



Report No : NSPO-PM-1040317_03-E

Function Test Report

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Sign of Reporter : Tseng Hsi-Mao

Report Date : Mar. / 27 / 2015

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National Space Organization

Test Unit: 12dBi 2.4GHz/5GHz Panel Antenna

Model No: WLMP-5024-12-02

Serial No: N/A

Received Date: Mar./18/2015

Total Page: 22

Items to be measured: Antenna Gain / Antenna Pattern

Applicant: WIFI-Link Technologies (Taiwan) Ltd.

Contact: James Wang

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※ The report only valid to the measured items. Do not copy without permission.

I. Test Project

1. Test Date: Mar./19/2015

2. Test Method:

2.1 The measurement only valid to the measured items. All of the measurement processes are certificated by ISO9001:2000 quality management.

2.2 Test item, parameter setting and method are agreed by both sides. Test flow and test procedures are executed according to NSPO-PROC-0039.

2.3 It is necessary to warm up the test facilities for at least one hour.

3. Test standard units:

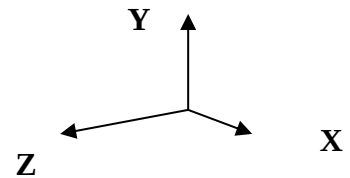
Item	S/N	Valid date	Trace no.	Calibration Co.
Network Analyzer Agilent E8364B	MY43040631	2015/8/31	1-6182827751 -1	Agilent Ltd.
Standard Horn Antenna	4101	2015/9/10	14-09-BCC-0 43-01	ETC

4. Test environment:

Temperature: 20.5~20.7 °C

Humidity: 54~56 %

5. Measured unit coordinate:



6. Reference Document:

Antenna measurement system operation procedure, NSPO-PROC-0039, version: 0102, National Space Organization, 2012.



II. System parameter setup

A. Measure Surface

- | | | | |
|------------------------|--|---|---------------------------------|
| (I). Planer | ☐ Polar | ☐ Rectangular | ☐ Linear |
| (II). Spherical | ☐ E-th/E-phi | ☐ Co-pol/X-pol | |
| (III). Cylindrical | ☐ Y/Phi Vertical | ☐ X/Phi Horizontal | |
| (IV). Direct Far Field | ☒ E-th/E-phi | ☐ Co-pol/X-pol | |

B. Probe type

Type: ☐ WG: _____ ☒ Horn: X: 6.9 in Y: 6.1 in

C. AUT setup

- (I). Orientation: Y
- (II). Polarization: Linear
- (III). AUT Probe Distance: 145.7 in

D. Frequency

Start: 2.40 GHz Stop: 2.50 GHz Step: 0.05 GHz

Start: 5.10 GHz Stop: 5.90 GHz Step: 0.05 GHz

Start: 5.625 GHz Stop: 5.825 GHz Step: 0.1 GHz

E. Sampling

- | | |
|------------------|------------------------------------|
| I. Scan Priority | No of Theta (N): <u>201</u> |
| | No of Phi Angles (M): <u>2</u> |
| II. Travel Range | Theta (2-way) (deg): <u>360</u> |
| | Phi-Cut (1/2 way)(deg): <u>180</u> |

III. Test Result

1. Antenna Gain

Port I

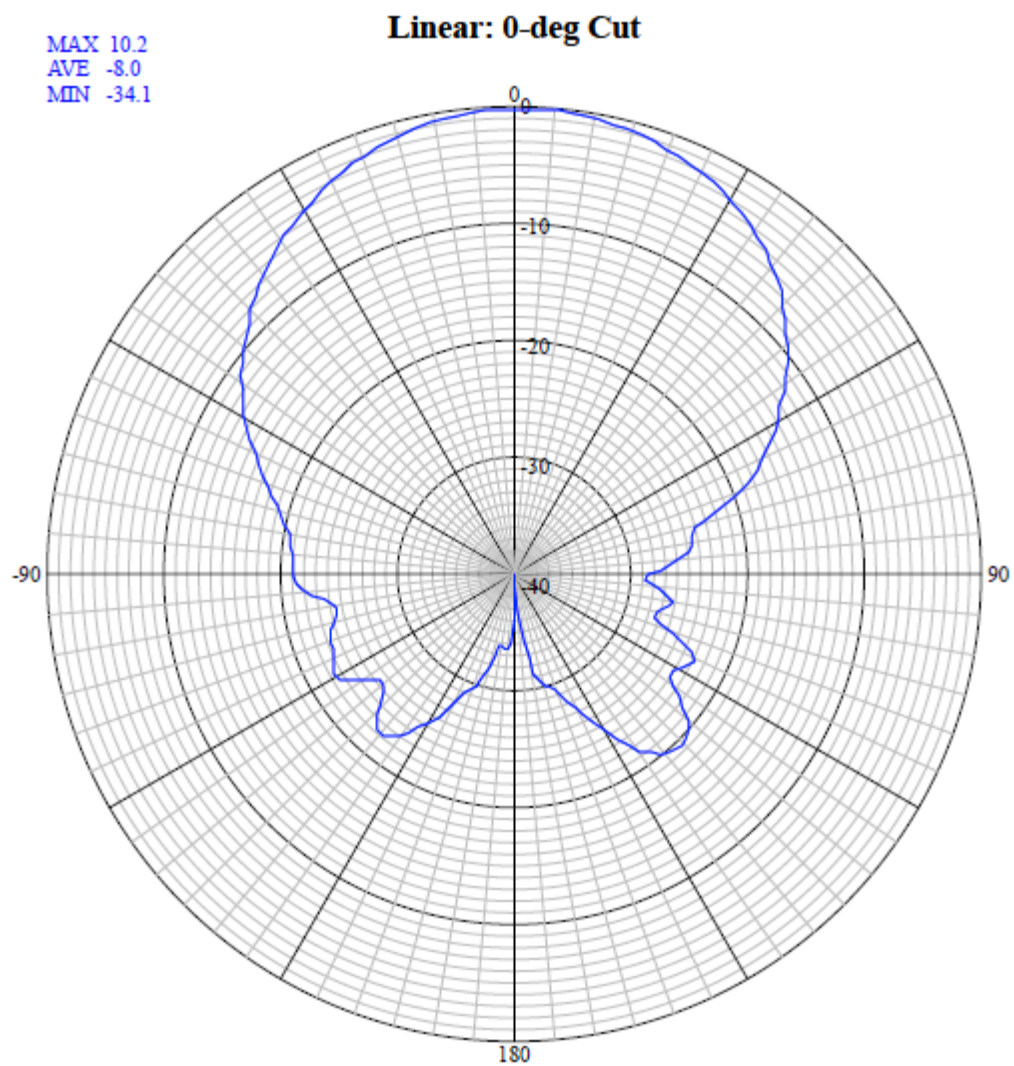
	Gain	HPBW
2.45 GHz	11.6 dBi	48.0 deg
5.15 GHz	11.3 dBi	39.7 deg
5.5 GHz	12.2 dBi	25.7 deg
5.825 GHz	11.5 dBi	35.9 deg

