

# 3D Antenna Measurement Report

**REPORT NO.:**

**PLATFORM MANUFACTURER:** Kunshan Innowave Communication Technology Co., Ltd.

**PLATFORM NAME:**

BT

**ANTENNA TYPE:**

PCB Antenna

**TESTED DATE:**

2022.11.25

**ISSUED:**

2022.11.28

**APPLICANT:** Kunshan Innowave Communication Technology Co., Ltd.

**ADDRESS :** 1689 Zizhu Road, Yushan Town, Kunshan City, Jiangsu Province

**ISSUED BY :****ADDRESS :**

This report is for your exclusive use. Any copying or replication of this report to or for any other person or entity, or use of our name or trademark, is permitted only with our prior written permission. This report sets forth our findings solely with respect to the test samples identified herein. The results set forth in this report are not indicative or representative of the quality or characteristics of the lot from which a test sample was taken or any similar or identical product unless specifically and expressly noted. Our report includes all of the tests requested by you and the results thereof based upon the information that you provided to us. You have 60 days from date of issuance of this report to notify us of any material error or omission caused by our negligence, provided, however, that such notice shall be in writing and shall specifically address the issue you wish to raise. A failure to raise such issue within the prescribed time shall constitute your unqualified acceptance of the completeness of this report, the tests conducted and the correctness of the report contents. Unless specifically mentioned, the uncertainty of measurement has been explicitly taken into account to declare the compliance or non-compliance to the specification.

**RELEASE CONTROL RECORD**

REPORT NO.	REASON FOR CHANGE	DATE ISSUED

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**GENERAL INFORMATION**

<b>APPLICANT:</b>	
<b>MANUFACTURER:</b>	Kunshan Innowave Communication Technology Co., Ltd.
<b>MODEL NO.:</b>	B02N

Test Standard:

## 1. Test Equipment List

TYPE OF EQUIPMENT	MODEL NUMBER	SERIAL NUMBER	CALIBRATION DUE DATE
Network Analyzer	E5071C	WY46632208	2023.09.01
OTA	GTS-1800	N/A	2023.09.10

