



PZS513V9BAS ~ PZS5143BAS Series

SILICON ZENER DIODE

Voltage 3.9~43V **Power** 500 mW

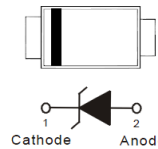
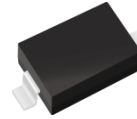
Features

- Planar Die construction
- 500mW Power Dissipation
- Ideally Suited for Automated Assembly Processes
- Lead free in compliance with EU RoHS 2.0
- Green molding compound as per IEC 61249 standard

Mechanical Data

- Terminals: Solderable per MIL-STD-750, Method 2026
- Polarity: Color band denotes cathode end
- Approx. Weight: 0.0004 ounces, 0.001 grams

SOD-123



Maximum Ratings and Thermal Characteristics ($T_A = 25^\circ\text{C}$ unless otherwise noted)

| PARAMETER | SYMBOL | LIMIT | UNITS |
|--|-----------------------|-------------|---------------------------|
| Peak Pulse Power Dissipation at $T_A=25^\circ\text{C}$ | $P_D^{(1)}$ | 500 | mW |
| Typical Thermal Resistance Junction to Ambient | $R_{\theta JA}^{(2)}$ | 250 | $^\circ\text{C}/\text{W}$ |
| Operating Junction Temperature Range | T_J | -55 to +150 | $^\circ\text{C}$ |
| Storage Temperature Range | T_{STG} | -55 to +150 | $^\circ\text{C}$ |

NOTES:

1. Mounted on a 5mm^2 copper pads to each terminal.
2. Mounted on a FR-4 PCB, single-sided copper, mini pad .



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Electrical Characteristics ($T_A=25^{\circ}\text{C}$ unless otherwise noted)

| Part Number | Nominal Zener Voltage | | | | Max. Reverse Leakage Current | | Marking Code |
|-------------|-----------------------|-------|-------|------|------------------------------|------|--------------|
| | $V_Z@I_{ZT}$ | | | | $I_R@V_R$ | | |
| | Nom. V | Min.V | Max.V | mA | μA | V | |
| PZS513V9BAS | 3.9 | 3.71 | 4.10 | 0.05 | 5 | 2 | ACH |
| PZS514V3BAS | 4.3 | 4.09 | 4.52 | 0.05 | 4 | 2 | BCH |
| PZS514V7BAS | 4.7 | 4.47 | 4.94 | 0.05 | 10 | 3 | CCH |
| PZS515V1BAS | 5.1 | 4.85 | 5.36 | 0.05 | 10 | 3 | DCH |
| PZS515V3BAS | 5.3 | 5.03 | 5.57 | 0.05 | 10 | 4 | ECH |
| PZS515V6BAS | 5.6 | 5.32 | 5.88 | 0.05 | 7 | 4.2 | FCH |
| PZS516V2BAS | 6.2 | 5.89 | 6.51 | 0.05 | 10 | 5 | HCH |
| PZS516V8BAS | 6.8 | 6.46 | 7.14 | 0.05 | 10 | 5.1 | ICH |
| PZS517V5BAS | 7.5 | 7.13 | 7.88 | 0.05 | 10 | 5.7 | JCH |
| PZS518V2BAS | 8.2 | 7.79 | 8.61 | 0.05 | 1 | 6.2 | KCH |
| PZS518V7BAS | 8.7 | 8.27 | 9.14 | 0.05 | 1 | 6.6 | LCH |
| PZS519V1BAS | 9.1 | 8.65 | 9.56 | 0.05 | 1 | 6.9 | MCH |
| PZS5110BAS | 10 | 9.5 | 10.5 | 0.05 | 1 | 7.6 | NCH |
| PZS5111BAS | 11 | 10.5 | 11.6 | 0.05 | 0.05 | 8.4 | PCH |
| PZS5112BAS | 12 | 11.4 | 12.6 | 0.05 | 0.05 | 9.1 | RCH |
| PZS5113BAS | 13 | 12.4 | 13.7 | 0.05 | 0.05 | 9.8 | SCH |
| PZS5114BAS | 14 | 13.3 | 14.7 | 0.05 | 0.05 | 10.6 | TCH |
| PZS5115BAS | 15 | 14.3 | 15.8 | 0.05 | 0.05 | 11.4 | UCH |
| PZS5116BAS | 16 | 15.2 | 16.8 | 0.05 | 0.05 | 12.1 | VCH |
| PZS5117BAS | 17 | 16.2 | 17.9 | 0.05 | 0.05 | 12.9 | WCH |
| PZS5118BAS | 18 | 17.1 | 18.9 | 0.05 | 0.05 | 13.6 | XCH |
| PZS5119BAS | 19 | 18.1 | 20 | 0.05 | 0.05 | 14.4 | YCH |
| PZS5120BAS | 20 | 19 | 21 | 0.05 | 0.01 | 15.2 | ZCH |
| PZS5122BAS | 22 | 20.9 | 23.1 | 0.05 | 0.01 | 16.7 | 2CH |
| PZS5124BAS | 24 | 22.8 | 25.2 | 0.05 | 0.01 | 18.2 | 3CH |
| PZS5125BAS | 25 | 23.8 | 26.3 | 0.05 | 0.01 | 19 | 4CH |
| PZS5127BAS | 27 | 25.7 | 28.4 | 0.05 | 0.01 | 20.4 | 6CH |
| PZS5128BAS | 28 | 26.6 | 29.4 | 0.05 | 0.01 | 21.2 | 7CH |
| PZS5130BAS | 30 | 28.5 | 31.5 | 0.05 | 0.01 | 22.8 | 9CH |
| PZS5133BAS | 33 | 31.4 | 34.7 | 0.05 | 0.01 | 25 | AEH |
| PZS5136BAS | 36 | 34.2 | 37.8 | 0.05 | 0.01 | 27.3 | BEH |
| PZS5139BAS | 39 | 37.1 | 41 | 0.05 | 0.01 | 29.6 | CEH |
| PZS5143BAS | 43 | 40.9 | 45.2 | 0.05 | 0.01 | 32.6 | DEH |



