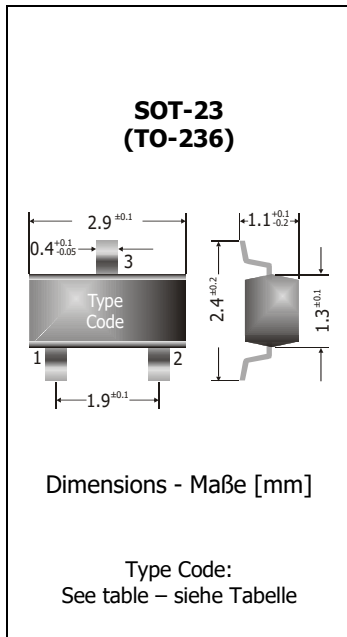


| | |
|---|---|
| BZX84C2V4 ... BZX84C47, 2BZX84C3V0 ... 2BZX84C47 SMD Planar Zener Diodes SMD Planar Zener-Dioden | P_{tot} = 300 mW V_Z = 2.4/3.0 V ... 47 V T_{jmax} = 150°C |
|---|---|

Version 2018-10-16



Typical Applications

Voltage stabilization and regulators
 (For ESD protection, see ESDxxCA series)
 Commercial grade
 Suffix -Q: AEC-Q101 compliant ¹⁾
 Suffix -AQ: in AEC-Q101 qualification ¹⁾

Features

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 ESD-Schutz siehe ESDxxCA-Reihe)
 Standardausführung
 Suffix -Q: AEC-Q101 konform ¹⁾
 Suffix -AQ: in AEC-Q101 Qualifikation ¹⁾

Besonderheiten

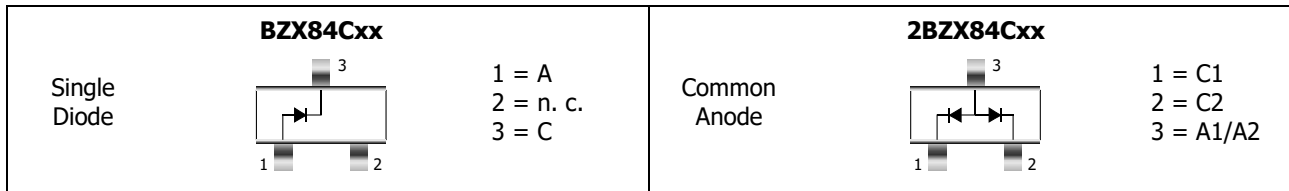
Scharfer Zenerspannungsabbruch
 Niedriger Sperrstrom
 Konform zu RoHS, REACH, Konfliktmineralien ¹⁾

Mechanische Daten ¹⁾

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

Standard Zener voltage tolerance is graded to the international E 24 (~ ±5%) standard. Zener voltages see table on next page. Other voltage tolerances and higher Zener voltages on request.

Die Toleranz der Zener-Spannung ist in der Standard-Ausführung gestuft nach der internationalen Reihe E 24 (~ ±5%). Zener-Spannungen siehe Tabelle auf der nächsten Seite. Andere Toleranzen oder höhere Z-Spannungen auf Anfrage.



Maximum ratings ²⁾

Grenzwerte ²⁾

| | | |
|---|------------------|----------------------|
| Total power dissipation Gesamt-Verlustleistung | P _{tot} | 300 mW ³⁾ |
| Junction temperature – Sperrschichttemperatur | T _j | -50...+150°C |
| Storage temperature – Lagerungstemperatur | T _s | -50...+150°C |

Characteristics

Kennwerte

| | | |
|---|------------------|-----------------------|
| Typical thermal resistance junction to ambient Typischer Wärmewiderstand Sperrschicht – Umgebung | R _{thA} | 420 K/W ²⁾ |
|---|------------------|-----------------------|

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 3 mm² copper pads at each terminal
 Montage auf Leiterplatte mit 3 mm² Kupferbelag (Lötpad an jedem Anschluss)

Characteristics

 (T_j = 25°C unless otherwise specified)

