

# EVVOSEMI<sup>®</sup>

THINK CHANGE DO



ESD



TVS



MOS



LDO



Diode



Sensor



DC-DC

## Product Specification

|              |             |               |
|--------------|-------------|---------------|
| ▶ Domestic   | Part Number | BR35xx Series |
| ▶ Overseas   | Part Number | BR35xx Series |
| ▶ Equivalent | Part Number | BR35xx Series |

EV is the abbreviation of name EVVO

## Single Phase Rectifier Bridge

$V_{RRM}$  200 to 1200V

$I_D$  35 Amp

### Features

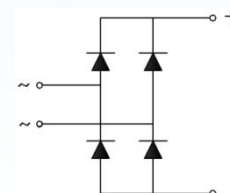
- Very low forward voltage drop
- High surge current capability
- Low thermal resistance
- High thermal conductivity

### Applications

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



### Circuit



### Module Type

| Type   | $V_{RRM}$ | $V_{RSM}$ |
|--------|-----------|-----------|
| BR3502 | 200V      | 300V      |
| BR3504 | 400V      | 500V      |
| BR3506 | 600V      | 700V      |
| BR3508 | 800V      | 900V      |
| BR3510 | 1000V     | 1100V     |
| BR3512 | 1200V     | 1300V     |

### Maximum Ratings

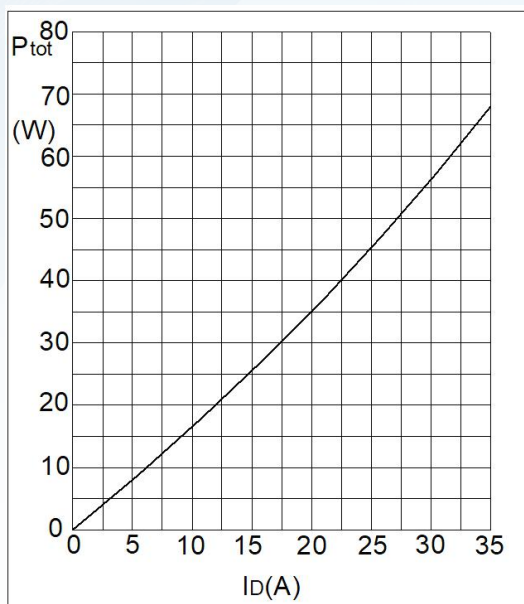
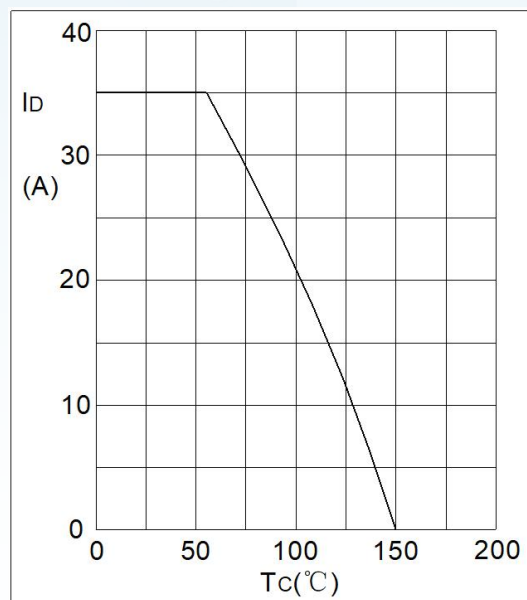
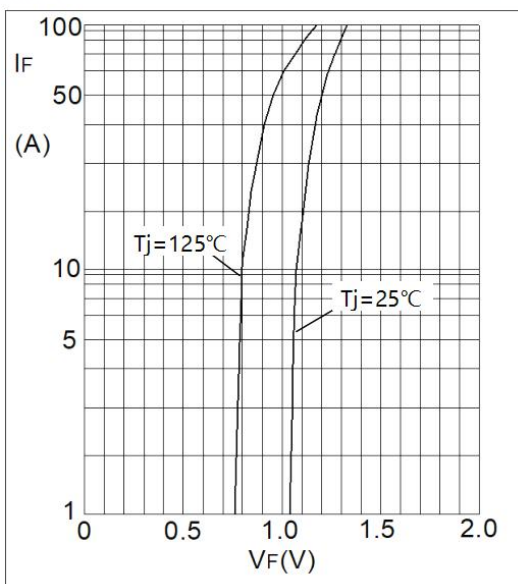
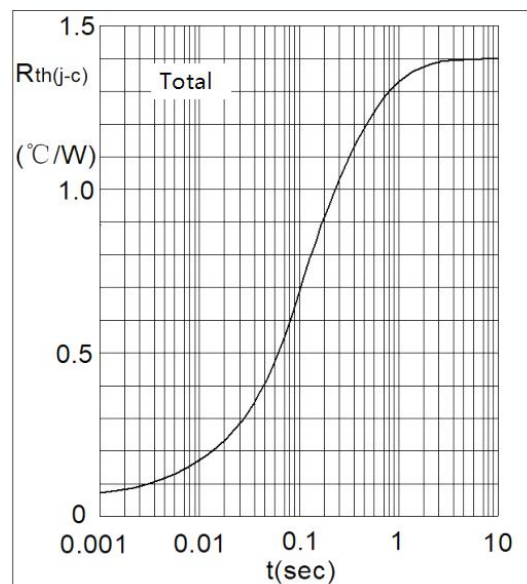
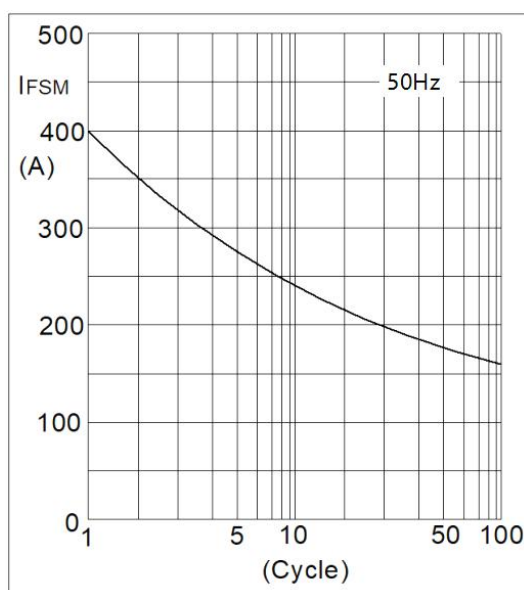
| Symbol    | Item                           | Conditions                                                                    | Values      | Unit                 |
|-----------|--------------------------------|-------------------------------------------------------------------------------|-------------|----------------------|
| $I_D$     | Output Current                 | Single Phase, Sin Full Wave $T_c = 55^\circ\text{C}$                          | 35          | A                    |
