## 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: 100pF)
- Peak Pulse current (8/20μs) MAX : 25A
- IEC61000-4-2 (ESD) ±30kV (air), ±30kV (contact)
- Low leakage current
- Working voltages:3.3V
- RoHS Compliant

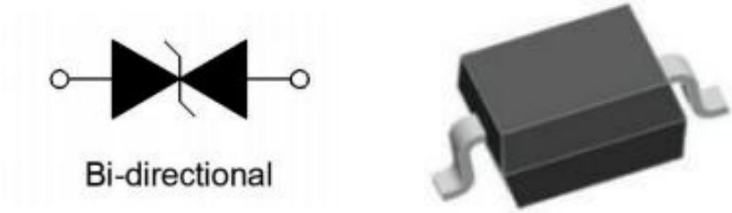
## Applications

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

## Mechanical Characteristics

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

## Equivalent Circuit & Pinning



## Absolute Maximum Ratings(Ta=25℃)

| Parameters | Symbol | Value | Unit |
|---|---|---|---|
| Peak Pulse Power (tp=8/20μs waveform) | $P_{PP}$ | 375 | W |
| Peak Pulse Current (8/20μs) | $I_{PP}$ | 25 | A |
| ESD per IEC 61000−4−2 (Air)<br>ESD per IEC 61000−4−2 (Contact) | VESD | ±30<br>±30 | KV |
| Operating Temperature Range | $T_J$ | −55 to +125 | ℃ |
| Storage Temperature Range | Tstg | −55 to +150 | ℃ |

## Electrical Characteristics (Ta=25℃)

| Parameter | Symbol | Test Condition | Min | Typ | Max | Unit |
|---|---|---|---|---|---|---|
| Reverse Working Voltage | $V_{RWM}$ | | | | 3.3 | V |
| Reverse Breakdown Voltage | $V_{BR}$ | $I_R$ = 1mA | 5 | | 8 | V |
| Reverse Leakage Current | $I_R$ | $V_R$ = 3.3V | | | 0.5 | uA |
| Clamping voltage | $V_C$ | $I_{PP}$ = 1A,$T_P$=8/20us | | | 10 | V |
| Clamping voltage | $V_C$ | $I_{PP}$ = 25A,$T_P$=8/20us | | | 15 | V |
| Junction capacitance | Cj | $V_R$ =0V,f = 1MHz | | | 100 | pF |

