

# M1FE60

## General Rectifying Diodes

600V, 1.0A

### Feature

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

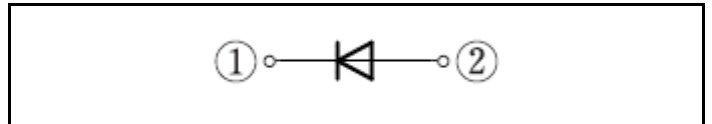
### OUTLINE

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	T <sub>stg</sub>		-55 to 150	°C
Junction temperature	T <sub>j</sub>		-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

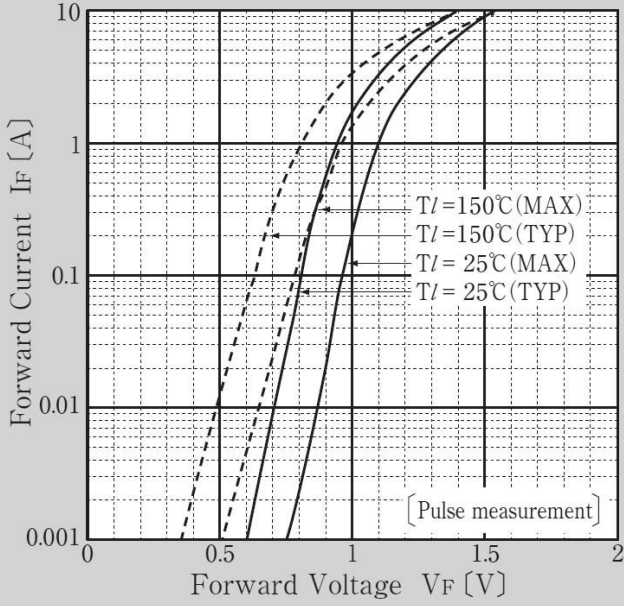
**Electrical Characteristics** (unless otherwise specified : Tl=25°C)

Item	Symbol	Conditions	Ratings			Unit
			MIN	TYP	MAX	
Forward voltage	$V_F$	$I_F=1A$ , Pulse measurement			1.1	V
Reverse current	$I_R$	$V_R=600V$ , Pulse measurement			10	$\mu A$
Electro static discharge Capability	$V_{ESD}$	$C=150pF$ , $R=150\Omega$ , Polarity $\pm$ , Aerial discharge		25		kV
Thermal resistance	$R_{th(j-l)}$	Junction to lead			20	$^{\circ}C/W$
Thermal resistance	$R_{th(j-a)}$	Junction to ambient, On alumina substrate ※			108	$^{\circ}C/W$
Thermal resistance	$R_{th(j-a)}$	Junction to ambient, On glass-epoxy substrate ※			186	$^{\circ}C/W$

