# RoHS Greentube™ SL1002 Series Gas Plasma Arresters

The Broadband Optimized™ SL1002 series has been especially developed for use in broadband equipment. Unique design features offer high levels of performance on fast rising transients in the domain of 100V/µS to 1KV/µS, which are those most likely from induced Lightning disturbances. These devices have Ultra low capacitance (typically 1.2pF or less) and present insignificant signal losses up to 1.5GHz. These devices are extremely robust and are able to divert a 5000A pulse without destruction. For AC Power Cross of long duration, overcurrent protection is recommended.



## FEATURES

- **RoHS** compliant
- Ultra Low Insertion Loss
- Surface mountable
- 5KA surge capability tested with 8/20µS pulse as defined by IEC 61000-4-5
- Excellent response to fast rising transients.
- Can be used to meet Telcordia GR1089 without series resistance
- 10/700 6KV capability, as per ITUT k.21, enhanced test level
- 2000 Amp 2/10µS surge rating
- Meets FCC part 68 10/160µs waveform, 200A test and 10/560µs waveform 100A test.

## Applications:

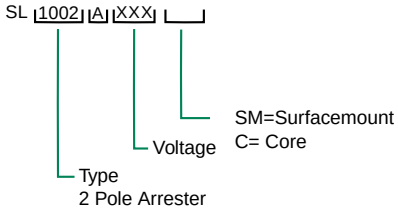
- Broadband equipment.
- ADSL equipment.
- XDSL equipment.
- Satellite and CATV equipment.
- General telecom equipment.

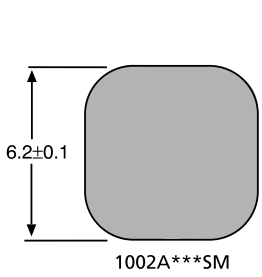


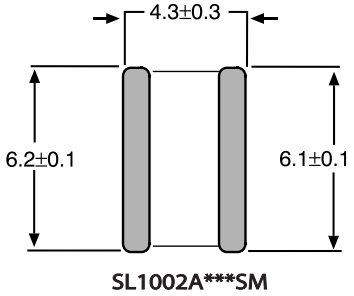
2 ELECTRODE GDT

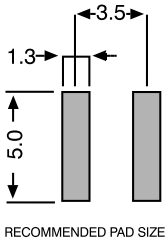
**GRAPHICAL SYMBOL**

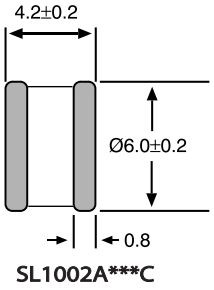
## ORDERING INFORMATION




All dimensions in mm

## Mechanical Specifications:

| | |
|---|---|
| **Weight:** | 0.63g (0.022 oz.) |
| **Materials:** | Electrode Base: Nickel Iron Alloy<br>Electrode Plating: Bright Sn<br>Body: Ceramic |
| **Device Marking:** | 'LF' logo, Voltage and date code |

# RoHS Greentube™ SL1002 Series Gas Plasma Arresters

**LITTELFUSE 2 TERMINAL MINI ARRESTER SERIES**
**TOTALLY NON-RADIOACTIVE, UL RECOGNIZED**

| Part Number | DC Voltage @ 100V/sec (V) | Max Dynamic Breakover Voltage @ 100V/µs (Vbr) | Max Dynamic Breakover Voltage @ 1 kV/µs (Vbr) | Max Repetitive Impulse Discharge Current[2] (kA) | Max Single Impulse Discharge Current[5] (A) | Max Single Impulse Discharge Current[6] (A) | Max Leakage Current[3] (nA) | Max Capacitance[4] (pF) | Holdover Voltage[1] (V) | Nominal On-State Voltage @ 1A (V) |
|---|---|---|---|---|---|---|---|---|---|---|
| SL1002A090 | 90 | **360** | 700 | **5** | **2** | **2** | **100** | **1.2** | **50** | **20** |
| SL1002A230 | 230 | **400** | 500 | **5** | **2** | **2** | **100** | **1.2** | **135** | **20** |
| SL1002A250 | 250 | **400** | 500 | **5** | **2** | **2** | **100** | **1.2** | **135** | **20** |
| SL1002A260 | 260 | **400** | 500 | **5** | **2** | **2** | **100** | **1.2** | **135** | **20** |
| SL1002A350 | 350 | **500** | 600 | **5** | **2** | **2** | **100** | **1.2** | **135** | **20** |
| SL1002A600 | 600 | **800** | 900 | **5** | **2** | **2** | **100** | **1.2** | **135** | **20** |

Notes:

