




SPECIFICATION SHEET

SPECIFICATION SHEET NO.	N0310-GBU1010000L10A
DATE	Mar. 10, 2021
REVISION	A0
DESCRIPTION	Thru Hole Glass Passivated Bridge Rectifier, GBU Series, GBU1010 Type, 4 Pins, Reverse Voltage 1000V Max. Forward Current 10A Max. Operating Temp. Range -55°C ~+150°C, Package in Bulk, 500pcs/Box RoHS/RoHS III compliant
CUSTOMER	
CUSTOMER PART NUMBER	
CROSS REF. PART NUMBER	
ORIGINAL PART NUMBER	MDD GBU1010
PART CODE	GBU1010000L10A

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

CUSTOMER APPROVE
DATE:

THRU HOLE BRIDGE RECTIFER GBU SERIES

MAIN FEATURE

- Surge overload rating – 220 amperes peak
- Reliable low cost construction utilizing molded plastic technique
- Plastic material has UL flammability classification 94V-0



APPLICATION

- For printed circuit board

RFQ

[Request For Quotation](#)

PART CODE GUIDE

GBU	1010000	L	10A
1	2	3	4

- 1) **GBU**: Thru Hole Glass Passivated Bridge Rectifier, 4 Pins, GBU Series
- 2) **101000**: Type code for original part number GBU1010
- 3) **L**: Package code, In Bulk, 500pcs/Box.
- 4) **10A**: Specification code for Reverse Voltage 1000V Max. Forward Current 10.0A Max

MORE ITEMS AVAILABLE

GBU0400500L405	GBU0401000L410	GBU0402000L420	GBU0404000L440	GBU0406000L460
GBU0408000L480	BGU0410000L40A			
GBU0800500L805	GBU0801000L810	GBU0802000L820	GBU0804000L840	GBU0806000L860
GBU0808000L880	GBU0810000L80A			
GBU1000500L105	GBU1001000L110	GBU1002000L120	GBU1004000L140	GBU1006000L160
GBU1008000L180	GBU1010000L10A			
GBU1500500L155	GBU1501000L151	GBU1502000L152	GBU1504000L154	GBU1506000L156
GBU1508000L158	GBU1510000L15A			
GBU2000500L205	GBU2001000L201	GBU2002000L201	GBU2003000L204	GBU2006000L206
GBU2008000L208	GBU2010000L20A			
GBU2500500L255	GBU2501000L251	GBU2502000L252	GBU2504000L254	GBU2506000L256
GBU2508000L258	GBU2510000L25A			

THRU HOLE BRIDGE RECTIFIER GBU SERIES

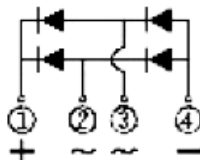
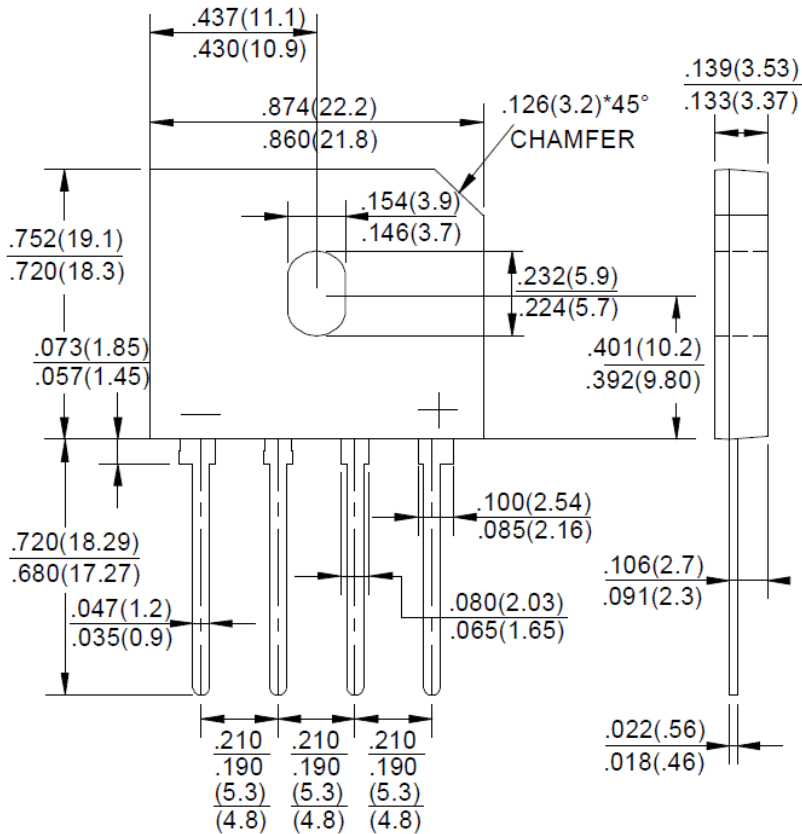
DIMENSION (Unit: Inch/mm)

