



**THE DATASHEET OF  
VS-KBPC610**



INTERNATIONAL RECTIFIER



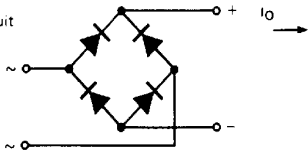
## KBPC1, KBPC6 SERIES

### 3A, 6A single phase rectifier bridges

#### Maximum Ratings

	KBPC1	KBPC6	Units
$I_O$	3	6	A
$I_{FSM}$	50Hz	50	A
	60Hz	55	A
$I^2t$	50Hz	12.5	A <sup>2</sup> s
	60Hz	11.4	A <sup>2</sup> s
$V_{RRM}$	50 to 1000		V

Circuit



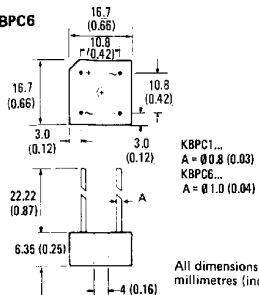
#### Description

3A and 6A single phase encapsulated bridge rectifiers consisting of four single diodes connected as a full bridge. They are suitable for general applications in industrial and consumer equipment.

#### Features

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

#### KBPC1, KBPC6



## Electrical Specifications

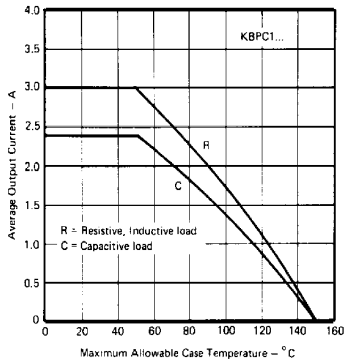
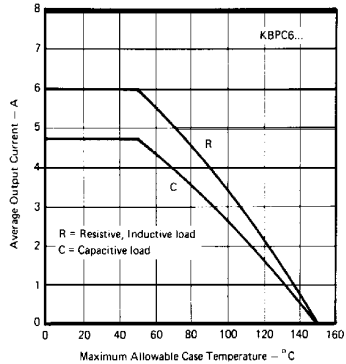
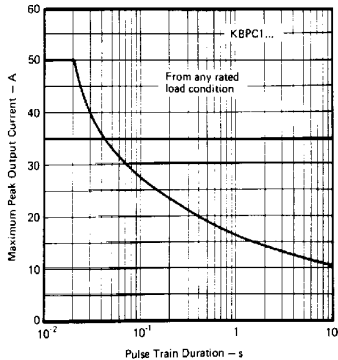
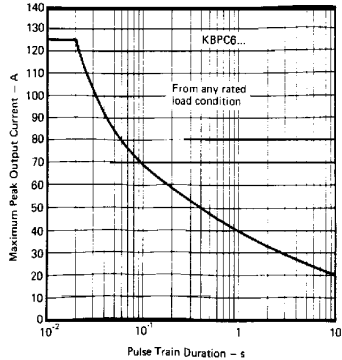
		KBPC1	KBPC6	Units	Conditions
$I_O$	Maximum DC Output current	3.0	6.0	A	$T_C = 50^\circ\text{C}$ , Resistive and inductive load
		2.4	4.7	A	$T_C = 50^\circ\text{C}$ , capacitive load
$I_{FSM}$	Maximum peak one cycle, non-repetitive surge current	50	125	A	$t = 10\text{ms}, 20\text{ms}$ Following any rated load condition and with rated $V_{RRM}$ reapplied
		55	137	A	$t = 8.3\text{ms}, 16.7\text{ms}$
$I^2t$	Maximum $I^2t$ capability for fusing	12.5	78	$A^2s$	$t = 10\text{ms}$ Initial $T_J = T_J \text{ max}$ 100% $V_{RRM}$ reapplied
		11.4	71	$A^2s$	$t = 8.3\text{ms}$
		17.7	110	$A^2s$	$t = 10\text{ms}$ Initial $T_J = T_J \text{ max}$ No voltage reapplied
		16.1	100	$A^2s$	$t = 8.3\text{ms}$
$I^2\sqrt{t}$	Maximum $I^2\sqrt{t}$ capability for fusing	177	1105	$A^2\sqrt{s}$	$t = 0.1$ to $10\text{ms}$ , No voltage reapplied
$V_{FM}$	Maximum peak forward voltage per diode	1.1	1.2	V	$I_{FM} = 0.5 \times I_O$ , $T_J = 25^\circ\text{C}$
$I_{RM}$	Typical peak reverse leakage current per diode	10	10	$\mu\text{A}$	$T_J = 25^\circ\text{C}$
		1.0	1.0	mA	$T_J = 150^\circ\text{C}$ 100% $V_{RRM}$
f	Operating frequency range	40 to 1000		Hz	

## Thermal and Mechanical Specifications

		KBPC1	KBPC6	Units	Conditions
$T_J$	Operating temperature range	-40 to 150		$^\circ\text{C}$	
$T_{stg}$	Storage temperature range	-40 to 150		$^\circ\text{C}$	
W	Approximate weight	5 (0.18)	6 (0.21)	g (oz)	

## Voltage Specifications

Part number		$V_{RRM}$ Maximum repetitive peak reverse voltage	$V_{RSM}$ Maximum non-repetitive peak reverse voltage	$V_{RMS}$ Maximum recommended RMS supply voltage
		V	V	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

**Fig. 1 – Case Temperature Ratings**

**Fig. 2 – Case Temperature Ratings**

**Fig. 3 – Non-Repetitive Surge Ratings**

**Fig. 4 – Non-Repetitive Surge Ratings**


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