

## Single Phase Glass Passivated Silicon Bridge Rectifier

$V_{RRM} = 50\text{ V} - 400\text{ V}$

$I_O = 3\text{ A}$

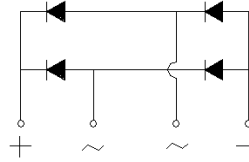
### Features

- Low forward voltage
- High surge overload rating
- Ideal for printed circuit boards
- High temperature soldering: 260°C/ 10 s
- Types from 50 V up to 400 V  $V_{RRM}$
- Not ESD Sensitive

### Applications

- Switching power supply
- Home appliances, office devices
- Industrial auto-equipments

BR-3 Package



### Maximum ratings at $T_A = 25\text{ °C}$ , unless otherwise specified

| Parameter                       | Symbol    | Conditions | BR305      | BR31       | BR32       | BR34       | Unit |
|---------------------------------|-----------|------------|------------|------------|------------|------------|------|
| Repetitive peak reverse voltage | $V_{RRM}$ |            | 50         | 100        | 200        | 400        | V    |
| RMS reverse voltage             | $V_{RMS}$ |            | 35         | 70         | 140        | 280        | V    |
| DC blocking voltage             | $V_{DC}$  |            | 50         | 100        | 200        | 400        | V    |
| Operating temperature           | $T_j$     |            | -40 to 125 | -40 to 125 | -40 to 125 | -40 to 125 | °C   |
| Storage temperature             | $T_{stg}$ |            | -40 to 150 | -40 to 150 | -40 to 150 | -40 to 150 | °C   |

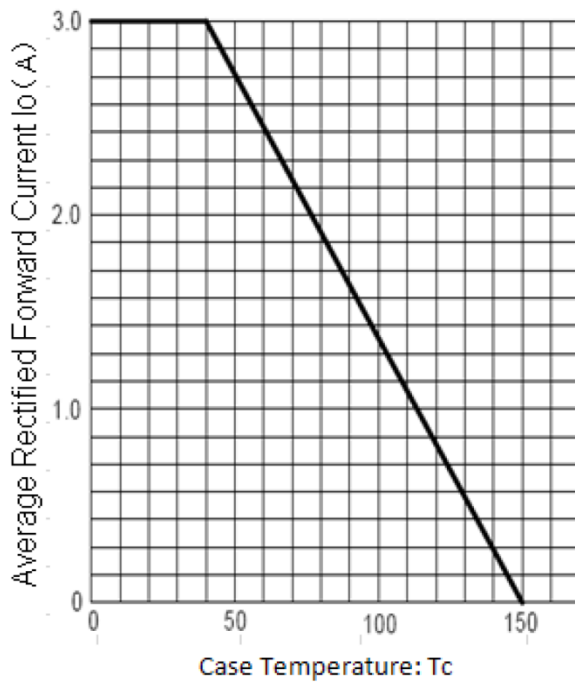
### Electrical characteristics at $T_A = 25\text{ °C}$ , unless otherwise specified

Single phase, half sine wave, 50 Hz, resistive load

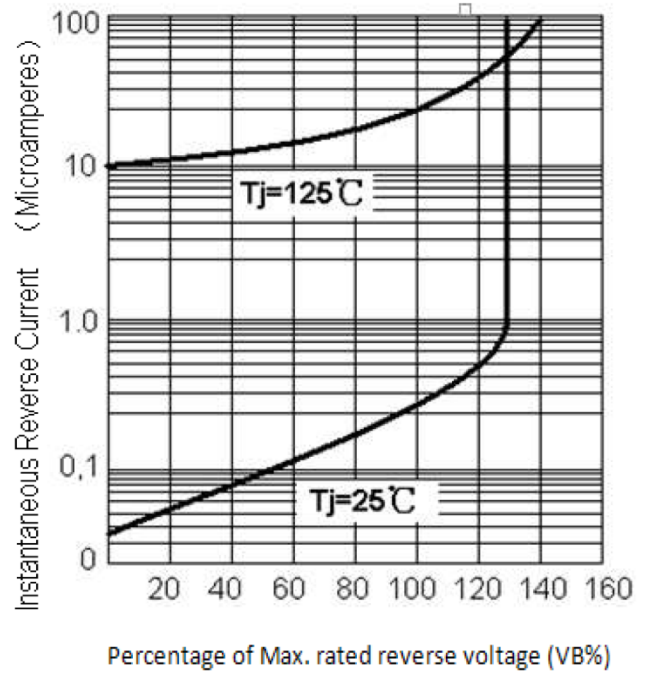
For capacitive load derate current by 20%

