ShinDengen

D2FL40

Fast Recovery Diodes
400V, 1.3A

Feature

- Small SMD
- High Recovery Speed
- Pb free terminal
- RoHS:Yes

OUTLINE

Package (House Name): 2F

Equivalent circuit

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

Item	Symbol	Conditions	Ratings	Unit
Storage temperrature	Tstg		-40 to 150	℃
Junction temperature	Tj		-40 to 150	℃
Repetitive peak reverse voltage	V_{RRM}		400	V
Average forward current	I_F(AV)	50Hz sine wave, Resistance load, Tl=116℃	1.3	A
Average forward current	I_F(AV)	50Hz sine wave, Resistance load, On alumina substrate, Ta=25℃ ※	1.3	A
Average forward current	I_F(AV)	50Hz sine wave, Resistance load, On glass-epoxy substrate, Ta=25℃ ※	1.05	A
Surge forward current	I_{FSM}	50Hz sine wave, Non-repetitive 1 cycle, Peak value, Tj=25℃	40	A

※ :See the original Specifications

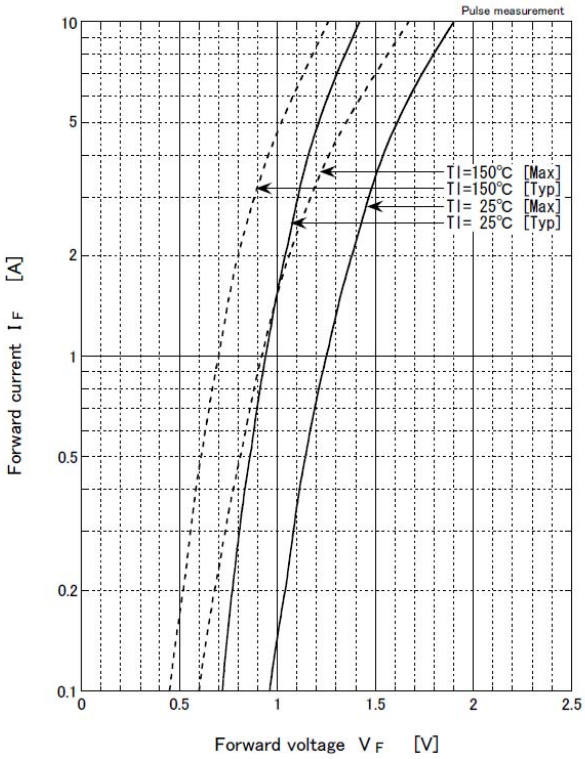
Electrical Characteristics (unless otherwise specified : Tl=25℃)

Item	Symbol	Conditions	Ratings			Unit
			MIN	TYP	MAX	
Forward voltage	V_F	IF=1.3A, Pulse measurement			1.3	V
Reverse current	I_R	VR=400V, Pulse measurement			10	μA
Reverse recovery time	trr	IF=0.5A, IR=1.0A, 0.1IR			50	ns
Total capacitance	Ct	f=1MHz, VR=10V		23		pF
Thermal resistance	Rth(j-l)	Junction to lead			24	℃/W
Thermal resistance	Rth(j-a)	Junction to ambient, On alumina substrate ※			90	℃/W
Thermal resistance	Rth(j-a)	Junction to ambient, On glass-epoxy substrate ※			120	℃/W

