

# MB2505~MB2510

## BRIDGE RECTIFIERS

**VOLTAGE** 50 to 1000 Volt **CURRENT** 25 Ampere

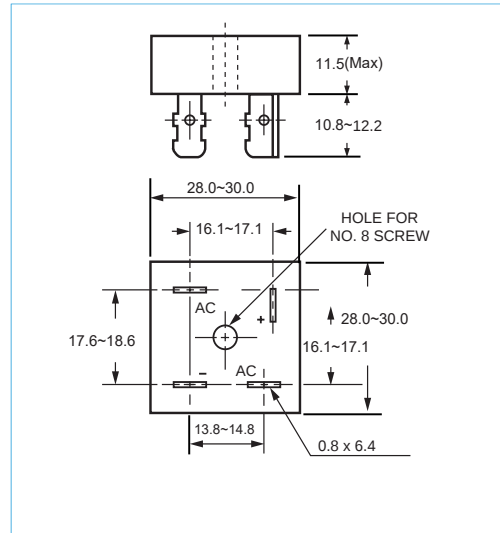
**MB-35** Unit:mm

### FEATURES

- High Conductivity Metal Case
- Low Power Loss
- Low Reverse Leakage Current
- High Efficiency
- Lead free in compliance with EU RoHS

### MECHANICAL DATA

- Case Material: Molded Plastic.
- UL Flammability Classification Rating 94V-0



## MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Ratings at 25°C ambient temperature unless otherwise specified.

| PARAMETER                                                                           | SYMBOL          | MB2505      | MB251 | MB252 | MB254 | MB256 | MB258 | MB2510 | UNITS            |
|-------------------------------------------------------------------------------------|-----------------|-------------|-------|-------|-------|-------|-------|--------|------------------|
| Maximum Recurrent Peak Reverse Voltage                                              | $V_{RRM}$       | 50          | 100   | 200   | 400   | 600   | 800   | 1000   | V                |
| Maximum RMS Voltage                                                                 | $V_{RMS}$       | 35          | 70    | 140   | 280   | 420   | 560   | 700    | V                |
| Maximum DC Blocking Voltage                                                         | $V_{DC}$        | 50          | 100   | 200   | 400   | 600   | 800   | 1000   | V                |
| Maximum Average Forward Current (see FIG.1)                                         | $I_{F(AV)}$     | 25          |       |       |       |       |       |        | A                |
| Peak Forward Surge Current : 8.3ms single half sine-wave superimposed on rated load | $I_{FSM}$       | 300         |       |       |       |       |       |        | A                |
| Maximum Forward Voltage at 12.5 A                                                   | $V_F$           | 1.1         |       |       |       |       |       |        | V                |
| Maximum DC Reverse Current at<br>Rated DC Blocking Voltage                          | $I_R$           | 10<br>500   |       |       |       |       |       |        | $\mu A$          |
| Thermal Resistance (Note1)                                                          | $R_{\theta JC}$ | 1.4         |       |       |       |       |       |        | °C / W           |
| I <sup>2</sup> t Rating for fusing                                                  | $I^2t$          | 374         |       |       |       |       |       |        | A <sup>2</sup> S |
| Operating Junction Temperature Range                                                | $T_J$           | -55 to +150 |       |       |       |       |       |        | °C               |
| Storage Temperature Range                                                           | $T_{STG}$       | -55 to +150 |       |       |       |       |       |        | °C               |

#### NOTES:

1. Thermal resistance junction to case mounted on heatsink.

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## RATING AND CHARACTERISTIC CURVES

FIG. 1 - MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

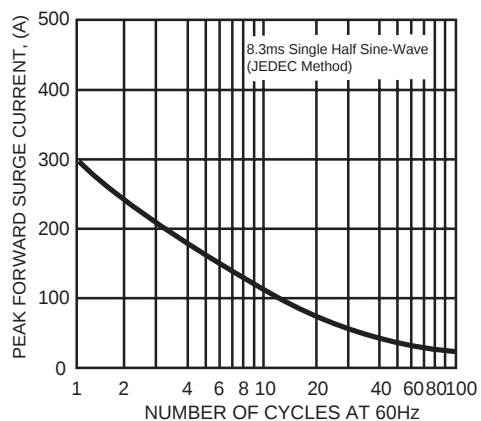


FIG. 2 - TYPICAL FORWARD CURRENT DERATING CURVE

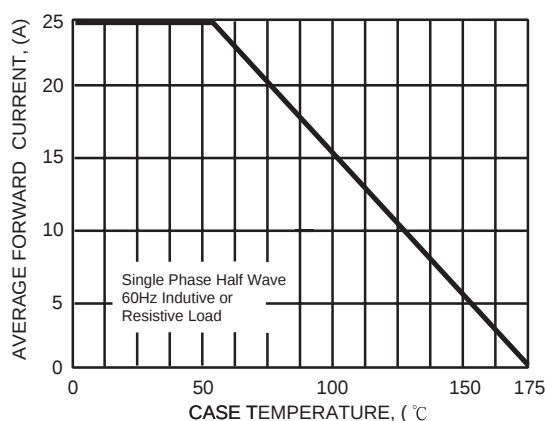


FIG. 3 - TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

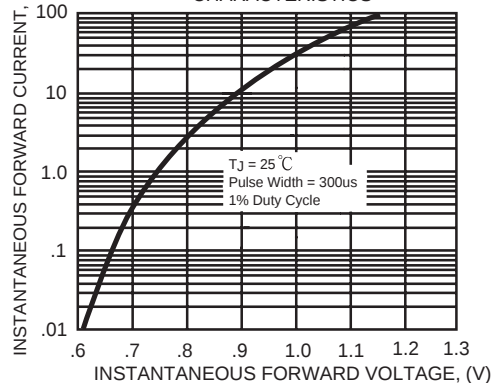
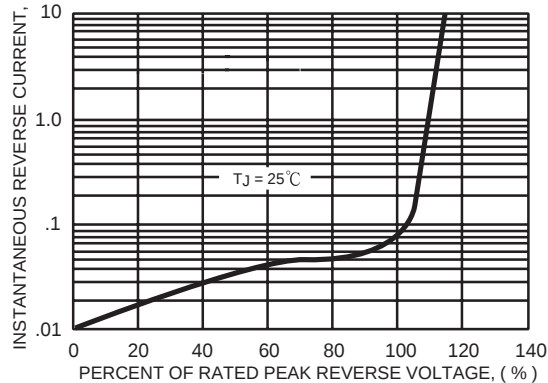


FIG. 4 - TYPICAL REVERSE CHARACTERISTICS



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### ORDER INFORMATION

- Packing information

| Part Number   | Case  | DELIVERY MODE | QUANTITY |
|---------------|-------|---------------|----------|
| MB2505~MB2510 | MB-35 | BULK          | 500/Ctn  |