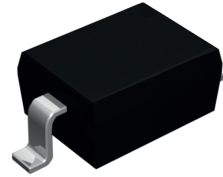
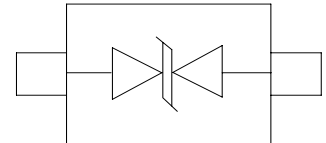


Features

- Small SOD-323 package
- Protects one data or power line
- Operating voltage: 4.5V
- High peak pulse current capability
- Ultra low clamping voltage
- Complies with following standards:
-IEC 61000-4-2 (ESD) immunity test
Air discharge: $\pm 30\text{kV}$
Contact discharge: $\pm 30\text{kV}$
-IEC61000-4-5 (Lightning) 160A (8/20 μs)



SOD-323



Schematic Diagram

Applications

- Mobile phones and accessories
- Battery protection
- Power supply protection
- Hand held portable applications
- Peripherals

Absolute Maximum Ratings (T_A=25°C unless otherwise specified)

Parameter	Symbol	Value	Unit
Peak Pulse Power (8/20 μs)	P _{PK}	2700	W
Peak Pulse Current (8/20 μs)	I _{PP}	160	A
ESD per IEC 61000-4-2 (Air)	V _{ESD}	± 30	kV
ESD per IEC 61000-4-2 (Contact)		± 30	
Operating Temperature Range	T _J	-55 to +125	°C
Storage Temperature Range	T _{STG}	-55 to +150	°C

Electrical Characteristics (T_A=25°C unless otherwise specified)

Parameter	Symbol	Test Condition	Min	Typ	Max	Unit
Reverse Working Voltage	V _{RWM}	-	-	-	4.5	V
Breakdown Voltage	V _{BR}	I _T =1mA	4.7	-	-	V
Reverse Leakage Current	I _R	V _{RWM} =4.5V	-	-	1.0	μA
Clamping Voltage	V _C	I _{PP} =20A (8 x 20 μs pulse)	-	-	7.5	V
Clamping Voltage	V _C	I _{PP} =160A (8 x 20 μs pulse)	-	-	17	V
Junction Capacitance	C _J	V _R =0V, F=1MHz	-	300	400	pF

Typical Performance Characteristics ($T_A=25^\circ\text{C}$ unless otherwise specified)

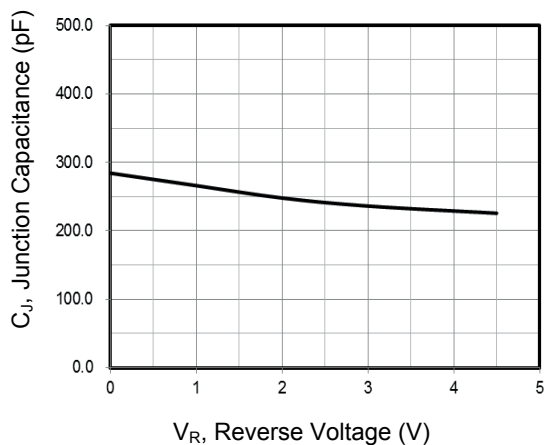


Figure 1. Junction Capacitance vs. Reverse Voltage

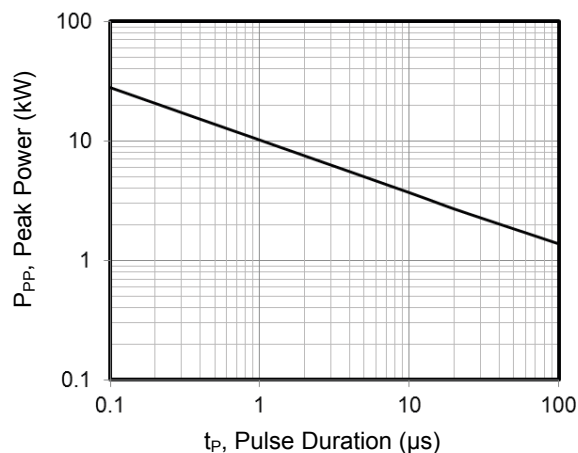


Figure 2. Peak Pulse Power vs. Pulse Time

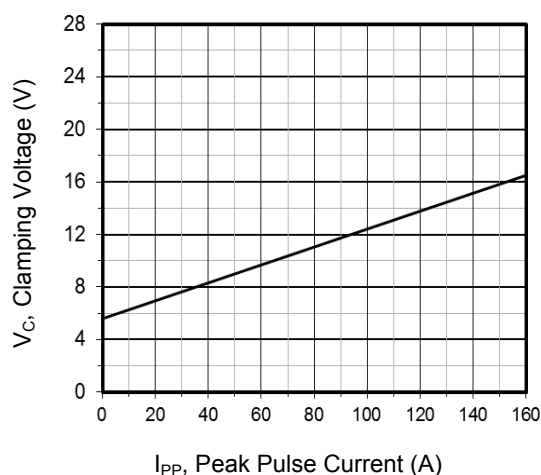


Figure 3. Clamping Voltage vs. Peak Pulse Current
($t_p=8/20\mu\text{s}$)

