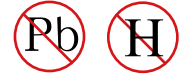




# SMD ESD Protection Diode

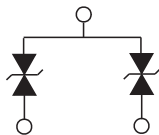
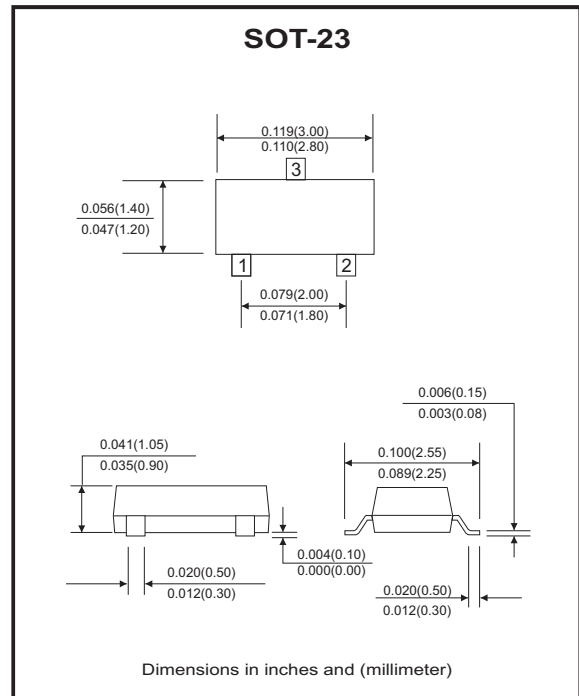


## Features

- Common anode ESD protection.
- IEC61000-4-2 Level 4 ESD protection.
- Surface mount package.
- High component density.

## Mechanical data

- Case: SOT-23 Standard package, molded plastic.
- Terminals: Tin plated, solderable per MIL-STD-750, method 2026.
- Marking code:E12
- Mounting position: Any.
- Weight: 0.0078 gram(approx.).



## Maximum Rating and Electrical Characteristics

(at TA=25°C unless otherwise noted)

Parameter	Conditions	Symbol	Min	Typ	Max	Unit
Diode breakdown voltage	I <sub>R</sub> = 1mA	V <sub>BD</sub>	13	17		V
Leakage current	V <sub>R</sub> = 12V	I <sub>L</sub>		0.1	2.0	uA
Junction capacitance	V <sub>R</sub> =0V,f =1MHz	C <sub>T</sub>		12		pF
ESD capability	IEC 61000-4-2(air) IEC 61000-4-2(contact)	ESD			25	kV
Clamping voltage	I <sub>PP</sub> = 1A,T <sub>P</sub> =8/20us	V <sub>C</sub>			25	V
Peak pulse power	T <sub>P</sub> =8/20us	P <sub>PP</sub>			25	W
Operation temperature		T <sub>j</sub>			125	°C
Storage temperature		T <sub>STG</sub>	-55		150	°C

# DEVICE CHARACTERISTICS

## YSDT-12V

Fig. 1 - 8/20us Peak pulse current wave form acc. IEC 61000-4-5

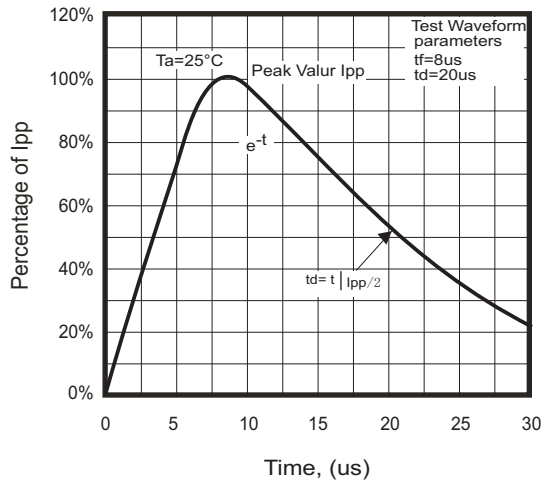


Fig. 2 - Reverse characteristics

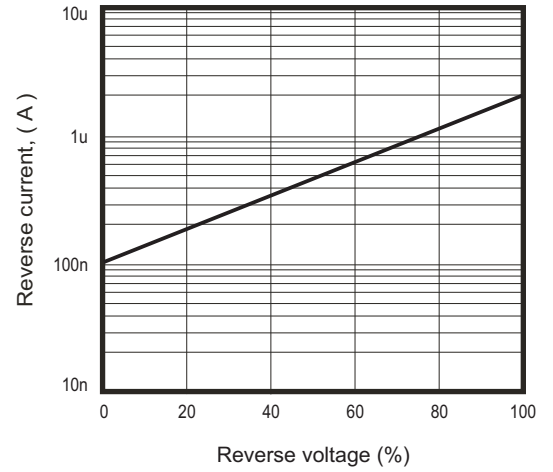


Fig.3 - Capacitance between terminals characteristics

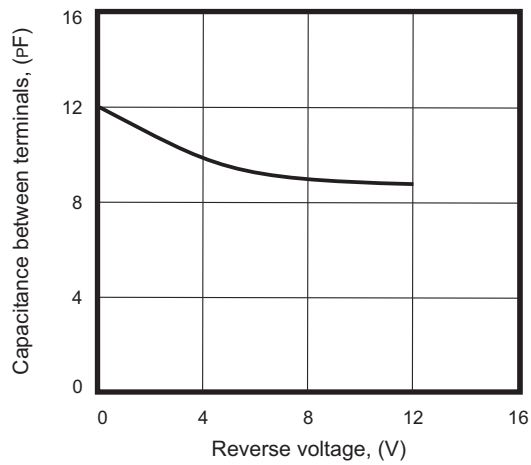
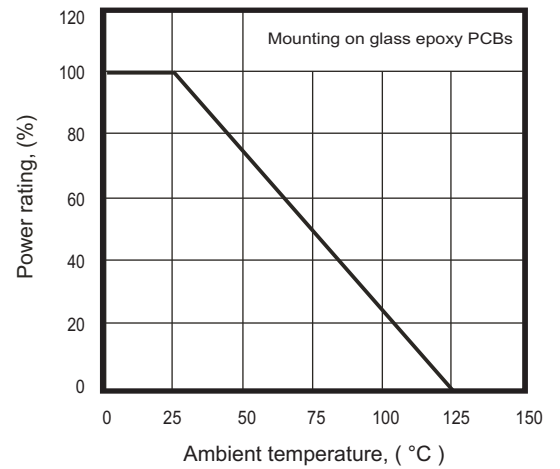


Fig.4 - Power rating derating curve

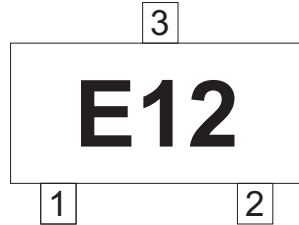


# PACKAGE OUTLINE & DIMENSIONS

## YSDT-12V

### Marking Code

Part Number	Marking Code
YSDT-12V	E12



### Suggested PAD Layout

SIZE	SOT-23	
	(mm)	(inch)
A	0.80	0.031
B	1.90	0.075
C	2.02	0.080
D	2.82	0.111

