

ESD Protection -ESD5V0D8B

Description

The ESD5V0D8B in a SOD-882 package and will protect bidirectional line. These devices are designed to replace multilayer varistors (MLVs) in portable applications such as cell phones, notebook computers, and PDA's. They offer superior electrical characteristics such as lower clamping voltage and no device degradation when compared to MLVs, The ESD5V0D8B are designed to protect sensitive semiconductor components from damage or upset due to electrostatic discharge (ESD), and other voltage induced transient events.



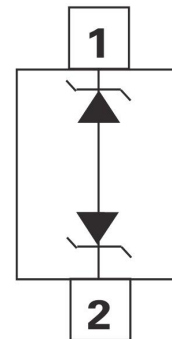
Feature

- Case : SOD882 package
- Low clamping voltage
- Low Leakage current
- Peak Power up to 150 Watts @ 8 x 20 μ s Pulse
- Response Time is Typically < 1.0 ns
- IEC61000 4 2 Level 4 ESD Protection

Applications

- Cellular phones
- Portable devices
- Digital cameras
- Power supplies

Schematic & PIN Configuration



Absolute Maximum Ratings

Parameter	Symbol	Value	Units
IEC61000-4-2 (Contact)	V_{ESD}	8	kV
IEC61000-4-2 (Air)	V_{ESD}	15	kV
Lead Soldering Temperature	T_L	260 (10 sec)	$^{\circ}C$
Operating Temperature	T_J	-40 to 125	$^{\circ}C$
Storage Temperature Range	T_{STG}	-55 to 155	$^{\circ}C$

Electrical Characteristics (T = 25° C)

Parameter	Symbol	Conditions	Min.	Typ.	Max.	Units
Reverse Stand-off Voltage	V_{RWM}				5	V
Reverse Breakdown Voltage	V_{BR}	$I_T = 1\text{mA}$	5.6			V
Reverse Leakage Current	I_R	$V_R = V_{RWM}$			0.5	μA
Clamping Voltage	V_C	$I_{PP}=5\text{A}$, $t_P = 8/20\mu\text{s}$		11.6		V
Peak pulse Current	I_{PP}	$t_P = 8/20\mu\text{s}$			9.4	A
Junction Capacitance	C_J	$V_R=0\text{V}$, $f = 1\text{MHz}$		15		pF

