

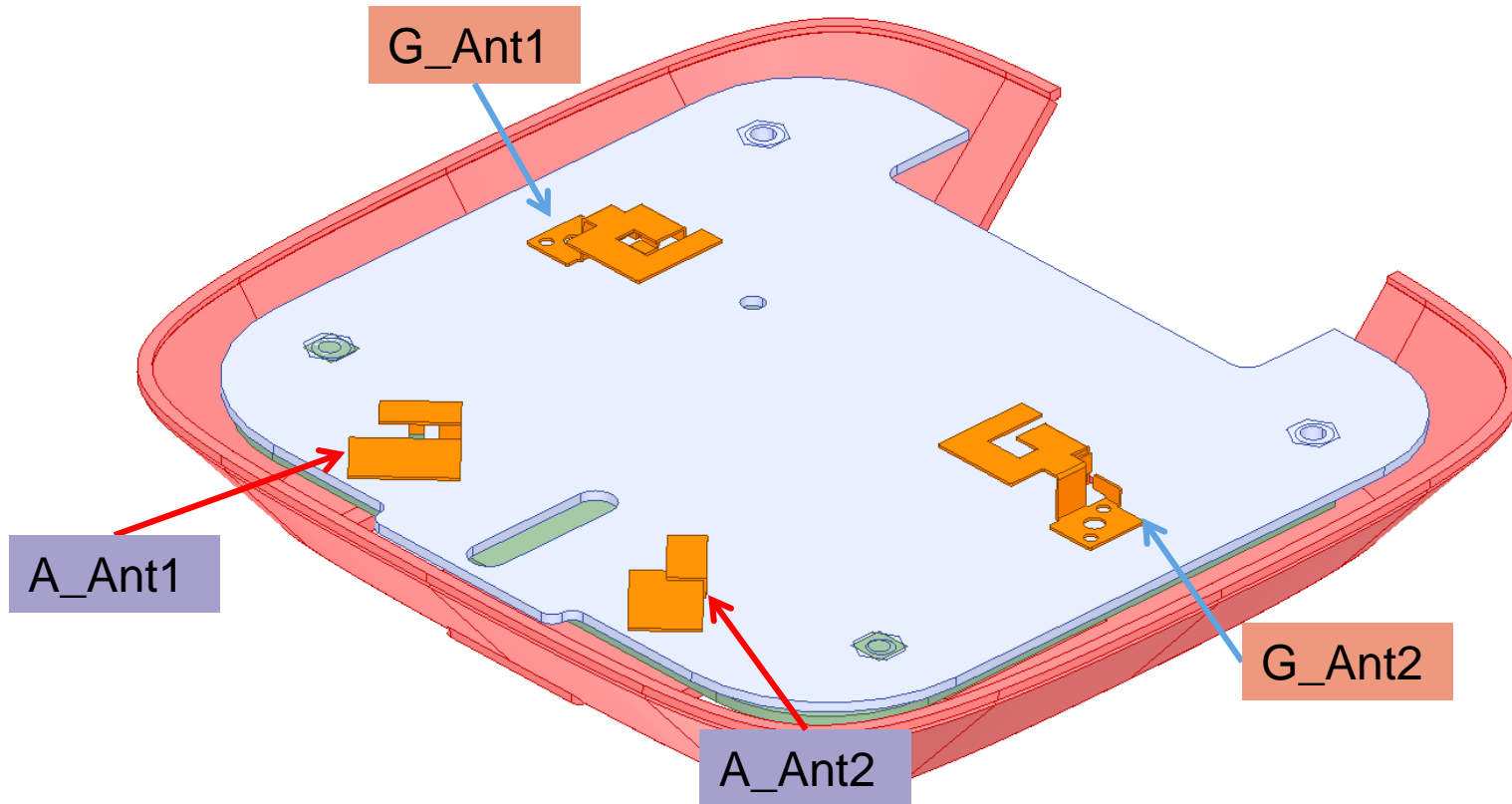
Cambium XV2-21X Antenna Test Report Vt00b

