

Test Report No.:
FCC2022-0020-RF2

RF Test Report

EUT : **ActivPanel 9 WiFi and Bluetooth Module**
MODEL : **AP9-WIFIBT-AB-02**
BRAND NAME : **Promethean**
CLIENT : **Promethean Limited**
Classification Of Test : **N/A**

CVC Testing Technology Co., Ltd.



Client	Name : Promethean Limited		
	Address : Promethean House,Lower Philips Rd,whitebirk Industrial Estate,Blackburn,Bb1 5th United Kingdom		
Manufacturer	Name : Promethean Limited		
	Address : Promethean House,Lower Philips Rd,whitebirk Industrial Estate,Blackburn,Bb1 5th United Kingdom		
Equipment Under Test	Name : ActivPanel 9 WiFi and Bluetooth Module		
	Model/Type: AP9-WIFIBT-AB-02		
	Trade mark : Promethean		
	Serial NO.:N/A		
	Sample NO.:3-1		
Date of Receipt.	2022.03.25	Date of Testing	2022.03.25~2022.05.24
Test Specification		Test Result	
FCC Part 15, Subpart C, Section 15.247 Canada RSS-247 Issue 2 (2017-02) Canada RSS-Gen Issue 5 (2019-03)		PASS	
Evaluation of Test Result	The equipment under test was found to comply with the requirements of the standards applied.		
	Issue Date: 2022.05.25		
Tested by:	Reviewed by:	Approved by:	
			
Xu ZhenFei Name Signature	Liu YongHai Name Signature	Chen HuaWen Name Signature	
Other Aspects: NONE.			
Abbreviations:OK, Pass= passed Fail = failed N/A= not applicable EUT= equipment, sample(s) under tested			

This test report relates only to the EUT, and shall not be reproduced except in full, without written approval of CVC.



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RELEASE CONTROL RECORD

ISSUE NO.	REASON FOR CHANGE	DATE ISSUED
FCC2022-0020-RF2	Original release	2022.05.25



1 SUMMARY OF TEST RESULTS

The EUT has been tested according to the following specifications:

APPLIED STANDARD: FCC Part 15, Subpart C			
STANDARD SECTION	TEST TYPE AND LIMIT	RESULT	REMARK
15.207 RSS-Gen 8.8	AC Power Conducted Emission	PASS	Meet the requirement of limit.
RSS-Gen 6.7	Radiated Emissions	PASS	Meet the requirement of limit.
15.247(d) 15.209 8.10 Table 7 8.9 Table 5	Band Edge Measurement	PASS	Meet the requirement of limit.
15.247(d) 5.5	6dB bandwidth	PASS	Meet the requirement of limit.
15.247(a)(2) 5.2(a)	Conducted Output power	PASS	Meet the requirement of limit.
15.247(b) 5.4(d)	Power Spectral Density	PASS	Meet the requirement of limit.
15.247(e) 5.2(b)	Antenna Requirement	PASS	Meet the requirement of limit.



1.1 LIST OF TEST AND MEASUREMENT INSTRUMENTS

Test Equipment	Type/Mode	SERIAL NO.	Equipment No.	Manufacturer	Cal. Due
WIFI & Bluetooth Test System 1					/
Communication Shielded Room 1	4m*3m*3m	CRTDSWKSR44301	VGDS-0699	CRT	2024/04/24
Spectrum Analyzer	FSV30	104337	DZ-000235	R&S	2022/11/03
Comprehensive Test Instrument	CMW500	137779	DZ-000220	R&S	2022/06/30
Comprehensive Test Instrument	CMW500	169888	DZ-000342	R&S	2022/12/01
LTE Comprehensive Test Instrument	E7515A	MY58010639	DZ-000173	KEYSIGHT	2022/04/14
Analog Signal Generator	SMA100B	103663	DZ-000239-2	R&S	2022/06/30
Vector Signal Generator	SMBV100B	101757	DZ-000239-1	R&S	2022/06/30
Programmable DC Power Supply	E3642A	MY59108106	DZ-000242-2	KEYSIGHT	2022/08/05
Radiation Spurious Test System					/
3m Semi-Anechoic Chamber	FACT-4	ST08035	WKNA-0024	ETS	2024/12/12
Spectrum Analyzer	N9010B	MY57470323	DZ-000174	KEYSIGHT	2023/03/02
EMI Test Receiver	N9038A-508	MY532290079	EM-000397	Agilent	2023/03/02
Broadband Antenna	VULB 9163	9163-530	EM-000342	SCHWARZBECK	2022/06/26
Waveguide Horn Antenna	HF906	360306/008	WKNA-0024-8	R&S	2023/03/04
Waveguide Horn Antenna	BBHA9170	00949	DZ-000209-2	SCHWARZBECK	2022/08/27
Preamplifier	BBV 9721	9721-050	DZ-000209-1	SCHWARZBECK	2022/06/30
5G Bandstop Filters	WRCJV12-4 900-5100-5 900-6100-5 0EE	1	DZ-000186	WI	2022/12/20
Comprehensive tester	CMW500	159000	DZ-000240-2	R&S	2022/12/20
Conducted emission					/
EMI Test Receiver	ESCI	100857	WKNB-0081	R&S	2022-12-08
EMI Test Receiver	ESR3	102394	VG DY-0705	R&S	2023-03-04
LISN	NSLK 8127	8127644	VG DY-0150	SCHWARZBECK	2022-09-01
DC LISN	PVDC8301-017	PVDC8301#17	VG DY-0692	SCHWARZBECK	2022-06-07
LISN	NSLK 8129	8129-268	EM-000388	SCHWARZBECK	2023-03-03
Plus Limiter (#1)	VTSD 9561 F-N	00515	VG DY-0808	SCHWARZBECK	2023-03-04
Impedance Stabilization Network	ISN T800	27095	WKNE-0195	TESEQ	2022-09-01
Impedance Stabilization Network	NTFM8158	8158-0092	VG DY-0356	SCHWARZBECK	2022-06-07
Impedance Stabilization Network	NTFM8131	#184	EM-000498	SCHWARZBECK	2022-06-05
Voltage Probe	TK9420	9420-499	VG DY-0128	SCHWARZBECK	2023-03-04
Power Divider	4901.17.B	22643830	DB-0016	HUBER+SUHNER	2023-09-01
Video Signal Generator	GV-798+	151064920001	VGDS-0215	PROMAX	2022-06-07
Audio Signal Generator	GAG-810	EK871591	EM-000309	GW	2022-12-08
Shielding Room(#1)	GP1A	001	WKNF-0001	LEINING	2024-08-08



1.2 MEASUREMENT UNCERTAINTY

Where relevant, the following measurement uncertainty levels have been estimated for tests performed on the EUT as specified in CISPR 16-4-2:

No.	ITEM	FREQUENCY	UNCERTAINTY
1	Conducted emissions	9kHz~30MHz	±2.66dB
2	Radiated emissions	9KHz ~ 30MHz	±0.769dB
		30MHz ~ 1GMHz	±0.877dB
		1GHz ~ 18GHz	±0.777dB
		18GHz ~ 40GHz	±1.315dB

Where relevant, the following measurement uncertainty levels have been estimated for tests performed on the EUT as specified in CISPR 16-4-2:

1.3 TEST LOCATION

The tests and measurements refer to this report were performed by EMC testing Lab. of CVC Testing Technology Co., Ltd.

Address: No.3,TiantaiyiRoad,KaitaiAvenue,ScienceCity,Guangzhou,China

Post Code: 510663

Tel: 020-32293888

FAX: 020-32293889

E-mail: office@cvc.org.cn



2 GENERAL INFORMATION

2.1 GENERAL PRODUCT INFORMATION

PRODUCT	ActivPanel 9 WiFi and Bluetooth Module
BRAND	Promethean
MODEL	AP9-WIFIBT-AB-02
ADDITIONAL MODEL	N/A
FCC ID	QAM023
IC ID	5459A-023
POWER SUPPLY	DC 5V from USB host unit
MODULATIONTECHNOLOGY	DSSS, GFSK, OFDM, OFDMA
MODULATION TYPE	CCK, DQPSK, DBPSK for DSSS 64QAM, 16QAM, QPSK, BPSK for OFDM 64QAM, 16QAM, QPSK, BPSK for OFDMA GFSK for BT-LE
OPERATING FREQUENCY	2412MHz ~ 2462MHz for 11b/g/n(HT20)/ax (HE20) 2422MHz ~ 2452MHz for 11n(HT40)/ax (HE40) 2402MHz ~ 2480MHz for BT-LE
NUMBER OF CHANNEL	802.11b/g/n (HT20)/ax (HE20): 11 802.11n (HT40)/ax (HE40): 7 BT-LE: 40
PEAK OUTPUT POWER	WLAN: 23.95dBm (Maximum) BLE:6.66dBm (Maximum)
ANTENNA TYPE (Remark 4)	WLAN: ANT0:External Antenna, with 2.9dBi gain ANT1:External Antenna, with 2.9dBi gain BT-LE: External Antenna, with 2.9dBi gain
I/O PORTS	Refer to user's manual
CABLE SUPPLIED	N/A
Remark: - For more detailed features description, please refer to the manufacturer's specifications or the User's Manual. - For the test results, the EUT had been tested with all conditions. But only the worst case was shown in test report. - Please refer to the EUT photo document for detailed product photo. (Report NO.: FCC2022-0020-E) - Since the above data and/or information is provided by the client relevant results or conclusions of this report are only made for these data and/or information, CVC is not responsible for the authenticity, integrity and results of the data and information and/or the validity of the conclusion. - The EUT have MIMO function, provides 2 completed transmitter and 2 receiver	

2.2 Description of Accessories

N/A

2.3 OTHER INFORMATION

Operating frequency of each channel

2.4G WIFI							
802.11b/g/n (HT20)/ax(HE20)							
CHANNEL	FREQ. (MHz)	CHANNEL	FREQ. (MHz)	CHANNEL	FREQ. (MHz)		
1	2412	5	2432	9	2452		
2	2417	6	2437	10	2457		
3	2422	7	2442	11	2462		
4	2427	8	2447				
802.11n (HT40) ax(HE40)							
CHANNEL	FREQ. (MHz)	CHANNEL	FREQ. (MHz)	CHANNEL	FREQ. (MHz)		
3	2422	6	2437	9	2452		
4	2427	7	2442				
5	2432	8	2447				
BT-LE(1 Mbps)							
CHANNEL	FREQ. (MHz)	CHANNEL	FREQ. (MHz)	CHANNEL	FREQ. (MHz)	CHANNEL	FREQ. (MHz)
0	2402	10	2422	20	2442	30	2462
1	2404	11	2424	21	2444	31	2464
2	2406	12	2426	22	2446	32	2466
3	2408	13	2428	23	2448	33	2468
4	2410	14	2430	24	2450	34	2470
5	2412	15	2432	25	2452	35	2472
6	2414	16	2434	26	2454	36	2474
7	2416	17	2436	27	2456	37	2476
8	2418	18	2438	28	2458	38	2478
9	2420	19	2440	29	2460	39	2480

- The channels which were indicated in bold type of the above channel list were selected as representative test channel. Therefore only the data of the test channels were recorded in this report.
- By means of test software which provided by manufacture, the power levels during the tests were set according to the following codes:

2.4G WIFI									
802.11b		802.11g		802.11n(HT20)		802.11n(HT40)		802.11ax (HE40)	
FREQUEN CY(MHZ)	POWER SETTING	FREQUEN CY(MHZ)	POWER SETTING	FREQUEN CY(MHZ)	POWER SETTING	FREQUEN CY(MHZ)	POWER SETTING	FREQUEN CY(MHZ)	POWER SETTING
2412	17	2412	13	2412	12	2422	12	2422	11
2437	17	2437	13	2437	12	2437	12	2437	11
2462	17	2462	13	2462	12	2452	12	2452	11
BT-LE(1 Mbps)									
GFSK									
CHANNEL	POWER SETTING	CHANNEL	POWER SETTING	CHANNEL	POWER SETTING	CHANNEL	POWER SETTING	CHANNEL	POWER SETTING
0	6	19	6	39	6				



2.4 TEST MODE APPLICABILITY AND TESTED CHANNEL DETAIL

Pre-scan has been conducted to determine the worst-case mode from all possible combinations between available modulations, data rates, xyz axis and antenna ports

EUT CONFIGURE MODE	APPLICABLE TEST ITEMS				DESCRIPTION
	RE<1G	RE≥1G	PLC	APCM	
A	√	√	√	√	2.4G WIFI Function
B	√	√	√	√	BT Function

Where **RE<1G**: Radiated Emission below 1GHz
PLC: Power Line Conducted Emission

RE≥1G: Radiated Emission above 1GHz
APCM: Antenna Port Conducted Measurement

RADIATED EMISSION TEST (BELOW 1 GHz):

- ☒ Pre-Scan has been conducted to determine the worst-case mode from all possible combinations between available modulations, XYZ axis, antenna ports (if EUT with antenna diversity architecture) and packet type.
- ☒ The worst case was found when positioned on x axis for radiated emission. Following channel(s) was (were) selected for the final test as listed below:

EUT CONFIGURE MODE	MODE	AVAILABLE CHANNEL	TESTED CHANNEL	MODULATION TECHNOLOGY	MODULATION TYPE	DATA RATE (Mbps)
A	802.11b	1 to 11	1	DSSS	DBPSK	6.0

For the test results, only the worst case was shown in test report.

RADIATED EMISSION TEST (ABOVE 1 GHz):

- ☒ Pre-Scan has been conducted to determine the worst-case mode from all possible combinations between available modulations, XYZ axis, antenna ports (if EUT with antenna diversity architecture) and packet type.
- ☒ The worst case was found when positioned on x axis for radiated emission. Following channel(s) was (were) selected for the final test as listed below:

EUT CONFIGURE MODE	MODE	AVAILABLE CHANNEL	TESTED CHANNEL	MODULATION TECHNOLOGY	MODULATION TYPE	DATA RATE PARAMETER
A	802.11b	1 to 11	1, 6, 11	DSSS	DBPSK	1.0 Mbit/s
A	802.11g	1 to 11	1, 6, 11	OFDM	BPSK	6.0 Mbit/s
A	802.11n(HT20)	1 to 11	1, 6, 11	OFDM	BPSK	MCS0
A	802.11n(HT40)	3 to 9	3, 6, 9	OFDM	BPSK	MCS0
A	802.11ax (HE40)	3 to 9	3, 6, 9	OFDMA	BPSK	MCS0
B	BT-LE	0 to 39	0,19, 39	DTS	GFSK	1.0 Mbit/s



POWER LINE CONDUCTED EMISSION TEST:

- ☒ Pre-Scan has been conducted to determine the worst-case mode from all possible combinations between available modulations, antenna ports (if EUT with antenna diversity architecture), and packet types.
- ☒ Following channel(s) was (were) selected for the final test as listed below.

EUT CONFIGURE MODE	TESTED CONDITION
-	BT LINK + WIFI (2.4G) Link

ANTENNA PORT CONDUCTED MEASUREMENT:

- ☒ This item includes all test value of each mode, but only includes spectrum plot of worst value of each mode.
- ☒ Pre-Scan has been conducted to determine the worst-case mode from all possible combinations between available modulations, antenna ports (if EUT with antenna diversity architecture), and packet types.
- ☒ Following channel(s) was (were) selected for the final test as listed below.

