

D5FY20SN

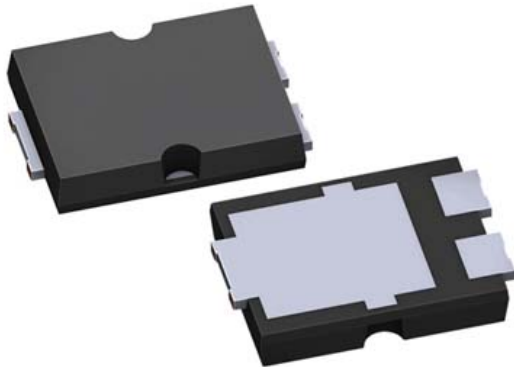
Schottky Barrier Diodes
200V, 5A

Feature

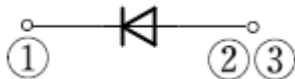
- Permit high current with a small package
- High Voltage
- Tj=175°C
- Ultra low I_R
- Based on AEC-Q101
- Halogen free
- Pb free terminal
- RoHS:Yes

OUTLINE

Package (House Name): FY
Package (JEDEC Code): TO-277A similar



Equivalent circuit



Absolute Maximum Ratings (unless otherwise specified : Tl=25°C)

Item	Symbol	Conditions	Ratings	Unit
Storage temperrature	Tstg		-55 to 175	°C
Junction temperature	Tj		-55 to 175	°C
Repetitive peak reverse voltage	V _{RRM}		200	V
Average forward current	I _F (AV)	50Hz sine wave, Resistance load, With heatsink ,Tl=163°C ※	5	A
Average forward current	I _F (AV)	50Hz sine wave, Resistance load, On alumina substrate, Ta=25°C ※	3.2	A
Average forward current	I _F (AV)	50Hz sine wave, Resistance load, On glass-epoxy substrate, Ta=25°C ※	3	A
Surge forward current	I _{FSM}	50Hz sine wave, Non-repetitive, 1 cycle, Peak value, Tj=25°C	210	A

※ : See the original Specifications

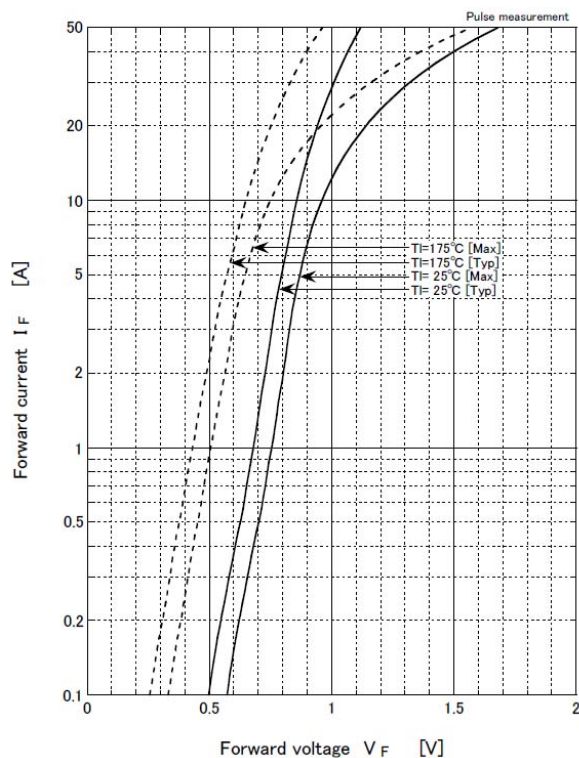
Electrical Characteristics (unless otherwise specified : Tl=25°C)

Item	Symbol	Conditions	Ratings			Unit
			MIN	TYP	MAX	
Forward voltage	V_F	IF=5A, Pulse measurement			0.87	V
Reverse current	I_R	VR=200V, Pulse measurement			0.005	mA
Total capacitance	Ct	f=1MHz, VR=10V		111		pF
Thermal resistance	Rth(j-l)	Junction to lead, With heatsink ※			2.9	°C/W
Thermal resistance	Rth(j-a)	Junction to ambient, On alumina substrate ※			60	°C/W
Thermal resistance	Rth(j-a)	Junction to ambient, On glass-epoxy substrate ※			65	°C/W

