Features

- 100 Watts Peak Pulse Power per Line (t_p = 8/20μs)
- Replacement for MLV (0603)
- Protects one I/O or power line
- Low Clamping Voltage
- Working Voltage: 03V
- Low Leakage Current
- Response Time is Typically < 1 ns

SOD-523

IEC COMPATIBILITY (EN61000-4)

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

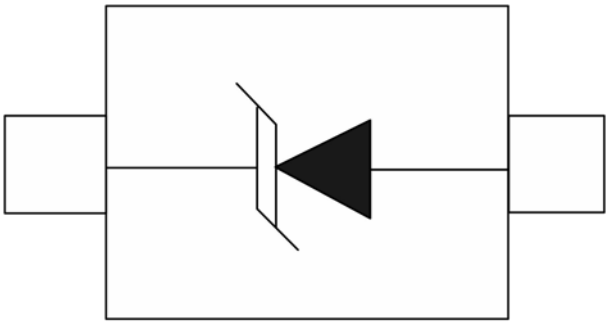
Mechanical Characteristics

- 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

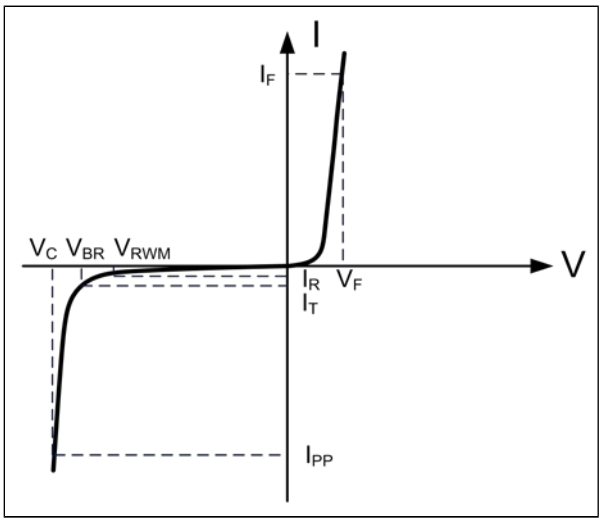


SOD-523 (Top View)

Absolute Maximum Rating			
Rating	**Symbol**	**Value**	**Units**
Peak Pulse Power (t_p =8/20μs)	P_{PP}	100	Watts
Peak Forward Voltage (I_F = 1A, t_p =8/20μs)	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}(μA)	Typical Capacitance DC=0V CJ@ 1 MHz (pF)
PESD3V3 S1UB-N	3.3	6	12	8.0	1	160

