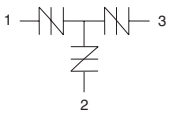
Balanced Three-chip *SIDACtor*® Device

RoHS

Littelfuse



This three-chip *SIDACtor* solution offers a guaranteed balanced protection, based on a Littelfuse patent (US Patent 4,905,119). The 'Y' configuration offers identical metallic and longitudinal protection in one through-hole modified TO-220 package. For primary protection applications, devices with higher holding current and integrated failsafe options are available.

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_{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
	Pins 1-2, 2-3		Pins 1-3						
P1553A_L	130	180	130	180	8	5	800	2.2	150
P1803A_L	150	210	150	210	8	5	800	2.2	150
P2103A_L	170	250	170	250	8	5	800	2.2	150
P2353A_L	200	270	200	270	8	5	800	2.2	150
P2703A_L	230	300	230	300	8	5	800	2.2	150
P3203A_L	270	350	270	350	8	5	800	2.2	150
P3403A_L	300	400	300	400	8	5	800	2.2	150
P5103A_L	420	600	420	600	8	5	800	2.2	150
A2106A_3L **	170	250	50	80	8	5	800	2.2	120
A5030A_3L **	400	550	270	340	8	5	800	2.2	150

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

** Asymmetrical

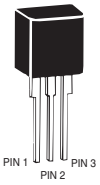
General Notes:
- All measurements are made at an ambient temperature of 25 °C. I_{PP} applies to -40 °C through +85 °C temperature range.
- I_{PP} is a repetitive surge rating and is guaranteed for the life of the product.
- Listed *SIDACtor* devices are bi-directional. All electrical parameters and 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.
- Device is designed to meet balance requirements of GTS 8700 and GR 974.

Surge Ratings in Amps

Series	I_{PP}									I_{TSM}	di/dt
	0.2x310 * 0.5x700 **	2x10 * 2x10 **	8x20 * 1.2x50 **	10x160 * 10x160 **	10x560 * 10x560 **	5x320 * 9x720 **	10x360 * 10x360 **	10x1000 * 10x1000 **	5x310 * 10x700 **	50 / 60 Hz	Amps
	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

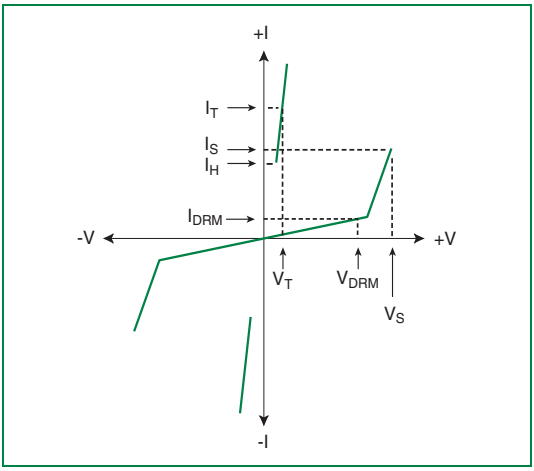
Package	Symbol	Parameter	Value	Unit
Modified TO-220 	T_J	Operating Junction Temperature Range	-40 to +150	°C
	T_S	Storage Temperature Range	-65 to +150	°C
	$R_{\theta JA}$	Thermal Resistance: Junction to Ambient	50	°C/W

Capacitance Values

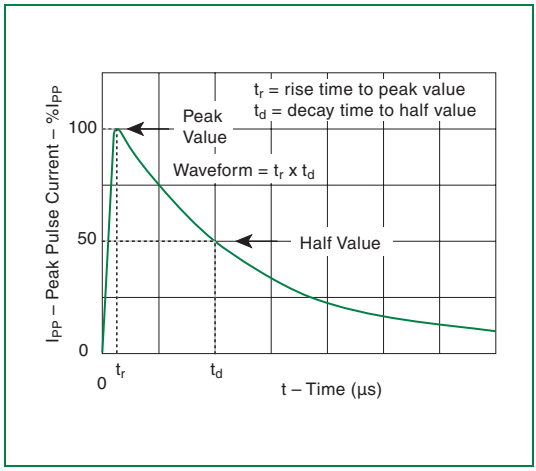
Part Number	pF Pin 1-2 / 3-2 Tip-Ground, Ring-Ground		pF Pin 1-3 Tip-Ring	
	MIN	MAX	MIN	MAX
P1553AAL	10	45	10	30
P1553ABL	25	95	15	60
P1553ACL	30	95	20	60
P1803AAL	20	40	10	30
P1803ABL	25	85	15	55
P1803ACL	30	85	15	55
P2103AAL	15	35	10	25
P2103ABL	20	85	10	55
P2103ACL	30	85	15	55
P2353AAL	15	35	10	25
P2353ABL	20	75	15	50
P2353ACL	25	75	15	50
P2703AAL	15	35	10	25
P2703ABL	20	75	10	50
P2703ACL	25	75	15	50
P3203AAL	15	30	10	20
P3203ABL	20	70	10	45
P3203ACL	25	70	15	45
P3403AAL	15	30	10	20
P3403ABL	15	65	10	45
P3403ACL	20	65	15	45
P5103AAL	10	60	10	40
P5103ABL	15	60	10	40
P5103ACL	20	60	10	40
A2106AA3L	15	35	10	45
A2106AB3L	20	35	10	45
A2106AC3L	30	45	15	45
A5030AA3L	15	35	25	40
A5030AB3L	20	35	25	40
A5030AC3L	30	45	25	40

Note: Off-state capacitance (C_O) is measured at 1 MHz with a 2 V bias.

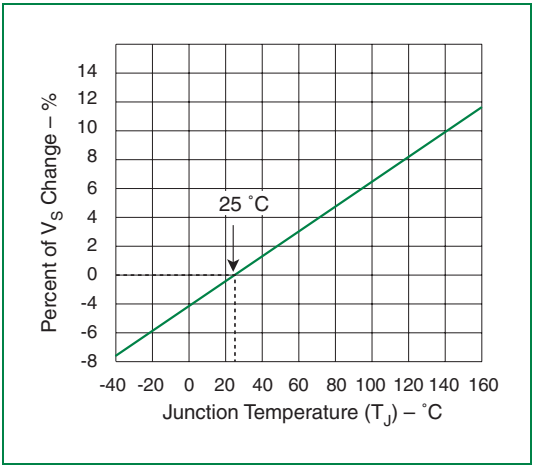
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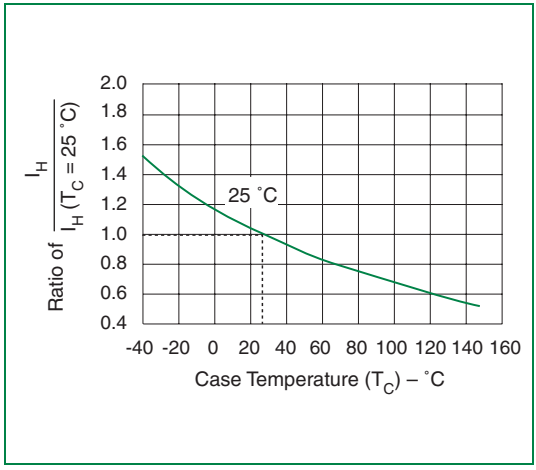
V-I Characteristics



t_r x t_d Pulse Waveform



Normalized V_S Change versus Junction Temperature



Normalized DC Holding Current versus Case Temperature