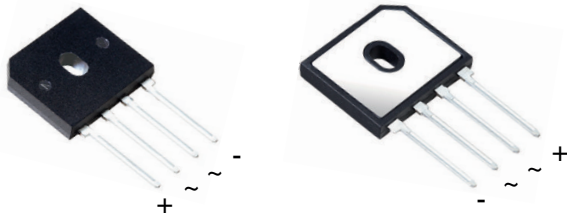
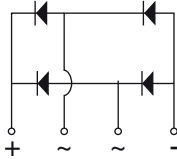




## Enhanced isoCink+™ Bridge Rectifiers



isoCink+™  
Case Style BU



## FEATURES

- UL recognition file number E312394
- Thin single in-line package
- Glass passivated chip junction
- Available for BU-5S lead forming option (part number with "5S" suffix, e.g. BU15065S)
- 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](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.

## LINKS TO ADDITIONAL RESOURCES



## PRIMARY CHARACTERISTICS

$I_{F(AV)}$	15 A
$V_{RRM}$	600 V, 800 V, 1000 V
$I_{FSM}$	200 A
$I_R$	5 $\mu$ A
$V_F$ at $I_F = 7.5$ A	0.87 V
$T_J$ max.	150 °C
Package	BU
Circuit configurations	In-line

## MECHANICAL DATA

## Case: BU

Molding compound meets UL 94 V-0 flammability rating  
Base P/N-E3 - RoHS-compliant, commercial grade  
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

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	BU1506	BU1508	BU1510	UNIT
Maximum repetitive peak reverse voltage	V <sub>RRM</sub>	600	800	1000	V
Average rectified forward current (Fig. 1, 2)	I <sub>O</sub>	T <sub>C</sub> = 80 °C <sup>(1)</sup>			A
		T <sub>A</sub> = 25 °C <sup>(2)</sup>			
Non-repetitive peak forward surge current 8.3 ms single sine-wave, T <sub>J</sub> = 25 °C	I <sub>FSM</sub>	200			A
Rating for fusing (t < 8.3 ms) T <sub>J</sub> = 25 °C	I <sup>2</sup> t	160			A <sup>2</sup> s
Operating junction and storage temperature range	T <sub>J</sub> , T <sub>STG</sub>	-55 to +150			°C

## Notes

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

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

**ELECTRICAL CHARACTERISTICS** ( $T_A = 25\text{ }^{\circ}\text{C}$  unless otherwise noted)

PARAMETER	TEST CONDITIONS	SYMBOL	TYP.	MAX.	UNIT
Maximum instantaneous forward voltage per diode <sup>(1)</sup>	$I_F = 7.5\text{ A}$	$T_A = 25\text{ }^{\circ}\text{C}$	0.97	1.05	V
		$T_A = 125\text{ }^{\circ}\text{C}$	0.87	0.95	
Maximum reverse current per diode	rated $V_R$	$T_A = 25\text{ }^{\circ}\text{C}$	-	5.0	$\mu\text{A}$
		$T_A = 125\text{ }^{\circ}\text{C}$	90	250	
Typical junction capacitance per diode	4.0 V, 1 MHz	$C_J$	70	-	pF

**Note**

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

**THERMAL CHARACTERISTICS** ( $T_A = 25\text{ }^{\circ}\text{C}$  unless otherwise noted)

PARAMETER	SYMBOL	BU1506	BU1508	BU1510	UNIT
Typical thermal resistance	$R_{\theta JC}$ <sup>(1)</sup>	2.5			°C/W
	$R_{\theta JA}$ <sup>(2)</sup>	20			

**Notes**

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

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

**ORDERING INFORMATION** (Example)

PREFERRED P/N	UNIT WEIGHT (g)	PREFERRED PACKAGE CODE	BASE QUANTITY	DELIVERY MODE
BU1506-E3/45	4.75	45	20	Tube
BU1506-E3/51	4.75	51	250	Paper tray
BU1506-M3/45	4.75	45	20	Tube
BU1506S-E3/45	4.75	45	20	Tube

