

# **Antenna Data Sheet**

**Kunshan Innowave Communication Technology Co.Ltd**

## **Catalogue**

- 1. Antenna manufacturer Capability Status**
- 2. Antenna model number and Location**
- 3. Antenna Passive Efficiency**
- 4. Simple Antenna Pattern Plot**
- 5. Antenna return loss**
- 6. Test software name**
- 7. Calibration date and Due date of the testing instrument**
- 8. Signature of testing engineer**

## **1. Antenna manufacturer Capability Status**

Antenna manufacturer:

Kunshan Innowave Communication Technology Co.Ltd

Antenna manufacturer address:

Hongxintai Industrial Park, No. 28, Yinying Road, Gaoying Village,  
Dalang Town, Dongguan.

Antenna manufacturer website:

<http://www.innowave.cn/>

a. Main software and hardware facilities for antenna R&D

Equipment introduction

Shanghai: Satimo:2 GTS1800:3 NFC Micropross:1

SAR DASY 5:1

b. Full category testing capability

Support system

GSM/WCDMA/EVDO/TDSCDMA/TDD/FDD/5G-SA/5G-NSA/eMT

## C/NB-iot/GPS/WiFi/BT/CA/ENDC

Common equipment

SP9500

Anritsu MT8820C

5071C

CMW500

### 2. Antenna model number and Location

- a. Antenna model number: RX-U209 (embed, PIFA)
- b. Antenna location

### 3. Antenna Passive Efficiency

- a. ANT1 Antenna

Main	Band	Average Gain	Maximum Gain
WCDMA	Band 1	-4.8dBi	-1.2dBi
	Band 2	-5.8dBi	-1.5dBi
	Band 4	-6.5dBi	-2.3dBi
	Band 5	-6.7dBi	-1.3dBi
	Band 8	-8.4dBi	-3.5dBi
LTE	Band 1	-4.8dBi	-1.2dBi
	Band 2	-5.8dBi	-1.5dBi
	Band 3	-6.5dBi	-2.3dBi
	Band 4	-6.5dBi	-2.3dBi

	Band 5	-6.7dBi	-1.3dBi
	Band 8	-8.4dBi	-3.5dBi
	Band 12	-5.6dBi	-1.9dBi
	Band 13	-5.8dBi	-1.2dBi
	Band 14	-5.8dBi	-1.2dBi
	Band 20	-6.8dBi	-1.3dBi
	Band 25	-5.8dBi	-1.5dBi
	Band 26	-6.7dBi	-1.3dBi
	Band 28	-5.6dBi	-1.9dBi
	Band 66	-6.5dBi	-2.3dBi
	Band 71	-5.6dBi	-2.4dBi
	5G NR	n2	-5.8dBi
n5		-6.7dBi	-1.3dBi
n14		-5.8dBi	-1.2dBi
n25		-5.8dBi	-1.5dBi
n28		-5.6dBi	-1.9dBi
n66		-6.5dBi	-2.3dBi
n71		-5.6dBi	-2.4dBi

b. ANT2 Antenna

	Band	Average Gain	Maximum Gain
LTE	Band 7	-3.8dBi	0.8dBi
	Band 38	-3.8dBi	0.8dBi
	Band 41	-3.8dBi	0.8dBi
	Band 42	-6.1dBi	0.7dBi
	Band 43	-6.1dBi	0.7dBi
	Band 48	-6.1dBi	0.7dBi
5G NR	n7	-3.8dBi	0.8dBi

	n38	-3.8dBi	0.8dBi
	n41	-3.8dBi	0.8dBi
	n48	-6.1dBi	0.7dBi
	N77	-6.1dBi	0.7dBi
	N78	-6.1dBi	0.7dBi

c. ANT3 (GPS/WiFi/BT) Antenna

GPS/WIFI/BT	Band	Average Gain	Maximum Gain
GPS	L1 1575.5	-5.7dBi	-1.8dBi
WIFI	2.4Ghz-2.5Ghz	-5.5dBi	-0.8dBi
	5.15Ghz-5.25Ghz	-6.9dBi	-0.9dBi
	5.25Ghz-5.35Ghz	-7.2dBi	-2.1dBi
	5.47Ghz-5.725Ghz z	-6.6dBi	-0.4dBi
	5.725Ghz-5.85Ghz z	-6.6dBi	0.1dBi
BT	2.4Ghz-2.5Ghz	-5.5dBi	-0.8dBi

