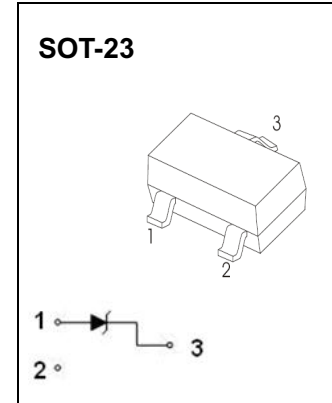


## Surface mount zener diode

### FEATURES

- Planar Die Construction
- 300mW Power Dissipation
- Zener Voltages from 2.4V - 43V
- Ultra-Small Surface Mount Package Power Dissipation



### Maximum Ratings( $T_a=25^\circ\text{C}$ unless otherwise specified)

| Characteristic                                 | Symbol          | Value    | Unit               |
|--|-----------------|----------|--------------------|
| Forward Voltage (Note 2) @ $I_F = 10\text{mA}$ | $V_F$           | 0.9      | V                  |
| Power Dissipation(Note 1)                      | $P_d$           | 300      | mW                 |
| Thermal Resistance from Junction to Ambient    | $R_{\theta JA}$ | 417      | $^\circ\text{C/W}$ |
| Junction Temperature                           | $T_j$           | 150      | $^\circ\text{C}$   |
| Storage Temperature Range                      | $T_{stg}$       | -55~+150 | $^\circ\text{C}$   |

