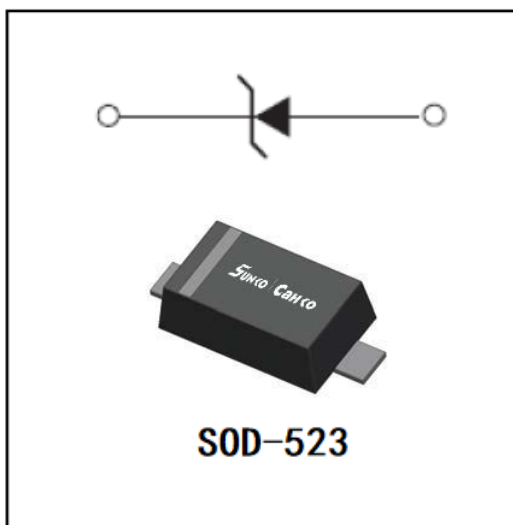


ESD Protection Diode



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:** ZF

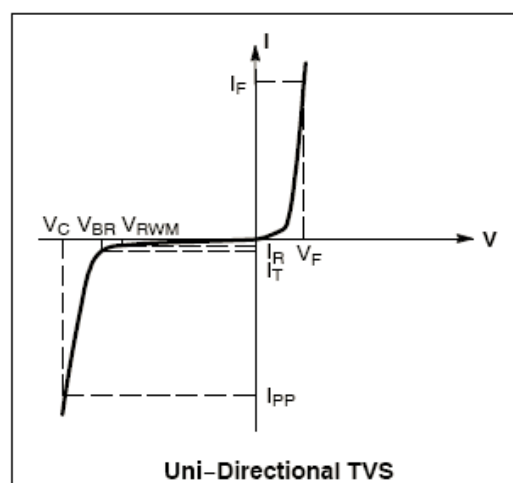
Maximum Ratings

PARAMETER	SYMBOL	LIMITS	UNIT
Operating Junction & Storage Temperature	T_J & T_{STG}	-45 to +125	°C
IEC61000-4-2(ESD)Air	V_{ESD}	±15	KV
IEC61000-4-2(ESD)Contact		±8	KV
Peak Pulse Current	$I_{PP}^{(2)}$	13	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



■ Electrical Characteristics ($T_A=25^\circ\text{C}$ Unless otherwise specified)

PARAMETER	Symbol	UNIT	Conditions	Min	Typ	Max
Reverse Standoff Voltage	$V_{RWM}^{(1)}$	V				5.0
Reverse Leakage Current	I_R	μA	$V_{RWM}=5.0\text{V}$			1
Breakdown Voltage	$V_{(BR)}$	V	$I_T=1\text{mA}$	6.2		7.5
Clamping Voltage	$V_C^{(2)}$	V	$I_{PP}=13\text{A}$, $t_p=8/20\mu\text{s}$			17
Forward voltage	V_F	V	$I_F=10\text{mA}$			1.2
Peak Power Dissipation	P_{pk}	W	$t_p=8/20\mu\text{s}$			221
Junction Capacitance	C_J	pF	$V_R=0\text{V}$, $f=1\text{MHz}$		100	

(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)

PREFERED P/N	PACKING CODE	UNIT WEIGHT(g)	MINIMUM PACKAGE(pcs)	INNER BOX QUANTITY(pcs)	OUTER CARTON QUANTITY(pcs)	DELIVERY MODE
ESD5V0D5	F2	Approximate 0.002	8000	80000	320000	7" reel

■ Characteristics (Typical)

