

SIDACtor Protection Thyristors

Package DO-214AA



Description

Fast Delivery Time

PXXA,PXXB,PXXC Series SIDACtor Protection Thyristor 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,PXXB,PXXC 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,PXXB,PXXC Series devices offer absolute surge protection regardless of the surge current available and the rate of applied voltage (dv/dt). PXXA,PXXB,PXXC 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}	Peak Off-state Voltage — maximum voltage that can be applied while maintaining off state
V_S	Switching Voltage — maximum voltage prior to switching to on state
I_H	Holding Current — minimum current required to maintain on state
I_S	Switching Current — maximum current required to switch to on state
I_T	On-state Current — maximum rated continuous on-state current
V_T	On-state Voltage — maximum voltage measured at rated on-state current
Capacitance	Off-state Capacitance — typical capacitance measured in off state
I_{DRM}	Leakage Current — maximum peak off-state current measured at V_{DRM}
I_{PP}	Peak Pulse Current — maximum rated peak impulse current
I_{TSM}	Peak One-cycle Surge Current — maximum rated one-cycle AC current
di/dt	Rate of Rise of Current — maximum rated value of the acceptable rate of rise in current over time

Electrical Characteristics



Part Number	V _{DRM} @I _{DRM} =5 μ A	V _S @100V/μs	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
P008A	6	25	50	800	2.2	4	45
P03A	25	40	50	800	2.2	4	45
P06A	58	77	150	800	2.2	4	35
P07A	65	88	150	800	2.2	4	50
P09A	75	98	150	800	2.2	4	40
P11A	90	130	150	800	2.2	4	35
P13A	120	160	150	800	2.2	4	35
P15A	140	180	150	800	2.2	4	40
P18A	170	220	150	800	2.2	4	40
P21A	180	240	150	800	2.2	4	40
P23A	190	260	150	800	2.2	4	45
P26A	220	300	150	800	2.2	4	35
P31A	275	350	150	800	2.2	4	35
P35A	320	400	150	800	2.2	4	30
P008B	6	25	50	800	2.2	4	60
P03B	25	40	50	800	2.2	4	65
P06B	58	77	150	800	2.2	4	45
P07B	65	88	150	800	2.2	4	45
P09B	75	98	150	800	2.2	4	40
P11B	90	130	150	800	2.2	4	40
P13B	120	160	150	800	2.2	4	40
P15B	140	180	150	800	2.2	4	35
P18B	170	220	150	800	2.2	4	65
P21B	180	240	150	800	2.2	4	60

Electrical Characteristics

continued



Part Number	V _{DRM} @I _{DRM} =5 μ A	V _S @100V/μs	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
P23B	190	260	150	800	2.2	4	50
P26B	220	300	150	800	2.2	4	45
P31B	275	350	150	800	2.2	4	45
P35B	320	400	150	800	2.2	4	40
P008C	6	25	50	800	2.2	4	75
P03C	25	40	50	800	2.2	4	75
P06C	58	77	150	800	2.2	4	55
P07C	65	88	150	800	2.2	4	60
P09C	75	98	150	800	2.2	4	65
P11C	90	130	150	800	2.2	4	55
P13C	120	160	150	800	2.2	4	60
P15C	140	180	150	800	2.2	4	50
P18C	170	220	150	800	2.2	4	55
P21C	180	240	150	800	2.2	4	85
P23C	190	260	150	800	2.2	4	65
P26C	220	300	150	800	2.2	4	65
P31C	275	350	150	800	2.2	4	55
P35C	320	400	150	800	2.2	4	50
P45C	400	540	150	800	2.2	4	45

Notes:

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

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

*For surge ratings,see next page.