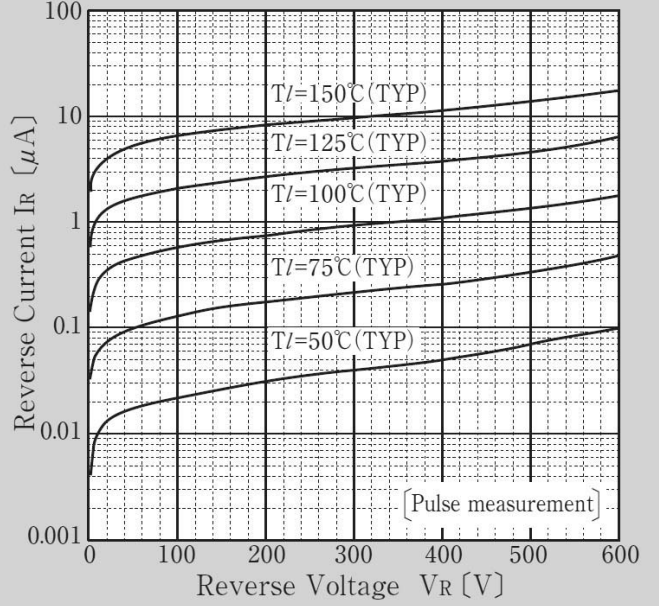
※ :See the original Specifications

# CHARACTERISTIC DIAGRAMS

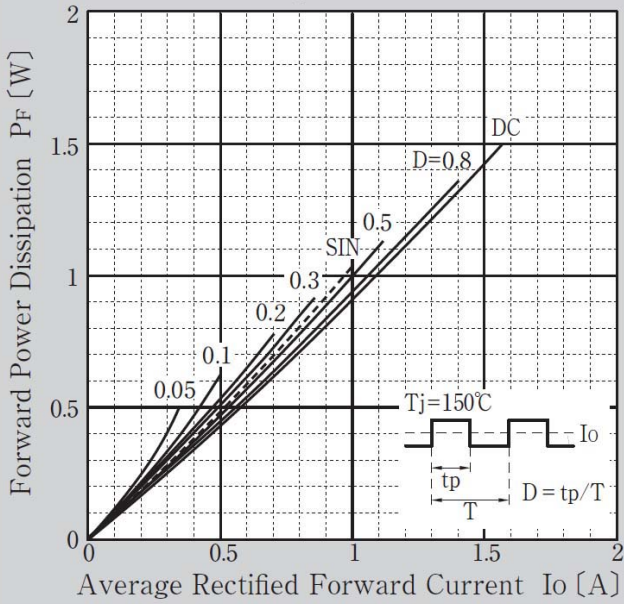
### Forward Voltage



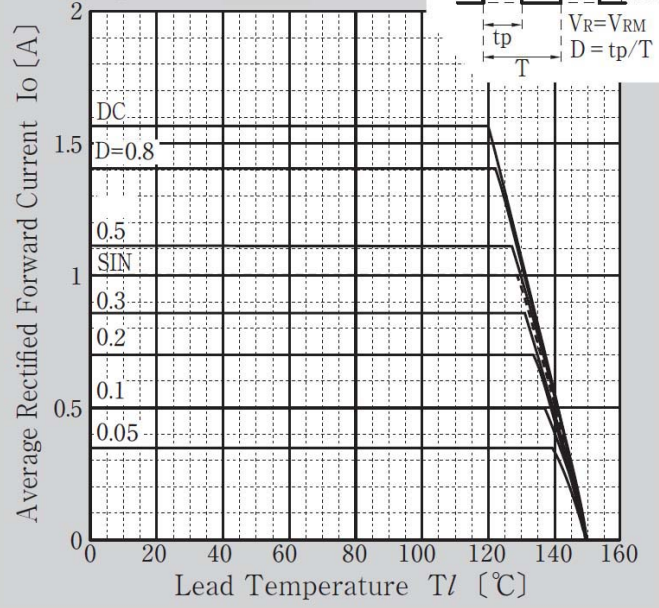
