

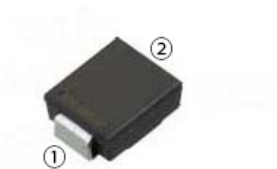
M3FE60  
General Rectifying Diodes  
600V, 3.0A

Feature

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

OUTLINE

Package (House Name): M2F  
Package (JEDEC Code): DO-214AA similar



Equivalent circuit



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

| Item                            | Symbol             | Conditions   | Ratings    | Unit |
|---------------------------------|--------------------|--|------------|------|
| Storage temperrature            | 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=76°C                             | 3          | A    |
| Average forward current         | I <sub>F(AV)</sub> | 50Hz sine wave, Resistance load, Tl=90°C                             | 2.5        | A    |
| Average forward current         | I <sub>F(AV)</sub> | 50Hz sine wave, Resistance load, On glass-epoxy substrate, Ta=25°C ※ | 1.3        | A    |
| Surge forward current           | I <sub>FSM</sub>   | 50Hz sine wave, Non-repetitive 1 cycle peak value, Tj=25°C           | 90         | A    |
| Surge forward current           | I <sub>FSM1</sub>  | tp=1ms, sine wave, Non-repetitive, peak value, Tj=25°C               | 230        | A    |

※ :See the original Specifications

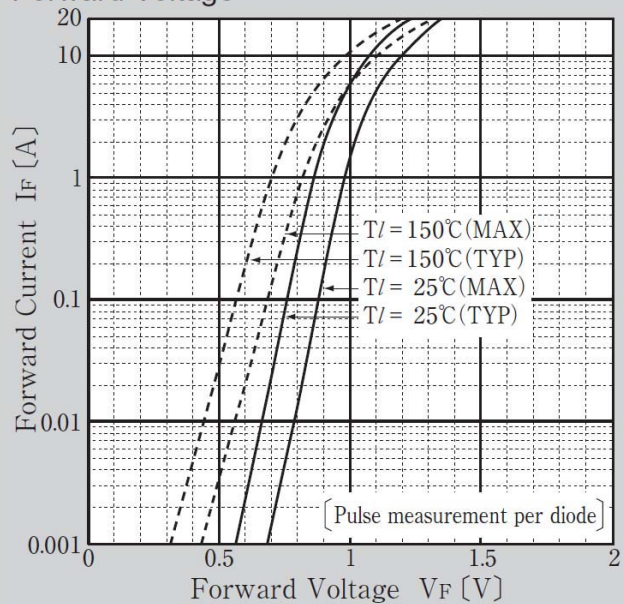
**Electrical Characteristics** (unless otherwise specified : Tl=25°C)

| Item                                | Symbol        | Conditions                                      | Ratings |     |      | Unit |
|-------------------------------------|---------------|---|---------|-----|------|------|
|                                     |               |   | MIN     | TYP | MAX  |      |
| Forward voltage                     | $V_F$         | IF=3A, Pulse measurement                        |         |     | 1.05 | V    |
| Reverse current                     | $I_R$         | VR=600V, Pulse measurement                      |         |     | 10   | μA   |
| Electro static discharge Capability | $V_{ESD}$     | C=330pF, R=330Ω, Polarity±, Aerial discharge    |         | 25  |      | kV   |
| Thermal resistance                  | $R_{th(j-l)}$ | Junction to lead                                |         |     | 25   | °C/W |
| Thermal resistance                  | $R_{th(j-a)}$ | Junction to ambient, On glass-epoxy substrate ※ |         |     | 110  | °C/W |

