TAIWAN
SEMICONDUCTOR


## Features

\& UL Recognized File \# E-96005
$\diamond$ Glass passivated junction
« Ideal for printed circuit board
\& Reliable low cost construction
$\diamond$ Plastic material has Underwriters Laboratory Flammability Classification 94V-0
« Surge overload rating to 150 amperes peak
\& High temperature soldering guaranteed: $260^{\circ} \mathrm{C} / 10$ seconds / $.375^{\prime \prime}$, ( 9.5 mm ) lead lengths at 5 lbs ., ( 2.3 kg ) tension
$\diamond$ Weight: 0.3 ounce, 8.0 grams
$>$ Mounting torque: 5 in . lbs. Max.

## KBU401G - KBU407G

Single Phase 4.0 AMPS. Glass Passivated Bridge Rectifiers

KBU


Dimensions in inches and (millimeters)

## Maximum Ratings and Electrical Characteristics

Rating at $25^{\circ} \mathrm{C}$ ambient temperature unless otherwise specified.
Single phase, half wave, 60 Hz , resistive or inductive load.
For capacitive load, derate current by $20 \%$

| Type Number | Symbol | $\begin{array}{\|l\|} \hline \text { KBU } \\ \text { 401G } \end{array}$ | $\begin{array}{\|c\|} \hline \text { KBU } \\ \text { 402G } \end{array}$ | $\begin{array}{\|l\|} \hline \text { KBU } \\ \text { 403G } \end{array}$ | $\begin{array}{\|l\|} \hline \text { KBU } \\ 404 G \end{array}$ | $\begin{array}{\|l} \hline \text { KBU } \\ 405 G \end{array}$ | $\begin{array}{\|l\|} \hline \text { KBU } \\ 406 G \end{array}$ | $\begin{aligned} & \hline \begin{array}{l} \text { KBU } \\ 407 G \end{array} \end{aligned}$ | Units |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Maximum Recurrent Peak Reverse Voltage | $\mathrm{V}_{\text {RRM }}$ | 50 | 100 | 200 | 400 | 600 | 800 | 1000 | V |
| Maximum RMS Voltage | $\mathrm{V}_{\text {RMS }}$ | 35 | 70 | 140 | 280 | 420 | 560 | 700 | V |
| Maximum DC Blocking Voltage | $V_{D C}$ | 50 | 100 | 200 | 400 | 600 | 800 | 1000 | V |
| Maximum Average Forward Rectified Current $@ T_{A}=50^{\circ} \mathrm{C}$ | ${ }^{\text {( }}$ (V) | 4.0 |  |  |  |  |  |  | A |
| Peak Forward Surge Current, 8.3 ms Single Half Sne-wave Superimposed on Rated Load (JEDEC method ) | IFSM | 150 |  |  |  |  |  |  | A |
| Maximum Instantaneous Forward Voltage <br> @ 2.0A <br> @ 4.0A | $V_{F}$ | $\begin{aligned} & 1.0 \\ & 1.1 \end{aligned}$ |  |  |  |  |  |  | V |
| Maximum DC Reverse Current @ $\mathrm{T}_{\mathrm{A}}=25^{\circ} \mathrm{C}$ at Rated DC Blocking Voltage @ $T_{A}=125^{\circ} \mathrm{C}$ | $\mathrm{I}_{\mathrm{R}}$ | $\begin{aligned} & 5.0 \\ & 500 \\ & \hline \end{aligned}$ |  |  |  |  |  |  | uA uA |
| Typical thermal resistance (Note 1) <br> (Note 2) | $\begin{aligned} & \hline \mathrm{R}_{\text {QJA }} \\ & \mathrm{R}_{\text {OJL }} \\ & \hline \end{aligned}$ | $\begin{aligned} & 19 \\ & 4.0 \end{aligned}$ |  |  |  |  |  |  | ${ }^{\circ} \mathrm{C} / \mathrm{W}$ |
| Operating Temperature Range | TJ | -55 to +150 |  |  |  |  |  |  | ${ }^{\circ} \mathrm{C}$ |
| Storage Temperature Range | Tsta | -55 to +150 |  |  |  |  |  |  | ${ }^{\circ} \mathrm{C}$ |

Notes: 1. Units Mounted on P.C.B. with $0.5^{\prime \prime} \times 0.5^{\prime \prime}(12 \mathrm{~mm} \times 12 \mathrm{~mm})$ Copper Pads and $0.375^{\prime \prime}(9.5 \mathrm{~mm})$ Lead Length. 2. Units Mounted on a $2.0^{\prime \prime} \times 3.0^{\prime \prime} \times 0.25$ " Al. Plate.

RATINGS AND CHARACTERISTIC CURVES (KBU401G THRU KBU407G)


FIG.3- MAXIMUM NON-REPETITIVE FORWARD SURGE


FIG.5- TYPICAL FORWARD CHARACTERISTICS


FIG.2- TYPICAL REVERSE CHARACTERISTICS


FIG.4- TYPICAL JUNCTION CAPACITANCE


