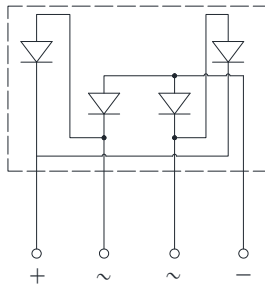
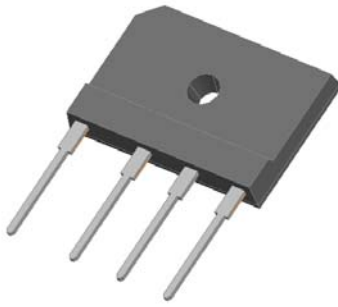


Bridge Rectifiers



Features

- UL recognition, file #E230084
- Glass passivated chip junction
- Thin single in-line package
- High surge current capability
- Solder dip 275 °C max. 7 s, per JESD 22-B106

Typical Applications

General purpose use in AC/DC bridge full wave rectification for switching power supply, home appliances, office equipment, industrial automation applications.

Mechanical Data

- **Package:** 6KBJ
Molding compound meets UL 94 V-0 flammability rating, RoHS-compliant
- **Terminals:** Tin plated leads, solderable per J-STD-002 and JESD22-B102
- **Polarity:** As marked on body

■Maximum Ratings (Ta=25°C Unless otherwise specified)

PARAMETER		SYMBOL	UNIT	GBJ5012	GBJ5013
Device marking code				GBJ5012	GBJ5013
Maximum Repetitive Peak Reverse Voltage		VRRM	V	1200	1300
Maximum RMS Voltage		VRMS	V	840	910
Maximum DC blocking Voltage		VDC	V	1200	1300
Average rectified output current @60Hz sine wave, R-load	With heatsink Tc =70°C	IO	A	50.0	
	Without heatsink Ta =25°C			4.0	
Forward Surge Current (Non-repetitive) @60Hz Half-sine wave, 1 cycle, Tj=25°C		IFSM	A	500	
Forward Surge Current (Non-repetitive) @1ms, square wave, 1 cycle, Tj=25°C				1000	
Current squared time @1ms≤t≤8.3ms Tj=25°C, Rating of per diode		I ² t	A ² s	1037.5	
Storage temperature		Tstg	°C	-55 ~ +150	
Junction temperature		Tj	°C	-55 ~ +150	
Dielectric strength @ Terminals to case, AC 1 minute		Vdis	KV	2.5	
Mounting torque @Recommend torque: 5kg·cm		Tor	kg·cm	8	



GBJ5012 THRU GBJ5013

■ Electrical Characteristics (T_a=25°C Unless otherwise specified)

PARAMETER	SYMBOL	UNIT	TEST CONDITIONS	GBJ5012	GBJ5013
Maximum instantaneous forward voltage drop per diode	V _F	V	IFM=25A	1.1	
Maximum DC reverse current at rated DC blocking voltage per diode	I _R	μA	T _j =25°C	5	
			T _j =125°C	500	
Typical junction capacitance	C _j	pF	Measured at 1MHz and Applied Reverse Voltage of 4.0 V.D.C	193	

■ Thermal Characteristics (T_a=25°C Unless otherwise specified)

PARAMETER		SYMBOL	UNIT	GBJ5012	GBJ5013
Thermal Resistance	Between junction and ambient, Without heatsink	R _{θJ-A}	°C/W	18.0	
	Between junction and case, With heatsink	R _{θJ-C}		0.8	

Note: Device mounted on 75mm x 45mm x 5.5mm Aluminum Plate Heatsink.

