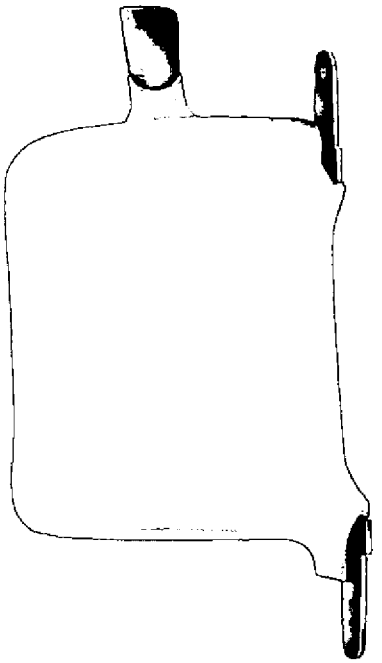


GL-7964

TRIGGERED SPARK GAP

MINIATURE SWITCHING DEVICE **3 KILOVOLTS**

18 JOULES

The GL-7964 is a small, cold cathode, gaseous, triggered spark gap capable of switching 18 joules of energy at high voltages. Since the device does not require external energy to initiate the discharge its use permits both equipment cost reduction and savings in space through component elimination.

Mechanical features include rugged metal-ceramic construction, ability to withstand high shock and vibration conditions, and reliable operation over temperatures ranging from as low as −80 to as high as +200 F.

The GL-7964 is especially designed to deliver short rapid pulses of current with minimum delay and jitter in applications where high hold-off voltages and low leakage currents exist.

Applications include switching single stored electrical energy systems into low impedance loads, or energy storage capacitors into resistive or inductive loads.

Electrical

Heater Voltage	None Required

Mechanical

Mounting Position	Any
Net Weight	0.3 Ounces

Thermal

Ambient Temperature Range	−80 to +200 F

MAXIMUM RATINGS

Interelectrode Leakage Resistance	10,000	Megohms
Main Gap		
Operating Voltage	2.0 to 2.6	Kilovolts
Hold-off Voltage		
Indefinite	3	Kilovolts
10 Minutes	3.6	Kilovolts
Peak Current		
Ringing*, maximum	1500	Amperes
Unidirectional Pulse, maximum	4000	Amperes
Pulse Duration, maximum	10	Microseconds
Dissipation, approximate	60	Volts
Delay Time† @ V_{APP} 2600 volts	1.5	Microseconds
Jitter‡	0.5	Microseconds

Trigger		
Firing Voltage, minimum§	5000	Volts
Peak Firing Current, maximum	5	Amperes
Firing Pulse Duration, maximum**	10	Microseconds

* 1500 amperes for the first half cycle of a 10–12 kc ringing frequency, circuit should be sufficiently damped to pass only 5–6 cycles.

† Main gap delay time is defined as the interval of time between application of ½ maximum trigger voltage and initiation of ½ maximum current conduction.

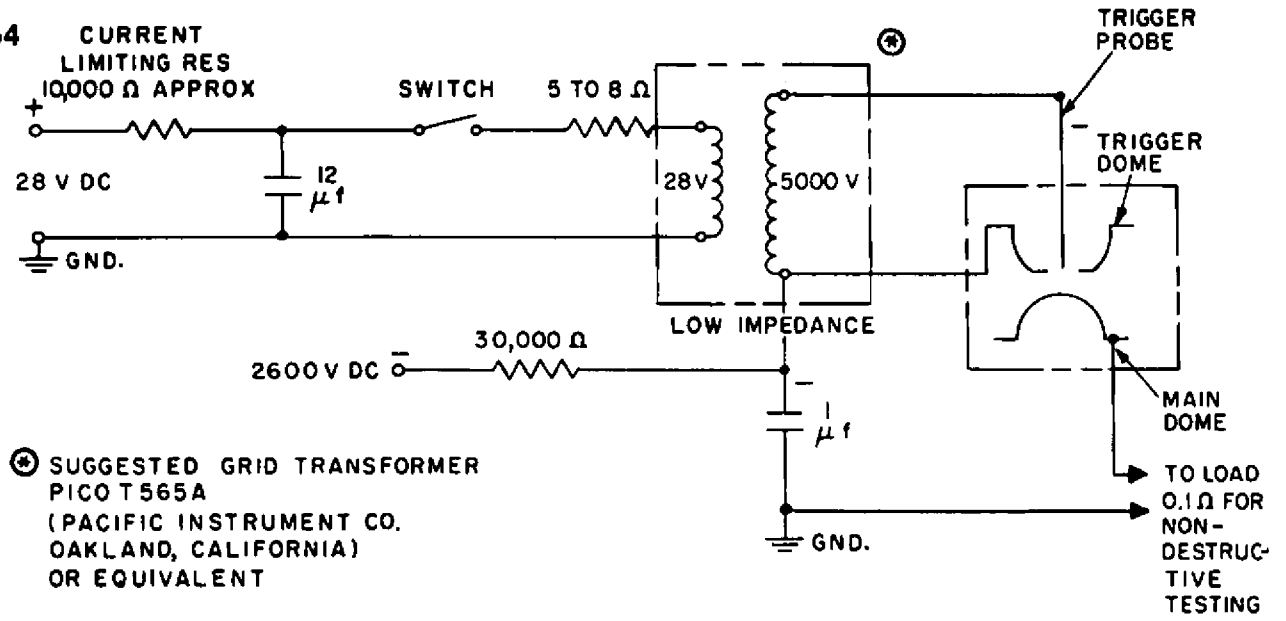
‡ Main gap jitter is defined as the variation in main-gap delay time.

