

D5FY6SY

Schottky Barrier Diodes

60V, 5A

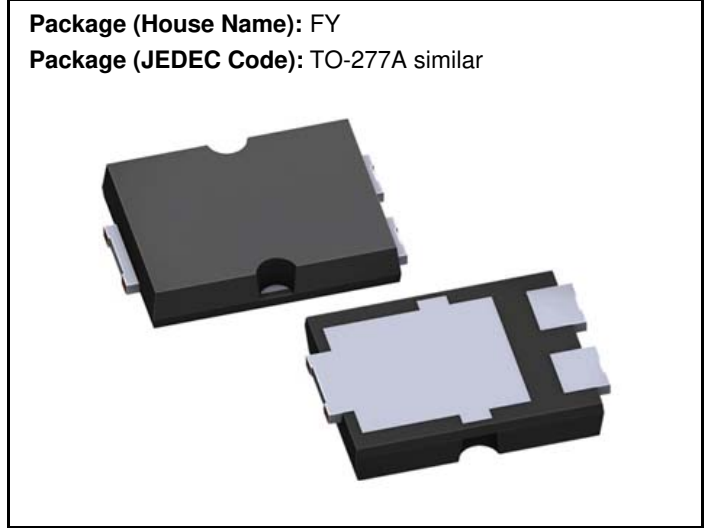
Feature

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

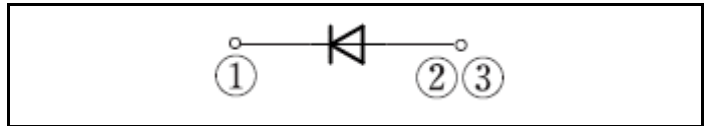
OUTLINE

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 temperature	T _{stg}		-55 to 175	°C
Junction temperature	T _j		-55 to 150	°C
Repetitive peak reverse voltage	V _{RRM}		60	V
Average forward current	I _{F(AV)}	50Hz sine wave, Resistance load, With heatsink, Tl=138°C ※	5	A
Average forward current	I _{F(AV)}	50Hz sine wave, Resistance load, On alumina substrate, Ta=25°C ※	2.9	A
Average forward current	I _{F(AV)}	50Hz sine wave, Resistance load, On glass-epoxy substrate, Ta=25°C ※	2.7	A
Surge forward current	I _{FSM}	50Hz sine wave, Non-repetitive, 1 cycle, Peak value, Tj=25°C	210	A

