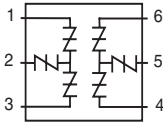


## Multiport Balanced *SIDACTor*<sup>®</sup> Device



This six-pin SMT package offers a guaranteed balanced protection, based on a Littelfuse patent (US Patent 4,905,119). The 'Y' configuration offers identical metallic and longitudinal protection all in one package. *SIDACTor* devices enable equipment to comply with various regulatory requirements including GR 1089, ITU K.20, K.21, and K.45, IEC 60950, UL 60950, and TIA-968-A (formerly known as FCC Part 68).

### Electrical Parameters

Part Number *	V <sub>DRM</sub> Volts	V <sub>S</sub> Volts	V <sub>DRM</sub> Volt	V <sub>S</sub> Volts	V <sub>T</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, 1-3		Pins 4-5, 5-6, 4-6						
P1556U_L	130	180	130	180	8	5	800	2.2	150
P1806U_L	150	210	150	210	8	5	800	2.2	150
P2106U_L	170	250	170	250	8	5	800	2.2	150
P2356U_L	200	270	200	270	8	5	800	2.2	150
P2706U_L	230	300	230	300	8	5	800	2.2	150
P3206U_L	270	350	270	350	8	5	800	2.2	150
P3406U_L	300	400	300	400	8	5	800	2.2	150
P5106U_L	420	600	420	600	8	5	800	2.2	150

Part Number *	V <sub>DRM</sub> Volts	V <sub>S</sub> Volts	V <sub>DRM</sub> Volt	V <sub>S</sub> Volts	V <sub>T</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		Pins 4-6, 1-3						
A2106U_6L	170	250	50	80	3.5	5	800	2.2	120
A5030U_6L	400	550	270	340	3.5	5	800	2.2	150

\* "L" in part number indicates RoHS compliance. For non-RoHS compliant device, delete "L" from part number.  
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<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.
- Listed *SIDACTor* devices are bi-directional. All electrical parameters and surge ratings apply to forward and reverse polarities.
- V<sub>DRM</sub> is measured at I<sub>DRM</sub>.
- V<sub>S</sub> is 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.
- Device is designed to meet balance requirements of GTS 8700 and GR 974.

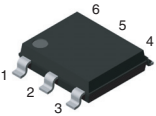
### Surge Ratings in Amps

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
B	25	250	250	150	100	100	125	80	100	30	500
C	50	500	400	200	150	200	175	100	200	50	500

\* Current waveform in  $\mu$ s

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

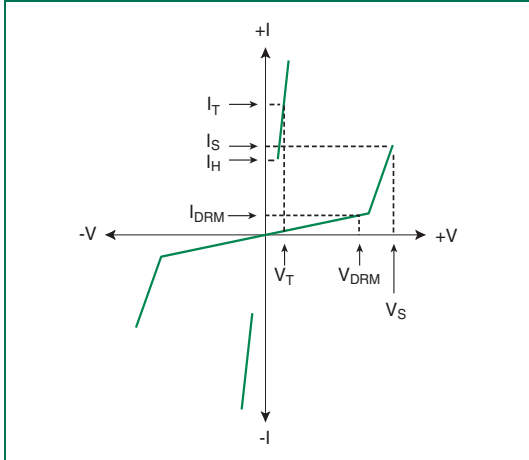
**Thermal Considerations**

Package	Symbol	Parameter	Value	Unit
	T <sub>J</sub>	Operating Junction Temperature Range	-40 to +125	°C
	T <sub>S</sub>	Storage Temperature Range	-65 to +150	°C
	R <sub>θJA</sub>	Thermal Resistance: Junction to Ambient	60	°C/W

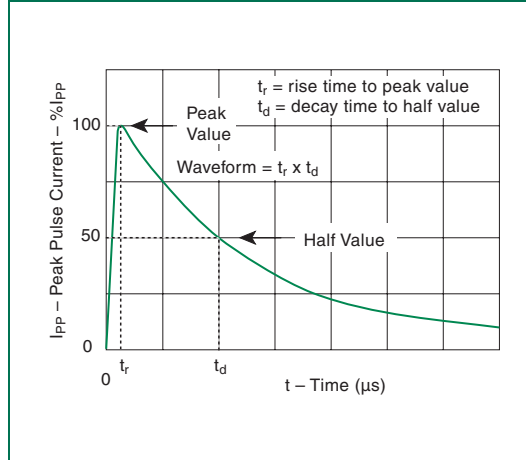
**Capacitance Values**

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
P1556UAL	10	30	10	45
P1556UBL	15	60	25	95
P1556UCL	20	60	30	55
P1806UAL	10	55	20	85
P1806UBL	15	55	25	85
P1806UCL	15	55	30	85
P2106UAL	15	55	15	85
P2106UBL	20	55	20	85
P2106UCL	15	55	30	85
P2356UAL	15	50	15	75
P2356UBL	15	50	20	75
P2356UCL	15	50	25	75
P2706UAL	10	50	15	75
P2706UBL	10	50	20	75
P2706UCL	15	50	25	75
P3206UAL	10	45	15	70
P3206UBL	10	45	20	70
P3206UCL	25	45	45	70
P3406UAL	10	45	15	65
P3406UBL	10	45	15	65
P3406UCL	15	45	20	65
P5106UAL	10	45	15	35
P5106UBL	10	45	15	35
P5106UCL	30	45	25	40
A2106UA6L	10	30	20	60
A2106UB6L	10	30	20	60
A2106UC6L	10	45	20	70
A5030UA6L	10	45	15	35
A5030UB6L	10	45	15	35
A5030UC6L	20	35	25	40

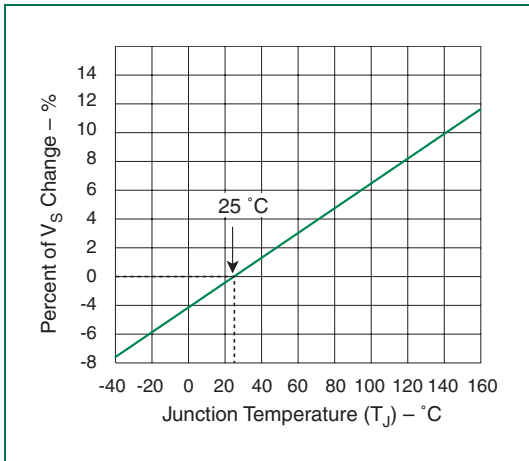
 Note: Off-state capacitance (C<sub>O</sub>) is measured at 1 MHz with a 2 V bias.



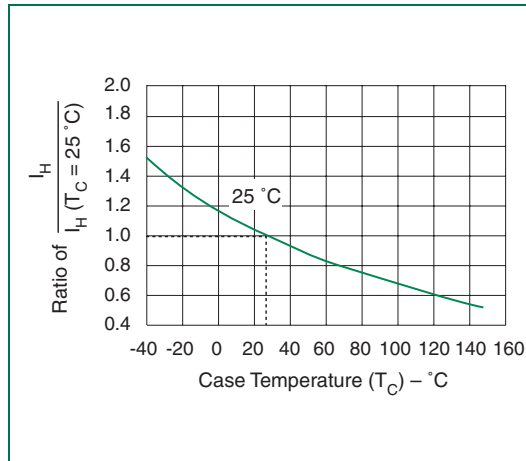
V-I Characteristics



$t_r \times t_d$  Pulse Waveform



Normalized  $V_S$  Change versus Junction Temperature



Normalized DC Holding Current versus Case Temperature