LXESD3Z3.3C~LXESD3Z24C
Bi-direction ESD Protection Diode

FEATURES

- Bi-directional ESD protection of one line
- Low capacitance: 1pF
- Low reverse stand−off voltage:3.3V,5V,8V,12V,15V,24V
- Low reverse clamping voltage Low leakage current
- Excellent package:1.7mm×1.3mm×1.0mm
- Fast response time
- JESD22-A114-B ESD Rating of class 3B per human body model
- IEC 61000-4-2 Level 4 ESD protection

DESCRIPTION

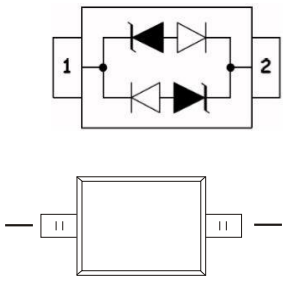
Designed to protect voltage sensitive electronic components from ESD and other transients. Excellent clamping capability, low leakage, low capacitance, and fast response time provide best in class protection on designs that are exposed to ESD.

The combination of small size, low capacitance, and high level of ESD protection makes them a flexible solution for applications such as HDMI, Display Port TM, and MDDI interfaces. It is designed to replace multiplayer varistors (MLV) in consumer equipments applications such as mobile phone, notebook, PAD,STB, LCD TV etc.

APPLICATIONS

- Cellular phones
- Audio and video equipment
- Handheld-Wireless Systems
- PDAs
- Ethernet – 10/100/1000 Base
- Portable electronics
- USB Interface
- Other electronics equipments communi- cation systems

PIN CONFIGURATION



Front side

PACKAGE OUTLINE

SOD-323

MAXIMUM RATINGS T =25℃ unless otherwise noted

Parameter	Symbol	Value	Units
ESD per IEC 61000-4-2 (Air) ESD per IEC 61000-4-2 (Contact)	V_{ESD}	±20 ±20	kV
Peak Pulse Power (8/20μs)	P_{PP}	350	W
Operating Temperature	T_{OPT}	-55/+150	℃
Storage Temperature	T_{STG}	-55/+150	℃
Lead Soldering Temperature	T_L	260	℃

ESD standards compliance

IEC61000-4-2 Standard

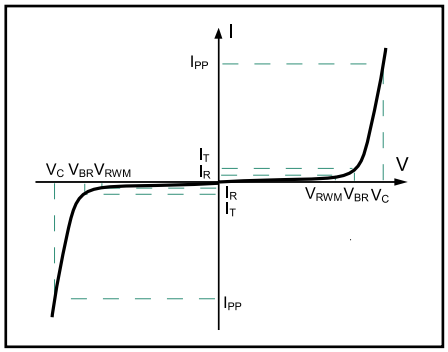
Contact Discharge		Air Discharge	
Level	Test Voltage kV	Level	Test Voltage kV
1	2	1	2
2	4	2	4
3	6	3	8
4	8	4	15

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

ELECTRICAL PARAMETER

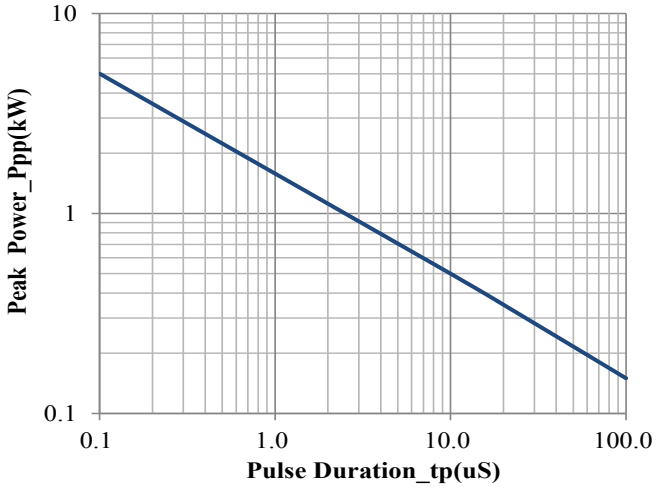
Symbol	Parameter
V_C	Clamping Voltage @ I_{PP}
I_{PP}	Peak Pulse Current
V_{BR}	Breakdown Voltage @ I_T
I_T	Test Current
I_R	Reverse Leakage Current @ V_{RWM}
V_{RWM}	Reverse Standoff Voltage



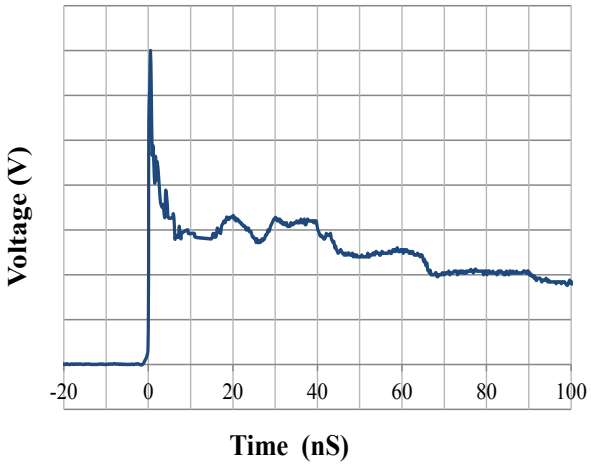
V-I characteristics for a Bi-directional TVS

ELECTRICAL CHARACTERISTICS(Ta=25℃ unless otherwise specified)