EUT CONFIGURE MODE	MODE	AVAILABLE CHANNEL	TESTED CHANNEL	MODULATION TECHNOLOGY	MODULATION TYPE	DATA RATE (Mbps)
A	802.11b	1 to 11	1, 6, 11	DSSS	DBPSK	1.0 Mbit/s
A	802.11g	1 to 11	1, 6, 11	OFDM	BPSK	6.0 Mbit/s
A	802.11n(HT20)	1 to 11	1, 6, 11	OFDM	BPSK	MCS0
A	802.11n(HT40)	3 to 9	3, 6, 9	OFDM	BPSK	MCS0
A	802.11ax (HE40)	3 to 9	3, 6, 9	OFDMA	BPSK	MCS0
B	BT-LE	0 to 39	0, 19, 39	DSS	GFSK	1.0 Mbit/s

TEST CONDITION:

APPLICABLE TO	ENVIRONMENTAL CONDITIONS	TEST VOLTAGE (SYSTEM)	TESTED BY
RE<1G	24deg. C, 55%RH	DC 5V from USB host unit	Liu ShiWei
RE≥1G	24deg. C, 55%RH	DC 5V from USB host unit	Liu ShiWei
PLC	24deg. C, 55%RH	DC 5V from USB host unit	Liu ShiWei
APCM	25deg. C, 58%RH	DC 5V from USB host unit	Liu ShiWei



2.5 GENERAL DESCRIPTION OF APPLIED STANDARDS

The EUT is a RF product, according to the specifications of the manufacturers. It must comply with the requirements of the following standards:

FCC PART 15, Subpart C. Section 15.247
KDB 558074 D01 15.247 Meas Guidance v05r02
ANSI C63.10-2020
Canada RSS-247 Issue 2 (2017-02)
Canada RSS-Gen Issue 5 (2019-03)

All test items have been performed and recorded as per the above standards

2.6 DESCRIPTION OF SUPPORT UNITS

The EUT has been tested as an independent unit together with other necessary accessories or support units. The following support units or accessories were used to form a representative test configuration during the tests.

Support Equipment							
NO	Description	Brand	Model No.	Serial Number	Supplied by		
N/A	N/A	N/A	N/A	N/A	N/A		
Support Cable							
NO	Description	Quantity (Number)	Length (cm)	Detachable (Yes/ No)	Shielded (Yes/ No)	Cores (Number)	Supplied by
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

3 TEST TYPES AND RESULTS

3.1 CONDUCTED EMISSION MEASUREMENT

3.1.1 Limit

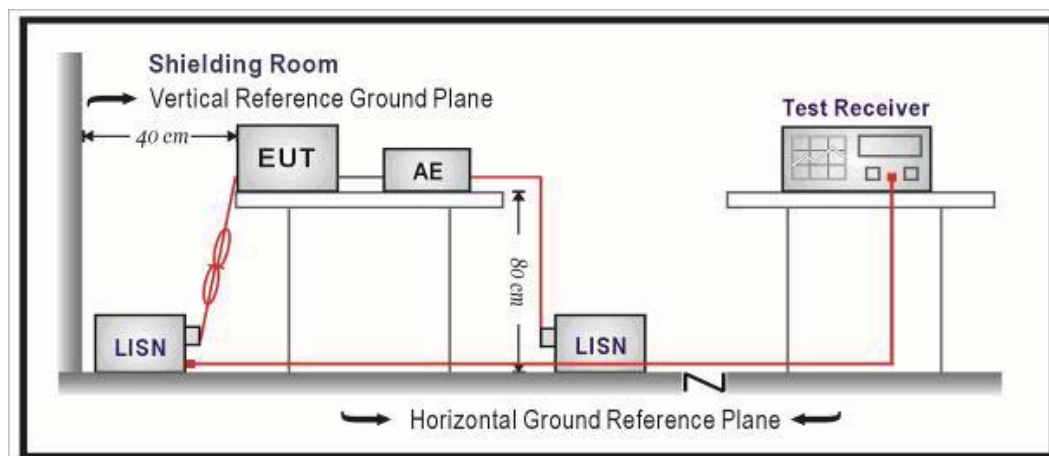
Frequency (MHz)	Conducted Limits(dB μ V)	
	Quasi-peak	Average
0.15 - 0.5	66 to 56 *	56 to 46*
0.5 - 5	56	46
5 - 30	60	50

NOTE: 1. The lower limit shall apply at the transition frequencies.
NOTE: 2. The limit decreases in line with the logarithm of the frequency in the range of 0.15 to 0.50MHz.

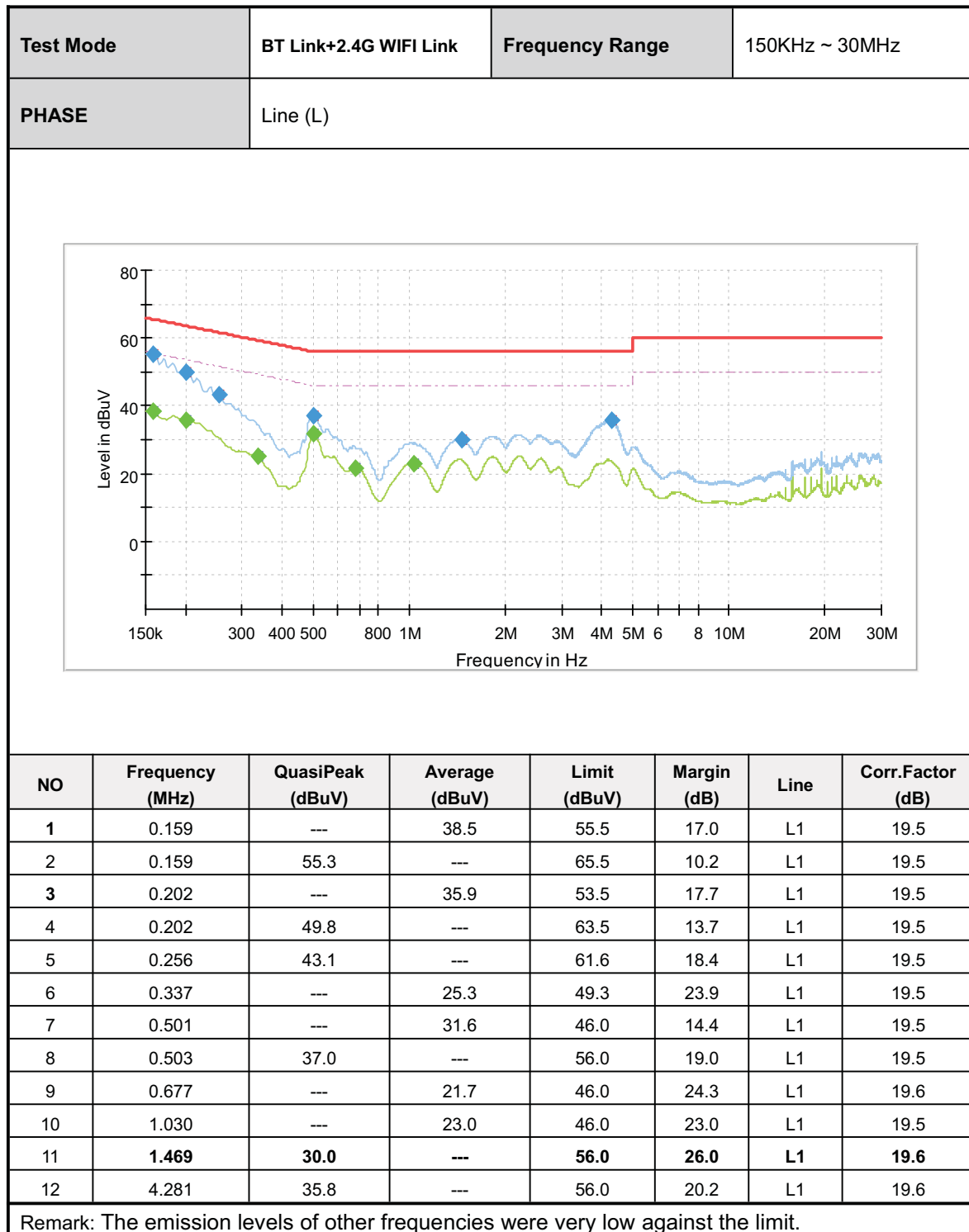
3.1.2 Measurement procedure

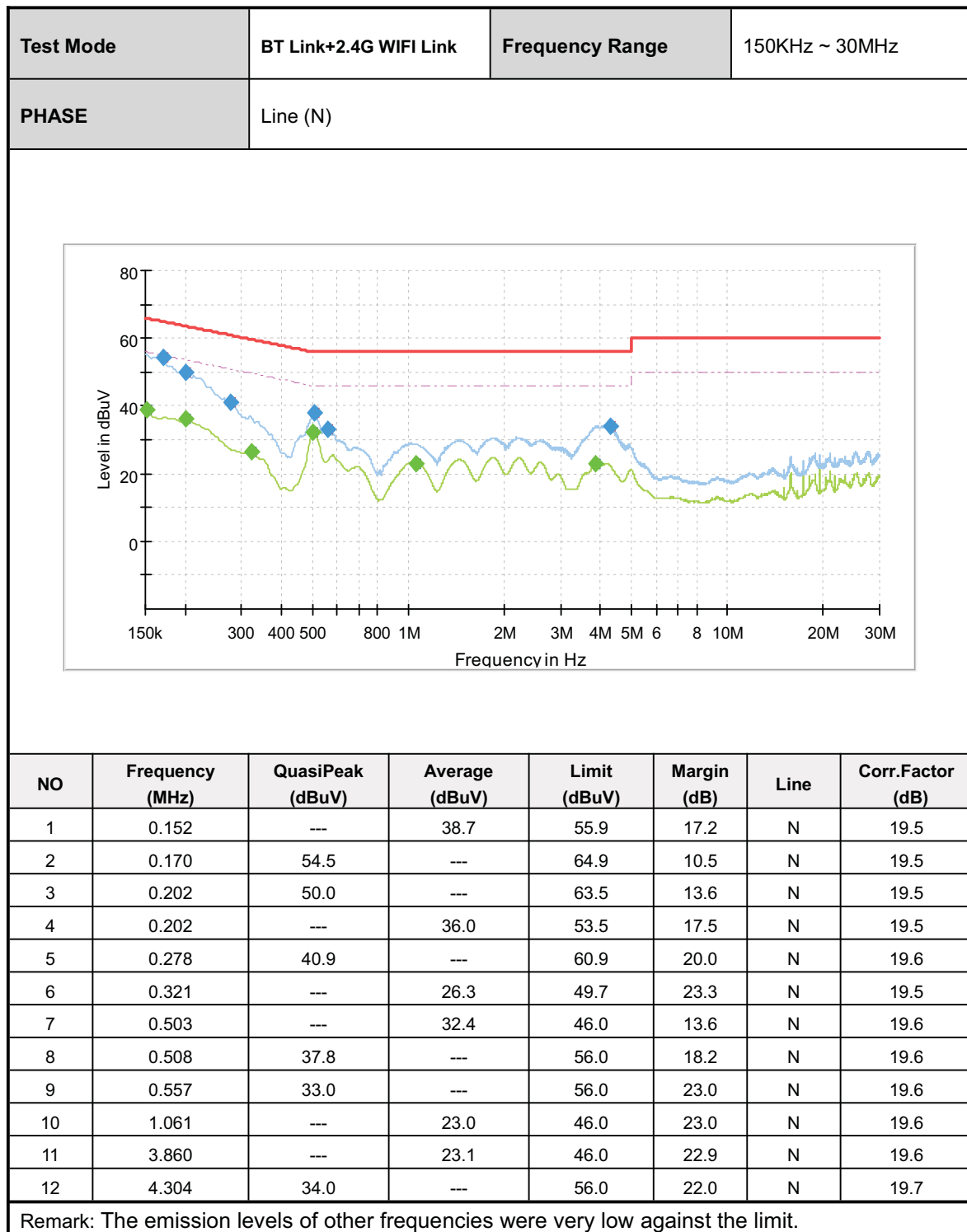
- The EUT was placed on a platform of nominal size, 1 m by 1.5 m, raised 80 cm above the conducting ground plane. The vertical conducting plane was located 40 cm to the rear of the EUT. All other surfaces of EUT were at least 80 cm from any other grounded conducting surface. The EUT and simulators are connected to the main power through a line impedance stabilization network (LISN). The LISN provides a 50 ohm /50uH coupling impedance for the measuring equipment. The peripheral devices are also connected to the main power through a LISN. (Please refer to the Test photographs) Each current-carrying conductor of the EUT power cord, except the ground (safety) conductor, was individually connected through a LISN to the input power source. The equipment under test shall be placed on a support of non-metallic material, the height of which shall be 1.5m above the ground,
- The excess length of the power cord between the EUT and the LISN receptacle were folded back and forth at the center of the lead to form a bundle not exceeding 40 cm in length.
- Conducted emissions were investigated over the frequency range from 0.15MHz to 30MHz using a receiver bandwidth of 9 kHz.

3.1.3 Test setup



3.1.4 Test results







3.2 RADIATED EMISSION AND BANDEDGE MEASUREMENT

3.2.1 Limit

Radiated emissions which fall in the restricted bands, as defined in Section 15.205(a), must also comply with the radiated emission limits specified in Section 15.209(a).

FREQUENCIES (MHz)	FIELD STRENGTH (Microvolts/Meter)	MEASUREMENT DISTANCE (Meters)
0.009 ~ 0.490	2400/F(kHz)	300
0.490 ~ 1.705	24000/F(kHz)	30
1.705 ~ 30.0	30	30
30 ~ 88	100	3
88 ~ 216	150	3
216 ~ 960	200	3
Above 960	500	3

NOTE: 1. The lower limit shall apply at the transition frequencies.
NOTE: 2. Emission level (dBuV/m) = 20 log Emission level (uV/m).
NOTE: 3. As shown in 15.35(b), for frequencies above 1000MHz, the field strength limits are based on average detector, however, the peak field strength of any emission shall not exceed the maximum permitted average limits, specified above by more than 20dB under any condition of modulation.

