Single Phase Silicon Bridge Rectifier

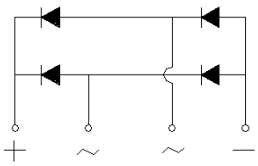
V_{RRM} = 600 V - 1000 V

I_O = 25 A

Features

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

KBPC-T/W Package



Mechanical Data

Case: Mounted in the bridge encapsulation

Mounting: Hole for #10 screw

Polarity: Marked on case

Maximum ratings at Tc = 25 °C, unless otherwise specified (KBPCXXXXT uses KBPC-T package while KBPCXXXXW uses KBPC-W package)

Parameter	Symbol	Conditions	KBPC2506T/W	KBPC2508T/W	KBPC2510T/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	°C
Storage temperature	T_{stg}		-55 to 150	-55 to 150	-55 to 150	°C

Electrical characteristics at Tc = 25 °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	KBPC2506T/W	KBPC2508T/W	KBPC2510T/W	Unit
Maximum average forward rectified current	I_O	T_c = 55 °C	25	25	25	A
Peak forward surge current	I_{FSM}	8.3 ms half sine-wave	350	350	350	A
Maximum instantaneous forward voltage per leg	V_F	I_F = 12.5 A	1.1	1.1	1.1	V
Maximum DC reverse current at rated DC blocking voltage per leg	I_R	T_c = 25 °C T_c = 100 °C	5 500	5 500	5 500	µA
Typical junction capacitance [1]	C_j		300	300	300	pF
Thermal characteristics						
Typical thermal resistance [2]	$R_{\theta JC}$		1.9	1.9	1.9	°C/W

[1] - Measured ay 1 MHz and applied reverse voltage of 4.0 V D.C.

