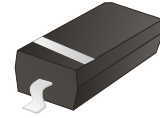


ACZRW5225B-HF Thru. ACZRW5256B-HF

Voltage: 3.0 to 30 Volts

Power: 350 mW

RoHS Device

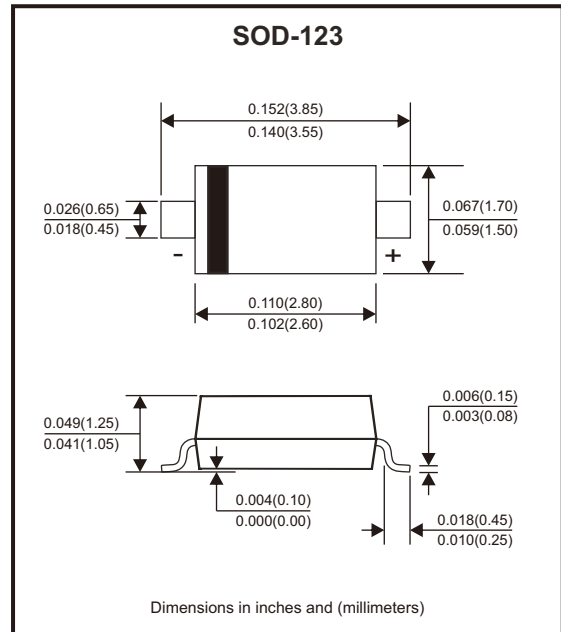


Features

- Planar die construction.
- Ultra-small surface mount package.
- General purpose, medium current.
- Ideally suited for automated assembly processes.
- AEC-Q101 Qualified.

Mechanical data

- Case: SOD-123, molded plastic.
- Polarity: indicated by cathode band.
- Mounting position: Any.



Circuit Diagram



Maximum Rating (@Ta=25°C unless otherwise specified)

| Parameter | Symbol | Value | Unit |
|--|-----------------------------------|-------------|------|
| Forward voltage (Note 2) @ I _F = 10mA | V _F | 0.9 | V |
| Power dissipation (Note 1) | P _D | 350 | mW |
| Thermal resistance, junction to ambient air | R _{θJA} | 357 | °C/W |
| Operation junction and storage temperature range | T _J , T _{STG} | -55 to +150 | °C |

Notes: 1. Device mounted on ceramic PCB; 7.6mm x 9.4mm x 0.87mm with pad areas 25mm².

2. Tested with pulses, T_p ≤ 1.0ms.

Electrical Characteristics (@Ta = 25°C unless otherwise specified)

