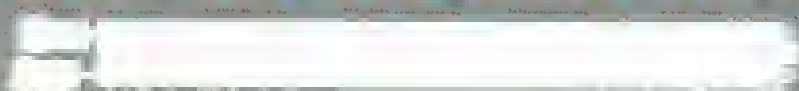
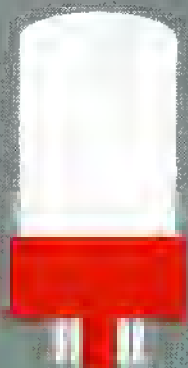
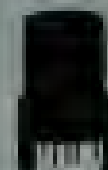


RCA

RECEIVING-TYPE TUBES FOR INDUSTRY AND COMMUNICATIONS



"Premium" Tubes
"Special Red" Tubes
"Pencil" Tubes
Computer Tubes
Glow Discharge Tubes
Small Thyratrons
Low-Microphonic Amplifier Tubes
Nuvistor Tubes
Traveling-Wave Tubes
and other Special Types



RADIO CORPORATION OF AMERICA

ELECTRON TUBE DIVISION

HARRISON, N. J.

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Form No. RIT-104B

Designed to Meet Military Specifications and Critical Industrial Applications

 Type	Proto- type	Name	Description and/or Difference Between Type and Prototype	Special Tests and Controls												
				Shock	Fatigue	Vibration	Glass Strain	AF Noise, Microphones	Stability	Inertness	High Altitude	Heater Cycling	Room Temp.	Elevated Bulb Temp.		
			Rating or Characteristic	Premium Type	Proto- Type	Life Test										
0A2-WA	0A2	Voltage Regulator*	This type is designed to meet the indicated military specification.	✓	✓	✓	✓	—	✓	✓	—	—	—	—		
0B2-WA	0B2	Voltage Regulator*	This type is designed to meet the indicated military specification.	✓	✓	✓	✓	—	✓	✓	—	—	—	✓		
2D21-W	2D21	Thyratron Tetrode*	This type is designed to meet the indicated military specification.	✓	✓	✓	—	✓	—	—	—	—	—	—		
6AC7-W	6AC7	Sharp Cutoff Pentode*■	This type is designed to meet the indicated military specification.	✓	✓	✓	—	✓	—	—	—	—	—	—		
6AU6-WA	6AU6	Sharp Cutoff Pentode*	This type is designed to meet the indicated military specification.	✓	✓	✓	✓	—	✓	✓	✓	✓	—	✓		
6J4-WA	6J4	High-Mu Triode*	This type is designed to meet the indicated military specification.	✓	✓	—	✓	—	✓	✓	✓	✓	—	—		
6J6-WA	6J6	Medium-Mu Twin Triode*	This type is designed to meet the indicated military specification.	✓	✓	✓	✓	✓	✓	✓	✓	✓	—	✓		
12AT7-WA	12AT7	High-Mu Twin Triode§	This type is designed to meet the indicated military specification.	✓	✓	✓	✓	✓	✓	✓	✓	✓	—	—		
5636	—	Sharp-Cutoff Pentode*	Heater-Cathode Type. For gated amplifier, delay and mixer circuits up to 400 Mc, and gain-controlled amplifier circuits.	✓	✓	✓	✓	✓	✓	✓	✓	✓	—	✓		
5639	—	Sharp-Cutoff Pentode*	Heater-Cathode Type. For use in high-gain wide-band circuits.	✓	✓	✓	✓	✓	✓	✓	✓	✓	—	✓		
5651	—	Voltage Regulator*	For use in equipment where extreme voltage stability is required.	—	—	✓	—	✓	—	—	—	—	✓	—		
5651-WA	—	Voltage Regulator*	This type is designed to meet the indicated military specification.	✓	✓	✓	✓	✓	✓	✓	✓	—	✓	✓		
5654	6AK5	Sharp-Cutoff Pentode*	None	✓	✓	✓	✓	✓	✓	✓	✓	✓	—	✓		
5654/ 6AK5-W	6AK5	Sharp-Cutoff Pentode*	This type is designed to meet the indicated military specification.	✓	✓	✓	✓	✓	✓	✓	✓	✓	—	✓		
5654/ 6AK5-W/ 6096	6AK5	Sharp-Cutoff Pentode*	This type is designed to meet the indicated military specification.	✓	✓	✓	✓	✓	✓	✓	✓	✓	—	✓		
5670	2C51	Medium-Mu Twin Triode§	This type is designed to meet the indicated military specification.	✓	✓	✓	✓	✓	✓	✓	✓	✓	—	✓		
5670-WA	2C51	Medium-Mu Twin Triode§	This type is designed to meet the indicated military specification.	✓	✓	✓	✓	✓	✓	✓	✓	✓	—	✓		
5686	—	Beam Power Tube§	Heater-Cathode Type. For renewal use only.	✓	✓	✓	✓	—	✓	✓	✓	✓	✓	—		
5718	—	Medium-Mu Triode*	Heater-Cathode Type. Uhf amplifier and oscillator. Useful power output at 500 Mc., nearly one watt.	✓	✓	✓	✓	✓	✓	✓	✓	✓	—	✓		
5719	—	High-Mu Triode*	Heater-Cathode Type. Useful as an audio amplifier in mobile receivers.	✓	✓	✓	✓	✓	✓	✓	✓	✓	—	✓		
5725	6AS6	Sharp-Cutoff Pentode*	Bulb Temperature, Max. °C (at hottest point)	165	120	✓	✓	✓	✓	✓	✓	✓	✓	—		
5726	6AL5	Twin Diode*	Controlled Plate-Current Balance	Yes	No	✓	✓	✓	—	✓	✓	✓	✓	—		
5726/ 6AL5-W	6AL5	Twin Diode*	This type is designed to meet the indicated military specification.	✓	✓	✓	✓	—	✓	✓	✓	✓	—	✓		

For key to terminal connections see page 30.

* 7-pin miniature type.

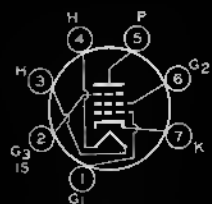
§ 9-pin miniature type.

* Subminiature type with flexible leads.

■ Small wafer octal 8-pin type.

0A2-WA 0B2-WA
5651 5651-WA

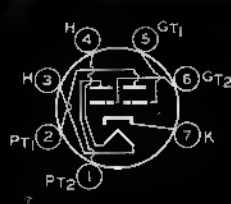
6AC7-W



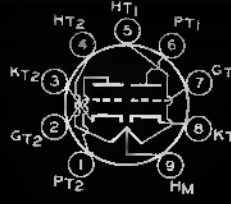
6AU6-WA



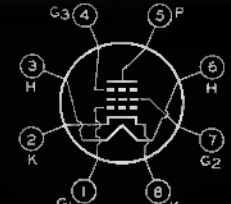
6J4-WA



6J6-WA



12AT7-WA



5636



5639

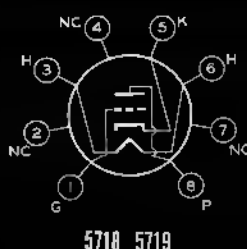
PREMIUM TUBES

Designed to Meet Military Specifications and Critical Industrial Applications

Cathode		Maximum Dimensions Inches		Class of Service	Maximum Ratings				Operating Conditions and Characteristics										 Type
					Plate Volts	Plate Dissipation Watts	Cathode Current Ma.	Grid-No. 2 Input Watts	Plate Supply Volts	Grid-No. 1 Volts(v) or Cathode Resistance Ohms	Grid-No. 2 Supply Volts	Plate Current Ma.	AC Plate Resistance Ohms	Trans-conductance Micro-mhos	Amplification Factor	Power Output Watts			
Volts	Amps.	Length	Diam.																
Cold Cathode		2 5/8	3/4	Voltage Regulator	For data refer to MIL-E-1/290B specification [▲]												0A2-WA		
Cold Cathode		2 5/8	3/4	Voltage Regulator	For data refer to MIL-E-1/291 specification [▲]												0B2-WA		
6.3	0.6	2 1/8	3/4	High-Sensitivity Control Service	For data refer to MIL-E-1/756B specification [▲]												2D21-W		
6.3	0.45	2 5/8	—	Class A ₁ Amplifier	For data refer to MIL-E-1/354 specification [▲]												6AC7-W		
6.3	0.3	2 1/8	3/4	Class A ₁ Amplifier	For data refer to MIL-E-1/1 specification [▲]												6AU6-WA		
6.3	0.4	2 1/8	3/4	Class A ₁ Amplifier for UHF Service	For data refer to MIL-E-1/619D specification [▲]												6J4-WA		
6.3	0.45	2 1/8	3/4	Class A ₁ Amplifier Each Unit	For data refer to MIL-E-243B specification [▲]												6J6-WA		
6.3 12.6	0.3 0.15	2 3/16	7/8	Class A ₁ Amplifier Each Unit	For data refer to MIL-E-1/3A specification [▲]												12AT7-WA		
6.3	0.15	1 3/8 [†]	0.383	Class A ₁ Amplifier	165	1.1	—	0.7	100 100	150 150	100 100	5.6 4	110000 50000	3200 1950	Grid-No. 3 Volts, 0 Grid-No. 3 Volts, -1	—	5636		
6.3	0.45	1 3/4 [†]	0.4	Class A ₁ Amplifier	165	4.0	40	1.0	150	100	100	21	50000	9000	—	—	5639		
Cold Cathode		2 1/8	3/4	Voltage-Reference Tube	Ambient Temp., -55° to +90°C Approx. DC Starting Volts, 107 Max. Starting Ma., 100 Min. DC Anode-Supply Volts, 115 Approx. DC Operating Volts, 87 Regulation Range, 1.5 to 3.5 Ma. Regulation Volts, 115												5651		
Cold Cathode		2 1/8	3/4	Voltage-Reference Tube	For data refer to MIL-E-1/825A specification [▲]												5651-WA		
6.3	0.175	1 3/4	3/4	Voltage-Reference Tube	200	1.65	—	0.55	180	180	120	2.4	500000	5100	—	—	5654		
6.3	0.175	1 3/4	3/4	Voltage-Reference Tube	For data refer to MIL-E-1/4A specification [▲]												5654/ 6AK5-W		
6.3	0.175	1 3/4	3/4	Voltage-Reference Tube	For data refer to MIL-E-1/236 specification [▲]												5654/ 6AK5-W/ 6096		
6.3	0.35	1 3/4	7/8	Class A ₁ Amplifier Each Unit	For data refer to MIL-E-1/5C specification [▲]												5670		
6.3	0.35	1 3/4	7/8	Class A ₁ Amplifier Each Unit	For data refer to MIL-E-1/247 specification [▲]												5670-WA		
6.3	0.35	2 3/16	7/8	Class A ₁ Amplifier	250	7.5	—	3.0	250	-12.5v	250	27	45000	3100	—	2.7	5686		
6.3	0.15	1 3/8 [†]	0.4	Class C Amplifier and Oscillator	Maximum Ratings, Absolute Values: DC Plate Volts, 165 DC Grid Volts, -55 DC Plate Ma., 22 DC Grid Ma., 5.5 Plate Dissipation, 3.3 Watts												5718		
6.3	0.15	1 3/8 [†]	0.4	Class A ₁ Amplifier	165	0.55	—	—	150	680	—	1.85	30500	2300	70	—	5719		
6.3	0.175	1 3/4	3/4	Class A ₁ Amplifier	200	1.65	20	0.55	120	-2v	120	5.2	—	3200	—	—	5725		
6.3	0.3	1 3/4	3/4	Half-Wave Rectifier	Maximum Ratings, Absolute Values: Peak Inverse Plate Volts, 360 DC Output Ma. per Plate, 10 Peak Plate Ma. per Plate, 60 Peak Heater-Cathode Volts, ±360												5726		
6.3	0.3	1 3/4	3/4	Half-Wave Rectifier	For data refer to MIL-E-1/7B specification [▲]												5726/ 6AL5-W		

[▲] A copy of this specification may be obtained from the Director of the Armed Services Electro-Standards Agency (ASESA) at Fort Monmouth, New Jersey.

[†] Excluding flexible leads.



PREMIUM TUBES — Cont'd

Designed to Meet Military Specifications and Critical Industrial Applications

 Type	Proto- type	Name	Description and/or Difference Between Type and Prototype			Special Tests and Controls										
						Shock	Fatigue	Vibration	Glass Strain	RF Noise, Microphonics	Stability	Inoperatives	High-Altitude	Heater-Cycling	Room Temp.	Elevated Bulb Temp.
			Rating or Characteristic	Premium Type	Proto- Type											
5726/ 6AL5-W/ 6097	6AL5	Twin Diode*	This type is designed to meet the indicated military specification.			✓	✓	✓	✓	—	✓	✓	✓	✓	—	✓
5727	2D21	Thyratron Tetrode*	Heater-Cathode Type. Relay, grid-controlled rectifier, and pulse-modulator service. Operates in a high-sensitivity circuit directly from a vacuum photo-tube.			✓	✓	✓	✓	—	✓	✓	✓	✓	—	✓
5727/ 2D21-W	2D21	Thyratron Tetrode*	This type is designed to meet the indicated military specification.			✓	✓	✓	✓	—	✓	✓	✓	✓	✓	—
5749	6BA6	Remote-Cutoff Pentode*	Heater-Cathode Type. For high-grain rf or if amplifier service, and automatic-gain-control circuits.			✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	—
5749/ 6BA6-W	6BA6	Remote-Cutoff Pentode*	This type is designed to meet the indicated military specification.			✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	—
5750	6BE6	Pentagrid Converter*	Heater-Cathode Type. For renewal use only.			✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	—
5751	12AX7	High-Mu Twin Triode§	This type is designed to meet the indicated military specification.			✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	—
5751-WA	12AX7	High-Mu Twin Triode§	This type is designed to meet the indicated military specification.			✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	—
5814-A	12AU7	Medium-Mu Twin Triode§	Heater Current Amp./Sect.	0.175	0.15	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	—
			Peak H-K Volts	± 100	± 200											
			Controlled Plate- Current Balance	Yes	No											
5814-WA	12AU7	Medium-Mu Twin Triode§	This type is designed to meet the indicated military specifications.			✓	✓	✓	✓	✓	✓	✓	✓	✓	—	✓
5840	—	Sharp-Cutoff Pentode*	Heater-Cathode Type. Useful as an rf or if amplifier tube in broad-band circuits of mobile and aircraft equipment. Can be used up to 400 Mc. as an rf amplifier.			✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	—
5896	—	Twin Diode*	Heater-Cathode Type. A low-current rectifier and detector at frequencies through the uhf regions.			✓	✓	✓	✓	—	✓	✓	✓	✓	✓	—
5899	—	Semiremote- Cutoff Pentode*	Heater-Cathode Type. For use in agc rf and if amplifier circuits up to 400 Mc.			✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	—
5902	—	Beam-Power Tube*	Heater-Cathode Type. For use as an audio-amplifier and series-regulator tube in power supplies.			✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	—
6005	6AQ5	Beam-Power Tube*	Max. Bulb Temperature, °C	225	250	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	—
6005/ 6AQ5-W	6AQ5	Beam-Power Tube*	This type is designed to meet the indicated military specification.			✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	—
6005/ 6AQ5-W/ 6095	6AQ5	Beam-Power Tube*	This type is designed to meet the indicated military specification.			✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	—
6021	—	Medium-Mu Twin Triode*	For general-purpose oscillator and amplifier applications. Each unit has a separate cathode.			✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	—

For key to terminal connections see page 30.

* 7-pin miniature type.

§ 9-pin miniature type.

* Subminiature type with flexible leads.

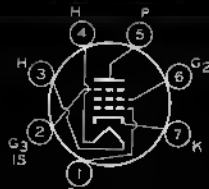
■ DC component must not exceed 100 volts.



