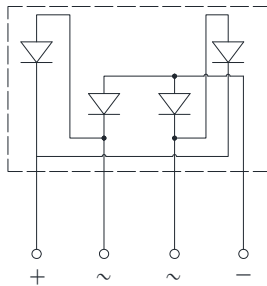
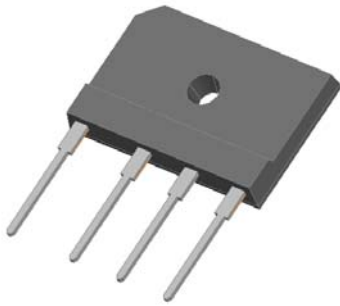


## High Efficient Bridge Rectifiers



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

PARAMETER	SYMBOL	UNIT	HGBJ5006	
Device marking code			HGBJ5006	
Maximum Repetitive Peak Reverse Voltage	VRRM	V	600	
Maximum RMS Voltage	VRMS	V	420	
Maximum DC blocking Voltage	VDC	V	600	
Average rectified output current @60Hz sine wave, R-load,	With heatsink $T_c=50^\circ\text{C}$	IO	A	50
	Without heatsink $T_a=25^\circ\text{C}$			3.5
Forward Surge Current (Non-repetitive) @60Hz Half-sine wave, 1 cycle, $T_j=25^\circ\text{C}$	IFSM	A	450	
Forward Surge Current (Non-repetitive) @1ms, square wave, 1 cycle, $T_j=25^\circ\text{C}$			900	
Current squared time @1ms≤t≤8.3ms $T_j=25^\circ\text{C}$ , Rating of per diode	I <sup>2</sup> t	A <sup>2</sup> s	840.4	
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	Tor	kg·cm	8	



# HGBJ5006

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

PARAMETER	SYMBOL	UNIT	TEST CONDITIONS	HGBJ5006
Maximum reverse recovery time	t <sub>r</sub>	ns	I <sub>F</sub> =0.5A, I <sub>R</sub> =1.0A, I <sub>r</sub> =0.25A	100
Maximum instantaneous forward voltage drop per diode	V <sub>F</sub>	V	I <sub>FM</sub> =25.0A	4
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	300

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

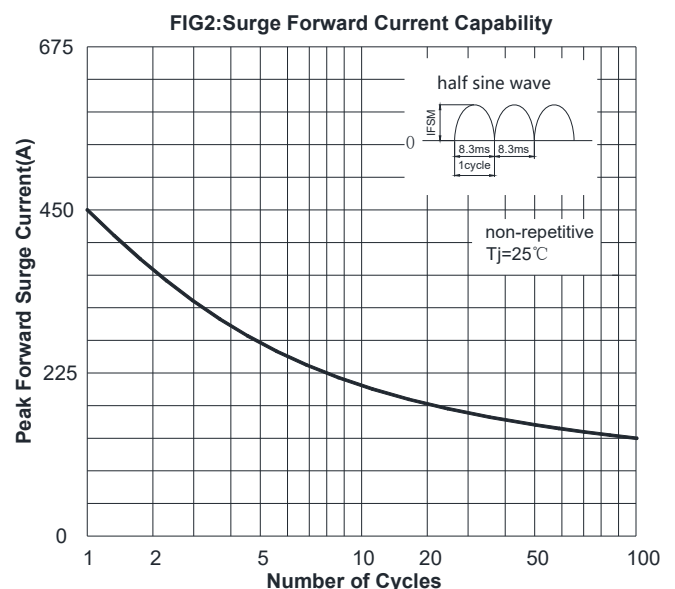
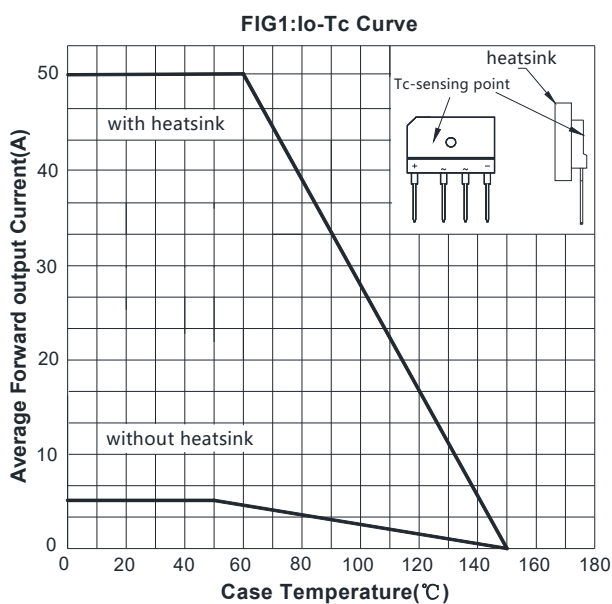
PARAMETER		SYMBOL	UNIT	HGBJ5006
Thermal Resistance	Between junction and ambient, Without heatsink	R <sub>θJ-A</sub>	°C/W	18.0
	Between junction and case, With heatsink	R <sub>θJ-C</sub>		1.0

