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SMB Plastic-Encapsulate Diodes

Thyristor Surge Suppressors

Features

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

SMB



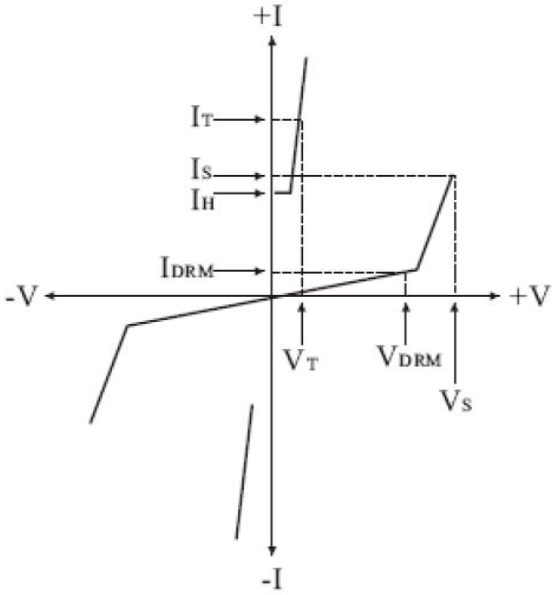


Applications

- Protect circuit

Electrical Characteristics (T_a=25℃ Unless otherwise specified）

Parameter	Definition
CO	Off-state Capacitance—typical capacitance measured in off state
di /dt	Rate of Rise of Current —maximum rated value of the acceptable rate of rise in current over time
IS	Switching Current—maximum current required to switch to on state
IDRM	Leakage Current —maximum peak off-state current measured at VDRM
IH	Holding Current —minimum current required to maintain on state
IPP	Peak Pulse Current—maximum rated peak impulse current
IT	On-state Current—maximum rated continuous on-state current
ITSM	Peak One-cycle Surge Current —maximum rated one-cycle AC current
VS	Switching Voltage —maximum voltage prior to switching to on state
VDRM	Peak Off-state Voltage —maximum voltage that can be applied while maintaining off state
VF	On-state Forward Voltage —maximum forward voltage measured at rated on-state current
VT	On-state Voltage —maximum voltage measured at rated on-state current



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Electrical Characteristics

Electrical Characteristics (T_a=25℃ Unless otherwise specified）

PART NUMBER	V_{DRM} V Min.	I_{DRM} uA Max.	V_S V Max.	I_S mA	V_T V Max.	I_T A	I_H mA	C_O pF Max.
P0080SCE	6	5	25	800	4	2.2	≥50	130

1、V_S is measured at 100KV/S
2、Off-state capacitance is measured in V_{DC}=2V,V_{RMS}=1V,F=1MHz
3、All measurements are made at an ambient temperature of 25℃

Surge Ratings

Series	I_{PP} (A) min			
	2 × 10us	8 × 20us	10 ×360us	10 ×1000us
P0080SCE	400	400	175	100

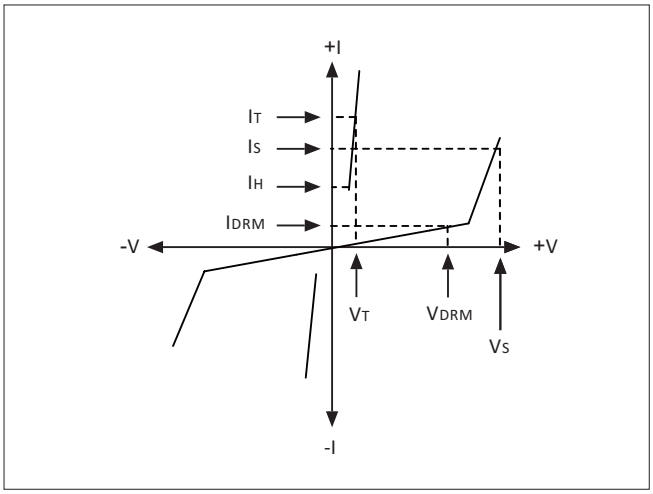
Limiting Values (Absolute Maximum Rating)

Symbol	Parameter	Value	Unit
T_J	Operating Junction Temperature	-40 to +150	℃
T_S	Storage Temperature Range	-40 to +150	℃
$R_{\theta JA}$	Junction to Ambient on printed circuit	90	℃/W

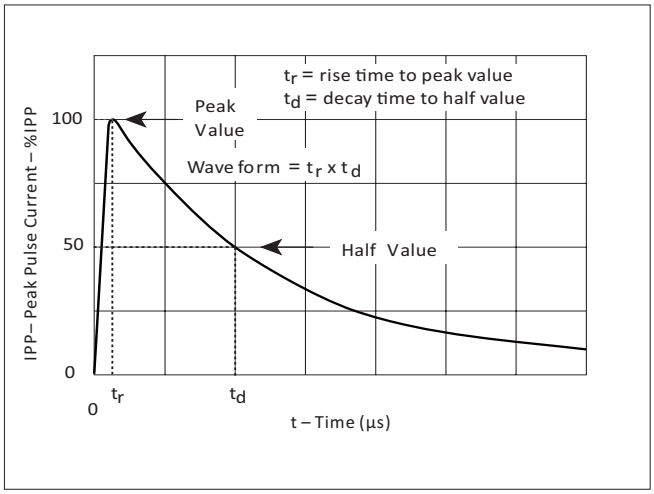
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Typical Characteristics

