

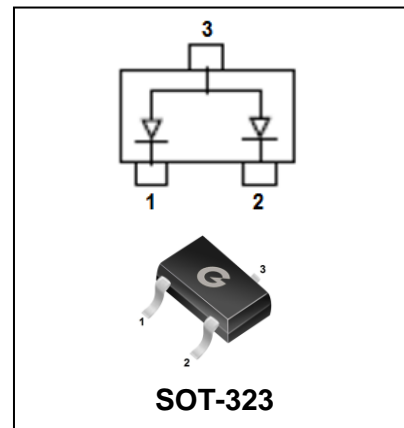
SMT-Type Zener Diode

AZ23C2V4W – AZ23C51W

FEATURES

- Large selection of zener voltages: 2.4V ~ 51V
- Tight voltage tolerance: $\pm 5\%$ for C-series
- Ultra low-profile package well suited for automated assembly
- MSL Class 1 compatible

HF



APPLICATIONS

- General voltage regulation
- Mobile & handheld systems

ORDERING INFORMATION

| Part Number | Marking | Package |
|----------------------|--------------------------------|---------|
| AZ23C2V4W - AZ23C51W | See Electrical Characteristics | SOT-323 |

MAXIMUM RATING (@ $T_A = 25^\circ\text{C}$ unless otherwise specified)

| Parameter | Symbol | Value | Unit |
|--|-----------------|------------|---------------------------|
| Power Dissipation | P_D | 200 | mW |
| Thermal Resistance (Junction-to-Ambient) | $R_{\theta JA}$ | 625 | $^\circ\text{C}/\text{W}$ |
| Junction Temperature Range | T_J | -55 ~ +150 | $^\circ\text{C}$ |
| Storage Temperature Range | T_{STG} | -65 ~ +150 | $^\circ\text{C}$ |

Note: These ratings are limiting values above which the serviceability of the diodes may be impaired.

SMT-Type Zener Diode

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ELECTRICAL CHARACTERISTICS (@ T_A = 25°C unless otherwise specified)

