

### 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 (T<sub>a</sub>=25°C Unless otherwise specified)

PARAMETER	SYMBOL	UNIT	GBJ50005	GBJ5001	GBJ5002	GBJ5004	GBJ5006	GBJ5008	GBJ5010
Device marking code			GBJ50005	GBJ5001	GBJ5002	GBJ5004	GBJ5006	GBJ5008	GBJ5010
Maximum Repetitive Peak Reverse Voltage	VRRM	V	50	100	200	400	600	800	1000
Maximum RMS Voltage	VRMS	V	35	70	140	280	420	560	700
Maximum DC blocking Voltage	VDC	V	50	100	200	400	600	800	1000
Average rectified output current @60Hz sine wave, R-load,	With heatsink T <sub>c</sub> =100°C	I <sub>O</sub>	A	50.0					
	Without heatsink T <sub>a</sub> =25°C			5.2					
Forward Surge Current (Non-repetitive) @60Hz Half-sine wave, 1 cycle, T <sub>j</sub> =25°C	IFSM	A	500						
Forward Surge Current (Non-repetitive) @1ms, square wave, 1 cycle, T <sub>j</sub> =25°C			1000						
Current squared time @1ms≤t≤8.3ms T <sub>j</sub> =25°C, Rating of per diode	I <sup>2</sup> t	A <sup>2</sup> s	1037.5						
Storage temperature	T <sub>stg</sub>	°C	-55 ~ +150						
Junction temperature	T <sub>j</sub>	°C	-55 ~ +150						
Dielectric strength @ Terminals to case, AC 1 minute	V <sub>dis</sub>	KV	2.5						
Mounting torque @Recommend torque: 5kg·cm	T <sub>or</sub>	kg·cm	8						

### ELECTRICAL CHARACTERISTICS (T<sub>a</sub>=25°C Unless otherwise specified)

PARAMETER	SYMBOL	UNIT	TEST CONDITIONS	GBJ50005	GBJ5001	GBJ5002	GBJ5004	GBJ5006	GBJ5008	GBJ5010
Maximum instantaneous forward voltage drop per diode	V <sub>F</sub>	V	I <sub>FM</sub> =25A	1.0						
Maximum DC reverse current at rated DC blocking voltage per diode	I <sub>R</sub>	μA	T <sub>j</sub> =25°C	5						
			T <sub>j</sub> =125°C	200						
Typical junction capacitance	C <sub>j</sub>	pF	Measured at 1MHz and Applied Reverse Voltage of 4.0 V.D.C	190						

