



## GBU Plastic-Encapsulate Bridge Rectifier

### GBU6005 THRU GBU610

General Purpose Bridge Rectifier

#### Features

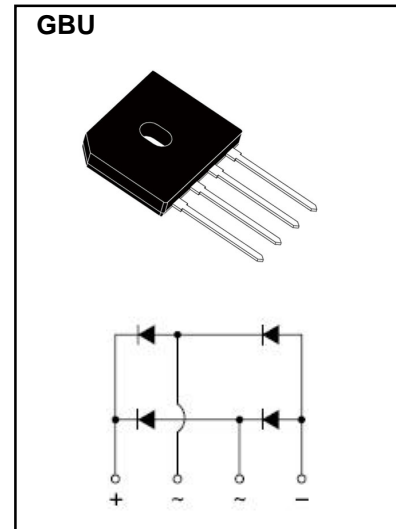
- $I_o$  6.0A
- $V_{RRM}$  50V-1000V
- High surge current capability
- Glass passivated chip

#### Applications

- General purpose 1 phase Bridge rectifier applications

#### Marking

- GBU6XX
- XX : From 005 To 10



#### Limiting Values (Absolute Maximum Rating)

Item	Symbol	Unit	Conditions	GBU6						
				005	01	02	04	06	08	10
Repetitive Peak Reverse Voltage	$V_{RRM}$	V		50	100	200	400	600	800	1000
Maximum RMS Voltage	$V_{RMS}$	V		35	70	140	280	420	560	700
Average Rectified Output Current	$I_o$	A	60Hz sine wave, R-load	With heatsink $T_c = 110^\circ\text{C}$		6				
				Without heatsink $T_a = 25^\circ\text{C}$		2.8				
Surge(Non-repetitive)Forward Current	$I_{FSM}$	A	60Hz sine wave, 1 cycle, $T_j = 25^\circ\text{C}$	175						
Current Squared Time	$I^2t$	$\text{A}^2\text{S}$	$1\text{ms} \leq t < 8.3\text{ms}$ $T_j = 25^\circ\text{C}$ , Rating of per diode	127						
Storage Temperature	$T_{stg}$	$^\circ\text{C}$		-55 ~ +150						
Junction Temperature	$T_j$	$^\circ\text{C}$		-55 ~ +150						
Dielectric Strength	$V_{dis}$	KV	Terminals to case, AC 1 minute	2						
Mounting Torque	Tor	$\text{kg} \cdot \text{cm}$	Recommend torque: $5\text{kg} \cdot \text{cm}$	8						

#### Electrical Characteristics ( $T_a = 25^\circ\text{C}$ Unless otherwise specified)

Item	Symbol	Unit	Test Condition	Max
Peak Forward Voltage	$V_{FM}$	V	$I_{FM} = 3\text{A}$ , Pulse measurement, Rating of per diode	1.0
Peak Reverse Current	$I_{RRM}$	$\mu\text{A}$	$V_{RM} = V_{RRM}$ , Pulse measurement, Rating of per diode	10
Thermal Resistance	$R_{\theta J-A}$	$^\circ\text{C}/\text{W}$	Between junction and ambient, Without heatsink	26
	$R_{\theta J-C}$		Between junction and case, With heatsink	3.4

