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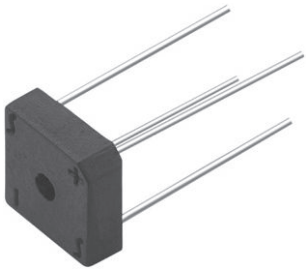
Single Phase Rectifier Bridge, 8 A



D-72

FEATURES

- Suitable for printed circuit board or chasis 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

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.

PRODUCT SUMMARY	
$I_{O(av)}$	8.0 A
V_{RRM}	50 V to 1000 V
Package	D-72
Circuit	Single phase bridge

MAJOR RATINGS AND CHARACTERISTICS			
SYMBOL	CHARACTERISTICS	VALUES	UNITS
I_O	T_C = 50 °C, resistive load	8	A
	T_C = 50 °C, capacitive load	6.4	
I_{FSM}	50 Hz	125	A
	60 Hz	137	
I^2t	50 Hz	110	A^2s
	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 °C, resistive or inductive load		8.0	A
		T_C = 50 °C, capacitive load		6.4	
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} reapllied	125	
		t = 8.3 ms, 16.7 ms		137	
Maximum I^2t capability for fusing	I^2t	t = 10 ms	Initial T_J = T_J maximum 100 % V_{RRM} reapplied	78	A^2s
		t = 8.3 ms		71	
		t = 10 ms		110	
		t = 8.3 ms		1000	
Maximum $I^2\sqrt{t}$ capability for fusing	$I^2\sqrt{t}$	t = 0.1 to 10 ms, no voltage reapplied		1105	$A^2\sqrt{s}$
Maximum peak forward voltage per diode	V_{FM}	I_{FM} = 3.0 A, T_J = 25 °C		1.0	V
Typical peak reverse leakage per diode	I_{RM}	T_J = 25 °C, 100 % V_{RRM}		10	mA
		T_J = 150 °C, 100 % V_{RRM}		100	
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	°C
Thermal resistance, junction to case	R_{thJC}	6	K/W
Approximate weight		6	g
		0.21	oz.

