ShinDengen

D1FS6

Schottky Barrier Diodes
60V, 1.1A

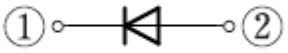
Feature

- Small SMD
- High Recovery Speed
- Low V_F
- Based on AEC-Q101
- Pb free terminal
- RoHS:Yes

OUTLINE

Package (House Name): 1F
Package (JEDEC Code): DO-214AC

Equivalent circuit



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

Item	Symbol	Conditions	Ratings	Unit
Storage temperrature	Tstg		-55 to 150	°C
Junction temperature	Tj		-55 to 150	°C
Repetitive peak reverse voltage	V_{RRM}		60	V
Repetitive peak surge reverse voltage	V_{RRSM}	Pulse width 0.5ms, duty=1/40	65	V
Average forward current	I_F(AV)	50Hz sine wave, Resistance load, On alumina substrate, Ta=49°C ※	1.1	A
Average forward current	I_F(AV)	50Hz sine wave, Resistance load, On glass-epoxy substrate, Ta=48°C ※	0.82	A
Surge forward current	I_{FSM}	50Hz sine wave, Non-repetitive, 1cycle, Peak value, Tj=125°C	40	A
Repetitive peak surge reverse power	P_{RRSM}	Pulse width 10µs, Tj=25°C	60	W

※ ：See the original Specifications

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

Item	Symbol	Conditions	Ratings			Unit
			MIN	TYP	MAX	
Forward voltage	V_F	IF=1.1A, Pulse measurement			0.58	V
Reverse current	I_R	VR=60V, Pulse measurement			1	mA
Total capacitance	Ct	f=1MHz, VR=10V		50		pF
Thermal resistance	Rth(j-l)	Junction to lead			23	°C/W
Thermal resistance	Rth(j-a)	Junction to ambient, On alumina substrate ※			108	°C/W
Thermal resistance	Rth(j-a)	Junction to ambient, On glass-epoxy substrate ※			157	°C/W

