

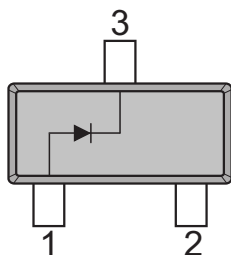


Silicon Planar Zener Diodes

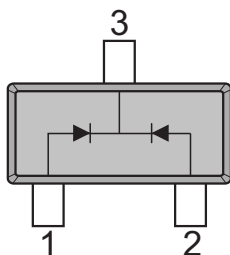
FEATURES

- Total power dissipation: Max. 350mW.
- Wide zener reverse voltage range 2.0V to 75V.
- Small plastic package suitable for surface mounted design.
- Tolerance approximately $\pm 2\%$ and $\pm 5\%$

SOT-23



Suffix A



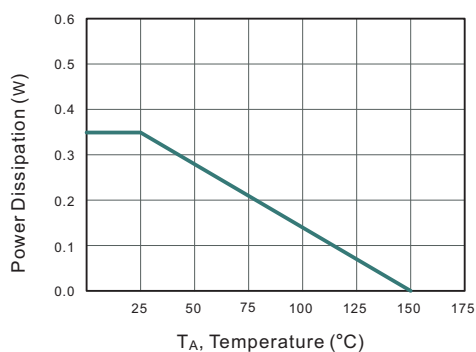
Suffix CA

Absolute Maximum Ratings And Characteristics (Ta = 25 °C)

| Parameter | Symbol | Value | Unit |
|-----------------------------------------|----------------|------------|------|
| Power Dissipation | P_{tot} | 350 | mW |
| Forward Voltage at $I_F = 10mA$ | V_F | 0.9 | V |
| Operating and Storage Temperature Range | T_j, T_{stg} | -55 ~ +150 | °C |

(1) Thermal resistance from junction to ambient at P.C.B. mounted with 2.0" X 2.0" (5 X 5 cm) copper areas pads.

