

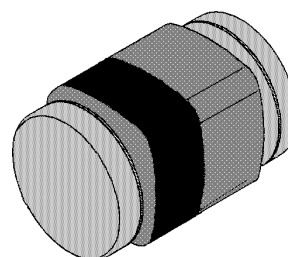
# ZMC...UDZB Series

## SILICON EPITAXIAL PLANAR ZENER DIODES

LS-31

### Features

- Compact, 2-pin mini-mold type for high-density mounting. (UMD2)
- Non-wire bonding structure improves.
- High demand voltage range (3.6V~36V) is manufactured on high-efficient non-wire bonding production line.
- Fits onto SOD 323 / SOT 23 footprints.
- Micro Melf package.
- This series of products can be a substitution of UDZS series.

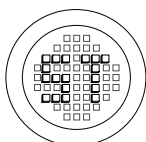


### Applications

- Constant voltage control.

### Absolute Maximum Ratings ( $T_a = 25^{\circ}\text{C}$ )

|                           | Symbol    | Value       | Unit               |
|---------------------------|-----------|-------------|--------------------|
| Power Dissipation         | P         | 200         | mW                 |
| Junction Temperature      | $T_J$     | 150         | $^{\circ}\text{C}$ |
| Storage Temperature Range | $T_S$     | -55 to +150 | $^{\circ}\text{C}$ |
| Operating Temperature     | $T_{opr}$ | -55 to +150 | $^{\circ}\text{C}$ |



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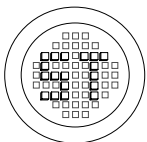
# ZMC...UDZB Series

Characteristics at  $T_a = 25^\circ\text{C}$

| TYPE        | Zener Voltage |       |            | Operating resistance |            | Rising operating resistance |            | Reverse Current         |           |
|-------------|---------------|-------|------------|----------------------|------------|-----------------------------|------------|-------------------------|-----------|
|             | $V_Z$ (V)     |       |            | $Z_Z$ ( $\Omega$ )   |            | $Z_{ZK}$ ( $\Omega$ )       |            | $I_R$ ( $\mu\text{A}$ ) |           |
|             | Min.          | Max.  | $I_Z$ (mA) | Max.                 | $I_Z$ (mA) | Max.                        | $I_Z$ (mA) | Max.                    | $V_R$ (V) |
| ZMC3.6 UDZB | 3.600         | 3.845 | 5          | 100                  | 5          | 1000                        | 1          | 10                      | 1         |
| ZMC3.9 UDZB | 3.890         | 4.160 | 5          | 100                  | 5          | 1000                        | 1          | 5                       | 1         |
| ZMC4.3 UDZB | 4.170         | 4.430 | 5          | 100                  | 5          | 1000                        | 1          | 5                       | 1         |
| ZMC4.7 UDZB | 4.550         | 4.750 | 5          | 100                  | 5          | 800                         | 0.5        | 2                       | 1         |
| ZMC5.1 UDZB | 4.980         | 5.200 | 5          | 80                   | 5          | 500                         | 0.5        | 2                       | 1.5       |
| ZMC5.6 UDZB | 5.490         | 5.730 | 5          | 60                   | 5          | 200                         | 0.5        | 1                       | 2.5       |
| ZMC6.2 UDZB | 6.060         | 6.330 | 5          | 60                   | 5          | 100                         | 0.5        | 1                       | 3         |
| ZMC6.8 UDZB | 6.650         | 6.930 | 5          | 40                   | 5          | 60                          | 0.5        | 0.5                     | 3.5       |
| ZMC7.5 UDZB | 7.280         | 7.600 | 5          | 30                   | 5          | 60                          | 0.5        | 0.5                     | 4         |
| ZMC8.2 UDZB | 8.020         | 8.360 | 5          | 30                   | 5          | 60                          | 0.5        | 0.5                     | 5         |
| ZMC9.1 UDZB | 8.850         | 9.230 | 5          | 30                   | 5          | 60                          | 0.5        | 0.5                     | 6         |
| ZMC10 UDZB  | 9.770         | 10.21 | 5          | 30                   | 5          | 60                          | 0.5        | 0.1                     | 7         |
| ZMC11 UDZB  | 10.76         | 11.22 | 5          | 30                   | 5          | 60                          | 0.5        | 0.1                     | 8         |
| ZMC12 UDZB  | 11.74         | 12.24 | 5          | 30                   | 5          | 80                          | 0.5        | 0.1                     | 9         |
| ZMC13 UDZB  | 12.91         | 13.49 | 5          | 37                   | 5          | 80                          | 0.5        | 0.1                     | 10        |
| ZMC15 UDZB  | 14.34         | 14.98 | 5          | 42                   | 5          | 80                          | 0.5        | 0.1                     | 11        |
| ZMC16 UDZB  | 15.85         | 16.51 | 5          | 50                   | 5          | 80                          | 0.5        | 0.1                     | 12        |
| ZMC18 UDZB  | 17.56         | 18.35 | 5          | 65                   | 5          | 80                          | 0.5        | 0.1                     | 13        |
| ZMC20 UDZB  | 19.52         | 20.39 | 5          | 85                   | 5          | 100                         | 0.5        | 0.1                     | 15        |
| ZMC22 UDZB  | 21.54         | 22.47 | 5          | 100                  | 5          | 100                         | 0.5        | 0.1                     | 17        |
| ZMC24 UDZB  | 23.72         | 24.78 | 5          | 120                  | 5          | 120                         | 0.5        | 0.1                     | 19        |
| ZMC27 UDZB  | 26.19         | 27.53 | 5          | 150                  | 5          | 150                         | 0.5        | 0.1                     | 21        |
| ZMC30 UDZB  | 29.19         | 30.69 | 5          | 200                  | 5          | 200                         | 0.5        | 0.1                     | 23        |
| ZMC33 UDZB  | 32.15         | 33.79 | 5          | 250                  | 5          | 250                         | 0.5        | 0.1                     | 25        |
| ZMC36 UDZB  | 35.07         | 36.87 | 5          | 300                  | 5          | 300                         | 0.5        | 0.1                     | 27        |