Port II

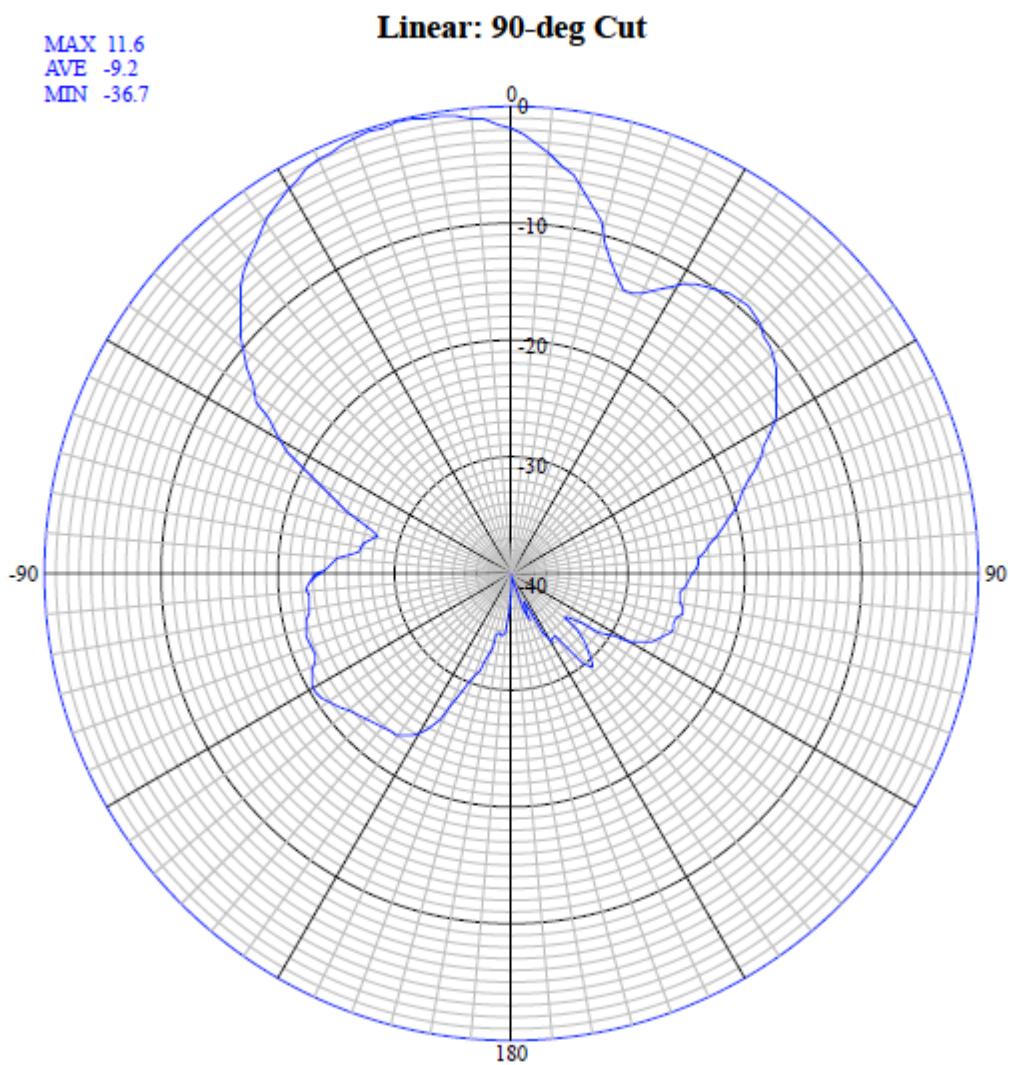
	Gain	HPBW
2.45 GHz	11.5 dBi	47.9 deg
5.15 GHz	10.5 dBi	41.1 deg
5.5 GHz	11.5 dBi	43.8 deg
5.825 GHz	12.4 dBi	35.2 deg

