

# M1FE60

## General Rectifying Diodes

600V, 1.0A

### Feature

- Small SMD
- High ESD Capability
- Based on AEC-Q101
- Pb free terminal
- RoHS:Yes

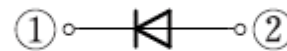
### OUTLINE

Package (House Name): M1F

Package (JEDEC Code): DO-219AA similar



### Equivalent circuit



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

Item	Symbol	Conditions	Ratings	Unit
Storage temperature	Tstg		-55 to 150	°C
Junction temperature	Tj		-55 to 150	°C
Repetitive peak reverse voltage	V <sub>RRM</sub>		600	V
Average forward current	I <sub>F(AV)</sub>	50Hz sine wave, Resistance load, Tl=129°C	1	A
Average forward current	I <sub>F(AV)</sub>	50Hz sine wave, Resistance load, On alumina substrate, Ta=25°C ※	1	A
Average forward current	I <sub>F(AV)</sub>	50Hz sine wave, Resistance load, On glass-epoxy substrate, Ta=25°C ※	0.65	A
Surge forward current	I <sub>FSM</sub>	50Hz sine wave, Non-repetitive 1 cycle peak value, Tj=25°C	30	A
Surge forward current	I <sub>FSM1</sub>	tp=1ms, sine wave, Non-repetitive, peak value, Tj=25°C	70	A

※ : See the original Specifications

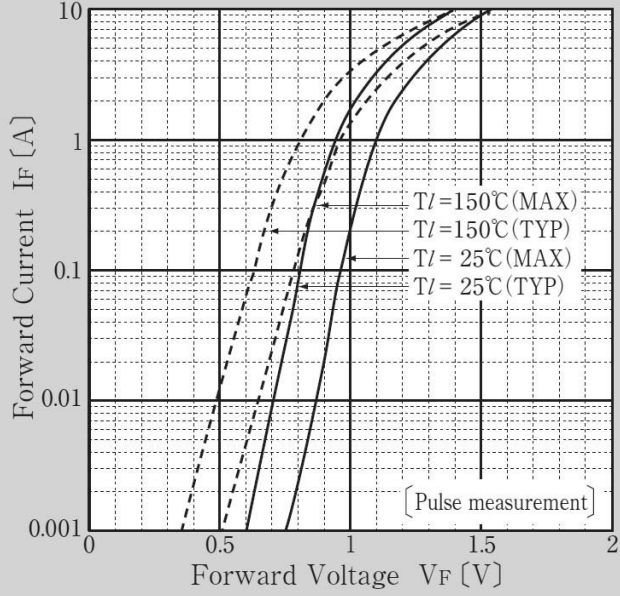
**Electrical Characteristics** (unless otherwise specified : Tl=25°C)

Item	Symbol	Conditions	Ratings			Unit
			MIN	TYP	MAX	
Forward voltage	V <sub>F</sub>	IF=1A, Pulse measurement			1.1	V
Reverse current	I <sub>R</sub>	VR=600V, Pulse measurement			10	μA
Electro static discharge Capability	V <sub>ESD</sub>	C=150pF, R=150Ω, Polarity±, Aerial discharge		25		kV
Thermal resistance	Rth(j-l)	Junction to lead			20	°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 ※			186	°C/W

