ShinDengen

D1FT10A

Schottky Barrier Diodes
100V, 3A

Feature

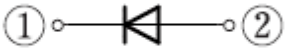
- Small SMD
- High Recovery Speed
- Tj=175°C
- Ultra low I_R
- Based on AEC-Q101
- Pb free terminal
- RoHS:Yes

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 175	°C
Junction temperature	Tj		-55 to 175	°C
Repetitive peak reverse voltage	V_{RRM}		100	V
Average forward current	I_F(AV)	50Hz sine wave, Resistance load, Tl=116°C	3	A
Average forward current	I_F(AV)	50Hz sine wave, Resistance load, On alumina substrate, Ta=25°C ※	1.9	A
Average forward current	I_F(AV)	50Hz sine wave, Resistance load, On glass-epoxy substrate, Ta=25°C ※	1.4	A
Surge forward current	I_{FSM}	50Hz sine wave, Non-repetitive, 1cycle, Peak value, Tj=25°C	60	A

※ ：See the original Specifications

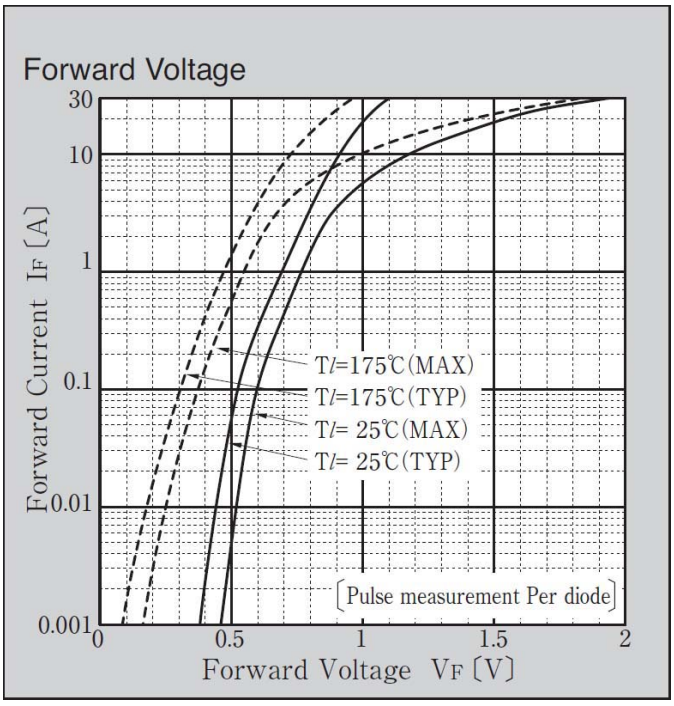
Electrical Characteristics (unless otherwise specified : Tl=25°C)

Item	Symbol	Conditions	Ratings			Unit
			MIN	TYP	MAX	
Forward voltage	V_F	IF=3A, Pulse measurement			0.86	V
Forward voltage	V_F	IF=1A, Pulse measurement			0.75	V
Reverse current	I_R	VR=100V, Pulse measurement			0.008	mA
Total capacitance	Ct	f=1MHz, VR=10V		60		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

