

# Antenna

# YG0030AA Datasheet

## Antenna Services

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Status: Released



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# About the Document

## Revision History

Version	Date	Author	Note
-	2020-10-14	Kenny YIN	Creation of the document
1.0	2020-10-14	Kenny YIN	First official release
2.0	2021-01-18	Kenny YIN	<ol style="list-style-type: none"><li>1. Updated the antenna image in Chapter 2.</li><li>2. Updated electrical performance and product size in Chapter 3–5.</li></ol>

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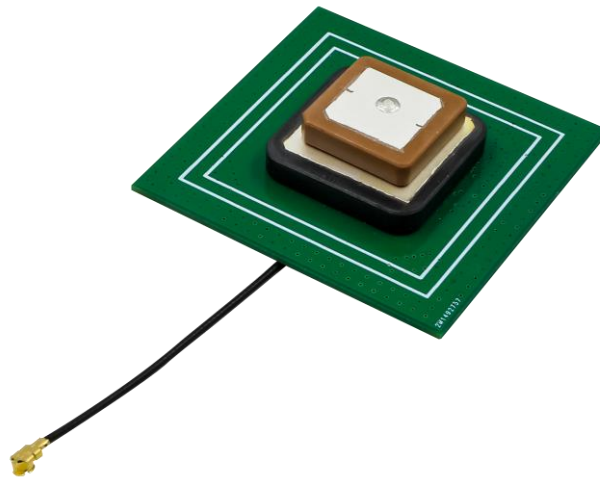
## 1 Product Description

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

