



FORWARD INTERNATIONAL ELECTRONICS LTD.

**SEMICONDUCTOR  
TECHNICAL DATA**

KBPC / MB  
35005W / 3505W  
THRU  
KBPC / MB  
3510W / 3510W

**TECHNICAL SPECIFICATIONS OF SINGLE-PHASE SILICON BRIDGE RECTIFIER**  
VOLTAGE RANGE - 50 to 1000 Volts CURRENT - 35 Amperes

**FEATURES**

- \* Metal case Maximum Heat Dissipation
- \* Surge overload ratings-400 Amperes
- \* Low forward voltage drop

**MECHANICAL DATA**

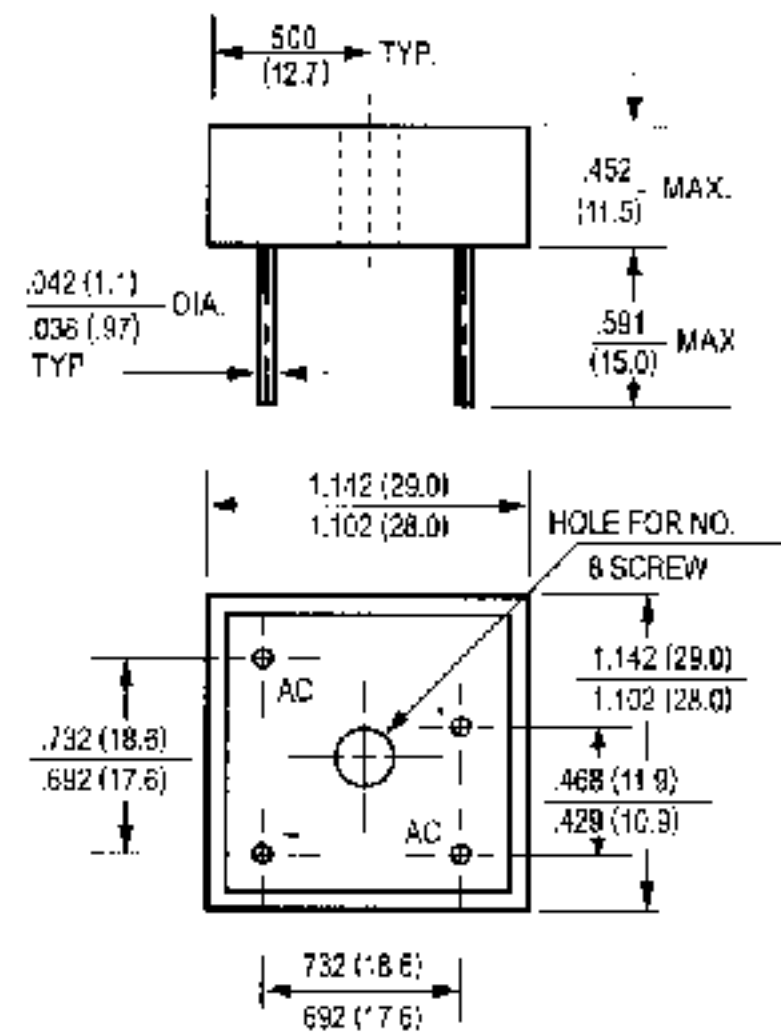
- \* Case: Metal, electrically isolated
- \* Epoxy: UL 94V-0 rate flame retardant
- \* Lead: MIL-STD-202E, Method 208 guaranteed
- \* Polarity: As marked
- \* Mounting position: Any
- \* Weight: 30 grams

**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%.



MB-25W



Dimensions in inches and (millimeters)

		KBPC 35005W	KBPC 3501W	KBPC 3502W	KBPC 3504W	KBPC 3506W	KBPC 3508W	KBPC 3510W	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>	35							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 17.5A DC	V <sub>F</sub>	1.1							Volts	
Maximum DC Reverse Current at Rated	I <sub>R</sub>								10	uAmps
DC Blocking Voltage per element										
									500	
									664	A <sup>2</sup> Sec
Typical Junction Capacitance ( Note 1)	C <sub>J</sub>								300	pF
Typical Thermal Resistance (Note 2)	R <sub>θJC</sub>								2.2	°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 ( KBPC35005W MB3505W THRU KBPC3510W MB3510W )

