HIGH ENERGY DEVICES

TG Three-Electrode Legacy Series Triggered Spark Gaps



Features

- Tight main static breakdown voltage tolerance (± 10%)
- Long-life tungsten or molybdenum electrodes
- Rugged ceramic-to-metal or glass-to-metal construction

Description

High Energy Devices' TG Legacy Series of three electrode triggered sparkgaps (cold cathode thyratrons) are designed for switching high levels of stored energy in fractions of a microsecond, on command, using low energy control pulses.

Applications

- Test equipment
- Video displays
- Pulse generators
- Medical electronics

Voltage Range

| Series | Main Static Breakdown Voltage | Units |
|-----------|----------------------------------|-------|
| TG | | |
| Three | 1.0-30.0 | kV |
| Electrode | | |

Devices in the TG Three-Electrode Legacy Series with other main static breakdown voltages other than the standard voltages listed (in the 1.0-30kV range) are available upon request. Also refer to the TA/TB/TG221-226 Series Triggered Spark Gaps for additional product availability.

Ordering Information

A complete part number is represented by the information contained in the Part Number column of the specification table.

Specifications (@25°C)

| Part Number | Applied DC Voltage Range | Main Static Breakdown (kV ± 10%) | Peak Current (kA) ⁽¹⁾ | Delay Time (µs) ⁽²⁾ | Package Outline | Dimension A (Inches) | (Inches) | Dimension C (Inches) |
|----------------|--------------------------------|--|-------------------------------------|-----------------------------------|--------------------|-------------------------|--------------|-------------------------|
| TG7 | 1.3 - 4.0 | 5.0 | 15.0 | 0.1 | I-A | 2.427 nom | 0.228 max | 1.500 max |
| TG88 | 1.3 - 4.0 | 5.0 | 15.0 | 0.1 | I-B | 2.427 nom | 0.228 max | 2.015 max |
| TG114 | 2.5 - 8.0 | 10.0 | 15.0 | 0.1 | I-B | 2.427 nom | 0.228 max | 2.015 max |
| TG121 | 0.8 - 2.0 | 2.5 | 15.0 | 0.3 | I-B/I-D | 1.990 nom | 0.228 max | 1.450 max |
| TG122 | 1.5 - 4.0 | 5.0 | 15.0 | 0.1 | I-B/I-D | 1.990 nom | 0.228 max | 1.450 max |
| TG123 | 2.3 - 6.0 | 7.5 | 15.0 | 0.1 | I-B/I-D | 1.990 nom | 0.228 max | 1.450 max |
| TG124 | 3.0 - 8.0 | 10.0 | 15.0 | 0.1 | I-B/I-D | 1.990 nom | 0.228 max | 1.450 max |
| TG125 | 4.5 - 12.0 | 15.0 | 20.0 | 0.1 | I-B/I-D | 2.670 | .540 | 1.560 |
| TG126 | 6.0 - 16.0 | 20.0 | 20.0 | 0.1 | I-B/I-D | 2.670 | .540 | 1.560 |
| TG127 | 7.5 - 20.0 | 25.0 | 20.0 | 0.1 | I-B/I-D | 2.797 nom | 0.540 max | 2.051 max |
| TG151 | 2.7 - 6.0 | 6.8 | 15.0 | 0.1 | special | - | - | - |
| TG177 | 0.6 - 1.9 | 2.5 | 10.0 | 0.3 | | 1.625 max | 0.520 ± .030 | 0.300 ± .025 |
| TG178 | 1.5 - 3.5 | 5.0 | 10.0 | 0.2 | | 1.625 max | 0.580 ± .030 | 0.340 ± .025 |
| TG179 | 3.0 - 8.0 | 10.0 | 10.0 | 0.1 | | 1.719 max | 0.620 ± .030 | 0.380 ± .025 |
| TG180 | 4.5 - 12.0 | 15.0 | 10.0 | 0.1 | | 1.906 max | 0.725 ± .030 | 0.490 ± .025 |
| TG181 | 5.3 - 14.0 | 17.5 | 10.0 | 0.1 | | 1.906 max | 0.725 ± .030 | 0.490 ± .025 |
| TG240 | 0.4 - 0.85 | 1.0 | 10.0 | 0.1 | II | 0.750 ± .063 | - | - |
| TG241 | 0.5 - 1.25 | 1.5 | 10.0 | 0.1 | II | 0.750 ± .063 | - | - |
| TG242 | 0.7 - 1.7 | 2.0 | 10.0 | 0.1 | II | 0.760 ± .063 | - | - |
| TG243 | 0.8 - 2.1 | 2.5 | 10.0 | 0.1 | II | 0.760 ± .063 | - | - |
| TG244 | 1.2 - 4.2 | 5.0 | 10.0 | 0.1 | II | 0.760 ± .063 | - | - |
| TG245 | 2.0 - 6.2 | 7.5 | 10.0 | 0.1 | II | 0.760 ± .063 | - | - |
| TG246 | 3.5 - 8.5 | 10.0 | 10.0 | 0.15 | | 0.790 ± .063 | - | - |
| TG247 | 4.5 - 11.0 | 12.0 | 10.0 | 0.15 | II | 0.790 ± .063 | - | - |
| TG248 | 7.0 - 12.0 | 15.0 | 10.0 | 0.15 | II | 0.830 ± .063 | - | - |
| TG1208 | 8.3 - 22.2 | 25.0 - 30.0 | 20.0 | 0.1 | I-B | 2.797 nom | 0.515 ± .020 | 2.051 max |

⁽¹⁾ The peak current is a conservative maximum for an approximately triangular pulse with a 50µs half-width.

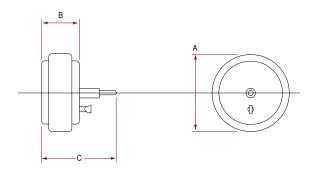
⁽²⁾ Delay time is for Mode A operation when the applied voltage is 80% of the main static breakdown and the trigger pulse reaches 150% of the maximum trigger voltage.

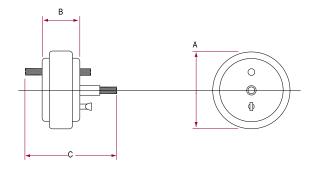
MECHANICAL DIMENSIONS mm/(inches)

TG Legacy I-A

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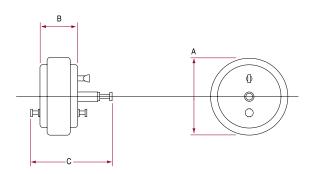
TG Legacy I-B

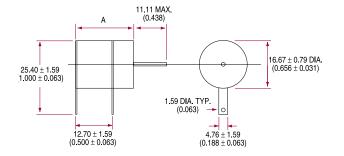




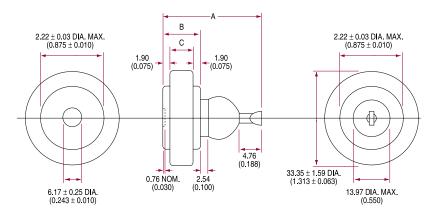
TG Legacy I-D

TG Legacy II





TG Legacy III



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