



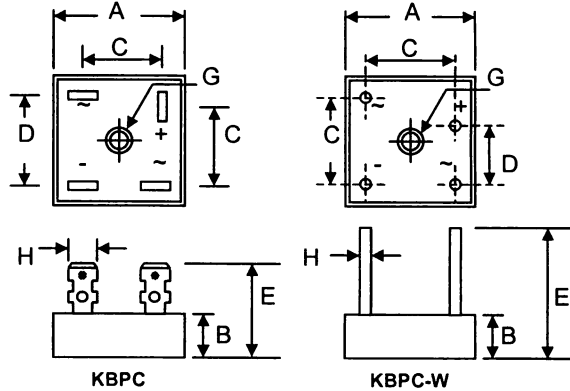
# KBPC25 SERIES



## 25A SINGLE-PHASE BRIDGE RECTIFIER

### Features

- Diffused Junction
- Low Reverse Leakage Current
- Low Power Loss, High Efficiency
- Electrically Isolated Metal Case for Maximum Heat Dissipation
- Case to Terminal Isolation Voltage 2500V



### Mechanical Data

- Case: KBPC (Metal Case with Faston Lugs) or KBPC-W (Metal Case with Wire Leads)
- Terminals: Plated Faston Lugs or Wire Leads, Add "W" Suffix to Indicate Wire Leads
- Polarity: As Marked on Case
- Mounting: Through Hole with #10 Screw
- Mounting Torque: 23 cm·kg (20 in·lbs) Max.
- Weight: 30 grams (KBPC); 28 grams (KBPC-W)
- Marking: Type Number
- Lead Free: For RoHS / Lead Free Version, Add "LF" Suffix to Date Code

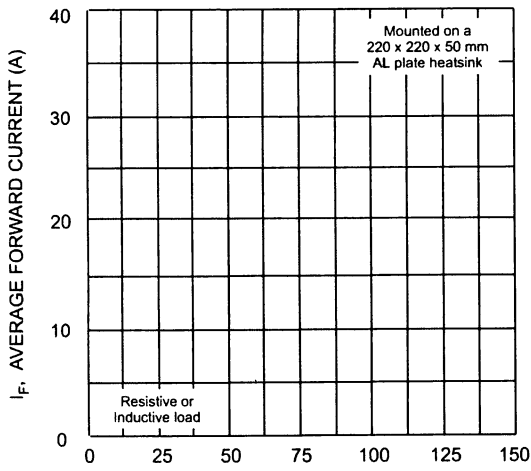
Dim	KBPC		KBPC-W	
	Min	Max	Min	Max
A	27.94	28.96	27.94	28.96
B	10.97	11.23	10.97	11.23
C	15.50	17.60	17.10	19.10
D	17.50	18.50	10.90	11.90
E	22.86	25.40	30.50	—
G	Hole for #10 screw, 5.08Ø Nominal			
H	6.35 Typical		0.97Ø	1.07Ø
All Dimension in mm				

### Maximum Ratings and Electrical Characteristics @T<sub>A</sub>=25°C unless otherwise specified

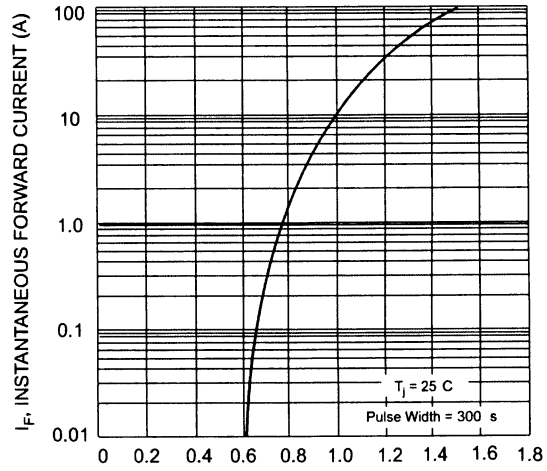
Single Phase, half wave, 60Hz, resistive or inductive load. For capacitive load, derate current by 20%.

