



MASTER INSTRUMENT CORPORATION

**SINGLE-PHASE BRIDGE RECTIFIER
KBPC3505N THRU KBPC3510N**

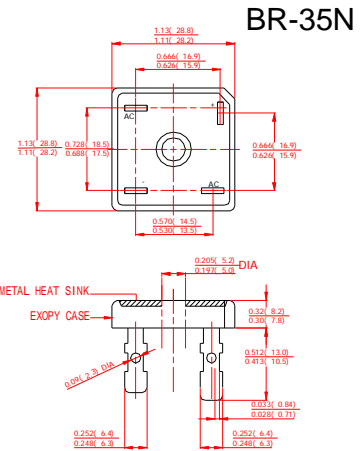
**VOLTAGE RANGE 50 to 1000 Volts
CURRENT 35 Amperes**

FEATURES

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

MECHANICAL DATA

- I Case: Molded plastic body
- I Terminal: Plated lead 0.25"(6.35mm)lug.
- I Polarity: Polarity symbols marked on case
- I Mounting: Thru hole for #10 screw, 20 in.-lbs torque max.
- I Weight:0.55ounce, 15.6 grams



Dimensions in inches and (millimeters)

MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

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

| | SYMBOLS | KBPC 35005N | KBPC 3501N | KBPC 3502N | KBPC 3504N | KBPC 3506N | KBPC 3508N | KBPC 3510N | 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 $T_C=50^\circ\text{C}$ (Note1) | $I_{(AV)}$ | 35 | | | | | | | Amps | |
| Peak Forward Surge Current 8.3ms single half sine-wave superimposed on rated load (JEDEC Method) | I_{FSM} | 400 | | | | | | | Amps | |
| Rating for Fusing($t<8.3\text{ms}$) | I^2T | 373 | | | | | | | A^2S | |
| Maximum Instantaneous Forward Voltage at 17.5A | V_F | 1.1 | | | | | | | Volts | |
| Maximum DC Reverse Current at rated DC blocking voltage | I_R | $T_A=25^\circ\text{C}$ | 10 | | | | | | | μAmps |
| | | $T_A=100^\circ\text{C}$ | 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 | | | | | | | $^\circ\text{C}/\text{W}$ | |
| Operating Temperature Range | T_J | -55 to +150 | | | | | | | $^\circ\text{C}$ | |
| Storage Temperature Range | T_{STG} | -55 to +150 | | | | | | | $^\circ\text{C}$ | |

NOTES:

1. Unit mounted on 9"×3.5"×4.6" thick (23cm×9cm×11.8cm) Al. plate.
2. Bolt down on heat-sink with silicone thermal compound between bridge and mounting surface for maximum heat transfer efficiency with #10 screw.



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RATINGS AND CHARACTERISTIC CURVES KBPC35005N THRU KBPC3510N

FIG.1-TYPICAL FORWARD CURRENT DERATING CURVE

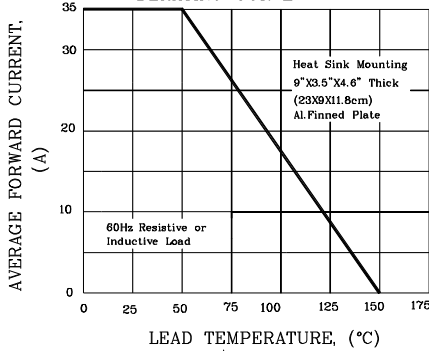


FIG.2-MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

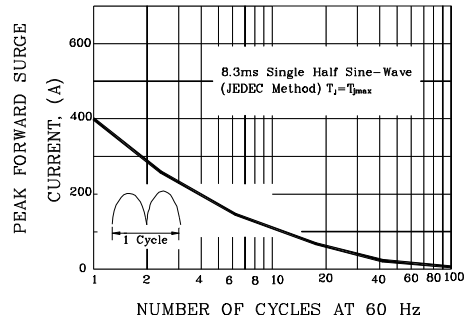


FIG.3-TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

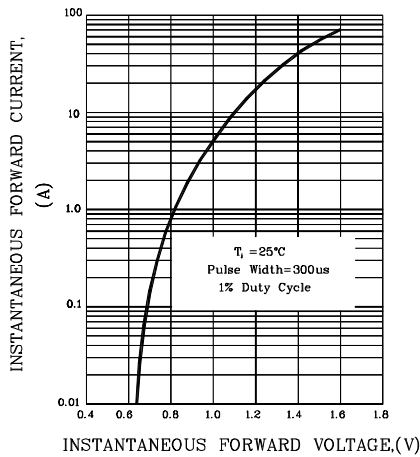


FIG.4-TYPICAL REVERSE CHARACTERISTICS

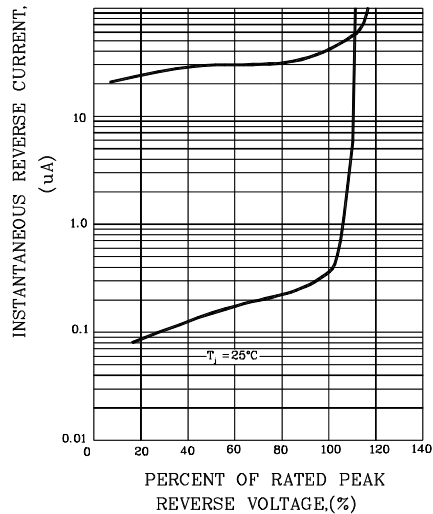


FIG.5-TYPICAL JUNCTION CAPACITANCE

