

Features

- 100 Watts Peak Pulse Power per Line ($t_p = 8/20\mu s$)
- Replacement for MLV (0603)
- Protects one I/O or power line
- Low Clamping Voltage
- Working Voltage: 05V
- Low Leakage Current
- Response Time is Typically < 1 ns



IEC COMPATIBILITY (EN61000-4)

- IEC 61000-4-2 (ESD) ± 15 kV (air), ± 8 kV (contact)
- IEC 61000-4-4 (EFT) 40A (5/50ns)
- IEC 61000-4-5 (Lightning) 8A (8/20 μs)

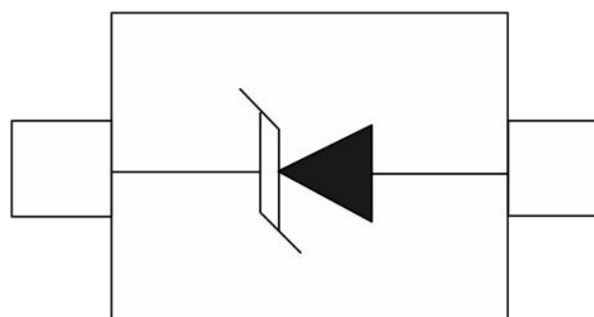
Mechanical Characteristics

- JEDEC SOD-523 package
- Molding compound flammability rating: UL 94V-0
- Marking : Marking Code
- Packaging : Tape and Reel per EIA 481
- RoHS Compliant

Applications

- Cellular Handsets & Accessories
- Personal Digital Assistants (PDAs)
- Notebooks & Handhelds
- Portable Instrumentation
- Digital Cameras
- MP3 players

Schematic & PIN Configuration



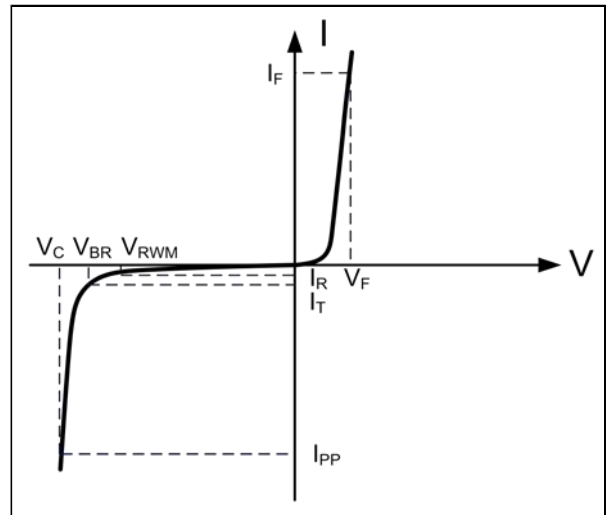
SOD-523 (Top View)

Absolute Maximum Rating

Rating	Symbol	Value	Units
Peak Pulse Power ($t_p = 8/20\mu s$)	P_{PP}	100	Watts
Peak Forward Voltage ($I_F = 1A, t_p = 8/20\mu s$)	V_{FP}	1.4	V
Operating Temperature	T_J	-55 to + 125	°C
Storage Temperature	T_{STG}	-55 to +150	°C

Electrical Parameters (T=25°C)

Symbol	Parameter
I_{PP}	Maximum Reverse Peak Pulse Current
V_C	Clamping Voltage @ I_{PP}
V_{RWM}	Working Peak Reverse Voltage
I_R	Maximum Reverse Leakage Current @ V_{RWM}
V_{BR}	Breakdown Voltage @ I_T
I_T	Test Current
I_F	Forward Current
V_F	Forward Voltage @ I_F


Electrical Characteristics

Part Number	Reverse Stand off Voltage V_{RWM} (Volts)	Minimum Breakdown Voltage $V_{BR}@1mA$ (Volts)	Maximum Clamping Voltage $V_C @ I_{PP}$ (Volts)	Maximum Peak Pulse Current I_{pp} (Amps)	Maximum Reverse Leakage current $I_R @ V_{RWM}(\mu A)$	Typical Capacitance DC=0V $C_J @ 1 MHz$ (pF)
BSD5A051V	05	6	12	8.0	1	30

