Wistron NeWeb Corp.

DHUR-AZ68 ANT Measurement in Free Space

Provided by: Eason Chen
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Rev.1.0

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Introduction

- The Module PCBA dimension is **40 x 46 mm^2**, the gap between TV panel and the module is **15mm**.
- 2 printing antennas on board: 2 printing Wi-Fi dual band antennas.

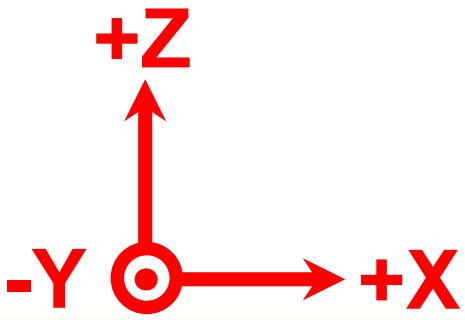
Summary

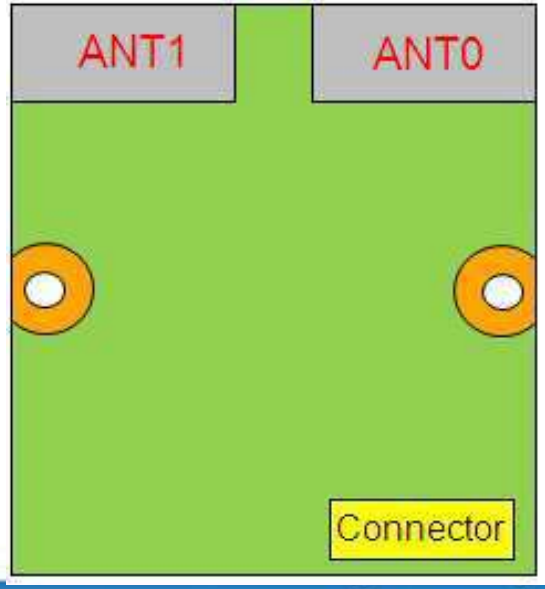
- **The summary antenna performance results shown in below.**
  - VSWR
    - Under 2.0 for 2G WIFI ANT 0, Under 2.6 for 5G WIFI ANT 0
    - Under 2.0 for 2G WIFI ANT 1, Under 2.5 for 5G WIFI ANT 1
  - Isolation
    - 15.2~23.0dB between WIFI ANT 0 & WIFI ANT 1 @ 2GHz
    - 15.8~26.2dB between WIFI ANT 0 & WIFI ANT 1 @ 5GHz
  - Radiation efficiency
    - 60~64% for 2G WIFI ANT 0, 62~69% for 5G WIFI ANT 0
    - 63~70% for 2G WIFI ANT 1, 60~69% for 5G WIFI ANT 1
  - Peak gain
    - Max 5.3dBi for 2G WIFI Antennas, Max 5.9dBi for 5G WIFI Antennas

