1-Line, Uni-directional, Transient Voltage Suppressor



Features

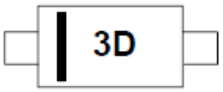
- Stand-off voltage: 3.3V Max
- Transient protection for each line according to
  IEC61000-4-2(ESD): ±30kV (contact)
  IEC61000-4-5(surge): 15A (8/20μs)
- Ultra-low capacitance: CJ = 22pF typ
- Low leakage current
- Low clamping voltage
- RoHS Compliant

Applications

- Cellular Handsets and Accessories
- Personal Digital Assistants
- Notebooks and Handhelds
- Portable Instrumentation
- Digital Cameras
- Peripherals
- Audio Players
- Keypads, Side Keys, LCD Displays

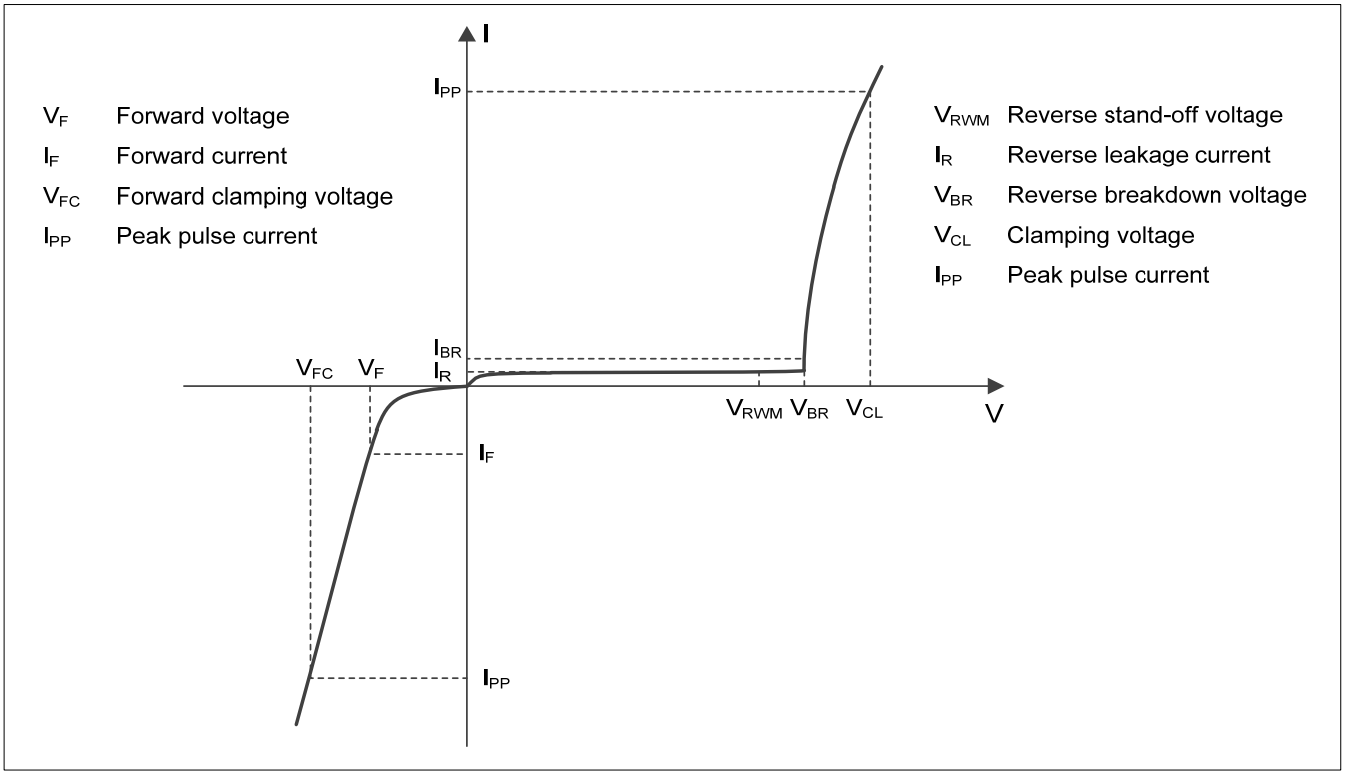
Mechanical Data

- Package: SOD-523
- Terminals: Tin plated leads, solderable per J-STD-002 and JESD22-B102
- Moisture Sensitivity: Level 1 per J-STD-020
- Marking:



3D = Device Marking Code
Bar denotes Pin1

■Definitions of electrical characteristics



■Maximum Ratings

PARAMETER	SYMBOL	Rating	UNIT
Peak pulse power (t_p = 8/20μs)	P_{pk}	150	W
Peak pulse current (t_p = 8/20μs)	I_{PP}	15	A
ESD according to IEC61000-4-2 air discharge	V_{ESD}	±30	KV
ESD according to IEC61000-4-2 contact discharge		±30	KV
Junction temperature	T_J	−55 ~125	°C
Storage temperature	T_{STG}	-55~150	°C

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

PARAMETER	Symbol	UNIT	Conditions	Min	Typ	Max
Reverse maximum working voltage	V_{RWM}	V				3.3
Reverse leakage current	I_R	nA	V_{RWM} =3.3V			200
Reverse breakdown voltage	V_{BR}	V	I_{BR} = 1mA	3.5		
Clamping voltage [1)]	V_{CL}	V	I_{PP} = 1A, t_p = 8/20μs			7
		V	I_{PP} = 15A, t_p = 8/20μs			10
Junction capacitance	C_J	pF	V_R = 0V, f = 1MHz		22	

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

■Ordering Information (Example)

PREFERED P/N	PACKING CODE	UNIT WEIGHT(mg)	MINIMUM PACKAGE(pcs)	INNER BOX QUANTITY(pcs)	OUTER CARTON QUANTITY(pcs)	DELIVERY MODE
ESD3V3D5A	F3	Approximate 0.9	3 000	30 000	120 000	Tape & reel

■ Characteristics (Typical)

