

## 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  $T_j = 25\text{ }^\circ\text{C}$ , unless otherwise specified (KBPCXXXXT uses KBPC-T package while KBPCXXXXW uses KBPC-W package)

| Parameter  | Symbol     | Conditions   | KBPC35005T/W | KBPC3501T/W | KBPC3502T/W | KBPC3504T/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                           | $I_F$      | $T_C \leq 55\text{ }^\circ\text{C}$                      | 35           | 35          | 35          | 35          | A                |
| Surge non-repetitive forward current, Half Sine Wave | $I_{F,SM}$ | $T_C = 25\text{ }^\circ\text{C}$ , $t_p = 8.3\text{ ms}$ | 400          | 400         | 400         | 400         | A                |
| Operating temperature                                | $T_j$      |  | -55 to 150   | -55 to 150  | -55 to 150  | -55 to 150  | $^\circ\text{C}$ |
| Storage temperature                                  | $T_{stg}$  |  | -55 to 150   | -55 to 150  | -55 to 150  | -55 to 150  | $^\circ\text{C}$ |

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

| Parameter             | Symbol | Conditions   | KBPC35005T/W | KBPC3501T/W | KBPC3502T/W | KBPC3504T/W | Unit          |
|-----------------------|--------|--|--------------|-------------|-------------|-------------|---------------|
| Diode forward voltage | $V_F$  | $I_F = 17.5\text{ A}$ , $T_j = 25\text{ }^\circ\text{C}$ | 1.1          | 1.1         | 1.1         | 1.1         | V             |
| Reverse current       | $I_R$  | $V_R = 50\text{ V}$ , $T_j = 25\text{ }^\circ\text{C}$   | 5            | 5           | 5           | 5           | $\mu\text{A}$ |
|                       |        | $V_R = 50\text{ V}$ , $T_j = 100\text{ }^\circ\text{C}$  | 500          | 500         | 500         | 500         | $\mu\text{A}$ |

### Thermal characteristics

|                                     |            |  |     |     |     |     |                    |
|-------------------------------------|------------|--|-----|-----|-----|-----|--------------------|
| Thermal resistance, junction - case | $R_{thJC}$ |  | 1.4 | 1.4 | 1.4 | 1.4 | $^\circ\text{C/W}$ |
|-------------------------------------|------------|--|-----|-----|-----|-----|--------------------|

FIG.1 - TYPICAL FORWARD CURRENT DERATING CURVE

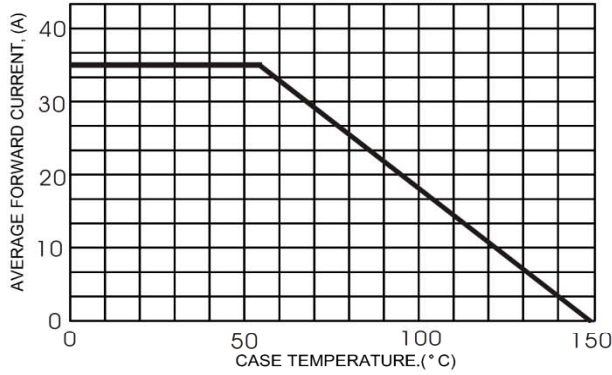


FIG.2 - TYPICAL FORWARD CHARACTERISTICS

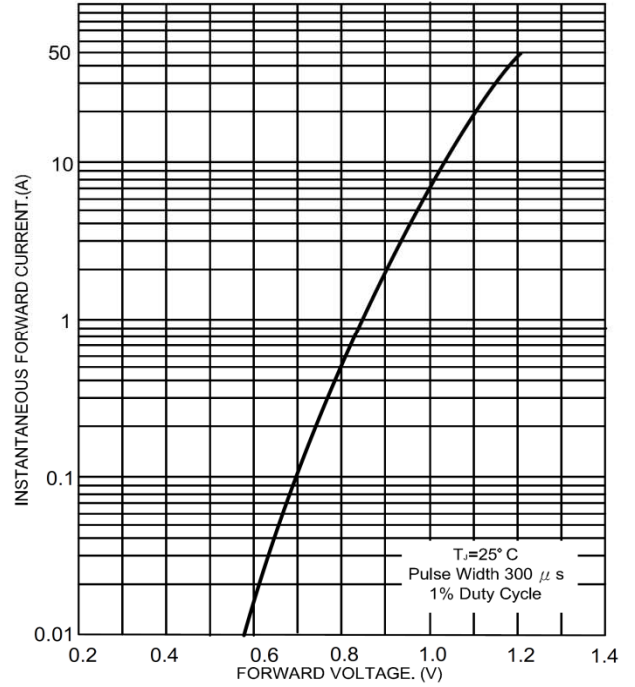


FIG.3 - MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

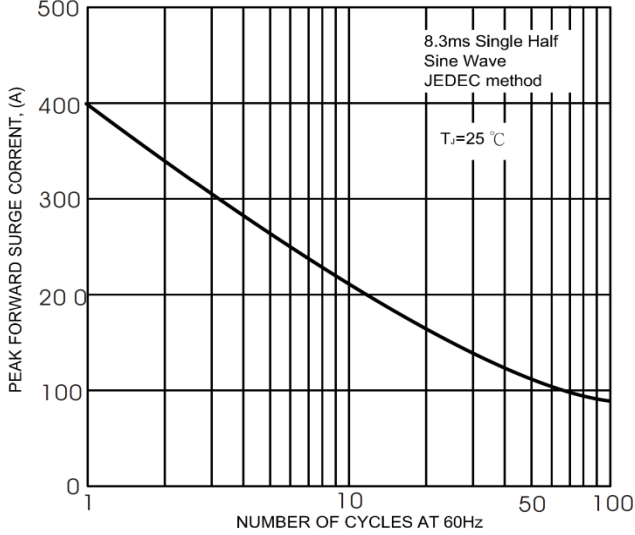


FIG.5- TYPICAL REVERSE CHARACTERISTICS

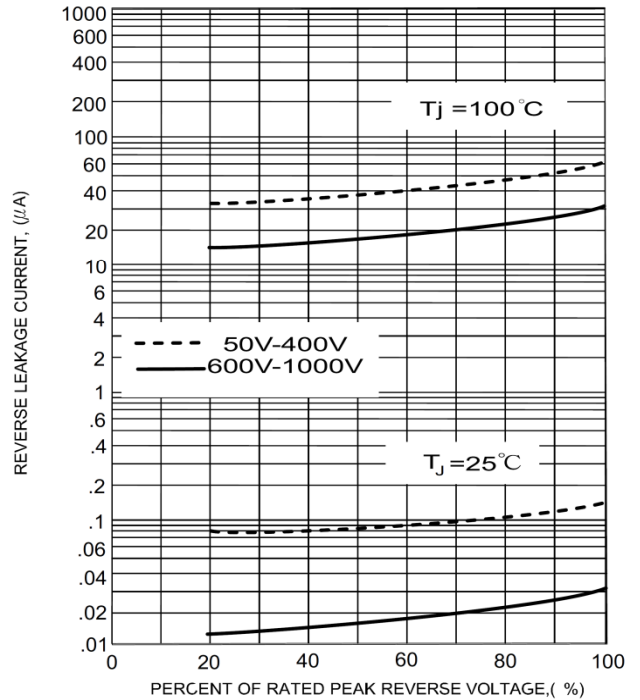


FIG.4- TYPICAL JUNCTION CAPACITANCE