Fig.1 Maximum Continuous Power Derating





Characteristics at Ta = 25°C

| Type | Marking | Type | Marking | Zener Voltage Range ⁽¹⁾ | | | I _{ZT} | Dynamic Impedance | Reverse Current | |
|------------|---------|-------------|---------|---------------------------------------|---------|---------|-----------------|---------------------------------------|-----------------|-------------------|
| | | | | V _{ZT} (at I _{ZT}) | | | | Z _{ZT} (at I _{ZT}) | I _R | at V _R |
| | | | | Min (V) | Nom (V) | Max (V) | (mA) | Max (Ω) | Max (μA) | (V) |
| BZX84B2V0A | BAA | BZX84B2V0CA | BACA | 1.96 | 2 | 2.04 | 5 | 100 | 120 | 0.5 |
| BZX84B2V2A | BBA | BZX84B2V2CA | BBCA | 2.16 | 2.2 | 2.24 | 5 | 100 | 120 | 0.7 |
| BZX84B2V4A | BCA | BZX84B2V4CA | BCCA | 2.35 | 2.4 | 2.45 | 5 | 100 | 120 | 1 |
| BZX84B2V7A | BDA | BZX84B2V7CA | BDCA | 2.65 | 2.7 | 2.75 | 5 | 110 | 120 | 1 |
| BZX84B3V0A | BEA | BZX84B3V0CA | BECA | 2.94 | 3 | 3.06 | 5 | 120 | 50 | 1 |
| BZX84B3V3A | BFA | BZX84B3V3CA | BFCA | 3.23 | 3.3 | 3.37 | 5 | 130 | 20 | 1 |
| BZX84B3V6A | BGA | BZX84B3V6CA | BGCA | 3.53 | 3.6 | 3.67 | 5 | 130 | 10 | 1 |
| BZX84B3V9A | BHA | BZX84B3V9CA | BHCA | 3.82 | 3.9 | 3.98 | 5 | 130 | 5 | 1 |
| BZX84B4V3A | BJA | BZX84B4V3CA | BJCA | 4.21 | 4.3 | 4.39 | 5 | 130 | 5 | 1 |
| BZX84B4V7A | BKA | BZX84B4V7CA | BKCA | 4.61 | 4.7 | 4.79 | 5 | 130 | 2 | 1 |
| BZX84B5V1A | BLA | BZX84B5V1CA | BLCA | 5.00 | 5.1 | 5.20 | 5 | 130 | 2 | 1.5 |
| BZX84B5V6A | BMA | BZX84B5V6CA | BMCA | 5.49 | 5.6 | 5.71 | 5 | 80 | 1 | 2.5 |
| BZX84B6V2A | BNA | BZX84B6V2CA | BNCA | 6.08 | 6.2 | 6.32 | 5 | 50 | 1 | 3 |
| BZX84B6V8A | BPA | BZX84B6V8CA | BPCA | 6.66 | 6.8 | 6.94 | 5 | 30 | 0.5 | 3.5 |
| BZX84B7V5A | BRA | BZX84B7V5CA | BRCA | 7.35 | 7.5 | 7.65 | 5 | 30 | 0.5 | 4 |
| BZX84B8V2A | BSA | BZX84B8V2CA | BSCA | 8.04 | 8.2 | 8.36 | 5 | 30 | 0.5 | 5 |
