



DC COMPONENTS CO., LTD.

RECTIFIER SPECIALISTS

**MBR3505W
THRU
MBR3510W**

TECHNICAL SPECIFICATIONS OF SINGLE-PHASE SILICON BRIDGE RECTIFIER

VOLTAGE RANGE - 50 to 1000 Volts

CURRENT - 35 Amperes

FEATURES

- * Plastic case with heatsink for Maximum Heat Dissipation
- * Diffused Junction
- * High current capability
- * Surge overload ratings - 400 Amperes
- * Low forward voltage drop
- * High Reliability

MECHANICAL DATA

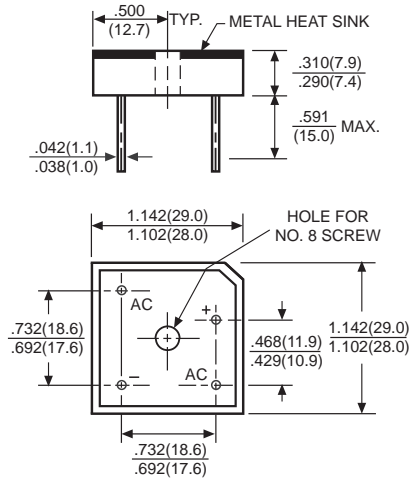
- * Case: Molded plastic with heatsink
- * Epoxy: UL 94V-0 rate flame retardant
- * Lead: MIL-STD-202E, Method 208 guaranteed
- * Polarity: As marked
- * Mounting position: Any
- * Weight: 25 grams approx.

MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Ratings at 25 °C ambient temperature unless otherwise specified.
Single phase, half wave, 60 Hz, resistive or inductive load.
For capacitive load, derate current by 20%.



MBR-25W



Dimensions in inches and (millimeters)

| | SYMBOL | MBR 3505W | MBR 351W | MBR 352W | MBR 354W | MBR 356W | MBR 358W | MBR 3510W | UNITS |
|---|-----------------------------------|--------------------------|----------|----------|----------|----------|----------|-----------|--------------------|
| Maximum Recurrent Peak Reverse Voltage | V _{RRM} | 50 | 100 | 200 | 400 | 600 | 800 | 1000 | Volts |
| Maximum RMS Bridge Input Voltage | V _{RMS} | 35 | 70 | 140 | 280 | 420 | 560 | 700 | Volts |
| Maximum DC Blocking Voltage | V _{DC} | 50 | 100 | 200 | 400 | 600 | 800 | 1000 | Volts |
| Maximum Average Forward Rectified Output Current at T _c = 55°C | I _O | 35 | | | | | | | Amps |
| Peak Forward Surge Current 8.3 ms single half sine-wave superimposed on rated load (JEDEC Method) | I _{FSM} | 400 | | | | | | | Amps |
| Maximum Forward Voltage Drop per element at 17.5A DC | V _F | 1.1 | | | | | | | Volts |
| Maximum DC Reverse Current at Rated | I _R | @ T _A = 25°C | | | | | | | μAmps |
| DC Blocking Voltage per element | | @ T _A = 100°C | | | | | | | |
| I ² t Rating for Fusing (t<8.3ms) | I ² t | 664 | | | | | | | A ² Sec |
| Typical Junction Capacitance (Note1) | C _J | 300 | | | | | | | pF |
| Typical Thermal Resistance (Note 2) | R _{θJC} | 2.2 | | | | | | | °C/W |
| Operating and Storage Temperature Range | T _J , T _{STG} | -55 to +150 | | | | | | | °C |

NOTES : 1. Measured at 1 MHz and applied reverse voltage of 4.0 volts
2. Thermal Resistance from Junction to Case per leg.

RATING AND CHARACTERISTIC CURVES (MBR3505W THRU MBR3510W)

FIG. 1 - MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

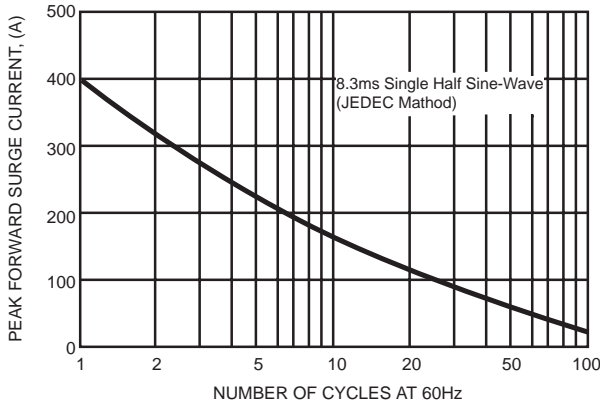


FIG. 2 - TYPICAL FORWARD CURRENT DERATING CURVE

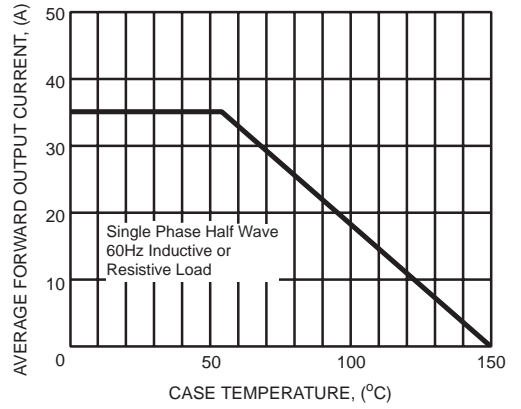


FIG. 3 - TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

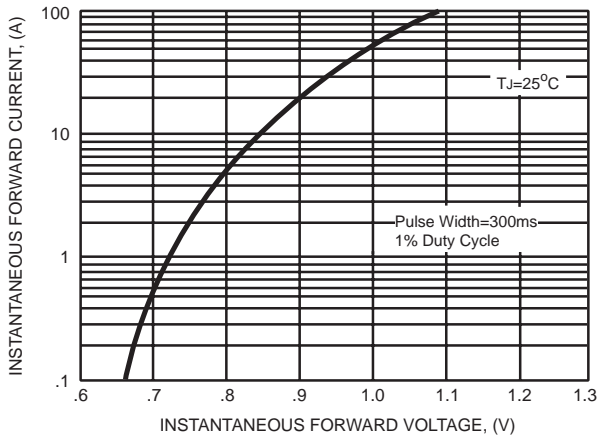
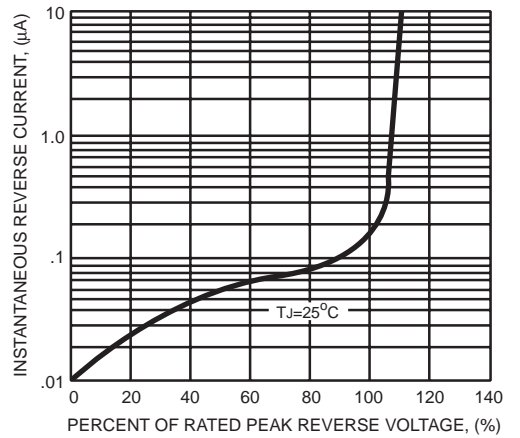


FIG. 4 - TYPICAL REVERSE CHARACTERISTICS



DC COMPONENTS CO., LTD.