

# GBU6005~GBU610

Rev.B Dec.-2022

DATA SHEET

## / Absolute Maximum Ratings(Ta=25 )

| Parameter                                                                                         | Symbol          | Rating      |         |         |         |         |         |         | Unit             |
|---------------------------------------------------------------------------------------------------|-----------------|-------------|---------|---------|---------|---------|---------|---------|------------------|
|                                                                                                   |                 | GBU 6005    | GBU 601 | GBU 602 | GBU 604 | GBU 606 | GBU 608 | GBU 610 |                  |
| Maximum Recurrent Peak Reverse Voltage                                                            | $V_{RRM}$       | 50          | 100     | 200     | 400     | 600     | 800     | 1000    | V                |
| Maximum RMS Voltage                                                                               | $V_{RMS}$       | 35          | 70      | 140     | 280     | 420     | 560     | 700     | V                |
| Maximum DC Blocking Voltage                                                                       | $V_{DC}$        | 50          | 100     | 200     | 400     | 600     | 800     | 1000    | V                |
| Maximum Average Forward Rectified Current(with heatsink Note 2)                                   | $I_{F(AV)}$     | 6           |         |         |         |         |         |         | A                |
| Maximum Average Forward Rectified Current @T <sub>c</sub> =100 (without heatsink)                 |                 | 2.8         |         |         |         |         |         |         | A                |
| Peak Forward Surge Current 8.3ms Single Half Sine-Wave Super Imposed on Rated Load (JEDEC Method) | $I_{FSM}$       | 175         |         |         |         |         |         |         | A                |
| I <sup>2</sup> t Rating for Fusing (t<8.3ms)                                                      | $I^2t$          | 127         |         |         |         |         |         |         | A <sup>2</sup> s |
| Typical Junction Capacitance Per Element (Note1)                                                  | $C_J$           | 50          |         |         |         |         |         |         | pF               |
| Typical Thermal Resistance (Note2)                                                                | $R_{\theta Jc}$ | 2.5         |         |         |         |         |         |         | /W               |
| Operating Temperature Range                                                                       | $T_j$           | -55 to +150 |         |         |         |         |         |         |                  |
| Storage Temperature Range                                                                         | $T_{stg}$       | -55 to +150 |         |         |         |         |         |         |                  |

NOTE:

1. Measured at 1.0MHz and applied reverse voltage of 4.0V DC.
2. Device mounted on 150mm\*150mm\*1.6mm Cu Plate Heatsink.

## / Electrical Characteristics(Ta=25 )

| Parameter                                               | Symbol | Test Conditions     | Rating | Unit |
|---------------------------------------------------------|--------|---------------------|--------|------|
| Maximum Forward Voltage                                 | $V_F$  | $I_F=3.0A$          | 1.0    | V    |
| Maximum DC Reverse Current at Rated DC Blocking Voltage | $I_R$  | T <sub>a</sub> =25  | 5.0    | μA   |
|                                                         |        | T <sub>a</sub> =125 | 500    |      |

