KBJL10J THRU KBJL10M

General Bridge Rectifiers

Pb Pb-Free RoHS COMPLIANT

Voltage:	600~1000 Volts	Current:	10.0 Ampers	Package:	KBJL

Features

- NH'S Standard Rectifier Chip Technology
- Low Forward Voltage Drop For High Efficiency
- Low Leakage Current For High Reliability
- High Surge Capability For High Reliability

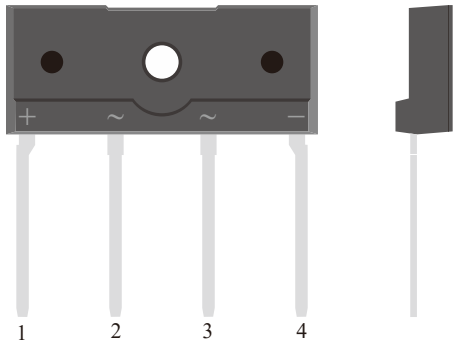
Mechanical Data

- **Case:** Molded With UL-94 ClassV-0 Recognized, RoHS-Compliant
- **Polarity:** Look At The Diagram And Polarity On The Right
- **Terminals:** Tin Plated Leads,Solderable Per J-STD-002 And JESD22-B102

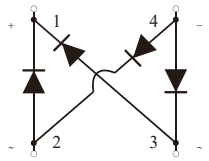
Typical Applications

- Switch Mode Power Supplies (SMPS)
- Fast Chargers
- LED Driver And Monitor Lighting
- Automotive Electronics And Charging Posts

Diagram:



Polarity:



Single Phase,Half Wave,60Hz,Resistive Or Inductive Load.For Capacitive Load,Derate Current By 20%

Maximum Ratings (Ta=25℃ Unless Otherwise Specified)

Parameter	Test Conditions	Symbol	KBJL 10J	KBJL 10K	KBJL 10M	Unit
Maximum Repetitive Peak Reverse Voltage		V_{RRM}	600	800	1000	V
Maximum RMS Voltag		V_{RMS}	420	560	700	V
Maximum DC Blocking Voltage		V_{DC}	600	800	1000	V
Maximum Average Forward Rectified Current	With Heatsink 100 ℃ Without Heatsink 25 ℃	$I_{F(AV)}$	10 3			A
Peak Forward Surge Current Per Diode	8.3ms Single Half Sine-wave Superimposed On Rate Load	I_{FSM}	200			A
Current Squared Time Per Diode	t< 8.3ms	I^2t	166.0			A^2sec
Maximum Mounting Torque	M3 srew	T_{MM}	1.1			N.m

Electrical Characteristcs (Ta=25℃ Unless Otherwise Specified)

Parameter	Test Conditions	Symbol	KBJL 10J	KBJL 10K	KBJL 10M	Unit
Instaneous Forward Voltage Per Diode	I_F= 5.0 A	V_F	1.0			V
Maximum DC Reverse Current at Rated DC Blocking Voltage	Ta=25℃ ,V_R=VRRM Ta=125℃ ,V_R=VRRM*80%	I_{RRM}	5 500			uA uA
Typical Junction Capacitance Per Diode	4 V,1MHz	C_J	70			pF

Thermal Characteristcs (Ta=25℃ Unless Otherwise Specified)

Parameter	Test Conditions	Symbol	KBJL 10J	KBJL 10K	KBJL 10M	Unit
Operating Junction Temperature Range		T_J	-55~150			℃
Storage Temperature Range		T_{STD}	-55~150			
Thermal Resistance Junction To Ambient With Steady-State	Still Air Environment With Ta=25℃	$R_{\theta JA}$	30.0			℃/W
Thermal Resistance Junction-Case With Steady-State	Device Mounted On 75mm x 45mm x 2.5mm Alu. Heat.	$R_{\theta JC}$	3.7			

Notes: 1.Pulse Test: 300 Us Pulse Width,1% Duty Cycle

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Typical Characteristics Curves

