ShinDengen

D2FL40U

Fast Recovery Diodes
400V, 2A

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		-55 to 150	℃
Junction temperature	Tj		-55 to 150	℃
Repetitive peak reverse voltage	V_{RRM}		400	V
Average forward current	I_F(AV)	50Hz sine wave, Resistance load, Tl=100℃	2	A
Average forward current	I_F(AV)	50Hz sine wave, Resistance load, On alumina substrate, Ta=25℃	1.4	A
Average forward current	I_F(AV)	50Hz sine wave, Resistance load, On glass-epoxy substrate, Ta=25℃	1.14	A
Surge forward current	I_{FSM}	50Hz sine wave, Non-repetitive 1 cycle, Peak value, Tj=25℃	95	A

※ :See the original Specifications

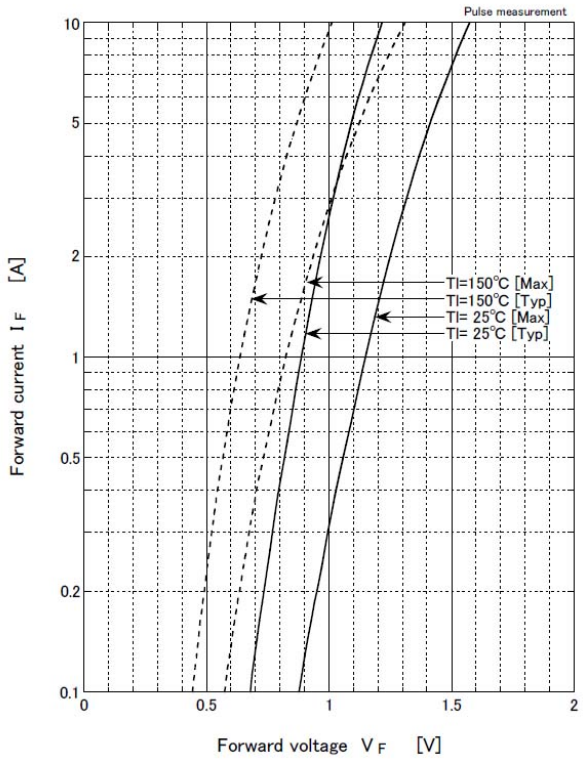
Electrical Characteristics (unless otherwise specified : Tl=25°C)

Item	Symbol	Conditions	Ratings			Unit
			MIN	TYP	MAX	
Forward voltage	V_F	IF=2A, Pulse measurement			1.25	V
Reverse current	I_R	VR=400V, Pulse measurement			10	μA
Reverse recovery time	trr	IF=0.5A, IR=1.0A, 0.25IR			35	ns
Total capacitance	Ct	f=1MHz, VR=10V		34		pF
Thermal resistance	Rth(j-l)	Junction to lead			24	°C/W
Thermal resistance	Rth(j-a)	Junction to ambient, On alumina substrate ※			90	°C/W
Thermal resistance	Rth(j-a)	Junction to ambient, On glass-epoxy substrate ※			120	°C/W

