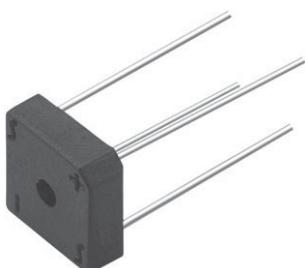


Single Phase Rectifier Bridge, 8 A



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	°C
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	$T_C = 50^\circ\text{C}$, resistive or inductive load		8.0	A	
		$T_C = 50^\circ\text{C}$, capacitive load		6.4		
Maximum peak one cycle, non-repetitive surge current	I_{FSM}	$t = 10\text{ ms}, 20\text{ ms}$	Following any rated load condition and with rated V_{RRM} reapplied	125	A	
		$t = 8.3\text{ ms}, 16.7\text{ ms}$		137		
Maximum I^2t capability for fusing	I^2t	$t = 10\text{ ms}$	Initial $T_J = T_J$ maximum 100 % V_{RRM} reapplied	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	$I^2\sqrt{t}$	$t = 0.1$ to 10 ms, no voltage reapplied		1105	$\text{A}^2\sqrt{\text{s}}$	
Maximum peak forward voltage per diode	V_{FM}	$I_{FM} = 3.0\text{ A}$, $T_J = 25^\circ\text{C}$		1.0	V	
Typical peak reverse leakage per diode	I_{RM}	$T_J = 25^\circ\text{C}$, 100 % V_{RRM}		10	μA	
		$T_J = 150^\circ\text{C}$, 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.	

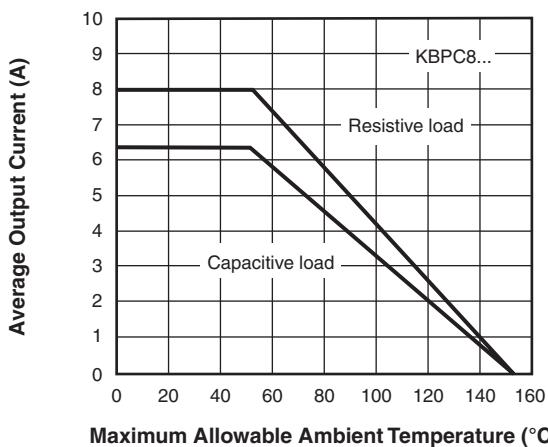


Fig. 1 - Current Ratings

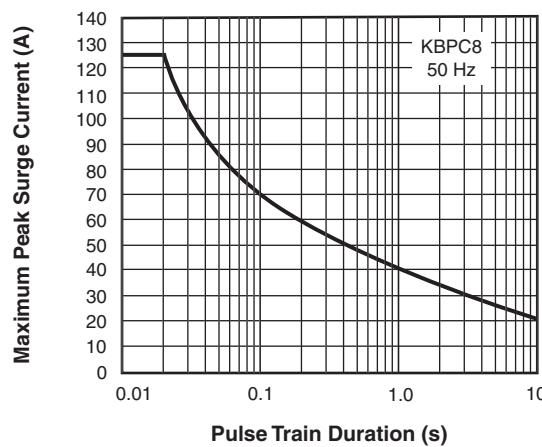
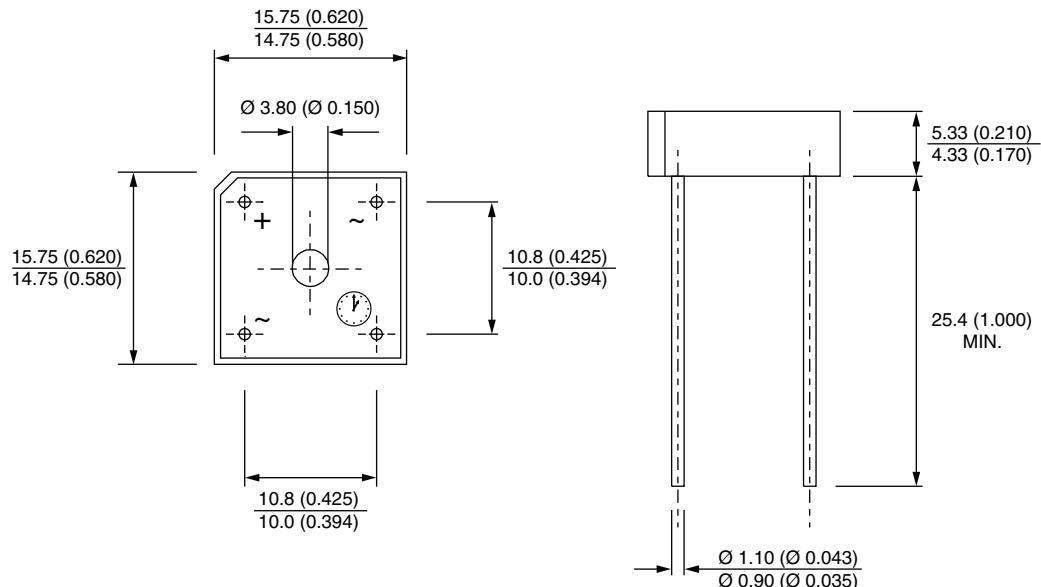


Fig. 2 - Non-Repetitive Surge Ratings

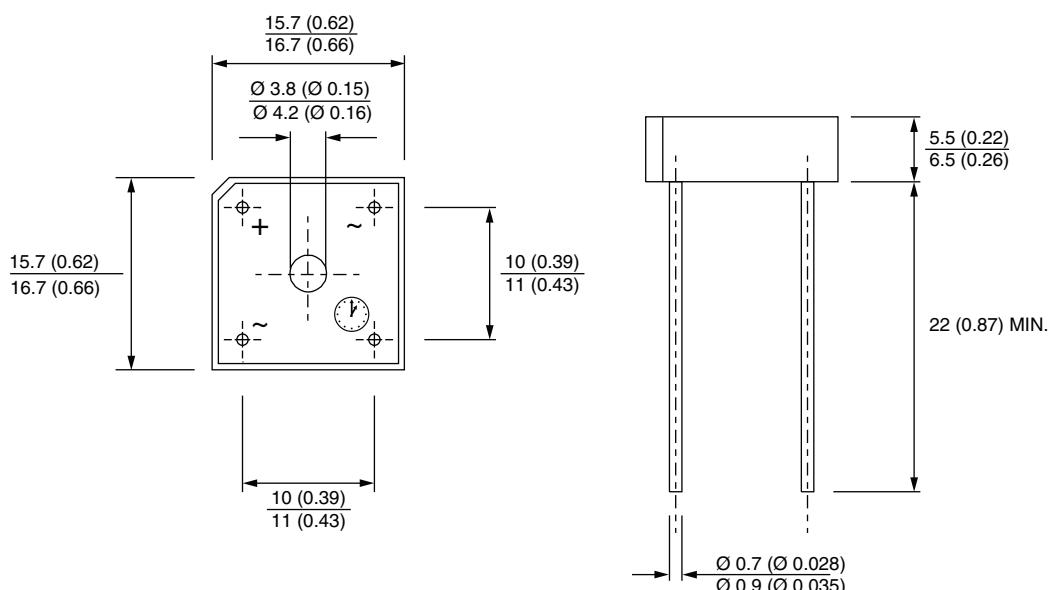
LINKS TO RELATED DOCUMENTS	
Dimensions	www.vishay.com/doc?95250

D-72

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



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



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