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PESD1CAN-UX

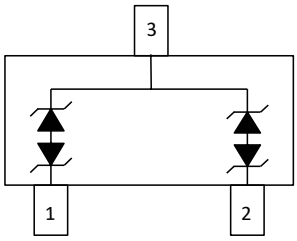
2-Line Bi-directional TVS Diode Array

Features

- Ultra low leakage: nA level
- Operating voltage: 24V
- Low clamping voltage
- Small SOT-323 package
- Up to 2-line protects
- Complies with following standards:
  – IEC 61000-4-2 (ESD) immunity test
  Air discharge: ±25kV
  Contact discharge: ±20kV
  – IEC61000-4-5 (Lightning) 3A (8/20μs)
- RoHS Compliant



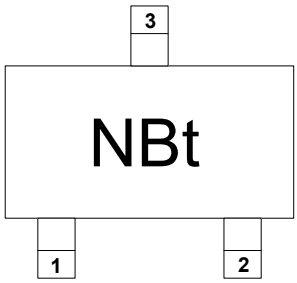
SOT-323



Circuit diagram

Mechanical Characteristics

- Package: SOT-323
- Lead Finish: Matte Tin
- Case Material: “Green” Molding Compound.
- Terminal Connections: See Diagram Below
- Marking Information: See Below



NBt= Device code

Marking (Top View)

Applications

- Cellular Handsets and Accessories
- Notebooks and Handhelds
- Personal Digital Assistants
- Portable Instrumentation
- Digital Cameras
- Peripherals
- Audio Players, Keypads, Side Keys, LCD

Ordering Information

Part Number	Packaging	Reel Size
PESD1CAN-UX	3000/Tape & Reel	7 inch

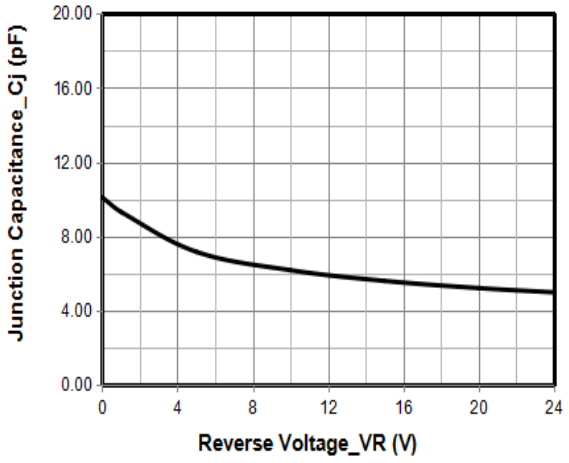
Absolute Maximum Ratings (T_A=25°C unless otherwise specified)

Parameter	Symbol	Value	Unit
Peak Pulse Power (8/20μs)	Ppk	150	W
Peak Pulse Current (8/20μs)	I_{PP}	3	A
ESD per IEC 61000−4−2 (Air) ESD per IEC 61000−4−2 (Contact)	V_{ESD}	±25 ±20	kV
Operating Temperature Range	T_J	−55 to +125	°C
Storage Temperature Range	Tstg	−55 to +150	°C

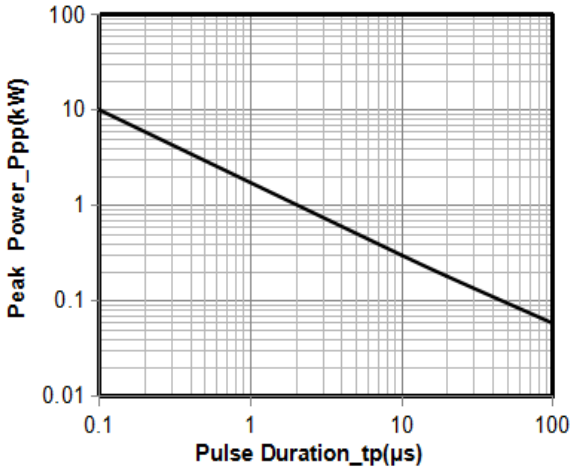
Electrical Characteristics (T_A=25°C unless otherwise specified)

