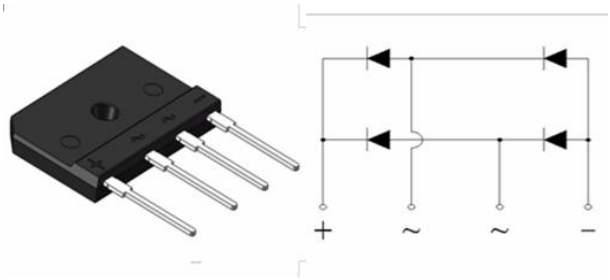
Reverse Voltage50V~1000V Output Current 50A

Features

- Thin Single In-Line package;
- Ideal for printed circuit boards;
- Glass Passivated chip junction;
- High Surge current capability;
- High case dielectric strength of 2500 VRMS;
- Plastic package has Underwrites Laboratory Flammability Classification 94V-0;



GBJ

Typical Applications

- General purpose use in AC-to-DC bridge full wave rectification for Switching Power Supply, Home Appliances, Office Equipment, Industrial Automation applications.

Mechanical Data

- Case: GBJ(5S)Molded plastic body;Base P/N with suffix"E" on packing code-halogen free
- Terminals:Plated leads solderable per MIL-STD-750,Method 2026;
- High temperature soldering guaranteed: Solder Dip 260°C,10seconds;
- Polarity: As marked on body;
- Mounting Torgue: 10cm-kg (8.8 inches-lbs) max;
- Recommend Torgue:Mounting Torgue: 5.7cm-kg (5inches-lbs);

Maximum Ratings (TA = 25 °C unless otherwise noted)

Parameter		Symbol	GBJ50A	GBJ50B	GBJ50D	GBJ50G	GBJ50J	GBJ50K	GBJ50M	Unit
Maximum repetitive 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 rectified output current at	TC=87°C	$I_{F(AV)}$	50(1)							A
	TA=25°C		5.2(2)							
Peak forward surge current 8.3 ms single half sine-wave superimposed on rated load		I_{FSM}	450							A
Rating for fusing(t<8.3ms)		I^2t	844							A^2sec
Operating junction and storage temperature range		T_J, T_{STG}	- 55 to + 150							°C

Electrical Characteristics (TA = 25 °C unless otherwise noted)										
Parameter		**Symbol**	**GBJ50A**	**GBJ50B**	**GBJ50D**	**GBJ50G**	**GBJ50J**	**GBJ50K**	**GBJ50M**	**Unit**
Maximum instantaneous forward voltage drop per leg at 25A		V_F	1.10							Volts
Maximum DC reverse at rated DC blocking voltage per leg	TA=25°C	I_R	5.00							μA
	TA=125°C		250.00							

Thermal Characteristics										
Parameter		**Symbol**	**GBJ50A**	**GBJ50B**	**GBJ50D**	**GBJ50G**	**GBJ50J**	**GBJ50K**	**GBJ50M**	**Unit**
Typical thermal resistance per leg		$R_{\theta JA}$ (2)	$22^{(2)}$							°C /W
		$R_{\theta JC}$ (3)	$0.8^{(1)}$							

1). Unit case mounted on Al plate heatsink;
2). Units mounted on PCB without heatsink;
3). Recommended mounting position is to bolt down on heatsink with silicone thermal compound for maximum heat transfer with M3 screw.

Ratings and Characteristics Curves

(TA = 25° C unless otherwise noted)

