WON-TOP ELECTRONICS

KBPC50P SERIES

50A SINGLE PHASE BRIDGE RECTIFIER

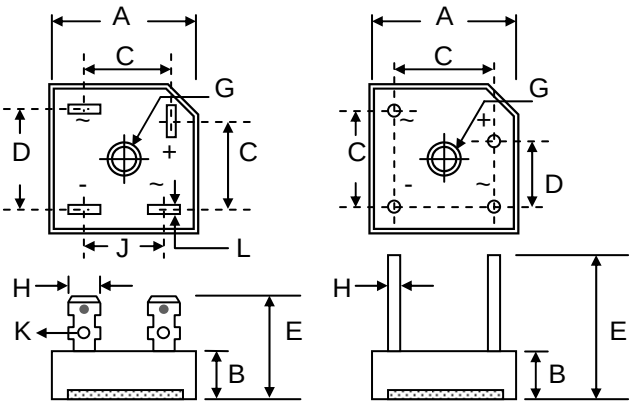
RoHS Pb

Features

- Diffused Junction
- Low Reverse Leakage Current
- Low Power Loss, High Efficiency
- Heatsink Integrated Epoxy Case for Maximum Heat Dissipation
- Low Thermal Resistance
- High Surge Current Capability
- Recognized File # E157705

Mechanical Data

- Case: Epoxy Case with Heatsink, Available in Both Low Profile and Standard Case Height
- 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: 2.0 N.m Max.
- Weight: 21 grams (KBPC-P); 18 grams (KBPC-PW)
- Marking: Type Number
- **Lead Free: For RoHS / Lead Free Version, Add "-LF" Suffix to Part Number, See Page 4**



	KBPC-P Low Profile / Standard		KBPC-PW Low Profile / Standard	
Dim	**Min**	**Max**	**Min**	**Max**
A	28.20	28.80	28.20	28.80
B	7.50 / 10.77	8.50 / 11.23	7.50 / 10.77	8.50 / 11.23
C	15.30	17.30	17.10	19.10
D	17.10	19.10	10.40	12.40
E	19.00 / 21.50	—	30.50	—
G	Hole for #10 screw, 5.08Ø Nominal			
H	6.35 Typical		0.97Ø	1.07Ø
J	13.20	15.20		
K	2.5Ø Typical			
L	0.71	0.91		
All Dimension in mm				

Maximum Ratings and Electrical Characteristics @T_A=25°C unless otherwise specified

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

Characteristic	Symbol	KBPC50								Unit
		00P	01P	02P	04P	06P	08P	10P	12P	
Peak Repetitive Reverse Voltage Working Peak Reverse Voltage DC Blocking Voltage	V_{RRM} V_{RWM} V_R	50	100	200	400	600	800	1000	1200	V
RMS Reverse Voltage	$V_{R(RMS)}$	35	70	140	280	420	560	700	840	V
Average Rectified Output Current @T_C = 55°C	I_O	50								A
Non-Repetitive Peak Forward Surge Current 8.3ms Single Half Sine-Wave Superimposed on Rated Load (JEDEC Method)	I_{FSM}	500								A
Forward Voltage per leg @I_F = 25A	V_{FM}	1.1								V
Peak Reverse Current @T_C = 25°C At Rated DC Blocking Voltage @T_C = 125°C	I_{RM}	10 500								μA
I^2t Rating for Fusing (t < 8.3ms)	I^2t	800								A^2s
Typical Junction Capacitance (Note 1)	C_J	300								pF
Typical Thermal Resistance (Note 2)	$R_{\theta JC}$	1.4								°C/W
RMS Isolation Voltage, t = 1min	V_{ISO}	2500								V
Operating and Storage Temperature Range	T_J, T_{STG}	-55 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 394 x 114 x 114mm Al. heatsink.

