

Transient Voltage Suppressors

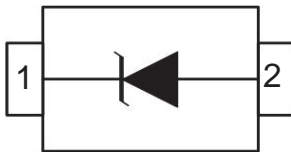
DESCRIPTION

The TEP3Z Series is designed to protect voltage sensitive components from ESD and transient voltage events. Excellent clamping capability, low leakage, and fast response time, make these parts ideal for ESD protection on designs where board space is at a premium. Because of its small size, it is suited for use in cellular phones, portable devices, digital cameras, power supplies and many other portable applications.

ORDERING INFORMATION

- ✧ Device: TEP3ZXXX
- ✧ Package: SOD-323
- ✧ Material: Halogen free
- ✧ Packing: Tape & Reel
- ✧ Quantity per reel: 3,000pcs

PIN CONFIGURATION



FEATURES

- ✧ IEC61000-4-2 Level 4 ESD Protection
- ✧ Protects one directional I/O line
- ✧ Low clamping voltage
- ✧ Working voltages : 3.3V, 5V,7V,12V
- ✧ Low leakage current

MACHANICAL DATA

- ✧ SOD-323 package
- ✧ Flammability Rating: UL 94V-0
- ✧ Packaging: Tape and Reel
- ✧ High temperature soldering guaranteed: 260°C/10s
- ✧ Reel size: 7 inch

APPLICATIONS

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

PACKAGE OUTLINE



ABSOLUTE MAXIMUM RATING

Symbol	Parameter	Value	Units
V _{ESD}	ESD per IEC 61000-4-2 (Air)	±30	kV
	ESD per IEC 61000-4-2 (Contact)	±30	kV
ESD	ESD Voltage per human body model	16	kV
	ESD Voltage per machine model	400	V
P _D	Total Power Dissipation on FR-5 Board (Note 1) @ Ta=25°C	150	mW
T _J , T _{STG}	Junction and Storage Temperature	-55/+150	°C
T _L	Lead Solder Temperature – Maximum (10 Second Duration)	260	°C

These ratings are limiting values above which the serviceability of the diode may be impaired
Note 1. FR-5=1.0x0.75x0.62 in.

ELECTRICAL CHARACTERISTICS (T_{amb}=25°C)

PART NUMBER	DEVICE MARKING	V _{RWM} (V) (max.)	I _R (μA) (max.)	V _B (V) (min.)	I _T (mA)	V _{C@5A} (V) (max.)	V _C (V) (max.) (@A)	P _{PK} (W) (max.)	C _J (pF) (typ.)	
TEP3Z3.3	03	3.3	0.90	5.0	1	9.4	14.1	11.2	158	105
TEP3Z5.0	05	5.0	0.08	6.2	1	11.6	18.6	9.4	174	80
TEP3Z7.0	07	7.0	0.03	7.5	1	13.5	22.7	8.8	200	65
TEP3Z12	12	12.0	0.02	14.1	1	23.0	29.0	9.6	240	55

RATING AND CHARACTERISTICS CURVES (TEP3Z SERIES)

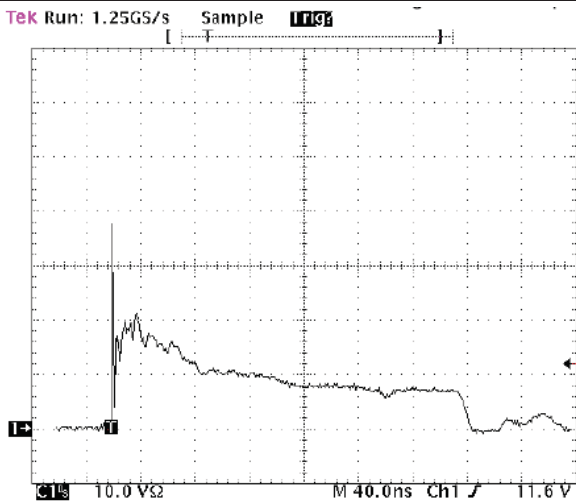


Figure 1. ESD Clamping Voltage Screenshot
Positive 8 kV contact per IEC 61000-4-2

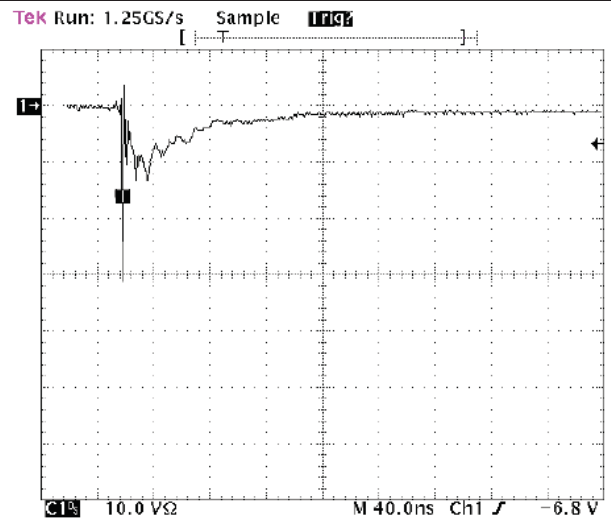
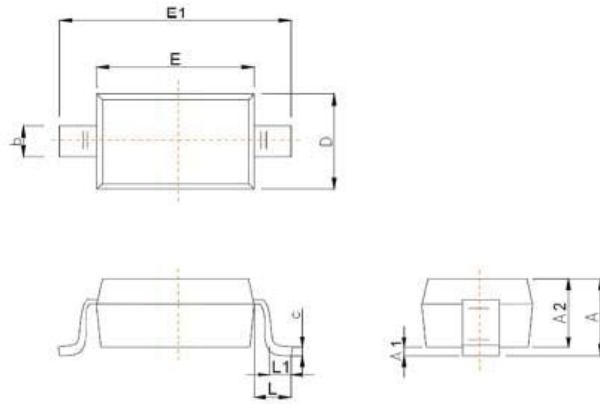
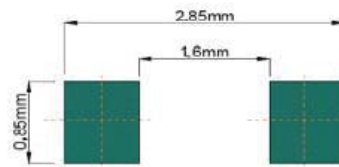


Figure 2. ESD Clamping Voltage Screenshot
Negative 8 kV contact per IEC 61000-4-2

SOD-323 PACKAGE OUTLINE DIMENSIONS



Symbol	Dimensions in Millimeters	
	Min	Max
A		1.00
A1	0.000	0.100
A2	0.800	0.900
b	0.250	0.350
c	0.080	0.150
D	1.200	1.400
E	1.600	1.800
E1	2.500	2.700
e	1.800	2.040
L	0.475 REF	
L1	0.250	0.400
θ	0°	8°



Recommended Pad outline

PACKAGING OF DIODE AND BRIDGE RECTIFIERS

REEL PACK

PACKAGE	PACKING CODE	EA PER REEL	EA PER INNER BOX	COMPONENT SPACE (mm)	TAPE SPACE (mm)	REEL DIA (mm)	CARTON SIZE (mm)	EA PER CARTON	GROSS WEIGHT(Kg)
SOD-323	-T	3,000	15,000	---	---	178	390*205*31	120,000	5.17

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