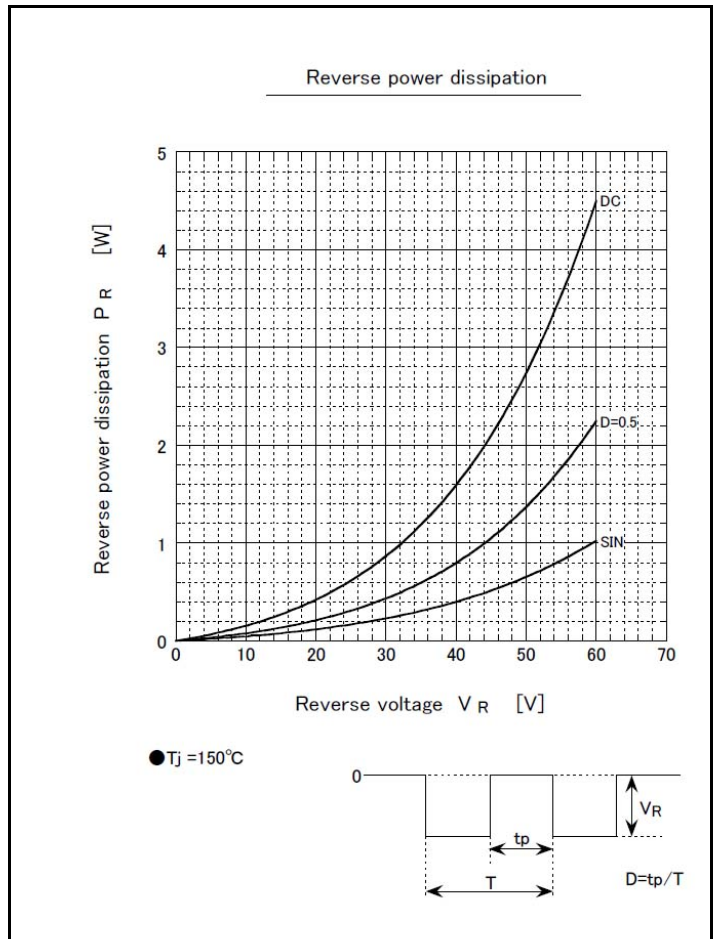
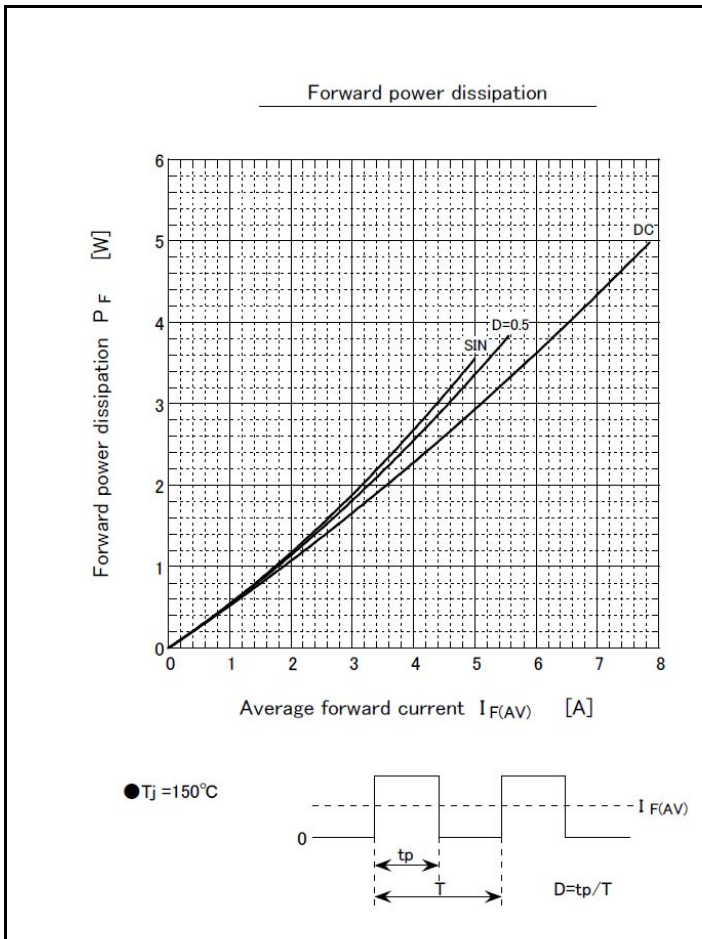
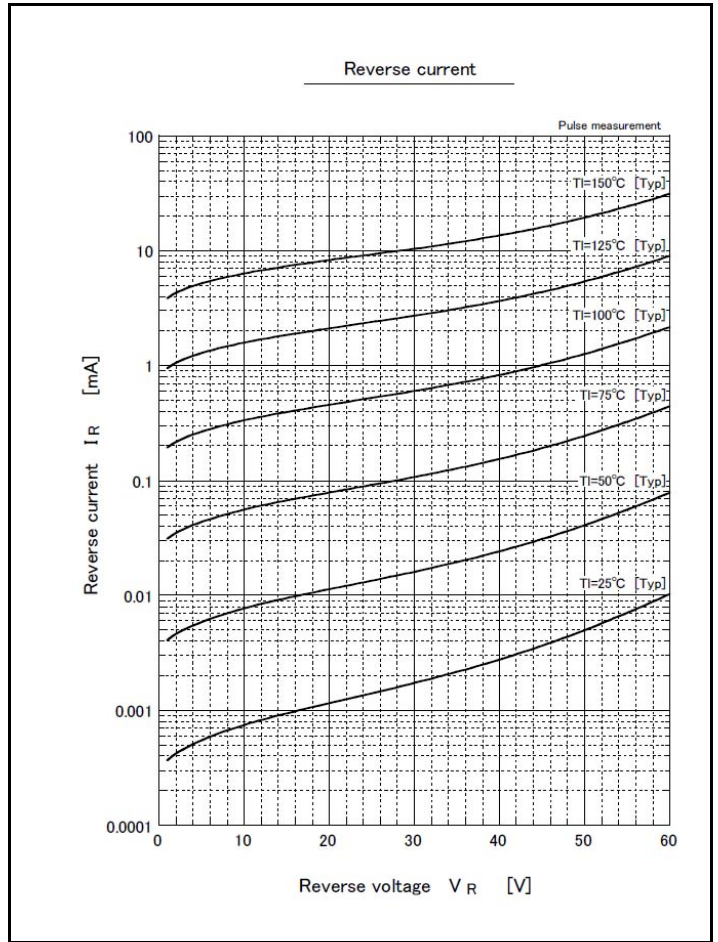
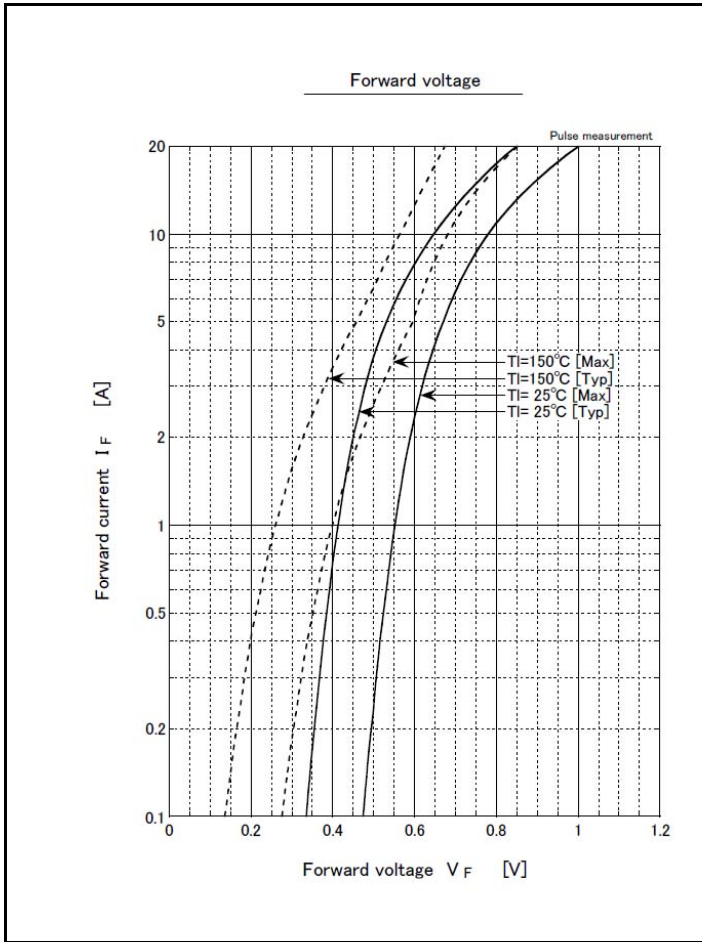
※ : See the original Specifications