DVT Report



Antenna Team
August 8, 2022

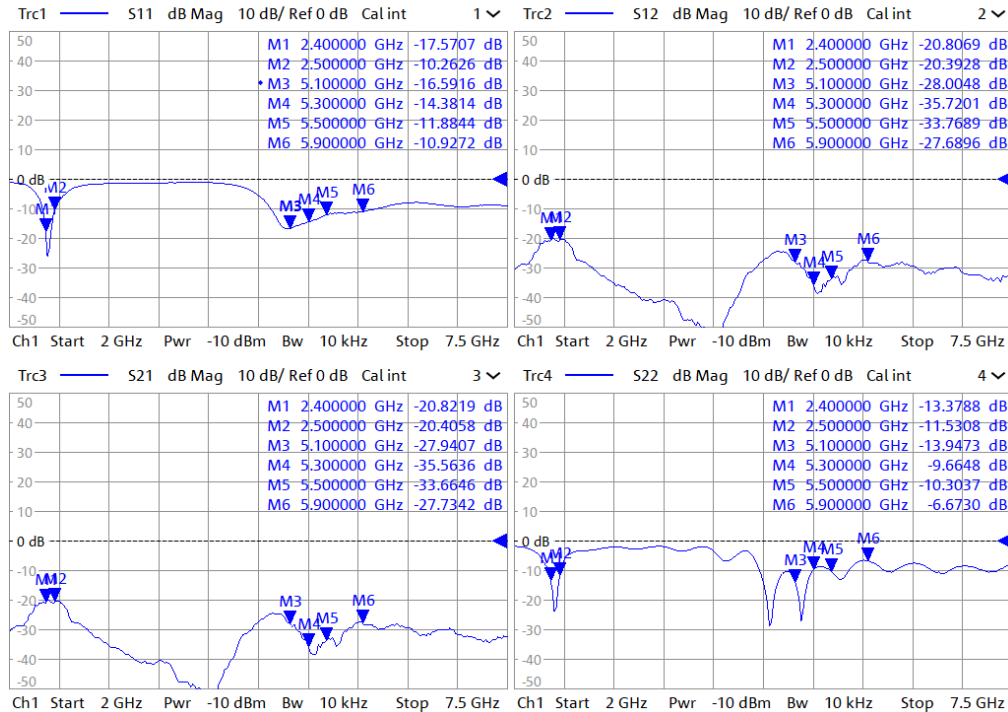
Antenna Set Definition



G Band Antenna Return Loss & Isolation

G_Ant2

5/11/2022 9:58:22 AM
1334.3330K44-101440-be

