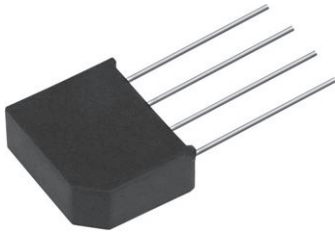


Single Phase Bridge Rectifier, 2 A



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


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 ² 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 ² 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 ² \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 | μA |
| | | $T_J = 150\text{ }^\circ\text{C}$, 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. |

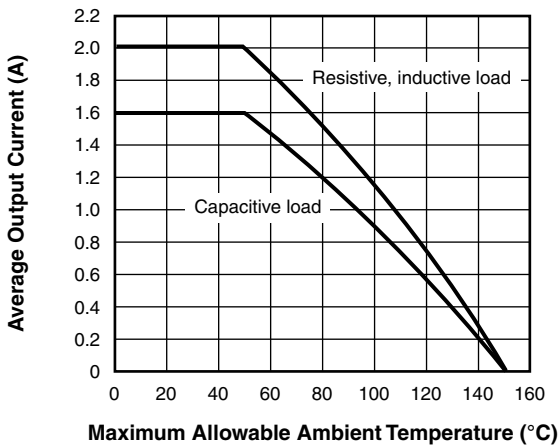


Fig. 1 - Ambient Temperature Ratings

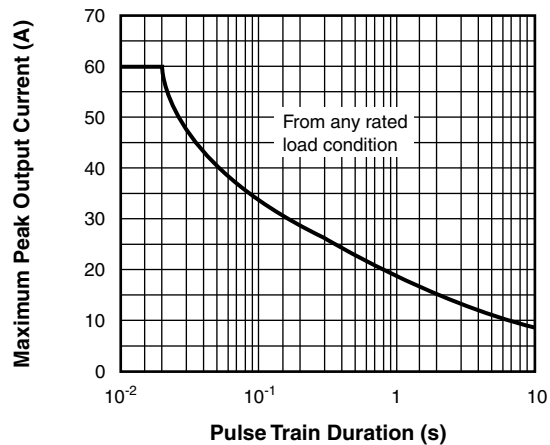
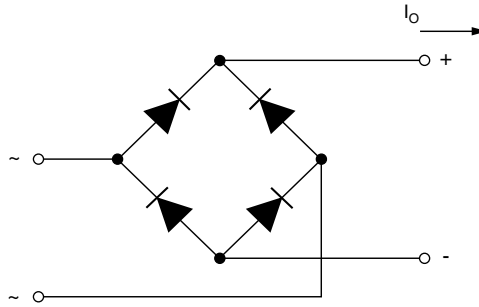


Fig. 2 - Non-Repetitive Surge Ratings



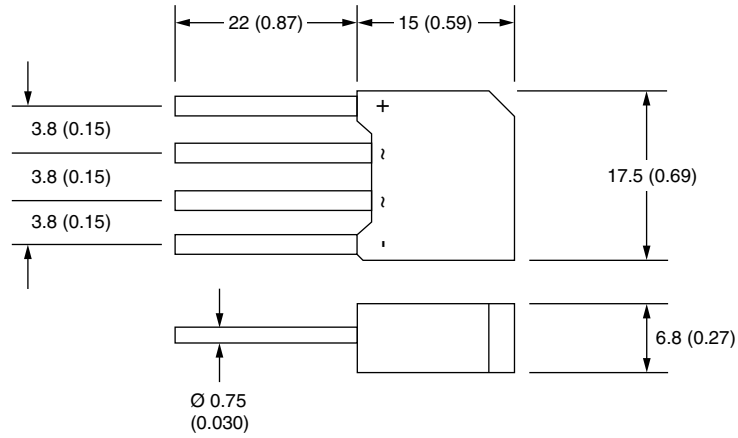
CIRCUIT CONFIGURATION



| LINKS TO RELATED DOCUMENTS | |
|----------------------------|--|
| Dimensions | www.vishay.com/doc?95329 |

D-44

DIMENSIONS in millimeters (inches)





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