

DO-214AA

SIDACtor[®]
Solid State Overvoltage Protection

**MicroCapacitance
“MC” Series
Protector**

Features

- Lowest capacitance solid state device to meet GR1089
- 500A surge current rating meets all GR1089 and FCC Part 68 surge immunity requirements
- Meets UL and IEC 60950 creepage and clearance requirements
- Utilizes patented ion implant technology (US Patent 5,479,031) for peerless performance
- Glass passivated for superior reliability



Description

This MicroCapacitance (MC) SIDACTor solid state protection device in a DO214AA package is designed for telecommunication protection applications for modems, line cards, fax machines, etc. Additionally, the "MC" series of devices has capacitance that is approximately 40% lower than the standard "SC" series product, making it a perfect fit for today's higher speed applications.

SIDACTor devices are used to help equipment meet various regulatory requirements including: GR 1089, ITU K.20, K.21 & K.45, IEC 60950, UL 60950 and FCC Part 68.

Electrical Specifications

DO214AA SC MC

Part Number	V _{DRM} Volts	V _S Volts	V _T Volts	I _{DRM} μAmps	I _S mAmps	I _T Amps	I _H mAmps	C _O pF
*P0080SC MC	6	25	5	5	800	1	50	120
*P0300SC MC	25	40	5	5	800	1	50	120
*P0640SC MC	58	77	5	5	800	1	150	75
P0720SC MC	65	88	5	5	800	1	150	75
P0900SC MC	75	98	5	5	800	1	150	65
P1100SC MC	90	130	5	5	800	1	150	55
P1300SC MC	120	160	5	5	800	1	150	50
P1500SC MC	140	180	5	5	800	1	150	45
P1800SC MC	170	220	5	5	800	1	150	40
P2300SC MC	190	260	5	5	800	1	150	40
P2600SC MC	220	300	5	5	800	1	150	35
P3100SC MC	275	350	5	5	800	1	150	35
P3500SC MC	320	400	5	5	800	1	150	35

* These parts are not scheduled for production until Q2 2002

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 devices are bi-directional. All electrical parameters & surge ratings apply to forward and reverse polarities.
- V_{DRM} is measured at I_{DRM}.
- V_S is measured at 100V/μs.
- Special voltage (V_S & V_{DRM}) and holding current (I_H) requirements are available upon request.
- Off-state capacitance is measured at 1MHz with a 2 volt bias.

Surge Ratings

Series	I _{PP} 2x10μs Amps	I _{PP} 8x20μs Amps	I _{PP} 10x160μs Amps	I _{PP} 10x560μs Amps	I _{PP} 10x1000μs Amps	I _{TSM} 60Hz Amps	di/dt Amps/μs
SC MC	500	400	200	150	100	50	500

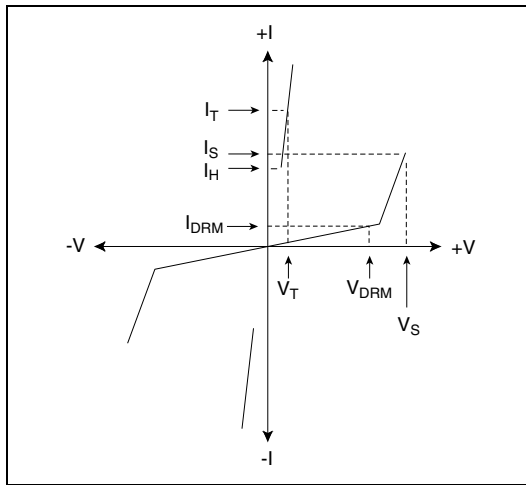
Notes:

- Surge ratings apply from -40°C to +80°C
- Surge ratings are repetitive and are guaranteed for the life of the product

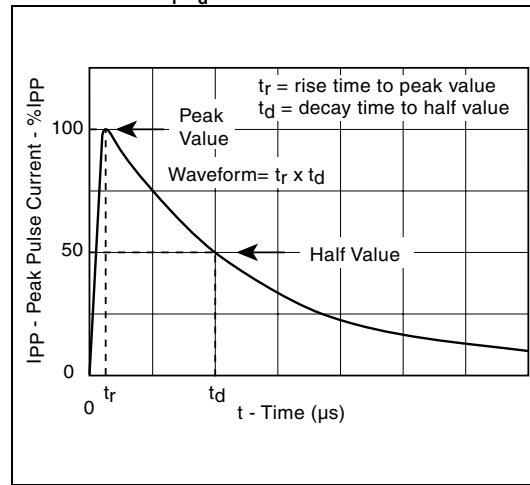
Thermal Considerations

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
	T_c	Maximum Case Temperature	+115	°C
	$R_{\theta jc}$	Thermal Resistance: junction to case	+23	°C/W
	$R_{\theta ja}$	Thermal Resistance: junction to ambient	+90	°C/W

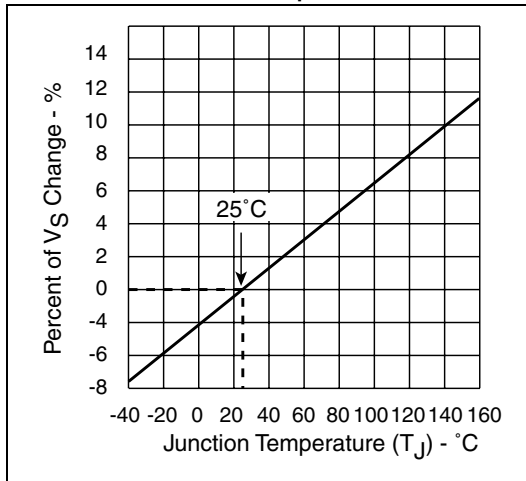
V-I Characteristics



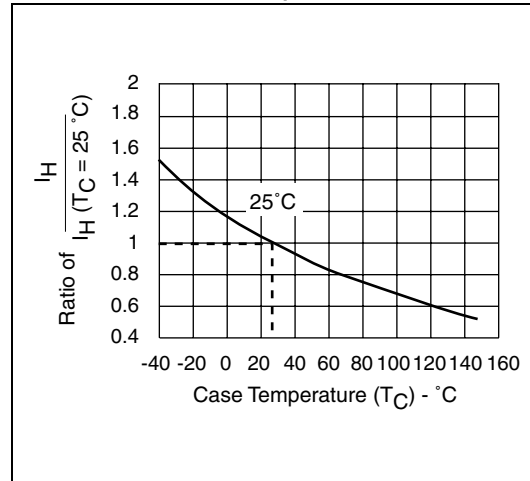
t_r, t_d Pulse Wave-form



Normalized V_S Change vs. Junction Temperature



Normalized DC Holding Current vs. Case Temperature



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Please contact the factory for further information.

Ref: Pxxx0 SC MC 011106

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SIDACtor®, Battrax®, and TeleLink®.

Teccor Electronics SIDACtor® TVS product is covered
by these and other U.S. Patents: 4,685,120 - 4,827,497
- 4,905,119 - 5,479,031 - 5,516,705

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