PROTECTION THYRISTORS
P0080~P3500SA_B_C

Protection Thyristors

UL497B approved (UL file number E331293)

Features

- Fails short circuit when surged in excess of ratings
- Low voltage overshoot
- High repetitive surge current capability
- Low on-state voltage
- P0080SA~P3500SA are also available in SMA package
- RoHS and REACH Compliant

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RoHS
COMPLIANT

Main Applications

- Customer Premises Equipment (CPE)
- Modems, Line cards, DSL, ISDN, T-1/E-1
- Data lines and security systems
- Fax machines, Telephones etc.

Electrical Characteristics *($T_{Ambient}$=25ºC unless noted otherwise)*

Part Number	Marking	VDRM	VS	IH	IS	IT	VT	CO	
		V min	V max	mA min	mA max	A max	V max	pF min	pF max
P0080SA	P008A	6	25	50	800	2.2	4	25	150
P0220SA	P22A	15	32	50	800	2.2	4	25	150
P0300SA	P03A	25	40	50	800	2.2	4	15	140
P0640SA	P06A	58	77	150	800	2.2	4	40	60
P0720SA	P07A	65	88	150	800	2.2	4	35	60
P0900SA	P09A	75	98	150	800	2.2	4	25	55
P1100SA	P11A	90	130	150	800	2.2	4	30	50
P1300SA	P13A	120	160	150	800	2.2	4	25	45
P1500SA	P15A	140	180	150	800	2.2	4	25	45
P1800SA	P18A	170	220	150	800	2.2	4	25	50
P2100SA	P21A	180	240	150	800	2.2	4	20	50
P2300SA	P23A	190	260	150	800	2.2	4	25	50
P2600SA	P26A	220	300	150	800	2.2	4	20	50
P3100SA	P31A	275	350	150	800	2.2	4	20	45
P3500SA	P35A	320	400	150	800	2.2	4	20	45
P0080SB	P008B	6	25	50	800	2.2	4	25	80
P0220SB	P22B	15	32	50	800	2.2	4	25	100
P0300SB	P03B	25	40	50	800	2.2	4	15	140
P0640SB	P06B	58	77	150	800	2.2	4	40	80
P0720SB	P07B	65	88	150	800	2.2	4	35	75
P0900SB	P09B	75	98	150	800	2.2	4	35	70
P1100SB	P11B	90	130	150	800	2.2	4	30	70
P1300SB	P13B	120	160	150	800	2.2	4	25	70

P0080~P3500SA_B_C

Part Number	Marking	VDRM	VS	IH	IS	IT	VT	CO	
		V min	V max	mA min	mA max	A max	V max	pF min	pF max
P1500SB	P15B	140	180	150	800	2.2	4	25	70
P1800SB	P18B	170	220	150	800	2.2	4	25	70
P2100SB	P21B	180	240	150	800	2.2	4	20	70
P2300SB	P23B	190	260	150	800	2.2	4	25	70
P2600SB	P26B	220	300	150	800	2.2	4	20	70
P3100SB	P31B	275	350	150	800	2.2	4	20	65
P3500SB	P35B	320	400	150	800	2.2	4	20	60
P0080SC	P008C	6	25	50	800	2.2	4	45	100
P0220SC	P22C	15	32	50	800	2.2	4	30	110
P0300SC	P03C	25	40	50	800	2.2	4	25	80
P0640SC	P06C	58	77	150	800	2.2	4	55	155
P0720SC	P07C	65	88	150	800	2.2	4	50	150
P0900SC	P09C	75	98	150	800	2.2	4	45	140
P1100SC	P11C	90	130	150	800	2.2	4	45	115
P1300SC	P13C	120	160	150	800	2.2	4	40	115
P1500SC	P15C	140	180	150	800	2.2	4	35	115
P1800SC	P18C	170	220	150	800	2.2	4	35	110
P2100SC	P21C	180	240	150	800	2.2	4	30	110
P2300SC	P23C	190	260	150	800	2.2	4	30	120
P2600SC	P26C	220	300	150	800	2.2	4	30	120
P3100SC	P31C	275	350	150	800	2.2	4	30	110
P3500SC	P35C	320	400	150	800	2.2	4	25	110

Note: 1. V_{DRM}@I_{DRM}=5μA, V_S@100V/μS, V_T@I_T=2.2A, C_O@1MHz,2V

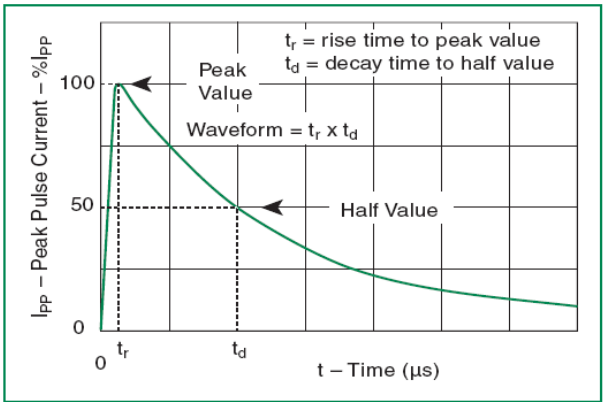
Surge Ratings

Series	I_{PP} 2x10μS Amps	I_{PP} 8x20μS Amps	I_{PP} 10x160μS Amps	I_{PP} 10x560μS Amps	I_{PP} 10x1000μS Amps	I_{TSM} 50/60Hz Amps	di/dt Amps/μS
A	150	150	90	50	50	20	500
B	250	250	150	100	75	25	500
C	500	400	200	150	100	30	500