FIG. 1 - MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

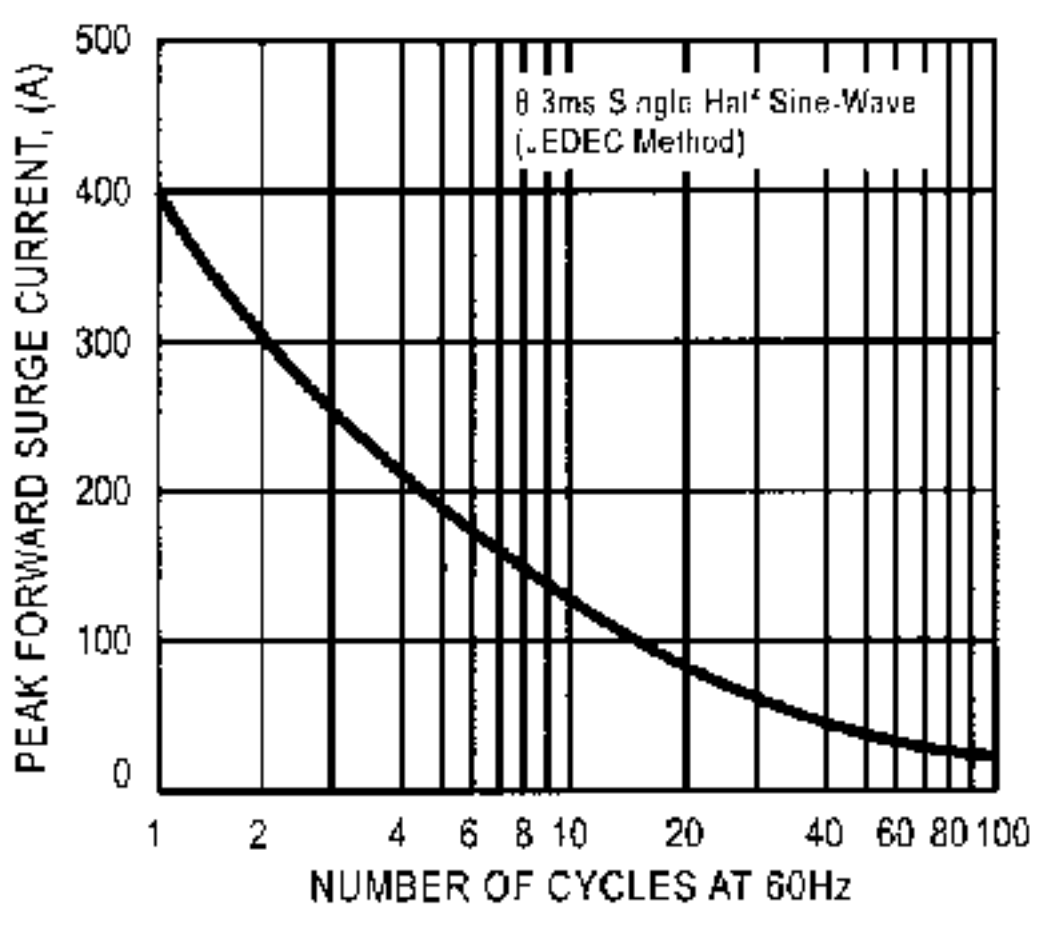


FIG. 2 - TYPICAL FORWARD CURRENT DERATING CURVE

