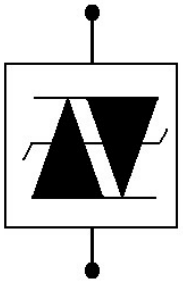
Thyristor Surge Suppressors(TSS)

P series

●General description

P series is designed to protect low voltage or signal line, as well as power line communication circuit interface from damaging over-voltage transients . The series provides a surface mount solution that enables equipment to comply with global regulatory standards.



●Features

- Low voltage overshoot.
- Low on-state voltage.
- Does not degrade surge capability after multiple surge within limit.
- Fails short circuit when surged in excess of ratings.
- Low Capacitance.

●Electrical characteristics

Part number	Type	V_{DRM}	I_{DRM}	V_S	I_S	I_H	V_T	I_T	C_O
		Min (V)	Max (uA)	Max (V)	Max (mA)	Typ (mA)	Max (V)	(A)	Typ (pF)
P0080XX	A	6	5	25	800	50	4	2.2	80
P0300XX	A	25	5	40	800	50	4	2.2	60
P0640XX	A	58	5	77	800	150	4	2.2	60
P0720XX	A	65	5	88	800	150	4	2.2	60
P0900XX	A	75	5	98	800	150	4	2.2	50
P1100XX	A	90	5	130	800	150	4	2.2	45
P1300XX	A	120	5	160	800	150	4	2.2	40
P1500XX	A	140	5	180	800	150	4	2.2	40
P1800XX	A	170	5	220	800	150	4	2.2	35
P2100XX	A	180	5	240	800	150	4	2.2	35
P2300XX	A	190	5	260	800	150	4	2.2	35
P2600XX	A	220	5	300	800	150	4	2.2	35
P3100XX	A	275	5	350	800	150	4	2.2	35/
P3500XX	A	320	5	400	800	150	4	2.2	35
P0080XX	B	6	5	25	800	50	4	2.2	100
P0300XX	B	25	5	40	800	50	4	2.2	90
P0640XX	B	58	5	77	800	150	4	2.2	80
P0720XX	B	65	5	88	800	150	4	2.2	80
P0900XX	B	75	5	98	800	150	4	2.2	70
P1100XX	B	90	5	130	800	150	4	2.2	65
P1300XX	B	120	5	160	800	150	4	2.2	60
P1500XX	B	140	5	180	800	150	4	2.2	60
P1800XX	B	170	5	220	800	150	4	2.2	50
P2100XX	B	180	5	240	800	150	4	2.2	50

●Electrical characteristics

Part number	Type	V_{DRM}	I_{DRM}	V_S	I_S	I_H	V_T	I_T	C_O
		Min (V)	Max (uA)	Max (V)	Max (mA)	Typ (mA)	Max (V)	(A)	Typ (pF)
P2300XX	B	190	5	260	800	150	4	2.2	45
P2600XX	B	220	5	300	800	150	4	2.2	45
P3100XX	B	275	5	350	800	150	4	2.2	40
P3500XX	B	320	5	400	800	150	4	2.2	40
P0080XX	C	6	5	25	800	50	4	2.2	160
P0300XX	C	25	5	40	800	50	4	2.2	150
P0640XX	C	58	5	77	800	150	4	2.2	150
P0720XX	C	65	5	88	800	150	4	2.2	150
P0900XX	C	75	5	98	800	150	4	2.2	140
P1100XX	C	90	5	130	800	150	4	2.2	130
P1300XX	C	120	5	160	800	150	4	2.2	120
P1500XX	C	140	5	180	800	150	4	2.2	120
P1800XX	C	170	5	220	800	150	4	2.2	100
P2100XX	C	180	5	240	800	150	4	2.2	100
P2300XX	C	190	5	260	800	150	4	2.2	90
P2600XX	C	220	5	300	800	150	4	2.2	90
P3100XX	C	275	5	350	800	150	4	2.2	65
P3500XX	C	320	5	400	800	150	4	2.2	65

