KBPC25005/W - KBPC2510/W

25A BRIDGE RECTIFIER

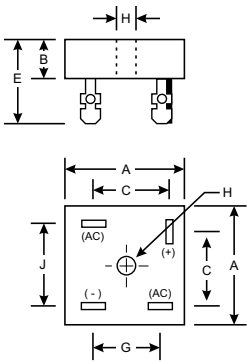
Features

- Diffused Junction
- Low Reverse Leakage Current
- Low Power Loss, High Efficiency
- Surge Overload Rating to 400A Peak
- Electrically Isolated Metal Case for Maximum Heat Dissipation
- Case to Terminal Isolation Voltage 1500V
- UL Listed: Recognized Component Index, File Number E95060

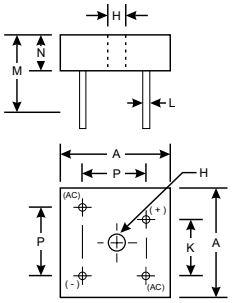
Mechanical Data

- Case: High Conductivity Metal
- Terminals: Plated Leads Solderable per MIL-STD-202, Method 208
- Polarity: Symbols Marked on Case
- Mounting: Through Hole for #10 Screw
- Mounting Torque: 8.0 Inch-pounds Maximum
- Weight: KBPC 31.6 grams (approx)
- KBPC-W 28.5 grams (approx)
- Mounting Position: Any
- Marking: Type Number

KBPC



KBPC-W



KBPC / KBPC-W		
Dim	**Min**	**Max**
A	28.40	28.70
B	10.97	11.23
C	15.50	17.60
E	22.86	25.40
G	13.30	15.30
H	Hole for #10 screw	
	4.85∅	5.59∅
J	17.10	19.10
K	10.40	12.40
L	0.97∅	1.07∅
M	30.50	—
N	10.97	11.23
P	17.10	19.10
All Dimensions in mm		

"W" Suffix Designates Wire Leads
No Suffix Designates Fast-on Terminals

Maximum Ratings and Electrical Characteristics

@ T_A = 25°C unless otherwise specified

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

Characteristic	Symbol	KBPC25 005/W	KBPC25 01/W	KBPC25 02/W	KBPC25 04/W	KBPC25 06/W	KBPC25 08/W	KBPC25 10/W	Unit
Peak Repetitive Reverse Voltage Working Peak Reverse Voltage DC Blocking Voltage	V_{RRM} V_{RWM} V_R	50	100	200	400	600	800	1000	V
RMS Reverse Voltage	$V_{R(RMS)}$	35	70	140	280	420	560	700	V
Average Rectified Output Current @ T_C = 55°C	I_O	25							A
Non-Repetitive Peak Forward Surge Current 8.3ms single half sine-wave superimposed on rated load (JEDEC Method)	I_{FSM}	400							A
Forward Voltage (per element) @ I_F = 12.5A	V_{FM}	1.2							V
Peak Reverse Current @ T_C = 25°C at Rated DC Blocking Voltage @ T_C = 125°C	I_{RM}	10 1.0							μA mA
I^2t Rating for Fusing (t<8.3ms) (Note 3)	I^2t	373							A^2s
Typical Junction Capacitance (Note 2)	C_j	300							pF
Typical Thermal Resistance Junction to Case	$R_{\theta JC}$	3.8							K/W
Operating and Storage Temperature Range	T_j, T_{STG}	-65 to +150							°C

Notes: 1. Thermal resistance junction to case mounted on heatsink.
2. Measured at 1.0MHz and applied reverse voltage of 4.0V DC.
3. Measured at non-repetitive, for t > 1.0ms and < 8.3ms.

