

Descriptions

This is working voltage 3.3V ESD protection diode in a SOD-323 package.

Features

- 2-pin lead-less package
- Junction capacitance (Max value: 200pF)
- Peak Pulse current (8/20 μ s) MAX : 20A
- IEC61000-4-2 (ESD) $\pm$ 30kV (air), $\pm$ 30kV (contact)
- Low leakage current
- Working voltages:3.3V
- RoHS Compliant

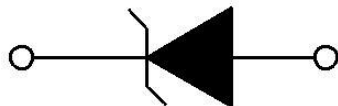
Applications

- Laptop Computers
- Cellular Phones
- Digital Cameras
- Personal Digital Assistants(PDAs)

Mechanical Characteristics

- Package: SOD-323
- Lead Finish:Matte Tin
- Case Material: "Green" Molding Compound
- UL Flammability Classification Rating 94V-0
- Moisture Sensitivity: Level 3 per J-STD-020
- Tape Reel :3000pcs

Equivalent Circuit & Pinning



Uni-directional



Absolute Maximum Ratings(Ta=25°C)

Parameters	Symbol	Value	Unit
Peak Pulse Power (tp=8/20μs waveform)	P _{PP}	300	W
Peak Pulse Current (8/20μs)	I _{PP}	20	A
ESD per IEC 61000-4-2 (Air)	V _{ESD}	±30	KV
ESD per IEC 61000-4-2 (Contact)		±30	
Operating Temperature Range	T _J	-55 to +125	°C
Storage Temperature Range	T _{stg}	-55 to +150	°C

Electrical Characteristics (Ta=25°C)

Parameter	Symbol	Test Condition	Min	Typ	Max	Unit
Reverse Working Voltage	V _{RWM}				3.3	V
Reverse Breakdown Voltage	V _{(BR)R}	I _R = 1mA	5		7	V
Reverse Leakage Current	I _R	V _R = 3.3V			0.5	uA
Clamping voltage	V _C	I _{PP} = 1A, T _P =8/20us			8	V
Clamping voltage	V _C	I _{PP} = 20A, T _P =8/20us			14	V
Junction capacitance	C _j	V _R = 0V, f = 1MHz			200	pF

