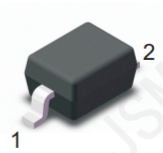
## FEATURES

- Total power dissipation: Max. 300mW.
- Wide zener reverse voltage range 2.0V to 75V.
- Small plastic package suitable for surface mounted design.
- Tolerance approximately±2%




Top View
Simplified outline SOD-323 and symbol



## MECHANICAL DATA

▪Case: SOD-323

▪Terminals: Solderable per MIL-STD-750, Method 2026

▪Approx. Weight: 5.48mg / 0.00019oz

PINNING

| PIN | DESCRIPTION |
|---|---|
| 1 | Cathode |
| 2 | Anode |

## Absolute Maximum Ratings And Characteristics （Ta = 25°C）

| Parameter | Symbol | Value | Unit |
|---|---|---|---|
| Power Dissipation | $P_{tot}$ | 300 | mW |
| Forward Voltage at $I_F$ = 10 mA | $V_F$ | 0.9 | V |
| Typical thermal resistance juncting to ambient (1) | $R_{\theta JA}$ | 417 | °C/W |
| Operating and Storage Temperature Range | $T_j$, $T_{stg}$ | -55 ~ +150 | °C |

(1) Thermal resistance from junction to ambient at P.C.B. mounted with 2.0" X 2.0" (5 X 5 cm) copper areas pads.

Fig.1 Maximum Continuous Power Derating

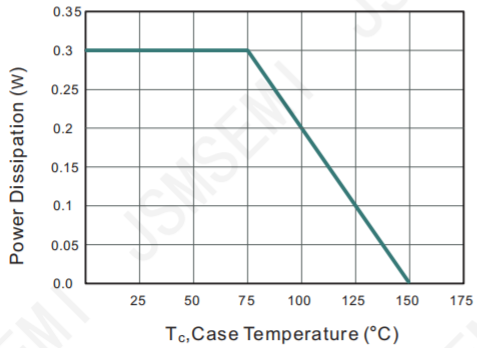
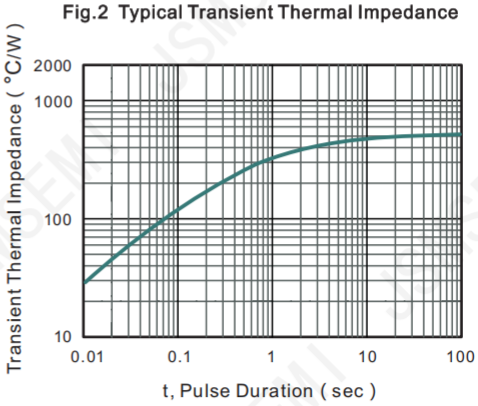