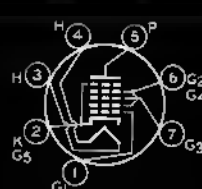
5726/6AL5-W/6097



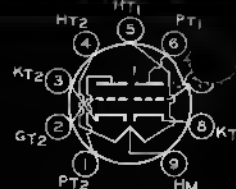
5727
5727/2D21-W



5749 5749/6BA6-W



5750



5751 5751-WA
5814-A 5814-WA

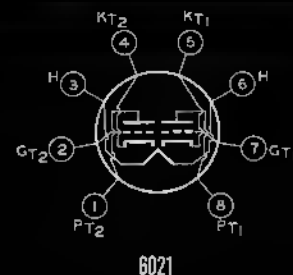
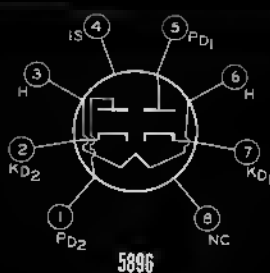
PREMIUM TUBES — Cont'd

Designed to Meet Military Specifications and Critical Industrial Applications

Cathode		Maximum Dimensions Inches		Class of Service	Maximum Ratings				Operating Conditions and Characteristics								Type	
					Plate Volts	Plate Dissipation Watts	Cathode Current Ma.	Grid-No. 2 Input Watts	Plate Supply Volts	Grid-No. 1 Volts(v) or Cathode Resistance Ohms	Grid-No. 2 Supply Volts	Plate Current Ma.	AC Plate Resistance Ohms	Trans-conductance Micro-mhos	Amplification Factor	Power Output Watts		
Volts	Amps.	Length	Diam.															
6.3	0.3	1 3/4	3/4	Half-Wave Rectifier	For data refer to MIL-E-1/235A specification [▲]												5726/ 6AL5-W/ 6097	
6.3	0.6	2 1/8	3/4	Relay and Grid-Controlled Rectifier Service	Maximum Ratings: Peak Forward Anode Volts, 650 Peak Inverse Anode Volts, 1300 Fault Cathode Amp., 10 Peak Cathode Amp., 0.5 Av. Cathode Amp., 0.1												5727	
6.3	0.6	2 1/8	3/4	Control Service	For data refer to MIL-E-1/83B specification [▲]												5727/ 2D21-W	
6.3	0.3	2 1/8	3/4	Class A ₁ Amplifier	300	3.0	—	0.6	100 250	68 68	100 100	10.8 11	250000 1000000	4300 4400	— —	— —	5749	
6.3	0.3	2 1/8	3/4	Class A ₁ Amplifier	For data refer to MIL-E-1/8 specification [▲]												5749/ 6BA6-W	
6.3	0.3	2 5/16	7/8	Converter Service Separate Excitation	300	1.0	14	1.0	100	—	100	2.6	400000	Osc. Grid Volts (rms.), 10		5750		
6.3 12.6	0.35 0.175	2 5/16	7/8	Class A ₁ Amplifier Each Unit	For data refer to MIL-E-1/10A specification [▲]												5751	
6.3 12.6	0.35 0.175	2 5/16	7/8	Class A ₁ Amplifier Each Unit	For data refer to MIL-E-1/237 specification [▲]												5751-WA	
6.3 12.6	0.35 0.175	2 5/16	7/8	Class A ₁ Amplifier Each Unit	For data refer to MIL-E-1/12A specification [▲]												5814-A	
6.3 12.6	0.35 0.175	2 5/16	7/8	Class A ₁ Amplifier Each Unit	For data refer to MIL-E-1/238A specification [▲]												5814-WA	
6.3	0.15	1 3/8†	0.4	Class A ₁ Amplifier	165	1.1	16.5	0.55	100	150	100	7.5	260000	5000	—	—	5840	
6.3	0.3	1 3/8†	0.4	Full-Wave Rectifier	For data refer to MIL-E-1/174C specification [▲]												5896	
6.3	0.15	1 3/8†	0.4	Class A ₁ Amplifier	165	1.1	16.5	0.55	100	120	100	7.2	260000	4500	Grid-No. 1 Volts for Cutoff, —14		5899	
6.3	0.45	1 3/4†	0.4	Class A ₁ Amplifier	165	4.0	50	1.0	110	270	110	30	15000	4200	Grid-No. 1 Volts for Cutoff, —40		5902	
6.3	0.45	2 5/8	3/4	Class A ₁ Amplifier	275	11	—	2.2	180 250	— 8.5v —12.5v	180 250	29 45	58000 52000	3700 4100	— —	2 4.5	6005	
6.3	0.45	2 5/8	3/4	Class A ₁ Amplifier	For data refer to MIL-E-1/13B specification [▲]												6005/ 6AQ5-W	
6.3	0.45	2 5/8	3/4	Class A ₁ Amplifier	For data refer to MIL-E-1/239 specification [▲]												6005/ 6AQ5-W/ 6095	
6.3	0.3	1 3/4†	0.4	Class A ₁ Amplifier Each Unit	165	1.1	—	—	100	150	—	6.5	6500	5400	35	Grid Volts for Cutoff, —6.5		6021

[▲] A copy of this specification may be obtained from the Director of the Armed Services Electro-Standards Agency (ASESA) at Fort Monmouth, New Jersey.

‡ Excluding flexible leads.



Designed to Meet Military Specifications and Critical Industrial Applications

RCA Type	Proto- type	Name	Description and/or Difference Between Type and Prototype			Special Tests and Controls										
						Shock	Fatigue	Vibration	Glass Strain	AF Noise, Microphonics	Stability	Inoperatives	High-Altitude	Life Test		
			Rating or Characteristic	Premium Type	Proto- Type									Heater-Cycling	Room Temp.	Elevated Bulb Temp.
6072	12AY7	Medium-Mu Twin Triode §	Heater Current, Amperes, for Heater Volts = 6.3 For renewal use only.	0.35	0.3	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
6073	0A2	Voltage Regulator*	None Like 0A2, but intended for volt- age-regulator applications critical as to shock and vibration.	—	—	✓	✓	✓	—	✓	—	—	—	—	—	—
6073/ 0A2	0A2	Voltage Regulator*	None Like 0A2, but intended for volt- age-regulator applications critical as to shock and vibration.	—	—	✓	✓	✓	✓	✓	—	—	—	—	—	—
6074	0B2	Voltage Regulator*	None Like 0B2 but intended for volt- age-regulator applications critical as to shock and vibration.	—	—	✓	✓	✓	—	✓	—	—	—	—	—	—
6074/ 0B2	0B2	Voltage Regulator*	None Like 0B2 but intended for volt- age-regulator applications critical as to shock and vibration.	—	—	✓	✓	✓	✓	✓	—	—	—	—	—	—
6080-WA	6AS7-G	Low-Mu Twin Power Triode §	This type is designed to meet the indicated military specification.	—	—	✓	✓	✓	—	✓	✓	✓	✓	✓	✓	—
6099	6J6	Medium-Mu Twin Triode*	Special Air Force application only. For other military uses, the 6101/ 6J6-WA is recommended.	—	—	✓	✓	✓	✓	—	✓	✓	✓	✓	✓	✓
6101	6J6	Medium-Mu Twin Triode*	Plate Dissip., Watts Plate Res., Ohms Transcon., μ mbos Peak H-K Volts	0.85 6300 6000 ± 180	1.5 7100 5300 ± 100	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	—
6101/ 6J6-WA	6J6	Medium-Mu Twin Triode*	This type is designed to meet the indicated military specification.	—	—	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	—
6111	—	Medium-Mu Twin Triode*	General-purpose amplifier. Also used as a combined oscillator and mixer tube in vhf applications.	—	—	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	—
6112	—	High-Mu Twin Triode*	Heater-Cathode Type. Low-level audio amplifier. Designed to meet indicated military specification.	—	—	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	—
6136	6AU6	Sharp-Cutoff Pentode*	Input Capacitance (μ mf) For high-frequency broad-band applications.	6.0	5.5	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	—
6186	6AG5	Sharp-Cutoff Pentode*	None RF Amplifier.	—	—	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
6186/ 6AG5-WA	6AG5	Sharp-Cutoff Pentode*	This type is designed to meet the indicated military specification.	—	—	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	—
6189/ 12AU7-WA	12AU7	Medium-Mu Twin Triode §	This type is designed to meet the indicated military specification.	—	—	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	—
6201	12AT7	High-Mu Twin Triode §	None Mixer, oscillator and amplifier at frequencies up to 300 Mc.	—	—	✓	✓	✓	—	✓	✓	✓	✓	✓	✓	—
6205	5840	Sharp-Cutoff Pentode*	Grid-No. 3 brought out to separate pin	Yes	No	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	—
6206	5899	Semiremote- Cutoff Pentode*	Grid-No. 2 Ma. Similar to 5899 but uses a sepa- rate terminal for grid No. 3.	2.2	2.0	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	—
6626/ 0A2-WA	0A2	Voltage Regulator*	This type is designed to meet the indicated military specification.	—	—	✓	✓	✓	✓	—	✓	✓	—	—	—	—

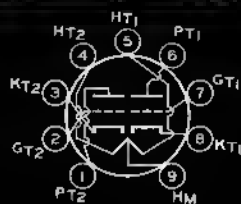
For key to terminal connections see page 30.

* 7-pin miniature type.

§ 9-pin miniature type.

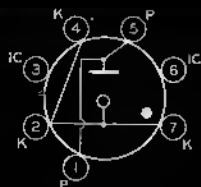
* Large wafer octal 8-pin type with metal sleeve.

* Subminiature type with flexible leads.



6072

6189/12AU7-WA 6201

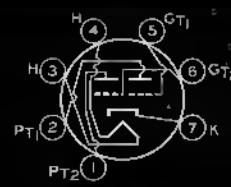


6073

6073/0A2 6074 6074/0B2



6080-WA



6099 6101

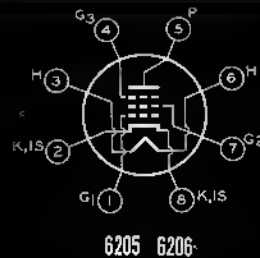
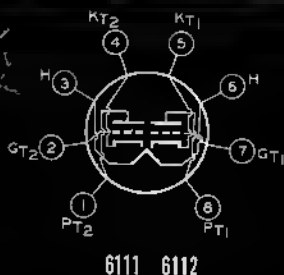
6101/6J6-WA

Designed to Meet Military Specifications and Critical Industrial Applications

Cathode		Maximum Dimensions Inches		Class of Service	Maximum Ratings				Operating Conditions and Characteristics								Type
					Plate Volts	Plate Dissipation Watts	Cathode Current Ma.	Grid-No. 2 Input Watts	Plate Supply Volts	Grid-No. 1 Volts(v) or Cathode Resistance Ohms	Grid-No. 2 Supply Volts	Plate Current Ma.	AC Plate Resistance Ohms	Trans-conductance Micro-mhos	Amplification Factor	Power Output Watts	
6.3 12.6	0.35 0.175	2 3/16	7/8	Class A ₁ Amplifier Each Unit	300	1.5	—	—	250	—4v	—	3.0	25000	1750	44	Grid Volts for Cut-off, —8	6072
Cold Cathode		2 5/8	3/4	Voltage Regulator	Ambient Temp., —55 to +90°C Approx. DC Starting Volts, 156 Min. DC Anode-Supply Volts, 185							Approx. DC Operating Volts, 151 Regulation Range, 5 to 30 Ma. Regulation Volts, 2				6073	
Cold Cathode		2 5/8	3/4	Voltage Regulator	Ambient Temp., —55 to +90°C Approx. DC Starting Volts, 156 Min. DC Anode-Supply Volts, 185							Approx. DC Operating Volts, 151 Regulation Range, 5 to 30 Ma. Regulation Volts, 2				6073/ OA2	
Cold Cathode		2 5/8	3/4	Voltage Regulator	Ambient Temp., —55 to +90°C Approx. DC Starting Volts, 115 Min. DC Anode-Supply Volts, 133							Approx. DC Operating Volts, 108 Regulation Range, 5 to 30 Ma. Regulation Volts, 1				6074	
Cold Cathode		2 5/8	3/4	Voltage Regulator	Ambient Temp., —55 to +90°C Approx. DC Starting Volts, 115 Min. DC Anode-Supply Volts, 133							Approx. DC Operating Volts, 108 Regulation Range, 5 to 30 Ma. Regulation Volts, 1				6074/ OB2	
6.3	2.5	4 1/4	1.72	DC Amplifier	For data refer to MIL-E-1/510B specification [†]												6080-WA
6.3	0.45	2 1/8	3/4	Class A ₁ Amplifier Each Unit	For government end use only												6099
6.3	0.45	2 1/8	3/4	Class A ₁ Amplifier Each Unit	330	0.85	—	—	100	Cath. Res., 50 Ohms Common to Both Units	—	3.5	6300	6000	38	—	6101
6.3	0.45	2 1/8	3/4	Class A ₁ Amplifier Each Unit	For data refer to MIL-E-1/243A specification [†]												6101/ 6J6-WA
6.3	0.3	1 3/8†	0.4	Class A ₁ Amplifier Each Unit	165	1.1	Neg. DC Grid Volts, 55	—	100	220	—	8.5	4000	5000	20	Grid Volts for Cut-off, —9	6111
6.3	0.3	1 3/8†	0.4	Class A ₁ Amplifier Each Unit	For data refer to MIL-E-1/190C specification [†]												6112
6.3	0.3	2 1/8	3/4	Class A ₁ Amplifier	300	3.0	—	0.65	100 250	150 68	100 150	5 10.6	500000 1000000	3900 5200	Cutoff Volts, —4.2 Cutoff Volts, —6.5	—	6136
6.3	0.3	2 1/8	3/4	Class A ₁ Amplifier	330	2.5	—	0.55	250	200	150	7.0	—	5000	—	—	6186
6.3	0.3	2 1/8	3/4	Class A ₁ Amplifier	For data refer to MIL-E-1/244A specification [†]												6186/ 6AG5-WA
6.3 12.6	0.3 0.15	2 3/16	7/8	Class A ₁ Amplifier Each Unit	For data refer to MIL-E-1/246A specification [†]												6189/ 12AU7-WA
6.3 12.6	0.3 0.15	2 3/16	7/8	Class A ₁ Amplifier Each Unit	300	2.5	Neg. DC Grid Volts, 50	—	100 250	270 200	—	3.3 10	14300 10900	4000 5500	57 60	—	6201
6.3	0.15	1 3/8†	0.4	Class A ₁ Amplifier	165	1.1	16.5	0.55	100	150	100	7.5	260000	5000	Cutoff Volts, —9	—	6205
6.3	0.15	1 3/8†	0.4	Class A ₁ Amplifier	165	1.1	16.5	0.55	100	120	100	7.2	260000	4500	—	—	6206
Cold Cathode		2 5/8	3/4	Voltage Regulator	For data refer to MIL-E-1/939B specification [†]												6626/ OA2-WA

[†] A copy of this specification may be obtained from the Director of the Armed Services Electro-Standards Agency (ASESA) at Fort Monmouth, New Jersey.
^{††} A copy of this specification may be obtained from the Bureau of Ships, Department of the Navy, Washington 25, D. C.

‡ Excluding flexible leads.