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TYPICAL CHARACTERISTIC CURVES

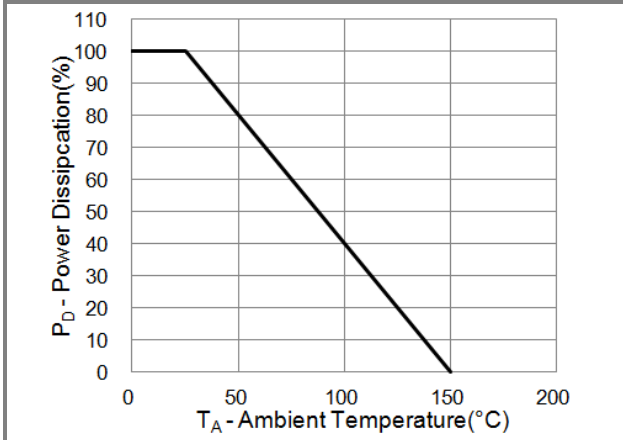


Fig.1 Power Derating Curve

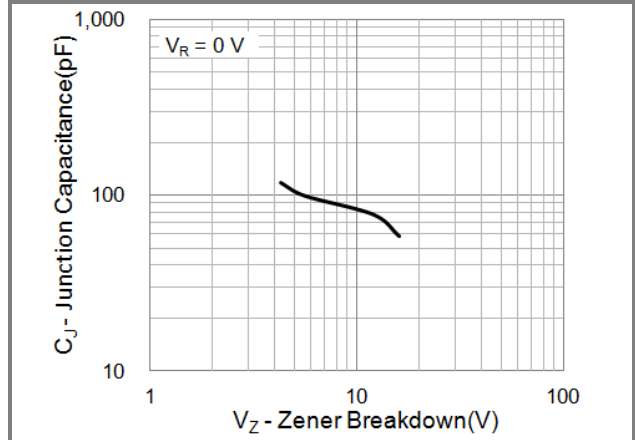


Fig.2 Typical Junction Capacitance

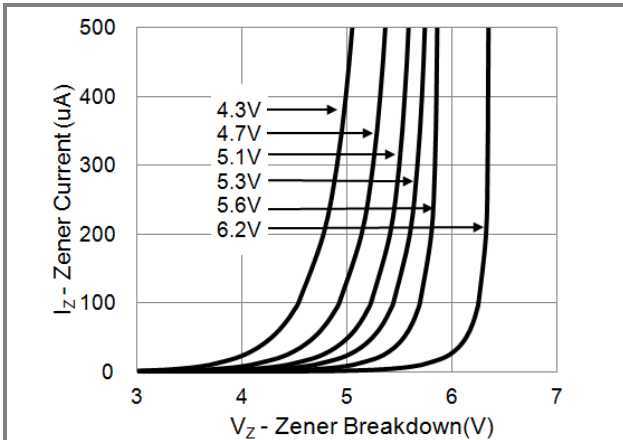


Fig.3 Typical Zener Breakdown

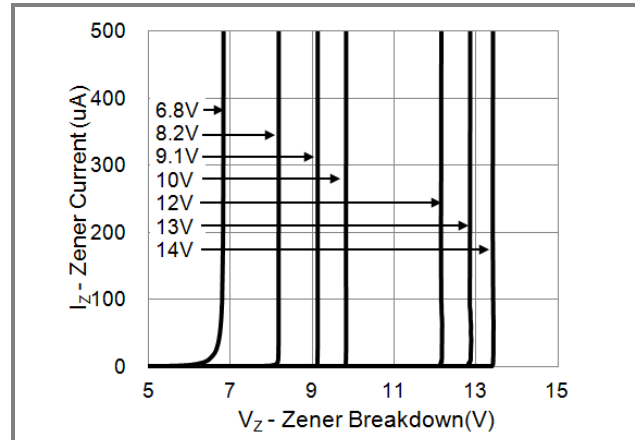


Fig.4 Typical Zener Breakdown

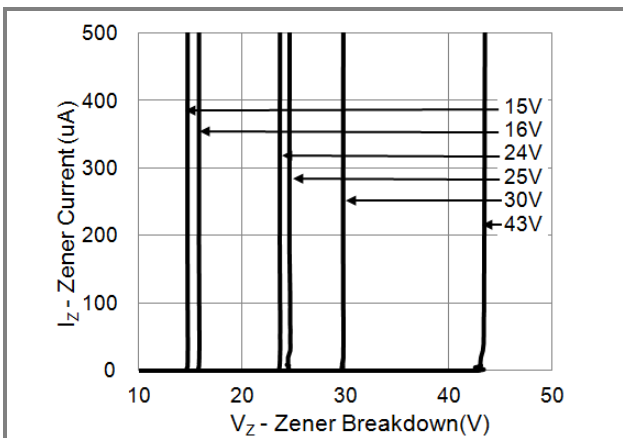


Fig.5 Typical Zener Breakdown

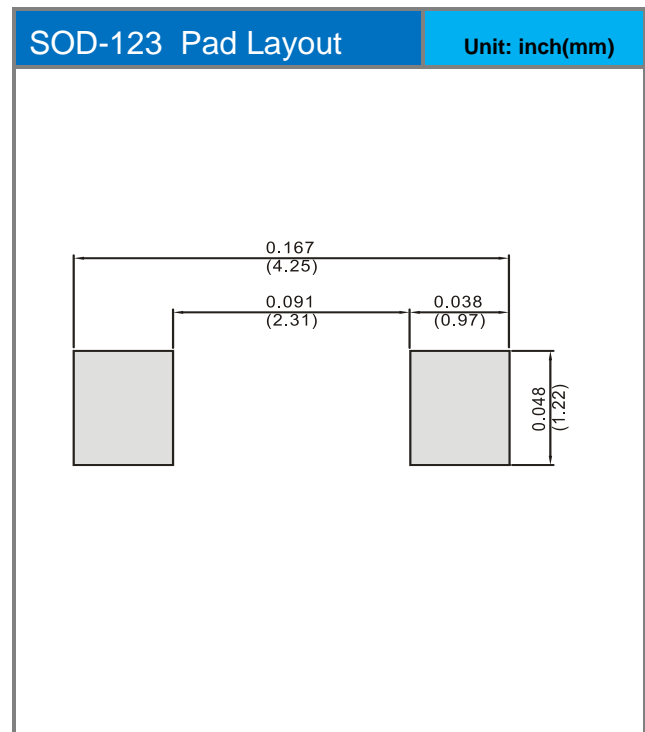
