




SPECIFICATION SHEET

SPECIFICATION SHEET NO.	N0626-KBPC610000L60A
DATE	June 26, 2021
REVISION	A0
DESCRIPTION	<p>Thru Hole Silicon Bridge Rectifier, KBPC6/BR-6 Series, KPB610 Type, 4 Pins Reverse Voltage 1000V Max. Forward Current 6.0A Max. Operating Temp. Range -55°C ~+125°C, Package in Bulk, 200pcs/Box RoHS/RoHS III compliant</p>
CUSTOMER	
CUSTOMER PART NUMBER	
CROSS REF. PART NUMBER	
ORIGINAL PART NUMBER	MDD KBPC610
PART CODE	KBPC610000L60A

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

CUSTOMER APPROVE
DATE:

THRU HOLE BRIDGE RECTIFER KBPC6 SERIES

MAIN FEATURE



- The plastic package carries Underwriters Laboratory Flammability Classification 94V-0
- Glass passivated die construction
- Low reverse leakage
- High forward surge current capability
- High temperature soldering guaranteed 260 °C/10 seconds

APPLICATION

- For printed circuit board

RFQ
Request For Quotation

PART CODE GUIDE

KBPC	610000	L	60A
1	2	3	4

- 1) **KBPC**: Thru Hole Single Bridge Rectifier, KBPC6/BR-6 Series
- 2) **610000**: Type code for original part number KBPC610
- 3) **L**: Package code, In Bulk, 200pcs/Box.
- 4) **60A**: Specification code for Reverse Voltage 1000V Max. Forward Current 6.0A Max.

MORE ITEMS AVAILABLE

KBPC60050L6005	KBPC601000L610	KBPC602000L620	KBPC604000L640	KBPC606000L660
KBPC608000L680	KBPC610000L60A			

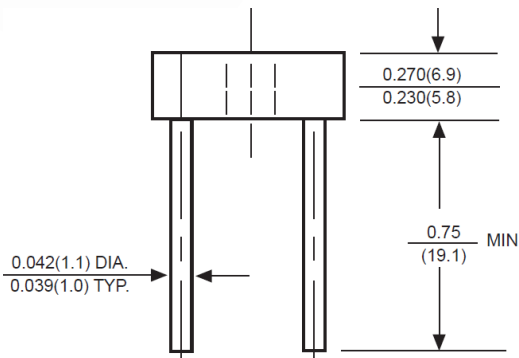
THRU HOLE BRIDGE RECTIFIER KBPC6 SERIES

DIMENSION (Unit: Inch/mm)

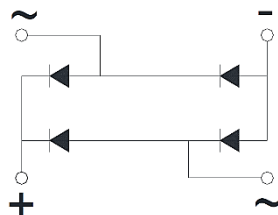
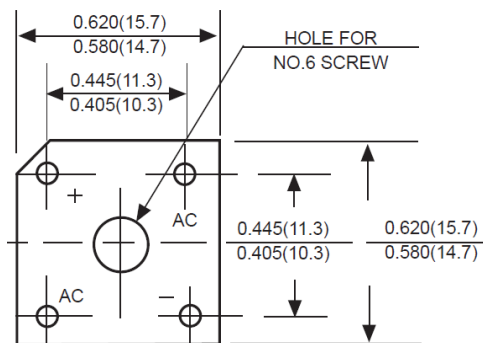
Image for reference



Marking: KBPC610



KBPC6/BR-6



THRU HOLE BRIDGE RECTIFIER KBPC6 SERIES
MECHANICAL DATA

Case	Terminals	Polarity	Mounting Position	Weight per piece
JEDEC KBPC6/BR-6 molded plastic body	Solder plated, Solderable per MIL-STD-750, Method 2026	Polarity symbol marking on body	Any	0.130 Ounce, 3.66 grams

MAX. RATING & CHARACTERISTICS

Parameter	SYMBOLS	VALUE			UNITS
		Min.	Typical	Max.	
Repetitive peak reverse voltage	V _{RRM}			1000	Volts
RMS voltage	V _{RMS}			700	Volts
DC blocking voltage	V _{DC}			1000	Volts
Average forward output rectified current at T _c = 50°C (see Note 2)	I _{AV}			6.0	A
Peak forward surge current 8.3ms single half sine-wave superimposed on rated load (JEDEC Method)	I _{FSM}		125		A
Instantaneous forward voltage at 3.0A	V _F			1.1	Volts
DC reverse current at rated DC blocking voltage	I _R			10	μA
				1.0	mA
I ² t Rating for fusing (t≤8.3ms)	I ² t		64		A ² S
Junction capacitance (Note 2)	C _J		60		pF
Thermal resistance (Note 3)	R _{QJA}		8.0		°C/W
Operating junction temperature range	T _J	-55		+125	
Storage temperature range	T _{STG}	-55		+125	°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. Unit mounted on 6.0"*5.5"*0.11" thick Al plate
3. Unit mounted on PCB with 0.47"*0.47" copper pads, 0.375" lead length

