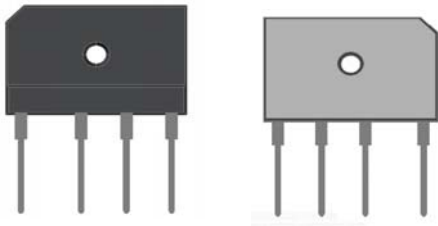
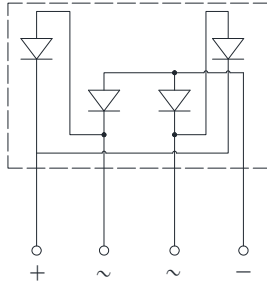


## Bridge Rectifiers



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### Features

- UL recognition, file #E230084
- Glass passivated chip junction
- Thin single in-line package
- High surge current capability
- Solder dip 275 °C max. 7 s, per JESD 22-B106

### Typical Applications

General purpose use in AC/DC bridge full wave rectification for switching power supply, home appliances, office equipment, industrial automation applications.

### Mechanical Data

- **Package:** PB  
Molding compound meets UL 94 V-0 flammability rating, RoHS-compliant, halogen-free
- **Terminals:** Tin plated leads, solderable per J-STD-002 and JESD22-B102
- **Polarity:** As marked on body

### ■Maximum Ratings (Ta=25°C Unless otherwise specified)

PARAMETER	SYMBOL	UNIT	PB5012	
Device marking code			PB5012	
Maximum Repetitive Peak Reverse Voltage	VRRM	V	1200	
Maximum RMS Voltage	VRMS	V	840	
Maximum DC blocking Voltage	VDC	V	1200	
Average rectified output current @60Hz sine wave, R-load,	With heatsink Tc =90°C	IO	A	50.0
	Without heatsink Ta =25°C			4.5
Forward Surge Current (Non-repetitive) @60Hz Half-sine wave, 1 cycle, Tj=25°C	IFSM	A	500	
Forward Surge Current (Non-repetitive) @1ms, square wave, 1 cycle, Tj=25°C			1000	
Current squared time @1ms≤t≤8.3ms Tj=25°C, Rating of per diode	I <sup>2</sup> t	A <sup>2</sup> s	1037.5	
Storage temperature	Tstg	°C	-55 ~ +150	
Junction temperature	Tj	°C	-55 ~ +150	
Dielectric strength @ Terminals to case, AC 1 minute	Vdis	KV	2.5	
Mounting torque @Recommend torque: 5kg·cm	Tor	kg·cm	8	

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

PARAMETER	SYMBOL	UNIT	TEST CONDITIONS	PB5012
Maximum instantaneous forward voltage drop per diode	VF	V	IFM=25.0A	1.1
Maximum DC reverse current at rated DC blocking voltage per diode	IR	μA	Tj =25°C	5
			Tj =125°C	500
Typical junction capacitance	Cj	pF	Measured at 1MHz and Applied Reverse Voltage of 4.0 V.D.C	250

## ■ Thermal Characteristics (T<sub>a</sub>=25°C Unless otherwise specified)

PARAMETER		SYMBOL	UNIT	PB5012
Thermal Resistance	Between junction and ambient, Without heatsink	R <sub>θJ-A</sub>	°C/W	15.0
	Between junction and case, With heatsink	R <sub>θJ-C</sub>		0.6

Note: Device mounted on 75mm x 45mm x 5.5mm Aluminum Plate Heatsink.

## ■ Ordering Information (Example)

PREFERRED P/N	PACKING CODE	UNIT WEIGHT(g)	MINIMUM PACKAGE(pcs)	INNER BOX QUANTITY(pcs)	OUTER CARTON QUANTITY(pcs)	DELIVERY MODE
PB5012	B1	Approximate 7.5	15	750	1500	TUBE

