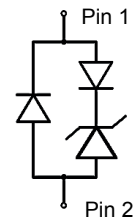


Features

- Protects one data line
- Ultra low leakage: nA level
- Operating voltage: 5V
- Low clamping voltage
- Ultra low capacitance: 0.6pF
- Complies with following standards:
 - IEC 61000-4-2 (ESD) immunity test
 Air discharge: $\pm 25\text{kV}$
 Contact discharge: $\pm 20\text{kV}$
 - IEC61000-4-5 (Lightning) 5A (8/20 μs)
- RoHS Compliant



Schematic Diagram

Applications

- Cellular Handsets and Accessories
- Personal Digital Assistants
- Notebooks, Desktops, Server
- USB 2.0 and USB 3.0 Interfaces
- Ethernet - 10/100/1000 Base T

Absolute Maximum Ratings (T_A=25°C unless otherwise specified)

Parameter	Symbol	Value	Unit
Peak Pulse Power (8/20 μs)	P _{PK}	75	W
Peak Pulse Current (8/20 μs)	I _{PP}	5	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	°C
Storage Temperature Range	T _{STG}	-55 to +150	°C

Electrical Characteristics (T_A=25°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 =1mA	6	-	-	V
Reverse Leakage Current	I _R	V _{RWM} =5V	-	-	0.5	μA
Clamping Voltage	V _C	I _{PP} =1A (8 x 20 μs pulse)	-	-	10	V
		I _{PP} =5A (8 x 20 μs pulse)	-	-	15	V
Junction Capacitance	C _J	V _R =0V, F=1MHz	-	0.6	0.8	pF

