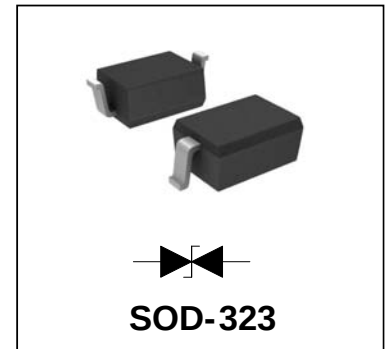


Features

- Bidirectional ESD protection of one I/O line
- Ultra low capacitance: typically 0.8pF
- Low clamping voltage
- Working voltage: 5V
- Low leakage current
- Solid-state silicon-avalanche technology
- IEC 61000-4-2 $\pm 30\text{kV}$ contact $\pm 30\text{kV}$ air
- IEC 61000-4-4 (EFT) 40A (5/50ns)
- IEC 61000-4-5 (Lightning) 25A (8/20 μs)



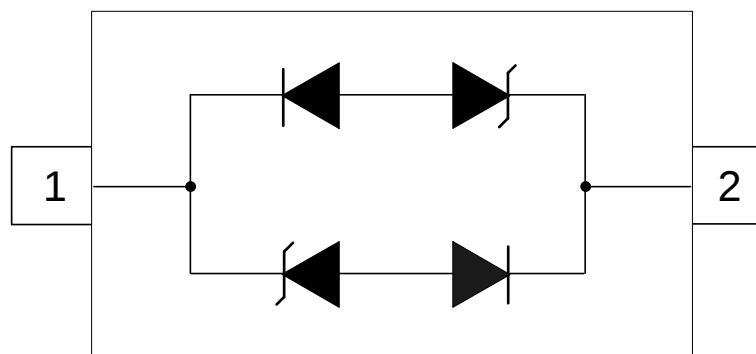
Mechanical Characteristics

- JEDEC SOD-323 package
- Molding compound flammability rating: UL 94V-0
- Marking : Marking Code
- Packaging : Tape and Reel per EIA 481
- RoHS Compliant

Applications

- Smart Phone
- Laptop
- Wearable
- LCD TV
- USB 2.0/3.0
- PCI Express
- HDMI 1.3/1.4/2.0
- DVI

Schematic & PIN Configuration



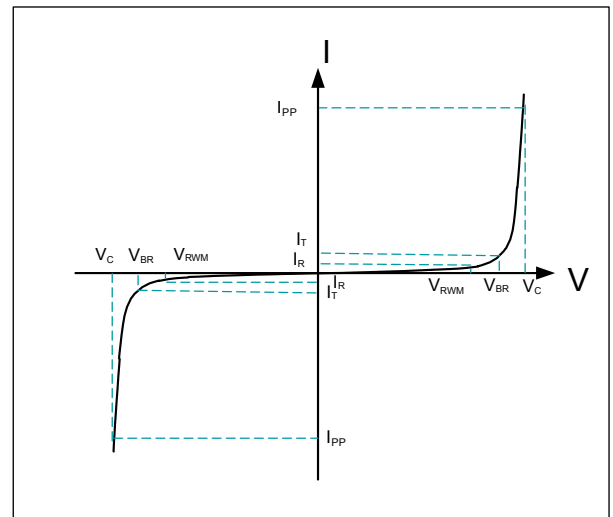
SOD-323 (Top View)

Absolute Maximum Rating

Rating	Symbol	Value	Units
Peak Pulse Power ($t_p = 8/20\mu s$)	P_{PP}	400	Watts
Peak Pulse Current ($t_p = 8/20\mu s$)(note1)	I_{pp}	25	A
ESD per IEC 61000-4-2 (Air) ESD per IEC 61000-4-2 (Contact)	V_{ESD}	30 30	kV
Lead Soldering Temperature	T_L	260(10seconds)	°C
Junction Temperature	T_J	-55 to + 125	°C
Storage Temperature	T_{stg}	-55 to + 125	°C

Electrical Parameters (TA = 25°C unless otherwise noted)

