

Features

- ❑ IEC61000-4-2 (ESD) \pm 30kV (air),
 \pm 30KV(contact)
- IEC61000-4-4 (EFT) 40A (5/50ns)
- ❑ 400 Watts Peak Pulse Power per (tp=8/20us)
- ❑ Protects two I/O lines
- ❑ Working voltages: 24V
- ❑ Low leakage current
- ❑ ROHS compliant

Description

The PESD1CAN is designed for applications requiring transient overvoltage protection capability. PESD1CAN is intended for use in voltage and ESD sensitive equipment such as computers, printers, business machines, communication systems, medical equipment and other applications. The device is ideal for situations where board space is at a premium.

This device has been specifically designed to protect sensitive components which are connected to power data and transmission lines from overvoltage caused by ESD (electrostatic discharge), CDE (Cable Discharge Events), and EFT (electrical fast transients).

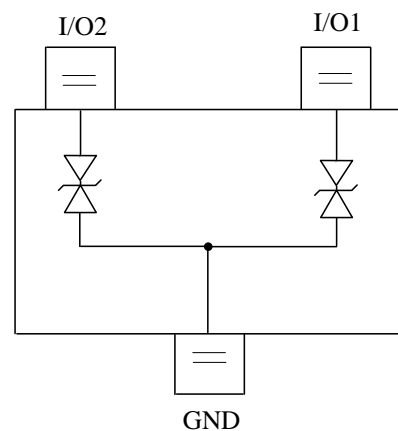
Applications

- ❑ Cell Phone Handsets and Accessories
- ❑ Microprocessor based equipment
- ❑ Personal Digital Assistants (PDA's)
- ❑ Notebooks, Desktops, and Servers
- ❑ Portable Instrumentation
- ❑ Networking and Telecom
- ❑ Serial and Parallel Ports.
- ❑ Peripherals

Mechanical Characteristics

- ❑ SOT23 package
- ❑ Flammability Rating: UL 94V-0
- ❑ Packaging: Tape and Reel
- ❑ High temperature soldering guaranteed: 260°C/10s
- ❑ Reel size: 7 inch

Pin Configuration



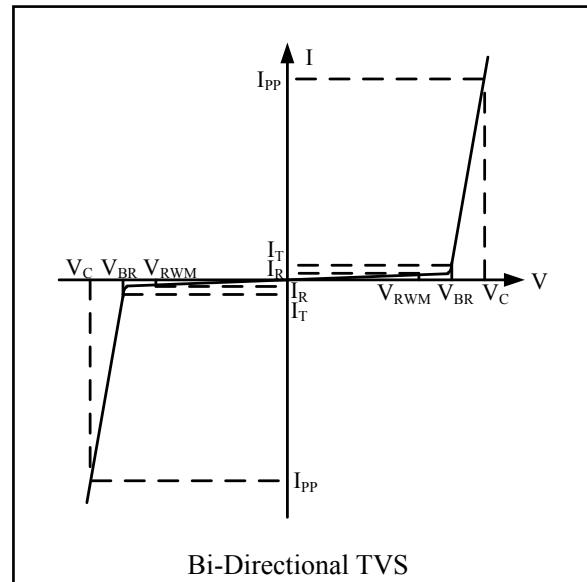
SOT23
(Top View)

Absolute Maximum Rating

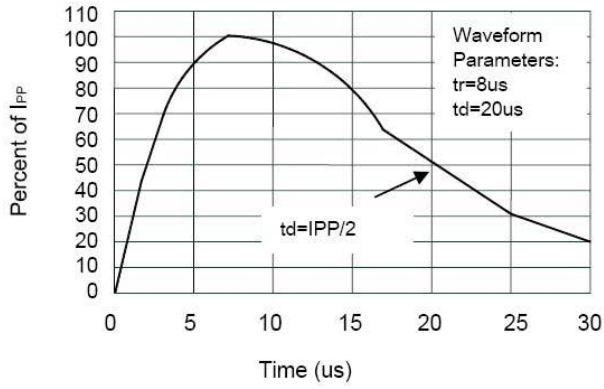
Symbol	Parameter	Value	Units
I_{PP}	Peak Pulse Current (8/20 μ s)	8	A
P_{PK}	Peak Pulse Power (8/20 μ s)	400	Watts
V_{ESD}	ESD per IEC 61000-4-2 (Air)	± 30	kV
	ESD per IEC 61000-4-2 (Contact)	± 30	
T_{OPT}	Operating Temperature	-55 to +125	$^{\circ}$ C
T_{STG}	Storage Temperature	-55 to +150	$^{\circ}$ C

Electrical Characteristics (T = 25 $^{\circ}$ C)

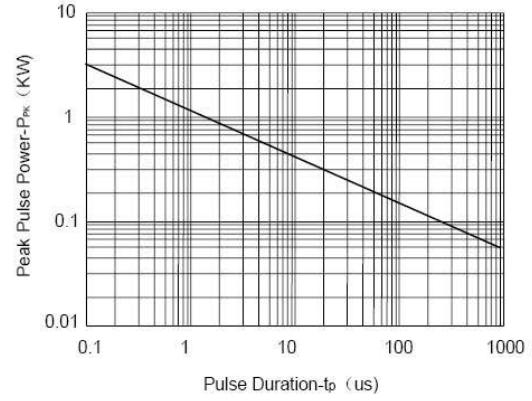
Symbol	Parameter
V_{RWM}	Nominal Reverse Working Voltage
I_R	Reverse Leakage Current @ V_{RWM}
V_{BR}	Reverse Breakdown Voltage @ I_T
I_T	Test Current for Reverse Breakdown
V_C	Clamping Voltage @ I_{PP}
I_{PP}	Maximum Peak Pulse Current
C_{ESD}	Parasitic Capacitance
V_R	Reverse Voltage
f	Small Signal Frequency
I_F	Forward Current
V_F	Forward Voltage @ I_F



