

# KBJL1010(LS)

## GLASS PASSIVATED BRIDGE RECTIFIER

**REVERSE VOLTAGE – 1000 Volts  
FORWARD CURRENT – 10 Amperes**

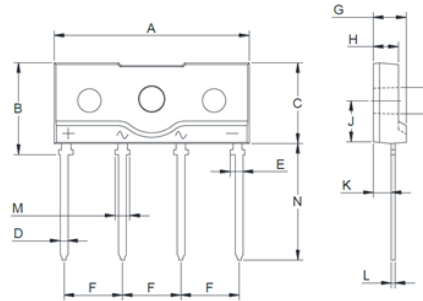
### FEATURES

- Low forward voltage drop
- Ideal for printed circuit board
- High surge current capability
- **Lead-Free Finish; RoHS Compliant (Notes 1 & 2)**
- **Halogen and Antimony Free. “Green” Device (Note 3)**

### MECHANICAL DATA

- Package: KBJL
- Package Material: Plastic material, UL flammability classification 94V-0
- Component in accordance to RoHS 2002/95/EC
- Polarity indicator: Symbol molded on body
- Weight: 2.4 grams (Approximate)
- Marking code: KBJL1010

### KBJL



KBJL		
DIM	MIN	MAX
A	24.7	25.3
B	11.4	12.0
C	10.0	10.6
D	0.9	1.1
E	1.75(MAX)	
F	7.3	7.7
G	3.9	4.5
H	2.9	3.9
I	3.1	3.4
J	5.4	6.0
K	2.0	2.6
L	0.4	0.6
M	2.1	2.3
N	14.6	15.2
All dimension in millimeter		

## MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Ratings at 25°C ambient temperature unless otherwise specified.

### ABSOLUTE RATINGS

PARAMETER	SYMBOL	VALUE	UNIT
Maximum repetitive peak reverse voltage	$V_{RRM}$	1000	V
Maximum DC blocking voltage	$V_{DC}$	1000	V
Average rectified output current per device	$I_{(AV)}$	10 2.6	A
Peak forward surge current 8.3ms single half sine-wave superimposed on rated load	$I_{FSM}$	150 120	A
Peak forward surge current 1ms single half sine-wave superimposed on rated load	$I_{FSM}$	300 240	A
$I^2 t$ rating for fusing ( $t=8.3ms$ )	$I^2 t$	93.3	A <sup>2</sup> S
Operating junction temperature range	$T_J$	-55 to +150	°C
Storage temperature range	$T_{STG}$	-55 to +150	°C

### STATIC ELECTRICAL CHARACTERISTICS

PARAMETER	TEST CONDITION	SYMBOL	TYP.	MAX	UNIT
Forward voltage	$I_F = 5A$ $T_A = 25^\circ C$ $T_A = 125^\circ C$ (Note 4)	$V_F$	0.94 0.83	1.10 --	V
Leakage current	$V_R = 1000V$ $T_A = 25^\circ C$	$I_R$	0.14	10	uA
Typical junction capacitance (Note 5)		$C_J$	55		pF

### THERMAL CHARACTERISTICS

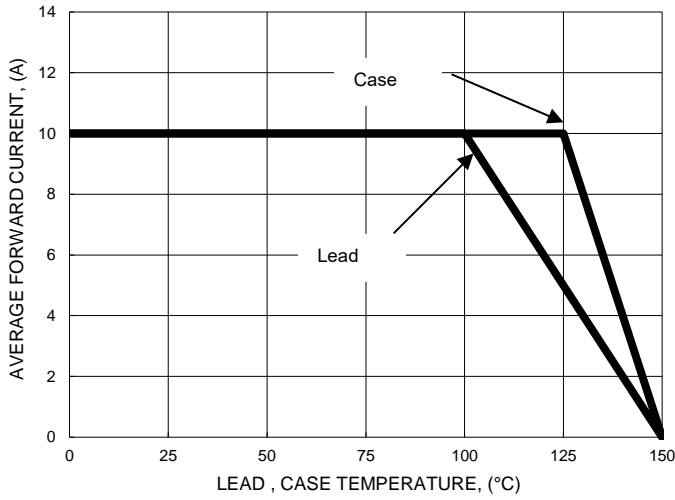
PARAMETER	SYMBOL	TYP.	UNIT
Typical Thermal Resistance (without heatsink)	$R_{thJC}$	6	°C/W
	$R_{thJL}$	14	
	$R_{thJA}$	15	
Typical thermal resistance (Note 6)	$R_{thJC}$	2	°C/W
	$R_{thJL}$	3	
	$R_{thJA}$	5	

