

Features

- Planar Die Construction
- Ideally Suited for Automated Assembly Processes
- General Purpose Medium Current
- Halogen Free. "Green" Device (Note 1)
- Moisture Sensitivity Level 1
- Epoxy Meets UL 94 V-0 Flammability Rating
- Lead Free Finish/RoHS Compliant ("P" Suffix Designates RoHS Compliant. See Ordering Information)

**200 mW
Zener Diode
2.4 to 56 Volts**

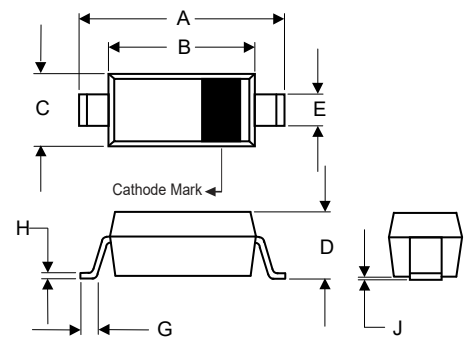
Maximum Ratings

- Operating Junction Temperature Range: -65°C to +150°C
- Storage Temperature Range: -65°C to +150°C
- Thermal Resistance :625°C/W Junction to Ambient

| Parameter | Symbol | Rating | Conditions |
|-------------------------|--------|--------|------------|
| Power Dissipation | P_D | 200mW | |
| Maximum Forward Voltage | V_F | 0.9V | $I_F=10mA$ |

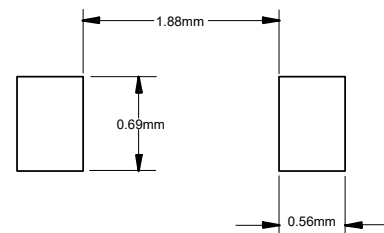
Note: 1. Halogen free "Green" products are defined as those which contain <900ppm bromine, <900ppm chlorine (<1500ppm total Br + Cl) and <1000ppm antimony compounds.

SOD-323



| DIM | DIMENSIONS | | | | NOTE |
|-----|------------|-------|-------|------|------|
| | INCHES | | MM | | |
| | MIN | MAX | MIN | MAX | |
| A | 0.090 | 0.107 | 2.30 | 2.70 | |
| B | 0.063 | 0.071 | 1.60 | 1.80 | |
| C | 0.045 | 0.053 | 1.15 | 1.35 | |
| D | 0.031 | 0.045 | 0.80 | 1.15 | |
| E | 0.010 | 0.016 | 0.25 | 0.40 | |
| G | 0.004 | 0.018 | 0.10 | 0.45 | |
| H | 0.004 | 0.010 | 0.10 | 0.25 | |
| J | ----- | 0.006 | ----- | 0.15 | |

