

Features

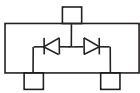
- Dual Zeners in Common Anode Configuration
- ΔV_z for Both Diodes in One Case is $\leq 5\%$.
- Ideally Suited for Automated Assembly Processes
- Moisture Sensitivity Level 1
- Epoxy Meets UL 94 V-0 Flammability Rating
- Halogen Free Available Upon Request By Adding Suffix "-HF"
- Lead Free Finish/RoHS Compliant ("P" Suffix Designates RoHS Compliant. See Ordering Information)

Maximum Ratings

- Operating Junction Temperature Range: -55°C to $+150^{\circ}\text{C}$
- Storage Temperature Range: -55°C to $+150^{\circ}\text{C}$
- Thermal Resistance : 417°C/W Junction to Ambient

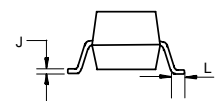
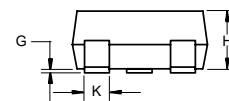
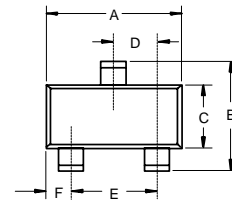
| Parameter | Symbol | Rating | Unit |
|-------------------|--------|--------|------|
| Power Dissipation | P_D | 300 | mW |

Internal Structure



**300 mW
Zener Diode
2.7 to 51 Volts**

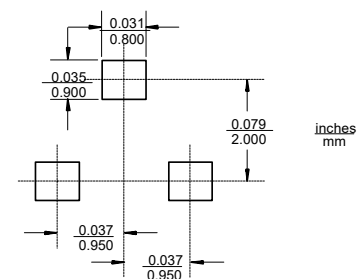
SOT-23



DIMENSIONS

| DIM | INCHES | | MM | | NOTE |
|-----|--------|-------|------|------|------|
| | MIN | MAX | MIN | MAX | |
| A | 0.110 | 0.120 | 2.80 | 3.04 | |
| B | 0.083 | 0.104 | 2.10 | 2.64 | |
| C | 0.047 | 0.055 | 1.20 | 1.40 | |
| D | 0.034 | 0.041 | 0.85 | 1.05 | |
| E | 0.067 | 0.083 | 1.70 | 2.10 | |
| F | 0.018 | 0.024 | 0.45 | 0.60 | |
| G | 0.0004 | 0.006 | 0.01 | 0.15 | |
| H | 0.035 | 0.043 | 0.90 | 1.10 | |
| J | 0.003 | 0.007 | 0.08 | 0.18 | |
| K | 0.012 | 0.020 | 0.30 | 0.51 | |
| L | 0.007 | 0.020 | 0.20 | 0.50 | |

