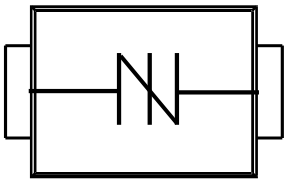
Surface Mount Thyristor Surge Suppressor

Features

- ✧ Silicon technology
- ✧ Cannot be damaged by voltage
- ✧ Low capacitance
- ✧ Eliminate voltage overshoot
- ✧ Epoxy resin package
- ✧ Will not fatigue
- ✧ Complies with following standards:

- GR1089
- ITU K.20, K.21 and K.45
- IEC 60950
- UL 60950
- TIA-968



Circuit Diagram

Applications

- ✧ commercial systems
- ✧ industrial & instrumentation
- ✧ communications

Mechanical Data

- ✧ Package: SMB
- ✧ Lead Finish: Matte Tin
- ✧ RoHS/WEEE Compliant



SMB (DO-214AA)

Absolute Maximum Rating at T_A = 25 °C, unless otherwise specified

Parameter	Symbol	Value	Units	Remarks
Peak Pulse Voltage	V_{PP}	6000	V	10/700us
Peak Pulse Current	I_{PP}	100	A	10/1000us
Peak Pulse Current	I_{PK}	400	A	8/20us
Peak One-cycle Surge Current	I_{TSM}	30	A	60Hz
Rate of Rise of Current	di/dt	500	A/us	
Typical Thermal Resistance Junction to Lead	$R_{\theta JL}$	20	℃/W	
Typical Thermal Resistance Junction to Ambient	$R_{\theta JA}$	100	℃/W	
Operating Temperature Range	T_J	-40 to 150	℃	
Storage Temperature Range	T_{STG}	-55 to 150	℃	

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Electrical Characteristics at T_A = 25 °C, unless otherwise specified

Part Number	Marking	I_H mA MIN	V_S V 100KV/S MAX	I_{S_LMT} mA	V_T V @ I_T MAX	I_T A	I_D uA @ V_D	V_D V	C_O pF 1MHz,2V_{DC} TYP
OVTS0080SC	E-8C	40	25	500	4	2.2	5	6	105
OVTS0220SC	P02C	40	30	500	4	2.2	5	15	105
OVTS0300SC	P03C	40	40	500	4	2.2	5	25	100
OVTS0640SC	P06C	120	77	800	4	2.2	5	58	95
OVTS0720SC	P07C	120	88	800	4	2.2	5	65	95
OVTS0900SC	P09C	120	98	800	4	2.2	5	75	95
OVTS1100SC	P11C	120	130	800	4	2.2	5	90	90
OVTS1300SC	P13C	120	160	800	4	2.2	5	120	90
OVTS1500SC	P15C	120	180	800	4	2.2	5	140	85
OVTS1800SC	P18C	120	220	800	4	2.2	5	170	80
OVTS2300SC	P23C	120	260	800	4	2.2	5	190	75
OVTS2600SC	P26C	120	300	800	4	2.2	5	220	70
OVTS3100SC	P31C	120	350	800	4	2.2	5	275	65
OVTS3500SC	P35C	120	400	800	4	2.2	5	320	60
OVTS3800SC	P38C	120	450	800	4	2.2	5	340	45

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Rating And Characteristic Curves at T_A = 25 °C, unless otherwise specified