■ Ordering Information (Example)

PREFERRED P/N	PACKING CODE	UNIT WEIGHT(g)	MINIMUM PACKAGE(pcs)	INNER BOX QUANTITY(pcs)	OUTER CARTON QUANTITY(pcs)	DELIVERY MODE
GBJ5012 – GBJ5013	B1	Approximate 6.5	15	750	1500	TUBE

■ Characteristics (Typical)

FIG1: I_o-T_c Curve

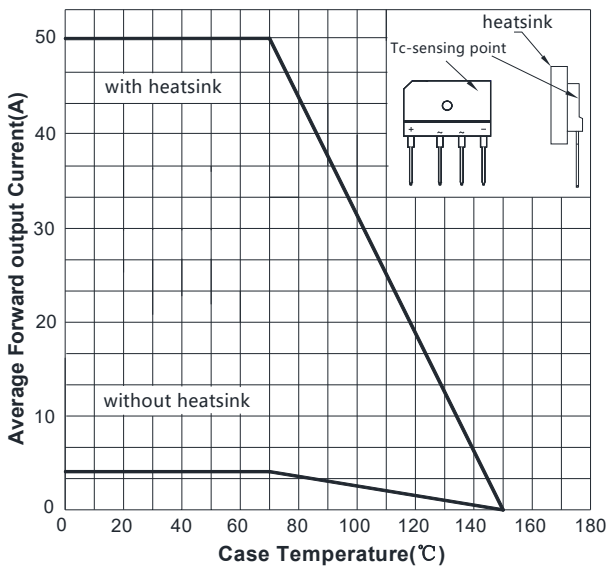
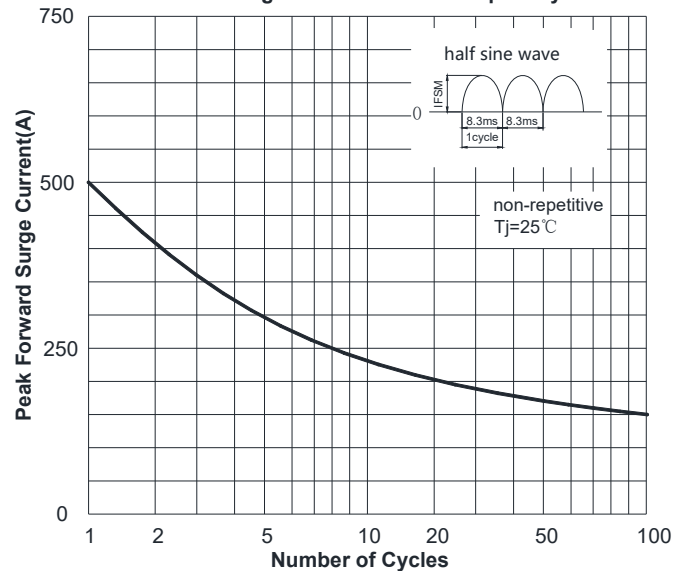


