



## SINGLE PHASE BRIDGE RECTIFIER

**MB1505 THRU MB1510**

**VOLTAGE RANGE  
CURRENT**

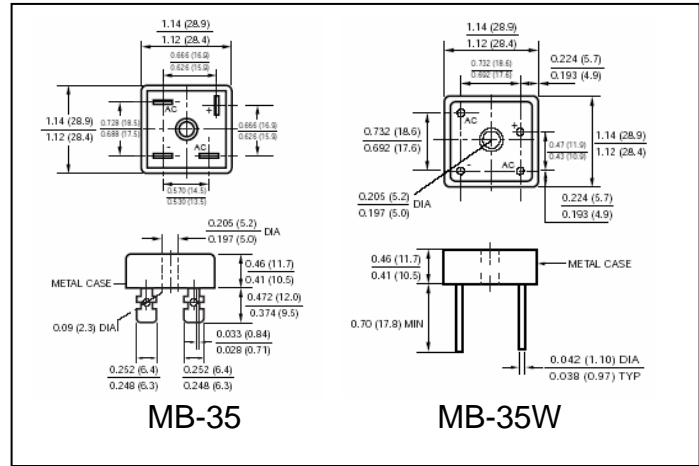
**50 to 1000 Volts  
15.0 Ampere**

### FEATURES

- UL recognized
- High forward surge current capability
- Metal package provides low thermal resistance
- High isolation voltage from case to lugs
- High temperature soldering guaranteed:  
260°C / 10 seconds
- Available in either lug package (MB1505)  
or wire lead package (MB1505W)

### MECHANICAL DATA

- Case: Metal
- Terminal: Plated 0.25" (6.35mm) lug or  
Plated lead 0.040" (1.02mm) diameter
- Polarity: Polarity symbols marked on case
- Mounting: Thru hole for #10 screw, 20 in-lbs Torque max.
- Weight: 1.02 ounce, 29.0 gram (MB-35)  
0.93 ounce, 26.4 gram (MB-35W)



### MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

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

	SYMBOLS	MB 1505	MB 151	MB 152	MB 154	MB 156	MB 158	MB 1510	UNIT	
Maximum Repetitive Peak Reverse Voltage	$V_{RRM}$	50	100	200	400	600	800	1000	Volts	
Maximum RMS 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 Current, At $T_C = 55^\circ\text{C}$ (Note 1 and 2)	$I_{(AV)}$	15							Amps	
Peak Forward Surge Current 8.3mS single half sine wave superimposed on rated load (JEDEC method)	$I_{FSM}$	300							Amps	
Rating for Fusing ( $t < 8.3\text{mS}$ )	$I^2t$	373							$\text{A}^2\text{s}$	
Maximum Instantaneous Forward Voltage drop per Bridge element 7.5A	$V_F$	1.1							Volts	
Maximum DC Reverse Current at Rated DC Blocking Voltage per element	$I_R$	10							$T_A = 25^\circ\text{C}$	$\mu\text{A}$
									$T_A = 100^\circ\text{C}$	mA
Isolation Voltage from case to lug or lead	$V_{ISO}$	2500							Volts	
Typical Thermal Resistance (Note 1 and 2)	$R_{\theta Jc}$	2.0							$^\circ\text{C}/\text{W}$	
Operating Junction Temperature	$T_J$	(-65 to +150)							$^\circ\text{C}$	
Storage Temperature Rang	$T_{STG}$	(-65 to +150)							$^\circ\text{C}$	

### Notes:

1. Unit mounted on 5" x 4" x 3" (12.8cm x 10.2cm x 7.3cm) AL finned plate
2. Bolt down on heat-sink with silicon thermal compound between bridge and mounting surface for maximum heat transfer efficiency with #10 screw

