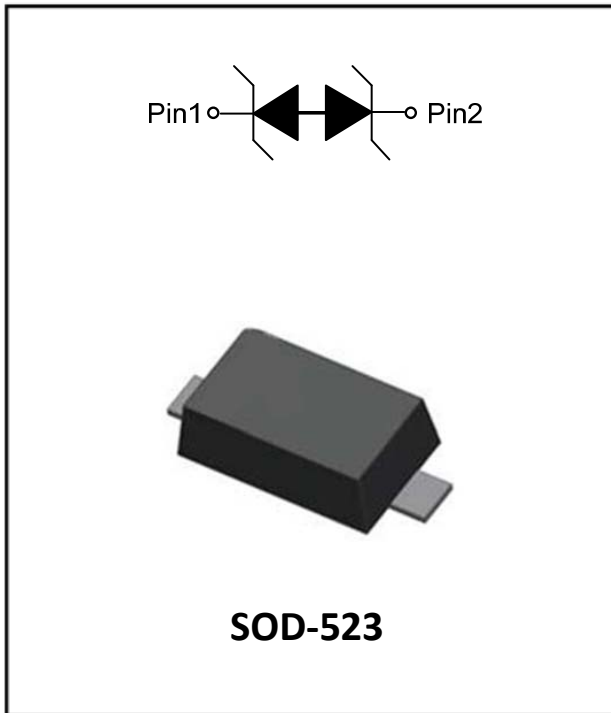


1- Line, Bi-directional, ESD protection diode



Features

- Transient protection for each line according to IEC61000-4-2(ESD): $\pm 30\text{kV}$ contact, $\pm 30\text{kV}$ air IEC61000-4-5:9A($t_p=8/20\mu\text{s}$)
- Low leakage current
- Ultra low clamping voltage
- RoHS Compliant
- Part no. with suffix "Q" means AEC-Q101 qualified

