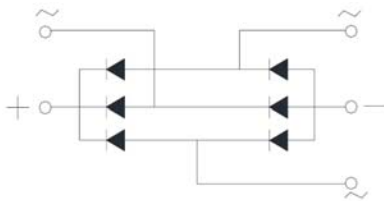


## Three Phase Bridge Rectifiers



### Features

- UL recognition, file #E230084
- Low thermal resistance
- Glass passivated chip junction
- High surge current capability
- Solder dip 275 °C max. 7 s, per JESD 22-B106

### Typical Applications

General purpose use in AC/DC bridge full wave rectification for Server、Frequency converter、Industrial power supply.

### Mechanical Data

- **Package:** MT-M  
Molding compound meets UL 94 V-0 flammability rating
- **Terminals:** Gold plated leads, solderable per J-STD-002 and JESD22-B102
- **Polarity:** As marked on body

### ■Maximum Ratings (T<sub>a</sub>=25°C Unless otherwise specified)

| PARAMETER   | SYMBOL           | UNIT             | MT3506M    | MT3508M | MT3510M | MT3512M | MT3514M | MT3516M |
|---|------------------|------------------|------------|---------|---------|---------|---------|---------|
| Device marking code   |                  |                  | MT3506M    | MT3508M | MT3510M | MT3512M | MT3514M | MT3516M |
| Maximum Repetitive Peak Reverse Voltage   | VRRM             | V                | 600        | 800     | 1000    | 1200    | 1400    | 1600    |
| Maximum RMS Voltage   | VRMS             | V                | 420        | 560     | 700     | 840     | 980     | 1120    |
| Maximum DC blocking Voltage   | VDC              | V                | 600        | 800     | 1000    | 1200    | 1400    | 1600    |
| Average rectified output current<br>@60Hz sine wave, R-load                                     | IO               | A                | 35.0       |         |         |         |         |         |
| With heatsink<br>T <sub>c</sub> =100°C  |                  |                  |            |         |         |         |         |         |
| Forward Surge Current (Non-repetitive)<br>@8.3ms, Half-sine wave, 1 cycle, T <sub>j</sub> =25°C | IFSM             | A                | 400        |         |         |         |         |         |
| Forward Surge Current (Non-repetitive)<br>@1ms, square wave, 1 cycle, T <sub>j</sub> =25°C      |                  |                  | 800        |         |         |         |         |         |
| Current squared time<br>@1ms≤t≤8.3ms T <sub>j</sub> =25°C, Rating of per diode                  | I <sup>2</sup> t | A <sup>2</sup> s | 664        |         |         |         |         |         |
| Storage temperature   | T <sub>stg</sub> | °C               | -55 ~ +150 |         |         |         |         |         |
| Junction temperature  | T <sub>j</sub>   | °C               | -55 ~ +150 |         |         |         |         |         |
| Dielectric strength<br>@ Terminals to case, AC 1 minute   | V <sub>dis</sub> | KV               | 2.5        |         |         |         |         |         |
| Mounting torque   | Tor              | kg·cm            | 10         |         |         |         |         |         |



# MT3506M THRU MT3516M

## ■ Electrical Characteristics (T<sub>a</sub>=25°C Unless otherwise specified)

| PARAMETER   | SYMBOL         | UNIT | TEST CONDITIONS   | MT3506M | MT3508M | MT3510M | MT3512M | MT3514M | MT3516M |     |
|---|----------------|------|---|---------|---------|---------|---------|---------|---------|-----|
| Maximum instantaneous forward voltage drop per diode              | V <sub>F</sub> | V    | I <sub>FM</sub> =17.5A                                    |         |         |         |         |         |         | 1.1 |
| Maximum DC reverse current at rated DC blocking voltage per diode | I <sub>R</sub> | μA   | T <sub>j</sub> =25°C                                      |         |         |         |         |         |         | 5   |
|   |                |      | T <sub>j</sub> =125°C                                     |         |         |         |         |         |         | 500 |
| Typical junction capacitance                                      | C <sub>j</sub> | pF   | Measured at 1MHz and Applied Reverse Voltage of 4.0 V.D.C |         |         |         |         |         |         | 150 |

