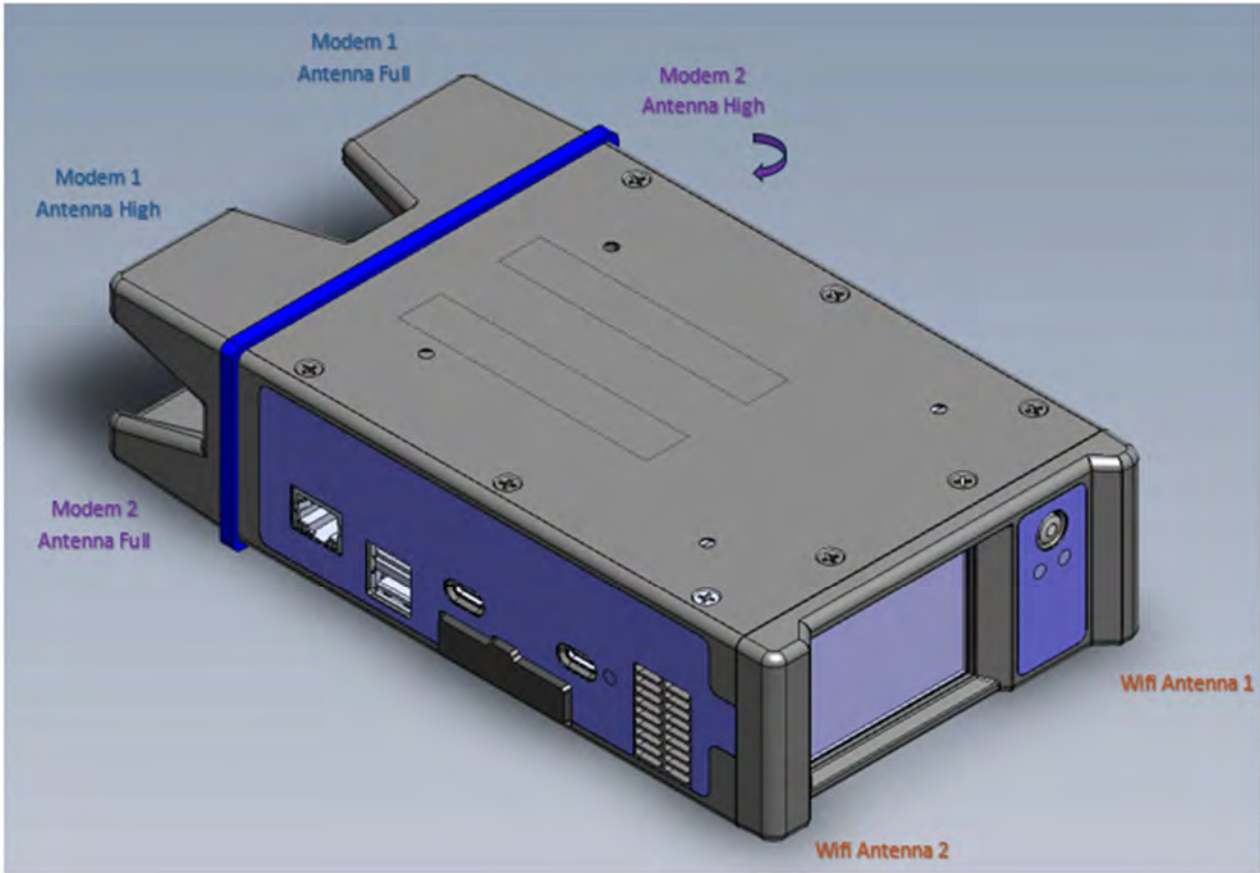


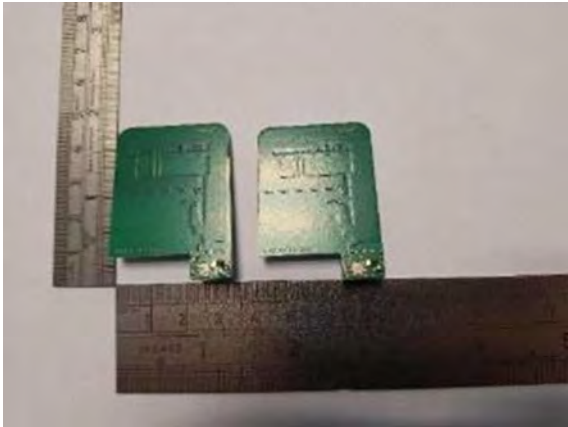
Falkon X2 Cellular Antennas



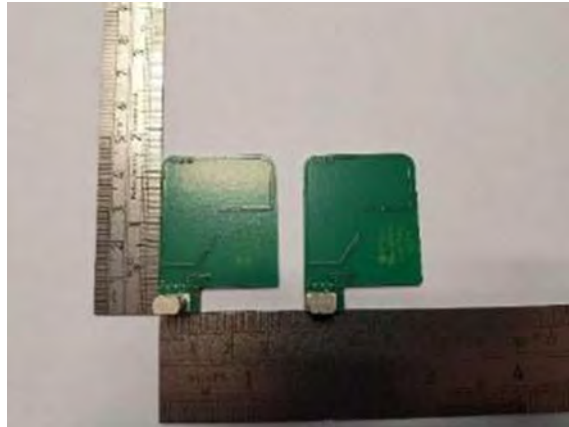
History of versions

Version	Date	Autor	Description
1.0	26/03/2025	Vincent LOUVEAU	Creation
2.0	02/07/2026	Vincent LOUVEAU	Update overview of antennas position
3.0	18/09/2026	Vincent LOUVEAU	Update confidentiality

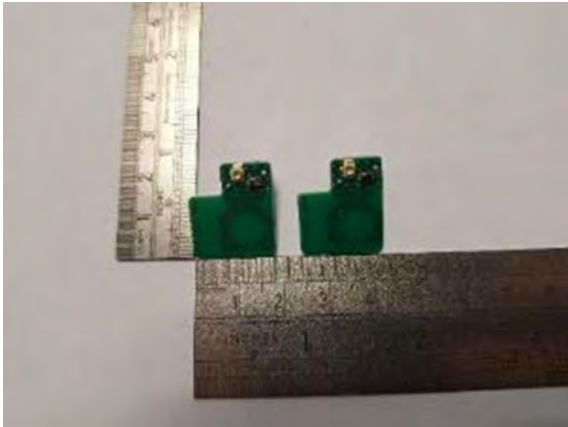
Cellular antenna description



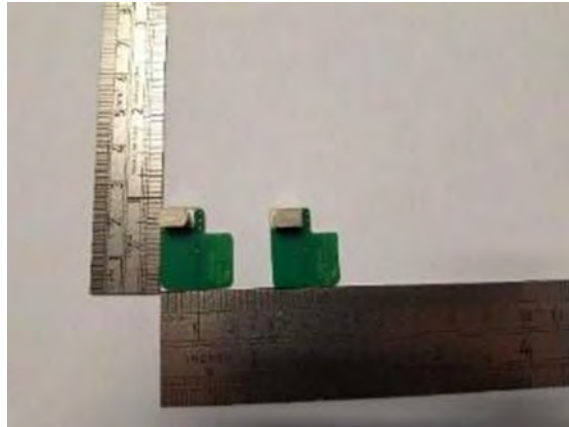
Antenna 5G Full - Top view



Antenna 5G Full - Bottom view



Antenna 5G High - Top view



Antenna 5G High - Bottom view

Name: XCOLIBRI_ANT_5G_FULL

XCOLIBRI_ANT_5G_HIGH

Operating frequency bands ANT_5G_FULL => 617 MHz - 5 GHz
ANT_5G_HIGH => 2500 MHz - 5 GHz

Type: Omni-Directional Embedded PCB Antenna, Radiated element is a printed track.

Typical input impedance: 50 ohms

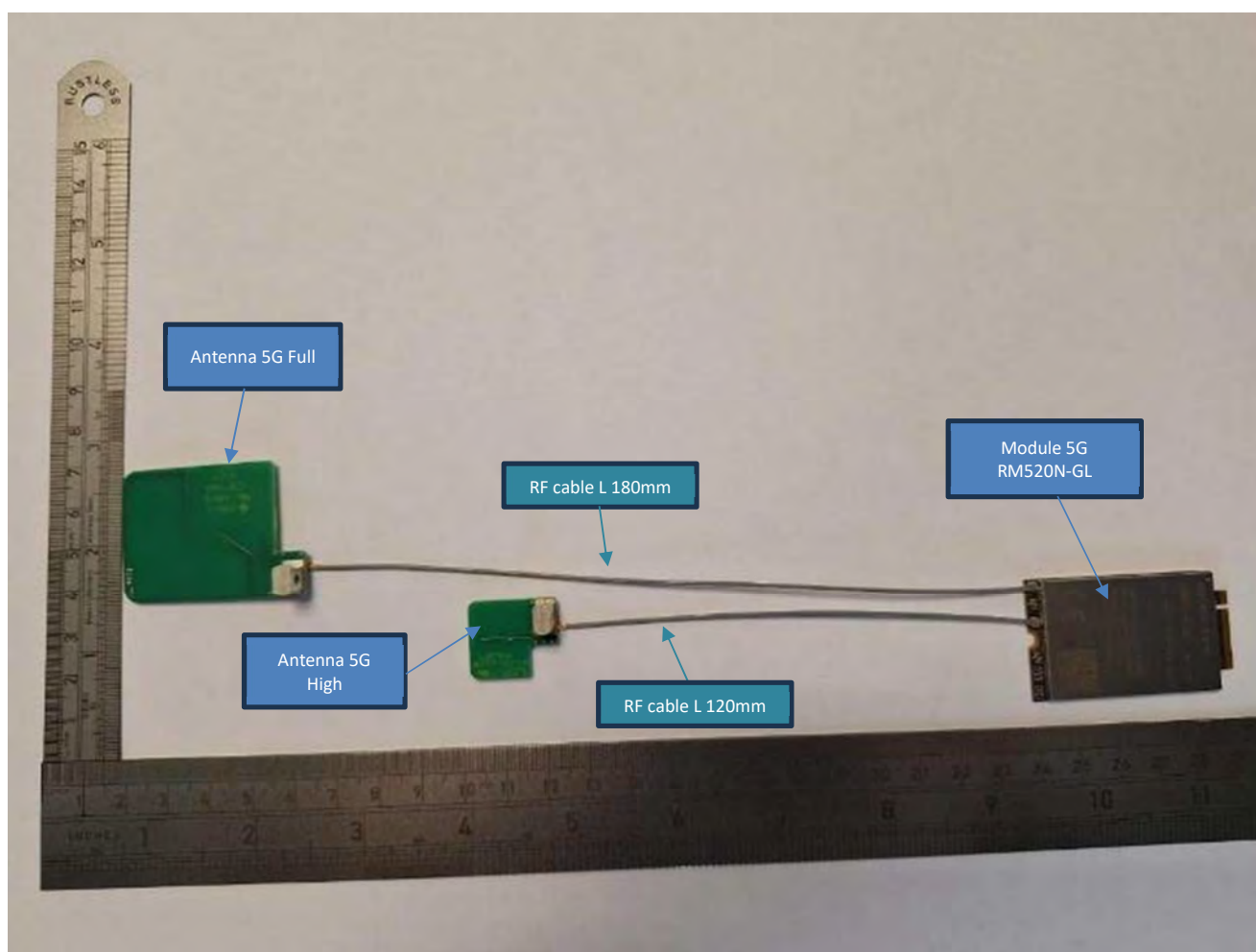
VSWR: < 4:1

Connector: RF connection (to the RM520N-GL) is using a MHF 4 (U.FL) receptacle mounted on the PCB.