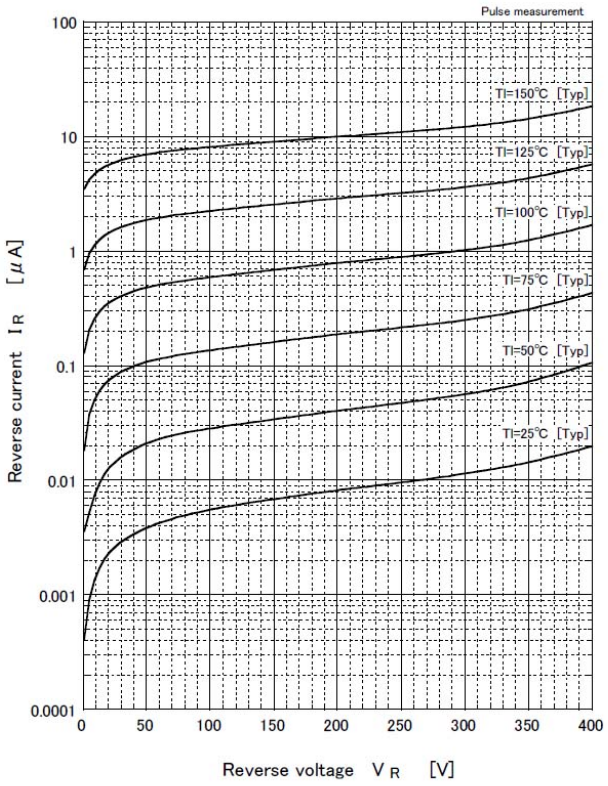
※ :See the original Specifications

CHARACTERISTIC DIAGRAMS

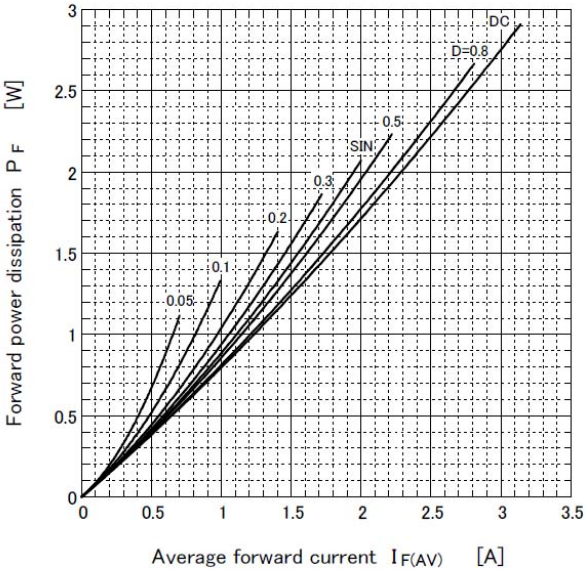
Forward voltage

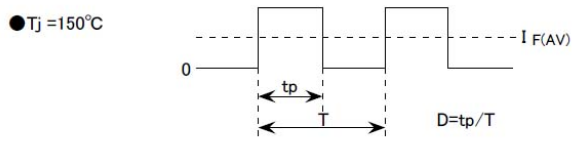


Reverse current

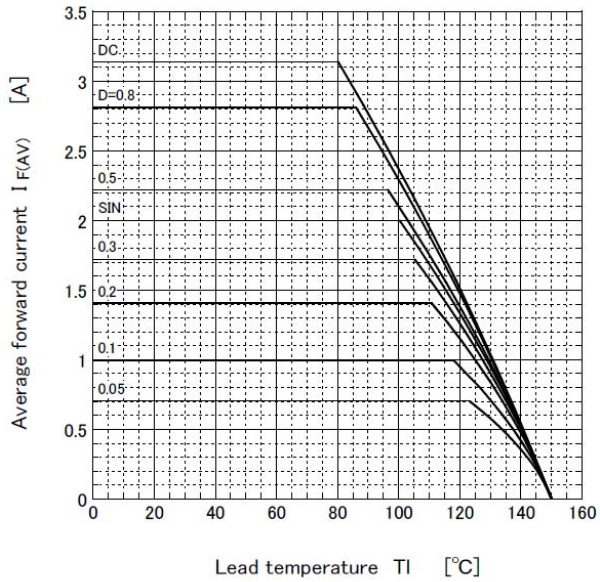


Forward power dissipation

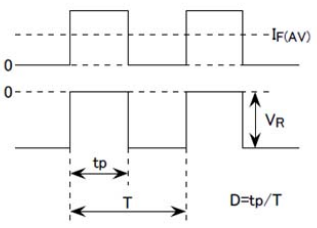




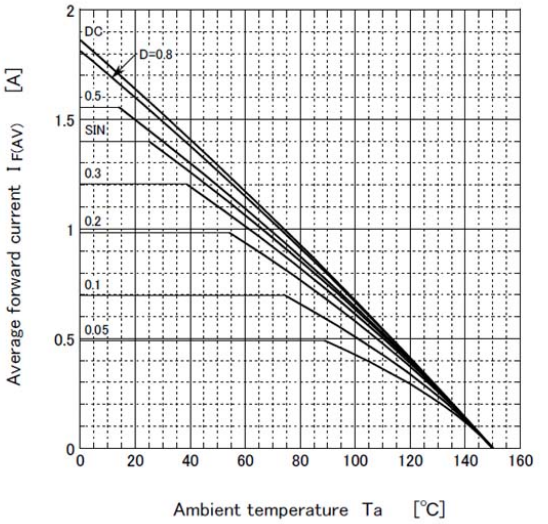
Derating curve



●VR = 400V
R-load
Free in air



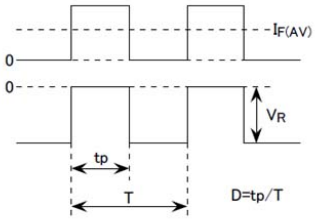
