D1FT4

Schottky Barrier Diodes
40V, 2A

Feature

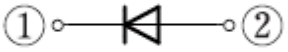
- Small SMD
- Tj=175°C
- Ultra low I_R
- Based on AEC-Q101
- Pb free terminal
- RoHS:Yes

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		175	°C
Repetitive peak reverse voltage	V_{RRM}		40	V
Average forward current	I_F(AV)	50Hz sine wave, Resistance load, Tl=143°C	2	A
Average forward current	I_F(AV)	50Hz sine wave, Resistance load, On alumina substrate, Ta=25°C	2	A
Average forward current	I_F(AV)	50Hz sine wave, Resistance load, On glass-epoxy substrate, Ta=25°C	1.5	A
Surge forward current	I_{FSM}	50Hz sine wave, Non-repetitive, 1cycle, Peak value, Tj=25°C	60	A

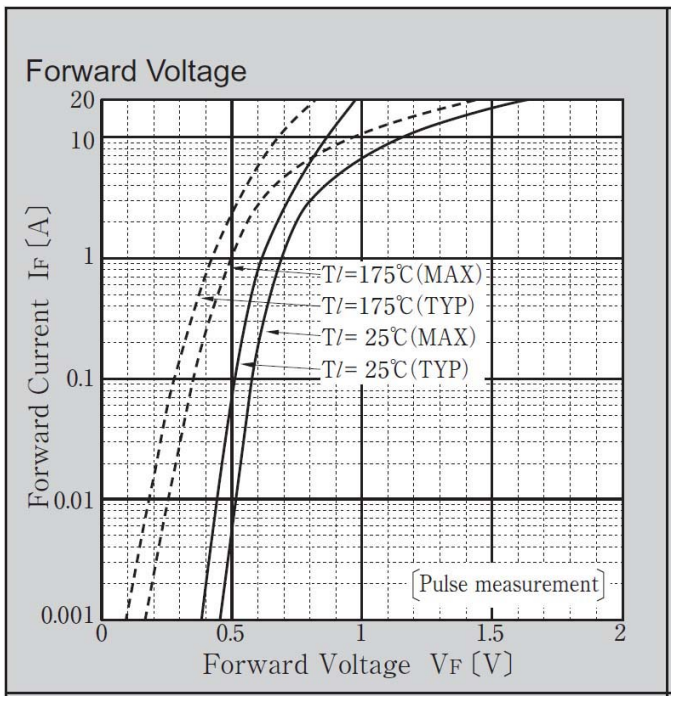
※ ：See the original Specifications

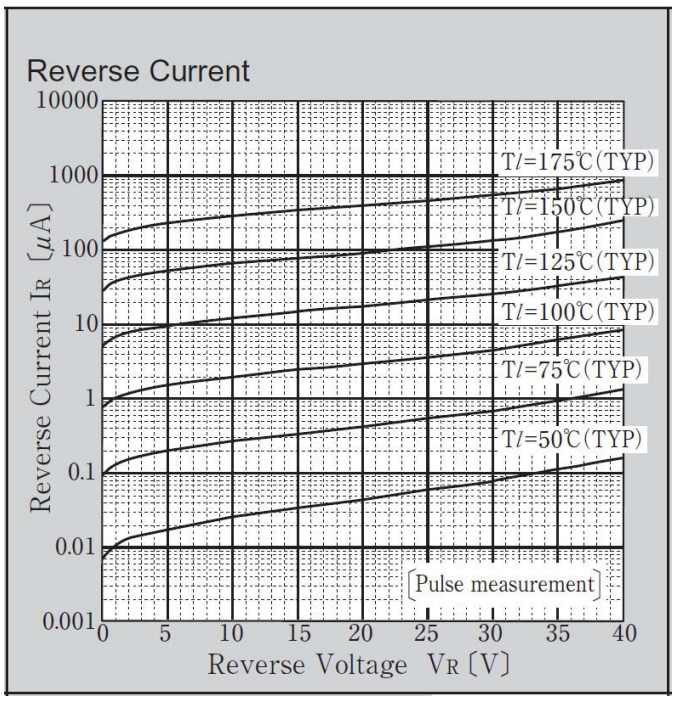
Electrical Characteristics (unless otherwise specified : Tl=25°C)

