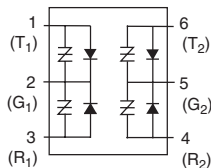


# Multiport SLIC Protector



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  $\mu$ s 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 details of specific design criteria, see Figure 6.44, Figure 6.45, and Figure 6.46 in Section 6, "Reference Designs" of this *Telecom Design Guide*.

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## Electrical Parameters

Part Number *	V <sub>DRM</sub> Volts	V <sub>S</sub> Volts	V <sub>T</sub> Volts	V <sub>F</sub> Volts	I <sub>DRM</sub> $\mu$ Amps	I <sub>S</sub> mAmps	I <sub>T</sub> Amps	I <sub>H</sub> mAmps
	Pins 1-2, 2-3, 4-5, 5-6							
P0641U_L	58	77	4	5	5	800	2.2	120
P0721U_L	65	88	4	5	5	800	2.2	120
P0901U_L	75	98	4	5	5	800	2.2	120
P1101U_L	95	130	4	5	5	800	2.2	120
P1301U_L	120	160	4	5	5	800	2.2	120
P1701U_L	160	200	4	5	5	800	2.2	120

\* "L" in part number indicates RoHS compliance. For non-RoHS compliant device, delete "L" from part number.  
For individual "UA" and "UC" surge ratings, see table below.

### General Notes:

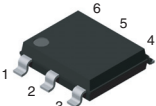
- All measurements are made at an ambient temperature of 25 °C. I<sub>PP</sub> applies to -40 °C through +85 °C temperature range.
- I<sub>PP</sub> is a repetitive surge rating and is guaranteed for the life of the product.
- V<sub>DRM</sub> is measured at I<sub>DRM</sub>.
- V<sub>S</sub> and V<sub>F</sub> are measured at 100 V/ $\mu$ s.
- Special voltage (V<sub>S</sub> and V<sub>DRM</sub>) and holding current (I<sub>H</sub>) requirements are available upon request.
- Parallel capacitive loads may affect electrical parameters.

## Surge Ratings in Amps

Series	I <sub>PP</sub>									I <sub>TSM</sub> 50 / 60 Hz	di/dt
	0.2x310 *	2x10 *	8x20 *	10x160 *	10x560 *	5x320 *	10x360 *	10x1000 *	5x310 *		
	0.5x700 **	2x10 **	1.2x50 **	10x160 **	10x560 **	9x720 **	10x360 **	10x1000 **	10x700 **		
	Amps	Amps	Amps	Amps	Amps	Amps	Amps	Amps	Amps	Amps	Amps/ $\mu$ s
A	20	150	150	90	50	75	75	45	75	20	500
C	50	500	400	200	150	200	175	100	200	50	500

\* Current waveform in  $\mu$ s  
\*\* Voltage waveform in  $\mu$ s

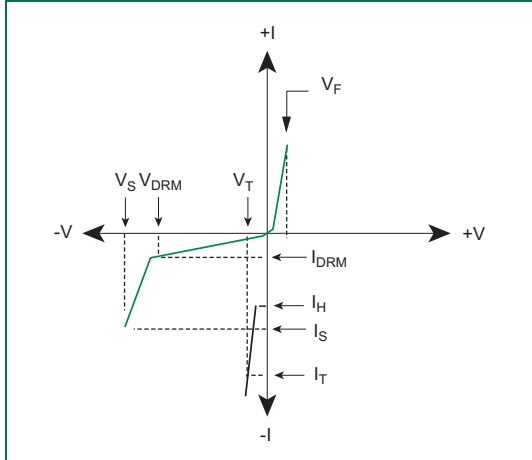
**Thermal Considerations**

Package	Symbol	Parameter	Value	Unit
 Modified MS-013	T <sub>J</sub>	Operating Junction Temperature Range	-40 to +150	°C
	T <sub>S</sub>	Storage Temperature Range	-65 to +150	°C
	R <sub>θJA</sub>	Thermal Resistance: Junction to Ambient	60	°C/W

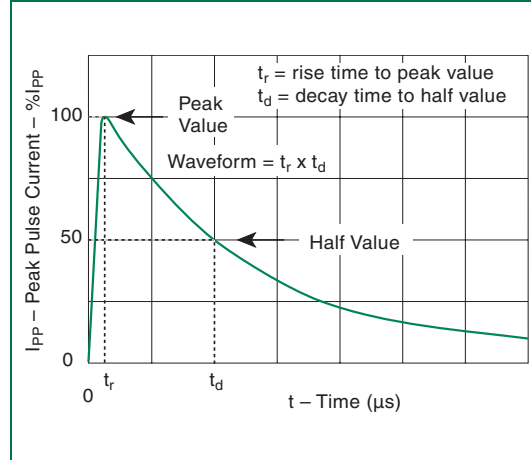
**Capacitance Values**

Part Number	pF Pin 1-2 / 3-2 (4-5 / 6-5) Tip-Ground, Ring-Ground		pF Pin 1-3 (4-6) Tip-Ring	
	MIN	MAX	MIN	MAX
P0641UAL	50	200	20	105
P0641UCL	65	200	20	105
P0721UAL	45	190	20	105
P0721UCL	60	190	20	105
P0901UAL	45	180	20	105
P0901UCL	60	180	20	105
P1101UAL	40	160	15	105
P1101UCL	50	160	15	105
P1301UAL	40	160	15	105
P1301UCL	50	160	15	105
P1701UAL	30	125	15	80
P1701UCL	40	125	15	80

Note: Off-state capacitance (C<sub>O</sub>) is measured at 1 MHz with a 2 V bias.

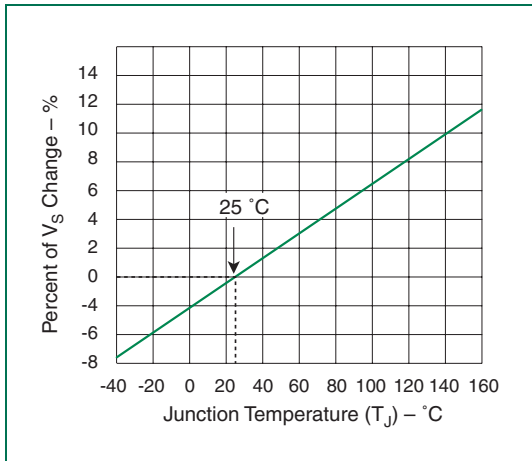


V-I Characteristics

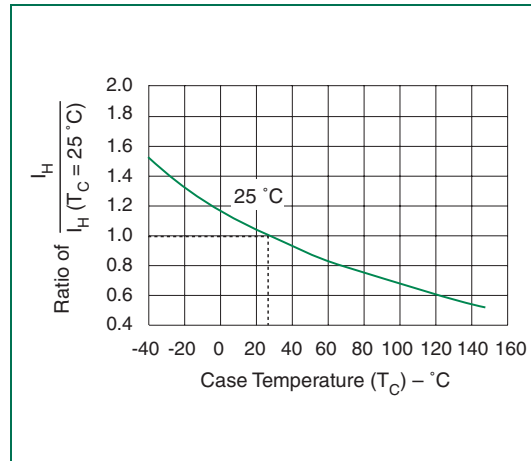


$t_r \times t_d$  Pulse Waveform

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Normalized  $V_S$  Change versus Junction Temperature



Normalized DC Holding Current versus Case Temperature