

#### Features

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

$$I_{O(AV)} = 4A$$

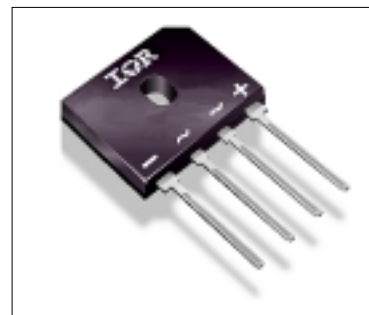
$$V_{RRM} = 50/800V$$

#### Description

These GBU 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	4GBU	Units
$I_o$	4	A
@ $T_C$	100	$^{\circ}\text{C}$
$I_{FSM}$	150	A
@50Hz	158	A
@60Hz	113	$\text{A}^2\text{s}$
$I^2t$	104	$\text{A}^2\text{s}$
@50Hz		
@60Hz		
$V_{RRM}$ range	50 to 800	V
$T_J$	- 55 to 150	$^{\circ}\text{C}$



4GBU

**ELECTRICAL SPECIFICATIONS**

**Voltage Ratings**

Type number	Voltage Code	$V_{RRM}$ , max repetitive peak rev. voltage $T_J = T_J \text{ max.}$ V	$V_{RMS}$ , max RMS voltage $T_J = T_J \text{ max.}$ V	$I_{RRM}$ max. @ rated $V_{RRM}$ $T_J = 25^\circ\text{C}$ $\mu\text{A}$	$I_{RRM}$ max. @ rated $V_{RRM}$ $T_J = 150^\circ\text{C}$ $\mu\text{A}$
4GBU	005	50	35	5	400
4GBU...F	01	100	70	5	400
	02	200	140	5	400
	04	400	280	5	400
	06	600	420	5	400
	08	800	560	5	400

**Forward Conduction**

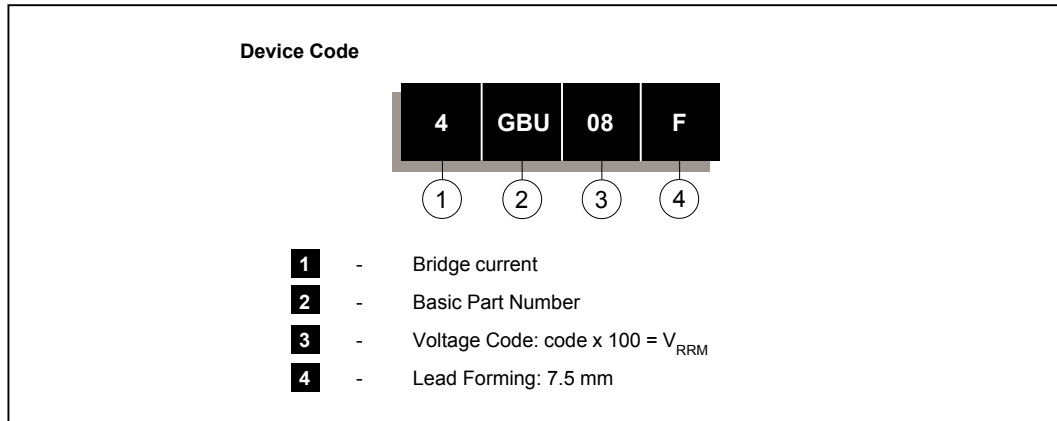
Parameters	4GBU	Unit	Conditions
$I_O$ Maximum DC output current	4	A	$T_C = 100^\circ\text{C}$ , Resistive & inductive load $T_C = 100^\circ\text{C}$ , Capacitive load
	3.2		
$I_{FSM}$ Maximum peak, one-cycle non-repetitive surge current, following any rated load condition and with rated $V_{RRM}$ reapplied	150		$t = 10\text{ms}$
	158		$t = 8.3\text{ms}$
$I^2t$ Maximum $I^2t$ for fusing, initial $T_J = T_J \text{ max}$	113	$\text{A}^2\text{s}$	$t = 10\text{ms}$
	104		$t = 8.3\text{ms}$
$V_{FM}$ Maximum peak forward voltage per diode	1.0	V	$T_J = 25^\circ\text{C}$ , $I_{FM} = 4\text{A}$
$I_{RM}$ Typical peak reverse leakage current per diode	5	$\mu\text{A}$	$T_J = 25^\circ\text{C}$ , 100% $V_{RRM}$
$V_{RRM}$ Maximum repetitive peak reverse voltage range	50 to 800	V	

