



SEMICONDUCTOR

# DATA SHEET

YSESD3ZxxT1G Series

## UNIDIRECTIONAL TVS DIODE



### APPLICATIONS

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

### IEC COMPATIBILITY

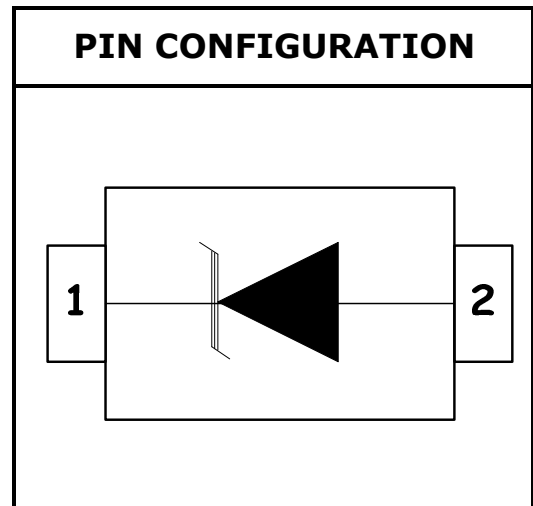
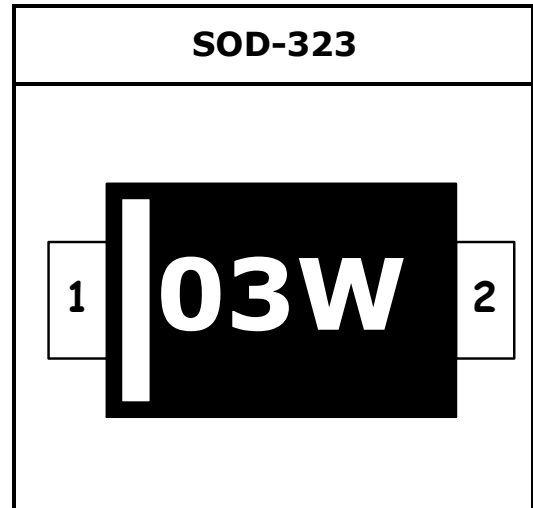
- ◆ IEC61000-4-2 (ESD) ±30kV (air), ±30kV (contact) -- 3.3V ~ 20V
- ◆ IEC61000-4-2 (ESD) ±15kV (air), ±8kV (contact) -- 24V ~ 36V
- ◆ IEC61000-4-4 (EFT) 40A (5/50  $\eta$  s)

### FEATURES

- ◆ 350 Watts Peak Pulse Power per Line ( $t_p=8/20\mu s$ )
- ◆ Protects one I/O or power line
- ◆ Low clamping voltage
- ◆ Working voltages: 3.3V ~ 36V
- ◆ Low leakage current

### MECHANICAL CHARACTERISTICS

- ◆ JEDEC SOD-323 Package
- ◆ Molding Compound Flammability Rating : UL 94V-0
- ◆ Weight 5 Milligrams (Approximate)
- ◆ Quantity Per Reel : 3,000pcs
- ◆ Reel Size : 7 inch
- ◆ Lead Finish : Lead Free



# DEVICE CHARACTERISTICS

## YSESD3ZxxT1G Series

MAXIMUM RATINGS (@ 25°C Unless Otherwise Specified)			
PARAMETER	SYMBOL	VALUE	UNITS
Peak Pulse Power (tp=8/20µs waveform)	P <sub>PP</sub>	350	Watts
Lead Soldering Temperature	T <sub>L</sub>	260 (10 sec.)	°C
Operating Temperature Range	T <sub>J</sub>	-55 ~ 150	°C
Storage Temperature Range	T <sub>STG</sub>	-55 ~ 150	°C

ELECTRICAL CHARACTERISTICS PER LINE (@ 25°C Unless Otherwise Specified)									
PART NUMBER	DEVICE MARKING	V <sub>RWM</sub>	V <sub>B</sub>	I <sub>T</sub>	V <sub>C</sub>	V <sub>C</sub>		I <sub>R</sub>	C <sub>T</sub>
		(V) (max.)	(V) (min.)	(mA)	@1A (max.)	(max.)	(@A)	(µA) (max.)	(pF) (max.)
YSESD3Z3.3T1G	03W	3	4	1	6.5	13	25	200	450
YSESD3Z05T1G	05W	5	6	1	9.8	16	23	10	300
YSESD3Z08T1G	08W	7	7.8	1	13.4	21	17	10	150
YSESD3Z12T1G	12W	12	13.3	1	19	25	12	1	130
YSESD3Z15T1G	15W	15	16.7	1	24	30	10	1	120
YSESD3Z18T1G	18W	18	19	1	28	40	8	1	100
YSESD3Z24T1G	24W	24	26.6	1	43	50	6	1	80
YSESD3Z36T1G	36W	36	40	1	60	75	4	1	30

