TUNG-SOL

DOUBLE DIODE TRIODE
MINIATURE TYPE

COATED UNIPOTENTIAL CATHODE

HEATER
12.6 VOLTS 0.15 AMP.
AC OR DC
ANY MOUNTING POSITION

BOTTOM VIEW
MINIATURE BUTTON
7 PIN BASE
7f8

THE 12EL6 IS A DOUBLE DIODE, HIGH-MU TRIODE IN THE 7 PIN MINIATURE CONSTRUCTION. IT IS DESIGNED FOR USE PRIMARILY AS A SECOND DETECTOR AUDIO AMPLIFIER IN OPERATION WHERE THE HEATER AND PLATE VOLTAGE ARE SUPPLIED DIRECTLY FROM A 12 VOLT AUTOMOTIVE STORAGE BATTERY.

DIRECT INTERELECTRODE CAPACITANCES
WITHOUT EXTERNAL SHIELD

GRID TO PLATE 1.8 µf
INPUT: G TO (H+K) 2.2 µf
OUTPUT: P TO (H+K) 1.0 µf
DIODE PLATE TO DIODE PLATE 1.0 µf

RATINGS
INTERPRETED ACCORDING TO DESIGN CENTER SYSTEM

HEATER VOLTAGE A 12.6 VOLTS
MAXIMUM PLATE VOLTAGE 30 VOLTS
MAXIMUM CATHODE CURRENT 20 MA
MAXIMUM GRID CIRCUIT RESISTANCE 10 MEGOHMS
MAXIMUM AVERAGE DIODE CURRENT 1.0 MA
MAXIMUM HEATER-CATHODE VOLTAGE
HEATER NEGATIVE WITH RESPECT TO CATHODE 30 VOLTS
HEATER POSITIVE WITH RESPECT TO CATHODE 30 VOLTS

TYPICAL OPERATING CONDITIONS AND CHARACTERISTICS
CLASS A1 AMPLIFIER

HEATER VOLTAGE 12.6 VOLTS
HEATER CURRENT 0.15 AMP.
PLATE VOLTAGE 12.6 VOLTS
GRID VOLTAGE 0 VOLTS
PLATE CURRENT 750 µA
TRANSCONDUCTANCE 1 200 µMOS
AMPLIFICATION FACTOR 55
PLATE RESISTANCE 45 000 OHMS
AVERAGE DIODE CURRENT WITH 10 VOLTS APPLIED (EACH DIODE) B
2.0 MA

CONTINUED ON FOLLOWING PAGE
### TYPICAL OPERATING CONDITIONS AND CHARACTERISTICS - CONT'D.

**RESISTANCE COUPLED AMPLIFIER**

<table>
<thead>
<tr>
<th>Description</th>
<th>Value 1</th>
<th>Value 2</th>
</tr>
</thead>
<tbody>
<tr>
<td>HEATER VOLTAGE</td>
<td>12.6</td>
<td>VOLTS</td>
</tr>
<tr>
<td>HEATER CURRENT</td>
<td>0.15</td>
<td>AMPL</td>
</tr>
<tr>
<td>PLATE SUPPLY VOLTAGE</td>
<td>12.6</td>
<td>VOLTS</td>
</tr>
<tr>
<td>GRID VOLTAGE<strong>C</strong></td>
<td>1.0</td>
<td>MEGOHM</td>
</tr>
<tr>
<td>GRID RESISTOR<strong>C</strong></td>
<td>1.0</td>
<td>MEGOHM</td>
</tr>
<tr>
<td>PLATE LOAD RESISTOR</td>
<td>1.0</td>
<td>MEGOHM</td>
</tr>
<tr>
<td>INPUT CAPACITOR</td>
<td>0.02</td>
<td>μF</td>
</tr>
<tr>
<td>OUTPUT CAPACITOR</td>
<td>0.01</td>
<td>μF</td>
</tr>
<tr>
<td>GRID RESISTOR OF FOLLOWING STAGE</td>
<td>2.0</td>
<td>MEGOHMS</td>
</tr>
<tr>
<td>VOLTAGE GAIN AT 400 CPS<strong>D</strong></td>
<td>16</td>
<td></td>
</tr>
</tbody>
</table>

**A** 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 20.0 TO 35.9 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.

**B** TEST CONDITION ONLY.

**C** CONTACT POTENTIAL DEVELOPED ACROSS SPECIFIED GRID RESISTOR.

**D** MEASURED AT AN OUTPUT VOLTAGE OF 1.0 VOLT RMS.