

ME5V0Z1BBD

1. Protection Solution To Meet

- IEC61000-4-2 (ESD) $\pm 30\text{kV}$ (air), $\pm 30\text{kV}$ (contact)
- IEC61000-4-4 (EFT) 40A (5/50ns)
- IEC61000-4-5 (Lightning) 8A (8/20 μs)

2. Features

- Protects one bi-directional I/O line
- Low clamping voltage
- Working voltage: 5V
- Low leakage current
- RoHS compliant

3. Main Application

- Cell phone handsets and accessories
- Microprocessor based equipment
- Personal digital assistants (PDA' s)
- Notebooks, desktops, and servers
- Portable instrumentation
- Peripherals
- Digital cameras

4. Mechanical Characteristics

- SOD-323 package
- Molding compound flammability rating: UL 94V-0
- Weight 4.5 milligrams (approximate)
- Lead finish: lead free
- Marking code: 5D

5. Absolute Maximum Ratings ($T_A=25^\circ\text{C}$ unless otherwise noted)

Parameter	Symbol	Value	Unit
ESD per IEC 61000-4-2 (Contact)	$V_{\text{ESD-Contact}}$	± 30	KV
ESD per IEC 61000-4-2 (Air)	$V_{\text{ESD-Air}}$	± 30	KV
Peak Pulse Power(8/20us)	P_{pp}	96	W
Operating Temperature	T_{OPT}	-55~+150	$^\circ\text{C}$
Storage Temperature Range	T_{stg}	-55~+150	$^\circ\text{C}$

6. Pinning information

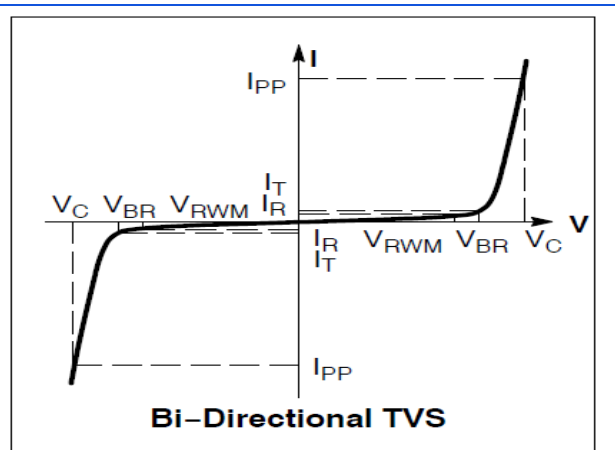
Pin	Symbol	Description	Simplified outline	Equivalent Circuit	Marking	Package
1	A	Anode			5D	SOD-323
2	A	Anode				

7. Electrical Characteristics (Tamb=25°C)

Parameter	Symbols	Condition	Min	Typ	Max	Unit
Reverse Working Voltage	V_{RWM}				5	V
Breakdown Voltage	V_{BR}	$I_T = 1mA$	6.0		8.5	V
Reverse Leakage Current	I_R	$V_{RWM} = \pm 5V$			0.1	μA
Clamping Voltage	V_C	$I_{PP} = 1A, t_p = 8/20\mu s$			8.5	V
		$I_{PP} = 8A, t_p = 8/20\mu s$			12	V
Junction Capacitance	C_J	$V_R = 0V, f = 1MHz$		18	25	pF

8. Electrical Parameters

Symbol	Parameter
I_{PP}	Maximum Reverse Peak Pulse Current
V_C	Clamping Voltage @ I_{PP}
V_{RWM}	Working Peak Reverse Voltage
I_R	Maximum Reverse Leakage Current @ V_{RWM}
I_T	Test Current
V_{BR}	Breakdown Voltage @ I_T
PK	Peak Power Dissipation
C	Capacitance @ $V_R = 0$ and $f = 1MHz$