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

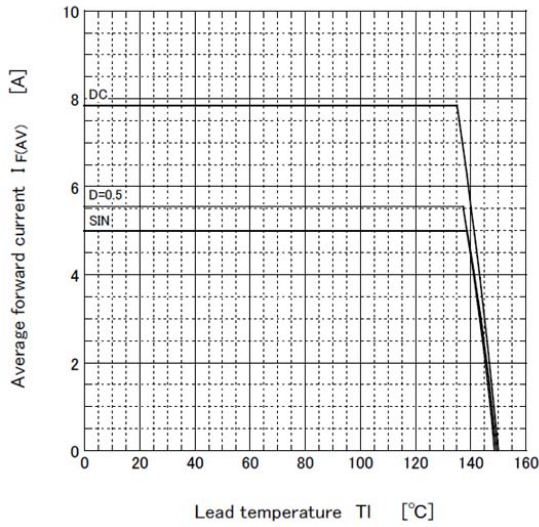
Item	Symbol	Conditions	Ratings			Unit
			MIN	TYP	MAX	
Forward voltage	V_F	$I_F=5A$, Pulse measurement			0.67	V
Reverse current	I_R	$V_R=60V$, Pulse measurement			0.2	mA
Total capacitance	C_t	$f=1MHz$, $V_R=10V$		170		pF
Thermal resistance	$R_{th(j-l)}$	Junction to lead, With heatsink *			3	°C/W
Thermal resistance	$R_{th(j-a)}$	Junction to ambient, On alumina substrate *			60	°C/W
Thermal resistance	$R_{th(j-a)}$	Junction to ambient, On glass-epoxy substrate *			65	°C/W

