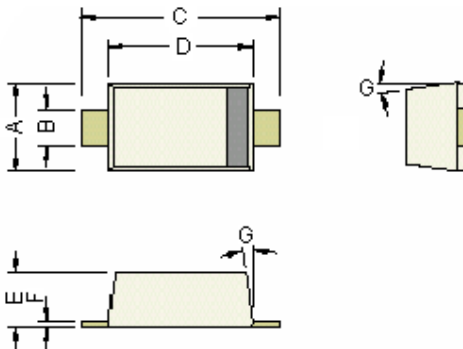


# SURFACE MOUNT SILICON ZENER DIODE



## SOD-323 Plastic Package



Cathode is marked by a Band

Dimensions: Millimetres

| Dimensions | Minimum | Maximum |
|------------|---------|---------|
| A          | 1.15    | 1.35    |
| B          | 0.25    | 0.40    |
| C          | 2.30    | 2.80    |
| D          | 1.60    | 1.80    |
| E          | 0.80    | 1.10    |
| F          | 0.00    | 0.15    |
| G          | 5°      |         |

Dimensions: Millimetres

## Absolute Maximum Ratings

| Description                                                                        | Symbol      | Value        | Unit |
|------------------------------------------------------------------------------------|-------------|--------------|------|
| Maximum Forward Voltage Drop at $I_F = 10\text{mA}$                                | $V_F$       | 0.9          | V    |
| Power Dissipation at 25°C                                                          | $*P_D$      | 200          | mW   |
| Peak Forward Surge Current, 8.3ms Single Half Sine-Wave Superimposed on Rated Load | $**I_{FSM}$ | 2.0          | A    |
| Operating Junction and Storage Temperature Range                                   | $T_j$       | - 55 to +150 | °C   |

- Notes:**
1. \*Mounted on 5.0mm<sup>2</sup> (0.13mm thick) land areas.
  2. \*\*Measured on 8.3ms, single half sine-wave or equivalent square wave, duty cycle = 4 pulses per minute maximum.

# SURFACE MOUNT SILICON ZENER DIODE



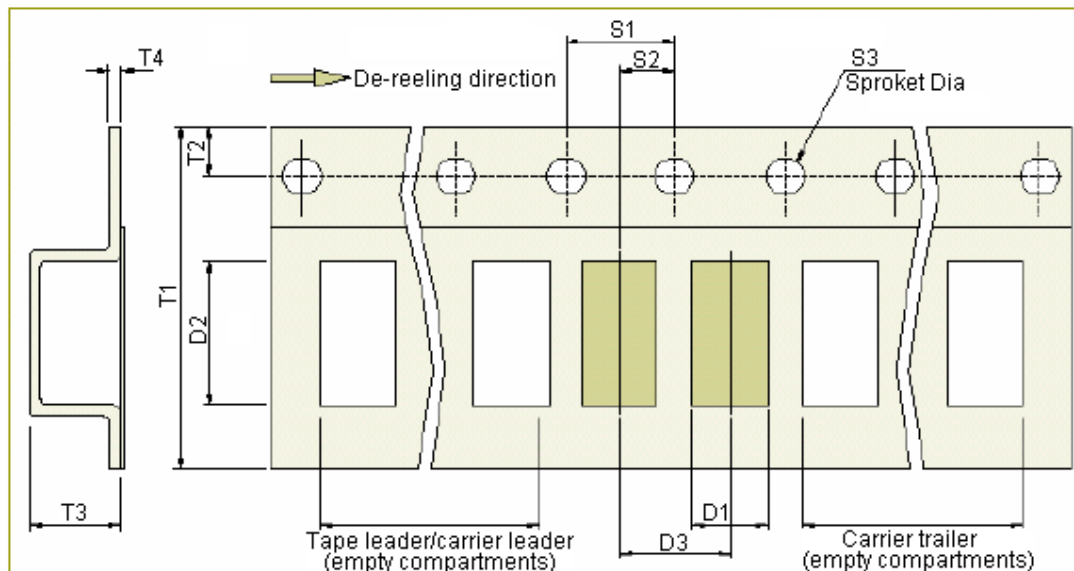
Electrical Characteristics ( $T_A=25^\circ\text{C}$  unless specified otherwise)  $V_F$  at 10mA <0.9V