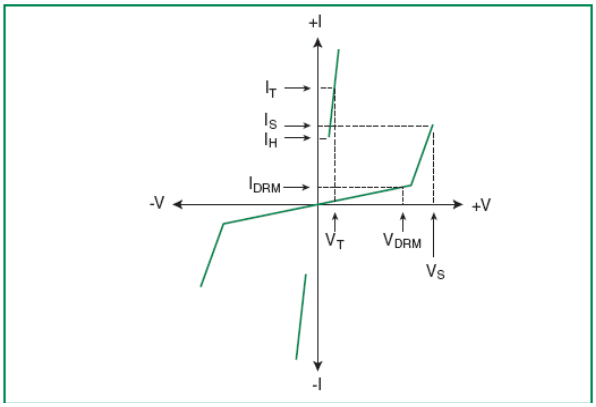
Note: 1. Peak pulse current rating (I_{PP}) is non-repetitive and guaranteed for the life of the product.
2. I_{PP} ratings applicable over temperature range of -40℃ to +85℃
3. The device must initially be in thermal equilibrium with -40℃< TJ <+150℃
4. Current waveform and voltage waveform in μS.

Typical Characteristics Curves

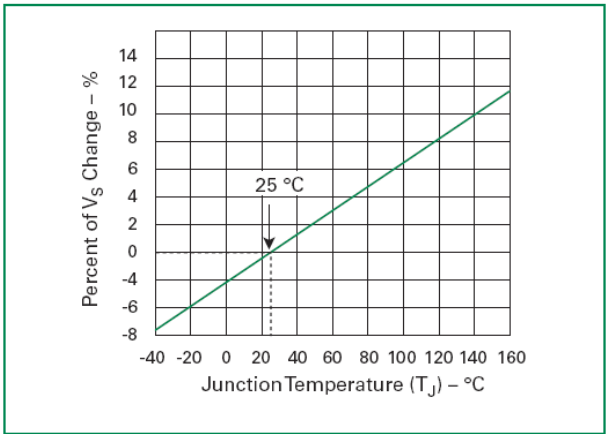
t_r x t_d Pulse Waveform



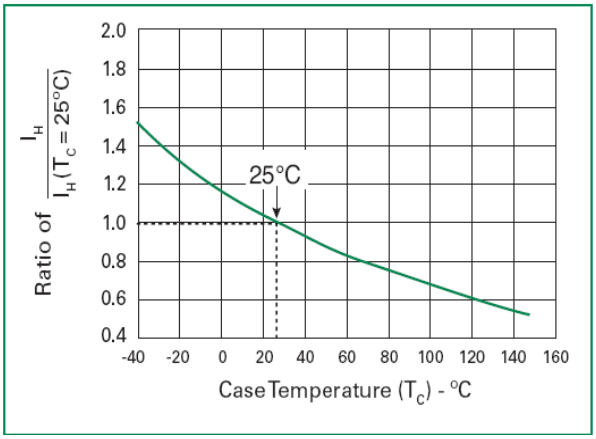
V-I Characteristics



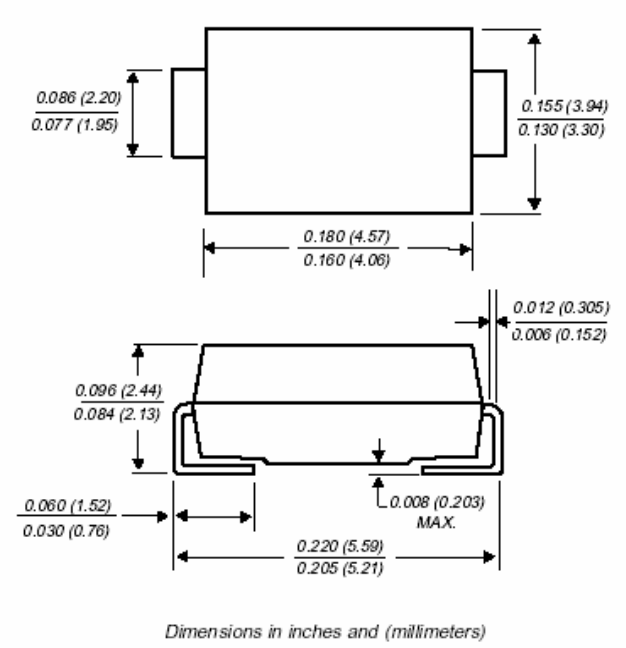
Normalized V_S Change vs. Junction Temperature



Normalized DC Holding Current vs. Case Temperature



Dimensions in inch (mm)



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