

## Single Phase Silicon Bridge Rectifier

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

$I_O = 10 \text{ A}$

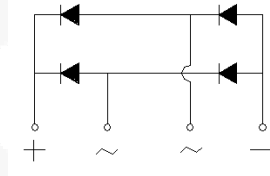
### Features

- Low forward voltage drop
- Low leakage current
- Types from 50 V up to 400 V  $V_{RRM}$
- Not ESD Sensitive

### Mechanical Data

Case: Molded plastic body  
Polarity: marked on the body  
Mounting: Hole thru for #6 screw  
Mounting position: Any

BR-10 Package



### Maximum ratings at $T_c = 25^\circ\text{C}$ , unless otherwise specified

| Parameter                       | Symbol    | Conditions | BR1005     | BR101      | BR102      | BR104      | 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           | $T_j$     |            | -55 to 150 | -55 to 150 | -55 to 150 | -55 to 150 | $^\circ\text{C}$ |
| Storage temperature             | $T_{stg}$ |            | -55 to 150 | -55 to 150 | -55 to 150 | -55 to 150 | $^\circ\text{C}$ |

### Electrical characteristics at $T_c = 25^\circ\text{C}$ , unless otherwise specified

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

| Parameter                                                     | Symbol          | Conditions                         | BR1005 | BR101 | BR102 | BR104 | Unit               |
|---------------------------------------------------------------|-----------------|------------------------------------|--------|-------|-------|-------|--------------------|
| Maximum average forward rectified current                     | $I_O$           | $T_c = 50^\circ\text{C}$           | 10     | 10    | 10    | 10    | A                  |
| Peak forward surge current                                    | $I_{FSM}$       | $t_p = 8.3 \text{ ms}$ , half sine | 150    | 150   | 150   | 150   | A                  |
| Maximum instantaneous forward voltage drop per bridge element | $V_F$           | $I_F = 5.0 \text{ A}$              | 1.1    | 1.1   | 1.1   | 1.1   | V                  |
| Maximum DC reverse current at rated DC blocking voltage       | $I_R$           | $T_a = 25^\circ\text{C}$           | 10     | 10    | 10    | 10    | $\mu\text{A}$      |
|                                                               |                 | $T_a = 100^\circ\text{C}$          | 1000   | 1000  | 1000  | 1000  |                    |
| Typical junction capacitance                                  | $C_j$           |                                    | 55     | 55    | 55    |       | pF                 |
| Typical thermal resistance                                    | $R_{\theta JA}$ |                                    | 9.4    | 9.4   | 9.4   |       | $^\circ\text{C/W}$ |

