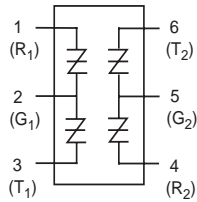


LCAS Asymmetrical Multiport Device



This is an integrated multichip solution for protecting multiple twisted pair from overvoltage conditions. Based on a six-pin surface mount SOIC package, it is equivalent to four discrete DO-214AA or two TO-220 packages. Available in surge current ratings up to 500 A, the multiport line protector is ideal for densely populated line cards that cannot afford PCB inefficiencies or the use of series power resistors.

For a diagram of an LCAS (Line Circuit Access Switch) application, see Figure 3.22.

Electrical Parameters

Part Number *	V _{DRM} Volts	V _S Volts	V _{DRM} Volts	V _S Volts	V _T Volts	I _{DRM} μAmps	I _S mAmps	I _T Amps	I _H mAmps	C _O pF
	Pins 3-2, 6-5		Pins 1-2, 4-5							Pins 3-2, 6-5, 1-2, 4-5
A1220U_4	100	130	180	220	4	5	800	2.2	120	30
A1225U_4	100	130	230	290	4	5	800	2.2	120	30

* For individual "UA", "UB", and "UC" surge ratings, see table below.

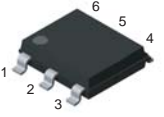
General Notes:

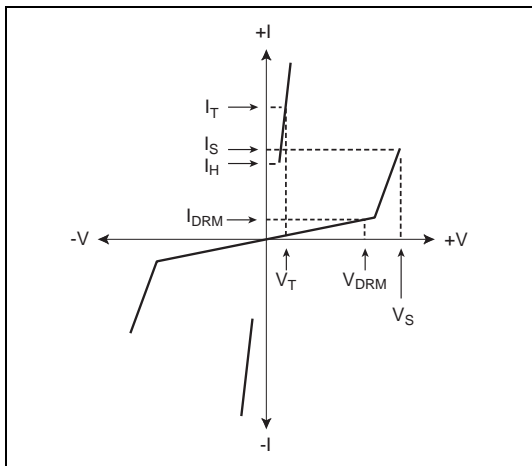
- All measurements are made at an ambient temperature of 25 °C. I_{PP} applies to -40 °C through +85 °C temperature range.
- I_{PP} is a repetitive surge rating and is guaranteed for the life of the product.
- Listed *SIDACTor* devices are bi-directional. All electrical parameters and surge ratings apply to forward and reverse polarities.
- V_{DRM} is measured at I_{DRM}.
- V_S is measured at 100 V/μs.
- Special voltage (V_S and V_{DRM}) and holding current (I_H) requirements are available upon request.
- Off-state capacitance (C_O) is measured between Pins 1-2 and 3-2 at 1 MHz with a 2 V bias and is a typical value for "UA" product. "UB" and "UC" capacitance is approximately 2x higher.

Surge Ratings

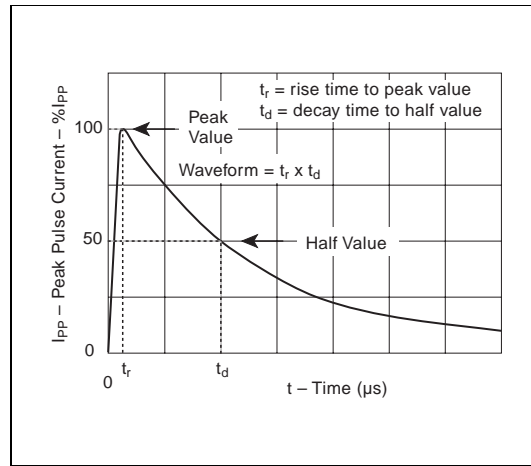
Series	I _{PP} 2x10 μs Amps	I _{PP} 8x20 μs Amps	I _{PP} 10x160 μs Amps	I _{PP} 10x560 μs Amps	I _{PP} 10x1000 μs Amps	I _{TSM} 60 Hz Amps	di/dt Amps/μs
A	150	150	90	50	45	20	500
B	250	250	150	100	80	30	500
C	500	400	200	150	100	50	500

Thermal Considerations

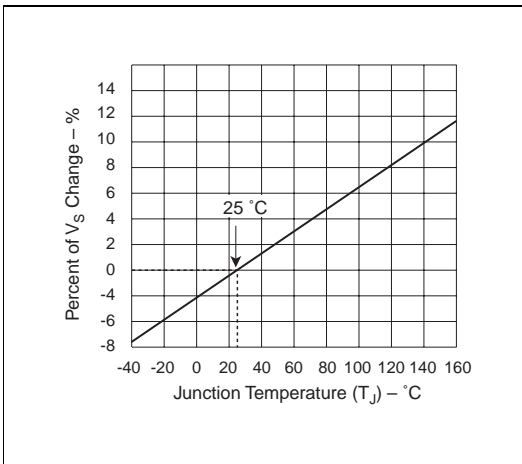
Package	Symbol	Parameter	Value	Unit
	T_J	Operating Junction Temperature Range	-40 to +125	°C
	T_S	Storage Temperature Range	-65 to +150	°C
	$R_{\theta JA}$	Thermal Resistance: Junction to Ambient	60	°C/W



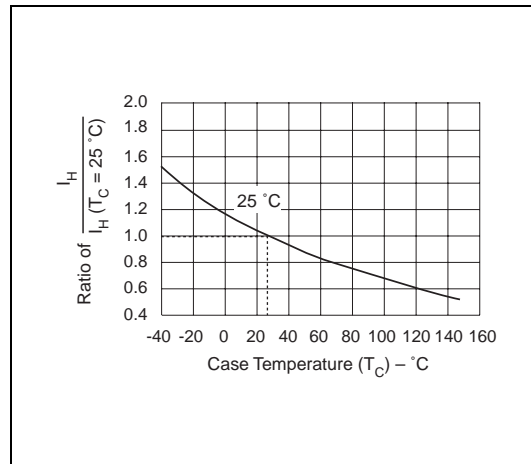
V-I Characteristics



$t_r \times t_d$ Pulse Wave-form



Normalized V_S Change versus Junction Temperature



Normalized DC Holding Current versus Case Temperature