

B/S/H/ PED	SME_Antenna_Specification SME_Antenna_Specification	Doc.-ID: 60100004189275 Rev, Seq: A1 Date: 2022-11-03 CR-No.: E_000K CR-Rev: A
Specification	Template - Specification_PED_General_(Word_A4)	

International Designation: SME_Antenna_Specification

National Designation: SME_Antenna_Specification

Second International Designation:

Description: Template - Specification_PED_General_(Word_A4)

Owner: Seel, Bilel [GED-HWP6]

Document Number: 60100004189275

Rev, Seq: A1

CR-No.: E_000K

CR-Rev: A

Document Type: Specification

File Name: 60100004189275_01.docx

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1. Checker	Gerald Bollinger	GED-VS	14.12.2018
2. Checker	Ludwig Stöckl	GED-HWP6	13.12.2018
Responsible	Ludwig Stöckl	GED-HWP6	13.12.2018
Released	Matthias Rusch	GED-HWP6	08.01.2019
Created	Matthias Rusch	GED-HWP6	12.12.2018

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Abbreviations

SMM	Systemmaster
SMM_EXT_ST	Systemmaster Extended Stamp
SME	Systemmaster Extended

List of changes:

Version	Change	Name	Date
A1	Creation	Rusch	12.12.2018

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1 Referenced documents

Ref.	Description	Document name/ No.	Lang.	Review status	Responsible
1.					
2.					
3.					
4.					
5.					

2 Scope of the document

This document specifies the two PCB antennas of the Systemmaster Basic

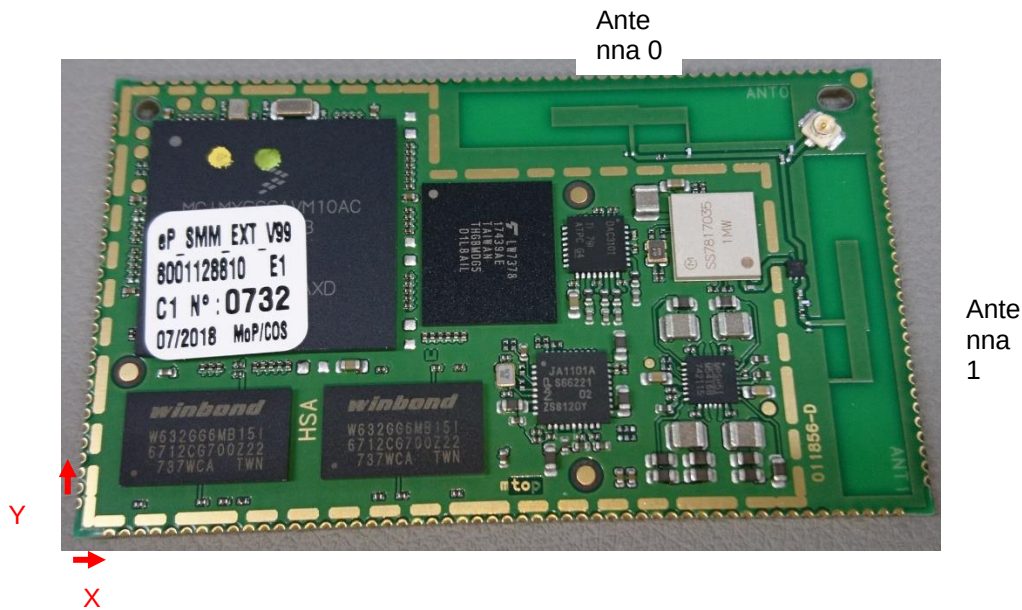
3 Contacts

Division	Name	Phone	Email
BSH	Ludwig Stöckl	+49 941 8994 2447	Ludwig.Stoeckl@bshg.com
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4 Antennas

4.1 Placement on board



4.2 Specifications valid for each antenna

Antenna type:	Dual band PCB
Material antenna:	Copper
Material PCB:	FR4
Colour solder mask:	Green
Operation Temperature:	0°C to +85°C
Impedance:	50 Ohm
Frequency range:	2400 MHz to 2484 MHz and 5180 MHz to 5825MHz
Connectors:	No external connection to antennas possible
Polarization:	according x marking in Figure 1: Layout and Figure 3: Layout , depends on mounting position in household device
Radiation pattern:	Omnidirectional