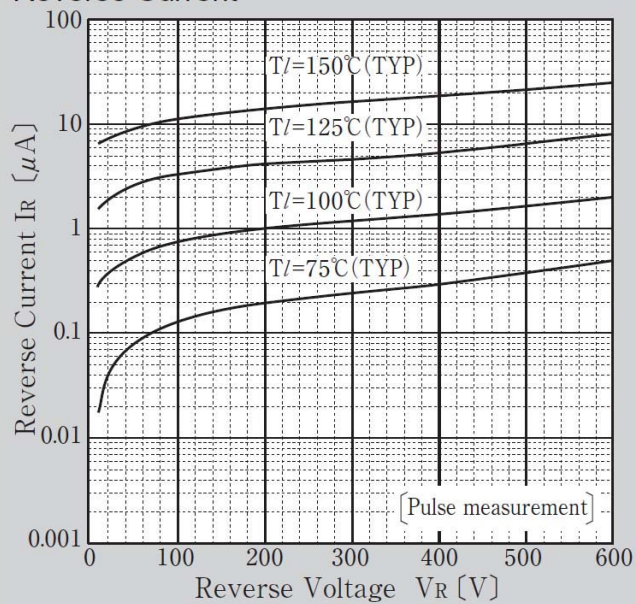
※ : See the original Specifications

## CHARACTERISTIC DIAGRAMS

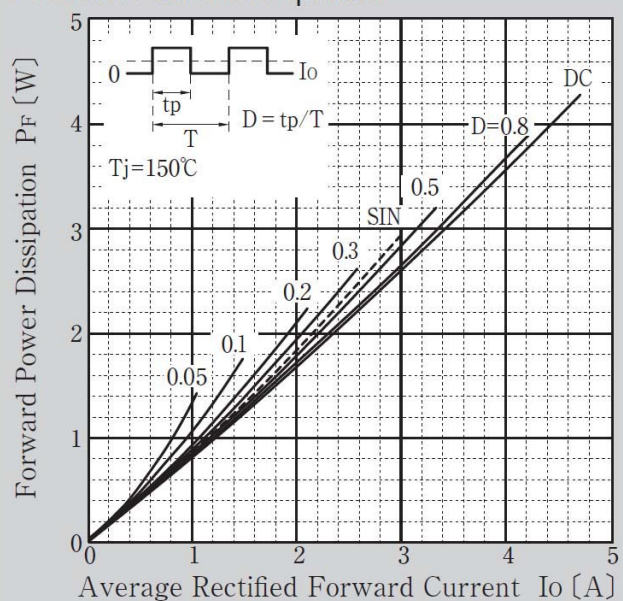
Forward Voltage



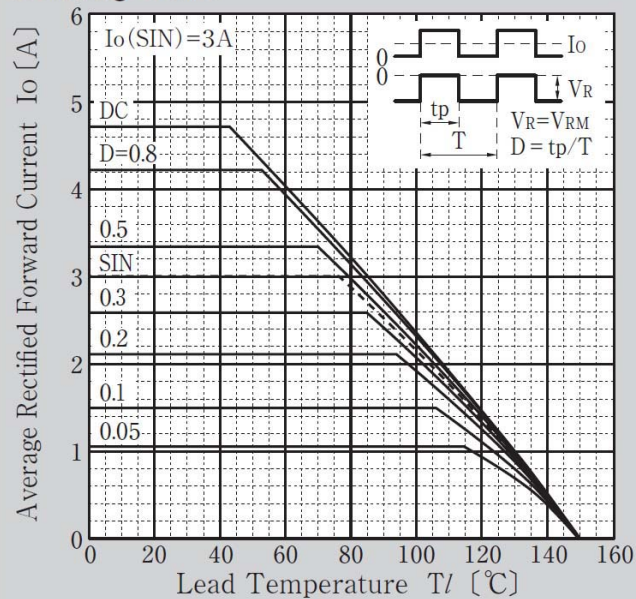
Reverse Current



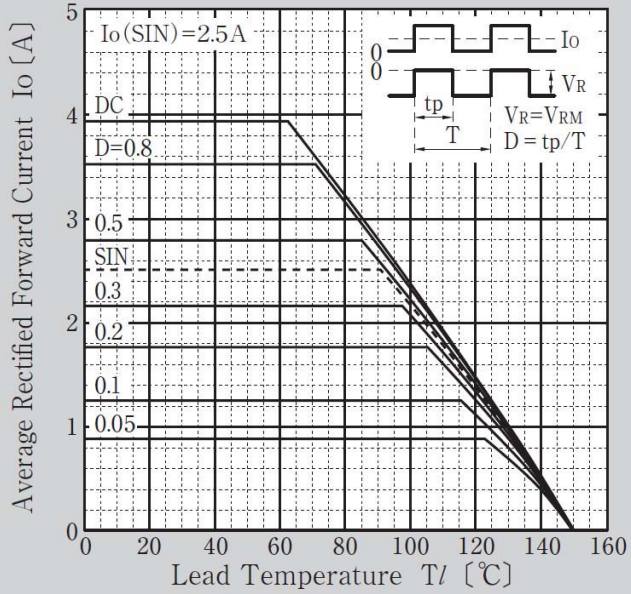
Forward Power Dissipation



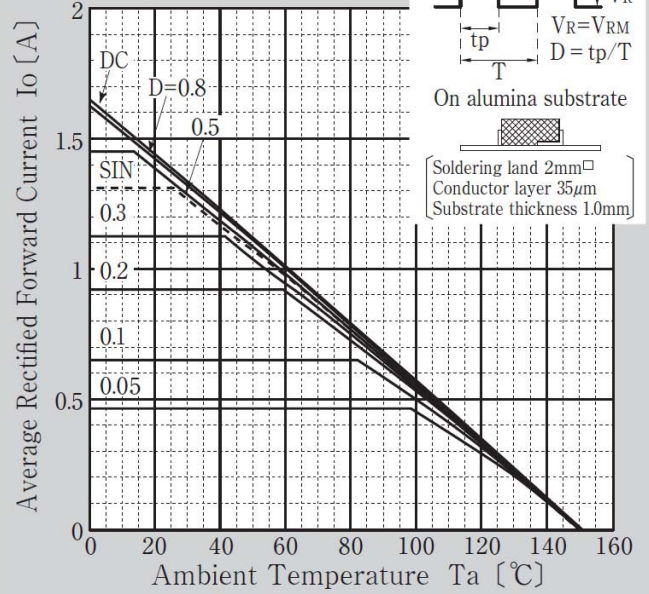
Derating Curve



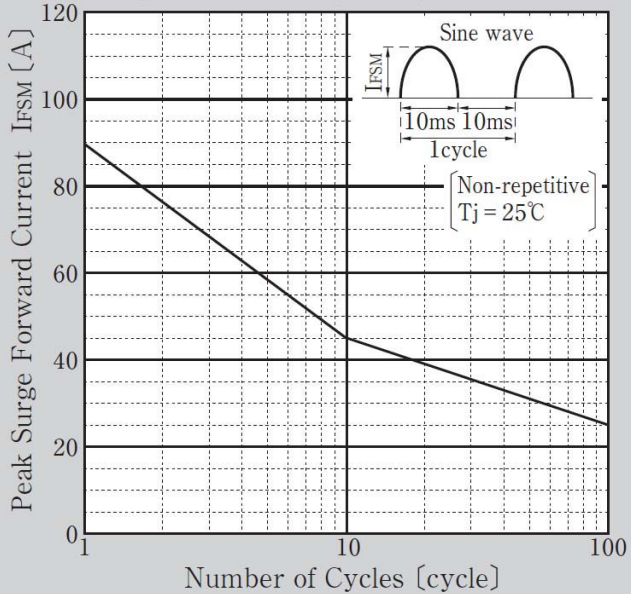
