Elektronische Bauelemente

ESD03R

VOLTAGE: 3.3 V

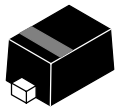
150 W Transient Voltage Suppressors Diode

RoHS Compliant Product
A suffix of "-C" specifies halogen & lead-free

DESCRIPTION

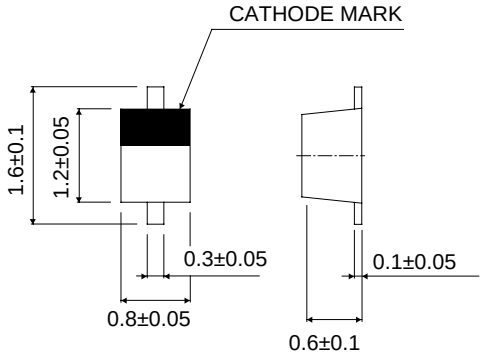
. Designed to protect voltage sensitive components from ESD.
. Excellent clamping capability, low leakage and fast response.
. Cellular phones, MP3 players, digital cameras ... etc.
. Suitable for electronics where board space is a major design consideration.

SOD-523



FEATURES

. Response time is typically < 1 ns
. Low leakage
. Stand-off voltage:3.3V
. ESD rating of class 3 (> 16 kV) per human body model
. IEC61000-4-2 level 4 ESD protection



Dimensions in millimeters

MARKING CODE

ZE

MAXIMUM RATINGS

Rating 25℃ ambient temperature unless otherwise specified.

TYPE NUMBER		SYMBOL	LIMITS	UNITS
IEC61000-4-2 (ESD)	Air Contact		+/- 30 +/- 30	kV
ESD Voltage	per human body model per machine model	V_{ESD}	16 400	kV V
Lead Solder Temperature - Max. (10 sec duration)		T_L	260	℃
Thermal Resistance Junction-to-ambient		$R_{\theta JA}$	625	℃/W
Junction and Storage Temperature Range		T_J, T_{STG}	-55 ~ +150	℃
Total Power Dissipation on FR-5 board (Note 1)		P_D	200	mW

Stresses exceeding "Maximum Ratings" may damage the device. "Maximum Ratings" are stress ratings only. Functional operation above the recommended. Operating conditions is not implied. Extended exposure to stresses above the recommended operating conditions may affect device reliability.
1. FR-5 = 1.0 x 0.75 x 0.62 in.

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ELECTRICAL CHARACTERISTICS ($T = 25^{\circ}C$ unless otherwise noted, V_F = 0.9V Max. @ I_F=10mA for all types)

TYPE NUMBER	SYMBOL	Min.	Typ.	Max.	UNIT	TEST CONDITIONS
Reverse Stand-Off Voltage	V_{RWM}	-	-	3.3	V	
Reverse Leakage Current	I_R	-	-	0.08	µA	V_{RWM} = 3.3 V
Clamping Voltage	V_C	-	-	9.4	V	I_{PP} = 5 A
Peak Pulse Current	I_{PP}	-	-	11.2	A	(surge charge waveform per Figure 2.)
Clamping Voltage	V_C	-	-	14.1	V	I_{PP} = 11.2 A (surge charge waveform per Figure 2.)
Reverse Breakdown Voltage	V_{BR}	5.0	-	-	V	I_T = 1mA, $T_{AMBIENT}$ = 25°C
Test Current	I_T	-	1.0	-	mA	
Junction Capacitance	C	-	105	-	pF	
Peak Power Dissipation	P_{PK}	-	-	158	W	(surge charge waveform per Figure 2.)

ELECTRICAL CHARACTERISTIC CURVES

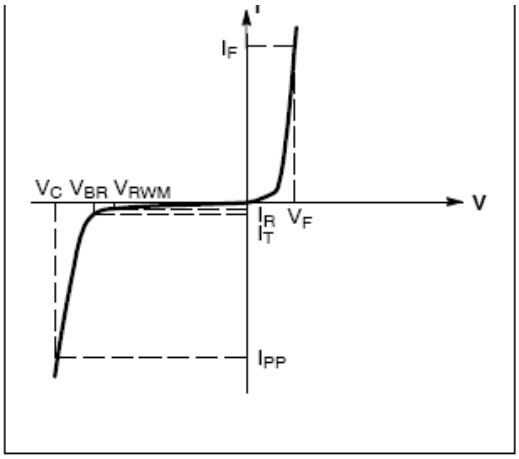


Figure 1. Uni−Directional TVS

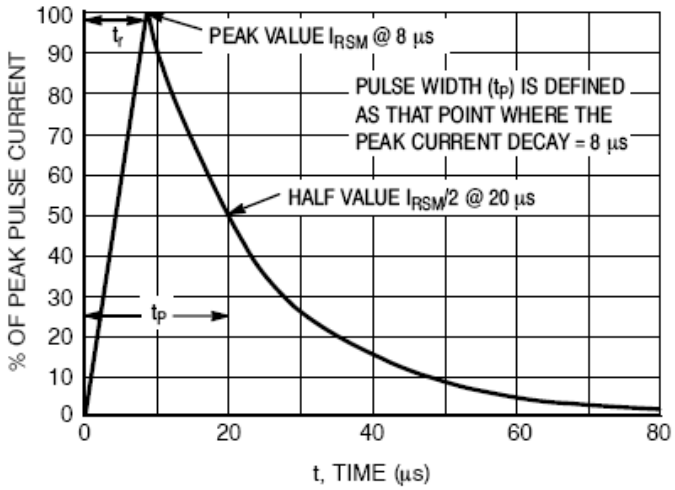


Figure 2. 8 x 20 µs Pulse Waveform