

# M1FH3

## Schottky Barrier Diodes

30V, 1.7A

### Feature

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

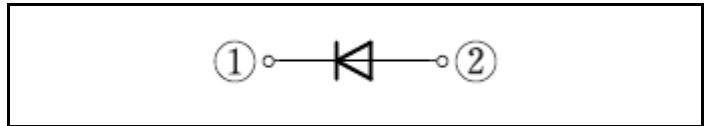
### OUTLINE

Package (House Name): M1F

Package (JEDEC Code): DO-219AA similar



### 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, On glass-epoxy substrate, $T_a=25^\circ\text{C}$ ※	1.7	A
Average forward current	$I_F(AV)$	50Hz sine wave, Resistance load, $T_c=105^\circ\text{C}$	1.5	A
Average forward current	$I_F(AV)$	50Hz sine wave, Resistance load, $T_l=103^\circ\text{C}$	1.5	A
Surge forward current	$I_{FSM}$	50Hz sine wave, Non-repetitive, 1cycle, Peak value, $T_j=25^\circ\text{C}$	30	A

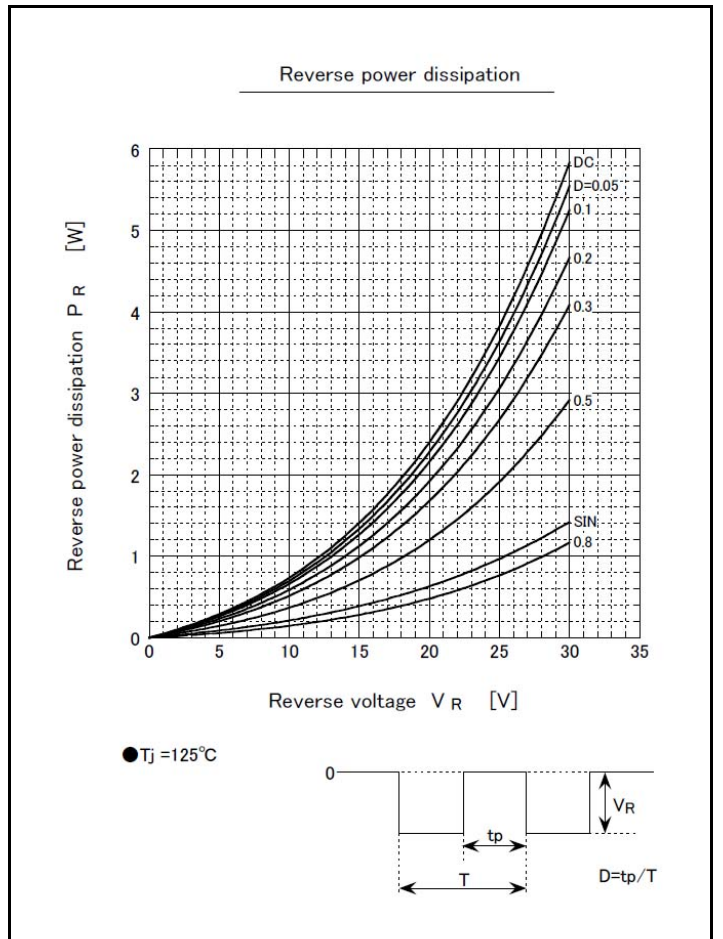
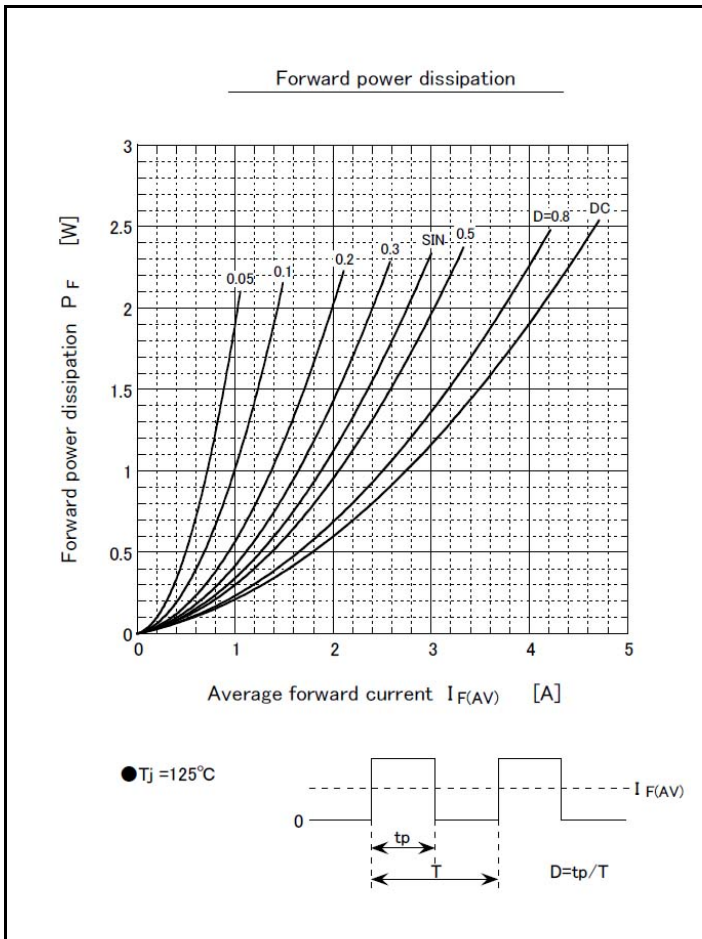
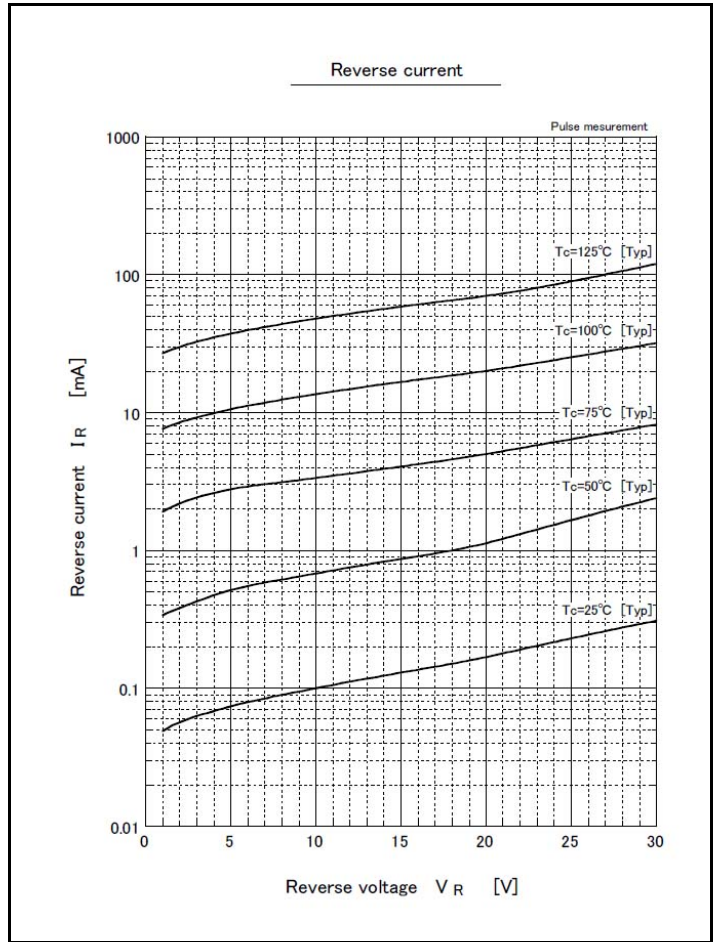
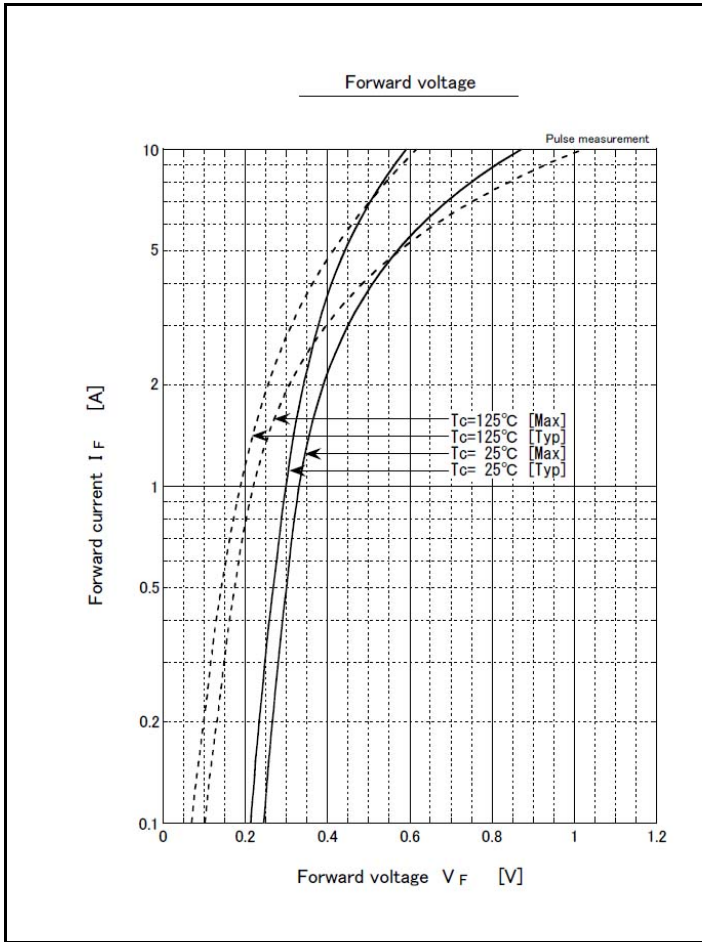
※ :See the original Specifications

