



Zener Diode  
DZ5X120D0R

## DZ5X120D0R

### Silicon epitaxial planar type

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: 05

#### ■ Basic Part Number :

Dual DZ3X120D (Common anode)

#### ■ Packaging

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

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

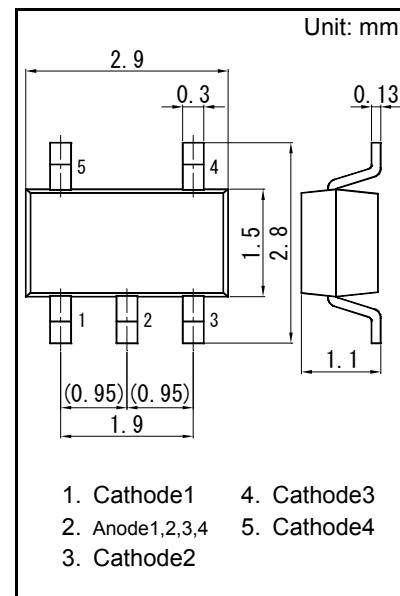
Parameter	Symbol	Rating	Unit
Total power dissipation <sup>*1</sup>	PT	200	mW
Electrostatic discharge <sup>*2</sup>	ESD	$\pm 10$	kV
Junction temperature	T <sub>j</sub>	150	°C
Operating ambient temperature	T <sub>opr</sub>	-40 to +85	°C
Storage temperature	T <sub>stg</sub>	-55 to +150	°C

Note) \*1: Mounted on glass epoxy print board. ( 45 mm x 45 mm x 1 mm)

(4Diode total)

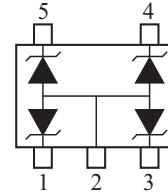
Solder in ( 0.7 mm x 1.0 mm)

\*2: Test method:IEC61000\_4\_2(C = 150 pF, R = 330 Ω, Contact discharge:10 times)



Panasonic	Mini5-G3-B
JEITA	SC-74A
Code	MO-178

#### Internal Connection



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

Parameter	Symbol	Conditions	Min	Typ	Max	Unit
Forward voltage	VF	IF = 10 mA			1.0	V
Zener voltage <sup>*1, *2</sup>	VZ	$I_Z = 5 \text{ mA}$	11.40		12.60	V
Zener operating resistance	RZ	$I_Z = 5 \text{ mA}$			30	Ω
Zener rise operating resistance	RZK	$I_Z = 0.5 \text{ mA}$			80	Ω
Reverse current	IR	$VR = 9.0 \text{ V}$			0.05	μA
Temperature coefficient of zener voltage <sup>*3</sup>	SZ	$I_Z = 5 \text{ mA}$		8.5		mV/°C

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

2. \*1: The temperature must be controlled  $25^\circ\text{C}$  for VZ measurement.

VZ value measured at other temperature must be adjusted to VZ ( $25^\circ\text{C}$ )

\*2: VZ guaranteed 20 ms after current flow.

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

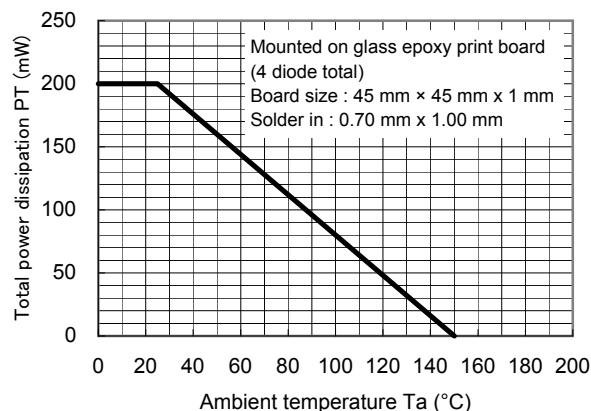
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Zener Diode

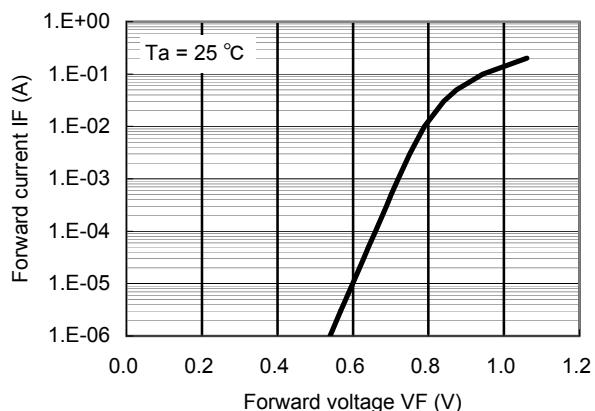
**DZ5X120D0R**

Technical Data ( reference )

