

Panasonic

DY2W3Z300L

Silicon epitaxial planar type

For ESD protection and transient voltage suppressor

■ Features

- IEC 61000-4-2 (ESD) $\pm 30\text{kV}$ (air and contact)
- Low Clamping Voltage
- Low Capacitance
- Low Leak Current
- Halogen-free / RoHS compliant
(EU RoHS / UL-94 V-0 / MSL:Level 1 compliant)

■ Marking Symbol: 5V

■ 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
Total power dissipation ^{*1}	PT	1	W
Forward current	IF	200	mA
Electrostatic discharge ^{*2}	ESD	± 30	kV
Electrostatic discharge ^{*3}	ESD	± 30	kV
Peak pulse power ^{*4}	Ppp	1000	W
Peak pulse current ^{*4}	Ipp	121	A
Junction temperature	Tj	150	$^\circ\text{C}$
Operating ambient temperature	Topr	-40 to +85	$^\circ\text{C}$
Storage temperature	Tstg	-55 to +150	$^\circ\text{C}$

Note: ^{*1} Mounted on ceramics print circuit board. (Board size: 50 mm $\times$ 50 mm)

Board thickness: 0.8 mm Soldering size: 2 mm $\times$ 2 mm

^{*2} Test method: IEC61000_4_2

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

^{*3} Test method: IEC61000_4_2

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

^{*4} Test method: IEC61000_4_5 (tp = 8/20 μs , Unrepeated)

■ 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 = 200mA			1.2	V
Reverse stand-off voltage	VRWM	—			3.3	V
Reverse breakdown voltage ^{*1, *2}	VBR	IR = 20mA	5.32	5.6	5.88	V
Reverse current	IR	VR = 3.3V			100	μA
Clamping voltage ^{*3}	Vc	Ipp = 121A, tp = 8/20 μs			13	V
Terminal capacitance	Ct	VR = 0 V, f = 1 MHz		1280		pF

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 VBR measurement.

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

^{*2} VBR guaranteed 20 ms after current flow.

^{*3} 8 μs $\times$ 20 μs Pulse Waveform

