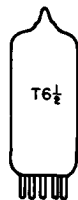
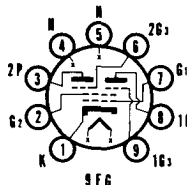


CHARACTERISTICS AND TYPICAL OPERATION (Each Section)**Half Wave Rectifier**Diode Current at $E_b = 10$ Volts DC..... 60 Ma*Color Television Type***SYNC SEPARATOR/CLIPPER
and AGC TUBE****6GS8****6BU8, 3GS8/3BU8,
4GS8/4BU8****Double Pentode**

Construction Miniature T-6½
 Base Button 9 Pin, E9-1
 Basing⁽¹⁾ 9LW or 9FG
 Outline 6-3
 Maximum Diameter 0.875 In.
 Maximum Seated Height 2.375 In.
 Maximum Overall Height 2.625 In.

**ELECTRICAL DATA
HEATER OPERATION**

	3GS8/3BU8	4GS8/4BU8	6BU8 6GS8
Heater Voltage.....	3.15	4.2	6.3 Volts
Heater Current	600	450	300 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. 3 to Plate (Each Section)	1.9 Pf
Grid No. 1 to All.....	6.0 Pf
Grid No. 3 (Each Section) to All	3.6 Pf
Plate (Each Section) to All	3.0 Pf
Grid No. 3 (Section 1) to Grid No. 3 (Section 2) (Max.)	0.015 Pf

RATINGS (Design Maximum Rating System)

Plate Voltage (Each Section) (Max.)	300 Volts
Grid No. 2 Voltage (Max.)	150 Volts
Positive DC Grid No. 3 Voltage (Each Section) (Max.)	3.0 Volts
Negative DC Grid No. 3 Voltage (Each Section) (Max.)	50 Volts
Peak Positive Grid No. 3 Voltage (Each Section) (Max.)	50 Volts
Negative DC Grid No. 1 Voltage (Max.)	50 Volts
Plate Dissipation (Each Section) (Max.)	1.1 Watts
Grid No. 2 Dissipation (Max.)	0.75 Watt
DC Cathode Current (Max.)	12 Ma
Grid No. 1 Circuit Resistance (Max.)	0.5 Megohm
Grid No. 3 Circuit Resistance (Each Section) (Max.)	0.5 Megohm

CHARACTERISTICS AND TYPICAL OPERATION**Both Sections Operating**

Plate Voltage (Each Section).....	100	100 Volts
Grid No. 2 Voltage	67.5	67.5 Volts
Grid No. 3 Voltage (Each Section).....	-10	0 Volts
Grid No. 1 Voltage	Note 2	Note 2
Plate Current (Each Section)	—	2.2 Ma
Grid No. 2 Current	6.5	3.3 Ma
Cathode Current	6.6	7.8 Ma

**Each Section Separately with Plate and Grid No. 3
of Opposite Section Grounded**

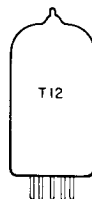
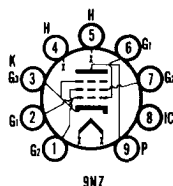
Plate Voltage	100	100 Volts
Grid No. 2 Voltage	67.5	67.5 Volts
Grid No. 3 Voltage	0	0 Volt
Grid No. 1 Voltage	0	Note 2
Plate Current	—	2.2 Ma
Grid No. 3 Transconductance	—	180 μ mhos
Grid No. 1 Transconductance	1500	11 μ mhos
Grid No. 3 Voltage (Approx.) for $I_b = 100 \mu$ a	—	-4.5 Volts
Grid No. 1 Voltage (Approx.) for $I_b = 100 \mu$ a	—	-2.3 Volts

NOTES:

- (1) Basing 9LW has Internal Shield tied to Cathode.
 Basing 9FG has Internal Shield tied to Grid No. 2.
 (2) Grid Current adjusted for 100μ a DC.

6GT5**12GT5, 17GT5****HORIZONTAL DEFLECTION
AMPLIFIER****Beam Power Pentode**

Construction Novar T-12
 Base Novar Button 9 Pin, E9-76
 Basing 9NZ
 Outline 12-64
 Maximum Diameter 1.562 In.
 Maximum Seated Height 3.050 In.
 Maximum Overall Height 3.410 In.

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

	17GT5	12GT5	6GT5
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: g_1 to $(h + k + g_2 + g_3)$	15 Pf
Output: p to $(h + k + g_2 + g_3)$	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 μ mhos
Amplification Factor ⁽³⁾	4.4
Plate Resistance.....	15,000 Ohms
E_{c1} for $I_b = 1$ Ma (Approx.).....	-42 Volts

INSTANTANEOUS PLATE KNEE VALUES

$E_b = 60$ V, $E_{c2} = 150$ V, and $E_{c1} = 0$ V;

$I_b = 390$ Ma; and $I_{c2} = 32$ 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 operation as a triode with 150 volts on the plate and Grid No. 2 and -22.5 volts on Grid No. 1.