




SPECIFICATION SHEET

SPECIFICATION SHEET NO.	N0626- KBL4060000L460
DATE	June. 26, 2021
REVISION	A1
DESCRIPTION	Thru Hole Silicon Bridge Rectifier, KBL Series, KBL406 Type, 4 Pins, Reverse Voltage 600V Max. Forward Current 4 A Max. Operating Temp. Range -65°C ~+150°C, Package in Bulk, 500pcs/Box RoHS/RoHS III compliant
CUSTOMER	
CUSTOMER PART NUMBER	
CROSS REF. PART NUMBER	
ORIGINAL PART NUMBER	MDD KBL406
PART CODE	KBL4060000L460

VENDOR APPROVE			
Issued/Checked/Approved			
DATE: June 26, 2021			

CUSTOMER APPROVE	
DATE:	

THRU HOLE BRIDGE RECTIFIER KBL SERIES

MAIN FEATURE

- The plastic package has Underwrite Laboratory Flammability Classification 94V-0
- Low reverse leakage
- High forward surge current capability
- High temperature soldering guaranteed: 260/10 sec. 0.375" lead length, 5 lbs tension



APPLICATION

- For printed circuit board

RFQ

Request For Quotation

PART CODE GUIDE

KBL	4060000	L	460
1	2	3	4

- 1) **KBL**: Thru Hole Silicon Bridge Rectifier, KBL Series, 4 Pins
- 2) **4060000**: Type code for original part number KBL406
- 3) **L**: Package code, In Bulk, 500pcs/Box.
- 4) **460**: Specification code for Reverse Voltage 600V Max. Forward Current 4 A Max

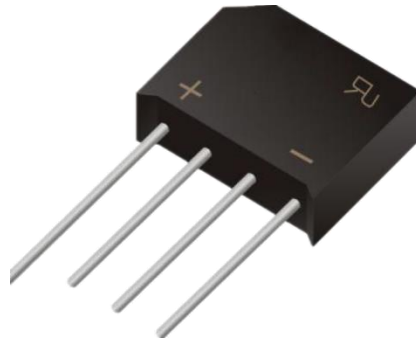
MORE ITEMS AVAILABLE

KBL400500L4005	KBL4010000L410	KBL4020000L420	KBL4040000L440	KBL4060000L460
KBL4080000L480	KBL4100000L40A			
KBL600500L6005	KBL6010000L610	KBL6020000L620	KBL6040000L640	KBL6060000L660
KBL6080000L680	KBL6100000L60A			

THRU HOLE BRIDGE RECTIFIER KBL SERIES

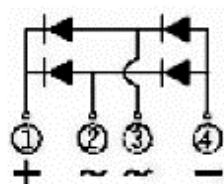
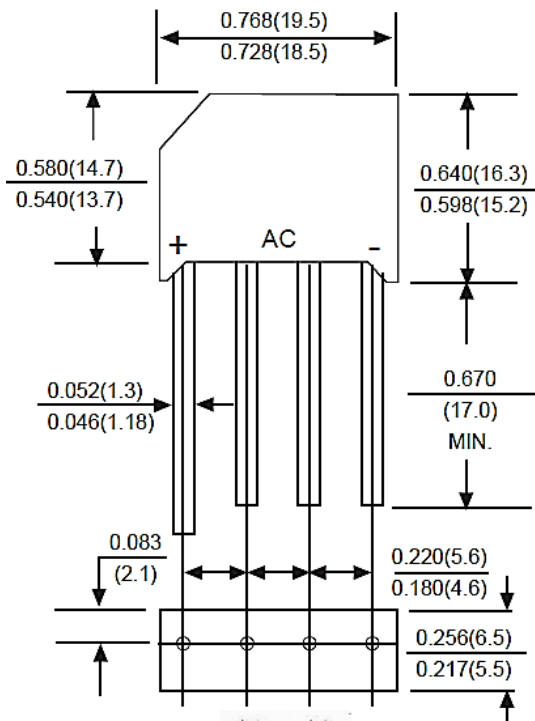
DIMENSION (Unit: Inch/mm)

