Research Institute of Posts and Telecommunications
Testing and Metrology Subdivision
Laboratory of Radio Equipment and Electrical Sa
Zvolenská cesta 20, 974 05 Banská Bystrica

SNAS
Reg. No. 040/S-120

Tests indicated by * are beyond the terms of laboratory accreditation.

TEST REPORT

Radio Characteristics

Equipment under test:	**Shelters for point to multipoint antennas**
Model and/or type:	**According clause 1.7**
Manufacturer:	**Ing. Zdenko Zeleňák – CSAT**
Applicant:	**Ing. Zdenko Zeleňák - CSAT.....**
Relevant Standards for Tests:	EN 301 126-3-1 V1.1.2 (2002-12)

Tested by:	Roman Ščehovič *Testing Engineer*
Approved by:	Pavol Solivajs *Head of Testing and Metrology Subdivision*
Date of issue:	19.12.2014
Issue (No. / Total No.):	1/2

Test Report No.: **79/608/2014/LRB(R)_Eng**

Contents

1 General Information

1.1 General remarks

a) The test results presented in this Test Report relate only to the object (EUT) described in item 1.7 of this Test Report, which was tested.

b) This Test Report shall not be reproduced, except in full without written approval of the Testing and Metrology Subdivision, Výskumný ústav spojov Banská Bystrica.

c) "See remark #" refers to a remark in this Test Report.

d) "See Annex #" refers to an annex of this Test Report.

1.2 Testing laboratory

Výskumný ústav spojov, n. o. (Research Institute of Posts and Telecommunications)
Testing and Metrology Subdivision – Laboratory of Radio Equipment and Electrical Safety
Zvolenská cesta 20
974 05 Banská Bystrica
Slovak Republic

Telephone:	+421 48 4324 230
Fax:	+421 48 4324 124

1.3 Subcontractor

Subcontracted tests:	none

1.4 Details of applicant

Applicant's name:	Ing. Zdenko Zeleňák
Street / P.O.Box:	6.aprila 360/18
Town/City:	922 03 Vrbove
Country:	Slovak Republic
Phone:	+421 905 717 523
E-mail:	csat@csat.sk
Contact person:	Ing. Zdenko Zeleňák

1.5 Details of manufacturer

Manufacturer's name:	CSAT – Ing.Zdenko Zeleňák
Street / P.O.Box:	6.aprila 360/18
Town/City:	922 03 Vrbove
Country:	Slovak Republic

1.6 Dates

Date of receipt of application: 24.10.2014
Date of receipt of test item: 24.10.2014
Date of test: 25. 10. a 6.11. 2014

1.7 Equipment under test

Type of product: Shelters for antennas
Model and/or type reference: See table
Technical documentation: Datasheets

Test configuration:

Item	Designation	Shelter type	Antenna type
Antenna with shelter	EUT	20 RF AM-G – economy 20 RF AM-G – excellent 60 RF AM-G – economy 60 RF AM-G - excelent	**AM 5 G16** **AM 5 G 17**
Antenna with shelter	EUT	20RFM5 LOCO economy 20RFM5 LOCO excelent	**NanoStation M5 LOCO**
Antenna with shelter	EUT	20 RFM5 economy 20 RFM5 excelent	**NanoStation M5**
Antenna with shelter	EUT	RFSXT RFSXT +RE 45	**SXTG 5HP AcD**
Antenna with shelter	EUT	RFSXT RFSXT + RE 45	**SXTG 5HP PnD**
Antenna with shelter	EUT	RF SXT RFSXT + RE 45	**SXTG 5HP acD-SA**
Antenna with shelter	EUT	RF SXT RFSXT + RE 45	**SXT Lite 5**

1.8 Technical specification declared by manufacturer

Equipment category:	Point to point antenna
Operating frequency range	5,4 GHz – 5,7 GHz
Environmental profile for intended operation	-35°C - +55°C

1.9 Test frequencies

Frequency [GHz]	5,5 GHz

1.10 Environmental conditions for testing

T_{nom} = 23 ºC

Relative humidity: 43 - 48 %

1.11 General Remarks for Testing

1.11.1 Basic test specification

Procedure deviation: none
Non-standard test method: none

1.11.2 Test result assessment

Test result does meet the requirement: **P**(ass)
Test result does not meet the requirement: **F**(ail)
Test case does not apply to the test object: **N**(.A.)
Test case not performed: **X**

1.11.3 Other notes

a) Place of tests:

All measurements described in this Test Report were performed at the premises of the Testing and Metrology Subdivision – Laboratory of Radio Equipment and Electrical Safety, Zvolenská cesta 20, 974 05 Banská Bystrica, Slovakia.

2 Test Results

2.1 Results summary

EN Clause EN 301 126-3-1 Test methods	Limits Resolução nº 609, de 18 de abril de 2013	Parameter	Test result assessment	Clause of this Report
6.1	Clause 5.2 Table 4	Radiation pattern envelope (RPE)	P	**3.2.1**

2.2 Test results details

2.2.1 Radiation pattern envelope (RPE)

Test conditions:

Ambient temperature: 23º C

Relative humidity: 45 %

Test method: EN 301 126-3-1; Clause 6.1

Test results:

Antenna	Shelter	Results of radiation pattern		
		Polarization	Table n.	Graph n.
AM 5 G16	20 RF AM-G - economy	H	-	-
		V	1	1
	20 RF AM-G - excelent	H	-	-
		V	2	2
	60 RF AM-G - economy	H	3	3
		V	4	4
	60 RF AM-G - excelent	H	5	5
		V	6	6
AM 5 G 17	20 RF AM-G - economy	V	7	7
	20 RF AM-G - excelent	V	8	8
	60 RF AM-G - economy	H	-	-
		V	9	9
	60 RF AM-G - excelent	H	-	-
		V	10	10
NanoStation M5 LOCO	20RFM5 LOCO economy	V	19	19
	20RFM5 LOCO excelent	V	20	20
	20 RFM5 economy	V	11	11
NanoStation M5	20 RFM5 excelent	V	12	12
SXTG 5HP AcD	RFSXT	V	13	13
	RFSXT +RE 45	V	14	14
SXTG 5HP PnD	RFSXT	V	15	15
	RFSXT + RE 45	V	16	16
SXTG 5HP acD-SA	RF SXT	V	17	17
	RFSXT + RE 45	V	18	18
SXT Lite 5	RFSXT	V	21	21
	RFSXT + RE 45	V	22	22

Limits:

Uncertainty: ±2 dB

Test equipment used (see Clause 3): 1, 2, 13, 51, 53

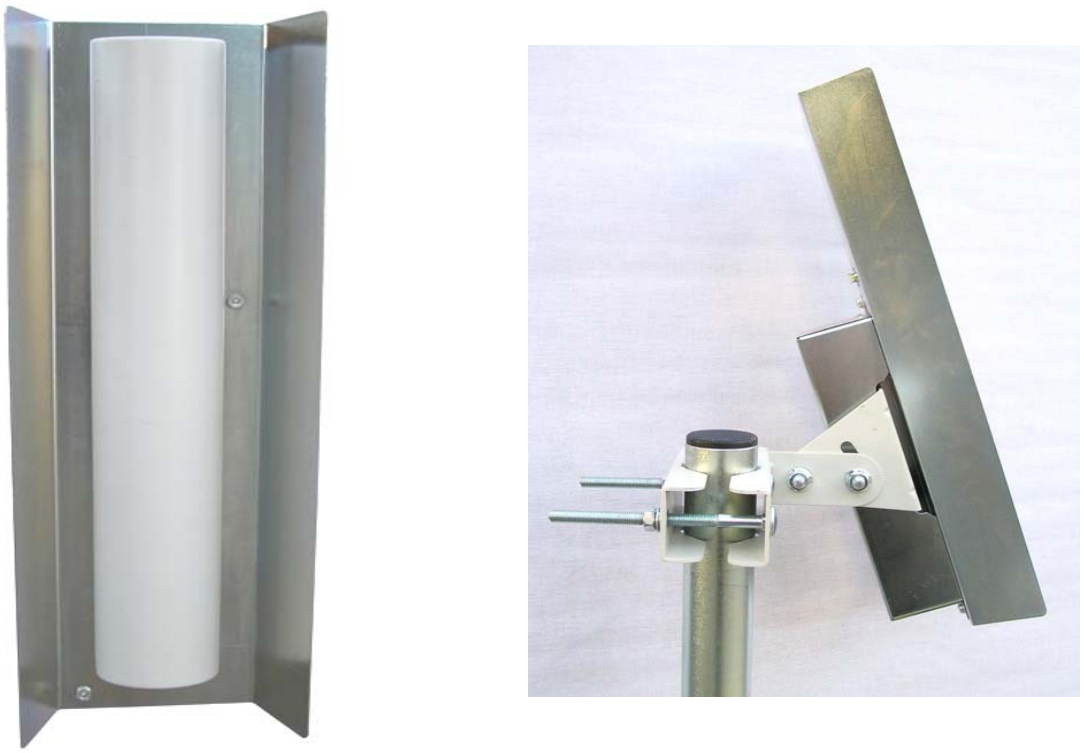
Date of test: 25. 10. and 6.11. 2014

3 List of Test Equipment

No.	Test equipment	Manufacturer	Type	Serial number
1.	Anechoic chamber	Frankonia	—	—
2.	Antenna up to 12 GHz	VÚS	—	—
3.	Attenuator	Hewlett-Packard	HP 8494B	2812A14886
4.	Attenuator	Hewlett-Packard	HP 8495B	3308A17153
5.	Attenuator	Hewlett-Packard	HP 8496B	3308A20041
6.	Attenuator	Hewlett-Packard	HP 8498A	1801A07157
7.	Attenuator	JFW Industries	50FHB-010-5	HIM2972
8.	Attenuator 10 dB / 100 W	R&S	RBU	836121/006
9.	Attenuator 20 dB / 30 W	R&S	RBU	825723/001
10.	Attenuator 40 dB / 1000 W	R&S	RBS	D67077
11.	Audio generator	HTSZ Hungary	TR-0157	761-095
12.	Autotransformer	RAS	—	212617
13.	Calibrated antenna	EMCO	3115	—
14.	Calibrated antenna	RFT Germany	DP1	—
15.	Calibrated antenna	RFT Germany	DP3	—
16.	Channel filter (12.5; 25 kHz)	Tesla Pardubice	—	—
17.	Climate chamber	Vötsch Industrietechnik	VC 7060	59566021780010
18.	Digital multimeter	Mesit	VDM-1	HA0830
19.	Digital oscilloscope	LeCroy	9310AM	3182
20.	Digital thermometer	ZPA Nový Bor	Digiterm	067090
21.	Digital TV & SAT level meter	Promax	Prolink-4C Premium	HIM854
22.	Directional coupler	Hewlett-Packard	778D-012	16078
23.	Directional coupler	R&S	IN 219.6270.70	870440/24
24.	Directional coupler	R&S	IN 219.6270.70	870440/51
25.	Directional coupler	R&S	IN 219.6270.74	870441/26
26.	Directional coupler	R&S	IN 219.6270.74	870441/28
27.	EMI test receiver	R&S	ESU40	1302.6005K40-100213-cu
28.	EMI test receiver	R&S	ESHS10	836495/009
29.	EMI test receiver	R&S	ESVS10	836787/002
30.	Frame analyzer	Wandel & Goltermann	PA-41	L-0118
31.	Generator	Hewlett-Packard	HP 83640B	—
32.	Generator 10 Hz ÷ 10 MHz	Tesla Brno	—	519053
33.	Group delay tester	R&S	LFM	881696/025

No.	Test equipment	Manufacturer	Type	Serial number
34.	Half wave dipole	R&S	HZ-12	831781/13
35.	HF generator	R&S	SMDU	—
36.	High-pass filter	VÚS	—	—
37.	LF amplifier	VÚS	—	—
38.	Log-periodic antenna	R&S	HL023A1	348501/005
39.	Log-periodic antenna	R&S	HL223	835556/001
40.	Loop antenna	R&S	HFH2-Z2	836077/011
41.	Modulation analyzer	R&S	FMAB	832488/008
42.	Network analyzer	Agilent Technologies	8753ET	US39170511
43.	Oscilloscope	Tektronix	2230	E205124
44.	Power generator	Comtest	CRI-10C1	9607097
45.	Power meter	Marconi	6970	237025/041
46.	Power sensor	Marconi	—	—
47.	Psophometer	Tesla Brno	—	1202251
48.	Signal generator	R&S	SMG	083451/036
49.	Signal generator	R&S	SMG	826784/006
50.	Signal generator	R&S	SMH	828190/007
51.	Spectrum analyzer	Hewlett-Packard	HP 8564E	3517A00350
52.	Splitter 4 × 50 Ω	—	—	—
53.	Sweep generator	Hewlett-Packard	HP 8350B	2933A12777
54.	SWR bridge	R&S	ZRC	840804/004
55.	Telephone LF bridge	VÚS	—	—
56.	Test bridge	R&S	ZRB2	825441/002
57.	Test power source	Agilent Technologies	E4356A	US39290262
58.	TV monitoring receiver	R&S	EKF 2	883621/002
59.	TV test transmitter	R&S	SBUF	883621/002
60.	TV test transmitter – modulator	R&S	SBTF	826881/001
61.	TV transmitter	Vigintos Elektronika	TV-05D	19401343
62.	Video analyzer	R&S	UAF	827558/031
63.	Video generator	Tesla	GTS 11	84028
64.	Wave guide – SMA adapter	Tesla	R100	870440/24
65.	Wave guide coupler	Tesla	R100	870440/51
66.	Wideband dipole	R&S	HUF-Z1	830612/006