●Surge ratings

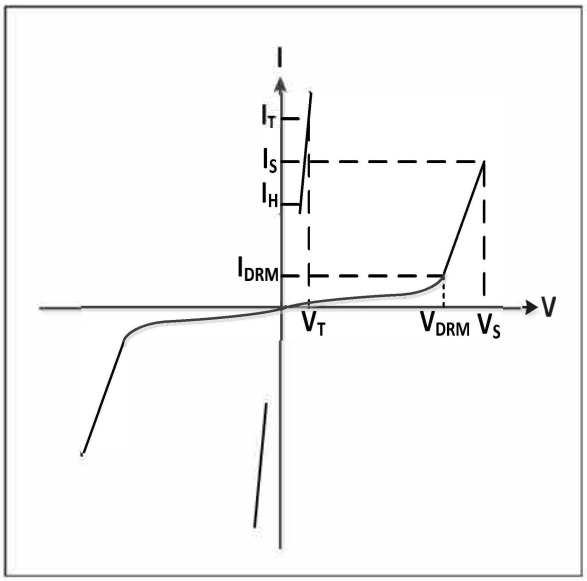
	IPP						ITSM	di/dt
	2x10 µs	8x20 µs	10x160 µs	10x560 µs	10x700 µs	10x1000 µs	60 Hz	Amps/µs
	Amps	Amps	Amps	Amps	Amps	Amps	Amps	
A	150	150	90	50	75	50	20	500
B	250	250	150	100	100	80	25	500
C	500	400	200	150	150	100	30	500

●Thermal considerations

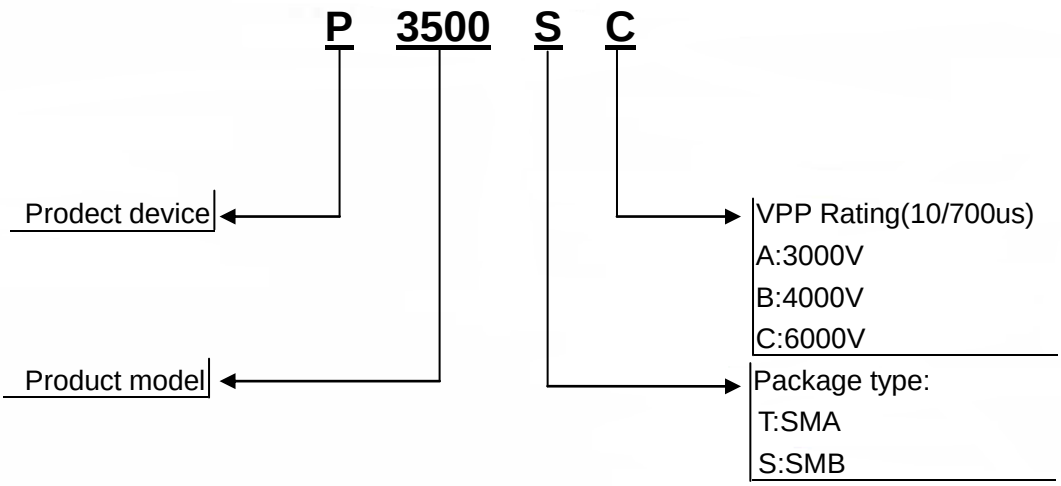
Package	Symbol	Parameter	Value	Unit
SMA SMB	Tj	Operating junction temperature range	-40 to 150	ºC
	Tstg	Storage temperature range	-65 to 150	ºC
	Rth(j-a)	Junction to ambient on printed circuit on recommended pad layout	90	ºC/W

●I-V Curve Characteristics

I_S	**Switching Current**
I_{DRM}	**Leakage Current**
I_H	**Holding Current**
I_T	**On-state Current**
V_S	**Switching Voltage**
V_{DRM}	**Peak Off-state Voltage**
V_T	**On-state Voltage**
C_o	**Off-state Capacitance**

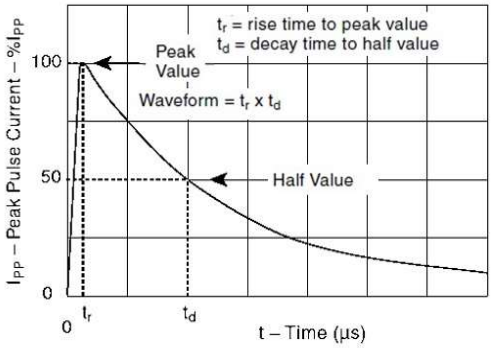


●Name rule

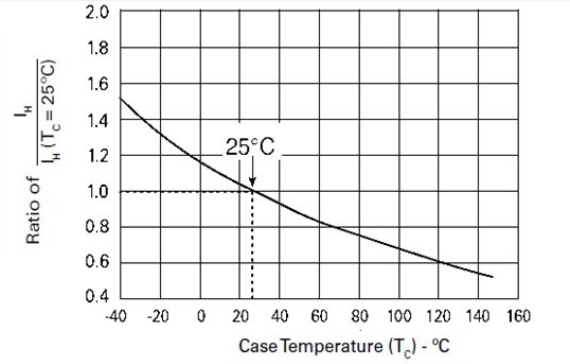


●Ratings and characteristic curves (T_A=25°C unless otherwise noted)

