

# Zener diode

## CDZ3.9B

**●Applications**

Constant voltage control

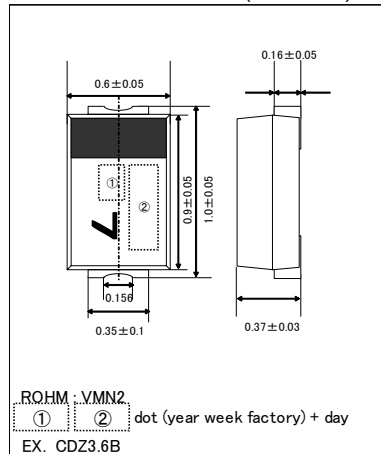
**●Features**

- 1) 2-pin ultra mini-mold type for high-density mounting (VMN2).
- 2) High reliability.
- 3) Can be mounted automatically, using chip mounter.

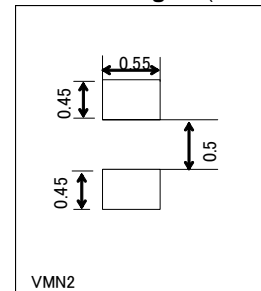
**●Construction**

Silicon epitaxial planar

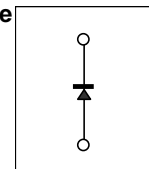
**●External dimensions (Unit : mm)**



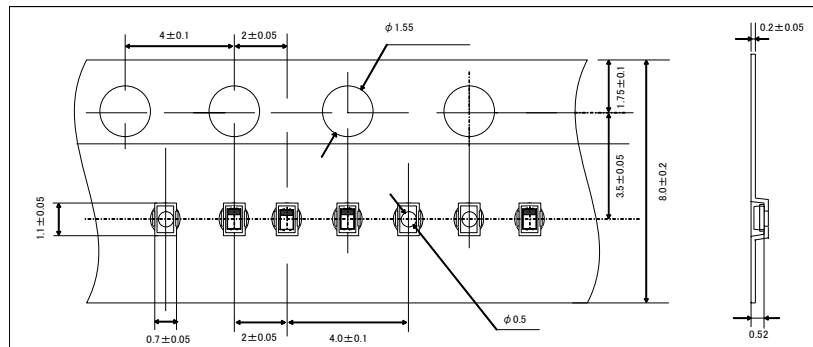
**●Land size figure (Unit : mm)**



**●Structure**



**●Taping specifications (Unit : mm)**



**●Absolute maximum ratings (Ta=25°C)**

| Parameter             | Symbol           | Limits      | Unit |
|-----------------------|------------------|-------------|------|
| Power dissipation     | P                | 100         | mW   |
| Junction temperature  | T <sub>j</sub>   | 150         | °C   |
| Storage temperature   | T <sub>stg</sub> | -55 to +150 | °C   |
| Operating temperature | T <sub>opr</sub> | -55 to +150 | °C   |

