

Antenna

YKL001AA Datasheet

Antenna Services

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Status: Released



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About the Document

Revision History

Version	Date	Author	Note
1.0	2020-06-02	Kenny YIN	Initial
1.1	2020-12-16	Kenny YIN	Updated the gain data

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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

- Cellular LTE/BT/GNSS
- High efficiency
- Excellent performance



3 Product Specifications

Passive Electrical Specifications

Frequency Range	BT: 2400–2500 MHz 4G: 824–960 MHz; 1710–2690 MHz GPS & BD: 1575.42 ±10 MHz; 1561 ±10 MHz
Input Impedence	50 Ω
VSWR	≤ 3.0
Gain	4G: ≤ 2.23 dBi BT: ≤ 2.65 dBi GNSS: 25 ±3 dBi
Polarization Type	Linear (4G MAIN/BT); Circular (GNSS)

Mechanical Specifications

Antenna Size	33 mm × 48 mm
Casing	PC + ABS
Radiator	Cuprum
Connector Type	SMA Male
Working Temperature	-20 °C to +80 °C
Radome Color	Black
Line Length	Optional
Waterproof Grade	IP66

4 Overall Performance

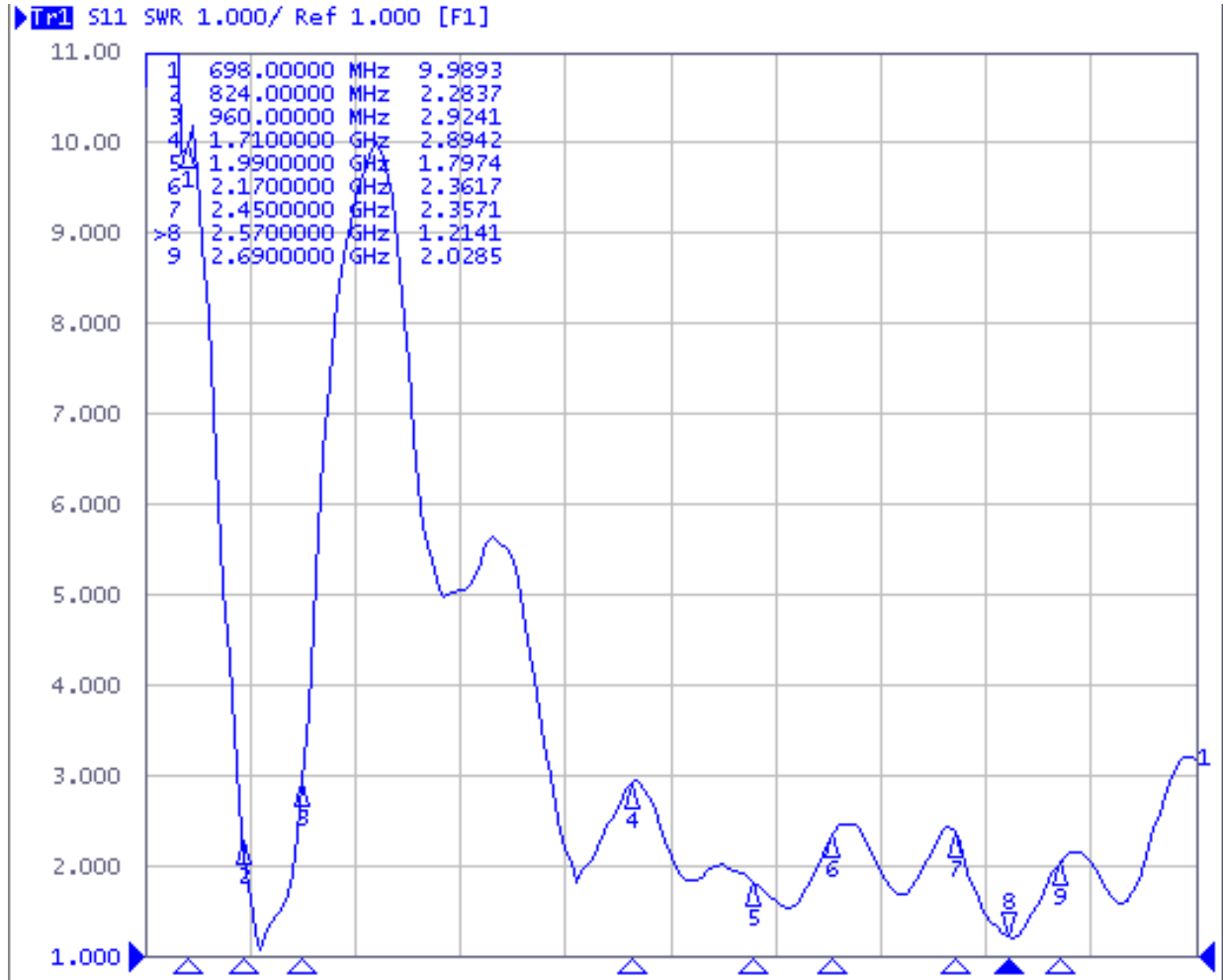
4.1. Test Environment

- 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

4G



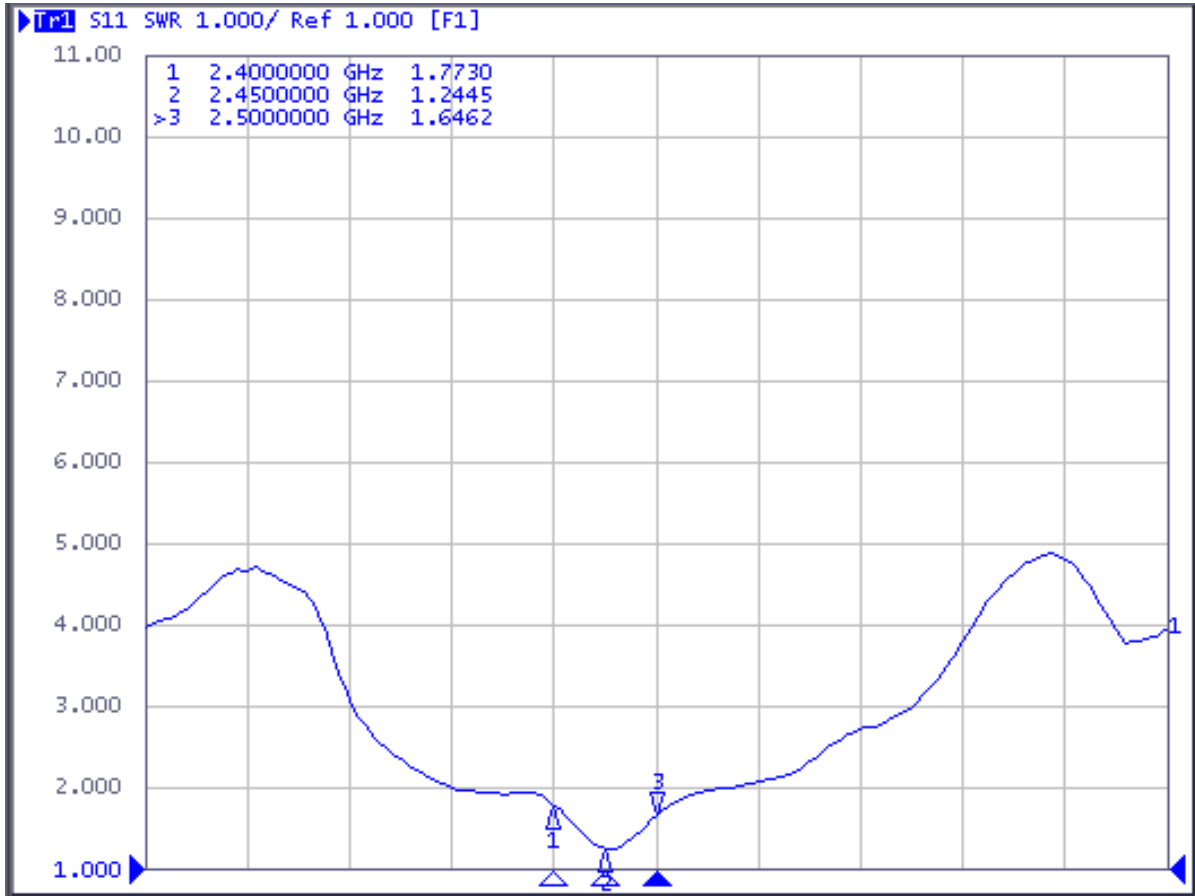
Frequency (MHz)	824	960	1710	1990	2170	2450	2570	2690
VSWR	2.28	2.92	2.89	1.79	2.36	2.35	1.21	2.03