### ■ THERMAL CHARACTERISTICS (T<sub>a</sub>=25°C Unless otherwise specified)

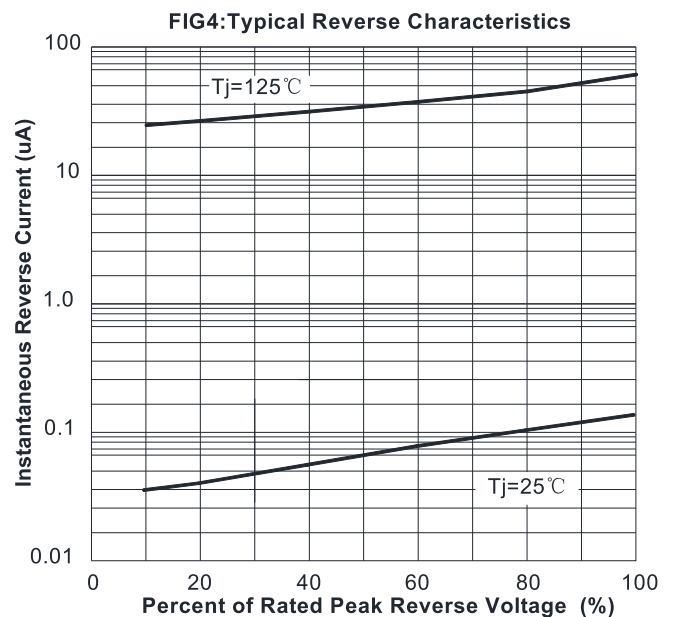
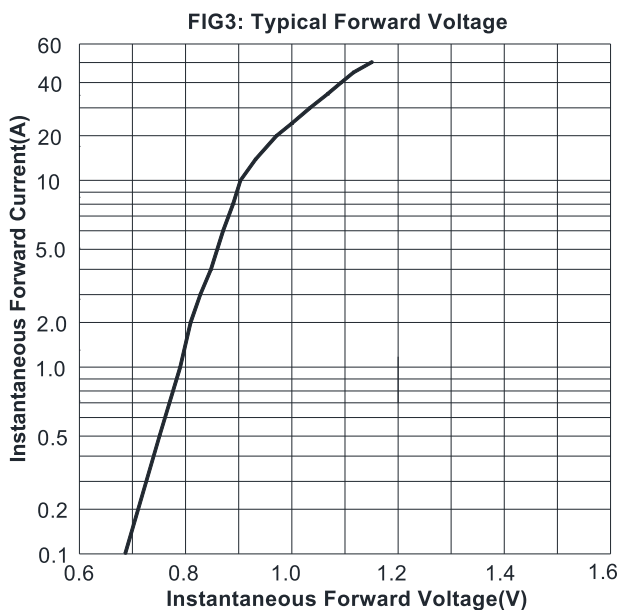
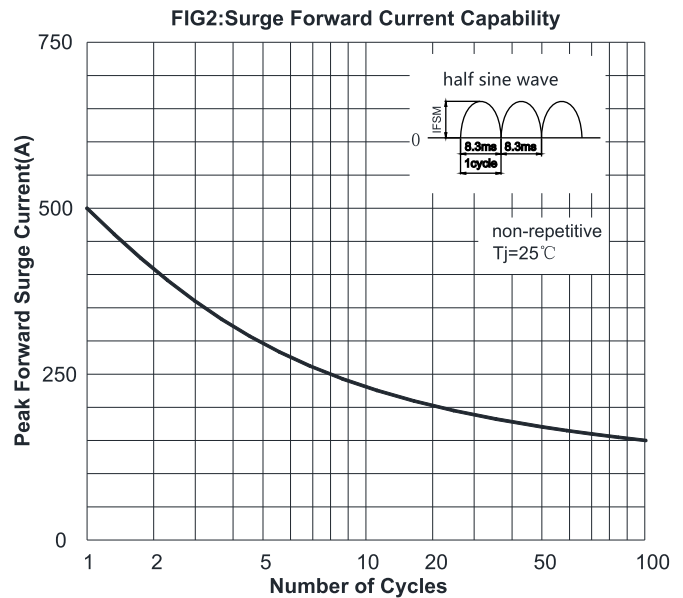
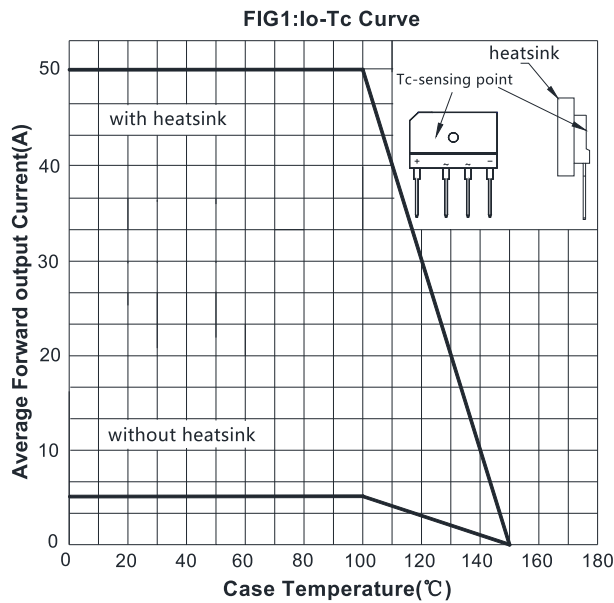
PARAMETER		SYMBOL	UNIT	GBJ50005	GBJ5001	GBJ5002	GBJ5004	GBJ5006	GBJ5008	GBJ5010
Thermal Resistance	Between junction and ambient, Without heatsink	R <sub>θJ-A</sub>	°C/W	18						
	Between junction and case, With heatsink	R <sub>θJ-C</sub>		0.8						

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

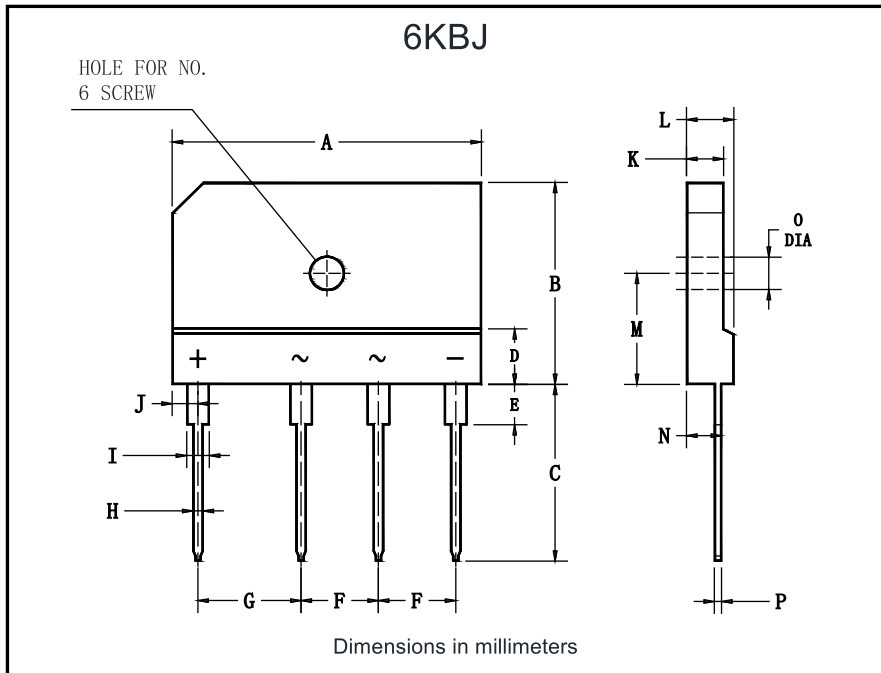
### ■ PACKAGING INFORMATION

PREFERED P/N	PACKING CODE	UNIT WEIGHT(g)	MINIIMUM PACKAGE(pcs)	INNER BOX QUANTITY(pcs)	OUTER CARTON QUANTITY(pcs)	DELIVERY MODE
GBJ50005 - GBJ5010	B1	Approximate 6.5	15	750	1500	TUBE

### ■ CHARACTERISTICS (TYPICAL)



■ **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