



## SINGLE-PHASE BRIDGE RECTIFIER

**KBPC25005 THRU KBPC2510**

**VOLTAGE RANGE**

**50 to 1000 Volts**

**MB2505 THRU MB2510**

**CURRENT**

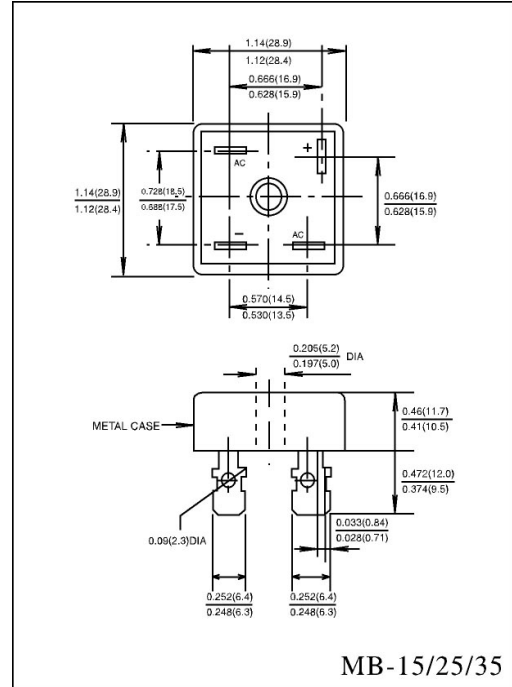
**25 Ampere**

### FEATURES

- Low cost
- This series is UL recognized under component index, file number E127707
- High forward surge current capability
- Low thermal resistance.
- High isolation voltage from case to lugs.
- High temperature soldering guaranteed: 260°C/10 second, at 5 lbs. (2.3kg) tension.

### MECHANICAL DATA

- Case: Metal case.
- Terminal: Plated 0.25" (6.35mm) lug.
- Polarity: Polarity symbols marked on case.
- Mounting: Thru hole for #10 screw, 20 in.- lbs. Torque Max.
- Weight: 1.02 ounce, 29gram



### 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	KBPC	KBPC	KBPC	KBPC	KBPC	KBPC	KBPC	UNIT	
		2505	2501	2502	2504	2506	2508	2510		
		MB2505	MB251	MB252	MB254	MB256	MB258	MB2510		
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 Output Current, at $T_C = 50^\circ\text{C}$ (Note 1, 2)	$I_{(AV)}$	25							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 at 12.5A	$V_F$	1.1							Volts	
Maximum DC Reverse Current at rate DC blocking voltage per element	$I_R$	$T_A = 25^\circ\text{C}$	10							$\mu\text{A}$
		$T_A = 100^\circ\text{C}$	1.0							mA
Isolation Voltage from case to lugs	$V_{ISO}$	2500							$V_{AC}$	
Typical Thermal Resistance (Note 1,2)	$R_{\theta JC}$	2.0							$^\circ\text{C}/\text{W}$	
Operating Temperature Range	$T_J$	(-65 to +150)							$^\circ\text{C}$	
Storage Temperature Range	$T_{STG}$	(-65 to +150)								

