THE 6CB5 IS A HIGH-PERFORMANCE BEAM POWER TUBE. IT IS DESIGNED FOR USE AS A HORIZONTAL-DEFLECTION AMPLIFIER TUBE IN COLOR TELEVISION. ITS FEATURES INCLUDE LOW AMPLIFICATION, HIGH PLATE CURRENT AT LOW PLATE VOLTAGE, AND A HIGH OPERATING RATIO OF PLATE CURRENT TO GRID #2 CURRENT.

DIRECT INTERELECTRODE CAPACITANCES — APPROX. WITH NO EXTERNAL SHIELD

<table>
<thead>
<tr>
<th>Grid or Input</th>
<th>Capacity</th>
</tr>
</thead>
<tbody>
<tr>
<td>Grid #1 to Plate</td>
<td>0.8 µµµ f</td>
</tr>
<tr>
<td>Input</td>
<td>24 µµµ f</td>
</tr>
<tr>
<td>Output</td>
<td>10 µµµ f</td>
</tr>
</tbody>
</table>

RATINGS

INTERPRETED ACCORDING TO DESIGN CENTER SYSTEM A
HORIZONTAL DEFLECTION AMPLIFIER B

HEATER VOLTAGE
6.3 VOLTS

MAXIMUM PEAK-HEATER-CATHODE VOLTAGE:
- HEATER NEGATIVE WITH RESPECT TO CATHODE: 200 VOLTS
- HEATER POSITIVE WITH RESPECT TO CATHODE: 200 VOLTS
- DC COMPONENT: 100 VOLTS

MAXIMUM PLATE SUPPLY VOLTAGE (DC AND BOOST): 700 VOLTS

MAXIMUM PEAK POSITIVE PULSE PLATE VOLTAGE (ABSOLUTE MAXIMUM):
6800 VOLTS

MAXIMUM PEAK NEGATIVE PULSE PLATE VOLTAGE:
-1500 VOLTS

MAXIMUM DC GRID #2 VOLTAGE:
200 VOLTS

MAXIMUM DC GRID #1 VOLTAGE:
-50 VOLTS

MAXIMUM PEAK NEGATIVE PULSE GRID #1 VOLTAGE:
-200 VOLTS

MAXIMUM DC PLATE CURRENT:
200 MA

MAXIMUM GRID #2 INPUT:
3.6 WATTS

MAXIMUM PLATE DISSIPATION:
23 WATTS

MAXIMUM GRID #1 CIRCUIT RESISTANCE:
0.47 MEGOHM

A EXCEPT AS NOTED.
B FOR OPERATION IN A 525-LINE, 30-FRAME SYSTEM AS DESCRIBED IN "STANDARDS OF GOOD ENGINEERING PRACTICE CONCERNING TELEVISION BROADCAST STATIONS", FEDERAL COMMUNICATIONS COMMISSION.
C THE DURATION OF THE VOLTAGE PULSE MUST NOT EXCEED 15% OF ONE HORIZONTAL SCANING CYCLE. IN A 525-LINE, 30-FRAME SYSTEM, 25% OF ONE HORIZONTAL SCANING CYCLE IS 10 MICROSECONDS.
D UNDER NO CIRCUMSTANCES SHOULD THIS ABSOLUTE VALUE BE EXCEEDED.

→ INDICATES A CHANGE.

CONTINUED ON FOLLOWING PAGE
TYPICAL OPERATING CONDITIONS AND CHARACTERISTICS

CLASS A₁ AMPLIFIER

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Heater Voltage</td>
<td>6.3 V</td>
</tr>
<tr>
<td>Heater Current</td>
<td>2.5 A</td>
</tr>
<tr>
<td>Plate Voltage</td>
<td>175 V</td>
</tr>
<tr>
<td>Grid #2 Voltage</td>
<td>175 V</td>
</tr>
<tr>
<td>Grid #1 Voltage</td>
<td>-30 V</td>
</tr>
<tr>
<td>Amplification Factor (G₂ to  G₁)</td>
<td>3.8 OHM</td>
</tr>
<tr>
<td>Plate Resistance (Approx.)</td>
<td>5000 Ω</td>
</tr>
<tr>
<td>Transconductance</td>
<td>8000 μS</td>
</tr>
<tr>
<td>Grid Bias (Approx.) for Iₐ = 1 MA</td>
<td>-60 V</td>
</tr>
<tr>
<td>Plate Current</td>
<td>90 MA</td>
</tr>
<tr>
<td>Grid #2 Current</td>
<td>6 MA</td>
</tr>
</tbody>
</table>

\[ E_f = 6.3 \text{ Volts} \]
\[ E_{C₂} = 150 \text{ Volts} \]

\[ E_{C₄} = +5 \]

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Graph showing plate current vs. plate voltage with various grid biases.
$E_f = 6.3$ Volts
$E_{C2} = 150$ Volts