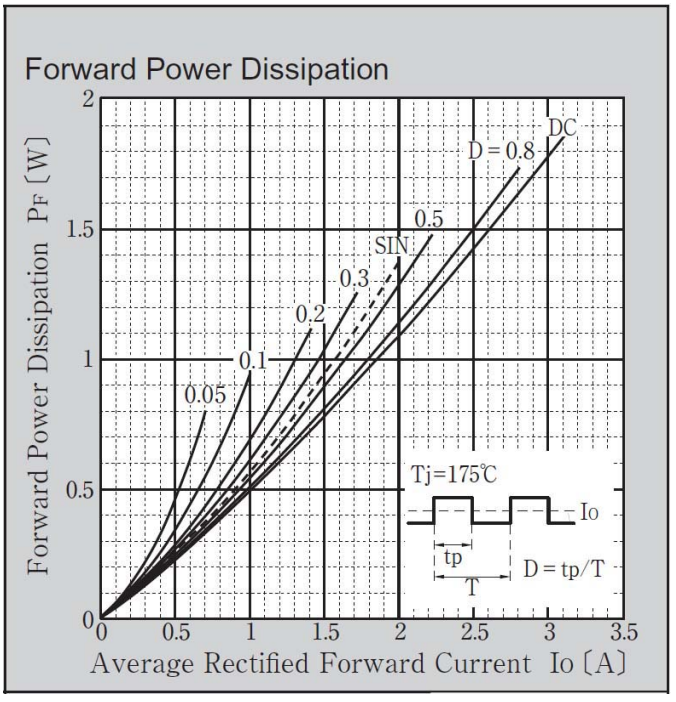
Item	Symbol	Conditions	Ratings			Unit
			MIN	TYP	MAX	
Forward voltage	V_F	IF=2.0A, Pulse measurement			0.74	V
Forward voltage	V_F	IF=1.0A, Pulse measurement			0.69	V
Reverse current	I_R	VR=40V, Pulse measurement			0.005	mA
Total capacitance	Ct	f=1MHz, VR=10V		63		pF
Thermal resistance	Rth(j-l)	Junction 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

