



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) 10A (8/20 μs)

2. Features

- Protects one bi-directional I/O line
- Low clamping voltage
- Working voltage: 3.3V
- Low leakage current
- RoHS compliant

3. Main Application

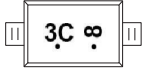
- Cell phone handsets and accessories
- Microprocessor based equipment
- Personal digital assistants (PDA' s)
- Notebooks, desktops, and servers
- Portable instrumentation
- Peripherals
- Digital cameras

- SOD-523 package
- Molding compound flammability rating: UL 94V-0

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}	100	W
Operating Temperature	T_{OPT}	$-55\sim+150$	$^\circ\text{C}$
Storage Temperature Range	T_{stg}	$-55\sim+150$	$^\circ\text{C}$

6. Pinning information

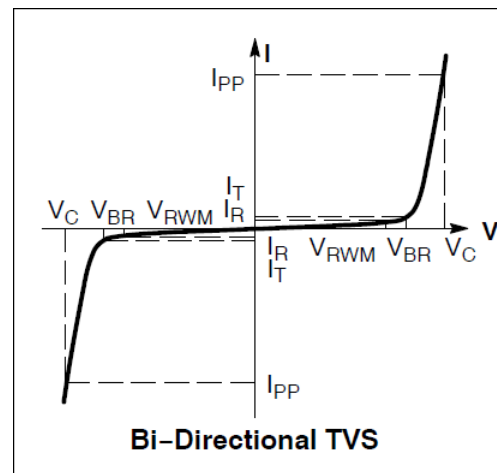
Pin	Symbol	Description	Simplified outline	Equivalent Circuit	Marking	Package
2	Bi	Nonpolar			3C ∞	SOD-523

7. Electrical Characteristics(Tamb=25 °C)

Parameter	Symbols	Condition	Min	Typ	Max	Unit
Reverse Working Voltage	V_{RWM}				3.3	V
Breakdown Voltage	V_{BR}	$I_T = 1mA$	3.6	—	—	V
Reverse Leakage Current	I_R	$V_{RWM}=3.3V$	—	—	0.5	uA
Clamping Voltage	V_C	$I_{pp}=1A, t_p=8/20\mu s$	—	—	6.5	V
		$I_{pp}=10A, t_p=8/20\mu s$	—	—	10	V
Junction Capacitance	C_J	$V_R = 0V, f=1MHz$	—	15	—	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
P_{PK}	Peak Power Dissipation
C_J	Capacitance @ $V_R = 0$ and $f=1MHz$



