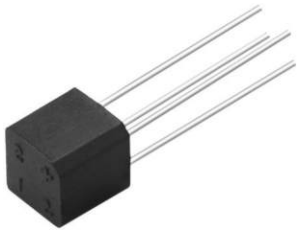
Single Phase Rectifier Bridge, 1.2 A



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FEATURES

- Ease of assembly, installation, inventory
- High surge rating
- Compact
- RoHS compliant

RoHS COMPLIANT

DESCRIPTION

A 1.2 A diode bridge rectifier assembly designed for new circuits and for replacement service. For printed circuit board applications.

PRODUCT SUMMARY	
I_O	1.2 A
V_{RRM}	100 to 1000 V

MAJOR RATINGS AND CHARACTERISTICS			
SYMBOL	CHARACTERISTICS	VALUES	UNITS
I_O		1.2	A
I_{FSM}	50 Hz	50	A
	60 Hz	52	
I^2t	50 Hz	17.7	A^2s
	60 Hz	16.1	
V_{RRM}		100 to 1000	V
T_J		- 55 to 150	°C

ELECTRICAL SPECIFICATIONS

VOLTAGE RATINGS					
CROSS REFERENCE		V_{RRM}, V_{RSM} (V)	V_{RMS} (RECOMMENDED) (V)	MAXIMUM (1) LOAD CAPACITANCE (µF)	MINIMUM SOURCE RESISTANCE (SEE FIGURE 3) (Ω)
PART NUMBER	DIN CODE				
1KAB10E	B40C1000	100	40	5000	0.5
1KAB20E	B80C1000	200	80	3300	0.8
1KAB40E	B125C1000	400	125	1600	1.5
1KAB60E	B250C1000	600	250	1200	2.6
1KAB80E	B380C1000	800	380	800	3.0
1KAB100E	B500C1000	1000	500	600	5.0

FORWARD CONDUCTION					
PARAMETER	**SYMBOL**	**TEST CONDITIONS**		**VALUES**	**UNITS**
Maximum DC output current	I_O	T_A = 45 °C, resistive or inductive load		1.2	A
		T_A = 45 °C, capacitive load		1.0	
Maximum peak one cycle, non-repetitive surge current	I_{FSM}	50 Hz half cycle sine wave or 6 ms rectangular pulse	Following any rated load condition, and with rated V_{RRM} applied following surge	50	A
		60 Hz half cycle sine wave or 5 ms rectangular pulse		52	
Maximum I^2t capability for fusing	I^2t	t = 10 ms	Rated V_{RRM} applied following surge, initial T_J = 150 °C	12.5	A^2s
		t = 8.3 ms		11.3	
		t = 10 ms	V_{RRM} = 0 following surge, initial T_J = 150 °C	17.7	
		t = 8.3 ms		16.1	
Maximum $I^2\sqrt{t}$ capability for fusing	$I^2\sqrt{t}$ (1)	t = 0.1 to 10 ms, V_{RRM} following surge = 0		177	$A^2\sqrt{s}$
Maximum peak forward voltage per leg	V_{FM}	I_O = 1.2 A (1.88 Apk)		1.1	V
Typical peak reverse current per leg	I_{RM}	T_J = 25 °C, at rated V_{RRM}		10	µA
		T_J = 150 °C, at rated V_{RRM}		500	
Operating frequency range	f			40 to 2000	Hz

Note

(1) I^2t for time $t_x = I^2\sqrt{t} \bullet \sqrt{t_x}$

THERMAL AND MECHANICAL SPECIFICATIONS			
PARAMETER	**SYMBOL**	**VALUES**	**UNITS**
Operating junction and storage temperature range	T_J, T_{Stg}	- 40 to 150	°C
Approximate weight		3	g
		0.1	oz.

