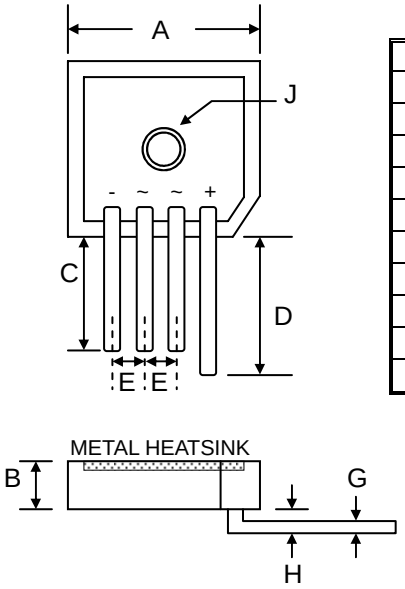
GBPC50S SERIES

50A GLASS PASSIVATED HIGH CURRENT SINGLE-PHASE BRIDGE RECTIFIER

Features

- Glass Passivated Die Construction
- Low Forward Voltage Drop
- High Current Capability
- High Reliability
- High Surge Current Capability
- Designed for Saving Mounting Space
- Recognized File # E157705



KBPC-S		
Dim	**Min**	**Max**
A	28.40	28.70
B	10.97	11.23
C	—	21.00
D	—	25.00
E	5.10	—
G	1.20 Ø Typical	
H	3.05	3.60
J	5.08 Ø Nominal	
All Dimensions in mm		

Mechanical Data

- Case: KBPC-S, Molded Plastic 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: 23 cm-kg (20 in-lbs) Max.
- Weight: 21 grams (approx.)
- Marking: Type Number
- **Lead Free: For RoHS / Lead Free Version, Add "-LF" Suffix to Part Number, See Page 4**

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	GBPC50										Unit
		00S	01S	02S	04S	06S	08S	10S	12S	14S	16S	
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	1400	1600	V
RMS Reverse Voltage	$V_{R(RMS)}$	35	70	140	280	420	560	700	840	980	1120	V
Average Rectified Output Current @T_C = 50°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}	450										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}	5.0 500										µA
I^2t Rating for Fusing (t < 8.3ms)	I^2t	800										A^2s
Typical Junction Capacitance (Note 1)	C_j	400										pF
Typical Thermal Resistance per leg (Note 2)	$R_{\theta JC}$	1.0										°C/W
RMS Isolation Voltage from Case to Leads	V_{ISO}	2500										V
Operating and Storage Temperature Range	T_j, T_{STG}	-65 to +150										°C

Note: 1. Measured at 1.0 MHz and applied reverse voltage of 4.0V D.C.
2. Mounted on 229 x 152 x 127mm Al. finned plate.

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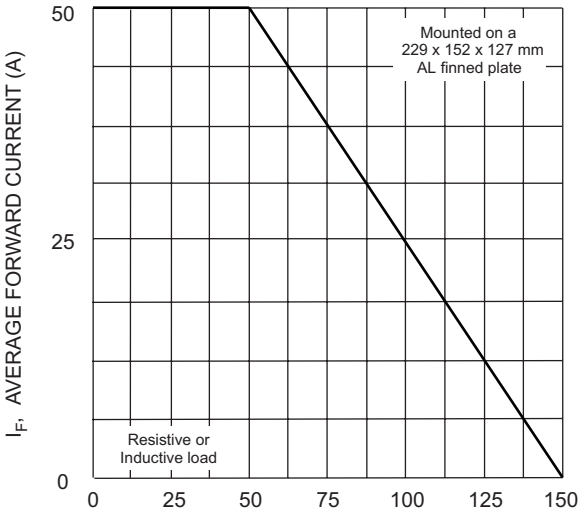

Fig. 1 Forward. Current Derating Curve

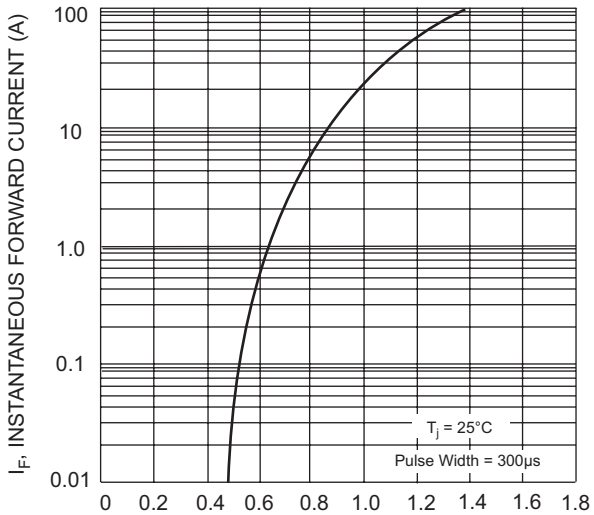

Fig. 2 Typical Forward Characteristics (per element)

