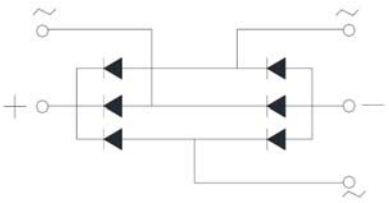
# Three Phase Bridge Rectifiers



## 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
  Molding compound meets UL 94 V-0 flammability rating
- **Terminals**: Au 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 | MT2504A | MT2506A | MT2508A | MT2510A | MT2512A | MT2514A | MT2516A |
|---|---|---|---|---|---|---|---|---|---|---|
| Device marking code | | | | MT2504A | MT2506A | MT2508A | MT2510A | MT2512A | MT2514A | MT2516A |
| Maximum Repetitive Peak Reverse Voltage | | $V_{RRM}$ | V | 400 | 600 | 800 | 1000 | 1200 | 1400 | 1600 |
| Maximum RMS Voltage | | $V_{RMS}$ | V | 280 | 420 | 560 | 700 | 840 | 980 | 1120 |
| Maximum DC blocking Voltage | | $V_{DC}$ | V | 400 | 600 | 800 | 1000 | 1200 | 1400 | 1600 |
| Average rectified output current @60Hz sine wave, R-load | With heatsink Tc =115℃ | $I_O$ | A | 25 | | | | | | |
| 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 @Recommend torque：5kg·cm | | Tor | kg· cm | 8 | | | | | | |

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

| PARAMETER | SYMBOL | UNIT | TEST CONDITIONS | MT2504A | MT2506A | MT2508A | MT2510A | MT2512A | MT2514A | MT2516A |
|---|---|---|---|---|---|---|---|---|---|---|
| Maximum instantaneous forward voltage drop per diode | VF | V | $I_{FM}$=12.5A | 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 | 200 | | | | 150 | | |

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

| PARAMETER | | SYMBOL | UNIT | MT2504A | MT2506A | MT2508A | MT2510A | MT2512A | MT2514A | MT2516A |
|---|---|---|---|---|---|---|---|---|---|---|
| Typical Thermal Resistance | Between junction and case, With heatsink | RθJ-C | ℃/W | 1.0 | | | | | | |

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 |
|---|---|---|---|---|---|---|
| **MT2504A ~ MT2516A** | A1 | Approximate 17.5 | 50 | 50 | 500 | Paper Box |

