

Antenna

YFWO001AA Datasheet

Antenna Services

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About the Document

Revision History

Version	Date	Author	Note
-	2021-12-17	Eleven RONG/ Jason LONG	Creation of the document
1.0	2021-12-17	Eleven RONG/ Jason LONG	First official release
1.1	2022-01-12	Jason LONG	Updated to IPEX MHF original terminal and add antenna weight parameter (Chapter 3).

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1 Product Description

Quectel Wi-Fi antenna covers 2.4 GHz, 5 GHz, and up to 7 GHz bands, fully satisfying customers' requirements for Wi-Fi 5, Wi-Fi 6, and Wi-Fi 6E. There are various antenna types, including built-in FPC antenna, ceramic patch antenna, and other external antennas of different shapes or sizes. The antenna performance meets the customers' demands for efficiency, gain, and radiation and ensures the superior experience of the customers' products in use.

2 Product Features

- Wi-Fi/Bluetooth
- High efficiency
- Excellent performance



3 Product Specifications

Passive Electrical Specifications

Frequency Range	2400–2500 MHz, 5150–7150 MHz
Input Impedence	50 Ω
VSWR	≤ 2.2
Gain	≤ 4.7 dBi
Polarization Type	Linear

Mechanical Specifications

Antenna Size	78.6 mm × 21.4 mm
Casing	FPC
Connector Type	IPEX I
Working Temperature	-40 °C to +85 °C
Radome Color	Black
Mounting Type	Adhesive
Antenna Weight	1.5 g

4 Overall Performance

4.1. Test Environment

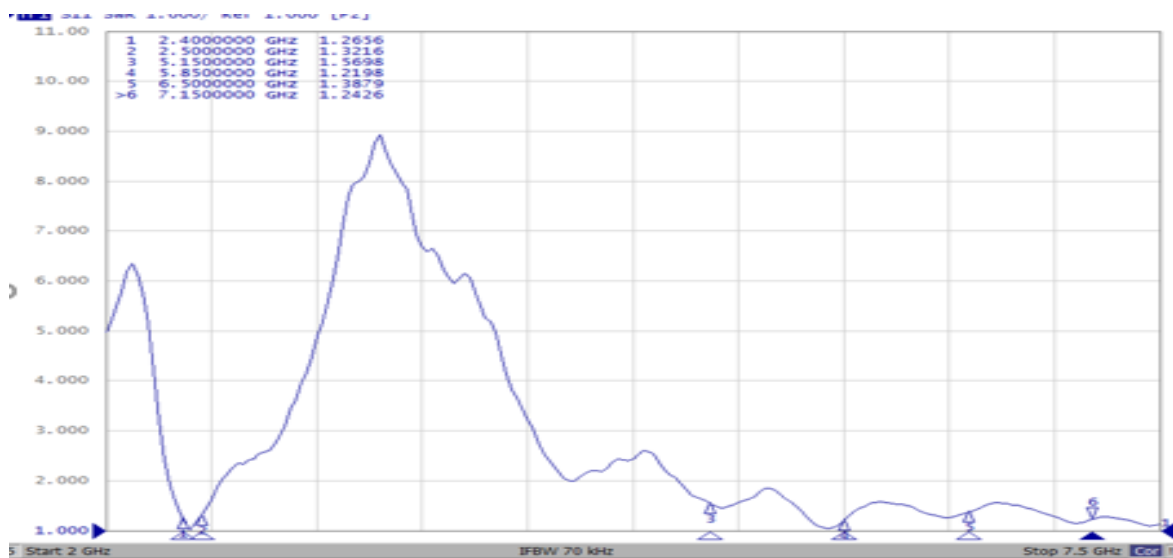
- KEYSIGHT VNA Network Analyzer E5063A 100 kHz – 8.5 GHz
- RayZone® 2800 Chamber 5G (FR1) SISO/MIMO, 600 MHz – 8.5 GHz



