

1-Line, Bi-directional, Transient Voltage Suppressors

Features

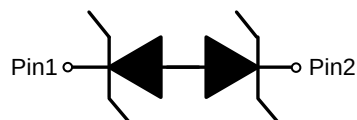
- ◆ IEC61000-4-2(ESD):±30KV Max Air
±30KV Max Contact
- ◆ IEC61000-4-4(EFT):40A(5/50ns)
- ◆ IEC61000-4-5(Surge): 10A (8/20us)
- ◆ Line capacitance:15.0pF@1MHz
- ◆ Very low reverse current: $I_R < 0.2\mu A$ (typical)
- ◆ Halogen free ,Lead free and RoHs
- ◆ AEC-Q101



SOD-523

Application

- ◆ Cellular phones
- ◆ Portable devices
- ◆ Digital cameras
- ◆ Player
- ◆ Smart home
- ◆ Robot



Circuit diagram

Order information

Model	Marking	Package	shipping
ESD5B150TBC	5C	SOD-523	3000/Tape&Reel

Maximum Rating

Rating	symbol	value	Units
Peak Pulse Current($t_p=8/20\mu s$)	I_{pp}	10.0	A
ESD per IEC61000-4-2(Contact)	V_{ESD}	±30	KV
ESD per IEC61000-4-2(Air)		±30	
Operating Temperature	T_J	-50~125	°C
Storage Temperature	T_{STG}	-65~150	°C

Electrical characteristic(T=25°C unless otherwise specified)

Parameter	Symbol	Conditions	Min.	TYP.	Max.	Units
Reverse stand-off voltage	V_{RWM}				± 5.0	V
Reverse leakage current	I_R	$V_{RWM}=5.0V$			0.2	μA
Reveres breakdown voltage	V_{BR}	$I_T=1mA$	5.6		8.2	V
Peak pulse current	I_{PP}	$V_{C\ Max} (8/20\mu s)$	9.0	10.0		A
Clamping voltage	V_C	$I_{PP}=1.0A(8/20\mu s)$			9.5	V
		$I_{PP}=10.0A(8/20\mu s)$			13.0	V
Junction capacitance	C_J	$V_R=0V\ f=1MHz$		15.0		pF

Electrical characteristic(T=25°C, unless otherwise specified)