| $I_{FSM}$ | Surge Forward Current          | $T_j = 25^\circ\text{C}$ , $t = 50\text{Hz}(10\text{ms})$ , $V_R = 0\text{V}$ | 400         | A                    |
| $I^2t$    | Circuit Fusing Consideration   | $t = 10\text{ms}$ $T_j = 25^\circ\text{C}$                                    | 800         | $\text{A}^2\text{s}$ |
| $V_{ISO}$ | Isolation Breakdown Voltage    | AC 50Hz/60Hz; R.M.S; 1min                                                     | 2000        | V                    |
| $T_j$     | Operating Junction Temperature |                                                                               | -40 to +150 | $^\circ\text{C}$     |
| $T_{stg}$ | Storage Temperature            |                                                                               | -40 to +125 | $^\circ\text{C}$     |
| $M_s$     | Mounting Torque                | To Heatsink(M5)                                                               | 2.5~3       | N·m                  |
| Weight    | Module (Approximately)         |                                                                               | 16          | g                    |

### Thermal Characteristics

| Symbol        | Item                   | Conditions                  | Values | Unit                      |
|---------------|------------------------|-----------------------------|--------|---------------------------|
| $R_{th(j-c)}$ | Thermal Impedance, Max | Junction to Case(Per Total) | 1.4    | $^\circ\text{C}/\text{W}$ |
|               |                        | Junction to Case(Per Diode) | 5.6    | $^\circ\text{C}/\text{W}$ |

