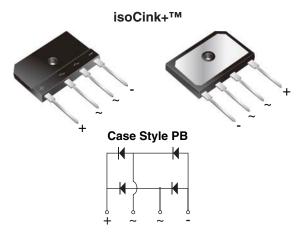
Vishay General Semiconductor

Enhanced isoCink+TM Bridge Rectifiers



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*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 µA				
V _F at I _F = 17.5 A	0.90 V				
T _J max.	150 °C				

FEATURES

- UL recognition file number E312394 (QQQX2) UL 1557 (see *)
- Enhanced high-current density single in-line package
- RoHS

COMPLIANT

- · 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

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)

MAXIMUM RATINGS ($T_A = 25 \text{ °C}$ 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)	$T_{C} = 91 \ ^{\circ}C \ ^{(1)}$ $T_{A} = 25 \ ^{\circ}C \ ^{(2)}$	Ι _Ο	35 4.2		A	
Non-repetitive peak forward surge current 8.3 ms single sine-wave, $T_J = 25 ^{\circ}\text{C}$		I _{FSM}		350		A
Rating for fusing (t < 8.3 ms) T_J = 25 °C		l ² t		508		A ² s
Operating junction and storage temperature range	je	T _J , T _{STG}		- 55 to + 150		°C

Notes

⁽¹⁾ With heatsink

(2) Without heatsink, free air

Document Number: 84807



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ELECTRICAL CHARACTERISTICS (T _A = 25 °C unless otherwise noted)							
PARAMETER	TEST CONDITIONS		SYMBOL	TYP.	MAX.	UNIT	
Maximum instantaneous forward voltage per diode ⁽¹⁾	l _F = 17.5 A	T _A = 25 °C T _A = 125 °C	V _F	1.00 0.90	1.10 1.00	V	
Reverse current per diode ⁽²⁾	rated V _R	T _A = 25 °C T _A = 125 °C	I _R	- 115	10 500	μΑ	
Typical junction capacitance per diode	4.0 V, 1 MHz		CJ	105	-	pF	

Notes

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

⁽²⁾ Pulse test: 10 ms pulse width

THERMAL CHARACTERISTICS ($T_A = 25 \text{ °C}$ unless otherwise noted)						
PARAMETER	SYMBOL	PB3506	PB3508	PB3510	UNIT	
Typical thermal resistance	${f R}_{ heta JC}{}^{(1)}_{R_{ heta JA}}$	0.8 20			°C/W	

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			
PB3506-E3/45	7.49	45	20	Tube			

RATINGS AND CHARACTERISTICS CURVES (T_A = 25 °C unless otherwise noted)

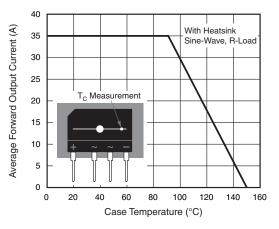


Fig. 1 - Derating Curve Output Rectified Current

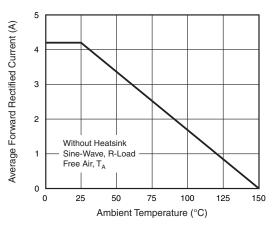
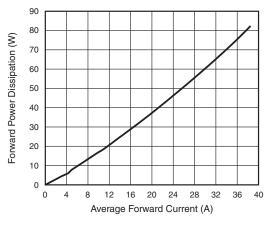


Fig. 2 - Forward Current Derating Curve

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Fig. 3 - Forward Power Dissipation

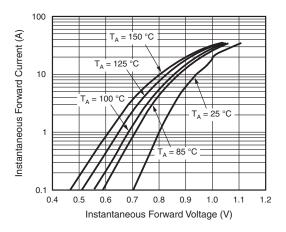


Fig. 4 - Typical Forward Characteristics Per Diode

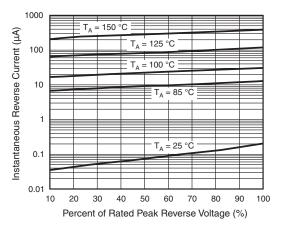


Fig. 5 - Typical Reverse Characteristics Per Diode

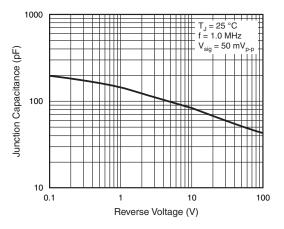


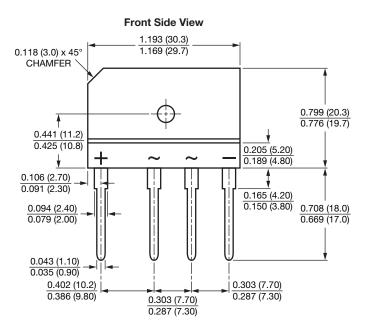
Fig. 6 - Typical Junction Capacitance Per Diode



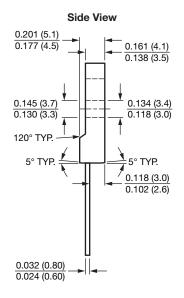
PB3506 thru PB3510

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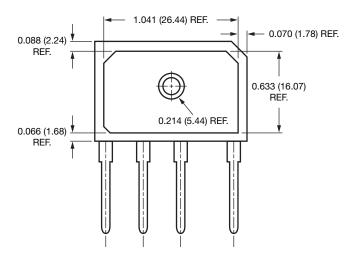
PACKAGE OUTLINE DIMENSIONS in inches (millimeters)



Case Type PB



Back Side View





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