MECHANICAL DATA

Bulb ........................................ T-5\frac{1}{2}
Base ........................................ Miniature Button 7-Pin
Outline ..................................... 5-2
Basing ......................................... 7DC
Cathode ....................................... Coated Filament
Mounting Position .......................... Any

ELECTRICAL DATA

FILAMENT CHARACTERISTICS

Filament Voltage DC .......................... 1.4 Volts
Filament Current ................................ 50 Ma

DIRECT INTERELECTRODE CAPACITANCES

Shielded1 Unshielded
RF Input:
g4 to (f+g1+g2+g3+g4+g5+p) .... 7.5 7.5 \mu F
Grid No. 4 to Plate .................. 0.36 0.46 \mu F  Max.
Mixer Output:
p to (f+g1+g2+g3+g4+g5) .... 12.0 7.0 \mu F
Oscillator Input:
g1 to (f+g3+g4+g5+p) .... 2.2 2.2 \mu F
Oscillator Output:
g2 to (f+g3+g4+g5+p) .... 2.6 2.6 \mu F
Coupling:
Grid No. 1 to Grid No. 4
(Osc. Inp. to RF Inp.) ........ 0.19 0.19 \mu F
Grid No. 2 to Grid No. 4
(Osc. Out. to RF Inp.) ........ 0.24 0.24 \mu F
Grid No. 1 to Plate
(Osc. Inp. to Mix. Out.) .... 0.10 0.15 \mu F  Max.

RATINGS (Design Center Values)

Plate Voltage .................................. 110 Volts  Max.
Grid No. 2 Voltage (Osc. Plate) ........ 110 Volts  Max.
Grid No. 3 and Grid No. 5 Supply Voltage .... 110 Volts  Max.
Grid No. 3 and Grid No. 5 Voltage .......... 65 Volts  Max.
Total Cathode Current ................... 4.0 Ma  Max.
Grid No. 1 Circuit Resistance ........... 1.0 Megohm  Max.

CHARACTERISTICS AND TYPICAL OPERATION

Plate Voltage .................................. 90 Volts
Grid No. 2 Voltage (Osc. Plate) ........ 90 Volts
Grid No. 3 and Grid No. 5 Voltage² .... 45 Volts
Grid No. 4 Voltage (Mixer Grid) ....... 0 Volts
Plate Current .................................. 0.5 Ma
Grid No. 2 Current (Osc. Plate) ....... 1.2 Ma
Grid No. 3 and Grid No. 5 Current .... 0.6 Ma
Grid No. 1 Resistor (Osc. Grid) ........ 0.2 Megohm
Grid No. 1 Current (Osc. Grid) ........ 0.035 Ma
Conversion Transconductance .......... 300 \mu mhos
Plate Resistance (approx.) .............. 0.65 Megohm
Cathode Current ............................ 2.35 Ma
Ec, Volts for Gc = 10 \mu mhos (approx.) .. -3.5 Volts
Ec, Volts for Gc = 100 \mu mhos (approx.) .. -1.3 Volts

SYLVANIA ELECTRIC PRODUCTS INC.
RADIO TUBE DIVISION
EMPIRUM, PA.
Prepared and Released By The
TECHNICAL PUBLICATIONS SECTION
EMPIRUM, PENNSYLVANIA
JUNE, 1957
PAGE 1 OF 4
CHARACTERISTICS AND TYPICAL OPERATION (Cont'd.)

Oscillator Section Characteristics (Non-Oscillating)

<table>
<thead>
<tr>
<th>Characteristics</th>
<th>Voltage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Grid No. 2 Voltage (Osc. Plate)</td>
<td>90 Volts</td>
</tr>
<tr>
<td>Plate Voltage</td>
<td>90 Volts</td>
</tr>
<tr>
<td>Grid No. 3 and Grid No. 5 Voltage</td>
<td>45 Volts</td>
</tr>
<tr>
<td>Grid No. 4 Voltage (Mixer Grid)</td>
<td>0 Volts</td>
</tr>
<tr>
<td>Grid No. 1 Voltage (Osc. Grid)</td>
<td>0 Volts</td>
</tr>
<tr>
<td>Transconductance (Osc. Section)</td>
<td>550 µmhos</td>
</tr>
</tbody>
</table>

NOTES:

1. *External shield No. 316 connected to Pin No. 1.*

2. *Obtained preferably by using a properly by-passed dropping resistor of from 45,000 to 75,000 ohms.*
AVERAGE CHARACTERISTICS

\[
\begin{align*}
E_f &= \text{RATED VALUE} \\
E_b &= 90 \text{ VOLTS} \\
E_{c2} &= 90 \text{ VOLTS} \\
E_{c3+5} &= 45 \text{ VOLTS} \\
E_{c4} &= 0 \text{ VOLTS} \\
R_{g1} &= 200000 \text{ OHMS}
\end{align*}
\]