

Features

1. Saving space
2. Fits onto SOD 323/SOT 23 footprints
3. Micro Melf package

Applications

Voltage stabilization

Absolute Maximum Ratings

$T_j = 25^\circ\text{C}$

| Parameter | Test Conditions | Type | Symbol | Value | Unit |
|---------------------------|-------------------------------|------|-----------|-----------|------------------|
| Power dissipation | $R_{thJA} \leq 300\text{K/W}$ | | P_V | 500 | mW |
| Z-current | | | I_Z | P_V/V_Z | mA |
| Junction temperature | | | T_j | 175 | $^\circ\text{C}$ |
| Storage temperature range | | | T_{stg} | -65~+175 | $^\circ\text{C}$ |

Maximum Thermal Resistance

$T_j = 25^\circ\text{C}$

| Parameter | Test Conditions | Symbol | Value | Unit |
|------------------|-----------------------------|------------|-------|------|
| Junction ambient | on PC board 50mm×50mm×1.6mm | R_{thJA} | 500 | K/W |

Stresses exceeding maximum ratings may damage the device. Maximum ratings are stress ratings only. Functional operation above the recommended operating conditions is not implied. Extended exposure to stresses above the recommended operating conditions may affect device reliability.

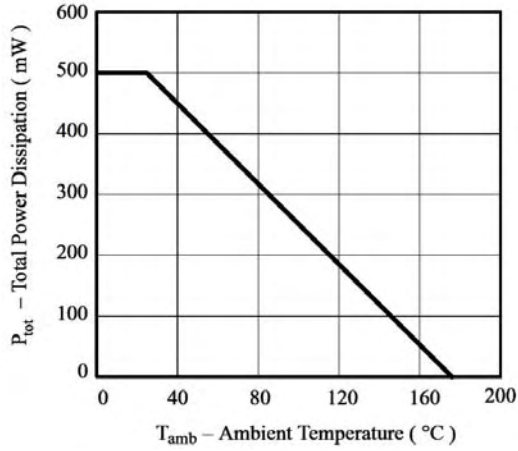
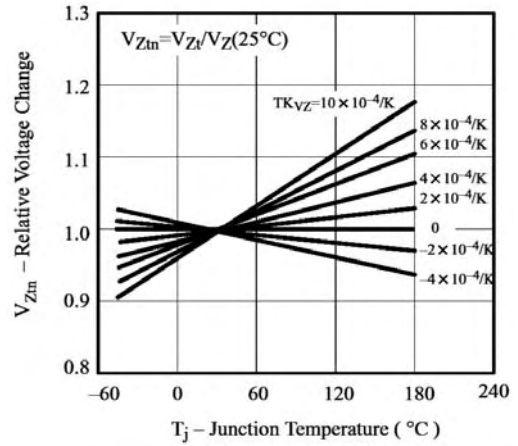
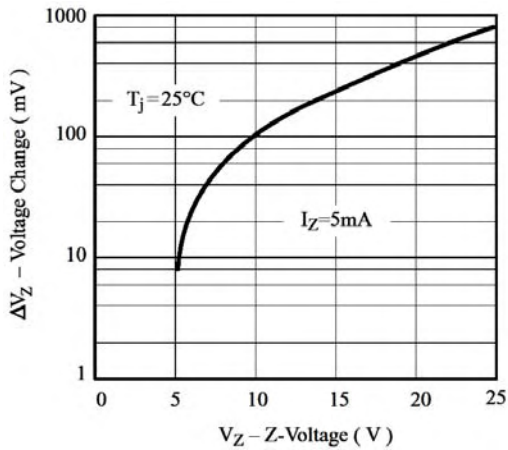
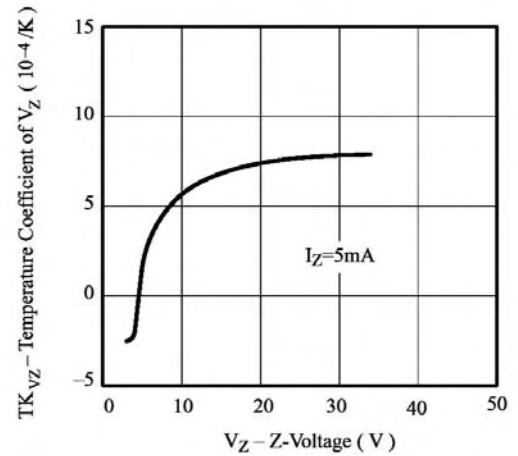
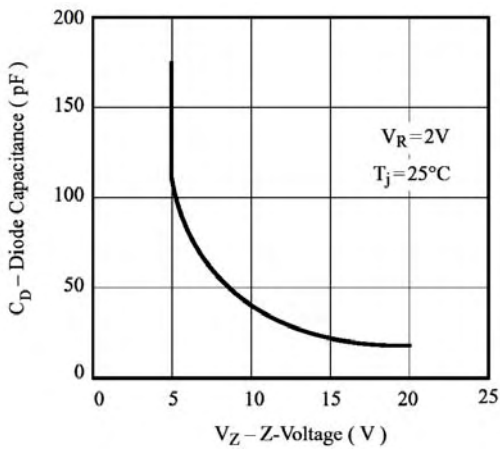
Electrical Characteristics

