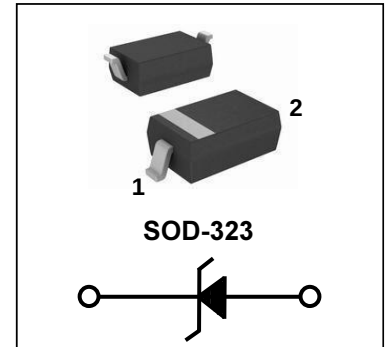


Features

- 400Watts peak pulse power ($t_p = 8/20\mu s$)
- Unidirectional configurations
- Solid-state silicon-avalanche technology
- Low clamping voltage
- Low leakage current



IEC COMPATIBILITY (EN61000-4)

- IEC 61000-4-2 (ESD) $\pm 30kV$ (air), $\pm 30kV$ (contact)
- IEC 61000-4-4 (EFT) 40A (5/50ns)
- IEC 61000-4-5 (Lightning) 20A (8/20 μs)

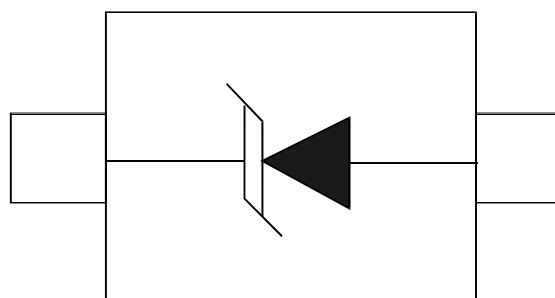
Mechanical Characteristics

- SOD-323 package
- Molding compound flammability rating: UL94V-0
- Packaging: Tape and Reel
- RoHS/WEEE Compliant

Applications

- Security
- Power Line
- Power management

Schematic & PIN Configuration



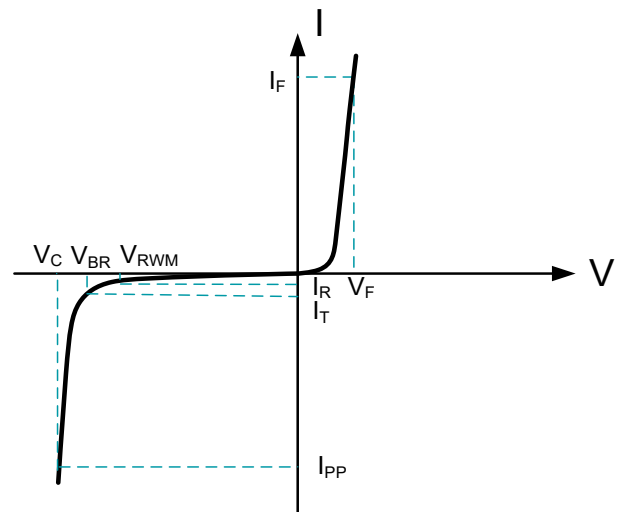
SOD-323 (Top View)

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}	20	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 + 150	°C
Storage Temperature	T_{stg}	-55 to + 150	°C

Electrical Parameters (T=25°C)

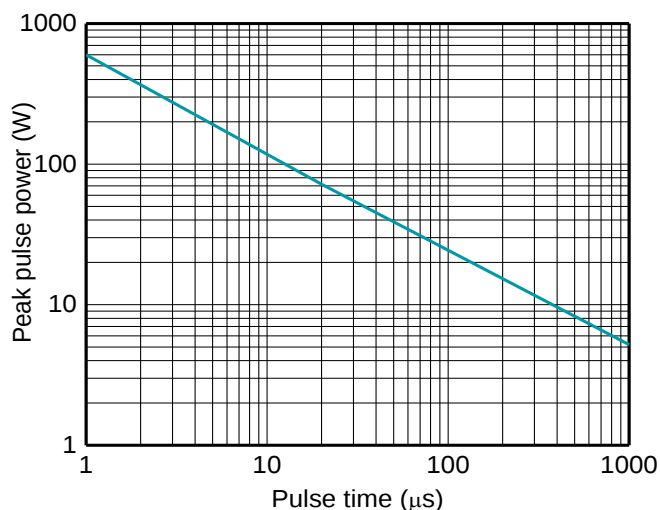
Symbol	Parameter
I_{PP}	Reverse Peak Pulse Current
V_C	Clamping Voltage @ I_{PP}
V_{RWM}	Working Peak Reverse Voltage
I_R	Reverse Leakage Current @ V_{RWM}
V_{BR}	Breakdown Voltage @ I_T
I_T	Test Current
I_F	Forward Current
V_F	Forward Voltage @ I_F



