

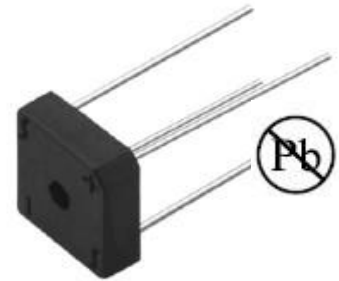


# SINGLE PHASE BRIDGE RECTIFIER BR605 ~ BR610 / KBPC6005 ~ KBPC610

## Single Phase Bridge Rectifier

### Features

- Low cost
- This series is UL recognized under component Index, file number E127707
- High isolation voltage from case to leads
- Ideal for printed circuit board
- High forward surge current capability
- High temperature soldering guaranteed:  
260°C/10 seconds, at 5lbs. (2.3kg) tension.
- RoHS and REACH Compliance



### Mechanical Data

|                           |   |
|---------------------------|---|
| <b>Case:</b>              | Molded plastic body                             |
| <b>Polarity</b>           | Polarity symbols marked on case                 |
| <b>Terminals:</b>         | Leads solderable per MIL-STD-202E method 208C   |
| <b>Mounting position:</b> | Thru hole for #6 screw, 5 in, -lbs. Torqute Max |
| <b>Weight:</b>            | 0.13 ounce, 3.66 gram                           |

### Maximum Ratings ( $T_{Ambient}=25^{\circ}C$ unless noted otherwise)

| Symbol         | Description                             | KBPC6005<br>BR605        | KBPC601<br>BR61 | KBPC602<br>BR62 | KBPC604<br>BR64 | KBPC606<br>BR66 | KBPC608<br>BR68 | KBPC610<br>BR610 | Unit | Conditions                                     |
|----------------|---|--------------------------|-----------------|-----------------|-----------------|-----------------|-----------------|------------------|------|--|
| <b>VRRM</b>    | Max Recurrent Peak Reverse Voltage      | 50                       | 100             | 200             | 400             | 600             | 800             | 1000             | V    |  |
| <b>VRMS</b>    | Max RMS Voltage                         | 35                       | 70              | 140             | 280             | 420             | 560             | 700              | V    |  |
| <b>VDC</b>     | Max DC Blocking Voltage                 | 50                       | 100             | 200             | 400             | 600             | 800             | 1000             | V    |  |
| <b>I(AV)</b>   | Max Average Forward Rectified Current   | 6.0                      |                 |                 |                 |                 |                 |                  | A    | TC=50°C<br>( Note 1 )<br>TA=25°C<br>( Note 2 ) |
|                |   | 3.0                      |                 |                 |                 |                 |                 |                  |      |  |
| <b>IFSM</b>    | Peak Forward Surge Current              | 125                      |                 |                 |                 |                 |                 |                  | A    | 8.3ms single half sine-wave                    |
| <b>TJ,TSTG</b> | Operating and Storage Temperature Range | -55 to +125, -55 to +150 |                 |                 |                 |                 |                 |                  | °C   |  |
| <b>I2t</b>     | Rating for Fusing                       | 64                       |                 |                 |                 |                 |                 |                  | A2s  | T<8.3mS  |

### Electrical Characteristics ( $T_{Ambient}=25^{\circ}C$ unless noted otherwise)

| Symbol       | Description   | KBPC6005<br>BR605 | KBPC601<br>BR61 | KBPC602<br>BR62 | KBPC604<br>BR64 | KBPC606<br>BR66 | KBPC608<br>BR68 | KBPC610<br>BR610 | Unit | Conditions                   |
|--------------|---|-------------------|-----------------|-----------------|-----------------|-----------------|-----------------|------------------|------|------------------------------|
| <b>VF</b>    | Max Instantaneous Forward Voltage                   | 1.0               |                 |                 |                 |                 |                 |                  | V    | Drop per Bridge element 3.0A |
| <b>IR</b>    | Max DC Reverse Current at Rated DC Blocking Voltage | 10                |                 |                 |                 |                 |                 |                  | µA   | TA=25°C                      |
|              |   | 1.0               |                 |                 |                 |                 |                 |                  | mA   | TA=100°C                     |
| <b>Rθ-Jc</b> | Typical Thermal Resistance                          | 8.0               |                 |                 |                 |                 |                 |                  | °C/W | Note 1                       |
| <b>VISO</b>  | Isolation Voltage from case to leads                | 2500              |                 |                 |                 |                 |                 |                  | Vac  |                              |

