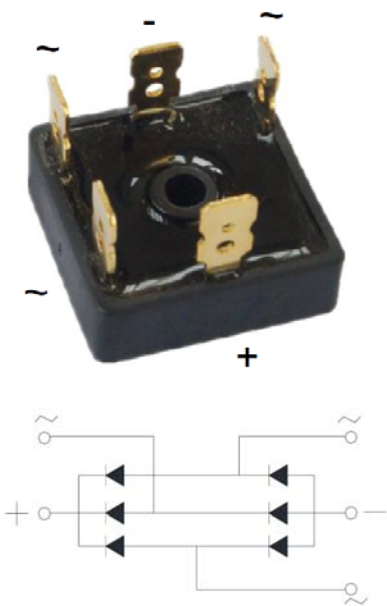


## Three Phase Bridge Rectifiers



### 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  
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<sub>a</sub>=25°C 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                                          |                            | VRRM   | V     | 400        | 600     | 800     | 1000    | 1200    | 1400    | 1600    |
| Maximum RMS Voltage                                                              |                            | VRMS   | V     | 280        | 420     | 560     | 700     | 840     | 980     | 1120    |
| Maximum DC blocking Voltage                                                      |                            | VDC    | V     | 400        | 600     | 800     | 1000    | 1200    | 1400    | 1600    |
| Average rectified output current<br>@60Hz sine wave, R-load                      | With heatsink<br>Tc =115°C | IO     | A     | 25         |         |         |         |         |         |         |
| Forward Surge Current (Non-repetitive)<br>@8.3ms,Half-sine wave,1 cycle, Tj=25°C |                            | IFSM   | A     | 400        |         |         |         |         |         |         |
| Forward Surge Current (Non-repetitive)<br>@1ms, square wave, 1 cycle, Tj=25°C    |                            |        |       | 800        |         |         |         |         |         |         |
| Current squared time<br>@1ms≤t≤8.3ms Tj=25°C, Rating of per diode                |                            | I²t    | A²s   | 664        |         |         |         |         |         |         |
| Storage temperature                                                              |                            | Tstg   | °C    | -55 ~ +150 |         |         |         |         |         |         |
| Junction temperature                                                             |                            | Tj     | °C    | -55 ~ +150 |         |         |         |         |         |         |
| Dielectric strength<br>@ Terminals to case, AC 1 minute                          |                            | Vdis   | KV    | 2.5        |         |         |         |         |         |         |
| Mounting torque<br>@Recommend torque: 5kg·cm                                     |                            | Tor    | kg·cm | 8          |         |         |         |         |         |         |

# MT2504A THRU MT2516A

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

| PARAMETER                                                         | SYMBOL         | UNIT | TEST CONDITIONS                                           | MT2504A | MT2506A | MT2508A | MT2510A | MT2512A | MT2514A | MT2516A |
|-------------------------------------------------------------------|----------------|------|-----------------------------------------------------------|---------|---------|---------|---------|---------|---------|---------|
| Maximum instantaneous forward voltage drop per diode              | V <sub>F</sub> | V    | I <sub>FM</sub> =12.5A                                    | 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 | 200     |         |         |         | 150     |         |         |

