

M1F60

General Rectifying Diodes
600V, 1.0A

Feature

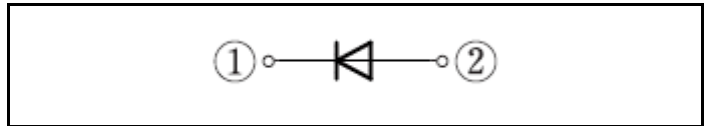
- Small SMD
- Available for automotive use
- Pb free terminal
- RoHS:Yes

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 _{stg}		-55 to 150	°C
Junction temperature	T _j		-55 to 150	°C
Repetitive peak reverse voltage	V _{RRM}		600	V
Average forward current	I _{F(AV)}	50Hz sine wave, Resistance load, On alumina substrate, Ta=25°C ※	1	A
Average forward current	I _{F(AV)}	50Hz sine wave, Resistance load, On glass-epoxy substrate, Ta=25°C ※	0.64	A
Surge forward current	I _{FSM}	50Hz sine wave, Non-repetitive 1 cycle peak value, T _j =25°C	25	A

※ :See the original Specifications

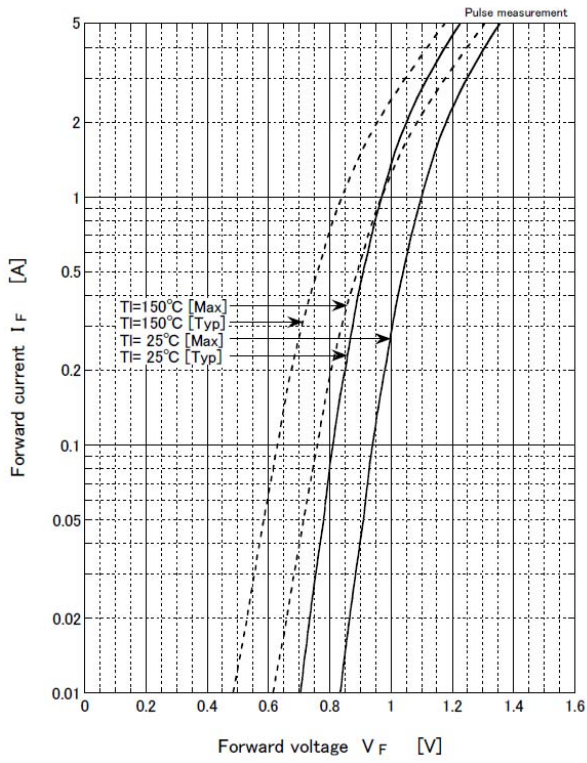
Electrical Characteristics (unless otherwise specified : Tl=25°C)

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	μA
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	$^{\circ}C/W$