$T_j = 25^\circ\text{C}$

| Parameter | Test Conditions | Type | Symbol | Min | Typ | Max | Unit |
|-----------------|----------------------|------|--------|-----|-----|-----|------|
| Forward voltage | $I_F = 200\text{mA}$ | | V_F | | | 1.5 | V |

| Type | V _{Znom} | I _{ZT} | for V _{ZT} and | r _{ZT} | r _{ZJK} at | I _{ZK} | I _R and | I _R at | V _R | TK _{VZ} |
|---------|-------------------|-----------------|-------------------------|-----------------|---------------------|-----------------|--------------------|-------------------|----------------|------------------|
| BZM55C. | V | mA | V | Ω | Ω | mA | μA | μA ¹⁾ | V | %/K |
| 2V0 | 2.0 | 5 | 1.9~2.1 | 100 | <600 | 1 | <150 | <300 | 1 | -0.09~-0.06 |
| 2V2 | 2.2 | 5 | 2.09~2.31 | 100 | <600 | 1 | <150 | <300 | 1 | -0.09~-0.06 |
| 2V4 | 2.4 | 5 | 2.28~2.56 | <85 | <600 | 1 | <50 | <100 | 1 | -0.09~-0.06 |
| 2V7 | 2.7 | 5 | 2.5~2.9 | <85 | <600 | 1 | <10 | <50 | 1 | -0.09~-0.06 |
| 3V0 | 3.0 | 5 | 2.8~3.2 | <85 | <600 | 1 | <4 | <40 | 1 | -0.08~-0.05 |
| 3V3 | 3.3 | 5 | 3.1~3.5 | <85 | <600 | 1 | <2 | <40 | 1 | -0.08~-0.05 |
| 3V6 | 3.6 | 5 | 3.4~3.8 | <85 | <600 | 1 | <2 | <40 | 1 | -0.08~-0.05 |
| 3V9 | 3.9 | 5 | 3.7~4.1 | <85 | <600 | 1 | <2 | <40 | 1 | -0.08~-0.05 |
| 4V3 | 4.3 | 5 | 4.0~4.6 | <75 | <600 | 1 | <1 | <20 | 1 | -0.06~-0.03 |
| 4V7 | 4.7 | 5 | 4.4~5.0 | <60 | <600 | 1 | <0.5 | <10 | 1 | -0.05~+0.02 |
| 5V1 | 5.1 | 5 | 4.8~5.4 | <35 | <550 | 1 | <0.1 | <2 | 1 | -0.02~+0.02 |
| 5V6 | 5.6 | 5 | 5.2~6.0 | <25 | <450 | 1 | <0.1 | <2 | 1 | -0.05~+0.05 |
| 6V2 | 6.2 | 5 | 5.8~6.6 | <10 | <200 | 1 | <0.1 | <2 | 2 | 0.03~0.06 |
| 6V8 | 6.8 | 5 | 6.4~7.2 | <8 | <150 | 1 | <0.1 | <2 | 3 | 0.03~0.07 |
| 7V5 | 7.5 | 5 | 7.0~7.9 | <7 | <50 | 1 | <0.1 | <2 | 5 | 0.03~0.07 |
| 8V2 | 8.2 | 5 | 7.7~8.7 | <7 | <50 | 1 | <0.1 | <2 | 6.2 | 0.03~0.08 |
| 9V1 | 9.1 | 5 | 8.5~9.6 | <10 | <50 | 1 | <0.1 | <2 | 6.8 | 0.03~0.09 |