- GPS L1/L5
- High efficiency
- Excellent performance



### 3 Product Specifications

#### Passive Electrical Specifications

Frequency	GPS L1: 1575.42 MHz GPS L5: 1176.45 MHz
Input Impedence	50 $\Omega$
VSWR	GPS L1: $\geq 1.02$ GPS L2: $\geq 1.07$
Gain	GPS L1: $\leq 3.05$ dBi GPS L2: $\leq -0.9$ dBi
Polarization Type	R.H.C.P

#### Mechanical Specifications

Antenna Size	52 mm $\times$ 52 mm $\times$ 9.3 mm
Casing	Ceramics
Connector Type	IPEX MHF I
Working Temperature	-40 $^{\circ}$ C to +85 $^{\circ}$ C
Radome Color	Black

## 4 Overall Performance

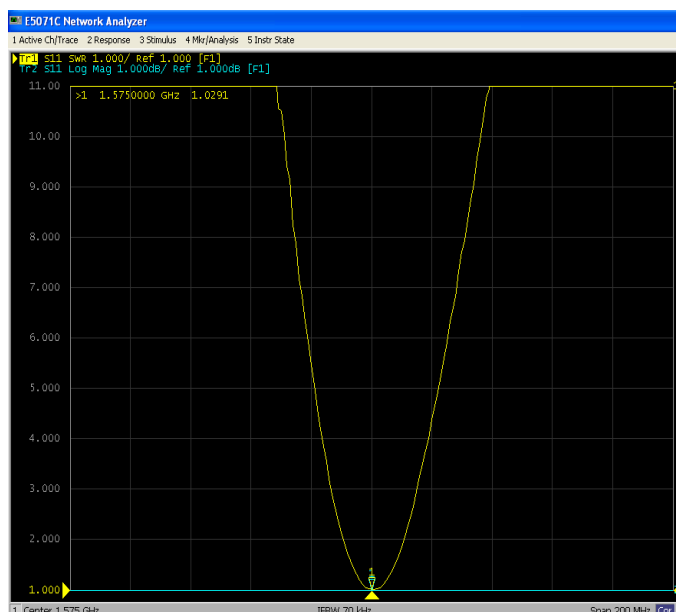
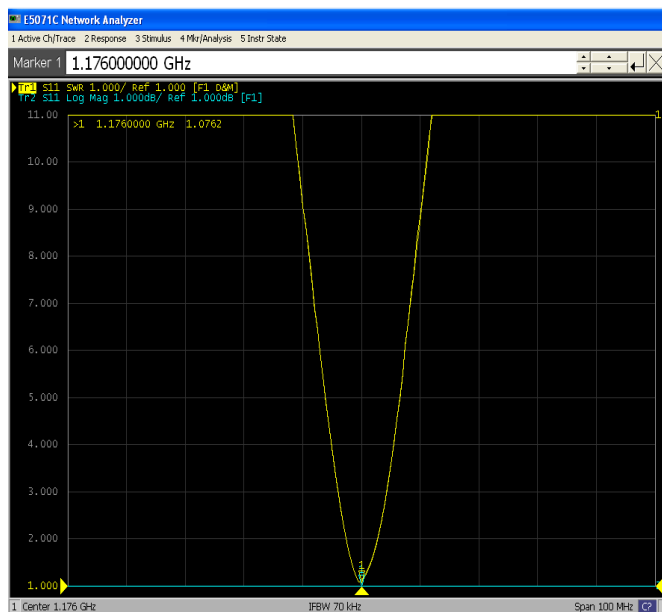
### 4.1. Test Environment

