7229

Cold-Cathode Trigger Tube

The 7229 is a cold-cathode miniature trigger and timer tube used in trigger applications where high hold-off voltage, short anode delay times, minimum anode delay variation and high pulse currents are required. Special construction enables the 7229 to operate over an ambient temperature range of -55°C to +85°C, and withstand vibrational stresses. Dark-start design characteristic, is such that it will operate in sealed enclosures and after storage periods without requiring incident light or other extraneous energies to initiate the glow discharge.

MECHANICAL DATA

<table>
<thead>
<tr>
<th>Cathode</th>
<th>cold</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bulb, JETEC 5-1</td>
<td>T5 1/2</td>
</tr>
<tr>
<td>Base, min. button 7-pin</td>
<td>(E7-1)</td>
</tr>
<tr>
<td>Mounting position</td>
<td>Any</td>
</tr>
<tr>
<td>Maximum overall height</td>
<td>1.5 inch</td>
</tr>
<tr>
<td>Maximum diameter</td>
<td>0.75 inch</td>
</tr>
</tbody>
</table>

PIN CONNECTIONS

Pin 1. Grid
Pin 2. Anode
Pin 3. Grid
Pin 4. No connection
Pin 5. Cathode
Pin 6. Glow pin
Pin 7. Cathode

from JETEC release #2268, Aug. 25, 1958
ELECTRICAL DATA

Maximum Ratings (Absolute Maximum Values)

Anode operating voltage 1000 volts
Hold-off voltage 2000 volts
Cathode current, peak 500 amp
Glow current 100 μA
Grid resistor 2.0 meg
Discharge capacitor 0.5 μf
Power input 1.0 W
Grid bias ± 80 volts
Grid pulse current 40 μA
Output pulse duration 10 μs
Ambient temperature range -55 to +85° C
Anode delay time 4.0 μs
Anode delay time variation 0.4 μs
Pulse repetition rate ** 20 ppm
Potting temperature (not to exceed 2 hours) 125° C

**Pulse repetition rate is governed by the relation \( W = \frac{1}{2} CV^2f \)
where \( C \) = discharge capacitor; \( V \) = anode potential in kilovolts;
\( W \) = power input, and \( f \) = repetition frequency.

Typical Operation (For circuit below)

Anode supply voltage 550 volts
Grid voltage 0 volts
Glow current 50 μA

*May be triggered manually by applying d-c momentarily to grid.

Minimum Conditions

Anode operating voltage, d-c 500 volts
Cathode current, peak 10 amp
Glow current 30 μA
Grid resistor 0.25 meg
Grid pulse duration 10 μs
Grid pulse amplitude 230 volts