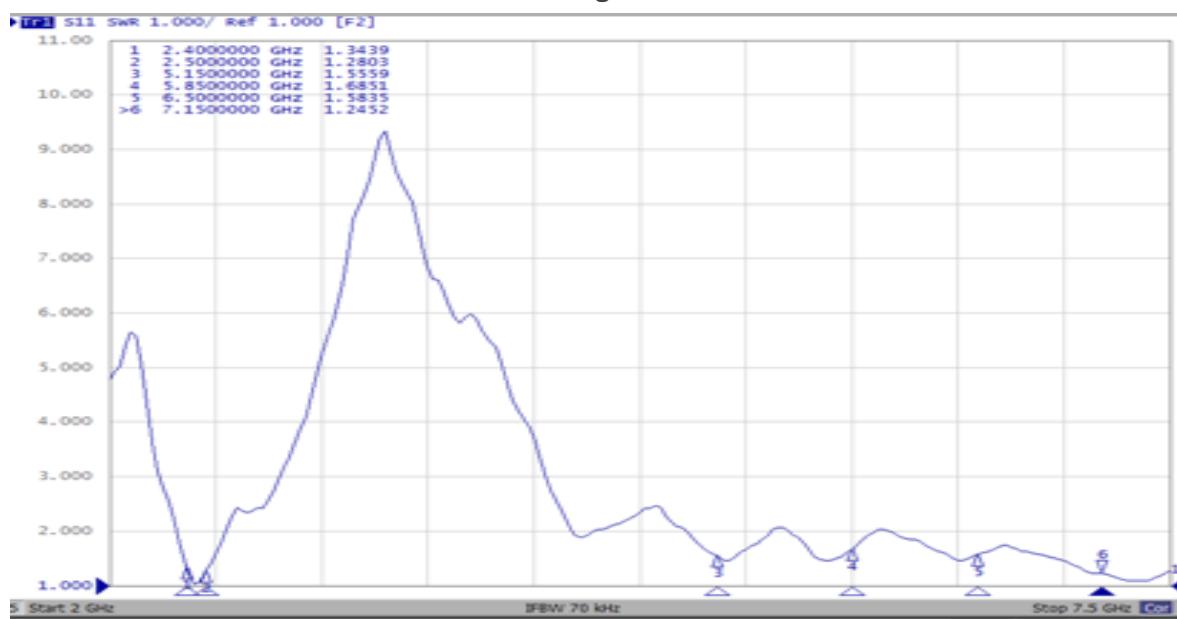
4.2. VSWR

- Test on 3 mm ABS.