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



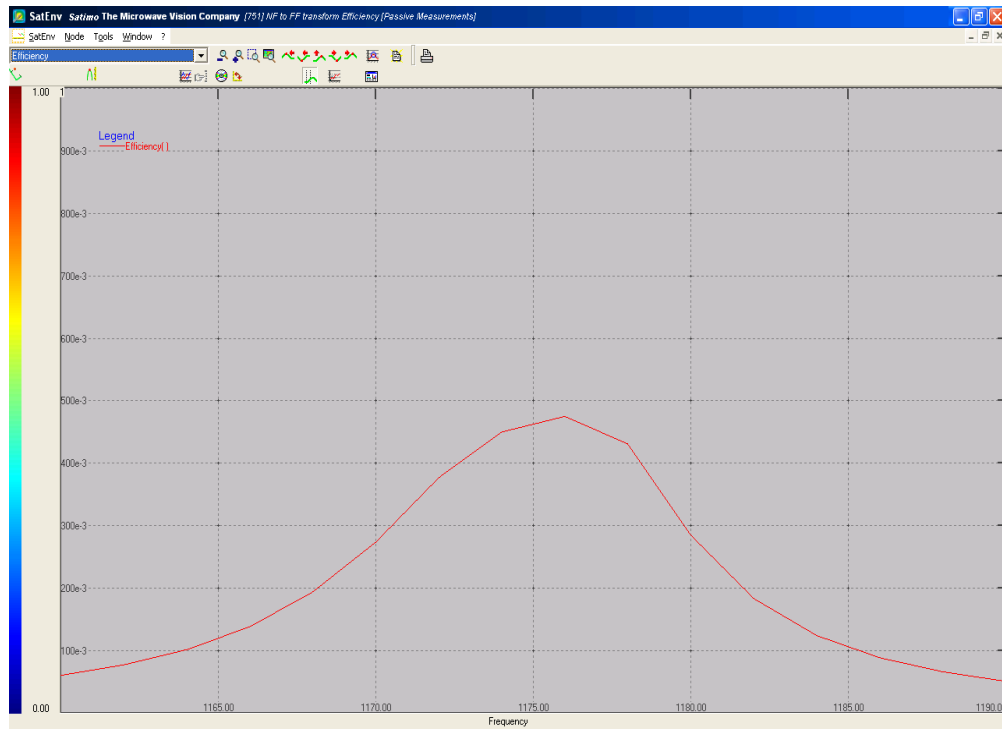
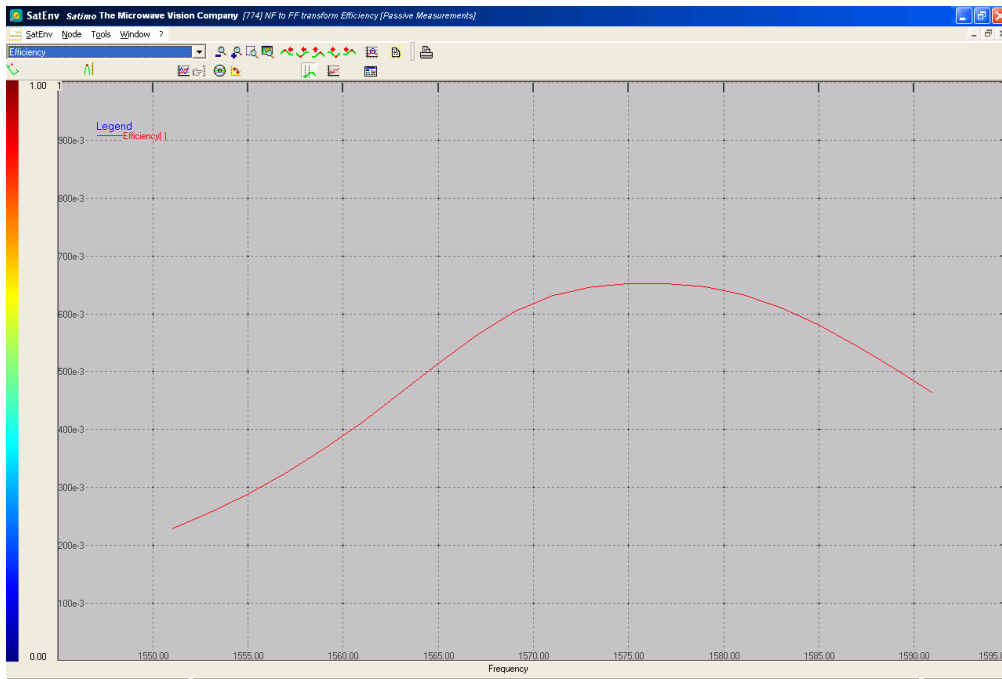


