




SPECIFICATION SHEET

SPECIFICATION SHEET NO.	N0310-KBPC351000L35A
DATE	Mar. 10, 2021
REVISION	A0
DESCRIPTION	Thru Hole Silicon Bridge Rectifiers, KBPC Series, 4 Pins, KBPC3510 Type, Reverse Voltage 1000V Max. Forward Current 35A 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 KBPC3510
PART CODE	KBPC351000L35A

VENDOR APPROVE			
Issued/Checked/Approved			
DATE: March 10, 2021			

CUSTOMER APPROVE	
DATE:	

THRU HOLE BRIDGE RECTIFER 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	351000	L	35A
1	2	3	4

- 1) **KBPC**: Thru Hole Silicon Bridge Rectifiers, 4 pins, KBPC Series
- 2) **351000**: Type code for original part number KBPC3510
- 3) **L**: Package code, In Bulk, 50pcs/Box.
- 4) **35A**: Specification code for Reverse Voltage 1000V Max, Forward Current 35A Max

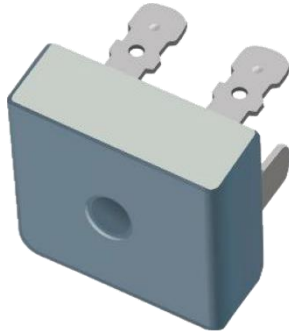
MORE ITEMS AVAILABLE

KBPC150500L155	KBPC150100L151	KBPC150200L152	KBPC150400L154	KBPC150600L156
KBPC150800L158	KBPC151000L15A			
KBPC250500L255	KBPC250100L251	KBPC250200L252	KBPC250400L254	KBPC250600L256
KBPC250800L258	KBPC251000L25A			
KBPC350500L355	KBPC350100L351	KBPC350200L352	KBPC350400L354	KBPC35060L356
KBPC350800L358	KBPC351000L35A			

THRU HOLE BRIDGE RECTIFIER KBPC SERIES

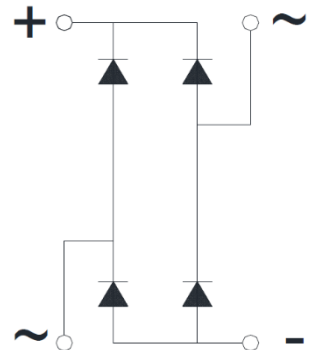
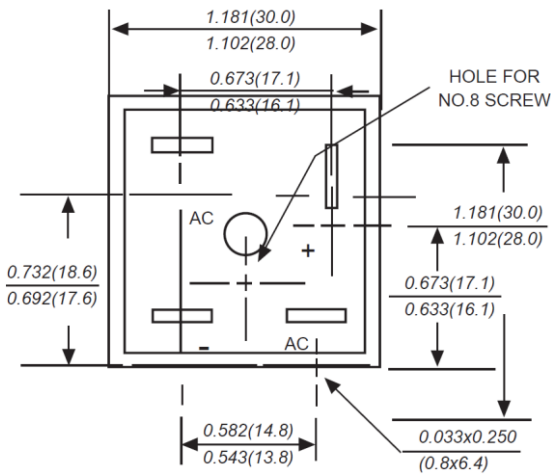
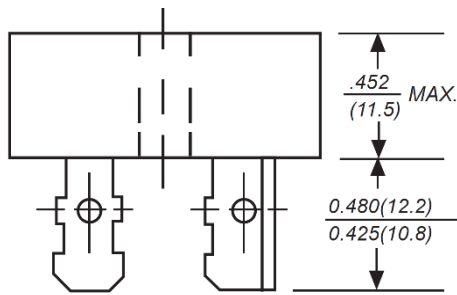
DIMENSION (Unit: Inch/mm)

Image for reference



Marking: KBPC 3510

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}			35	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 17.5A	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

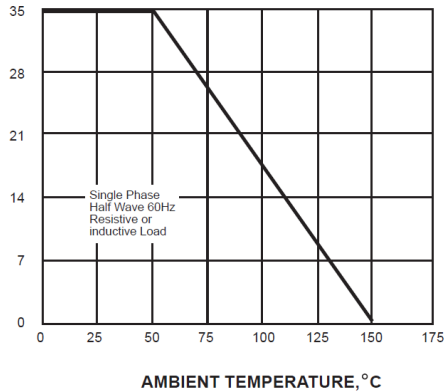
Number	Experiment Items	Experiment Method And Conditions	Reference Documents
1	Solder Resistance Test	Test 260°C± 5°C for 10 ± 2 sec. Immerse body into solder 1/16" ± 1/32"	MIL-STD-750D METHOD-2031.2
2	Solderability Test	230°C ±5°C for 5 sec.	MIL-STD-750D METHOD-2026.1 0
3	Pull Test	1 kg in axial lead 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)

