.25	46
								400	—	CLASS B AMPLIFIER ❖	300	0	—	—	Power output values are for 2 tubes at indicated plate-to-plate load.				5200	16.0	
											400	0							5800	20.0	
47	POWER AMPLIFIER PENTODE	MEDIUM 5-PIN	FIG. 8	5 3/8" × 2 1/16"	FILAMENT	2.5	1.75	250	250	CLASS A AMPLIFIER	250	−16.5	250	6.0	31.0	60000	2500	150	7000	2.7	47
48	POWER AMPLIFIER TETRODE	MEDIUM 6-PIN	FIG. 15	5 3/8" × 2 1/16"	D-C HEATER	30.0	0.4	125	100	CLASS A AMPLIFIER	95	−19.0	95	9.0	52.0	—	3800	—	1500	2.0	48
											125	−20.0	100	9.5	56.0	—	3900	—	1500	2.5	
49	DUAL-GRID POWER AMPLIFIER	MEDIUM 6-PIN	FIG. 7	4 13/16" × 1 13/16"	D-C FILAMENT	2.0	0.12	135	—	CLASS A AMPLIFIER □	135	−20.0	—	—	6.0	4175	1125	4.7	11000	0.17	49
								180	—	CLASS B AMPLIFIER ❖	180	0	—	—	Power output values are for 2 tubes at indicated plate-to-plate load.				12000	3.5	
50	POWER AMPLIFIER TRIODE	MEDIUM 4-PIN	FIG. 1	6 1/2" × 2 11/16"	FILAMENT	7.5	1.25	450	—	CLASS A AMPLIFIER	300	−54.0	—	—	35.0	2000	1900	3.8	4600	1.6	50
											400	−70.0			55.0	1800	2100	3.8	3670	3.4	
											450	−84.0			55.0	1800	2100	3.8	4350	4.6	
53	TWIN-TRIODE AMPLIFIER	MEDIUM 7-PIN✖	FIG. 24	4 3/4" × 1 1/2"	HEATER	2.5	2.0	300	—	CLASS B AMPLIFIER	250	0	—	—	Power output value is for one tube at stated load, plate-to-plate.				8000	8.0	53
											300	0							10000	10.0	
55	DUPLEX-DIODE TRIODE	SMALL 6-PIN	FIG. 13	4 13/32" × 1 1/16"	HEATER	2.5	1.0	250	—	TRIODE UNIT AS CLASS A AMPLIFIER	135	−10.5	—	—	3.7	11000	750	8.3	25000	0.075	55
											180	−13.5			6.0	8500	975	8.3	20000	0.160	
											250	−20.0			8.0	7500	1100	8.3	20000	0.350	
56	SUPER-TRIODE AMPLIFIER DETECTOR★	SMALL 5-PIN	FIG. 8	4 1/4" × 1 3/16"	HEATER	2.5	1.0	250	—	CLASS A AMPLIFIER	250	−13.5	—	—	5.0	9500	1450	13.8	—	—	56
										BIAS DETECTOR	250	−20.0 approx.	—	—	Plate current to be adjusted to 0.2 milliampere with no signal.					
57	TRIPLE-GRID DETECTOR AMPLIFIER	SMALL 6-PIN	FIG. 11	4 13/16" × 1 1/16"	HEATER	2.5	1.0	250	100	SCREEN GRID R-F AMPLIFIER	250	−3.0	100	0.5	2.0	exceeds 0.5 meg.	1225	exceeds 1500	—	—	57
										BIAS DETECTOR	250	−1.95	50	Cathode current 0.65 ma.		—	Plate coupling resistor 250000 ohms. Grid coupling resistor 250000 ohms**			

★For Grid-leak Detection—plate volts 45, grid return to + filament or to cathode

✖ Requires different socket from small 7-pin.

□ Grid next to plate tied to plate. ❖ Two grids tied together. **For grid of following tube.

✖ Applied through plate coupling resistor of 250000 ohms.