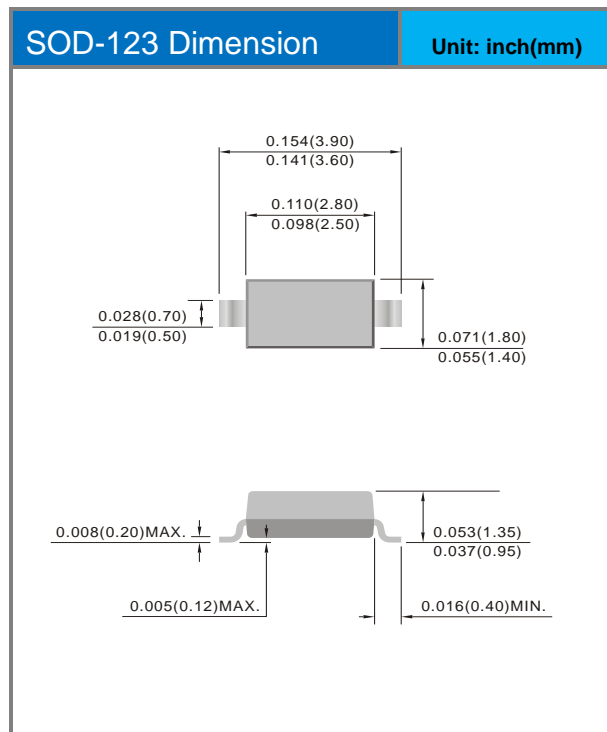


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Part No Packing Code Version

| Part No Packing Code | Package Type | Packing Type | Marking | Version |
|----------------------|--------------|--------------|-----------|--------------|
| PZS51xxxBAS_R1_00001 | SOD-123 | 3K / 7" Reel | See Table | Halogen Free |

Packaging Information & Mounting Pad Layout





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