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

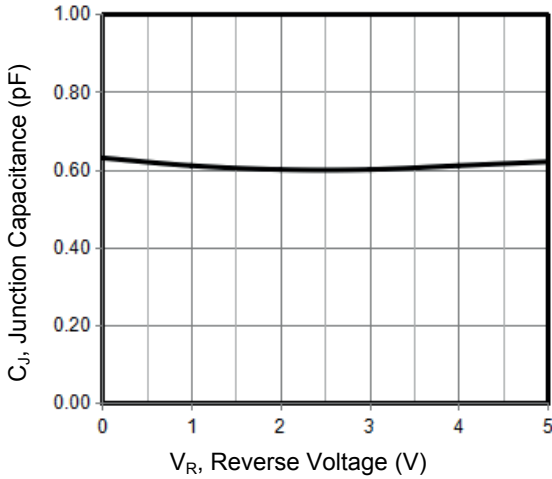


Figure 1. Junction Capacitance vs. Reverse Voltage

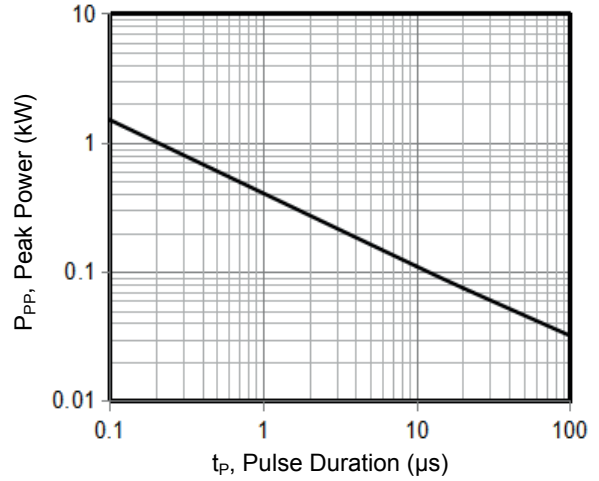


Figure 2. Peak Pulse Power vs. Pulse Time

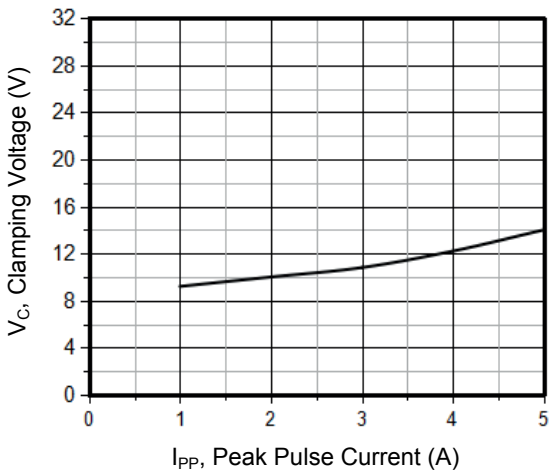


Figure 3. Clamping Voltage vs. Peak Pulse Current

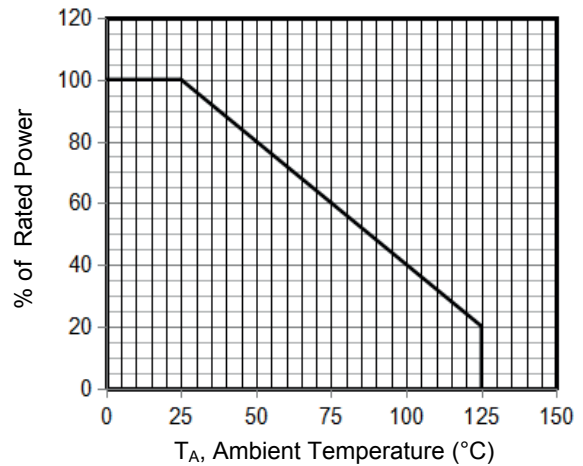


Figure 4. Power Derating Curve

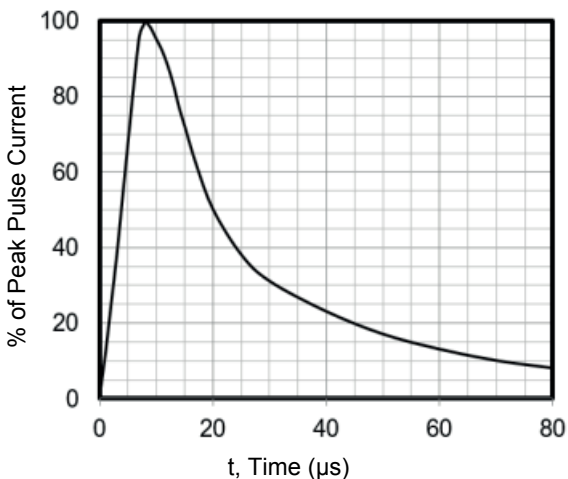
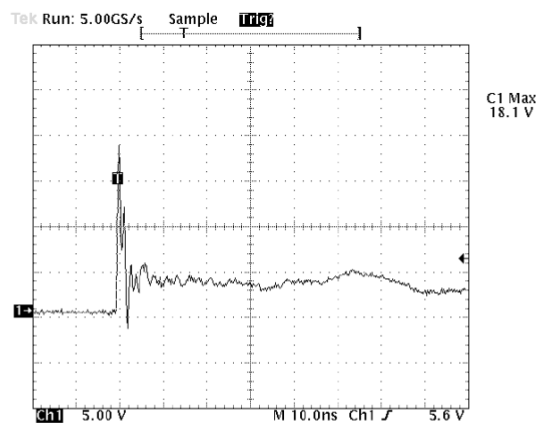


Figure 5. 8 X 20µs Pulse Waveform

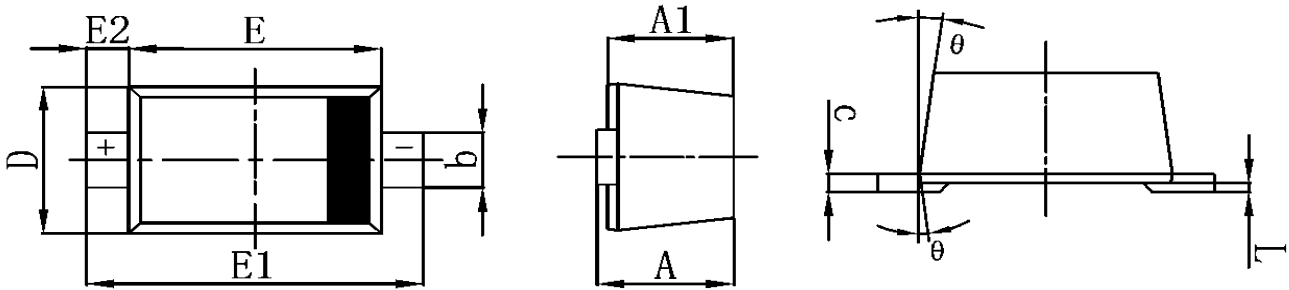


Note: Data is taken with a 10x attenuator

Figure 6. ESD Clamping Voltage

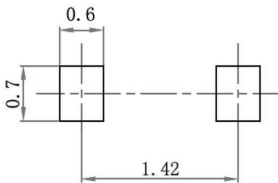
8 kV Contact per IEC61000-4-2

Package Outline Dimensions (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



Note:

1. Controlling dimension: in millimeters
2. General tolerance: $\pm 0.05\text{mm}$
3. The pad layout is for reference purposes only

Order Information

Device	Package	Marking	Quantity	HSF Status
GSEV5U006	SOD-523	5Y	3,000pcs / Reel	RoHS Compliant

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