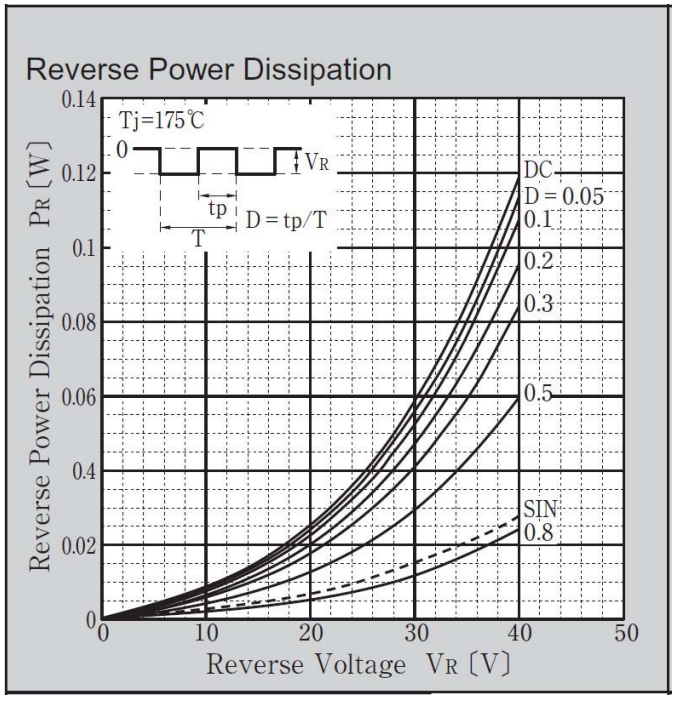
※ ：See the original Specifications

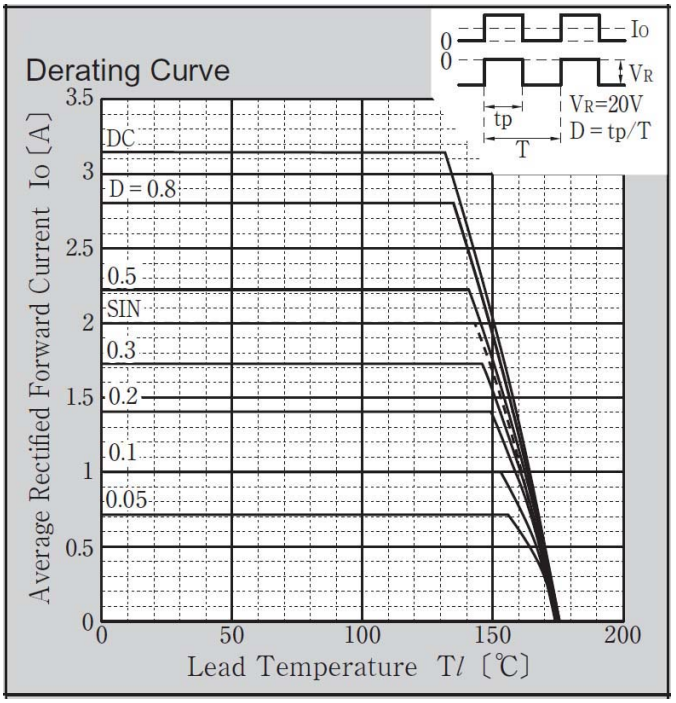
CHARACTERISTIC DIAGRAMS

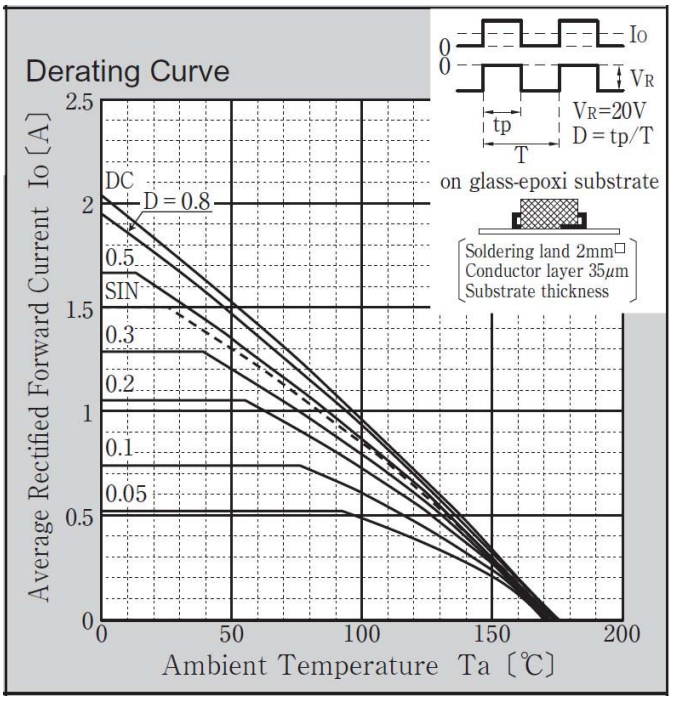


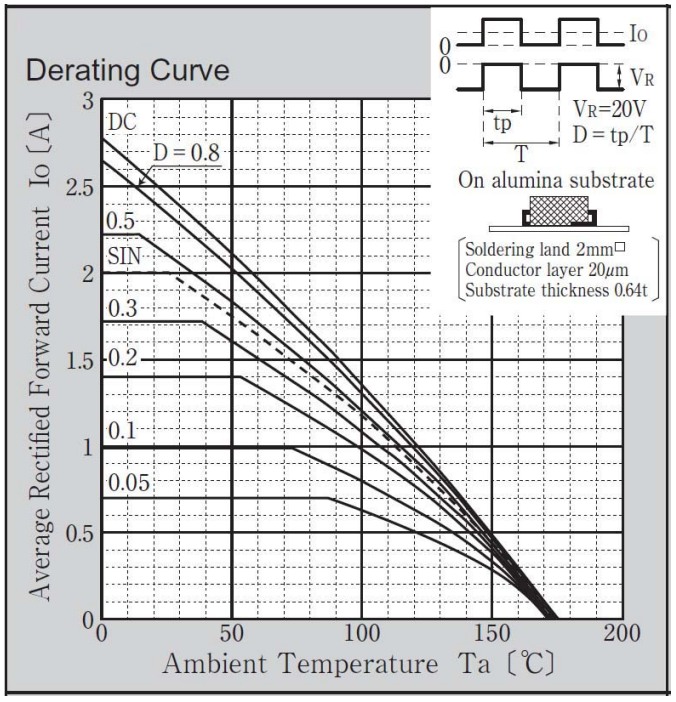


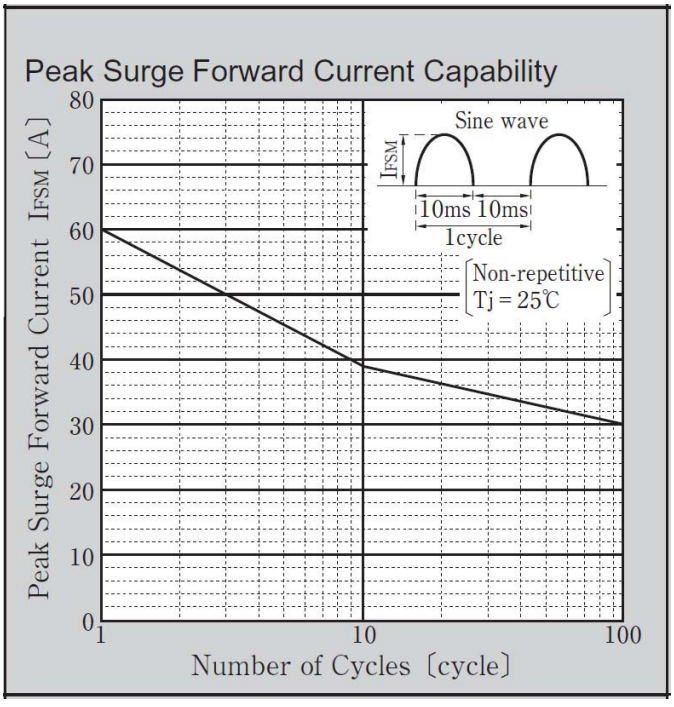




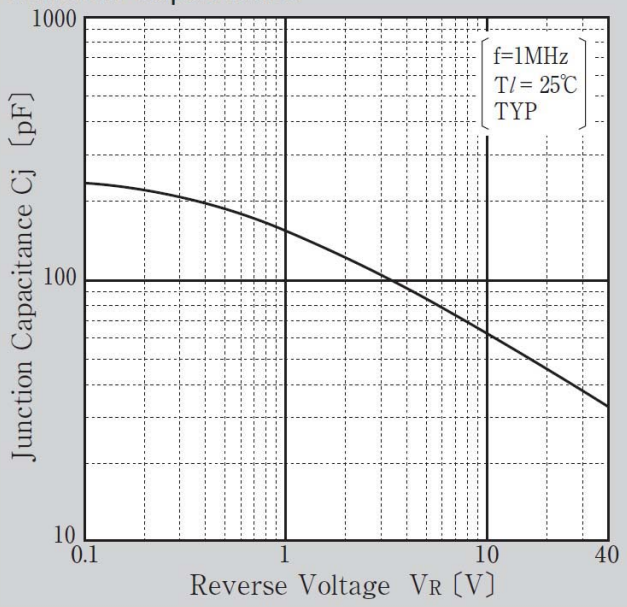

Derating Curve
Io
VR
VR=20V
D = tp/T
tp
T
DC
D = 0.8
0.5
SIN
0.3
0.2
0.1
0.05
Average Rectified Forward Current Io〔A〕
Lead Temperature Tl〔℃〕
0
0.5
1
1.5
2
2.5
3
3.5
50
100
150
200


Derating Curve
