



1. 主要用途与主要特点

1.1 主要用途

小功率稳压管主要用于移动电话，手持设备和高密度电脑主板等产品的电路电压调整。

1.2 主要特点

- 适合高密度应用的小型化封装尺寸
- 5%的高精度稳压电压稳定性
- 高可靠性芯片和封装工艺

2. 封装管芯示意图



3. 电参数极限值

除非另有规定， $T_{amb} = 25^{\circ}\text{C}$

| 参数名称 | 符号 | 额定值 | 单位 |
|----------------------|-----------------|---------|-----------------------------|
| 正向电压 (IF=10mA) | VF | 0.85 | V |
| 总耗散功率 (FR-5 版, 注 1) | P_D | 500 | mW |
| 热阻 (FR-5 Board, 注 1) | $R_{\theta JA}$ | 556 | $^{\circ}\text{C}/\text{W}$ |
| 热阻 (AL 基板, 注 2) | $R_{\theta JA}$ | 417 | $^{\circ}\text{C}/\text{W}$ |
| 最高工作结温 | T_j | 150 | $^{\circ}\text{C}$ |
| 贮存温度 | T_{stg} | -55~150 | $^{\circ}\text{C}$ |

注 1:FR-5=1.0*0.75*0.62 in.

注 2:Alumina=0.4*0.3*0.024 in., 99.5% alumina



4. 电参数特性表

除非另有规定, $T_{amb} = 25^{\circ}\text{C}$

| DEVICE | VZ(V) @ IZ=5mA | | | ZZ@ IZ1=1mA | ZZ @ IZ2 = 5 mA | ZZ @ IZ3 = 20mA | IR@VR | VR | Typical Temperature Coefficient(mV/°C)@ IZ=5mA | |
|------------|----------------|-----|-------|----------------|--------------------|--------------------|-------|----|--|------|
| | MIN | NOM | MAX | (Ω) | (Ω) | (Ω) | (uA) | V | Min | Max |
| BZT52 C2V4 | 2.28 | 2.4 | 2.52 | 570 | 95 | 47.5 | 40 | 1 | -3.5 | 0 |
| BZT52 C2V7 | 2.57 | 2.7 | 2.84 | 570 | 95 | 47.5 | 16 | 1 | -3.5 | 0 |
| BZT52 C3V0 | 2.85 | 3 | 3.15 | 570 | 90 | 47.5 | 8 | 1 | -3.5 | 0 |
| BZT52 C3V3 | 3.14 | 3.3 | 3.47 | 570 | 90 | 38 | 4 | 1 | -3.5 | 0 |
| BZT52 C3V6 | 3.42 | 3.6 | 3.78 | 570 | 85 | 38 | 4 | 1 | -3.5 | 0 |
| BZT52 C3V9 | 3.72 | 3.9 | 4.08 | 570 | 85 | 28.5 | 2.4 | 1 | -3.5 | 0 |
| BZT52 C4V3 | 4.09 | 4.3 | 4.52 | 570 | 85 | 28.5 | 2.4 | 1 | -3.5 | 0 |
| BZT52 C4V7 | 4.47 | 4.7 | 4.94 | 475 | 75 | 14 | 2.4 | 2 | -3.5 | 0.2 |
| BZT52 C5V1 | 4.85 | 5.1 | 5.36 | 455 | 57 | 14 | 1.6 | 2 | -2.7 | 1.2 |
| BZT52 C5V6 | 5.32 | 5.6 | 5.88 | 380 | 38 | 9.5 | 0.8 | 2 | -2 | 2.5 |
| BZT52 C6V2 | 5.89 | 6.2 | 6.51 | 150 | 9.5 | 5.7 | 2.4 | 4 | 0.4 | 3.7 |
| BZT52 C6V8 | 6.46 | 6.8 | 7.14 | 76 | 14.2 | 5.7 | 1.6 | 4 | 1.2 | 4.5 |
| BZT52 C7V5 | 7.13 | 7.5 | 7.88 | 76 | 14.2 | 5.7 | 0.8 | 5 | 2.5 | 5.3 |
| BZT52 C8V2 | 7.79 | 8.2 | 8.61 | 76 | 14.2 | 5.7 | 0.56 | 5 | 3.2 | 6.2 |
| BZT52 C9V1 | 8.65 | 9.1 | 9.56 | 95 | 14.2 | 7.6 | 0.16 | 7 | 3.8 | 7.0 |
| BZT52 C10 | 9.50 | 10 | 10.50 | 142.5 | 19 | 9.5 | 0.08 | 8 | 4.5 | 8.0 |
| BZT52 C11 | 10.45 | 11 | 11.55 | 142.5 | 19 | 9.5 | 0.08 | 8 | 5.4 | 9.0 |
| BZT52 C12 | 11.4 | 12 | 12.60 | 150 | 23.7 | 9.5 | 0.08 | 8 | 6.0 | 10.0 |
| BZT52 C13 | 12.35 | 13 | 13.65 | 170 | 28.5 | 14.2 | 0.08 | 8 | 7.0 | 11.0 |
| BZT52 C15 | 14.25 | 15 | 15.75 | 190 | 28.5 | 19 | 0.04 | 11 | 9.2 | 13.0 |
| BZT52 C16 | 15.2 | 16 | 16.80 | 190 | 38 | 19 | 0.04 | 11 | 10.4 | 14.0 |
| BZT52 C18 | 17.10 | 18 | 18.90 | 213 | 42.7 | 19 | 0.04 | 13 | 12.4 | 16.0 |
| BZT52 C20 | 19.0 | 20 | 21.0 | 213 | 52.2 | 19 | 0.04 | 14 | 14.4 | 18.0 |
| BZT52 C22 | 20.9 | 22 | 23.10 | 237 | 52.2 | 23.7 | 0.04 | 15 | 16.4 | 20.0 |
| BZT52 C24 | 22.8 | 24 | 25.2 | 250 | 66.5 | 23.7 | 0.04 | 17 | 18.4 | 22.0 |



