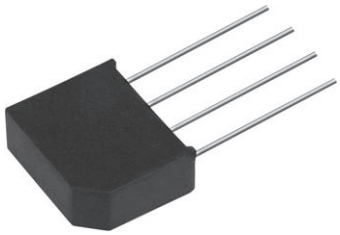
Single Phase Bridge Rectifier, 2 A



D-44

FEATURES

- Suitable for printed circuit board mounting
- Compact construction
- High surge current capability
- Material categorization: for definitions of compliance please see www.vishay.com/doc?99912

RoHS COMPLIANT

DESCRIPTION

A 2 A single phase encapsulated bridge rectifier consisting of four single diodes connected as a full bridge. They are intended for general applications in industrial and consumer equipment.

PRIMARY CHARACTERISTICS	
I_O	2 A
V_{RRM}	50 V to 1000 V
Package	D-44
Circuit configuration	Single phase bridge

MAJOR RATINGS AND CHARACTERISTICS			
SYMBOL	CHARACTERISTICS	VALUES	UNITS
I_O		2.0	A
I_{FSM}	50 Hz	60	A
	60 Hz	63	
I^2t	50 Hz	18	A^2s
	60 Hz	16	
V_{RRM}		50 to 1000	V
T_J		-40 to +150	°C

ELECTRICAL SPECIFICATIONS

VOLTAGE RATINGS			
PART NUMBER	V_{RRM}, MAXIMUM REPETITIVE PEAK REVERSE VOLTAGE (V)	V_{RSM}, MAXIMUM NON-REPETITIVE PEAK REVERSE VOLTAGE (V)	V_{RMS}, MAXIMUM RECOMMENDED RMS SUPPLY VOLTAGE (V)
VS-2KBP005	50	50	20
VS-2KBP01	100	100	50
VS-2KBP02	200	200	80
VS-2KBP04	400	400	125
VS-2KBP06	600	600	250
VS-2KBP08	800	800	380
VS-2KBP10	1000	1000	500

FORWARD CONDUCTION						
PARAMETER	SYMBOL	TEST CONDITIONS			VALUES	UNITS
Maximum DC output current	I_O	T_A = 50 °C, resistive or inductive load			2.0	A
		T_A = 50 °C, capacitive load			1.6	
Maximum peak one cycle, non-repetitive surge current	I_{FSM}	t = 10 ms, 20 ms	Following any rated load condition and with rated V_{RRM} reapplied		60	A
		t = 8.3 ms, 16.7 ms			63	
Maximum I^2t capability for fusing	I^2t	t = 10 ms	100 % V_{RRM} reapplied	Initial $T_J = T_J$ maximum	18	A^2s
		t = 8.3 ms			16	
		t = 10 ms	No voltage reapplied		26	
		t = 8.3 ms			23	
Maximum $I^2\sqrt{t}$ capability for fusing	$I^2\sqrt{t}$	t = 0.1 to 10 ms, no voltage reapplied			255	$A^2\sqrt{s}$
Maximum peak forward voltage per diode	V_{FM}	I_{FM} = 1 A, T_J = 25 °C			1.0	V
Typical peak reverse leakage current per diode	I_{RM}	T_J = 25 °C, 100 % V_{RRM}			10	µA
		T_J = 150 °C, 100 % V_{RRM}			1.0	mA
Operating frequency range	f				40 to 1000	Hz

THERMAL AND MECHANICAL SPECIFICATIONS			
PARAMETER	SYMBOL	VALUES	UNITS
Operating junction and storage temperature range	T_J, T_{Stg}	-40 to 150	°C
Approximate weight		4	g
		0.14	oz.