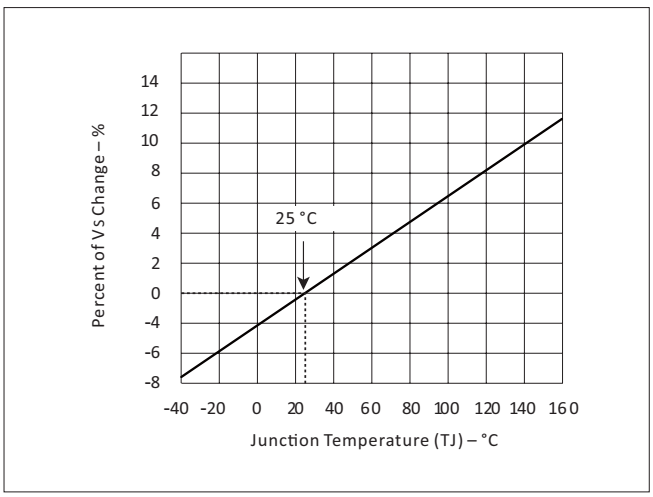
V-I Characteristics



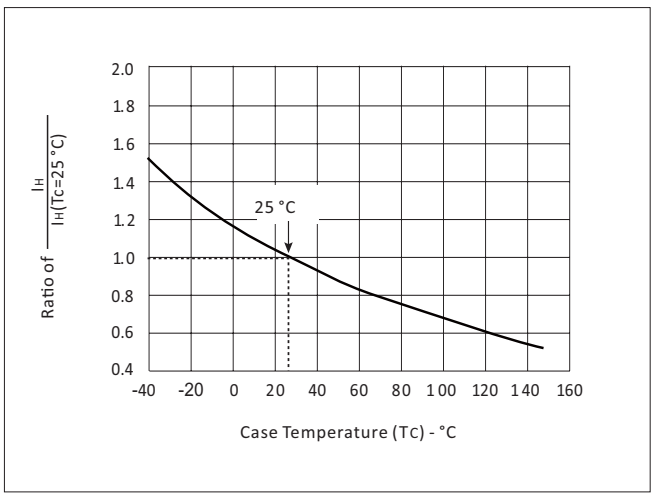
tr x td Pulse Waveform



Normalized V Change vs. Junction Temperature

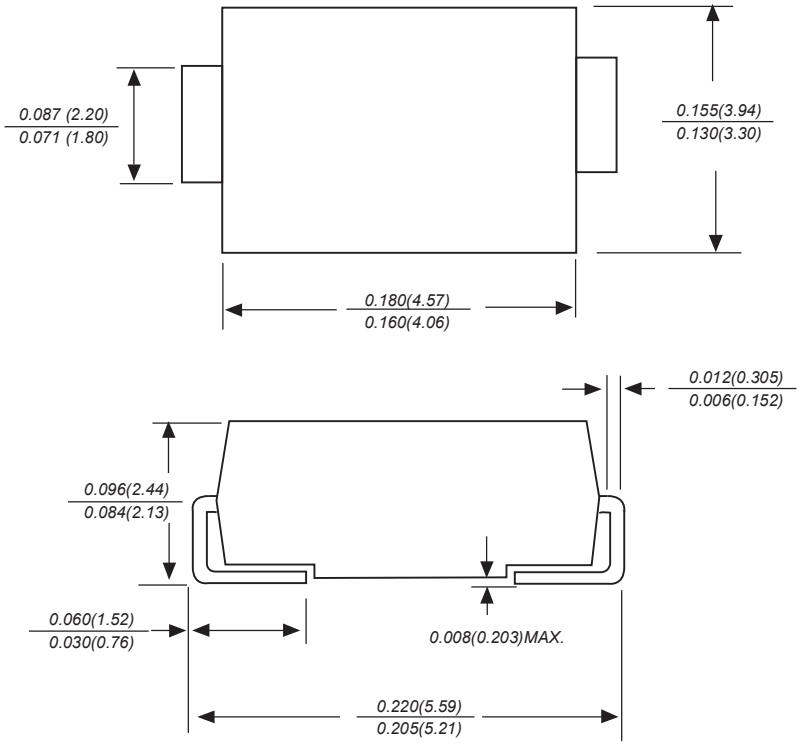


Normalized DC Holding Current vs. Case Temperature



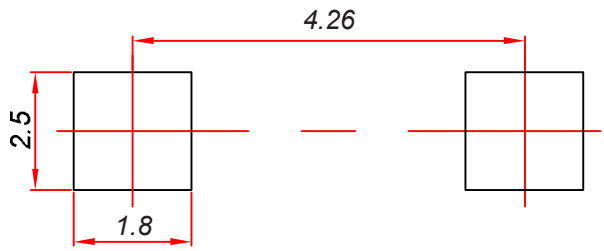
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SMB Package Outline Dimensions



