

SILICON PLANAR ZENER DIODES

BZM55C 2V4 - 75V

LS-31 (MICRO-MELF)
GLASS PACKAGE



MAXIMUM RATINGS

| DESCRIPTION | TEST CONDITIONS | SYMBOL | VALUE | UNIT |
|---------------------------|---------------------------|-----------|--------------|------|
| Power Dissipation | $R_{th(j-a)} \leq 300K/W$ | P_D | 500 | mW |
| Junction Temperature | | T_j | 175 | °C |
| Storage Temperature Range | | T_{stg} | - 65 to +175 | °C |

THERMAL RESISTANCE

| | | | |
|---------------------------------|----------------|-----|-----|
| Junction to Ambient in free air | $R_{th(j-a)}$ | 500 | K/W |
| Junction to tie point | $*R_{th(j-L)}$ | 300 | K/W |

*35µm copper clad, 0.9mm² copper area per electrode

ELECTRICAL CHARACTERISTICS ($T_j=25^\circ C$ unless specified otherwise)

| | | | |
|--------------------------------|-------|-----|---|
| Forward Voltage at $I_F=200mA$ | V_F | 1.5 | V |
|--------------------------------|-------|-----|---|

| Device # | V_{ZT} **at I_{ZT} | | r_{ZT} **at I_{ZT} max (Ω) | I_{ZT} (mA) | r_{ZK} at max (Ω) | I_{ZK} (mA) | I_R at V_R | | Temp. Coeff of Zener Voltage (%/K) | |
|-----------|---------------------------|------------|---|------------------|------------------------------|------------------|---------------------------|----------------------------|---|-----------------|
| | min (V) | max (V) | | | | | at 25°C max (µA) | at 150°C max (µA) | | |
| BZM55C2V4 | 2.28 | 2.56 | 85 | 5.0 | 600 | 1.0 | 100 | 50 | 1.0 | - 0.09 ~ - 0.06 |
| BZM55C2V7 | 2.50 | 2.90 | 85 | 5.0 | 600 | 1.0 | 10 | 50 | 1.0 | - 0.09 ~ - 0.06 |
| BZM55C3V0 | 2.80 | 3.20 | 90 | 5.0 | 600 | 1.0 | 4.0 | 40 | 1.0 | - 0.08 ~ - 0.05 |
| BZM55C3V3 | 3.10 | 3.50 | 90 | 5.0 | 600 | 1.0 | 2.0 | 40 | 1.0 | - 0.08 ~ - 0.05 |
| BZM55C3V6 | 3.40 | 3.80 | 90 | 5.0 | 600 | 1.0 | 2.0 | 40 | 1.0 | - 0.08 ~ - 0.05 |
| BZM55C3V9 | 3.70 | 4.10 | 90 | 5.0 | 600 | 1.0 | 2.0 | 40 | 1.0 | - 0.08 ~ - 0.05 |
| BZM55C4V3 | 4.00 | 4.60 | 90 | 5.0 | 600 | 1.0 | 1.0 | 20 | 1.0 | - 0.06 ~ - 0.03 |
| BZM55C4V7 | 4.40 | 5.00 | 80 | 5.0 | 600 | 1.0 | 0.5 | 10 | 1.0 | - 0.05 ~ + 0.02 |
| BZM55C5V1 | 4.80 | 5.40 | 60 | 5.0 | 550 | 1.0 | 0.1 | 2.0 | 1.0 | - 0.02 ~ + 0.02 |
| BZM55C5V6 | 5.20 | 6.00 | 40 | 5.0 | 450 | 1.0 | 0.1 | 2.0 | 1.0 | - 0.05 ~ + 0.05 |
| BZM55C6V2 | 5.80 | 6.60 | 10 | 5.0 | 200 | 1.0 | 0.1 | 2.0 | 2.0 | 0.03 ~ 0.06 |
| BZM55C6V8 | 6.40 | 7.20 | 8 | 5.0 | 150 | 1.0 | 0.1 | 2.0 | 3.0 | 0.03 ~ 0.07 |
| BZM55C7V5 | 7.00 | 7.90 | 7 | 5.0 | 50 | 1.0 | 0.1 | 2.0 | 5.0 | 0.03 ~ 0.07 |
| BZM55C8V2 | 7.70 | 8.70 | 7 | 5.0 | 50 | 1.0 | 0.1 | 2.0 | 6.2 | 0.03 ~ 0.08 |
| BZM55C9V1 | 8.50 | 9.60 | 10 | 5.0 | 50 | 1.0 | 0.1 | 2.0 | 6.8 | 0.03 ~ 0.09 |
| BZM55C10 | 9.40 | 10.60 | 15 | 5.0 | 70 | 1.0 | 0.1 | 2.0 | 7.5 | 0.03 ~ 0.10 |
| BZM55C11 | 10.40 | 11.60 | 20 | 5.0 | 70 | 1.0 | 0.1 | 2.0 | 8.2 | 0.03 ~ 0.11 |
| BZM55C12 | 11.40 | 12.70 | 20 | 5.0 | 90 | 1.0 | 0.1 | 2.0 | 9.1 | 0.03 ~ 0.11 |
| BZM55C13 | 12.40 | 14.10 | 26 | 5.0 | 110 | 1.0 | 0.1 | 2.0 | 10 | 0.03 ~ 0.11 |
| BZM55C15 | 13.80 | 15.60 | 30 | 5.0 | 110 | 1.0 | 0.1 | 2.0 | 11 | 0.03 ~ 0.11 |