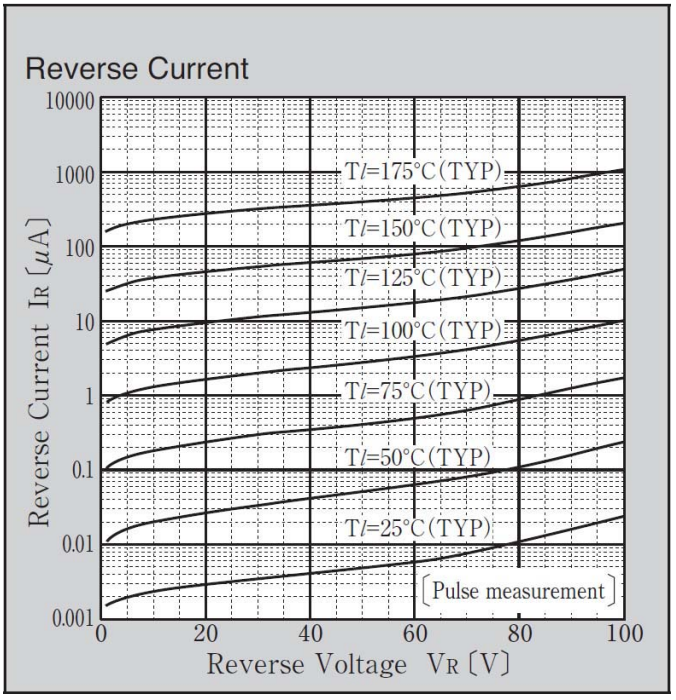
※ ：See the original Specifications

CHARACTERISTIC DIAGRAMS

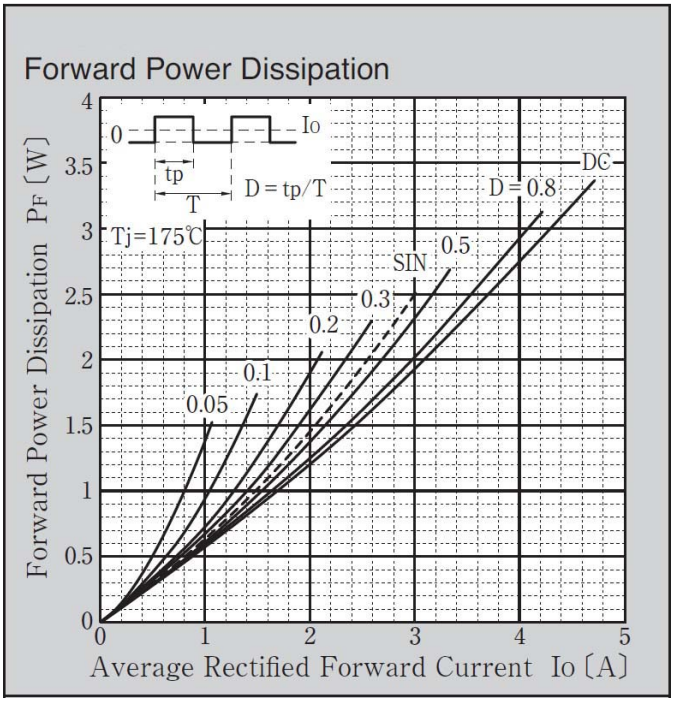
Forward Voltage



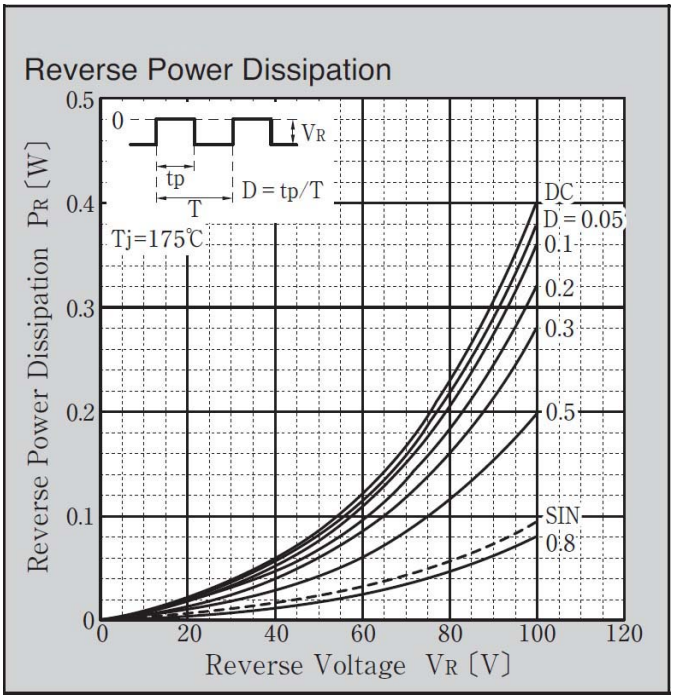
Reverse Current