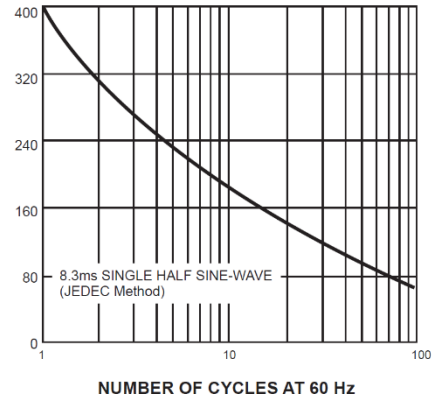
AVERAGE FORWARD RECTIFIED CURRENT
AMPERES

FIG. 1- FORWARD CURRENT DERATING CURVE



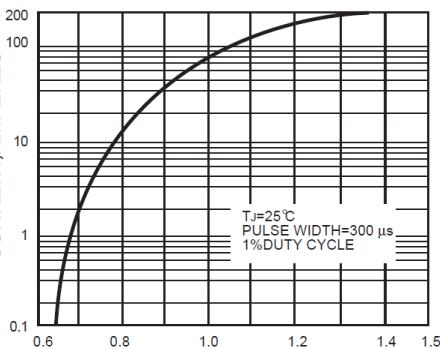
PEAK FORWARD SURGE CURRENT,
AMPERES

FIG. 2-MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT



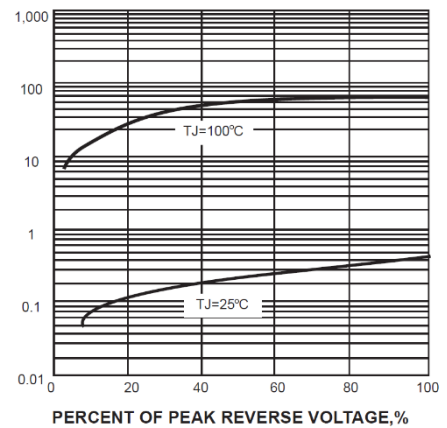
INSTANTANEOUS FORWARD
CURRENT, AMPERES

FIG. 3-TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS



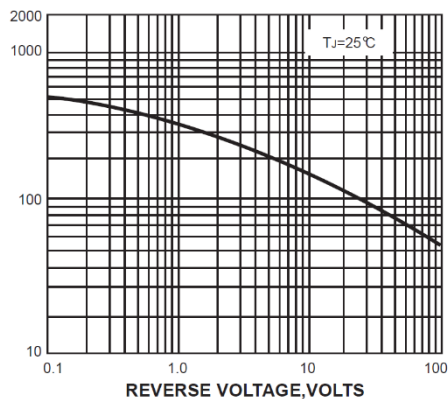
INSTANTANEOUS REVERSE CURRENT,
MICROAMPERES

FIG. 4-TYPICAL REVERSE CHARACTERISTICS



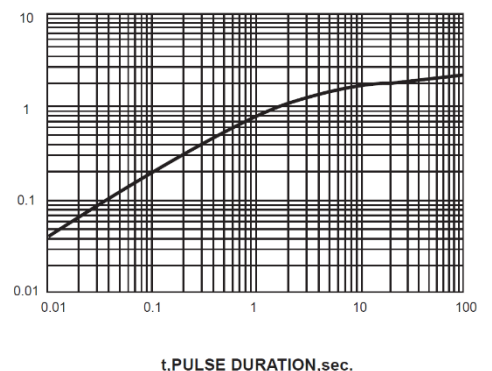
JUNCTION CAPACITANCE, pF

FIG. 5-TYPICAL JUNCTION CAPACITANCE



TRANSIENT THERMAL IMPEDANCE
 $^{\circ}\text{C}/\text{W}$

FIG. 6-TYPICAL TRANSIENT THERMAL IMPEDANCE



THRU HOLE BRIDGE RECTIFER KBPC SERIES

PACKAGE

Part Type	Qty. Per Box (pcs)	Inner Box L*W*H (mm)	Carton size L*W*H (mm)	Qty. Per Carton (pcs)	G. W (kg)
KBPC	50	203*203*45	440*220*255	500	14.8

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