



E-287D 7-22-58

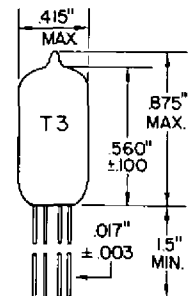
7231

Subminiature Cold-Cathode Trigger Tube

The 7231 is a cold-cathode trigger and timer tube used in trigger applications where high hold-off voltage, short anode delay variation and high pulse currents are required. Its specifications are to commercial levels. Special construction enables the 7231 to operate over an ambient temperature range of -55°C to $+85^{\circ}\text{C}$ 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.

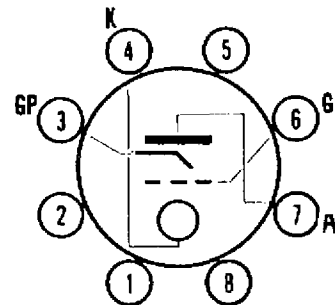
MECHANICAL DATA

Cathode	cold
Bulb	T3
Base, submin. button 8-lead	flexible leads
Lead length, minimum	1.5 inch
Lead diameter	$.017 \pm .003$ inch
Mounting position	Any
Max. overall ht. (leads not included)	0.875 inch
Maximum diameter	0.415 inch



LEAD CONNECTIONS

Lead 1.	Omitted
Lead 2.	Omitted
Lead 3.	Glow pin
Lead 4.	Cathode
Lead 5.	Omitted
Lead 6.	Grid
Lead 7.	Anode
Lead 8.	Omitted



ELECTRICAL DATA

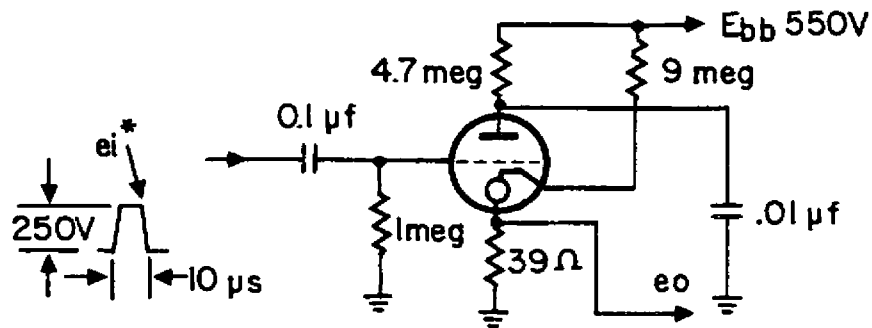
Maximum Ratings (Absolute Maximum Values)

Anode operating voltage	700 volts
Hold-off voltage	1500 volts
Glow current	100 μ A
Grid resistor	2.0 meg
Discharge capacitor	0.2 μ f
Power input	0.1 W
Grid bias	$\pm$ 45 volts
Grid pulse current	20 μ a
Output pulse duration	10 μ s
Ambient temperature range	-55 to +85°C
Anode delay time	4.0 μ s
Anode delay time variation	0.4 μ s
Pulse repetition rate *	

*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