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4.3 Antenna 0

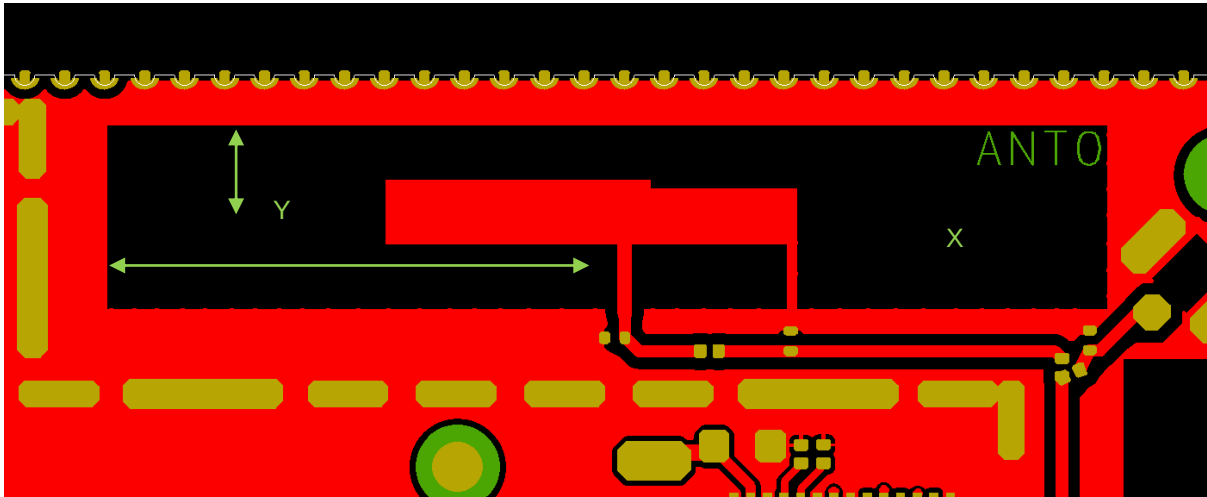


Figure 1: Layout antenna 0

Dimension: X = 30.0 mm Y = 5.5 mm

Max. Gain in 2.4 GHz Band: 3.45 dBi

Max. Gain in 5 GHz Band: 5.63 dBi

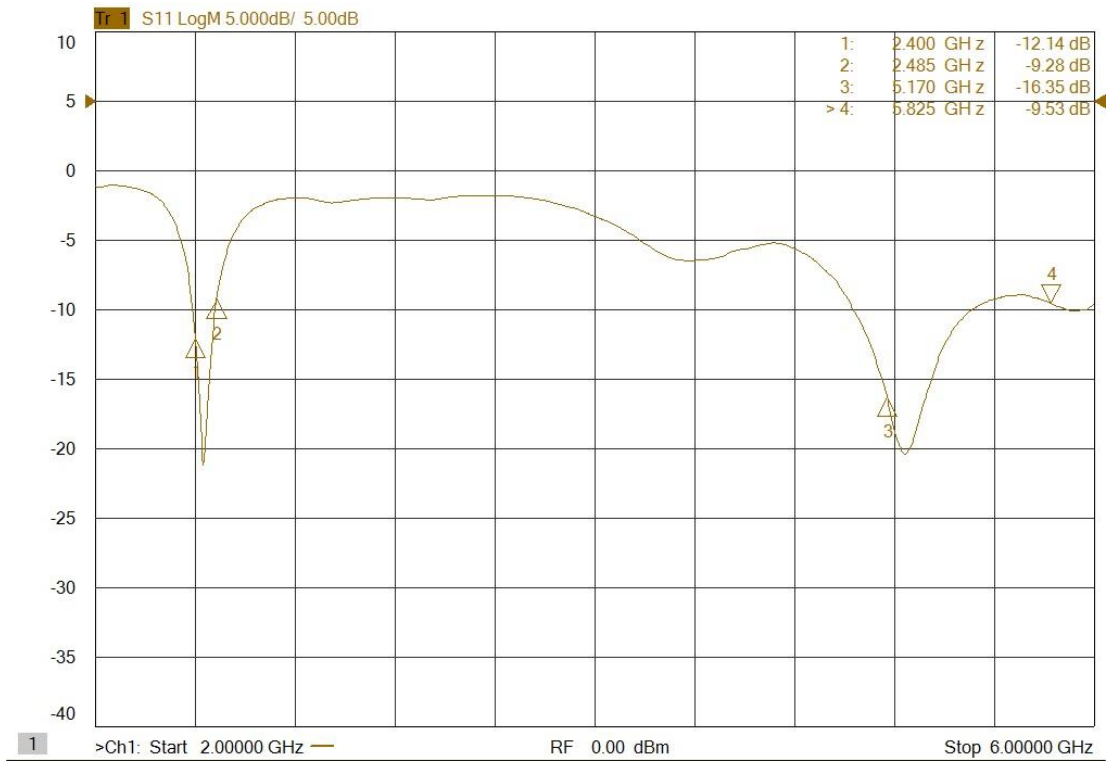


Figure 2: Returnloss of antenna 0

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4.4 Antenna 1

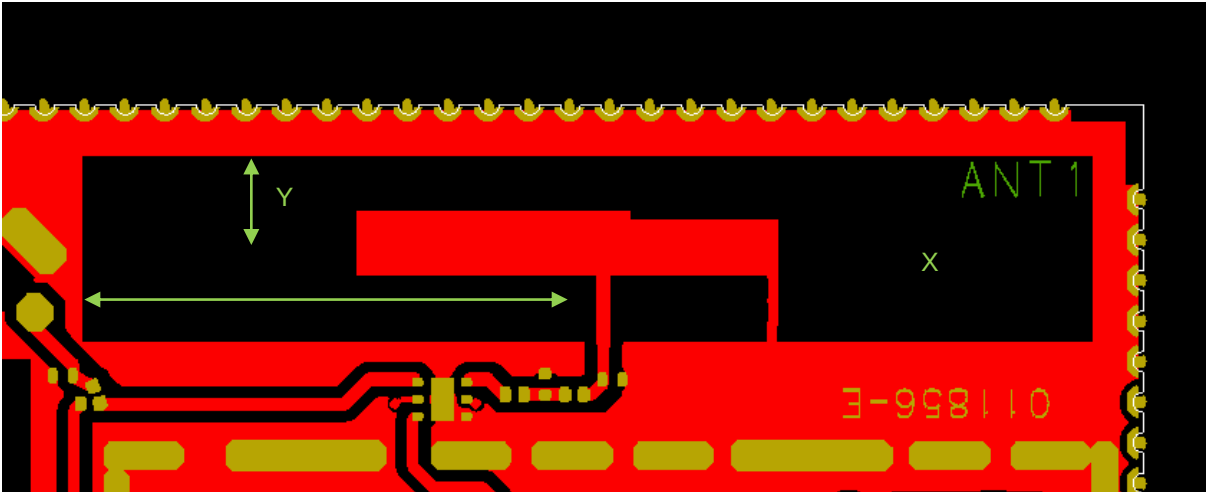