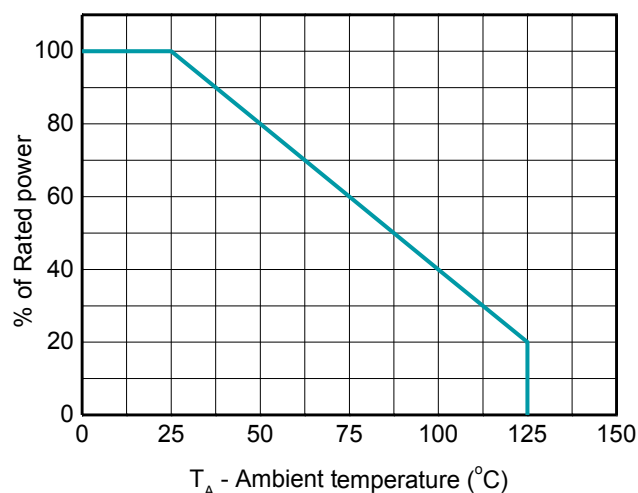
Electrical Characteristics

Parameter	Symbol	Conditions	Min	Typical	Max	Units
Reverse Stand-Off Voltage	V_{RWM}				8	V
Reverse Breakdown Voltage	V_{BR}	$I_T = 1mA$	9			V
Reverse Leakage Current	I_R	$V_{RWM} = 8V, T = 25^\circ C$			0.1	μA
Peak Pulse Current	I_{PP}	$t_p = 8/20\mu s$		20		A
Clamping Voltage	V_C	$I_{PP} = 20A, t_p = 8/20\mu s$		20		V
Junction Capacitance	C_j	$V_R = 0V, f = 1MHz$		100		pF

