

Features

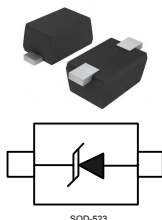
250Watts peak pulse power ($t_p = 8/20\mu s$)
 SOD523 package
 Bidirectional configurations
 Solid-state silicon-avalanche technology
 Low clamping voltage
 Low leakage current
 Low capacitance ($C_j = 70pF$ typ.)
 Protection one data/power line to:
 IEC 61000-4-2 $\pm 15kV$ contact $\pm 15kV$ air
 IEC 61000-4-4 (EFT) 40A (5/50ns)
 IEC 61000-4-5 (Lightning) 15A (8/20 μs)

Applications

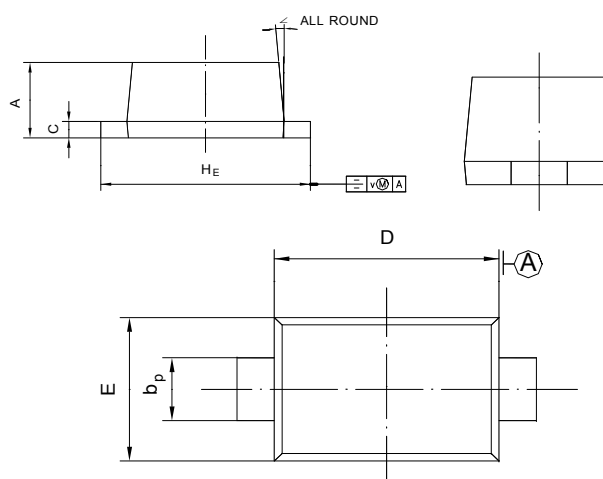
Cell Phone Handsets and Accessories
 Microprocessor based equipment
 Personal Digital Assistants (PDA's)
 Notebooks, Desktops, and Servers
 Portable Instrumentation

Mechanical Data

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



SOD-523



UNIT	A	b _p	C	D	E	H _E	V	∠
mm	0.70 0.50	0.40 0.20	0.14 0.05	1.30 1.10	0.90 0.75	1.70 1.50	0.1	5°

Dimensions in inches and (millimeters)

Absolute Maximum Rating

Rating	Symbol	Value	Units
Peak Pulse Power ($t_p = 8/20\mu s$)	P_{pp}	250	Watts
Peak Pulse Current ($t_p = 8/20\mu s$) (note1)	I_{pp}	15	A
ESD per IEC 61000-4-2 (Air) ESD per IEC 61000-4-2 (Contact)	V_{ESD}	30 30	kV
Lead Soldering Temperature	T_L	260(10seconds)	°C
Junction Temperature	T_J	-55 to + 125	°C
Storage Temperature	T_{stg}	-55 to + 125	°C

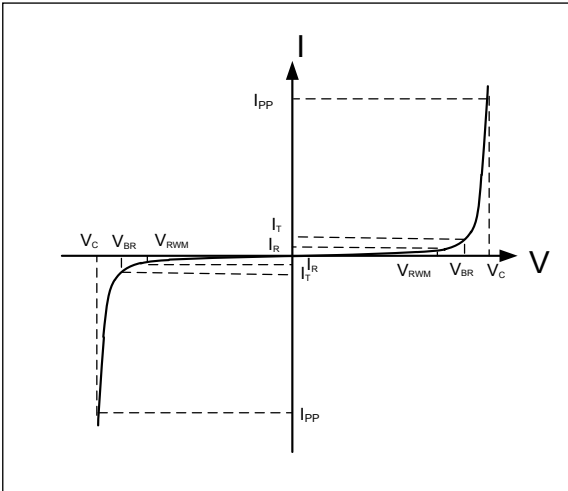
ESD5Z3V3

Electrical Characteristics

Parameter	Symbol	Conditions	Min	Typical	Max	Units
Reverse Stand-Off Voltage	V_{RWM}				3.3	V
Reverse Breakdown Voltage	V_{BR}	$I_T=1mA$	4.8			V
Reverse Leakage Current	I_R	$V_{RWM}=3.3V, T=25^{\circ}C$			2.0	μA
Peak Pulse Current	I_{PP}	$t_p=8/20\mu s$			15	A
Clamping Voltage	V_C	$I_{PP}=15A, t_p=8/20\mu s$			18	V
Junction Capacitance	C_j	$V_R=0V, f=1MHz$		70		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.

RATING AND CHARACTERISTIC CURVES (ESD5Z3V3)

Figure 1: Peak Pulse Power vs. Pulse Time

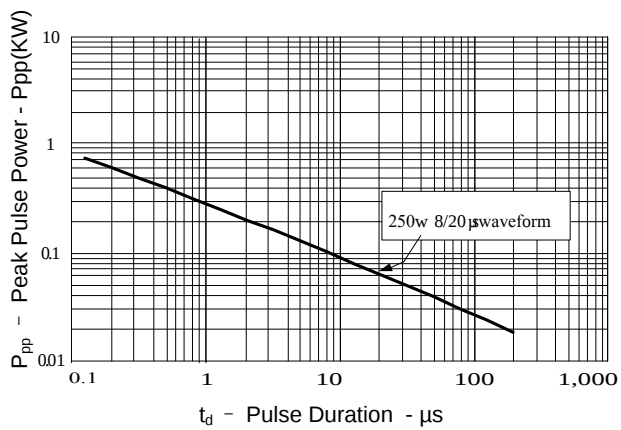


Figure 2: Power Derating Curve

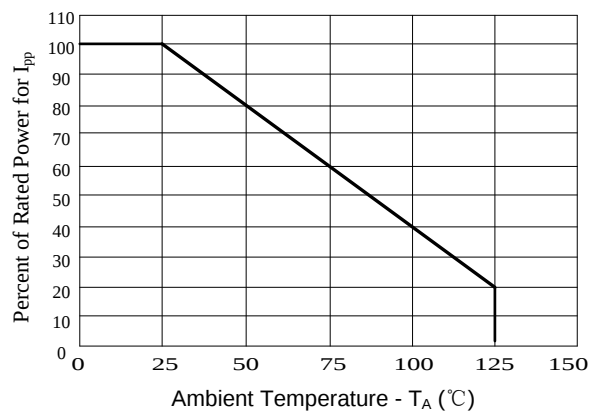


Figure3: Pulse Waveform

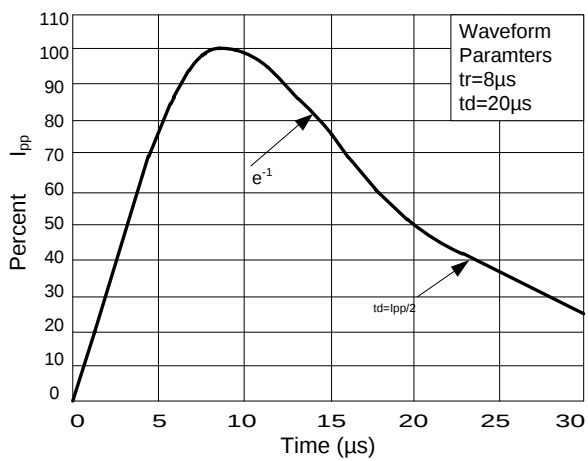


Figure 4: Clamping Voltage vs. I_pp

