

# DZ24091

## Silicon epitaxial planar type

For constant voltage / For surge absorption circuit  
 Capability of withstanding a high surge type  
 DZ2W091 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: LJ

### ■ Packaging

DZ2409100L 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	$\pm 30$	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  $\Omega$ , 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	$V_Z$	$I_Z = 10$ mA	8.65	9.10	9.56	V
Zener operating resistance	$R_Z$	$I_Z = 10$ mA			30	$\Omega$
Reverse current	$I_R$	$V_R = 5.0$ V			10	$\mu\text{A}$
Temperature coefficient of zener voltage *3	$S_Z$	$I_Z = 10$ mA		5.7		mV/ $^\circ\text{C}$

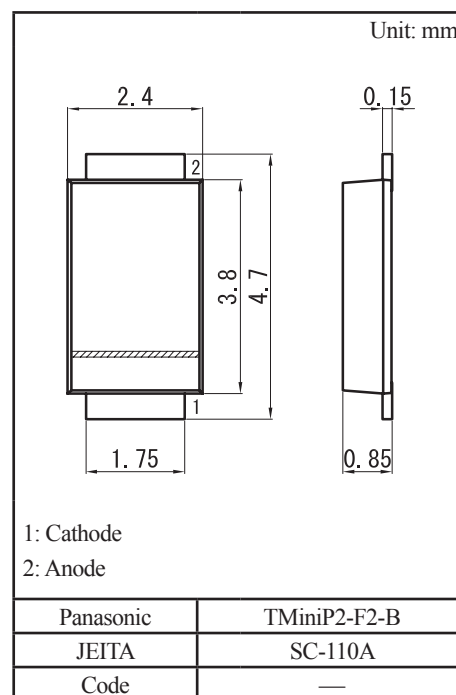
Note) 1. Measuring methods are based on JAPANESE INDUSTRIAL STANDARD JIS C 7031 measuring methods for diodes.