d. ANT4 Antenna

Main	Band	Average Gain	Maximum Gain
WCDMA	Band 1	-5.0dBi	-0.6dBi
	Band 2	-5.6dBi	-0.6dBi
	Band 4	-5.5dBi	-1.5dBi
	Band 5	-11.5dBi	-6.8dBi
	Band 8	-13.8dBi	-7.5dBi
LTE	Band 1	-5.0dBi	-0.6dBi
	Band 2	-5.6dBi	-0.6dBi
	Band 3	-5.5dBi	-1.5dBi

	Band 4	-5.5dBi	-1.5dBi
	Band 5	-11.5dBi	-6.8dBi
	Band 7	-8.9dBi	-1.4dBi
	Band 8	-13.8dBi	-7.5dBi
	Band 12	-16.0dBi	-12.8dBi
	Band 13	-16.1dBi	-12.7dBi
	Band 14	-16.1dBi	-12.7dBi
	Band 20	-15.5dBi	-11.8dBi
	Band 25	-5.6dBi	-0.6dBi
	Band 26	-11.5dBi	-6.8dBi
	Band 28	-16.0dBi	-12.8dBi
	Band 41	-8.9dBi	-1.4dBi
	Band 66	-5.5dBi	-1.5dBi
	Band 71	-13.2dBi	-6.5dBi
	5G NR	n2	-5.6dBi
n5		-11.5dBi	-6.8dBi
n7		-8.9dBi	-1.4dBi
n14		-16.1dBi	-12.7dBi
n25		-5.6dBi	-0.6dBi
n28		-16.0dBi	-12.8dBi
n38		-8.9dBi	-1.4dBi
n41		-8.9dBi	-1.4dBi
n66		-5.5dBi	-1.5dBi
n71		-13.2dBi	-6.5dBi

e. ANT5 Antenna

	Band	Average Gain	Maximum Gain
LTE	Band 7	-6.2dBi	0.1dBi

	Band 38	-6.2dBi	0.1dBi
	Band 41	-6.2dBi	0.1dBi
	Band 42	-8.8dBi	-3.3dBi
	Band 48	-8.8dBi	-3.3dBi
5G NR	n7	-6.2dBi	0.1dBi
	n38	-6.2dBi	0.1dBi
	n41	-6.2dBi	0.1dBi
	n48	-8.8dBi	-3.3dBi
	n77	-8.8dBi	-3.3dBi
	n78	-8.8dBi	-3.3dBi

f. ANT6 Antenna

	Band	Average Gain	Maximum Gain
LTE	Band 42	-6.2dBi	0.1dBi
	Band 43	-6.2dBi	0.1dBi
	Band 48	-6.2dBi	0.1dBi
5G NR	n48	-6.2dBi	0.1dBi
	n77	-6.2dBi	0.1dBi
	n78	-6.2dBi	0.1dBi