Parameter	Symbol	Min	Typ	Max	Unit	Test Condition
Reverse Working Voltage	V_{RWM}			24	V	
Breakdown Voltage	V_{BR}	26.7			V	I_T = 1mA
Reverse Leakage Current	I_R			0.2	μA	V_{RWM} = 24V
Clamping Voltage	V_C		33	35	V	I_{PP} = 1A (8 x 20μs pulse)
Clamping Voltage	V_C		42	50	V	I_{PP} = 3A (8 x 20μs pulse)
Junction Capacitance	C_J		10		pF	VR = 0V, f = 1MHz, Pin 1 to Pin 3 or Pin 2 to Pin 3
Junction Capacitance	C_J		5		pF	VR = 0V, f = 1MHz, Pin 1 to Pin 2

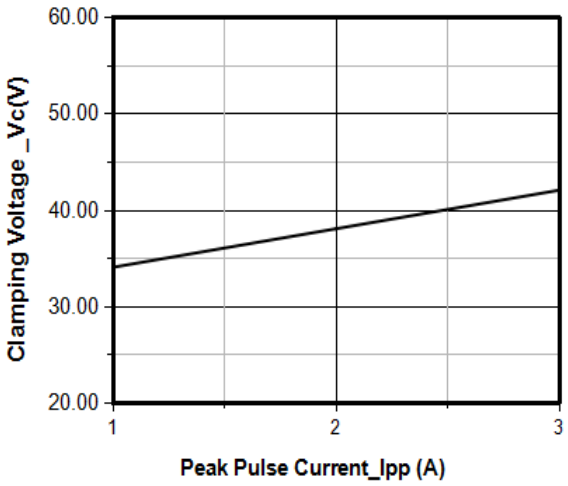
Typical Performance Characteristics (TA=25°C unless otherwise Specified)



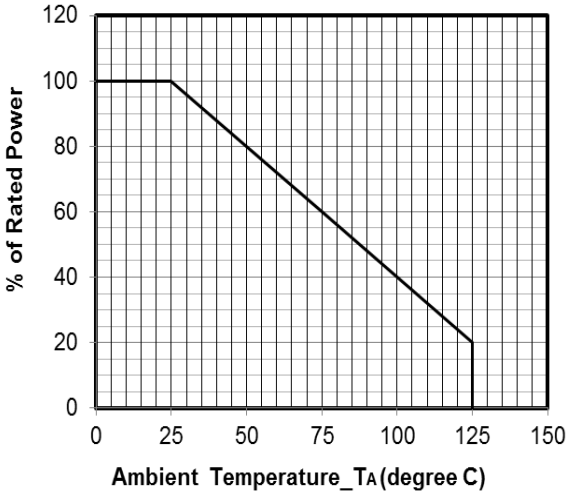
Junction Capacitance vs. Reverse Voltage



