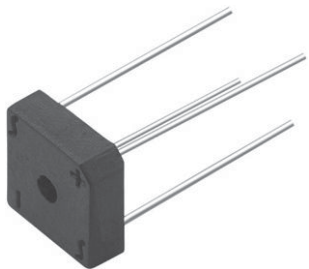


## Single Phase Rectifier Bridge, 8 A



D-72

### FEATURES

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


**RoHS**  
COMPLIANT

### PRIMARY CHARACTERISTICS

|                       |                     |
|-----------------------|---------------------|
| $I_O$                 | 8.0 A               |
| $V_{RRM}$             | 50 V to 1000 V      |
| Package               | D-72                |
| Circuit configuration | Single phase bridge |

### DESCRIPTION

The VS-KBPC series of single phase rectifier bridge consists of four silicon junctions connected as a full bridge. These device are intended for general use in industrial and consumer equipment.

### MAJOR RATINGS AND CHARACTERISTICS

| SYMBOL    | CHARACTERISTICS | VALUES      | UNITS            |
|-----------|-----------------|-------------|------------------|
| $I_O$     | Resistive load  | 8           | A                |
|           | Capacitive load | 6.4         |                  |
|           | $T_C$           | 50          | °C               |
| $I_{FSM}$ | 50 Hz           | 125         | A                |
|           | 60 Hz           | 137         |                  |
| $I^2t$    | 50 Hz           | 110         | A <sup>2</sup> s |
|           | 60 Hz           | 100         |                  |
| $V_{RRM}$ | Range           | 50 to 1000  | V                |
| $T_J$     |                 | -55 to +150 | °C               |

### ELECTRICAL SPECIFICATIONS

#### VOLTAGE RATINGS

| PART NUMBER | $V_{RRM}$ , MAXIMUM REPETITIVE<br>PEAK REVERSE VOLTAGE<br>V | $V_{RSM}$ , MAXIMUM NON-REPETITIVE<br>PEAK REVERSE VOLTAGE<br>V |
|-------------|-------------------------------------------------------------|-----------------------------------------------------------------|
| VS-KBPC8005 | 50                                                          | 80                                                              |
| VS-KBPC801  | 100                                                         | 150                                                             |
| VS-KBPC802  | 200                                                         | 300                                                             |
| VS-KBPC804  | 400                                                         | 500                                                             |
| VS-KBPC806  | 600                                                         | 700                                                             |
| VS-KBPC808  | 800                                                         | 900                                                             |
| VS-KBPC810  | 1000                                                        | 1100                                                            |

**FORWARD CONDUCTION**

| PARAMETER                                            | SYMBOL        | TEST CONDITIONS                                                  | VALUES      | UNITS                       |
|------------------------------------------------------|---------------|------------------------------------------------------------------|-------------|-----------------------------|
| Maximum DC output current                            | $I_O$         | $T_C = 50\text{ }^{\circ}\text{C}$ , resistive or inductive load | 8.0         | A                           |
|                                                      |               | $T_C = 50\text{ }^{\circ}\text{C}$ , capacitive load             | 6.4         |                             |
| Maximum peak one cycle, non-repetitive surge current | $I_{FSM}$     | $t = 10\text{ ms}$ , 20 ms                                       | 125         |                             |
|                                                      |               | $t = 8.3\text{ ms}$ , 16.7 ms                                    | 137         |                             |
| Maximum $I^2t$ capability for fusing                 | $I^2t$        | $t = 10\text{ ms}$                                               | 78          | $\text{A}^2\text{s}$        |
|                                                      |               | $t = 8.3\text{ ms}$                                              | 71          |                             |
|                                                      |               | $t = 10\text{ ms}$                                               | 110         |                             |
|                                                      |               | $t = 8.3\text{ ms}$                                              | 1000        |                             |
| Maximum $I^2\sqrt{t}$ capability for fusing          | $I^2\sqrt{t}$ | $t = 0.1\text{ to }10\text{ ms}$ , no voltage reapplied          | 1105        | $\text{A}^2\sqrt{\text{s}}$ |
| Maximum peak forward voltage per diode               | $V_{FM}$      | $I_{FM} = 3.0\text{ A}$ , $T_J = 25\text{ }^{\circ}\text{C}$     | 1.0         | V                           |
| Typical peak reverse leakage 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                            | $f$           |                                                                  | 400 to 1000 | Hz                          |
| Maximum repetitive peak reverse voltage range        | $V_{RRM}$     |                                                                  | 50 to 1000  | V                           |

**THERMAL AND MECHANICAL SPECIFICATIONS**

| PARAMETER                               | SYMBOL            | VALUES      | UNITS              |
|-----------------------------------------|-------------------|-------------|--------------------|
| Operating and storage temperature range | $T_J$ , $T_{Stg}$ | -55 to +150 | $^{\circ}\text{C}$ |
| Thermal resistance, junction to case    | $R_{thJC}$        | 6           | K/W                |
| Approximate weight                      |                   | 6           | g                  |
|                                         |                   | 0.21        | oz.                |