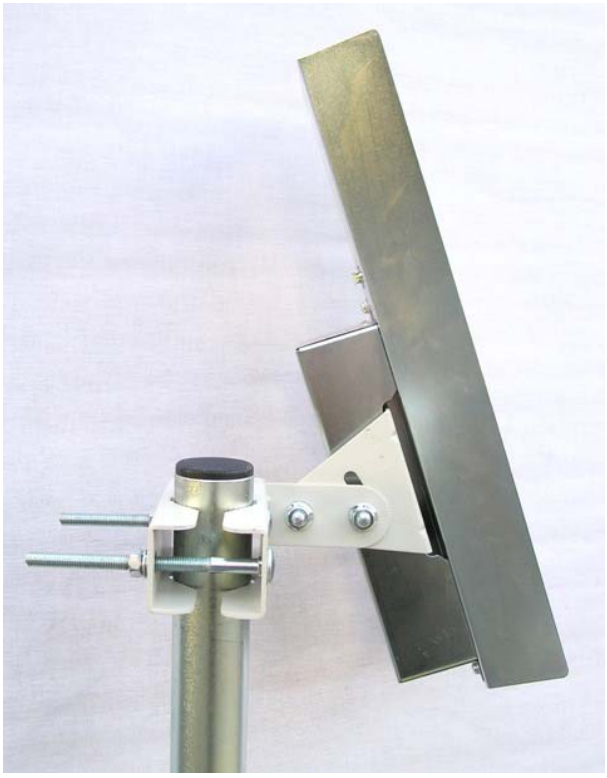
4 Photos of the Equipment Under Test



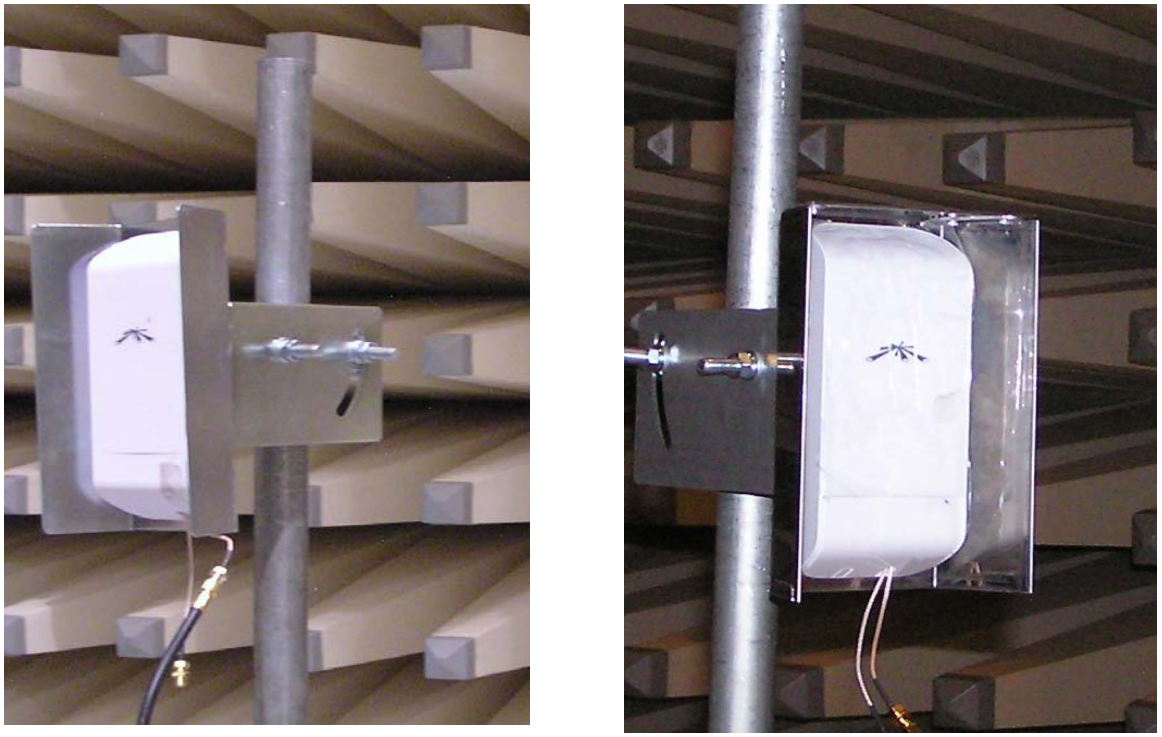
Photos 1: AM5 G16 with shelter 20 RFAM-G economy

Photos 2: AM5 G16 with shelter 20 RFAM-G excelent

Photos 3: AM5 G16 with shelter 60RFAM-G excelent and economy



Photos 4: AM5 G17 with shelter 20RFAM-G excelent and economy



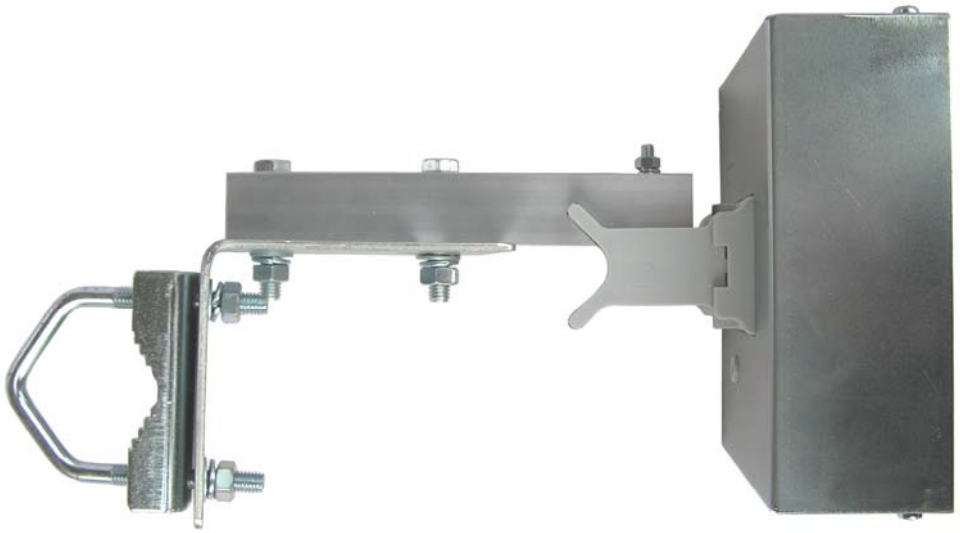
Photos 5: NanoStation M5 LOCO with shelter 20RFM5 LOCO economy and excelent

Photos 6: NanoStation M5 with shelter 20RFM5 economy and excellent

Photos 7: NanoStation M5 LOCO with shelter 20RFM5 LOCO economy and excelent

Photos 8: NanoStation M5 with shelter 20RFM5 economy and excelent

Photos 9: SXTG-5HPnD with RFSXT and with RFSXT + reflector RE45

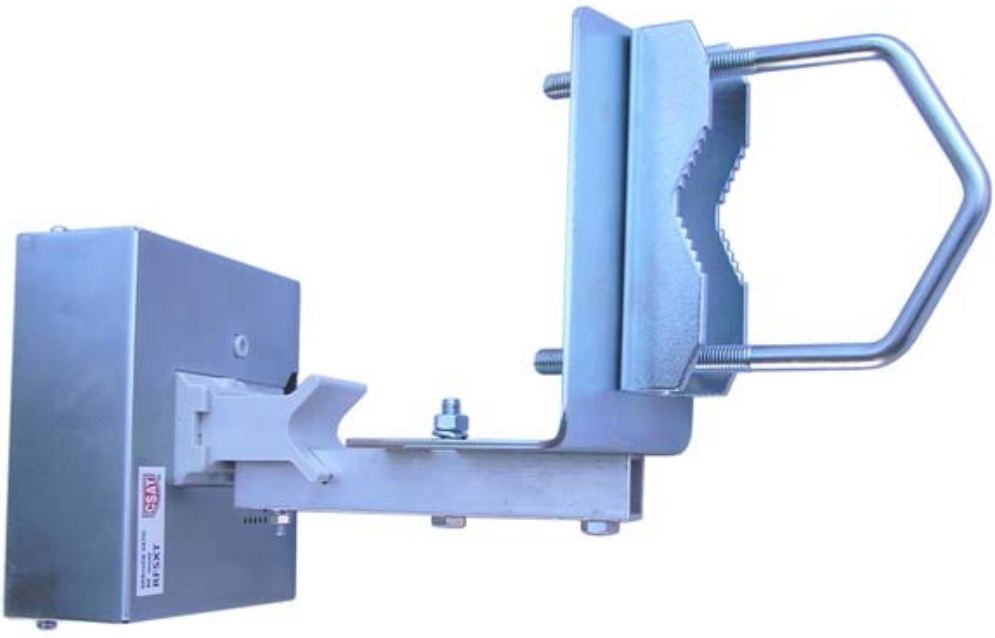


Photos 10: SXTG-5HPnD with RFSXT + MK5-T
(MK5-T special bracket made in CSAT)

Photos 11: SXTG-5HPaCD with RFSXT+ MK5-T and with RFSXT+reflector RE45+MK5-T (MK5-T special bracket made in CSAT)

Photos 12: SXTG-5HP aCD-SA with RFSXT and with RFSXT+MK5-T (MK5-T special bracket made in CSAT)

Photos 13: SXTG-5HP aCD-SA with RFSXT+ reflector RE45 + MK5-K / with VBZ3 / (MK5-K special bracket made in CSAT)

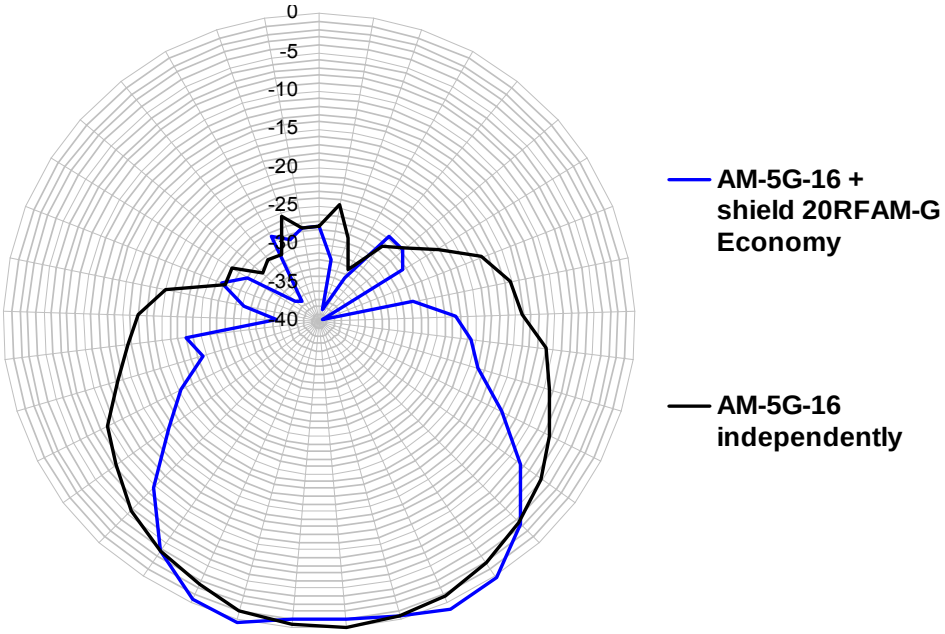


Photos 14: SXTG-5HP aCD-SA with RFSXT+MK5-TX / with Z5V105 / (MK5-TX special bracket made in CSAT)

5 List of Annexes

Annex No.	Title and specification of Annex
1	Graphs and Tables – radiation patterns

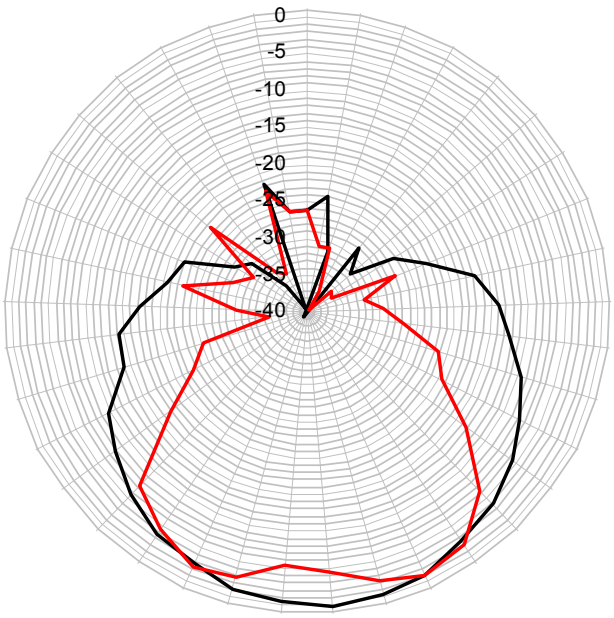
Graphs and Tables – Radiation patterns



Graph 1 V - polarization

Azimut°	Gain relative to azimuth 0°(dB) AM-5G-16	Gain relative to azimuth 0° of antenna without shelter(dB) AM-5G-16 with 20RFAM -G	Azimut°	Gain relative to azimuth 0°(dB) AM-5G-16	Gain relative to azimuth 0° of antenna without shelter(dB) AM-5G-16 with 20RFAM -G
-180	-27,66	-27,66	5	-0,16	-1,16
-170	-24,66	-31,8	10	-0,33	-1
-160	-28,5	-38,5	15	-0,66	-0,33
-150	-32,5	-33,5	20	-1,16	0,34
-140	-27,5	-26	25	-1,66	0,34
-130	-25,5	-26	30	-2,5	-0,33
-120	-22,2	-27,5	35	-3	-1,83
-110	-17,8	-39,5	40	-4	-4
-100	-15,2	-27,8	45	-4,83	-7
-90	-14,33	-22,7	50	-5,66	-10
-85	-12,33	-23,5	55	-7,33	-13,83
-80	-11	-20,5	60	-8,16	-16,5
-75	-10,16	-19,5	65	-9,66	-20,16
-70	-9,5	-19	70	-10	-20,33
-65	-8,33	-16,5	75	-11,66	-18,66
-60	-7,16	-14	80	-13,33	-24,66
-55	-6,16	-11,16	85	-12,83	-23
-50	-5,16	-8,33	90	-15,5	-23
-45	-4,16	-5,33	100	-17,1	-34,5
-40	-3,66	-3,16	110	-20,1	-30,33
-35	-2,83	-1	120	-27,3	-26,5
-30	-2,16	0,2	130	-27	-29,5
-25	-1,33	0,8	140	-30,5	-35,8
-20	-0,83	0,8	150	-29,8	-36,5
-15	-0,5	0,34	160	-30,1	-27,5
-10	-0,33	-0,5	170	-25,5	-28,7
-5	-0,16	-1	180	-27,66	-27,66
0	0	-1			