NUVISTOR TRIODE

General-Purpose Type for Critical Industrial Applications

Type	Name	Description	Special Tests and Controls									
			Shock	Fatigue	Variable-Frequency Vibration	High Altitude	Heater Cycling	Intermittent Shorts	Inter-electrode Leakage	Life Tests		
										Early-Hour Stability	100-Hour Performance	1000-Hour Performance
7586	Medium-Mu Triode	Heater-cathode type; metal shell with indexing lugs; weight approximately 1/15 ounce (1.9 grams).	✓	✓	✓	✓	✓	✓	✓	✓	✓	

SPECIAL RED TUBES

For Critical Industrial Applications Where 10000-Hour Life,
Extreme Dependability, and Exceptional Stability are Paramount

	Type	Proto- type	Name	Description and/or Difference Between Type and Prototype			Special Tests and Controls										
							Shock	Fatigue	Vibration	Base Tension	AF Noise, Microphonics	Stability	Temperature	High-Altitude	Heater-Cycling	Life Test	
				Rating or Characteristic	Premium Type	Proto- Type										500-Hour	1000-Hour
5690	—		Full-Wave Vacuum Rectifiers	Heater-Cathode Type. Each unit has its own heater and cathode with individual base-pin connections. Full ratings up to 40000 feet.			✓	✓	✓	—	✓	✓	✓	✓	✓	✓	✓
5691	6SL7-GT	High-Mu Twin Triodes	Heater Current	0.6	0.3	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
			Max. Plate Volts	275	300												
			Peak H-K Volts	± 100	± 90												
			Heaters in series for fail-safe operation	Yes	No												
5692	6SN7-GT	Medium-Mu Twin Triodes	Controlled Plate-Current Balance	Yes	No	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
			Max. Plate Volts	275	300												
			Plate Dissip., Watts	1.75	2.5												
			Peak H-K Volts	± 100	± 200												
5693	6SJ7	Sharp-Cutoff Pentode	Heaters in series for fail-safe operation	Yes	No	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
			Plate Dissip., Watts	2	2.5												
			Grid-No. 2 Input Watts	0.3	0.7												
			Peak H-K Volts	± 100	± 90												

For key to terminal connections see page 30.

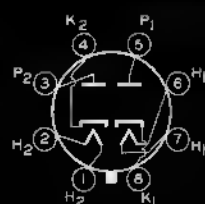
⊘ Glass-octal 8-pin type.

† Metal-octal 8-pin type.



INDEX=LARGE LUG
●=PIN CUT OFF

7586



5690

NUVISTOR TRIODE

General-Purpose Type for Critical Industrial Applications

Cathode		Maximum Dimensions Inches		Maximum Ratings					Characteristics — Class A ₁ Amplifier									Type
				Plate Supply	Plate	Plate Dissipation	Grid Current	Plate Current	Plate Supply	Plate	Grid Supply	Cathode Resistor	Grid-Circuit Resistance	Amplification Factor	AC Plate Resistance (Approx.)	Trans-conductance Micro-mhos	Plate Current	
Volts	Amps.	Length	Diam.	Volts	Volts	Watts	Ma.	Ma.	Volts	Volts	Volts	Ohms	Ohms		Ohms		Ma.	
6.3	0.14	0.800	0.440	330	110	1.0	2.0	20	—	26.5	0	—	500000	31	4400	7000	2.8	7586
									75	—	0	130	—	33	2900	11500	10.5	

SPECIAL RED TUBES

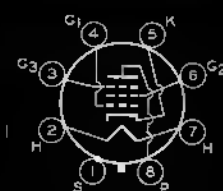
For Critical Industrial Applications Where 10000-Hour Life,
Extreme Dependability, and Exceptional Stability are Paramount

Cathode		Maximum Dimensions Inches		Class of Service	Maximum Ratings				Operating Conditions and Characteristics								 Type
					Plate Volts	Plate Dissipation Watts	Cathode Current Ma.	Grid-No. 2 Input Watts	Plate Supply Volts	Grid-No. 1 Volts(v) or Cathode Resistance Ohms	Grid-No. 2 Supply Volts	Plate Current Ma.	AC Plate Resistance Ohms	Trans-conductance Micro-mhos	Amplification Factor	Power Output Watts	
Volts	Amps.	Length	Diam.														
12.6 6.3	1.2 2.4	4 1/4	1 23/32	Full-Wave Rectifier with Capacitive Input Filter	AC Volts per Plate (RMS), 350 Filter Input Capacitor, 10 μ f DC Output Volts at 110 Ma., 365 DC Output Volts at 55 Ma., 415						Max. Peak Inverse Plate Volts, 1120 Max. Peak Plate Ma. per Plate, 375 Max. Av. Plate Ma. per Plate, 62.5 Total Effect-Supply Imped. per Plate, 350 Ohms						5690
				Full-Wave Rectifier with Inductive Input Filter	AC Volts per Plate (RMS), 350 Filter Input Choke, 10 henries DC Output Volts at 135 Ma., 300 DC Output Volts at 67.5 Ma., 305						Max. Peak Inverse Plate Volts, 1120 Max. Peak Plate Ma. per Plate, 375 Max. Av. Plate Ma. per Plate, 75						
6.3	0.6	2 7/8	1 9/32	Industrial Service (Each Unit)	275	1.0	10	—	250	-2v	—	2.3	44000	1600	70	—	5691
					Max. Plate Current for Grid Volts at -5.5, 15 μ a Difference in Plate Current Between Units, 0.9 Max. Ma. at Grid Volts, -2										Max. Reverse Grid Current, 0.2 μ a		
6.3	0.6	2 7/8	1 9/32	Industrial Service (Each Unit)	275	1.75	15	—	250	-9v	—	6.5	9100	2200	20	—	5692
					Max. Plate Current for Grid Volts at -24, 15 μ a Difference in Plate Current Between Units, 2 Max. Ma. at Grid Volts, -9										Max. Reverse Grid μ a, 0.2		
6.3	0.3	2 5/8	1 5/16	Industrial Service	300	2.0	10	0.3	250	-3v	100	3.0	1.0**	1650	—	—	5693
					Max. Plate μ a 80, at Grid-No. 1 Volts, -7.5 Max. Plate μ a 750, at Grid-No. 3 Volts, -70										Max. Reverse Grid-No. 1 Current, 0.1 μ a		

** Minimum megohms.



5691 5692



5693

TUBES FOR UHF APPLICATIONS

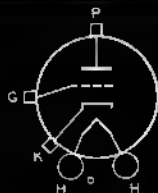


 Type	Description
PENCIL TUBES	
5675	Medium-Mu Triode. For use in cathode-drive service as a class C rf power amplifier and oscillator. Useful up to 3000 Mc.
5876	General-Purpose, High-Mu Triode. For use in cathode-drive circuits as an rf amplifier, if amplifier, or mixer tube in receivers operating at frequencies up to 1000 Mc; as a frequency multiplier up to about 1500 Mc, and as an oscillator up to 1700 Mc.
5876-A	High-Mu Triode. Like the 5876 but intended for military and critical industrial applications.
5893	Medium-Mu Triode. For cathode-drive service as a plate-pulsed oscillator up to 3300 Mc. May also be used as an rf power amplifier, cw oscillator, or frequency doubler up to 1000 Mc.
6263	Medium-Mu Triode. Has external plate radiator. For use in cathode-drive service as an rf power amplifier and oscillator at frequencies up to 1700 Mc. Can be used in mobile equipment, and in aircraft transmitters at altitudes up to 60,000 feet without pressurized chambers.
6264-A	Medium-Mu Triode. Like the 6263 but has a mu of 40. Especially useful as a frequency multiplier. Intended for military and critical industrial applications.
6562/ 5794-A	Fixed-Tuned Oscillator Triode. Has two resonators integral with tube. Intended for radiosonde applications at 1680 Mc.
7533	Tunable Oscillator Triode. Has two resonators integral with the tube. Intended for radiosonde applications between 1660 Mc and 1700 Mc.
7552	High-Mu Triode type with ceramic-metal seals. For use in cathode-drive service as a low noise uhf amplifier at frequencies up to 1000 Mc and above. For compact mobile and aircraft equipment at altitudes up to 100,000 feet without pressurization.
7554	High-Mu Triode type with ceramic-metal seals. For use at frequencies up to 3000 Mc in cathode-drive service as an uhf power amplifier, oscillator and frequency multiplier in compact mobile and aircraft equipment at altitudes up to 100,000 feet without pressurization.

The heater leads for the Pencil tubes with the exceptions of types 6562, 7533, 7552, and 7554 fit the Cinch Socket, No. 54A1635, or equivalent. Connections to the plate, grid, and cathode terminals require flexible spring contacts. The cathode of the 6562 is externally connected to one of the heater leads.

G terminals nearer filament leads; P terminals nearer bulb tip.

G caps nearer base; P caps nearer bulb tip.



5675 5876 5876 A 5893

6263 6264 A 7552 7554

TUBES FOR UHF APPLICATIONS

Heater (H) or Filament		Max. Dimensions Inches		Amplification Factor	Class of Service	Max. Frequency for Full Input Mc	Max. Plate Ratings† Absolute Values			Typical Operating Conditions†							Type	
Volts	Amp.	Length	Diam.				Volts	DC Input Watts	Dissipation Watts	Plate Volts	Grid Volts	Peak AF Grid-to-Grid Volts	Plate Amperes	Plate-to-Plate Load Ohms	Approx. Driving Power Watts	Approx. Power Output Watts		
PENCIL TUBES																		
6.3	0.135	2.252	0.816 ^{aa}	20	C-T	—	300	9	9	120	-8	—	0.025	—	—	0.475	5675	
						Oscillator at 1700 Mc→											5876	
6.3	0.135	2.252	0.816 ^{aa}	56	C-T	—	360	9	6.25	250	-2	—	0.023	—	—	0.75		
						Oscillator at 1700 Mc→												
						C-M	—	330	7.5	6.25	300	-70	—	0.017	—	2	2	
						Doubler to 960 Mc→												
For data refer to MIL-E-1/1043 (USAF) specification ^{xx}																	5876-A	
6	0.28	2.297	0.816 ^{aa}	27	Maximum Ratings for Plate-Pulsed Oscillator Service—Class C: Maximum "On" Time, 5 μ sec in Any 5000 μ sec Interval Peak Positive-Pulse Plate Supply Volts, 1750 Peak Plate Amperes, 3 Plate Dissipation, 6 watts Pulse Duration, 1.5 μ sec												5893	
6	0.28	2.63	1.01 ^{bb}	27	• C-P	500	330	15	9	320	-52	—	0.035	—	2.4 ^m	8 ^p	6263	
						• C-T	500	400	22	13	350	-35	—	0.04	—	—		7 ^p
						Oscillator at 500 Mc→ Rf Power Amp. at 500 Mc→				350	-58	—	0.04	—	3 ^m	10 ^p		
For data refer to MIL-E-1/1045 (USAF) specification ^{xx}																	6264-A	
5.2 to 6.6	0.16 at 6.0 volts	3.256 ^c	0.865 ^a	—	C-T	Frequency (approx.), 1680 Mc. Frequency Adjustment Range, ± 12 Mc Max. Frequency Drift, +4 to -1 Mc Plate-Voltage Range, 117 to 95 Volts Ambient Temp. Range +22 to -40°C Power Output (approx.), 600 mw												6562/ 5794-A
5.2 to 6.6	0.16 at 6.0 volts	3.23 ^c	0.865 ^a	—	C-T	Frequency (approx.), 1680 Mc. Frequency Adjustment Range, ± 20 Mc Max. Frequency Drift, +4 to -1 Mc Plate-Voltage Range, 117 to 95 Volts Ambient Temp. Range +22 to -40°C Power Output (approx.), 575 mw												7533
6.3	0.225	1.62	0.557	70	A ₁	1000	250	—	2.5	125	Cathode Resistor 50 ohms		0.014	Power Gain: ^{zz} 16.5 db. above 70 dbm Noise Factor: 6.5 db		7552		
						Amplifier at 500 Mc→											7554	
6.3	0.225	1.62	0.557	70	C-T	1000	250 ^h	—	2.5	203 ^h	3 π	—	0.024 ^{vv}	—	—	1.3 ^p		
						Oscillator at 1000 Mc→												
						C-M	1000	250 ^h	—	2.5	218 ^h	18 π	—	0.021 ^{vv}	—	0.8 ^m	0.9 ^p	
						Doubler to 1000 Mc→												

Note: To facilitate comparison between types, all ratings are given on an absolute-maximum basis.

† Unless otherwise specified, all values shown are for Continuous Commercial Service.

* Intermittent Commercial and Amateur Service.

^h Plate-to-grid volts.

^a Cathode-to-grid volts.

^b Maximum radius.

^c Excluding flexible leads.

^m Driver power output.

^p Useful power output.

^{vv} Cathode current.

^{zz} For bandwidth of 5 Mc.

^{aa} Including grid flange.

^{bb} Including radiator fin.

^{xx} A copy of this specification may be obtained from the Commander, Wright-Patterson AFB, Attn., EWBFER, Wright-Patterson Air Force Base, Ohio.

EXPLANATION OF CLASS-OF-SERVICE ABBREVIATIONS

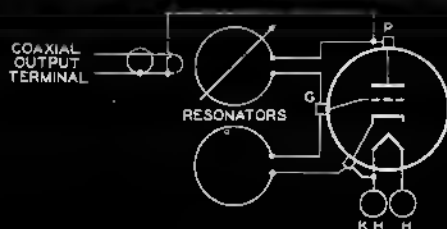
A₁ = Class A₁ RF Amplifier Service.

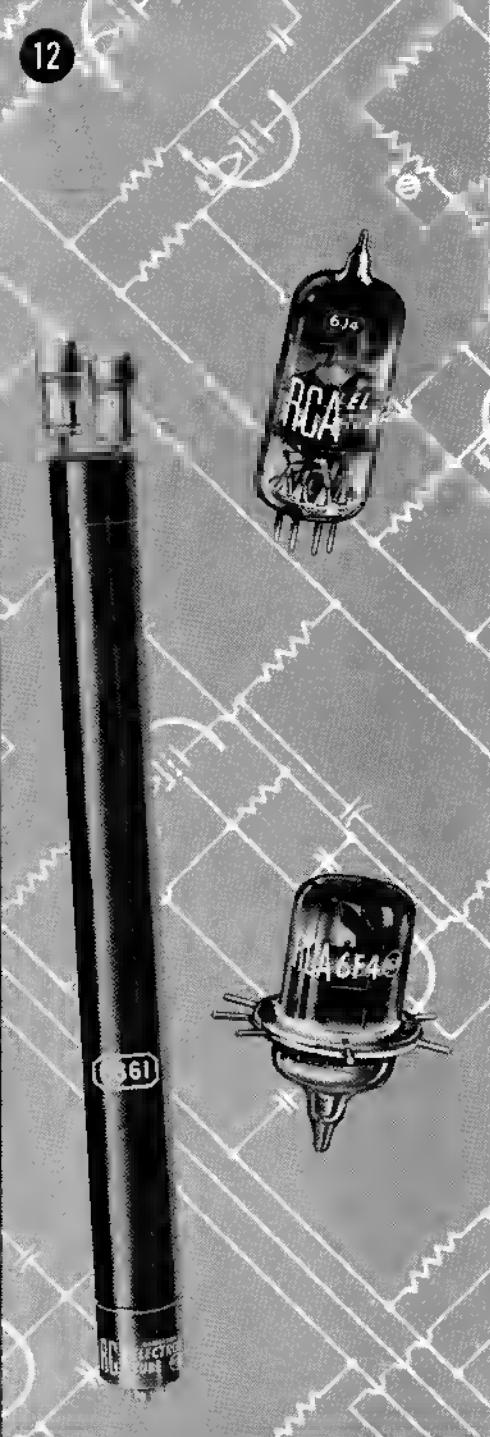
C-P = Class C Plate-Modulated Telephone Service.

C-M = Class C Frequency-Multiplier Service.

C-T = Class C Telegraph Service.

NOTE: In Classes of Service A₁, C-P, C-M, and C-T, the values shown under Maximum Plate Ratings and Typical Operating Conditions are for one tube.