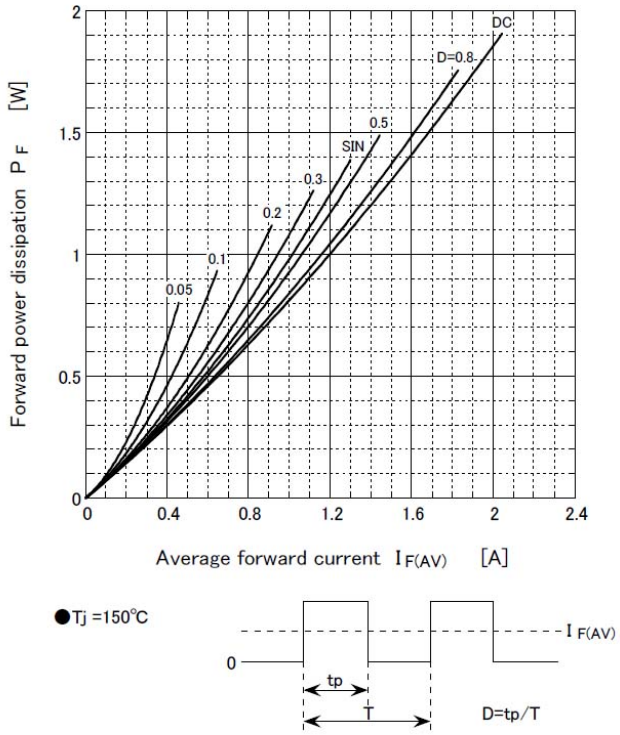
※ ：See the original Specifications

CHARACTERISTIC DIAGRAMS

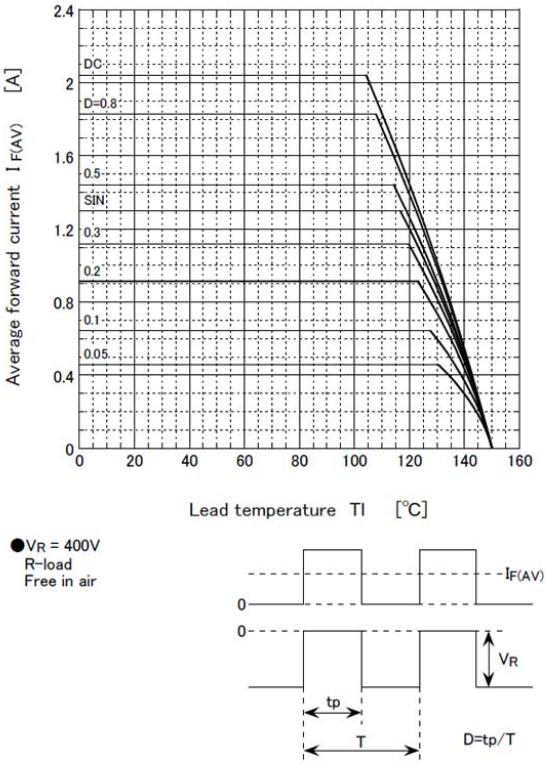
Forward voltage



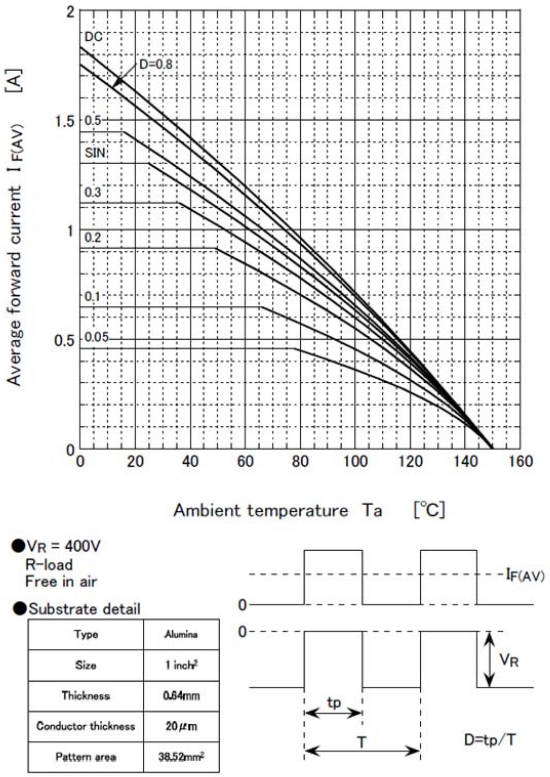
Forward power dissipation



Derating curve

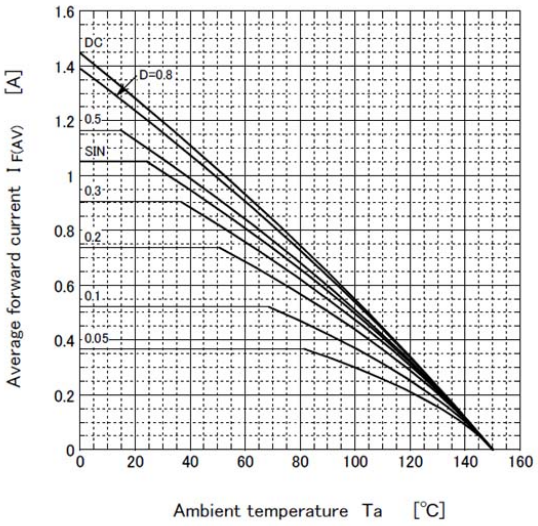


Derating curve



Type	Alumina
Size	1 inch²