Symbol	Parameter
I_{PP}	Maximum Reverse Peak Pulse Current
V_C	Clamping Voltage @ I_{PP}
V_{RWM}	Working Peak Reverse Voltage
I_R	Maximum Reverse Leakage Current @ V_{RWM}
V_{BR}	Breakdown Voltage @ I_T
I_T	Test Current

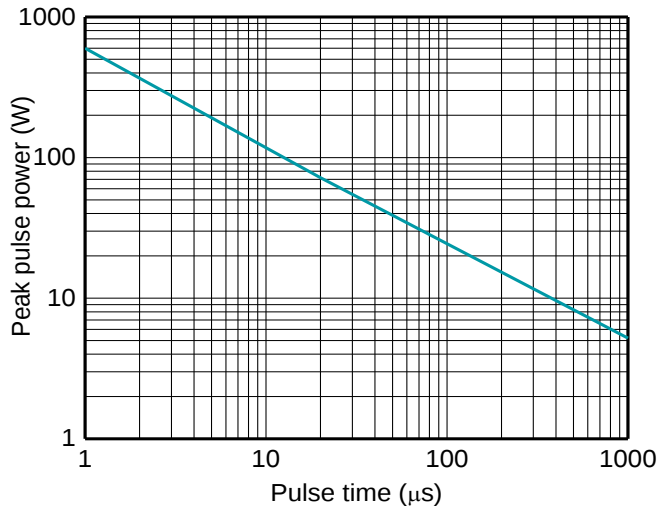


Note: 8/20 μs pulse waveform.

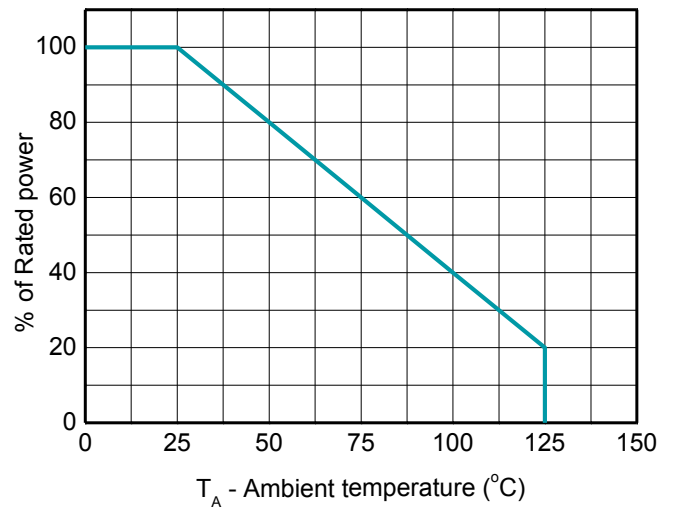
Electrical Characteristics

Parameter	Symbol	Conditions	Min	Typical	Max	Units
Reverse Stand-Off Voltage	V_{RWM}				5	V
Reverse Breakdown Voltage	V_{BR}	$I_T = 1mA$	6			V
Reverse Leakage Current	I_R	$V_{RWM} = 5V, T = 25^\circ C$			0.1	μA
Peak Pulse Current	I_{PP}	$t_p = 8/20\mu s$		25		A
Clamping Voltage	V_C	$I_{PP} = 25A, t_p = 8/20\mu s$		16		V
Junction Capacitance	C_j	$V_R = 0V, f = 1MHz$		0.8		pF

