

## Transient Voltage Suppressors for ESD Protection

### DESD5Z5.0

The DESD5Z5.0 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.

#### ● APPLICATIONS

- 1) Cell phones
- 2) Portable devices
- 3) Digital cameras
- 4) Power supplies

#### ● FEATURES

- 1) Small Body Outline Dimensions
- 2) Low Body Height
- 3) Peak Power up to 200 Watts @ 8 x 20  $\mu$ s Pulse
- 4) Low Leakage
- 5) Response Time is Typically < 1 ns
- 6) ESD Rating of Class 3 (> 16 kV) per Human Body Model
- 7) IEC61000-4-2 Level 4 ESD Protection
- 8) IEC61000-4-4 Level 4 EFT Protection
- 9) We declare that the material of product compliant with RoHS requirements and Halogen Free.

#### ● DEVICE MARKING AND RESISTOR VALUES

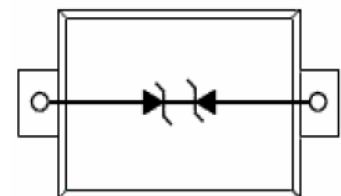
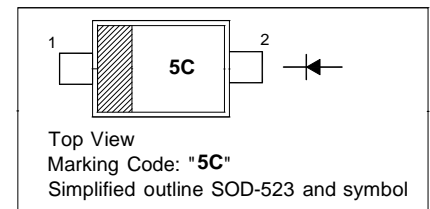
Device	Marking	Shipping
DESD5Z5.0	5C	3000/Tape&Reel
DESD5Z5.0	5C	8000/Tape&Reel

#### ● ABSOLUTE RATINGS(Ta = 25°C)

Parameter	Symbol	Limits	Unit
IEC 61000-4-2 (ESD)	Contact	$\pm 8$	kV
	Air	$\pm 15$	
IEC 61000 - 4 - 4 (EFT)		40	A
ESD Voltage(Per Human Body Model)		16	kV
Peak Pulse Power (tp = 8/20 $\mu$ s)	PPP	200	W
Maximum Junction Temperature	TJ	150	°C
Storage temperature	Tstg	-55 ~ +155	°C
Operating Temperature Range	TOP	-40 ~ +125	°C
Lead Solder Temperature - Maximum (10 Second Duration)	TL	260	°C

#### PINNING

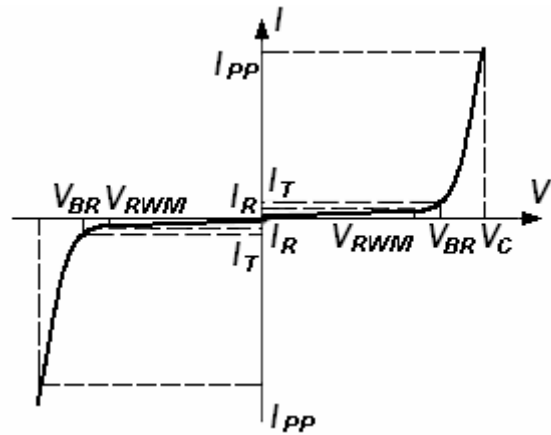
PIN	DESCRIPTION
1	Cathode
2	Anode



## DESD5Z5.0

### Electrical Parameter

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 @ $I_T$



### ● ELECTRICAL CHARACTERISTICS (Ta= 25°C)

Device	$V_{RWM}$ (V)	$I_R$ (u A) @ $V_{RWM}$	$V_{BR}$ (V) @ $I_T$ (Note 1)		$I_T$	$V_C$ (V) @ $I_{pp} = 5$ A	$V_C$ (V) @ Max $I_{pp}$	$I_{PP}$ (A)	$PPK$ (W)	$C$ (pF)
	Max	Max	Min	Max	mA	Max	Max	Max	Max	Typ
DESD5Z5.0	5	1	5.6	7.8	1	11.6	18.6	9.4	174	25

1.  $V_{BR}$  is measured with a pluse test current  $I_T$  at an ambient temperature of 25°C.