### Reverse Current

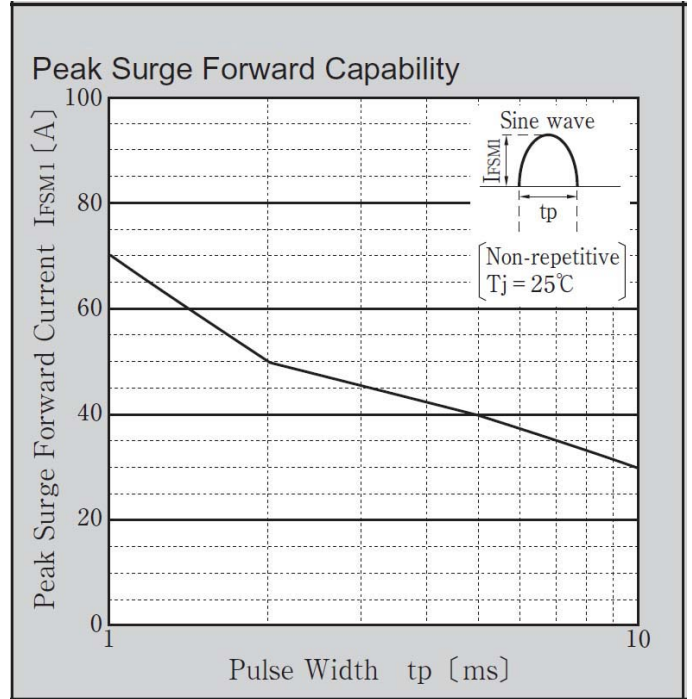
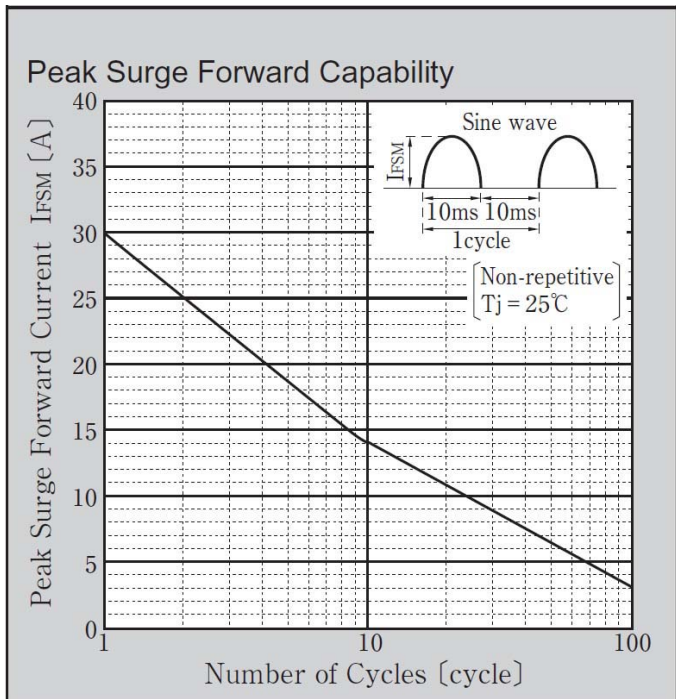
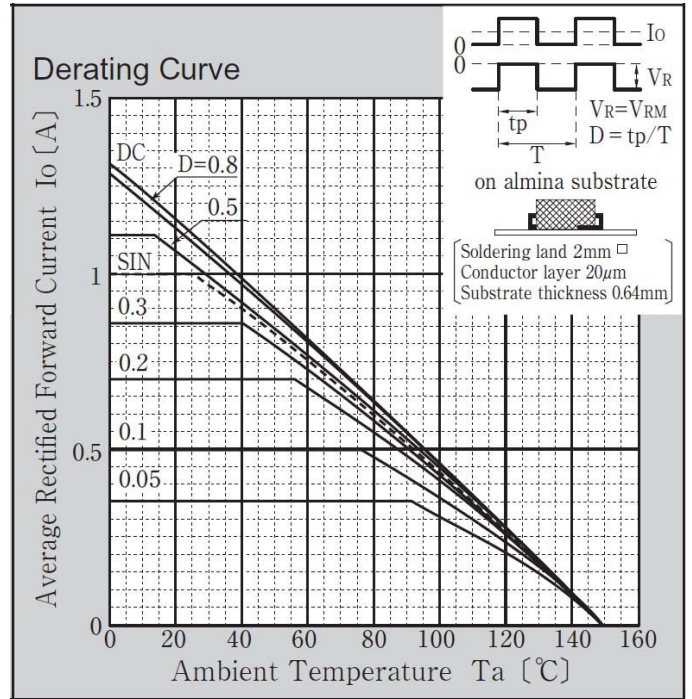
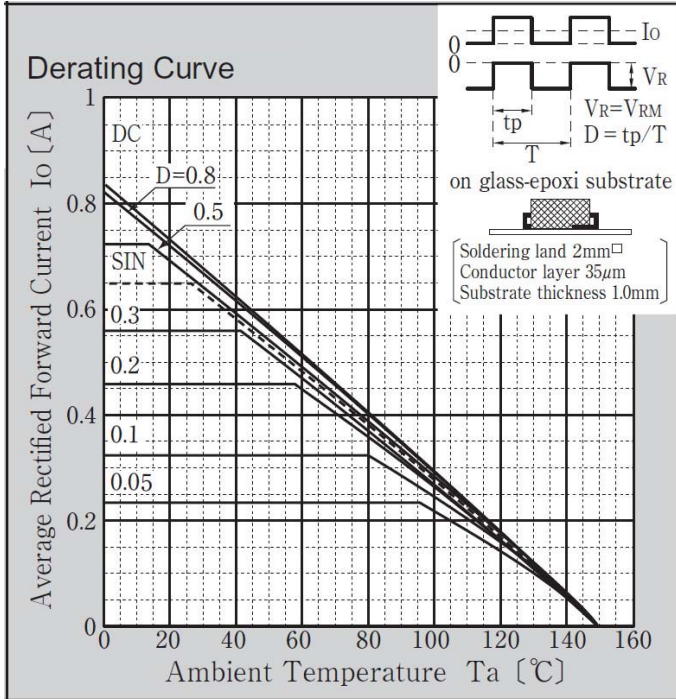


