

# Antenna

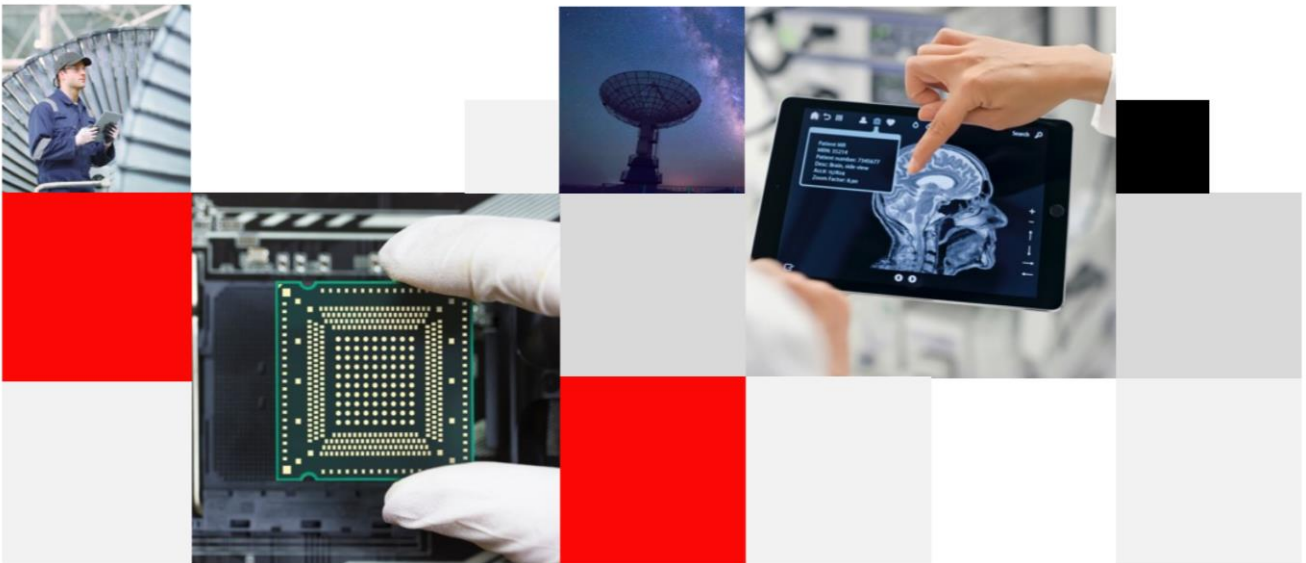
# YG0008AA Datasheet

## Antenna Services

Version: 1.2

Date: 2021-01-20

Status: Released



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# About the Document

## Revision History

Version	Date	Author	Note
-	2020-08-14	Kenny YIN	Creation of the document
1.0	2020-08-14	Kenny YIN	First official release
1.1	2020-09-15	Kenny YIN	Updated the adhesive (Chapter 5).
1.2	2021-02-20	Kenny YIN	<ol style="list-style-type: none"><li>1. Added the antenna image (Chapter 2);</li><li>2. Updated the input impedance (Chapter 3);</li><li>3. Updated the picture (Chapter 4.4);</li><li>4. Added the welding reference temperature and packaging information (Chapter 5&amp;7).</li><li>5. Updated the product size information (Chapter 5).</li></ol>

## Contents

About the Document.....	3
Contents.....	4
<b>1 Product Description.....</b>	<b>5</b>
<b>2 Product Features .....</b>	<b>5</b>
<b>3 Product Specifications .....</b>	<b>6</b>
<b>4 Overall Performance.....</b>	<b>7</b>
4.1. Test Environment .....	7
4.2. Return Loss Characteristics.....	8
4.3. Measured Input Impedance on a Smith Chart.....	9
4.4. Test Condition Ground Plane.....	10
<b>5 Product Size .....</b>	<b>11</b>
<b>6 Reflow Soldering Condition.....</b>	<b>12</b>
<b>7 Packaging .....</b>	<b>13</b>

## 1 Product Description

The antenna is designed for superior performance, and can be widely used for wireless applications.

We provide comprehensive antenna design support such as simulation, testing and manufacturing for custom antenna solutions to meet your specific application needs.