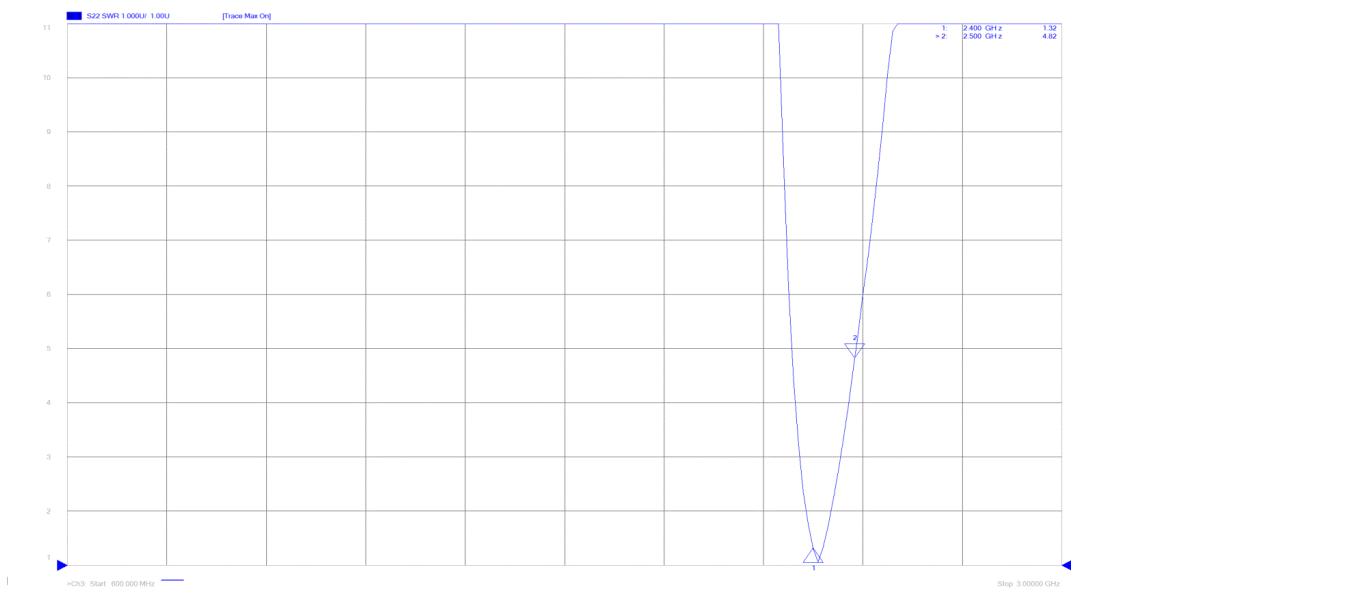
## 2. Measurement Uncertainty

Expanded Uncertainty for Measurement (k=2 or 95% Confidence Level) at Passive antenna test over frequency range 690 – 2200MHz is +/- 1.52 dB.

### 3. Characteristics of antenna

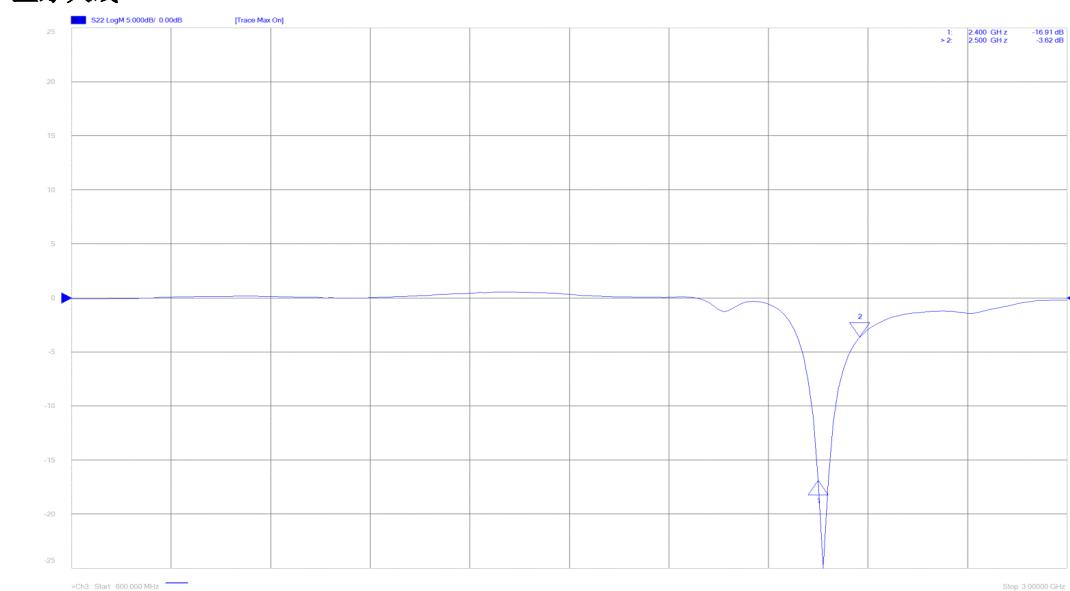
#### 3.1. VSWR

蓝牙天线:



### 3.2. S11

蓝牙天线:

