HEPTODE
MINIATURE TYPE

COATED UNIPOTENTIAL CATHODE

HEATER
6.3 VOLTS 0.3 AMP.
AC OR DC
ANY MOUNTING POSITION

THE 6CS6 IS A MINIATURE DUAL CONTROL PENTAGRID TUBE INTENDED FOR USE IN SYNC SEPARATOR CIRCUITS. IN THESE CIRCUITS IT PROVIDES IMPROVED NOISE IMMUNITY. BOTH CONTROL GRIDS HAVE SHARP CUT-OFF CHARACTERISTICS.

DIRECT INTERELECTRODE CAPACITANCES - APPROX.

GRID #4 TO PLATE: G₄ TO P (MAX.) 0.05 μμf
GRID #5 TO PLATE: G₅ TO P (MAX) 0.36 μμf
#4 INPUT: G₄ TO (H+K+G₂+G₃&S₅) 5.5 μμf
#3 INPUT: G₃ TO (H+K+G₄+G₂&S₅) 7.0 μμf
OUTPUT: P TO (H+K+G₄+G₂+G₃&S₅) 7.5 μμf
COUPLING: G₄ TO G₅ (MAX.) 0.22 μμf

RATINGS
INTERPRETED ACCORDING TO DESIGN CENTER SYSTEM

DESIGN CENTER VALUES

HEATER VOLTAGE 6.3 VOLTS
MAXIMUM HEATER-CATHODE VOLTAGE:
HEATER NEGATIVE 200 VOLTS
TOTAL DC AND PEAK
HEATER POSITIVE 100 VOLTS
DC
TOTAL DC AND PEAK 200 VOLTS
MAXIMUM PLATE VOLTAGE 300 VOLTS
MAXIMUM GRID #2 & #4 VOLTAGE A
MAXIMUM GRID #2 & #4 SUPPLY VOLTAGE 300 VOLTS
MAXIMUM PLATE DISSIPATION 1.0 WATT
MAXIMUM GRID #2 & #4 DISSIPATION:
FOR GRID #2 & GRID #4 VOLTAGES UP TO 150 VOLTS 1.0 VOLTS
FOR GRID #2 & GRID #4 VOLTAGES BETWEEN 150 & 300V. A
MAXIMUM CATHODE CURRENT 14 MA.
MAXIMUM GRID #3 CIRCUIT RESISTANCE 0.47 MEGOHM
MAXIMUM GRID #3 CIRCUIT RESISTANCE 2.2 MEGOHMS

A SEE SCREEN DISSIPATION RATING CHART JEDC #03-C4-2.

INDICATES A CHANGE.
CONTINUED ON FOLLOWING PAGE
### TYPICAL OPERATING CONDITIONS AND CHARACTERISTICS

**CLASS A\textsubscript{1} AMPLIFIER**

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Value 1</th>
<th>Value 2</th>
<th>Value 3</th>
</tr>
</thead>
<tbody>
<tr>
<td>HEATER VOLTAGE</td>
<td>6.3</td>
<td>6.3</td>
<td>6.3</td>
</tr>
<tr>
<td>HEATER CURRENT</td>
<td>0.3</td>
<td>0.3</td>
<td>0.3</td>
</tr>
<tr>
<td>PLATE VOLTAGE</td>
<td>10</td>
<td>100</td>
<td>100</td>
</tr>
<tr>
<td>GRID #2 &amp; #4 VOLTAGE</td>
<td>30</td>
<td>30</td>
<td>30</td>
</tr>
<tr>
<td>GRID #1 VOLTAGE</td>
<td>0</td>
<td>0</td>
<td>-1</td>
</tr>
<tr>
<td>GRID #3 VOLTAGE</td>
<td>0</td>
<td>-1</td>
<td>0</td>
</tr>
<tr>
<td>PLATE CURRENT</td>
<td>2.0</td>
<td>0.8</td>
<td>1.0</td>
</tr>
<tr>
<td>GRID #2 &amp; #4 CURRENT</td>
<td>4.5</td>
<td>5.5</td>
<td>1.3</td>
</tr>
<tr>
<td>TRANSCONDUCTANCE (MEASURED BETWEEN GRID #1 AND PLATE)</td>
<td>-</td>
<td>-</td>
<td>100 (\mu\text{MHOS})</td>
</tr>
<tr>
<td>TRANSCONDUCTANCE (MEASURED BETWEEN GRID #3 AND PLATE)</td>
<td>-</td>
<td>1,500</td>
<td>-</td>
</tr>
<tr>
<td>PLATE RESISTANCE (APPROX.)</td>
<td>7 (\mu\text{MHOS})</td>
<td>1.0 \text{MEGOHM}</td>
<td></td>
</tr>
<tr>
<td>GRID #1 VOLTAGE (APPROX.) FOR (I_b=50 \mu\text{A})</td>
<td>-</td>
<td>-</td>
<td>-2.5</td>
</tr>
<tr>
<td>GRID #3 VOLTAGE (APPROX.) FOR (I_b=50 \mu\text{A})</td>
<td>-</td>
<td>-</td>
<td>-2.2</td>
</tr>
</tbody>
</table>

---

**6CS6**

\[
\begin{align*}
E_f &= 6.3 \text{ Volts} \\
E_{C2\&4} &= 30 \text{ Volts} \\
E_{C1} &= 0 \text{ Volts}
\end{align*}
\]

![Graph of Plate Current vs. Plate Voltage](image)