

## Gas Discharge Tubes

### High Performance Beta Range

## RoHS Greentube™ SL1021A Series Gas Plasma Arresters



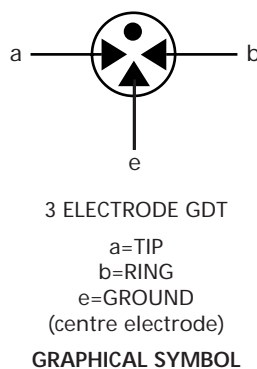
The SL1021A series offers high levels of performance on fast rising transients in the domain of 100V/μs to 1KV/μs, which are those most likely from induced Lightning disturbances. The SL1021A series also features ultra low capacitance (typically 1pF or less) and optimised internal geometry which provides low insertion loss at high frequencies, so are ideal for the protection of broadband equipment. These devices are extremely robust and are able to divert a 10,000Amp pulse without destruction.

### FEATURES





- RoHS compliant except 'RS' suffix
- Low insertion loss
- Excellent response to fast rising transients.
- Ultra low capacitance.
- 10KA surge capability tested with 8/20μs pulse as defined by IEC 61000-4-5
- 20,000 A single shot surge capability tested with 8/20μs pulse as defined by IEC 61000-4-5
- Available with thermal failsafe option (add 'F' or 'S' suffix to part number)
- ROHS Compliant

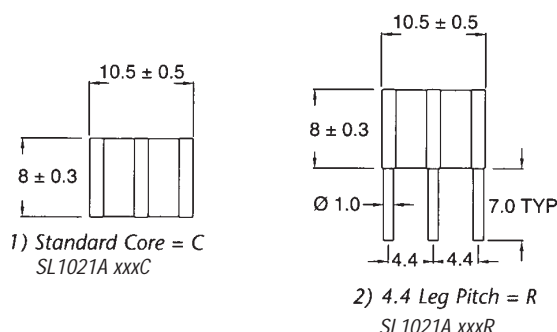
### Applications:

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



### ORDERING INFORMATION

SL 1021A   
Voltage   
Pin Configuration   
C=Core  
R=Leaded  
Failsafe Option   
F=Plastic  
S=Solder



All dimensions in mm

### Mechanical Specifications:

**Weight:** 2.7g (0.095 oz.)  
**Materials:** Electrode Base: Nickel Iron Alloy  
Electrode Plating: Bright Sn  
Body: Ceramic  
**Device Marking:** Littelfuse 'LF' marking, Voltage and date code.

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LITTELFUSE 3 TERMINAL ARRESTER SERIES  
TOTALLY NON-RADIOACTIVE, UL RECOGNIZED

Part Number	DC Voltage @ 100V/sec (V)	DC Breakover Voltage Min-Max (V)	DC Dynamic Breakover Voltage @ 100/ $\mu$ s (V)	Max Alternating Discharge Current <sup>1,3</sup> (A)	Max Repetitive Impulse Discharge Current 8/20 $\mu$ s <sup>1,4</sup> (kA)	Max Single Impulse Discharge Current 8/20 $\mu$ s <sup>5</sup> (kA)	Single Impulse Discharge Current <sup>8</sup> (kA)	Max Single Impulse Discharge Current 10/350 $\mu$ s <sup>5</sup> (kA)	Life Test Rating <sup>2</sup>
SL1021A145	145	116-174	500	10	10	20	40	2.5	100 shots
SL1021A150	150	120-180	500	10	10	20	40	2.5	100 shots
SL1021A200 <sup>6</sup>	200	150-250	350	10	10	20	40	2.5	100 shots
SL1021A230	230	184-276	350	10	10	20	40	2.5	100 shots
SL1021A250	250	200-300	400	10	10	20	40	2.5	100 shots
SL1021A260 <sup>7</sup>	260	210-310	420	10	10	20	40	2.5	100 shots
SL1021A300	300	240-360	450	10	10	20	40	2.5	100 shots
SL1021A350	350	280-420	500	10	10	20	40	2.5	100 shots
SL1021A400	400	320-480	550	10	10	20	40	2.5	100 shots
SL1021A420	420	345-500	600	10	10	20	40	2.5	100 shots
SL1021A450	450	360-540	650	10	10	20	40	2.5	100 shots
SL1021A500	500	400-500	700	10	10	20	40	2.5	100 shots
SL1021A600	600	480-720	850	10	10	20	40	2.5	100 shots

(1) Total current through center (ground) electrode, both line electrodes pulsed simultaneously; half value through each respective line terminal.

