

Single Phase Rectifier Bridge, 8 A



D-72

FEATURES

- Suitable for printed circuit board or chassis mounting
- Compact construction
- High surge current capability
- Fully characterized data
- Wide temperature range
- Material categorization: for definitions of compliance please see www.vishay.com/doc?99912



RoHS
COMPLIANT

PRIMARY CHARACTERISTICS

I_O	8.0 A
V_{RRM}	50 V to 1000 V
Package	D-72
Circuit configuration	Single phase bridge

DESCRIPTION

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

MAJOR RATINGS AND CHARACTERISTICS

SYMBOL	CHARACTERISTICS	VALUES	UNITS
I_O	Resistive load	8	A
	Capacitive load	6.4	
	T_C		50
I_{FSM}	50 Hz	125	A
	60 Hz	137	
I^2t	50 Hz	110	A ² s
	60 Hz	100	
V_{RRM}	Range	50 to 1000	V
T_J		-55 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
VS-KBPC8005	50	80
VS-KBPC801	100	150
VS-KBPC802	200	300
VS-KBPC804	400	500
VS-KBPC806	600	700
VS-KBPC808	800	900
VS-KBPC810	1000	1100



FORWARD CONDUCTION				
PARAMETER	SYMBOL	TEST CONDITIONS	VALUES	UNITS
Maximum DC output current	I_O	$T_C = 50\text{ }^\circ\text{C}$, resistive or inductive load	8.0	A
		$T_C = 50\text{ }^\circ\text{C}$, capacitive load	6.4	
Maximum peak one cycle, non-repetitive surge current	I_{FSM}	$t = 10\text{ ms}$, 20 ms	125	A
		$t = 8.3\text{ ms}$, 16.7 ms	137	
Maximum I^2t capability for fusing	I^2t	$t = 10\text{ ms}$	78	A^2s
		$t = 8.3\text{ ms}$	71	
		$t = 10\text{ ms}$	110	
		$t = 8.3\text{ ms}$	1000	
Maximum $I^2\sqrt{t}$ capability for fusing	$I^2\sqrt{t}$	$t = 0.1\text{ to }10\text{ ms}$, no voltage reapplied	1105	$A^2\sqrt{s}$
Maximum peak forward voltage per diode	V_{FM}	$I_{FM} = 3.0\text{ A}$, $T_J = 25\text{ }^\circ\text{C}$	1.0	V
Typical peak reverse leakage per diode	I_{RM}	$T_J = 25\text{ }^\circ\text{C}$, $100\% V_{RRM}$	10	μA
		$T_J = 150\text{ }^\circ\text{C}$, $100\% V_{RRM}$	1.0	mA
Operating frequency range	f		400 to 1000	Hz
Maximum repetitive peak reverse voltage range	V_{RRM}		50 to 1000	V

THERMAL AND MECHANICAL SPECIFICATIONS			
PARAMETER	SYMBOL	VALUES	UNITS
Operating and storage temperature range	T_J , T_{Stg}	-55 to +150	$^\circ\text{C}$
Thermal resistance, junction to case	R_{thJC}	6	K/W
Approximate weight		6	g
		0.21	oz.



Fig. 1 - Current Ratings



Fig. 2 - Non-Repetitive Surge Ratings

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



D-72

DIMENSIONS in millimeters (inches): **KBPC6, KBPC8**



DIMENSIONS in millimeters (inches): **KBPC1**





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