

PART OBSOLETE - EOL18

Bulletin I2716 rev. F 06/03

International
IOR Rectifier

4GBL Series

4.0 Amps Single Phase Full Wave

Bridge Rectifier

Features

- Diode chips are glass passivated
- Easy to assemble & install on P.C.B.
- High Surge Current Capability
- High Isolation between terminals and molded case ($1500\text{ V}_{\text{RMS}}$)
- Lead free terminals solderable as per MIL-STD-750 Method 2026
- Terminals suitable for high temperature soldering at 260°C for 8-10 secs
- UL E160375 approved

$$I_{\text{O(AV)}} = 4\text{A}$$
$$V_{\text{RRM}} = 50/800\text{V}$$

Description

These GBL Series of Single Phase Bridges consist of four glass passivated silicon junction connected as a Full Wave Bridge. These four junctions are encapsulated by plastic molding technique. These Bridges are mainly used in Switch Mode power supply and in industrial and consumer equipment.

Major Ratings and Characteristics

Parameters	4GBL	Units
I_{O}	4	A
@ T_{C}	50	$^{\circ}\text{C}$
I_{FSM}	150	A
@ 50Hz	158	A
@ 60Hz	113	A^2s
$I^2\text{t}$	104	A^2s
@ 50Hz		
@ 60Hz		
V_{RRM} range	50 to 800	V
T_{J}	- 55 to 150	$^{\circ}\text{C}$



4GBL



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ELECTRICAL SPECIFICATIONS

Voltage Ratings

Type number	Voltage Code	V_{RRM} , max repetitive peak rev. voltage $T_J = T_{Jmax}$, V	V_{RMS} , maximum RMS voltage $T_J = T_{Jmax}$, V	V_{RSM} , max non-repetitive reverse voltage $T_J = T_{Jmax}$, V	I_{RRM} max. @ rated V_{RRM} $T_J = 25^\circ\text{C}$ μA	I_{RRM} max. @ rated V_{RRM} $T_J = 150^\circ\text{C}$ μA
4GBL	005	50	35	75	5	400
	01	100	70	150	5	400
	02	200	140	275	5	400
	04	400	280	500	5	400
	06	600	420	725	5	400
	08	800	560	900	5	400

Forward Conduction

Parameters	4GBL	Unit	Conditions
I_O Maximum DC output current	4 3.2	A	$T_C = 50^\circ\text{C}$, Resistive & inductive load $T_C = 50^\circ\text{C}$, Capacitive load
I_{FSM} Maximum peak, one-cycle non-repetitive surge current, following any rated load condition and with rated V_{RRM} reapplied	150 158		$t = 10\text{ms}, 20\text{ms}$ $t = 8.3\text{ms}, 16.7\text{ms}$ $T_J = 150^\circ\text{C}$
I^2t Maximum I^2t for fusing, initial $T_J = T_{Jmax}$	113 104	A^2s	$t = 10\text{ms}$ $t = 8.3\text{ms}$
V_{FM} Maximum peak forward voltage per diode	0.975	V	$T_J = 25^\circ\text{C}$, $I_{FM} = 4\text{A}$
I_{RM} Typical peak reverse leakage current per diode	5	μA	$T_J = 25^\circ\text{C}$, 100% V_{RRM}
V_{RRM} Maximum repetitive peak reverse voltage range	50 to 800	V	

Thermal and Mechanical Specifications

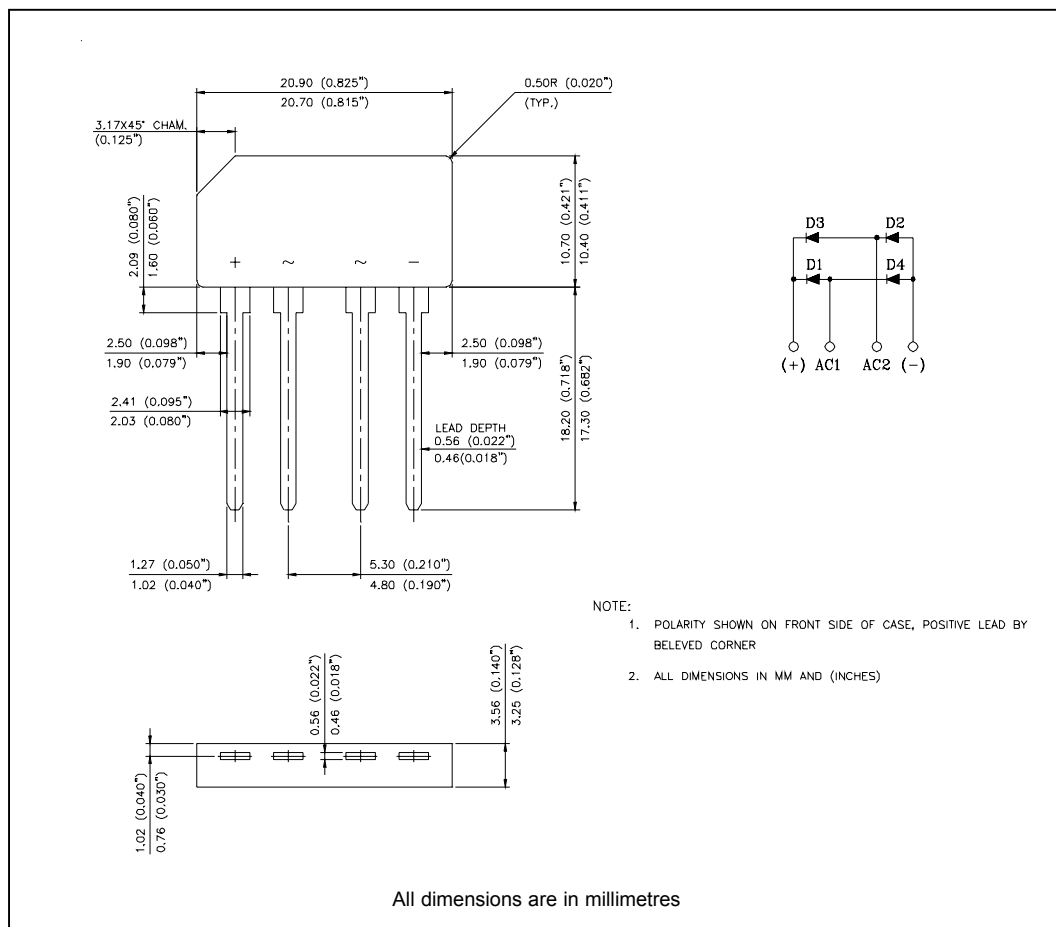
Parameters	4GBL	Unit	Conditions
T_J Operating and storage temperature range	-55 to 150	$^\circ\text{C}$	
R_{thJC} Max. thermal resistance junction to case	6.5	$^\circ\text{C/W}$	DC rated current through bridge (1)
R_{thJA} Thermal resistance, junction to ambient	22	$^\circ\text{C/W}$	DC rated current through bridge (1)
W Approximate weight	2 (0.07)	g (oz)	

