ShinDengen

D15FY6SY

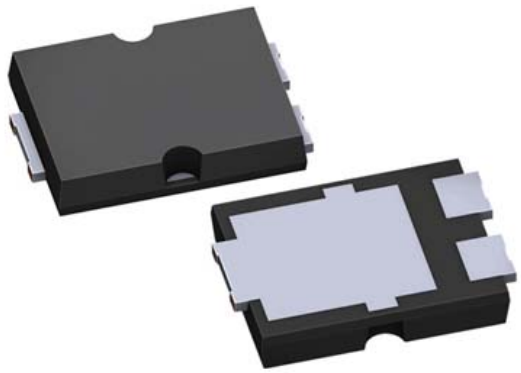
Schottky Barrier Diodes
60V, 15A

Feature

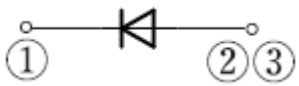
- Permit high current with a small package
- Based on AEC-Q101
- Halogen free
- Pb free terminal
- RoHS:Yes

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	℃
Junction temperature	Tj		-55 to 150	℃
Repetitive peak reverse voltage	V_{RRM}		60	V
Average forward current	I_F(AV)	50Hz sine wave, Resistance load, With heatsink ,Tl=117℃ ※	15	A
Average forward current	I_F(AV)	50Hz sine wave, Resistance load, On alumina substrate, Ta=25℃ ※	2.8	A
Average forward current	I_F(AV)	50Hz sine wave, Resistance load, On glass-epoxy substrate, Ta=25℃ ※	2.6	A
Surge forward current	I_{FSM}	50Hz sine wave, Non-repetitive, 1cycle, Peak value, Tj=25℃	280	A

※ :See the original Specifications

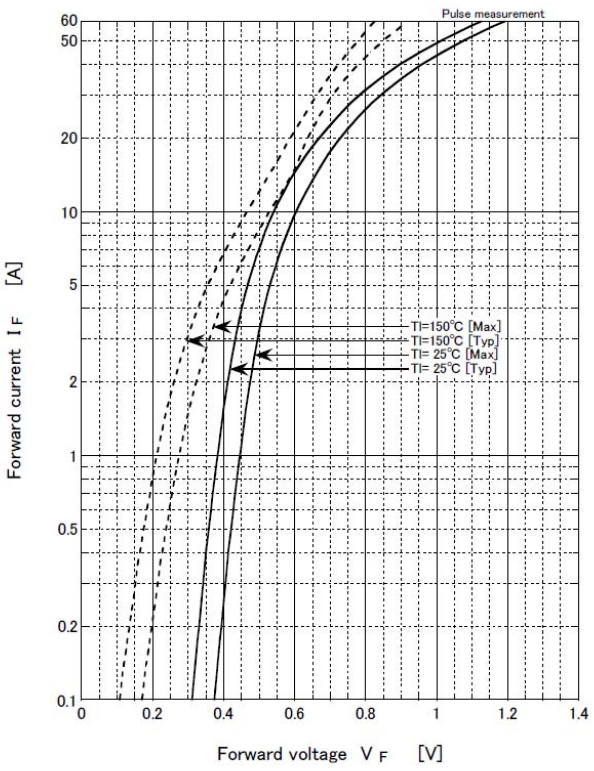
Electrical Characteristics (unless otherwise specified : Tl=25℃)

Item	Symbol	Conditions	Ratings			Unit
			MIN	TYP	MAX	
Forward voltage	V_F	IF=15A, Pulse measurement			0.67	V
Reverse current	I_R	VR=60V, Pulse measurement			0.5	mA
Total capacitance	Ct	f=1MHz, VR=10V		345		pF
Thermal resistance	Rth(j-l)	Junction to lead, With heatsink ※			2.8	℃/W
Thermal resistance	Rth(j-a)	Junction to ambient, On alumina substrate ※			60	℃/W
Thermal resistance	Rth(j-a)	Junction to ambient, On glass-epoxy substrate ※			65	℃/W