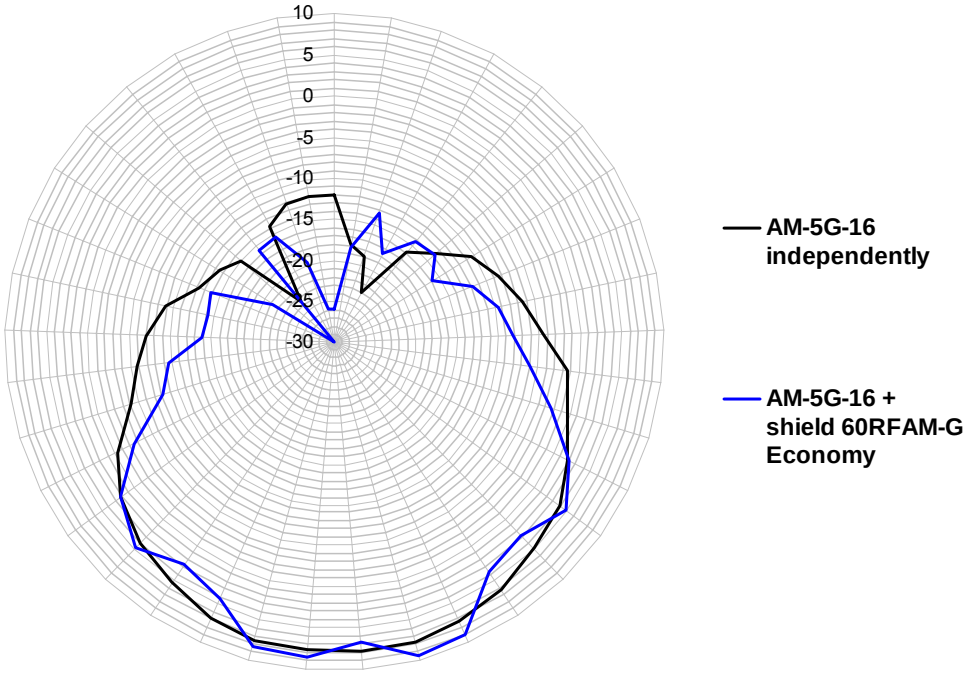
Table 1



Graph 2

Azimut°	Gain relative to azimuth 0°(dB) AM-5G-16	Gain relative to azimuth 0° of antenna without shelter(dB) AM-5G-16 with 20RFAM -G	Azimut°	Gain relative to azimuth 0°(dB) AM-5G-16	Gain relative to azimuth 0° of antenna without shelter(dB) AM-5G-16 with 20RFAM -G
-180	-26,34	-26,34	5	-5,34	6,17
-170	-24,17	-31	10	-5,5	5,5
-160	-31,34	-30,84	15	-3,84	4,34
-150	-40,84	-36,84	20	-3	3,5
-140	-29	-39,84	25	-2,5	3,34
-130	-32,34	-35,5	30	-2,34	3,5
-120	-26,17	-36,17	35	-2,84	3,5
-110	-22,67	-27,17	40	-4,5	2,84
-100	-17	-32,17	45	-6,5	1,17
-90	-14,17	-29,84	50	-7,5	-0,5
-85	-13,5	-30,84	55	-13,67	-3
-80	-12,5	-27	60	-17,17	-5,83
-75	-11,5	-24,34	65	-19,67	-9
-70	-9,67	-21,67	70	-22,84	-9,16
-65	-8,67	-20,84	75	-24,84	-14,5
-60	-7,84	-19,84	80	-25,34	-15
-55	-6,84	-16,84	85	-35,84	-16
-50	-5,84	-13,5	90	-34,84	-20,5
-45	-4,84	-9,67	100	-30,34	-27,33
-40	-4	-6,5	110	-22,84	-22,16
-35	-3,67	-4,17	120	-29,17	-27,33
-30	-2,67	-2	130	-31,34	-24
-25	-1,84	-1,17	140	-22,67	-27
-20	-1,17	-0,84	150	-33,34	-28
-15	-0,84	-1,5	160	-34,17	-22
-10	-0,34	-2,34	170	-22,67	-24,3
-5	0	-3,5	180	-26,34	-22,8
0	0	-4,5			

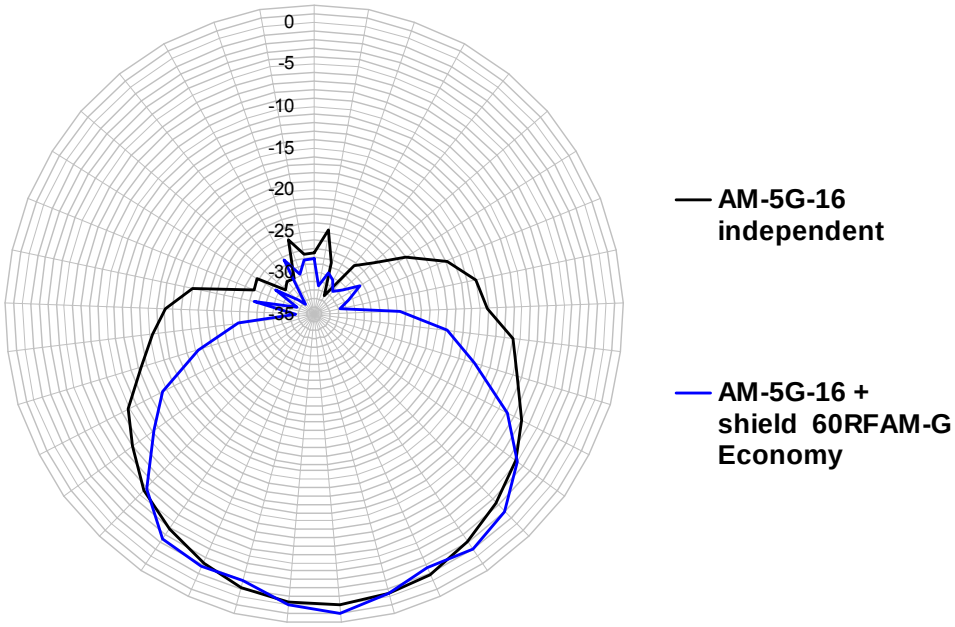
Table 2



Graph 3 **H polarization**

Azimut°	Gain relative to azimuth 0°(dB) AM-5G-16	Gain relative to azimuth 0° of antenna without shelter(dB) AM-5G-16 with 60RFAM -G	Azimut°	Gain relative to azimuth 0°(dB) AM-5G-16	Gain relative to azimuth 0° of antenna without shelter(dB) AM-5G-16 with 60RFAM -G
-180	-20	-33,84	5	0	-0,67
-170	-25,84	-26,14	10	-0,17	0,66
-160	-26,84	-21,14	15	-0,17	1
-150	-30,84	-25,64	20	-0,17	0,5
-140	-23,84	-22,14	25	-0,67	-0,67
-130	-21,34	-21,64	30	-1,17	-3,67
-120	-18,34	-23,84	35	-1,84	-5,67
-110	-16,34	-19,84	40	-2,5	-5,34
-100	-14,54	-17,54	45	-3	-4,17
-90	-12,5	-16,17	50	-3,84	-3,17
-85	-11,34	-15,67	55	-5,17	-4,5
-80	-9,34	-13,84	60	-5,84	-5,84
-75	-9,34	-12,17	65	-7,67	-8,84
-70	-8,17	-10,17	70	-8,34	-10,54
-65	-6,67	-7,84	75	-10,17	-13,34
-60	-6	-5,84	80	-12	-16,04
-55	-5,17	-4,34	85	-12,34	-17,34
-50	-4	-3,17	90	-13,67	-17,5
-45	-3,17	-4,17	100	-15	-21,84
-40	-3	-5,17	110	-16,84	-22,14
-35	-2,17	-5,84	120	-20,14	-21,84
-30	-1,5	-4	130	-21,44	-29,04
-25	-0,84	-0,84	140	-22,84	-37,84
-20	-0,67	1	150	-31,44	-23,44
-15	-0,5	1,5	160	-21,84	-23,14
-10	0	1,66	170	-20,14	-27,54
-5	0,16	0,5	180	-20	-33,84
0	0	-1,17			

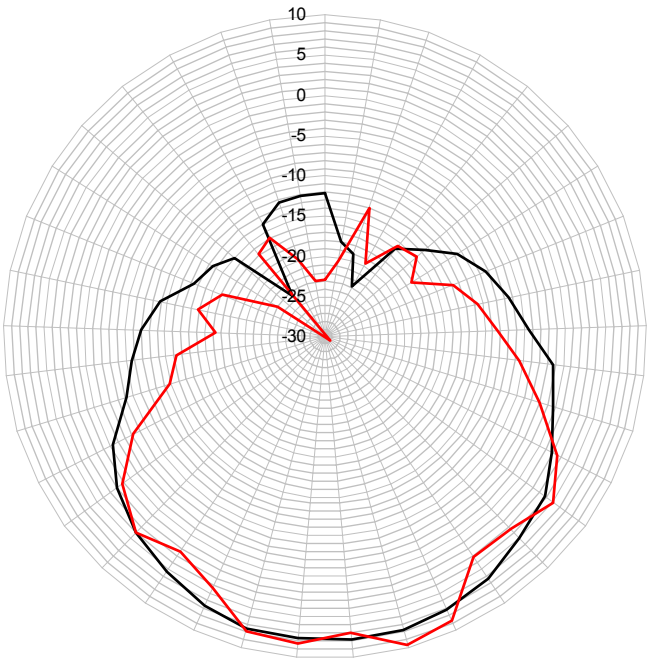
Table 3



Graph 4

Azimut°	Gain relative to azimuth 0°(dB) AM-5G-16	Gain relative to azimuth 0° of antenna without shelter(dB) AM-5G-16 with 60RFAM -G	Azimut°	Gain relative to azimuth 0°(dB) AM-5G-16	Gain relative to azimuth 0° of antenna without shelter(dB) AM-5G-16 with 60RFAM -G
-180	-20	-33,84	5	0,16	-1,17
-170	-25,84	-26,14	10	0	-0,67
-160	-26,84	-21,14	15	0	0,66
-150	-30,84	-25,64	20	-0,17	1
-140	-23,84	-22,14	25	-0,17	0,5
-130	-21,34	-21,64	30	-0,17	-0,67
-120	-18,34	-23,84	35	-0,67	-3,67
-110	-16,34	-19,84	40	-1,17	-5,67
-100	-14,54	-17,54	45	-1,84	-5,34
-90	-12,5	-16,17	50	-2,5	-4,17
-85	-11,34	-15,67	55	-3	-3,17
-80	-9,34	-13,84	60	-3,84	-4,5
-75	-9,34	-12,17	65	-5,17	-5,84
-70	-8,17	-10,17	70	-5,84	-8,84
-65	-6,67	-7,84	75	-7,67	-10,54
-60	-6	-5,84	80	-8,34	-13,34
-55	-5,17	-4,34	85	-10,17	-16,04
-50	-4	-3,17	90	-12	-17,34
-45	-3,17	-4,17	100	-12,34	-17,5
-40	-3	-5,17	110	-13,67	-21,84
-35	-2,17	-5,84	120	-15	-22,14
-30	-1,5	-4	130	-16,84	-21,84
-25	-0,84	-0,84	140	-20,14	-29,04
-20	-0,67	1	150	-21,44	-37,84
-15	-0,5	1,5	160	-22,84	-23,44
-10	0	1,66	170	-31,44	-23,14
-5	0,16	0,5	180	-21,84	-27,54
0	0	-1,17			

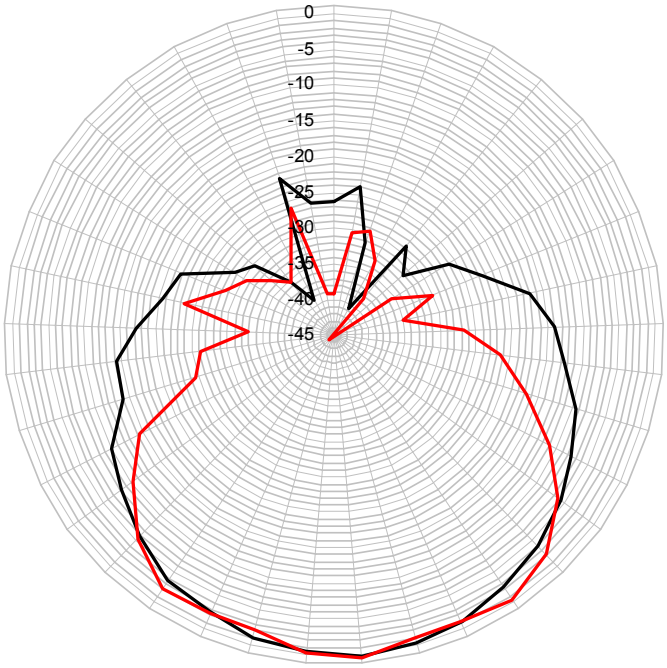
Table 4



Graph 5 **H polarization**

Azimut°	Gain relative to azimuth 0°(dB) AM-5G-16	Gain relative to azimuth 0° of antenna without shelter(dB) AM-5G-16 with 60RFAM -G	Azimut°	Gain relative to azimuth 0°(dB) AM-5G-16	Gain relative to azimuth 0° of antenna without shelter(dB) AM-5G-16 with 60RFAM -G
-180	-27,66	-28,3	5	-0,16	0,67
-170	-24,66	-31,5	10	-0,33	0
-160	-28,5	-29,7	15	-0,66	-1,16
-150	-32,5	-30,33	20	-1,16	-2
-140	-27,5	-31,5	25	-1,66	-2,16
-130	-25,5	-30,5	30	-2,5	-2
-120	-22,2	-28,5	35	-3	-2
-110	-17,8	-30,5	40	-4	-2,66
-100	-15,2	-32	45	-4,83	-4,33
-90	-14,33	-24,7	50	-5,66	-6
-85	-12,33	-22,3	55	-7,33	-8,5
-80	-11	-18,9	60	-8,16	-11,33
-75	-10,16	-16,8	65	-9,66	-14,5
-70	-9,5	-15	70	-10	-14,66
-65	-8,33	-12,2	75	-11,66	-20
-60	-7,16	-9,16	80	-13,33	-20,5
-55	-6,16	-7,16	85	-12,83	-21,5
-50	-5,16	-5	90	-15,5	-26
-45	-4,16	-3,16	100	-17,1	-32,83
-40	-3,66	-2,16	110	-20,1	-27,66
-35	-2,83	-1	120	-27,3	-32,83
-30	-2,16	-1	130	-27	-29,5
-25	-1,33	-1,5	140	-30,5	-32,5
-20	-0,83	-1,83	150	-29,8	-33,5
-15	-0,5	-1,5	160	-30,1	-27,5
-10	-0,33	-0,33	170	-25,5	-29,8
-5	-0,16	0,5	180	-27,66	-28,3
0	0	1			