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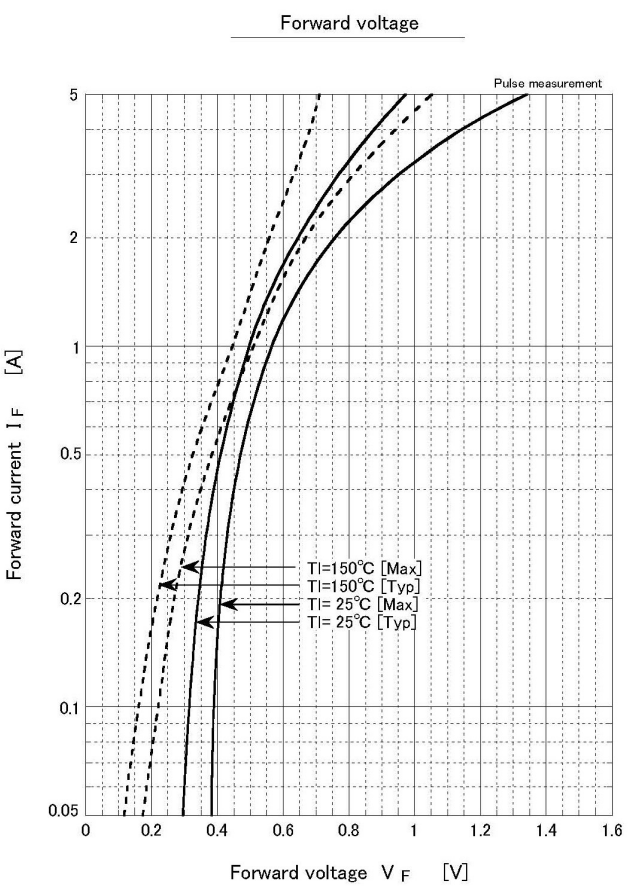
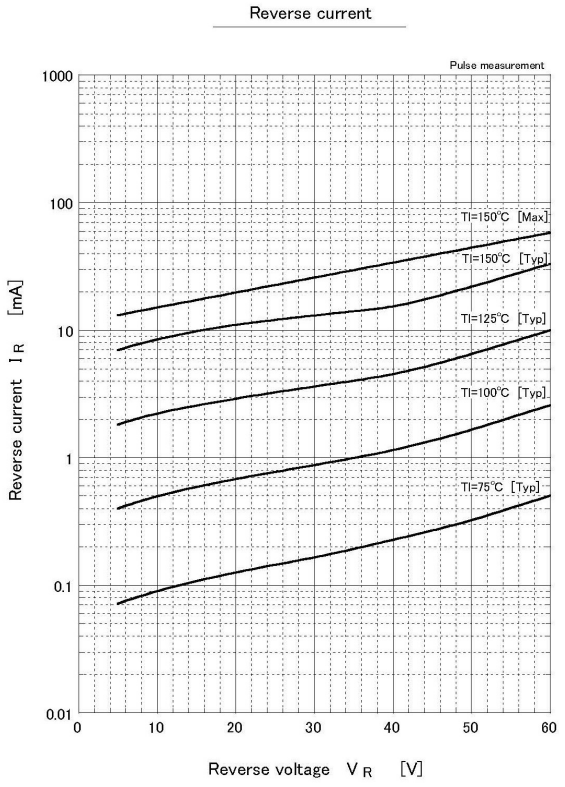
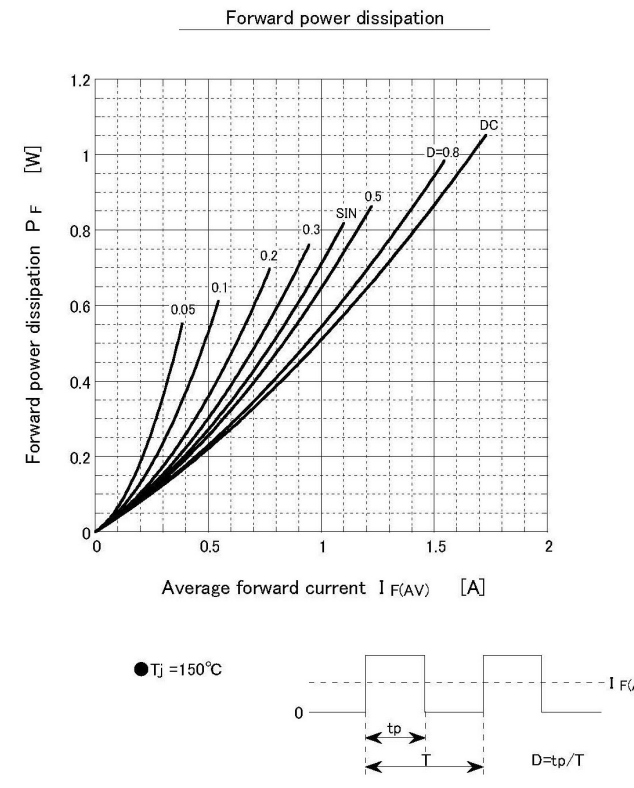
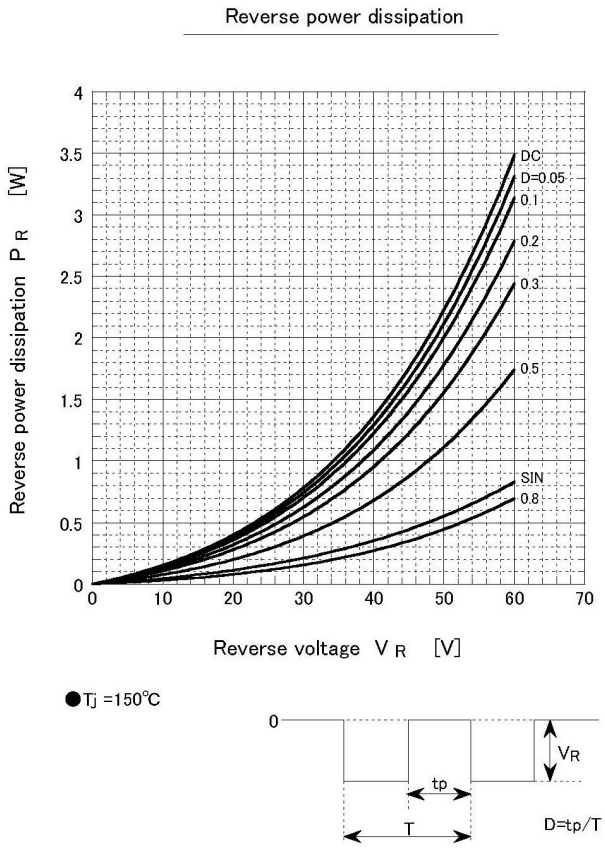
CHARACTERISTIC DIAGRAMS









