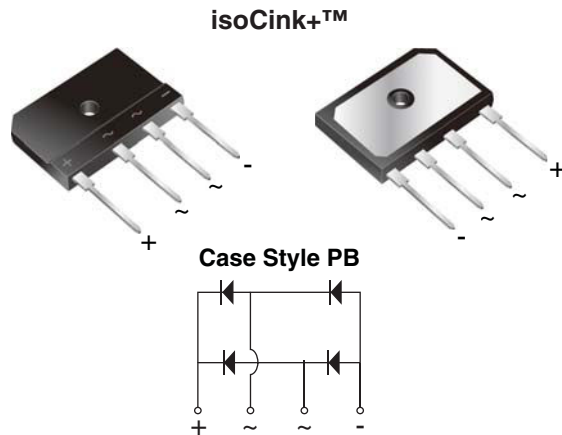


## Enhanced isoCink+™ Bridge Rectifiers


**Case Style PB**

\*Tested to UL standard for safety electrically isolated semiconductor devices. UL 1557 4th edition. Dielectric tested to maximum case, storage and junction temperature to 150 °C to withstand 1500 V. Epoxy meets UL 94 V-0 flammability rating.

PRIMARY CHARACTERISTICS	
$I_{F(AV)}$	35 A
$V_{RRM}$	600 V, 800 V, 1000 V
$I_{FSM}$	350 A
$I_R$	10 $\mu$ A
$V_F$ at $I_F = 17.5$ A	0.90 V
$T_J$ max.	150 °C

MAXIMUM RATINGS ( $T_A = 25$ °C unless otherwise noted)					
PARAMETER	SYMBOL	PB3506	PB3508	PB3510	UNIT
Maximum repetitive peak reverse voltage	$V_{RRM}$	600	800	1000	V
Average rectified forward current (Fig. 1, 2)	$I_O$	35 4.2			A
Non-repetitive peak forward surge current 8.3 ms single sine-wave, $T_J = 25$ °C	$I_{FSM}$	350			A
Rating for fusing ( $t < 8.3$ ms) $T_J = 25$ °C	$I^2t$	508			A <sup>2</sup> s
Operating junction and storage temperature range	$T_J, T_{STG}$	- 55 to + 150			°C

**Notes**

- (1) With heatsink  
(2) Without heatsink, free air

**FEATURES**

- UL recognition file number E312394 (QQQX2) UL 1557 (see \*)
- Enhanced high-current density single in-line package
- Superior thermal conductivity
- Solder dip 275 °C max. 10 s, per JESD 22-B106
- Compliant to RoHS Directive 2002/95/EC and in accordance to WEEE 2002/96/EC


**RoHS**  
COMPLIANT

**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:** PB

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

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

E3 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)

<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>	$I_F = 17.5\text{ A}$	$T_A = 25\text{ }^\circ\text{C}$ $T_A = 125\text{ }^\circ\text{C}$	$V_F$	1.00 0.90	1.10 1.00	V
Reverse current per diode <sup>(2)</sup>	rated $V_R$	$T_A = 25\text{ }^\circ\text{C}$ $T_A = 125\text{ }^\circ\text{C}$	$I_R$	- 115	10 500	$\mu\text{A}$
Typical junction capacitance per diode	4.0 V, 1 MHz		$C_J$	105	-	pF

**Notes**

- (1) Pulse test: 300  $\mu\text{s}$  pulse width, 1 % duty cycle  
 (2) Pulse test: 10 ms pulse width

<b>THERMAL CHARACTERISTICS</b> ( $T_A = 25\text{ }^\circ\text{C}$ unless otherwise noted)					
PARAMETER	SYMBOL	PB3506	PB3508	PB3510	UNIT
Typical thermal resistance	$R_{\theta JC}$ <sup>(1)</sup>		0.8		$^\circ\text{C/W}$
	$R_{\theta JA}$ <sup>(2)</sup>		20		

**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
PB3506-E3/45	7.49	45	20	Tube

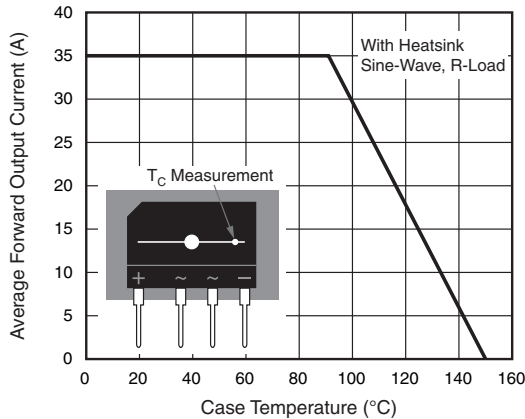
**RATINGS AND CHARACTERISTICS CURVES** ( $T_A = 25\text{ }^\circ\text{C}$  unless otherwise noted)