3.2.2 Measurement procedure

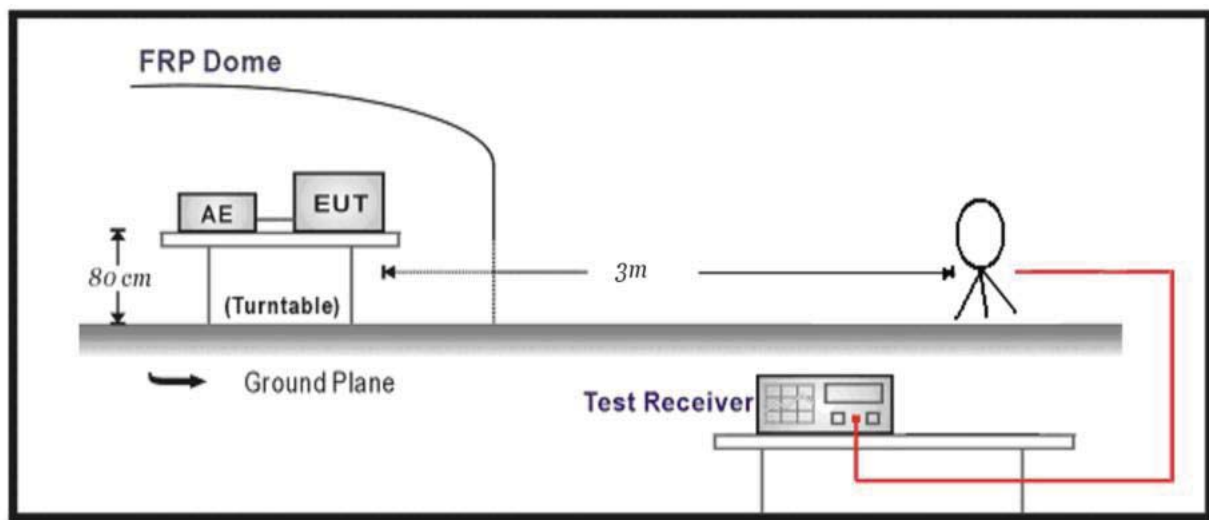
- The EUT was placed on the top of a rotating table 1.5 meters(above 1GHz) and 0.8 meters(below 1GHz) above the ground at a 3 meters semi-anechoic chamber. The table was rotated 360 degrees to determine the position of the highest radiation.
- The EUT was set 3 meters away from the interference-receiving antenna, which was mounted on the top of a variable-height antenna tower.
- For below 1GHz was used bilog antenna, and above 1GHz was used horn antenna, and its height is varied from one meter to four meters above the ground to determine the maximum value of the field strength. Both horizontal and vertical polarizations of the antenna are set to make the measurement.
- For each suspected emission, the EUT was arranged to its worst case and then the antenna was tuned to heights from 1 meter to 4 meters and the rotatable table was turned from 0 degrees to 360 degrees to find the maximum reading.
- The test-receiver system was set to Peak Detect Function and Specified Bandwidth with Maximum Hold Mode.
- For below 30MHz, a loop antenna with its vertical plane is place 3m from the EUT and rotated about its vertical axis for maximum response at each azimuth about the EUT. And the centre of the loop shall be 1m above the ground.
- During the test, each emission was maximized by: having the EUT continuously working, investigated all operating modes, rotated about all 3 axis (X, Y & Z) and considered typical configuration to obtain worst position, manipulating interconnecting cables, For battery operated equipment, the equipment tests shall be perform using fresh batteries. The turntable was rotated to maximize the emission level.

NOTE:

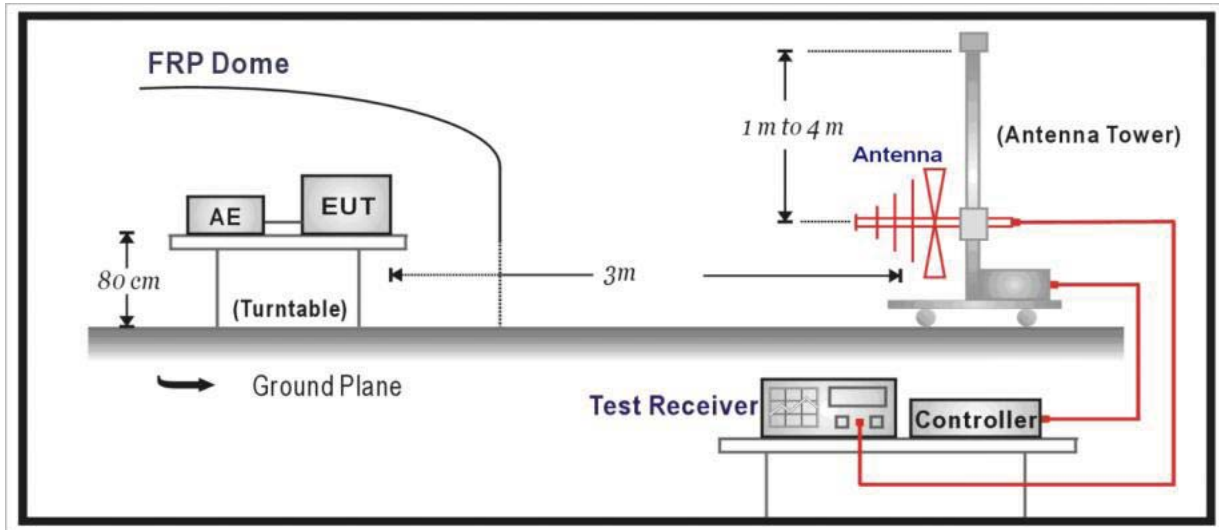
1. The resolution bandwidth and video bandwidth of test receiver/spectrum analyzer is 120kHz for Quasi-peak detection at frequency below 1GHz.
2. The resolution bandwidth of test receiver/spectrum analyzer is 1 MHz and video bandwidth is 3MHz for Peak detection at frequency above 1GHz.
3. The resolution bandwidth of test receiver/spectrum analyzer is 1MHz and the video bandwidth is $\geq 1/T$ (Duty cycle $< 98\%$) or 10Hz (Duty cycle $> 98\%$) for Average detection (AV) at frequency above 1GHz.
4. All modes of operation were investigated and the worst-case emissions are reported.
5. The testing of the EUT was performed on all 3 orthogonal axes; the worst-case test configuration was reported on the file test setup photo.

3.2.3 Test setup

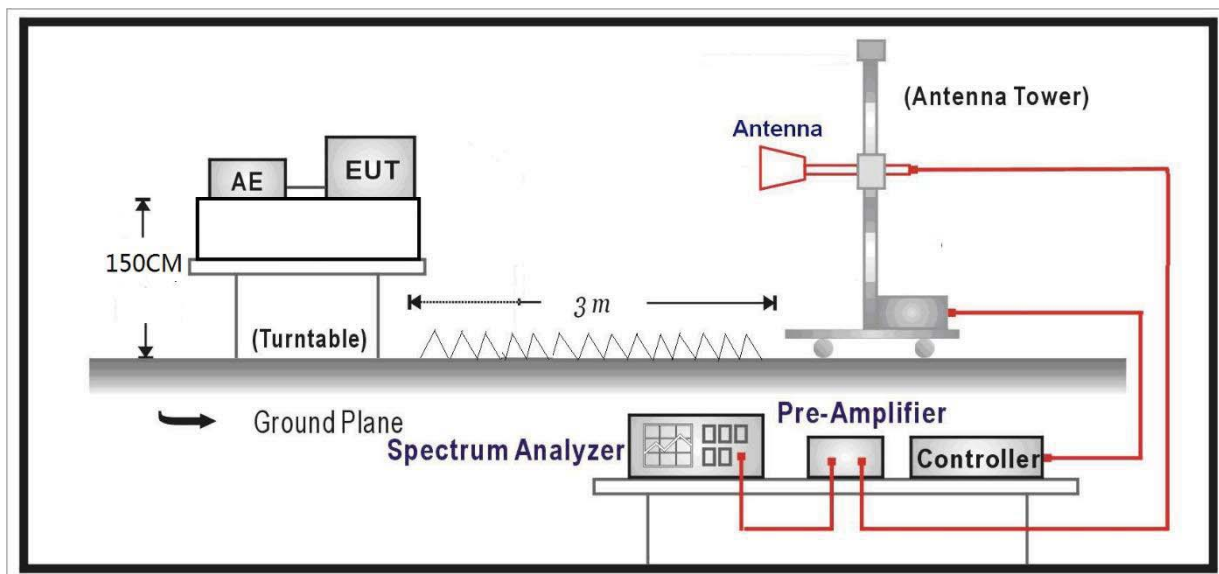
Below 30MHz Test Setup:



Below 1GHz Test Setup:

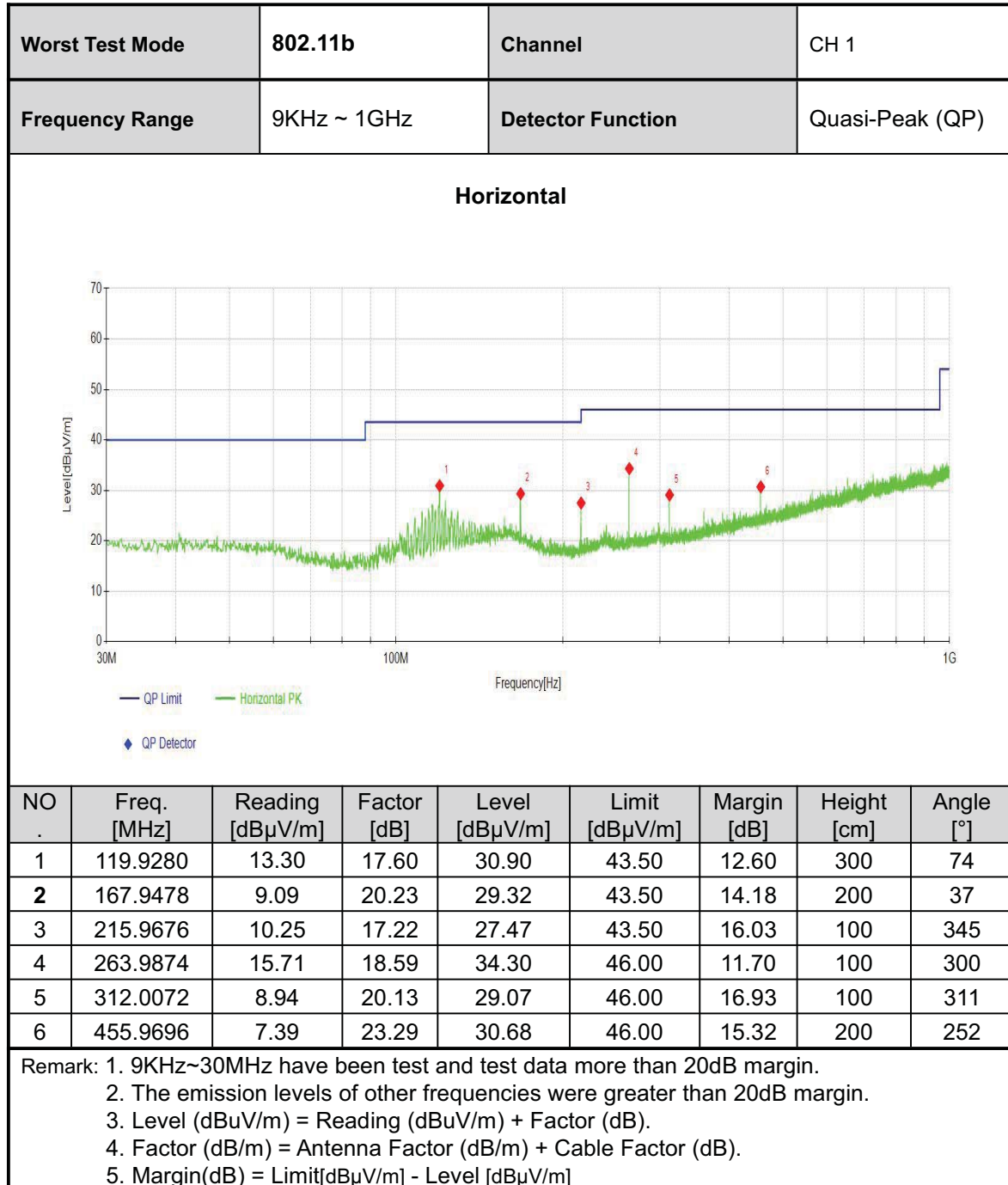


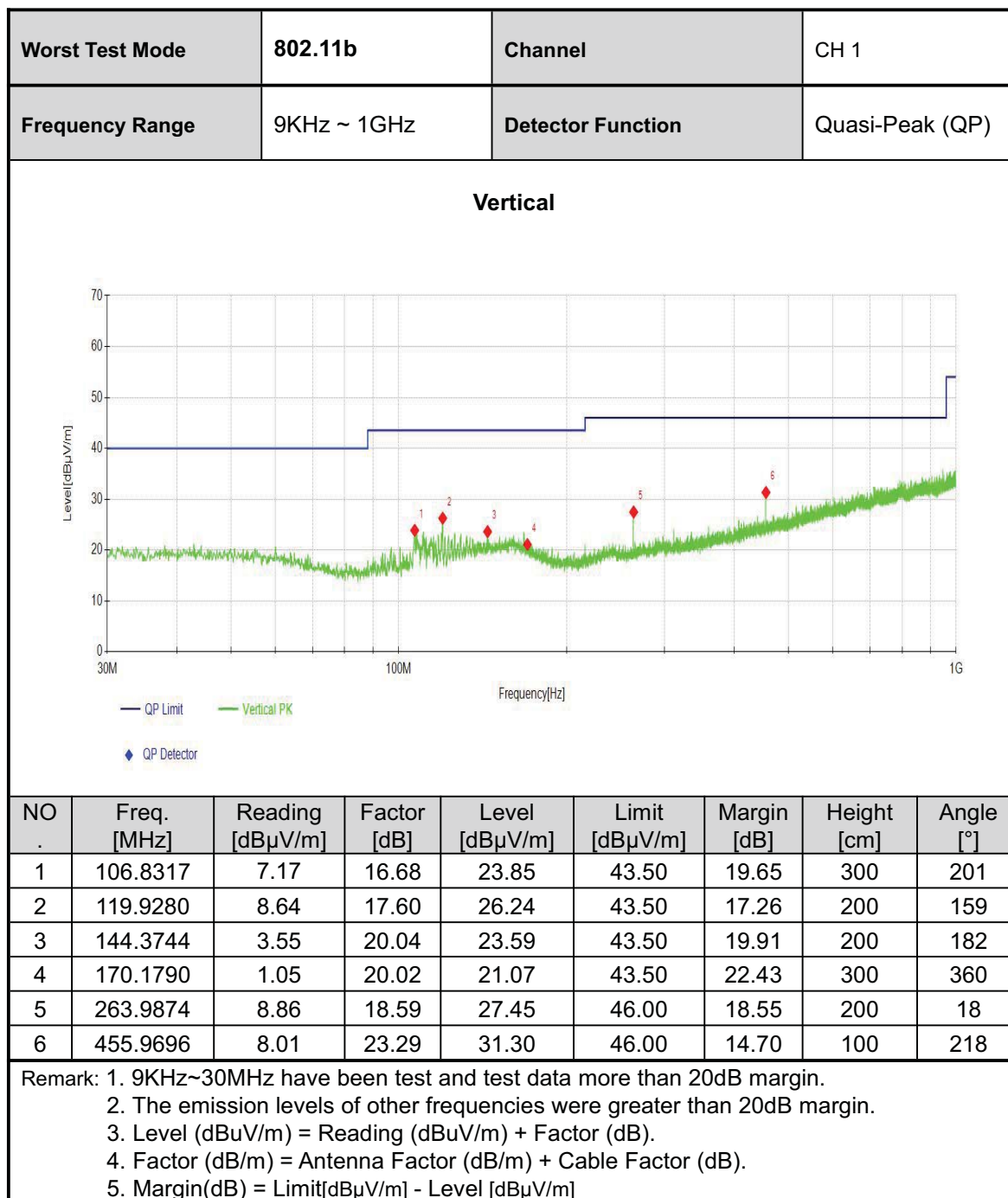
Above 1GHz Test Setup:



3.2.4 Test results

BELOW 1GHz WORST-CASE DATA:







