

# PZ1AH3V6B~PZ1AH75B

## SILICON ZENER DIODE

**VOLTAGE**

**3.6V~75V**

**POWER**

**1Watt**

### Features

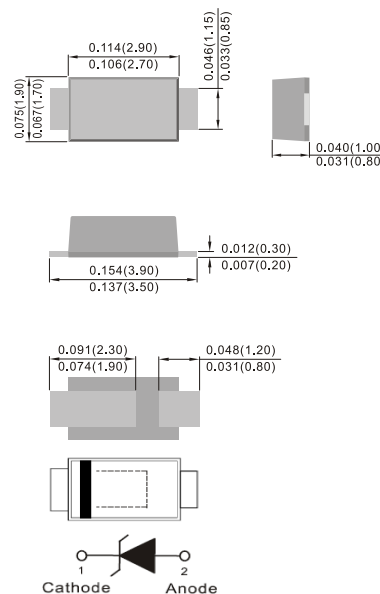
- Silicon planar Zener diode
- Low profile surface-mount package
- Low leakage current
- Excellent stability
- High temperature soldering : 260 °C/10 seconds at terminals
- Lead free in compliance with EU RoHS2.0 (2011/65/EU & 2015/865/EU directive)
- Green molding compound as per IEC61249 Std..(Halgen Free)

### Mechanical Data

- Case: SOD-123HE, plastic
- Terminals: Solderable per MIL-STD-750, Method 2026
- Polarity: Color band denotes cathode end
- Approx. Weight: 0.0006 ounces, 0.0172 grams

**SOD-123HE**

**Unit: inch(mm)**



### 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) | $P_D$           | 1           | W                    |
| ESD Voltage per IEC61000-4-2 (Air)                                 | $V_{ESD}$       | $\pm 30$    | kV                   |
| ESD Voltage per IEC61000-4-2 (Contact)                             |                 | $\pm 30$    |                      |
| Typical Thermal Resistance (Notes 2)                               | $R_{\theta JA}$ | 185         | $^{\circ}\text{C/W}$ |
| 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 .