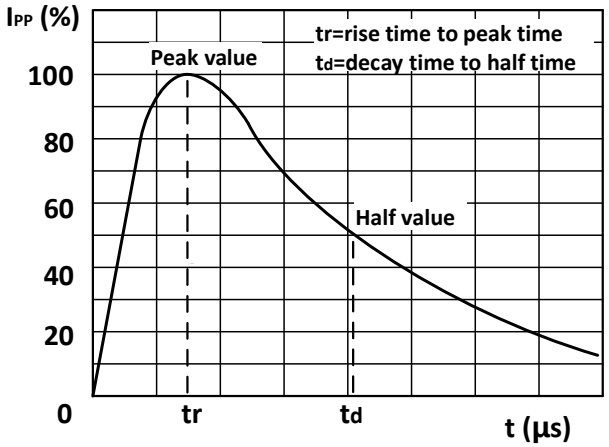

Fig. 1. tr x td pulse waveform

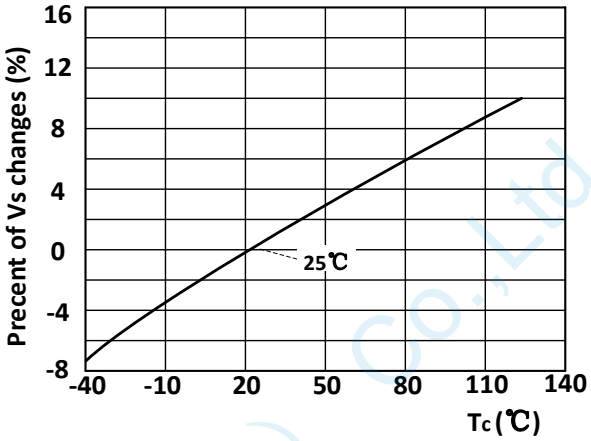

Fig. 2. Normalized Vs change vs. junction temperature

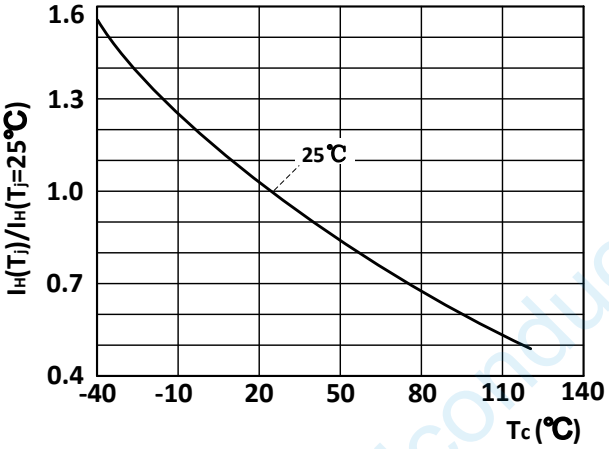

Fig. 3. Normalized DC holding current vs. case temperature

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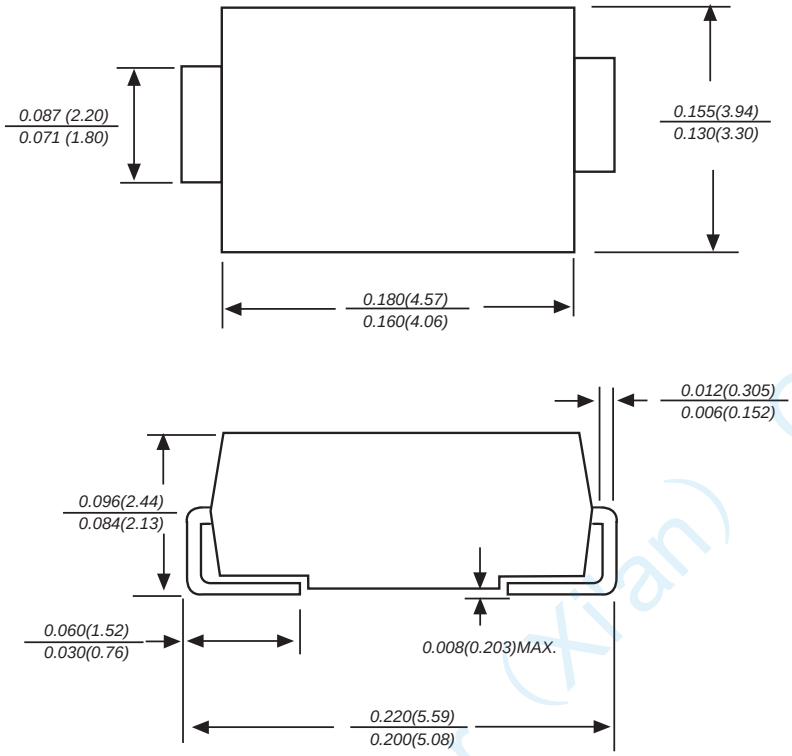
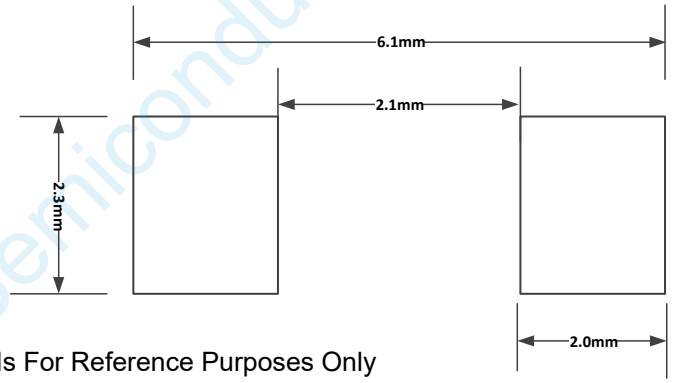
Package Information

