

6GJ5

12GJ5, 17GJ5

HORIZONTAL DEFLECTION  
AMPLIFIER

Beam Power Pentode

Construction .....Novar T-12  
Base .....Novar Button 9 Pin, E9-76  
Top Cap .....C1-2, C1-3 or C1-33  
Basing .....9QK  
Outline .....12-70  
Maximum Diameter .....1.562 in.  
Maximum Seated Height .....3.170 in.  
Maximum Overall Height .....3.550 in.

ELECTRICAL DATA  
HEATER OPERATION

|                                         |               |               |                   |
|-----------------------------------------|---------------|---------------|-------------------|
| Heater Voltage.....                     | 17GJ5<br>16.8 | 12GJ5<br>12.6 | 6GJ5<br>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 |               |               |                   |
| Total DC and Peak.....                  |               |               | 200 Volts         |
| Heater Positive with Respect to Cathode |               |               |                   |
| DC .....                                |               |               | 100 Volts         |
| Total DC and Peak .....                 |               |               | 200 Volts         |

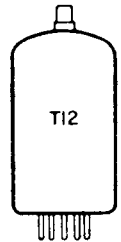
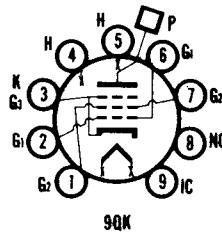
DIRECT INTERELECTRODE CAPACITANCES (Unshielded)

|                                      |         |
|--------------------------------------|---------|
| Grid to Plate .....                  | 0.26 Pf |
| Input: g1 to (k + g3 + g2 + h) ..... | 15 Pf   |
| Output: p to (k + g3 + g2 + h) ..... | 6.5 Pf  |

RATINGS (Design Maximum Rating System)

Horizontal Deflection Amplifier<sup>(1)</sup>

|                                                                |            |
|----------------------------------------------------------------|------------|
| DC Plate Supply Voltage (Boost + DC Power Supply) (Max.) ..... | 770 Volts  |
| Peak Positive Plate Voltage (Max.) .....                       | 6500 Volts |
| Peak Negative Plate Voltage (Max.) .....                       | 1500 Volts |
| Grid No. 2 Voltage (Max.) .....                                | 220 Volts  |
| Negative Grid No. 1 Voltage (Max.) .....                       | -55 Volts  |
| Peak Negative Grid No. 1 Voltage (Max.) .....                  | 330 Volts  |
| Plate Dissipation (Max.) <sup>(2)</sup> .....                  | 17.5 Watts |
| Grid No. 2 Input (Max.) .....                                  | 3.5 Watts  |
| Average Cathode Current (Max.).....                            | 175 Ma     |
| Peak Cathode Current (Max.).....                               | 550 Ma     |
| Grid No. 1 Circuit Resistance (Max.).....                      | 1.0 Megohm |
| Bulb Temperature (At Hottest Point) (Max.).....                | 240 °C     |



CHARACTERISTICS AND TYPICAL OPERATION

|                                           |                 |
|-------------------------------------------|-----------------|
| Plate Voltage .....                       | 250 Volts       |
| Grid No. 2 Voltage .....                  | 150 Volts       |
| Grid No. 1 Voltage .....                  | -22.5 Volts     |
| Plate Current .....                       | 70 Ma           |
| Grid No. 2 Current .....                  | 2.1 Ma          |
| Transconductance .....                    | 7100 $\mu$ mhos |
| Amplification Factor <sup>(3)</sup> ..... | 4.4             |
| Plate Resistance.....                     | 15,000 Ohms     |
| Ec1 for Ib = 1 Ma (Approx.).....          | -42 Volts       |

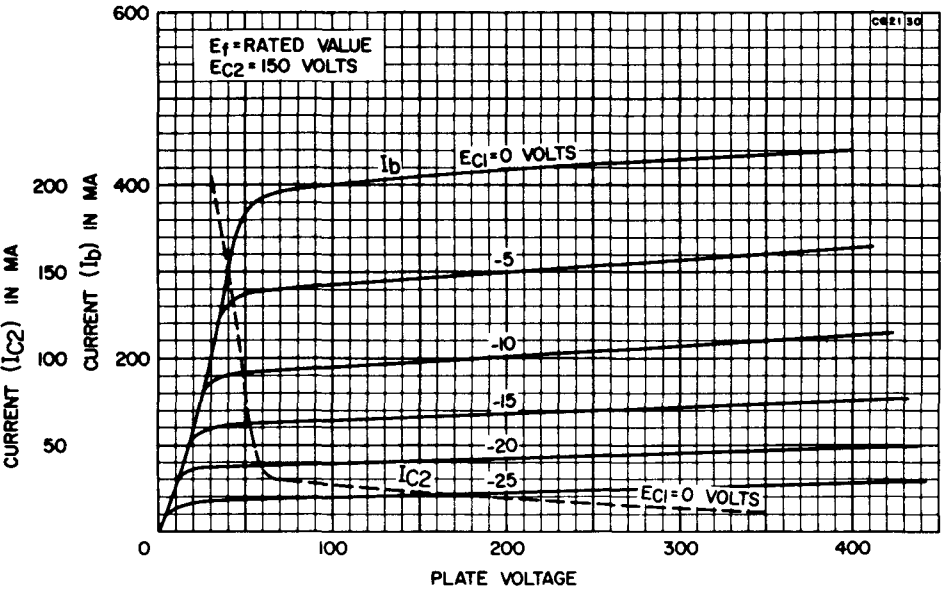
INSTANTANEOUS PLATE KNEE VALUES

Eb = 60 V, Ec2 = 150 V and Ec1 = 0 V;  
Ib = 390 Ma; and Ic2 = 32 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 150 volts on the plate and Grid No. 2 and -22.5 volts on Grid No. 1.

AVERAGE PLATE CHARACTERISTICS



HORIZONTAL DEFLECTION  
AMPLIFIER

6GJ5A  
12GJ5A, 17GJ5A

Beam Power Pentode

Construction .....Novar T-12  
Base .....Novar Button 9 Pin, E9-88  
(Exhaust Tip on Base)  
Top Cap .....C1-2, C1-3 or C1-33  
Basing .....9QK  
Outline  
Maximum Diameter .....1.562 In.  
Maximum Seated Height .....3.125 In.  
Maximum Overall Height .....3.505 In.  
The 6GJ5A, 12GJ5A, and 17GJ5A are identical to the 6GJ5, 12GJ5, and 17GJ5 except for base with exhaust tip at bottom and shorter bulb.

