WON-TOP ELECTRONICS

KBPC50S SERIES

50A SINGLE PHASE BRIDGE RECTIFIER

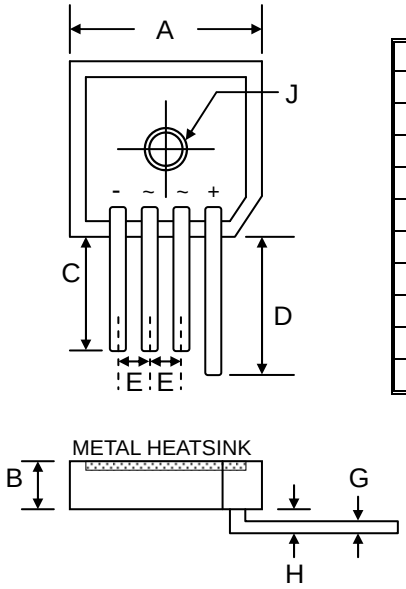
RoHS Pb

Features

- Diffused Junction
- Low Forward Voltage Drop
- High Current Capability
- Low Thermal Resistance
- High Surge Current Capability
- Vertical Mount Ideally Suited for Space Constrained Applications
- Recognized File # E157705

Mechanical Data

- Case: Epoxy Case with Heatsink Internally Mounted in the Bridge Encapsulation
- Terminals: Plated Leads Solderable per MIL-STD-202, Method 208
- Polarity: As Marked on Body
- Mounting: Through Hole with #10 Screw
- Mounting Torque: 2.0 N.m Max.
- Weight: 21 grams (approx.)
- Marking: Type Number
- **Lead Free: For RoHS / Lead Free Version, Add "-LF" Suffix to Part Number, See Page 4**



KBPC-S		
Dim	**Min**	**Max**
A	28.30	28.80
B	10.77	11.23
C	13.90	—
D	19.00	—
E	4.60	5.60
G	1.20 Ø Typical	
H	3.05	3.60
J	5.08 Ø Nominal	
All Dimensions 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
		00S	01S	02S	04S	06S	08S	10S	12S	
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.

