



# KBPC2500 - KBPC2510 SILICON BRIDGE RECTIFIERS

**PRV : 50 - 1000 Volts**

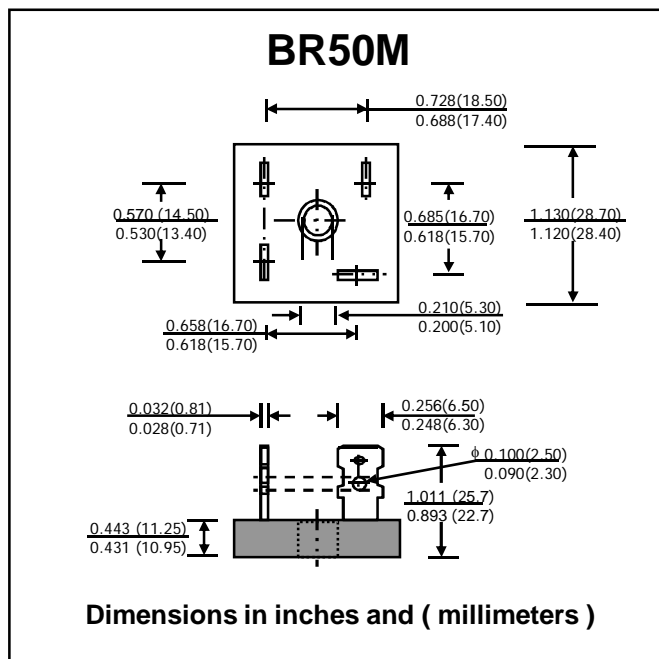
**Io : 25 Amperes**

**FEATURES :**

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

**MECHANICAL DATA :**

- \* Case : Metal Case
- \* Epoxy : UL94V-0 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



**MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS**

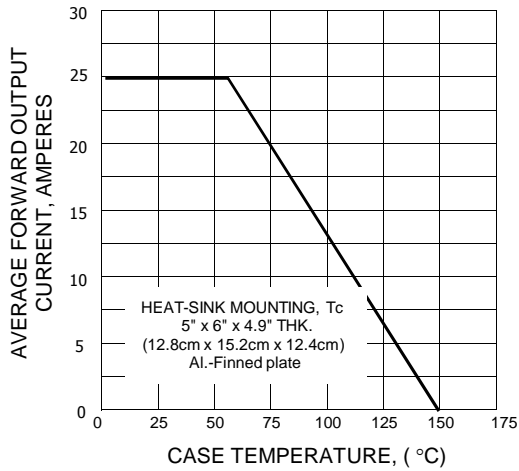
Rating at 25 °C ambient temperature unless otherwise specified. Single phase, half wave, 60 Hz, resistive or inductive load. For capacitive load, derate current by 20%.

RATING	SYMBOL	KBPC 2500	KBPC 2501	KBPC 2502	KBPC 2504	KBPC 2506	KBPC 2508	KBPC 2510	UNIT	
Maximum Recurrent Peak Reverse Voltage	V <sub>RRM</sub>	50	100	200	400	600	800	1000	V	
Maximum RMS Voltage	V <sub>RMS</sub>	35	70	140	280	420	560	700	V	
Maximum DC Blocking Voltage	V <sub>DC</sub>	50	100	200	400	600	800	1000	V	
Maximum Average Forward Current T <sub>c</sub> = 55°C	I <sub>F(AV)</sub>	25								A
Peak Forward Surge Current Single half sine wave Superimposed on rated load (JEDEC Method)	I <sub>FSM</sub>	300								A
Current Squared Time at t < 8.3 ms.	I <sup>2</sup> <sub>t</sub>	375								A <sup>2</sup> S
Maximum Forward Voltage per Diode at I <sub>F</sub> = 12.5 A	V <sub>F</sub>	1.1								V
Maximum DC Reverse Current T <sub>a</sub> = 25 °C at Rated DC Blocking Voltage T <sub>a</sub> = 100 °C	I <sub>R</sub>	10								μA
	I <sub>R(H)</sub>	200								μA
Typical Thermal Resistance (Note 1)	R <sub>θJC</sub>	1.45								°C/W
Operating Junction Temperature Range	T <sub>J</sub>	- 40 to + 150								°C
Storage Temperature Range	T <sub>STG</sub>	- 40 to + 150								°C

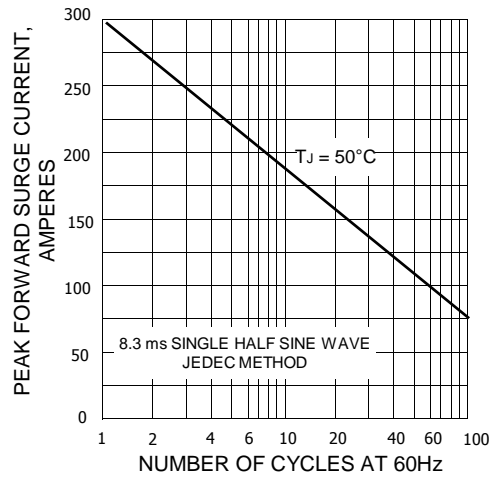
**Note :** (1) Thermal Resistance from junction to case with units mounted on a 5" x 6" x 4.9" (12.8cm.x 15.2cm.x 12.4cm.) Al-Finned Plate

**RATING AND CHARACTERISTIC CURVES (KBPC2500 - KBPC2510)**

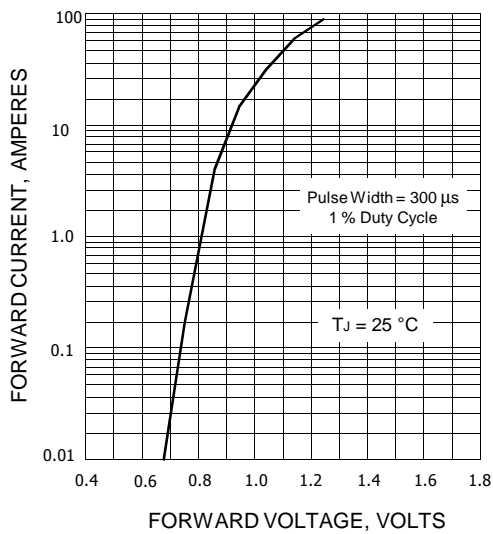
**FIG.1 - DERATING CURVE FOR OUTPUT RECTIFIED CURRENT**



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



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



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