Left

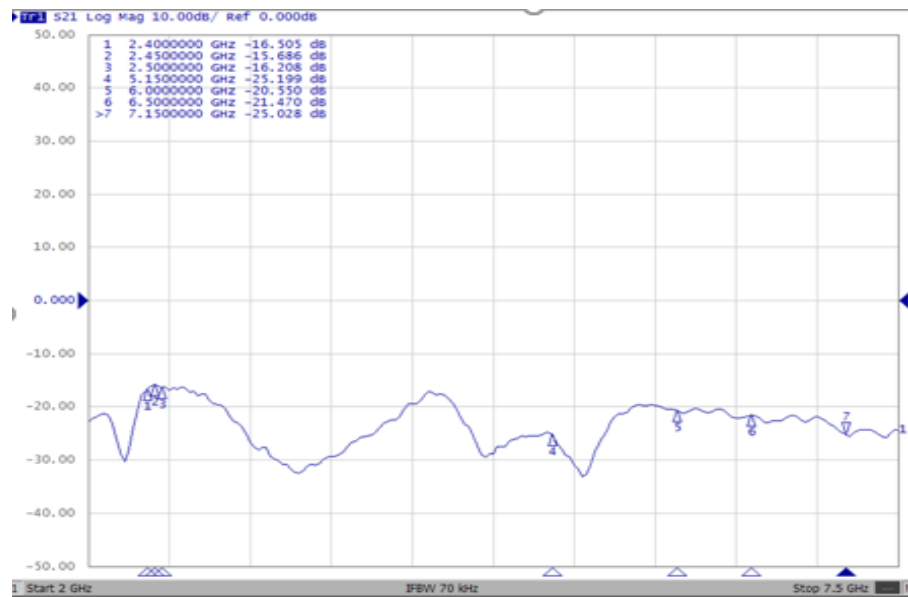


Right



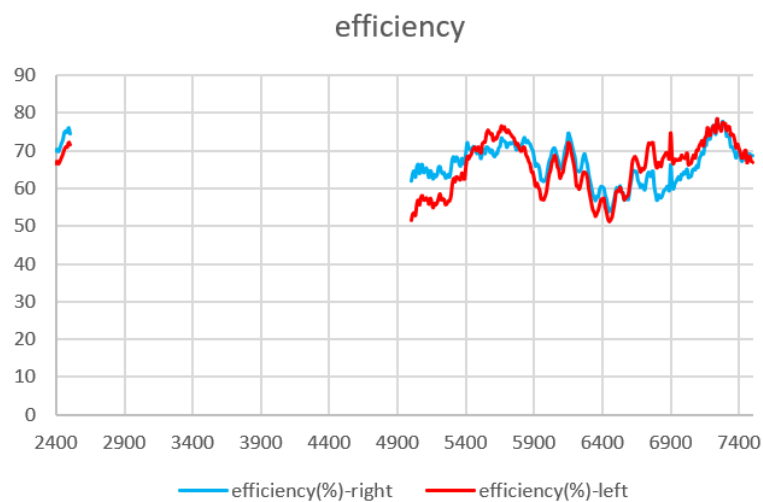
Frequency (MHz)	2400	2500	5150	6000	6500	7150
VSWR - Left	1.26	1.32	1.56	1.21	1.38	1.24
VSWR - Right	1.31	1.28	1.55	1.68	1.58	1.24

4.3. Isolation



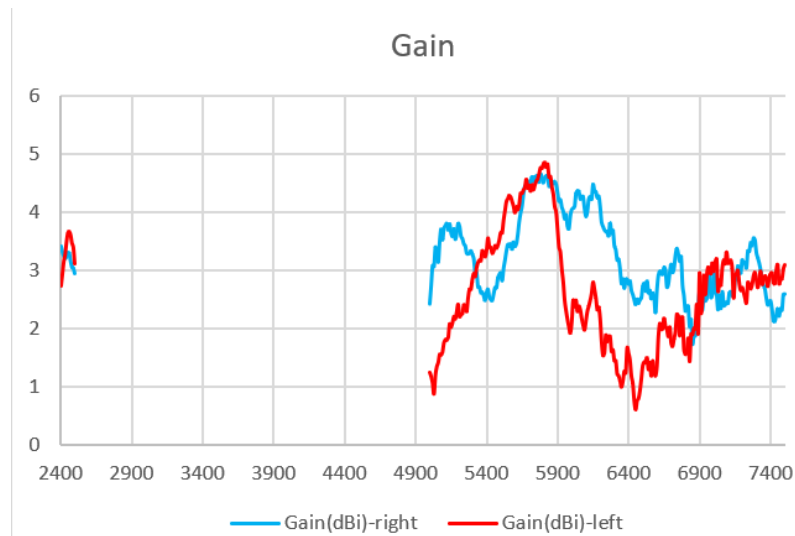
Frequency (MHz)	2400	2450	2500	5150	6000	6500	7150
Insulation (dB)	-16.5	-15.6	-16.2	-25.1	-20.5	-21.4	-25.0

4.4. Efficiency



Frequency (MHz)	2400	2450	2500	5150	6000	6500	7150
Efficiency (%) - Left	66.65	69.07	71.49	56.23	61.67	59.03	73.23
Efficiency (%) - Right	69.82	72.75	74.34	63.95	65.45	59.79	71.57