Surge Ratings

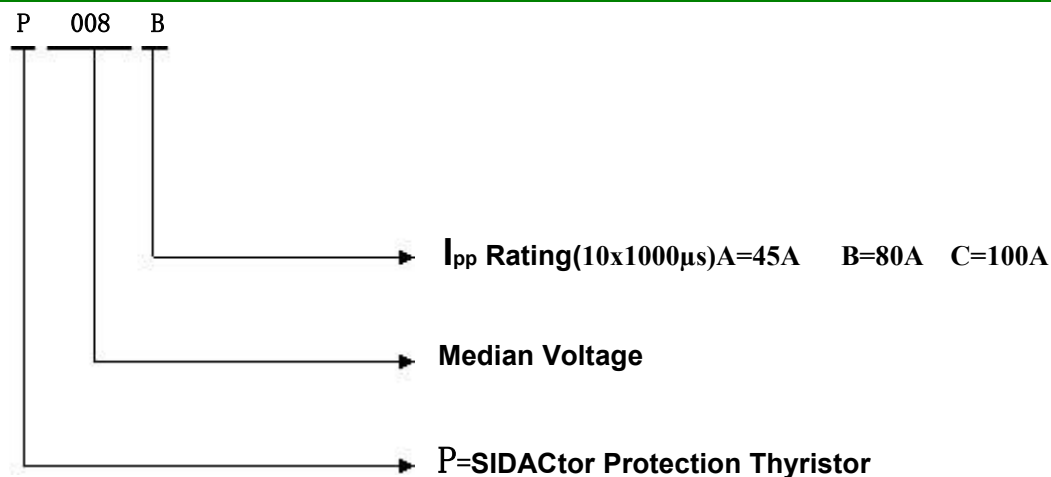


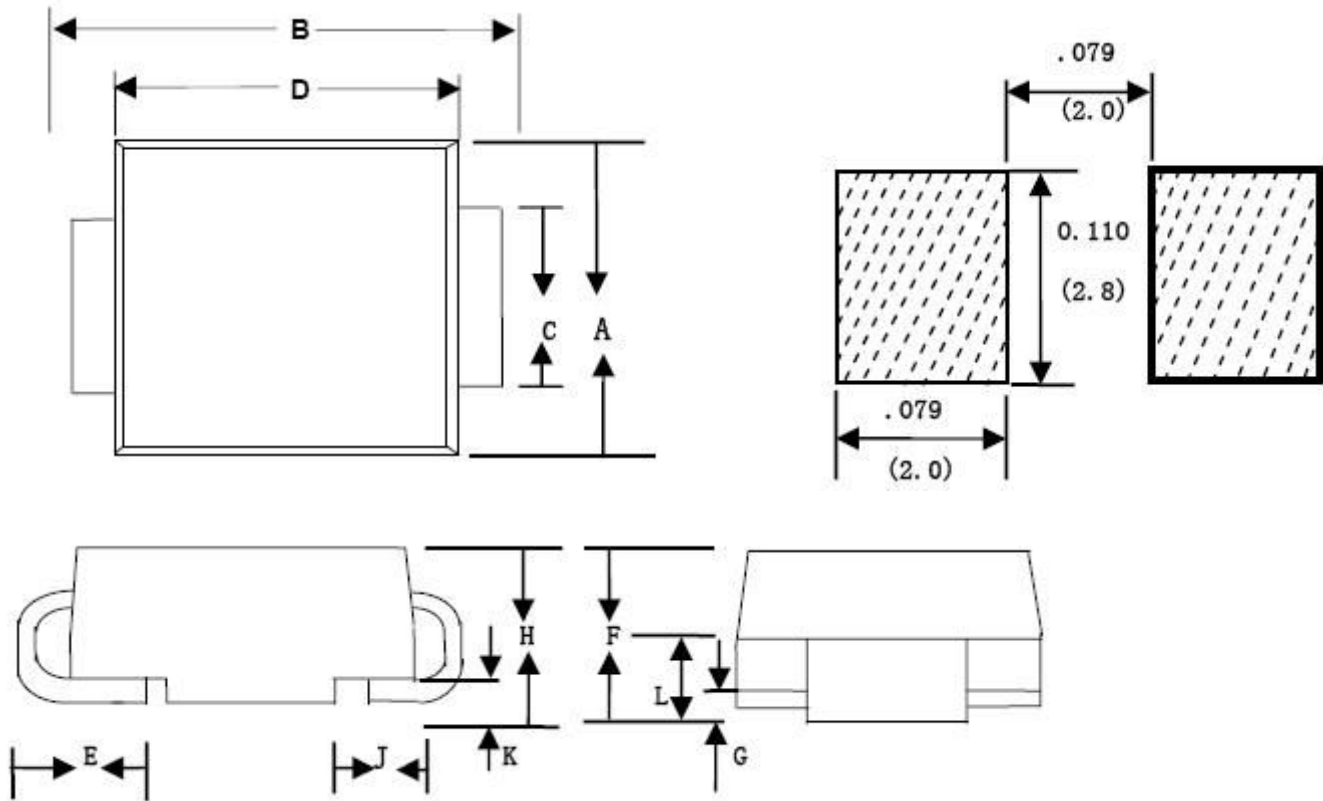
	I_{pp} 2x10 μ s	I_{pp} 8x20 μ s	I_{pp} 10x160 μ s	I_{pp} 10x560 μ s	I_{pp} 10x1000 μ s	I_{pp} 5x320 μ s	I_{pp} 5x310 μ s	I_{pp} 10x360 μ s	I_{TSM} 50/60Hz	di/dt
Series	Amps	Amps	Amps	Amps	Amps	Amps	Amps	Amps	Amps	Amps/ μ s
A	150	150	90	50	45	75	75	75	20	500
B	250	250	150	100	80	100	100	125	25	500
C	500	400	200	150	100	200	200	175	30	500

