

DZ24510

Silicon epitaxial planar type

For constant voltage / For surge absorption circuit

Capability of withstanding a high surge type

DZ2W510 in Power type package

■ Features

- Excellent rising characteristics of zener current I_Z
- Low zener operating resistance R_Z
- Halogen-free / RoHS compliant
(EU RoHS / UL-94 V-0 / MSL: Level 1 compliant)

■ Marking Symbol: RG

■ Packaging

DZ2451000L Embossed type (Thermo-compression sealing): 3 000 pcs / reel (standard)

■ Absolute Maximum Ratings $T_a = 25^\circ\text{C}$

| Parameter | Symbol | Rating | Unit |
|---|-----------|-------------|------------------|
| Forward current | I_F | 400 | mA |
| Repetitive peak forward current | I_{FRM} | 500 | mA |
| Total power dissipation *1 | P_T | 2 | W |
| Non-repetitive reverse surge power dissipation *2 | P_{ZSM} | 100 | W |
| Electrostatic discharge *3 | ESD | ± 30 | kV |
| Junction temperature | T_j | 150 | $^\circ\text{C}$ |
| Storage temperature | T_{stg} | -55 to +150 | $^\circ\text{C}$ |

Note) *1: Mounted on ceramics print circuit board.

Board size: 50 mm × 50 mm, Board thickness: 0.8 mm, Soldering size: 2 mm × 2 mm

*2: $t = 0.1$ ms

*3: Test method: IEC61000-4-2 (C = 150 pF, R = 330 Ω , Contact discharge: 10 times)

■ Electrical Characteristics $T_a = 25^\circ\text{C} \pm 3^\circ\text{C}$

| Parameter | Symbol | Conditions | Min | Typ | Max | Unit |
|---|--------|----------------|-------|-------|-------|----------------------|
| Forward voltage | V_F | $I_F = 200$ mA | | | 1.2 | V |
| Zener voltage *1, 2 | V_Z | $I_Z = 5$ mA | 48.45 | 51.00 | 53.55 | V |
| Zener operating resistance | R_Z | $I_Z = 5$ mA | | | 65 | Ω |
| Reverse current | I_R | $V_R = 40.8$ V | | | 10 | μA |
| Temperature coefficient of zener voltage *3 | S_Z | $I_Z = 5$ mA | | 58.0 | | mV/ $^\circ\text{C}$ |

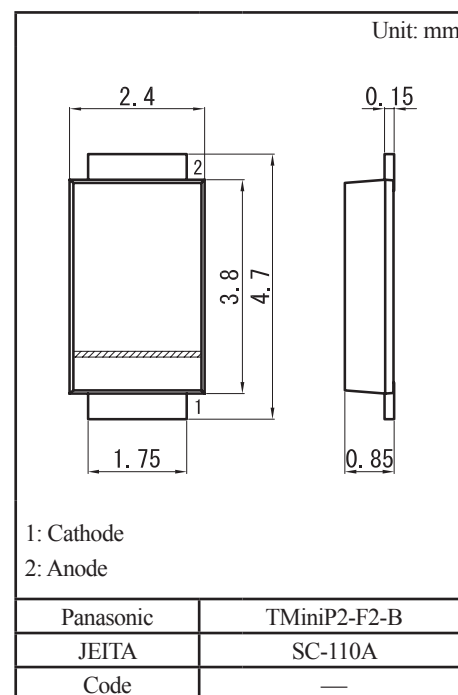
Note) 1. Measuring methods are based on JAPANESE INDUSTRIAL STANDARD JIS C 7031 measuring methods for diodes.

