

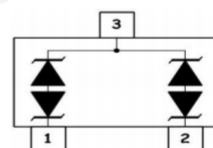
DESCRIPTION

The PESD5V0L2BT is designed for applications requiring transient over voltage protection capability. They are intended for use in voltage and ESD sensitive equipment such as computers, printers, business machines, communication systems, medical equipment and other applications. These devices are ideal for situations where board space is at a premium.

This series 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).



SOT-23



PIN CONFIGURATION

FEATURES

- ◆ IEC61000-4-2 (ESD) $\pm 30\text{kV}$ (Contact)
 $\pm 30\text{kV}$ (Air)
- ◆ IEC61000-4-4 (EFT) 40A (5/50ns)
- ◆ 350 (200) Watts Peak Pulse Power per
($t_p=8/20\mu\text{s}$)
- ◆ Protects two bidirectional lines
- ◆ Low clamping voltage
- ◆ Working voltages: 3.3V to 24V
- ◆ Low leakage current

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

MACHANICAL

- ◆ SOT-23 package
- ◆ Packaging: Tape and Reel
- ◆ High temperature soldering guaranteed:
260°C/10s
- ◆ Reel size: 7 inch
- ◆ MSL 1

ABSOLUTE MAXIMUM RATING

Symbol	Parameter	Value	Units
V_{ESD}	ESD per IEC 61000-4-2 (Contact)	± 30	kV
	ESD per IEC 61000-4-2 (Air)	± 30	
P_{PP}	Peak Pulse Power (8/20 μ s) (3V3、5V0L2BT)	350	W
P_{pp}	Peak Pulse Power (8/20 μ s) (12、15、24L2BT)	200	W
T_{OPT}	Operating Temperature	-55/+150	°C
T_{STG}	Storage Temperature	-55/+150	°C
T_L	Lead Soldering Temperature	260 (10 sec.)	°C

ELECTRICAL CHARACTERISTICS (Tamb=25°C)

PART NUMBER	V_{RWM} (V) (max.)	V_B (V) (min.)	I_T (mA)	$V_C@1A$ (V) (max.)	V_C (V) (max.) (@A)	I_R (μ A) (max.)	C_J (pF) (max.)
PESD3V3L2BT-JSM	3.3	5.8	1	7.5	23.0	15	2
PESD5V0L2BT-JSM	5.0	7.0	1	9.8	24.0	13	1
PESD12VL2BT-JSM	12.0	14.2	1	19.0	35.0	5	0.05
PESD15VL2BT-JSM	15.0	17.1	1	25.0	43.0	5	0.05
PESD24VL2BT-JSM	24.0	25.4	1	39.0	58.0	3	0.05

ELECTRICAL CHARACTERISTICS CURVE

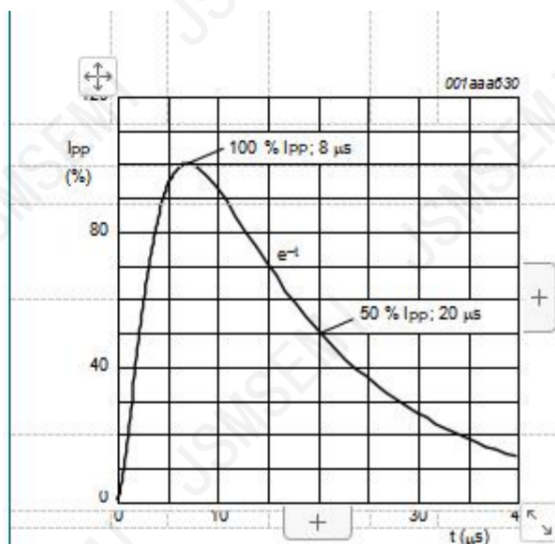


Fig 1. 8/20 μ s pulse waveform according to IEC 61000-4-5

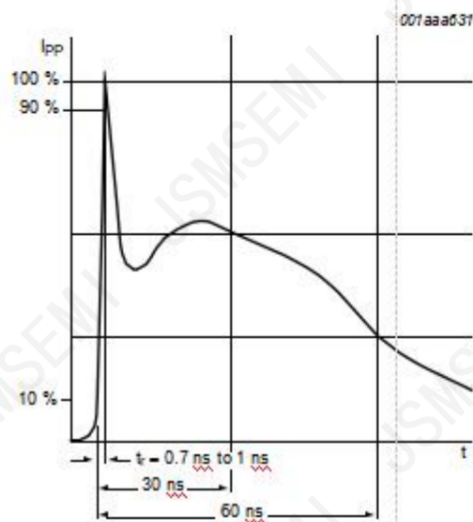
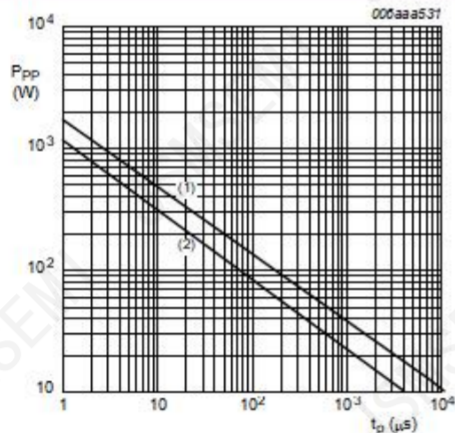


Fig 2. ESD pulse waveform according to IEC 61000-4-2



$T_{amb} = 25^{\circ}C$
(1) PESD3V3L2BT and PESD5V0L2BT
(2) PESD12VL2BT, PESD15VL2BT, PESD24VL2BT

Fig 3. Peak pulse power as a function of exponential pulse duration t_p ; typical values

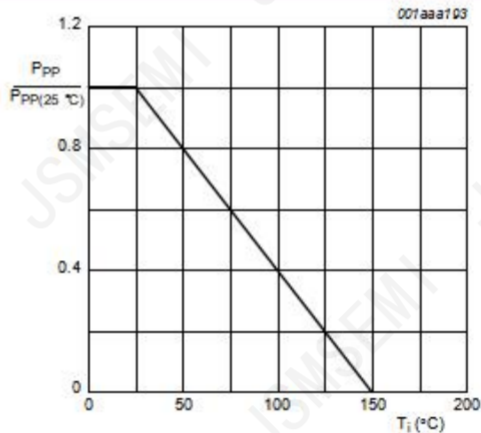
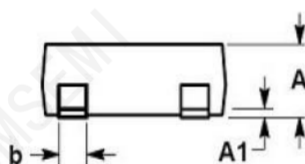
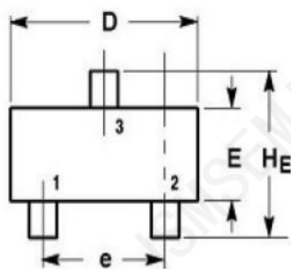


Fig 4. Relative variation of peak pulse power as a function of junction temperature; typical values

SOT-23 PACKAGE OUTLINE DIMENSIONS



DIM	MILLIMETERS			INCHES		
	MIN	NOM	MAX	MIN	NOM	MAX
A	0.89	1.00	1.11	0.035	0.040	0.044
A1	0.01	0.06	0.10	0.001	0.002	0.004
b	0.37	0.44	0.50	0.015	0.018	0.020
c	0.09	0.13	0.18	0.003	0.005	0.007
D	2.80	2.90	3.04	0.110	0.114	0.120
E	1.20	1.30	1.40	0.047	0.051	0.055
e	1.78	1.90	2.04	0.070	0.075	0.081
L	0.35	0.54	0.69	0.014	0.021	0.029
HE	2.10	2.40	2.64	0.083	0.094	0.104