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

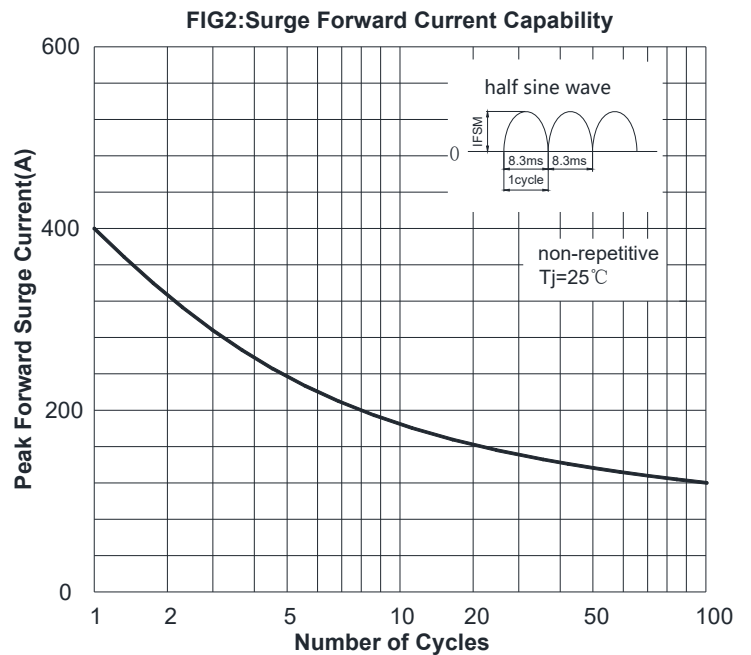
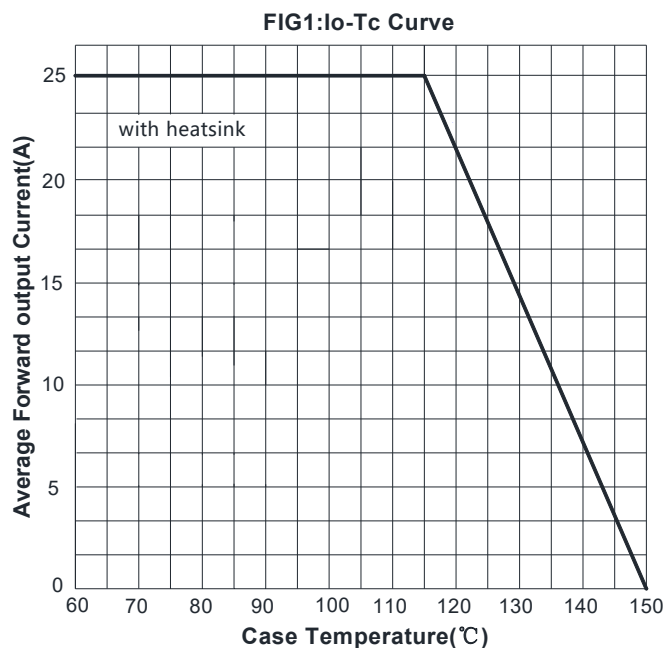
| PARAMETER                  |                                             | SYMBOL            | UNIT | MT2504A | MT2506A | MT2508A | MT2510A | MT2512A | MT2514A | MT2516A |
|----------------------------|---------------------------------------------|-------------------|------|---------|---------|---------|---------|---------|---------|---------|
| Typical Thermal Resistance | Between junction and case,<br>With heatsink | R <sub>θJ-C</sub> | °C/W | 1.0     |         |         |         |         |         |         |

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

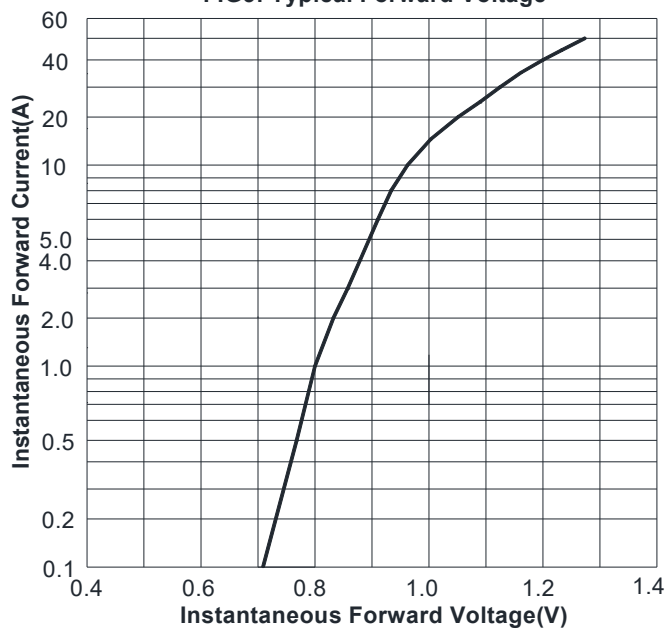
## ■Ordering Information (Example)