Suggested Solder Pad Layout



Electrical Characteristics @ 25°C Unless Otherwise Specified

| MCC Part Number | Zener Voltage ⁽²⁾ | | | Maximum Zener Impedance ⁽³⁾ | | Maximum Zener Impedance ⁽³⁾ | | Reverse Current | | Typical Temperature Coefficient @ I _{ZTC} | | Marking Code |
|-----------------|----------------------------------|--------|---------|--|-----------------|--|-----------------|----------------------|----------------|--|------|--------------|
| | V _Z @ I _{ZT} | | | I _{ZT} | Z _{ZT} | I _{ZK} | Z _{ZK} | I _R (Max) | V _R | Min. | Max. | |
| | Min.(V) | Nom(V) | Max.(V) | mA | Ω | mA | Ω | μA | V | mV/°C | | |
| BZT52C2V4S | 2.28 | 2.4 | 2.56 | 5 | 100 | 1.0 | 600 | 50 | 1.0 | -3.5 | 0 | WX |
| BZT52C2V7S | 2.5 | 2.7 | 2.9 | 5 | 100 | 1.0 | 600 | 20 | 1.0 | -3.5 | 0 | W1 |
| BZT52C3V0S | 2.8 | 3.0 | 3.2 | 5 | 95 | 1.0 | 600 | 10 | 1.0 | -3.5 | 0 | W2 |
| BZT52C3V3S | 3.1 | 3.3 | 3.5 | 5 | 95 | 1.0 | 600 | 5 | 1.0 | -3.5 | 0 | W3 |
| BZT52C3V6S | 3.4 | 3.6 | 3.8 | 5 | 90 | 1.0 | 600 | 5 | 1.0 | -3.5 | 0 | W4 |
| BZT52C3V9S | 3.7 | 3.9 | 4.1 | 5 | 90 | 1.0 | 600 | 3 | 1.0 | -3.5 | 0 | W5 |
| BZT52C4V3S | 4.0 | 4.3 | 4.6 | 5 | 90 | 1.0 | 600 | 3 | 1.0 | -3.5 | 0 | W6 |
| BZT52C4V7S | 4.4 | 4.7 | 5.0 | 5 | 80 | 1.0 | 500 | 3 | 2.0 | -3.5 | 0.2 | W7 |
| BZT52C5V1S | 4.8 | 5.1 | 5.4 | 5 | 60 | 1.0 | 480 | 2 | 2.0 | -2.7 | 1.2 | W8 |
| BZT52C5V6S | 5.2 | 5.6 | 6.0 | 5 | 40 | 1.0 | 400 | 1 | 2.0 | -2.0 | 2.5 | W9 |
| BZT52C6V2S | 5.8 | 6.2 | 6.6 | 5 | 10 | 1.0 | 150 | 3 | 4.0 | 0.4 | 3.7 | WA |
| BZT52C6V8S | 6.4 | 6.8 | 7.2 | 5 | 15 | 1.0 | 80 | 2 | 4.0 | 1.2 | 4.5 | WB |
| BZT52C7V5S | 7.0 | 7.5 | 7.9 | 5 | 15 | 1.0 | 80 | 1 | 5.0 | 2.5 | 5.3 | WC |
| BZT52C8V2S | 7.7 | 8.2 | 8.7 | 5 | 15 | 1.0 | 80 | 0.7 | 5.0 | 3.2 | 6.2 | WD |
| BZT52C9V1S | 8.5 | 9.1 | 9.6 | 5 | 15 | 1.0 | 100 | 0.5 | 6.0 | 3.8 | 7.0 | WE |
| BZT52C10S | 9.4 | 10 | 10.6 | 5 | 20 | 1.0 | 150 | 0.2 | 7.0 | 4.5 | 8.0 | WF |
| BZT52C11S | 10.4 | 11 | 11.6 | 5 | 20 | 1.0 | 150 | 0.1 | 8.0 | 5.4 | 9.0 | WG |
| BZT52C12S | 11.4 | 12 | 12.7 | 5 | 25 | 1.0 | 150 | 0.1 | 8.0 | 6.0 | 10.0 | WH |
| BZT52C13S | 12.4 | 13 | 14.1 | 5 | 30 | 1.0 | 170 | 0.1 | 8.0 | 7.0 | 11.0 | WI |
| BZT52C15S | 13.8 | 15 | 15.6 | 5 | 30 | 1.0 | 200 | 0.1 | 10.5 | 9.2 | 13.0 | WJ |
| BZT52C16S | 15.3 | 16 | 17.1 | 5 | 40 | 1.0 | 200 | 0.1 | 11.2 | 10.4 | 14.0 | WK |
| BZT52C18S | 16.8 | 18 | 19.1 | 5 | 45 | 1.0 | 225 | 0.1 | 12.6 | 12.4 | 16.0 | WL |
| BZT52C20S | 18.8 | 20 | 21.2 | 5 | 55 | 1.0 | 225 | 0.1 | 14.0 | 14.4 | 18.0 | WM |
| BZT52C22S | 20.8 | 22 | 23.3 | 5 | 55 | 1.0 | 250 | 0.1 | 15.4 | 16.4 | 20.0 | WN |
| BZT52C24S | 22.8 | 24 | 25.6 | 5 | 70 | 1.0 | 250 | 0.1 | 16.8 | 18.4 | 22.0 | WO |
| BZT52C27S | 25.1 | 27 | 28.9 | 2 | 80 | 0.5 | 300 | 0.1 | 18.9 | 21.4 | 25.3 | WP |
| BZT52C30S | 28 | 30 | 32 | 2 | 80 | 0.5 | 300 | 0.1 | 21.0 | 24.4 | 29.4 | WQ |
| BZT52C33S | 31 | 33 | 35 | 2 | 80 | 0.5 | 325 | 0.1 | 23.1 | 27.4 | 33.4 | WR |
| BZT52C36S | 34 | 36 | 38 | 2 | 90 | 0.5 | 350 | 0.1 | 25.2 | 30.4 | 37.4 | WS |
| BZT52C39S | 37 | 39 | 41 | 2 | 130 | 0.5 | 350 | 0.1 | 27.3 | 33.4 | 41.2 | WT |
| BZT52C43S | 40 | 43 | 46 | 2 | 100 | 0.5 | 700 | 0.1 | 32.0 | 10.0 | 12.0 | WU |
| BZT52C47S | 44 | 47 | 50 | 2 | 100 | 0.5 | 750 | 0.1 | 35.0 | 10.0 | 12.0 | WV |
| BZT52C51S | 48 | 51 | 54 | 2 | 100 | 0.5 | 750 | 0.1 | 38.0 | 10.0 | 12.0 | WW |
| BZT52C56S | 53 | 56 | 59 | 2 | 200 | 0.5 | 400 | 0.05 | 39.2 | 10.0 | 12.0 | X1 |

