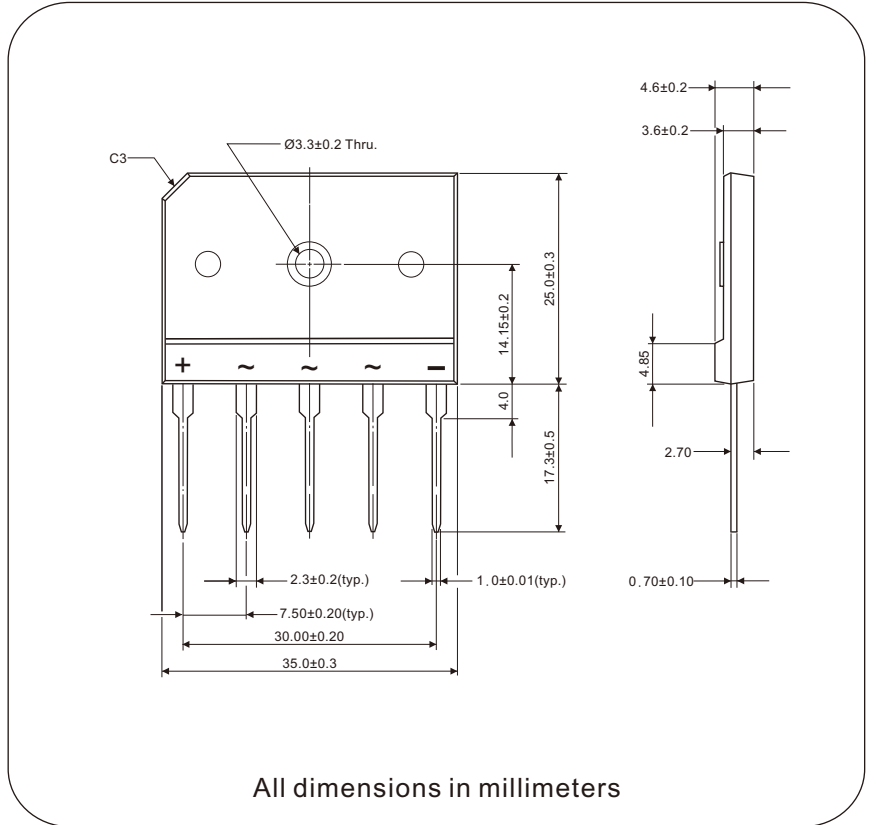
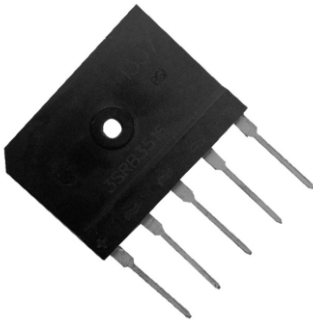


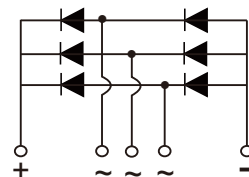
Glass Passivated Three-Phase Bridge Rectifier, 50A

MTP5008L Thru MTP5016L



FEATURES

- UL recognition file number E320098
- Typical IR less than 2.0 μA
- 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°C/10 second, 2.3kg tension force
- Weight: 11g (0.39 ozs)

| PRIMARY CHARACTERISTICS | |
|-------------------------|---------------|
| $I_{F(AV)}$ | 50A |
| V_{RRM} | 800V to 1600V |
| I_{FSM} | 500A |
| I_R | 10 μA |
| V_F | 1.10V |
| $T_{J \text{ max.}}$ | 150°C |

| MAJOR RATINGS AND CHARACTERISTICS ($T_A = 25^\circ\text{C}$ unless otherwise noted) | | | | | |
|--|-------------|------------|------|------|----------------------|
| PARAMETER | SYMBOL | MTP50..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, $T_C = 80^\circ\text{C}$ | $I_{F(AV)}$ | 50 | | | A |
| Peak forward surge current single sine-wave superimposed on rated load | I_{FSM} | 500 | | | A |
| Rating (non-repetitive, for t greater than 1 ms and less than 10 ms) for fusing | I^2t | 1250 | | | A^2s |
| 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 | | | $^\circ\text{C}$ |

