

# KABF12 THRU KABF125

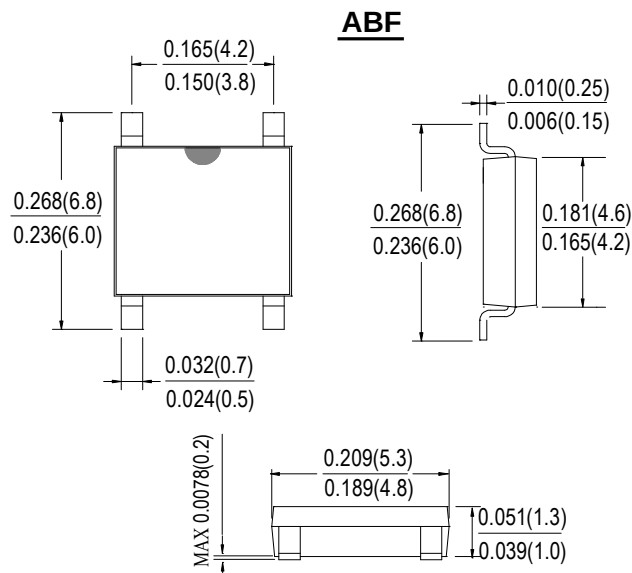
SINGLE PHASE 2.0 AMP SURFACE MOUNT SCHOTTKY BRIDGE RECTIFIER

## Features

- Schottky Briier Chip
- Low Power Loss,High Efficiency
- Ideally Suited for Automatic Assembly
- Surge Overload Rating to 50A Peak
- Plastic Case Material has UL Flammability Classification Rating 94V-0

## Mechanical Data

- Case: SOPA-4, molded plastic
- Terminals: plated leads solderable per MIL-STD-202, Method 208
- Polarity: as marked on case
- Mounting position: Any
- Marking: type number



Dimensions in inches and (millimeters)

## Maximum Ratings and Electrical Characteristics

Rating at 25°C ambient temperature unless otherwise specified.

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

For capacitive load, derate current by 20%.

| TYPE NUMBER                                                                                                           | SYMBOL           | KABF<br>12 | KABF<br>13 | KABF<br>14 | KABF<br>145 | KABF<br>15 | KABF<br>16 | KABF<br>18 | KABF<br>110 | KABF<br>115 | KABF<br>120 | KABF<br>125 | UNITS |
|-----------------------------------------------------------------------------------------------------------------------|------------------|------------|------------|------------|-------------|------------|------------|------------|-------------|-------------|-------------|-------------|-------|
| Peak Repetitive Reverse Voltage<br>Working Peak Reverse Voltage<br>DC Blocking Voltage                                | V <sub>RRM</sub> | 20         | 30         | 40         | 45          | 50         | 60         | 80         | 100         | 150         | 200         | 250         | V     |
|                                                                                                                       | V <sub>RWM</sub> |            |            |            |             |            |            |            |             |             |             |             |       |
|                                                                                                                       | V <sub>DC</sub>  |            |            |            |             |            |            |            |             |             |             |             |       |
| RMS Reverse Voltage                                                                                                   | V <sub>RMS</sub> | 14         | 21         | 28         | 31          | 35         | 42         | 56         | 70          | 135         | 140         | 175         | V     |
| Average Rectified Output Current @T <sub>A</sub> =90 °C                                                               | I <sub>O</sub>   | 1.0        |            |            |             |            |            |            |             |             |             |             | A     |
| Non-Repetitive Peak Forward Surge Current 8.3ms<br>Single half sine-wave superimposed on rated load<br>(JEDEC Method) | I <sub>FSM</sub> | 30         |            |            |             |            |            |            |             |             |             |             | A     |
| Forward Voltage per element @I <sub>F</sub> =2.0A                                                                     | V <sub>FM</sub>  | 0.5        |            |            |             | 0.7        |            | 0.85       |             | 0.90        |             | 0.92        | V     |
| Peak Reverse Current @T <sub>A</sub> =25 °C<br>At Rated DC Blocking Voltage @T <sub>A</sub> =100 °C                   | I <sub>R</sub>   | 0.1        |            |            |             |            |            | 0.05       |             |             |             |             | mA    |
|                                                                                                                       |                  | 10         |            |            |             |            |            | 5          |             |             |             |             |       |
| Typical Thermal Resistance per leg (Note 1)                                                                           | R <sub>θJA</sub> | 50         |            |            |             |            |            |            |             |             |             |             | °C/W  |
|                                                                                                                       | R <sub>θJL</sub> | 10         |            |            |             |            |            |            |             |             |             |             |       |
| Operating junction temperature range                                                                                  | T <sub>J</sub>   | -55to+150  |            |            |             |            |            |            |             |             |             |             | °C    |
| Operating and Storage Temperature Range                                                                               | T <sub>STG</sub> | -55to+150  |            |            |             |            |            |            |             |             |             |             | °C    |