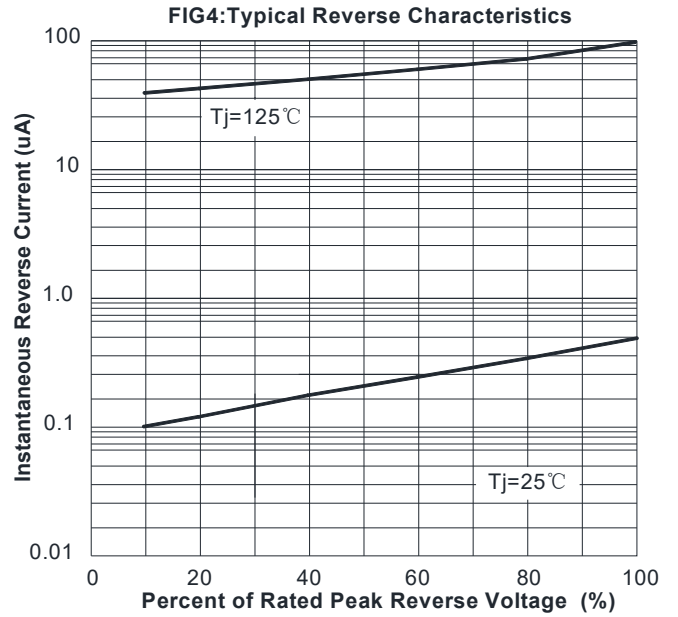
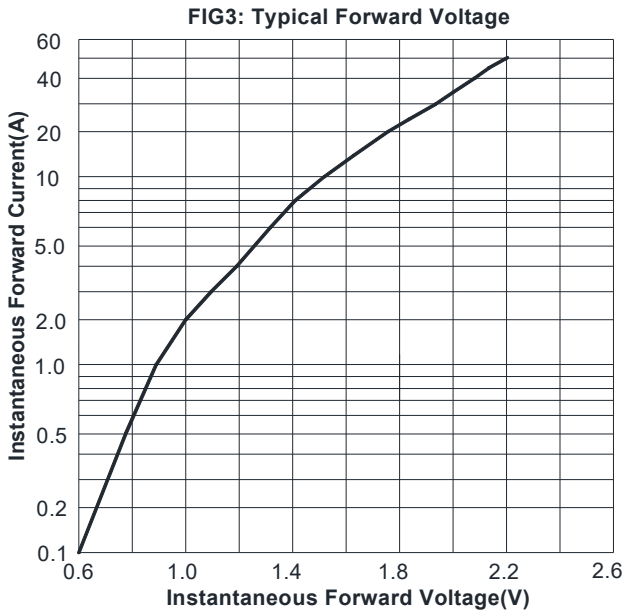
Note: Device mounted on 75mm x 45mm x 5.5mm Aluminum Plate Heatsink.

