

50A HIGH CURRENT SINGLE-PHASE SILICON BRIDGE RECTIFIER

Voltage - 600 to 1600 V

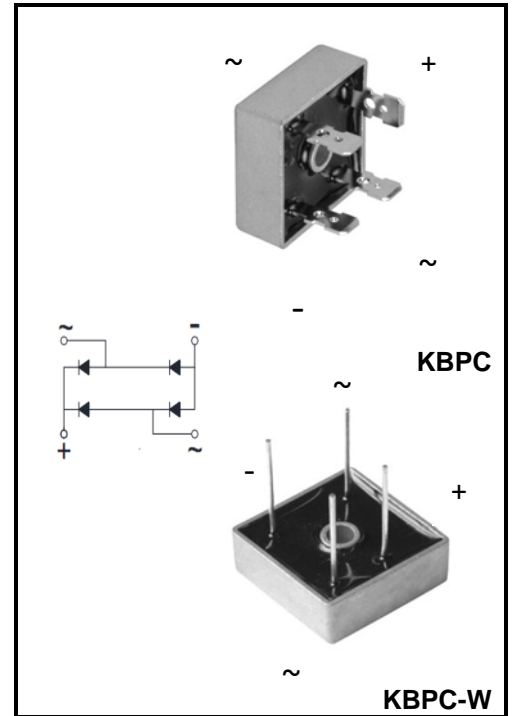
Forward Current – 50A

FEATURES

- ◆High current capability
- ◆Low forward voltage drop
- ◆Glass Passivated Chip Junction
- ◆Low power loss, high efficiency
- ◆Lead free in comply with EU RoHS 2011/65/EU directives

MECHANICAL DATA

- ◆Case: KBPC, KBPC-W
- ◆Terminals: Solderable per MIL-STD-202, Method 208
- ◆Approx. Weight: KBPC 31.6g , KBPC-W 28.5g



Maximum Ratings and Electrical characteristics

Ratings at 25 °C ambient temperature unless otherwise specified.

| Parameter | Symbols | KBPC5006 (W) | KBPC5008 (W) | KBPC5010 (W) | KBPC5012 (W) | KBPC5016 (W) | Units | |
|---|----------------|--------------|--------------|--------------|--------------|--------------|-------|----------|
| Maximum Repetitive Peak Reverse Voltage | V_{RRM} | 600 | 800 | 1000 | 1200 | 1600 | V | |
| Maximum RMS voltage | V_{RMS} | 420 | 560 | 700 | 840 | 980 | V | |
| Maximum DC Blocking Voltage | V_{DC} | 600 | 800 | 1000 | 1200 | 1600 | V | |
| Maximum Average Forward Rectified Current at TC=60°C | $I_{(AV)}$ | 50 | | | | | | A |
| Peak Forward Surge Current 8.3 ms Single Half Sine-Wave Superimposed on Rated Load (JEDEC method) | I_{FSM} | 500 | | | | | | A |
| Maximum Forward Voltage at 25 A DC and 25°C | V_F | 1.1 | | | | | | V |
| Maximum Reverse Current at TA=25°C at Rated DC Blocking Voltage TA=125°C | I_R | 10 1.0 | | | | | | μA mA |
| Operating and Storage Temperature Range | T_j, T_{stg} | -55 ~ +150 | | | | | | °C |

(1) Measured at 1 MHz and applied reverse voltage of 4 V D.C

(2) Thermal Resistance Junction to Case, Lead and Ambient.

