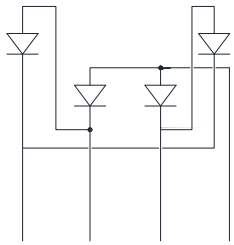
Bridge Rectifiers



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 (T_a=25 Unless otherwise specified

PARAMETER		SYMBOL	UNIT	PB5010H
Device marking code				PB5010H
Maximum Repetitive Peak Reverse Voltage		V_{RRM}	V	1600
Maximum RMS Voltage		V_{RMS}	V	1120
Maximum DC blocking Voltage		V_{DC}	V	1600
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 T_a=25 Unless otherwise specified

PARAMETER	SYMBOL	UNIT	TEST CONDITIONS	PB5010H
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	1000
Typical junction capacitance	Cj	pF	Measured at 1MHz and Applied Reverse Voltage of 4.0 V.D.C	195

■Thermal Characteristics T_a=25 Unless otherwise specified

PARAMETER		SYMBOL	UNIT	PB5010H
Thermal Resistance	Between junction and ambient, Without heatsink	$R_{\theta J-A}$	/W	15.0
	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.

■Ordering Information (Example)

PREFERED P/N	PACKING CODE	UNIT WEIGHT(g)	MINIIMUM PACKAGE(pcs)	INNER BOX QUANTITY(pcs)	OUTER CARTON QUANTITY(pcs)	DELIVERY MODE
PB5010H	B1	Approximate 7.5	15	750	1500	TUBE

■ Characteristics (Typical)

