SYLVANIA TYPE TL6
PENTAGRID CONVERTER

MECHANICAL DATA
Bulb ........................................ T-5 1/2, Outline 5-2
Base ........................................... Miniature Button 7-Pin
Basing ........................................ 7DC
Mounting Position ......................... Any

ELECTRICAL DATA
Filament Voltage D.C .................................. 1.4 Volts
Filament Current ..................................... 50 mA

DIRECT INTERELECTRODE CAPACITANCES

<table>
<thead>
<tr>
<th>Shielded</th>
<th>Unshielded</th>
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</thead>
<tbody>
<tr>
<td>Grid No. 4 to Plate</td>
<td>0.36 μF Max</td>
</tr>
<tr>
<td>Grid No. 2 to Grid No. 4</td>
<td>0.24 μF</td>
</tr>
<tr>
<td>Grid No. 1 to Grid No. 4</td>
<td>0.19 μF</td>
</tr>
<tr>
<td>R F Input: e4 to All</td>
<td>7.5 μF</td>
</tr>
<tr>
<td>Oscillator Input: a1 to All except a2</td>
<td>2.2 μF</td>
</tr>
<tr>
<td>Oscillator Output: a2 to All except a1</td>
<td>2.6 μF</td>
</tr>
<tr>
<td>Mixer Output: Plate to All</td>
<td>12.0 μF</td>
</tr>
<tr>
<td>Grid No. 1 to Plate</td>
<td>0.10 μF Max</td>
</tr>
</tbody>
</table>

MAXIMUM RATINGS (Design Center Values)
Plate Voltage ........................................... 110 Volts
Grid No. 3 and 5 Voltage ......................... 65 Volts
Grid No. 3 and 5 Supply Voltage ................. 110 Volts
Grid No. 2 Voltage (Oscillator Plate) ............ 110 Volts
Total Cathode Current ............................... 4.0 Ma

TYPICAL OPERATION
Plate Voltage ........................................... 90 Volts
Grid No. 2 Voltage (Anode Grid) ................... 90 Volts
Grid No. 3 and 5 Voltage2 ......................... 45 Volts
Grid No. 4 Voltage (Control Grid) .................. 0 Volts
Plate Current ......................................... 0.5 Ma
Grid No. 3 and 5 Current ....................... 0.6 Ma
Grid No. 2 Current (Anode Grid) .................. 1.2 Ma
Grid No. 1 Current (Osc. Grid) .................... 0.025 Ma
Total Cathode Current ............................. 2.35 Ma
Grid No. 4 Circuit Resistance .................... 1.0 Megohm
Grid No. 1 Circuit Resistance ..................... 0.2 Megohm
Conversion Transconductance ....................... 300 μmhos
Grid No. 4 at 0 Volts .......................... 300 μmhos
Grid No. 4 at -3.5 Volts (approx.) ............... 10 μmhos
Oscillator Transconductance3 ...................... 550 μmhos

SYLVANIA ELECTRONIC TUBES
NOTES:
1. External shield No. 316 connected to Pin 1.
2. Obtained preferably by using a properly by-passed dropping resistor of from 45,000 to 75,000 ohms in series with the B supply.
3. Not oscillating with $E_{c1} = 0 \text{ V}$, $E_b = 90 \text{ V}$, $E_{c3}$ and $5 = 45 \text{ V}$, $E_{c2} = 90 \text{ V}$, $E_{c4} = 0 \text{ V}$.

APPLICATION

Sylvania Type 1L6 is a miniature type pentagrid converter designed for use in low drain battery operated receivers. It is similar in construction and application to Types 1A7GT and 1LA6. The small size and low current requirements recommend it for use in small portable receivers.