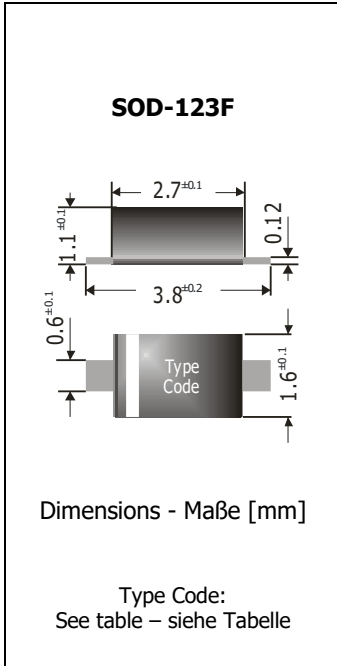


BZT52B2V4 ... BZT52B39
SMD Planar Zener Diodes
SMD Planar Zener-Dioden

P_{tot} = 500 mW
V_Z = 2.4 V ... 39 V
T_{jmax} = 150°C

Version 2019-08-23



Typical Applications

Voltage stabilization and regulators
 (For overvoltage protection see TVS diodes SMF series)
 Commercial grade
 Suffix -Q: AEC-Q101 compliant ¹⁾
 Suffix -AQ: in AEC-Q101 qualification ¹⁾

Features

~ ±2% tolerance of Zener voltage
 Sharp Zener voltage breakdown
 Low leakage current
 Compliant to RoHS, REACH, Conflict Minerals ¹⁾

Mechanical Data ¹⁾

| | |
|------------------------------|-----------|
| Taped and reeled | 3000 / 7" |
| Weight approx. | 0.01 g |
| Case material | UL 94V-0 |
| Solder & assembly conditions | 260°C/10s |
| | MSL = 1 |



Typische Anwendungen

Spannungsstabilisierung und -regler
 (Für Überspannungsschutz siehe TVS-Diodenreihe SMF)
 Standardausführung
 Suffix -Q: AEC-Q101 konform ¹⁾
 Suffix -AQ: in AEC-Q101 Qualifikation ¹⁾

Besonderheiten

~ ±2% Toleranz der Zener-Spannung
 Scharfer Zenerspannungsabbruch
 Niedriger Sperrstrom
 Konform zu RoHS, REACH, Konfliktmineralien ¹⁾

Mechanische Daten ¹⁾

| |
|----------------------------|
| Gegurtet auf Rolle |
| Gewicht ca. |
| Gehäusematerial |
| Löt- und Einbaubedingungen |

Zener voltages and Type Codes see table on next page
 Zener-Spannungen und Typ-Kodierungen siehe Tabelle auf der nächsten Seite

Maximum ratings ²⁾

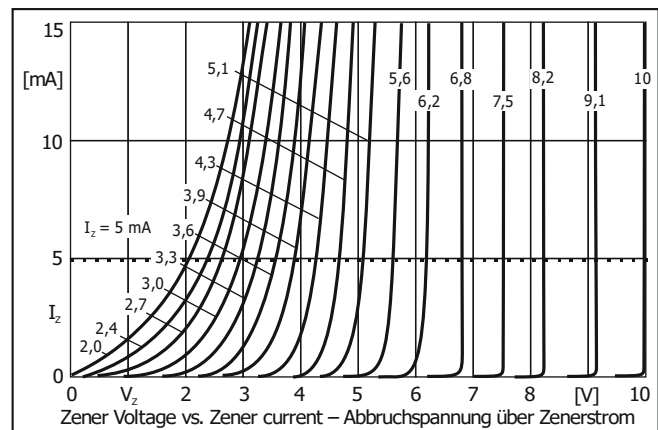
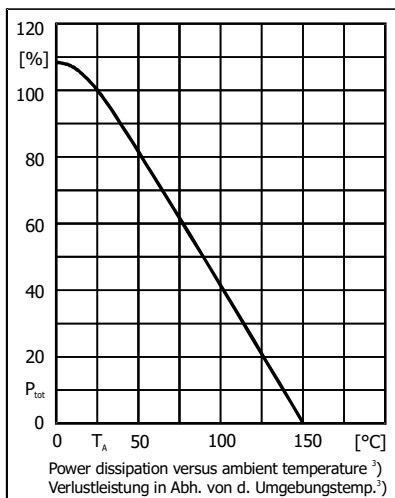
Grenzwerte ²⁾

| | | |
|--|------------------|----------------------|
| Power dissipation – Verlustleistung | P _{tot} | 500 mW ³⁾ |
| Junction/Storage temperature – Lagerungs-/Sperrschichttemperatur | T _{j/s} | -50...+150°C |

Characteristics

Kennwerte

| | | |
|--|------------------|-----------------------|
| Typ. thermal resistance junction to ambient – Typ. Wärmewiderstand Sperrschicht-Umgebung | R _{thA} | 300 K/W ³⁾ |
| Typ. thermal resistance junction to terminal – Typ. Wärmewiderstand Sperrschicht-Anschluss | R _{thT} | 240 K/W |



1 Please note the [detailed information on our website](#) or at the beginning of the data book
 Bitte beachten Sie die [detaillierten Hinweise auf unserer Internetseite](#) bzw. am Anfang des Datenbuches
 2 T_A = 25°C unless otherwise specified – T_A = 25°C wenn nicht anders angegeben
 3 Mounted on P.C. board with 25 mm² copper pads per terminal – Montage auf Leiterplatte mit 25 mm² Löt pads je Anschluss

Characteristics

 (T_j = 25°C unless otherwise specified)

