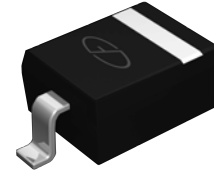


**Features**

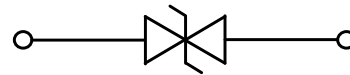
- Small SOD-323 package
- Protects one data or power line
- Working Voltage: 5V
- High peak pulse current capability
- Ultra low clamping voltage
- Complies with following standards:
  - IEC 61000-4-2 (ESD) immunity test  
Air discharge: ±30KV  
Contact discharge: ±30KV
  - IEC61000-4-5 (Lightning) 132A (8/20µs)
- RoHS compliant



**SOD-323**

**Applications**

- Mobile phones and accessories
- Battery protection
- USB vbus
- Power line protection
- Hand held portable applications



**Schematic Diagram**

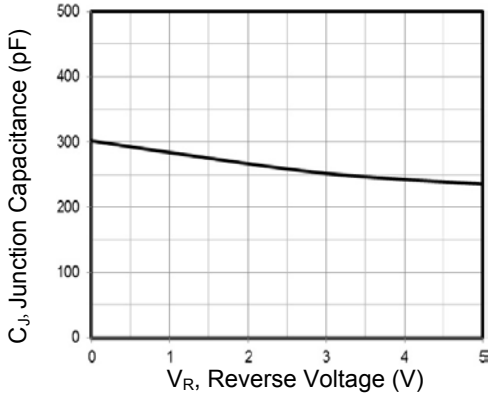
**Absolute Maximum Ratings** ( $T_A=25^{\circ}\text{C}$  unless otherwise specified)

Parameter	Symbol	Value	Unit
Peak Pulse Power ( $t_p=8/20\mu\text{s}$ )	$P_{pk}$	2376	W
Peak Pulse Current ( $t_p=8/20\mu\text{s}$ )	$I_{pp}$	132	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	$^{\circ}\text{C}$
Storage Temperature Range	$T_{stg}$	-55 To +150	$^{\circ}\text{C}$

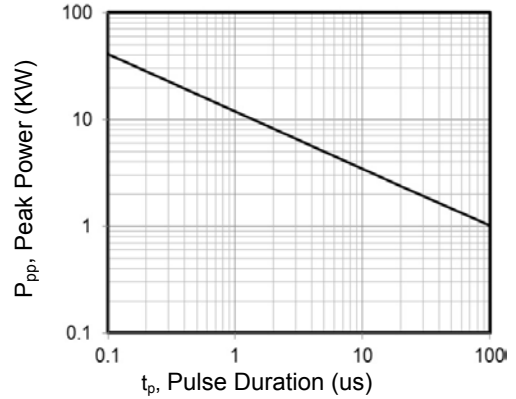
**Electrical Characteristics** ( $T_A=25^{\circ}\text{C}$  unless otherwise specified)

Parameter	Symbol	Condition	Min	Typ	Max	Unit
Reverse Working Voltage	$V_{RWM}$	-	-	-	5	V
Breakdown Voltage	$V_{BR}$	$I_T=1\text{mA}$	6	-	-	V
Reverse Leakage Current	$I_R$	$V_{RWM}=5\text{V}$	-	-	0.2	$\mu\text{A}$
Clamping Voltage	$V_C$	$I_{PP}=20\text{A}$ (8 x 20µs pulse)	-	-	9	V
Clamping Voltage	$V_C$	$I_{PP}=132\text{A}$ (8 x 20µs pulse)	-	-	18	V
Junction Capacitance	$C_J$	$V_R=0\text{V}$ , $f=1\text{MHz}$	-	300	-	pF

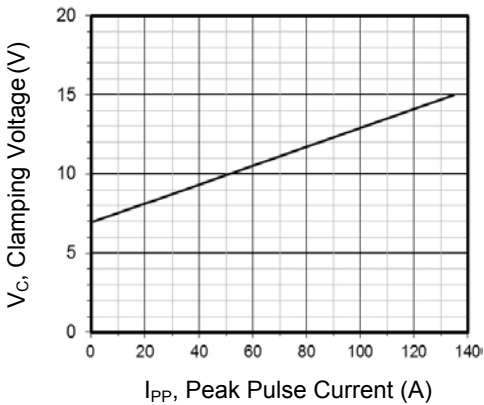
**Typical Performance Characteristics** ( $T_A=25^{\circ}\text{C}$  unless otherwise Specified)



