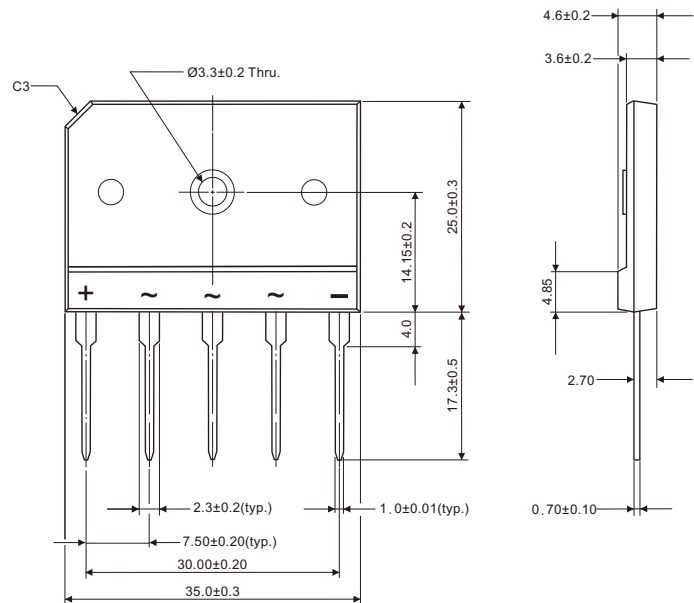
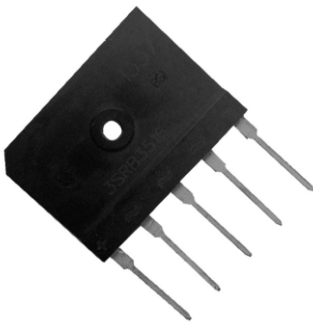


## Glass Passivated Three-Phase Bridge Rectifier, 35A

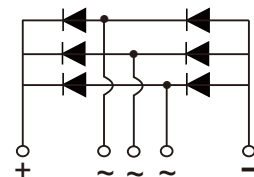
### MTP3508L Thru MTP3516L



All dimensions in millimeters

### FEATURES

- UL recognition file number E320098
- Typical IR less than  $2.0 \mu A$
- High surge current capability
- Low thermal resistance
- Compliant to RoHS
- Isolation voltage up to 2500V



### TYPICAL APPLICATIONS

General purpose use in AC/DC bridge full wave rectification for big power supply, field supply for DC motor, industrial automation applications.

### ADVANTAGE

- International standard package
- Epoxy meets UL 94 V-O flammability rating
- Small volume, light weight
- Small thermal resistance
- High heat-conduction rate
- Low temperature rise
- High temperature soldering guaranteed :  $260^{\circ}C/10$  second, 2.3kg tension force
- Weight: 11g (0.39 ozs)

### PRIMARY CHARACTERISTICS

|               |                |
|---------------|----------------|
| $I_{F(AV)}$   | 35A            |
| $V_{RRM}$     | 800V to 1600V  |
| $I_{FSM}$     | 400A           |
| $I_R$         | $10 \mu A$     |
| $V_F$         | 1.10V          |
| $T_{J \max.}$ | $150^{\circ}C$ |

| MAJOR RATINGS AND CHARACTERISTICS ( $T_A = 25^\circ\text{C}$ unless otherwise noted) |             |            |      |      |                      |
|--------------------------------------------------------------------------------------|-------------|------------|------|------|----------------------|
| PARAMETER                                                                            | SYMBOL      | MTP35..L   |      |      | UNIT                 |
|                                                                                      |             | 08         | 12   | 16   |                      |
| Maximum repetitive peak reverse voltage                                              | $V_{RRM}$   | 800        | 1200 | 1600 | V                    |
| Peak reverse non-repetitive voltage                                                  | $V_{RSM}$   | 900        | 1300 | 1700 | V                    |
| Maximum DC blocking voltage                                                          | $V_{DC}$    | 800        | 1200 | 1600 | V                    |
| Maximum average forward rectified output current, $T_C = 90^\circ\text{C}$           | $I_{F(AV)}$ | 35         |      |      | A                    |
| Peak forward surge current single sine-wave superimposed on rated load               | $I_{FSM}$   | 400        |      |      | A                    |
| Rating (non-repetitive, for t greater than 1 ms and less than 10 ms) for fusing      | $I^2t$      | 800        |      |      | $\text{A}^2\text{s}$ |
| RMS isolation voltage from case to leads                                             | $V_{ISO}$   | 2500       |      |      | V                    |
| Operating junction storage temperature range                                         | $T_J$       | -55 to 150 |      |      | $^\circ\text{C}$     |
| Storage temperature range                                                            | $T_{STG}$   | -55 to 150 |      |      | $^\circ\text{C}$     |

| ELECTRICAL CHARACTERISTICS (T <sub>A</sub> = 25°C unless otherwise noted) |                        |                |          |    |    |      |
|---------------------------------------------------------------------------|------------------------|----------------|----------|----|----|------|
| PARAMETER                                                                 | TEST CONDITIONS        | SYMBOL         | MTP35..L |    |    | UNIT |
|                                                                           |                        |                | 08       | 12 | 16 |      |
| Maximum instantaneous forward drop per diode                              | I <sub>F</sub> = 17.5A | V <sub>F</sub> | 1.10     |    |    | V    |
| Maximum reverse DC current at rated DC blocking voltage per diod          | T <sub>A</sub> = 25°C  | I <sub>R</sub> | 10       |    |    | µA   |
|                                                                           | T <sub>A</sub> = 150°C |                | 1000     |    |    |      |