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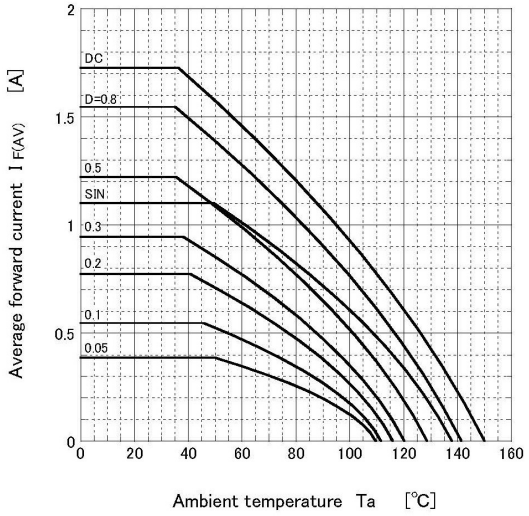
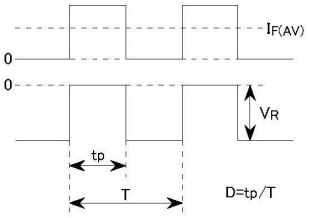
Derating curve



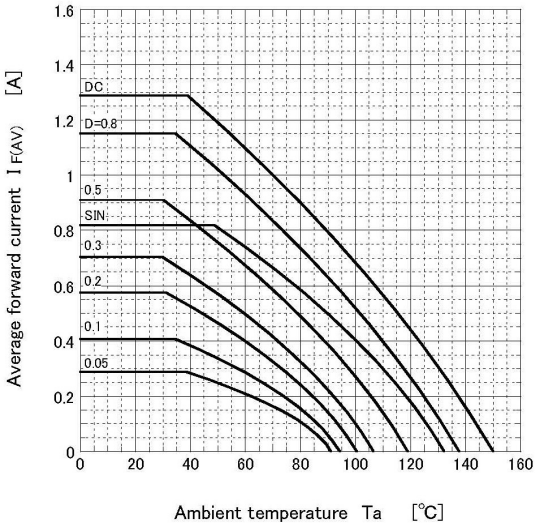
●V_R = 20V
R-load
Free in air



●Substrate detail

Type	Alumina
Size	1 inch²
Thickness	0.64mm
Conductor thickness	20μm
Pattern area	47.8mm²

Derating curve



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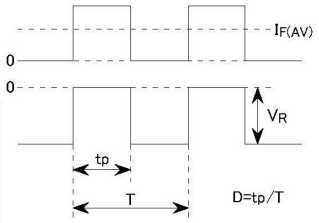
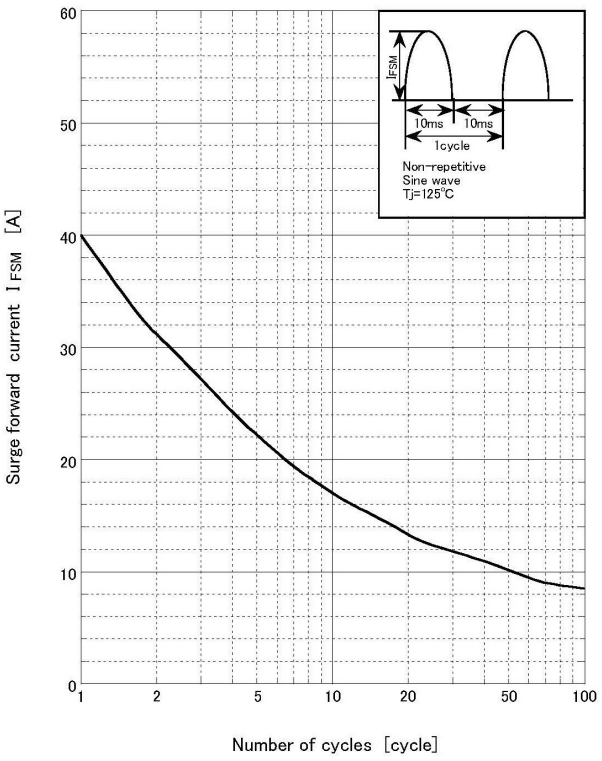