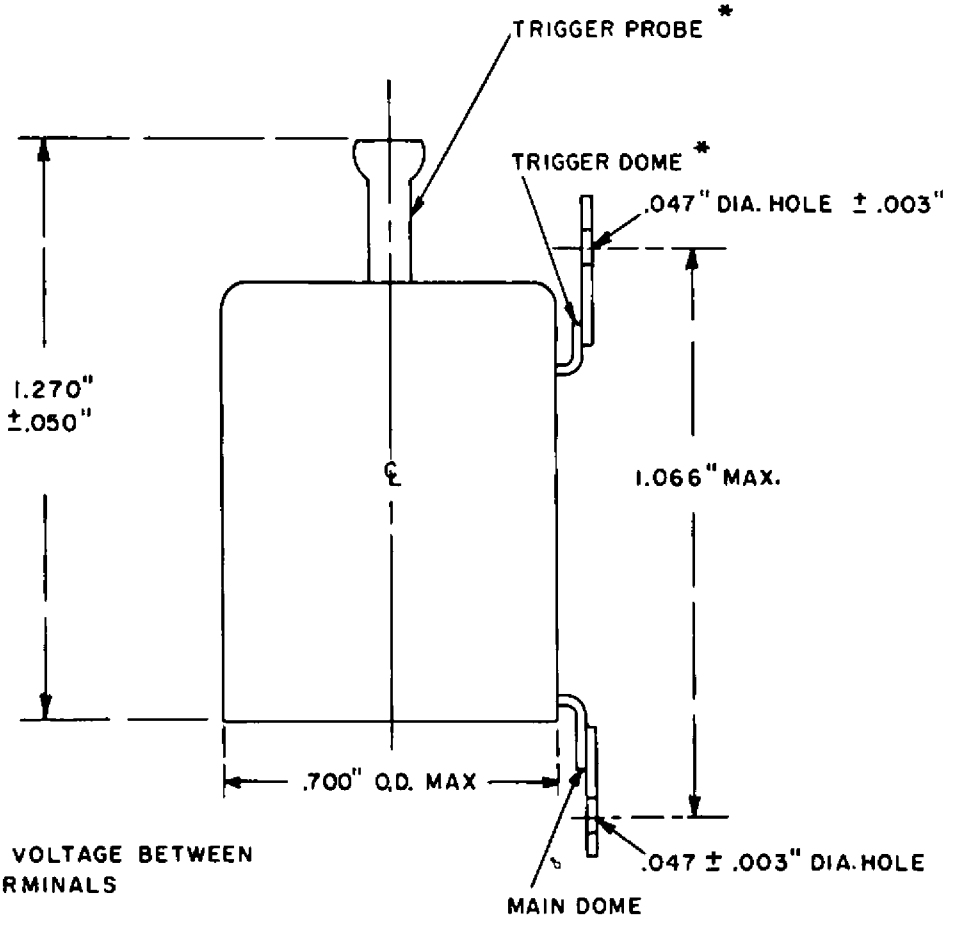
§ Breakdown to occur on leading edge of pulse having a rise time of 0.5 microseconds where rise time is defined as the interval of time between 10 percent and 90 percent of the trigger voltage pulse.

**Measured at a point between 10 to 90 percent of initial rise to a point 90 percent of current maximum on trailing edge of pulse.

from JEDEC release #3178, March 6, 1961

GENERAL ELECTRIC





ELECTRONIC COMPONENTS DIVISION
GENERAL ELECTRIC
Schenectady 5, N. Y.