

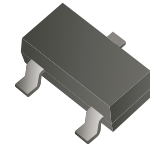
BZX84C2V4CC-HF Thru. BZX84C51CC-HF

Voltage: 2.4 to 51 Volts

Power: 350 mWatts

RoHS Device

Halogen Free

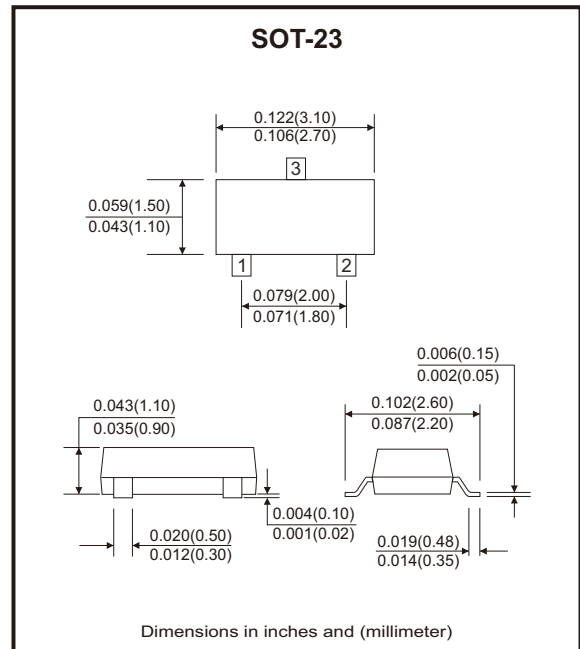


Features

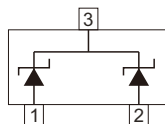
- Zener breakdown voltage range
- 2.4V to 51V.
- Package designed for optimal automated board assembly.
- Small package size for high density applications.

Mechanical data

- Case: SOT-23, Molded plastic.



Circuit Diagram



Maximum Rating (at Ta=25°C unless otherwise noted)

| Parameter | Symbol | Value | Unit |
|--|-----------------------------------|-------------|------|
| Power dissipation | P _D | 350 | mW |
| Thermal resistance, junction to ambient (Note 1) | R _{θJA} | 417 | °C/W |
| Operating and storage temperature range | T _J , T _{STG} | -65 to +150 | °C |

Note: 1. Alumina = 0.4 * 0.3 * 0.024 in, 99.5% alumina.

Electrical Characteristics (at Ta=25°C unless otherwise noted, VF < 0.9V at IF = 10)

