

Single Phase Silicon Bridge Rectifier

$V_{RRM} = 50\text{ V} - 400\text{ V}$

$I_O = 50\text{ A}$

Features

- High efficiency
- Silicon junction
- Metal case
- Types from 50 V to 400 V V_{RRM}
- Not ESD Sensitive

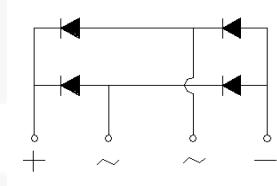
Mechanical Data

Case: Mounted in the bridge encapsulation

Mounting: Hole for #10 screw

Polarity: Marked on case

KBPC-T/W Package



Maximum ratings at $T_c = 25\text{ }^\circ\text{C}$, unless otherwise specified (KBPCXXXXT uses KBPC-T package while KBPCXXXXW uses KBPC-W package)

Parameter	Symbol	Conditions	KBPC50005T/W	KBPC5001T/W	KBPC5002T/W	KBPC5004T/W	Unit
Repetitive peak reverse voltage	V_{RRM}		50	100	200	400	V
RMS reverse voltage	V_{RMS}		35	70	140	280	V
DC blocking voltage	V_{DC}		50	100	200	400	V
Operating temperature	T_j		-55 to 150	-55 to 150	-55 to 150	-55 to 150	$^\circ\text{C}$
Storage temperature	T_{stg}		-55 to 150	-55 to 150	-55 to 150	-55 to 150	$^\circ\text{C}$

Electrical characteristics at $T_c = 25\text{ }^\circ\text{C}$, unless otherwise specified

Single phase, half sine wave, 60 Hz, resistive or inductive load

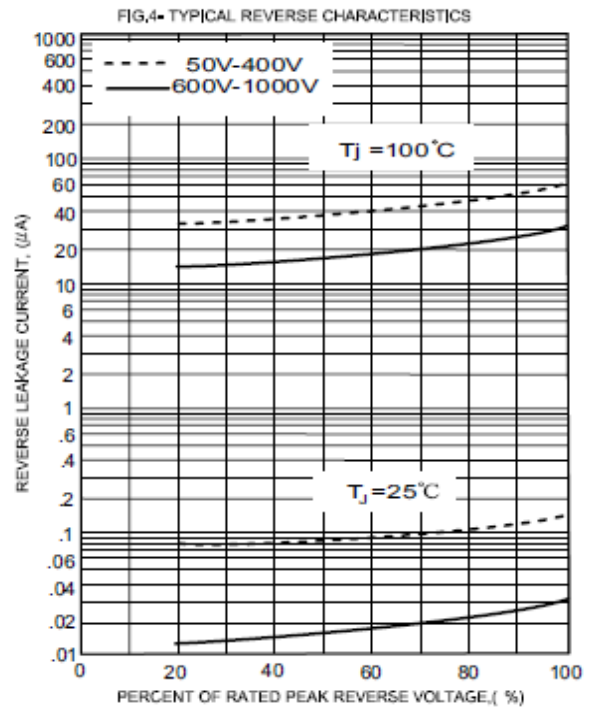
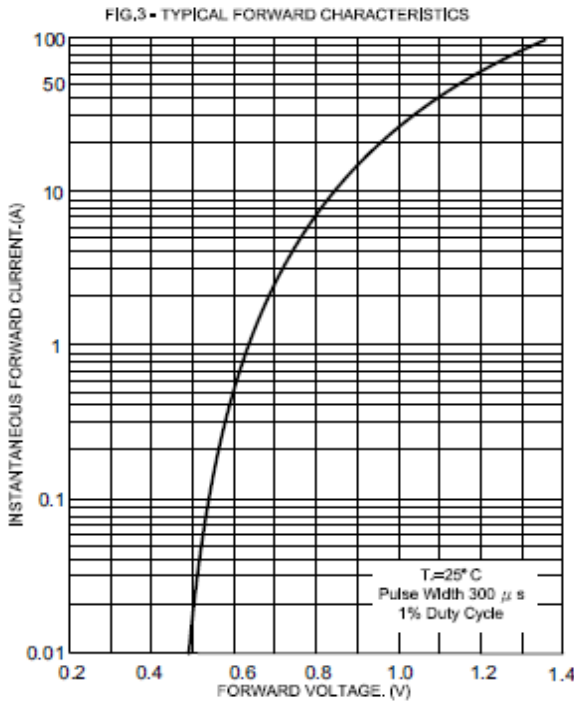
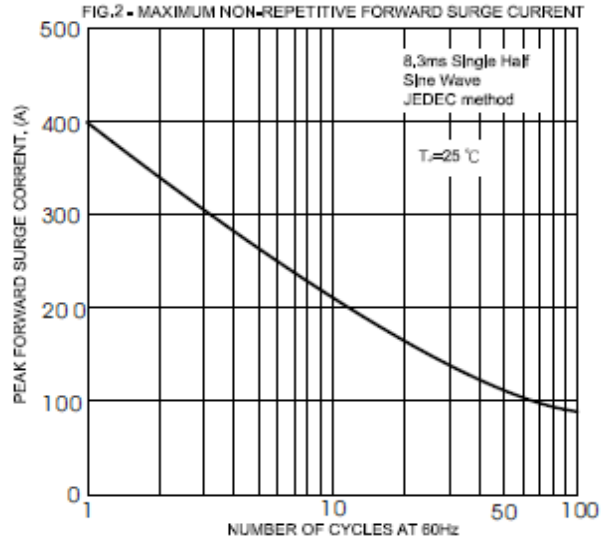
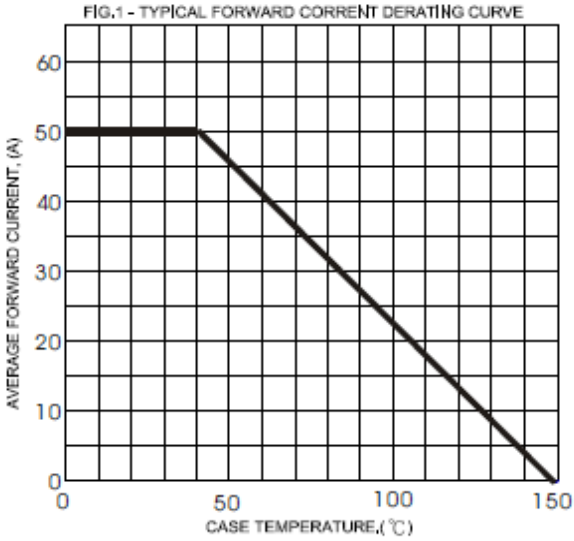
For capacitive load derate current by 20%

