Color Television Type

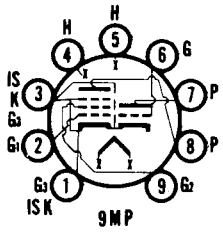
VHF OSCILLATOR and MIXER

6HG8/ECF86

4HG8, 5HG8/LCF86, 7HG8/PCF86, 8HG8

Medium Mu Triode and Sharp Cutoff Pentode

Construction .....Miniature T-6½
Base .....Button 9 Pin, E9-1
Basing 9MP
Outline 6-2
Maximum Diameter .....0.875 In.
Maximum Seated Height .....1.937 In.
Maximum Overall Height .....2.187 In.



ELECTRICAL DATA

HEATER OPERATION

	8HG8	7HG8/ PCF86	5HG8/LCF86	4HG8	6HG8/ ECF86
Heater Voltage	8.0	7.2	5.3	4.5	6.3 Volts
Heater Current	300	300	450	600	340 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)

Triode Section

Grid to Plate ..... 2.0 Pf
Input: g to (h + k, Pk, Pg3, IS) ..... 2.4 Pf
Output: p to (h + k, Pk, Pg3, IS) ..... 1.1 Pf

Pentode Section

Grid No. 1 to Plate (Max.) ..... 0.020 Pf
Input: g1 to (h + k, Tk, g3, IS + g2) ..... 6.0 Pf
Output: p to (h + k, Pk, Pg3, IS + g2) ..... 3.5 Pf
Grid No. 1 to Grid No. 2 ..... 1.7 Pf

Coupling

Triode Grid to Pentode Plate (Max.) ..... 0.014 Pf
Pentode Grid No. 1 to Triode Plate (Max.) ..... 0.01 Pf
Pentode Plate to Triode Plate (Max.) ..... 0.14 Pf
Pentode Grid No. 1 to Triode Grid (Max.) ..... 0.01 Pf

RATINGS (Design Maximum Rating System)

	Triode Section	Pentode Section
Plate Voltage (Max.)	125	250 Volts
Grid No. 2 Supply Voltage (Max.)	—	250 Volts
Grid No. 2 Voltage	See Rating Chart (Gen. Info. Sec.)	
Positive Grid No. 1 Voltage (Max.)	0	0 Volt
Plate Dissipation (Max.)	1.9	2.2 Watts
Grid No. 2 Dissipation (Max.)	—	0.55 Watts
Cathode Current (Max.)	16.5	20 Ma
Grid No. 1 Circuit Resistance (Max.)	0.5	— Megohm
Fixed Bias (Max.)	—	0.25 Megohm
Cathode Bias (Max.)	—	0.5 Megohm

The spacing between the control grids and cathodes are of such a low order of magnitude as to preclude the use of excessive voltages between these elements in commercial tube checkers and shorts indicating devices, particularly where the tube is mechanically excited. The DC or peak AC voltage applied between each sections control grid and cathode must not exceed 30 volts for the pentode or 50 volts for the triode.

CHARACTERISTICS AND TYPICAL OPERATION

	Triode Section	Pentode Section
Plate Voltage	100	170 Volts
Grid No. 2 Voltage	—	150 Volts
Grid No. 1 Voltage	−3	−1.2 Volts
Plate Current	14	10 Ma
Grid No. 2 Current	—	3.3 Ma
Transconductance	5500	12,000 μmhos
Amplification Factor (g1 to g2)	17	70
Plate Resistance	3100	350,000 Ohms

AVERAGE PLATE CHARACTERISTICS
(Pentode Section)