# ABS Plastic-Encapsulate Bridge Rectifier

## Features

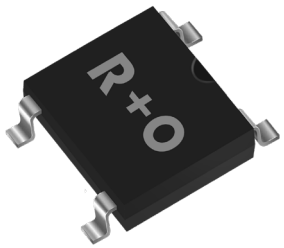
- Ideal for printed circuit board
- Small size, simple installation
- High surge current capability
- Reliable low cost construction utilizing molded plastic technique
- High temperature soldering guaranteed: 260/10 seconds at 5lbs., (2.3kg) tension

**Reverse Voltage**
50-1000 V
**Forward Current**
2.0 Ampere

## Applications

General purpose 1 phase Bridgerectifier applications

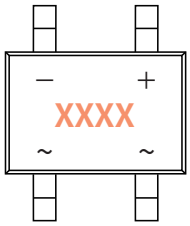
**ABS**

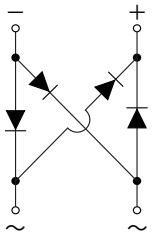



## Mechanical Data

- Case: ABS
  Molding compound meets UL 94V-0 flammability rating, RoHS-compliant, halogen-free
- Terminals: Solder plated, solderable per MIL-STD-750,Method 2026
- Polarity: Cathode line denotes the cathode end

## Function Diagram



## Maximum Ratings (Ta=25°C Unless otherwise specified)

| PARAMETER | SYMBOL | UNIT | ABS205 | ABS21 | ABS22 | ABS24 | ABS26 | ABS28 | ABS210 |
|---|---|---|---|---|---|---|---|---|---|
| Device marking code | | | ABS205 | ABS21 | ABS22 | ABS24 | ABS26 | ABS28 | ABS210 |
| Maximum Repetitive Peak Reverse Voltage | $V_{RRM}$ | V | 50 | 100 | 200 | 400 | 600 | 800 | 1000 |
| Maximum RMS Voltage | $V_{RMS}$ | V | 35 | 70 | 140 | 280 | 420 | 560 | 700 |
| Maximum DC blocking Voltage | $V_{DC}$ | V | 50 | 100 | 200 | 400 | 600 | 800 | 1000 |
| Maximum Average Forward Rectified Current @60Hz sinewave, Resistance load,TL (Fig.1) | $I_{F(AV)}$ | A | 2.0 | | | | | | |
| Non-repetitive Peak Forward Surge Current @ t=8.3ms Half-sine wave | $I_{FSM}$ | A | 60 | | | | | | |
| Rating for fusing (t=8.3ms, Ta=25 °C ) | $I^2t$ | $A^2S$ | 14.9 | | | | | | |
| Storage temperature | $T_{stg}$ | °C | -55 ~ +150 | | | | | | |
| Junction temperature | $T_j$ | °C | -55 ~ +150 | | | | | | |
| Typical Thermal Resistance | $R_{\theta J-A}$ | °C /W | 75 | | | | | | |
| | $R_{\theta J-L}$ | °C /W | 18 | | | | | | |

## Electrical Characteristics (Ta=25°C Unless otherwise noted)

| PARAMETER | TEST CONDITIONS | SYMBOL | UNIT | ABS205 | ABS21 | ABS22 | ABS24 | ABS26 | ABS28 | ABS210 |
|---|---|---|---|---|---|---|---|---|---|---|
| Maximum instantaneous forward voltage | $I_F$=1.0A | $V_F$ | V | 1.0 | | | | | | |
| Maximum DC reverse currentat rated DC blocking voltage | $V_R$=$V_{DC}$, $T_A$=25°C | $I_{R1}$ | μA | 5.0 | | | | | | |
| | $V_R$=$V_{DC}$, $T_A$=100°C | $I_{R2}$ | | 500 | | | | | | |
| Typical junction capacitance | 4.0V DC,1MHz | $C_J$ | pF | 25 | | | | | | |