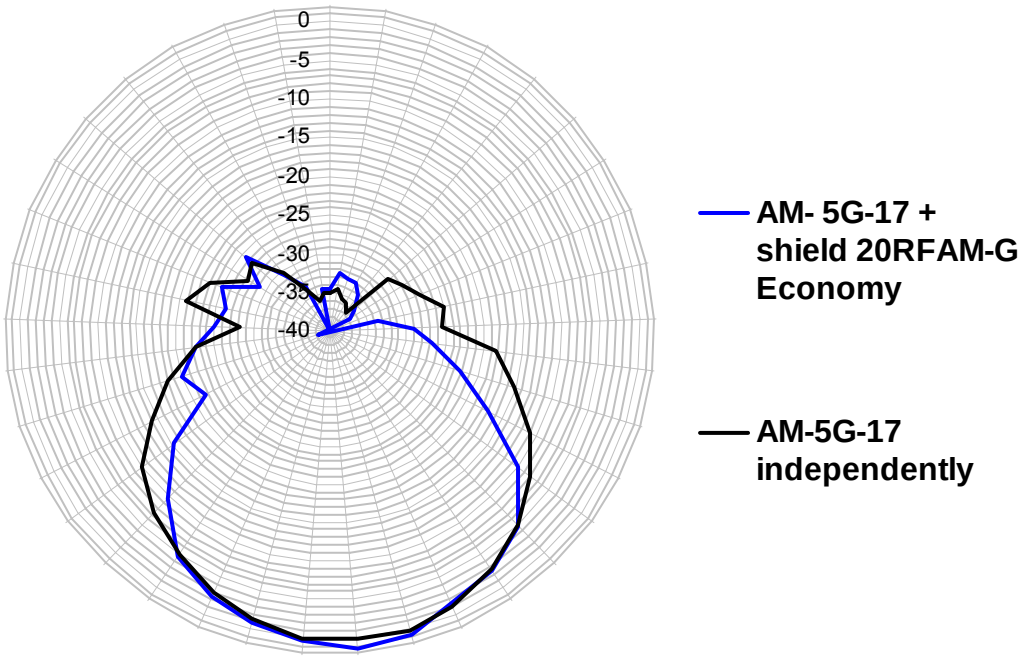
Table 5



Graph 6

Azimut°	Gain relative to azimuth 0°(dB) AM-5G-16	Gain relative to azimuth 0° of antenna without shelter(dB) AM-5G-16 with 60RFAM -G	Azimut°	Gain relative to azimuth 0°(dB) AM-5G-16	Gain relative to azimuth 0° of antenna without shelter(dB) AM-5G-16 with 60RFAM -G
-180	-27,66	-34	5	0	1,5
-170	-24,66	-31,5	10	-0,16	1,34
-160	-28,5	-38,1	15	-0,33	0,5
-150	-32,5	-42,5	20	-0,66	-1
-140	-27,5	-32,5	25	-1,16	-2
-130	-25,5	-35,8	30	-1,66	-1,83
-120	-22,2	-31	35	-2,5	-1,33
-110	-17,8	-39	40	-3	-1,16
-100	-15,2	-35,1	45	-4	-1,5
-90	-14,33	-25,33	50	-4,83	-3,16
-85	-12,33	-23	55	-5,66	-4,83
-80	-11	-19,83	60	-7,33	-7,5
-75	-10,16	-16,66	65	-8,16	-10,33
-70	-9,5	-14	70	-9,66	-13,5
-65	-8,33	-11,33	75	-10	-14,16
-60	-7,16	-8,5	80	-11,66	-20,5
-55	-6,16	-5,83	85	-13,33	-20,66
-50	-5,16	-3,66	90	-12,83	-22
-45	-4,16	-1,83	100	-15,5	-25,66
-40	-3,66	-0,66	110	-17,1	-35,33
-35	-2,83	0	120	-20,1	-29
-30	-2,16	0	130	-27,3	-35,16
-25	-1,33	-0,83	140	-27	-32,5
-20	-0,83	-1,66	150	-30,5	-35,16
-15	-0,5	-1,5	160	-29,8	-41,3
-10	-0,33	-0,16	170	-30,1	-29,2
-5	-0,16	1	180	-25,5	-29,2
0	0	1,5			

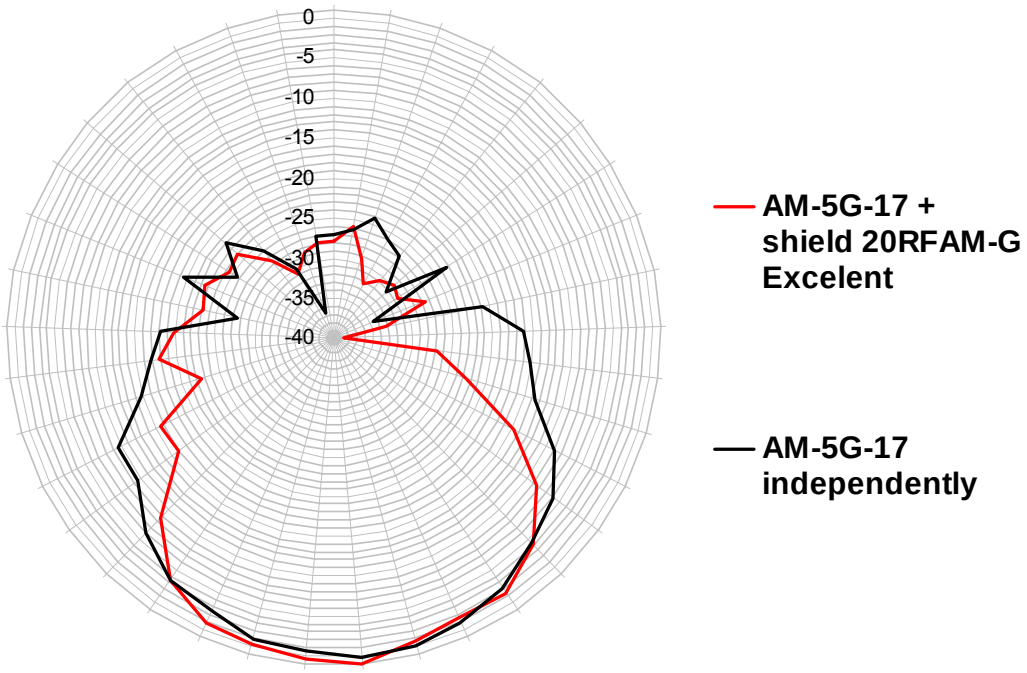
Table 6



Graph 7

Azimut°	Gain relative to azimuth 0°(dB) AM-5G-16	Gain relative to azimuth 0° of antenna without shelter(dB) AM-5G-16 with 60RFAM -G	Azimut°	Gain relative to azimuth 0°(dB) AM-5G-16	Gain relative to azimuth 0° of antenna without shelter(dB) AM-5G-16 with 60RFAM -G
-180	-35	-34,5	5	0	0,83
-170	-34,5	-32,5	10	-0,17	0,16
-160	-35,67	-33	15	-0,67	-0,84
-150	-35,84	-33	20	-1,5	-1,17
-140	-37	-34	25	-2,17	-1,67
-130	-30	-36	30	-3,17	-2,34
-120	-29	-37	35	-4	-3,34
-110	-27,5	-41,67	40	-5,17	-4,84
-100	-25,17	-33,5	45	-6,84	-7,34
-90	-25,67	-29,17	50	-7,5	-9,84
-85	-21,34	-26,67	55	-8,17	-12,34
-80	-18,34	-26,84	60	-10	-15,34
-75	-16,67	-24,84	65	-12,34	-20,17
-70	-15,17	-22,5	70	-14,17	-21,84
-65	-13	-19,84	75	-15,84	-20,5
-60	-11,17	-17	80	-18	-20,17
-55	-10,5	-13	85	-20,67	-21
-50	-8	-10	90	-22,67	-22,67
-45	-6,34	-7	100	-28,34	-25
-40	-5,17	-5	110	-21	-26,34
-35	-4	-3,5	120	-23,34	-25,17
-30	-3	-2,67	130	-27,67	-29,5
-25	-2	-2,17	140	-26,67	-25,5
-20	-1	-1,5	150	-30,34	-30,67
-15	-0,34	-0,84	160	-34	-33,5
-10	0	0,33	170	-36	-40
-5	0,16	1,16	180	-35	-34,5
0	0	1,33			

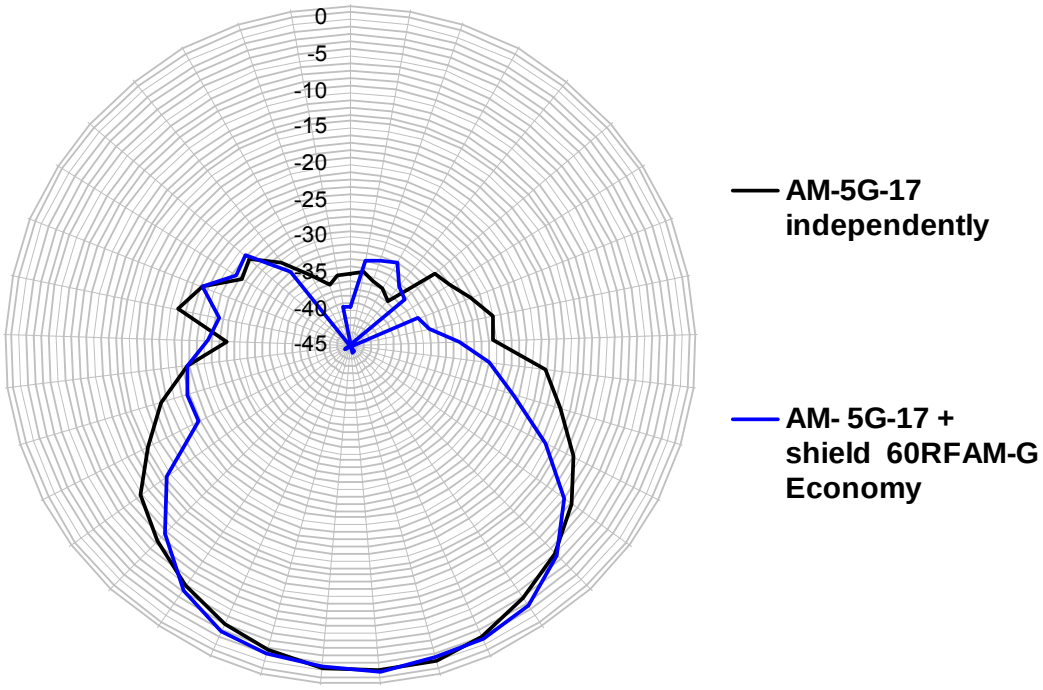
Table 7



Graph 8

Azimut°	Gain relative to azimuth 0°(dB) AM-5G-17	Gain relative to azimuth 0° of antenna without shelter(dB) AM-5G-17 with 20RFAM -G	Azimut°	Gain relative to azimuth 0°(dB) AM-5G-17	Gain relative to azimuth 0° of antenna without shelter(dB) AM-5G-17 with 20RFAM -G
-180	-27,13	-28	5	-0,33	0,83
-170	-26,33	-25,83	10	-0,67	0,33
-160	-24,33	-29,67	15	-1	-0,17
-150	-25,83	-32,33	20	-1	-0,33
-140	-26,83	-30,83	25	-1,83	-0,5
-130	-31,33	-30	30	-2,5	-1
-120	-23,53	-30,67	35	-3,67	-2,33
-110	-34,67	-27,83	40	-3,5	-3,33
-100	-21	-33,33	45	-5,67	-6
-90	-16,33	-38,83	50	-6,17	-8,67
-85	-15,63	-20,83	55	-7,17	-11,33
-80	-15,17	-27,13	60	-9,83	-16
-75	-11,83	-21,83	65	-9,83	-14
-70	-13,67	-22,63	70	-9,83	-15,67
-65	-10,33	-20,63	75	-11	-22,33
-60	-9	-14,67	80	-14,83	-22,63
-55	-8,67	-13,5	85	-17,33	-18,17
-50	-6	-8,67	90	-17	-18
-45	-4,67	-5,67	100	-18,33	-20
-40	-4,5	-4,17	110	-27,83	-23,33
-35	-3,67	-2,5	120	-19,67	-22,67
-30	-2,33	-1,5	130	-25,67	-24,5
-25	-1,67	-1,17	140	-22	-24
-20	-1,17	-1,67	150	-26,13	-27,5
-15	-1	-1,5	160	-30,13	-30,83
-10	-0,17	-0,67	170	-36,83	-28,83
-5	0	0,17	180	-27,13	-28
0	0	0,83			