| DEVICE | VZ(V) @ IZ=2mA | | | ZZ @ IZ = 0.5 mA | ZZ @ IZ = 2 mA | ZZ @ IZ = 10mA | IR@VR | VR | Typical Temperature Coefficient(mV/°C)@ IZ=2mA | |
|-----------|----------------|-----|-------|---------------------|-------------------|-------------------|-------|----|---|------|
| | MIN | NOM | MAX | (Ω) | (Ω) | (Ω) | (uA) | V | Min | Max |
| BZT52 C27 | 25.65 | 27 | 28.35 | 295 | 75 | 43 | 0.04 | 19 | 21.4 | 25.3 |
| BZT52 C30 | 28.50 | 30 | 31.50 | 295 | 75 | 48 | 0.04 | 21 | 24.4 | 29.4 |
| BZT52 C33 | 31.35 | 33 | 34.65 | 320 | 75 | 53 | 0.04 | 23 | 27.4 | 33.4 |
| BZT52 C36 | 34.20 | 36 | 37.80 | 345 | 85 | 58 | 0.04 | 25 | 30.4 | 37.4 |
| BZT52 C39 | 37.05 | 39 | 40.95 | 345 | 125 | 68 | 0.04 | 27 | 33.4 | 41.2 |
| BZT52 C43 | 40.85 | 43 | 45.15 | 370 | 145 | 78 | 0.04 | 30 | 37.6 | 46.6 |
| BZT52 C47 | 44.65 | 47 | 49.35 | 370 | 165 | 88 | 0.04 | 33 | 42.0 | 51.8 |
| BZT52 C51 | 48.45 | 51 | 53.55 | 395 | 175 | 98 | 0.04 | 36 | 46.6 | 57.2 |
| BZT52 C56 | 52.2 | 56 | 58.8 | 420 | 195 | 108 | 0.04 | 39 | 52.2 | 63.8 |
| BZT52 C62 | 58.9 | 62 | 65.1 | 445 | 210 | 118 | 0.04 | 43 | 58.8 | 71.6 |
| BZT52 C68 | 64.6 | 68 | 71.4 | 470 | 235 | 128 | 0.04 | 48 | 65.6 | 79.8 |
| BZT52 C75 | 71.25 | 75 | 78.75 | 495 | 250 | 138 | 0.04 | 53 | 73.4 | 88.6 |