GPS & BD



Frequency (MHz)	1561	1575
VSWR	1.68	1.23

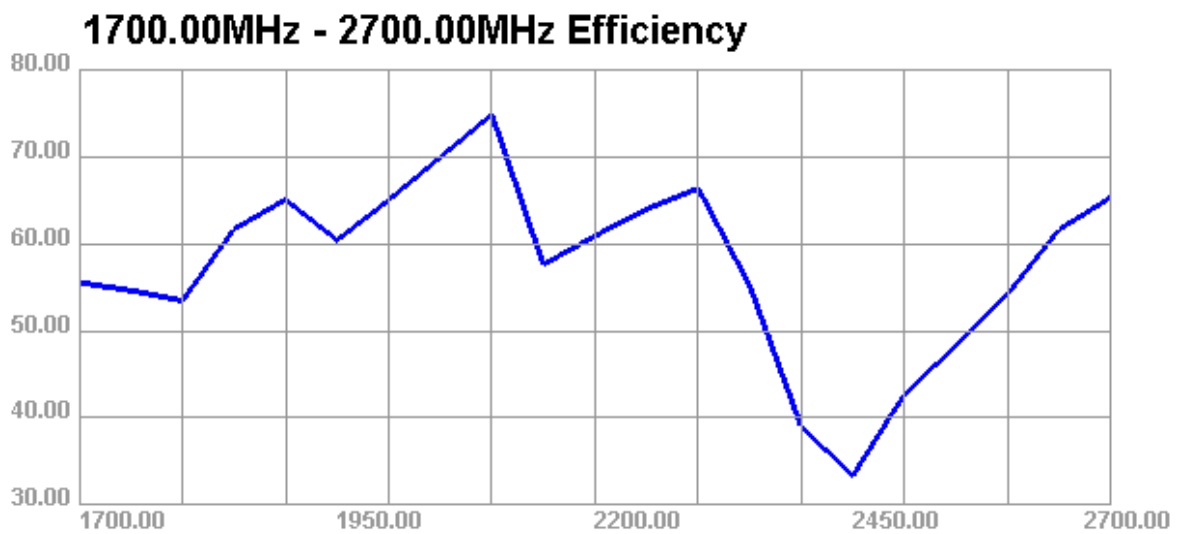
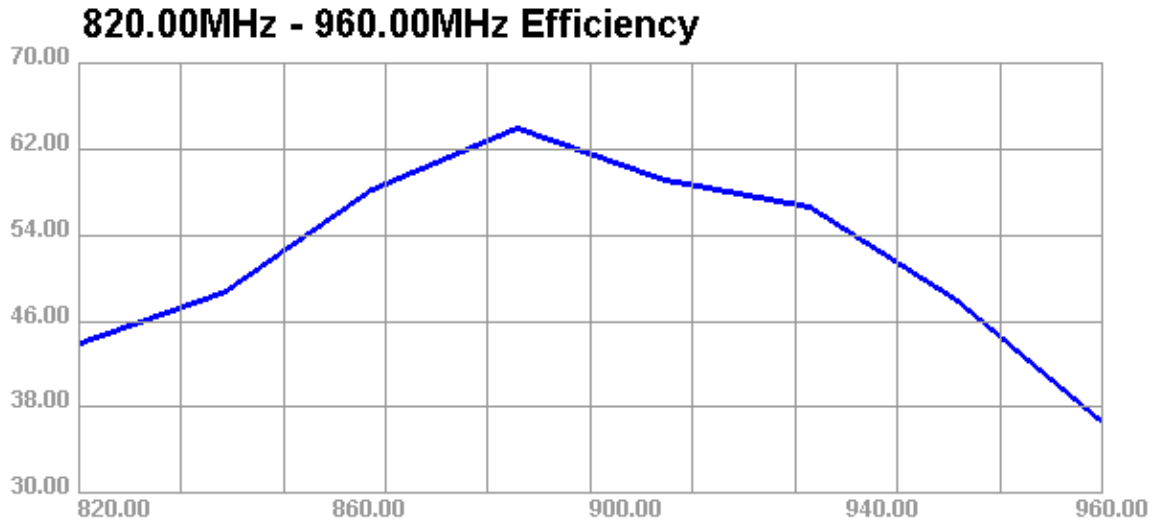
BT



Frequency (MHz)	2400	2450	2500
VSWR	1.77	1.24	1.65

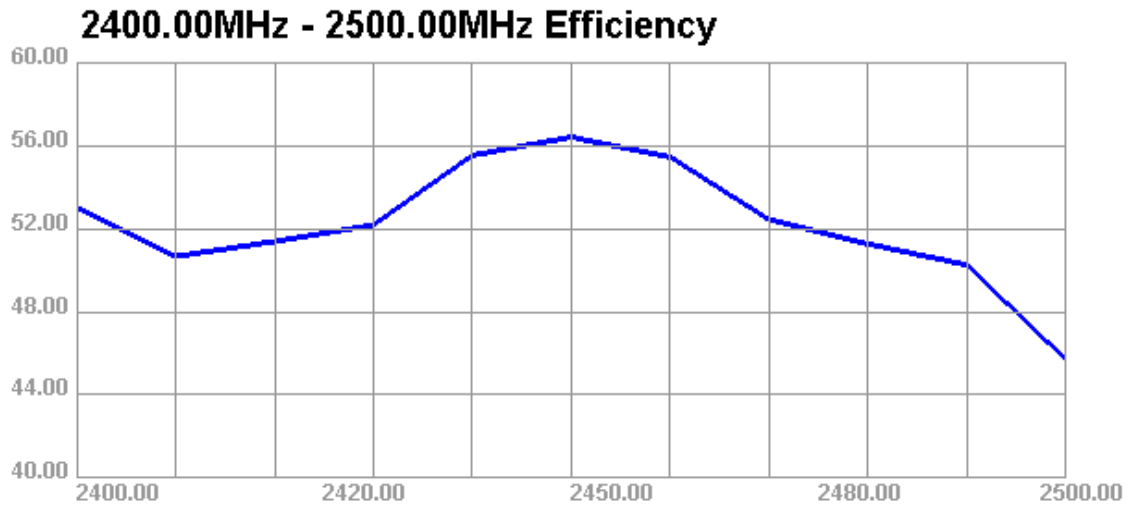
4.3. Efficiency

4G



Frequency (MHz)	820	860	900	940	960	1700	1950	2200	2450	2700
Efficiency (%)	43.89	58.17	59.15	47.98	36.63	55.54	60.42	60.89	33.39	65.32

