# PESD3V3L1BAF
ESD PROTECTION DIODE

## Discription

Low capacitance bidirectional ElectroStatic Discharge (ESD) protection diode in a ultra-small and flat lead SOD-323 plastic package designed to protect one signal line from the damage caused by ESD and other transients.


SOD-323

## Features

★ Bidirectional ESD protection of one line
★ Reverse stand-off voltage: 3.3V Max
★ Low leakage current: nA Level
★ Response time is typically < 1 ns
★ Low clamping voltage:VC < 16V @IPP=20A
★ ESD Protection: 30kV(air)/ 30kV(contact) ( IEC61000-4-2)
★ RoHS compliant

Circuit Diagram

## Applications

★ Cell Phone Handsets and Accessories
★ Microprocessor based equipment
★ Personal Digital Assistants (PDA's)
★ Notebooks,Desktops,and Servers

## Ordering Information

| Product ID | Pack | Qty(PCS) |
|---|---|---|
| PESD3V3L1BAF | SOD-323 | 3000 |

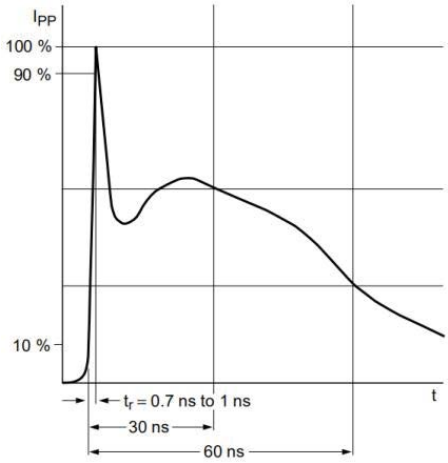
## Absolute Ratings(Tamb = 25°C)

| Parameter | Symbol | Value | Unit |
|---|---|---|---|
| Peak Pulse Power (tp = 8/20μs) | $P_{PPM}$ | 60 | W |
| ESD voltage IEC 61000-4-2 (air discharge) | $V_{ESD}$ | 30 | kV |
| ESD voltage IEC 61000-4-2 (contact discharge) | $V_{ESD}$ | 30 | kV |
| Maximum lead temperature for soldering during 10s | $T_L$ | 260 | °C |
| Storage Temperature Range | $T_{stg}$ | -55 to +150 | °C |
| Operating Temperature Range | $T_{OP}$ | -40 to +125 | °C |

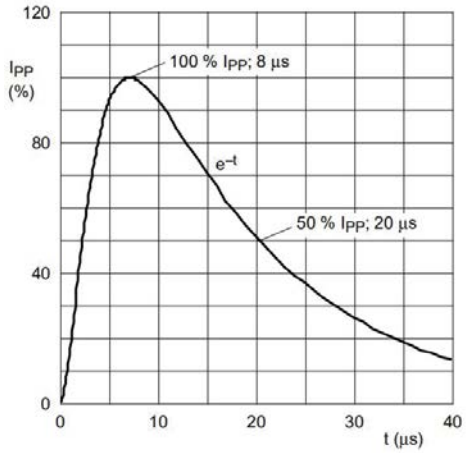
## Electrical Characteristics

| Parameter | Symbol | Min | Typ | Max | Unit | Condition |
|---|---|---|---|---|---|---|
| Reverse Working Voltage | $V_{RWM}$ | -- | -- | 3.3 | V | |
| Breakdown Voltage | $V_{BR}$ | 4.0 | -- | | V | $I_T$=1mA |
| Leakage Current ILeak | $I_R$ | -- | -- | 40 | uA | $V_{RWM}$=3.3V |
| Clamping Voltage | $V_C$ | -- | -- | 7.5 | V | $I_{PP}$=1A,Tp=8/20μs |
| | $V_C$ | -- | -- | 16 | | $I_{PP}$=20A,Tp=8/20μs |
| Junction Capacitance | $C_J$ | -- | 65 | 100 | pF | $V_R$=0V, f=1MHz |

## Typical Characteristics

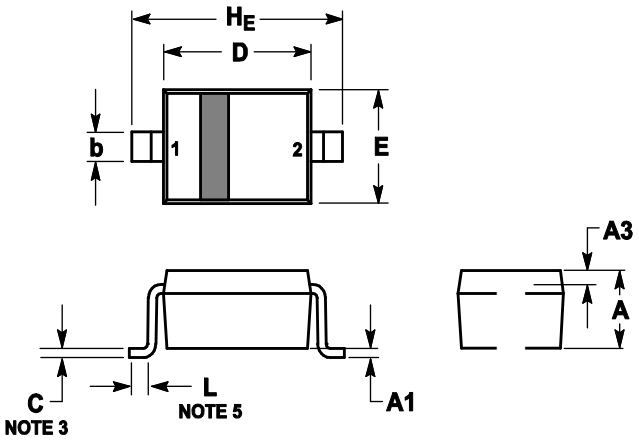



IEC61000−4−2 Waveform




IEC 61000-4-5 Waveform( 8/20μs pulse)

## Outline And Dimensions

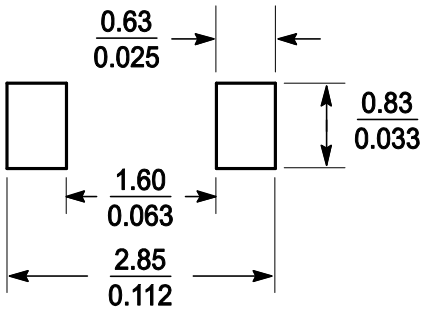



Notes:

1. DIMENSIONING AND TOLERANCING PER ANSI Y14.5M, 1982.
2. CONTROLLING DIMENSION: MILLIMETERS.
3. MAXIMUM LEAD THICKNESS INCLUDES LEAD FINISH. MINIMUM LEAD THICKNESS IS THE MINIMUM THICKNESS OF BASE MATERIAL.
4. DIMENSIONS D AND E DO NOT INCLUDE MOLD FLASH, PROTRUSIONS OR GATE BURRS.

| DIM | MILLIMETERS | | | INCHES | | |
|---|---|---|---|---|---|---|
| | MIN | NOM | MAX | MIN | NOM | MAX |
| A | 0.8 | 0.9 | 1 | 0.031 | 0.035 | 0.04 |
| A1 | 0 | 0.05 | 0.1 | 0 | 0.002 | 0.004 |
| A3 | 0.15REF | | | 0.006REF | | |
| b | 0.25 | 0.32 | 0.4 | 0.01 | 0.012 | 0.016 |
| C | 0.089 | 0.12 | 0.177 | 0.003 | 0.005 | 0.007 |
| D | 1.6 | 1.7 | 1.8 | 0.062 | 0.066 | 0.07 |
| E | 1.15 | 1.25 | 1.35 | 0.045 | 0.049 | 0.053 |
| L | 0.08 | | | 0.003 | | |
| $H_E$ | 2.3 | 2.5 | 2.7 | 0.09 | 0.098 | 0.105 |

## Soledering Footprint



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