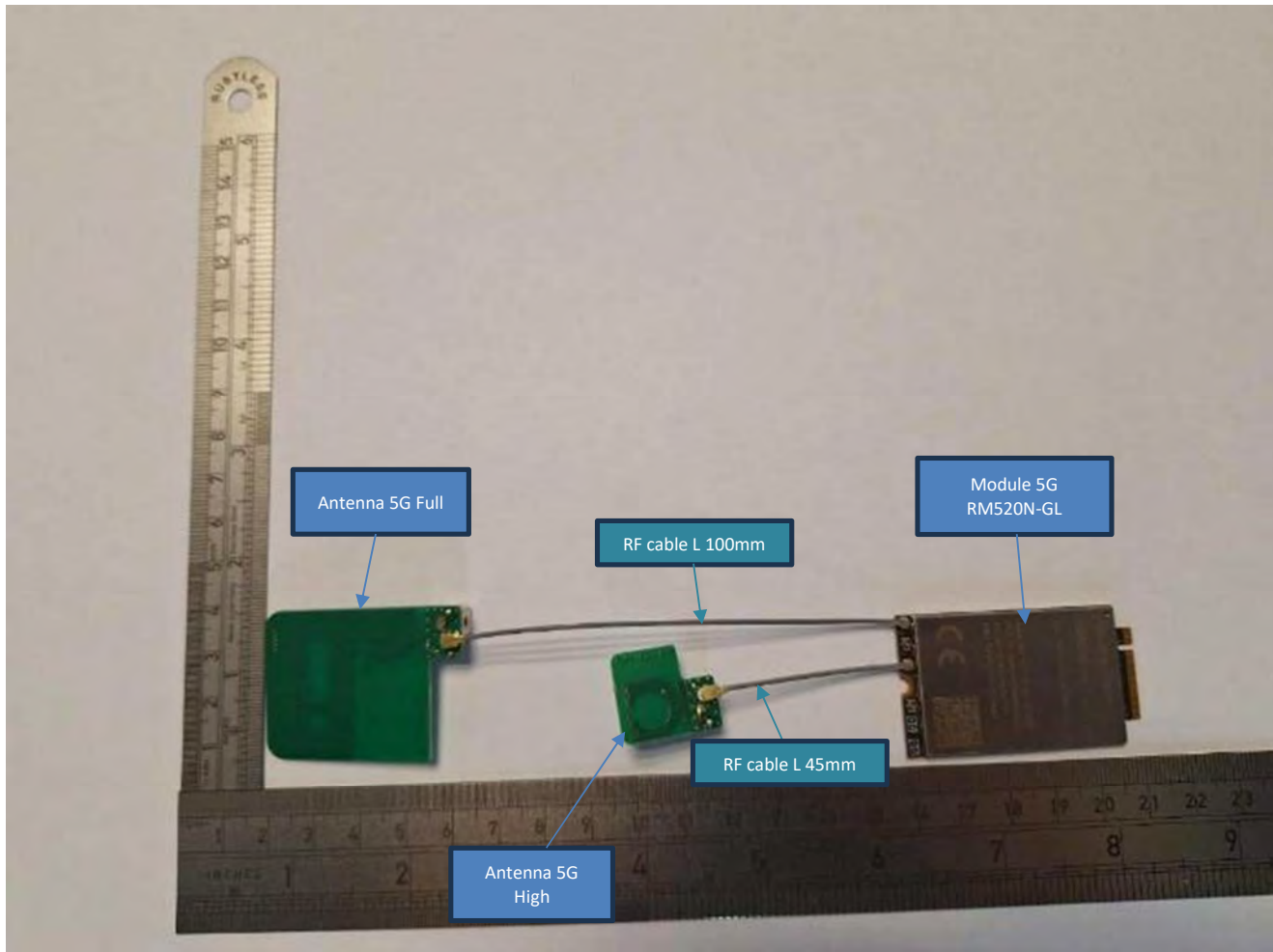
Max gain (including RF cable loss):

Gain (dBi) / Frequency (MHz)	617	700	824	960	1710	2170	2500	2700	3300	3550	3800	4200	4400	4700	5000
Antenna Modem 1 Full => 5G FG antenna	-2.2	-1.8	-0.4	-0.7	-1.1	0.1	0.1	1.5	0.4	0.6	0.8	2.6	-0.5	2.3	1.6
Antenna Modem 1 High => 5G HG antenna							0.6	0.9	0.9	3.0	4.1	1.2	2.4	1.4	2.8
Antenna Modem 2 Full => 5G FE antenna	-3.2	-2.2	-0.7	-0.5	-0.2	0.4	-0.5	0.1	1.4	-1.0	1.4	1.0	2.4	2.4	1.3
Antenna Modem 2 High => 5G HE antenna							3.5	2.7	2.6	2.8	2.8	2.2	1.6	2.0	0.6

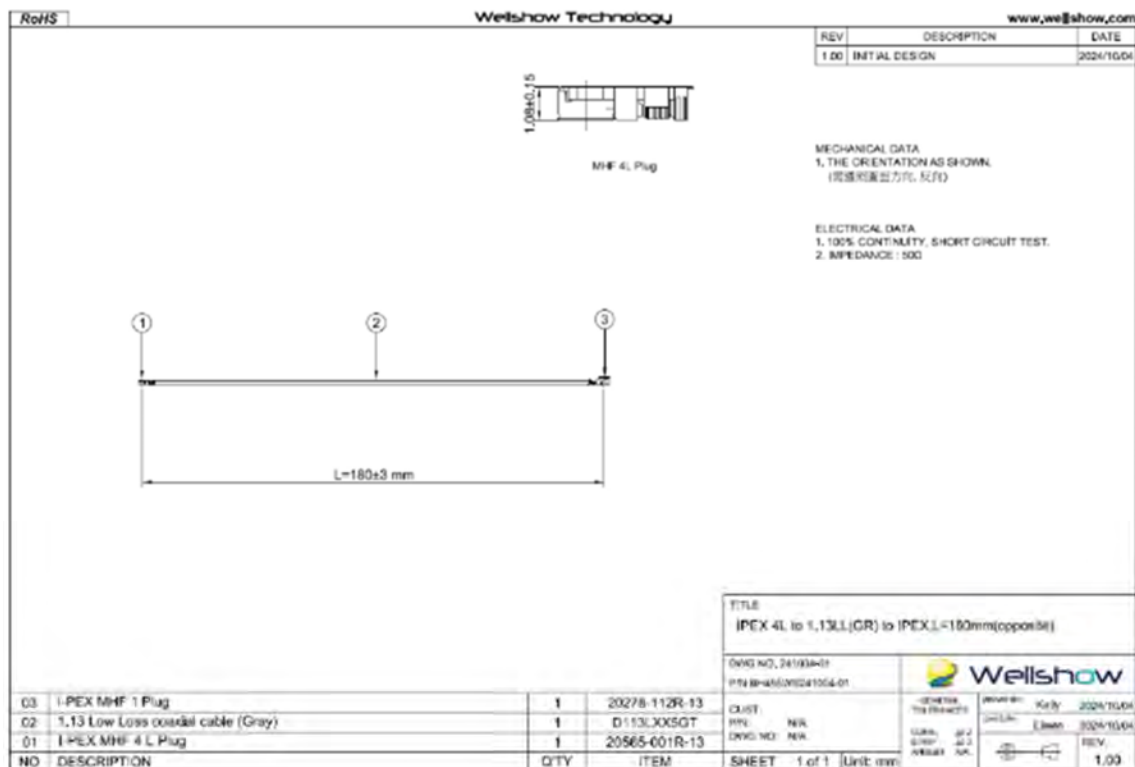
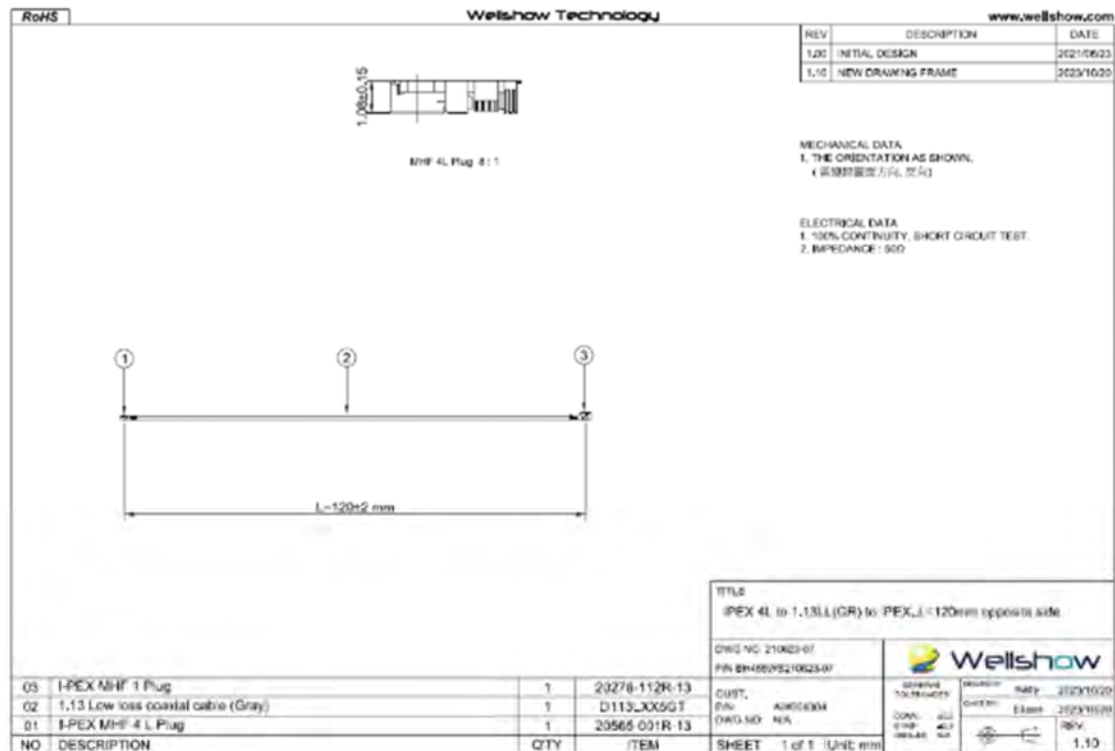
Connection to the Modem 1 - RM520N-GL

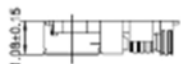
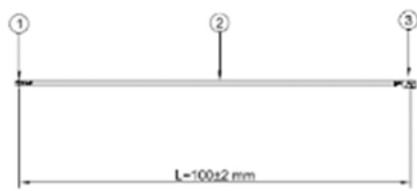