| PREFERRED P/N     | PACKING CODE | UNIT WEIGHT(g)   | MINIMUM PACKAGE(pcs) | INNER BOX QUANTITY(pcs) | OUTER CARTON QUANTITY(pcs) | DELIVERY MODE |
|-------------------|--------------|------------------|----------------------|-------------------------|----------------------------|---------------|
| MT2504A ~ MT2516A | A1           | Approximate 17.5 | 50                   | 50                      | 500                        | Paper Box     |

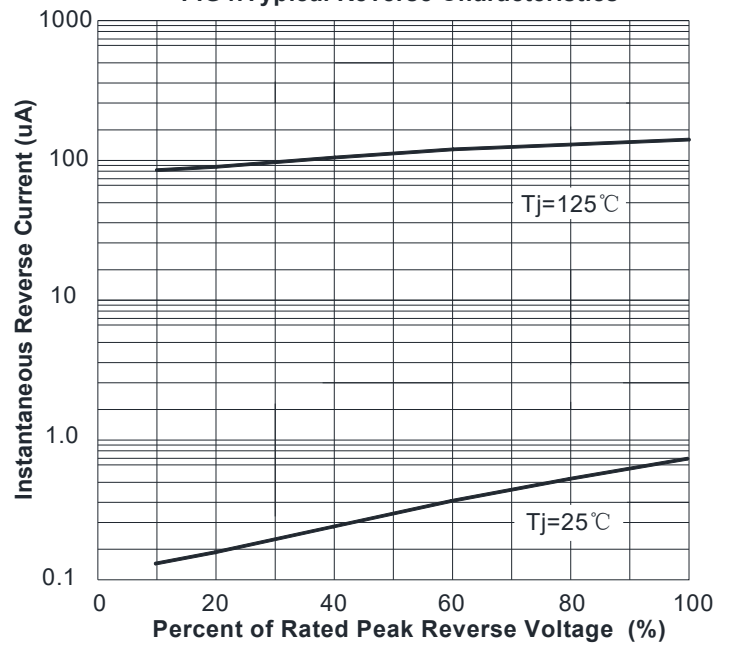
## ■ Characteristics (Typical)



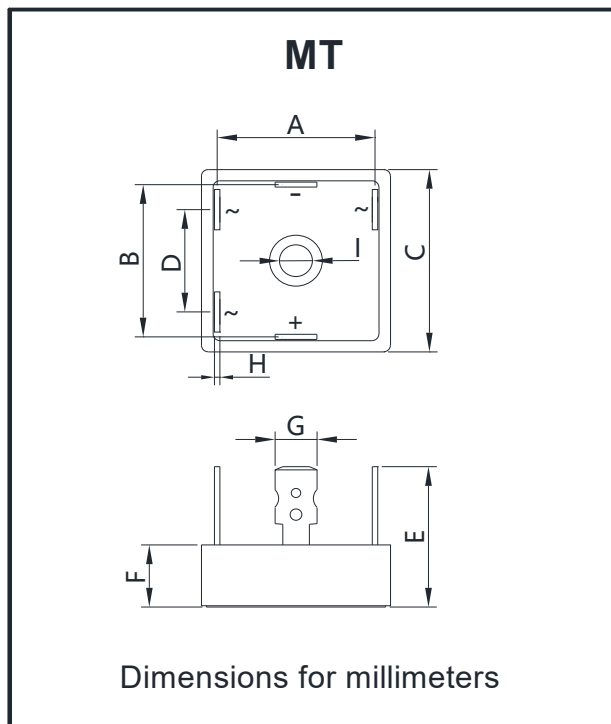
**FIG3: Typical Forward Voltage**



**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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