## Diodes

## ●Electrical characteristics (Ta=25°C)

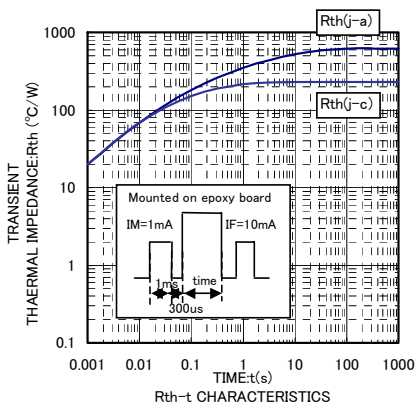
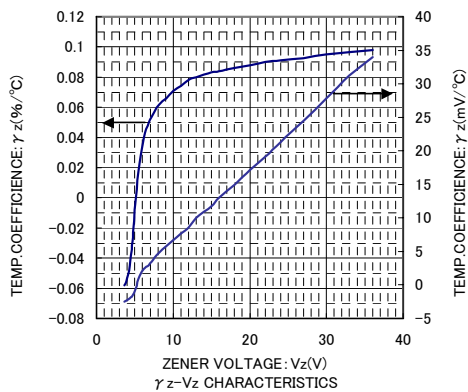
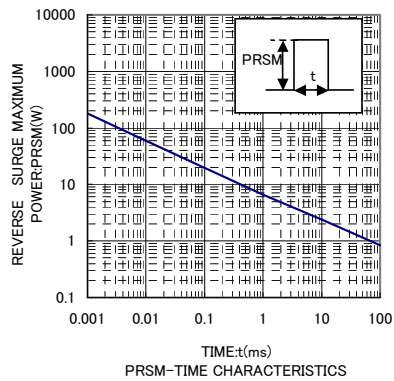
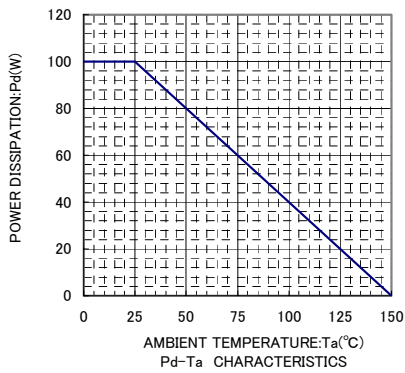
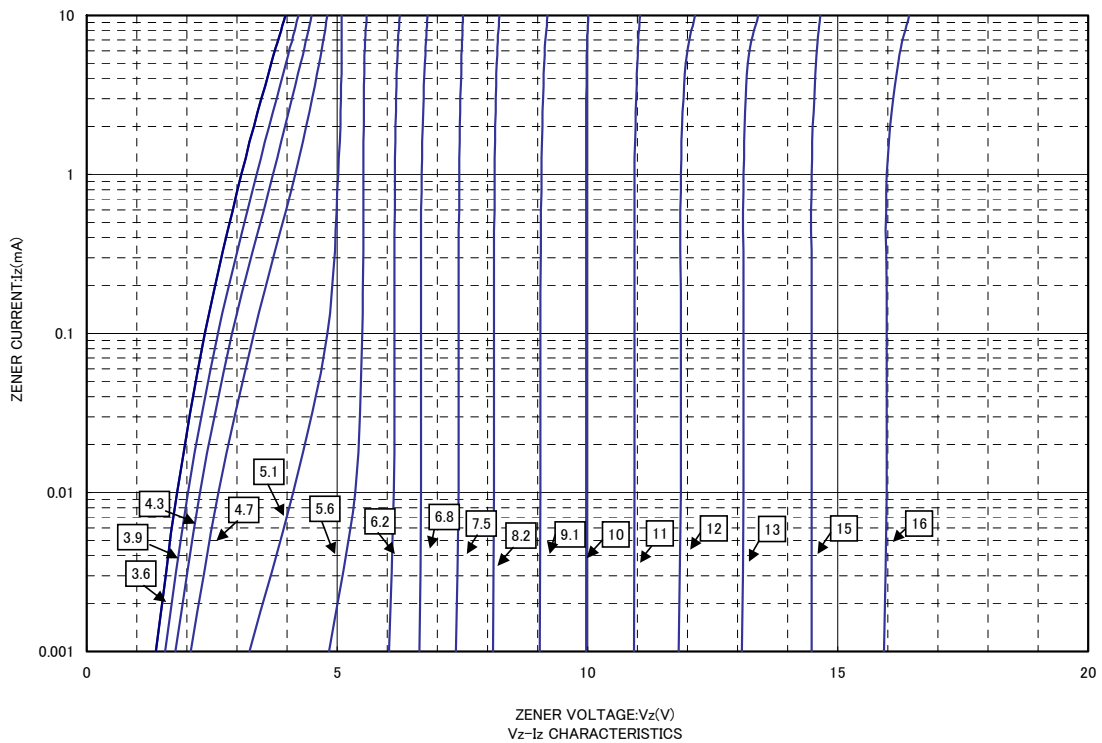
| TYP.     | Symbol                |        |        |                              |        |                                     |        |                          |       |
|----------|-----------------------|--------|--------|------------------------------|--------|-------------------------------------|--------|--------------------------|-------|
|          | Zener voltage : Vz(V) |        |        | Operating resistance : Zz(Ω) |        | Rising operating resistance : Zz(Ω) |        | Reverse current : IR(μA) |       |
|          | MIN.                  | MAX.   | Iz(mA) | MAX.                         | Iz(mA) | MAX.                                | Iz(mA) | MAX.                     | VR(V) |
| CDZ 3.6B | 3.600                 | 3.845  | 5.0    | 100                          | 5.0    | 1000.0                              | 1.0    | 10.0                     | 1.0   |
| CDZ 3.9B | 3.890                 | 4.160  | 5.0    | 100                          | 5.0    | 1000.0                              | 1.0    | 5.0                      | 1.0   |
| CDZ 4.3B | 4.170                 | 4.430  | 5.0    | 100                          | 5.0    | 1000.0                              | 1.0    | 5.0                      | 1.0   |
| CDZ 4.7B | 4.550                 | 4.750  | 5.0    | 100                          | 5.0    | 800.0                               | 0.5    | 2.0                      | 1.0   |
| CDZ 5.1B | 4.980                 | 5.200  | 5.0    | 80                           | 5.0    | 500.0                               | 0.5    | 2.0                      | 1.5   |
| CDZ 5.6B | 5.490                 | 5.730  | 5.0    | 60                           | 5.0    | 200.0                               | 0.5    | 1.0                      | 2.5   |
| CDZ 6.2B | 6.060                 | 6.330  | 5.0    | 60                           | 5.0    | 100.0                               | 0.5    | 1.0                      | 3.0   |
| CDZ 6.8B | 6.650                 | 6.930  | 5.0    | 40                           | 5.0    | 60.0                                | 0.5    | 0.5                      | 3.5   |
| CDZ 7.5B | 7.280                 | 7.600  | 5.0    | 30                           | 5.0    | 60.0                                | 0.5    | 0.5                      | 4.0   |
| CDZ 8.2B | 8.020                 | 8.360  | 5.0    | 30                           | 5.0    | 60.0                                | 0.5    | 0.5                      | 5.0   |
| CDZ 9.1B | 8.850                 | 9.230  | 5.0    | 30                           | 5.0    | 60.0                                | 0.5    | 0.5                      | 6.0   |
| CDZ 10B  | 9.770                 | 10.210 | 5.0    | 30                           | 5.0    | 60.0                                | 0.5    | 0.1                      | 7.0   |
| CDZ 11B  | 10.760                | 11.220 | 5.0    | 30                           | 5.0    | 60.0                                | 0.5    | 0.1                      | 8.0   |
| CDZ 12B  | 11.740                | 12.240 | 5.0    | 30                           | 5.0    | 80.0                                | 0.5    | 0.1                      | 9.0   |
| CDZ 13B  | 12.910                | 13.490 | 5.0    | 37                           | 5.0    | 80.0                                | 0.5    | 0.1                      | 10.0  |
| CDZ 15B  | 14.340                | 14.980 | 5.0    | 42                           | 5.0    | 80.0                                | 0.5    | 0.1                      | 11.0  |
| CDZ 16B  | 15.850                | 16.510 | 5.0    | 50                           | 5.0    | 80.0                                | 0.5    | 0.1                      | 12.0  |