### Notes:

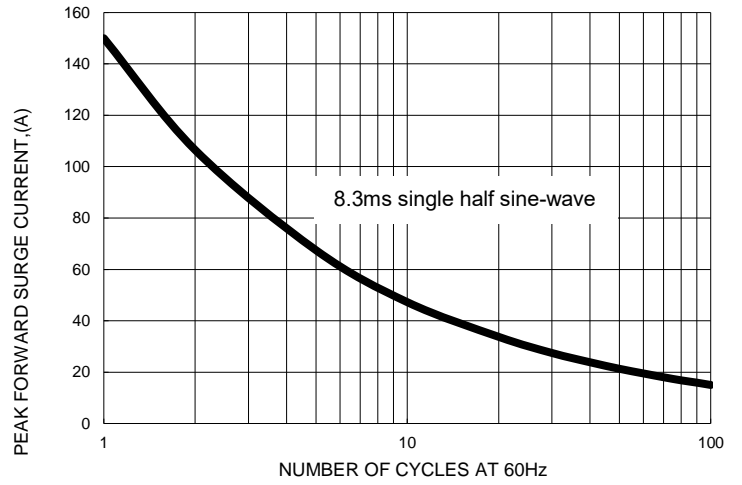
1. EU Directive 2002/95/EC (RoHS), 2011/65/EU (RoHS 2) & 2015/863/EU (RoHS 3) compliant. All applicable RoHS exemptions applied.
2. See <https://www.diodes.com/quality/lead-free/> for more information about Diodes Incorporated's definitions of Halogen- and Antimony-free, "Green" and Lead-free.
3. Halogen- and Antimony-free "Green" products are defined as those which contain <900ppm bromine, <900ppm chlorine (<1500ppm total Br + Cl) and <1000ppm antimony compounds.
4. Perform static test after the temperature of oven is steady 20 minutes.
5. Measured at 1.0MHz and applied reverse voltage of 4.0V DC.
6. Thermal resistance junction to case, lead and ambient in accordance with JESD-51. Unit mounted on 100mm \* 100mm \* 5mm AL heatsink

**RATING AND CHARACTERISTIC CURVES**  
**KBJL1010**

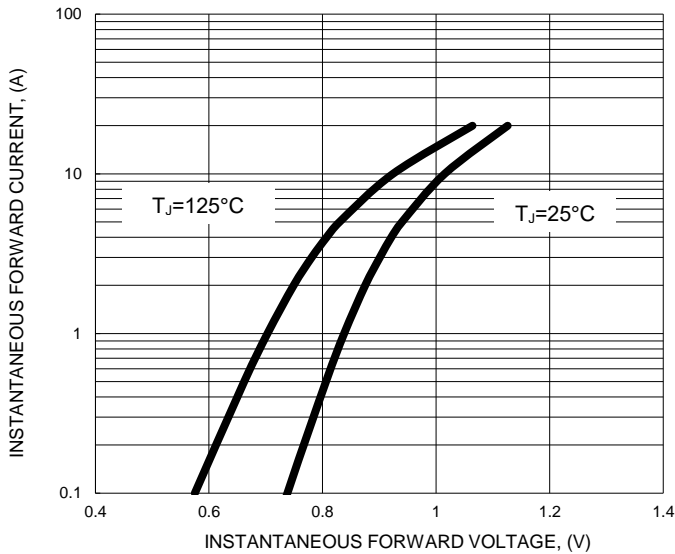
**FIG.1- FORWARD CURRENT DERATING CURVE**



