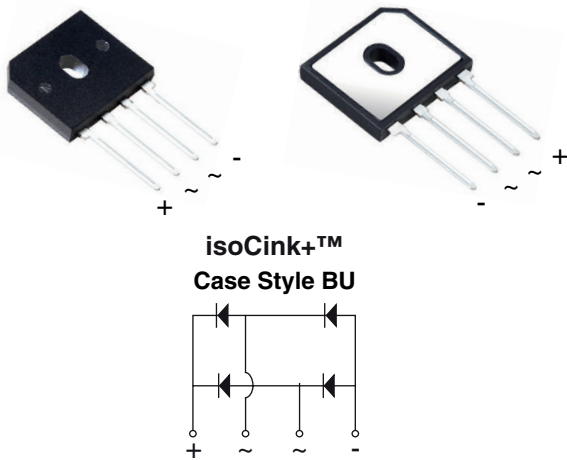


## Enhanced isoCink+™ Bridge Rectifiers



### LINKS TO ADDITIONAL RESOURCES



| PRIMARY CHARACTERISTICS |              |
|-------------------------|--------------|
| $I_{F(AV)}$             | 25 A         |
| $V_{RRM}$               | 600 V, 800 V |
| $I_{FSM}$               | 300 A        |
| $I_R$                   | 5 $\mu$ A    |
| $V_F$ at $I_F = 12.5$ A | 0.87 V       |
| $T_J$ max.              | 175 °C       |
| Package                 | BU           |
| Circuit configurations  | In-line      |

### FEATURES

- UL recognition file number E312394
- Thin single in-line package
- Superior thermal conductivity
- Glass passivated chip junction
- Solder dip 275 °C max. 10 s, per JESD 22-B106
- Material categorization: for definitions of compliance please see [www.vishay.com/doc?99912](http://www.vishay.com/doc?99912)



**RoHS**  
COMPLIANT  
HALOGEN  
**FREE**  
Available

### TYPICAL APPLICATIONS

General purpose use in AC/DC bridge full wave rectification for switching power supply, home appliances and white-goods applications.

### MECHANICAL DATA

**Case:** BU

Molding compound meets UL 94 V-0 flammability rating  
Base P/N-E3 - RoHS-compliant, industrial grade  
Base P/N-M3 - halogen-free, RoHS-compliant, and industrial grade

**Terminals:** matte tin plated leads, solderable per J-STD-002 and JESD 22-B102

E3 and M3 suffix meet JESD 201 class 1A whisker test

**Polarity:** as marked on body

**Mounting Torque:** 10 cm-kg (8.8 inches-lbs) max.

**Recommended Torque:** 5.7 cm-kg (5 inches-lbs)

| MAXIMUM RATINGS ( $T_A = 25$ °C unless otherwise noted)                           |                |                              |         |                  |
|---|----------------|------------------------------|---------|------------------|
| PARAMETER   | SYMBOL         | BU25H06                      | BU25H08 | UNIT             |
| Maximum repetitive peak reverse voltage   | $V_{RRM}$      | 600                          | 800     | V                |
| Average rectified forward current (Fig. 1, 2)                                     | $I_O$          | $T_C = 60$ °C <sup>(1)</sup> |         | A                |
|   |                | $T_A = 25$ °C <sup>(2)</sup> |         |                  |
| Non-repetitive peak forward surge current, 8.3 ms single sine-wave, $T_J = 25$ °C | $I_{FSM}$      | 300                          |         | A                |
| Rating for fusing ( $t < 8.3$ ms) $T_J = 25$ °C                                   | $I^2t$         | 373                          |         | A <sup>2</sup> s |
| Operating junction and storage temperature range                                  | $T_J, T_{STG}$ | -55 to +175                  |         | °C               |

### Notes

<sup>(1)</sup> With 60 W air cooled heatsink

<sup>(2)</sup> Without heatsink, free air



| <b>ELECTRICAL CHARACTERISTICS</b> ( $T_A = 25\text{ }^\circ\text{C}$ unless otherwise noted) |                       |                                   |       |      |      |               |
|--|-----------------------|-----------------------------------|-------|------|------|---------------|
| PARAMETER  | TEST CONDITIONS       | SYMBOL                            | TYP.  | MAX. | UNIT |               |
| Maximum instantaneous forward voltage per diode <sup>(1)</sup>                               | $I_F = 12.5\text{ A}$ | $T_A = 25\text{ }^\circ\text{C}$  | $V_F$ | 0.97 | 1.05 | V             |
|  |                       | $T_A = 125\text{ }^\circ\text{C}$ |       | 0.87 | 0.95 |               |
| Maximum reverse current per diode  | rated $V_R$           | $T_A = 25\text{ }^\circ\text{C}$  | $I_R$ | -    | 5.0  | $\mu\text{A}$ |
|  |                       | $T_A = 125\text{ }^\circ\text{C}$ |       | 120  | 350  |               |
| Typical junction capacitance per diode   | 4.0 V, 1 MHz          | $C_J$                             | 125   | -    | pF   |               |