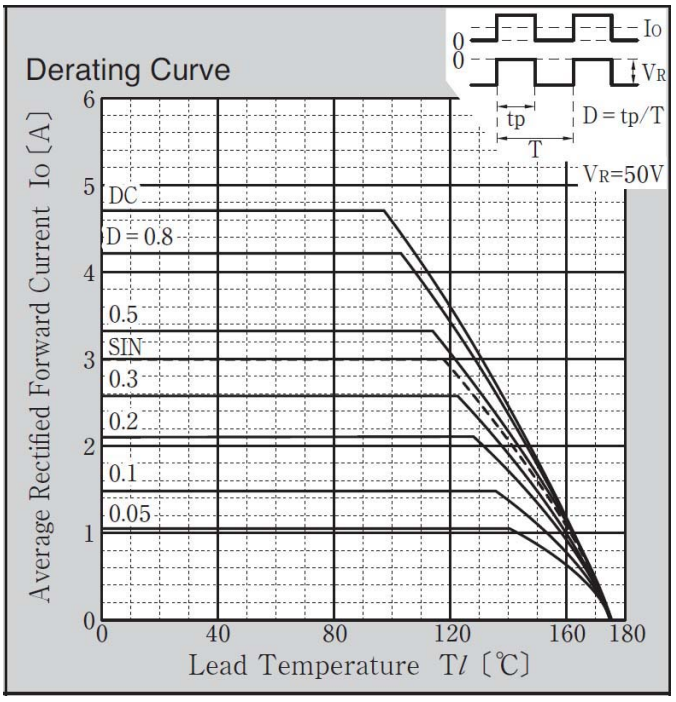


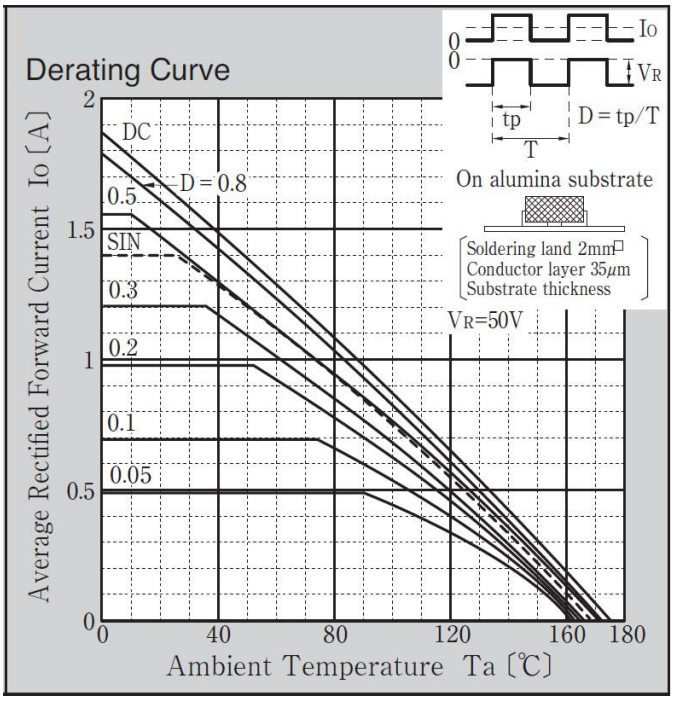
Forward Power Dissipation

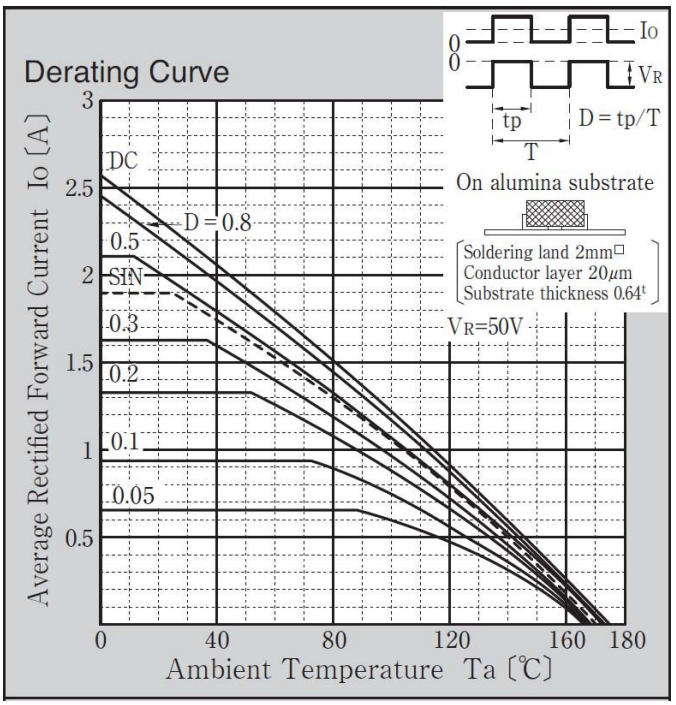


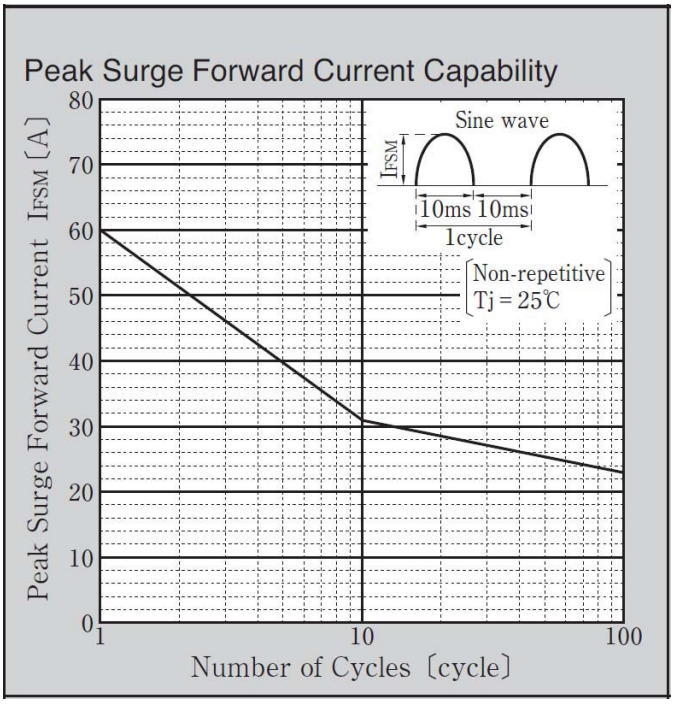
Reverse Power Dissipation