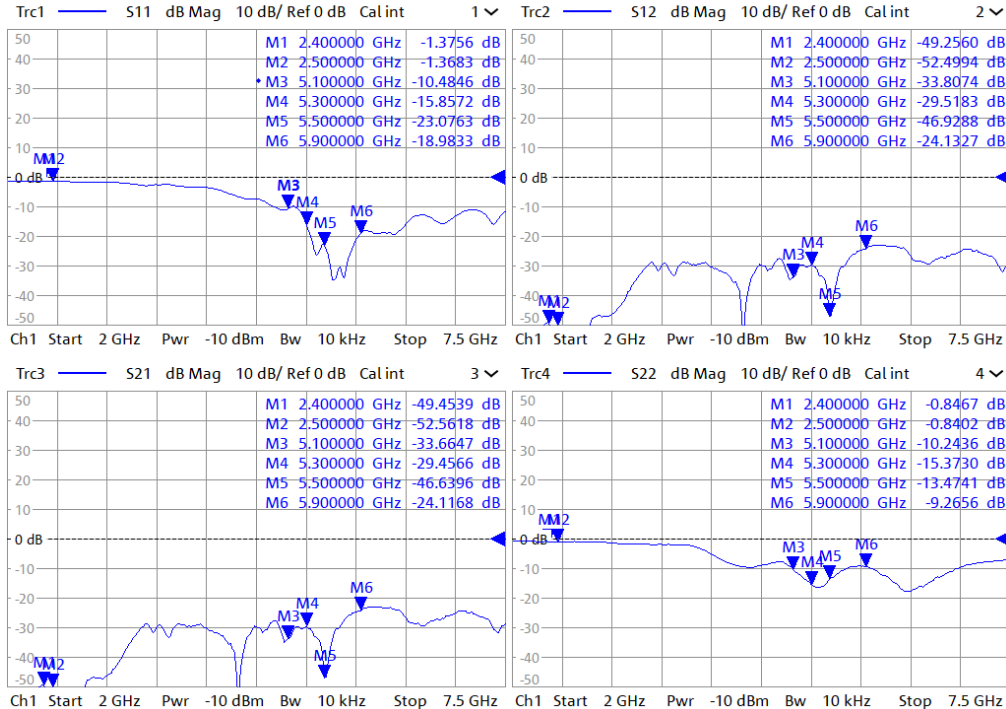


G_Ant1

A Band Antenna Return Loss & Isolation

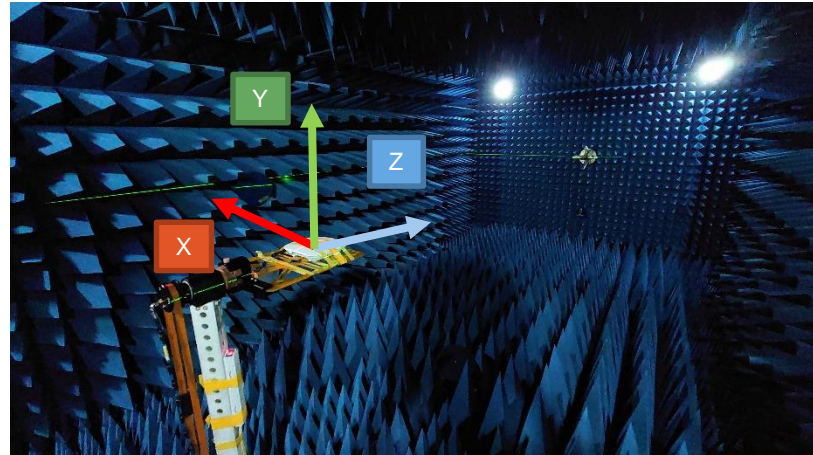
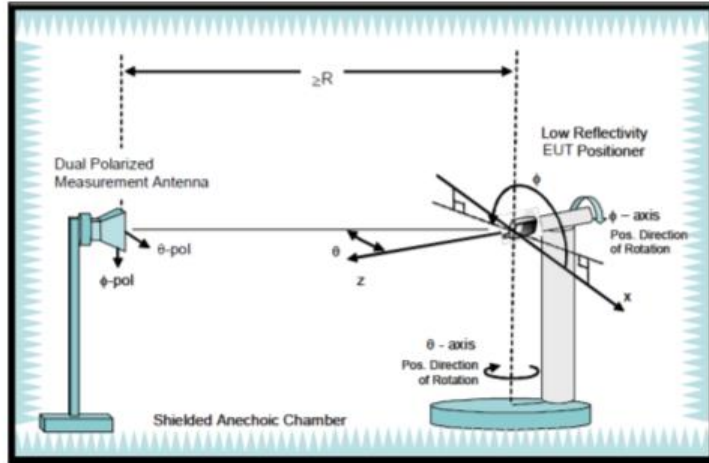
A_Ant2

