

Single-Phase Bridge Rectifier 50.0A KBPC Package

KBPC50 Series

MERITEK

FEATURE

- Operating Temperature: -55 ~ +150°C
- Average Forward Rectified Output Current 50.0A
- Repetitive Reverse Voltage from 50~1000V
- Surge Overload Ratings to 400A
- Electrically Isolated Metal Case for Maximum Heat Dissipation
- Case to Terminal Isolation Voltage 2500V
- Flammability Classification 94V-0
- UL Safety Approved: Certification No: E223027



MAXIMUM RATINGS AND THERMAL CHARACTERISTICS

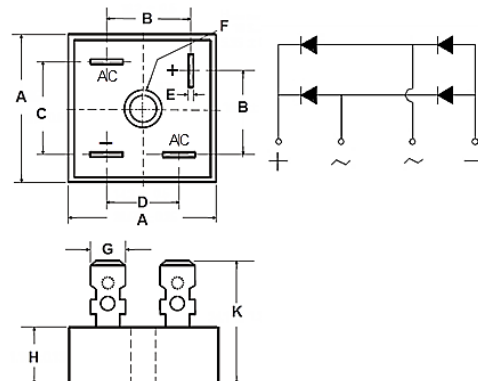


Parameter	Code	KBPC 50005	KBPC 5001	KBPC 5002	KBPC 5004	KBPC 5006	KBPC 5008	KBPC 5010	Unit
Maximum Repetitive Peak Reverse Voltage	V_{RRM}	50	100	200	400	600	800	1000	V
Maximum RMS Bridge Input Voltage	V_{RMS}	35	70	140	280	420	560	700	V
Maximum DC Blocking Voltage	V_{DC}	50	100	200	400	600	800	1000	V
Maximum Average Forward Rectified Output Current	I_F	50, $T_A=40^\circ\text{C}$							A
Peak Forward Surge Current Single Sine-Wave Superimposed on Rated Load (JEDEC Method)	I_{FSM}	400							A
Rating for Fusing ($t < 8.3\text{ms}$)	I^2t	664							A^2sec
Maximum Instantaneous Forward Voltage Drop per Diode	V_F	1.0, $I_F=25\text{A}$							V
Maximum DC Reverse Current at Rated DC Blocking Voltage per Element	I_R	10, $T_A=25^\circ\text{C}$							μA
	I_R	500, $T_A=125^\circ\text{C}$							μA
Isolation Voltage from Case to Leads	V_{IS}	2500							VAC
Operating Junction and Storage Temperature	T_J, T_{STG}	-55~150							$^\circ\text{C}$
Typical Thermal Resistance per Element	$R_{\theta JA}$	2.5							$^\circ\text{C/W}$

- Note:
1. Rating at 25°C ambient temperature unless otherwise specified. Resistive or Inductive load, 60Hz. For Capacitive load derate current by 20%.
 2. Thermal resistance from Junction to Ambient on P.C. board mounting.

DIMENSION AND PIN CONFIGURATION

Item	Min. (mm)	Max. (mm)
A	28.30	28.80
B	15.70	16.70
C	17.60	18.60
D	13.80	14.80
E	0.78	
F	DIA. 5.10	DIA. 5.60
G	6.35	
H	10.97	11.23
K	22.80	25.40