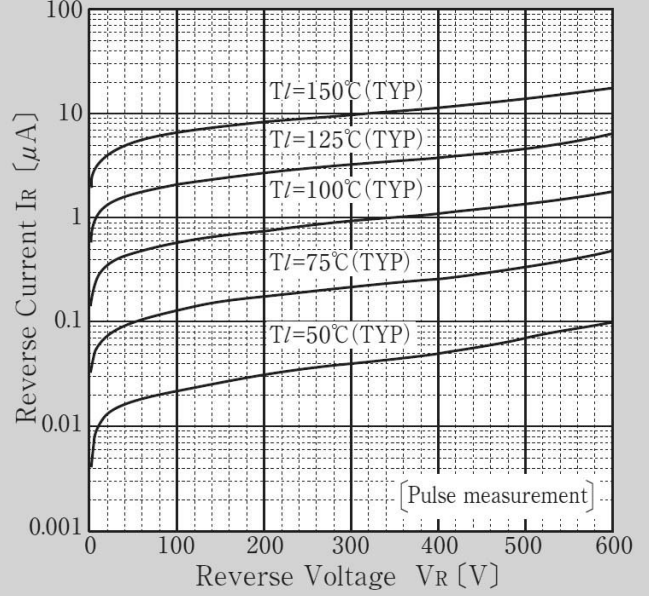
※ : See the original Specifications

# CHARACTERISTIC DIAGRAMS

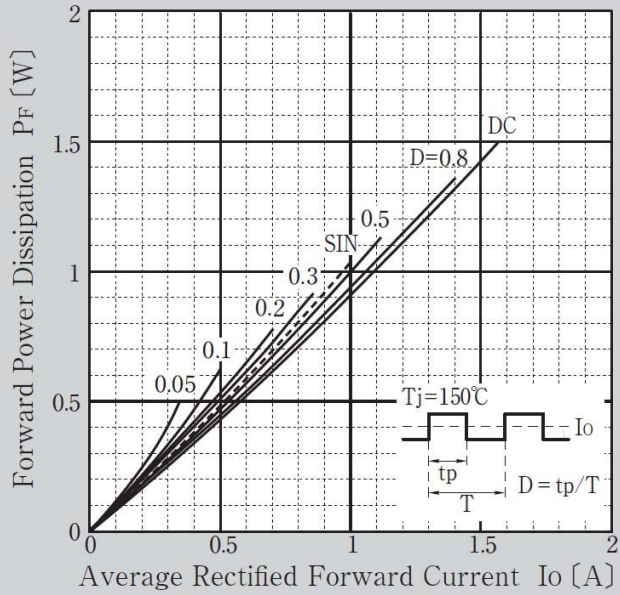
Forward Voltage



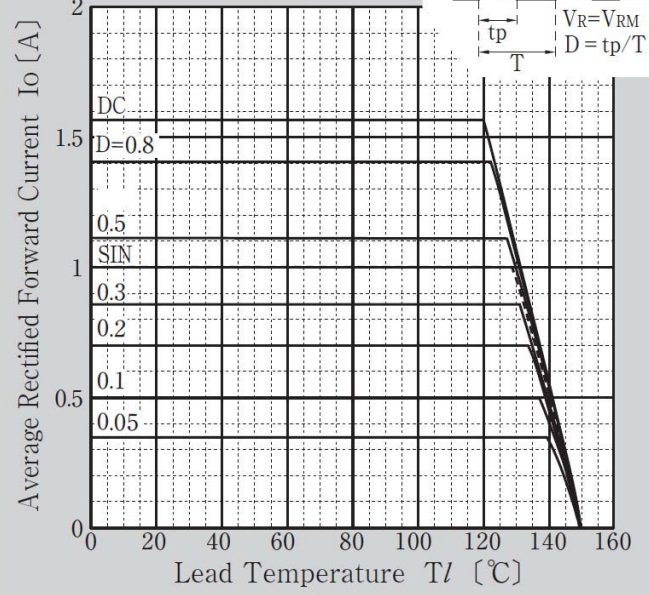
