

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 0.24 Pf

Input: g_1 to $(h + k + g_2)$ 8.5 PfOutput: p to $(h + k + g_2)$ 8.5 Pf**RATINGS (Design Maximum Rating System)**

Plate Voltage (Max.) 300 Volts

Grid No. 2 Voltage (Max.) 300 Volts

Positive DC Grid No. 1 Voltage (Max.) 0 Volts

Plate Dissipation (Max.) 4.8 Watts

Grid No. 2 Dissipation—Continuous (Max.) 1.1 Watts

Cathode Current—Average (Max.) 30 Ma

Grid No. 1 Circuit Resistance

Fixed Bias (Max.) 0.5 Megohm

Cathode Bias (Max.) 1.0 Megohm

Bulb Temperature (Max.) 200 °C

CHARACTERISTICS AND TYPICAL OPERATION**Class A1 Audio Amplifier**

Plate Supply Voltage..... 250 250 Volts

Grid No. 2 Supply Voltage..... 250 250 Volts

Cathode Resistor 270 270 Ohms

Peak Audio Grid No. 1 Voltage 9.8 2.0 Volts

Zero Signal Plate Current 16 16 Ma

Maximum Signal Plate Current 16 16 Ma

Zero Signal Grid No. 2 Current 2.7 2.7 Ma

Maximum Signal Grid No. 2 Current 5.0 5.0 Ma

Transconductance 8400 μ mhos

Plate Resistance (Approx.) 0.15 Megohm

Load Resistance 15,000 15,000 Ohms

Total Harmonic Distortion 10 10 Percent

Power Output 1.8 1.1 Watts

6HA5/6HM5**4HA5/PC900, 4HM5,
3HA5/3HM5, 2HA5, 2HM5**

Color Television Type

VHF AMPLIFIER**Shielded Triode**

Construction Miniature T-5½

Base Button 7 Pin, E7-1

Basing 7GM

Outline 5-1

Maximum Diameter 0.750 In.

Maximum Seated Height 1.500 In.

Maximum Overall Height 1.750 In.

ELECTRICAL DATA**HEATER OPERATION**

	2HA5 2HM5	3HA5/ 3HM5	4HA5/PC900 4HM5	6HA5/ 6HM5
Heater Voltage.....	2.4	2.9	4.0	6.3 Volts
Heater Current	600	450	300	185 Ma
Heater Warm-up Time	11	11	11	— Seconds

Maximum Heater-Cathode Voltage

Heater Negative with Respect to Cathode

Total DC and Peak..... 100 Volts

Heater Positive with Respect to Cathode

Total DC and Peak..... 100 Volts

DIRECT INTERELECTRODE CAPACITANCES (Shielded)⁽¹⁾

Output 3.0 Pf

Input 4.5 Pf

Plate to Grid 0.34 Pf

Cathode to Heater 2.5 Pf

RATINGS (Design Maximum Rating System)

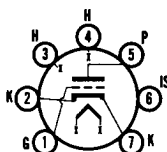
Plate Voltage (Max.) 200 Volts

Grid Voltage (Max.) -50 Volts

Cathode Current (Max.) 20 Ma

Plate Dissipation (Max.) 2.6 Watts

Grid Circuit Resistance 1 Megohm



7GM



CHARACTERISTICS AND TYPICAL OPERATION

Plate Voltage	120	135 Volts
Grid Voltage	0	-1 Volt
Plate Current	15.0	12.5 Ma
Transconductance	18,000	14,500 μ mhos
Amplification Factor	82	78
Grid Cutoff Bias		
GM = 150 μ mhos	-5.1	-5.7 Volts
GM = 1500 μ mhos	—	-2.7 Volts
Grid Resistance	0.1	0 Megohm
Hot Input Resistance ⁽¹⁾	—	1000 Ohms
Hot Input Capacitance ⁽²⁾	—	8.5 Pf
Noise Figure ⁽³⁾	4.0	4.2 db

NOTES:

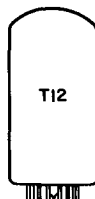
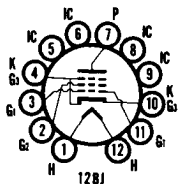
- (1) With JEDEC Shield No. 316 connected to Pin No. 2.
- (2) Measured at 200 MHz with plate at signal ground $E_{c1} = -1.5$ volts.
- (3) In a 200 MHz noise matched, optimized, neutralized grounded cathode, triode amplifier stage.

HORIZONTAL DEFLECTION AMPLIFIER

6HB5
21HB5

Beam Power Pentode

Construction.....Compactron T-12
 Base Button 12 Pin, E12-74
 Basing 12BJ
 Outline 12-58
 Maximum Diameter 1.563 In.
 Maximum Seated Height 3.000 In.
 Maximum Overall Height 3.375 In.

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

	21HB5	6HB5
Heater Voltage.....	21	6.3 Volts
Heater Current	450	1500 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 (Unshielded)

Grid No. 1 to Plate: (g1 to p)	0.4 Pf
Input: g1 to (h + k + g2 + bp).....	22 Pf
Output: p to (h + k + g2 + bp).....	9.0 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.)	6000 Volts
Peak Negative Pulse Plate Voltage (Max.)	1500 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	60	130 Volts
Screen Voltage.....	130	130	130 Volts
Grid No. 1 Voltage	—	0 ⁽³⁾	-20 Volts
Plate Resistance (Approx.)	—	—	11,000 Ohms
Transconductance	—	—	9100 μ mhos
Plate Current	—	410	50 Ma