(1) Tested according to ITU-T Rec.K12

(2) 10 shots, 8/20µs wave form per IEC 61000-4-5

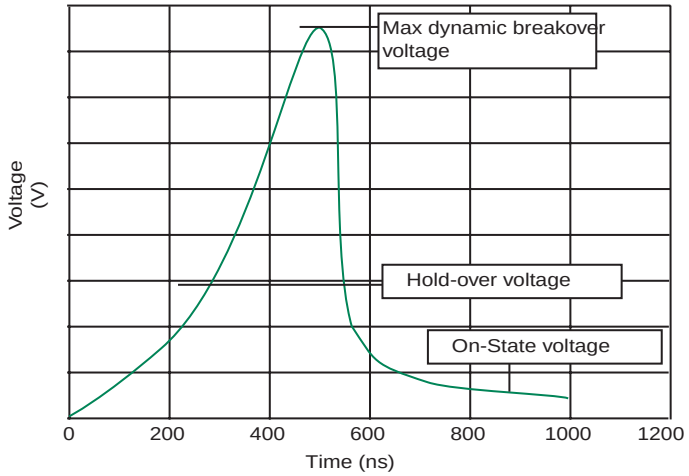
(3) Measured @ 100 Volts

(4) Measured @ 1MHz, O volt bias

(5) Measured with 2/10µs wave form

(6) Measured with 10/350µs wave form

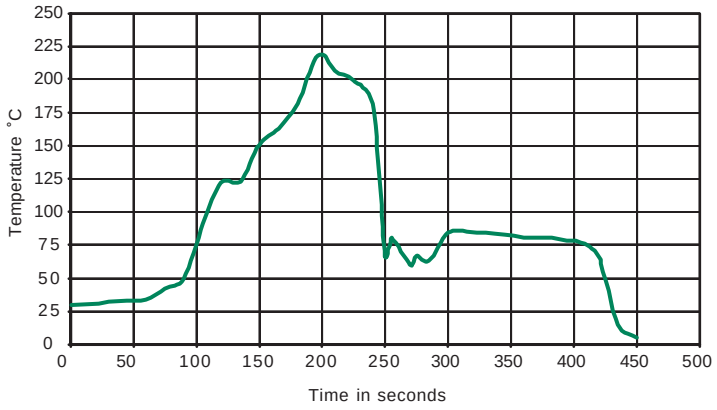
**Voltage vs Time Characteristic**



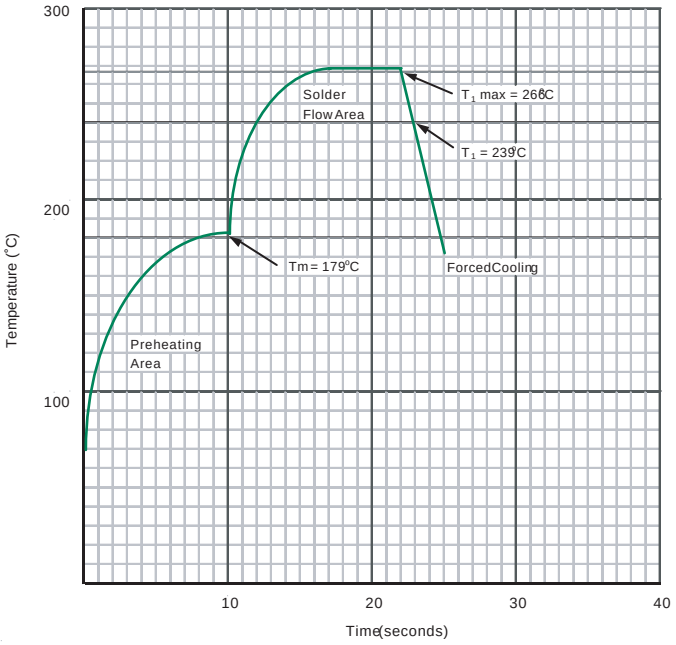

| Typical Insertion loss figures |
|---|
| @1.0 GHz = 0.01dB |
| @1.4 GHz = 0.1dB |
| @1.8 GHz = 0.53dB |
| @2.1 GHz = 0.81dB |
| @2.45 GHz = 1.0dB |
| @2.8 GHz = 1.2dB |
| @3.1 GHz= 1.5dB |
| @3.5 GHz = 2.1dB |

# RoHS Greentube™ SL1002 Series Gas Plasma Arresters

## Profile for reflow soldering




## Profile for wave soldering




**Notes:**

$T_1$ max = Maximum Tab Temperature = 266°C
$T_1$ = Flow Tempearture of Solder = 239°C
Tm = Melting Point of Solder = 179°C
Tamb = 25°C
Maximum permissible rate of temperature change = °C / sec