

D1FH3

Schottky Barrier Diodes 30V, 3A

Feature

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

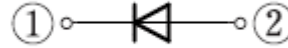
OUTLINE

Package (House Name): 1F

Package (JEDEC Code): DO-214AC



Equivalent circuit



Absolute Maximum Ratings (unless otherwise specified : $T_c=25^\circ\text{C}$)

Item	Symbol	Conditions	Ratings	Unit
Storage temperature	T_{stg}		-55 to 125	$^\circ\text{C}$
Junction temperature	T_j		-55 to 125	$^\circ\text{C}$
Repetitive peak reverse voltage	V_{RRM}		30	V
Average forward current	$I_F(AV)$	50Hz sine wave, Resistance load, $T_c=95^\circ\text{C}$	3	A
Average forward current	$I_F(AV)$	50Hz sine wave, Resistance load, $T_l=91^\circ\text{C}$	3	A
Average forward current	$I_F(AV)$	50Hz sine wave, Resistance load, On glass-epoxy substrate, $T_a=25^\circ\text{C}$ ※	2.5	A
Surge forward current	I_{FSM}	50Hz sine wave, Non-repetitive, 1cycle, Peak value, $T_j=25^\circ\text{C}$	60	A

※ :See the original Specifications

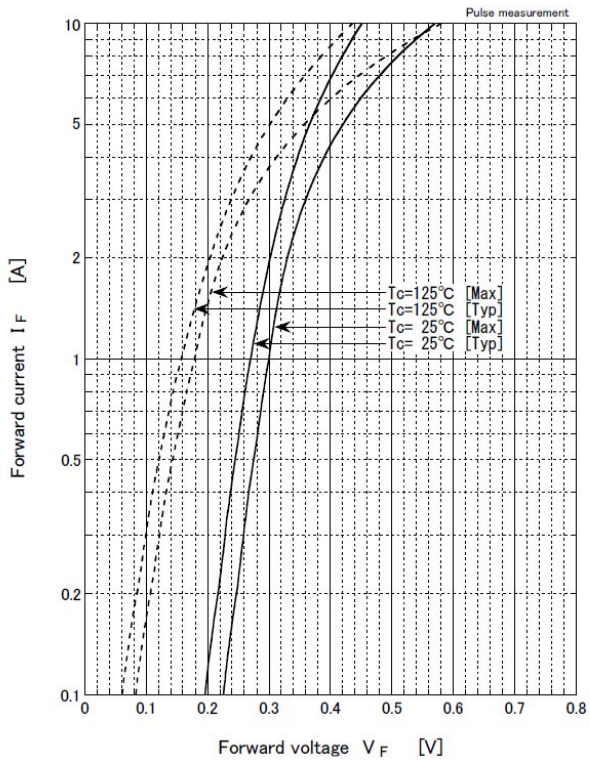
Electrical Characteristics (unless otherwise specified : Tc=25°C)

Item	Symbol	Conditions	Ratings			Unit
			MIN	TYP	MAX	
Forward voltage	V_F	IF=3A, Pulse measurement			0.36	V
Forward voltage	V_F	IF=1A, Pulse measurement			0.3	V
Reverse current	I_R	VR=30V, Pulse measurement			2	mA
Total capacitance	Ct	f=1MHz, VR=10V		130		pF
Thermal resistance	Rth(j-c)	Junction to case			16	°C/W
Thermal resistance	Rth(j-l)	Junction to lead			18	°C/W
Thermal resistance	Rth(j-a)	Junction to ambient, On glass-epoxy substrate ※			65	°C/W