## 2 Product Features

- GNSS
- High efficiency
- Excellent performance



### 3 Product Specifications

#### Passive Electrical Specifications

Frequency Range	1575.42 ±2 MHz & 1602 ±2 MHz: In the Machine 1601.4 ± 2 MHz: By Test Ground Plane
Input Impedence	50 Ω
S11	< -20 (By Test Ground Plane)
Gain	-
Polarization Type	RHCP

#### Mechanical Specifications

Antenna Size	18.4 mm × 18.4 mm × 4 mm
Casing	Ceramics
Connector Type	-
Working Temperature	-40 °C to +85 °C
Radome Color	-

## 4 Overall Performance

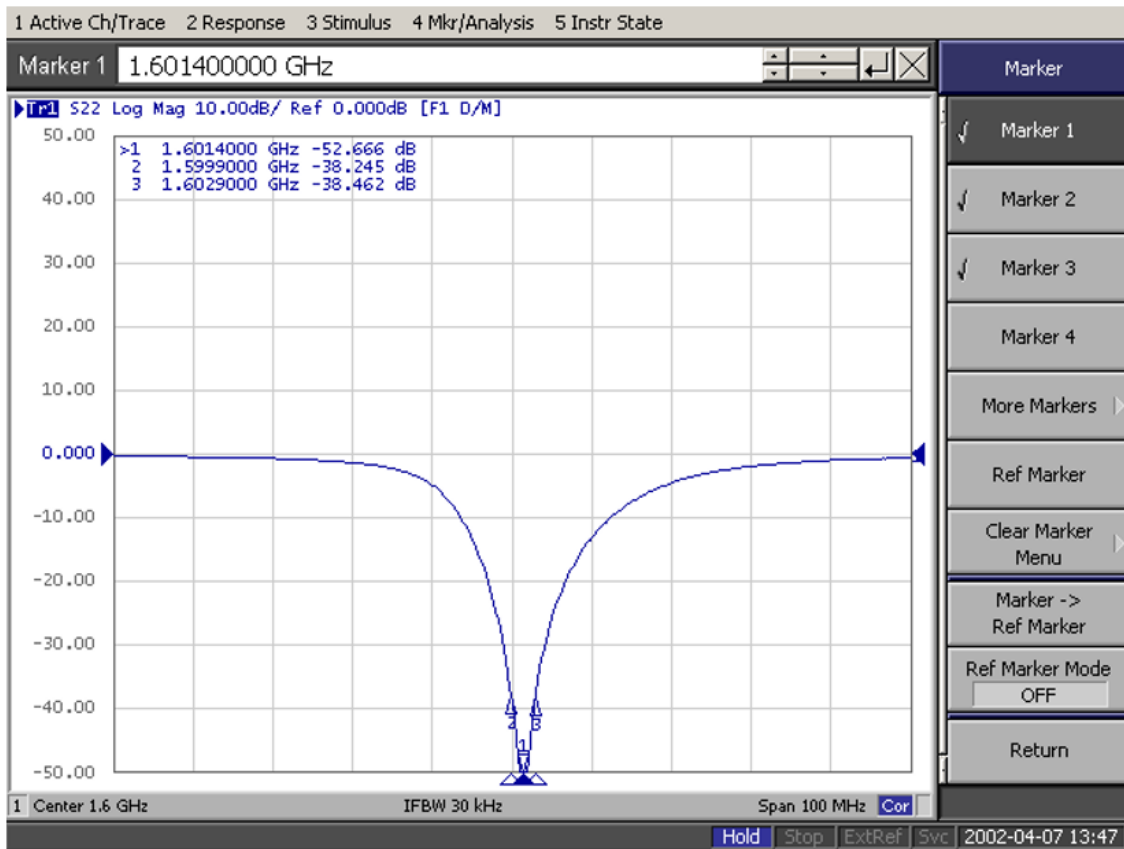
### 4.1. Test Environment

- KEYSIGHT VNA Network Analyzer E5063A 100 kHz – 6.5 GHz
- RayZone®2800 Chamber 5G (FR1) SISO/MIMO, 400 MHz – 6.0 GHz

