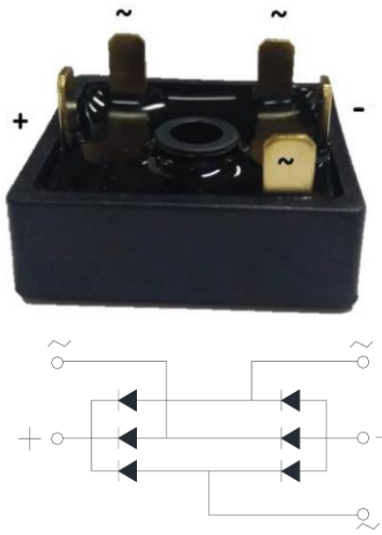
# Three Phase Bridge Rectifiers






## Features

- 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 ($T_a$=25℃ 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 | | $V_{RRM}$ | V | 600 | 800 | 1000 | 1200 | 1400 | 1600 |
| Maximum RMS Voltage | | $V_{RMS}$ | V | 420 | 560 | 700 | 840 | 980 | 1120 |
| Maximum DC blocking Voltage | | $V_{DC}$ | V | 600 | 800 | 1000 | 1200 | 1400 | 1600 |
| Average rectified output current @60Hz sine wave, R-load | With heatsink Tc =100℃ | $I_O$ | A | 35.0 | | | | | |
| Forward Surge Current (Non-repetitive) @8.3ms, Half-sine wave,1 cycle, Tj=25℃ | | $I_{FSM}$ | A | 400 | | | | | |
| Forward Surge Current (Non-repetitive) @1ms, square wave, 1 cycle, Tj=25℃ | | | | 800 | | | | | |
| Current squared time @1ms≤t≤8.3ms Tj=25℃, Rating of per diode | | $I^2t$ | $A^2s$ | 664 | | | | | |
| Storage temperature | | $T_{stg}$ | ℃ | -55 ~ +150 | | | | | |
| Junction temperature | | $T_j$ | ℃ | -55 ~ +150 | | | | | |
| Dielectric strength @ Terminals to case, AC 1 minute | | $V_{dis}$ | KV | 2.5 | | | | | |
| Mounting torque | | Tor | kg·cm | 10 | | | | | |

## ■Electrical Characteristics（$T_a$=25℃ Unless otherwise specified）

| PARAMETER | SYMBOL | UNIT | TEST CONDITIONS | MT3506M | MT3508M | MT3510M | MT3512M | MT3514M | MT3516M |
|---|---|---|---|---|---|---|---|---|---|
| Maximum instantaneous forward voltage drop per diode | $V_F$ | V | $I_{FM}$=17.5A | 1.1 | | | | | |
| Maximum DC reverse current at rated DC blocking voltage per diode | $I_R$ | μA | $T_j$ =25℃ | 5 | | | | | |
| | | | $T_j$ =125℃ | 500 | | | | | |
| Typical junction capacitance | Cj | pF | Measured at 1MHz and Applied Reverse Voltage of 4.0 V.D.C | 150 | | | | | |

## ■Thermal Characteristics （$T_a$=25℃ Unless otherwise specified）

| PARAMETER | | SYMBOL | UNIT | MT3506M | MT3508M | MT3510M | MT3512M | MT3514M | MT3516M |
|---|---|---|---|---|---|---|---|---|---|
| Typical Thermal Resistance | Between junction and case, With heatsink | $R_{\theta J-C}$ | ℃/W | 0.9 | | | | | |