## Ratings And Characteristics Curves (Ta=25°C Unless otherwise specified)

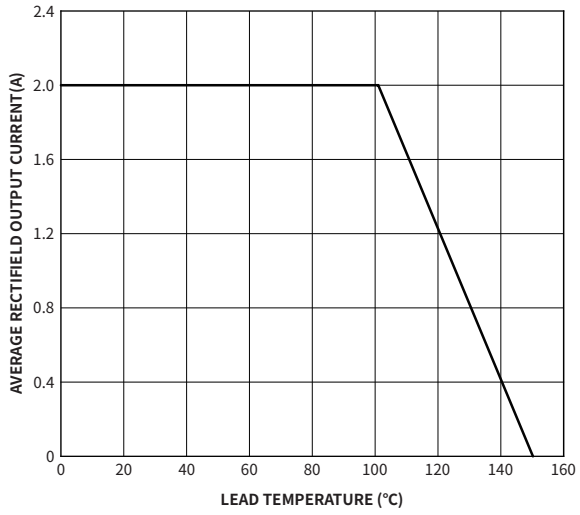



Fig.1 Forward Current Derating Curve

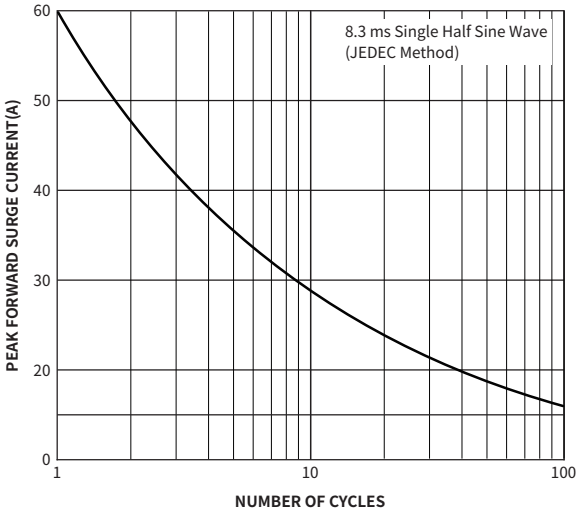



Fig.2 Maximum Non-Repetitive Peak Forward Surge Current

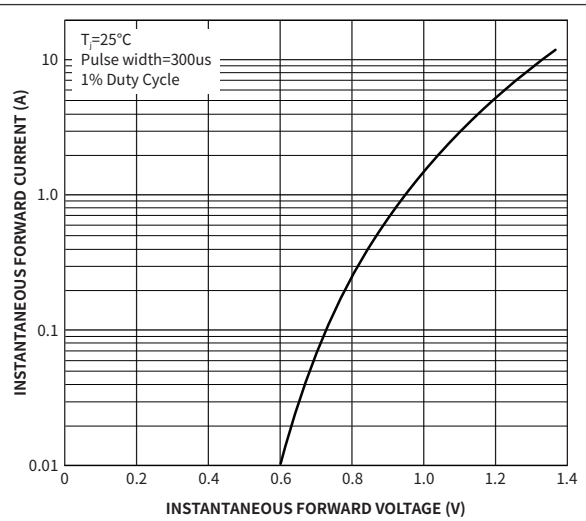



Fig.3 Typical Forward Voltage

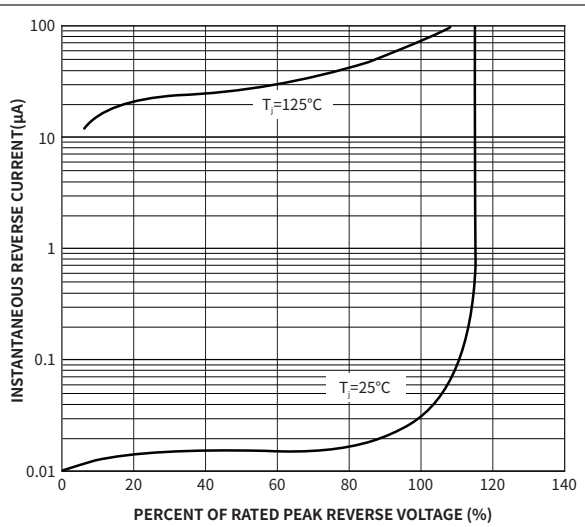
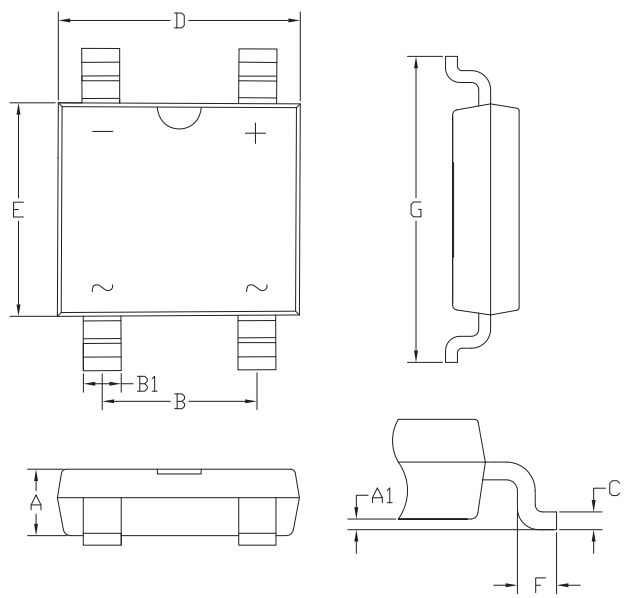



Fig.4 Typical Reverse Characteristics

## Ordering Information

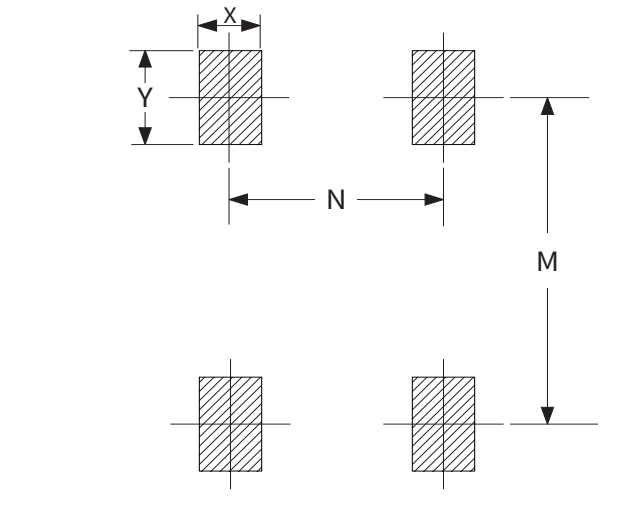
| PACKAGE | PACKAGE CODE | REEL(pcs) | BOX(pcs) | CARTON(pcs) | DELIVERY MODE |
|---|---|---|---|---|---|
| ABS | R3 | 5000 | 10000 | 100000 | 13'' |

