

40A, 600V to 1200V Standard Single-Phase Bridge Rectifiers

FEATURES

- Glass passivated chip junction
- High surge current capability
- Low reverse leakage current
- High temperature soldering guaranteed: 270°C/10 seconds
- RoHS compliant

MECHANICAL DATA

- Case: GBJHS
- Case material: molding compound meets UL 94V-0 flammability rating
- Polarity: as marked on case body

TYPICAL APPLICATION

General purpose use in Household electric appliances, industrial power supply, industrial automation equipment.

MAXIMUM RATINGS

$T_A=25^\circ\text{C}$ unless otherwise noted

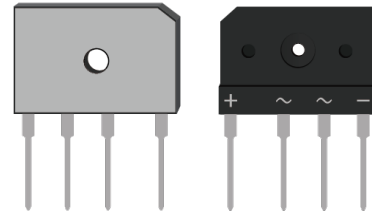
Parameter	Symbol	GBJ 4060HS	GBJ 4080HS	GBJ 40100HS	GBJ 40120HS	Unit
Repetitive Peak Reverse Voltage	V_{RRM}	600	800	1000	1200	V
Average Forward Rectified Current (with heatsink, $T_C=100^\circ\text{C}$)	$I_{F(AV)}$	40				A
Peak Forward Surge Current (8.3ms single half sine-wave superimposed on rated load)	I_{FSM}	400				A
Rating For Fusing ($1\text{ms}<t<8.3\text{ms}$, $T_J=25^\circ\text{C}$, Rating of per diode)	I^2t	664				A^2s
Operating Junction Temperature Range	T_J	-55 to +150				$^\circ\text{C}$
Storage Temperature Range	T_{STG}	-55 to +150				$^\circ\text{C}$

ELECTRICAL CHARACTERISTICS

$T_A=25^\circ\text{C}$ unless otherwise noted

Parameter	Test Conditions	Symbol	Value	Unit
Peak Forward Voltage@ $I_F=20\text{A}$ (Pulse measurement, Rate of per diode)	$T_A=25^\circ\text{C}$	V_F	1.1	V
Reverse Current@ $V_R=V_{RRM}$ (Pulse measurement, Rate of per diode)	$T_J=25^\circ\text{C}$	I_R	5	μA
	$T_J=125^\circ\text{C}$		500	
Typical Thermal Resistance	without heatsink	$R_{\theta JA}$	22	$^\circ\text{C}/\text{W}$
	with heatsink	$R_{\theta JC}$	0.7	

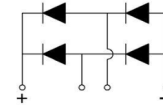
GBJHS



RoHS
COMPLIANT

HALOGEN
FREE
AVAILABLE

Circuit diagram



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RATINGS AND CHARACTERISTIC CURVES

