



DC COMPONENTS CO., LTD.  
RECTIFIER SPECIALISTS

MBR2505W  
THRU  
MBR2510W

TECHNICAL SPECIFICATIONS OF SINGLE-PHASE SILICON BRIDGE RECTIFIER

VOLTAGE RANGE - 50 to 1000 Volts

CURRENT - 25 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

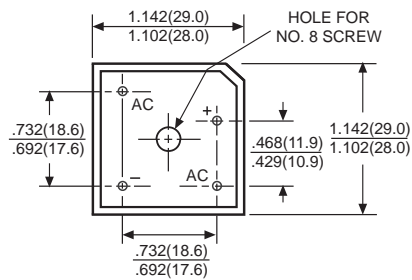
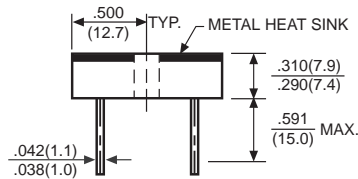
- \* Case: Molded plastic with heatsink
- \* Epoxy: UL 94V-0 rate flame retardant
- \* Lead: MIL-STD-202E, Method 208 guaranteed
- \* Polarity: As marked
- \* Mounting position: Any
- \* Weight: 25 grams approx.

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 2505W	MBR 251W	MBR 252W	MBR 254W	MBR 256W	MBR 258W	MBR 2510W	UNITS
Maximum Recurrent Peak Reverse Voltage	V <sub>RRM</sub>	50	100	200	400	600	800	1000	Volts
Maximum RMS Bridge Input Voltage	V <sub>RMS</sub>	35	70	140	280	420	560	700	Volts
Maximum DC Blocking Voltage	V <sub>DC</sub>	50	100	200	400	600	800	1000	Volts
Maximum Average Forward Rectified Output Current at T <sub>c</sub> = 55°C	I <sub>O</sub>	25							Amps
Peak Forward Surge Current 8.3 ms single half sine-wave superimposed on rated load (JEDEC Method)	I <sub>FSM</sub>	400							Amps
Maximum Forward Voltage Drop per element at 12.5A DC	V <sub>F</sub>	1.1							Volts
Maximum DC Reverse Current at Rated	I <sub>R</sub>	10							μAmps
DC Blocking Voltage per element		500							
I <sup>2</sup> t Rating for Fusing (t<8.3ms)	I <sup>2</sup> t	374							A <sup>2</sup> Sec
Typical Junction Capacitance (Note1)	C <sub>J</sub>	300							pF
Typical Thermal Resistance (Note 2)	R <sub>θJC</sub>	2.5							°C/W
Operating and Storage Temperature Range	T <sub>J</sub> , T <sub>STG</sub>	-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 (MBR2505W THRU MBR2510W)

FIG. 1 - MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

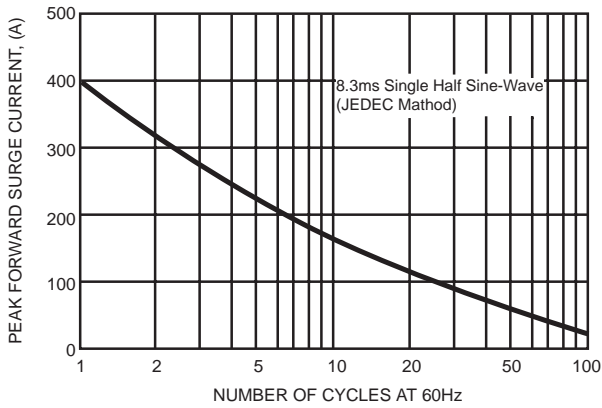


FIG. 2 - TYPICAL FORWARD CURRENT DERATING CURVE

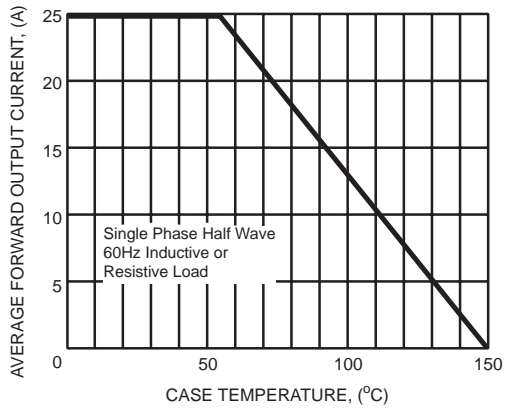


FIG. 3 - TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

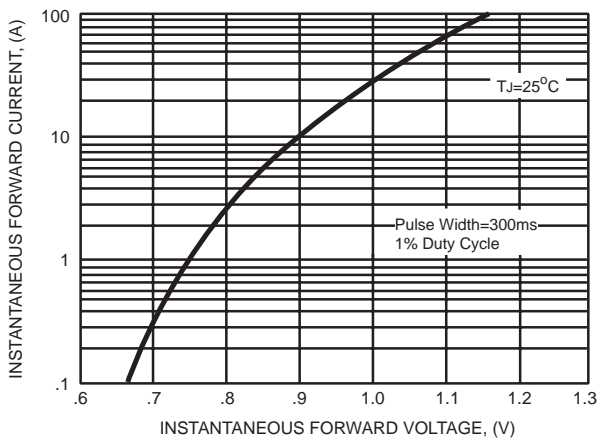


FIG. 4 - TYPICAL REVERSE CHARACTERISTICS