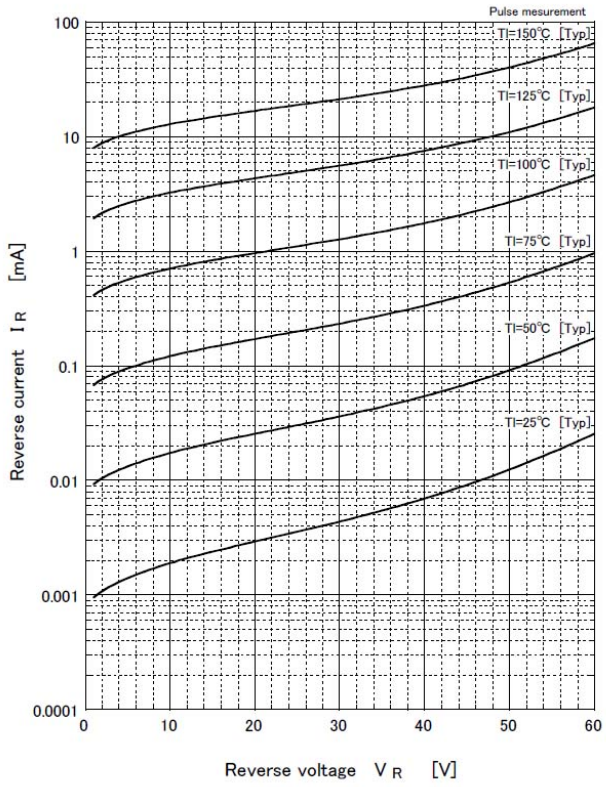
※ ：See the original Specifications

CHARACTERISTIC DIAGRAMS

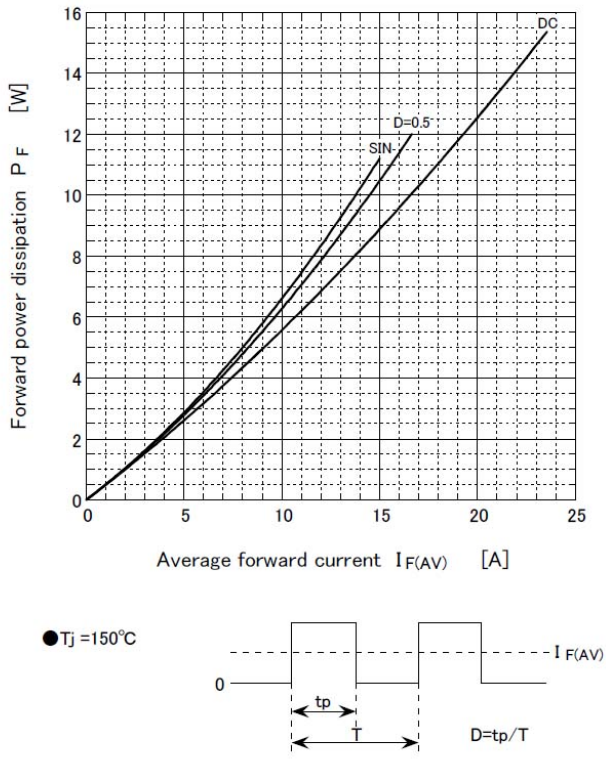
Forward voltage



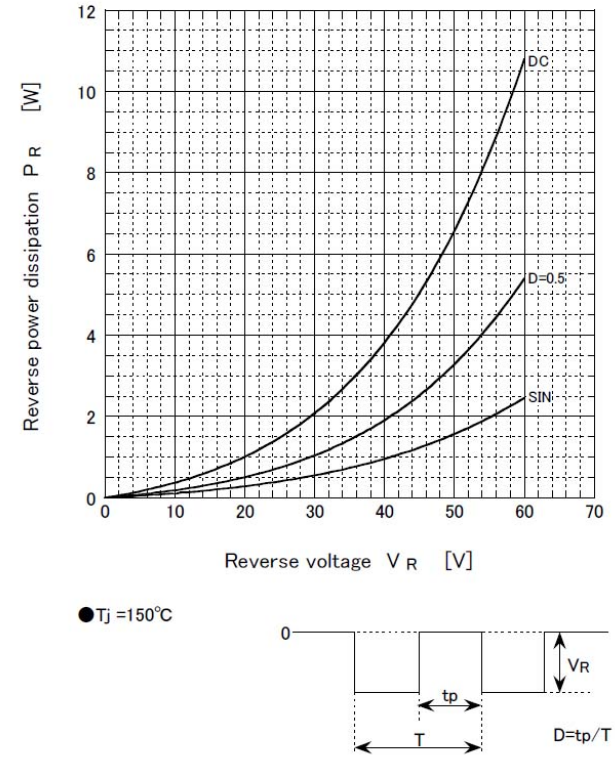
Reverse current



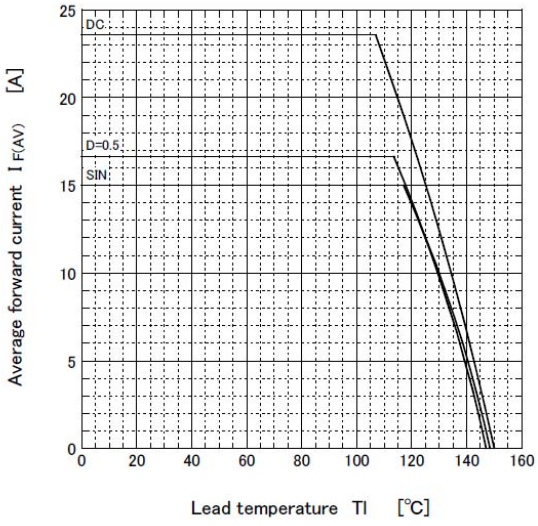
Forward power dissipation



Reverse power dissipation



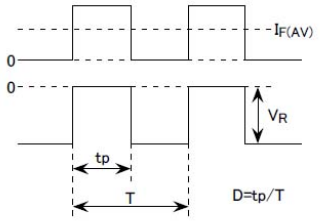
Derating curve



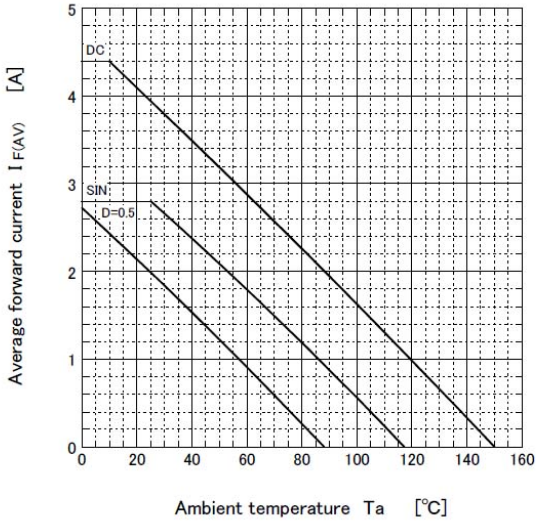