Suggested Solder Pad Layout



Electrical Characteristics @ 25°C Unless Otherwise Specified

| MCC Part Number | Zener Voltage ⁽¹⁾ | Maximum Zener Impedance ⁽²⁾ | | Maximum Zener Impedance ⁽²⁾ | | Min reverse Voltage ⁽¹⁾ | | Typical Temperature coefficient | Marking Code |
|-----------------|----------------------------------|--|-----------------------------------|--|-----------------|------------------------------------|----------------|---------------------------------|--------------|
| | V _Z @ I _{ZT} | I _{ZT} | Z _{ZT} @ I _{ZT} | Z _{ZK} @ I _{ZK} | I _{ZK} | I _R | V _R | T _c | |
| | V | mA | Ω | Ω | mA | μA | V | %/°C | |
| AZ23C2V7 | 2.5-2.9 | 5 | 83 | 500 | 1 | 0.1 | - | -0.065 | KD1 |
| AZ23C3V0 | 2.8-3.2 | 5 | 95 | 500 | 1 | 0.1 | - | -0.060 | KD2 |
| AZ23C3V3 | 3.1-3.5 | 5 | 95 | 500 | 1 | 0.1 | - | -0.055 | KD3 |
| AZ23C3V6 | 3.4-3.8 | 5 | 95 | 500 | 1 | 0.1 | - | -0.055 | KD4 |
| AZ23C3V9 | 3.7-4.1 | 5 | 95 | 500 | 1 | 0.1 | - | -0.050 | KD5 |
| AZ23C4V3 | 4.0-4.6 | 5 | 95 | 500 | 1 | 0.1 | - | -0.035 | KD6 |
| AZ23C4V7 | 4.4-5.0 | 5 | 78 | 500 | 1 | 0.1 | - | -0.015 | KD7 |
| AZ23C5V1 | 4.8-5.4 | 5 | 60 | 480 | 1 | 0.1 | 0.8 | +0.005 | KD8 |
| AZ23C5V6 | 5.2-6.0 | 5 | 40 | 400 | 1 | 0.1 | 1.0 | +0.020 | KD9 |
| AZ23C6V2 | 5.8-6.6 | 5 | 10 | 200 | 1 | 0.1 | 2.0 | +0.030 | KDA |
| AZ23C6V8 | 6.4-7.2 | 5 | 8.0 | 150 | 1 | 0.1 | 3.0 | +0.045 | KDB |
| AZ23C7V5 | 7.0-7.9 | 5 | 7.0 | 50 | 1 | 0.1 | 5.0 | +0.050 | KDC |
| AZ23C8V2 | 7.7-8.7 | 5 | 7.0 | 50 | 1 | 0.1 | 6.0 | +0.055 | KDD |
| AZ23C9V1 | 8.5-9.6 | 5 | 10 | 50 | 1 | 0.1 | 7.0 | +0.065 | KDE |
| AZ23C10 | 9.4-10.6 | 5 | 15 | 70 | 1 | 0.1 | 7.5 | +0.065 | KDF |
| AZ23C11 | 10.4-11.6 | 5 | 20 | 70 | 1 | 0.1 | 8.5 | +0.070 | KDG |
| AZ23C12 | 11.4-12.7 | 5 | 20 | 90 | 1 | 0.1 | 9.0 | +0.075 | KDH |
| AZ23C13 | 12.4-14.1 | 5 | 25 | 110 | 1 | 0.1 | 10.0 | +0.080 | KDI |
| AZ23C15 | 13.8-15.6 | 5 | 30 | 110 | 1 | 0.1 | 11.0 | +0.080 | KDJ |
| AZ23C16 | 15.3-17.1 | 5 | 40 | 170 | 1 | 0.1 | 12.0 | +0.090 | KDK |
| AZ23C18 | 16.8-19.1 | 5 | 50 | 170 | 1 | 0.1 | 14.0 | +0.090 | KDL |
| AZ23C20 | 18.8-21.2 | 5 | 50 | 220 | 1 | 0.1 | 15.0 | +0.090 | KDM |
| AZ23C22 | 20.8-23.3 | 5 | 55 | 220 | 1 | 0.1 | 17.0 | +0.090 | KDN |
| AZ23C24 | 22.8-25.6 | 5 | 80 | 220 | 1 | 0.1 | 18.0 | +0.090 | KDO |
| AZ23C27 | 25.1-28.9 | 5 | 80 | 250 | 1 | 0.1 | 20.0 | +0.090 | KDP |
| AZ23C30 | 28-32 | 5 | 80 | 250 | 1 | 0.1 | 22.5 | +0.090 | KDQ |
| AZ23C33 | 31-35 | 5 | 80 | 250 | 1 | 0.1 | 25.0 | +0.090 | KDR |
| AZ23C36 | 34-38 | 5 | 90 | 250 | 1 | 0.1 | 27.0 | +0.090 | KDS |
| AZ23C39 | 37-41 | 5 | 90 | 300 | 1 | 0.1 | 29.0 | +0.110 | KDT |
| AZ23C43 | 40-46 | 5 | 100 | 700 | 1 | 0.1 | 32.0 | +0.110 | D30 |
| AZ23C47 | 44-50 | 5 | 100 | 750 | 1 | 0.1 | 35.0 | +0.110 | D31 |
| AZ23C51 | 48-54 | 5 | 100 | 750 | 1 | 0.1 | 38.0 | +0.110 | D32 |

Note :

- (1) Short duration test pulse used to minimize self-heating effect.
- (2) f=1KHz.