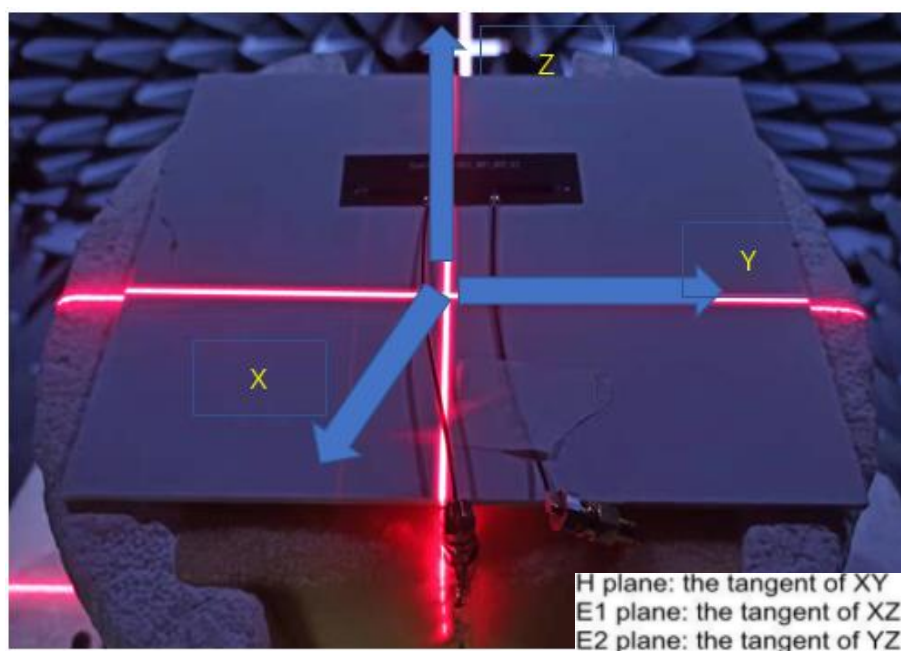
4.5. Gain



Frequency (MHz)	2400	2450	2500	5150	6000	6500	7150
Gain (dBi) - Left	2.74	3.65	3.12	2.02	2.11	1.36	2.92
Gain (dBi) - Right	3.42	3.31	2.95	3.65	4.05	2.73	2.86

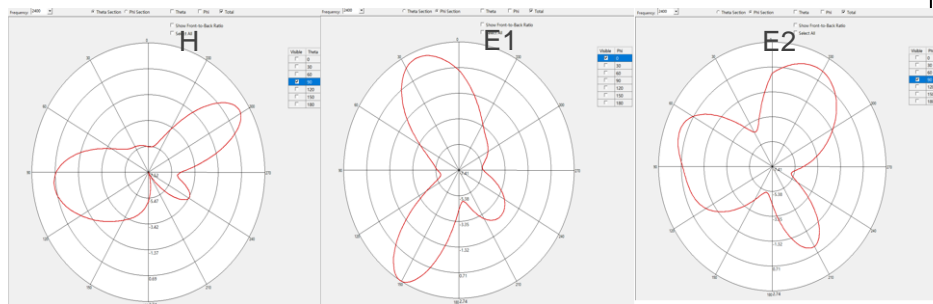
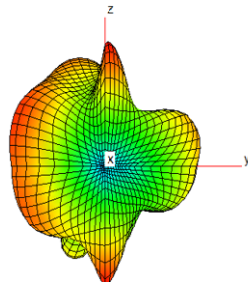
4.6. Radiation Pattern

- Test condition: free space.

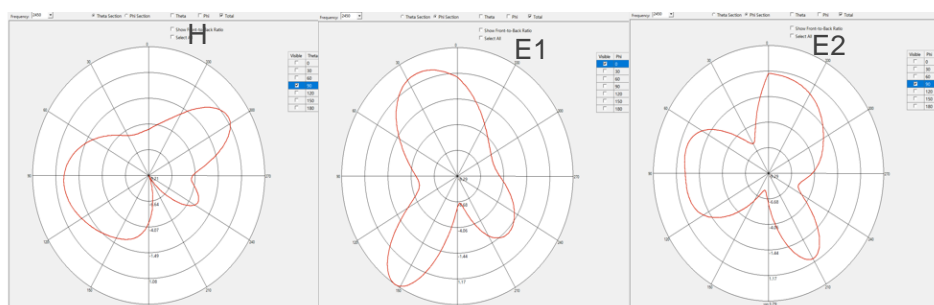
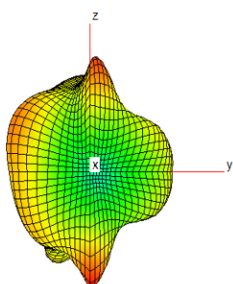