TYPE	NAME	BASE	SOCKET CONNECTIONS	DIMENSIONS MAXIMUM OVERALL LENGTH x DIAMETER	CATHODE TYPE ■	RATING: FILAMENT OR HEATER VOLTS	RATING: FILAMENT OR HEATER AMPERES	RATING: PLATE MAX. VOLTS	RATING: SCREEN MAX. VOLTS	USE Values to right give operating conditions and characteristics for indicated typical use	PLATE SUPPLY VOLTS	GRID VOLTS ■	SCREEN VOLTS	SCREEN MILLI-AMP.	PLATE MILLI-AMP.	A-C PLATE RESISTANCE OHMS	MUTUAL CONDUCTANCE MICROMHOS	VOLTAGE AMPLIFICATION FACTOR	LOAD FOR STATED POWER OUTPUT OHMS	POWER OUTPUT WATTS	TYPE
58	TRIPLE-GRID SUPER-CONTROL AMPLIFIER	SMALL 6-PIN	FIG. 11	4 1/16" x 1 7/16"	HEATER	2.5	1.0	250	100	SCREEN GRID R-F AMPLIFIER	250	(−3.0 min.)	100	2.0	8.2	800000	1600	1280	——	——	58
										MIXER IN SUPERHETERODYNE	250	−10.0	100	——	——	Oscillator peak volts = 7.0.					
59	TRIPLE-GRID POWER AMPLIFIER	MEDIUM 7-PIN#	FIG. 18	5 3/8" x 2 1/16"	HEATER	2.5	2.0	250	250	AS TRIODE ¶ CLASS A AMPLIFIER	250	−28.0	——	——	26.0	2300	2600	6.0	5000	1.25	59
								250	250	AS PENTODE ** CLASS A AMPLIFIER	250	−18.0	250	9.0	35.0	40000	2500	100	6000	3.00	
								400	——	AS TRIODE ψ CLASS B AMPLIFIER	300 / 400	0 / 0	——	——	Power output values are for 2 tubes at indicated plate-to-plate load.				4600 / 6000	15.0 / 20.0	
71-A	POWER AMPLIFIER TRIODE	MEDIUM 4-PIN	FIG. 1	4 1/16" x 1 13/32"	FILAMENT	5.0	0.25	180	——	CLASS A AMPLIFIER	90 / 180	−19.0 / −43.0	——	——	10.0 / 20.0	2170 / 1750	1400 / 1700	3.0 / 3.0	3000 / 4800	0.125 / 0.790	71-A
75	DUPLEX-DIODE HIGH-MU TRIODE	SMALL 6-PIN	FIG. 13	4 1/32" x 1 7/16"	HEATER	6.3	0.3	250	——	TRIODE UNIT AS CLASS A AMPLIFIER	250 ✕	−1.35	——	——	0.4	——	——	Gain per stage = 50-60			75
76	SUPER-TRIODE AMPLIFIER DETECTOR★	SMALL 5-PIN	FIG. 8	4 1/4" x 1 7/16"	HEATER	6.3	0.3	250	——	CLASS A AMPLIFIER	250	−13.5	——	——	5.0	9500	1450	13.8	——	——	76
										BIAS DETECTOR	250	−20.0	——	——	Plate current to be adjusted to 0.2 milliampere with no signal.					
77	TRIPLE-GRID DETECTOR AMPLIFIER	SMALL 6-PIN	FIG. 11	4 7/32" x 1 9/16"	HEATER	6.3	0.3	250	100	SCREEN GRID R-F AMPLIFIER	100 / 250	−1.5 / −3.0	60 / 100	0.4 / 0.5	1.7 / 2.3	650000 / 1500000	1100 / 1250	715 / 1500	——	——	77