Figure 3: Layout antenna 1

Dimension: X =30.0 mm Y = 5.5 mm

Max. Gain in 2.4 GHz Band: 3.30 dBi

Max. Gain in 5 GHz Band: 6.11 dBi

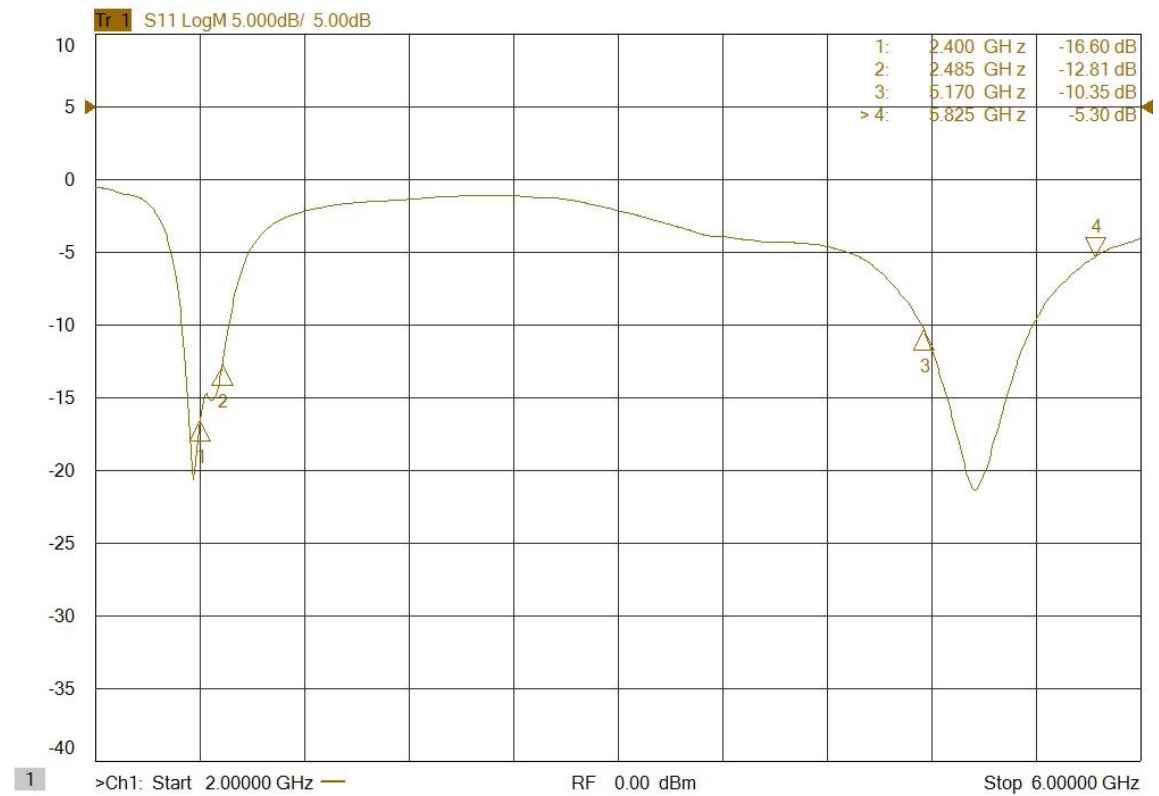


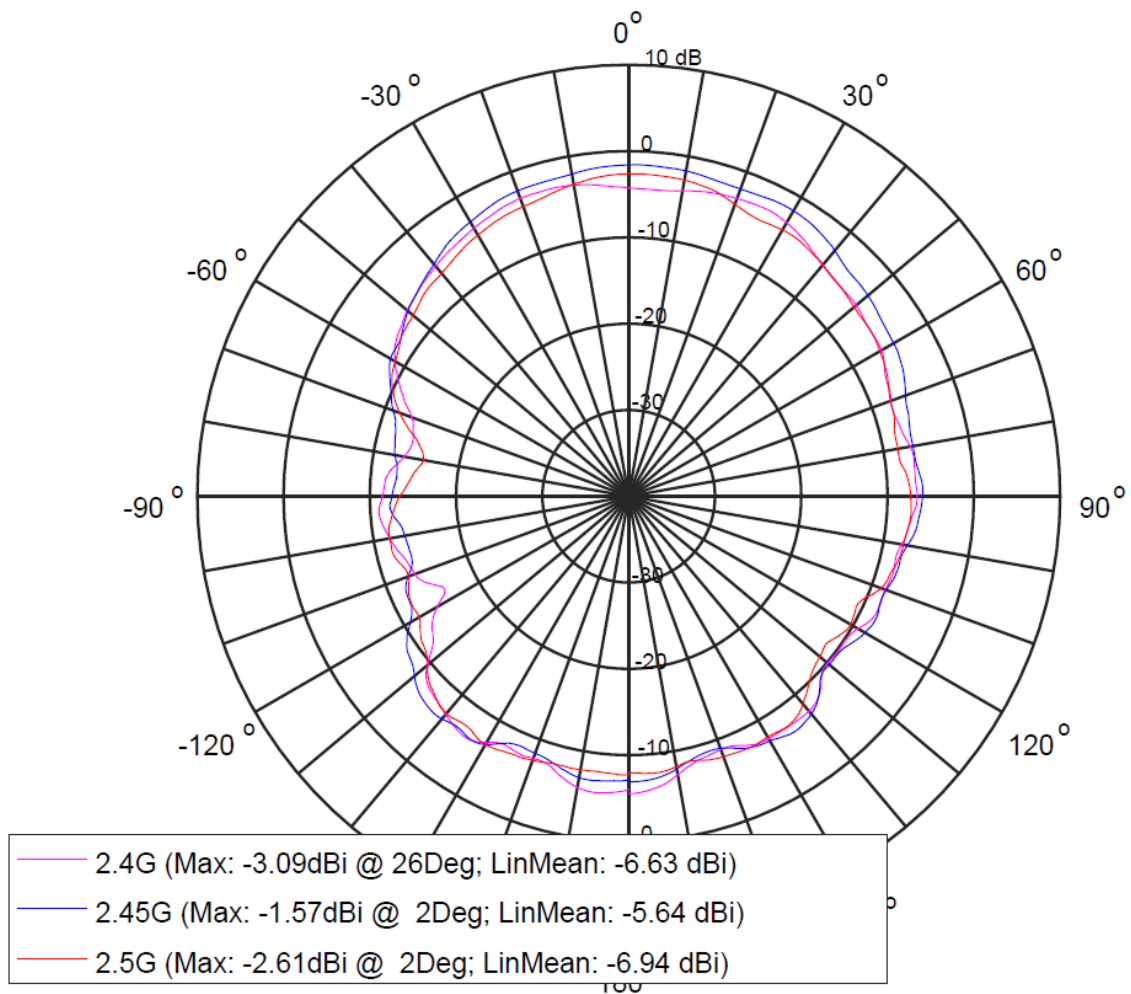
Figure 4: Returnloss of antenna 1

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5 Appendix: Radiation Patterns:

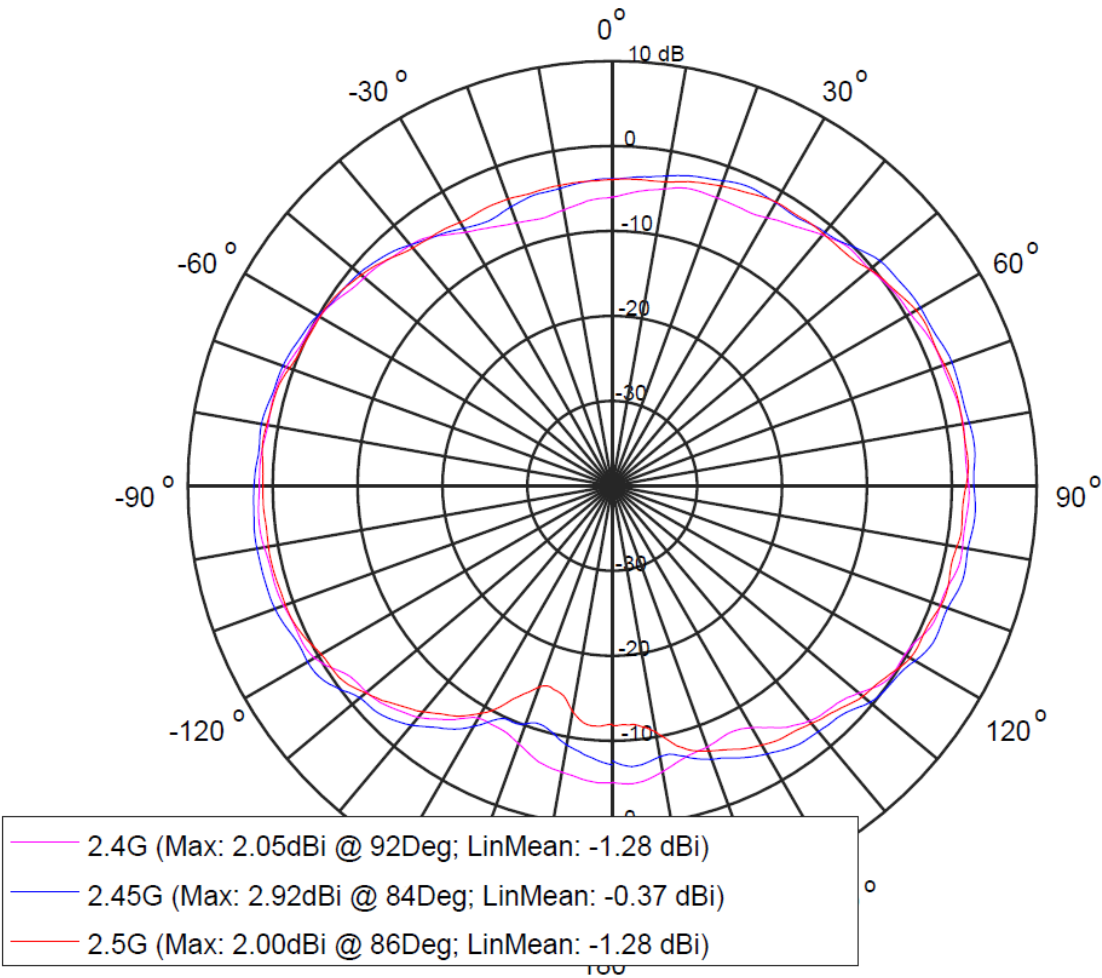
5.1 Antenna 0 - 2,4GHz Band:

SMM EXT C1 ASK ANT0 XY 2,4GHz Band



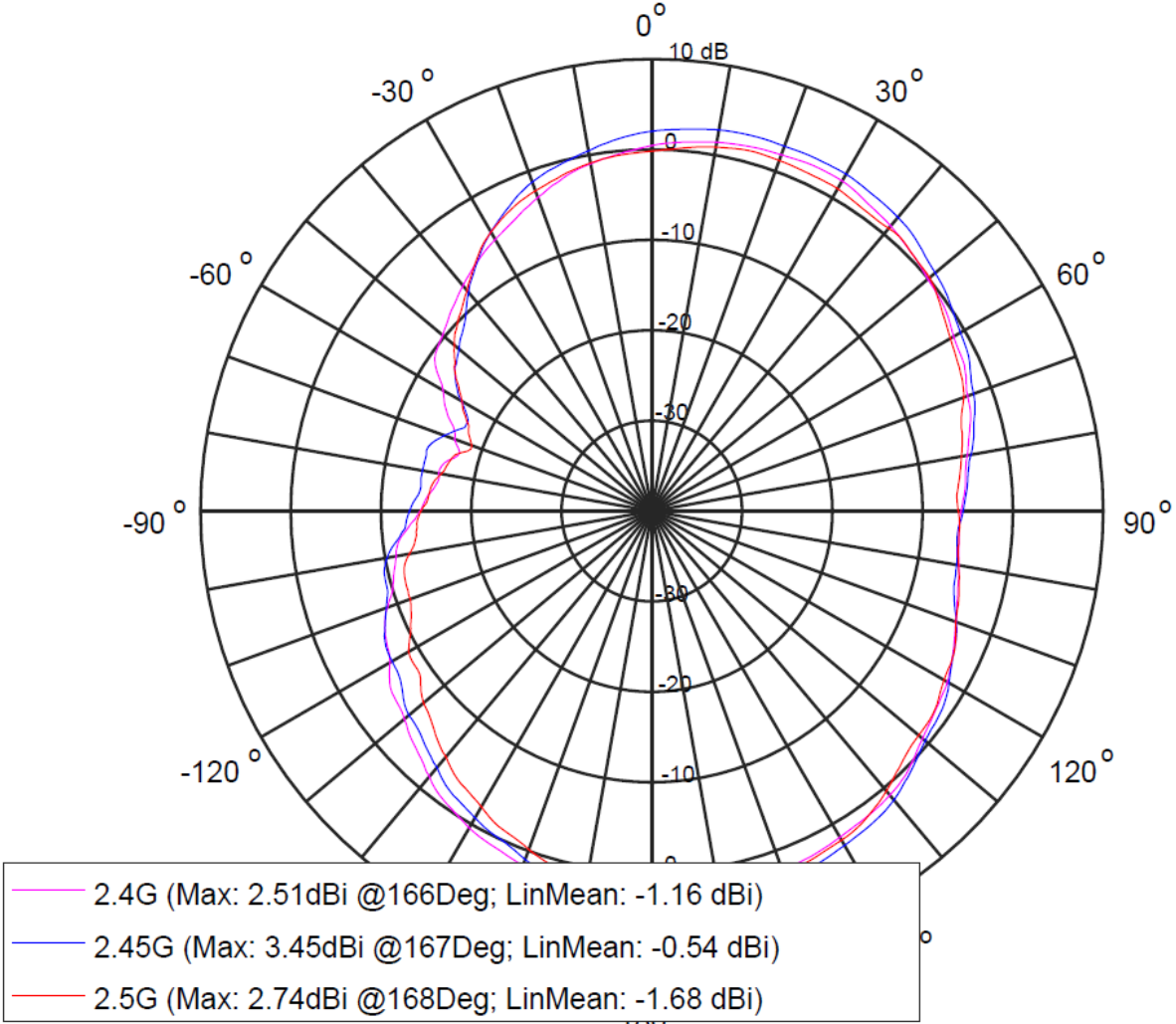
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SMM EXT C1 ASK ANT0 XZ 2,4GHz Band



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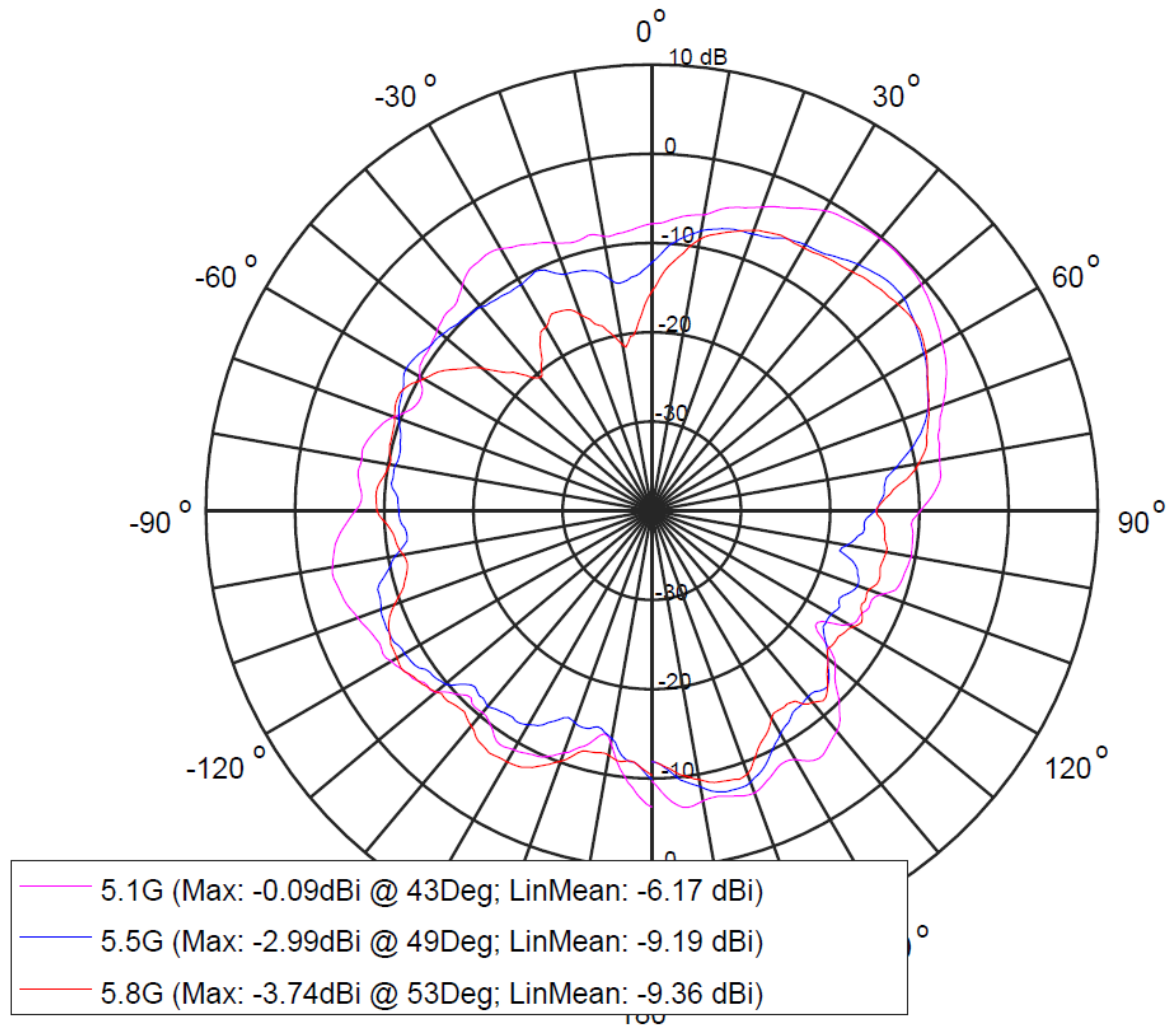
SMM EXT C1 ASK ANT0 YZ 2,4GHz Band