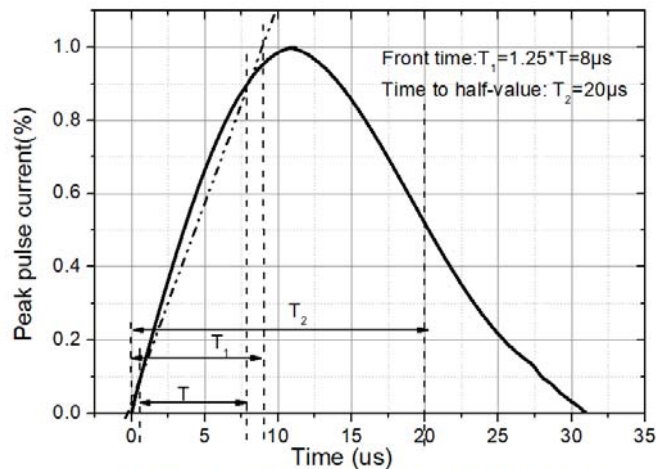


Figure 1. 8/20us waveform per IEC61000-4-5

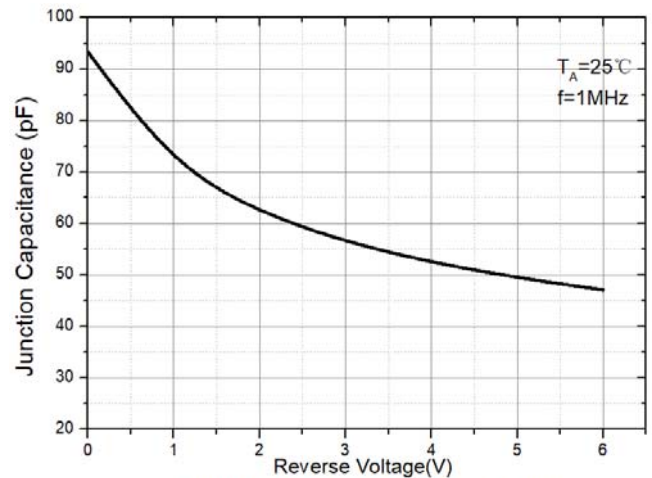


Figure 2. Capacitance Characteristics

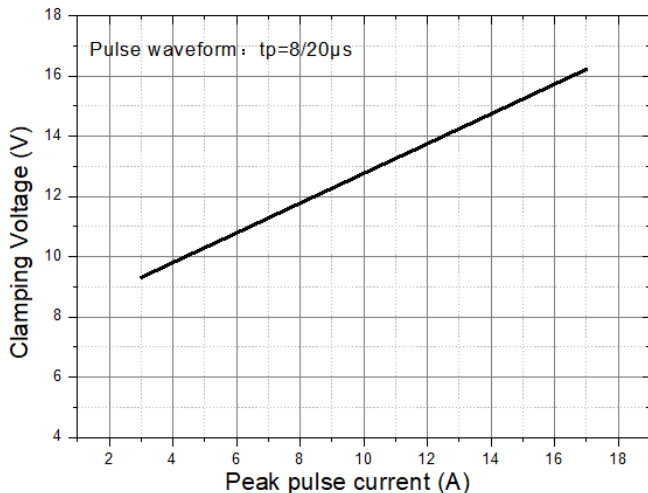


Figure 3. Clamping voltage vs. Peak pulse current

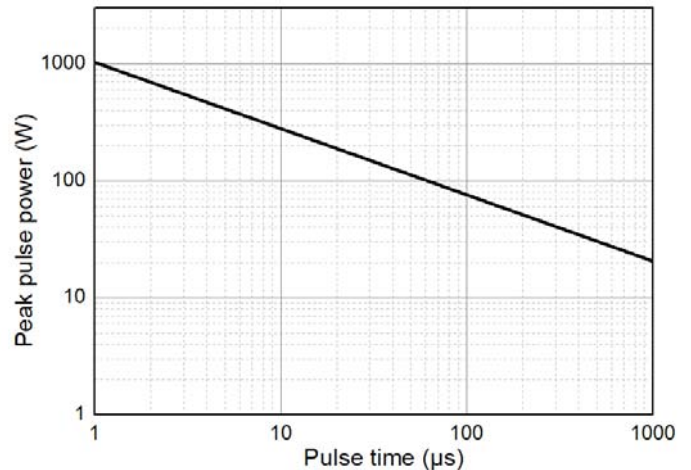
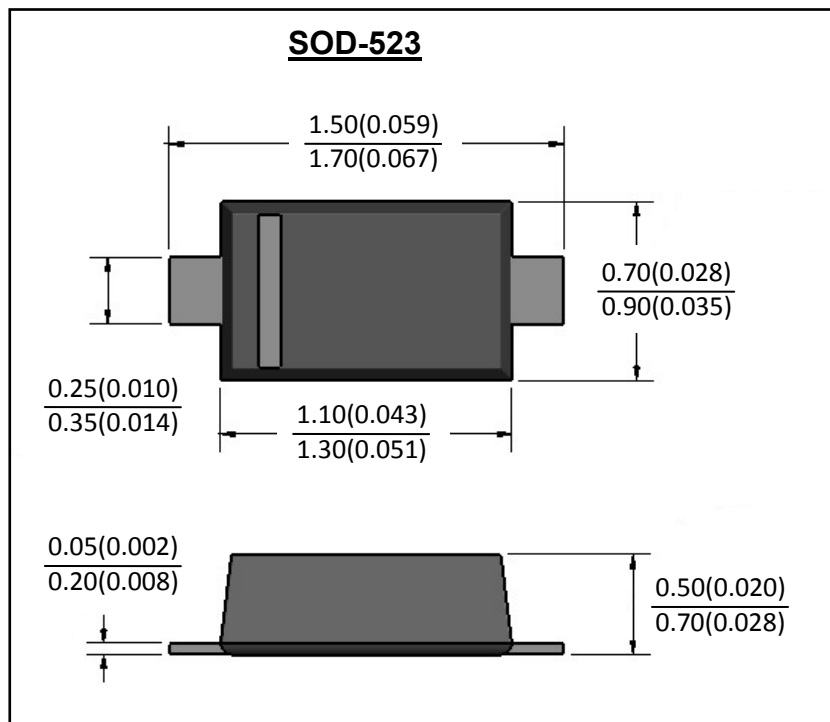
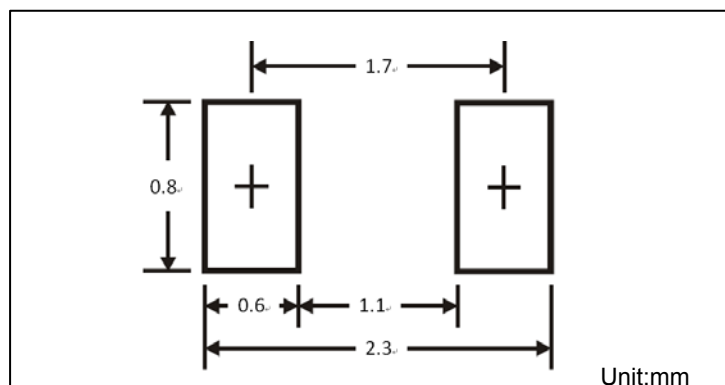


Figure 4 Non-repetitive peak pulse power vs. Pulse time

■ Outline Dimensions



■ Soldering Footprint



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