**Thermal and Mechanical Specifications**

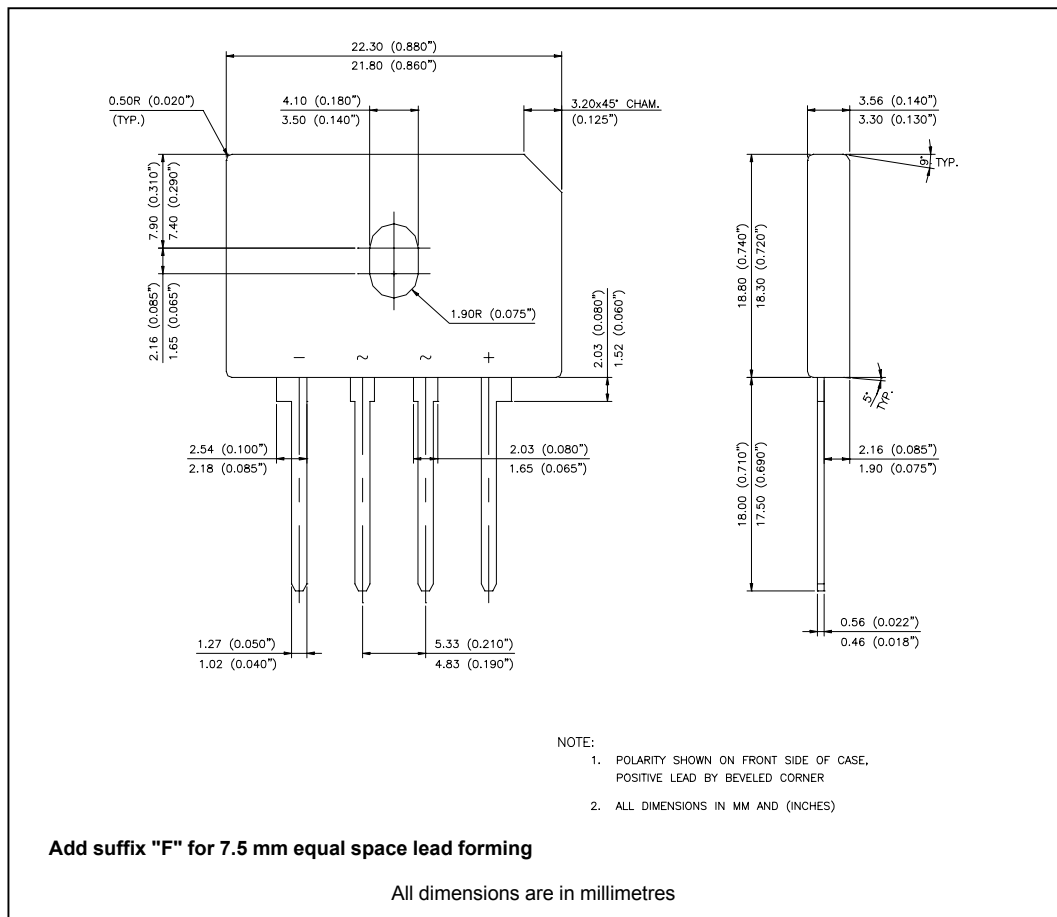
Parameters	4GBU	Unit	Conditions
$T_J$ Operating and storage temperature range	-55 to 150	$^\circ\text{C}$	
$R_{thJC}$ Max. thermal resistance junction to case	4.2	$^\circ\text{C}/\text{W}$	DC rated current through bridge (1)
$R_{thJA}$ Thermal resistance, junction to ambient	22	$^\circ\text{C}/\text{W}$	DC rated current through bridge (1)
W Approximate weight	4(0.14)	g(oz)	
T Mounting Torque	1.0	Nm	Bridge to Heatsink
	9.0	Lb.in	

Note (1): Devices mounted on 40x40x1.5mm aluminum plate; use silicon thermal compound for maximum heat transfer and bolt down using 3mm screw

Ordering Information Table



Outline Table



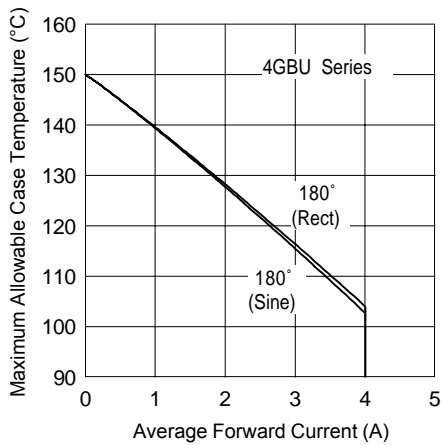


Fig. 1 - Current Ratings Characteristics

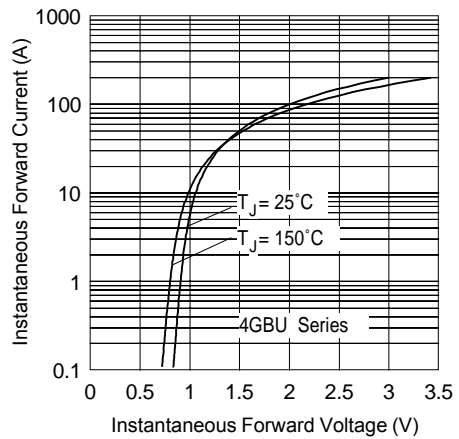


Fig. 2 - Forward Voltage Drop Characteristics

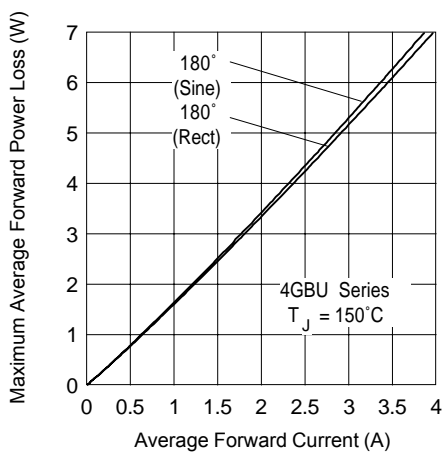


Fig. 3 - Total Power Loss Characteristics

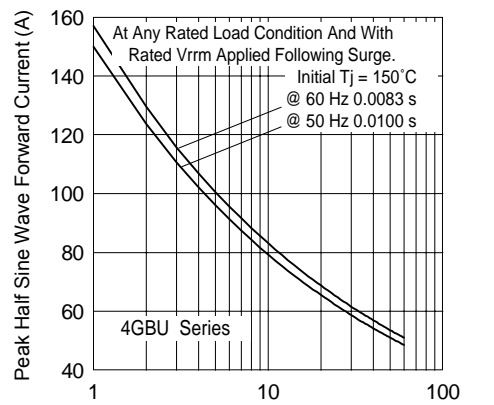


Fig. 4 - Maximum Non-Repetitive Surge Current

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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