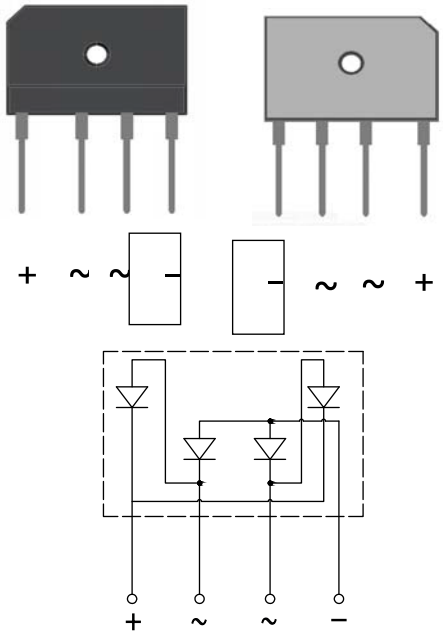
Bridge Rectifiers
PB50005 Through PB5010



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℃ Unless otherwise specified)

PARAMETER		SYMBOL	UNIT	PB50005	PB5001	PB5002	PB5004	PB5006	PB5008	PB5010
Device marking code				PB50005	PB5001	PB5002	PB5004	PB5006	PB5008	PB5010
Maximum Repetitive Peak Reverse Voltage		V_{RRM}	V	50	100	200	400	600	800	1000
Maximum RMS Voltage		V_{RMS}	V	35	70	140	280	420	560	700
Maximum DC blocking Voltage		V_{DC}	V	50	100	200	400	600	800	1000
Average rectified output current @60Hz sine wave, R-load,	With heatsink Tc =90℃	I_O	A	50.0						
	Without heatsink Ta =25℃			4.5						
Forward Surge Current (Non-repetitive) @60Hz Half-sine wave,1 cycle, Tj=25℃		I_{FSM}	A	500						
Forward Surge Current (Non-repetitive) @1ms, square wave, 1 cycle, Tj=25℃				1000						
Current squared time @1ms≤t≤8.3ms Tj=25℃, Rating of per diode		I^2t	A^2s	1037.5						
Storage temperature		T_{stg}	℃	-55 ~ +150						
Junction temperature		T_j	℃	-55 ~ +150						
Dielectric strength @ Terminals to case, AC 1 minute		V_{dis}	KV	2.5						
Mounting torque @Recommend torque：5kg·cm		Tor	kg·cm	8						

ELECTRICAL CHARACTERISTICS (Ta=25℃ Unless otherwise specified)

PARAMETER	SYMBOL	UNIT	TEST CONDITIONS	PB50005	PB5001	PB5002	PB5004	PB5006	PB5008	PB5010
Maximum instantaneous forward voltage drop per diode	V_F	V	I_{FM}=25.0A	1.1						
Maximum DC reverse current at rated DC blocking voltage per diode	I_R	μA	T_j =25℃	5						
			T_j =125℃	200						
Typical junction capacitance	Cj	pF	Measured at 1MHz and Applied Reverse Voltage of 4.0 V.D.C	270						

■ THERMAL CHARACTERISTICS (Ta=25℃ Unless otherwise specified)

PARAMETER		SYMBOL	UNIT	PB50005	PB5001	PB5002	PB5004	PB5006	PB5008	PB5010
Thermal Resistance	Between junction and ambient, Without heatsink	$R_{\theta J-A}$	℃/W	18.0						
	Between junction and case, With heatsink	$R_{\theta J-C}$		0.6						

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

■ PACKAGING INFORMATION

PREFERED P/N	PACKING CODE	UNIT WEIGHT(g)	MINIIMUM PACKAGE(pcs)	INNER BOX QUANTITY(pcs)	OUTER CARTON QUANTITY(pcs)	DELIVERY MODE
PB50005 THRU PB5010	B1	Approximate 7.5	15	750	1500	TUBE

■ CHARACTERISTICS (TYPICAL)