* :See the original Specifications

CHARACTERISTIC DIAGRAMS



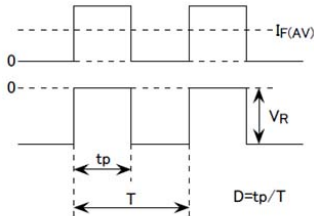
Derating curve



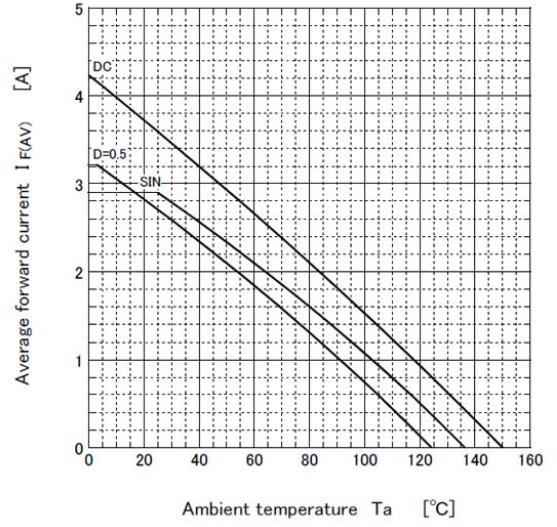
● $V_R = 30V$
R-load
With heatsink

● Substrate detail

Type	Alumina
Size	1 inch ²
Thickness	1mm
Conductor thickness	20 μm
Pattern area	400mm ²



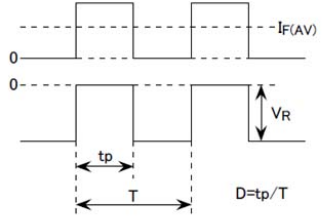
Derating curve



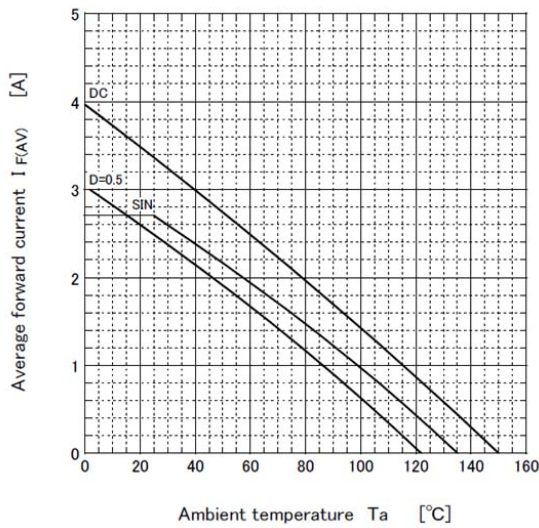
● $V_R = 30V$
R-load
Free in air

● Substrate detail

Type	Alumina
Size	1 inch ²
Thickness	1mm
Conductor thickness	20 μm
Pattern area	400mm ²



