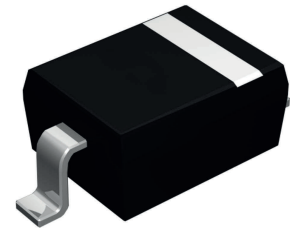


### Features

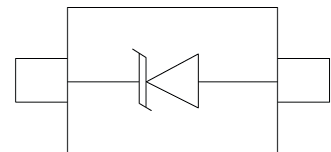
- Protects one data line
- Ultra low leakage: nA level
- Operating voltage: 15V
- Ultra low clamping voltage
- Complies with following standards:
  - IEC 61000-4-2 (ESD) immunity test
  - Air discharge:  $\pm 30\text{kV}$
  - Contact discharge:  $\pm 30\text{kV}$
  - IEC 61000-4-5 (Lightning) 55A (8/20 $\mu\text{s}$ )



SOD-323

### Applications

- Cellular handsets and accessories
- Personal digital assistants
- Notebooks, desktops, servers
- Portable instrumentation
- Digital cameras
- Analog inputs
- Audio players
- Keypads, side keys, LCD displays
- Laser diode protection



Schematic Diagram

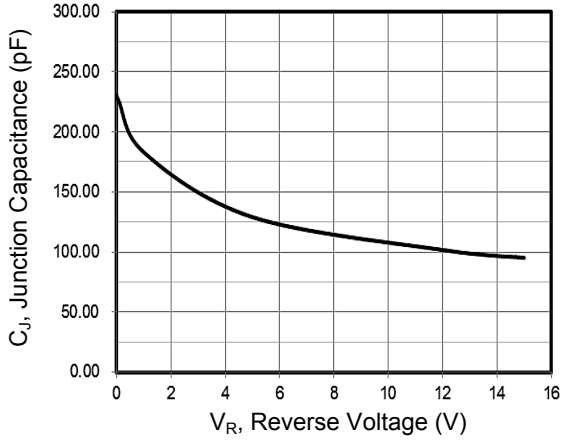
### Absolute Maximum Ratings ( $T_A=25^\circ\text{C}$ unless otherwise specified)

Parameter	Symbol	Value	Unit
Peak Pulse Power (8/20 $\mu\text{s}$ )	$P_{PK}$	1900	W
Peak Pulse Current (8/20 $\mu\text{s}$ )	$I_{PP}$	55	A
ESD per IEC 61000-4-2 (Air)	$V_{ESD}$	$\pm 30$	kV
ESD per IEC 61000-4-2 (Contact)		$\pm 30$	kV
Operating Temperature Range	$T_J$	-55 to +125	$^\circ\text{C}$
Storage Temperature Range	$T_{STG}$	-55 to +150	$^\circ\text{C}$

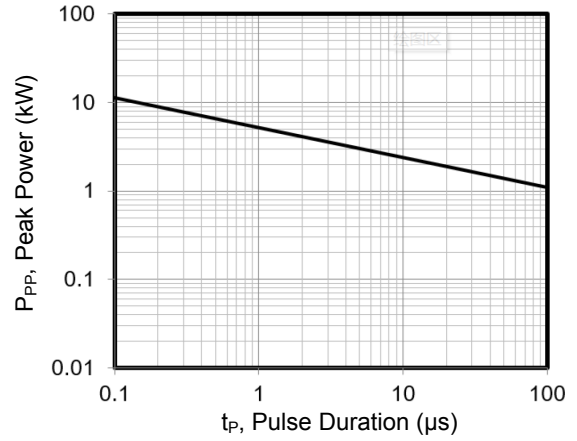
### Electrical Characteristics ( $T_A=25^\circ\text{C}$ unless otherwise specified)

Parameter	Symbol	Test Condition	Min	Typ	Max	Unit
Reverse Working Voltage	$V_{RWM}$	-	-	-	15	V
Breakdown Voltage	$V_{BR}$	$I_T=1\text{mA}$	16.5	-	-	V
Reverse Leakage Current	$I_R$	$V_{RWM}=15\text{V}$	-	-	0.5	$\mu\text{A}$
Clamping Voltage	$V_C$	$I_{PP}=1\text{A}$ (8 x 20 $\mu\text{s}$ pulse)	-	-	20	V
		$I_{PP}=55\text{A}$ (8 x 20 $\mu\text{s}$ pulse)	-	-	34.5	V
Junction Capacitance	$C_J$	$V_R=0\text{V}$ , $f=1\text{MHz}$	-	230	-	pF

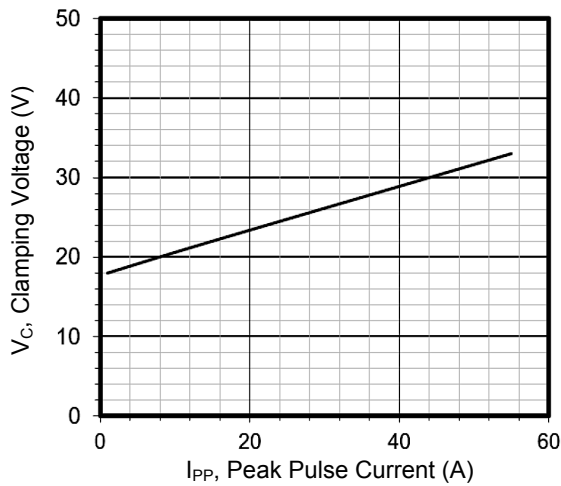
**Typical Performance Characteristics** ( $T_A=25^\circ\text{C}$  unless otherwise specified)



