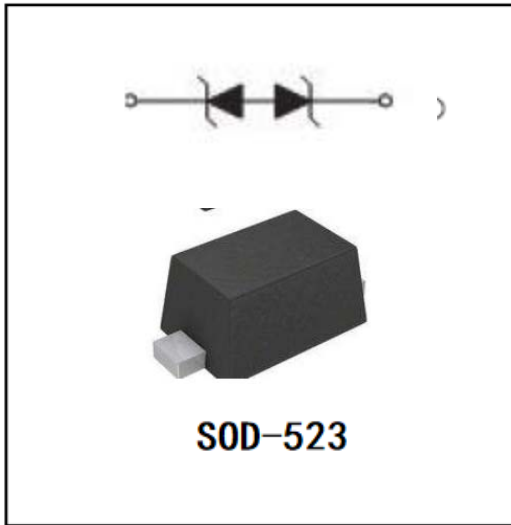


ESD Protection Diode



Features

- For sensitive ESD protection
- Low leakage
- Bi-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
- **Marking:** B5

Maximum Ratings

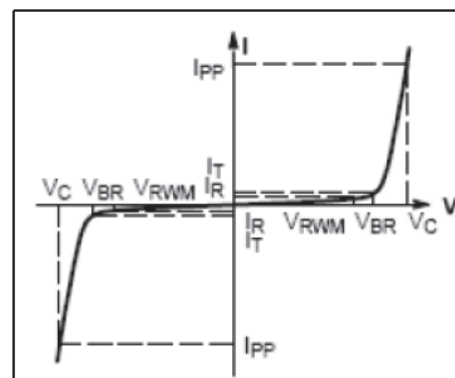
PARAMETER	SYMBOL	LIMITS	UNIT
Operating Junction & Storage Temperature	T_J & T_{STG}	-45 to +125	°C
IEC61000-4-2(ESD)Air	VESD ⁽¹⁾	± 15	KV
IEC61000-4-2(ESD)Contact		± 8	KV
Peak Pulse Current	I_{PP} ⁽²⁾	8	A

(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}
Peak Power Dissipation	P_{PK}
Max. Capacitance @ $V_R=0$ and $f=1$ MHz	C



V-I characteristics for a Bi-directional TVS



ESD5V0D5B

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

PARAMETER	Symbol	UNIT	Conditions	Min	Typ	Max
Reverse Standoff Voltage	V _{RWM} ⁽¹⁾	V				5.0
Reverse Leakage Current	I _R	uA	V _{RWM} =5.0V			1
Breakdown Voltage	V _(BR)	V	I _T =1mA	5.8		8.7
Clamping Voltage	V _C ⁽²⁾	V	I _{PP} =8A			16
Junction Capacitance	C _J	pF	V _R =0V, f=1MHz		35	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
ESD5V0D5B	F2	Approximate 0.002	8000	80000	320000	7" reel

■ Characteristics (Typical)