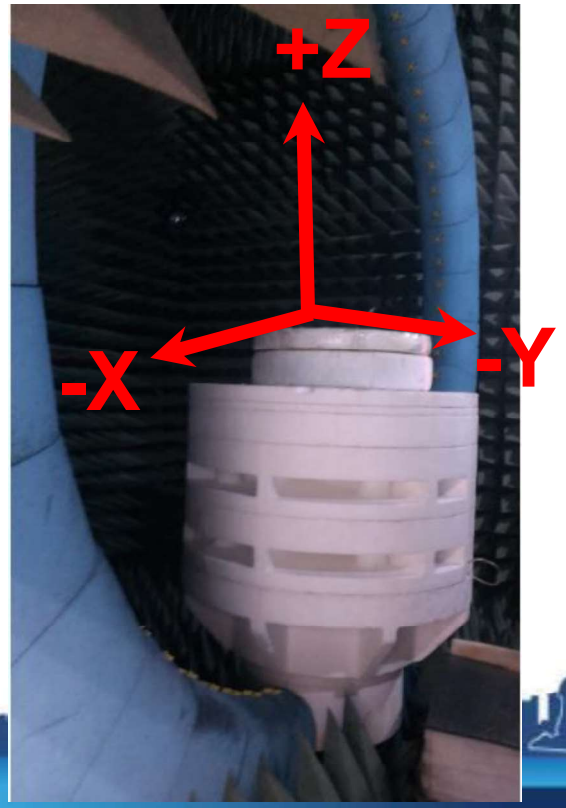
Experimental setup

- Measurement Item: a. VSWR b. Radiation Pattern

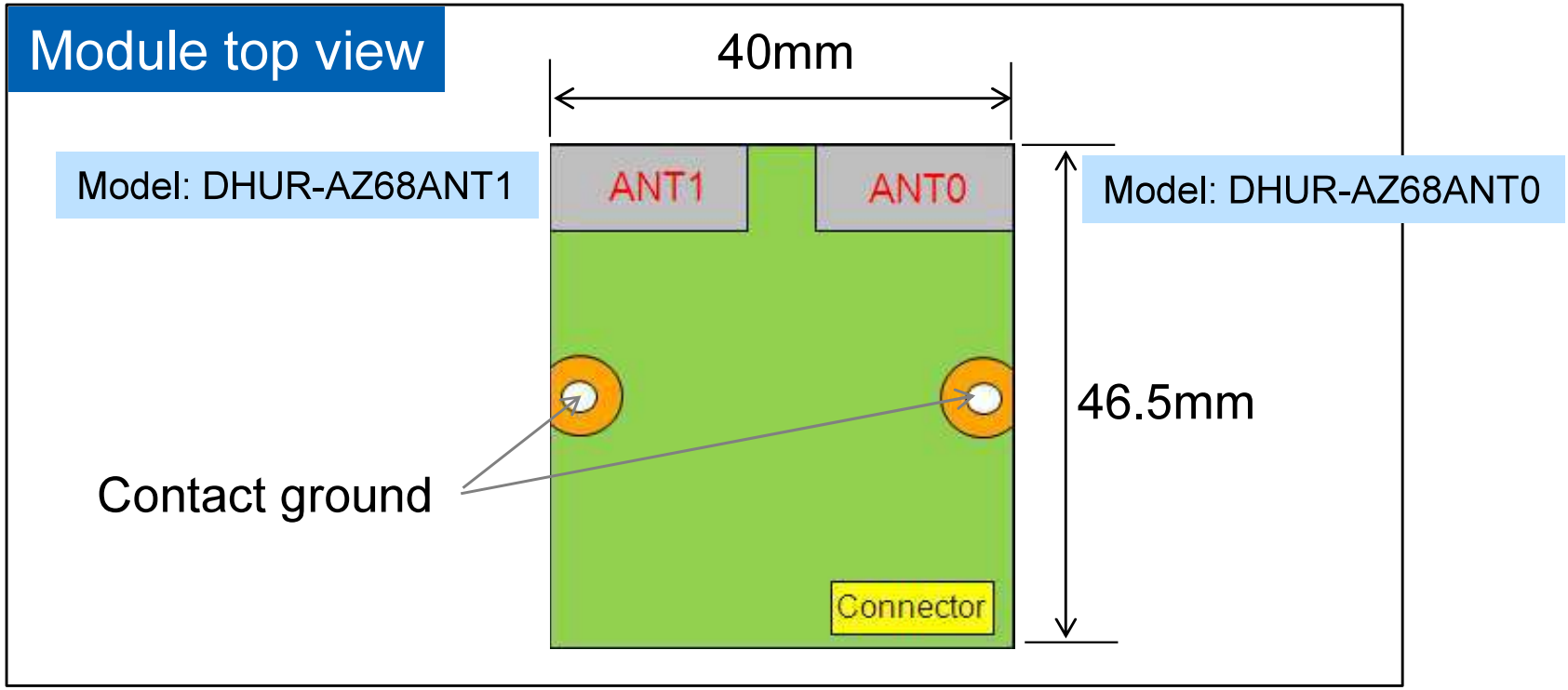
- VSWR: a. Instrument: vector network analyzer
  b. Calibration method: open/short/load
- Radiation Pattern:
  Instrument: WNC In-house 3D Antenna Measurement System
  @Satimo SG 64
- Coordinate system:



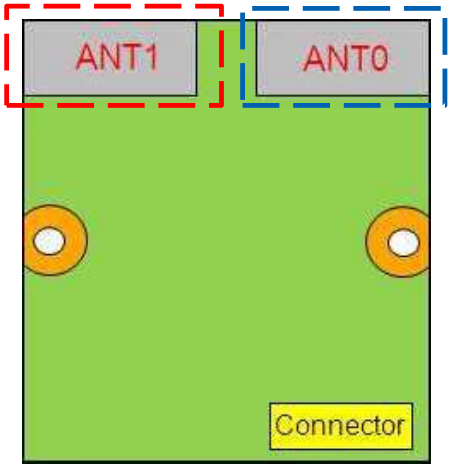


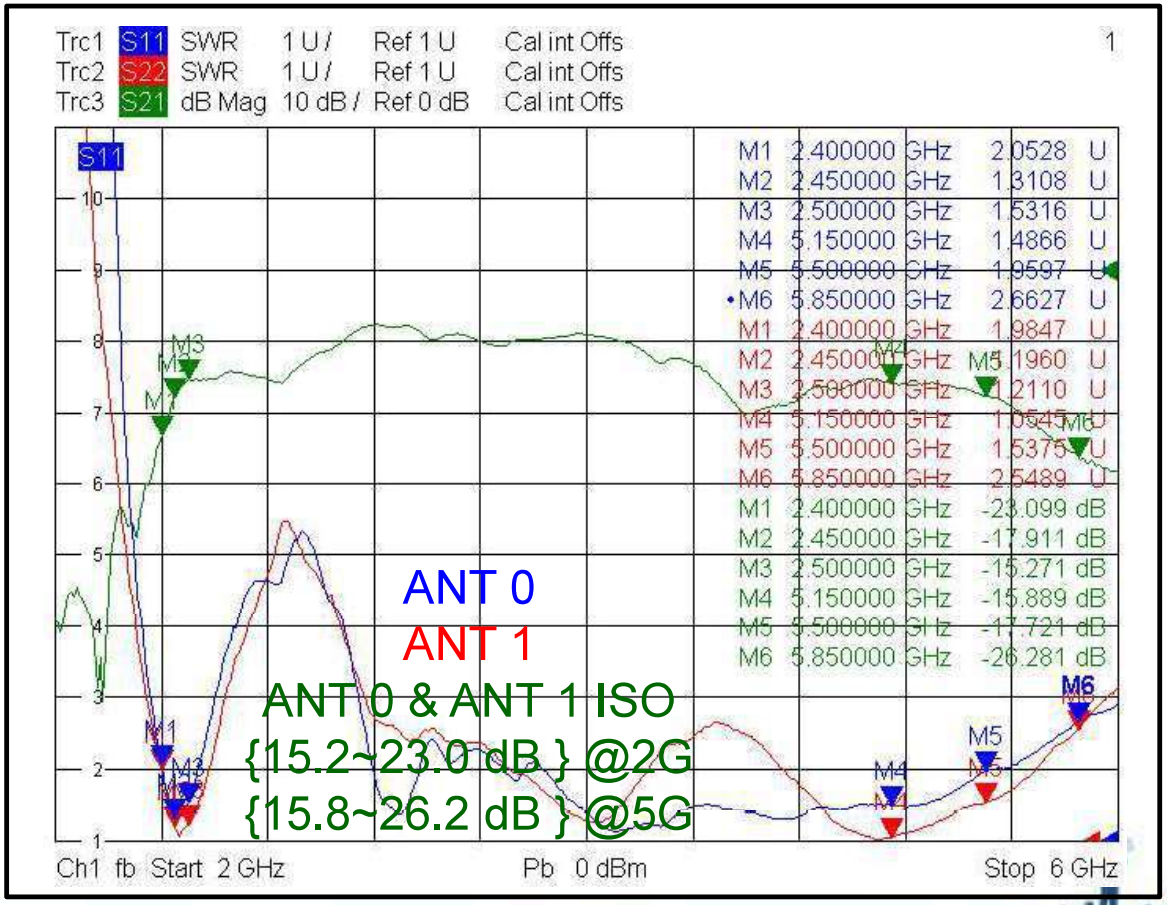


Testing condition

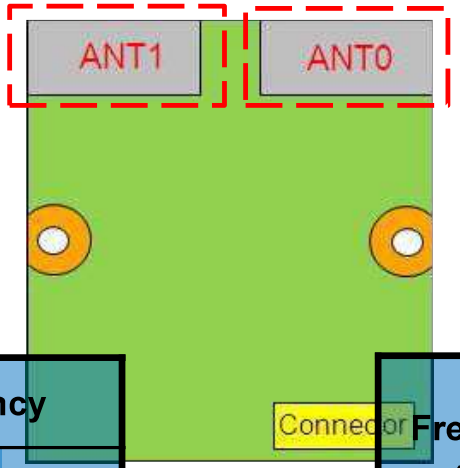


VSWR & Isolation for WIFI ANT 0 & ANT 1





Efficiency & Peak Gain



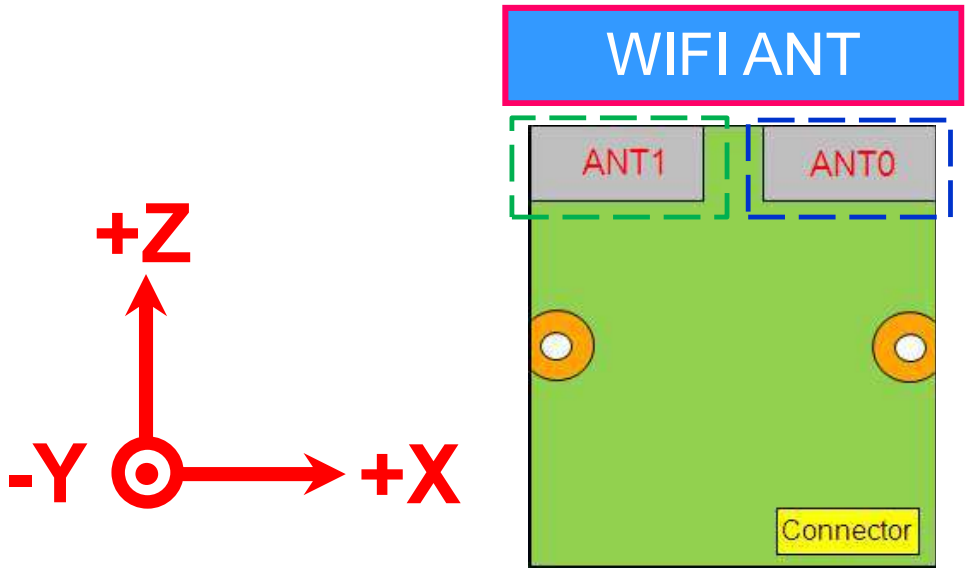
WIFI ANT 1

