

Features

- 100W (8x20us) Peak Pulse Power
- Low Clamping Voltage
- SOD-523 Package
- RoHS Compliant
- Matte Tin Lead finish (Pb-Free)
- Protect One I/O or Power Line
- Meet IEC61000-4-2 Level 4:
 Contact Discharge >20kV
 Air Discharge >2 0kV

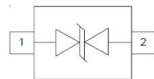
Applications

- Smart Phones
- Laptop Computers
- Portable Electronics

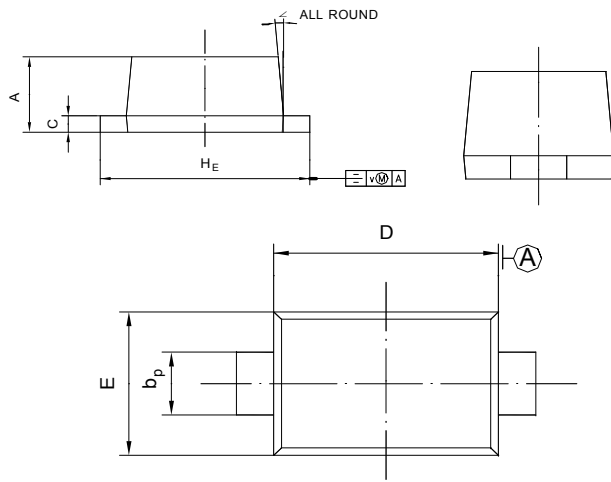
Circuit Diagram



PIN Diagram



SOD-523



SOD-523 mechanical data

UNIT	A	b _p	C	D	E	H _E	V	∠
mm	0.70 0.60	0.4 0.3	0.135 0.100	1.25 1.15	0.85 0.75	1.7 1.5	0.1	5°

Maximum Ratings (Ta = 25°C)

Symbol	Parameter	Value	Unit
T _J	Junction Temperature	-55 to +150	°C
T _{STG}	Storage Temperature	-55 to +150	°C
I _{pp} Max	Maximum Peak Pulse Current	7	A
PPK	Peak Pulse Power	100	W

(1). Device stressed with ten non-repetitive ESD pulses.

(2). Non-repetitive current pulse 8/20μs exponential decay waveform according to IEC61000-4-5.

LESD5D5.0CT1G

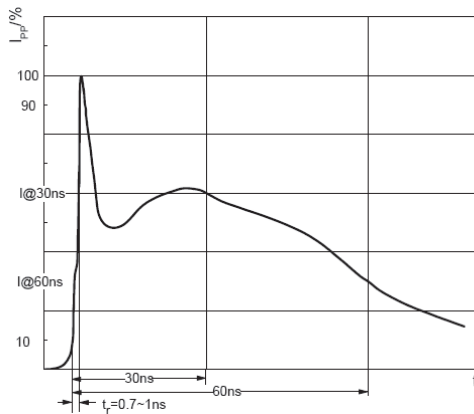
ESD standards compliance

IEC61000-4-2 Standard

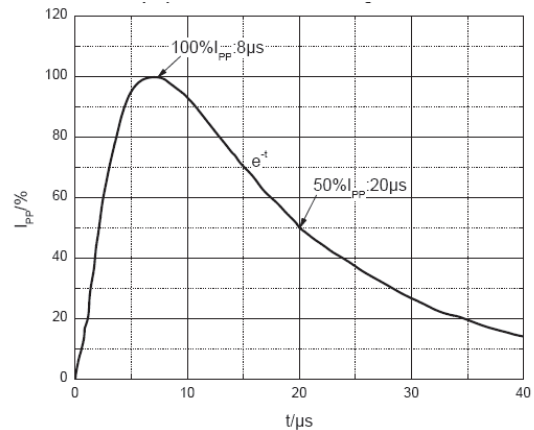
Contact Discharge		Air Discharge	
Level	Test Voltage kV	Level	Test Voltage kV
1	2	1	2
2	4	2	4
3	6	3	8
4	8	4	15

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



ESD pulse waveform according to IEC61000-4-2

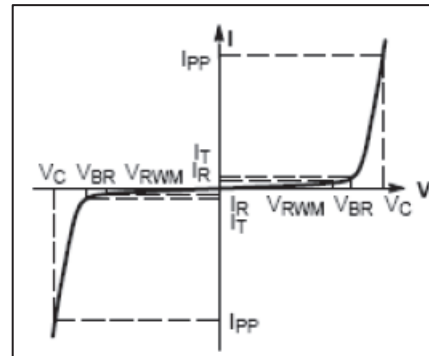


8/20µs pulse waveform according to IEC 61000-4-5

LESD5D5.0CT1G

ELECTRICAL PARAMETER

Symbol	Parameter
V_C	Clamping Voltage @ I_{PP}
I_{PP}	Peak Pulse Current
V_{BR}	Breakdown Voltage @ I_T
I_T	Test Current
I_R	Reverse Leakage Current @ V_{RWM}
V_{RWM}	Reverse Standoff Voltage