Left

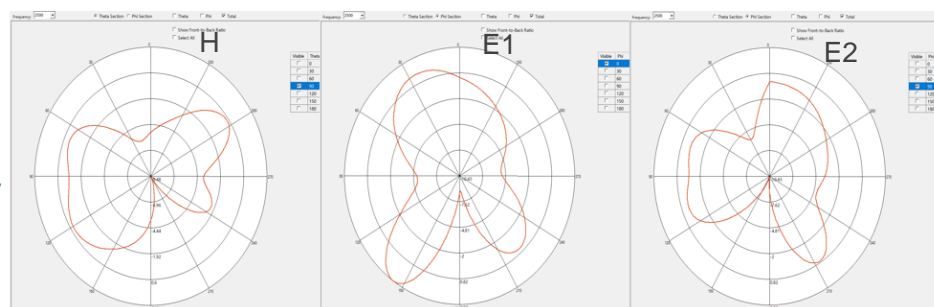
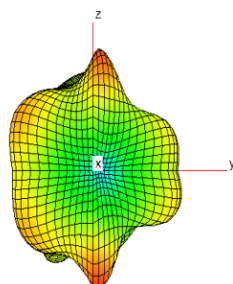
2400



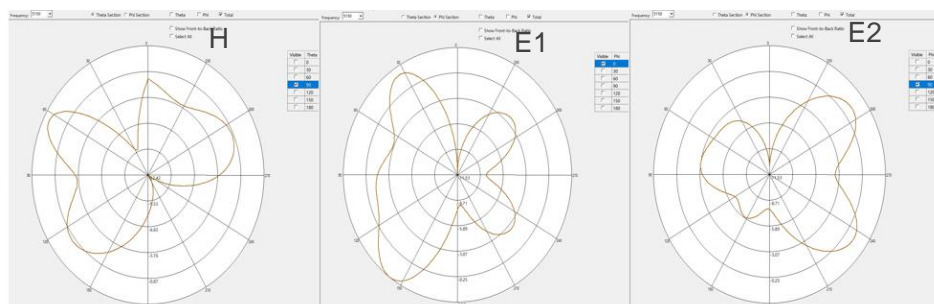
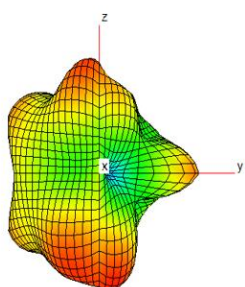
2450



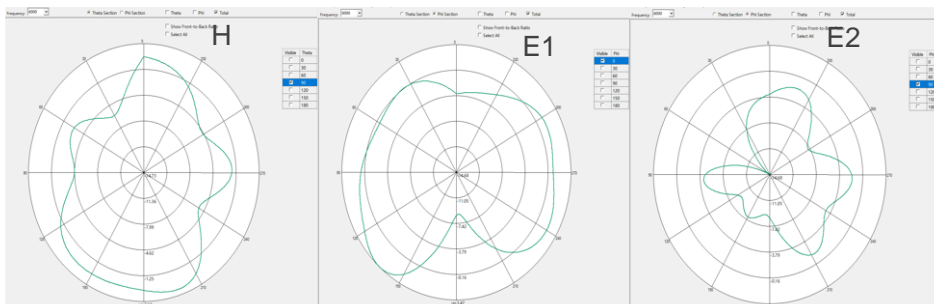
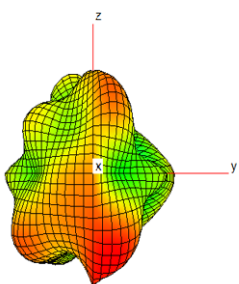
2500

