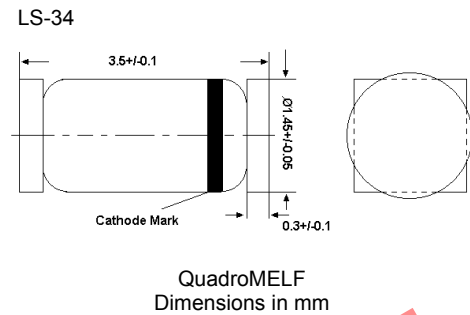


BZT52 Series

Silicon Epitaxial Planar Zener Diodes

Standard Zener voltage tolerance is $\pm 20\%$.
 Add suffix "A" for $\pm 10\%$ Tolerance, suffix
 "B" for $\pm 5\%$ tolerance, suffix "C" for $\pm 2\%$
 tolerance, Other tolerance, non standard
 and higher Zener voltages are upon request.



Absolute Maximum Ratings ($T_a = 25^\circ\text{C}$)

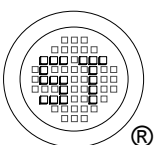
| Parameter | Symbol | Value | Unit |
|---------------------------|------------------|-------------------|------------------|
| Power Dissipation | P_{tot} | 500 ¹⁾ | mW |
| Junction Temperature | T_j | 200 | $^\circ\text{C}$ |
| Storage Temperature Range | T_{stg} | - 65 to + 200 | $^\circ\text{C}$ |

¹⁾ Valid provided that electrodes are kept at ambient temperature

Characteristics at $T_a = 25^\circ\text{C}$

| Parameter | Symbol | Max. | Unit |
|--|------------------|-------------------|------|
| Thermal Resistance Junction to Ambient Air | R_{thA} | 0.3 ¹⁾ | K/mW |
| Forward Voltage at $I_F = 200 \text{ mA}$ | V_F | 1.1 | V |

¹⁾ Valid provided that electrodes are kept at ambient temperature



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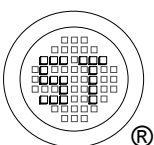
Dated : 10/09/2009