## ■ Thermal Characteristics (T<sub>a</sub>=25°C Unless otherwise specified)

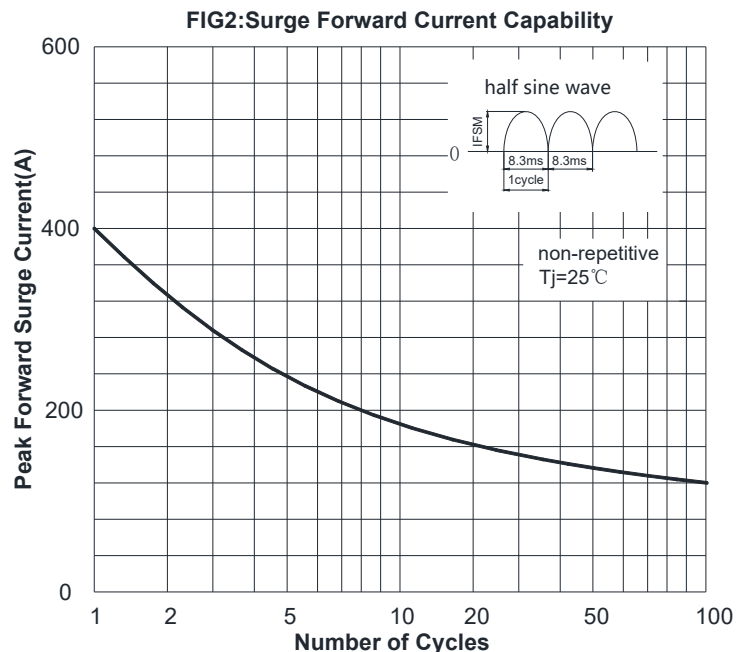
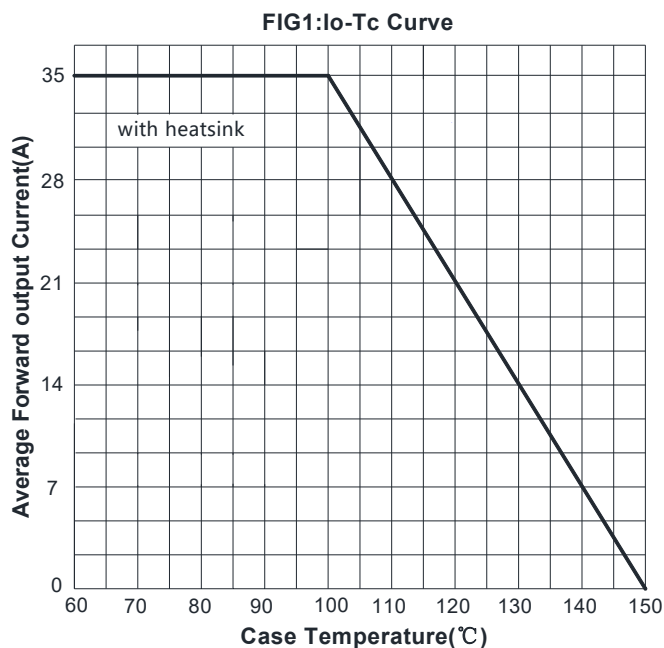
| PARAMETER                  |  | SYMBOL            | UNIT | MT3506M | MT3508M | MT3510M | MT3512M | MT3514M | MT3516M |     |
|----------------------------|--|-------------------|------|---------|---------|---------|---------|---------|---------|-----|
| Typical Thermal Resistance | Between junction and case, With heatsink | R <sub>θJ-C</sub> | °C/W |         |         |         |         |         |         | 0.9 |

Note: Device mounted on 75mm x 45mm x 5.5mm Aluminum Plate Heatsink.

## ■ Ordering Information (Example)

| PREFERRED P/N     | PACKING CODE | UNIT WEIGHT(g) | MINIMUM PACKAGE(pcs) | INNER BOX QUANTITY(pcs) | OUTER CARTON QUANTITY(pcs) | DELIVERY MODE |
|-------------------|--------------|----------------|----------------------|-------------------------|----------------------------|---------------|
| MT3506M ~ MT3516M | A1           | Approximate 16 | 50                   | 50                      | 500                        | Paper Box     |