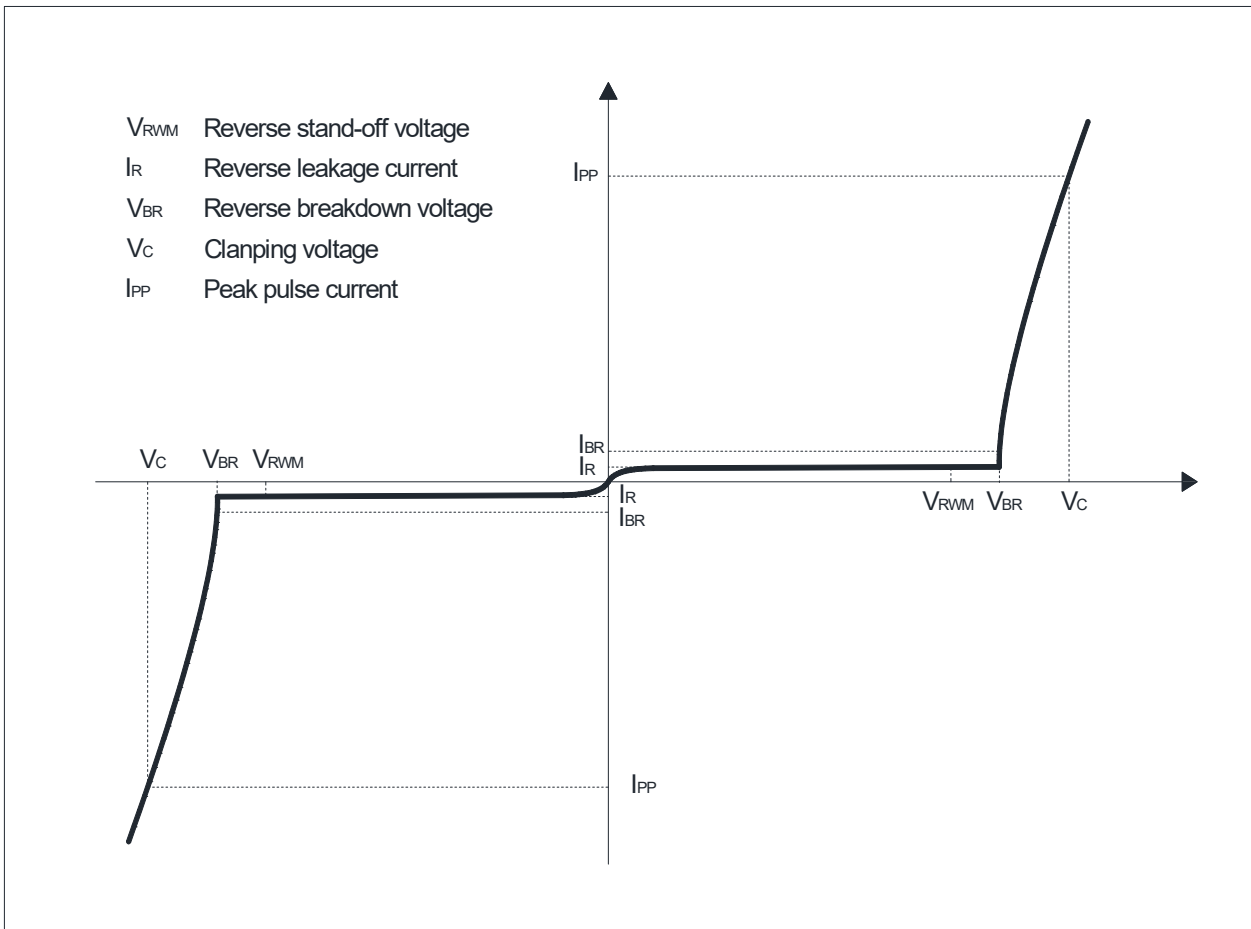
Applications

- Switches / Buttons
- Test Equipment/Instrumentation
- Point-of-Sale Terminals
- Medical Equipment
- Notebooks / Desktops / Servers
- Computer Peripherals
- CAN Bus protection
- Automotive applications

Mechanical Data

- Package: SOD-523
- Lead Finish: Matte Tin
- Case Material: "Green" Molding Compound
- Moisture Sensitivity: Level 1 per J-STD-020

■ Definitions of electrical characteristics





ESD3V3D5BSQ

■Maximum Ratings

PARAMETER	SYMBOL	LIMITS	UNIT
Peak pulse power ($t_p = 8/20\mu s$)	P_{pk}	90	W
ESD according to IEC61000-4-2 air discharge	V_{ESD}	± 30	KV
ESD according to IEC61000-4-2 contact discharge		± 30	
Junction temperature	T_J	-55~150	$^{\circ}C$
Storage temperature	T_{STG}	-55~150	$^{\circ}C$

Notes:

CAUTION: Stresses above those listed in "Absolute Maximum Ratings" may cause permanent damage to the component. This is a stress only rating and operation of the component at these or any other conditions above those indicated in the operational sections of this specification is not implied.

■Electrical Characteristics ($T_J=25^{\circ}C$)

PARAMETER	Symbol	UNIT	Conditions	Min	Typ	Max
Reverse Standoff Voltage	V_{RWM}	V				3.3
Reverse breakdown voltage	V_{BR}	V	$I_{BR} = 1mA$	3.5		6
Reverse leakage current	I_R	μA	$V_{RWM} = 3.3V$			1.0
Clamping voltage ¹⁾	V_C	V	$I_{PP} = 1A, t_p = 8/20\mu s$			6
			$I_{PP} = 9A, t_p = 8/20\mu s$			10
Peak Pulse Current	I_{PP}	A	$t_p = 8/20\mu s$			9
Junction capacitance	C_J	pF	$V_R = 0V, f = 1MHz$		14	25

Notes:

(1). Non-repetitive current pulse, according to IEC61000-4-5.

