

## DZ2J220×0L

Silicon epitaxial planar type

For constant voltage / For surge absorption circuit

### ■ 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: CG or CR

### ■ Packaging

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

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

| Parameter                             | Symbol | Rating      | Unit |
|---------------------------------------|--------|-------------|------|
| Repetitive peak forward current       | IFRM   | 200         | mA   |
| Total power dissipation <sup>*1</sup> | PT     | 200         | mW   |
| Electrostatic discharge <sup>*2</sup> | ESD    | ±8          | kV   |
| Junction temperature                  | Tj     | 150         | °C   |
| Operating ambient temperature         | Topr   | -40 to +85  | °C   |
| Storage temperature                   | Tstg   | -55 to +150 | °C   |

Note) \*1 Mounted on glass epoxy print board ( 45 mm × 45 mm × 1 mm )

Solder in ( Recommended land pattern )

\*2 Test method : IEC61000\_4\_2

( C = 150 pF, R = 330 Ω, Contact discharge : 10 times )

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

| Parameter                                              | Symbol | Conditions  | Min   | Typ  | Max   | Unit  |
|--------------------------------------------------------|--------|-------------|-------|------|-------|-------|
| Forward voltage                                        | VF     | IF = 10 mA  |       |      | 1.0   | V     |
| Zener voltage <sup>*1, *2</sup>                        | VZ     | IZ = 5 mA   | 20.90 |      | 23.10 | V     |
| Zener operating resistance                             | RZ     | IZ = 5 mA   |       |      | 80    | Ω     |
| Zener rise operating resistance                        | RZK    | IZ = 0.5 mA |       |      | 100   | Ω     |
| Reverse current                                        | IR     | VR = 17 V   |       |      | 0.05  | μA    |
| Temperature coefficient of zener voltage <sup>*3</sup> | SZ     | IZ = 5 mA   |       | 22.2 |       | mV/°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 VZ measurement.

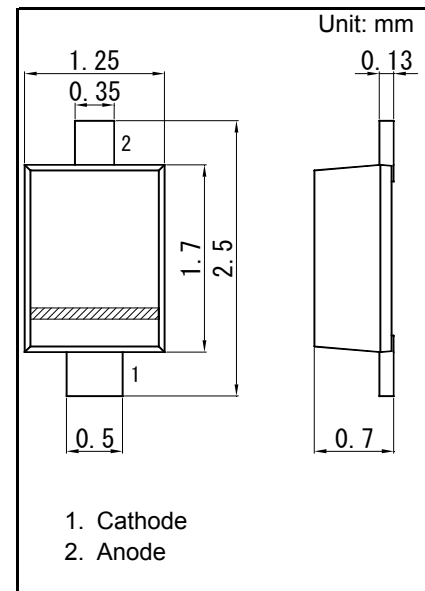
VZ value measured at other temperature must be adjusted to VZ (25 °C).