Kennwerte

 (T_j = 25°C wenn nicht anders angegeben)

| Type Typ | Code ¹⁾ | Z-voltage range ²⁾ Z-Spannungs-Bereich ¹⁾ I _Z = 5 mA | | Dynamic resistance Diff. Widerstand r _{Zj} [Ω] at f = 1 kHz I _Z = 5 mA | Temp. Coefficient of Z-voltage ...der Z-Spannung α _{VZ} [10 ⁻⁴ /°C] | Reverse voltage Sperrspannung V _R at/bei I _R | | Z-current ³⁾ Z-Strom ²⁾ I _{Zmax} [mA] T _A = 25°C |
|-------------|--------------------|---|------------------------|---|--|--|---------------------|---|
| | | V _{Z min} [V] | V _{Z max} [V] | | | V _R [V] | I _R [μA] | |
| BZT52B... | | V _{Z min} [V] | V _{Z max} [V] | I _Z = 5 mA | α _{VZ} [10 ⁻⁴ /°C] | V _R [V] | I _R [μA] | I _{Zmax} [mA] |
| 2V4 | 9C/5Y1 | 2.20 | 2.65 | < 100 | -9...-6 | 1 | 120 | 189 |
| 2V7 | 9D/5Z1 | 2.65 | 2.95 | < 110 | -9...-6 | 1 | 120 | 169 |
| 3V0 | 9E/6A1 | 2.95 | 3.25 | < 120 | -8...-5 | 1 | 120 | 154 |
| 3V3 | 9F/6B1 | 3.25 | 3.55 | < 120 | -8...-5 | 1 | 50 | 141 |
| 3V6 | 9H/6C1 | 3.60 | 3.84 | < 100 | -8...-5 | 1 | 20 | 130 |
| 3V9 | 9J/6D1 | 3.89 | 4.16 | < 100 | -8...-5 | 1 | 10 | 120 |
| 4V3 | 9K/6E1 | 4.17 | 4.43 | < 100 | -6...-3 | 1 | 5 | 113 |
| 4V7 | 9M/6F1 | 4.55 | 4.75 | < 100 | -5...+2 | 1 | 5 | 105 |
| 5V1 | 9N/6G1 | 4.98 | 5.20 | < 80 | -2...+2 | 1 | 2 | 96 |
| 5V6 | 9P/6H1 | 5.49 | 5.73 | < 60 | -5...+5 | 1.5 | 2 | 87 |
| 6V2 | 9R/6J1 | 6.06 | 6.33 | < 60 | -3...+6 | 2.5 | 1 | 79 |
| 6V8/-Q | 9X /6K1 | 6.65 | 6.93 | < 40 | +3...+7 | 3 | 1 | 72 |
| 7V5 | 9Y/6L1 | 7.28 | 7.60 | < 30 | +3...+7 | 3.5 | 0.5 | 66 |
| 8V2 | 9Z/6M1 | 8.02 | 8.36 | < 30 | +8...+7 | 4 | 0.5 | 60 |
| 9V1 | 0A/6N1 | 8.85 | 9.23 | < 30 | +3...+9 | 5 | 0.5 | 54 |
| 10 | 0B/6P1 | 9.77 | 10.21 | < 30 | +3...+10 | 6 | 0.5 | 49 |
| 11 | 0C/6Q1 | 10.76 | 11.22 | < 30 | +3...+11 | 7 | 0.1 | 45 |
| 12 | 0D/6R1 | 11.74 | 12.24 | < 30 | +3...+11 | 8 | 0.1 | 41 |
| 13 | 0E/6S1 | 12.91 | 13.49 | < 37 | +3...+11 | 9 | 0.1 | 37 |
| 15 | 0F/6T1 | 14.34 | 14.98 | < 42 | +3...+11 | 10 | 0.1 | 33 |
| 16/-Q | 0H /6U1 | 15.85 | 16.51 | < 50 | +3...+11 | 11 | 0.1 | 30 |
| 18 | 0J/6W1 | 17.56 | 18.35 | < 65 | +3...+11 | 12 | 0.1 | 27 |
| 20/-Q | 0K /6X1 | 19.52 | 20.39 | < 85 | +3...+11 | 13 | 0.1 | 25 |
| 22 | 0M/6Y1 | 21.54 | 22.47 | < 100 | +4...+12 | 15 | 0.1 | 22 |
| 24 | 0N/6Z1 | 23.72 | 24.78 | < 120 | +4...+12 | 17 | 0.1 | 20 |
| 27 | 0P/7A1 | 26.19 | 27.53 | < 150 | +4...+12 | 19 | 0.1 | 18 |
| 30 | 0R/7B1 | 29.19 | 30.69 | < 200 | +4...+12 | 21 | 0.1 | 16 |
| 33 | 0X/7C1 | 32.15 | 33.79 | < 250 | +4...+12 | 23 | 0.1 | 15 |
| 36 | 0Y/7D1 | 35.07 | 36.87 | < 300 | +4...+12 | 25 | 0.1 | 14 |
| 39 | 0Z/7E1 | 37.00 | 41.00 | <100 | +4...+12 | 27 | 0.1 | 12 |

Disclaimer: See data book page 2 or [website](#)

Haftungsausschluss: Siehe Datenbuch Seite 2 oder [Internet](#)

1 Alternatively used (commercial grade only) – Alternativ verwendet (nur bei Standardausführung)

2 Tested with pulses (20 ms) – Gemessen mit Impulsen (20 ms)

3 Mounted on P.C. board with 25 mm² copper pads per terminal – Montage auf Leiterplatte mit 25 mm² Lötpad je Anschluss