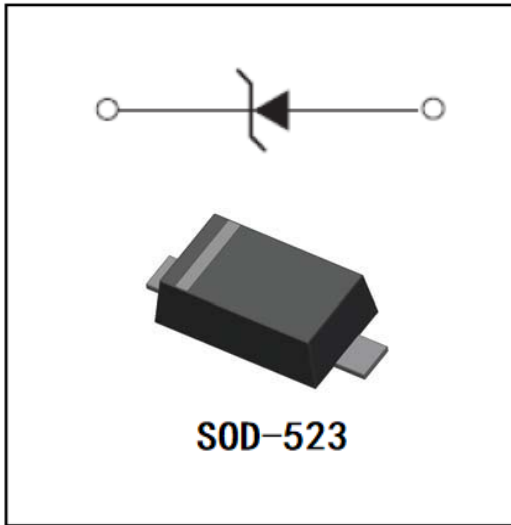


ESD Protection Diode



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:** ZM

■Maximum Ratings

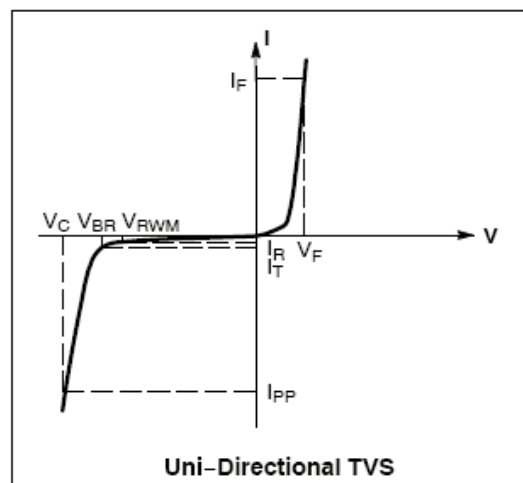
PARAMETER	SYMBOL	LIMITS	UNIT
Operating Junction & Storage Temperature	T_J & T_{STG}	-45 to +125	°C
IEC61000-4-2(ESD)Air	VESD ⁽¹⁾	± 15	KV
IEC61000-4-2(ESD)Contact		± 8	KV
Peak Pulse Current	I_{PP} ⁽²⁾	8	A

(1).Device stressed with ten non-repetitive ESD pulses.

(2).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 $f=1$ MHz	C





ESD12VD5

■ Electrical Characteristics (T_a=25°C Unless otherwise specified)

PARAMETER	Symbol	UNIT	Conditions	Min	Typ	Max
Reverse Standoff Voltage	V _{RWM} ⁽¹⁾	V				12
Reverse Leakage Current	I _R	uA	V _{RWM} =12V			0.5
Breakdown Voltage	V _(BR)	V	I _T =1mA	13.5		16.5
Clamping Voltage	V _C ⁽²⁾	V	I _{PP} =8A			30
Forward voltage	V _F	V	I _F =10mA			1.1
Junction Capacitance	C _J	pF	V _R =0V, f=1MHz		45	

(1).Other voltages available upon request.

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

■ Ordering Information (Example)

PREFERRED P/N	PACKING CODE	UNIT WEIGHT(g)	MINIMUM PACKAGE(pcs)	INNER BOX QUANTITY(pcs)	OUTER CARTON QUANTITY(pcs)	DELIVERY MODE
ESD12VD5	F2	Approximate 0.002	8000	80000	320000	7" reel

■ Characteristics (Typical)

