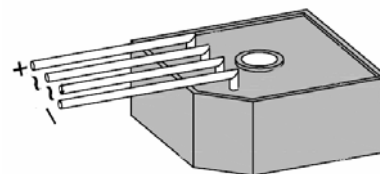


## 50A Single-Phase in-line Bridge Rectifier

### Features

- Low Forward Voltage Drop
- High Current Capability, High Reliability
- High Surge Current Capability
- Designed for Saving Mounting Space
- RoHS Compliant



**KBPCS**  
(Plastic Case with Metal Heat Sink)



### Mechanical Data

<b>Case:</b>	KBPCS, molded plastic with heatsink internally mounted in the bridge encapsulation
<b>Terminals:</b>	Plated leads solderable per MIL-STD-202, method 208
<b>Polarity:</b>	As marked on body
<b>Mounting:</b>	Through hole with #10 screw
<b>Mounting Torque:</b>	23 cm-kg (20 in-lbs) Max.
<b>Weight:</b>	21grams

### Maximum Ratings And Electrical Characteristics ( $T_{amb}=25^{\circ}C$ )

Symbol	Description	KBPC50-005S	KBPC50-01S	KBPC50-02S	KBPC50-04S	KBPC50-06S	KBPC50-08S	KBPC50-10S	Unit	Conditions
<b>V<sub>RRM</sub></b>	Max. Repetitive Peak Reverse Voltage	50	100	200	400	600	800	1000	V	
<b>V<sub>RMS</sub></b>	Max. RMS Voltage	35	70	140	280	420	560	700	V	
<b>V<sub>DC</sub></b>	Max. DC blocking voltage	50	100	200	400	600	800	1000	V	
<b>I<sub>o</sub></b>	Average Rectified Output Current	50							A	$T_A=60^{\circ}C$
<b>I<sub>FSM</sub></b>	Non-Repetitive Peak Forward Surge Current	450							A	8.3ms single half sine-wave superimposed on rated load (JEDEC method)

# 50A Single-Phase in-line Bridge Rectifier

## KBPC50-005S – KBPC50-10S

Symbol	Description	KBPC50-005S	KBPC50-01S	KBPC50-02S	KBPC50-04S	KBPC50-06S	KBPC50-08S	KBPC50-10S	Unit	Conditions
V <sub>FM</sub>	Forward Voltage per leg					1.1			V	I <sub>o</sub> =25A
I <sub>RM</sub>	Max. Reverse DC Current At Rated DC Blocking Voltage per leg					10			μA	T <sub>C</sub> = 25°C
						500			μA	T <sub>C</sub> = 125°C
I <sup>2</sup> t	Rating for Fusing (t<8.3ms)					800			A <sup>2</sup> s	
C <sub>J</sub>	Typical junction capacitance per leg					400			pF	f=1MHz V <sub>R</sub> = 4V
R <sub>thjc</sub>	Typical Thermal Resistance per leg					1.6			°C / W	Note
V <sub>ISO</sub>	RMS Isolation Voltage from Case to Leads					2500			V	
T <sub>J</sub> ,T <sub>STG</sub>	Operating Junction and Storage Temperature Range					-65 to +150			°C	

