MECHANICAL DATA

Bulb .................................. T-61/2  
Base .................................. E9-1, Miniature Button 9-Pin  
Outline ................................ 6-2  
Basing ................................ Per Diagram  
Cathode ................................ Coated Unipotential  
Mounting Position ..................... Any

ELECTRICAL DATA

HEATER CHARACTERISTICS

Heater Voltage Range ................. 12-15 Volts  
Heater Current at Ef = 13.5 Volts .... 280 Ma  
Heater-Cathode Voltage (Absolute Maximum Values)
  Heater Negative with Respect to Cathode .......... 120 Volts Max.
  Heater Positive with Respect to Cathode .......... 120 Volts Max.

DIRECT INTERELECTRODE CAPACITANCES (Unshielded)

Triode
  Grid to Plate ...................... 2.2 μuf  
  Input ................................ 2.4 μuf  
  Output ................................ 0.22 μuf

Pentode
  Grid to Plate ...................... 0.044 μuf  
  Input ................................ 7.1 μuf  
  Output ................................ 2.5 μuf  
  Coupling: Pentode Grid No. 1 to Triode Plate .... 0.015 μuf Max.
  Coupling: Triode Grid to Pentode Plate .......... 0.022 μuf Max.
  Coupling: Pentode Plate to Triode Plate .......... 0.16 μuf Max.

RATINGS (Absolute Maximum Values)

<table>
<thead>
<tr>
<th>Class</th>
<th>Triode</th>
<th>Pentode</th>
</tr>
</thead>
<tbody>
<tr>
<td>A1 Amplifier</td>
<td>Plate Voltage</td>
<td>300</td>
</tr>
<tr>
<td></td>
<td>Grid No. 2 Supply Voltage</td>
<td>300 Volts Max.</td>
</tr>
<tr>
<td></td>
<td>Grid No. 2 Voltage</td>
<td>See Rating Chart</td>
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<tr>
<td></td>
<td>Plate Dissipation</td>
<td>2.5</td>
</tr>
<tr>
<td></td>
<td>Grid No. 2 Dissipation</td>
<td>1.0 Watts Max.</td>
</tr>
<tr>
<td></td>
<td>Positive Grid No. 1 Voltage</td>
<td>0</td>
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<tr>
<td></td>
<td>Grid No. 1 Circuit Resistance</td>
<td>Fixed Bias</td>
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<tr>
<td></td>
<td></td>
<td>Self Bias</td>
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SYLVANIA ELECTRONIC TUBES
A Division of Sylvania Electric Products Inc.

RECEIVING TUBE OPERATIONS
EMPORIUM, PA.

Prepared and Released By The TECHNICAL PUBLICATIONS SECTION EMPORIUM, PENNSYLVANIA
NOVEMBER, 1939
PAGE 1 OF 13
File Under RECEIVING TUBES
(Class C Amplifier)

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Triode Section</th>
<th>Pentode Section</th>
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</thead>
<tbody>
<tr>
<td>Plate Voltage</td>
<td>150</td>
<td>200 Volts</td>
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<tr>
<td>Grid No. 2 Voltage</td>
<td></td>
<td>125 Volts</td>
</tr>
<tr>
<td>Cathode Bias Resistor</td>
<td>150</td>
<td>82 Ohms</td>
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<tr>
<td>Amplification Factor</td>
<td>40</td>
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<tr>
<td>Plate Resistance (Approx.)</td>
<td>0.0082</td>
<td>0.15 Megohm</td>
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<tr>
<td>Transconductance</td>
<td>4900</td>
<td>7000 µmhos</td>
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<tr>
<td>Plate Current</td>
<td>9.0</td>
<td>15 Ma</td>
</tr>
<tr>
<td>Grid No. 2 Current</td>
<td></td>
<td>3.4 Ma</td>
</tr>
<tr>
<td>EC1 for I_b = 100 µa (Approx.)</td>
<td></td>
<td>−6.5 Volts</td>
</tr>
</tbody>
</table>

(RF Power Amp. & Osc.\(^1\))

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Triode Section</th>
<th>Pentode Section</th>
</tr>
</thead>
<tbody>
<tr>
<td>Plate Voltage</td>
<td>200</td>
<td>250</td>
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<tr>
<td>Grid No. 3</td>
<td>250</td>
<td>300 Volts</td>
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<tr>
<td>Grid No. 2 Voltage</td>
<td>85</td>
<td>105</td>
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<tr>
<td>Grid No. 1 Voltage</td>
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<td>−9</td>
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<tr>
<td>Plate Current</td>
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<td>15</td>
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<tr>
<td>Grid No. 2 Current</td>
<td>3.2</td>
<td>4.5</td>
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<tr>
<td>Grid No. 1 Current (Approx.)</td>
<td>0.9</td>
<td>1.2</td>
</tr>
<tr>
<td>Driving Power (Approx.)</td>
<td>9</td>
<td>15</td>
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<tr>
<td>Power Output</td>
<td>1.3</td>
<td>2.1</td>
</tr>
</tbody>
</table>

SPECIAL TESTS

Heater Cycling Life Test

Ef = 17.0 V; 1 min. on, 4 min. off;
Ehk = −150 Vdc

2000 Cycles Min.

Low Frequency Vibration: Ep

G = 2.5 @ 25 cps

Triode Section: 150 mVac Max.

Pentode Section: 250 mVac Max.
NOTE:

1. Key-down conditions per tube without amplitude modulation. Amplitude modulation essentially negative may be used if the positive peak of the audio-frequency envelope does not exceed 115% of the carrier conditions.

AVERAGE PLATE CHARACTERISTICS
(TRIODE SECTION)
AVERAGE TRANSFER CHARACTERISTICS
(TRIODE SECTION)
AVERAGE TRANSFER CHARACTERISTICS
(TRIODE SECTION)
AVERAGE PLATE CHARACTERISTICS
(PENTODE SECTION)

CURRENTS IN mA

PLATE VOLTAGE

E1 = 60 VOLTS
E2 = 125 VOLTS
E1' = RATED VALUE
AVERAGE PLATE CHARACTERISTICS
(PENTODE SECTION)

\[ E_f = \text{RATED VALUE} \]
\[ E_{C2} = 125 \text{ VOLTS} \]
AVERAGE PLATE CHARACTERISTICS
(PENTODE SECTION)

$E_f = \text{RATED VALUE}$
$E_{CI} = 0 \text{ VOLTS}$

CURRENT IN MA

0 10 20 30 40

PLATE VOLTAGE

0 100 200 300 400 500

$E_{C2} = 150 \text{ VOLTS}$
AVERAGE TRANSFER CHARACTERISTICS
(PENTODE SECTION)

\[ E_t = \text{RATED VALUE} \]
\[ E_b = 200 \text{ VOLTS} \]
AVERAGE TRANSFER CHARACTERISTICS
(PENTODE SECTION)

\[ E_f = \text{RATED VALUE} \]
\[ E_b = 200 \text{ VOLTS} \]
AVERAGE TRANSFER CHARACTERISTICS
(PENTODE SECTION)

\[ E_f = \text{RATED VALUE} \]
\[ E_b = 200 \text{ VOLTS} \]
AVERAGE CONSTANT CURRENT CHARACTERISTICS

\[ E_f = \text{RATED VALUE} \]

GRID - NO. 2 = 125 VOLTS

\[ I_C = 1 \text{ MA} \]

\[ I_C = 5 \text{ MA} \]

\[ I_b = 0 \text{ MA} \]
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