(2) 100 amps, 10/1000 $\mu$ s pulse (does not apply to SL1021A200)

(3) 10 shots, A.C. 60Hz, 1 sec duration.

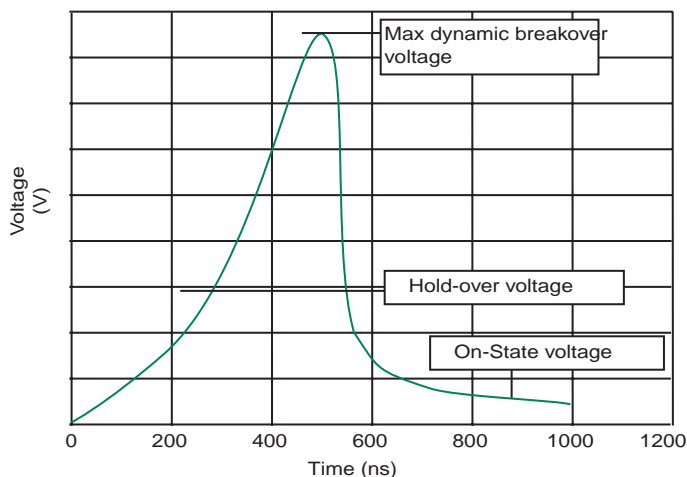
(4) 10 shots, 8/20 $\mu$ s waveform

(5) either end (line) electrode to centre (ground) electrode

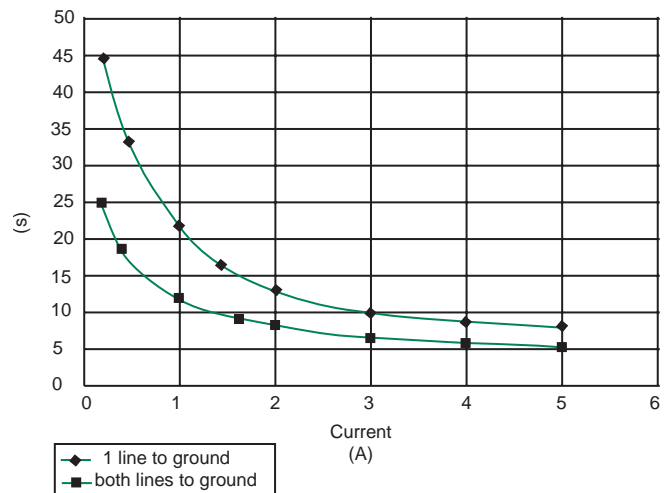
(6) Meets the requirements of BT Type 21A.

(7) Meets the requirements of BT Type 14A. Addition of 'F' (failsafe) option meets the requirements of BT type number 14A/1.

