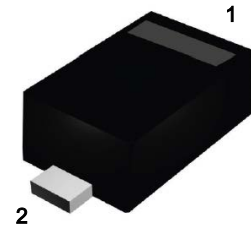


GSEV15U250 ESD Protection Diode

Features

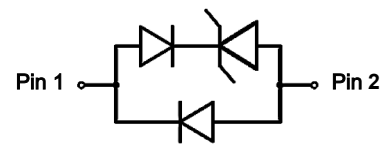
- Ultra small package: SOD-523
- Protects one data or power line
- Ultra low leakage: nA level
- Operating voltage: 15V
- Low clamping voltage
- Complies with following standards:
-IEC 61000-4-2 (ESD) immunity test
Air discharge: $\pm 25\text{kV}$
Contact discharge: $\pm 20\text{kV}$
-IEC 61000-4-5 (Lightning) 4A (8/20 μs)



SOD-523

Applications

- Cellular handsets and accessories
- Personal digital assistants
- Notebooks and handhelds
- Portable instrumentation
- Power supply
- Keypads, side keys, LCD displays



Schematic Diagram

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

Parameter	Symbol	Value	Unit
Peak Pulse Power (8/20 μs)	P_{PK}	100	W
Peak Pulse Current (8/20 μs)	I_{PP}	4	A
ESD per IEC 61000-4-2 (Air)	V_{ESD}	± 25	kV
ESD per IEC 61000-4-2 (Contact)		± 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}	Pin 1 to Pin 2	-	-	15	V
Breakdown Voltage	V_{BR}	$I_T=1\text{mA}$, Pin 1 to Pin 2	16.5	-	-	V
Reverse Leakage Current	I_R	$V_{RWM}=15\text{V}$, Pin 1 to Pin 2	-	-	0.2	μA
Forward Voltage	V_F	$I_F=10\text{mA}$, Pin 2 to Pin 1	-	-	1.2	V
Clamping Voltage	V_C	$I_{PP}=1\text{A}$ (8 x 20 μs pulse), Pin 1 to Pin 2	-	-	21	V
		$I_{PP}=4\text{A}$ (8 x 20 μs pulse), Pin 1 to Pin 2	-	-	25	V
Junction Capacitance	C_J	$V_R=0\text{V}$, $f=1\text{MHz}$	-	25	-	pF