## Package Outline Dimensions (ABS)




| Symbol | Dimensions | | | |
|---|---|---|---|---|
| | Millimeters | | Inches | |
| | Min. | Max. | Min. | Max. |
| A | 1.25 | 1.45 | 0.049 | 0.057 |
| A1 | - | 0.2 | - | 0.008 |
| B | 3.9 | 4.1 | 0.126 | 0.141 |
| B1 | 0.5 | 0.8 | 0.02 | 0.031 |
| C | 0.15 | 0.35 | 0.006 | 0.014 |
| D | 4.8 | 5.1 | 0.197 | 0.201 |
| E | 4.2 | 4.6 | 0.165 | 0.181 |
| F | 0.3 | 0.8 | 0.012 | 0.031 |
| G | 6.2 | 7.0 | 0.244 | 0.275 |

## Suggested Pad Layout




| Symbol | Dimensions | | | |
|---|---|---|---|---|
| | Millimeters | | Inches | |
| | Min. | Max. | Min. | Max. |
| M | 5.72 | 5.9 | 0.225 | 0.232 |
| N | 4.0 | 4.2 | 0.157 | 0.165 |
| Y | 1.0 | 1.2 | 0.039 | 0.047 |
| X | 0.9 | 1.1 | 0.035 | 0.043 |