| Part Number | Zener voltage range (Note 1) | Dynamic resistance | Reverse leakage current | I _{ZT} | Z _{ZT} Max. (Ω) | I _R Max (μA) at V _R (V) | | Marking Code |
|----------------|------------------------------|--------------------|-------------------------|-----------------|--------------------------|---|--------|--------------|
| | Min(V) | | | | | Nom(V) | Max(V) | |
| BZX84C2V4CC-HF | 2.2 | 2.4 | 2.6 | 5.0 | 100 | 50 | 1.0 | JH |
| BZX84C2V7CC-HF | 2.5 | 2.7 | 2.9 | 5.0 | 100 | 20 | 1.0 | JJ |
| BZX84C3V0CC-HF | 2.8 | 3.0 | 3.2 | 5.0 | 95 | 10 | 1.0 | JK |
| BZX84C3V3CC-HF | 3.1 | 3.3 | 3.5 | 5.0 | 95 | 5.0 | 1.0 | JM |
| BZX84C3V6CC-HF | 3.4 | 3.6 | 3.8 | 5.0 | 90 | 5.0 | 1.0 | JN |
| BZX84C3V9CC-HF | 3.7 | 3.9 | 4.1 | 5.0 | 90 | 3.0 | 1.0 | JP |
| BZX84C4V3CC-HF | 4.0 | 4.3 | 4.6 | 5.0 | 90 | 3.0 | 1.0 | JR |
| BZX84C4V7CC-HF | 4.4 | 4.7 | 5.0 | 5.0 | 80 | 3.0 | 2.0 | JX |
| BZX84C5V1CC-HF | 4.8 | 5.1 | 5.4 | 5.0 | 60 | 2.0 | 2.0 | JY |
| BZX84C5V6CC-HF | 5.2 | 5.6 | 6.0 | 5.0 | 40 | 1.0 | 2.0 | JZ |
| BZX84C6V2CC-HF | 5.8 | 6.2 | 6.6 | 5.0 | 10 | 3.0 | 4.0 | KA |
| BZX84C6V8CC-HF | 6.4 | 6.8 | 7.2 | 5.0 | 15 | 2.0 | 4.0 | KB |
| BZX84C7V5CC-HF | 7.0 | 7.5 | 7.9 | 5.0 | 15 | 1.0 | 5.0 | KC |
| BZX84C8V2CC-HF | 7.7 | 8.2 | 8.7 | 5.0 | 15 | 0.7 | 5.0 | KD |
| BZX84C9V1CC-HF | 8.5 | 9.1 | 9.6 | 5.0 | 15 | 0.5 | 6.0 | KE |
| BZX84C10CC-HF | 9.4 | 10 | 10.6 | 5.0 | 20 | 0.2 | 7.0 | KF |
| BZX84C11CC-HF | 10.4 | 11 | 11.6 | 5.0 | 20 | 0.1 | 8.0 | KH |
| BZX84C12CC-HF | 11.4 | 12 | 12.7 | 5.0 | 25 | 0.1 | 8.0 | KJ |
| BZX84C13CC-HF | 12.4 | 13 | 14.1 | 5.0 | 30 | 0.1 | 8.0 | KK |
| BZX84C15CC-HF | 14.3 | 15 | 15.8 | 5.0 | 30 | 0.05 | 10.5 | KM |
| BZX84C16CC-HF | 15.3 | 16 | 17.1 | 5.0 | 40 | 0.05 | 11.2 | KN |
| BZX84C18CC-HF | 16.8 | 18 | 19.1 | 5.0 | 45 | 0.05 | 12.6 | KP |
| BZX84C20CC-HF | 18.8 | 20 | 21.2 | 5.0 | 55 | 0.05 | 14.0 | KR |
| BZX84C22CC-HF | 20.8 | 22 | 23.3 | 5.0 | 55 | 0.05 | 15.4 | KX |
| BZX84C24CC-HF | 22.8 | 24 | 25.6 | 5.0 | 70 | 0.05 | 16.8 | KY |
| BZX84C27CC-HF | 25.1 | 27 | 28.9 | 2.0 | 80 | 0.05 | 18.9 | KZ |
| BZX84C30CC-HF | 28.0 | 30 | 32.0 | 2.0 | 80 | 0.05 | 21.0 | MA |
| BZX84C33CC-HF | 31.0 | 33 | 35.0 | 2.0 | 80 | 0.05 | 23.1 | MB |
| BZX84C36CC-HF | 34.0 | 36 | 38.0 | 2.0 | 90 | 0.05 | 25.2 | MC |
| BZX84C39CC-HF | 37.0 | 39 | 41.0 | 2.0 | 130 | 0.05 | 27.3 | MD |
| BZX84C43CC-HF | 40.0 | 43 | 46.0 | 2.0 | 150 | 0.05 | 30.1 | ME |
| BZX84C47CC-HF | 44.0 | 47 | 50.0 | 2.0 | 170 | 0.05 | 32.9 | MF |
| BZX84C51CC-HF | 48.0 | 51 | 54.0 | 2.0 | 180 | 0.05 | 35.7 | MH |

Note: 1. Tested with pulses tp = 20ms.

