



Single Phase Glass Passivated Fast Recovery Bridge Rectifiers

Reverse Voltage: 50V to 1000V
Forward Current: 3 Amp

Features

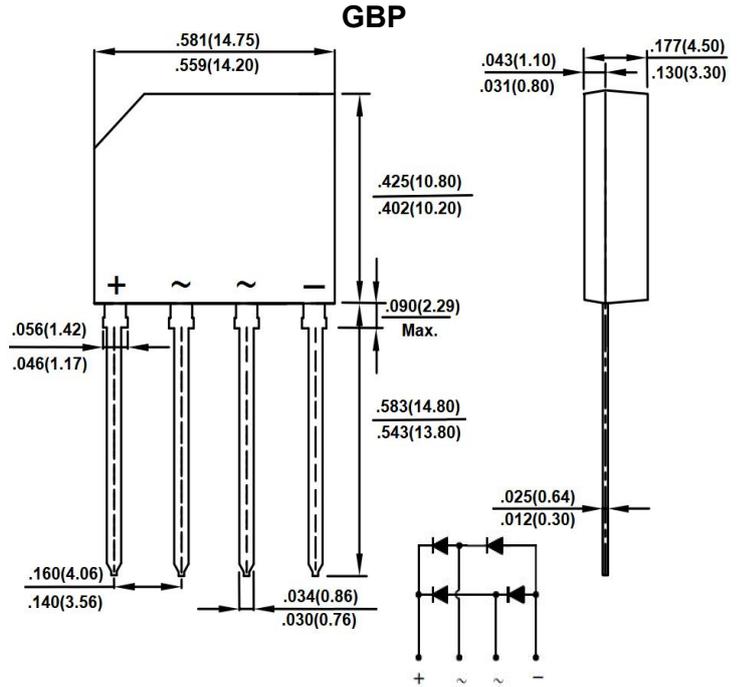
- Glass passivated chip junction
- Low forward voltage drop
- Low leakage current
- High forward surge capability
- Solder dip 260°C max. 10 s, per JESD 22-B106

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.



Package Outline Dimensions in Inches (Millimeters)

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

Parameter&Test Conditions	SYM.	RGBP 3005	RGBP 301	RGBP 302	RGBP 304	RGBP 306	RGBP 308	RGBP 310	Unit
Device marking code		RGBP 3005	RGBP 301	RGBP 302	RGBP 304	RGBP 306	RGBP 308	RGBP 310	
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)}	3.0							A
Peak Forward Surge Current 8.3ms Single Half Sine-wave Superimposed On Rated Load	I _{FSM}	60							A
Operating junction range	T _J	-55 to+150							°C
Storage temperature range	T _{STG}	-55 to+150							°C

Thermal Characteristics (Ta=25°C Unless otherwise specified)

Parameter&Test Conditions	SYM.	RGBP 3005	RGBP 301	RGBP 302	RGBP 304	RGBP 306	RGBP 308	RGBP 310	Unit
Maximum Thermal Resistance per Leg, Junction To Lead (Note 1)	R _{θJL}	25							°C/W
Maximum Thermal Resistance per Leg, Junction To Ambient (Note 1)	R _{θJA}	59							°C/W
Maximum Thermal Resistance per Leg, Junction To Case (Note 1)	R _{θJC}	13							°C/W

Electrical Characteristics (Ta=25°C Unless otherwise specified)

Parameter&Test Conditions	SYM.	RGBP 3005	RGBP 301	RGBP 302	RGBP 304	RGBP 306	RGBP 308	RGBP 310	Unit
Maximum reverse recovery time IF=0.5A, IR=-1.0A, IRR=-0.25A	T _{rr}	150				250	500		ns
Maximum Instantaneous Forward Voltage per diode IF= 1.5A	V _{FM}	1.3							V
Maximum DC reverse current at rated DC blocking voltage per diode	TA = 25°C	5							μA
	TA = 125°C	100							

