

## Single Phase Silicon Bridge Rectifier

$V_{RRM} = 600\text{ V} - 1000\text{ V}$

$I_O = 50\text{ A}$

### Features

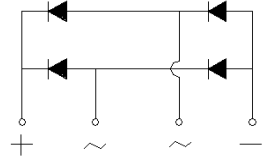
- High efficiency
- Silicon junction
- Metal case
- Types from 600 V to 1000 V  $V_{RRM}$
- Not ESD Sensitive

### 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	KBPC5006T/W	KBPC5008T/W	KBPC5010T/W	Unit
Repetitive peak reverse voltage	$V_{RRM}$		600	800	1000	V
RMS reverse voltage	$V_{RMS}$		420	560	700	V
DC blocking voltage	$V_{DC}$		600	800	1000	V
Operating temperature	$T_j$		-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	$^\circ\text{C}$

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

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

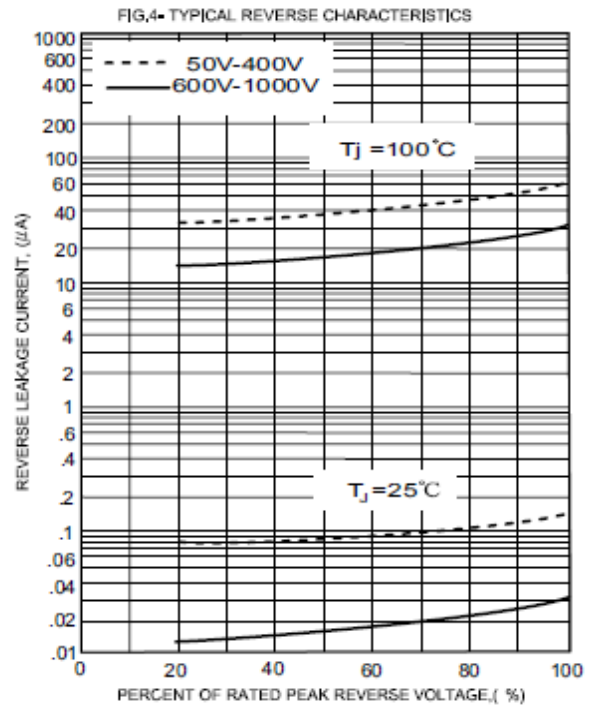
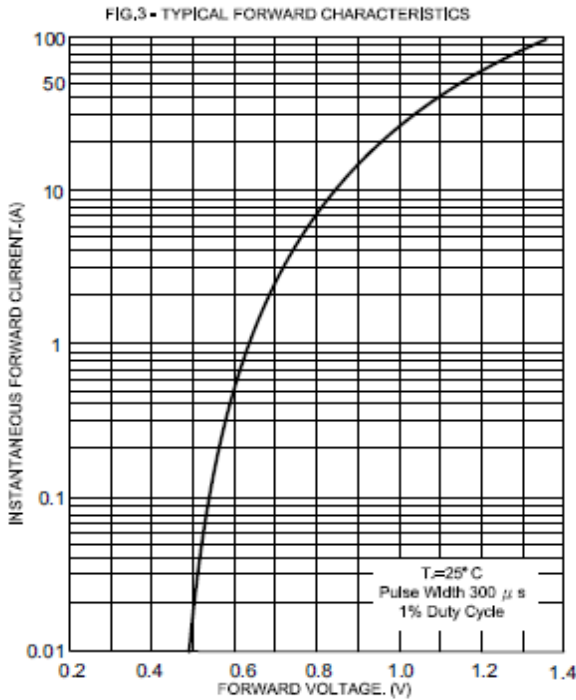
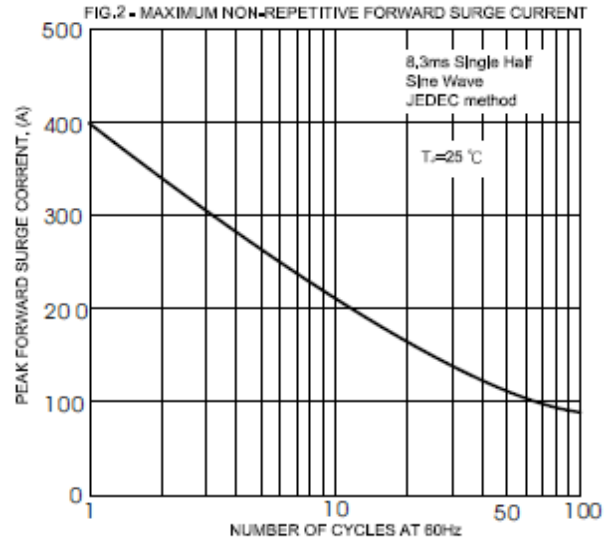
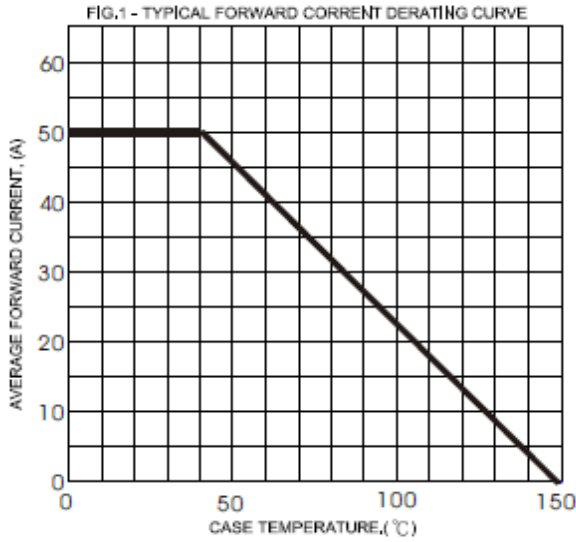
For capacitive load derate current by 20%

Parameter	Symbol	Conditions	KBPC5006T/W	KBPC5008T/W	KBPC5010T/W	Unit
Maximum average forward rectified current	$I_O$	$T_c = 40\text{ }^\circ\text{C}$	50	50	50	A
Peak forward surge current	$I_{FSM}$	8.3 ms half sine-wave	400	400	400	A
Maximum instantaneous forward voltage per leg	$V_F$	$I_F = 25.0\text{ A}$	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	$\mu\text{A}$

### Thermal characteristics

Typical thermal resistance per leg <sup>1</sup>	$R_{\theta JC}$		2.5	2.5	2.5	$^\circ\text{C/W}$
-------------------------------------------------	-----------------	--	-----	-----	-----	--------------------

<sup>1</sup> - 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)



# Mouser Electronics

Authorized Distributor

Click to View Pricing, Inventory, Delivery & Lifecycle Information:

[GeneSiC Semiconductor:](#)

[KBPC5008W](#)