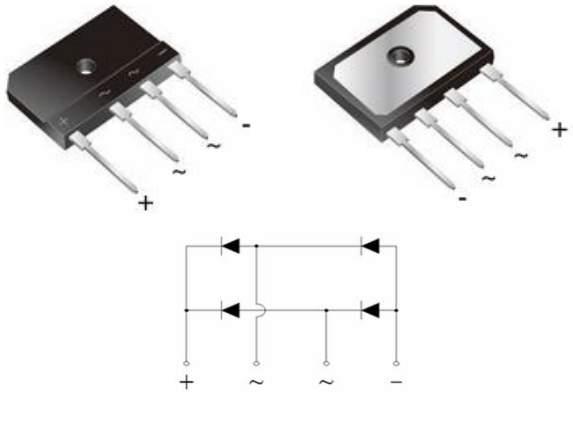
Reverse Voltage 50V~1000V Output Current 50A

Features



●Enhanced high-current density single in-line package

●Superior thermal conductivity

●Glass passivated chip junction

●Solder dip 275 °C max. 10 s, per JESD 22-B106

PB

Typical Applications

● General purpose use in AC/DC bridge full wave rectification for switching power supply, home appliances and white-goods applications

Mechanical Data

●Case: PB

●Terminals: matte tin plated leads, solderable per J-STD-002 and JESD 22-B102 E3 suffix meets JESD 201 class 1A whisker test

● Polarity: as marked on body

● Mounting Torque: 10 cm-kg (8.8 inches-lbs) max.

● Recommended Torque: 5.7 cm-kg (5 inches-lbs)

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

Parameter		Symbol	PB50005	PB5001	PB5002	PB5004	PB5006	PB5008	PB5010	Unit
Maximum repetitive peak reverse voltage		V_{RRM}	50	100	200	400	600	800	1000	V
Maximum average forward rectified output current at	TC=84°C (1)	$I_{F(AV)}$	50							A
	TA=25°C(2)		4.5							A
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 temperaturerange		T_J, T_{STG}	- 55 to + 150							°C

Notes

(1) With heatsink

(2) Without heatsink, free air

Electrical Characteristics (TA = 25 °C unless otherwise noted)										
Parameter		**Symbol**	**PB50005**	**PB5001**	**PB5002**	**PB5004**	**PB5006**	**PB5008**	**PB5010**	**Unit**
Maximum instantaneous forward voltage dropper leg at 22.5A	TA=25°C	V_F	1.10							Volts
	TA=125°C		1.00							
Maximum DC reverse at ratedDC blocking voltage per leg	TA=25°C	I_R	5							μA
	TA=125°C		200							

Notes

(1) Pulse test: 300 μs pulse width, 1 % duty cycle

(2) Pulse test: 10 ms pulse width

Thermal Characteristics									
Parameter	**Symbol**	**PB50005**	**PB5001**	**PB5002**	**PB5004**	**PB5006**	**PB5008**	**PB5010**	**Unit**
Typical thermal resistance per leg	$R_{\theta JA}$ (2)	18							°C /W
	$R_{\theta JC}$ (3)	0.7							

Notes

(1) With 60 W air cooled heatsink

(2) Without heatsink, free air

Ratings and Characteristics Curves

(TA = 25° C unless otherwise noted)

