

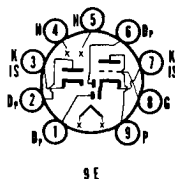
Color Television Type

**CLAMPER or DETECTOR
VOLTAGE AMPLIFIER****6T8A**

5T8, 19T8

Triple Diode and High Mu Triode

Construction Miniature T-6½
 Base Button 9 Pin, E9-1
 Basing 9E
 Outline 6-2
 Maximum Diameter 0.875 In.
 Maximum Seated Height 1.937 In.
 Maximum Overall Height 2.187 In.

**ELECTRICAL DATA****HEATER OPERATION**

	19T8	5T8	6T8A
Heater Voltage	18.9	4.7	6.3 Volts
Heater Current	150	600	450 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)

Grid to Plate	1.7 Pf
Input	1.6 Pf
Output	1.2 Pf
Grid to Any Diode Plate (Max.)	0.034 Pf
Diode No. 1 Input	3.8 Pf
Diode No. 2 Input	3.8 Pf
Diode No. 3 Input	3.4 Pf
Diode No. 2 Cathode to All	7.5 Pf

RATINGS (Design Center Rating System)

Plate Voltage (Max.)	300 Volts
Plate Dissipation (Max.)	1.0 Watt
Positive Grid Voltage (Max.)	0 Volt
Diode Current for Continuous Operation (Each Plate) (Max.)	5.0 Ma

CHARACTERISTICS AND TYPICAL OPERATION**Class A Amplifier**

Plate Voltage	100	250 Volts
Grid Voltage	-1.0	-3.0 Volts
Plate Current	0.8	1.0 Ma
Transconductance	1300	1200 μmhos
Amplification Factor	70	70
Plate Resistance	54,000	58,000 Ohms
Average Diode Current with 5 Volt DC Applied (Each Plate) ...	—	20 Ma

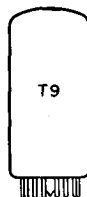
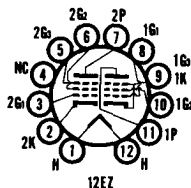
Color Television Type

**AUDIO OUTPUT and
FM DETECTOR****6T10**

12T10

Double Dissimilar Pentode

Construction Compactron T-9
 Base Button 12 Pin, 12-70
 Basing 12EZ
 Outline 9-58
 Maximum Diameter 1.188 In.
 Maximum Seated Height 2.000 In.
 Maximum Overall Height 2.375 In.



ELECTRICAL DATA**HEATER OPERATION**

	12T10	6T10
Heater Voltage.....	12.6	6.3 Volts
Heater Current	450	950 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)**Section No. 1**

Grid to Plate	0.22 Pf
Input: g to (h + 1k + 1g ₂ + 1g ₃ + 1S)	11.0 Pf
Output: p to (h + 1k + 1g ₂ + 1g ₃ + 1S)	10.0 Pf

Section No. 2

Grid No. 1 to Plate	0.032 Pf
Grid No. 3 to Plate	3.0 Pf
Grid No. 1 to (h + 2k + 2g ₂ + 2g ₃ + 1S)	6.5 Pf
Grid No. 3 to (h + 2k + 2g ₁ + 2g ₂ + 2p + 1S).....	7.5 Pf
Grid No. 1 to Grid No. 3	0.12 Pf
Plate No. 1 to Plate No. 2	0.13 Pf

RATINGS (Design Maximum Rating System)

Plate Voltage (Max.)	275 Volts
Screen Voltage (Max.)	275 Volts
Plate Dissipation (Max.)	10.0 Watts
Screen Dissipation (Max.)	2.0 Watts
Grid No. 1 Circuit Resistance	
Fixed Bias (Max.)	0.25 Megohm
Cathode Bias (Max.)	0.5 Megohm

Section No. 2

Plate Voltage (Max.)	330 Volts
Suppressor Voltage (Max.).....	28 Volts
Screen Supply Voltage (Max.)	330 Volts
Positive DC Grid Voltage (Max.)	0 Volt
Plate Dissipation (Max.)	1.7 Watts
Screen Dissipation (Max.)	1.1 Watts