\*2 VZ guaranteed 20 ms after current flow

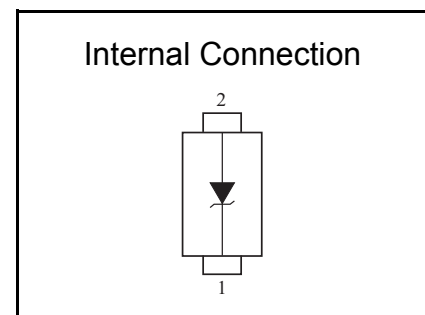
\*3 Tj = 25 °C to 150 °C

### Rank classification

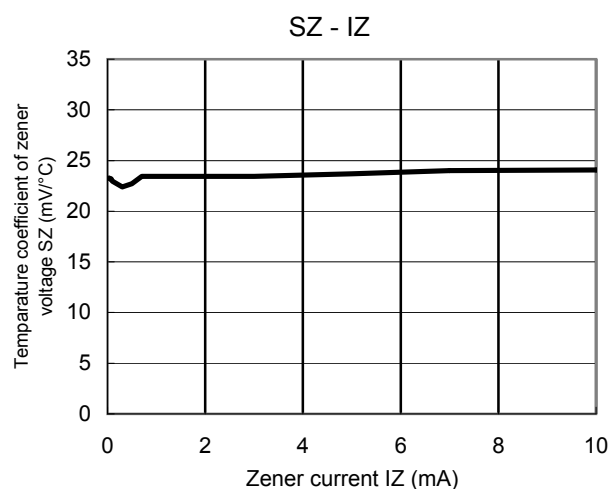
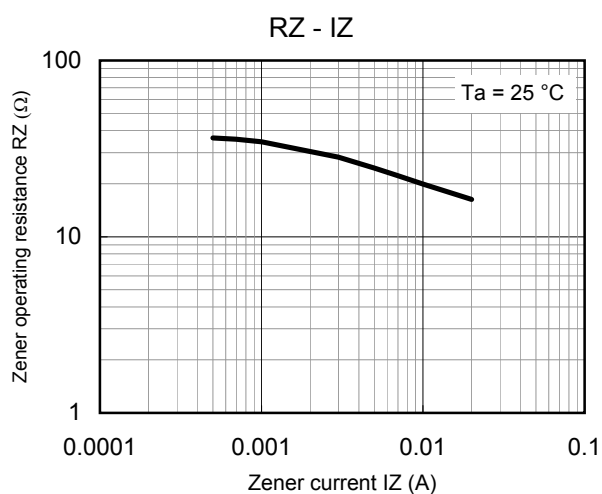
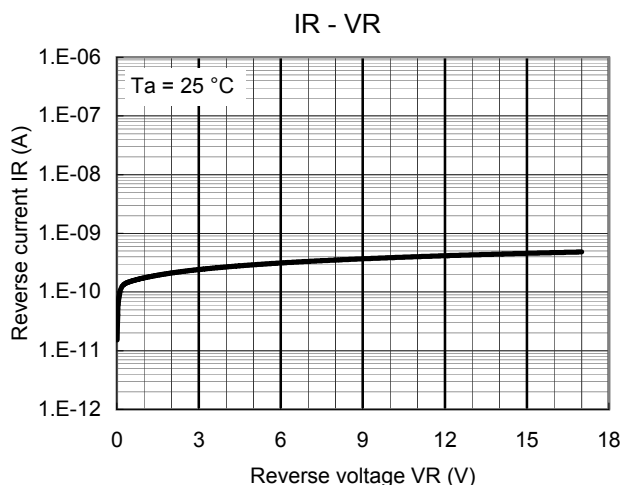
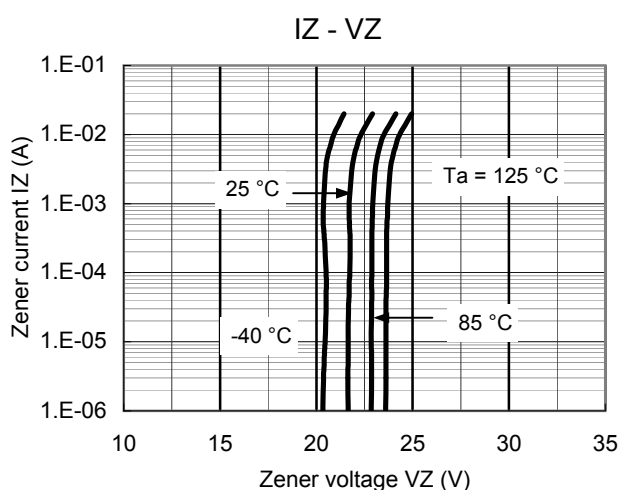
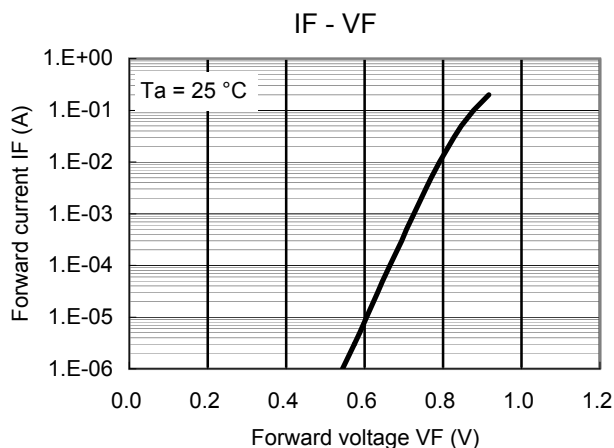
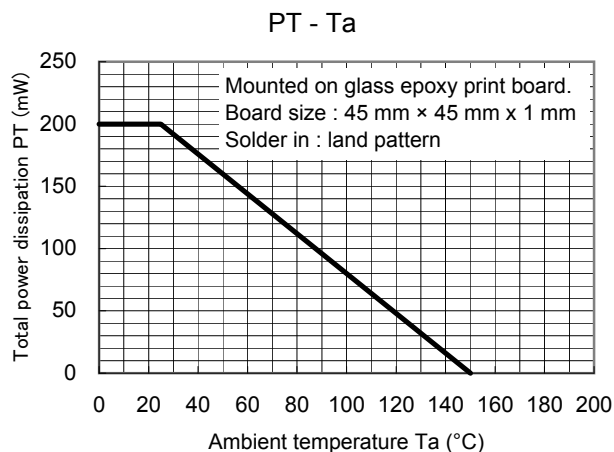
| Code           | M              | 0              |
|----------------|----------------|----------------|
| Rank           | M              | No-rank        |
| VZ             | 21.45 to 22.55 | 20.90 to 23.10 |
| Marking symbol | CR             | CG             |



