C3J/5632
XENON THYRATRON
NEGATIVE-CONTROL TRIODE TYPE

GENERAL DATA

Electrical:
Filament, Coated and
Mid-tapped:
Voltage between pins 1 and 4 2.4 2.5 2.6 ac or dc volts
Current at 2.5 volts 7 9 11 amp
Minimum heating time prior to tube conduction 30 sec
Direct Inter electrode Capacitances (Approx.):
Grid to anode 2 μf
Grid to cathode 14 μf
Maximum Desionization 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 va/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"
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 900 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:

<table>
<thead>
<tr>
<th>Description</th>
<th>Value</th>
<th>Unit</th>
</tr>
</thead>
<tbody>
<tr>
<td>Peak, before tube conduction</td>
<td>-100 max.</td>
<td>volts</td>
</tr>
</tbody>
</table>

## ANODE CURRENT:

<table>
<thead>
<tr>
<th>Description</th>
<th>Value</th>
<th>Unit</th>
</tr>
</thead>
<tbody>
<tr>
<td>Peak</td>
<td>30 max.</td>
<td>amp</td>
</tr>
<tr>
<td>Average*</td>
<td>2.5 max.</td>
<td>amp</td>
</tr>
<tr>
<td>Overload:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>0.37 sec.</td>
<td>30 max.</td>
<td>amp</td>
</tr>
<tr>
<td>0.50 sec.</td>
<td>22.5 max.</td>
<td>amp</td>
</tr>
<tr>
<td>1 sec.</td>
<td>11.25 max.</td>
<td>amp</td>
</tr>
<tr>
<td>2 sec.</td>
<td>5.63 max.</td>
<td>amp</td>
</tr>
<tr>
<td>3 sec.</td>
<td>3.75 max.</td>
<td>amp</td>
</tr>
<tr>
<td>4 sec.</td>
<td>2.82 max.</td>
<td>amp</td>
</tr>
<tr>
<td>3 sec.</td>
<td>3.75 max.</td>
<td>amp</td>
</tr>
<tr>
<td>4 sec.</td>
<td>3.40 max.</td>
<td>amp</td>
</tr>
<tr>
<td>4.5 sec.</td>
<td>3.30 max.</td>
<td>amp</td>
</tr>
</tbody>
</table>

Rating II**, for duration of:

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<tr>
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<th>Value</th>
<th>Unit</th>
</tr>
</thead>
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<tr>
<td>1 sec.</td>
<td>11.25 max.</td>
<td>amp</td>
</tr>
<tr>
<td>2 sec.</td>
<td>5.63 max.</td>
<td>amp</td>
</tr>
<tr>
<td>3 sec.</td>
<td>3.75 max.</td>
<td>amp</td>
</tr>
<tr>
<td>4 sec.</td>
<td>3.40 max.</td>
<td>amp</td>
</tr>
<tr>
<td>4.5 sec.</td>
<td>3.30 max.</td>
<td>amp</td>
</tr>
</tbody>
</table>

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

## AMBIENT-TEMPERATURE RANGE

-55 to +75 °C

### OPERATING CONSIDERATIONS

**Circuit returns** should be connected to filament mid-tap (pin 2).

The anode of the C3J/5632 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:
$E_C = 2.5 \text{ Volts} \pm 5\%$; 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.

CONDUCTING
CRITICAL
NON-CONDUCTING

DC GRID SUPPLY VOLTS

DC ANODE VOLTS

92CS-9117T