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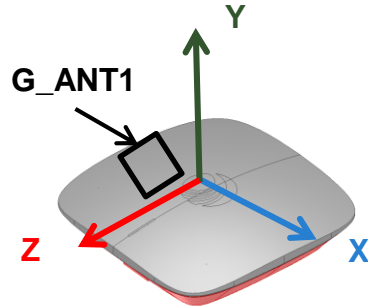
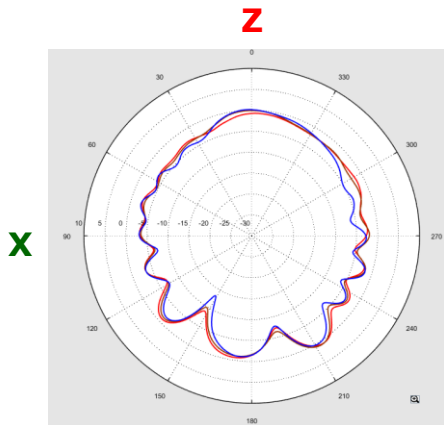


A_Ant1

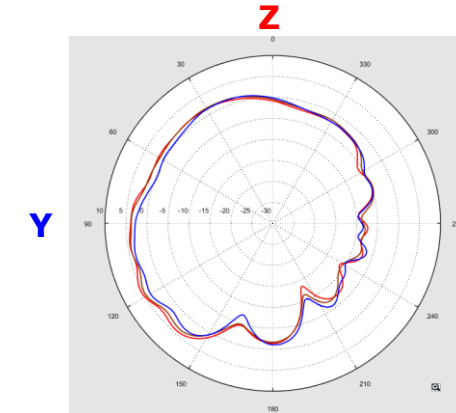
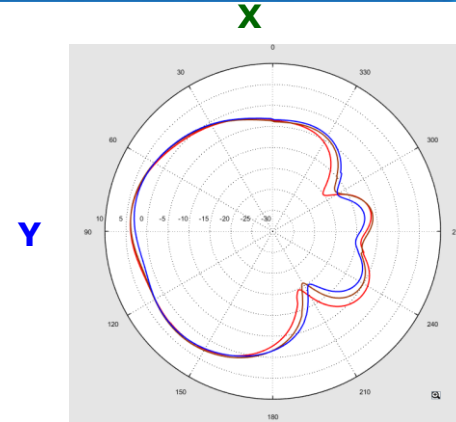
Antenna Coordinate System Definition



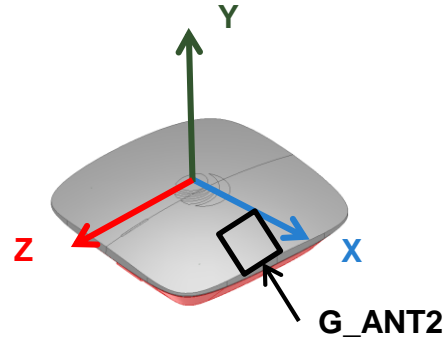
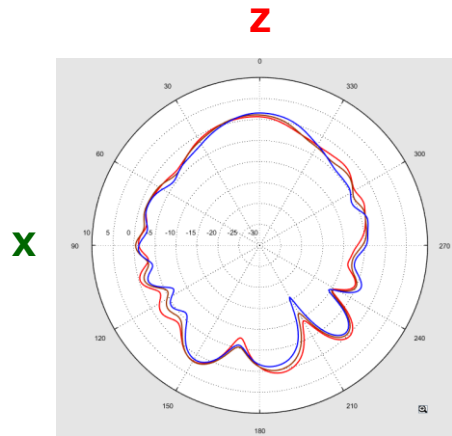
G_ANT1 Gain Total (dBi) Pattern



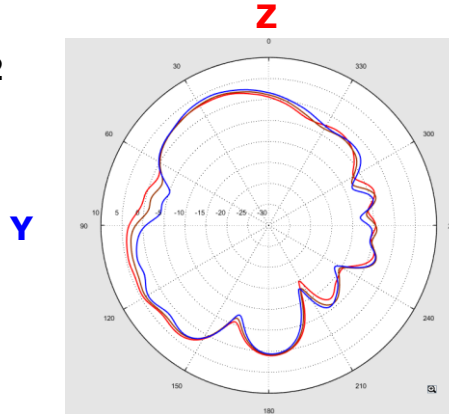
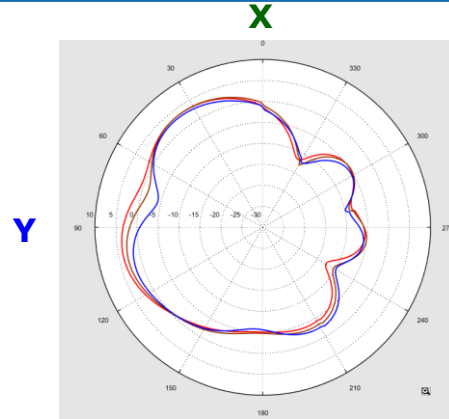
2400MHz — (red line)
2450MHz — (brown line)
2500MHz — (blue line)



