

■ 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°C Unless otherwise specified)

PARAMETER	SYMBOL	UNIT	PB25005	PB2501	PB2502	PB2504	PB2506	PB2508	PB2510
Device marking code			PB25005	PB2501	PB2502	PB2504	PB2506	PB2508	PB2510
Maximum Repetitive Peak Reverse Voltage	VRRM	V	50	100	200	400	600	800	1000
Maximum RMS Voltage	VRMS	V	35	70	140	280	420	560	700
Maximum DC blocking Voltage	VDC	V	50	100	200	400	600	800	1000
Average rectified output current @60Hz sine wave, R-load,	With heatsink T _c =110°C	I _O	A	25.0					
	Without heatsink T _a =25°C			3.5					
Forward Surge Current (Non-repetitive) @60Hz Half-sine wave, 1 cycle, T _j =25°C	IFSM	A	350						
Forward Surge Current (Non-repetitive) @1ms, square wave, 1 cycle, T _j =25°C			700						
Current squared time @1ms≤t≤8.3ms T _j =25°C, Rating of per diode	I ² t	A ² s	508						
Storage temperature	T _{stg}	°C	-55 ~ +150						
Junction temperature	T _j	°C	-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°C Unless otherwise specified)

PARAMETER	SYMBOL	UNIT	TEST CONDITIONS	PB25005	PB2501	PB2502	PB2504	PB2506	PB2508	PB2510
Maximum instantaneous forward voltage drop per diode	V _F	V	I _{FM} =12.5A	1.0						
Maximum DC reverse current at rated DC blocking voltage per diode	I _R	μA	T _j =25°C	5						
			T _j =125°C	100						
Typical junction capacitance	C _j	pF	Measured at 1MHz and Applied Reverse Voltage of 4.0 V.D.C	130						

■ **THERMAL CHARACTERISTICS** ($T_a=25^\circ\text{C}$ Unless otherwise specified)

PARAMETER		SYMBOL	UNIT	PB25005	PB2501	PB2502	PB2504	PB2506	PB2508	PB2510
Thermal Resistance	Between junction and ambient, Without heatsink	$R_{\theta J-A}$	$^\circ\text{C/W}$	18						
	Between junction and case, With heatsink	$R_{\theta J-C}$		0.8						

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

■ **PACKAGING INFORMATION**

PREFERRED P/N	PACKING CODE	UNIT WEIGHT(g)	MINIMUM PACKAGE(pcs)	INNER BOX QUANTITY(pcs)	OUTER CARTON QUANTITY(pcs)	DELIVERY MODE
PB25005 THRU PB2510	B1	Approximate 7.5	15	750	1500	TUBE