CHARACTERISTICS AND TYPICAL OPERATION**Section No. 1****Class A1 Amplifier**

Plate Voltage	250 Volts
Screen Voltage.....	250 Volts
Grid No. 1 Voltage	-8.0 Volts
Peak AF Grid Voltage	8.0 Volts
Plate Resistance (Approx.)	100,000 Ohms
Transconductance	6500 μ mhos
Zero Signal Plate Current	35 Ma
Maximum Signal Plate Current	39 Ma
Zero Signal Screen Current	2.5 Ma
Maximum Signal Screen Current	7.0 Ma
Load Resistance	5000 Ohms
Total Harmonic Distortion (Approx.)	10 Percent
Maximum Signal Power Output	4.2 Watts

Section No. 2

Plate Voltage	150 Volts
Suppressor Voltage	0 Volt
Screen Voltage.....	100 Volts
Cathode Resistor	560 Ohms
Plate Resistance (Approx.)	150,000 Ohms
Transconductance (G ₁)	1000 μ mhos
Transconductance (G ₃)	400 μ mhos
Plate Current	1.3 Ma
Screen Current	2.1 Ma
Ec1 for Ib = 30 μ a	-4.5 Volts
Ec3 for Ib = 50 μ a	-4.5 Volts

Color Television Type

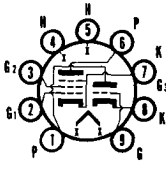
HORIZONTAL OSC. and REACTANCE TUBE or VHF OSC. and MIXER

6U8A/6KD8

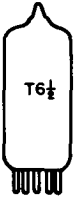
5U8, 5KD8, 9U8A

Medium Mu Triode and Sharp Cutoff Pentode

Construction Miniature T-6½
Base Button 9 Pin, E9-1
Basing 9AE
Outline 6-2
Maximum Diameter 0.875 In.
Maximum Seated Height 1.937 In.
Maximum Overall Height 2.187 In.



9AE



ELECTRICAL DATA

HEATER OPERATION

	9U8A	5KD8	5U8	6U8A/6KD8
Heater Voltage.....	9.45	5.6	4.7	6.3 Volts
Heater Current.....	300	450	600	450 Ma
Heater Warm-up Time	11	11	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

	Shielded (1)	Unshielded
Pentode Section		
Grid No. 1 to Plate (Max.).....	0.007	0.015 Pf
Input: g1 to (h + k + g2 + g3 + IS).....	5.0	5.0 Pf
Output: p to (h + k + g2 + g3 + IS).....	3.5	2.6 Pf
Cathode to Heater	3.0	3.0 Pf
Triode Section		
Grid to Plate	1.8	1.8 Pf
Input: g to (h + Pk + Tk + g3 + IS)	2.8	2.8 Pf
Output: p to (h + Pk + Tk + g3 + IS)	2.0	1.5 Pf
Cathode to Heater	3.0	3.0 Pf
Coupling		
Pentode Grid No. 1 to Triode Plate (Max.)	0.2	0.2 Pf
Pentode Plate to Triode Plate (Max.)	0.02	0.1 Pf

RATINGS (Design Maximum Rating System)

	Triode Section	Pentode Section
Plate Voltage (Max.)	330	330 Volts
Grid No. 2 Supply Voltage (Max.)	—	330 Volts
Grid No. 2 Voltage	See Rating Chart (Gen. Info. Sec.)	
Positive DC Grid No. 1 Voltage	0	0 Volt
Plate Dissipation (Max.)	2.5	3.0 Watts
Grid No. 2 Dissipation (Max.)	0	0.55 Watt
Grid No. 1 Circuit Resistance		
Fixed Bias (Max.)	—	0.5 Megohm
Self Bias (Max.)	—	1.0 Megohm

CHARACTERISTICS AND TYPICAL OPERATION

	Triode Section	Pentode Section
Plate Voltage	125	125 Volts
Grid No. 2 Voltage	—	110 Volts
Grid No. 1 Voltage	-1.0	-1.0 Volts
Plate Current	13.5	9.5 Ma
Grid No. 2 Current	—	3.5 Ma
Transconductance	7500	5000 μmhos
Amplification Factor	40	—
Plate Resistance (Approx.)	—	0.2 Megohm
Ec1 for Ib = 20 μa (Approx.)	-9	-8 Volts

NOTE:

(1) External shielded No. 315 connected to cathode of section under test.