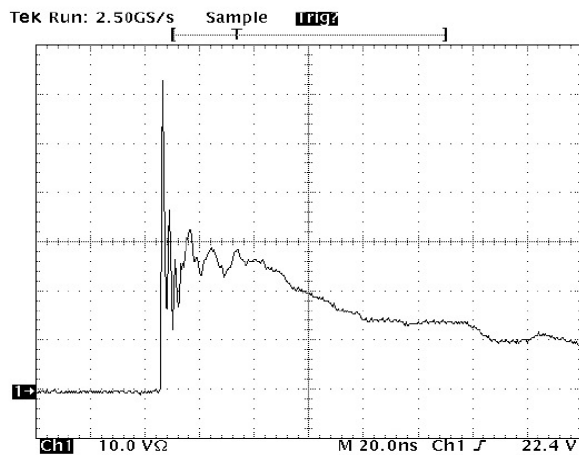


Figure 1. ESD Clamping Voltage Screenshot  
Positive 8 kV Contact per IEC61000-4-2

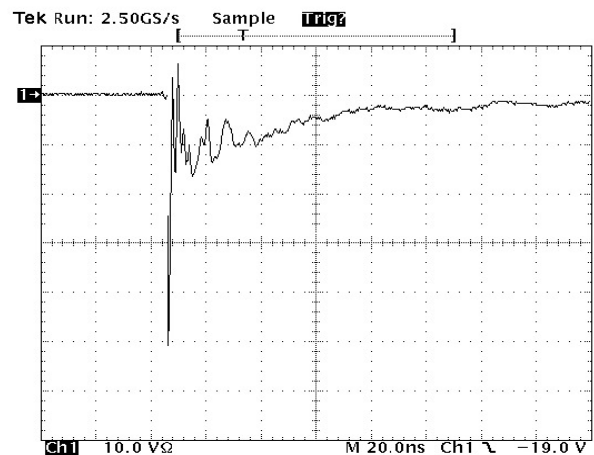
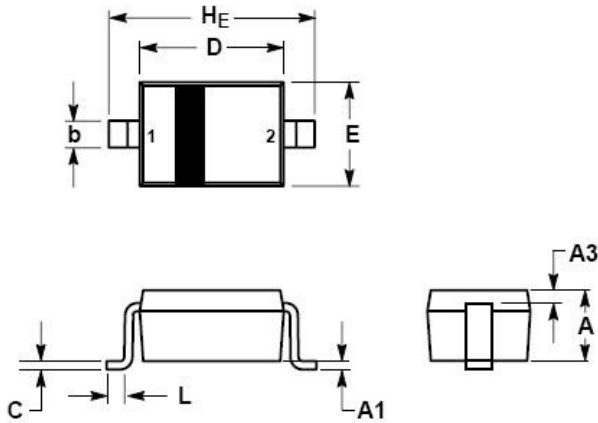


Figure 2. ESD Clamping Voltage Screenshot  
Negative 8 kV Contact per IEC61000-4-2

# PACKAGE OUTLINE & DIMENSIONS

## YESD3ZxxT1G Series

### SOD-323



DIM	MILLIMETERS			INCHES		
	MIN	NOM	MAX	MIN	NOM	MAX
A	0.80	0.90	1.00	0.031	0.035	0.040
A1	0.00	0.05	0.10	0.000	0.002	0.004
A3	0.15 REF			0.006 REF		
b	0.25	0.32	0.4	0.010	0.012	0.016
C	0.089	0.12	0.177	0.003	0.005	0.007
D	1.60	1.70	1.80	0.062	0.066	0.070
E	1.15	1.25	1.35	0.045	0.049	0.053
L	0.08			0.003		
HE	2.30	2.50	2.70	0.090	0.098	0.105

### \* SOLDERING FOOTPRINT

