



DONGGUAN NANJING ELECTRONICS LTD.,

GBJ Plastic-Encapsulate Bridge Rectifier

GBJ50005 THRU GBJ5010

General Purpose Bridge Rectifier

Features

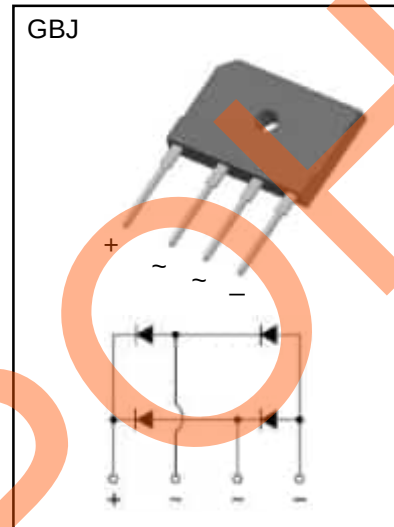
- I_O 50A
- V_{RRM} 50V-1000V
- High surge current capability
- Glass passivated chip

Applications

- General purpose 1 phase Bridge rectifier applications

Marking

- GBJ50XX
XX : From 005 To 10



Limiting Values (Absolute Maximum Rating)

Item	Symbol	Unit	Conditions	GBJ50						
				005	01	02	04	06	08	10
Repetitive Peak Reverse Voltage	V_{RRM}	V		50	100	200	400	600	800	1000
Average Rectified Output Current	I_O	A	60Hz sine wave, R-load With heatsink $T_c = 100^\circ\text{C}$	50						
Surge(Non-repetitive)Forward Current	I_{FSM}	A	60Hz sine wave, 1 cycle, $T_j = 25^\circ\text{C}$	500						
Current Squared Time	I^2t	A^2S	$1\text{ms} \leq t < 8.3\text{ms}$ $T_j = 25^\circ\text{C}$, Rating of per diode	600						
Storage Temperature	T_{stg}	$^\circ\text{C}$		$-55 \sim +150$						
Junction Temperature	T_j	$^\circ\text{C}$		$-55 \sim +150$						
Dielectric Strength	V_{dis}	KV	Terminals to case, AC 1 minute	2.5						
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	$I_{FM} = 25.0\text{A}$, Pulse measurement, Rating of per diode	1.0
Peak Reverse Current	I_{RRM}	μA	$V_{RM} = V_{RRM}$, Pulse measurement, Rating of per diode	5
Thermal Resistance	$R_{\theta J-A}$	$^\circ\text{C}/\text{W}$	Between junction and ambient, Without heatsink	20
	$R_{\theta J-C}$		Between junction and case, With heatsink	0.6