 Type	Description
TRAVELING-WAVE TUBES	
4009	Helix-transmission line type with built-in periodic permanent magnet focusing. Frequency range 2000 to 4000 Mc. Low-power amplifier tube for driver applications and for first stage of wide-band microwave receivers not requiring a low-noise figure; also for grid-No. 1 pulsed applications involving negligible driving power.
4010	Helix-transmission line type with built-in periodic permanent magnet focusing. Frequency range 2000 to 4000 Mc. Intermediate power amplifier for use as driver of higher-power traveling-wave tubes; or as output stage in applications requiring power output of 1.5 watts or less.
6861	Low-noise, low-level amplifier tube of the helix-transmission line type. Frequency range, 2700 to 3500 Mc. For use in input stage of radar, scatter propagation and other microwave receivers, and in if amplifier service.
OTHER UHF TYPES	
2C40	Lighthouse Triode. For use as an RF amplifier at frequencies up to 1200 Mc and as a continuous-wave oscillator at frequencies up to 3370 Mc. Octal 6-pin base.
2C43	Lighthouse Triode. Similar to Type 2C40 except for higher dissipation rating. For use as a continuous-wave oscillator at frequencies up to 1500 Mc.
6F4	Oscillator Triode. Acorn type with a heater-cathode. For use at frequencies up to 1200 Mc.
6J4	High-Mu Triode. 7-pin miniature type with a heater-cathode. For use in cathode-drive circuits. Has a μ of 55 and a gm of 12000 micromhos. Useful up to about 500 Mc.
6F4	Oscillator Triode. Similar to 6F4 but operates at a higher plate voltage, has higher amplification factor, and lower grid-to-plate capacitance.
954	Sharp-Cutoff Pentode. Acorn type with a heater-cathode. For use at frequencies up to 430 Mc.
955	Medium-Mu Triode. Acorn type with a heater-cathode. For use at frequencies up to 600 Mc.
956	Remote-Cutoff Pentode. Acorn type with a heater-cathode. For use at frequencies up to 430 Mc.
959	Medium-Mu Triode. Acorn type with a coated filament for operation from a dry-cell supply.
958-A	Medium-Mu Triode. Acorn type with a coated filament. Designed for transmitter service. Useful up to 350 Mc.
959	Sharp-Cutoff Pentode. Acorn type with a coated filament for operation from a dry-cell supply.
5718	Medium-Mu Triode. Subminiature type. For use as an rf power amplifier and oscillator in uhf applications critical as to shock and vibration. Useful power output of nearly 1 watt at 500 Mc. Full input up to 1000 Mc.
6026	Oscillator Triode. Subminiature type. Intended particularly as an oscillator for transmitting service in radiosonde and similar applications at 400 Mc.
9001	Sharp-Cutoff Pentode. 7-pin miniature type with a heater-cathode. Electrically similar to the 954.

For key to terminal connections see page 30.

Note 1: P is on long part of bulb (top); G is on short part of bulb.

Note 2: Long part of bulb is top.

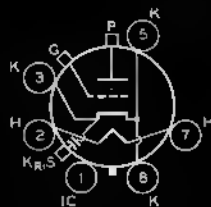
Lead Color Code

Heater (2) Brown
 Collector Red
 Helix Orange
 Grid No. 2 Blue
 Grid No. 1 Green
 Cathode Yellow

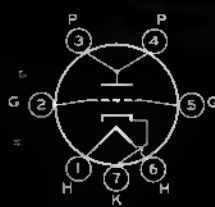


4009 4010

6861



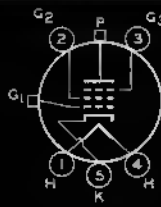
2C40 2C43



6F4 6L4



6J4

See Note 1
954 956See Note 2
955

TUBES FOR UHF APPLICATIONS —Cont'd

Cathode		Maximum Dimensions Inches		Class of Service	Maximum Ratings			Typical Operation										 Type
					DC Plate Volts	DC Current Plate Ma.	Plate Dissipation Watts	Plate Supply Volts	Grid-No. 1 Volts(V) or Cathode Resistance Ohms	Grid- No. 2 Supply Volts	Grid- No. 2 Current Ma.	Plate Current Ma.	AC Plate Resistance Ohms	Trans- conduc- tance Micro- mhos	Ampli- fication Factor	Power Output Watts		
Volts	Amp.	Length	Diam.															
TRAVELING-WAVE TUBES																		
6.3	1.3	15 $\frac{3}{8}$ " [▲]	Ø	RF Amplifier	1000*	5.0*	—	Typical Operation at 3000 Mc: DC Collector Volts, 700 Gain at 10 mw. Output, 35 db.						Saturated Power Output, 28 mw.		4009		
6.0	1.3	15 $\frac{3}{8}$ " [▲]	Ø	RF Amplifier	1300*	25.0*	—	Typical Operation at 3000 Mc: DC Collector Volts, 1150 Gain at 1 Watt Output, 32 db.						Saturated Power Output, 1.8 watts		4010		
5	0.65	19 $\frac{3}{8}$ "	1.38"	RF & IF Amplifier	500*	500 $\frac{1}{2}$ *	—	Typical Operation at 3100 Mc: DC Collector Volts, 400 Noise Figure, 6.5 db.						Saturated Power Output, 1 mw. Gain (low-level), 25 db.		6861		
OTHER UHF TYPES																		
6.3	0.75	2 $\frac{9}{16}$ "	1 $\frac{1}{16}$ "	Class A ₁ Amplifier	—	—	—	250	200	—	—	17	7452	4850	36	—	2C40	
				Class C Amp. & Osc.	500 [▲]	25 [▲]	6.5 [▲]	—	—	—	—	—	—	—	—	—		—
6.3	0.9	2 $\frac{11}{16}$ "	1 $\frac{1}{16}$ "	Class A ₁ Amplifier	—	—	—	250	100	—	—	21	6000	8000	48	—	2C43	
				Class C Amp. & Osc.	500 [▲]	40 [▲]	12 [▲]	—	—	—	—	—	—	—	—	—		—
6.3	0.225	1 $\frac{3}{8}$ "	1 $\frac{5}{32}$ "	RF Amp. & Osc. Class C Telegraphy	150	20	2	150	—15v	—	—	20	DC Grid Ma., 7.5 Driver Power, 0.2 watt			1.8	6F4	
6.3	0.4	2 $\frac{1}{8}$ "	$\frac{3}{4}$ "	Class A ₁ Amplifier	150	20	2.25	100 150	100 100	— —	— —	10 15	5000 4500	11000 12000	55 55	—	6J4	
6.3	0.225	1 $\frac{3}{8}$ "	1 $\frac{5}{32}$ "	Class A ₁ Amplifier	500	15	1.7	80	150	—	—	9.5	4400	6400	28	—	6L4	
6.3	0.15	1 $\frac{7}{8}$ "	1 $\frac{5}{32}$ "	Class A ₁ Amplifier	250	—	0.5	250	—3v	100	0.7	2.0	1.0+ $\frac{1}{2}$	1400	—	—	954	
				Bias Detector				250	—6v	100	DC plate ma. adjusted to 0.1 with no input signal. Cath. Res. of 20000 to 50000 ohms.							
6.3	0.15	1 $\frac{3}{8}$ "	1 $\frac{5}{32}$ "	RF Amp. & Osc. Class C Telegraphy	180	8.0	1.6	180	—35v	—	—	7	DC Grid Ma., 1.5			0.5 at 60 Mc	955	
6.3	0.15	1 $\frac{7}{8}$ "	1 $\frac{5}{32}$ "	Class A ₁ Amplifier	250	—	1.7	250	—3v	100	2.7	6.7	0.7 $\frac{1}{2}$	1800	—	—	956	
				Mixer				250	—10v	100	Conversion Transcond., 600 μ mhos Osc. Peak Volts, 9							
1.25	0.05	1 $\frac{3}{8}$ "	1 $\frac{5}{32}$ "	Class A ₁ Amplifier	135	—	—	135	—5v	—	—	2	20800	650	13.5	—	957	
1.25	0.1	1 $\frac{3}{8}$ "	1 $\frac{5}{32}$ "	RF Amp. & Osc. Class C Telegraphy	135	7	0.6	135	—20v	Grid Res., 20000 Ohms		7	DC Grid Ma., 1 Driving Power, 0.035 watt			0.6	958-A	
1.25	0.05	1 $\frac{7}{8}$ "	1 $\frac{5}{32}$ "	Class A ₁ Amplifier	145	—	—	135	—3v	67.5	0.4	1.7	0.8 $\frac{1}{2}$	600	—	—	959	
6.3	0.15	1 $\frac{3}{8}$ " [♦]	0.4	RF Amp. & Osc. Class C Telegraphy	Max. DC Grid Volts, —55* Max. DC Plate Volts, 165* Max. Peak Heater Cathode Volts, $\pm$ 200*							Max. DC Grid Ma., 5.5* Max. DC Plate Ma., 22* Max. Plate Dissipation, 3.3 watts*						5718
6.3	0.2	1 $\frac{1}{2}$ " [♦]	0.4	Class A ₁ Amplifier	—	—	—	120	120	—	—	12	4000	5900	24	—	6026	
				400 Mc Oscillator Class C Telegraphy	150*	—	3*	135	Grid Res., 1300 Ohms DC Grid Ma., 9.5		20	—	—	—	1.25			
6.3	0.15	1 $\frac{3}{4}$ "	$\frac{3}{4}$ "	Class A ₁ Amplifier	250	—	0.5	250	—3v	100	0.7	2	1.0+ $\frac{1}{2}$	1400	—	—	9001	
				Mixer				250	—5v	100	Conversion Transcond., 550 μ mhos Osc. Peak Volts, 4							

†Microamperes.

*Collector.

*Excluding flexible leads.

ØMaximum Height 2 $\frac{3}{8}$ ", Maximum Width 2 $\frac{1}{2}$ ".

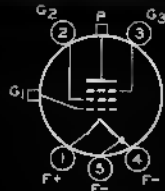
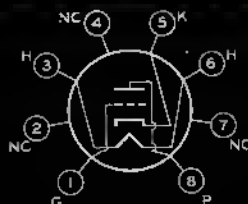
□Metal shell.

§ Megohms.

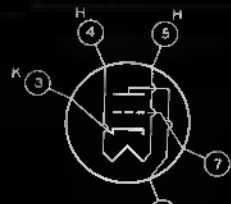
♦ Excluding flexible leads.

* Absolute values.

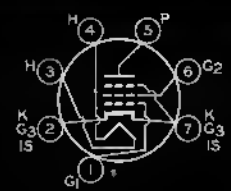
▲ Under conditions as RF Amplifier and Oscillator, Class C Telegraphy.

See Note 2
957 958-ASee Note 1
959

5718



6026



9001



 Type	Description
OTHER UHF TYPES (Cont'd)	
9002	Medium-Mu Triode. 7-pin miniature type with a heater-cathode. Electrically similar to the 955. For frequencies up to 500 Mc.
90D3	Remote-Cutoff Pentode. 7-pin miniature type with a heater-cathode. Electrically similar to the 956.
9004	UHF Diode. Acorn type with a heater-cathode. For use as a rectifier, detector, or measuring device. Resonant frequency about 850 Mc.
9005	UHF Diode. Acorn type with a heater-cathode. For use as a rectifier, detector, or measuring device. Resonant frequency about 1500 Mc.
90D6	UHF Diode. 7-pin miniature type with a heater-cathode. Resonant frequency about 700 Mc. For uhf service as a rectifier, detector, or measuring device.

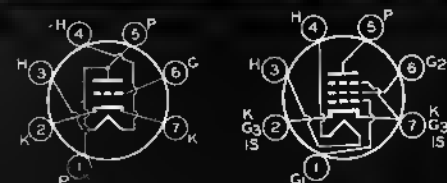
THYRATRONS



 Type	Description
TRIODES (Gas Types)	
884	Negative-control, heater-cathode type. Small shell, octal 6-pin base.
885	Negative-control, heater-cathode type. Small 5-pin base. For renewal use only.
TETRODES (Gas Types)	
2D21	Miniature heater-cathode type. Can be operated in a high-sensitivity circuit directly from a vacuum phototube. Miniature button 7-pin base.
2D21-W	Like 2D21 but intended to meet indicated military specification.
5D2-A	Metal, negative-control, heater-cathode type. Octal 8-pin base.
2050	Negative-control, heater-cathode type. Can be operated directly from a vacuum phototube. Octal 8-pin base.
5696	Miniature 7-pin type for relay applications such as counter-circuits where low-heater-current drain and short deionization time are important considerations.
5727	Miniature heater-cathode type, 7-pin base. For use in relay, grid-controlled rectifier and pulse-modulator circuits.
5727 / 2D21-W	Designed to meet the indicated military specification.
6012	Negative-control, heater-cathode type. For grid-controlled rectifier and relay applications, particularly those involving motor-control and low-power inverter service.

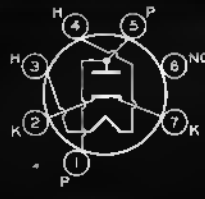
For key to terminal connections see page 30.

Note: Long part of bulb is top.



9002

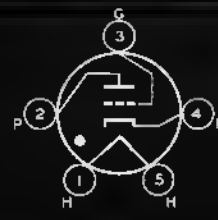
9003

See Note
9004See Note
9005

9006



884



885

Cathode		Maximum Dimensions Inches		Class of Service	Maximum Ratings				Typical Operation								Type
					DC Plate Volts	DC Current Plate	Plate Dissipation	Plate Supply	Grid-No. 1 Volts(v) or Cathode Resistance Ohms	Grid-No. 2 Supply	Grid-No. 2 Current	Plate Current	AC Plate Resistance	Transconductance Micro-mhos	Amplification Factor	Power Output Watts	
Volts	Amp.	Length	Diam.			Ma.	Watts	Volts	Ohms	Volts	Ma.	Ma.	Ohms				
OTHER UHF TYPES (Cont'd)																	
6.3	0.15	1 3/4	3/4	Class A ₁ Amplifier	250	—	1.6	90 250	-2.5v -7.0v	—	—	2.5 6.3	14700 11400	1700 2200	25 25	—	9002
6.3	0.15	1 3/4	3/4	Class A ₁ Amplifier Mixer	250	—	1.7	250 250	-3v -10v	100 100	2.7	6.7	0.7§	1800	—	—	9003
6.3	0.15	1 3/8	1 1/2	Detector Rectifier	Max. AC Plate Volts, 117 Max. DC Output Ma., 5				Max. DC Heater-Cathode Volts, ±90 Resonant Frequency (Approx.), 850 Mc								9004
3.6	0.165	1 3/8	1 1/2	Detector Rectifier	Max. AC Plate Volts, 117 Max. DC Output Ma., 1				Max. DC Heater-Cathode Volts, -50 Resonant Frequency (Approx.), 1500 Mc								9005
6.3	0.15	1 3/4	3/4	Detector Rectifier	Max. AC Plate Volts, 270 Max. Peak Inverse Plate Volts, 750				Max. Peak Plate Ma., 15 Max. DC Output Ma., 5								9006

THYRATONS

Applications	Cathode		Max. Dimensions Inches		Approx. Tube Drop Volts	Maximum Ratings						 Type
						Temperature Range		Peak Forward Anode Volts	Peak Inverse Anode Volts	Peak Cathode Amperes	Average Cathode Amperes	
	Volts	Amp.	Length	Diam.		Condensed Mercury °C	Ambient °C					

For complete listing of Thyratrons, see Power and Gas Tubes Booklet, PG-101-D.