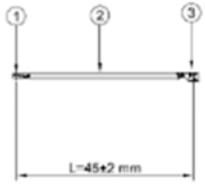
Connection to the Modem 2 - RM520N-GL



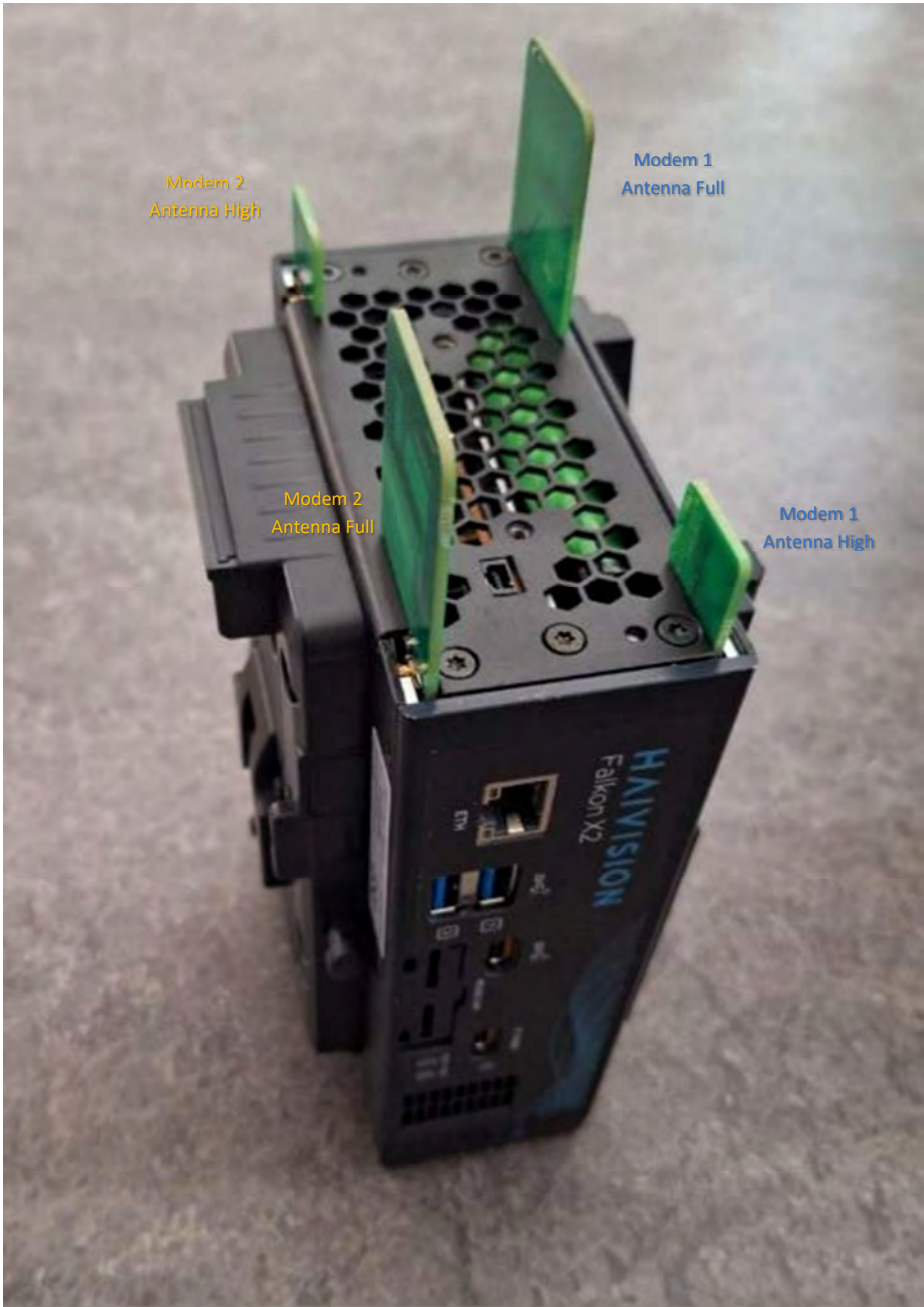
RF cables:

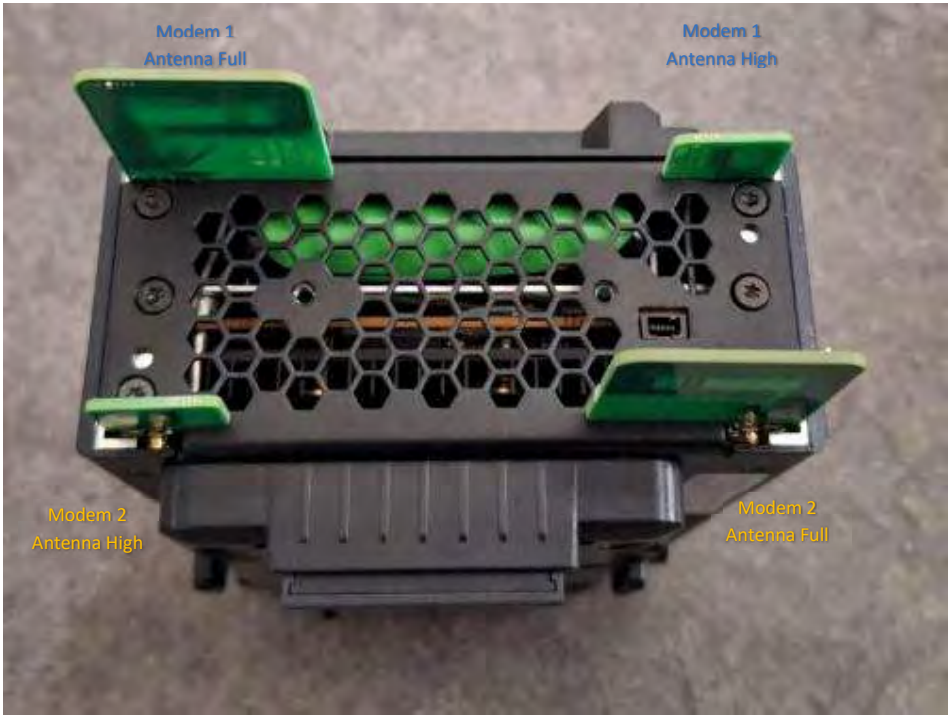


RoHS		Wellshow Technology		www.wellshow.com	
 MHF 4L Plug 8:1  L=100±2 mm		REV		DESCRIPTION	DATE
		1.00		INITIAL DESIGN	2021/06/23
		1.10		NEW DRAWING FRAME	2023/10/20
		MECHANICAL DATA		1. THE ORIENTATION AS SHOWN. (按图例定向为: 70°)	
		ELECTRICAL DATA		1. 100% CONTINUITY, SHORT CIRCUIT TEST. 2. IMPEDANCE : 50Ω	
		TITLE		IPEX 4L to 1.13LL(OR) to IPEX, L=100mm	
		DWG NO. 210625-11		PIN 8H485AW210625-11	
		CUST		AW004338	
		PIN		N/A	
		DWG NO.		N/A	
		SHEET		1 of 1 Unit: mm	
		REV		1.10	
03	I-PEX MHF 1 Plug	1	2027B-112R-13		
02	1.13 Low loss coaxial cable (Gray)	1	D113LXXSGT		
01	I-PEX MHF 4 L Plug	1	2056S-C01R-13		
NO	DESCRIPTION	QTY	ITEM		

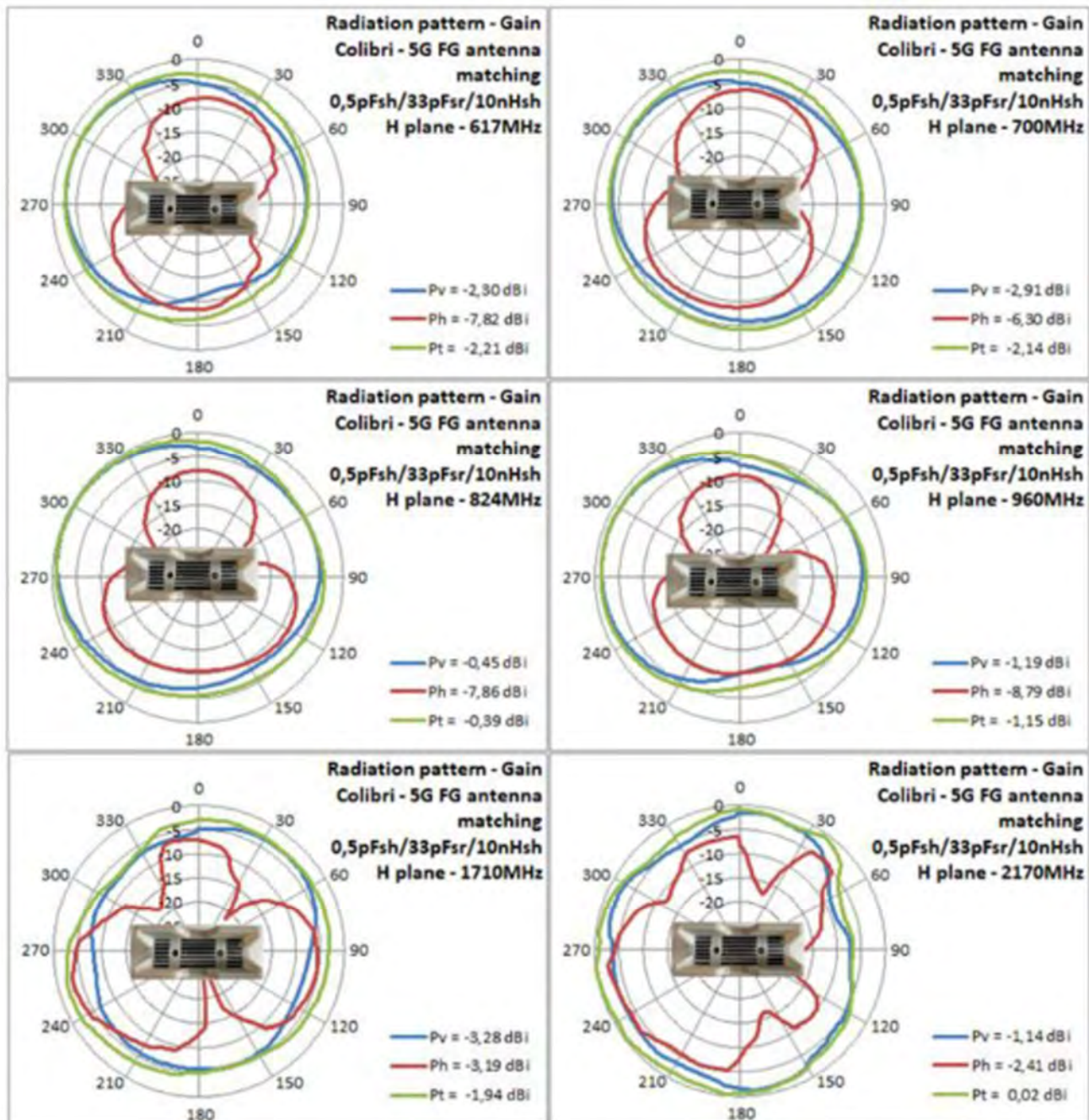
RoHS		Wellshow Technology		www.wellshow.com	
 MHF 4L Plug 8:1  L=45±2 mm		REV		DESCRIPTION	DATE
		1.00		INITIAL DESIGN	2021/06/23
		1.10		NEW DRAWING FRAME	2023/10/20
		MECHANICAL DATA		1. THE ORIENTATION AS SHOWN. (按图例定向为: 70°)	
		ELECTRICAL DATA		1. 100% CONTINUITY, SHORT CIRCUIT TEST. 2. IMPEDANCE : 50Ω	
		TITLE		IPEX 4L to 1.13LL(OR) to IPEX, L=45mm	
		DWG NO. 210625-10		PIN 8H485AW210625-10	
		CUST		AW004338	
		PIN		N/A	
		DWG NO.		N/A	
		SHEET		1 of 1 Unit: mm	
		REV		1.10	
03	I-PEX MHF 1 Plug	1	2027B-112R-13		
02	1.13 Low loss coaxial cable (Gray)	1	D113LXXSGT		
01	I-PEX MHF 4 L Plug	1	2056S-C01R-13		
NO	DESCRIPTION	QTY	ITEM		