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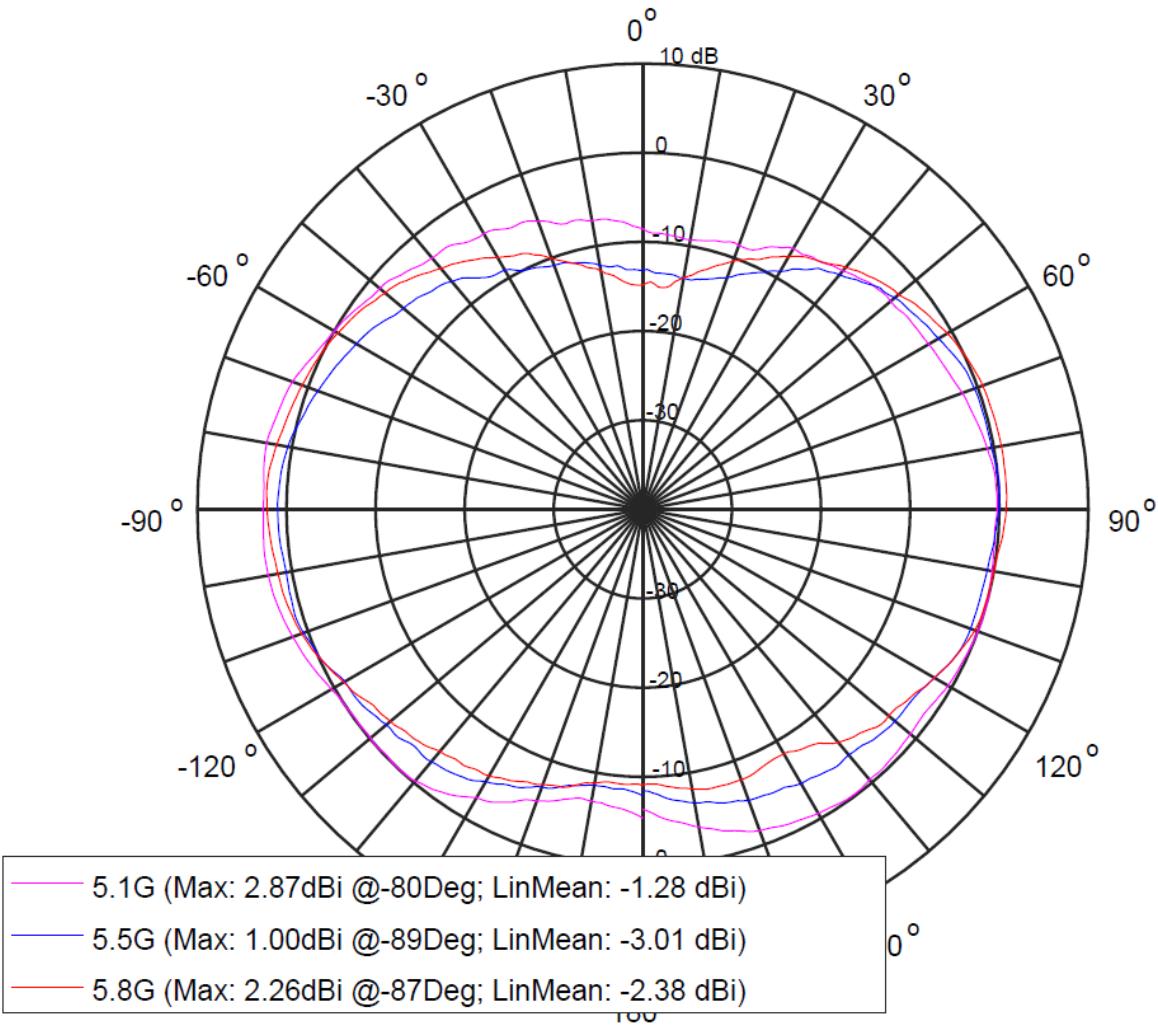
5.2 Antenna 0 - 5GHz Band:

SMM EXT C1 ASK ANT0 XY 5GHz Band



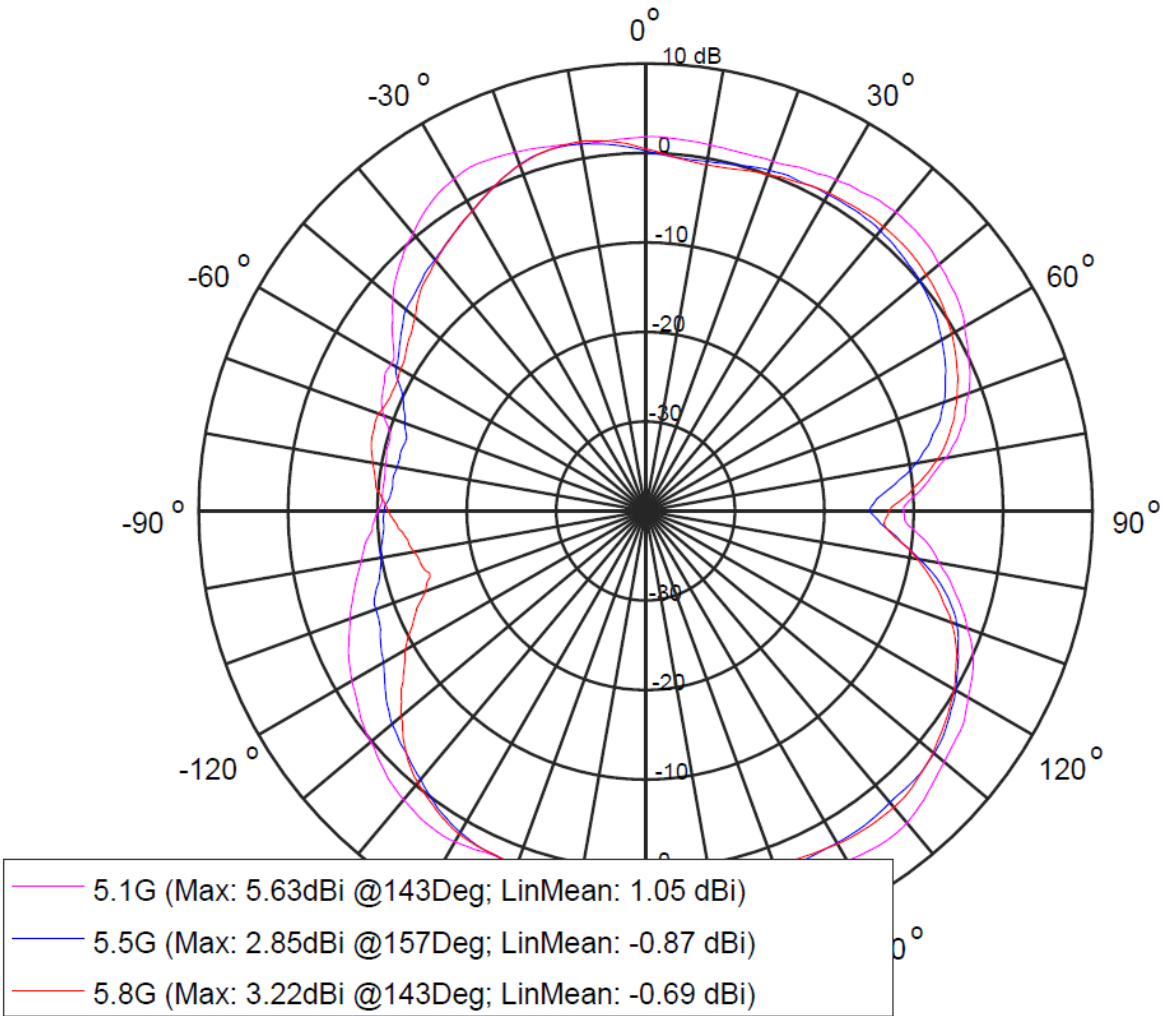
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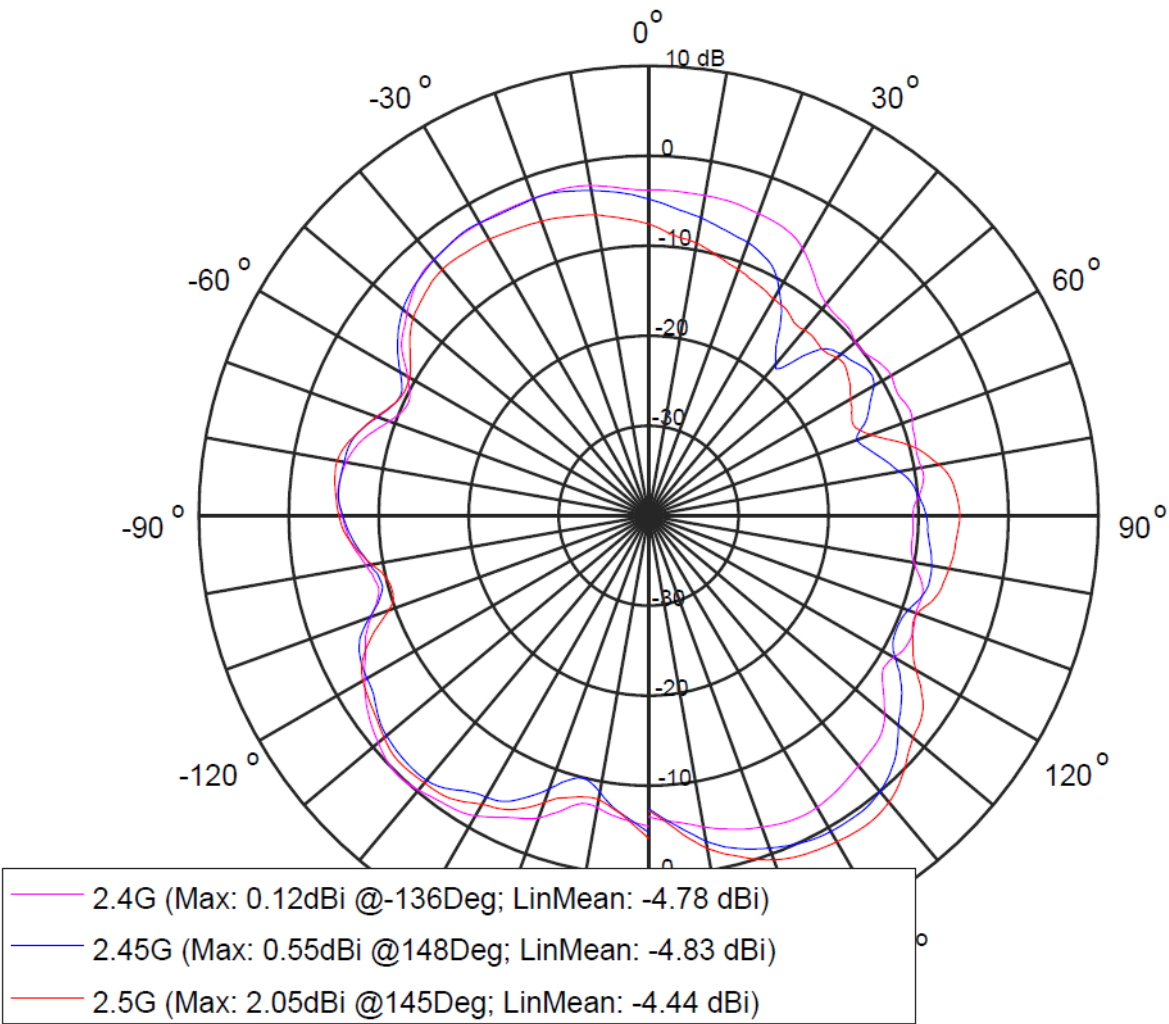
SMM EXT C1 ASK ANT0 YZ 5GHz Band