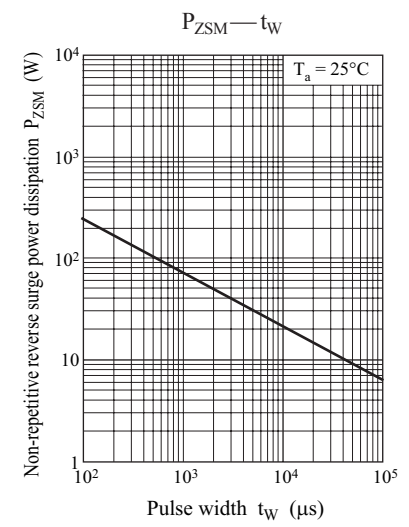
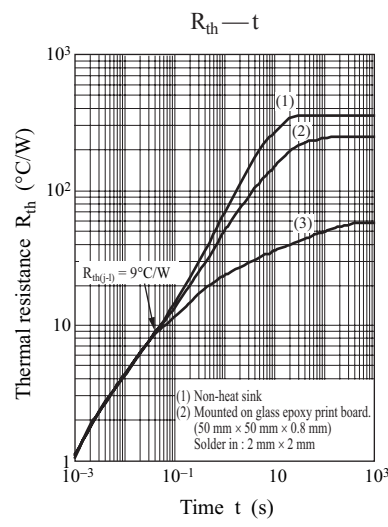
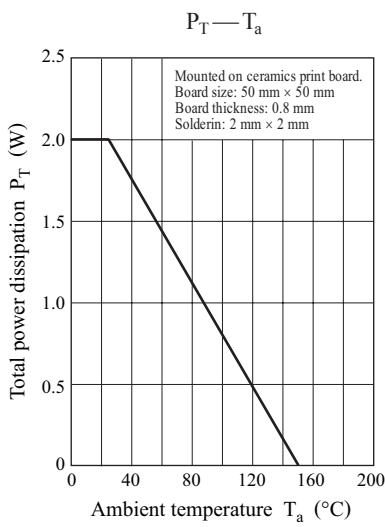
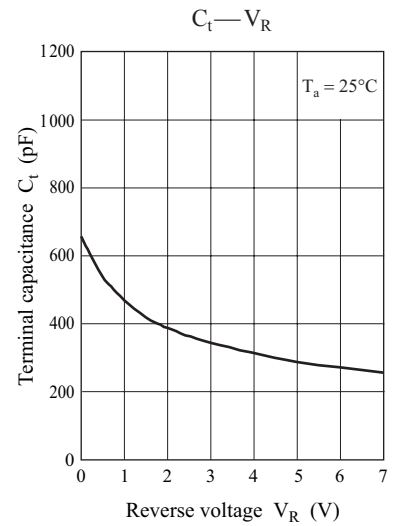
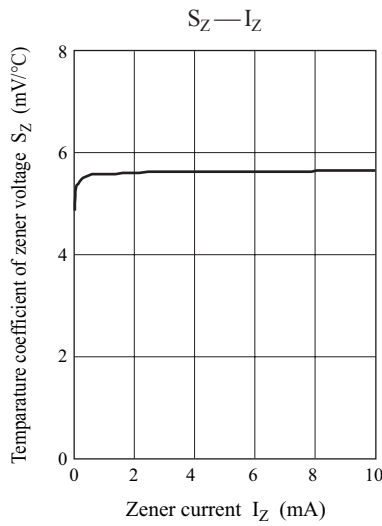
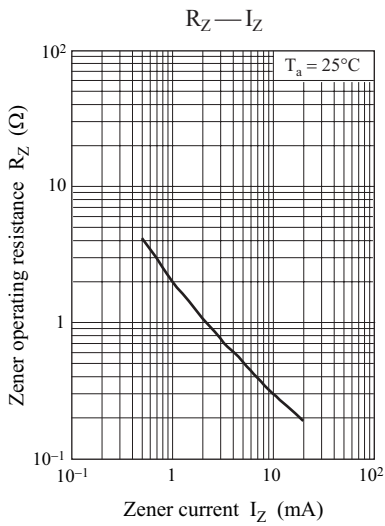
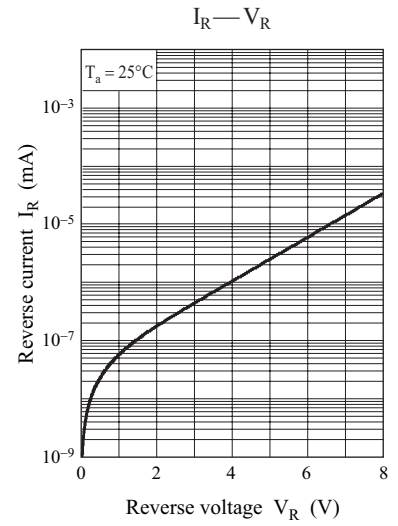
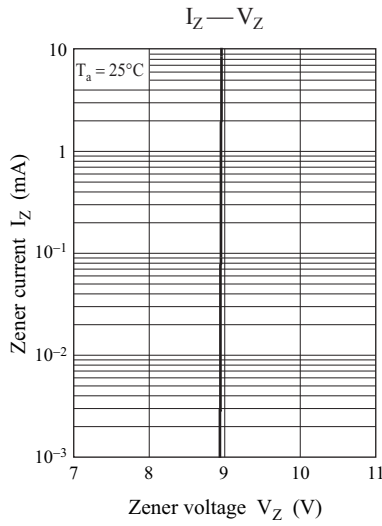
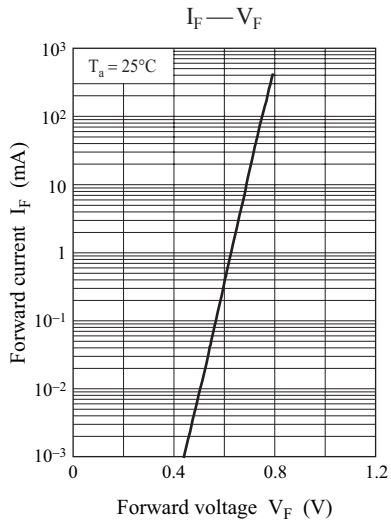
2. Absolute frequency of input and output is 5 MHz.