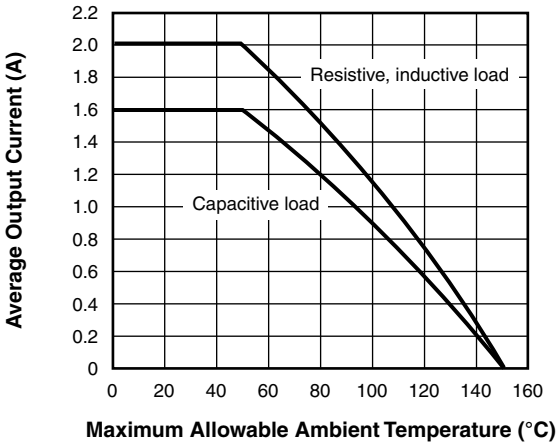


Fig. 1 - Ambient Temperature Ratings

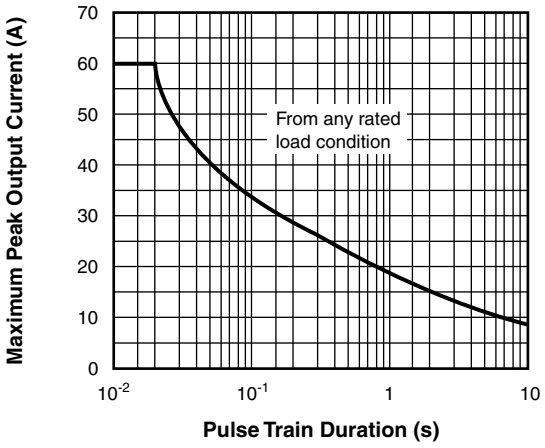
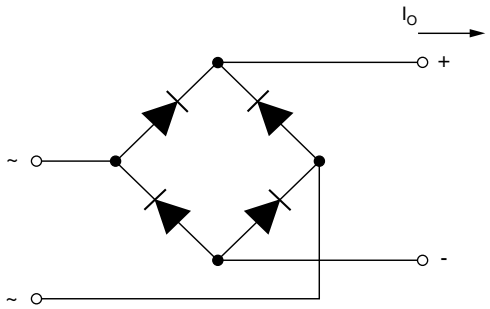


Fig. 2 - Non-Repetitive Surge Ratings

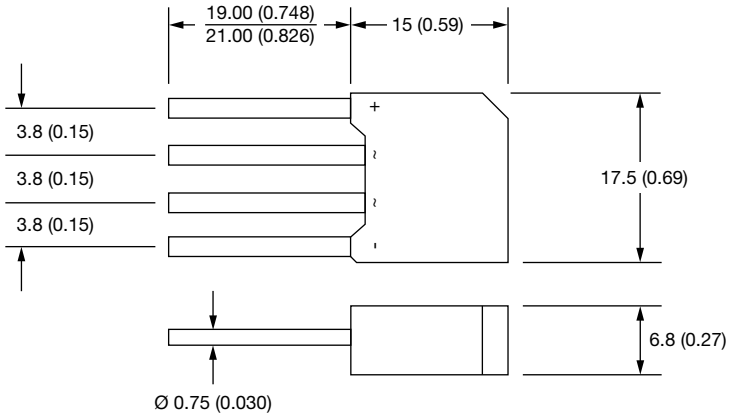
CIRCUIT CONFIGURATION



LINKS TO RELATED DOCUMENTS	
Dimensions	www.vishay.com/doc?95329

D-44

DIMENSIONS in millimeters (mils)



Disclaimer

ALL PRODUCT, PRODUCT SPECIFICATIONS AND DATA ARE SUBJECT TO CHANGE WITHOUT NOTICE TO IMPROVE RELIABILITY, FUNCTION OR DESIGN OR OTHERWISE.

Vishay Intertechnology, Inc., its affiliates, agents, and employees, and all persons acting on its or their behalf (collectively, “Vishay”), disclaim any and all liability for any errors, inaccuracies or incompleteness contained in any datasheet or in any other disclosure relating to any product.

Vishay makes no warranty, representation or guarantee regarding the suitability of the products for any particular purpose or the continuing production of any product. To the maximum extent permitted by applicable law, Vishay disclaims (i) any and all liability arising out of the application or use of any product, (ii) any and all liability, including without limitation special, consequential or incidental damages, and (iii) any and all implied warranties, including warranties of fitness for particular purpose, non-infringement and merchantability.

Statements regarding the suitability of products for certain types of applications are based on Vishay's knowledge of typical requirements that are often placed on Vishay products in generic applications. Such statements are not binding statements about the suitability of products for a particular application. It is the customer's responsibility to validate that a particular product with the properties described in the product specification is suitable for use in a particular application. Parameters provided in datasheets and / or specifications may vary in different applications and performance may vary over time. All operating parameters, including typical parameters, must be validated for each customer application by the customer's technical experts. Product specifications do not expand or otherwise modify Vishay's terms and conditions of purchase, including but not limited to the warranty expressed therein.

Hyperlinks included in this datasheet may direct users to third-party websites. These links are provided as a convenience and for informational purposes only. Inclusion of these hyperlinks does not constitute an endorsement or an approval by Vishay of any of the products, services or opinions of the corporation, organization or individual associated with the third-party website. Vishay disclaims any and all liability and bears no responsibility for the accuracy, legality or content of the third-party website or for that of subsequent links.

Vishay products are not designed for use in life-saving or life-sustaining applications or any application in which the failure of the Vishay product could result in personal injury or death unless specifically qualified in writing by Vishay. Customers using or selling Vishay products not expressly indicated for use in such applications do so at their own risk. Please contact authorized Vishay personnel to obtain written terms and conditions regarding products designed for such applications.

No license, express or implied, by estoppel or otherwise, to any intellectual property rights is granted by this document or by any conduct of Vishay. Product names and markings noted herein may be trademarks of their respective owners.