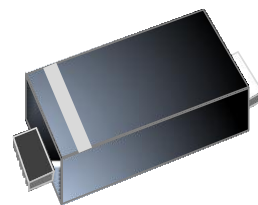


Features

- 200 Watts Peak Pulse Power per Line ($t_p = 8/20\mu s$)
- Protects one I/O or power line
- Low Clamping Voltage
- Working Voltage: 5 V
- Low Leakage Current
- Response Time is Typically $< 1\text{ ns}$



SOD-523

IEC COMPATIBILITY (EN61000-4)

- IEC 61000-4-2 (ESD) $\pm 30\text{kV}$ (air), $\pm 30\text{kV}$ (contact)
- IEC 61000-4-4 (EFT) 40A (5/50ns)
- IEC 61000-4-5 (Lightning) 12A (8/20 μs)

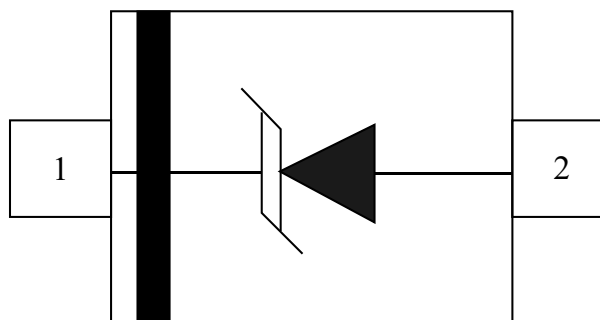
Mechanical Characteristics

- JEDEC SOD-523 package
- Molding compound flammability rating:
UL 94V-0
- 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



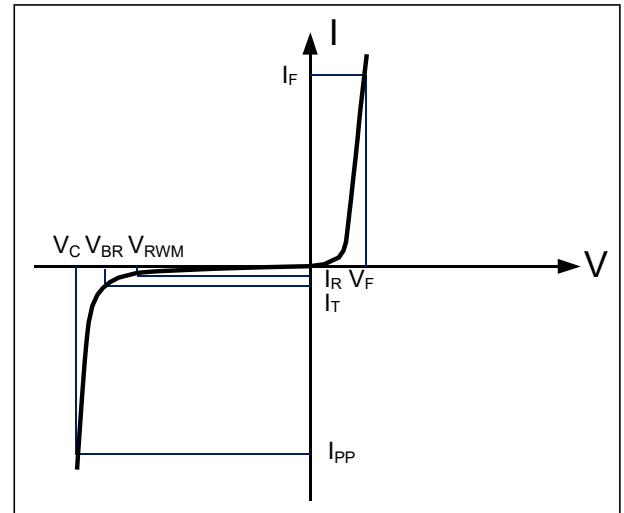
SOD-523 (Top View)

Transient Voltage Suppressor

Absolute Maximum Rating			
Rating	Symbol	Value	Units
Peak Pulse Power ($t_p=8/20\mu s$)	P_{PP}	200	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}	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

CSE5.0UCS523						
Parameter	Symbol	Conditions	Minimum	Typical	Maximum	Units
Reverse Stand-Off Voltage	V_{RWM}				5.0	V
Reverse Breakdown Voltage	V_{BR}	$I_T=1mA$	6.0			V
Reverse Leakage Current	I_R	$V_{RWM}=5V, T=25^\circ C$			1	μA
Peak Pulse Current	I_{PP}	$t_p=8/20\mu s$			12	A
Clamping Voltage	V_C	$I_{PP}=1A, t_p=8/20\mu s$			9.3	V
Clamping Voltage	V_C	$I_{PP}=12A, t_p=8/20\mu s$			17	V
Junction Capacitance	C_j	$V_R = 0V, f = 1MHz$			90	pF

