



Single-Phase Bridge Rectifier

Features

- Low cost
- This series is UL recognized under component index, file number E127707
- Low thermal resistance
- High isolation voltage from case to leads
- High forward surge current capability
- High temperature soldering guaranteed:
260°C/10 seconds, 0.375" (9.5mm) lead length at 5 lbs. (2.3kg) tension
- RoHS and REACH Compliance



Mechanical Data

| | |
|---------------------------|---|
| Case: | Metal case |
| Polarity | Polarity symbols marked on case |
| Terminals: | Plated lead 0.04" (1.02mm) diameter |
| Mounting position: | Thru hole for #10 screw, 20in, -lbs. Torque max |
| Weight: | 0.93 ounce, 26.4 gram |

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

| Symbol | Description | KBPC25005W MB2505W | KBPC2501W MB251W | KBPC2502W MB252W | KBPC2504W MB254W | KBPC2506W MB256W | KBPC2508W MB258W | KBPC2510W MB2510W | Unit | Conditions |
|----------------|---------------------------------------|--------------------------|---------------------|---------------------|---------------------|---------------------|---------------------|----------------------|------|----------------------|
| VRRM | Max Recurrent Peak Reverse Voltage | 50 | 100 | 200 | 400 | 600 | 800 | 1000 | V | |
| VRMS | Max RMS Voltage | 35 | 70 | 140 | 280 | 420 | 560 | 700 | V | |
| VDC | Max DC Blocking Voltage | 50 | 100 | 200 | 400 | 600 | 800 | 1000 | V | |
| I(AV) | Max Average Forward Rectified Current | 25 | | | | | | | A | TC=55°C (Note1,2) |
| IFSM | Peak Forward Surge Current | 300 | | | | | | | A | JEDEC method |
| TJ,TSTG | Operating/Storage Temperature Range | -65 to +150, -65 to +150 | | | | | | | °C | |
| I2t | Rating for Fusing | 373 | | | | | | | A2s | T<8.3mS |

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

| Symbol | Description | KBPC25005W MB2505W | KBPC250W MB251W | KBPC250W MB252W | KBPC250W MB254W | KBPC250W MB256W | KBPC250W MB258W | KBPC251W MB2510W | Unit | Conditions |
|--------------|---|-----------------------|--------------------|--------------------|--------------------|--------------------|--------------------|---------------------|------|-------------------------------|
| VF | Max Instantaneous Forward Voltage | 1.1 | | | | | | | V | Drop per Bridge element 12.5A |
| IR | Max DC Reverse Current at Rated DC Blocking Voltage | 10 | | | | | | | µA | TA=25°C |
| | | 1.0 | | | | | | | mA | TA=100°C |
| Rθ-JC | Typical Thermal Resistance | 2.0 | | | | | | | °C/W | Note 1,2 |
| VISO | Isolation Voltage from case to leads | 2500 | | | | | | | VAC | |

Note:

1. Unit mounted on 5" x 6" x 4.9" (12.8 X 15.2 X 12.4cm) Al. Plate
2. Bolt down on heat-sink with silicon thermal compound between bridge and mounting surface for maximum heat transfer efficiency with #10 screw.