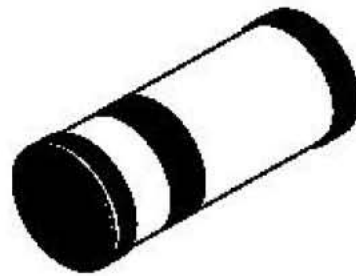
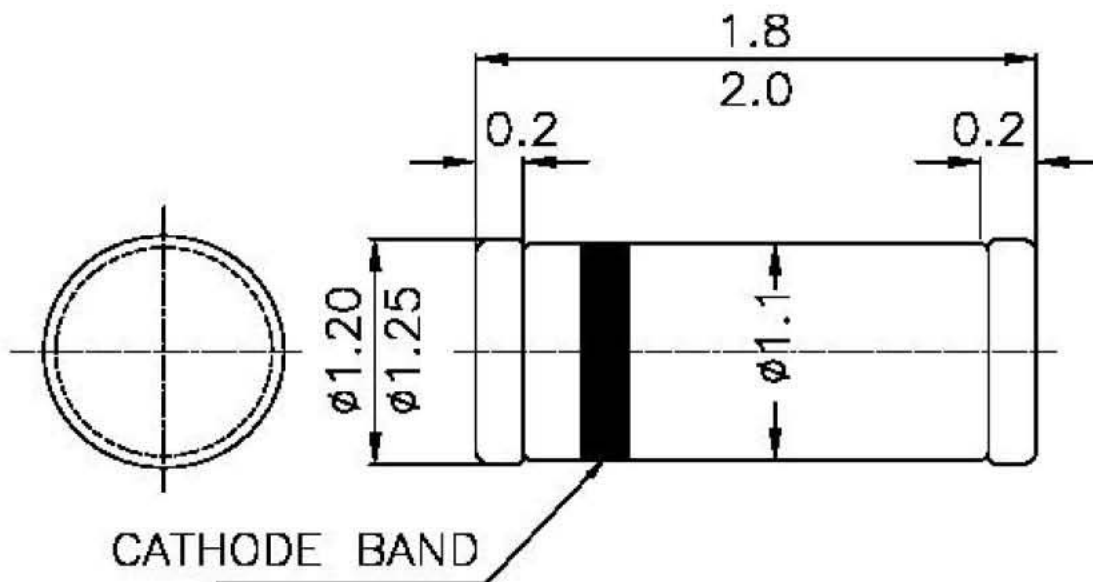
** $t_p/T \leq 100ms$