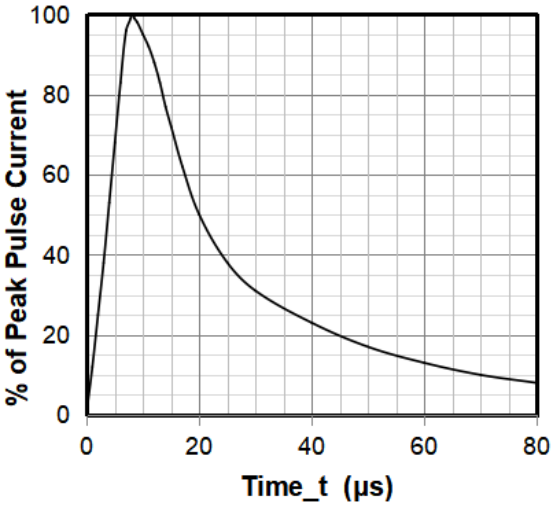
Peak Pulse Power vs. Pulse Time



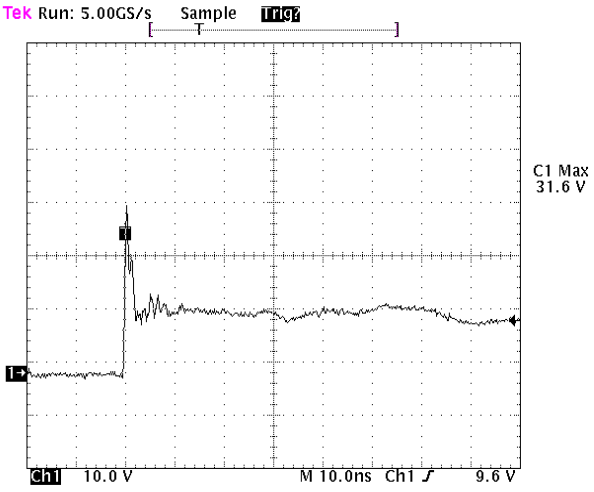
Clamping Voltage vs. Peak Pulse Current



Power Derating Curve



8 X 20μs Pulse Waveform

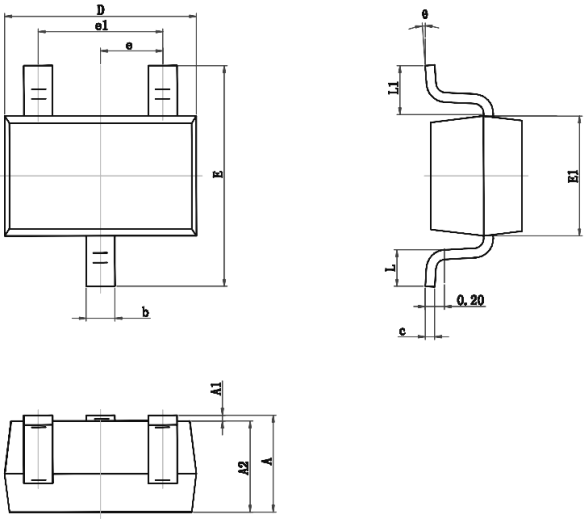


Note：Data is taken with a 10x attenuator

ESD Clamping Voltage

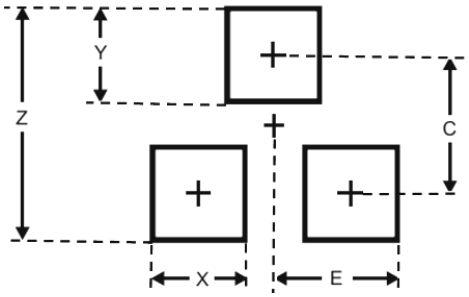
8 kV Contact per IEC61000−4−2

SOT-323 Package Outline Drawing



SYM	DIMENSIONS					
	MILLIMETERS			INCHES		
	MIN	NOM	MAX	MIN	NOM	MAX
A	0.900	- -	1.100	0.035	- -	0.043
A1	0.000	- -	0.100	0.000	- -	0.004
A2	0.900	- -	1.000	0.035	- -	0.039
b	0.200	- -	0.400	0.008	- -	0.016
c	0.080	- -	0.150	0.003	- -	0.006
D	2.000	- -	2. 200	0.079	- -	0.087
E	2.150	- -	2.450	0.085	- -	0.096
E1	1.150	- -	1.350	0.045		0.053
e	0.650 TYP.			0.026 TYP.		
e1	1.200	- -	1.400	0.047	- -	0.055
L	0.260	- -	0.460	0.010	- -	0.018
L1	0.525 REF.			0.021 REF.		
Θ	0°	- -	8°	0°	- -	8°

Suggested Land Pattern



SYM	DIMENSIONS	
	MILLIMETERS	INCHES
C	1.90	0.075
E	1.00	0.039
X	0.70	0.028
Y	0.90	0.035
Z	2.80	0.110