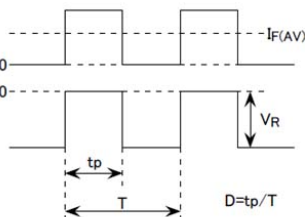
Derating curve



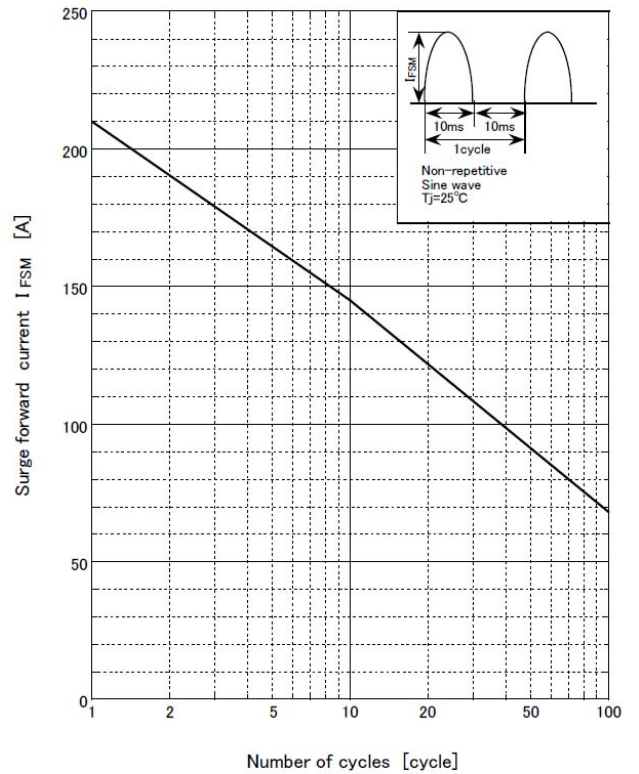
● $V_R = 30V$
R-load
Free in air

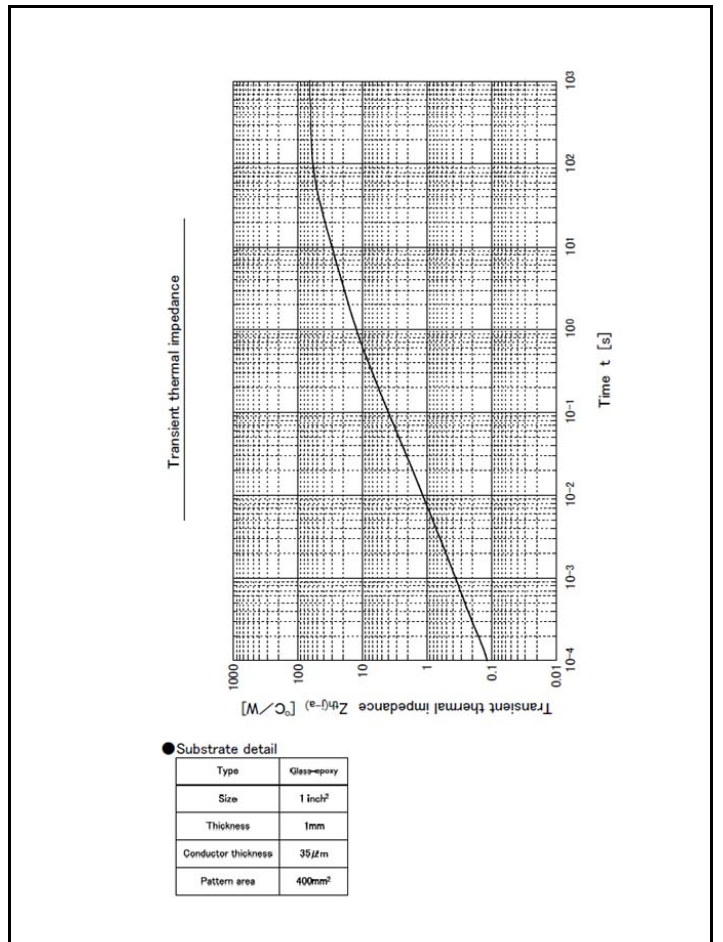
