

ELECTRICAL DATA**HEATER OPERATION**

Heater Voltage.....	14 Volts
Heater Current	150 Ma
Heater Warm-up Time	17 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)**Triode Section**

Grid to Plate	1.8 Pf
Input: g to (h + tk)	1.6 Pf
Output: p to (h + tk)	0.24 Pf

Diode Section

Diode No. 1 Input	2.4 Pf
Diode No. 2 Input	2.4 Pf
Diode No. 1 Cathode to All.....	6.5 Pf
Diode No. 2 Cathode to All.....	6.5 Pf

Coupling

Grid to Diode Plate No. 1 (Max.)	0.09 Pf
Grid to Diode Plate No. 2 (Max.)	0.07 Pf

RATINGS (Design Maximum Rating System)**Triode**

Plate Voltage (Max.)	330 Volts
Positive DC Grid Voltage (Max.)	0 Volt
Plate Dissipation (Max.)	1.1 Watts

Diodes

DC Current (Each Plate) (Max.)	5.0 Ma
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CHARACTERISTICS AND TYPICAL OPERATION**Class A1 Amplifier**

Plate Voltage	250 Volts
Grid Voltage	-3 Volts
Plate Current	0.7 Ma
Transconductance	1000 μ mhos
Amplification Factor	72
Plate Resistance (Approx.)	72,000 Ohms

Diodes

Average Current Each Plate with 5 Volts DC Applied ⁽¹⁾	18 Ma
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NOTE:

(1) Test condition only.

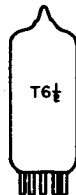
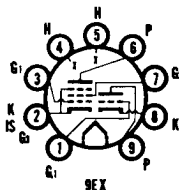
OSCILLATOR (T) AUDIO POWER AMPLIFIER (P)

16A8/PCL82

8B8, 11BM8

Triode and Pentode

Construction	Miniature T-6½
Base	Button 9 Pin, E9-1
Basing	9EX
Outline	6-4
Maximum Diameter	0.875 In.
Maximum Seated Height	2.812 In.
Maximum Overall Height	3.062 In.

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

	8B8	11BM8	16A8/PCL82
Heater Voltage.....	8	10.7	15 Volts
Heater Current	600	450	300 Ma
Maximum Heater-Cathode Voltage			
Heater Negative with Respect to Cathode			200 Volts
Heater Positive with Respect to Cathode			200 Volts

DIRECT INTERELECTRODE CAPACITANCES

Triode Section

Grid to All Other Elements Except Plate	2.7 Pf
Plate to All Other Elements Except Grid	4.3 Pf
Plate to Grid	4.2 Pf
Grid to Heater (Max.)	0.02 Pf

Pentode Section

Grid No. 1 to All Other Elements Except Plate	9.3 Pf
Plate to All Other Elements Except Grid No. 1	8.0 Pf
Plate to Grid No. 1 (Max.)	0.3 Pf
Grid No. 1 to Heater (Max.)	0.3 Pf

Coupling

Triode Plate to Pentode Grid No. 1 (Max.)	0.02 Pf
Triode Grid to Pentode Plate (Max.)	0.02 Pf
Triode Grid to Pentode Grid No. 1 (Max.)	0.025 Pf
Triode Plate to Pentode Plate (Max.)	0.25 Pf

RATINGS (Design Center Rating System)

Pentode Section

Plate Voltage Without Plate Current (Max.)	550 Volts
Plate Voltage (Max.)	250 Volts
Peak Plate Voltage (Max.) ⁽¹⁾	2500 Volts
Peak Inverse Plate Voltage (Max.)	500 Volts
Plate Dissipation (Max.)	5 Watts
Peak Plate Dissipation (Max.)	7 Watts
Grid No. 2 Voltage Without Current (Max.)	550 Volts
Grid No. 2 Voltage (Max.)	250 Volts
Grid No. 2 Dissipation (Max.)	1.8 Watts
Peak Grid No. 2 Dissipation (Max.)	3.2 Watts
Cathode Current (Max.)	50 Ma
Grid No. 1 Circuit Resistance With Automatic Bias (Max.)	2 Megohms
Grid No. 1 Circuit Resistance With Fixed Bias (Max.)	1 Megohm
Circuit Resistance Between Heater and Cathode (Max.)	20,000 Ohms

Triode Section

Plate Voltage Without Plate Current (Max.)	550 Volts
Plate Voltage (Max.)	250 Volts
Peak Plate Voltage (Max.) ⁽¹⁾	600 Volts
Plate Dissipation (Max.)	1 Watt
Cathode Current (Max.)	15 Ma
Grid Circuit Resistance With Automatic Bias (Max.)	3 Megohms
Grid Circuit Resistance With Fixed Bias (Max.)	1 Megohm
Voltage Between Heater and Cathode (Max.)	200 Volts
Circuit Resistance Between Heater and Cathode (Max.)	20,000 Ohms
Grid Circuit Impedance (Freq. = 50 Hz) (Max.)	0.5 Megohm

CHARACTERISTICS AND TYPICAL OPERATION

Pentode Section

Plate Voltage	100	170	200	200 Volts
Grid No. 2 Voltage	100	170	200	200 Volts
Grid No. 1 Bias	-6.0	-11.5	-12.5	-16 Volts
Plate Current	26	41	35	35 Ma
Grid No. 2 Current	5.0	8.0	6.5	7.0 Ma
Transconductance	6800	7500	6800	6400 μ mhos
Plate Resistance	15,000	16,000	20,500	20,000 Ohms
Amplification Factor of Grid No. 2				
With Respect to Grid No. 1	10	9.5	9.5	9.5

Triode Section

Plate Voltage	100 Volts
Grid Voltage	0 Volt
Plate Current	3.5 Ma
Transconductance	2500 μ mhos
Amplification Factor	70

NOTE:

(1) Maximum pulse duration 4% of one cycle with a maximum of 0.8 millisecond.