2. Antenna Pattern

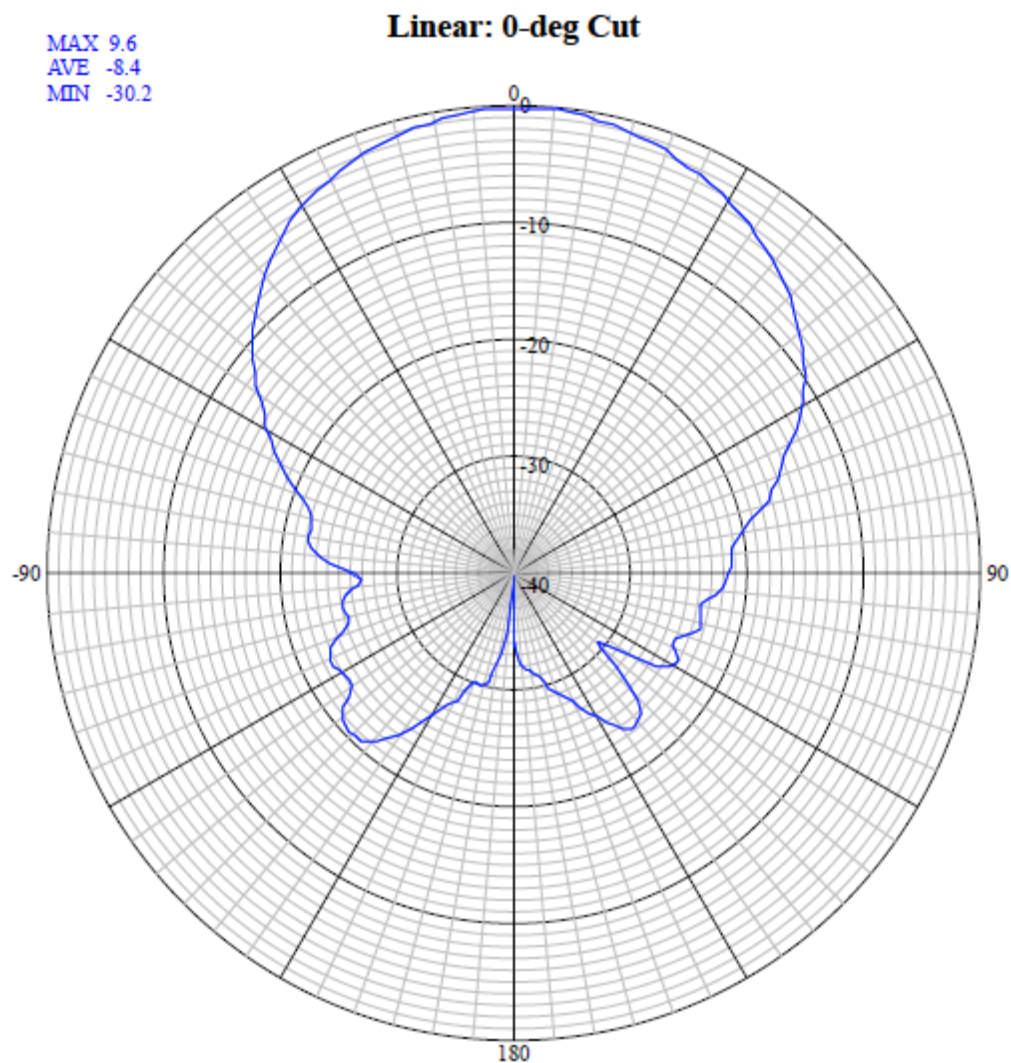
2.45 GHz / Port I / Vertical



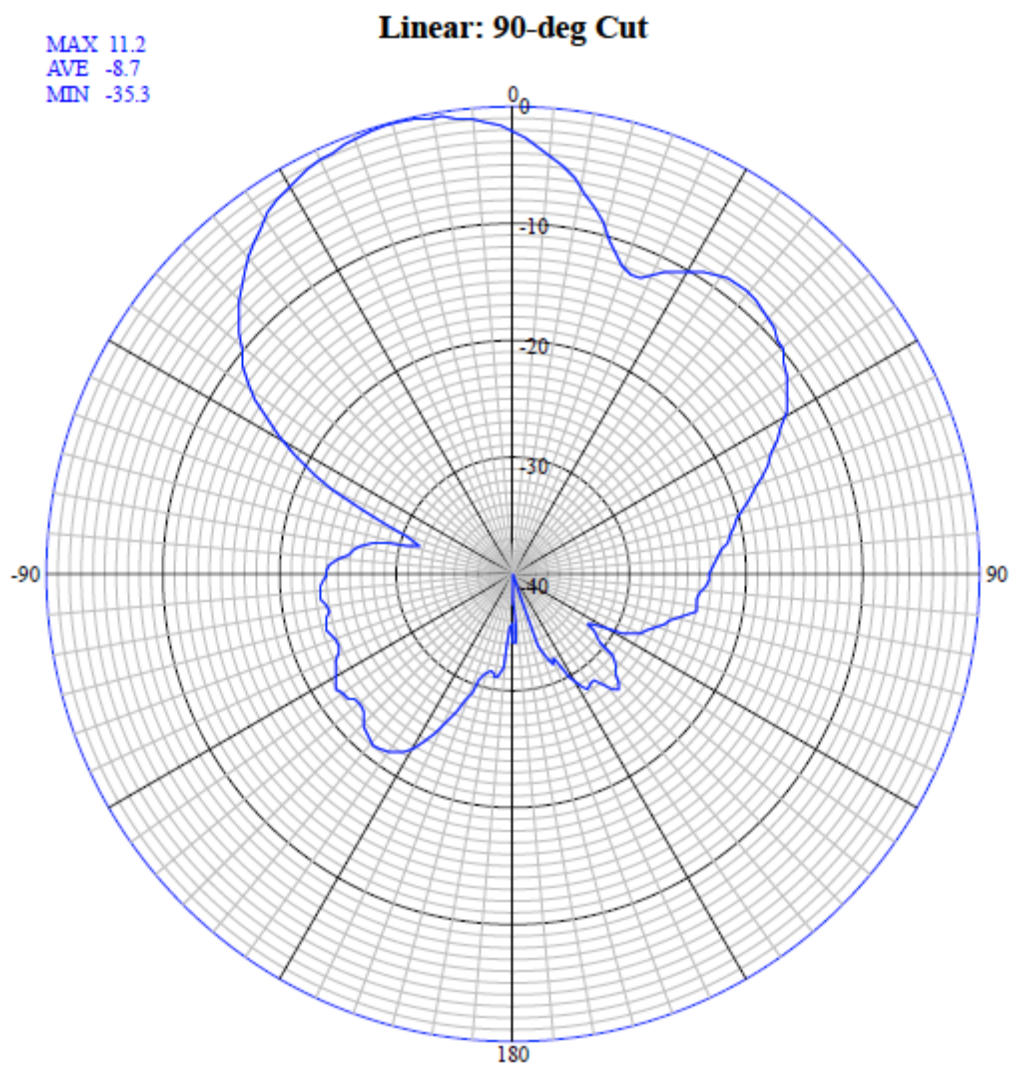
2.45 GHz / Port I / Horizontal



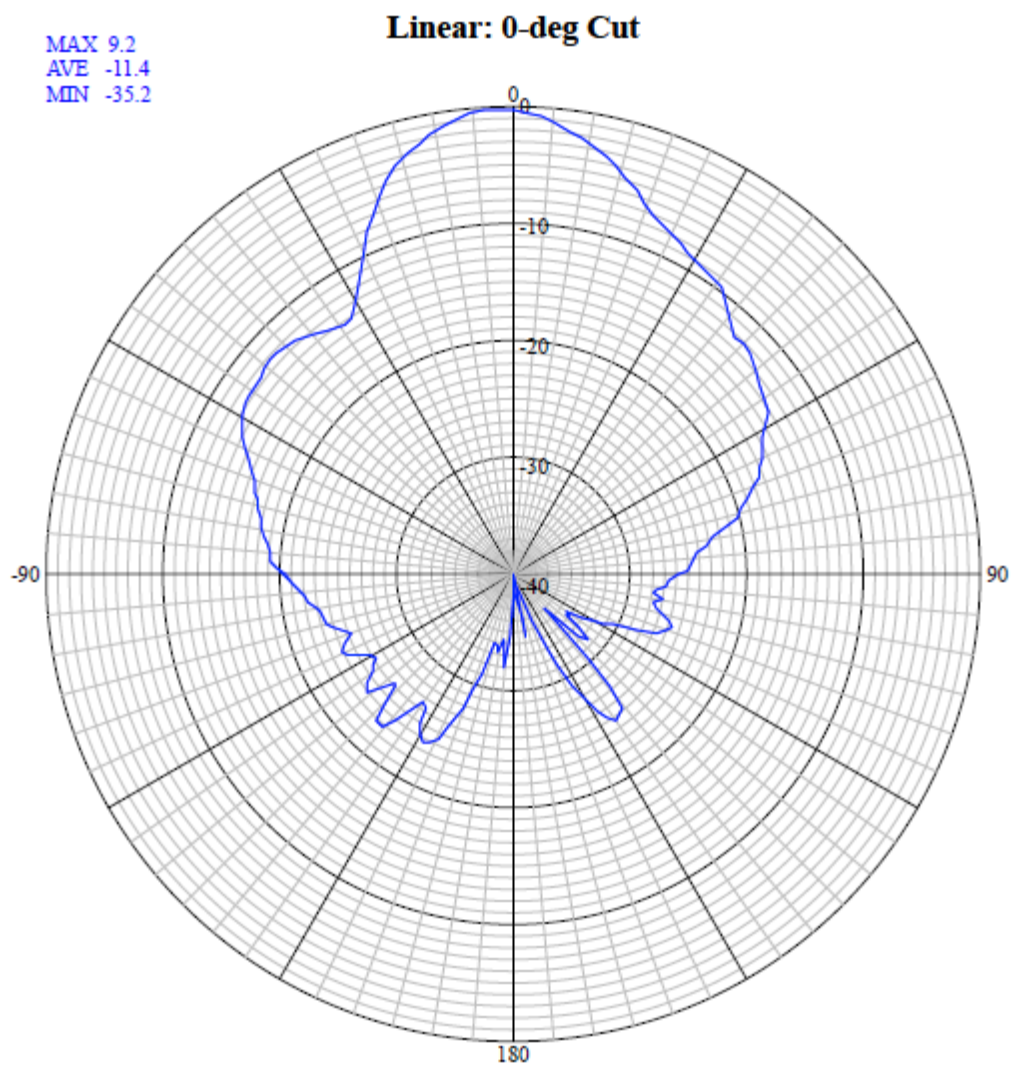
