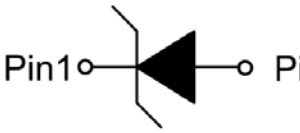
1- Line, Uni-directional, Transient Voltage Suppressor





SOD-523

Features

- Stand-off voltage: 24V Max
- Transient protection for each line according to
  IEC61000-4-2(ESD): ±30kV (contact)
  IEC61000-4-5(surge): 7A (8/20μs)
- Low leakage current:
- Ultra low clamping voltage
- RoHS Compliant

Applications

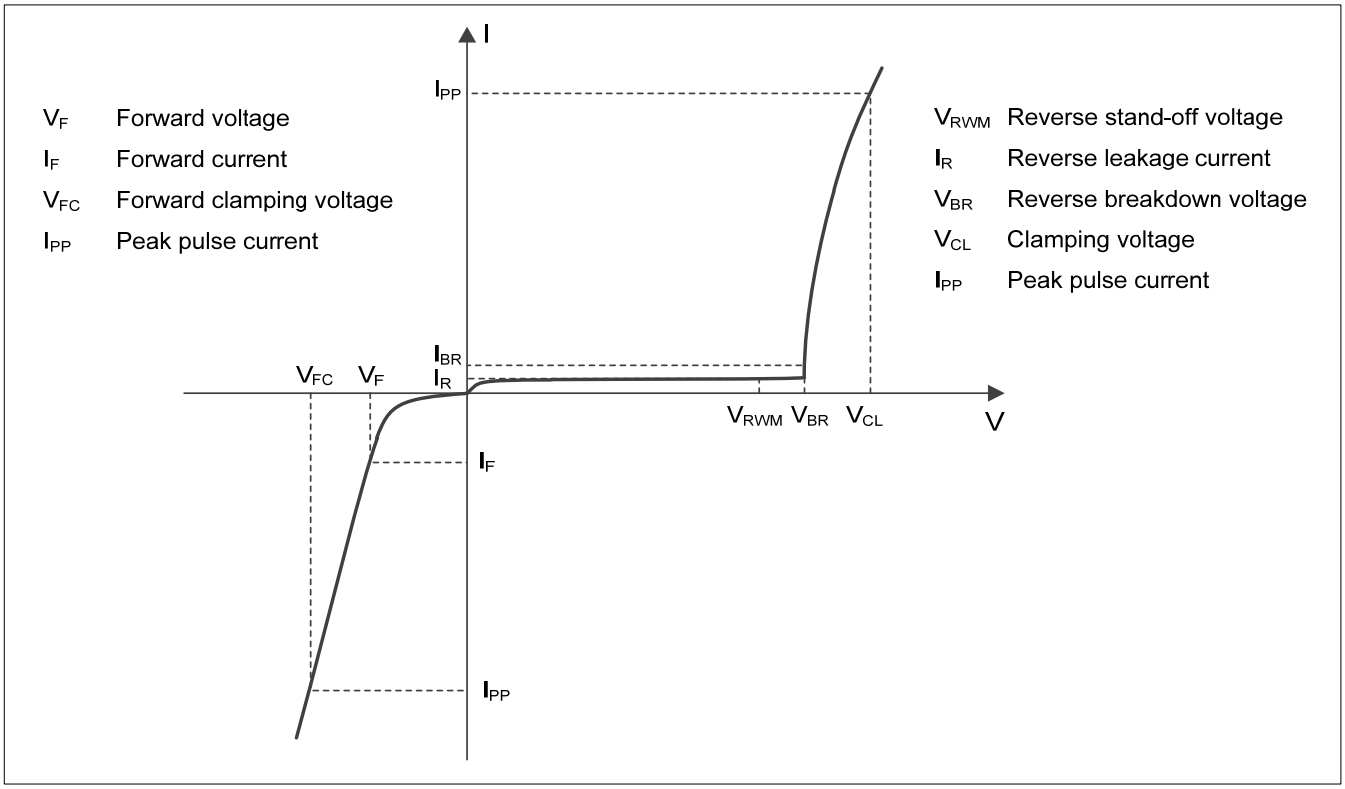
- Cellular Handsets and Accessories
- Personal Digital Assistants
- Notebooks and Handhelds
- Portable Instrumentation
- Digital Cameras
- Peripherals
- Audio Players