| Part Number | Zener voltage range | | | Maximum zener impedance | | | Maximum reverse current | | Marking code | |
|---------------|---------------------|--------|--------|-------------------------|---------|---------|-------------------------|------|--------------|-----|
| | Vz@IzT | | | IzT | ZzT@IzT | Zzk@Izk | Izk | Ir | | Vr |
| | Min(V) | Nom(V) | Max(V) | (mA) | (Ω) | (Ω) | (mA) | (μA) | | (V) |
| ACZRW5225B-HF | 2.85 | 3.0 | 3.15 | 20 | 30 | 1600 | 0.25 | 50 | 1.0 | C5 |
| ACZRW5226B-HF | 3.14 | 3.3 | 3.47 | 20 | 28 | 1600 | 0.25 | 25 | 1.0 | G1 |
| ACZRW5227B-HF | 3.42 | 3.6 | 3.78 | 20 | 24 | 1700 | 0.25 | 15 | 1.0 | G2 |
| ACZRW5228B-HF | 3.71 | 3.9 | 4.10 | 20 | 23 | 1900 | 0.25 | 10 | 1.0 | G3 |
| ACZRW5229B-HF | 4.09 | 4.3 | 4.52 | 20 | 22 | 2000 | 0.25 | 5 | 1.0 | G4 |
| ACZRW5230B-HF | 4.47 | 4.7 | 4.94 | 20 | 19 | 1900 | 0.25 | 5 | 2.0 | G5 |
| ACZRW5231B-HF | 4.85 | 5.1 | 5.36 | 20 | 17 | 1600 | 0.25 | 5 | 2.0 | E1 |
| ACZRW5232B-HF | 5.32 | 5.6 | 5.88 | 20 | 11 | 1600 | 0.25 | 5 | 3.0 | E2 |
| ACZRW5233B-HF | 5.70 | 6.0 | 6.30 | 20 | 7 | 1600 | 0.25 | 5 | 3.5 | E3 |
| ACZRW5234B-HF | 5.89 | 6.2 | 6.51 | 20 | 7 | 1000 | 0.25 | 5 | 4.0 | E4 |
| ACZRW5235B-HF | 6.46 | 6.8 | 7.14 | 20 | 5 | 750 | 0.25 | 3 | 5.0 | E5 |
| ACZRW5236B-HF | 7.13 | 7.5 | 7.88 | 20 | 6 | 500 | 0.25 | 3 | 6.0 | F1 |
| ACZRW5237B-HF | 7.79 | 8.2 | 8.61 | 20 | 8 | 500 | 0.25 | 3 | 6.5 | F2 |
| ACZRW5238B-HF | 8.27 | 8.7 | 9.14 | 20 | 8 | 600 | 0.25 | 3 | 6.5 | F3 |
| ACZRW5239B-HF | 8.65 | 9.1 | 9.56 | 20 | 10 | 600 | 0.25 | 3 | 7.0 | F4 |
| ACZRW5240B-HF | 9.50 | 10 | 10.50 | 20 | 17 | 600 | 0.25 | 3 | 8.0 | F5 |
| ACZRW5241B-HF | 10.45 | 11 | 11.55 | 20 | 22 | 600 | 0.25 | 2 | 8.4 | H1 |
| ACZRW5242B-HF | 11.40 | 12 | 12.60 | 20 | 30 | 600 | 0.25 | 1 | 9.1 | H2 |
| ACZRW5243B-HF | 12.35 | 13 | 13.65 | 9.5 | 13 | 600 | 0.25 | 0.5 | 9.9 | H3 |
| ACZRW5244B-HF | 13.30 | 14 | 14.70 | 9.0 | 15 | 600 | 0.25 | 0.1 | 10 | H4 |
| ACZRW5245B-HF | 14.25 | 15 | 15.75 | 8.5 | 16 | 600 | 0.25 | 0.1 | 11 | H5 |
| ACZRW5246B-HF | 15.20 | 16 | 16.80 | 7.8 | 17 | 600 | 0.25 | 0.1 | 12 | J1 |
| ACZRW5248B-HF | 17.10 | 18 | 18.90 | 7.0 | 21 | 600 | 0.25 | 0.1 | 14 | J3 |
| ACZRW5250B-HF | 19.00 | 20 | 21.00 | 6.2 | 25 | 600 | 0.25 | 0.1 | 15 | J5 |
| ACZRW5251B-HF | 20.90 | 22 | 23.10 | 5.6 | 29 | 600 | 0.25 | 0.1 | 17 | K1 |
| ACZRW5252B-HF | 22.80 | 24 | 25.20 | 5.2 | 33 | 600 | 0.25 | 0.1 | 18 | K2 |
| ACZRW5253B-HF | 23.75 | 25 | 26.25 | 5.0 | 35 | 600 | 0.25 | 0.1 | 19 | K3 |
| ACZRW5254B-HF | 25.65 | 27 | 28.35 | 5.0 | 41 | 600 | 0.25 | 0.1 | 21 | K4 |
| ACZRW5255B-HF | 26.60 | 28 | 29.40 | 4.5 | 44 | 600 | 0.25 | 0.1 | 21 | K5 |
| ACZRW5256B-HF | 28.50 | 30 | 31.50 | 4.2 | 49 | 600 | 0.25 | 0.1 | 23 | M1 |

Rating and Characteristic Curves (ACZRW52xxB-HF Series)