TRIODES (Gas Types)

Relaxation oscillators	6.3	0.6	4 1/8	1 1/16	14	—	-75 to +90	350	—	0.3	0.075	—	884
	Max. Ratings for Relaxation Osc. Peak Anode Volts, 300; Peak Cathode Amp., 0.3												
Relaxation oscillators	2.5	1.5	4 3/16	1 1/16	14	—	-75 to +90	350	—	0.3	0.075	—	885
	Max. Ratings for Relaxation Osc. Peak Anode Volts, 300; Peak Cathode Amp., 0.3												

TETRODES (Gas Types)

High-sensitivity relay control circuits	6.3	0.6	2 1/8	3/4	8	—	-75 to +90	650	1300	0.5	0.1	10	2D21
	Typical Operating Conditions for Relay Service: Anode Volts, 400 Grid-No. 1 Circuit Res., 1 megohm												
	6.3	0.6	2 1/8	3/4	For data refer to MIL-E-1/756B specification*								2D21-W
	6.3	0.6	2 5/8	1 5/16	8	—	-55 to +90	650	1300	1.0	0.1	10	502-A
	6.3	0.6	4 1/8	1 1/16	8	—	-75 to +90	650	1300	1.0	0.1	10	2050
High-sensitivity relay control circuits	6.3	0.15	1 3/4	3/4	10	—	-55 to +90	500	500	0.1	0.025	2	5696
	Typical Operating Conditions for Relay Service: AC Anode Voltage (RMS), 117 Grid-No. 1 Bias Volts (RMS), 5 Peak Grid-No. 1 Signal Volts, 5 Grid-No. 1 Circuit Resistance, 0.1 megohm												
	6.3	0.6	2 1/8	3/4	8	—	-75 to +90	650	1300	0.5	0.1	10	5727
	6.3	0.6	2 1/8	3/4	For data refer to MIL-E-1/83B specification*								5727 / 2D21-W
	6.3	2.6	4 1/4	1 23/32	10	—	-75 to +90	650	1300	5	0.5	20	6012
Grid-No. 1 Circuit Resistance, 2 megohms max.													

All thyratron ratings are for continuous service.

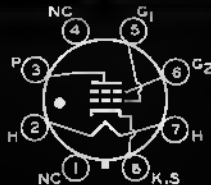
§ Megohms.

* A copy of this specification may be obtained from the Director of the Armed Services Electro-Standards Agency (ASESA) at Fort Monmouth, New Jersey.

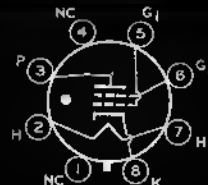


2D21 2D21-W

5696 5727 5727/2D21-W



502-A



2050



6012



 Type	Description
FOR ELECTRONIC COMPUTERS AND OTHER "ON-OFF" CONTROL APPLICATIONS	
5915	Pentagrid Amplifier. For gated amplifier service. Grids No. 1 and No. 3 can each be used as independent control electrodes. 7-pin miniature base.
5963	Medium-Mu Twin Triode. Especially useful in multivibrator applications. Noval 9-pin miniature base with separate terminals for each cathode. Mid-tapped heater for 6.3-volt or 12.6-volt operation.
5964	Medium-Mu Twin Triode. Especially useful in multivibrator applications. 7-pin miniature base.
5965	Medium-Mu Twin Triode. Especially useful in cathode-follower applications. Noval 9-pin miniature base with separate terminals for each cathode. Heater mid-tap for 6.3-volt or 12.6-volt operation.
6197	Sharp-Cutoff Power Pentode. Especially useful in pulse-amplifier applications. Noval 9-pin miniature base.
6211	Medium-Mu Twin Triode. Especially useful in multivibrator applications. Noval 9-pin miniature base with separate terminals for each cathode. Mid-tapped heater for 6.3-volt or 12.6-volt operation.
6350	Medium-Mu Twin Triode. High perveance type having transconductance per unit = 4600 micromhos. Especially useful in cathode follower applications in high-speed digital computers. Noval 9-pin miniature base with separate terminals for each cathode. Mid-tapped heater for 6.3-volt or 12.6-volt operation.
6814	Medium-Mu Triode. For pulse-amplifier, inverter, and cathode-follower circuits in high-speed digital-type computers. Subminiature type with 8 flexible leads.
6887	Twin Diode. Especially useful in switching circuits of medium-speed electronic computers. Low wattage heater (only 1.26 watts). 7-pin miniature base.
7044	Medium-Mu Twin Triode. High perveance type having transconductance per unit 10,000 micromhos. Especially useful in cathode follower applications in high-speed digital computers. Noval 9-pin miniature base with separate terminals for each cathode. Mid-tapped heater for 6.3-volt or 12.6-volt operation.

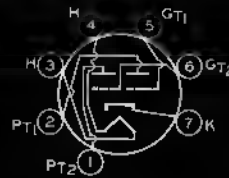
For key to terminal connections see page 30.



5915



5963 5965 6211



5964



6197

TUBES FOR COMPUTER APPLICATIONS

Cathode		Maximum Dimensions Inches		Maximum Ratings		Use Values to right give operating conditions and characteristics for indicated use.	Plate Supply	Grid- No. 1	Grid-No. 2 and No. 4 Supply	Grid- No. 3 Supply	Plate Current	Grid-No. 2 and No. 4 Current	Plate Circuit Resistance	Grid-No. 1 Circuit Resistance	Grid-No. 3 Circuit Resistance	RCA Type
				Plate Dissip. Watts	DC Cathode Current Ma.											
Volts	Amp.	Length	Diag.	Each Unit	Both Units		Volts	Volts	Volts	Volts	Ma.	Ma.	Ohms	Ohms	Ohms	
FOR ELECTRONIC COMPUTERS AND OTHER "ON-OFF" CONTROL APPLICATIONS																
6.3	0.3	2 1/8	3/4	1	20	Gated Amp; Grid-No. 1 Grid-No. 3	150 150 150	-10 ^A 0 0	75 75 75	0 -10 0	0 0 5.8	0 14 9	20000 20000 20000	47000 47000 47000	47000 47000 47000	5915
12.6 6.3	0.15 0.3	2 3/16	7/8	2.5	5.0	Frequency Halfer*	150 150	-15 0	— —	— —	0 5.1	— —	20000 20000	47000 47000	— —	5963
6.3	0.45	2 1/8	3/4	1.5	3.0	Frequency Halfer*	150 150	-10 0	— —	— —	0 5	— —	20000 20000	47000 47000	— —	5964
12.6 6.3	0.225 0.45	2 3/16	7/8	2.4	4.4	Frequency Divider*	150	Grid Volts (Approx.) for Plate Current of 160 μa = -7.5			—	Difference between Grid Voltages of Units for Plate Currents of 160 μa per Unit = 1.5 Max.			Plate Load Resistance = 7200 ohms	5965
							150	Grid Volts (Approx.) for Grid Current of 140 μa = less than 1 volt			10.5	—	7200	—	—	
6.3	0.65	2 5/8	7/8	7.5	50	Frequency Divider*	250* 250*	-12 -3	150* 150*	0 0	0 30	— —	— —	— —	— —	6197
12.6 6.3	0.15 0.3	2 3/16	7/8	1.5	3.0	Frequency Divider*	150	Grid Volts (Approx.) for Plate Current of 100 μa = -10 volts Max.			—	Difference between Grid Voltages of Units for Plate Currents of 100 μa per Unit = -1.5 Volt Max.			Plate Load Resistance = 20000 Ohms	6211
							150	0	—	—	5.15	—	20000	47000	—	
12.6 6.3	0.3 0.6	2 5/8	7/8	4	7	Cathode Follower	Maximum Ratings, Absolute Values: DC Plate Volts, 330 Peak Positive-Pulse Plate Volts, 1000									6350
							DC Grid Volts, -80; +4 Grid Current (Ma.), dc = 5.5; peak = 110 Cathode Current (Ma.), dc = 45; peak = 350									
6.3	0.15	1 3/8	0.4	2.2	22	Cathode Follower	Maximum Ratings, Absolute Values: Peak Heater-Cathode Volts, ±200 DC Grid Ma., 5.5; peak, 110 Cathode Ma., dc = 22; peak = 440									6814
6.3	0.2	1 3/4	3/4	—	—	Switching Service	Maximum Ratings, Absolute Values: Peak Inverse Plate Volts, 360									6887
6.3 12.6	0.9 0.45	2 5/8	7/8	4.5	8	Cathode Follower	Maximum Ratings, Absolute Values: DC Plate Volts, 300 Grid Ma., dc = 5; peak = 200 Cathode Ma., dc = 50; peak = 400									7044

^A Peak Plate Current.
♦ Excluding leads.

§ DC Plate Current.
* Values shown in italics are for

♦ With both units operating.
cutoff condition; other values are conduction condition.

^A Grid-No. 1 Supply Volts.

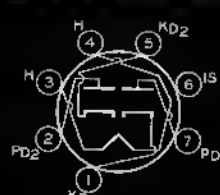
* Voltages at electrode terminals.



6350



6814



6887



7044

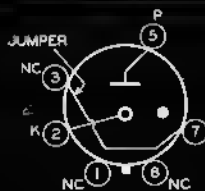
GLOW-DISCHARGE (Cold-Cathode) TUBES

 Type	Description
VOLTAGE-REGULATOR TYPES	
OA2	Miniature button 7-pin base.
OA3	Octal 6-pin base.
OB2	Intended for use in applications where it is necessary to maintain a constant dc output voltage across a load, independent of load current and moderate line-voltage variations.
OC2	Miniature button 7-pin base.
OC3	Miniature button 7-pin base.
OD3	Octal 6-pin base.
991	Octal 6-pin base.
6073	Candelabra, double-contact base.
6073	Like the OA2 but having very stable characteristics and intended for applications critical as to shock and vibration.
6073/OA2	Like the OA2 but having very stable characteristics and intended for applications critical as to shock and vibration.
6074	Like the OB2 but having very stable characteristics and intended for applications critical as to shock and vibration.
6074/OB2	Like the OB2 but having very stable characteristics and intended for applications critical as to shock and vibration.
6626/OA2-WA	Like OA2 but intended to meet indicated military specification.
VOLTAGE-REFERENCE TYPES	
5651	7-pin miniature type designed for extreme voltage stability. Voltage stability is such that voltage fluctuations at any current value within the operating current range (1.5 to 3.5 ma.) are less than 0.1 volt.
5651-WA	Like 5651 but intended to meet indicated military specification.
RELAY TYPES	
OA4-G	For use in calculating machines and carrier-current relay systems. Octal 6-pin base.
1C21	Similar to OA4-G, but for dc operation only.
5823	Miniature 7-pin type intended primarily for the "on-off" control of low-current electrical circuits.

For key to terminal connections see page 30.



OA2 OB2 OC2 6073 6073/OA2
6074 6074/OB2 6626/OA2-WA



OA3 OC3 OD3

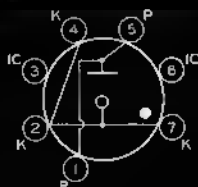


991

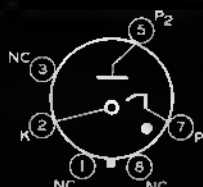
Applications	Max. Dimensions Inches		Max. Starting Current Ma.	DC Operating Current Ma.		Ambient Temperature Range °C	Operating Conditions					 Type	
	Length	Diam.		Max.	Min.		Approx. DC Starting Volts	Min. DC Anode Supply Volts	Approx. DC Operating Volts	Regulation			
										Current Range Ma.	Volts		
VOLTAGE-REGULATOR TYPES													
Regulation of dc voltage supplies for amplifiers, oscillators, etc.; can also be used as relaxation oscillators	2 5/8	3/4	75	30	5	-55 to +90	156	185	151	5 to 30	2	OA2	
	4 1/8	1 1/16	100	40	5	-55 to +90	100	105	75	5 to 40	5	OA3	
	2 5/8	3/4	75	30	5	-55 to +90	115	133	108	5 to 30	1	OB2	
	2.63	3/4	75	30	5	-55 to +90	105	115	75	5 to 30	3	OC2	
	4 1/8	1 1/16	100	40	5	-55 to +90	115	133	108	5 to 40	2	OC3	
	4 1/8	1 1/16	100	40	5	-55 to +90	160	185	153	5 to 40	4	OD3	
	1 9/16	5/8	—	2	0.4	—	67	87	59	0.4 to 2.0	8	991	
Same as OA2	Instantaneous Impact Acceleration, 500 Max. g Vibrational Acceleration for Extended Periods, 2.5 g										6073		
Same as OA2	Instantaneous Impact Acceleration, 500 Max. g Vibrational Acceleration for Extended Periods, 2.5 g										6073/OA2		
Same as OB2	Instantaneous Impact Acceleration, 500 Max. g Vibrational Acceleration for Extended Periods, 2.5 g										6074		
Same as OB2	Instantaneous Impact Acceleration, 500 Max. g Vibrational Acceleration for Extended Periods, 2.5 g										6074/OB2		
Same as OA2	For data refer to MIL-E-1/939B specification ♦										6626/ OA2-WA		
VOLTAGE-REFERENCE TYPES													
Voltage-Reference Tube	2 1/8	3/4	—	3.5	1.5	-55 to +90	107	115	87	1.5 to 3.5	3	5651	
Voltage-Reference Tube	2 1/8	3/4	For data refer to MIL-E-1/825A specification ▲								5651-WA		
RELAY TYPES													
Relay Service	4 1/8	1 9/16	Max. Peak Inverse Anode Volts, 225 Peak Starter-Electrode Breakdown Volts, +75 to +90				Max. Peak Cathode Current, 100 Ma. Max. Av. Cathode Current, 25 Ma.				OA4-G		
	2 5/8	1 5/16	Max. Peak Inverse Anode Volts, 180 Peak Starter-Electrode Breakdown Volts, +66 to +80				Max. Peak Cathode Current, 100 Ma. Max. Average Cathode Current, 25 Ma.				1C21		
	2 1/8	3/4	Max. Peak Anode and Starter-Electrode Volts, 200 Peak Starter-Electrode Breakdown Volts, +73 to +105				Max. Peak Cathode Current, 100 Ma. Max. Average Cathode Current, 25 Ma.				5823		

♦ A copy of this specification may be obtained from the Bureau of Ships, Department of the Navy, Washington 25, D. C.

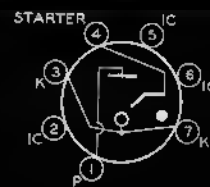
▲ A copy of this specification may be obtained from the Director of the Armed Services Electro-Standards Agency (ASESA) at Fort Monmouth, New Jersey.



5651 5651-WA



OA4-G 1C21

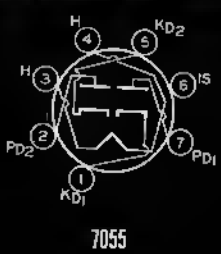
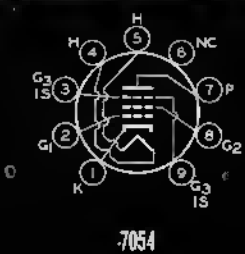


5823

TUBES FOR MOBILE COMMUNICATIONS EQUIPMENT

 Type	Description	Special Tests and Controls					
		Low Frequency Vibration	Intermittent Shorts	Heater-Cathode Leakage	Inter-electrode Leakage	Heater-Cycling	Life Test
TYPES OPERATING FROM 6-CELL STORAGE-BATTERY SYSTEMS							
7054	Power Pentode. 9-pin miniature heater-cathode type. For use as a class C rf power amplifier, oscillator or frequency multiplier at frequencies up to 40 Mc. Receiving-tube prototype 12BY7-A.	✓	✓	✓	✓	✓	✓
7055	Twin Diode. 7-pin miniature heater-cathode type. For use as a detector or full-wave rectifier in power supplies having low dc requirements. Receiving-tube prototype 6AL5.	—	✓	✓	✓	✓	✓
7056	Sharp-Cutoff Pentode. 7-pin miniature heater-cathode type. For use as an if or rf amplifier at frequencies up to about 45 Mc. Receiving-tube prototype 6CB6.	✓	✓	✓	✓	✓	✓
7057	Medium-Mu Twin Triode. 9-pin miniature heater-cathode type. For use as an rf amplifier in cascode-type circuits at frequencies up to 200 Mc. Receiving-tube prototype 6BZ7.	✓	✓	✓	✓	✓	✓
7058	High-Mu Twin Triode. 9-pin miniature heater-cathode type. For use in phase-inverter, resistance-coupled amplifier and low-frequency oscillator circuits. Receiving-tube prototype 12AX7.	✓	✓	✓	✓	✓	✓
7059	Medium-Mu Triode, Sharp-Cutoff Pentode. 9-pin miniature heater-cathode type. For use as a combined oscillator and mixer-tube in receivers with if frequencies up to 40 Mc. Receiving-tube prototype 6U8-A.	✓	✓	✓	✓	✓	✓
7060	Medium-Mu Triode, Power Pentode. 9-pin miniature heater-cathode type. For use in rf power-amplifier and frequency multiplier applications at frequencies up to 40 Mc. Receiving-tube prototype 6AU8.	✓	✓	✓	✓	✓	✓
7061	Beam Power Tube. 9-pin miniature heater-cathode type. For use as an af power amplifier. Receiving-tube prototype 12AB5.	✓	✓	✓	✓	✓	✓
7551	Beam Power Tube. 9-pin miniature heater-cathode type. For use as a class C rf amplifier, oscillator, or frequency multiplier at frequencies up to 175 Mc.	✓	—	—	—	✓	—

For key to terminal connections see page 30.