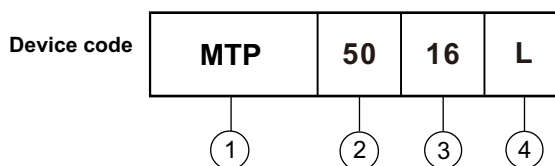
| ELECTRICAL CHARACTERISTICS ($T_A = 25^\circ\text{C}$ unless otherwise noted) | | | | | | |
|---|---------------------------|--------|----------|----|----|---------------|
| PARAMETER | TEST CONDITIONS | SYMBOL | MTP50..L | | | UNIT |
| | | | 08 | 12 | 16 | |
| Maximum instantaneous forward drop per diode | $I_F = 25\text{A}$ | V_F | 1.10 | | | V |
| Maximum reverse DC current at rated DC blocking voltage per diode | $T_A = 25^\circ\text{C}$ | I_R | 10 | | | μA |
| | $T_A = 150^\circ\text{C}$ | | 1000 | | | |

| THERMAL AND MECHANICAL ($T_A = 25^\circ\text{C}$ unless otherwise noted) | | | | | | |
|---|--|---------------------|----------|----|----|---------------------------|
| PARAMETER | TEST CONDITIONS | SYMBOL | MTP50..L | | | UNIT |
| | | | 08 | 12 | 16 | |
| Typical thermal resistance junction to case | Single-side heat dissipation, sine half wave | $R_{th(j-c)}^{(1)}$ | 0.96 | | | $^\circ\text{C}/\text{W}$ |
| Mounting torque to heatsink M3 $\pm 10\%$ | 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



- 1 - Product type : "MTP" Package, 3Ø Bridge (Three-phase bridge)
- 2 - $I_{F(AV)}$ rating : "50" for 50A
- 3 - Voltage code : code x 100 = V_{RRM}
- 4 - L: SIP (Single-in-line) package

Fig.1 Forward current derating curve

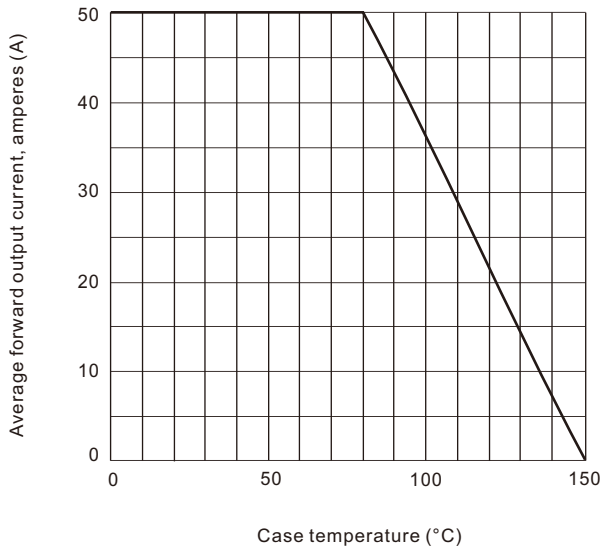


Fig.2 Forward characteristics

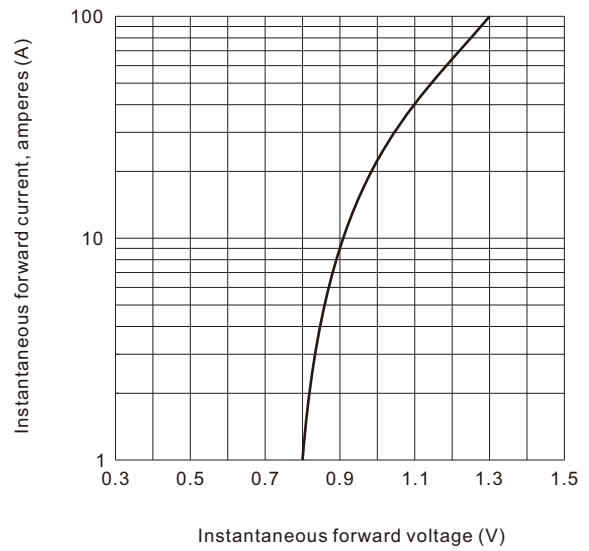


Fig.3 Transient thermal impedance

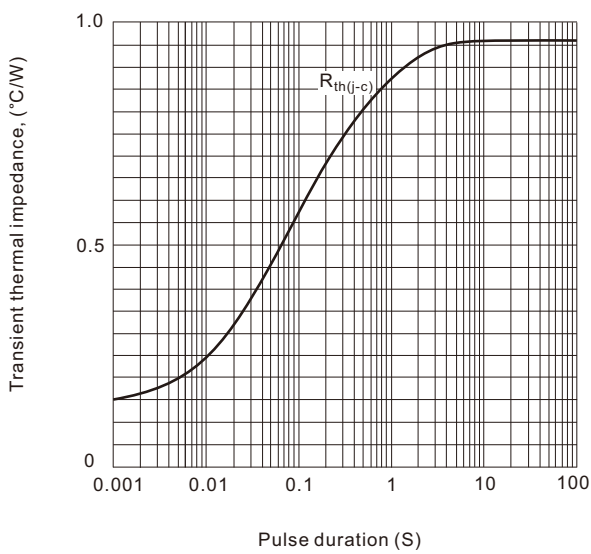


Fig.4 Max Non-repetitive forward surge current