Typical Characteristics

FIG.1-MAXIMUM FORWARD SURGE CURRENT

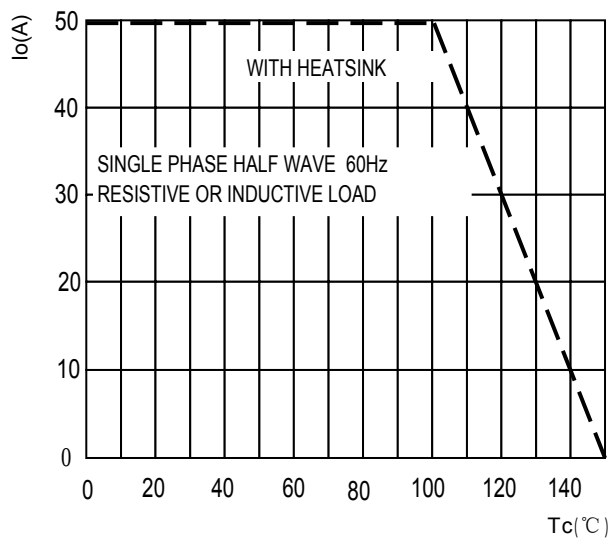


FIG.2-MAXIMUM NON-REPETITIVE SURGE CURRENT

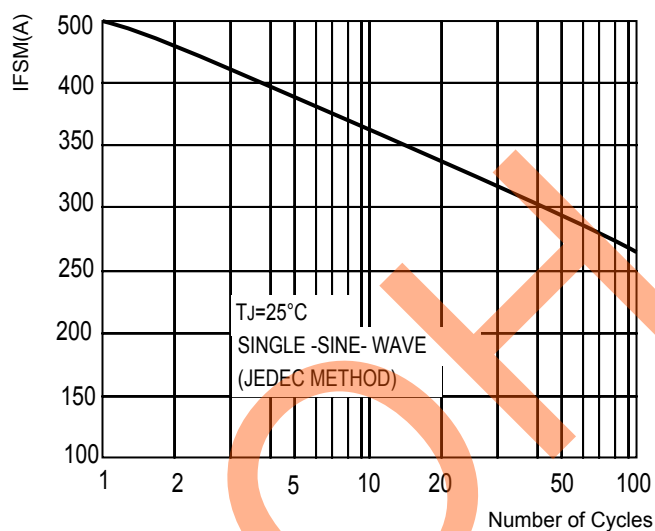


FIG.3-TYPICAL FORWARD CHARACTERISTICS

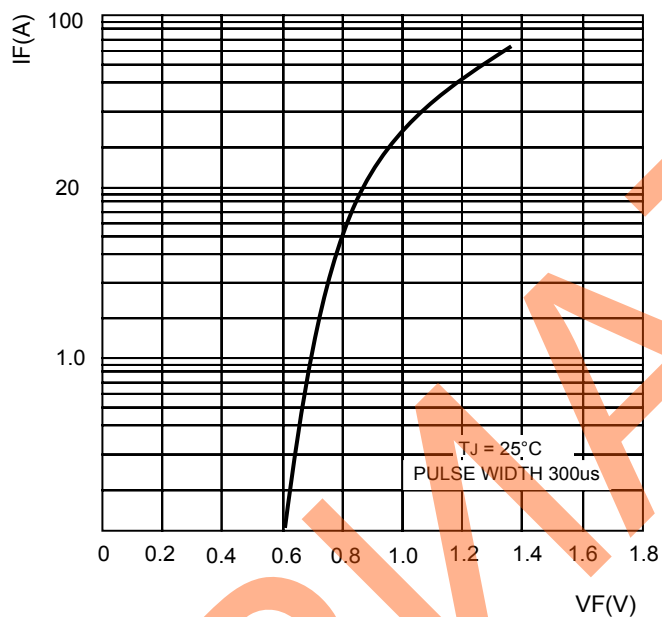