Ratings And Characteristic Curves

FIG.1-MAXIMUM FORWARD SURGE CURRENT

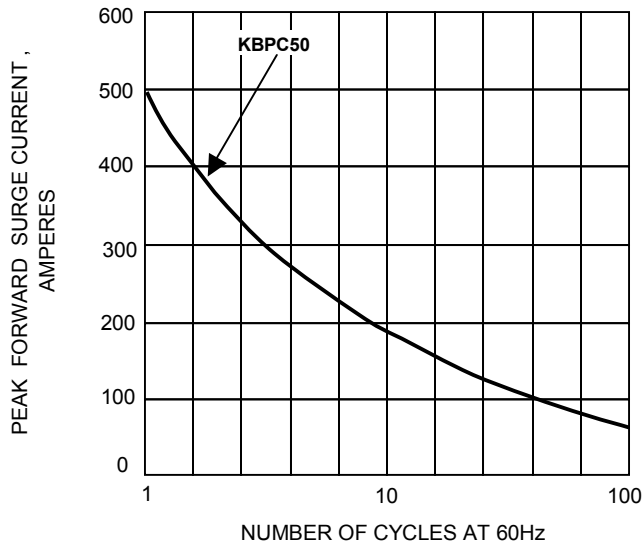


FIG.2- DERATING CURVE
OUTPUT RECTIFIED CURRENT

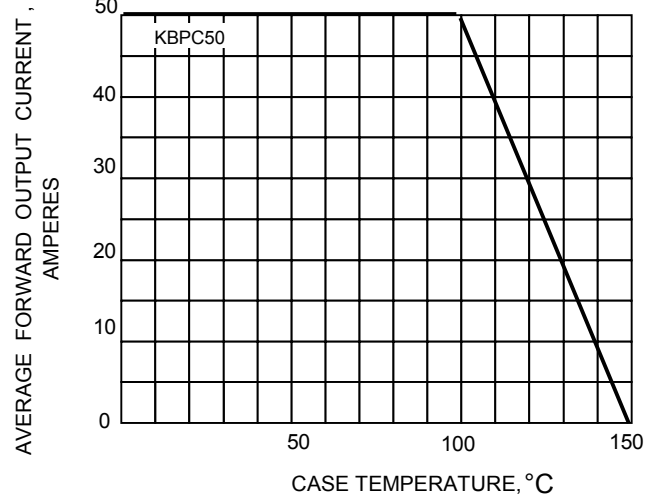


FIG.3-TYPICAL FORWARD CHARACTERISTICS

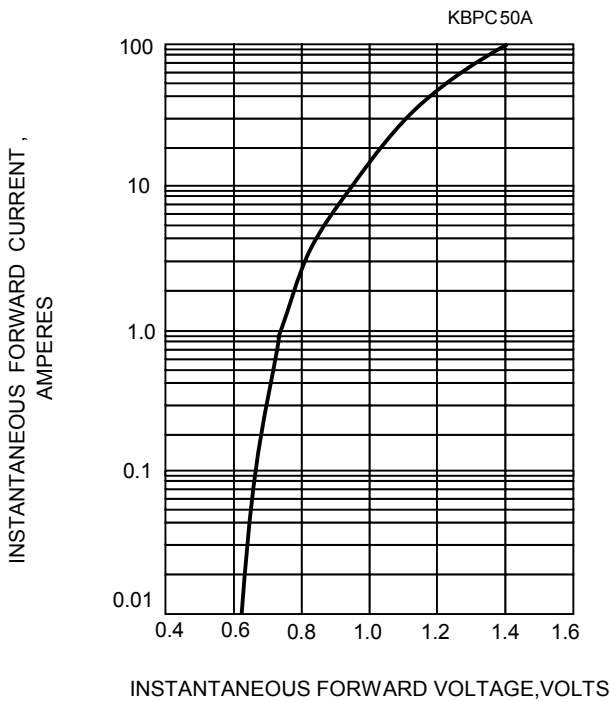
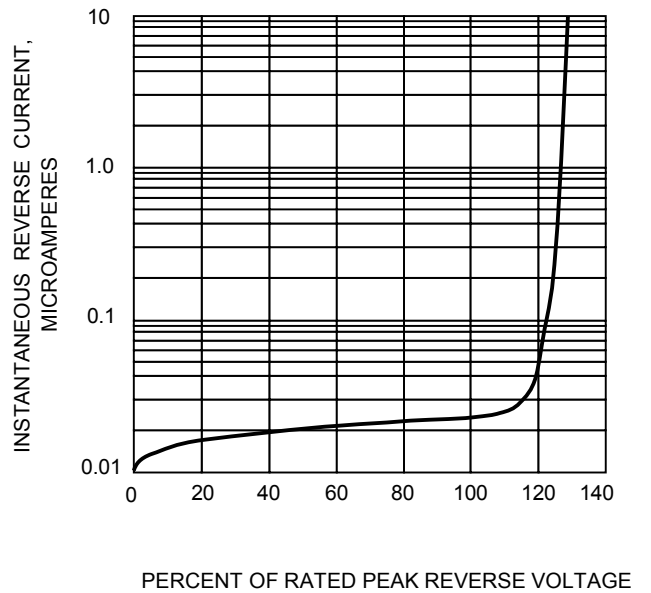
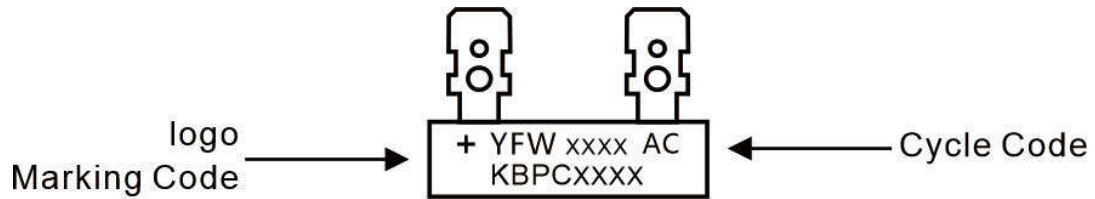


