

## Bridge Rectifiers

### Features

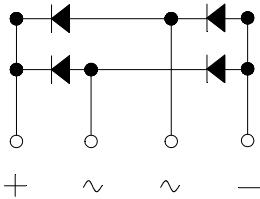
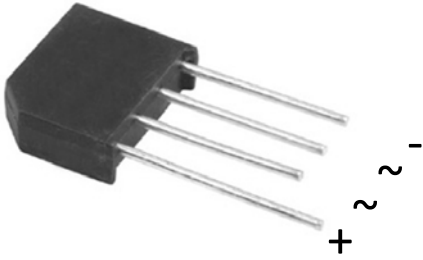
- UL recognition, file #E230084
- Ideal for printed circuit boards
- High surge current capability
- Solder dip 275 °C max. 7 s, per JESD 22-B106

### 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:** KBL  
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	KBL6005	KBL601	KBL602	KBL604	KBL606	KBL608	KBL610
Device marking code			KBL6005	KBL601	KBL602	KBL604	KBL606	KBL608	KBL610
Repetitive Peak Reverse Voltage	VRRM	V	50	100	200	400	600	800	1000
Average Rectified Output Current @60Hz sine wave, R-load, T <sub>a</sub> =40°C	I <sub>O</sub>	A	6						
Surge(Non-repetitive)Forward Current @60Hz half-sine wave, 1 cycle, T <sub>a</sub> =25°C	IFSM	A	135						
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	76						
Storage Temperature	T <sub>stg</sub>	°C	-55 ~+150						
Junction Temperature	T <sub>j</sub>	°C	-55 ~+150						

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

PARAMETER	SYMBOL	UNIT	TEST CONDITIONS	KBL6005	KBL601	KBL602	KBL604	KBL606	KBL608	KBL610
Maximum instantaneous forward voltage drop per diode	V <sub>F</sub>	V	IFM=6A	1.05						
Maximum DC reverse current at rated DC blocking voltage per diode	I <sub>RRM</sub>	μA	V <sub>RM</sub> =V <sub>RRM</sub>	10						



# KBL6005 THRU KBL610

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

PARAMETER		SYMBOL	UNIT	KBL6005	KBL601	KBL602	KBL604	KBL606	KBL608	KBL610
Thermal Resistance	Between junction and ambient,	$R_{\theta J-A}$	$^\circ\text{C}/\text{W}$	19 <sup>(1)</sup>						
	Between junction and lead	$R_{\theta J-L}$		5 <sup>(2)</sup>						

Notes

(1) Thermal resistance from junction to ambient with units mounted on 3.0\*3.0\*0.11" thick(7.5\*7.5\*0.3cm) aluminum plate

(2) Thermal resistance from junction to lead with units mounted on P.C.B.at 0.375"(9.5mm)lead length and 0.5\*0.5"(12\*12mm) copper pads

## ■ Ordering Information (Example)

PREFERRED P/N	PACKAGE CODE	UNIT WEIGHT(g)	MINIMUM PACKAGE(pcs)	INNER BOX QUANTITY(pcs)	OUTER CARTON QUANTITY(pcs)	DELIVERY MODE
KBL6005~KBL610	A1	Approximate4.56	500	500	4000	Paper Box

