

Description

This is working voltage 5.0V ESD diode 2-pin lead-less package in a SOD-323 package.

Applications

- LED Lighting Modules
- RS232/RS485
- CAN and LIN Bus
- Portable Instrumentation
- General Purpose I/O
- Automotive application

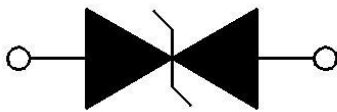
Features

- 2-pin lead-less package
- Junction capacitance (Max value: 100pF)
- Peak Pulse current (8/20 μ s) MAX : 25A
- IEC61000-4-2 (ESD) \pm 30kV (air), \pm 30kV (contact)
- Low leakage current
- Working voltages:5V
- RoHS Compliant

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



Bi-directional



Marking

Marking : 05B

Absolute Maximum Ratings (T=25°C, RH=45%-75%, unless otherwise noted)

Parameters	Symbol	Value	Unit
Peak Pulse Power (tp=8/20μs waveform)	PPP	400	W
Peak Pulse Current (8/20μs)	IPP	25	A
ESD per IEC 61000-4-2 (Air) ESD per IEC 61000-4-2 (Contact)	VESD	±30 ±30	KV
Operating Temperature Range	TJ	-55 to +125	°C
Storage Temperature Range	Tstg	-55 to +150	°C

Electrical Characteristics (T=25°C, RH=45%-75%, unless otherwise noted)

Parameter	Symbol	Test Condition	Min	Typ	Max	Unit
Reverse Working Voltage	VRWM				5	V
Reverse Breakdown Voltage	V(BR)R	IR = 1mA	6		9	V
Reverse Leakage Current	IR	VR = 5V			0.2	uA
Clamping voltage	VC	IPP = 20A, TP=8/20us			14	V
Clamping voltage	VC	IPP = 25A, TP=8/20us			16	V
Junction capacitance	Cj	VR = 0V, f = 1MHz			100	pF