										BIAS DETECTOR	250	−1.95	50	Cathode current 0.65 ma.		Plate coupling resistor 250000 ohms. Grid coupling resistor 250000 ohms**				
78	TRIPLE-GRID SUPER-CONTROL AMPLIFIER	SMALL 6-PIN	FIG. 11	4 1/32" x 1 7/16"	HEATER	6.3	0.3	250	125	SCREEN GRID R-F AMPLIFIER	90 / 180 / 250 / 250	(−3.0 min.)	90 / 75 / 100 / 125	1.3 / 1.0 / 1.7 / 2.6	5.4 / 4.0 / 7.0 / 10.5	315000 / 1000000 / 800000 / 600000	1275 / 1100 / 1450 / 1650	400 / 1100 / 1150 / 990	——	——	78
79	TWIN-TRIODE AMPLIFIER	SMALL 6-PIN	FIG. 19	4 1/32" x 1 7/16"	HEATER	6.3	0.6	250	——	CLASS B AMPLIFIER	180 / 250	0 / 0	——	——	Power output value is for one tube at stated load, plate-to-plate.				7000 / 14000	5.5 / 8.0	79
85	DUPLEX-DIODE TRIODE	SMALL 6-PIN	FIG. 13	4 1/32" x 1 7/16"	HEATER	6.3	0.3	250	——	TRIODE UNIT AS CLASS A AMPLIFIER	135 / 180 / 250	−10.5 / −13.5 / −20.0	——	——	3.7 / 6.0 / 8.0	11000 / 8500 / 7500	750 / 975 / 1100	8.3 / 8.3 / 8.3	25000 / 20000 / 20000	0.075 / 0.160 / 0.350	85
89	TRIPLE-GRID POWER AMPLIFIER	SMALL 6-PIN	FIG. 14	4 1/32" x 1 7/16"	HEATER	6.3	0.4	250	250	AS TRIODE ¶ CLASS A AMPLIFIER	160 / 180 / 250	−20.0 / −22.5 / −31.0	——	——	17.0 / 20.0 / 32.0	3300 / 3000 / 2600	1425 / 1550 / 1800	4.7 / 4.7 / 4.7	7000 / 6500 / 5500	0.300 / 0.400 / 0.900	89
										AS PENTODE ** CLASS A AMPLIFIER	100 / 180 / 250	−10.0 / −18.0 / −25.0	100 / 180 / 250	1.6 / 3.0 / 5.5	9.5 / 20.0 / 32.0	104000 / 80000 / 70000	1200 / 1550 / 1800	125 / 125 / 125	10700 / 8000 / 6750	0.33 / 1.50 / 3.40	
										AS TRIODE ψ CLASS B AMPLIFIER	180	0	——	——	Power output values are for 2 tubes at indicated plate-to-plate load.				13600 / 9400	2.50 / 3.50	
V-'99 X-'99	DETECTOR★ AMPLIFIER TRIODE	SMALL 4-NUB SMALL 4-PIN	FIG. 10 FIG. 1	3 1/16" x 1 1/16" / 4 1/8" x 1 3/8"	D-C FILAMENT	3.3	0.063	90	——	CLASS A AMPLIFIER	90	−4.5	——	——	2.5	15500	425	6.6	——	——	V-'99 X-'99
112-A	DETECTOR★ AMPLIFIER TRIODE	MEDIUM 4-PIN	FIG. 1	4 1/16" x 1 13/16"	D-C FILAMENT	5.0	0.25	180	——	CLASS A AMPLIFIER	90 / 180	−4.5 / −13.5	——	——	5.0 / 7.7	5400 / 4700	1575 / 1800	8.5 / 8.5	——	——	112-A

