

	Triode Section	Tetrode Section
Grid No. 1 Voltage	0	-1.0 Volt
Cathode Bias Resistor	56	— Ohms
Plate Current	15	12 Ma
Grid No. 2 Current	—	4.0 Ma
Transconductance	8000	6400 μ mhos
Amplification Factor	40	—
Plate Resistance	5000	100K Ohms
Grid No. 1 Voltage for $I_b = 10 \mu$ a (Approx.)	-9	-10 Volts

NOTE:

(1) Shield No. 315.

6CM3

25CM3, 34CM3

DAMPER**Heater-Cathode Diode**

Construction Novar T-9
 Base E9-89
 Basing 9HP
 Outline

Maximum Diameter 1.188 In.
 Maximum Seated Height 2.625 In.
 Maximum Overall Height 3.005 In.

ELECTRICAL DATA**HEATER OPERATION**

Heater Voltage 6.3
 Heater Current 2.4
 Heater Warm-up Time—
 Maximum Heater-Cathode Voltage

Heater Negative with Respect to Cathode

DC 900 Volts

Total DC and Peak 5500 Volts

Heater Positive with Respect to Cathode

DC 100 Volts

Total DC and Peak 300 Volts

DIRECT INTERELECTRODE CAPACITANCES (Without Shield)

Cathode to Plate and Heater.....18.0 pf

Plate to Cathode and Heater.....20.0 pf

Heater to Cathode 4.0 pf

RATINGS (Design Maximum Rating System)**Damper Service⁽¹⁾**

Peak Inverse Plate Voltage (Max.) 5500 Volts

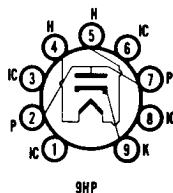
Plate Dissipation (Max.) 12 Watts

Steady State Peak Plate Current (Max.) 1700 Ma

DC Plate Current (Max.) 400 Ma

AVERAGE CHARACTERISTICSTube Voltage Drop ($I_b = 350$ Ma) 10 Volts**NOTE:**

(1) For operation in a 525 line, 30 frame system as described in "Standards of Good Engineering Practice of Television Broadcasting Stations, Federal Communications Commission," the duty cycle of the voltage pulse is not to exceed 15% of one horizontal scanning cycle.



6CM3

6.3

2.4

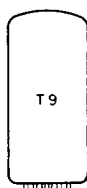
—

25CM3

25.0

0.600

11



34CM3

33.5 Volts

0.450 Amp.

11 Seconds

6CM6

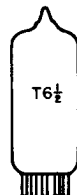
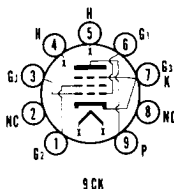
5CM6, 12CM6

Color Television Type

**AUDIO POWER AMPLIFIER or
VERTICAL DEFLECTION AMPLIFIER****Beam Power Pentode**

Construction Miniature T-6½
 Base Button 9 Pin, E9-1
 Basing 9CK
 Outline

Maximum Diameter 0.875 In.
 Maximum Seated Height 2.375 In.
 Maximum Overall Height 2.625 In.



ELECTRICAL DATA**HEATER OPERATION**

	12CM6	5CM6	6CM6
Heater Voltage.....	12.6	4.7	6.3 Volts
Heater Current.....	225	600	450 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)

Grid to Plate.....	0.7 Pf
Input: g ₁ to (h + k + g ₂ + g ₃).....	8.0 Pf
Output: p to (h + k + g ₂ + g ₃).....	8.5 Pf

RATINGS (Design Center Rating System)**Class A1 Amplifier**

Plate Voltage (Max.).....	315 Volts
Plate Dissipation (Max.).....	12 Watts
Grid No. 2 Voltage (Max.).....	285 Volts
Grid No. 2 Dissipation (Max.).....	2 Watts
Grid No. 1 Circuit Resistance	
Fixed Bias (Max.).....	0.1 Megohm
Cathode Bias (Max.).....	0.5 Megohm

Vertical Deflection Amplifier⁽¹⁾

	Pent. Conn.	Tri. Conn.
Plate Voltage (Max.).....	315	315 Volts
Peak Positive Plate Voltage (Abs. Max.).....	2000	2000 Volts
Plate Dissipation (Max.) ⁽²⁾	8	9 Watts
Grid No. 2 Voltage.....	285	— Volts
Grid No. 2 Dissipation ⁽²⁾	1.75	— Watts
Peak Negative Grid Voltage (Max.).....	250	250 Volts
Average Cathode Current (Max.).....	40	40 Ma
Peak Cathode Current (Max.).....	120	120 Ma
Grid No. 1 Circuit Resistance		
Cathode Bias (Max.).....	2.2	2.2 Megohms

CHARACTERISTICS AND TYPICAL OPERATION**Class A1 Amplifier**

	Tri. Conn.	Single Tube	Push-Pull
Plate Voltage.....	250	180 250 315	250 285 Volts
Grid No. 2 Voltage.....	—	180 250 225	250 285 Volts
Grid No. 1 Voltage.....	-12.5	-8.5 -12.5 -13.0	-15 -19 Volts
Peak AF Grid No. 1 Voltage.....	—	8.5 12.5 13.0	30 38 Volts
Zero Signal Plate Current.....	49.5	29 45 34	70 70 Ma
Maximum Signal Plate Current ..	—	30 47 35	90 92 Ma
Zero Signal Grid No. 2 Current....	—	3.0 4.5 2.2	5 4 Ma
Max. Signal Grid No. 2 Current ..	—	4.0 7.0 6.0	13 13.5 Ma
Plate Resistance (Approx.).....	1960	50,000 50,000 80,000	— — Ohms
Transconductance.....	5000	3700 4100 3750	— — μmhos
Amplification Factor.....	9.8	— — —	— —
Load Resistance.....	—	5500 5000 8500	10,000 8000 Ohms
Maximum Signal Power Output ..	—	2.0 4.5 5.5	10 14 Watts
Total Harmonic Distortion	—	8 8 12	5 3.5 Percent
Ec1 for Ib = 0.5 Ma (Approx.)	-37	— -37 —	— — Volts

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 a grid-leak bias, an adequate cathode bias resistor, or other suitable means, is required to protect the tube in the absence of excitation.

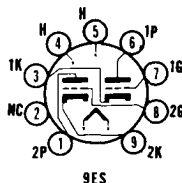
VERTICAL DEFLECTION OSCILLATOR and AMPLIFIER

6CM7

8CM7

Dissimilar Double Triode

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



9ES