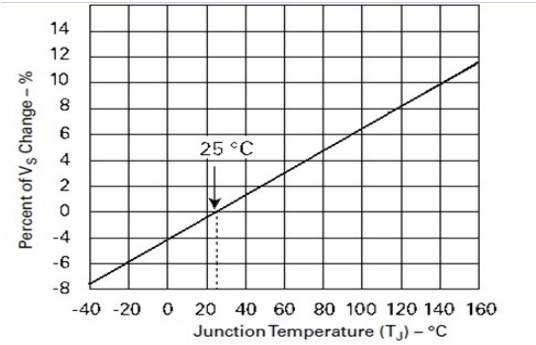
Tr x Td Pulse waveform



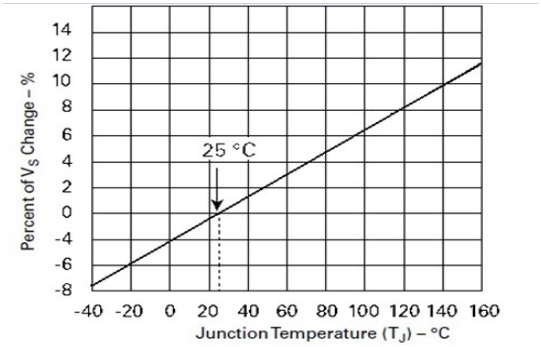
Normalized DC holding current vs. case temperature



