




SPECIFICATION SHEET

SPECIFICATION SHEET NO.	N0626-KBPC50100L500A
DATE	June. 26, 2021
REVISION	A0
DESCRIPTION	Thru Hole Silicon Bridge Rectifiers, KBPC Series, 4 Pins, KBPC5010 Type, Reverse Voltage 1000V Max. Forward Current 50A Max. Operating Temp. Range -65°C ~+150°C, Package in Bulk, 50pcs/Box, RoHS/RoHS III compliant
CUSTOMER	
CUSTOMER PART NUMBER	
CROSS REF. PART NUMBER	
ORIGINAL PART NUMBER	MDD KBPC5010
PART CODE	KBPC50100L500A

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

CUSTOMER APPROVE	
DATE:	

THRU HOLE BRIDGE RECTIFIER KBPC SERIES

MAIN FEATURE



- The plastic package carries underwriters Laboratory flammability classification 94V-0
- Low reverse leakage
- High forward surge current capability
- High temperature soldering guaranteed, 260 °C/10 seconds, at 5 lbs (2.3kg) tension

APPLICATION

- For printed circuit board

RFQ

[Request For Quotation](#)

PART CODE GUIDE

KBPC	50100	L	500A
1	2	3	4

- 1) **KBPC**: Thru Hole Silicon Bridge Rectifiers, 4 pins, KBPC Series
- 2) **50100**: Type code for original part number KBPC5010
- 3) **L**: Package code, In Bulk, 50pcs/Box.
- 4) **500A**: Specification code for Reverse Voltage 1000V Max, Forward Current 50A Max

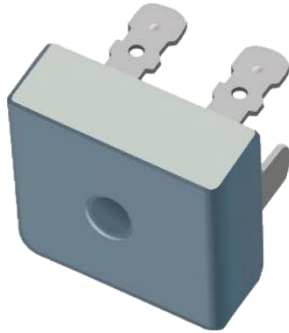
MORE ITEMS AVAILABLE

KBPC15005L1505	KBPC150010L1510	KBPC15002L1520	KBPC15004L1540	KBPC15006L1560
KBPC15008L1580	KBPC15100L150A			
KBPC25005L2505	KBPC25001L2510	KBPC25002L2520	KBPC25004L2540	KBPC25006L2560
KBPC25008L2580	KBPC25100L250A			
KBPC35005L3505	KBPC35001L3510	KBPC35002L3520	KBPC35004L3540	KBPC35006L3560
KBPC35008L3580	KBPC35100L350A			
KBPC50005L5005	KBPC50010L5010	KBPC50020L5020	KBPC50040L5040	KBPC50060L5060
KBPC35008L5080	KBPC50100L500A			

THRU HOLE BRIDGE RECTIFIER KBPC SERIES

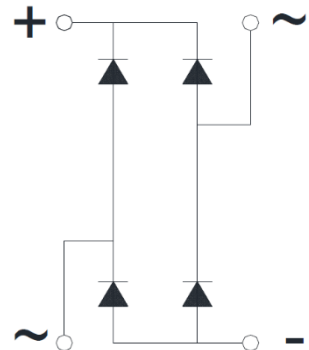
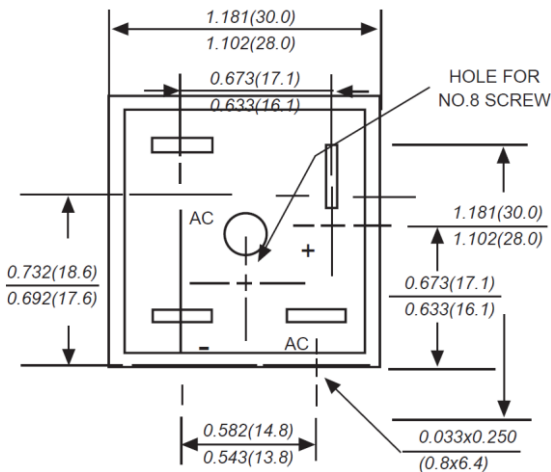
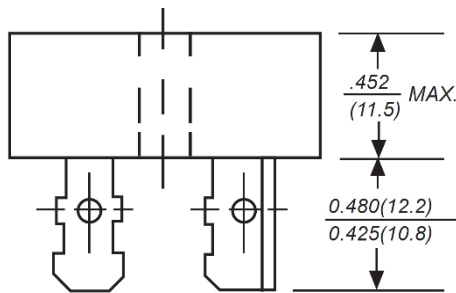
DIMENSION (Unit: Inch/mm)

