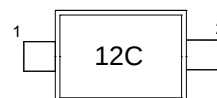


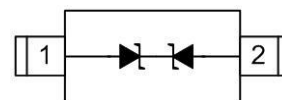
Features

- ◇ 180W (8/20 μ s) Peak Pulse Power
- ◇ Low Capacitance ESD Protection
- ◇ SOD-523 Package
- ◇ RoHS Compliant
- ◇ Matte Tin Lead finish (Pb-Free)
- ◇ Protect One High Speed Data Line
- ◇ Meet IEC61000-4-2 Level 4:
Contact Discharge >30kV
Air Discharge >30kV

SOD-523



PIN Diagram



Applications

- ◇ Communication System
- ◇ Portable Instrumentation
- ◇ Audio and Video Equipment
- ◇ Computers and Peripherals
- ◇ USB 1.1, USB 1.0 Ports

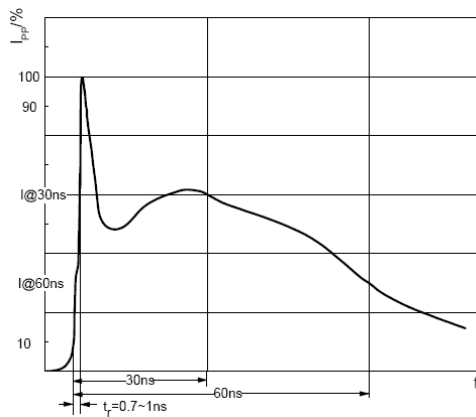
Maximum Ratings (Ta = 25℃)

Symbol	Parameter	Value	Unit
PPK	Peak Pulse Power	180	W
IPP	Peak Pulse Current	6	A
VESD (Contact)	Contact ESD Voltage per IEC61000-4-2	30	kV
VESD (Air)	Air ESD Voltage per IEC61000-4-2	30	kV
TJ	Junction Temperature	-55 to +150	℃
TSTG	Storage Temperature	-55 to +150	℃

ESD standards compliance

IEC61000-4-2 Standard

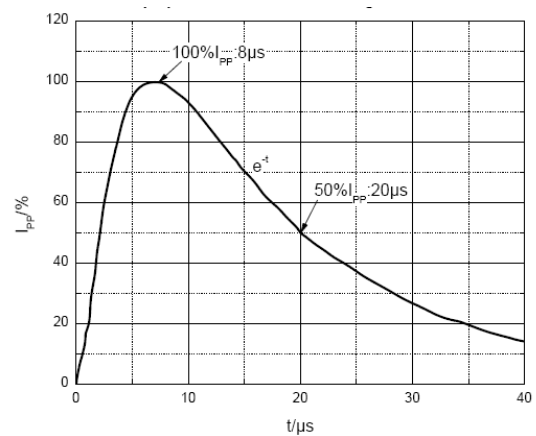
Contact Discharge		Air Discharge	
Level	Test Voltage kV	Level	Test Voltage kV
1	2	1	2
2	4	2	4
3	6	3	8
4	8	4	15



ESD pulse waveform according to IEC61000-4-2

JESD22-A114-B Standard

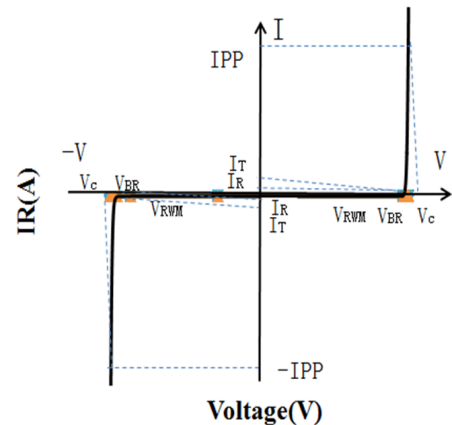
ESD Class	Human Body Discharge V
0	0~249
1A	250~499
1B	500~999
1C	1000~1999
2	2000~3999
3A	4000~7999
3B	8000~15999