WON-TOP ELECTRONICS

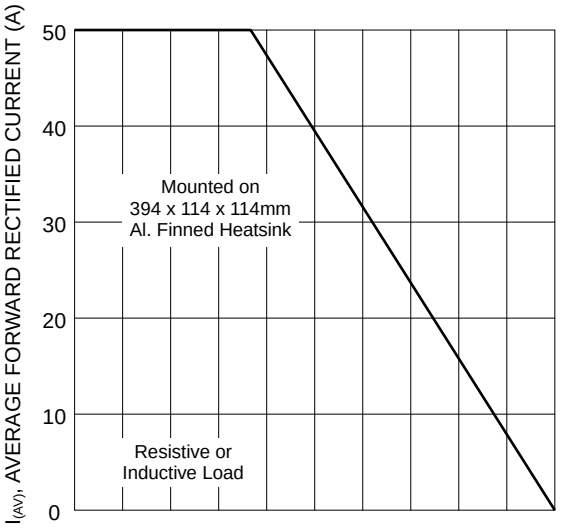


Fig. 1 Forward Current Derating Curve

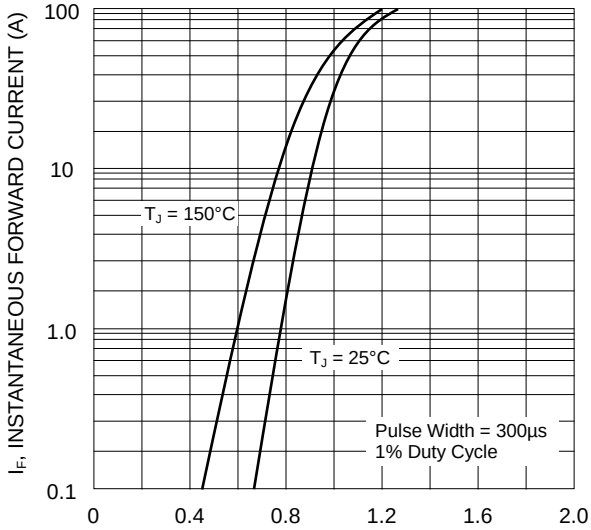


Fig. 2 Typical Forward Characteristics

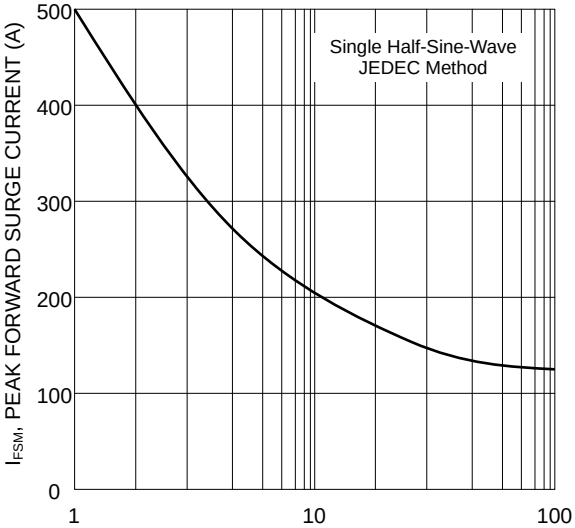


Fig. 3 Forward Surge Current Derating Curve

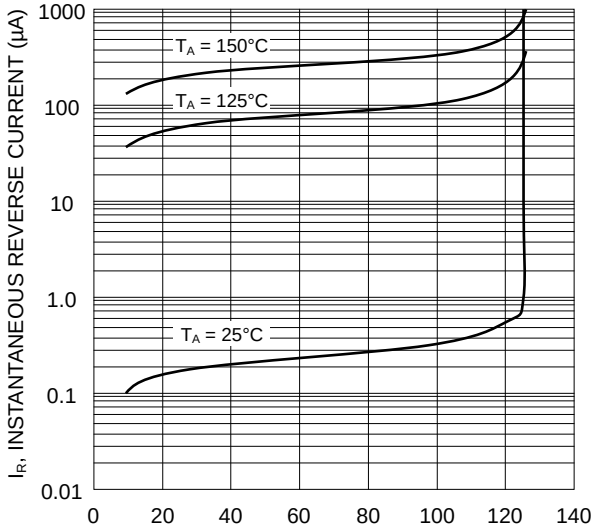


Fig. 4 Typical Reverse Characteristics

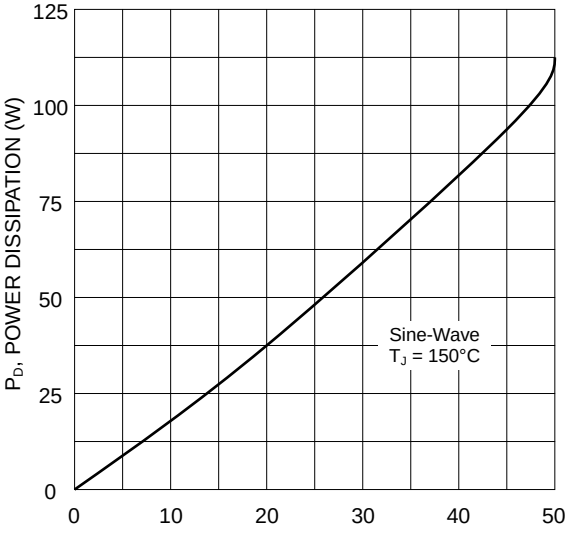


Fig. 5 Forward Power Dissipation

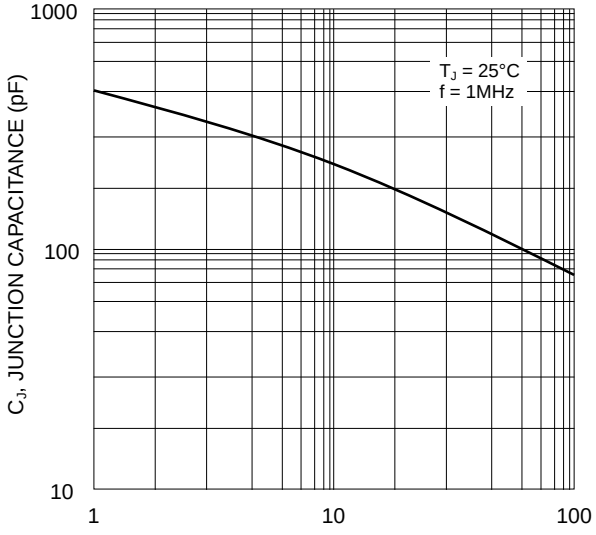
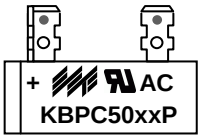


Fig. 6 Typical Junction Capacitance

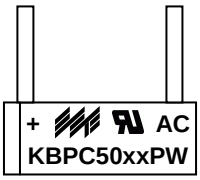
MARKING INFORMATION

KBPC-P



KBPC50xxP = Device Number
xx = 00, 01, 02, 04, 06, 08, 10 or 12
Polarity = As Marked on Body

KBPC-PW



KBPC50xxPW = Device Number
xx = 00, 01, 02, 04, 06, 08, 10 or 12
Polarity = As Marked on Body

PACKAGING INFORMATION

BULK

Case Style	Inner Box Size L x W x H (mm)	Quantity (PCS)	Carton Size L x W x H (mm)	Quantity (PCS)	Approx. Gross Weight (KG)
KBPC-P	195 x 195 x 40	50	405 x 205 x 240	500	12.0
KBPC-PW	195 x 195 x 40	50	405 x 205 x 240	500	11.0

Note: 1. Paper box, white or brown color.

WON-TOP ELECTRONICS

ORDERING INFORMATION

Product No.	Package Type	Shipping Quantity
KBPC50xxP	Square Bridge	50 Units/Box
KBPC50xxPW	Square Bridge	50 Units/Box

1. Shipping quantity given is for minimum packing quantity only. For minimum order quantity, please consult the Sales Department.
2. **To order RoHS / Lead Free version (with Lead Free finish), add "-LF" suffix to part number above. For example, KBPC5000P-LF**.

Won-Top Electronics Co., Ltd.
No. 44 Yu Kang North 3rd Road,
Chine Chen Dist., Kaohsiung 806, Taiwan
Phone: 886-7-822-5408 or 886-7-822-5410
Fax: 886-7-822-5417
Email: sales@wontop.com
Internet: http://www.wontop.com

We power your everyday.