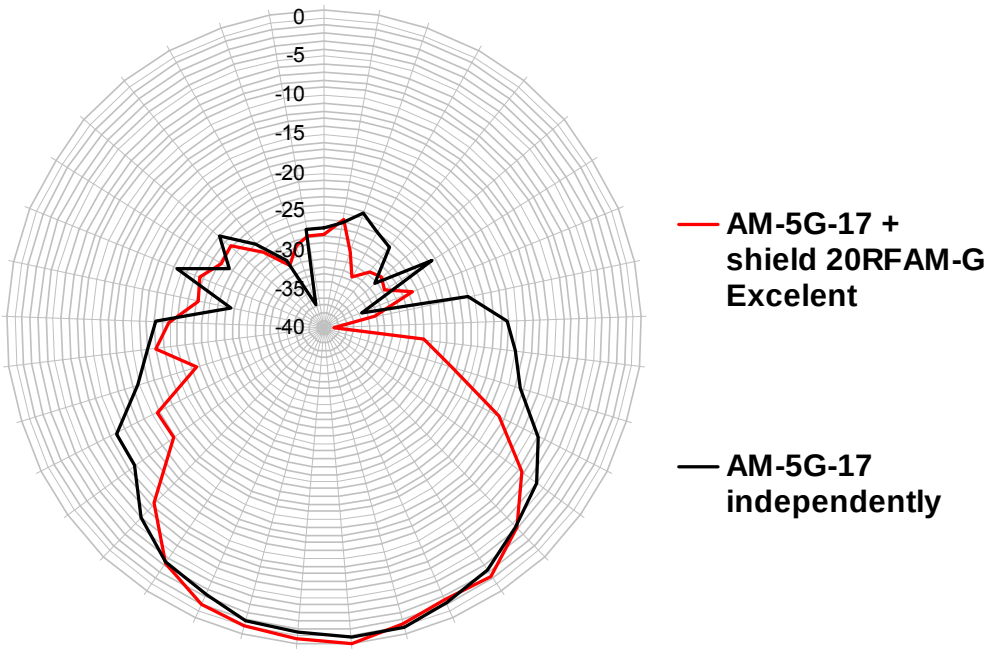
Table 8



Graph 9

Azimut°	Gain relative to azimuth 0°(dB) AM-5G-17	Gain relative to azimuth 0° of antenna without shelter(dB) AM-5G-17 with 60RFAM -G	Azimut°	Gain relative to azimuth 0°(dB) AM-5G-17	Gain relative to azimuth 0° of antenna without shelter(dB) AM-5G-17 with 60RFAM -G
-180	-27,13	-39,67	5	-0,33	-0,17
-170	-26,33	-33	10	-0,67	-0,5
-160	-24,33	-32,5	15	-1	-1
-150	-25,83	-32	20	-1	-1
-140	-26,83	-34,67	25	-1,83	-1,17
-130	-31,33	-35,34	30	-2,5	-1,87
-120	-23,53	-46	35	-3,67	-2,84
-110	-34,67	-35	40	-3,5	-4,34
-100	-21	-34	45	-5,67	-6,5
-90	-16,33	-30,17	50	-6,17	-8,84
-85	-15,63	-29,67	55	-7,17	-11
-80	-15,17	-26	60	-9,83	-14,34
-75	-11,83	-24,84	65	-9,83	-18,67
-70	-13,67	-21,84	70	-9,83	-22
-65	-10,33	-19,67	75	-11	-24
-60	-9	-15,34	80	-14,83	-21,84
-55	-8,67	-11,67	85	-17,33	-24
-50	-6	-9,17	90	-17	-22,67
-45	-4,67	-6,34	100	-18,33	-25,67
-40	-4,5	-4,5	110	-27,83	-26,67
-35	-3,67	-2,84	120	-19,67	-23,5
-30	-2,33	-1,84	130	-25,67	-26,67
-25	-1,67	-1,34	140	-22	-26,17
-20	-1,17	-0,84	150	-26,13	-32,17
-15	-1	-0,84	160	-30,13	-46
-10	-0,17	-0,5	170	-36,83	-46
-5	0	0,16	180	-27,13	-39,67
0	0	0,33			

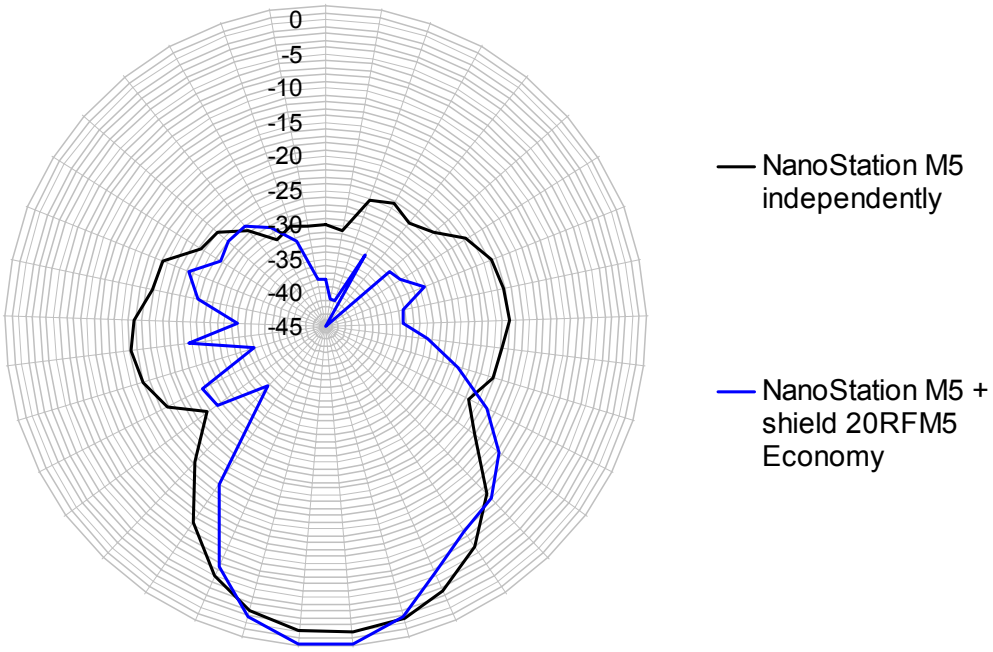
Table 9



Graph 10

Azimut°	Gain relative to azimuth 0°(dB) AM-5G-17	Gain relative to azimuth 0° of antenna without shelter(dB) AM-5G-17 with 60RFAM -G	Azimut°	Gain relative to azimuth 0°(dB) AM-5G-17	Gain relative to azimuth 0° of antenna without shelter(dB) AM-5G-17 with 60RFAM -G
-180	-27,13	-25,83	5	-0,33	-0,5
-170	-26,33	-27,67	10	-0,67	-0,83
-160	-24,33	-25,83	15	-1	-0,83
-150	-25,83	-32,5	20	-1	-0,5
-140	-26,83	-36,5	25	-1,83	-1,17
-130	-31,33	-36,67	30	-2,5	-1,5
-120	-23,53	-31,17	35	-3,67	-2,17
-110	-34,67	-27,33	40	-3,5	-2,83
-100	-21	-29,5	45	-5,67	-4,5
-90	-16,33	-30,83	50	-6,17	-6,5
-85	-15,63	-20,83	55	-7,17	-9
-80	-15,17	-32,46	60	-9,83	-13,67
-75	-11,83	-18	65	-9,83	-13,33
-70	-13,67	-20,83	70	-9,83	-13,33
-65	-10,33	-15,83	75	-11	-18,33
-60	-9	-13,67	80	-14,83	-28,83
-55	-8,67	-12,67	85	-17,33	-22
-50	-6	-7,5	90	-17	-22,53
-45	-4,67	-5,83	100	-18,33	-20,33
-40	-4,5	-4,33	110	-27,83	-22,83
-35	-3,67	-3	120	-19,67	-25,53
-30	-2,33	-1,67	130	-25,67	-23
-25	-1,67	-1	140	-22	-20,83
-20	-1,17	-1,17	150	-26,13	-30,17
-15	-1	-1,33	160	-30,13	-37
-10	-0,17	-1	170	-36,83	-32,63
-5	0	-0,33	180	-27,13	-25,83
0	0	-0,17			

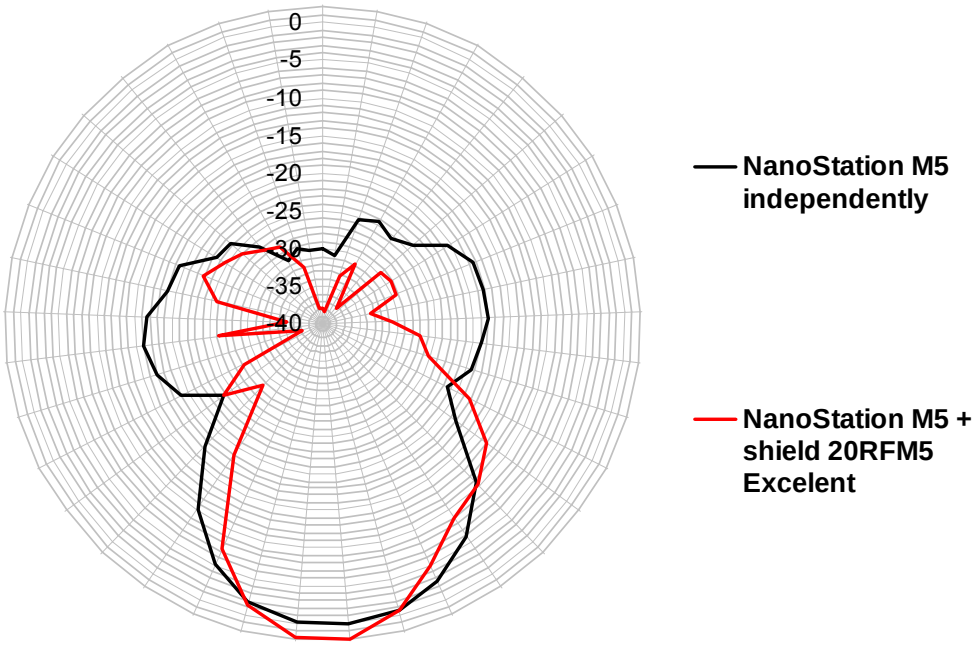
Table 10



Graph 11

Azimut°	Gain relative to azimuth 0°(dB) NanoStationM5	Gain relative to azimuth 0° of antenna without shelter(dB) NanoStationM5 with 20RFM5	Azimut°	Gain relative to azimuth 0°(dB) NanoStationM5	Gain relative to azimuth 0° of antenna without shelter(dB) NanoStationM5 with 20RFM5
-180	-27,13	-38	5	0,16	2
-170	-26,33	-41	10	-0,17	1,66
-160	-24,33	-41	15	-0,84	0,66
-150	-25,83	-33	20	-1,84	-0,84
-140	-26,83	-45	25	-3,34	-3,34
-130	-31,33	-32,84	30	-5,17	-6,5
-120	-23,53	-32,17	35	-7,5	-10,84
-110	-34,67	-29,5	40	-10,34	-17
-100	-21	-33,37	45	-14	-29
-90	-16,33	-33,67	50	-17,5	-33
-85	-15,63	-33	55	-23,5	-30,84
-80	-15,17	-29,84	60	-23,67	-25,5
-75	-11,83	-27,17	65	-21,67	-23,67
-70	-13,67	-24,84	70	-19	-24,67
-65	-10,33	-21,34	75	-18,17	-28
-60	-9	-18,5	80	-17,17	-34
-55	-8,67	-16,84	85	-16	-27,5
-50	-6	-13,67	90	-16,17	-24,84
-45	-4,67	-11	100	-16,84	-32
-40	-4,5	-10	110	-19	-25,84
-35	-3,67	-8,84	120	-19,5	-23,34
-30	-2,33	-8,67	130	-23,5	-27
-25	-1,67	-7,5	140	-24	-26,17
-20	-1,17	-5,5	150	-27	-26,17
-15	-1	-3,17	160	-30,5	-28,5
-10	-0,17	-1	170	-29,34	-31,83
-5	0	0,66	180	-30,17	-38
0	0	1,66			

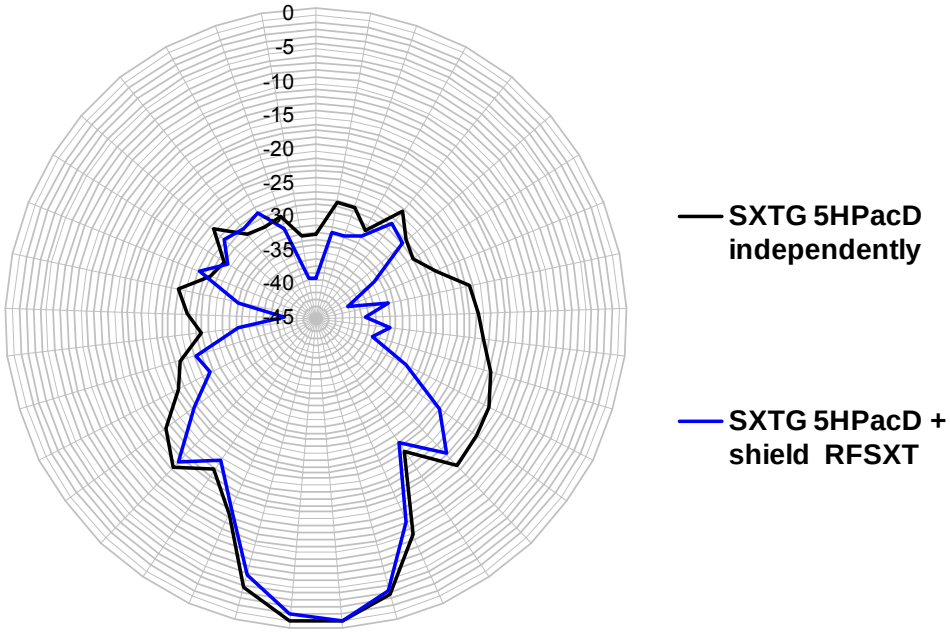
Table 11



Graph 12

Azimut°	Gain relative to azimuth 0°(dB) NanoStationM5	Gain relative to azimuth 0° of antenna without shelter(dB) NanoStationM5 with 20RFM5	Azimut°	Gain relative to azimuth 0°(dB) NanoStationM5	Gain relative to azimuth 0° of antenna without shelter(dB) NanoStationM5 with 20RFM5
-180	-30,33	-38,16	5	0	1,84
-170	-31	-38,66	10	-0,33	1,5
-160	-25,5	-33,33	15	-1	0,34
-150	-24,5	-31,16	20	-2	-1,5
-140	-25,66	-37,5	25	-3,5	-4,16
-130	-24,33	-30	30	-5,33	-7,66
-120	-20,83	-29,5	35	-7,66	-12,33
-110	-18,83	-29,83	40	-10,5	-19,16
-100	-18,5	-33,66	45	-14,16	-32,66
-90	-18,33	-30,83	50	-17,66	-28,83
-85	-19,16	-30,33	55	-23,66	-30,5
-80	-19	-27,33	60	-23,83	-24
-75	-19,66	-26,66	65	-21,83	-24,33
-70	-19,66	-25,5	70	-19,16	-28,33
-65	-21,16	-22	75	-18,33	-33,16
-60	-21,66	-18,16	80	-17,33	-37,16
-55	-20,66	-16,16	85	-16,16	-31
-50	-18,16	-13,33	90	-16,33	-26,5
-45	-14,66	-11,16	100	-17	-35,33
-40	-11,16	-10,5	110	-19,16	-26
-35	-8,5	-9,5	120	-19,66	-23,16
-30	-6,16	-9,16	130	-23,66	-25
-25	-4,5	-7,33	140	-24,16	-26,16
-20	-2,83	-5,16	150	-27,16	-27,66
-15	-1,66	-2,66	160	-30,66	-28,66
-10	-0,83	-0,83	170	-29,5	-32,16
-5	0	1,16	180	-30,33	-38,16
0	0	1,84			

