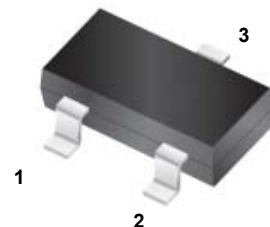


Features

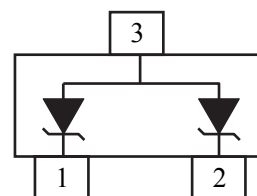
- 350W peak pulse power (8/20µs)
- Protects two uni-directional lines
- Ultra low leakage: nA level
- Operating voltage: 12V
- Low clamping voltage
- Complies with following standards:
 - IEC 61000-4-2 (ESD) immunity test Air discharge: ±30kV
 - Contact discharge: ±30kV
 - IEC61000-4-5 (Lightning) 13A (8/20µs)



SOT-23

Applications

- Cellular Handsets and Accessories
- Notebooks and Handhelds
- Portable Instrumentation
- Set Top Box
- Industrial Controls
- Server and Desktop PC



Schematic Diagram

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

Parameter	Symbol	Value	Unit
Peak Pulse Power (8/20µs)	P_{PK}	350	W
Peak Pulse Current (8/20µs)	I_{PP}	13	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	°C
Storage Temperature Range	T_{STG}	-55 to +150	°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}	-	-	-	12	V
Breakdown Voltage	V_{BR}	$I_T=1\text{mA}$	13.3	-	-	V
Reverse Leakage Current	I_R	$V_{RWM}=12\text{V}$	-	-	0.2	µA
Clamping Voltage	V_C	$I_{PP}=1\text{A}$ (8 x 20µs pulse)	-	-	16	V
		$I_{PP}=13\text{A}$ (8 x 20µs pulse)	-	23.5	27	V
Junction Capacitance	C_J	$V_R=0\text{V}$, $f=1\text{MHz}$, Pin 1 to Pin 3 or Pin 2 to Pin 3	-	40	-	pF