**Note**

(1) Pulse test: 300  $\mu\text{s}$  pulse width, 1 % duty cycle

| <b>THERMAL CHARACTERISTICS</b> ( $T_A = 25\text{ }^\circ\text{C}$ unless otherwise noted) |                                |         |         |                    |
|---|--------------------------------|---------|---------|--------------------|
| PARAMETER   | SYMBOL                         | BU25H06 | BU25H08 | UNIT               |
| Typical thermal resistance  | $R_{\theta JC}$ <sup>(1)</sup> | 2.5     |         | $^\circ\text{C/W}$ |
|   | $R_{\theta JA}$ <sup>(2)</sup> | 24      |         |                    |

**Notes**

(1) With 60 W air cooled heatsink

(2) Without heatsink, free air

| <b>ORDERING INFORMATION</b> (Example) |                 |                        |               |               |
|---------------------------------------|-----------------|------------------------|---------------|---------------|
| PREFERRED P/N                         | UNIT WEIGHT (g) | PREFERRED PACKAGE CODE | BASE QUANTITY | DELIVERY MODE |
| BU25H06-E3/P                          | 4.84            | P                      | 20            | Tube          |
| BU25H06-E3/A                          | 4.84            | A                      | 250           | Paper tray    |
| BU25H06-M3/P                          | 4.84            | P                      | 20            | Tube          |