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

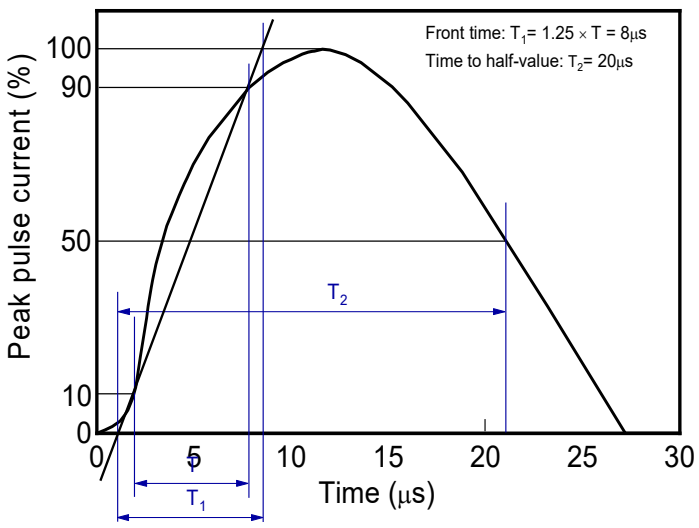


Fig.2 Contact discharge current waveform per IEC61000-4-2

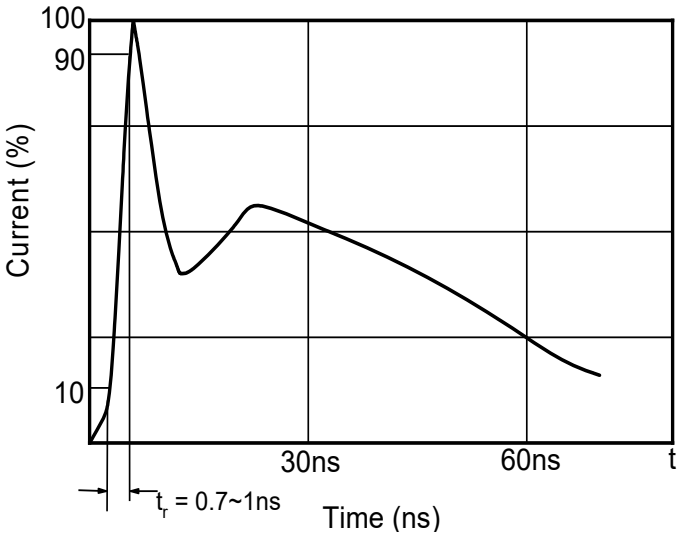


Fig.3 Clamping voltage vs. Peak pulse current

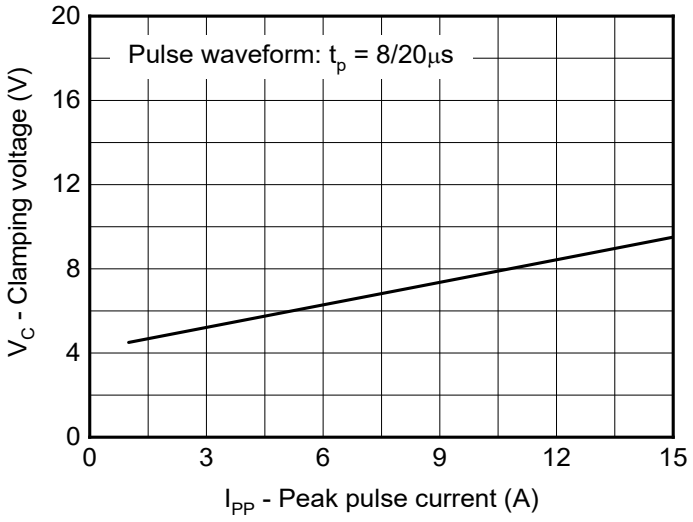


Fig.4 Capacitance vs. Reverse voltage

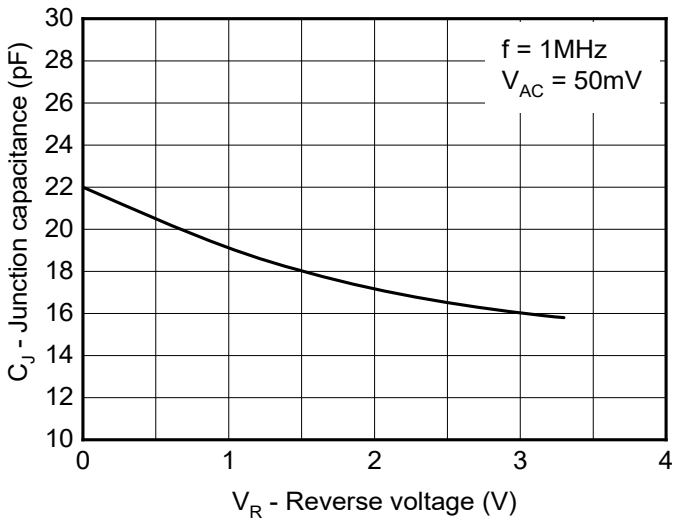


Fig.5 Non-repetitive peak pulse power vs. Pulse time