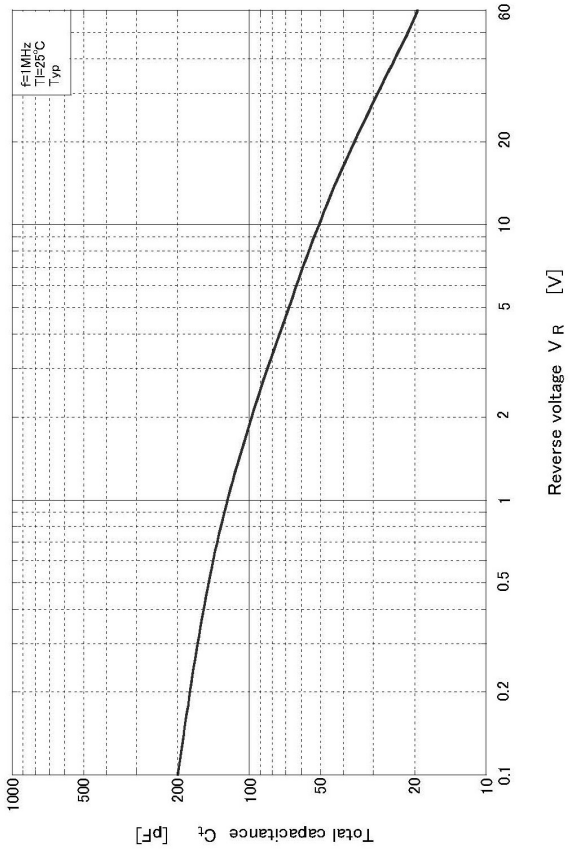
●Substrate detail

Type	Glass-epoxy
Size	1 inch²
Thickness	1mm
Conductor thickness	35μm
Pattern area	47.8mm²

Surge forward current capability



Total capacitance



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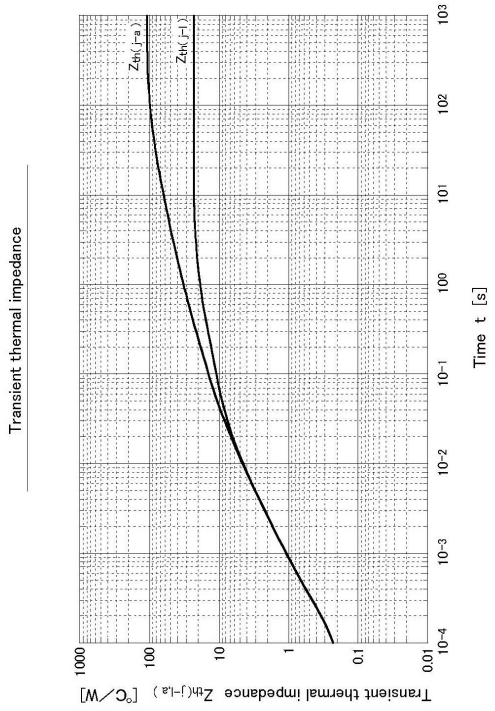

