

## Description

Fast Delivery Time

PXXX0SCMC Series are micro capacitance SIDACtor Protection Thyristor designed to protect telecommunications equipment such as ADSL Modems,Router, , Telephone, CCTV Camera,Digital Video Record,Video Capture Card,Twisted-pair video transmitter,CATV Splitter.....Etc.

PXXX0SCMC Series SIDACtor Protection Thyristor are used to enable equipment to meet various regulatory requirements including GR 1089, ITU K.20/21,IEC 61000-4-5, YD/T 1082,YD/T 993,YD/T 950,TIA-968-A ,TIA-968-B



## Features

Compared to surge suppression using other technologies, PXXX0SCMC Series devices offer absolute surge protection regardless of the surge current available and the rate of applied voltage (dv/dt). PXXX0SCMC Series devices:

- 100% Lead-Free(RoHs Compliant )
- Cannot be damaged by voltage
- Eliminate hysteresis and heat dissipation typically found with clamping devices
- Eliminate voltage overshoot caused by fast-rising transients
- Are non-degenerative
- Have low capacitance, making them ideal for high-speed transmission equipment

## Electrical Characteristics

Parameter	Definition
$V_{DRM}$	<b>Peak Off-state Voltage</b> — maximum voltage that can be applied while maintaining off state
$V_S$	<b>Switching Voltage</b> — maximum voltage prior to switching to on state
$I_H$	<b>Holding Current</b> — minimum current required to maintain on state
$I_S$	<b>Switching Current</b> — maximum current required to switch to on state
$I_T$	<b>On-state Current</b> — maximum rated continuous on-state current
$V_T$	<b>On-state Voltage</b> — maximum voltage measured at rated on-state current
Capacitance	<b>Off-state Capacitance</b> — typical capacitance measured in off state
$I_{DRM}$	<b>Leakage Current</b> — maximum peak off-state current measured at $V_{DRM}$
$I_{PP}$	<b>Peak Pulse Current</b> — maximum rated peak impulse current
$I_{TSM}$	<b>Peak One-cycle Surge Current</b> — maximum rated one-cycle AC current
di/dt	<b>Rate of Rise of Current</b> — maximum rated value of the acceptable rate of rise in current over time

Part Number	Marking	$V_{DRM}$	$V_S$	$I_H$	$I_S$	$I_T$	$V_T$	Capacitance
		@ $I_{DRM}=5 \mu A$	@ $100V/\mu s$				@ $I_T=2.2Amps$	@ $1MHz, 2V$ bias
		$V_{min}$	$V_{max}$	$mA_{min}$	$mA_{max}$	$A_{max}$	$V_{max}$	$pF$
P0080SCMC	P008C	6	25	50	800	2.2	4	50
P0300SCMC	P03C	25	40	50	800	2.2	4	45
P0640SCMC	P06C	58	77	150	800	2.2	4	45
P0720SCMC	P07C	65	88	150	800	2.2	4	45
P0900SCMC	P09C	75	98	150	800	2.2	4	50
P1100SCMC	P11C	90	130	150	800	2.2	4	45
P1300SCMC	P13C	120	160	150	800	2.2	4	70
P1500SCMC	P15C	140	180	150	800	2.2	4	40
P1800SCMC	P18C	170	220	150	800	2.2	4	40
P2100SCMC	P21C	180	240	150	800	2.2	4	65
P2300SCMC	P23C	190	260	150	800	2.2	4	50
P2600SCMC	P26C	220	300	150	800	2.2	4	50
P3100SCMC	P31C	275	350	150	800	2.2	4	40
P3500SCMC	P35C	320	400	150	800	2.2	4	35

Notes:

-All measurements are made at an ambient temperature of 25°C .Ipp applies to -40°C through +85°C temperature range .


\*For surge ratings,see next page.