# Typical Characteristics

FIG.1-MAXIMUM FORWARD SURGE CURRENT

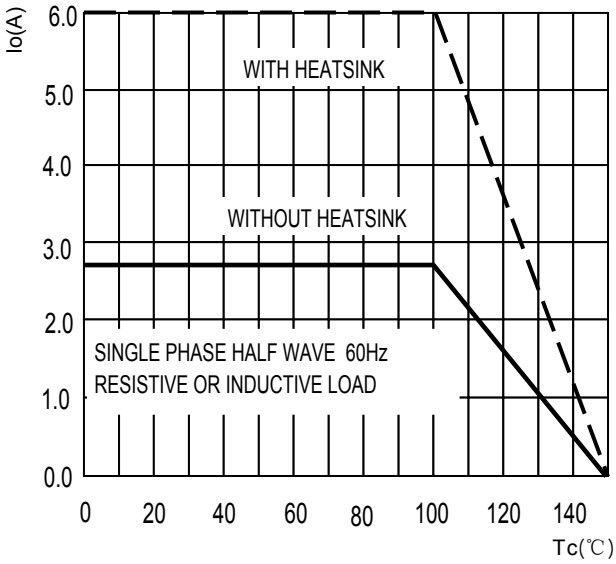


FIG.2-MAXIMUM NON-REPETITIVE SURGE CURRENT

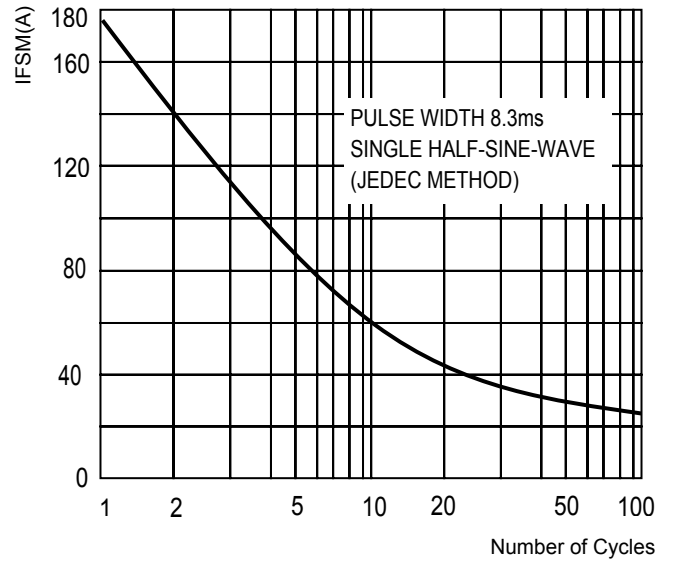


FIG.3-TYPICAL FORWARD CHARACTERISTICS

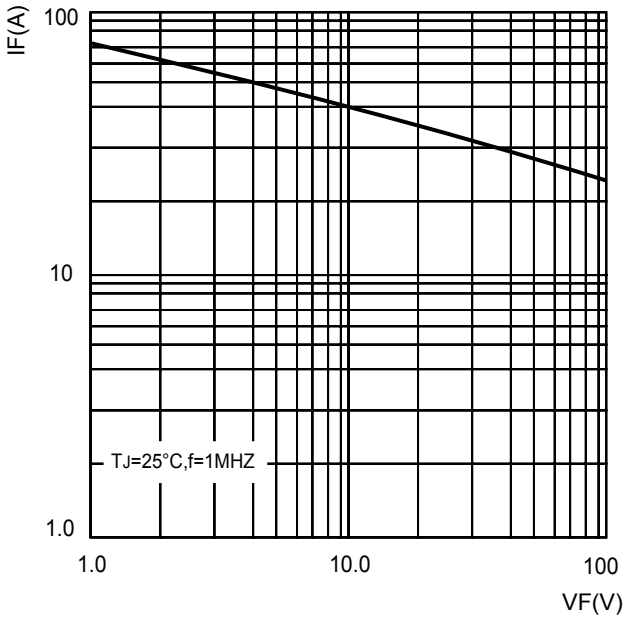


FIG.4-TYPICAL REVERSE CHARACTERISTICS