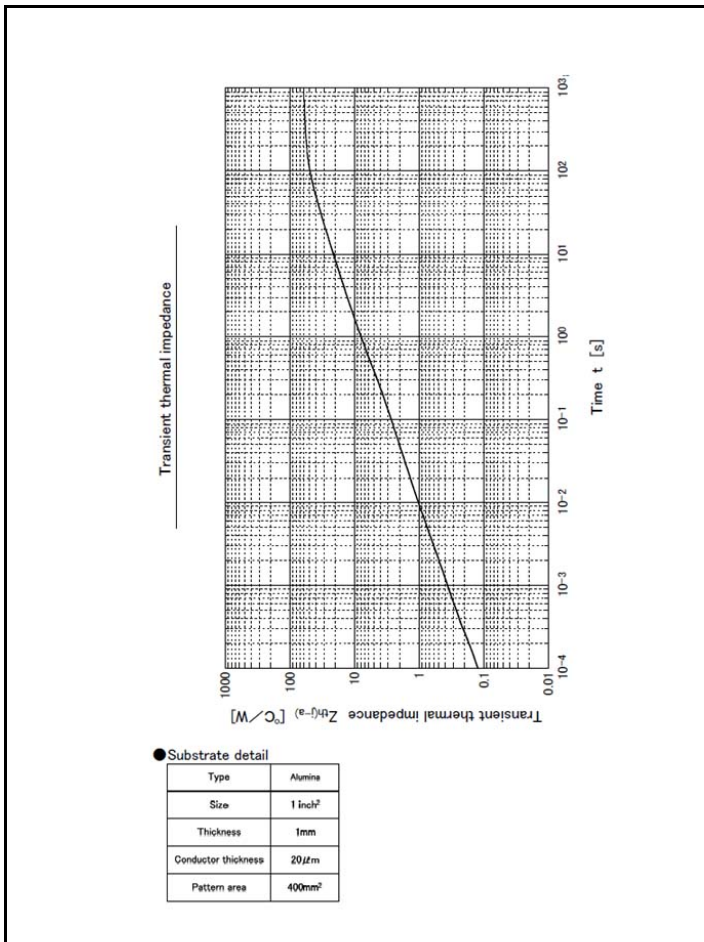
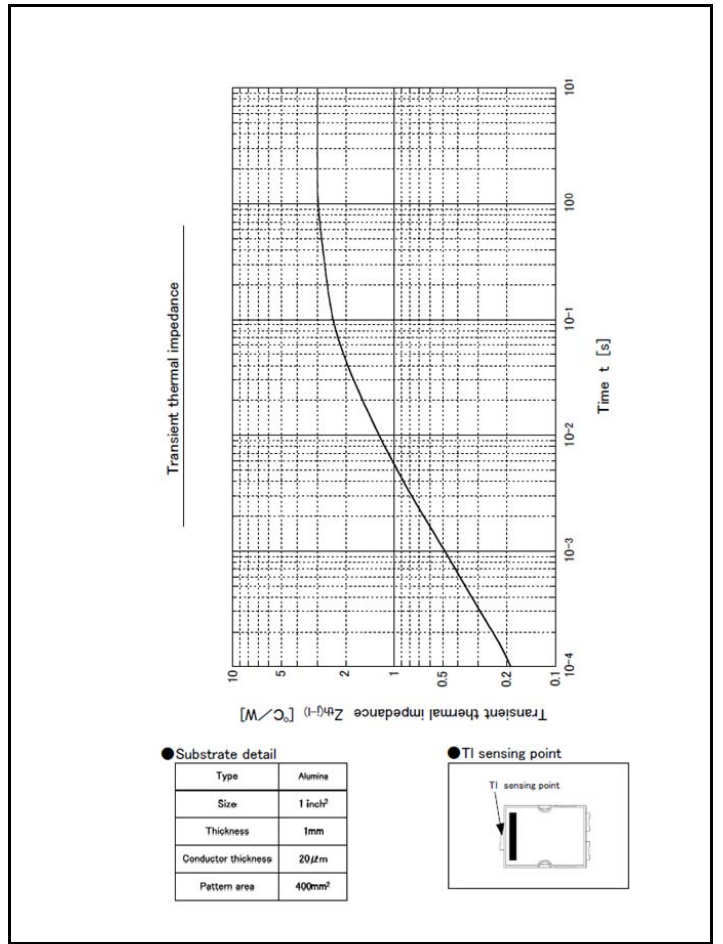
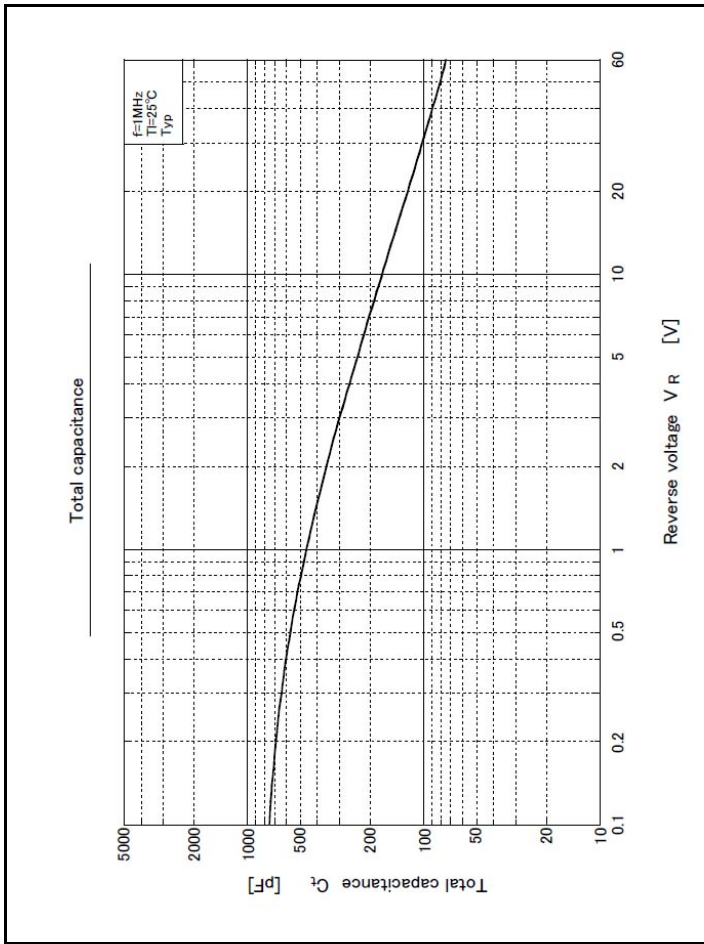
● Substrate detail