ABOVE 1GHz DATA

Channel		802.11b CH 1			Frequency		2412MHz		
Frequency Range		Above 1G			Detector Function		PK/AV		
Horizontal									
NO	Freq. [MHz]	Reading [dBμV/m]	Factor [dB]	Level [dBμV/m]	Limit [dBμV/m]	Margin [dB]	Height [cm]	Angle [°]	Detector
1	2390	36.61	-0.15	36.46	54.00	17.54	341	15	AV
2	2390	44.05	-0.15	43.90	74.00	30.10	343	0	PK
3	2412	96.16	0.16	96.32			351	15	PK
4	2412	94.31	0.17	94.48			139	22	AV
5	4824	42.34	9.68	52.02	74.00	21.98	108	99	PK
6	4824	34.68	9.68	44.36	54.00	9.64	217	86	AV
7	7236	19.47	12.39	31.86	54.00	22.14	283	357	AV
8	7236	28.18	12.39	40.57	74.00	33.43	314	354	PK
9	9648	26.97	13.13	40.10	74.00	33.90	160	354	PK
10	9648	19.46	13.13	32.59	54.00	21.41	320	348	AV
Vertical									
NO	Freq. [MHz]	Reading [dBμV/m]	Factor [dB]	Level [dBμV/m]	Limit [dBμV/m]	Margin [dB]	Height [cm]	Angle [°]	Remark
1	2390	38.40	-0.15	38.25	54.00	15.75	333	314	AV
2	2390	45.13	-0.15	44.98	74.00	29.02	265	19	PK
3	2412	98.83	0.16	98.99			101	19	PK
4	2412	97.04	0.16	97.20			302	357	AV
5	4824	42.36	9.68	52.04	74.00	21.96	209	109	PK
6	4824	35.28	9.68	44.96	54.00	9.04	336	76	AV
7	7236	19.82	12.39	32.21	54.00	21.79	275	125	AV
8	7236	27.40	12.39	39.79	74.00	34.21	152	225	PK
9	9648	28.31	13.13	41.44	74.00	32.56	218	252	PK
10	9648	19.29	13.13	32.42	54.00	21.58	145	1	AV
Remark: 1. The emission levels of other frequencies were greater than 20dB margin. 2. Level (dBuV/m) = Reading (dBuV/m) + Factor (dB). 3. Factor (dB/m) = Antenna Factor (dB/m) + Cable Factor (dB). 4. Margin(dB) = Limit[dBuV/m] - Level [dBuV/m]									



Channel		802.11b CH 6		Frequency		2437MHz			
Frequency Range		Above 1G		Detector Function		PK/AV			
Horizontal									
NO	Freq. [MHz]	Reading [dBμV/m]	Factor [dB]	Level [dBμV/m]	Limit [dBμV/m]	Margin [dB]	Height [cm]	Angle [°]	Detector
1	4874	42.13	9.70	51.83	74.00	22.17	209	296	PK
2	4874	34.61	9.70	44.31	54.00	9.69	336	117	AV
3	7311	19.66	11.03	30.69	54.00	23.31	275	262	AV
4	7311	27.70	11.03	38.73	74.00	35.27	152	210	PK
5	9748	27.38	13.23	40.61	74.00	33.39	218	137	PK
6	9748	18.47	13.23	31.70	54.00	22.30	145	44	AV
Vertical									
NO	Freq. [MHz]	Reading [dBμV/m]	Factor [dB]	Level [dBμV/m]	Limit [dBμV/m]	Margin [dB]	Height [cm]	Angle [°]	Remark
1	4874	43.27	9.70	52.97	74.00	21.03	254	162	PK
2	4874	34.82	9.70	44.52	54.00	9.48	224	156	AV
3	7311	20.05	11.03	31.08	54.00	22.92	266	38	AV
4	7311	27.97	11.03	39.00	74.00	35.00	265	277	PK
5	9748	26.92	13.23	40.15	74.00	33.85	272	65	PK
6	9748	18.76	13.23	31.99	54.00	22.01	387	360	AV
Remark: 1. The emission levels of other frequencies were greater than 20dB margin. 2. Level (dBuV/m) = Reading (dBuV/m) + Factor (dB). 3. Factor (dB/m) = Antenna Factor (dB/m) + Cable Factor (dB). 4. Margin(dB) = Limit[dBuV/m] - Level [dBuV/m]									



Channel		802.11b CH 11			Frequency		2462MHz		
Frequency Range		Above 1G			Detector Function		PK/AV		
Horizontal									
NO	Freq. [MHz]	Reading [dBμV/m]	Factor [dB]	Level [dBμV/m]	Limit [dBμV/m]	Margin [dB]	Height [cm]	Angle [°]	Detector
1	2462.0000	90.42	0.79	91.21			176	31	AV
2	2462.0000	92.38	0.79	93.17			312	31	PK
3	2483.5000	36.65	0.46	37.11	54.00	16.89	176	31	AV
4	2483.5000	43.96	0.46	44.42	74.00	29.58	106	359	PK
5	4926.0000	42.50	10.07	52.57	74.00	21.43	200	32	PK
6	4926.0000	35.19	10.07	45.26	54.00	8.74	249	257	AV
7	7386.0000	20.34	9.80	30.14	54.00	23.86	198	29	AV
8	7386.0000	28.82	9.80	38.62	74.00	35.38	295	42	PK
9	9848.0000	26.85	13.24	40.09	74.00	33.91	105	357	PK
10	9848.0000	18.85	13.24	32.09	54.00	21.91	256	357	AV
Vertical									
NO	Freq. [MHz]	Reading [dBμV/m]	Factor [dB]	Level [dBμV/m]	Limit [dBμV/m]	Margin [dB]	Height [cm]	Angle [°]	Remark
1	2462.0000	96.48	0.79	97.27			297	351	AV
2	2462.0000	98.35	0.79	99.14			135	345	PK
3	2483.5000	40.62	0.46	41.08	54.00	12.92	348	345	AV
4	2483.5000	48.40	0.46	48.86	74.00	25.14	163	12	PK
5	4926.0000	42.75	10.07	52.82	74.00	21.18	351	123	PK
6	4926.0000	34.59	10.07	44.66	54.00	9.34	160	242	AV
7	7386.0000	20.50	9.80	30.30	54.00	23.70	383	1	AV
8	7386.0000	29.30	9.80	39.10	74.00	34.90	372	39	PK
9	9848.0000	27.42	13.24	40.66	74.00	33.34	339	12	PK
10	9848.0000	19.06	13.24	32.30	54.00	21.70	353	158	AV
Remark: 1. The emission levels of other frequencies were greater than 20dB margin. 2. Level (dBuV/m) = Reading (dBuV/m) + Factor (dB). 3. Factor (dB/m) = Antenna Factor (dB/m) + Cable Factor (dB). 4. Margin(dB) = Limit[dBuV/m] - Level [dBuV/m]									



Channel		802.11g CH 1			Frequency		2412MHz		
Frequency Range		Above 1G			Detector Function		PK/AV		
Horizontal									
NO	Freq. [MHz]	Reading [dBμV/m]	Factor [dB]	Level [dBμV/m]	Limit [dBμV/m]	Margin [dB]	Height [cm]	Angle [°]	Detector
1	2390	41.01	-0.15	40.86	54.00	13.14	351	12	AV
2	2390	49.93	-0.15	49.78	74.00	24.22	160	12	PK
3	2412	99.49	0.16	99.65			383	31	PK
4	2412	92.21	0.16	92.37			372	12	AV
5	4824	43.14	9.68	52.82	74.00	21.18	278	1	PK
6	4824	34.72	9.68	44.40	54.00	9.60	275	204	AV
7	7236	19.73	12.39	32.12	54.00	21.88	340	62	AV
8	7236	28.72	12.39	41.11	74.00	32.89	204	222	PK
9	9648	26.65	13.13	39.78	74.00	34.22	373	70	PK
10	9648	19.55	13.13	32.68	54.00	21.32	268	62	AV
Vertical									
NO	Freq. [MHz]	Reading [dBμV/m]	Factor [dB]	Level [dBμV/m]	Limit [dBμV/m]	Margin [dB]	Height [cm]	Angle [°]	Remark
1	2390	42.28	-0.15	42.13	54.00	11.87	173	19	AV
2	2390	51.96	-0.15	51.81	74.00	22.19	395	334	PK
3	2412	94.86	0.17	95.03			189	19	AV
4	2412	102.43	0.17	102.60			305	357	PK
5	4824	42.84	9.68	52.52	74.00	21.48	310	215	PK
6	4824	34.68	9.68	44.36	54.00	9.64	331	334	AV
7	7236	20.13	12.39	32.52	54.00	21.48	306	45	AV
8	7236	28.11	12.39	40.50	74.00	33.50	117	333	PK
9	9648	28.92	13.13	42.05	74.00	31.95	314	119	PK
10	9648	19.31	13.13	32.44	54.00	21.56	290	326	AV
Remark: 1. The emission levels of other frequencies were greater than 20dB margin. 2. Level (dBuV/m) = Reading (dBuV/m) + Factor (dB). 3. Factor (dB/m) = Antenna Factor (dB/m) + Cable Factor (dB). 4. Margin(dB) = Limit[dBuV/m] - Level [dBuV/m]									



Channel		802.11g CH 6		Frequency		2437MHz			
Frequency Range		Above 1G		Detector Function		PK/AV			
Horizontal									
NO	Freq. [MHz]	Reading [dBμV/m]	Factor [dB]	Level [dBμV/m]	Limit [dBμV/m]	Margin [dB]	Height [cm]	Angle [°]	Detector
1	4874	43.86	9.70	53.56	74.00	20.44	280	244	PK
2	4874	34.63	9.70	44.33	54.00	9.67	135	138	AV
3	7311	20.25	11.03	31.28	54.00	22.72	308	242	AV
4	7311	27.80	11.03	38.83	74.00	35.17	306	242	PK
5	9748	26.75	13.23	39.98	74.00	34.02	102	162	PK
6	9748	19.31	13.23	32.54	54.00	21.46	329	209	AV
Vertical									
NO	Freq. [MHz]	Reading [dBμV/m]	Factor [dB]	Level [dBμV/m]	Limit [dBμV/m]	Margin [dB]	Height [cm]	Angle [°]	Remark
1	4874	42.96	9.70	52.66	74.00	21.34	175	308	PK
2	4874	34.91	9.70	44.61	54.00	9.39	146	48	AV
3	7311	19.81	11.03	30.84	54.00	23.16	225	360	AV
4	7311	27.53	11.03	38.56	74.00	35.44	267	360	PK
5	9748	27.30	13.23	40.53	74.00	33.47	125	125	PK
6	9748	18.90	13.23	32.13	54.00	21.87	304	105	AV
Remark: 1. The emission levels of other frequencies were greater than 20dB margin. 2. Level (dBuV/m) = Reading (dBuV/m) + Factor (dB). 3. Factor (dB/m) = Antenna Factor (dB/m) + Cable Factor (dB). 4. Margin(dB) = Limit[dBuV/m] - Level [dBuV/m]									



Channel		802.11g CH 11			Frequency		2462MHz		
Frequency Range		Above 1G			Detector Function		PK/AV		
Horizontal									
NO	Freq. [MHz]	Reading [dBμV/m]	Factor [dB]	Level [dBμV/m]	Limit [dBμV/m]	Margin [dB]	Height [cm]	Angle [°]	Detector
1	2462	94.97	0.80	95.77			260	268	PK
2	2462	88.84	0.78	89.62			339	295	AV
3	2483.5	39.78	0.46	40.24	54.00	13.76	156	321	AV
4	2483.5	49.10	0.46	49.56	74.00	24.44	120	321	PK
5	4924	43.66	10.07	53.73	74.00	20.27	203	238	PK
6	4924	34.10	10.07	44.17	54.00	9.83	235	19	AV
7	7386	20.52	9.80	30.32	54.00	23.68	381	116	AV
8	7386	27.95	9.80	37.75	74.00	36.25	191	357	PK
9	9848	26.44	13.24	39.68	74.00	34.32	365	348	PK
10	9848	18.95	13.24	32.19	54.00	21.81	104	202	AV
Vertical									
NO	Freq. [MHz]	Reading [dBμV/m]	Factor [dB]	Level [dBμV/m]	Limit [dBμV/m]	Margin [dB]	Height [cm]	Angle [°]	Remark
1	2462	94.85	0.77	95.62			386	258	AV
2	2462	101.47	0.72	102.19			261	258	PK
3	2483.5	47.40	0.46	47.86	54.00	6.14	339	272	AV
4	2483.5	56.60	0.46	57.06	74.00	16.94	101	245	PK
5	4924	42.84	10.07	52.91	74.00	21.09	203	89	PK
6	4924	34.07	10.07	44.14	54.00	9.86	235	63	AV
7	7386	20.56	9.80	30.36	54.00	23.64	381	360	AV
8	7386	28.01	9.80	37.81	74.00	36.19	191	7	PK
9	9848	27.29	13.24	40.53	74.00	33.47	365	226	PK
10	9848	18.66	13.24	31.90	54.00	22.10	104	60	AV
Remark: 1. The emission levels of other frequencies were greater than 20dB margin. 2. Level (dBuV/m) = Reading (dBuV/m) + Factor (dB). 3. Factor (dB/m) = Antenna Factor (dB/m) + Cable Factor (dB). 4. Margin(dB) = Limit[dBμV/m] - Level [dBμV/m]									



Channel		802.11n20 CH 1			Frequency		2412MHz		
Frequency Range		Above 1G			Detector Function		PK/AV		
Horizontal									
NO	Freq. [MHz]	Reading [dBμV/m]	Factor [dB]	Level [dBμV/m]	Limit [dBμV/m]	Margin [dB]	Height [cm]	Angle [°]	Detector
1	2390	39.79	-0.15	39.64	54.00	14.36	337	302	AV
2	2390	47.81	-0.15	47.66	74.00	26.34	386	329	PK
3	2412	97.51	0.16	97.67			110	296	PK
4	2412	90.51	0.19	90.70			255	296	AV
5	4824	42.88	9.68	52.56	74.00	21.44	148	32	PK
6	4824	34.70	9.68	44.38	54.00	9.62	128	144	AV
7	7236	19.75	12.39	32.14	54.00	21.86	207	275	AV
8	7236	28.24	12.39	40.63	74.00	33.37	159	116	PK
9	9648	26.56	13.13	39.69	74.00	34.31	107	176	PK
10	9648	19.60	13.13	32.73	54.00	21.27	253	10	AV
Vertical									
NO	Freq. [MHz]	Reading [dBμV/m]	Factor [dB]	Level [dBμV/m]	Limit [dBμV/m]	Margin [dB]	Height [cm]	Angle [°]	Remark
1	2390	40.69	-0.15	40.54	54.00	13.46	269	281	AV
2	2390	47.80	-0.15	47.65	74.00	26.35	338	274	PK
3	2412	101.05	0.17	101.22			322	333	PK
4	2412	93.24	0.17	93.41			326	254	AV
5	4824	42.45	9.68	52.13	74.00	21.87	198	70	PK
6	4824	34.45	9.68	44.13	54.00	9.87	274	222	AV
7	7236	19.74	12.39	32.13	54.00	21.87	323	351	AV
8	7236	27.46	12.39	39.85	74.00	34.15	155	138	PK
9	9648	27.95	13.13	41.08	74.00	32.92	341	92	PK
10	9648	19.31	13.13	32.44	54.00	21.56	336	278	AV
Remark: 1. The emission levels of other frequencies were greater than 20dB margin. 2. Level (dBuV/m) = Reading (dBuV/m) + Factor (dB). 3. Factor (dB/m) = Antenna Factor (dB/m) + Cable Factor (dB). 4. Margin(dB) = Limit[dBuV/m] - Level [dBuV/m]									