3. \*1: The temperature must be controlled  $25^\circ\text{C}$  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.

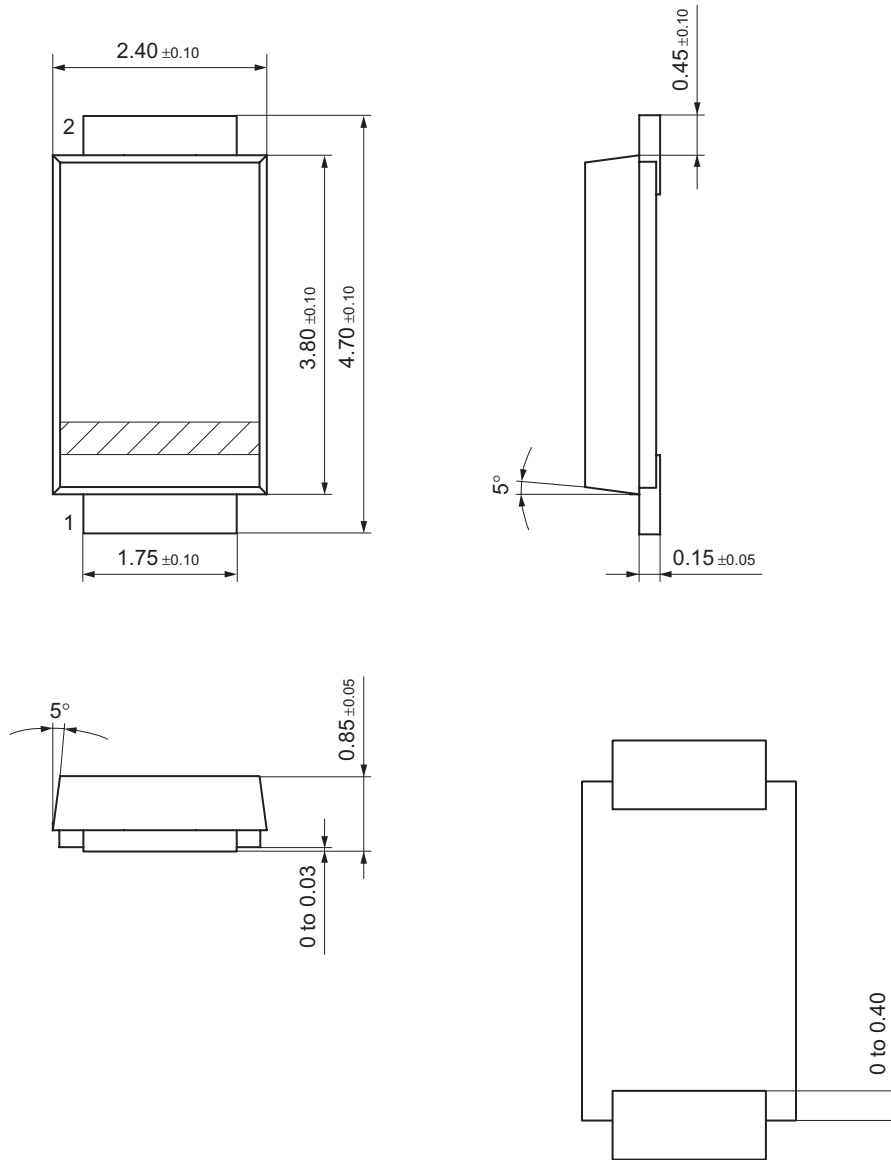
\*3:  $T_j = 25^\circ\text{C}$  to  $150^\circ\text{C}$



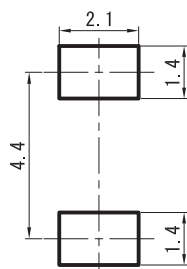


TMiniP2-F2-B

Unit: mm



■ Land Pattern (Reference) (Unit: mm)



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