| THERMAL AND MECHANICAL (T <sub>A</sub> = 25°C unless otherwise noted) |                                                                                                                                          |                                     |          |    |    |      |
|-----------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------|----------|----|----|------|
| PARAMETER                                                             | TEST CONDITIONS                                                                                                                          | SYMBOL                              | MTP35..L |    |    | UNIT |
|                                                                       |                                                                                                                                          |                                     | 08       | 12 | 16 |      |
| Typical thermal resistance junction to case                           | Single-side heat dissipation, sine half wave                                                                                             | R <sub>th(j-c)</sub> <sup>(1)</sup> | 0.96     |    |    | °C/W |
| Mounting torque to heatsink M3 ± 10 %                                 | A mounting compound is recommended and the torque should be rechecked after a period of 3 hours to allow for the spread of the compound. |                                     | 0.8      |    |    | N·m  |
| Approximate weight                                                    |                                                                                                                                          |                                     | 11       |    |    | g    |

### Notes

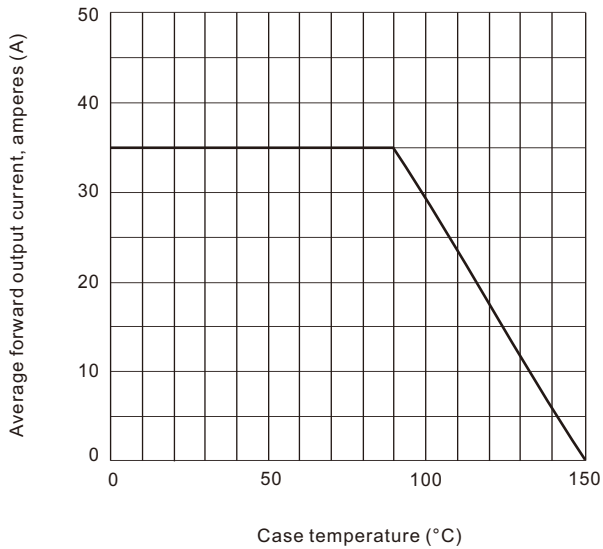
(1) With heatsink, single side heat dissipation, half sine wave.

### Ordering Information Tabel

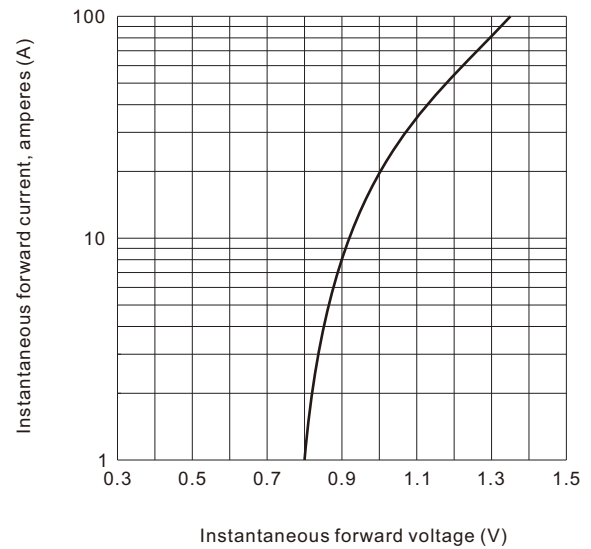
|             |     |    |    |   |
|-------------|-----|----|----|---|
| Device code | MTP | 35 | 16 | L |
|             | ①   | ②  | ③  | ④ |

- ① - Product type : "MTP" Package, 3Ø Bridge (Three-phase bridge)
- ② -  $I_{F(AV)}$  rating : "35" for 35A
- ③ - Voltage code : code x 100 =  $V_{RRM}$
- ④ - L: SIP (Single-in-line) package

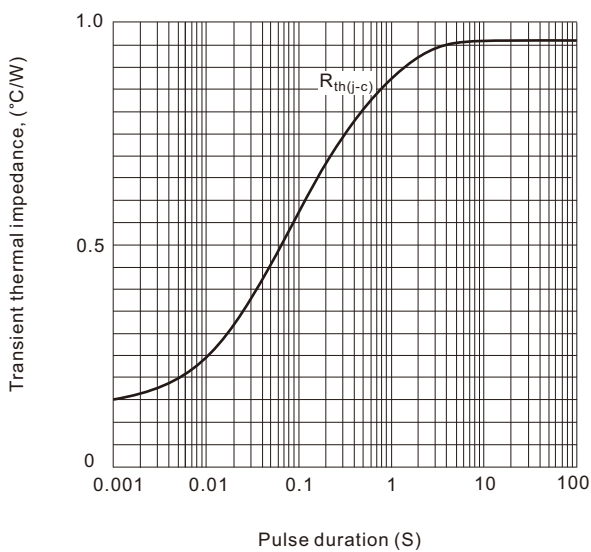
**Fig.1 Forward current derating curve**



**Fig.2 Forward characteristics**



**Fig.3 Transient thermal impedance**



**Fig.4 Max Non-repetitive forward surge current**