Channel		802.11n20 CH 6		Frequency		2437MHz			
Frequency Range		Above 1G		Detector Function		PK/AV			
Horizontal									
NO	Freq. [MHz]	Reading [dBμV/m]	Factor [dB]	Level [dBμV/m]	Limit [dBμV/m]	Margin [dB]	Height [cm]	Angle [°]	Detector
1	4874	42.75	9.70	52.45	74.00	21.55	301	72	PK
2	4874	34.60	9.70	44.30	54.00	9.70	264	211	AV
3	7311	19.89	11.03	30.92	54.00	23.08	217	101	AV
4	7311	28.34	11.03	39.37	74.00	34.63	136	262	PK
5	9748	26.78	13.23	40.01	74.00	33.99	173	101	PK
6	9748	18.89	13.23	32.12	54.00	21.88	102	188	AV
Vertical									
NO	Freq. [MHz]	Reading [dBμV/m]	Factor [dB]	Level [dBμV/m]	Limit [dBμV/m]	Margin [dB]	Height [cm]	Angle [°]	Remark
1	4874	43.22	9.70	52.92	74.00	21.08	339	123	PK
2	4874	34.86	9.70	44.56	54.00	9.44	382	295	AV
3	7311	20.36	11.03	31.39	54.00	22.61	230	3	AV
4	7311	27.95	11.03	38.98	74.00	35.02	383	138	PK
5	9748	26.39	13.23	39.62	74.00	34.38	242	125	PK
6	9748	19.02	13.23	32.25	54.00	21.75	199	12	AV
Remark: 1. The emission levels of other frequencies were greater than 20dB margin. 2. Level (dBuV/m) = Reading (dBuV/m) + Factor (dB). 3. Factor (dB/m) = Antenna Factor (dB/m) + Cable Factor (dB). 4. Margin(dB) = Limit[dBuV/m] - Level [dBuV/m]									



Channel		802.11n20 CH 11			Frequency		2462MHz		
Frequency Range		Above 1G			Detector Function		PK/AV		
Horizontal									
NO	Freq. [MHz]	Reading [dBμV/m]	Factor [dB]	Level [dBμV/m]	Limit [dBμV/m]	Margin [dB]	Height [cm]	Angle [°]	Detector
1	2462	88.17	0.56	88.73			186	289	AV
2	2462	95.08	0.56	95.64			288	269	PK
3	2483.5	36.66	0.46	37.12	54.00	16.88	100	91	AV
4	2483.5	44.47	0.46	44.93	74.00	29.07	384	315	PK
5	4924	34.75	10.10	44.85	54.00	9.15	229	265	AV
6	4924	43.19	10.07	53.26	74.00	20.74	146	72	PK
7	7386	20.16	10.31	30.47	54.00	23.53	335	155	AV
8	7386	29.19	9.80	38.99	74.00	35.01	280	2	PK
9	9848	18.96	13.20	32.16	54.00	21.84	268	209	AV
10	9848	27.98	13.24	41.22	74.00	32.78	103	9	PK
Vertical									
NO	Freq. [MHz]	Reading [dBμV/m]	Factor [dB]	Level [dBμV/m]	Limit [dBμV/m]	Margin [dB]	Height [cm]	Angle [°]	Remark
1	2462	100.12	0.56	100.68			228	244	PK
2	2462	94.25	0.59	94.84			343	244	RMS
3	2483.5	42.64	0.46	43.10	54.00	10.90	111	46	AV
4	2483.5	53.61	0.46	54.07	74.00	19.93	161	46	PK
5	4924	42.30	10.07	52.37	74.00	21.63	229	201	PK
6	4924	33.72	10.07	43.79	54.00	10.21	146	93	AV
7	7386	21.06	9.80	30.86	54.00	23.14	335	6	AV
8	7386	29.07	9.80	38.87	74.00	35.13	280	98	PK
9	9848	27.25	13.24	40.49	74.00	33.51	268	91	PK
10	9848	18.98	13.24	32.22	54.00	21.78	103	65	AV
Remark: 1. The emission levels of other frequencies were greater than 20dB margin. 2. Level (dBuV/m) = Reading (dBuV/m) + Factor (dB). 3. Factor (dB/m) = Antenna Factor (dB/m) + Cable Factor (dB). 4. Margin(dB) = Limit[dBuV/m] - Level [dBuV/m]									



Channel		802.11n40 CH 3			Frequency		2422MHz		
Frequency Range		Above 1G			Detector Function		PK/AV		
Horizontal									
NO	Freq. [MHz]	Reading [dBμV/m]	Factor [dB]	Level [dBμV/m]	Limit [dBμV/m]	Margin [dB]	Height [cm]	Angle [°]	Detector
1	2390	44.64	-0.15	44.49	54.00	9.51	112	111	AV
2	2390	52.77	-0.15	52.62	74.00	21.38	301	111	PK
3	2422	96.06	0.20	96.26			342	276	PK
4	2422	88.66	0.20	88.86			311	282	AV
5	4844	42.62	9.70	52.32	74.00	21.68	220	340	PK
6	4844	35.30	9.70	45.00	54.00	9.00	390	241	AV
7	7266	20.10	11.03	31.13	54.00	22.87	357	114	AV
8	7266	29.20	11.03	40.23	74.00	33.77	159	128	PK
9	9688	26.66	13.23	39.89	74.00	34.11	132	24	PK
10	9688	19.14	13.23	32.37	54.00	21.63	144	44	AV
Vertical									
NO	Freq. [MHz]	Reading [dBμV/m]	Factor [dB]	Level [dBμV/m]	Limit [dBμV/m]	Margin [dB]	Height [cm]	Angle [°]	Remark
1	2390	46.52	-0.15	46.37	54.00	7.63	215	77	AV
2	2390	54.15	-0.15	54.00	74.00	20.00	366	91	PK
3	2422	98.60	0.22	98.82			281	328	PK
4	2422	91.55	0.22	91.77			278	295	RMS
5	4844	42.93	9.70	52.63	74.00	21.37	110	53	PK
6	4844	34.99	9.70	44.69	54.00	9.31	280	34	AV
7	7266	20.11	11.03	31.14	54.00	22.86	223	1	AV
8	7266	28.52	11.03	39.55	74.00	34.45	365	218	PK
9	9688	27.80	13.23	41.03	74.00	32.97	318	347	PK
10	9688	19.37	13.23	32.60	54.00	21.40	342	322	AV
11	2390	42.93	9.70	52.63	74.00	21.37	110	53	PK
Remark: 1. The emission levels of other frequencies were greater than 20dB margin. 2. Level (dBuV/m) = Reading (dBuV/m) + Factor (dB). 3. Factor (dB/m) = Antenna Factor (dB/m) + Cable Factor (dB). 4. Margin(dB) = Limit[dBuV/m] - Level [dBuV/m]									



Channel		802.11n40 CH 9			Frequency		2452MHz		
Frequency Range		Above 1G			Detector Function		PK/AV		
Horizontal									
NO	Freq. [MHz]	Reading [dBμV/m]	Factor [dB]	Level [dBμV/m]	Limit [dBμV/m]	Margin [dB]	Height [cm]	Angle [°]	Detector
1	2452	86.37	0.56	86.93			182	302	AV
2	2452	93.13	0.56	93.69			109	315	PK
3	2483.5	45.09	0.46	45.55	74.00	8.45	290	92	AV
4	2483.5	55.49	0.46	55.95	54.00	18.05	298	92	PK
5	4904	41.85	10.07	51.92	74.00	22.08	314	359	PK
6	4904	34.20	10.07	44.27	54.00	9.73	235	330	AV
7	7356	20.47	9.80	30.27	54.00	23.73	284	206	AV
8	7356	28.92	9.80	38.72	74.00	35.28	110	79	PK
9	9808	26.68	13.24	39.92	74.00	34.08	276	187	PK
10	9808	18.77	13.24	32.01	54.00	21.99	116	3	AV
Vertical									
NO	Freq. [MHz]	Reading [dBμV/m]	Factor [dB]	Level [dBμV/m]	Limit [dBμV/m]	Margin [dB]	Height [cm]	Angle [°]	Remark
1	2452	99.23	0.57	99.80			224	314	PK
2	2452	91.97	0.58	92.55			135	235	AV
3	2483.5	51.03	0.46	51.49	54.00	2.51	202	268	AV
4	2483.5	61.13	0.46	61.59	74.00	12.41	369	268	PK
5	4904	41.99	10.07	52.06	74.00	21.94	138	197	PK
6	4904	34.87	10.07	44.94	54.00	9.06	127	20	AV
7	7356	20.37	9.80	30.17	54.00	23.83	241	227	AV
8	7356	28.29	9.80	38.09	74.00	35.91	151	178	PK
9	9808	27.22	13.24	40.46	74.00	33.54	215	286	PK
10	9808	18.91	13.24	32.15	54.00	21.85	159	188	AV
Remark: 1. The emission levels of other frequencies were greater than 20dB margin. 2. Level (dBuV/m) = Reading (dBuV/m) + Factor (dB). 3. Factor (dB/m) = Antenna Factor (dB/m) + Cable Factor (dB). 4. Margin(dB) = Limit[dBuV/m] - Level [dBuV/m]									



Channel		802.11ax40 CH 3			Frequency		2422MHz		
Frequency Range		Above 1G			Detector Function		PK/AV		
Horizontal									
NO	Freq. [MHz]	Reading [dBμV/m]	Factor [dB]	Level [dBμV/m]	Limit [dBμV/m]	Margin [dB]	Height [cm]	Angle [°]	Detector
1	2390	41.90	-0.15	41.75	54.00	12.25	165	104	AV
2	2390	49.31	-0.15	49.16	74.00	24.84	112	309	PK
3	2422	94.97	0.21	95.18			124	282	PK
4	2422	86.76	0.25	87.01			102	282	AV
5	4844	42.20	9.70	51.90	74.00	22.10	221	360	PK
6	4844	34.47	9.70	44.17	54.00	9.83	144	179	AV
7	7266	20.09	11.03	31.12	54.00	22.88	398	53	AV
8	7266	28.06	11.03	39.09	74.00	34.91	244	324	PK
9	9688	26.96	13.23	40.19	74.00	33.81	250	0	PK
10	9688	18.88	13.23	32.11	54.00	21.89	184	167	AV
Vertical									
NO	Freq. [MHz]	Reading [dBμV/m]	Factor [dB]	Level [dBμV/m]	Limit [dBμV/m]	Margin [dB]	Height [cm]	Angle [°]	Remark
1	2390	44.77	-0.15	44.62	54.00	9.38	128	58	AV
2	2390	52.30	-0.15	52.15	74.00	21.85	179	58	PK
3	2422	89.53	0.22	89.75			238	321	AV
4	2422	97.67	0.23	97.90			112	321	PK
5	4844	43.20	9.70	52.90	74.00	21.10	285	88	PK
6	4844	35.10	9.70	44.80	54.00	9.20	190	9	AV
7	7266	19.98	11.03	31.01	54.00	22.99	319	1	AV
8	7266	28.67	11.03	39.70	74.00	34.30	216	302	PK
9	9688	26.94	13.23	40.17	74.00	33.83	222	115	PK
10	9688	18.67	13.23	31.90	54.00	22.10	208	115	AV
Remark: 1. The emission levels of other frequencies were greater than 20dB margin. 2. Level (dBuV/m) = Reading (dBuV/m) + Factor (dB). 3. Factor (dB/m) = Antenna Factor (dB/m) + Cable Factor (dB). 4. Margin(dB) = Limit[dBuV/m] - Level [dBuV/m]									



Channel		802.11ax40 CH 9			Frequency		2452MHz		
Frequency Range		Above 1G			Detector Function		PK/AV		
Horizontal									
NO	Freq. [MHz]	Reading [dBμV/m]	Factor [dB]	Level [dBμV/m]	Limit [dBμV/m]	Margin [dB]	Height [cm]	Angle [°]	Detector
1	2452	83.67	0.56	84.23			216	288	AV
2	2452	93.03	0.56	93.59			219	305	PK
3	2483.5	41.61	0.46	42.07	54.00	11.93	285	65	AV
4	2483.5	49.37	0.46	49.83	74.00	24.17	352	311	PK
5	4904	41.77	10.07	51.84	74.00	22.16	349	168	PK
6	4904	34.11	10.07	44.18	54.00	9.82	322	158	AV
7	7356	20.38	9.80	30.18	54.00	23.82	323	148	AV
8	7356	29.10	9.80	38.90	74.00	35.10	279	182	PK
9	9808	27.66	13.24	40.90	74.00	33.10	157	286	PK
10	9808	18.89	13.24	32.13	54.00	21.87	336	202	AV
Vertical									
NO	Freq. [MHz]	Reading [dBμV/m]	Factor [dB]	Level [dBμV/m]	Limit [dBμV/m]	Margin [dB]	Height [cm]	Angle [°]	Remark
1	2452	89.42	0.56	89.98			100	227	AV
2	2452	98.25	0.56	98.81			278	312	PK
3	2483.5	49.41	0.46	49.87	54.00	4.13	319	116	AV
4	2483.5	56.83	0.46	57.29	74.00	16.71	350	286	PK
5	4904	42.65	10.10	52.75	74.00	21.25	300	1	PK
6	4904	34.18	10.10	44.28	54.00	9.72	281	152	AV
7	7356	20.23	10.31	30.54	54.00	23.46	340	35	AV
8	7356	28.63	10.31	38.94	74.00	35.06	175	197	PK
9	9808	26.81	13.20	40.01	74.00	33.99	260	286	PK
10	9808	18.73	13.20	31.93	54.00	22.07	332	237	AV
Remark: 1. The emission levels of other frequencies were greater than 20dB margin. 2. Level (dBuV/m) = Reading (dBuV/m) + Factor (dB). 3. Factor (dB/m) = Antenna Factor (dB/m) + Cable Factor (dB). 4. Margin(dB) = Limit[dBuV/m] - Level [dBuV/m]									



Channel		BT-LE CH0			Frequency		2402MHz		
Frequency Range		Above 1G			Detector Function		PK/AV		
Horizontal									
NO	Freq. [MHz]	Reading [dBμV/m]	Factor [dB]	Level [dBμV/m]	Limit [dBμV/m]	Margin [dB]	Height [cm]	Angle [°]	Detector
1	2390.0000	35.90	-0.15	35.75	54.00	18.25	400	358	AV
2	2390.0000	43.58	-0.15	43.43	74.00	30.57	268	292	PK
3	2401.7222	88.14	-0.04	88.10			118	122	PK
4	2401.7982	87.25	-0.03	87.22			137	96	AV
5	4804.0000	41.24	9.29	50.53	74.00	23.47	170	328	PK
6	4804.0000	34.09	9.29	43.38	54.00	10.62	359	220	AV
7	7206.0000	19.22	12.81	32.03	54.00	21.97	118	152	AV
8	7206.0000	26.40	12.81	39.21	74.00	34.79	178	119	PK
9	9608.0000	27.74	13.32	41.06	74.00	32.94	398	179	PK
10	9608.0000	18.92	13.32	32.24	54.00	21.76	364	325	AV
Vertical									
NO	Freq. [MHz]	Reading [dBμV/m]	Factor [dB]	Level [dBμV/m]	Limit [dBμV/m]	Margin [dB]	Height [cm]	Angle [°]	Remark
1	2390.0000	43.63	-0.15	43.48	74.00	30.52	399	315	PK
2	2390.0000	36.23	-0.15	36.08	54.00	17.92	215	334	AV
3	2401.7412	94.65	-0.04	94.61			100	39	PK
4	2401.7602	94.02	-0.04	93.98			133	39	AV
5	4804.0000	42.89	9.29	52.18	74.00	21.82	150	345	PK
6	4804.0000	34.08	9.29	43.37	54.00	10.63	150	79	AV
7	7206.0000	19.50	12.81	32.31	54.00	21.69	150	359	AV
8	7206.0000	27.89	12.81	40.70	74.00	33.30	150	4	PK
9	9608.0000	27.46	13.32	40.78	74.00	33.22	150	20	PK
10	9608.0000	19.10	13.32	32.42	54.00	21.58	150	168	AV
Remark: 1. The emission levels of other frequencies were greater than 20dB margin. 2. Level (dBuV/m) = Reading (dBuV/m) + Factor (dB). 3. Factor (dB/m) = Antenna Factor (dB/m) + Cable Factor (dB). 4. Margin(dB) = Limit[dBuV/m] - Level [dBuV/m]									