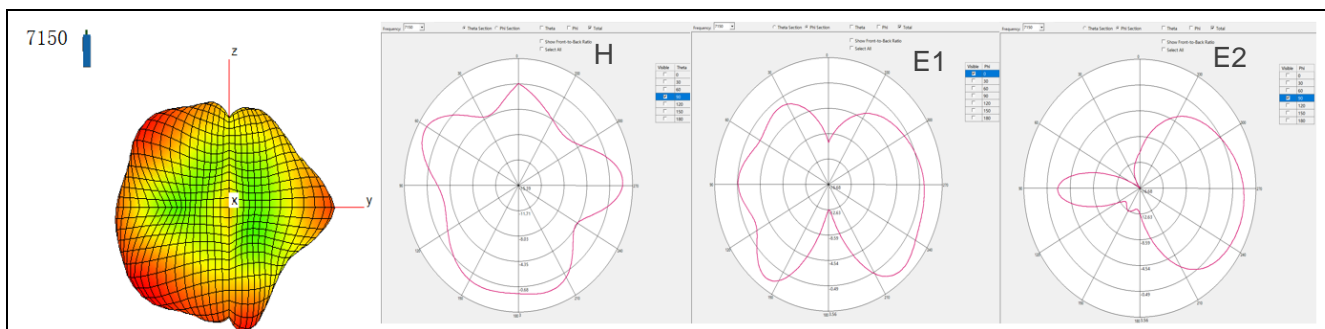


5150

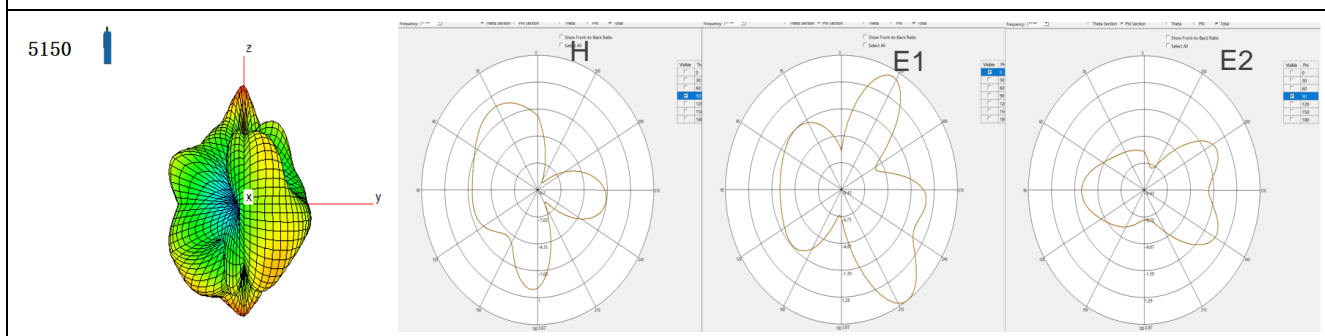