## Typical Characteristics

FIG1：Power rating derating curve

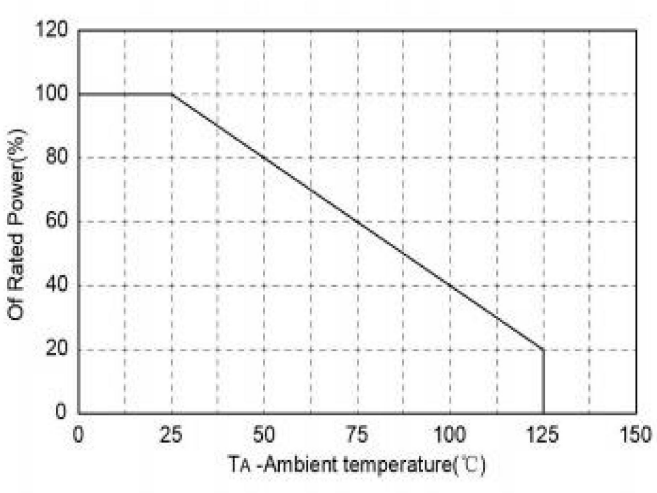



FIG2： pulse Waveform

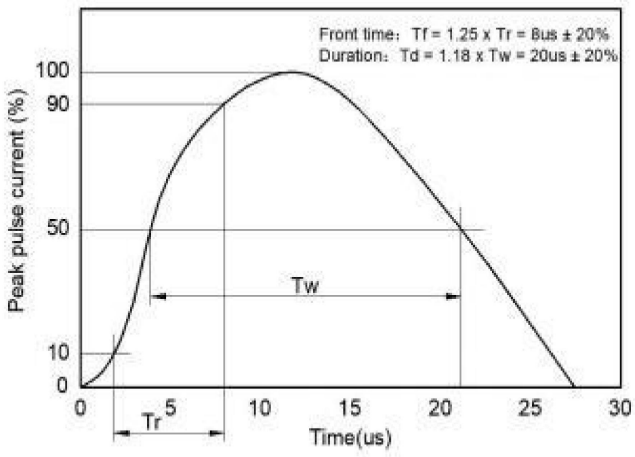



FIG3：Capacitance between teminals charateristics

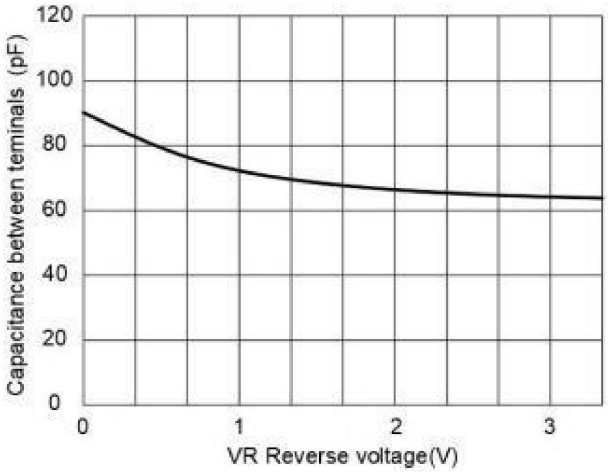
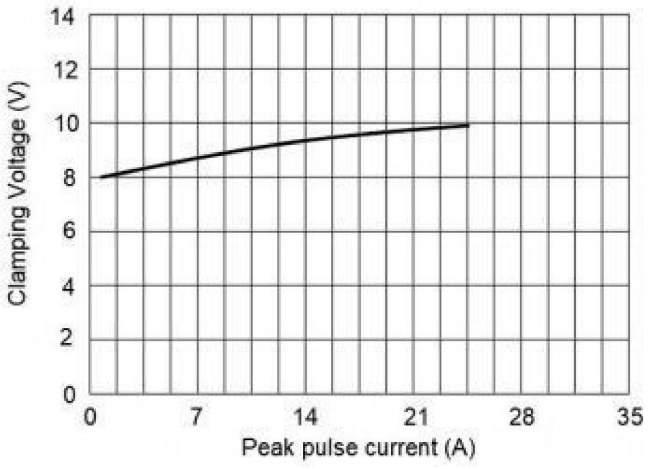


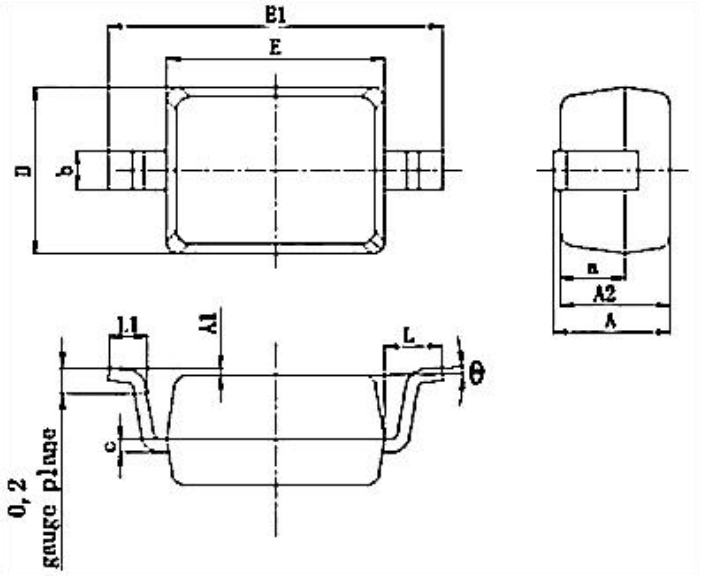

FIG4：Clamping Voltage vs. Peak Pulse Current



## Marking Information

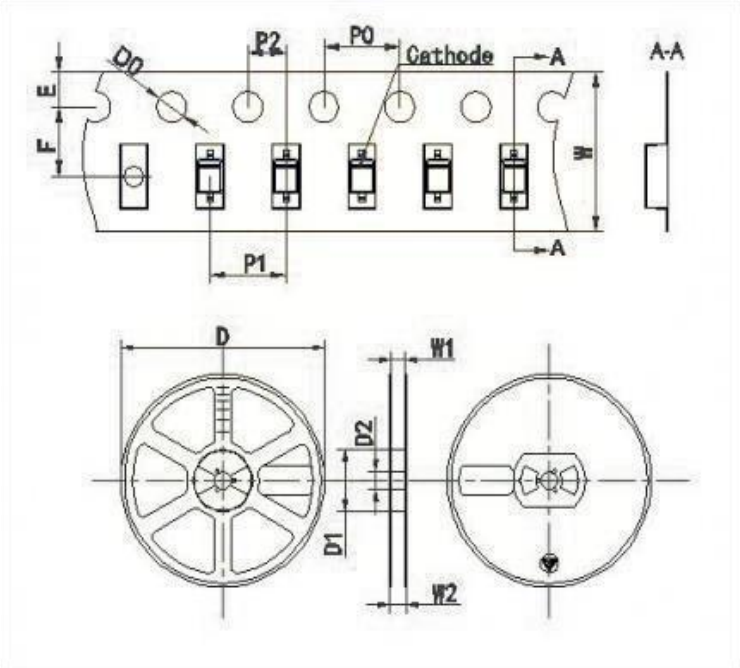

03B=Marking Code

## Package mechanical data




| Symbol | Millimeters | |
|---|---|---|
| | Min. | Max. |
| A | 0.80 | 1.15 |
| A1 | 0 | 0.1 |
| A2 | 0.8 | 1.0 |
| a | (0.5) | |
| D | 1.15 | 1.45 |
| E | 1.60 | 1.85 |
| E1 | 2.5 | 2.8 |
| b | 0.25 | 0.40 |
| 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 |