Gas Discharge Tubes SL1010A Series

SL1010A Series









Description

The SL1010A Series Gas Discharge Tube (GDT) offers a compact, three-terminal, surface mount component that's just 5mm in diameter. It is rated for 10 hits (±5 repetitions) of a 5kA 8/20µs surge event with a low off-state capacitance of 1.5pF. Its low arc voltage parameter of 10V reduces thermal accumulation during long-term power fault events.

Agency Approvals

Agency	Agency File Number		
7U	E128662		

Features

- 5mm diameter size
- Low insertion loss
- Fast response time
- Single component balanced protector (T-grd & R-grd)
- High current rating
- Stable performance over lifetime
- Lead-free and RoHS compliant
- UL Recognized

3 Electrode GDT Graphical Symbol



Applications

- Data lines
- Broadband interfaces such as ADSL2/VDSL2
- xDSL equipment
- Satellite and CATV equipment
- General telecom equipment
- Industrial automation
- Home gateway

Additional Information







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Electrical Characteristics

	Device Specifications (at 25°C)									
Part Number	i	Breakd n Volts¹ @ 100V	,2,3	Impulse Breakdown in Volts ^{2,3} (@100V/ µs)	Impulse Breakdown In Volts ^{2,3} (@1kV/μs)	Insulation Resistance	Capacitance (@1MHz 0V Bias)	Arc Voltage (on state Voltage) @1Amp Min	Nominal Impulse Discharge Current (x10@8/20µs)	Nominal Impulse Discharge Current (x1@10/350µs)
	MIN	TYP	MAX	MAX		MIN	MAX			
SL1010A075	60	75	90	450	600	>1GΩ (at 50VDC)		~10 V	5kA	1kA
SL1010A090	72	90	108	550	700					
SL1010A170	136	170	204	550	700					
SL1010A230	184	230	276	580	750					
SL1010A350	280	350	420	850	1000					
SL1010A420	335	420	504	650	850					
SL1010A470	376	470	564	800	950					

Notes

- 1. At delivery AQL 0.65 level II, DIN ISO 2859
- 2. In ionized mode, tested according to ITU-T Rec. K.12
- 3. Comparable to the silicon measurement Switching Voltage (Vs)
- 4. Total current through center electrode at 10kA, through side electrode respectively at 5kA

Product Characteristics

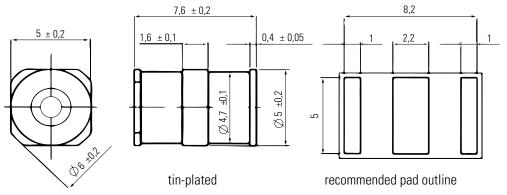
Materials	Construction: Ceramic Insulator Device Finish: Dull Tin-plated 17.5 +/- 12.5 microns
Product Marking	Littelfuse 'LF' Mark, voltage and date code

Glow to Arc Transition Current	~1 Amp
Glow Voltage	~60 Volts
Storage and Operational Temperature	-40 to +90°C

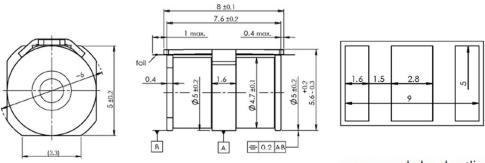
Device Dimensions

For SL1010A series:

Dimensions are in millimeters [and inches]



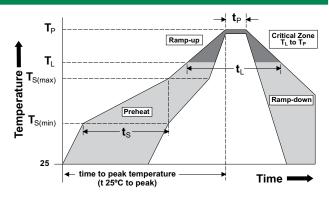
For SL1010A series failsafe version:



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Soldering Parameters - Reflow Soldering (Surface Mount Devices)

Reflow Condition Pb-free assembly				
Reflow Cond	aition	Pb-free assembly		
	-Temperature Min (T _{s(min)})	150°C		
Pre Heat	-Temperature Max (T _{s(max)})	200°C		
	-Time (Min to Max) (t _s)	60 - 180 seconds		
Average Rar to peak)	np-up Rate (Liquidus Temp (T _L)	3°C/second max.		
$T_{\text{S(max)}}$ to T_{L} -	Ramp-up Rate	5°C/second max.		
Reflow	- Temperature (T _L) (Liquidus)	217°C		
	- Temperature (t _L)	60 - 150 seconds		
Peak Temper	rature (T _P)	260 ^{+0/-5} °C		
Time within (t _p)	5°C of Actual Peak Temperature	10 – 30 seconds		
Ramp-down	Rate	6°C/second max.		
Time 25°C to	Peak Temperature (T _p)	8 minutes max.		
Do not exce	ed	260°C		



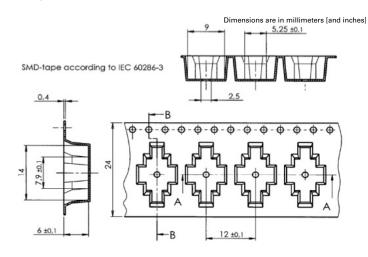
Soldering Parameters - Hand Soldering

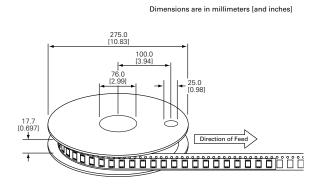
Solder Iron Temperature: 350° C +/- 5°C

Heating Time: 5 seconds max.

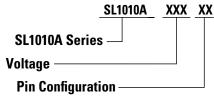
Packaging

'SM' Type Surface Mount Items: Packaged tape and reel carrier, 900 pcs/reel (specifications below)





Part Numbering System and Ordering Information



F = with Failsafe (Packed in carrier and tape, 900pcs/reel)

SM = Surface Mount (Packed in carrier and tape, 900pcs/reel)

SMF = Surface Mount with Failsafe (Packed in carrier and tape, 900pcs/reel)