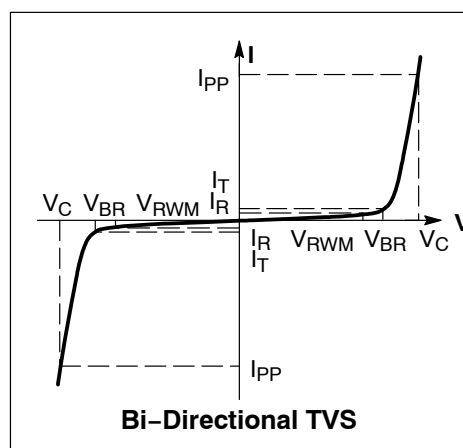
Electrical performance curve

V_C : Maximum clamping voltage

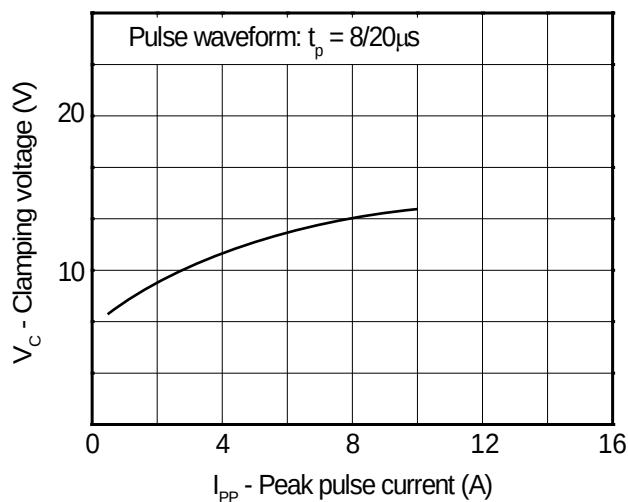
V_{br} : Reverse breakdown voltage

V_{RWM} : Working voltage

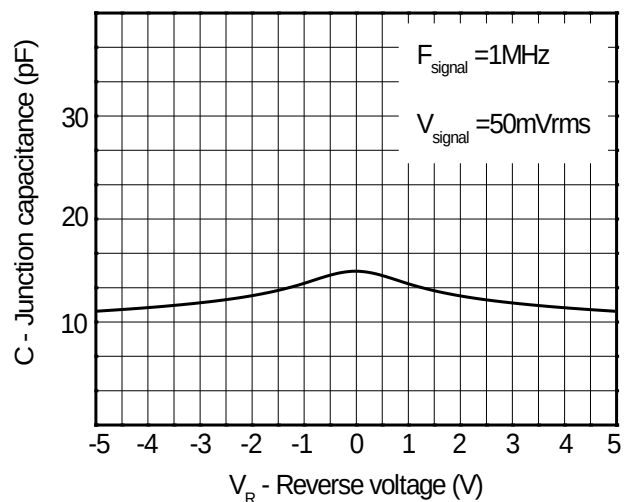
I_{PP} : Maximum peak current



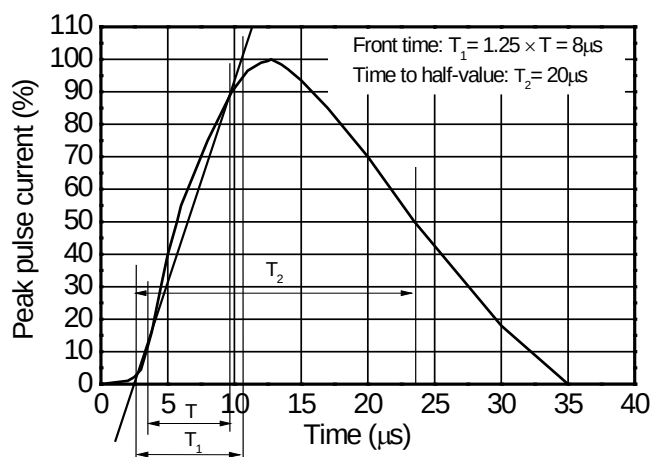
Typical characteristic



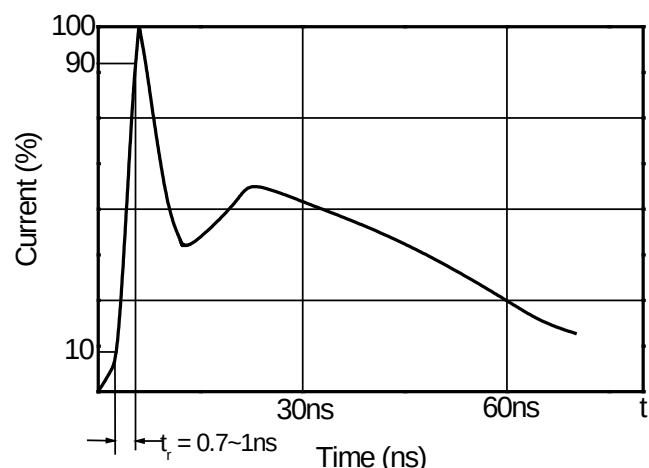
Clamping voltage vs. Peak pulse current



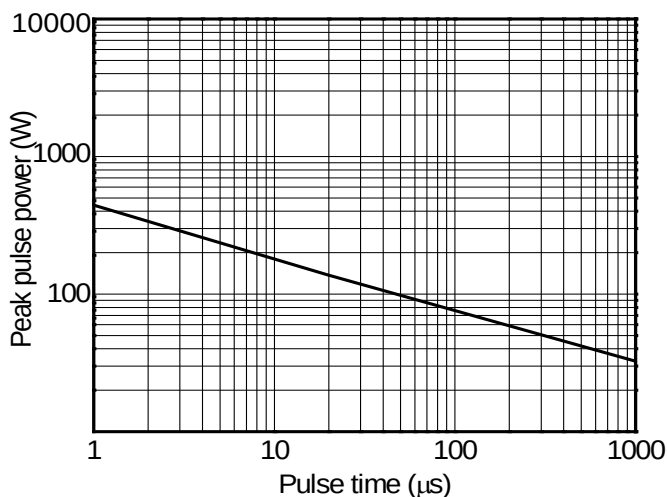
