

DIRECT INTERELECTRODE CAPACITANCES (Unshielded)

Triode Grid to Plate.....	1.8 Pf
Triode Input	1.5 Pf
Triode Output.....	0.5 Pf
Grid to Each Diode Plate.....	0.006 Pf
Diode p1 to (dk + h)	3.6 Pf
Diode p2 to (dk + h)	3.6 Pf

RATINGS (Design Maximum Rating System)

Plate Voltage (Max.)	330 Volts
Positive DC Grid Voltage (Max.)	0 Volt
Plate Dissipation (Max.)	1.1 Watt
Diode Current for Continuous Operation	
Each Diode (Max.)	5.5 Ma

CHARACTERISTICS AND TYPICAL OPERATION

Class A1 Amplifier

Plate Voltage	100	250 Volts
Grid Voltage	-1.0	-3.0 Volts
Amplification Factor	70	70
Plate Resistance (Approx.)	54,000	58,000 Ohms
Transconductance	1300	1200 μ mhos
Plate Current	0.8	1.0 Ma
Average Diode Current, Each Diode with 5.0 Volts		
DC Applied	—	20 Ma

6CQ8
5CQ8

Color Television Type
VHF OSCILLATOR and MIXER

Medium Mu Triode and Sharp Cutoff Tetrode

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

**ELECTRICAL DATA
HEATER OPERATION**

	5CQ8	6CQ8
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

Triode Section

	Shielded ⁽¹⁾	Unshielded
Grid to Plate	1.8	1.8 Pf
Input: g to (h + k)	2.7	2.7 Pf
Output: p to (h + k)	0.4	1.2 Pf

Pentode Section

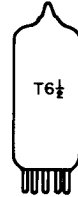
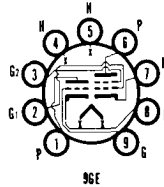
Grid No. 1 to Plate (Max.).....	0.019	0.015 Pf
Input: g1 to (h + k + g2 + IS)	5	5 Pf
Output: p to (h + k + g2 + IS)	2.5	3.3 Pf

Coupling

Triode Plate to Tetrode Plate (Max.).....	0.07	0.01 Pf
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RATINGS (Design Maximum Rating System)

	Triode Section (Oscillator)	Tetrode Section (Mixer)
Plate Voltage (Max.)	330	330 Volts
Grid No. 2 Voltage	See Rating Chart (Gen. Info. Sec.)	
Grid No. 2 Supply Voltage (Max.)	—	330 Volts
Positive Grid Voltage (Max.)	0	0 Volt
Plate Dissipation (Max.)	3.1	3.2 Watts



Grid No. 2 Input (Up to 150 Volts) (Max.)	—	0.7 Watt
Grid No. 2 Input (150 Volts to 300 Volts) (Max.)	. See Rating Chart (Gen. Info. Sec.)	
Grid Input	0.55	— Watt
Grid Circuit Resistance		
Fixed Bias (Max.)	0.5	0.25 Megohm
Cathode Bias (Max.)	1.0	1.0 Megohm

CHARACTERISTICS AND TYPICAL OPERATION**Class A1 Amplifier**

	Triode Section	Tetrode Section
Plate Voltage	125	125 Volts
Grid No. 2 Voltage	—	125 Volts
Grid No. 1 Voltage	—	-1.0 Volt
Cathode Resistor	56	— Ohms
Plate Current	15	12 Ma
Grid No. 2 Current	—	4.2 Ma
Transconductance	8000	5800 μ mhos
Amplification Factor	40	—
Plate Resistance (Approx.)	5000	140,000 Ohms
E _{c1} for I _b = 100 μ a (Approx.)	-7	-7 Volts

NOTE:

(1) With external JEDEC No. 315 shield connected to cathode of section under test.

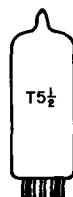
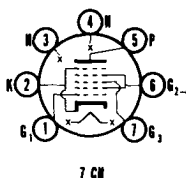
Color Television Type

SYNC SEPARATOR and CLIPPER**6CS6**

3CS6, 4CS6, 12CS6

Dual Control Heptode

Construction Miniature T-5½
 Base Button 7 Pin, E7-1
 Basing 7CH
 Outline 5-2
 Maximum Diameter 0.750 In.
 Maximum Seated Height 1.875 In.
 Maximum Overall Height 2.125 In.

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

	12CS6	4CS6	3CS6	6CS6
Heater Voltage	12.6	4.2	3.15	6.3 Volts
Heater Current	150	450	600	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. 1 to Plate (Max.)	0.05 Pf
Grid No. 3 to Plate (Max.)	0.36 Pf
Grid No. 1 Input: g ₁ to (k + h + g ₂ + g ₃ + g ₅)	5.5 Pf
Grid No. 3 Input: g ₃ to (k + h + g ₁ + g ₂ + g ₅)	7.0 Pf
Output: p to (k + h + g ₁ + g ₂ + g ₃ + g ₅)	7.5 Pf
Coupling (g ₁ to g ₃) (Max.)	0.15 Pf

RATINGS (Design Center Rating System)

Plate Voltage (Max.)	300 Volts
Plate Dissipation (Max.)	1.0 Watt
Grid No. 2 Voltage (Max.)	100 Volts
Grid No. 2 Supply Voltage (Max.)	300 Volts
Grid No. 2 Dissipation (Max.)	1.0 Watt
Cathode Current (Max.)	14 Ma
Grid No. 1 Circuit Resistance (Max.)	0.47 Megohm
Grid No. 3 Circuit Resistance (Max.)	2.2 Megohms

CHARACTERISTICS AND TYPICAL OPERATION

Plate Voltage	10	100	100 Volts
Grid No. 2 Voltage	30	30	30 Volts