Derating curve



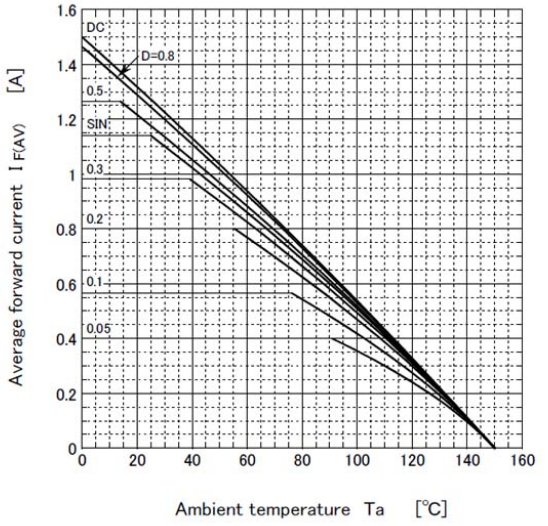
●V_R = 400V
R-load
Free in air

●Substrate detail

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



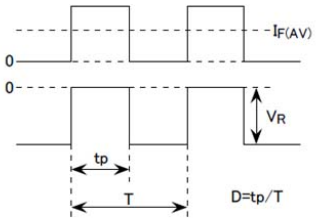
Derating curve



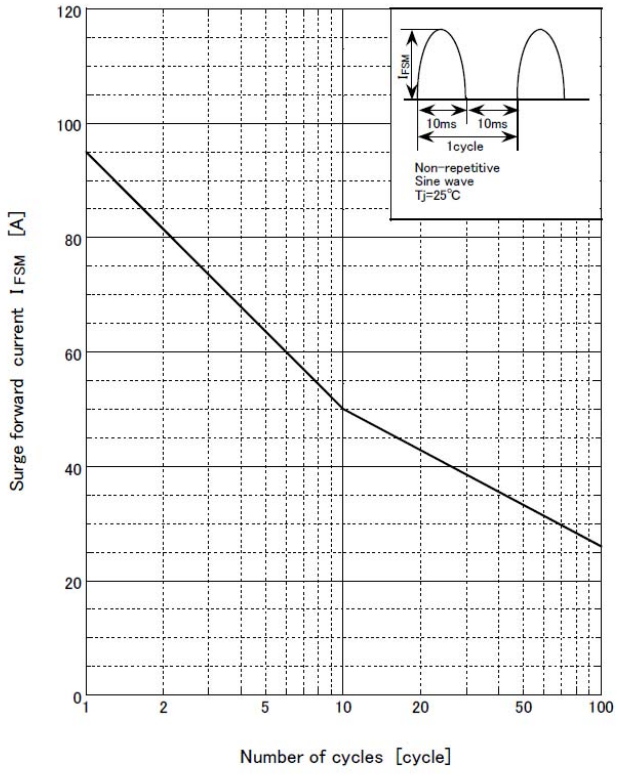
●V_R = 400V
R-load
Free in air

●Substrate detail

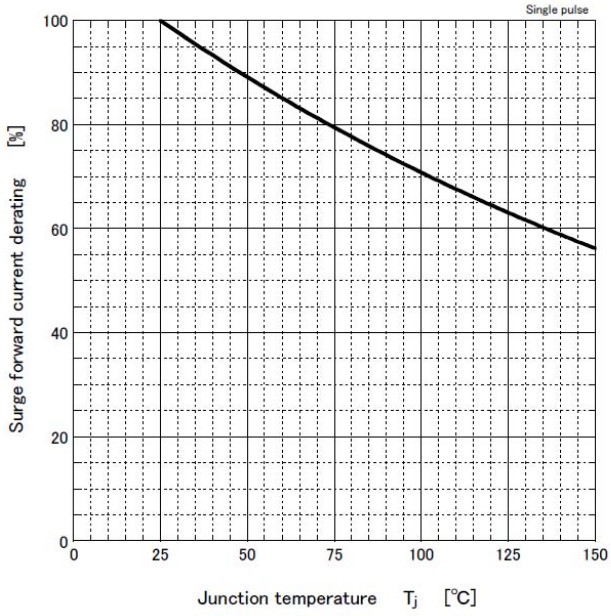
Type	Glass-epoxy
Size	1 inch²
Thickness	1mm
Conductor thickness	35μm
Pattern area	38.52mm²