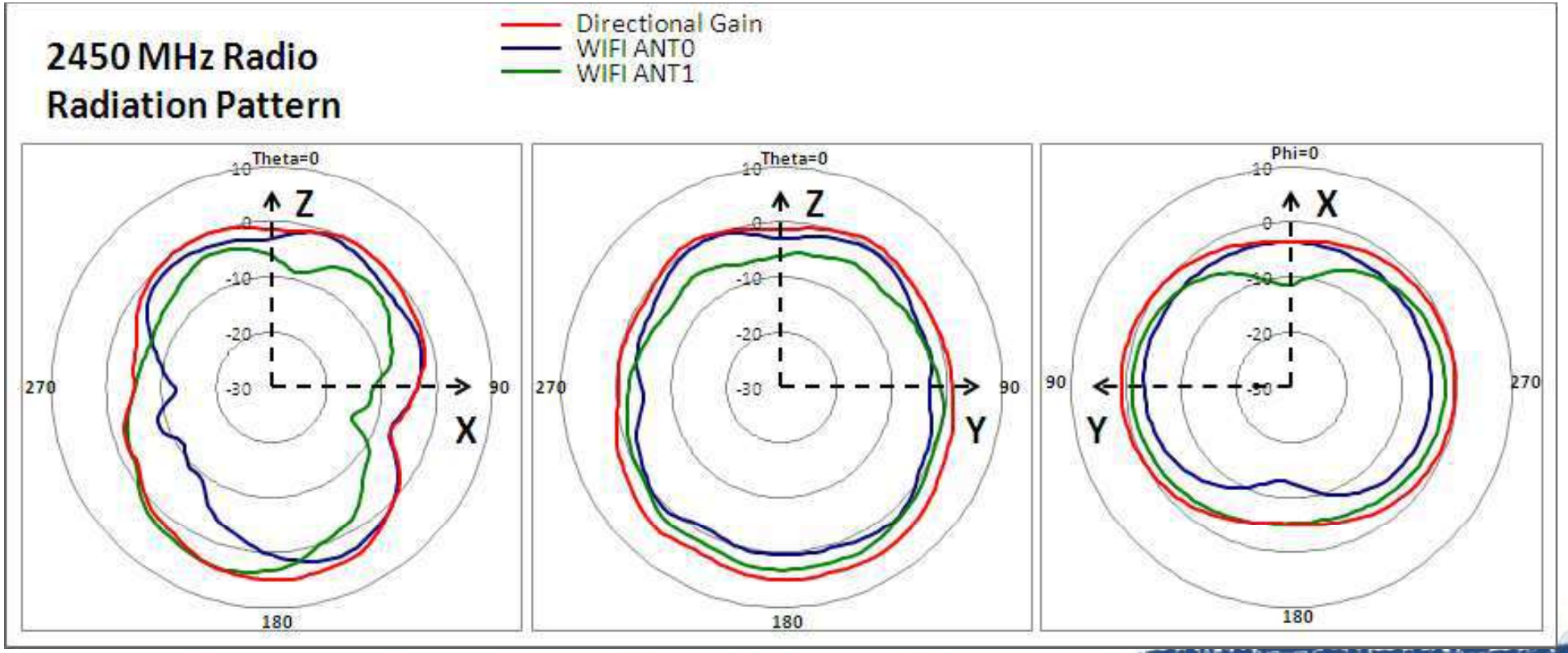
Frequency (MHz)	Peak gain	Efficiency	
		(%)	dB
2400	5.26	70.62	-1.51
2450	5.25	68.44	-1.65
2500	5.23	63.29	-1.99
5150	5.91	69.34	-1.59
5250	5.80	68.74	-1.63
5350	5.70	67.40	-1.71
5470	5.82	69.87	-1.56
5600	5.30	66.55	-1.77
5725	4.93	62.86	-2.02
5850	4.44	60.18	-2.21