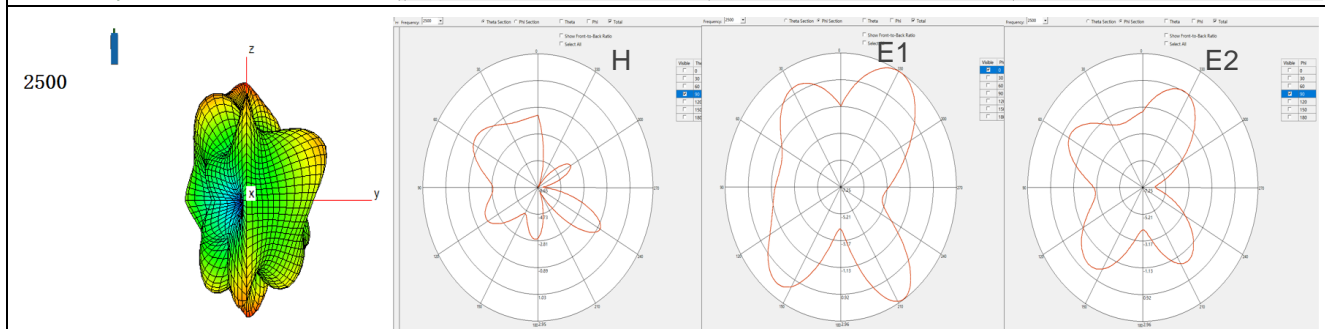
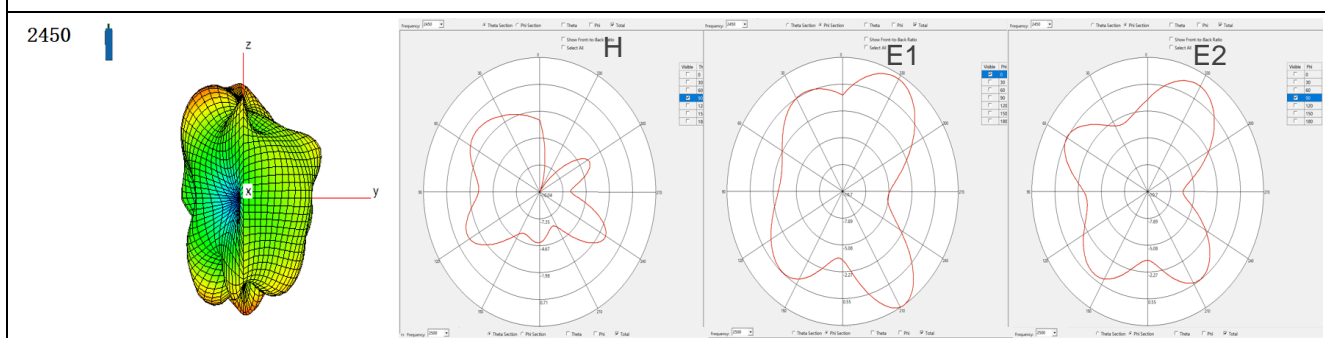
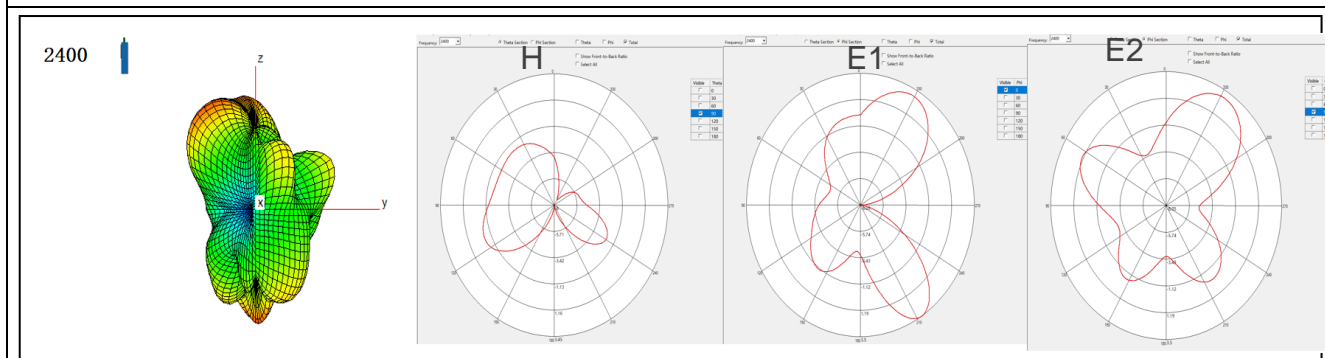