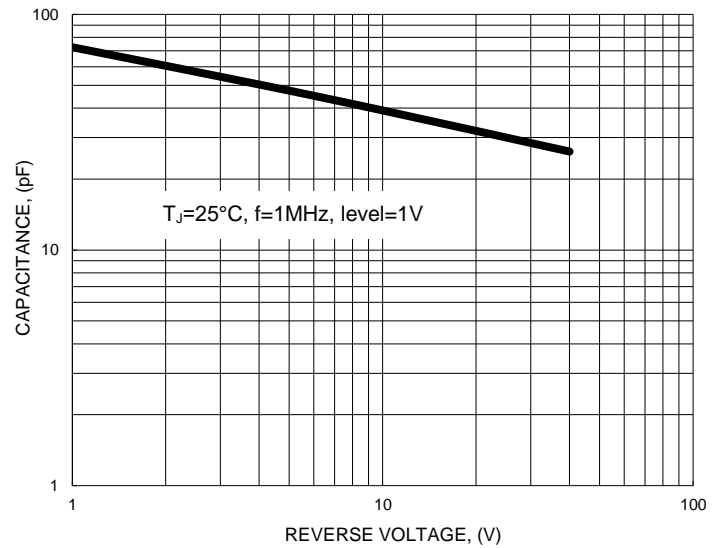
**FIG.2- MAXIMUM NON-REPETITIVE SURGE CURRENT**



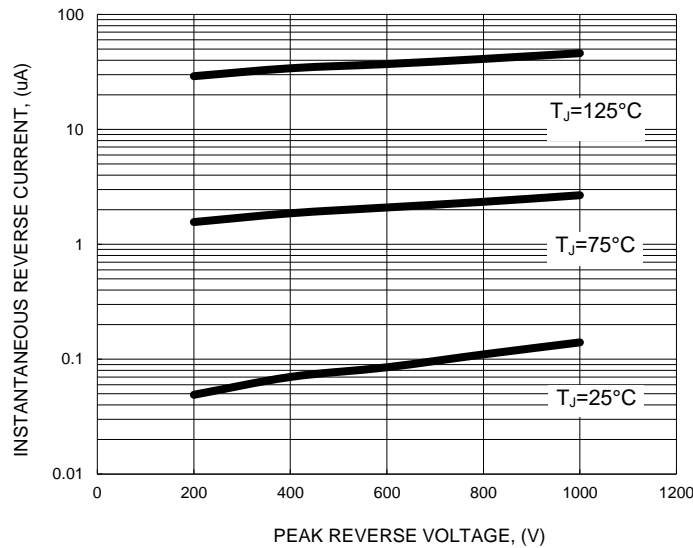
**FIG.3- TYPICAL FORWARD CHARACTERISTICS**



**FIG.4- TYPICAL JUNCTION CAPACITANCE**



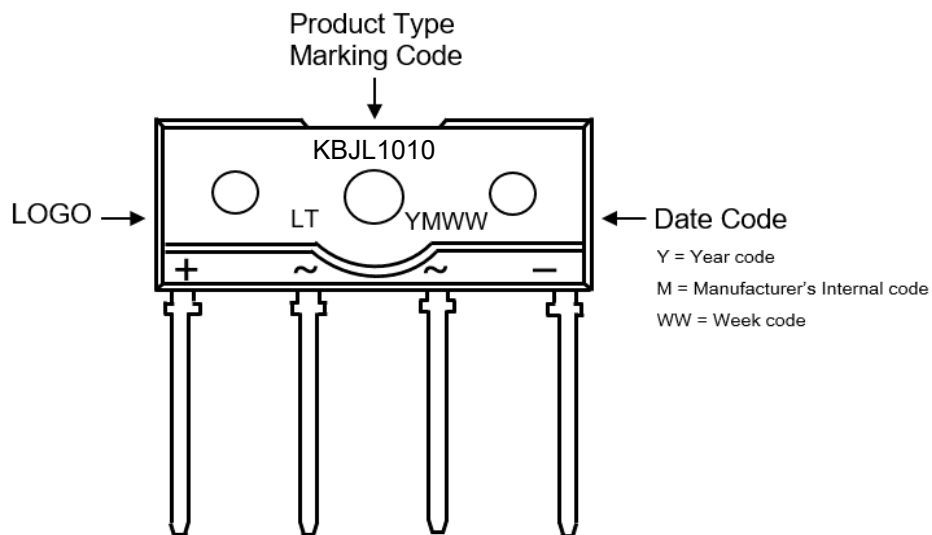
**FIG.5- TYPICAL REVERSE CHARACTERISTICS**



### Ordering Information :

Part Number	Package	Packing	
		Qty.	Carrier
KBJL1010_HF	KBJL	20pcs	Tube

### Marking Information :



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