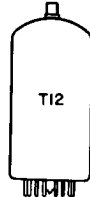
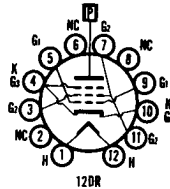


**HORIZONTAL DEFLECTION
AMPLIFIER**

6GY5
16GY5, 21GY5

Beam Power Pentode

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



ELECTRICAL DATA

HEATER OPERATION

	21GY5	16GY5	6GY5
Heater Voltage.....	21	15.8	6.3 Volts
Heater Current	450	600	1500 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 No. 1 to Plate	0.7 Pf
Input: g1 to (h + k + g3).....	22 Pf
Output: p to (h + k + g2 + g3)	9 Pf

RATINGS (Design Maximum Rating System)

Horizontal Deflection Amplifier⁽¹⁾

DC Plate Supply Voltage (Boost + DC Power Supply) (Max.)	770 Volts
Peak Positive Pulse Plate Voltage	6500 Volts
Peak Negative Pulse Plate Voltage (Max.)	1500 Volts
Plate Dissipation (Max.) ⁽²⁾	18 Watts
Peak Negative Grid No. 1 Voltage (Max.)	330 Volts
Grid No. 2 Voltage (Max.)	220 Volts
Grid No. 2 Dissipation (Max.)	3.5 Watts
Average 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	130 Volts
Grid No. 2 Voltage	130	130 Volts
Grid No. 1 Voltage	—	-20 Volts
Plate Current	—	50 Ma
Grid No. 2 Current	—	1.75 Ma
Transconductance	—	9100 μ mhos
Plate Resistance.....	—	11,000 Ohms
Amplification Factor ⁽³⁾	—	4.7
Ec1 for Ib = 1.0 Ma (Approx.)	-66	-33 Volts

INSTANTANEOUS PLATE KNEE VALUES

Eb = 60 V; Ec2 = 130 V and Ec1 = 0
Ib = 410 Ma; and Ic2 = 26 Ma

NOTES:

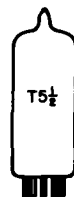
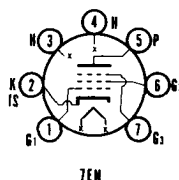
- (1) For operation in a 525 line, 30 frame system as described in "Standards of Good Engineering Practice for Television Broadcast Stations; Federal Communications Commission," the duty cycle of the voltage pulse must not exceed 15% of one horizontal scanning cycle.
- (2) In stages operating with grid leak bias, an adequate cathode bias resistor or other suitable means is required to protect the tube in the absence of excitation.
- (3) Amplification factor with tube operating as a triode with 130 volts on the plate and Grid No. 2 and -20 volts on Grid No. 1.

6GY6/6GX6**5GX6**

Color Television Type

**GATED AGC AMP. and NOISE
INVERTER or 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.

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

	5GX6	6GY6/6GX6
Heater Voltage.....	4.7	6.3 Volts
Heater Current	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 No. 1 to Plate	0.026 Pf
Grid No. 3 to Plate	1.6 Pf
Input: g1 to (k & IS + g3 + g2 + h).....	8 Pf
Input: g3 to (k & IS + p + g2 + g1 + h)	6.5 Pf
Grid No. 1 to Grid No. 2	0.12 Pf

RATINGS (Design Maximum Rating System)

Plate Voltage (Max.)	300 Volts
Peak Positive Pulse Plate Voltage (Max.) ⁽¹⁾	600 Volts
Positive Grid No. 3 Voltage (Max.)	0 Volt
Negative Grid No. 3 Voltage (Max.)	100 Volts
Grid No. 2 Supply Voltage (Max.)	300 Volts
Positive Grid No. 1 Voltage (Max.)	0 Volt
Negative Grid No. 1 Voltage (Max.)	50 Volts
Plate Dissipation (Max.)	1.7 Watts
Grid No. 2 Input	
For Grid No. 2 Voltage to 150 Volts (Max.)	1.0 Watt
For Grid No. 2 Voltages Between 150 to 300 Volts	See Rating Chart (Gen. Info. Sec.)
Grid No. 3 Circuit Resistance (Max.)	0.68 Megohm
Grid No. 1 Circuit Resistance	
Fixed Bias (Max.)	0.22 Megohm
Self Bias (Max.)	0.47 Megohm

CHARACTERISTICS AND TYPICAL OPERATION

Plate Voltage	150 Volts
Grid No. 3 Voltage	0 Volt
Grid No. 2 Voltage	100 Volts
Cathode Resistor	180 Ohms
Plate Current	3.7 Ma
Grid No. 2 Current	3 Ma
Transconductance (G1 to P)	3700 μ mhos
Transconductance (G3 to P)	750 μ mhos
Plate Resistance	140,000 Ohms
Ec1 for Ib = 20 μ a (Approx.).....	-4.5 Volts
Ec3 for Ib = 20 μ a (Approx.).....	-7 Volts

NOTE:

(1) The duration of the pulse must not exceed 15% of one horizontal scanning cycle. In a 525-line, 30-frame system, 15% of one horizontal scanning cycle is 10 μ sec.