FIG.1-DERATING CURVE FOR OUTPUT RECTIFIED CURRENT

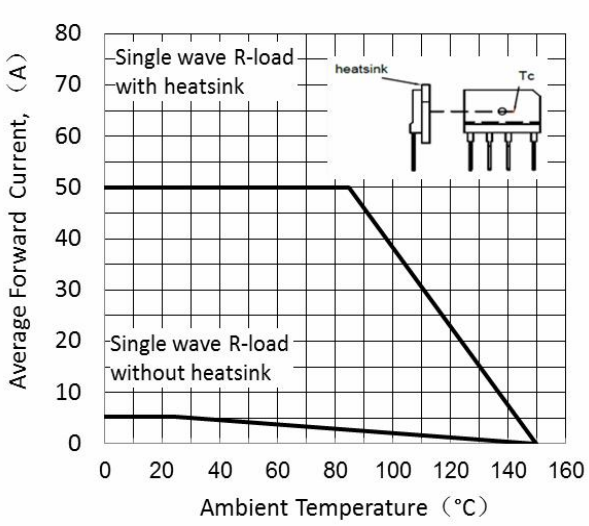


FIG.2-MAXIMUM NON-REPETITEVE PEAK FORWARD SUGER CURRENT

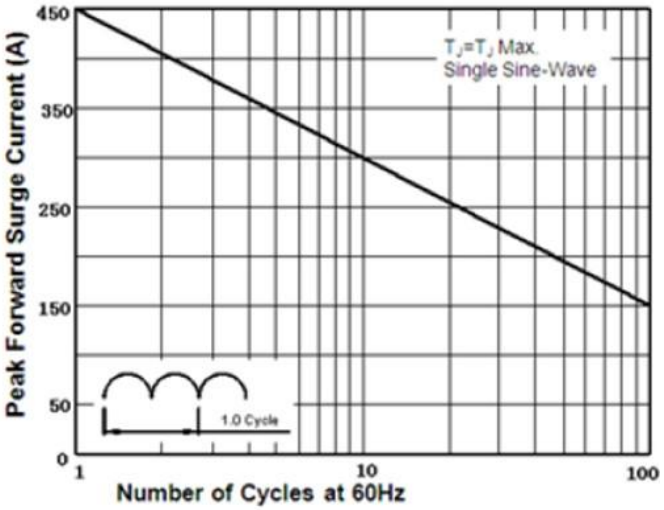


FIG.3-TYPICAL INSTANTANEOUS FORWARD CHARACTERISITCS

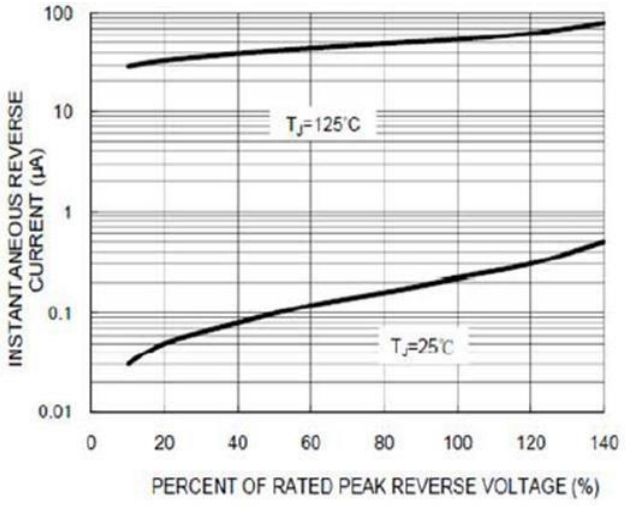
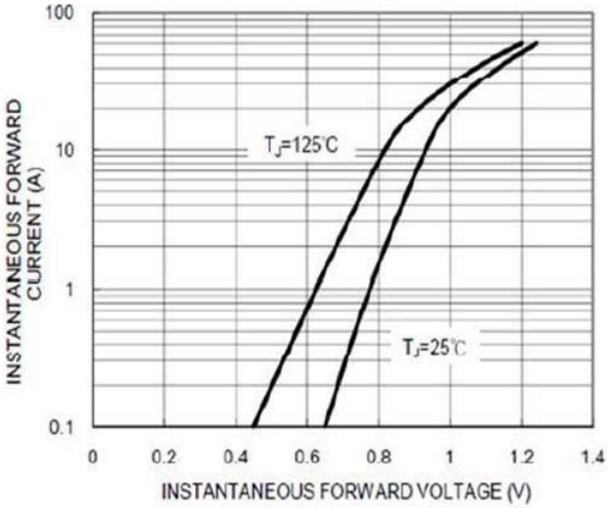


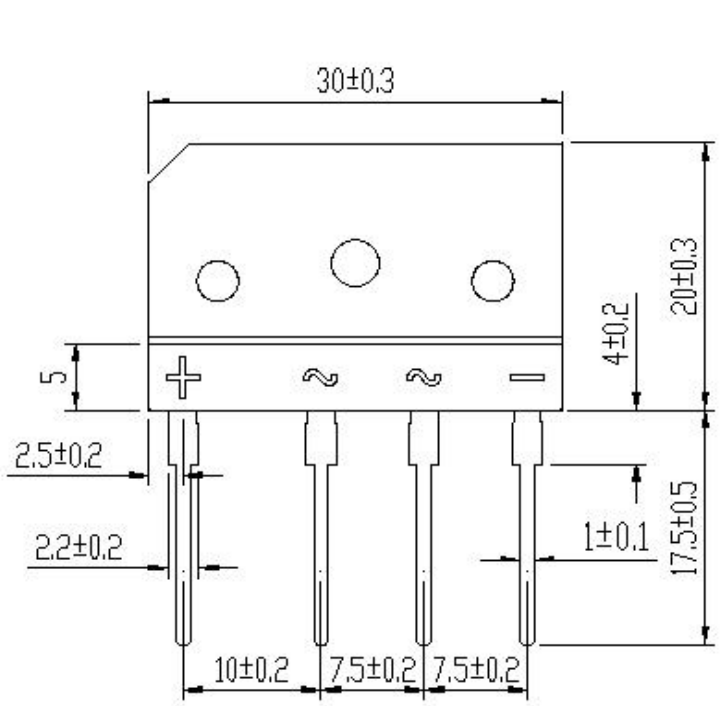
FIG.4-TYPICAL REAK REVERSE VOLTAGE CHARACTERISTICS



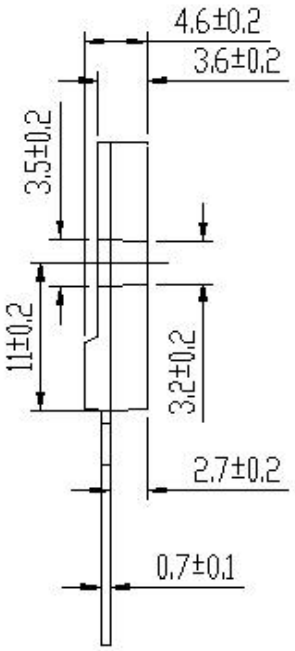
Package Outline Dimensions

in millimeters

First angle projection



elevation view



right elevation

Revision History

Document Version	Date of release	Discroption of changes
Rev.A	2021/3/1	Released Datasheet
Rev.B	2023/12/17	Modify document format

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