Image for reference



Marking: KBL406

KBL



THRU HOLE BRIDGE RECTIFIER KBL SERIES
MECHANICAL DATA

Case	Terminals	Polarity	Mounting Position	Weight per piece
JEDEC KBL molded plastic body	Solder plated, Solderable per MIL-STD-750, Method 2026	Polarity symbol marking on body	Any	-

MAX. RATING & CHARACTERISTICS

Parameter	SYMBOLS	VALUE			UNITS
		Min.	Typical	Max.	
Repetitive peak reverse voltage	V_{RRM}			600	Volts
RMS voltage	V_{RMS}			420	Volts
DC blocking voltage	V_{DC}			600	Volts
Average forward output rectified current at $T_c=50^{\circ}C$ (see Note 3)	I_{AV}			4.0	A
Peak forward surge current 8.3ms single half sine-wave superimposed on rated load (JEDEC Method)	I_{FSM}		125		A
Rating for Fusing ($t < 8.3ms$)	I^2t		166		A^2S
Forward voltage drop per bridge element at 4.0 A	V_F			1.0	Volts
DC reverse current at rated DC blocking voltage	I_R			10	μA
				1.0	mA
Junction capacitance	C_J		105		pF
Thermal resistance (Note 3)	R_{QJA}		20		$^{\circ}C/W$
Operating junction temperature range	T_J	-65		+150	
Storage temperature range	T_{STG}	-65		+150	$^{\circ}C$

Note

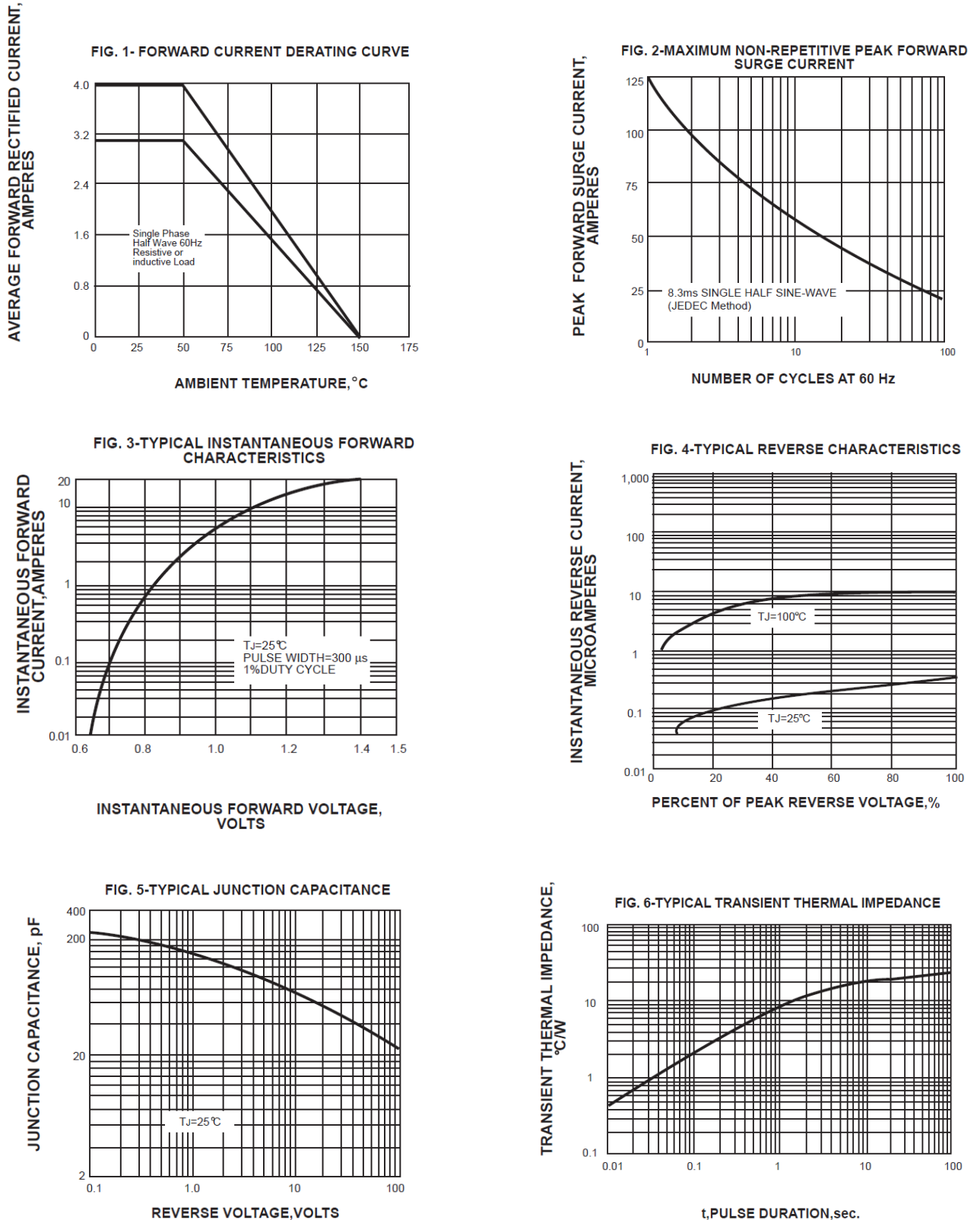
1. Ratings at 25 C ambient temperature unless otherwise specified. Single phase half-wave 60Hz, resistive or inductive load, for capacitive load current derate by 20%.
2. Measured at 1MHz and applied reverse voltage of 4.0V D.C.
3. Device mounted on 75*75*3mm thick Al plate
4. The typical data above is for reference only