●V_R = 30V
R-load
With heatsink

●Substrate detail

Item	
Substrate	Alumina
Substrate thickness	1mm
Conductor thickness	20μm
Pattern area	400mm²



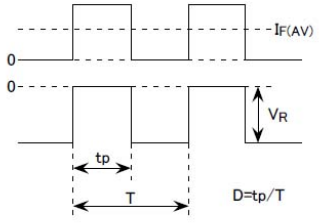
Derating curve



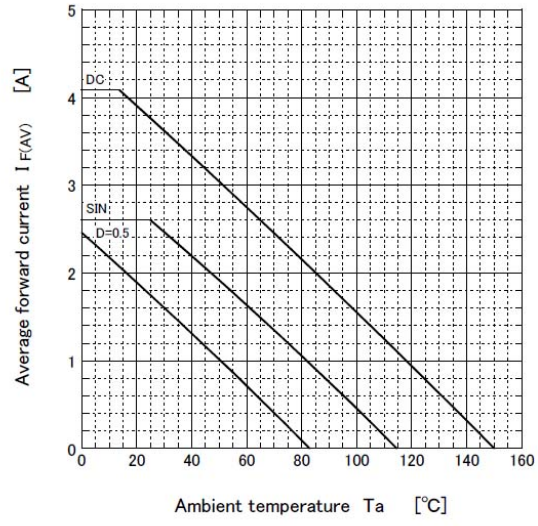
●V_R = 30V
R-load
Free in air

●Substrate detail

Item	
Substrate	Alumina
Substrate thickness	1mm
Conductor thickness	20μm
Pattern area	400mm²