Typical Characteristics

FIG1: Power rating derating curve

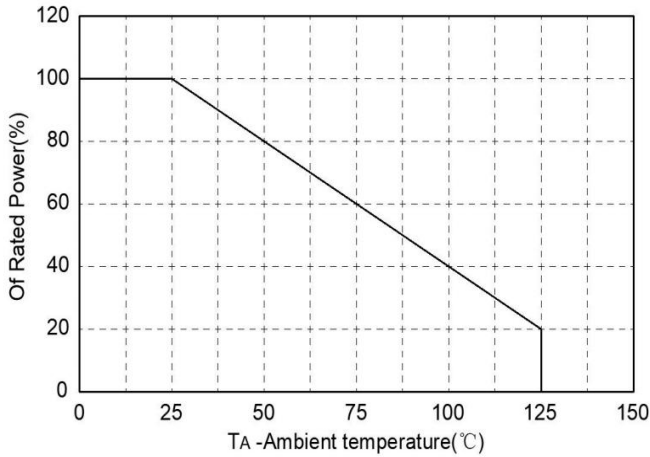


FIG2: pulse Waveform

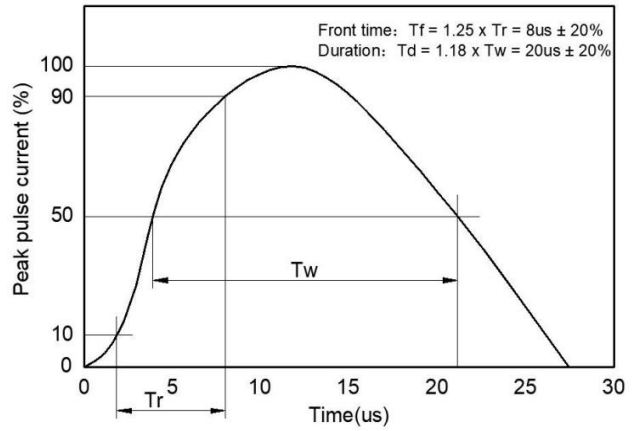


FIG3: Capacitance between terminals characteristics

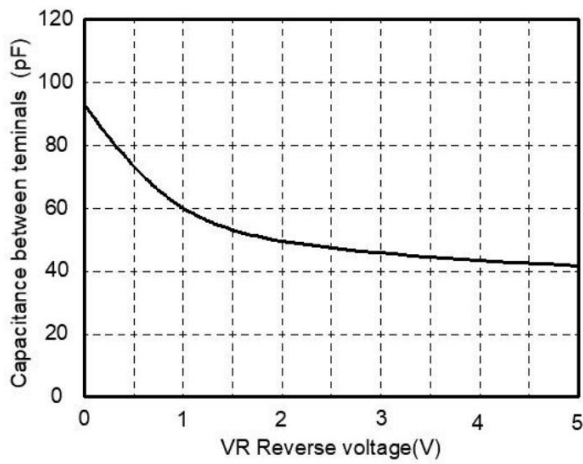
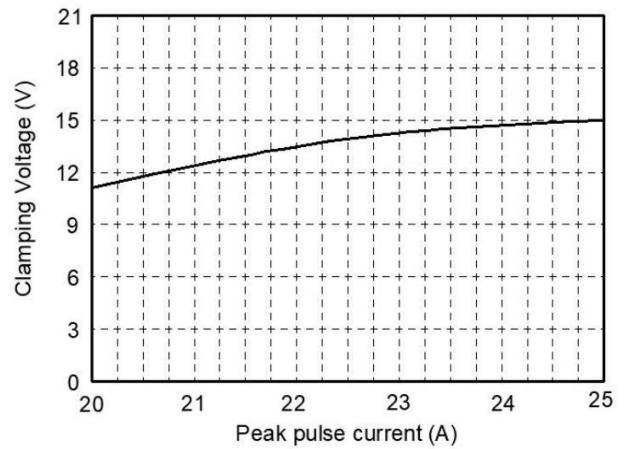


FIG4: Clamping Voltage vs. Peak Pulse Current

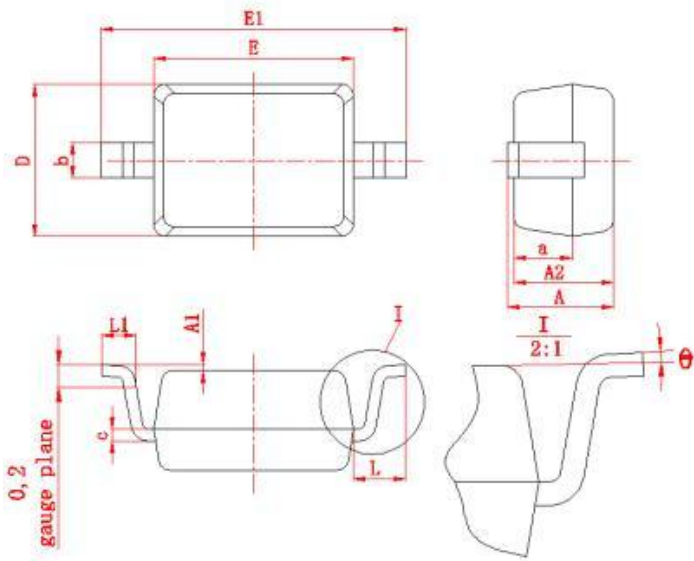


Marking Information



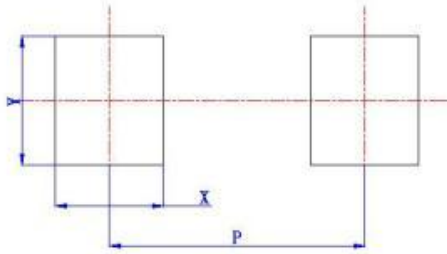
05B=Marking Code

Package mechanical data



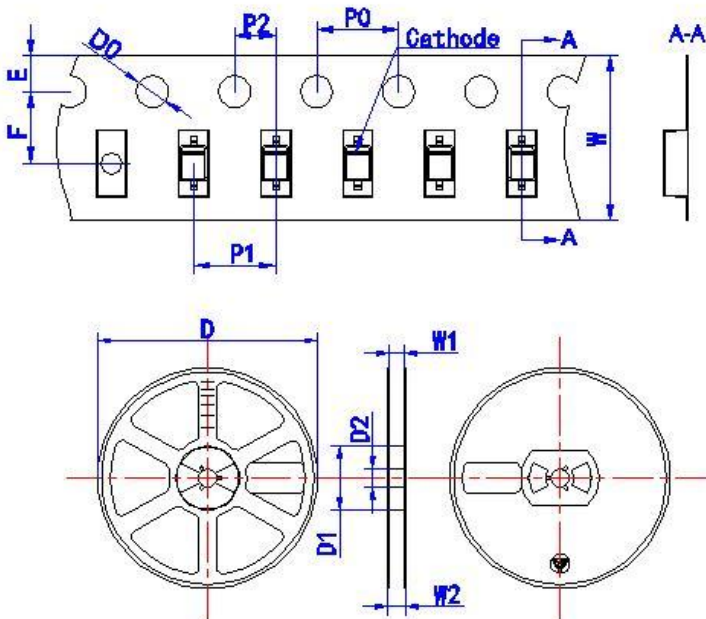
Symbol	Millimeters	
	Min.	Max.
A	0.80	1.05
A1	0	0.1
A2	0.8	0.95
a	(0.5)	
D	1.2	1.4
E	1.6	1.8
E1	2.5	2.75
b	0.25	0.35
c	0.08	0.15
L	(0.475)	
L1	0.25	0.45
θ	0°	8°

Suggested Land Pattern



Symbol	Dimension in Millimeters
	Typ.
X	(0.7)
Y	(0.7)
P	(2.3)

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