

KBPC5000 - KBPC5010

PRV : 50 - 1000 Volts

Io : 50 Amperes

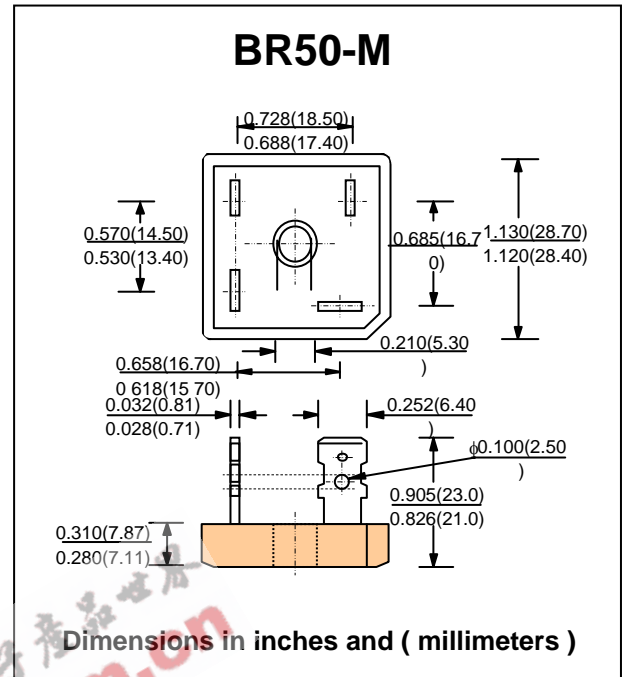
FEATURES :

- * 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°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 ² S
Maximum Forward Voltage per Diode at I _F = 25A	V _F	1.1							V
Maximum DC Reverse Current at Rated DC Blocking Voltage	T _a = 25 °C	10							μA
	T _a = 100 °C	500							μA
Typical Thermal Resistance (Note 1)	R _{θJC}	2.0							°C/W
Operating Junction Temperature Range	T _J	- 40 to + 150							°C
Storage Temperature Range	T _{STG}	- 40 to + 150							°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

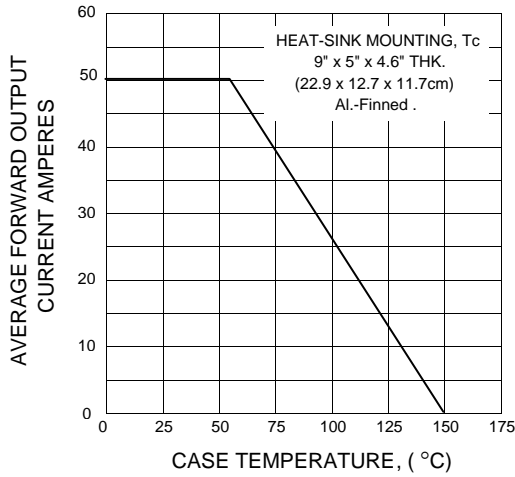


FIG.2 - MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

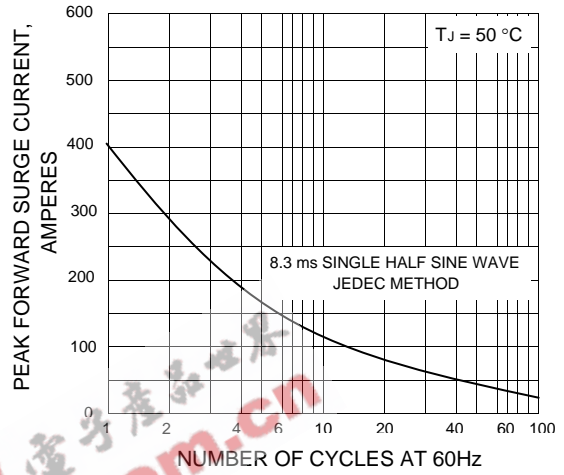


FIG.3 - TYPICAL FORWARD CHARACTERISTICS PER DIODE

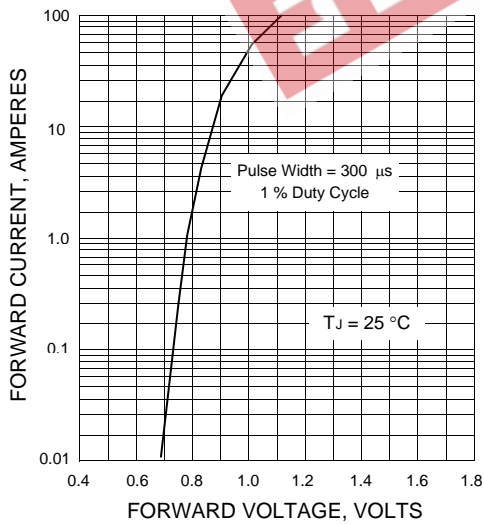


FIG.4 - TYPICAL REVERSE CHARACTERISTICS PER DIODE

