ADVANCE DATA

MECHANICAL DATA

Bulb T-6 1/2
Base E 9-1, Miniature Button 9-Pin
Outline 6-3
Basing 9HR
Cathode Coated Unipotential
Mounting Position Any

ELECTRICAL DATA

HEATER CHARACTERISTICS

Heater Voltage 12.6 Volts
Heater Current 0.55 Amp.

Direct Inter-electrode Capacitances

Diode (each unit)

Input (P1 to K+H) 1.6 μF
Input (P2 to K+H) 1.6 μF
No. 1 to No. 2 (P1 to P2) 0.03 μF

Tetrode (each unit)

Input (G2 to G1*K+H) 12 μF
Output (P to G1*K+H) 1.3 μF
Grid No. 2 to Plate 14 μF

Coupling (Diode No. 1 Plate to Tetrode Grid No. 2) 0.02 μF Max.
(Diode No. 2 Plate to Tetrode Grid No. 2) 0.006 μF Max.

RATINGS - (Design Center Values except as noted)

Tetrode Plate Voltage 30 Volts Max.
Positive Tetrode Grid No. 1 Voltage (Abs. Max.) 16 Volts
Negative Tetrode Grid No. 2 Voltage 20 Volts Max.
Tetrode Grid No. 2 Circuit Resistance 10 Megohms Max.
Average Diode Current 5 Ma. Max.
Heater-Cathode Voltage ±30 Volts Max.

CHARACTERISTICS

Class A1 Amplifier - Single Tube

Plate Voltage 12.6 Volts
Grid No. 2 (Control Grid) Voltage -0.5 Volts
Grid No. 1 (Space-Charge Grid) Voltage 12.6 Volts
Plate Current 40 Ma.
Grid No. 1 (Space-Charge Grid) Current 75 Ma.
Plate Resistance 480 Ohms
Amplification Factor 7.2
Transconductance 15 000 μhmos

Diode Units - Two

Diode Current with 10.0 Volts Applied (each diode) 3 Ma.
TYPICAL OPERATION

Class $A_1$ Amplifier - Single Tube

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Plate Voltage</td>
<td>12.6 Volts</td>
</tr>
<tr>
<td>Grid No. 2 (Control Grid) Voltage</td>
<td>-2.0 Volts</td>
</tr>
<tr>
<td>Grid No. 1 (Space-Charge Grid) Voltage</td>
<td>12.6 Volts</td>
</tr>
<tr>
<td>Peak AF Grid No. 2 Voltage</td>
<td>2.5 Volts</td>
</tr>
<tr>
<td>AF Signal Source Resistance</td>
<td>100,000 Ohms</td>
</tr>
<tr>
<td>Load Resistance</td>
<td>800 Ohms</td>
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<tr>
<td>Plate Current</td>
<td>8.0 Ma</td>
</tr>
<tr>
<td>Grid No. 1 (Space-Charge Grid) Current</td>
<td>75 Ma</td>
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<tr>
<td>Power Output</td>
<td>40 mw</td>
</tr>
<tr>
<td>Total Harmonic Distortion (Max.)</td>
<td>10%</td>
</tr>
</tbody>
</table>

NOTES:

1. This tube is intended to be used in automotive service from a nominal 12 Volt battery source. The heater is therefore designed to operate over the 10.0 to 15.9 voltage range encountered in this service. The Maximum Ratings of the tube provide for an adequate safety factor such that the tube will withstand the wide variation in supply voltages.

2. Average bias developed across a 2.2 Megohm resistor.

3. From Grid No. 2 to plate.

4. Obtained across a 2.2 Megohm resistor by Grid No. 2 rectification in which case the zero signal plate current is approximately 40 Ma.
AVERAGE PLATE CHARACTERISTICS

$E_t =$ RATED VALUE
$E_{C2} = 0$ VOLTS

CURRENT IN MA

PLATE VOLTAGE
AVerage Plate Characteristics

$E_f = \text{Rated Value}$

$E_{C1} = 12.6 \text{ Volts}$