SEMICONDUCTOR

# KBP3005 THRU KBP310

GENERAL PURPOSE BRIDGE RECTIFIER
Reverse Voltage:50 to 1000Volts
Forward Current:3.0 Amps

## FEATURES

- Plastic package has Underwriters Laboratory Flammability Classification 94V-0
- Glass passivated chip junction
- High current capability
- Low forward voltage drop
- High temperature soldering guaranteed:260°C/10 seconds at terminals
- Component in accordance to RoHS 2015/863/EU

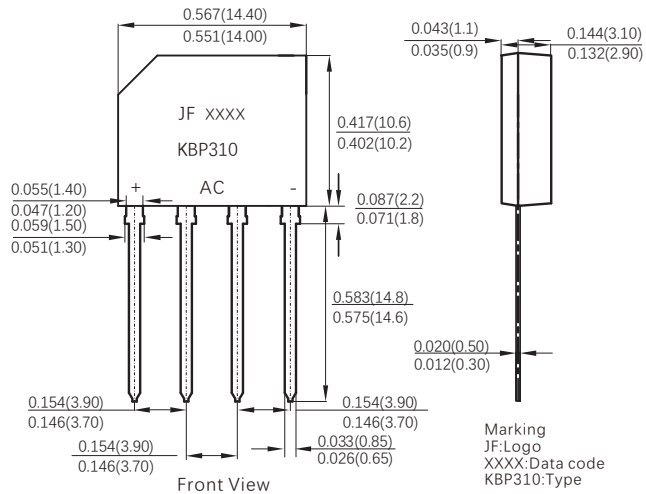
## MECHANICAL DATA

- Case: KBP molded plastic body
- Terminals: Plated leads solderable per MIL-STD-750,method 2026
- Mounting Position: Any

## TYPICAL APPLICATIONS

Used in AC/DC bridge full wave rectification for SMPS, lighting ballaster, adapter, charger, home appliances, office equipment, and telecommunication applications.

## KBP




Front View

Dimensions in inches and (millimeters)

## MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

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

| Parameters | | Symbol | KBP3005 | KBP301 | KBP302 | KBP304 | KBP306 | KBP308 | KBP310 | Units |
|---|---|---|---|---|---|---|---|---|---|---|
| Maximum Reverse 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 Current (See Fig 2) | | $I_{F(AV)}$ | 3.0 | | | | | | | Amps |
| Peak Forward Surge Current 8.3ms Single Half Sine-wave Superimposed on Rated Load | | $I_{FSM}$ | 90 | | | | | | | Amps |
| Rating for Fusing (t =8.3ms) | | $I^2t$ | 33.62 | | | | | | | $A^2S$ |
| Maximum Instantaneous Forward Voltage at 1.5A DC | | $V_F$ | 1.0 | | | | | | | Volts |
| Maximum DC Reverse Current at rated DC blocking voltage | $T_J$=25℃ | $I_R$ | 5.0 | | | | | | | μA |
| | $T_J$=125℃ | | 100 | | | | | | | μA |
| Typical Thermal Resistance (Note 2) | Junction And Ambient | $R_{\theta JA}$ | 45 | | | | | | | ℃/W |
| | Junction And Case | $R_{\theta JC}$ | 5 | | | | | | | |
| Typical Junction capacitance (Note 1) | | $C_J$ | 27 | | | | | | | pF |
| Operating and Storage Temperature Range | | $T_J$, $T_{STG}$ | -55 to +150 | | | | | | | °C |

NOTE: 1.Measured at 1MHz and applied reverse voltage of 4.0 Volts.
2 Device mounted on 30mm x 30mm x 1mm Cu plate heatsink

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# RATINGS AND CHARACTERISTIC CURVES KBP3005 THRU KBP310

FIG.1-MAXIMUM FORWARD SURGE CURRENT

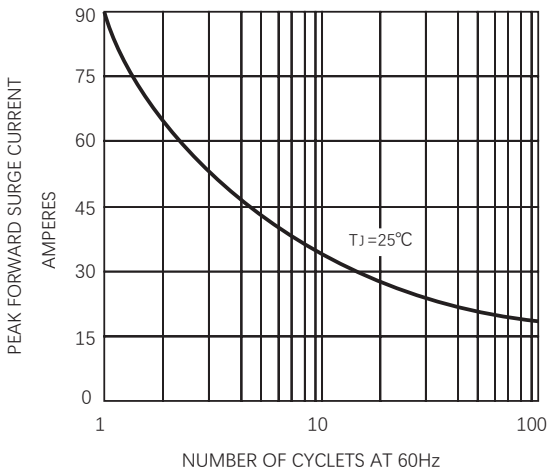



FIG.2 FORWARD CURRENT DERATING CURVE

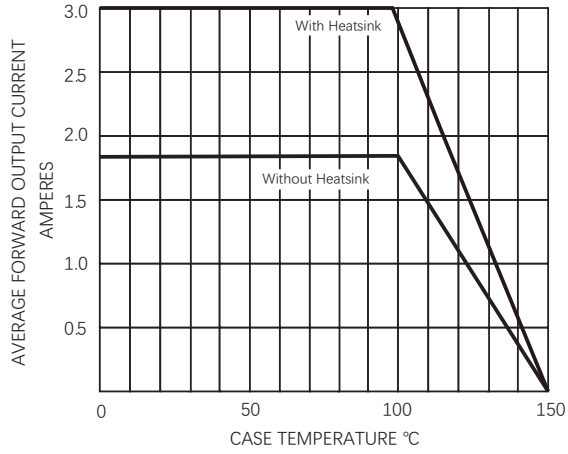



FIG. 3-TYPICAL FORWARD CHARACTERISTICS

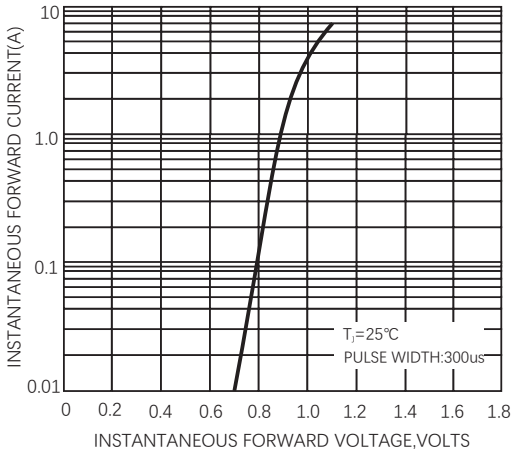
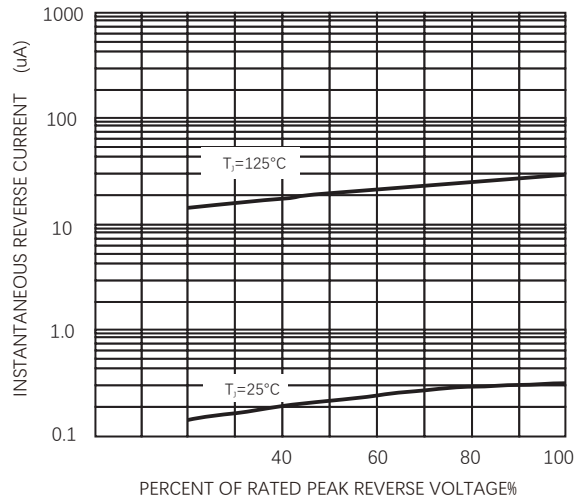



FIG.4 -TYPICAL REVERSE CHARACTERISTICS



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