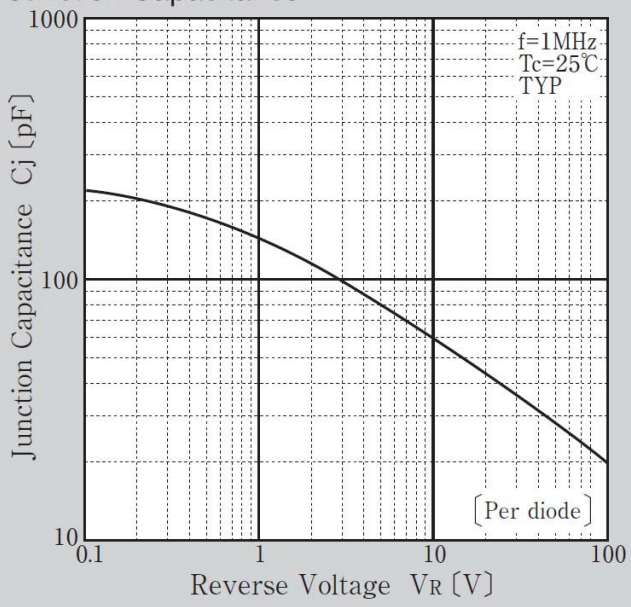

Derating Curve
Io
VR
tp
T
D = tp/T
VR=50V
DC
D = 0.8
0.5
SIN
0.3
0.2
0.1
0.05
Average Rectified Forward Current Io〔A〕
Lead Temperature Tl〔℃〕
0
40
80
120
160
180
1
2
3
4
5
6