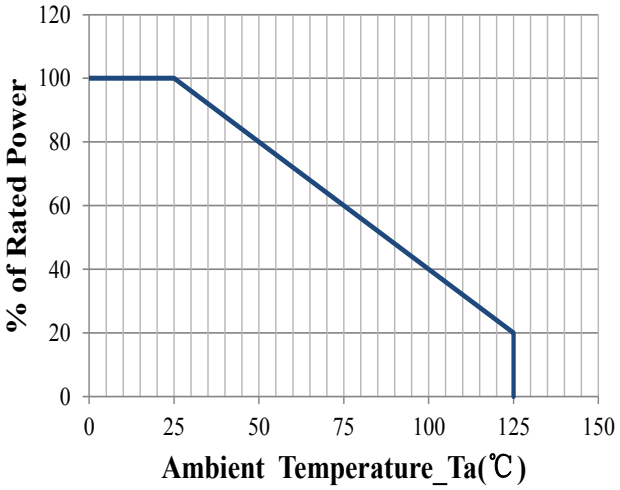
PART	DEVICE MARKING	V_{RWM} (V) (max.)	V_B (V) (min.)	I_T (mA)	V_C@1A (V) (max.)	V_C (V) (max.)	(@A)	I_R (μA) (max.)	C (pF) (typ.)
LXESD3Z3.3C	CC	3.3	4.0	1	7.0	15	20	1	1
LXESD3Z5.0C	AC	5.0	6.0	1	9.8	20	20	1	1
LXESD3Z8.0C	BC	8.0	8.5	1	13.4	25	15	1	1
LXESD3Z12C	DC	12.0	13.3	1	19.0	30	8	1	1
LXESD3Z15C	EC	15.0	16.7	1	24.0	40	6	1	1
LXESD3Z24C	HC	24.0	26.7	1	43.0	60	3	1	1



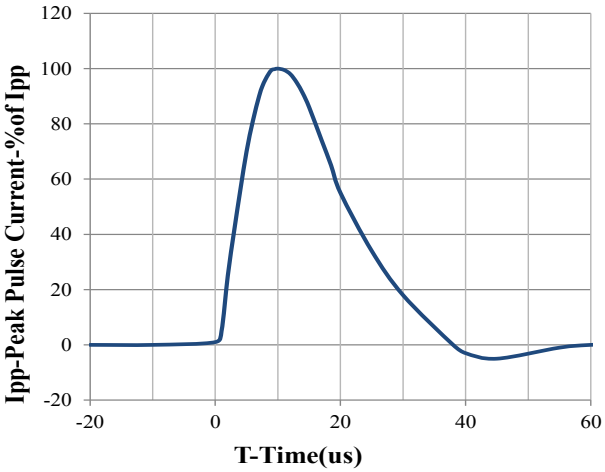
Peak Pulse Power vs. Pulse Time



IEC61000−4−2 Pulse Waveform



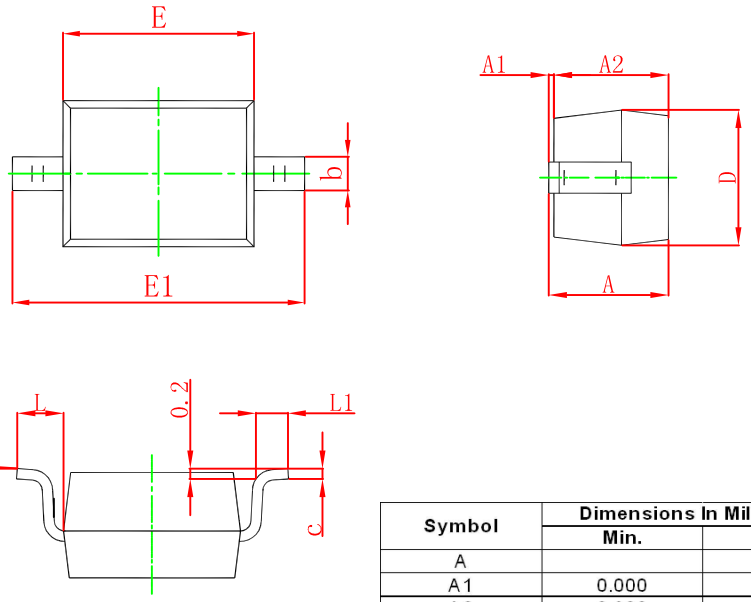
Power Derating Curve



8 X 20us Pulse Waveform

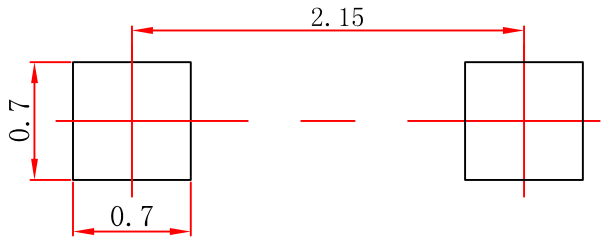
PACKAGE OUTLINE AND PAD LAYOUT INFORMATION

SOD-323 Package Outline Dimensions



Symbol	Dimensions In Millimeters		Dimensions In Inches	
	Min.	Max.	Min.	Max.
A		1.000		0.039
A1	0.000	0.100	0.000	0.004
A2	0.800	0.900	0.031	0.035
b	0.250	0.350	0.010	0.014
c	0.080	0.150	0.003	0.006
D	1.200	1.400	0.047	0.055
E	1.600	1.800	0.063	0.071
E1	2.550	2.750	0.100	0.108
L	0.475 REF.		0.019 REF.	
L1	0.250	0.400	0.010	0.016
θ	0°	8°	0°	8°

SOD-323 Suggested Pad Layout



Note:
1.Controlling dimension:in millimeters.
2.General tolerance:± 0.05mm.
3.The pad layout is for reference purposes only.