

Panasonic

TVS Diode

DY2S21Z00L

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Silicon epitaxial planar type

For ESD protection and transient voltage suppressor

■ Features

- IEC 61000-4-2 (ESD) ± 8 kV (contact) / ± 15 kV (air)
- Low Clamping Voltage
- Low Capacitance
- Low Leak Current
- Halogen-free / RoHS compliant
(EU RoHS / UL-94 V-0 / MSL:Level 1 compliant)

■ Marking Symbol: TV

■ 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 ^{*1}	PT	150	mW
Forward current	IF	100	mA
Electrostatic discharge ^{*2}	ESD	± 8	kV
Electrostatic discharge ^{*3}	ESD	± 15	kV
Peak pulse power ^{*4}	Ppp	70	W
Peak pulse current ^{*4}	Ipp	1.8	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 glass epoxy print board. (45 mm x 45 mm x 1 mm)

Solder in. (0.8 mm x 0.6 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 ($t_p = 8/20 \mu\text{s}$, Unrepeated)

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

Parameter	Symbol	Conditions	Min	Typ	Max	Unit
Forward voltage	VF	IF = 10mA			1.0	V
Reverse stand-off voltage	VRWM	—			21.0	V
Reverse breakdown voltage ^{*1, *2}	VBR	IR = 5mA	22.8	24	25.2	V
Reverse current	IR	VR = 21V			0.01	μA
Clamping voltage ^{*3}	Vc	Ipp = 1.8A, $t_p = 8/20 \mu\text{s}$			49.4	V
Terminal capacitance	Ct	VR = 0 V, f = 1 MHz		10		pF

Note: 1. Measuring methods are based on JAPANESE INDUSTRIAL STANDARD JIS C 7031

Measuring methods for Diodes.

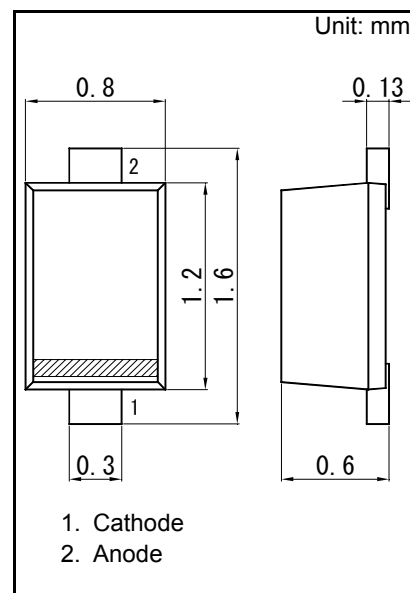
2. Absolute frequency of input and output is 5 MHz.

3. ^{*1} The temperature must be controlled 25°C for VBR measurement.

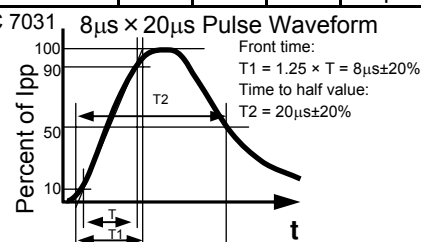
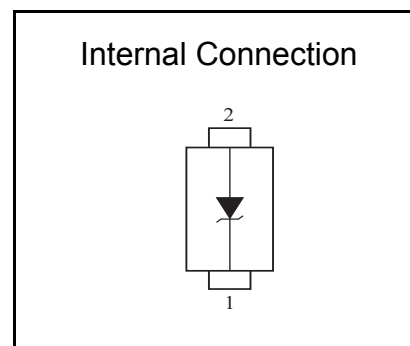
VBR value measured at other temperature must be adjusted to VBR (25°C)

