

## Bridge Rectifiers

### Features

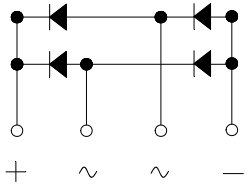
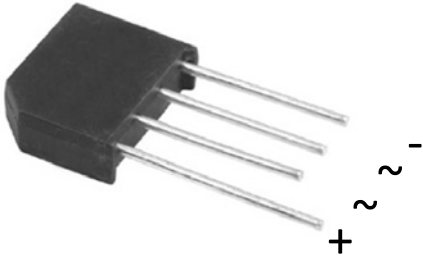
- UL recognition, file #E230084
- Ideal for printed circuit boards
- High surge current capability
- Solder dip 275 °C max. 7 s, per JESD 22-B106

### 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 (Ta=25°C Unless otherwise specified)

PARAMETER	SYMBOL	UNIT	KBL4005	KBL401	KBL402	KBL404	KBL406	KBL408	KBL410
Device marking code			KBL4005	KBL401	KBL402	KBL404	KBL406	KBL408	KBL410
Repetitive Peak Reverse Voltage	VRRM	V	50	100	200	400	600	800	1000
Average Rectified Output Current @60Hz sine wave, R-load, Without heatsink Ta =40°C	IO	A	4						
Surge(Non-repetitive)Forward Current @60HZ half-sine wave, 1 cycle, Tj=25°C	IFSM	A	120						
Current Squared Time @1ms≤t<8.3ms Tj=25°C, Rating of per diode	I <sup>2</sup> t	A <sup>2</sup> S	59.8						
Storage Temperature	Tstg	°C	-55 ~+150						
Junction Temperature	Tj	°C	-55 ~+150						

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

PARAMETER	SYMBOL	UNIT	TEST CONDITIONS	KBL4005	KBL401	KBL402	KBL404	KBL406	KBL408	KBL410
Maximum instantaneous forward voltage drop per diode	VF	V	IFM=4A	1.05						
Maximum DC reverse current at rated DC blocking voltage per diode	IRRM	μA	VRM=VRRM	10						



# KBL4005 THRU KBL410

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

PARAMETER		SYMBOL	UNIT	KBL4005	KBL401	KBL402	KBL404	KBL406	KBL408	KBL410
Thermal Resistance	Between junction and ambient,	R $\theta$ J-A	°C/W	13 <sup>(1)</sup>						
	Between junction and lead	R $\theta$ J-L		2.4 <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)	MINIIMUM PACKAGE(pcs)	INNER BOX QUANTITY(pcs)	OUTER CARTON QUANTITY(pcs)	DELIVERY MODE
KBL4005~KBL410	A1	Approximate 4.54	500	500	4000	Paper Box

