Heater Positive with Respect to Cathode

DC	100 Volts
Total DC and Peak	200 Volts

DIRECT INTERELECTRODE CAPACITANCES

	Shielded(1)	Unshielded
Triode		
Grid to Plate: (g to p)	2.2	2.2 Pf
Input: g to (h + k)	3.4	3.2 Pf
Output: p to (h+Tk+Pk+Pg3+IS)	3.0	1.8 Pf
Pentode		
Grid to Plate: (g1 to p) (Max.)	0.05	0.06 Pf
Input: g1 to (g + k + g2 + g3 + IS)	10.0	10.0 Pf
Output: p to (h + k + g2 + g3 + IS)	4.5	3.6 Pf
Coupling		
Pentode Grid No. 1 to Triode Plate (Max.)	0.005	0.008 Pf
Pentode Plate to Triode Grid	0.006	0.016 Pf
Pentode Plate to Triode Plate (Max.)	0.025	0.150 Pf

RATINGS (Design Maximum Rating System)

	Triode	Pentode
Plate Voltage (Max.)	330	330 Volts
Grid No. 2 Supply Voltage (Max.)	—	330 Volts
Grid No. 2 Voltage	See Rating Chart (Gen. Info. Sec.)	
Plate Dissipation (Max.)	1.1	3.75 Watts
Grid No. 2 Dissipation (Max.)	—	1.1 Watt
Negative Grid No. 1 Voltage (Max.)	—	50 Volts
Positive Grid No. 1 Voltage (Max.)	0	0 Volt
Grid No. 1 Circuit Resistance		
Fixed Bias (Max.)	0.5	0.25 Megohm
Self Bias (Max.)	1.0	1.0 Megohm

CHARACTERISTICS AND TYPICAL OPERATION
Class A1 Amplifier

	Triode	Pentode
Plate Voltage	200	150 Volts
Grid No. 2 Voltage	—	150 Volts
Grid No. 1 Voltage	-2	0 Volts
Cathode Bias Resistor	—	150 Ohms
Plate Current	4.0	15 Ma
Grid No. 2 Current	—	3.5 Ma
Transconductance	4000	9500 μmhos
Amplification Factor	70	—
Plate Resistance (Approx.)	—	0.20 Megohm
Grid No. 1 Voltage (Approx.) for Ib = 20 μa	-5	-8 Volts

INSTANTANEOUS PLATE KNEE VALUES
Eb = 65 V, Ec2 = 150 V, and Ec1 = 0 V;
Ib = 46 Ma; and Ic2 = 15 Ma

NOTE:
(1) Shield No. 315 ties to Pins 4 and 5.

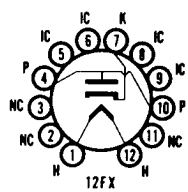
DAMPER

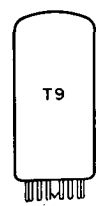
6AX3

12AX3, 17AX3

Heater-Cathode Diode

Construction.....Compactron T-9
Base .....Button 12 Pin, E12-70
Basing 12FX
Outline
Maximum Diameter .....1.188 In.
Maximum Seated Height .....2.250 In.
Maximum Overall Height .....2.596 In.





ELECTRICAL DATA
HEATER OPERATION

	17AX3	12AX3	6AX3
Heater Voltage	16.8	12.6	6.3 Volts
Heater Current	450	600	1200 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	5000 Volts
Heater Positive with Respect to Cathode	
DC	100 Volts
Total DC and Peak	300 Volts
DIRECT INTERELECTRODES CAPACITANCES (Unshielded)	
Cathode to Plate and Heater	7.5 Pf
Plate to Cathode and Heater	5.5 Pf
Heater to Cathode	2.8 Pf
RATINGS (Design Maximum Rating System)	
Damper Service(1)	
Peak Inverse Plate Voltage (Max.)	5000 Volts
Plate Dissipation (Max.)	5.3 Watts
Steady State Peak Plate Current (Max.)	1000 Ma
DC Output Current (Max.)	165 Ma
CHARACTERISTICS AND TYPICAL OPERATION	
Tube Voltage Drop for Ib = 250 Ma	32 Volts

NOTE:

(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.

6AX4GTB

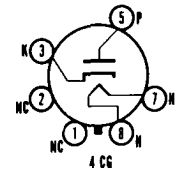
12AX4GTB, 17AX4GTA/17DM4A

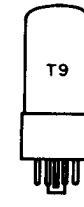
Color Television Type

DAMPER

Heater-Cathode Diode

Construction .....Octal T-9
Base .....Octal 5 Pin, B5-82
Basing(1) 4CG
Outline 9-11
Maximum Diameter .....1.188 In.
Maximum Seated Height .....2.750 In.
Maximum Overall Height .....3.313 In.





ELECTRICAL DATA

HEATER OPERATION	17AX4GTA/ 17DM4A	12AX4GTB	6AX4GTB
Heater Voltage	16.8	12.6	6.3 Volts
Heater Current	450	600	1200 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	5000 Volts
Heater Positive with Respect to Cathode	
DC	100 Volts
Total DC and Peak	300 Volts
DIRECT INTERELECTRODE CAPACITANCES (Unshielded)	
Cathode to Plate and Heater	8.5 Pf
Plate to Cathode and Heater	5.0 Pf
Heater to Cathode	4.0 Pf
RATINGS (Design Maximum Rating System)	
Damper Service(2)	
Peak Inverse Voltage (Max.)	5000 Volts
Plate Dissipation (Max.)	5.3 Watts
DC Plate Current (Max.)	165 Ma
Steady State Peak Current (Max.)	1000 Ma
CHARACTERISTICS AND TYPICAL OPERATION	
Tube Voltage Drop for Ib = 250 Ma	32 Volts

NOTES:

(1) Pins 1, 2, 4, and 6 shall 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.