Rating & Characteristic Curves

Figure 1 - Electrical Parameter

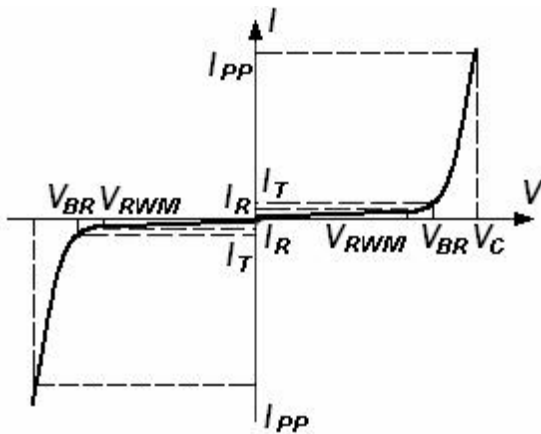


Figure 2- Pulse Waveform

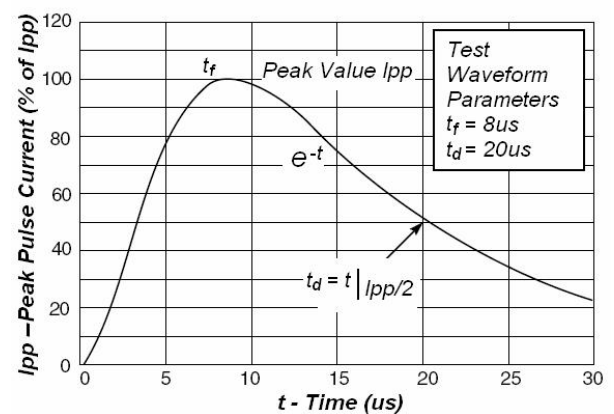
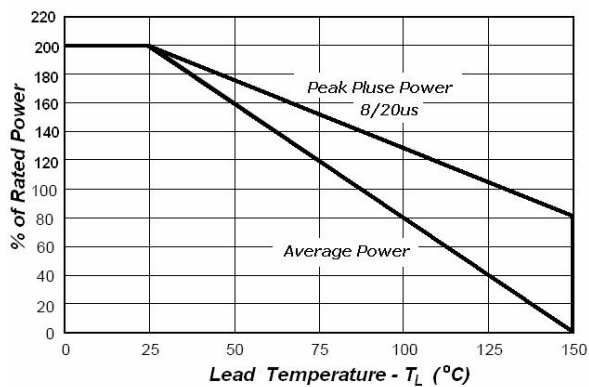
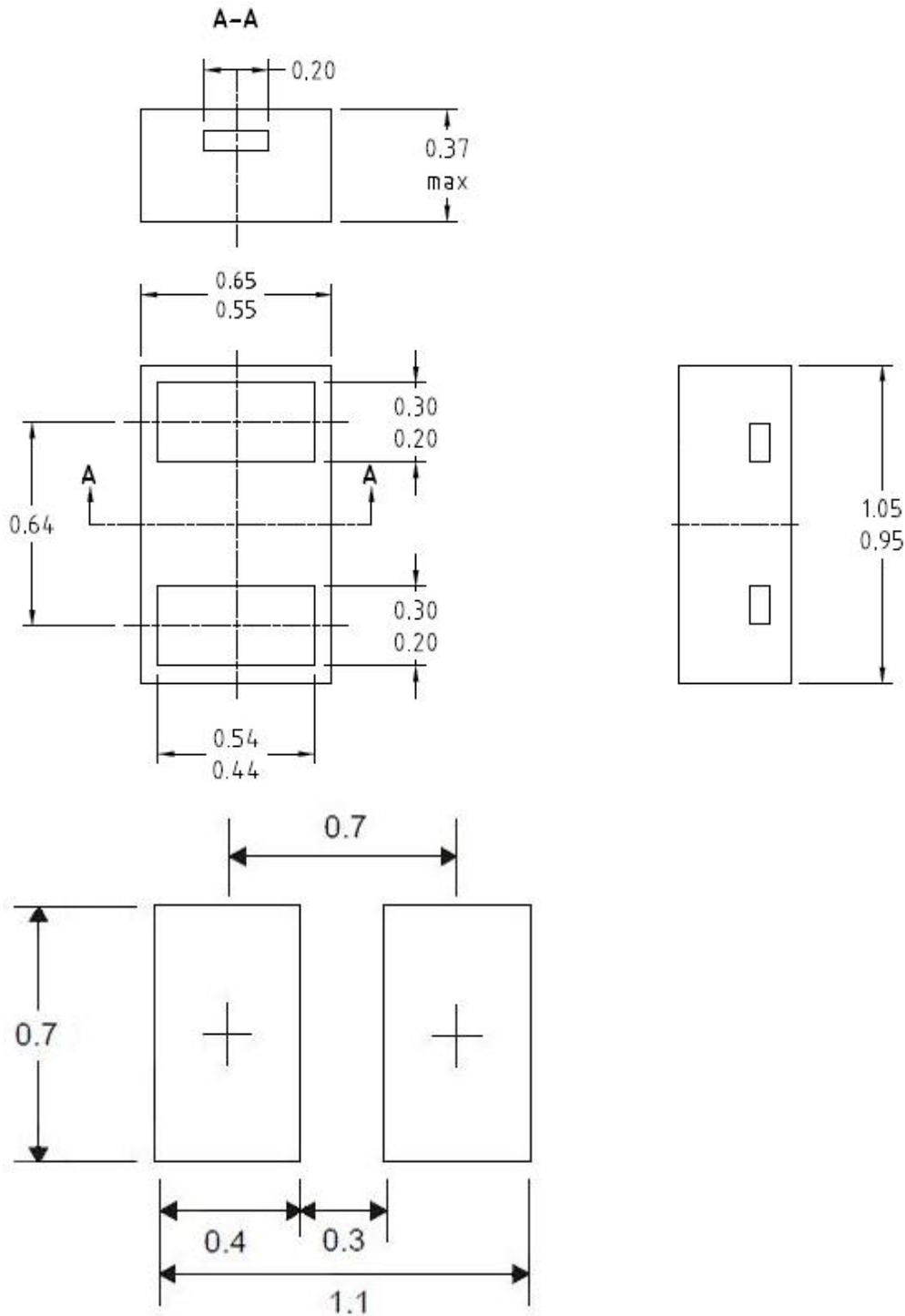


Figure 3- Power Derating Curve





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.