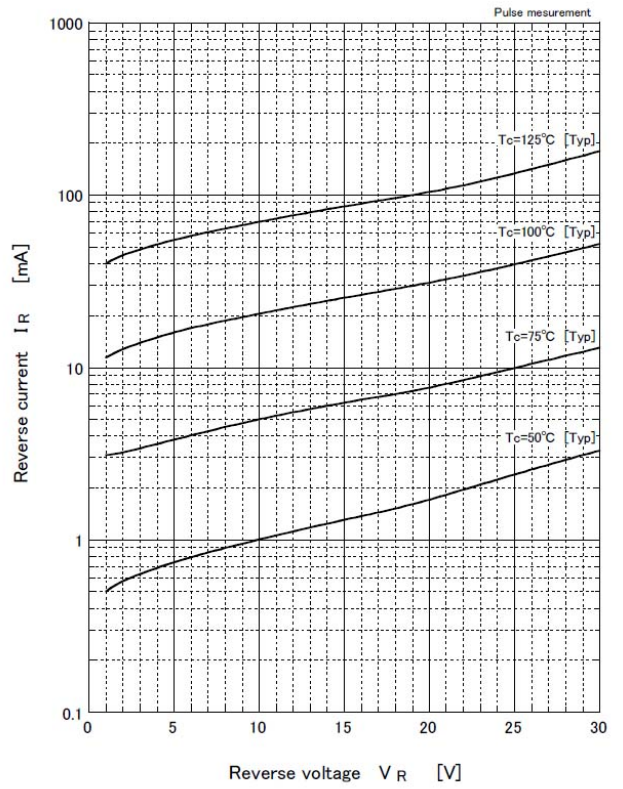
※ :See the original Specifications

CHARACTERISTIC DIAGRAMS

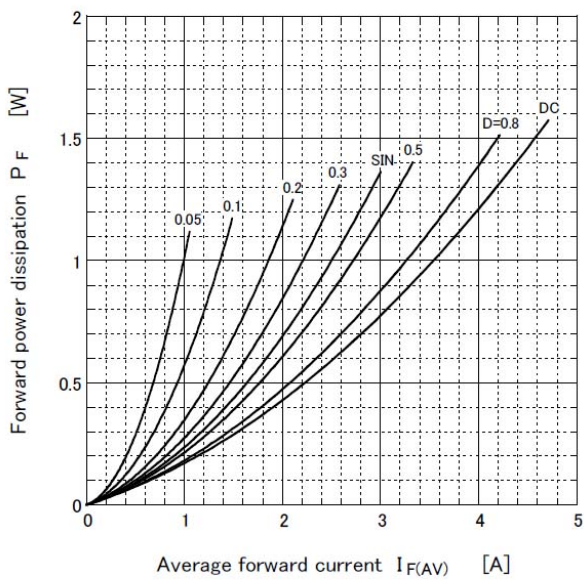
Forward voltage



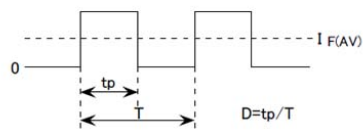
Reverse current



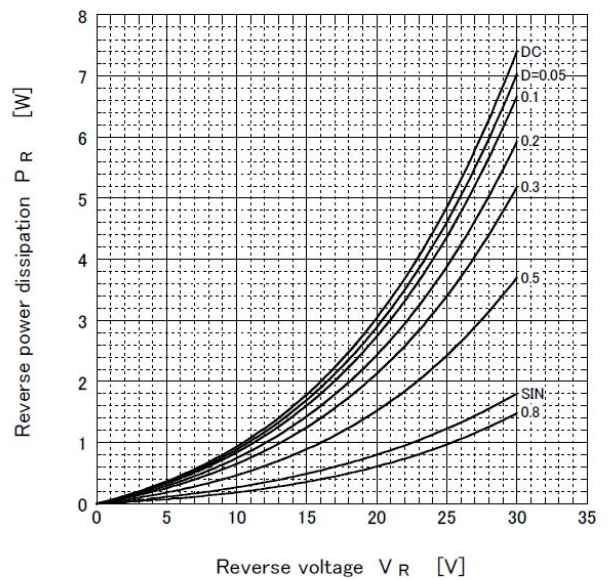
Forward power dissipation



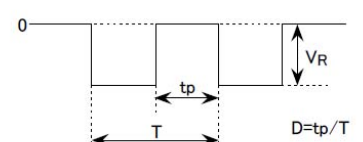
● $T_J=125^\circ\text{C}$



