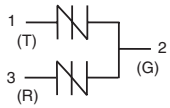
Two-chip MicroCapacitance (MC) *SIDACtor*® Device

RoHS

Littelfuse



This two-chip MicroCapacitance *SIDACtor* design provides a through-hole technology protection solution. It is intended for telecom applications that do not require a balanced solution. 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, 3-2		Pins 1-3						
P0302AAMCL	6	25	12	50	4	5	800	2.2	50
P0602AAMCL	25	40	50	80	4	5	800	2.2	50

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, 3-2		Pins 1-3						
P0602ACMCL	25	40	50	80	4	5	800	2.2	50
P1402ACMCL	58	77	116	154	4	5	800	2.2	150
P1602ACMCL	65	95	130	190	4	5	800	2.2	150
P2202ACMCL	90	130	180	260	4	5	800	2.2	150
P2702ACMCL	120	160	240	320	4	5	800	2.2	150
P3002ACMCL	140	180	280	360	4	5	800	2.2	150
P3602ACMCL	170	220	340	440	4	5	800	2.2	150
P4202ACMCL	190	250	380	500	4	5	800	2.2	150
P4802ACMCL	220	300	440	600	4	5	800	2.2	150
P6002ACMCL	275	350	550	700	4	5	800	2.2	150

* **"L" in part number indicates RoHS compliance.** For non-RoHS compliant device, delete "L" from part number.
For 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.
- 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.

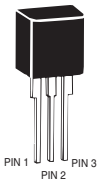
Surge Ratings in Amps

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/µs
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 µs
** Voltage waveform in µs

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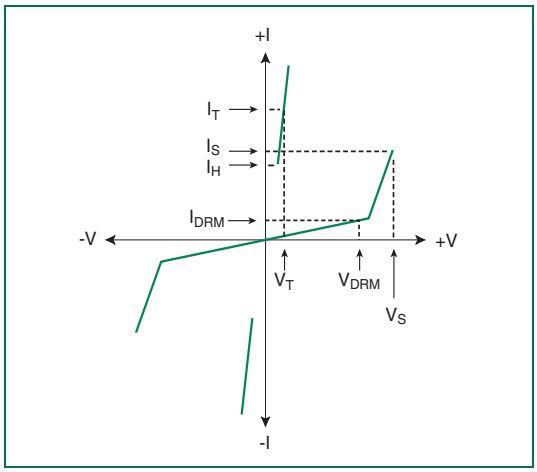
Thermal Considerations

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

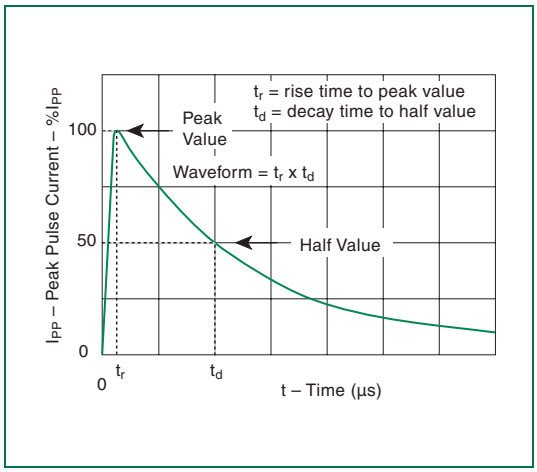
Capacitance Values

Part Number	pF Pin 1-2 / 3-2 Tip-Ground, Ring-Ground		pF Pin 1-3 Tip-Ring	
	MIN	MAX	MIN	MAX
P0302AAMCL	25	55	15	35
P0602AAMCL	15	35	10	20
P0602ACMCL	25	45	10	25
P1402ACMCL	40	60	20	35
P1602ACMCL	35	55	20	35
P2202ACMCL	45	70	25	40
P2702ACMCL	40	60	20	35
P3002ACMCL	35	55	20	35
P3602ACMCL	35	50	15	30
P4202ACMCL	30	50	15	30
P4802ACMCL	30	45	15	30
P6002ACMCL	30	45	15	25

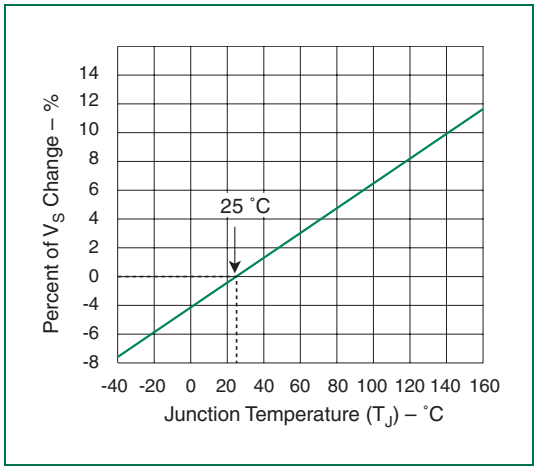
Note: Off-state capacitance (C_O) is measured at 1 MHz with a 2 V bias.



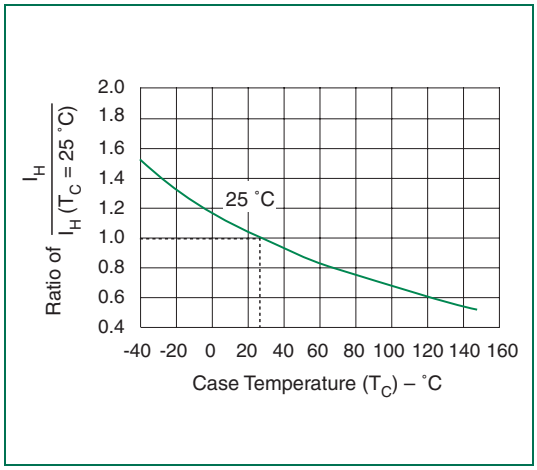
V-I Characteristics



t_r x t_d Pulse Waveform



Normalized V_S Change versus Junction Temperature



Normalized DC Holding Current versus Case Temperature