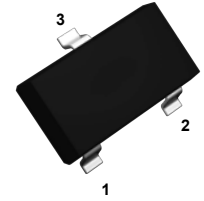
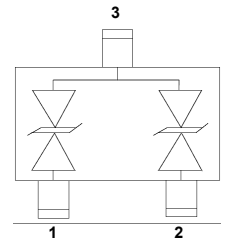


Features

- Ultra low leakage: nA level
- Operating voltage: 5V
- Low clamping voltage
- Small SOT-23 package
- Up to 2-line protects
- Complies with following standards:
 - IEC 61000-4-2 (ESD) immunity test
 - Air discharge: $\pm 30\text{kV}$
 - Contact discharge: $\pm 30\text{kV}$
 - IEC61000-4-5 (lightning) 8A (8/20 μs)
- RoHS compliant



SOT-23



Schematic Diagram

Applications

- Cellular handsets and accessories
- Notebooks and handhelds
- Personal digital assistants
- Portable instrumentation
- Digital cameras
- Peripherals
- Audio players, keypads, side keys, LCD
- USB 2.0

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	I_{PP}	8	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	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	$V_{RWM}=5\text{V}$	-	-	0.2	μA
Clamping Voltage	V_C	$I_{PP}=1\text{A}$ (8 x 20 μs pulse)	-	-	8	V
Clamping Voltage	V_C	$I_{PP}=8\text{A}$ (8 x 20 μs pulse)	-	-	12.5	V
Junction Capacitance	C_J	$V_R=0\text{V}$, $f=1\text{MHz}$, pin1 or pin2 to pin 3	-	16	-	pF

Typical Characteristic Curves

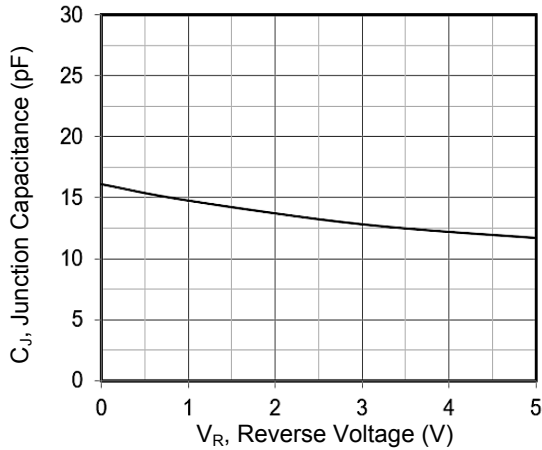


Figure 1. Junction Capacitance vs. Reverse Voltage

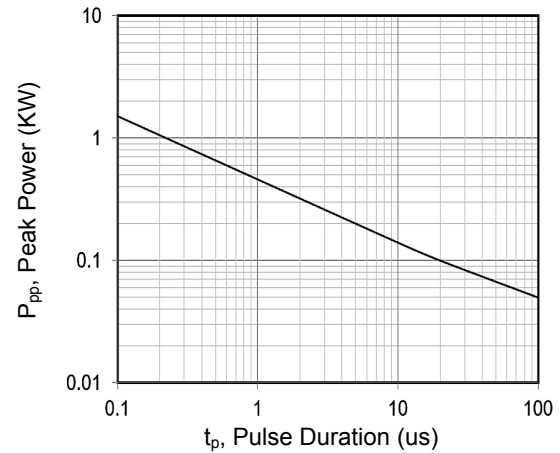


Figure 2. Peak Pulse Power vs. Pulse Time

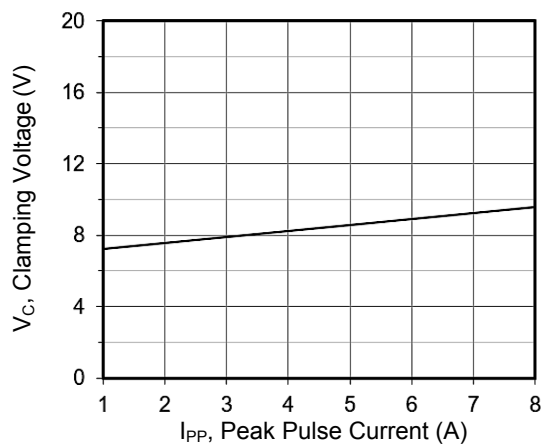


Figure 3. Clamping Voltage vs. Peak Pulse Current
($t_p=8/20\mu s$)