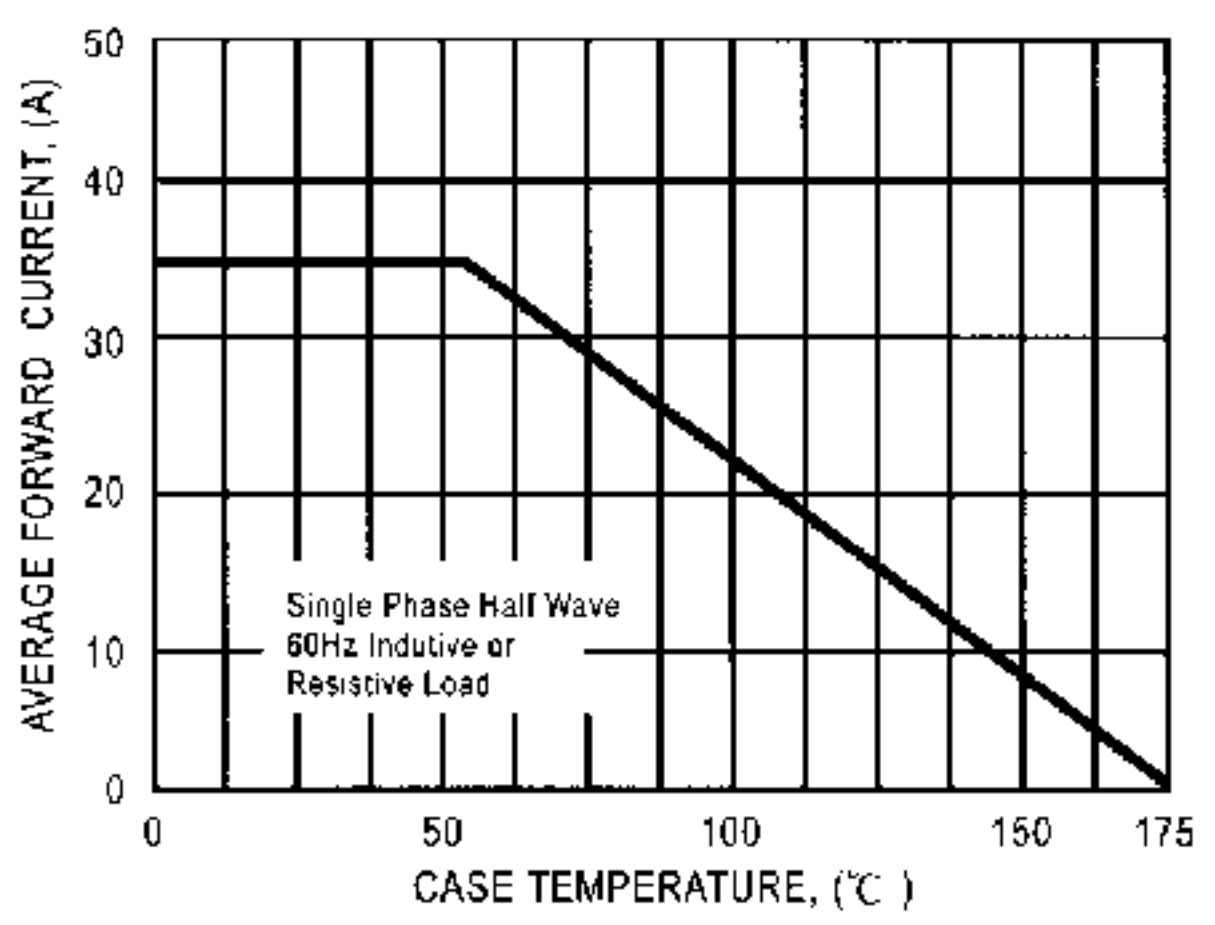


FIG. 3 - TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

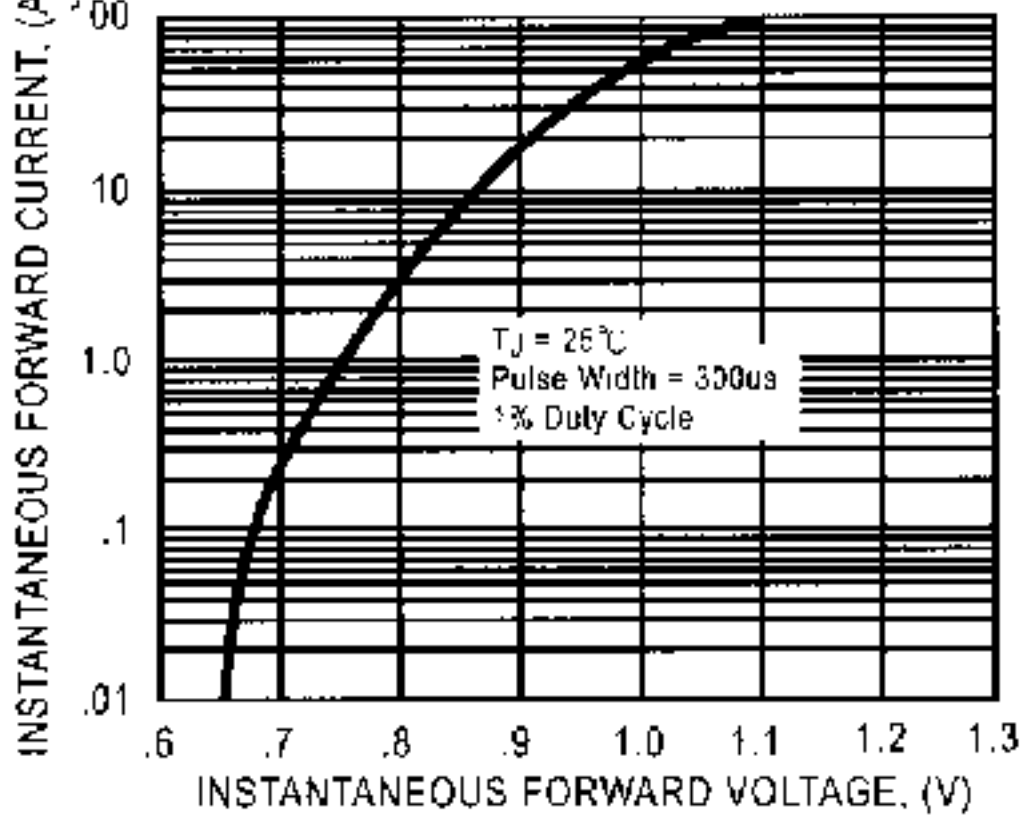


FIG. 4 - TYPICAL REVERSE CHARACTERISTICS