## ■ Characteristics (Typical)





# MT3506M THRU MT3516M

FIG3: Typical Forward Voltage

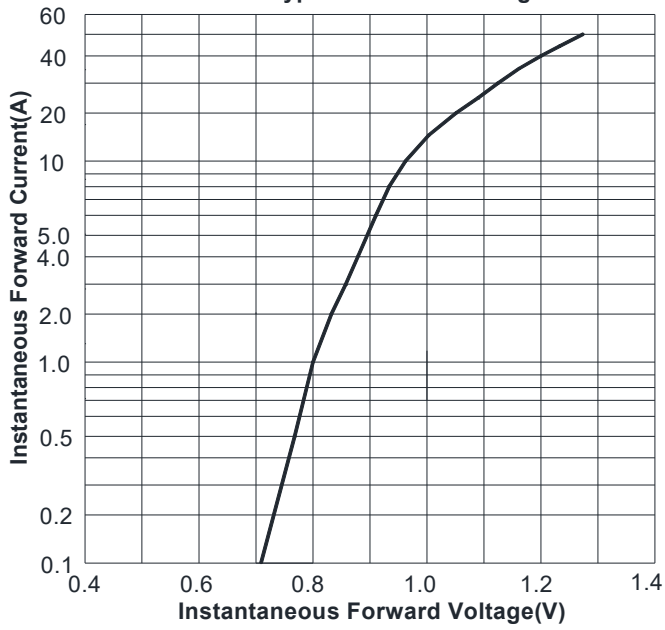
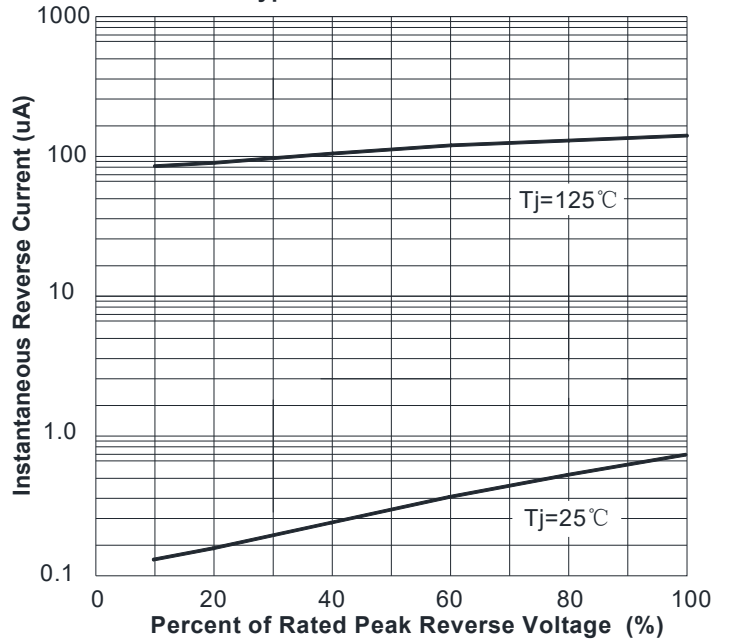
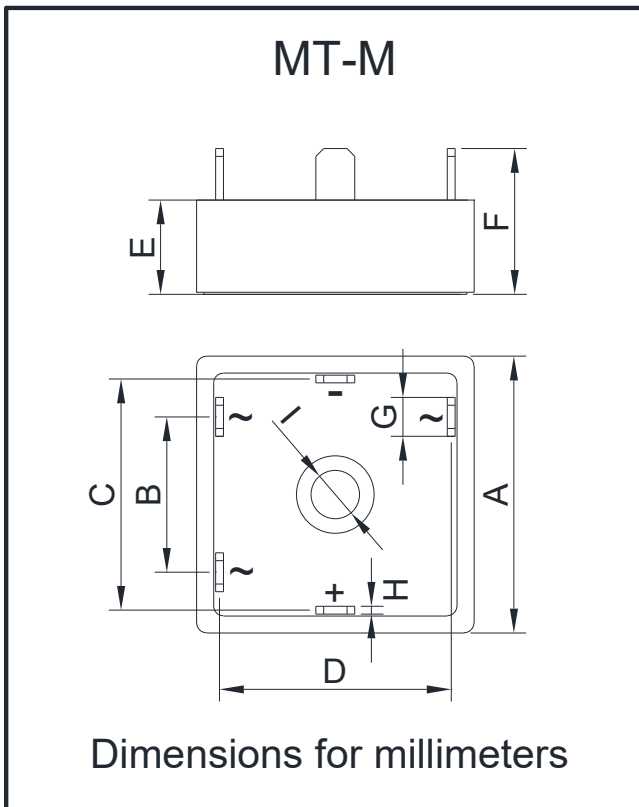


FIG4: Typical Reverse Characteristics



## ■ Outline Dimensions



| MT-M |      |      |
|------|------|------|
| Dim  | Min  | Max  |
| A    | 28.2 | 28.8 |
| B    | 15.5 | 16.5 |
| C    | 23.3 | 24.3 |
| D    | 23.3 | 24.3 |
| E    | 9.0  | 10.0 |
| F    | 14.5 | 15.5 |
| G    | 3.8  | 4.2  |
| H    | 0.75 | 0.85 |
| I    | 4.5  | 5.5  |



## MT3506M THRU MT3516M

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