ShenZhen HuaXinAn Electronics Co.,Ltd (PXXX0SA PXXX0SB PXXX0SC)

SIDACtor Protection Thyristors Package DO-214AA

Description

Fast Delivery Time

Pxxx0SA,PXXX0SB,PXXX0SC 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.

Pxxx0SA,PXXX0SB,PXXX0SC 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, Pxxx0SA,PXXX0SB,PXXX0SC Series devices offer absolute surge protection regardless of the surge current available and the rate of applied voltage (dv/dt). Pxxx0SA,PXXX0SB,PXXX0SC 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	Marking	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	Vmax	pF
P0080SA	P008A	6	25	50	800	2.2	4	45
P0300SA	P03A	25	40	50	800	2.2	4	45
P0640SA	P06A	58	77	150	800	2.2	4	35
P0720SA	P07A	65	88	150	800	2.2	4	50
P0900SA	P09A	75	98	150	800	2.2	4	40
P1100SA	P11A	90	130	150	800	2.2	4	35
P1300SA	P13A	120	160	150	800	2.2	4	35
P1500SA	P15A	140	180	150	800	2.2	4	40
P1800SA	P18A	170	220	150	800	2.2	4	40
P2100SA	P21A	180	240	150	800	2.2	4	40
P2300SA	P23A	190	260	150	800	2.2	4	45
P2600SA	P26A	220	300	150	800	2.2	4	35
P3100SA	P31A	275	350	150	800	2.2	4	35
P3500SA	P35A	320	400	150	800	2.2	4	30
P0080SB	P008B	6	25	50	800	2.2	4	60
P0300SB	P03B	25	40	50	800	2.2	4	65
P0640SB	P06B	58	77	150	800	2.2	4	45
P0720SB	P07B	65	88	150	800	2.2	4	45
P0900SB	P09B	75	98	150	800	2.2	4	40
P1100SB	P11B	90	130	150	800	2.2	4	40
P1300SB	P13B	120	160	150	800	2.2	4	40
P1500SB	P15B	140	180	150	800	2.2	4	35
P1800SB	P18B	170	220	150	800	2.2	4	65
P2100SB	P21B	180	240	150	800	2.2	4	60

Table continues on next page

Electrical Characteristics continued

Part Number	Marking	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	Vmax	pF
P2300SB	P23B	190	260	150	800	2.2	4	50
P2600SB	P26B	220	300	150	800	2.2	4	45
P3100SB	P31B	275	350	150	800	2.2	4	45
P3500SB	P35B	320	400	150	800	2.2	4	40
P0080SC	P008C	6	25	50	800	2.2	4	75
P0300SC	P03C	25	40	50	800	2.2	4	75
P0640SC	P06C	58	77	150	800	2.2	4	55
P0720SC	P07C	65	88	150	800	2.2	4	60
P0900SC	P09C	75	98	150	800	2.2	4	65
P1100SC	P11C	90	130	150	800	2.2	4	55
P1300SC	P13C	120	160	150	800	2.2	4	60
P1500SC	P15C	140	180	150	800	2.2	4	50
P1800SC	P18C	170	220	150	800	2.2	4	55
P2100SC	P21C	180	240	150	800	2.2	4	85
P2300SC	P23C	190	260	150	800	2.2	4	65
P2600SC	P26C	220	300	150	800	2.2	4	65
P3100SC	P31C	275	350	150	800	2.2	4	55
P3500SC	P35C	320	400	150	800	2.2	4	50
P4500SC	P45C	400	540	150	800	2.2	4	45

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.

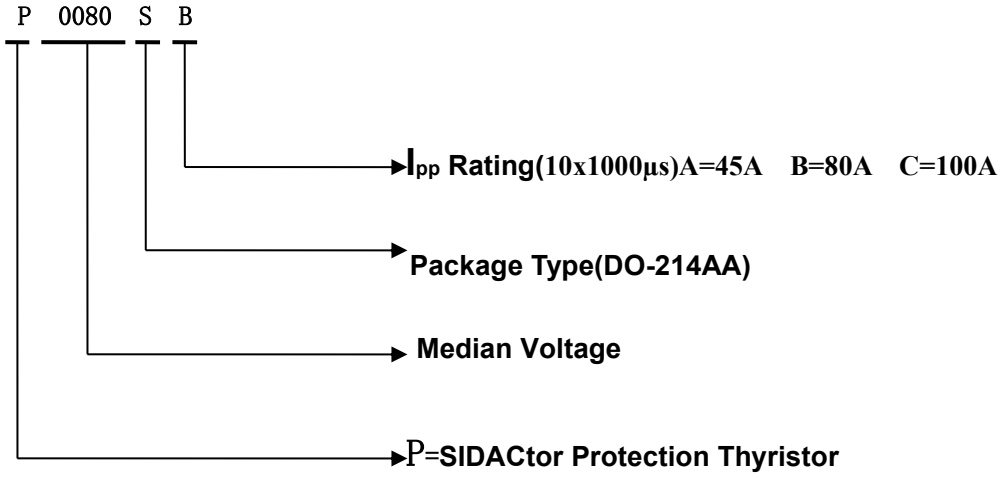
Surge Ratings

Series	I_{pp} 2x10μs	I_{pp} 8x20μs	I_{pp} 10x160μs	I_{pp} 10x560μs	I_{pp} 10x1000μs	I_{pp} 5x320μs	I_{pp} 5x310μs	I_{pp} 10x360μs	I_{TSM} 50/60Hz	di/dt
	Amps	Amps	Amps	Amps	Amps	Amps	Amps	Amps	Amps	Amps/μs
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