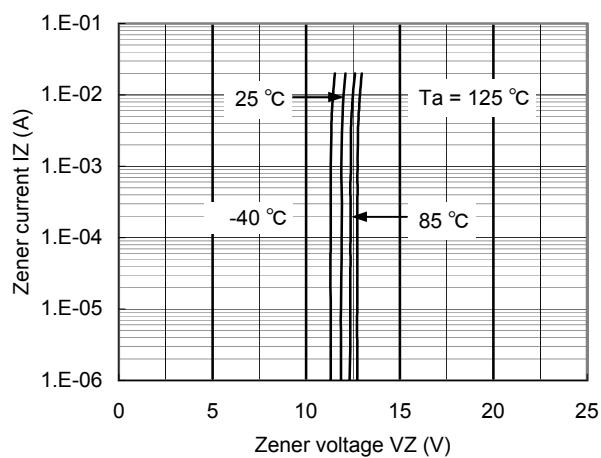
PT - Ta



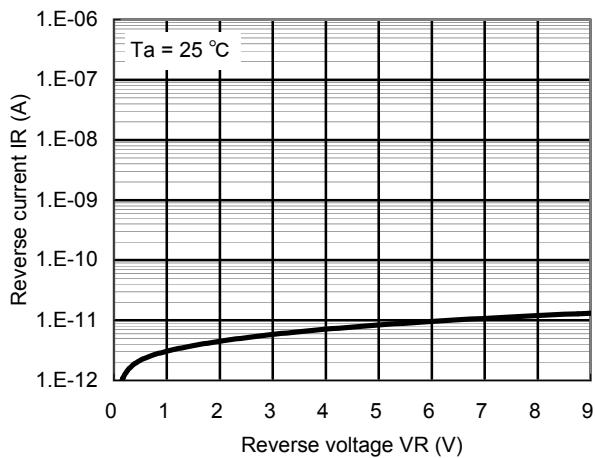
IF - VF



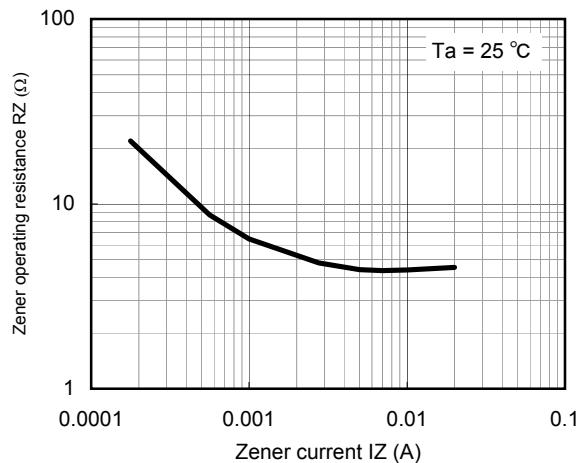
IZ - VZ



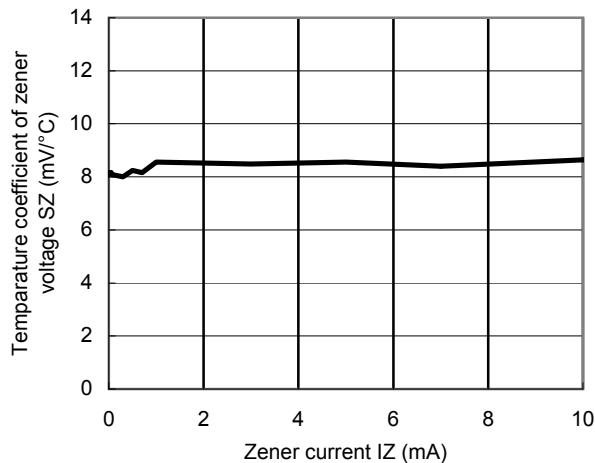
IR - VR



RZ-IZ



SZ - IZ



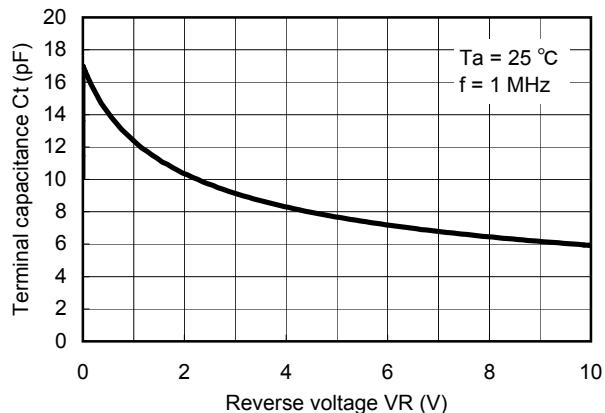
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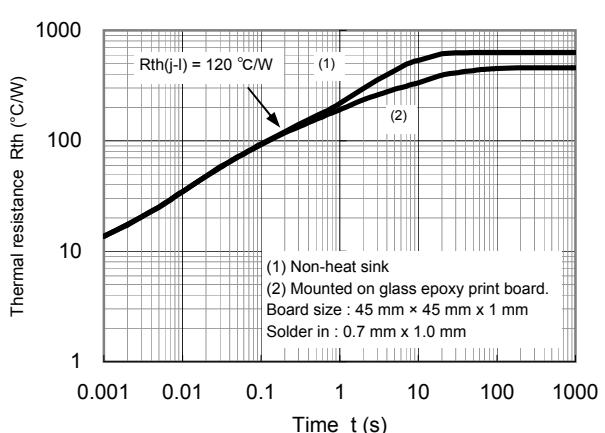
**DZ5X120D0R**