8/20µs pulse waveform according to IEC 61000-4-5

Portion Electronics Parameter

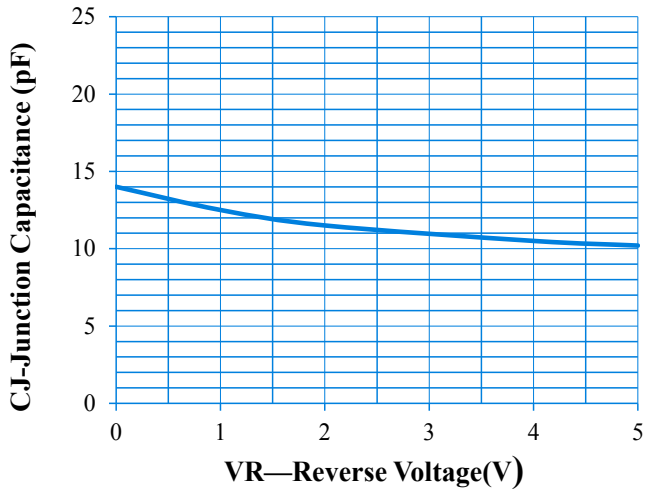
Symbol	Parameter
I_T	Test Current
I_{PP}	Maximum Reverse Peak Pulse Current
V_C	Clamping Voltage @ I_C



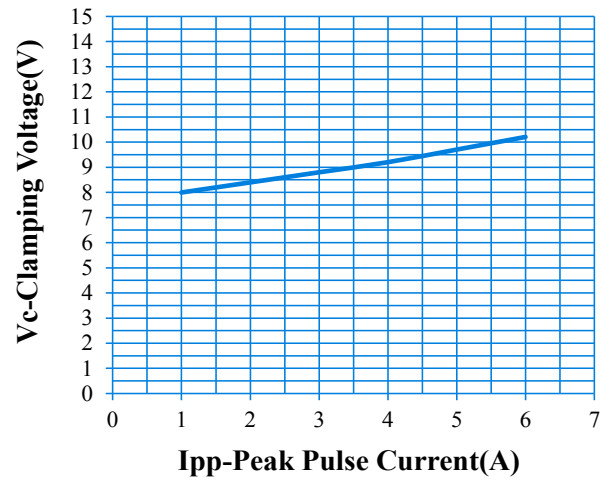
Electrical Characteristics (Ta = 25°C)

Symbol	Parameter	Conditions	Min	Typ	Max	Unit
VRWM	Reverse Working Peak Voltage				12	V
VBR	Reverse Breakdown Voltage	$I_T = 1\text{mA}$	12.5	13	16.5	V
IR	Reverse Leakage Current	$V_{RWM} = 5\text{V}$			0.2	µA
VC	Clamping Voltage	$I_{PP} = 1\text{A}$ (8/20µs)		17		V
VC	Clamping Voltage	$I_{PP} = 6\text{A}$ (8/20 µs)		20	30	V
CJ	Capacitance	$V_R = 0\text{V}$, $f = 1\text{MHz}$		15	25	pF

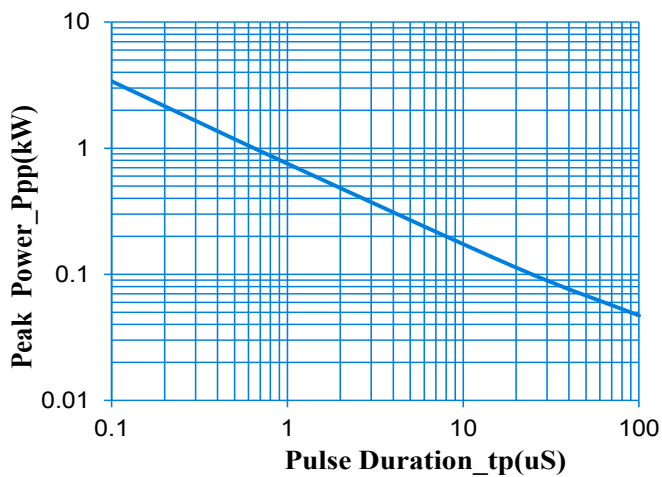
Typical Performance Characteristics ($T_A=25^{\circ}\text{C}$ unless otherwise Specified)



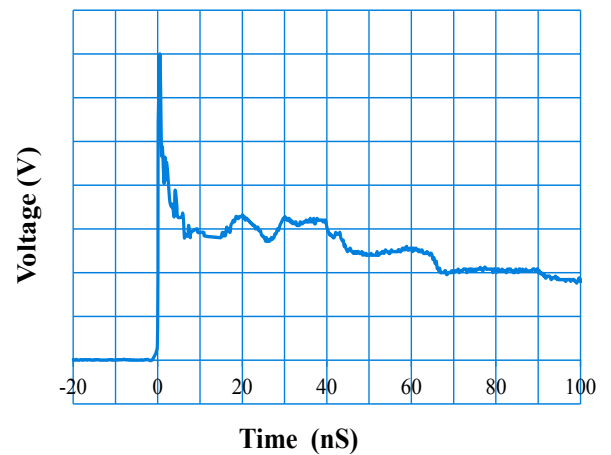
Junction Capacitance vs. Reverse Voltage



