

## MicroCapacitance (MC) SIDACtor Device



The TO-92 MC SIDACtor series is intended for applications sensitive to load values. Typically, high speed connections require a lower capacitance.  $C_O$  values for MC devices are 40% lower than a standard EC part.

This MC SIDACtor series is used to enable equipment to meet 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) without the need of series resistors.

### 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	$C_O$ pF
P0640EC MC	58	77	4	5	800	2.2	150	60
P1500EC MC	140	180	4	5	800	2.2	150	50
P2600EC MC	220	300	4	5	800	2.2	150	40
P3100EC MC	275	350	4	5	800	2.2	150	40

\* For surge ratings, see table below.


#### General Notes:

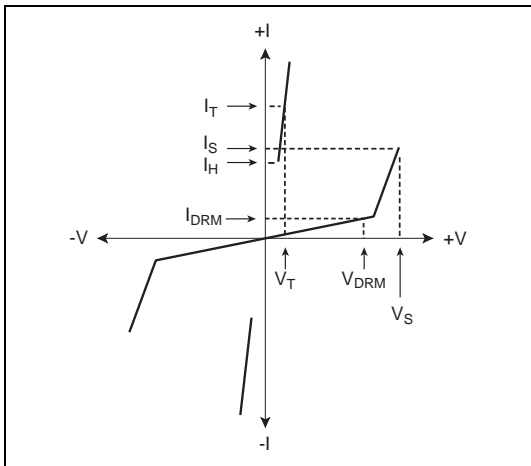
- All measurements are made at an ambient temperature of 25 °C.  $I_{PP}$  applies to -40 °C through +85 °C temperature range.
- $I_{PP}$  is a repetitive surge rating and is guaranteed for the life of the product.
- Listed SIDACtor devices are bi-directional. All electrical parameters and surge ratings 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.
- Off-state capacitance ( $C_O$ ) is measured at 1 MHz with a 2 V bias.

### Surge Ratings

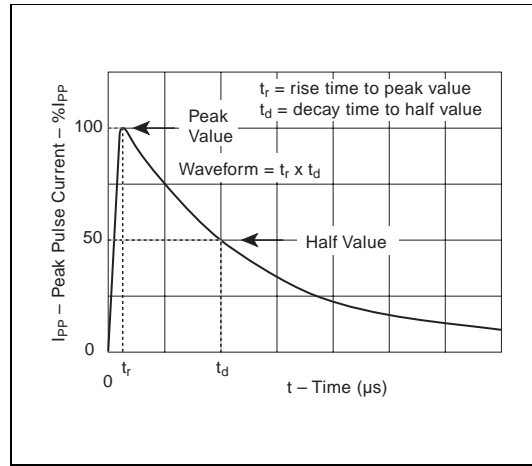
Series	$I_{PP}$ 2x10 $\mu$ s Amps	$I_{PP}$ 8x20 $\mu$ s Amps	$I_{PP}$ 10x160 $\mu$ s Amps	$I_{PP}$ 10x560 $\mu$ s Amps	$I_{PP}$ 10x1000 $\mu$ s Amps	$I_{TSM}$ 60 Hz Amps	di/dt Amps/ $\mu$ s
C	500	400	200	150	100	50	500

Thermal Considerations

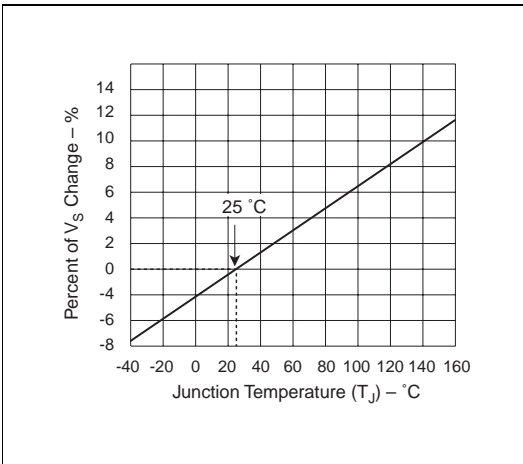
Package	Symbol	Parameter	Value	Unit
	$T_J$	Operating Junction Temperature Range	-40 to +150	$^{\circ}\text{C}$
	$T_S$	Storage Temperature Range	-65 to +150	$^{\circ}\text{C}$
	$R_{\theta JA}$	Thermal Resistance: Junction to Ambient	90	$^{\circ}\text{C/W}$



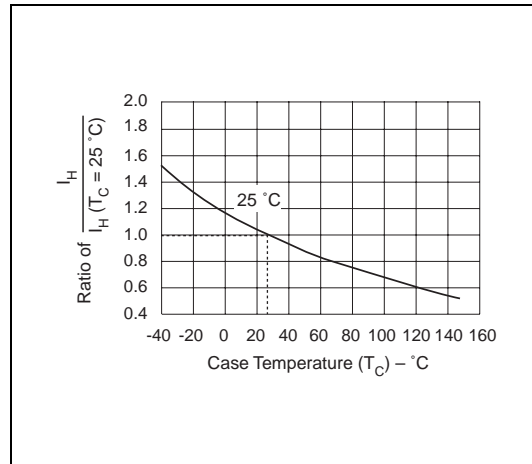
V-I Characteristics



$t_r \times t_d$  Pulse Wave-form



Normalized  $V_S$  Change versus Junction Temperature



Normalized DC Holding Current versus Case Temperature

Data Sheets