Note 1. Tested with pulses  $t_p = 20$  ms.

2. The operating resistances ( $Z_z$ ,  $Z_{zk}$ ) are measured by superimposing a minute alternating current on the regulated current ( $I_z$ ).



**SEMTECH ELECTRONICS LTD.**

(Subsidiary of Semtech International Holdings Limited, a company listed on the Hong Kong Stock Exchange, Stock Code: 724)

®



ISO/TS 16949 : 2002  
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ISO 14001:2004  
Certificate No. 7116

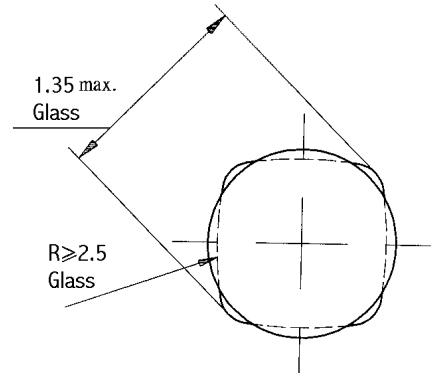
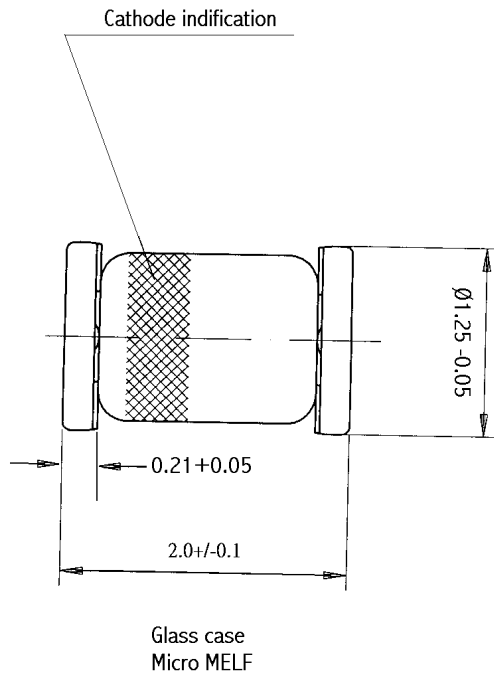


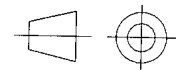
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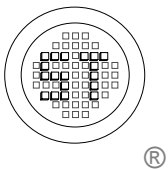
Dated : 22/01/2005

# ZMC...UDZB Series

## Dimensions in mm



  
technical drawings  
according to DIN  
specifications



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