

**Transient Voltage Suppressor**

**APPLICATIONS**

- ◆Laptop Computers
- ◆Cellular Phones
- ◆Digital Cameras
- ◆Personal Digital Assistant (PDA<sub>S</sub>)

**IEC COMPATIBILITY (EN61000-4)**

- ◆61000-4-2 (ESD): Air±30kV, Contact ±30kV
- ◆61000-4-4 (EFT): 40A - 5/50ns
- ◆61000-4-5 (Lightning) 12A (8/20μs)

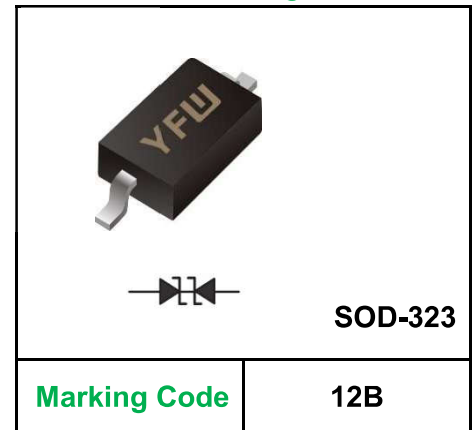
**FEATURES**

- 500 Watts Peak Pulse Power per Line (tp = 8/20μs)
- Protects one I/O or power line
- Working Voltage: 12V
- Low Leakage Current
- Response Time is Typically < 1 ns

**MECHANICAL DATA**

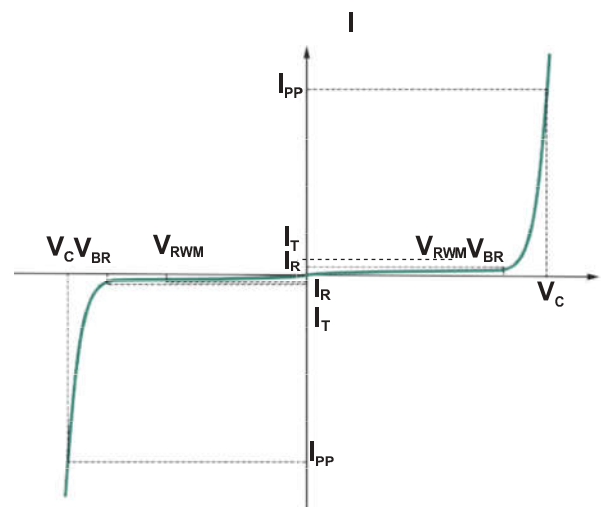
- ◆Case:SOD-323
- ◆Terminals: Solderable per MIL-STD-750, Method 2026
- ◆Approx.Weight:5.48mg/0.00019oz

**Pinning**



**ElectronicsParameter**

Parameter	Symbol
MaximumReversePeakPulseCurrent	$I_{PP}$
ClampingVoltage@Ipp	$V_C$
PeakReverseWorkingVoltage	$V_{RWM}$
ReverseLeakageCurrent @VRWM	$I_R$
BreakdownViltage@IT	$V_{BR}$
TestCurrent	$I_T$
ForwardCurrent	$I_F$
ForwardVoltage@IF	$V_F$



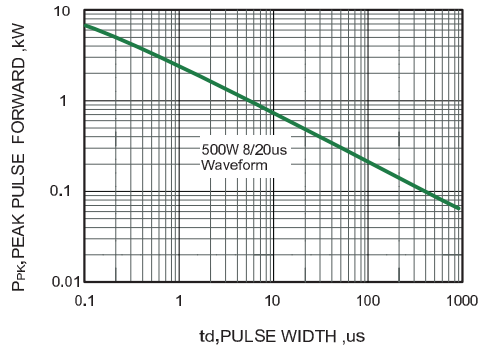
**AbsoluteMaximumRating**

Rating	Symbol	Value	Unit
PeakPulsePower(tp=8/20us)	PPP	500	W
PeakPulseCurrent(tp=8/20us)	IPP	12	A
OperatingJunctionTemperature	TJ	-55to+125	°C
StorageTemperature	T <sub>STG</sub>	-55to+150	°C

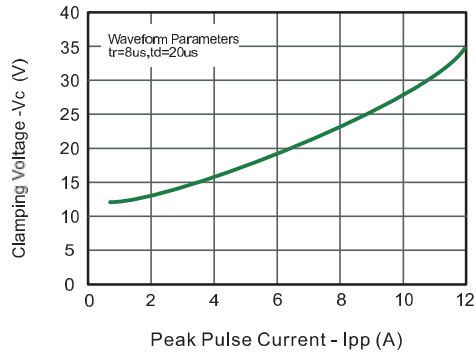
**ElectricalCharacteristics(Tamb=25°C)**