2.45 GHz / Port II / Vertical



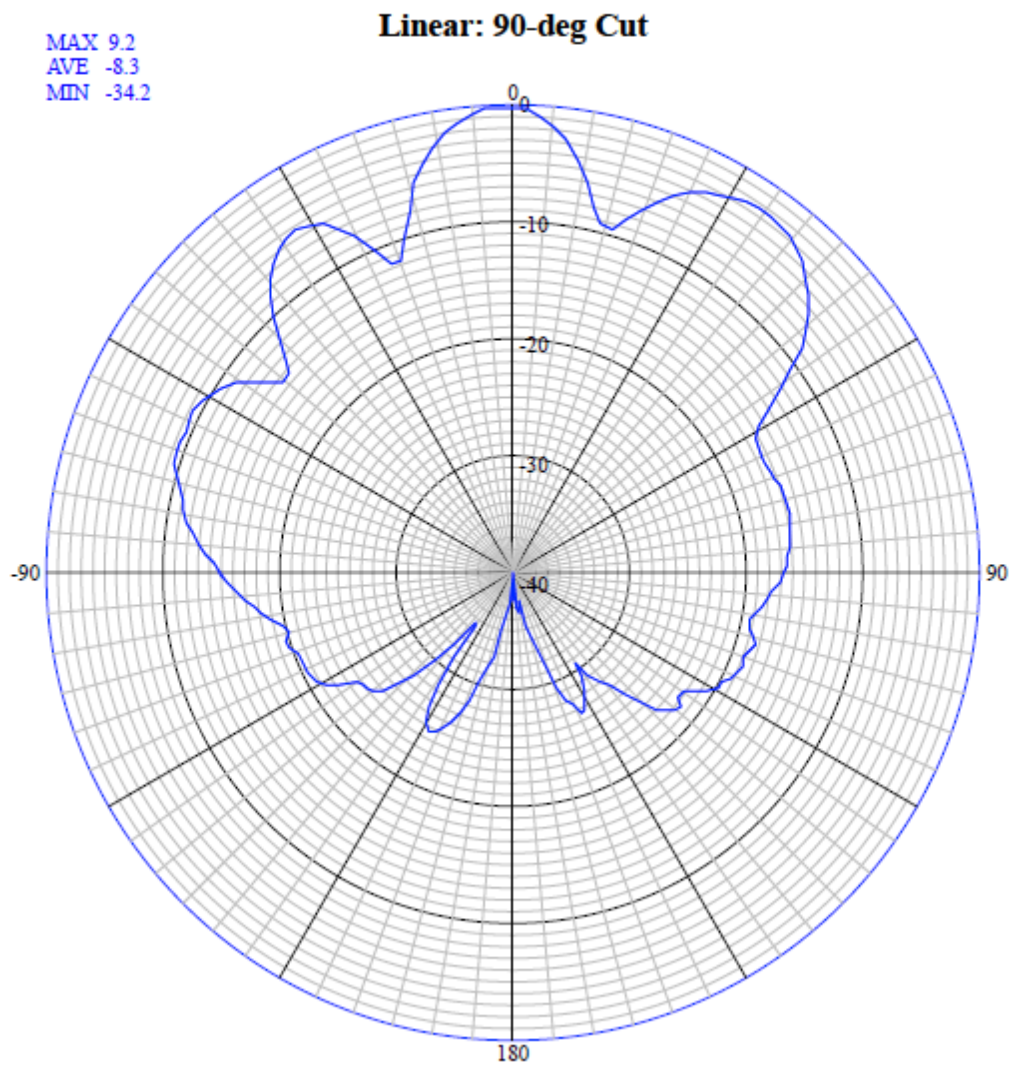
2.45 GHz / Port II / Horizontal



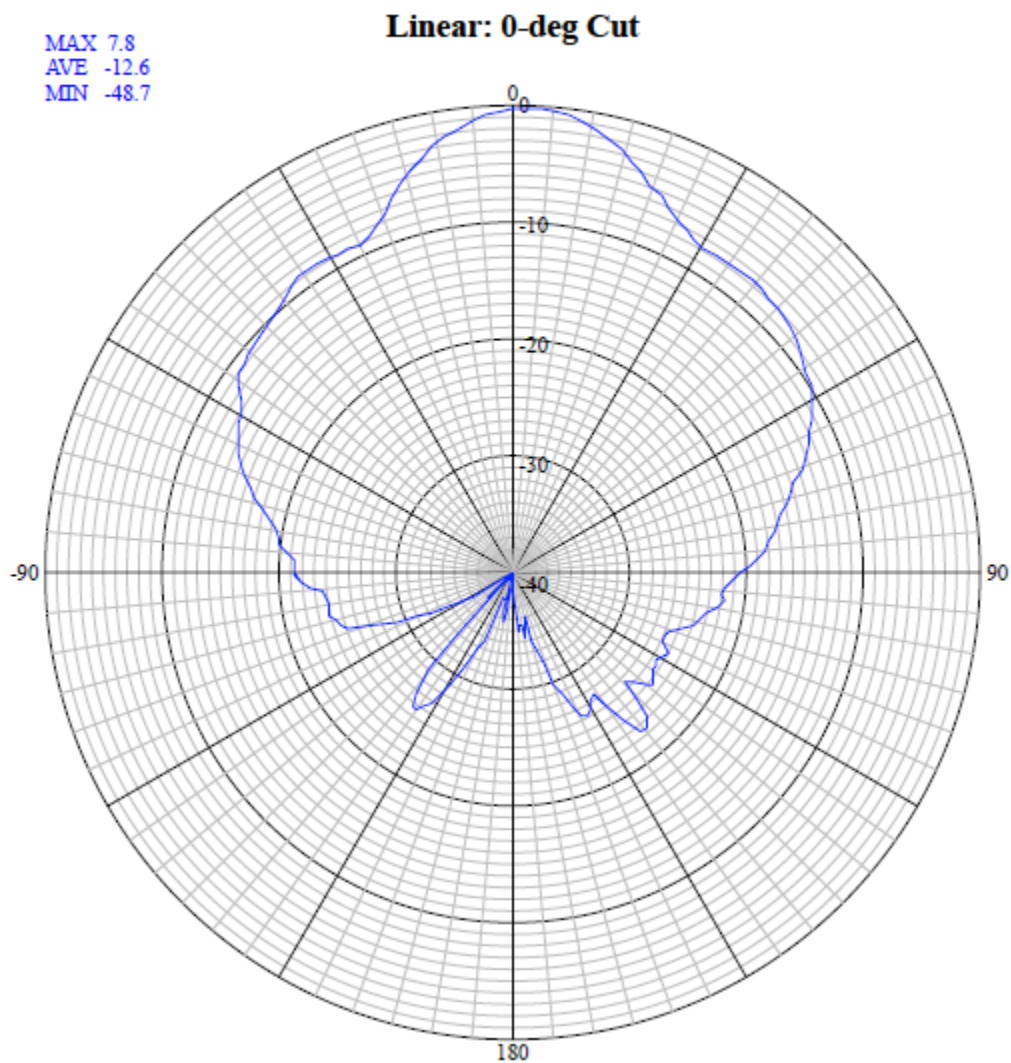
5.15 GHz / Port I / Vertical