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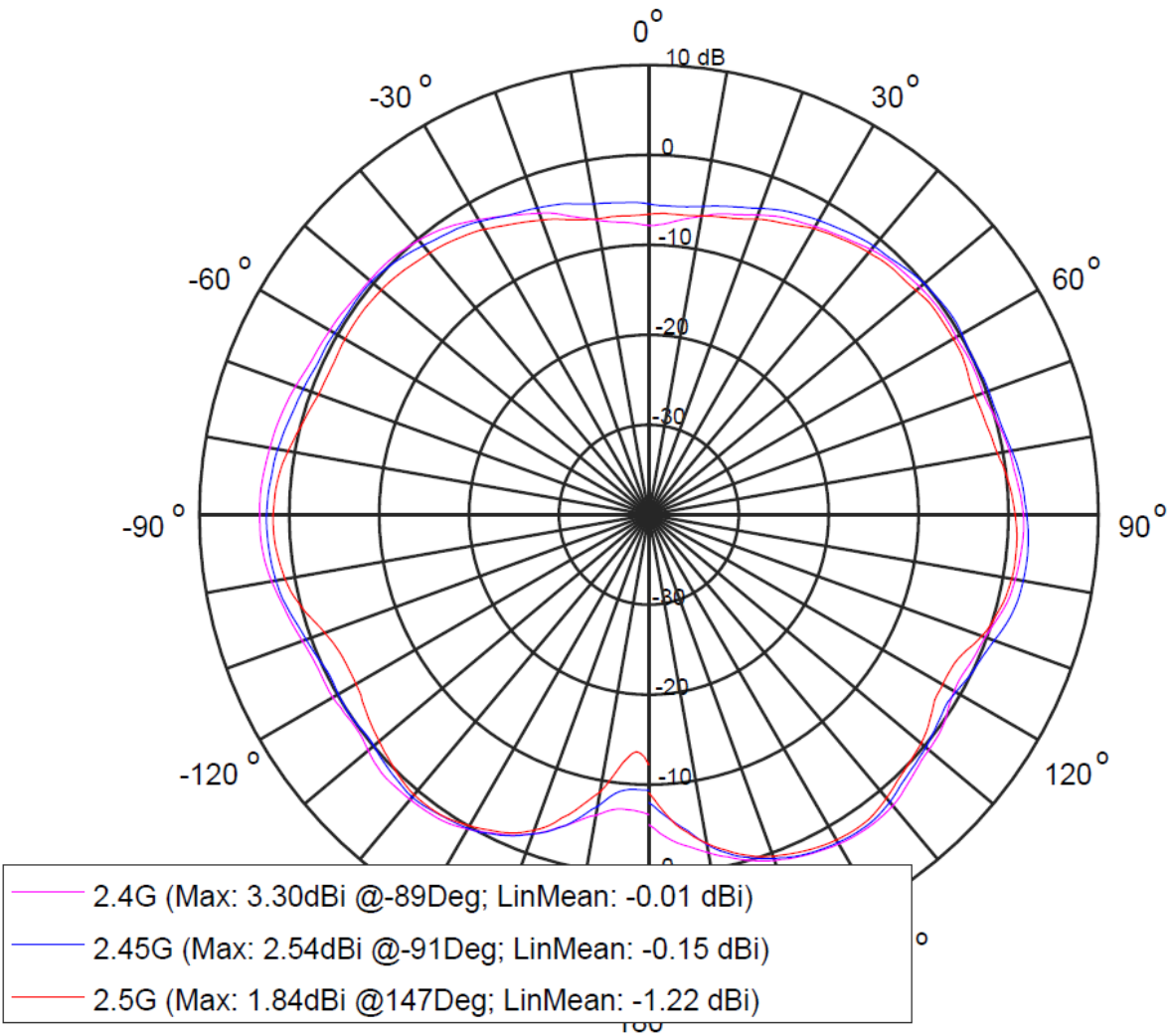
5.3 Antenna 1 - 2,4GHz Band:

SMM EXT C1 ASK ANT1 XY 2,4GHz Band



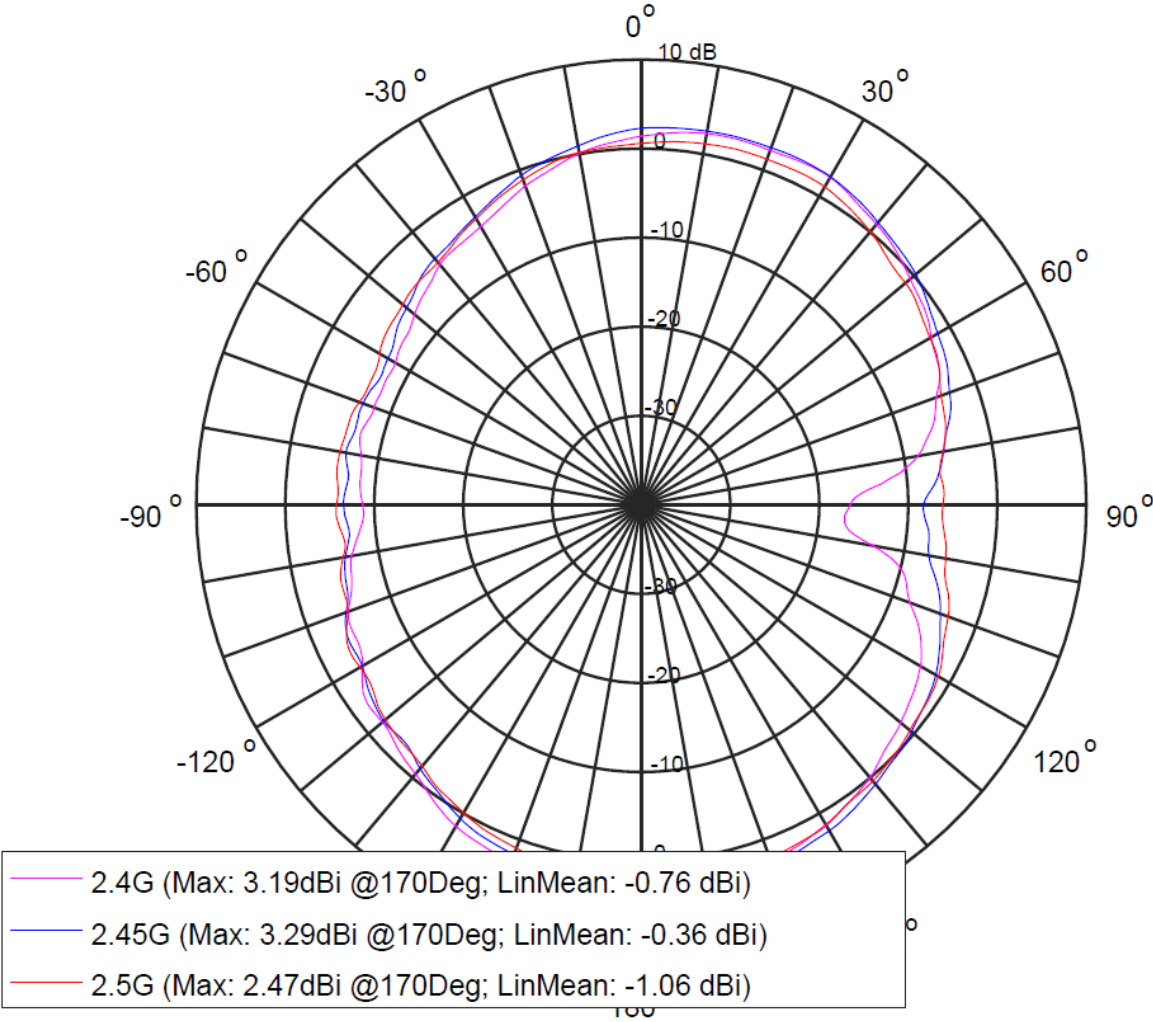
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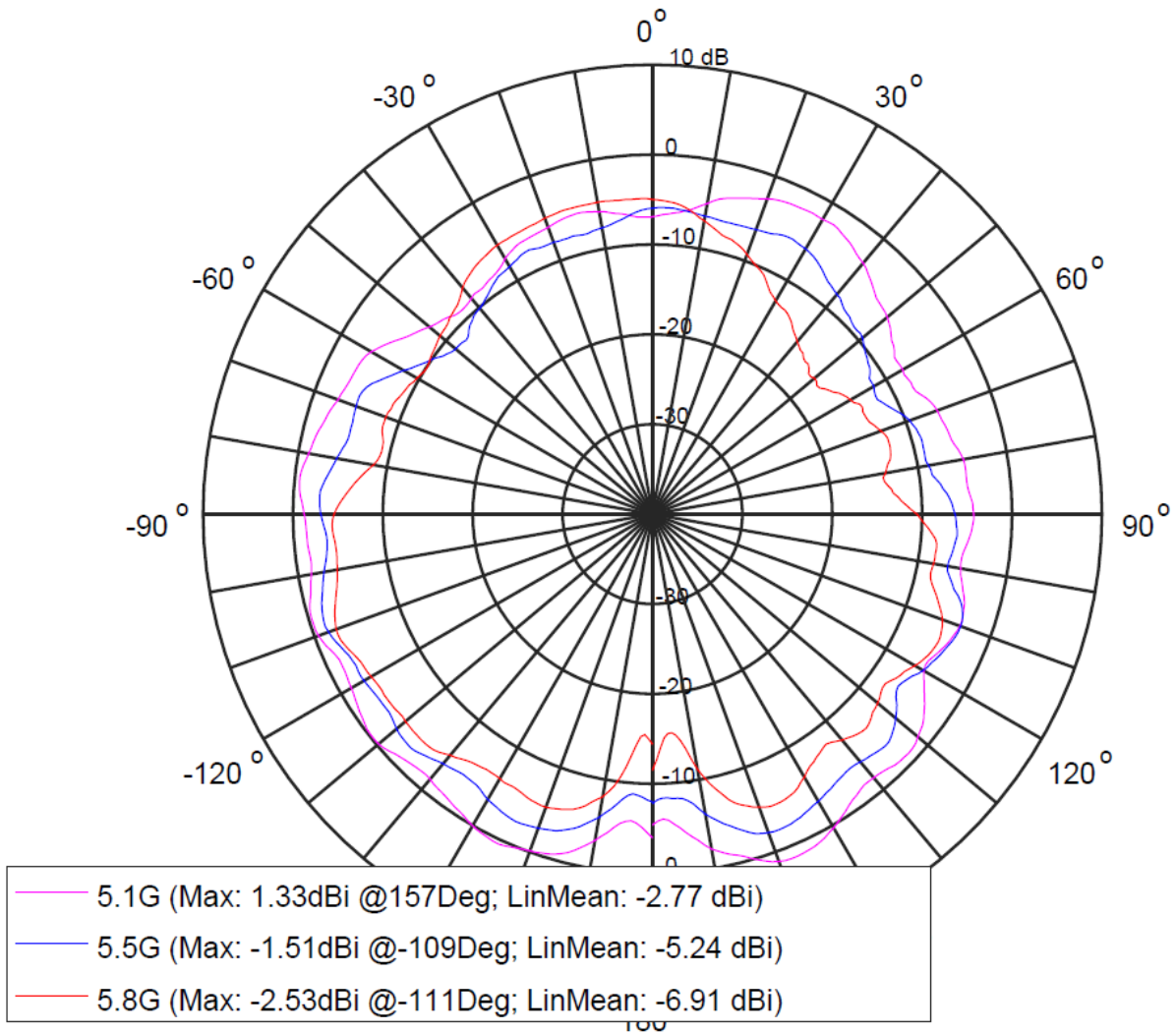
SMM EXT C1 ASK ANT1 YZ 2,4GHz Band