Vs change vs. junction temperature

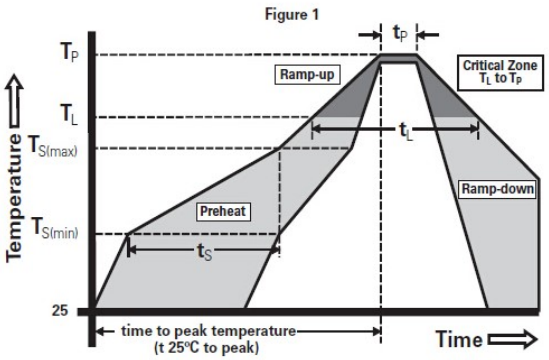


Co change vs. bias voltage （V_R=1V）

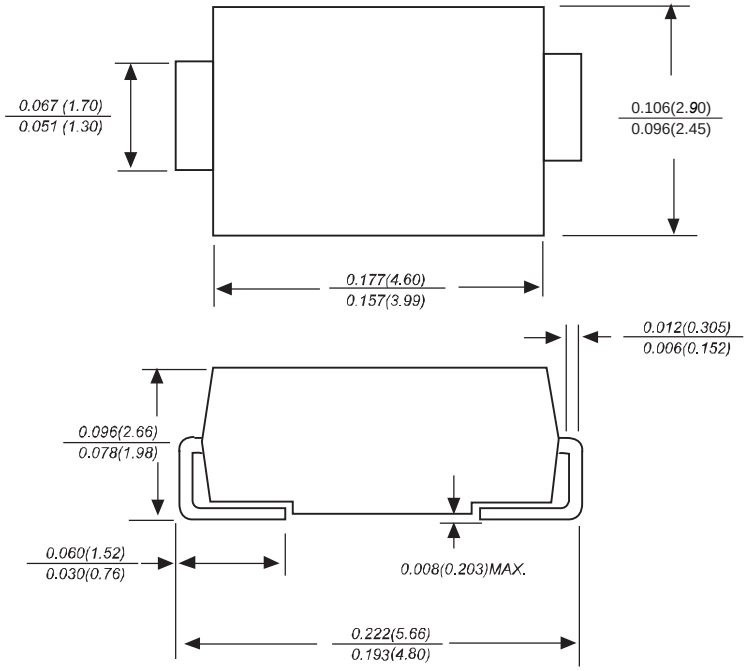


●Soldering Parameters

Reflow Condition		Pb-Free assembly (see Fig. 1)
Pre Heat	-Temperature Min ($T_{s(min)}$)	+150°C
	-Temperature Max ($T_{s(max)}$)	+200°C
	-Time (Min to Max) (t_s)	60-180 secs.
Average ramp up rate (Liquidus Temp (T_L) to peak)		3°C/sec. Max.
$T_{S(max)}$ to T_L - Ramp-up Rate		3°C/sec. Max.
Reflow	-Temperature (T_L) (Liquidus)	+217°C
	-Temperature (t_L)	60-150 secs.
Peak Temp (T_P)		+260(+0/-5)°C
Time within 5°C of actual Peak Temp (t_p)		30 secs. Max.
Ramp-down Rate		6°C/sec. Max.
Time 25°C to Peak Temp (T_P)		8 min. Max.
Do not exceed		+260°C

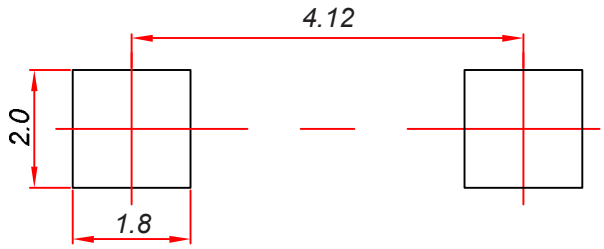


● Dimensions - SMA



Dimensions in inches and (millimeters)

● Suggested Pad Layout

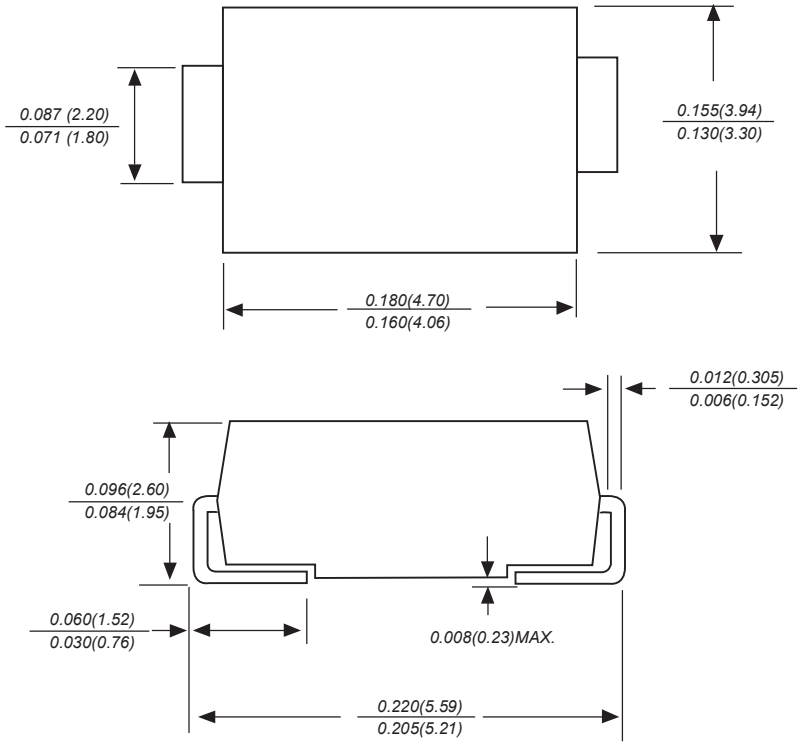


Note:
1.Controlling dimension:in millimeters.
2.General tolerance:± 0.05mm.
3.The pad layout is for reference purposes only.

NOTICE

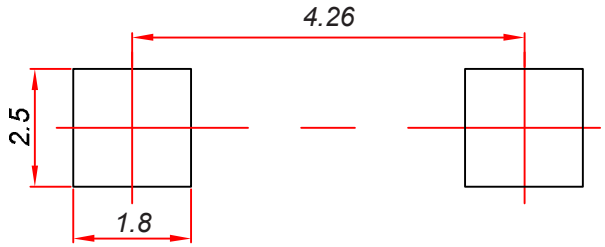
JSCJ reserves the right to make modifications,enhancements,improvements,corrections or other changes without further notice to any product herein.JSCJ does not assume any liability arising out of the application or use of any product described herein.

● Dimensions - SMB



Dimensions in inches and (millimeters)

● Suggested Pad Layout



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