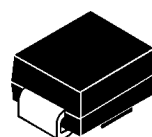




Overvoltage and Surge Protection Devices

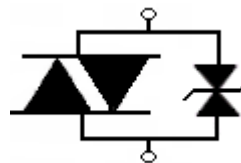
Features

- **SMA** or **SMB** Package
- Bi-directional Configurations
- Excellent clamping capability.
- Passivated planar junction technology.
- Typical IR less than 2uA.
- Plastic material has UL flammability classification 94V-O
- RoHS compliant in lead-free versions



Applications

- Power Line Communication interface
- T1/E1 Trunk & Line Card
- RS-485/RS-232/RS-422
- Video/audio line



Maximum Ratings And Characteristics @ 25°C Ambient Temperature (unless otherwise noted)

Parameter	Symbol	Value	Units
No-repetitive peak pulse voltage @ $T_L = 25^\circ\text{C}$ (10/700us) TNP3025A	V_{PP1}	4	KV
No-repetitive peak pulse voltage @ $T_L = 25^\circ\text{C}$ (10/700us) TNP3025B	V_{PP1}	6	KV
Lead Soldering Temperature	T_L	260(10sec)	$^\circ\text{C}$
Storage Temperature Range	T_{STG}	-55 to 150	$^\circ\text{C}$
Operating Junction Temperature Range	T_J	-55 to 150	$^\circ\text{C}$

Electrical Specification @ Tamb 25°C

Symbol	Parameter	Value			Unit
		Min.	Typ.	Max.	
V_{RWM}	Repetitive Peak off-state Voltage TNP3025A TNP3025B			25 25	V
V_{BR}	Breakdown Voltage;(I _{BR} =1mA) TNP3025A TNP3025B		28 28		V
$V_{(BO)}$	Breakdown Voltage;(I _(BO) =800mA) TNP3025A TNP3025B			40 40	V
I_R	Off-state Current TNP3025A TNP3025B			2 2	uA
V_T	On-state Voltage:I _T =2.2A, tw=100us TNP3025A TNP3025B			4 4	V
C_{off}	Off-state Capacitance:f=1.0MHz Vd=1.0Vrms, VD= -2V TNP3025A TNP3025B		25 35		PF

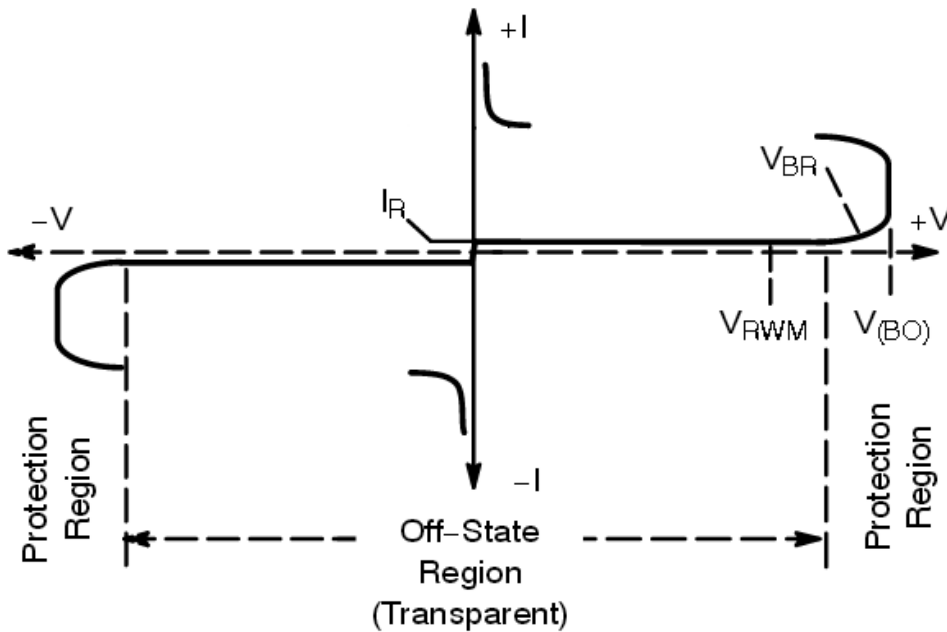


Fig1. Electrical characteristics

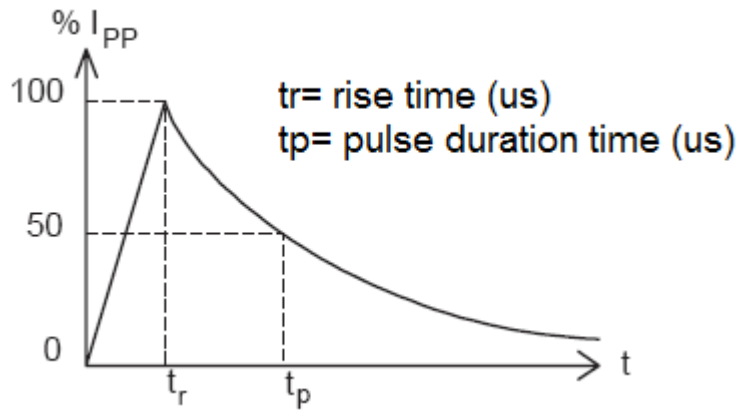
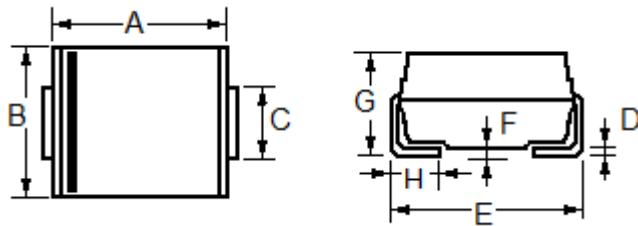


Fig2. Pulse Waveform ($t_r=10\mu s$ $t_p=700\mu s$)

Package Outline Dimensions and Pad Layouts



SMA (DO-214AC)				
Dim	Millimeters		Inches	
	Min	Max	Min	Max
A	3.99	4.57	0.157	0.180
B	2.29	2.92	0.09	0.115
C	1.25	1.65	0.049	0.065
D	0.152	0.405	0.006	0.016
E	4.83	5.59	0.190	0.220
F	----	0.203	----	0.008
G	1.91	2.41	0.075	0.095
H	0.76	1.52	0.030	0.060

SMB (DO-214AA)				
Dim	Millimeters		Inches	
	Min	Max	Min	Max
A	4.06	4.57	0.160	0.180
B	3.30	3.94	0.130	0.155
C	1.95	2.20	0.077	0.086
D	0.13	0.31	0.006	0.012
E	5.08	5.59	0.200	0.220
F	----	0.20	----	0.008
G	1.95	2.62	0.077	0.103
H	0.76	1.52	0.030	0.060