## ■ Characteristics (Typical)

FIG1:Io-Tc Curve

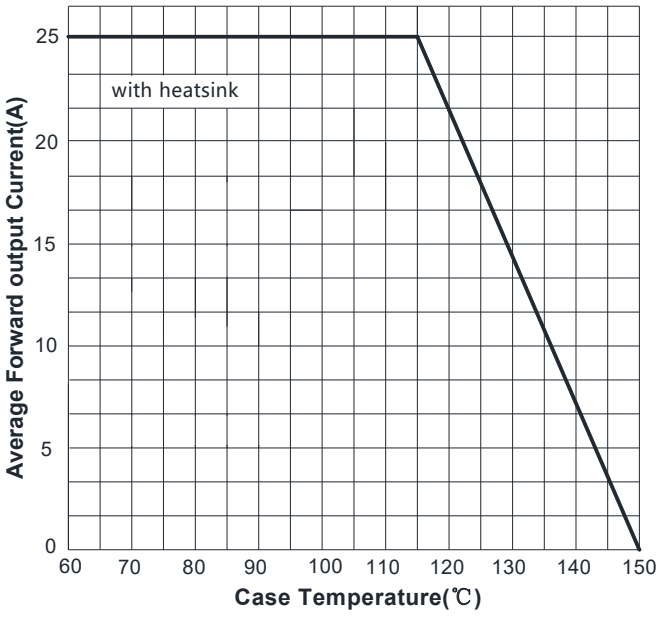



FIG2:Surge Forward Current Capability

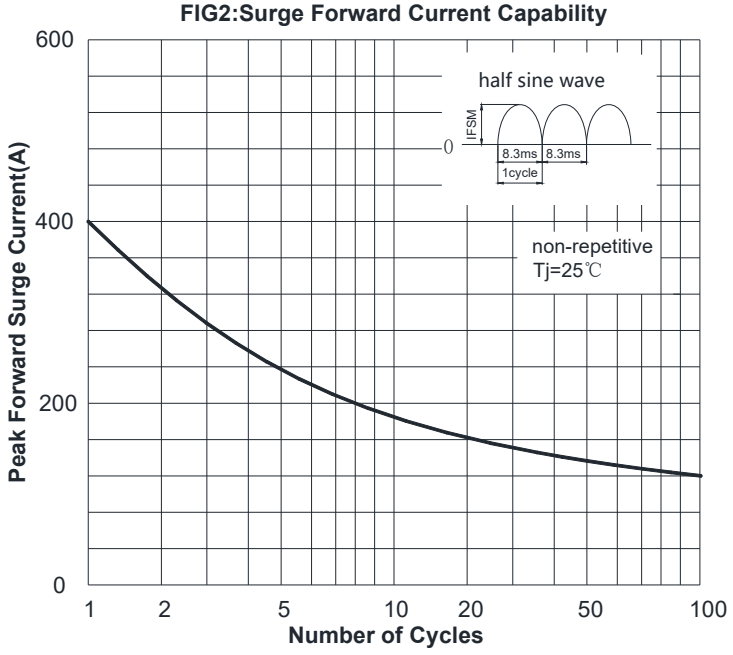


FIG3: Typical Forward Voltage

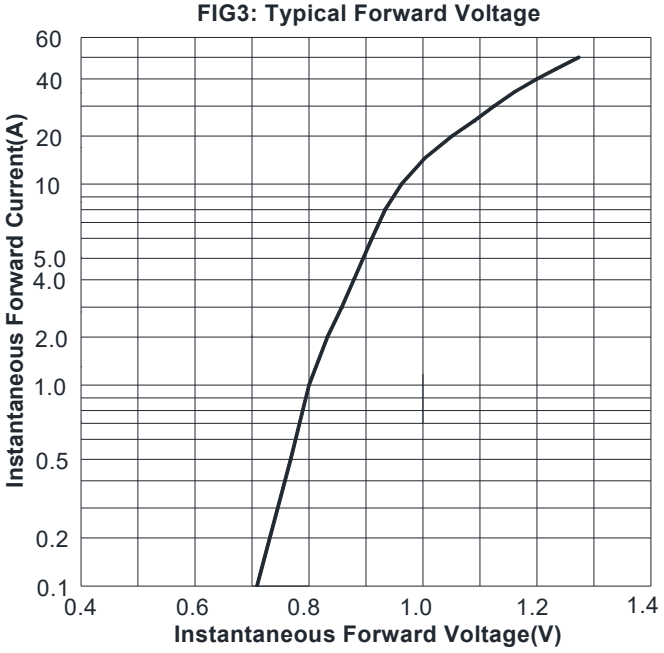
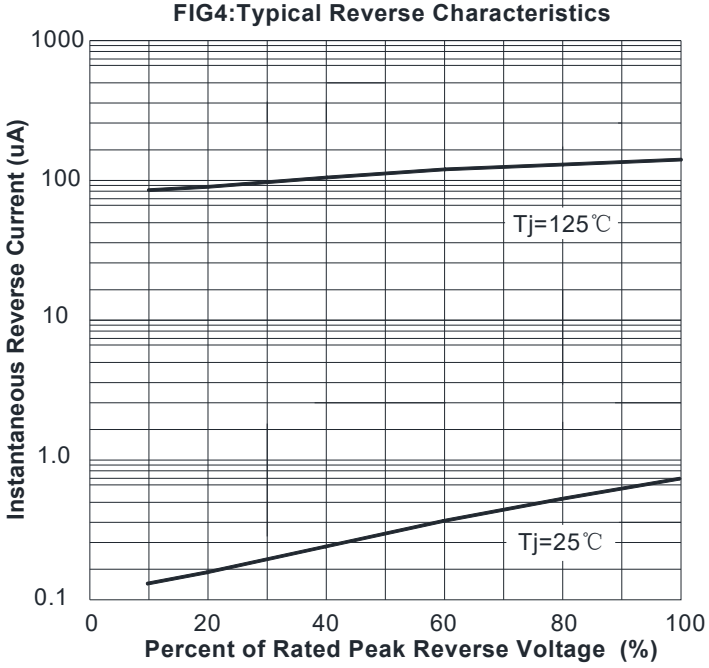
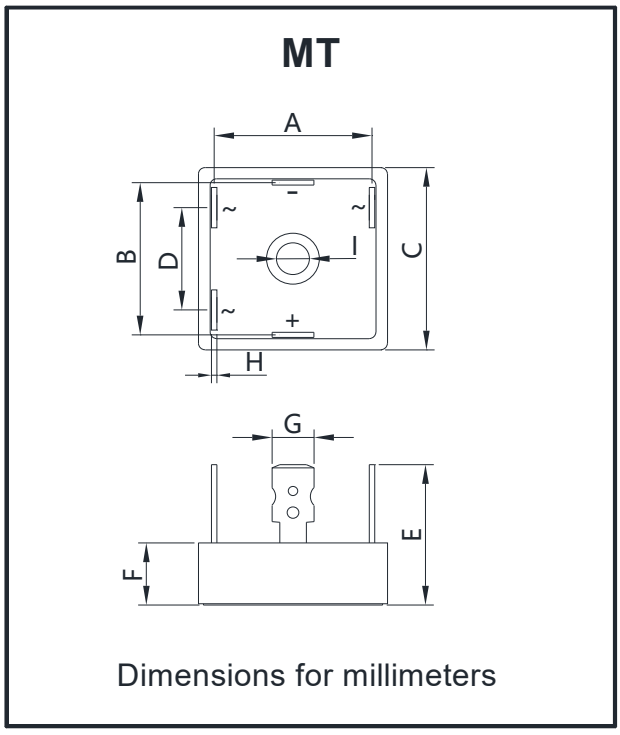



FIG4:Typical Reverse Characteristics




## ■ Outline Dimensions




| MT | | |
|---|---|---|
| Dim | Min | Max |
| A | 23.3 | 24.3 |
| B | 23.3 | 24.3 |
| C | 28.2 | 28.8 |
| D | 15.5 | 16.5 |
| E | / | 25 |
| F | 9.0 | 10.0 |
| G | 6.2 | 6.4 |
| H | 0.75 | 0.85 |
| I | 4.5 | 5.5 |

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