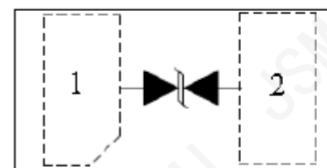


## DESCRIPTION

PESD5V0H1BSF-JSM is a bidirectional TVS diode that utilizes leading monolithic silicon technology to provide fast response time and low ESD clamping voltage, making an ideal solution for protecting voltage sensitive data and power lines. This device complies with the IEC 61000-4-2 (ESD) standard, supporting \*\* $\pm 20$  kV air discharge\*\* and \*\* $\pm 15$  kV contact discharge\*\*. It is housed in an ultra-compact, lead-free 0201 package(dimensions: 0.6×0.3×0.3 mm).

The PESD5V0H1BSF-JSM compact size and high ESD surge protection make it a superior choice for safe guarding portable applications such as mobile phones, digital cameras audio players, and similar devices.



DFN0603

## FEATURES

- ◆ Ultra small package: 0.6x0.3x0.3mm
- ◆ Ultra low capacitance: 0.35pF typica 1
- ◆ Ultra low leakage: nA level
- ◆ Low operating voltage: 5V
- ◆ Low clamping voltage
- ◆ 2-pin leadless package
- ◆ Complies with following standards:- IEC 61000-4-2 (ESD) immunity test
- ◆ Air discharge:  $\pm 20$ kV
- ◆ Contact discharge:  $\pm 15$ kV
- ◆ RoHS Compliant
- ◆ Lead Finish: NiPdAu

## APPLICATIONS

- ◆ Smart phones
- ◆ Display Ports
- ◆ MDDI Ports
- ◆ USB Ports
- ◆ digital Video Interface (DVI)
- ◆ PCI Express and Serial SATA Ports

## MACHANICAL DATA

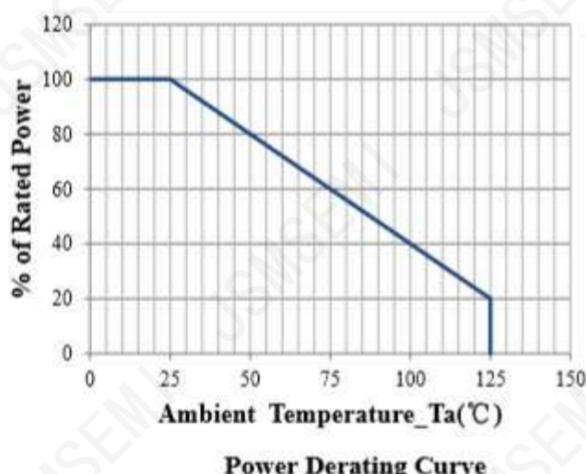
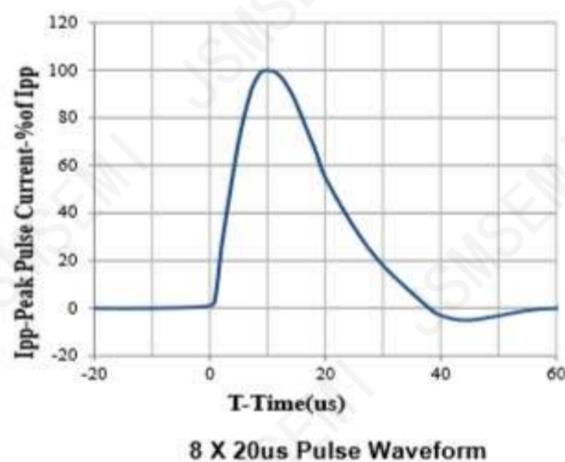
- ◆ Flammability Rating: UL 94V-0
- ◆ Packaging: Tape and Reel
- ◆ High temperature soldering guaranteed: 260 °C/10s
- ◆ Reel size: 7 inch

