

Primed Trigger Tube

Close Tolerance Tube with stable characteristics
intended for quadrant I operation

GTE130T
(CV.2434)

Limit Ratings

Maximum anode voltage to prevent self ignition in all tubes		+290 V
Maximum trigger to cathode voltage at which breakdown will not occur in any tube $V_a = 280$ V		± 128 V
Minimum trigger voltage necessary to cause breakdown in all tubes $V_a = 280$ V		+137 V
Maximum increase in trigger striking volts when anode voltage is changed from 290 V to 170 V		1.0%
Maximum peak positive trigger current (Note 1)		8.0 mA
Maximum cathode current	d.c.	25 mA
	Peak	100 mA ←
Minimum auxiliary anode supply voltage		150 V

Characteristics

Anode to cathode running volts (Note 2)		105 V nom.
De-ionization time	1k (pk) 0—20 mA	3.5 mS nom. ←
	20—100 mA	
	(Note 3)	12 mS nom. ←
Ionization time	$V_T = V_{TS} + 0.5$ V	2 mS nom.
	$V_T = V_{TS} + 4.0$ V	0.1 mS nom.

Trigger transfer characteristics

Current triggering

Trigger Current necessary for anode takeover,
with no trigger capacitor ($V_a = 240$ V) 25 μ A

N.B. ← Indicates a change from previous data sheets.



Characteristics (cont.)

Capacitive triggering (High impedance source)
Minimum trigger capacitor to ensure anode take-over (Note 4)

$V_a = 170 \text{ V}$	2,700 pf.
$V_a = 200 \text{ V}$	1,000 pf.
$V_a = 240 \text{ V}$	500 pf.

Recommended Operating Conditions

Anode supply voltage	170—290 V
Auxiliary anode series resistor (Note 5)	10 M Ω

Notes

1. During anode conduction the trigger is held by the discharge at 90 V above the cathode potential and if the trigger input voltage is raised or lowered about this potential, trigger current will flow. In the condition where the voltage is below 90 V current flows in a reverse direction and the trigger acts as a cathode. This condition is harmful to the tube and in applications such as those where the anode and trigger are extinguished by relay contacts it is desirable to extinguish the main anode discharge before the trigger discharge. If the trigger supply voltage rises above 90 V the tube will not be affected, providing the resultant forward current is limited to the value stated.
2. Oscillations of up to 10 V pk to pk superimposed on the running voltage.
3. In self extinguishing circuits the deionization time is much shorter.
4. To limit the positive peak current a resistor of 2.2 k Ω is required for trigger capacitors between 4,700 and 15,000 pf., and a resistor of 5.6 k Ω for trigger capacitors of over 15,000 pf.
5. It is recommended that the auxiliary anode resistor is soldered direct to pin 6. Stray capacitance between the auxiliary anode and the cathode must be kept to a minimum.



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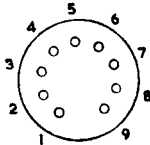
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Mechanical Data

Mounting position
Base

Any
B9A

Base connections
(underside view)



- Pin 1 Main anode
- 2 Do not connect
- 3 Do not connect
- 4 Cathode
- 5 Cathode
- 6 Auxiliary anode
- 7 Cathode
- 8 Trigger
- 9 Trigger

