



technical information

CBS-HYTRON

A Division of Columbia Broadcasting System, Inc.
Danvers, Massachusetts

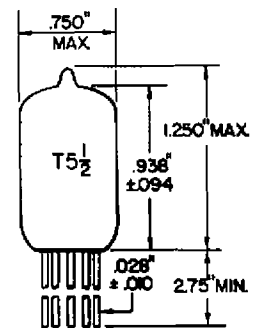
7230

Reliable Cold-Cathode Trigger Tube

The 7230 is a cold-cathode miniature trigger and timer tube used in critical applications where high hold-off voltage, short anode delay times, minimum anode delay variation and high pulse currents are required. Special construction enables the 7230 to operate over an ambient temperature range of -55°C to $+85^{\circ}\text{C}$, withstand impact shocks with 100g peaks, and severe 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.

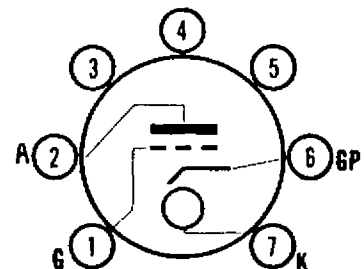
MECHANICAL DATA

Cathode	cold
Bulb	T5-1/2
Base, min. button 7-lead	flexible leads
Lead length, minimum	2.75 inches
Lead diameter	$.028 \pm .010$ inch
Mounting position	Any
Max. overall ht. (leads not included)	1.250 inch
Maximum diameter	0.75 inch



LEAD CONNECTIONS

- Lead 1. Grid
- Lead 2. Anode
- Lead 3. Omitted
- Lead 4. Omitted
- Lead 5. Omitted
- Lead 6. Glow pin
- Lead 7. Cathode



ELECTRICAL DATA

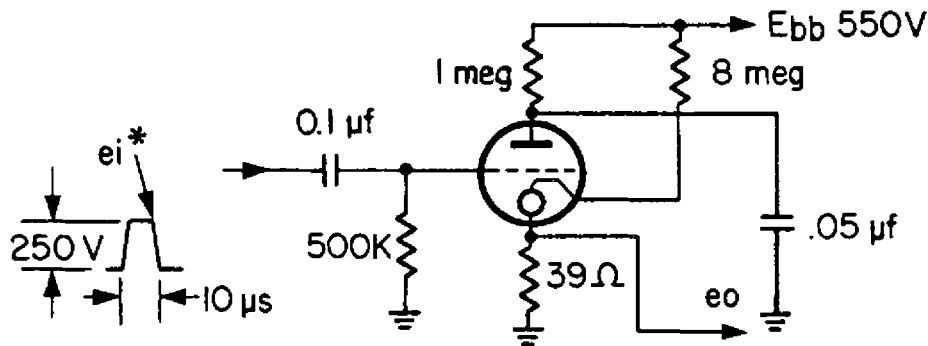
Maximum Ratings (Absolute Maximum Values)

Anode operating voltage	1000 volts
Hold-off voltage	3000 volts
Cathode current peak	500 amp
Glow current	100 μ A
Grid resistor	2.0 meg
Discharge capacitor	0.5 μ f
Power input	1.0 W
Grid bias	\pm 80 volts
Grid pulse current	10 μ a
Output pulse duration	10 μ s
Ambient temperature range	-55 to +85° C
Anode delay time	2.0 μ s
Anode delay time variation	0.2 μ s
Pulse repetition rate**	20 ppm
Potting temperature (not to exceed 2 hours)	125° C

**Pulse repetition rate is governed by the relation $W = 1/2 CV^2f$, 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 μ a



*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 μ A
Grid resistor	0.25 meg
Grid pulse duration	10 μ s
Grid pulse amplitude	230 volts

SPECIAL TESTS AND RATINGS

Operation tests for: d-c trigger current, d-c trigger voltage, pulse trigger voltage, emission, anode delay time, anode delay time variation, keep alive starting characteristic.

Conditions for tests:

Over temperature of -55 to +85°C

Temperature cycles under Mil-E-1C, 4.9.10

After impact shock of 100g

After vibration test of 10-500 cps cycling up to 10g for 4.5 hours
in 3 planes of vibration.