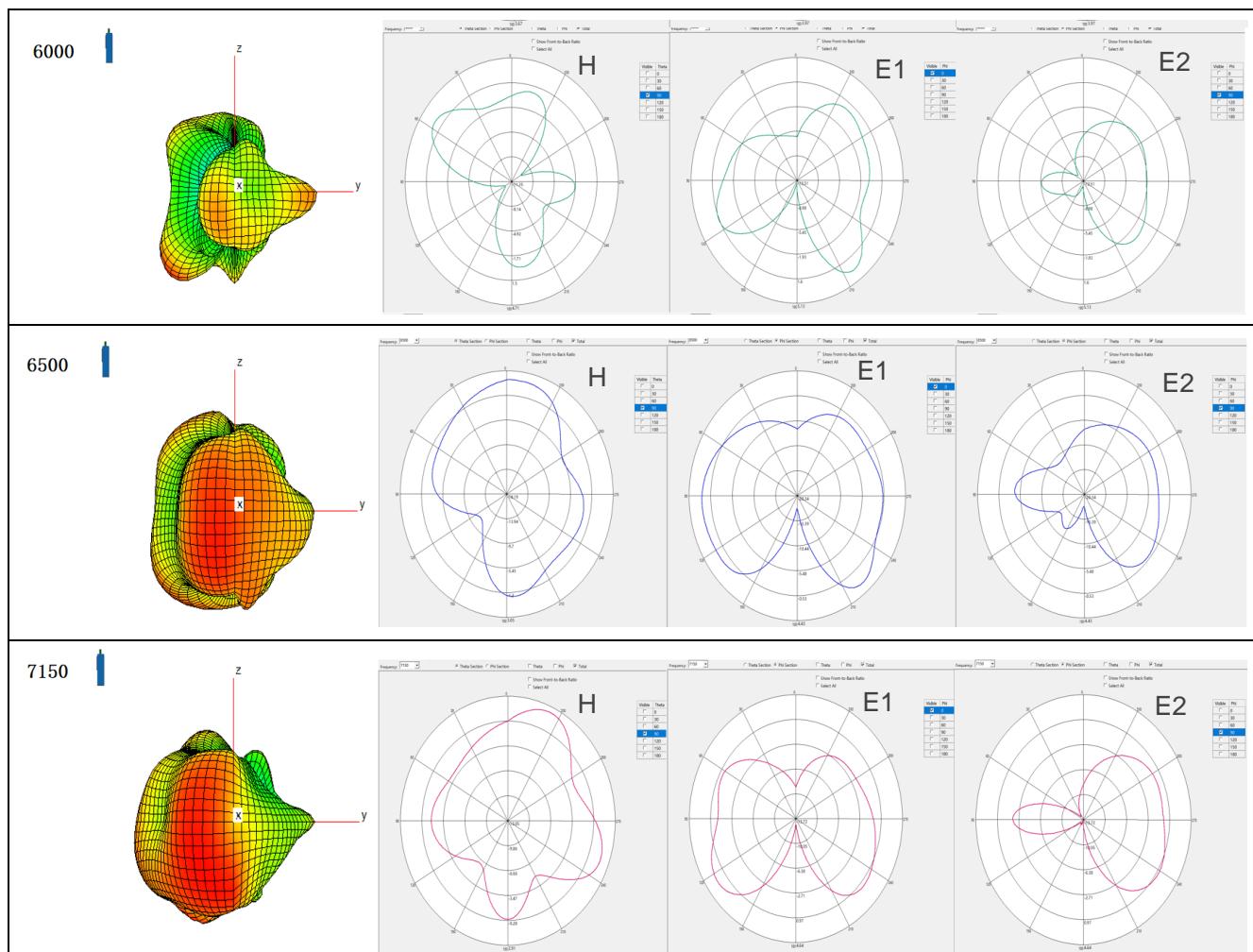
6000





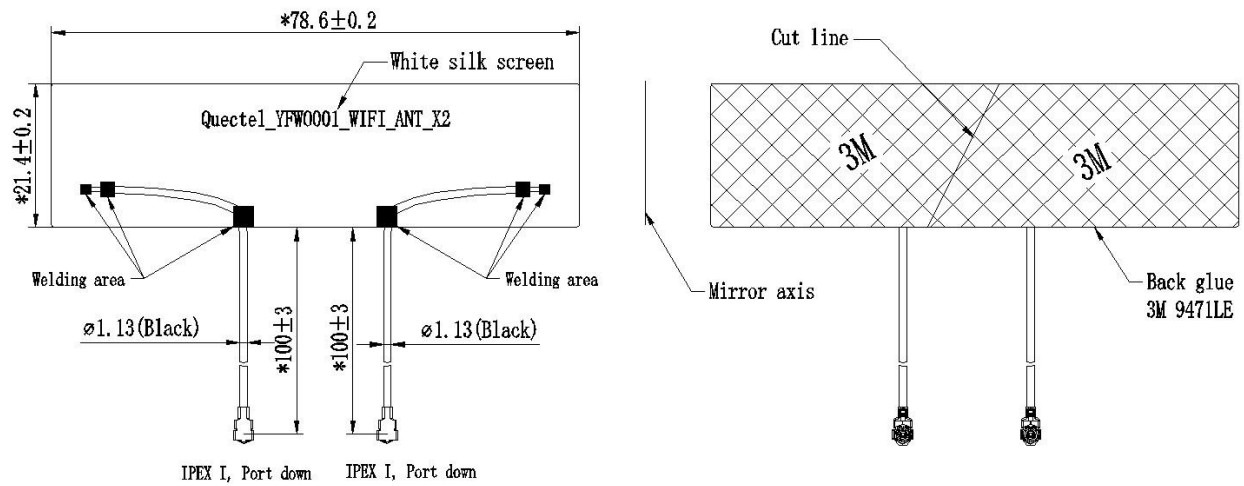
Right





5 Product Size

ROHS



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