NextGen Components,Inc.

# PART CODE: GBU8100000L80A

## SPECIFICATION SHEET

| | |
|---|---|
| **SPECIFICATION SHEET NO.** | N0729-GBU8100000L80A |
| **DATE** | July 29, 2021 |
| **REVISION** | A0 |
| **DESCRIPITION** | Thru Hole Glass Passivated Bridge Rectifier, GBU Series,<br>GBU810 L Type, 4 Pins,<br>Reverse Voltage 1000V Max. Forward Current 8A Max.<br>Operating Temp. Range -55°C ~+150°C,<br>Package in Bulk, 500pcs/Box<br>RoHS/RoHS III compliant |
| **CUSTOMER** | |
| **CUSTOMER PART NUMBER** | |
| **CROSS REF. PART NUMBER** | |
| **ORIGINAL PART NUMBER** | MDD GBU810 L |
| **PART CODE** | GBU8100000L80A |

| **VENDOR APPROVE** |
|---|
| Issued/Checked/Approved<br>NextGen Components, Inc. Mandy Xu<br>NextGen Components, Inc. Ruby Zhang<br>NextGen Components, Inc. Jack Zhang |
| DATE: July 29, 2021 |

| **CUSTOMER APPROVE** |
|---|
| |
| DATE: |

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## 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 | 8100000 | L | 10A |
|---|---|---|---|
| 1 | 2 | 3 | 4 |

1) **GBU**: Thru Hole Glass Passivated Bridge Rectifier, 4 Pins, GBU Series

2) **8100000**: Type code for original part number GBU810 L

3) **L**: Package code, In Bulk, 500pcs/Box.

4) **80A:** Specification code for Reverse Voltage 1000V Max. Forward Current 8.0A 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 | GBU25060000L256 |
| GBU2508000L258 | GBU2510000L25A | | | |

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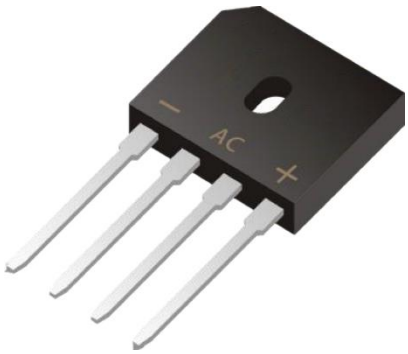
## THRU HOLE BRIDGE RECTIFER GBU SERIES

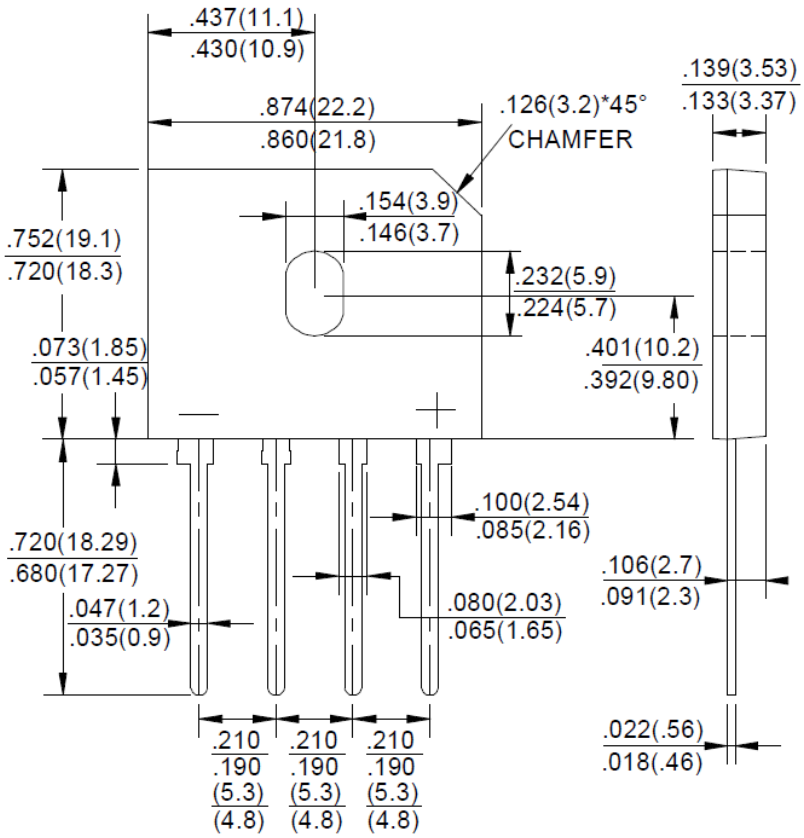
**DIMENSION (Unit: Inch/mm)**

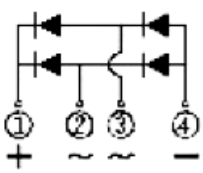
**Image for reference**




**Marking: GBU810**

**GBU**



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# 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 | 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 Tc= 100°C (without heatsink)** | | $I_{AV}$ | | | 8.0<br>2.9 | A |
| **Peak forward surge current 8.3ms single half sine-wave superimposed on rated load (JEDEC Method)** | | $I_{FSM}$ | | 200 | | A |
| **Rating for Fusing (t<8.3ms)** | | $I^2t$ | | 166 | | $A^2S$ |
| **Forward voltage at 5.0A DC** | | $V_F$ | | | 1.0 | Volts |
| **DC reverse current at rated DC blocking voltage** | **TA=25℃** | $I_R$ | | | 10 | μA |
| | **TA=125℃** | | | | 0.5 | mA |
| **Junction capacitance (Note 2)** | | $C_J$ | | 60 | | 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