Parameter	Symbol	Conditions	Minimum	Typical	Maximum	Units
ReverseStand-OffVoltage	VRWM				12.0	V
ReverseBreakdownVoltage	VBR	IT=1mA	13.3			V
ReverseLeakageCurrent	IR	VRWM=12V,Ta=25°C			1.0	uA
ClampingVoltage	VC	IPP=12A,tp=8/20us		33	35	V
JunctionCapacitance	Cj	VR=0V,f=1HMz		25		pF

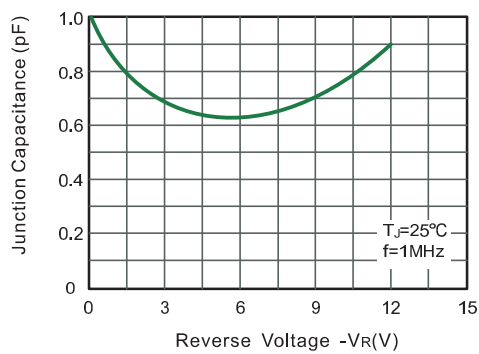
**Fig.1 Non-Repetitive Peak Pulse Power vs. Pulse Time**



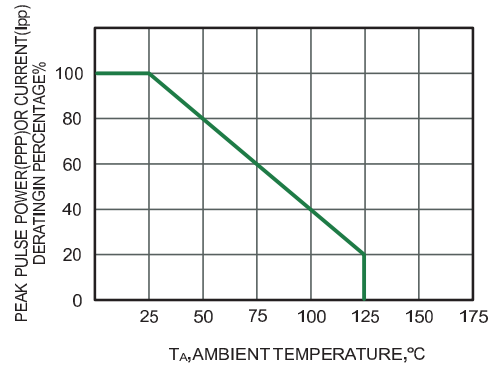
**Fig.3 Waveform**



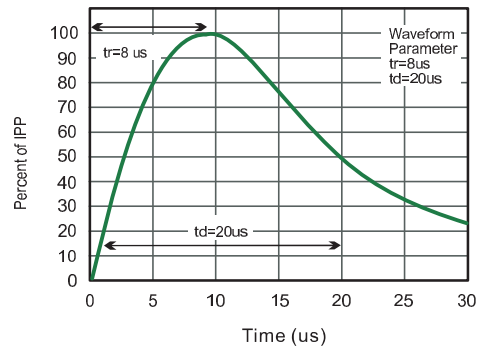
**Fig.5 Typical Junction Capacitance**



**Fig.2 Forward Current Derating Curve**

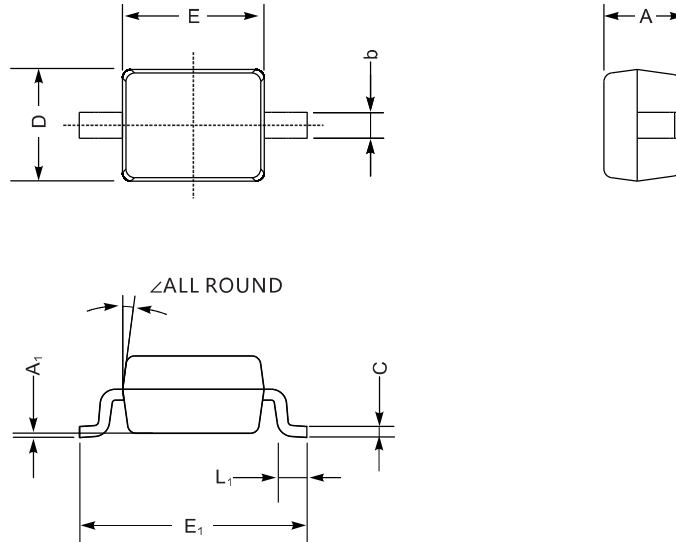


**Fig.4 Power Derating Curve**



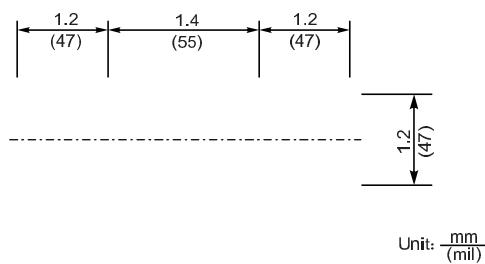
**Package Outline SOD-323**

Plastic surface mounted package; 2 leads



UNIT		A	C	D	E	E <sub>1</sub>	b	L <sub>1</sub>	A <sub>1</sub>	∠
mm	max	1.1	0.15	1.4	1.8	2.75	0.4	0.45	0.2	9°
	min	0.8	0.08	1.2	1.4	2.55	0.25	0.2	—	
mil	max	43	5.9	55	70	108	16	16	8	
	min	32	3.1	47	63	100	9.8	7.9	—	

**The recommended mounting pad size**



**Summary of Packing Options**

Package	Packing Description	Packing Quantity	Industry Standard
SOD-323	Tape/Reel, 7" reel	3000	EIA-481-1