

Features

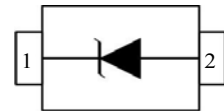
- 60W peak pulse power ($t_p=8/20\mu s$)
- Low capacitance
- Low clamping voltage
- Low leakage current
- IEC 61000-4-2 $\pm 20kV$ (Air) ESD protection
- IEC 61000-4-2 $\pm 20kV$ (Contact) ESD protection
- IEC 61000-4-4 40A (5/50ns) EFT protection



SOD-323

Applications

- Serial ATA, Cellular Phones
- Desktops, Servers and Notebooks
- HDMI and USB3.0/3.1 Data Line Protection
- Display Ports, Digital Visual Interfaces (DVI)



Schematic Diagram

Absolute Maximum Ratings

($T_A=25^\circ C$ unless otherwise specified)

Parameter	Symbol	Value	Units
ESD per IEC 61000-4-2 (Air) ESD per IEC 61000-4-2 (Contact)	V_{ESD}	± 20 ± 20	kV
Peak Pulse Power (8/20 μs)	P_{PP}	60	W
Operating Temperature	T_{OPT}	-55 to +125	$^\circ C$
Storage Temperature	T_{STG}	-55 to +150	$^\circ C$

Electrical Characteristics

($T_A=25^\circ C$ unless otherwise specified)

Parameter	Symbol	Test Condition	Min	Typ	Max	Units
Reverse Working Voltage	V_{RWM}	-	-	-	3.3	V
Reverse Breakdown Voltage	V_{BR}	$I_T=1mA$	4.2	-	-	V
Reverse Leakage Current	I_R	$V_{RWM}=3.3V$	-	-	100	nA
Clamping Voltage	V_C	$I_{PP}=1A, t_p=8/20\mu s$	-	-	10	V
		$I_{PP}=4A, t_p=8/20\mu s$	-	-	15	V
Junction Capacitance	C_J	$V_R=0V, f=1MHz$	-	0.4	-	pF