Channel		BT-LE CH19		Frequency		2440MHz			
Frequency Range		Above 1G		Detector Function		PK/AV			
Horizontal									
NO	Freq. [MHz]	Reading [dBμV/m]	Factor [dB]	Level [dBμV/m]	Limit [dBμV/m]	Margin [dB]	Height [cm]	Angle [°]	Detector
1	4880.0000	42.00	9.80	51.80	74.00	22.20	150	341	PK
2	4880.0000	33.91	9.80	43.71	54.00	10.29	150	181	AV
3	7320.0000	20.05	11.01	31.06	54.00	22.94	150	239	AV
4	7320.0000	27.58	11.01	38.59	74.00	35.41	150	152	PK
5	9760.0000	25.98	13.25	39.23	74.00	34.77	150	226	PK
6	9760.0000	18.99	13.25	32.24	54.00	21.76	150	332	AV
Vertical									
NO	Freq. [MHz]	Reading [dBμV/m]	Factor [dB]	Level [dBμV/m]	Limit [dBμV/m]	Margin [dB]	Height [cm]	Angle [°]	Remark
1	4880.0000	42.19	9.80	51.99	74.00	22.01	201	359	PK
2	4880.0000	34.68	9.80	44.48	54.00	9.52	257	333	AV
3	7320.0000	20.20	11.01	31.21	54.00	22.79	142	348	AV
4	7320.0000	28.42	11.01	39.43	74.00	34.57	300	240	PK
5	9760.0000	26.44	13.25	39.69	74.00	34.31	306	20	PK
6	9760.0000	18.80	13.25	32.05	54.00	21.95	128	32	AV
Remark: 1. The emission levels of other frequencies were greater than 20dB margin. 2. Level (dBuV/m) = Reading (dBuV/m) + Factor (dB). 3. Factor (dB/m) = Antenna Factor (dB/m) + Cable Factor (dB). 4. Margin(dB) = Limit[dBuV/m] - Level [dBuV/m]									



Channel		BT-LE CH39			Frequency		2480MHz		
Frequency Range		Above 1G			Detector Function		PK/AV		
Horizontal									
NO	Freq. [MHz]	Reading [dBμV/m]	Factor [dB]	Level [dBμV/m]	Limit [dBμV/m]	Margin [dB]	Height [cm]	Angle [°]	Detector
1	2479.9340	84.19	0.32	84.51			218	332	AV
2	2480.2190	84.97	0.32	85.29			102	25	PK
3	2483.5000	36.12	0.46	36.58	54.00	17.42	371	1	AV
4	2483.5000	44.61	0.46	45.07	74.00	28.93	149	1	PK
5	4960.0000	42.16	10.69	52.85	74.00	21.15	233	218	PK
6	4960.0000	33.93	10.69	44.62	54.00	9.38	214	69	AV
7	7440.0000	20.38	9.75	30.13	54.00	23.87	138	167	AV
8	7440.0000	27.75	9.75	37.50	74.00	36.50	175	142	PK
9	9920.0000	26.48	13.83	40.31	74.00	33.69	345	156	PK
10	9920.0000	18.48	13.83	32.31	54.00	21.69	254	107	AV
Vertical									
NO	Freq. [MHz]	Reading [dBμV/m]	Factor [dB]	Level [dBμV/m]	Limit [dBμV/m]	Margin [dB]	Height [cm]	Angle [°]	Remark
1	2479.8200	96.21	0.32	96.53			261	47	AV
2	2480.2380	96.91	0.32	97.23			129	47	PK
3	2483.5000	44.88	0.46	45.34	74.00	28.66	274	321	PK
4	2483.5000	35.93	0.46	36.39	54.00	17.61	316	359	AV
5	4960.0000	41.89	10.69	52.58	74.00	21.42	266	277	PK
6	4960.0000	34.65	10.69	45.34	54.00	8.66	286	147	AV
7	7440.0000	20.39	9.75	30.14	54.00	23.86	400	13	AV
8	7440.0000	28.40	9.75	38.15	74.00	35.85	113	178	PK
9	9920.0000	27.47	13.83	41.30	74.00	32.70	205	283	PK
10	9920.0000	19.08	13.83	32.91	54.00	21.09	100	318	AV
Remark: 1. The emission levels of other frequencies were greater than 20dB margin. 2. Level (dBuV/m) = Reading (dBuV/m) + Factor (dB). 3. Factor (dB/m) = Antenna Factor (dB/m) + Cable Factor (dB). 4. Margin(dB) = Limit[dBuV/m] - Level [dBuV/m]									

3.3 6dB BANDWIDTH MEASUREMENT

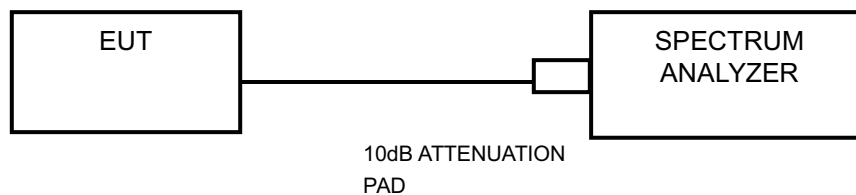
3.3.1 Limits

The minimum of 6dB Bandwidth Measurement is 0.5 MHz.

3.3.2 Measurement procedure

- Set resolution bandwidth (RBW) = 100KHz
- Set the video bandwidth (VBW) $\geq 3 \times$ RBW, Detector = Peak.
- Trace mode = max hold.
- Sweep = auto couple.
- Measure the maximum width of the emission that is constrained by the frequencies associated with the two amplitude points (upper and lower) that are attenuated by 6 dB relative to the maximum level measured in the fundamental emission.

3.3.3 Test setup



3.3.4 Test result

Please refer Annex A

3.4 CONDUCTED OUTPUT POWER

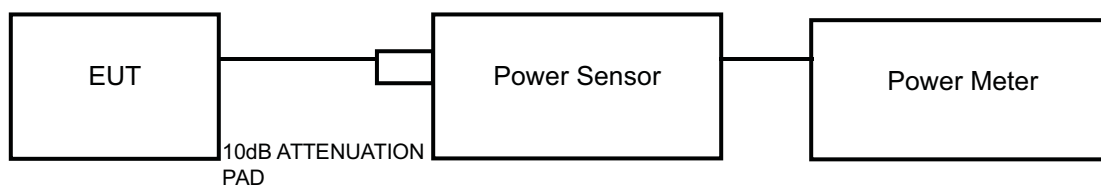
3.4.1 Limits

Forsystems using digital modulation in the 2400–2483.5 MHz band: 1 Watt (30dBm).

3.4.2 Measurement procedure

- A peak power sensor was used on the output port of the EUT. A power meter was used to read the response of the peak power sensor and set the detector to PEAK. Record the power level.
- An average power sensor was used on the output port of the EUT. A power meter was used to read the response of the average power sensor and set the detector to AVERAGE. Record the power level.

3.4.3 Test setup



3.4.4 Test result

Please refer Annex A.

3.5 POWER SPECTRAL DENSITY MEASUREMENT

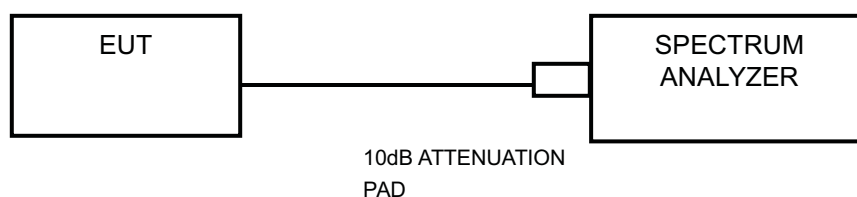
3.5.1 Limits

The Maximum of Power Spectral Density Measurement is 8dBm/3KHz.

3.5.2 Measurement procedure

- Set instrument center frequency to DTS channel center frequency.
- Set the span to 1.5 times the DTS bandwidth.
- Set RBW to: 3KHz
- Set VBW $\geq 3 \times$ RBW.
- Detector = peak
- Ensure that the number of measurement points in the sweep $\geq 2 \times$ span/RBW.
- Sweep time = auto couple.
- Use the peak marker function to determine the maximum amplitude level.

3.5.3 Test setup



3.5.4 Test result

Please refer Annex A.

3.6 OUT OF BAND EMISSION MEASUREMENT

3.6.1 Limits

Below -20dB of the highest emission level of operating band (in 100kHz Resolution Bandwidth).

3.6.2 Measurement procedure

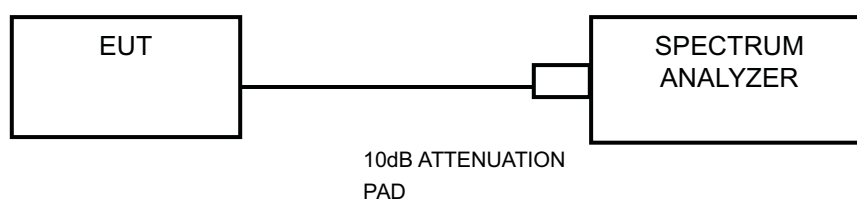
Measurement Procedure -Reference Level

- Set the RBW = 100 kHz.
- Set the VBW $\geq$ 300 kHz.
- Detector = peak.
- Sweep time = auto couple.
- Trace mode = max hold.
- Allow trace to fully stabilize.
- Use the peak marker function to determine the maximum power level in any 100 kHzband segment within the fundamental EBW.

Measurement Procedure –Unwanted Emission Level

- Set RBW = 100 kHz.
- Set VBW $\geq$ 300 kHz.
- Set span to encompass the spectrum to be examined
- Detector = peak.
- Trace Mode = max hold.
- Sweep = auto couple.

3.6.3 Test setup



3.6.4 Test result

Please refer Annex A.

3.7 OCCUPIED BANDWIDTH MEASUREMENT

3.7.1 Measurement procedure

The transmitter antenna output was connected to the spectrum analyzer through an attenuator. The resolution bandwidth shall be set to the range of 1% to 5% of the anticipated emission bandwidth, and a video bandwidth at least 3x the resolution bandwidth.

below the lower and above the upper frequency limits, the mean powers emitted are each equal to a specified percentage 0.5 %of the total mean power of a given emission.

3.7.2 TEST SETUP



3.7.3 Test result

Please refer Annex A.



4 PHOTOGRAPHS OF TEST SETUP

Please refer to the attached file (Test Setup Photo).

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5 PHOTOGRAPHS OF THE EUT

Please refer to the attached file (External Photos report and Internal Photos).



6 Appendix A

Please refer to the following pages for test results.

6.1 6DB BANDWIDTH MEASUREMENT

6.1.1 Test Result

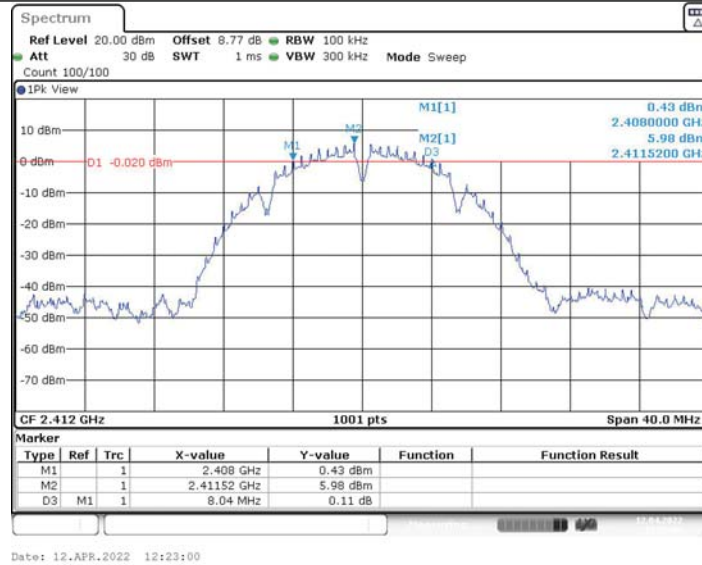
TestMode	Antenna	Frequency[MHz]	DTS BW [MHz]	FL[MHz]	FH[MHz]	Limit[MHz]	Verdict
11B	Ant1	2412	8.04	2408.00	2416.04	0.5	PASS
	Ant2	2412	7.56	2408.00	2415.56	0.5	PASS
	Ant1	2437	8.04	2433.00	2441.04	0.5	PASS
	Ant2	2437	8.04	2433.00	2441.04	0.5	PASS
	Ant1	2462	8.04	2458.00	2466.04	0.5	PASS
	Ant2	2462	7.56	2458.48	2466.04	0.5	PASS
11G	Ant1	2412	15.12	2404.44	2419.56	0.5	PASS
	Ant2	2412	15.32	2404.24	2419.56	0.5	PASS
	Ant1	2437	15.44	2429.12	2444.56	0.5	PASS
	Ant2	2437	16.32	2428.84	2445.16	0.5	PASS
	Ant1	2462	15.80	2454.12	2469.92	0.5	PASS
	Ant2	2462	15.72	2454.44	2470.16	0.5	PASS
11N20MIMO	Ant1	2412	15.04	2404.52	2419.56	0.5	PASS
	Ant2	2412	15.68	2403.88	2419.56	0.5	PASS
	Ant1	2437	17.28	2428.24	2445.52	0.5	PASS
	Ant2	2437	17.60	2428.20	2445.80	0.5	PASS
	Ant1	2462	16.04	2454.48	2470.52	0.5	PASS
	Ant2	2462	16.96	2453.84	2470.80	0.5	PASS
11N40MIMO	Ant1	2422	35.12	2404.48	2439.60	0.5	PASS
	Ant2	2422	35.12	2404.48	2439.60	0.5	PASS
	Ant1	2437	35.12	2419.48	2454.60	0.5	PASS
	Ant2	2437	35.68	2419.48	2455.16	0.5	PASS
	Ant1	2452	35.12	2434.48	2469.60	0.5	PASS
	Ant2	2452	33.20	2436.96	2470.16	0.5	PASS
11AX40MIMO	Ant1	2422	37.36	2403.44	2440.80	0.5	PASS
	Ant2	2422	37.36	2403.20	2440.56	0.5	PASS
	Ant1	2437	37.28	2418.20	2455.48	0.5	PASS
	Ant2	2437	37.52	2418.52	2456.04	0.5	PASS
	Ant1	2452	37.84	2433.04	2470.88	0.5	PASS
	Ant2	2452	36.56	2434.48	2471.04	0.5	PASS