Io
VR
VR=20V
D = tp/T
tp
T
on glass-epoxi substrate
Soldering land 2mm□
Conductor layer 35μm
Substrate thickness
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
0.5
1
1.5
2
2.5
50
100
150
200

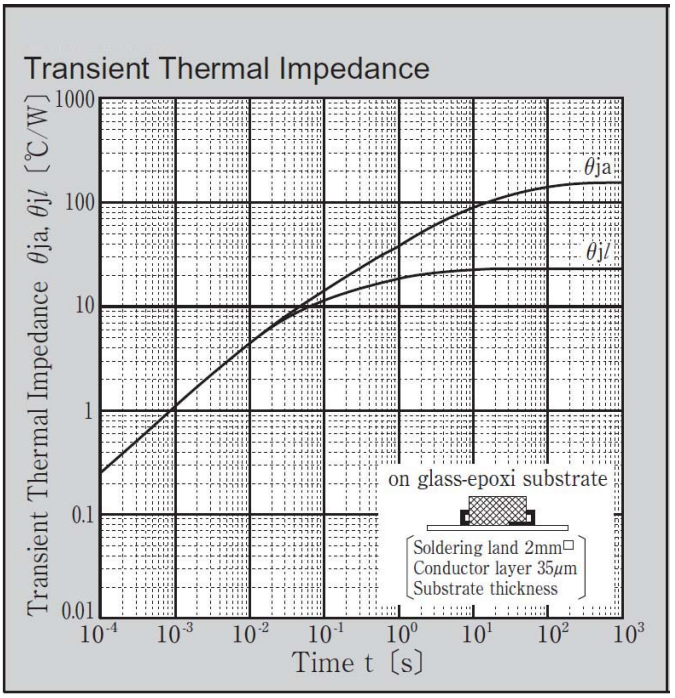

Derating Curve
Io
VR
VR=20V
D = tp/T
tp
T
On alumina substrate
Soldering land 2mm□
Conductor layer 20μm
Substrate thickness 0.64t
DC
D = 0.8
0.5
SIN
0.3
0.2
0.1
0.05
Average Rectified Forward Current Io〔A〕
Ambient Temperature Ta〔℃〕
0
0.5
1
1.5
2
2.5
3
50
100
150
200


