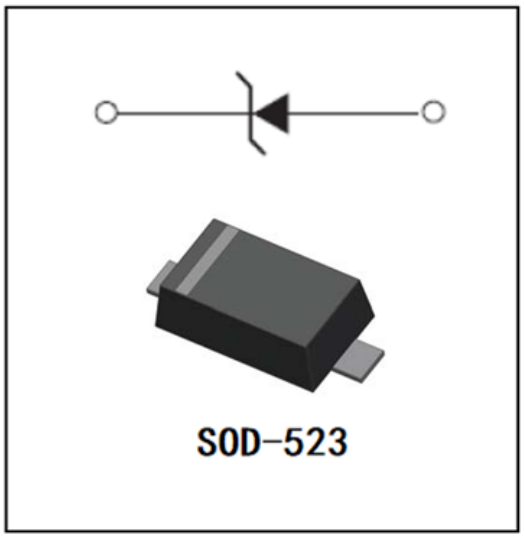
ESD Protection Diode



Features

- For sensitive ESD protection
- Low leakage
- Uni-directional ESD protection of one line
- Epoxy meets UL 94 V-0 flammability rating
- Moisture Sensitivity Level 1

Mechanical Data

- **Package**: SOD523
- **Terminals**: Tin plated leads, solderable per J-STD-002 and JESD22-B102
- **Polarity:** Cathode line denotes the cathode end
- **Marking:** ZE

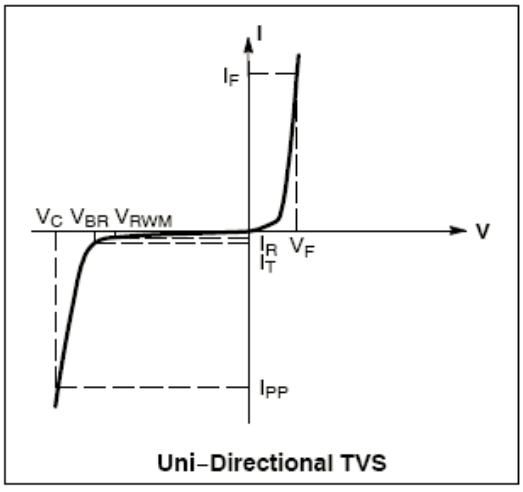
■Maximum Ratings

PARAMETER	SYMBOL	LIMITS	UNIT
Operating Junction & Storage Temperature	T_J&T_{STG}	-45 to +125	℃
IEC61000-4-2(ESD)Air	V_{ESD}	±30	KV
IEC61000-4-2(ESD)Contact		±30	KV
JESD22-A114-B(ESD)Machine		±0.4	KV
JESD22-A114-B(ESD)Human Body		±16	KV
Peak Pulse Current	I_{PP} (1)	16	A

(1).Non-repetitive current pulse 8/20μs exponential decay waveform according to IEC61000-4-5.

■Electrical Parameter

PARAMETER	SYMBOL
Clamping Voltage@ I_{PP}	V_C
Breakdown Voltage@ I_T	V_{BR}
Peak Pulse Current	I_{PP}
Test Current	I_T
Reverse Leakage Current@ V_{RWM}	I_R
Reverse Standoff Voltage	V_{RWM}
Forward Voltage@ I_F	V_F
Forward Current	I_F
Peak Power Dissipation	P_{Pk}
Max. Capacitance @ V_R=0 and f=1MHz	C



Uni-Directional TVS

■Electrical Characteristics（T_a=25℃ Unless otherwise specified）

PARAMETER	Symbol	UNIT	Conditions	Min	Typ	Max
Reverse Standoff Voltage	V_{RWM} (1)	V				3.3
Reverse Leakage Current	I_R	uA	V_{RWM}=3.3V			0.08
Breakdown Voltage	$V_{(BR)}$	V	I_T=1mA	5		
Clamping Voltage	V_C (2)	V	I_{PP}=5A， tp=8/20us			9.5
Clamping Voltage	V_C (2)	V	I_{PP}=16A， tp=8/20us			14
Forward voltage	V_F	V	I_F=10mA			0.9
Peak Power Dissipation	P_{Pk}	W	tp=8/20us			224
Junction Capacitance	C_J	pF	V_R=0V,f=1MHz		120	

(1).Other voltages available upon request.

