

Thyristor Surge Suppressors (TSS) Data Sheet

Description

TSS-SMA Series are low capacitance devices designed to protect broadband equipment such as VOIP, DSL modems and DSLAMs from damaging overvoltage transients.

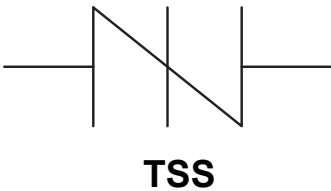
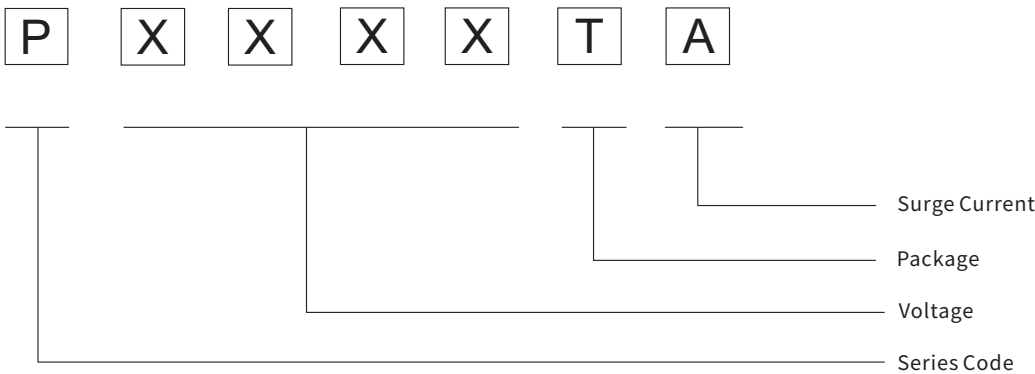
Features

- For surface mounted applications in order to optimize board space
- Low Capacitance
- Excellent capability of absorbing transient surge
- Quick response to surge voltage
- Eliminates overvoltage caused by fast rising transients
- Non degenerative
- Moisture sensitivity level: Level 1

Applications

- T1/E1 Trunk & Line Card
- RS-485/RS-232/RS-422
- Audio/Video line,Network and telecom
- Data lines and security systems

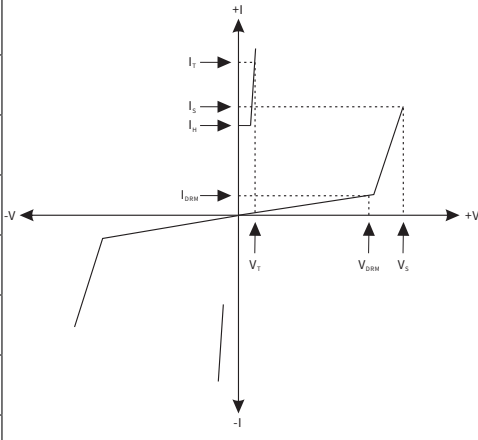
Part Numbering



Thermal Considerations

Symbol	Parameter	Value	Unit
T _J	Operating Junction Temperature	-40 to +150	°C
T _S	Storage Temperature Range	-40 to +150	°C
R _{θJA}	Junction to Ambient on printed circuit	120	°C /W

Electrical Parameters

Symbol	Parameter	Unit
V_{DRM} (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	
V_T (On-state Voltage)	Maximum voltage measured at rated on-state current	
I_{DRM} (Leakage Current)	Maximum peak off-state current measured at V_{DRM}	
I_S (Switching Current)	Maximum current required to switch to on state	
I_T (On-state Current)	Maximum rated continuous on-state current	
I_H (Holding Current)	Typical current required to maintain on state	
C_O (Off-state Capacitance)	Typical capacitance measured in off state	

Electrical Characteristics (Ta=25°C Unless otherwise specified)

