

## DESCRIPTION

The PESD12VL2BT is designed for applications requiring transient overvoltage 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).

## FEATURES

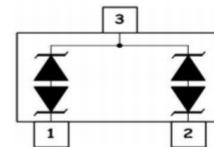
- ◆ IEC61000-4-2 (ESD)  $\pm 30\text{kV}$  (Contact)  
 $\pm 30\text{kV}$  (Air)
- ◆ IEC61000-4-4 (EFT) 40A (5/50ns)
- ◆ 350 (200) Watts Peak Pulse Power per  
( $t_p=8/20\mu\text{s}$ )
- ◆ Protects two bidirectional lines
- ◆ Low clamping voltage
- ◆ Working voltages: 3.3V to 24V
- ◆ Low leakage current

## 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



**SOT-23**



**PIN CONFIGURATION**

## MACHANICAL

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

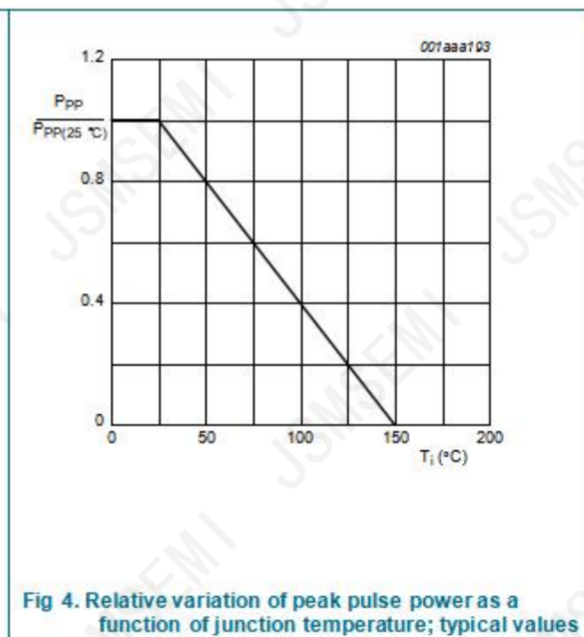
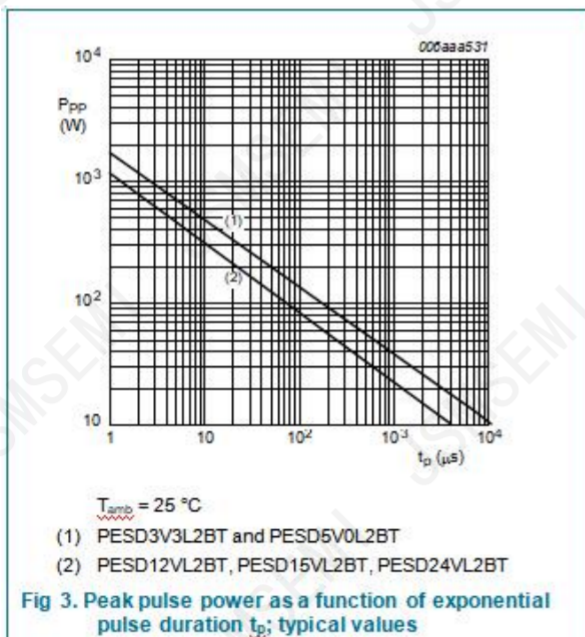
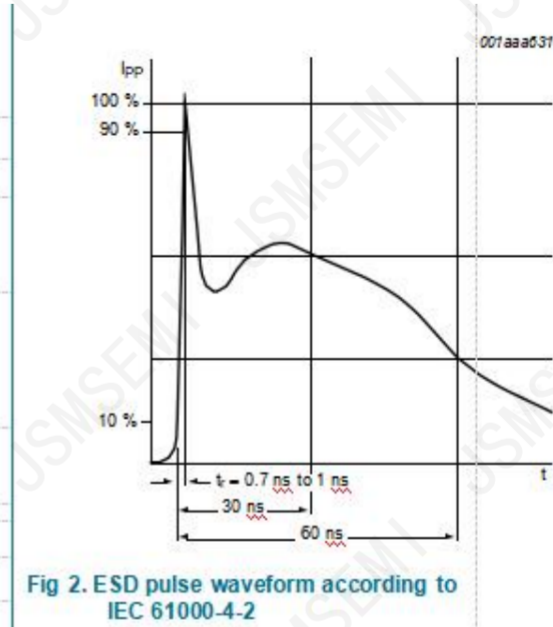
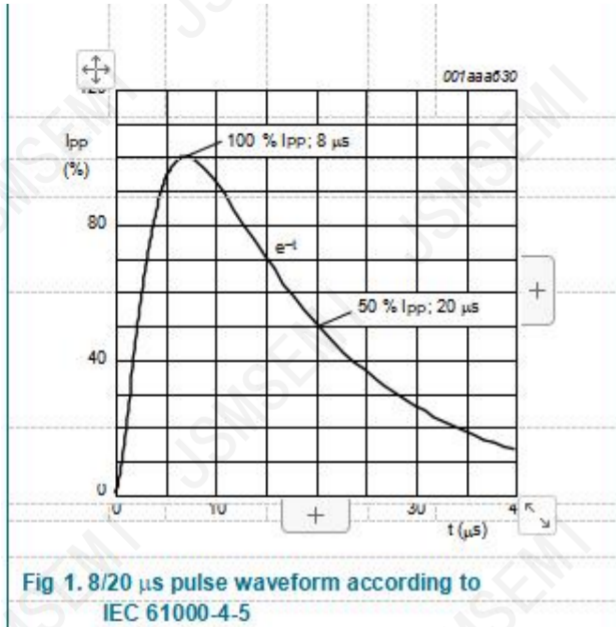
**ABSOLUTE MAXIMUM RATING**

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

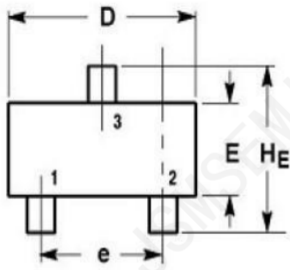
**ELECTRICAL CHARACTERISTICS (Tamb=25 $^{\circ}$ C)**

PART NUMBER	$V_{RWM}$ (V) (max.)	$V_B$ (V) (min.)	$I_T$ (mA)	$V_C@1A$ (V) (max.)	$V_C$ (V) (max.) (@A)	$I_R$ ( $\mu$ 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**



**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