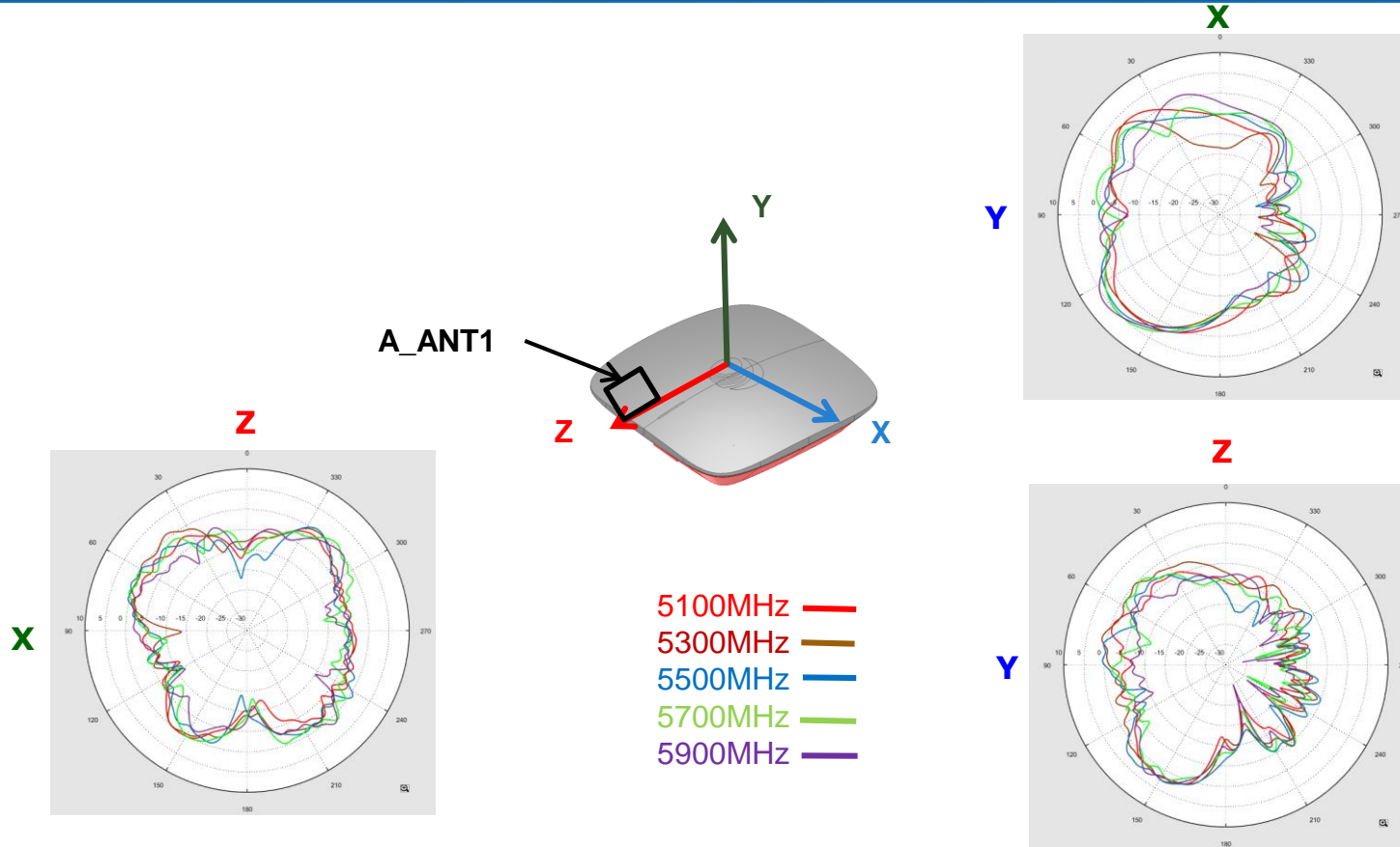
G_ANT2 Gain Total (dBi) Pattern



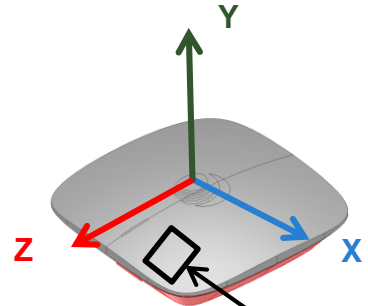
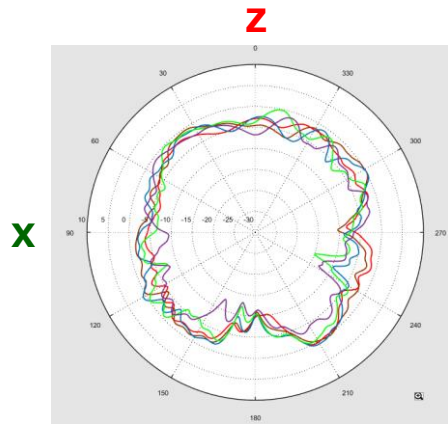
2400MHz ———
2450MHz ———
2500MHz ———



A_ANT1 Gain Total (dBi) Pattern

