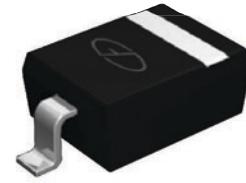
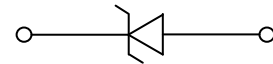


## Features

- Ultra low leakage: nA level
- Operating voltage: 5V
- Low clamping voltage
- Protects one power line or data line
- Complies with following standards:  
 IEC 61000-4-2 (ESD) immunity test  
 Air discharge:  $\pm 25\text{kV}$   
 Contact discharge:  $\pm 20\text{kV}$   
 IEC61000-4-5 (Lightning) 5A (8/20 $\mu\text{s}$ )
- RoHS compliant



**SOD-323**



**Schematic Diagram**

## Applications

- USB ports
- Smart phones
- Wireless systems
- Ethernet 10/100/1000 base T

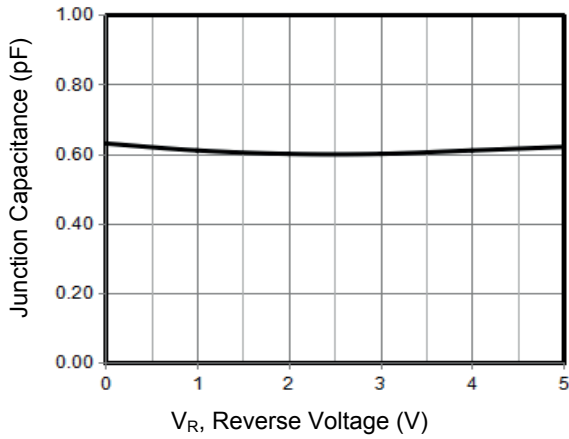
## Absolute Maximum Ratings ( $T_A=25^\circ\text{C}$ unless otherwise specified)

Parameter	Symbol	Value	Unit
Peak Pulse Power (8/20 $\mu\text{s}$ )	$P_{PK}$	75	W
Peak Pulse Current (8/20 $\mu\text{s}$ )	$I_{PP}$	5	A
ESD per IEC 61000-4-2 (Air)	$V_{ESD}$	$\pm 25$	kV
ESD per IEC 61000-4-2 (Contact)		$\pm 20$	
Operating Temperature Range	$T_J$	-55 to +125	$^\circ\text{C}$
Storage Temperature Range	$T_{STG}$	-55 to +150	$^\circ\text{C}$

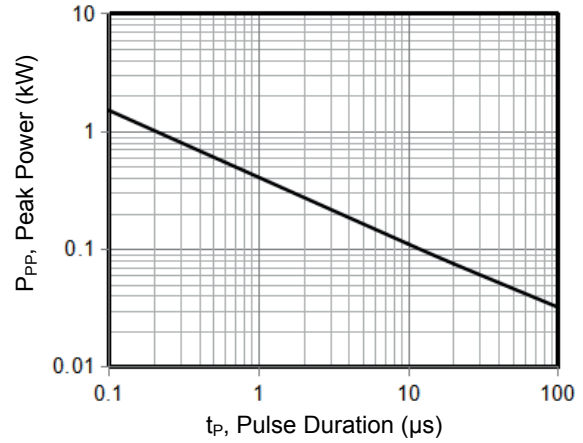
## Electrical Characteristics ( $T_A=25^\circ\text{C}$ unless otherwise specified)

Parameter	Symbol	Test 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	$I_R$	$V_{RWM}=5\text{V}$	-	-	0.5	$\mu\text{A}$
Clamping Voltage	$V_C$	$I_{PP}=1\text{A}$ (8 x 20 $\mu\text{s}$ pulse)	-	-	10	V
Clamping Voltage	$V_C$	$I_{PP}=5\text{A}$ (8 x 20 $\mu\text{s}$ pulse)	-	-	15	V
Junction Capacitance	$C_J$	$V_R=0\text{V}$ , $F=1\text{MHz}$	-	0.6	0.8	pF

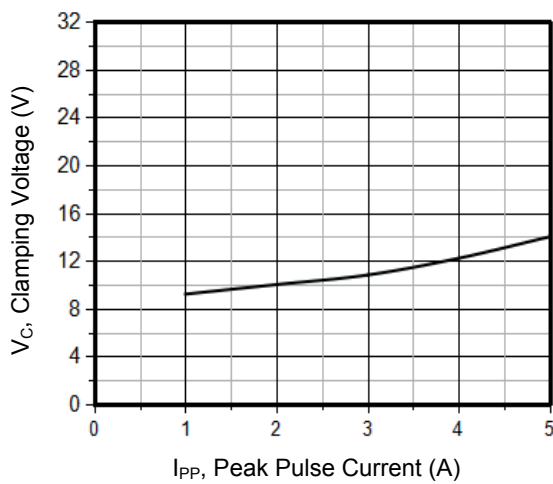
**Typical Performance Characteristics** ( $T_A=25^\circ\text{C}$  unless otherwise Specified)