Thermal Considerations

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

Description of Part Number





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

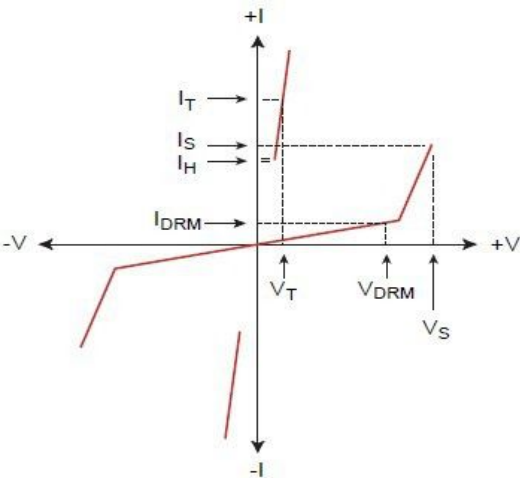
SGS

RoHS

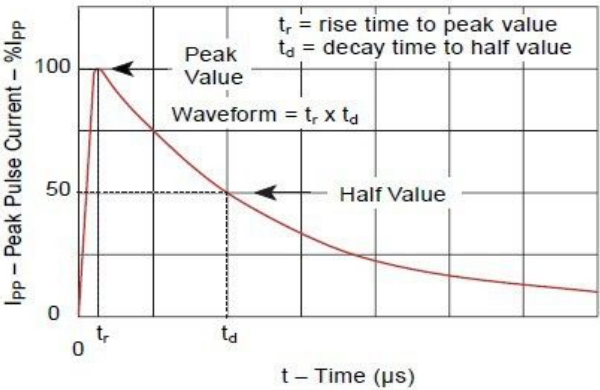
Package Type	Description	Packing Quantity	Industry Standard
A,B,C	DO-214AA Reel Pack	2500 PCS	EIA-481-D

Characteristics Curve

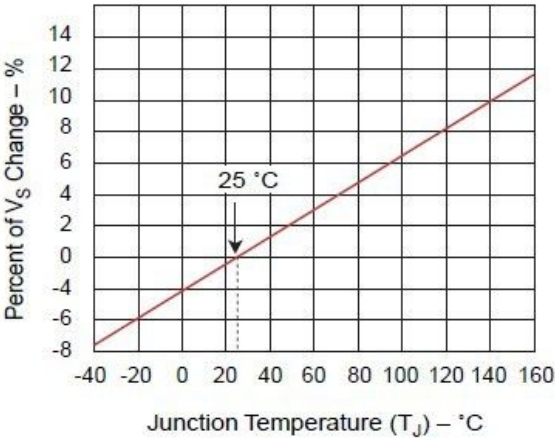
V-I Characteristics



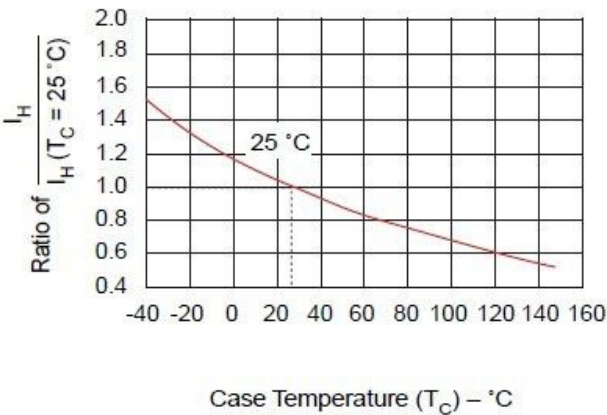
Tr x Td Pulse Waveform



Normalized Vs Change Versus Junction Temperature



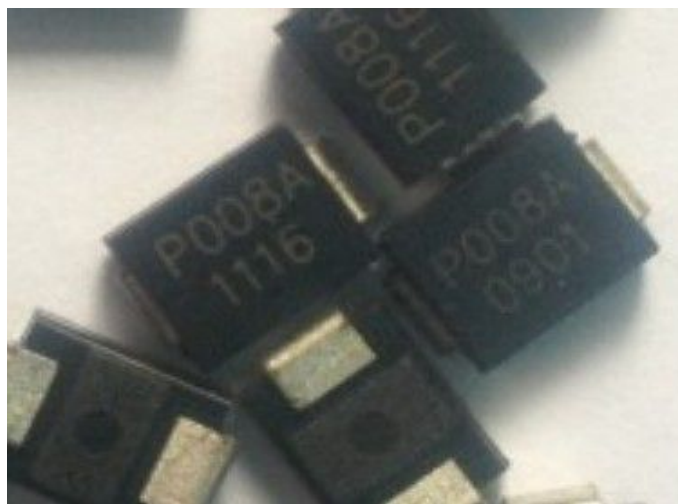
Normalized DC Holding Current Versus Case Temperature



Sample pictures

P008A

Fast Delivery Time



P008B

Fast Delivery Time



P35A

Fast Delivery Time



P35B

Fast Delivery Time