WIFI ANT 0

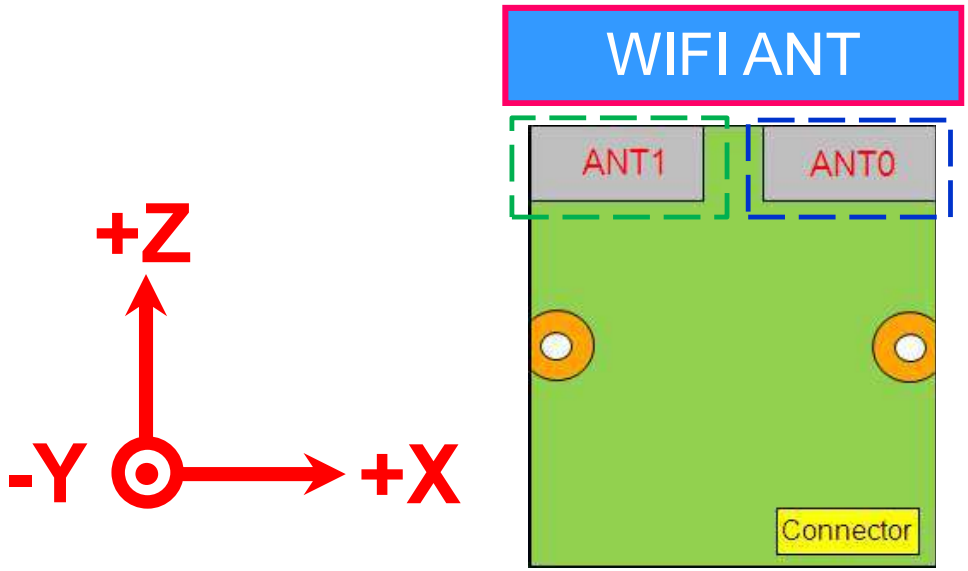
Frequency (MHz)	Peak gain	Efficiency	
		(%)	dB
2400	5.23	62.62	-2.03
2450	5.31	64.29	-1.92
2500	4.37	60.83	-2.16
5150	5.17	69.57	-1.58
5250	5.48	65.71	-1.82
5350	5.16	62.23	-2.06
5470	4.82	64.19	-1.93
5600	5.65	66.16	-1.79
5725	5.68	67.19	-1.73
5850	5.92	63.49	-1.97