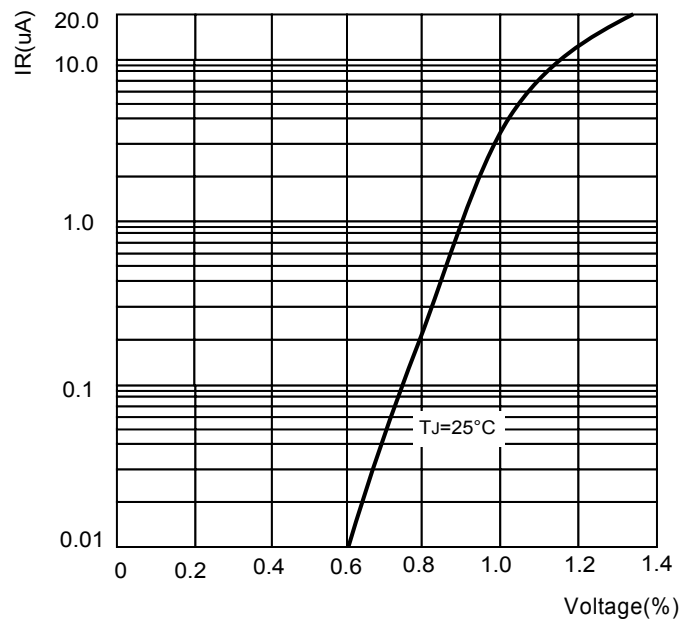
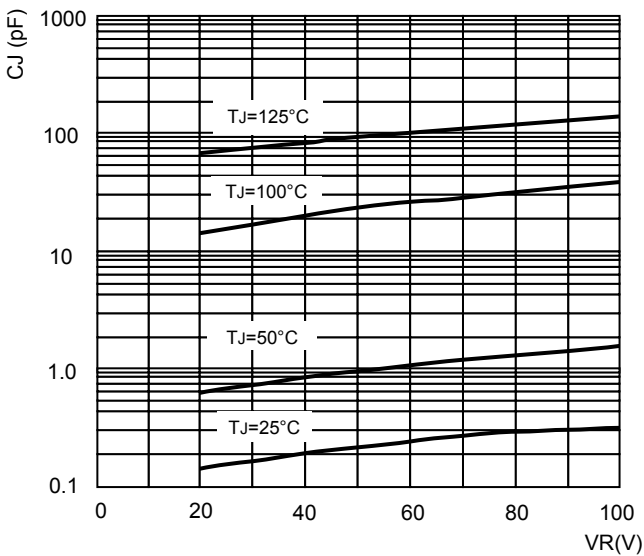
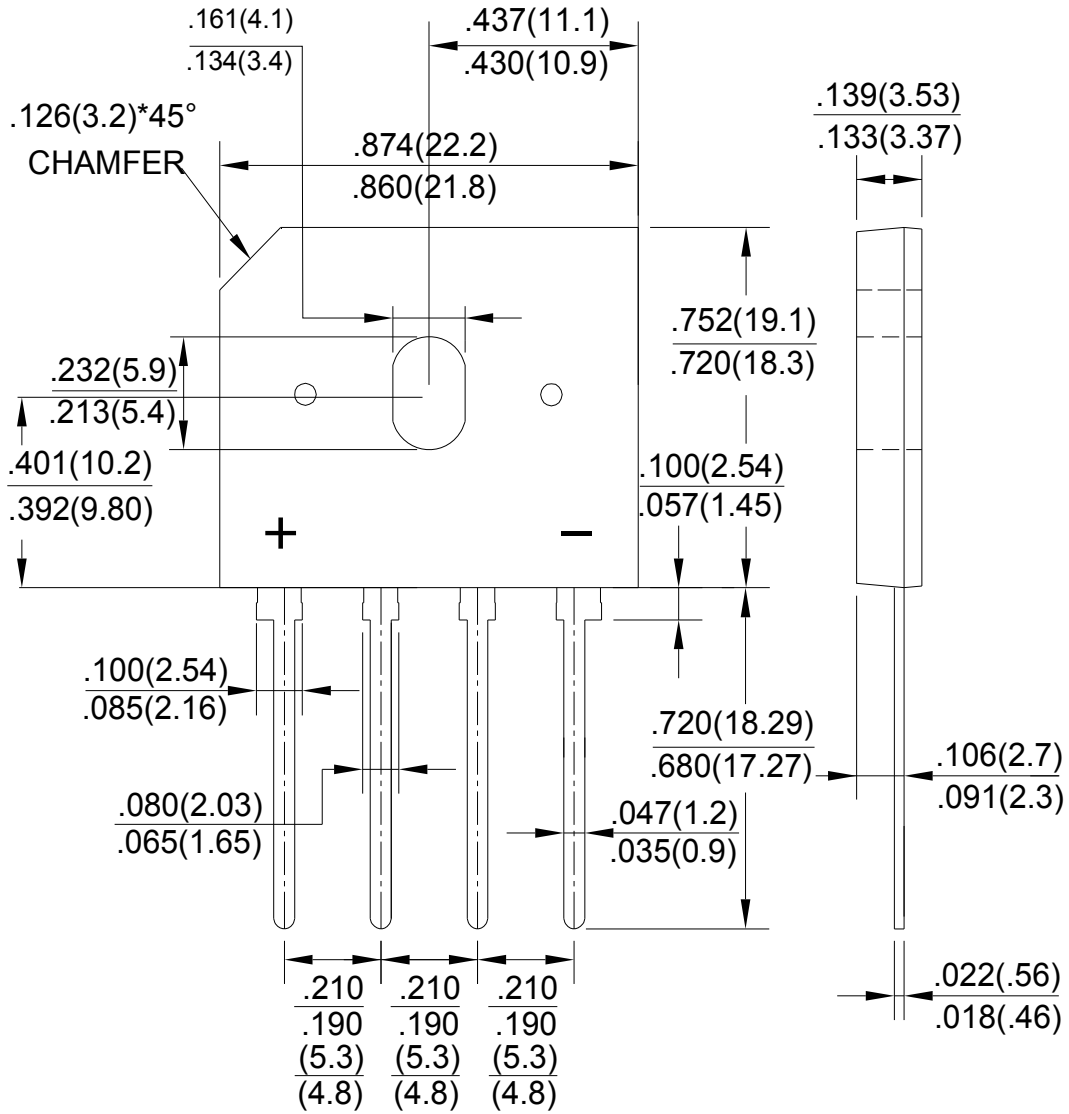


FIG.5-TYPICAL JUNCTION CAPACITANCE



# GBU Package Outline Dimensions



Unit: in inches (millimeters)

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