$T_A=25^\circ\text{C}$ unless otherwise noted

FIG.1: Forward Output Current Derating Curve

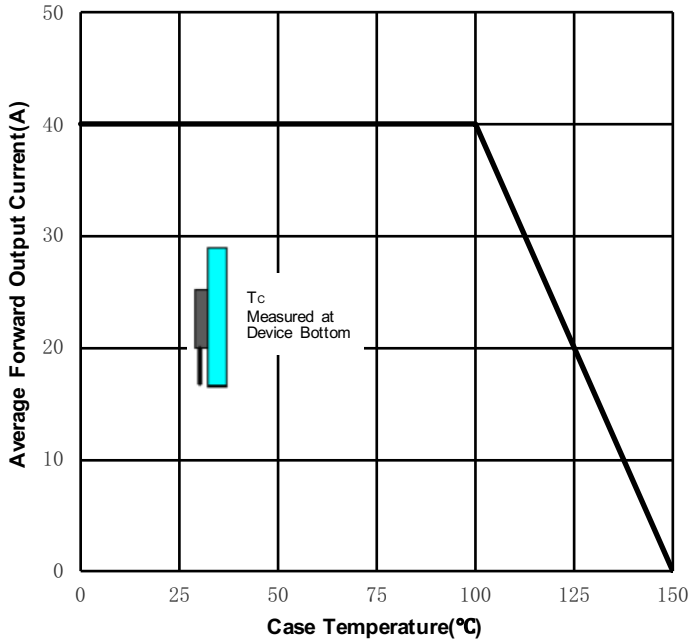


FIG.2: Maximum Non-Repetitive Peak Forward Surge Current

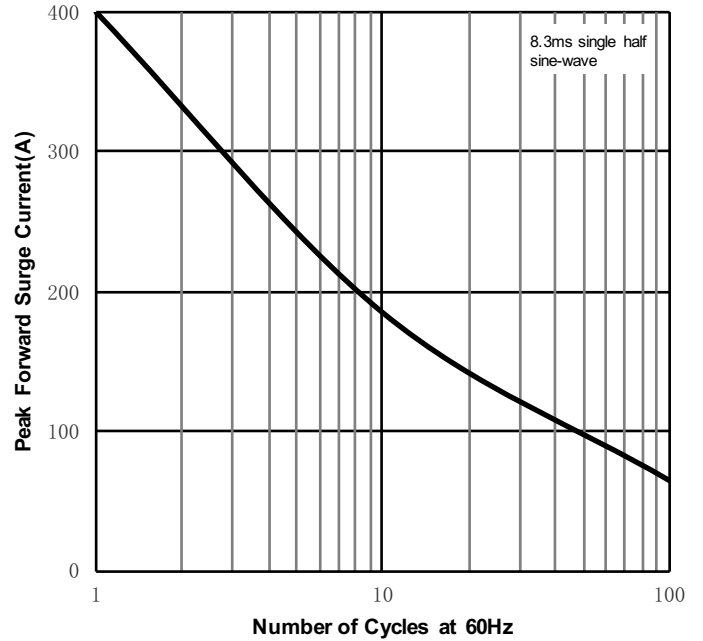


FIG.3: Typical Forward Characteristics

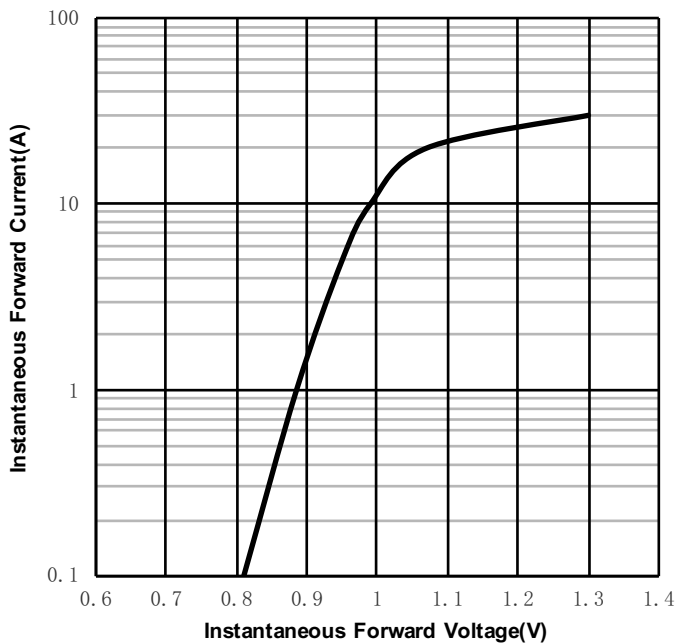
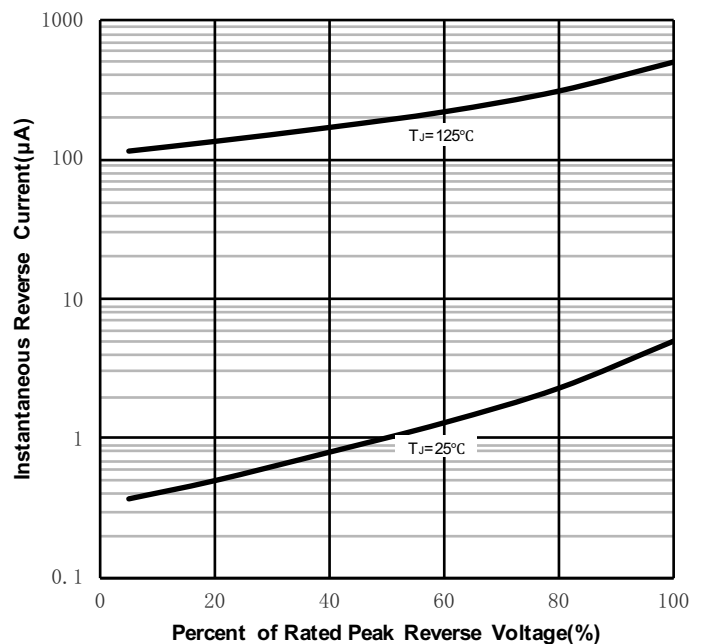