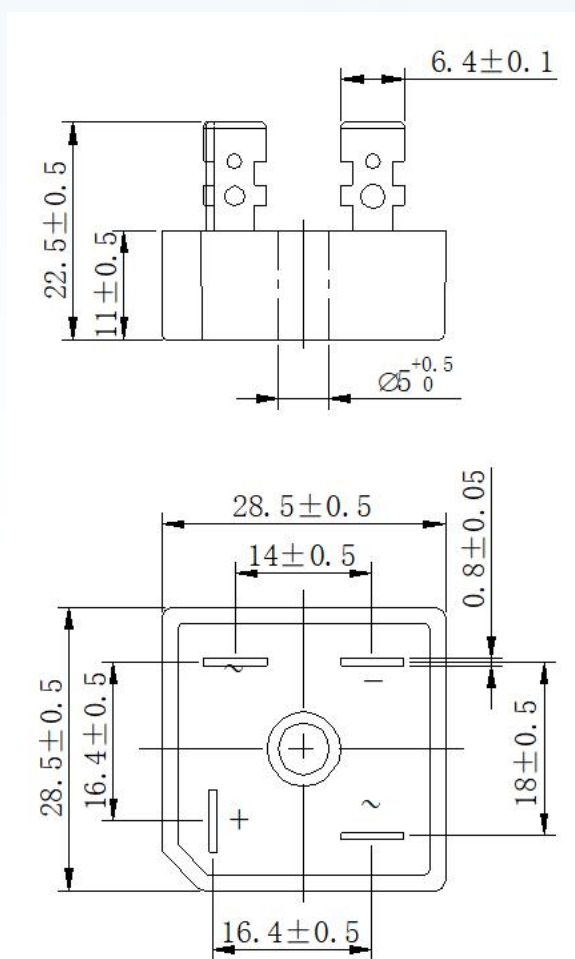
### Electrical Characteristics

| Symbol    | Item                                               | Conditions                                    | Values |      |      | Unit       |
|-----------|----------------------------------------------------|-----------------------------------------------|--------|------|------|------------|
|           |                                                    |                                               | Min.   | Typ. | Max. |            |
| $V_{FM}$  | Forward Voltage Drop, Max                          | $T_j = 25^\circ\text{C}$ $I_F = 17.5\text{A}$ | —      | —    | 1.1  | V          |
| $I_{RRM}$ | Repetitive Peak Reverse Current, Max               | $T_j = 25^\circ\text{C}$ $V_R = V_{RRM}$      | —      | —    | 0.1  | mA         |
|           |                                                    | $T_j = 150^\circ\text{C}$ $V_R = V_{RRM}$     | —      | —    | 3    |            |
| $V_{T0}$  | Threshold Voltage, for power loss calculation only | $T_j = 125^\circ\text{C}$                     | 0.75   |      |      | V          |
| $r_T$     | Slope Resistance, for power loss calculation only  | $T_j = 125^\circ\text{C}$                     | 4.0    |      |      | m $\Omega$ |

**Fig1. Power Dissipation****Fig2. Forward Current Derating Curve****Fig3. Forward Characteristics****Fig4. Transient Thermal impedance****Fig5. Max Non-Repetitive Forward Surge Current**

## Performance Curves

## CASE: BR



**Dimensions in mm**

## Disclaimer

EVVOSEMI ("EVVO") reserves the right to make corrections, enhancements, improvements, and other changes to its products and services at any time, and to discontinue any product or service without notice.

EVVO warrants the performance of its hardware products to the specifications applicable at the time of sale in accordance with its standard warranty. Testing and other quality control techniques are used as deemed necessary by EVVO to support this warranty. Except where mandated by government requirements, testing of all parameters of each product is not necessarily performed.

Customers should obtain and confirm the latest product information and specifications before final design, purchase, or use. EVVO makes no warranty, representation, or guarantee regarding the suitability of its products for any particular purpose, nor does EVVO assume any liability for application assistance or customer product design. EVVO does not warrant or accept any liability for products that are purchased or used for any unintended or unauthorized application.

EVVO products are not authorized for use as critical components in life support devices or systems without the express written approval of EVVOSEMI.

The EVVO logo and EVVOSEMI are trademarks of EVVOSEMI or its subsidiaries in relevant jurisdictions. EVVO reserves the right to make changes without further notice to any products herein.