

Heater Positive with Respect to Cathode

DC	100 Volts
Total DC and Peak	300 Volts

DIRECT INTERELECTRODE CAPACITANCES (Unshielded)

Cathode to Plate and Heater	16.0 Pf
Plate to Cathode and Heater	13.0 Pf
Heater to Cathode	4.0 Pf

RATINGS (Design Maximum Rating System)**Damper Service⁽²⁾**

Peak Inverse Plate Voltage (Max.)	5000 Volts
Plate Dissipation (Max.)	6.5 Watts
Steady State Peak Plate Current (Max.)	2100 Ma
DC Plate Current (Max.)	350 Ma

CHARACTERISTICS AND TYPICAL OPERATION

Tube Voltage Drop for $I_b = 700$ Ma	20 Volts
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NOTES:

- (1) Pins designated Internal Connection (IC) may or may not have connections to internal elements depending on the manufacturer. To maintain interchangeability do not use these pins for external connection.
- (2) 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.

6CG7/6FQ7**8CG7/8FQ7, 12FQ7**

Color Television Type

HORIZONTAL and VERTICAL DEFLECTION OSCILLATOR**Medium Mu Twin Triodes**

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

ELECTRICAL DATA**HEATER OPERATION**

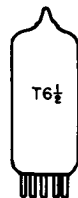
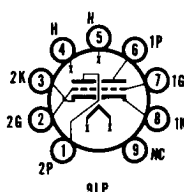
	12FQ7	8CG7/8FQ7	6CG7/6FQ7
Heater Voltage	12.6	8.4	6.3 Volts
Heater Current	300	450	600 Ma
Heater Warm-up Time	11	11	11 Seconds
Maximum Heater-Cathode Voltage			
Heater Negative with Respect to Cathode			
Total DC and Peak			200 Volts
Heater Positive with Respect to Cathode			
DC			100 Volts
Total DC and Peak			200 Volts

DIRECT INTERELECTRODE CAPACITANCES (Unshielded)

	Section No. 1	Section No. 2
Grid to Plate	3.6	3.8 Pf
Input: g to (h + k)	2.4	2.4 Pf
Output: p to (h + k)	0.34	0.26 Pf
Plate of Section No. 1 to Plate of Section No. 2	1.0	Pf

RATINGS (Design Maximum Rating System)

	Class A1 Amplifier	Horiz. Defl. Oscillator⁽¹⁾	Vert. Defl. Oscillator⁽¹⁾
DC Plate Voltage (Max.)	330	330	330 Volts
Peak Negative Pulse Grid Voltage (Max.)	—	660	440 Volts
Positive Grid Voltage (Max.)	0	—	— Volt
Plate Dissipation ⁽²⁾			
Each Plate (Max.)	4	4	4 Watts
Both Plates (Max.)	5.7	5.7	5.7 Watts
Average Cathode Current (Max.)	22	22	22 Ma
Peak Cathode Current (Max.)	—	330	77 Ma
Grid Circuit Resistance			
Fixed Bias (Max.)	1.0	—	— Megohm
Self Bias (Max.)	—	2.2	2.2 Megohms



CHARACTERISTICS AND TYPICAL OPERATION

Plate Voltage	90	250 Volts
Grid No. 1 Voltage	0	-8 Volts
Plate Current	10	9 Ma
Transconductance	3000	2600 μ mhos
Amplification Factor	20	20
Plate Resistance (Approx.)	6700	7700 Ohms
Grid Voltage for $I_b = 10 \mu$ a (Approx.)	-7	-18 Volts
Plate Current at $E_c = -12.5$ Vdc.	—	1.3 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 bias resistor or other suitable means is required to protect the tube in the absence of excitation.

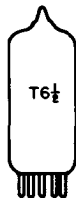
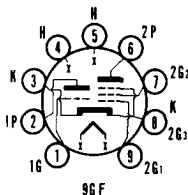
Color Television Type

VHF OSCILLATOR and MIXER**6CG8A**

5CG8

Medium Mu Triode and Sharp Cutoff Pentode

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

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

	5CG8	6CG8A
Heater Voltage.....	4.7	6.3 Volts
Heater Current	600	450 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

	Shielded ⁽¹⁾	Unshielded
Triode Section		
Grid to Plate	1.5	1.5 Pf
Input: g to (h + k)	2.4	2.0 Pf
Output: p to (h + k)	1.0	0.5 Pf
Pentode Section		
Grid No. 1 to Plate (Max.).....	0.02	0.04 Pf
Input: g1 to (k + g3 + g2 + h)	4.8	4.6 Pf
Output: p to (k + g3 + g2 + h)	1.6	0.9 Pf
Coupling		
Pentode Grid No. 1 to Triode Plate (Max.)	0.04	0.05 Pf
Pentode Plate to Triode Plate (Max.)	0.008	0.05 Pf
Heater to Cathode	5.5 ⁽²⁾	5.5 Pf

RATINGS (Design Maximum Rating System)

	Triode Section	Pentode Section
Converter Service		
Plate Voltage (Max.)	275	275 Volts
Grid No. 2 Supply Voltage (Max.)	—	275 Volts
Grid No. 2 Voltage	See Rating Chart (Gen. Info. Sec.)	
Plate Dissipation (Max.)	1.7	2.3 Watts