Fig.1 - Zener Characteristics

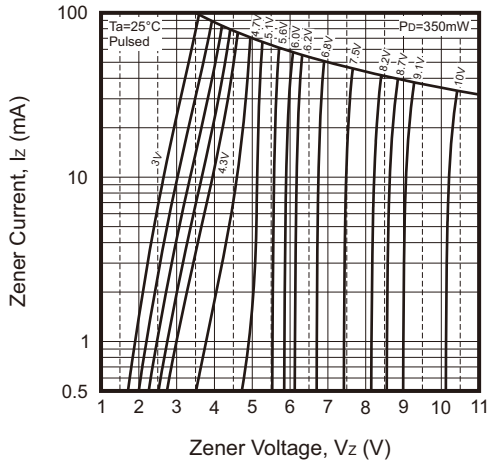


Fig.2 - Zener Characteristics

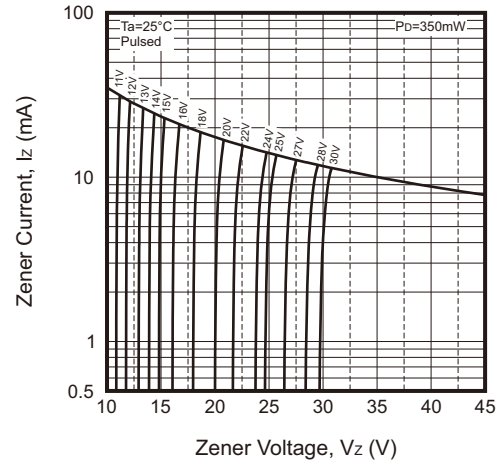


Fig.3 - Temperature Coefficients

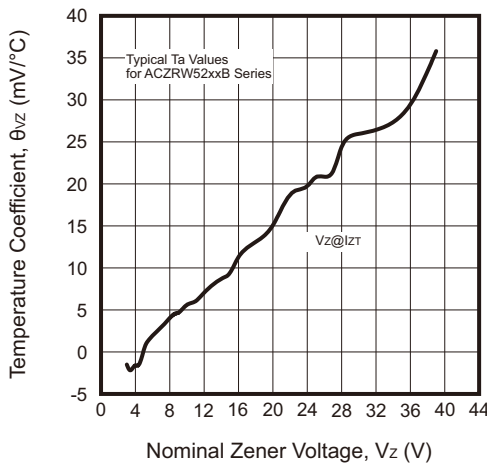


Fig.4 - Typical Leakage Current

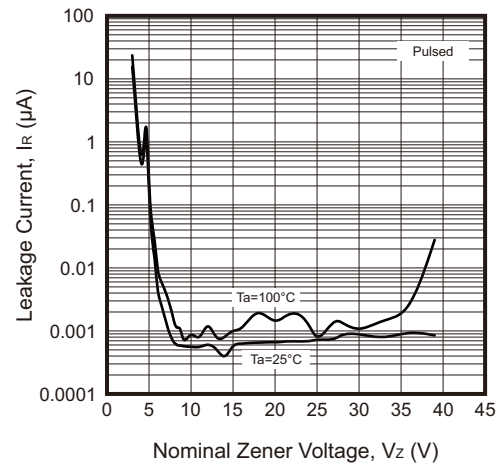


Fig.5 - Typical Capacitance

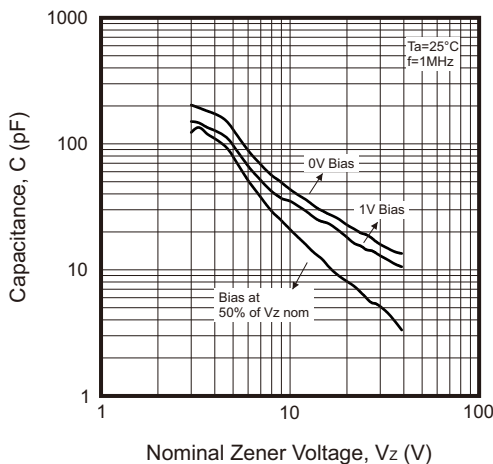
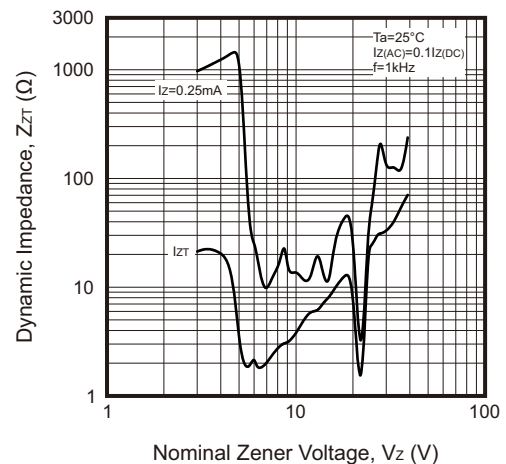
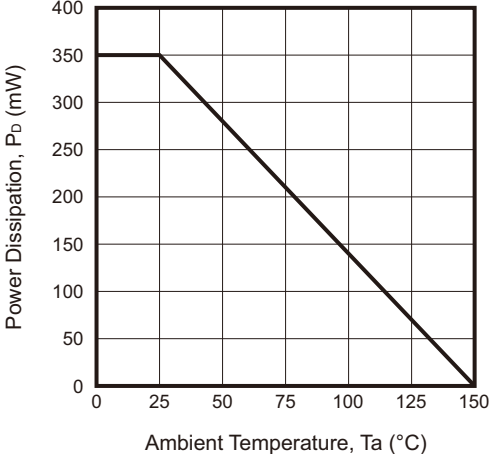