### Forward Power Dissipation



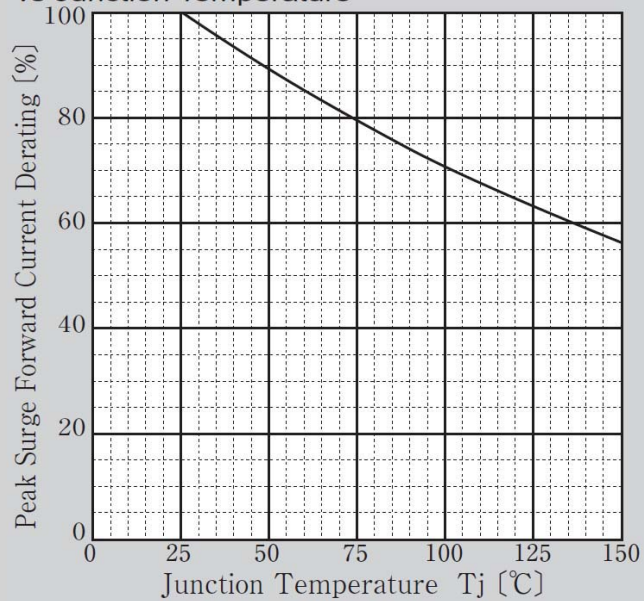
### Derating Curve $T_j$ - $I_o$



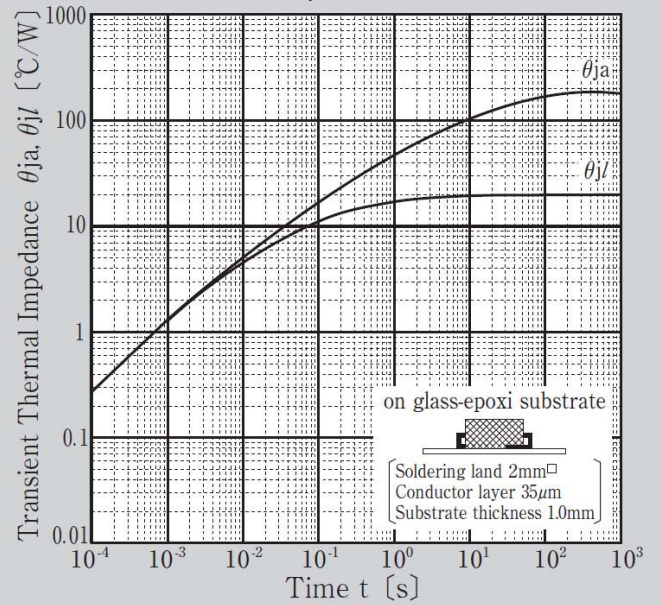




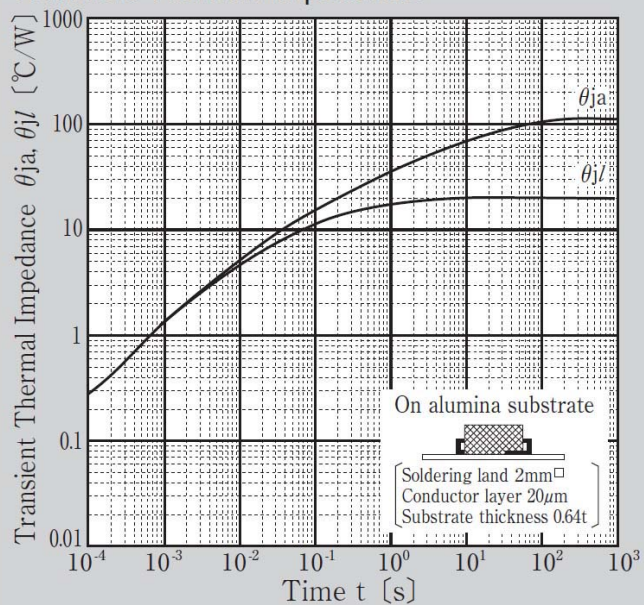
Peak Surge Forward Current Derating vs Junction Temperature



Transient Thermal Impedance

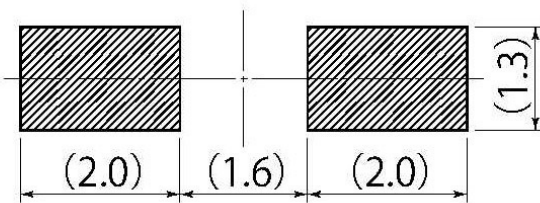
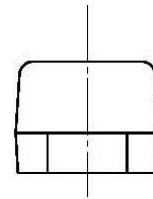
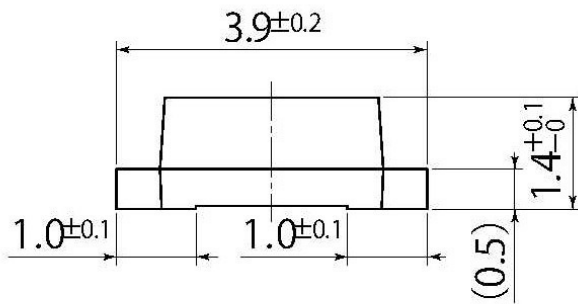
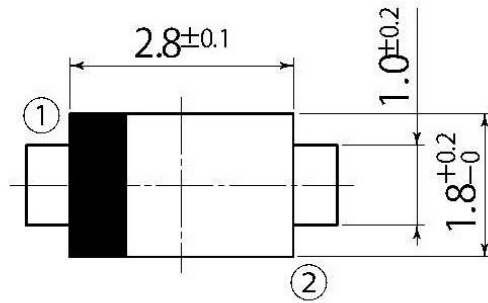


Transient Thermal Impedance



B2

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



Referential Soldering Pad

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

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