Fig. 1 - Derating Curve Output Rectified Current

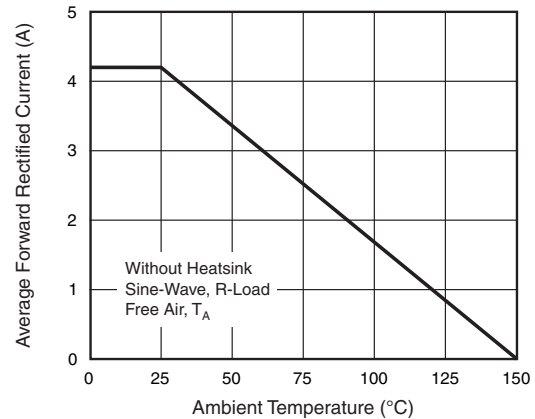


Fig. 2 - Forward Current Derating Curve

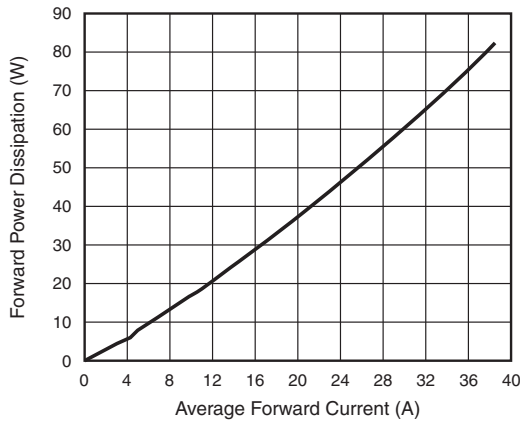


Fig. 3 - Forward Power Dissipation

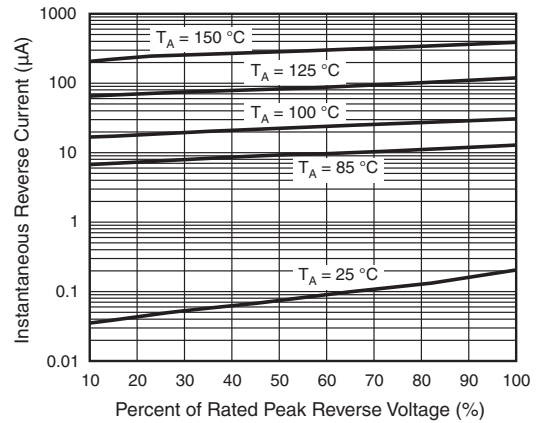


Fig. 5 - Typical Reverse Characteristics Per Diode

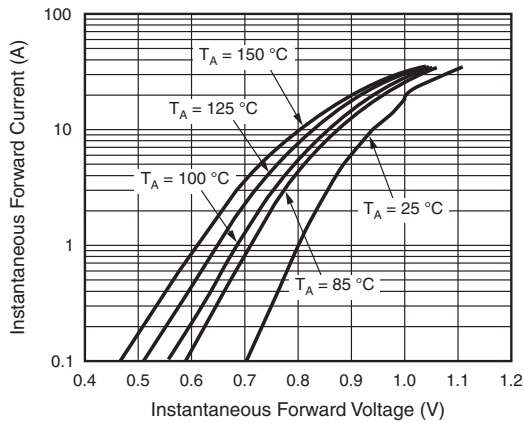


Fig. 4 - Typical Forward Characteristics Per Diode

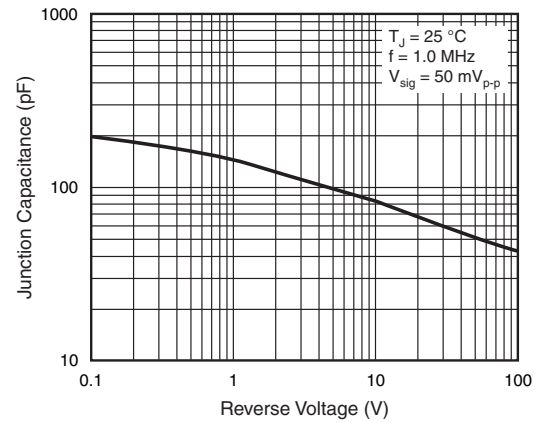