**RATINGS AND CHARACTERISTICS CURVES** ( $T_A = 25\text{ }^\circ\text{C}$  unless otherwise specified)

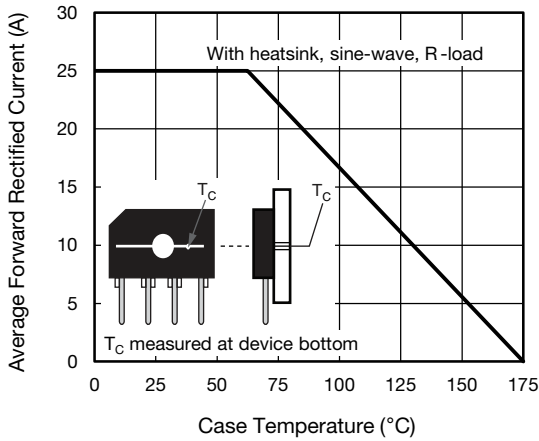


Fig. 1 - Derating Curve Output Rectified Current

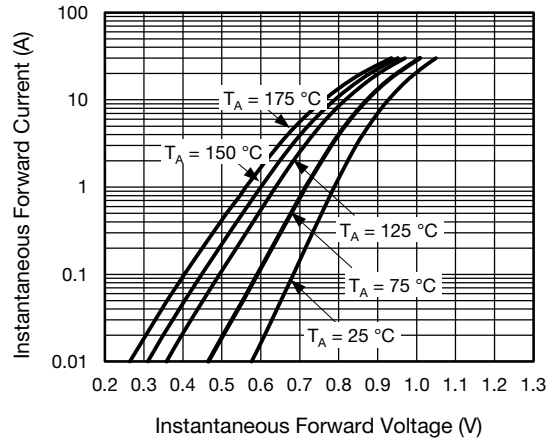


Fig. 4 - Typical Forward Characteristics Per Diode

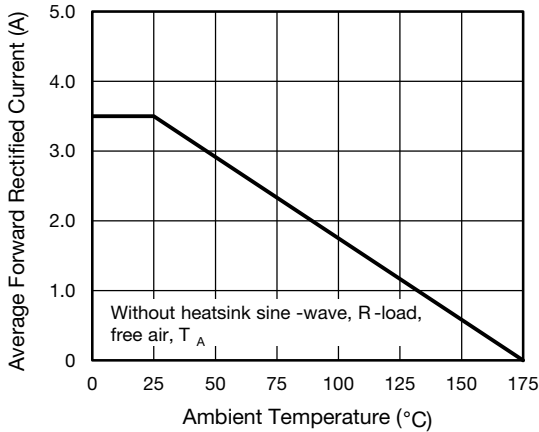


Fig. 2 - Forward Current Derating Curve

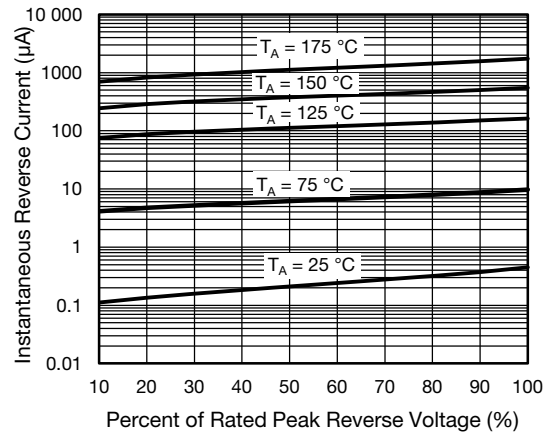


Fig. 5 - Typical Reverse Characteristics Per Diode

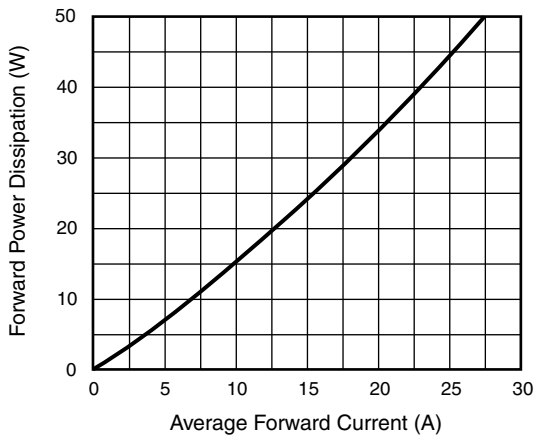


Fig. 3 - Forward Power Dissipation

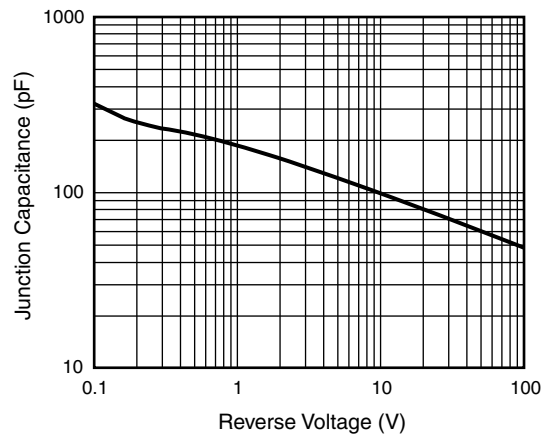
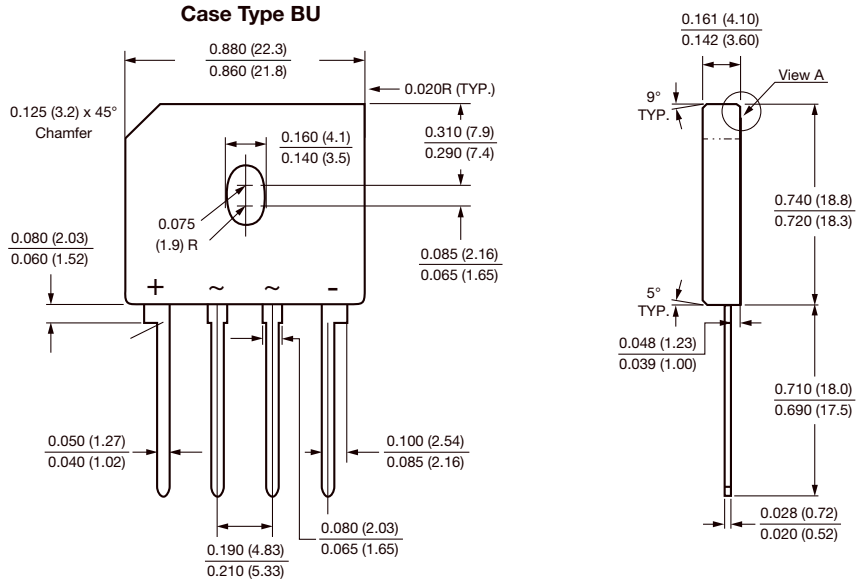


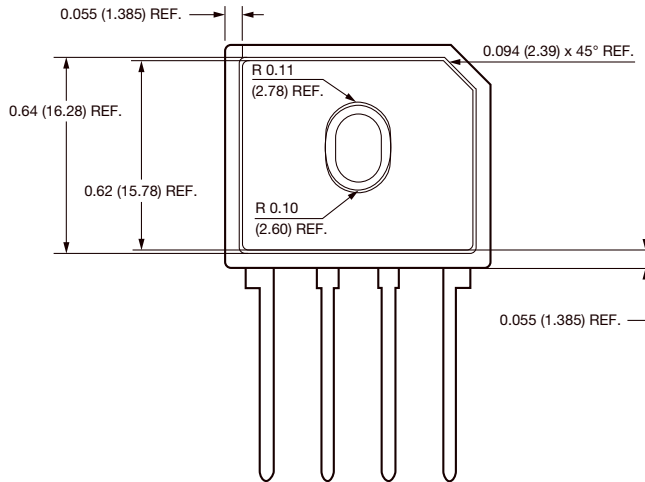
Fig. 6 - Typical Junction Capacitance Per Diode



PACKAGE OUTLINE DIMENSIONS in inches (millimeters)



Polarity shown on front side of case, positive lead beveled corner





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