



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

- SOD-523 package
- Molding compound flammability rating: UL 94V-0
- Marking code: 5B

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

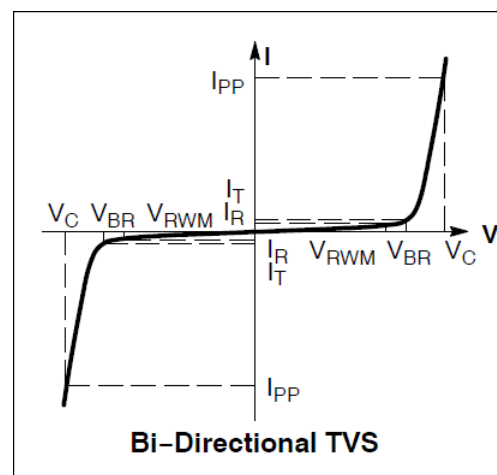
Pin	Symbol	Description	Simplified outline	Equivalent Circuit	Marking	Package
1	A	Anode			5B	SOD-523
2	A	Anode				

7. Electrical Characteristics(Tamb=25 °C)

Parameter	Symbols	Condition	Min	Typ	Max	
Reverse Working Voltage	VRWM				5	V
Breakdown Voltage	VBR	IT =1mA	6.0	—	8.5	V
Reverse Leakage Current	IR	VRWM=±5V	—	—	0.1	uA
Clamping Voltage	VC	Ipp=1A , tp=8/20us	—	—	8.5	V
		Ipp=8A , tp=8/20us	—	—	12	V
Junction Capacitance	CJ	VR =0V ,f=1MHz	—	—	18	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	Capacitance @ V _R =0 and f=1MHz