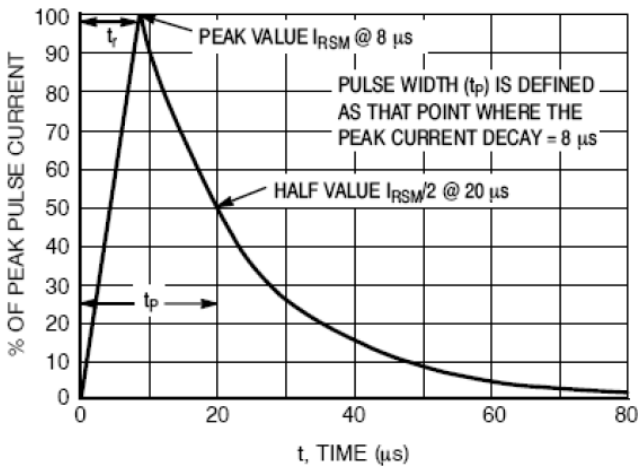


Figure 1. 8 x 20 μs Pulse Waveform

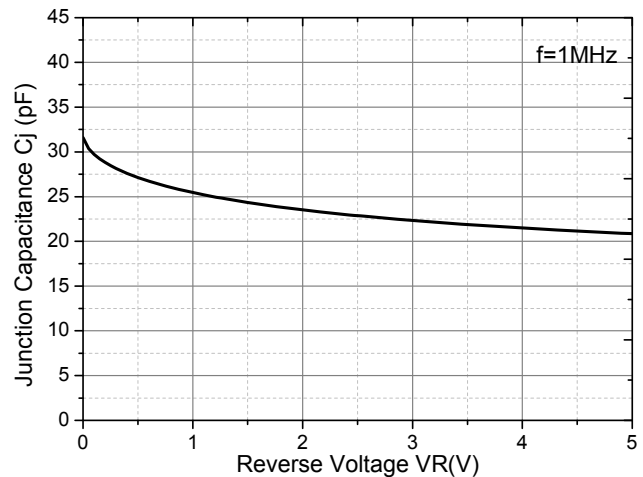
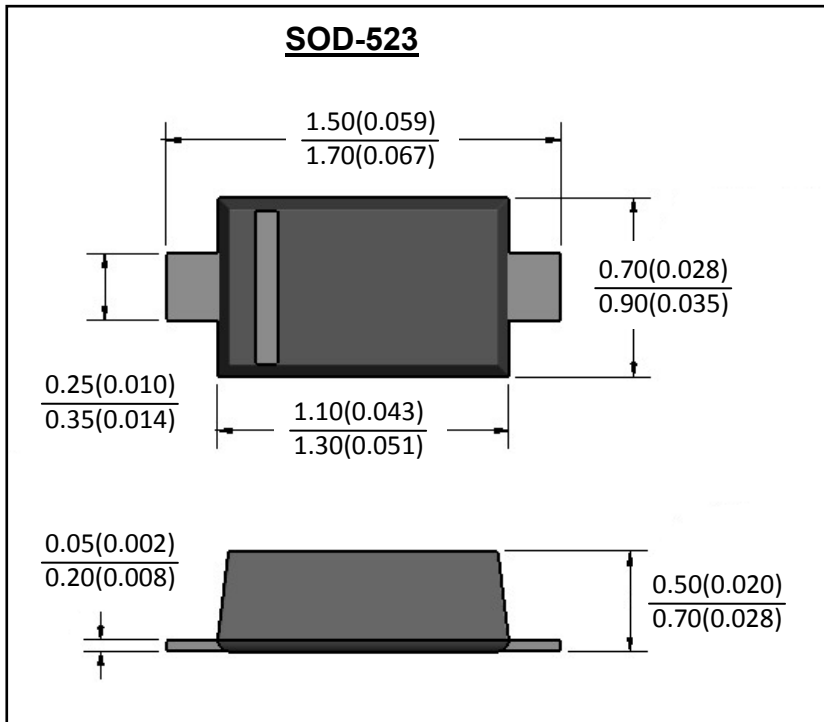
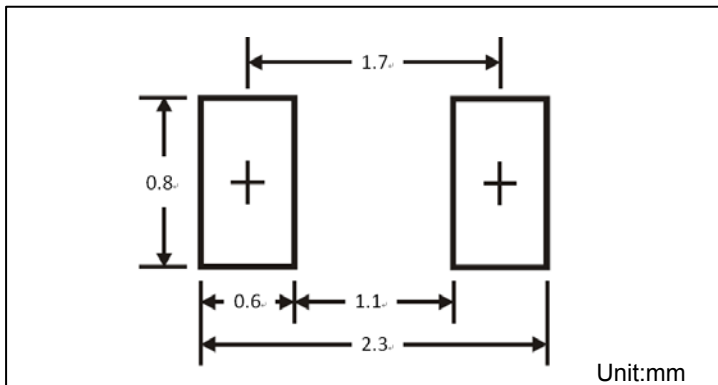


Figure 2. Capacitance Characteristics

■ Outline Dimensions



■ Soldering Footprint





ESD5V0D5B

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