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

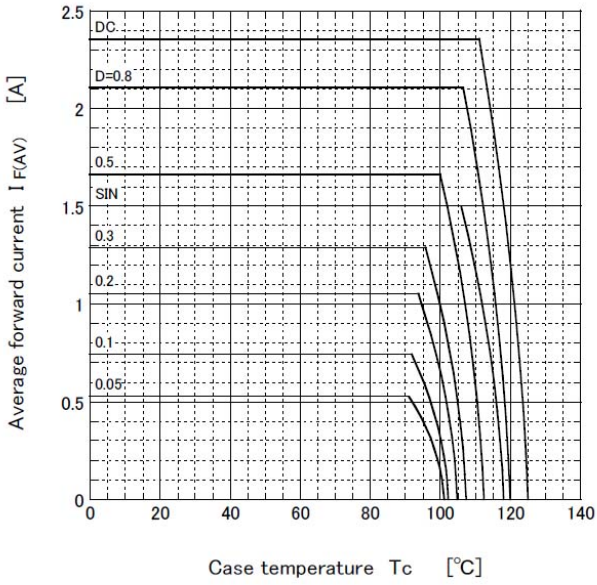
Item	Symbol	Conditions	Ratings			Unit
			MIN	TYP	MAX	
Forward voltage	V <sub>F</sub>	I <sub>F</sub> =1.5A, Pulse measurement			0.36	V
Forward voltage	V <sub>F</sub>	I <sub>F</sub> =0.5A, Pulse measurement			0.3	V
Reverse current	I <sub>R</sub>	V <sub>R</sub> =30V, Pulse measurement			10	mA
Total capacitance	C <sub>t</sub>	f=1MHz, V <sub>R</sub> =10V		80		pF
Thermal resistance	R <sub>th(j-c)</sub>	Junction to case			18	°C/W
Thermal resistance	R <sub>th(j-l)</sub>	Junction to lead			20	°C/W
Thermal resistance	R <sub>th(j-a)</sub>	Junction to ambient, On glass-epoxy substrate ※			80	°C/W