## PZ1AH3V6B~PZ1AH75B

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   |              |
| PZ1AH3V6B   | 3.6                             | 3.42   | 3.78   | 100 | 8                                | 100 | 400                              | 1    | 100                            | 1   | ACH          |
| PZ1AH3V9B   | 3.9                             | 3.71   | 4.10   | 100 | 8                                | 100 | 400                              | 1    | 50                             | 1   | BCH          |
| PZ1AH4V3B   | 4.3                             | 4.09   | 4.52   | 100 | 7                                | 100 | 400                              | 1    | 25                             | 1   | CCH          |
| PZ1AH4V7B   | 4.7                             | 4.47   | 4.94   | 100 | 7                                | 100 | 500                              | 1    | 10                             | 1   | DCH          |
| PZ1AH5V1B   | 5.1                             | 4.85   | 5.36   | 100 | 6                                | 100 | 550                              | 1    | 5                              | 1   | ECH          |
| PZ1AH5V6B   | 5.6                             | 5.32   | 5.88   | 100 | 4                                | 100 | 600                              | 1    | 10                             | 2   | FCH          |
| PZ1AH6V0B   | 6                               | 5.7    | 6.3    | 100 | 3                                | 100 | 650                              | 1    | 8                              | 2   | HCH          |
| PZ1AH6V2B   | 6.2                             | 5.89   | 6.51   | 100 | 3                                | 100 | 700                              | 1    | 5                              | 2   | ICH          |
| PZ1AH6V8B   | 6.8                             | 6.46   | 7.14   | 100 | 3                                | 100 | 700                              | 1    | 10                             | 3   | JCH          |
| PZ1AH7V5B   | 7.5                             | 7.13   | 7.88   | 100 | 2                                | 100 | 700                              | 0.5  | 10                             | 3   | KCH          |
| PZ1AH8V2B   | 8.2                             | 7.79   | 8.61   | 100 | 2                                | 100 | 700                              | 0.5  | 10                             | 3   | LCH          |
| PZ1AH8V7B   | 8.7                             | 8.27   | 9.14   | 50  | 3                                | 50  | 700                              | 0.5  | 10                             | 4   | MCH          |
| PZ1AH9V1B   | 9.1                             | 8.65   | 9.56   | 50  | 4                                | 50  | 700                              | 0.5  | 10                             | 5   | NCH          |
| PZ1AH10B    | 10                              | 9.50   | 10.50  | 50  | 4                                | 50  | 700                              | 0.25 | 7                              | 7.5 | PCH          |
| PZ1AH11B    | 11                              | 10.45  | 11.55  | 50  | 7                                | 50  | 700                              | 0.25 | 4                              | 8.2 | RCH          |
| PZ1AH12B    | 12                              | 11.40  | 12.60  | 50  | 7                                | 50  | 700                              | 0.25 | 3                              | 9.1 | SCH          |
| PZ1AH13B    | 13                              | 12.35  | 13.65  | 50  | 10                               | 50  | 700                              | 0.25 | 2                              | 10  | TCH          |
| PZ1AH14B    | 14                              | 13.30  | 14.70  | 50  | 10                               | 50  | 700                              | 0.25 | 2                              | 11  | UCH          |
| PZ1AH15B    | 15                              | 14.25  | 15.75  | 50  | 12                               | 50  | 700                              | 0.25 | 1                              | 11  | VCH          |
| PZ1AH16B    | 16                              | 15.20  | 16.80  | 25  | 15                               | 25  | 700                              | 0.25 | 1                              | 12  | WCH          |
| PZ1AH17B    | 17                              | 16.15  | 17.85  | 25  | 15                               | 25  | 750                              | 0.25 | 1                              | 13  | XCH          |
| PZ1AH18B    | 18                              | 17.10  | 18.90  | 25  | 15                               | 25  | 750                              | 0.25 | 1                              | 13  | YCH          |
| PZ1AH19B    | 19                              | 18.05  | 19.95  | 25  | 15                               | 25  | 750                              | 0.25 | 1                              | 14  | ZCH          |
| PZ1AH20B    | 20                              | 19.00  | 21.00  | 25  | 15                               | 25  | 750                              | 0.25 | 1                              | 15  | 2CH          |
| PZ1AH22B    | 22                              | 20.90  | 23.10  | 25  | 15                               | 25  | 750                              | 0.25 | 1                              | 16  | 3CH          |
| PZ1AH24B    | 24                              | 22.80  | 25.20  | 25  | 15                               | 25  | 750                              | 0.25 | 1                              | 18  | 4CH          |
| PZ1AH25B    | 25                              | 23.75  | 26.25  | 25  | 15                               | 25  | 750                              | 0.25 | 1                              | 19  | 6CH          |
| PZ1AH27B    | 27                              | 25.65  | 28.35  | 25  | 15                               | 25  | 750                              | 0.25 | 1                              | 20  | 7CH          |
| PZ1AH28B    | 28                              | 26.60  | 29.40  | 25  | 15                               | 25  | 850                              | 0.25 | 1                              | 21  | 9CH          |