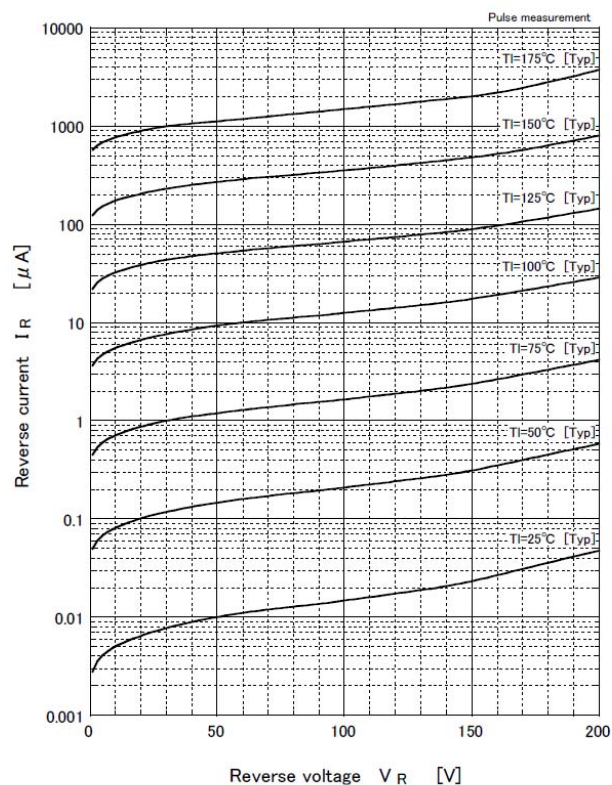
※ :See the original Specifications

CHARACTERISTIC DIAGRAMS

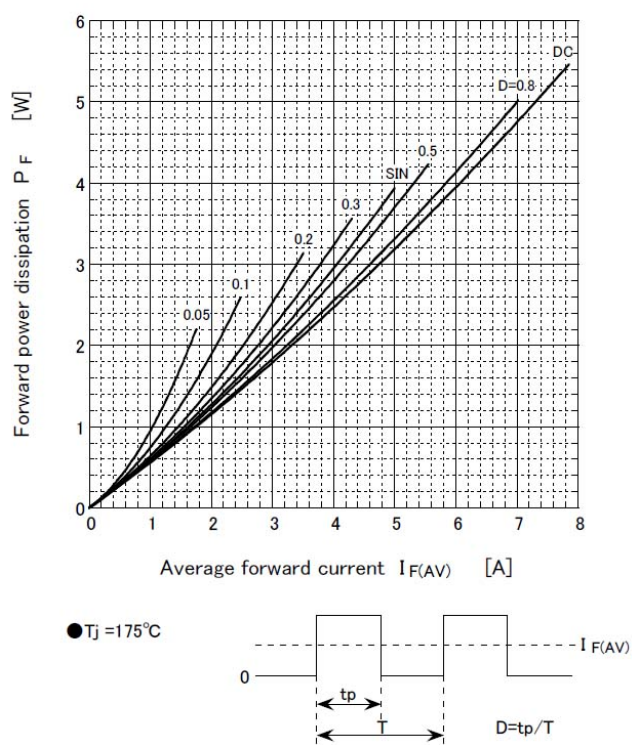
Forward voltage



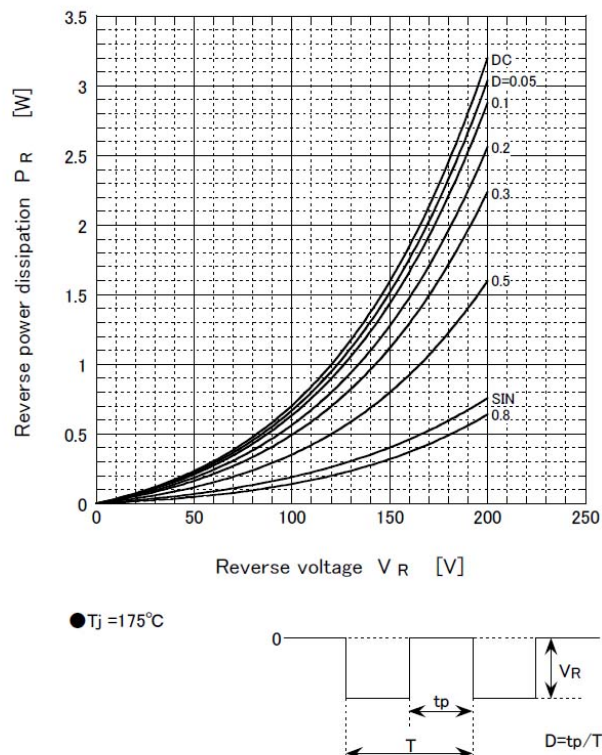
Reverse current



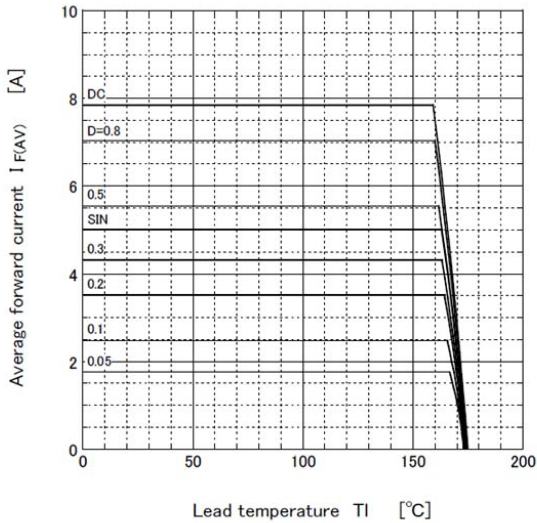
Forward power dissipation



Reverse power dissipation



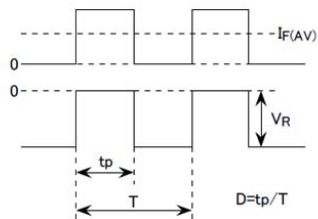
Derating curve



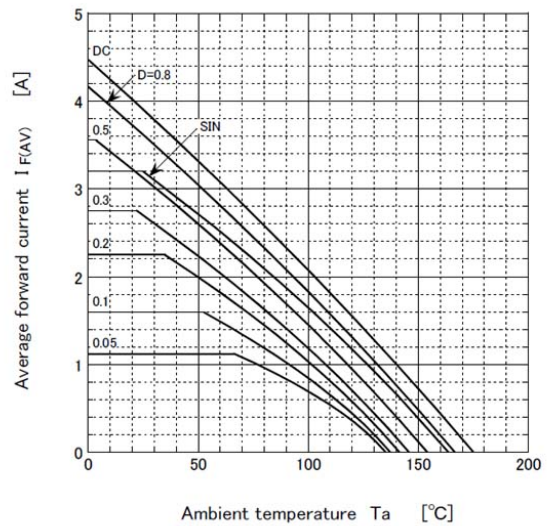