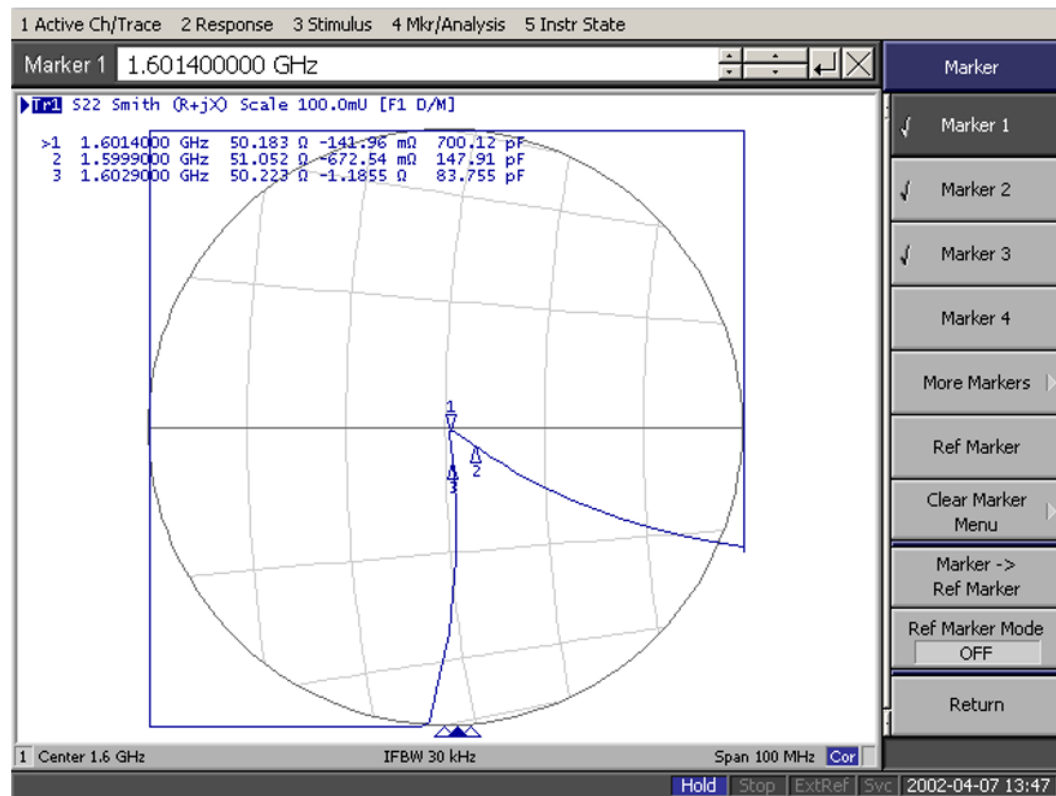
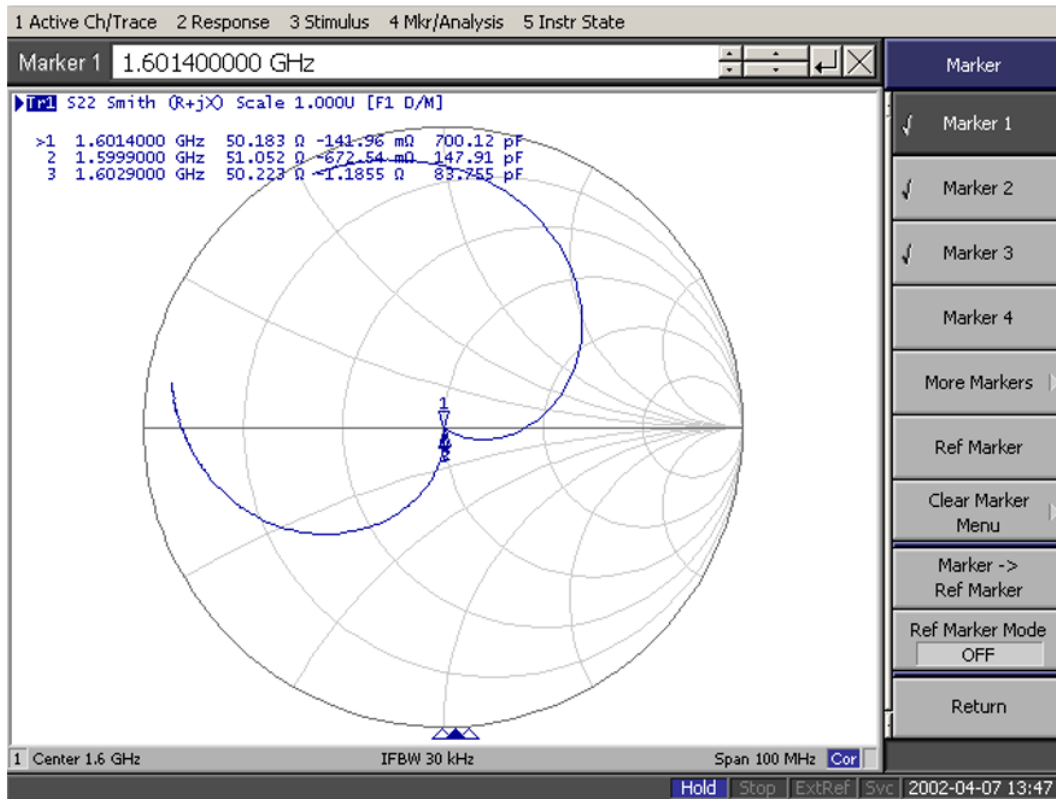