Typical Characteristics

FIG1: Power rating derating curve

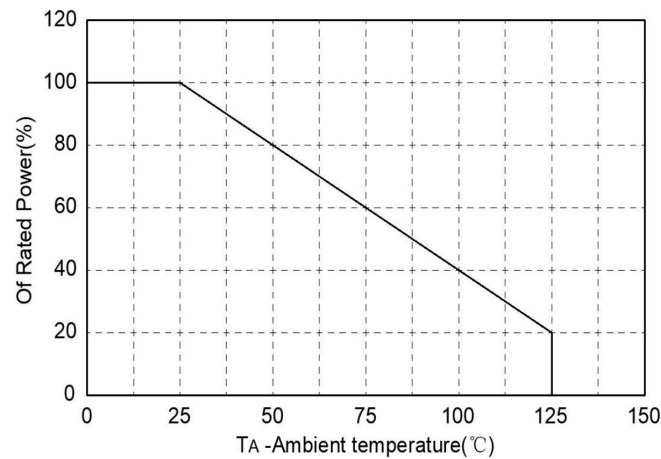


FIG2: pulse Waveform

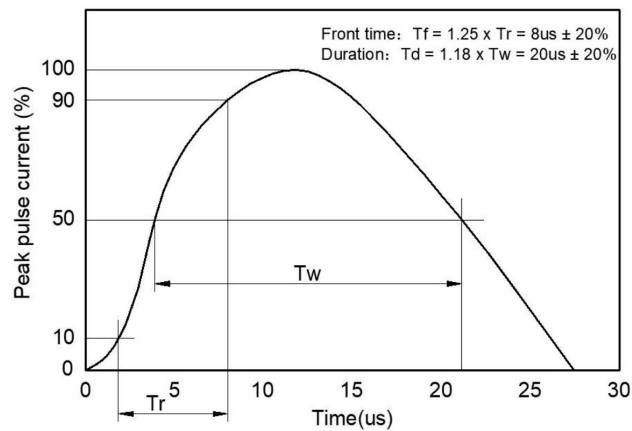


FIG3: Capacitance between teminals charateristics

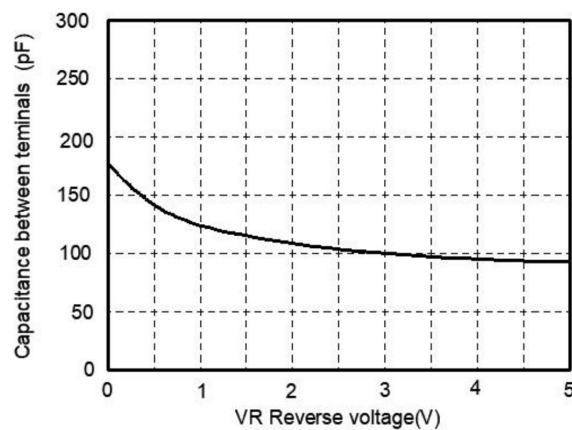
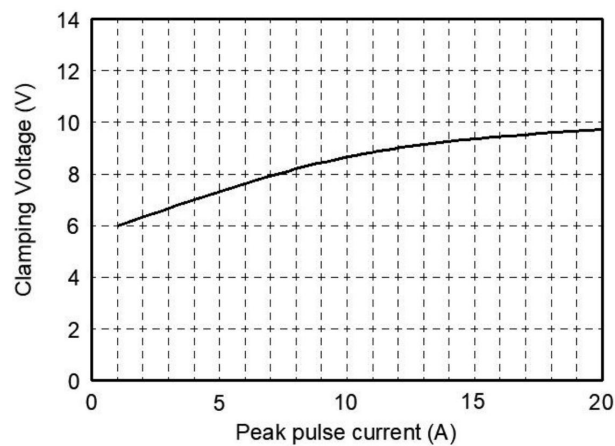
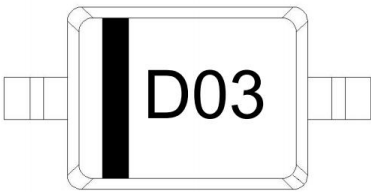


FIG4: Clamping Voltage vs. Peak Pulse Current

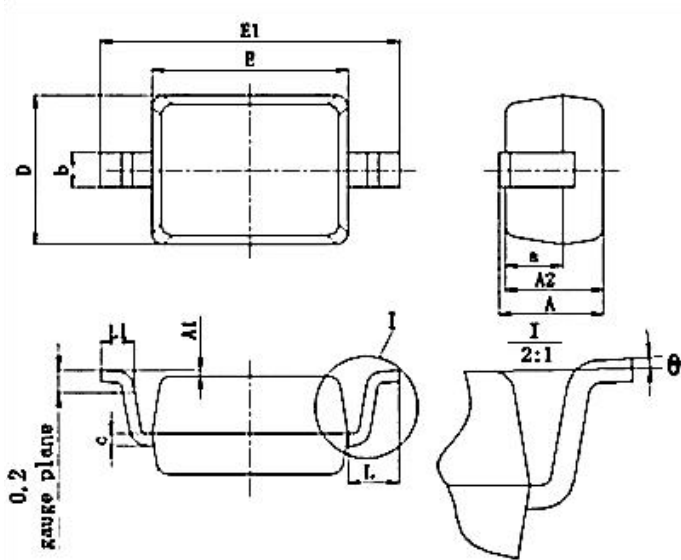


Marking Information



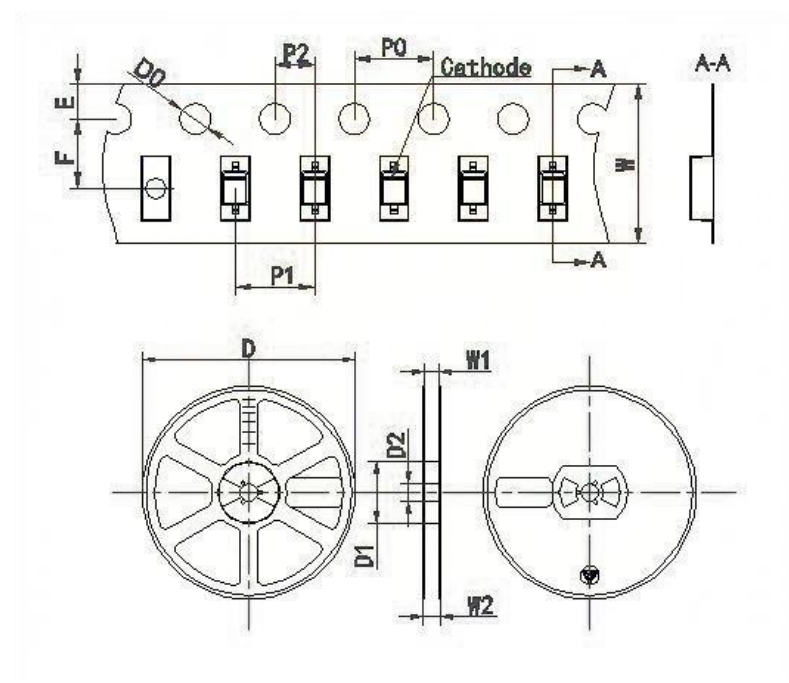
D03=Marking Code

Package mechanical data



Symbol	Millimeters	
	Min.	Max.
A	0.80	1.05
A1	0	0.1
A2	0.8	0.95
a	(0.5)	
D	1.2	1.4
E	1.6	1.8
E1	2.5	2.75
b	0.25	0.35
c	0.08	0.15
L	(0.475)	
L1	0.25	0.45
θ	0°	8°

Tape & reel specification - SOD-323



Symbol	Dimension in Millimeters
Tape	
D0	1.50+0.10/-0.00
E	1.75±0.10
F	3.50±0.10
P0	4.00±0.10
P1	4.00±0.10
P2	2.00±0.10
W	8.00+0.3/-0.1
Reel	
D	178.0±2.00
D1	54.40±1.00
D2	13.00±1.00
W1	9.50±1.00
W2	12.30±1.00