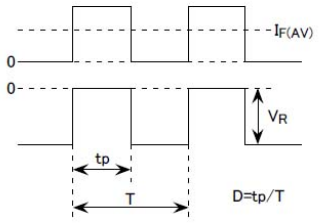
Derating curve



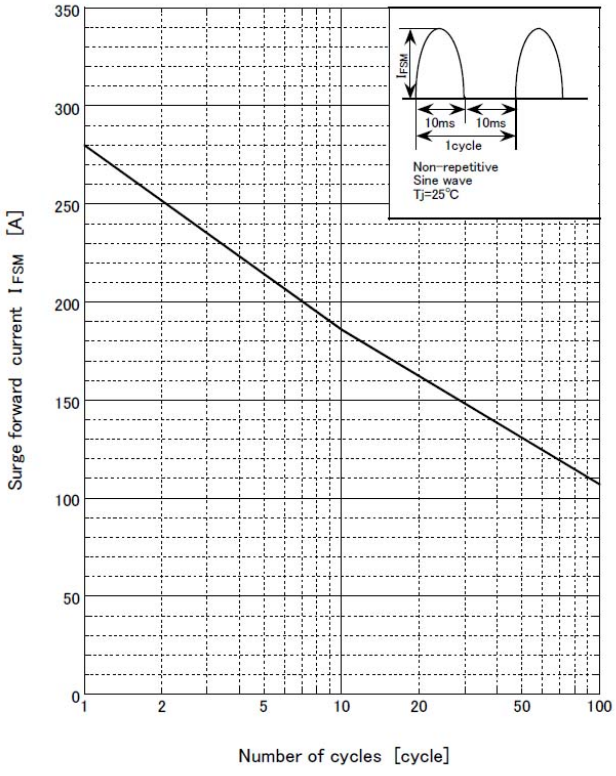
●V_R = 30V
R-load
Free in air

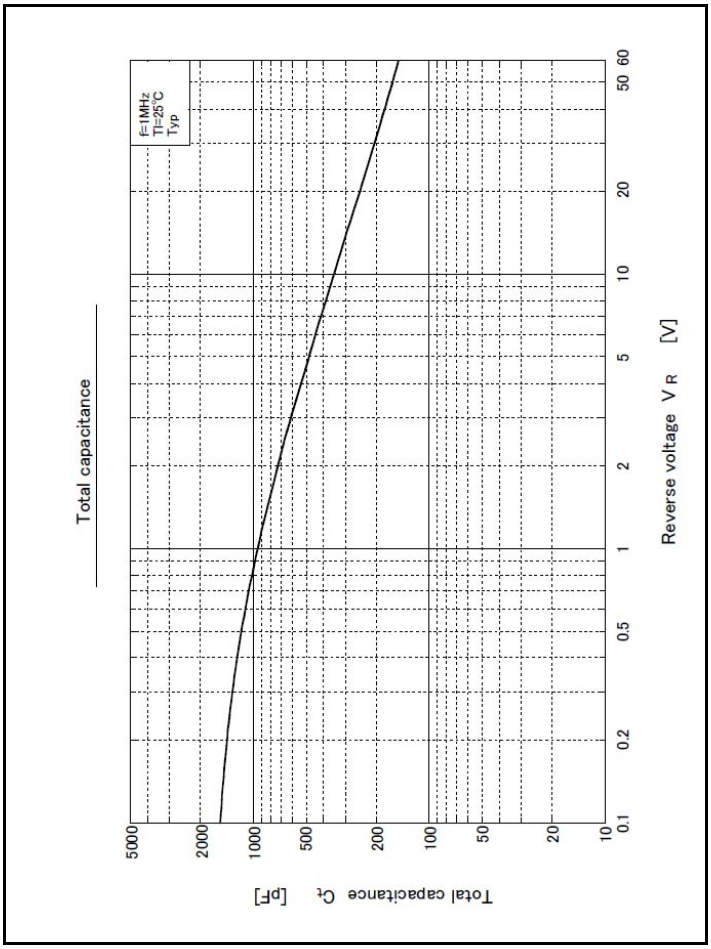
●Substrate detail

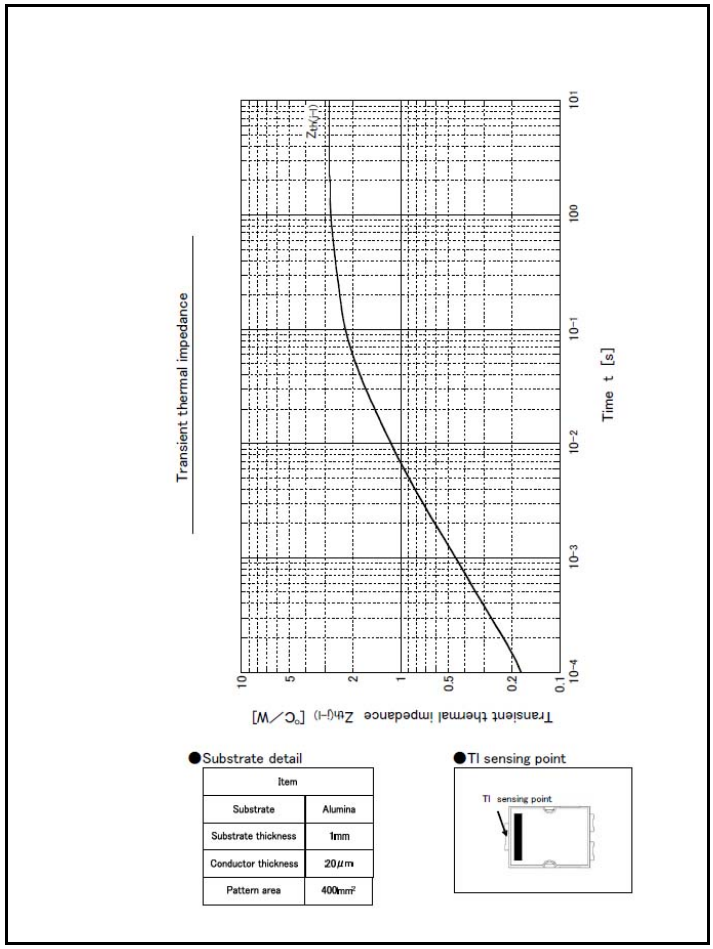
Item	
Substrate	Glass-epoxy
Substrate thickness	1mm
Conductor thickness	35μm
Pattern area	400mm²