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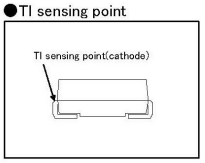
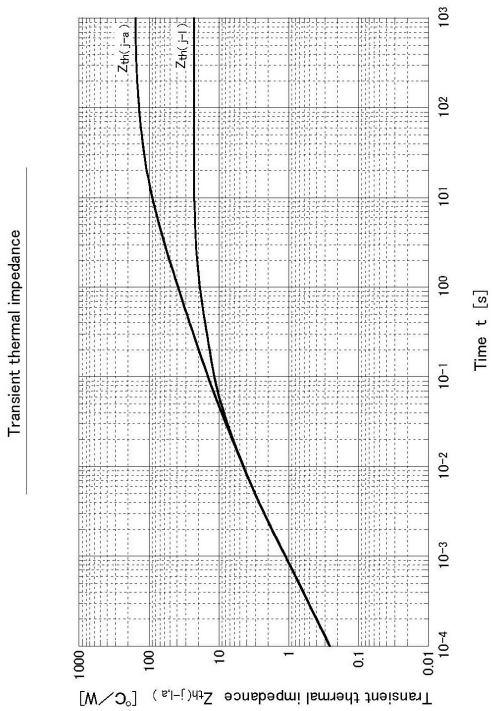
●TI sensing point





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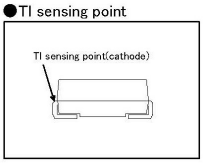
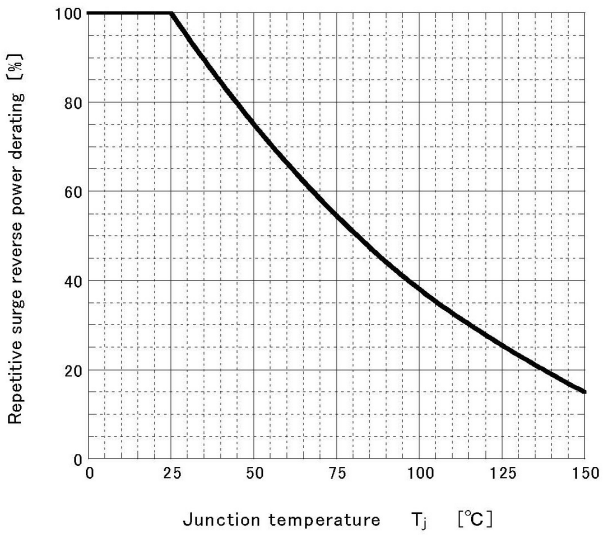
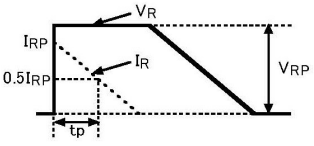


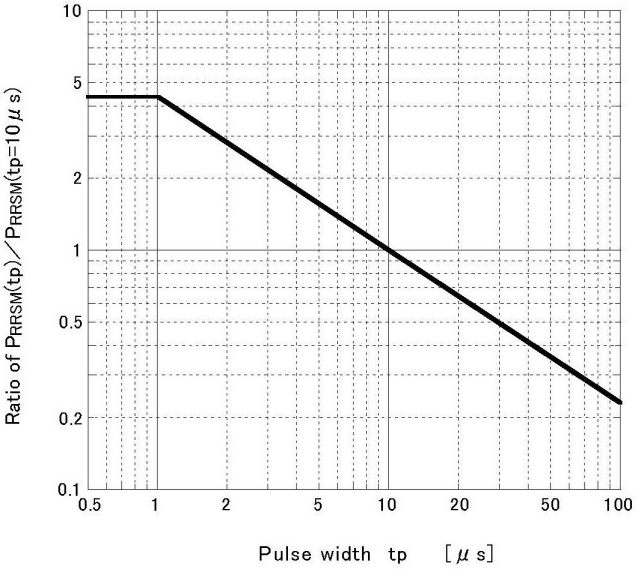
Repetitive surge reverse power derating
vs Junction temperature



●$P_{RRSM} = I_{RP} \times V_{RP}$



Repetitive surge reverse power capability



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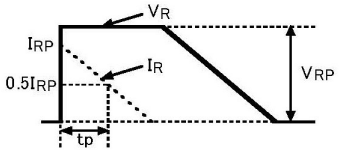