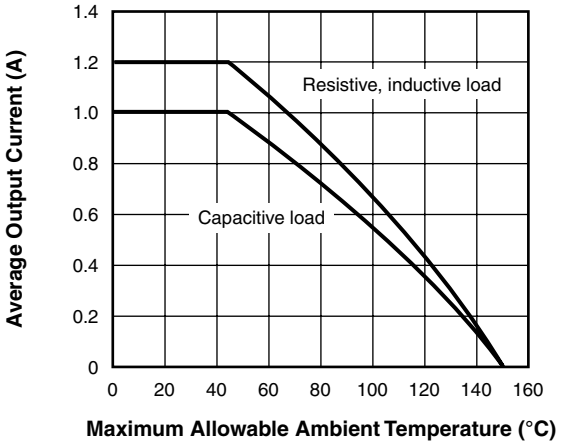


Fig. 1 - Average (DC) Output Current vs. Maximum Allowable Ambient Temperature

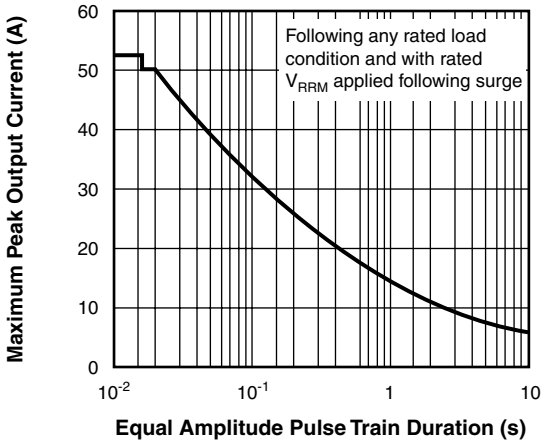


Fig. 2 - Maximum Non-Repetitive Surge Current vs. Pulse Train Duration (f = 50 Hz)

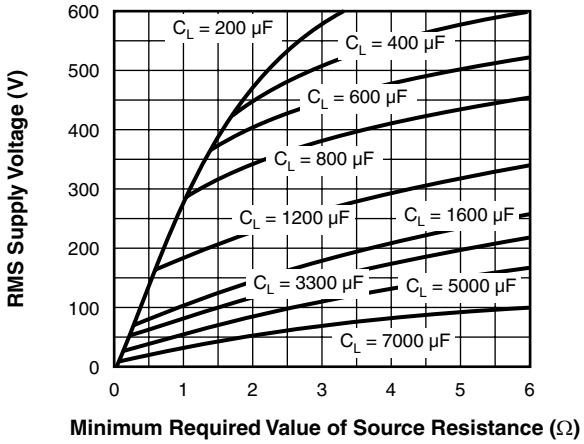


Fig. 3 - Minimum Required Source Resistance vs. RMS Supply Voltage and Load Capacitance

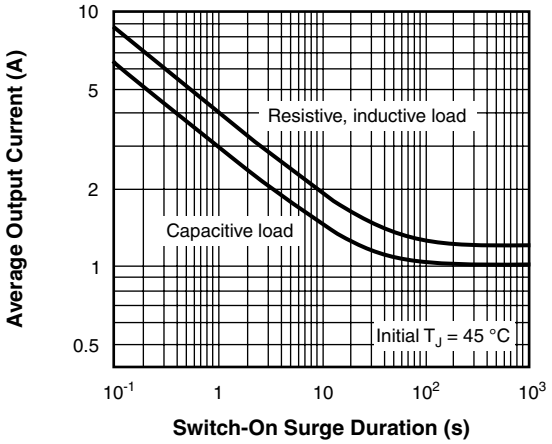
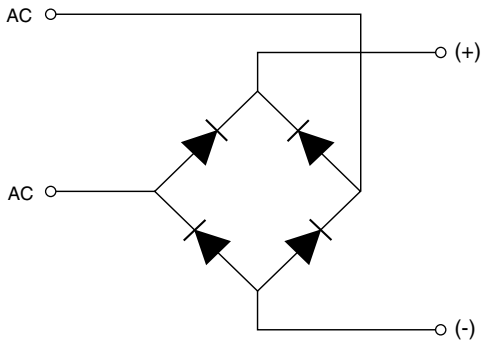


Fig. 4 - Maximum Switch-On Surge Current vs. Surge Duration

CIRCUIT CONFIGURATION



LINKS TO RELATED DOCUMENTS	
Dimensions	http://www.vishay.com/doc?95327

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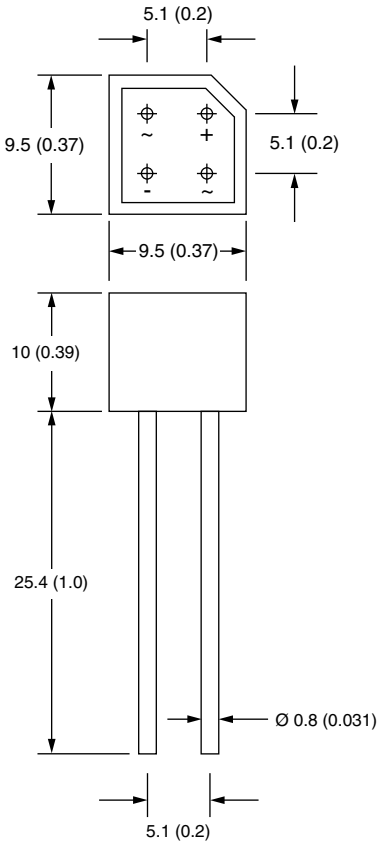
DIMENSIONS in millimeters (inches)



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