Fig.2 Typical Transient Thermal Impedance



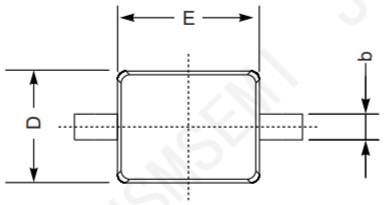
## Characteristics at Ta = 25°C

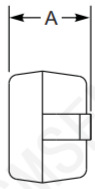
| Type | Marking | Zener Voltage Range (1) | | | $I_{ZT}$ | Dynamic Impedance | Reverse Current | |
|---|---|---|---|---|---|---|---|---|
| | | $V_{ZT}$ (at $I_{ZT}$) | | | | $Z_{ZT}$ (at $I_{ZT}$) | $I_R$ | at $V_R$ |
| | | Min (V) | Nom (V) | Max (V) | (mA) | Max (Ω) | Max (μA) | (V) |
| PDZ2.0B,115 | 0B | 1.96 | 2.0 | 2.04 | 5 | 100 | 120 | 0.5 |
| PDZ2.2B,115 | 0C | 2.16 | 2.2 | 2.24 | 5 | 100 | 120 | 0.7 |
| PDZ2.4B,115 | C1 | 2.35 | 2.4 | 2.45 | 5 | 100 | 120 | 1 |
| PDZ2.7B,115 | D1 | 2.65 | 2.7 | 2.75 | 5 | 110 | 120 | 1 |
| PDZ3.0B,115 | E1 | 2.94 | 3.0 | 3.06 | 5 | 120 | 50 | 1 |
| PDZ3.3B,115 | F1 | 3.23 | 3.3 | 3.37 | 5 | 130 | 20 | 1 |
| PDZ3.6B,115 | H1 | 3.53 | 3.6 | 3.67 | 5 | 130 | 10 | 1 |
| PDZ3.9B,115 | J1 | 3.82 | 3.9 | 3.98 | 5 | 130 | 5 | 1 |
| PDZ4.3B,115 | K1 | 4.21 | 4.3 | 4.39 | 5 | 130 | 5 | 1 |
| PDZ4.7B,115 | M1 | 4.61 | 4.7 | 4.79 | 5 | 130 | 2 | 1 |
| PDZ5.1B,115 | N1 | 5 | 5.1 | 5.2 | 5 | 130 | 2 | 1.5 |
| PDZ5.6B,115 | P1 | 5.49 | 5.6 | 5.71 | 5 | 80 | 1 | 2.5 |
| PDZ6.2B,115 | R1 | 6.08 | 6.2 | 6.32 | 5 | 50 | 1 | 3 |
| PDZ6.8B,115 | X1 | 6.66 | 6.8 | 6.94 | 5 | 30 | 0.5 | 3.5 |
| PDZ7.5B,115 | Y1 | 7.35 | 7.5 | 7.65 | 5 | 30 | 0.5 | 4 |
| PDZ8.2B,115 | Z1 | 8.04 | 8.2 | 8.36 | 5 | 30 | 0.5 | 5 |
| PDZ9.1B,115 | A2 | 8.92 | 9.1 | 9.28 | 5 | 30 | 0.5 | 6 |
| PDZ10B,115 | B2 | 9.8 | 10 | 10.2 | 5 | 30 | 0.1 | 7 |
| PDZ11B,115 | C2 | 10.78 | 11 | 11.22 | 5 | 30 | 0.1 | 8 |
| PDZ12B,115 | D2 | 11.76 | 12 | 12.24 | 5 | 35 | 0.1 | 9 |
| PDZ13B,115 | E2 | 12.74 | 13 | 13.26 | 5 | 35 | 0.1 | 10 |
| PDZ15B,115 | F2 | 14.7 | 15 | 15.3 | 5 | 40 | 0.1 | 11 |
| PDZ16B,115 | H2 | 15.68 | 16 | 16.32 | 5 | 40 | 0.1 | 12 |
| PDZ18B,115 | J2 | 17.64 | 18 | 18.36 | 5 | 45 | 0.1 | 13 |
| PDZ20B,115 | K2 | 19.6 | 20 | 20.4 | 5 | 50 | 0.1 | 15 |
| PDZ22B,115 | M2 | 21.56 | 22 | 22.44 | 5 | 55 | 0.1 | 17 |
| PDZ24B,115 | N2 | 23.52 | 24 | 24.48 | 5 | 60 | 0.1 | 19 |
| PDZ27B,115 | P2 | 26.46 | 27 | 27.54 | 2 | 70 | 0.1 | 21 |
| PDZ30B,115 | R2 | 29.4 | 30 | 30.60 | 2 | 80 | 0.1 | 23 |
| PDZ33B,115 | X2 | 32.34 | 33 | 33.66 | 2 | 80 | 0.1 | 25 |
| PDZ36B,115 | Y2 | 35.28 | 36 | 36.72 | 2 | 90 | 0.1 | 27 |
| PDZ39B,115 | Z2 | 38.22 | 39 | 39.78 | 2 | 100 | 0.1 | 30 |
| PDZ43B,115 | A3 | 42.14 | 43 | 43.86 | 2 | 130 | 0.1 | 33 |
| PDZ47B,115 | B3 | 46.06 | 47 | 47.94 | 2 | 150 | 0.1 | 36 |
| PDZ51B,115 | C3 | 49.98 | 51 | 52.02 | 2 | 180 | 0.1 | 39 |
| PDZ56B,115 | D3 | 54.88 | 56 | 57.12 | 2 | 200 | 0.1 | 43 |
| PDZ62B,115 | E3 | 60.76 | 62 | 63.24 | 2 | 215 | 0.1 | 47 |
| PDZ68B,115 | F3 | 66.64 | 68 | 69.36 | 2 | 240 | 0.1 | 52 |
| PDZ75B,115 | H3 | 73.5 | 75 | 76.5 | 2 | 265 | 0.1 | 56 |

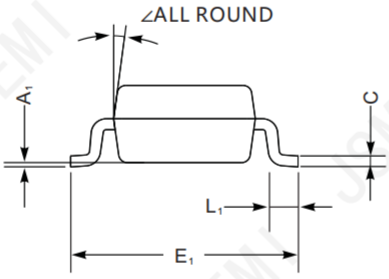
(1) $V_{ZT}$ is tested with pulses (20 ms)

## Package Information

SOD-323



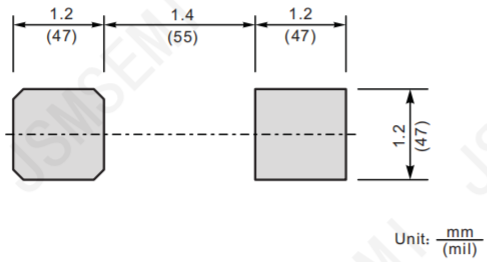




SOD-323 mechanical data

| UNIT | | A | C | D | E | E1 | b | L1 | A1 | ∠ |
|---|---|---|---|---|---|---|---|---|---|---|
| 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



## Revision History

| Rev. | Change | Date |
|---|---|---|
| V1.0 | Initial version | 2/23/2024 |
| | | |

## Important Notice

JSMSEMI Semiconductor (JSMSEMI) PRODUCTS ARE NEITHER DESIGNED NOR INTENDED FOR USE IN MILITARY AND/OR AEROSPACE, AUTOMOTIVE OR MEDICAL DEVICES OR SYSTEMS UNLESS THE SPECIFIC JSMSEMI PRODUCTS ARE SPECIFICALLY DESIGNATED BY JSMSEMI FOR SUCH USE. BUYERS ACKNOWLEDGE AND AGREE THAT ANY SUCH USE OF JSMSEMI PRODUCTS WHICH JSMSEMI HAS NOT DESIGNATED FOR USE IN MILITARY AND/OR AEROSPACE, AUTOMOTIVE OR MEDICAL DEVICES OR SYSTEMS IS SOLELY AT THE BUYER’S RISK.

JSMSEMI assumes no liability for application assistance or customer product design. Customers are responsible for their products and applications using JSMSEMI products.

Resale of JSMSEMI products or services with statements diferent from or beyond the parameters stated by JSMSEMI for that product or service voids all express and any implied warranties for the associated JSMSEMI product or s ervice. JSMSEMI is not responsible or liable for any such statements.

JSMSEMI All Rights Reserved. Information and data in this document are owned by JSMSEMI wholly and may not be edited, reproduced, or redistributed in any way without the express written consent from JSMSEMI.

Any and all information described or contained herein are subject to change without notice due to product/technology improvement, etc.When designing equipment, refer to the "Delivery Specification" for the JSMSEMI product that you intend to use.

For additional information please contact Kevin@jsmsemi.com or visit www.jsmsemi.com