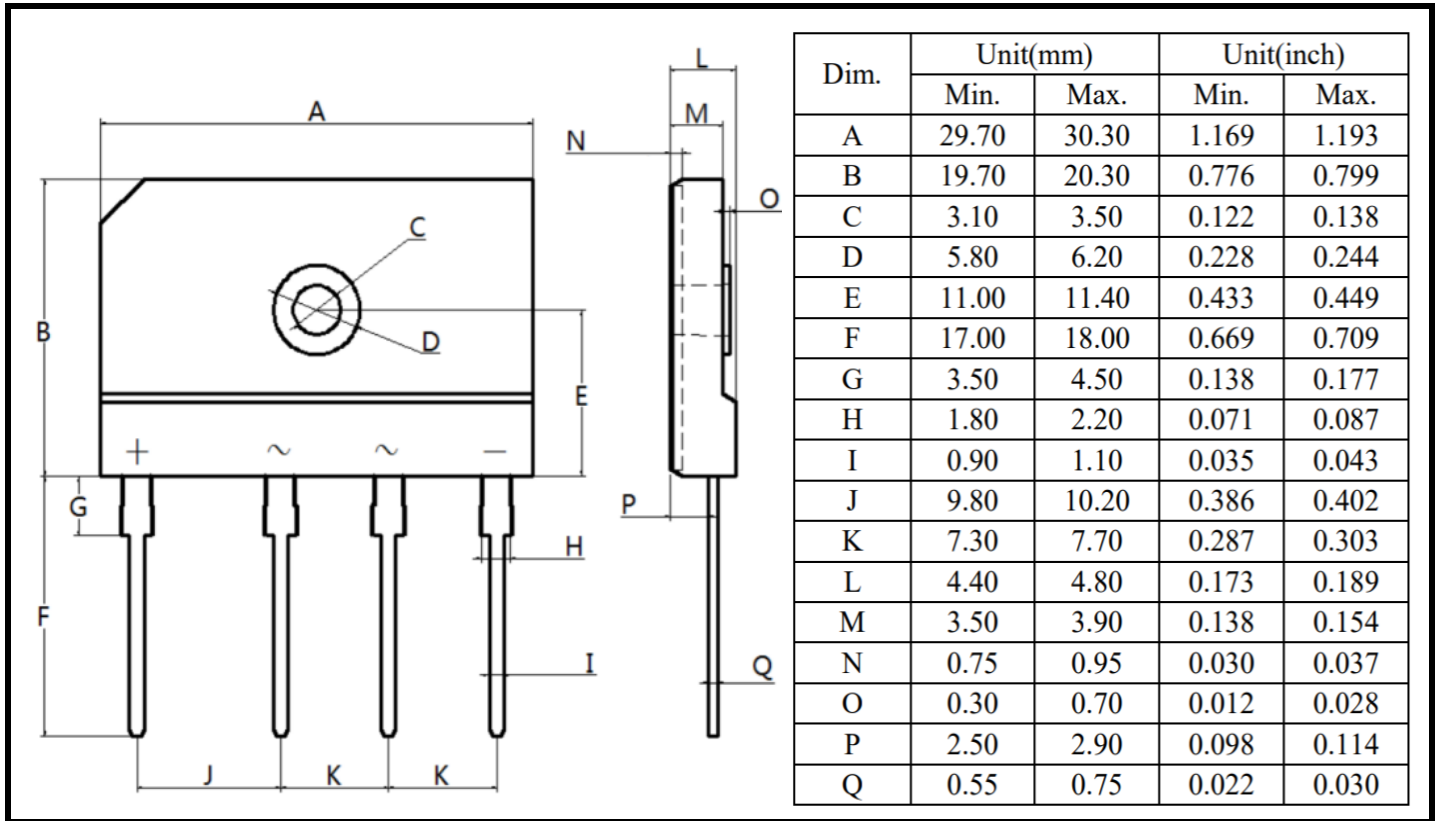
FIG.4: Typical Reverse Characteristics



GBJ4060HS THRU GBJ40120HS

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PACKAGE OUTLINE DIMENSIONS



PACKING INFORMATION

Package	Inner Box Qty.(PCS)	Carton Qty.(PCS)
GBJHS	250	2,000