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

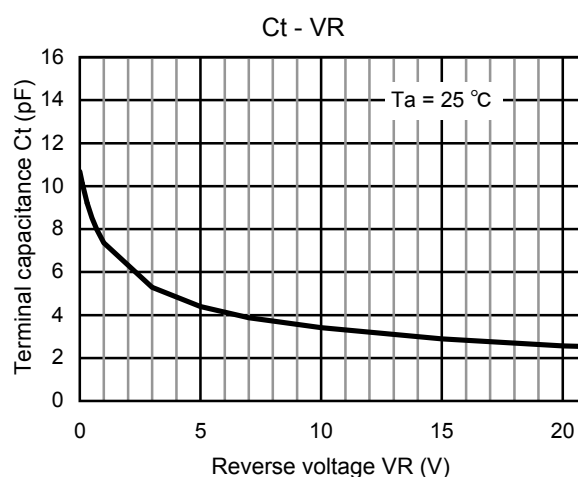
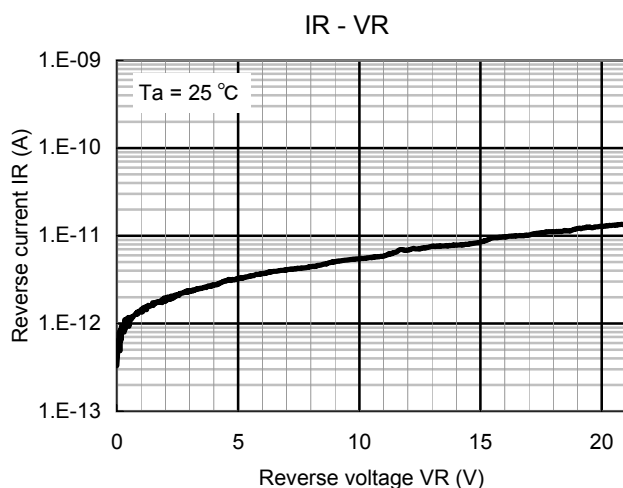
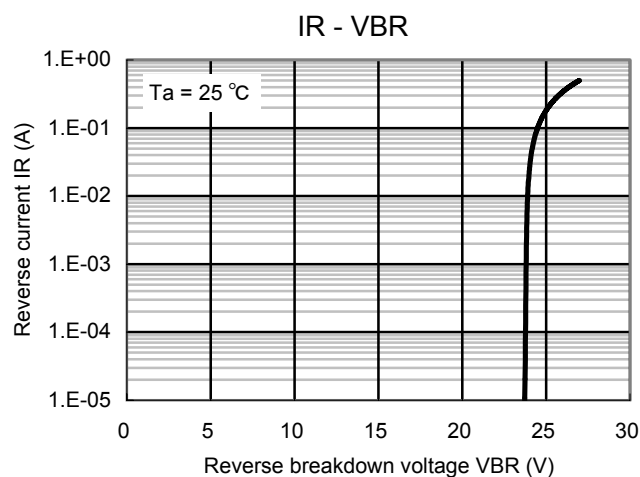
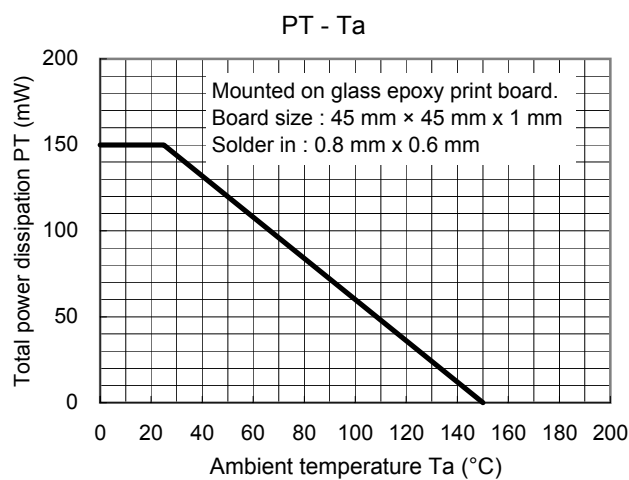
^{*3} $8 \mu\text{s} \times 20 \mu\text{s}$ Pulse Waveform



Panasonic	SSMini2-F5-B
JEITA	SC-79
Code	SOD-523



Technical Data (reference)

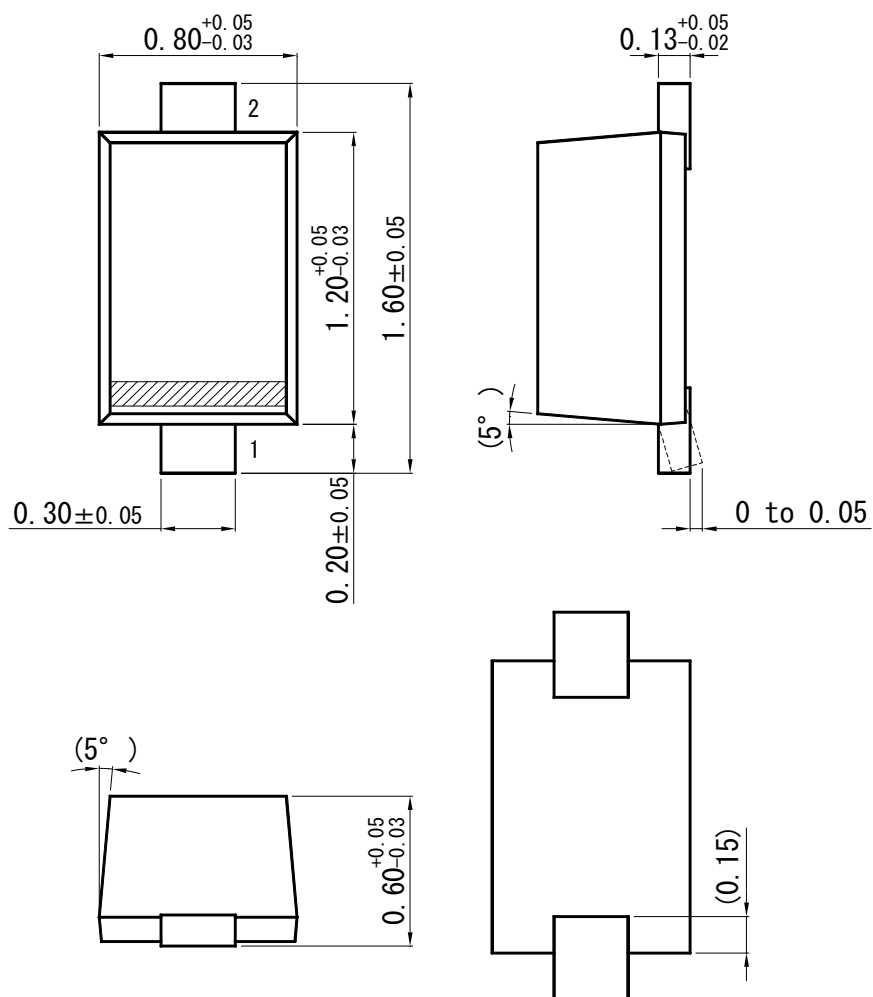


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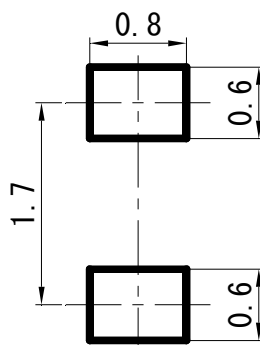
TVS Diode
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SSMini2-F5-B

Unit: mm



■ Land Pattern (Reference) (Unit: mm)



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