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# 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 | $T_A$=100°C for 1000 Hours at $V_R$=80% Rated $V_R$ | 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, $T_A$=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 | $T_A$=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 |

## RATINGS AND CHARACTERISTIC CURVES (For Reference Only)

FIG.1-FORWARD CURRENT DERATING CURVE

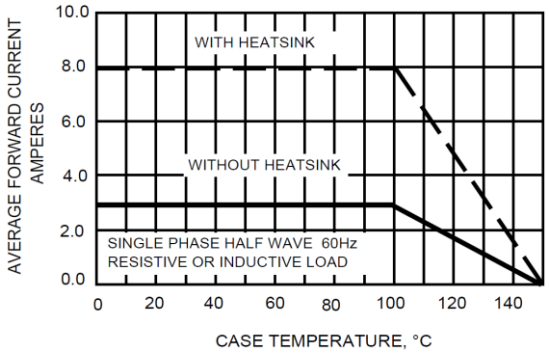



FIG.2-MAXIMUM NON-REPETITIVE SURGE CURRENT

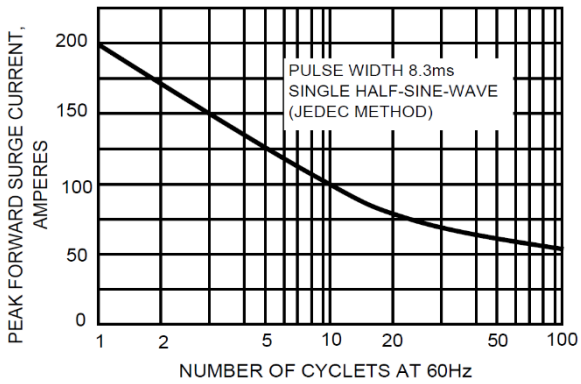



FIG.3-TYPICAL JUNCTION CAPACITANCE

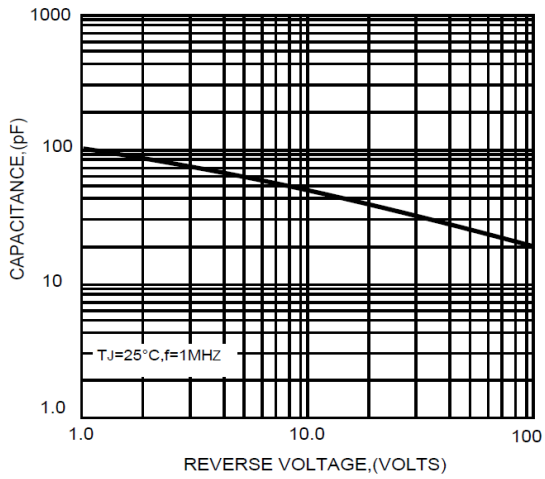



FIG.4-TYPICAL FORWARD CHARACTERISTICS

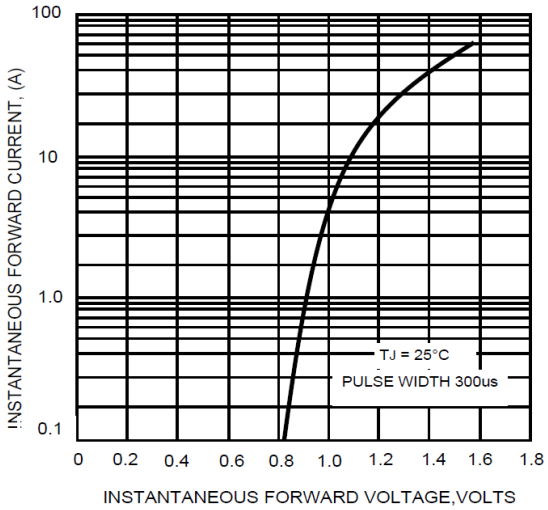
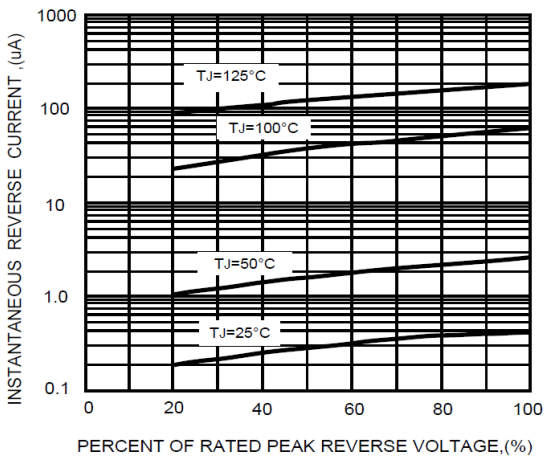



FIG.5-TYPICAL REVERSE CHARACTERISTICS



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## 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 |

## DISCLAIMER