KBPC25005W~KBPC2510W/MB2505W~MB2510W

RATINGS AND CHARACTERISTIC CURVES KBPC25005W~KBPC2510W/MB2505W~MB2510W

FIG.1-DERATING CURVE FOR OUTPUT RECTIFIED CURRENT

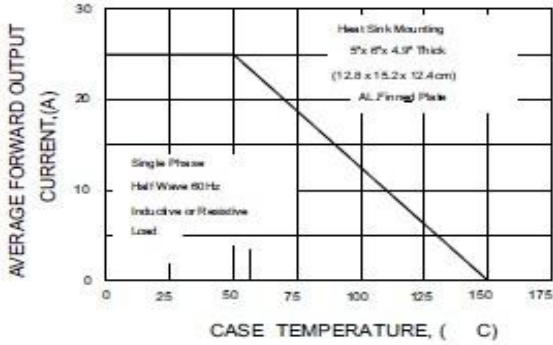


FIG.2-MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT PER ELEMENT

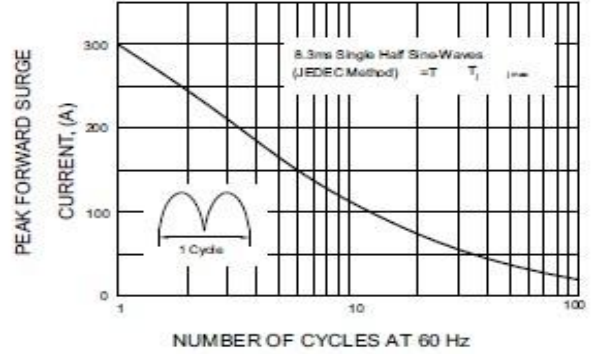


FIG.3-TYPICAL FORWARD CHARACTERISTICS PER BRIDGE ELEMENT

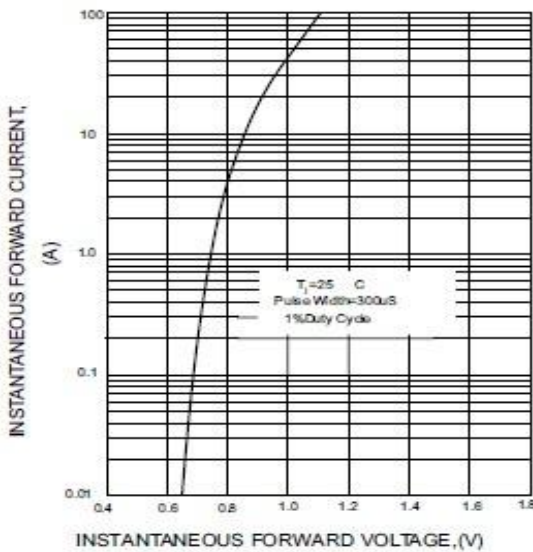


FIG.4-TYPICAL REVERSE CHARACTERISTICS PER BRIDGE ELEMENT

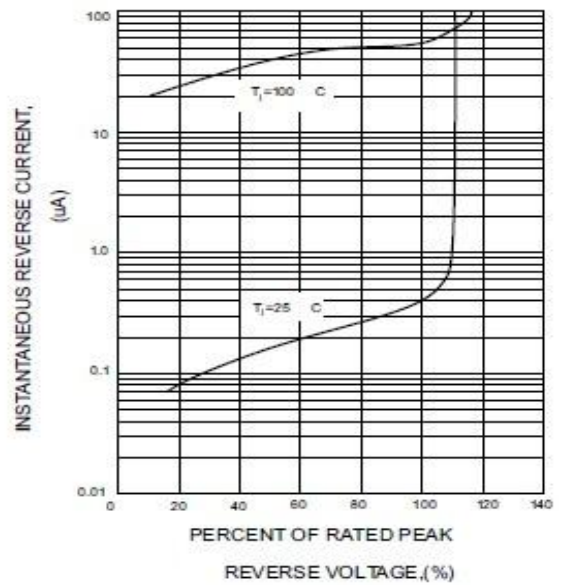


FIG.5-TYPICAL JUNCTION CAPACITANCE PER BRIDGE ELEMENT

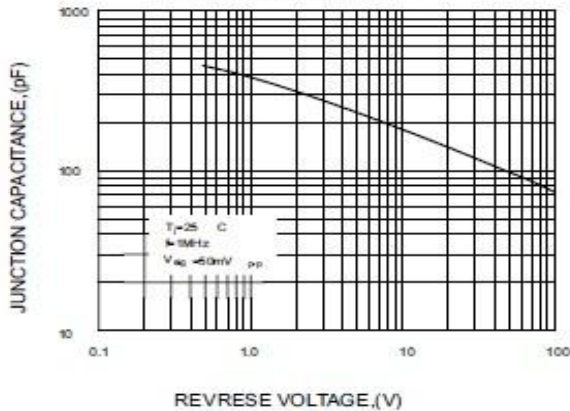
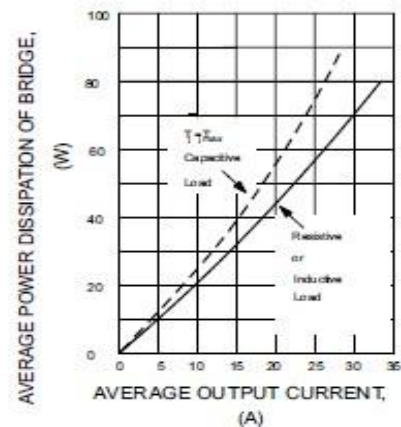
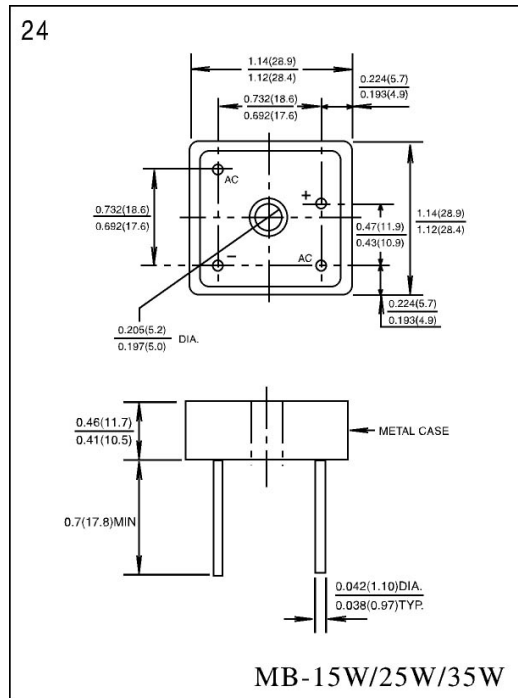


FIG.6-MAXIMUM POWER DISSIPATION



KBPC25005W~KBPC2510W/MB2505W~MB2510W
Dimensions in inches (mm)

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