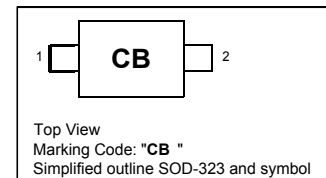


Transient Voltage Suppressors for ESD Protection

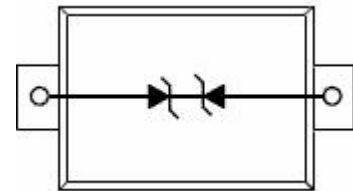
General Description

The DESD3Z7V0 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

- Cellular phones
- Portable devices
- Digital cameras
- Power supplies
- S- Prefix for Automotive and Other Applications Requiring Unique Site and Control Change Requirements; AEC-Q101 Qualified and PPAP Capable.



Features

- Small Body Outline Dimensions
- Low Body Height
- Peak Power up to 181 Watts @ 8 x 20 μ s Pulse
- Low Leakage current
- Response Time is Typically < 1 ns
- ESD Rating of Class 3 (> 16 kV) per Human Body Model
- IEC61000-4-2 Level 4 ESD Protection
- IEC61000-4-4 Level 4 EFT Protection

ORDERING INFORMATION

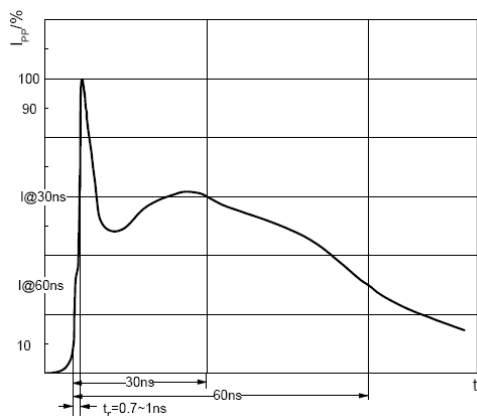
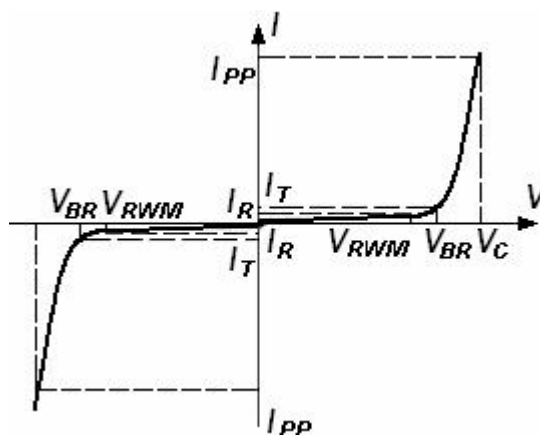
Device	Marking	Shipping
DESD3Z7V0	CB	3000/Tape & Reel

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

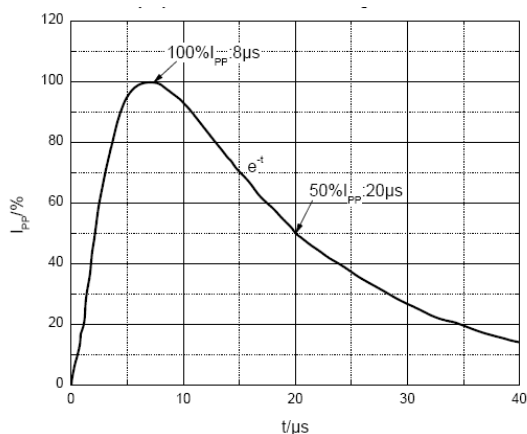
Symbol	Parameter	Value	Units
P_{PP}	Peak Pulse Power ($t_p = 8/20 \mu s$)	181	W
T_L	Maximum lead temperature for soldering during 10s	260	$^{\circ}\text{C}$
T_{stg}	Storage Temperature Range	-55 to +155	$^{\circ}\text{C}$
T_{op}	Operating Temperature Range	-40 to +125	$^{\circ}\text{C}$
T_j	Maximum junction temperature	150	$^{\circ}\text{C}$
	IEC61000-4-2 (ESD) air discharge	± 15	KV
	IEC61000-4-2 (ESD) contact discharge	± 8	KV
	IEC61000-4-4 (EFT)	10	A
	ESD Voltage Per Human Body Model	16	KV

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



ESD pulse waveform according to IEC61000-4-2



8/20µs pulse waveform according to IEC 61000-4-5

Electrical Characteristics

Ratings at 25°C ambient temperature unless otherwise specified. $V_F = 0.9V$ at $I_F = 10mA$

Device	V_{RWM} (V)	$I_R(\mu A)$ @ 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)*	P_{PK} (W)*	C (pF)
	Max	Max	Min	Max	mA	Typ	Max	Max	Max	Typ
DESD3Z7V0	7.0	1	8.0	11.5	1.0	13	20	10	181	120

*Surge current waveform per Figure 1.

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