Heater Positive with Respect to Cathode	
DC	100 Volts
Total DC and Peak	300 Volts
DIRECT INTERELECTRODE CAPACITANCES	
Heater to Cathode	3.0 Pf
Plate to Cathode and Heater	9.0 Pf
Cathode to Plate and Heater	7.0 Pf
RATINGS (Design Maximum Rating System)	
Damper Service(2)	
Peak Inverse Plate Voltage (Max.)	5000 Volts
Plate Dissipation (Max.)	8.0 Watts
Steady State Peak Current (Max.)	900 Ma
DC Plate Current (Max.)	185 Ma
CHARACTERISTICS AND TYPICAL OPERATION	
Tube Voltage Drop for Ib = 340 Ma	30 Volts

NOTES:

(1) Pins 1, 2, 4, and 6 should not be used as tie points.

(2) 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.

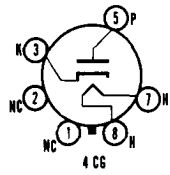
6DE4

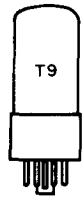
17DE4, 22DE4

DAMPER

Heater-Cathode Diode

Construction	Octal T-9
Base(1)	Octal 5 Pin, B5-85
Basing(2)	4CG
Outline	9-44
Maximum Diameter	1.188 In.
Maximum Seated Height	3.250 In.
Maximum Overall Height	3.813 In.





ELECTRICAL DATA

HEATER OPERATION

	22DE4	17DE4	6DE4
Heater Voltage	22.4	17	6.3 Volts
Heater Current	450	600	1600 Ma
Heater Warm-up Time	11	11	— Seconds

Maximum Heater-Cathode Voltage	
Heater Negative with Respect to Cathode	
DC	900 Volts
Total DC and Peak	5500 Volts
Heater Positive with Respect to Cathode	
DC	100 Volts
Total DC and Peak	300 Volts
DIRECT INTERELECTRODE CAPACITANCES (Unshielded)	
Heater to Cathode	4 Pf
Plate to Cathode and Heater	8.5 Pf
Cathode to Plate and Heater	11.5 Pf
RATINGS (Design Maximum Rating System)	
Damper Service	
Peak Inverse Plate Voltage (Max.)(3)	5500 Volts
Plate Dissipation (Max.)	6.5 Watts
Steady State Peak Current (Max.)	1100 Ma
DC Plate Current (Max.)	180 Ma
CHARACTERISTICS AND TYPICAL OPERATION	
Tube Voltage Drop for Ib = 350 Ma	34 Volts

NOTES:

(1) On some base arrangements Pins 1, 4, and 6 are omitted.

(2) Pins 1, 2, 4, and 6 should not be used as tie points.

(3) 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.

Color Television Type

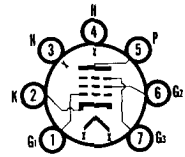
IF AMPLIFIER

6DE6

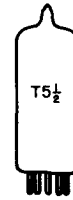
4DE6

Sharp Cutoff Pentode

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



7CM



ELECTRICAL DATA

HEATER OPERATION

	4DE6	6DE6
Heater Voltage	4.2	6.3 Volts
Heater Current	450	300 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

	Shielded	Unshielded
Grid No. 1 to Plate	0.015	0.025 Pf
Input: g1 to (h + k + g2 + g3 + IS)	6.5	6.5 Pf
Output: p to (h + k + g2 + g3 + IS)	3.0	2.0 Pf

RATINGS (Design Maximum Rating System)

Class A1 Amplifier

Plate Voltage (Max.)	330 Volts
Grid No. 2 Supply Voltage (Max.)	330 Volts
Grid No. 2 Voltage	See Rating Chart (Gen. Info. Sec.)
Plate Dissipation (Max.)	2.3 Watts
Grid No. 2 Input (Max.)	0.55 Watt
Positive Grid No. 1 Voltage (Max.)	0 Volt

CHARACTERISTICS AND TYPICAL OPERATION

Class A1 Amplifier

Plate Voltage	125 Volts
Grid No. 3 Voltage	Connected to Cathode at Socket
Grid No. 2 Voltage	125 Volts
Cathode Bias Resistor	56 Ohms
Plate Current	15.5 Ma
Grid No. 2 Current	4.2 Ma
Transconductance	8000 μmhos
Plate Resistance (Approx.)	0.25 Megohm
Transconductance with Ec1 = −5.5, Rk = 0	700 μmhos
Ec1 for Ib = 20 μa	−9 Volts

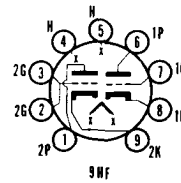
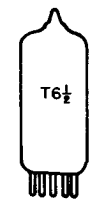
VERTICAL DEFLECTION OSCILLATOR and AMPLIFIER

6DE7

10DE7, 13DE7, 19DE7

Dissimilar Double Triode

Construction .....Miniature T-6½
Base .....Button 9 Pin, E9-1
Basing 9HF
Outline 6-3
Maximum Diameter .....0.875 In.
Maximum Seated Height .....2.375 In.
Maximum Overall Height .....2.625 In.



9HF