| Part Number | Marking Code | Zener Voltage V _Z (V) | | | @ I _{ZT} (mA) | Maximum Zener Impedance | | | Typical Temperature Coefficient T _C (%/°C) | Maximum Reverse Current I _R (μA) | @ V _R (V) |
|-------------|--------------|----------------------------------|-------|-------|------------------------|--|---------------------|------------------------|---|---|----------------------|
| | | Min. | Typ. | Max. | | Z _{ZT} (Ω) @ I _{ZT} | Z _{ZK} (Ω) | @ I _{ZK} (mA) | | | |
| AZ23C2V4W | KD0 | 2.28 | 2.40 | 2.52 | 5 | 85 | 600 | 1.0 | -0.065 | 100.000 | 1.0 |
| AZ23C2V7W | KD1 | 2.57 | 2.70 | 2.84 | 5 | 83 | 600 | 1.0 | -0.065 | 75.000 | 1.0 |
| AZ23C3V0W | KD2 | 2.85 | 3.00 | 3.15 | 5 | 95 | 600 | 1.0 | -0.060 | 50.000 | 1.0 |
| AZ23C3V3W | KD3 | 3.14 | 3.30 | 3.47 | 5 | 95 | 600 | 1.0 | -0.055 | 25.000 | 1.0 |
| AZ23C3V6W | KD4 | 3.42 | 3.60 | 3.78 | 5 | 95 | 600 | 1.0 | -0.055 | 15.000 | 1.0 |
| AZ23C3V9W | KD5 | 3.71 | 3.90 | 4.10 | 5 | 95 | 600 | 1.0 | -0.050 | 10.000 | 1.0 |
| AZ23C4V3W | KD6 | 4.09 | 4.30 | 4.52 | 5 | 95 | 600 | 1.0 | -0.035 | 5.000 | 1.0 |
| AZ23C4V7W | KD7 | 4.47 | 4.70 | 4.94 | 5 | 78 | 500 | 1.0 | -0.015 | 5.000 | 2.0 |
| AZ23C5V1W | KD8 | 4.85 | 5.10 | 5.36 | 5 | 60 | 480 | 1.0 | 0.005 | 0.100 | 0.8 |
| AZ23C5V6W | KD9 | 5.32 | 5.60 | 5.88 | 5 | 40 | 400 | 1.0 | 0.020 | 0.100 | 1.0 |
| AZ23C6V2W | KDA | 5.89 | 6.20 | 6.51 | 5 | 10 | 200 | 1.0 | 0.030 | 0.100 | 2.0 |
| AZ23C6V8W | KDB | 6.46 | 6.80 | 7.14 | 5 | 8 | 150 | 1.0 | 0.045 | 0.100 | 3.0 |
| AZ23C7V5W | KDC | 7.13 | 7.50 | 7.88 | 5 | 7 | 50 | 1.0 | 0.050 | 0.100 | 5.0 |
| AZ23C8V2W | KDD | 7.79 | 8.20 | 8.61 | 5 | 7 | 50 | 1.0 | 0.055 | 0.100 | 6.0 |
| AZ23C9V1W | KDE | 8.65 | 9.10 | 9.56 | 5 | 10 | 50 | 1.0 | 0.065 | 0.100 | 7.0 |
| AZ23C10W | KDF | 9.50 | 10.00 | 10.50 | 5 | 15 | 70 | 1.0 | 0.065 | 0.100 | 7.5 |
| AZ23C11W | KDG | 10.45 | 11.00 | 11.55 | 5 | 20 | 70 | 1.0 | 0.070 | 0.100 | 8.5 |
| AZ23C12W | KDH | 11.40 | 12.00 | 12.60 | 5 | 20 | 90 | 1.0 | 0.075 | 0.100 | 9.0 |
| AZ23C13W | KDI | 12.35 | 13.00 | 13.65 | 5 | 25 | 110 | 1.0 | 0.080 | 0.100 | 10.0 |
| AZ23C15W | KDJ | 14.25 | 15.00 | 15.75 | 5 | 30 | 110 | 1.0 | 0.080 | 0.100 | 11.0 |
| AZ23C16W | KDK | 15.20 | 16.00 | 16.80 | 5 | 40 | 170 | 1.0 | 0.090 | 0.100 | 12.0 |
| AZ23C18W | KDL | 17.10 | 18.00 | 18.90 | 5 | 50 | 170 | 1.0 | 0.090 | 0.100 | 14.0 |
| AZ23C20W | KDM | 19.00 | 20.00 | 21.00 | 5 | 50 | 220 | 1.0 | 0.090 | 0.100 | 15.0 |
| AZ23C22W | KDN | 20.90 | 22.00 | 23.10 | 5 | 55 | 220 | 1.0 | 0.090 | 0.100 | 17.0 |
| AZ23C24W | KDO | 22.80 | 24.00 | 25.20 | 5 | 80 | 220 | 1.0 | 0.090 | 0.100 | 18.0 |
| AZ23C27W | KDP | 25.65 | 27.00 | 28.35 | 5 | 80 | 250 | 1.0 | 0.090 | 0.100 | 20.0 |
| AZ23C30W | KDQ | 28.50 | 30.00 | 31.50 | 5 | 80 | 250 | 1.0 | 0.090 | 0.100 | 22.5 |
| AZ23C33W | KDR | 31.35 | 33.00 | 34.65 | 5 | 80 | 250 | 1.0 | 0.090 | 0.100 | 25.0 |
| AZ23C36W | KDS | 34.20 | 36.00 | 37.80 | 5 | 90 | 250 | 1.0 | 0.090 | 0.100 | 27.0 |
| AZ23C39W | KDT | 37.05 | 39.00 | 40.95 | 5 | 90 | 300 | 1.0 | 0.110 | 0.100 | 29.0 |
| AZ23C43W | KDU | 40.85 | 43.00 | 45.15 | 5 | 100 | 700 | 1.0 | 0.110 | 0.100 | 32.0 |
| AZ23C47W | KDV | 44.65 | 47.00 | 49.35 | 5 | 100 | 750 | 1.0 | 0.110 | 0.100 | 35.0 |
| AZ23C51W | KDW | 48.45 | 51.00 | 53.55 | 5 | 100 | 750 | 1.0 | 0.110 | 0.100 | 38.0 |

