

## 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](http://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 <sup>2</sup> s
	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	$I_o$	$T_A = 50\text{ }^\circ\text{C}$ , resistive or inductive load		2.0	A
		$T_A = 50\text{ }^\circ\text{C}$ , capacitive load		1.6	
Maximum peak one cycle, non-repetitive surge current	$I_{FSM}$	$t = 10\text{ ms}$ , 20 ms	Following any rated load condition and with rated $V_{RRM}$ reapplied	60	A
		$t = 8.3\text{ ms}$ , 16.7 ms		63	
Maximum $I^2t$ capability for fusing	$I^2t$	$t = 10\text{ ms}$	100 % $V_{RRM}$ reapplied	Initial $T_J = T_J$ maximum	A <sup>2</sup> s
		$t = 8.3\text{ ms}$			
		$t = 10\text{ ms}$	No voltage reapplied	26	
		$t = 8.3\text{ ms}$		23	
Maximum $I^2\sqrt{t}$ capability for fusing	$I^2\sqrt{t}$	$t = 0.1$ to 10 ms, no voltage reapplied		255	A <sup>2</sup> $\sqrt{s}$
Maximum peak forward voltage per diode	$V_{FM}$	$I_{FM} = 1\text{ A}$ , $T_J = 25\text{ }^\circ\text{C}$		1.0	V
Typical peak reverse leakage current per diode	$I_{RM}$	$T_J = 25\text{ }^\circ\text{C}$ , 100 % $V_{RRM}$		10	$\mu\text{A}$
		$T_J = 150\text{ }^\circ\text{C}$ , 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	$^\circ\text{C}$
Approximate weight		4	g
		0.14	oz.

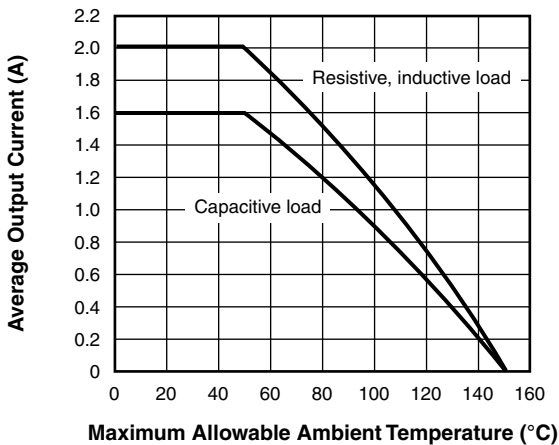


Fig. 1 - Ambient Temperature Ratings

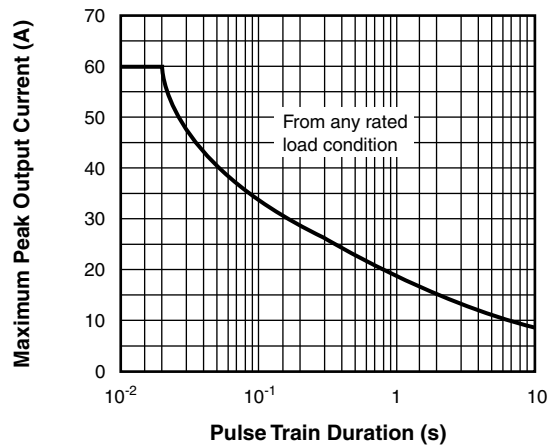
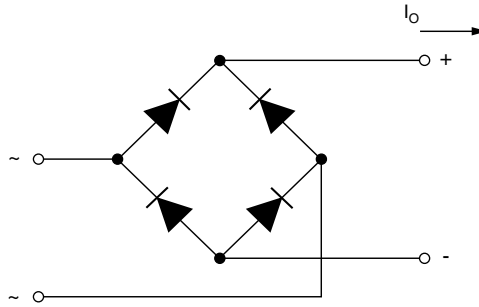


Fig. 2 - Non-Repetitive Surge Ratings



## CIRCUIT CONFIGURATION



LINKS TO RELATED DOCUMENTS	
Dimensions	<a href="http://www.vishay.com/doc?95329">www.vishay.com/doc?95329</a>

## D-44

**DIMENSIONS** in millimeters (inches)





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