

MicroCapacitance (MC) SA *SIDACTor*[®] Device



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

This SAMC *SIDACTor* series enables 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_T Volts	I_{DRM} μ Amps	I_S mAmps	I_T Amps	I_H mAmps
P0080SAMCL	6	25	4	5	800	2.2	50
P0220SAMCL	15	32	4	5	800	2.2	50
P0300SAMCL	25	40	4	5	800	2.2	50

* "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/ μ s.
- Special voltage (V_S and V_{DRM}) and holding current (I_H) requirements are available upon request.

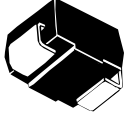
Surge Ratings in Amps

Series	I_{PP}									I_{TSM} 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/ μ s
A	20	150	150	90	50	75	75	45	75	20	500

* Current waveform in μ s

** Voltage waveform in μ s

Thermal Considerations

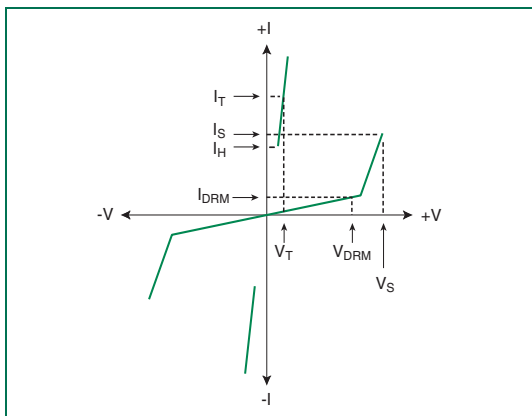
Package	Symbol	Parameter	Value	Unit
	T _J	Operating Junction Temperature Range	-40 to +150	°C
	T _S	Storage Temperature Range	-65 to +150	°C
	R _{θJA}	Thermal Resistance: Junction to Ambient	90	°C/W

Capacitance Values

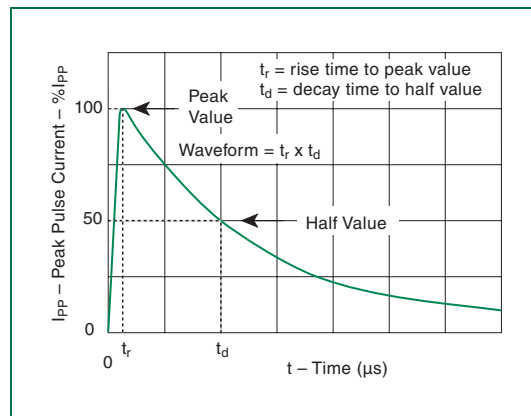
Part Number	pF	
	MIN	MAX
P0080SAMCL	25	55
P0220SAMCL	25	50
P0300SAMCL	15	35

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

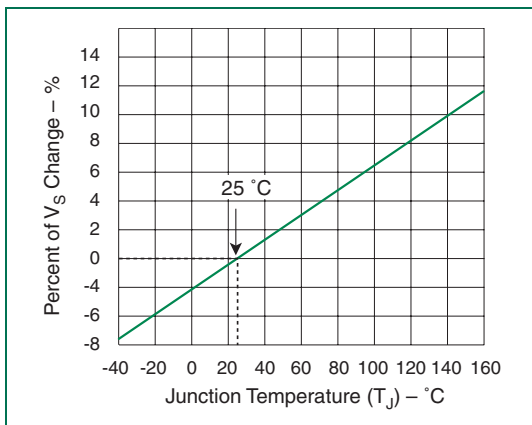
SIDACtor Devices



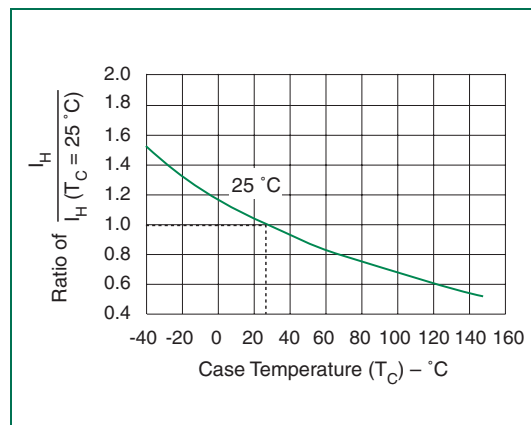
V-I Characteristics



t_r x t_d Pulse Waveform



Normalized V_S Change versus Junction Temperature



Normalized DC Holding Current versus Case Temperature