

# PZS524V3BCH~PZS5275BCH

## SURFACE MOUNT SILICON ZENER DIODE

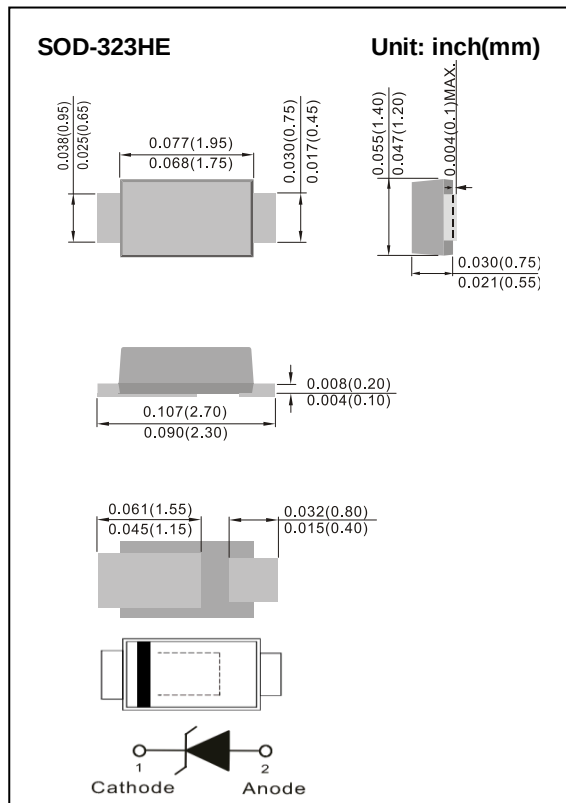
**VOLTAGE** 4.3V~75V **POWER** 500 mWatt

### Features

- Planar Die construction
- 500mW Power Dissipation
- Ideally Suited for Automated Assembly Processes
- Lead free in compliance with EU RoHS 2011/65/EU directive
- Green molding compound as per IEC61249 Std..(Halgen Free)

### Mechanical Data

- Terminals: Solderable per MIL-STD-750, Method 2026
- Polarity: Color band denotes cathode end
- Approx. Weight: 0.0002 ounces, 0.005 grams



