

Grid No. 2 Voltage	See Rating Chart (Gen. Info. Sec.)	
Positive Grid No. 1 Voltage (Max.)	0	0 Volt
Plate Dissipation (Max.)	2.0	5.0 Watts
Grid No. 2 Dissipation (Max.)	—	1.1 Watts
Grid No. 1 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	Pentode Section
Plate Voltage	150	200 Volts
Grid No. 2 Voltage	—	125 Volts
Cathode Bias Resistor	150	68 Ohms
Plate Current	9.2	24 Ma
Grid No. 2 Current	—	5.2 Ma
Transconductance	4600	10,000 μ mhos
Amplification Factor	40	—
Plate Resistance (Approx.)	8700	70,000 Ohms
Grid No. 1 Voltage for $I_b = 100 \mu a$ (Approx.)	-5.0	-8.5 Volts

INSTANTANEOUS PLATE KNEE CHARACTERISTICS

$E_b = 40 \text{ V}$, $E_{c2} = 125 \text{ V}$, $E_{c1} = 0 \text{ V}$
 $I_b = 40 \text{ Ma}$, $I_{c2} = 15.5 \text{ Ma}$

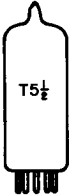
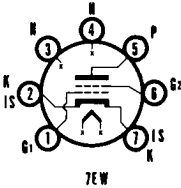
6CY5

2CY5, 3CY5, 4CY5

VHF AMPLIFIER

Sharp Cutoff Tetrode

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



ELECTRICAL DATA

HEATER OPERATION

	2CY5	3CY5	4CY5	6CY5
Heater Voltage	2.4	2.9	4.5	6.3
Heater Current	600	450	300	200 Ma
Heater Warm-up Time	11	11	11	— Seconds
Maximum Heater-Cathode Voltage				100 Volts

DIRECT INTERELECTRODE CAPACITANCES (Shielded)⁽¹⁾

Grid No. 1 to Plate	0.03 Pf
Input	4.5 Pf
Output	3.0 Pf

RATINGS (Design Maximum Rating System)

Plate Voltage (Max.)	180 Volts
Grid No. 2 Supply Voltage (Max.)	180 Volts
Grid No. 2 Voltage	See Rating Chart (Gen. Info. Sec.)
Plate Dissipation (Max.)	2.0 Watts
Grid No. 2 Dissipation (Max.)	0.5 Watt
Positive Grid No. 1 Voltage (Max.)	0 Volt
Cathode Current (Max.)	20 Ma
Grid Circuit Resistance (Max.)	0.5 Megohms

CHARACTERISTICS AND TYPICAL OPERATION

Plate Voltage	125 Volts
Grid No. 2 Voltage	80 Volts
Grid No. 1 Voltage	-1 Volt
Plate Current	10 Ma
Grid No. 2 Current	1.5 Ma
Transconductance	8000 μ mhos
Plate Resistance	0.1 Megohm
Grid No. 1 Voltage for $I_b = 20 \mu a$	-6 Volts

NOTE:

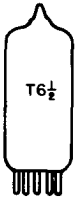
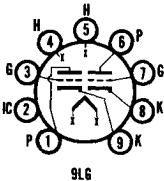
(1) Shield No. 316 connected to cathode.

VERTICAL DEFLECTION
OSCILLATOR and AMPLIFIER

6CY7
8CY7, 11CY7

Double Dissimilar Triode

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



ELECTRICAL DATA

HEATER OPERATION

	11CY7	8CY7	6CY7
Heater Voltage	11	7.9	6.3 Volts
Heater Current	450	600	750 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)

	Section No. 1	Section No. 2
Grid to Plate	1.8	4.4 Pf
Input: g to (h + k)	1.5	5.0 Pf
Output: p to (h + k)	0.30	1.0 Pf

RATINGS (Design Maximum Rating System)

	Vertical Defl. Osc. ⁽¹⁾ Section No. 1	Vertical Defl. Amp. ⁽¹⁾ Section No. 2
DC Plate Voltage (Max.)	350	350 Volts
Peak Positive Pulse Plate Voltage (Max.)	—	1800 Volts
Peak Negative Pulse Grid Voltage (Max.)	400	250 Volts
Plate Dissipation (Max.) ⁽²⁾	1.0	5.5 Watts
DC Cathode Current (Max.)	—	35 Ma
Peak Cathode Current (Max.)	—	120 Ma
Grid Circuit Resistance		
Cathode Bias (Max.)	2.2	2.2 Megohms
Fixed Bias (Max.)	2.2	— Megohms

CHARACTERISTICS AND TYPICAL OPERATION

	Section No. 1	Section No. 2
Plate Voltage	250	150 Volts
Grid Voltage	-3.0	— Volts
Cathode Bias Resistor	—	620 Ohms
Plate Current	1.2	30 Ma
Transconductance	1300	5400 μ mhos
Amplification Factor	68	5
Plate Resistance (Approx.)	52,000	920 Ohms
Grid Voltage for Ib = 200 μ a (Approx.)	—	-40 Volts
Grid Voltage for Ib = 10 μ a (Approx.)	-5.5	— Volts
Plate Current at Ec = -30 VDC (Approx.).....	—	3.5 Ma

INSTANTANEOUS PLATE KNEE CHARACTERISTICS

Eb = 60 V, Ec1 = 0 V, Ib = 80 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.