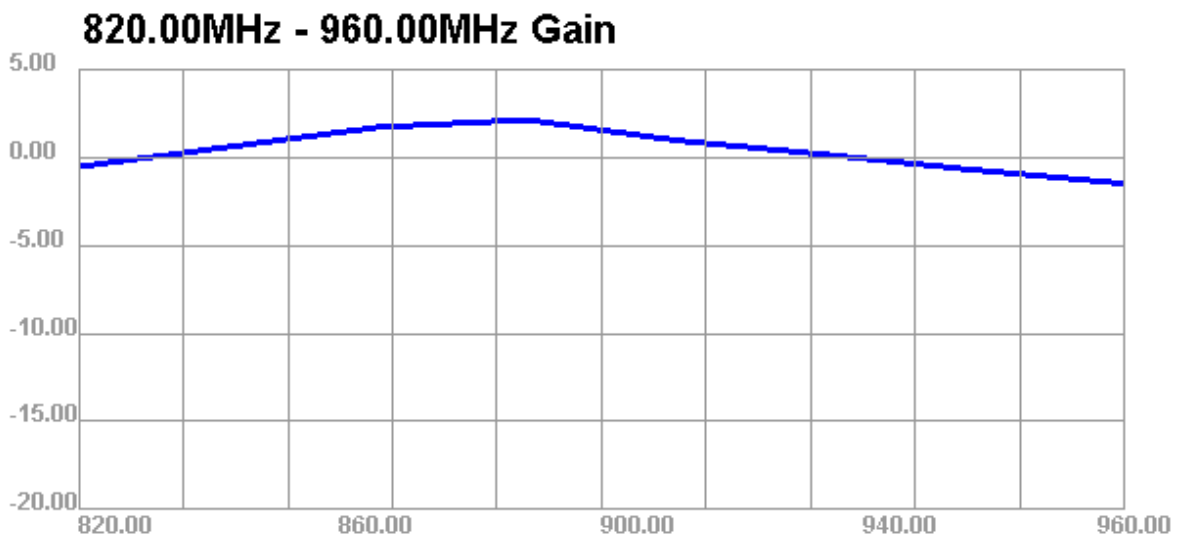
BT

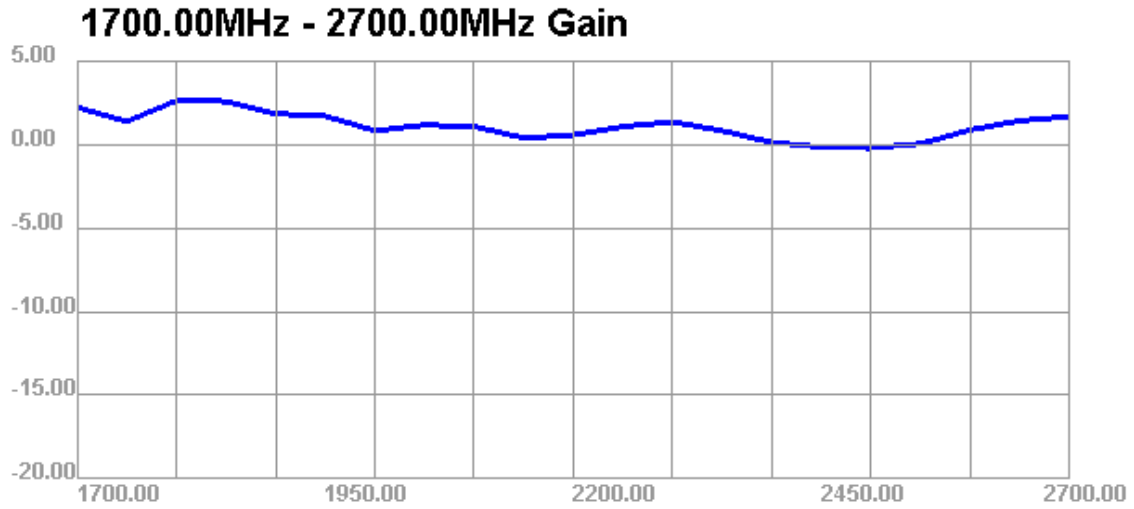


Frequency (MHz)	2400	2420	2450	2480	2500
Efficiency (%)	53.04	51.39	56.42	51.27	45.72