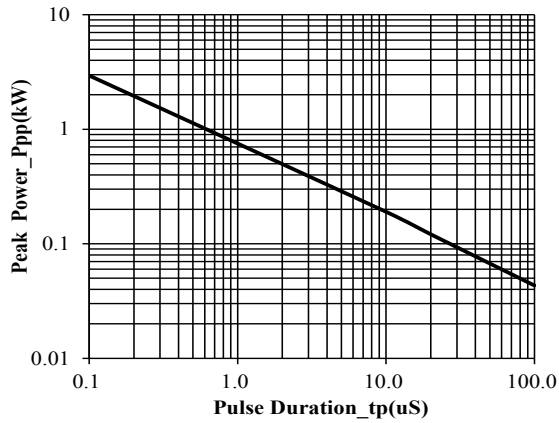


V-I characteristics for a Bi-directional TVS

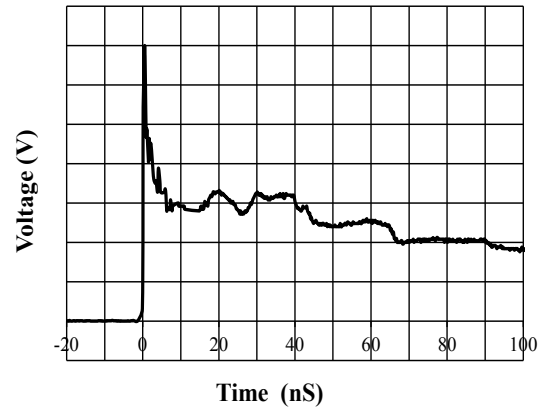
Electrical Characteristics (Ta=25°C)

Symbol	Parameter	Conditions	Min	Typ	Max	Unit
VRWM	Reverse Working Peak Voltage				5.0	V
VBR	Reverse Breakdown Voltage	$I_T = 1mA$	6.0	7.0	8.5	V
IR	Reverse Leakage Current	$V_{RWM} = 5.0V$			1	μA
VC1	Clamping Voltage	$I_{PP} = 1A (8/20\mu s)$			8	V
VC2	Clamping Voltage	$I_{PP} = 7A(8/20\mu s)$		11	16	V
Ipp	Peak Pulse Current	$t_p = 8/20\mu s$			7	A
CJ	Capacitance	$V_R = 0V, f = 1MHz$		12	18	pF

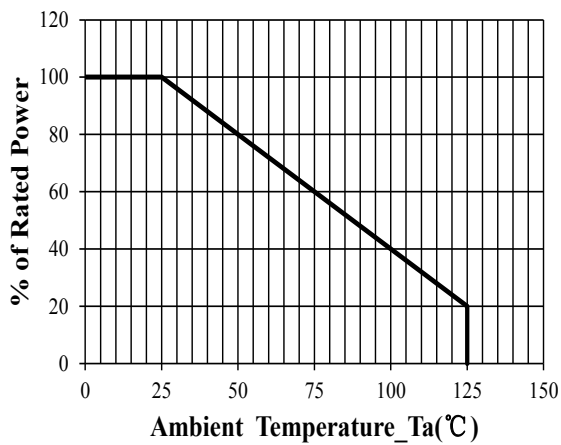
RATING AND CHARACTERISTIC CURVES (LESD5D5.0CT1G)



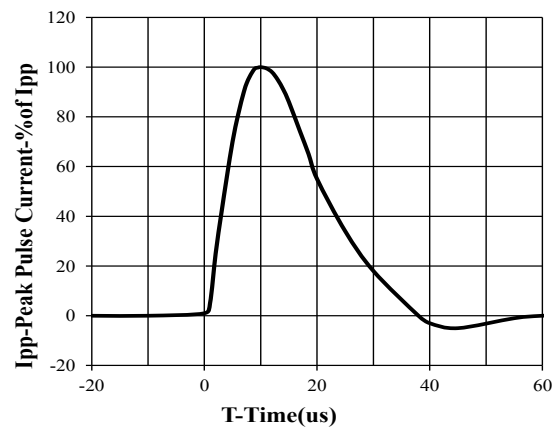
Peak Pulse Power vs. Pulse Time



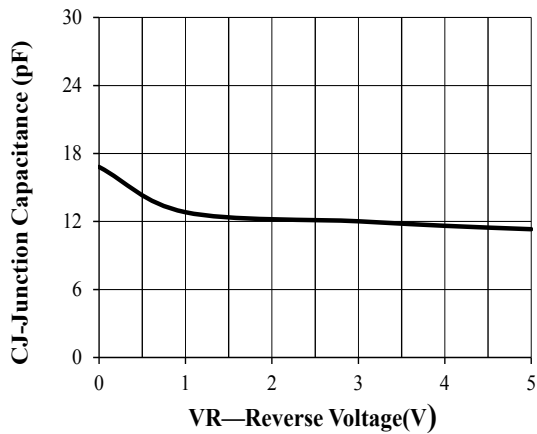
IEC61000-4-2 Pulse Waveform



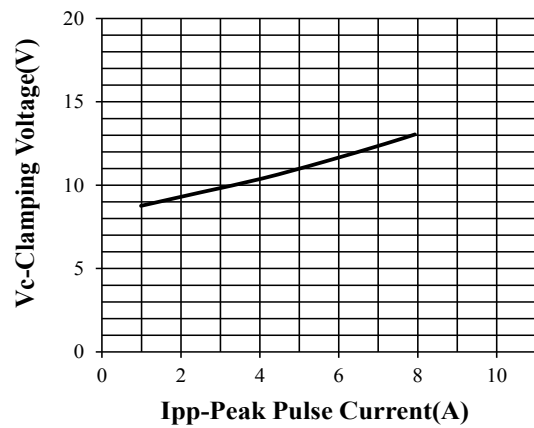
Power Derating Curve



8 X 20us Pulse Waveform



Junction Capacitance vs. Reverse Voltage



Clamping Voltage vs. Peak Pulse Current