Derating Curve
Io
VR
tp
T
D = tp/T
On alumina substrate
Soldering land 2mm□
Conductor layer 35μm
Substrate thickness
VR=50V
DC
D = 0.8
0.5
SIN
0.3
0.2
0.1
0.05
Average Rectified Forward Current Io〔A〕
Ambient Temperature Ta〔℃〕
0
40
80
120
160
180
0.5
1
1.5
2

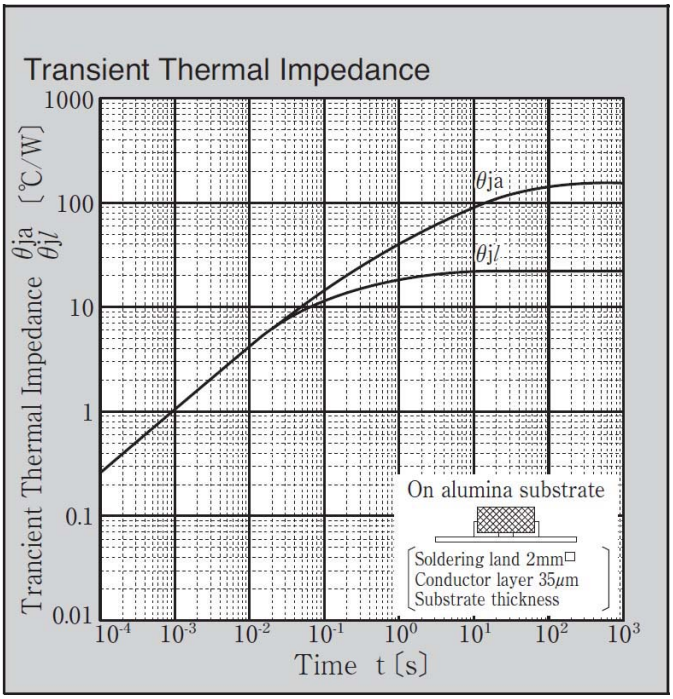

Derating Curve
Io
VR
tp
T
D = tp/T
On alumina substrate
Soldering land 2mm□
Conductor layer 20μm
Substrate thickness 0.64t
VR=50V
DC
D = 0.8
0.5
SIN
0.3
0.2
0.1
0.05
Average Rectified Forward Current Io〔A〕
Ambient Temperature Ta〔℃〕
0
40
80
120
160
180
0.5
1
1.5
2
2.5
3


Peak Surge Forward Current Capability
Sine wave
IFSM
10ms 10ms
1cycle
Non-repetitive
Tj = 25℃
Peak Surge Forward Current IFSM〔A〕
Number of Cycles〔cycle〕
1
10
100
0
10
20
30
40
50
60
70
80