## ■Ordering Information (Example)

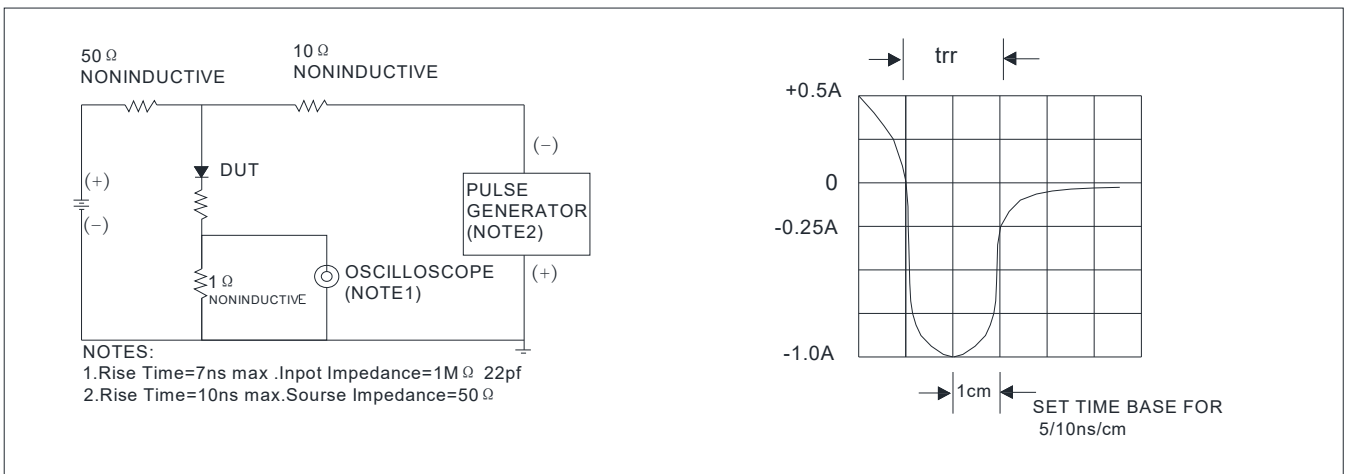
PREFERRED P/N	PACKING CODE	UNIT WEIGHT(g)	MINIMUM PACKAGE(pcs)	INNER BOX QUANTITY(pcs)	OUTER CARTON QUANTITY(pcs)	DELIVERY MODE
HGBJ5006	B1	Approximate 6.5	15	750	1500	TUBE
HGBJ5006	A1	Approximate 6.5	250	250	2000	BOX

## ■ Characteristics (Typical)





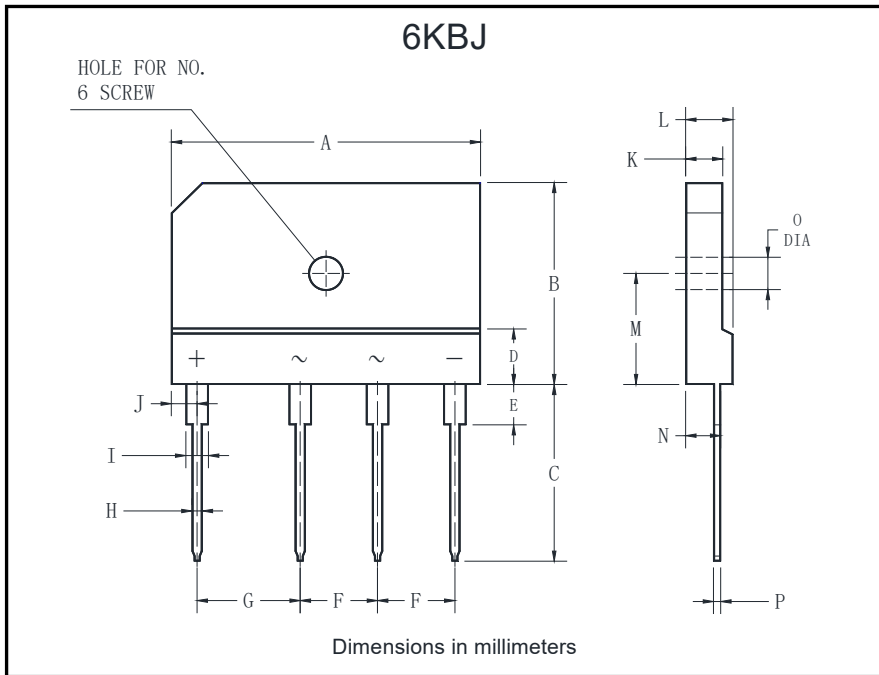
**FIG.5: Diagram of circuit and Testing wave form of reverse recovery time**





# HGBJ5006

## ■ 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



## HGBJ5006

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