CESDBLC5V0D5

Features

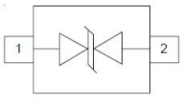
100W (8x20us) Peak Pulse Power
Low Clamping Voltage
SOD-523 Package
RoHS Compliant
Matte Tin Lead finish (Pb-Free)
Protect One I/O or Power Line
Meet IEC61000-4-2 Level 4:
ContactDischarge>30kV
AirDischarge>30kV

Applications

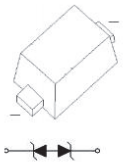
Smart Phones
Laptop Computers
Portable Electronics

Circuit Diagram

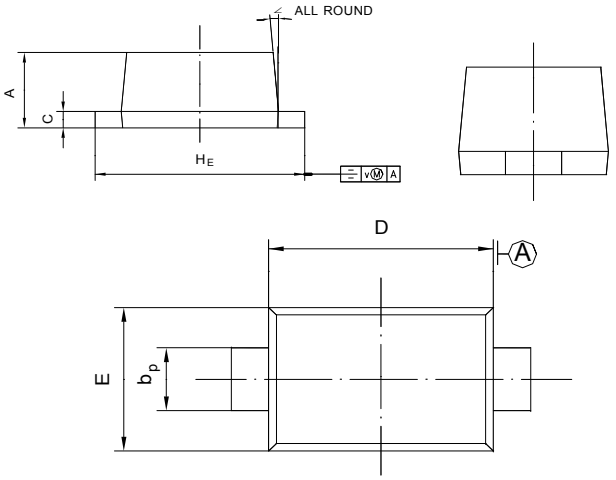
PIN Diagram



SOD-523



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)

Maximum Ratings (Ta = 25℃)

Symbol	Parameter	Value	Unit
TJ	Junction Temperature	-55 to +150	℃
TSTG	Storage Temperature	-55 to +150	℃
Ipp Max	Maximum Peak Pulse Current	7	A
PPK	Peak Pulse Power	100	W

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

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

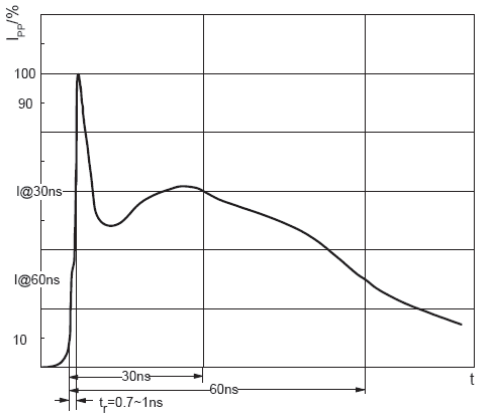
ESD standards compliance

IEC61000-4-2 Standard

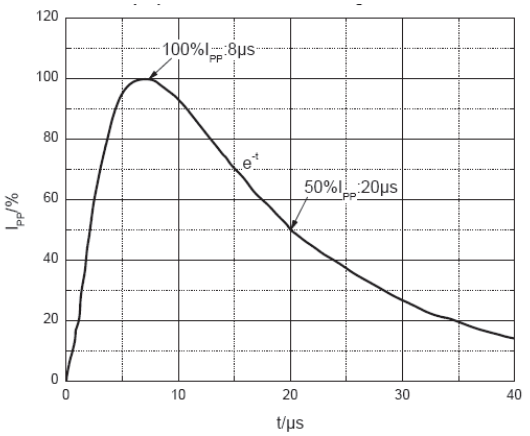
Contact Discharge		Air Discharge	
Level	Test Voltage kV	Level	Test Voltage kV
1	2	1	2
2	4	2	4
3	6	3	8
4	8	4	15

JESD22-A114-B Standard

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



ESD pulse waveform according to IEC61000-4-2



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

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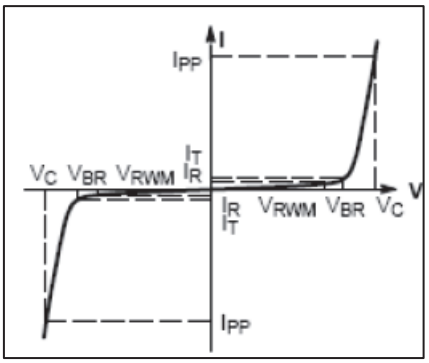
ELECTRICAL PARAMETER