/ Electrical Characteristic Curve

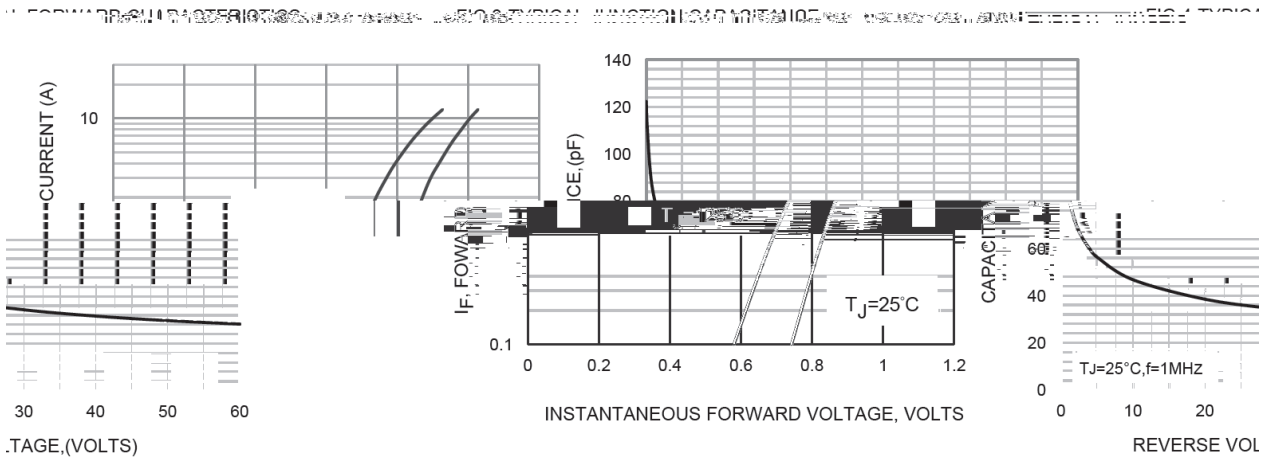
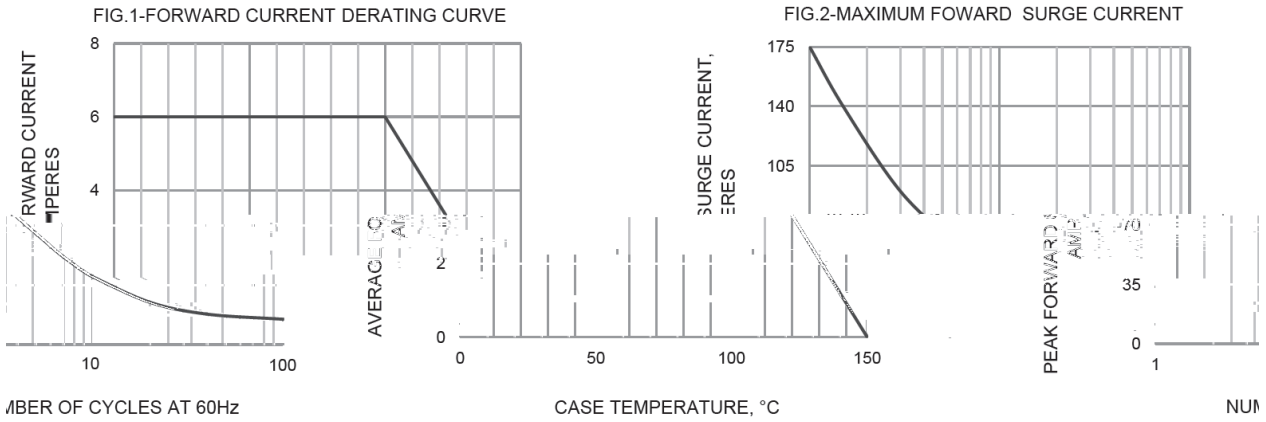
