

## ESD3ZxxC

### Transient Voltage Suppressors for ESD Protection

#### Description

The ESD3ZxxC 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.

#### Features

- Small Body Outline Dimensions
- Low Body Height
- Peak Power up to 350 Watts @ 8 x 20  $\mu$ s Pulse
- Low Leakage current
- Response Time is Typically < 1 ns
- ESD Rating of Class 3 (> 16 kV) per Human Body

#### Model

- RoHS compliant package

#### Complies with the following standards

IEC61000-4-2

Level 4 15 kV (air discharge)

8 kV(contact discharge)

MIL STD 883E - Method 3015-7 Class 3

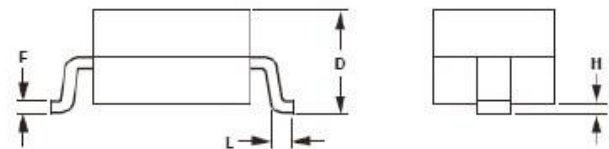
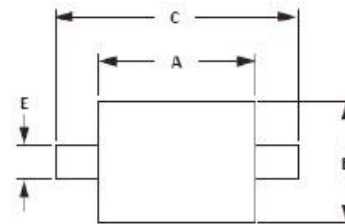
25 kV HBM (Human Body Model)

#### Applications:

- Cellular phones
- Portable devices
- Digital cameras
- Power supplies

#### Packing & Order Information

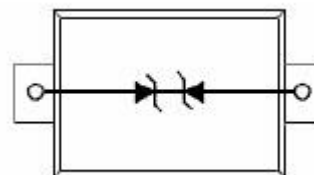
Shipping : 3,000/Reel



OUTLINE DIMENSIONS				
DIM	MILLIMETERS		INCHES	
	MIN	MAX	MIN	MAX
A	1.60	1.90	0.063	0.075
B	1.15	1.45	0.045	0.057
C	2.39	2.70	0.094	0.106
D	0.80	1.10	0.031	0.043
E	0.25	0.40	0.010	0.016
F	0.10	0.20	0.004	0.008
H	-	0.10	-	0.004
L	0.20	-	0.008	-

**NOTES**  
 1. Controlling dimension: millimeters.  
 2. Dimensioning and tolerances per ANSI Y14.5M, 1985.  
 3. Dimensions are exclusive of mold flash and metal burrs.

#### Graphic symbol



**RoHS**  
COMPLIANT

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### MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

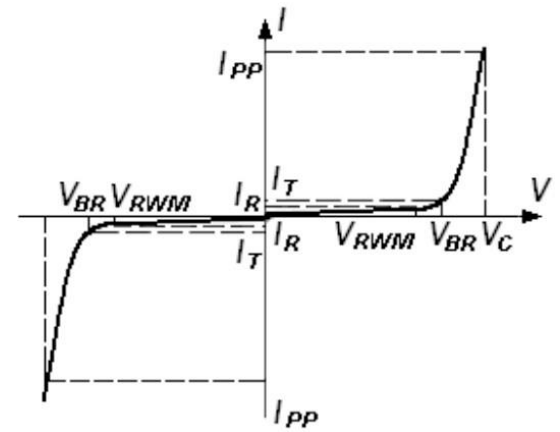
#### Absolute ratings ( $T_{amb}=25^{\circ}\text{C}$ )

Symbol	Parameter	Value	Unit
Ppk	Peak Pulse Power ( $t_p = 8/20\mu\text{s}$ )	350	W
$T_L$	Maximum lead temperature for soldering during 10s	260	$^{\circ}\text{C}$
$T_{STG}$	Storage Temperature Range	-55 to +150	$^{\circ}\text{C}$
TOP	Operating Temperature Range	-40 to +125	$^{\circ}\text{C}$
$T_J$	Maximum junction temperature	150	$^{\circ}\text{C}$

#### Electrical Characteristics (Ratings at $25^{\circ}\text{C}$ ambient temperature unless otherwise specified.)

Part Numbers	VBR			IT mA	VRWM V	IR uA	Cj TYP(Note1) PF
	Min. V	Typ. V	Max. V				
	ESD3Z5C	5.4	6.7				7.8
ESD3Z12C	13.3	14.5	15.7	1	12.0	1	35

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



#### Typical Characteristics

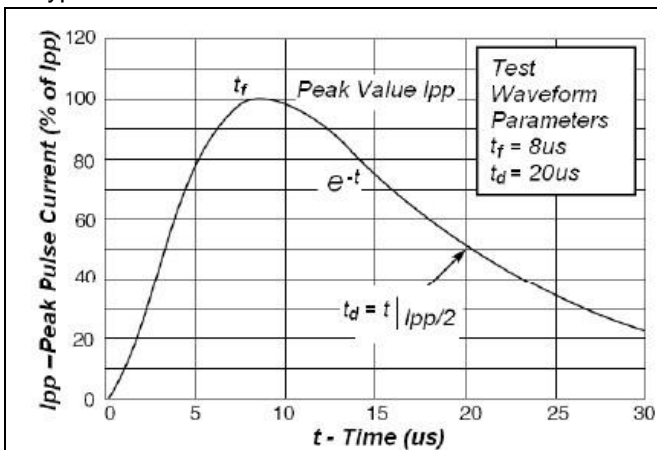


FIG.1-PULSE WAVEFORM

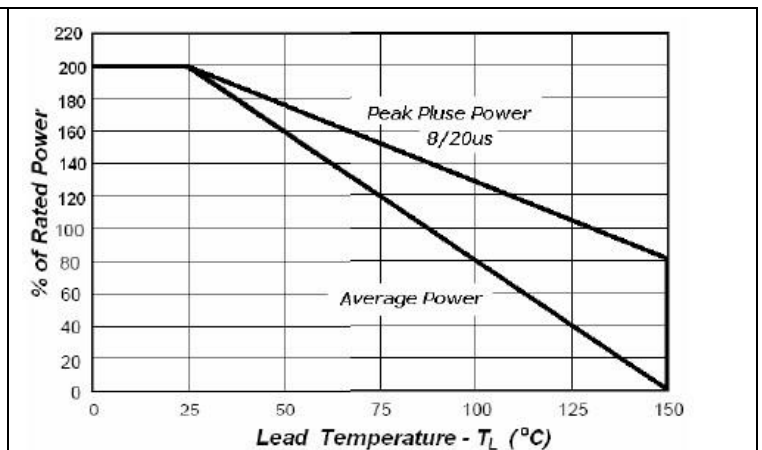


FIG.2-POWER DERATING CURVE

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