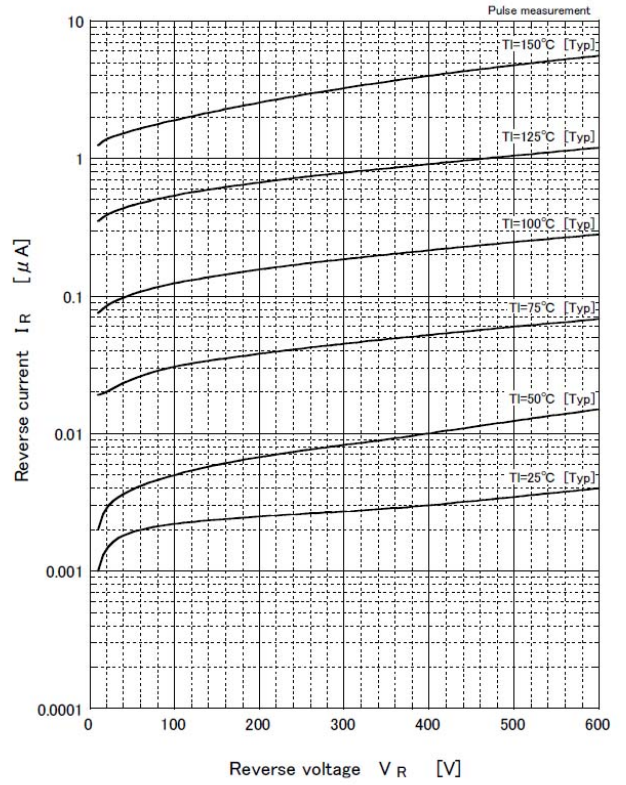
* :See the original Specifications

CHARACTERISTIC DIAGRAMS

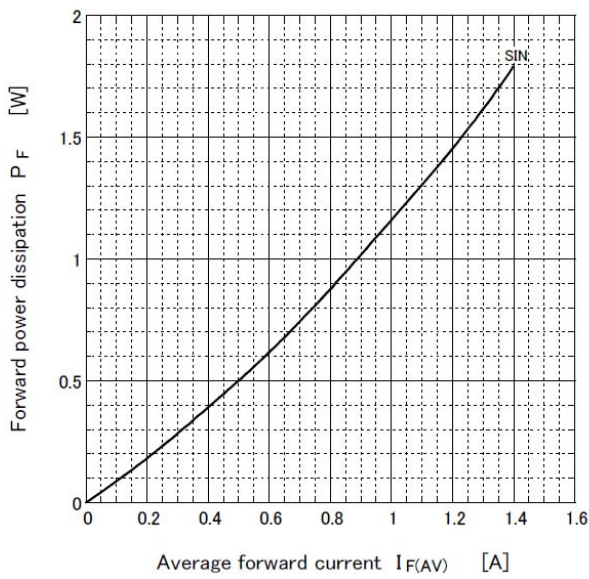
Forward voltage



Reverse current

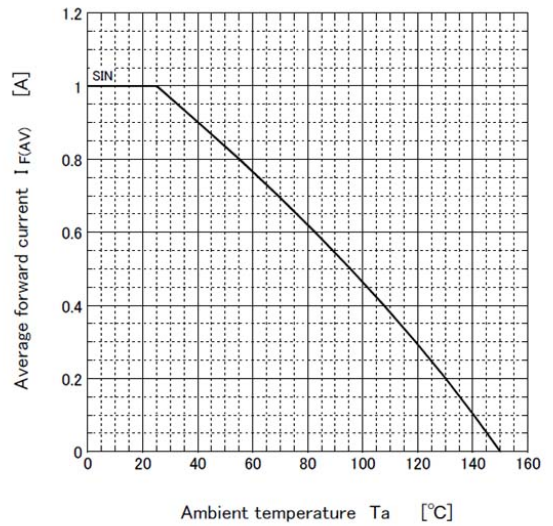


Forward power dissipation



● $T_J = 150^\circ\text{C}$

Derating curve

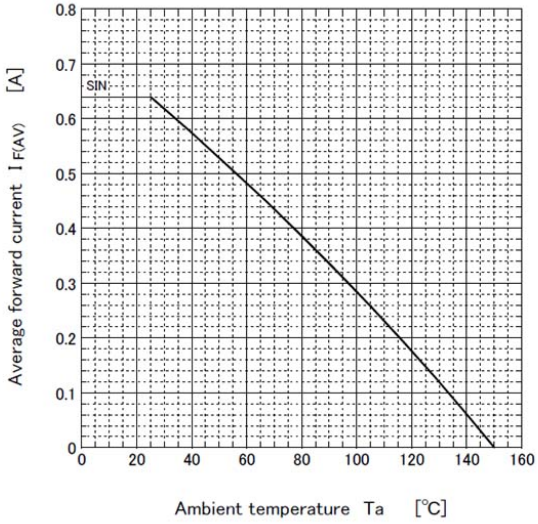


● $V_R = 600\text{V}$
 R-load
 Free in air

● Substrate detail

Type	Alumina
Size	1 inch ²
Thickness	0.64mm
Conductor thickness	20 μ m
Pattern area	43.4mm ²