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

| PARAMETER                                                          | SYMBOL          | LIMIT       | UNITS                |
|--------------------------------------------------------------------|-----------------|-------------|----------------------|
| Peak Pulse Power Dissipation at $T_A=25^{\circ}\text{C}$ (Notes 1) | $P_D$           | 500         | mW                   |
| Typical Thermal Resistance (Notes 2)                               | $R_{\theta JA}$ | 250         | $^{\circ}\text{C/W}$ |
| 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  $5\text{mm}^2$  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           |        |        |    | Nominal Zener Impedance          |    |                                  |    | Max. Reverse Leakage Current   |      | Marking Code |
|-------------|---------------------------------|--------|--------|----|----------------------------------|----|----------------------------------|----|--------------------------------|------|--------------|
|             | V <sub>Z</sub> @I <sub>ZT</sub> |        |        |    | Z <sub>ZT</sub> @I <sub>ZT</sub> |    | Z <sub>ZK</sub> @I <sub>ZK</sub> |    | I <sub>R</sub> @V <sub>R</sub> |      |              |
|             | Nom. V                          | Min. V | Max. V | mA | Ω                                | mA | Ω                                | mA | μA                             | V    |              |
| PZS524V3BCH | 4.3                             | 4.08   | 4.52   | 5  | 95                               | 5  | 600                              | 1  | 5                              | 1    | ACH          |
| PZS524V7BCH | 4.7                             | 4.46   | 4.94   | 5  | 78                               | 5  | 500                              | 1  | 5                              | 1    | BCH          |
| PZS525V1BCH | 5.1                             | 4.84   | 5.36   | 5  | 60                               | 5  | 480                              | 1  | 0.1                            | 0.8  | CCH          |
| PZS525V6BCH | 5.6                             | 5.32   | 5.88   | 5  | 40                               | 5  | 400                              | 1  | 0.1                            | 1    | DCH          |
| PZS526V2BCH | 6.2                             | 5.89   | 6.51   | 5  | 10                               | 5  | 150                              | 1  | 0.1                            | 2    | FCH          |
| PZS526V8BCH | 6.8                             | 6.46   | 7.14   | 5  | 8                                | 5  | 80                               | 1  | 0.1                            | 3    | HCH          |
| PZS527V5BCH | 7.5                             | 7.12   | 7.88   | 5  | 7                                | 5  | 80                               | 1  | 0.1                            | 5    | ICH          |
| PZS528V2BCH | 8.2                             | 7.79   | 8.61   | 5  | 7                                | 5  | 80                               | 1  | 0.1                            | 6    | JCH          |
| PZS528V7BCH | 8.7                             | 8.26   | 9.14   | 5  | 7                                | 5  | 100                              | 1  | 0.1                            | 6.5  | KCH          |
| PZS529V1BCH | 9.1                             | 8.64   | 9.56   | 5  | 10                               | 5  | 100                              | 1  | 0.1                            | 7    | LCH          |
| PZS5210BCH  | 10                              | 9.5    | 10.5   | 5  | 15                               | 5  | 150                              | 1  | 0.1                            | 7.5  | MCH          |
| PZS5211BCH  | 11                              | 10.45  | 11.55  | 5  | 20                               | 5  | 150                              | 1  | 0.1                            | 8.5  | NCH          |
| PZS5212BCH  | 12                              | 11.4   | 12.6   | 5  | 20                               | 5  | 150                              | 1  | 0.1                            | 9    | PCH          |
| PZS5213BCH  | 13                              | 12.35  | 13.65  | 5  | 25                               | 5  | 170                              | 1  | 0.1                            | 10   | RCH          |
| PZS5214BCH  | 14                              | 13.3   | 14.7   | 5  | 25                               | 5  | 170                              | 1  | 0.1                            | 10.5 | SCH          |
| PZS5215BCH  | 15                              | 14.25  | 15.75  | 5  | 30                               | 5  | 200                              | 1  | 0.1                            | 11   | TCH          |
| PZS5216BCH  | 16                              | 15.2   | 16.8   | 5  | 40                               | 5  | 200                              | 1  | 0.1                            | 12   | UCH          |
| PZS5217BCH  | 17                              | 16.15  | 17.85  | 5  | 40                               | 5  | 200                              | 1  | 0.1                            | 13   | VCH          |
| PZS5218BCH  | 18                              | 17.1   | 18.9   | 5  | 50                               | 5  | 225                              | 1  | 0.1                            | 14   | WCH          |
| PZS5220BCH  | 20                              | 19     | 21     | 5  | 50                               | 5  | 220                              | 1  | 0.1                            | 15   | XCH          |
| PZS5222BCH  | 22                              | 20.9   | 23.1   | 5  | 55                               | 5  | 250                              | 1  | 0.1                            | 17   | YCH          |
| PZS5224BCH  | 24                              | 22.8   | 25.2   | 5  | 80                               | 5  | 250                              | 1  | 0.1                            | 18   | ZCH          |
| PZS5227BCH  | 27                              | 25.65  | 28.35  | 5  | 80                               | 5  | 300                              | 1  | 0.1                            | 20   | 2CH          |
| PZS5228BCH  | 28                              | 26.6   | 29.4   | 5  | 80                               | 5  | 300                              | 1  | 0.1                            | 22   | 3CH          |
| PZS5230BCH  | 30                              | 28.5   | 31.5   | 5  | 80                               | 5  | 300                              | 1  | 0.1                            | 22.5 | 4CH          |
| PZS5233BCH  | 33                              | 31.35  | 34.65  | 5  | 80                               | 5  | 325                              | 1  | 0.1                            | 25   | 6CH          |
| PZS5236BCH  | 36                              | 34.2   | 37.8   | 5  | 90                               | 5  | 350                              | 1  | 0.1                            | 27   | 7CH          |
| PZS5239BCH  | 39                              | 37.05  | 40.95  | 5  | 90                               | 5  | 350                              | 1  | 0.1                            | 29   | 9CH          |