(2).Non-repetitive current pulse 8/20μs exponential decay waveform according to IEC61000-4-5

■Ordering Information (Example)

PREFERED P/N	PACKING CODE	UNIT WEIGHT(g)	MINIMUM PACKAGE(pcs)	INNER BOX QUANTITY(pcs)	OUTER CARTON QUANTITY(pcs)	DELIVERY MODE
ESD3V3D5	F2	Approximate 0.002	8000	80000	320000	7” reel

■ Characteristics (Typical)

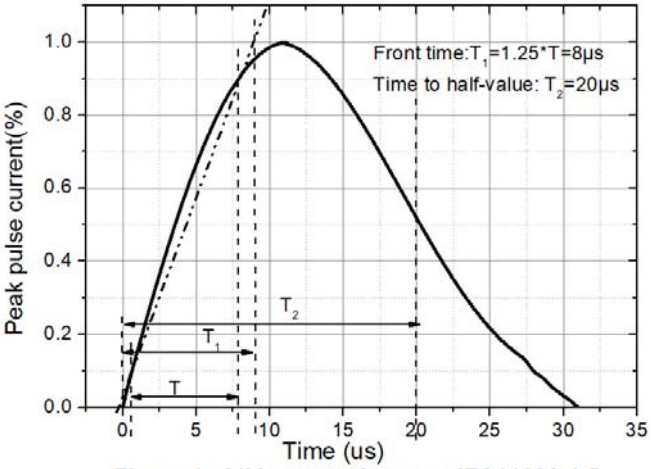


Figure 1. 8/20μs waveform per IEC61000-4-5