Thickness	0.64mm
Conductor thickness	20 μm
Pattern area	38.52mm²

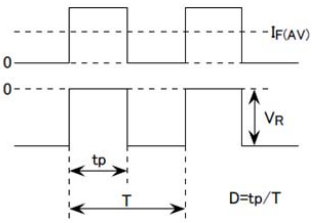
Derating curve



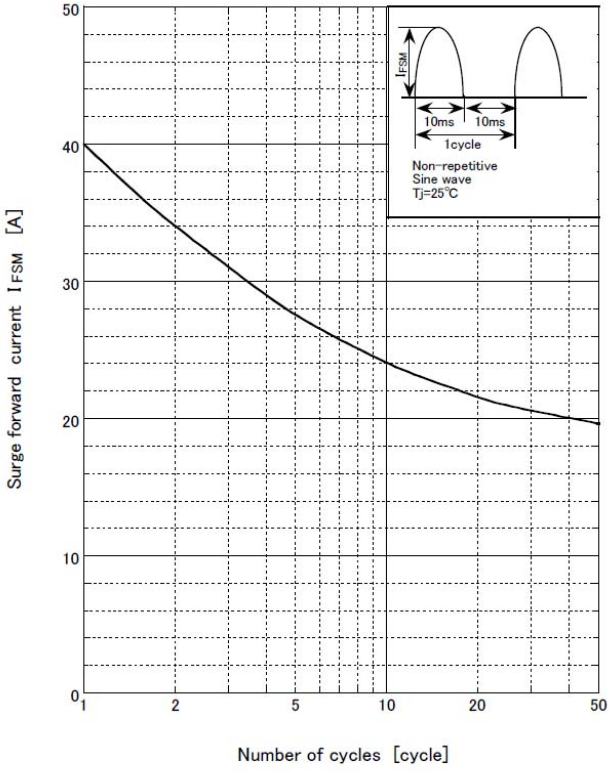
●V_R = 400V
R-load
Free in air

●Substrate detail

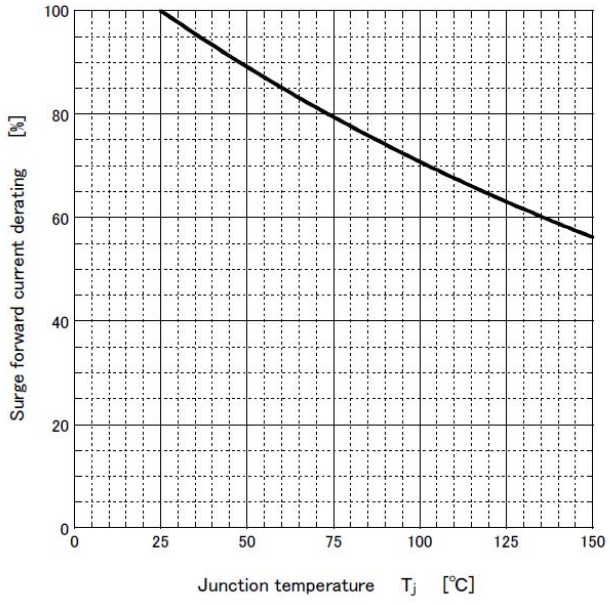
Type	Glass-epoxy
Size	1 inch²
Thickness	1mm
Conductor thickness	35μm
Pattern area	38.52mm²