FIG.1-DERATING CURVE FOR OUTPUT RECTIFIED CURRENT

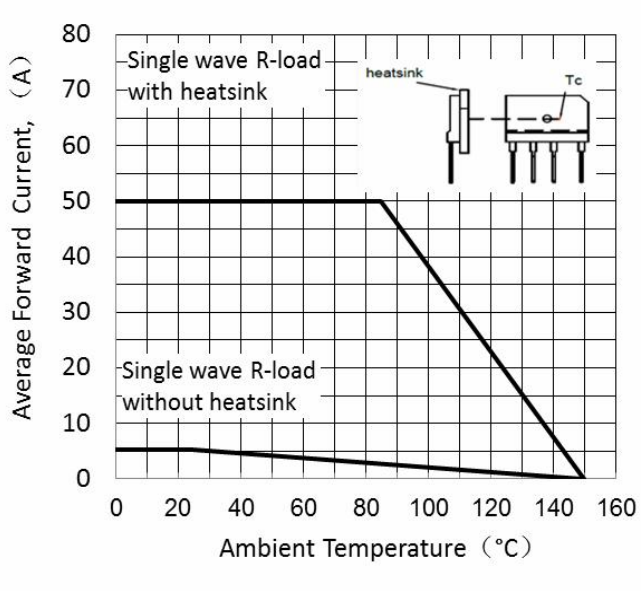


FIG.2-Forward Power Dissipation

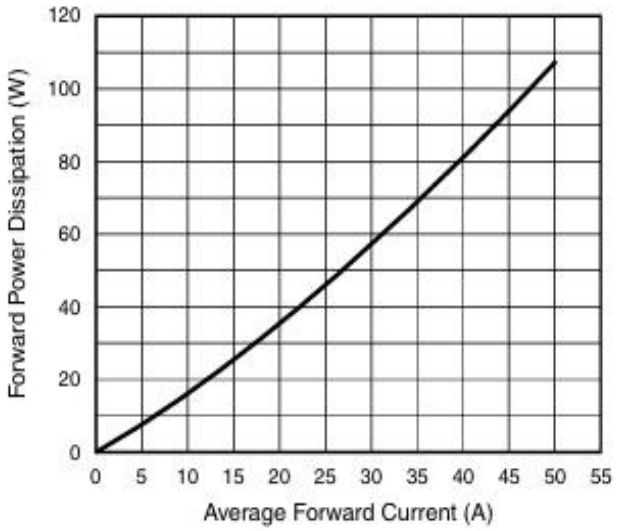


FIG.3-TYPICAL INSTANTANEOUS FORWARD CHARACTERISITCS

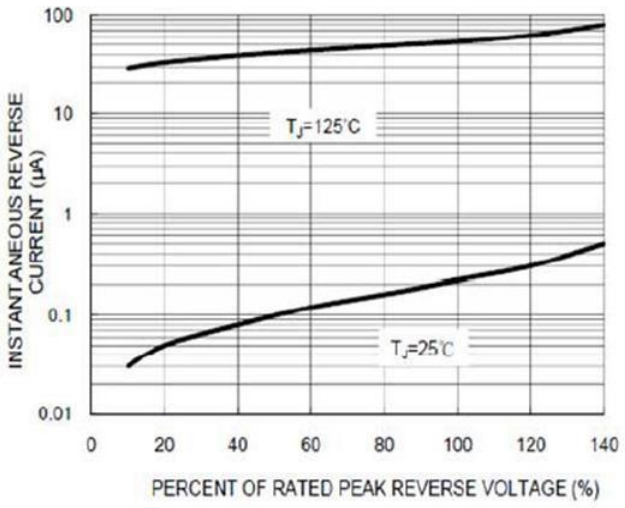
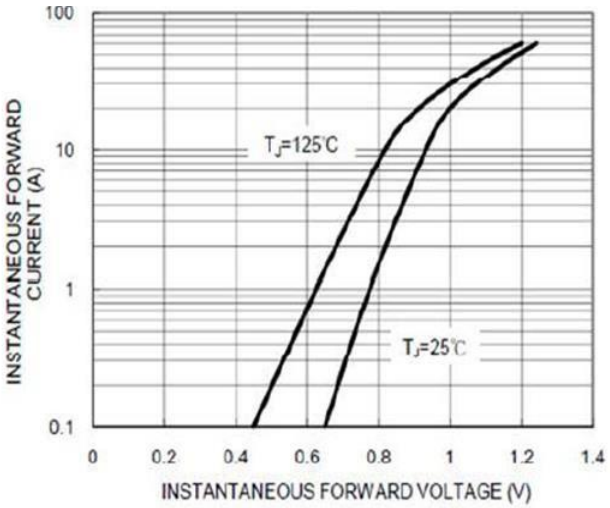


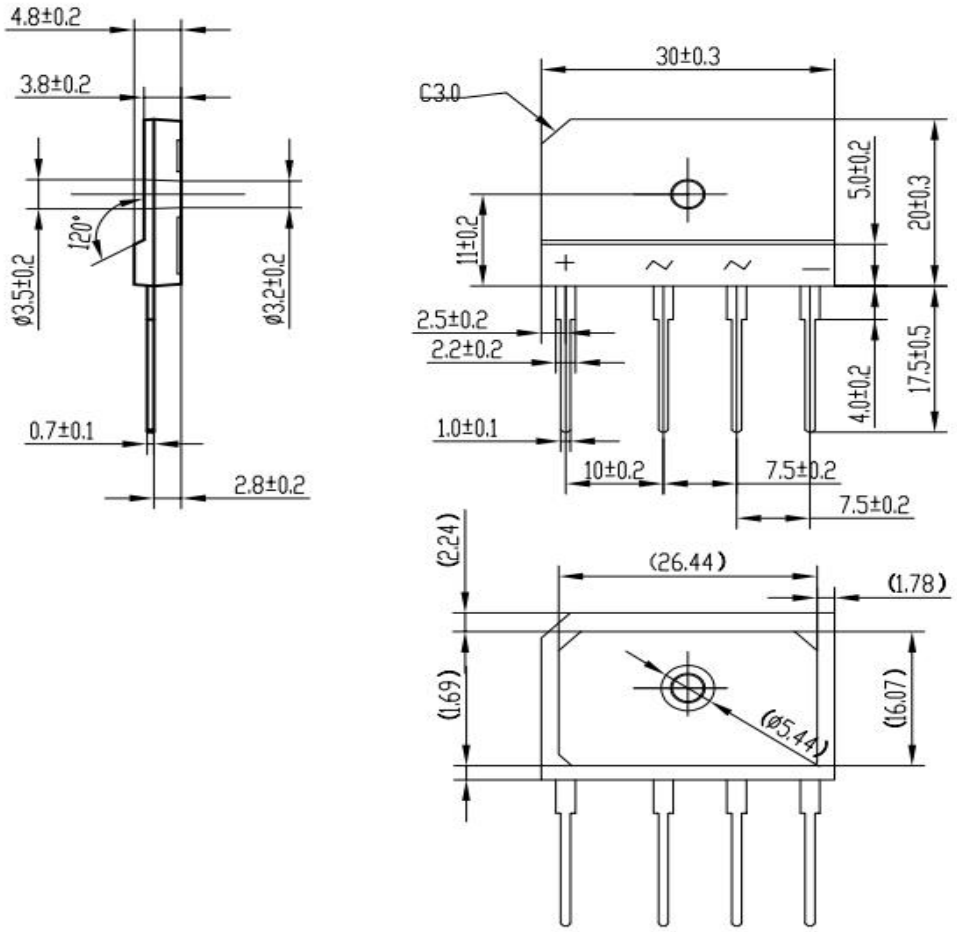
FIG.4-TYPICAL REAK REVERSE VOLTAGE CHARACTERISTICS



Package Outline Dimensions

in millimeters

First angle projection



Revision History

Document Version	Date of release	Discroption of changes
Rev.A	2024/4/2	Released Datasheet

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