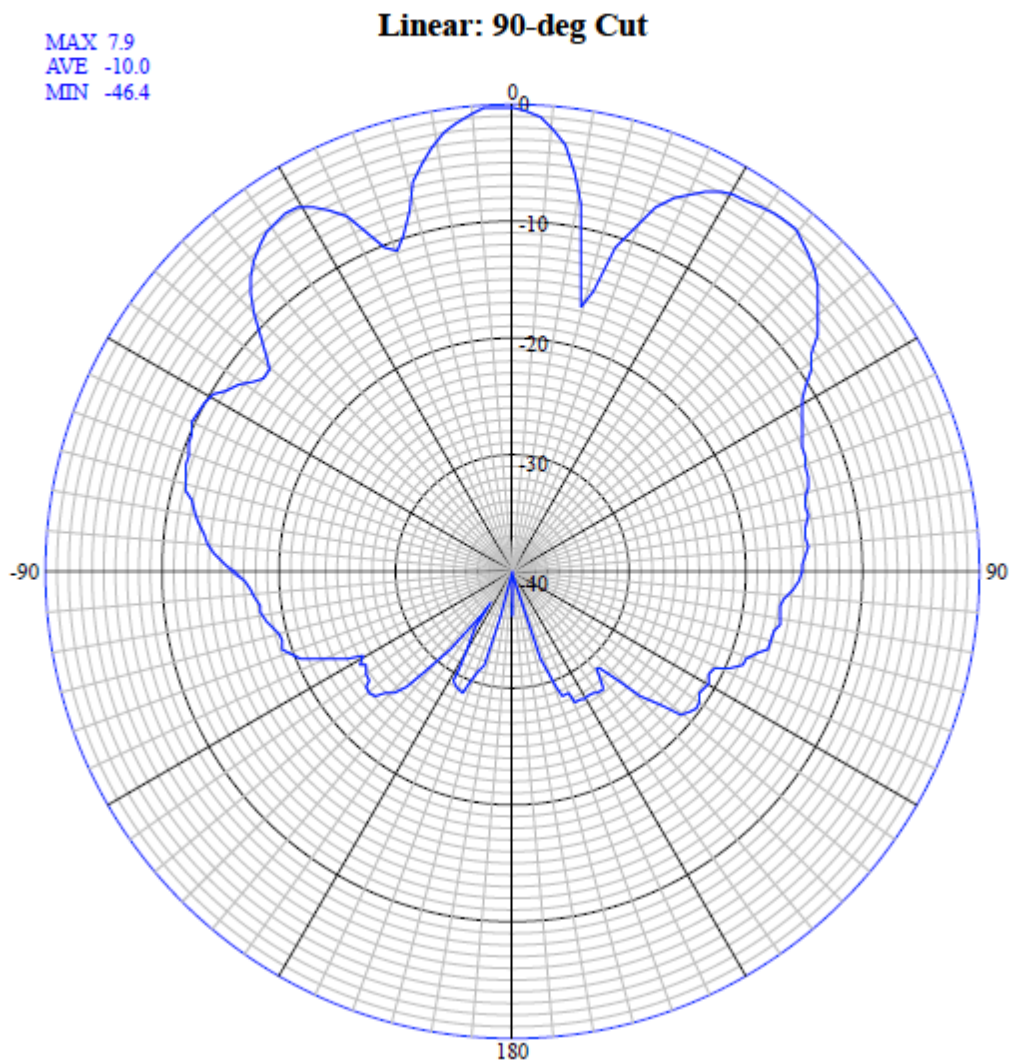
5.15 GHz / Port I / Horizontal



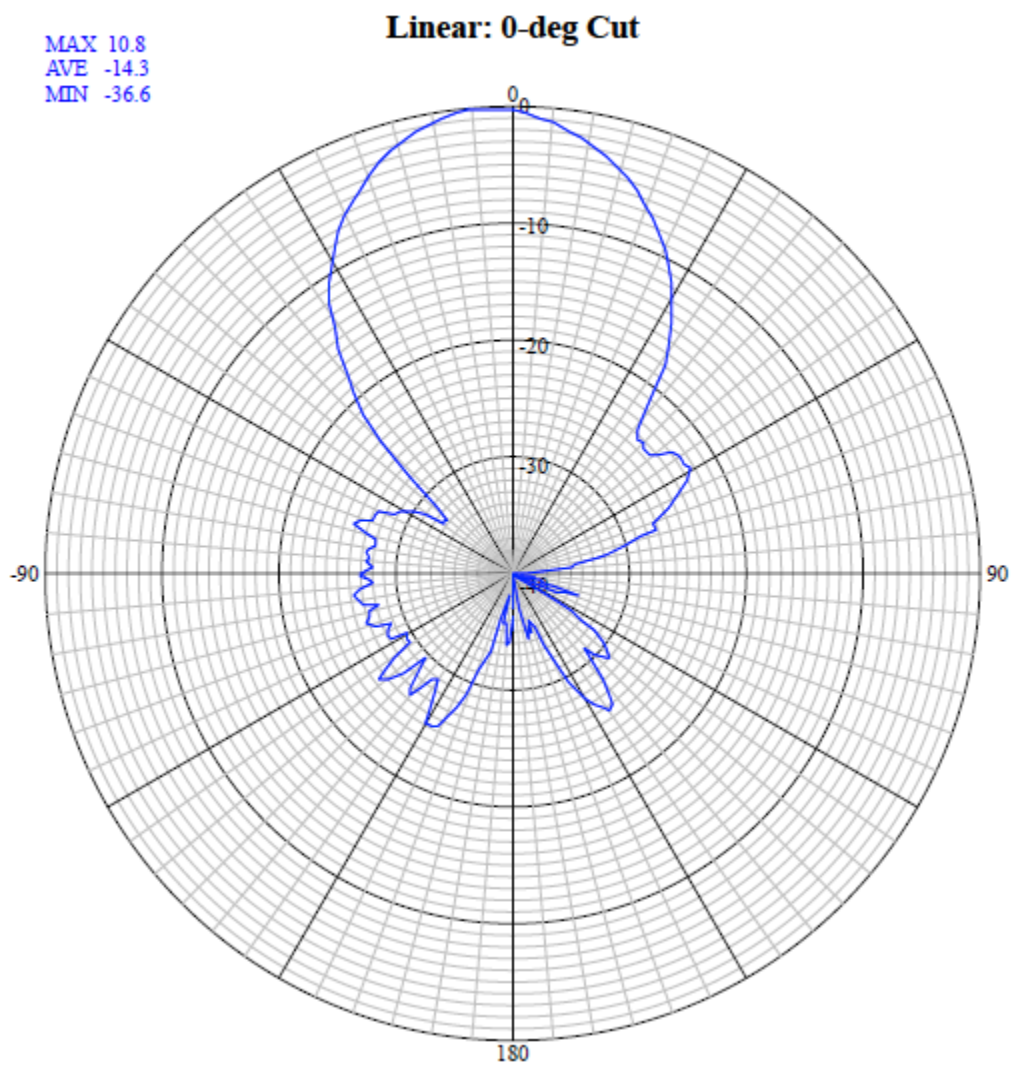
5.15 GHz / Port II / Vertical



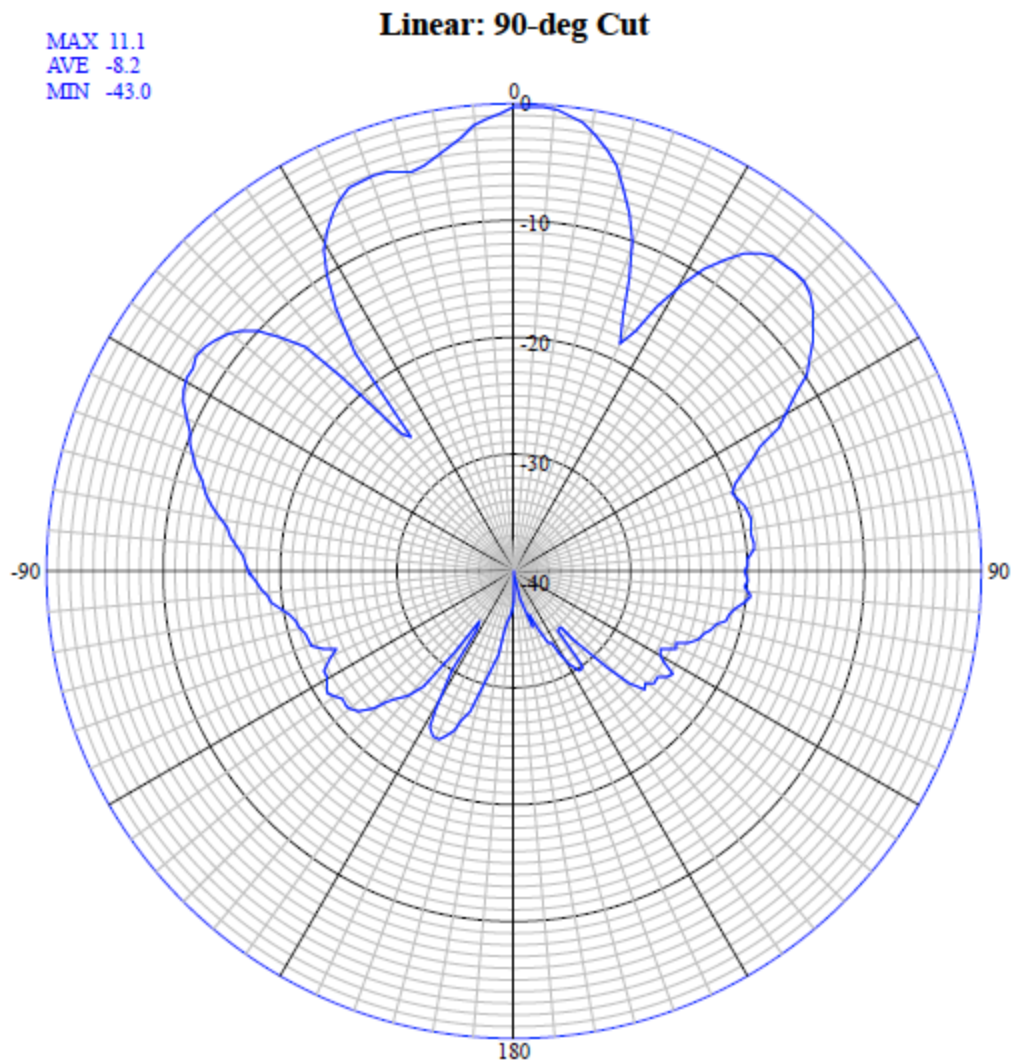