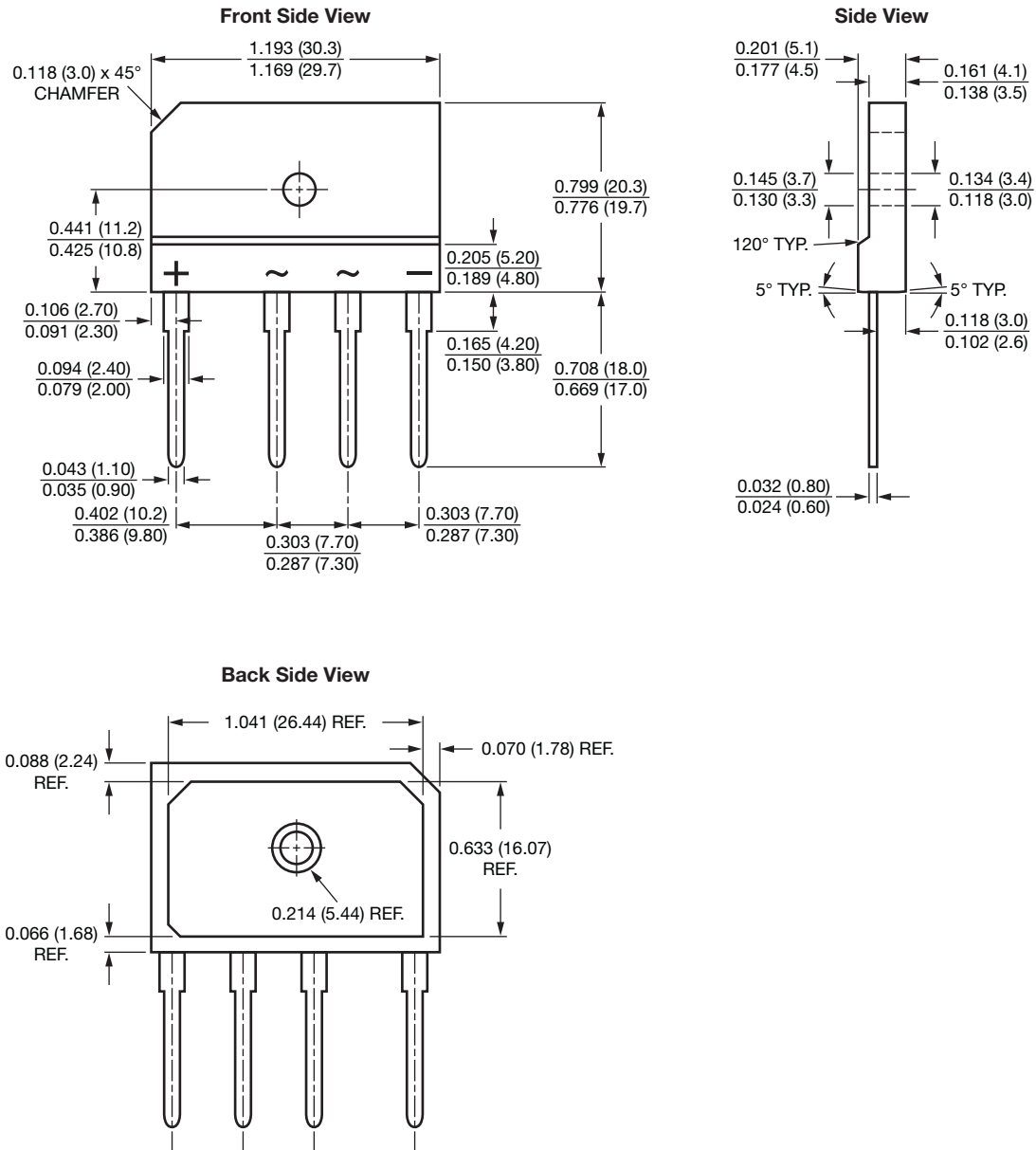


Fig. 6 - Typical Junction Capacitance Per Diode



PACKAGE OUTLINE DIMENSIONS in inches (millimeters)

Case Type PB





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**Please note that some Vishay documentation may still make reference to RoHS Directive 2002/95/EC. We confirm that all the products identified as being compliant to Directive 2002/95/EC conform to Directive 2011/65/EU.**