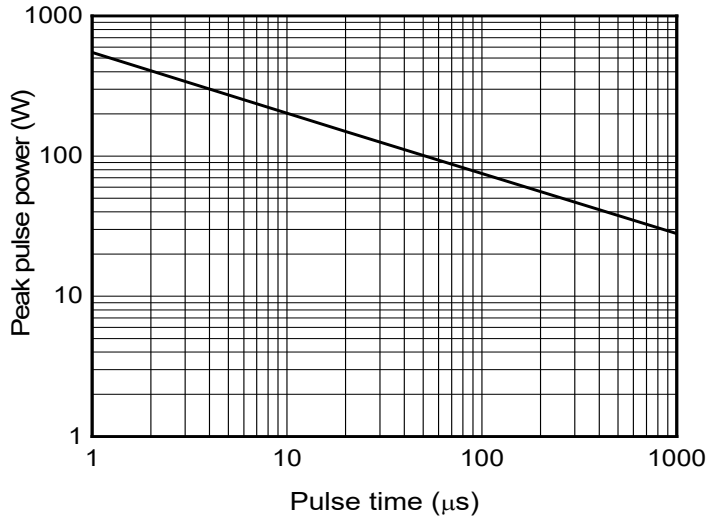
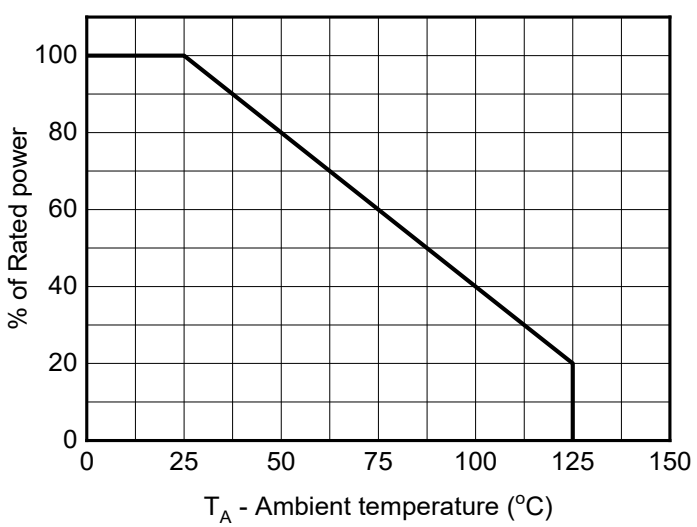
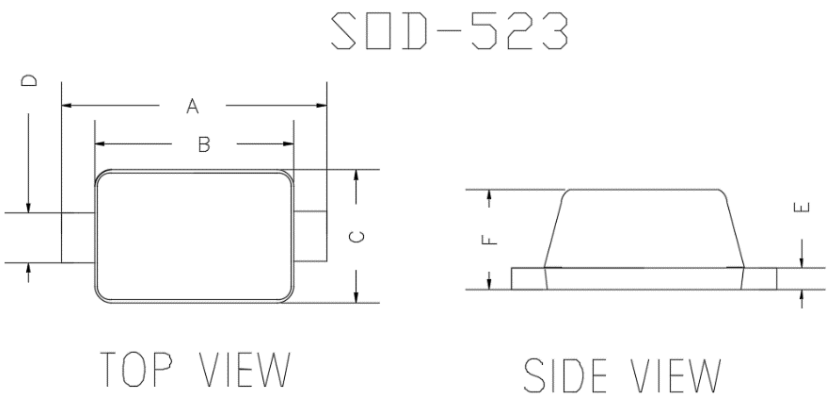


Fig.6 Power derating vs. Ambient temperature

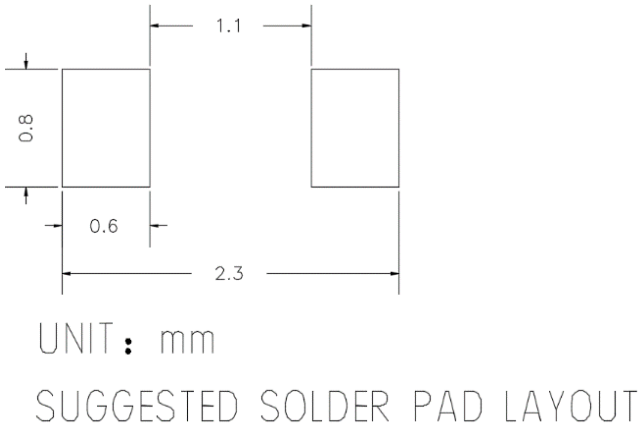


■ Outline Dimensions



DIMENSIONS				
DIM	INCHES		MM	
	MIN	MAX	MN	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

■ Soldering Footprint



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