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

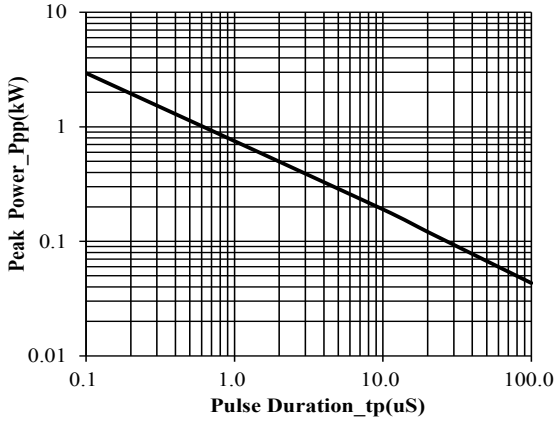


V-I characteristics for a Bi-directional TVS

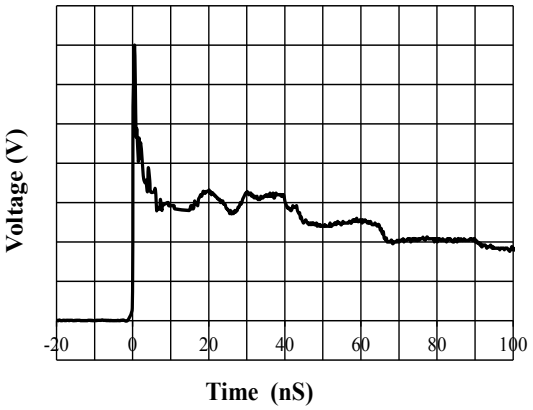
ElectricalCharacteristics(Ta=25℃)

Symbol	Parameter	Conditions	Min	Typ	Max	Unit
VRWM	Reverse Working Peak Voltage				5.0	V
VBR	Reverse Breakdown Voltage	IT = 1mA	6.0	7.0	8.5	V
IR	Reverse Leakage Current	VRWM = 5.0V			1	μA
VC1	Clamping Voltage	IPP = 1 A (8/20μs)			8	V
VC2	Clamping Voltage	IPP =7A(8/20μs)		11	16	V
Ipp	Peak Pulse Current	‘tp = 8/20μs			7	A
CJ	Capacitance	VR = 0V, f = 1MHz		15	20	pF

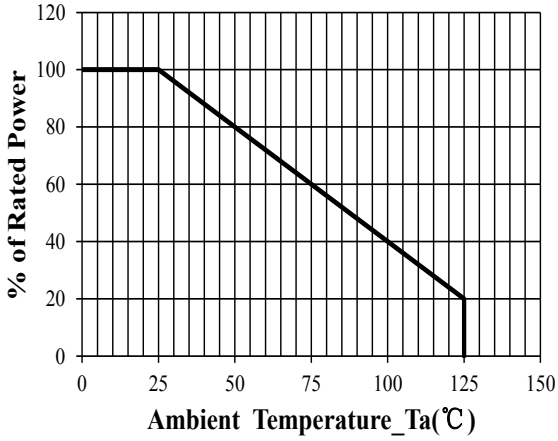
RATING AND CHARACTERISTIC CURVES (CESDBLC5V0D5)



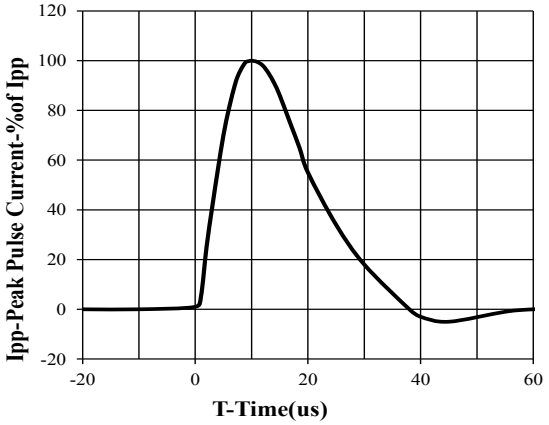
Peak Pulse Power vs. Pulse Time



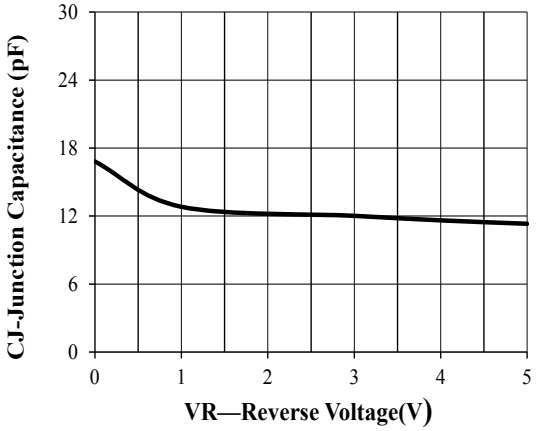
IEC61000−4−2 Pulse Waveform



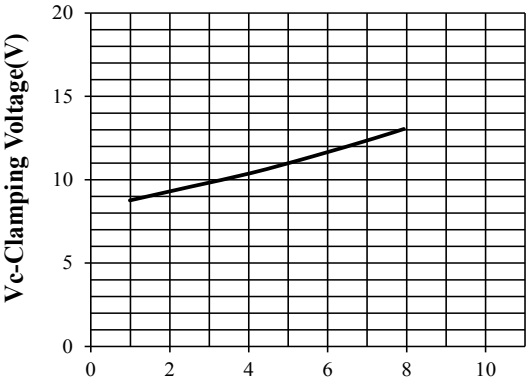
Power Derating Curve



8 X 20us Pulse Waveform



Junction Capacitance vs. Reverse Voltage



Clamping Voltage vs. Peak Pulse Current