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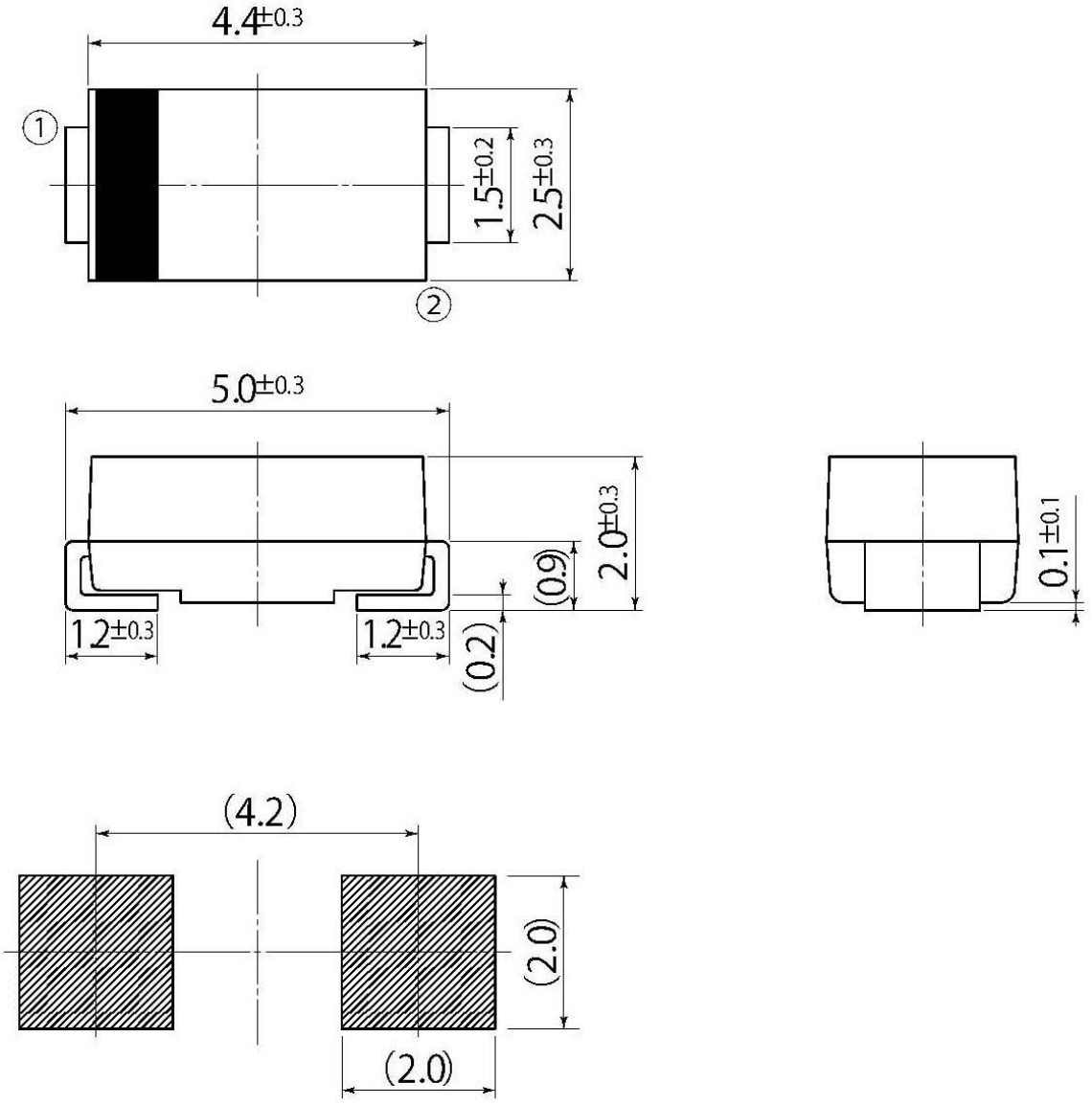
Outline Dimensions

unit:mm

scale: 10/1

B3

JEDEC Code	DO-214AC
JEITA Code	–
House Name	1F, CF



Referential Soldering Pad

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

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Notes

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