- $V_R = 100V$
R-load
With heatsink

- Substrate detail

Type	Alumina
Size	1 inch ²
Thickness	1mm
Conductor thickness	13 μm
Pattern area	400mm ²



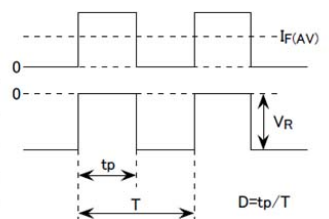
Derating curve



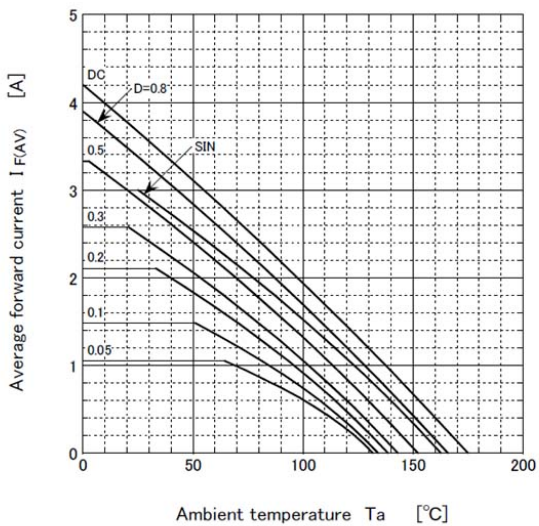
- $V_R = 100V$
R-load
Free in air

- Substrate detail

Type	Alumina
Size	1 inch ²
Thickness	1mm
Conductor thickness	13 μm
Pattern area	400mm ²