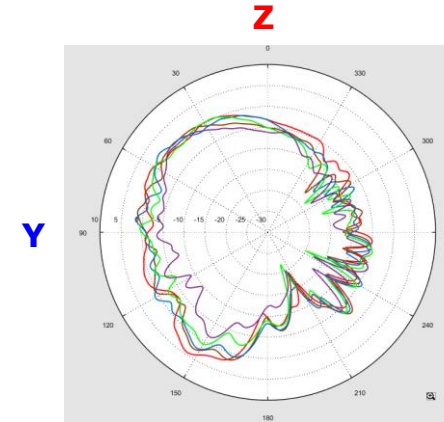
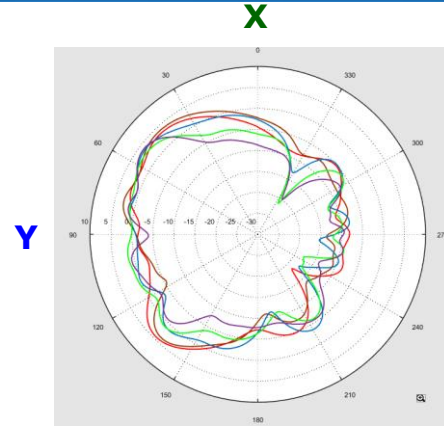


A_ANT2 Gain Total (dBi) Pattern

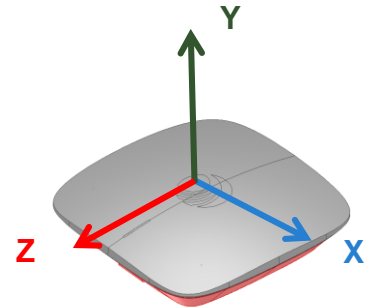
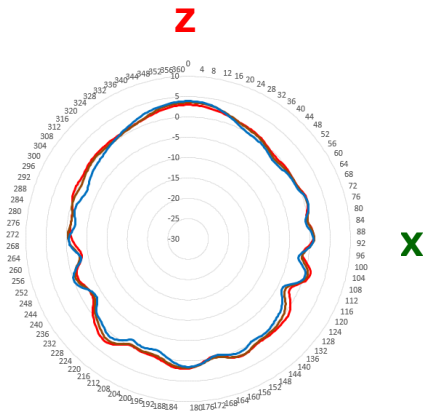