Image for reference



Marking: GBU1010

GBU



THRU HOLE BRIDGE RECTIFIER GBU SERIES
MECHANICAL DATA

Case	Terminals	Polarity	Mounting Position	Weight per piece
JEDEC GBU molded plastic body	Solder plated, Solderable per MIL-STD-750, Method 2026	Polarity symbol marking on body	Any	0.0693 Ounce, 2.1554 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 (with heatsink see Note 3) rectified current at T _c = 100°C (without heatsink)	I _{AV}			10 3.0	A
Peak forward surge current 8.3ms single half sine-wave superimposed on rated load (JEDEC Method)	I _{FSM}		220		A
Rating for Fusing (t<8.3ms)	I ² t		200		A ² S
Forward voltage at 5.0A DC	V _F			1.0	Volts
DC reverse current at rated DC blocking voltage	I _R	TA=25°C		10	μA
		TA=125°C		0.5	mA
Junction capacitance (Note 2)	C _J		70		pF
Thermal resistance (Note 3)	R _{QJA}		2.2		°C/W
Operating junction temperature range	T _J	-55		+150	
Storage temperature range	T _{STG}	-55		+150	°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*1.6mm cu plate heatsink.
4. The typical data above is for reference only

THRU HOLE BRIDGE RECTIFER GBU 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 GBU SERIES

RATINGS AND CHARACTERISTIC CURVES (For Reference Only)

FIG.1-MAXIMUM FORWARD SURGE CURRENT

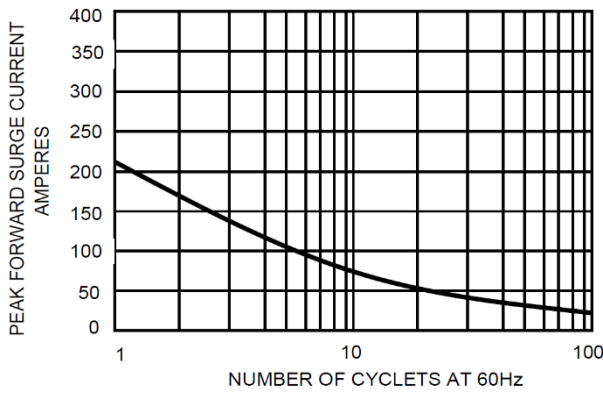


FIG.2- DERATING CURVE
OUTPUT RECTIFIED CURRENT

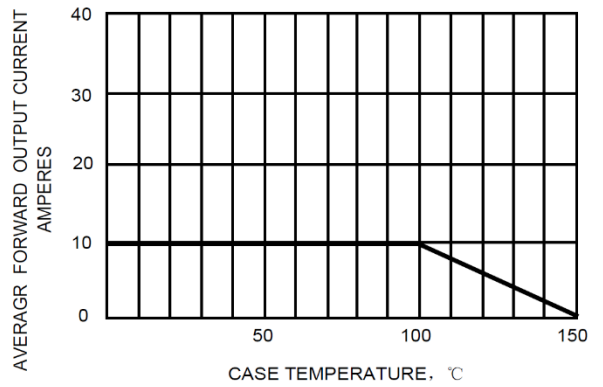


FIG.3-TYPICAL FORWARD CHARACTERISTICS

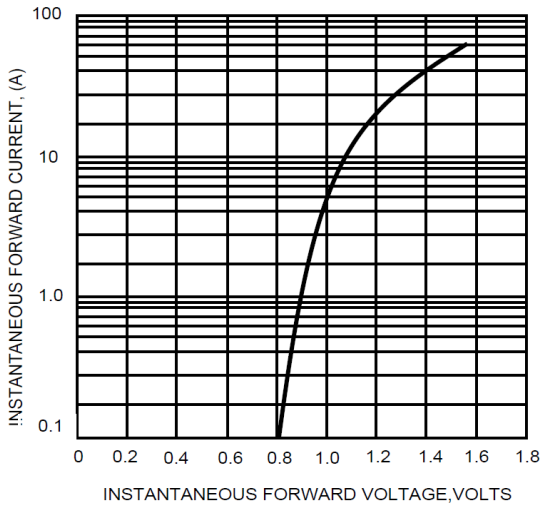
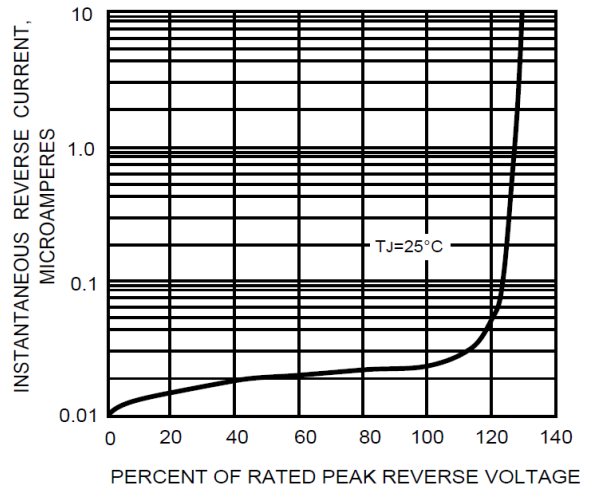


FIG.4-TYPICAL REVERSE CHARACTERISTICS



THRU HOLE BRIDGE RECTIFER GBU 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)
GBU	500	210*210*50	445*220*255	5,000	20.95

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