■Ordering Information (Example)

PREFERRED P/N	PACKING CODE	UNIT WEIGHT(mg)	MINIMUM PACKAGE(pcs)	INNER BOX QUANTITY(pcs)	OUTER CARTON QUANTITY(pcs)	DELIVERY MODE
ESD3V3D5BSQ	F2	Approximate 2	8000	80000	320000	7 reel



■ Characteristics (Typical)

Fig.1: 8/20 μ s Pulse Waveform

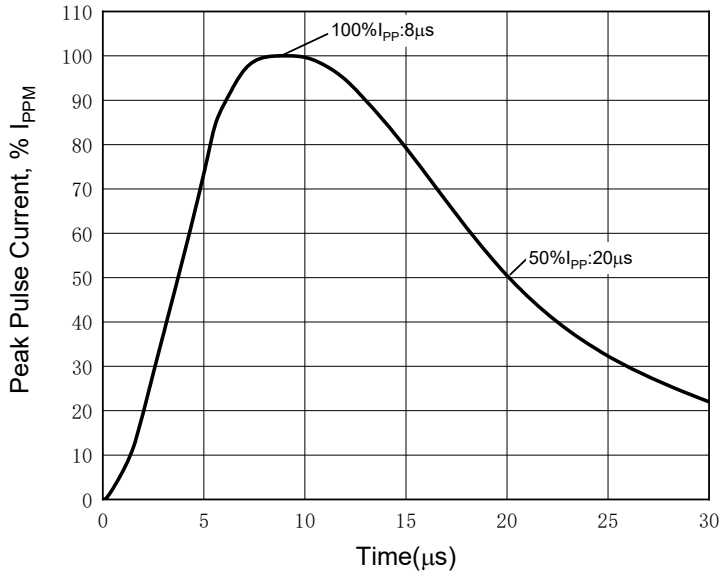


Fig.2: Capacitance vs. Bias

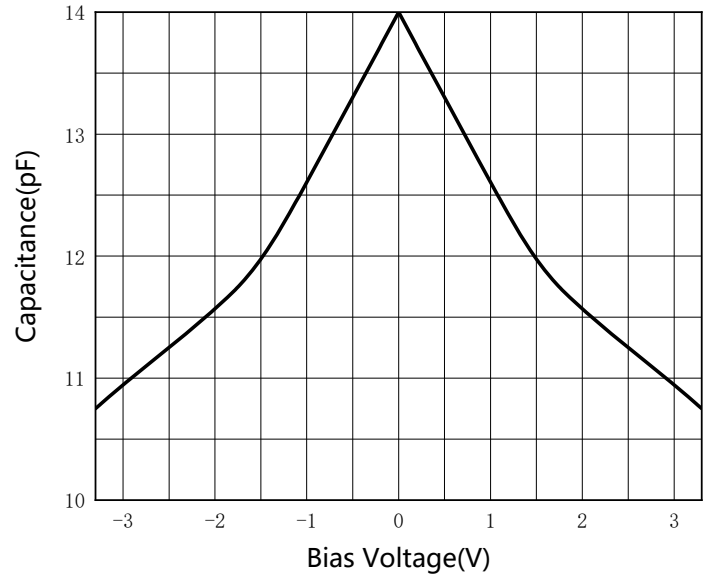


Fig.3: Power Derating Curve

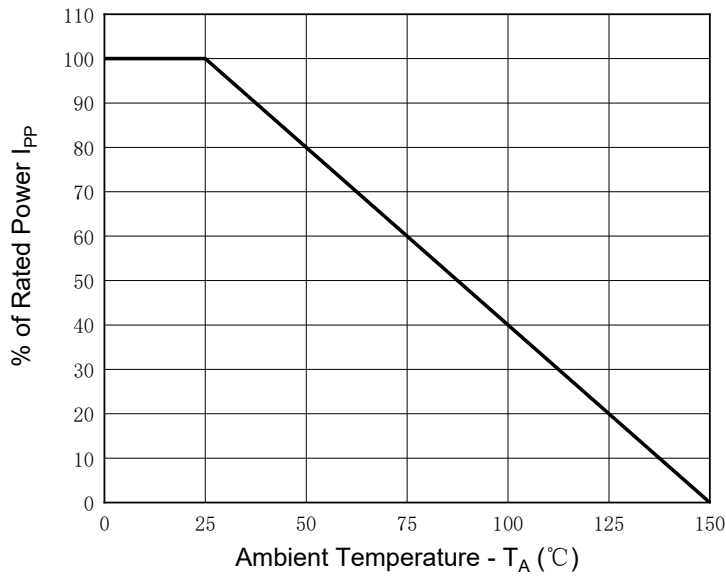
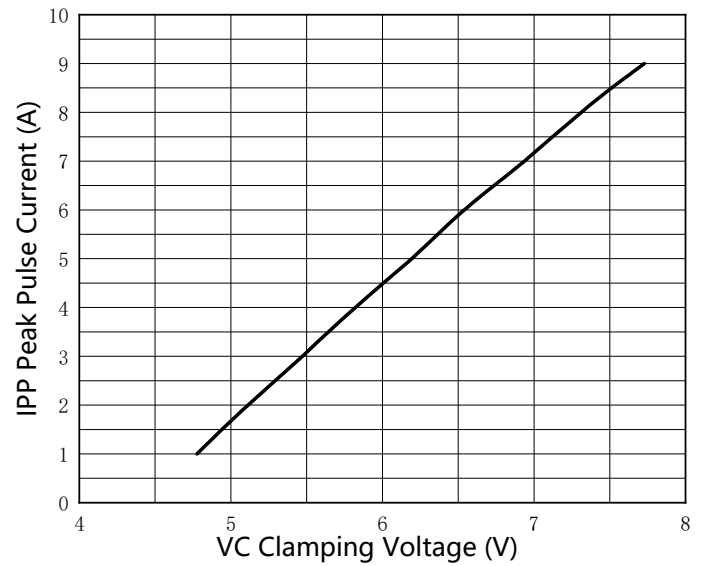