TUBES FOR MOBILE COMMUNICATIONS EQUIPMENT

Cathode		Maximum Dimensions Inches		Class of Service	Maximum Ratings			Operating Conditions and Characteristics										 Type
					Plate Volts	Plate Dissipation Watts	Grid-No. 2 Input Watts	Plate Supply Volts	Grid-No. 1 Volts(v) or Cathode Resistance Ohms	Grid-No. 2 Supply Volts	Grid-No. 2 Current Ma.	Plate Current Ma.	AC Plate Resistance Ohms	Trans-conduc-tance Micro-mhos	Ampli-fication Factor	Power Output Watts		
Volts	Amp.	Length	Diam.															
TYPES OPERATING FROM 6-CELL STORAGE-BATTERY SYSTEMS																		
12.0 to 15.0	0.275 at 13.5V	2 5/8	0.875	Class A ₁ Amplifier		330	5.0	1.0	250	120	150	3.5	19	100000	11500	—	—	7054
				RF Power Amplifier Class C Telegraphy		330	5.0	1.0	300	—12v	175	5.5	26	Power Output, 4 Watts at 40 Mc.				
				Frequency Doubler		330	5.0	1.0	300	—25v	175	4.0	20	Power Output, 2.5 Watts at 40 Mc.				
12.0 to 15.0	0.155 at 13.5V	1 3/4	0.75	Half-Wave Rectifier Each Unit		Maximum Ratings, Absolute Values: Peak Inverse Plate Volts, 350 Peak Plate Ma., 60 DC Output Ma., 10 Peak Heater-Cathode Volts, 120												7055
12.0 to 15.0	0.15 at 13.5V	2 1/8	0.75	Class A ₁ Amplifier		330	2.0	0.5 †	200	180	150	2.8	9.5	600000	6200	—	—	7056
12.0 to 15.0	0.18 at 13.5V	2 5/16	0.875	Class A ₁ Amplifier Each Unit		275	2.2	—	150	220	—	—	10	5300	6800	36	—	7057
12.0 to 15.0	0.155 at 13.5V	2 5/16	0.875	Class A ₁ Amplifier Each Unit		330	1.0	—	250	—2v	—	—	1.25	61000	1650	100	—	7058
12.0 to 15.0	0.195 at 13.5V	2 5/16	0.875	Class A ₁ Amplifier	Triode Unit	300	2.5	—	150	56	—	—	18	4700	8500	40	—	7059
					Pentode Unit	300	2.8	0.5 ♦	250	68	110	3.5	10	400000	5200	—	—	
12.0 to 15.0	0.28 at 13.5V	2 5/16	0.875	Class A ₁ Amplifier	Triode Unit	300	2.5	—	150	150	—	—	9.0	8200	4900	40	—	7059
					Pentode Unit	300	3.0	0.5 ♦	200	82	125	3.4	10	150000	7000	—	—	
12.0 to 15.0	0.21 at 13.5V	2 5/8	0.875	Class A ₁ Amplifier		345	9.0	2.0	200	—10v	200	9.0	35.5	60000	4200	—	3.0 *	7061
12.0 to 15.0	0.36 at 13.5V	2 5/8	0.875	Class A ₁ Amplifier		—	—	—	250	—18v	250	3.0	40	—	5300	—	—	7551
				RF Power Amplifier Class C Telegraphy at 175 Mc.		300	10	2	300	—42v	200	3.7	70	—	—	—	8.5	
				Frequency Doubler at 175 Mc.		300	10	2	250	—53v	200	2.6	50	—	—	—	4.5	

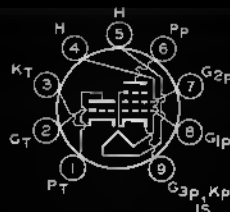
† For Grid-No. 2 Volts up to 155. For Grid-No. 2 Volts between 165 and 330, see JEDEC Input Rating Chart J5-C4-2.

♦ For Grid-No. 2 Volts up to 150. For Grid-No. 2 Volts between 150 and 300, see JEDEC Input Rating Chart J5-C4-2.

* Load for stated power, 5000 ohms.



7059



7060



7061



7551

TUBES FOR MOBILE COMMUNICATIONS EQUIPMENT

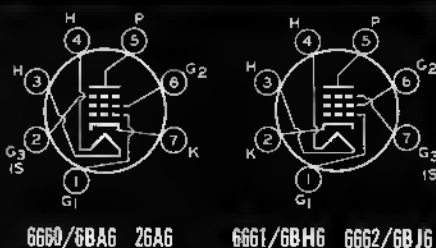


 Type	Description
TYPES OPERATING FROM 3-CELL STORAGE-BATTERY SYSTEMS	
6660/ 68A6	Remote-Cutoff Pentode. 7-pin miniature heater-cathode type. For hf wide-band amplifier circuits. For renewal use.
6661/ 68H6	Sharp-Cutoff Pentode. 7-pin miniature heater-cathode type. For hf wide-band amplifier circuits. For renewal use.
6662/ 68J6	Remote-Cutoff Pentode. 7-pin miniature heater-cathode type. For use in rf wide-band amplifier circuits. For renewal use.
6663/ 6AL5	Twin Diode. 7-pin miniature heater-cathode type. For low-current rectifier and detector circuits. For renewal use.
6669/ 6AQ5-A	Beam Power Tube. 7-pin miniature heater-cathode type. For use as an af power amplifier. For renewal use.
6677/ 6CL6	Power Pentode. 9-pin miniature heater-cathode type. For output power stages. For renewal use.
6678/ 6U8-A	Medium-Mu Triode, Sharp-Cutoff Pentode. 9-pin miniature heater cathode type. For use as a combined oscillator and mixer in vhf circuits. For renewal use.
6679/ 12AT7	High-Mu Twin Triode. 9-pin miniature heater-cathode type. For use as a frequency converter below 300 Mc. For renewal use.
6680/ 12AU7-A	Medium-Mu Twin Triode. 9-pin miniature heater-cathode type. For oscillator and multivibrator applications. For renewal use.
6681/ 12AX7	High-Mu Twin Triode. 9-pin miniature heater-cathode type. For phase-inverter and oscillator circuits. For renewal use.

TUBES HAVING 26.5-VOLT HEATERS

26A6	Remote-Cutoff Pentode. 7-pin miniature type. Features high transconductance.	Of special use in aircraft receivers where operating voltages are obtained from 12-cell storage batteries.
26A7-GT	Twin Beam Power Tube. Single-ended type with a common cathode. Octal 8-pin base.	
26C6	Twin Diode—Medium-Mu Triode. 7-pin miniature. Useful as a detector, amplifier and avc tube.	
26D6	Pentagrid Converter. 7-pin miniature. Useful as mixer and oscillator in superheterodyne receivers.	
6082	Low-Mu Twin Power Triode. Useful as regulator tube in stabilized dc power supplies subject to shock and vibration. Octal 8-pin base.	

For key to terminal connections see page 30.



TUBES FOR MOBILE COMMUNICATIONS EQUIPMENT

Cathode		Maximum Dimensions Inches		Class of Service	Maximum Ratings			Operating Conditions and Characteristics									Type
					Plate Volts	Plate Dissipation Watts	Grid-No. 2 Input Watts	Plate Supply Volts	Grid-No. 1 Volts(v) or Cathode Resistance Ohms	Grid-No. 2 Supply Volts	Grid-No. 2 Current Ma.	Plate Current Ma.	AC Plate Resistance Ohms	Trans-conductance Micro-mhos	Amplification Factor	Power Output Watts	
Volls	Amp.	Length	Diam.														
TYPES OPERATING FROM 3-CELL STORAGE-BATTERY SYSTEMS																	
6.3	0.3	2 1/8	3/4	Class A ₁ Amplifier	330	3.3	0.65	100	68	100	4.4	10.8	250000	4300	—	—	6660/ 6BA6
6.3	0.15	2 1/8	3/4	Class A ₁ Amplifier	330	3.3	0.55	250	100	150	2.6	7.4	1400000	4600	—	—	6661/ 6BH6
6.3	0.15	2 1/8	3/4	Class A ₁ Amplifier	330	3.3	0.65	250	80	100	3.3	9.2	1300000	3600	—	—	6662/ 6BJ6
6.3	0.3	1 3/4	3/4	Half-Wave Rectifier	Maximum Ratings, Design-Maximum Values: Peak Inverse Plate Volts, 275 DC Output Ma. (per Plate), 10 Steady-State Peak Plate Ma. (per Plate), 60												6663/ 6AL5
6.3	0.45	2 5/8	3/4	Class A ₁ Amplifier	250	12	2.0	250	-12.5v	250	4.5	45	52000	4100	—	4.5 [†]	6669/ 6AQS-A
6.3	0.65	2 5/8	3/8	Class A ₁ Amplifier	330	8.5	2.0	250	-3v	150	7	30	150000	11000	—	2.8 [*]	6677/ 6CL6
6.3	0.45	2 3/16	7/8	Class A ₁ Amplifier	330	3.0	—	150	56	—	—	18	5000	8500	40	—	6678/ 6U8-A
				Triode Unit	330	3.0	—	150	56	—	—	18	5000	8500	40	—	
6.3	0.45	2 3/16	7/8	Class A ₁ Amplifier	330	3.0	0.55	250	68	110	3.5	10	400000	5200	—	—	6679/ 12AT7
				Pentode Unit	330	3.0	0.55	250	68	110	3.5	10	400000	5200	—	—	
6.3 12.6	0.3 0.15	2 3/16	7/8	Class A ₁ Amplifier Each Unit	330	2.8	—	250	200	—	—	10	10900	5500	60	—	6679/ 12AT7
6.3 12.6	0.3 0.15	2 3/16	7/8	Class A ₁ Amplifier Each Unit	330	3.0	—	250	-8.5v	—	—	10.5	7700	2200	17	—	6680/ 12AU7-A
6.3 12.6	0.3 0.15	2 3/16	7/8	Class A ₁ Amplifier Each Unit	330	1.1	—	250	-2v	—	—	1.2	62500	1600	100	—	6681/ 12AX7

TUBES HAVING 26.5-VOLT HEATERS

26.5	0.07	2 $\frac{1}{8}$	$\frac{3}{4}$	Class A ₁ Amplifier	250	3.0	0.4	26.5 250	— 125	26.5 100	0.7 4.0	1.7 10.5	250000 1000000	2000 4000	Grid Res., 2 meg. ohms —	—	26A6
26.5	0.6	3 $\frac{13}{16}$	1 $\frac{5}{16}$	Class A ₁ Amplifier	50	2.0	0.5	26.5	−4.5v	26.5	1.9	20	—	5700	—	0.18†	26A7-GT
				Class AB ₁ Amplifier	50	2.0	0.5	26.5	−7v	26.5	2.0	19	—	—	—	0.54 ^a	
26.5	0.07	2 $\frac{1}{8}$	$\frac{3}{4}$	Triode Unit as Class A ₁ Amplifier	250	2.5	—	26.5 250	Grid Res., 2 megohms −9v	— —	— —	1.1 9.5	15500 8500	1100 1900	17 16	— —	26C6
26.5	0.07	2 $\frac{1}{8}$	$\frac{3}{4}$	Converter	300	1.0	1.0	26.5 250	−5v −1.5v	26.5 100	1.6 7.8	0.45 3.0	— 1000000	Conversion } Transcond. }	270 μmhos 475 μmhos	—	26D6
26.5	0.6	4 $\frac{1}{16}$	1 $\frac{23}{32}$	DC Amplifier	Maximum Ratings, Absolute Values: Plate Volts, 250 Plate Dissipation, 13 Watts Grid-Circuit Resistance for Plate Ma., 125 Peak Heater-Cathode Volts, ±300 Cathode-Bias Operation, 1 megohm												6082

[†] Load for stated power, 1500 ohms.

[‡] Each unit.

[‡] Load for stated power, (plate-to-plate), 2500 ohms.

[‡] Load for stated power, 5000 ohms.

^{*} Load for stated power, 7500 ohms.


26A7-GT



26C6



26D6



6082

VACUUM-GAUGE TUBES

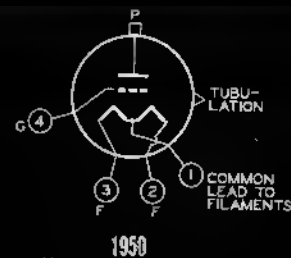
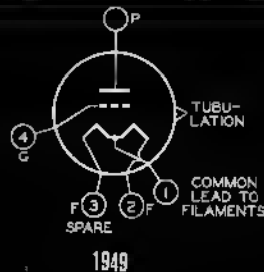
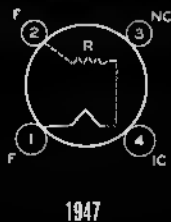
 TYPE	DESCRIPTION
1946	Thermocouple Type. Resistance of thermocouple, 5 ohms approx.
1947	Pirani Type. Each tube individually calibrated to 135.8 ohms res., under vacuum better than 3×10^{-5} mm of Hg. Small 4-pin base.
1949	Ionization Type having two tungsten filaments, one a spare.
1950	Ionization Type similar to 1949 but constructed with soft glass.

For use in determination of gas pressures in vacuum systems and vacuum enclosures.

LOW-MICROPHONIC AMPLIFIER TUBES

Type	Description
1609	Sharp-Cutoff Pentode. Coated-filament type. Small 5-pin base. For new equipment design the 1620 is recommended.
1612	Pentagrid Mixer. Metal type. Similar to 6L7. For volume-expander-compressor circuits. Miniature cap. Octal 7-pin base.
1620	Sharp-Cutoff Pentode. Especially designed for applications critical as to microphonics. Metal type similar to 6J7. Miniature cap. Octal 7-pin base.

For key to terminal connections see page 30.



