



## Description

Fast Delivery Time

PXXX0TA 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.

PXXX0TA 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, PXXX0TA Series devices offer absolute surge protection regardless of the surge current available and the rate of applied voltage (dv/dt). PXXX0TA 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	Marking	$V_{DRM}$ @ $I_{DRM}=5 \mu A$	$V_S$ @ $100V/\mu s$	$I_H$	$I_S$	$I_T$	$V_T$ @ $I_T=2.2Amps$	Capacitance @ $1MHz, 2V$ bias
		$V_{min}$	$V_{max}$	$mA_{min}$	$mA_{max}$	$A_{max}$	$V_{max}$	pF
<b>P0080TA</b>	P008A	6	25	50	800	2.2	4	30
<b>P1800TA</b>	P18A	170	220	150	800	2.2	4	40
<b>P2300TA</b>	P23A	190	260	150	800	2.2	4	35
<b>P2600TA</b>	P26A	220	300	150	800	2.2	4	35
<b>P3100TA</b>	P31A	275	350	150	800	2.2	4	30
<b>P3500TA</b>	P35A	320	400	150	800	2.2	4	30

Notes:

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

-Off-state capacitance(Co) is typical value.


\*For surge ratings,see next page.

### Surge Ratings

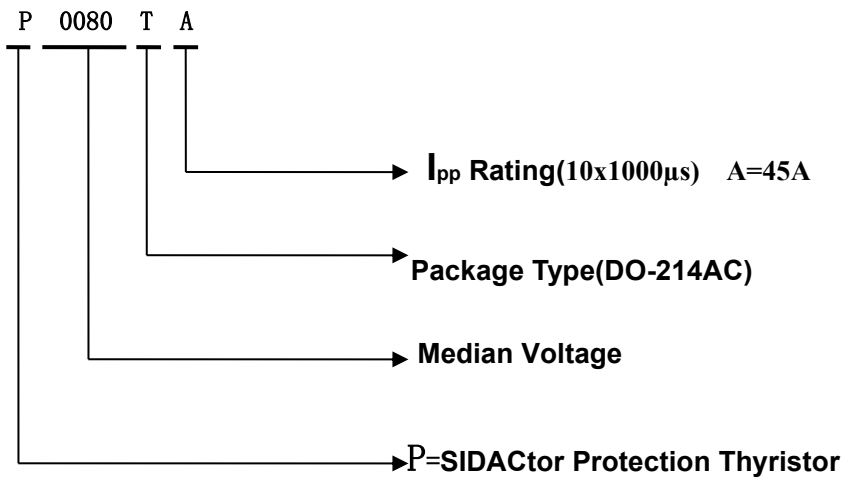


Series	$I_{pp}$ 2x10 $\mu$ s	$I_{pp}$ 8x20 $\mu$ s	$I_{pp}$ 10x160 $\mu$ s	$I_{pp}$ 10x560 $\mu$ s	$I_{pp}$ 10x1000 $\mu$ s	$I_{pp}$ 5x320 $\mu$ s	$I_{pp}$ 5x310 $\mu$ s	$I_{pp}$ 10x360 $\mu$ s	$I_{TSM}$ 50/60Hz	di/dt
	Amps	Amps	Amps	Amps	Amps	Amps	Amps	Amps	Amps	Amps/ $\mu$ s
A	150	150	90	50	45	75	75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