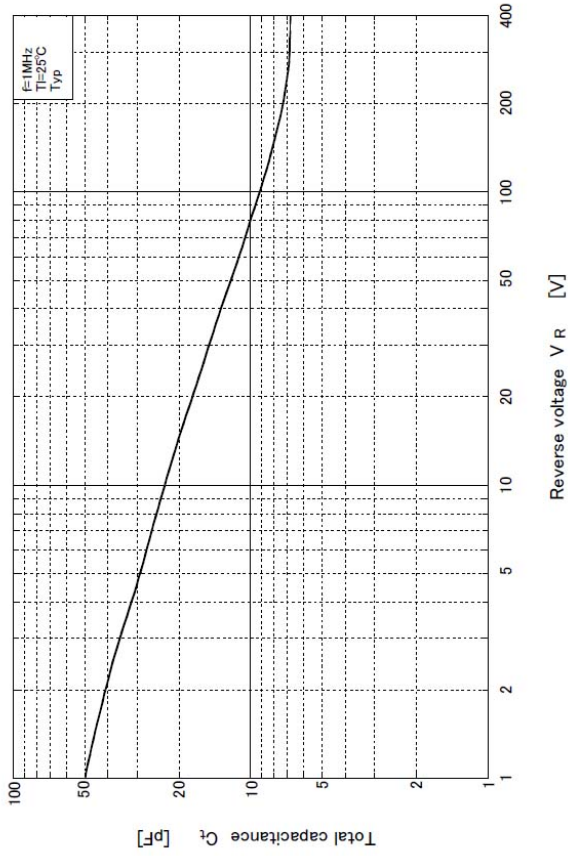
Surge forward current capability

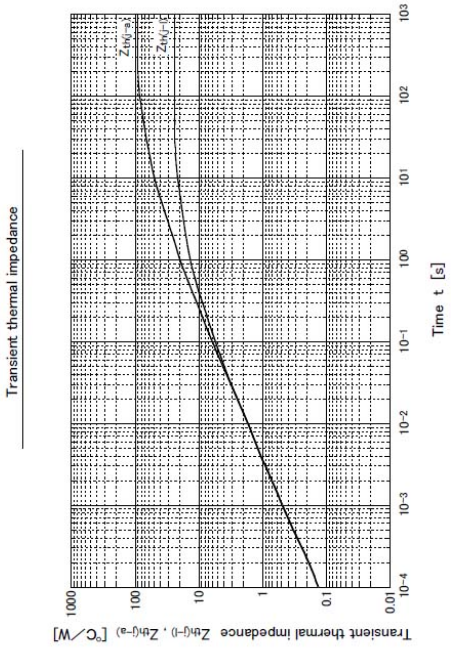


Surge forward current derating vs Junction temperature



Total capacitance

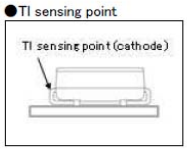


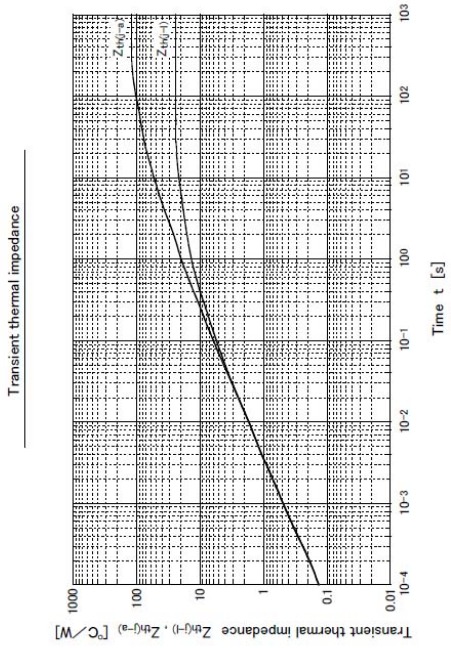


●Substrate detail

Type	Alumina
Size	1 inch²
Thickness	0.64mm
Conductor thickness	20μm
Pattern area	38.52mm²

●TI sensing point

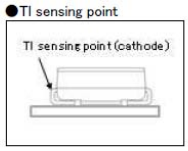




●Substrate detail

Type	Glass-epoxy
Size	1 inch²
Thickness	1mm
Conductor thickness	35μm
Pattern area	38.52mm²