Note (1): Devices mounted on 75 x 75 x 3 mm aluminum plate

Ordering Information Table

Device Code		
4	GBL	08
①	②	③
1	-	Bridge current
2	-	Basic Part Number
3	-	Voltage Code: code x 100 = V_{RRM}

Outline Table



4GBL Series

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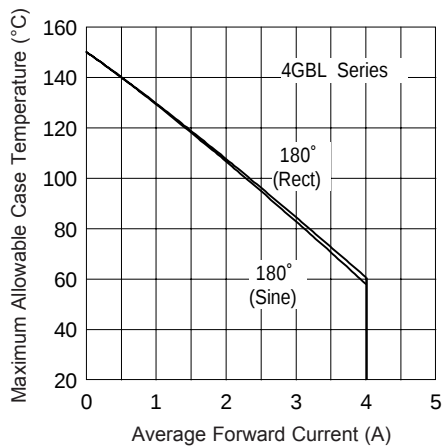


Fig. 1 - Current Ratings Characteristics

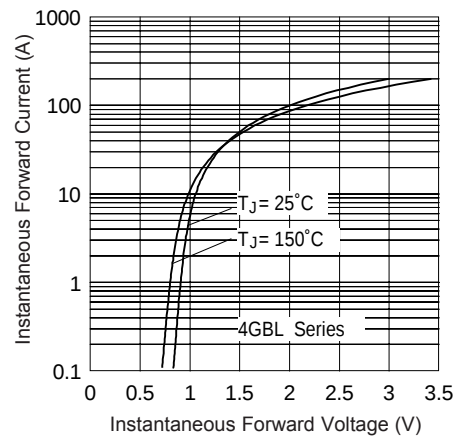


Fig. 2 - Forward Voltage Drop Characteristics

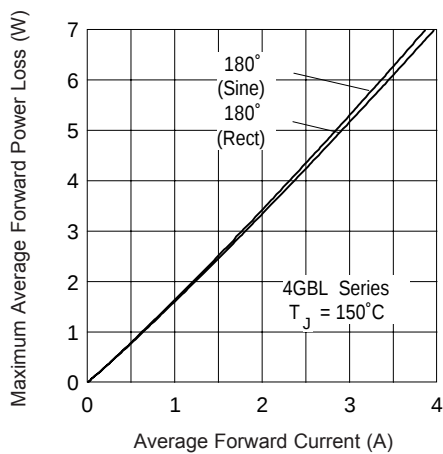


Fig. 3 - Total Power Loss Characteristics

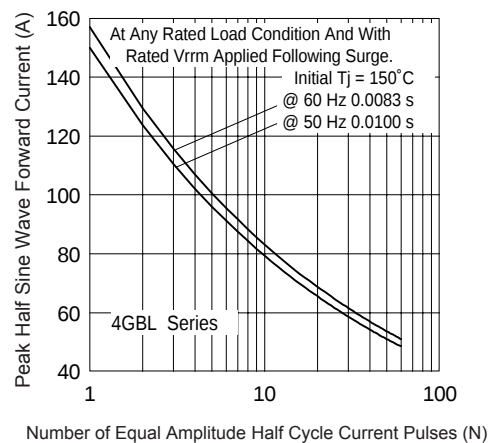


Fig. 4 - Maximum Non-Repetitive Surge Current

Data and specifications subject to change without notice.
This product has been designed and qualified for Multiple Level.
Qualification Standards can be found on IR's Web site.

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