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



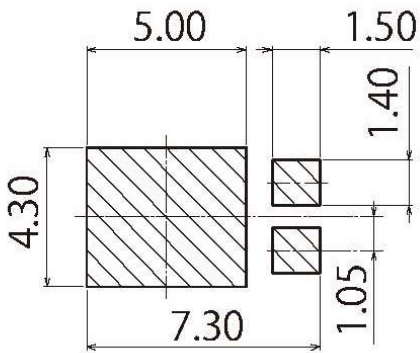
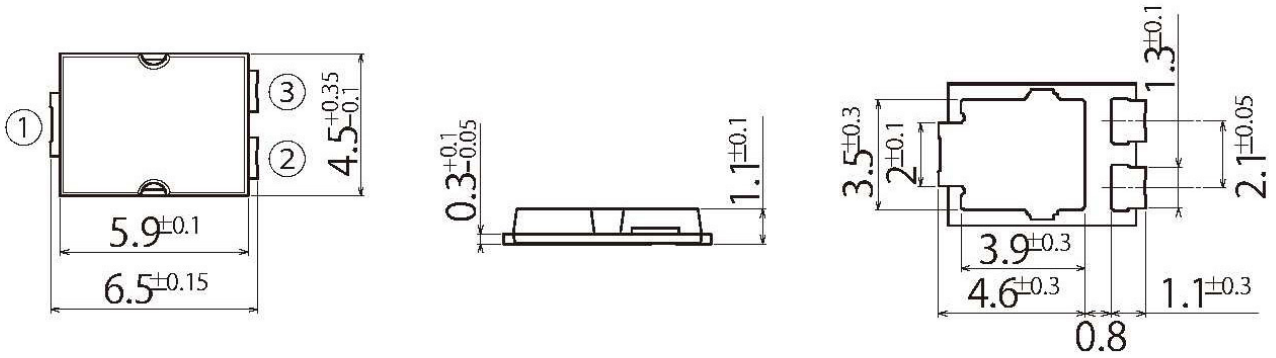
Surge forward current capability





G4

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



Referential Soldering Pad

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

Notes

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