[2] - Device mounted on 300 mm x 300 mm x 1.6 mm Cu plate heatsink

FIG.1 - TYPICAL FORWARD CORRENT DERATING CURVE

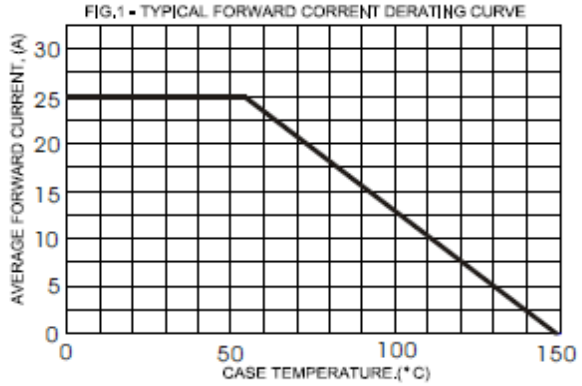


FIG.2 - TYPICAL FORWARD CHARACTERISTICS

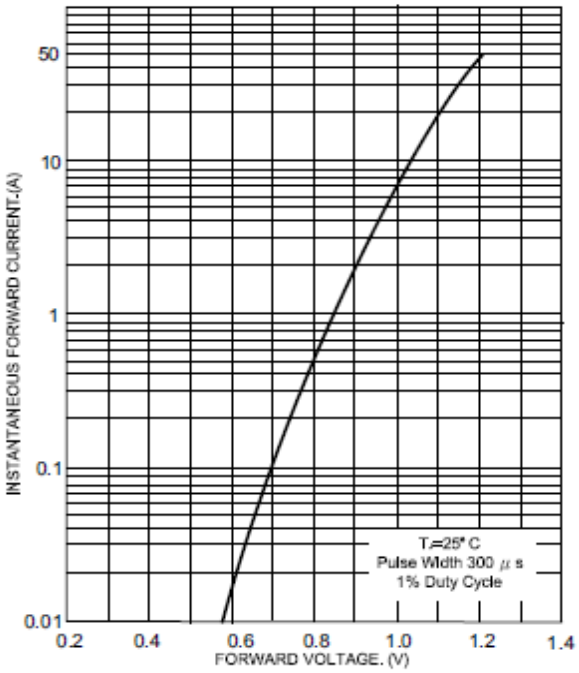


FIG.3 - MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

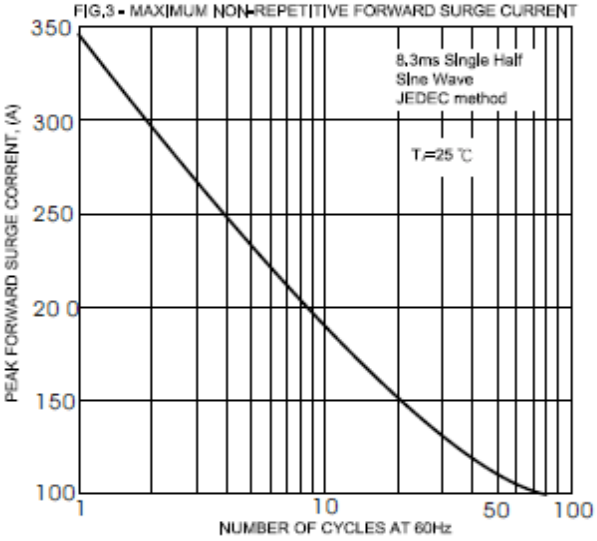


FIG.4- TYPICAL JUNCTION CAPACITANCE

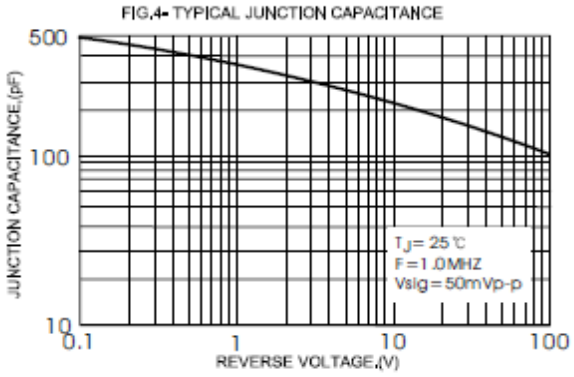
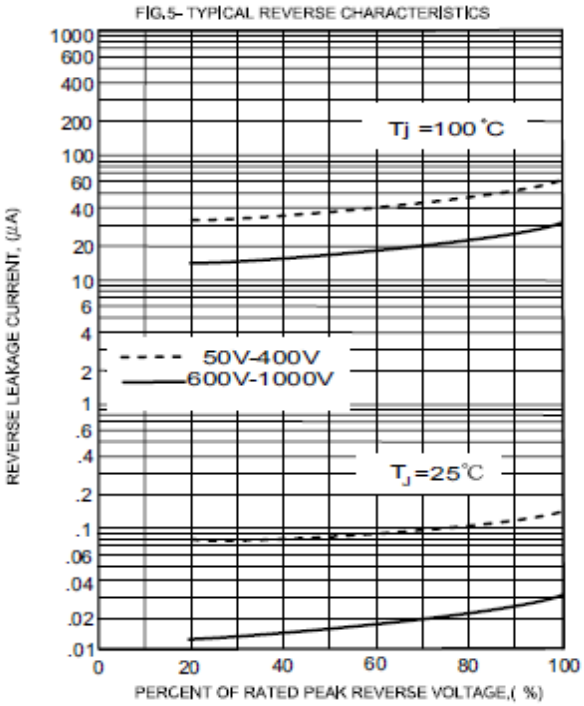
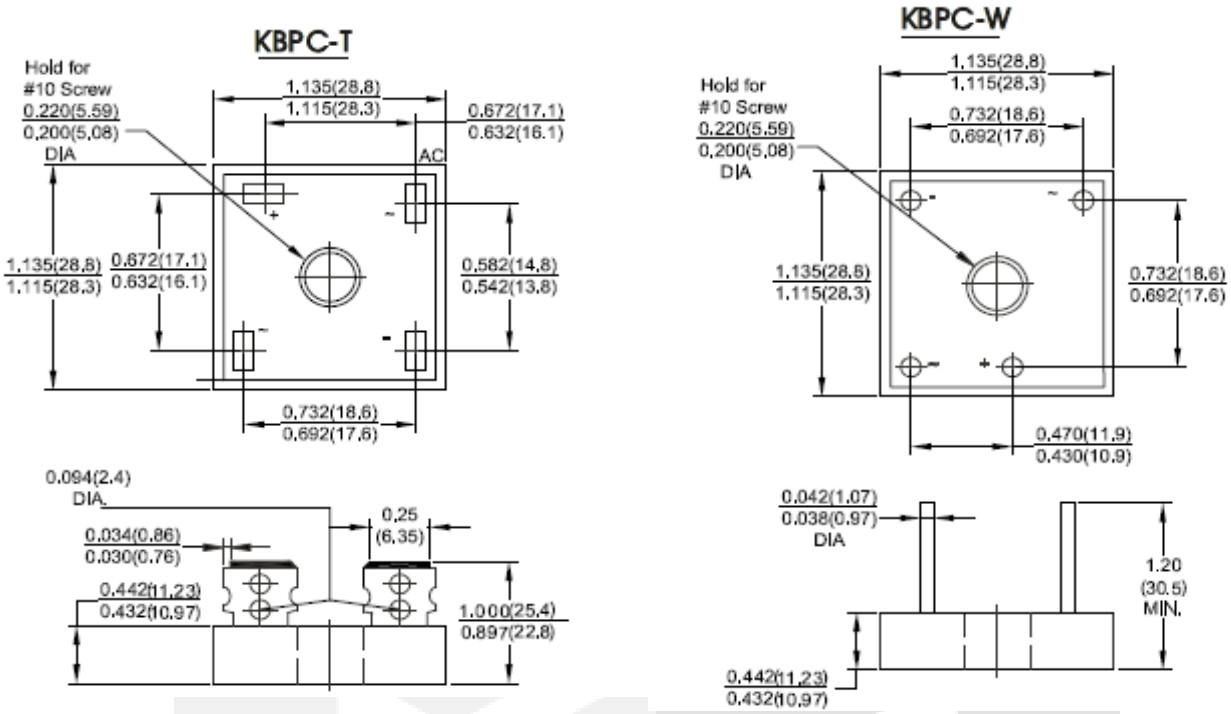


FIG.5- TYPICAL REVERSE CHARACTERISTICS

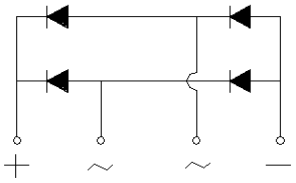


Package dimensions and terminal configuration

Product is marked with part number and terminal configuration.



Dimensions in inches and (millimeters)



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