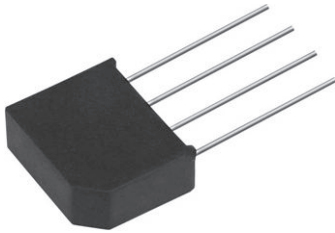


## Single Phase Bridge Rectifier, 2 A



D-44

### FEATURES

- Suitable for printed circuit board mounting
- Compact construction
- High surge current capability
- Material categorization: for definitions of compliance please see [www.vishay.com/doc?99912](http://www.vishay.com/doc?99912)


**RoHS**  
COMPLIANT

### DESCRIPTION

A 2 A single phase encapsulated bridge rectifier consisting of four single diodes connected as a full bridge. They are intended for general applications in industrial and consumer equipment.

#### PRIMARY CHARACTERISTICS

|                       |                     |
|-----------------------|---------------------|
| $I_o$                 | 2 A                 |
| $V_{RRM}$             | 50 V to 1000 V      |
| Package               | D-44                |
| Circuit configuration | Single phase bridge |

#### MAJOR RATINGS AND CHARACTERISTICS

| SYMBOL    | CHARACTERISTICS | VALUES      | UNITS            |
|-----------|-----------------|-------------|------------------|
| $I_o$     |                 | 2.0         | A                |
| $I_{FSM}$ | 50 Hz           | 60          | A                |
|           | 60 Hz           | 63          |                  |
| $I^2t$    | 50 Hz           | 18          | A <sup>2</sup> s |
|           | 60 Hz           | 16          |                  |
| $V_{RRM}$ |                 | 50 to 1000  | V                |
| $T_J$     |                 | -40 to +150 | °C               |

### ELECTRICAL SPECIFICATIONS

#### VOLTAGE RATINGS

| PART NUMBER | $V_{RRM}$ , MAXIMUM REPETITIVE PEAK REVERSE VOLTAGE (V) | $V_{RSM}$ , MAXIMUM NON-REPETITIVE PEAK REVERSE VOLTAGE (V) | $V_{RMS}$ , MAXIMUM RECOMMENDED RMS SUPPLY VOLTAGE (V) |
|-------------|---|---|--|
| VS-2KBP005  | 50  | 50  | 20   |
| VS-2KBP01   | 100   | 100   | 50   |
| VS-2KBP02   | 200   | 200   | 80   |
| VS-2KBP04   | 400   | 400   | 125  |
| VS-2KBP06   | 600   | 600   | 250  |
| VS-2KBP08   | 800   | 800   | 380  |
| VS-2KBP10   | 1000  | 1000  | 500  |



| FORWARD CONDUCTION                                   |               |  |   |                             |                           |
|--|---------------|--|---|-----------------------------|---------------------------|
| PARAMETER  | SYMBOL        | TEST CONDITIONS  |   | VALUES                      | UNITS                     |
| Maximum DC output current                            | $I_o$         | $T_A = 50\text{ }^\circ\text{C}$ , resistive or inductive load |   | 2.0                         | A                         |
|  |               | $T_A = 50\text{ }^\circ\text{C}$ , capacitive load             |   | 1.6                         |                           |
| Maximum peak one cycle, non-repetitive surge current | $I_{FSM}$     | $t = 10\text{ ms}$ , 20 ms                                     | Following any rated load condition and with rated $V_{RRM}$ reapplied | 60                          | A                         |
|  |               | $t = 8.3\text{ ms}$ , 16.7 ms                                  |   | 63                          |                           |
| Maximum $I^2t$ capability for fusing                 | $I^2t$        | $t = 10\text{ ms}$   | 100 % $V_{RRM}$ reapplied   | Initial $T_J = T_J$ maximum | A <sup>2</sup> s          |
|  |               | $t = 8.3\text{ ms}$  |   |                             |                           |
|  |               | $t = 10\text{ ms}$   | No voltage reapplied  | 16                          |                           |
|  |               | $t = 8.3\text{ ms}$  |   | 23                          |                           |
| Maximum $I^2\sqrt{t}$ capability for fusing          | $I^2\sqrt{t}$ | $t = 0.1$ to 10 ms, no voltage reapplied                       |   | 255                         | A <sup>2</sup> $\sqrt{s}$ |
| Maximum peak forward voltage per diode               | $V_{FM}$      | $I_{FM} = 1\text{ A}$ , $T_J = 25\text{ }^\circ\text{C}$       |   | 1.0                         | V                         |
| Typical peak reverse leakage current per diode       | $I_{RM}$      | $T_J = 25\text{ }^\circ\text{C}$ , 100 % $V_{RRM}$             |   | 10                          | $\mu\text{A}$             |
|  |               | $T_J = 150\text{ }^\circ\text{C}$ , 100 % $V_{RRM}$            |   | 1.0                         | mA                        |
| Operating frequency range                            | $f$           |  |   | 40 to 1000                  | Hz                        |

