

INSTANTANEOUS PLATE KNEE VALUESZero Bias: With $E_b = 60$ V and $E_c2 = 150$ V

Plate Current	100 Ma
Grid No. 2 Current	15 Ma

NOTES:

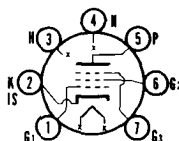
- (1) For operation in a 525 line, 30 frame system as described in "Standards of Good Engineering Practice for Television Broadcast Stations; Federal Communications Commission," the duty cycle of the voltage pulse must not exceed 15% of one horizontal scanning cycle.
- (2) In stages operating with grid leak bias, an adequate bias resistor or other suitable means is required to protect the tube in the absence of excitation.

6DT6A**3DT6A, 4DT6A**

Color Television Type

FM DETECTOR**Sharp Cutoff Pentode**

Construction	Miniature T-5½
Base	Button 7 Pin, E7-1
Basing	7EN
Outline	5-2
Maximum Diameter	0.750 In.
Maximum Seated Height	1.875 In.
Maximum Overall Height	2.125 In.



7EN

**ELECTRICAL DATA
HEATER OPERATION**

	3DT6A	4DT6A	6DT6A
Heater Voltage.....	3.15	4.2	6.3 Volts
Heater Current	600	450	300 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 (Shielded)⁽¹⁾

Grid No. 1 to Plate	0.02 Pf
Grid No. 1 to Grid No. 3	0.1 Pf
Grid No. 3 to All Other Electrodes.....	6.1 Pf
Grid No. 1 to Grid No. 2, Grid No. 3, Heater, and Internal Shield and Cathode	5.8 Pf
Grid No. 3 to Plate	1.7 Pf

RATINGS (Design Maximum Rating System)**FM Detector Service**

Plate Voltage (Max.)	330 Volts
Plate Dissipation (Max.)	1.7 Watts
Grid No. 3 Voltage (Max.)	28 Volts
Grid No. 2 Supply Voltage (Max.)	330 Volts
Grid No. 2 Voltage	See Rating Chart (Gen. Info. Sec.)
Grid No. 1 Voltage (Positive Bias) (Max.)	0 Volt
Grid No. 2 Input	
For E_{b2} up to 165 Volts (Max.).....	1.1 Watts
For E_{b2} Between 165 and 330 Volts.....	See Rating Chart (Gen. Info. Sec.)

CHARACTERISTICS AND TYPICAL OPERATION**Class A1 Amplifier**

Plate Supply Voltage.....	150 Volts
Grid No. 3 Supply Voltage.....	0 Volt
Grid No. 2 Supply Voltage.....	100 Volts
Cathode Bias Resistor	560 Ohms
Plate Current	1.55 Ma
Grid No. 2 Current	1.80 Ma
Transconductance	
Grid No. 1 to Plate	1350 μ mhos
Grid No. 3 to Plate	515 μ mhos
Plate Resistance (Approx.)	0.15 Megohm
Grid No. 1 Voltage for $I_b = 10 \mu$ a	-5.2 Volts
Grid No. 3 Voltage for $I_b = 10 \mu$ a	-4.2 Volts

NOTE:

- (1) Shield No. 316 connected to cathode.

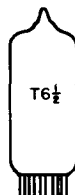
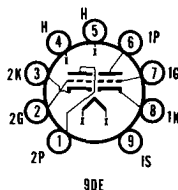
RF AMPLIFIER or OSCILLATOR and MIXER

6DT8

12DT8

High Mu Twin Triode

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



ELECTRICAL DATA HEATER OPERATION

	12DT8	6DT8
Heater Voltage.....	12.6	6.3 Volts
Heater Current	150	300 Ma
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)

	Section No. 1 ⁽¹⁾	Section No. 2
Grid to Plate	1.6	1.6 Pf
Input: g to (k + h + IS)	2.7	2.7 Pf
Output: p to (k + h + IS)	1.6	1.6 Pf
Heater to Cathode	3.0	3.0 Pf

Grounded Grid Operation

Input: k to (g + h + IS)	5.3 Pf
Output: p to (g + h + IS)	2.8 Pf

RATINGS (Design Center Rating System)

Plate Voltage (Max.)	300 Volts
Plate Dissipation (Max.)	2.5 Watts
Negative Grid Voltage (Max.)	50 Volts
Grid Circuit Resistance	
Fixed Bias (Max.)	0.25 Megohm
Self Bias (Max.)	1.0 Megohms

CHARACTERISTICS AND TYPICAL OPERATION

Class A1 Amplifier—Each Section

Plate Voltage	100	250 Volts
Cathode Bias Resistor	270	200 Ohms
Plate Current	3.7	10.0 Ma
Transconductance	4000	5500 μmhos
Amplification Factor	60	60
Plate Resistance.....	15,000	10,900 Ohms
Ec for Ib = 10 μa (Approx.).....	-5	-12 Volts

NOTES:

- (1) Section No. 1 connects to Pins 6, 7, and 8.
- (2) An internal shield is connected to Pin No. 9 to provide isolation between the two sections.

Color Television Type

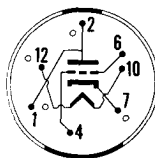
UHF OSCILLATOR

6DV4

2DV4

Medium Mu Triode

Construction Nuvistor, Metal
Base... Ceramic Wafer, Twelvar 7 Pin, E7-83
Basing 12EA
Outline
Maximum Diameter 0.440 In.
Maximum Seated Height 0.625 In.
Maximum Overall Height 0.800 In.



12EA