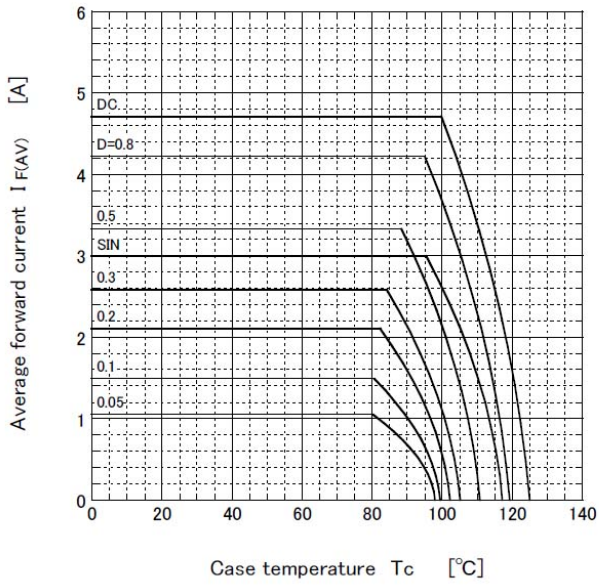
Reverse power dissipation



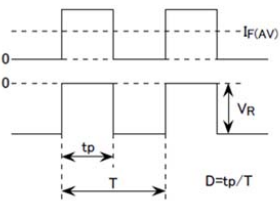
● $T_J=125^\circ\text{C}$



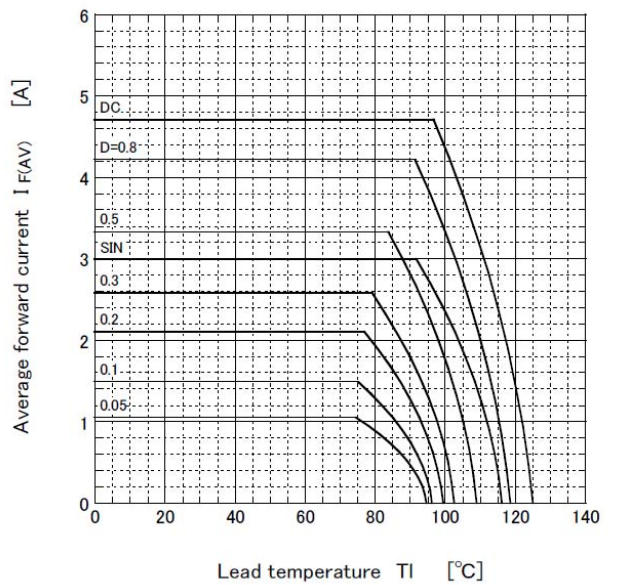
Derating curve



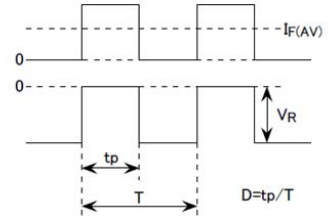
● $V_R = 15V$
R-load
Free in air



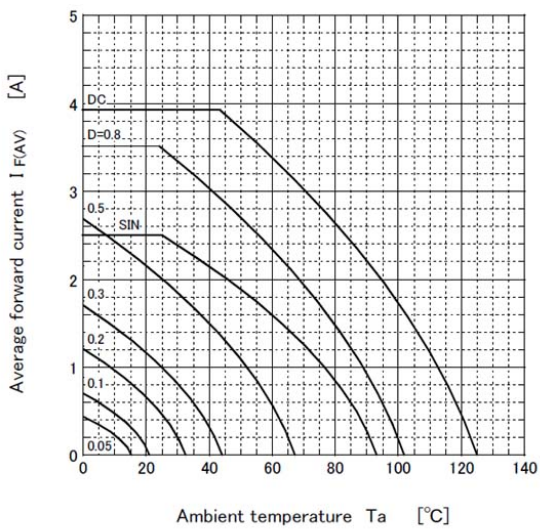
Derating curve



● $V_R = 15V$
R-load
Free in air