## 4.2. VSWR



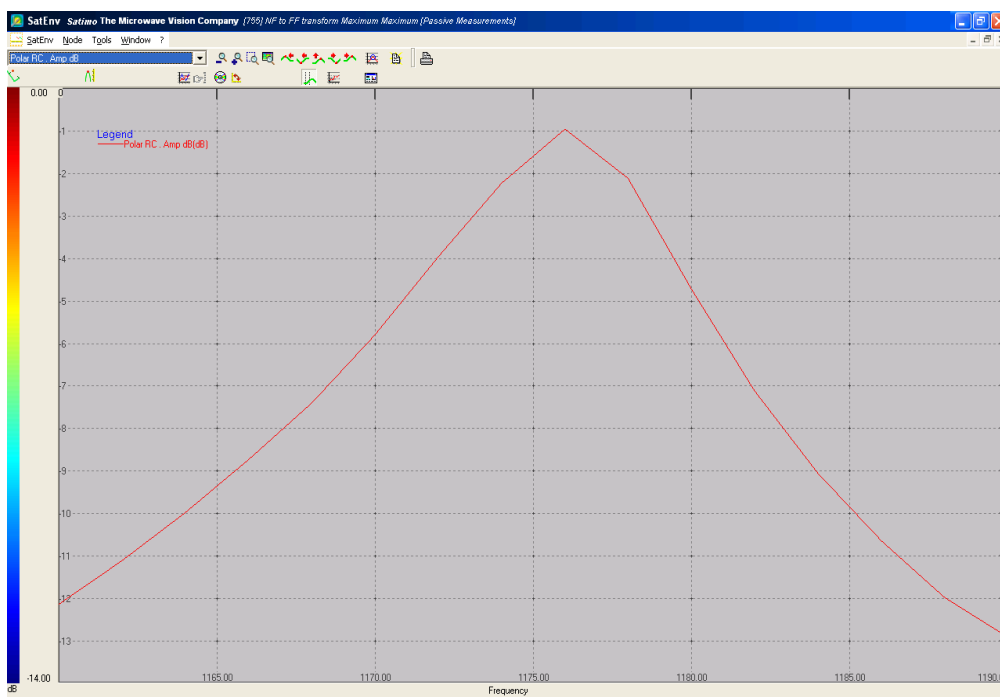
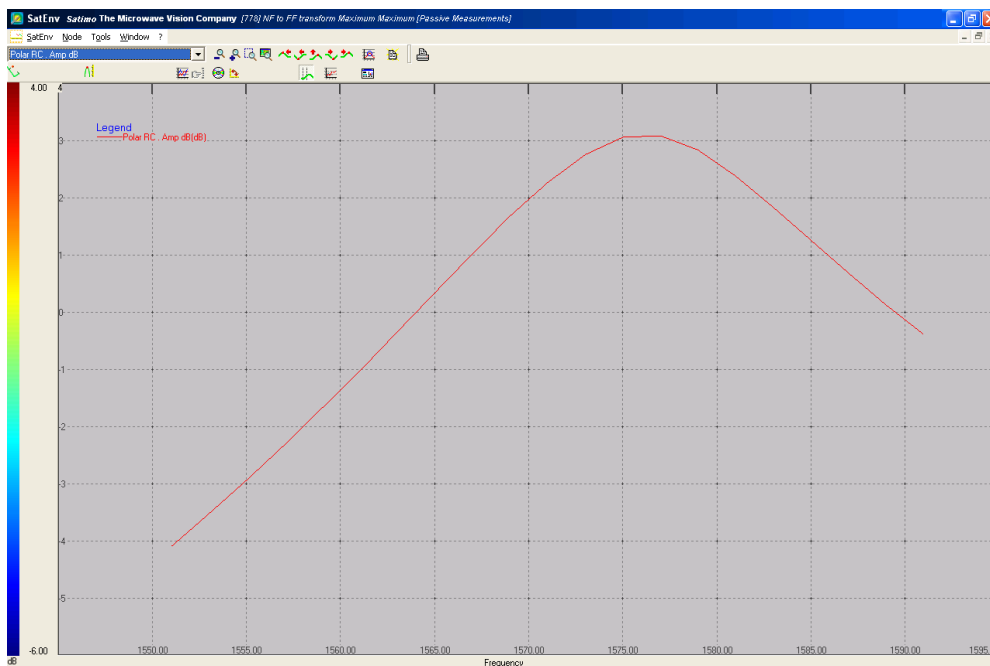
Frequency (MHz)	1176	1575
VSWR	1.07	1.02

