

1-Line Uni-directional TVS Diode

Features

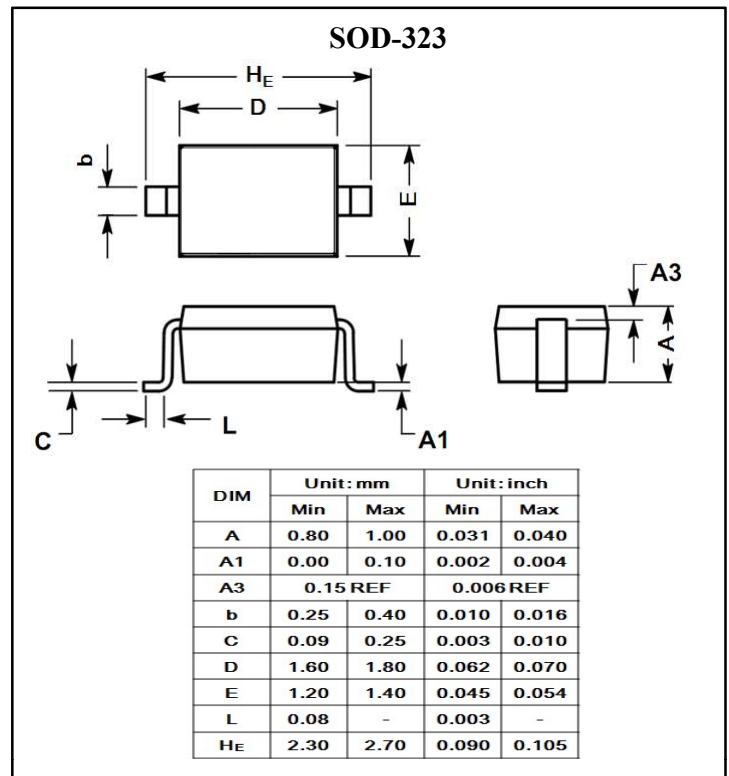
- 500W peak pulse power (8/20us)
- Protects one data or power line
- Ultra low leakage : nA level
- Operating voltage : 5V
- Ultra low clamping voltage
- JEDEC SOD-323 package
- Complies with following standards :
 - IEC 61000-4-2(ESD) immunity test
Air discharge : $\pm 30\text{kV}$, Contact discharge : $\pm 30\text{kV}$
 - IEC61000-4-4 (EFT) 40A (5/50ns)
- RoHS Compliant

Mechanical Data

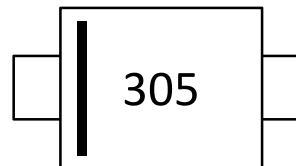
- Package : SOD-323
- Case Material : "Green" Molding Compound.
- Lead Finish : Matte Tin
- UL Flammability Classification Rating 94V-0
- Moisture Sensitivity : Level 3 per J-STD-020
- Terminal Connections : See Diagram Below
- Marking Information : See Below

Applications

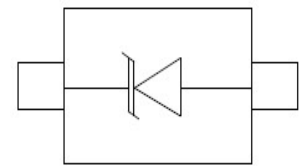
- Cellular Handsets and Accessories
- Personal Digital Assistants
- Notebooks and Handhelds
- Portable Instrumentation
- Peripherals
- Pagers Peripherals
- Desktop and Servers



Marking



305 = Device Marking Code



Pin Configuration

Absolute Maximum Ratings (Ta= 25°C unless otherwise specified)

Parameter	Symbol	Value	Unit
Peak Pulse Power (8/20us)	Ppk	500	W
Peak Pulse Current (8/20us)	Ipp	40	A
ESD per IEC 61000-4-2 (Air)	V _{ESD}	± 30	kV
ESD per IEC 61000-4-2 (Contact)		± 30	
Operating Junction Temperature Range	T _J	-55 to +125	°C
Storage Temperature Range	T _{STG}	-55 to +150	°C

Electrical Characteristics (Ta= 25°C unless otherwise specified)

Characteristic	Symbol	Min.	Typ.	Max.	Unit	Test Condition
Reverse Working Voltage	V _{RWM}	-	-	5.0	V	
Breakdown Voltage	V _{BR}	6.0	-	-	V	I _T = 1mA,
Reverse Leakage Current	I _R	-	-	1.0	uA	V _{RWM} = 5V
Clamping Voltage	V _C	-	-	9.5	V	I _{pp} = 5A (8×20us pulse)
Clamping Voltage	V _C	-	-	12.5	V	I _{pp} = 40A (8×20us pulse)
Junction Capacitance	C _J	-	-	350	pF	f = 1MHz, V _R = 0V



Ratings and Characteristics Curves ($T_a=25^{\circ}\text{C}$ unless otherwise noted)

Fig.1 Power Derating Curve

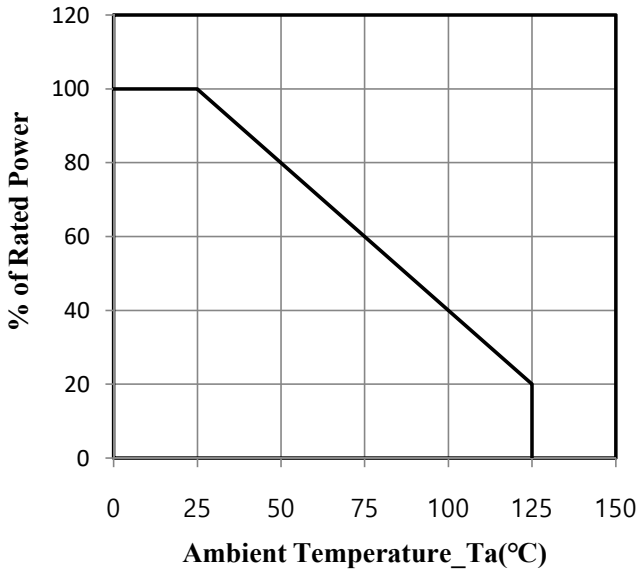


Fig.2 Peak Pulse Power vs. Pulse Time

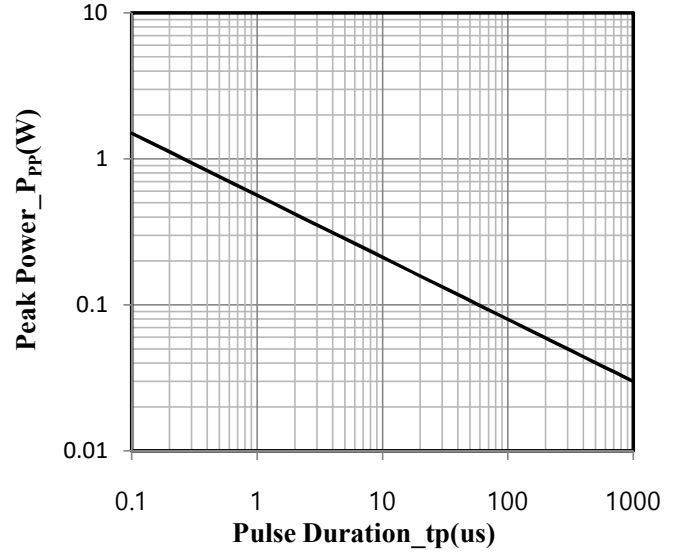


Fig.3 $8 \times 20\mu\text{s}$ Pulse Waveform