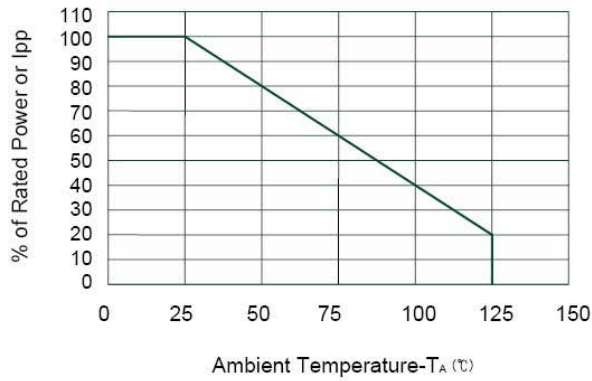
Symbol	Test Condition	Minimum	Typical	Maximum	Units
V_{RWM}				24	V
I_R	$V_{RWM} = 24V, T = 25^{\circ}C$ Between I/O and GND		0.1	1.0	μ A
V_{BR}	$I_T = 1mA$ Between I/O and GND	26.7			V
V_C	$I_{PP} = 1A, t_p = 8/20\mu s$ Between I/O and GND			42	V
V_C	$I_{PP} = 8A, t_p = 8/20\mu s$ Between I/O and GND			50	V
C_{ESD}	$V_R = 0V, f = 1MHz$ Between I/O and GND		20		pF



Pulse Waveform



Non-Repetitive Peak Pulse Power vs. Pulse Time

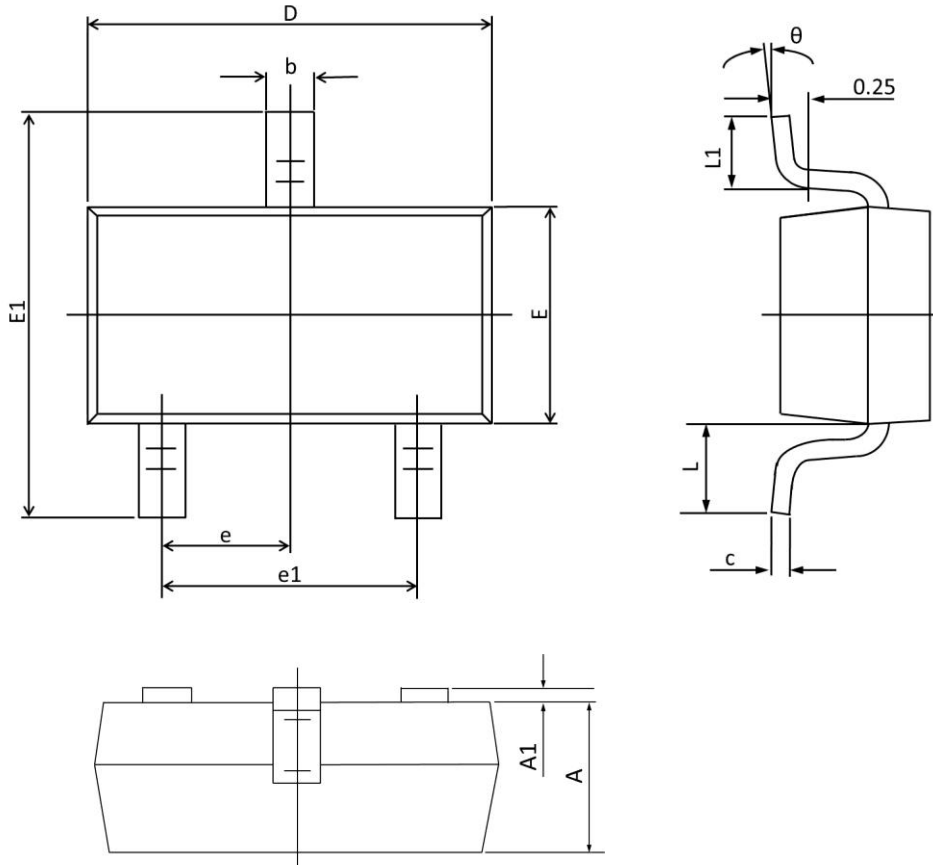


Power Derating Curve



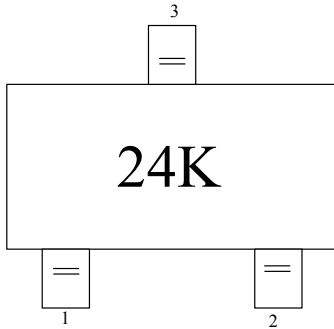
□ SOT23 package

□ MSL-3



Symbol	Dimensions In Millimeters		Dimensions In Inches	
	Min	Max	Min	Max
A	0.900	1.000	0.035	0.039
A1	0.000	0.100	0.000	0.004
b	0.300	0.500	0.012	0.020
c	0.090	0.110	0.003	0.004
D	2.800	3.000	0.110	0.118
E	1.200	1.700	0.047	0.066
E1	2.250	2.550	0.089	0.100
e	0.950 TYP.		0.037 TYP.	
e1	1.800	2.000	0.071	0.079
L	0.550 REF.		0.022 REF.	
L1	0.300	0.500	0.012	0.020
θ	1°	7°	1°	7°

Marking Codes



Note:

(1) "24K" is part number, fixed.

Ordering Information

Part Number	Working Voltage	Quantity Per Reel	Reel Size
PESD1CAN	24V	3,000	7 Inch

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