A_ANT2

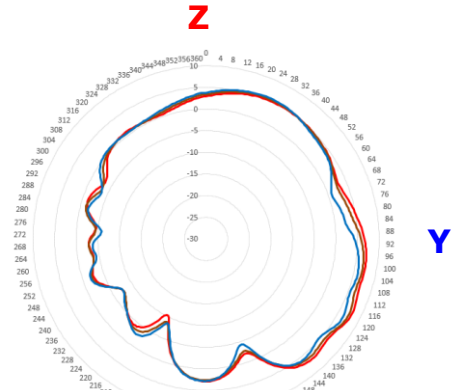
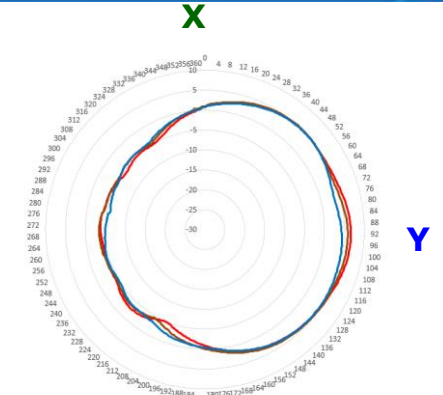
- 5100MHz —
- 5300MHz —
- 5500MHz —
- 5700MHz —
- 5900MHz —



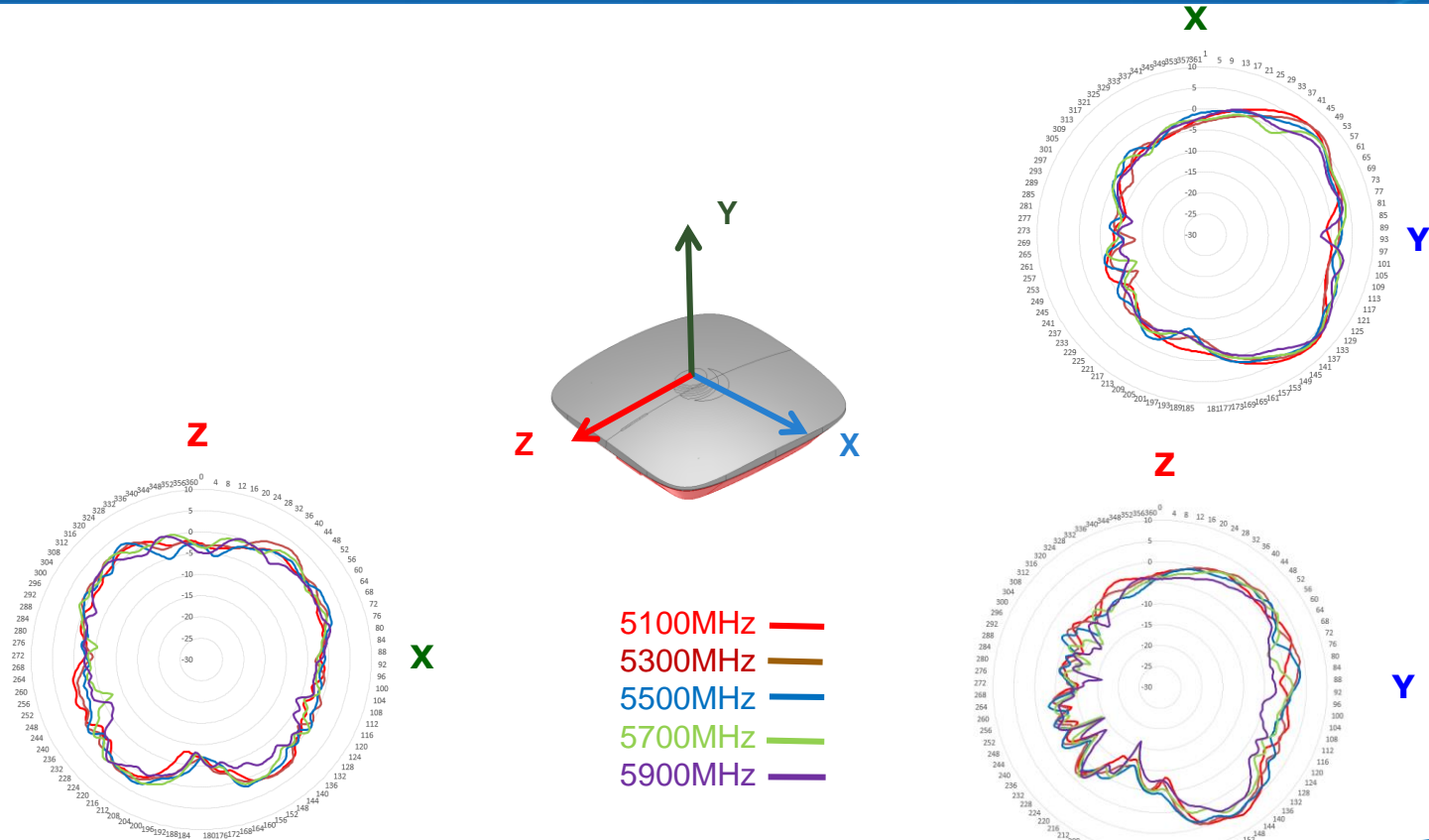
G_ANT Composite Gain Total (dBi) Pattern