VACUUM-GAUGE TUBES

Heater or Filament		Maximum Dimensions Including Tubulation Inches			Type of Glass	Maximum Ratings				Operating Position	Range of Gas Pressure				 Type
						Filament Volts	DC Plate Volts	DC Grid Volts	Ambient Temp. °C		Useful Sensitivity		Greatest Sensitivity		
											Millions of Hg	Mm of Hg	Microns of Hg	Mm of Hg	
Volts	Amp.	Length	Diam.	Tubulation Diam.		During Operation									
Htr. 1.0	0.07	6¼♦	1⅛	⅜	Hard, Corning Code 772 Nonex	—	—	—	50	Any	1000 to 0.1	1 to 10 ⁻⁴	1000 to 1	1 to 10 ⁻³	1946
Fil. 10	0.07 to 0.1	7⅞	1⅛	⅞	Soft, Corning Code 001 Lead	16	—	—	60	Any	1500 to less than 10	1.5 to less than 0.01	500 to 10	0.5 to 0.01	1947
Fil. 5	3.5	11½♦	2⅜*	½	Hard, Corning Code 772 Nonex	6.5	-100	+200	100	See Note A	below 0.1	below 10 ⁻⁴	—	—	1949
Fil. 5	3.5	11¼♦	2⅜*	½	Soft, Corning Code 012 Lead	6.5	-100	+200	100	See Note A	below 0.1	below 10 ⁻⁴	—	—	1950

LOW-MICROPHONIC AMPLIFIER TUBES

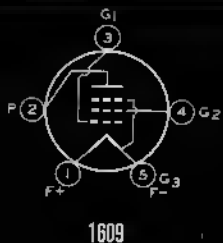
Cathode		Maximum Dimensions Inches		Class of Service	Maximum Ratings				Operating Conditions and Characteristics								Type
					Plate Volts	Plate Dissipation Watts	Cathode Current Ma.	Grid-No. 2 Input Watts	Plate Supply Volts	Grid-No. 1 Volts(v) or Cathode Resistance Ohms	Grid-No. 2 Supply Volts	Plate Current Ma.	AC Plate Resistance Ohms	Trans-conductance Micro-mhos	Amplification Factor	Power Output Watts	
Volts	Amps.	Length	Diam.														
1.1	0.25	4 $\frac{3}{16}$	1 $\frac{9}{16}$	Class A ₁ Amplifier	135	—	—	—	135	-1.5v	67.5	2.5	400000	725	—	—	1609
6.3	0.3	3 $\frac{1}{8}$	1 $\frac{5}{16}$	Class A ₁ Amplifier	250	1.5	—	1.0	250	-3v†	100	5.3	600000	1100	—	—	1612
				Mixer in Superheterodyne	—	—	—	—	250	-3v	100	2.4	Oscillator Grid (#3) Bias, -10 Volts Conversion Transcond., 375 μmhos				
6.3	0.3	3 $\frac{1}{8}$	1 $\frac{3}{16}$	Pentode as Class A ₁ Amplifier	250	0.75	—	0.1	100 250	-3v -3v	100 100	2 2	1.0 meg. 1.0 meg.	1185 1225	— —	— —	1620
				Triode as Class A ₁ Amplifier	250	1.75	—	—	180 250	-5.3v -8v	5 5	5.3 6.5	11000 10500	1800 1900	20 20	— —	

† For signal input control grid (#1); control grid (#3) bias, -3 volts.
* Grids No. 2 and No. 3 are connected to plate.

* Maximum radius.

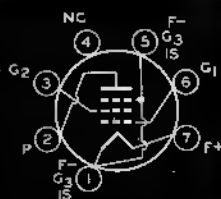
♦ Excluding flexible leads.

Note A: Vertical, with tubulation up or down; horizontal with stem press in vertical plane.

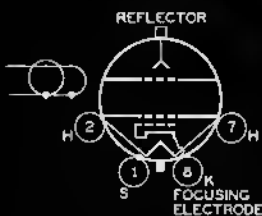


 Type	Description
1L4	Sharp-Cutoff Pentode. 7-pin miniature type. For rf amplifiers in battery-supply receivers.
2K26	Single resonator reflex Klystron with an integral resonant cavity and mechanical tuning mechanism. For local oscillator service in applications such as microwave receivers. Can be tuned electrically to give about a 55 Mc vernier adjustment. Useful power output about 100 Mw.
3A4	Power Pentode. 7-pin miniature, coated-filament, dry-cell type. Can deliver 1.2 watts power output at 10 Mc in rf amplifier service.
3A5	Medium-Mu Twin Triode. 7-pin miniature, coated-filament, dry-cell type. Can deliver 2 watts power output at 40 Mc in push-pull class C service.
5R4-GY	Full-Wave Vacuum Rectifier. Coated filament type. Useful in aircraft applications at altitudes up to 40000 feet. Octal 5-pin base.
5R4-GYB	Full-Wave Vacuum Rectifier. Coated-filament type. Useful in aircraft applications at altitudes up to 40000 feet. Octal 5-pin base.
6AG7-Y	Power Pentode. Has a low-loss-phenolic base but otherwise identical with the 6AG7.
6AK6	Power Pentode. 7-pin miniature type. Similar to 6G6-G.
6AS6	Sharp-Cutoff Pentode. 7-pin miniature type with heater-cathode. For use in gated amplifier circuits, delay circuits, and gain-controlled amplifier circuits.
6AS7-G	Low-Mu Twin Triode. Heater-cathode type. Has high perveance, a μ of 2, and an ac plate resistance of 280 ohms. For use as a regulator tube in dc power supplies, and in projection television booster scanning applications. Octal 8-pin base.
6SJ7-Y	Sharp-Cutoff Pentode. Has a low-loss-phenolic base but otherwise identical with the 6SJ7.
12A6	Beam Power Tube. Metal type with 12.6-volt heater. Octal 7-pin base.
125W7	Twin Diode—Medium-Mu Triode. Single-ended metal type with an octal 8-pin base. Similar to the 6SR7 except for heater rating.
125X7-GT	Medium-Mu Twin Triode. Similar to the 6SN7-GT except for heater rating. Octal 8-pin base.
125Y7	Pentagrid Converter. Metal type with an octal 8-pin base. Similar to the 6SA7 except for heater rating.
83	Full-Wave Mercury Vapor Rectifier. Useful in dc power supplies subject to wide variations in the output current. Values shown are for the temperature range from 20° to 60° C. Medium 4-pin base.
1613	Power Pentode. Heater-cathode type. Useful as a crystal oscillator. For renewal use only.
1614	Beam Power Tube. Heater cathode type. For police and emergency broadcast use. Octal 7-pin base.

For key to terminal connections see page 30.

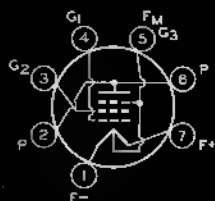


1L4

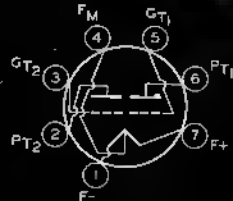


NOTE: COAXIAL OUTPUT LINE PASSES THROUGH VACANT PIN POSITION No. 4.

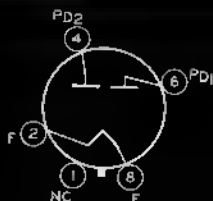
2K26



3A4



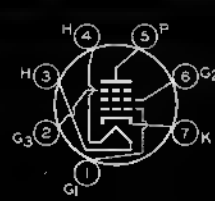
3A5



5R4 GY 5R4 GYB



6AG7 Y



6AK6



6AS6

MISCELLANEOUS TYPES

Cathode		Maximum Dimensions Inches		Class of Service	Maximum Ratings			Operating Conditions and Characteristics										Type
					Plate Volts	Plate Dissipation Watts	Grid-No. 2 Input Watts	Plate Supply Volts	Grid-No. 1 Volts(v) or Cathode Resistance Ohms	Grid-No. 2 Supply Volts	Grid-No. 2 Current Ma.	Plate Current Ma.	AC Plate Resistance Ohms	Trans-conductance Micro-mhos	Amplification Factor	Power Output Watts		
1.4	0.05	2 1/8	3/4	Class A ₁ Amplifier	110	—	—	90	0	67.5	1.2	2.9	260000	925	—	—	1L4	
6.3	0.44	3 1/2	1 39/64	Class C CW Oscillator	Maximum Ratings, Absolute Values: DC Resonator Volts, 330 DC Reflector Volts, 0 to -350 Peak Heater-Cathode Volts, ±50												DC Resonator Ma., 35	2K26
2.8 1.4	0.1 0.2	2 1/8	3/4	Class A ₁ Amplifier	150	2.0	0.4	150	-8.4v	90	2.2	13.3	100000	1900	—	0.7→	3A4	
				RF Power Amplifier	150	2.0	0.9	150	Grid Leak	135	6.5	18.3	Power Output, 1.2 watts at 10 Mc.					
2.8 1.4	0.11 0.22	2 1/8	3/4	Class A ₁ Amplifier Each Unit	135	5.0	—	90	-2.5v	—	—	3.7	8300	1800	15	—	3A5	
				Push-Pull Class C Amplifier Each Unit	135	1.0	—	135	-20v	Power Output, 2 watts at 40 Mc.		30	Driving Power, 0.2 watt					
5	2	5 5/16	2 1/16	At 40000 Feet with Capacitive Input Filter	AC Volts per Plate (RMS), 750 Max. Peak Inverse Volts, 2400 Min. Total Effective Supply Impedance per Plate, 125 ohms												Max. DC Output Ma., 175 Max. Peak Plate Ma., 650	5R4-GY
				At 40000 Feet with Inductive Input Filter	AC Volts per Plate (RMS), 850 Max. Peak Inverse Volts, 2400 Min. Value of Input Choke, 5 Henries												Max. DC Output Ma., 250 Max. Peak Plate Ma., 650	
5	2	4 1/4	1 9/16	At 40000 Feet with Capacitive Input Filter	Max. AC Volts per Plate (RMS), 750 Max. Peak Inverse Plate Volts, 2650 Min. Total Effective Supply Impedance per Plate, 100 ohms												Max. DC Output Ma. (Both Plates), 250 Max. Peak Plate Ma., 715	5R4-GYB
				At 40000 Feet with Inductive Input Filter	Max. AC Volts per Plate (RMS), 800 Max. Peak Inverse Plate Volts, 2650 Min. Value of Input Choke, 5 henries												Max. DC Output Ma. (Both Plates), 250 Max. Peak Plate Ma., 715	
6.3	0.65	3 1/4	1 5/16	Class A ₁ Amplifier	300	9.0	1.5	180	-3v	150	7.0	30	150000	11000	—	3.0o	6AG7-Y	
6.3	0.15	2 1/8	3/4	Class A ₁ Amplifier	300	2.75	.75	180	-9v	180	2.5	15	200000	2300	—	1.1	6AK6	
6.3	0.175	1 3/4	3/4	Class A ₁ Amplifier	180	1.7	0.75	120	-2v	120	3.5	5.2	110000	3200	—	—	6AS6	
6.3	2.5	4 5/8	1 9/16	Class A ₁ Amplifier Each Unit	250	13	—	135	250	—	—	125	280	7000	2.0	—	6AS7-G	
6.3	0.3	2 5/8	1 5/16	Class A ₁ Amplifier	300	2.5	0.4	250	-3v	100	0.8	3.0	#	1650	—	—	6SJ7-Y	
12.6	0.15	3 1/4	1 5/16	Class A ₁ Amplifier	250	7.5	1.5	250	-12.5v	250	3.5	30	70000	3000	—	3.4o	12A6	
12.6	0.15	2 5/8	1 5/16	Class A ₁ Amplifier	250	2.5	—	26.5	Grid Res., 2 meg.	—	—	1.1	15500	1100	17	—	12SW7	
								250	-9v	—	—	9.5	8500	1900	16	—		
12.6	0.3	3 5/16	1 5/16	Class A ₁ Amplifier Each Unit	300	2.5	—	26.5	Grid Res., 0.05 meg.	—	—	1.8	11500	1800	21	—	12SX7-GT	
								250	-8v	—	—	9.0	7700	2600	20	—		
12.6	0.15	2 5/8	1 5/16	Converter	300	1.0	1.0	26.5	-1v†	26.5†	1.7†	0.45	—	Conversion Transcond., 250 μmhos		12SY7		
								250	-2v†	100†	8.5†	3.5	1000000	Conversion Transcond., 450 μmhos				
5.0	3.0	5 3/8	2 1/16	With Capacitive Input Filter	Max. AC Volts per Plate (RMS), 450 Max. Peak Inverse Volts, 1550				Max. DC Output Ma., 225 Max. Peak Plate Amp., 1		Min. Total Effec. Supply Imped./Plate, 50 Ohms						83	
				With Inductive Input Filter	Max. AC Volts per Plate (RMS), 550 Max. Peak Inverse Volts, 1550				Max. DC Output Ma., 225 Max. Peak Plate Amp., 1		Min. Value of Input Choke, 3 henries							
6.3	0.7	3 1/4	1 5/16	Class C Telegraphy	275	7.0	2.0	350	-35v	200	10	50	—	—	—	9.0	1613	
6.3	0.9	4 5/16	1 9/8	Class C Telephony**	375	21	2.5	375	-50v	250	—	93	—	—	—	24.5	1614	
				Class C Telegraphy**	450	25	3.5	450	-45v	250	8	100	—	—	—	31		

* Greater than 1 megohm.

† For Grid No. 3, which is control grid.

‡ For Grids No. 2 and No. 4, which are internally connected.

O Load for stated power, 10000 ohms.

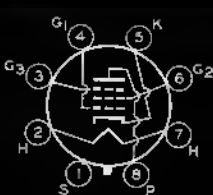
→ Load for stated power, 8000 ohms.

o Load for stated power, 7500 ohms.

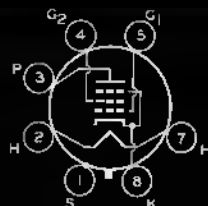
** Intermittent Commercial and Amateur Service.



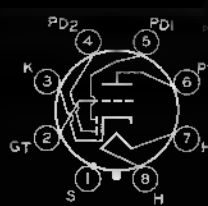
6AS7-G 12SX7-GT



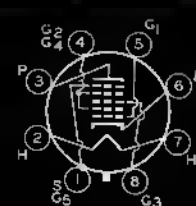
6SJ7-Y



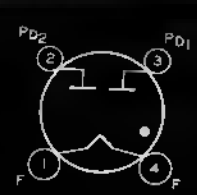
12A6 1613 1614



12SW7



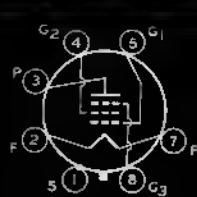
12SY7



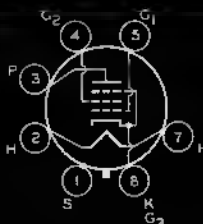
83

 Type	Description
1619	Beam Power Tube. Has a fast-heating, coated filament. Useful in equipment requiring quick off-to-on action. Octal 7-pin base. Values shown are for two tubes in class AB ₂ service.
1621	Power Pentode. Similar to 6F6. For applications requiring continuity of service. Octal 7-pin base. Values shown are for two tubes.
1622	Beam Power Tube. Similar to 6L6. For applications requiring continuity of service. Octal 7-pin base. Values shown are for two tubes.
1626	Low-Mu Triode. For rf oscillator applications requiring stability of characteristics. For renewal use only.
1629	Electron-Ray Tube. Similar to 6E5 except for 12.6-volt heater. Useful as a voltage indicator in aircraft equipment. Octal 7-pin base.
1631	Beam Power Tube. Similar to 6L6 except for 12.6-volt heater and dissipation ratings. For applications critical as to uniformity of characteristics.
1632	Beam Power Tube. Similar to the 25L6 except for 12.6-volt heater and dissipation ratings. For applications critical as to uniformity of characteristics.
1635	High-Mu Twin Triode. Heater-cathode type. For audio amplifier applications. Octal 8-pin base.
5618	VHF Power Pentode. 7-pin miniature type. Has a center-tapped heater for either 3- or 6-volt operation. Off-to-on action takes only one second. Useful as a frequency multiplier at full ratings up to 100 Mc.
5642	Half-Wave Rectifier. Subminiature filamentary type with flexible leads. For use in compact portable equipment requiring high peak inverse voltages.
5687	Medium-Mu Twin Triode. 9-pin miniature type. For general-purpose amplifier applications. Separate base-pin connection for each cathode.
5734	Mechano-Electronic Transducer. Triode type. For translating mechanical vibration into electrical current variations which can be observed and measured. Flexible leads.
5763	VHF Beam Power Tube. 9-pin miniature. For use in compact, low-power mobile transmitters and in low-power stages of fixed station transmitters. Particularly useful in doubler and tripler service. Has unipotential cathode.
5881	Beam Power Tube. Glass-octal type. For output stages of radio receivers and audio amplifiers particularly in the push-pull stages of high-fidelity audio amplifiers. Octal 7-pin base.
6080	Low-Mu Twin Triode. Similar to the 6AS7-G, but smaller in size. Intended for applications critical as to shock and vibration, and requiring reduced susceptibility to electrolysis. Octal 8-pin base.
6417	VHF Beam Power Tube. 9-pin miniature type. Identical with 5763 except for 12.6-volt heater.