Part Number	Marking	V_{DRM}	V_S	V_T	I_{DRM}	I_S	I_T	I_H	C_O
		(V)	(V)	(V)	(μA)	(mA)	(A)	(mA)	(pF)
P0080TA	P008A	6	25	4	5	800	2.2	50	50
P0300TA	P03A	25	40	4	5	800	2.2	50	70
P0640TA	P06A	58	77	4	5	800	2.2	150	50
P0720TA	P07A	65	88	4	5	800	2.2	150	50
P0900TA	P09A	75	98	4	5	800	2.2	150	45
P1100TA	P11A	90	130	4	5	800	2.2	150	45
P1300TA	P13A	120	160	4	5	800	2.2	150	45
P1500TA	P15A	140	180	4	5	800	2.2	150	40
P1800TA	P18A	170	220	4	5	800	2.2	150	40
P2000TA	P20A	180	220	4	5	800	2.2	150	40
P2300TA	P23A	190	260	4	5	800	2.2	150	35
P2600TA	P26A	220	300	4	5	800	2.2	150	35
P3100TA	P31A	275	350	4	5	800	2.2	150	30
P3500TA	P35A	320	400	4	5	800	2.2	150	30

Notes :
(1) V_S is measured at 100KV/S ;
(2)Off-state capacitance(CO) is measured at 1 MHz with a 2V bias and is typical value

Surge Ratings

Series	$I_{PP} 8 \times 20\mu s$ (A)	$I_{PP} 10 \times 1000\mu s$ (A)	$I_{TSM} 60Hz$ (A)	$di/dt(A/\mu s)$
A	150	45	20	500

● Ratings And Characteristics Curves (Ta=25°C Unless otherwise specified)

