

ESD Protection – ESD12VD8BT

Description

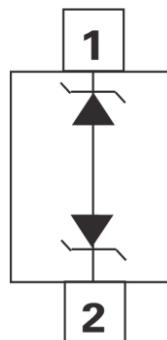
The ESD12VD8BT is designed to protect voltage sensitive components from ESD. Excellent clamping capability, low leakage, and fast response time provide best in class protection on designs that are exposed to ESD. Because of its small size, it is suited for use in cellular phones, MP3 players, digital cameras and many other portable applications where board space is at a premium.



Feature

- Case : SOD882 package
- Low Leakage current
- Response Time is Typically < 1.0 ns
- Bi-directional ESD protection
- ESD Rating of Class 3 (> 16 kV) per Human Body Model
- IEC61000-4-2 Level 4 ESD Protection
- We declare that the material of product compliance with RoHS requirements.

Schematic & PIN Configuration



Applications

- Cellular phones audio
- MP3 players
- Digital cameras
- Portable applications
- mobile telephone

Absolute Maximum Ratings

Parameter	Symbol	Value	Units
IEC61000-4-2 (Contact)	V _{ESD}	±16	kV
IEC61000-4-2 (Air)	V _{ESD}	±16	kV
Total Power Dissipation on FR-5 Board (Note 1)@ TA=25°C	P _D	200	mW
Operating Temperature	T _J	-55 to 150	°C
Lead Solder Temperature – Maximum (10Second Duration)	T _L	260	°C

Stresses exceeding Maximum Ratings may damage the device. Maximum Rating are stress ratings only.

Functional operation above the Recommended Operating Conditions is not implied. Extended exposure to stresses above the Recommended Operating Conditions may affect device reliability.

1. FR-5 = 1.0*0.75*0.62 in.

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

V_{RWM} (V)	IR (μA) @ V_{RWM}	V_{BR} (V) @ I_T (Note 2)		I_T (mA)	IPP (A) Note 3	V_C (V) Note 3	P_{PK} W 8/20 μ s	C pF	
Max	Max	Min	Max		Max	Max	Max	Typ	Max
12	1	13.3	16	1	4	18	72	6.5	9.5