FIG.4-TYPICAL REVERSE CHARACTERISTICS

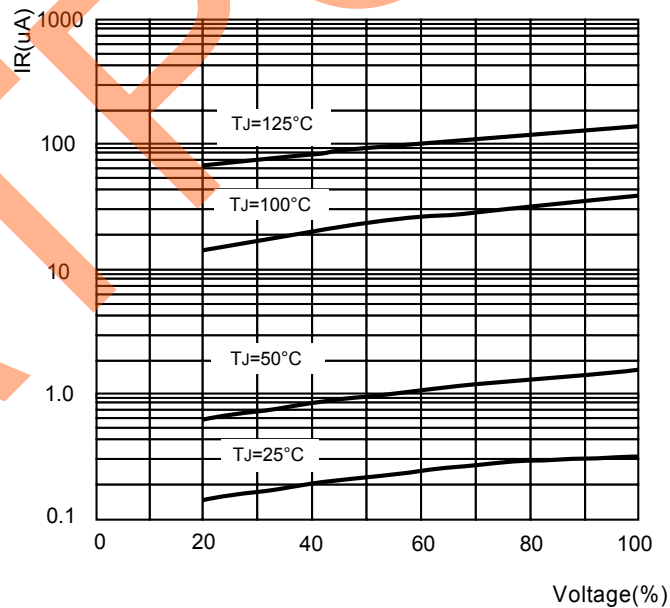
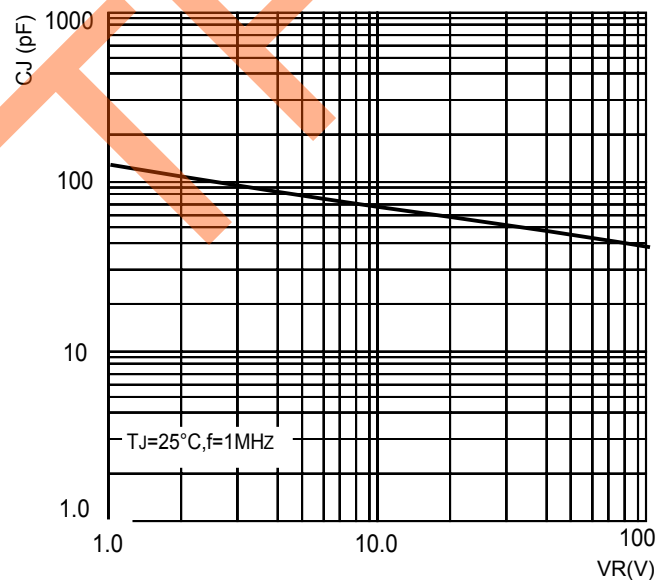
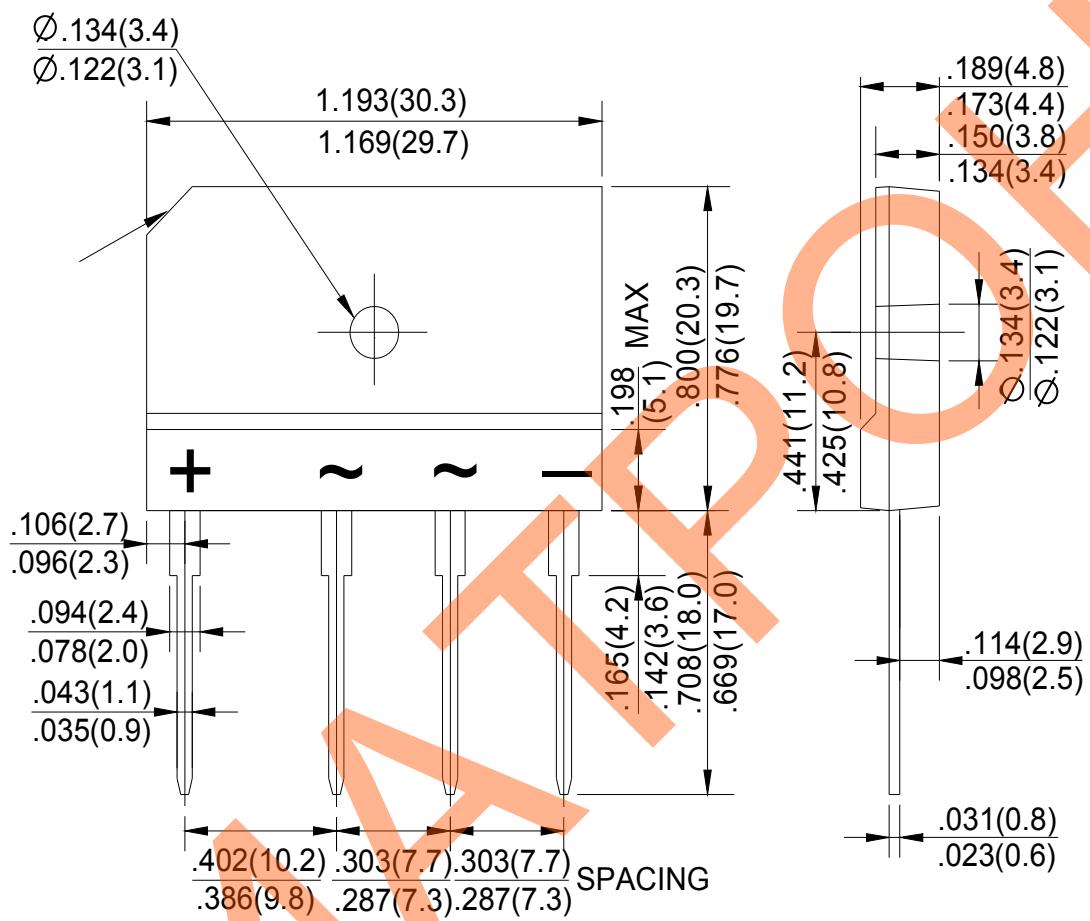


FIG.5-TYPICAL JUNCTION CAPACITANCE





Dimensions in inches and (millimeters)