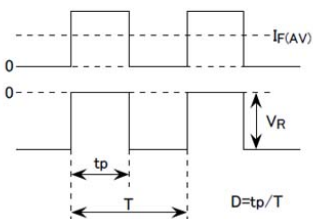
Derating curve



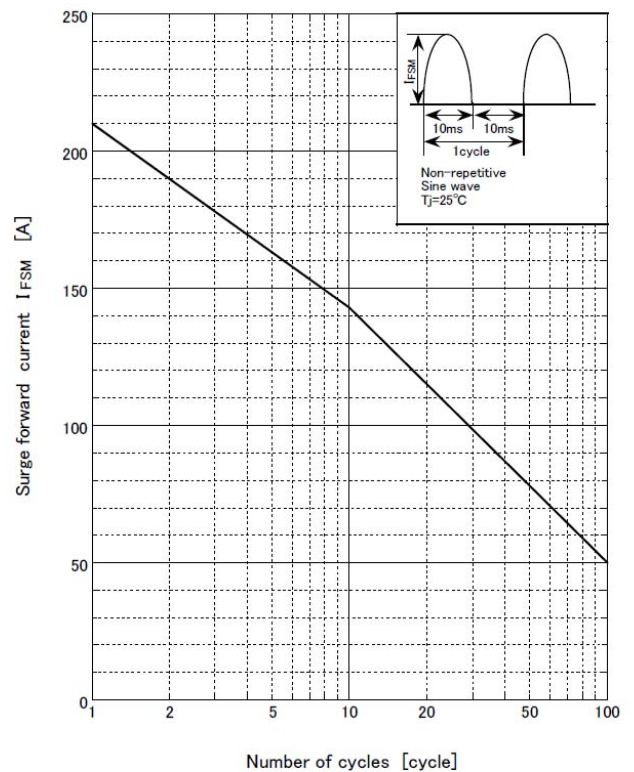
