# Single Phase Silicon Bridge Rectifier

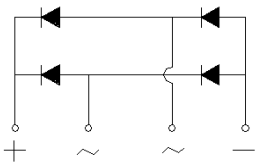
$V_{RRM}$ = 600 V - 1000 V

$I_O$ = 35 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 | 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 |
| 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 | KBPC3506T/W | KBPC3508T/W | KBPC3510T/W | Unit |
|---|---|---|---|---|---|---|
| Maximum average forward rectified current | $I_O$ | $T_c$ = 55 °C | 35 | 35 | 35 | A |
| Peak forward surge current | $I_{FSM}$ | 8.3 ms half sine-wave | 400 | 400 | 400 | A |
| Maximum instantaneous forward voltage per leg | $V_F$ | $I_F$ = 17.5 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<br>$T_c$ = 100 °C | 5<br>500 | 5<br>500 | 5<br>500 | µA |
| Typical junction capacitance [1] | $C_j$ | | 300 | 300 | 300 | pF |
| **Thermal characteristics** | | | | | | |
| Typical thermal resistance [2] | $R_{\theta JC}$ | | 1.4 | 1.4 | 1.4 | °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

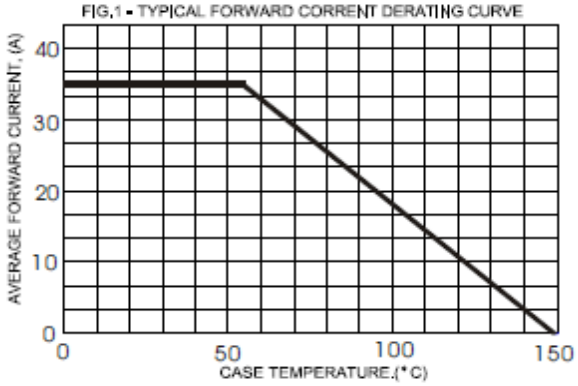



FIG.2 - TYPICAL FORWARD CHARACTERISTICS

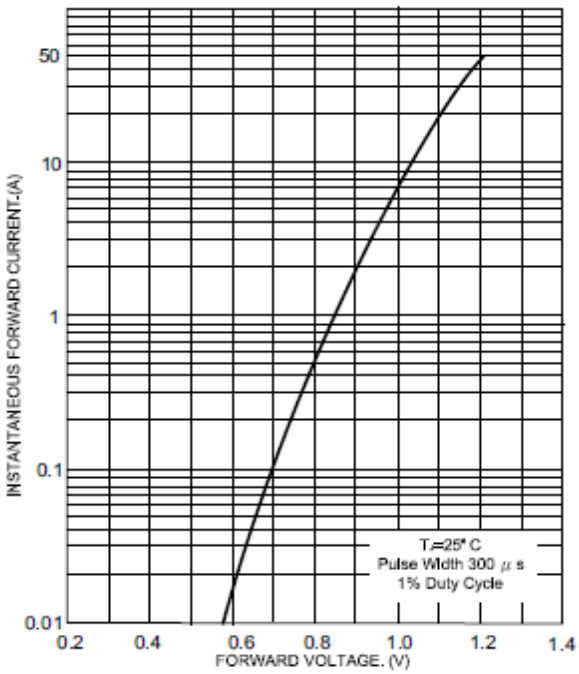



FIG.3 - MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

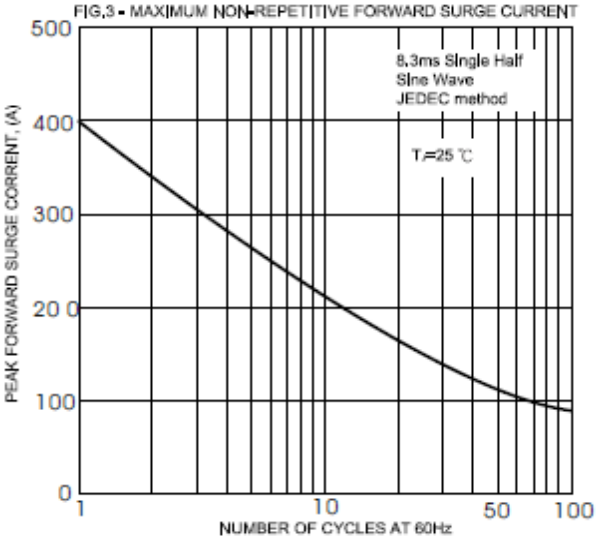



FIG.4- TYPICAL JUNCTION CAPACITANCE

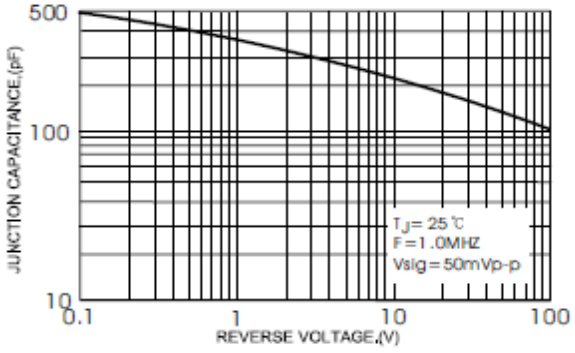
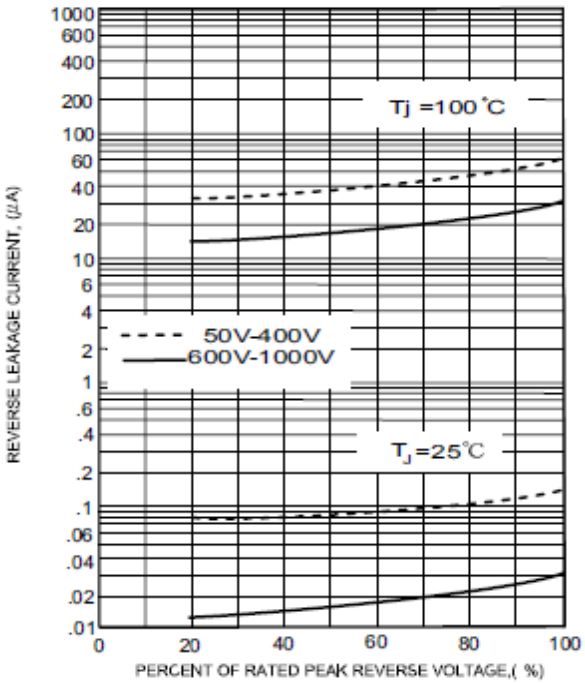
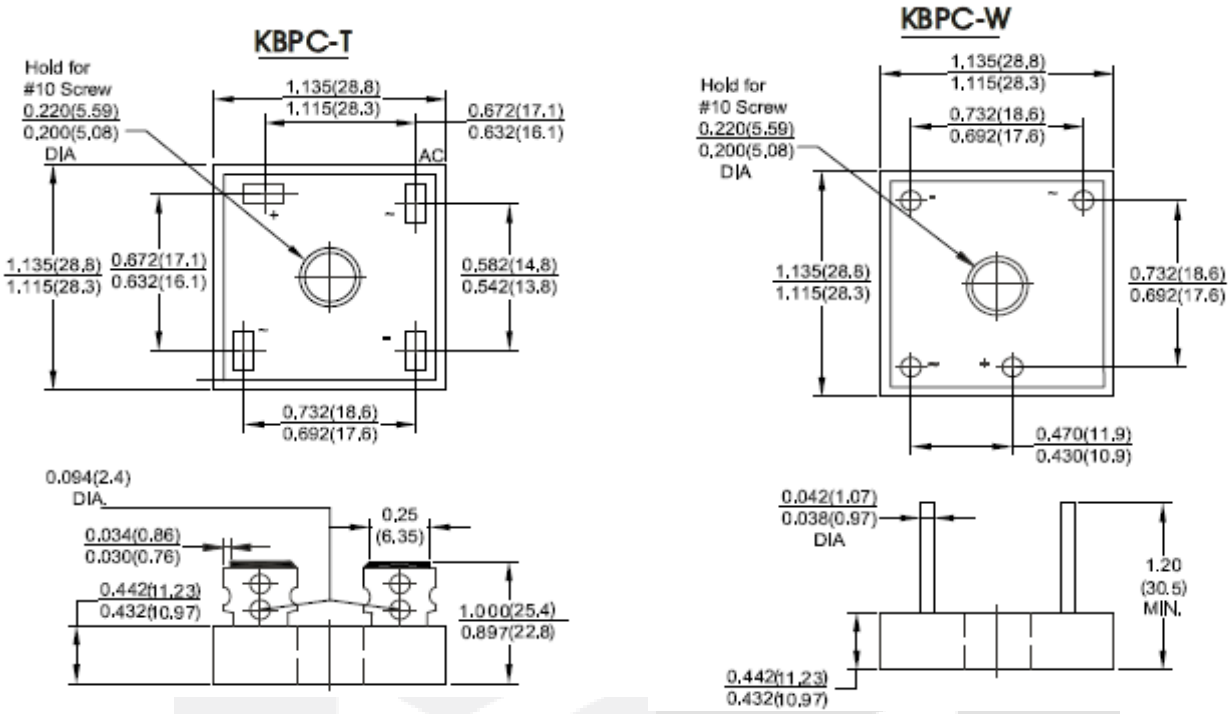



FIG.5- TYPICAL REVERSE CHARACTERISTICS

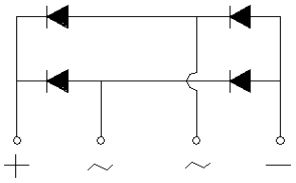


## Package dimensions and terminal configuration

Product is marked with part number and terminal configuration.




Dimensions in inches and (millimeters)



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