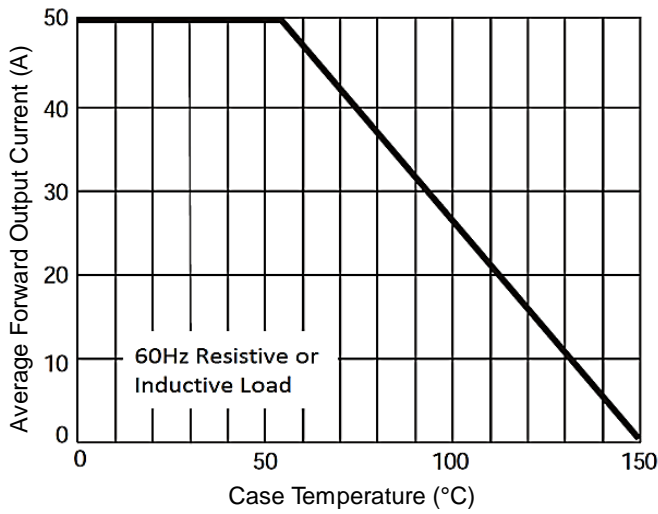
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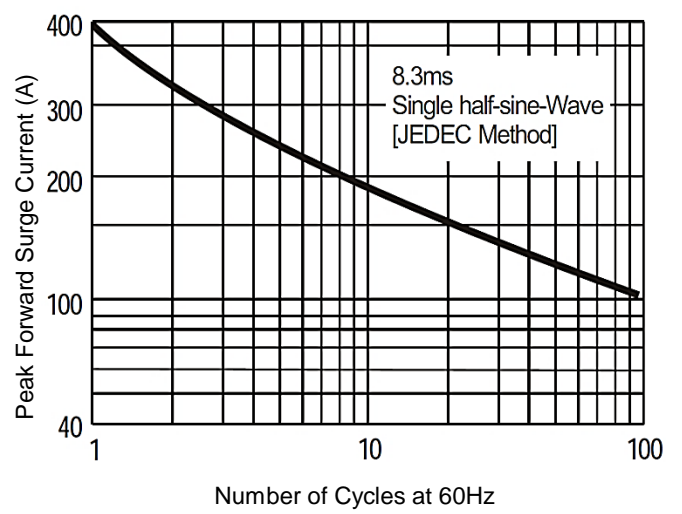
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RATING AND CHARACTERISTIC CURVES

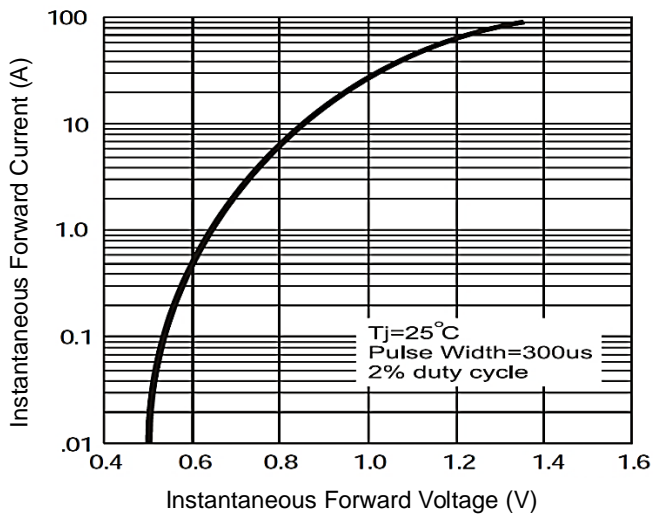
Derating Curve for Output Rectified Current



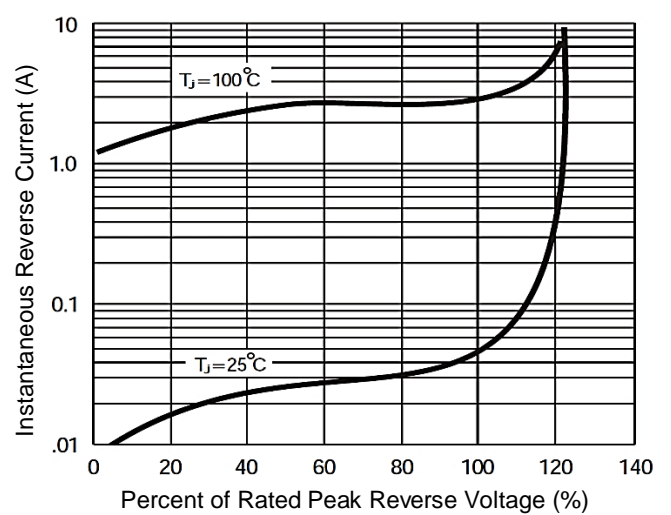
Maximum Non-Repetitive Peak Forward Surge Current



Typical Instantaneous Forward Characteristics



Typical Reverse Characteristics at $T_J = 25^\circ\text{C}$



*Specifications subject to change without notice.