




SPECIFICATION SHEET

SPECIFICATION SHEET NO.	N0626- GBU0410000L40A
DATE	June. 26, 2021
REVISION	A1
DESCRIPTION	<p>Thru Hole Glass Passivated Bridge Rectifier, GBU Series, GBU410 Type, 4 Pins, Reverse Voltage 1000V Max. Forward Current 4 A Max. Operating Temp. Range -55°C ~+150°C, Package in Bulk, 500pcs/Box RoHS/RoHS III compliant</p>
CUSTOMER	
CUSTOMER PART NUMBER	
CROSS REF. PART NUMBER	
ORIGINAL PART NUMBER	MDD GBU410
PART CODE	GBU0410000L40A

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

CUSTOMER APPROVE	
DATE:	

THRU HOLE BRIDGE RECTIFER GBU SERIES

MAIN FEATURE

- Surge overload rating – 200 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	0410000	L	40A
1	2	3	4

- 1) **GBU**: Thru Hole Glass Passivated Bridge Rectifier, 4 Pins, GBU Series
- 2) **0410000**: Type code for original part number GBU410
- 3) **L**: Package code, In Bulk, 500pcs/Box.
- 4) **40A**: Specification code for Reverse Voltage 1000V Max. Forward Current 4.0A Max

MORE ITEMS AVAILABLE

GBU0400500L405	GBU0401000L410	GBU0402000L420	GBU0404000L440	GBU0406000L460
GBU0408000L480	GBU0410000L40A			
GBU0600500L605	GBU0601000L610	GBU0602000L620	GBU0604000L640	GBU0606000L660
GBU0608000L680	GBU0610000L60A			
GBU0800500L805	GBU0801000L810	GBU0802000L820	GBU0804000L840	GBU0806000L860
GBU0808000L880	GBU0810000L80A			
GBU100050L1005	GBU100100L1010	GBU100200L1020	GBU100400L1040	GBU100600L1060
GBU100800L1080	GBU101000L100A			
GBU150050L1505	GBU150100L1510	GBU150200L1520	GBU150400L1540	GBU150600L1560
GBU150800L1580	GBU151000L150A			
GBU200050L2005	GBU200100L2010	GBU200200L2020	GBU200300L2040	GBU200600L2060
GBU200800L2080	GBU201000L200A			
GBU250050L2505	GBU250100L2510	GBU250200L2520	GBU250400L2540	GBU2506000L2560
GBU250800L2580	GBU251000L250A			

THRU HOLE BRIDGE RECTIFIER GBU SERIES

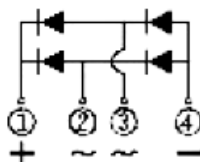
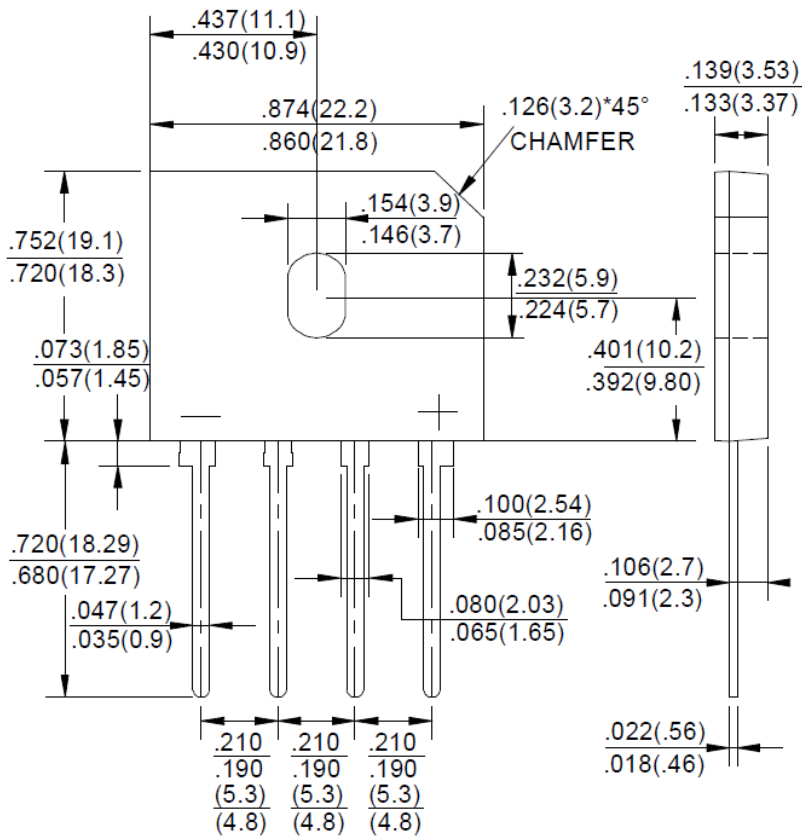
DIMENSION (Unit: Inch/mm)

Image for reference



Marking: GBU410

GBU



THRU HOLE BRIDGE RECTIFER 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	-

