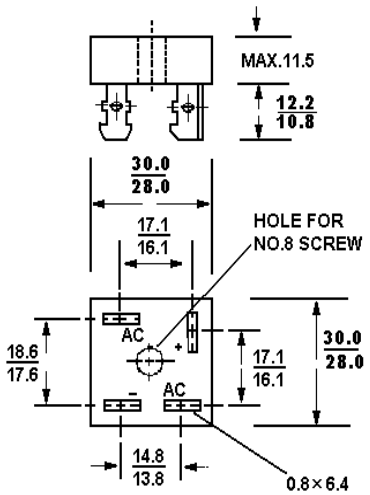
KBPC50005 THRU KBPC5010

HIGH CURRENT SINGLE-PHASE BRIDGE RECTIFIERS

REVERSE VOLTAGE: 50 TO 1000 VOLTS
FORWARD CURRENT: 50 AMPERES

KBPC



Dimensions in mm

Features

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

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%.

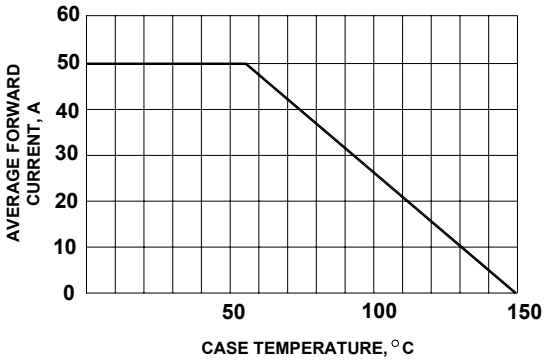
	Symbols	KBPC 50005	KBPC 5001	KBPC 5002	KBPC 5004	KBPC 5006	KBPC 5008	KBPC 5010	Units
Maximum repetitive peak reverse voltage	V_{RRM}	50	100	200	400	600	800	1000	V
Maximum RMS voltage	V_{RMS}	35	70	140	280	420	560	700	V
Maximum DC blocking voltage	V_{DC}	50	100	200	400	600	800	1000	V
Average forward rectified current at T_C = 55°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℃	V_F	1.2							V
Maximum reverse current T_A = 25°C at rated DC blocking voltage T_A = 125°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							°C/W
Operating junction and storage temperature range	T_J ,T_{STG}	-55 to +150							°C

Notes:

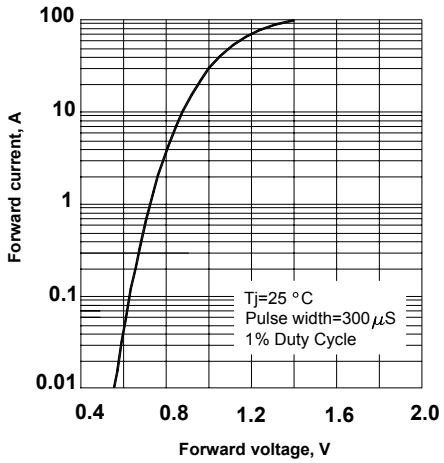
1. Measured at 1.0MHz and applied reverse voltage of 4.0 V.DC
2. Thermal resistance from junction to case per leg.

KBPC50005 THRU KBPC5010

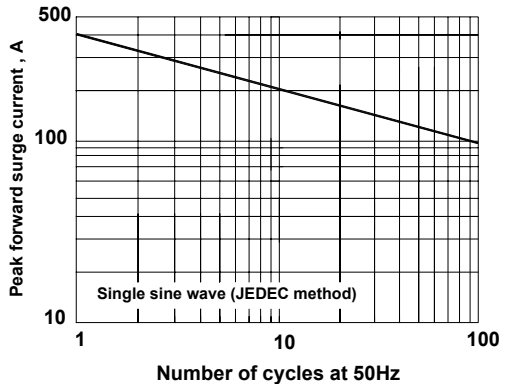
FORWARD CURRENT DERATING CURVE



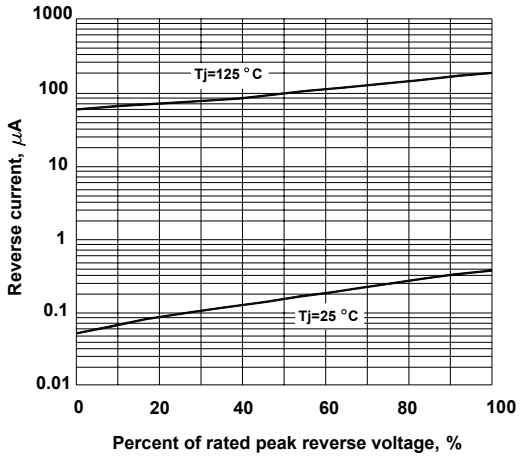
Typical forward characteristics per bridge element



Maximum non-repetitive peak forward surge current per element



Typical Reverse Leakage Characteristics Per Bridge element



Typical junction capacitance per bridge element