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

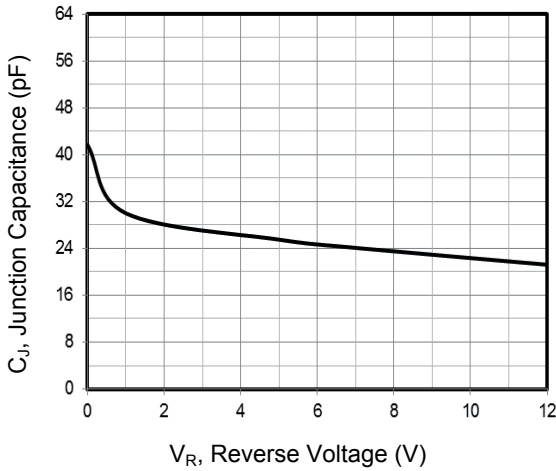


Figure 1. Junction Capacitance vs. Reverse Voltage

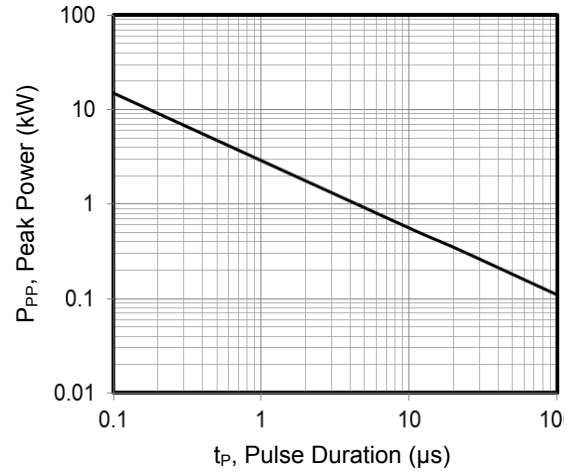


Figure 2. Peak Pulse Power vs. Pulse Time

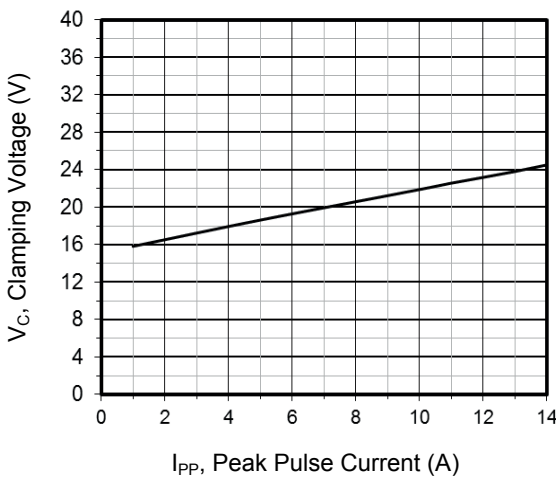


Figure 3. Clamping Voltage vs. Peak Pulse Current

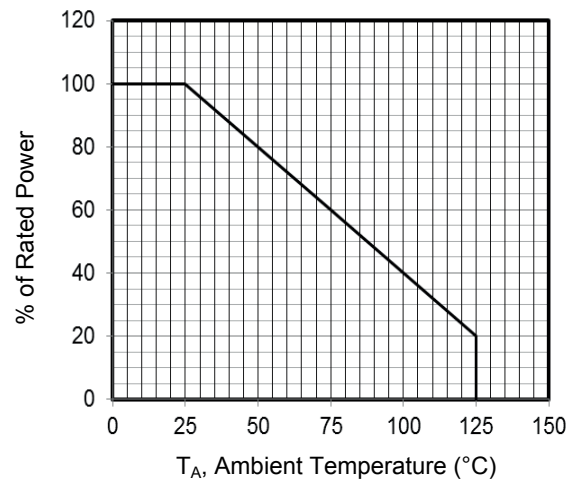


Figure 4. Power Derating Curve

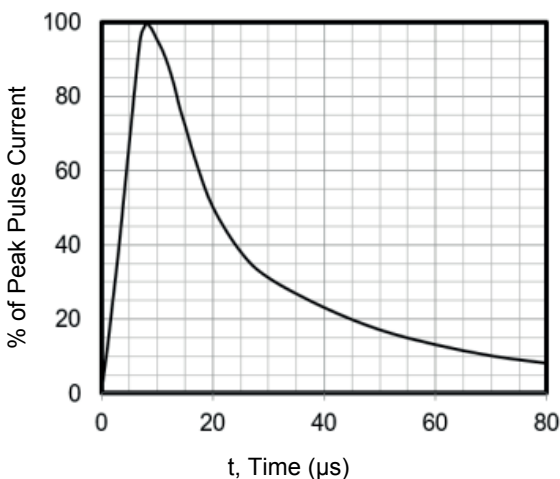
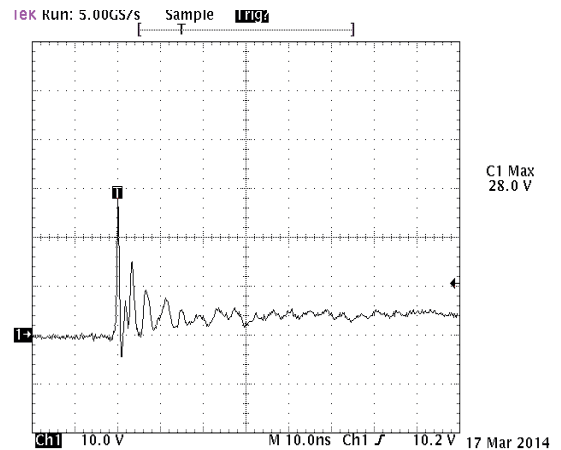


Figure 5. 8 X 20µs Pulse Waveform

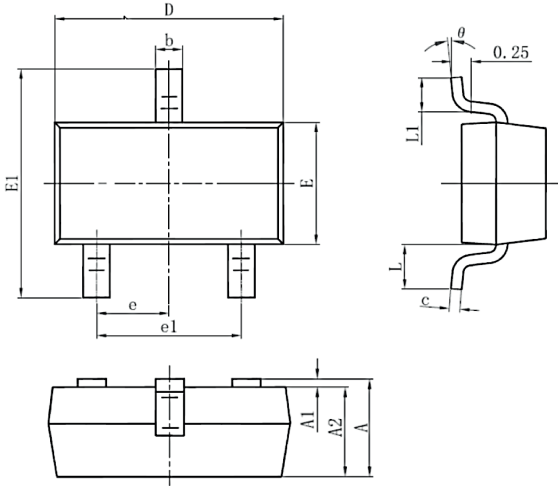


Note: Data is taken with a 10x attenuator

Figure 6. ESD Clamping Voltage

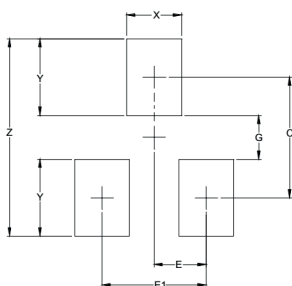
8 kV Contact per IEC61000-4-2

Package Outline Dimensions (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	1.40	0.047	0.055
E1	2.25	2.55	0.089	0.100
e	0.95TYP		0.037TYP	
e1	1.80	2.00	0.071	0.079
L	0.55REF		0.022REF	
L1	0.30	0.50	0.012	0.020
θ	0°	8°	0°	8°

Recommended Pad Layout



Symbol	Dimensions	
	Inches	Millimeters
C	0.087	2.20
E	0.037	0.95
E1	0.075	1.90
G	0.031	0.80
X	0.039	1.00
Y	0.055	1.40
Z	0.141	3.60

Order Information

Device	Package	Marking	Carrier	Quantity
GSEC12U400	SOT-23	S12	Tape & Reel	3,000pcs / Reel

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