★For Grid-leak Detection—plate volts 45, grid return to + filament or to cathode.
■Either A. C. or D. C. may be used on filament or heater, except as specifically noted. For use of D. C. on A-C filament types, decrease stated grid volts by ½ (approx.) of filament voltage.
#Requires different socket from small 7-pin.
**Grid #1 is control grid. Grid #2 is screen. Grid #3 tied to cathode.
¶Grid #1 is control grid. Grids #2 and #3 tied to plate.
ψGrids #1 and #2 connected together. Grid #3 tied to plate.
✕Applied through plate coupling resistor of 250000 ohms.
**For grid of following tube.

RECTIFIERS

5Z3	FULL-WAVE RECTIFIER	MEDIUM 4-PIN	FIG. 2	5 3/8" x 2 1/16"	FILAMENT	5.0	3.0	——	——	Maximum A-C Voltage per Plate.....500 Volts, RMS Maximum D-C Output Current.....250 Milliamperes	5Z3
12Z3	HALF-WAVE RECTIFIER	SMALL 4-PIN	FIG. 22	4 1/2" x 1 9/16"	HEATER	12.6	0.3	——	——	Maximum A-C Voltage per Plate.....250 Volts, RMS Maximum D-C Output Current.....60 Milliamperes	12Z3
25Z5	RECTIFIER-DOUBLER	SMALL 6-PIN	FIG. 5	4 1/2" x 1 3/16"	HEATER	25.0	0.3	——	——	Maximum A-C Voltage per Plate.....125 Volts, RMS Maximum D-C Output Current.....100 Milliamperes	25Z5
1-V°	HALF-WAVE RECTIFIER	SMALL 4-PIN	FIG. 22	4 1/2" x 1 7/16"	HEATER	6.3	0.3	——	——	Maximum A-C Plate Voltage.....350 Volts, RMS Maximum D-C Output Current.....50 Milliamperes	1-V°
80	FULL-WAVE RECTIFIER	MEDIUM 4-PIN	FIG. 2	4 13/16" x 1 13/16"	FILAMENT	5.0	2.0	——	——	A-C Voltage per Plate (Volts RMS) 350 400 550 The 550 volt rating applies to filter circuits having an D-C Output Current (Maximum MA.) 125 110 135 input choke of at least 20 henries.	80
'81	HALF-WAVE RECTIFIER	MEDIUM 4-PIN	FIG. 3	6 1/4" x 2 7/16"	FILAMENT	7.5	1.25	——	——	Maximum A-C Plate Voltage.....700 Volts, RMS Maximum D-C Output Current.....85 Milliamperes	'81
82	FULL-WAVE ➤ RECTIFIER	MEDIUM 4-PIN	FIG. 2	4 13/16" x 1 13/16"	FILAMENT	2.5	3.0	——	——	Maximum A-C Voltage per Plate.....500 Volts, RMS Maximum Peak Inverse Voltage.....1400 Volts Maximum D-C Output Current.....125 Milliamperes Maximum Peak Plate Current.....400 Milliamperes	82
83	FULL-WAVE ➤ RECTIFIER	MEDIUM 4-PIN	FIG. 2	5 3/8" x 2 1/16"	FILAMENT	5.0	3.0	——	——	Maximum A-C Voltage per Plate.....500 Volts, RMS Maximum Peak Inverse Voltage.....1400 Volts Maximum D-C Output Current.....250 Milliamperes Maximum Peak Plate Current.....800 Milliamperes	83
84 also 6Z4	FULL-WAVE RECTIFIER	SMALL 5-PIN	FIG. 23	3 1/4" x 1 7/16"	HEATER	6.3	0.5	——	——	Maximum A-C Voltage per Plate.....350 Volts, RMS Maximum D-C Output Current.....50 Milliamperes	84 also 6Z4

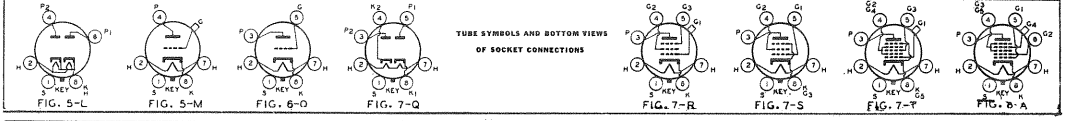
➤Mercury Vapor Type. ° Interchangeable with Type 1.

