

## Description

**PxxA** 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.

**PxxA** 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, **PxxA** Series devices offer absolute surge protection regardless of the surge available and the rate of applied voltage (dv/dt). **PxxA** 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

## Electrical Characteristics

Part Number	V <sub>DRM</sub> @I <sub>DRM</sub> =5 μ A	V <sub>S</sub> @100V/μs	I <sub>H</sub>	I <sub>S</sub>	I <sub>T</sub>	V <sub>T</sub> @I <sub>T</sub> =2.2Amps	Capacitance @1MHz,2V bias
	V <sub>min</sub>	V <sub>max</sub>	mA <sub>min</sub>	mA <sub>max</sub>	A <sub>max</sub>	V <sub>max</sub>	pF
P008A	6	25	50	800	2.2	4	30
P18A	170	220	150	800	2.2	4	40
P23A	190	260	150	800	2.2	4	35
P26A	220	300	150	800	2.2	4	35
P31A	275	350	150	800	2.2	4	30
P35A	320	400	150	800	2.2	4	30

Notes:

-All measurements are made at an ambient temperature of 25°C .I<sub>pp</sub> applies to -40°C through +85°C temperature range .

-Off-state capacitance(C<sub>o</sub>) is typical value.

\*For surge ratings,see next page.

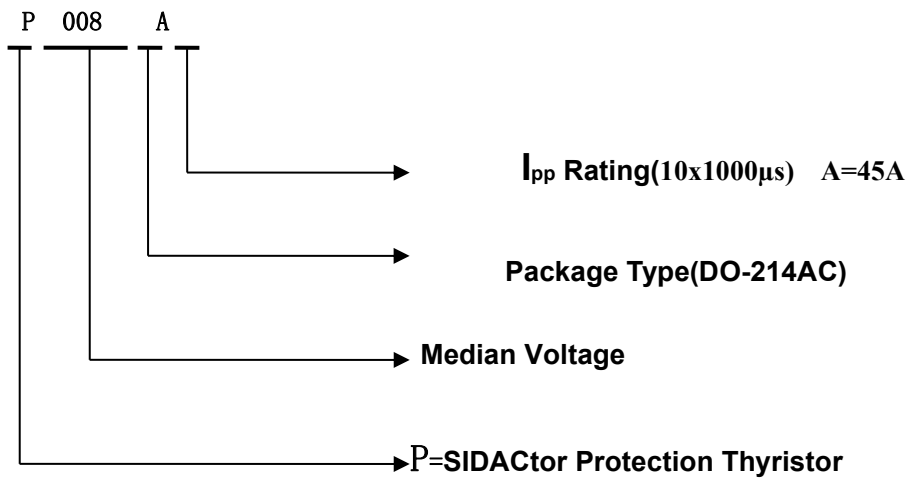
## Surge Ratings

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