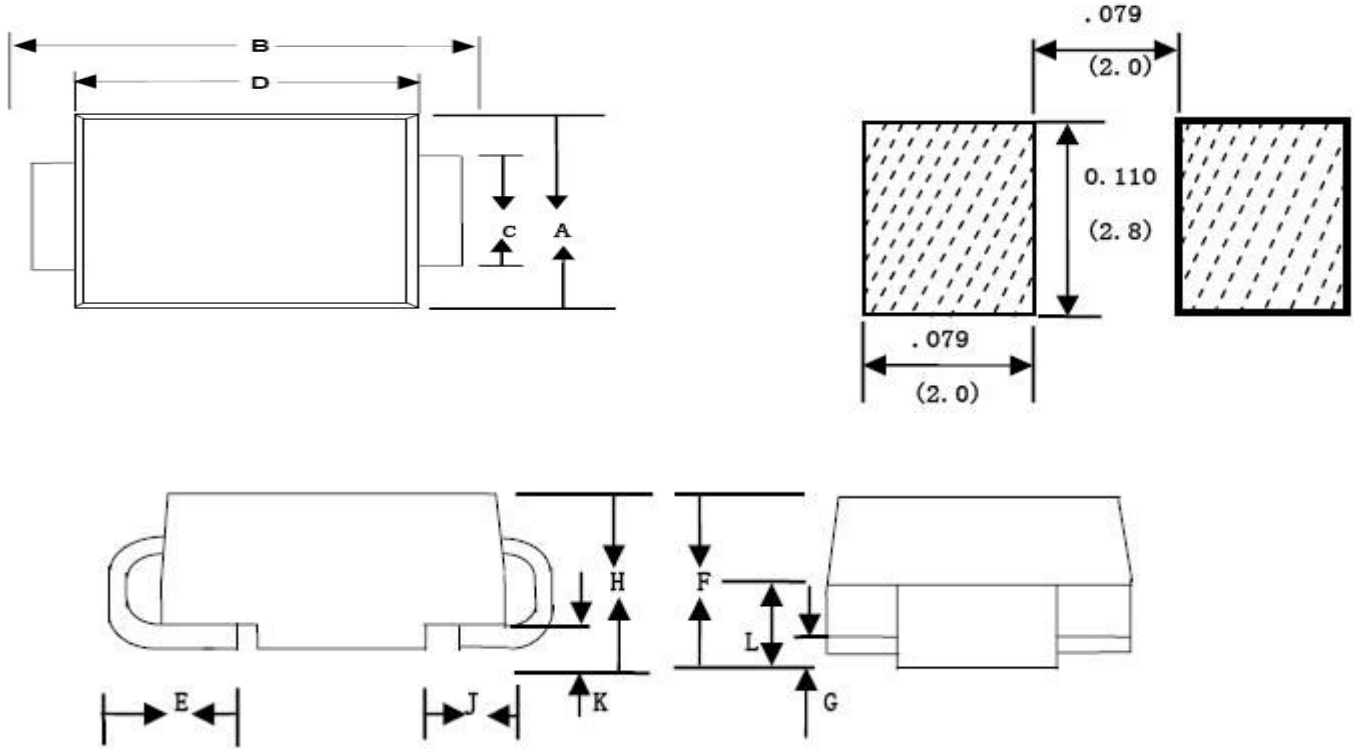
### Thermal Considerations

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 prited 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

