MicroCapacitance (MC) SC *SIDACtor*® Device

RoHS

Littelfuse

These DO-214AA SCMC *SIDACtor* devices are intended for applications sensitive to load values. Typically, high speed connections, such as xDSL and T1/E1, require a lower capacitance. C_O values for the MicroCapacitance device are 40 percent lower than a standard SC part.

This SCMC *SIDACtor* series enables equipment to comply with various regulatory requirements including GR 1089, IEC 60950, UL 60950, TIA-968-A (formerly known as FCC Part 68), and ITU K.20, K.21, and K.45.

Electrical Parameters

Part Number *	V_{DRM} Volts	V_S Volts	V_T Volts	I_{DRM} µAmps	I_S mAmps	I_T Amps	I_H mAmps
P0080SCMCL	6	25	4	5	800	2.2	50
P0220SCMCL	15	32	4	5	800	2.2	50
P0300SCMCL	25	40	4	5	800	2.2	50
P0640SCMCL	58	77	4	5	800	2.2	150
P0720SCMCL	65	88	4	5	800	2.2	150
P0900SCMCL	75	98	4	5	800	2.2	150
P1100SCMCL	90	130	4	5	800	2.2	150
P1200SCMCL	100	130	4	5	800	2.2	120
P1300SCMCL	120	160	4	5	800	2.2	150
P1500SCMCL	140	180	4	5	800	2.2	150
P1800SCMCL	170	220	4	5	800	2.2	150
P2000SCMCL	180	220	4	5	800	2.2	120
P2100SCMCL	180	240	4	5	800	2.2	150
P2300SCMCL	190	260	4	5	800	2.2	150
P2500SCMCL	230	290	4	5	800	2.2	120
P2600SCMCL	220	300	4	5	800	2.2	150
P3100SCMCL	275	350	4	5	800	2.2	150
P3500SCMCL	320	400	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.

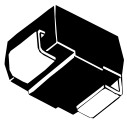
General Notes:
- All measurements are made at an ambient temperature of 25 °C. I_{PP} applies to -40 °C through +85 °C temperature range.
- I_{PP} is a repetitive surge rating and is guaranteed for the life of the product.
- Listed *SIDACtor* devices are bi-directional. All electrical parameters and 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
C	50	500	400	200	150	200	175	100	200	30	500

* Current waveform in µs
** Voltage waveform in µs

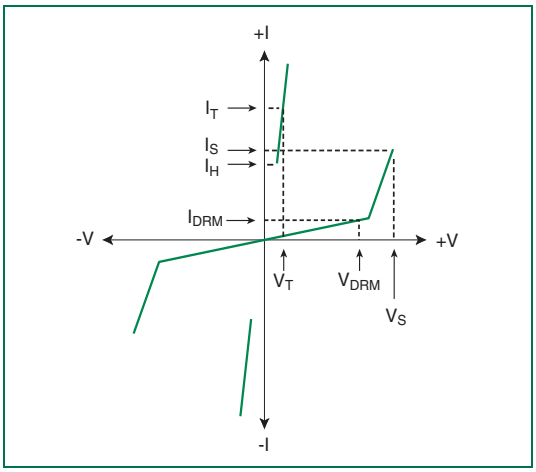
Thermal Considerations

Package	Symbol	Parameter	Value	Unit
DO-214AA 	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	90	°C/W

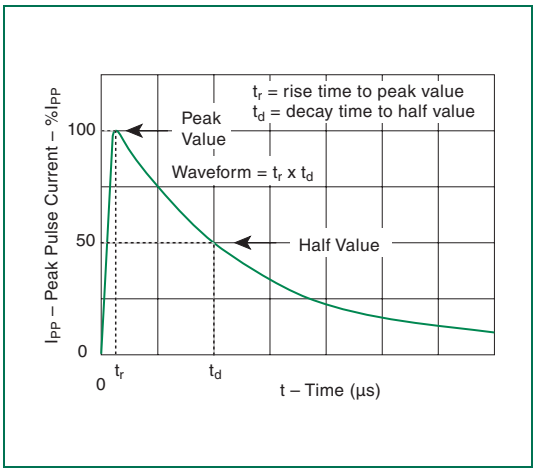
Capacitance Values

Part Number	pF	
	MIN	MAX
P0080SCMCL	35	75
P0220SCMCL	30	65
P0300SCMCL	25	45
P0640SCMCL	55	85
P0720SCMCL	50	75
P0900SCMCL	45	70
P1100SCMCL	45	70
P1200SCMCL	45	65
P1300SCMCL	40	60
P1500SCMCL	35	55
P1800SCMCL	35	50
P2000SCMCL	35	50
P2100SCMCL	30	50
P2300SCMCL	30	50
P2500SCMCL	30	45
P2600SCMCL	30	45
P3100SCMCL	30	45
P3500SCMCL	25	40

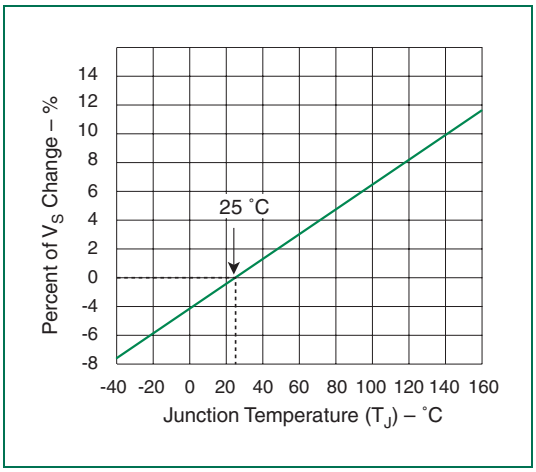
Note: Off-state capacitance (C_O) is measured at 1 MHz with a 2 V bias.



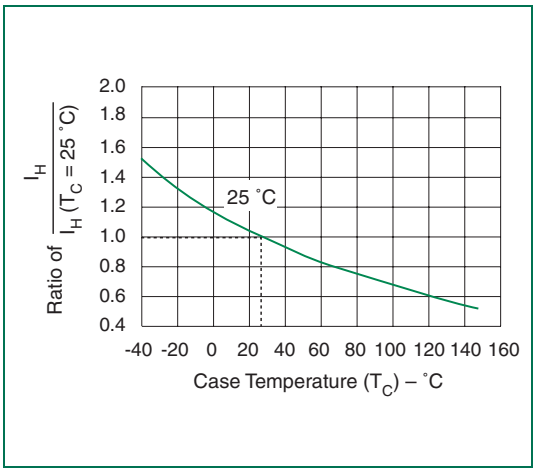
V-I Characteristics



t_r x t_d Pulse Waveform



Normalized V_S Change versus Junction Temperature



Normalized DC Holding Current versus Case Temperature