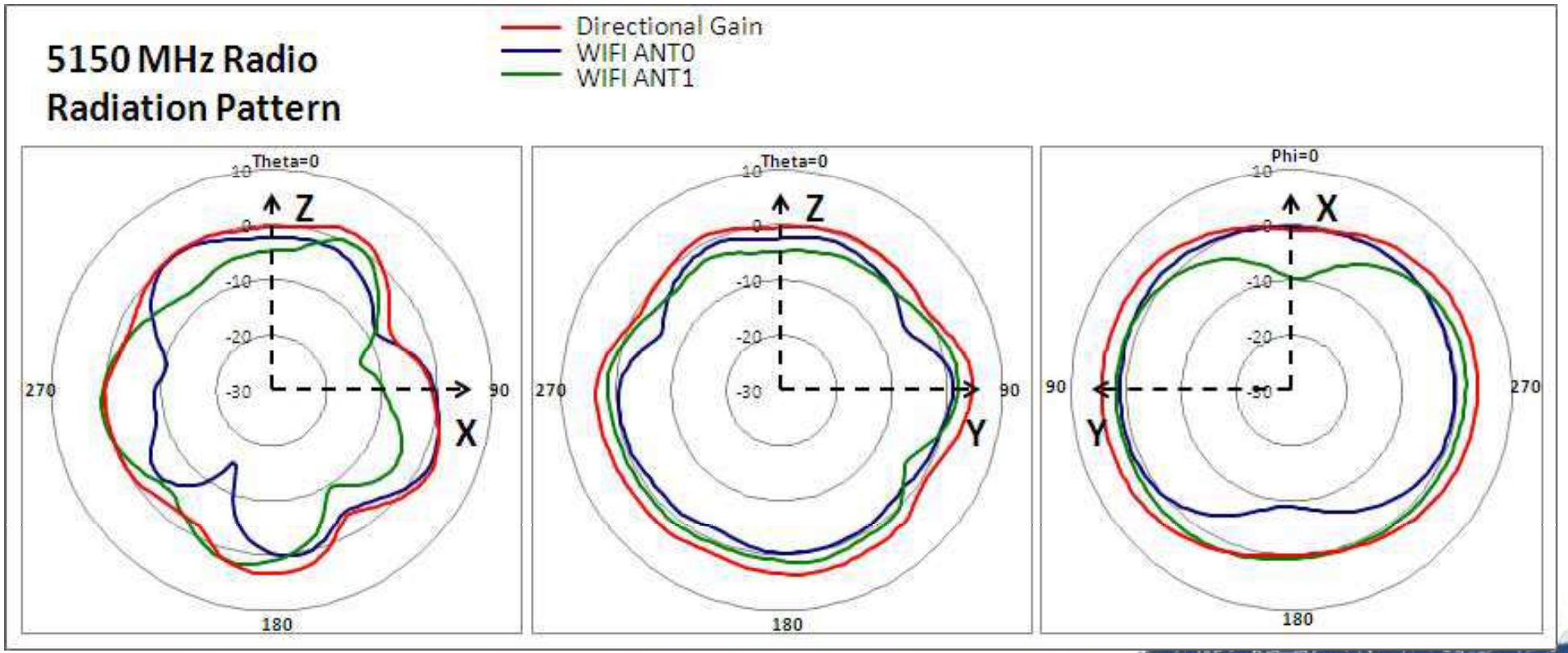
Radiation Pattern – WIFI ANT 2G Radio



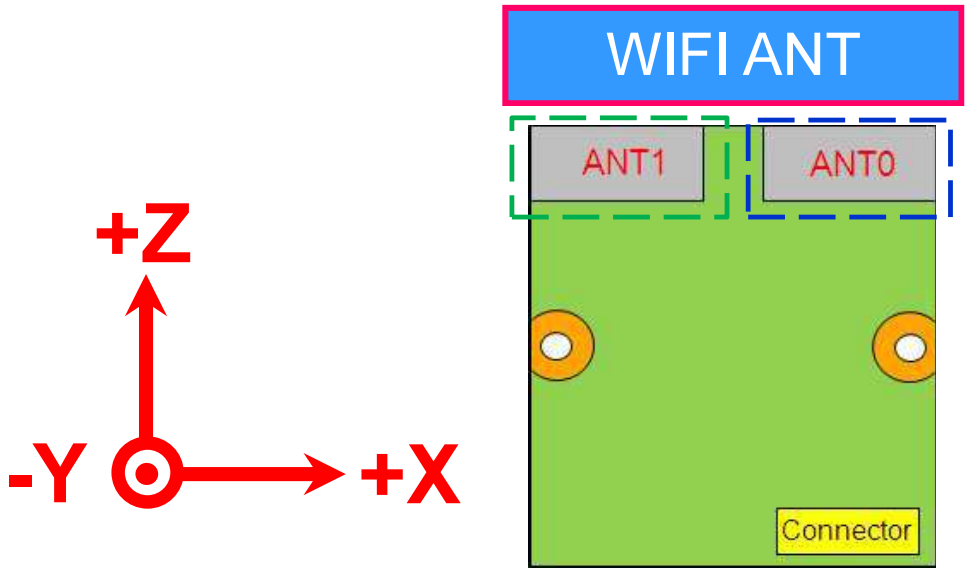


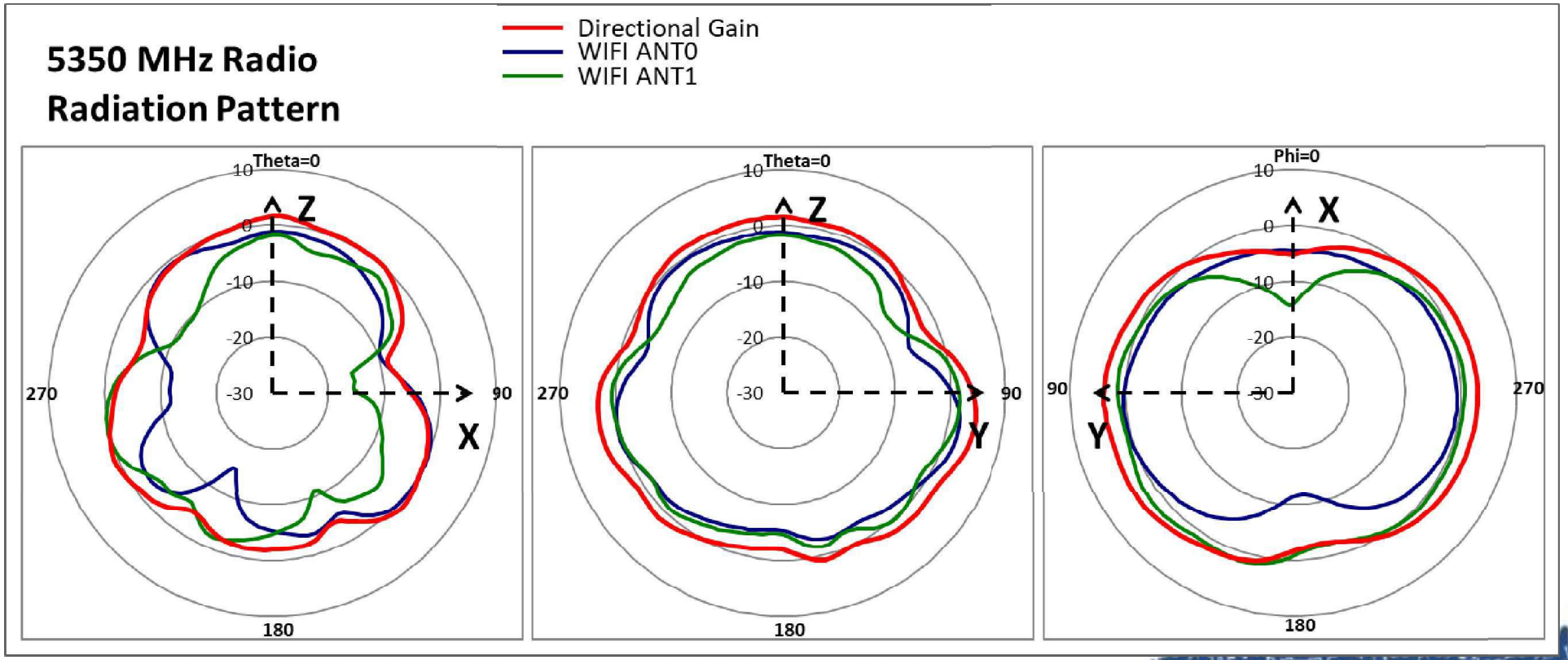
Radiation Pattern – WIFI ANT 5G Radio





Radiation Pattern – WIFI ANT 5G Radio





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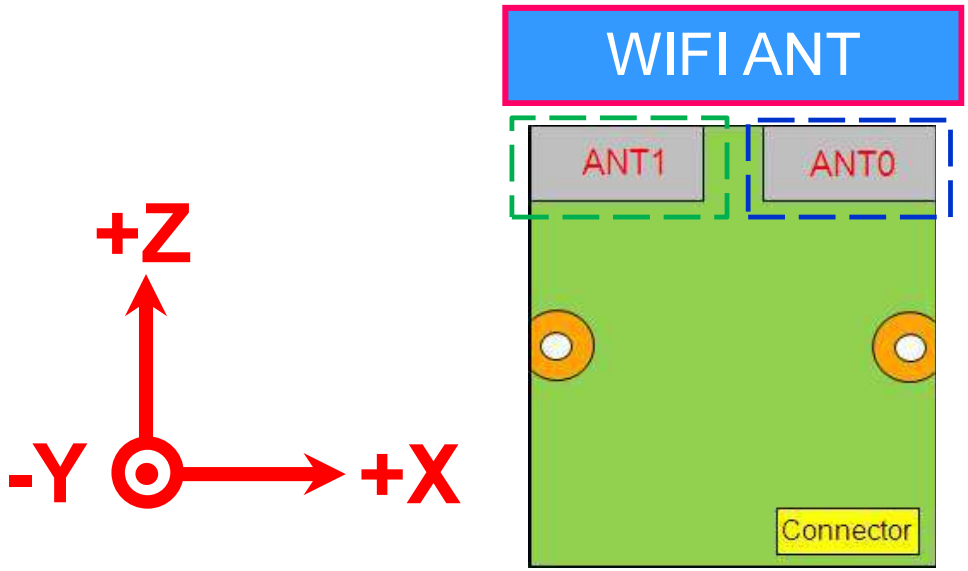