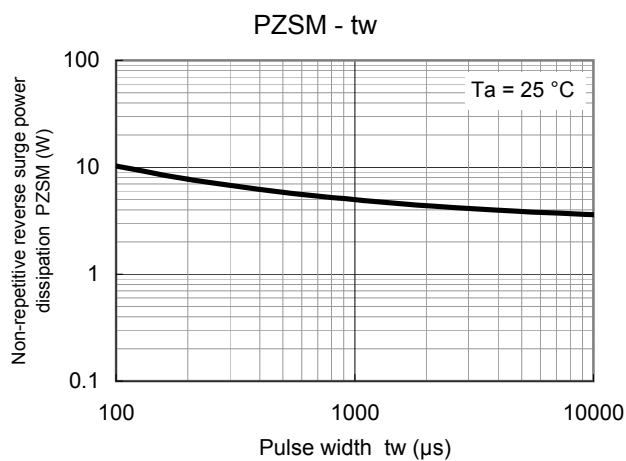
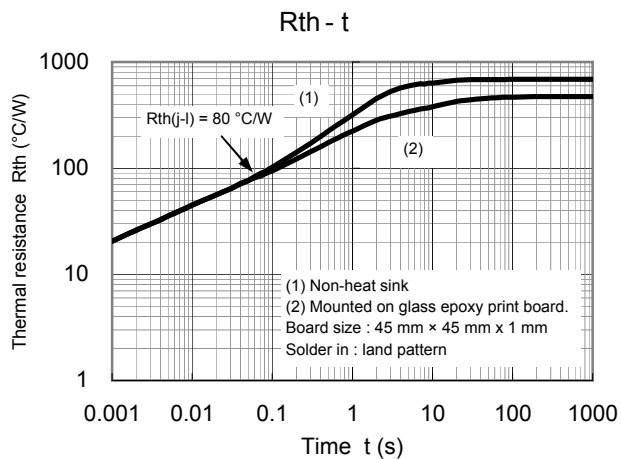
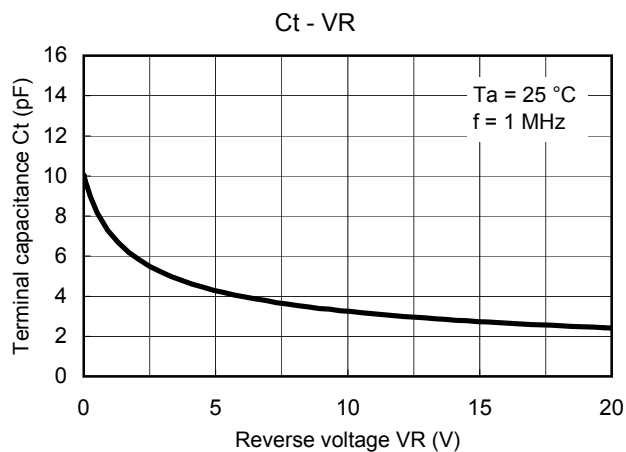
|           |             |
|-----------|-------------|
| Panasonic | SMini2-F5-B |
| JEITA     | SC-90A      |
| Code      | —           |



