PBU601 - PBU607

6.0A BRIDGE RECTIFIER

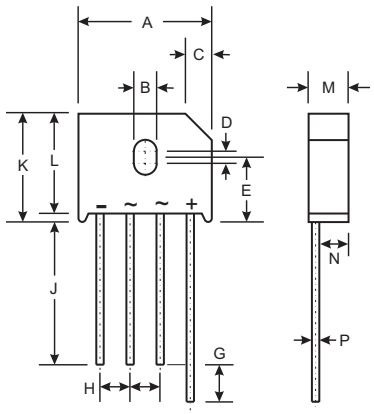
NOT RECOMMENDED FOR NEW DESIGN
USE GBU6005 - GBU610

Features

- Diffused Junction
- Low Forward Voltage Drop, High Current Capability
- Surge Overload Rating to 250A Peak
- Ideal for Printed Circuit Board Applications
- Case to Terminal Isolation Voltage 1500V
- Plastic Material: UL Flammability Classification Rating 94V-0
- UL Listed Under Recognized Component Index, File Number E95060
- **Lead Free Finish, RoHS Compliant (Date Code 0514+) (Note 3)**

Mechanical Data

- Case: Molded Plastic
- Terminals: Plated Leads Solderable per MIL-STD-202, Method 208
- Polarity: As Marked on Case
- Mounting: Through Hole for #6 Screw
- Mounting Torque: 5.0 Inch-pounds Maximum
- Weight: 8.0 grams (approximate)
- Mounting Position: Any
- Marking: Type Number



PBU		
Dim	**Min**	**Max**
A	22.70	23.70
B	3.80	4.10
C	4.20	4.70
D	1.70	2.20
E	10.30	11.30
G	4.50	6.80
H	4.80	5.80
J	25.40	—
K	—	19.30
L	16.80	17.80
M	6.60	7.10
N	4.70	5.20
P	1.20	1.30
All Dimensions in mm		

Maximum Ratings and Electrical Characteristics @ T_A = 25°C unless otherwise specified

Single phase, 60Hz, resistive or inductive load.
For capacitive load, derate current by 20%.

Characteristic	Symbol	PBU 601	PBU 602	PBU 603	PBU 604	PBU 605	PBU 606	PBU 607	Unit
Peak Repetitive Reverse Voltage Working Peak Reverse Voltage DC Blocking Voltage	V_{RRM} V_{RWM} V_R	50	100	200	400	600	800	1000	V
RMS Reverse Voltage	$V_{R(RMS)}$	35	70	140	280	420	560	700	V
Average Rectified Output Current @ T_C = 100°C	I_O	6.0							A
Non-Repetitive Peak Forward Surge Current 8.3ms Single half sine-wave superimposed on rated load (JEDEC Method)	I_{FSM}	250							A
Forward Voltage (per element) @ I_F = 3.0A	V_{FM}	1.0							V
Peak Reverse Current @ T_C = 25°C at Rated DC Blocking Voltage @ T_C = 100°C	I_R	10 1.0							μA mA
I^2t Rating for Fusing (Note 2)	I^2t	166							A^2s
Typical Thermal Resistance Junction to Case (Note 1)	$R_{\theta JC}$	4.2							K/W
Operating and Storage Temperature Range	T_j, T_{STG}	-65 to +150							°C

Notes:
1. Thermal resistance junction to case mounted on heatsink.
2. Non-repetitive, for t > 1.0ms and t < 8.3ms.
3. EC Directive 2002/95/EC (RoHS) revision 13.2.2003. Glass and High Temperature Solder Exemptions Applied, see *EU Directive Annex Notes 5 and 7.*