※ :See the original Specifications

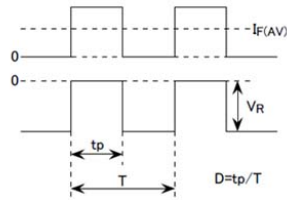
# CHARACTERISTIC DIAGRAMS



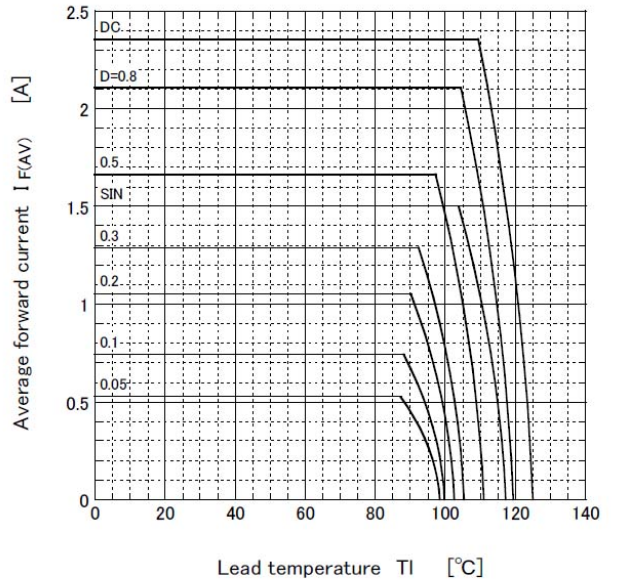
Derating curve



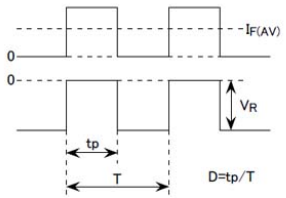
●  $V_R = 15V$   
R-load  
Free in air



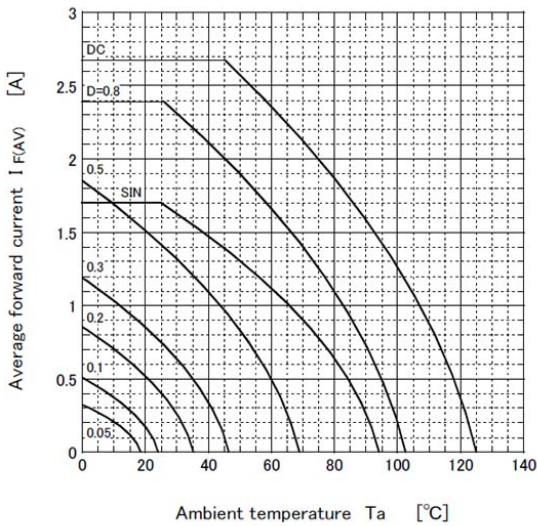
Derating curve



●  $V_R = 15V$   
R-load  
Free in air