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〕
0
10
20
30
40
50
60
70
80
1
10
100

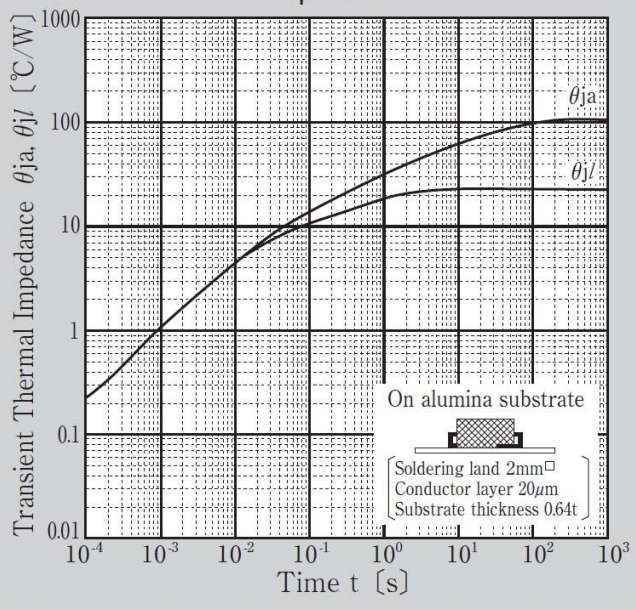
Junction Capacitance



Transient Thermal Impedance



Transient Thermal Impedance



Outline Dimensions

unit:mm

B3

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

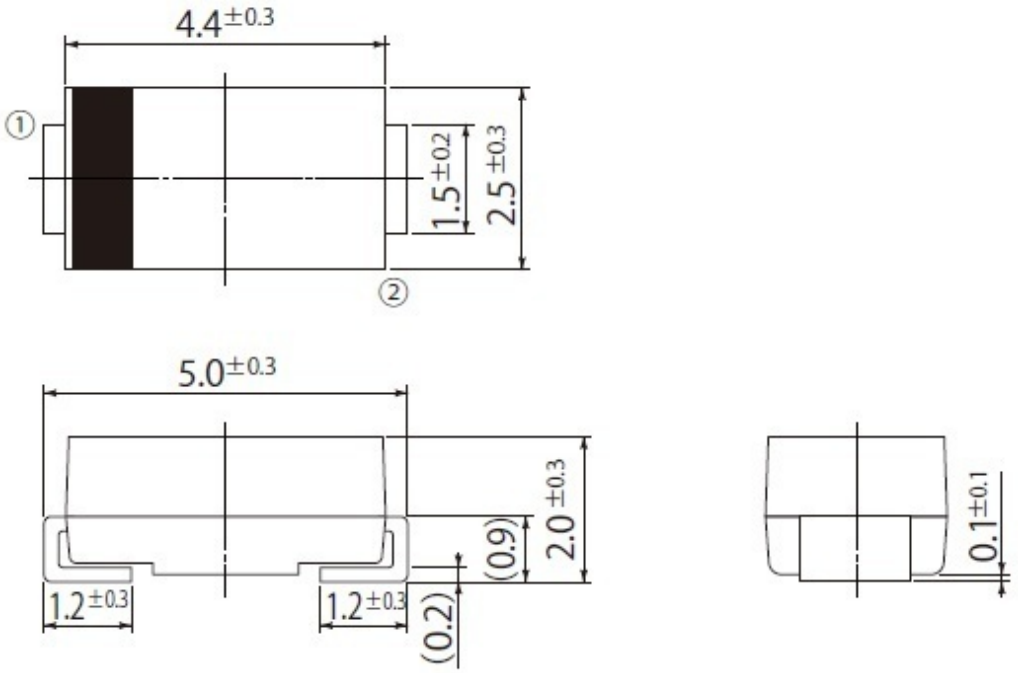
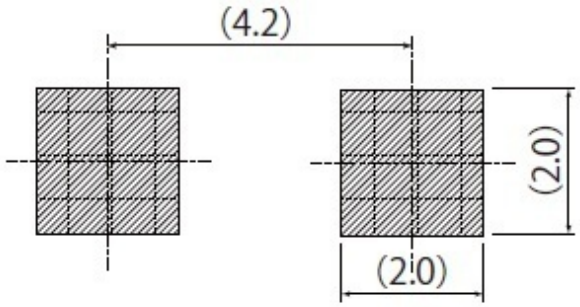


Fig. B3-1 ① ②



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)

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