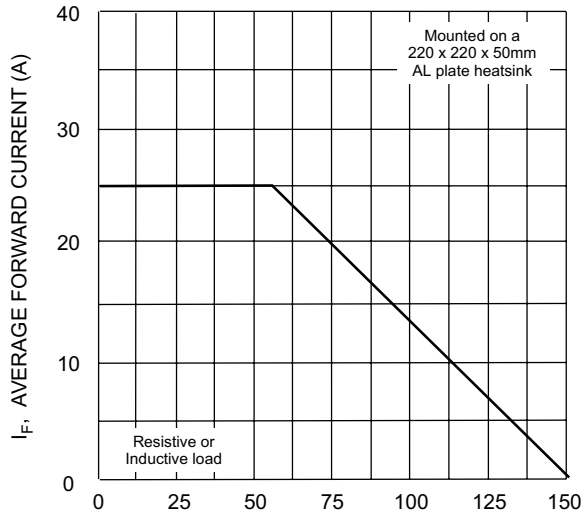


Fig. 1 Forward. Current Derating Curve.

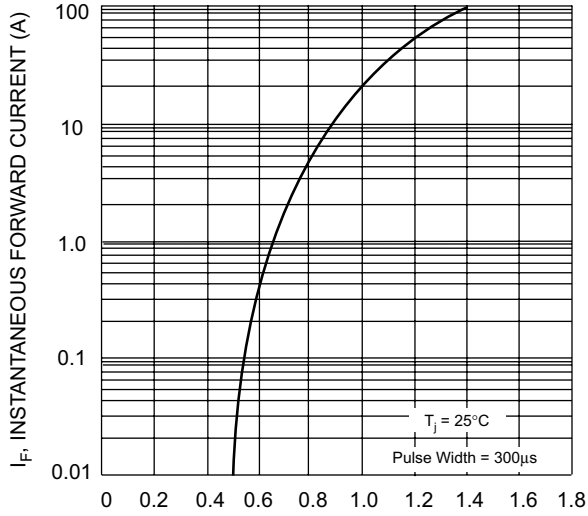


Fig. 2 Typical Forward Characteristics (per element)

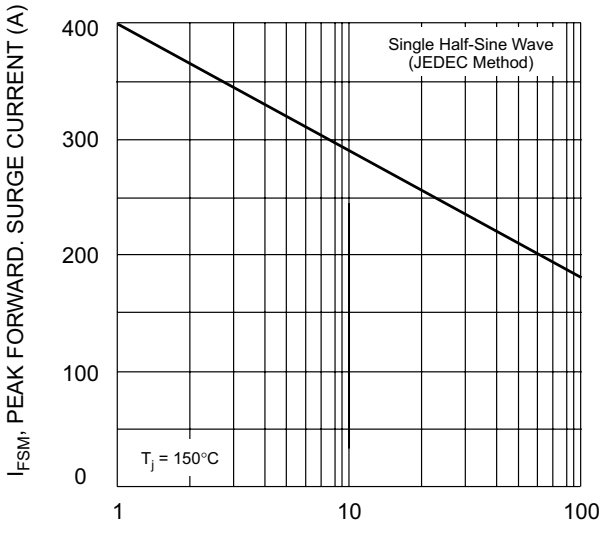


Fig. 3 Maximum Non-Repetitive Surge Current

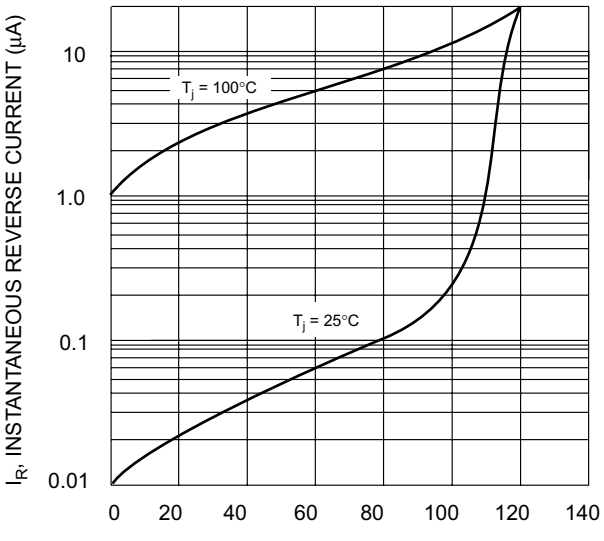


Fig. 4 Typical Reverse Characteristics (per element)