# KI SEMICONDUCTOR

# KBL4005 THRU KBL410

## 4 Amp Single Phase Bridge Rectifier 50 to 1000 Volts

## Features

- Low Leakage
- Low Forward Voltage
- Any Mounting Position
- Silver Plated Copper Leads
- Surge Overload Rating Of 200 Amps

## Maximum Ratings

- Operating Temperature: -55°C to +125°C
- Storage Temperature: -55°C to +150°C

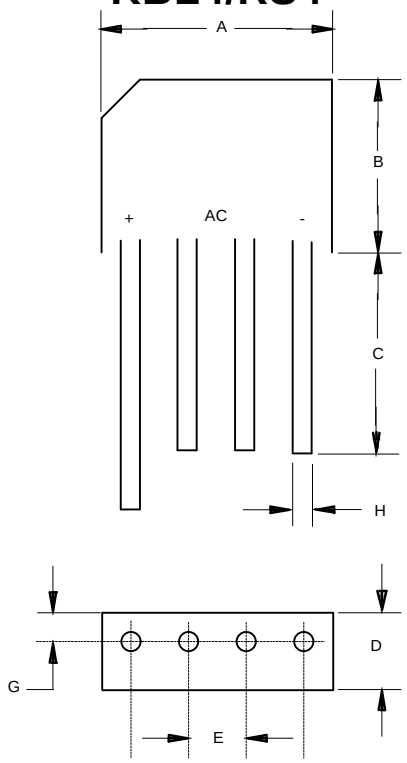
| Catalog Number | Device Marking | Maximum Recurrent Peak Reverse Voltage | Maximum RMS Voltage | Maximum DC Blocking Voltage |
|---|---|---|---|---|
| RS401L | KBL4005 | 50V | 35V | 50V |
| RS402L | KBL401 | 100V | 70V | 100V |
| RS403L | KBL402 | 200V | 140V | 200V |
| RS404L | KBL404 | 400V | 280V | 400V |
| RS405L | KBL405 | 600V | 420V | 600V |
| RS406L | KBL406 | 800V | 560V | 800V |
| RS407L | KBL410 | 1000V | 700V | 1000V |

## Electrical Characteristics @ 25°C Unless Otherwise Specified

| | | | |
|---|---|---|---|
| Average Forward Current | $I_{F(AV)}$ | 4.0A | $T_A$ = 50°C |
| Peak Forward Surge Current | $I_{FSM}$ | 200A | 8.3ms, half sine |
| Maximum Forward Voltage Drop Per Element | $V_F$ | 1.1V | $I_{FM}$ = 3.0A; $T_J$ = 25°C |
| Maximum DC Reverse Current At Rated DC Blocking Voltage | $I_R$ | 10µA<br>1.0mA | $T_J$ = 25°C<br>$T_J$ = 100°C |

*Pulse test: Pulse width 300 µsec, Duty cycle 1%

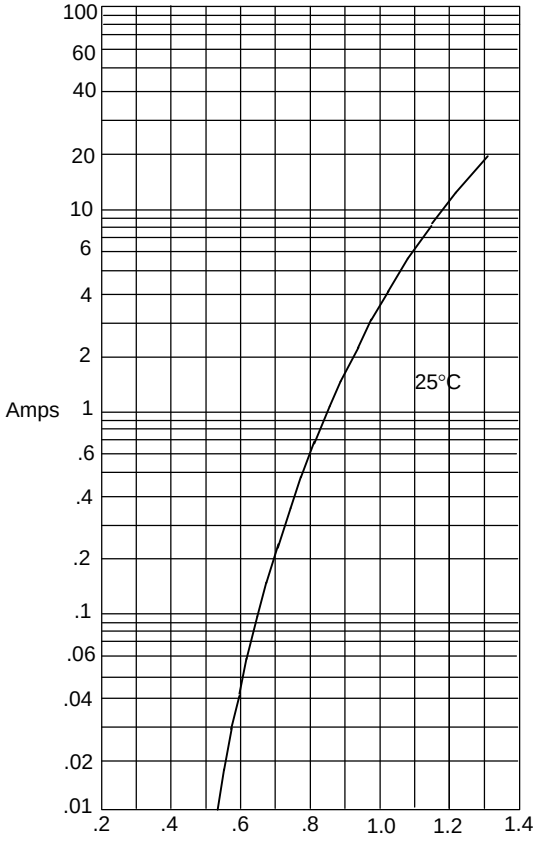
## KBL4/RS4




| DIMENSIONS | | | | | |
|---|---|---|---|---|---|
| | INCHES | | MM | | |
| DIM | MIN | MAX | MIN | MAX | NOTE |
| A | .728 | .768 | 18.50 | 19.50 | |
| B | .600 | .640 | 15.20 | 16.30 | |
| C | .750 | --- | 19.00 | --- | |
| D | .236 | .256 | 6.00 | 6.50 | |
| E | .180 | .220 | 4.60 | 5.60 | |
| G | ------ | .083 | ------ | 2.10 | |
| H | .048 | .052 | 1.20 | 1.30 | |