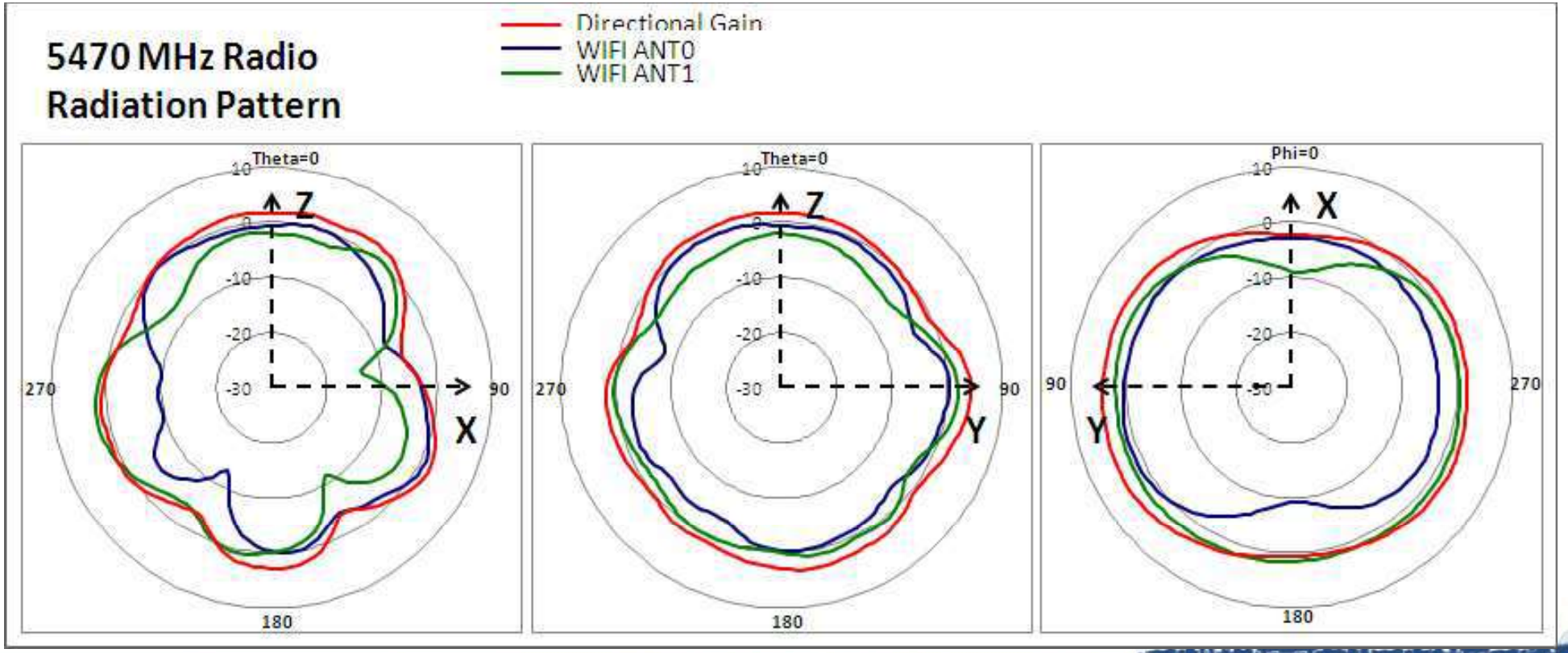

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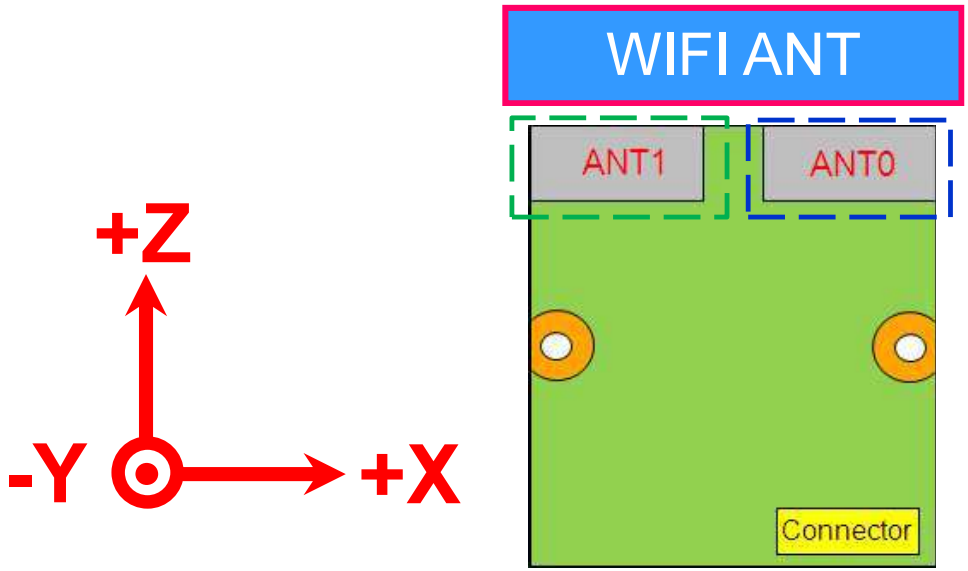