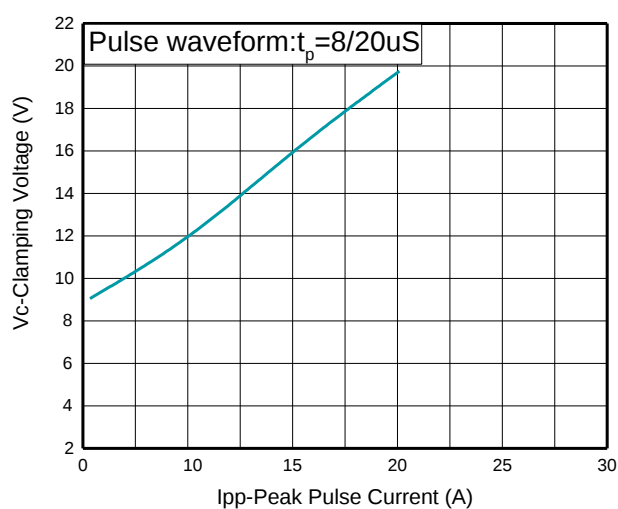
Typical Characteristics



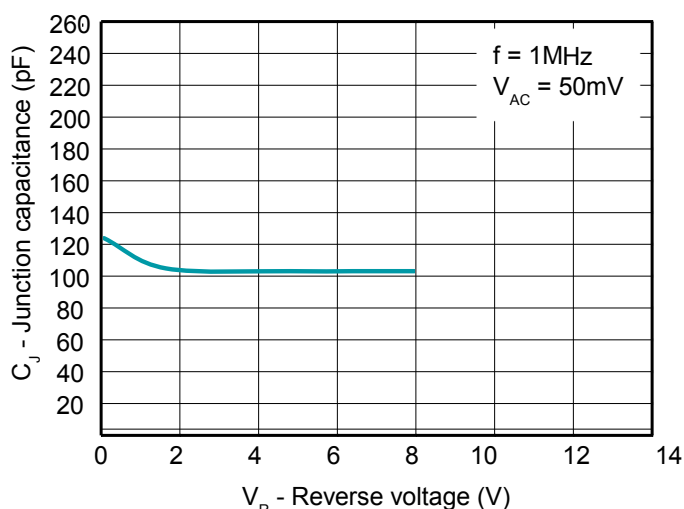
Non-repetitive peak pulse power vs. Pulse time