| Marking Code | Zener Voltage                     |         | Zener Impedance                    |      |                                    |      | Reverse Leakage                  |     |
|--------------|-----------------------------------|---------|------------------------------------|------|------------------------------------|------|----------------------------------|-----|
|              | V <sub>Z</sub> at I <sub>ZT</sub> |         | Z <sub>ZT</sub> at I <sub>ZT</sub> |      | Z <sub>ZK</sub> at I <sub>ZK</sub> |      | I <sub>R</sub> at V <sub>R</sub> |     |
|              | (V)                               |         | (Ω)                                | (mA) | (Ω)                                | (mA) | (μA)                             | (V) |
|              | Minimum                           | Maximum | Maximum                            |      | Maximum                            |      | Maximum                          |     |
| W1           | 2.28                              | 2.52    | 85                                 | 5.0  | 500                                | 1.0  | 100                              | 1.0 |
| W2           | 2.57                              | 2.84    | 83                                 |      |                                    |      | 75                               |     |
| W3           | 2.85                              | 3.15    | 95                                 |      |                                    |      | 50                               |     |
| W4           | 3.14                              | 3.47    |                                    |      |                                    |      | 25                               |     |
| W5           | 3.42                              | 3.78    |                                    |      |                                    |      | 15                               |     |
| W6           | 3.71                              | 4.10    |                                    |      |                                    |      | 10                               |     |
| W7           | 4.09                              | 4.52    | 5.0                                |      |                                    |      | 0.1                              |     |
| W8           | 4.47                              | 4.94    | 78                                 |      |                                    |      |                                  | 2.0 |
| W9           | 4.85                              | 5.36    | 60                                 |      | 0.8                                |      |                                  |     |
| WA           | 5.32                              | 5.88    | 40                                 |      | 1.0                                |      |                                  |     |
| WB           | 5.89                              | 6.51    | 10                                 |      | 2.0                                |      |                                  |     |
| WC           | 6.46                              | 7.14    | 8                                  |      | 3.0                                |      |                                  |     |
| WD           | 7.13                              | 7.88    | 7                                  |      | 5.0                                |      |                                  | 5.0 |
| WE           | 7.79                              | 8.61    |                                    |      | 6.0                                |      |                                  |     |
| WF           | 8.65                              | 9.56    | 10                                 |      | 7.0                                |      |                                  |     |
| WG           | 9.50                              | 10.50   | 15                                 |      | 7.5                                |      |                                  |     |
| WH           | 10.45                             | 11.55   | 20                                 |      | 8.5                                |      |                                  |     |
| WI           | 11.40                             | 12.60   |                                    |      | 9.0                                |      |                                  |     |
| WK           | 12.35                             | 13.65   | 25                                 |      | 10                                 |      |                                  |     |
| WL           | 14.25                             | 15.75   | 30                                 |      | 11                                 |      |                                  |     |
| WM           | 15.20                             | 16.80   | 40                                 |      | 12                                 |      |                                  |     |
| WN           | 17.10                             | 18.90   | 50                                 |      | 14                                 |      |                                  |     |
| WO           | 19.00                             | 21.00   |                                    |      | 15                                 |      |                                  |     |
| WP           | 20.90                             | 23.10   | 55                                 |      | 17                                 |      |                                  |     |
| WR           | 22.80                             | 25.20   | 80                                 |      | 18                                 |      |                                  |     |
| WS           | 25.65                             | 28.35   |                                    |      | 20                                 |      |                                  |     |
| WT           | 28.50                             | 31.50   |                                    |      | 22.5                               |      |                                  |     |
| WU           | 31.35                             | 34.65   |                                    |      | 25                                 |      |                                  |     |
| WW           | 34.20                             | 37.80   | 90                                 |      | 27                                 |      |                                  |     |
| WX           | 37.05                             | 40.95   |                                    |      | 29                                 |      |                                  |     |

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# SURFACE MOUNT SILICON ZENER DIODE



## SMD Tape Specifications (8-12 mm)

| Device  | D1       | D2       | D3       | T1       | T2        | T3<br>(Maximum) | T4<br>(Maximum) | S1       | S2       | S3       |
|---------|----------|----------|----------|----------|-----------|-----------------|-----------------|----------|----------|----------|
| SOD-323 | 2.3 ±0.1 | 3.5 ±0.1 | 4.0 ±0.1 | 8.3 ±0.1 | 1.75 ±0.1 | 2.26            | 0.26            | 4.0 ±0.1 | 2.0 ±0.1 | 1.5 ±0.1 |

Dimensions: Millimetres

## Packaging Specifications

| Package/Case Type          | Packaging Type | Standard Packing | Inner Carbon |                       |                   | Outer Carbon |                       |                   |
|----------------------------|----------------|------------------|--------------|-----------------------|-------------------|--------------|-----------------------|-------------------|
|                            |                | Quantity         | Quantity     | Size (L x W x H) (cm) | Gross Weight (kg) | Qty          | Size (L x W x H) (cm) | Gross Weight (kg) |
| SMD Glass/Plastic Packages |                |                  |              |                       |                   |              |                       |                   |
| SOD-323                    | T & R          | 3,000            | 15K          | 19 x 19 x 8           | 1.0               | 45K          | 23 x 23 x 23          | 2.9               |
|                            | T & R          | 10,000           | 50K          | 33 x 33 x 1.3         | 2.6               | 300K         | 48 x 48 x 51          | 17.4              |

**Notes:** T & A: Tape and Ammo Pack; T & R: Tape and Reel; Bulk: Loose in Poly Bags; Tube: Tube and Carton; K: 1,000

# SURFACE MOUNT SILICON ZENER DIODE



## Part Number Table

| Description               | Part Number |
|---------------------------|-------------|
| DIODE, ZENER 0.2W SOD-323 | BZT52C2V4S  |
|                           | BZT52C2V7S  |
|                           | BZT52C3V0S  |
|                           | BZT52C3V3S  |
|                           | BZT52C3V6S  |
|                           | BZT52C3V9S  |
|                           | BZT52C4V3S  |
|                           | BZT52C4V7S  |
|                           | BZT52C5V1S  |
|                           | BZT52C5V6S  |
|                           | BZT52C6V2S  |
|                           | BZT52C6V8S  |
|                           | BZT52C7V5S  |
|                           | BZT52C8V2S  |
|                           | BZT52C9V1S  |
|                           | BZT52C10S   |
|                           | BZT52C11S   |
|                           | BZT52C12S   |
| DIODE, ZENER 0.2W SOD-323 | BZT52C13S   |
|                           | BZT52C15S   |
|                           | BZT52C16S   |
|                           | BZT52C218S  |
|                           | BZT52C20S   |
|                           | BZT52C22S   |
|                           | BZT52C24S   |
|                           | BZT52C27S   |
|                           | BZT52C30S   |
|                           | BZT52C33S   |
|                           | BZT52C36S   |
|                           | BZT52C39S   |

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