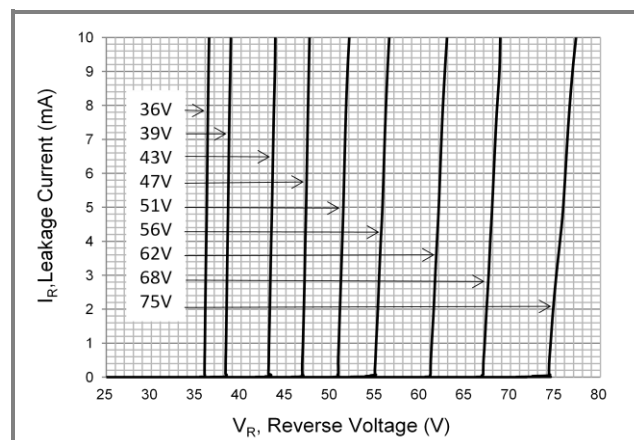
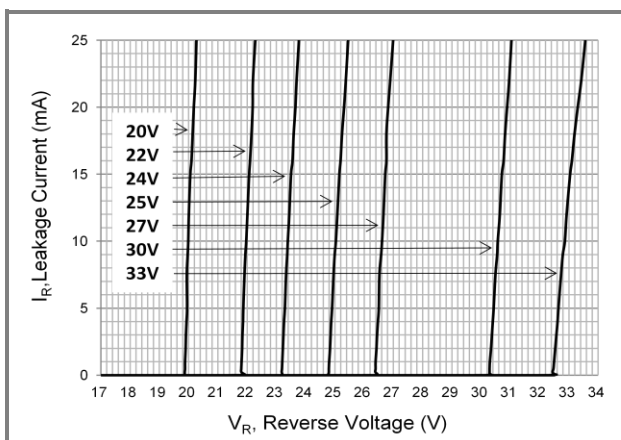
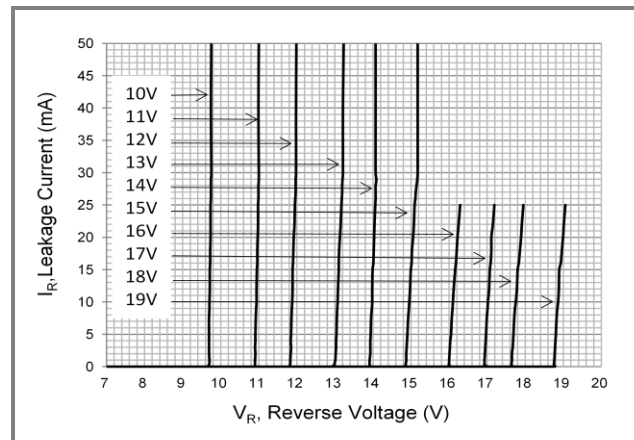
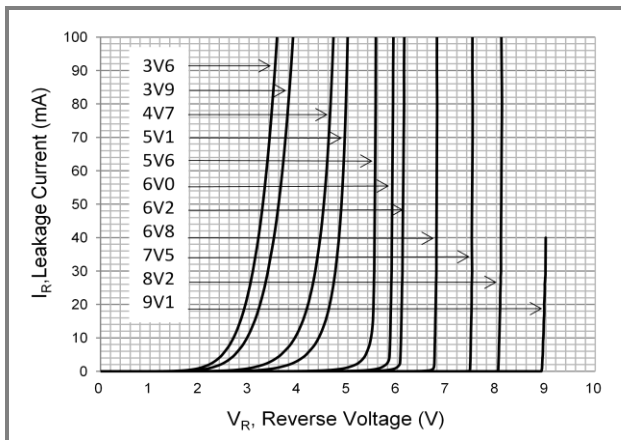
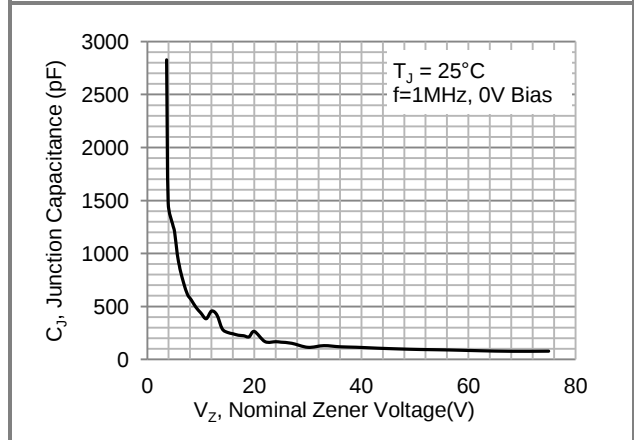
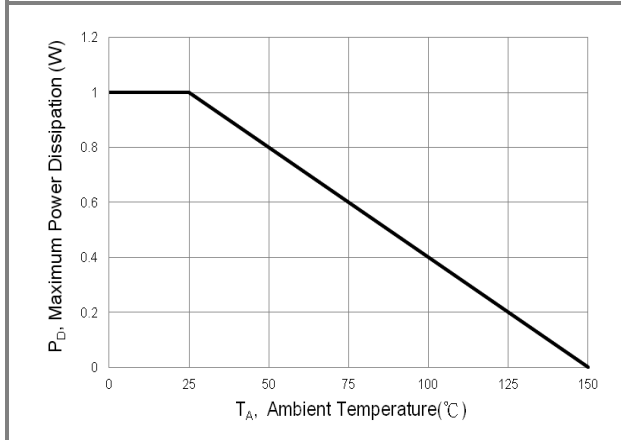
## PZ1AH3V6B~PZ1AH75B