## ABSOLUTE MAXIMUM RATING

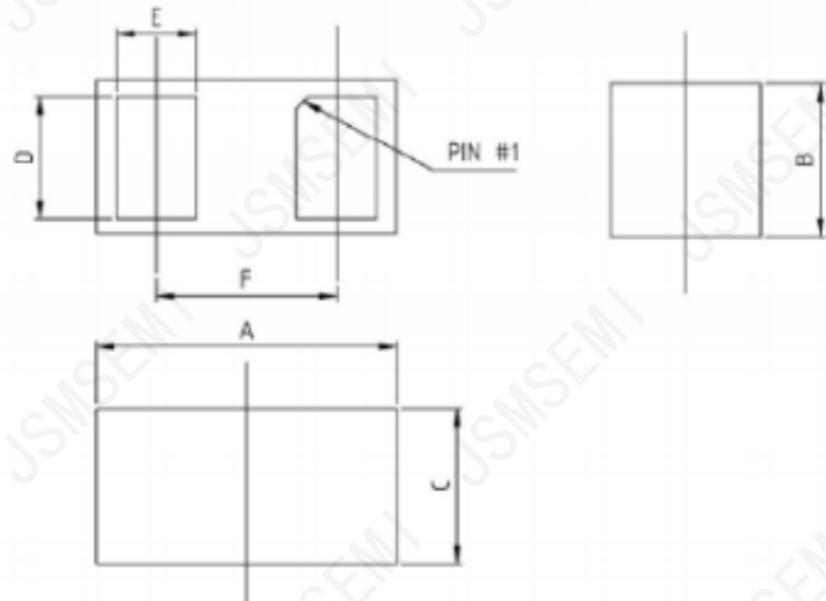
Symbol	Parameter	Value	Units
$V_{ESD}$	ESD per IEC 61000-4-2 (Air) ESD per IEC 61000-4-2 (Contact)	$\pm 20$ $\pm 15$	kV
$P_{PP}$	Peak Pulse Power (8/20 $\mu$ s)	80	W
$T_{OPT}$	Operating Temperature	-55~125	°C
$T_{STG}$	Storage Temperature	-55~150	°C

**ELECTRICAL CHARACTERISTICS (Tamb=25°C)**

Symbol	Parameter	Test Condition	Min	Typ	Max	Units
$V_{RWM}$	Reverse Working Voltage				5.0	V
$V_{BR}$	Reverse Breakdown Voltage	$I_T = 1\text{mA}$	6.0			V
$I_R$	Reverse Leakage Current	$V_{RWM} = 5\text{V}$			0.1	nA
$V_C$	Clamping Voltage	$I_{PP} = 1\text{A}, t_p = 8/20\mu\text{s}$			12	V
$C_J$	Junction Capacitance	$V_R = 0\text{V}, f = 1\text{MHz}$		0.35		pF

**ELECTRICAL CHARACTERISTICS CURVE**

**Power Derating Curve**

**8 X 20us Pulse Waveform**

## DFN0603 PACKAGE OUTLINE DIMENSIONS



Dimensions In Millimeterer			
Symbol	MIN	TYP	MAX
A	0.58	0.60	0.65
B	0.28	0.30	0.35
C	0.28	0.30	0.34
D	0.20	0.24	0.26
E	0.13	0.16	0.19
F	-	0.36	-

## Revision History

Rev.	Change	Date
V1.0	Initial version	6/27/2021

## Important Notice

JSMSEMI Semiconductor (JSMSEMI) PRODUCTS ARE NEITHER DESIGNED NOR INTENDED FOR USE IN MILITARY AND/OR AEROSPACE, AUTOMOTIVE OR MEDICAL DEVICES OR SYSTEMS UNLESS THE SPECIFIC JSMSEMI PRODUCTS ARE SPECIFICALLY DESIGNATED BY JSMSEMI FOR SUCH USE. BUYERS ACKNOWLEDGE AND AGREE THAT ANY SUCH USE OF JSMSEMI PRODUCTS WHICH JSMSEMI HAS NOT DESIGNATED FOR USE IN MILITARY AND/OR AEROSPACE, AUTOMOTIVE OR MEDICAL DEVICES OR SYSTEMS IS SOLELY AT THE BUYER'S RISK.

JSMSEMI assumes no liability for application assistance or customer product design. Customers are responsible for their products and applications using JSMSEMI products.

Resale of JSMSEMI products or services with statements different from or beyond the parameters stated by JSMSEMI for that product or service voids all express and any implied warranties for the associated JSMSEMI product or service. JSMSEMI is not responsible or liable for any such statements.

JSMSEMI All Rights Reserved. Information and data in this document are owned by JSMSEMI wholly and may not be edited, reproduced, or redistributed in any way without the express written consent from JSMSEMI.

Any and all information described or contained herein are subject to change without notice due to product/technology improvement, etc. When designing equipment, refer to the "Delivery Specification" for the JSMSEMI product that you intend to use.

For additional information please contact [Kevin@jsmsemi.com](mailto:Kevin@jsmsemi.com) or visit [www.jsmsemi.com](http://www.jsmsemi.com)