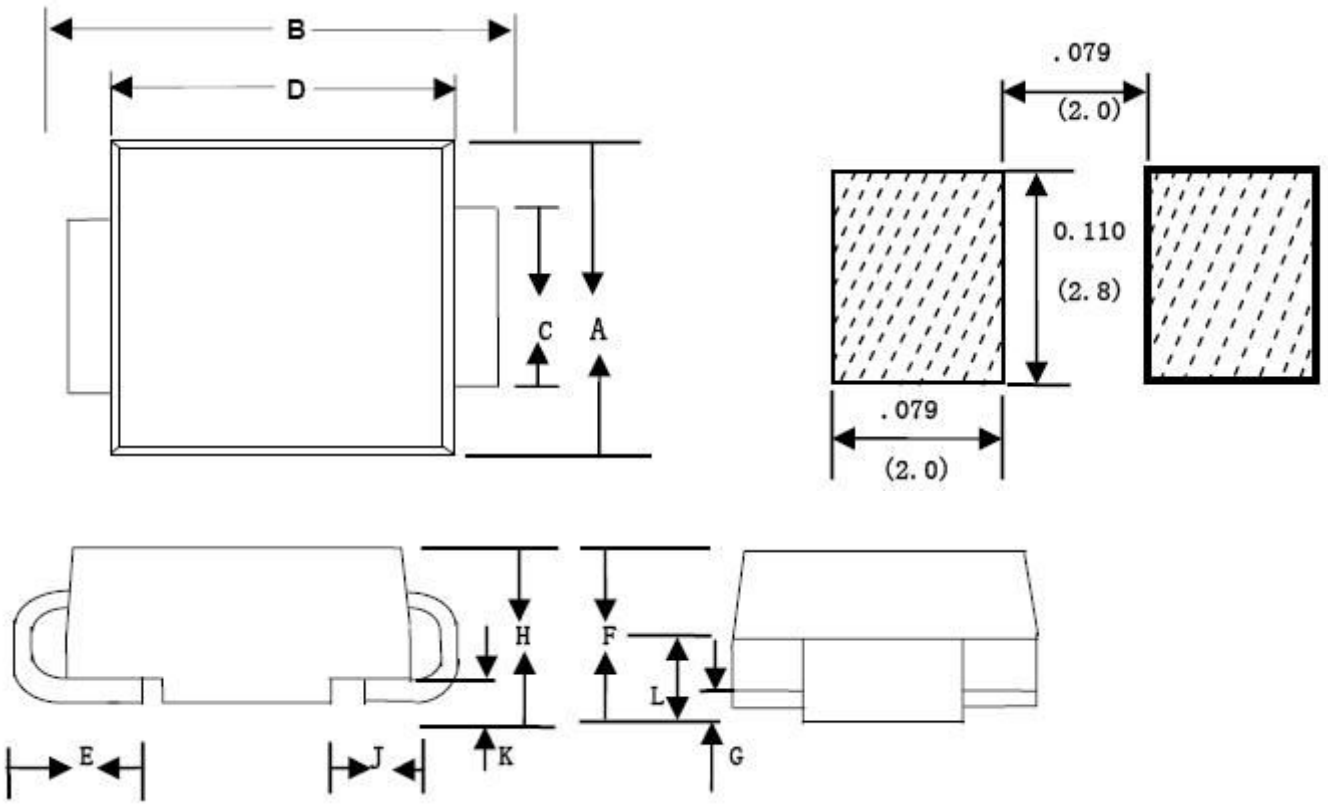
Thermal Considerations

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

Description of Part Number



Dimensions - DO-214AA



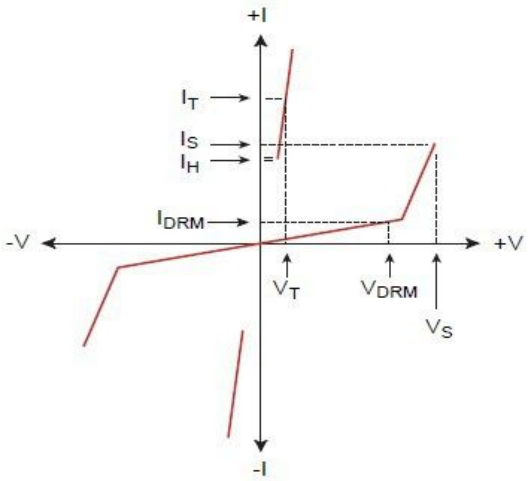
Dimension	Inches		Millimeters	
	Min	Max	Min	Max
A	0.134	0.155	3.40	3.94
B	0.205	0.22	5.21	5.59
C	0.075	0.083	1.90	2.11
D	0.166	0.185	4.22	4.70
E	0.036	0.056	0.91	1.42
F	0.073	0.087	1.85	2.2
G	0.002	0.008	0.05	0.20
H	0.077	0.094	1.95	2.40
J	0.043	0.053	1.09	1.35
K	0.008	0.014	0.20	0.35
L	0.039	0.049	0.99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