g. ANT7 Antenna

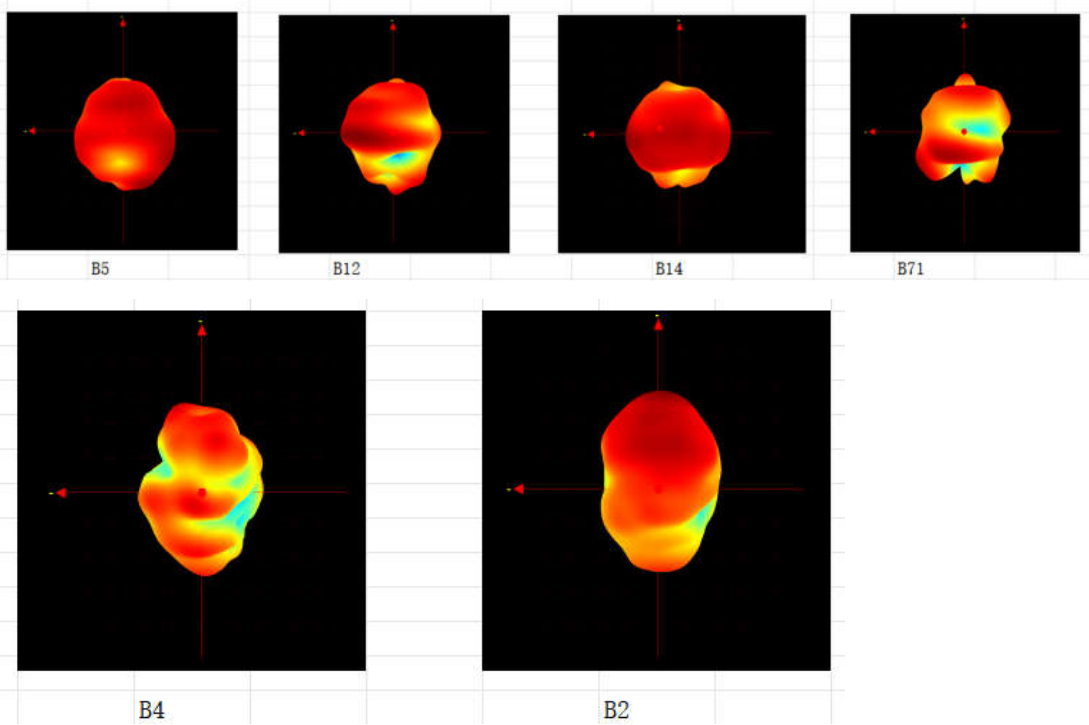
	Band	Average Gain	Maximum Gain
LTE	Band 7	-6.8dBi	-1.6dBi
	Band 38	-6.8dBi	-1.6dBi
	Band 41	-6.8dBi	-1.6dBi
	Band 42	-7.2dBi	-1.6dBi
	Band 48	-7.2dBi	-1.6dBi
	5G NR	n7	-6.8dBi

	n38	-6.8dBi	-1.6dBi
	n41	-6.8dBi	-1.6dBi
	n48	-7.2dBi	-1.6dBi
	n77	-7.2dBi	-1.6dBi
	n78	-7.2dBi	-1.6dBi

