

## 1. 主要用途与主要特点

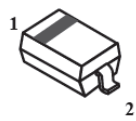
### 1.1 主要用途

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。

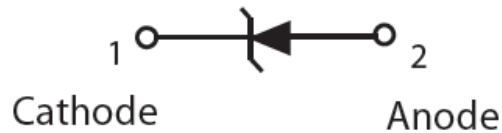
### 1.2 主要特点

- 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



**SOD-123**



## 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          | PD               | 500     | mW   |
| 热阻             | R <sub>θJA</sub> | 556     | °C/W |
| 热阻             | R <sub>θJA</sub> | 417     | °C/W |
| 最高工作结温         | T <sub>j</sub>   | 150     | °C   |
| 贮存温度           | T <sub>stg</sub> | -55~150 | °C   |

## 4. 电参数特性表 除非另有规定, $T_{amb} = 25^{\circ}\text{C}$

| DEVICE       | Marking | VZ(V) @ IZ=5mA |     |       | ZZ@<br>IZ1=1mA | ZZ @<br>IZ2 = 5<br>mA | ZZ @<br>IZ3 =<br>20mA | IR@VR | VR | Typical<br>Temperature<br>Coefficient(mV/°C)@<br>IZ=5mA |      |
|--------------|---------|----------------|-----|-------|----------------|-----------------------|-----------------------|-------|----|---|------|
|              |         | MIN            | NOM | MAX   | (Ω)            | (Ω)                   | (Ω)                   | (uA)  | V  | Min   | Max  |
| BZT52C2V4T1G | WX      | 2.28           | 2.4 | 2.60  | 600            | 100                   | 50                    | 50    | 1  | -3.5  | 0    |
| BZT52C2V7T1G | W1      | 2.57           | 2.7 | 2.90  | 600            | 100                   | 50                    | 20    | 1  | -3.5  | 0    |
| BZT52C3V0T1G | W2      | 2.85           | 3   | 3.15  | 600            | 95                    | 50                    | 10    | 1  | -3.5  | 0    |
| BZT52C3V3T1G | W3      | 3.14           | 3.3 | 3.47  | 600            | 95                    | 40                    | 5     | 1  | -3.5  | 0    |
| BZT52C3V6T1G | W4      | 3.42           | 3.6 | 3.78  | 600            | 90                    | 40                    | 5     | 1  | -3.5  | 0    |
| BZT52C3V9T1G | W5      | 3.71           | 3.9 | 4.09  | 600            | 90                    | 30                    | 0.5   | 1  | -3.5  | 0    |
| BZT52C4V3T1G | W6      | 4.09           | 4.3 | 4.52  | 600            | 90                    | 30                    | 0.5   | 1  | -3.5  | 0    |
| BZT52C4V7T1G | W7      | 4.47           | 4.7 | 4.94  | 500            | 80                    | 15                    | 3.0   | 2  | -3.5  | 0.2  |
| BZT52C5V1T1G | W8      | 4.85           | 5.1 | 5.36  | 480            | 60                    | 15                    | 2.0   | 2  | -2.7  | 1.2  |
| BZT52C5V6T1G | W9      | 5.32           | 5.6 | 5.88  | 400            | 40                    | 10                    | 1.0   | 2  | -2  | 2.5  |
| BZT52C6V2T1G | WA      | 5.89           | 6.2 | 6.51  | 150            | 9.5                   | 5.7                   | 2.4   | 4  | 0.4   | 3.7  |
| BZT52C6V8T1G | WB      | 6.46           | 6.8 | 7.14  | 76             | 14.2                  | 5.7                   | 1.6   | 4  | 1.2   | 4.5  |
| BZT52C7V5T1G | WC      | 7.13           | 7.5 | 7.88  | 76             | 14.2                  | 5.7                   | 0.8   | 5  | 2.5   | 5.3  |
| BZT52C8V2T1G | WD      | 7.79           | 8.2 | 8.61  | 76             | 14.2                  | 5.7                   | 0.56  | 5  | 3.2   | 6.2  |
| BZT52C9V1T1G | WE      | 8.65           | 9.1 | 9.56  | 95             | 14.2                  | 7.6                   | 0.4   | 7  | 3.8   | 7.0  |
| BZT52C10T1G  | WF      | 9.50           | 10  | 10.50 | 142.5          | 19                    | 9.5                   | 0.1   | 8  | 4.5   | 8.0  |
| BZT52C11T1G  | WG      | 10.45          | 11  | 11.55 | 142.5          | 19                    | 9.5                   | 0.1   | 8  | 5.4   | 9.0  |
| BZT52C12T1G  | WH      | 11.4           | 12  | 12.60 | 150            | 23.7                  | 9.5                   | 0.1   | 8  | 6.0   | 10.0 |
| BZT52C13T1G  | WI      | 12.35          | 13  | 13.65 | 190            | 28.5                  | 14.2                  | 0.1   | 8  | 7.0   | 11.0 |
| BZT52C15T1G  | WJ      | 14.25          | 15  | 15.75 | 190            | 28.5                  | 19                    | 0.1   | 11 | 9.2   | 13.0 |
| BZT52C16T1G  | WK      | 15.2           | 16  | 16.80 | 190            | 38                    | 19                    | 0.1   | 11 | 10.4  | 14.0 |
| BZT52C18T1G  | WL      | 17.10          | 18  | 18.90 | 213            | 42.7                  | 19                    | 0.1   | 13 | 12.4  | 16.0 |
| BZT52C20T1G  | WM      | 19.0           | 20  | 21.0  | 213            | 52.2                  | 19                    | 0.1   | 14 | 14.4  | 18.0 |
| BZT52C22T1G  | WN      | 20.9           | 22  | 23.10 | 237            | 52.2                  | 23.7                  | 0.1   | 15 | 16.4  | 20.0 |
| BZT52C24T1G  | WO      | 22.8           | 24  | 25.2  | 250            | 66.5                  | 23.7                  | 0.1   | 17 | 18.4  | 22.0 |

