THE 6BG6G IS ESSENTIALLY A MECHANICAL REDESIGN OF TYPE 6L6G TO PERMIT OPERATION AS A HORIZONTAL DEFLECTION AMPLIFIER FOR TELEVISION SERVICE. IT USES A TOP CAP CONNECTION AND ADDITIONAL INSULATION FOR THE PLATE STRUCTURE TO WITHSTAND THE HIGH PEAK PLATE VOLTAGE ENCOUNTERED IN SUCH CIRCUITS.

DIRECT INTERELECTRODE CAPACITANCES WITH NO EXTERNAL SHIELD

GRID #1 TO PLATE: \( (G_1 \text{ TO } P) \text{ MAX.} \) 0.34 \( \mu \text{f} \)
INPUT: \( G_1 \text{ TO } (H+K+G_2+IS) \) 12 \( \mu \text{f} \)
OUTPUT: \( P \text{ TO } (H+K+G_2+IS) \) 6.5 \( \mu \text{f} \)

RATINGS
INTERPRETED ACCORDING TO DESIGN CENTER SYSTEM
HORIZONTAL DEFLECTION AMPLIFIER

HEATER VOLTAGE 6.3 VOLTS
MAXIMUM HEATER-CATHODE VOLTAGE:
HEATER NEGATIVE WITH RESPECT TO CATHODE
TOTAL DC AND PEAK
HEATER POSITIVE WITH RESPECT TO CATHODE
DC
TOTAL DC AND PEAK
MAXIMUM DC PLATE SUPPLY VOLTAGE (BOOST +DC POWER SUPPLY)
MAXIMUM PEAK POSITIVE PLATE VOLTAGE (ABS. MAX.)
MAXIMUM PEAK NEGATIVE PLATE VOLTAGE
MAXIMUM PLATE DISSIPATION
MAXIMUM PEAK NEGATIVE GRID #1 VOLTAGE
MAXIMUM DC GRID #2 VOLTAGE
MAXIMUM GRID #2 DISSIPATION
MAXIMUM AVERAGE CATHODE CURRENT
MAXIMUM PEAK CATHODE CURRENT
MAXIMUM GRID #1 CIRCUIT RESISTANCE
MAXIMUM BULB TEMPERATURE (AT HOTTEST POINT)

6BG6G ELECTRIC INC. ELECTRON TUBE DIVISION BLOOMFIELD, NEW JERSEY, U.S.A. MARCH 1, 1959 PLATE#6439
CONTINUED FROM PRECEDING PAGE

TYPICAL OPERATING CONDITIONS AND CHARACTERISTICS ←

<table>
<thead>
<tr>
<th>Characteristic</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>HEATER VOLTAGE</td>
<td>6.3</td>
</tr>
<tr>
<td>HEATER CURRENT</td>
<td>0.9 A</td>
</tr>
<tr>
<td>PENTODE OPERATION: WITH $E_b = 250 \text{ V}$, $E_C2 = 250 \text{ V}$, &amp; $E_C1 = -15 \text{ V}$</td>
<td></td>
</tr>
<tr>
<td>PLATE CURRENT</td>
<td>75 MA</td>
</tr>
<tr>
<td>GRID #2 CURRENT</td>
<td>4 MA</td>
</tr>
<tr>
<td>TRANSCONDUCTANCE</td>
<td>6000 $\mu$MS</td>
</tr>
<tr>
<td>PLATE RESISTANCE</td>
<td>25 000 OHMS</td>
</tr>
<tr>
<td>ZERO BIAS: WITH $E_b = 60 \text{ V}$, &amp; $E_C2 = 250 \text{ V}$ (INSTANTANEOUS VALUES)</td>
<td></td>
</tr>
<tr>
<td>PLATE CURRENT</td>
<td>180 MA</td>
</tr>
<tr>
<td>GRID #2 CURRENT</td>
<td>18 MA</td>
</tr>
<tr>
<td>CUTOFF: FOR $I_b = 1 \text{ MA}$, WITH $E_b = 250 \text{ V}$, &amp; $E_C2 = 250 \text{ V}$</td>
<td></td>
</tr>
<tr>
<td>GRID #1 VOLTAGE (APPROX.)</td>
<td>-45 VOLTS</td>
</tr>
<tr>
<td>TRIODE $\mu$: WITH $E_b = E_C2 = 250 \text{ V}$, &amp; $E_C1 = -15 \text{ V}$</td>
<td>8.0</td>
</tr>
</tbody>
</table>

A FOR OPERATION IN A 525-LINE, 30-FRAME SYSTEM AS DESCRIBED IN "STANDARDS OF GOOD ENGINEERING PRACTICE FOR TELEVISION BROADCAST STATIONS: FEDERAL COMMUNICATIONS COMMISSION", THE DUTY CYCLE OF THE VOLTAGE PULSE MUST NOT EXCEED 15% OF ONE SCANNING CYCLE.

IN STAGES OPERATING WITH GRID-LEAK BIAS, AN ADEQUATE CATHODE BIAS RESISTOR OR OTHER SUITABLE MEANS IS REQUIRED TO PROTECT THE TUBE IN THE ABSENCE OF EXCITATION.

SIMILAR TYPE REFERENCE: Except for heater ratings the 6BG6G is identical to the 10BG6G.

→ INDICATES A CHANGE.
6BG6G

PENTODE CONNECTION

$E_f = 6.3$ Volts
$E_{C1} = 0$ Volts

SCREEN (I_G) MILLIAMPERES

PLATE VOLTS

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