## ●Type No.

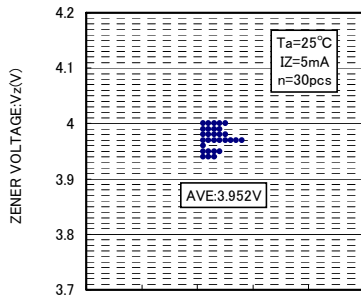
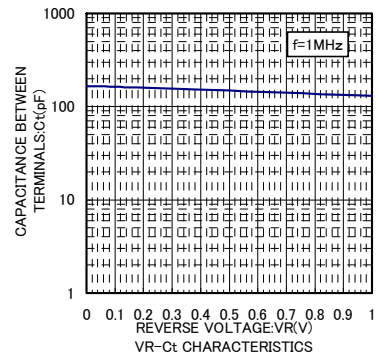
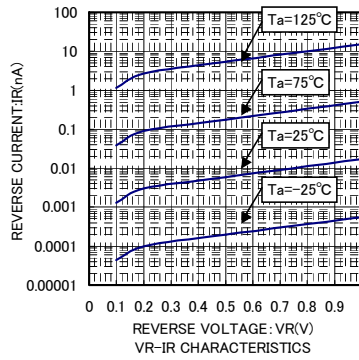
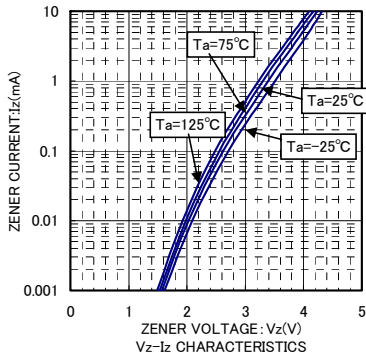
| TYPE     | TYPE NO. | TYPE     | TYPE NO. |
|----------|----------|----------|----------|
| CDZ 3.6B | <u>7</u> | CDZ 8.2B | <u>H</u> |
| CDZ 3.9B | <u>1</u> | CDZ 9.1B | <u>J</u> |
| CDZ 4.3B | <u>2</u> | CDZ 10B  | <u>K</u> |
| CDZ 4.7B | <u>3</u> | CDZ 11B  | <u>L</u> |
| CDZ 5.1B | <u>5</u> | CDZ 12B  | <u>N</u> |
| CDZ 5.6B | <u>7</u> | CDZ 13B  | <u>S</u> |
| CDZ 6.2B | <u>C</u> | CDZ 15B  | <u>C</u> |
| CDZ 6.8B | <u>E</u> | CDZ 16B  | <u>E</u> |
| CDZ 7.5B | <u>F</u> |          |          |

Diodes

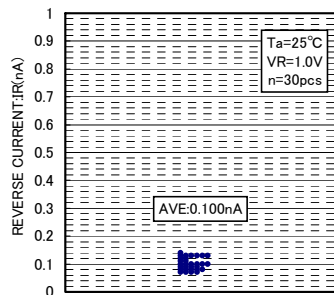
●Electrical characteristic curves (Ta=25°C)



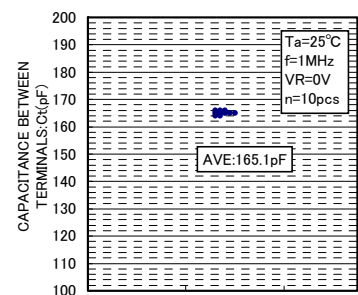
Diodes



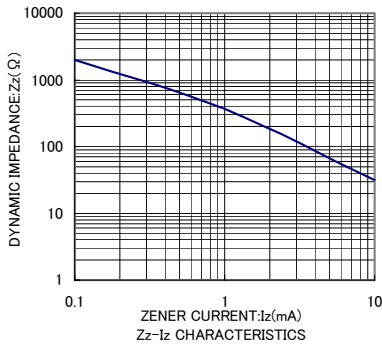
$V_z$  DISPERSION MAP



$I_R$  DISPERSION MAP



$C_t$  DISPERSION MAP



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