## ■ Characteristics(Typical)

FIG1:I<sub>o</sub>-T<sub>c</sub> Curve

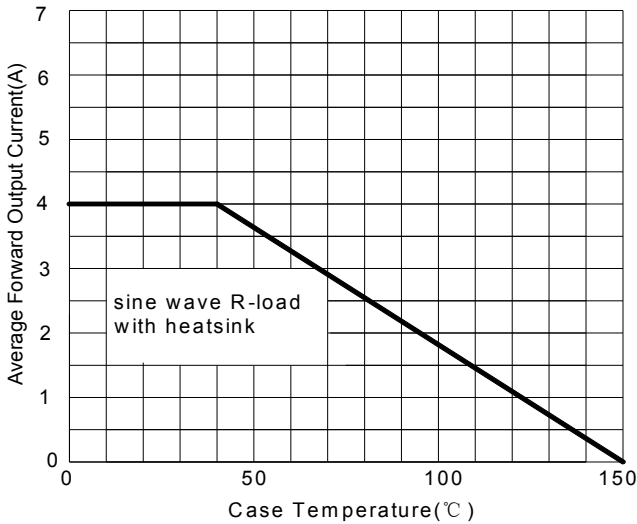


FIG2:Surge Forward Current Capability

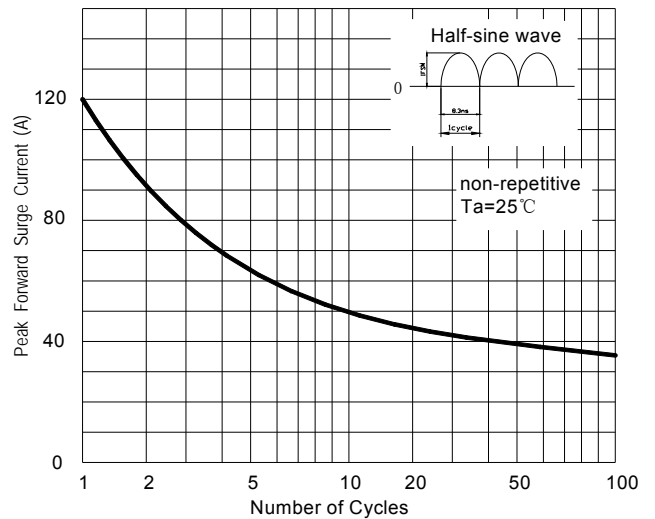


FIG3:Instantaneous Forward Voltage

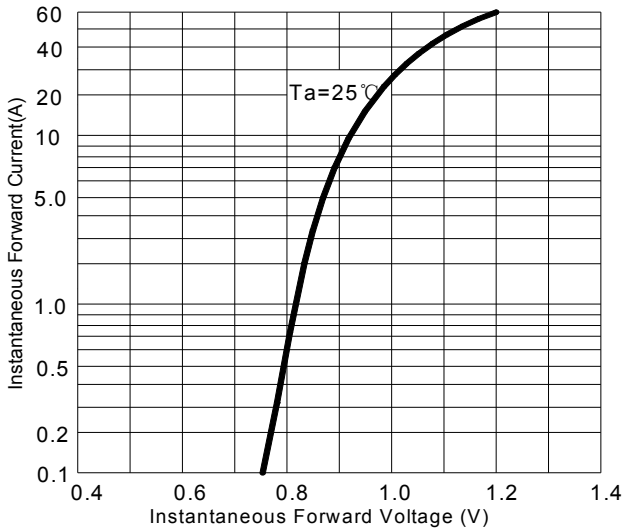
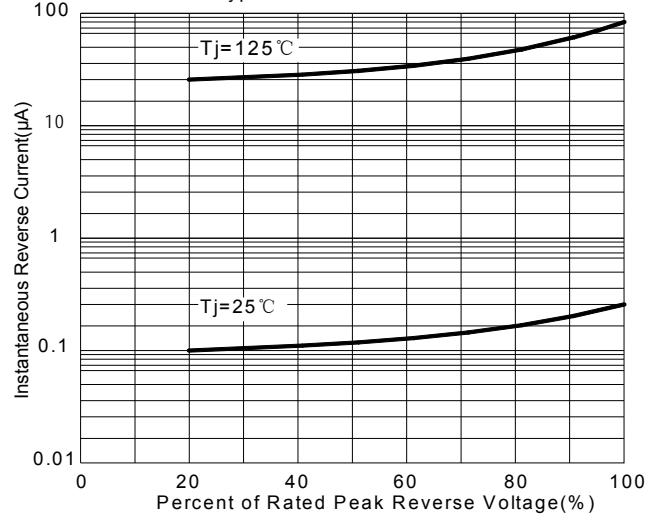


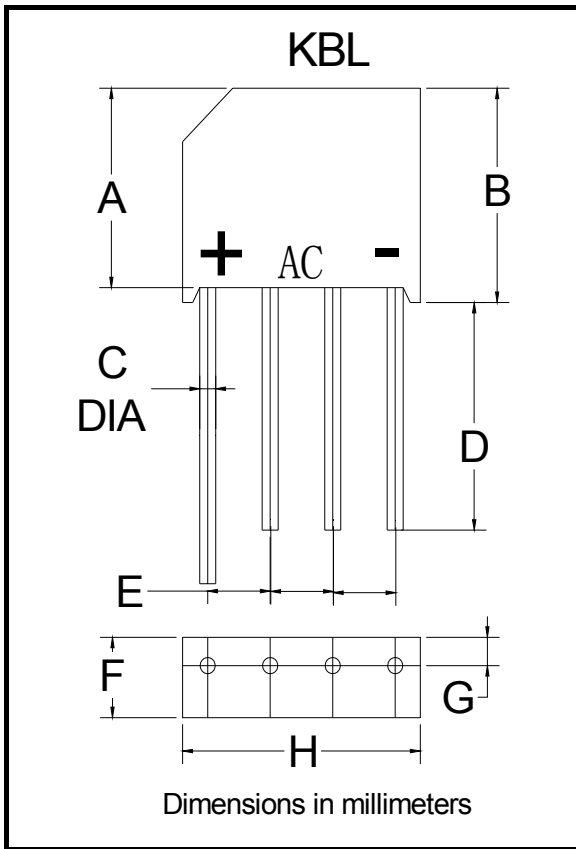
FIG4:Typical Reverse Characteristics





# KBL4005 THRU KBL410

## ■ 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



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