C3J-A/5684
XENON THYRATRON
NEGATIVE-CONTROL TRIODE TYPE

GENERAL DATA

Electrical:

<table>
<thead>
<tr>
<th>Filament, Coated and</th>
<th>Min.</th>
<th>Av.</th>
<th>Max.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mid-tapped:</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Voltage between pins 1 and 4</td>
<td>2.4</td>
<td>2.5</td>
<td>2.6</td>
</tr>
<tr>
<td>Current at 2.5 volts</td>
<td>7</td>
<td>9</td>
<td>11</td>
</tr>
<tr>
<td>Minimum heating time prior to tube conduction</td>
<td>30 sec</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Direct Interelectrode Capacitances (Approx.):
- Grid to anode: 2 μuf
- Grid to cathode: 14 μuf
- Maximum Deionization Time: 1000 μsec
- Maximum Critical Grid Current: 10 μamp
- Anode Voltage Drop:
  - Average, at beginning of life: 10 volts
  - Maximum, at end of life: 14 volts
- Maximum Commutation Factor, averaged over first 350 volts of inverse anode voltage rise: 0.66 volts/μs²

Grid Control Ratio (Approx.):
- For conditions: 10000-ohm grid resistor, circuit returns to filament mid-tap, dc anode voltage, and dc grid voltage: 200

Mechanical:
- Mounting Position: Any
- Maximum Overall Length: 6" 1/2
- Maximum Diameter: 1-9/16"
- Weight (Approx.): 3 oz
- Cap: Medium (JETEC No.C1-5)
- Bulb: T-12
- Base: Medium-Metal-Shell Small 4-Pin with Bayonet (JETEC No.A4-89)

Basing Designation for BOTTOM VIEW: 4CF

GRID-CONTROLLED RECTIFIER SERVICE

Maximum Ratings, Absolute Values:

PEAK ANODE VOLTAGE:
- Forward: 1000 max. volts
- Inverse: 1250 max. volts

† Defined as the product of the rate of current decay in amperes per microsecond just before conduction ceases and the rate of inverse voltage rise in volts per microsecond following current conduction.
**GRID VOLTAGE:**
Peak, before tube conduction ........... -100 max. volts

**ANODE CURRENT:**
Peak ..................................... 30 max. amp
Average .................................. 2.5 max. amp
Overload:
- Rating I*, for duration of . . .
  - 0.37 sec. .................. 30 max. amp
  - 0.50 sec. .................. 22.5 max. amp
  - 1 sec. ....................... 11.25 max. amp
  - 2 sec. ....................... 5.63 max. amp
  - 3 sec. ....................... 3.75 max. amp
  - 4 sec. ....................... 2.82 max. amp
- Rating II**, for duration of . . .
  - 3 sec. ....................... 3.75 max. amp
  - 4 sec. ....................... 3.40 max. amp
  - 4.5 sec. ..................... 3.30 max. amp

Fault, for duration of 0.1 second maximum .................. 300 max. amp

**AMBIENT-TEMPERATURE RANGE. .......... -55 to +75 °C**

* Averaged over any period of 4.5 seconds.
* Averaged over duration of overload occurring no more than once in any period of 4.5 seconds.
** Averaged over duration of overload occurring no more than once in any period of 30 seconds.

**OPERATING CONSIDERATIONS**

Circuit returns should be connected to filament mid-tap (pin 2).
The anode of the C3J-A/5684 may show a red color when the tube is operated at full load.
Sufficient anode-circuit resistance, including the tube load, must be used under any conditions of operation to prevent exceeding the current ratings of the tube.
OPERATIONAL RANGE OF CRITICAL GRID VOLTAGE

RANGE IS FOR CONDITIONS WHERE:
E_p = 2.5 Volts ± 5% ; CIRCUIT RETURNS AND PIN 2 CONNECTED TO FILAMENT TRANSFORMER CENTER-TAP.
THE RANGE INCLUDES INITIAL AND LIFE VARIATIONS OF INDIVIDUAL TUBES.
GRID RESISTOR = 0 TO 10000 OHMS.
AMBIENT-TEMPERATURE RANGE = -55 TO 75°C.

DC ANODE VOLTAGE

-12 -6 0 6 12
DC GRID SUPPLY VOLTAGE

92CS-9112T

CRITICAL CONDUCTING
NON-CONDUCTING