Capacitance vs. Reverse voltage



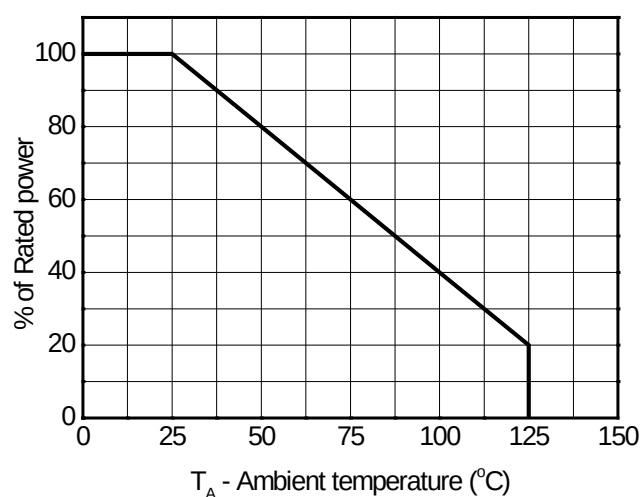
8/20 μs waveform per IEC61000-4-5



Contact discharge current waveform per IEC61000-4-2



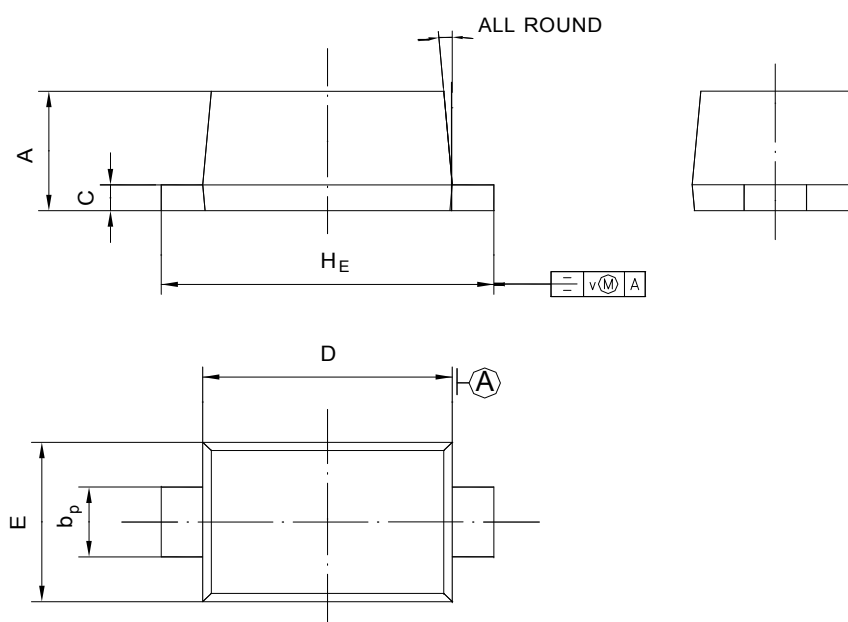
Non-repetitive peak pulse power vs. Pulse time



Power derating vs. Ambient temperature

Package outline dimensions

SOD-523



UNIT	A	b _p	C	D	E	H _E	V	
mm	0.70 0.60	0.4 0.3	0.135 0.100	1.25 1.15	0.85 0.75	1.7 1.5	0.1	5°

Recommended Mounting Pad Layout Unit:mm

