

Transient Voltage Suppressor

Features

- Small Body Outline Dimensions:
0.059" x 0.026" (1.5 mm x 0.65 mm)Max
- Low Body Height: 0.026" (0.65 mm) Max
- Protects one line
- Working Voltage: 3.3 V
- Low Leakage Current
- Response Time is Typically < 1 ns



SOD-523

IEC COMPATIBILITY (EN61000-4)

- IEC 61000-4-2 (ESD) $\pm 15\text{kV}$ (air), $\pm 8\text{kV}$ (contact)
- IEC 61000-4-4 (EFT) 40A (5/50ns)

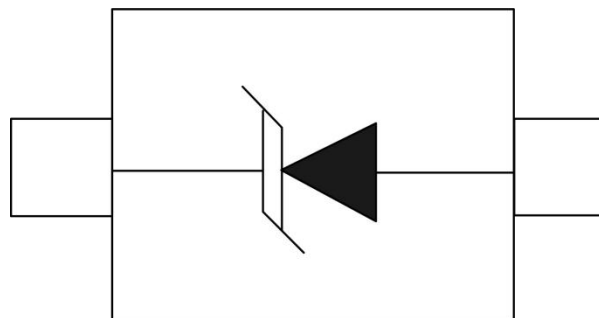
Mechanical Characteristics

- 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



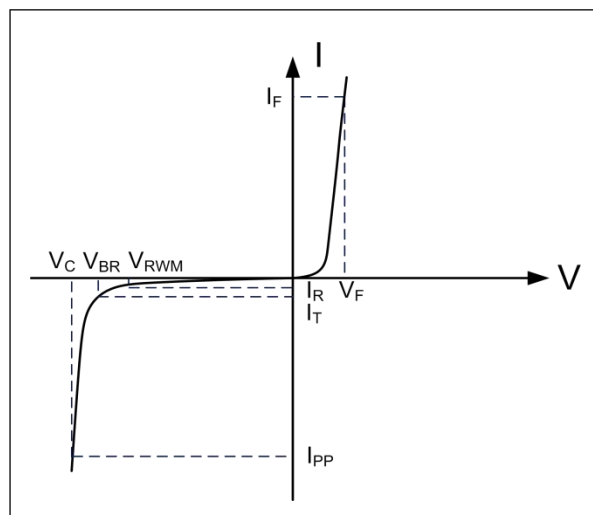
SOD-523 (Top View)

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}	1.5	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

CSE3.3UCS523						
Parameter	Symbol	Conditions	Minimum	Typical	Maximum	Units
Reverse Stand-Off Voltage	V_{RWM}				3.3	V
Reverse Breakdown Voltage	V_{BR}	$I_T=1mA$	5.0			V
Reverse Leakage Current	I_R	$V_{RWM}=3.3V$, $T=25^\circ C$			1	μA
Peak Pulse Current	I_{PP}	$t_p=8/20\mu s$			11.0	A
Clamping Voltage	V_C	$I_{PP}=5A$, $t_p=8/20\mu s$		8.3		V
Clamping Voltage	V_C	$I_{PP}=11.0A$, $t_p=8/20\mu s$		14.1		V
Junction Capacitance	C_j	$V_R = 0V$, $f = 1MHz$		100		pF