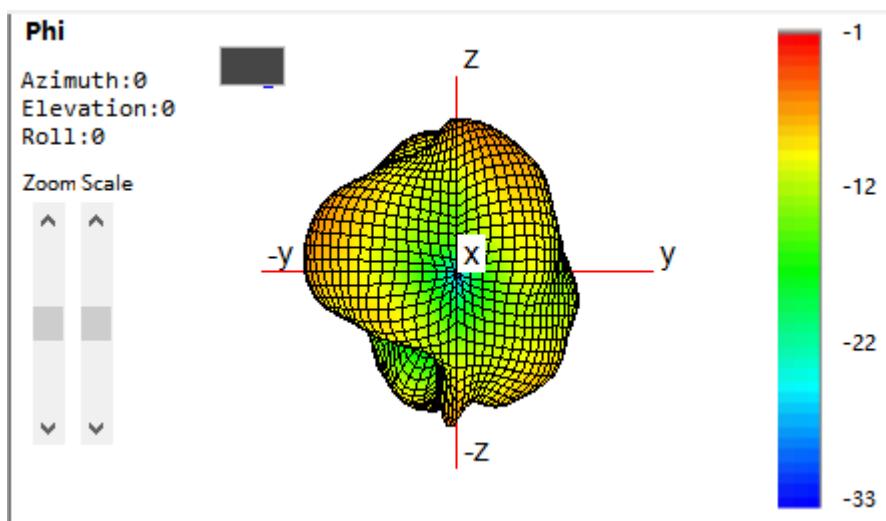
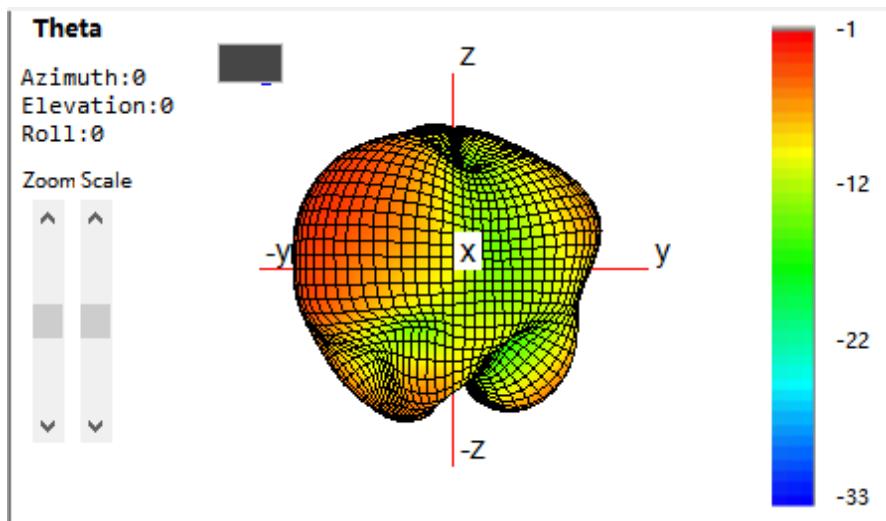


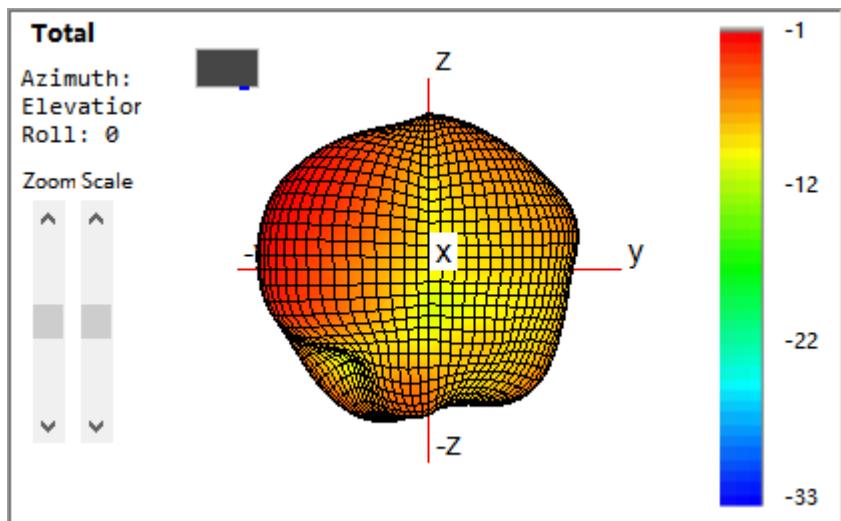
### 3.3. 3D Antenna Gain-Free Space

Freq(MHz)	Effi(dB)	Gain(dBi)
2400	-5.31	-1.07
2410	-5.19	-0.84
2420	-5.42	-0.99
2430	-5.84	-1.4
2440	-6.03	-1.6
2450	-6	-1.46
2460	-6.43	-1.82
2470	-6.81	-2.1
2480	-6.66	-1.9
2490	-6.87	-2.05
2500	-7.16	-2.19