5.15 GHz / Port II / Horizontal



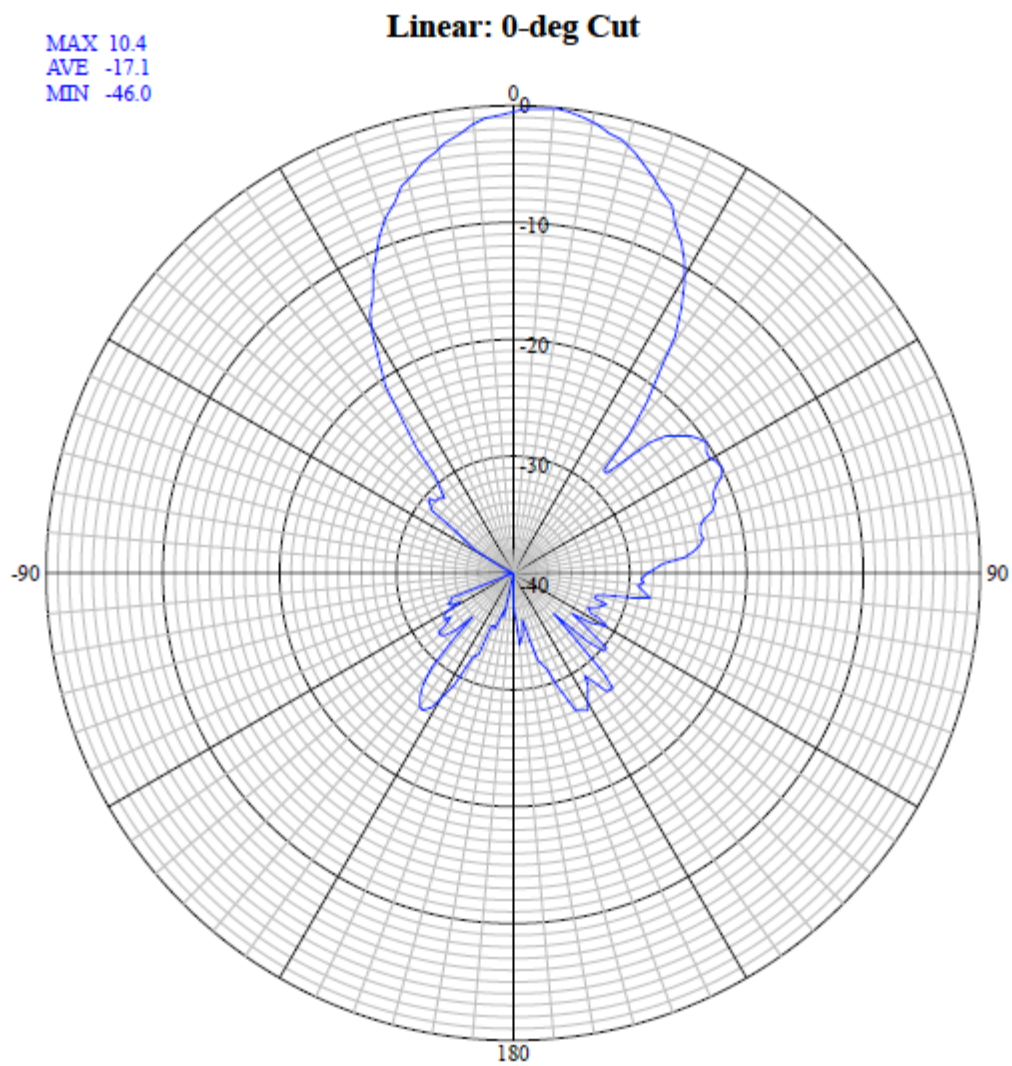
5.5 GHz / Port I / Vertical



5.5 GHz / Port I / Horizontal



5.5 GHz / Port II / Vertical

