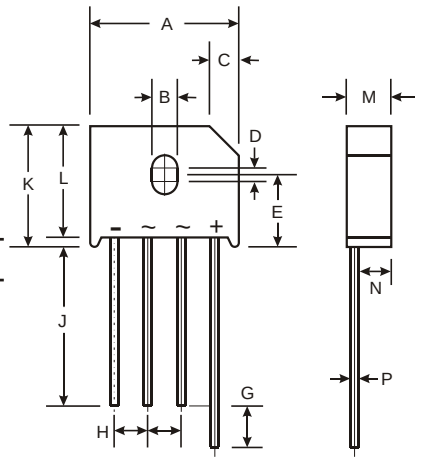
# RS601 - RS607

## 6.0A BRIDGE RECTIFIER

**NOT RECOMMENDED FOR NEW DESIGNS, PLEASE USE GBU6005 - GBU610**

## Features

- UL Recognized, File #94661
- Ideal for Printed Circuit Board
- Surge Overload Rating of 250A Peak
- Low Forward Voltage Drop
- The Plastic Material Carries UL Recognition 94V-0
- **Lead Free Finish, RoHS Compliant (Date Code 0514+) (Note 2)**




| RS-6 | | |
|---|---|---|
| **Dim** | **Min** | **Max** |
| **A** | 22.7 | 23.7 |
| **B** | 3.6 | 4.1 |
| **C** | 4.2 | 4.7 |
| **D** | 1.7 | 2.2 |
| **E** | 10.3 | 11.3 |
| **G** | 4.5 | 6.8 |
| **H** | 4.6 | 5.6 |
| **J** | 25.4 | - |
| **K** | - | 19.3 |
| **L** | 16.8 | 17.8 |
| **M** | 6.6 | 7.1 |
| **N** | 4.7 | 5.2 |
| **P** | 1.2 | 1.3 |
| **All Dimensions in mm** | | |

## Mechanical Data

- Case: RS-6, Molded Plastic
- Terminals: Leads Solderable per MIL-STD-202, Method 208
- Polarity: Symbols Marked on Body
- Approx. Weight: 8.0 grams

## Maximum Ratings and Electrical Characteristics @ $T_A$ = 25°C unless otherwise specified

Single phase, 60Hz, resistive or inductive load.
For capacitive load, derate current by 20%.

| Characteristic | Symbol | RS 601 | RS 602 | RS 603 | RS 604 | RS 605 | RS 606 | RS 607 | Units |
|---|---|---|---|---|---|---|---|---|---|
| Maximum Recurrent Peak Reverse Voltage | $V_{RRM}$ | 50 | 100 | 200 | 400 | 600 | 800 | 1000 | V |
| Maximum RMS Bridge Input Voltage | $V_{RSM}$ | 35 | 70 | 140 | 280 | 420 | 560 | 700 | V |
| Maximum DC Blocking Voltage | $V_{DC}$ | 50 | 100 | 200 | 400 | 600 | 800 | 1000 | V |
| Maximum Average Forward Current @ $T_C$ = 100°C @ $T_A$ = 40°C | $I_{(AV)}$ | 6.0 | | | | | | | A |
| Peak Forward Surge current, 8.3 ms half sine-wave superimposed on rated load | $I_{FSM}$ | 250 | | | | | | | A |
| Maximum DC Forward Voltage Drop per element at 3.0A | $V_F$ | 1.0 | | | | | | | V |
| Maximum DC Reverse Current at Rated @ $T_A$ = 25°C<br>DC Blocking Voltage, per element @ $T_A$ = 100°C | $I_R$ | 10<br>1.0 | | | | | | | µA<br>mA |
| Maximum Thermal Resistance (Note 1) | $R_{\theta JC}$ | 4.7 | | | | | | | °C/W |
| Operating Temperature Range | $T_J$ | -55 to +125 | | | | | | | °C |
| Storage Temperature Range | $T_{STG}$ | -55 to +150 | | | | | | | °C |

Notes: 1. Thermal Resistance junction to case per diode.
2. EC Directive 2002/95/EC (RoHS) revision 13.2.2003. Glass and High Temperature Solder Exemptions Applied, see *EU Directive Annex Notes 5 and 7.*