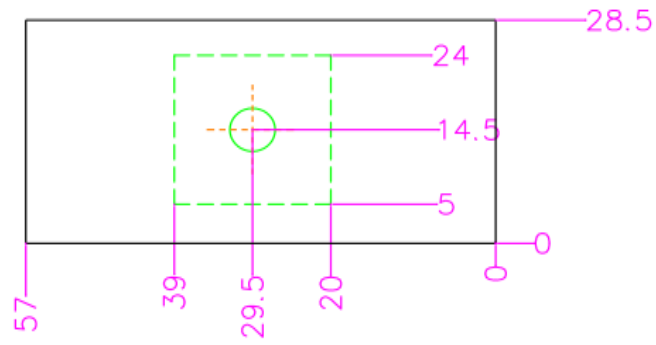
## 4.2. Return Loss Characteristics



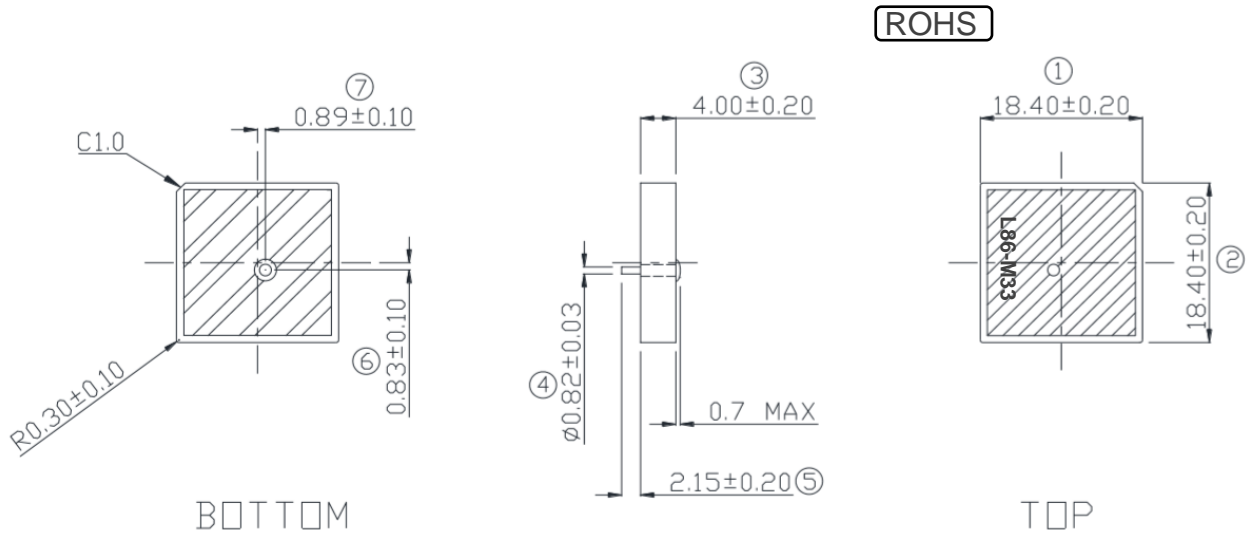
### 4.3. Measured Input Impedance on a Smith Chart