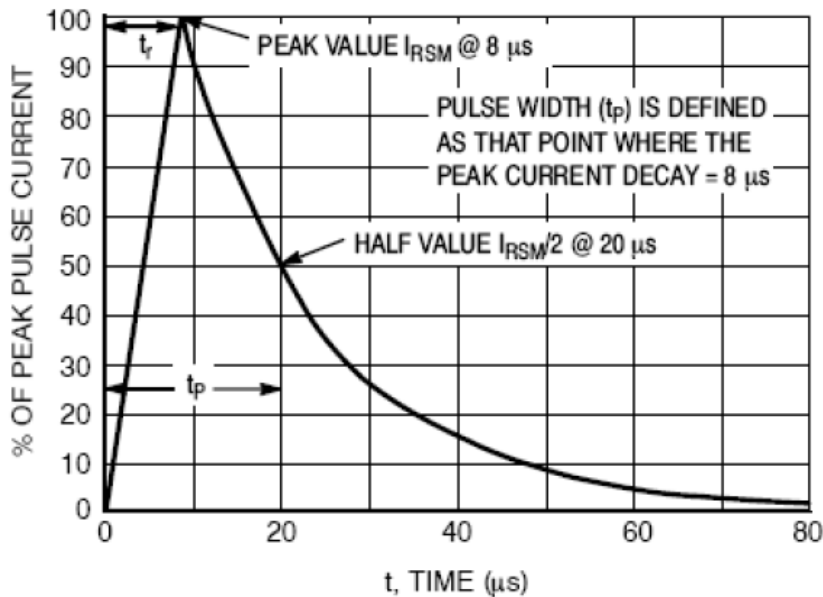
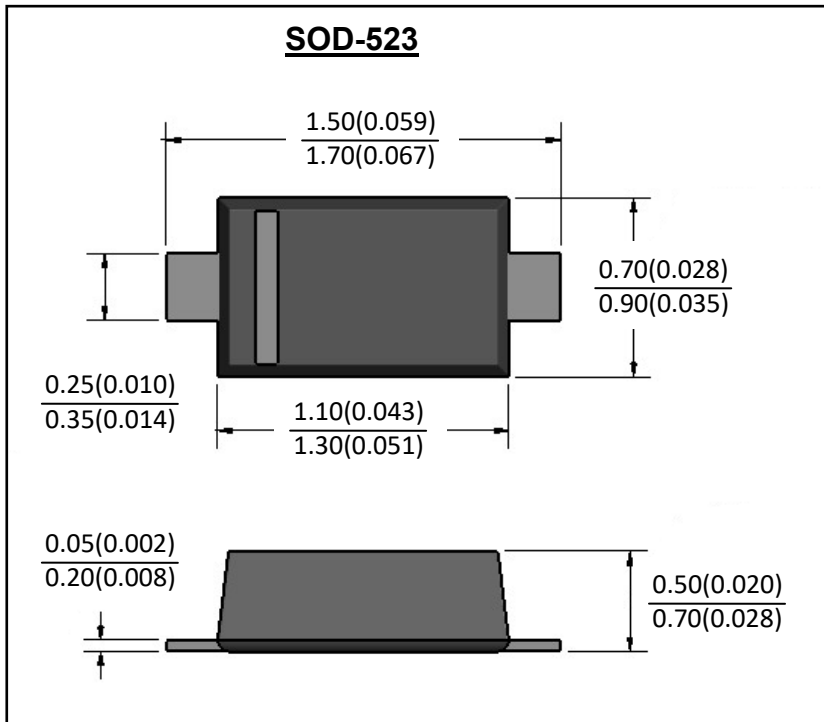
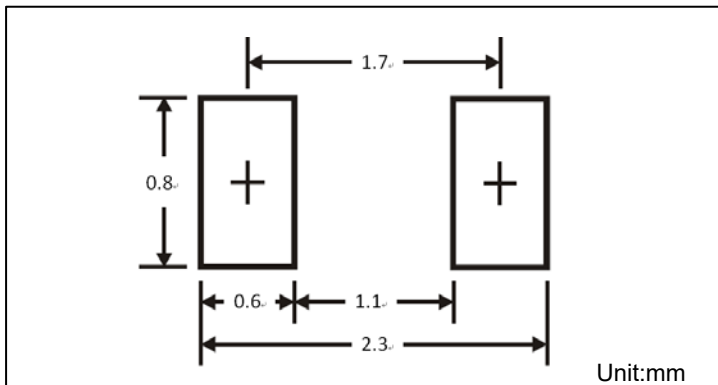


Figure 1. 8 x 20 μs Pulse Waveform

■ Outline Dimensions



■ Soldering Footprint





ESD12VD5

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