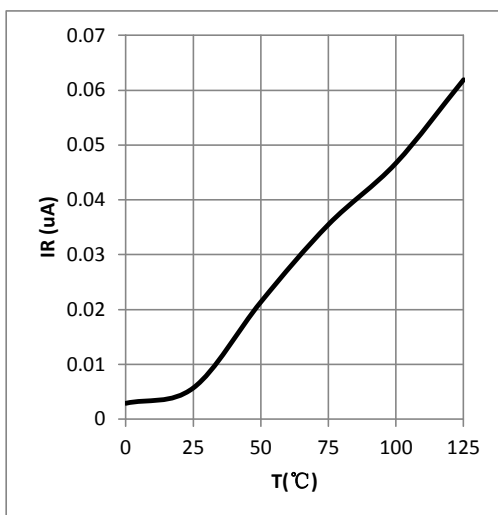


Fig 1. Reverse character

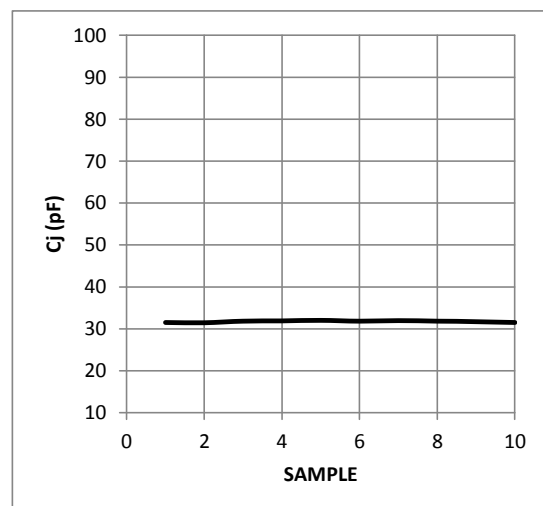
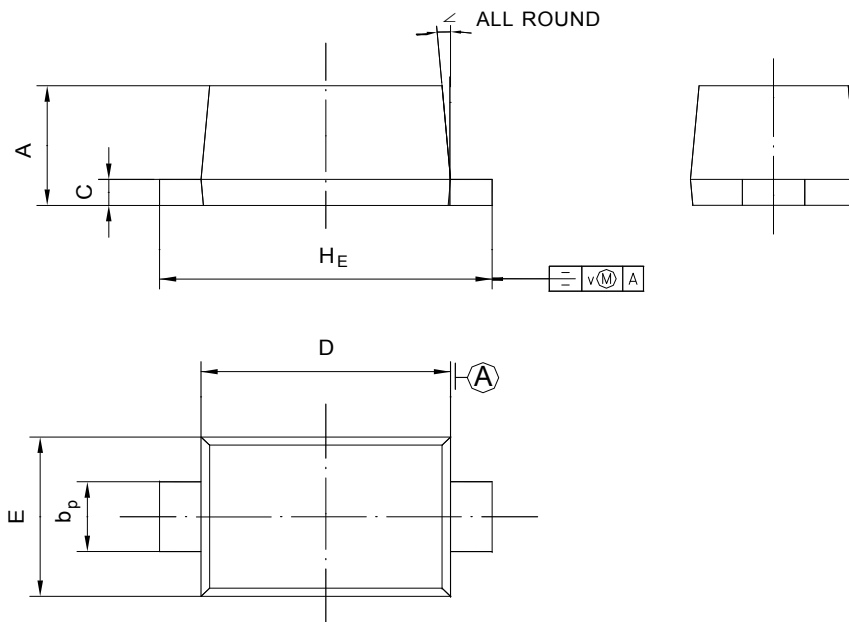


Fig 2. Capacitance character

**PACKAGE OUTLINE**
**DESD5Z5.0**

Plastic surface mounted package; 2 leads

SOD-523



UNIT	A	b <sub>p</sub>	C	D	E	H <sub>E</sub>	V	∠
mm	0.70	0.4	0.135	1.25	0.85	1.7	0.1	5°
	0.60	0.3	0.100	1.15	0.75	1.5		