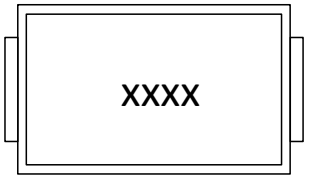


Recommend PCB Layout



Notes: This PCB Layout Is For Reference Purposes Only

Marking



XXXX: Marking Code

Ordering Information

Part number	Package	Type	Reel size	MOQ	Packaging specification
OVTSxxxxSC	DO-214AA	T/R	13 inch	3k/reel	EIA STD RS-481

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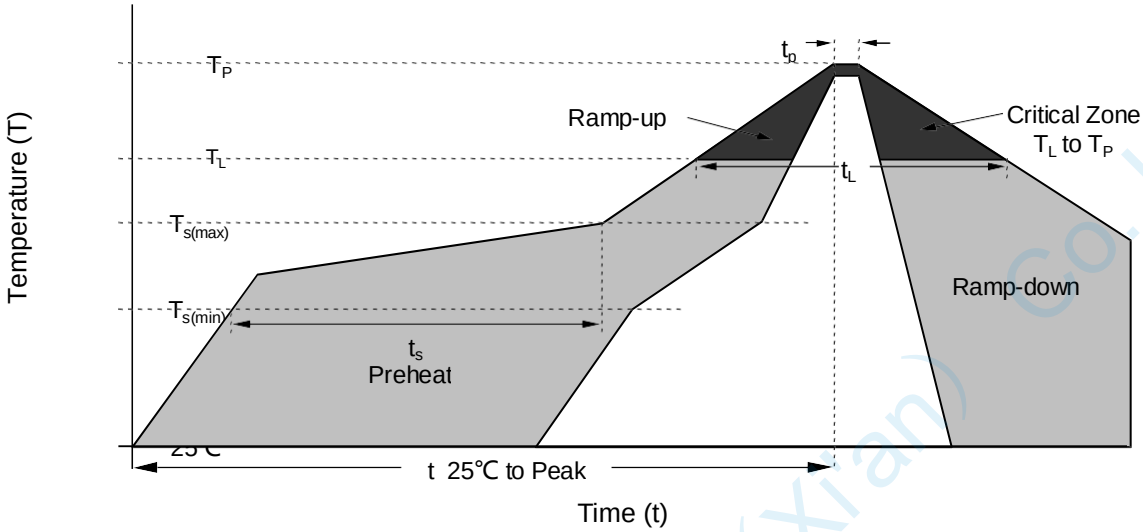
Soldering Parameters



Reflow Condition		Lead-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 (Liquidus Temp (T_L) to peak)		3°C/second max
$T_{S(max)}$ to TL - Ramp-up Rate		3°C/second max
Reflow	- Temperature (T_L) (Liquidus)	217°C
	- Time (t_L)	60 – 150 secs
Peak Temperature (T_P)		$260^{+0/-5}$ °C
Time within 5°C of actual peak Temperature (t_p)		20 – 40 secs
Ramp-down Rate		6°C/second max
Time 25°C to peak Temperature (t)		8 minutes Max.
Do not exceed		260°C

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