



# DATA SHEET

SEMICONDUCTOR

KBPC15005N THRU KBPC1510N

VOLTAGE RANGE 50 to 1000 Volts



CURRENT 15 Ampere

## FEATURES

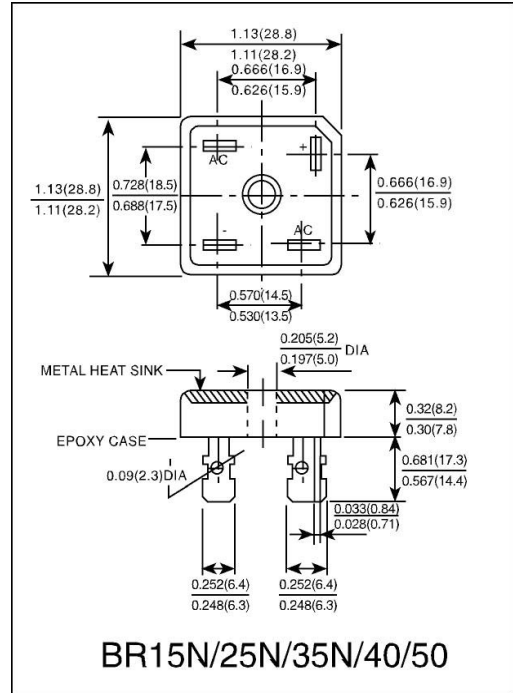
- Low cost
- This series is UL recognized under component index, file number E127707
- High forward surge current capability
- Integrally molded heatsink provide very low thermal resistance.
- High isolation voltage from case to lugs.
- High temperature soldering guaranteed: 260 /10 second, at 5 lbs. (2.3kg) tension.
- High temperature soldering : 260°C / 10 seconds at terminals
- Pb free product at available : 99% Sn above meet RoHS environment substance directive request

## MECHANICAL DATA

- Case: Molded plastic body, suffix "N" for thinner type
- Terminal: Plated 0.25" (6.35mm) lug.
- Polarity: Polarity symbols marked on case.
- Mounting: Thru hole for #10 screw, 20 in, - lbs. Torque Max.
- Weight: 0.55 ounce, 15.6 gram(KBPC15N)

## 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 15005N   | KBPC 1501N | KBPC 1502N | KBPC 1504N | KBPC 1506N | KBPC 1508N | KBPC 1510N |       |
|--|---------|---------------|------------|------------|------------|------------|------------|------------|-------|
| Maximum Repetitive Peak Reverse Voltage  | VRRM    | 50            | 100        | 200        | 400        | 600        | 800        | 1000       | Volts |
| Maximum RMS Voltage  | VRMS    | 35            | 70         | 140        | 280        | 420        | 560        | 700        | Volts |
| Maximum DC Blocking Voltage  | VDC     | 50            | 100        | 200        | 400        | 600        | 800        | 1000       | Volts |
| Maximum Average Forward Rectified Output Current, at TC = 55 (Note 1, 2)                               | I(AV)   | 15            |            |            |            |            |            |            | Amps  |
| Peak Forward Surge Current<br>8.3ms single half sine - wave superimposed on rated load (JEDEC method ) | IFSM    | 300           |            |            |            |            |            |            | Amps  |
| Rating for Fusing (t<8.3ms)  | I2t     | 373           |            |            |            |            |            |            | A2s   |
| Maximum Instantaneous Forward Voltage Drop per bridge element at 7.5A                                  | VF      | 1.1           |            |            |            |            |            |            | Volts |
| Maximum DC Reverse Current at rate<br>DC blocking voltage per element                                  | IR      | 10            |            |            |            |            |            |            | μ A   |
|  |         | 1.0           |            |            |            |            |            |            | mA    |
| Isolation Voltage from case to lugs  | VISO    | 2500          |            |            |            |            |            |            | VAC   |
| Typical Thermal Resistance (Note 1,2)  | R JC    | 2.0           |            |            |            |            |            |            | /W    |
| Operating Temperature Range  | TJ      | (-65 to +150) |            |            |            |            |            |            |       |
| Storage Temperature Range  | TSTG    | (-65 to +150) |            |            |            |            |            |            |       |