Dimensions in inches and (millimeters)

SMB Suggested Pad Layout



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

NOTICE

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Reel Taping Specifications For Surface Mount Devices–SMB

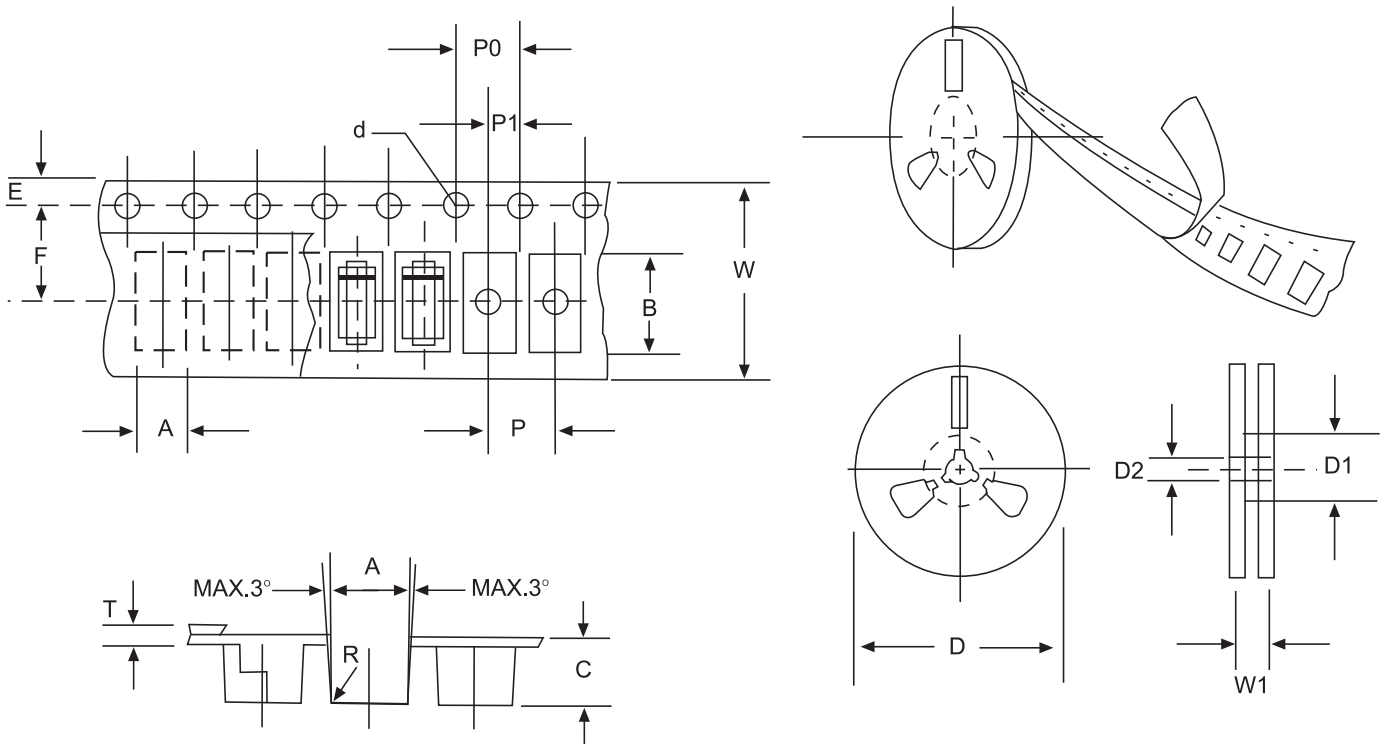


FIG:CONFIGURATION OF AXIAL TAPING

ITEM	SYMBOL	SMB mm(inch)
Carrier width	A	4.09±0.1(0.161±0.004)
Carrier length	B	5.82±0.1(0.229±0.004)
Carrier depth	C	3.33±0.1(0.131±0.004)
Sprocket hole	d	1.55±0.05(0.061±0.0002
Reel outside diameter	D	330/178±2.0(13/7.0±0.79)
Reel inner diameter	D1	8.0±0.2(0.315±0.008)
Feed hole diameter	D2	13±0.5(0.512±0.020)
Stroket hole position	E	1.75±0.1(0.069±0.004)
Punch hole position	F	5.65±0.05(0.222±0.002)
Punch hole pitch	P	8.0±0.1(0.315±0.004)
Sprocket hole pitch	P0	4.0±0.1(0.157±0.004)
Embossment center	P1	2.0±0.1(0.079±0.004)
Totall tape thickness	T	0.32±0.1(0.013±0.004)
Tape width	W	12.0±0.2(0.472±0.008)
Reel width	W1	16.8±2.0(0.661±0.079)

NOTE:Devices are packde in accordance with EIA standard RS-481-A and specification given above.