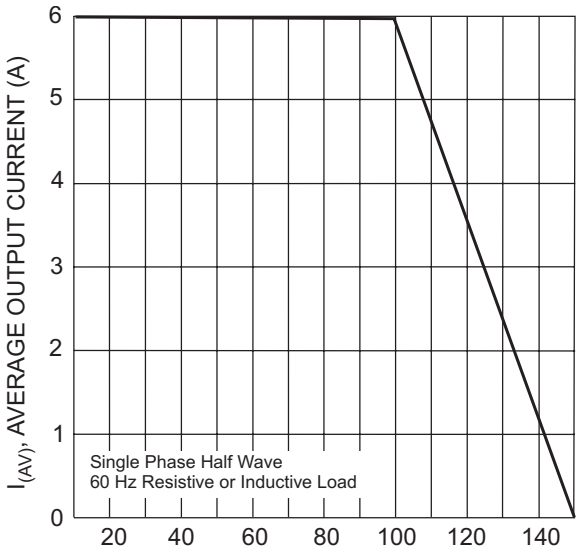


Fig. 1 Forward Current Derating Curve

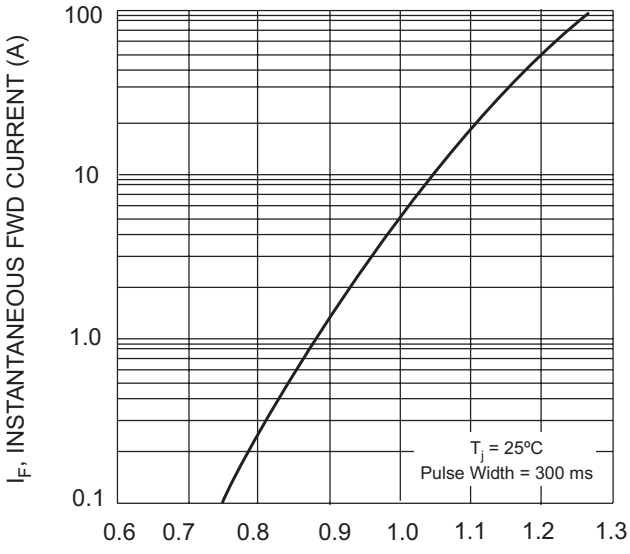


Fig. 2 Typical Forward Characteristics

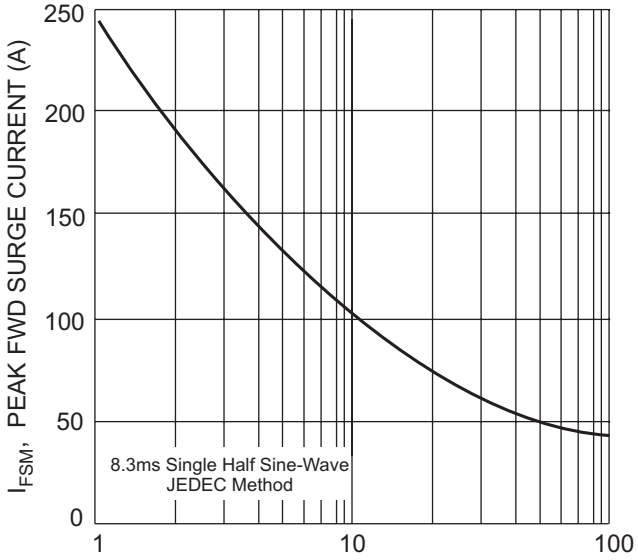


Fig. 3 Max Non-Repetitive Peak Fwd Surge Current

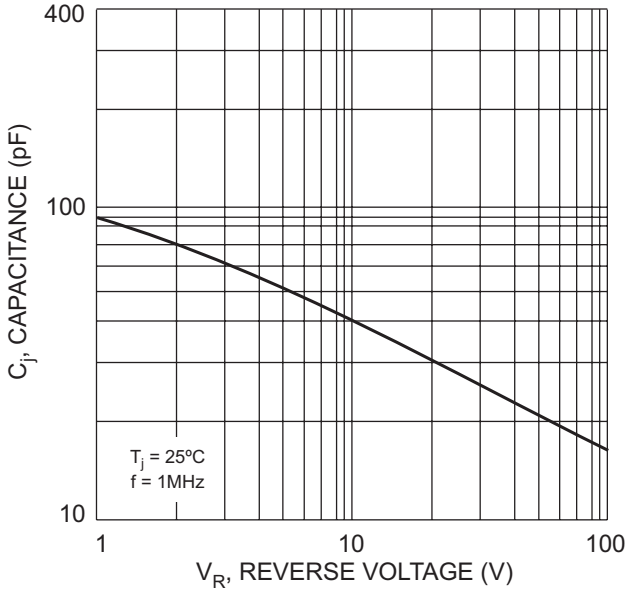


Fig. 4 Typical Junction Capacitance Per Element

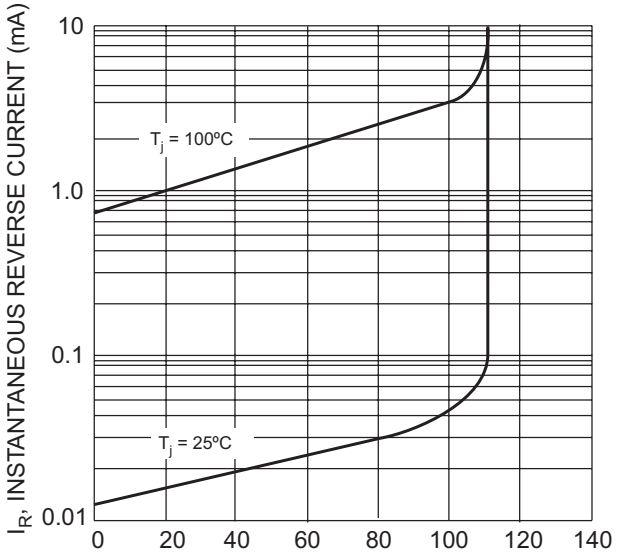


Fig. 5 Typical Reverse Characteristics

Ordering Information (Note 4)

Device	Packaging	Shipping
PBU601	PBU	0.5K Bulk
PBU602	PBU	0.5K Bulk
PBU603	PBU	0.5K Bulk
PBU604	PBU	0.5K Bulk
PBU605	PBU	0.5K Bulk
PBU606	PBU	0.5K Bulk
PBU607	PBU	0.5K Bulk

Notes: 4 . For packaging details, visit our website at http://www.diodes.com/datasheets/ap2008.pdf