

PLATE KNEE CHARACTERISTICS

$E_b = 65$ V, $E_{c2} = 150$ V, $E_{c1} = 0$ and $I_b = 60$ Ma, $I_{c2} = 20$ Ma

NOTE:

(1) External shield No. 315 connected to Pins 4 and 5.

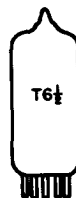
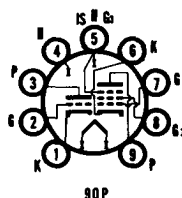
Color Television Type

SYNC SEP. or VOLTAGE AMP. (T) IF AMPLIFIER (P)

6KT8

High Mu Triode and High Gm Pentode

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

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

Heater Voltage.....	6.3 Volts
Heater Current.....	600 Ma
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.....	3.0	3.0 Pf
Input: g to (h + Pg3, IS + k).....	3.2	3.2 Pf
Output: p to (h + Pg3, IS + k).....	2.4	1.6 Pf
Pentode Section		
Grid No. 1 to Plate (Max.).....	0.03	0.03 Pf
Input: g1 to (h, g3, IS + g2 + k).....	7.5	7.5 Pf
Output: p to (h, g3, IS + g2 + k).....	2.8	2.2 Pf
Coupling		
Triode Grid to Pentode Plate (Max.).....	0.003	0.018 Pf
Pentode Grid No. 1 to Triode Plate (Max.).....	0.002	0.006 Pf

RATINGS (Design Maximum Rating System)

	Triode Section	Pentode Section
Plate Voltage (Max.).....	330	330 Volts
Grid No. 2 Supply Voltage (Max.).....	—	330 Volts
Grid No. 2 Voltage.....	See Rating Chart (Gen. Info. Sec.)	
Positive Grid No. 1 Voltage (Max.).....	0	0 Volt
Plate Dissipation (Max.).....	1.0	2.5 Watts
Grid No. 2 Dissipation (Max.).....	—	0.55 Watts
Grid No. 1 Circuit Resistance		
Fixed Bias (Max.).....	0.5	0.25 Megohm
Cathode Bias (Max.).....	1.0	1.0 Megohm

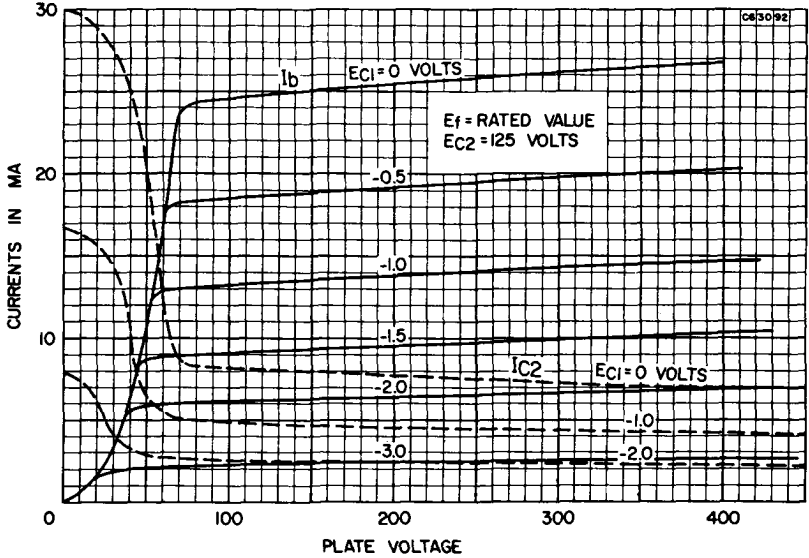
CHARACTERISTICS AND TYPICAL OPERATION

	Triode Section	Pentode Section
Plate Voltage.....	250	125 Volts
Grid No. 2 Voltage.....	—	125 Volts
Grid No. 1 Voltage.....	-2	-1 Volts
Plate Current.....	1.8	12 Ma
Grid No. 2 Current.....	—	4.5 Ma
Transconductance.....	3200	10,000 μ mhos
Amplification Factor.....	100	—
Plate Resistance (Approx.).....	31,500	150,000 Ohms
E_{c1} for $I_b = 20$ μ a (Approx.).....	-3.5	-7 Volts

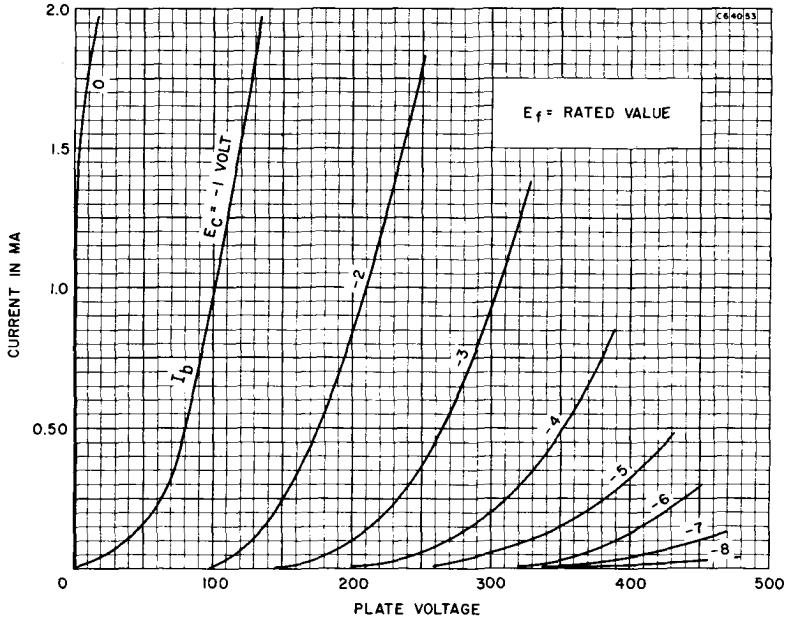
NOTES:

- (1) External Shield No. 315 connected to Pins 4 and 5.
- (2) Due to the unique element connections, this tube is designed that Pin No. 5 be operated at or near ground potential. Pentode section Grid No. 3, Internal Shield and one side of the heater all connect to Pin No. 5. Should instantaneous total cathode to Grid No. 3 voltage exceed + 20 Volts, undesirable changes in tube characteristics may result.

**AVERAGE PLATE CHARACTERISTICS
(Pentode Section)**



**AVERAGE PLATE CHARACTERISTICS
(Triode Section)**



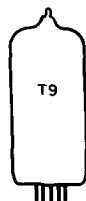
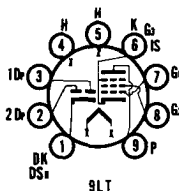
HORIZONTAL PHASE DETECTOR (D) VIDEO AMPLIFIER (P)

6KU8

10KU8

Double Diode and Sharp Cutoff Pentode

Construction 9T-9
Base Button 9 Pin, E9-68
Basing 9LT
Outline 9-69
Maximum Diameter 1.188 In.
Maximum Seated Height 2.320 In.
Maximum Overall Height 2.630 In.



ELECTRICAL DATA HEATER OPERATION

	10KU8	6KU8
Heater Voltage.....	10.2	6.3 Volts
Heater Current	450	725 Ma
Heater Warm-up Time	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)

Pentode

Grid No. 1 to Plate: Pg1 to Pp (Max.)	0.10 Pf
Input: Pg1 to (h + Pk, g3 + IS + g2 + Dk + IS)	12.0 Pf
Output: Pp to (h + Pk, g3 + IS + g2 + Dk + IS)	3.0 Pf

Diodes

No. 1 Plate to All: No. 1 Dp to (h + Dk + IS + Pk + g3 + IS)	1.1 Pf
No. 2 Plate to All: No. 2 Dp to (h + Dk + IS + Pk + g3 + IS)	1.1 Pf
Cathode to No. 1 Plate: Dk to (h + 1 Dp + Pk + g3 + IS).....	0.8 Pf
Cathode to No. 2 Plate: Dk to (h + 2 Dp + Pk + g3 + IS).....	0.9 Pf

Coupling

Pentode Grid No. 1 to No. 1 Diode Plate (Max.)	0.003 Pf
Pentode Grid No. 1 to No. 2 Diode Plate (Max.)	0.003 Pf
Pentode Plate to No. 1 Diode Plate (Max.)	0.008 Pf
Pentode Plate to No. 2 Diode Plate (Max.)	0.008 Pf

RATINGS (Design Maximum Rating System)

Plate Voltage (Max.)	330 Volts
Grid No. 2 Supply Voltage (Max.)	330 Volts
Grid No. 2 Voltage	See Rating Chart (Gen. Info. Sec.)
Positive Grid No. 1 Voltage (Max.)	0 Volt
Plate Dissipation (Max.)	4.0 Watts
Grid No. 2 Dissipation (Max.)	1.1 Watts
Grid No. 1 Circuit Resistance	
Fixed Bias (Max.)	0.25 Megohm
Cathode Bias (Max.)	1.0 Megohm
Control grid to cathode spacing of the pentode section of this type is of such low order of magnitude as to preclude the use of voltage between these elements of more than 50 volts DC and Peak AC in commercial tube checkers and shorts indicating devices, particularly where mechanical excitation of the tube is employed.	

CHARACTERISTICS AND TYPICAL OPERATION

Plate Voltage	200 Volts
Grid No. 2 Voltage	100 Volts
Grid No. 1 Voltage	0 Volt
Cathode Bias Resistor	82 Ohms
Plate Current	17 Ma
Grid No. 2 Current	3.5 Ma
Transconductance	20,000 μ mhos
Plate Resistance (Approx.)	50,000 Ohms
Ec1 for Ib = 100 μ a (Approx.)	-5 Volts

INSTANTANEOUS PLATE KNEE CHARACTERISTICS (Pentode Section)

Eb = 50 V, Ec2 = 100 V and Ec1 = 0 V

Ib = 55 Ma, and Ic2 = 18 Ma

DIODE CHARACTERISTICS (Each Diode)

Average Current with 10 Vdc Applied	2.0 Ma
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Pentode Section