Elektronische Bauelemente

SESD05

VOLTAGE: 5.0 V

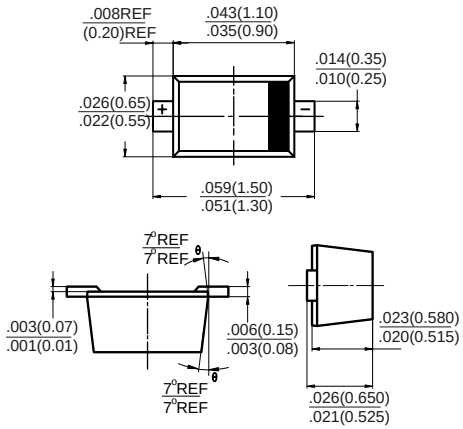
110 W Transient Voltage Suppressors Diode

RoHS Compliant Product

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-723



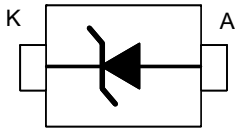
Dimensions in inches and (millimeters)

FEATURES

. Response time is typically < 1 ns
. Low leakage
. Stand-off voltage: 5V
. ESD rating of class 3 (> 16 kV) per human body model
. IEC61000-4-2 level 4 ESD protection

MARKING CODE

E2



MAXIMUM RATINGS

Rating 25°C ambient temperature unless otherwise specified.

TYPE NUMBER		SYMBOL	LIMITS	UNITS
IEC61000-4-2 (ESD)	Air Contact		+/- 16 +/- 8	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	°C
Thermal Resistance Junction-to-ambient		$R_{\theta JA}$	833	°C/W
Junction and Storage Temperature Range		T_J, T_{STG}	-55 ~ +150	°C
Total Power Dissipation on FR-5 board (Note 1)		P_D	150	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}	-	-	5.0	V	
Reverse Leakage Current	I_R	-	-	1.0	μA	V_{RWM} = 5.0 V
Peak Pulse Current	I_{PP}	-	-	8.8	A	(surge charge waveform per Figure 2.)
Clamping Voltage	V_C	-	-	13.3	V	I_{PP} = 8.8A (surge charge waveform per Figure 2.)
Reverse Breakdown Voltage	V_{BR}	6.2	-	-	V	I_T = 1mA, $T_{AMBIENT}$ = 25°C
Test Current	I_T	-	1.0	-	mA	
Junction Capacitance	C	-	65	-	pF	
Peak Power Dissipation	P_{PK}	-	-	117	W	(surge charge waveform per Figure 2.)

ELECTRICAL CHARACTERISTIC CURVES

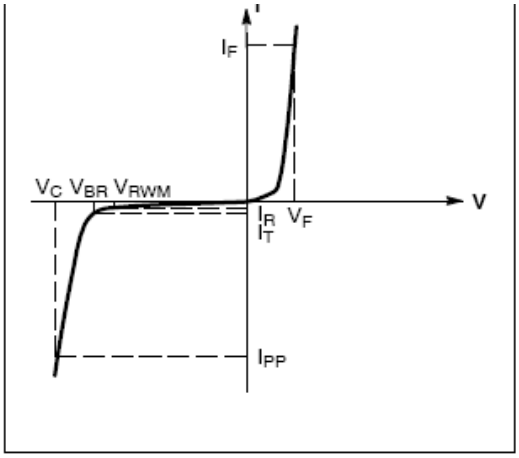

Figure 1. Uni–Directional TVS

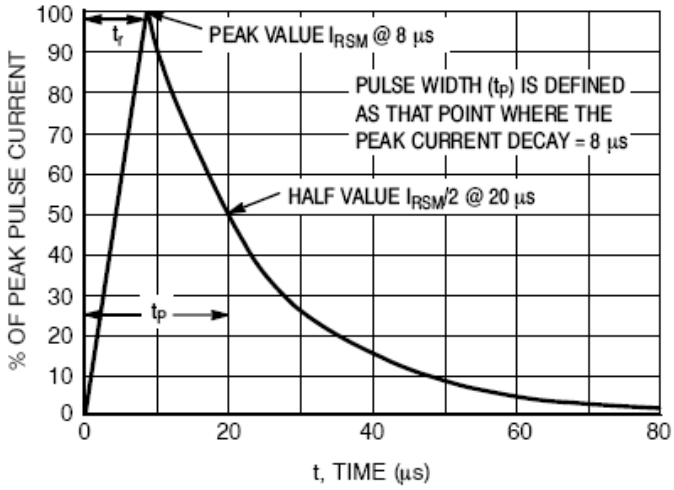

Figure 2. 8 x 20 μs Pulse Waveform

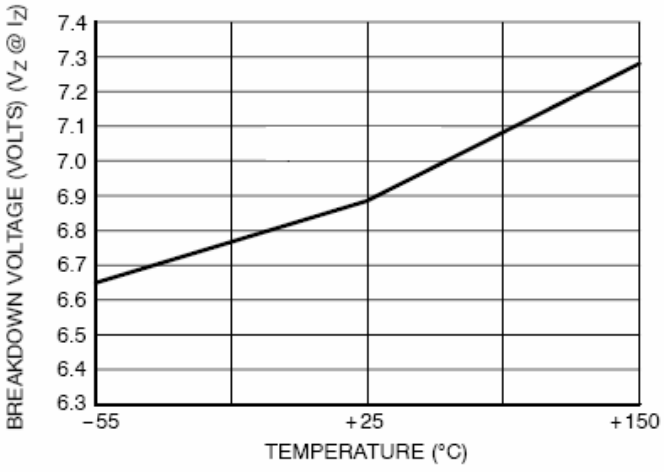

Figure 3. Typical Breakdown Voltage versus Temperature

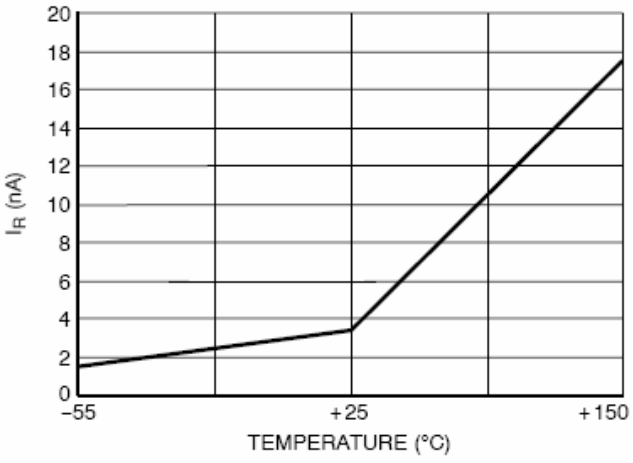

Figure 4. Typical Leakage Current versus Temperature