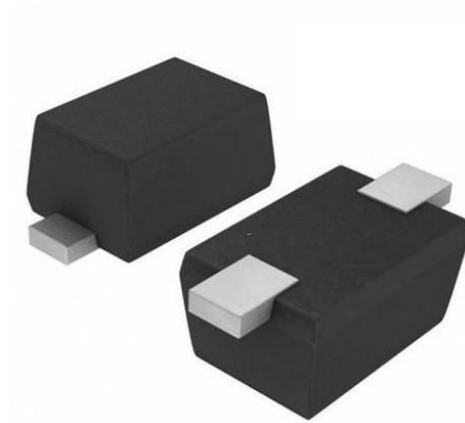


»Features

- 100Watts peak pulse power ($t_p = 8/20\mu s$)
- SOD523 package
- Bidirectional configurations
- Solid-state silicon-avalanche technology
- Low clamping voltage
- Low leakage current
- Low capacitance ($C_j=0.3pF$ typ.)
- Protection one data/power line
- IEC 61000-4-2 $\pm 15kV$ contact $\pm 20kV$ air
- IEC 61000-4-4 (EFT) 40A (5/50ns)
- IEC 61000-4-5 (Lightning) 3.5A (8/20 μs)



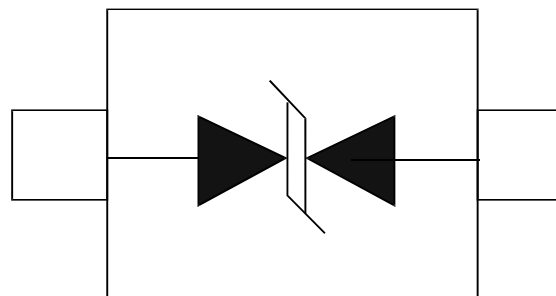
»Applications

- Cell Phone Handsets and Accessories
- Microprocessor based equipment
- Personal Digital Assistants (PDA's)
- Notebooks, Desktops, and Servers
- Portable Instrumentation

»Mechanical Data

- SOD523 package
- Molding compound flammability rating: UL 94V-0
- Packaging: Tape and Reel
- RoHS/WEEE Compliant

»Schematic & PIN Configuration



SOD-523

» **Absolute Maximum Rating**

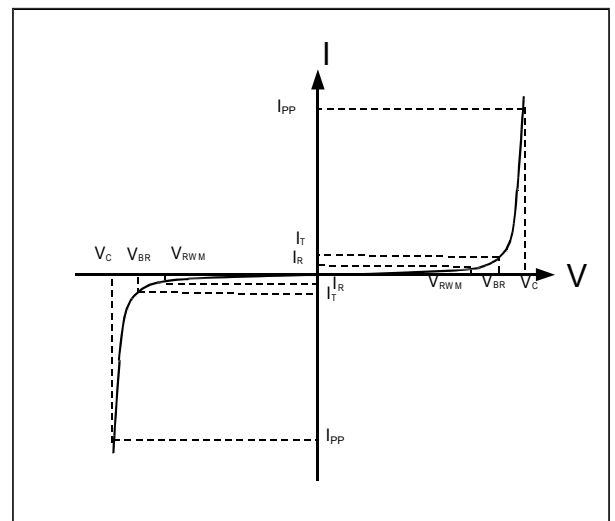
Rating	Symbol	Value	Units
Peak Pulse Power ($t_p = 8/20\mu s$)	P_{PP}	100	Watts
Peak Pulse Current ($t_p = 8/20\mu s$)(note1)	I_{PP}	3.5	A
ESD per IEC 61000-4-2 (Air) ESD per IEC 61000-4-2 (Contact)	V_{ESD}	20 15	kV
Lead Soldering Temperature	T_L	260(10seconds)	$^{\circ}C$
Junction Temperature	T_J	-55 to + 125	$^{\circ}C$
Storage Temperature	T_{stg}	-55 to + 125	$^{\circ}C$

» **Electrical Characteristics**

Parameter	Symbol	Conditions	Min	Typical	Max	Units
Reverse Stand-Off Voltage	V_{RWM}				12.0	V
Reverse Breakdown Voltage	V_{BR}	$I_T = 1mA$	13.2	14.7	18.0	V
Reverse Leakage Current	I_R	$V_{RWM} = 12V, T = 25^{\circ}C$		0.1	0.5	μA
Peak Pulse Current	I_{PP}	$t_p = 8/20\mu s$			3.5	A
Clamping Voltage	V_C	$I_{PP} = 3.5A, t_p = 8/20\mu s$		30	35	V
Junction Capacitance	C_j	$V_R = 0V, f = 1MHz$		0.3	0.5	pF

» **Electrical Parameters (TA = 25°C unless otherwise noted)**

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



Note: 8/20 μs pulse waveform.

