America Semiconductor

KBPC15005T/W thru KBPC1504T/W

Silicon Bridge Rectifier

V_{RRM} = 50 V - 1000 V

I_F =15 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	KBPC15005T/W	KBPC1501T/W	KBPC1502T/W	KBPC1504T/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
Continuous forward current	I_F	$T_C \leq 55$ °C	15	15	15	15	A
Surge non-repetitive forward current, Half Sine Wave	$I_{F,SM}$	T_C = 25 °C, t_p = 8.3 ms	300	300	300	300	A
Operating temperature	T_j		-55 to 150	-55 to 150	-55 to 150	-55 to 150	°C
Storage temperature	T_{stg}		-55 to 150	-55 to 150	-55 to 150	-55 to 150	°C

Electrical characteristics, at Tj = 25 °C, unless otherwise specified

Parameter	Symbol	Conditions	KBPC15005T/W	KBPC1501T/W	KBPC1502T/W	KBPC1504T/W	Unit
Diode forward voltage	V_F	I_F = 7.5 A, T_j = 25 °C	1.1	1.1	1.1	1.1	V
Reverse current	I_R	V_R = 50 V, T_j = 25 °C	5	5	5	5	µA
		V_R = 50 V, T_j = 100 °C	500	500	500	500	
Thermal characteristics							
Thermal resistance, junction - case	R_{thJC}		2.3	2.3	2.3	2.3	°C/W

FIG.1 - TYPICAL FORWARD CORRENT DERATING CURVE

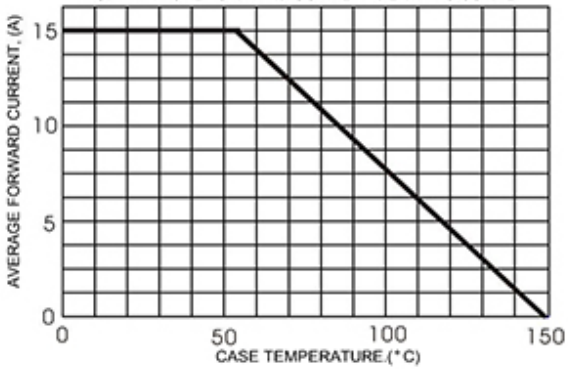


FIG.2 - TYPICAL FORWARD CHARACTERISTICS

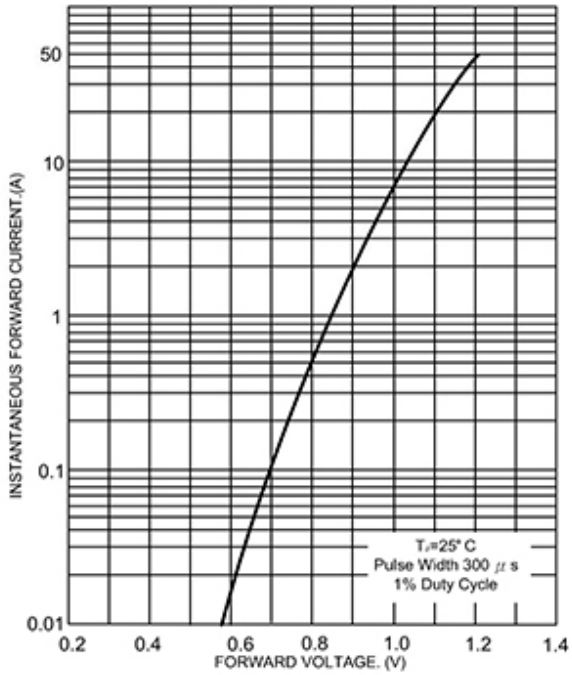


FIG.3 - MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

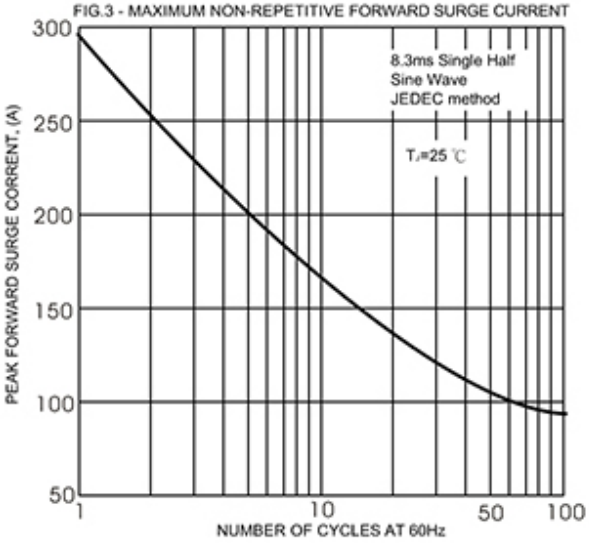


FIG.5- TYPICAL REVERSE CHARACTERISTICS

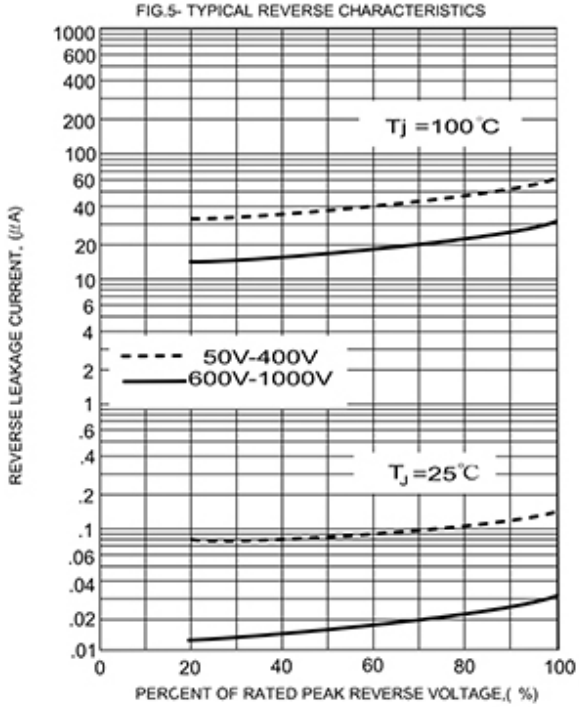


FIG.4- TYPICAL JUNCTION CAPACITANCE