Mechanical Data

- Package: SOD-523
- Lead Finish: Matte Tin
- Case Material: “Green” Molding Compound
- Moisture Sensitivity: Level 1 per J-STD-020
- Marking Information: See Below



■Definitions of electrical characteristics



■Maximum Ratings

PARAMETER	SYMBOL	LIMITS	UNIT
Peak pulse power (t_p = 8/20μs)	P_{pk}	300	W
Peak pulse current (t_p = 8/20μs)	I_{PP}	7	A
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	125	ºC
Operating temperature	T_{OP}	-40~85	ºC
Storage temperature	T_{STG}	-55~150	ºC

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

PARAMETER	Symbol	UNIT	Conditions	Min	Typ	Max
Reverse maximum working voltage	V_{RWM}	V				24
Reverse leakage current	I_R	μA	V_{RWM} = 24V			0.5
Reverse breakdown voltage	V_{BR}	V	I_{BR} = 1mA	26.4		32
Clamping voltage [1)]	V_{CL}	V	I_{PP} = 16A, t_p = 100ns		33	
Dynamic resistance [1)]	R_{DYN}	Ω			0.36	
Clamping voltage [2)]	V_{CL}	V	I_{PP} = 1A, t_p = 8/20μs		27	32
		V	I_{PP} = 7A, t_p = 8/20μs		37	44
Junction capacitance	C_J	pF	V_R = 0V, f = 1MHz		36	50

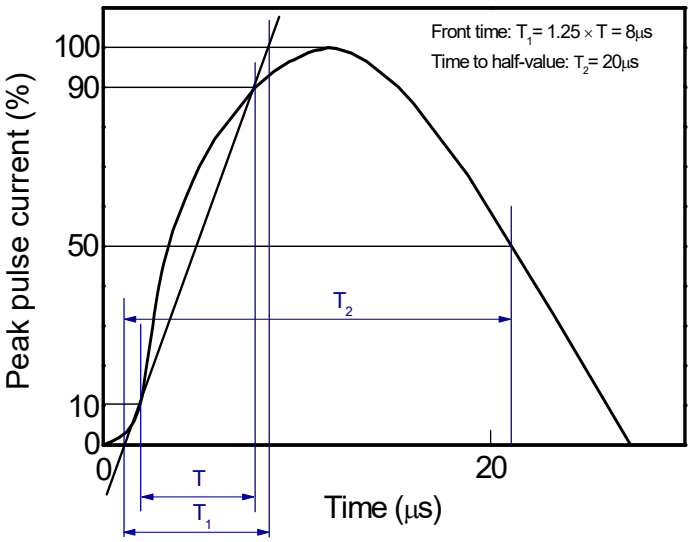
Notes:
(1). TLP parameter: Z_0 = 50Ω, t_p = 100ns, t_r = 2ns, averaging window from 60ns to 80ns. R_{DYN} is calculated from 4A to 16A.
(2). Non-repetitive current pulse, according to IEC61000-4-5.

■Ordering Information (Example)

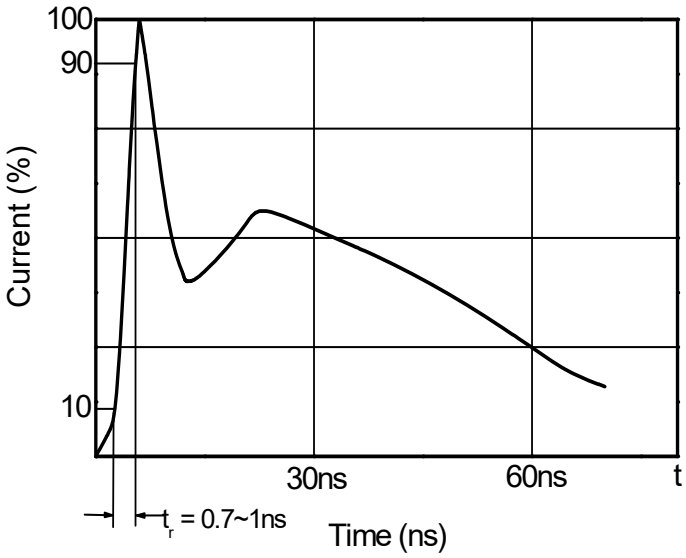
PREFERED P/N	PACKING CODE	UNIT WEIGHT(mg)	MINIMUM PACKAGE(pcs)	INNER BOX QUANTITY(pcs)	OUTER CARTON QUANTITY(pcs)	DELIVERY MODE
ESD24VD5	F2	Approximate 2	8000	80000	320000	7” reel