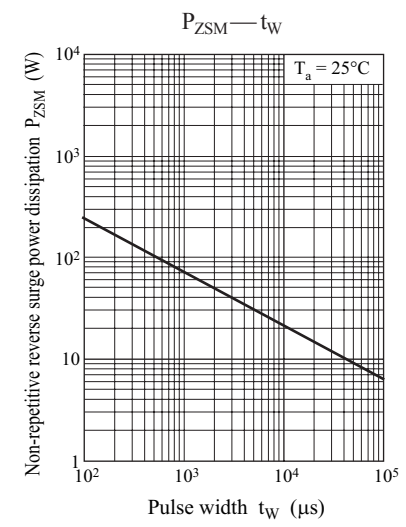
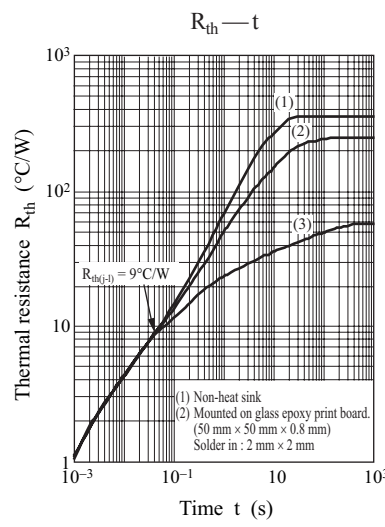
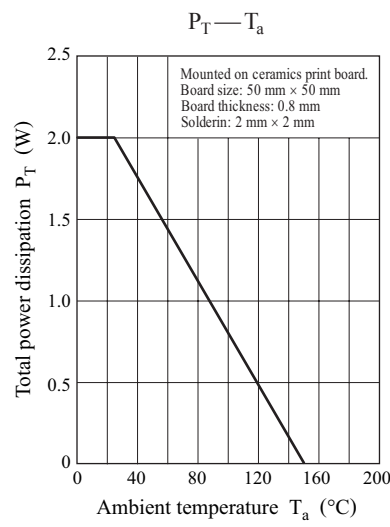
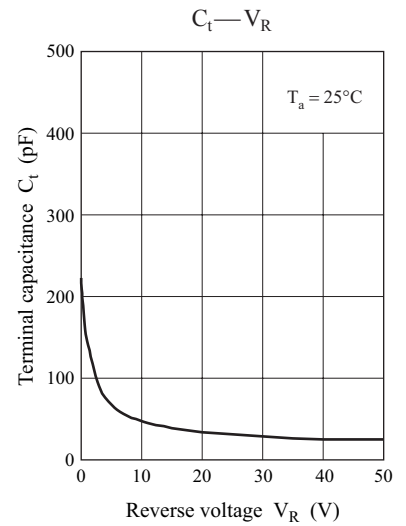
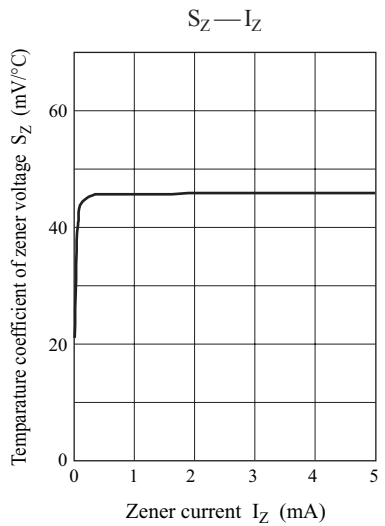
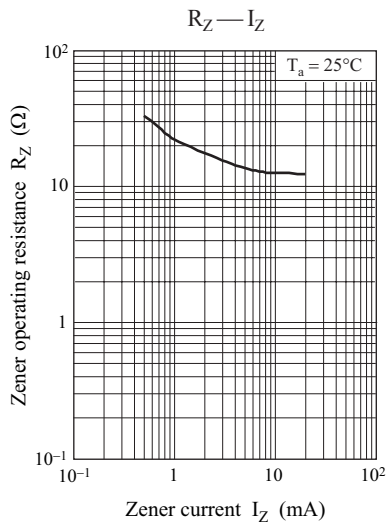
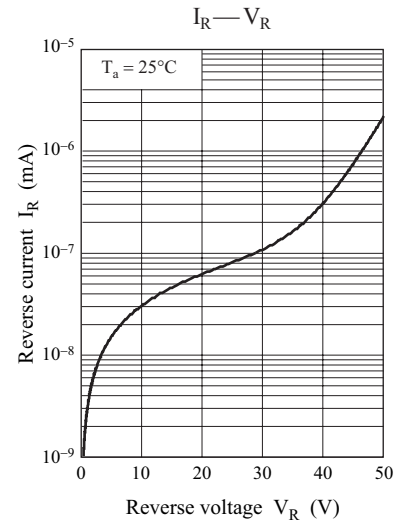
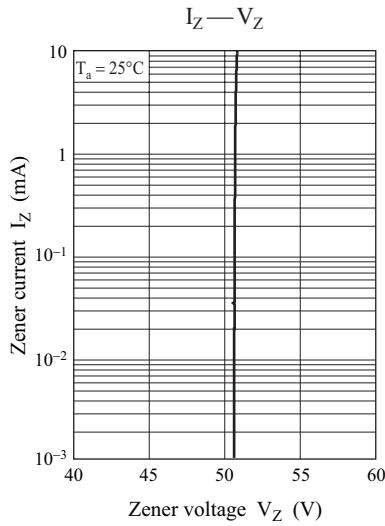
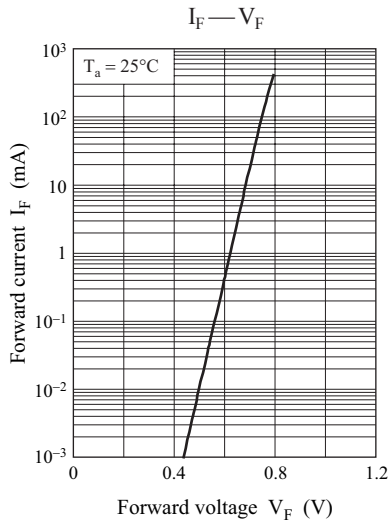
2. Absolute frequency of input and output is 5 MHz.