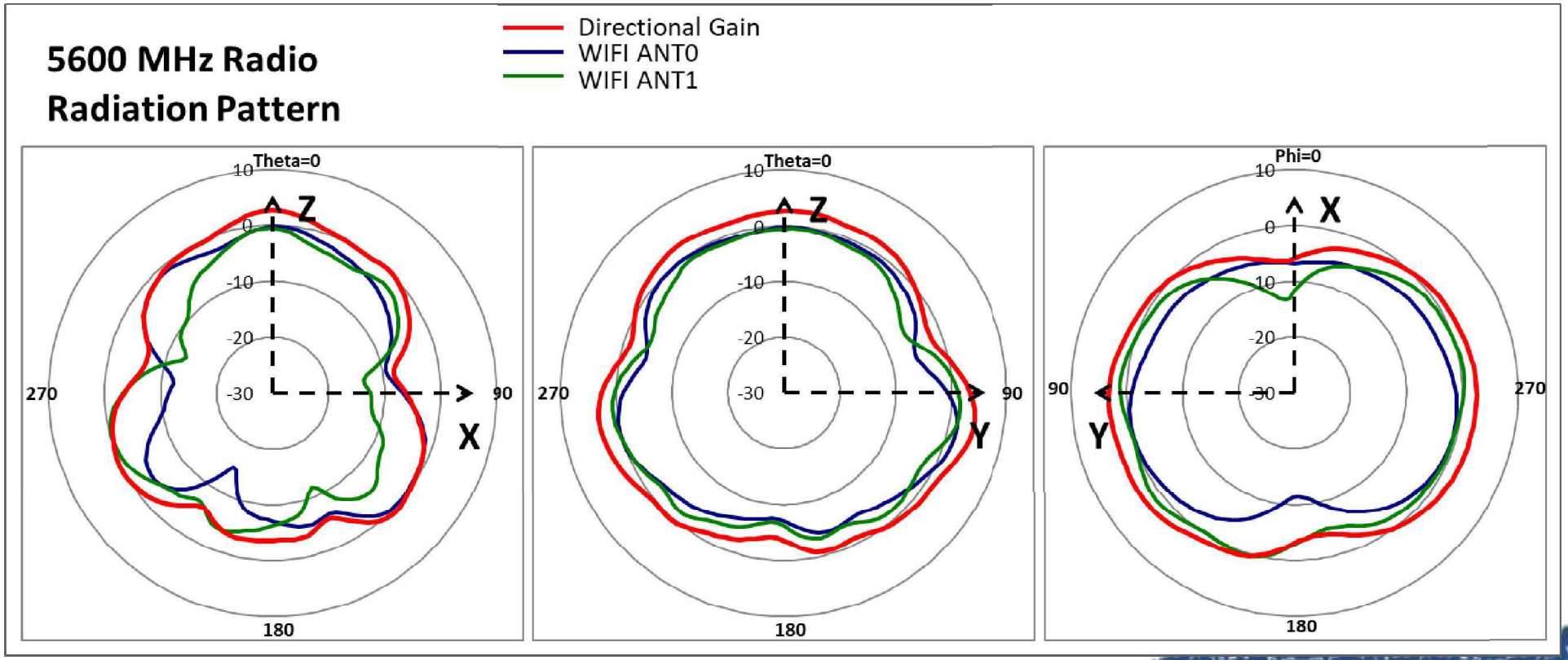

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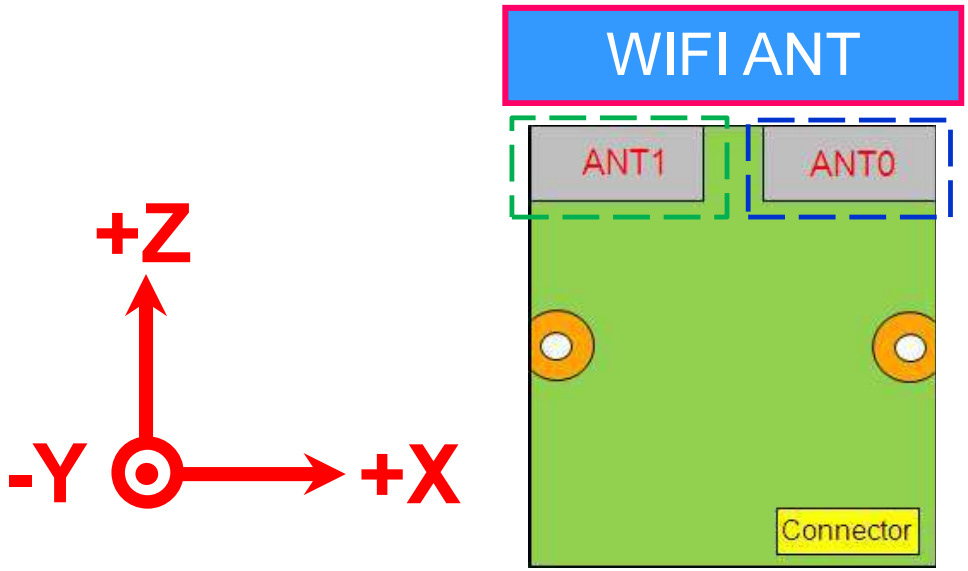

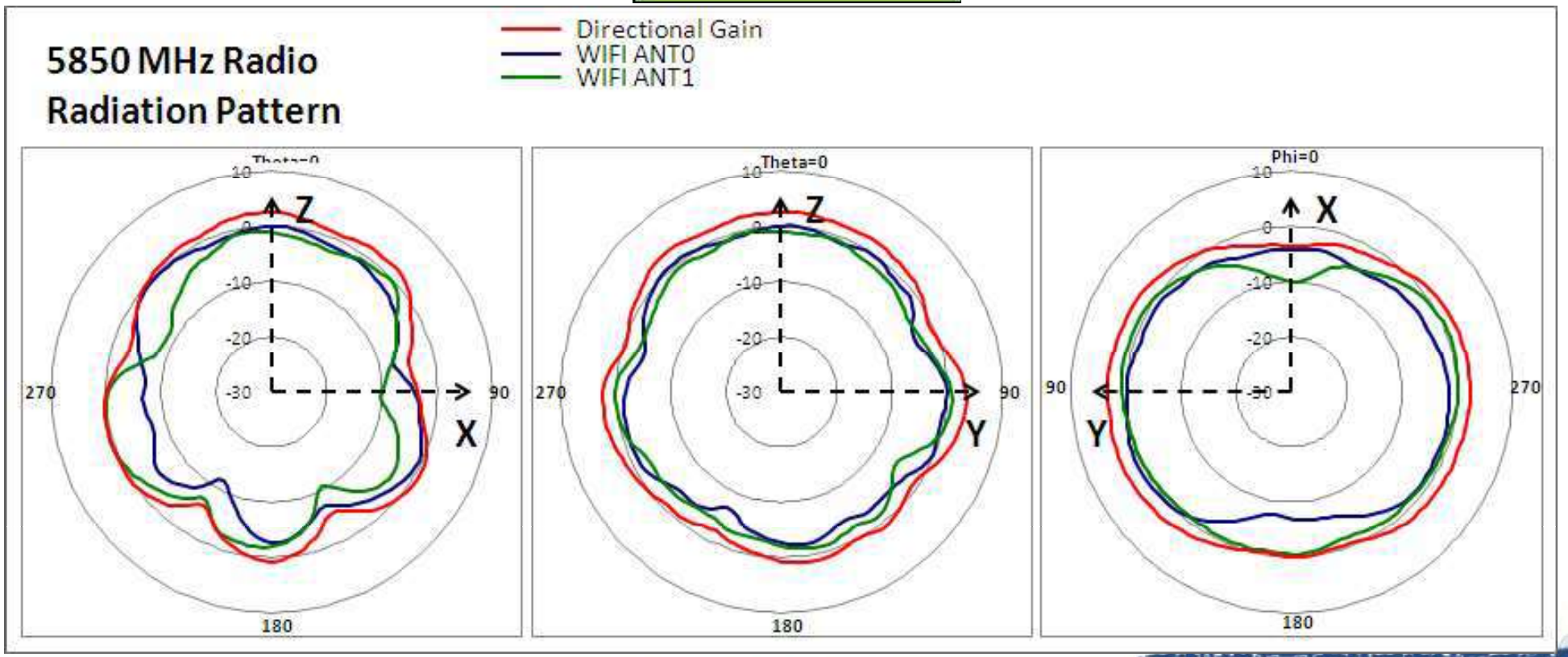

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