Typical Characteristics

Figure 1: Peak Pulse Power Vs Pulse Time

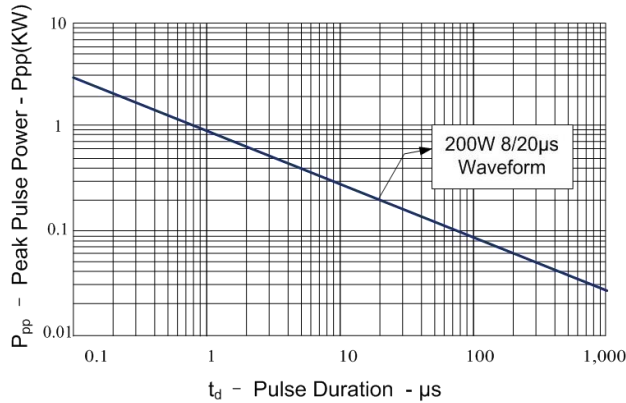


Figure 2: Power Derating Curve

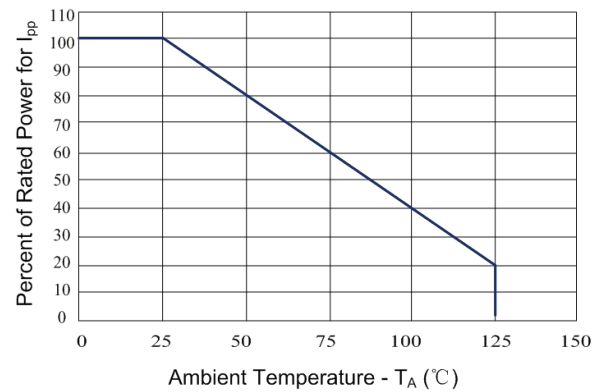


Figure 3: Clamping Voltage vs. Peak Pulse Current

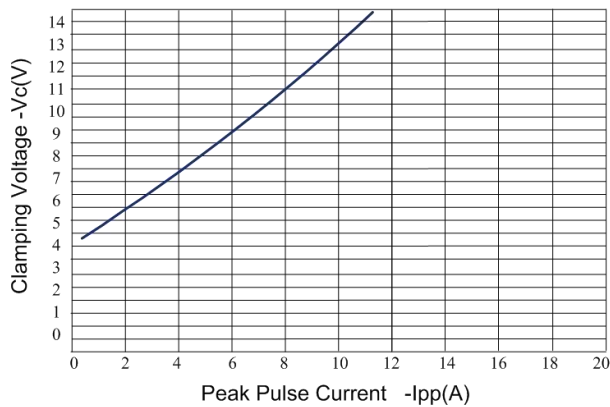


Figure 4: Normalized Junction Capacitance vs. Reverse Voltage

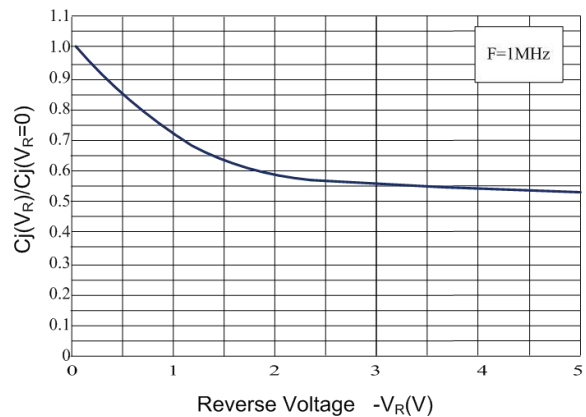


Figure 5: Pulse Waveform

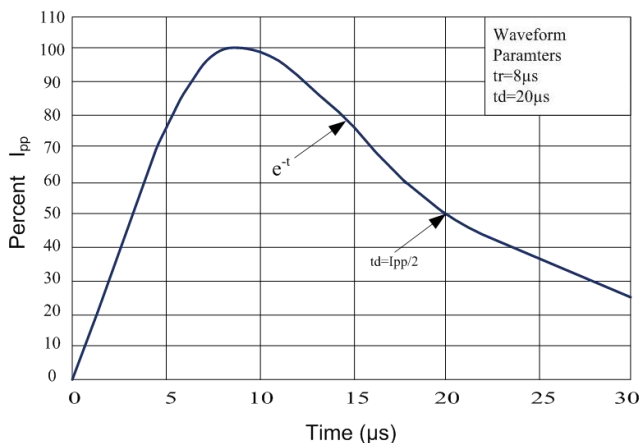
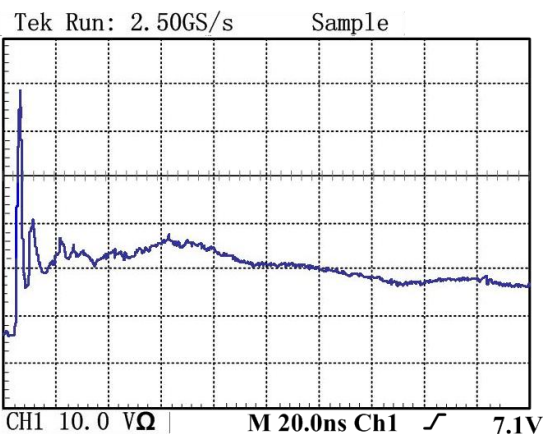
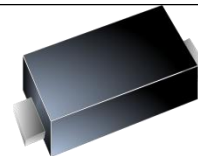
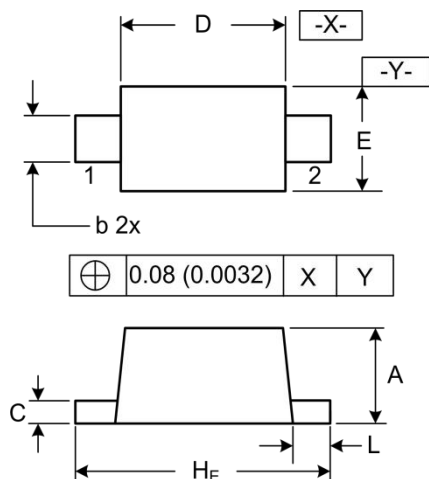


Figure 6: ESD Clamping(8kV Contact per IEC 61000-4-2)



Outline Drawing – SOD-523

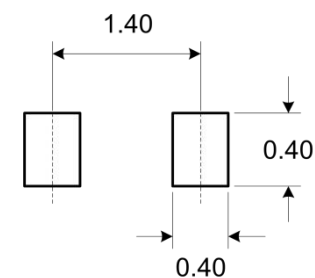
PACKAGE OUTLINE



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.

Package Information

Qty: 3k/Reel

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