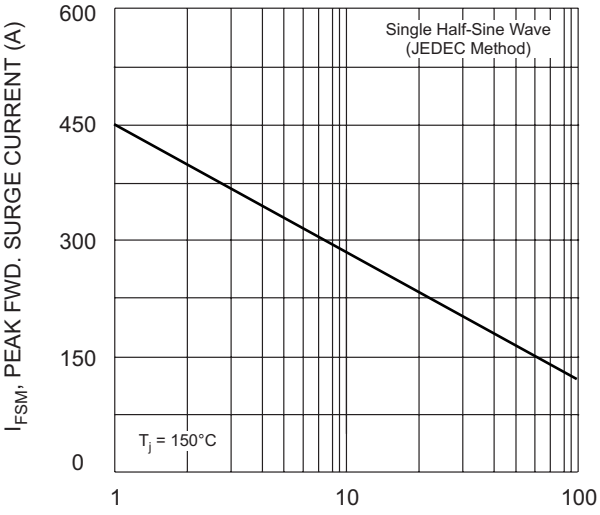

Fig. 3 Max Non-Repetitive Surge Current

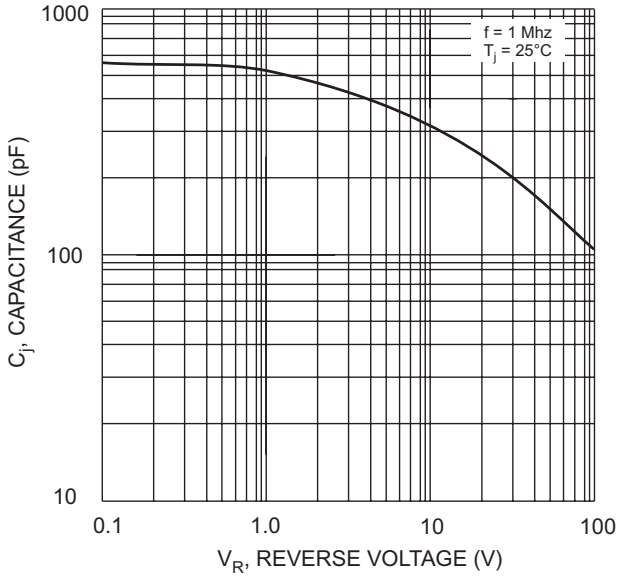

Fig. 4 Typical Junction Capacitance (per element)

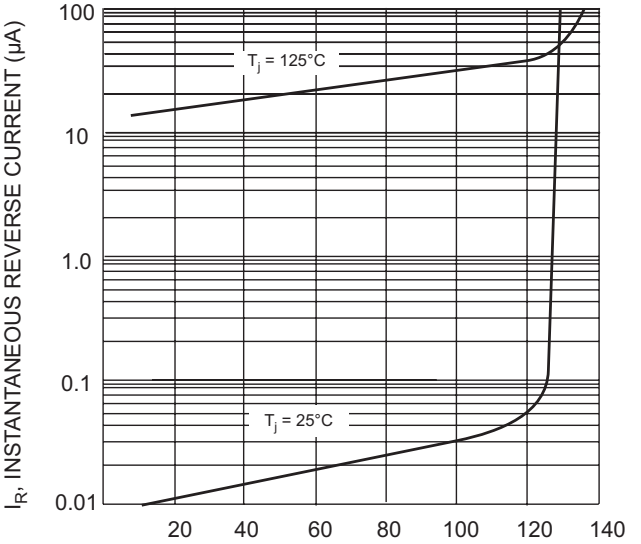

Fig. 5 Typical Reverse Characteristics (per element)

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MARKING INFORMATION

WTE = Manufacturer's Logo
GBPC50xxS = Device Number
xx = 00, 01, 02, 04, 06, 08, 10, 12, 14 or 16
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.

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ORDERING INFORMATION

Product No.	Package Type	Shipping Quantity
GBPC5000S	SIL Bridge	78 Units/Box
GBPC5001S	SIL Bridge	78 Units/Box
GBPC5002S	SIL Bridge	78 Units/Box
GBPC5004S	SIL Bridge	78 Units/Box
GBPC5006S	SIL Bridge	78 Units/Box
GBPC5008S	SIL Bridge	78 Units/Box
GBPC5010S	SIL Bridge	78 Units/Box
GBPC5012S	SIL Bridge	78 Units/Box
GBPC5014S	SIL Bridge	78 Units/Box
GBPC5016S	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 Lead Free version (with Lead Free finish), add "-LF" suffix to part number above. For example, GBPC5000S-LF.**

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WARNING: DO NOT USE IN LIFE SUPPORT EQUIPMENT. WTE power semiconductor products are not authorized for use as critical components in life support devices or systems without the express written approval.

Won-Top Electronics Co., Ltd.
No. 44 Yu Kang North 3rd Road, Chine Chen Dist., Kaohsiung, 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

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