Typical Characteristics

Figure 1: Peak Pulse Power Vs Pulse Time

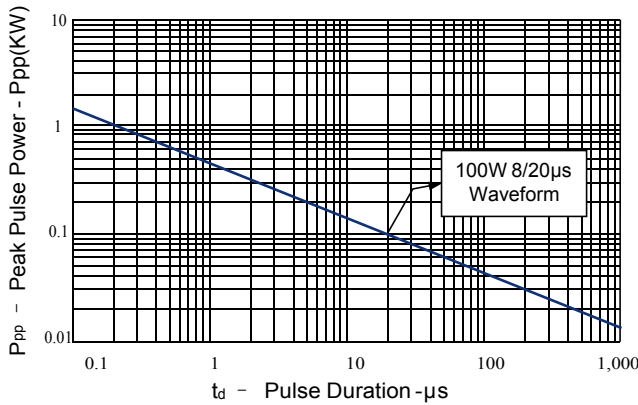


Figure 2: Power Derating Curve

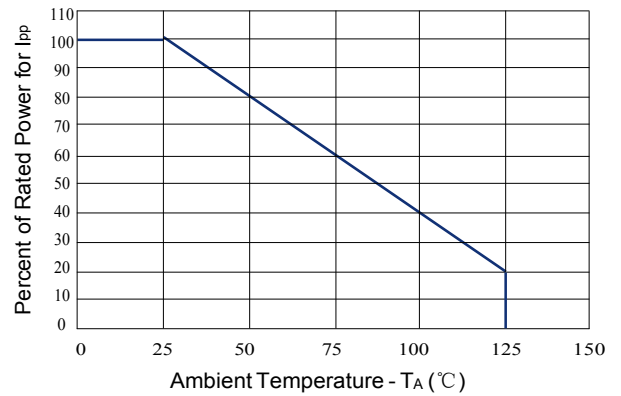


Figure 3: Clamping Voltage vs. Peak Pulse Current

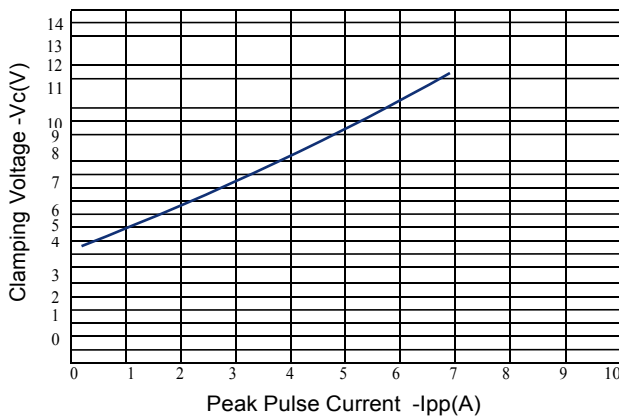


Figure 4: Normalized Junction Capacitance vs. Reverse Voltage

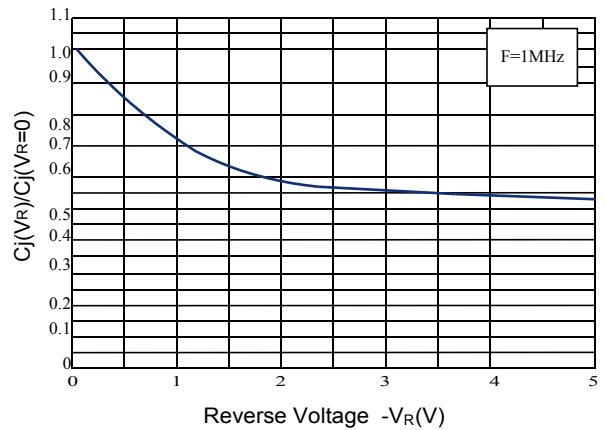


Figure 5: Pulse Waveform

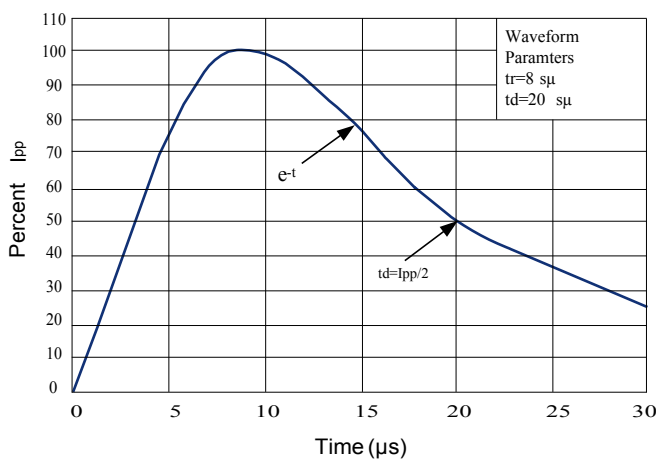
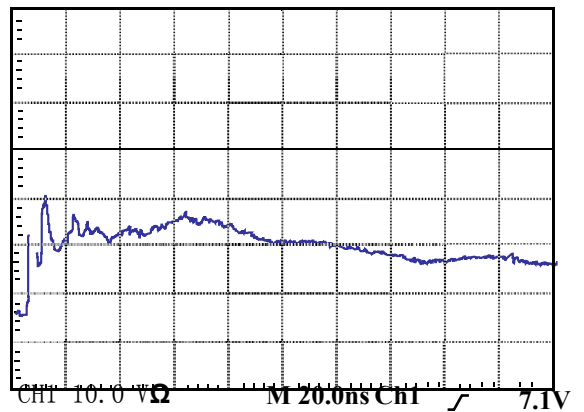


Figure 6: ESD Clamping(8kV Contact per IEC 61000-4-2)

Tek Run: 2.50GS/s Sample



Outline Drawing – SOD-523

PACKAGE OUTLINE

⊕	0.08 (0.0032)	X	Y
---	---------------	---	---

SOD-523

DIMENSIONS

SYMBOL	MILLIMETER		INCHES	
	MIN	MAX	MIN	MAX
A	0.50	0.70	0.020	0.028
b	0.25	0.35	0.010	0.014
C	0.07	0.20	0.0028	0.0079
D	1.10	1.30	0.043	0.051
E	0.70	0.90	0.028	0.035
H _E	1.50	1.70	0.059	0.067
L	0.15	0.25	0.006	0.010

DIMENSIONS: MILLIMETERS

Notes

1. Controlling Dimensions in Millimeters.
2. Dimensions are exclusive of mold flash and metal burrs.

Marking Codes



Package Information

Qty: 5k/Reel