#### Note:

1. Unit mounted on 6.0" X 5.5" X 0.11" thick (15 X 14 X 0.3cm) Al. Plate
2. Unit mounted on P.C.Borad 0.375" (9.5mm) lead length with 0.47"X0.47" (12 X 12mm) copper pads

# BR605 ~ BR610 / KBPC6005 ~ KBPC610

## RATINGS AND CHARACTERISTIC CURVES THRU BR605~BR610/KBPC6005~KBPC610

FIG.1-DERATING CURVE FOR  
OUTPUT RECTIFIED CURRENT

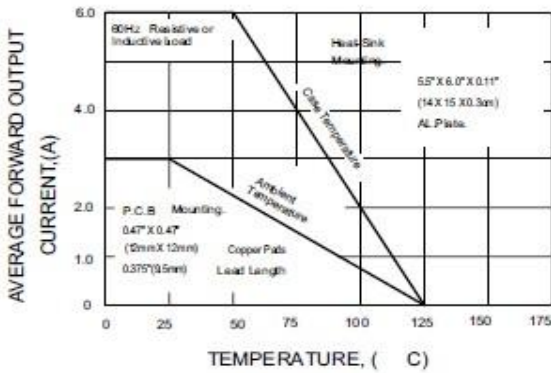


FIG.2-MAXIMUM NON-REPETITIVE PEAK  
FORWARD SURGE CURRENT PER ELEMENT

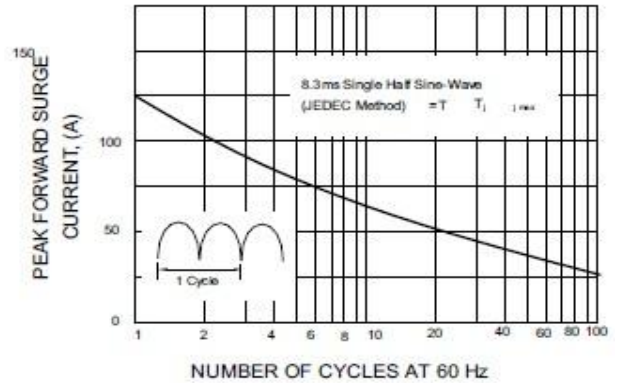


FIG.3-TYPICAL FORWARD CHARACTERISTICS  