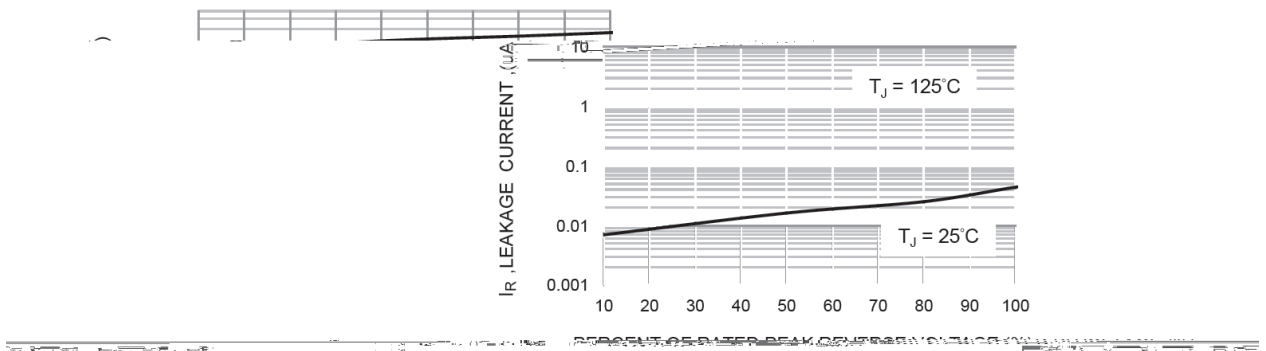
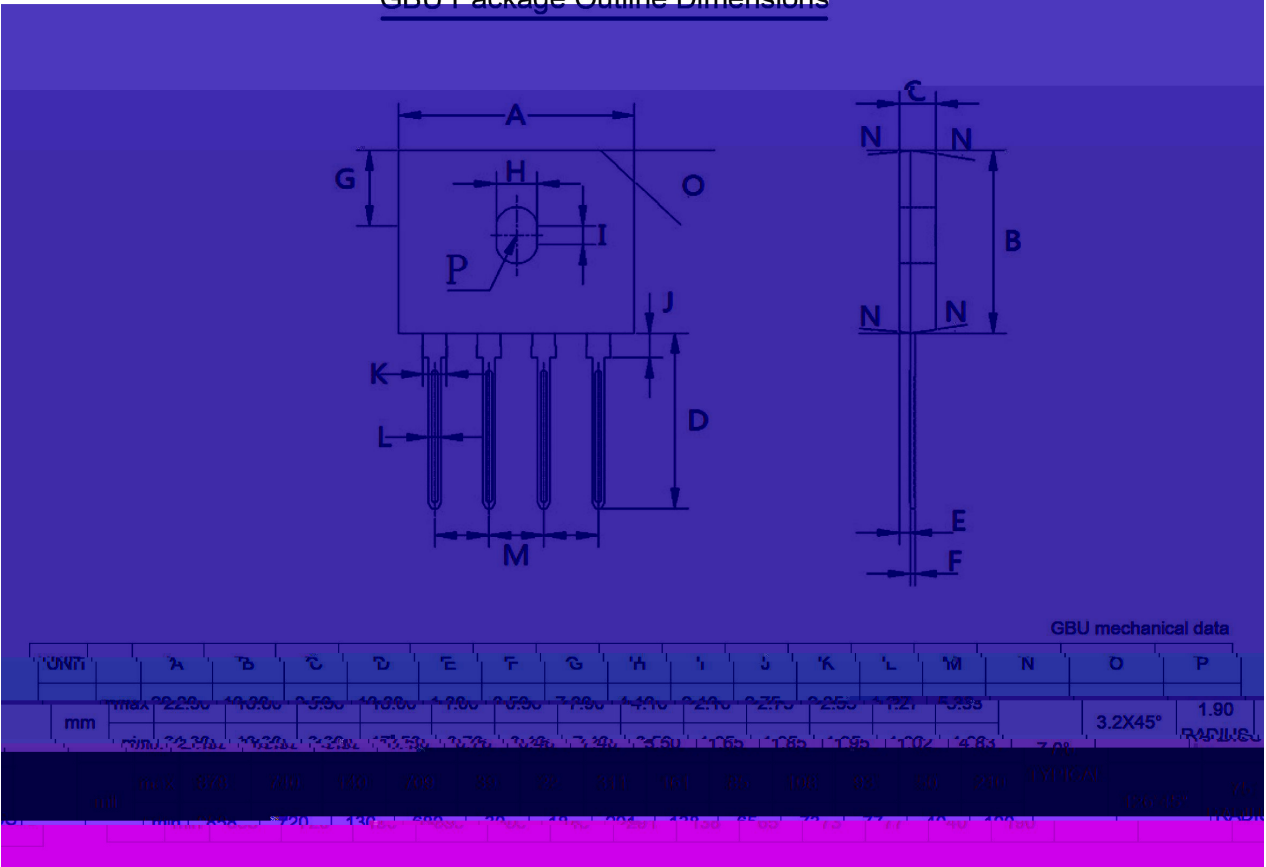