Packing Options

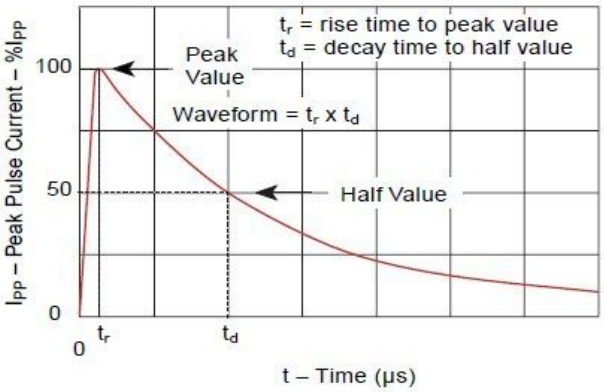
Package Type	Description	Packing Quantity	Industry Standard
SA,SB,SC	DO-214AA Reel Pack	2500 PCS	EIA-481-D

Characteristics Curve

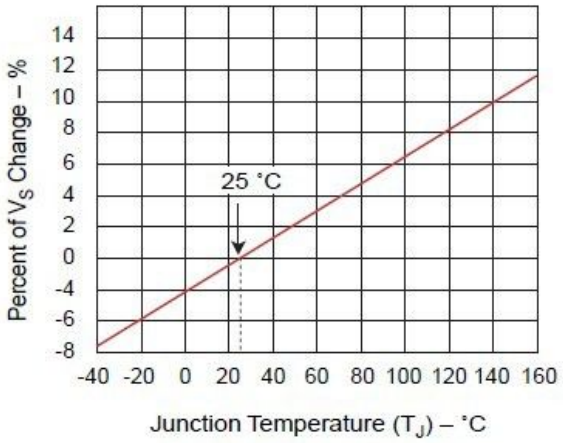
V-I Characteristics



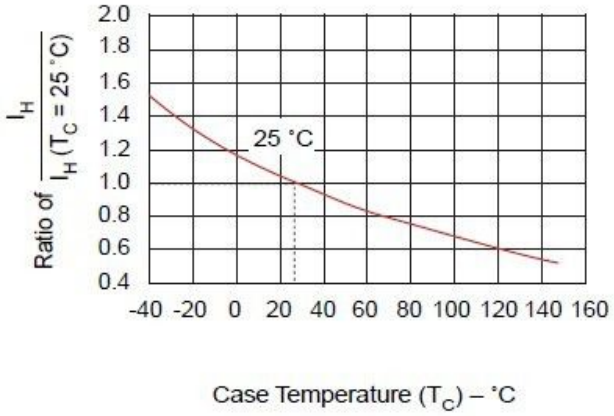
Tr x Td Pulse Waveform



Normalized Vs Change Versus Junction Temperature



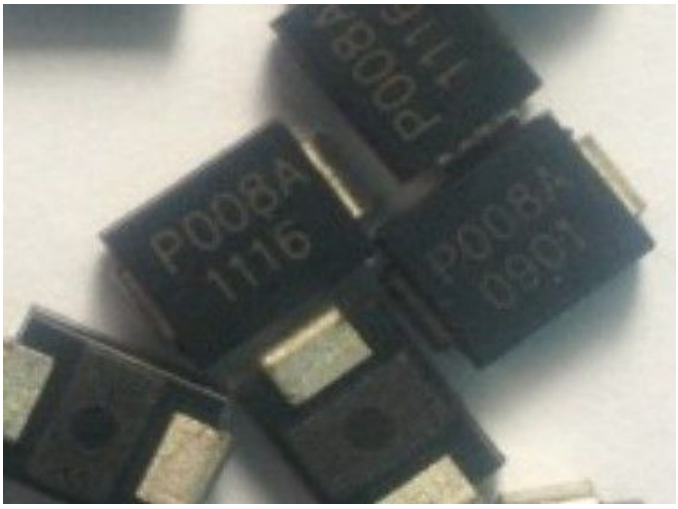
Normalized DC Holding Current Versus Case Temperature



Sample pictures

P0080SA (Marking: P008A)

Fast Delivery Time



P0080SB(Marking: P008B)

Fast Delivery Time

P3500SA (Marking: P35A)

Fast Delivery Time

P3500SB(Marking: P35B)

Fast Delivery Time