9. Typical Characteristics

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

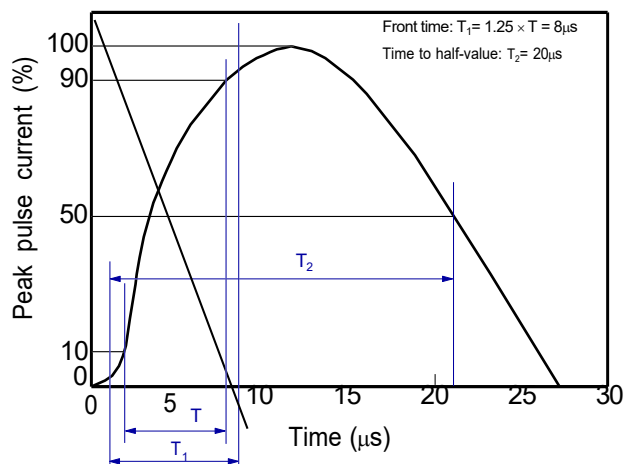


Fig.2 Contact Discharge Current Waveform per IEC61000-4-2

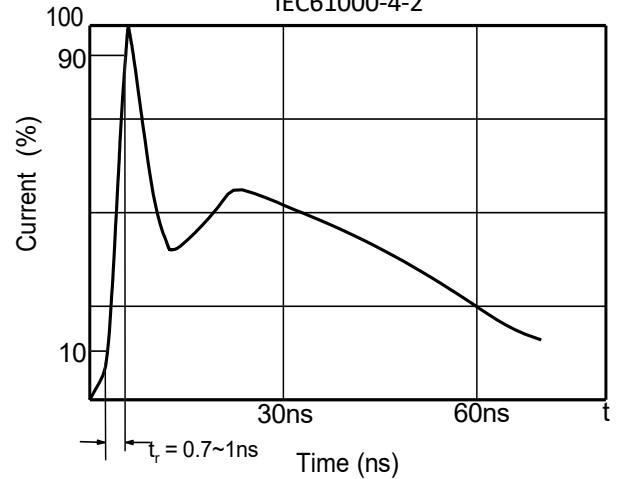


Fig.3 Clamping Voltage VS Peak Pulse Current

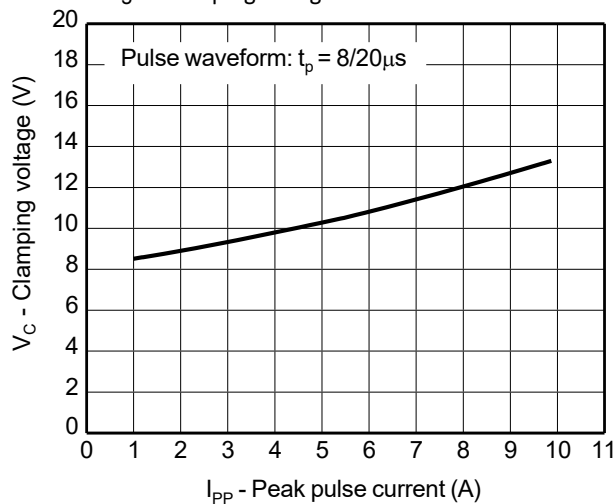


Fig.4 Capacitance VS Bias

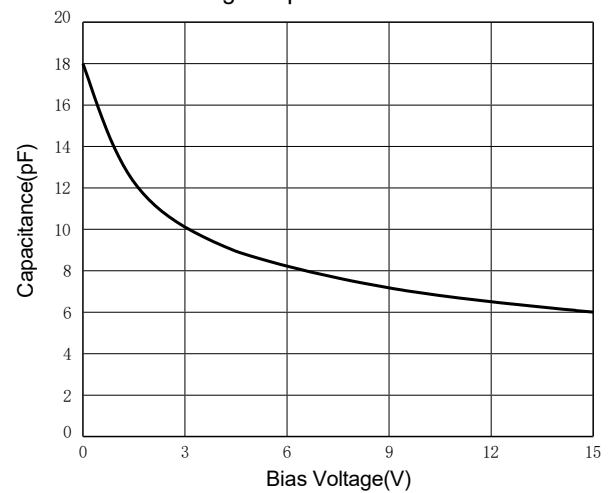


Fig.5 Non-Repetitive Peak Pulse Power vs Pulse Time

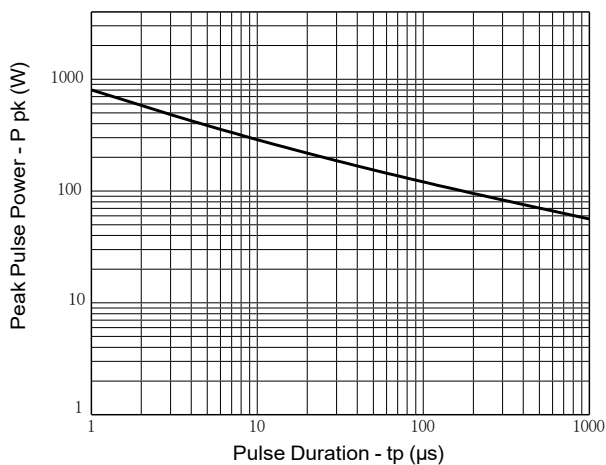
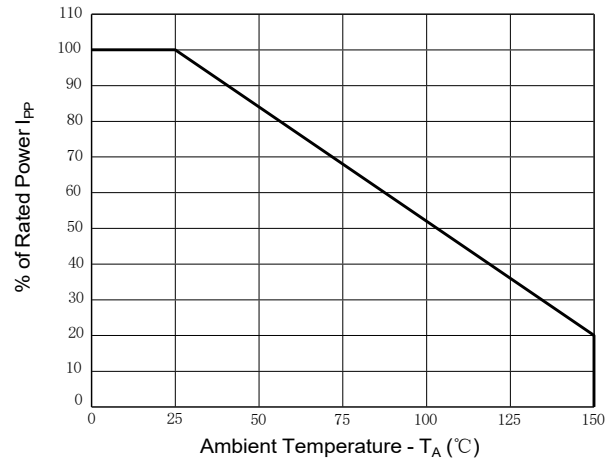


Fig.6 Power Derating Curve



The curve above is for reference only.