FIG.5-TYPICAL REVERSE CHARACTERISTICS

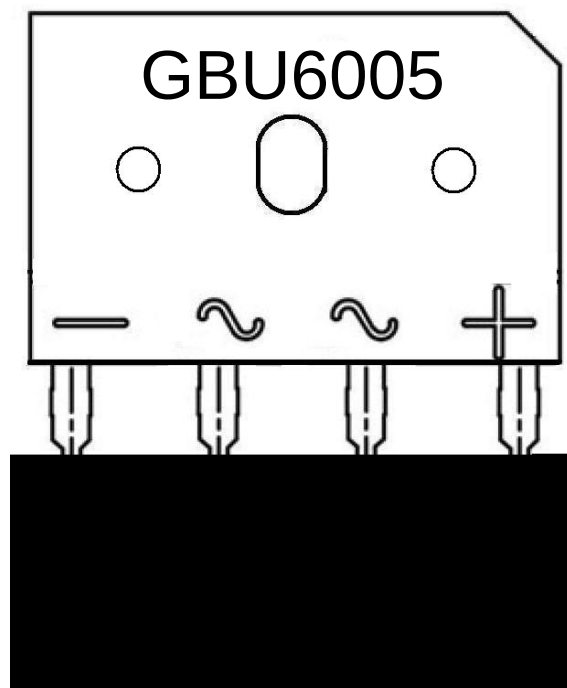


/ Package Dimensions

GBU Package Outline Dimensions



/ Marking Instructions

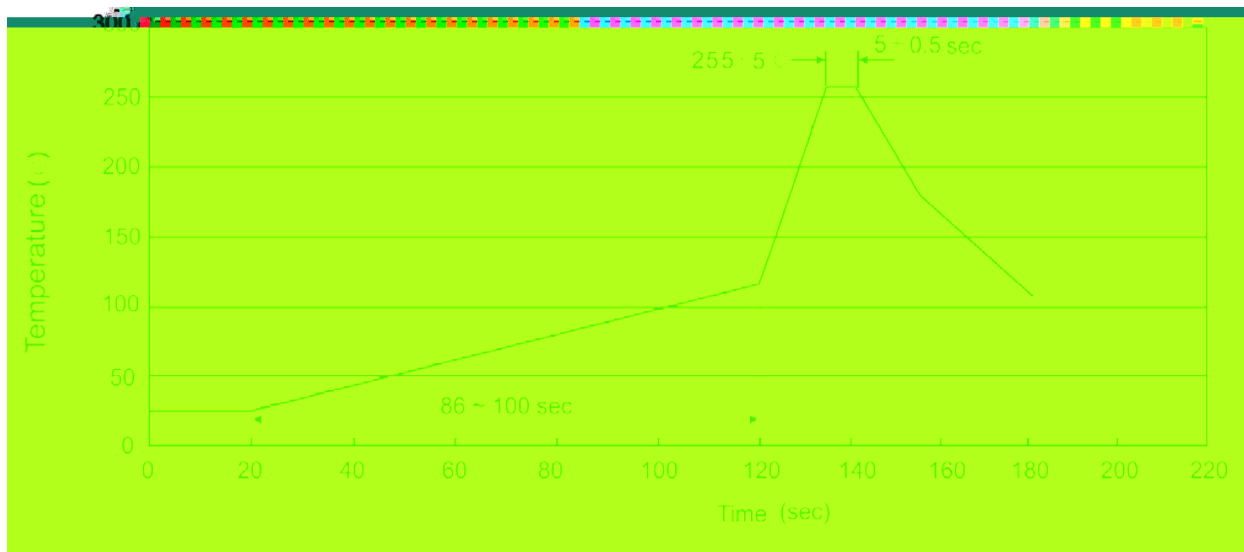


GBU6005:

\*\*\*\*:

Product Type.

Lot No. Code, code change with Lot No


**( ) / Temperature Profile for Dip Soldering(Pb-Free)**

**Note:**

- |   |          |             |                                             |
|---|----------|-------------|---------------------------------------------|
| 1 | 25 ~ 150 | 60 ~ 90sec; | 1.Preheating:25~150 , Time:60~90sec.        |
| 2 | 255 ± 5  | 5 ± 0.5sec; | 2.Peak Temp.:255 ± 5 , Duration:5 ± 0.5sec. |
| 3 | 2 ~ 10   | /sec.       | 3. Cooling Speed: 2~10 /sec.                |

**/ Resistance to Soldering Heat Test Conditions**

270 ± 5      10 ± 1 sec.      Temp.:270±5      Time:10±1 sec

**/ Packaging SPEC.**
**/ BULK**

| Package Type | Units |  |  |  |  | Dimension |  | (unit mm <sup>3</sup> ) |
|--------------|-------|--|--|--|--|-----------|--|-------------------------|
|              |       |  |  |  |  |           |  |                         |
|              |       |  |  |  |  |           |  |                         |

**/ TUBE**

| Package Type | Units | Dimension | (unit mm <sup>3</sup> ) |
|--------------|-------|-----------|-------------------------|
|--------------|-------|-----------|-------------------------|