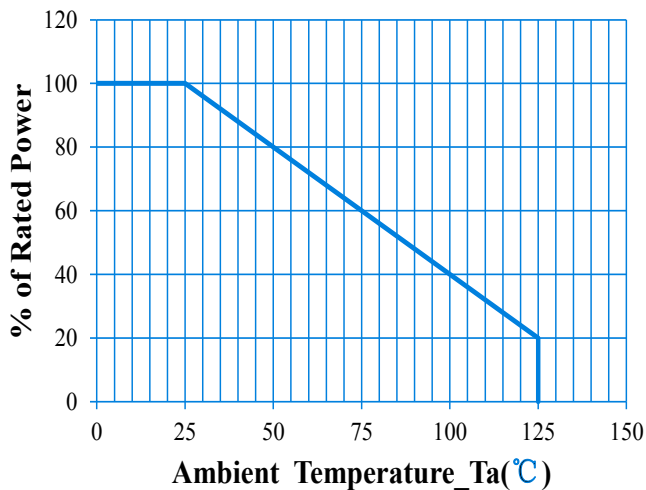
Clamping Voltage vs. Peak Pulse Current



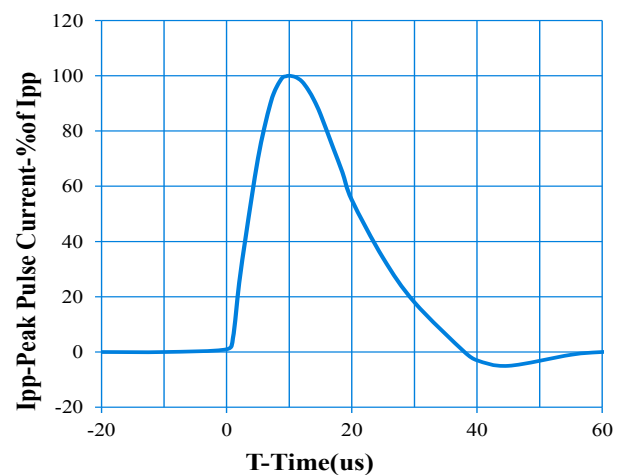
Peak Pulse Power vs. Pulse Time



IEC61000-4-2 Pulse Waveform



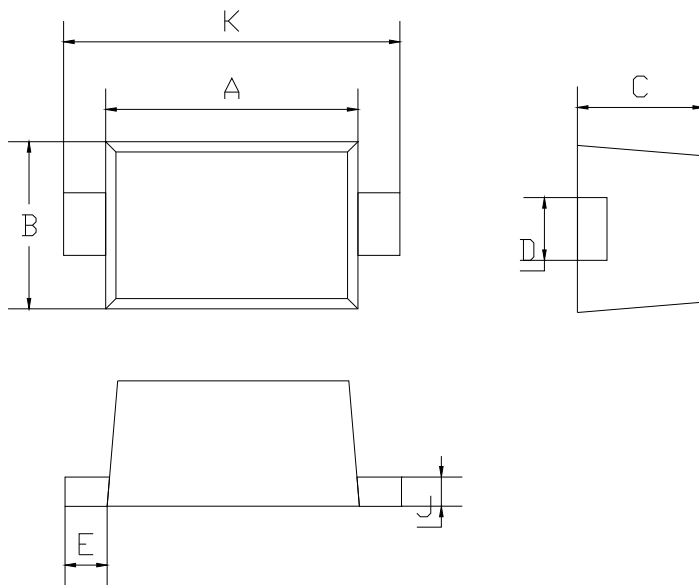
Power Derating Curve



8 X 20us Pulse Waveform

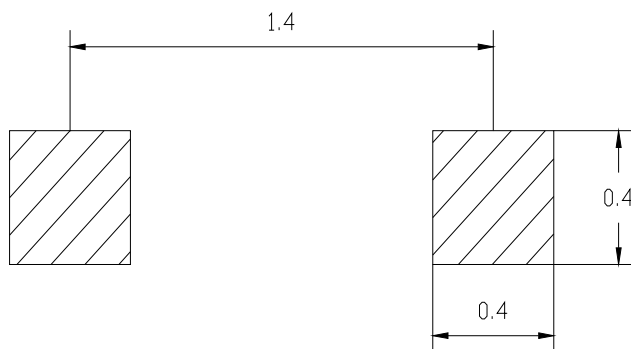
Plastic surface mounted package

SOD-523



SOD-523		
Dim	Min	Max
A	1.1	1.3
B	0.7	0.9
C	0.5	0.7
D	0.3 Typical	
E	0.15	0.25
J	0.1 Typical	
K	1.5	1.7
All Dimensions in mm		

SOLDERING FOOTPRINT



Unit: mm