| Parameter  | Symbol          | Conditions  | BR305                        | BR31 | BR32 | BR34 | Unit                 |
|--|-----------------|---|------------------------------|------|------|------|----------------------|
| Maximum forward rectified current                    | $I_O$           | $T_A = 40\text{ °C}$  | 3                            | 3    | 3    | 3    | A                    |
| Peak forward surge current                           | $I_{FSM}$       | $t_p = 8.3\text{ ms}$                                       | 60                           | 60   | 60   | 60   | A                    |
| Maximum forward voltage drop                         | $V_F$           | $I_F = 1.5\text{ A}$  | 1.05                         | 1.05 | 1.05 | 1.05 | V                    |
| Maximum reverse current at rated DC blocking voltage | $I_R$           | $T_A = 25\text{ °C}$  | 10                           | 10   | 10   | 10   | $\mu\text{A}$        |
|  |                 | $T_A = 125\text{ °C}$                                       | 500                          | 500  | 500  | 500  |                      |
| Rating for fusing                                    | $I^2t$          | $1\text{ ms} < t_p < 10\text{ ms},$<br>$T_j = 25\text{ °C}$ | 15                           | 15   | 15   | 15   | $\text{A}^2\text{s}$ |
| Thermal resistance                                   | $R_{\theta JA}$ |   | 18                           | 18   | 18   | 18   | °C/W                 |
| Mounting Torque                                      | M               |   | 2.0 (1.0 N.m is recommended) |      |      |      | N.m                  |

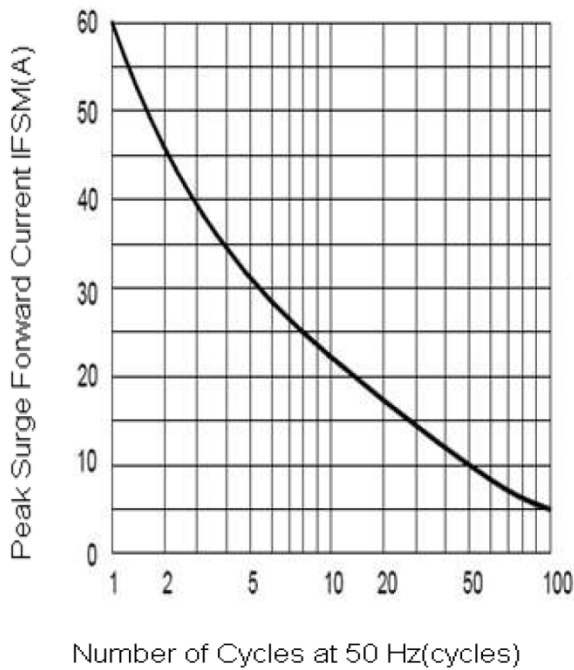
**Fig.1: Current Derating Curve**



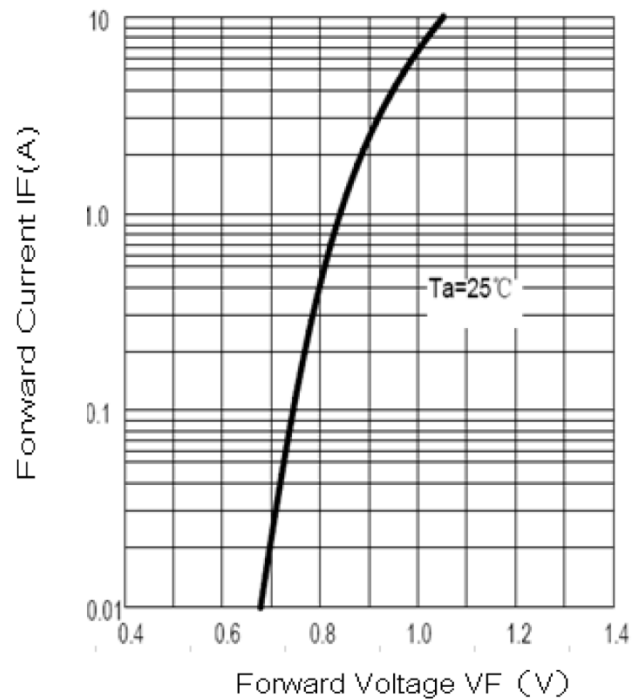
**Fig.2: Typical Reverse Characteristics**



**Fig.3: Max. Surge Current**



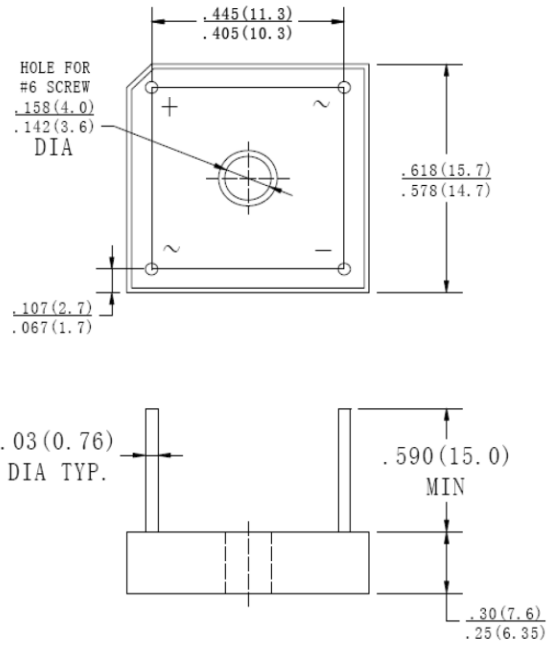
**Fig.4: Rated Forward Features**



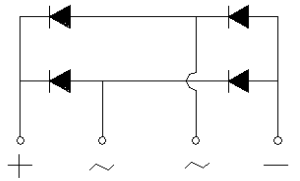
**Package dimensions and terminal configuration**

Product is marked with part number and terminal configuration.

**BR-3**



Dimensions in inches and (millimeters)



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