Technical Data ( reference )

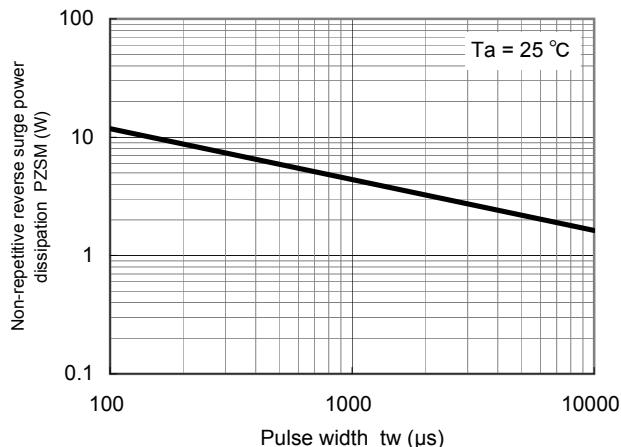
Ct - VR



Rth - t



PZSM - tw



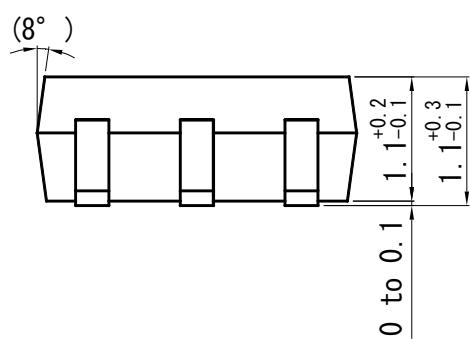
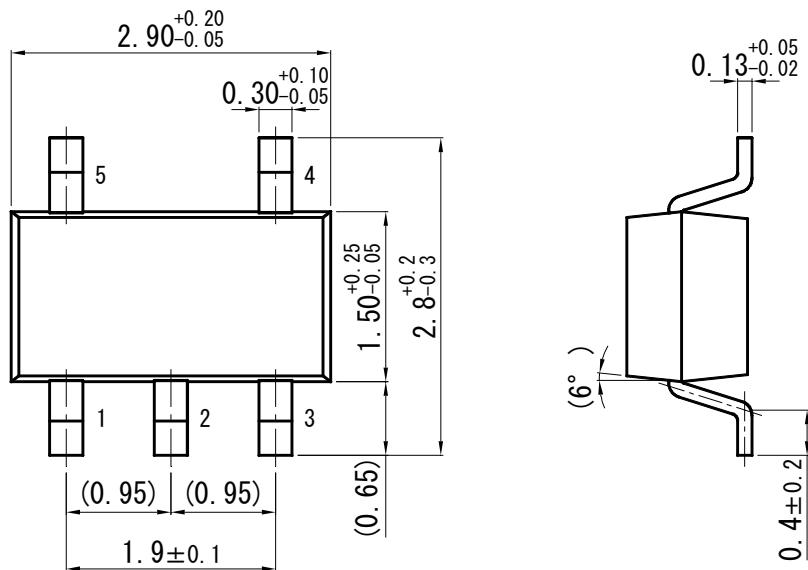
**Panasonic**

Zener Diode

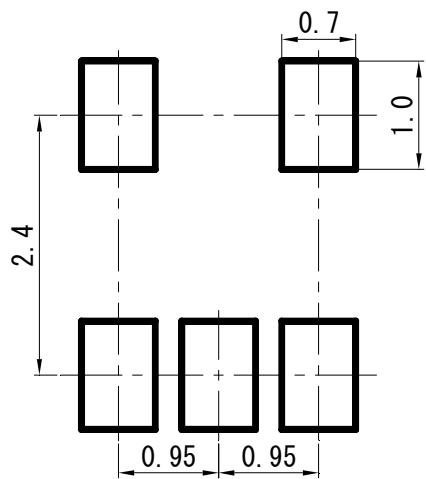
**DZ5X120D0R**

**Mini5-G3-B**

Unit: mm



■ Land Pattern (Reference) (Unit: mm)



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