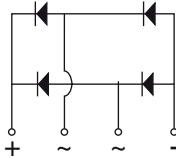


Enhanced isoCink+™ Bridge Rectifiers



isoCink+™
Case Style BU



Note

- Tested to UL standard for safety electrically isolated semiconductor devices. UL 1557 4th edition. Dielectric tested to maximum case, storage and junction temperature to 175 °C to withstand 1500 V. Epoxy meets UL 94 V-0 flammability rating.

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

FEATURES

- UL recognition file number E309391 (QQQX2) UL 1557 (see note)
- Thin single in-line package
- Superior thermal conductivity
- Solder dip 275 °C max. 10 s, per JESD 22-B106
- Material categorization: for definitions of compliance please see www.vishay.com/doc?99912



RoHS
COMPLIANT
HALOGEN
FREE

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-M3 - halogen-free, RoHS-compliant, and commercial grade

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

M3 suffix meets 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 ⁽¹⁾ | | 25 |
| | | $T_A = 25$ °C ⁽²⁾ | | 3.5 |
| 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 ² s |
| Operating junction and storage temperature range | T_J, T_{STG} | -55 to +175 | | °C |

Notes

- With 60 W air cooled heatsink
- Without heatsink, free air



| ELECTRICAL CHARACTERISTICS (T _A = 25 °C unless otherwise noted) | | | | | | |
|--|-------------------------|-------------------------|----------------|------|------|----|
| PARAMETER | TEST CONDITIONS | SYMBOL | TYP. | MAX. | UNIT | |
| Maximum instantaneous forward voltage per diode ⁽¹⁾ | I _F = 12.5 A | T _A = 25 °C | V _F | 0.97 | 1.05 | V |
| | | T _A = 125 °C | | 0.87 | | |
| Maximum reverse current per diode | rated V _R | T _A = 25 °C | I _R | - | 5.0 | μA |
| | | T _A = 125 °C | | 120 | 350 | |
| Typical junction capacitance per diode | 4.0 V, 1 MHz | C _J | 125 | - | pF | |

Note

⁽¹⁾ Pulse test: 300 μs pulse width, 1 % duty cycle

| THERMAL CHARACTERISTICS (T _A = 25 °C unless otherwise noted) | | | | |
|---|---------------------------------|---------|---------|------|
| PARAMETER | SYMBOL | BU25H06 | BU25H08 | UNIT |
| Typical thermal resistance | R _{θJC} ⁽¹⁾ | 2.5 | | °C/W |
| | R _{θJA} ⁽²⁾ | 24 | | |