4.4. Gain

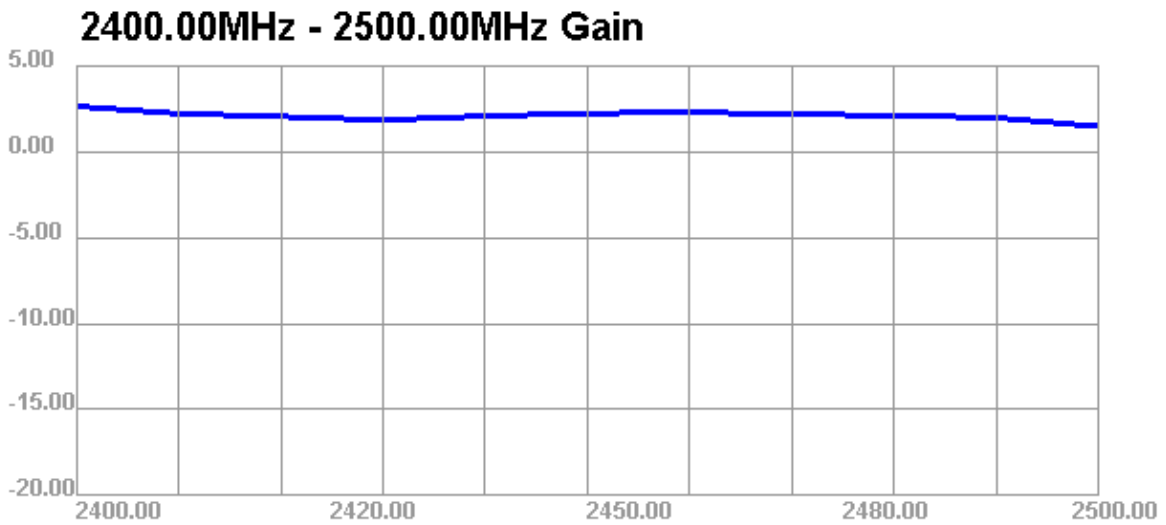
4G





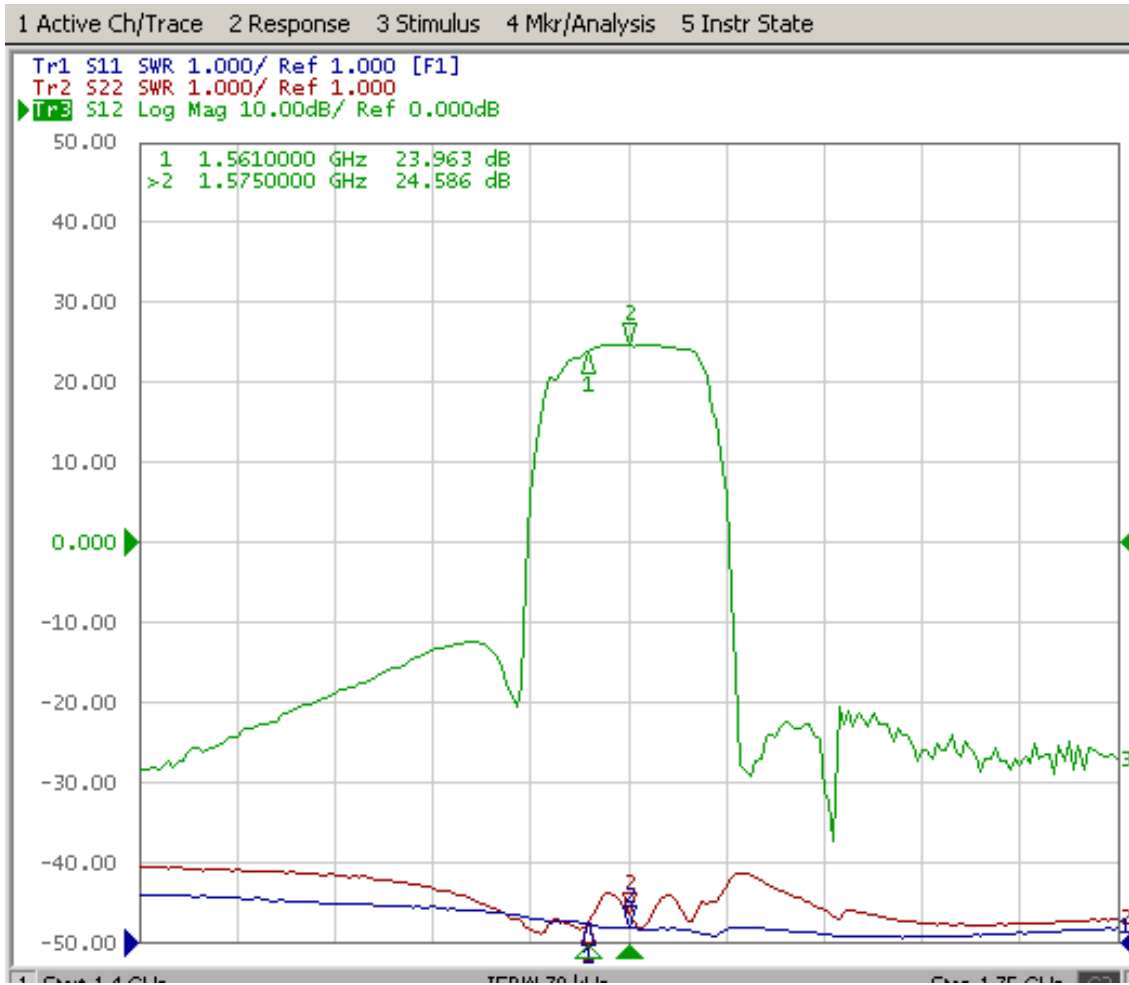
Frequency (MHz)	820	860	900	940	960	1700	1950	2200	2450	2700
Gain	-0.53	1.71	0.97	-0.72	-1.49	2.23	1.7	0.56	-0.15	1.67