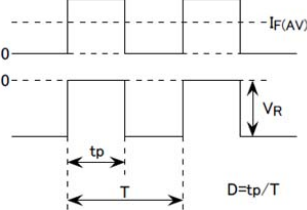
Derating curve



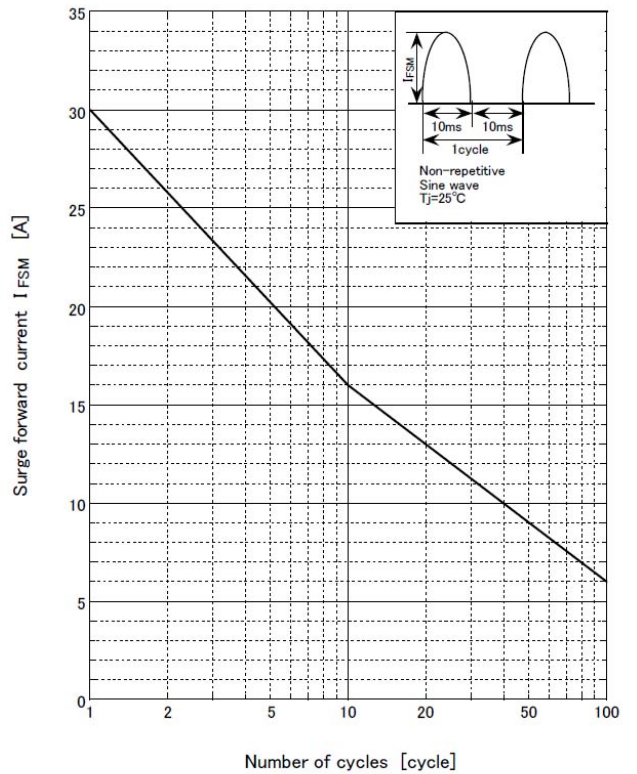
●  $V_R = 15V$   
R-load  
Free in air

● Substrate detail

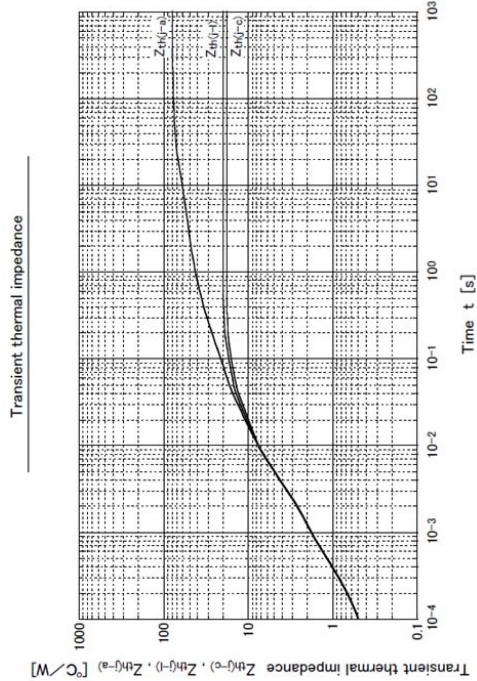
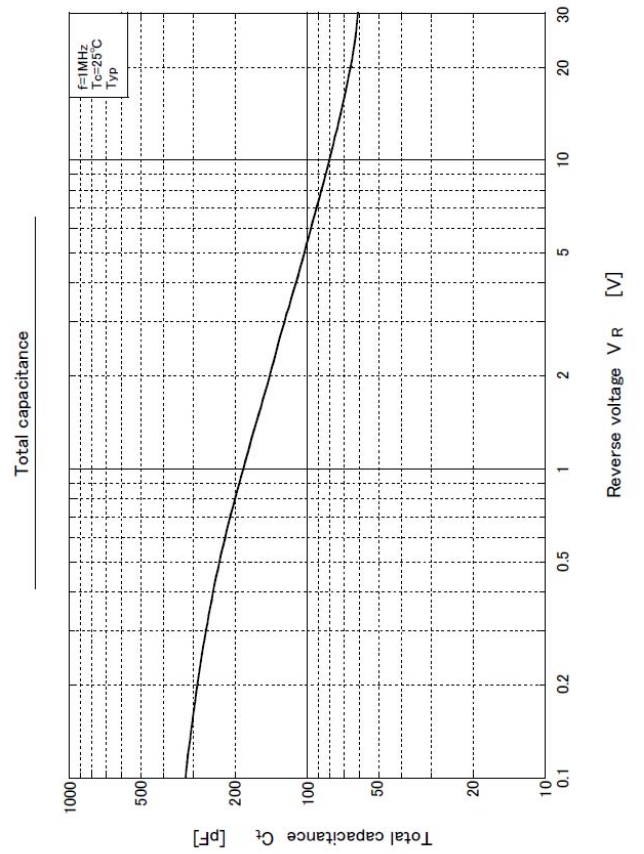
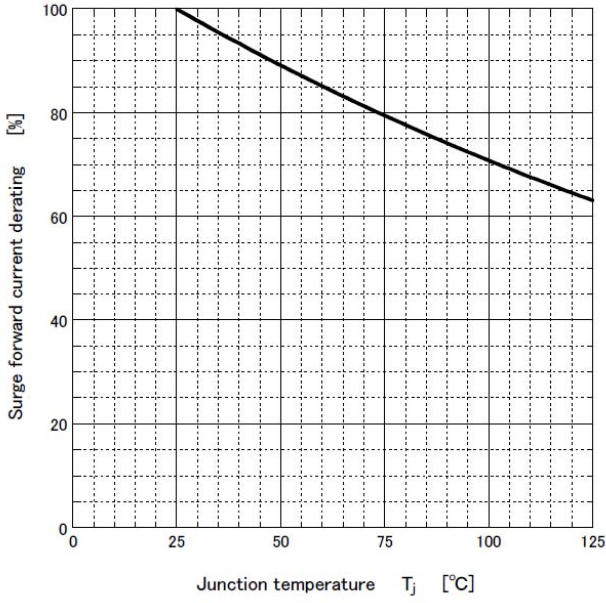
Type	Glass-epoxy
Size	1×1inch
Thickness	1.8mm
Conductor thickness	35μm
Pattern area	43.4mm <sup>2</sup>