FIG1:Io-Tc Curve

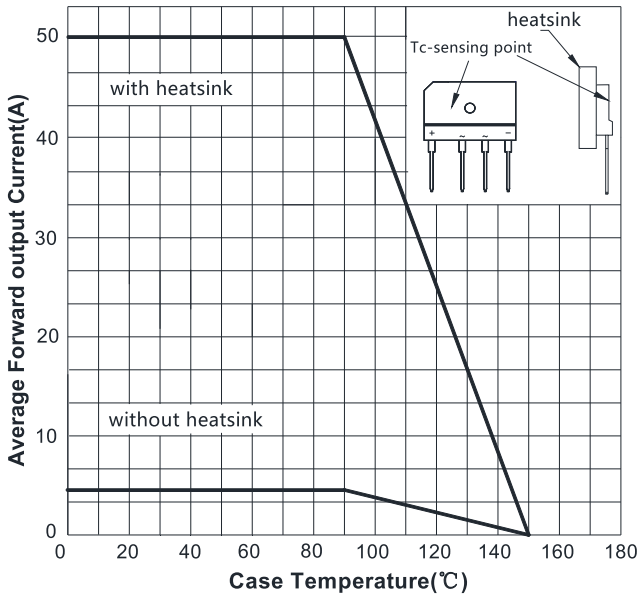


FIG2:Surge Forward Current Capability

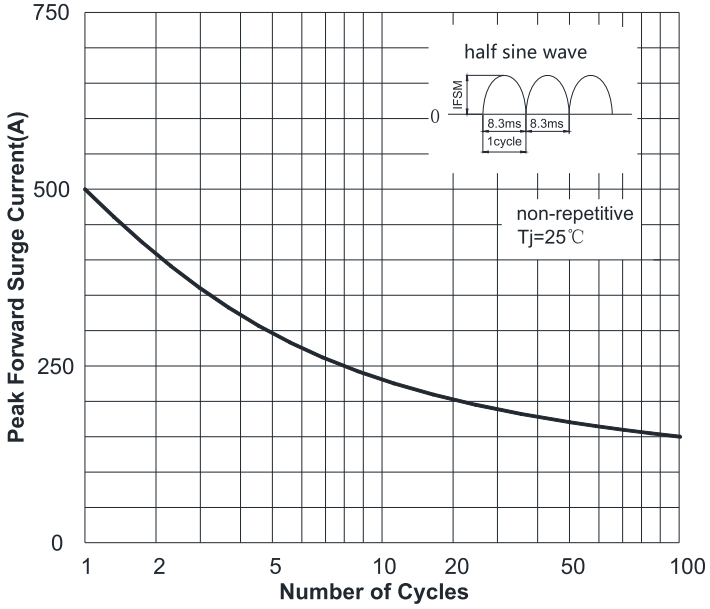


FIG3: Typical Forward Voltage

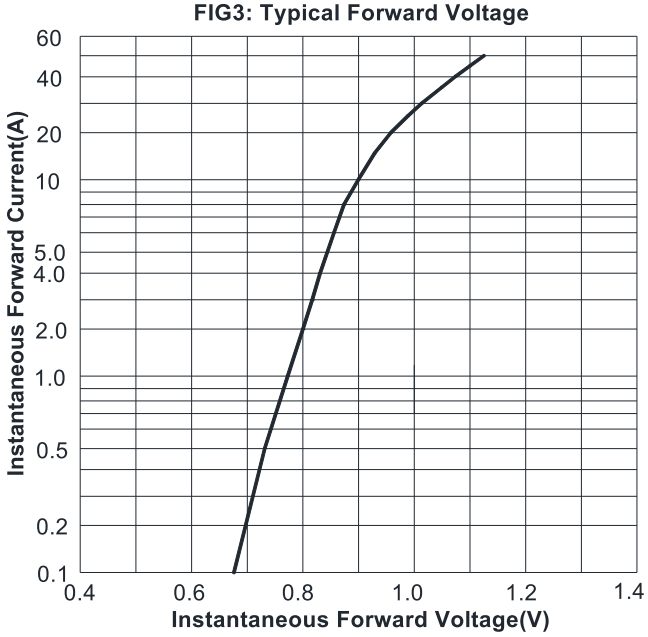