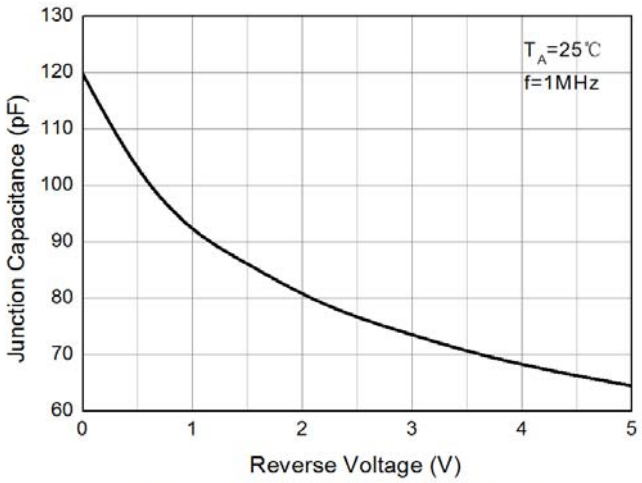


Figure2. Capacitance Characteristics

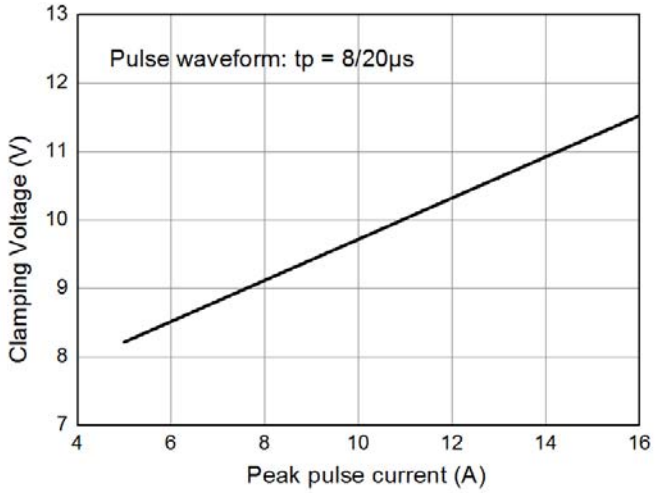


Figure 3. Clamping voltage vs. Peak pulse current

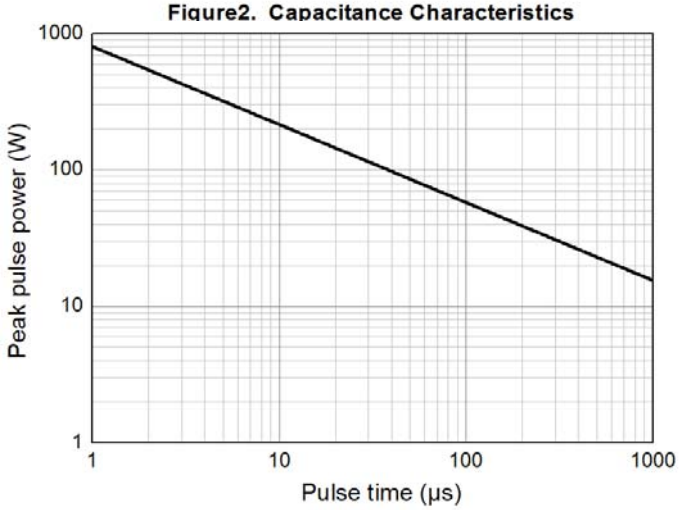
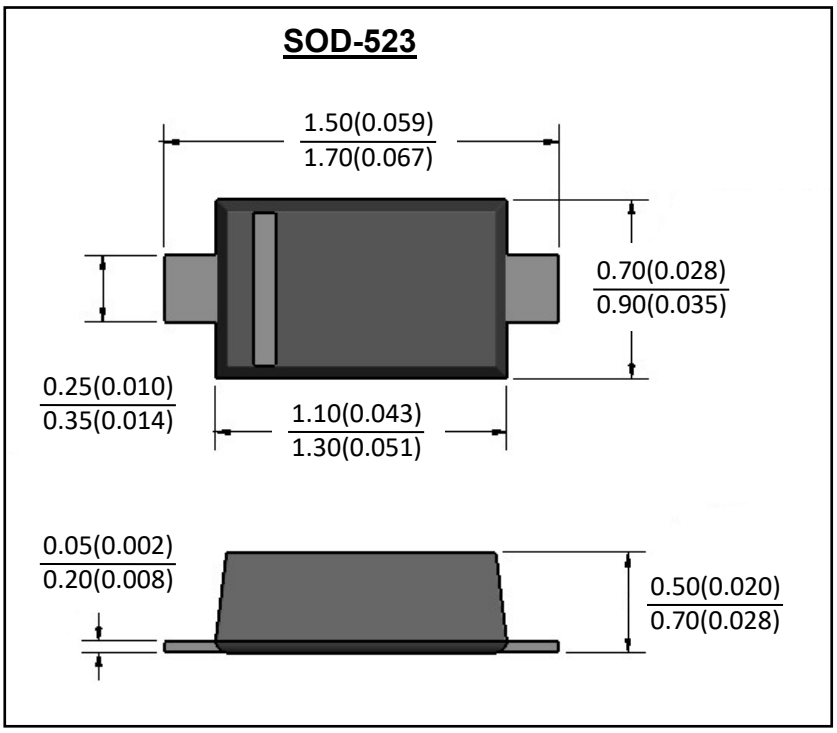
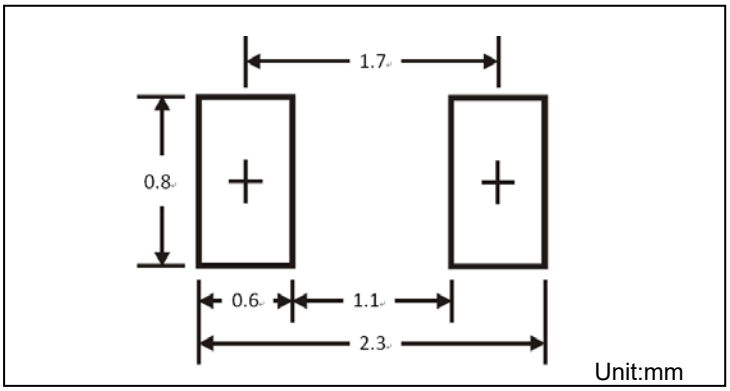


Figure 4 Non-repetitive peak pulse power vs. Pulse time

■ Outline Dimensions



■ Soldering Footprint



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