BT



Frequency (MHz)	2400	2420	2450	2480	2500
Gain	2.65	2.04	2.23	2.11	1.47

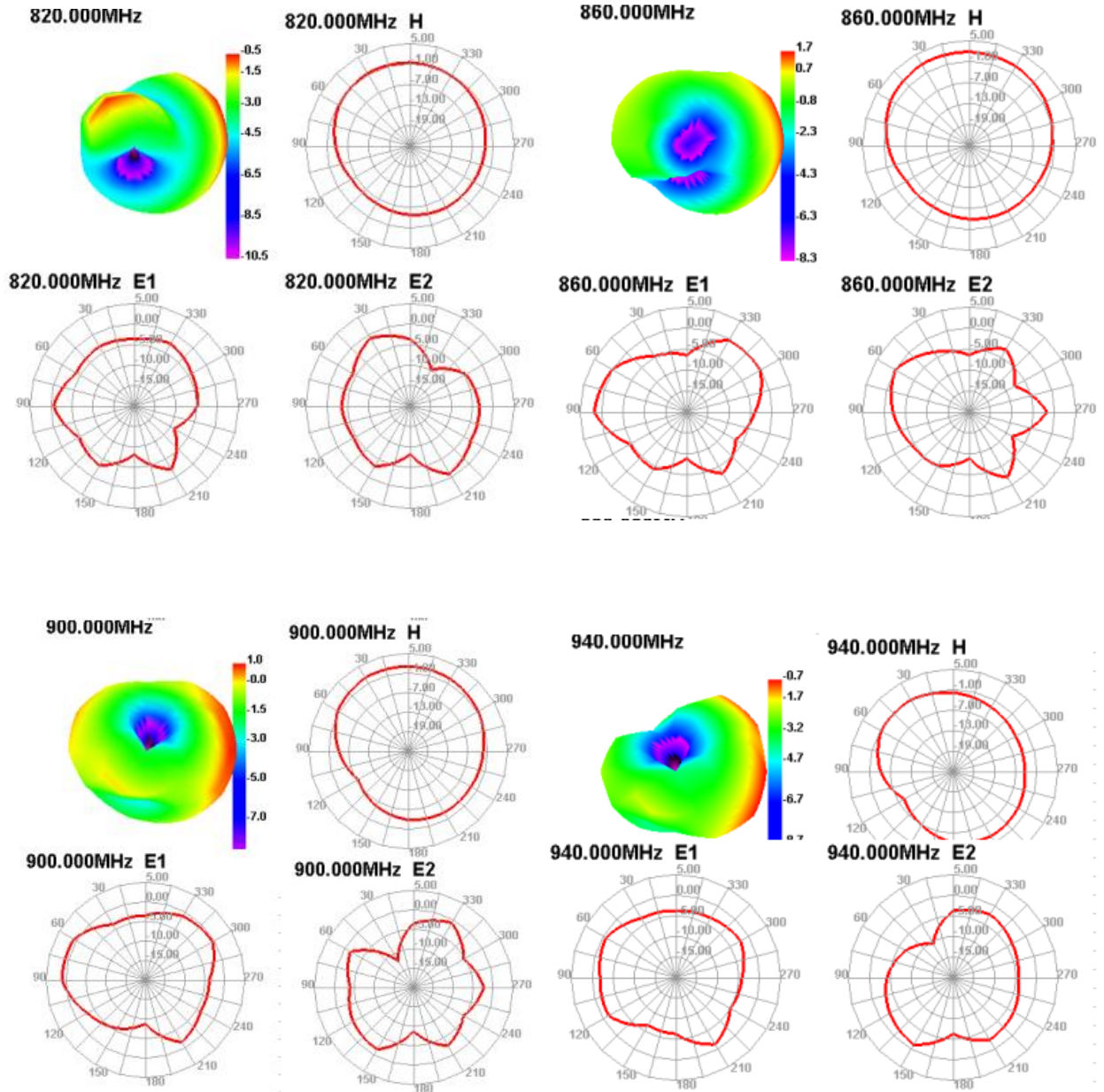
GNSS antenna



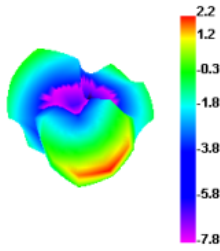
Frequency (MHz)	1561	1575
Gain	23.96	24.58