ELECTRICAL CHARACTERISTICS (T_j=25°C unless specified otherwise)

| Forward Voltage at I _F =200mA | | | | V _F | 1.5 | | V | | | |
|--|---|------------|---|-----------------|-----------------------|-----------------|---|--------------------|----------------|---|
| Device # | V _{ZT} **at I _{ZT} | | r _{ZT} **at I _{ZT} | I _{ZT} | r _{ZK} at | I _{ZK} | I _R T _a 25°C max | at 150°C max | V _R | Temp. Coeff of Zener Voltage (%/K) |
| | min (V) | max (V) | max (Ω) | (mA) | max (Ω) | (mA) | (μA) | (μA) | (V) | |
| BZM55C16 | 15.30 | 17.10 | 40 | 5.0 | 170 | 1.0 | 0.1 | 2.0 | 12 | 0.03 ~ 0.11 |
| BZM55C18 | 16.80 | 19.10 | 50 | 5.0 | 170 | 1.0 | 0.1 | 2.0 | 13 | 0.03 ~ 0.11 |
| BZM55C20 | 18.80 | 21.20 | 55 | 5.0 | 220 | 1.0 | 0.1 | 2.0 | 15 | 0.03 ~ 0.11 |
| BZM55C22 | 20.80 | 23.30 | 55 | 5.0 | 220 | 1.0 | 0.1 | 2.0 | 16 | 0.04 ~ 0.12 |
| BZM55C24 | 22.80 | 25.60 | 80 | 5.0 | 220 | 1.0 | 0.1 | 2.0 | 18 | 0.04 ~ 0.12 |
| BZM55C27 | 25.10 | 28.90 | 80 | 5.0 | 220 | 1.0 | 0.1 | 2.0 | 20 | 0.04 ~ 0.12 |
| BZM55C30 | 28.00 | 32.00 | 80 | 5.0 | 220 | 1.0 | 0.1 | 2.0 | 22 | 0.04 ~ 0.12 |
| BZM55C33 | 31.00 | 35.00 | 80 | 5.0 | 220 | 1.0 | 0.1 | 2.0 | 24 | 0.04 ~ 0.12 |
| BZM55C36 | 34.00 | 38.00 | 80 | 5.0 | 220 | 1.0 | 0.1 | 2.0 | 27 | 0.04 ~ 0.12 |
| BZM55C39 | 37.00 | 41.00 | 90 | 2.5 | 500 | 0.5 | 0.1 | 5.0 | 30 | 0.04 ~ 0.12 |
| BZM55C43 | 40.00 | 46.00 | 90 | 2.5 | 600 | 0.5 | 0.1 | 5.0 | 33 | 0.04 ~ 0.12 |
| BZM55C47 | 44.00 | 50.00 | 110 | 2.5 | 700 | 0.5 | 0.1 | 5.0 | 36 | 0.04 ~ 0.12 |
| BZM55C51 | 48.00 | 54.00 | 125 | 2.5 | 700 | 0.5 | 0.1 | 10 | 39 | 0.04 ~ 0.12 |
| BZM55C56 | 52.00 | 60.00 | 135 | 2.5 | 1000 | 0.5 | 0.1 | 10 | 43 | 0.04 ~ 0.12 |
| BZM55C62 | 58.00 | 66.00 | 150 | 2.5 | 1000 | 0.5 | 0.1 | 10 | 47 | 0.04 ~ 0.12 |
| BZM55C68 | 64.00 | 72.00 | 200 | 2.5 | 1000 | 0.5 | 0.1 | 10 | 51 | 0.04 ~ 0.12 |
| BZM55C75 | 70.00 | 79.00 | 250 | 2.5 | 1500 | 0.5 | 0.1 | 10 | 56 | 0.04 ~ 0.12 |

* t_p/T ≤ 100ms

BZM55C2V4_75V Rev061005E

PACKAGE MICRO-MELF

ALL DIMENSIONS ARE IN mm

PACKING:— 2.5K / REEL(7" 178.0mm)