**Note:** Thermal Resistance junction to case, mounted on heatsink.

### Typical Characteristics Curves

Fig.1- Forward Current Derating Curve

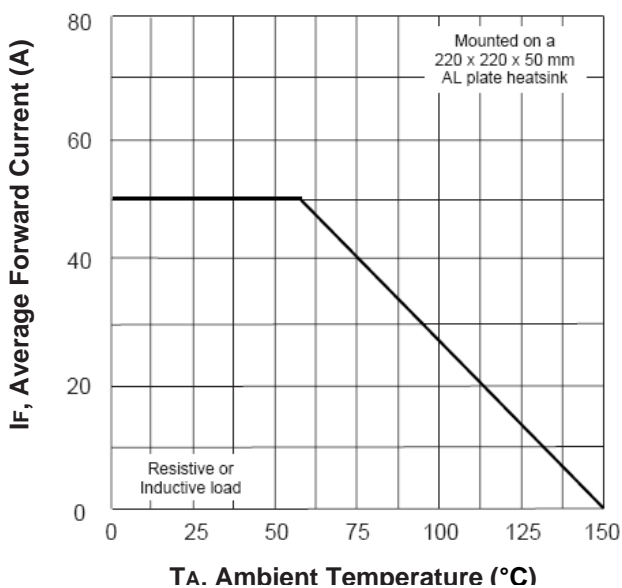
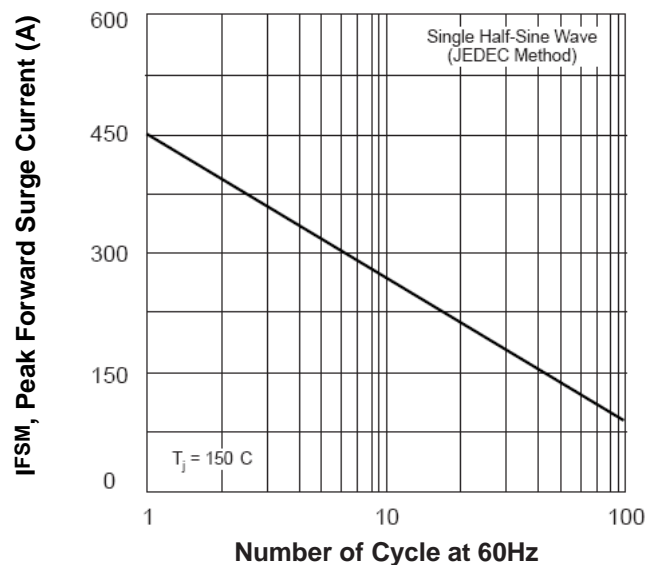


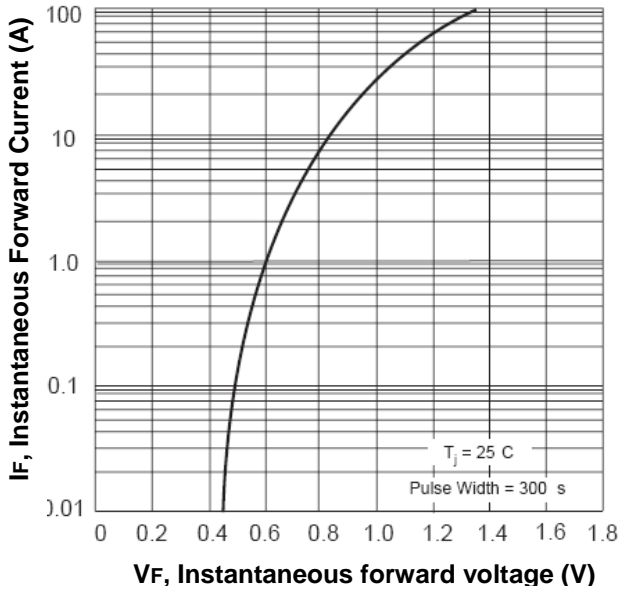
Fig.2-Max. Non-repetitive Peak Forward Surge Current Per Leg



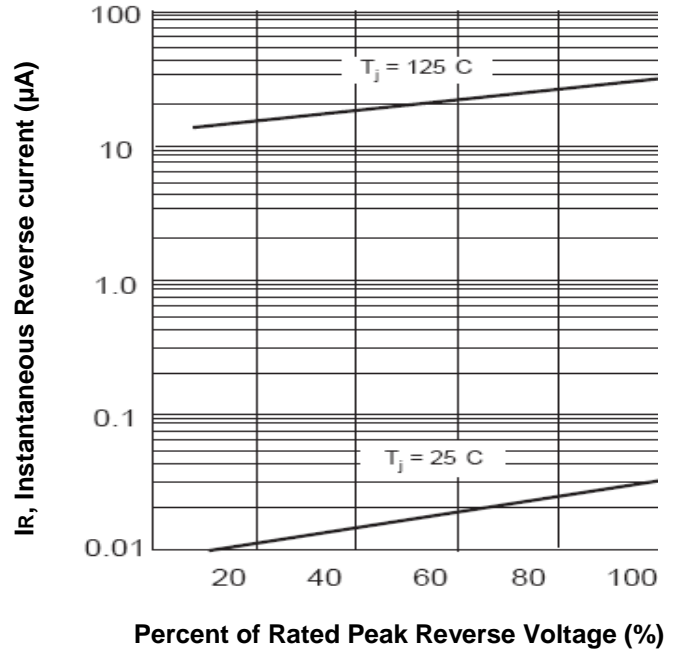
# 50A Single-Phase in-line Bridge Rectifier