BZT52 Series

Characteristics at $T_a = 25^\circ\text{C}$

| Type | Zener Voltage Range ¹⁾ | | | Dynamic Resistance | | | Reverse Current | | Temp. Coefficient of Zener Voltage | |
|----------|-----------------------------------|-----------------|----------|----------------------------|-----------------|-----------------|----------------------------|----------------|------------------------------------|------------------|
| | V _{Znom} (V) | V _{ZT} | | at I _{ZT} (mA) | Z _{ZT} | Z _{ZK} | at I _{ZK} (mA) | I _R | at V _R | TK _{VZ} |
| | | Min. (V) | Max. (V) | | Max. (Ω) | Max. (Ω) | | Max. (μA) | (V) | %/K |
| BZT5221B | 2.4 | 2.28 | 2.52 | 20 | 30 | 1200 | 0.25 | 100 | 1 | <-0.085 |
| BZT5222B | 2.5 | 2.38 | 2.62 | 20 | 30 | 1250 | 0.25 | 100 | 1 | <-0.085 |
| BZT5223B | 2.7 | 2.57 | 2.83 | 20 | 30 | 1300 | 0.25 | 75 | 1 | <-0.080 |
| BZT5224B | 2.8 | 2.66 | 2.94 | 20 | 30 | 1400 | 0.25 | 75 | 1 | <-0.080 |
| BZT5225B | 3 | 2.85 | 3.15 | 20 | 29 | 1600 | 0.25 | 50 | 1 | <-0.075 |
| BZT5226B | 3.3 | 3.14 | 3.46 | 20 | 28 | 1600 | 0.25 | 25 | 1 | <-0.070 |
| BZT5227B | 3.6 | 3.42 | 3.78 | 20 | 24 | 1700 | 0.25 | 15 | 1 | <-0.065 |
| BZT5228B | 3.9 | 3.71 | 4.09 | 20 | 23 | 1900 | 0.25 | 10 | 1 | <-0.060 |
| BZT5229B | 4.3 | 4.09 | 4.51 | 20 | 22 | 2000 | 0.25 | 5 | 1 | <-0.055 |
| BZT5230B | 4.7 | 4.47 | 4.93 | 20 | 19 | 1900 | 0.25 | 5 | 2 | <±0.030 |
| BZT5231B | 5.1 | 4.85 | 5.35 | 20 | 17 | 1600 | 0.25 | 5 | 2 | <±0.030 |
| BZT5232B | 5.6 | 5.32 | 5.88 | 20 | 11 | 1600 | 0.25 | 5 | 3 | <+0.038 |
| BZT5233B | 6 | 5.7 | 6.3 | 20 | 7 | 1600 | 0.25 | 5 | 3.5 | <+0.038 |
| BZT5234B | 6.2 | 5.89 | 6.51 | 20 | 7 | 1000 | 0.25 | 5 | 4 | <+0.045 |
| BZT5235B | 6.8 | 6.46 | 7.14 | 20 | 5 | 750 | 0.25 | 3 | 5 | <+0.050 |
| BZT5236B | 7.5 | 7.13 | 7.87 | 20 | 6 | 500 | 0.25 | 3 | 6 | <+0.058 |
| BZT5237B | 8.2 | 7.79 | 8.61 | 20 | 8 | 500 | 0.25 | 3 | 6.5 | <+0.062 |
| BZT5238B | 8.7 | 8.27 | 9.13 | 20 | 8 | 600 | 0.25 | 3 | 6.5 | <+0.065 |
| BZT5239B | 9.1 | 8.65 | 9.55 | 20 | 10 | 600 | 0.25 | 3 | 7 | <+0.068 |
| BZT5240B | 10 | 9.5 | 10.5 | 20 | 17 | 600 | 0.25 | 3 | 8 | <+0.075 |
| BZT5241B | 11 | 10.45 | 11.55 | 20 | 22 | 600 | 0.25 | 2 | 8.4 | <+0.076 |
| BZT5242B | 12 | 11.4 | 12.6 | 20 | 30 | 600 | 0.25 | 1 | 9.1 | <+0.077 |
| BZT5243B | 13 | 12.35 | 13.65 | 9.5 | 13 | 600 | 0.25 | 0.5 | 9.9 | <+0.079 |
| BZT5244B | 14 | 13.3 | 14.7 | 9 | 15 | 600 | 0.25 | 0.1 | 10 | <+0.082 |
| BZT5245B | 15 | 14.25 | 15.75 | 8.5 | 16 | 600 | 0.25 | 0.1 | 11 | <+0.082 |
| BZT5246B | 16 | 15.2 | 16.8 | 7.8 | 17 | 600 | 0.25 | 0.1 | 12 | <+0.083 |
| BZT5247B | 17 | 16.15 | 17.85 | 7.4 | 19 | 600 | 0.25 | 0.1 | 13 | <+0.084 |
| BZT5248B | 18 | 17.1 | 18.9 | 7 | 21 | 600 | 0.25 | 0.1 | 14 | <+0.085 |
| BZT5249B | 19 | 18.05 | 19.95 | 6.6 | 23 | 600 | 0.25 | 0.1 | 14 | <+0.086 |
| BZT5250B | 20 | 19 | 21 | 6.2 | 25 | 600 | 0.25 | 0.1 | 15 | <+0.086 |
| BZT5251B | 22 | 20.9 | 23.1 | 5.6 | 29 | 600 | 0.25 | 0.1 | 17 | <+0.087 |
| BZT5252B | 24 | 22.8 | 25.2 | 5.2 | 33 | 600 | 0.25 | 0.1 | 18 | <+0.088 |
| BZT5253B | 25 | 23.75 | 26.25 | 5 | 35 | 600 | 0.25 | 0.1 | 19 | <+0.089 |
| BZT5254B | 27 | 25.65 | 28.35 | 4.6 | 41 | 600 | 0.25 | 0.1 | 21 | <+0.090 |
| BZT5255B | 28 | 26.6 | 29.4 | 4.5 | 44 | 600 | 0.25 | 0.1 | 21 | <+0.091 |
| BZT5256B | 30 | 28.5 | 31.5 | 4.2 | 49 | 600 | 0.25 | 0.1 | 23 | <+0.091 |
| BZT5257B | 33 | 31.35 | 34.65 | 3.8 | 58 | 700 | 0.25 | 0.1 | 25 | <+0.092 |
| BZT5258B | 36 | 34.2 | 37.8 | 3.4 | 70 | 700 | 0.25 | 0.1 | 27 | <+0.093 |
| BZT5259B | 39 | 37.05 | 40.95 | 3.2 | 80 | 800 | 0.25 | 0.1 | 30 | <+0.094 |
| BZT5260B | 43 | 40.85 | 45.15 | 3 | 93 | 900 | 0.25 | 0.1 | 33 | <+0.095 |
| BZT5261B | 47 | 44.65 | 49.35 | 2.7 | 105 | 1000 | 0.25 | 0.1 | 36 | <+0.095 |
| BZT5262B | 51 | 48.45 | 53.55 | 2.5 | 125 | 1100 | 0.25 | 0.1 | 39 | <+0.096 |
| BZT5263B | 56 | 53.2 | 58.8 | 2.2 | 150 | 1300 | 0.25 | 0.1 | 43 | <+0.096 |
| BZT5264B | 60 | 57 | 63 | 2.1 | 170 | 1400 | 0.25 | 0.1 | 46 | <+0.097 |
| BZT5265B | 62 | 58.9 | 65.1 | 2 | 185 | 1400 | 0.25 | 0.1 | 47 | <+0.097 |
| BZT5266B | 68 | 64.6 | 71.4 | 1.8 | 230 | 1600 | 0.25 | 0.1 | 52 | <+0.097 |
| BZT5267B | 75 | 71.25 | 78.75 | 1.7 | 270 | 1700 | 0.25 | 0.1 | 56 | <+0.098 |

¹⁾ Tested with pulses $t_p = 20$ ms.



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