■ **CHARACTERISTICS (TYPICAL)**

FIG1: I_o - T_c Curve

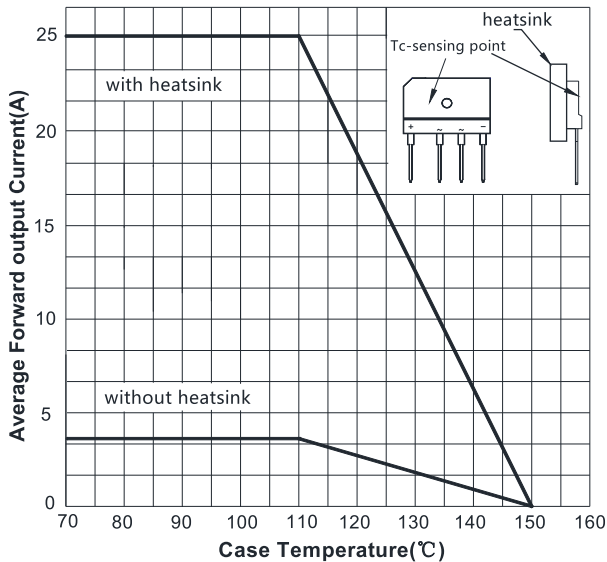


FIG2: Surge Forward Current Capability

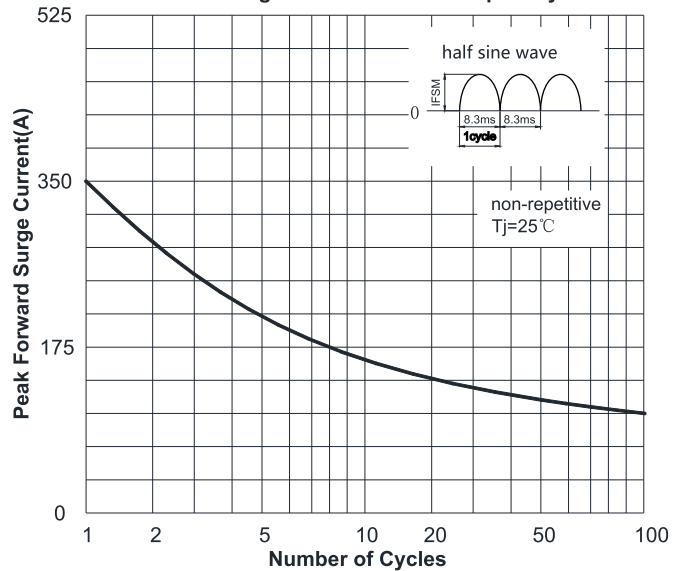


FIG3: Typical Forward Voltage

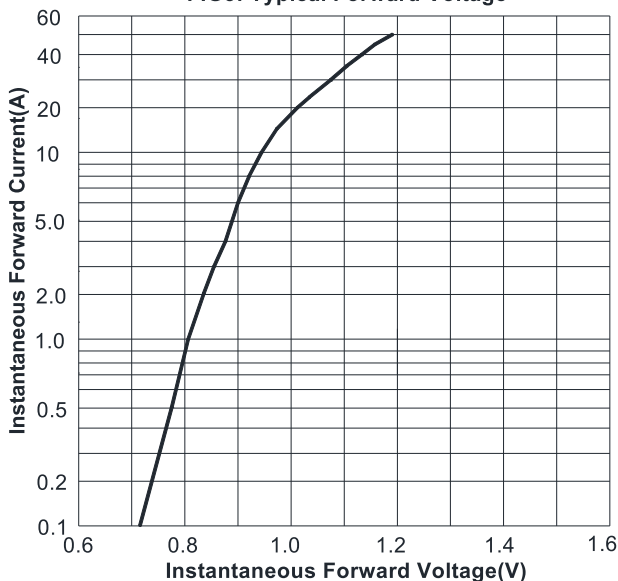
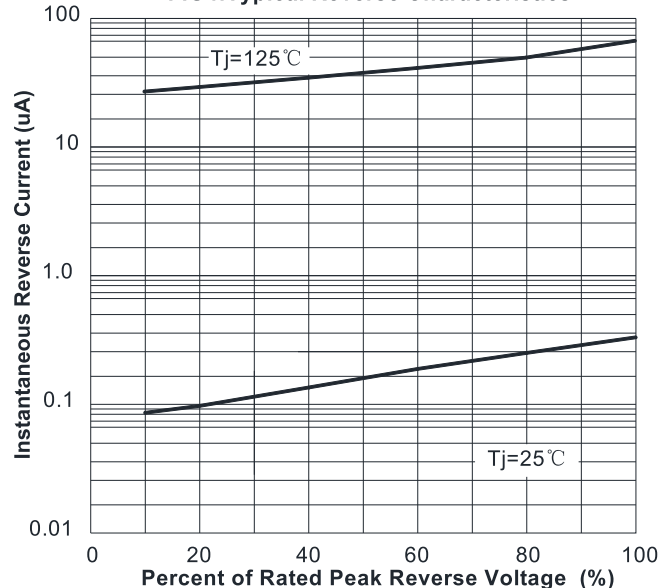
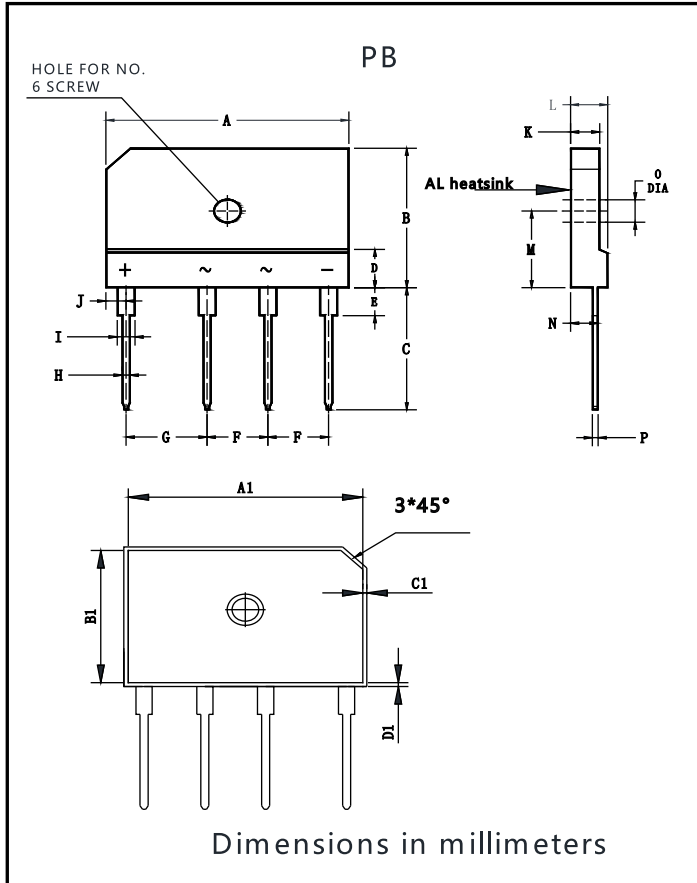


FIG4: Typical Reverse Characteristics



■ **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