Reverse Current

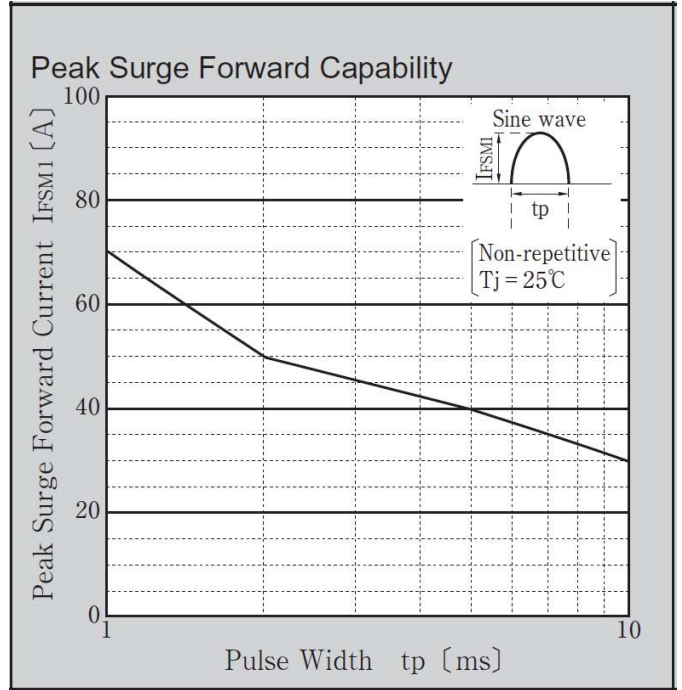
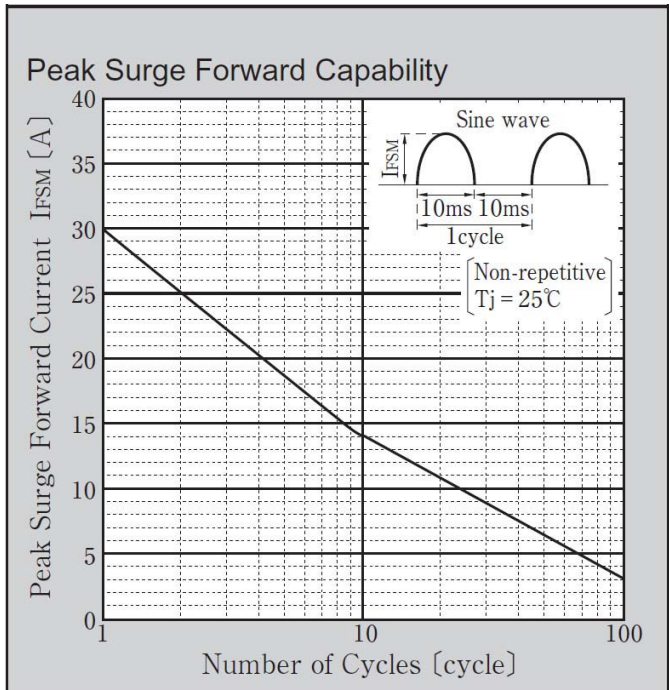
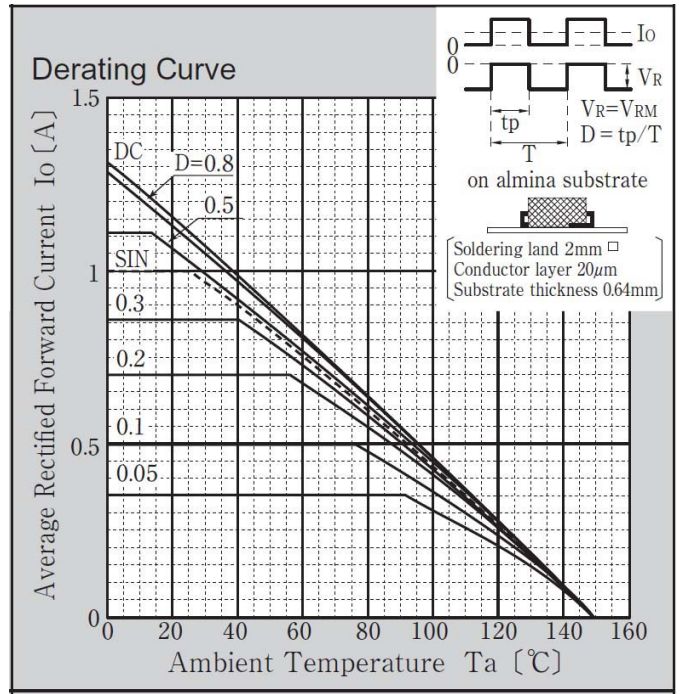
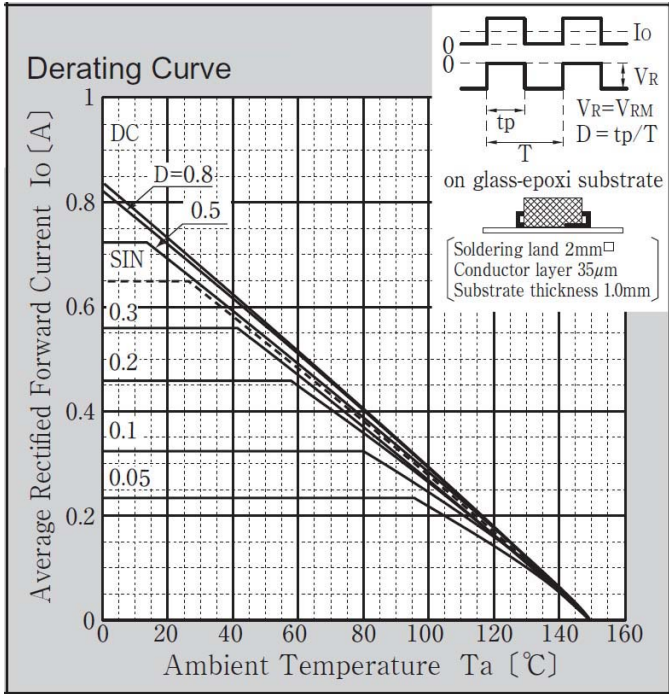