4.5. Radiation Patterns

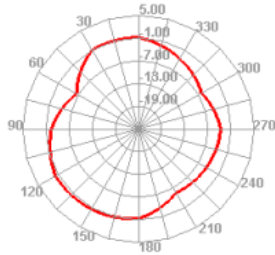
4G



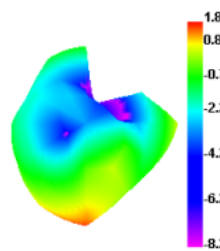
1700.000MHz



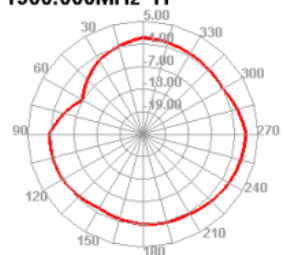
1700.000MHz H



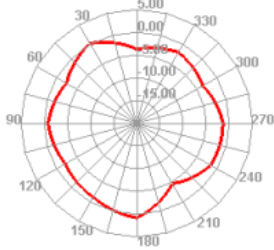
1900.000MHz



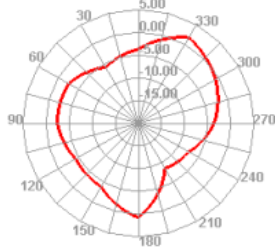
1900.000MHz H



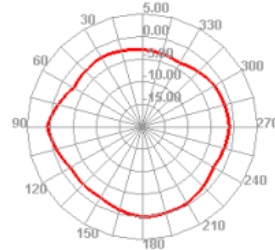
1700.000MHz E1



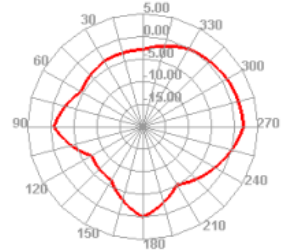
1700.000MHz E2



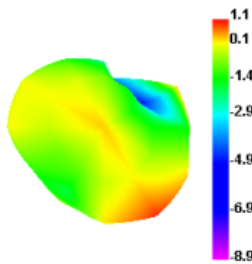
1900.000MHz E1



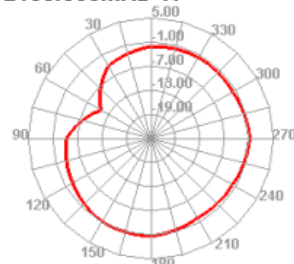
1900.000MHz E2



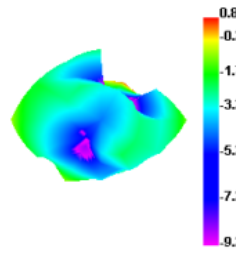
2100.000MHz



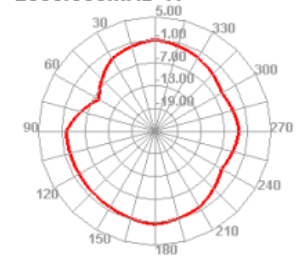
2100.000MHz H



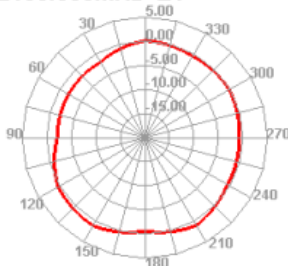
2350.000MHz



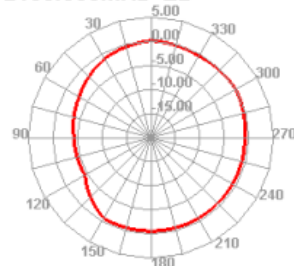
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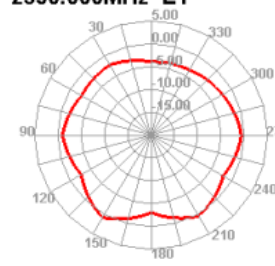
2100.000MHz E1



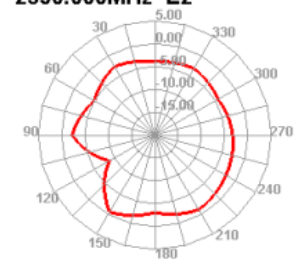
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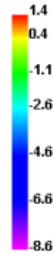
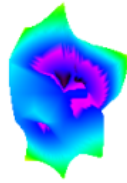
2350.000MHz E1



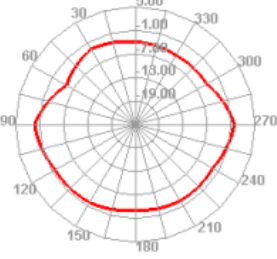
2350.000MHz E2



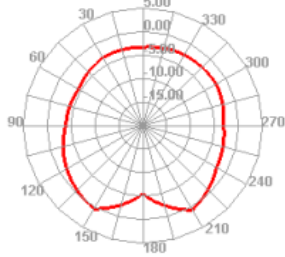
2650.000MHz



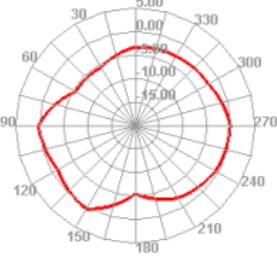
2650.000MHz H



2650.000MHz E1

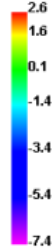
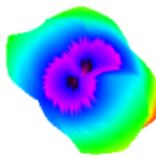


2650.000MHz E2

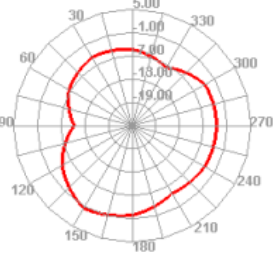


BT

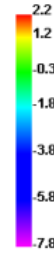
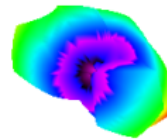
2400.000MHz