Note : 2. Standard Zener voltage tolerance is ±5%
3. f=1KHz

Curve Characteristics

Fig. 1 - Power Derating Curve

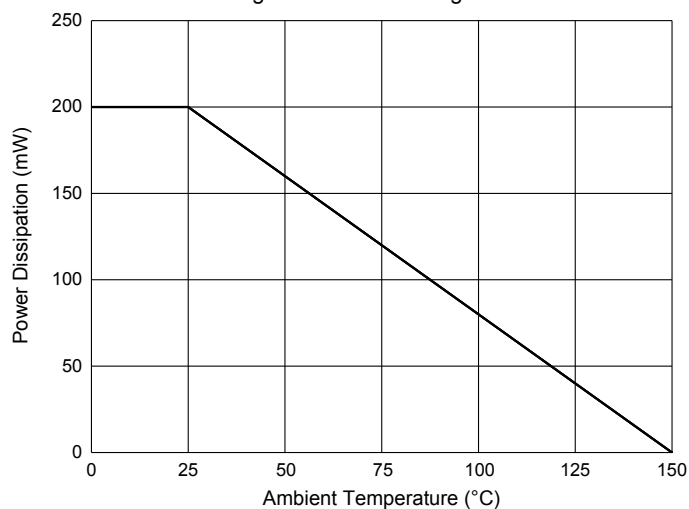


Fig. 2 - Typical Zener Breakdown Characteristics

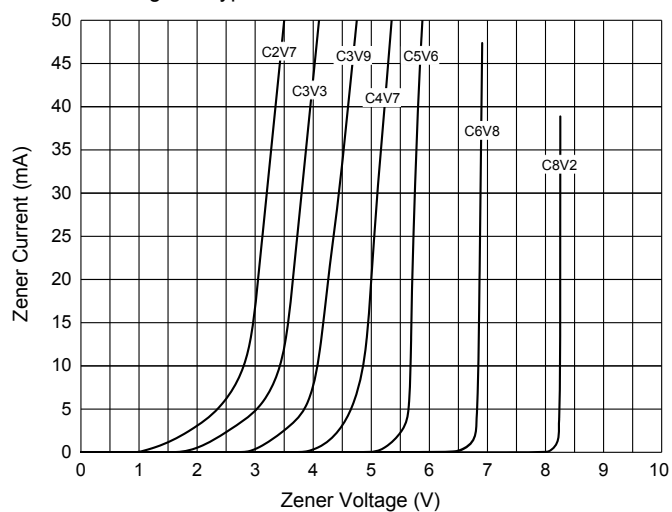
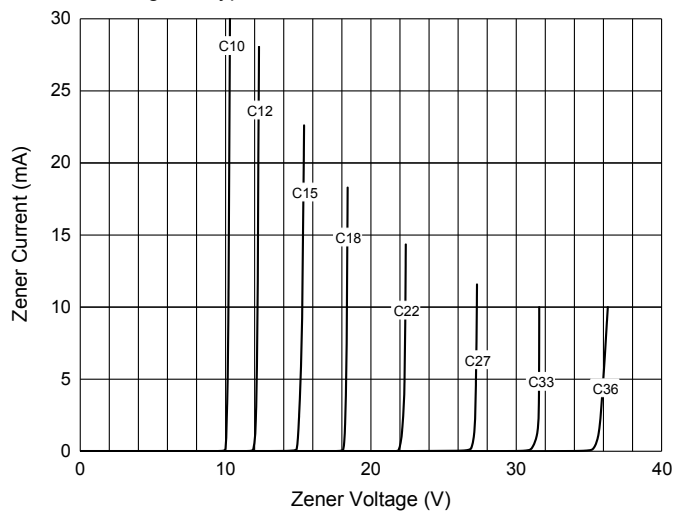


Fig. 3 - Typical Zener Breakdown Characteristics



Ordering Information

| Device | Packing |
|----------------|----------------------|
| Part Number-TP | Tape&Reel:3Kpcs/Reel |

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