## Surge Ratings



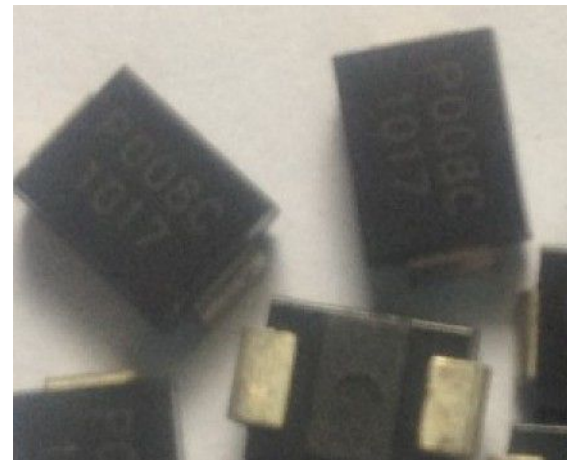
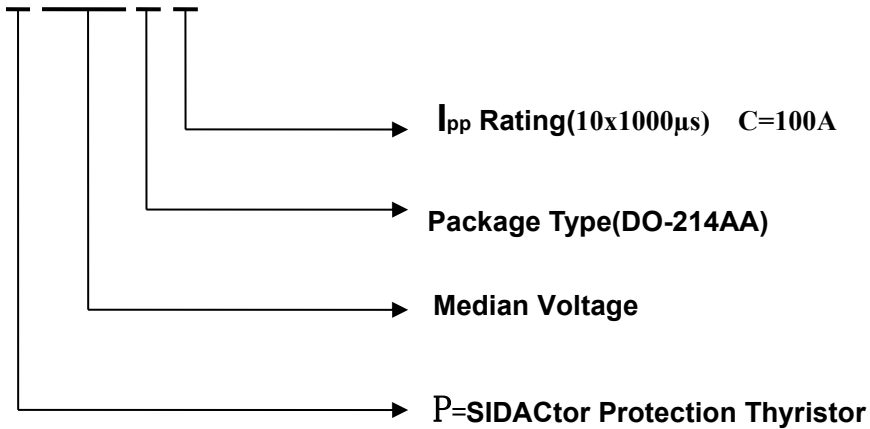
Series	I <sub>pp</sub> 2x10μs Amps	I <sub>pp</sub> 8x20μs Amps	I <sub>pp</sub> 10x160μs Amps	I <sub>pp</sub> 10x560μs Amps	I <sub>pp</sub> 10x1000μs Amps	I <sub>pp</sub> 5x320μs Amps	I <sub>pp</sub> 5x310μs Amps	I <sub>pp</sub> 10x360μs Amps	I <sub>TSM</sub> 50/60Hz Amps	di/dt Amps/μs
C	500	400	200	150	100	200	200	175	30	500

## Thermal Considerations

Package	DO-214AA/SMB	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>	Junction to Ambient on printed circuit	90	°C /W

