



Continental Device India Limited

An ISO/TS 16949, ISO 9001 and ISO 14001 Certified Company



## 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 |

\*35mm copper clad, 0.9mm<sup>2</sup> copper area per electrode

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

|                                       |       |     |   |
|---------------------------------------|-------|-----|---|
| Forward Voltage at $I_F=200\text{mA}$ | $V_F$ | 1.5 | V |
|---------------------------------------|-------|-----|---|

| Device #  | $V_{ZT}$<br>**at $I_{ZT}$ |            | $r_{ZT}$<br>**at $I_{ZT}$ | $I_{ZT}$ | $r_{ZK}$<br>at $I_{ZK}$ | $I_{ZK}$ | $I_R$<br>$T_a$<br>25°C<br>max | at<br>150°C<br>max | $V_R$ | Temp. Coeff<br>of<br>Zener Voltage<br>(%/K) |
|-----------|---------------------------|------------|---------------------------|----------|-------------------------|----------|-------------------------------|--------------------|-------|---------------------------------------------|
|           | min<br>(V)                | max<br>(V) | max<br>(W)                | (mA)     | max<br>(W)              | (mA)     | (mA)                          | (mA)               | (V)   |                                             |
| 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                                 |

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ELECTRICAL CHARACTERISTICS (T<sub>j</sub>=25°C unless specified otherwise)

|                                          |                |     |   |
|------------------------------------------|----------------|-----|---|
| Forward Voltage at I <sub>F</sub> =200mA | V <sub>F</sub> | 1.5 | V |
|------------------------------------------|----------------|-----|---|

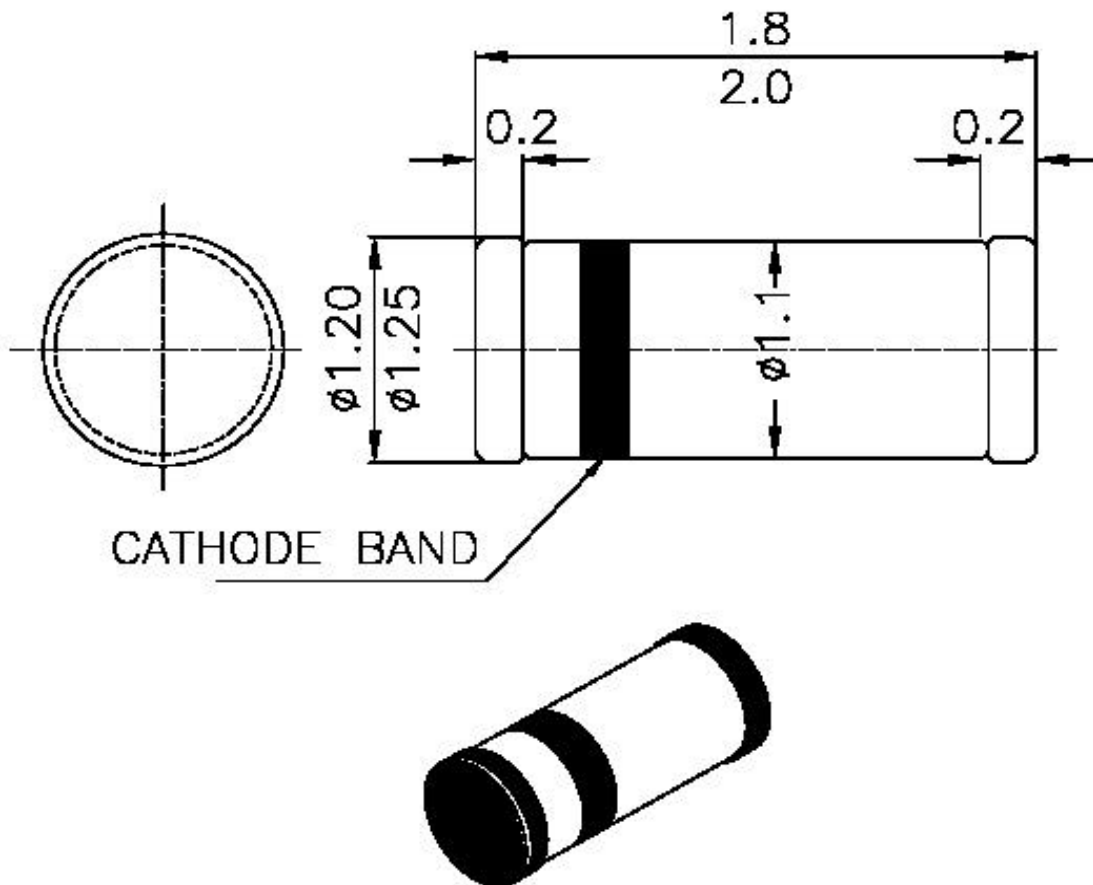
| Device # | V <sub>ZT</sub><br>**at I <sub>ZT</sub> |            | r <sub>ZT</sub><br>**at I <sub>ZT</sub> | I <sub>ZT</sub> | r <sub>ZK</sub><br>at | I <sub>ZK</sub> | I <sub>R</sub><br>T <sub>a</sub><br>25°C<br>max | at<br>150°C<br>max | V <sub>R</sub> | Temp. Coeff<br>of<br>Zener Voltage<br>(%/K) |
|----------|-----------------------------------------|------------|-----------------------------------------|-----------------|-----------------------|-----------------|-------------------------------------------------|--------------------|----------------|---------------------------------------------|
|          | min<br>(V)                              | max<br>(V) | max<br>(W)                              | (mA)            | max<br>(W)            | (mA)            | (mA)                                            | (mA)               | (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<sub>p</sub>/T ≤100ms

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## PACKAGE MICRO-MELF



ALL DIMENSIONS ARE IN mm

PACKING:— 2.5K / REEL(7" 178.0mm)

### **Disclaimer**

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