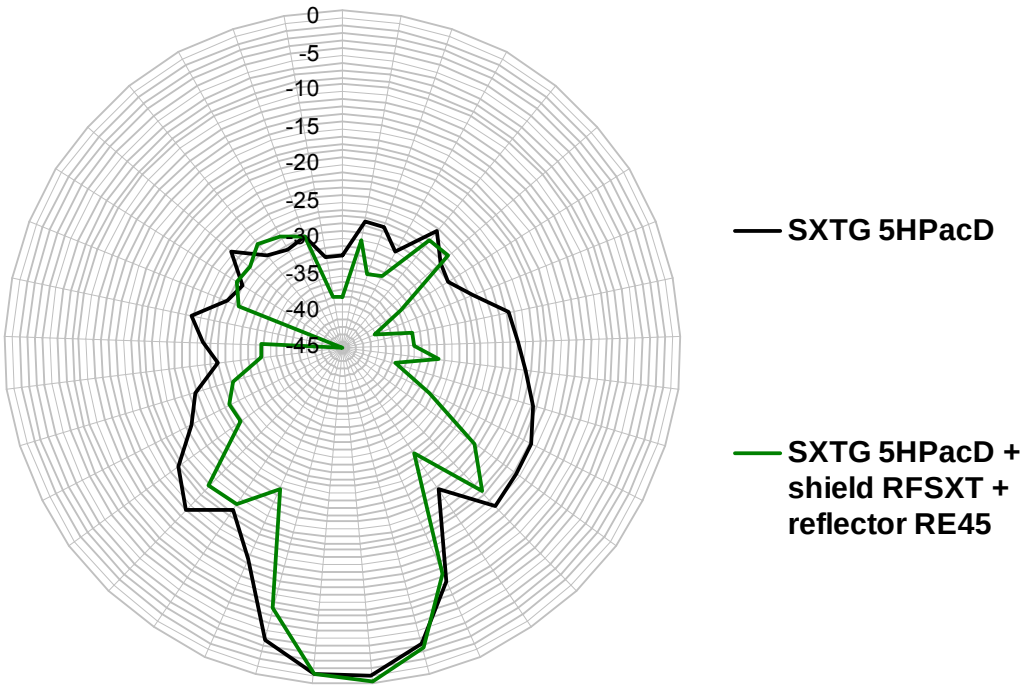
Table 12



Graph 13

Azimut°	Gain relative to azimuth 0°(dB) SXTG 5HPacD	Gain relative to azimuth 0° of antenna without shelter(dB) SXTG 5HPacD with RFSXT	RFSXT+ SXT5HPacD+ holder MK5-T	Azimut°	Gain relative to azimuth 0°(dB) SXTG 5HPacD	Gain relative to azimuth 0° of antenna without shelter(dB) SXTG 5HPacD with RFSXT	RFSXT+ SXTG5HPacD+ holder MK5-T
-180	-32,5	-39	-41	5	0,34	-0,16	-0,16
-170	-27,6	-32	-35	10	-0,16	-1	-1,33
-160	-27,5	-32	-35	15	-1,66	-2,83	-2,83
-150	-30	-31	-33	20	-4	-5,83	-6,33
-140	-24,5	-27	-24	25	-7,66	-9,5	-9,83
-130	-27,3	-28	-22,83	30	-13,33	-14,5	-14,83
-120	-28	-34,8	-33,83	35	-20	-23,33	-23,33
-110	-26	-40	-41	40	-18,16	-19,7	-18
-100	-21,83	-34	-35	45	-15	-15	-15,33
-90	-21	-37,8	-39	50	-14,5	-15,5	-16,33
-85	-20,5	-41	-43	55	-15,66	-19,5	-20,33
-80	-19,83	-34	-36	60	-17,5	-22,7	-23,66
-75	-19	-39	-39,83	65	-20	-31,66	-33
-70	-17,83	-36,5	-37,33	70	-22	-27,5	-25
-65	-16,6	-32,8	-33,33	75	-24	-27	-28,83
-60	-16,3	-30	-30,66	80	-23,83	-26,5	-27,33
-55	-15,66	-24,7	-25,16	85	-25	-30	-29,16
-50	-15,6	-22,5	-22,83	90	-28	-33,5	-33,83
-45	-15,16	-19,83	-20,16	100	-26	-40,3	-41,33
-40	-15	-17,33	-17,66	110	-24	-33,33	-34,66
-35	-18,83	-24,16	-24,83	120	-28	-26,33	-27,16
-30	-21,6	-23,16	-23,66	130	-29	-29,5	-29,83
-25	-15	-17,16	-17,33	140	-25	-27	-28,33
-20	-10	-12,16	-12,66	150	-28,8	-28	-26
-15	-6	-6,83	-6,83	160	-29,5	-27	-28
-10	-3	-3,5	-3,66	170	-29	-31	-32,33
-5	-1,16	-1,33	-1,4	180	-32,5	-39	-41
0	0	0	0				

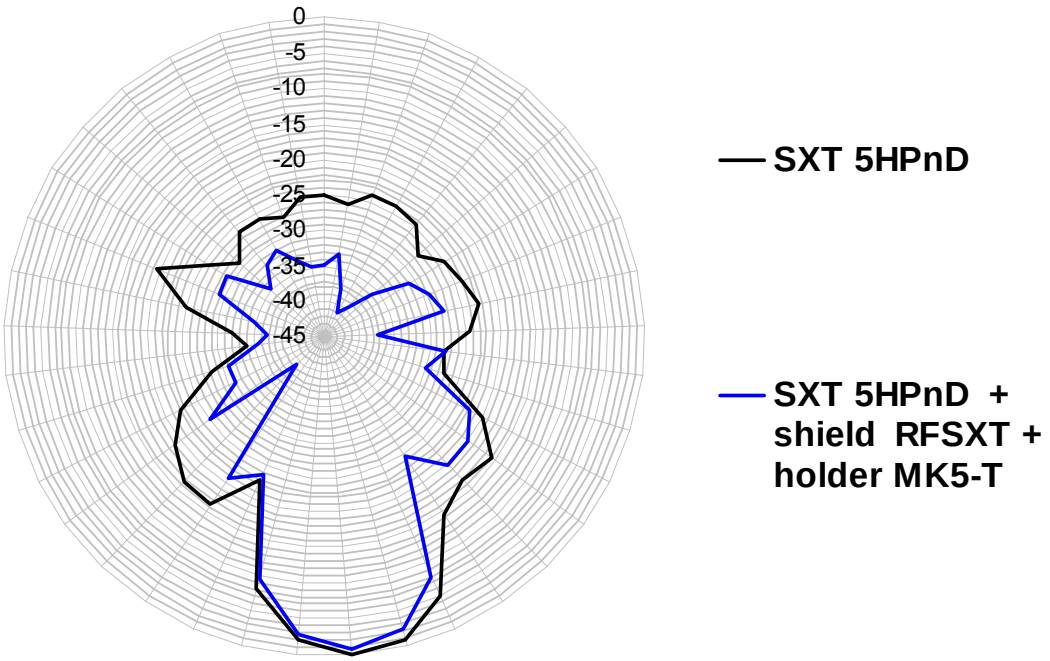
Table 13



Graph 14

Azimut°	Gain relative to azimuth 0° (dB) SXTG 5HPacD	Gain relative to azimuth 0° of antenna without shelter (dB) SXTG 5HPacD with RFSXT+RE45	Azimut°	Gain relative to azimuth 0° (dB) SXTG 5HPacD	Gain relative to azimuth 0° of antenna without shelter (dB) SXTG 5HPacD with RFSXT+RE45
-180	-32,5	-38	5	0,34	0,84
-170	-27,6	-30,16	10	-0,16	-0,16
-160	-27,5	-34,5	15	-1,66	-3
-150	-30	-34	20	-4	-8,16
-140	-24,5	-26,16	25	-7,66	-15,5
-130	-27,3	-26	30	-13,33	-23,83
-120	-28	-35,6	35	-20	-21
-110	-26	-40,5	40	-18,16	-19,33
-100	-21,83	-35,33	45	-15	-16,5
-90	-21	-35,33	50	-14,5	-18,83
-85	-20,5	-39,6	55	-15,66	-25,33
-80	-19,83	-32	60	-17,5	-27,83
-75	-19	-34,33	65	-20	-30,83
-70	-17,83	-37,5	70	-22	-27,83
-65	-16,6	-30,6	75	-24	-36
-60	-16,3	-31,66	80	-23,83	-29,33
-55	-15,66	-22,5	85	-25	-47
-50	-15,6	-22,83	90	-28	-33,83
-45	-15,16	-20,16	100	-26	-34
-40	-15	-17,7	110	-24	-45
-35	-18,83	-24,16	120	-28	-29,83
-30	-21,6	-27,6	130	-29	-28,16
-25	-15	-19,66	140	-25	-28,33
-20	-10	-11,33	150	-28,8	-26,83
-15	-6	-5,66	160	-29,5	-27,53
-10	-3	-2,5	170	-29	-29,16
-5	-1,16	-0,66	180	-32,5	-38
0	0	0,67			

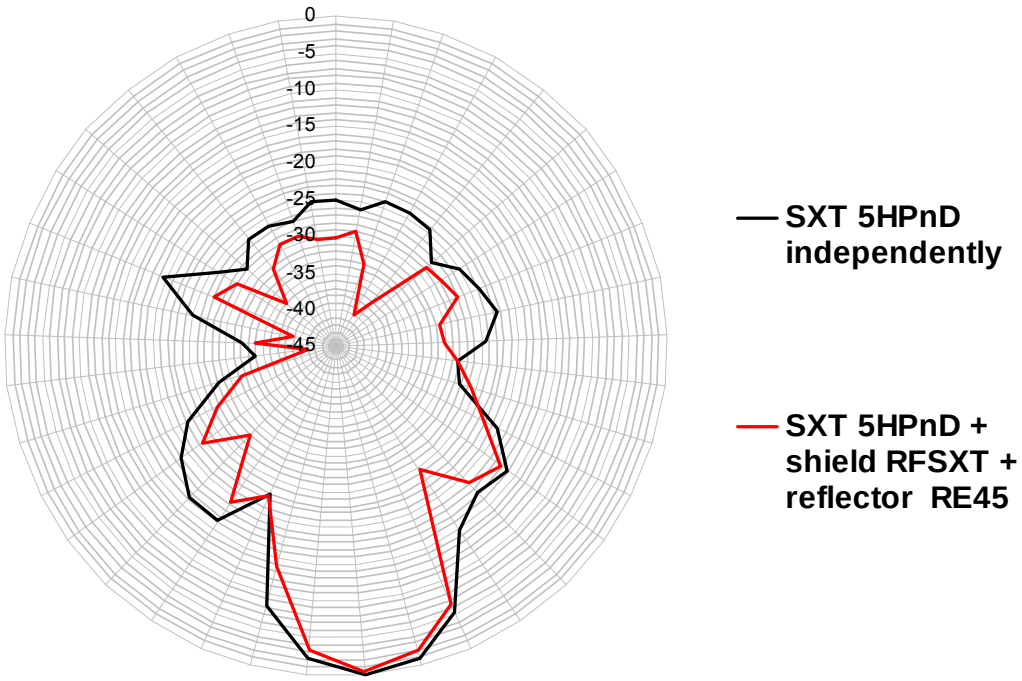
Table 14



Graph 15

Azimut°	Gain relative to azimuth 0°(dB) SXT 5HPnD	Gain relative to azimuth 0° of antenna without shelter(dB) SXT 5HPnD with RFSXT	SXT 5HPnD with RFSXT + holder MK5-T	Azimut°	Gain relative to azimuth 0° (dB) SXT 5HPnD	Gain relative to azimuth 0° of antenna without shelter(dB) SXT 5HPnD with RFSXT	SXT 5HPnD with RFSXT + holder MK5-T
-180	-25,14	-32,14	-35	5	-0,64	-1,3	-2,83
-170	-26,14	-30,14	-33	10	-2,14	-2,8	-5,66
-160	-24,14	-35,14	-38	15	-4,64	-5,3	-9,5
-150	-24,14	-39,14	-41	20	-8,3	-9,3	-15,33
-140	-24,64	-41,14	-39,83	25	-14,14	-15,14	-23,83
-130	-27,74	-35,44	-36	30	-23,14	-23,84	-20,83
-120	-25,14	-30,44	-31	35	-19,14	-20,44	-20,83
-110	-23,97	-29,44	-29	40	-16,44	-20,14	-25,66
-100	-22,64	-28,14	-28	45	-16,44	-25,44	-39,66
-90	-24,64	-37,14	-37,5	50	-16,44	-39,14	-25,83
-85	-30,14	-34,14	-35,13	55	-18,44	-25,84	-25
-80	-28,14	-27,84	-28	60	-19,14	-24,14	-25
-75	-28,14	-27,14	-28	65	-20,44	-25,14	-31
-70	-27,44	-29,44	-30	70	-22,3	-30,64	-39,16
-65	-22,14	-24,84	-25	75	-24,3	-38,94	-31
-60	-20,3	-21,44	-22	80	-28,44	-30,64	-31,83
-55	-18,14	-20,97	-21	85	-30,14	-31,14	-35,66
-50	-16,14	-19,14	-20	90	-34,14	-35,14	-37
-45	-15,97	-16,64	-17	100	-32,14	-36,14	-34,83
-40	-17,14	-19,64	-20	110	-25,14	-35,14	-29
-35	-20,94	-26,14	-27	120	-19,74	-28,14	-29
-30	-14,74	-24,3	-24,66	130	-26,14	-28,14	-35
-25	-9,47	-13,54	-13,66	140	-29,14	-35,14	-32
-20	-5,3	-7,97	-8	150	-26,14	-30,64	-31
-15	-2,64	-4,47	-4,66	160	-26,14	-29,14	-34
-10	-0,8	-2,3	-2,4	170	-27,14	-32,14	-35
-5	0	-0,97	-1	180	-25,14	-32,14	-2,83
0	0	-0,8	-0,8				-5,66