## 4. 电参数特性表 除非另有规定, $T_{amb} = 25^{\circ}\text{C}$

| DEVICE      | Marking | VZ(V) @ IZ=2mA |     |       | ZZ @<br>IZ = 0.5<br>mA | ZZ @<br>IZ = 2<br>mA | ZZ @<br>IZ =<br>10mA | IR@VR             | VR | Typical<br>Temperature<br>Coefficient(mV/°C)@<br>IZ=2mA |      |
|-------------|---------|----------------|-----|-------|------------------------|----------------------|----------------------|-------------------|----|---|------|
|             |         | MIN            | NOM | MAX   | ( $\Omega$ )           | ( $\Omega$ )         | ( $\Omega$ )         | ( $\mu\text{A}$ ) | V  | Min   | Max  |
| BZT52C27T1G | WP      | 25.65          | 27  | 28.35 | 295                    | 75                   | 43                   | 0.04              | 19 | 21.4  | 25.3 |
| BZT52C30T1G | WQ      | 28.50          | 30  | 31.50 | 295                    | 75                   | 48                   | 0.04              | 21 | 24.4  | 29.4 |
| BZT52C33T1G | WR      | 31.35          | 33  | 34.65 | 320                    | 75                   | 53                   | 0.04              | 23 | 27.4  | 33.4 |
| BZT52C36T1G | WS      | 34.20          | 36  | 37.80 | 345                    | 85                   | 58                   | 0.04              | 25 | 30.4  | 37.4 |
| BZT52C39T1G | WT      | 37.05          | 39  | 40.95 | 345                    | 125                  | 68                   | 0.04              | 27 | 33.4  | 41.2 |
| BZT52C43T1G | WU      | 40.85          | 43  | 45.15 | 370                    | 145                  | 78                   | 0.04              | 30 | 37.6  | 46.6 |
| BZT52C47T1G | WV      | 44.65          | 47  | 49.35 | 370                    | 165                  | 88                   | 0.04              | 33 | 42.0  | 51.8 |
| BZT52C51T1G | WW      | 48.45          | 51  | 53.55 | 395                    | 175                  | 98                   | 0.04              | 36 | 46.6  | 57.2 |
| BZT52C56T1G | XW      | 52.2           | 56  | 58.8  | 420                    | 195                  | 108                  | 0.04              | 39 | 52.2  | 63.8 |
| BZT52C62T1G | 6E      | 58.9           | 62  | 65.1  | 445                    | 210                  | 118                  | 0.04              | 43 | 58.8  | 71.6 |
| BZT52C68T1G | 6F      | 64.6           | 68  | 71.4  | 470                    | 235                  | 128                  | 0.04              | 48 | 65.6  | 79.8 |
| BZT52C75T1G | 6H      | 71.25          | 75  | 78.75 | 495                    | 250                  | 138                  | 0.04              | 53 | 73.4  | 88.6 |