TestMode	Antenna	Frequency[MHz]	DTS BW [MHz]	FL[MHz]	FH[MHz]	Limit[MHz]	Verdict
BLE_1M	Ant1	2402	0.70	2401.65	2402.34	0.5	PASS
		2440	0.70	2439.65	2440.34	0.5	PASS
		2480	0.69	2479.65	2480.34	0.5	PASS

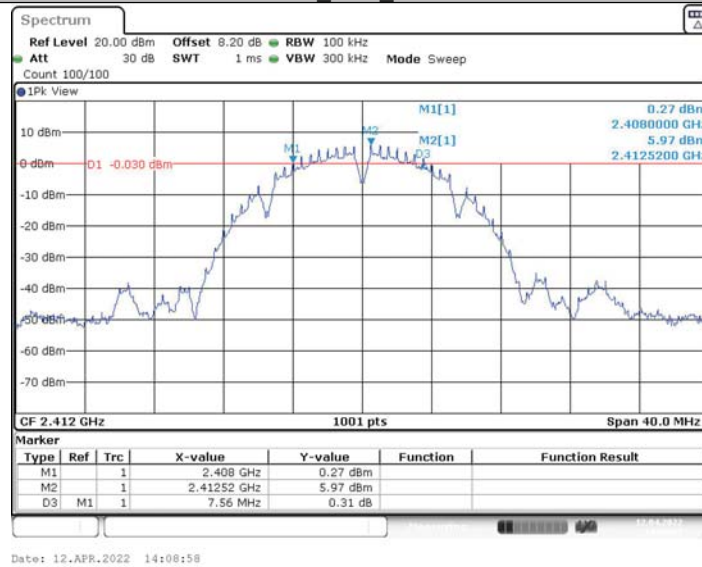


6.1.2 Test Graphs

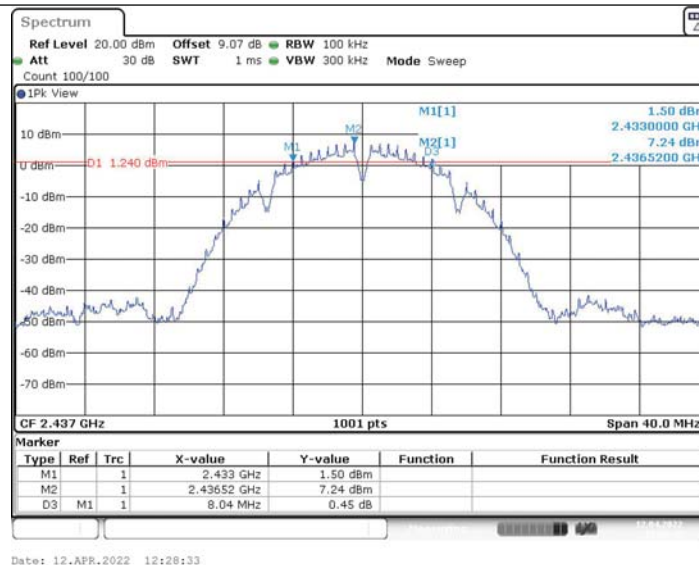
11B_Ant1_2412



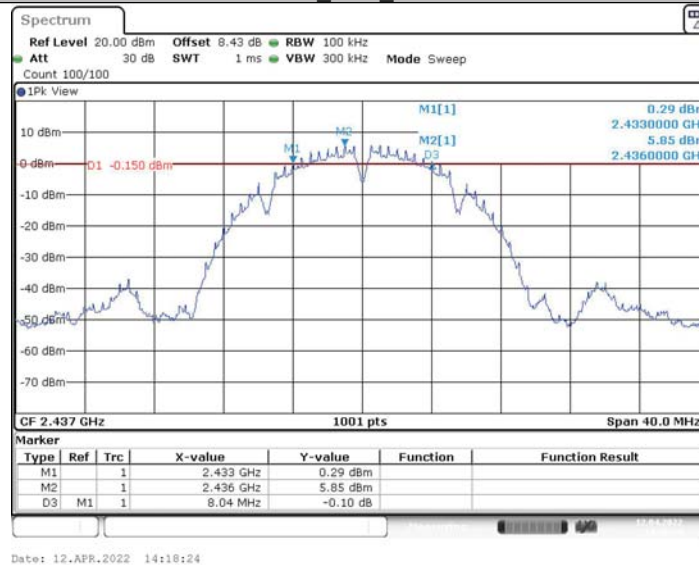
11B_Ant2_2412



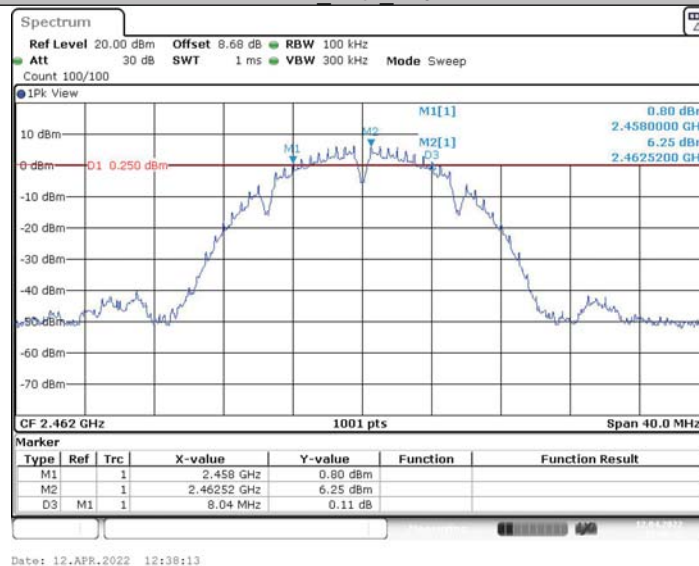
11B_Ant1_2437



11B_Ant2_2437

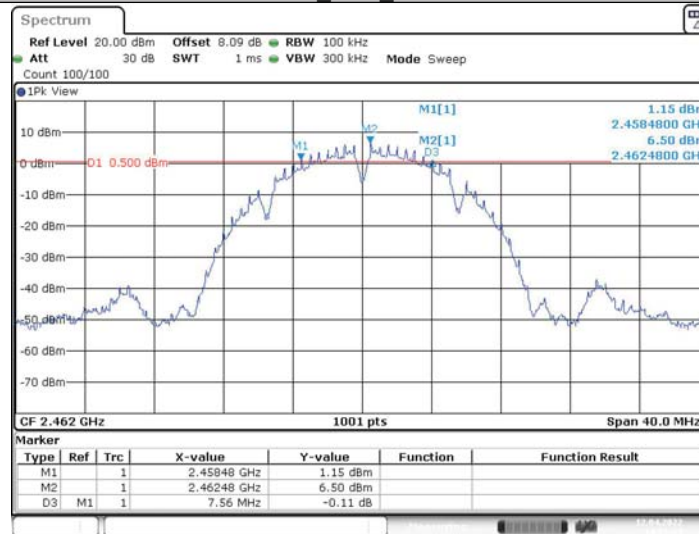


11B_Ant1_2462

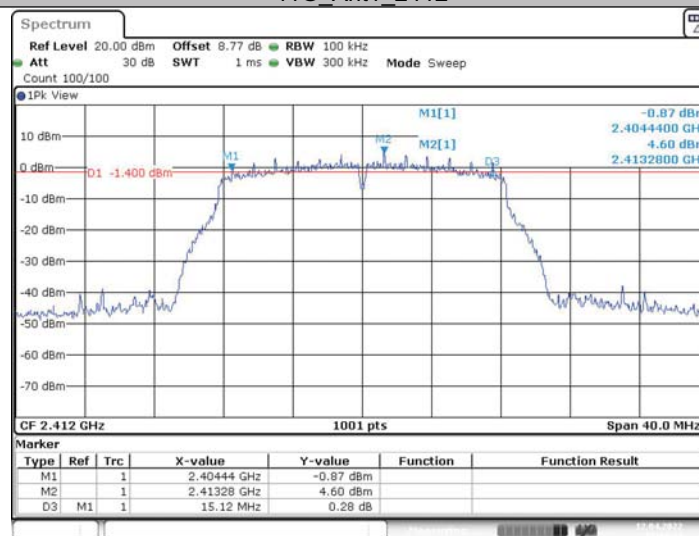




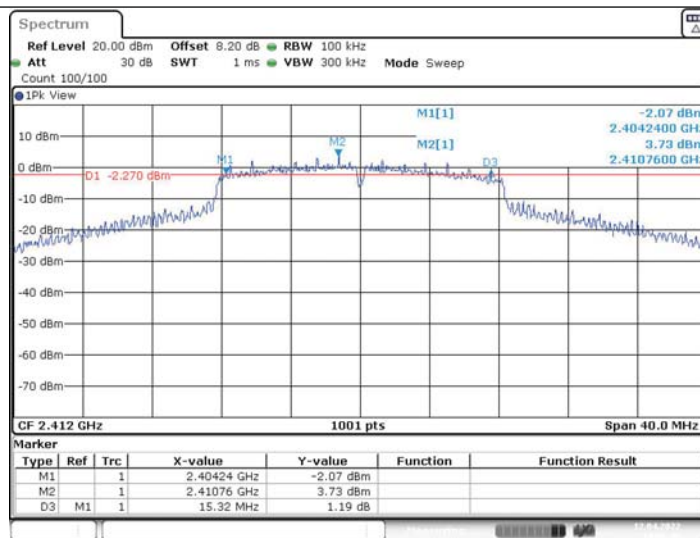
11B_Ant2_2462



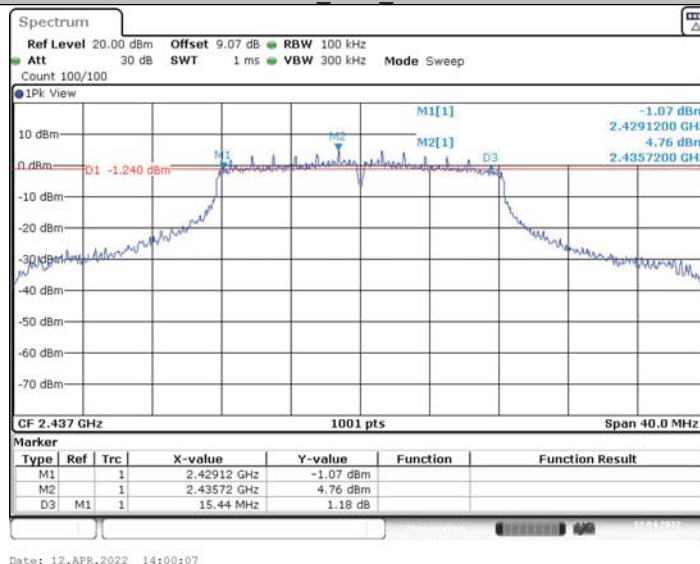
11G_Ant1_2412



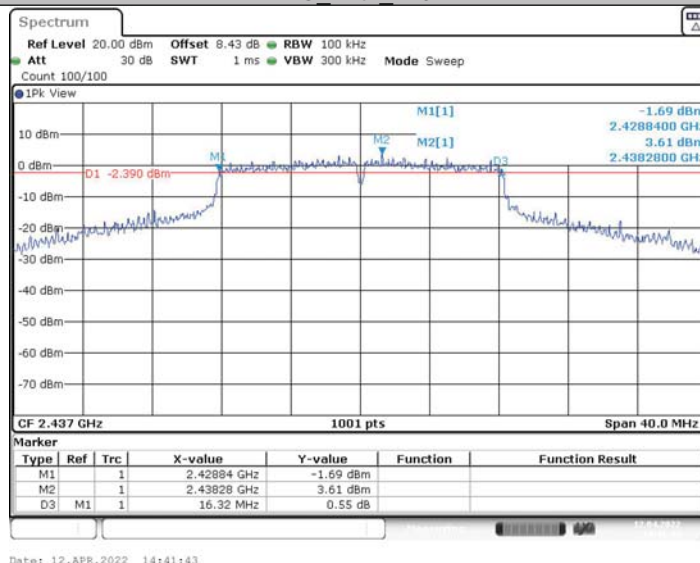
11G_Ant2_2412



11G_Ant1_2437

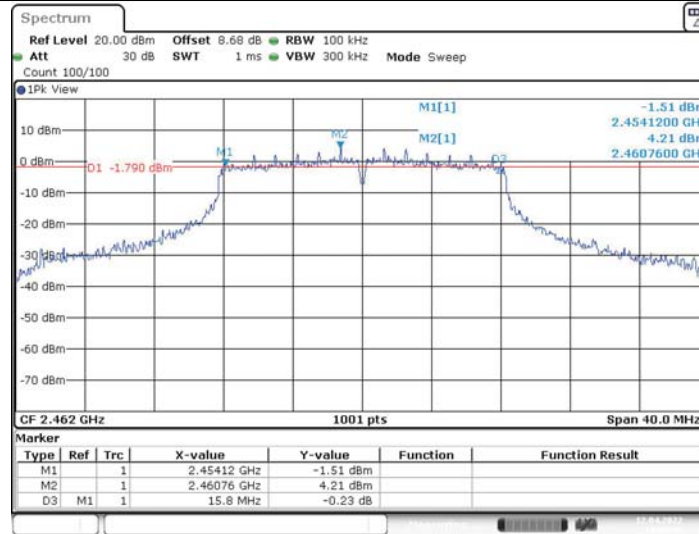


11G_Ant2_2437

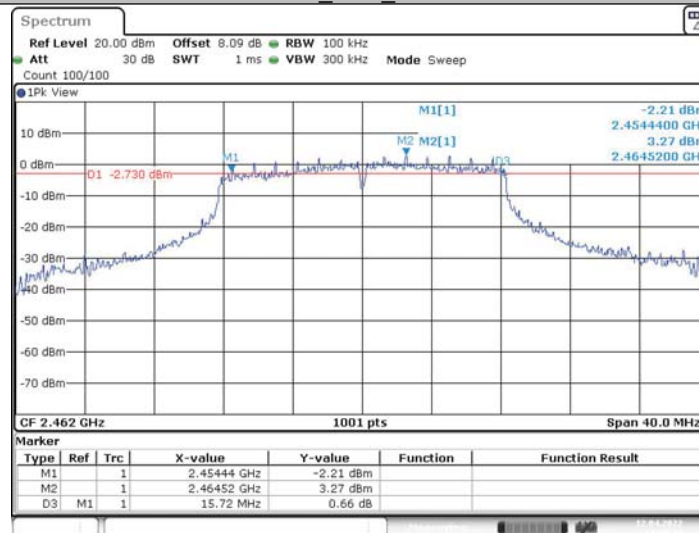