| 10 | 10 | 5 | 9.4~10.6 | <15 | <70 | 1 | <0.1 | <2 | 7.5 | 0.03~0.1 |
| 11 | 11 | 5 | 10.4~11.6 | <20 | <70 | 1 | <0.1 | <2 | 8.2 | 0.03~0.11 |
| 12 | 12 | 5 | 11.4~12.7 | <20 | <90 | 1 | <0.1 | <2 | 9.1 | 0.03~0.11 |
| 13 | 13 | 5 | 12.4~14.1 | <26 | <110 | 1 | <0.1 | <2 | 10 | 0.03~0.11 |
| 15 | 15 | 5 | 13.8~15.6 | <30 | <110 | 1 | <0.1 | <2 | 11 | 0.03~0.11 |
| 16 | 16 | 5 | 15.3~17.1 | <40 | <170 | 1 | <0.1 | <2 | 12 | 0.03~0.11 |
| 18 | 18 | 5 | 16.8~19.1 | <50 | <170 | 1 | <0.1 | <2 | 13 | 0.03~0.11 |
| 20 | 20 | 5 | 18.8~21.2 | <55 | <220 | 1 | <0.1 | <2 | 15 | 0.03~0.11 |
| 22 | 22 | 5 | 20.8~23.3 | <55 | <220 | 1 | <0.1 | <2 | 16 | 0.04~0.12 |
| 24 | 24 | 5 | 22.8~25.6 | <80 | <220 | 1 | <0.1 | <2 | 18 | 0.04~0.12 |
| 27 | 27 | 5 | 25.1~28.9 | <80 | <220 | 1 | <0.1 | <2 | 20 | 0.04~0.12 |
| 30 | 30 | 5 | 28~32 | <80 | <220 | 1 | <0.1 | <2 | 22 | 0.04~0.12 |
| 33 | 33 | 5 | 31~35 | <80 | <220 | 1 | <0.1 | <2 | 24 | 0.04~0.12 |
| 36 | 36 | 5 | 34~38 | <80 | <220 | 1 | <0.1 | <2 | 27 | 0.04~0.12 |
| 39 | 39 | 2.5 | 37~41 | <90 | <500 | 0.5 | <0.1 | <5 | 30 | 0.04~0.12 |
| 43 | 43 | 2.5 | 40~46 | <90 | <600 | 0.5 | <0.1 | <5 | 33 | 0.04~0.12 |
| 47 | 47 | 2.5 | 44~50 | <110 | <700 | 0.5 | <0.1 | <5 | 36 | 0.04~0.12 |
| 51 | 51 | 2.5 | 48~54 | <125 | <700 | 0.5 | <0.1 | <10 | 39 | 0.04~0.12 |
| 56 | 56 | 2.5 | 52~60 | <135 | <1000 | 0.5 | <0.1 | <10 | 43 | 0.04~0.12 |
| 62 | 62 | 2.5 | 58~66 | <150 | <1000 | 0.5 | <0.1 | <10 | 47 | 0.04~0.12 |
| 68 | 68 | 2.5 | 64~72 | <200 | <1000 | 0.5 | <0.1 | <10 | 51 | 0.04~0.12 |
| 75 | 75 | 2.5 | 70~79 | <250 | <1500 | 0.5 | <0.1 | <10 | 56 | 0.04~0.12 |
| 82 | 82 | 2.5 | 77~87 | <300 | <2000 | 0.5 | <0.1 | <10 | 62 | 0.04~0.12 |
| 91 | 91 | 1.0 | 85~96 | <450 | <5000 | 0.1 | <0.1 | <10 | 68 | 0.04~0.12 |
| 100 | 100 | 1.0 | 94~106 | <450 | <5000 | 0.1 | <0.1 | <10 | 75 | 0.04~0.12 |