## 5. 特性曲线图表

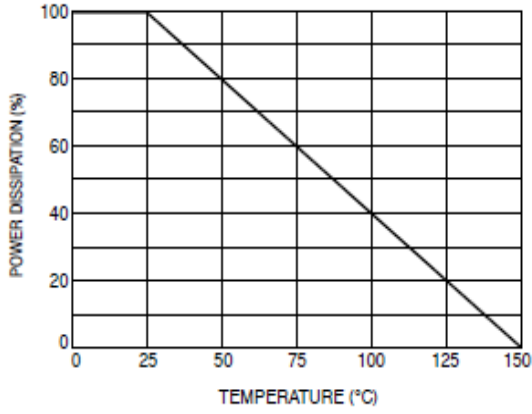


图 1 最大连续功率损耗

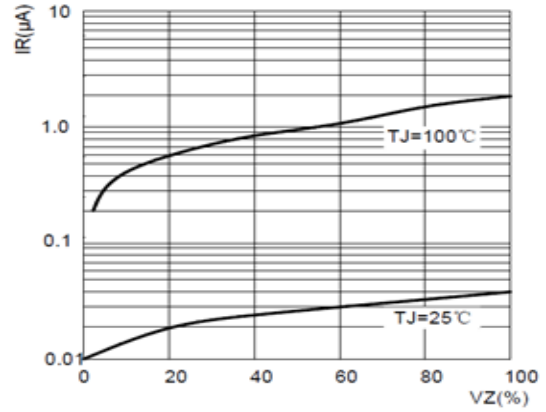


图 2 典型反向特性

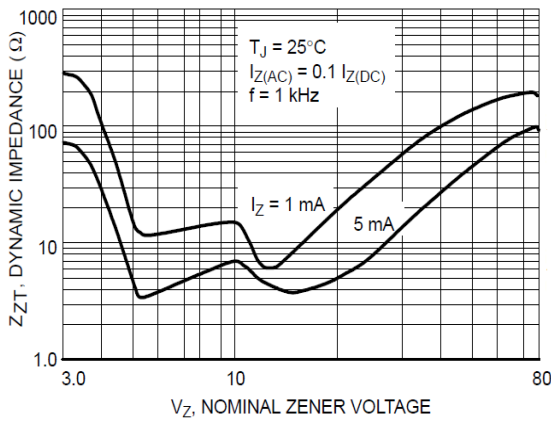


图 3 反向电压与阻抗特性曲线

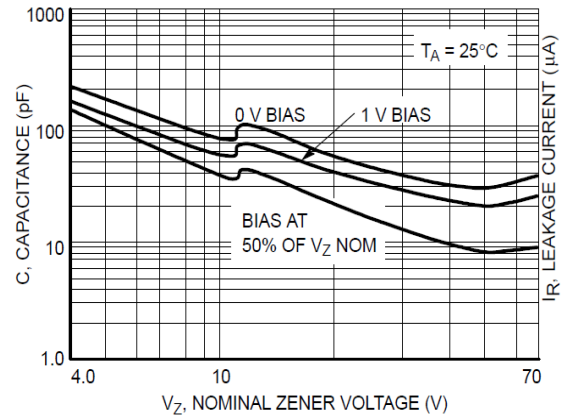
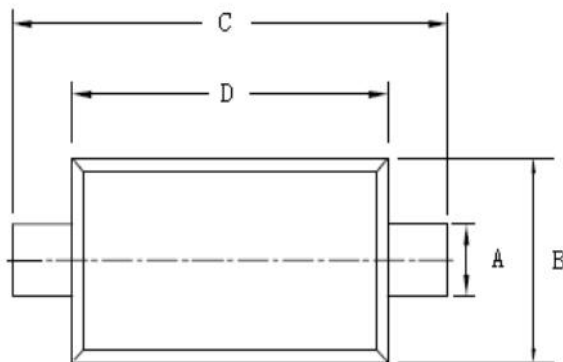
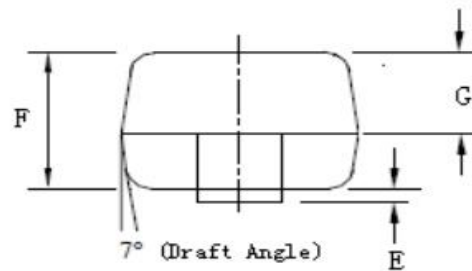
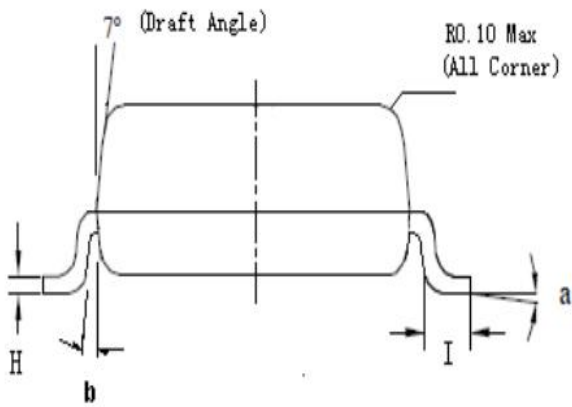


图 4 典型电容特性曲线

## SOD123 Package Mechanical Data



| Symbol | Dim in mm |       |       |
|--------|-----------|-------|-------|
|        | Min       | Nom   | Max   |
| A      | 0.520     | 0.550 | 0.570 |
| B      | 1.400     | 1.550 | 1.700 |
| C      | 3.550     | 3.650 | 3.850 |
| D      | 2.550     | 2.650 | 2.850 |
| E      | 0.000     | 0.050 | 0.100 |
| F      | 1.050     | 1.100 | 1.150 |
| G      | 0.620     | 0.650 | 0.670 |
| H      | 0.090     | 0.100 | 0.110 |
| I      | 0.250     | 0.350 | 0.450 |
| a      | 0°        | -     | 6°    |
| b      | 0.4°      | -     | 0.8°  |