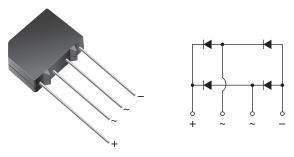


## Vishay General Semiconductor

# **Glass Passivated Single-Phase Bridge Rectifier**



Case	Ctv	مار	KR	D	N/
Case	Sι	/ie	ND	Г	Iν

PRIMARY CHARACTERISTICS							
Package	KBPM						
I <sub>F(AV)</sub>	2.0 A						
$V_{RRM}$	50 V to 1000 V						
I <sub>FSM</sub>	60 A						
I <sub>R</sub>	5 μΑ						
V <sub>F</sub> at I <sub>F</sub> = 3.14 A	1.1 V						
T <sub>J</sub> max.	165 °C						
Diode variations	In-line						

#### **FEATURES**





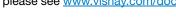
· High surge current capability

· High case dielectric strength

Solder dip 275 °C max. 10 s, per JESD 22-B106

· Material categorization: for definitions of compliance

please see www.vishay.com/doc?99912



TYPICAL APPLICATIONS

General purpose use in AC/DC bridge full wave rectification for switching power supply, home appliances, office equipment, and telecommunication applications.

#### **MECHANICAL DATA**

Case: KBPM

Molding compound meets UL 94 V-0 flammability rating

Base P/N-E4 - RoHS-compliant, commercial grade

Terminals: Silver plated leads, solderable

J-STD-002 and JESD22-B102 Polarity: As marked on body

<b>MAXIMUM RATINGS</b> (T <sub>A</sub> = 25 °C unless otherwise noted)										
PARAMETER	SYMBOL	2KBP005M	2KBP01M	2KBP02M	2KBP04M	2KBP06M	2KBP08M	2KBP10M	UNIT	
	STINIBUL	3N253	3N254	3N255	3N256	3N257	3N258	3N259	UNIT	
Maximum repetitive peak reverse voltage	$V_{RRM}$	50	100	200	400	600	800	1000	V	
Maximum RMS voltage	$V_{RMS}$	35	70	140	280	420	560	700	V	
Maximum DC blocking voltage	$V_{DC}$	50	100	200	400	600	800	1000	V	
Maximum average forward output rectified current at T <sub>A</sub> = 55 °C	I <sub>F(AV)</sub>		2.0						Α	
Peak forward surge current single half sine-wave superimposed on rated load	I <sub>FSM</sub>		60					Α		
Rating for fusing (t < 8.3 ms)	I <sup>2</sup> t	15					A <sup>2</sup> s			
Operating junction and storage temperature range	T <sub>J</sub> , T <sub>STG</sub>		-55 to +165						°C	

<b>ELECTRICAL CHARACTERISTICS</b> (T <sub>A</sub> = 25 °C unless otherwise noted)										
PARAMETER	SYMBOL	TEST	2KBP005M	2KBP01M	2KBP02M	2KBP04M	2KBP06M	2KBP08M	2KBP10M	UNIT
PANAMETEN	STIVIBUL	CONDITIONS	3N253	3N254	3N255	3N256	3N257	3N258	3N259	UNIT
Maximum instantaneous forward voltage drop per diode	V <sub>F</sub>	3.14 A	1.1					V		
Maximum DC reverse		T <sub>A</sub> = 25 °C	5.0							
current at rated DC blocking voltage per diode	I <sub>R</sub>	T <sub>A</sub> = 125 °C	500						μA	
Typical junction capacitance per diode	T <sub>J</sub>	4.0 V, 1 MHz	25					pF		



## Vishay General Semiconductor

THERMAL CHARACTERISTICS (T <sub>A</sub> = 25 °C unless otherwise noted)									
PARAMETER SYME	SYMBOL	2KBP005M	2KBP01M	2KBP02M	2KBP04M	2KBP06M	2KBP08M	2KBP10M	UNIT
		3N253	3N254	3N255	3N256	3N257	3N258	3N259	UNIT
Typical thermal resistance	R <sub>θJA</sub> <sup>(1)</sup>		30						
Typical thermal resistance	R <sub>0</sub> JL (1)		11						°C/W

#### Note

<sup>(1)</sup> Thermal resistance from junction to ambient and from junction to lead mounted on PCB with, 0.47" x 0.47" (12 mm x 12 mm) copper pads

ORDERING INFORMATION (Example)									
PREFERRED P/N	UNIT WEIGHT (g)	PACKAGE CODE	BASE QUANTITY	DELIVERY MODE					
2KBP06M-E4/51	1.895	51	600	Anti-static PVC tray					
3N257-E4/51	1.895	51	600	Anti-static PVC tray					

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

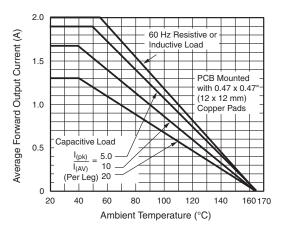


Fig. 1 - Derating Curve Output Rectified Current

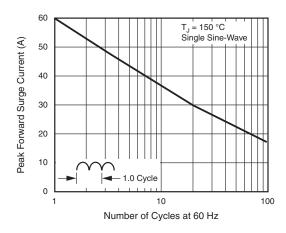


Fig. 2 - Maximum Non-Repetitive Peak Forward SurgeCurrent Per Diode

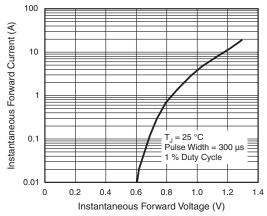


Fig. 3 - Typical Forward Characteristics Per Diode

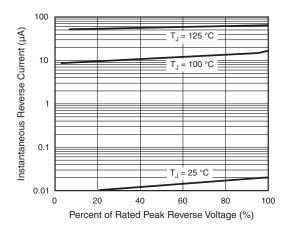


Fig. 4 - Typical Reverse Leakage Characteristics Per Diode

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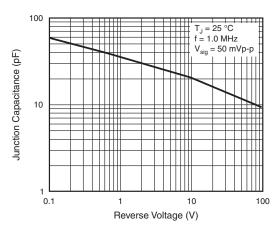
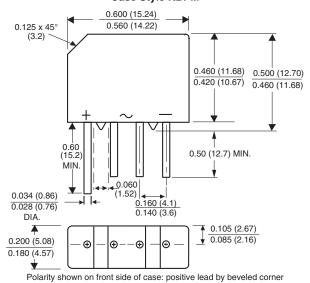


Fig. 5 - Typical Junction Capacitance Per Diode

#### PACKAGE OUTLINE DIMENSIONS in inches (millimeters)

#### Case Style KBPM





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