Single Phase Glass Passivated Fast Recovery Bridge Rectifiers

Reverse Voltage: 50V to 1000V
Forward Current: 4 Amp

Features

- Glass passivated chip junction
- Low forward voltage drop
- Low leakage current
- High forward surge capability
- Solder dip 260℃ max. 10 s, per JESD 22-B106

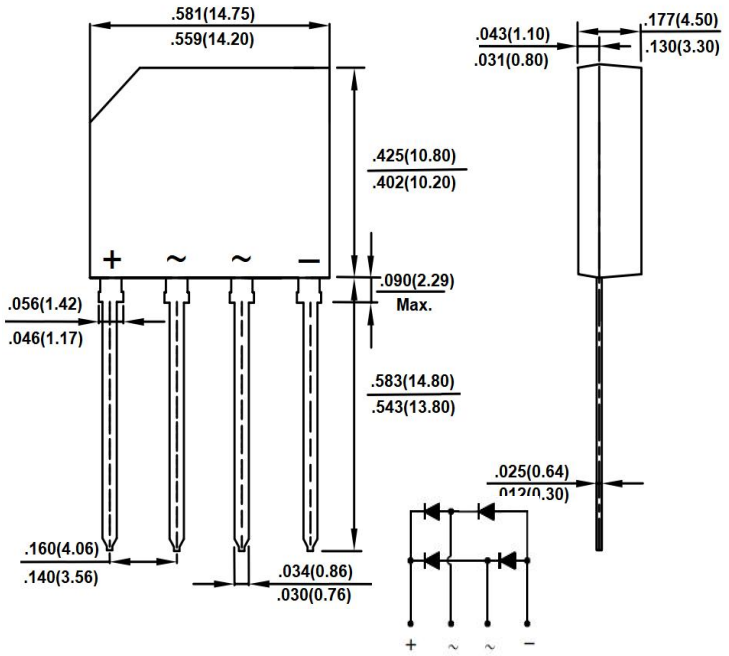
Mechanical Data

- **Package**: GBP
  Molding compound meets UL 94 V-0 flammability rating
- **Terminals**: Matte tin plated leads,
  solderable per MIL-STD-750, Method 2026
- **Polarity**: Symbol marking on body

Typical Applications

General purpose use in AC/DC bridge full wave rectification for monitor, TV, printer, switching mode power supply,adapter, audio equipment, and home appliances applications.

GBP



Package Outline Dimensions in Inches (Millimeters)

Maximum Ratings and Electrical Characteristics (Ta=25℃ Unless otherwise specified)

Parameter&Test Conditions	SYM.	RGBP 4005	RGBP 401	RGBP 402	RGBP 404	RGBP 406	RGBP 408	RGBP 410	Unit
Device marking code		RGBP 4005	RGBP 401	RGBP 402	RGBP 404	RGBP 406	RGBP 408	RGBP 410	
Maximum Recurrent Peak Reverse Voltage	V_{RRM}	50	100	200	400	600	800	1000	V
Maximum RMS 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 Output Rectified Current (FIG.1)	$I_{O(AV)}$	4.0							A
Peak Forward Surge Current 8.3ms Single Half Sine-wave Superimposed On Rated Load	I_{FSM}	110							A
Operating junction range	T_j	-55 to+150							℃
Storage temperature range	T_{STG}	-55 to+150							℃

Thermal Characteristics (Ta=25℃ Unless otherwise specified)

Parameter&Test Conditions	SYM.	RGBP 4005	RGBP 401	RGBP 402	RGBP 404	RGBP 406	RGBP 408	RGBP 410	Unit
Maximum Thermal Resistance per Leg, Junction To Lead (Note 1)	$R_{\theta JL}$	22							℃/W
Maximum Thermal Resistance per Leg, Junction To Ambient (Note 1)	$R_{\theta JA}$	56							℃/W
Maximum Thermal Resistance per Leg, Junction To Case (Note 1)	$R_{\theta JC}$	13							℃/W

Electrical Characteristics (Ta=25℃ Unless otherwise specified)

Parameter&Test Conditions		SYM.	RGBP 4005	RGBP 401	RGBP 402	RGBP 404	RGBP 406	RGBP 408	RGBP 410	Unit
Maximum reverse recovery time	IF=0.5A, IR=-1.0A, IRR=-0.25A	Trr	150				250	500		ns
Maximum Instantaneous Forward Voltage per diode	IF= 2A	V_{FM}	1.3							V
Maximum DC reverse current at rated DC blocking voltage per diode	TA = 25℃	I_R	5							μA
	TA = 125℃		200							

Notes:
1. Units mounted on PCB (10mm x 10mm Cu pad test board).

