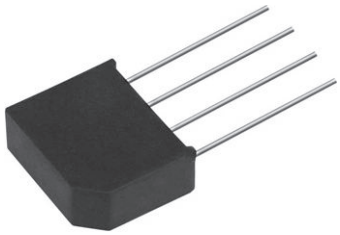
Single Phase Bridge Rectifier, 2 A



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.

PRODUCT SUMMARY	
I_O	2 A
V_{RRM}	50 V to 1000 V
Package	D-44
Circuit	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

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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			1.8	
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.

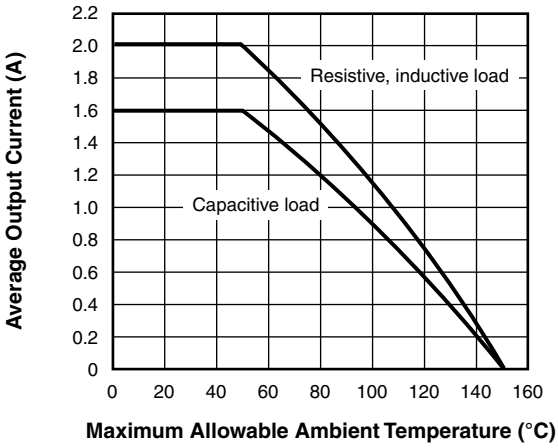

Fig. 1 - Ambient Temperature Ratings

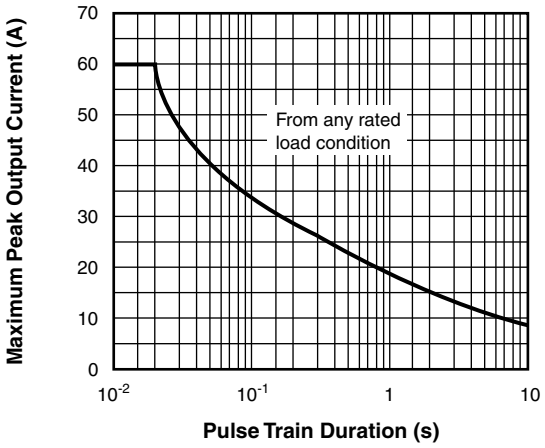

Fig. 2 - Non-Repetitive Surge Ratings

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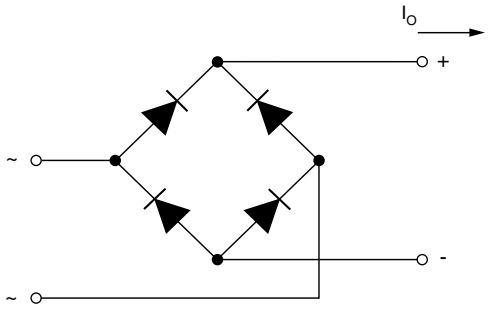
CIRCUIT CONFIGURATION



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

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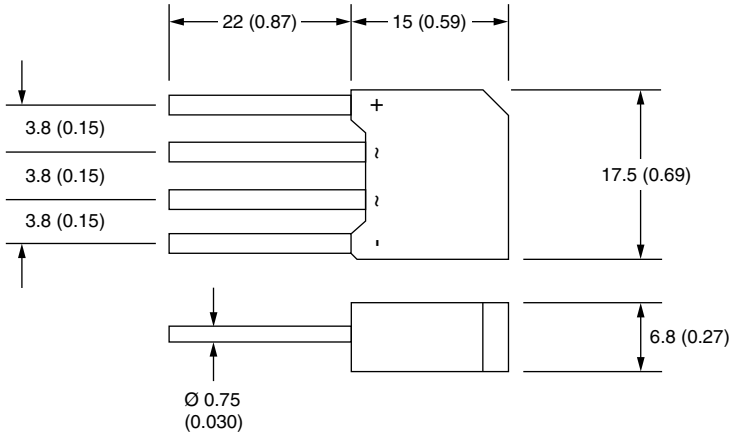
D-44

DIMENSIONS in millimeters (inches)



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