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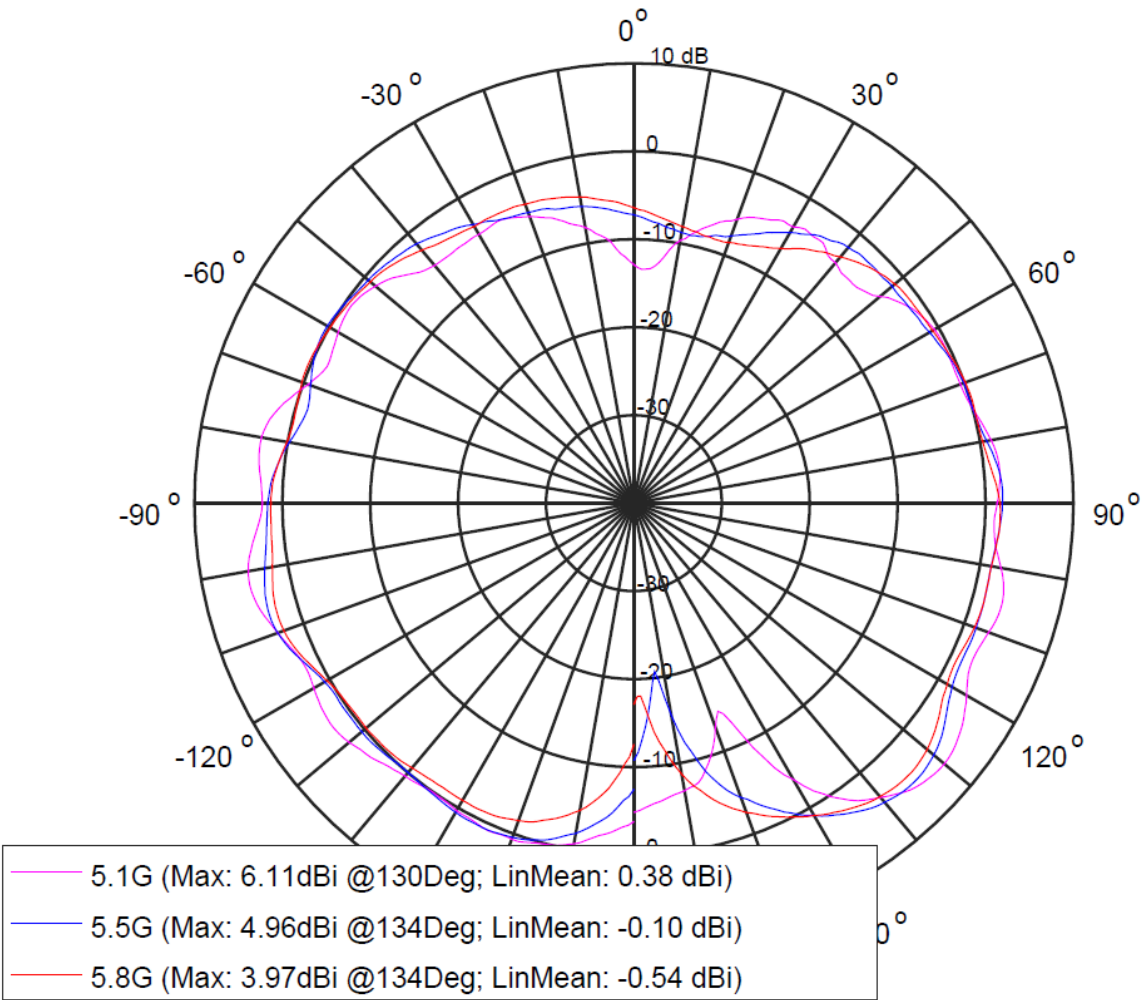
5.4 Antenna 1 - 5GHz Band:

SMM EXT C1 ASK ANT1 XY 5GHz Band



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