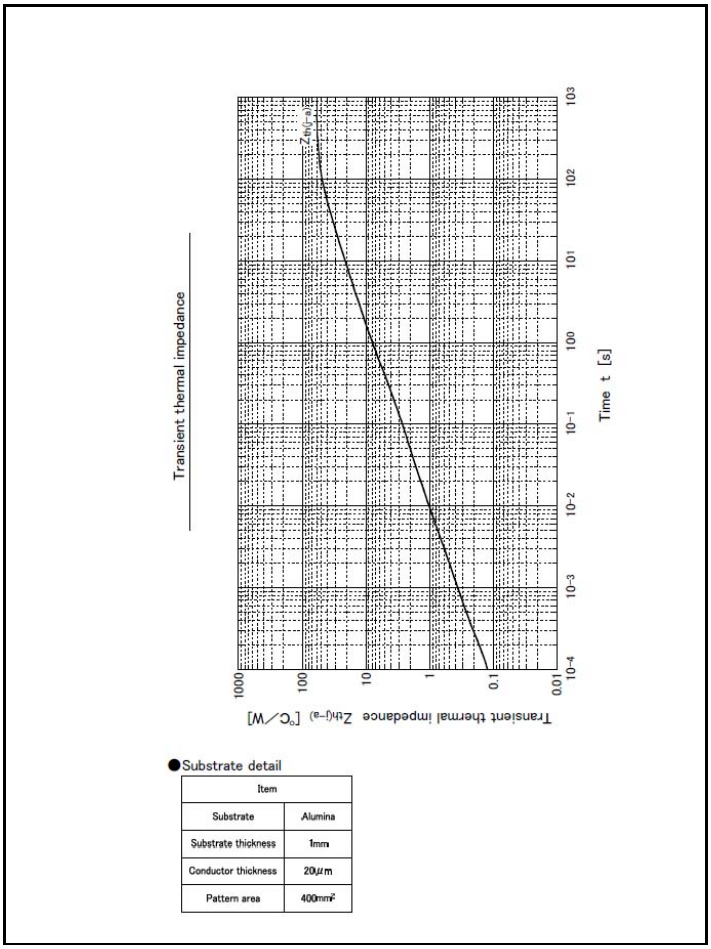


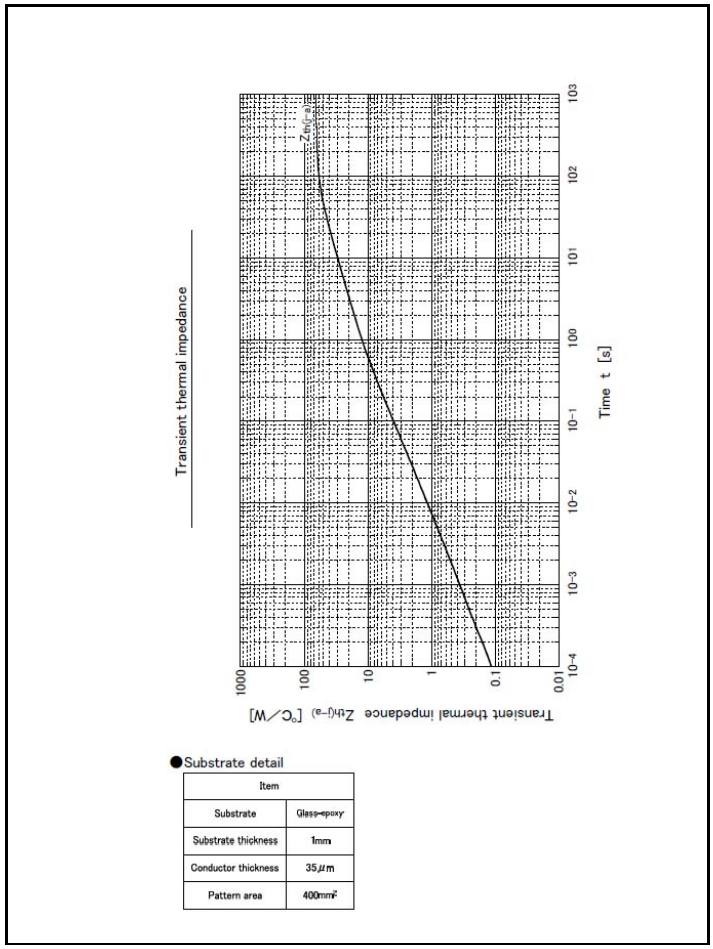
Surge forward current capability




Total capacitance
f=1MHz
Tl=25°C
Typ
Total capacitance Ct [pF]
Reverse voltage VR [V]


Transient thermal impedance
Transient thermal impedance Zth(j-l) [°C/W]
Time t [s]
●Substrate detail
Item
Substrate Alumina
Substrate thickness 1mm
Conductor thickness 20μm
Pattern area 400mm²
●Tl sensing point
Tl sensing point


Transient thermal impedance
Transient thermal impedance Zth(j-a) [°C/W]
Time t [s]
●Substrate detail
Item