### 4.3. Efficiency



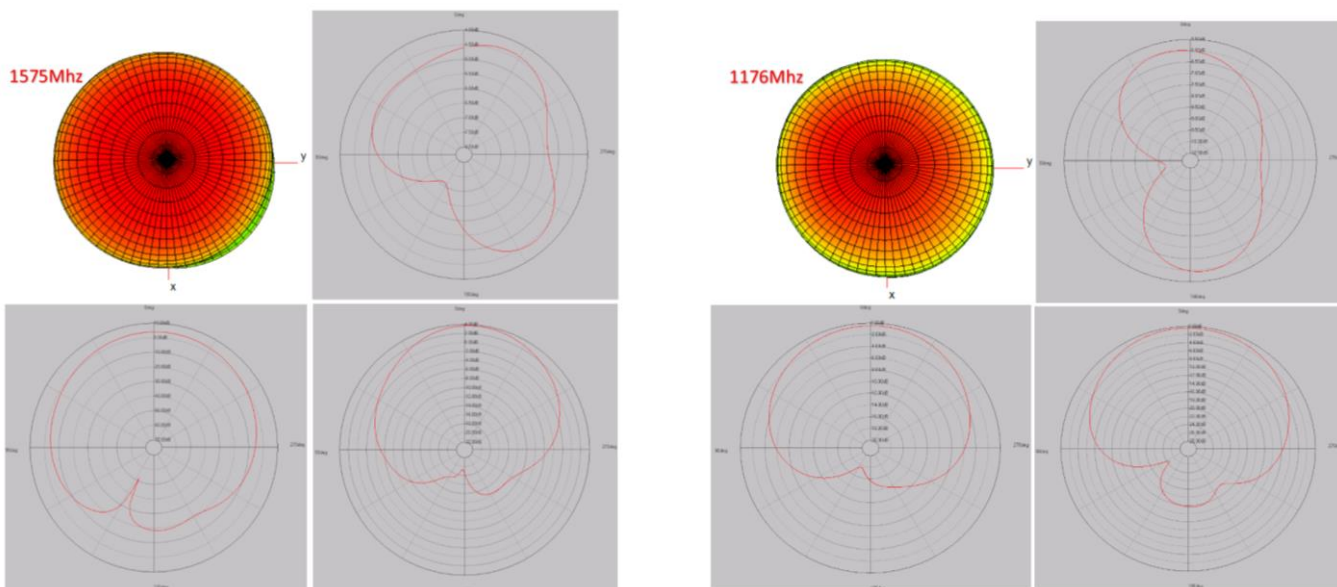
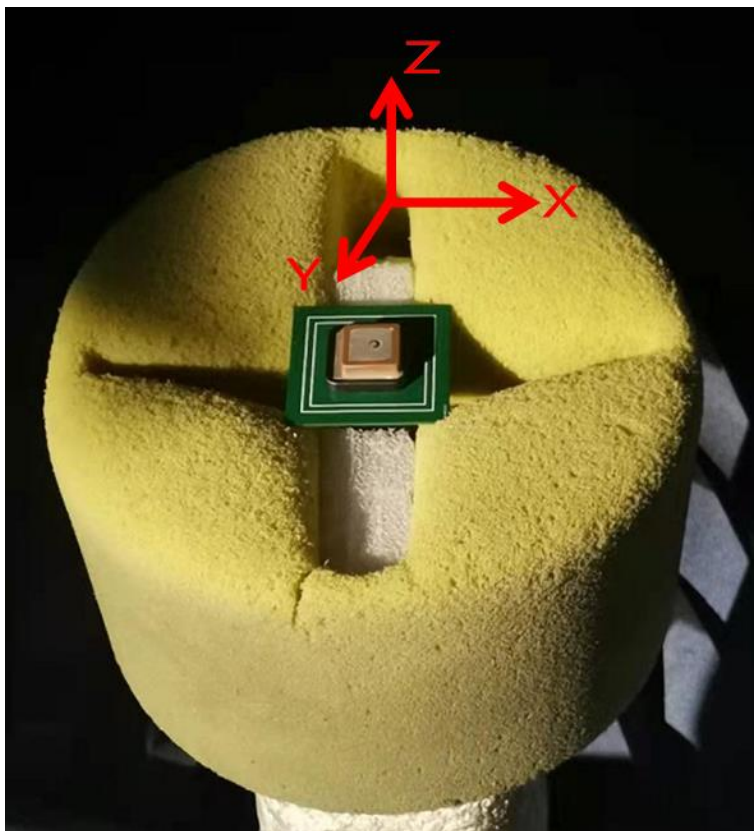
Frequency (MHz)	1176	1561	1575
Efficiency (%)	47	41	65

## 4.4. Gain



Frequency (MHz)	1176	1561	1575
Gain (dBi)	-0.9	-0.9	3.05

### 4.5. Radiation Patterns



## 5 Product Size

UNIT: mm  
General tolerances:  $\pm 0.3$   
"★" For key control size.