Note:1.Measured at 1.0 MHz and applied reverse voltage of 4.0V D.C.

Fig. 1 Output Current Derating Curve

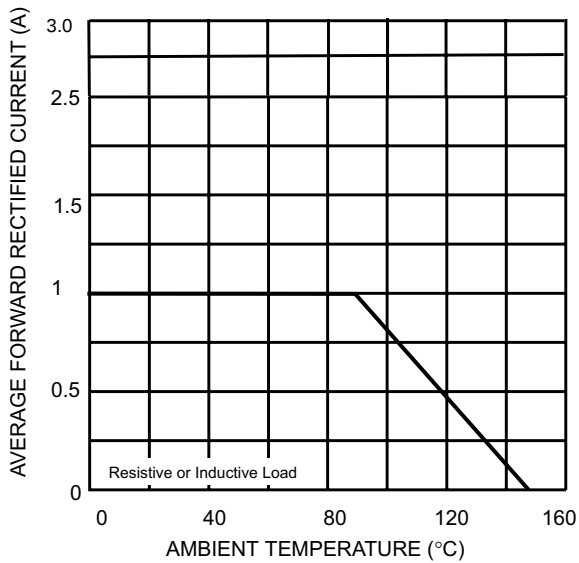


Fig. 2 Typical Forward Characteristics (per leg)

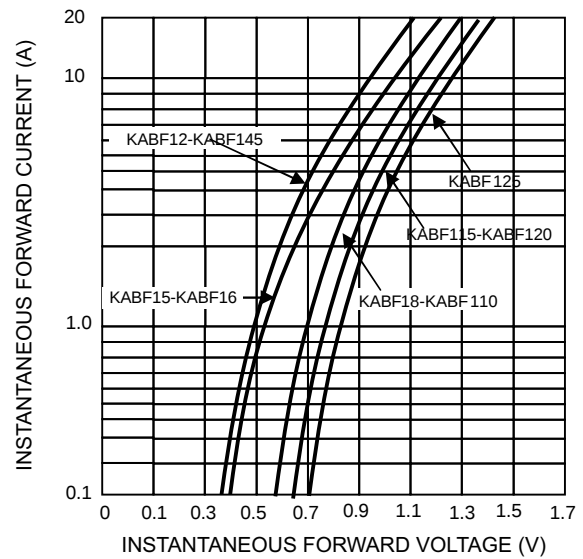


Fig. 3 Maximum Peak Forward Surge Current (per leg)

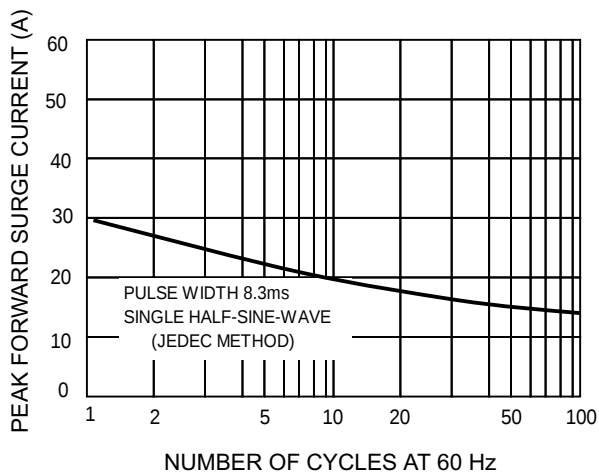


Fig. 4 Typical Reverse Characteristics (per element)