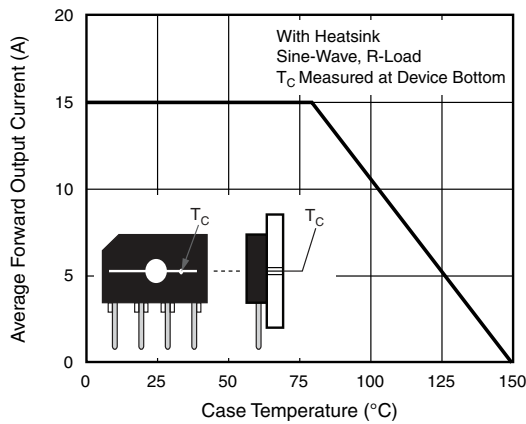
**RATINGS AND CHARACTERISTICS CURVES** ( $T_A = 25\text{ }^{\circ}\text{C}$  unless otherwise specified)

Fig. 1 - Derating Curve Output Rectified Current

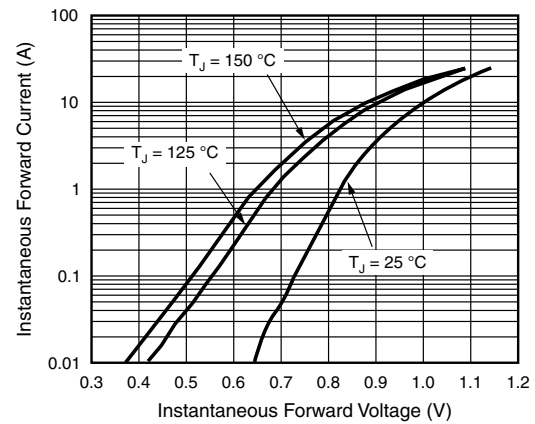


Fig. 4 - Typical Forward Characteristics Per Diode

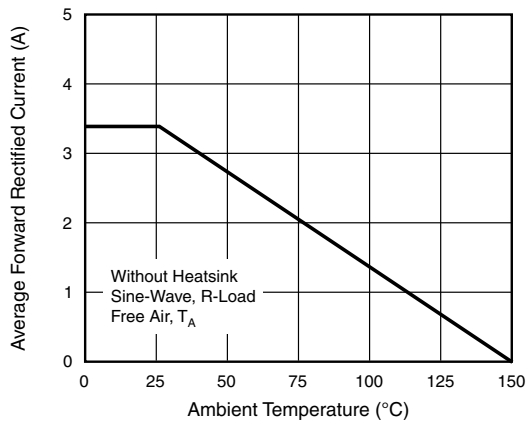


Fig. 2 - Forward Current Derating Curve

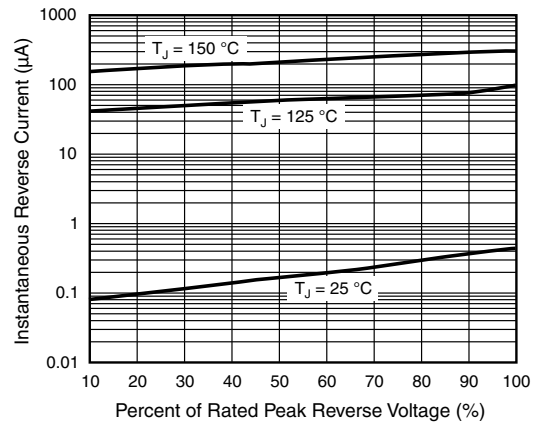


Fig. 5 - Typical Reverse Characteristics Per Diode

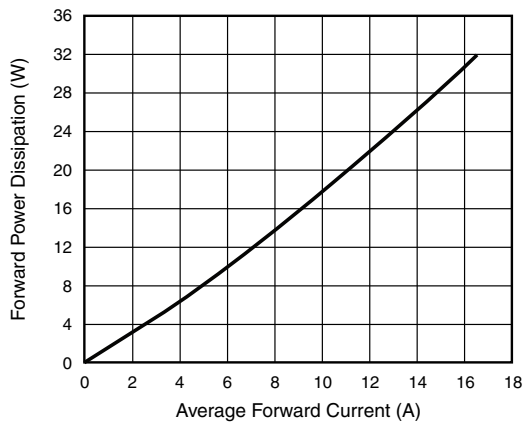


Fig. 3 - Forward Power Dissipation