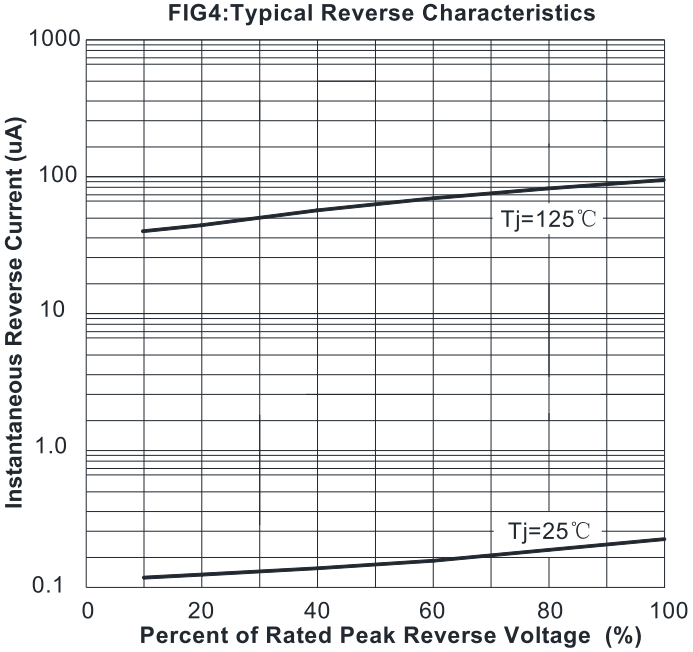
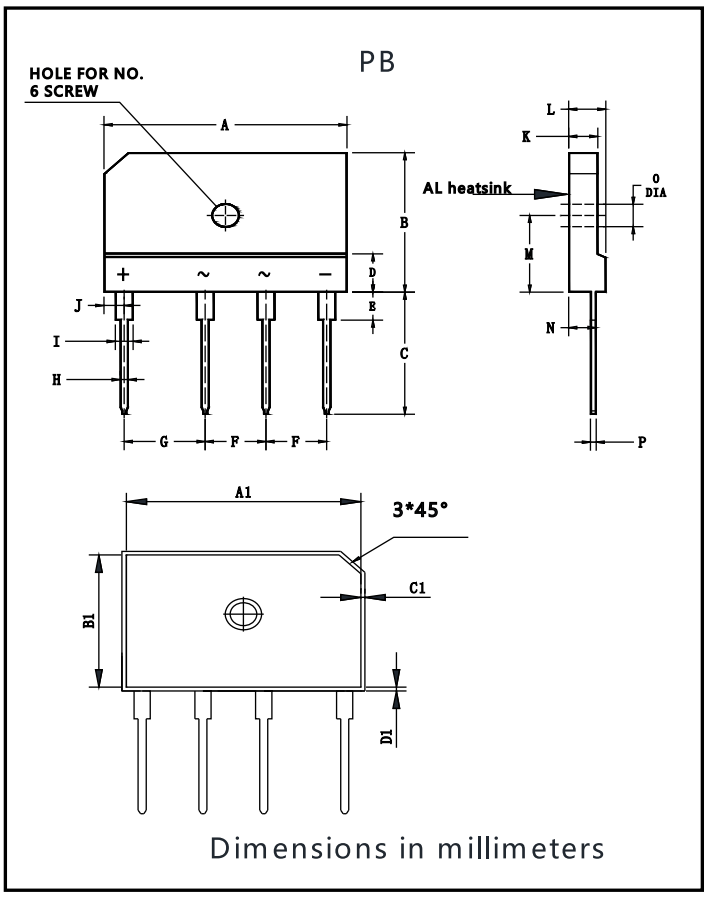


FIG4:Typical Reverse Characteristics



■ 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