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

Rating and Characteristic Curves

FIG. 1- DERATING CURVE OUTPUT RECTIFIED

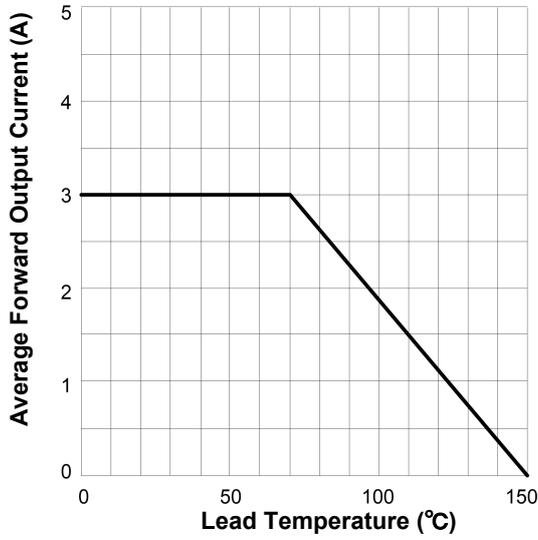


FIG. 2- -MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT Per Diode

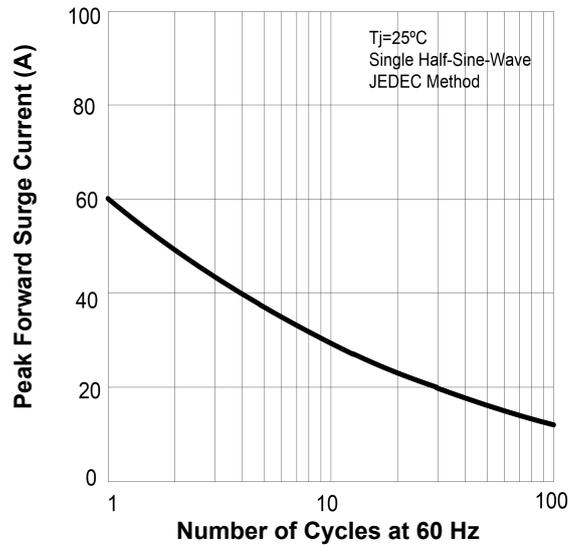


FIG. 3- TYPICAL FORWARD VOLTAGE

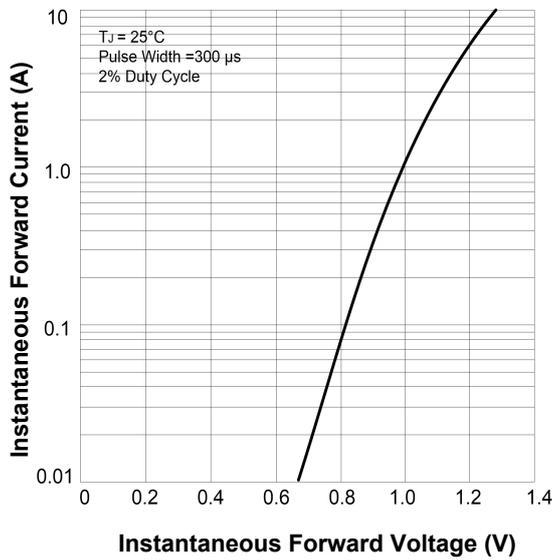
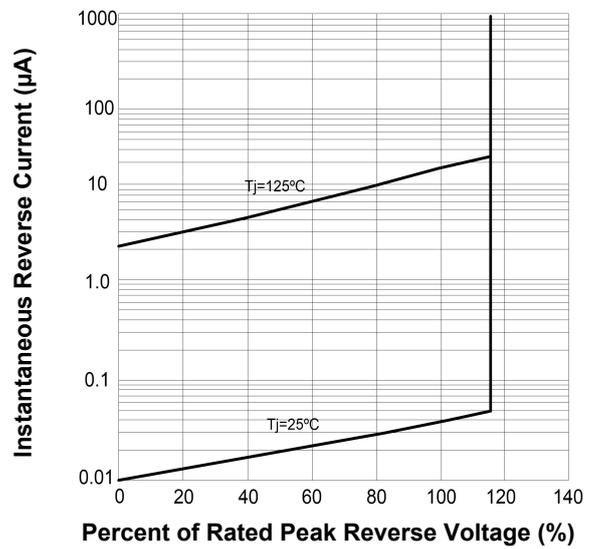


FIG. 4- TYPICAL REVERSE LEAKAGE CHARACTERISTICS



The curve above is for reference only.



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