5. 特性曲线图表

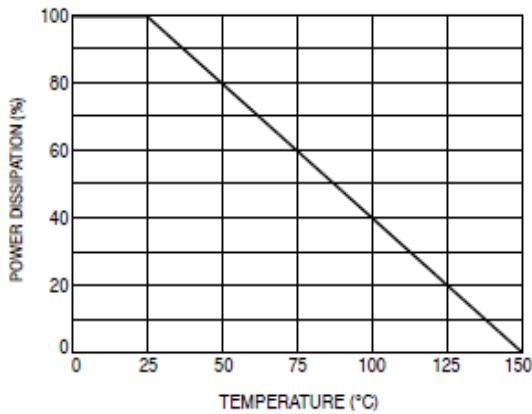


图 1 最大连续功率损耗

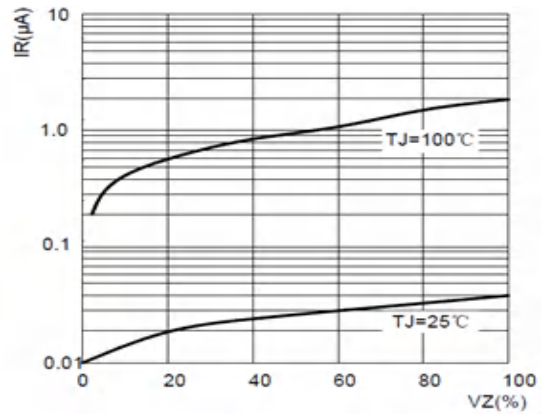


图 2 典型反向特性

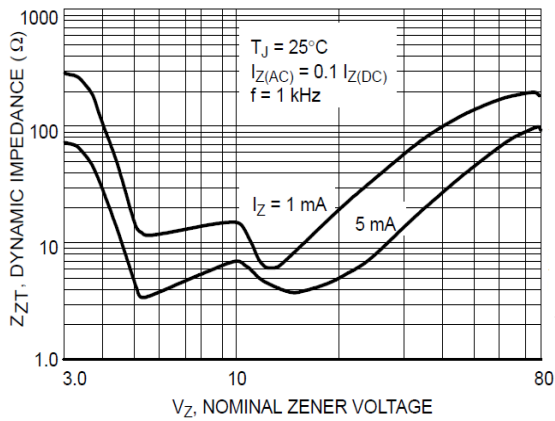


图 3 反向电压与阻抗特性曲线

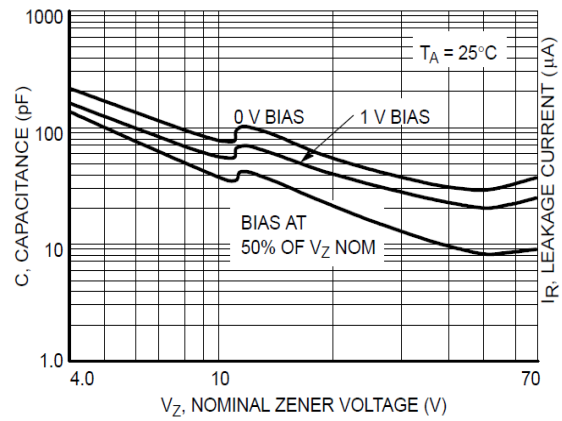
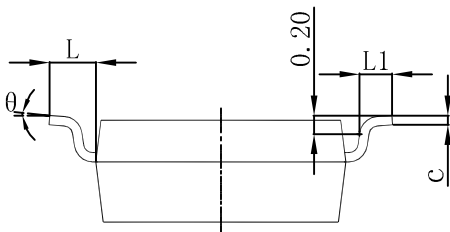
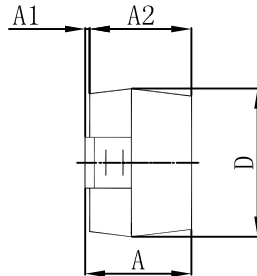
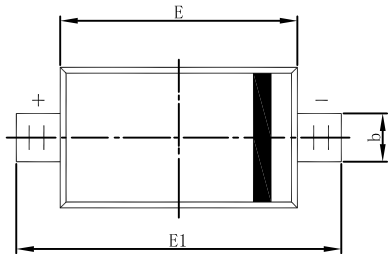


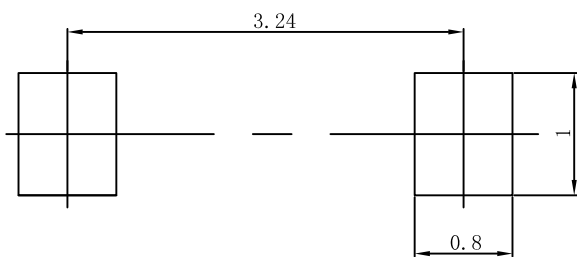
图 4 典型电容特性曲线



SOD-123 Package Outline Dimensions



| Symbol | Dimensions In Millimeters | | Dimensions In Inches | |
|--------|---------------------------|-------|----------------------|-------|
| | Min | Max | Min | Max |
| A | 1.050 | 1.250 | 0.041 | 0.049 |
| A1 | 0.000 | 0.100 | 0.000 | 0.004 |
| A2 | 1.050 | 1.150 | 0.041 | 0.045 |
| b | 0.450 | 0.650 | 0.018 | 0.026 |
| c | 0.080 | 0.150 | 0.003 | 0.006 |
| D | 1.500 | 1.700 | 0.059 | 0.067 |
| E | 2.600 | 2.800 | 0.102 | 0.110 |
| E1 | 3.550 | 3.850 | 0.140 | 0.152 |
| L | 0.500 REF | | 0.020 REF | |
| L1 | 0.250 | 0.450 | 0.010 | 0.018 |
| θ | 0° | 8° | 0° | 8° |



- Note:**
1. Controlling dimension: in millimeters.
 2. General tolerance: $\pm 0.05\text{mm}$.
 3. The pad layout is for reference purposes only.



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