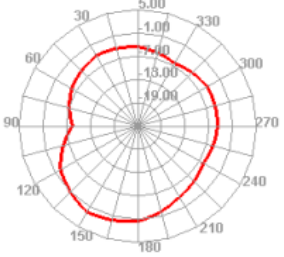
2400.000MHz H



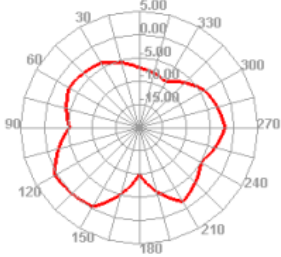
2450.000MHz



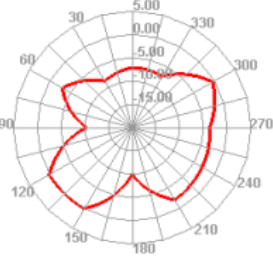
2450.000MHz H



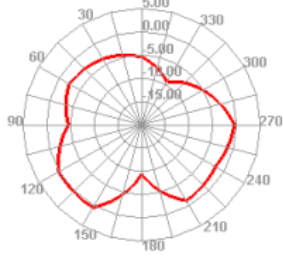
2400.000MHz E1



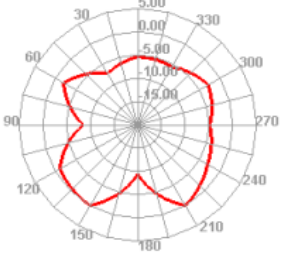
2400.000MHz E2



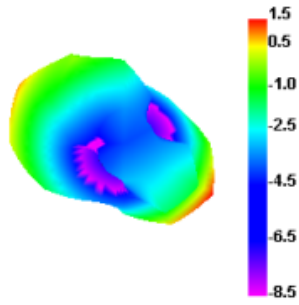
2450.000MHz E1



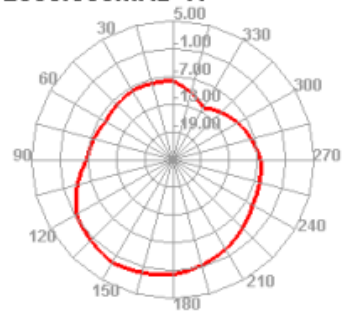
2450.000MHz E2



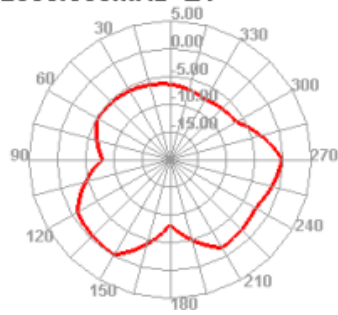
2500.000MHz



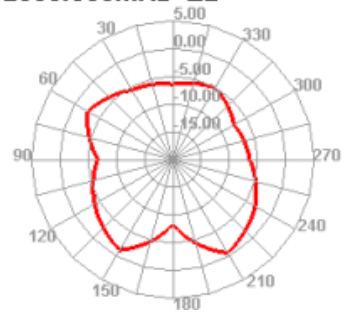
2500.000MHz H



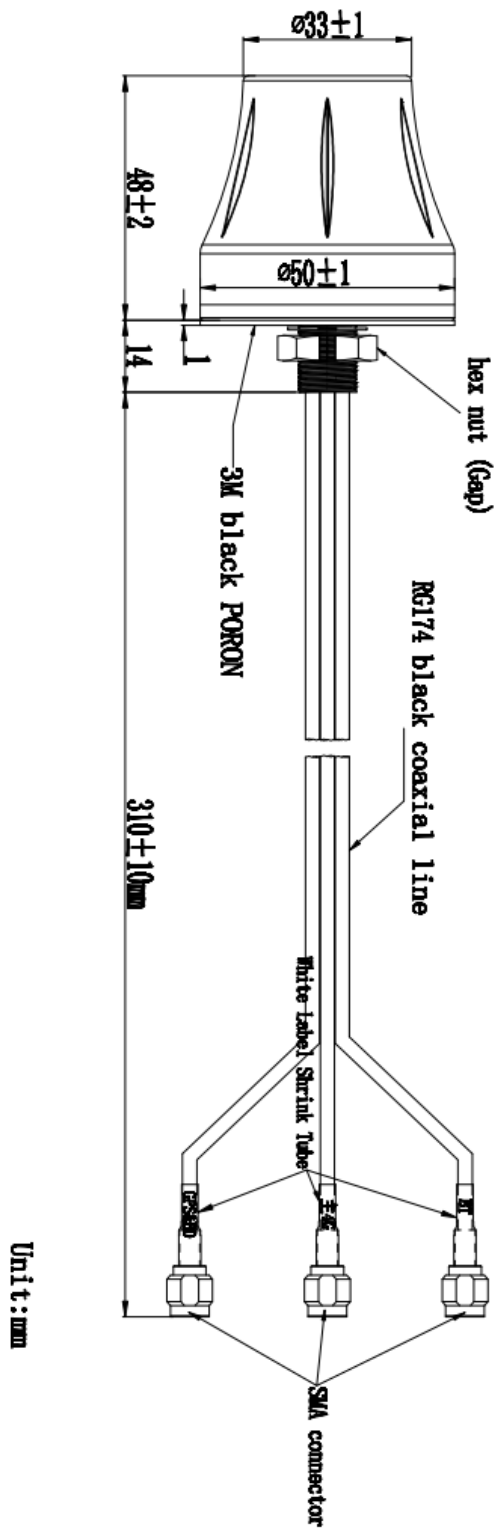
2500.000MHz E1



2500.000MHz E2



5 Product Size



RoHS