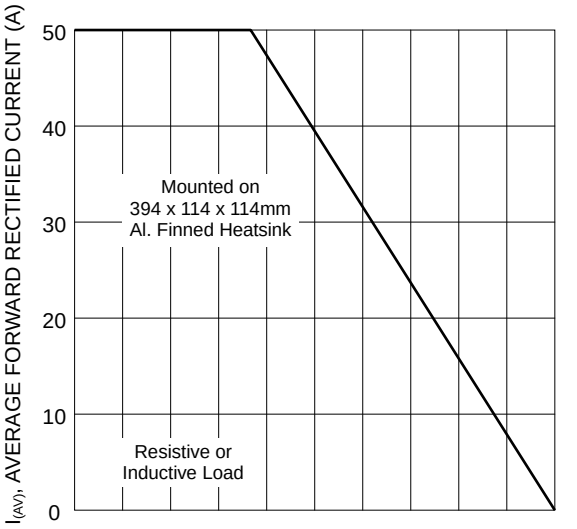


Fig. 1 Forward Current Derating Curve

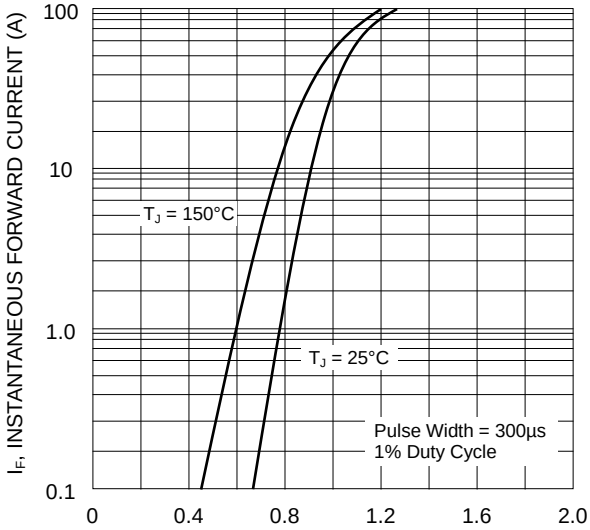


Fig. 2 Typical Forward Characteristics

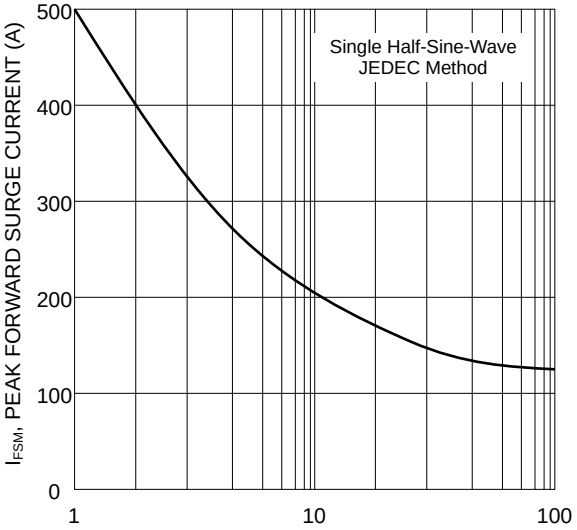


Fig. 3 Forward Surge Current Derating Curve

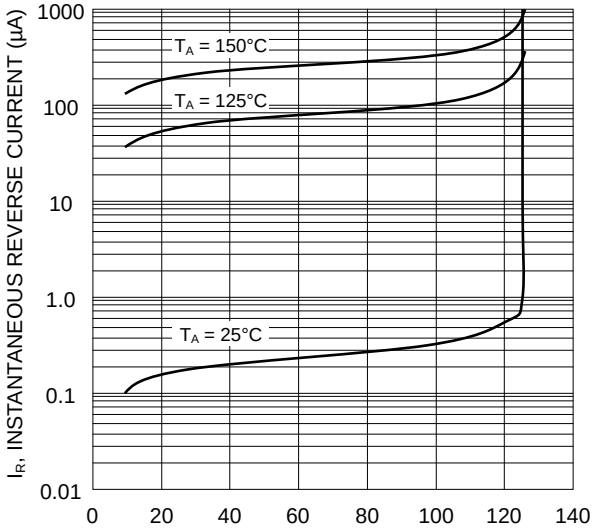


Fig. 4 Typical Reverse Characteristics

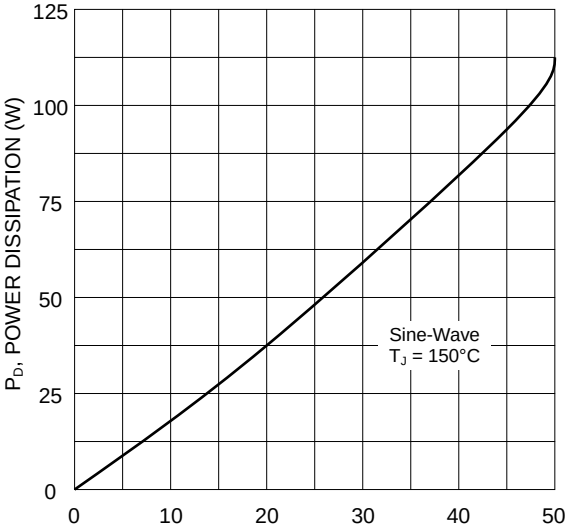


Fig. 5 Forward Power Dissipation

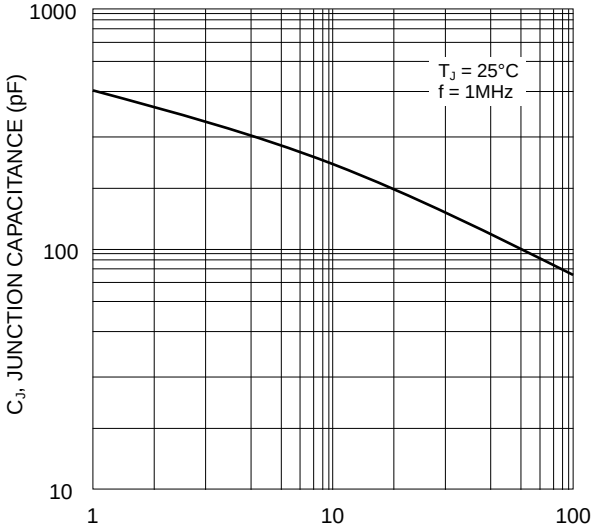
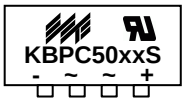


Fig. 6 Typical Junction Capacitance

MARKING INFORMATION



KBPC50xxS = Device Number
xx = 00, 01, 02, 04, 06, 08, 10 or 12
Polarity = As Marked on Body

PACKAGING INFORMATION

BULK

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)
195 x 195 x 40	78	405 x 205 x 240	780	17.0

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

WON-TOP ELECTRONICS

ORDERING INFORMATION

Product No.	Package Type	Shipping Quantity
KBPC50xxS	SIL Bridge	78 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, KBPC5000S-LF**.

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