

## MicroCapacitance (MC) SA *SIDACTor*® Device

RoHS

 Littelfuse®



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	$I_{DRM}$ $\mu$ 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/ $\mu$ s.
- Special voltage ( $V_S$  and  $V_{DRM}$ ) and holding current ( $I_H$ ) requirements are available upon request.

### Surge Ratings in Amps

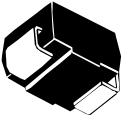
Series	$I_{PP}$										$I_{TSM}$ 50 / 60 Hz	di/dt Amps/ $\mu$ s
	0.2x310 *	2x10 *	8x20 *	10x160 *	10x560 *	5x320 *	10x360 *	10x1000 *	5x310 *	10x700 **		
	Amps	Amps	Amps	Amps	Amps	Amps	Amps	Amps	Amps	Amps		
A	20	150	150	90	50	75	75	45	75	20	500	

\* Current waveform in  $\mu$ s

\*\* Voltage waveform in  $\mu$ s



**Thermal Considerations**

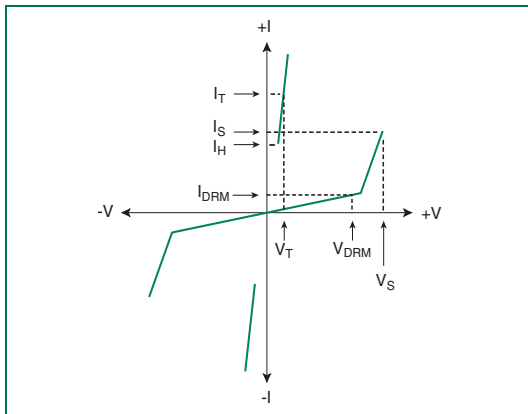
Package	Symbol	Parameter	Value	Unit
	T <sub>J</sub>	Operating Junction Temperature Range	-40 to +150	°C
	T <sub>S</sub>	Storage Temperature Range	-65 to +150	°C
	R <sub>θJA</sub>	Thermal Resistance: Junction to Ambient	90	°C/W

**Capacitance Values**

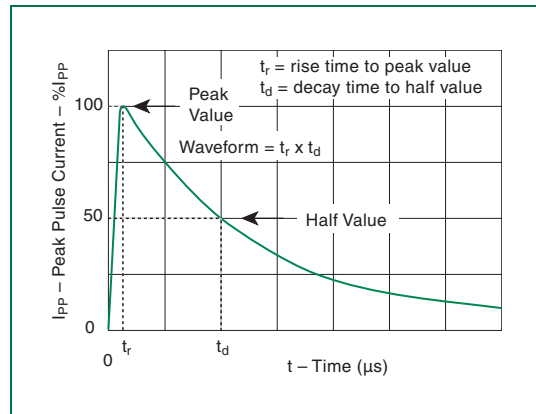
Part Number	pF	
	MIN	MAX
P0080SAMCL	25	55
P0220SAMCL	25	50
P0300SAMCL	15	35

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

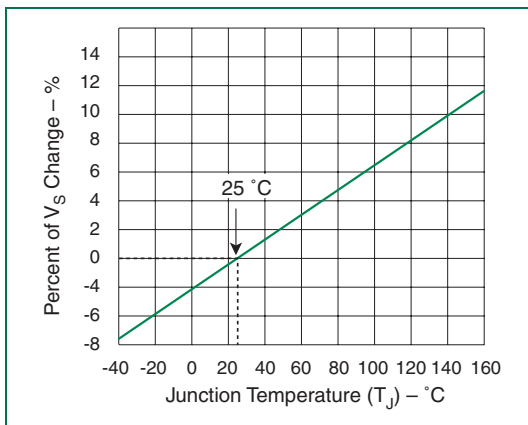
SIDACTor Devices



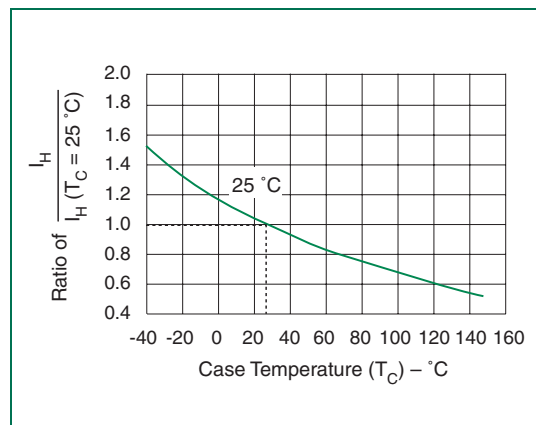
V-I Characteristics



t<sub>r</sub> x t<sub>d</sub> Pulse Waveform



Normalized V<sub>S</sub> Change versus Junction Temperature



Normalized DC Holding Current versus Case Temperature