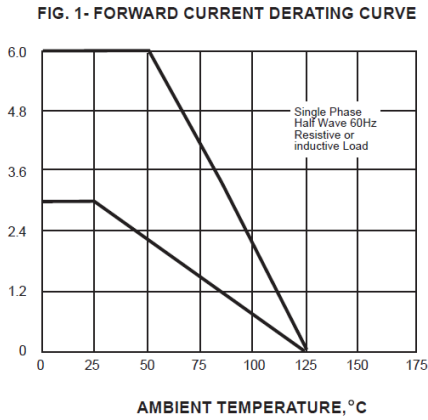
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RELIABILITY

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

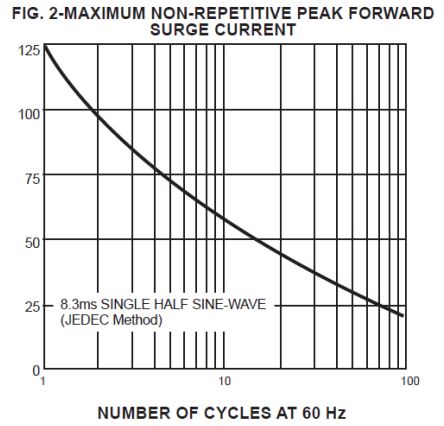
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RATINGS AND CHARACTERISTIC CURVES (For Reference Only)

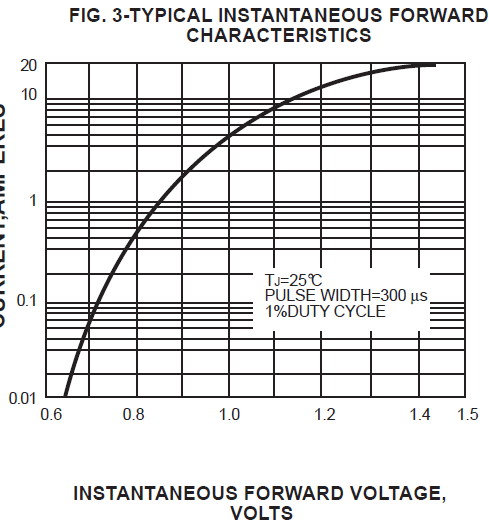
AVERAGE FORWARD RECTIFIED CURRENT, AMPERES



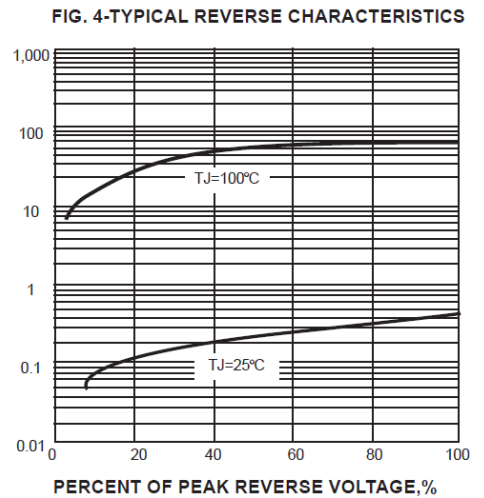
PEAK FORWARD SURGE CURRENT, AMPERES



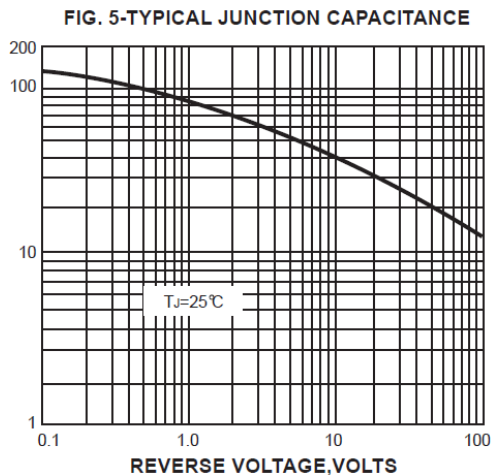
INSTANTANEOUS FORWARD CURRENT, AMPERES



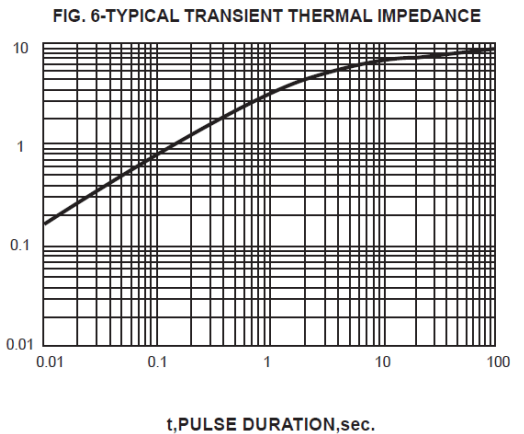
INSTANTANEOUS REVERSE CURRENT, MICROAMPERES



JUNCTION CAPACITANCE, pF



TRANSIENT THERMAL IMPEDANCE, °C/W



THRU HOLE BRIDGE RECTIFER KBPC6 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)
KBPC6/BR-6	200	1.45	200*200*50	430*220*240	4,000	14.85

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