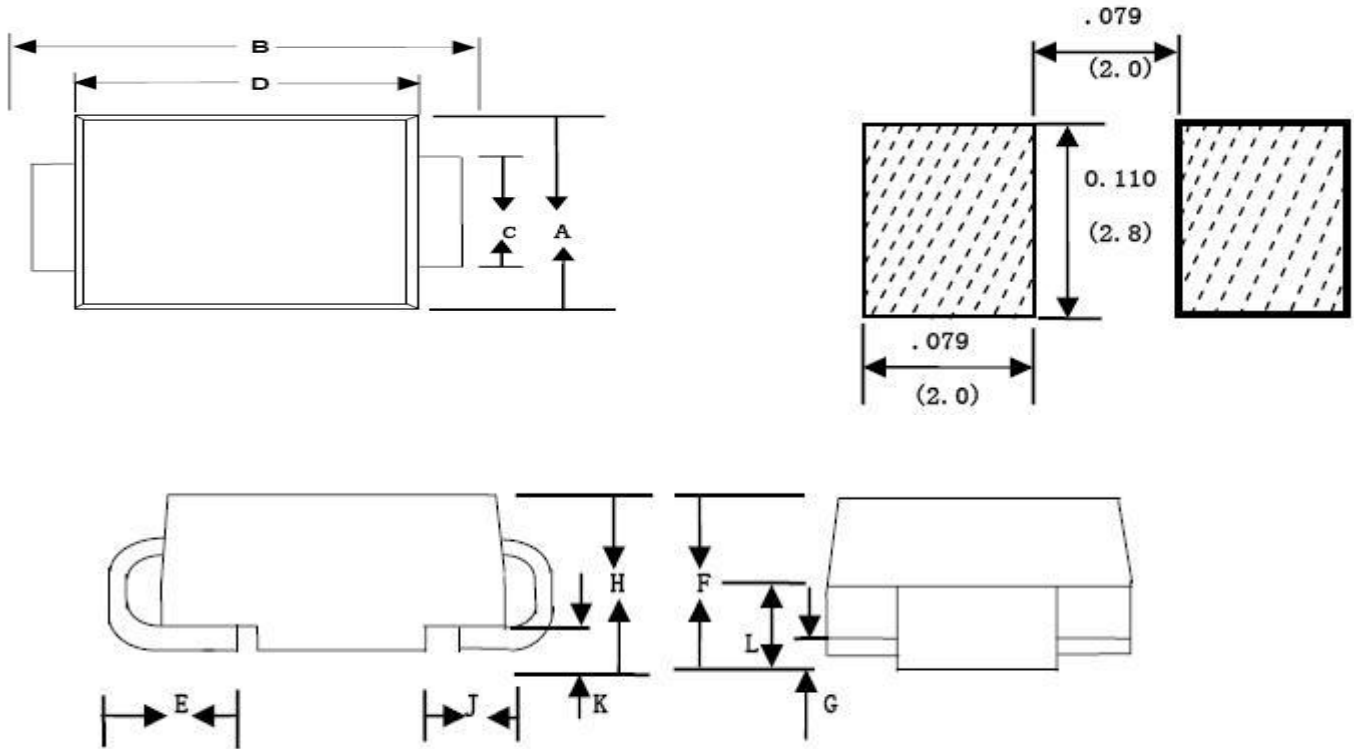
## Thermal Considerations

Package: DO-214AC/SMA	Symbol	Parameter	Value	Unit
	$T_J$	Operating Junction Temperature Range	-40 to +150	$^{\circ}C$
	$T_S$	Storage Temperature Range	-65 to +150	$^{\circ}C$
	$R_{\theta JA}$	Junction to Ambient on printed circuit	90	$^{\circ}C/W$

## Description of Part Number



Dimensions - DO-214AC



Dimension	Inches		Millimeters	
	Min	Max	Min	Max
A	0.098	0.114	2.50	2.90
B	0.188	0.208	4.80	5.28
C	0.055	0.062	1.40	1.60
D	0.157	0.181	4.00	4.60
E	0.030	0.060	0.76	1.52
F	0.078	0.096	2.00	2.44
H	0.080	0.104	2.05	2.64

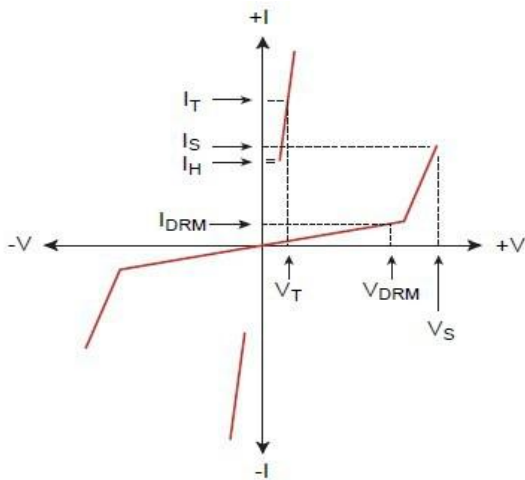
## Packing Options



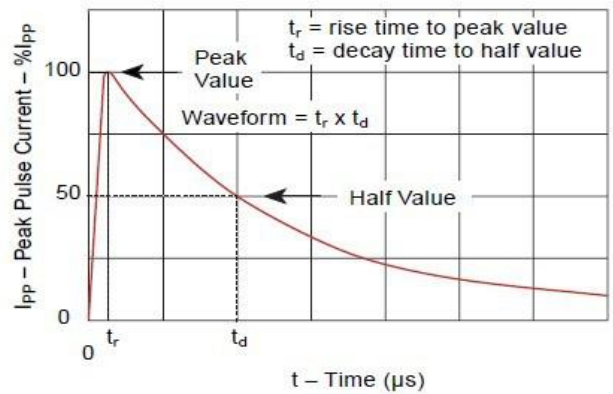
Package Type	Description	Packing Quantity	Industry Standard
A	DO-214AC Reel Pack	5000 PCS	EIA-481-D

## Characteristics Curve

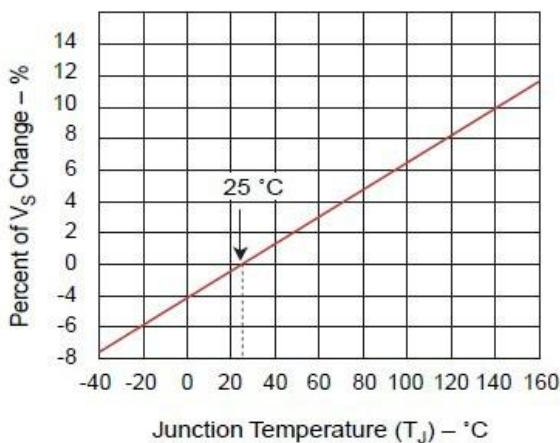
### V-I Characteristics



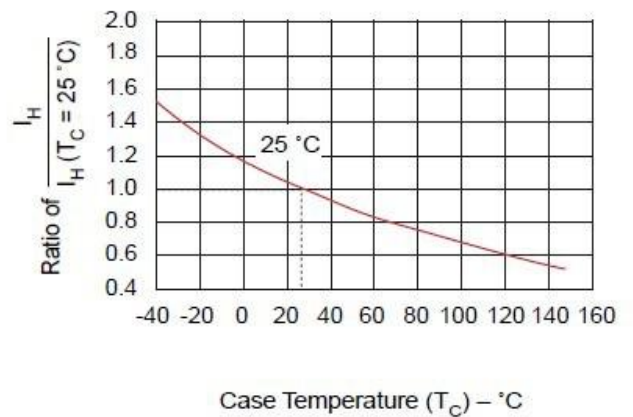
### Tr x Td Pulse Waveform



### Normalized Vs Change Versus Junction Temperature



### Normalized DC Holding Current Versus Case Temperature



Specifications are subject to change without notice

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