FIG.1-DERATING CURVE FOR  
OUTPUT RECTIFIED CURRENT

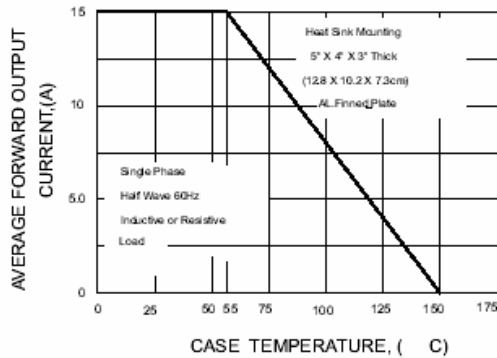


FIG.2-MAXIMUM NON-REPETITIVE PEAK  
FORWARD SURGE CURRENT PER ELEMENT

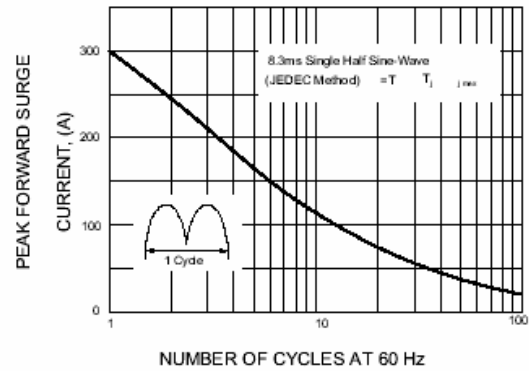


FIG.3-TYPICAL FORWARD CHARACTERISTICS  
PER BRIDGE ELEMENT

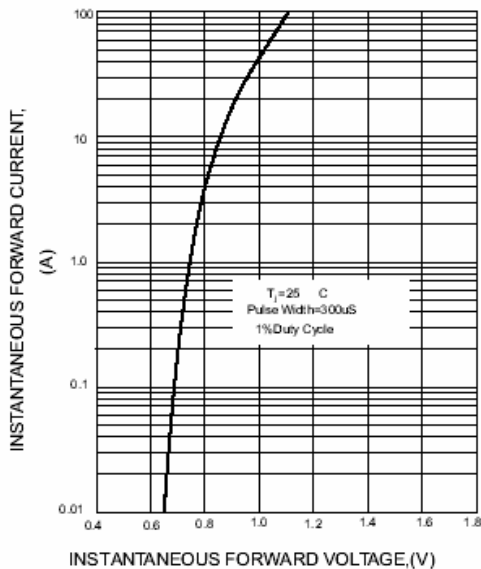


FIG.4-TYPICAL REVERSE CHARACTERISTICS  
PER BRIDGE ELEMENT

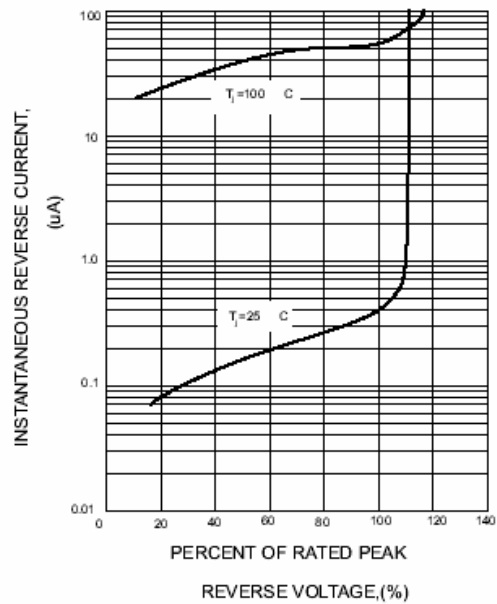


FIG.5-TYPICAL JUNCTION CAPACITANCE  
PER BRIDGE ELEMENT

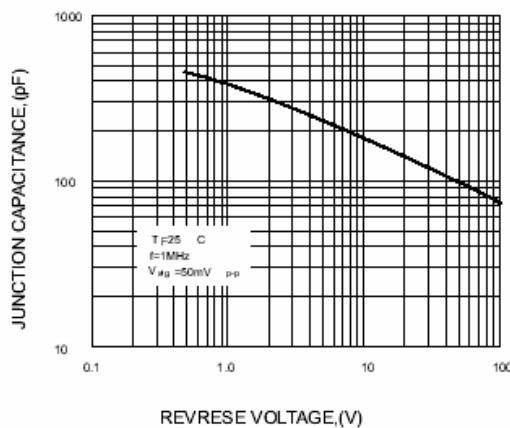


FIG.6-MAXIMUM POWER DISSIPATION