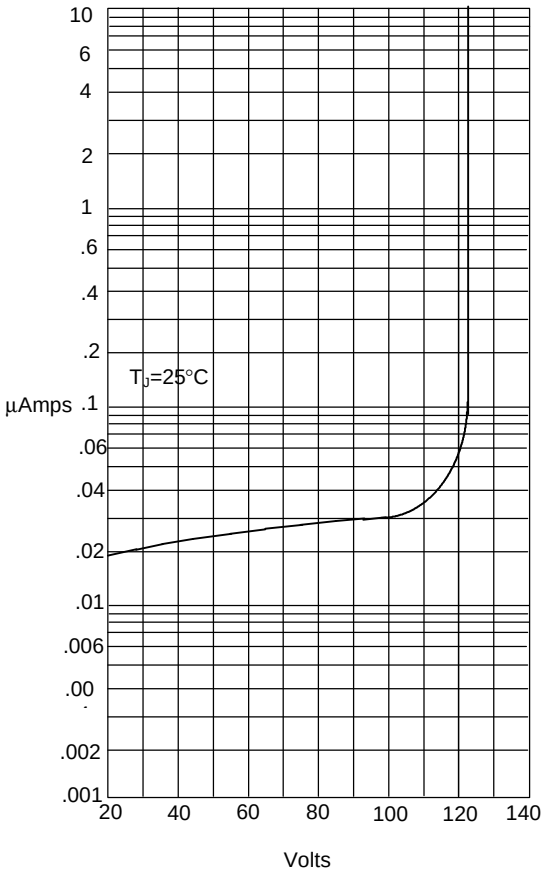
# RS401L(KBL4005)hru RS407L(KBL410)

Figure 1
Typical Forward Characteristics



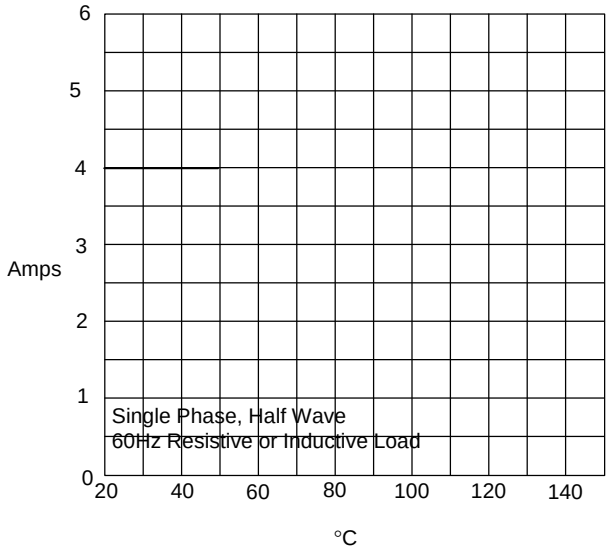

Instantaneous Forward Current - Amperes *versus*
Instantaneous Forward Voltage - Volts

Figure 2
Typical Reverse Characteristics



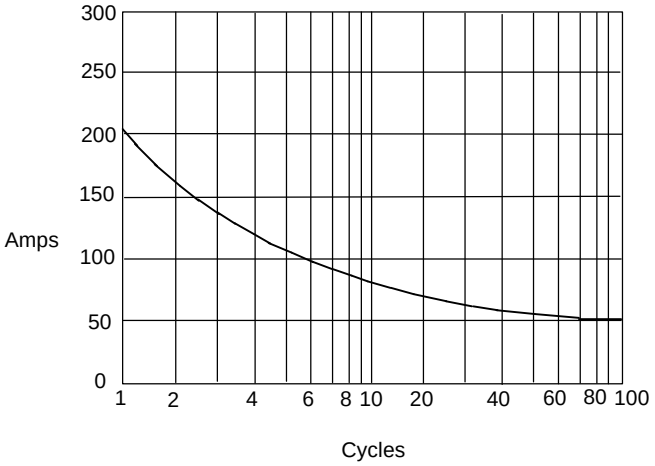

Instantaneous Reverse Leakage Current - MicroAmperes *versus*
Percent Of Rated Peak Reverse Voltage - Volts

Figure 3
Forward Derating Curve




Average Forward Rectified Current - Amperes *versus*
Ambient Temperature -°C

Figure 4
Peak Forward Surge Current




Peak Forward Surge Current - Amperes *versus*
Number Of Cycles At 60Hz - Cycles