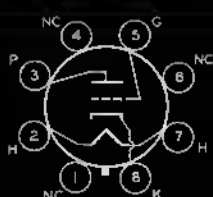
For key to terminal connections see page 30.



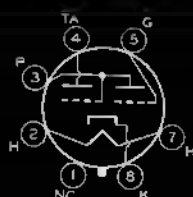
1619



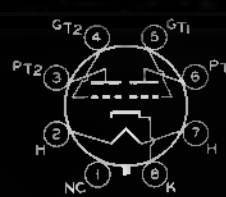
1621 1622 1631 1632



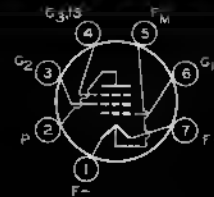
1626



1629



1635



5618

MISCELLANEOUS TYPES — Cont'd

Cathode		Maximum Dimensions Inches		Class of Service	Maximum Ratings			Operating Conditions and Characteristics										Type
					Plate Volts	Plate Dissipation Watts	Grid-No. 2 Input Watts	Plate Supply Volts	Grid-No. 1 Volts(v) or Cathode Resistance Ohms	Grid-No. 2 Supply Volts	Grid-No. 2 Current Ma.	Plate Current Ma.	AC Plate Resistance Ohms	Trans-conductance Micro-mhos	Amplification Factor	Power Output Watts		
2.5	2.0	4 $\frac{5}{16}$	1 $\frac{5}{8}$	Push-Pull Class AB ₂ Amplifier	400	15	3.5	400	-16.5v	300	6.5	75	Load for Stated Power (Plate-to-Plate), 6000 Ohms			36	1619	
				Class C Telephony§	325	10	2.5	325	-50v	285	7.5	62	—	—	—	13		
				Class C Telegraphy	400	15	3.5	400	-55v	300	10.5	75	—	—	—	19.5		
6.3	0.7	3 $\frac{1}{4}$	1 $\frac{5}{16}$	Push-Pull Class A ₁ Amplifier	300	7.9	1.9	300	-30v	300	6.5	38	Load for Stated Power (Plate-to-Plate), 4000 Ohms			5.0	1621	
6.3	0.9	4 $\frac{5}{16}$	1 $\frac{5}{8}$	Push-Pull Class A ₁ Amplifier	300	13.8	1.4	300	-20v	250	4.0	86	Load for Stated Power (Plate-to-Plate), 4000 Ohms			10	1622	
12.6	0.25	4 $\frac{1}{8}$	1 $\frac{9}{16}$	Class C Telegraphy	250	5.0	—	250	-70v	Driving Power 0.5 Watt Approx.		25	—	—	5	4.0	1626	
12.6	0.15	4 $\frac{1}{8}$	1 $\frac{1}{16}$	Visual Indicator	Plate and Target Supply Volts, 250. Triode Plate Resistor, 1 megohm. At zero grid bias, target ma. = 2, triode plate ma. = 0.2, shadow angle = 90°. At -7.5-volts grid bias, shadow angle = 0°.												1629	
12.6	0.45	4 $\frac{5}{16}$	1 $\frac{5}{8}$	Push-Pull Class AB ₁ Amplifier	360	16	2.5	360	-22.5v	270	5.0	88	Load for Stated Power (Plate-to-Plate), 8600 Ohms			26.5	1631	
					360			360	-22.5v	270	5.0	88	Load for Stated Power (Plate-to-Plate), 3800 Ohms			18		
12.6	0.6	3 $\frac{1}{4}$	1 $\frac{5}{16}$	Class A ₁ Amplifier	117	5.0	1.25	110	-7.5v	110	3.0	49	13000	9000	—	2.1	1632	
6.3	0.6	3 $\frac{5}{16}$	1 $\frac{5}{16}$	Class B Amplifier	300*	3.0*	—	300	0	Plate-to-plate load for power output of 1 tube, 12000 ohms						10.4	1635	
6.0° 3.0°	0.23° 0.46°	2 $\frac{3}{8}$	¾	Class A ₁ Amplifier**	300	5.0	2.0	250	-8.0v	75	2.0	19	—	3600	—	1.4	5618	
				RF Amp. & Osc. Class C Telegraphy**	300	5.0	2.0	300	-45v	75	7.0	25	Approx. driving power, 0.3 watt			4.5 at 80 Mc		
				Tripler to 80 Mc**	300	5.0	2.0	300	-125v	75	5.5	25	Approx. driving power, 0.75 watt			2.7		
1.25	0.2	2.38	0.4	Half-Wave Rectifier	Max. Peak Inverse Volts, 10,000 Supply Voltage Frequency, 400 Kc Max.					Max. DC Plate Ma., 0.25 Max. Peak Plate Ma., 5					5642			
6.3 12.6	0.9 0.45	2 $\frac{3}{16}$	¾	Class A ₁ Amplifier Each Unit	300	4.2	—	120 180 250	-2.0v -7.0v -12.5v	— — —	— — —	36 23 12	1560 2000 3000	11500 8500 5400	18 17 16	— — —	5687	
6.3	0.15	1.3	0.328	Measurement of Mechanical Vibration	300%	0.4	—	300	0	—	—	1.5	7200	275	20	—	5734	
6.0	0.75	2 $\frac{5}{8}$	¾	RF Amplifier Class C Telephony**	300	12	1.5	300	-42.5v	250	—	50	Approx. Driving Power at 30 Mc. 0.15 Watt			10	5763	
				RF Amp. & Osc. Class C Telegraphy	300	12	2.0	300	-60v	250	—	50	Approx. Driving Power at 50 Mc. 0.35 Watt			7.0		
				Tripler to 175 Mc.	300	12	2.0	300	-100v	300**	5	35	Approx. Driving Power, 0.6 Watt			1.3		
6.3	0.9	3 $\frac{15}{32}$	1 $\frac{1}{16}$	Class A ₁ Amplifier	400	23	3.0	250 350	-14v -18v	250 250	4.3 2.5	75 53	30000 48000	6100 5200	— —	6.7 11.3	5881	
				Push-Pull Class AB ₁ Amplifier	400	23	3.0	360 360	-22.5v -22.5v	270 270	5.0 5.0	88 88	Load for Stated Power/6500 Ohms/3800 Ohms			26.5 18		
6.3	2.5	4 $\frac{1}{16}$	1 $\frac{23}{32}$	DC Amplifier	Maximum Ratings, Absolute Values: Plate Volts, 250 Plate Ma., 125 Grid-Circuit Resistance for Cathode-Bias Operation, 1 megohm Plate Dissipation, 13 watts Peak Heater-Cathode Volts, ±300												6080	
12.6	0.375	2 $\frac{5}{8}$	¾		For other characteristics, refer to type 5763												6417	

§ Plate modulated.

† Values are for 2 tubes.

⊕ Load for stated power, 2000 ohms.

* Each unit.

⊖ Excluding flexible leads.

♦ Load for stated power, 2500 ohms.

** Intermittent Commercial and Amateur Service.

⋯ Load for stated power, 12000 ohms.

▲ Load for stated power, 4200 ohms.

** With a screen resistor of 12500 ohms.

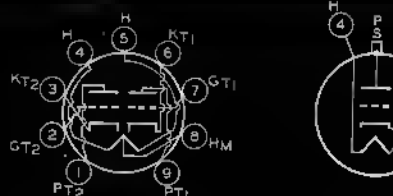
⊗ For plate shaft in undeflected position.

° For series filament arrangement, filament voltage is applied between pins No. 1 and No. 7. The grid-No. 1 voltage is referred to pin No. 1, and grid-No. 3 is connected to pin No. 1.

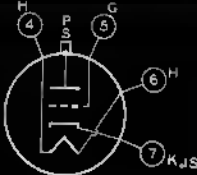
▲ For parallel filament arrangement, filament voltage is applied between pin No. 5 and pins No. 1 and No. 7 connected together. Grid-No. 1 voltage is referred to pin No. 5, and grid-No. 3 is connected to pin No. 5.



5642



5687



5734



5763 6417

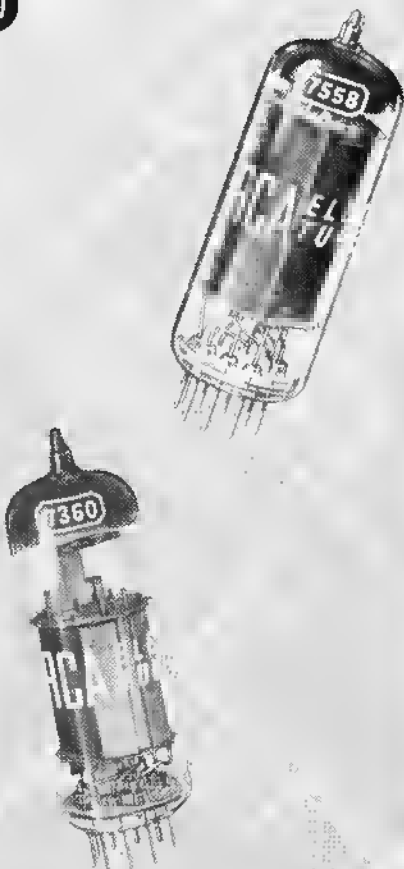


5881



6080

 Type	Description
7360	Beam-Deflection Tube. For use in modulator, demodulator, and frequency-converter applications in single- and double-side band suppressed-carrier communications equipment operating at frequencies up to 100 Mc. 9-pin miniature type.
7558	Beam Power Tube. For use as class C rf amplifier, oscillator or frequency multiplier at frequencies up to 175 Mc. 9-pin miniature type.



LEGEND FOR BASE AND ENVELOPE CONNECTION DIAGRAMS

Diagrams show terminals viewed from base or filament end of tube.

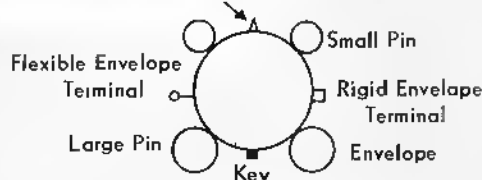
Alphabetical subscripts B, D, P, T, and TR, indicate, respectively, beam unit, diode unit, pentode unit, triode unit, and tetrode unit in multi-unit types.

F = Filament
FM = Filament Mid-Tap
G = Grid
H = Heater
HM = Heater Tap

IC = Internal Connection—
Do Not Use.
IS = Internal Shield
K = Cathode
• = Gas-Type Tube

NC = No Connection
P = Plate (Anode)
S = Shell
TA = Target
TC = Thermocouple

Orientation Symbol Other than Key



In addition to the electron devices covered in this booklet, the
ELECTRON TUBE DIVISION of the RADIO CORPORATION OF AMERICA offers the following:

RECEIVING TUBES FOR ENTERTAINMENT USE

Rectifiers, Diode Detectors, Converters, Voltage and Power Amplifiers, Oscillators, Mixers, and TV Picture Tubes.

PHOTOSENSITIVE DEVICES AND CATHODE-RAY TUBES

Phototubes, Photocells, Camera Tubes, Image-Converter Tubes, Storage Tubes, Cathode-Ray Tubes, Monoscopes.

MICROWAVE TUBES

Magnetrons and Traveling-Wave Tubes.

TEST AND MEASURING EQUIPMENT

For AM, FM, and TV Servicing as well as for Laboratories and Industrial Use.

SEMICONDUCTOR DEVICES

Transistors and Silicon Rectifiers.

RECEIVING-TYPE INDUSTRIAL TUBES

Nuvistor Tubes, Special Red Tubes, Premium Tubes, Pencil-Type Tubes, Computer Tubes, Glow-Discharge Tubes, Small Thyatron Tubes, Vacuum-Gauge Tubes, and Other Special Types.

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For Electron-Tube and Transistor Radios, Flashlights, and Industrial Applications.

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Magnetic-Recording Sound Tape and Accessories, TV-Set Couplers, and Lightning Arrestors.

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MISCELLANEOUS TYPES—Cont'd

Cathode		Maximum Dimensions Inches		Class of Service	Maximum Ratings			Operating Conditions and Characteristics								 Type	
					Plate Volts	Plate Dissipation Watts	Grid-No. 2 Input Watts	Plate Supply Volts	Grid-No. 1 Volts(v) or Cathode Resistance Ohms	Grid-No. 2 Supply Volts	Grid-No. 2 Current Ma.	Plate Current Ma.	AC Plate Resistance Ohms	Trans-conductance Micro-mhos	Amplification Factor		Power Output Watts
6.3	0.35	2 3/8	7/8	Balanced Modulator and/or Balanced Mixer	300+	1.5+	0.5	Plate Volts (Each Plate), 150 Peak RF Grid-No. 1 Volts, 10 Deflecting-Electrode Volts (Approx. Each Electrode), 25 Push-Pull Peak-to-Peak Double-Sideband Output Volts (Balanced Modulator), 4 Push-Pull Peak-to-Peak Single-Sideband Output Volts (Balanced Mixer), 40 Plate-to-Plate Load Imped.: Balanced Mixer, 10000 Ohms; Balanced Modulator, 5000 ohms								7360	
6.3	0.8	2 5/8	7/8	RF Power Amp. & Osc. Class C Telephony	300	10	2.0	300	-42v	200	3.7	70	—	—	—	8.5	7558
				Tripler to 175 Mc	300	10	2.0	200	-90v	200	3.0	50	—	—	—	2.3	
				Class AB ₁ Amplifier	300*	10*	2.0*	300♦	-21v♦	250♦	2.0♦	40♦	Load for Stated Power (Plate-to-Plate), 5000 Ohms			20.5	

+ Each plate.

* Each unit.

♦ Values are for 2 tubes.

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5R4-GY8	26	1619	28	5691	8	5915	16	6197	16	7057	20
6AC7-W	2	1620	24	5692	8	5963	16	6201	6	7058	20
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6A56	26	1626	28	5718	2 & 12	6005	4	6211	16	7061	20
6A57-G	26	1629	28	5719	2			6263	10	7360	30
6AU6-WA	2	1631	28	5725	2	6005/		6264-A	10	7533	10
6F4	12	1632	28	5726	2	6AQ5-W	4	6350	16	7551	20
6J4	12	1635	28	5726/		6005/		6417	28	7552	10
6J4-WA	2	1946	24	6AL5-W	2	6AQ5-W/		6562/		7554	10
6J6-WA	2	1947	24			6095	4	5794-A	10	7558	30
6L4	12	1949	24	5726/		6012	14	6626/	6	7586	8
65J7-Y	26	1950	24	6AL5-W/		6021	4	OA2-WA	18	9001	12
12A6	26	2050	14	6097	4	6026	12			9002	14
12AT7-WA	2	4009	12	5727	4 & 14	6072	6	6660/68A6	22	9003	14
125W7	26	4010	12	5727/	4	6073	6 & 18	6661/68H6	22	9004	14
125X7-GT	26	5618	28	2D21-W	14	6073/		6662/68J6	22	9005	14
125Y7	26					OA2	6 & 18	6663/6AL5	22	9006	14

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