Surge forward current capability



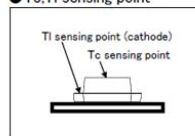
Surge forward current derating vs Junction temperature



● Substrate detail

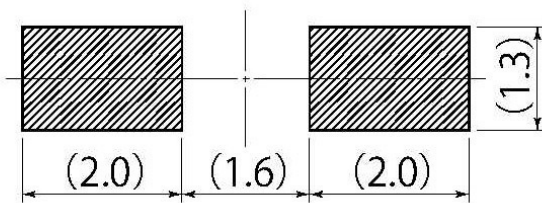
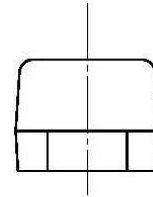
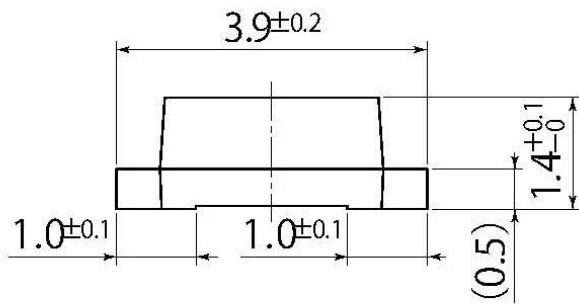
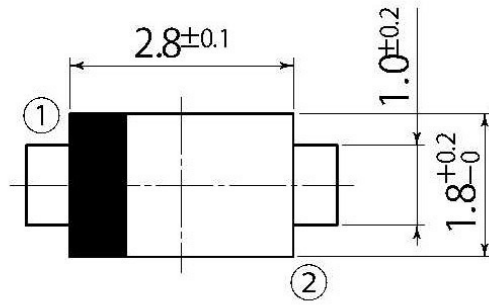
Type	Glass-epoxy
Size	1×1inch
Thickness	1.6mm
Conductor thickness	35μm
Pattern area	434mm <sup>2</sup>

● Tc, Tl sensing point



B2

JEDEC Code	DO-219AA similar
JEITA Code	—
House Name	M1F



Referential Soldering Pad

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

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