Notes

⁽¹⁾ With 60 W air cooled heatsink

⁽²⁾ Without heatsink, free air

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

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

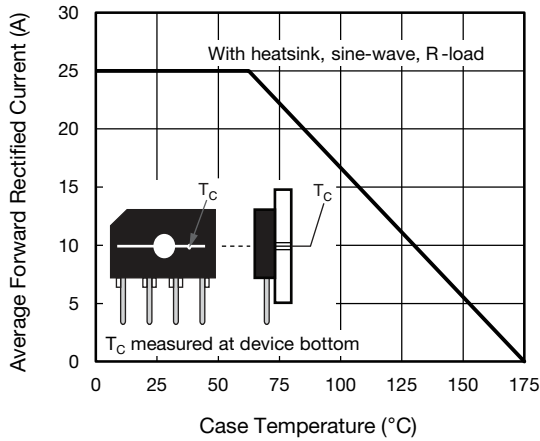


Fig. 1 - Derating Curve Output Rectified Current

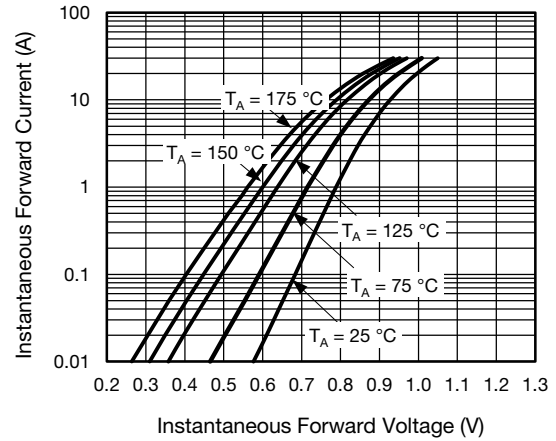


Fig. 4 - Typical Forward Characteristics Per Diode

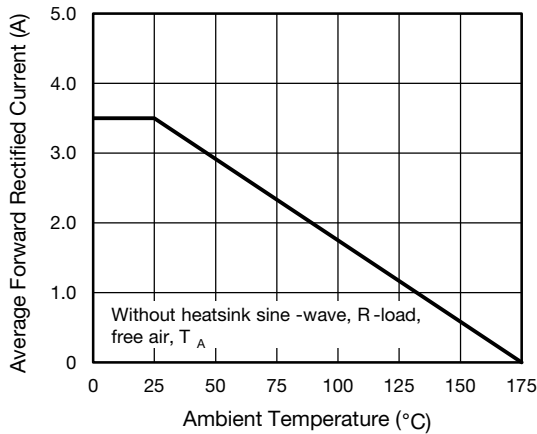


Fig. 2 - Forward Current Derating Curve

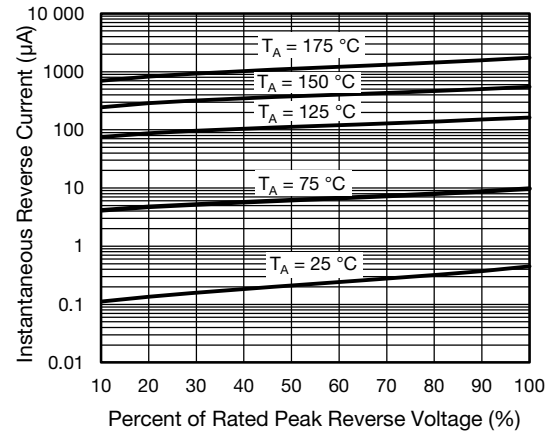


Fig. 5 - Typical Reverse Characteristics Per Diode

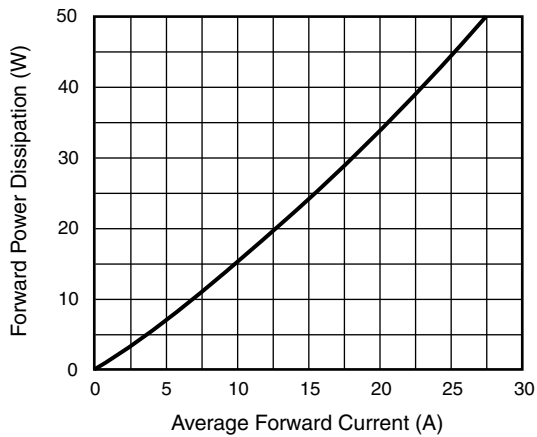


Fig. 3 - Forward Power Dissipation

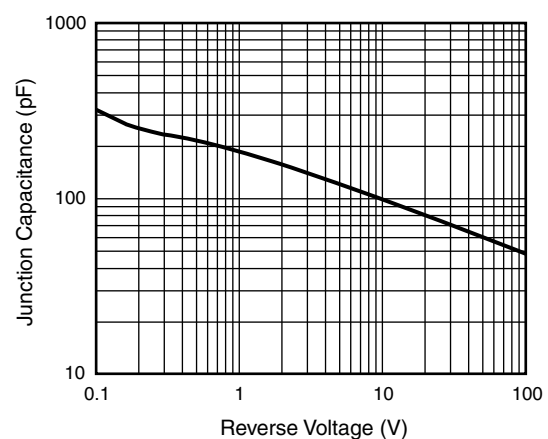
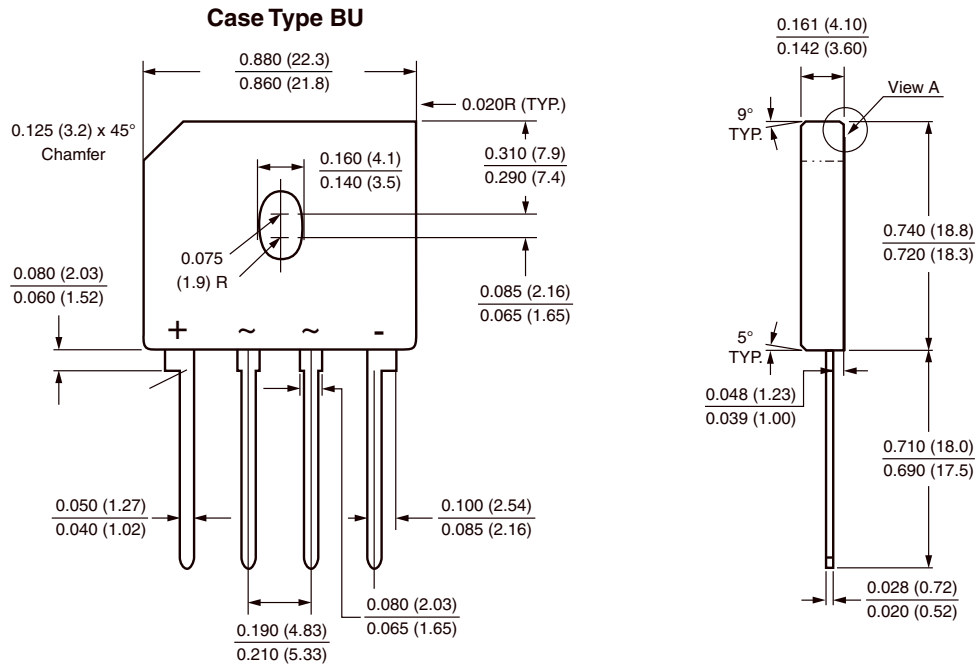


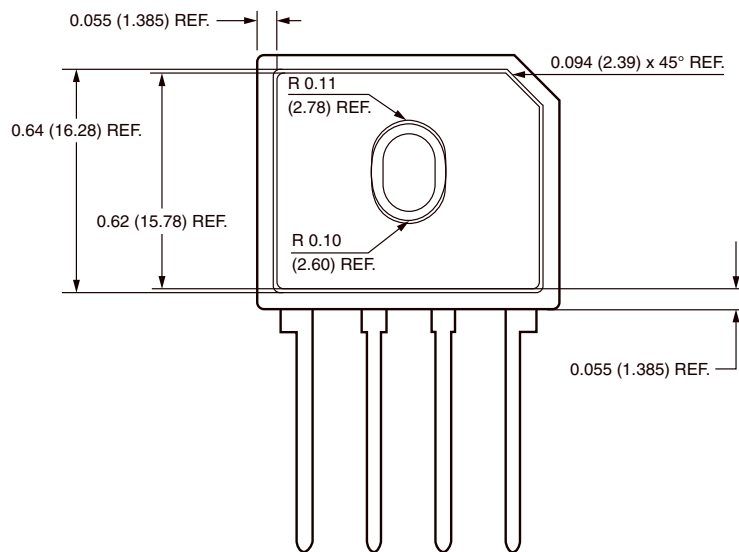
Fig. 6 - Typical Junction Capacitance Per Diode



PACKAGE OUTLINE DIMENSIONS in inches (millimeters)



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





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