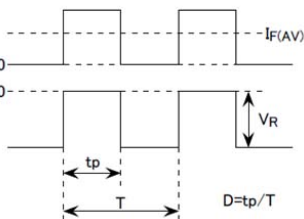
Derating curve



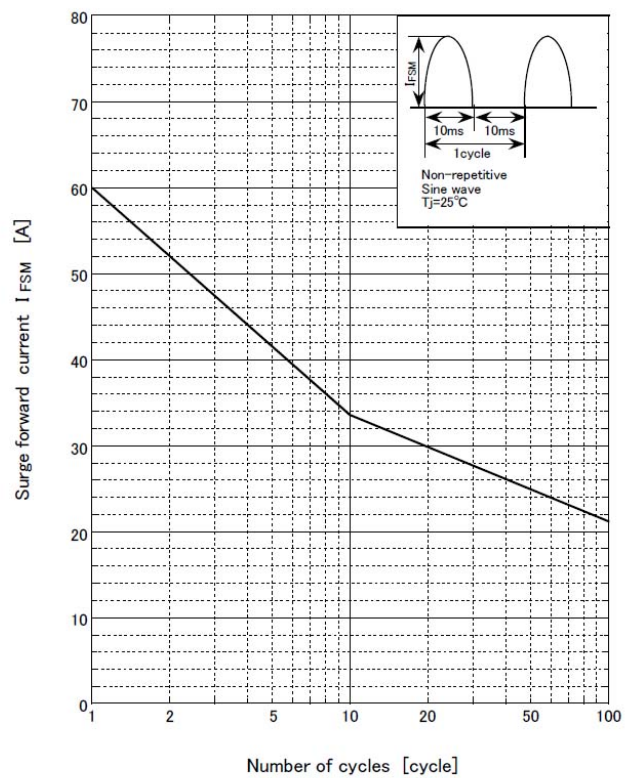
● $V_R = 15V$
R-load
Free in air

● Substrate detail

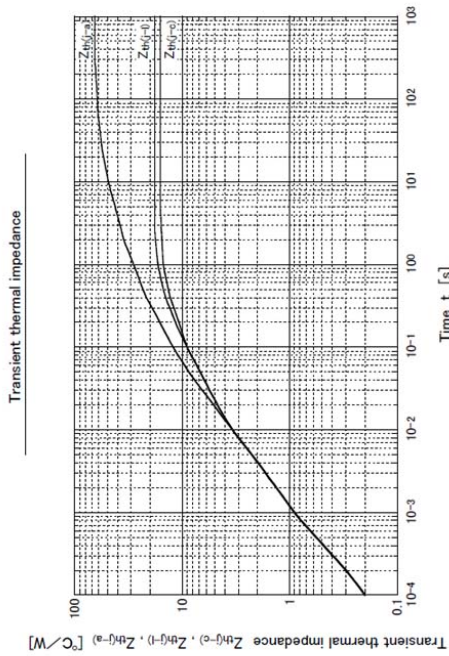
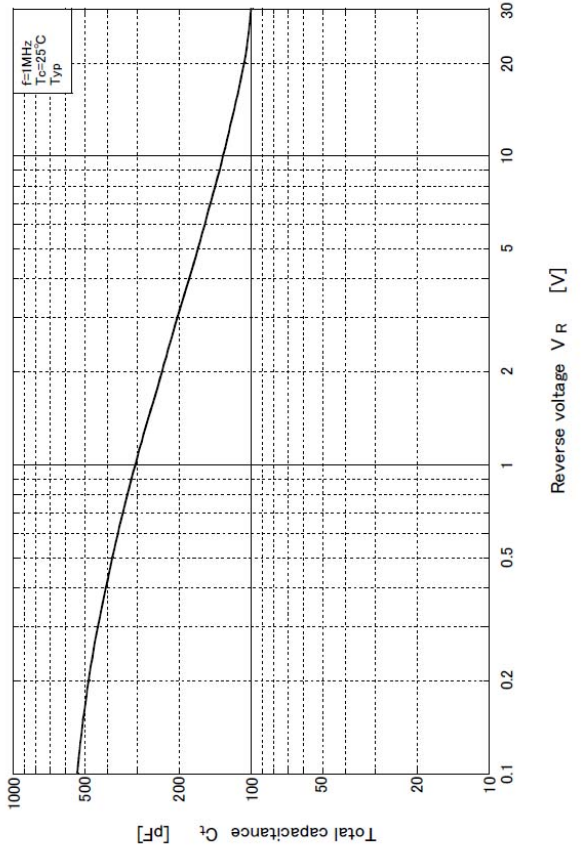
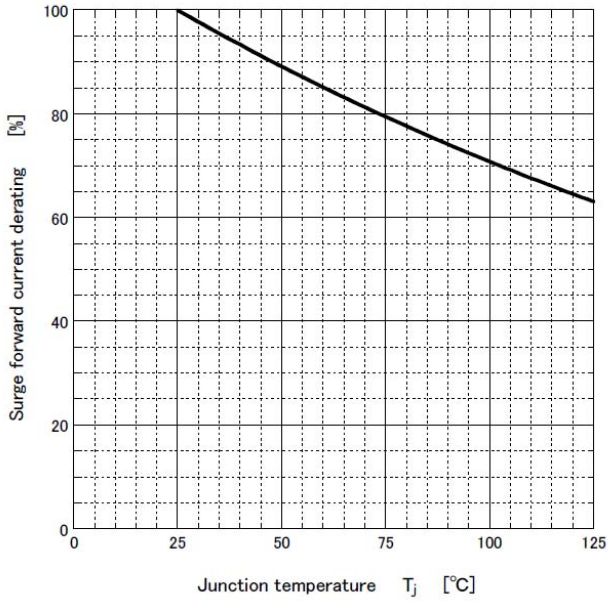
Type	Glass-epoxy
Size	2 inch ²
Thickness	1mm
Conductor thickness	35μm
Pattern area	2274.1mm ²