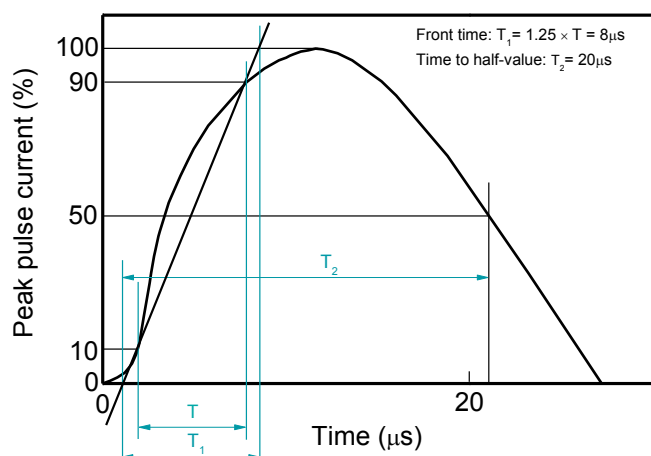
Power derating vs. Ambient temperature



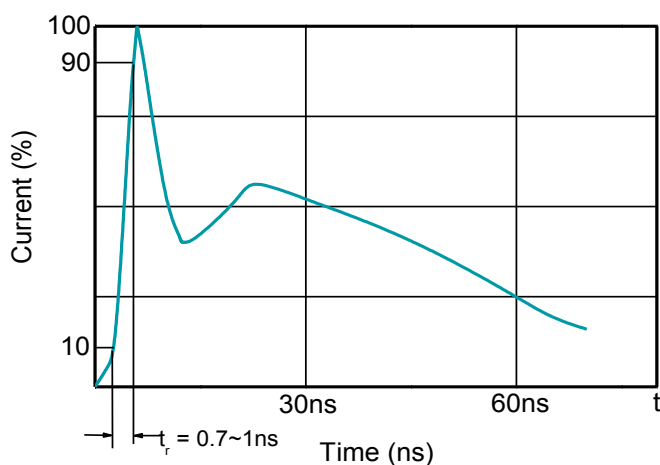
Clamping voltage vs. Peak pulse current



Capacitance vs. Reverse voltage

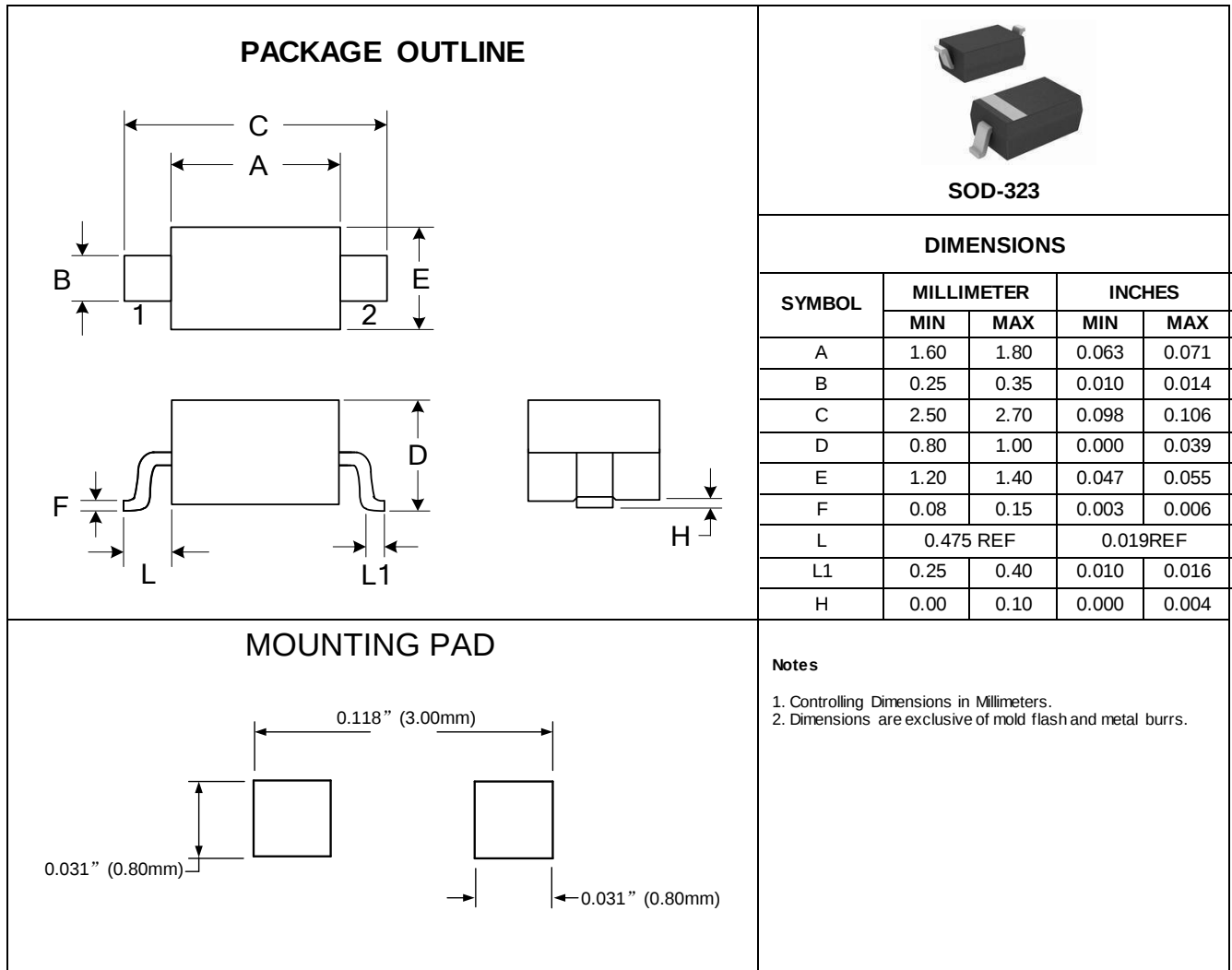


8/20 μs waveform per IEC61000-4-5

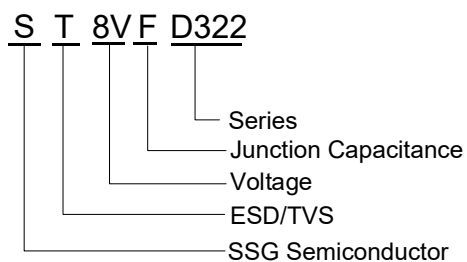


Contact discharge current waveform per IEC61000-4-2

Outline Drawing – SOD-323



Part Numbering System



Device	Package	Shipping	MarKing	Parameter
ST8VFD322	SOD-323	3000/Tape&Reel	08	08 = Product Code * = Device Code