9. Typical Characteristics

Fig.1 8/20us Waveform Per IEC6100-4-5

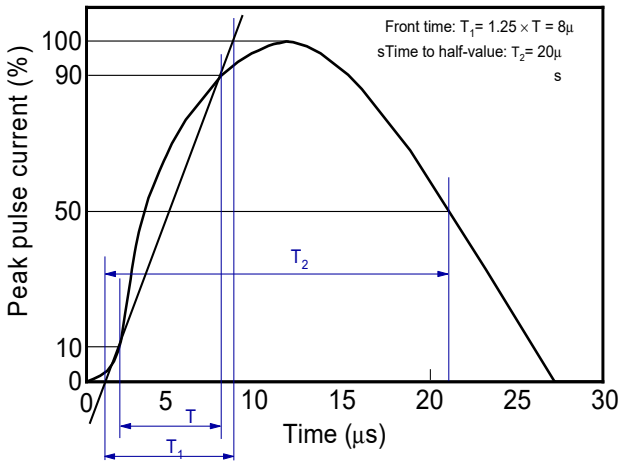


Fig.2 Contact Discharge Current Waveform per IEC61000-4-2

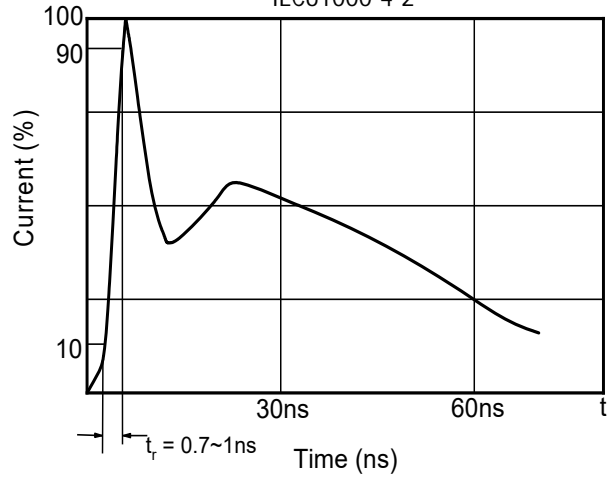


Fig.3 Clamping Voltage VS Peak Pulse Current

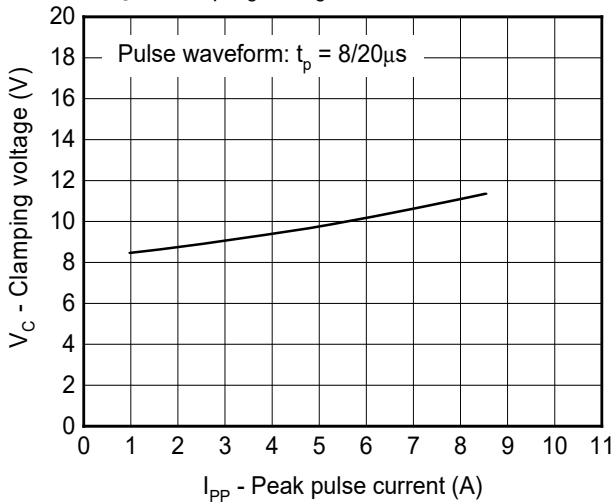
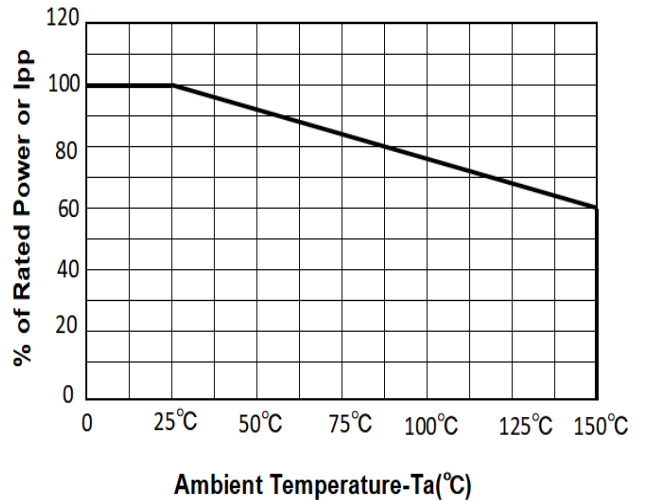
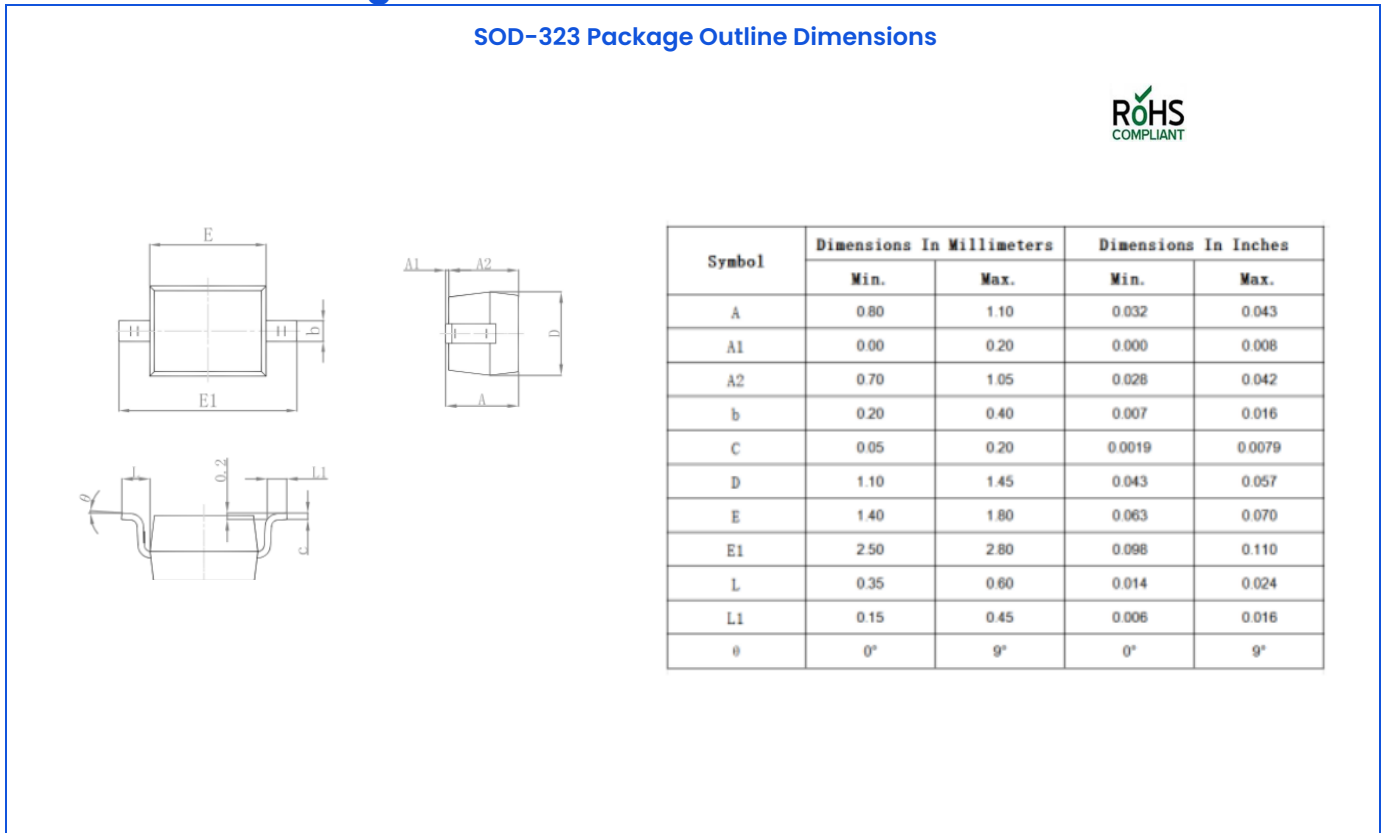