Rating and Characteristic Curves

FIG. 1- DERATING CURVE OUTPUT RECTIFIED

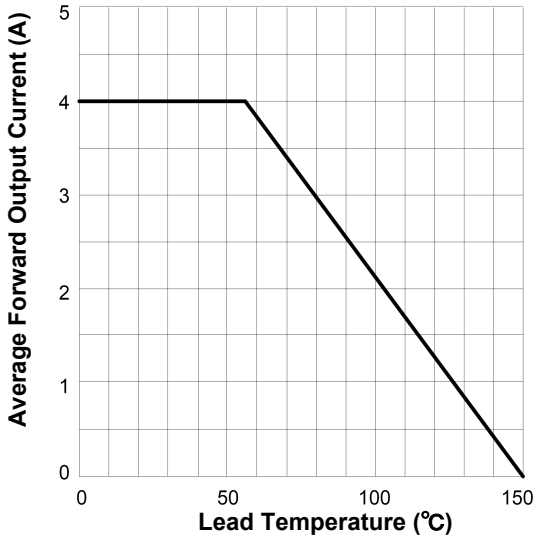


FIG. 2- -MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT Per Diode

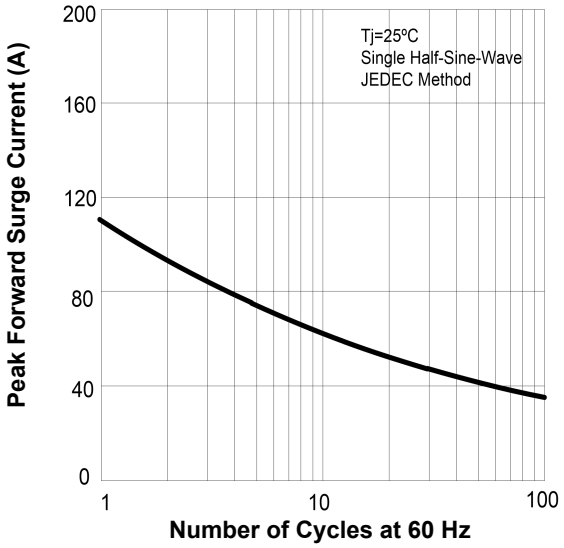


FIG. 3- TYPICAL FORWARD VOLTAGE

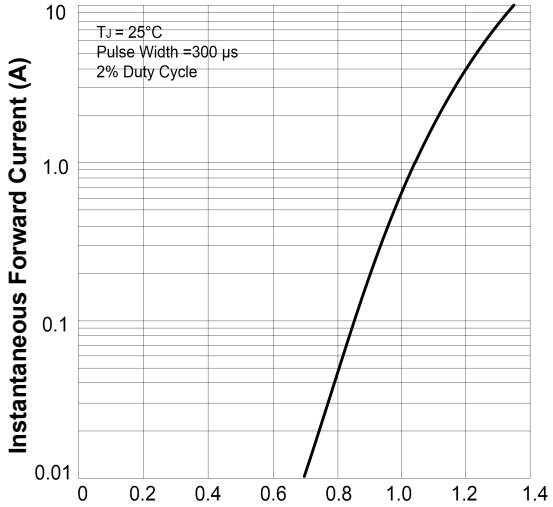
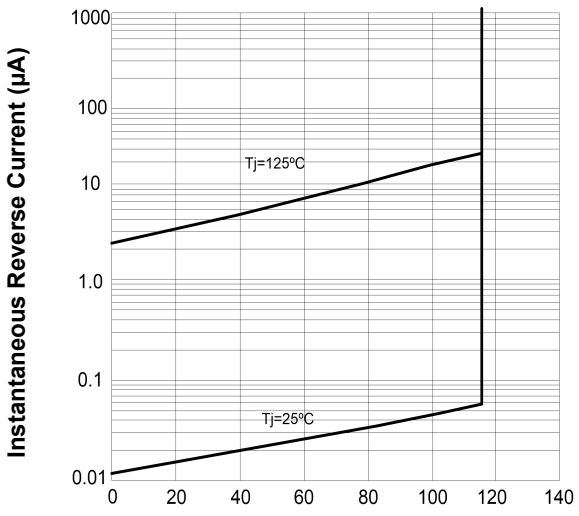


FIG. 4- TYPICAL REVERSE LEAKAGE CHARACTERISTICS



The curve above is for reference only.

Legel Disclaimer Notice

All specifications are subject to be changed without notice to improve reliability function, design, etc.JUXIN makes no warranty,or guarantee regarding the suitability of the products for any purpose. To the extent permitted by applicable law, JUXIN disclaims (i) any and all liability arising out of the application or use of any product, (ii) any and all liability, including without limitation special,consequential or incidental damages, and (iii) any and all implied warranties, including warranties of fitness for particular purpose, non-infringement.

Statements regarding the suitability of products for certain types of applications are based on JUXIN's ideas of typical requirements that are often placed on JUXIN products in generic applications. Such statements are not binding statements about the suitability of products for a particular application. It is the customer's responsibility to validate a particular product with the properties described in the product specification is suitable for use in a particular application.Parameters provided in datasheets and specifications may different applications and performance may vary over time.

All operating parameters, including typical parameters, must be validated for each customer application by the customer's technical experts. Product specifications do not expand or otherwise modify JUXIN's terms and conditions of purchase, including but not limited to the warranty expressed therein.Except as expressly indicated in writing, JUXIN products are not designed for use in medical, life saving, or life-sustaining applications or for any other applications in which the failure of the JUXIN product could result in personal injury or death. Customers using or selling JUXIN products not expressly indicated for use in such applications do so at their own risk. Please contact authorized JUXIN personnel to obtain written terms and conditions regarding products designed for such applications.

No license, express or implied, by forbid or otherwise, to any intellectual property rights is granted by this document or by any conduct of JUXIN. Product names and markings noted herein may be trademarks of their respective owners.