**h. ANT8 Antenna**

GPS	Band	Average Gain	Maximum Gain
GPS	L5 1176	-5.9dBi	-0.9dBi

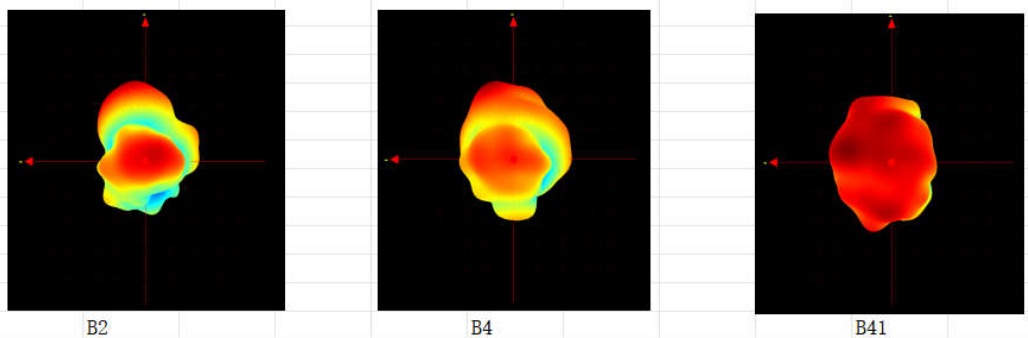
**4. Simple Antenna Pattern Plot**



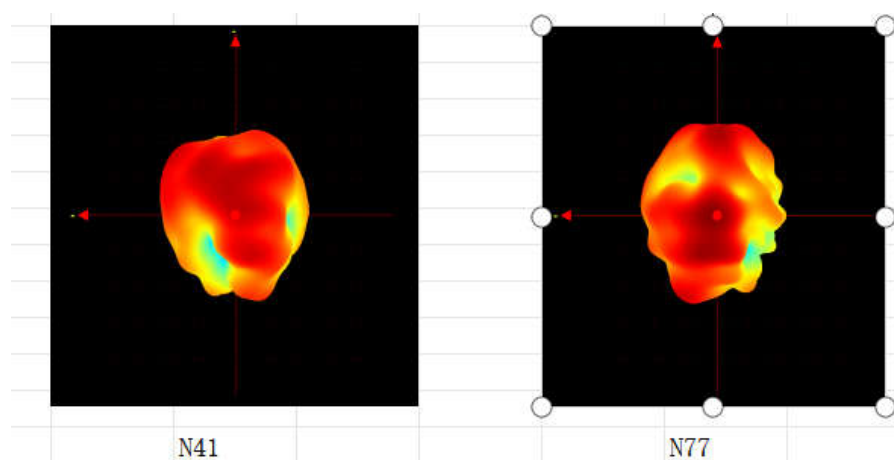
**b. ANT2 Antenna**



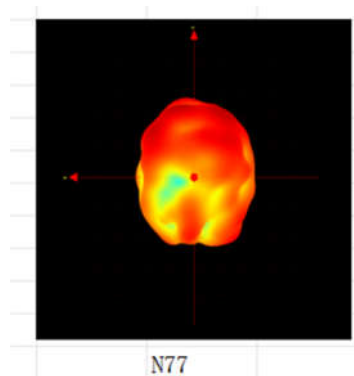




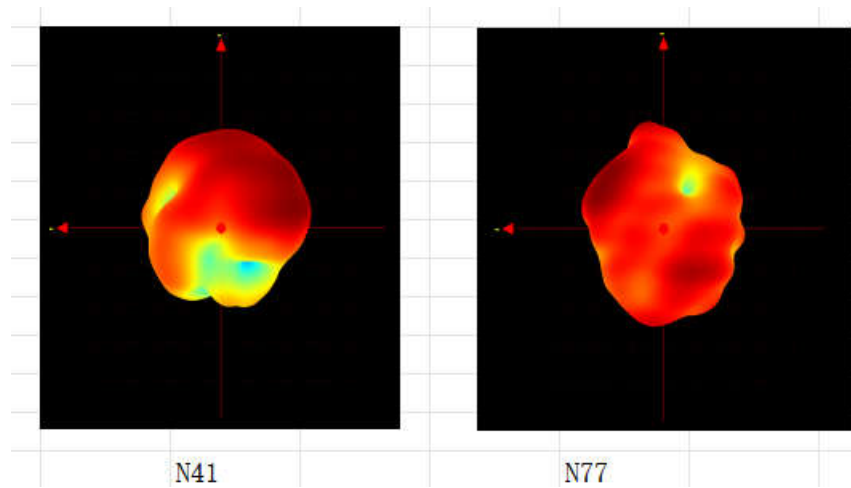
e. ANT5 Antenna



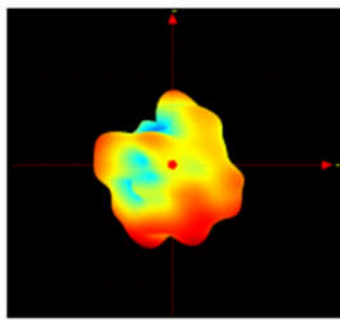
f. ANT6 Antenna



g. ANT7 Antenna



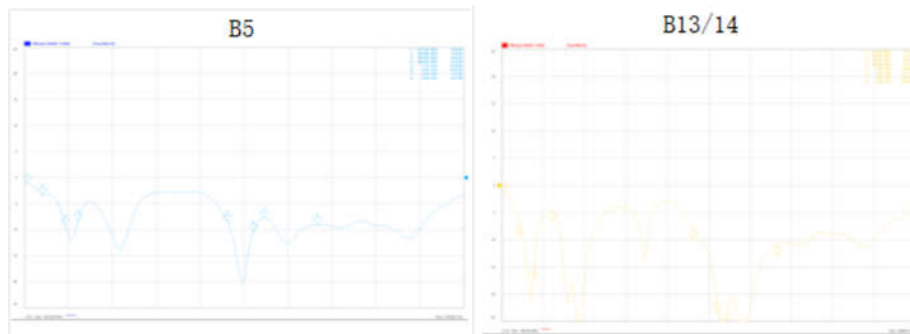
### h. ANT8 Antenna

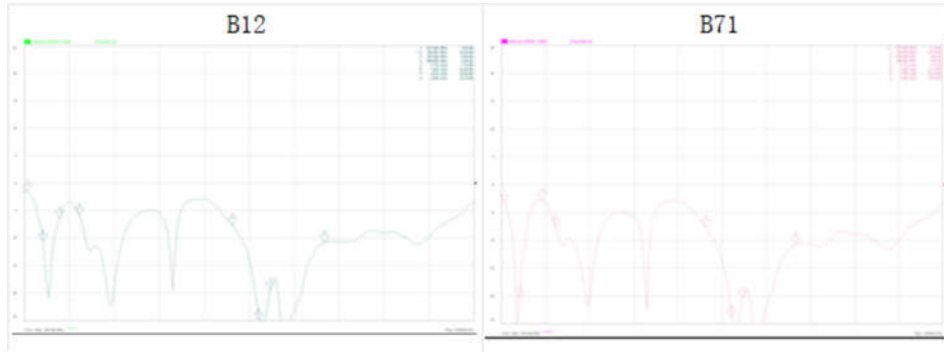


L5

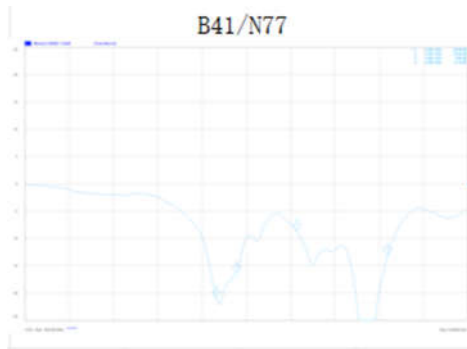
