



# KBPC10/15/25/35/50 Series

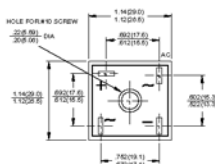
Glass Passivated Single-Phase Bridge Rectifiers  
Voltage Range 50 to 1000 Volts Forward Current 10/15/25/35/50 Amperes

## Features

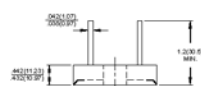
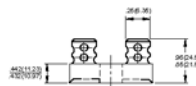
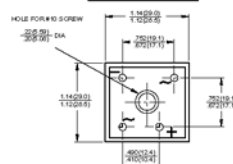
- ◆ Surge overload rating - 200~400 Amperes peak
- ◆ Low forward voltage drop
- ◆ Mounting Position: Any
- ◆ Electrically isolated base - 1800 Volts
- ◆ Solderable 0.25" FASTON terminals
- ◆ Materials used carries U/L recognition



**KBPC**



**KBPC-W**



Dimensions in inches and (millimeters)

## Maximum Ratings and Electrical Characteristics

Rating at 25°C ambient temperature unless otherwise specified.

Single phase, half wave, 60 Hz, resistive or inductive load.

For capacitive load, derate current by 20%

| Parameter                                                                                         | Symbols     | KBPC                                                                                                                                        | KBPC | KBPC | KBPC                                      | KBPC | KBPC | KBPC | Units            |
|---------------------------------------------------------------------------------------------------|-------------|---------------------------------------------------------------------------------------------------------------------------------------------|------|------|-------------------------------------------|------|------|------|------------------|
|                                                                                                   |             | 10005                                                                                                                                       | 1001 | 1002 | 1004                                      | 1006 | 1008 | 1010 |                  |
|                                                                                                   |             | 15005                                                                                                                                       | 1501 | 1502 | 1504                                      | 1506 | 1508 | 1510 |                  |
|                                                                                                   |             | 25005                                                                                                                                       | 2501 | 2502 | 2504                                      | 2506 | 2508 | 2510 |                  |
|                                                                                                   |             | 35005                                                                                                                                       | 3501 | 3502 | 3504                                      | 3506 | 3508 | 3510 |                  |
|                                                                                                   |             | 50005                                                                                                                                       | 5001 | 5002 | 5004                                      | 5006 | 5008 | 5010 |                  |
| Maximum recurrent peak reverse voltage                                                            | $V_{RRM}$   | 50                                                                                                                                          | 100  | 200  | 400                                       | 600  | 800  | 1000 | Volts            |
| Maximum RMS voltage                                                                               | $V_{RMS}$   | 35                                                                                                                                          | 70   | 140  | 280                                       | 420  | 560  | 700  | Volts            |
| Maximum DC blocking voltage                                                                       | $V_{DC}$    | 50                                                                                                                                          | 100  | 200  | 400                                       | 600  | 800  | 1000 | Volts            |
| Maximum average forward rectified current at $T_c=55^\circ\text{C}$                               | $I_{F(AV)}$ | KBPC10<br>KBPC15<br>KBPC25<br>KBPC35<br>KBPC50                                                                                              |      |      | 10.0<br>15.0<br>25.0<br>35.0<br>50.0      |      |      |      | Amps             |
| Peak forward surge current, 8.3ms single half sine-wave superimposed on rated load (JEDEC Method) | $I_{FSM}$   | KBPC10<br>KBPC15<br>KBPC25<br>KBPC35<br>KBPC50                                                                                              |      |      | 200.0<br>300.0<br>300.0<br>400.0<br>400.0 |      |      |      | Amps             |
| Max. instantaneous forward voltage drop per element at                                            | $V_F$       | KBPC10 $I_F=5.0\text{A}$<br>KBPC15 $I_F=7.5\text{A}$<br>KBPC25 $I_F=12.5\text{A}$<br>KBPC35 $I_F=17.5\text{A}$<br>KBPC50 $I_F=25.0\text{A}$ |      |      | 1.2                                       |      |      |      | Volts            |
| Maximum DC reverse current at rated DC blocking voltage per element                               | $I_R$       | $T_A=25^\circ\text{C}$<br>$T_A=125^\circ\text{C}$                                                                                           |      |      | 10.0<br>500                               |      |      |      | $\mu\text{A}$    |
| Operating temperature range                                                                       | $T_J$       |                                                                                                                                             |      |      | -55 to +125                               |      |      |      | $^\circ\text{C}$ |
| Storage temperature range                                                                         | $T_{STG}$   |                                                                                                                                             |      |      | -55 to +150                               |      |      |      | $^\circ\text{C}$ |

**Notes:** Also available on KBPC10W/15W/25W/35W/50W series

## RATINGS AND CHARACTERISTIC CURVES

( $T_A = 25^\circ\text{C}$  unless otherwise noted)

FIG. 1 - MAXIMUM FORWARD SURGE CURRENT

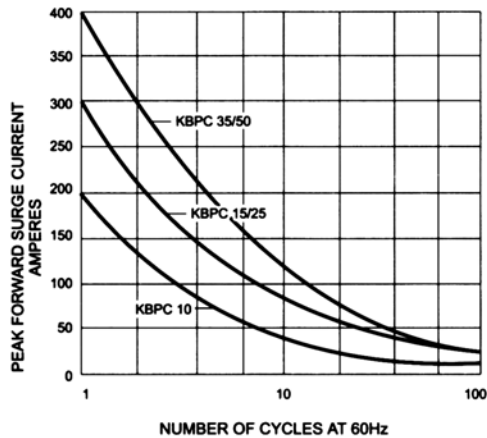


FIG. 2 - DERATING CURVE  
OUTPUT RECTIFIED CURRENT

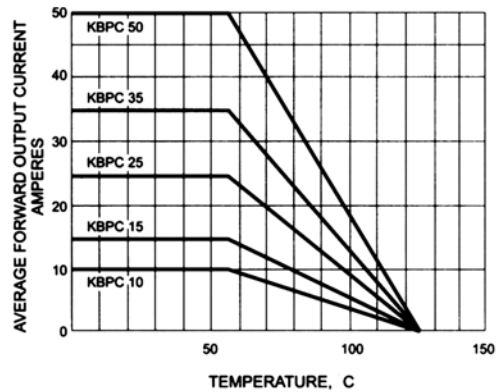


FIG. 3 - TYPICAL FORWARD  
CHARACTERISTICS

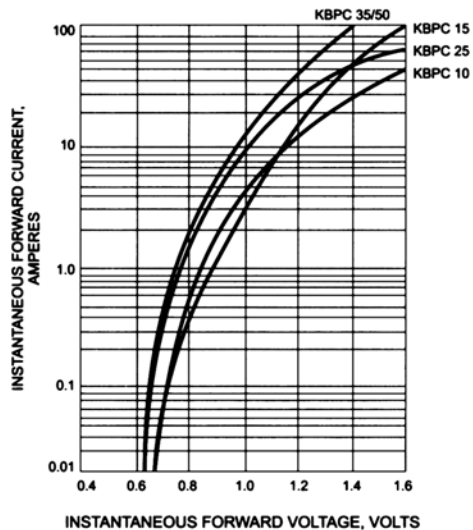


FIG. 4 - TYPICAL REVERSE  
CHARACTERISTICS