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

# DEVICE CHARACTERISTICS

## KBPC15005N THRU KBPC1510N

FIG.1-DERATING CURVE FOR  
OUTPUT RECTIFIED CURRENT

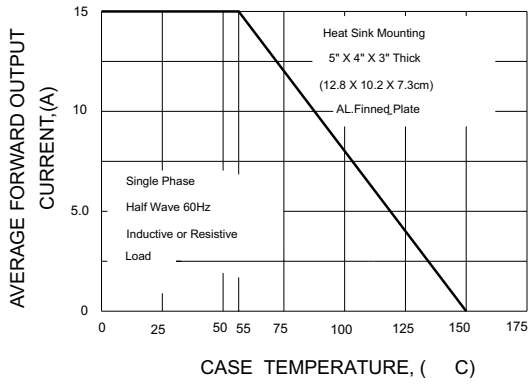


FIG.2-MAXIMUM NON-REPETITIVE PEAK  
FORWARD SURGE CURRENT PER ELEMENT

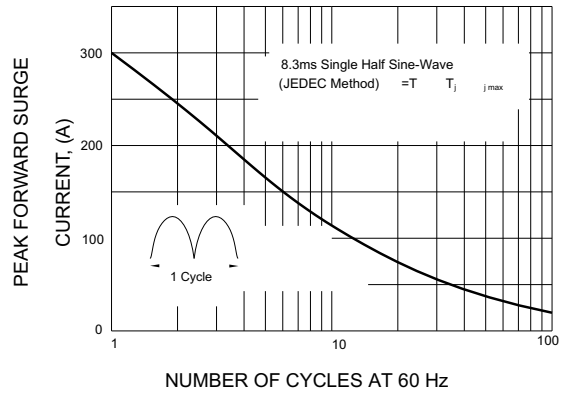


FIG.3-TYPICAL FORWARD CHARACTERISTICS  
PER BRIDGE ELEMENT

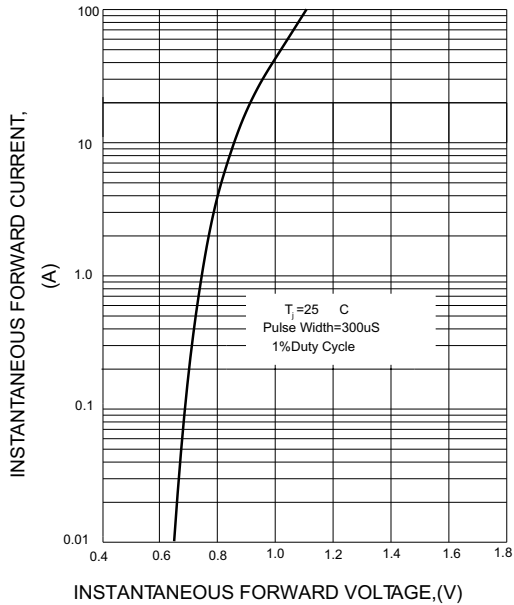


FIG.4-TYPICAL REVERSE CHARACTERISTICS  
PER BRIDGE ELEMENT

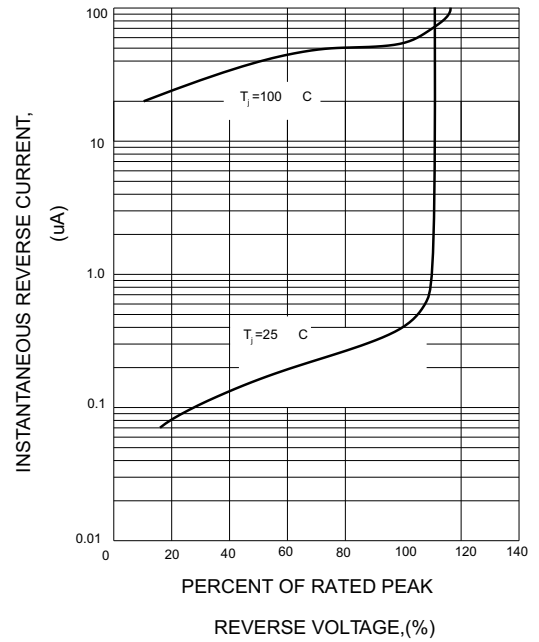


FIG.5-TYPICAL JUNCTION CAPACITANCE  
PER BRIDGE ELEMENT

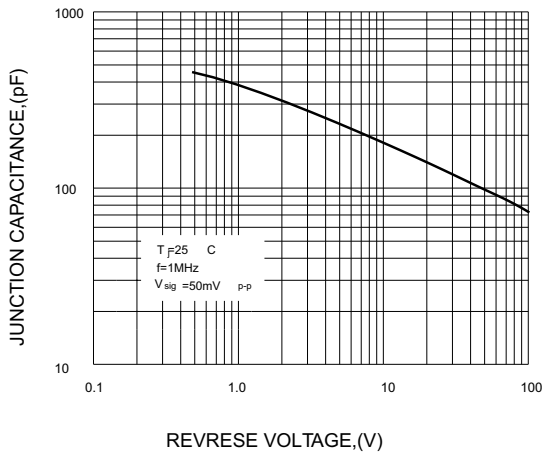


FIG.6-MAXIMUM POWER DISSIPATION

