# SINGLE-PHASE BRIDGE RECTIFIER

| KBPC15005WN THRU KBPC1510WN | BR1505W THRU BR1510W |
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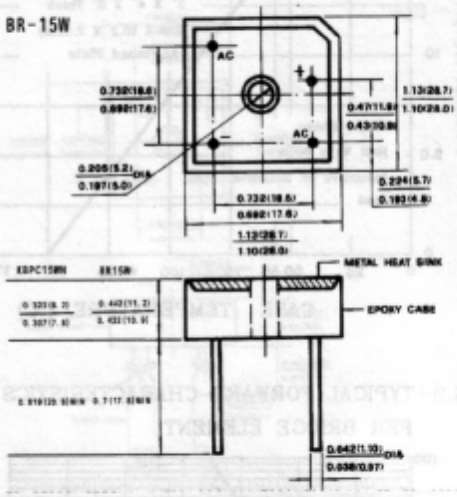
## FEATURES

- Low cost
- This series is UL recognized under component index, file number E127707
- High forward surge current capability
- Integrally molded heatsink provide very low thermal resistance
- High isolation voltage from case to leads.
- High temperature soldering guaranteed: 260℃/10 seconds, at 5 lbs. (2.3kg) tension.

## MECHANICAL DATA

- Case: Molded plastic body, suffix" N" for thinner type
- Terminal: Plated lead 0.040" (1.02mm) diameter.
- Polarity: Polarity symbols marked on case
- Mounting: Thru hole for #10 screw, 20 in. −lbs. torque max.
- Weight: 0.61 ounce, 17.4 grams (BR15W)
  0.47 ounce, 13.4 grams (KBPC15WN)

**VOLTAGE RANGE** 50 to 1000 Volts
**CURRENT** 15 Amperes




Dimensions in inches and (millimeters)

## MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Ratings at 25℃ ambient temperature unless otherwise specified.
Single phase, half wave, 60Hz, resistive or inductive load.
For capacitive load derate current by 20%.

| | SYMBOLS | KBPC 15005WN BR1505W | KBPC 1501WN BR151W | KBPC 1502WN BR152W | KBPC 1504WN BR154W | KBPC 1506WN BR156W | KBPC 1508WN BR158W | KBPC 1510WN BR1510W | UNITS |
|---|---|---|---|---|---|---|---|---|---|
| Maximum Repetitive 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 Output Current, at $T_C$=55℃ (Note 1,2) | $I_{(AV)}$ | 15 | | | | | | | Amps |
| Peak Forward Surge Current 8.3ms single half sine−wave superimposed on rated load (JEDEC Method) | $I_{FSM}$ | 300 | | | | | | | Amps |
| Rating for Fusing (t<8.3ms) | $I^2t$ | 373 | | | | | | | $A^2s$ |
| Maximum Instantaneous Forward Voltage Drop per bridge element at 7.5A | $V_F$ | 1.1 | | | | | | | Volts |
| Maximum DC Reverse Current at rated DC blocking voltage per element, $T_A$=25℃ | $I_R$ | 10 | | | | | | | μAmps |
| Maximum DC Reverse Current at rated DC blocking voltage per element, $T_A$=100℃ | $I_R$ | 1.0 | | | | | | | mAmps |
| Isolation Voltage from case to leads. | $V_{ISO}$ | 2500 | | | | | | | $V_{AC}$ |
| Typical Thermal Resistance (Note 1,2) | $R_{\theta JC}$ | 2.0 | | | | | | | ℃/W |
| Operating and Storage Temperature Range | $T_J$, $T_{STG}$ | −65 to +150 | | | | | | | ℃ |

**NOTES:**

1. Unit mounted on 5" ×4" ×3" (12.8cm×10.2cm×7.3cm) Al. finned plate.
2. Bolt down on heat-sink with silicone thermal compound between bridge and mounting surface for maximum heat transfer efficiency with #10 screw.