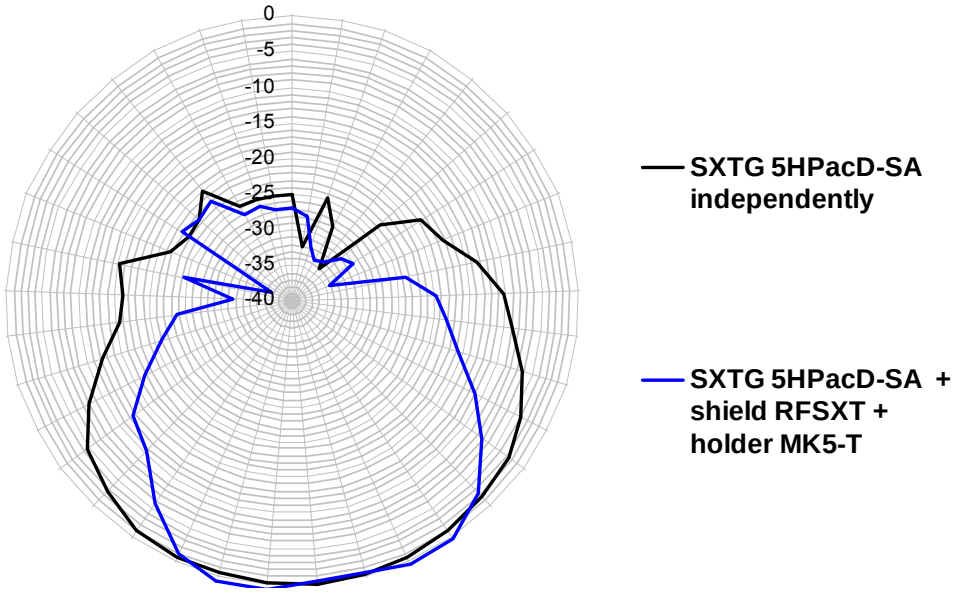
Table 15



Graph 16

Azimut°	Gain relative to azimuth 0°(dB) SXT 5HPnD	Gain relative to azimuth 0° of antenna without shelter(dB) SXT 5HPnD with RFSXT+RE45	Azimut°	Gain relative to azimuth 0°(dB) SXT 5HPnD	Gain relative to azimuth 0° of antenna without shelter(dB) SXT 5HPnD with RFSXT+RE45
-180	-25,14	-30,14	5	-0,64	-1,3
-170	-26,14	-29,14	10	-2,14	-3,3
-160	-24,14	-33,14	15	-4,64	-7,3
-150	-24,14	-40,14	20	-8,3	-13,8
-140	-24,64	-37,64	25	-14,14	-31,14
-130	-27,74	-28,64	30	-23,14	-22,64
-120	-25,14	-28,14	35	-19,14	-21,14
-110	-23,97	-27,14	40	-16,44	-19,47
-100	-22,64	-30,64	45	-16,44	-23,84
-90	-24,64	-30,14	50	-16,44	-28,14
-85	-30,14	-36,44	55	-18,44	-24,14
-80	-28,14	-28,14	60	-19,14	-22,54
-75	-28,14	-27,97	65	-20,44	-24,44
-70	-27,44	-25,64	70	-22,3	-26,84
-65	-22,14	-24,14	75	-24,3	-34,94
-60	-20,3	-22,3	80	-28,44	-31,64
-55	-18,14	-22,14	85	-30,14	-33,14
-50	-16,14	-17,14	90	-34,14	-41,14
-45	-15,97	-19,14	100	-32,14	-34,14
-40	-17,14	-19,14	110	-25,14	-38,94
-35	-20,94	-24,94	120	-19,74	-27,14
-30	-14,74	-24,64	130	-26,14	-29,14
-25	-9,47	-12,14	140	-29,14	-36,14
-20	-5,3	-6,47	150	-26,14	-31,44
-15	-2,64	-3,8	160	-26,14	-29,14
-10	-0,8	-1,97	170	-27,14	-29,14
-5	0	-0,97	180	-25,14	-30,14
0	0	-0,34			

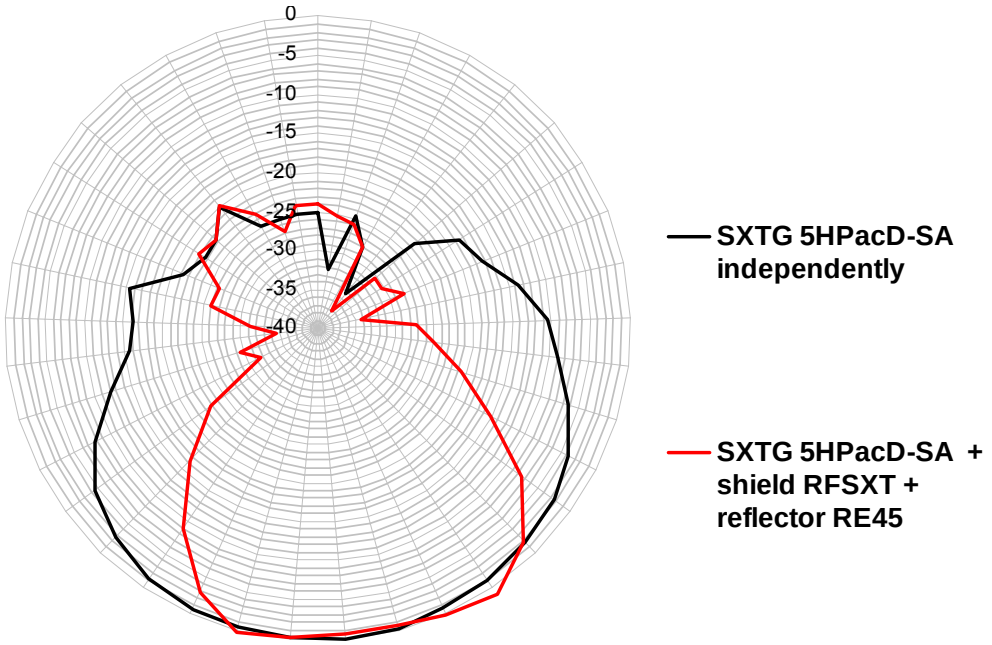
Table 16



Graph 17

Azimut°	Gain relative to azimuth 0°(dB) SXTG 5HpacD	Gain relative to azimuth 0° of antenna without shelter(dB) SXTG 5HpacD-SA + RFSXT	SXTG 5HpacD-SA + RFSXT+ holder MK5T	Azimut°	Gain relative to azimuth 0°(dB) SXTG 5HpacD	Gain relative to azimuth 0° of antenna without shelter(dB) SXTG 5HpacD-SA + RFSXT	SXTG 5HpacD-SA + RFSXT+ holder MK5T
-180	-25,17	-24,17	-27	5	0	0	0
-170	-32,17	-26,87	-28	10	-0,17	0,5	0,66
-160	-24,77	-30,17	-32	15	-0,33	0,83	0,83
-150	-28,17	-32,47	-33,66	20	-0,5	0,67	0,66
-140	-34,17	-32,17	-33	25	-0,5	0	-0,33
-130	-23,67	-30	-31	30	-0,67	-1,17	-1,33
-120	-18,67	-29,47	-30,13	35	-1	-3,17	-3,33
-110	-17,33	-34,17	-34,33	40	-1,33	-5,67	-5,83
-100	-13,67	-23,5	-24	45	-1,83	-8,17	-8,83
-90	-10,5	-19,67	-19,83	50	-2,83	-10,17	-10,66
-85	-9,83	-18,77	-18,83	55	-3,5	-11	-11,83
-80	-9	-18	-18,13	60	-4,67	-12,17	-12,66
-75	-8,17	-16,67	-16,83	65	-6	-13,67	-13,83
-70	-6,47	-15,67	-15,83	70	-8	-16,77	-16,83
-65	-5,17	-13,83	-13,83	75	-9,33	-18,47	-18,83
-60	-4	-11,17	-11,33	80	-12,33	-20,47	-21
-55	-3,17	-9,33	-9,5	85	-12,17	-19,17	-20
-50	-2,67	-7	-7,13	90	-15,67	-23,47	-23,66
-45	-2,17	-4,17	-4,33	100	-16,33	-31,47	-31,66
-40	-1,83	-2,33	-2,66	110	-15,5	-24,33	-24,66
-35	-1,5	-0,83	-1	120	-21,5	-37,17	-36,83
-30	-1,17	0,17	0,17	130	-23	-21,77	-21,83
-25	-1	0,33	0,33	140	-22,83	-22,67	-22,83
-20	-0,83	0,33	0,33	150	-20,17	-21,17	-22,13
-15	-0,67	0	0	160	-24,97	-25,17	-26,33
-10	-0,33	-0,33	-0,5	170	-25,17	-25,97	-26,13
-5	0	-0,5	-0,5	180	-25,17	-24,17	-27
0	0	-0,5	-0,5				

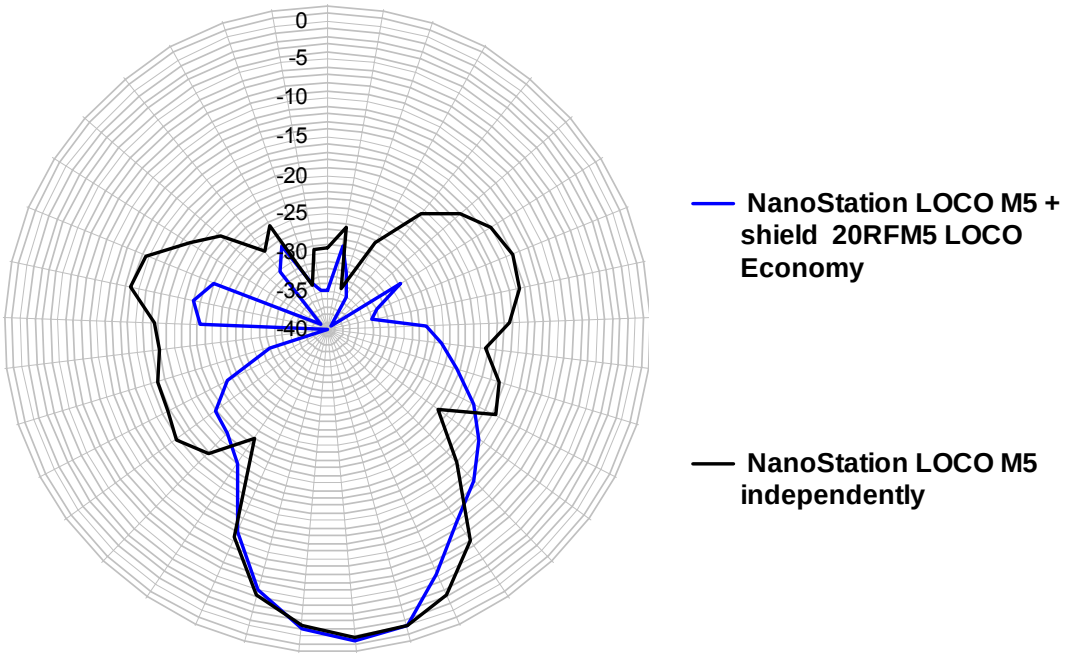
Table 17



Graph 18

Azimut°	Gain relative to azimuth 0°(dB) SXTG 5HpacD-SA	Gain relative to azimuth 0° of antenna without shelter(dB) SXTG 5HpacD-SA + RFSXT+RE45	Azimut°	Gain relative to azimuth 0°(dB) SXTG 5HpacD-SA	Gain relative to azimuth 0° of antenna without shelter(dB) SXTG 5HpacD-SA + RFSXT+RE45
-180	-25,17	-24,17	5	0	-0,33
-170	-32,17	-25,33	10	-0,17	-0,17
-160	-24,77	-26	15	-0,33	0,17
-150	-28,17	-28,17	20	-0,5	0,17
-140	-34,17	-37,17	25	-0,5	-0,83
-130	-23,67	-30,17	30	-0,67	-2,83
-120	-18,67	-30,17	35	-1	-5,83
-110	-17,33	-28,17	40	-1,33	-9,17
-100	-13,67	-34,17	45	-1,83	-12,67
-90	-10,5	-27,5	50	-2,83	-16,33
-85	-9,83	-24,47	55	-3,5	-19,33
-80	-9	-25,17	60	-4,67	-23
-75	-8,17	-24,17	65	-6	-26,33
-70	-6,47	-20,67	70	-8	-31,87
-65	-5,17	-18,67	75	-9,33	-40,17
-60	-4	-15,17	80	-12,33	-29,67
-55	-3,17	-11,77	85	-12,17	-32,17
-50	-2,67	-7,67	90	-15,67	-34,67
-45	-2,17	-4,33	100	-16,33	-31,47
-40	-1,83	-1,97	110	-15,5	-26,17
-35	-1,5	0,17	120	-21,5	-26,5
-30	-1,17	1	130	-23	-22
-25	-1	0,67	140	-22,83	-22,87
-20	-0,83	0,17	150	-20,17	-19,87
-15	-0,67	-0,5	160	-24,97	-23,5
-10	-0,33	-0,67	170	-25,17	-26,97
-5	0	-0,67	180	-25,17	-24,17
0	0	-0,67			