Fig.6 - Effect of Zener Voltage on Zener Impedance

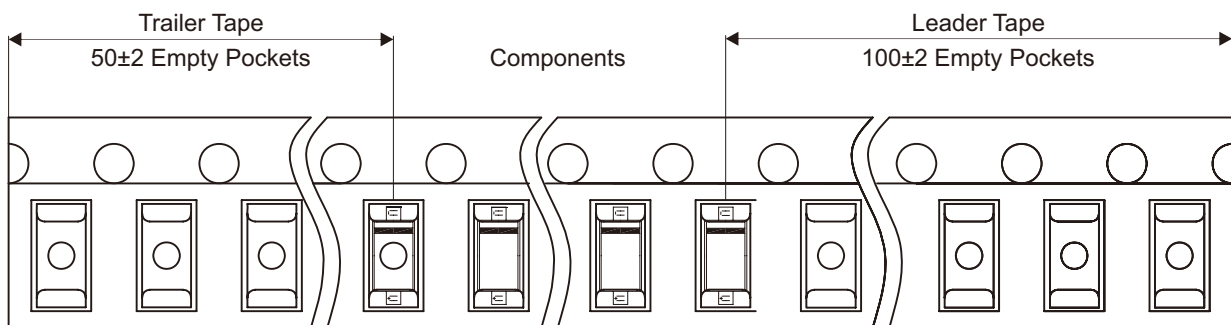
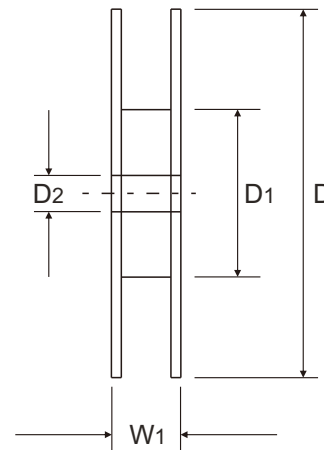
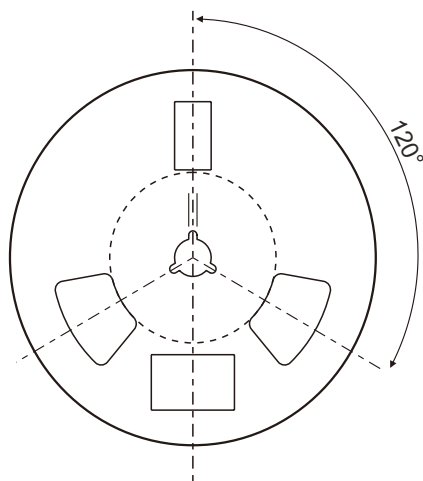
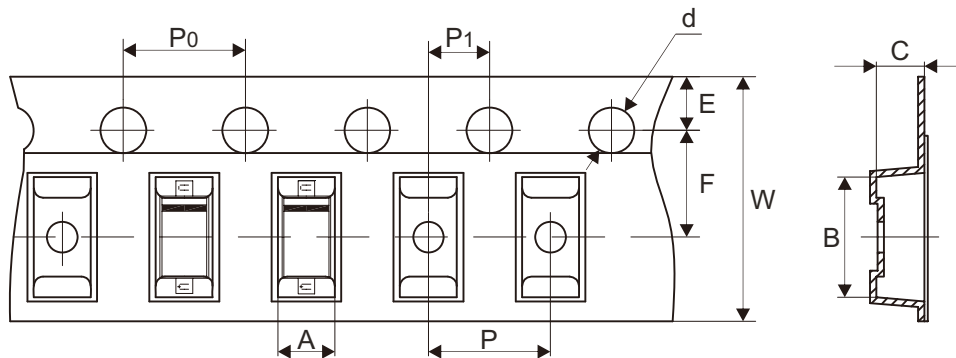


Rating and Characteristic Curves (ACZRW52xxB-HF Series)

Fig.7 - Power Derating Curve



Reel Taping Specification



| SOD-123 | SYMBOL | A | B | C | d | D | D1 | D2 |
|---------|--------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|
| | (mm) | 1.85 ± 0.10 | 3.95 ± 0.10 | 1.57 ± 0.10 | 1.55 ± 0.10 | 178.00 ± 1.00 | 54.40 ± 0.40 | 13.00 ± 0.20 |
| | (inch) | 0.073 ± 0.004 | 0.156 ± 0.004 | 0.062 ± 0.004 | 0.061 ± 0.004 | 7.008 ± 0.039 | 2.142 ± 0.016 | 0.512 ± 0.008 |

| SOD-123 | SYMBOL | E | F | P | P1 | P0 | W | W1 |
|---------|--------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|
| | (mm) | 1.75 ± 0.10 | 3.50 ± 0.05 | 4.00 ± 0.10 | 2.00 ± 0.10 | 4.00 ± 0.10 | 8.00 ± 1.00 | 12.30 ± 1.00 |
| | (inch) | 0.069 ± 0.004 | 0.138 ± 0.002 | 0.157 ± 0.004 | 0.079 ± 0.004 | 0.157 ± 0.004 | 0.315 ± 0.039 | 0.484 ± 0.039 |