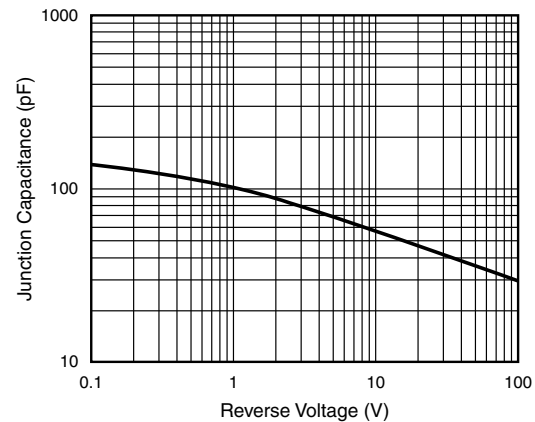
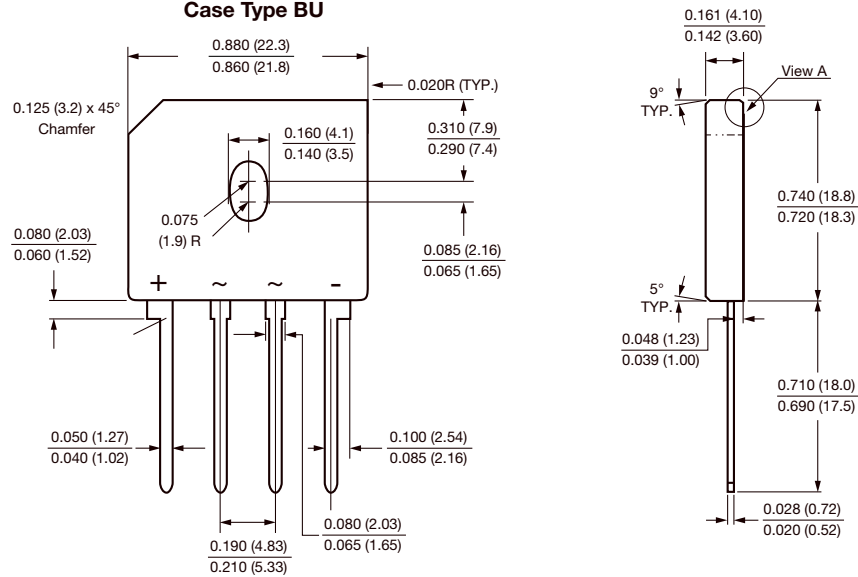
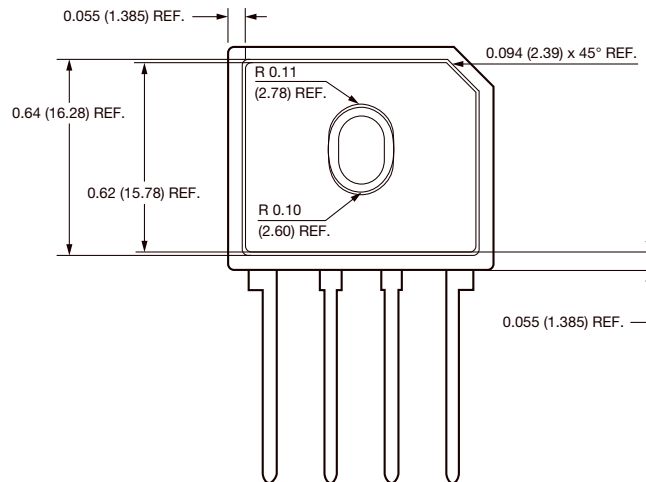


Fig. 6 - Typical Junction Capacitance Per Diode

**PACKAGE OUTLINE DIMENSIONS** in inches (millimeters)**Case Type BU**

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



For technical questions within your region: [DiodesAmericas@vishay.com](mailto:DiodesAmericas@vishay.com), [DiodesAsia@vishay.com](mailto:DiodesAsia@vishay.com), [DiodesEurope@vishay.com](mailto:DiodesEurope@vishay.com)  
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