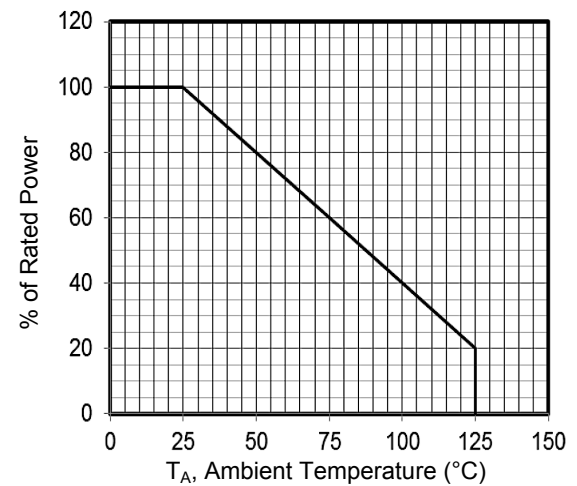
**Figure 1. Junction Capacitance vs. Reverse Voltage**



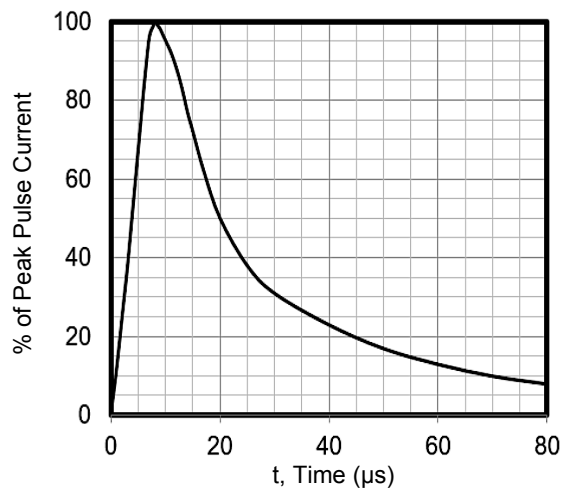
**Figure 2. Peak Pulse Power vs. Pulse Time**



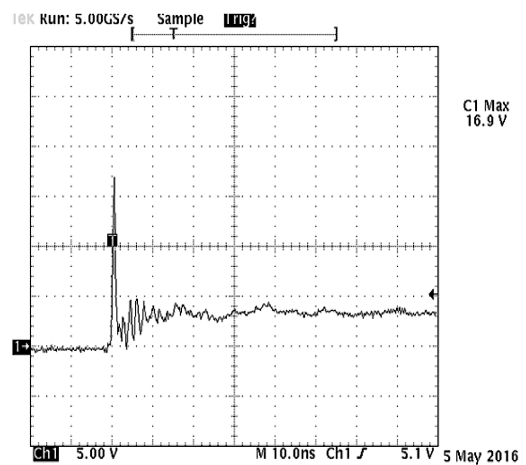
**Figure 3. Clamping Voltage vs. Peak Pulse Current**



**Figure 4. Power Derating Curve**



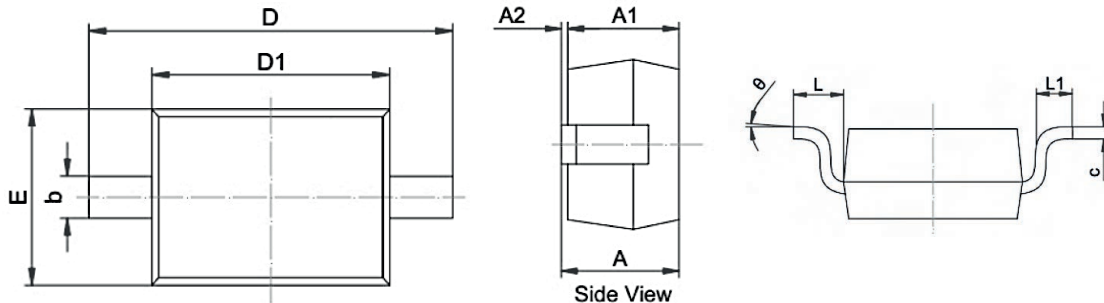
**Figure 5. 8 x 20 $\mu\text{s}$  Pulse Waveform**



Note: Data is taken with a 10x attenuator

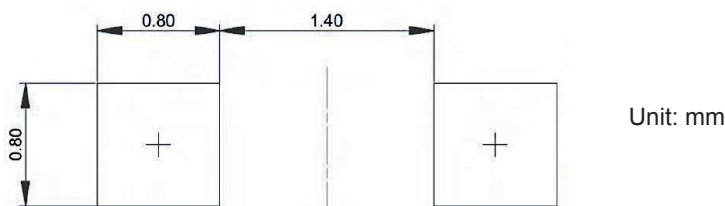
**Figure 6. ESD Clamping Voltage**  
**8kV Contact per IEC 61000-4-2**

**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	0.475 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
GSEDC15U2300	SOD-323	75DL	Tape & Reel	3,000 Pcs / Reel