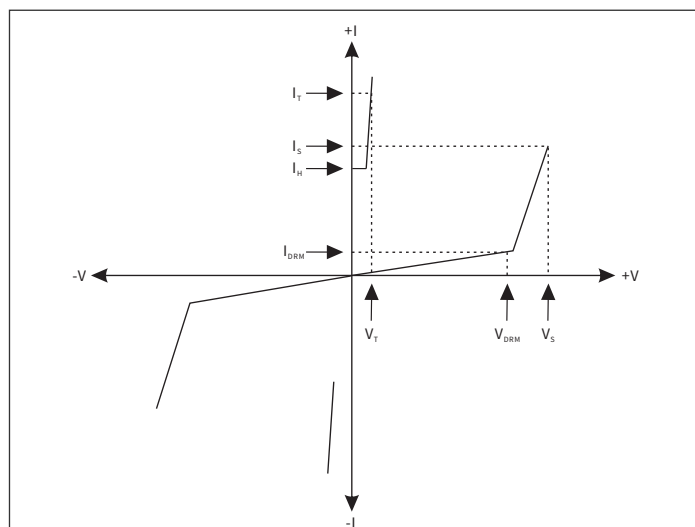


Fig. 1 I-V Characteristics

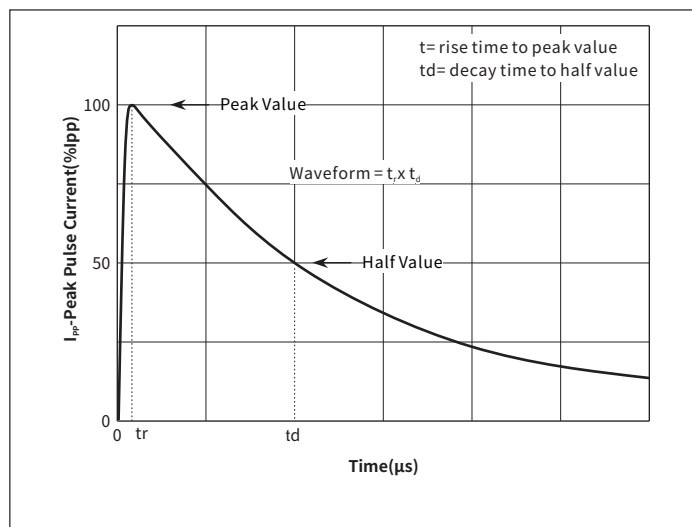


Fig. 2 tr X td Pulse Waveform

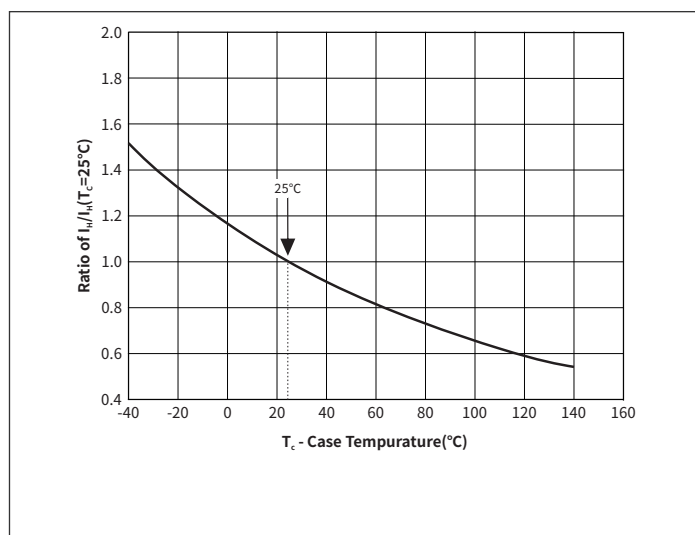


Fig. 3 Tj-Junction Temperature(°C)

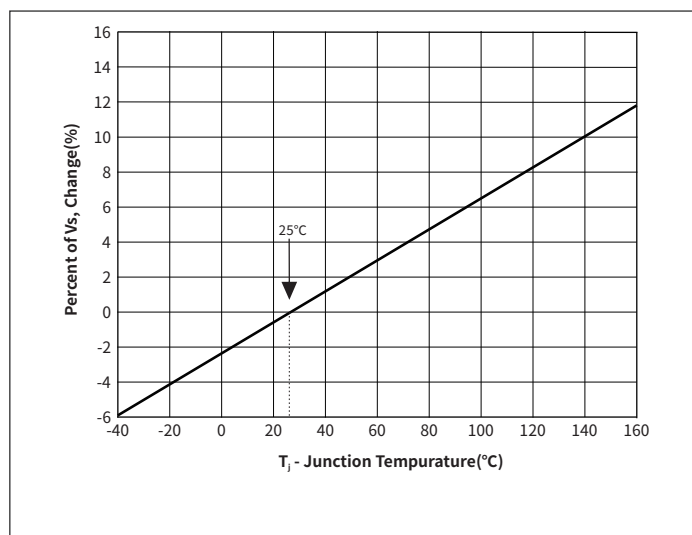
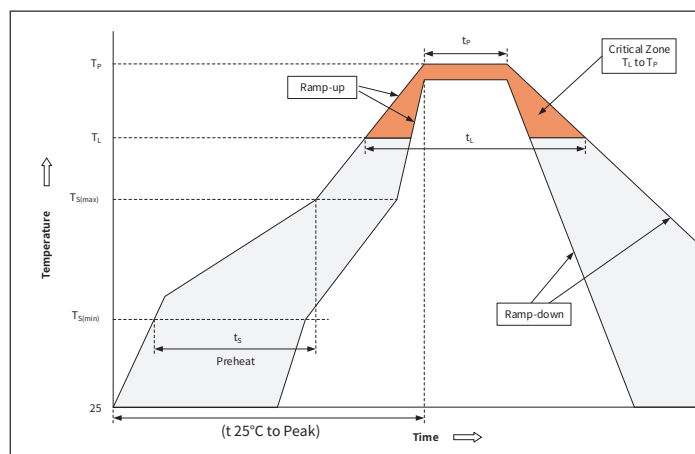