Surge forward current capability



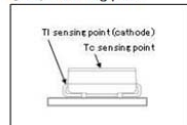
Surge forward current derating vs Junction temperature



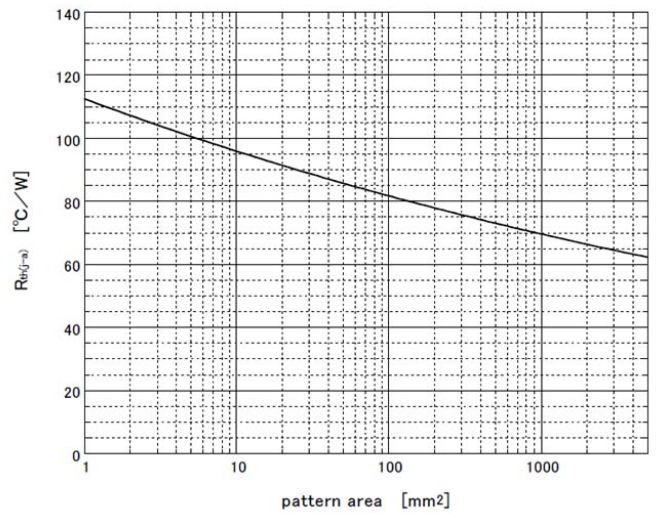
● Substrate detail

Type	Glass-epoxy
Size	2 inch ²
Thickness	1mm
Conductor thickness	35μm
Pattern area	2274.1mm ²

● Tc, Ti sensing point



$R_{th(j-a)}$ - pattern area

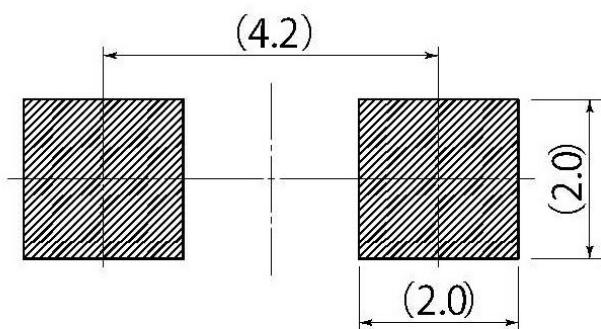
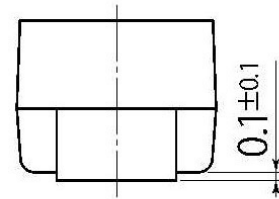
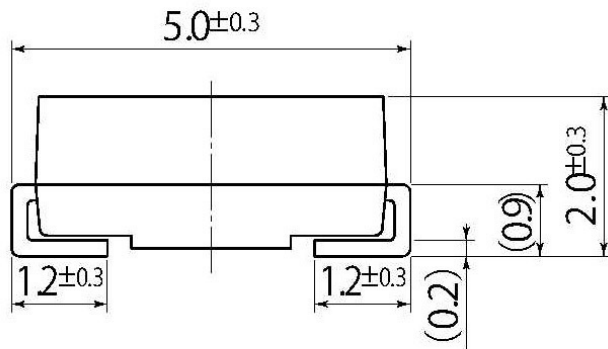
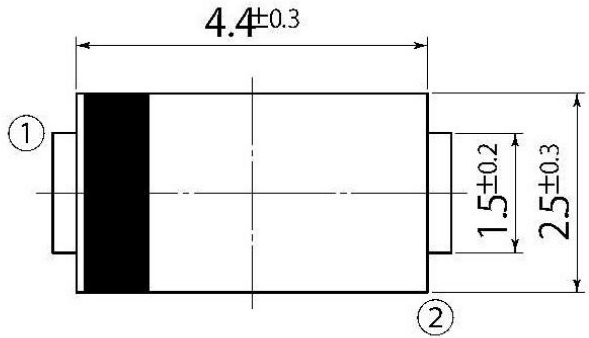


● Substrate detail

Type	Glass-epoxy
Size	2 inch ²
Thickness	1mm
Conductor thickness	35μm

B3

JEDEC Code	DO-214AC
JEITA Code	-
House Name	1F



Referential Soldering Pad

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

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