

IGBJ3502-12

Single Phase Rectifier Bridge

 V_{RRM}

200 to 1200V

ID

35 Amp

Features

- Glass passivated chip
- Ideal for printed circuit boards
- High surge current capability
- High temperature soldering guaranteed:265 $^\circ\!\!\mathbb{C}/10$ seconds

Applications

- Single phase rectifiers for power supplies
- Rectifiers for DC motor field supplies
- Industrial automation equipment
- Input rectifiers for inverter

Module Type

| Туре | V _{RRM} | V _{RSM} |
|----------|------------------|------------------|
| IGBJ3502 | 200V | 300V |
| IGBJ3504 | 400V | 500V |
| IGBJ3506 | 600V | 700V |
| IGBJ3508 | 800V | 900V |
| IGBJ3510 | 1000V | 1100V |
| IGBJ3512 | 1200V | 1300V |

Maximum Ratings

| Symbol | Item | Conditions | Values | Unit |
|------------------|--------------------------------|---|-------------|------------------|
| I _D | Output Current | Single Phase,Sin Full Wave Tc = 98°C | 35 | A |
| I _{FSM} | Surge Forward Current | $T_j = 25^{\circ}C, t = 50Hz(10ms), V_R = 0V$ | 400 | А |
| l ² t | Circuit Fusing Consideration | t = 10ms T _j =25°C | 800 | A ² s |
| VISO | Isolation Breakdown Voltage | AC 50Hz/60Hz; R.M.S; 1min | 2500 | V |
| Ti | Operating Junction Temperature | | -40 to +150 | °C |
| T _{stg} | Storage Temperature | | -40 to +150 | °C |
| Ms | Mounting Torque | (Recommended torque:0.65 N·m) | 0.8 | N∙m |
| Weight | Module (Approximately) | | 7 | g |

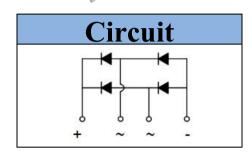
Thermal Characteristics

| Symbol | Item | Conditions | Values | Unit |
|----------------------|------------------------|-----------------------------|--------|------|
| R _{th(j-c)} | Thermal Impedance, Max | Junction to Case(Per Total) | 0.7 | °C/W |
| | | Junction to Case(Per Diode) | 2.8 | °C/W |

Electrical Characteristics

| Symbol | Item | Conditions | Values | | | Unit |
|------------------|--|--|--------|------|------|------|
| | | | Min. | Тур. | Max. | Unit |
| V _{FM} | Forward Voltage Drop, Max | T _j = 25°C I _F = 17.5A | — | — | 1.1 | V |
| I _{RRM} | Repetitive Peak Reverse Current, Max | $T_j = 25^{\circ}C$ $V_R = V_{RRM}$ | - | — | 5 | uA |
| | | $T_j = 150^{\circ}C V_R = V_{RRM}$ | - | — | 0.5 | mA |
| V _{T0} | Threshold Voltage, for power loss calculation only | T _j = 125°C | 0.75 | | V | |
| r _T | Slope Resistance, for power loss calculation only | T _j = 125°C | 5.5 | | mΩ | |







Performance Curves

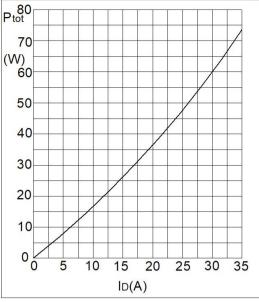


Fig1. Power Dissipation

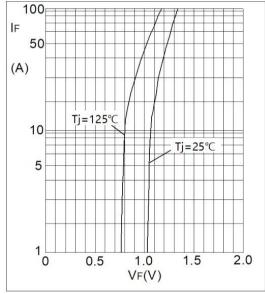
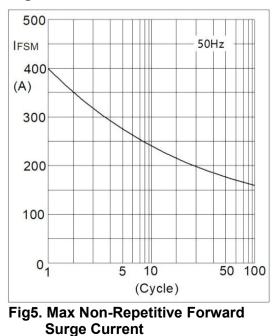


Fig3. Forward Characteristics



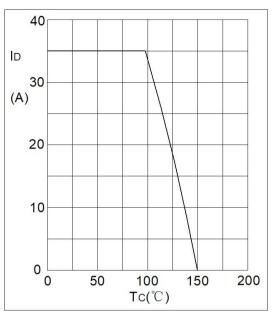


Fig2. Forward Current Derating Curve

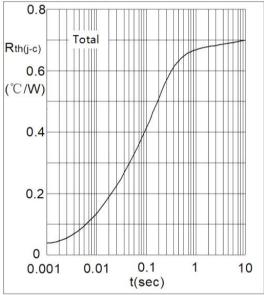
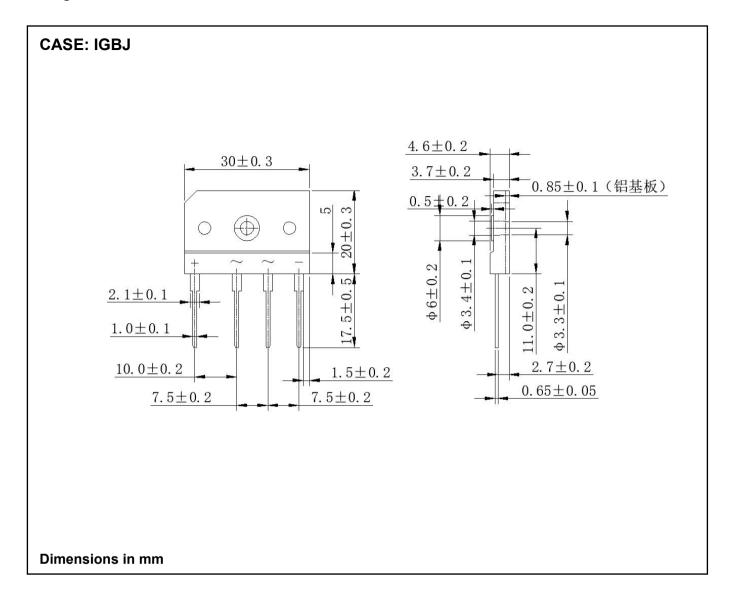


Fig4. Transient Thermal impedance



Package Outline Information





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