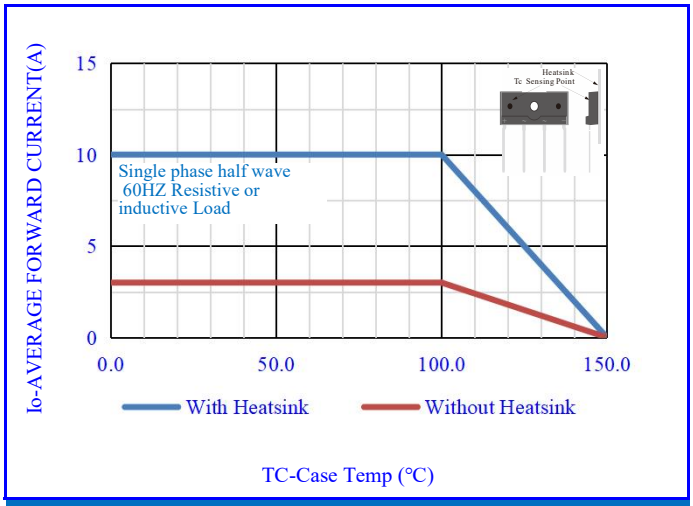

Fig.1-FORWARD CURRENT DERATING CURVE

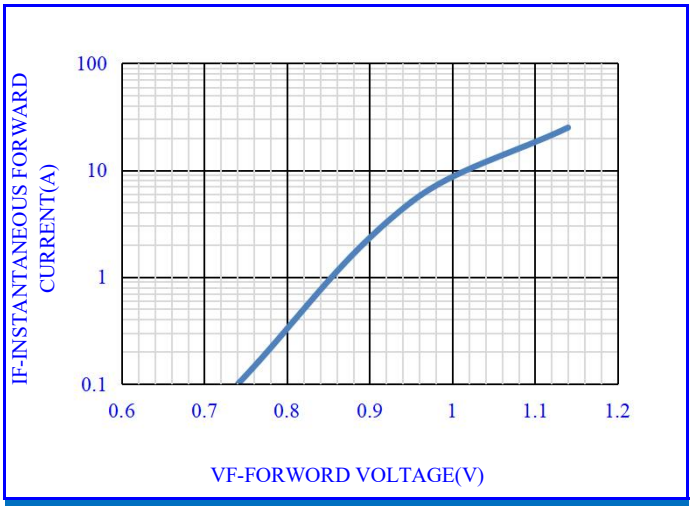

Fig.2- TYPICAL INSTANTANEOUS FORWARD

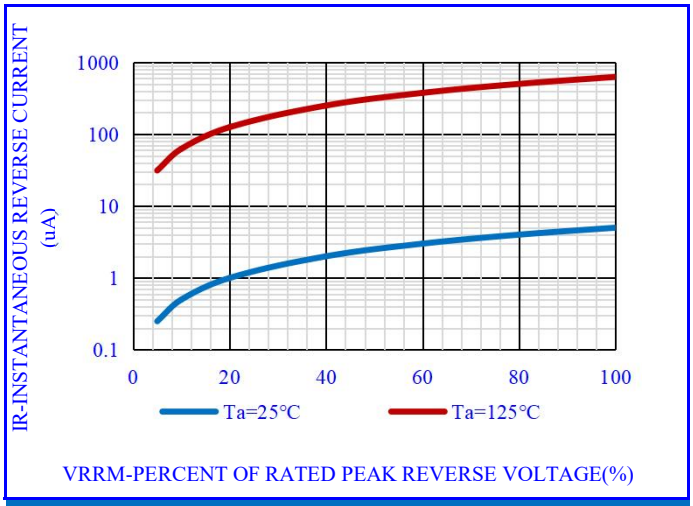

Fig.3- TYPICAL REVERSE CHARACTERISTICS

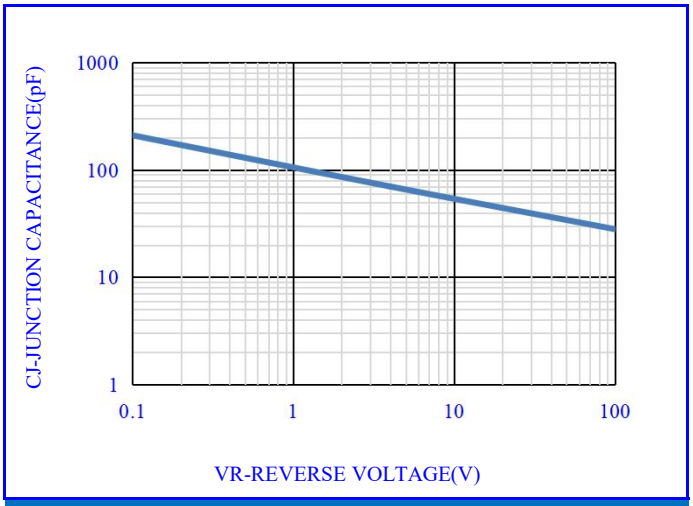

Fig.4- TYPICAL JUNCTION CAPACITANCE

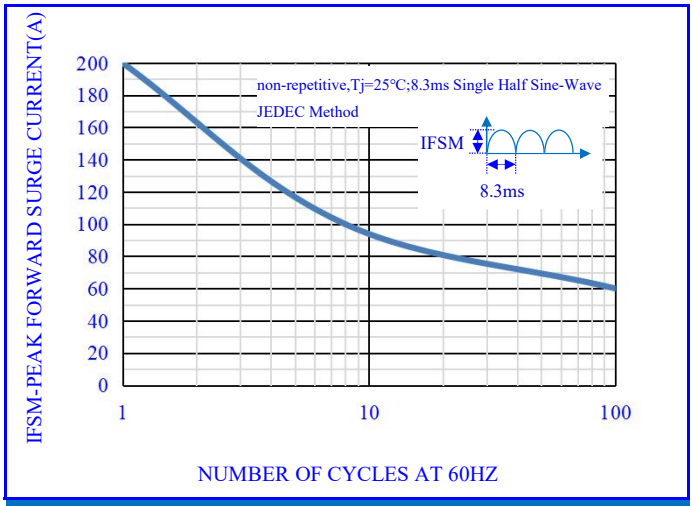

Fig.5-MAX. NON-REPETITIVE SURGE CURRENT

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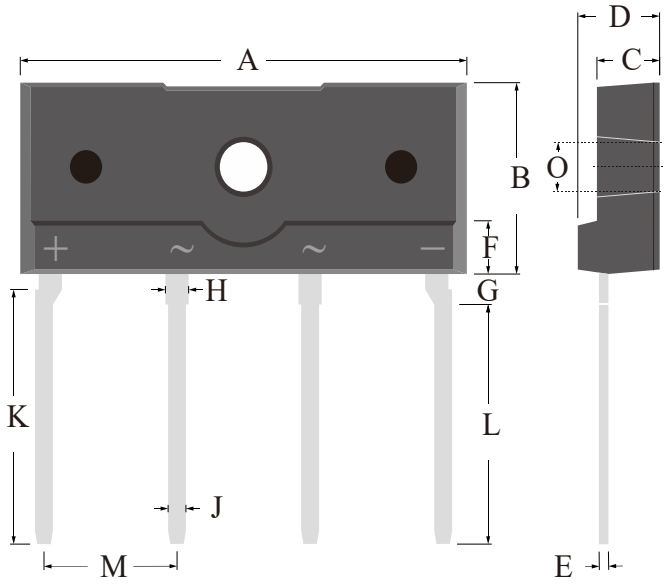
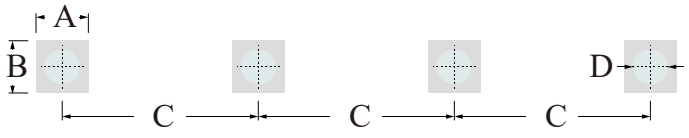
OUTLINE DRAWINGS



KBJL

OUTLINE DIMENSIONS						
Dim.	Milimeters			Inches		
	Min.	Typ.	Max.	Min.	Typ.	Max.
A	24.00	-	26.00	0.9449	-	1.0236
B	9.80	-	10.80	0.3858	-	0.4252
C	3.25	-	3.75	0.1280	-	0.1476
D	4.35	-	4.85	0.1713	-	0.1909
E	0.33	-	0.73	0.0130	-	0.0287
F	2.65	-	3.05	0.1043	-	0.1201
G	1.45	-	1.85	0.0571	-	0.0728
H	1.10	-	1.50	0.0433	-	0.0591
J	0.80	-	1.20	0.0315	-	0.0472
K	13.20	-	14.20	0.5197	-	0.5591
L	12.40	-	13.40	0.4882	-	0.5276
M	7.15	-	7.75	0.2815	-	0.3051
O	3.00	-	3.50	0.1181	-	0.1378

RECOMMEDNED LAYOUT DRAWINGS



KBJL

OUTLINE DIMENSIONS						
Dim.	Milimeters			Inches		
	Min.	Typ.	Max.	Min.	Typ.	Max.
A	-	2.00	-	-	0.0787	-
B	-	2.00	-	-	0.0787	-
C	-	7.50	-	-	0.2953	-
D	-	1.30	-	-	0.0512	-