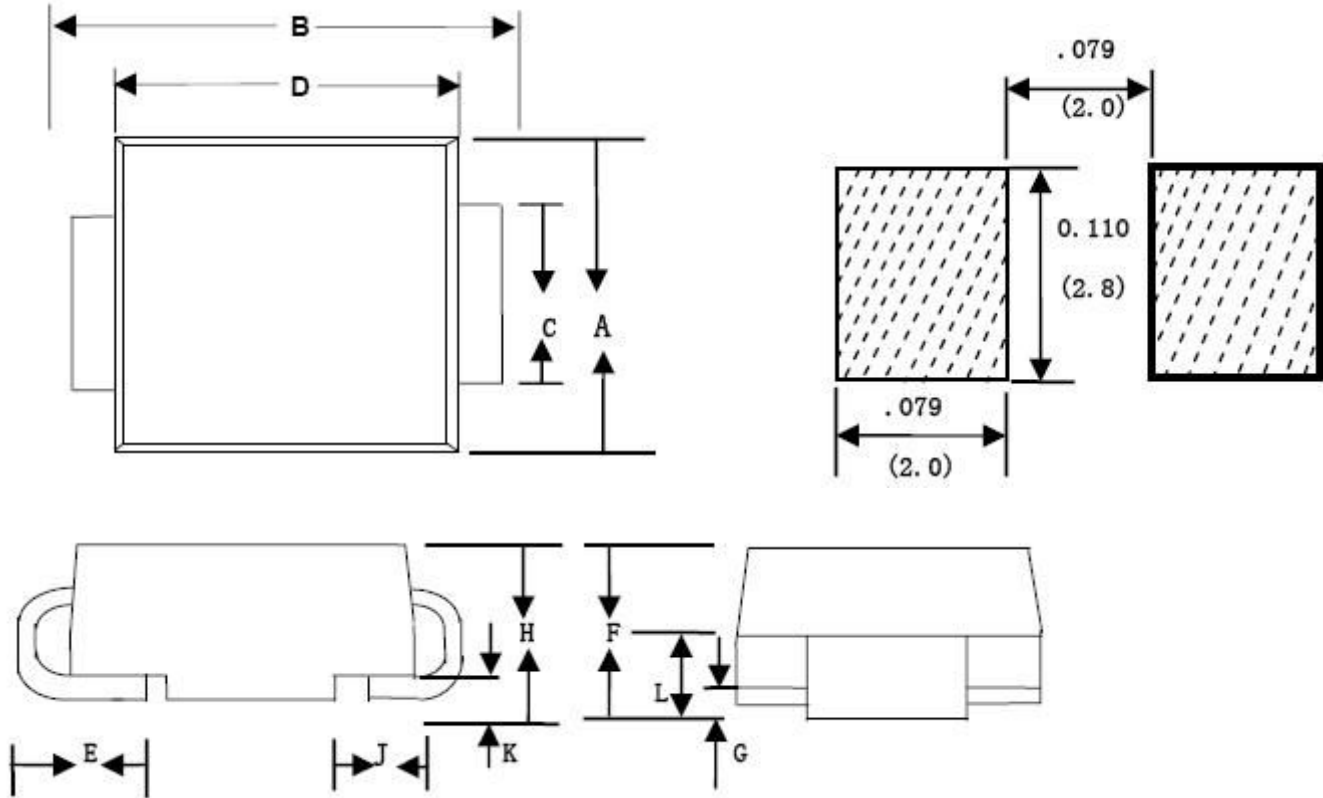
## Description of Part Number

P 0080 S C MC → (Micro Capacitance)



P0080SCMC(Marking:P008C)

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Dimension	Inches		Millimeters	
	Min	Max	Min	Max
A	0.134	0.155	3.40	3.94
B	0.205	0.22	5.21	5.59
C	0.075	0.083	1.90	2.11
D	0.166	0.185	4.22	4.70
E	0.036	0.056	0.91	1.42
F	0.073	0.087	1.85	2.2
G	0.002	0.008	0.05	0.20
H	0.077	0.094	1.95	2.40
J	0.043	0.053	1.09	1.35
K	0.008	0.014	0.20	0.35
L	0.039	0.049	0.99	1.24

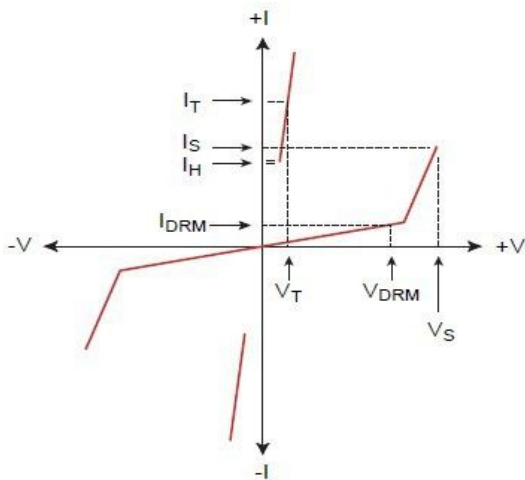
## Packing Options



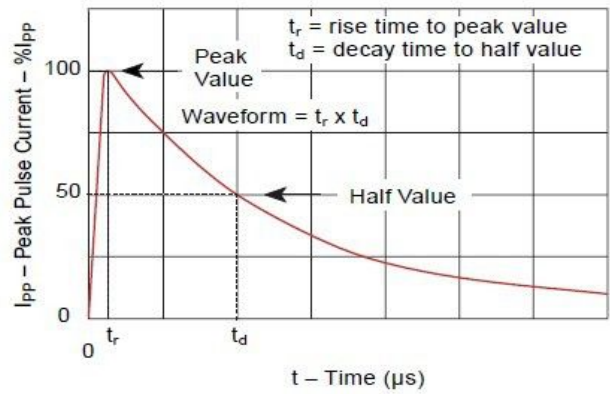
Package Type	Description	Packing Quantity	Industry Standard
SCMC	DO-214AA Reel Pack	2500 PCS	EIA-481-D

## Characteristics Curve

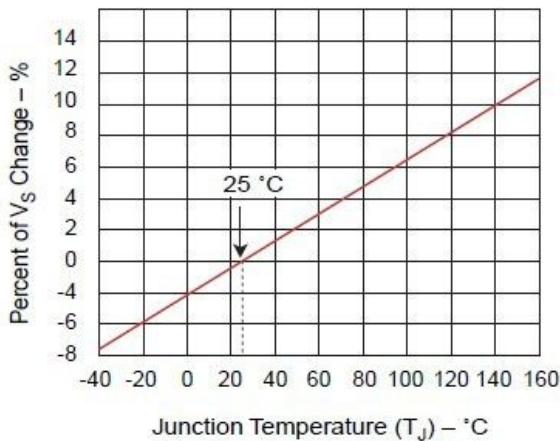
### V-I Characteristics



### Tr x Td Pulse Waveform



### Normalized Vs Change Versus Junction Temperature



### Normalized DC Holding Current Versus Case Temperature