FIG1:Io-Tc Curve

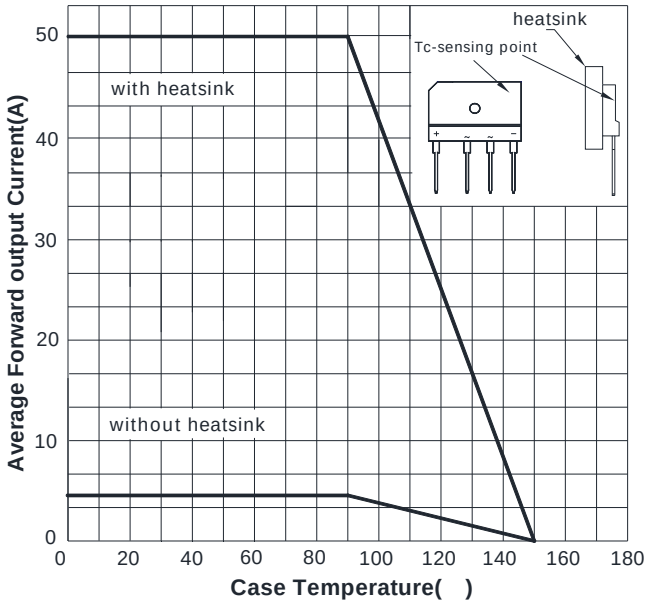


FIG2:Surge Forward Current Capability

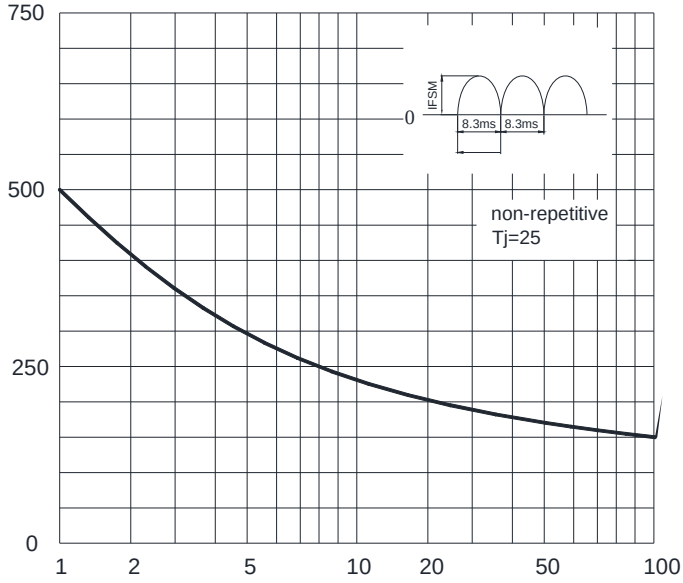


FIG3: Typical Forward Voltage

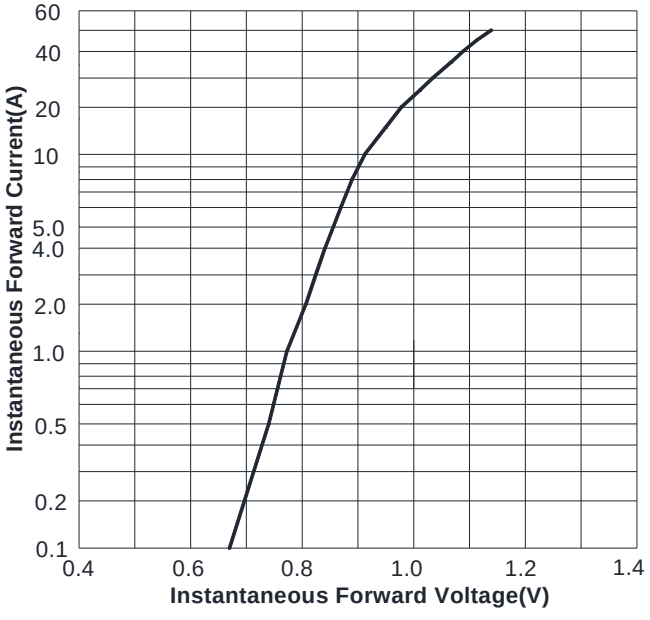
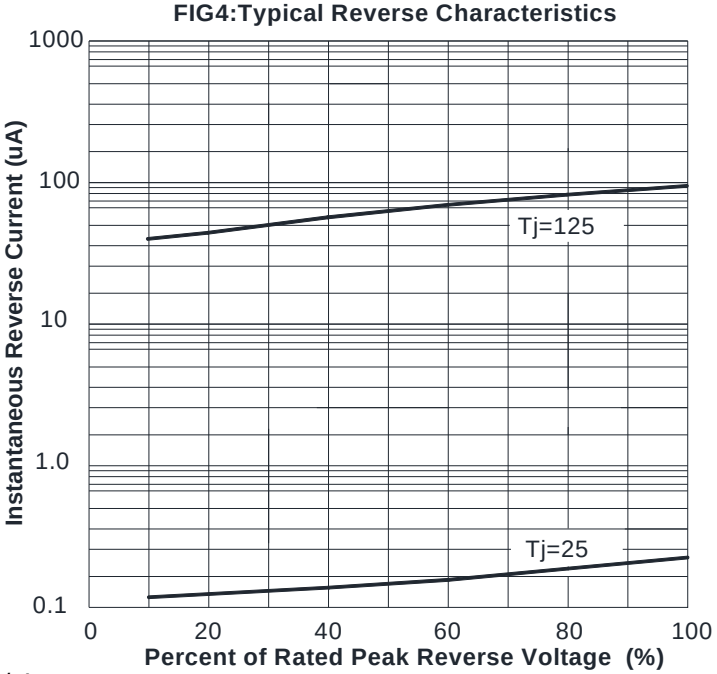
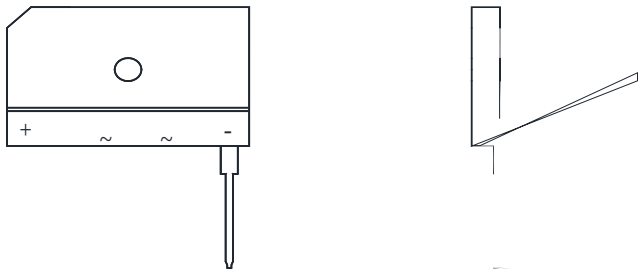


FIG4:Typical Reverse Characteristics



■ Outline Dimensions



Dimensions in millimeters

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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