

KBPC50005 THRU KBPC5010

HIGH CURRENT SINGLE-PHASE BRIDGE RECTIFIERS

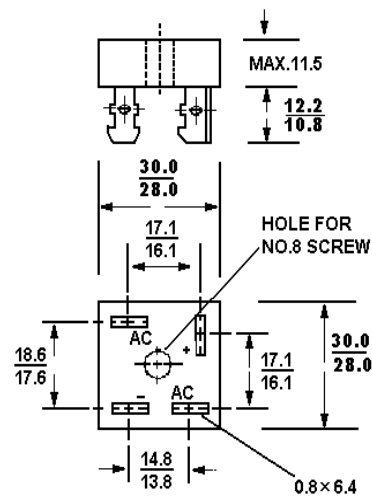
REVERSE VOLTAGE: 50 TO 1000 VOLTS

FORWARD CURRENT: 50 AMPERES

Features

- Low power loss, high efficiency
- Low reverse leakage current

KBPC



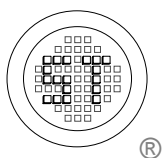
Absolute Maximum Ratings and Characteristics

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%.

	Symbols	KBPC 50005	KBPC 5001	KBPC 5002	KBPC 5004	KBPC 5006	KBPC 5008	KBPC 5010	Units
Maximum repetitive 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
Average forward rectified current at $T_C = 55^{\circ}C$	I_O	50							A
Peak forward surge current, 8.3ms single half sine wave superimposed on rated load (JEDEC)	I_{FSM}	400							A
Maximum forward voltage at 25A DC and 25°C	V_F	1.2							V
Maximum reverse current $T_A = 25^{\circ}C$ at rated DC blocking voltage $T_A = 125^{\circ}C$	I_R	10 1000							μA
Typical junction capacitance (note 1)	C_j	300							pF
Typical thermal resistance (note 2)	$R_{\theta JC}$	2.6							$^{\circ}C/W$
Operating junction and storage temperature range	T_J, T_{STG}	-55 to +150							$^{\circ}C$

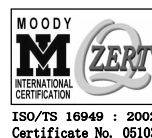
Notes:

1. Measured at 1.0MHz and applied reverse voltage of 4.0 V.DC
2. Thermal resistance from junction to case per leg.



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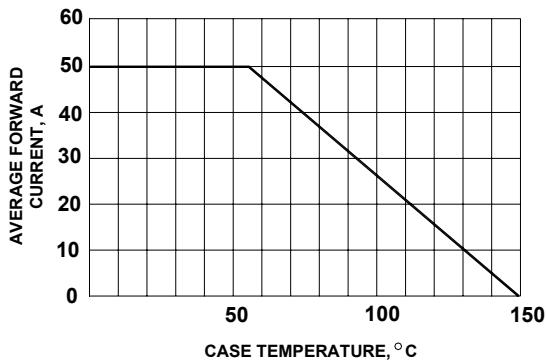
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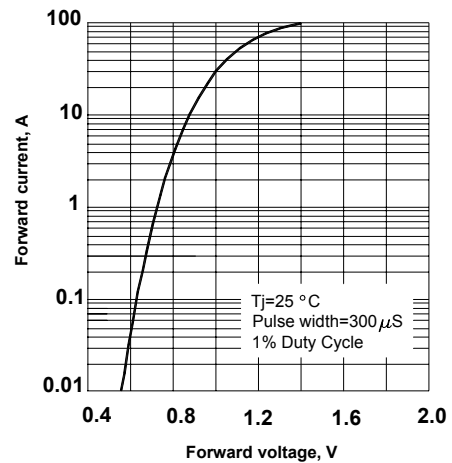
Dated : 19/07/2005

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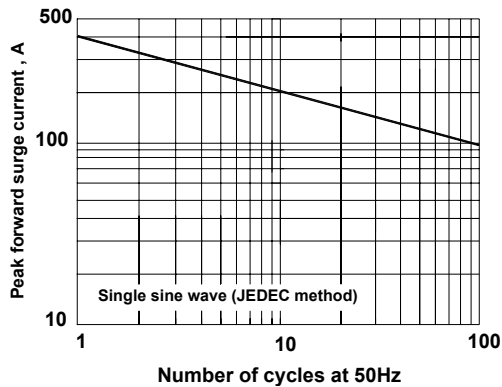
FORWARD CURRENT DERATING CURVE



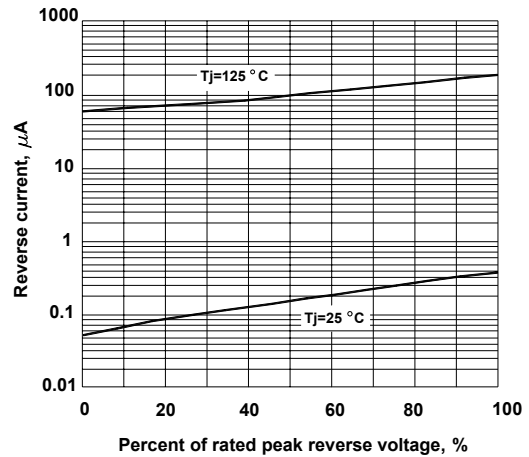
Typical forward characteristics per bridge element



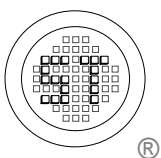
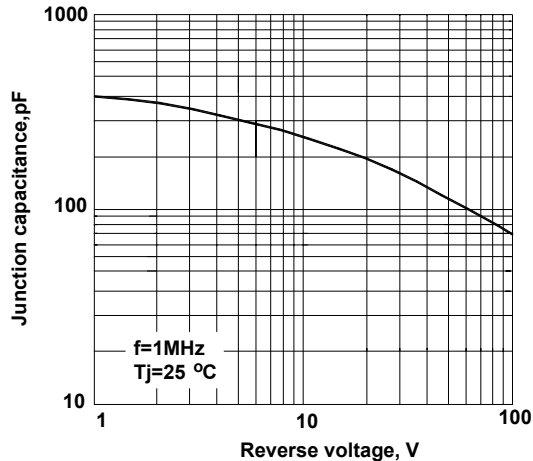
Maximum non-repetitive peak forward surge current per element



Typical Reverse Leakage Characteristics Per Bridge element

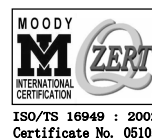


Typical junction capacitance per bridge element



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