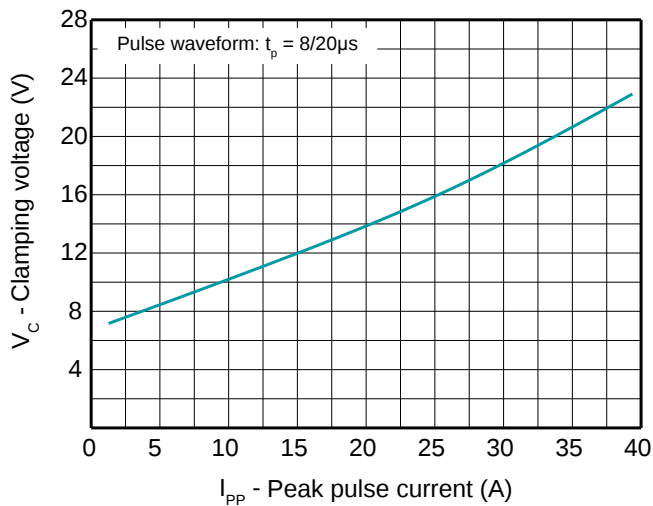
Typical Characteristics



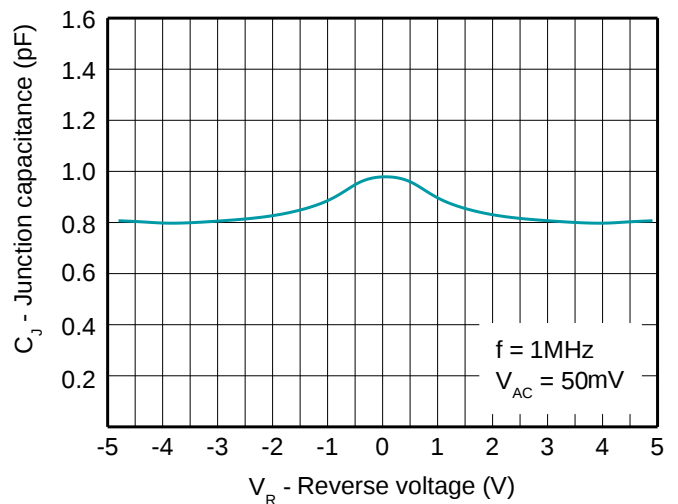
Non-repetitive peak pulse power vs. Pulse time