Typical Characteristics

Figure 1: Peak Pulse Power vs. Pulse Time

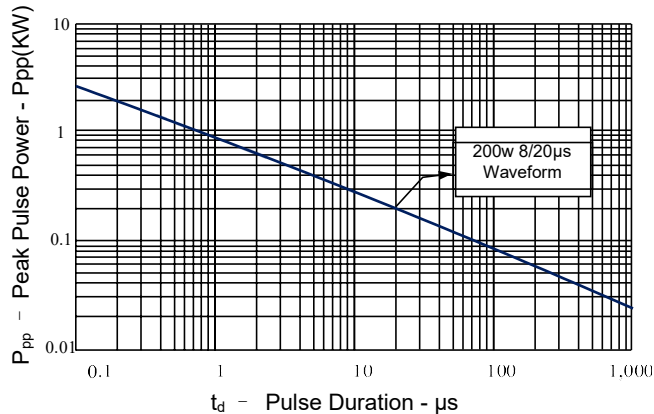


Figure 2: Power Derating Curve

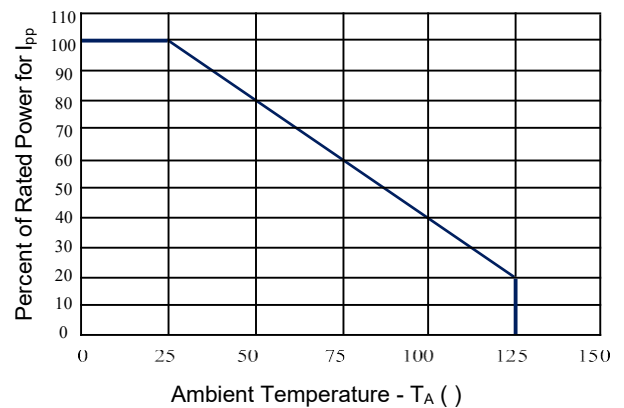


Figure 3: Clamping Voltage vs. Peak Pulse Current

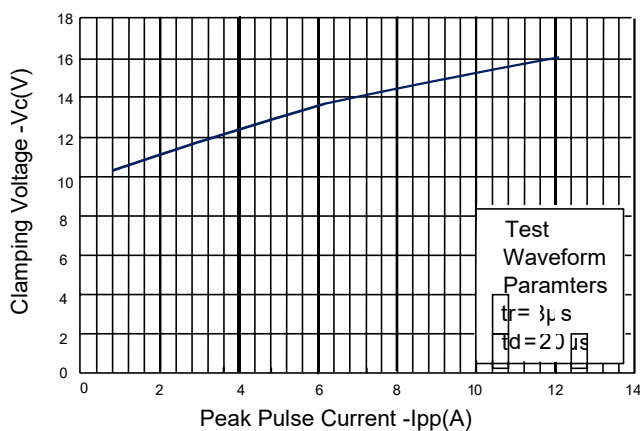


Figure 4: Normalized Junction Capacitance vs. Reverse Voltage

