

Features

- Stand-off voltage: 15V Max
- Low leakage current
- Ultra low clamping voltage
- Compliant to Halogen-free
- Suffix “-Q1” for AEC-Q101

Main applications

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

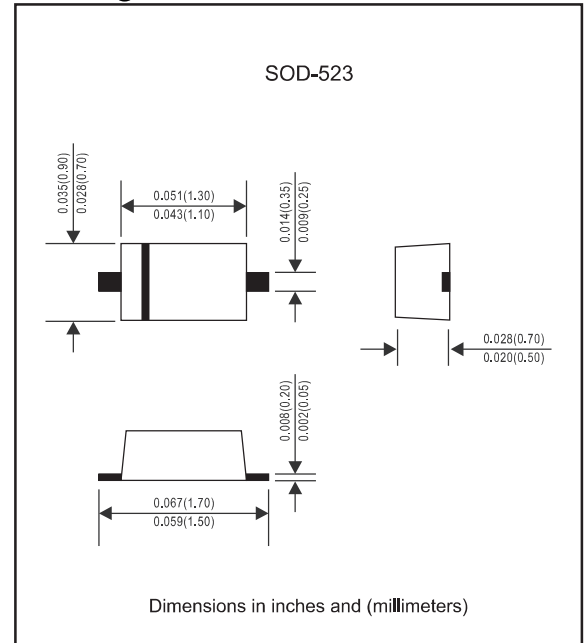
Protection solution to meet

- IEC61000-4-2(ESD): $\pm 30\text{kV}$ (contact)
- IEC61000-4-5(surge): 10A (8/20 μs)

MECHANICAL CHARACTERISTICS

- Package: SOD-523
- Case Material: “Green” Molding Compound
- Lead finish : Matte Tin

Package outline



Absolute maximum ratings

PARAMETER	SYMBOL	LIMITS	UNIT
Peak pulse power ($t_p = 8/20\mu s$)	P_{pk}	400	W
Peak pulse current ($t_p = 8/20\mu s$)	I_{PP}	10	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	155~125	$^{\circ}C$
Storage temperature	T_{STG}	-55~150	$^{\circ}C$

Electrical characteristics ($T_A=25^{\circ}C$ unless otherwise noted)

PARAMETER	Symbol	UNIT	Conditions	Min	Typ	Max
Reverse maximum working voltage	V_{RWM}	V				15
Reverse leakage current	I_R	μA	$V_{RWM} = 15V$			0.5
Reverse breakdown voltage	V_{BR}	V	$I_{BR} = 1mA$	16.5		
Clamping voltage ¹⁾	V_{CL}	V	$I_{PP} = 1A, t_p = 8/20\mu s$			24
		V	$I_{PP} = 10A, t_p = 8/20\mu s$			40
Junction capacitance	C_J	pF	$V_R = 0V, f = 1MHz$		45	55

Notes:

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

Ratings and V-I haracteristics curves

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

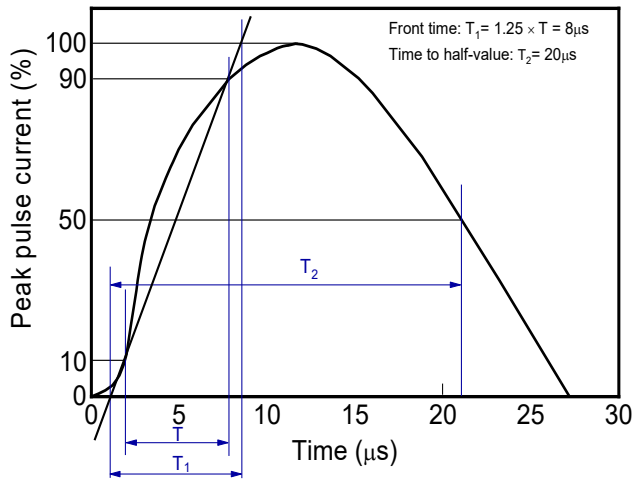


Fig.2 Contact discharge current waveform per IEC61000-4-2

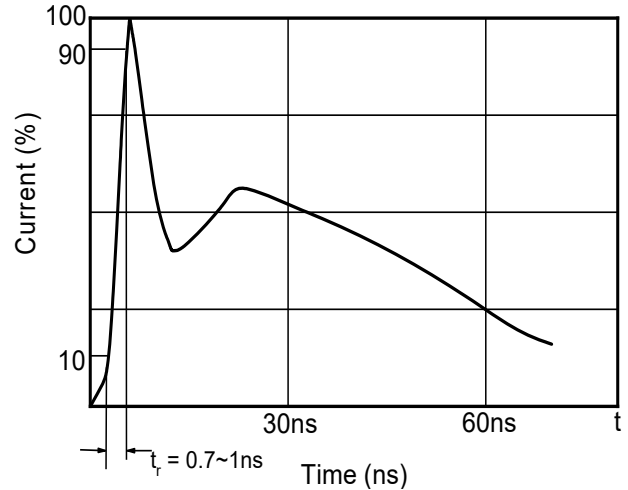


Fig.3 Clamping voltage vs. Peak pulse current

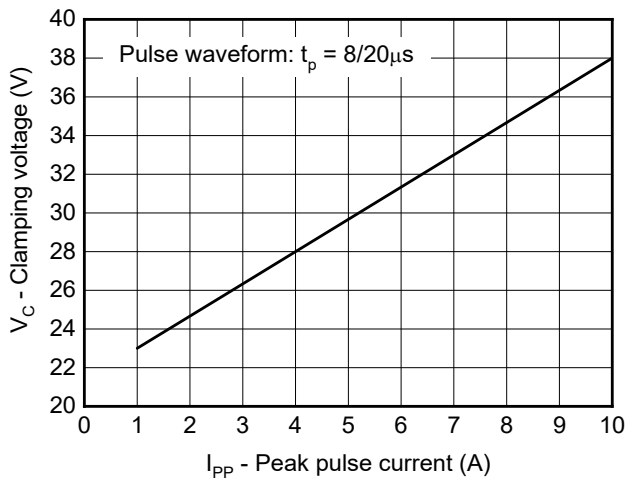


Fig.4 Capacitance vs. Reverse voltage

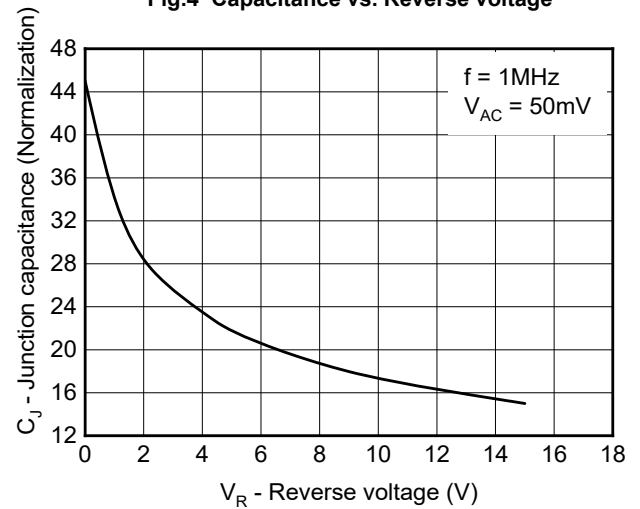


Fig.5 Non-repetitive peak pulse power vs. Pulse time

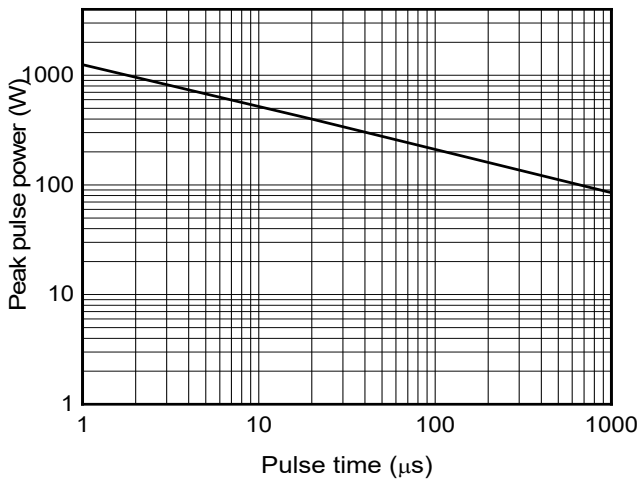
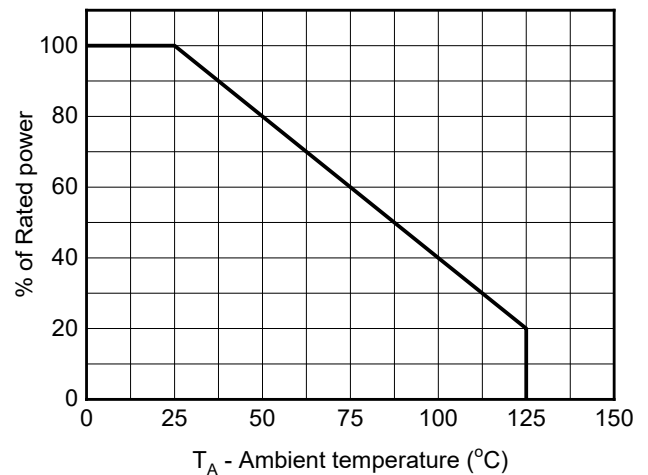
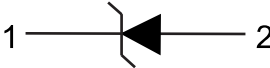


Fig.6 Power derating vs. Ambient temperature



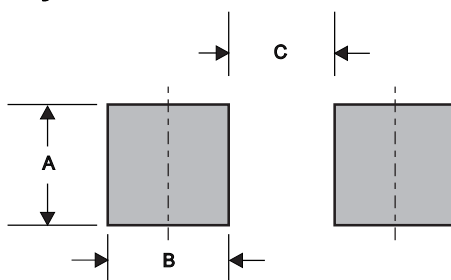
Pinning information

Pin	Simplified outline	Symbol
Pin1 cathode Pin2 anode		

Marking

Type number	Marking code
ESD5Z15A10-Q1	15.

Suggested solder pad layout



Dimensions in inches and (millimeters)

PACKAGE	A	B	C
SOD-523	0.031 (0.80)	0.024 (0.60)	0.044 (1.12)