Fig. 4 Normalized DC Holding Current vs. Case Temperature

● Soldering Parameters

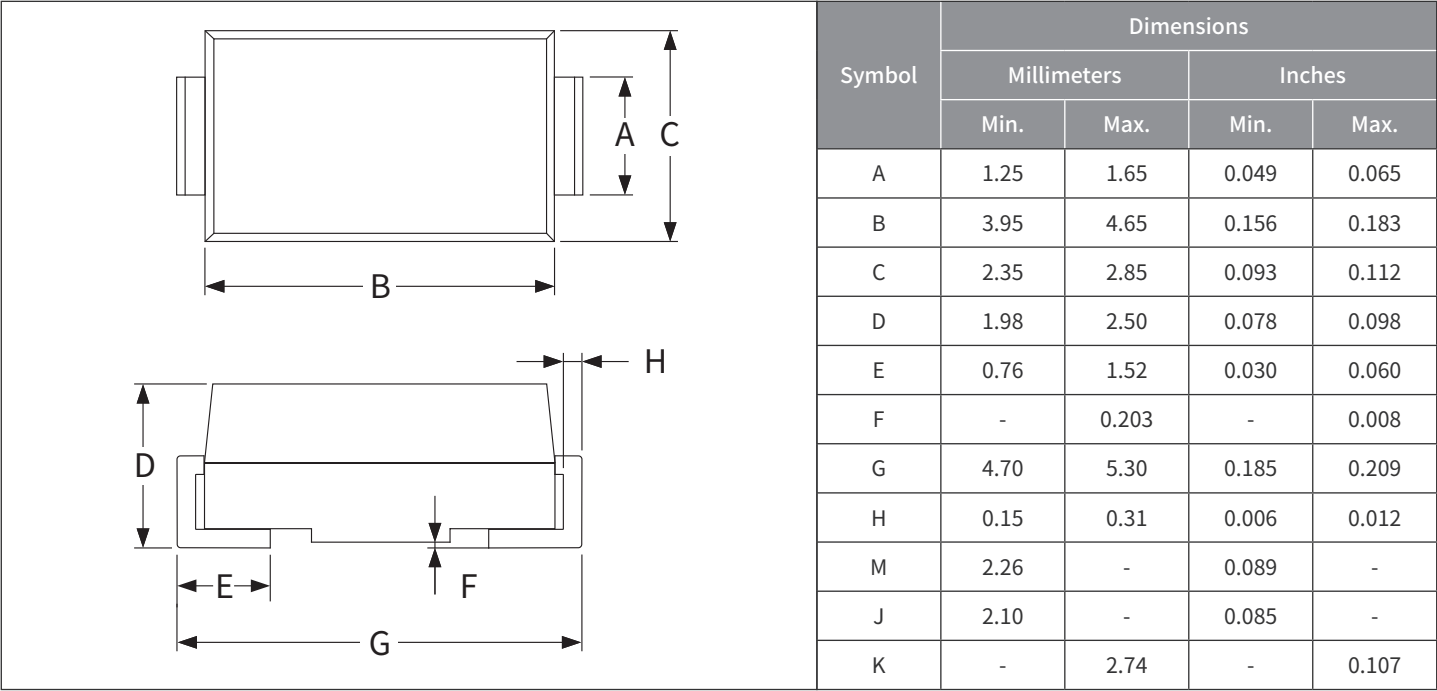


Profile Feature		Pb-Free Assembly
Pre-heat	Temperature Min (T _{S(min)})	+150°C
	Temperature Max(T _{S(max)})	+200°C
	Time (Min to Max) (t _s)	60-180 secs.
Average ramp up rate (Liquid us Temp (T _L) to peak)		3°C /sec. Max
T _{S(max)} to T _L - Ramp-up Rate		3°C /sec. Max
Reflow	Temperature(T _L)(Liquid us)	+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

TSS-SMA SERIES

SMA Package Thyristor Surge Suppressor

Package Outline Dimensions (SMA/DO-214AC)



Ordering Information

PACKAGE	DELIVERY MODE	REEL(pcs)
SMA	13"	5000

Packaging (SMA/DO-214AC)