## ■ Characteristics (Typical)

FIG1: I<sub>o</sub>-T<sub>c</sub> Curve

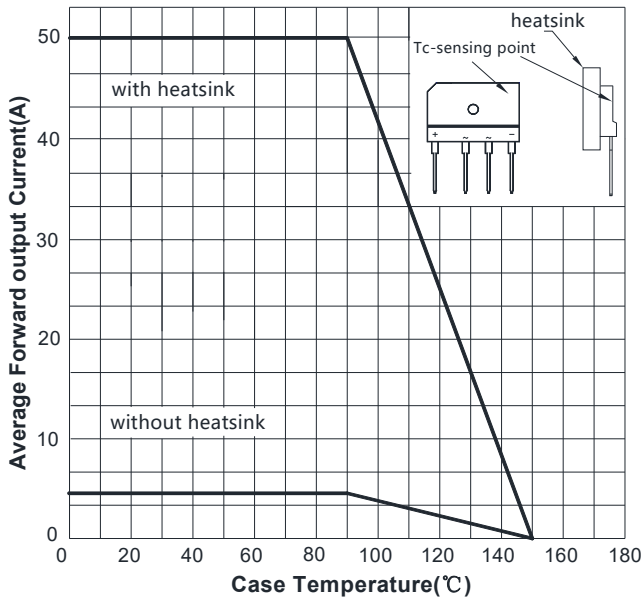


FIG2: Surge Forward Current Capability

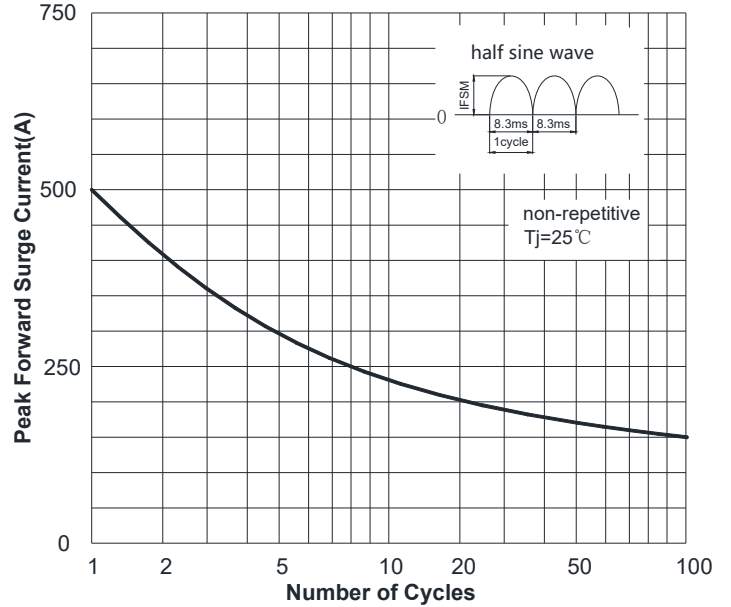


FIG3: Typical Forward Voltage

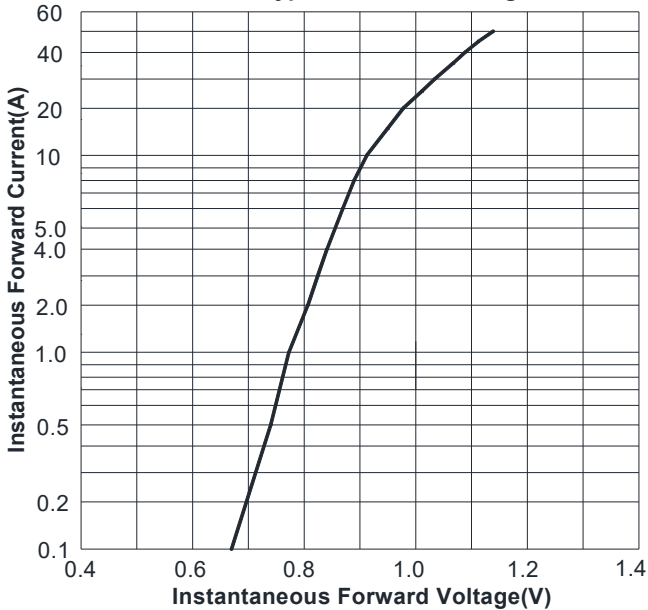
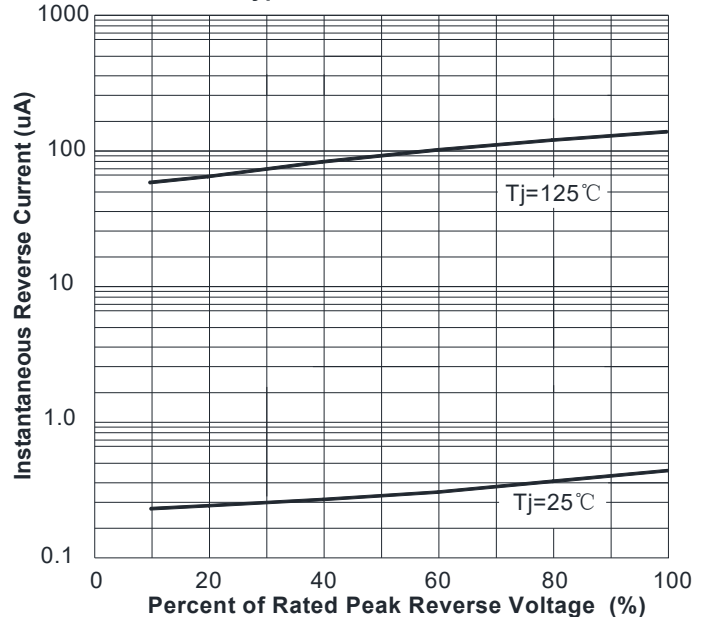


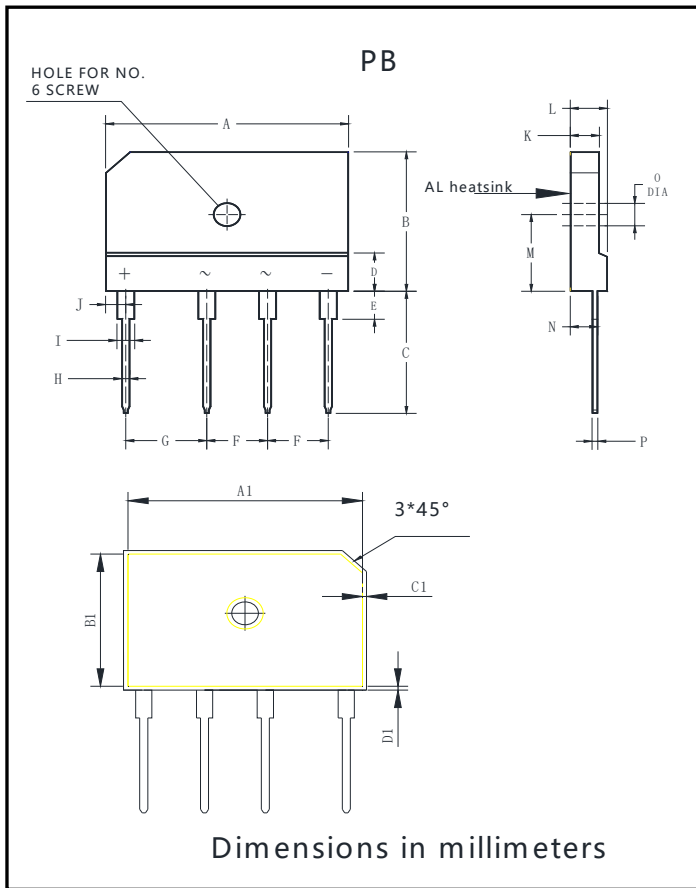
FIG4: Typical Reverse Characteristics





# PB5012

## ■ Outline Dimensions



PB		
Dim	Min	Max
A	29.7	30.3
B	19.7	20.3
C	17.0	18.0
D	4.8	5.8
E	3.8	4.2
F	7.3	7.7
G	9.8	10.2
H	0.9	1.1
I	2.0	2.4
J	2.3	2.7
K	3.4	3.8
L	4.4	4.8
M	10.8	11.2
N	3.1	3.7
O	3.1	3.4
P	0.6	0.8
A1	28.75	29.15
B1	18.75	19.15
C1	0.3	0.7
D1	0.3	0.7



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