**Voltage vs Time Characteristic**



**Time vs. Current for Failsafe**



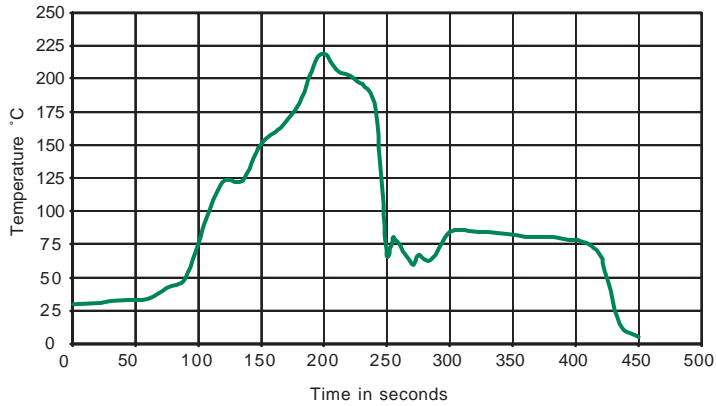
## Gas Discharge Tubes

High Performance Beta Range

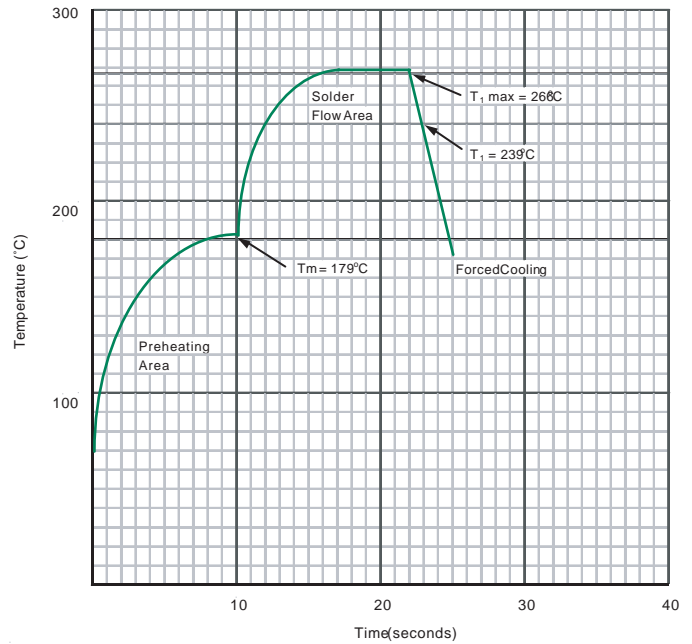
**RoHS**  **Greentube™ SL1021A Series Gas Plasma Arresters**



**Profile for reflow soldering**



**Profile for wave soldering**



**Notes:**

T<sub>1</sub> max = 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

8

GAS DISCHARGE  
TUBES

# Gas Discharge Tubes

## High Performance Beta Range

### RoHS Greentube™ SL1021B Series Gas Plasma Arresters



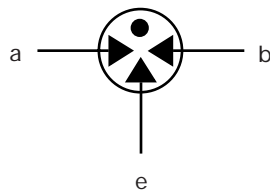
The SL1021B series offers high levels of performance on fast rising transients in the domain of 100V/μs to 1KV/μs, which are those most likely from induced Lightning disturbances. The SL1021B series also features ultra low capacitance (typically 1pF or less) and optimised internal geometry which provides low insertion loss at high frequencies, so are ideal for the protection of broadband equipment. These devices are extremely robust and are able to divert a 20,000Amp pulse without destruction.

#### FEATURES

- RoHS compliant except 'RS' suffix
- Low insertion loss
- Excellent response to fast rising transients.
- Ultra low capacitance.
- 10KA surge capability tested with 8/20μs pulse as defined by IEC 6100-4-5
- 20,000 A single shot surge capability tested with 8/20μs pulse as defined by IEC 6100-4-5
- Available with thermal failsafe option (add 'F' or 'S' suffix to part number)

#### Applications:

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



3 ELECTRODE GDT

a=TIP

b=RING

e=GROUND

(centre electrode)

GRAPHICAL SYMBOL

#### ORDERING INFORMATION

SL 1021 B                              

Voltage     

Pin Configuration     

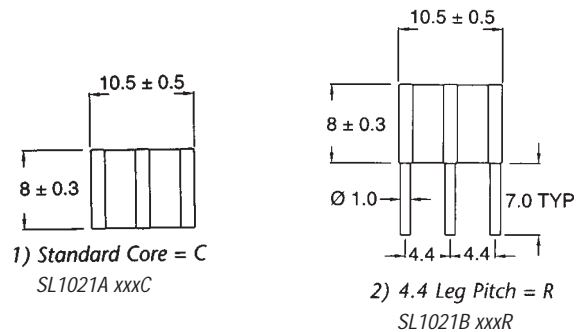
C=Core

R=Leaded

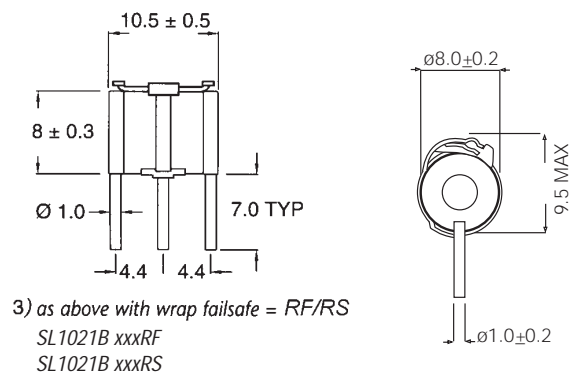
Failsafe Option     

F=Plastic

S=Solder



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: Littelfuse 'LF' marking, Voltage and date code. Blue.