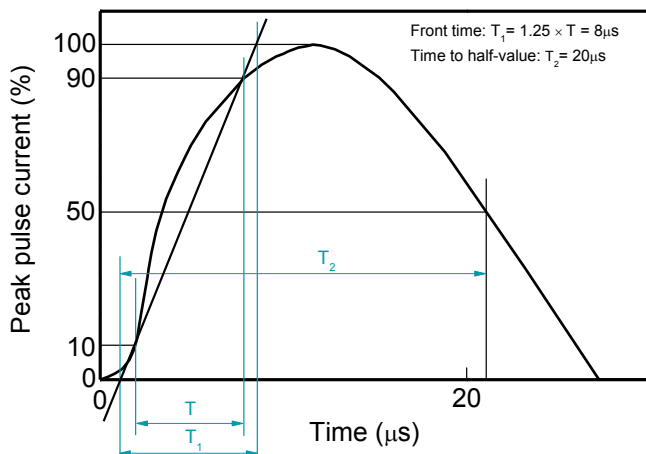
Power derating vs. Ambient temperature



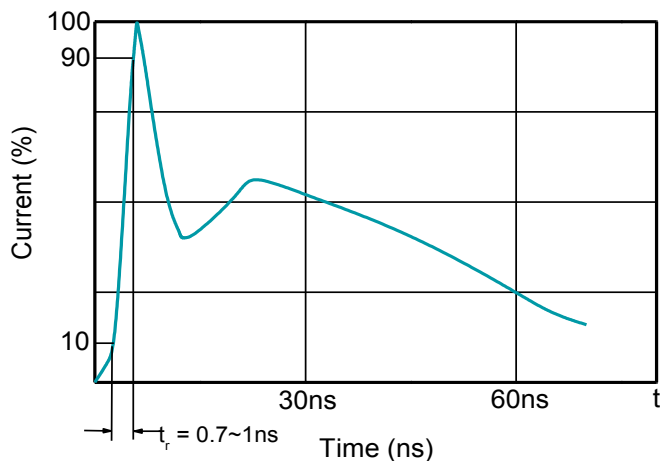
Clamping voltage vs. Peak pulse current



Capacitance vs. Reverse voltage

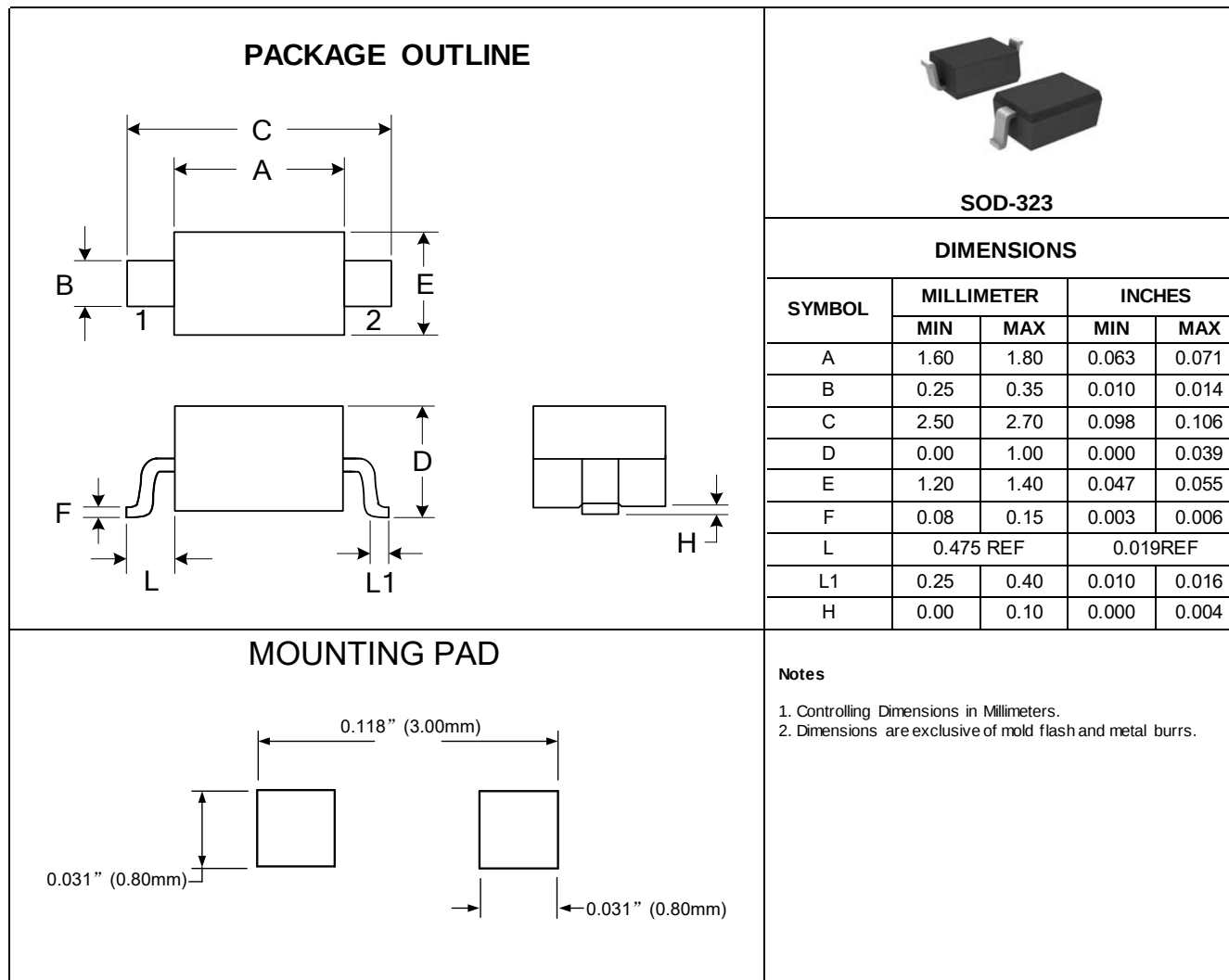


8/20 μ s waveform per IEC61000-4-5

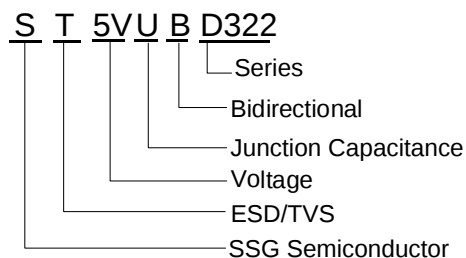


Contact discharge current waveform per IEC61000-4-2

Outline Drawing – SOD-323



Part Numbering System



Device	Package	Shipping	Marking	Parameter
ST5VUBD322	SOD-323	3000/Tape&Reel	5B *	5B = Product Code LC = Device Code