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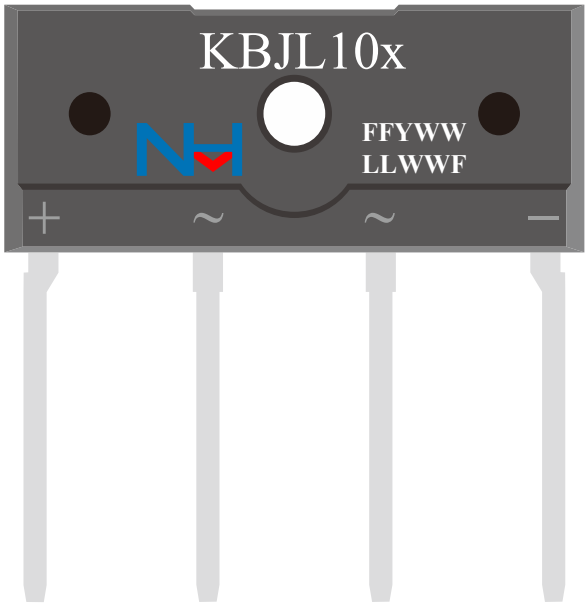
MARKING	MARKING INSTRUCTION
	**NH=Niuhang Trademark** **FF=Product Line Code,According To Actual Changes** **YWW=Date Code,According To Actual Changes** **LLWWF=Inernal Code,According To Actual Changes** **KBJL10x=Model,x=J,K,M**

PACKING INFORMATION

Package Type	Package Code	Productor Weight Approx(g/Pcs)	Package Method	Quantity (Pcs/Min. Pack.)	Quantity (Pcs/Inner Box)	Quantity (Pcs/Carton)
KBJL	P1	2.568	Box	250	250	2500
KBJL	P2	2.568	Tube	20	1000	2000

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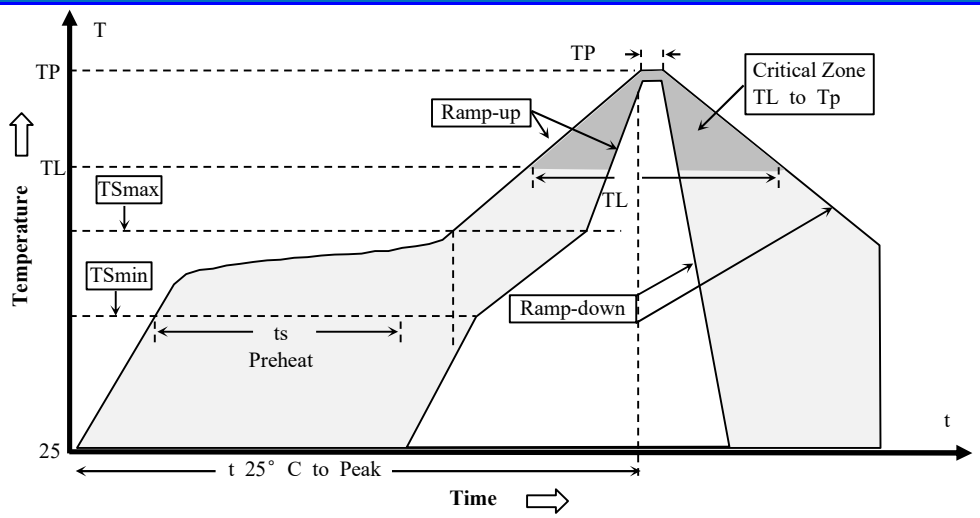
Recommended wave soldering condition

Product	Peak Temperature	Soldering Time
Pb-free devices	260 +0/-5 °C	5 +1/-1 seconds

Recommended temperature profile for IR reflow



Profile feature	Sn-Pb eutectic Assembly	Pb-free Assembly
Average ramp-up rate (Tsmax to Tp)	3°C/second max.	3°C/second max.
Preheat −Temperature Min(TS min) −Temperature Max(TS max) −Time(ts min to ts max)	100°C 150°C 60-120 seconds	150°C 200°C 60-180 seconds
Time maintained above: −Temperature (TL) − Time (tL)	183°C 60-150 seconds	217°C 60-150 seconds
Peak Temperature(TP)	240 +0/-5 °C	260 +0/-5 °C
Time within 5°C of actual peak temperature(tp)	10-30 seconds	20-40 seconds
Ramp down rate	6°C/second max.	6°C/second max.
Time 25 °C to peak temperature	6 minutes max.	8 minutes max.

Note : All temperatures refer to topside of the package, measured on the package body surface.

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