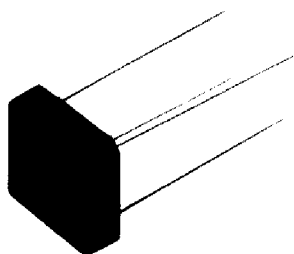


KBPC1, KBPC6 Series

Single Phase Rectifier Bridge, 3 A, 6 A



FEATURES

- Suitable for printed circuit board or chassis mounting
- Compact construction
- High surge current capability

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.

PRODUCT SUMMARY

$I_{O(AV)}$	3.0 A, 6.0 A
V_{RRM}	50 V to 1000 V

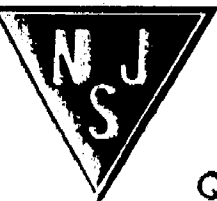
MAJOR RATINGS AND CHARACTERISTICS

SYMBOL	CHARACTERISTICS	KBPC1	KBPC6	UNITS
I_O		3	6	A
I_{FSM}	50 Hz	50	125	A
	60 Hz	55	137	
I^2t	50 Hz	12.5	78	A ² s
	60 Hz	11.4	71	
V_{RRM}	Range	50 to 1000		V
T_J		- 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



NJ Semi-Conductors reserves the right to change test conditions, parameter limits and package dimensions without notice. Information furnished by NJ Semi-Conductors is believed to be both accurate and reliable at the time of going to press. However, NJ Semi-Conductors assumes no responsibility for any errors or omissions discovered in its use. NJ Semi-Conductors encourages customers to verify that datasheets are current before placing orders.

KBPC1, KBPC6 Series

Single Phase Rectifier Bridge, 3 A, 6 A

FORWARD CONDUCTION						
PARAMETER	SYMBOL	TEST CONDITIONS		KBPC1	KBPC6	UNITS
Maximum DC output current	I_o	$T_C = 50^\circ\text{C}$, resistive or inductive load		3.0	6.0	A
		$T_C = 50^\circ\text{C}$, capacitive load		2.4	4.7	
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	50	125	A
		$t = 8.3\text{ ms}, 16.7\text{ ms}$		55	137	
Maximum I^2t capability for fusing	I^2t	$t = 10\text{ ms}$	Initial $T_J = T_J$ maximum 100 % V_{RRM} reapplied	12.5	78	A^2s
		$t = 8.3\text{ ms}$		11.4	71	
		$t = 10\text{ ms}$		17.7	110	
		$t = 8.3\text{ ms}$		16.1	1000	
Maximum $I^2\sqrt{t}$ capability for fusing	$I^2\sqrt{t}$	$t = 0.1\text{ ms to } 10\text{ ms}$, no voltage reapplied		177	1105	$\text{A}^2\sqrt{\text{s}}$
Maximum peak forward voltage per diode	V_{FM}	$I_{FM} = 0.5 \times I_o$, $T_J = 25^\circ\text{C}$		1.1	1.2	V
Typical peak reverse leakage per diode	I_{RM}	$T_J = 25^\circ\text{C}$, 100 % V_{RRM}		10	10	mA
		$T_J = 150^\circ\text{C}$, 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		V

THERMAL AND MECHANICAL SPECIFICATIONS				
PARAMETER	SYMBOL	KBPC1	KBPC6	UNITS
Operating and storage temperature range	T_J, T_{Stg}	- 40 to 150		$^\circ\text{C}$
Thermal resistance, junction to case	R_{thJC}	-	-	K/W
Approximate weight		5	6	g
		0.18	0.21	oz.

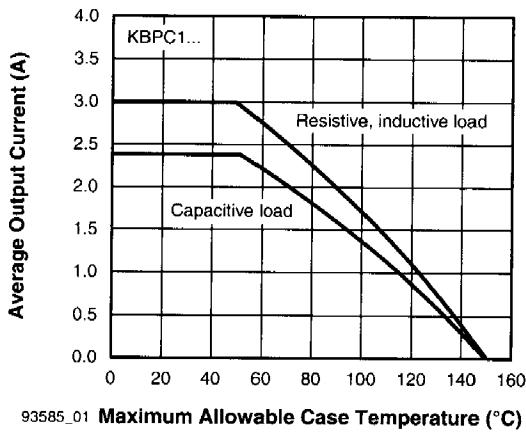


Fig. 1 - Case Temperature Ratings

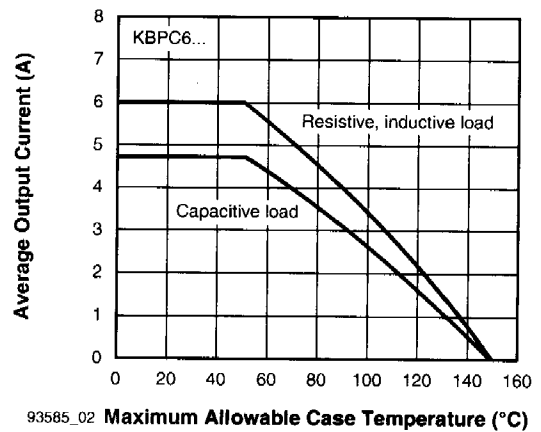


Fig. 2 - Case Temperature Ratings

D-72

DIMENSIONS in millimeters (inches)

