

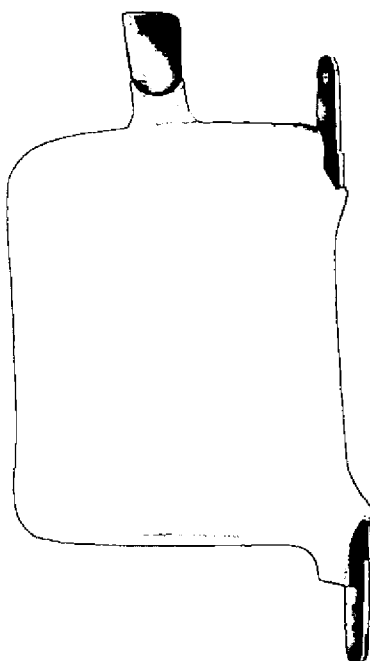
GL-7964

**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 tem-

peratures 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.

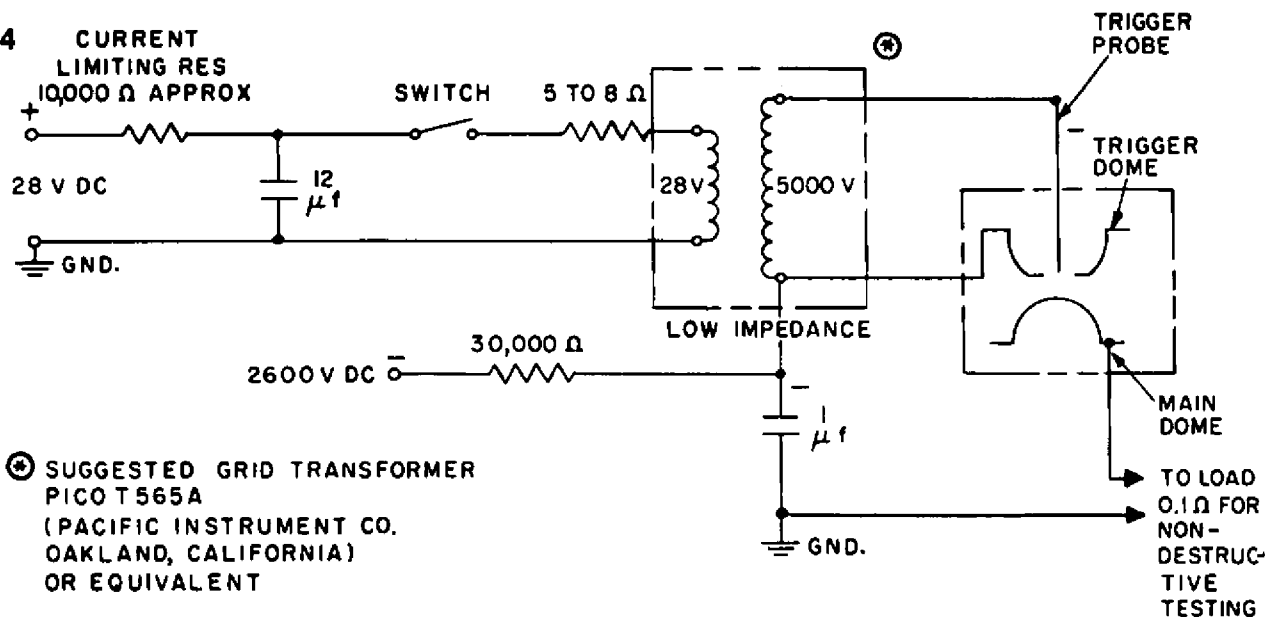
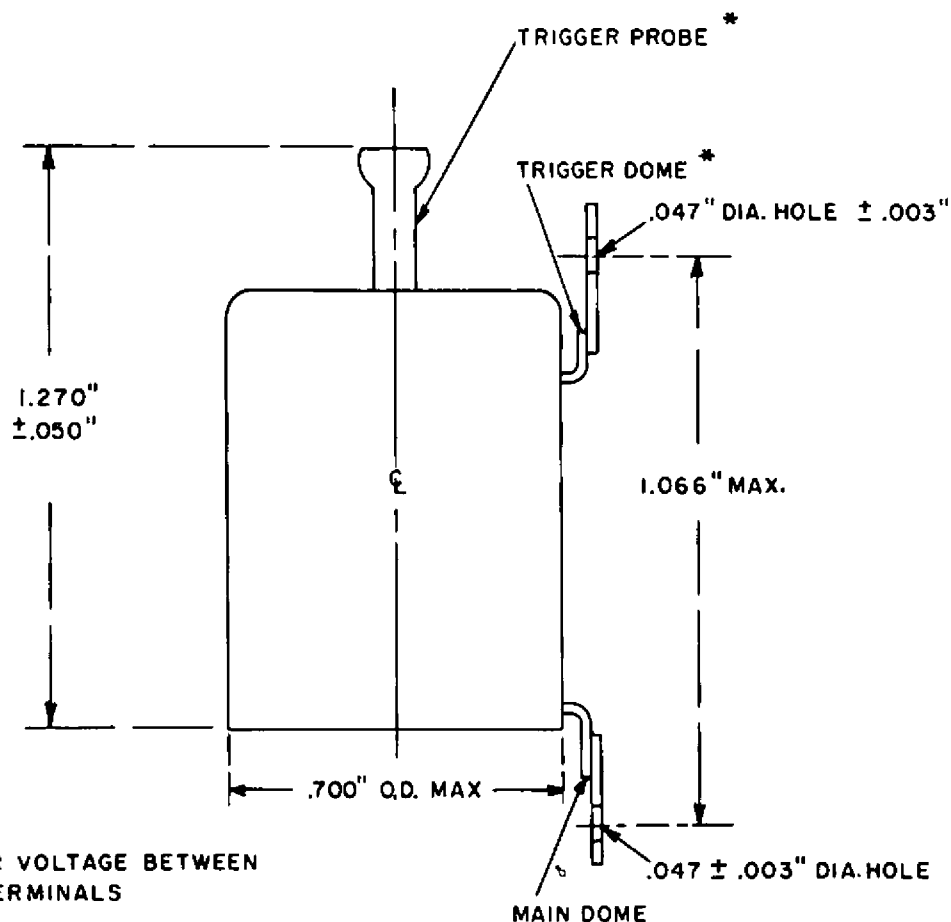
† Main gap delay time is defined as the interval of time between application of  $\frac{1}{2}$  maximum trigger voltage and initiation of  $\frac{1}{2}$  maximum current conduction.

‡ 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



ELECTRONIC COMPONENTS DIVISION

**GENERAL ELECTRIC**

Schenectady 5, N. Y.