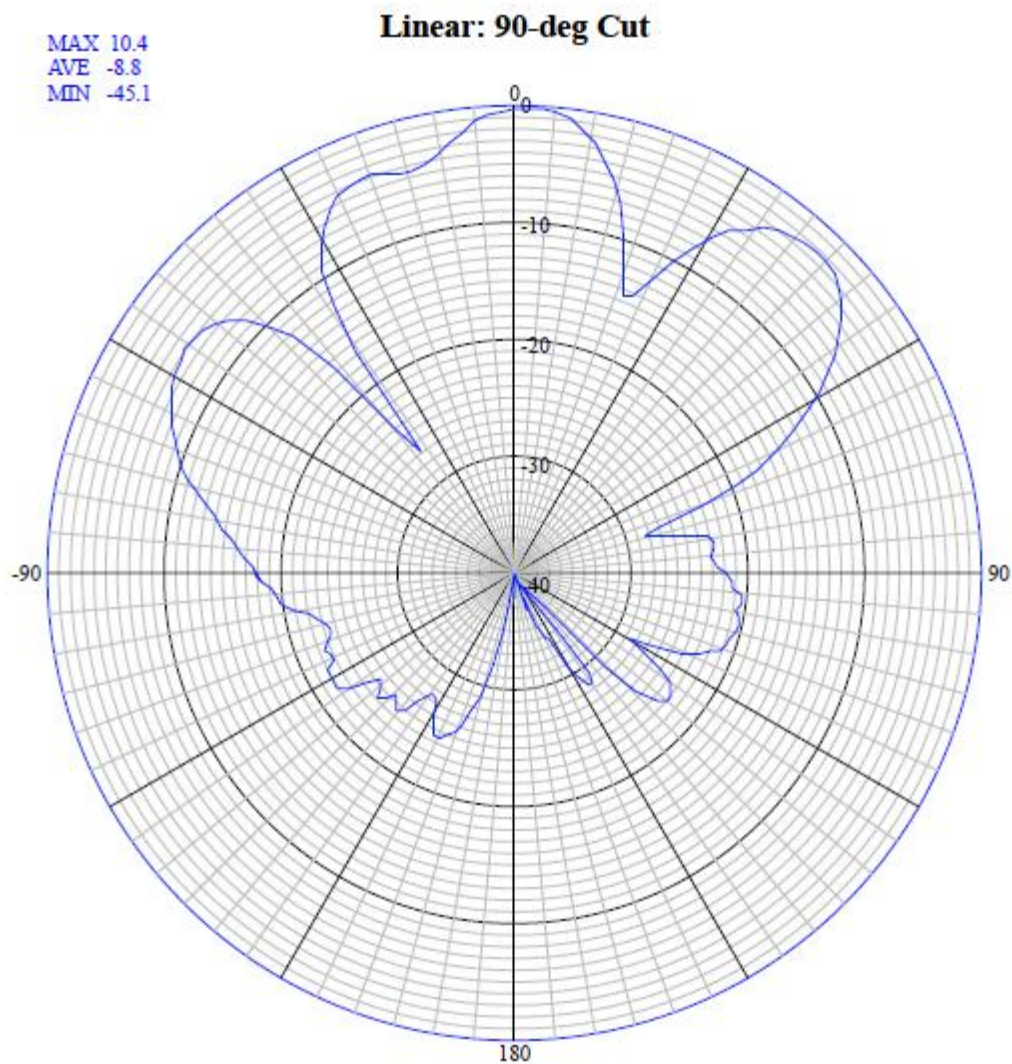




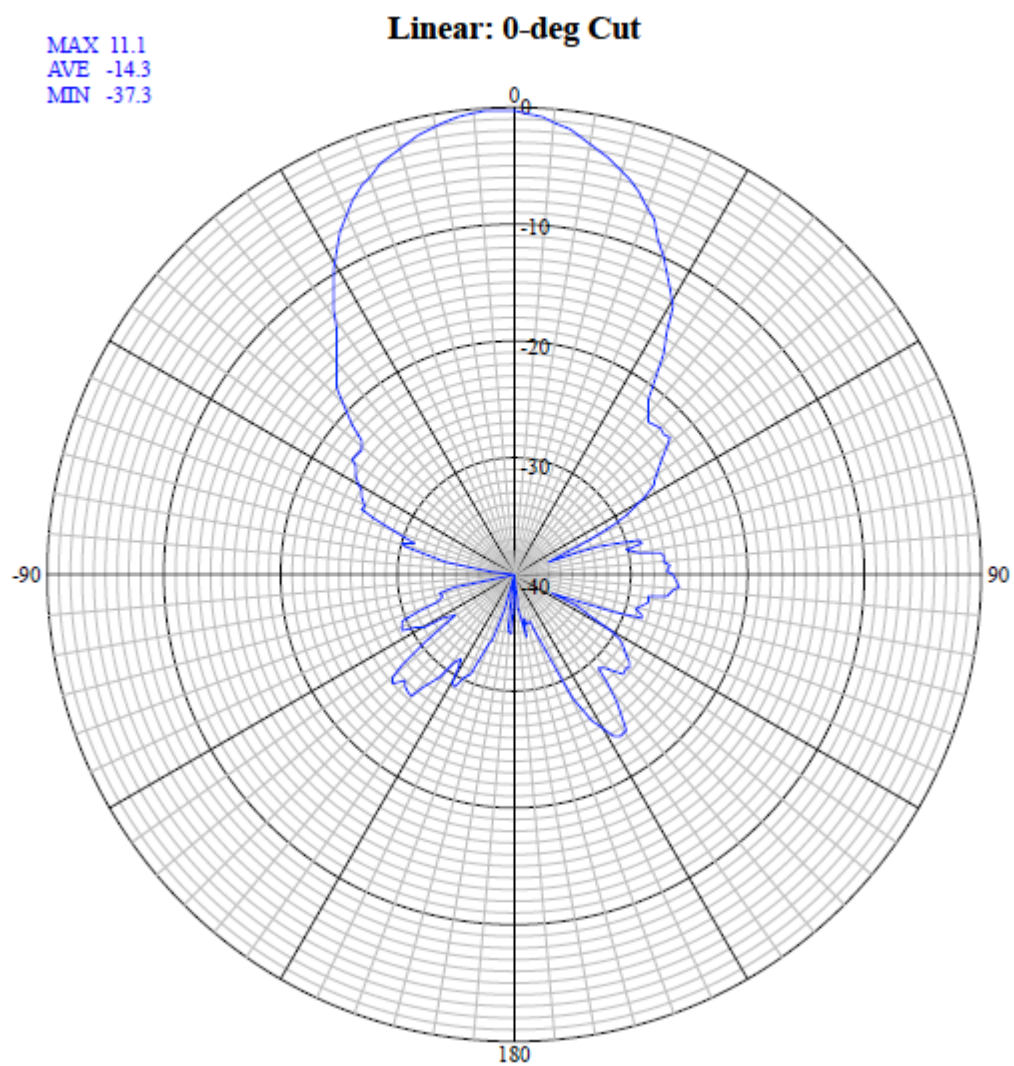
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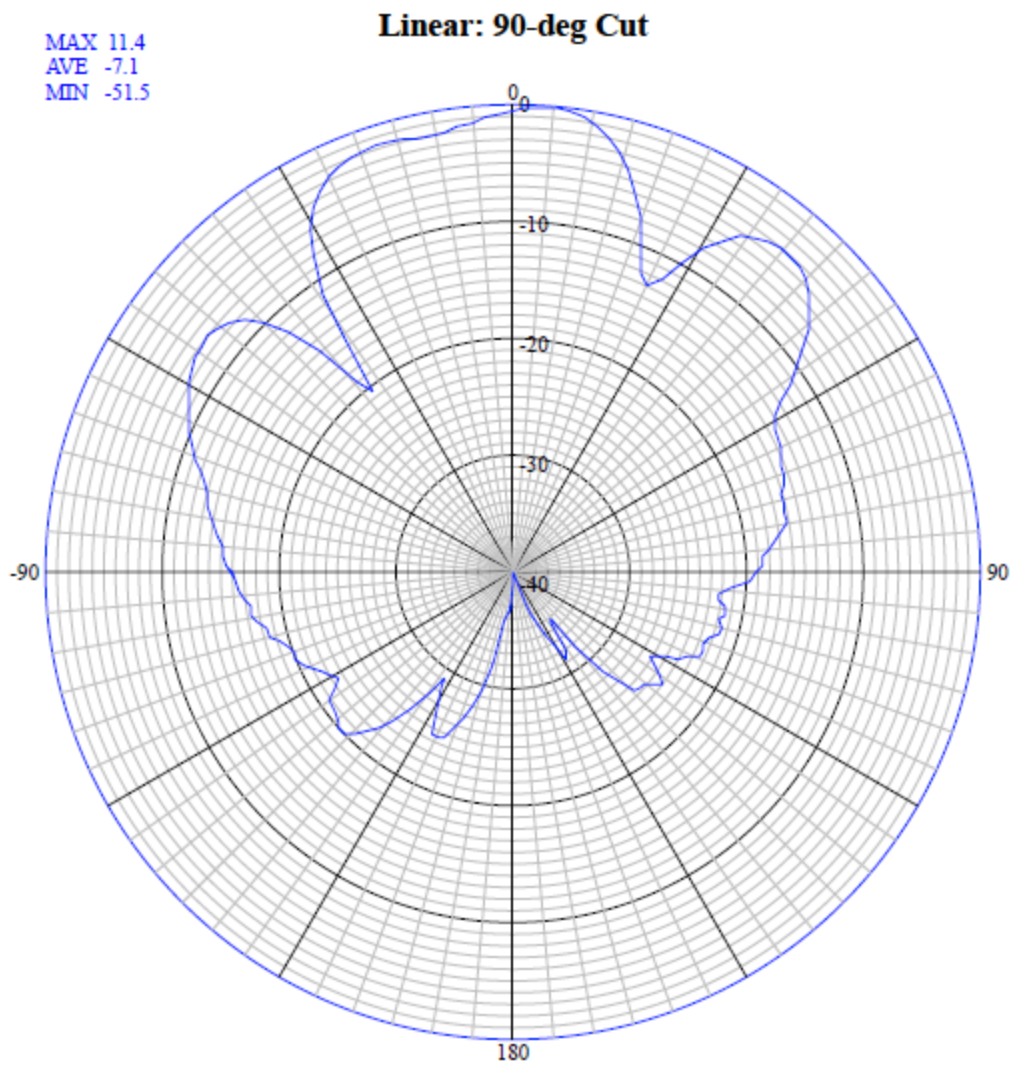
5.5 GHz / Port II / Horizontal