FIG2: Surge Forward Current Capability





GBJ5012 THRU GBJ5013

FIG3: Typical Forward Voltage

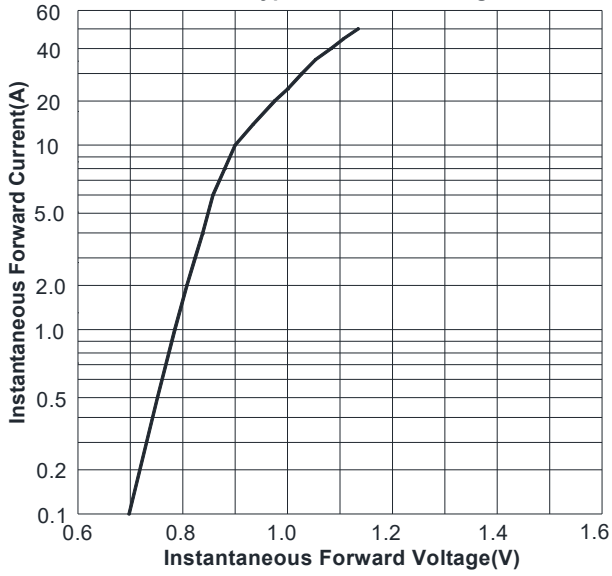
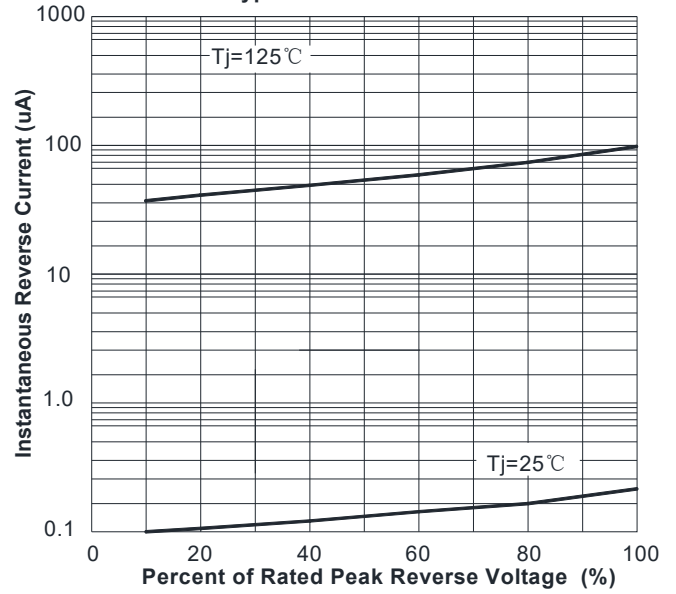
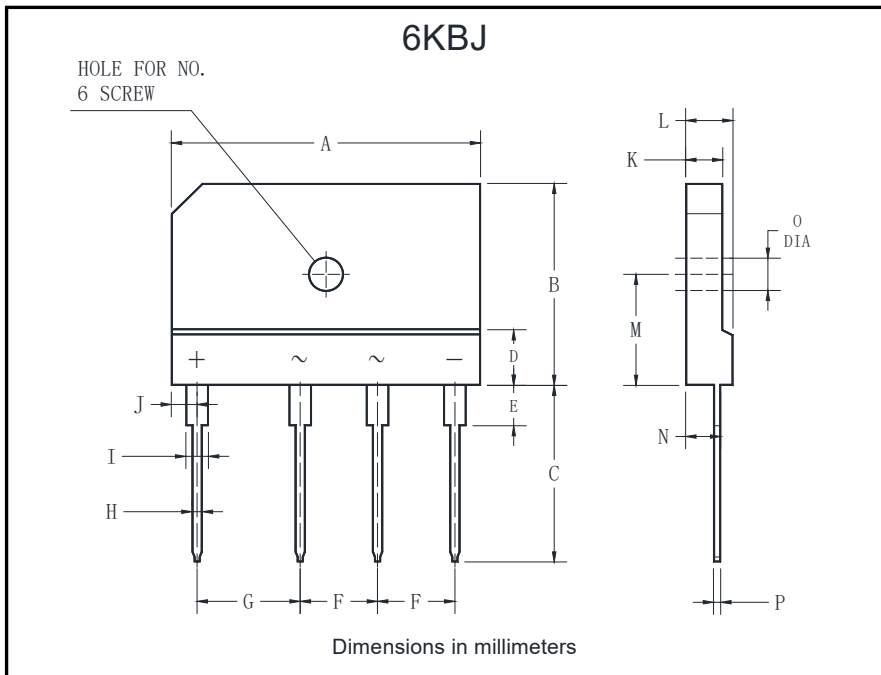


FIG4: Typical Reverse Characteristics



■ Outline Dimensions



6KBJ		
Dim	Min	Max
A	29.7	30.3
B	19.7	20.3
C	17.0	18.0
D	4.8	5.8
E	3.8	4.2
F	7.3	7.7
G	9.8	10.2
H	0.9	1.1
I	2.0	2.4
J	2.3	2.7
K	3.4	3.8
L	4.4	4.8
M	10.8	11.2
N	3.1	3.7
O	3.1	3.4
P	0.6	0.8



GBJ5012 THRU GBJ5013

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