| BZX84B9V1A | BTA | BZX84B9V1CA | BTCA | 8.92 | 9.1 | 9.28 | 5 | 30 | 0.5 | 6 |
| BZX84B10A | BUA | BZX84B10CA | BUCA | 9.80 | 10 | 10.2 | 5 | 30 | 0.1 | 7 |
| BZX84B11A | BVA | BZX84B11CA | BVCA | 10.78 | 11 | 11.22 | 5 | 30 | 0.1 | 8 |
| BZX84B12A | BWA | BZX84B12CA | BWCA | 11.76 | 12 | 12.24 | 5 | 35 | 0.1 | 9 |
| BZX84B13A | BXA | BZX84B13CA | BXCA | 12.74 | 13 | 13.26 | 5 | 35 | 0.1 | 10 |
| BZX84B15A | BYA | BZX84B15CA | BYCA | 14.70 | 15 | 15.3 | 5 | 40 | 0.1 | 11 |
| BZX84B16A | BZA | BZX84B16CA | BZCA | 15.68 | 16 | 16.32 | 5 | 40 | 0.1 | 12 |
| BZX84B18A | B1A | BZX84B18CA | B1CA | 17.64 | 18 | 18.36 | 5 | 45 | 0.1 | 13 |
| BZX84B20A | B2A | BZX84B20CA | B2CA | 19.60 | 20 | 20.4 | 5 | 50 | 0.1 | 15 |
| BZX84B22A | B3A | BZX84B22CA | B3CA | 21.56 | 22 | 22.44 | 5 | 55 | 0.1 | 17 |
| BZX84B24A | B4A | BZX84B24CA | B4CA | 23.52 | 24 | 24.48 | 5 | 60 | 0.1 | 19 |
| BZX84B27A | B5A | BZX84B27CA | B5CA | 26.46 | 27 | 27.54 | 5 | 70 | 0.1 | 21 |
| BZX84B30A | B6A | BZX84B30CA | B6CA | 29.40 | 30 | 30.6 | 5 | 80 | 0.1 | 23 |
| BZX84B33A | B7A | BZX84B33CA | B7CA | 32.34 | 33 | 33.66 | 5 | 80 | 0.1 | 25 |
| BZX84B36A | B8A | BZX84B36CA | B8CA | 35.28 | 36 | 36.72 | 5 | 90 | 0.1 | 27 |
| BZX84B39A | B9A | BZX84B39CA | B9CA | 38.22 | 39 | 39.78 | 2.5 | 100 | 2 | 30 |
| BZX84B43A | 3AA | BZX84B43CA | 3ACA | 42.14 | 43 | 43.86 | 2.5 | 130 | 2 | 33 |
| BZX84B47A | 3BA | BZX84B47CA | 3BCA | 46.06 | 47 | 47.94 | 2.5 | 150 | 2 | 36 |
| BZX84B51A | 3CA | BZX84B51CA | 3CCA | 49.98 | 51 | 52.02 | 2.5 | 180 | 1 | 39 |
| BZX84B56A | 3DA | BZX84B56CA | 3DCA | 54.88 | 56 | 57.12 | 2.5 | 180 | 1 | 43 |
| BZX84B62A | 3EA | BZX84B62CA | 3ECA | 60.76 | 62 | 63.24 | 2.5 | 200 | 0.2 | 47 |
| BZX84B68A | 3FA | BZX84B68CA | 3FCA | 66.64 | 68 | 69.36 | 2.5 | 250 | 0.2 | 52 |
| BZX84B75A | 3HA | BZX84B75CA | 3HCA | 73.50 | 75 | 76.5 | 2.5 | 300 | 0.2 | 57 |