¹⁾ at T_J=150°C

Characteristics ($T_j=25^\circ\text{C}$ unless otherwise specified)

Figure 1. Total Power Dissipation vs. Ambient Temperature

Figure 4. Typical Change of Working Voltage Vs. Junction Temperature

Figure 2. Typical Change of Working Voltage under Operating Conditions at $T_{amb}=25^\circ\text{C}$

Figure 5. Temperature Coefficient of V_Z vs. Z-Voltage

Figure 3. Diode Capacitance vs. Z-voltage

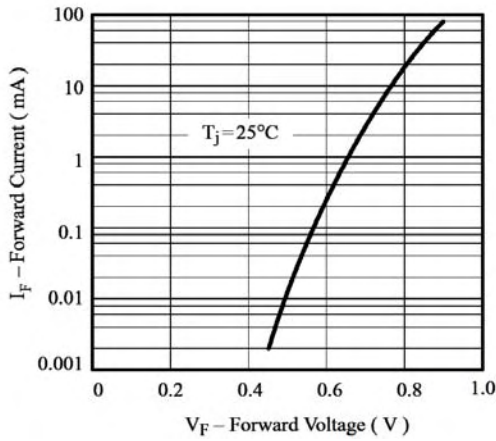


Figure 6. Forward Current vs. Forward Voltage

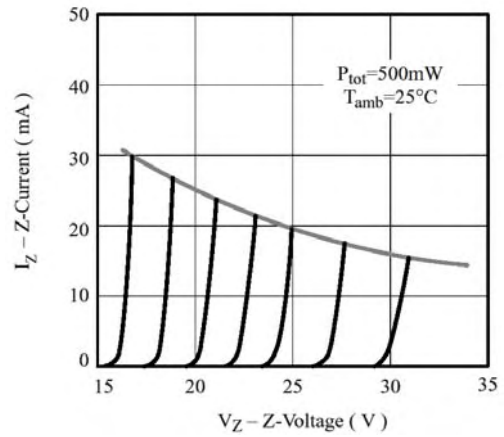


Figure 8. Z-Current vs. Z-Voltage

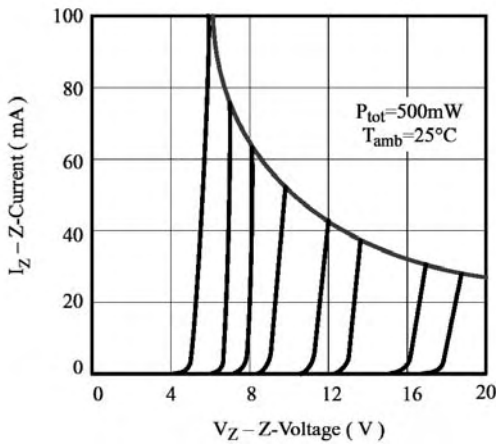


Figure 7. Z-Current vs. Z-Voltage

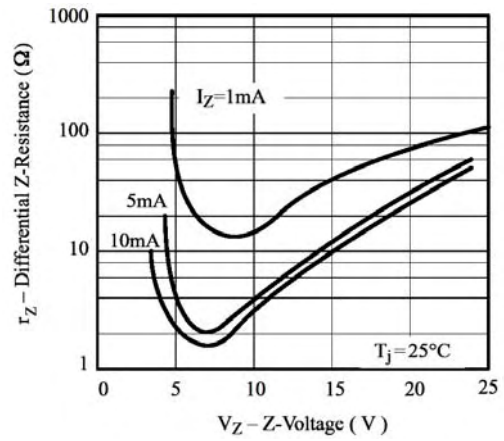


Figure 9. Differential Z-Resistance Vz vs. Z-Voltage

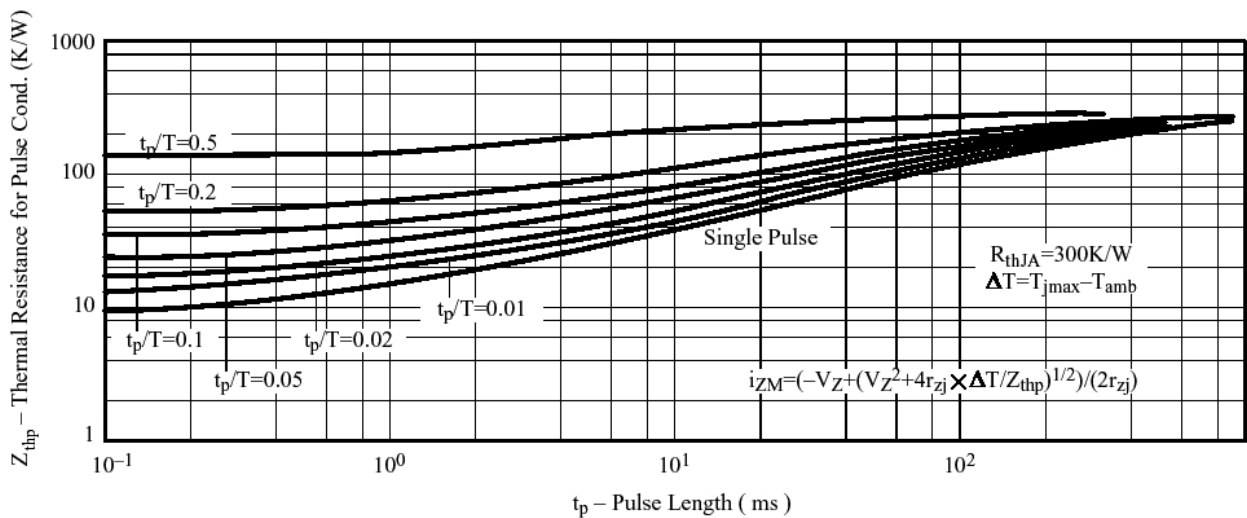


Figure 10. Thermal Response

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