2. VBR is measured with a pulse test current I_T at an ambient temperature of $25^\circ C$

3. Surge current waveform per Figure 3.

Rating & Characteristic Curves

Figure 1 - Electrical Parameter

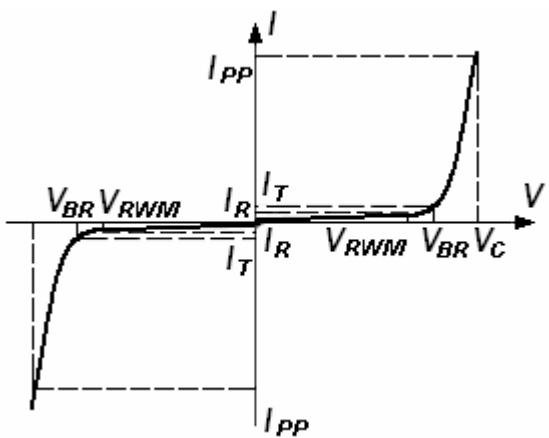


Figure 2- ESD Waveform

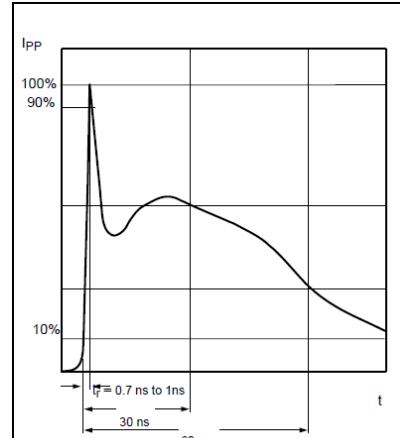
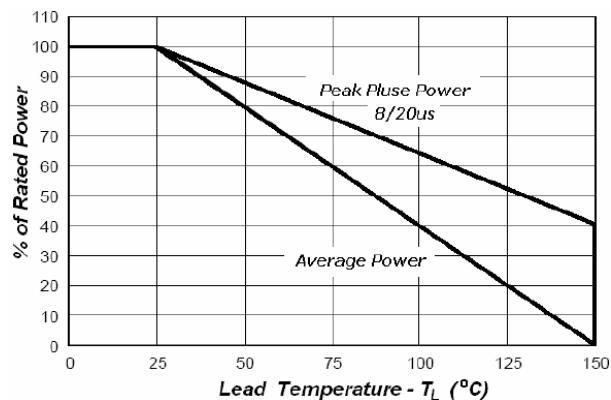
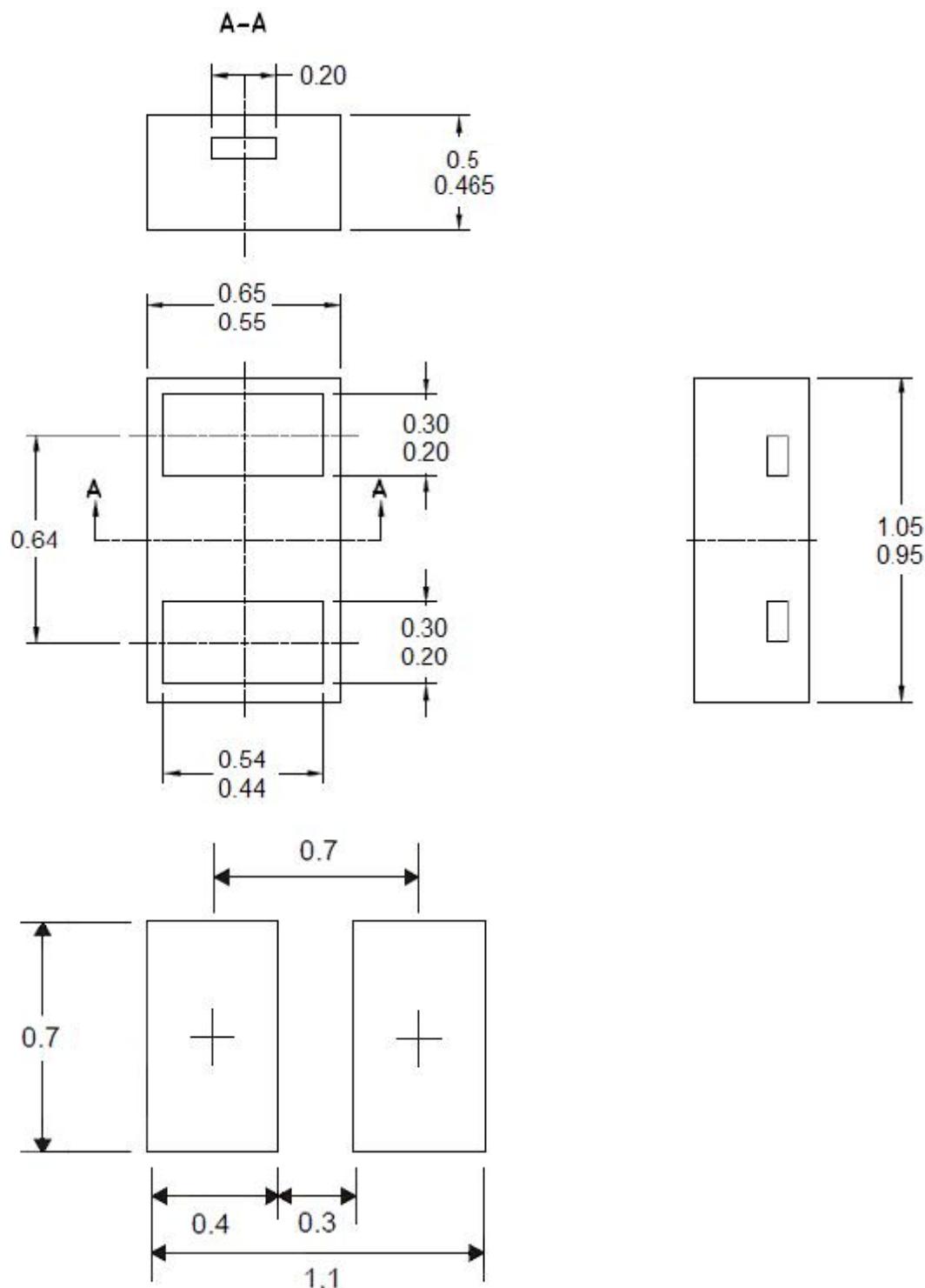


Figure 3 - Power Derating



PACKAGE OUTLINE DIMENSIONS in millimeters :SOD882



Disclaimer

Specifications are subject to change without notice.

The device characteristics and parameters in this data sheet can and do vary in different applications and actual device performance may vary over time.

Users should verify actual device performance in their specific applications.