

Color Television Type

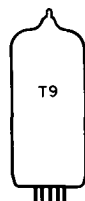
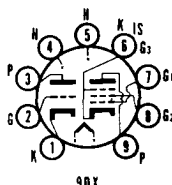
VOLTAGE AMP. or SYNC SEP. (T) VIDEO AMPLIFIER (P)

6JT8

8JT8, 10JT8

High Mu Triode and Sharp Cutoff Pentode

Construction	9T-9
Base	Button 9 Pin, E9-68
Basing	9DX
Outline	9-69
Maximum Diameter	1.188 In.
Maximum Seated Height	2.320 In.
Maximum Overall Height	2.630 In.



ELECTRICAL DATA HEATER OPERATION

	10JT8	8JT8	6JT8
Heater Voltage	10.2	7.7	6.3 Volts
Heater Current	450	600	725 Ma
Heater Warm-up Time	11	11	— Seconds

Maximum Heater-Cathode Voltage

Heater Negative with Respect to Cathode	
Total DC and Peak	200 Volts

Heater Positive with Respect to Cathode

DC	100 Volts
Total DC and Peak	200 Volts

DIRECT INTERELECTRODE CAPACITANCES (Unshielded)

Triode Section

Grid to Plate	3.2 Pf
Input: g to (h + Tk + Pk, g3, IS)	1.7 Pf
Output: p to (h + Tk + Pk, g3, IS)	1.6 Pf

Pentode Section

Grid No. 1 to Plate (Max.)	0.10 Pf
Input: g1 to (h + Pk, g3, IS + g2)	12 Pf
Output: p to (h + Pk, g3, IS + g2)	3.0 Pf

Coupling

Triode Grid to Pentode Plate (Max.)	0.02 Pf
Pentode Grid No. 1 to Triode Plate (Max.)	0.004 Pf
Pentode Plate to Triode Plate (Max.)	0.13 Pf

RATINGS (Design Maximum Rating System)

	Triode Section	Pentode Section
Plate Voltage	330	330 Volts
Grid No. 2 Supply Voltage (Max.)	—	330 Volts
Grid No. 2 Voltage	See Rating Chart (Gen. Info. Sec.)	
Positive Grid No. 1 Voltage (Max.)	0	0 Volt
Plate Dissipation (Max.)	1.0	4.0 Watts
Grid No. 2 Dissipation (Max.)	—	1.1 Watts
Grid No. 1 Circuit Resistance		
Fixed Bias (Max.)	0.5	0.25 Megohm
Cathode Bias (Max.)	1.0	1.0 Megohm

Control grid to cathode spacing of the pentode section of this type is of such low order of magnitude as to preclude the use of voltage between these elements of more than 50 volts DC or peak AC in commercial tube checkers and shorts indicating devices, particularly where mechanical excitation of the tube is employed.

CHARACTERISTICS AND TYPICAL OPERATION

	Triode Section	Pentode Section
Plate Voltage	250	200 Volts
Grid No. 2 Voltage	—	100 Volts
Grid No. 1 Voltage	—2	0 Volts
Cathode Bias Resistor	—	82 Ohms
Plate Current	1.5	17 Ma
Grid No. 2 Current	—	3.5 Ma
Transconductance	2700	20,000 μ mhos
Amplification Factor	100	—
Plate Resistance (Approx.)	37,000	50,000 Ohms
E _{c1} for I _b = 100 μ a (Approx.)	—	-5 Volts
E _c for I _b = 20 μ a (Approx.)	-5.3	— Volts

INSTANTANEOUS PLATE KNEE CHARACTERISTICS (Pentode Section)

E_b = 50 V, E_{c2} = 100 V and E_{c1} = 0 V
I_b = 55 Ma, and I_{c2} = 18 Ma

6JU6**22JU6****HORIZONTAL DEFLECTION
AMPLIFIER****Beam Power Pentode**

Construction Novar T-12
 Base Button 9 Pin, E9-76 or E9-88
 Top Cap C1-2, C1-33 or C1-3
 Basing 9QL
 Outline

Maximum Diameter 1.562 In.
 Maximum Seated Height 3.170 In.
 Maximum Overall Height 3.550 In.

ELECTRICAL DATA**HEATER OPERATION**

	22JU6	6JU6
Heater Voltage.....	22.0	6.3 Volts
Heater Current	450	1600 Ma
Heater Warm-up Time	11	— Seconds
Maximum Heater-Cathode Voltage		
Heater Negative with Respect to Cathode		
Total DC and Peak.....		200 Volts
Heater Positive with Respect to Cathode		
DC		100 Volts
Total DC and Peak.....		200 Volts

DIRECT INTERELECTRODE CAPACITANCES (Unshielded)

Grid No. 1 to Plate	1.2 Pf
Input: g1 to (k, g3, g2, H).....	22 Pf
Output: p to (k, g3, g2, H).....	9.0 Pf

RATINGS (Design Maximum Rating System)**Horizontal Deflection Amplifier**

DC Plate Supply Voltage (Max.).....	770 Volts
Peak Positive Pulse Plate Voltage (Max.) ⁽⁴⁾	6500 Volts
Peak Negative Pulse Plate Voltage (Max.)	1500 Volts
DC Grid No. 3 Voltage ⁽³⁾	75 Volts
DC Grid No. 2 Voltage.....	220 Volts
DC Grid No. 1 Voltage (Negative Bias Value).....	55 Volts
Peak Negative Pulse Grid No. 1 Voltage	330 Volts
Cathode Current	
Peak	950 Ma
Average	275 Ma
Grid No. 2 Input	3.5 Watts
Plate Dissipation ⁽⁴⁾	17 Watts
Envelope Temperature (At Hottest Point).....	240 °C
Grid No. 1 Circuit Resistance	
Grid Bias Operation	0.47 Megohms
Plate Pulse Operation (Horizontal Deflection Circuit Only)	10 Megohms

CHARACTERISTICS AND TYPICAL OPERATION

Peak Positive Pulse Plate Voltage ⁽³⁾	6500	—	—	— Volts
DC Plate Voltage.....	—	50	125	130 Volts
Grid No. 3 Voltage	Connected to Cathode at Socket			
DC Grid No. 2 Voltage.....	125	125	125	125 Volts
DC Grid No. 1 Voltage.....	—	0	-20	-20 Volts
Amplification Factor (Triode Connection) ⁽¹⁾	—	—	4.7	—
Plate Resistance (Approx.)	—	—	—	18 Kilohms
Transconductance	—	—	—	7000 μ mhos
DC Plate Current	—	470 ⁽²⁾	—	45 Ma
DC Grid No. 2 Current	—	32 ⁽²⁾	—	1.5 Ma
Cutoff DC Grid No. 1 Voltage for Ib = 1 Ma	-75	—	—	-32 Volts

NOTES:

- (1) With grid No. 2 connected to Plate at socket.
- (2) This value can be measured by a method involving a recurrent waveform such that the Maximum Ratings of the tube will not be exceeded.
- (3) Under pulse-duration condition specified in Footnote No. 4.
- (4) This rating is applicable where the duration of the voltage pulse do not exceed 15% of one horizontal scanning cycle. In a 525-line, 30-frame system, 15% of one horizontal scanning cycle is 10 μ s.
- (5) In horizontal deflection amplifier service, a positive voltage may be applied to Grid No. 3 to reduce interference from "Snivets" which may occur in both VHF and UHF television receivers. A typical operating value for this voltage is 30 V.
- (6) An adequate bias resistor or other suitable means is required to protect the tube in the absence of excitation.

