

Grid No. 1 Circuit Resistance (Fixed Bias) (Max.)	0.56 Megohm
Grid No. 1 Circuit Resistance (Self Bias) (Max.)	1.0 Megohm
Cathode Current (Max.)	15 Ma
Peak Cathode Current (Max.) ⁽¹⁾	50 Ma
Input Impedance at 60 Hertz (Max.)	300 K Ohms
Triode Section	
Plate Voltage, Zero Plate Current (Max.)	550 Volts
Plate Voltage (Max.)	250 Volts
Plate Dissipation (Max.)	1.4 Watts
Grid No. 1 Circuit Resistance (Max.)	3 Megohms
Cathode Current (Max.)	10 Ma
Input Impedance at 60 Hertz (Max.)	50 K Ohms

CHARACTERISTICS AND TYPICAL OPERATION**Pentode Section**

Plate Voltage	100 Volts
Grid No. 2 Voltage	100 Volts
Grid No. 1 Voltage	-1 Volt
Plate Current	6 Ma
Grid No. 2 Current	1.7 Ma
Transconductance	5500 μ mhos
Input Resistance	0.4 Megohm
Amplification Factor (Grid No. 1 to Grid No. 2)	47
Plate Current ($E_{g1} = 0$ V)	12.5 Ma
Grid No. 2 Current ($E_{g1} = 0$ V)	3.5 Ma
Grid No. 1 Voltage ($E_b = E_{g2} = 200$ V, $I_b = 10$ μ a)	-16 Volts
Grid No. 1 Voltage ($I_{c1} = +0.3$ μ a)	-1.3 Volts

Triode Section

Plate Voltage	200 Volts
Grid Voltage	-2 Volts
Plate Current	3.5 Ma
Transconductance	3500 μ mhos
Input Resistance	20 K Ohms
Amplification Factor	70
Plate Current ($I_c = 10$ μ a)	10 Ma
Grid Voltage ($I_c = +0.3$ μ a)	-1.3 Volts

NOTE:(1) Duty cycle 30% maximum; pulse time 30 μ sec. maximum.

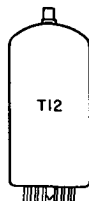
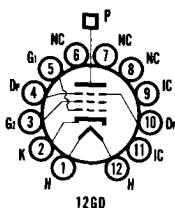
HORIZONTAL DEFLECTION AMPLIFIER

6JZ6

21JZ6

Beam Power Pentode

Construction	Compactron T-12
Base	Button 12 Pin, E12-74
Top Cap	C1-3
Basing	12GD
Outline	12-79
Maximum Diameter	1.563 In.
Maximum Seated Height	3.250 In.
Maximum Overall Height	3.625 In.

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

Heater Voltage	21.0	6JZ6 6.3 Volts
Heater Current	450	1500 Ma
Heater Warm-up Time	11	— Sec.
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	0.34 Pf
Input: g_1 to ($h + k + g_2 + b.p.$)	24 Pf
Output: p to ($h + k + g_2 + b.p.$)	8.5 Pf

RATINGS (Design Maximum Rating System)**Horizontal Deflection Amplifier Service⁽¹⁾**

DC Plate Supply Voltage (Boost + DC Power Supply) (Max.)	770 Volts
Peak Positive Pulse Plate Voltage (Max.)	6500 Volts
Peak Negative Pulse Plate Voltage (Max.)	1500 Volts
Positive DC Beam Plate Voltage (Max.)	70 Volts

Screen Voltage (Max.)	220 Volts
Negative DC Grid No. 1 Voltage (Max.)	55 Volts
Peak Negative Grid No. 1 Voltage (Max.)	330 Volts
Plate Dissipation (Max.) ⁽²⁾	18 Watts
Screen Dissipation (Max.)	3.5 Watts
DC Cathode Current (Max.)	230 Ma
Peak Cathode Current (Max.)	800 Ma
Grid No. 1 Circuit Resistance (Max.)	1.0 Megohm
Bulb Temperature at Hottest Point (Max.)	220 °C

CHARACTERISTICS AND TYPICAL OPERATION

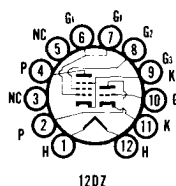
Plate Voltage	5000	50	130 Volts
Beam Plates	Connected to Cathode at Socket		
Screen Voltage	130	130	130 Volts
Grid No. 1 Voltage	—	0 ⁽³⁾	-20 Volts
Plate Resistance (Approx.)	—	—	9900 Ohms
Transconductance	—	—	9000 μ mhos
Plate Current	—	450	46 Ma
Screen Current	—	29	1.8 Ma
Grid No. 1 Voltage (Approx.) Ib = 1.0 Ma	-64	—	-32 Volts
Triode Amplification Factor ⁽⁴⁾	—	—	4.8

NOTES:

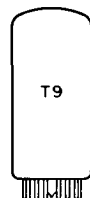
- (1) For operation in a 525 line, 30 frame system as described in "Standards of Good Engineering Practice for Television Broadcast Stations; Federal Communications Commission," the duty cycle of the voltage pulse must not exceed 15% of one horizontal scanning cycle.
- (2) In stages operating with grid-leak bias, an adequate cathode bias resistor of other suitable means is required to protect the tube in the absence of excitation.
- (3) Applied for short interval (two seconds maximum) so as not to damage tube.
- (4) Triode connection (screen tied to plate) with $E_b = E_{c2} = 130$ V and $E_{c1} = -20$ V.

6JZ813JZ8, 17JZ8,
24JZ8, 25JZ8**VERTICAL DEFLECTION
OSCILLATOR and AMPLIFIER****Medium Mu Triode and
Sharp Cutoff Pentode**

Construction	Compactron T-9
Base	Butt-on 12 Pin, E12-70
Basing	12DZ
Outline	9-58
Maximum Diameter	1.188 in.
Maximum Seated Height	2.000 in.
Maximum Overall Height	2.375 in.



12DZ

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

	25JZ8	24JZ8	13JZ8	17JZ8	6JZ8
Heater Voltage	25.2	24.2	12.7	17.5	6.3
Heater Current	300	315	600	450	1200 Ma
Heater Warm-up Time	11	11	11	11	— Seconds
Maximum Heater-Cathode Voltage					
Heater Negative with Respect to Cathode					
Total DC and Peak					
Heater Positive with Respect to Cathode					
DC					
Total DC and Peak					

DIRECT INTERELECTRODE CAPACITANCES (Unshielded)**Triode Section**

Grid to Plate	3.6 Pf
Input: g to (h + Tk)	2.2 Pf
Output: p to (h + Tk)	0.7 Pf

Pentode Section

Grid No. 1 to Plate (Max.)	0.34 Pf
Input: g1 to (h + Pk + Pp + g2)	11 Pf
Output: p to (h + Pk + Pp + g2)	7 Pf