Forward Power Dissipation

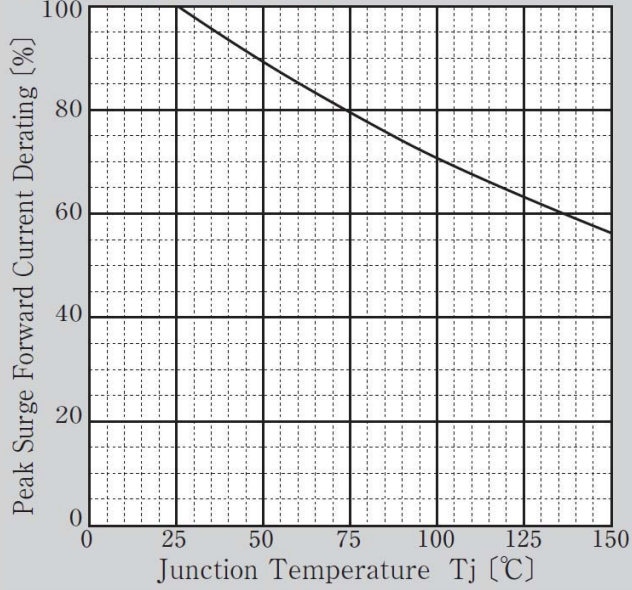


Derating Curve  $T_j$ - $I_o$

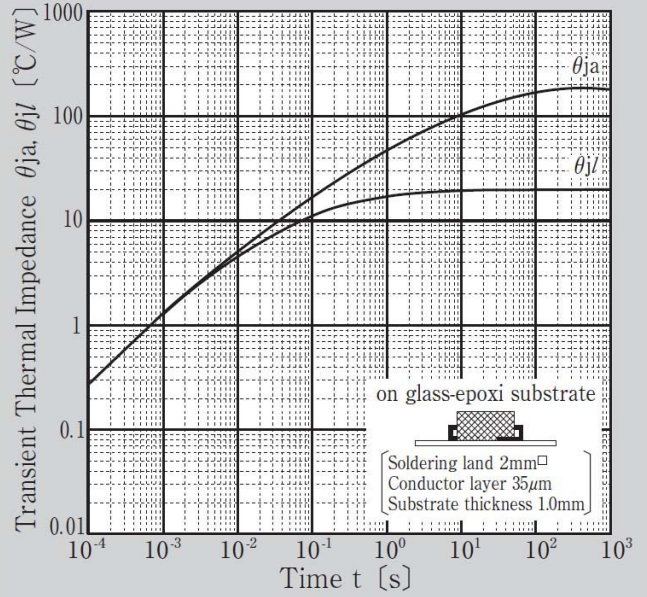




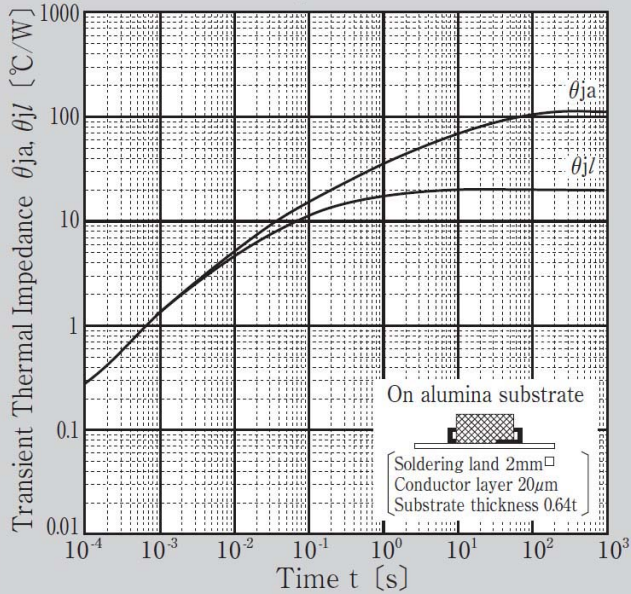
Peak Surge Forward Current Derating vs Junction Temperature



Transient Thermal Impedance

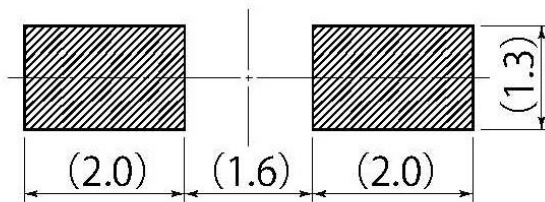
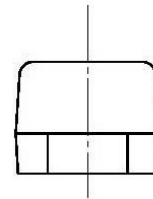
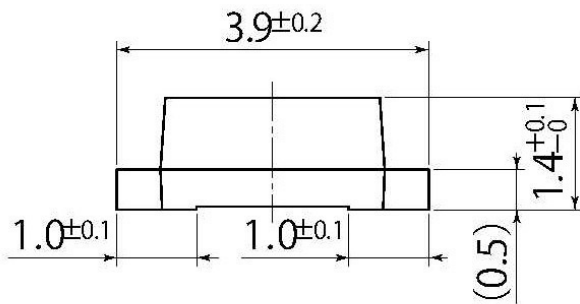
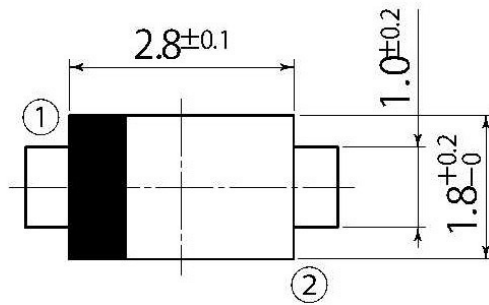


Transient Thermal Impedance



B2

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



Referential Soldering Pad

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

## Notes

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