■ Characteristics (Typical)

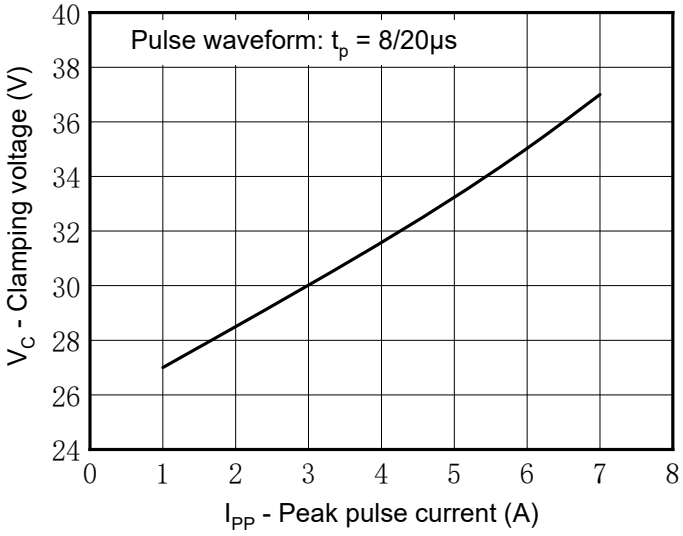
8/20μs waveform per IEC61000-4-5



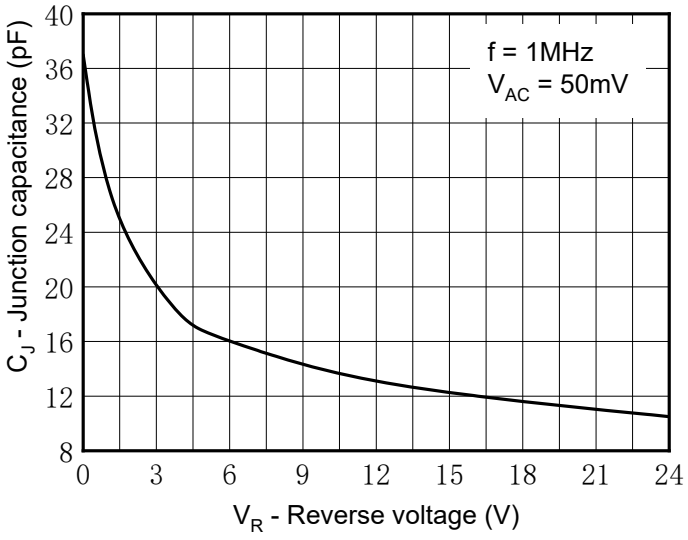
Contact discharge current waveform per IEC61000-4-2



