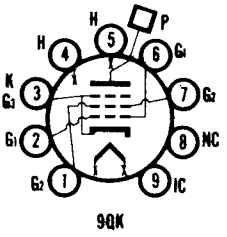
6GJ5

12GJ5, 17GJ5

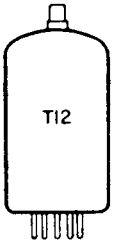
HORIZONTAL DEFLECTION AMPLIFIER

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.



9QK



ELECTRICAL DATA

HEATER OPERATION

	17GJ5	12GJ5	6GJ5
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
  - 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[1]

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.)[2]	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 μmhos
Amplification Factor(3)	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

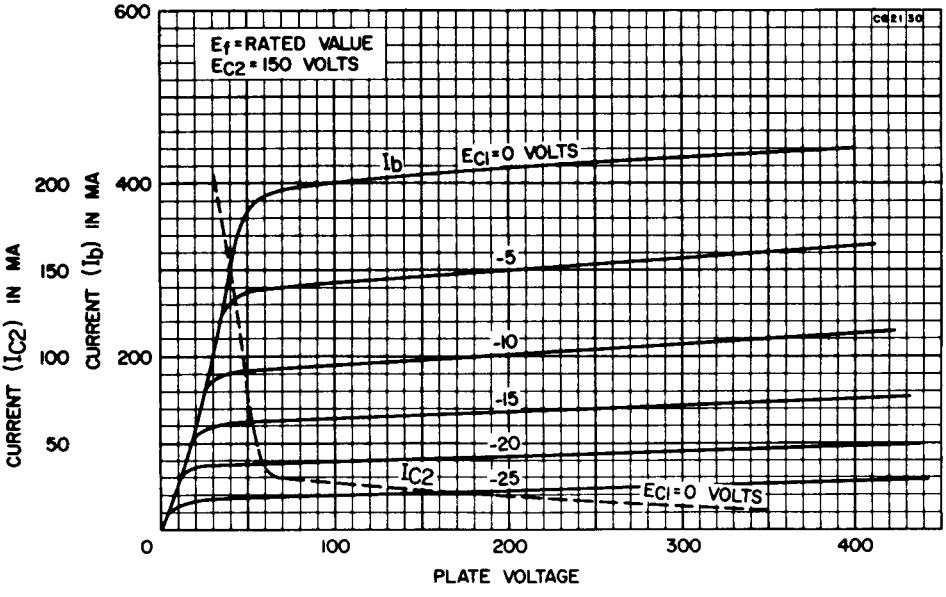
NOTES:

(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

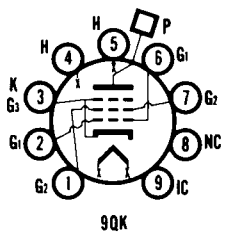
6GJ5A

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.



9QK