



DC COMPONENTS CO., LTD.
RECTIFIER SPECIALISTS

**MBR1505
THRU
MBR1510**

TECHNICAL SPECIFICATIONS OF SINGLE-PHASE SILICON BRIDGE RECTIFIER
VOLTAGE RANGE - 50 to 1000 Volts **CURRENT - 15 Amperes**

FEATURES

- * Plastic case with heatsink for Maximum Heat Dissipation
- * Diffused Junction
- * High current capability
- * Surge overload ratings - 300 Amperes
- * Low forward voltage drop
- * High Reliability

MECHANICAL DATA

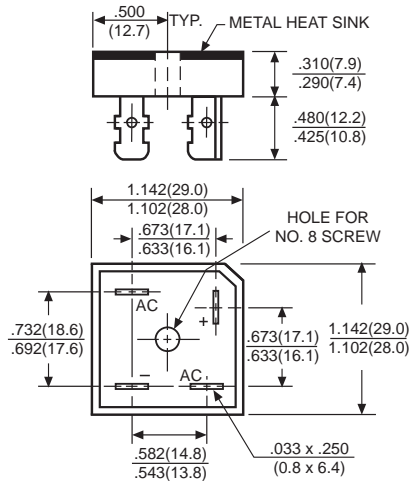
- * Case: Molded plastic with heatsink
- * Epoxy: UL 94V-0 rate flame retardant
- * Terminals: Plated .25"(6.35mm) Faston lugs, Solderable per MIL-STD-202E, Method 208 guaranteed
- * Polarity: As marked
- * Mounting position: Any
- * Weight: 25 grams approx.

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-25



Dimensions in inches and (millimeters)

	SYMBOL	MBR1505	MBR151	MBR152	MBR154	MBR156	MBR158	MBR1510	UNITS
Maximum Recurrent Peak Reverse Voltage	VRRM	50	100	200	400	600	800	1000	Volts
Maximum RMS Bridge Input Voltage	VRMS	35	70	140	280	420	560	700	Volts
Maximum DC Blocking Voltage	VDC	50	100	200	400	600	800	1000	Volts
Maximum Average Forward Rectified Output Current at Tc = 55°C	Io	15							Amps
Peak Forward Surge Current 8.3 ms single half sine-wave superimposed on rated load (JEDEC Method)	IFSM	300							Amps
Maximum Forward Voltage Drop per element at 7.5A DC	Vf	1.1							Volts
Maximum DC Reverse Current at Rated	IR	@TA = 25°C							μAmps
DC Blocking Voltage per element		@TA = 100°C							
I ² t Rating for Fusing (t<8.3ms)	I ² t	374							A ² Sec
Typical Junction Capacitance (Note1)	Cj	300							pF
Typical Thermal Resistance (Note 2)	RθJC	2.5							°C/W
Operating and Storage Temperature Range	Tj,Tstg	-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 (MBR1505 THRU MBR1510)