- 2400MHz —
- 2450MHz —
- 2500MHz —



A_ANT Composite Gain Total (dBi) Pattern



Antenna Efficiency & Peak Gain – G Band

WIFI G Band Antenna Efficiency (%)			
Frequency (MHz)	2400	2450	2500
G_ANT1 (Cable Loss : 0.6dB)	83.7	79.3	77.4
G_ANT2 (Cable Loss : 0.35dB)	80.1	77.4	66.4

WIFI G Band Antenna Peak Gain (dBi)			
Frequency (MHz)	2400	2450	2500
G_ANT1 (Cable Loss : 0.6dB)	5.65	5.17	4.3
G_ANT2 (Cable Loss : 0.35dB)	5	4.43	4.47

Noted: The antenna gain excludes the cable loss, Cable Loss is refer to D1.13 low loss cable datasheet, the attenuation at 2.4GHz is 3.2dB per meter.(including IPEX PLUG)

Antenna Efficiency & Peak Gain – A Band

WIFI A Band Antenna Efficiency (%)

Frequency (MHz)	5100	5300	5500	5700	5900
A_ANT1(Cable Loss : 0.9 dB)	70	80.3	84	86	81
A_ANT2(Cable Loss : 0.4 dB)	81.5	86.5	82.4	79.4	60.7

WIFI A Band Antenna Peak Gain(dBi)

Frequency (MHz)	5100	5300	5500	5700	5900
A_ANT1(Cable Loss : 0.9 dB)	6.32	7.2	6.57	7.76	7.79
A_ANT2(Cable Loss : 0.4 dB)	6.92	6.89	8.16	8.15	7.48

Noted: The antenna gain excludes the cable loss, Cable Loss is refer to D1.13 low loss cable datasheet, the attenuation at 5GHz is 4.5 dB per meter.(including IPEX PLUG)

Antenna Composite Average Gain @ ZX-Plan

WIFI G-Band Directional Gain	
Correlated	ZX-Plan
Average Gain@ 2.4GHz (dBi)	0.62
Average Gain@ 2.45GHz (dBi)	0.51
Average Gain@ 2.5GHz (dBi)	0.14

WIFI A-Band Directional Gain	
Correlated	ZX-Plan
Average Gain@ 5.1GHz (dBi)	-1.10
Average Gain@ 5.3GHz (dBi)	0.59
Average Gain@ 5.5GHz (dBi)	-0.79
Average Gain@ 5.7GHz (dBi)	-0.94
Average Gain@ 5.9GHz (dBi)	-1.46