Kennwerte

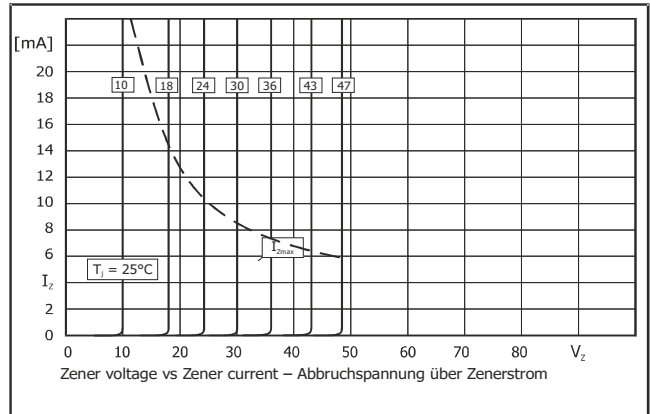
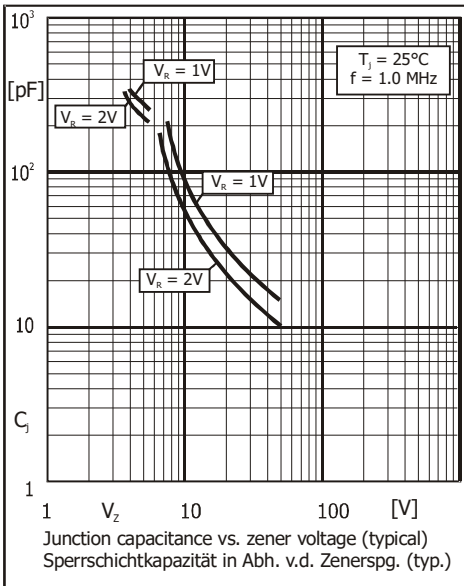
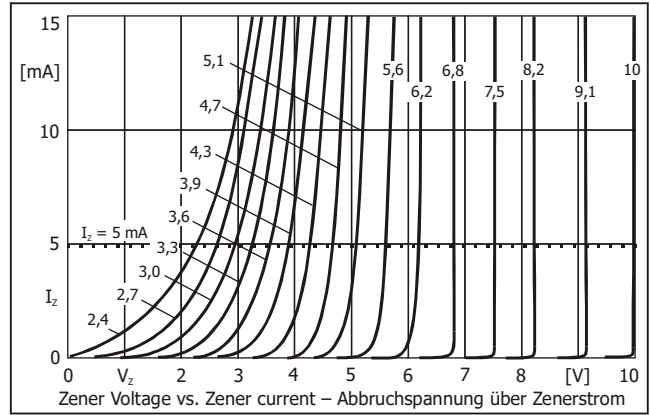
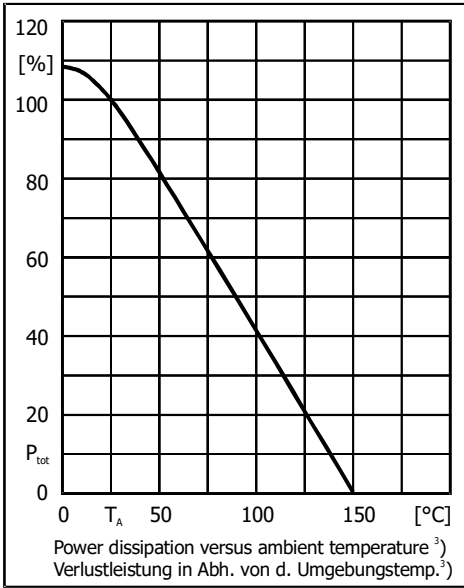
 (T_j = 25°C wenn nicht anders angegeben)