Technical Data ( reference )



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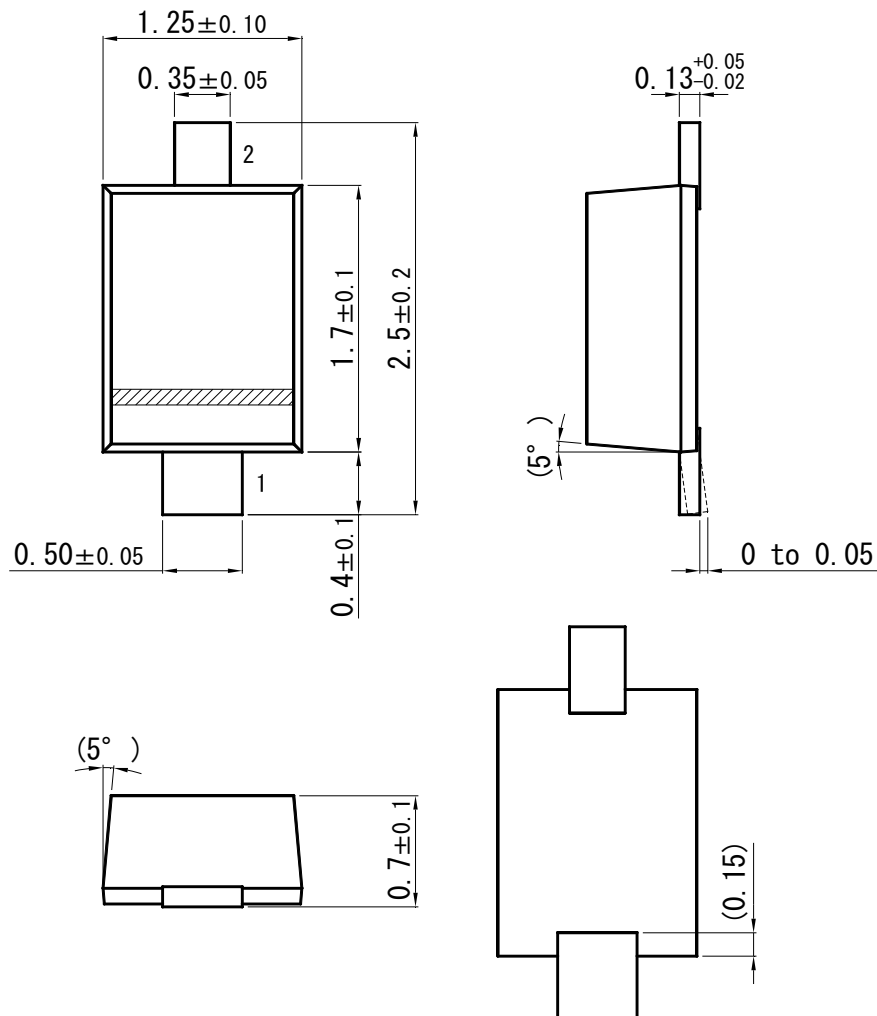


**Panasonic**

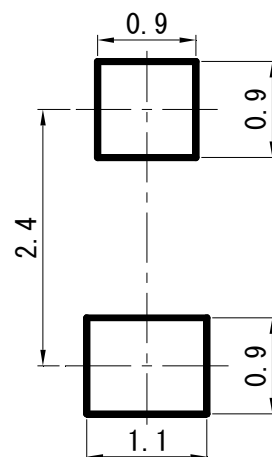
Zener Diode  
**DZ2J220×0L**

**SMini2-F5-B**

Unit: mm



■ Land Pattern (Reference) (Unit: mm)



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