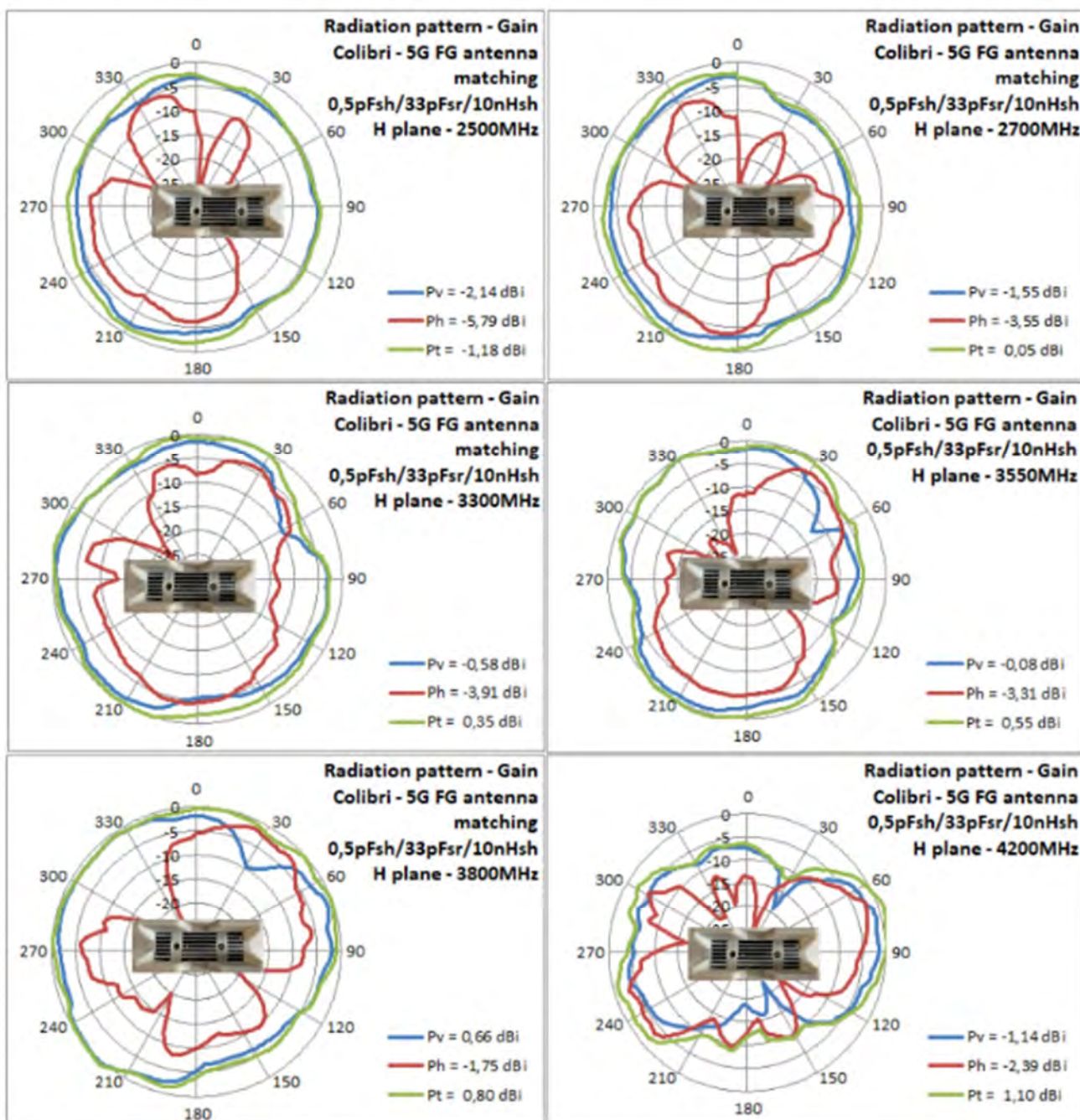
Overview of antennas position:

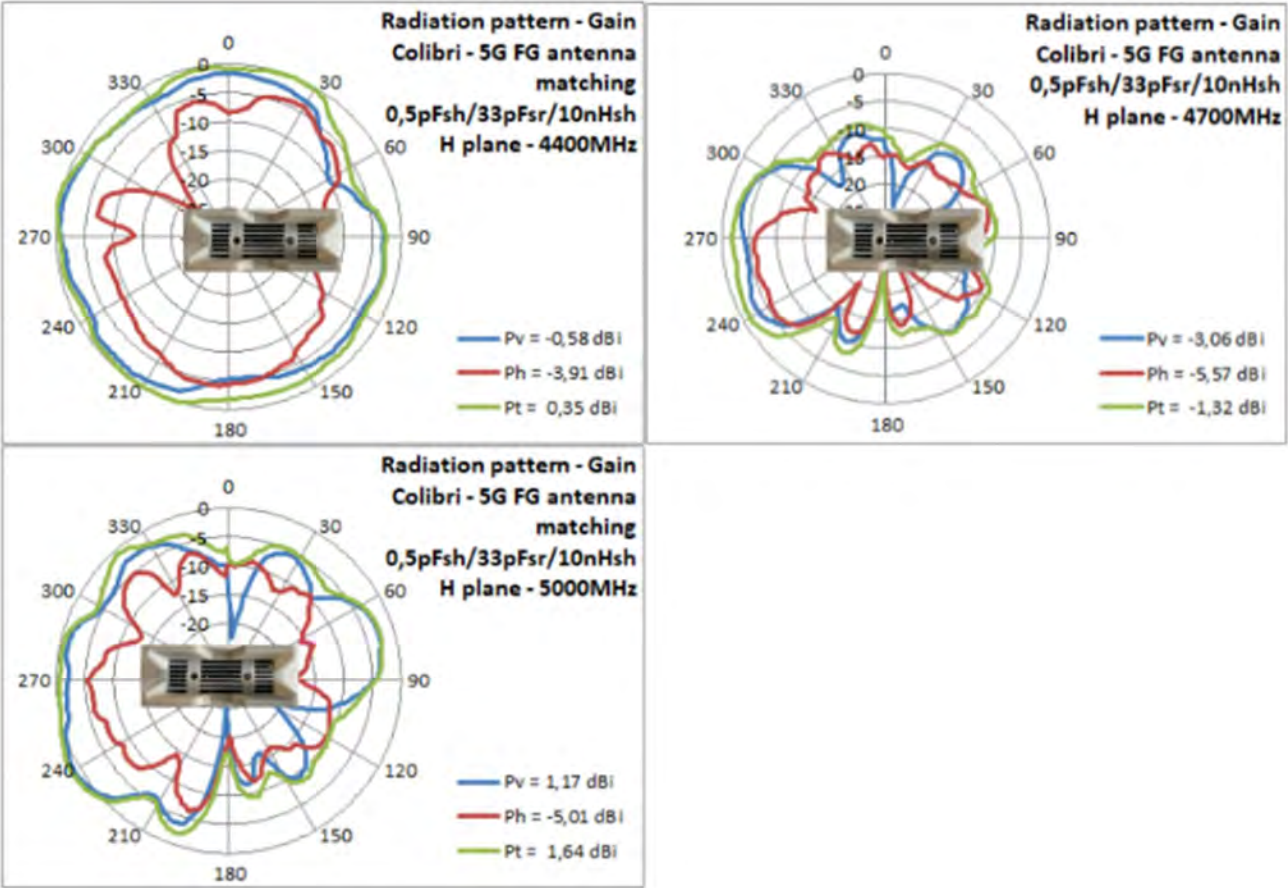


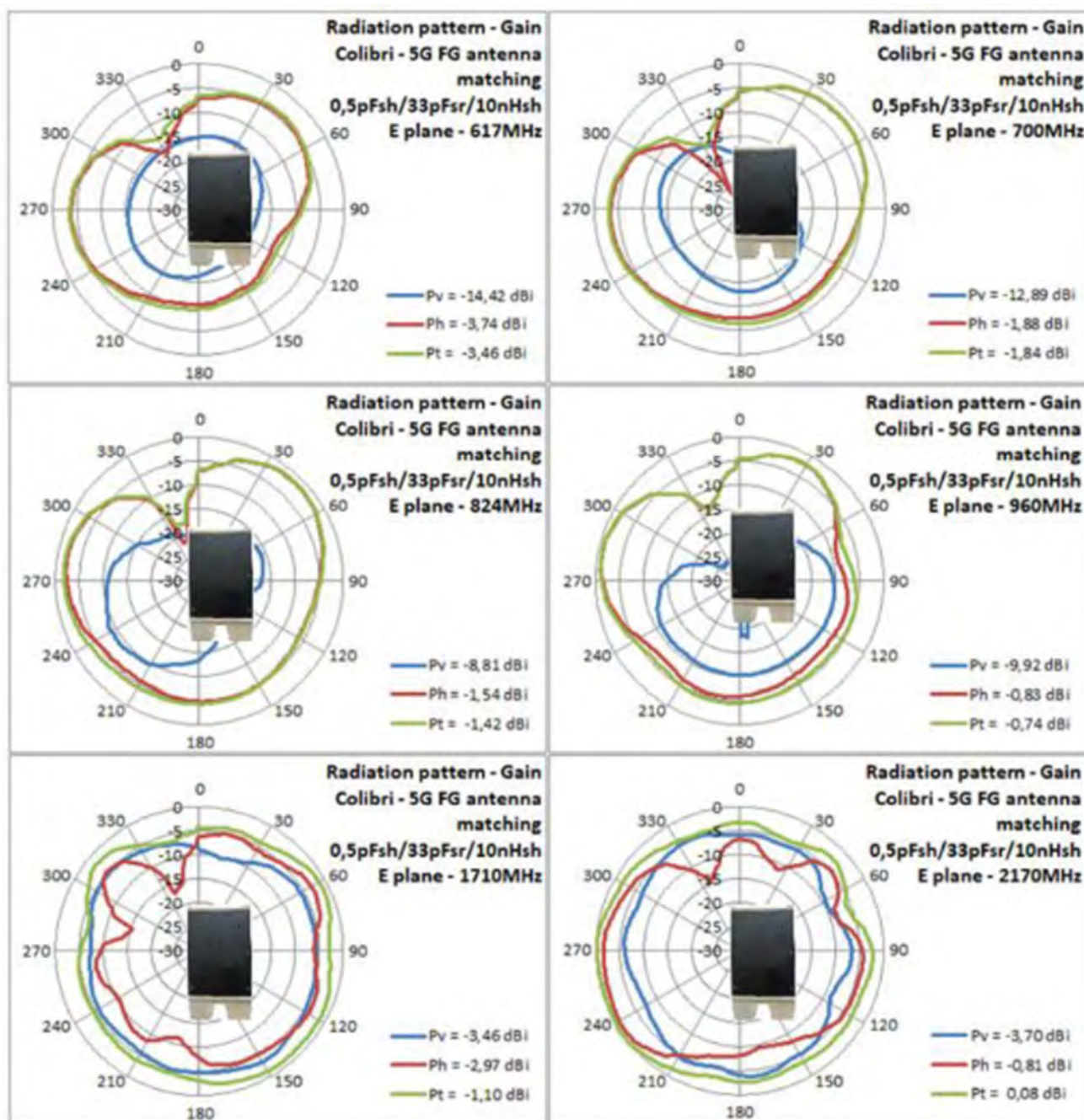


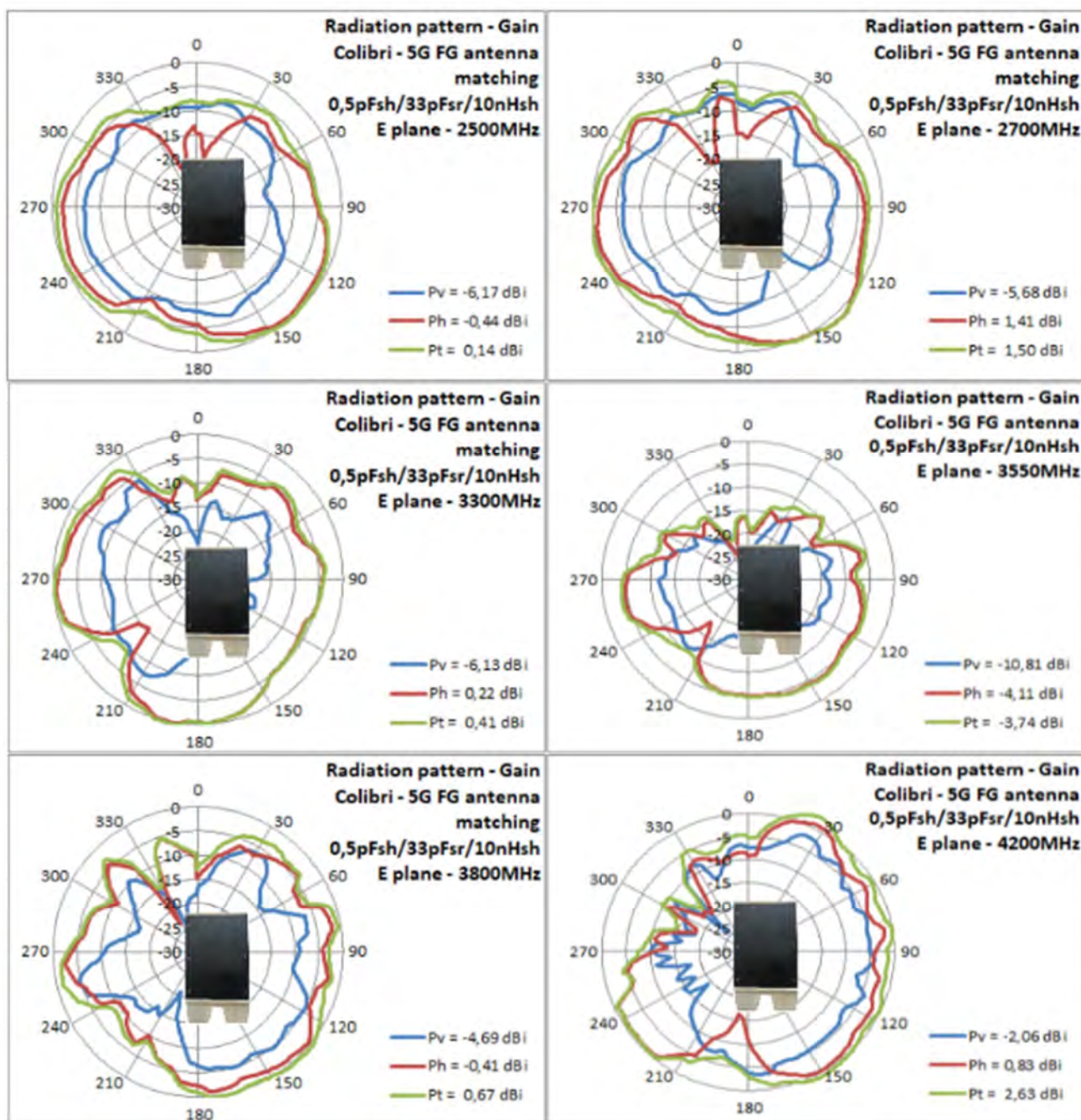
Radiation Patterns: Antenna Modem 1 Full - 5G FG antenna