Parameter	Symbol	Conditions	KBPC50005T/W	KBPC5001T/W	KBPC5002T/W	KBPC5004T/W	Unit
Maximum average forward rectified current	I_O	$T_c = 40\text{ }^\circ\text{C}$	50	50	50	50	A
Peak forward surge current	I_{FSM}	8.3 ms half sine-wave	400	400	400	400	A
Maximum instantaneous forward voltage per leg	V_F	$I_F = 25.0\text{ A}$	1.1	1.1	1.1	1.1	V
Maximum DC reverse current at rated DC blocking voltage per leg	I_R	$T_c = 25\text{ }^\circ\text{C}$ $T_c = 100\text{ }^\circ\text{C}$	5 500	5 500	5 500	5 500	μA

Thermal characteristics

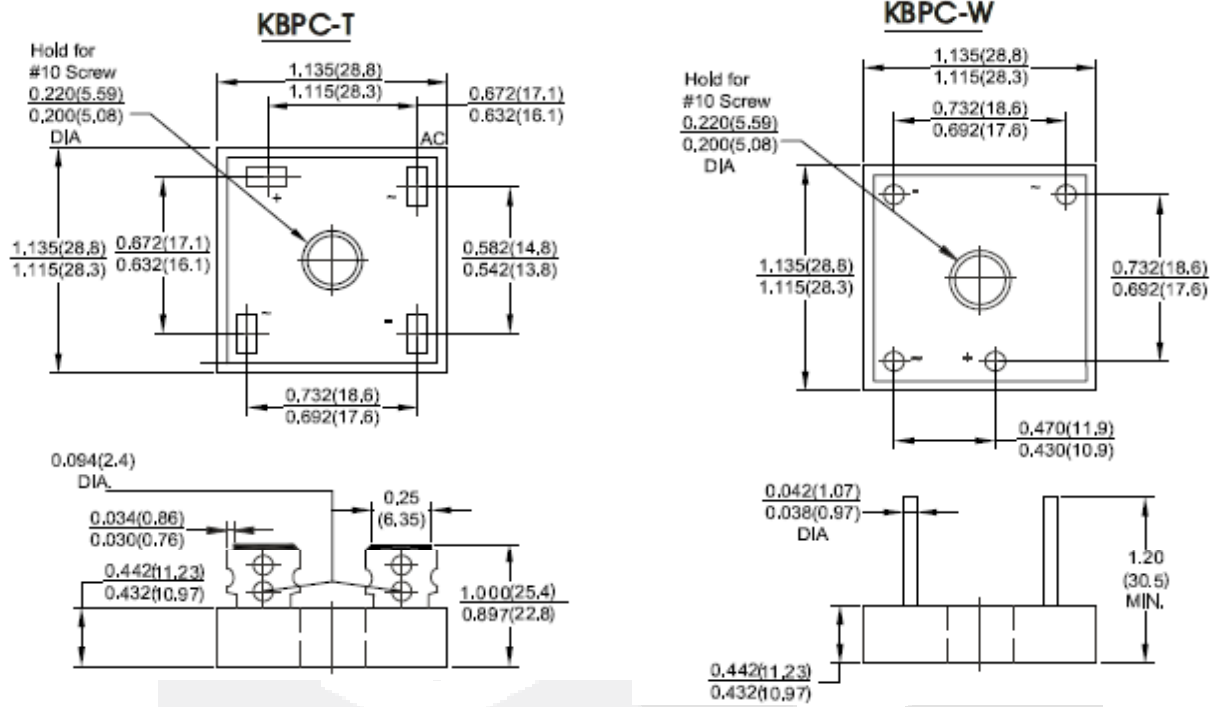
Parameter	Symbol	Conditions	KBPC50005T/W	KBPC5001T/W	KBPC5002T/W	KBPC5004T/W	Unit
Typical thermal resistance per leg ¹	$R_{\theta JA}$		2.5	2.5	2.5	2.5	$^\circ\text{C/W}$

¹ - Thermal resistance from Junction to Ambient on P.C. board mounting

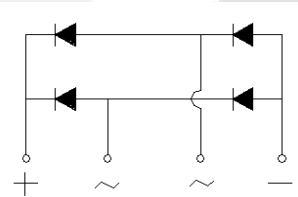


Package dimensions and terminal configuration

Product is marked with part number and terminal configuration.



Dimensions in inches and (millimeters)



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