Substrate Alumina
Substrate thickness 1mm
Conductor thickness 20μm
Pattern area 400mm²

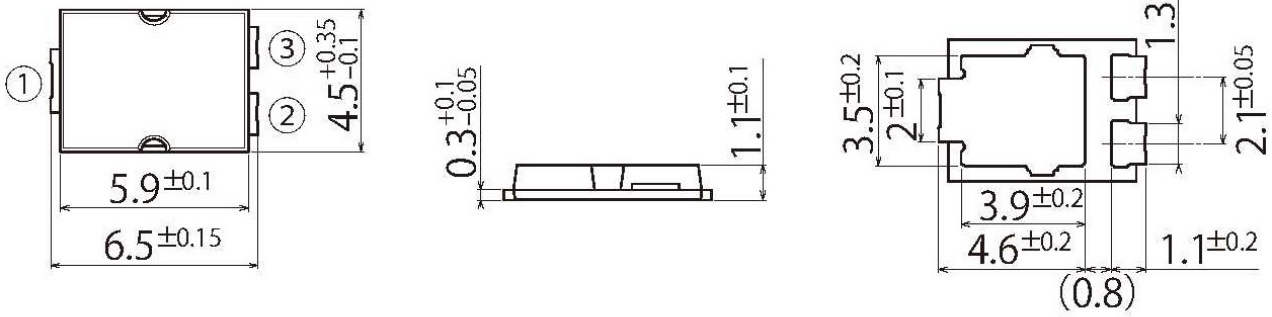

Transient thermal impedance
Transient thermal impedance Zth(j-a) [°C/W]
Time t [s]
●Substrate detail
Item
Substrate Glass-epoxy
Substrate thickness 1mm
Conductor thickness 35μm
Pattern area 400mm²

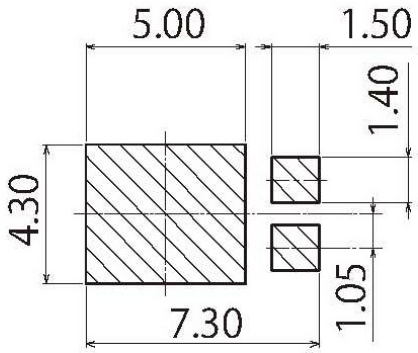
Outline Dimensions

unit:mm

G4

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





Referential Soldering Pad

Notes

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