Derating Curve



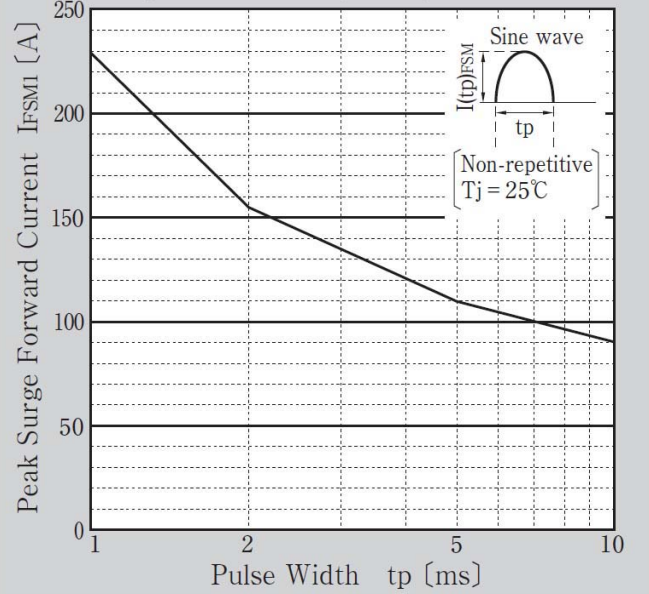
Derating Curve



Peak Surge Forward Capability

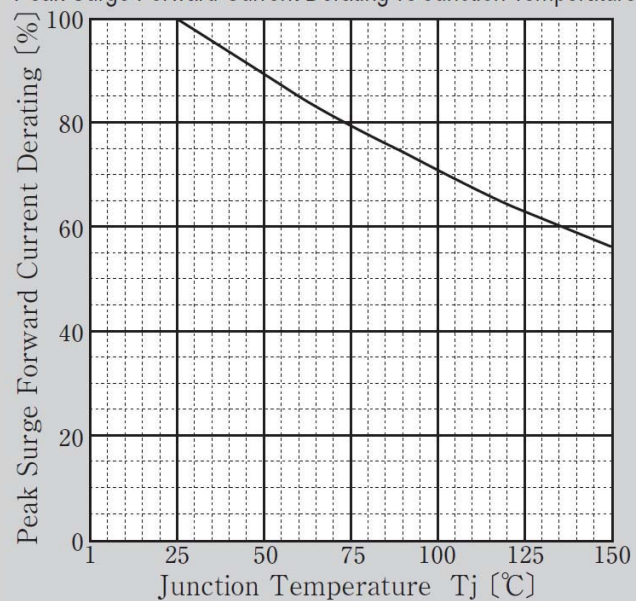


Peak Surge Forward Capability

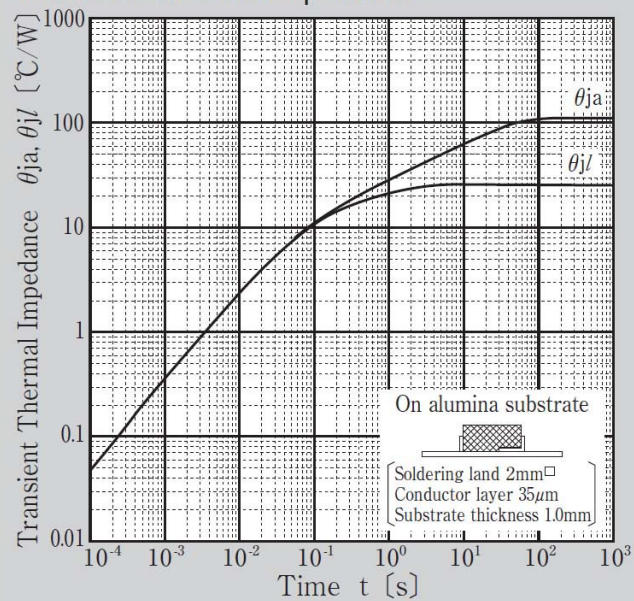




Peak Surge Forward Current Derating vs Junction Temperature

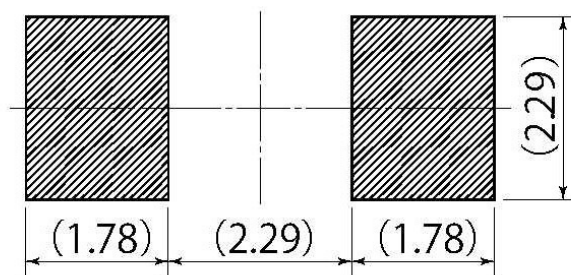
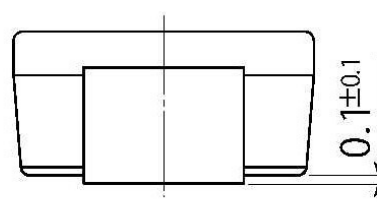
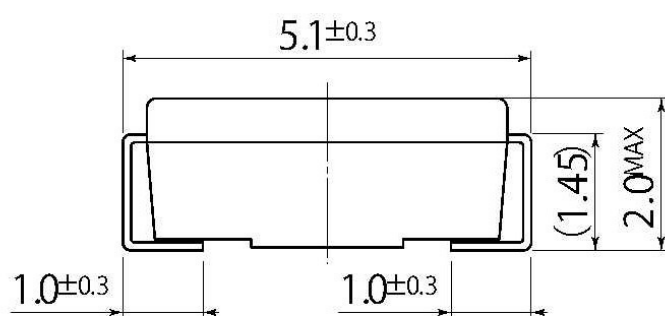
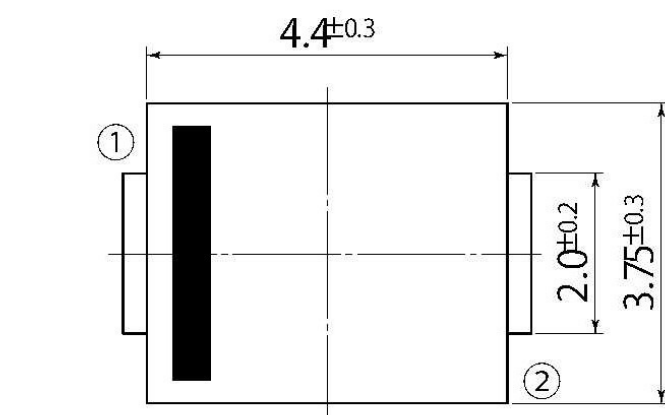


Transient Thermal Impedance



B6

|            |                  |
|------------|------------------|
| JEDEC Code | DO-214AA similar |
| JEITA Code | —                |
| House Name | M2F              |



Referential Soldering Pad

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

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