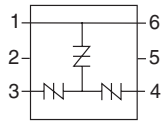


## Balanced Three-chip *SIDACtor*<sup>®</sup> Device



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).

SIDACtor Devices

### Electrical Parameters

Part Number *	V <sub>DRM</sub> Volts	V <sub>S</sub> Volts	V <sub>DRM</sub> Volts	V <sub>S</sub> Volts	V <sub>T</sub> Volts	I <sub>DRM</sub> μAmps	I <sub>S</sub> mAmps	I <sub>T</sub> Amps	I <sub>H</sub> mAmps
	Pins 1-3, 1-4		Pins 3-4						
P1553U_L	130	180	130	180	8	5	800	2.2	150
P1803U_L	150	210	150	210	8	5	800	2.2	150
P2103U_L	170	250	170	250	8	5	800	2.2	150
P2353U_L	200	270	200	270	8	5	800	2.2	150
P2703U_L	230	300	230	300	8	5	800	2.2	150
P3203U_L	270	350	270	350	8	5	800	2.2	150
P3403U_L	300	400	300	400	8	5	800	2.2	150
P5103U_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> Volts	V <sub>S</sub> Volts	V <sub>T</sub> Volts	I <sub>DRM</sub> μAmps	I <sub>S</sub> mAmps	I <sub>T</sub> Amps	I <sub>H</sub> mAmps
	Pins 1-3, 1-4		Pins 3-4						
A2106U_3L **	170	250	50	80	8	5	800	2.2	120
A5030U_3L **	400	550	270	340	8	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”, “UB”, and “UC” surge ratings, see table below.

\*\* Asymmetrical

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/μs.
- 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.

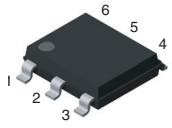
### Surge Ratings in Amps

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/μs
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 μs

\*\* Voltage waveform in μs

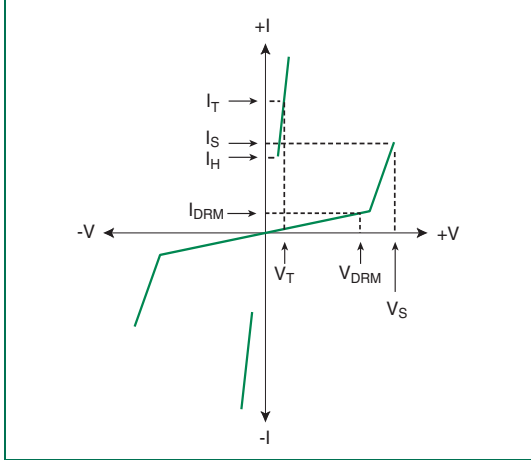
**Thermal Considerations**

Package	Symbol	Parameter	Value	Unit
 Modified MS-013	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

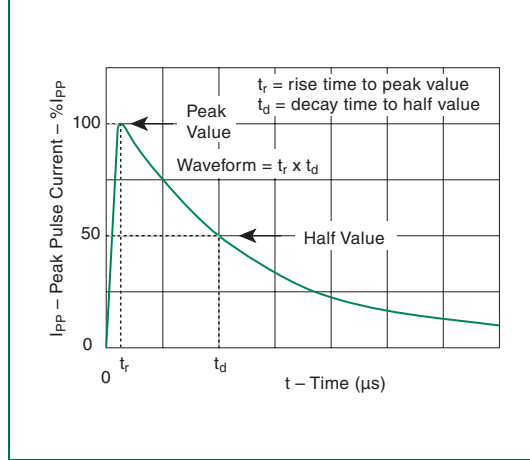
**Capacitance Values**

Part Number	pF Pin 3-4 Tip-Ring		pF Pin 1-3 (4-6) Tip-Ground, Ring-Ground	
	MIN	MAX	MIN	MAX
P1553UAL	10	95	10	60
P1553UBL	25	95	15	60
P1553UCL	30	95	20	60
P1803UAL	20	85	10	55
P1803UBL	25	85	15	55
P1803UCL	30	85	15	55
P2103UAL	15	85	10	55
P2103UBL	20	85	10	55
P2103UCL	30	85	15	55
P2353UAL	15	75	10	50
P2353UBL	20	75	10	50
P2353UCL	25	75	15	50
P2703UAL	15	75	10	50
P2703UBL	20	75	10	50
P2703UCL	25	75	15	50
P3203UAL	15	70	10	45
P3203UBL	20	70	10	45
P3203UCL	45	70	25	45
P3403UAL	15	65	10	45
P3403UBL	15	65	10	45
P3403UCL	20	65	15	45
P5103UAL	10	60	10	40
P5103UBL	15	60	10	40
P5103UCL	20	60	10	40
A2106UA3L	20	70	10	45
A2106UB3L	20	70	10	45
A2106UC3L	20	70	10	45
A5030UA3L	15	60	10	40
A5030UB3L	15	60	10	40
A5030UC3L	30	60	25	40

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

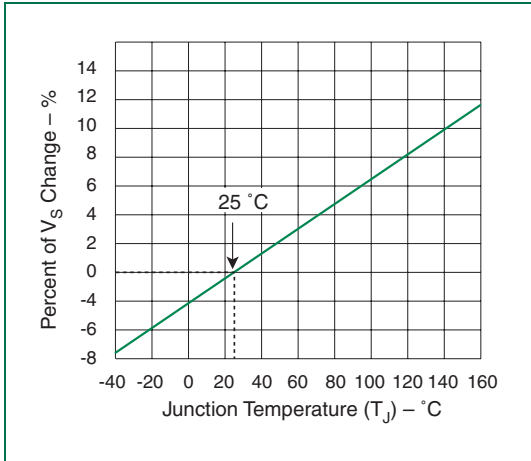


V-I Characteristics

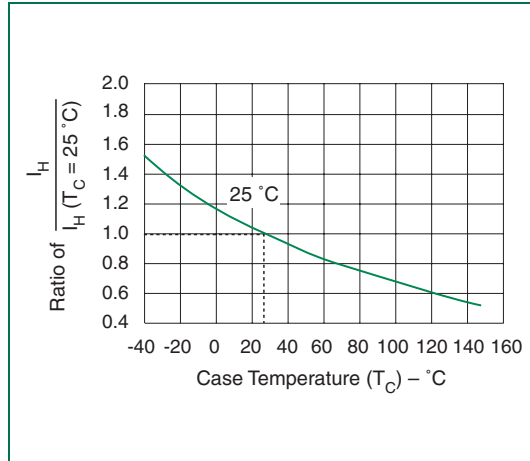


$t_r \times t_d$  Pulse Waveform

SIDACtor Devices



Normalized  $V_S$  Change versus Junction Temperature



Normalized DC Holding Current versus Case Temperature