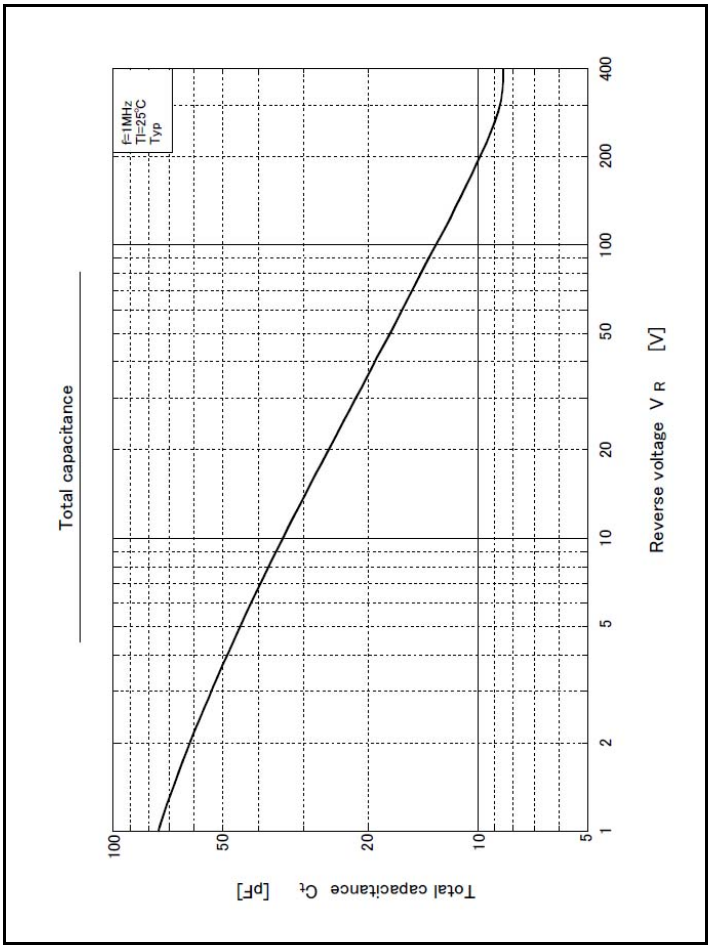


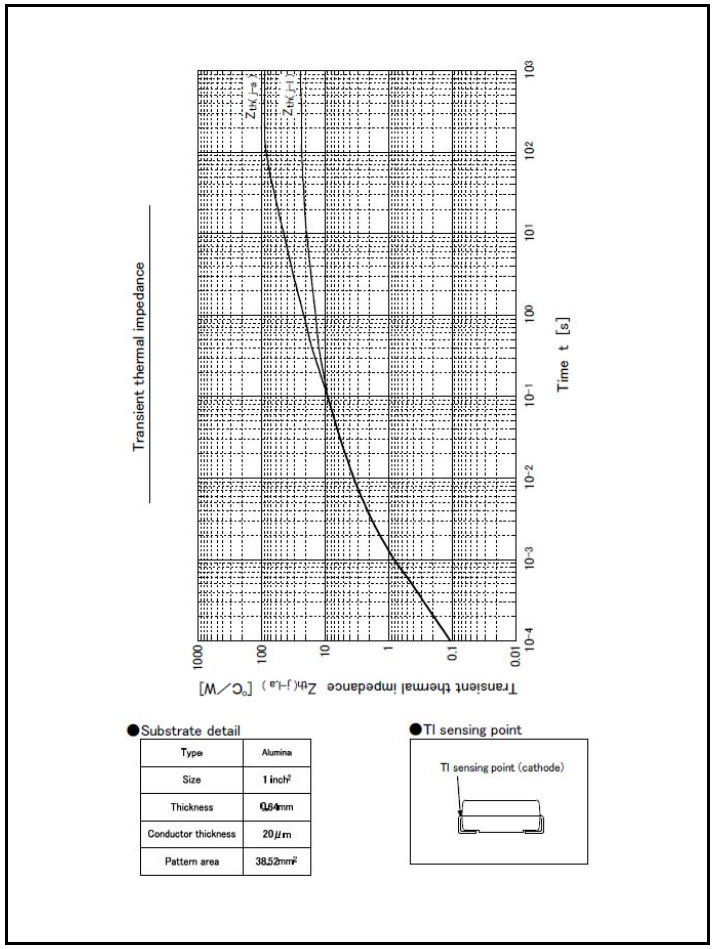
Surge forward current capability

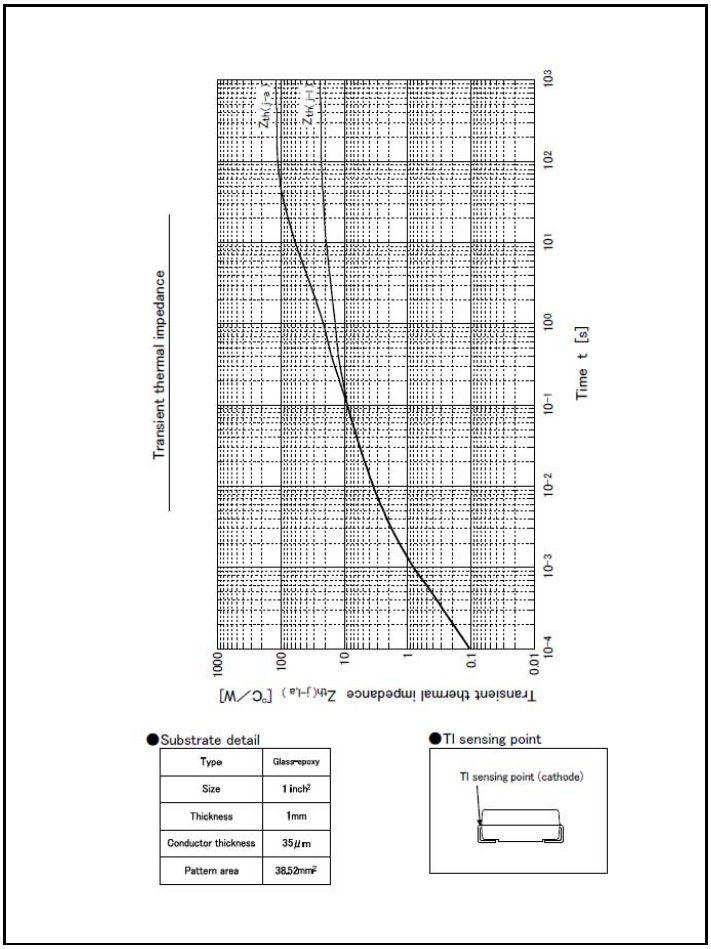


Surge forward current derating
vs Junction temperature




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


Transient thermal impedance
Time t [s]
Transient thermal impedance Zth(j-a) [°C/W]
●Substrate detail
Type Alumina
Size 1 inch²
Thickness 0.64mm
Conductor thickness 20μm
Pattern area 38.52mm²
●Tl sensing point
Tl sensing point (cathode)