RCA ALL-METAL RADIO TUBE CHARACTERISTICS CHART

TYPE	NAME	BASE	SOCKET CONNECTIONS	DIMENSIONS MAXIMUM OVERALL LENGTH x DIAMETER	CATHODE TYPE ■	RATING: FILAMENT OR HEATER VOLTS	RATING: FILAMENT OR HEATER AMPERES	RATING: PLATE MAX. VOLTS	RATING: SCREEN MAX. VOLTS	USE Values to right give operating conditions and characteristics for indicated typical use	PLATE SUPPLY VOLTS	GRID VOLTS ■	SCREEN VOLTS	SCREEN MILLI-AMP.	PLATE MILLI-AMP.	A-C PLATE RESISTANCE OHMS	MUTUAL CONDUCTANCE MICROMHOS	VOLTAGE AMPLIFICATION FACTOR	LOAD FOR STATED POWER OUTPUT OHMS	POWER OUTPUT WATTS	TYPE
6A8	PENTAGRID CONVERTER ■	SMALL OCTAL 8-PIN	FIG. 8A	3 1/2" x 1 1/16"	HEATER	6.3	0.3	250	100	CONVERTER	250	(−3.0 min.)	100	3.2	3.3	Anode Grid (# 2): Supply**, 250 max. volts; Current, 4.0 ma. Oscillator Grid (# 1) Resistor, 50000 ohms. Conversion conductance, 500 micromhos.					6A8
6C5	DETECTOR★ AMPLIFIER TRIODE	SMALL OCTAL 6-PIN	FIG. 6Q	2 3/4" x 1 5/16"	HEATER	6.3	0.3	250	——	CLASS A AMPLIFIER	250	−8.0	——	——	8.0	10000	2000	20	——	——	6C5
										BIAS DETECTOR	250	(−17.0 approx.)	——	——	Plate current to be adjusted to 0.2 milliampere with no signal.					
6F5	HIGH-MU TRIODE	SMALL OCTAL 5-PIN	FIG. 6M	3 1/2" x 1 5/16"	HEATER	6.3	0.3	250	——	CLASS A AMPLIFIER	250	−2.0	——	——	0.9	66000	1500	100	——	——	6F5
6F6	POWER AMPLIFIER PENTODE	SMALL OCTAL 7-PIN	FIG. 7S	3 1/2" x 1 5/16"	HEATER	6.3	0.7	315	315	CLASS A AMPLIFIER	250	−16.5	250	6.5	34.0	80000	2500	200	7000	3	6F6
6J7	TRIPLE-GRID DETECTOR AMPLIFIER	SMALL OCTAL 7-PIN	FIG. 7R	3 1/2" x 1 5/16"	HEATER	6.3	0.3	250	125	SCREEN GRID R-F AMPLIFIER	250	−3.0	100	0.5	2.0	exceeds 1.5 meg.	1225	exceeds 1500	——	——	6J7
										BIAS DETECTOR	250	−4.3	100	Cathode current 0.43 ma.		Plate coupling resistor 500000 ohms. Grid coupling resistor 250000 ohms.**				
6K7	TRIPLE-GRID SUPER-CONTROL AMPLIFIER	SMALL OCTAL 7-PIN	FIG. 7R	3 1/2" x 1 5/16"	HEATER	6.3	0.3	250	125	SCREEN GRID R-F AMPLIFIER	250	(−3.0 min.)	125	2.6	10.5	600000	1650	990	——	——	6K7
										MIXER IN SUPERHETERODYNE	250	−10.0	100	——	——	Oscillator peak volts = 7.0					
6L7	PENTAGRID MIXER & AMPLIFIER	SMALL OCTAL 7-PIN	FIG. 7T	3 1/2" x 1 5/16"	HEATER	6.3	0.3	250	150	MIXER IN SUPERHETERODYNE	250	−3.0	100	6.2	2.4	Oscillator Grid (# 3) bias, −10 volts. Grid # 3 peak swing, 12 volts min. Conversion conductance, 350 micromhos.					6L7
										AMPLIFIER ¶	250	−3.0	(100 max.)	5.5	5.3	800000	1100	——	——	——	

■Grids # 3 and # 5 are screen. Grid # 4 is signal-input control grid.
★For Grid-leak Detection—plate volts 45-100.
▲Grids # 2 and # 4 are screen. Grid # 1 is signal-input control grid.
¶Grid # 3 connected to grid # 1.
**Applied through 20000-ohm voltage-dropping resistor.
**For grid of following tube.
■Either A.C. or D.C. may be used on heater.

5Z4	FULL-WAVE RECTIFIER▲	SMALL OCTAL 5-PIN	FIG. 5L	5 1/4" x 1 5/16"	HEATER	5.0	2.0	——	——	Maximum A-C Voltage per Plate.....400 Volts, RMS Maximum D-C Output Current.....125 Milliamperes	5Z4
6H6	TWIN-DIODE DETECTOR RECTIFIER	SMALL OCTAL 7-PIN	FIG. 7Q	1 5/8" x 1 5/16"	HEATER	6.3	0.3	——	——	Maximum A-C Voltage per Plate.....100 Volts, RMS Maximum D-C Output Current.....2 Milliamperes	6H6



TUBE SYMBOLS AND BOTTOM VIEWS OF SOCKET CONNECTIONS