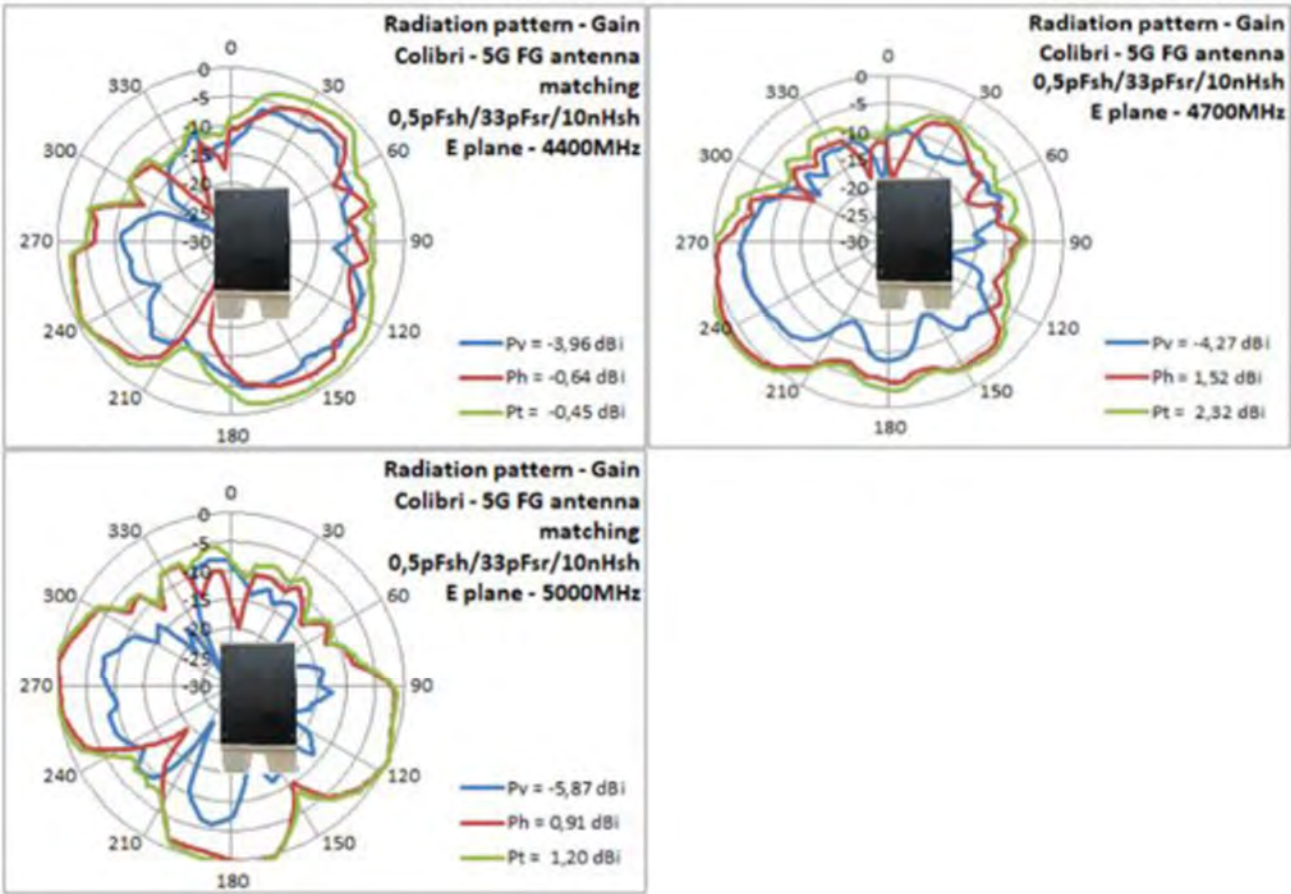




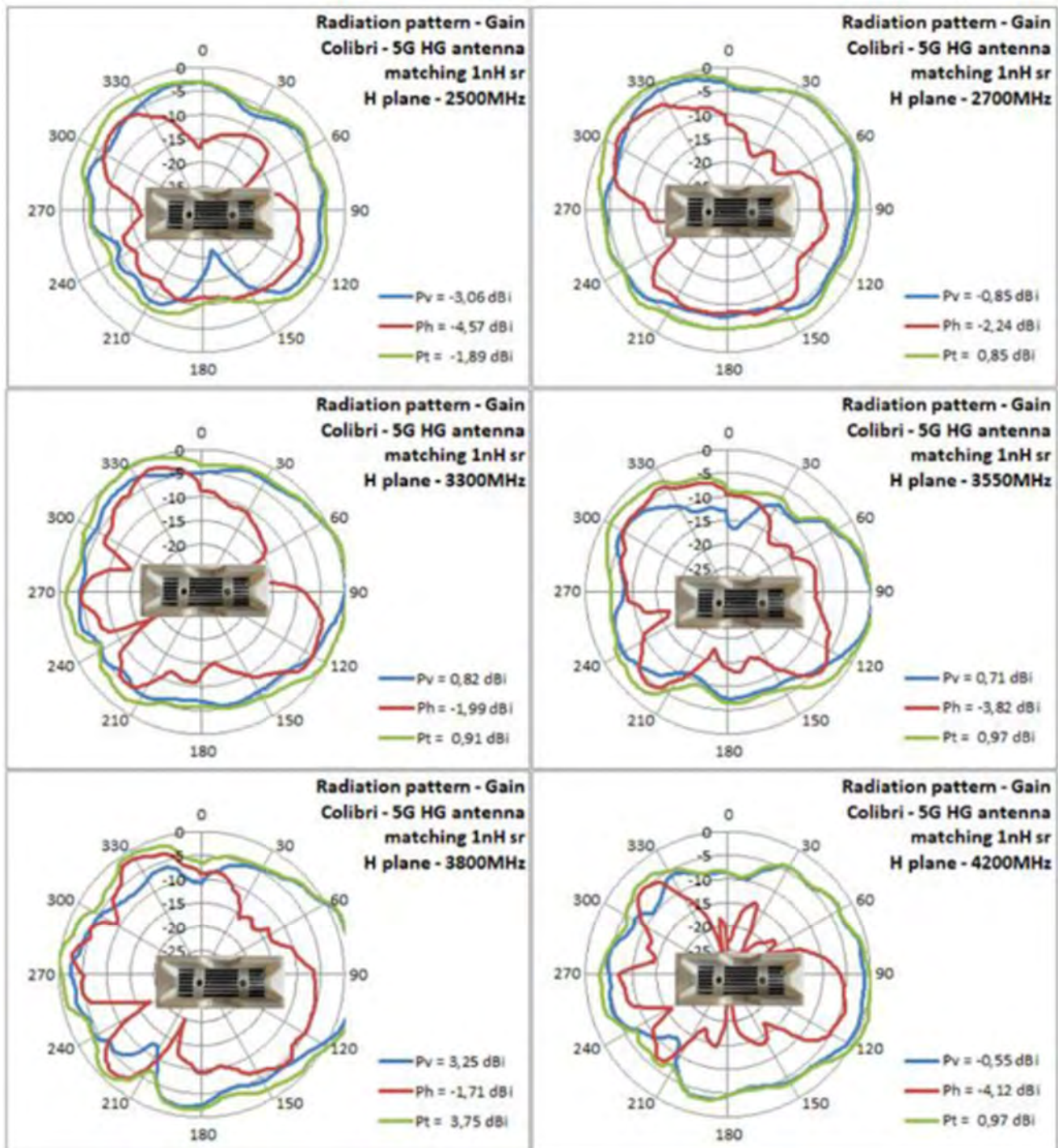


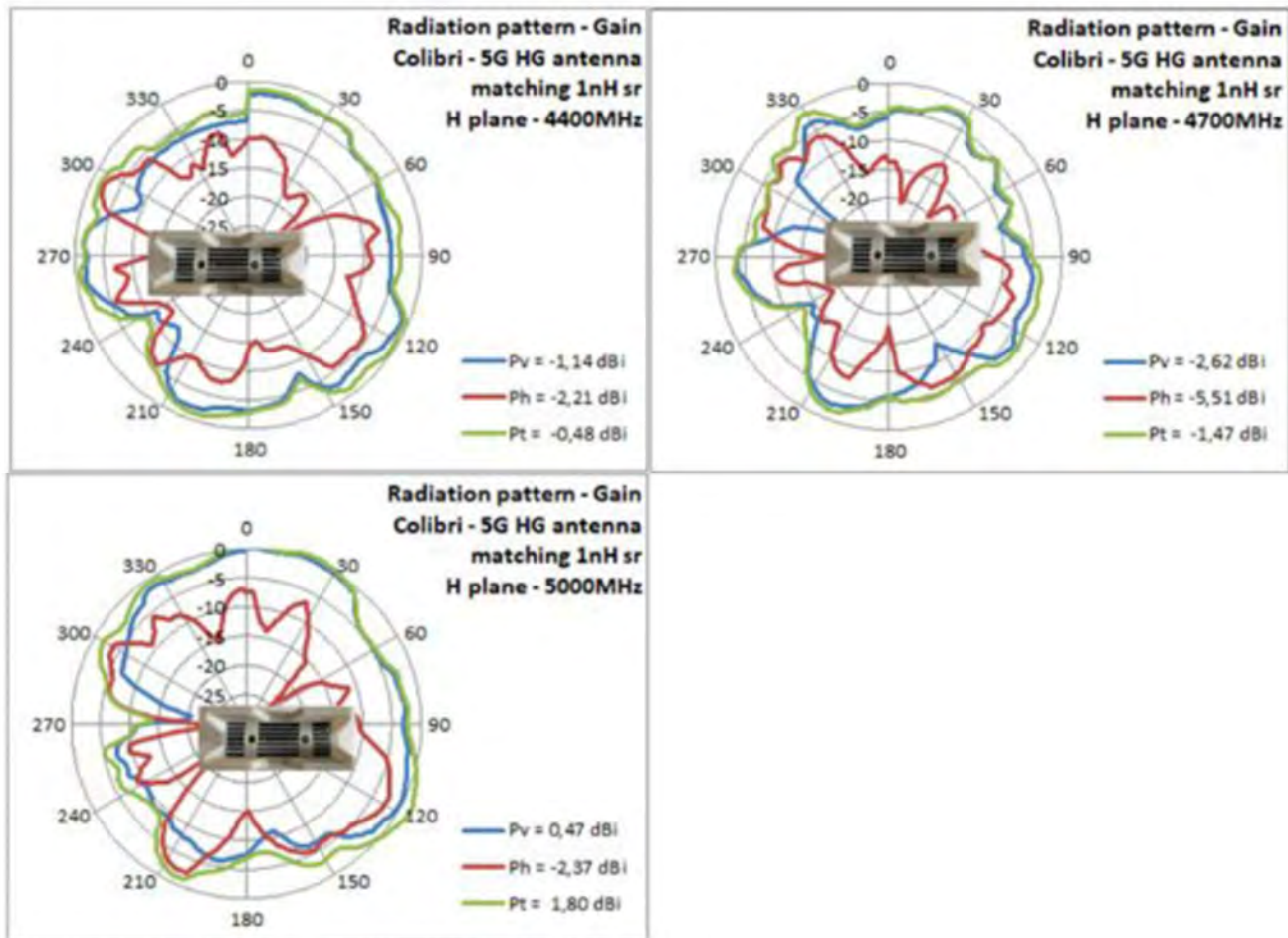


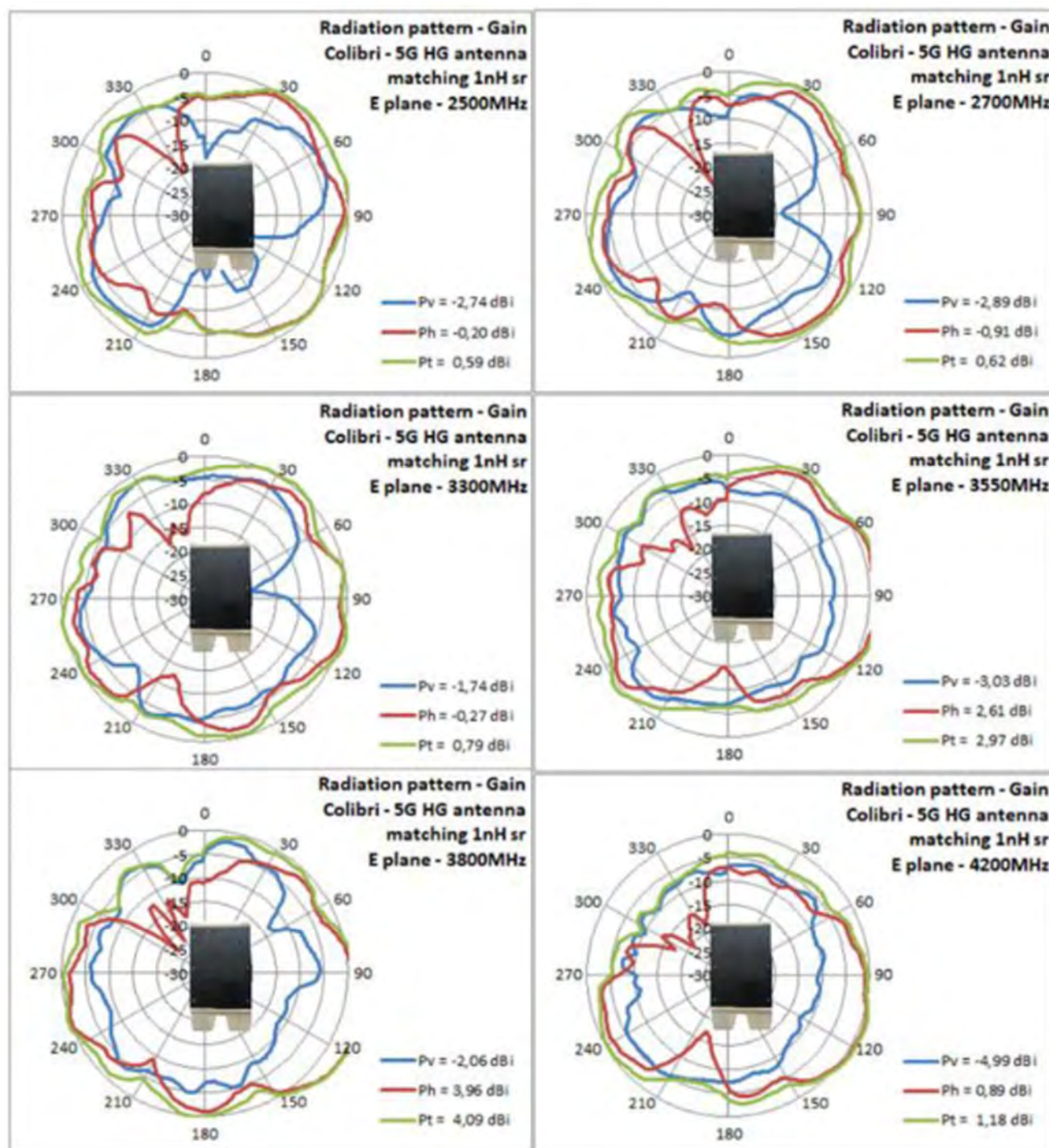


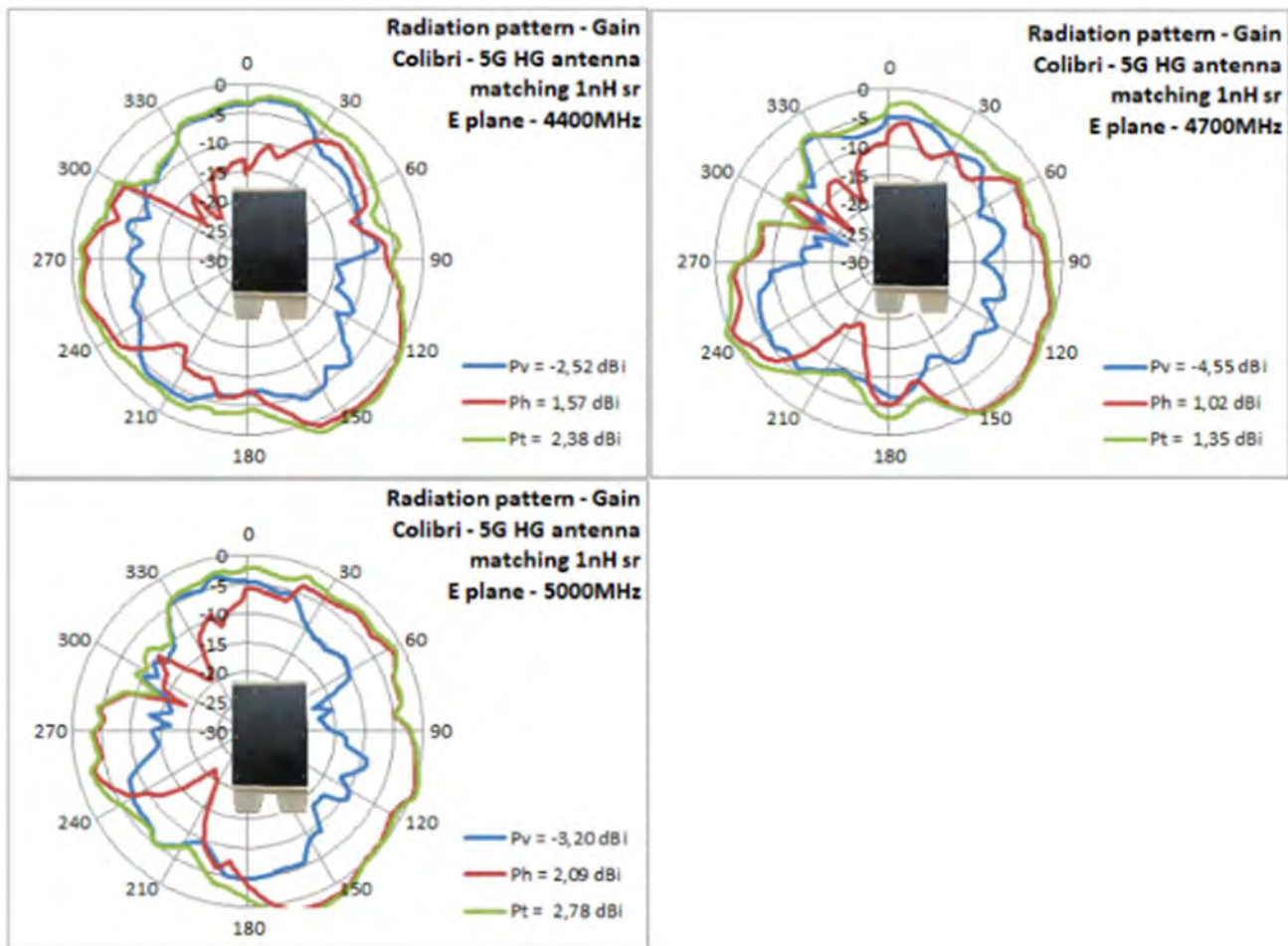