FIG. 1 - MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

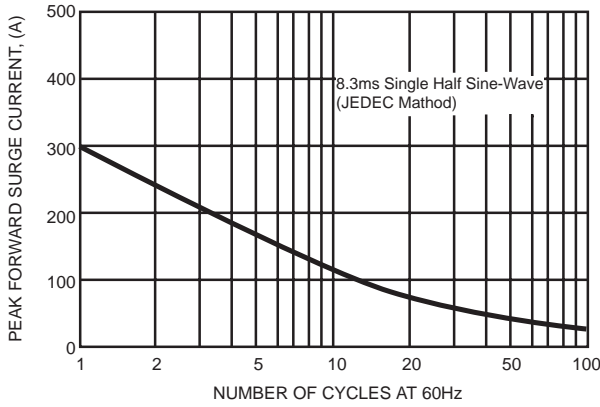


FIG. 2 - TYPICAL FORWARD CURRENT DERATING CURVE

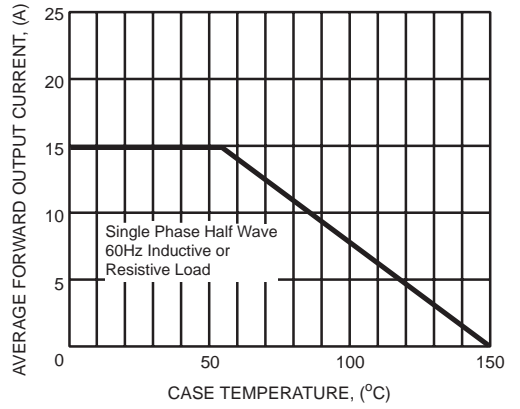


FIG. 3 - TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

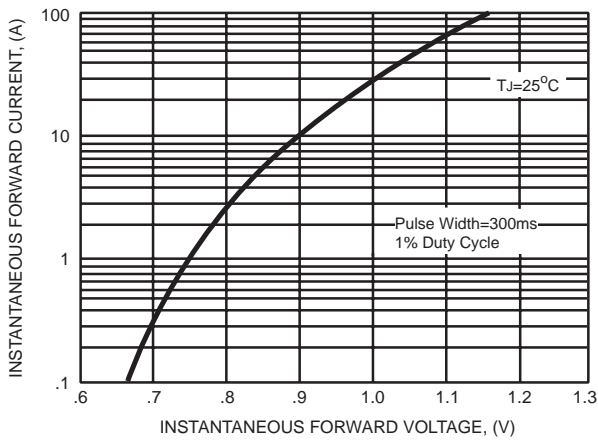
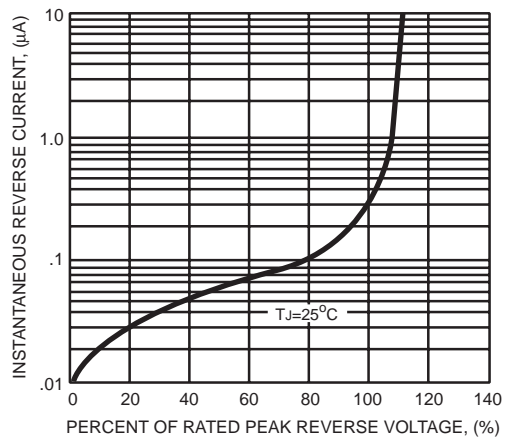


FIG. 4 - TYPICAL REVERSE CHARACTERISTICS





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VOLTAGE RANGE - 50 to 1000 Volts *CURRENT - 15 Amperes*

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MECHANICAL DATA

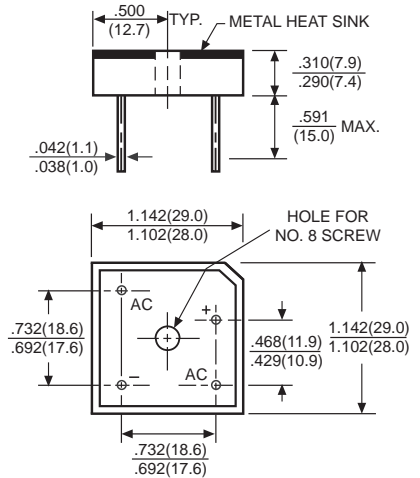
- * Case: Molded plastic with heatsink
- * Epoxy: UL 94V-0 rate flame retardant
- * Lead: MIL-STD-202E, Method 208 guaranteed
- * Polarity: As marked
- * Mounting position: Any
- * Weight: 25 grams approx.

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 1505W	MBR 151W	MBR 152W	MBR 154W	MBR 156W	MBR 158W	MBR 1510W	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	15							Amps
Peak Forward Surge Current 8.3 ms single half sine-wave superimposed on rated load (JEDEC Method)	I _{FSM}	300							Amps
Maximum Forward Voltage Drop per element at 7.5A DC	V _F	1.1							Volts
Maximum DC Reverse Current at Rated	I _R	10							μAmps
DC Blocking Voltage per element		500							
I ² t Rating for Fusing (t<8.3ms)	I ² t	374							A ² Sec
Typical Junction Capacitance (Note1)	C _J	300							pF
Typical Thermal Resistance (Note 2)	R _{θJC}	2.5							°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 (MBR1505W THRU MBR1510W)

FIG. 1 - MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

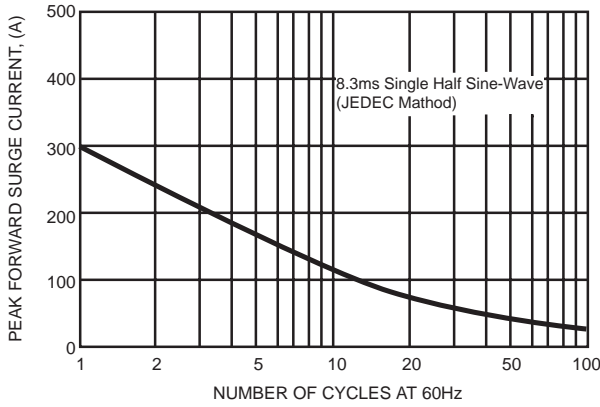


FIG. 2 - TYPICAL FORWARD CURRENT DERATING CURVE

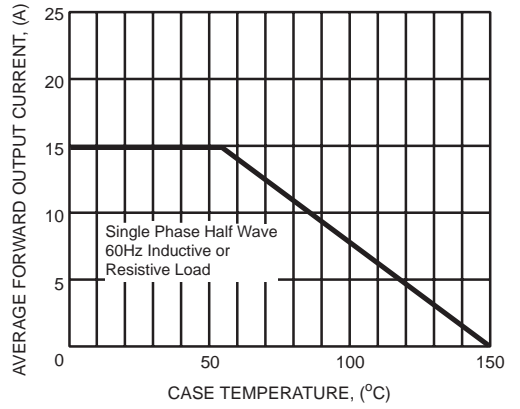


FIG. 3 - TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

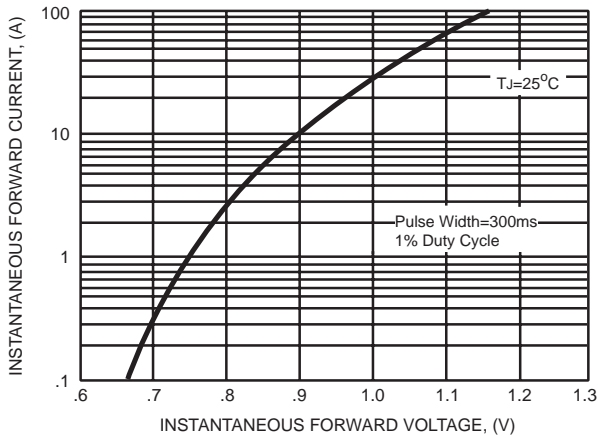


FIG. 4 - TYPICAL REVERSE CHARACTERISTICS

