

ELECTRICAL DATA

HEATER OPERATION

Heater Voltage.....	6.3 Volts
Heater Current	760 Ma
Maximum Heater-Cathode Voltage	
Heater Negative with Respect to Cathode	100 Volts
Heater Positive with Respect to Cathode	100 Volts

DIRECT INTERELECTRODE CAPACITANCES

Grid No. 1 to Plate (Max.).....	0.5 Pf
Input	10.8 Pf
Output	6.5 Pf
Grid No. 1 to Heater (Max.)	0.25 Pf

RATINGS (Design Maximum Rating System)

	Class AB Pentode Conn.	Class AB Ultra-linear Conn.
Plate Voltage (Max.)	440	415 Volts
Grid No. 2 Voltage (Max.) ⁽¹⁾	400	415 Volts
Plate Dissipation (Max.)	13.2	13.2 Watts
Grid No. 2 Dissipation (Zero Signal) (Max.)	2.2	2.2 Watts
Grid No. 2 Dissipation (Max. Signal) (Max.).....	4.4	4.4 Watts
Cathode Current (Max.).....	72	72 Ma
Grid No. 1 Circuit Resistance		
Fixed Bias (Max.)	0.3	0.3 Megohm
Cathode Bias (Max.)	1.0	1.0 Megohm

CHARACTERISTICS AND TYPICAL OPERATION

	Pentode Conn. Single Tube Class A1	Class AB Push-Pull	Ultra-linear Conn. Class AB Push-Pull
Plate Voltage	250	400	375 Volts
Grid No. 2 Voltage	250	300	Note 1 Volts
Grid No. 1 Voltage	-7.3	-15	— Volts
Cathode Resistor	—	—	220 Ohms
Grid Voltage (RMS) ⁽²⁾	—	10.5	12.5 Volts
Plate Current (Zero Signal)	48	30	70 Ma
Plate Current (Max. Signal)	—	105	81 Ma
Grid No. 2 Current (Zero Signal)	5.5	1.6	— Ma
Grid No. 2 Current (Max. Signal)	—	25	— Ma
Transconductance	11.3K	—	— μ mhos
Amplification Factor ⁽³⁾	19.5	—	—
Plate Resistance.....	40K	—	— Ohms
Load Resistance (P to P)	—	8K	11K Ohms
Maximum Signal Power Output	—	24	16.5 Watts
Total Harmonic Distortion	—	4.0	3 Percent

NOTES:

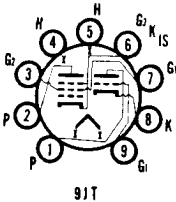
- (1) Grid No. 2 voltage is obtained from taps located at 43 percent of the output transformer windings.
(2) Per grid
(3) Measured from Grid No. 1 to Grid No. 2.

PREAMPLIFIER (P)
PHASE INVERTER (T)

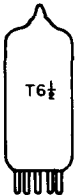
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Medium Mu Triode and
Sharp Cutoff Pentode

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



9JT



ELECTRICAL DATA

HEATER OPERATION

Heater Voltage.....	6.3 Volts
Heater Current	450 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 (Unshielded)**Triode Section**

Grid to Plate	2.0 Pf
Input: g to (h + k)	2.3 Pf
Output: p to (h + k)	0.3 Pf

Pentode Section

Grid No. 1 to Plate (Max.).....	0.06 Pf
Input: g1 to (h + k + g2 + g3 + IS).....	5.0 Pf
Output: p to (h + k + g2 + g3 + IS).....	2.0 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.)	2.4	3.0 Watts
Grid No. 2 Dissipation (Max.)	—	0.6 Watt
Grid 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	215	100 220 Volts
Grid No. 2 Voltage	—	50 130 Volts
Grid No. 1 Voltage	8.5	— Volts
Cathode Bias Resistor	—	1000 62 Ohms
Plate Current	9.0	1.1 12.5 Ma
Grid No. 2 Current	—	0.35 3.5 Ma
Transconductance	2100	1500 7000 μ mhos
Amplification Factor	17	—
Plate Resistance.....	0.0081	1.0 0.4 Megohm
Ec1 for Ib = 10 μ a (Approx.)	40	4 — Volts

Equivalent Noise and Hum Voltage (Referenced to Grid)

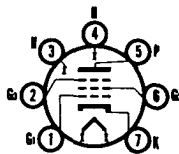
	Triode Section ⁽¹⁾	Pentode Section ⁽²⁾
Average Value	10	15 μ Volts rms
Maximum Value	50	35 μ Volts rms

NOTES:

- Measured under the following conditions: Ef = 6.3 Vac; center-tap of heater transformer grounded; Ebb = 250 Vdc; R_L = 0.1 Megohm; R_k = 1500 ohms; R_g = 50,000 ohms; F = 25 to 10,000 Hertz.
- Measured under the following conditions: Ef = 6.3 Vac; center tap of heater transformer grounded; Ebb = 250 Vdc; R_L = 0.22 Megohm; Ecc2 = 250 Vdc; R_{g2} = 330,000 ohms; C_{g2} = 0.1 μ f; R_k = 680 ohms; R_{g1} = 0.27 Megohms; F = 25 to 10,000 Hertz.

7543**AF AMPLIFIER****Sharp Cutoff Pentode**

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



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