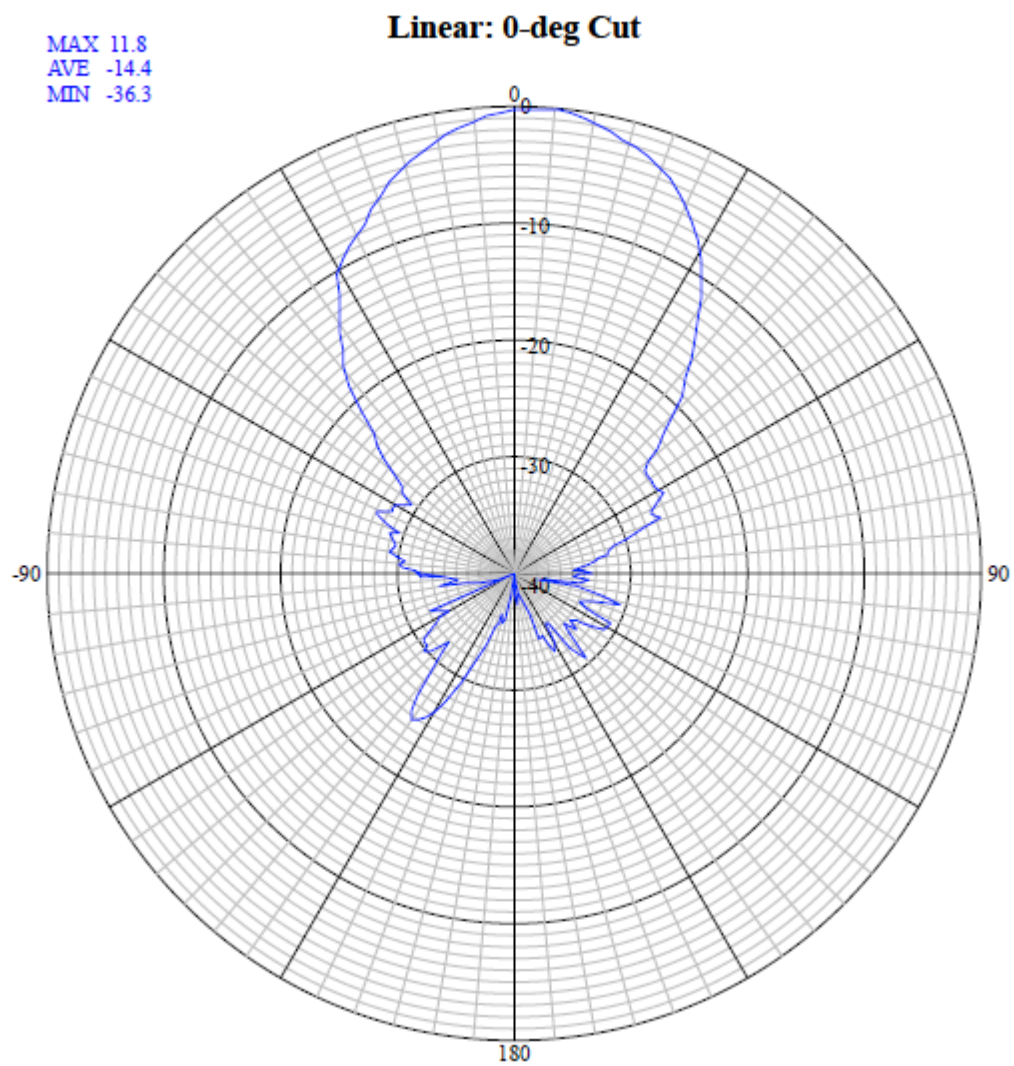
5.825 GHz / Port I / Vertical



5.825 GHz / Port I / Horizontal



5.825 GHz / Port II / Vertical



5.825 GHz / Port II / Horizontal