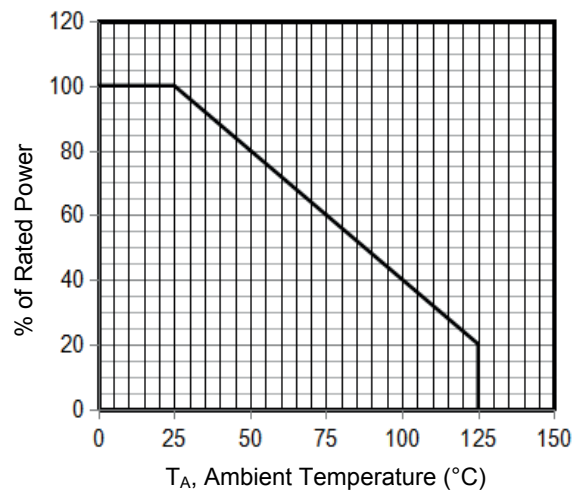
**Figure 1. Junction Capacitance vs. Reverse Voltage**



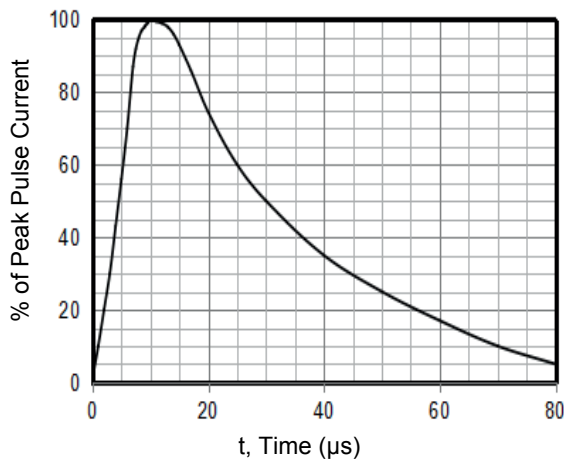
**Figure 2. Peak Pulse Power vs. Pulse Time**



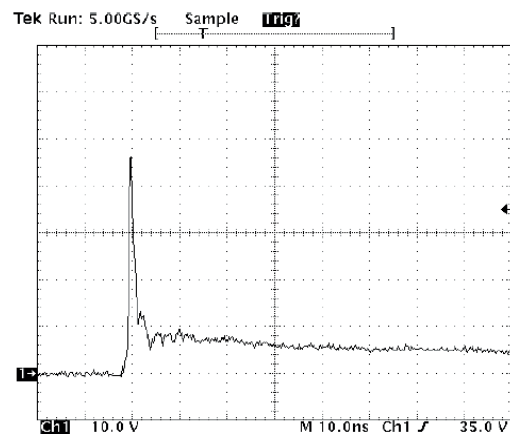
**Figure 3. Clamping Voltage vs. Peak Pulse Current**



**Figure 4. Power Derating Curve**

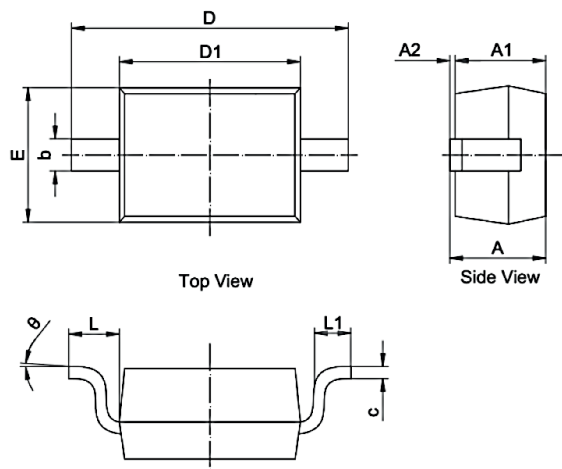


**Figure 5. 8 X 20µs Pulse Waveform**



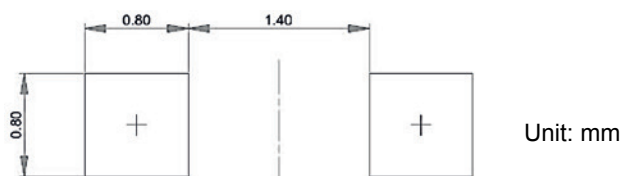
Note: Data is Taken With a 10x Attenuator  
**Figure 6. ESD Clamping Voltage 8 kV Contact per IEC61000-4-2**

**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
$\theta$	0°	8°	0°	8°

**Recommended Pad Layout**



**Order Information**

Device	Package	Marking	Carrier	Quantity
GSEDC5U006	SOD-323	S5	Tape & Reel	3,000pcs / Reel

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