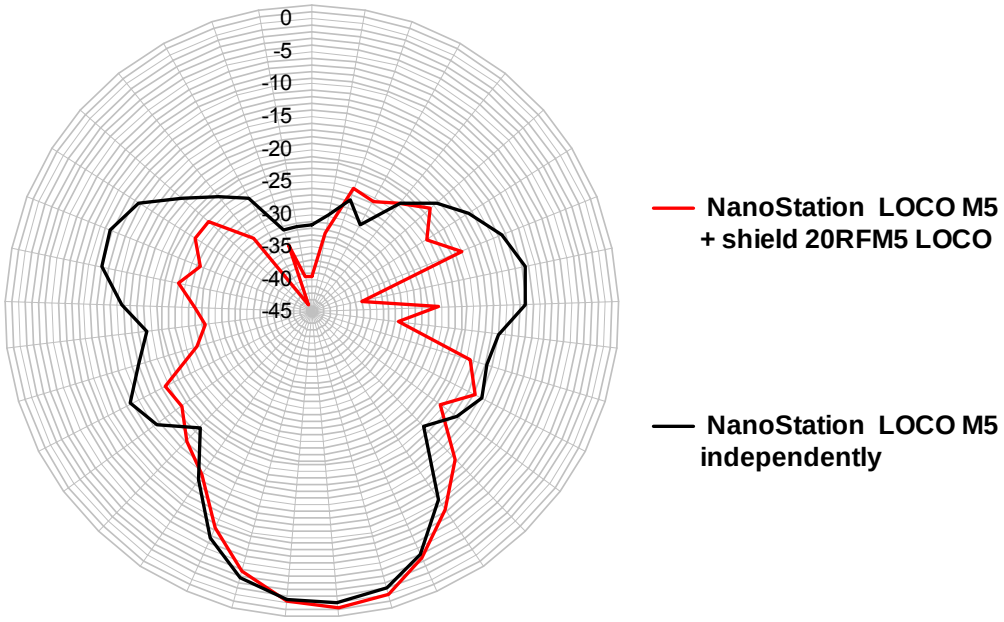
Table 18



Graph 19

Azimut°	Gain relative to azimuth 0°(dB) NanoStation LOCO M5	Gain relative to azimuth 0° of antenna without shelter(dB) NanoStation LOCO M5 with 20RFM5	Azimut°	Gain relative to azimuth 0°(dB) NanoStation LOCO M5	Gain relative to azimuth 0° of antenna without shelter(dB) NanoStation LOCO M5 with 20RFM5
-180	-29,5	-35	5	-0,33	0
-170	-26,5	-29	10	-1,5	-1,16
-160	-34,6	-32,33	15	-3	-3
-150	-27,3	-35,16	20	-4,33	-5,33
-140	-20,83	-39	25	-7	-8,33
-130	-17,3	-39,33	30	-10,5	-11,5
-120	-15,16	-28,83	35	-15,66	-15,66
-110	-14,16	-33,16	40	-23	-19,16
-100	-14,5	-34,16	45	-22,8	-19,33
-90	-16,5	-27,16	50	-17,8	-21,33
-85	-17	-25	55	-15,8	-21,5
-80	-19,3	-25,33	60	-15,8	-22,16
-75	-17,3	-24,66	65	-15,6	-26,16
-70	-16,6	-22,7	70	-17	-25,5
-65	-15,16	-19,66	75	-17	-31,5
-60	-15,66	-18,83	80	-17	-32
-55	-17,16	-17,83	85	-17	-25,83
-50	-22,3	-15,83	90	-18	-40
-45	-26	-14,7	100	-17,5	-23,5
-40	-16	-12,66	110	-13,8	-22,16
-35	-11	-11,33	120	-14,8	-24,16
-30	-7	-10	130	-18,8	-39
-25	-4,16	-8,16	140	-21,6	-39
-20	-2,33	-5,16	150	-27	-30,3
-15	-1	-2,33	160	-24,5	-27,66
-10	-0,33	-0,5	170	-34	-33,5
-5	0	0,5	180	-29,5	-35
0	0	0,5			

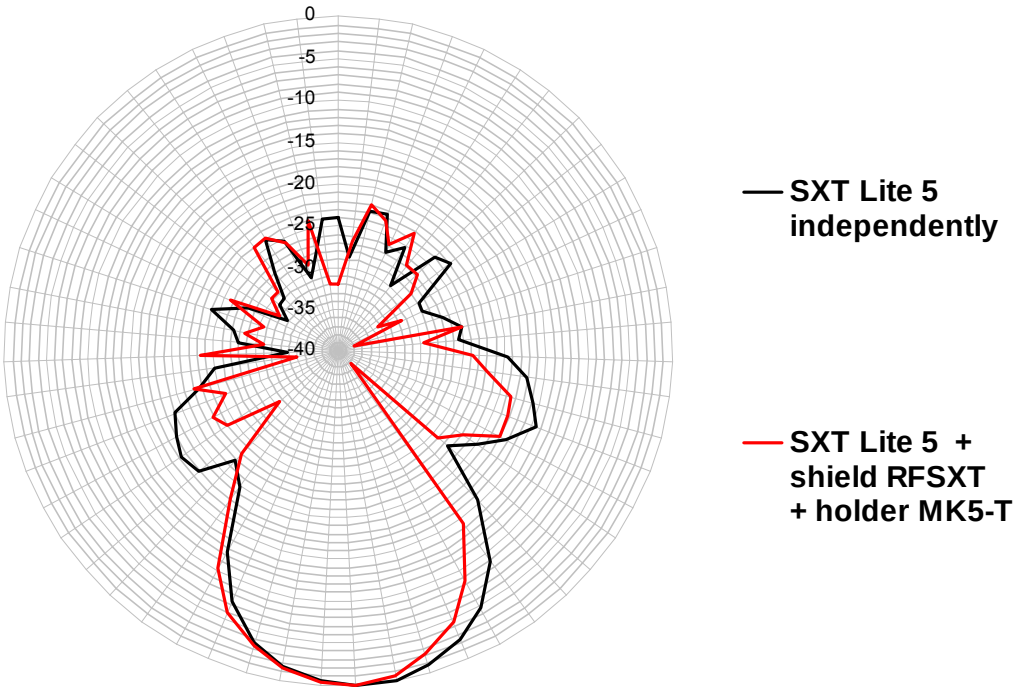
Table 19



Graph 20

Azimut°	Gain relative to azimuth 0°(dB) NanoStation LOCO M5	Gain relative to azimuth 0° of antenna without shelter(dB) NanoStation LOCO M5 with 20RFM5	Azimut°	Gain relative to azimuth 0°(dB) NanoStation LOCO M5	Gain relative to azimuth 0° of antenna without shelter(dB) NanoStation LOCO M5 with 20RFM5
-180	-31,66	-39,66	5	0	0,5
-170	-29,96	-32,66	10	-0,5	-0,33
-160	-26,83	-25,16	15	-1,16	-1,66
-150	-29,66	-25,5	20	-2,5	-3,5
-140	-23,66	-23,83	25	-4,33	-6,16
-130	-19,66	-21	30	-7	-8,83
-120	-16,66	-24,33	35	-10,5	-11,5
-110	-13,66	-20,33	40	-13,83	-14,83
-100	-11,5	-37,09	45	-17,16	-16,66
-90	-12,33	-25,5	50	-20,16	-17,33
-85	-14,16	-25,5	55	-18,83	-19,66
-80	-16,16	-31,66	60	-15,5	-20,16
-75	-17,33	-24,5	65	-14,33	-21,16
-70	-16,83	-19,83	70	-13,96	-19,83
-65	-16,16	-17	75	-14,96	-23,66
-60	-15,83	-16,83	80	-17,16	-26,66
-55	-15,83	-17,5	85	-19,16	-25,16
-50	-17,33	-20,66	90	-19,33	-28,66
-45	-18,83	-19,33	100	-15,96	-27,16
-40	-20,46	-13,33	110	-12	-24
-35	-15,33	-10,5	120	-11,83	-26,66
-30	-10,33	-8,5	130	-13,66	-23,83
-25	-6,83	-5,83	140	-18,66	-24,16
-20	-4,16	-3,5	150	-22,16	-30,66
-15	-2,5	-1,5	160	-24,96	-43,66
-10	-1,16	0	170	-31,66	-34,36
-5	-0,33	0,67	180	-31,66	-39,66
0	0	0,84			

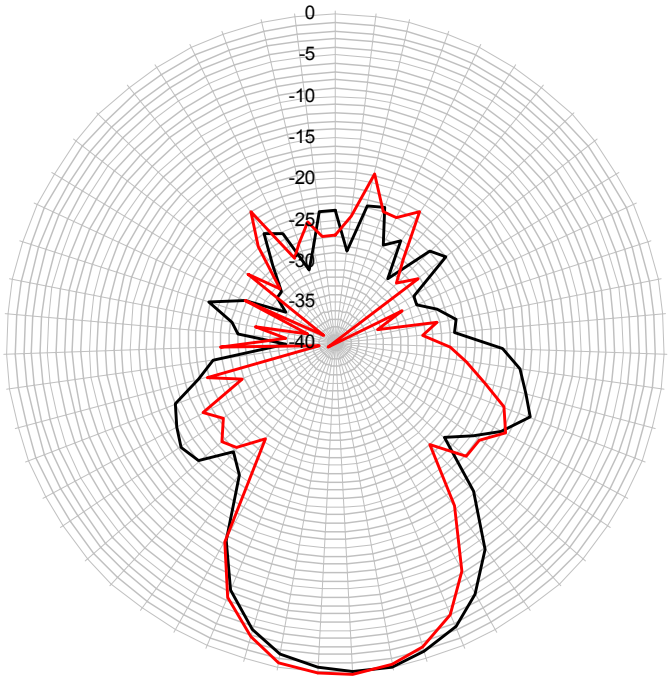
Table 20



Graph 21

Azimut°	Gain relative to azimuth 0°(dB) SXT Lite 5	Gain relative to azimuth 0° of antenna without shelter(dB) SXT Lite 5 + RFSXT + MK5-T	Azimut°	Gain relative to azimuth 0°(dB) SXT Lite 5	Gain relative to azimuth 0° of antenna without shelter(dB) SXT Lite 5 + RFSXT + MK5-T
-180	-24	-32	5	-0,5	-0,33
-170	-28,83	-26,66	10	-1,66	-1,5
-160	-23	-22,13	15	-3,83	-3,5
-150	-22,5	-23,5	20	-7,33	-6,16
-140	-26,83	-26	25	-12,6	-10,16
-130	-25,33	-23,33	30	-20	-18,16
-120	-30	-27	35	-22	-23,16
-110	-23,83	-27	40	-18	-30,66
-100	-23	-29	45	-17,33	-24
-90	-28,83	-34,5	50	-18	-23
-85	-29	-31,66	55	-19,16	-25,5
-80	-27	-38	60	-22,83	-22,16
-75	-25	-25	65	-25	-35
-70	-25,5	-29,83	70	-34	-23,5
-65	-19,66	-23,83	75	-28,13	-31
-60	-17,33	-22	80	-27,33	-28,66
-55	-16	-18,66	85	-24	-30,66
-50	-14,66	-18,13	90	-28	-25,83
-45	-17,16	-18,13	100	-33	-31,83
-40	-19,83	-22	110	-31	-30
-35	-22,5	-24	120	-31	-30
-30	-15,5	-38	130	-28	-24
-25	-9	-14,5	140	-24,13	-23,83
-20	-5	-8,5	150	-25,33	-25,5
-15	-2,5	-4,66	160	-30,66	-29,13
-10	-1	-2,33	170	-28	-24
-5	0	-0,5	180	-24	-32
0	0	0			

Table 21



Graph 22

Azimut°	Gain relative to azimuth 0°(dB) SXT Lite 5	Gain relative to azimuth 0° of antenna without shelter(dB) SXT Lite 5 + RFSXT + RE45 + MK5-T	Azimut°	Gain relative to azimuth 0°(dB) SXT Lite 5	Gain relative to azimuth 0° of antenna without shelter(dB) SXT Lite 5 + RFSXT + RE45 + MK5-T
-180	-24	-27	5	-0,5	0,17
-170	-28,83	-24,5	10	-1,66	-0,66
-160	-23	-19	15	-3,83	-2,83
-150	-22,5	-23	20	-7,33	-6,33
-140	-26,83	-23	25	-12,6	-12,33
-130	-25,33	-21	30	-20	-25,66
-120	-30	-26,66	35	-22	-22,5
-110	-23,83	-29,5	40	-18	-21,66
-100	-23	-27,3	45	-17,33	-23,5
-90	-28,83	-41	50	-18	-21,83
-85	-29	-31	55	-19,16	-27,83
-80	-27	-34,66	60	-22,83	-24
-75	-25	-27,5	65	-25	-38
-70	-25,5	-29,33	70	-34	-26
-65	-19,66	-26	75	-28,13	-34
-60	-17,33	-24	80	-27,33	-30,16
-55	-16	-21	85	-24	-36,5
-50	-14,66	-18	90	-28	-28
-45	-17,16	-16,66	100	-33	-38,33
-40	-19,83	-18,83	110	-31	-26,5
-35	-22,5	-19	120	-31	-30,66
-30	-15,5	-23	130	-28	-25
-25	-9	-15,5	140	-24,13	-21
-20	-5	-8,33	150	-25,33	-28,5
-15	-2,5	-4,16	160	-30,66	-27,33
-10	-1	-1,66	170	-28	-25
-5	0	-0,33	180	-24	-27
0	0	0,33			

Table 22

End of test report