## PZS524V3BCH~PZS5275BCH

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

| Part<br>Number | Nominal Zener Voltage           |           |           |     | Nominal Zener Impedance          |     |                                  |    | Max. Reverse<br>Leakage<br>Current |    | Marking<br>Code |
|----------------|---------------------------------|-----------|-----------|-----|----------------------------------|-----|----------------------------------|----|------------------------------------|----|-----------------|
|                | V <sub>Z</sub> @I <sub>ZT</sub> |           |           |     | Z <sub>ZT</sub> @I <sub>ZT</sub> |     | Z <sub>ZK</sub> @I <sub>ZK</sub> |    | I <sub>R</sub> @V <sub>R</sub>     |    |                 |
|                | Nom.<br>V                       | Min.<br>V | Max.<br>V | mA  | Ω                                | mA  | Ω                                | mA | μA                                 | V  |                 |
| PZS5243BCH     | 43                              | 40.85     | 45.15     | 5   | 100                              | 5   | 375                              | 1  | 0.1                                | 32 | AEH             |
| PZS5247BCH     | 47                              | 44.65     | 49.35     | 5   | 100                              | 5   | 375                              | 1  | 0.1                                | 35 | BEH             |
| PZS5251BCH     | 51                              | 48.45     | 53.55     | 5   | 100                              | 5   | 400                              | 1  | 0.1                                | 38 | CEH             |
| PZS5256BCH     | 56                              | 53.2      | 58.8      | 2.5 | 135                              | 2.5 | 1000                             | 1  | 0.1                                | 42 | DEH             |
| PZS5262BCH     | 62                              | 58.9      | 65.1      | 2.5 | 150                              | 2.5 | 1000                             | 1  | 0.1                                | 46 | EEH             |
| PZS5268BCH     | 68                              | 64.6      | 71.4      | 2.5 | 200                              | 2.5 | 1000                             | 1  | 0.1                                | 51 | FEH             |
| PZS5275BCH     | 75                              | 71.25     | 78.75     | 2.5 | 250                              | 2.5 | 1000                             | 1  | 0.1                                | 56 | HEH             |



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### TYPICAL CHARACTERISTIC CURVES

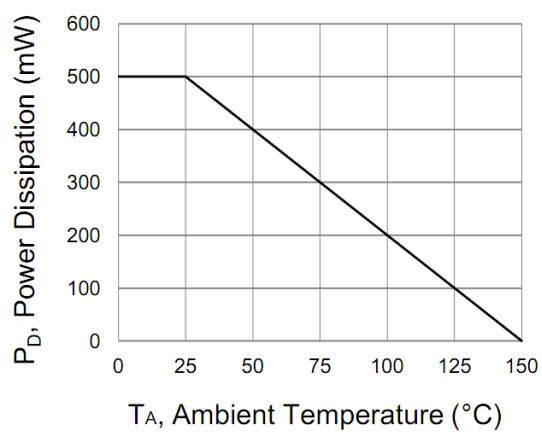


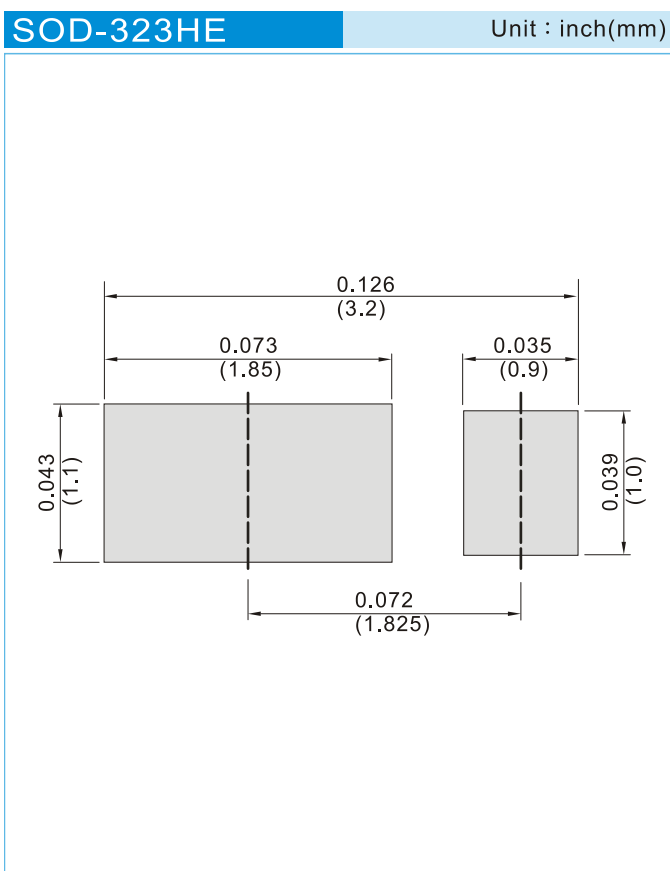
Fig.1 Steady-State Power Derating Curve

## PZS524V3BCH~PZS5275BCH

### Part No Packing Code Version

| Part No Packing Code | Package Type | Packing Type       | Marking | Version      |
|----------------------|--------------|--------------------|---------|--------------|
| PZS524V3BCH_R1_00001 | SOD-323HE    | 5K pcs / 7" reel   | ACH     | Halogen free |
| PZS524V3BCH_R2_00001 | SOD-323HE    | 12K pcs / 13" reel | ACH     | Halogen free |

### MOUNTING PAD LAYOUT





## **PZS524V3BCH~PZS5275BCH**

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