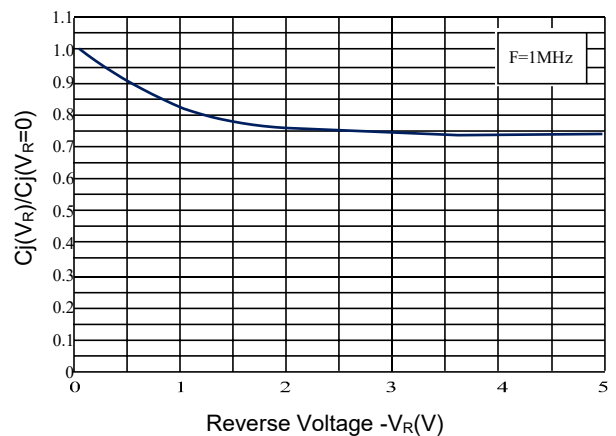


Figure 5: Pulse Waveform

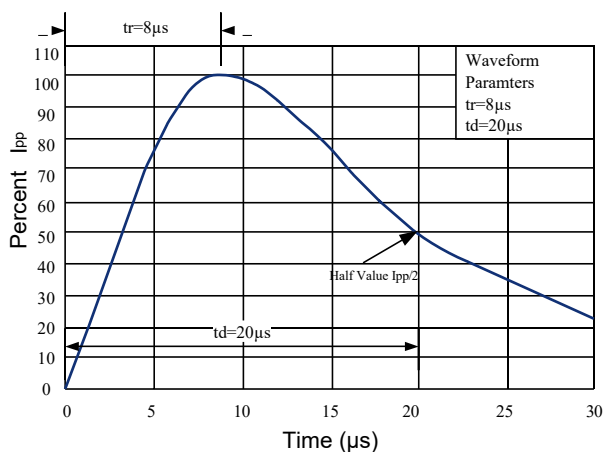
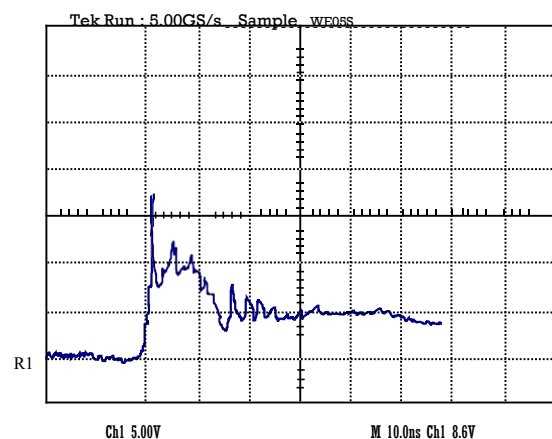
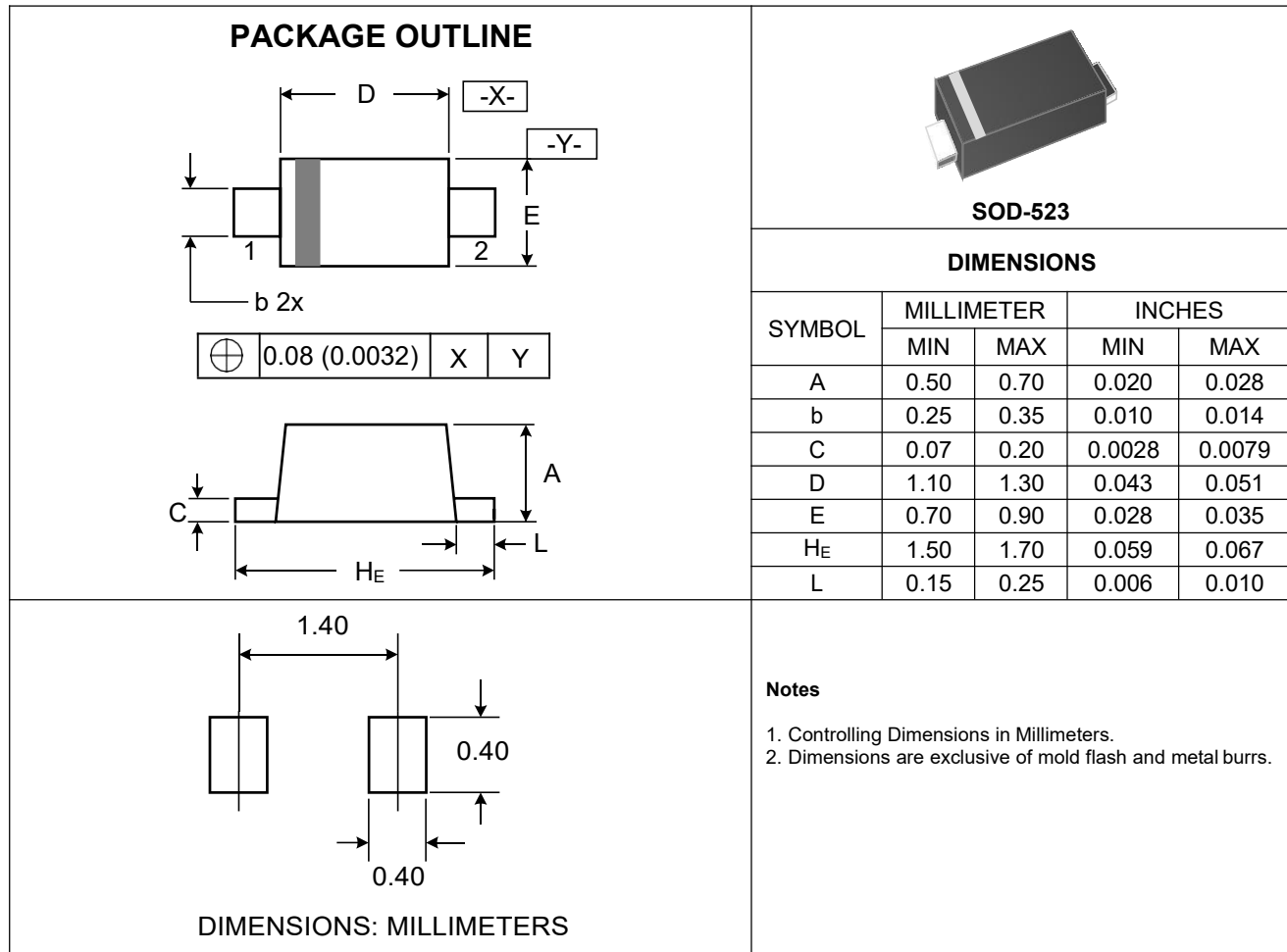


Figure 6: ESD Clamping(8kV Contact per IEC 61000-4-2)



Outline Drawing – SOD-523



Package Information

Qty: 3k/Reel

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