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

| Part<br>Number | Nominal Zener Voltage           |           |           |    | Nominal Zener Impedance          |    |                                  |      | Max.<br>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  |                 |
| PZ1AH30B       | 30                              | 28.50     | 31.50     | 25 | 15                               | 25 | 1000                             | 0.25 | 1                                     | 22 | AEH             |
| PZ1AH33B       | 33                              | 31.35     | 34.65     | 25 | 15                               | 25 | 1000                             | 0.25 | 1                                     | 24 | BEH             |
| PZ1AH36B       | 36                              | 34.20     | 37.80     | 10 | 40                               | 10 | 1000                             | 0.25 | 1                                     | 27 | CEH             |
| PZ1AH39B       | 39                              | 37.05     | 40.95     | 10 | 40                               | 10 | 1000                             | 0.25 | 1                                     | 30 | DEH             |
| PZ1AH43B       | 43                              | 40.85     | 45.15     | 10 | 45                               | 10 | 1500                             | 0.25 | 1                                     | 33 | EEH             |
| PZ1AH47B       | 47                              | 44.65     | 49.35     | 10 | 45                               | 10 | 1500                             | 0.25 | 1                                     | 36 | FEH             |
| PZ1AH51B       | 51                              | 48.45     | 53.55     | 10 | 60                               | 10 | 1500                             | 0.25 | 1                                     | 39 | HEH             |
| PZ1AH56B       | 56                              | 53.20     | 58.80     | 10 | 60                               | 10 | 2000                             | 0.25 | 1                                     | 43 | IEH             |
| PZ1AH62B       | 62                              | 58.90     | 65.10     | 10 | 80                               | 10 | 2000                             | 0.25 | 1                                     | 47 | JEH             |
| PZ1AH68B       | 68                              | 64.60     | 71.40     | 10 | 80                               | 10 | 2000                             | 0.25 | 1                                     | 51 | KEH             |
| PZ1AH75B       | 75                              | 71.25     | 78.75     | 10 | 100                              | 10 | 2000                             | 0.25 | 1                                     | 56 | LEH             |

# PZ1AH3V6B~PZ1AH75B

## TYPICAL CHARACTERISTIC CURVES

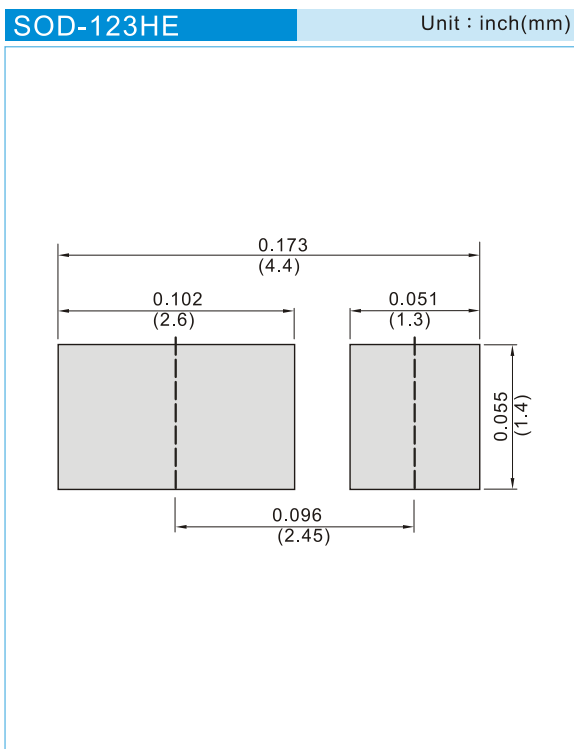


## PZ1AH3V6B~PZ1AH75B

### Part No Packing Code Version

| Part No Packing Code | Package Type | Packing Type       | Marking | Version      |
|----------------------|--------------|--------------------|---------|--------------|
| PZ1AH3V6B_R1_00001   | SOD-123HE    | 3K pcs / 7" reel   | ACH     | Halogen free |
| PZ1AH3V6B_R2_00001   | SOD-123HE    | 10K pcs / 13" reel | ACH     | Halogen free |

### Mounting Pad Layout





## **PZ1AH3V6B~PZ1AH75B**

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