- $V_R = 100V$
R-load
Free in air

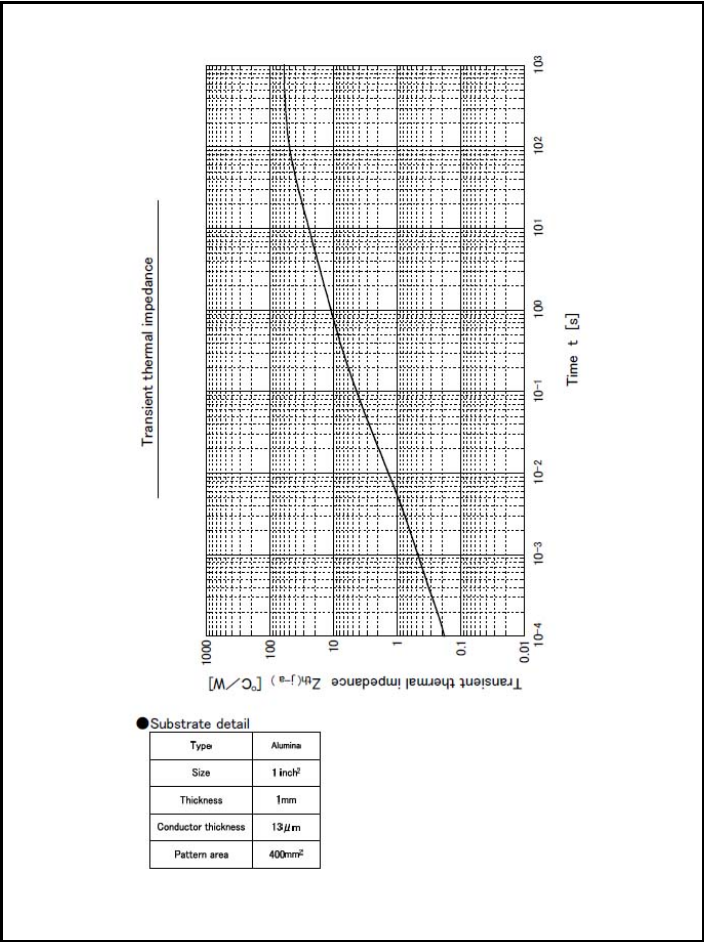
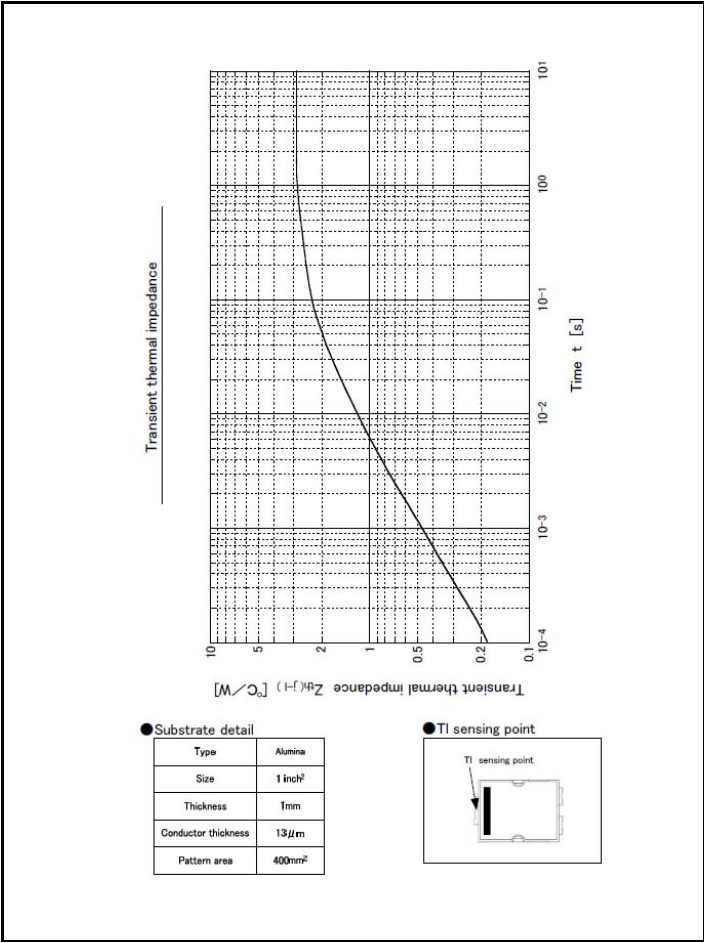