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

## ■Ordering Information (Example)

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

## ■ Characteristics (Typical)

FIG1:Io-Tc Curve

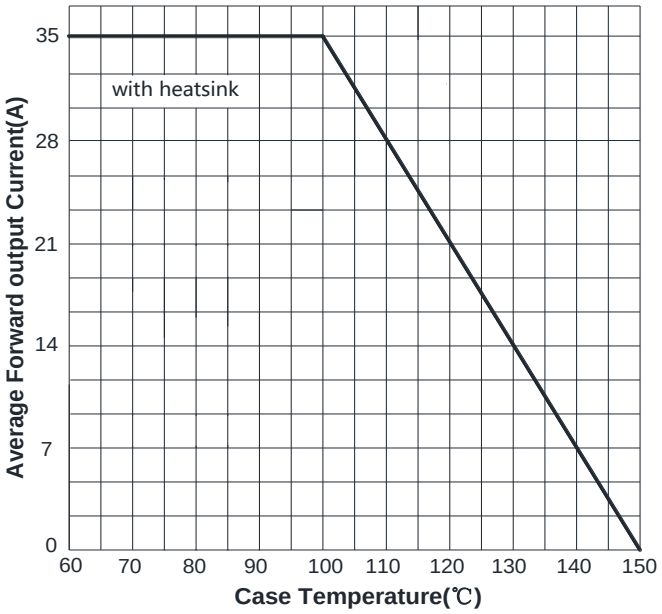



FIG2:Surge Forward Current Capability

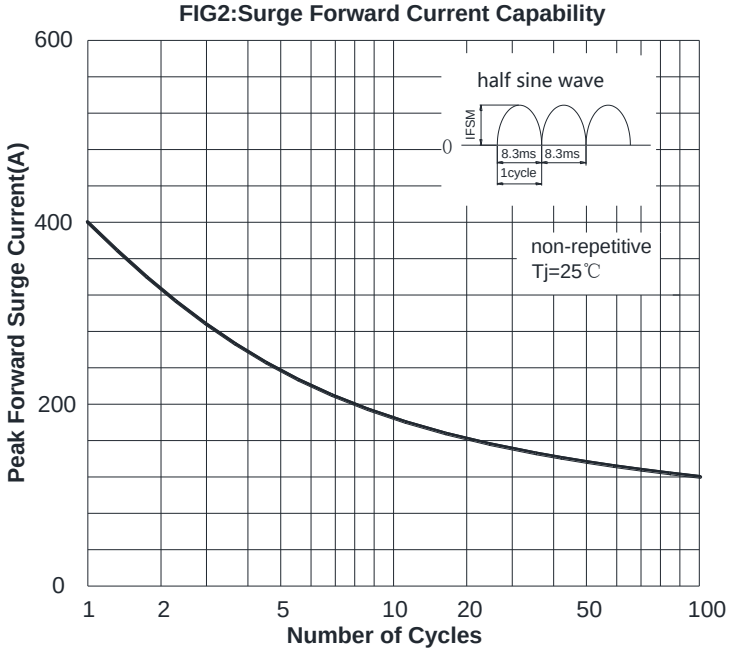


FIG3: Typical Forward Voltage

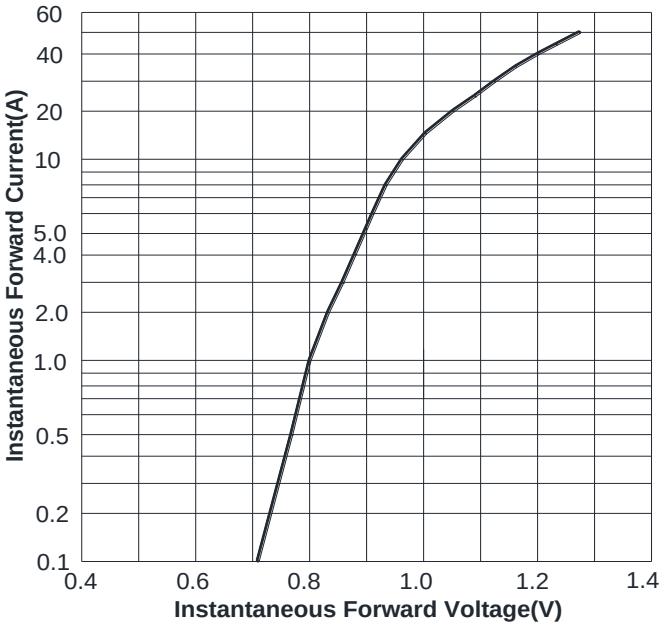
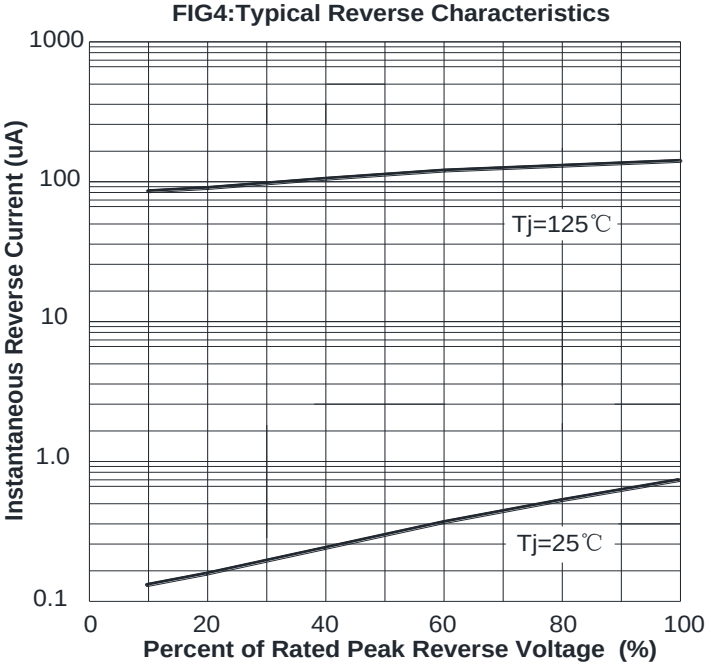
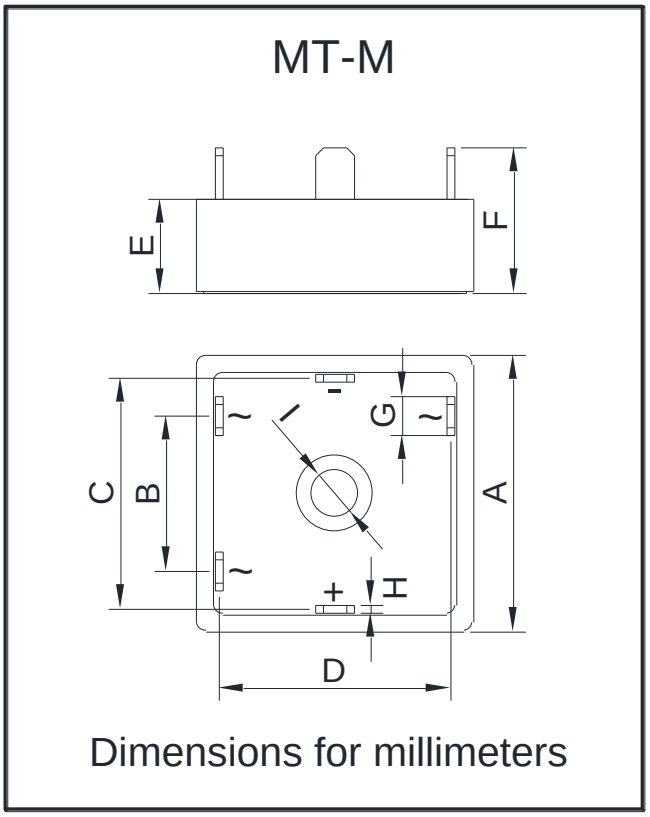



FIG4:Typical Reverse Characteristics




## ■ 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 |

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