9. Typical Characteristics

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

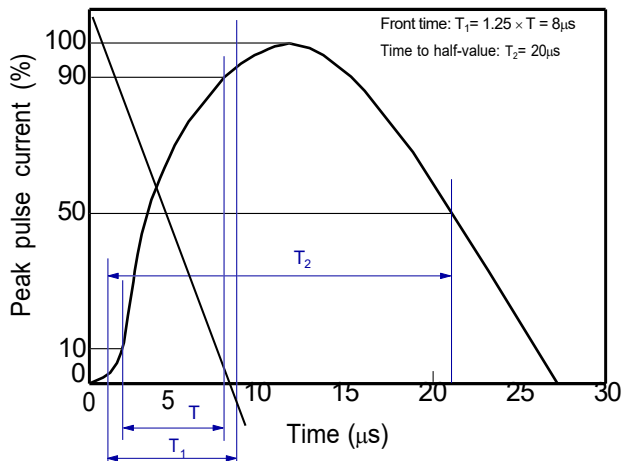


Fig.2 Contact Discharge Current Waveform per IEC61000-4-2

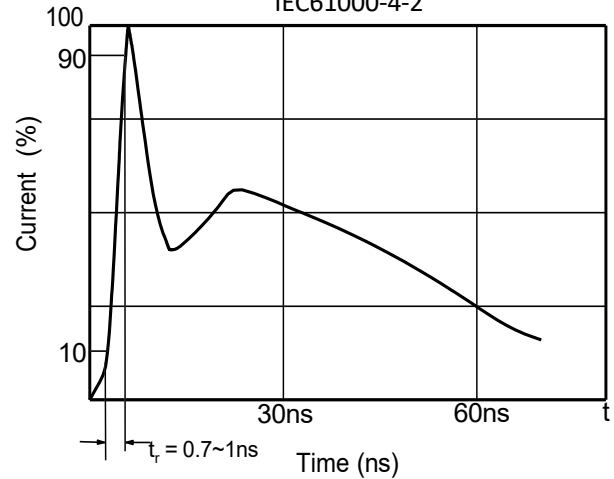


Fig.3 Clamping Voltage VS Peak Pulse Current

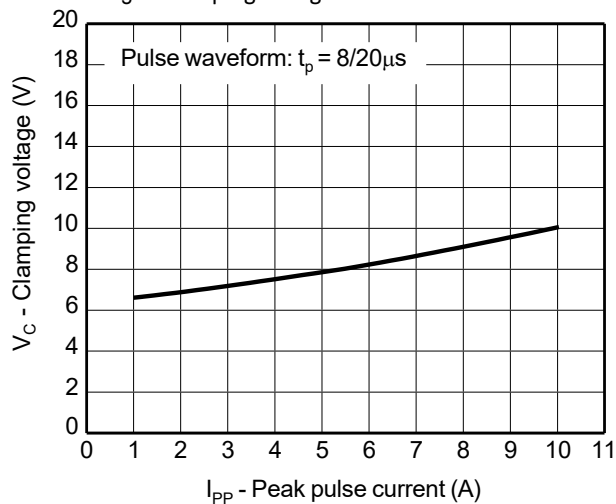


Fig.4 Capacitance VS Bias

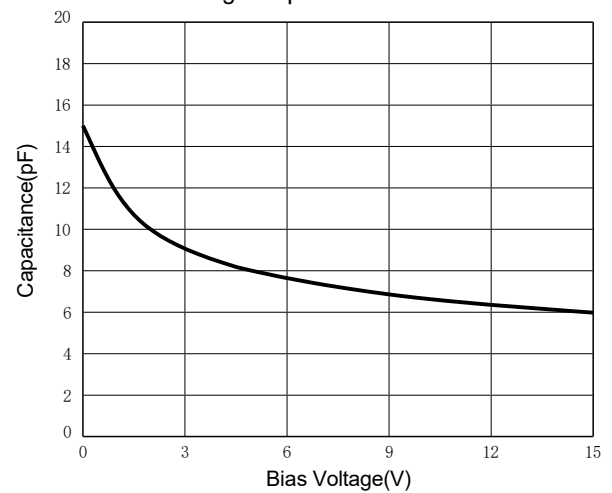


Fig.5 Non-Repetitive Peak Pulse Power vs Pulse Time

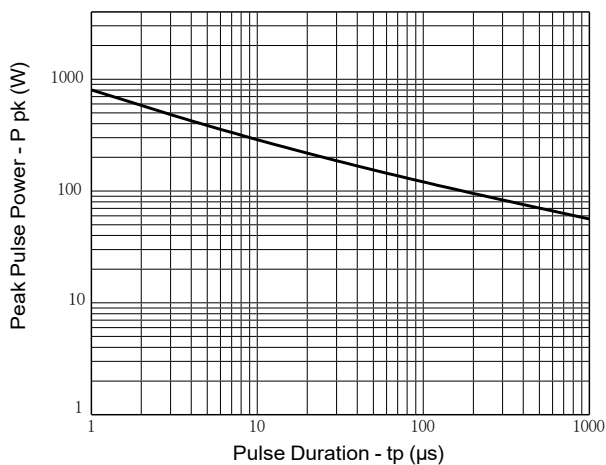
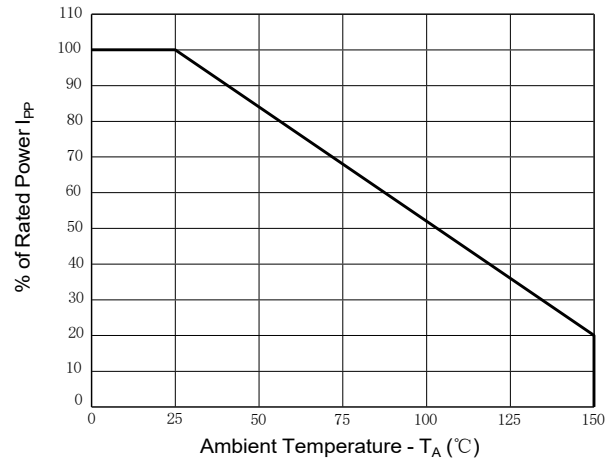


Fig.6 Power Derating Curve



The curve above is for reference only.