Characteristic	Symbol	KBPC25										Unit	
		05	01	02	04	06	08	10	12	14	16		
Peak Repetitive Reverse Voltage	V <sub>RRM</sub>												V
Working Peak Reverse Voltage	V <sub>RWM</sub>	50	100	200	400	600	800	1000	1200	1400	1600		
DC Blocking Voltage	V <sub>R</sub>												
RMS Reverse Voltage	V <sub>R(RMS)</sub>	35	70	140	280	420	560	700	840	980	1120	V	
Average Rectified Output Current @T <sub>A</sub> = 60°C	I <sub>O</sub>	25										A	
Non-Repetitive Peak Forward Surge Current 8.3ms Single half sine-wave superimposed on rated load (JEDEC Method)	I <sub>FSM</sub>	300										A	
Forward Voltage per leg @I <sub>F</sub> = 12.5A	V <sub>FM</sub>	1.2										V	
Peak Reverse Current @T <sub>C</sub> = 25°C	I <sub>RM</sub>	10										µA	
At Rated DC Blocking Voltage @T <sub>C</sub> = 125°C		1.0											
I <sup>2</sup> t Rating for Fusing (t < 8.3ms)	I <sup>2</sup> t	373										A <sup>2</sup> s	
Typical Junction Capacitance (Note 1)	C <sub>j</sub>	300										pF	
Typical Thermal Resistance per leg (Note 2)	R <sub>θJC</sub>	2.6										°C/W	
RMS Isolation Voltage from Case to Leads	V <sub>ISO</sub>	2500										V	
Operating and Storage Temperature Range	T <sub>j</sub> , T <sub>STG</sub>	-65 to +150										°C	

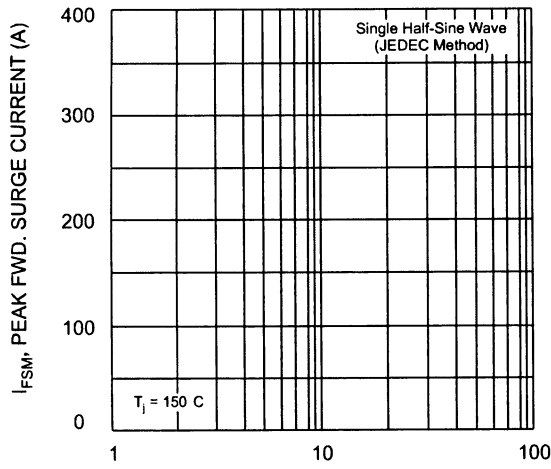
Note: 1. Measured at 1.0 MHz and applied reverse voltage of 4.0V D.C.  
 2. Thermal resistance junction to case, mounted on heatsink.



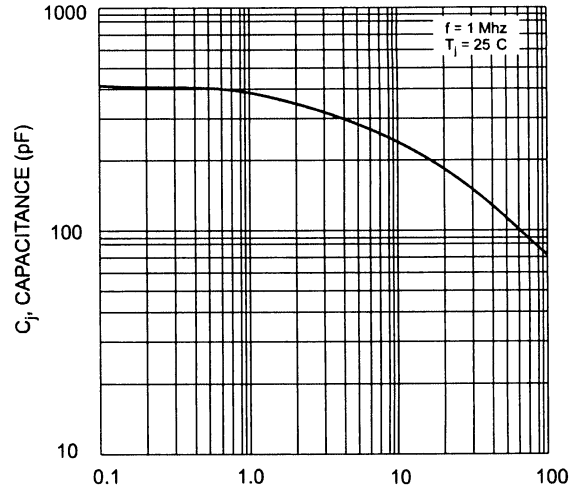
$T_A$ , AMBIENT TEMPERATURE ( C )  
Fig. 1 Forward Current Derating Curve



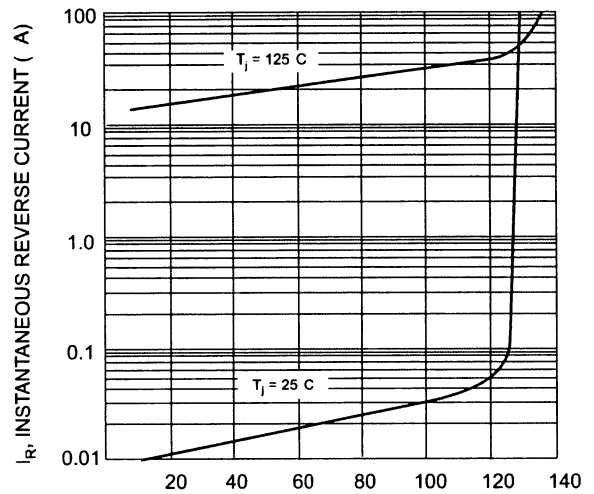
$V_F$ , INSTANTANEOUS FORWARD VOLTAGE ( V )  
Fig. 2 Typical Forward Characteristics (per element)



NUMBER OF CYCLES AT 60 Hz  
Fig. 3 Max Non-Repetitive Surge Current



$V_R$ , REVERSE VOLTAGE ( V )  
Fig. 4 Typical Junction Capacitance (per element)



PERCENT OF RATED PEAK REVERSE VOLTAGE ( % )  
Fig. 5 Typical Reverse Characteristics (per element)