Radiation Patterns: Antenna Modem 1 High - 5G HG antenna

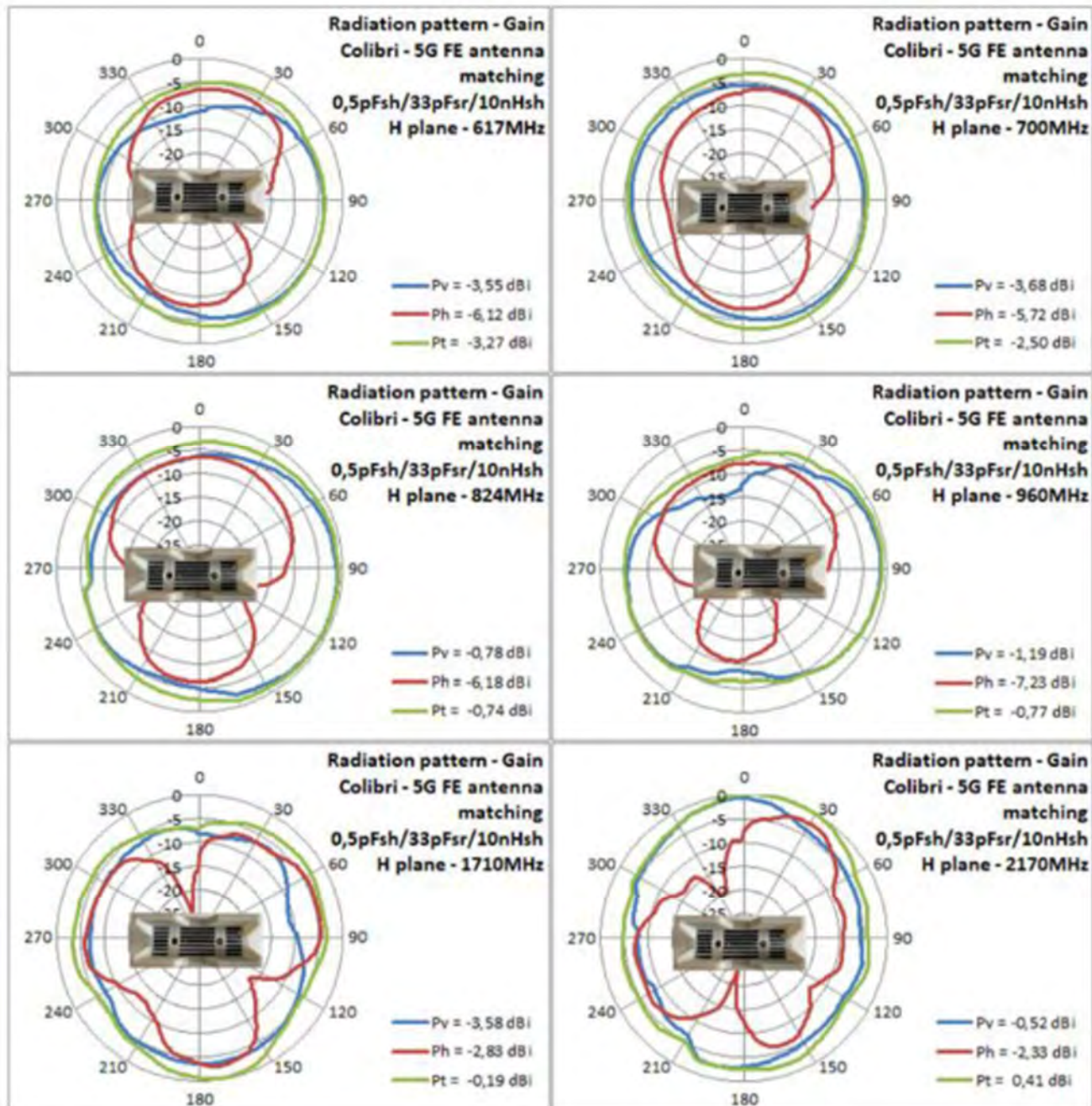


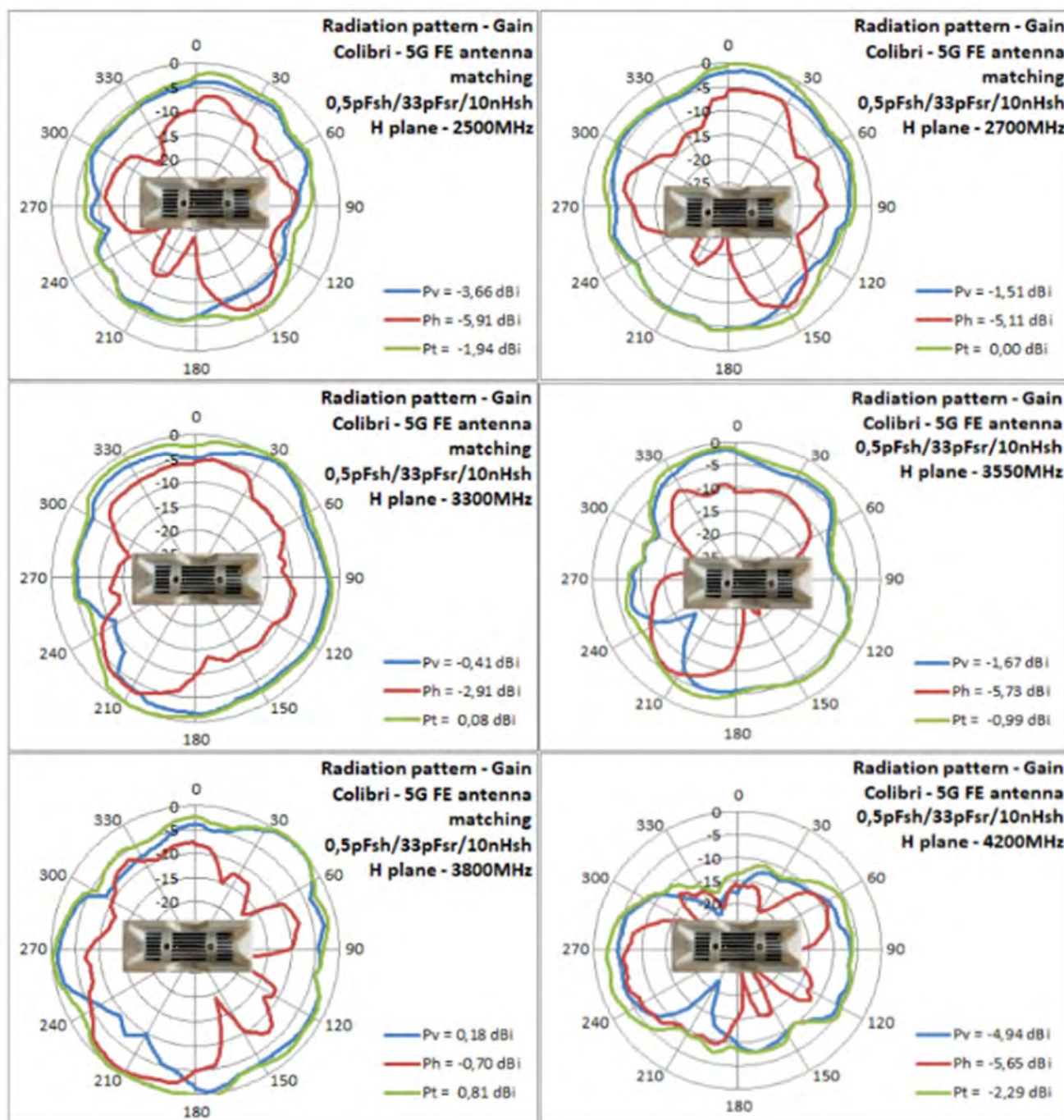


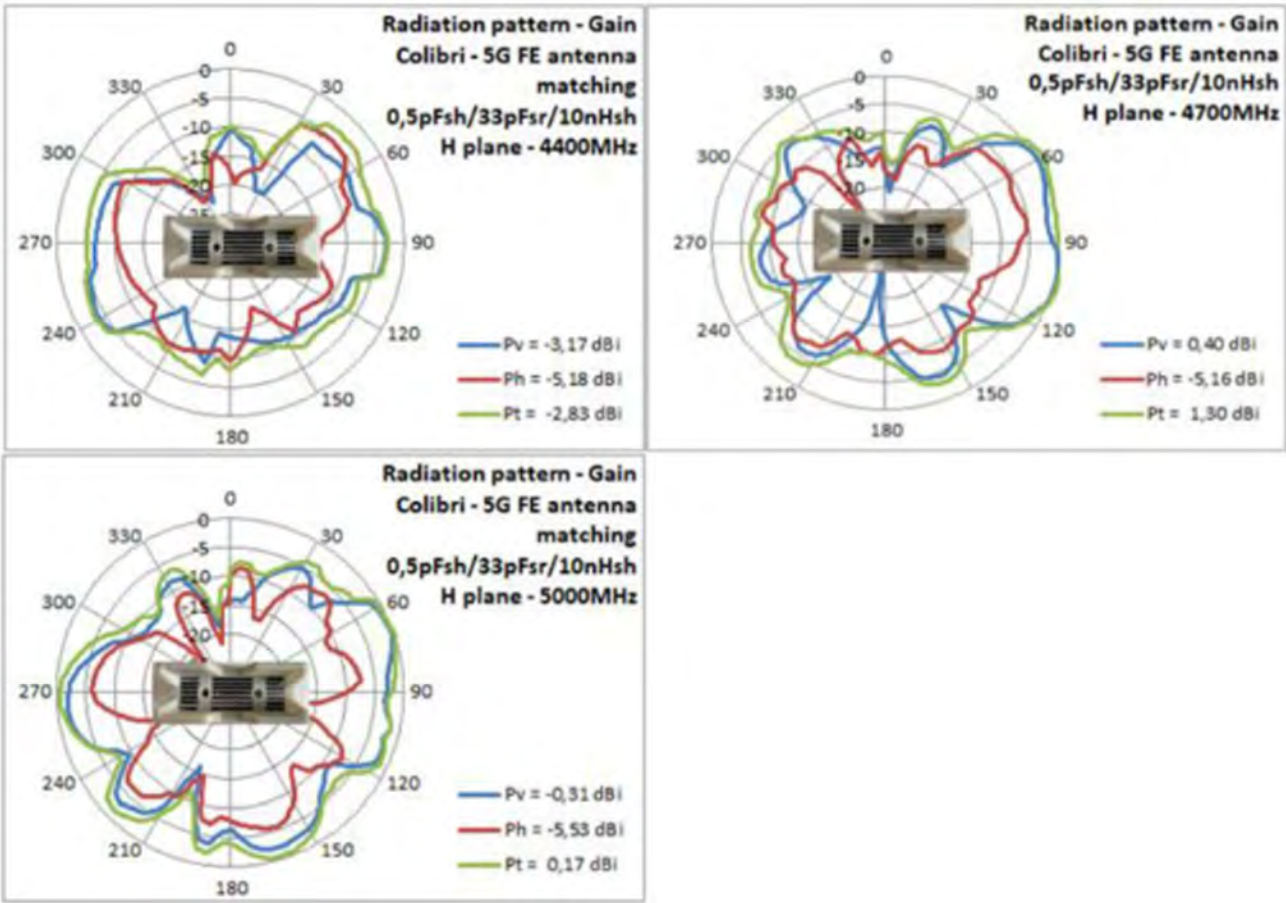


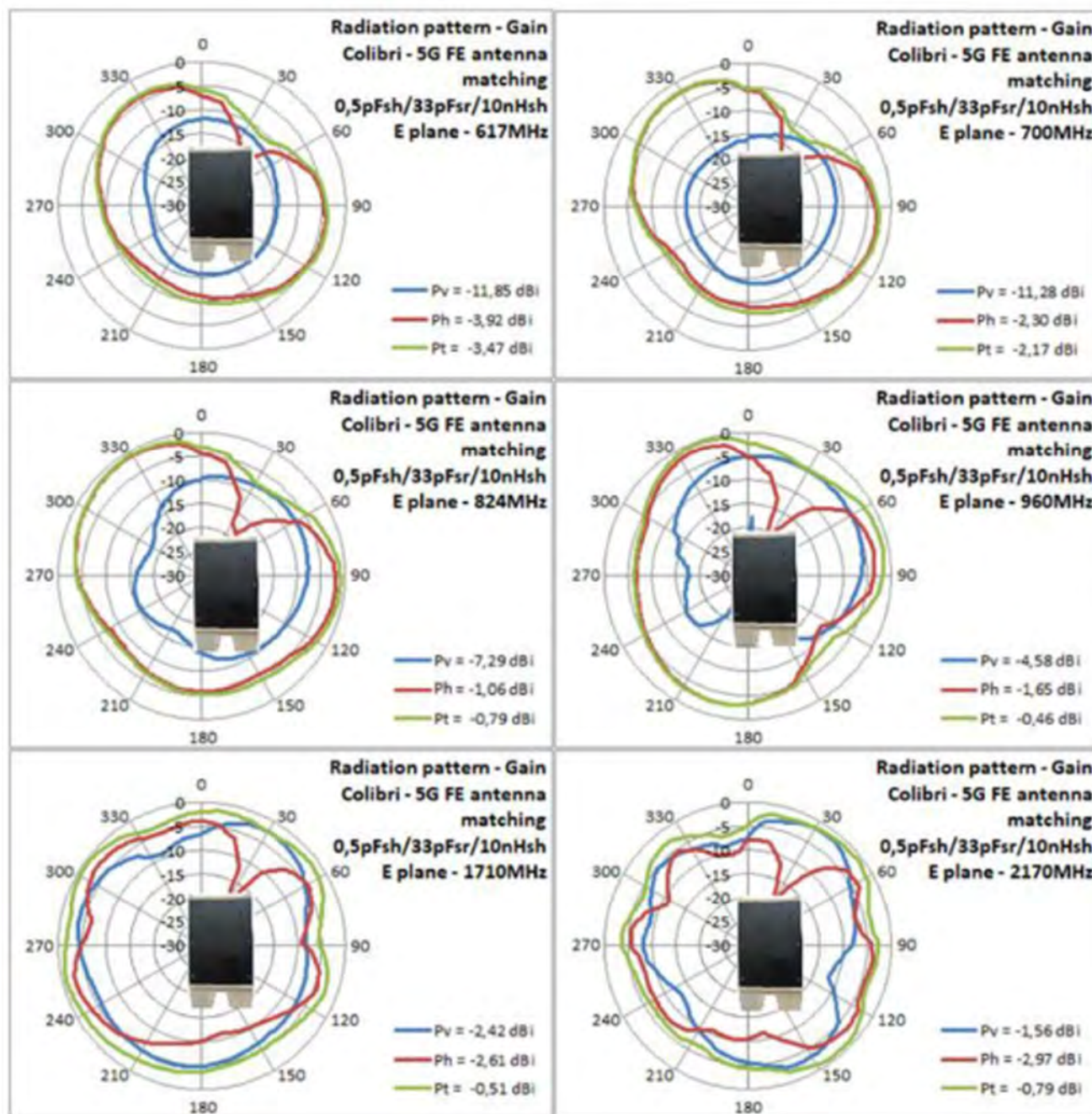


