

Heater Positive with Respect to Cathode	
DC	100 Volts
Total DC and Peak	300 Volts
DIRECT INTERELECTRODE CAPACITANCES (Unshielded)	
Heater to Cathode	3.0 Pf
Plate to Cathode and Heater	6.5 Pf
Cathode to Plate and Heater	9.0 Pf
RATINGS (Design Maximum Rating System)	
Damper Service⁽²⁾	
Peak Inverse Plate Voltage (Max.)	5500 Volts
Plate Dissipation (Max.)	8.5 Watts
Steady State Peak Current (Max.)	1300 Ma
DC Plate Current (Max.)	250 Ma
Bulb Temperature at Hottest Point	220 °C
CHARACTERISTICS AND TYPICAL OPERATION	
Tube Voltage Drop for Ib = 350 Ma	16 Volts

NOTES:

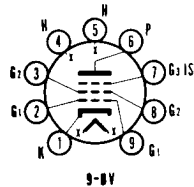
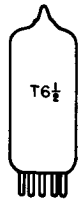
- (1) Pins 1, 3, 6, and 8 should not be used as tie points.
- (2) For operation in a 525 line, 30 frame system as described in "Standards of Good Engineering Practice for Television Broadcast Stations; Federal Communications Commission," the duty cycle of the voltage pulse must not exceed 15% of one horizontal scanning cycle.

6CL6

Color Television Type
VIDEO AMPLIFIER

Beam Pentode

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

**ELECTRICAL DATA
HEATER OPERATION**

Heater Voltage	6.3 Volts
Heater Current	650 Ma
Maximum Heater-Cathode Voltage	100 Volts

DIRECT INTERELECTRODE CAPACITANCES (Unshielded)

Grid No. 1 to Plate	0.12 Pf
Input	11 Pf
Output	5.5 Pf

RATINGS (Design Center Rating System)

Plate Voltage (Max.)	300 Volts
Plate Dissipation (Max.)	7.5 Watts
Grid No. 2 Voltage (Max.)	150 Volts
Grid No. 2 Input (Max.)	1.7 Watts
Grid No. 3 Voltage (Max.)	0 Volt
Grid No. 1 Voltage	
Negative Bias Value (Max.)	50 Volts
Positive Bias Value (Max.)	0 Volt
Grid No. 1 Circuit Resistance	
Fixed Bias (Max.)	0.1 Megohm
Cathode Bias (Max.)	0.5 Megohm
Bulb Temperature (At Hottest Point) (Max.)	200° C

CHARACTERISTICS AND TYPICAL OPERATION

Plate Voltage	250 Volts
Grid No. 2 Voltage	150 Volts
Grid No. 3 Voltage	Connected to Cathode at Socket
Grid No. 1 Bias Voltage	-3 Volts
Peak AF Grid No. 1 Signal Voltage	3 Volts
Zero Signal DC Plate Current	30 Ma
Maximum Signal DC Plate Current	31 Ma
Zero Signal DC Grid No. 2 Current	7 Ma
Maximum Signal DC Grid No. 2 Current	7.2 Ma
Transconductance	11,000 μ mhos
Plate Resistance (Approx.)	90,000 Ohms
Grid No. 1 Voltage for Plate Current of 10 μ a (Approx.)	-14 Volts
Load Resistance	7500 Ohms

Total Harmonic Distortion	8 Percent
Maximum Signal Power Output.....	2.8 Watts

4 MHz Bandwidth Video Amplifier

Plate Supply Voltage.....	300 Volts
Grid No. 3 Voltage.....	Connected to Cathode at Socket
Grid No. 2 Supply Voltage.....	300 Volts
Grid No. 1 Bias Voltage	-2 Volts
Peak-to-Peak Signal Voltage Grid No. 1	3 Volts
Grid No. 2 Resistor	24,000 Ohms
Grid No. 1 Resistor	0.1 Megohm
Plate Load Resistor.....	3900 Ohms
Zero Signal Plate Current	30 Ma
Zero Signal Grid No. 2 Current	7.0 Ma
Peak-to-Peak Voltage Output	132 Volts

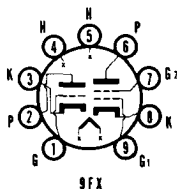
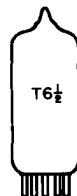
Color Television Type

VHF OSCILLATOR and MIXER**6CL8A**

5CL8A, 19CL8A

**Medium Mu Triode and
Semi-Remote Cutoff Tetrode**

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

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

	19CL8A	5CL8A	6CL8A
Heater Voltage.....	18.9	4.7	6.3 Volts
Heater Current	150	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	1.8	1.8 Pf
Input: g to (h + k)	2.7	2.7 Pf
Output: p to (h + k)	1.2	0.4 Pf
Tetrode Section		
Grid No. 1 to Plate (Max.).....	0.010	0.020 Pf
Input: g1 to (h + k + g2).....	5.0	5.0 Pf
Output: p to (h + k + g2).....	3.4	2.4 Pf

RATINGS (Design Center Rating System)

	Triode Section	Tetrode Section
Plate Voltage (Max.)	300	300 Volts
Grid No. 2 Supply Voltage (Max)	—	300 Volts
Grid No. 2 Voltage	See Rating Chart (Gen. Info. Sec.)	
Plate Dissipation (Max.)	2.7	2.8 Watts
Grid No. 2 Dissipation (Max.)	—	0.5 Watts
Positive Grid No. 1 Voltage (Max.)	0	0 Volt
Grid No. 1 Circuit Resistance		
Fixed Bias (Max.)	0.5	0.25 Megohm
Self Bias (Max.)	1.0	1.0 Megohm

CHARACTERISTICS AND TYPICAL OPERATION

	Triode Section	Tetrode Section
Class A1 Amplifier		
Plate Voltage	125	125 Volts
Grid No. 2 Voltage	—	125 Volts