

Kingtronics®

KBPC35005 THRU KBPC3510

SINGLE-PHASE GLASS PASSIVATED BRIDGE RECTIFIERS

REVERSE VOLTAGE 50 to 1000 Volts FORWARD CURRENT 35.0 Ampere

FEATURES

- 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°C/10 second, at 5 lbs. (2.3kg) tension.

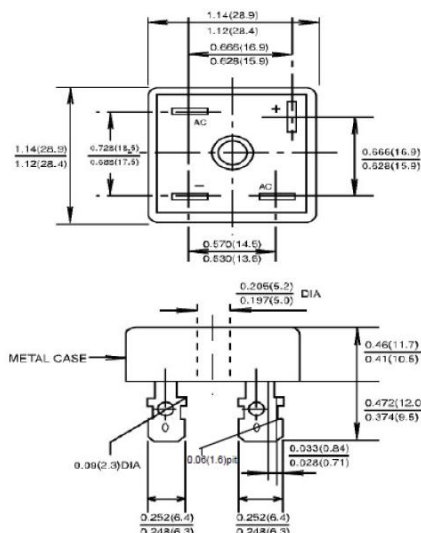
MECHANICAL DATA

- Case: Matel case.
- 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: 1.02 ounce, 29gram.

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%

Dimensions in inches and (millimeters)



| PARAMETER | SYMBOL | KBPC 35005 | KBPC 3501 | KBPC 3502 | KBPC 3504 | KBPC 3506 | KBPC 3508 | KBPC 3510 | UNIT |
|--|-------------------------|-------------|-----------|-----------|-----------|-----------|-----------|-----------|--------------------|
| 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 $T_c=50^\circ\text{C}$ (Note1,2) | $I_{(AV)}$ | 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 | 664 | | | | | | | A^2s |
| Maximum Instantaneous Forward Voltage at 17.5A | V_F | 1.1 | | | | | | | Volts |
| Maximum Reverse Current at Rated DC Blocking Voltage | $T_A=25^\circ\text{C}$ | 5.0 | | | | | | | μAmps |
| | $T_A=125^\circ\text{C}$ | 0.5 | | | | | | | mAmps |
| Isolation Voltage from case to lugs | V_{ISO} | 2500 | | | | | | | V_{AC} |
| Typical Thermal Resistance (Note 1,2) | $R_{\theta JL}$ | 2.0 | | | | | | | $^\circ\text{C/W}$ |
| Operating Temperature Range | T_J | -65 to +150 | | | | | | | $^\circ\text{C}$ |
| Storage Temperature Range | T_{stg} | -65 to +150 | | | | | | | $^\circ\text{C}$ |

- Unit mounted on 9"x3.5"x4.6" thick (23x9x11.8mm) Al. plate.
- Bolt down on heat-sink with silicone thermal compound between bridge and mounting surface for maximum heat transfer efficiency with #10 screw.

Kingtronics® International Company

Kingtronics®

KBPC35005 THRU KBPC3510

RATINGS AND CHARACTERISTIC CURVES

FIG.1-DERATING CURVE FOR
OUTPUT RECTIFIED CURRENT

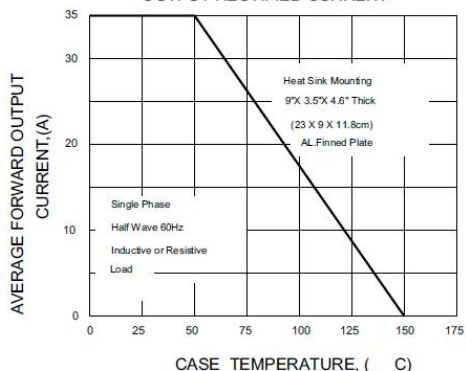


FIG.2-MAXIMUM NON-REPETITIVE PEAK
FORWARD SURGE CURRENT PER ELEMENT

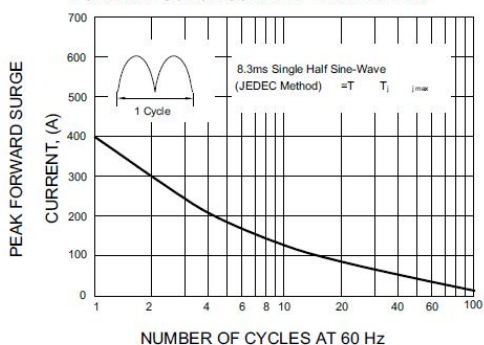


FIG.3-TYPICAL FORWARD CHARACTERISTICS
PER BRIDGE ELEMENT

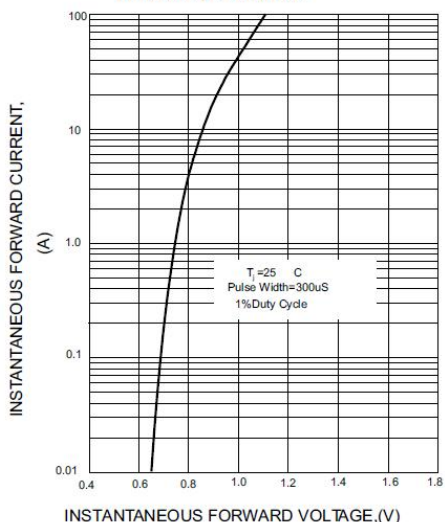


FIG.4-TYPICAL REVERSE CHARACTERISTICS
PER BRIDGE ELEMENT

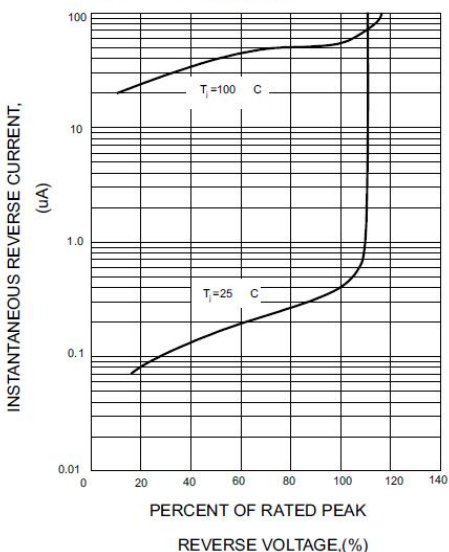


FIG.5-TYPICAL JUNCTION CAPACITANCE
PER BRIDGE ELEMENT

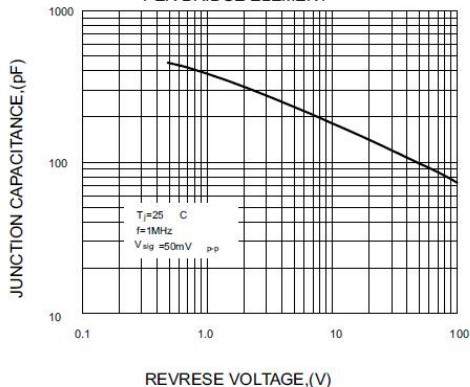
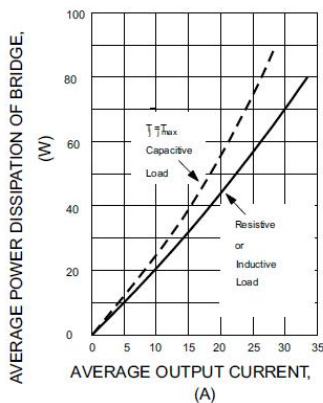


FIG.6-MAXIMUM POWER DISSIPATION



Note: Specifications are subject to change without notice.

Kingtronics® International Company