(1) V_{ZT} is tested with pulses (20 ms)
(2) B:±2%
(3) C:±5%



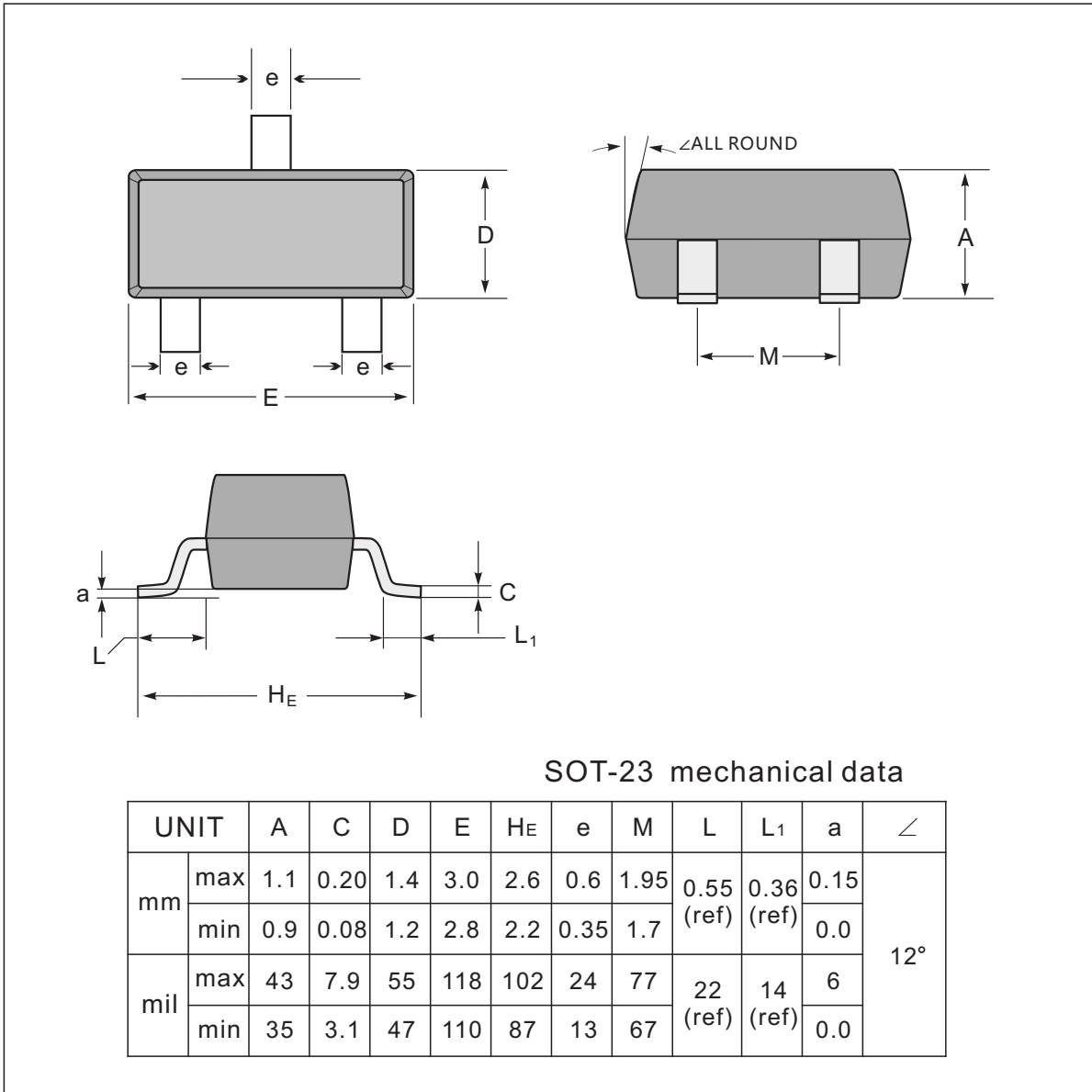
Characteristics at Ta = 25°C

| Type | Marking | Type | Marking | Zener Voltage Range ⁽¹⁾ | | | I _{ZT} | Dynamic Impedance | Reverse Current | |
|------------|---------|-------------|---------|---------------------------------------|---------|---------|-----------------|---------------------------------------|-----------------|-------------------|
| | | | | V _{ZT} (at I _{ZT}) | | | | Z _{ZT} (at I _{ZT}) | I _R | at V _R |
| | | | | Min (V) | Nom (V) | Max (V) | (mA) | Max (Ω) | Max (μA) | (V) |
| BZX84C2V0A | CAA | BZX84C2V0CA | CACA | 1.8 | 2.0 | 2.15 | 5 | 100 | 120 | 0.5 |
| BZX84C2V2A | CBA | BZX84C2V2CA | CBCA | 2.08 | 2.2 | 2.33 | 5 | 100 | 120 | 0.7 |
| BZX84C2V4A | CCA | BZX84C2V4CA | CCCA | 2.28 | 2.4 | 2.56 | 5 | 100 | 120 | 1 |
| BZX84C2V7A | CDA | BZX84C2V7CA | CDCA | 2.5 | 2.7 | 2.9 | 5 | 110 | 120 | 1 |
| BZX84C3V0A | CEA | BZX84C3V0CA | CECA | 2.8 | 3.0 | 3.2 | 5 | 120 | 50 | 1 |
| BZX84C3V3A | CFA | BZX84C3V3CA | CFCA | 3.1 | 3.3 | 3.5 | 5 | 130 | 20 | 1 |
| BZX84C3V6A | CGA | BZX84C3V6CA | CGCA | 3.4 | 3.6 | 3.8 | 5 | 130 | 10 | 1 |
| BZX84C3V9A | CHA | BZX84C3V9CA | CHCA | 3.7 | 3.9 | 4.1 | 5 | 130 | 5 | 1 |
| BZX84C4V3A | CJA | BZX84C4V3CA | CJCA | 4 | 4.3 | 4.6 | 5 | 130 | 5 | 1 |
| BZX84C4V7A | CKA | BZX84C4V7CA | CKCA | 4.4 | 4.7 | 5 | 5 | 130 | 2 | 1 |
| BZX84C5V1A | CLA | BZX84C5V1CA | CLCA | 4.8 | 5.1 | 5.4 | 5 | 130 | 2 | 1.5 |
| BZX84C5V6A | CMA | BZX84C5V6CA | CMCA | 5.2 | 5.6 | 6 | 5 | 80 | 1 | 2.5 |
| BZX84C6V2A | CNA | BZX84C6V2CA | CNCA | 5.8 | 6.2 | 6.6 | 5 | 50 | 1 | 3 |
| BZX84C6V8A | CPA | BZX84C6V8CA | CPCA | 6.4 | 6.8 | 7.2 | 5 | 30 | 0.5 | 3.5 |
| BZX84C7V5A | CRA | BZX84C7V5CA | CRCA | 7 | 7.5 | 7.9 | 5 | 30 | 0.5 | 4 |
| BZX84C8V2A | CSA | BZX84C8V2CA | CSCA | 7.7 | 8.2 | 8.7 | 5 | 30 | 0.5 | 5 |