Fig.4 Power Derating

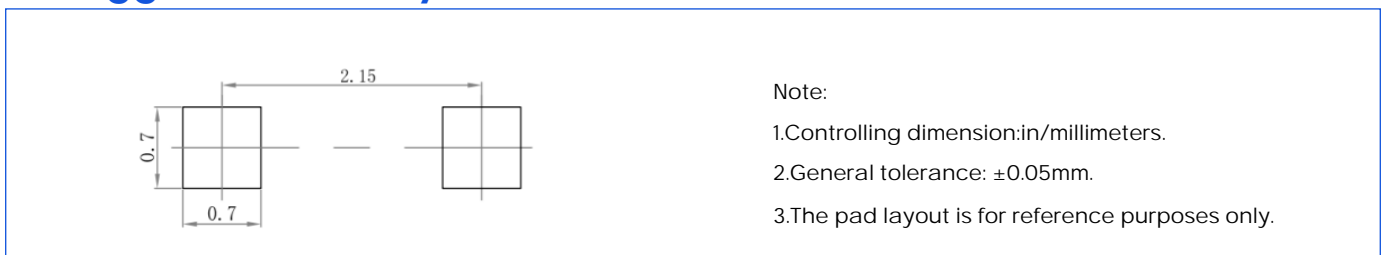


The curve above is for reference only.

10. Outline Drawing



11. Suggested Pad Layout



12 Package Specifications

Package	Reel Size	Reel DIA. (mm)	Q'TY/Reel (pcs)	Box Size (mm)	QTY/Box (pcs)	Carton Size (mm)	Q'TY/Carton (pcs)
SOD-323	7'	178	3000	190×190×190	45,000	400×400×220	180,000

13.Important Notice and Disclaimer

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