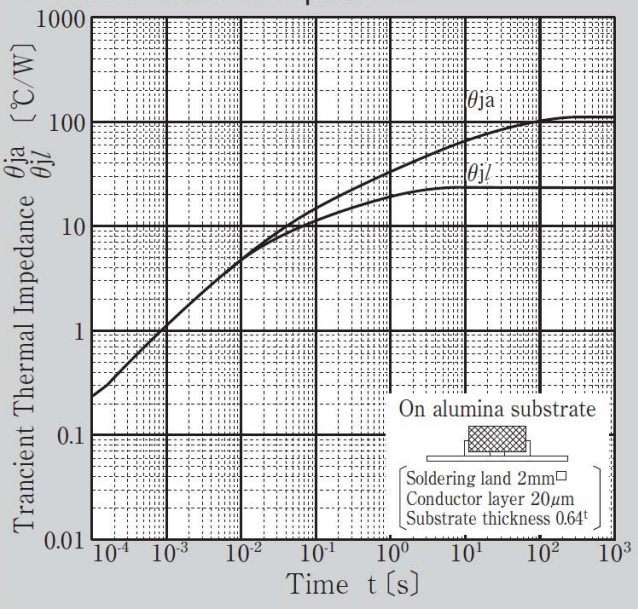
Junction Capacitance



Transient Thermal Impedance



Transient Thermal Impedance



Outline Dimensions

unit:mm

B3

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

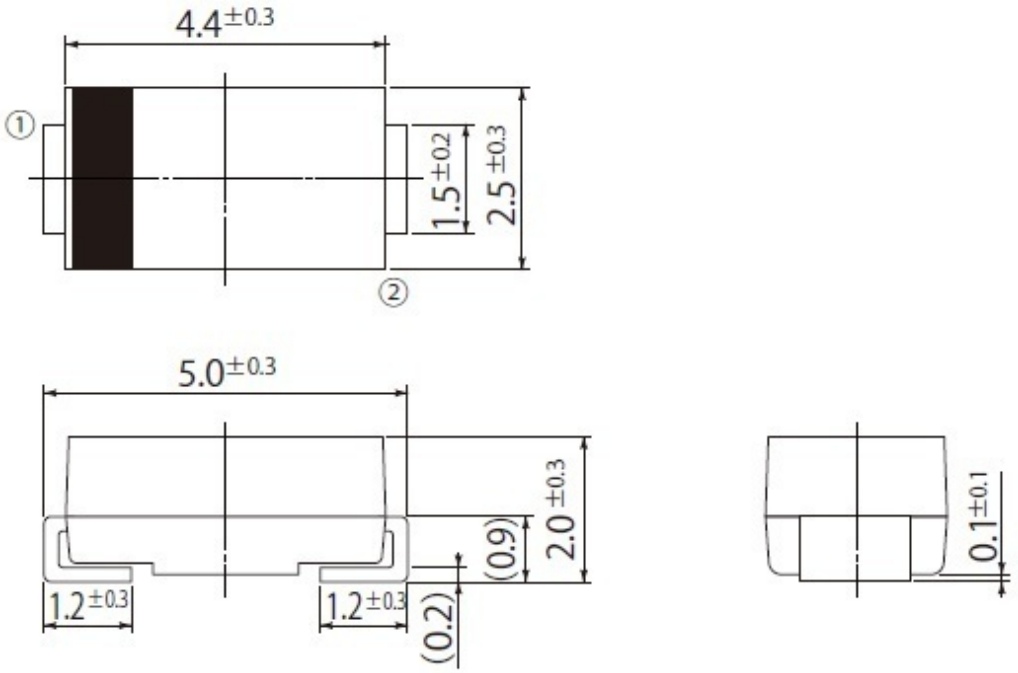
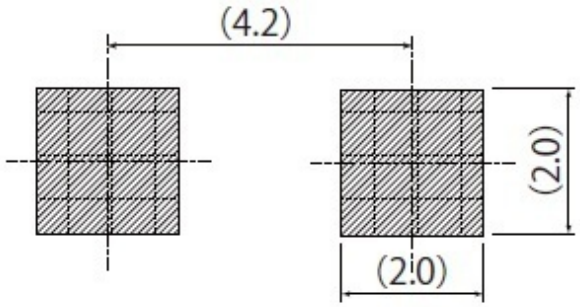


Fig. B3-1 ① ②



Referential Soldering Pad

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

- The content specified herein is subject to change for improvement without notice.
- If you wish to use any such products, please be sure to refer to the specifications.

U182-1 (2026.08)

Notes

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   Computers, office automation and other office equipment, communication terminals, test and measurement equipment, audio/visual equipment, amusement equipment, consumer electronics, machine tools, personal electronic equipment, industrial equipment, etc.
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