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}			4.0	A
Peak forward surge current 8.3ms single half sine-wave superimposed on rated load (JEDEC Method)	I _{FSM}		150		A
Rating for Fusing (t<8.3ms)	I ² t		93		A ² S
Forward voltage at 2.0A DC	V _F			1.1	Volts
DC reverse current at rated DC blocking voltage	I _R			10	μA
				0.5	mA
Junction capacitance (Note 2)	C _J		45		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-FORWARD CURRENT DERATING CURVE

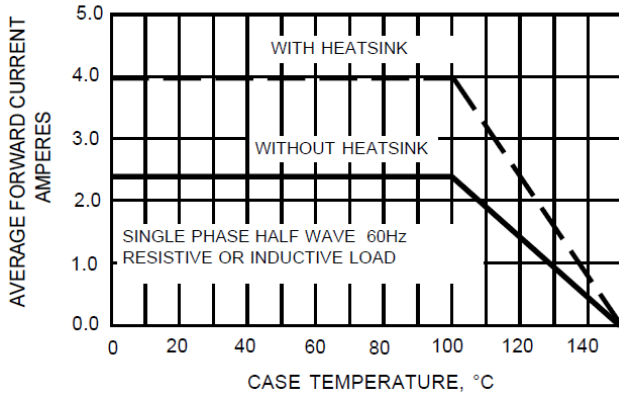


FIG.2-MAXIMUM NON-REPETITIVE SURGE CURRENT

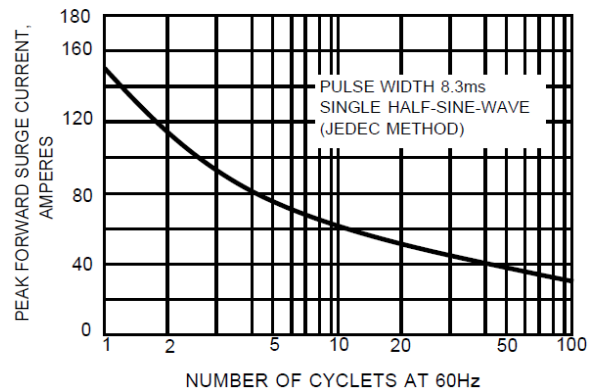


FIG.3-TYPICAL JUNCTION CAPACITANCE

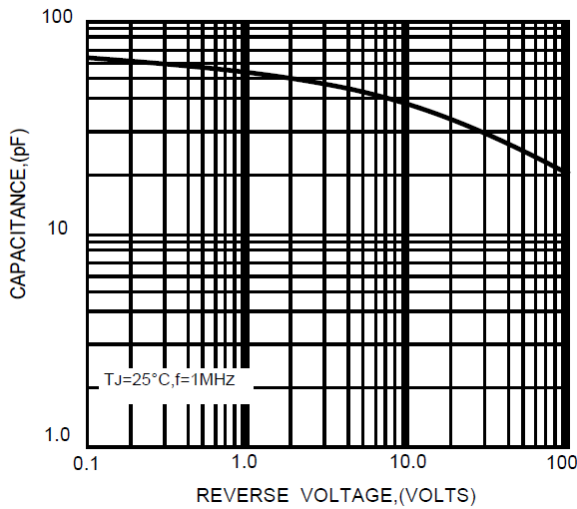


FIG.4-TYPICAL FORWARD CHARACTERISTICS

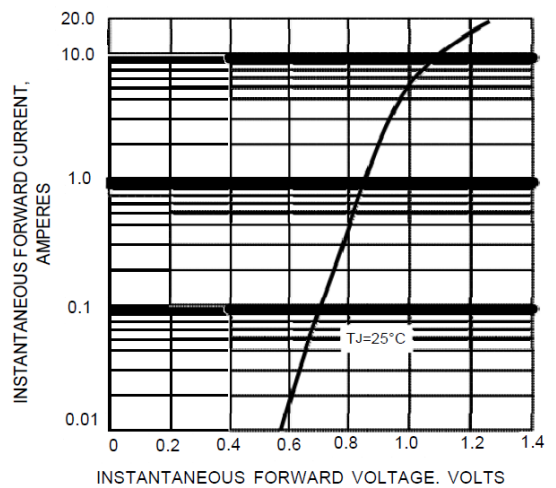
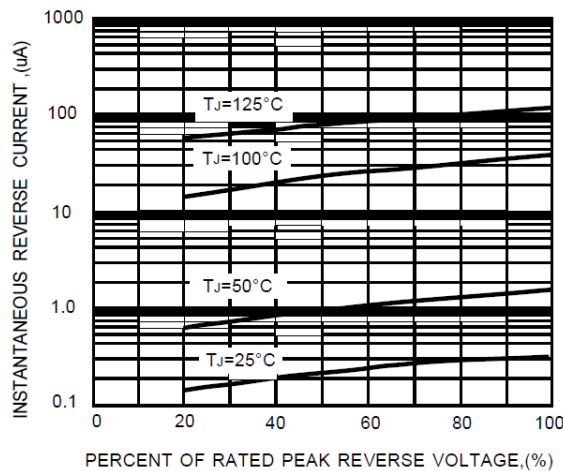


FIG.5-TYPICAL REVERSE CHARACTERISTICS



THRU HOLE BRIDGE RECTIFER GBU 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)
GBU	500	2.05	210*210*50	445*220*255	5,000	20.95

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