

Vishay High Power Products

Single Phase Rectifier Bridge, 3 A, 6 A



PRODUCT SUMMARY		
I _{O(AV)}	3.0 A, 6.0 A	
V _{RRM}	50 V to 1000 V	

FEATURES

Suitable for printed circuit board or chassis mounting



- · Compact construction
- · High surge current capability
- Compliant to RoHS directive 2002/95/EC

DESCRIPTION

The KBPC series of single phase rectifier bridge consists of four silicon junctions connected as a full bridge. These devices are intended for general use in industrial and consumer equipment.

MAJOR RATINGS AND CHARACTERISTICS					
SYMBOL	CHARACTERISTICS	KBPC1	KBPC6	UNITS	
Io		3	6	А	
I _{FSM}	50 Hz	50	125	Δ.	
	60 Hz	55	137	A	
l ² t	50 Hz	12.5	78	A ² s	
	60 Hz	11.4	71		
V _{RRM}	Range	50 to 1000		V	
TJ		- 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
KBPC1005	KBPC6005	50	50	20
KBPC102	KBPC602	200	200	80
KBPC104	KBPC604	400	400	125
KBPC106	KBPC606	600	600	250
KBPC108	KBPC608	800	800	380
KBPC110	KBPC610	1000	1000	500

Document Number: 93585 Revision: 23-Dec-08

KBPC1, KBPC6 Series

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FORWARD CONDUCTION						
PARAMETER	SYMBOL	TEST CONDITIONS		KBPC1	KBPC6	UNITS
Maximum DC autout augrant	Io	T _C = 50 °C, resistive or inductive load		3.0	6.0	
Maximum DC output current		T _C = 50 °C, capacitive load		2.4	4.7	
Maximum peak one cycle,	I _{FSM}	t = 10 ms, 20 ms	Following any rated load condition and with rated	50	125	A
non-repetitive surge current		t = 8.3 ms, 16.7 ms	V _{RRM} reapplied	55	137	
Maximum I ² t capability for fusing	l ² t	t = 10 ms	Initial T _J = T _J maximum 100 % V _{RRM} reapplied	12.5	78	- A ² s
		t = 8.3 ms		11.4	71	
		t = 10 ms		17.7	110	
		t = 8.3 ms		16.1	1000	
Maximum $I^2\sqrt{t}$ capability for fusing	I ² √t	t = 0.1 ms to 10 ms, no voltage reapplied		177	1105	A²√s
Maximum peak forward voltage per diode	V_{FM}	I _{FM} = 0.5 x I _O , T _J = 25 °C		1.1	1.2	V
	I _{RM}	T _J = 25 °C, 100 % V _{RRM}		10	10	mA
Typical peak reverse leakage per diode		T _J = 150 °C, 100 % V _{RRM}		1.0	1.0	
Operating frequency range	f			40 to 1000		Hz
Maximum repetitive peak reverse voltage range	V_{RRM}			50 to	1000	٧

THERMAL AND MECHANICAL SPECIFICATIONS				
PARAMETER	SYMBOL	KBPC1	KBPC6	UNITS
Operating and storage temperature range	T _J , T _{Stg}	- 40 to 150		°C
Thermal resistance, junction to case	R _{thJC}	-	-	K/W
Approximate weight		5	6	g
Approximate weight		0.18	0.21	OZ.

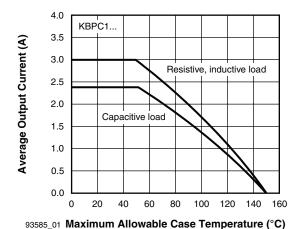
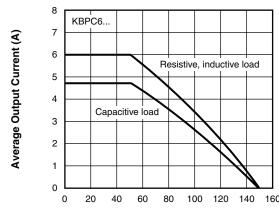


Fig. 1 - Case Temperature Ratings



93585_02 Maximum Allowable Case Temperature (°C)

Fig. 2 - Case Temperature Ratings

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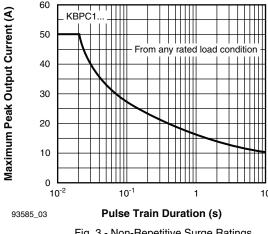


Fig. 3 - Non-Repetitive Surge Ratings

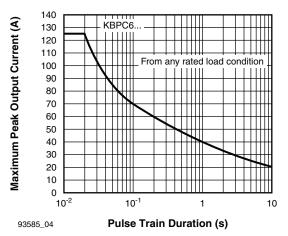
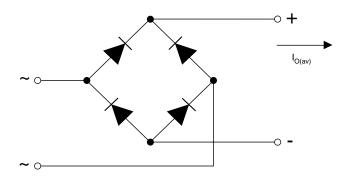


Fig. 4 - Non-Repetitive Surge Ratings

CIRCUIT CONFIGURATION



LINKS TO RELATED DOCUMENTS		
Dimensions	www.vishay.com/doc?95250	

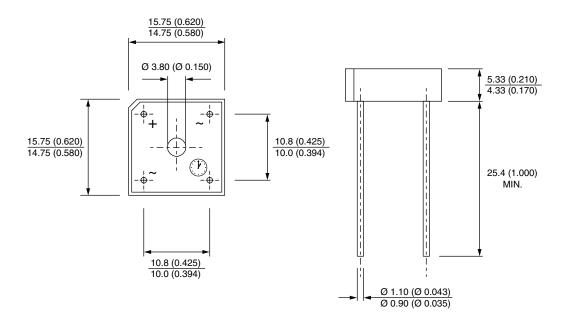
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Vishay Semiconductors

D-72

DIMENSIONS in millimeters (inches)





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- Консультации по применению компонента;
- Поставка образцов и прототипов;
- Техническая поддержка проекта;
- Защита от снятия компонента с производства.



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