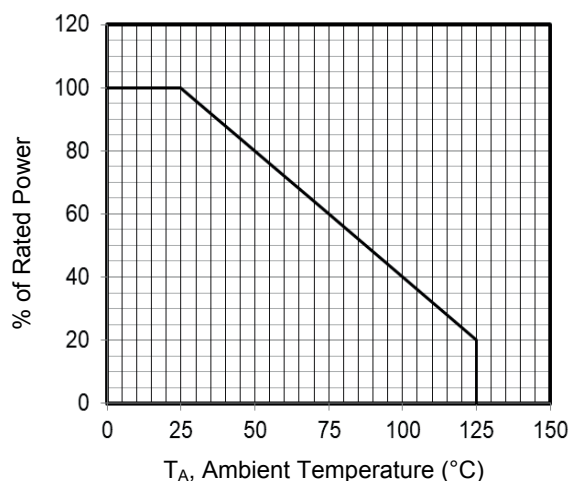


Figure 4. Power Derating Curve

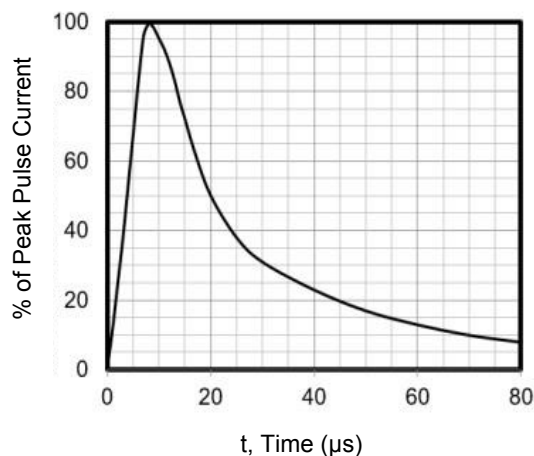
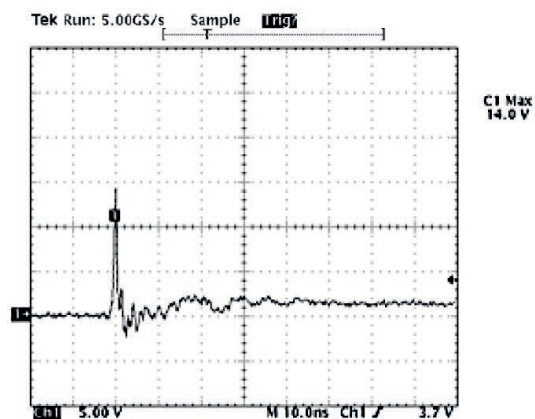


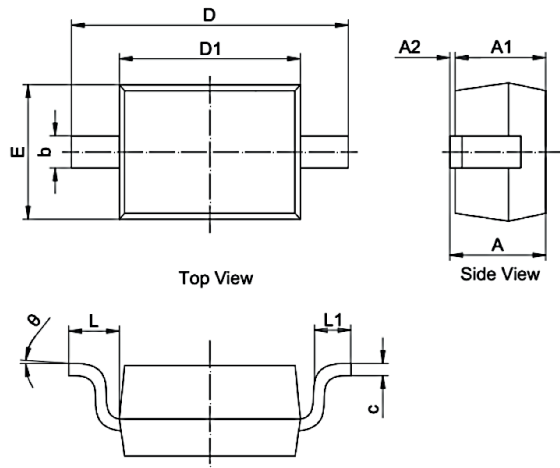
Figure 5. 8 X 20μs Pulse Waveform



Note: Data is Taken With a 10x Attenuator

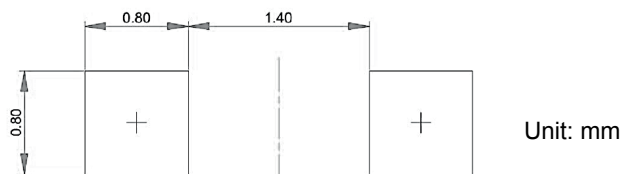
Figure 6. ESD Clamping Voltage
8kV Contact per IEC61000-4-2

Package Outline Dimensions (SOD-323)



Symbol	Dimensions In Millimeters		Dimensions In Inches	
	Min.	Max.	Min.	Max.
A	0.800	1.100	0.031	0.043
A1	0.800	0.900	0.031	0.035
A2	0.000	0.100	0.000	0.004
b	0.250	0.400	0.010	0.016
c	0.080	0.177	0.003	0.007
D1	1.600	1.800	0.063	0.071
D	2.300	2.800	0.091	0.110
E	1.150	1.400	0.045	0.055
L	0.475 REF		0.019 REF	
L1	0.100	0.500	0.004	0.020
θ	0°	8°	0°	8°

Recommended Pad Layout



Order Information

Device	Package	Marking	Packaging	SPQ
GSEDC4B3000	SOD-323	48D	Tape & Reel	3,000 pcs / Reel

For more information, please contact us at: inquiry@goodarksemi.com