| THERMAL AND MECHANICAL SPECIFICATIONS            |                |            |                  |
|--|----------------|------------|------------------|
| PARAMETER  | SYMBOL         | VALUES     | UNITS            |
| Operating junction and storage temperature range | $T_J, T_{Stg}$ | -40 to 150 | $^\circ\text{C}$ |
| Approximate weight                               |                | 4          | g                |
|  |                | 0.14       | oz.              |

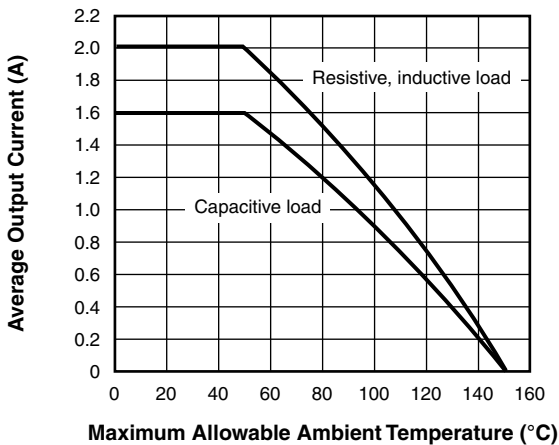


Fig. 1 - Ambient Temperature Ratings

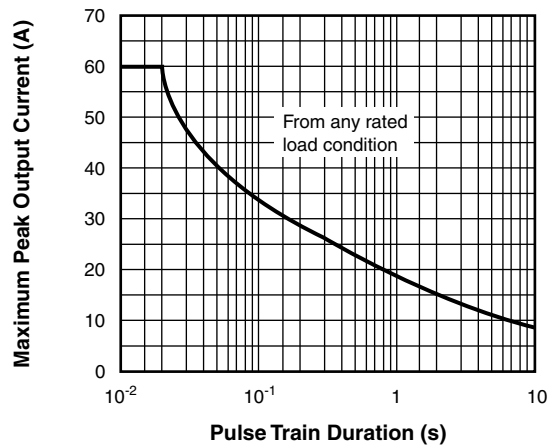
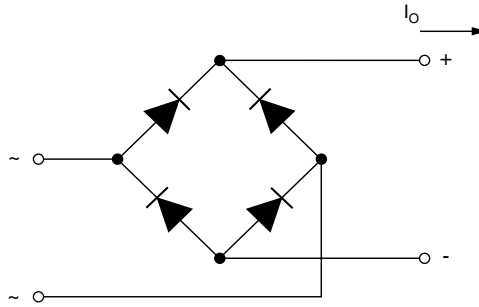


Fig. 2 - Non-Repetitive Surge Ratings



**CIRCUIT CONFIGURATION**

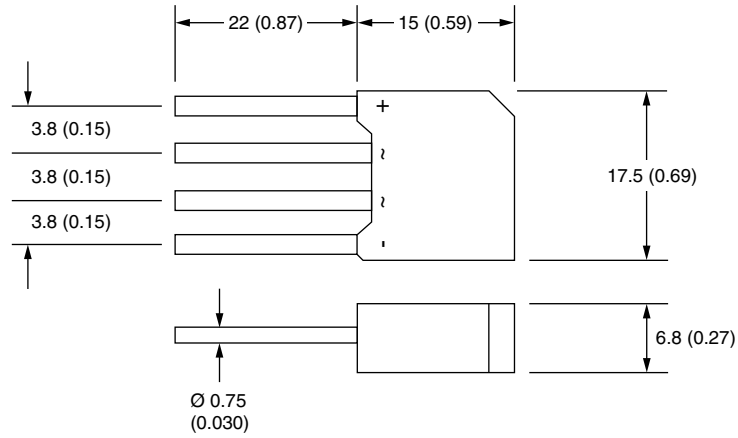


**LINKS TO RELATED DOCUMENTS**

|                                   |  |
|-----------------------------------|--|
| <b>LINKS TO RELATED DOCUMENTS</b> |  |
| Dimensions                        | <a href="http://www.vishay.com/doc?95329">www.vishay.com/doc?95329</a> |

## D-44

**DIMENSIONS** in millimeters (inches)





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