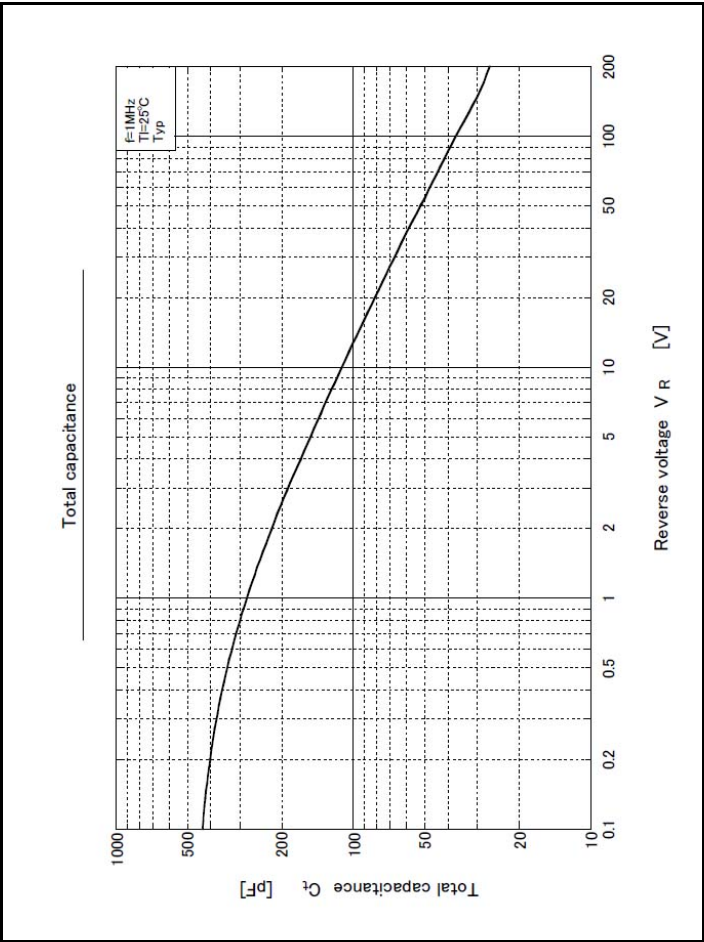
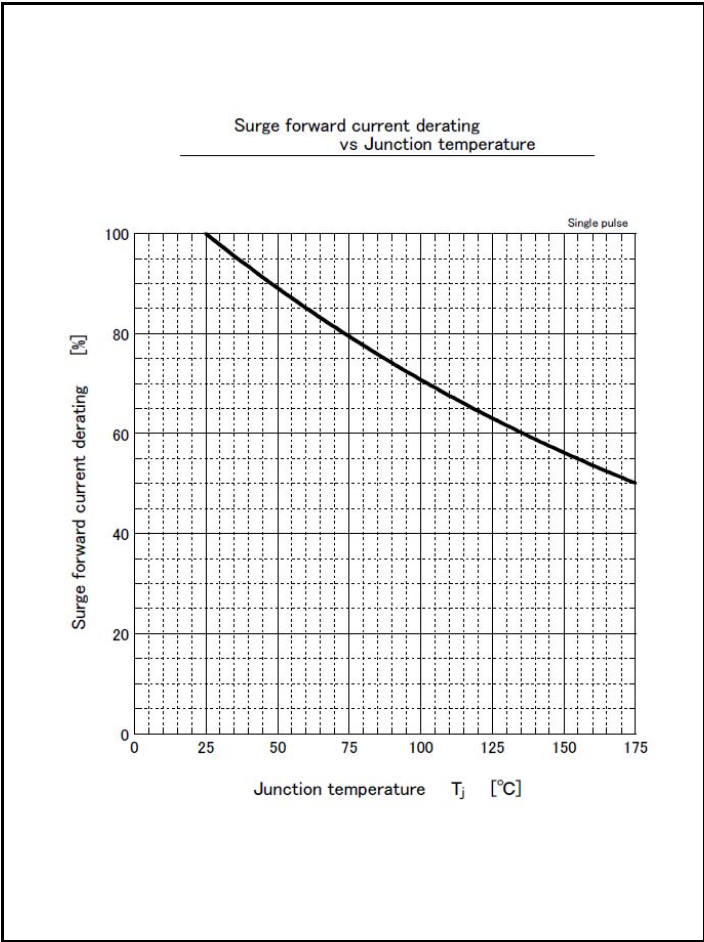
- Substrate detail