## ELECTRICAL CHARACTERISTICS $T_a=25^\circ\text{C}$ unless otherwise specified

| Type Number | Code | Zener Voltage Range (Note 2) |        |        |          | Maximum Zener Impedance (Note 3) |                 |          | Maximum Reverse Current |       | Temperature Coefficient of Zener voltage @ $I_{ZT}=5\text{mA}$ mV/ $^\circ\text{C}$ |      |
|-------------|------|------------------------------|--------|--------|----------|----------------------------------|-----------------|----------|-------------------------|-------|---|------|
|             |      | $V_Z@I_{ZT}$                 |        |        | $I_{ZT}$ | $Z_{ZT}@I_{ZT}$                  | $Z_{ZK}@I_{ZK}$ | $I_{ZK}$ | $I_R$                   | $V_R$ | Min   | Max  |
|             |      | Nom(V)                       | Min(V) | Max(V) | (mA)     | (Ω)                              |                 | (mA)     | (μA)                    | (V)   |   |      |
| BZX84C2V4   | Z11  | 2.4                          | 2.20   | 2.60   | 5        | 100                              | 600             | 1.0      | 50                      | 1.0   | -3.5  | 0    |
| BZX84C2V7   | Z12  | 2.7                          | 2.5    | 2.9    | 5        | 100                              | 600             | 1.0      | 20                      | 1.0   | -3.5  | 0    |
| BZX84C3V0   | Z13  | 3.0                          | 2.8    | 3.2    | 5        | 95                               | 600             | 1.0      | 10                      | 1.0   | -3.5  | 0    |
| BZX84C3V3   | Z14  | 3.3                          | 3.1    | 3.5    | 5        | 95                               | 600             | 1.0      | 5                       | 1.0   | -3.5  | 0    |
| BZX84C3V6   | Z15  | 3.6                          | 3.4    | 3.8    | 5        | 90                               | 600             | 1.0      | 5                       | 1.0   | -3.5  | 0    |
| BZX84C3V9   | Z16  | 3.9                          | 3.7    | 4.1    | 5        | 90                               | 600             | 1.0      | 3                       | 1.0   | -3.5  | 0    |
| BZX84C4V3   | Z17  | 4.3                          | 4.0    | 4.6    | 5        | 90                               | 600             | 1.0      | 3                       | 1.0   | -3.5  | 0    |
| BZX84C4V7   | Z1   | 4.7                          | 4.4    | 5.0    | 5        | 80                               | 500             | 1.0      | 3                       | 2.0   | -3.5  | 0.2  |
| BZX84C5V1   | Z2   | 5.1                          | 4.8    | 5.4    | 5        | 60                               | 480             | 1.0      | 2                       | 2.0   | -2.7  | 1.2  |
| BZX84C5V6   | Z3   | 5.6                          | 5.2    | 6.0    | 5        | 40                               | 400             | 1.0      | 1                       | 2.0   | -2.0  | 2.5  |
| BZX84C6V2   | Z4   | 6.2                          | 5.8    | 6.6    | 5        | 10                               | 150             | 1.0      | 3                       | 4.0   | 0.4   | 3.7  |
| BZX84C6V8   | Z5   | 6.8                          | 6.4    | 7.2    | 5        | 15                               | 80              | 1.0      | 2                       | 4.0   | 1.2   | 4.5  |
| BZX84C7V5   | Z6   | 7.5                          | 7.0    | 7.9    | 5        | 15                               | 80              | 1.0      | 1                       | 5.0   | 2.5   | 5.3  |
| BZX84C8V2   | Z7   | 8.2                          | 7.7    | 8.7    | 5        | 15                               | 80              | 1.0      | 0.7                     | 5.0   | 3.2   | 6.2  |
| BZX84C9V1   | Z8   | 9.1                          | 8.5    | 9.6    | 5        | 15                               | 100             | 1.0      | 0.5                     | 6.0   | 3.8   | 7.0  |
| BZX84C10    | Z9   | 10                           | 9.4    | 10.6   | 5        | 20                               | 150             | 1.0      | 0.2                     | 7.0   | 4.5   | 8.0  |
| BZX84C11    | Y1•  | 11                           | 10.4   | 11.6   | 5        | 20                               | 150             | 1.0      | 0.1                     | 8.0   | 5.4   | 9.0  |
| BZX84C12    | Y2•  | 12                           | 11.4   | 12.7   | 5        | 25                               | 150             | 1.0      | 0.1                     | 8.0   | 6.0   | 10.0 |
| BZX84C13    | Y3   | 13                           | 12.4   | 14.1   | 5        | 30                               | 170             | 1.0      | 0.1                     | 8.0   | 7.0   | 11.0 |
| BZX84C15    | Y4   | 15                           | 13.8   | 15.6   | 5        | 30                               | 200             | 1.0      | 0.1                     | 10.5  | 9.2   | 13.0 |
| BZX84C16    | Y5   | 16                           | 15.3   | 17.1   | 5        | 40                               | 200             | 1.0      | 0.1                     | 11.2  | 10.4  | 14.0 |
| BZX84C18    | Y6•  | 18                           | 16.8   | 19.1   | 5        | 45                               | 225             | 1.0      | 0.1                     | 12.6  | 12.4  | 16.0 |
| BZX84C20    | Y7   | 20                           | 18.8   | 21.2   | 5        | 55                               | 225             | 1.0      | 0.1                     | 14.0  | 14.4  | 18.0 |
| BZX84C22    | Y8   | 22                           | 20.8   | 23.3   | 5        | 55                               | 250             | 1.0      | 0.1                     | 15.4  | 16.4  | 20.0 |
| BZX84C24    | Y9   | 24                           | 22.8   | 25.6   | 5        | 70                               | 250             | 1.0      | 0.1                     | 16.8  | 18.4  | 22.0 |
| BZX84C27    | Y10  | 27                           | 25.1   | 28.9   | 2        | 80                               | 300             | 0.5      | 0.1                     | 18.9  | 21.4  | 25.3 |
| BZX84C30    | Y11• | 30                           | 28.0   | 32.0   | 2        | 80                               | 300             | 0.5      | 0.1                     | 21.0  | 24.4  | 29.4 |
| BZX84C33    | Y12  | 33                           | 31.0   | 35.0   | 2        | 80                               | 325             | 0.5      | 0.1                     | 23.1  | 27.4  | 33.4 |
| BZX84C36    | Y13  | 36                           | 34.0   | 38.0   | 2        | 90                               | 350             | 0.5      | 0.1                     | 25.2  | 30.4  | 37.4 |
| BZX84C39    | Y14  | 39                           | 37.0   | 41.0   | 2        | 130                              | 350             | 0.5      | 0.1                     | 27.3  | 33.4  | 41.2 |
| BZX84C43    | Y15  | 43                           | 40.0   | 46.0   | 2        | 100                              | 700             | 1        | 0.1                     | 32    | 10  | 12   |

- Notes:
1. Valid provided that device terminals are kept at ambient temperature.
  2. Tested with pulses, period=5ms, pulse width =300μs.
  3. f = 1kHz.

