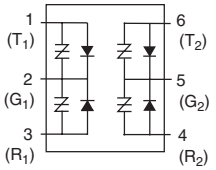
Multiport SLIC Protector



This multiport line protector is designed as a single-package solution for protecting multiple twisted pair from overvoltage conditions. Based on a six-pin SOIC package, it is equivalent to four discrete DO-214AA packages. Available in surge current ratings up to 500 A for a 2x10 µs event, the multiport line protector is ideal for densely populated line cards that cannot afford PCB inefficiencies or the use of series power resistors.

For specific design criteria, see details in Figure 3.24.

Electrical Parameters

Part Number *	V_{DRM} Volts	V_S Volts	V_{DRM} Volts	V_S Volts	V_T Volts	V_F Volts	I_{DRM} µAmps	I_S mAmps	I_T Amps	I_H mAmps	C_O pF
	Pins 1-2, 2-3, 4-5, 5-6		Pins 1-3, 4-6								
P0641U_	58	77	58	77	4	5	5	800	1	120	70
P0721U_	65	88	65	88	4	5	5	800	1	120	70
P0901U_	75	98	75	98	4	5	5	800	1	120	70
P1101U_	95	130	95	130	4	5	5	800	1	120	70

* For individual “UA” and “UC” surge ratings, see table below.

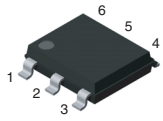
General Notes:

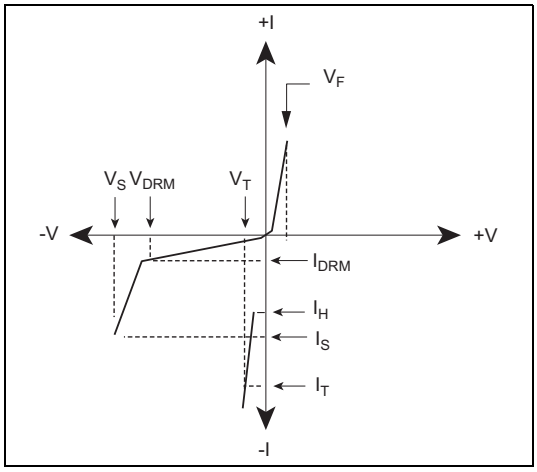
- All measurements are made at an ambient temperature of 25 °C. I_{PP} applies to -40 °C through +85 °C temperature range.
- I_{PP} is a repetitive surge rating and is guaranteed for the life of the product.
- V_{DRM} is measured at I_{DRM}.
- V_S and V_F are measured at 100 V/µs.
- Special voltage (V_S and V_{DRM}) and holding current (I_H) requirements are available upon request.
- Off-state capacitance is measured across pins 1-2, 2-3, 4-5, or 5-6 at 1 MHz with a 2 V bias and is a typical value. Capacitance across pins 1-3 or 4-6 is approximately half. “UC” capacitance is approximately 2x the listed value for “UA” product.
- Parallel capacitive loads may affect electrical parameters.

Surge Ratings

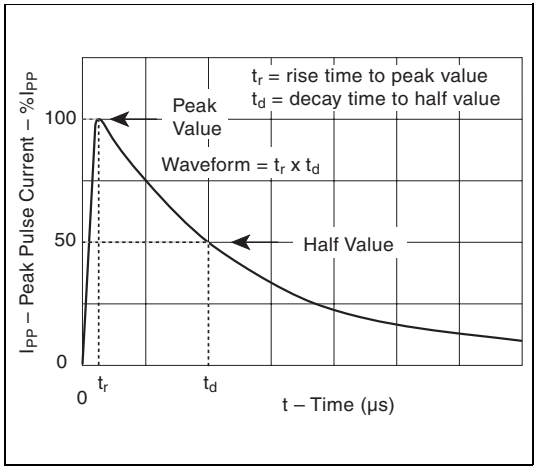
Series	I_{PP} 2x10 µs Amps	I_{PP} 8x20 µs Amps	I_{PP} 10x160 µs Amps	I_{PP} 10x560 µs Amps	I_{PP} 10x1000 µs Amps	I_{TSM} 60 Hz Amps	di/dt Amps/µs
A	150	150	90	50	45	20	500
C	500	400	200	120	100	50	500

Thermal Considerations

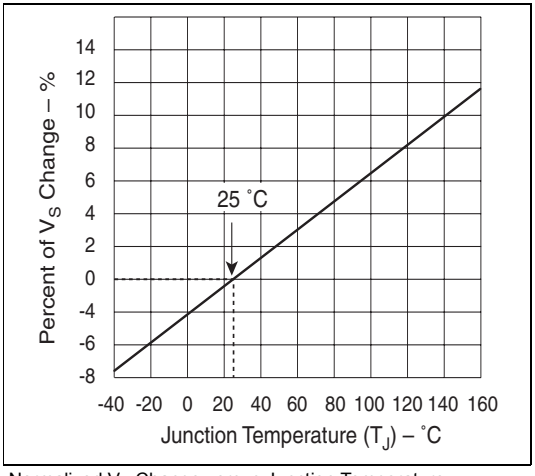
Package	Symbol	Parameter	Value	Unit
Modified MS-013 	T_J	Operating Junction Temperature Range	-40 to +150	°C
	T_S	Storage Temperature Range	-65 to +150	°C
	$R_{\theta JA}$	Thermal Resistance: Junction to Ambient	60	°C/W



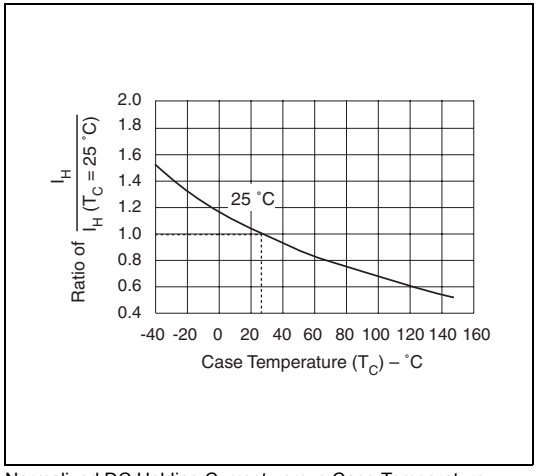
V-I Characteristics



t_r x t_d Pulse Wave-form



Normalized V_S Change versus Junction Temperature



Normalized DC Holding Current versus Case Temperature