FIG.1-DERATING CURVE FOR
OUTPUT RECTIFIED CURRENT

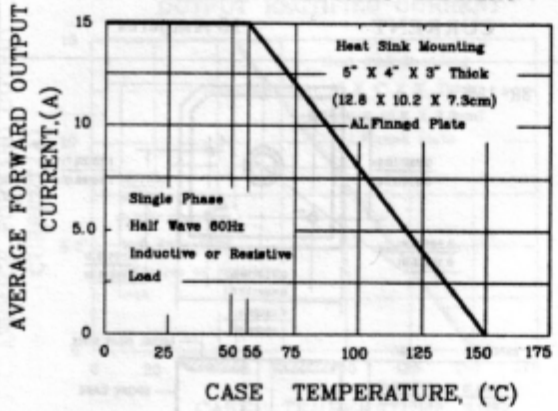



FIG.2-MAXIMUM NON-REPETITIVE PEAK
FORWARD SURGE CURRENT PER ELEMENT

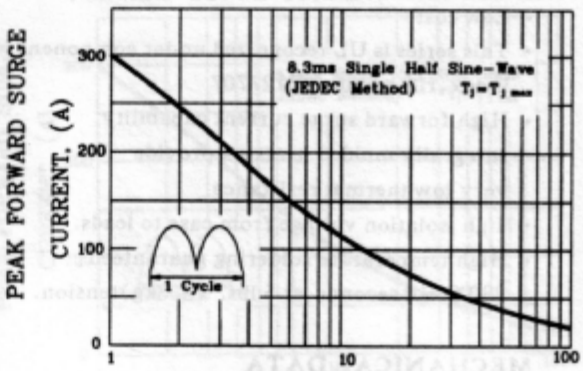



FIG.3-TYPICAL FORWARD CHARACTERISTICS
PER BRIDGE ELEMENT

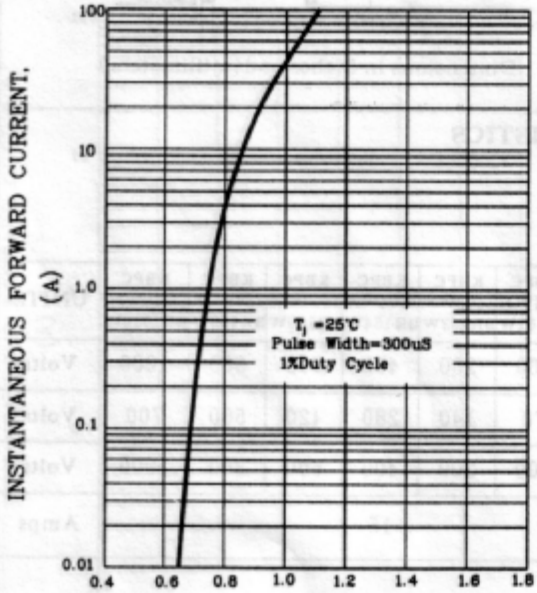



FIG.4-TYPICAL REVERSE CHARACTERISTICS
PER BRIDGE ELEMENT

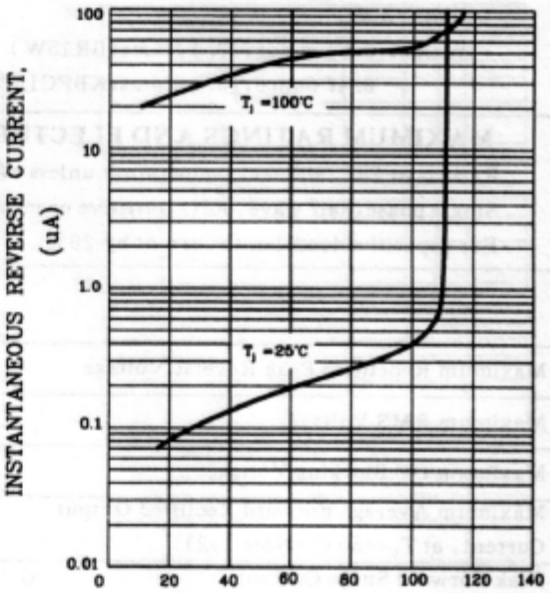



FIG.5-TYPICAL JUNCTION CAPACITANCE
PER BRIDGE ELEMENT

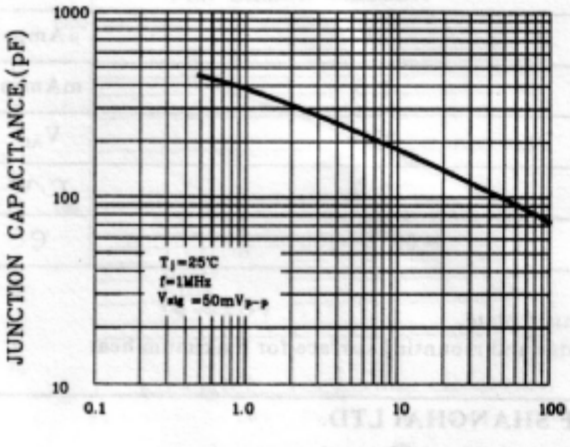



FIG.6-MAXIMUM POWER DISSIPATION