Curve Characteristics

Fig. 1 - Power Derating Curve

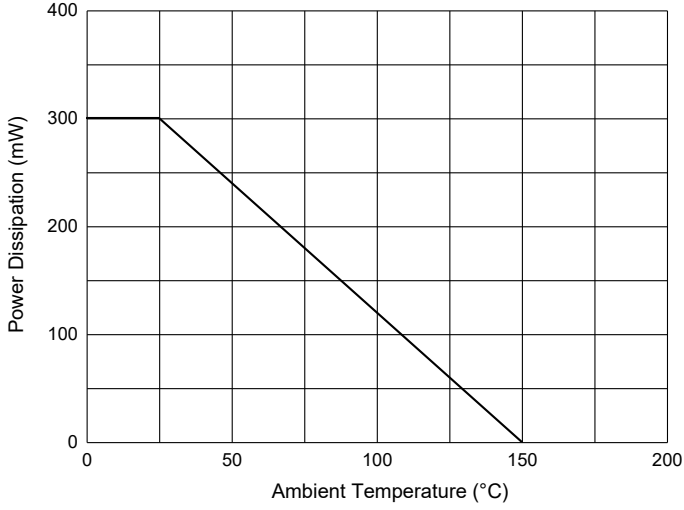


Fig. 2 - Typical Zener Breakdown Characteristics

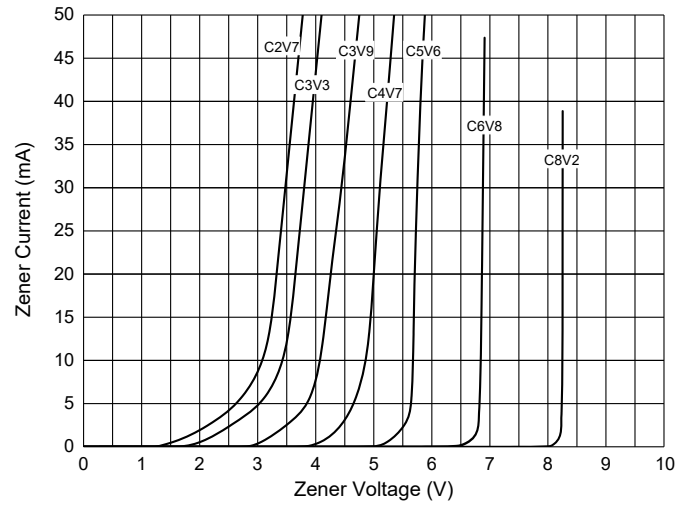
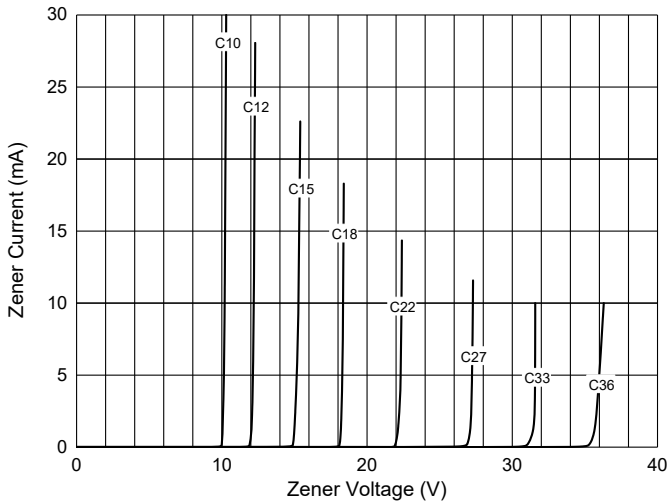


Fig. 3 - Typical Zener Breakdown Characteristics



Ordering Information

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

Note : Adding "-HF" Suffix For Halogen Free, eg. Part Number-TP-HF

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- Техническая поддержка проекта;
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