## KBPC50-005S – KBPC50-10S

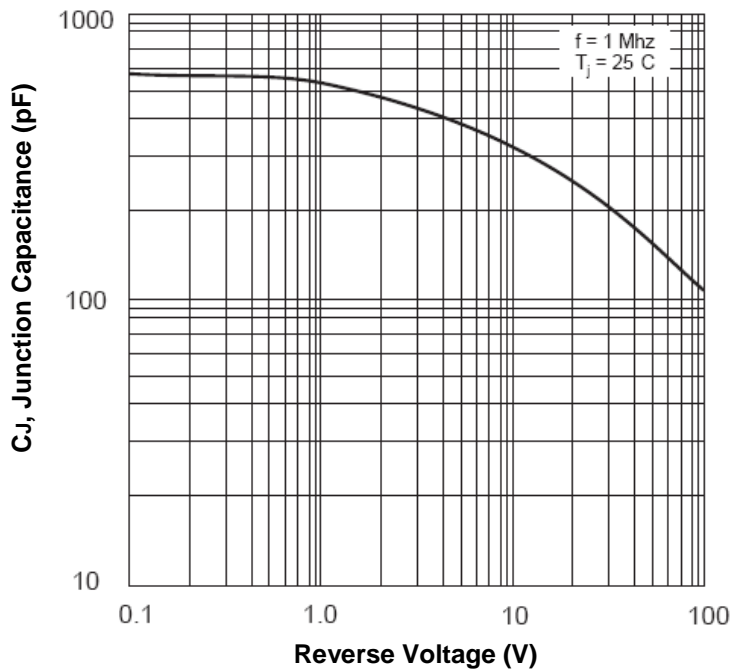
**Fig.3-Typical Instantaneous Forward Characteristic Per Leg**



**Fig.4-Typical Reverse Characteristics Per Leg**



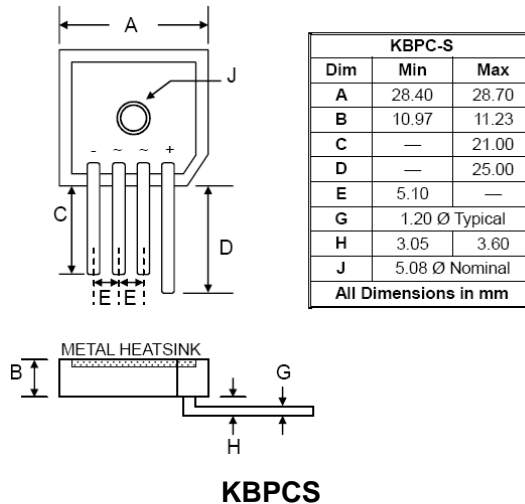
**Fig.5-Typical Junction Capacitance Per Leg**



# 50A Single-Phase in-line Bridge Rectifier

## KBPC50-005S – KBPC50-10S

### Dimensions in inch (mm)



### How to contact us:

#### US HEADQUARTERS

28040 WEST HARRISON PARKWAY, VALENCIA, CA 91355-4162  
Tel: (800) TAITRON (800) 824-8766 (661) 257-6060  
Fax: (800) TAITFAX (800) 824-8329 (661) 257-6415  
Email: [taitron@taitroncomponents.com](mailto:taitron@taitroncomponents.com)  
Http://[www.taitroncomponents.com](http://www.taitroncomponents.com)

#### TAITRON COMPONENTS MEXICO, S.A .DE C.V.

BOULEVARD CENTRAL 5000 INTERIOR 5 PARQUE INDUSTRIAL ATITALAQUIA, HIDALGO C.P.  
42970 MEXICO  
Tel: +52-55-5560-1519  
Fax: +52-55-5560-2190

#### TAITRON COMPONENTS INCORPORATED REPRESENTAÇÕES DO BRASIL LTDA

RUA DOMINGOS DE MORAIS, 2777, 2.ANDAR, SALA 24 SAÚDE - SÃO PAULO-SP 04035-001 BRAZIL  
Tel: +55-11-5574-7949  
Fax: +55-11-5572-0052

#### TAITRON COMPONENTS INCORPORATED, SHANGHAI REPRESENTATIVE OFFICE

CROSS REGION PLAZA, 899 LINLING ROAD, SUITE 18C, SHANGHAI, 200030, CHINA  
Tel: +86-21-5424-9942  
Fax: +86-21-5424-9931