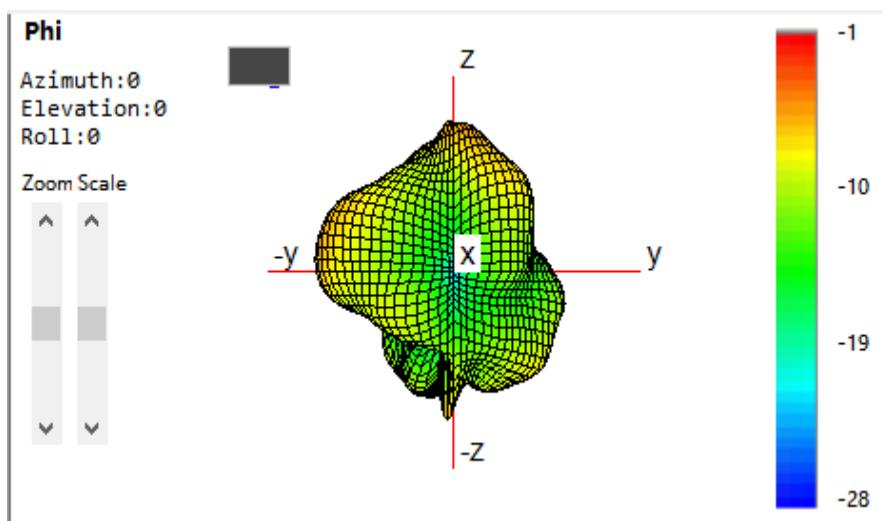
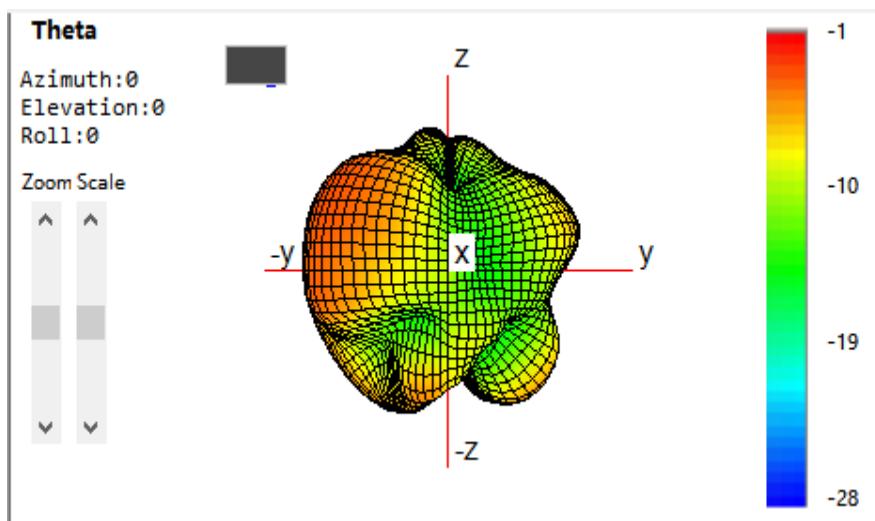
### 3.4. Antenna Pattern