»TypicalCharacteristics

Figure 1: Peak Pulse Power vs. Pulse Time

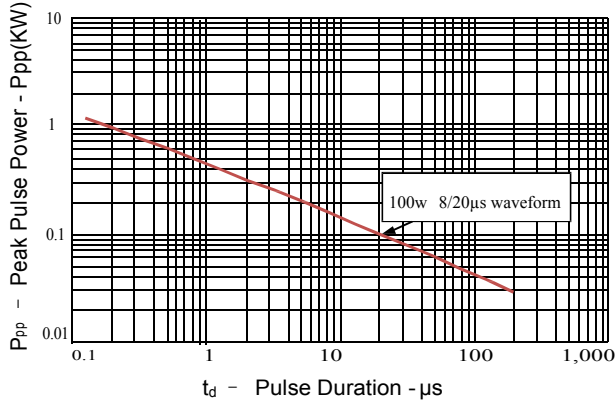


Figure 2: Power Derating Curve

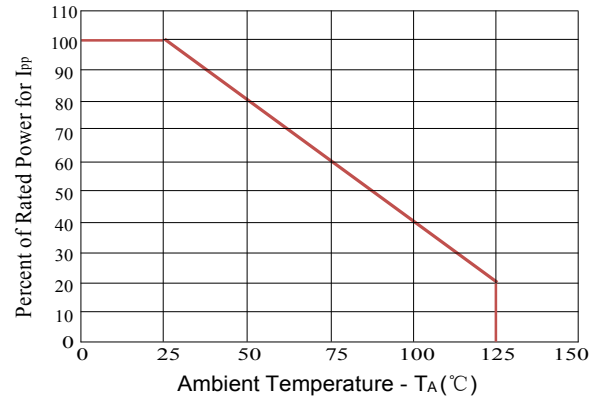


Figure3: Pulse Waveform

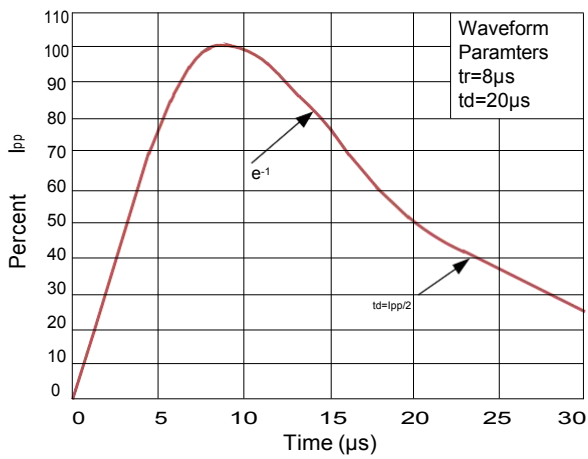
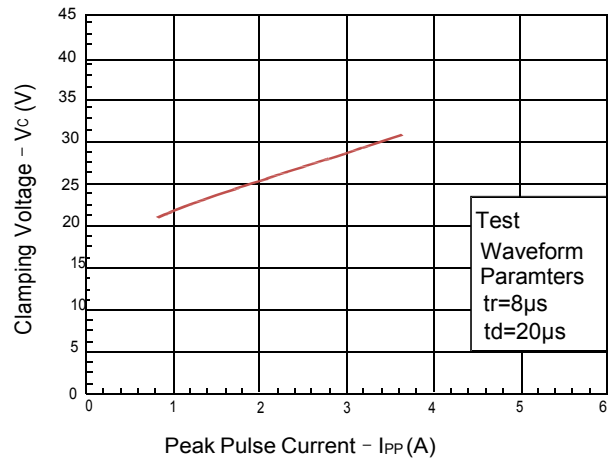
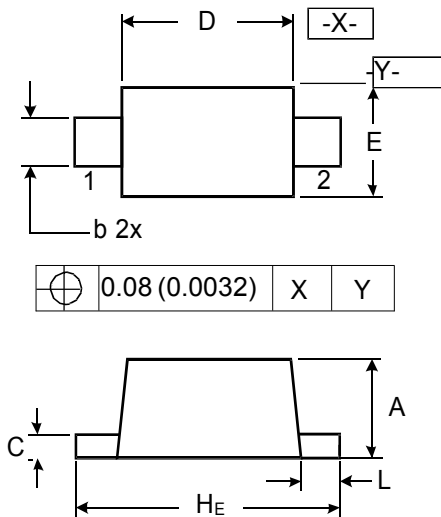


Figure 4: Clamping Voltage vs.Ipp



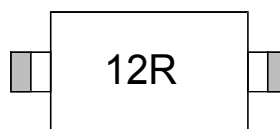
»Outline Drawing – SOD523



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
HE	1.50	1.70	0.059	0.067
L	0.15	0.25	0.006	0.010

»Marking



»Ordering information

Order code	Package	Base qty	Delivery mode
BSD5C121U	SOD523	5000	Tape and reel

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