TUNG-SOL
PENTODE
MINIATURE TYPE

COATED UNIPOTENTIAL CATHODE
HEATER
12.6 VOLTS 0.4 AMP.
AC OR DC
ANY MOUNTING POSITION

BOTTOM VIEW
MINIATURE BUTTON
7 PIN BASE
7CV

THE 12AS5 IS A HEATER-CATHODE, BEAM PENTODE POWER AMPLIFIER IN THE 7 PIN MINIATURE CONSTRUCTION. IT IS DESIGNED FOR USE AS AN OUTPUT TUBE IN AUTOMOBILE AND AC OPERATED RECEIVERS. EXCEPT FOR HEATER CHARACTERISTICS, THE 12AS5 IS IDENTICAL TO THE 6AS5.

DIRECT INTERELECTRODE CAPACITANCES - APPROX.
WITHOUT EXTERNAL SHIELD

GRID #4 TO PLATE: (G4 TO P) 0.6 μF
INPUT: G4 TO (H+K+G2+G3) 12 μF
OUTPUT: P TO (H+K+G2+G3) 6.2 μF

RATINGS
INTERPRETED ACCORDING TO DESIGN CENTER MAXIMUM SYSTEM

HEATER VOLTAGE 12.6 VOLTS
MAXIMUM PLATE VOLTAGE 150 VOLTS
MAXIMUM GRID #2 SUPPLY VOLTAGE 150 VOLTS
MAXIMUM GRID #2 VOLTAGE SEE GRID #2 RATING CURVE
MAXIMUM PLATE DISSIPATION 5.5 WATTS
MAXIMUM GRID #2 DISSIPATION 1.0 WATT
MAXIMUM GRID #1 CIRCUIT RESISTANCE:
FIXED BIAS 0.1 MEGOHM
SELF BIAS 0.5 MEGOHM
MAXIMUM HEATER-CATHODE VOLTAGE:
HEATER NEGATIVE WITH RESPECT TO CATHODE 90 VOLTS
TOTAL DC AND PEAK
HEATER POSITIVE WITH RESPECT TO CATHODE 90 VOLTS
TOTAL DC AND PEAK

CONTINUED ON FOLLOWING PAGE
## TYPICAL OPERATING CONDITIONS AND CHARACTERISTICS

**CLASS A1 AMPLIFIER**

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Value</th>
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</thead>
<tbody>
<tr>
<td>HEATER VOLTAGE</td>
<td>12.6 V</td>
</tr>
<tr>
<td>HEATER CURRENT</td>
<td>0.4 A</td>
</tr>
<tr>
<td>PLATE VOLTAGE</td>
<td>150 V</td>
</tr>
<tr>
<td>GRID #2 VOLTAGE</td>
<td>110 V</td>
</tr>
<tr>
<td>GRID #1 VOLTAGE</td>
<td>-8.5 V</td>
</tr>
<tr>
<td>PEAK AF GRID #1 VOLTAGE</td>
<td>8.5 V</td>
</tr>
<tr>
<td>ZERO-SIGNAL PLATE CURRENT</td>
<td>35 mA</td>
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<tr>
<td>MAX. SIGNAL PLATE CURRENT</td>
<td>36 mA</td>
</tr>
<tr>
<td>ZERO-SIGNAL GRID #2 CURRENT (APPROX.)</td>
<td>2 mA</td>
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<tr>
<td>MAX.-SIGNAL GRID #2 CURRENT (APPROX.)</td>
<td>6.5 mA</td>
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<tr>
<td>TRANSCONDUCTANCE</td>
<td>5600 (\mu)Mhos</td>
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<tr>
<td>LOAD RESISTANCE</td>
<td>4500 OHMS</td>
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<tr>
<td>TOTAL HARMONIC DISTORTION</td>
<td>10 PERCENT</td>
</tr>
<tr>
<td>MAX.-SIGNAL POWER OUTPUT</td>
<td>2.2 WATT</td>
</tr>
</tbody>
</table>

Under max. rated conditions, the DC resistance of the grid #1 circuit should not exceed 0.1 MEG. for fixed bias operation or 0.5 MEG. for cathode bias operation.

### 12AS5 Grid #2 Rating Curve

[Graph showing the grid #2 rating curve with grid #2 voltage on the x-axis and grid #2 dissipation in watts on the y-axis. The area marked shows the permissible operation area.]