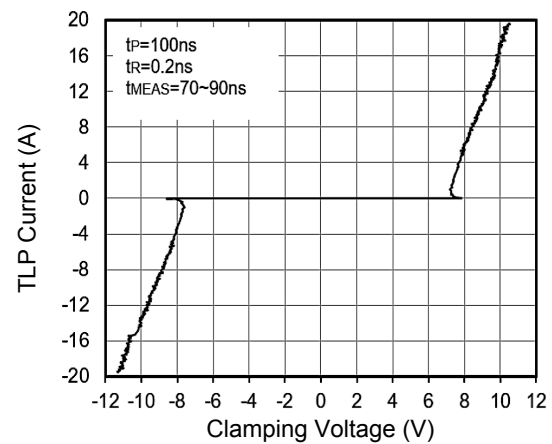


Figure 4. TLP Measurement

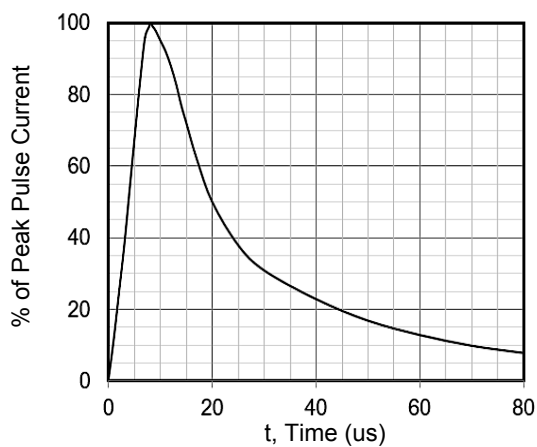


Figure 5. 8 x 20us Pulse Waveform

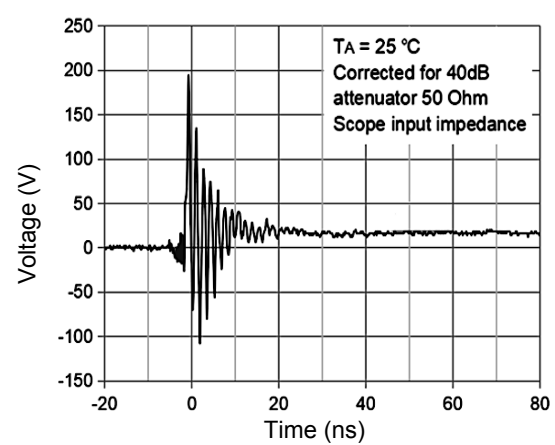
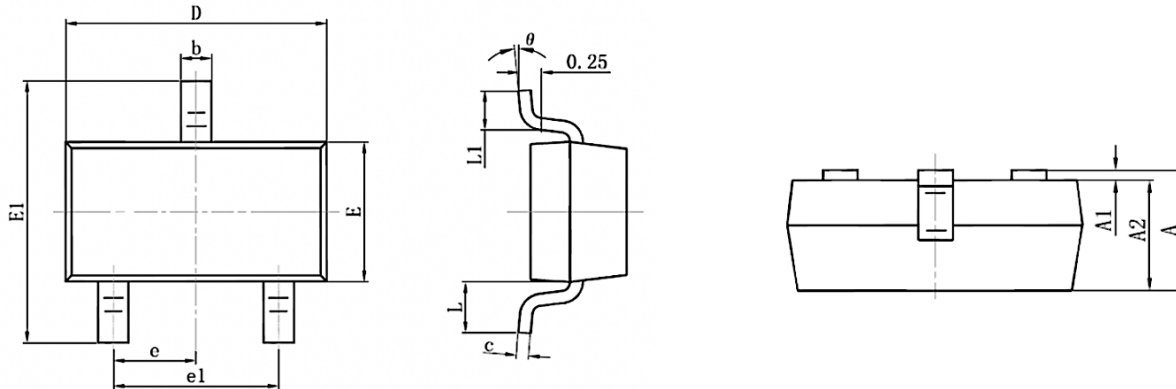


Figure 6. ESD Clamping Voltage
8kV Contact Per IEC 61000-4-2

Package Outline Dimensions (SOT-23)



Symbol	Dimensions In Millimeters		Dimensions In Inches	
	Min	Max	Min	Max
A	0.90	1.15	0.035	0.045
A1	0.00	0.10	0.000	0.004
A2	0.90	1.05	0.035	0.041
b	0.30	0.50	0.012	0.020
c	0.08	0.15	0.003	0.006
D	2.80	3.00	0.110	0.118
E	1.20	1.60	0.047	0.063
E1	2.25	2.55	0.089	0.100
e	0.95 TYP		0.037 TYP	
e1	1.80	2.00	0.071	0.079
L	0.55 REF		0.022 REF	
L1	0.20	0.50	0.012	0.020
θ	0°	8°	0°	8°

Order Information

Device	Package	Marking	Carrier	Quantity
GSEC5B160	SOT-23	52A	Tape & Reel	3,000 Pcs / Reel

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