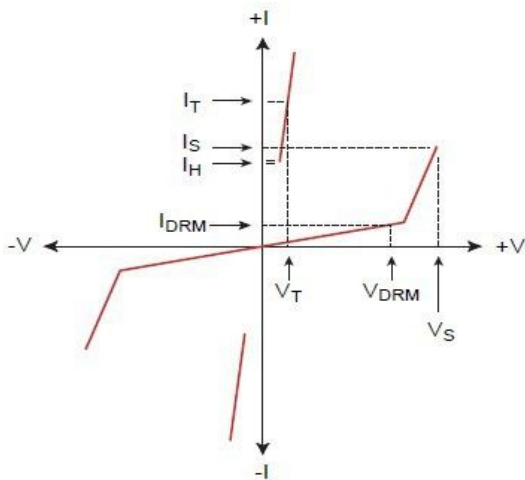
## Packing Options



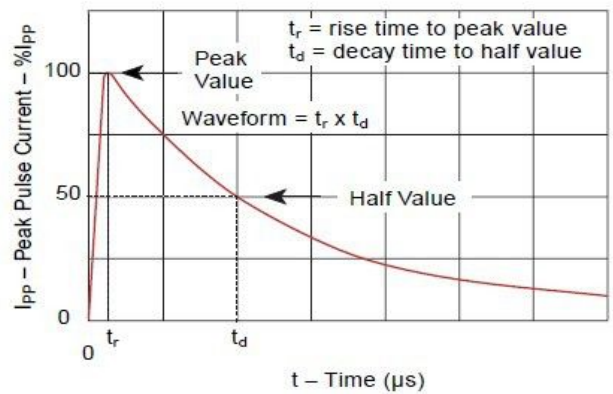
Package Type	Description	Packing Quantity	Industry Standard
T	DO-214AC Reel Pack	5000 PCS	EIA-481-D

## Characteristics Curve

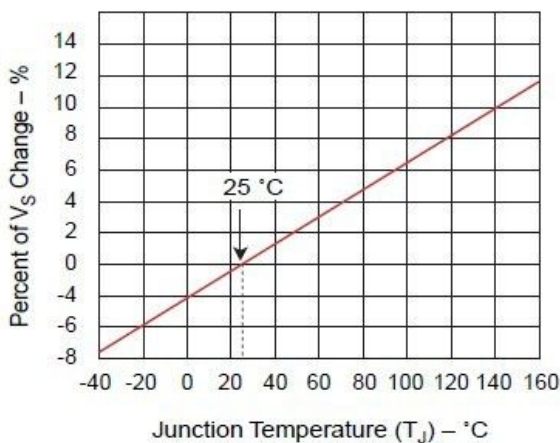
### V-I Characteristics



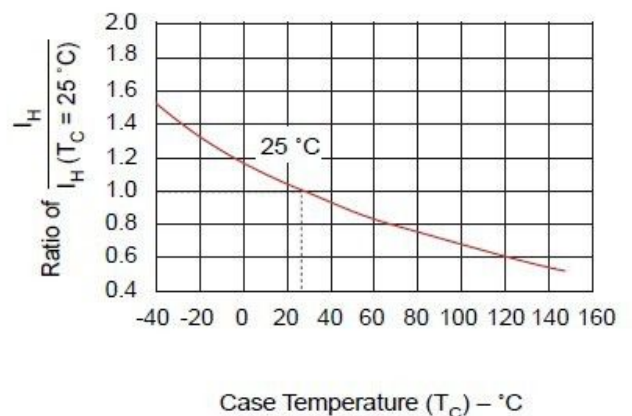
### Tr x Td Pulse Waveform



### Normalized Vs Change Versus Junction Temperature



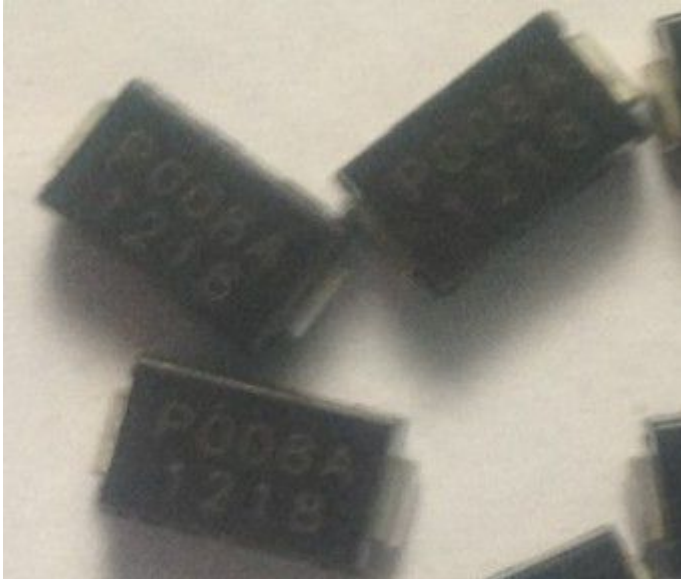
### Normalized DC Holding Current Versus Case Temperature



Sample pictures

P0080TA (Marking: P008A)

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P2300TA(Marking: P23A)

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P3100TA (Marking: P31A)

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