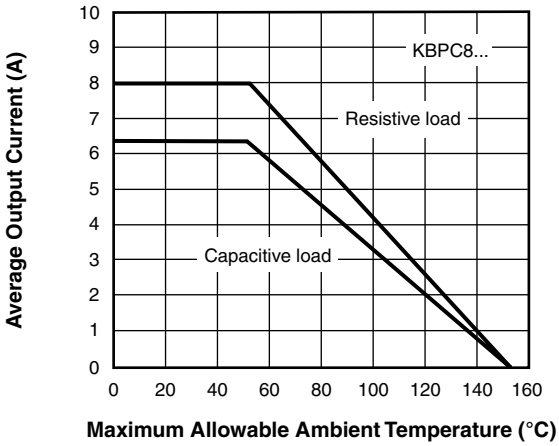


Fig. 1 - Current Ratings

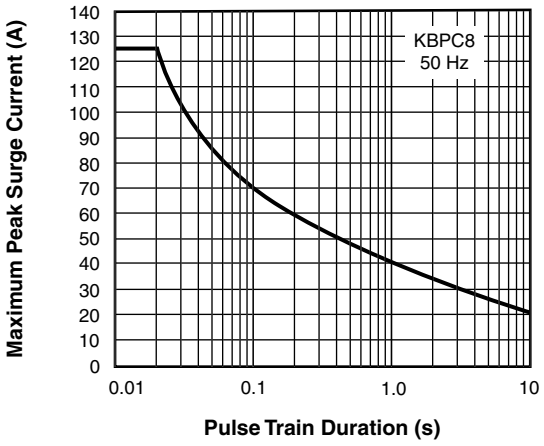


Fig. 2 - Non-Repetitive Surge Ratings

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

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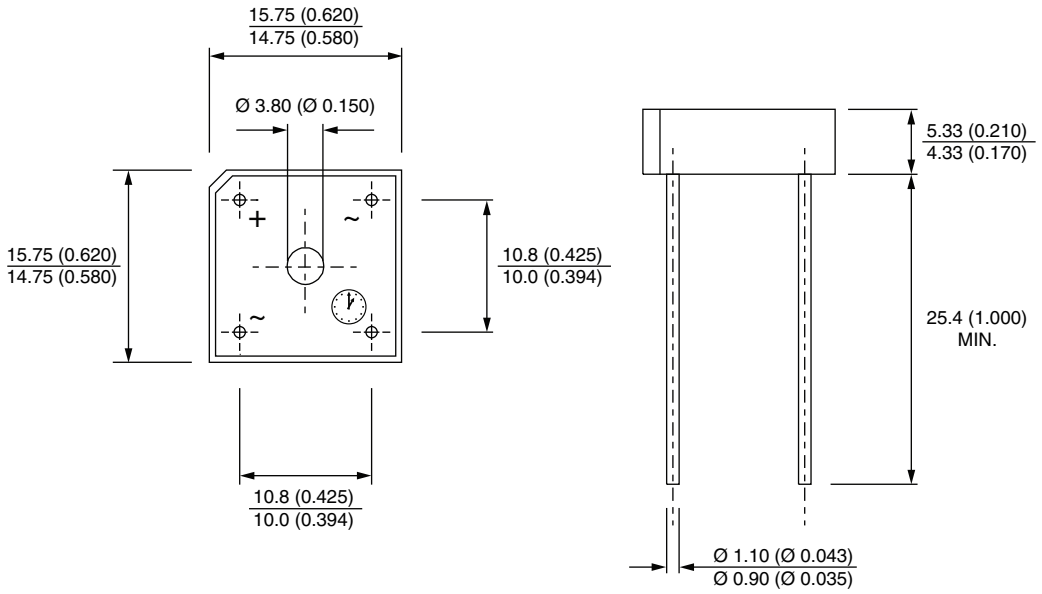
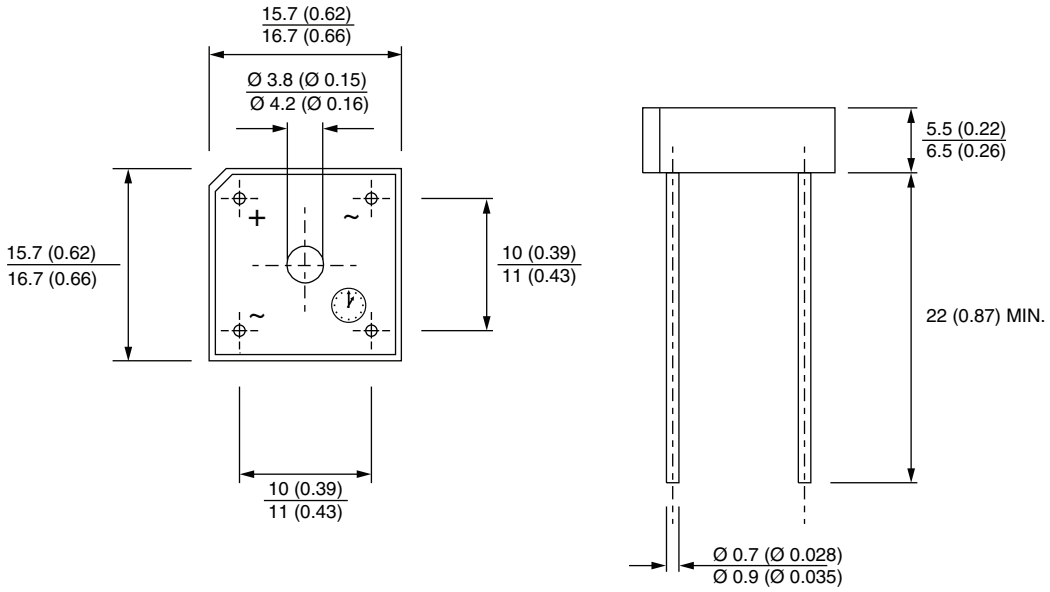
DIMENSIONS in millimeters (inches): **KBPC6, KBPC8**



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



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