### 4.4. Test Condition Ground Plane



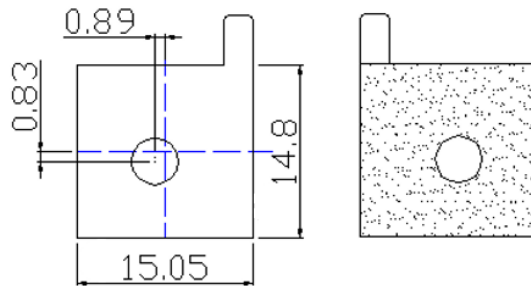
## 5 Product Size



Note: These 1~7 balloons are important dimension

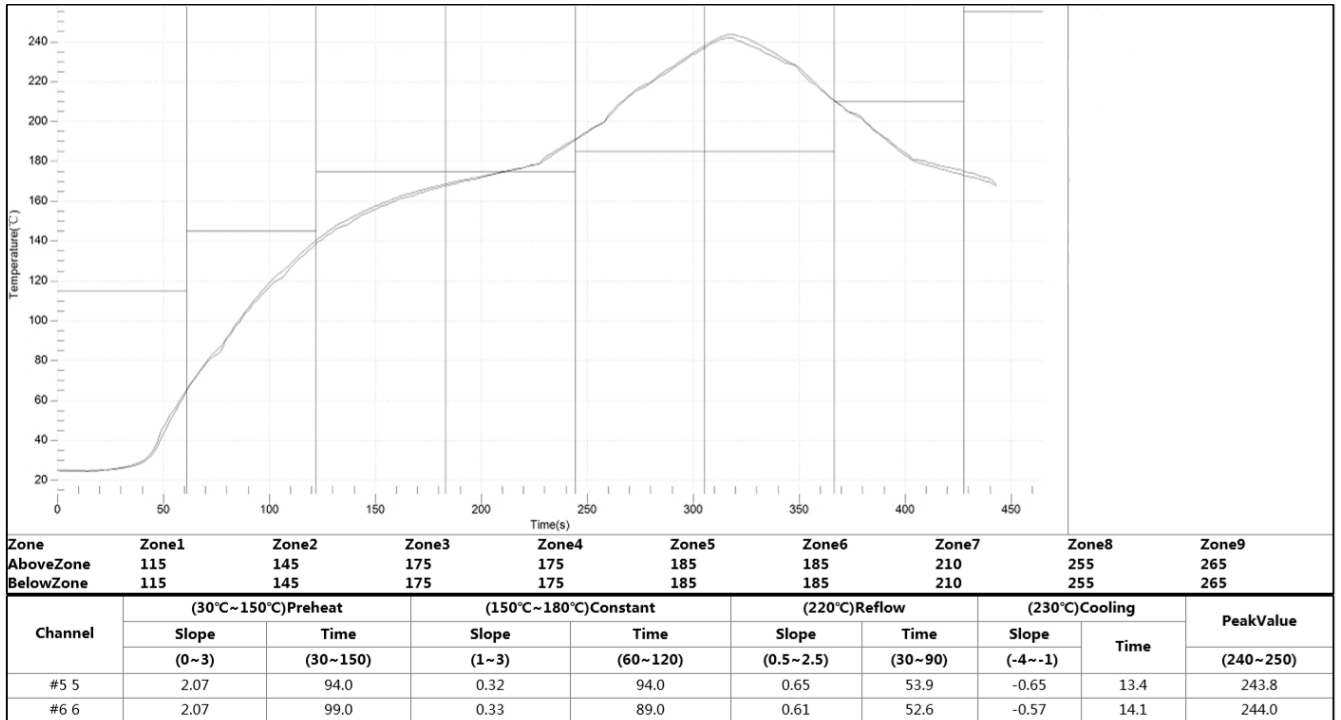
### Adhesive Transfer Tape Specification

- Thickness:  $0.13 \pm 0.02 \text{ mm}$
- 3M F9469PC, TOL:  $\pm 0.3$
- Release Liner:  $0.1 \text{ mm}$  (typ.) printed paper or paper
- Dimension: mm



Temperature Tolerance (Short Term)	500°F(260°C):4-hour conditioning at the indicated temperature with 100 g static load
Temperature Tolerance (Long Term)	300°F(149°C):Maximum temperature where tape supports 250 g in static shear for 10000 minutes.

## 6 Reflow Soldering Condition



## 7 Packaging

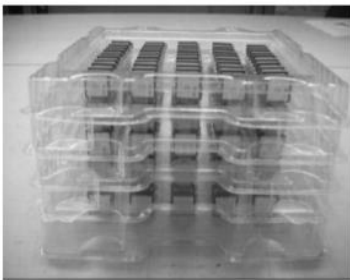
- 50pcs patch/Tray, 250pcs patch/Small box, 1000pcs patch/Carton.
- The packaging steps are as follows:



Step1:  
50pcs patch/Tray,  
Place 1pcs in each cell.  
Tray size:  
208\*208\*24mm



Step4:  
Vacuum sealing.



Step2:  
Five trays are staggered.



Step5:  
Put the inner box into the partition, and  
then put the sealed 250pcs patch into the  
small box.  
Small box size: 215\*215\*123mm



Step3:  
Place 1 piece of foam on  
the top layer, then pack  
and fix it.



Step6:  
Put four small boxes into the Carton,  
1000pcs patch/Carton.  
Carton size: 450\*240\*290mm

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