Image for reference



Marking: KBPC 5010

KBPC



THRU HOLE BRIDGE RECTIFIER KBPC SERIES
MECHANICAL DATA

Case	Terminals	Polarity	Mounting Position	Weight per piece
JEDEC KBPC molded plastic body	Solder plated, Solderable per MIL-STD-750, Method 2026	Polarity symbol marking on body	Any	1.020 Ounce, 31.72 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 = 55°C (Note 2)	I _{AV}			50	A
Peak forward surge current 8.3ms single half sine-wave superimposed on rated load (JEDEC Method)	I _{FSM}		400		A
Rating for Fusing (t<8.3ms)	I ² t		664		A ² S
Instantaneous Forward voltage drop per bridge element at 25.0A	V _F			1.1	Volts
DC reverse current at rated DC blocking voltage	I _R			10	μA
				1.0	mA
Isolation voltage from case to leads	V _{IOS}		2500		V _{AC}
Thermal resistance (Note 3)	R _{QJA}		2.0		°C/W
Operating junction temperature range	T _J	-65		+150	
Storage temperature range	T _{STG}	-65		+150	°C

Note

- 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%.
- Unit mounted on 9"*3.5"*4.6" thick (23*9*11.8cm) Al. plate
- Bolt down on heat-sink with silicone thermal compound between bridge and mounting surface for Maximum heat transfer efficiency with #8 screw.

THRU HOLE BRIDGE RECTIFIER KBPC 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 KBPC SERIES

RATINGS AND CHARACTERISTIC CURVES (For Reference Only)

FIG.1-FORWARD CURRENT DERATING CURVE

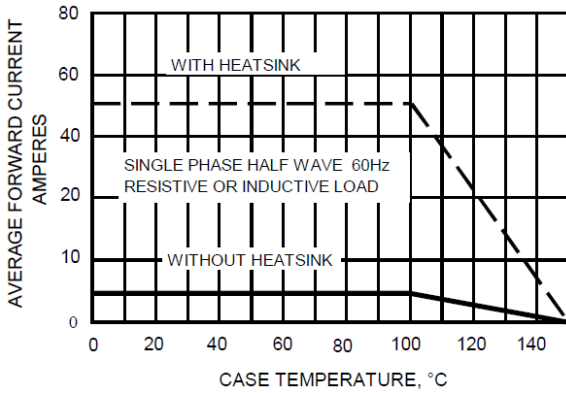


FIG.2-MAXMUN NON-REPETITIVE SURGE CURRENT

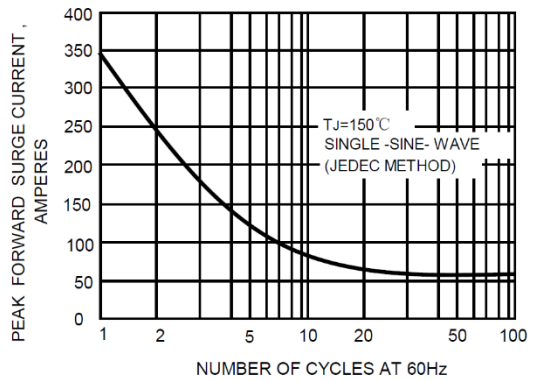


FIG.3-TYPICAL REVERSE CHARACTERISTICS

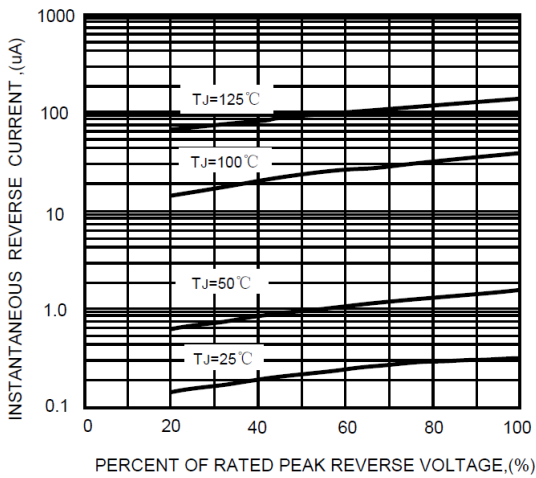
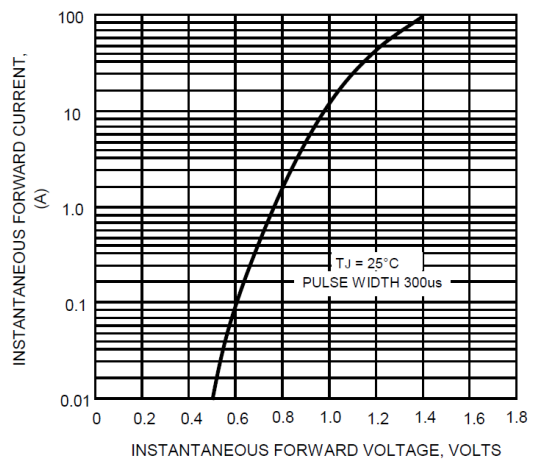


FIG.4-TYPICAL FORWARD CHARACTERISTICS



THRU HOLE BRIDGE RECTIFIER KBPC 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)
KBPC	50	1.45	200*200*50	430*220*240	500	14.85

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