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AZ23C2V4W – AZ23C51W

TYPICAL CHARACTERISTICS (@ $T_A = 25^\circ\text{C}$ unless otherwise specified)

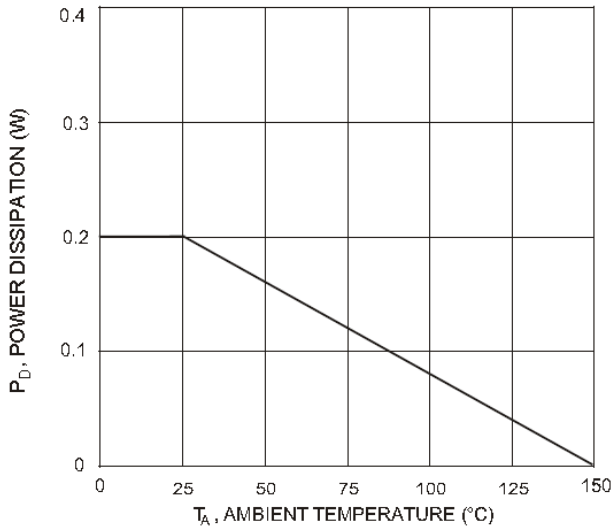


Fig. 1 Power Derating Curve

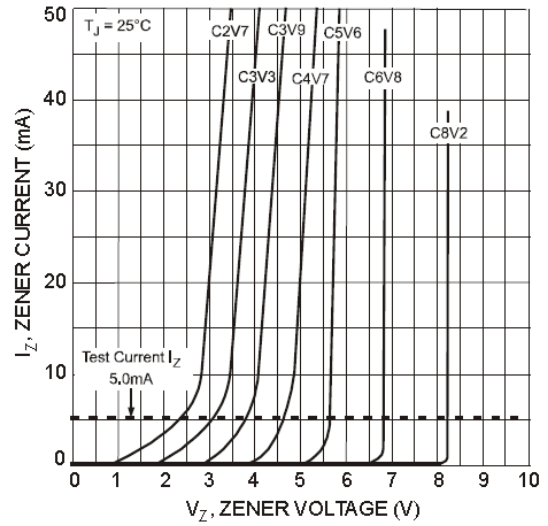


Fig. 2 Typical Zener Breakdown Characteristics

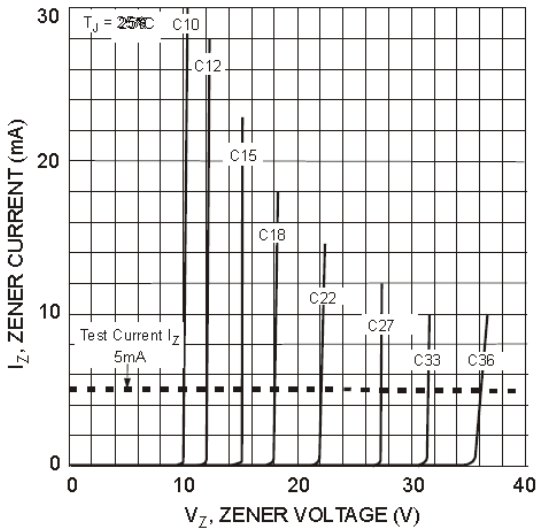


Fig. 3 Typical Zener Breakdown Characteristics

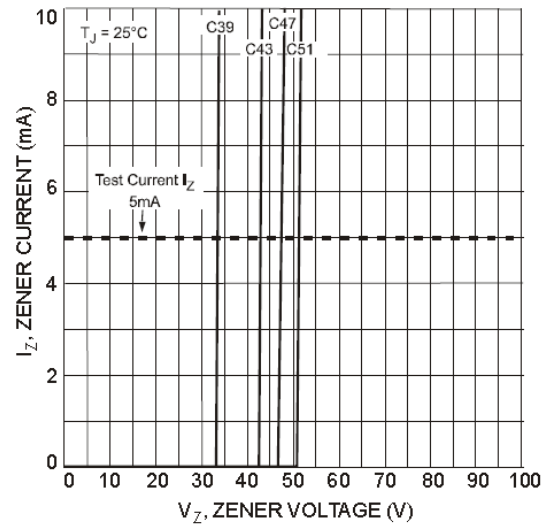


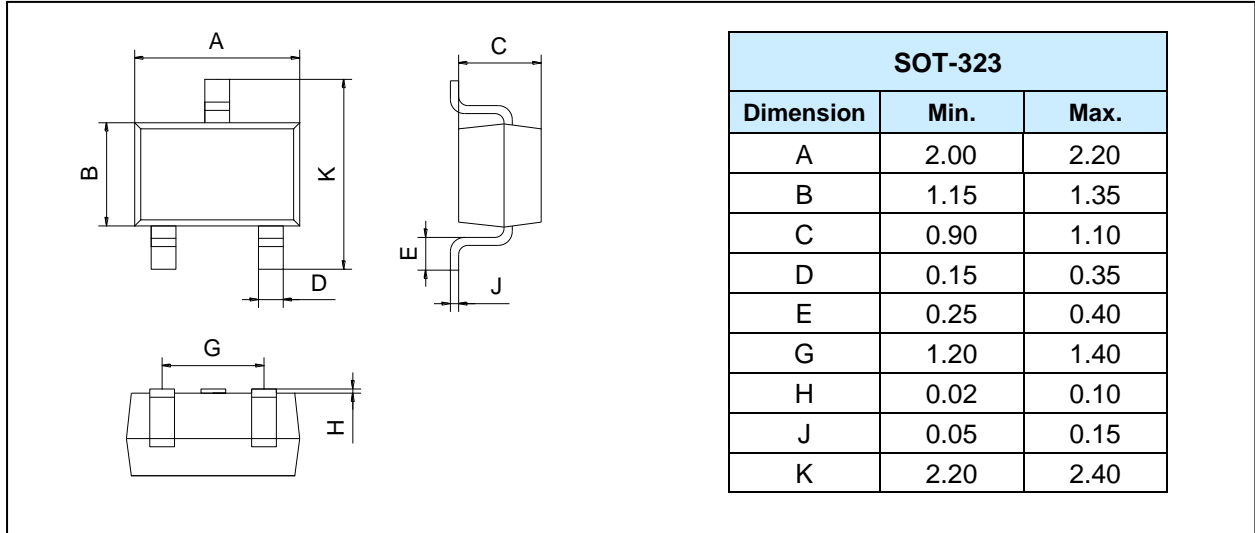
Fig. 4 Typical Zener Breakdown Characteristics

SMT-Type Zener Diode

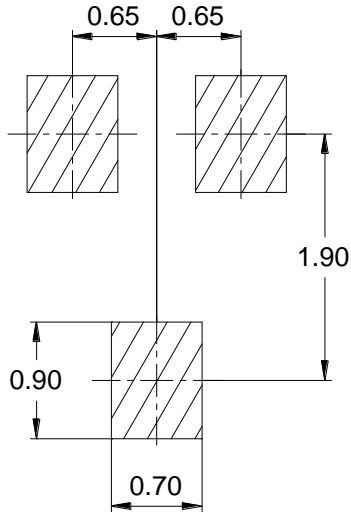
AZ23C2V4W – AZ23C51W

PACKAGE OUTLINE (Unit: mm)

Plastic surface mounted package



MOUNTING PAD LAYOUT (Unit: mm)



PACKAGE INFORMATION

| Part Number | Package | Shipping Quantity |
|----------------------|---------|-----------------------|
| AZ23C2V4W - AZ23C51W | SOT-323 | 3000pcs / Tape & Reel |

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