Rating and Characteristic Curves (BZX84C2V4CC-HF Thru. BZX84C51CC-HF)

Fig.1 - Temperature Coefficient

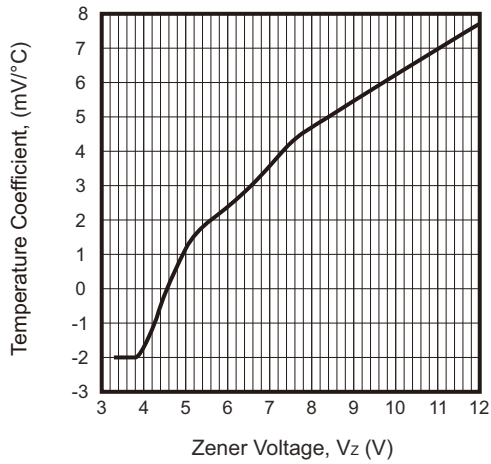


Fig.2 - Temperature Coefficient

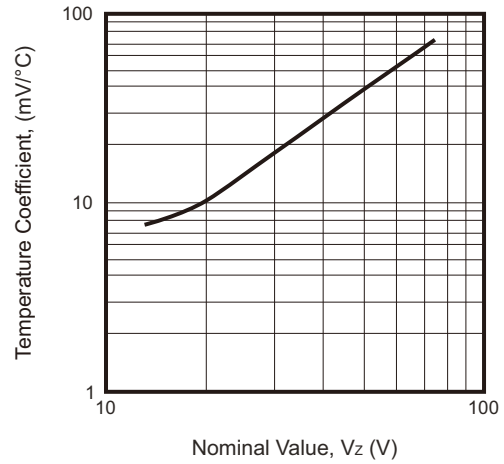


Fig.3 - Power Derating Curve

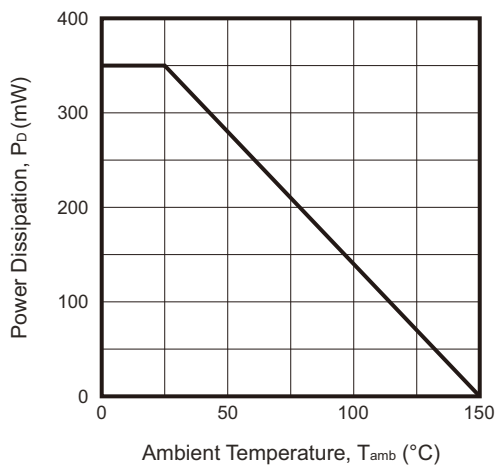
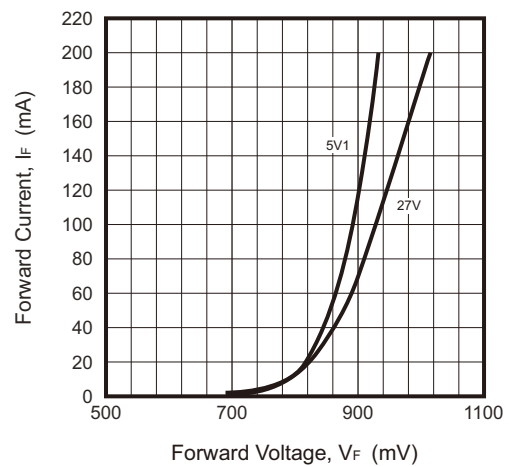
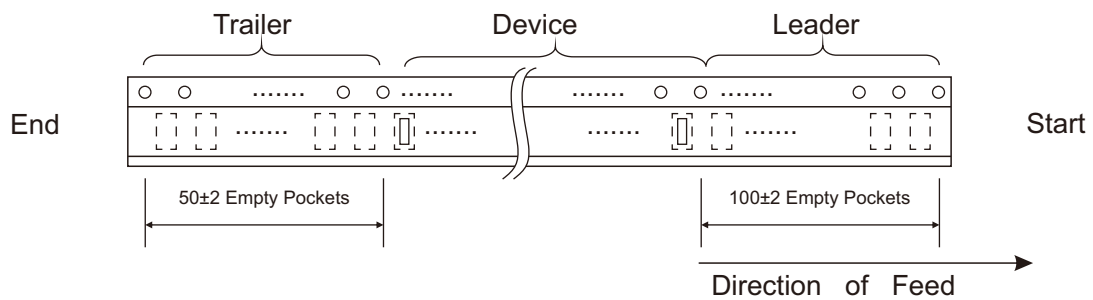
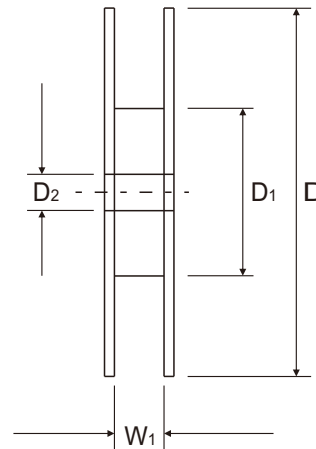
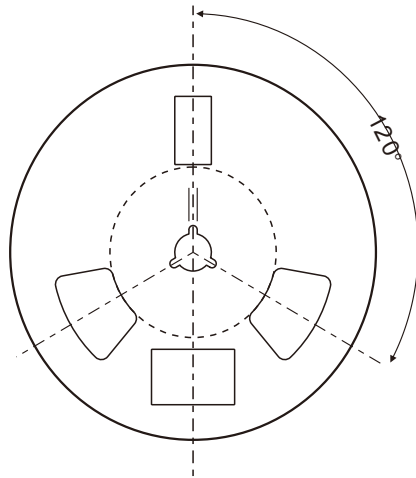
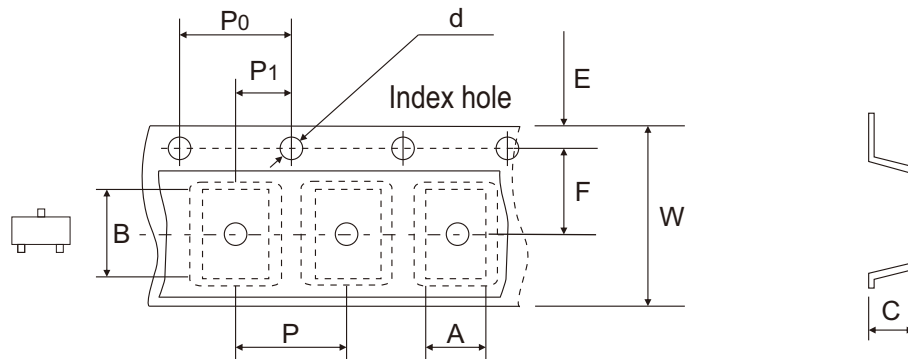


Fig.4 - Typical Forward Voltage



Reel Taping Specification



| SOT-23 | SYMBOL | A | B | C | d | D | D1 | D2 |
|--------|--------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|
| | (mm) | 3.15 ± 0.10 | 2.77 ± 0.10 | 1.22 ± 0.10 | 1.50 ± 0.10 | 178.00 ± 1.00 | 54.00 ± 0.50 | 13.00 ± 0.50 |
| | (inch) | 0.124 ± 0.004 | 0.109 ± 0.004 | 0.048 ± 0.004 | 0.059 ± 0.004 | 7.008 ± 0.039 | 2.126 ± 0.020 | 0.512 ± 0.020 |

| SOT-23 | SYMBOL | E | F | P | P0 | P1 | W | W1 |
|--------|--------|---------------|---------------|---------------|---------------|---------------|--------------------------|---------------|
| | (mm) | 1.75 ± 0.10 | 3.50 ± 0.05 | 4.00 ± 0.10 | 4.00 ± 0.10 | 2.00 ± 0.05 | 8.00 + 0.30 - 0.10 | 9.50 ± 1.00 |
| | (inch) | 0.069 ± 0.004 | 0.138 ± 0.002 | 0.157 ± 0.004 | 0.157 ± 0.004 | 0.079 ± 0.002 | 0.315 + 0.012 - 0.004 | 0.374 ± 0.039 |