

# KBPC5000 - KBPC5010

**PRV : 50 - 1000 Volts**

**Io : 50 Amperes**

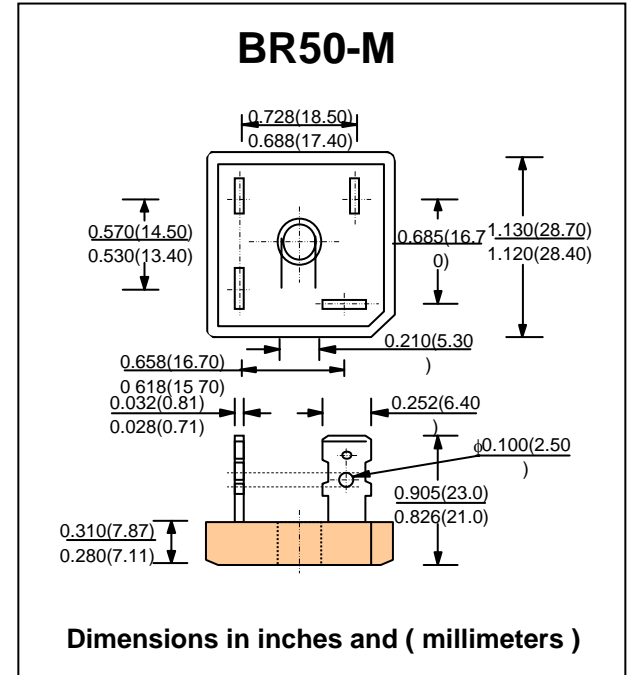
## FEATURES :

- \* High case dielectric strength
- \* High surge current capability
- \* High reliability
- \* High efficiency
- \* Low reverse current
- \* Low forward voltage drop
- \* **Pb / RoHS Free**

## MECHANICAL DATA :

- \* Case : Metal Case
- \* Epoxy : UL94V-O rate flame retardant
- \* Terminals : plated .25" (6.35 mm). Faston
- \* Polarity : Polarity symbols marked on case
- \* Mounting position : Bolt down on heat-sink with silicone thermal compound between bridge and mounting surface for maximum heat transfer efficiency.
- \* Weight : 17.1 grams

# SILICON BRIDGE RECTIFIERS



## MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

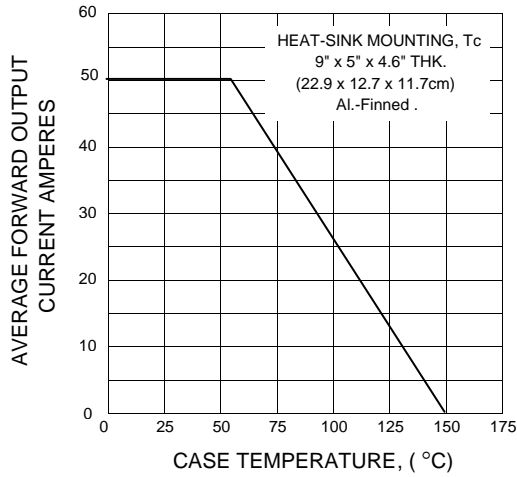
Rating at 25 °C ambient temperature unless otherwise specific.  
 Single phase, half wave, 60 Hz, resistive or inductive load  
 For capacitive load, derate current by 20%

RATING	SYMBOL	KBPC 5000	KBPC 5001	KBPC 5002	KBPC 5004	KBPC 5006	KBPC 5008	KBPC 5010	UNIT
Maximum Recurrent Peak Reverse Voltage	$V_{RRM}$	50	100	200	400	600	800	1000	V
Maximum RMS Voltage	$V_{RMS}$	35	70	140	280	420	560	700	V
Maximum DC Blocking Voltage	$V_{DC}$	50	100	200	400	600	800	1000	V
Maximum Average Forward Current $T_c = 55^\circ C$	$I_{F(AV)}$	50							A
Peak Forward Surge Current Single half sine wave Superimposed on rated load (JEDEC Method)	$I_{FSM}$	400							A
Current Squared Time at $t < 8.3$ ms.	$I^2 t$	660							A <sup>2</sup> S
Maximum Forward Voltage per Diode at $I_F = 25A$	$V_F$	1.1							V
Maximum DC Reverse Current $T_a = 25^\circ C$ at Rated DC Blocking Voltage $T_a = 100^\circ C$	$I_R$	10							$\mu A$
	$I_{R(H)}$	500							$\mu A$
Typical Thermal Resistance (Note 1)	$R_{\theta JC}$	2.0							$^\circ C/W$
Operating Junction Temperature Range	$T_J$	- 40 to + 150							$^\circ C$
Storage Temperature Range	$T_{STG}$	- 40 to + 150							$^\circ C$

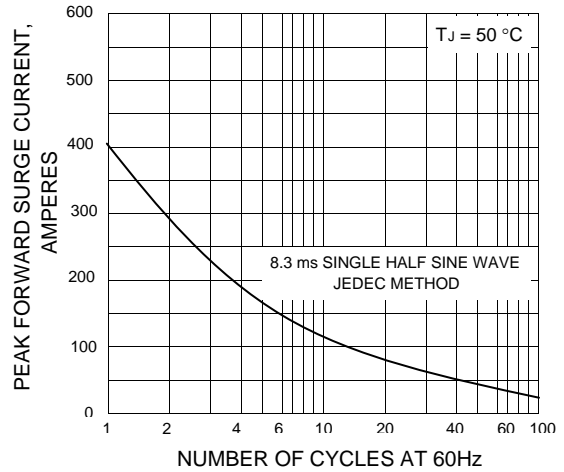
**Note :**  
 ( 1 ) Thermal resistance from Junction to Case with units mounted on a 9"x5"x4.6" (22.9x12.7x11.7 cm) Al-Finned Heatsink.

## RATING AND CHARACTERISTIC CURVES (KBPC50005 - KBPC5010)

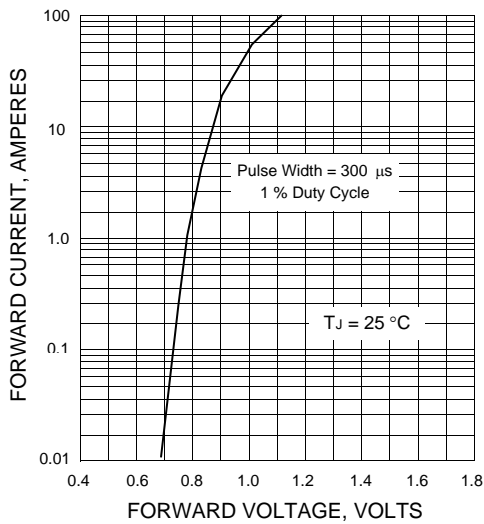
**FIG.1 - DERATING CURVE FOR OUTPUT RECTIFIED CURRENT**



**FIG.2 - MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT**



**FIG.3 - TYPICAL FORWARD CHARACTERISTICS PER DIODE**



**FIG.4 - TYPICAL REVERSE CHARACTERISTICS PER DIODE**

