

## Silicon Bridge Rectifier

$V_{RRM} = 50\text{ V} - 1000\text{ V}$

$I_F = 35\text{ A}$

### Features

- High efficiency
- Types up to 1000 V  $V_{RRM}$
- Silicon junction
- Metal case

KBPC-T/W Package

### Mechanical Data

Case: Mounted in the bridge encapsulation

Mounting position: Hole for #10 screw

Polarity: Marked on case



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

Parameter	Symbol	Conditions	KBPC3506T/W	KBPC3508T/W	KBPC3510T/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
Continuous forward current	$I_F$	$T_C \leq 55\text{ °C}$	35	35	35	A
Surge non-repetitive forward current, Half Sine Wave	$I_{F,SM}$	$T_C = 25\text{ °C}$ , $t_p = 8.3\text{ ms}$	400	400	400	A
Operating temperature	$T_j$		-55 to 150	-55 to 150	-55 to 150	°C
Storage temperature	$T_{stg}$		-55 to 150	-55 to 150	-55 to 150	°C

### Electrical characteristics, at $T_j = 25\text{ °C}$ , unless otherwise specified

Parameter	Symbol	Conditions	KBPC3506T/W	KBPC3508T/W	KBPC3510T/W	Unit
Diode forward voltage	$V_F$	$I_F = 17.5\text{ A}$ , $T_j = 25\text{ °C}$	1.1	1.1	1.1	V
Reverse current	$I_R$	$V_R = 50\text{ V}$ , $T_j = 25\text{ °C}$ $V_R = 50\text{ V}$ , $T_j = 100\text{ °C}$	5 500	5 500	5 500	$\mu\text{A}$

### Thermal characteristics

Parameter	Symbol	Conditions	KBPC3506T/W	KBPC3508T/W	KBPC3510T/W	Unit
Thermal resistance, junction - case	$R_{thJC}$		1.4	1.4	1.4	°C/W

FIG.1 - TYPICAL FORWARD CURRENT DERATING CURVE

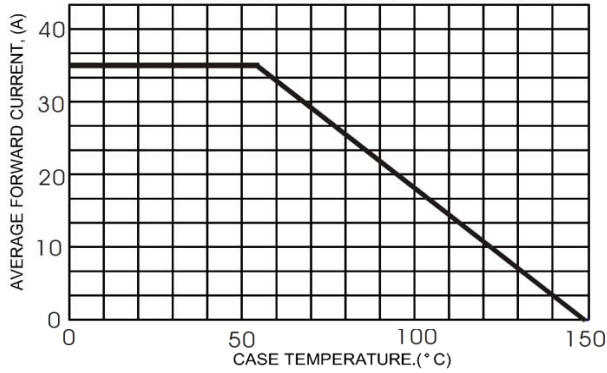


FIG.2 - TYPICAL FORWARD CHARACTERISTICS

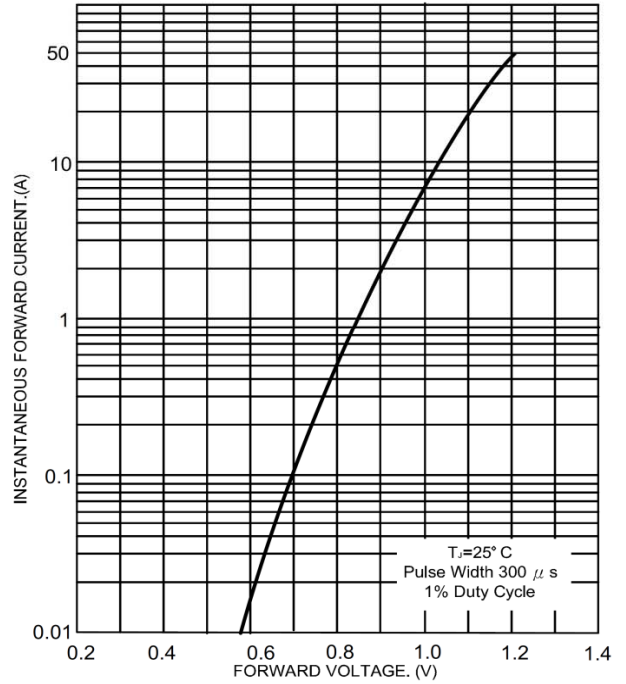


FIG.3 - MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

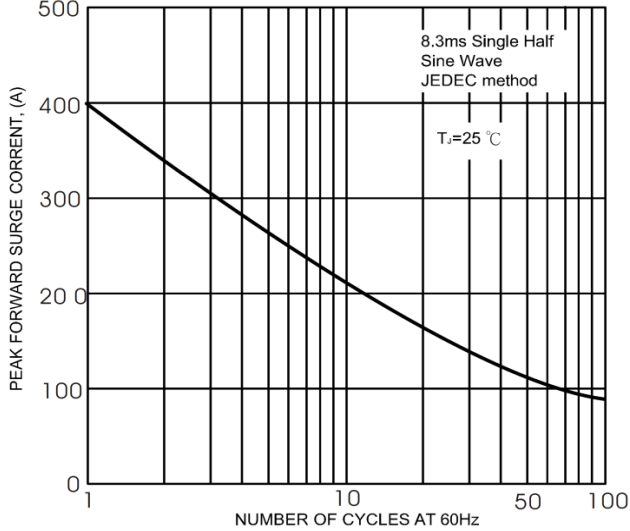


FIG.5- TYPICAL REVERSE CHARACTERISTICS

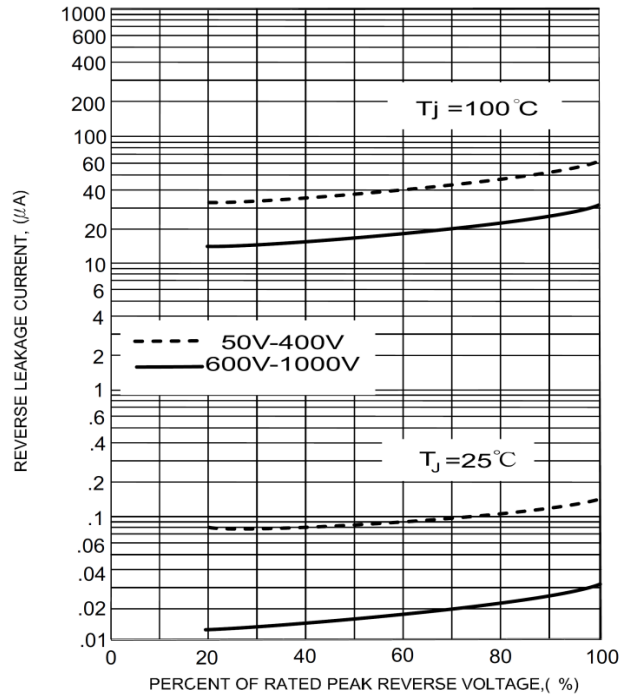


FIG.4- TYPICAL JUNCTION CAPACITANCE

