America Semiconductor

Silicon Bridge Rectifier

KBPC3506T/W thru KBPC3510T/W

V_{RRM} = 50 V - 1000 V

I_F = 35 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 °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	$T_C \leq 55$ °C	35	35	35	A
Surge non-repetitive forward current, Half Sine Wave	$I_{F,SM}$	T_C = 25 °C, t_p = 8.3 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 Tj = 25 °C, unless otherwise specified

Parameter	Symbol	Conditions	KBPC3506T/W	KBPC3508T/W	KBPC3510T/W	Unit
Diode forward voltage	V_F	I_F = 17.5 A, T_j = 25 °C	1.1	1.1	1.1	V
Reverse current	I_R	V_R = 50 V, T_j = 25 °C V_R = 50 V, T_j = 100 °C	5 500	5 500	5 500	µA
Thermal characteristics						
Thermal resistance, junction - case	R_{thJC}		1.4	1.4	1.4	°C/W

FIG.1 - TYPICAL FORWARD CORRENT DERATING CURVE

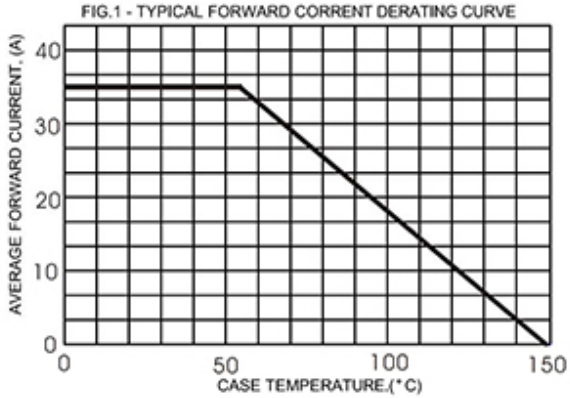

FIG.2 - TYPICAL FORWARD CHARACTERISTICS

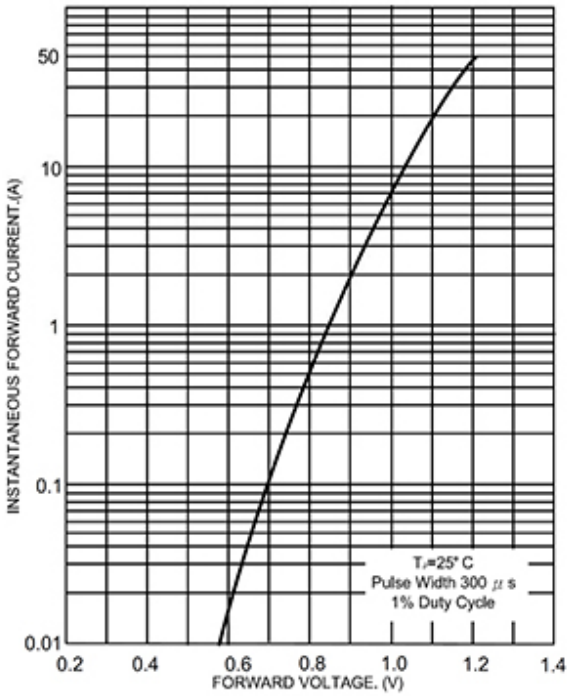

FIG.3 - MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

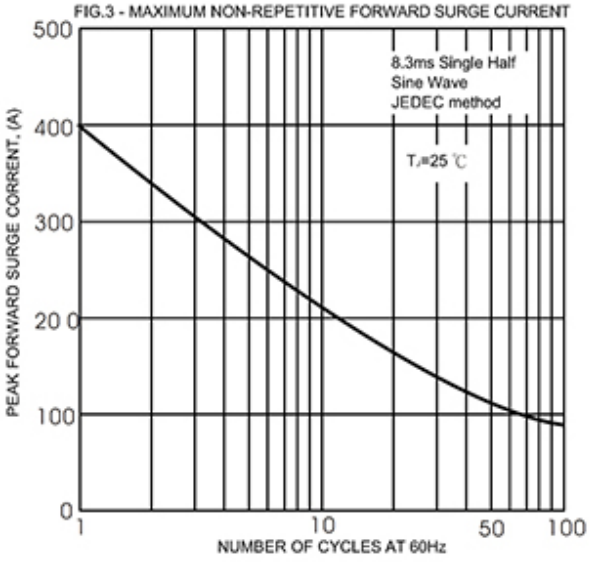

FIG.5- TYPICAL REVERSE CHARACTERISTICS

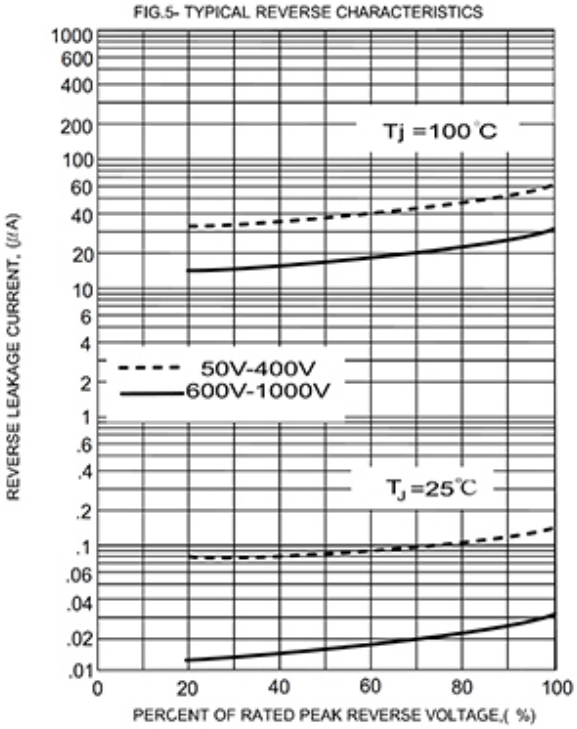

FIG.4- TYPICAL JUNCTION CAPACITANCE