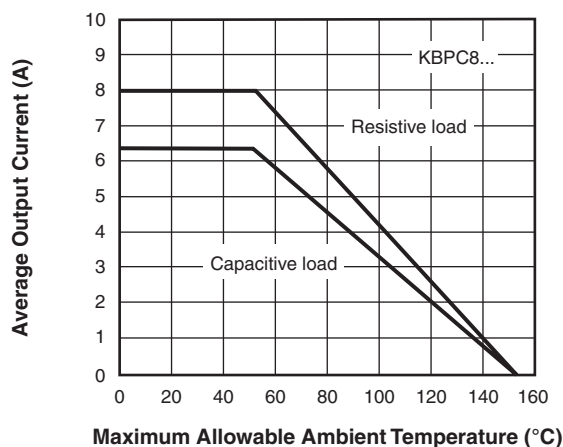


Fig. 1 - Current Ratings

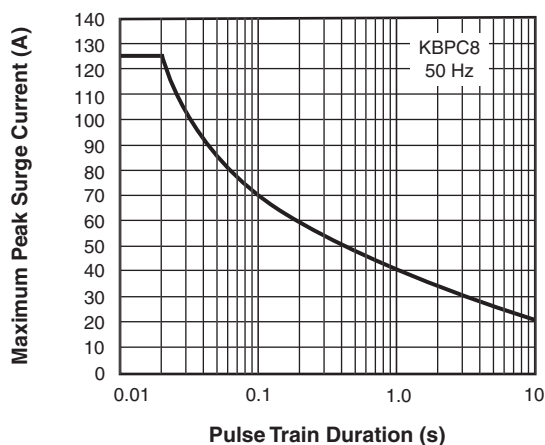


Fig. 2 - Non-Repetitive Surge Ratings

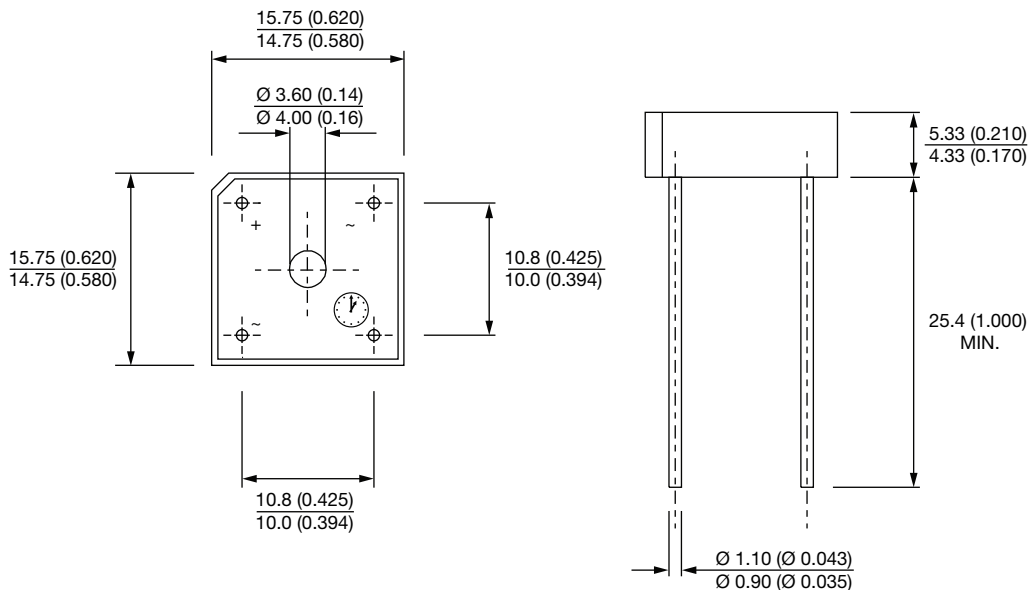
**LINKS TO RELATED DOCUMENTS**

|            |                                                                        |
|------------|------------------------------------------------------------------------|
| Dimensions | <a href="http://www.vishay.com/doc?95250">www.vishay.com/doc?95250</a> |
|------------|------------------------------------------------------------------------|

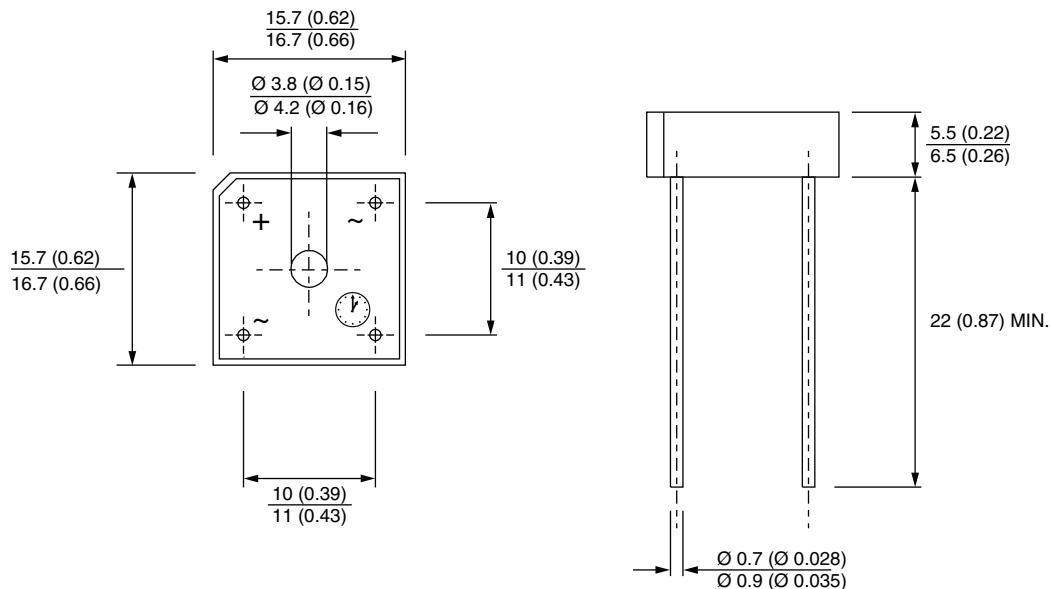


## D-72

**DIMENSIONS** in millimeters (inches): **KBPC6, KBPC8**



**DIMENSIONS** in millimeters (inches): **KBPC1**





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