Derating curve

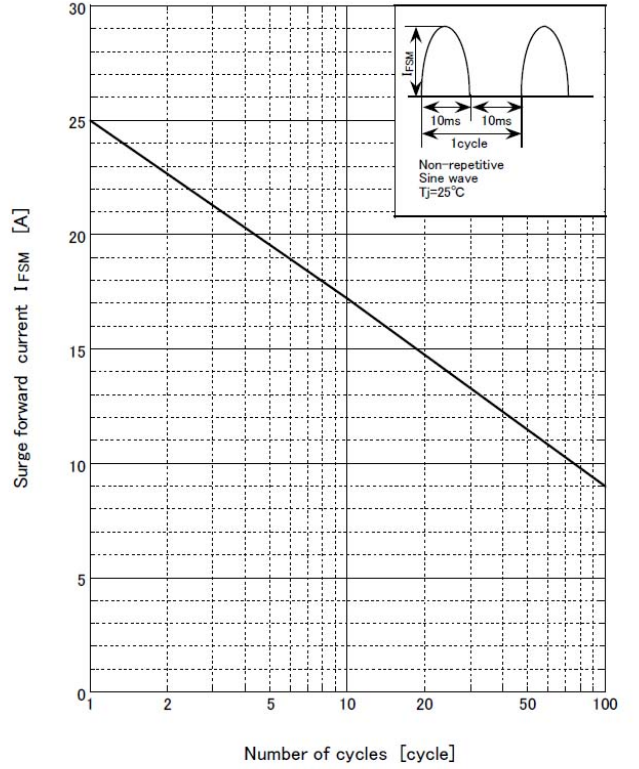


- $V_R = 600V$
R-load
Free in air

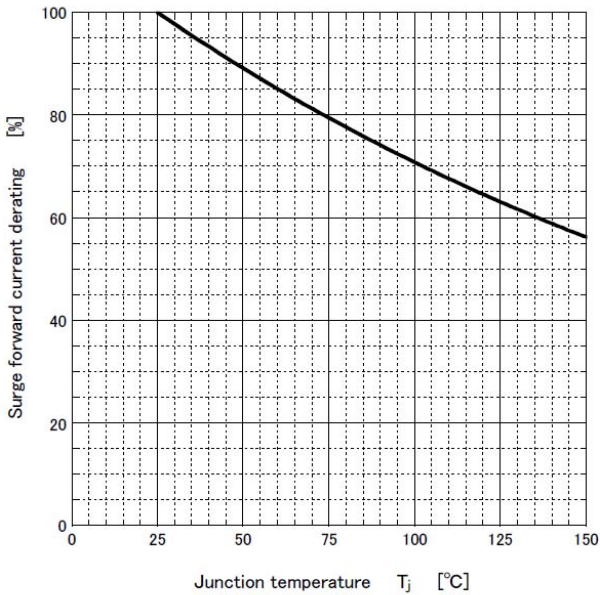
- Substrate detail

Type	Glass/epoxy
Size	1 inch ²
Thickness	1.0mm
Conductor thickness	35μm
Pattern area	43.4mm ²

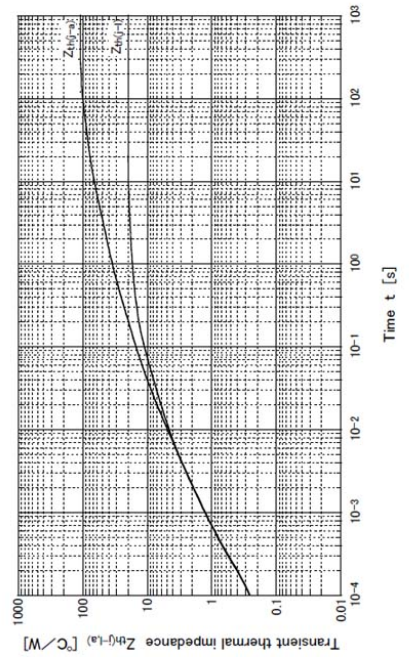
Surge forward current capability



Surge forward current derating vs Junction temperature



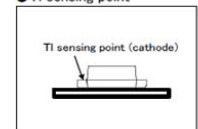
Transient thermal impedance



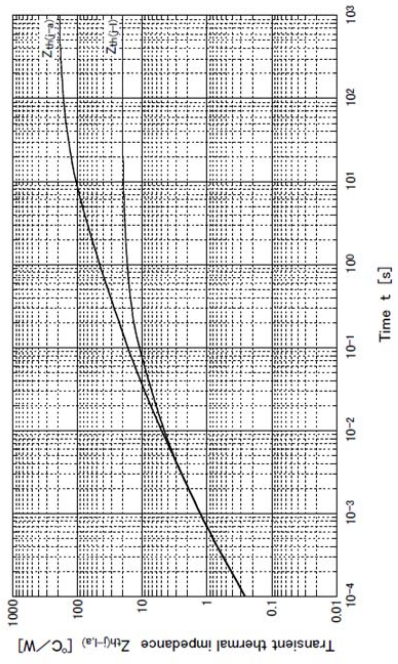
- Substrate detail

Type	Alumina
Size	1 inch ²
Thickness	0.64mm
Conductor thickness	20μm
Pattern area	43.4mm ²

- TI sensing point



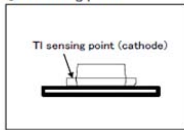
Transient thermal impedance



● Substrate detail

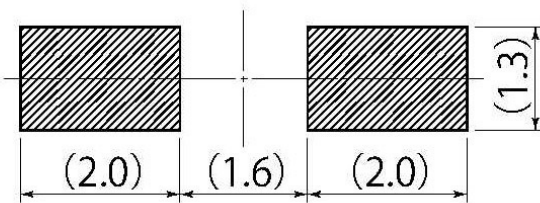
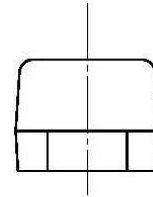
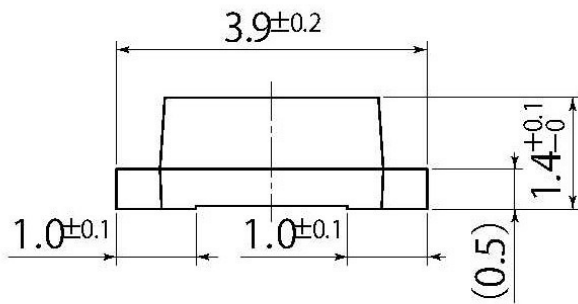
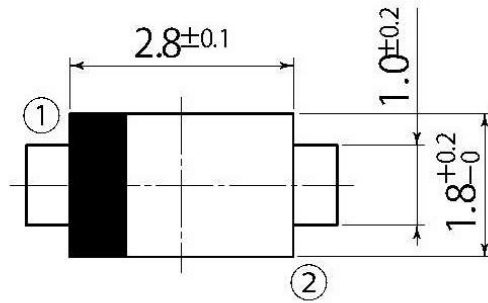
Type	Glass-epoxy
Size	1 inch ²
Thickness	1.6mm
Conductor thickness	35μm
Pattern area	43.4mm ²

● TI 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.

Notes

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