| Type Typ | Code | | Z-voltage range ¹⁾ Z-Spannungs-Bereich ¹⁾ I _Z = 5 mA | | Dynamic resistance Diff. Widerstand r _{Zj} [Ω] at f = 1 kHz | Temp. Coefficient of Z-voltage ...der Z-Spannung | Reverse voltage Sperrspannung V _R at/bei I _R | | Z-current ^{2,3)} Z-Strom ^{2,3)} T _A = 25°C |
|-------------|-------------------|--------------------|---|------------------------|--|--|--|--|---|
| | BZX 84 | 2BZX 84 | V _{Z min} [V] | V _{Z max} [V] | | | I _Z = 5 mA | α _{VZ} [10 ⁻⁴ /°C] | |
| C2V4 | C8 | - | 2.2 | 2.6 | < 100 | -9...-6 | 1 | 50 | |
| C2V7 | D8 | - | 2.5 | 2.9 | < 100 | -9...-6 | 1 | 20 | |
| C3V0 | E8 | MR | 2.8 | 3.2 | < 95 | -8...-5 | 1 | 10 | |
| C3V3 | F8 | MX | 3.1 | 3.5 | < 95 | -8...-5 | 1 | 5 | |
| C3V6 | H8 | MY | 3.4 | 3.8 | < 90 | -8...-5 | 1 | 5 | |
| C3V9 | J8 | MZ | 3.7 | 4.1 | < 90 | -8...-5 | 1 | 3 | |
| C4V3 | K8 | NA | 4.0 | 4.6 | < 90 | -7...-4 | 1 | 3 | |
| C4V7/-Q | M8 | NB | 4.4 | 5.0 | < 80 | -5...-2 | 2 | 3 | |
| C5V1 | N8 | NC | 4.8 | 5.4 | < 60 | -2...+2 | 2 | 2 | |
| C5V6/-Q | P8 | ND | 5.2 | 6.0 | < 40 | -1...+4 | 2 | 1 | |
| C6V2 | R8 | NE | 5.8 | 6.6 | < 10 | +2...+5 | 4 | 3 | |
| C6V8 | X8 | NF | 6.4 | 7.2 | < 15 | +3...+6 | 4 | 2 | |
| C7V5 | Y8 | NH | 7.0 | 7.9 | < 15 | +3...+6 | 5 | 1 | |
| C8V2 | Z8 | NJ | 7.7 | 8.7 | < 15 | +4...+7 | 5 | 0.7 | |
| C9V1 | A9 | NK | 8.5 | 9.6 | < 15 | +4...+7 | 6 | 0.5 | 35 |
| C10/-Q | B9 | NM | 9.4 | 10.6 | < 20 | +5...+8 | 7 | 0.2 | 32 |
| C11 | C9 | NN | 10.4 | 11.6 | < 20 | +5...+8 | 8 | 0.1 | 29 |
| C12 | D9 | NP | 11.4 | 12.7 | < 25 | +5...+8 | 8 | 0.1 | 26 |
| C13/-Q | E9 | NX | 12.4 | 14.1 | < 30 | +6...+9 | 8 | 0.1 | 24 |
| C15/-Q | F9 | NY | 13.8 | 15.6 | < 30 | +6...+9 | 10.5 | 0.05 | 22 |
| C16 | H9 | NZ | 15.3 | 17.1 | < 40 | +6...+9 | 11.2 | 0.05 | 20 |
| C18 | J9 | PA | 16.8 | 19.1 | < 45 | +6...+9 | 12.6 | 0.05 | 18 |
| C20 | K9 | PB | 18.8 | 21.2 | < 55 | +6...+9 | 14 | 0.05 | 16 |
| C22 | M9 | PC | 20.8 | 23.3 | < 70 | +7...+10 | 15.4 | 0.05 | 14 |
| C24 | N9 | PD | 22.8 | 25.6 | < 80 | +7...+10 | 16.8 | 0.05 | 13 |
| | | I _Z = | 2 mA | | 2 mA | | | | |
| C27 | P9 | PE | 25.1 | 28.9 | < 80 | +7...+10 | 18.9 | 0.05 | 12 |
| C30 | R9 | PF | 28 | 32 | < 80 | +7...+10 | 21 | 0.05 | 11 |
| C33 | X9 | PH | 31 | 35 | < 80 | +7...+10 | 23.1 | 0.05 | 10 |
| C36 | Y9 | PJ | 34 | 38 | < 90 | +7...+10 | 25.2 | 0.05 | 9 |
| C39 | Z9 | PM | 37 | 41 | < 130 | +7...+10 | 27.3 | 0.05 | 8 |
| C43 | A0 | PN | 40 | 46 | < 150 | +7...+10 | 30.1 | 0.05 | 8 |
| C47/-Q | B0 | PP | 44 | 50 | < 170 | +7...+10 | 32.9 | 0.05 | 7 |

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

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

3 Per device (current at pin 3) – Pro Bauteil (Strom an Pin 3)



Disclaimer: See data book page 2 or [website](#)
Haftungsausschluss: Siehe Datenbuch Seite 2 oder [Internet](#)