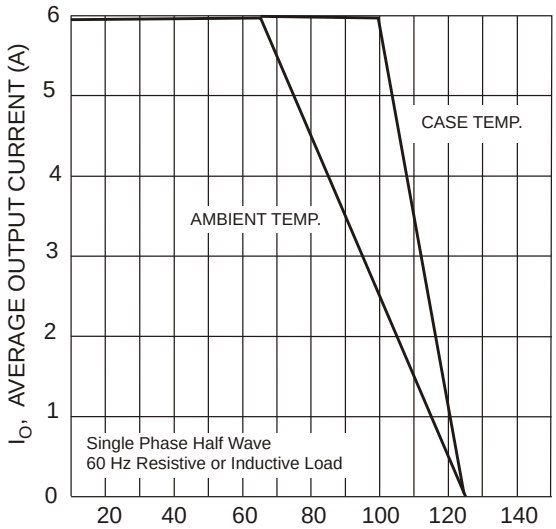



Fig. 1 Forward Current Derating Curve

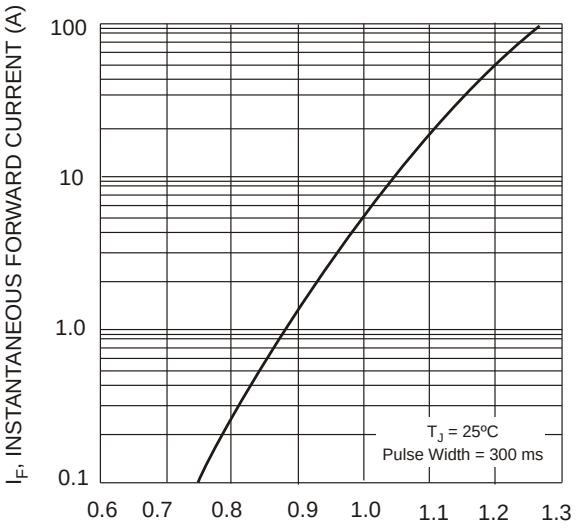



Fig. 2 Typical Forward Characteristics

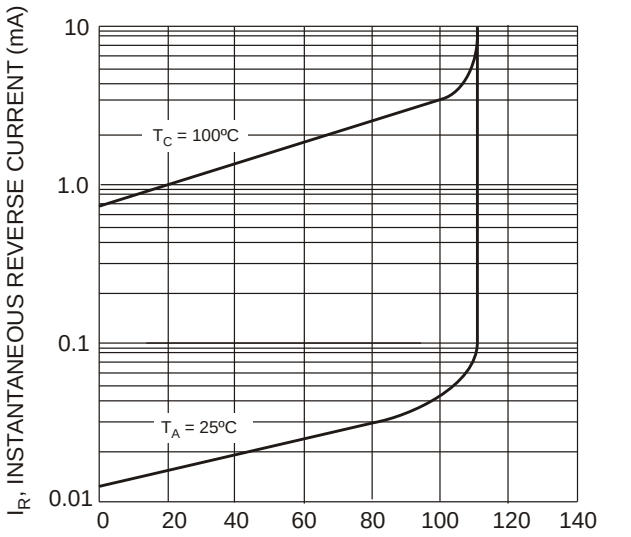



Fig. 3 Typical Reverse Characteristics

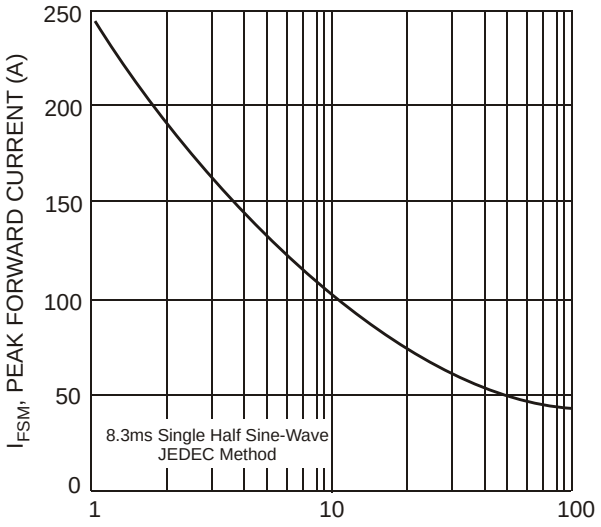



Fig. 4 Max Non-Repetitive Peak Forward Surge Current

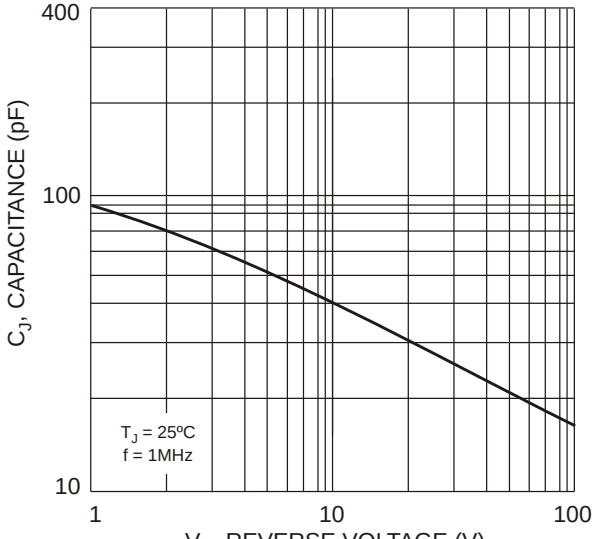



Fig. 5 Typical Junction Capacitance Per Element

## Ordering Information (Note 3)

| Device | Packaging | Shipping |
|---|---|---|
| RS601 | RS-6 | 0.5K Bulk |
| RS602 | RS-6 | 0.5K Bulk |
| RS603 | RS-6 | 0.5K Bulk |
| RS604 | RS-6 | 0.5K Bulk |
| RS605 | RS-6 | 0.5K Bulk |
| RS606 | RS-6 | 0.5K Bulk |
| RS607 | RS-6 | 0.5K Bulk |

Notes: 3 . For packaging details, visit our website at http://www.diodes.com/datasheets/ap2008.pdf