

# Gas Discharge Tubes

## High Performance Beta Range

### 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:

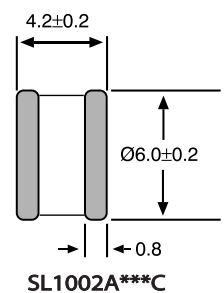
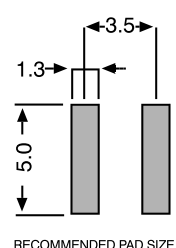
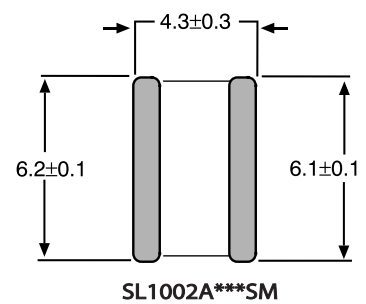
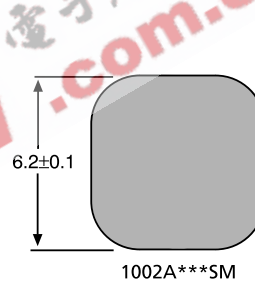
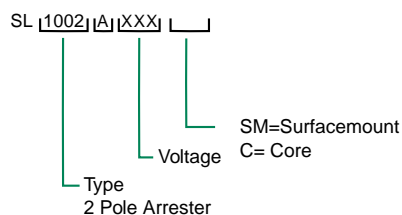
- Broadband equipment.
- ADSL equipment.
- XDSL equipment.
- Satellite and CATV equipment.
- General telecom equipment.



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  
Electrode Plating: Bright Sn  
Body: Ceramic
- Device Marking:** 'LF' logo, Voltage and date code

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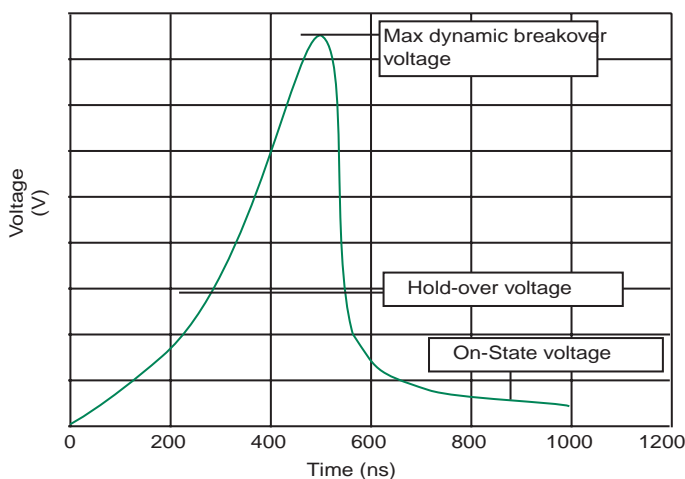
LITTELFUSE 2 TERMINAL MINI ARRESTER SERIES  
TOTALLY NON-RADIOACTIVE, UL RECOGNIZED

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 <sup>(2)</sup> (kA)	Max Single Impulse Discharge Current <sup>(5)</sup> (A)	Max Single Impulse Discharge Current <sup>(6)</sup> (A)	Max Leakage Current <sup>(3)</sup> (nA)	Max Capacitance <sup>(4)</sup> (pF)	Holdover Voltage <sup>(1)</sup> (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, 0 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

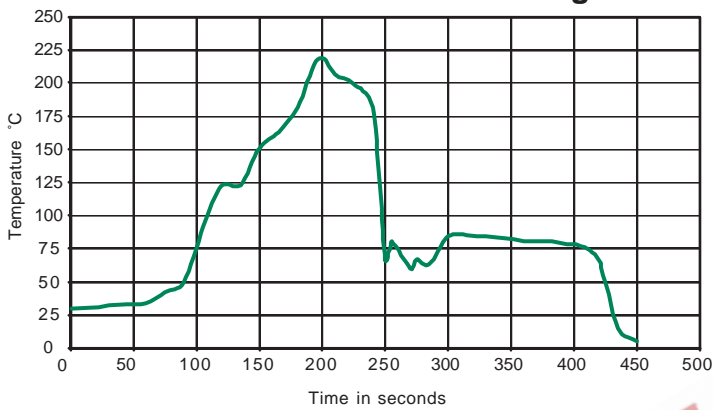
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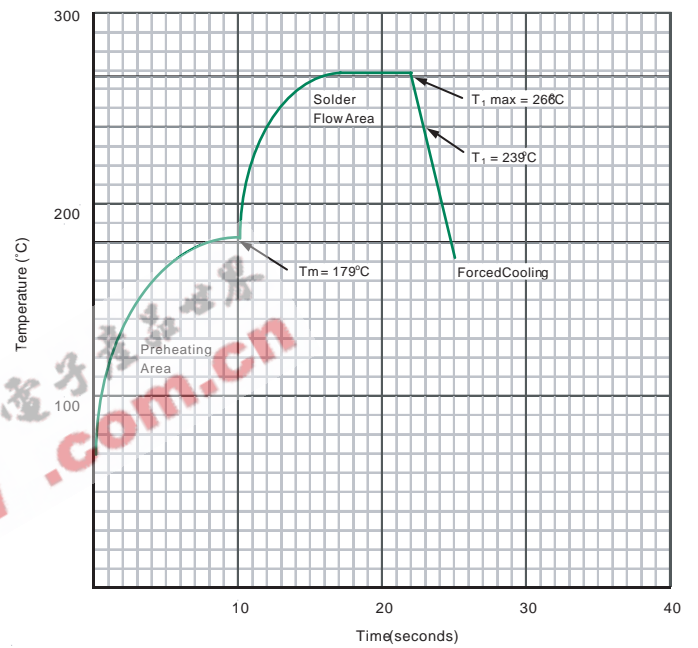
## RoHS Greentube™ SL1002 Series Gas Plasma Arresters



Profile for reflow soldering



Profile for wave soldering



**Notes:**

- T<sub>1 max</sub> = Maximum Tab Temperature = 266°C
- T<sub>1</sub> = Flow Temperature of Solder = 239°C
- T<sub>m</sub> = Melting Point of Solder = 179°C
- T<sub>amb</sub> = 25°C

Maximum permissible rate of temperature change = °C / sec

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