## 5. Antenna return loss

### a.ANT1 Antenna

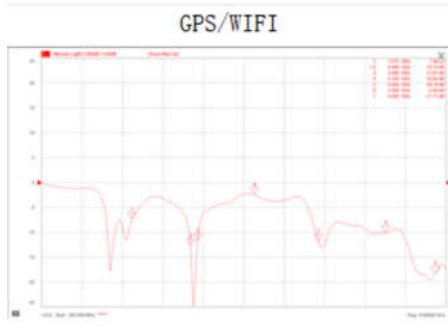




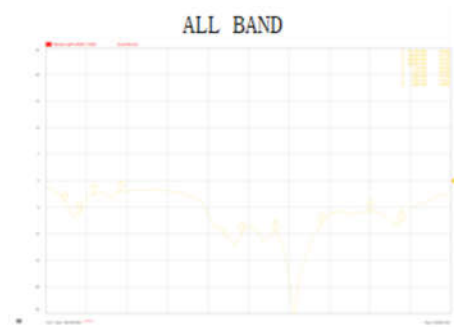
### b.ANT2 Antenna



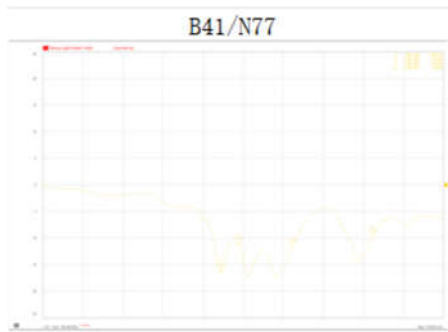
### c.ANT3 Antenna



### d.ANT4 Antenna



### e.ANT5 Antenna



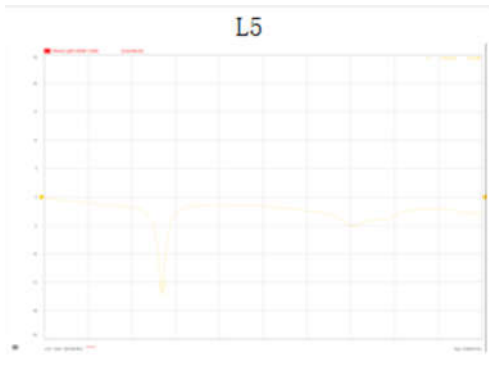
### f.ANT6 Antenna



### g.ANT7 Antenna



### h.ANT8 Antenna



**6. Test software name**

**Test software name is Libra.**

**7. Calibration date and Due date of the testing instrument**

**The inspection date is July 9,2024,and the expiration date is July 9,2025.**

**8.Signature of testing engineer**