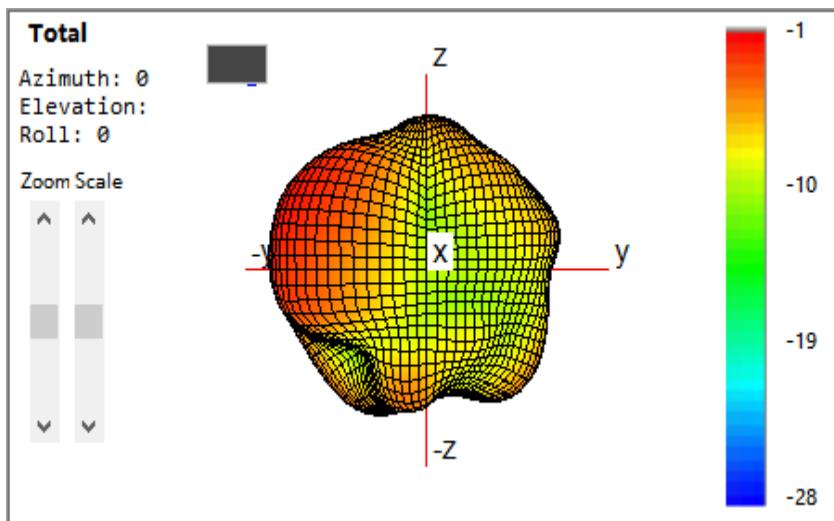
2400MHz



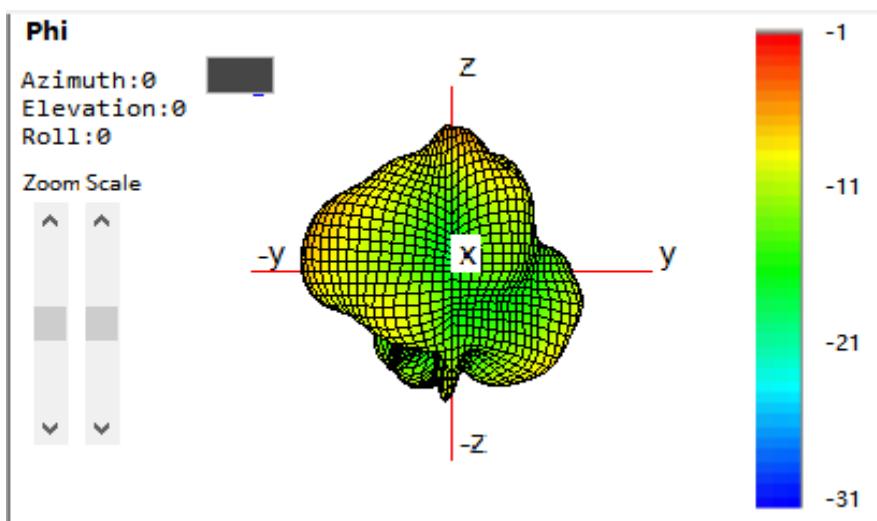
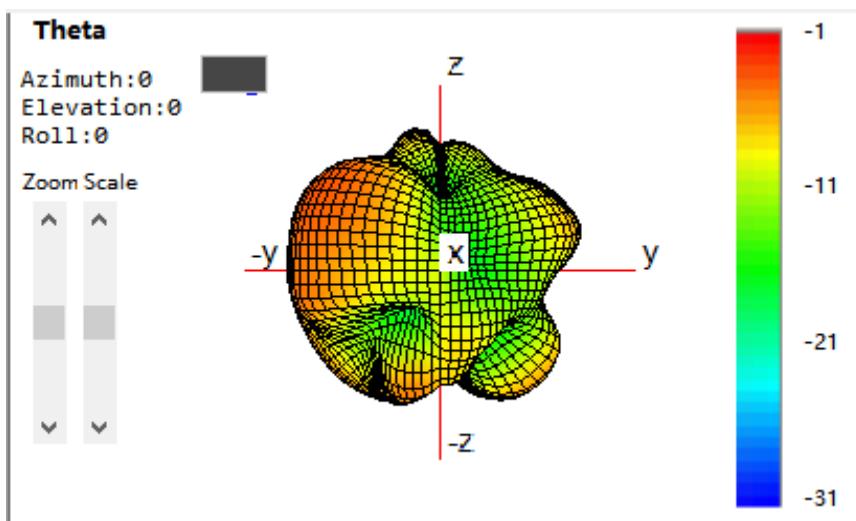


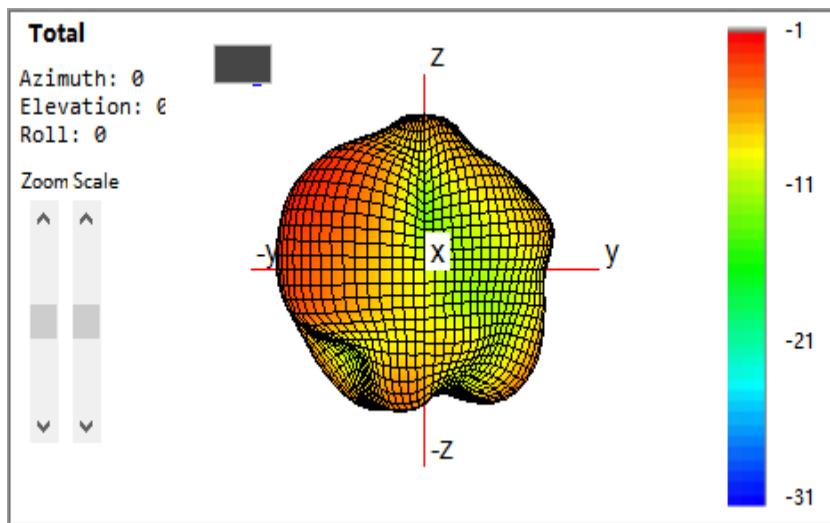
2440MHz





2480MHz





Antenna type: PCB

Size: 17.075\*2mm