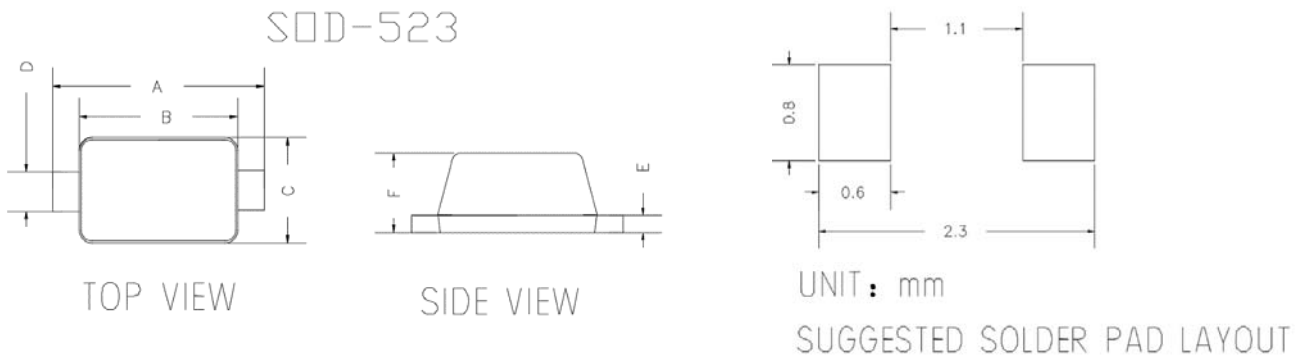
Fig.4: Peak Pulse Current vs Clamping Voltage





ESD3V3D5BSQ

■ Outline Dimensions



DIMENSIONS				
DIM	INCHES		MM	
	MIN	MAX	MIN	MAX
A	0.059	0.067	1.500	1.700
B	0.043	0.051	1.100	1.300
C	0.028	0.035	0.700	0.900
D	0.010	0.014	0.250	0.350
E	0.002	0.008	0.050	0.200
F	0.020	0.028	0.500	0.700

■ Marking Information



- Note:
1. All marking is at middle of the product body
 2. All marking is in laser marking
 3. Body color: Black



ESD3V3D5BSQ

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