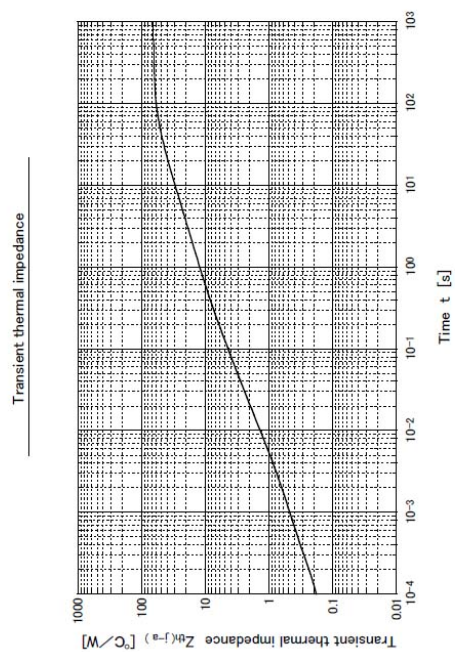
Type	Glass/epoxy
Size	1 inch ²
Thickness	1mm
Conductor thickness	35 μm
Pattern area	400mm ²



Surge forward current capability





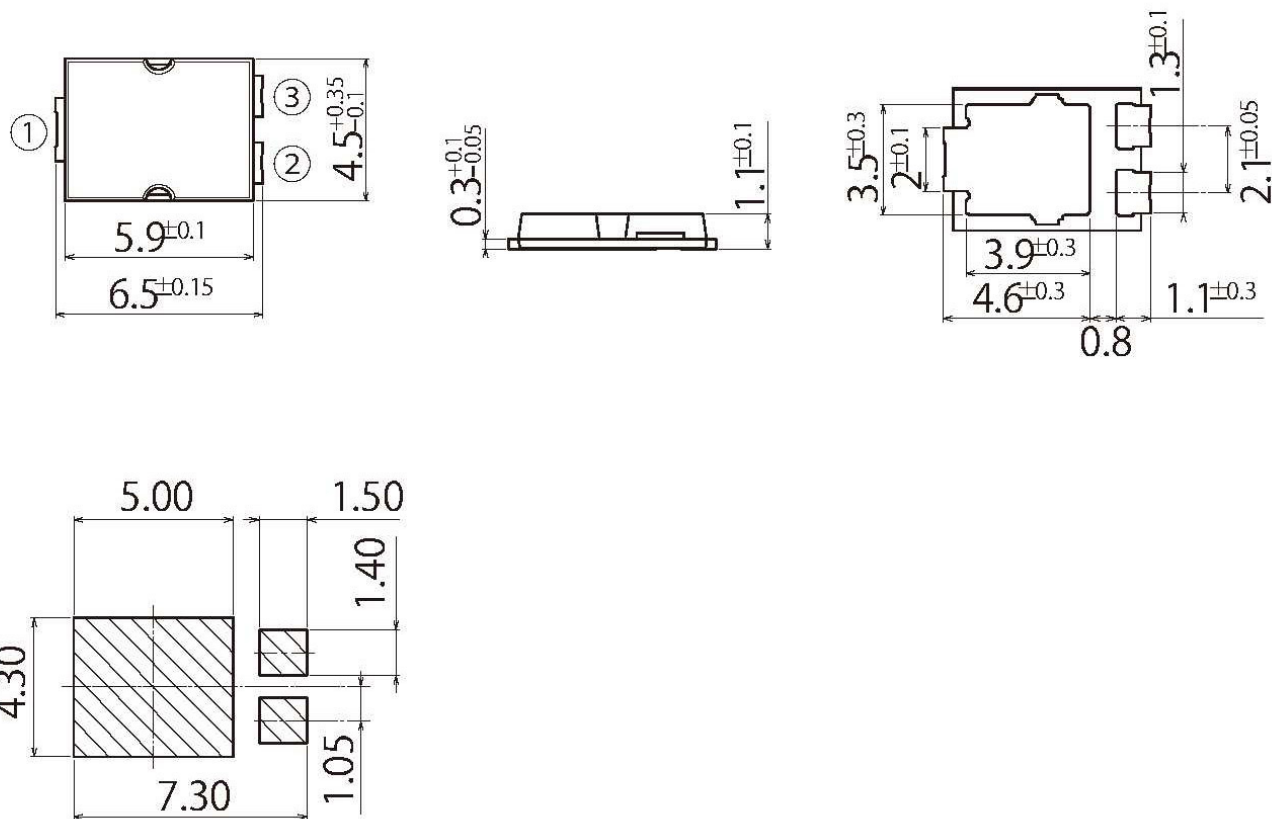


● Substrate detail

Type	Glass-epoxy
Size	1 inch ²
Thickness	1mm
Conductor thickness	35μm
Pattern area	400mm ²

G4

JEDEC Code	TO-277A similar
JEITA Code	—
House Name	FY



Referential Soldering Pad

- Optimize soldering pad to the board design and soldering condition.

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