PER BRIDGE ELEMENT

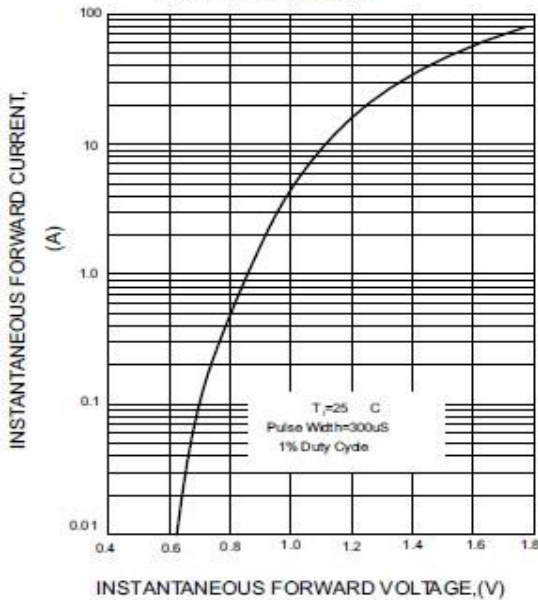


FIG.4-TYPICAL REVERSE CHARACTERISTICS  
PER BRIDGE ELEMENT

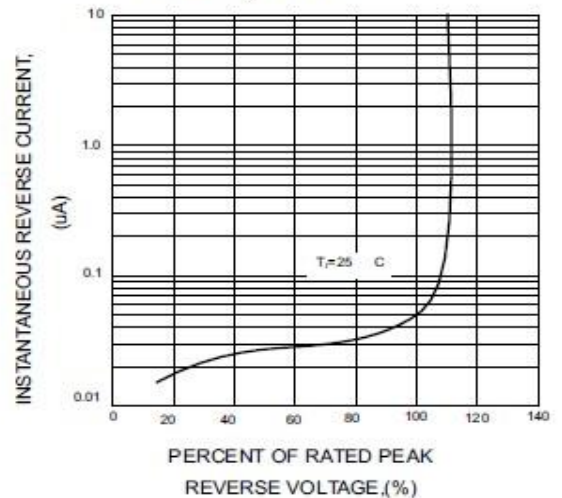
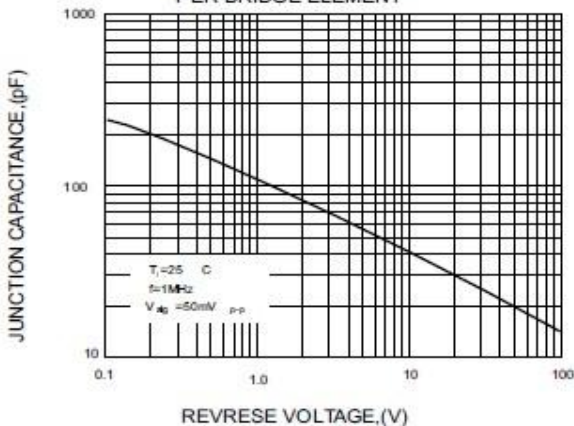
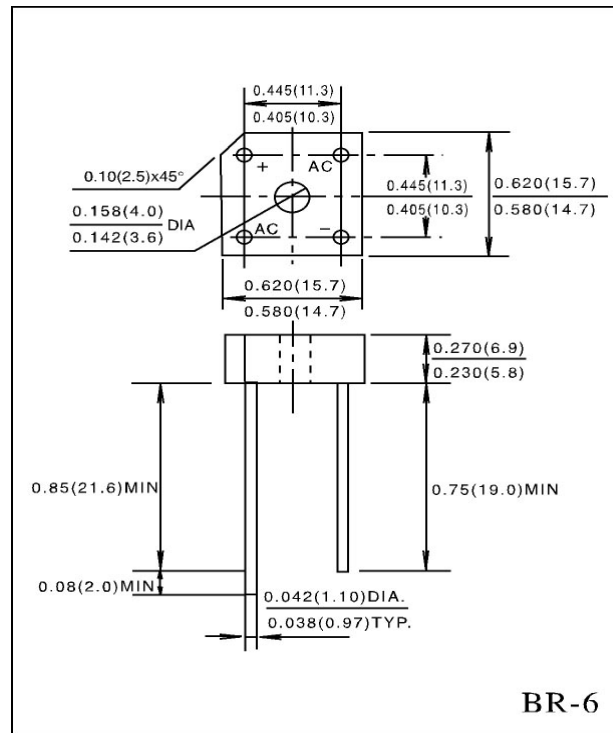


FIG.5-TYPICAL JUNCTION CAPACITANCE  
PER BRIDGE ELEMENT



**BR605 ~ BR610 / KBPC6005 ~ KBPC610**
**Dimensions in inches (mm)**

**Contact us:**
**US HEADQUARTERS**
**MEI SEMI INC.**
**2902** Corvin Drive, Santa Clara, CA95051, USA

Tel: 1-408-733-0808 Fax: 1-408-733-2828