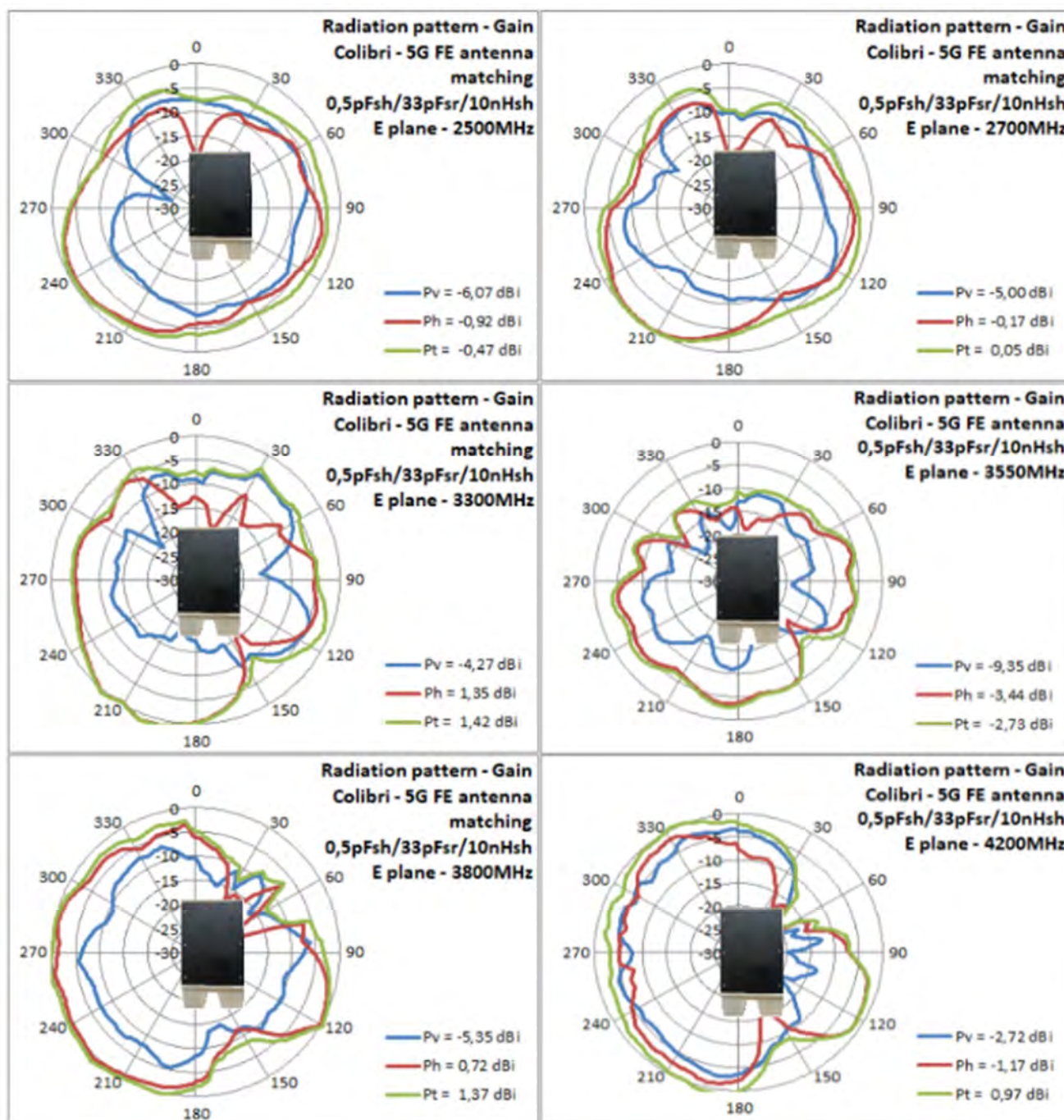
Radiation Patterns: Antenna Modem 2 Full - 5G FE antenna

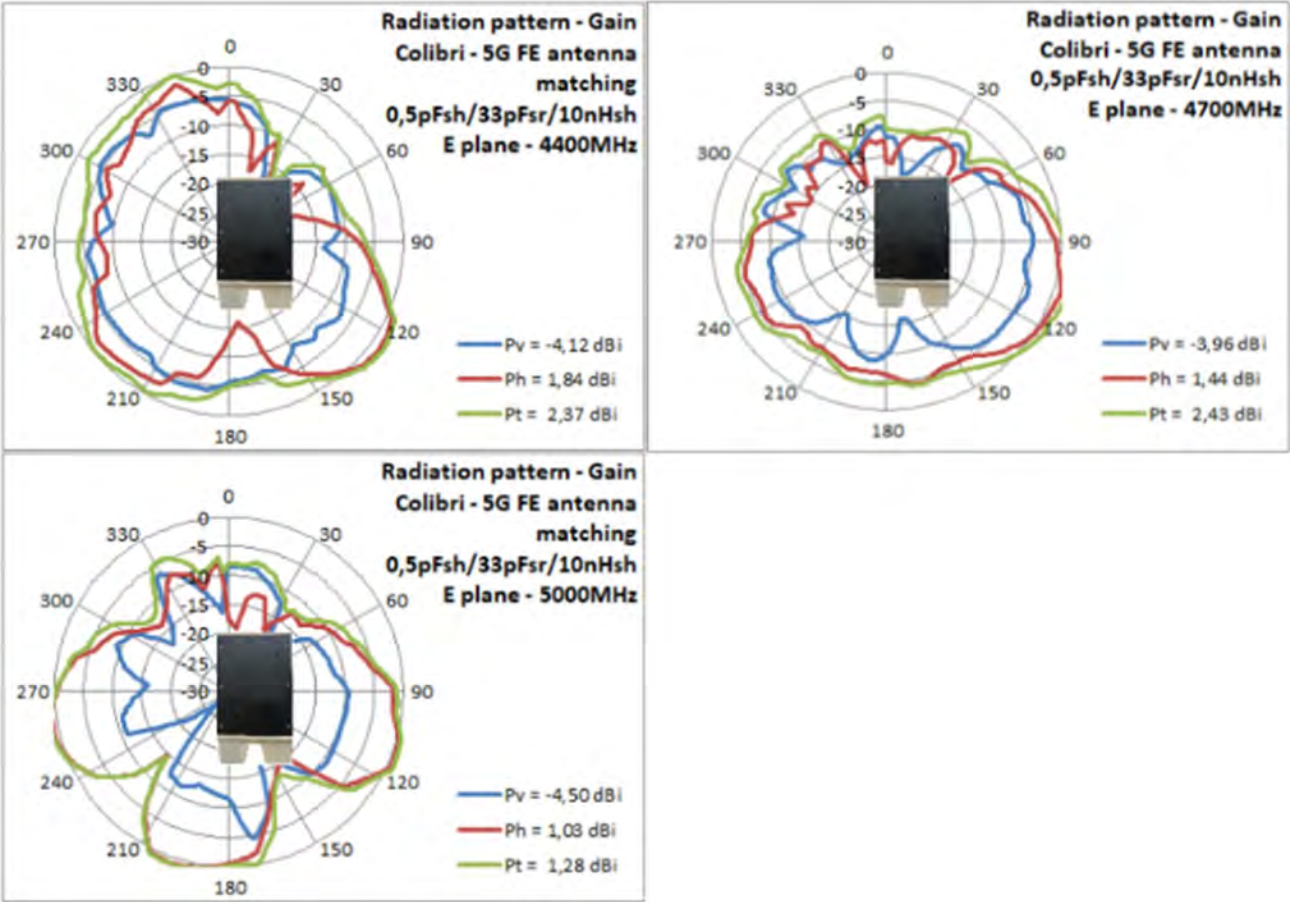












Radiation Patterns: Antenna Modem 2 High - 5G HE antenna