| BZX84C9V1A | CTA | BZX84C9V1CA | CTCA | 8.5 | 9.1 | 9.6 | 5 | 30 | 0.5 | 6 |
| BZX84C10A | CUA | BZX84C10CA | CUCA | 9.4 | 10 | 10.6 | 5 | 30 | 0.1 | 7 |
| BZX84C11A | CVA | BZX84C11CA | CVCA | 10.4 | 11 | 11.6 | 5 | 30 | 0.1 | 8 |
| BZX84C12A | CWA | BZX84C12CA | CWCA | 11.4 | 12 | 12.7 | 5 | 35 | 0.1 | 9 |
| BZX84C13A | CXA | BZX84C13CA | CXCA | 12.4 | 13 | 14.1 | 5 | 35 | 0.1 | 10 |
| BZX84C15A | CYA | BZX84C15CA | CYCA | 13.8 | 15 | 15.6 | 5 | 40 | 0.1 | 11 |
| BZX84C16A | CZA | BZX84C16CA | CZCA | 15.3 | 16 | 17.1 | 5 | 40 | 0.1 | 12 |
| BZX84C18A | C1A | BZX84C18CA | C1CA | 16.8 | 18 | 19.1 | 5 | 45 | 0.1 | 13 |
| BZX84C20A | C2A | BZX84C20CA | C2CA | 18.8 | 20 | 21.2 | 5 | 50 | 0.1 | 15 |
| BZX84C22A | C3A | BZX84C22CA | C3CA | 20.8 | 22 | 23.3 | 5 | 55 | 0.1 | 17 |
| BZX84C24A | C4A | BZX84C24CA | C4CA | 22.8 | 24 | 25.6 | 5 | 60 | 0.1 | 19 |
| BZX84C27A | C5A | BZX84C27CA | C5CA | 25.1 | 27 | 28.9 | 5 | 70 | 0.1 | 21 |
| BZX84C30A | C6A | BZX84C30CA | C6CA | 28 | 30 | 32 | 5 | 80 | 0.1 | 23 |
| BZX84C33A | C7A | BZX84C33CA | C7CA | 31 | 33 | 35 | 5 | 80 | 0.1 | 25 |
| BZX84C36A | C8A | BZX84C36CA | C8CA | 34 | 36 | 38 | 5 | 90 | 0.1 | 27 |
| BZX84C39A | C9A | BZX84C39CA | C9CA | 37 | 39 | 41 | 2.5 | 100 | 2 | 30 |
| BZX84C43A | 4AA | BZX84C43CA | 4ACA | 40 | 43 | 46 | 2.5 | 130 | 2 | 33 |
| BZX84C47A | 4BA | BZX84C47CA | 4BCA | 44 | 47 | 50 | 2.5 | 150 | 2 | 36 |
| BZX84C51A | 4CA | BZX84C51CA | 4CCA | 48 | 51 | 54 | 2.5 | 180 | 1 | 39 |
| BZX84C56A | 4DA | BZX84C56CA | 4DCA | 52 | 56 | 60 | 2.5 | 180 | 1 | 43 |
| BZX84C62A | 4EA | BZX84C62CA | 4ECA | 58 | 62 | 66 | 2.5 | 200 | 0.2 | 47 |
| BZX84C68A | 4FA | BZX84C68CA | 4FCA | 64 | 68 | 72 | 2.5 | 250 | 0.2 | 52 |
| BZX84C75A | 4HA | BZX84C75CA | 4HCA | 70 | 75 | 79 | 2.5 | 300 | 0.2 | 57 |

(1) V_{ZT} is tested with pulses (20 ms)
(2) B:±2%
(3) C:±5%



SOT-23 Package Outline Dimensions



The recommended mounting pad size