●TI sensing point



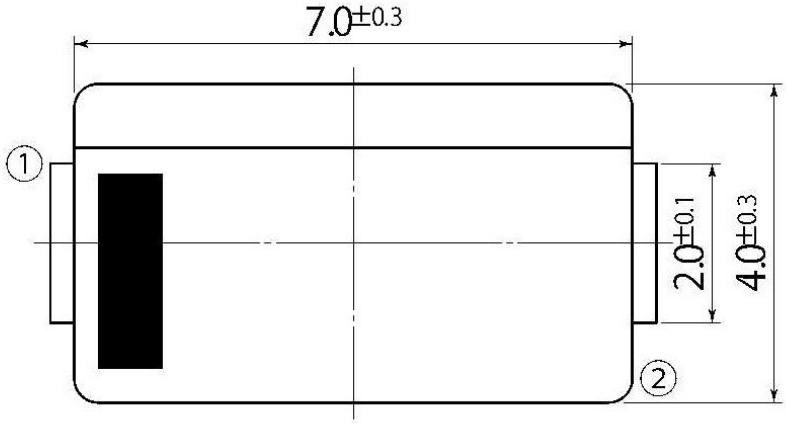
Outline Dimensions

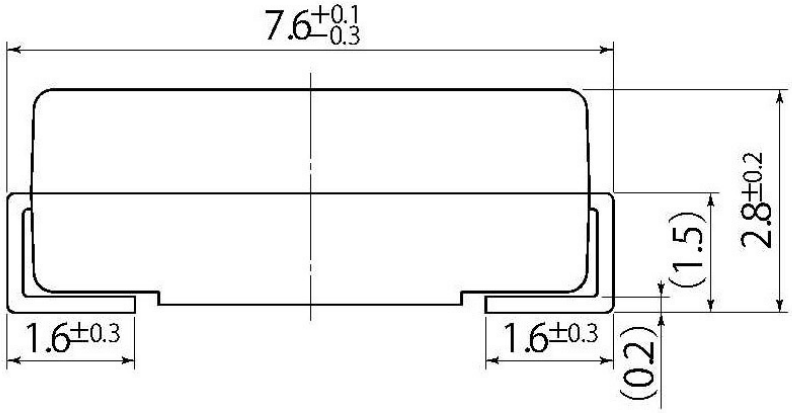
unit:mm

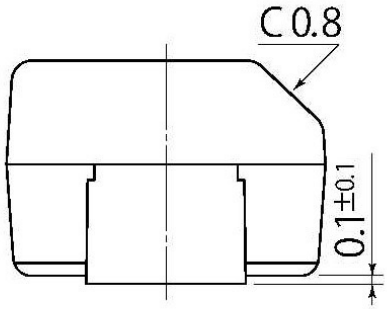
scale: 10/1

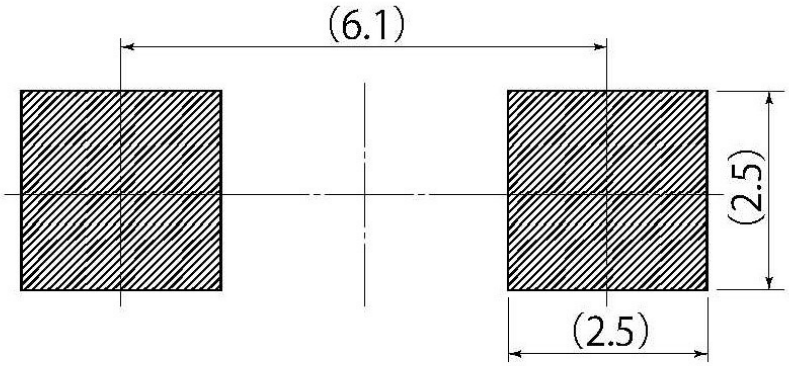
B9

JEDEC Code	–
JEITA Code	–
House Name	2F









Referential Soldering Pad

• Optimize soldering pad to the board design and soldering condi tion.

Notes

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