THRU HOLE BRIDGE RECTIFIER KBL SERIES
RELIABILITY

Number	Experiment Items	Experiment Method And Conditions	Reference Documents
1	Solder Resistance Test	Test 260°C± 5°C for 10 ± 2 sec. Immerse body into solder 1/16" ± 1/32"	MIL-STD-750D METHOD-2031.2
2	Solderability Test	230°C ±5°C for 5 sec.	MIL-STD-750D METHOD-2026.1 0
3	Pull Test	1 kg in axial lead direction for 10 sec.	MIL-STD-750D METHOD-2036.4
4	Bend Test	0.5Kg Weight Applied To Each Lead, Bending Arcs 90 °C ± 5 °C For 3 Times	MIL-STD-750D METHOD-2036.4
5	High Temperature Reverse Bias Test	TA=100°C for 1000 Hours at VR=80% Rated VR	MIL-STD-750D METHOD-1038.4
6	Forward Operation Life Test	TA=25°C Rated Average Rectified Current	MIL-STD-750D METHOD-1027.3
7	Intermittent Operation Life Test	On state: 5 min with rated IRMS Power Off state: 5 min with Cool Forced Air. On and off for 1000 cycles.	MIL-STD-750D METHOD-1036.3
8	Pressure Cooker Test	15 PSIG, TA=121°C, 4 hours	MIL-S-19500 APPENOIXC
9	Temperature Cycling Test	-55°C~+125°C; 30 Minutes For Dwelled Time 5 minutes for transferred time. Total: 10 cycles.	MIL-STD-750D METHOD-1051.7
10	Thermal Shock Test	0°C for 5 minutes., 100°C for 5minutes, Total: 10 cycles	MIL-STD-750D METHOD-1056.7
11	Forward Surge Test	8.3ms Single Sale Sine-wave One Surge.	MIL-STD-750D METHOD-4066.4
12	Humidity Test	TA=65°C, RH=98% for 1000 hours.	MIL-STD-750D METHOD-1021.3
13	High Temperature Storage life Test	150°C for 1000 Hours	MIL-STD-750D METHOD-1031.5

THRU HOLE BRIDGE RECTIFIER KBL SERIES

RATINGS AND CHARACTERISTIC CURVES (For Reference Only)



THRU HOLE BRIDGE RECTIFIER KBL SERIES

PACKAGE

Part Type	Qty. Per Box (pcs)	G.W per box (kg)	Inner Box L*W*H (mm)	Carton size L*W*H (mm)	Qty. Per Carton (pcs)	G. W (kg)
KBL	500	2.30	203*203*44	430*220*200	3,000	14.30

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