1. Unit mounted on 5" X 6" X 4.9" (12.8cm X 15.2cm X 12.4cm)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

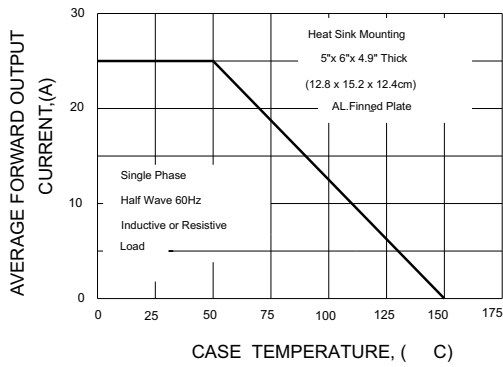


FIG.2-MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT PER ELEMENT

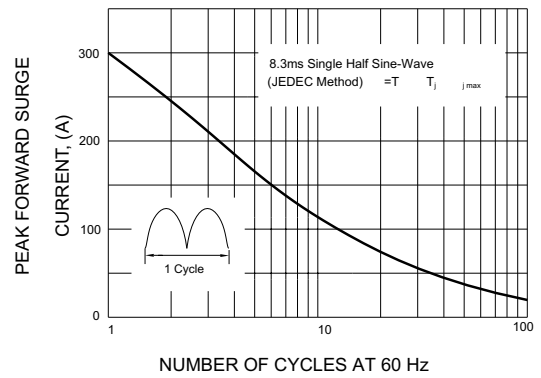


FIG.3-TYPICAL FORWARD CHARACTERISTICS PER BRIDGE ELEMENT

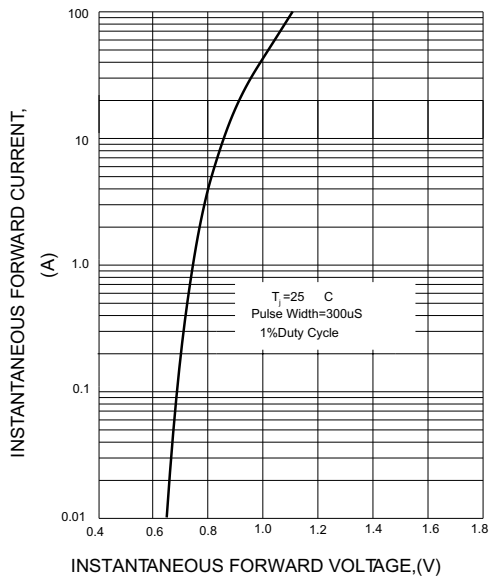


FIG.4-TYPICAL REVERSE CHARACTERISTICS PER BRIDGE ELEMENT

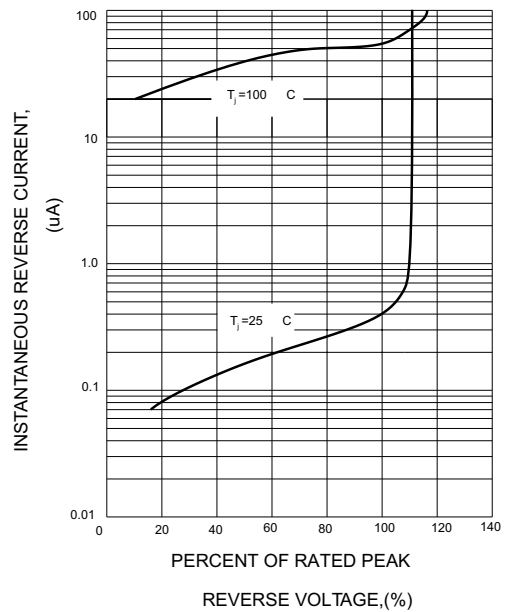


FIG.5-TYPICAL JUNCTION CAPACITANCE PER BRIDGE ELEMENT

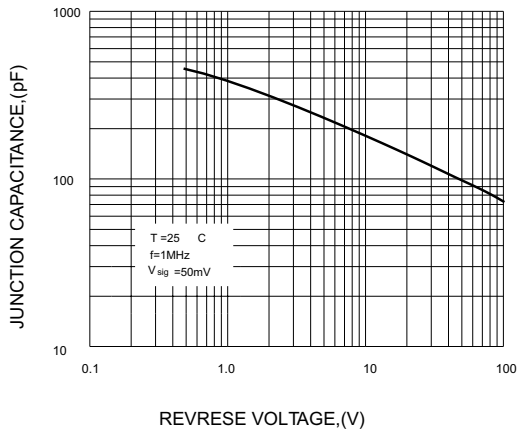


FIG.6-MAXIMUM POWER DISSIPATION