FIG.1-TYPICAL FORWARD CURRENT DERATING CURVE

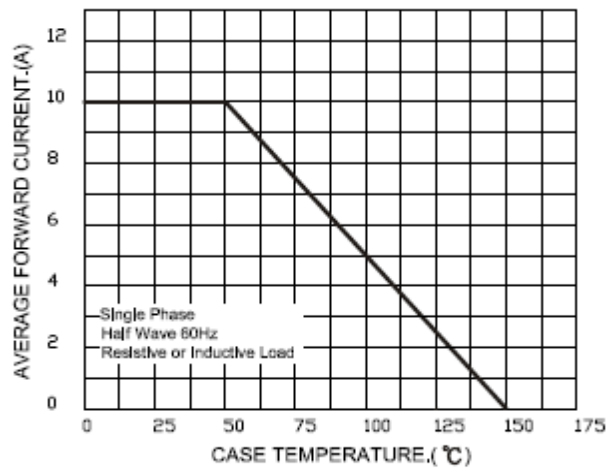


FIG.2-MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

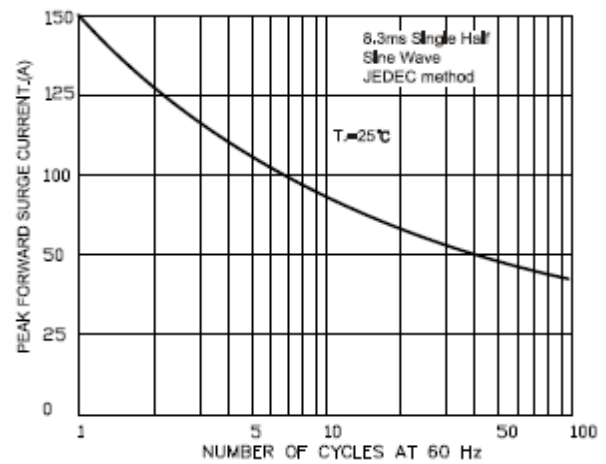


FIG.3-TYPICAL FORWARD CHARACTERISTICS

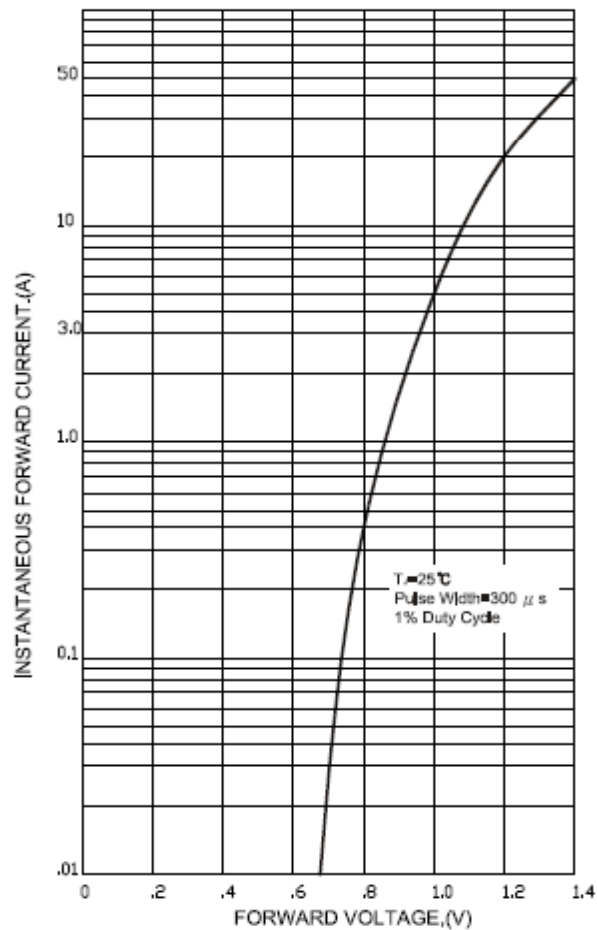
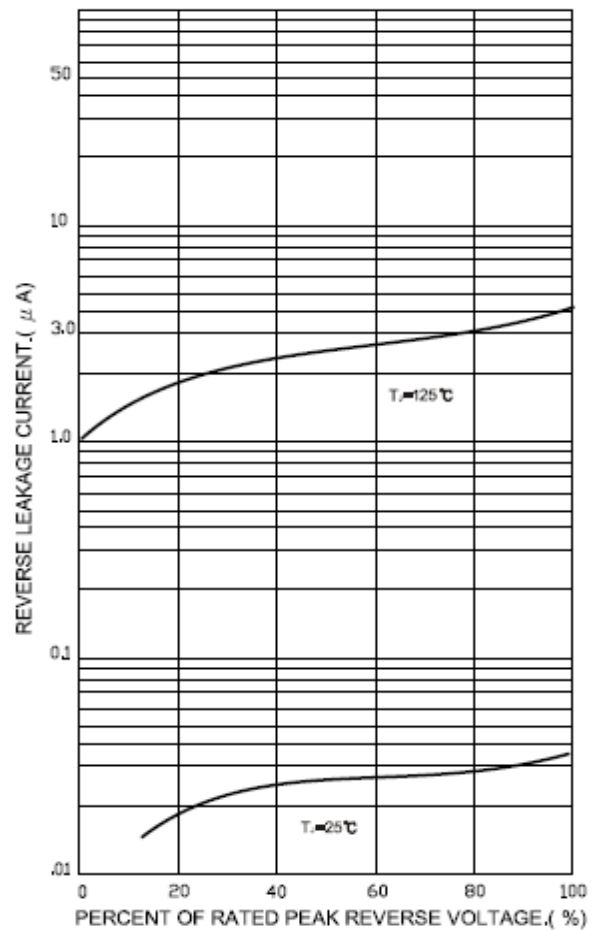


FIG.4-TYPICAL REVERSE CHARACTERISTICS



## Package dimensions and terminal configuration

Product is marked with part number and terminal configuration.