FIG.4-TYPICAL REVERSE CHARACTERISTICS



Marking Diagram



Ordering information

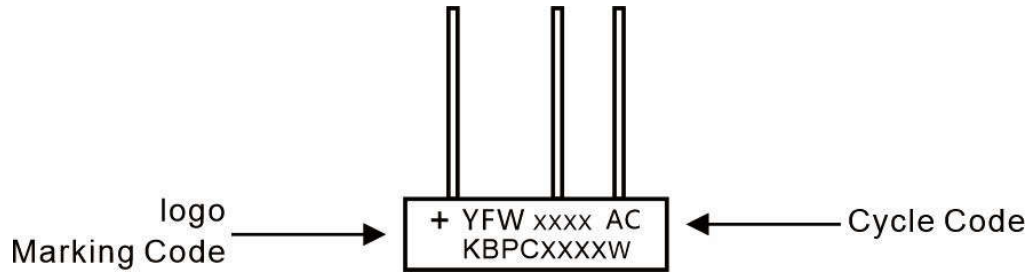
| Package | Packing Description | Packing Quantity |
|---------|---------------------|-------------------------|
| KBPC | bulk | 50PCS/Box 500PCS/Carton |

Package Dimensions

KBPC

| Dim. | Millimeter(mm) | | Dimensions inInch | |
|------|----------------|------|-------------------|--------|
| | Min. | Max. | Min. | Max. |
| A | 28.2 | 28.8 | 1.11 | 1.13 |
| B | 15.3 | 17.3 | 0.602 | 0.681 |
| C | 17.1 | 19.1 | 0.673 | 0.752 |
| D | 13.2 | 15.2 | 0.520 | 0.598 |
| E | 0.75 | 0.85 | 0.0295 | 0.0335 |
| F | 6.2 | 6.4 | 0.244 | 0.252 |
| G | 2.3 | 2.5 | 0.091 | 0.098 |
| H | 10.8 | 11.2 | 0.425 | 0.441 |
| I | 19 | - | 0.748 | - |

Marking Diagram



Ordering information

| Package | Packing Description | Packing Quantity |
|---------|---------------------|-------------------------|
| KBPC-W | bulk | 50PCS/Box 500PCS/Carton |

Package Dimensions

KBPC-W

| Dim. | Millimeter(mm) | | Dimensions inInch | |
|------|----------------|------|-------------------|-------|
| | Min. | Max. | Min. | Max. |
| A | 28.2 | 28.8 | 1.11 | 1.13 |
| B | 17.1 | 19.1 | 0.673 | 0.752 |
| C | 10.4 | 12.4 | 0.409 | |
| D | 0.95 | 1.05 | 0.037 | 0.041 |
| E | 10.8 | 11.2 | 0.425 | 0.441 |
| F | 30 | - | 1.18 | - |

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