Typical Characteristics

Figure 1: Peak Pulse Power Vs Pulse Time

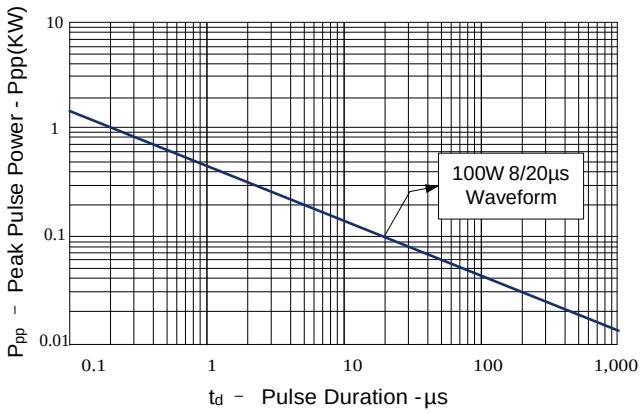


Figure 2: Power Derating Curve

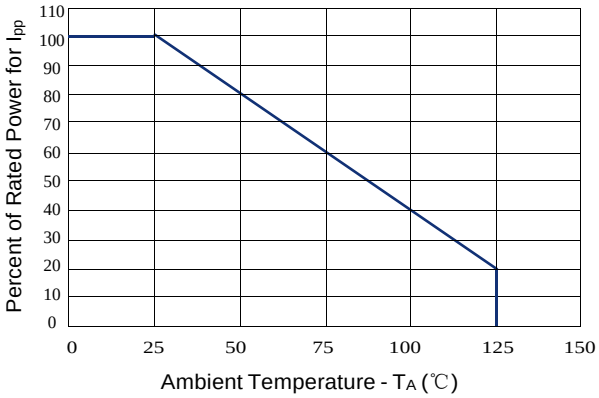


Figure 3: Clamping Voltage vs. Peak Pulse Current

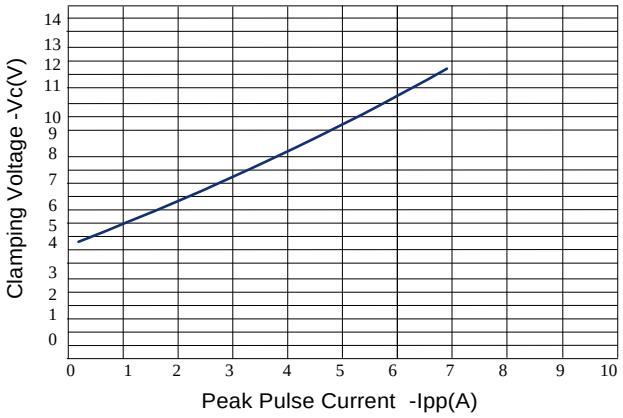


Figure 4: Normalized Junction Capacitance vs. Reverse Voltage

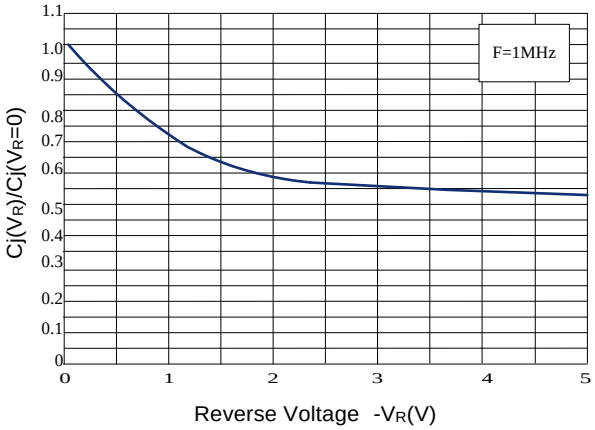


Figure 5: Pulse Waveform

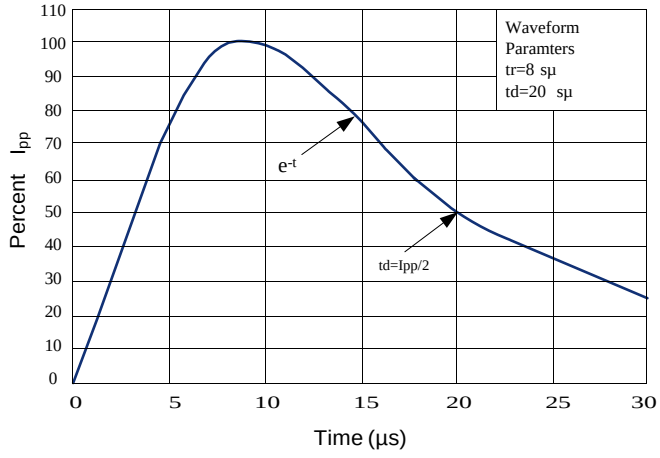
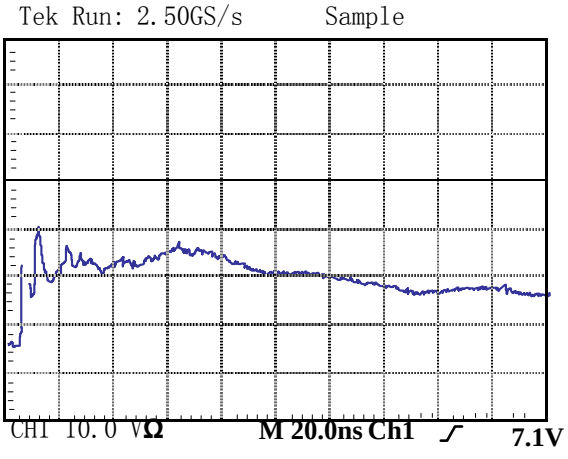
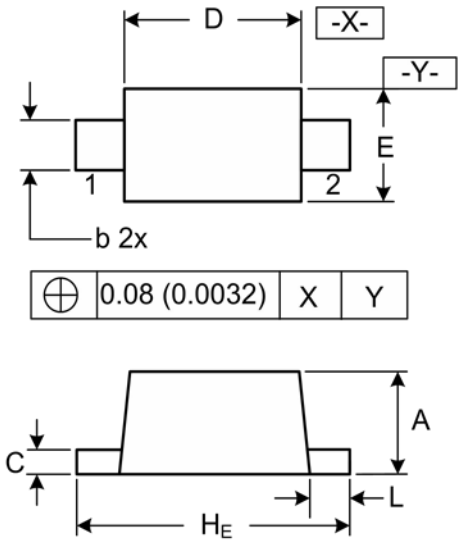


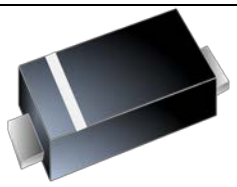
Figure 6: ESD Clamping(8kV Contact per IEC 61000-4-2)



Outline Drawing – SOD-523

PACKAGE OUTLINE

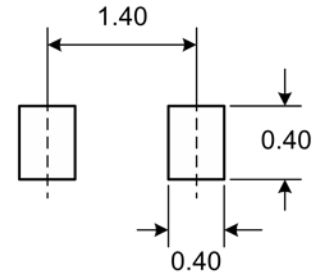




SOD-523

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.