Transient thermal impedance
Time t [s]
Transient thermal impedance Zth(j-a) [°C/W]
●Substrate detail
Type Glass-epoxy
Size 1 inch²
Thickness 1mm
Conductor thickness 35μm
Pattern area 38.52mm²
●Tl sensing point
Tl sensing point (cathode)

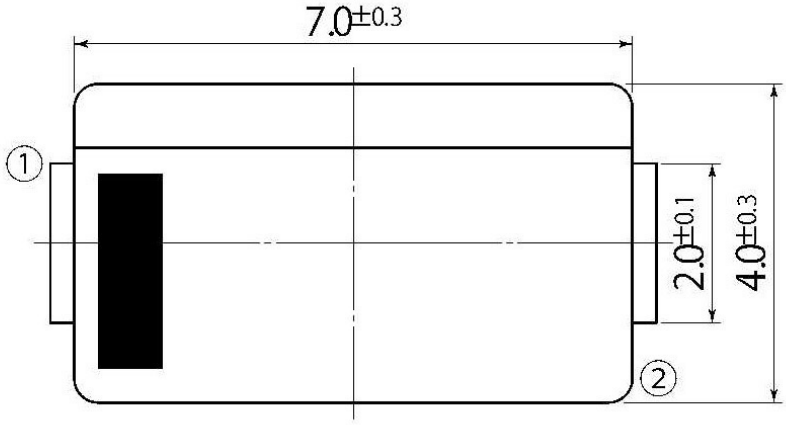
Outline Dimensions

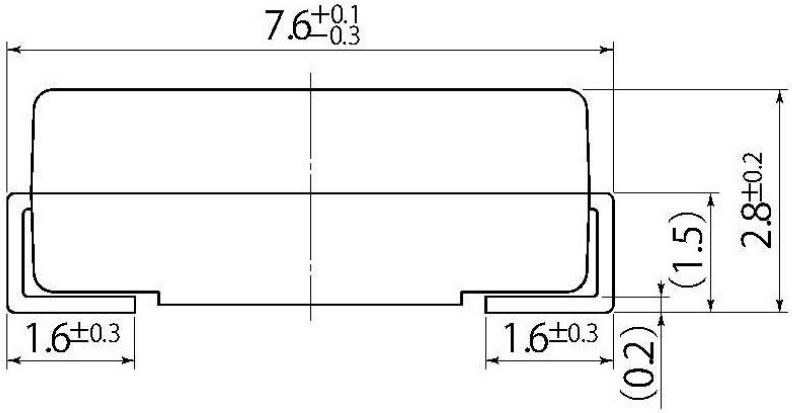
unit:mm

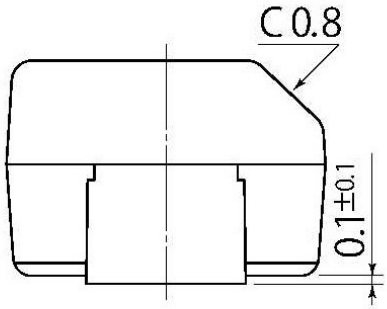
scale: 10/1

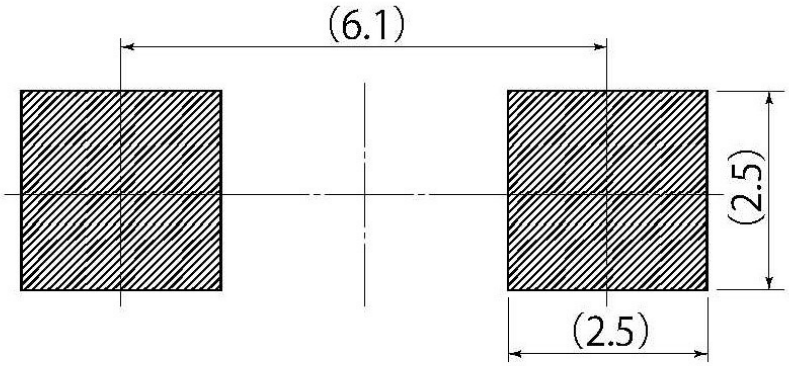
B9

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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