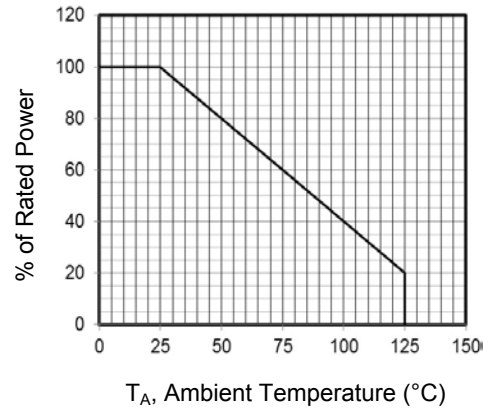
**Figure 1. Junction Capacitance vs. Reverse Voltage**



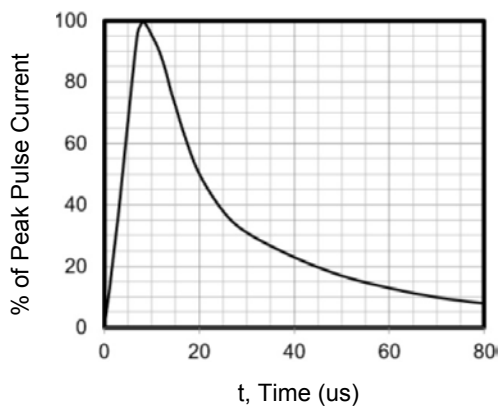
**Figure 2. Peak Pulse Power vs. Pulse Time**



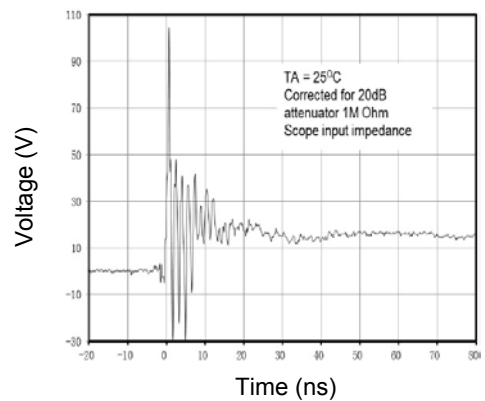
**Figure 3. Clamping Voltage vs. Peak Pulse Current**



**Figure 4. Power Derating Curve**

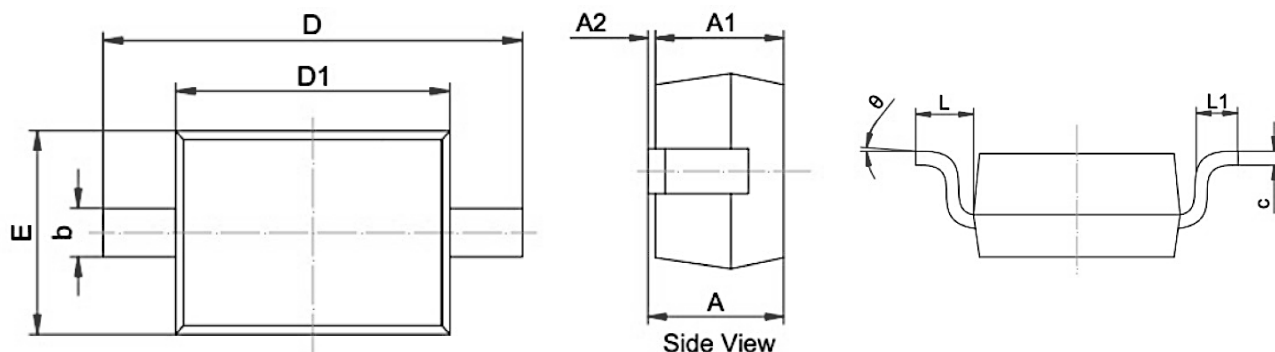


**Figure 5. 8 x 20us Pulse Waveform**



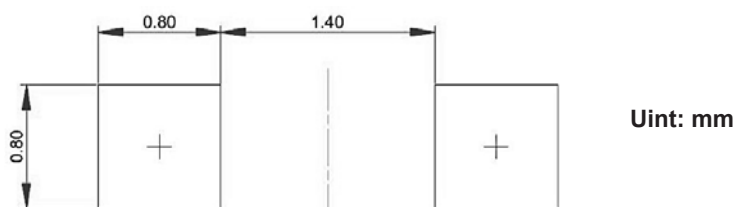
**Figure 6. ESD Clamping Voltage**  
**8 KV Contact Per IEC61000-4-2**

**Package Outline Dimension (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	0.475REF		0.019REF	
L1	0.100	0.500	0.004	0.020
θ	0°	8°	0°	8°

**Recommended Pad Layout**



**Order Information**

Device	Package	Marking Code	Carrier	Quantity
GSEDC5B3000	SOD-323	58DH	Tape & Reel	3,000 pcs / Reel

For more information, please contact us at: [inquiry@goodarksemi.com](mailto:inquiry@goodarksemi.com)