3. *1: The temperature must be controlled 25°C for V_Z measurement. V_Z value measured at other temperature must be adjusted to $V_Z(25^\circ\text{C})$

*2: V_Z guaranteed 20 ms after current flow.

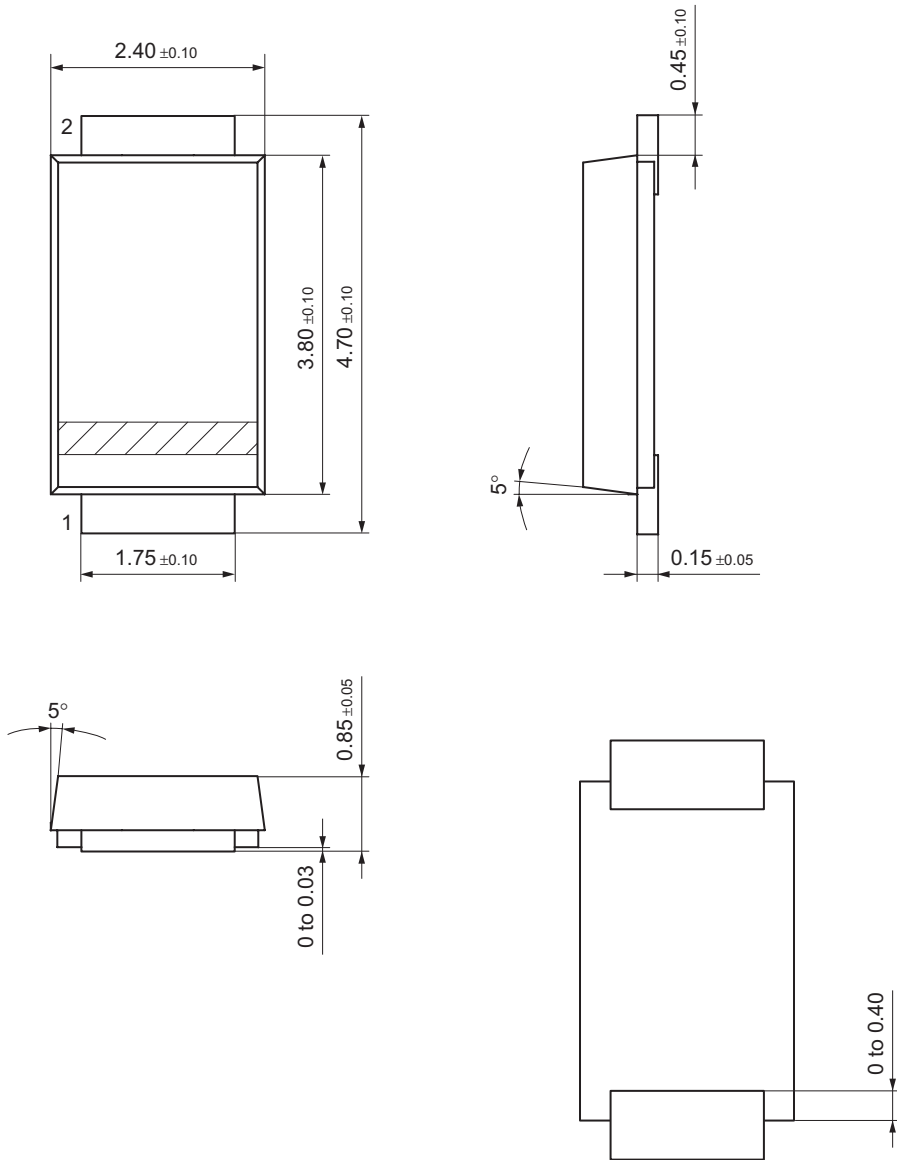
*3: $T_j = 25^\circ\text{C}$ to 150°C



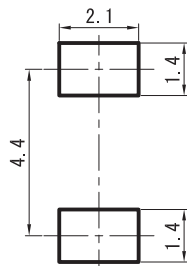


TMiniP2-F2-B

Unit: mm



■ Land Pattern (Reference) (Unit: mm)



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