## ■ Characteristics (Typical)

FIG1:  $I_o$ - $T_a$  Curve

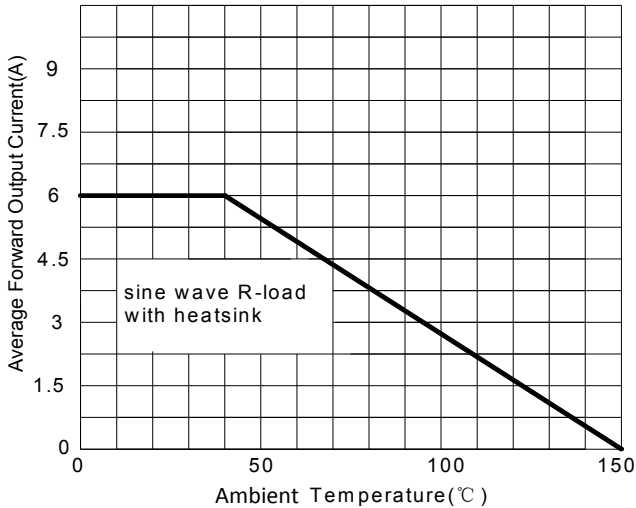


FIG2: Surge Forward Current Capability

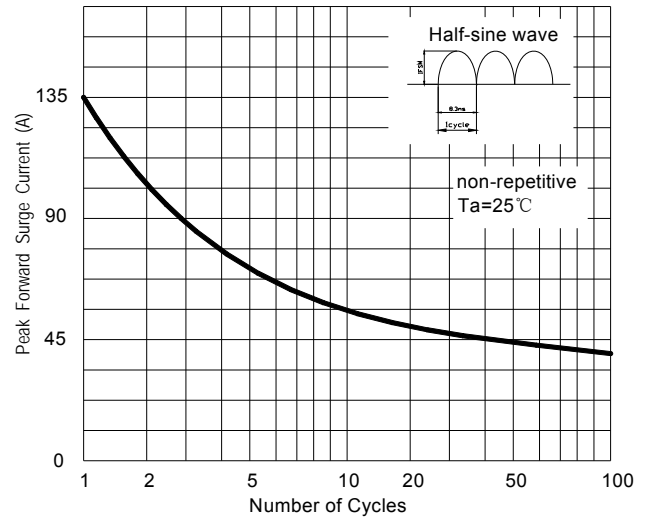


FIG3: Instantaneous Forward Voltage

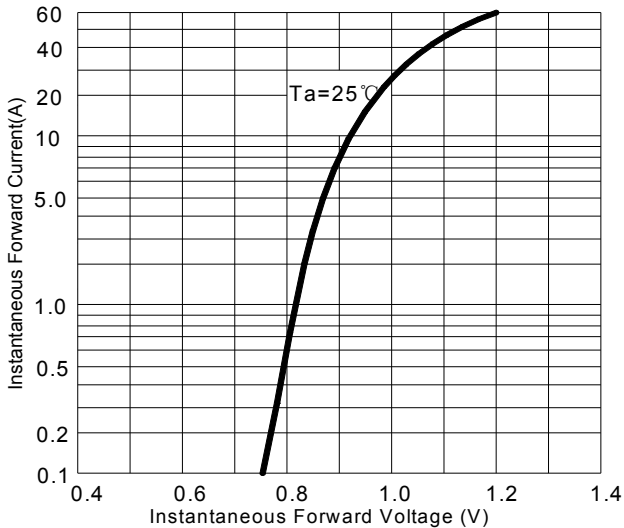
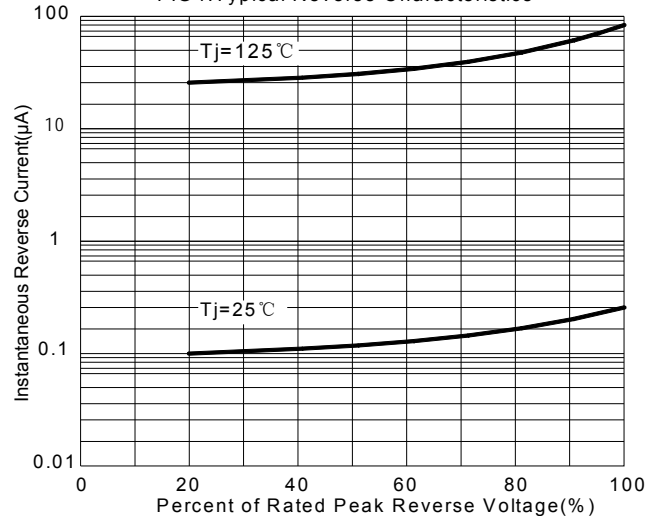


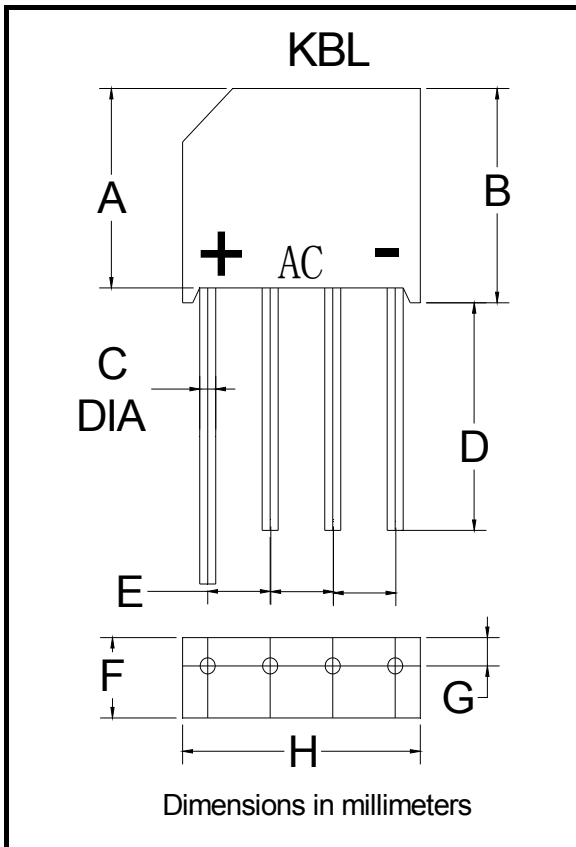
FIG4: Typical Reverse Characteristics





# KBL6005 THRU KBL610

## ■ Outline Dimensions



KBL		
Dim	Min	Max
A	13.7	15.7
B	15.2	16.3
C	1.2	1.3
D	16	/
E	4.6	5.6
F	5.5	6.5
G	1.8	2.4
H	18.5	19.5



## KBL6005 THRU KBL610

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