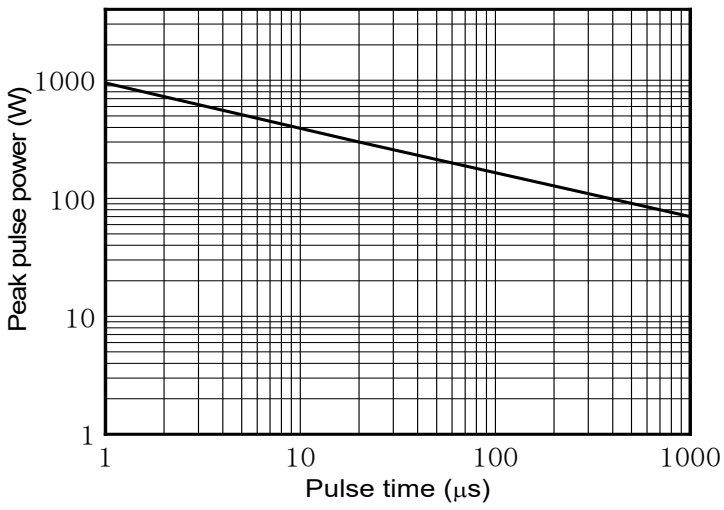
Clamping voltage vs. Peak pulse current



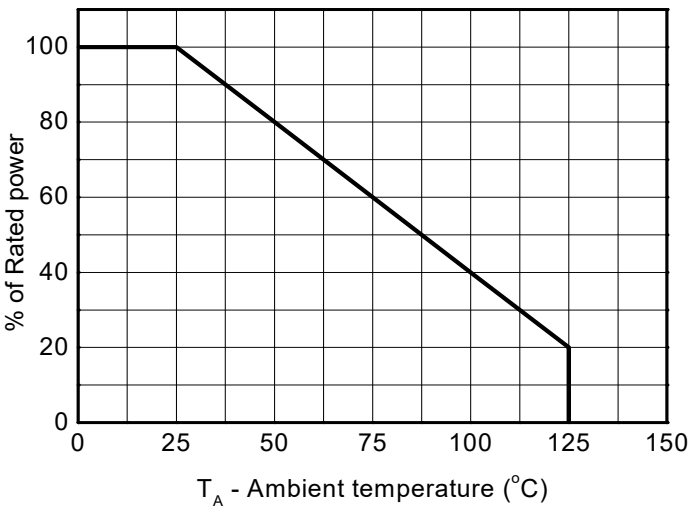
Capacitance vs. Reverse voltage



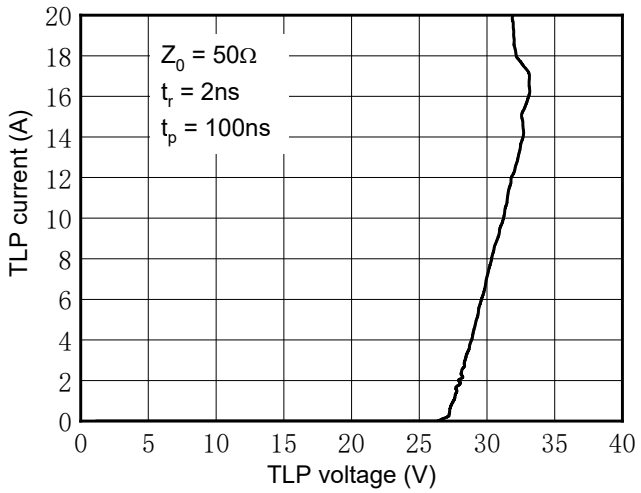
Non-repetitive peak pulse power vs. Pulse time



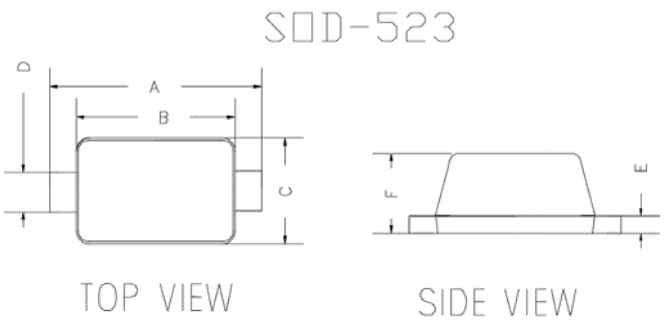
Power derating vs. Ambient temperature



TLP Measurement

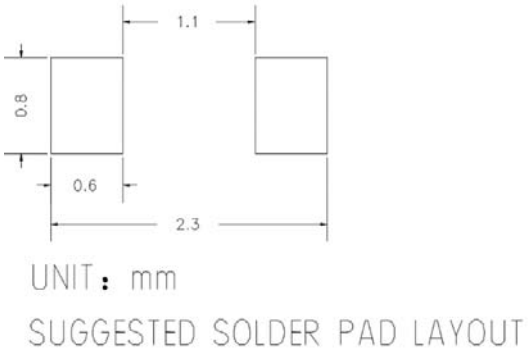


■ Outline Dimensions



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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