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

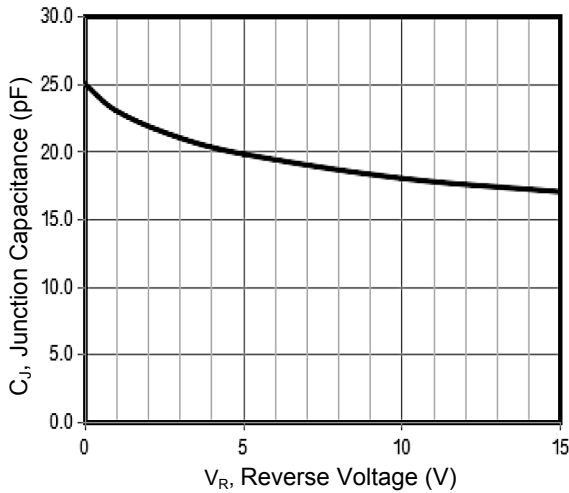


Figure 1. Junction Capacitance vs. Reverse Voltage

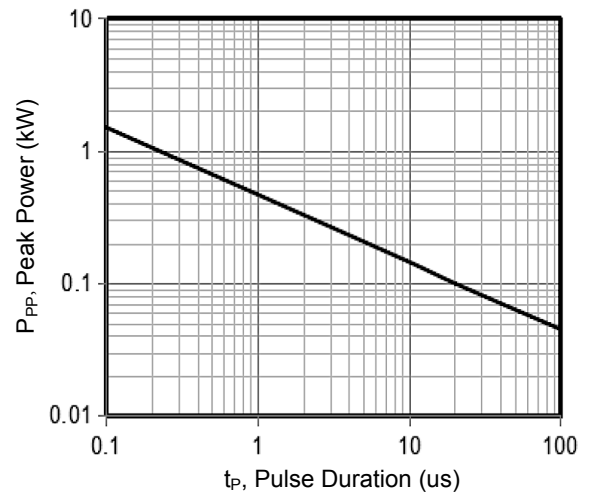


Figure 2. Peak Pulse Power vs. Pulse Time

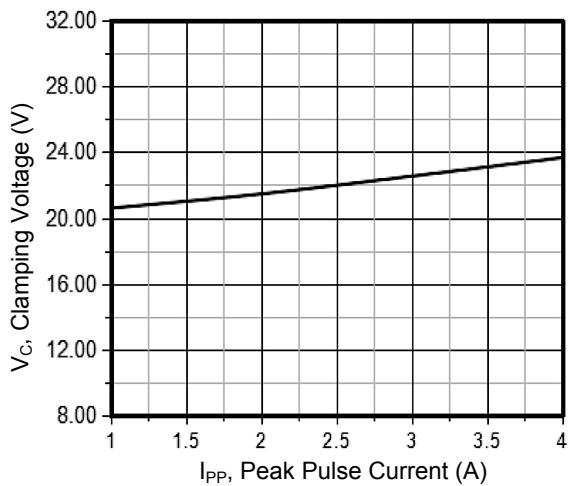


Figure 3. Clamping Voltage vs. Peak Pulse Current

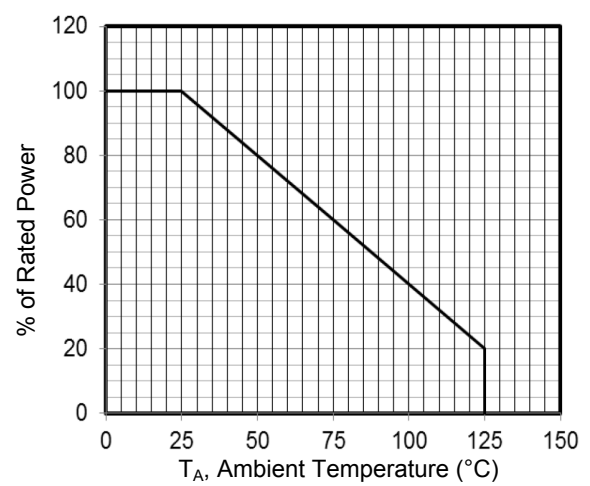


Figure 4. Power Derating Curve

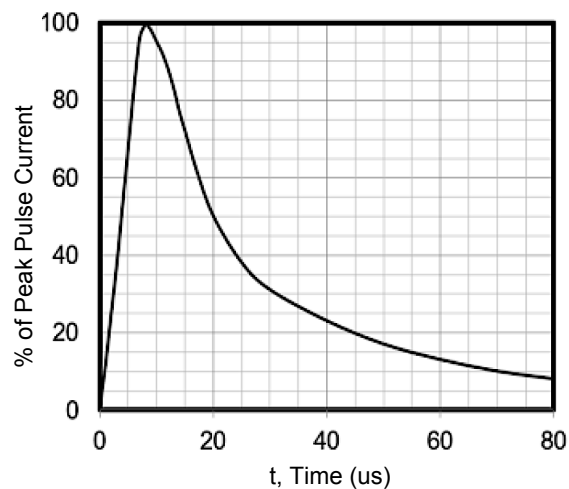


Figure 5. 8 x 20us Pulse Waveform

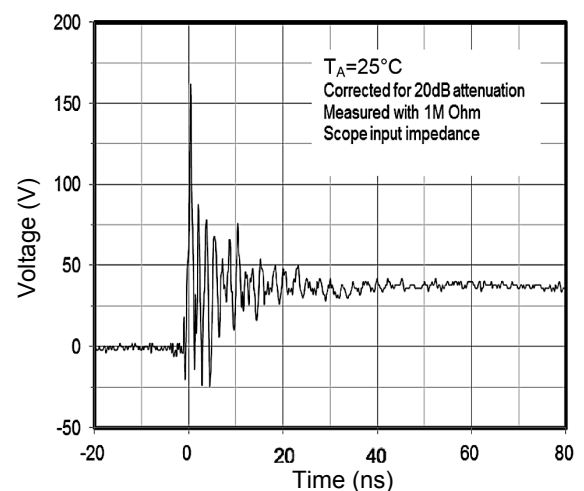
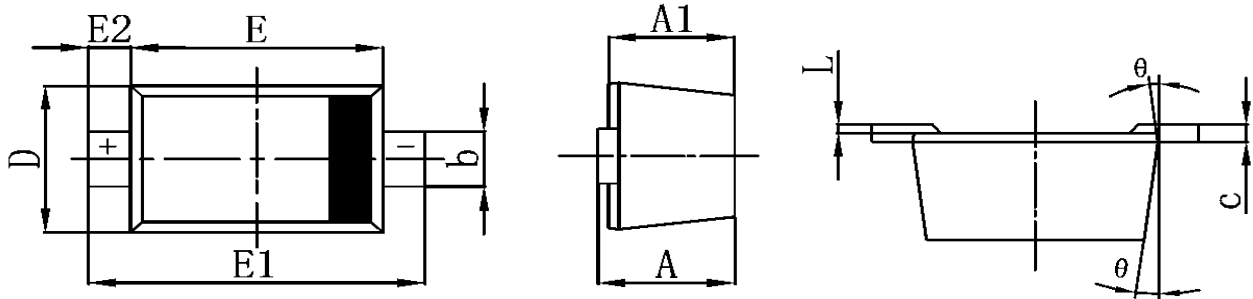


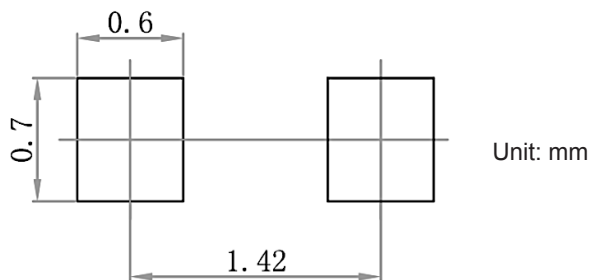
Figure 6. ESD Clamping Voltage
8kV Contact per IEC61000-4-2

Package Outline Dimension (SOD-523)



Symbol	Dimensions In Millimeters		Dimensions In Inches	
	Min	Max	Min	Max
A	0.510	0.770	0.020	0.031
A1	0.500	0.700	0.020	0.028
b	0.250	0.350	0.010	0.014
c	0.080	0.150	0.003	0.006
D	0.750	0.850	0.030	0.033
E	1.100	1.300	0.043	0.051
E1	1.500	1.700	0.059	0.067
E2	0.200 REF		0.008 REF	
L	0.010	0.070	0.001	0.003
θ	7° REF		7° REF	

Recommended Pad Layout



Order Information

Device	Package	Marking	Carrier	Quantity
GSEV15U250	SOD-523	15M	Tape & Reel	3,000 Pcs / Reel

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