Typical Characteristic Curves

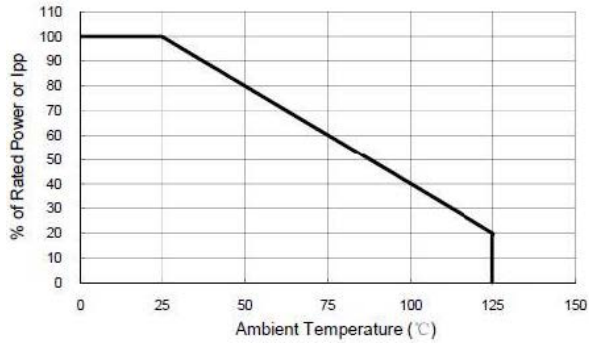


Figure 1. Power Derating Curve

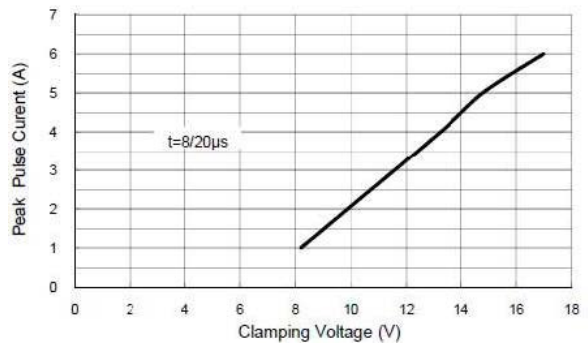


Figure 2. Clamping Voltage vs. Peak Pulse Current

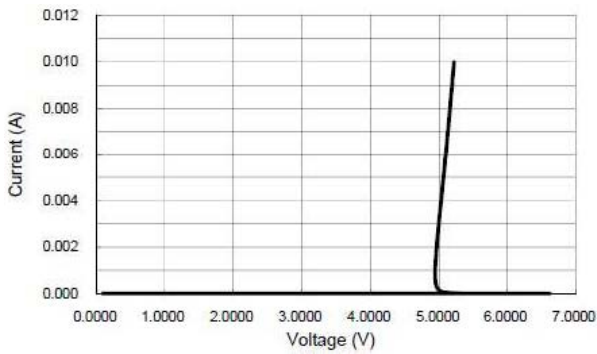


Figure 3. Voltage Sweeping

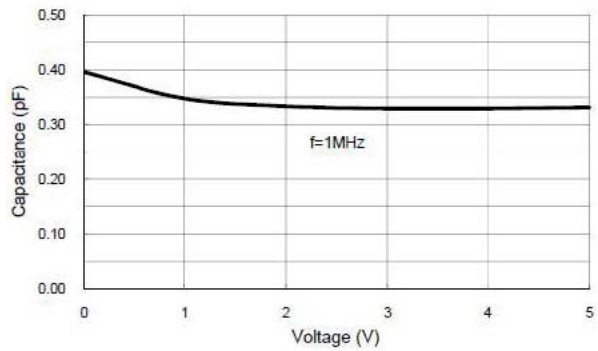


Figure 4. Voltage vs. Capacitance

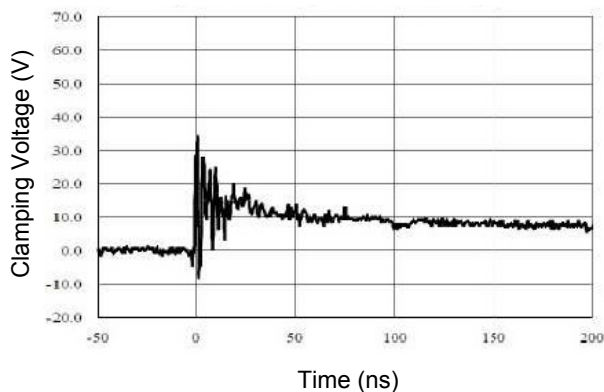


Figure 5. ESD Clamping
 (+8kV Contact per IEC 61000-4-2)

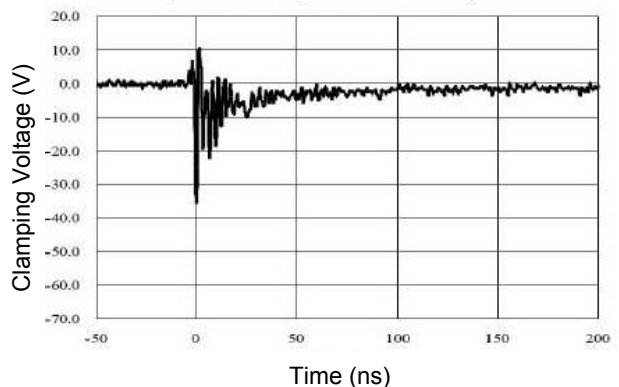
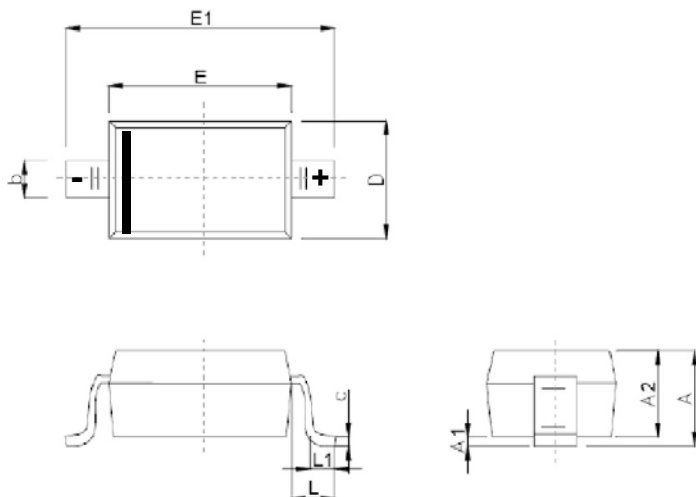


Figure 6. ESD Clamping
 (-8kV Contact per IEC 61000-4-2)

GSEDC3U004

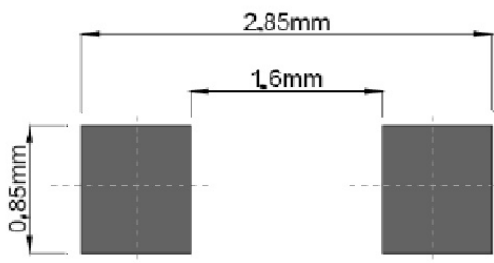
Ultra-Low Capacitance ESD Protection Diode

Package Outline Dimensions (SOD-323)



Symbol	Dimensions In Millimeters	
	Min	Max
A	-	1.000
A1	0.000	0.100
A2	0.800	0.900
b	0.250	0.350
C	0.080	0.150
D	1.200	1.400
E	1.600	1.800
E1	2.500	2.700
e	1.800	2.040
L	0.475 REF	
L1	0.250	0.400
θ	0°	8°

Recommended Pad Layout



Order Information

Device	Package	Marking	Carrier	Quantity	HSF Status
GSEDC3U004	SOD-323	3L	Tape & Reel	3,000pcs / Reel	RoHS compliant