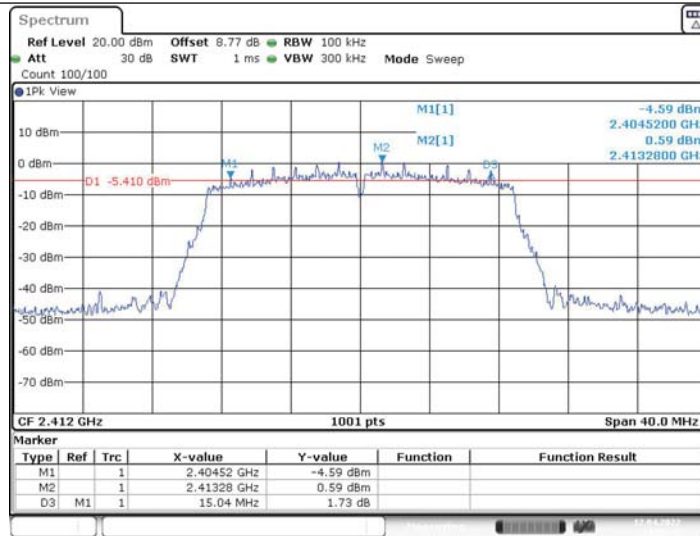
11G_Ant1_2462



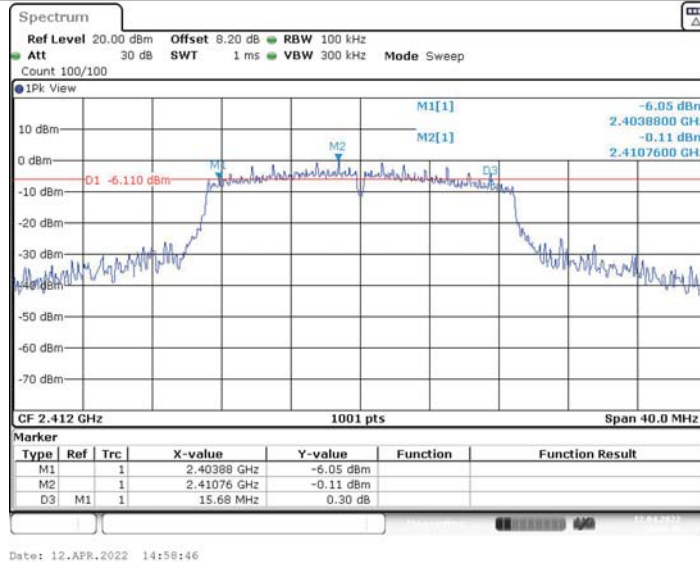
11G_Ant2_2462



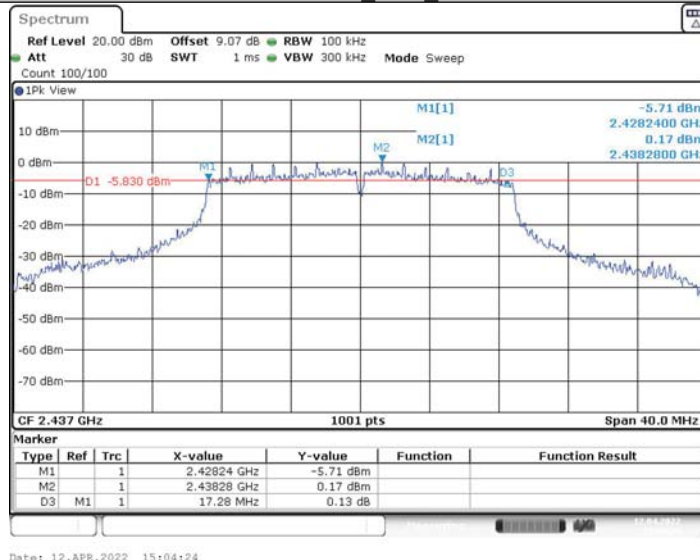
11N20MIMO_Ant1_2412



11N20MIMO_Ant2_2412

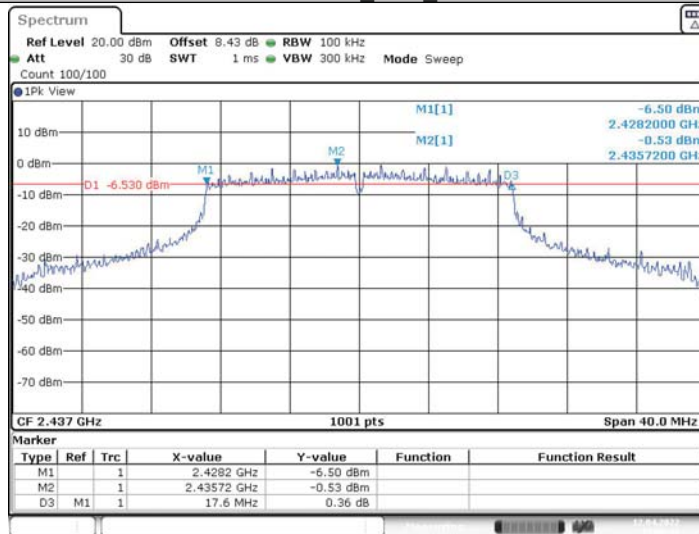


11N20MIMO_Ant1_2437



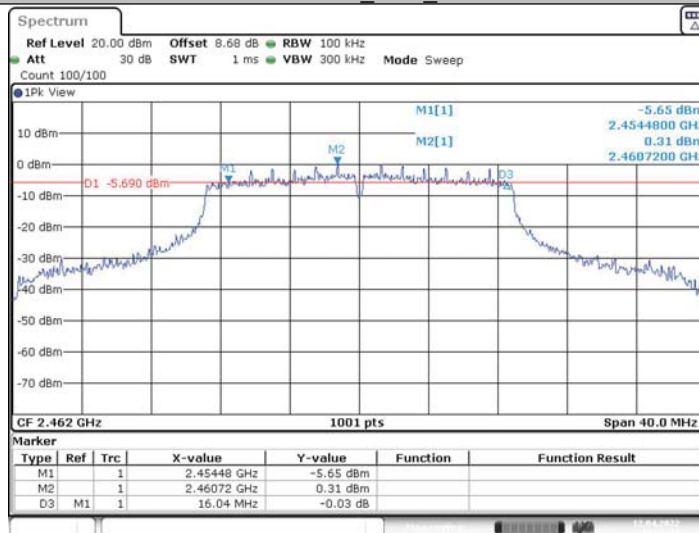


11N20MIMO_Ant2_2437



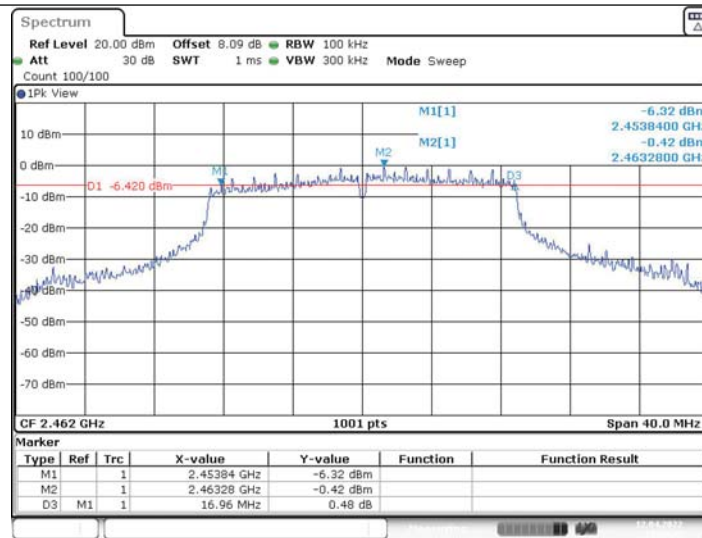
Date: 12.APR.2022 15:07:41

11N20MIMO_Ant1_2462

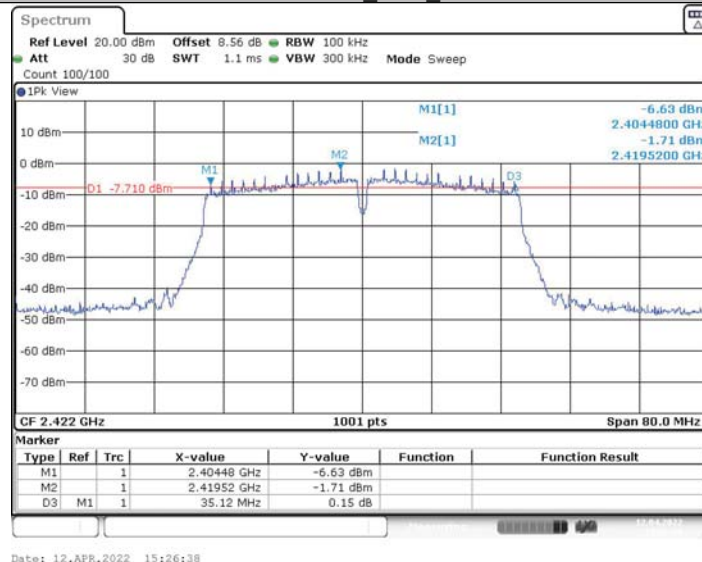


Date: 12.APR.2022 15:16:51

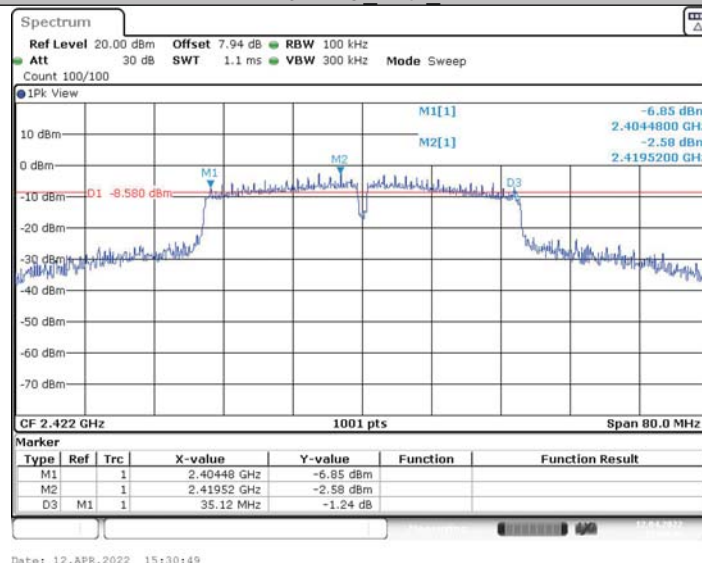
11N20MIMO_Ant2_2462



11N40MIMO_Ant1_2422

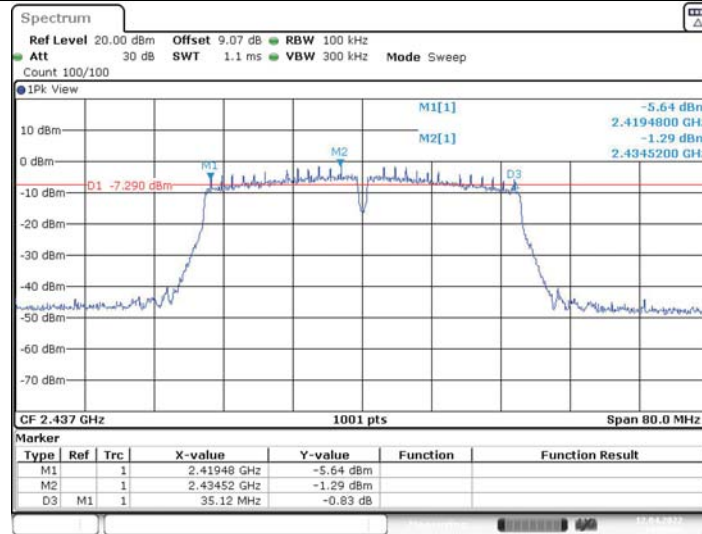


11N40MIMO_Ant2_2422



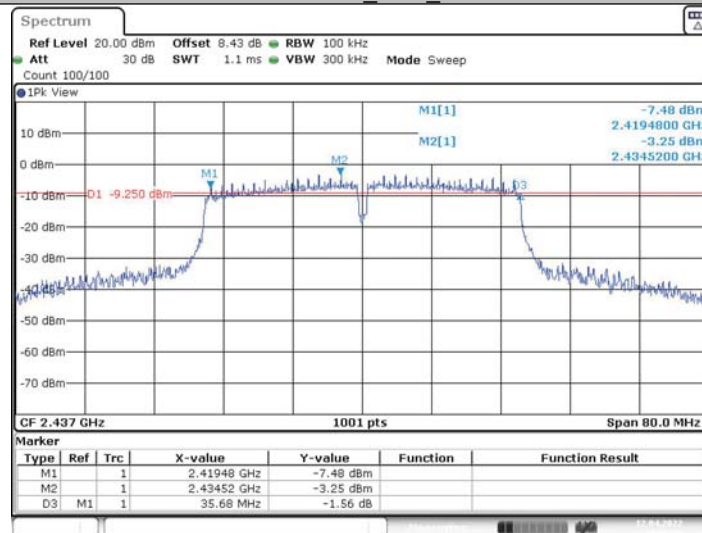


11N40MIMO_Ant1_2437



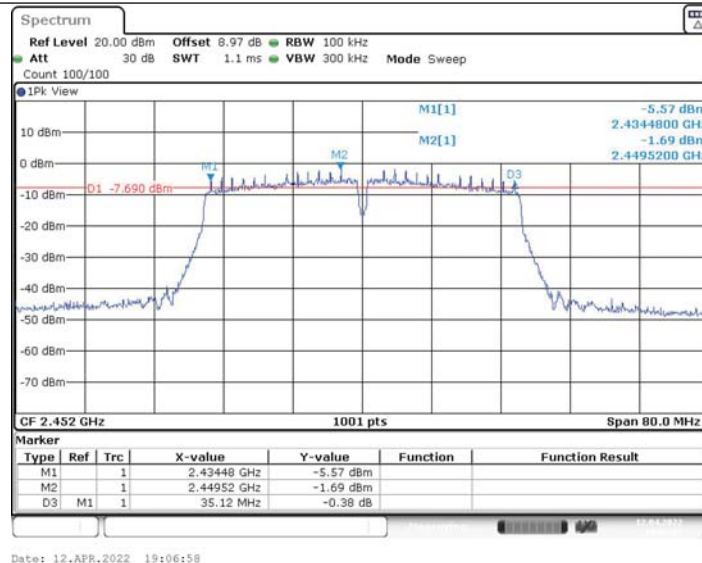
Date: 12.APR.2022 18:59:01

11N40MIMO_Ant2_2437

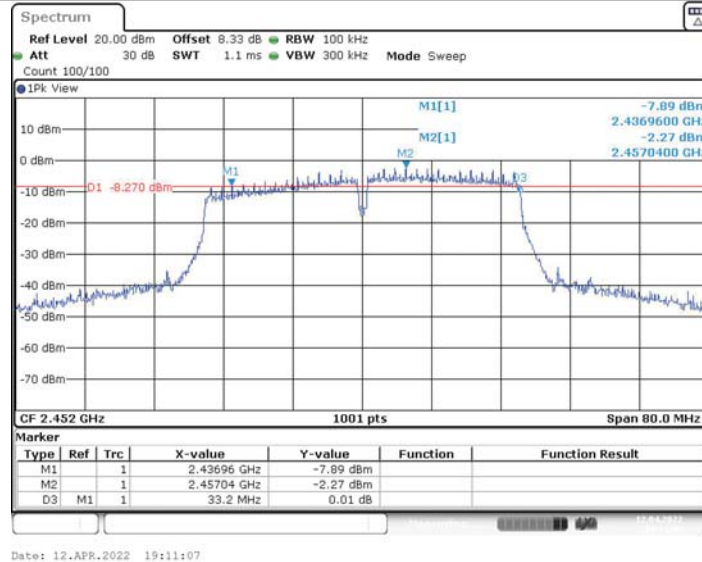


Date: 12.APR.2022 19:02:51

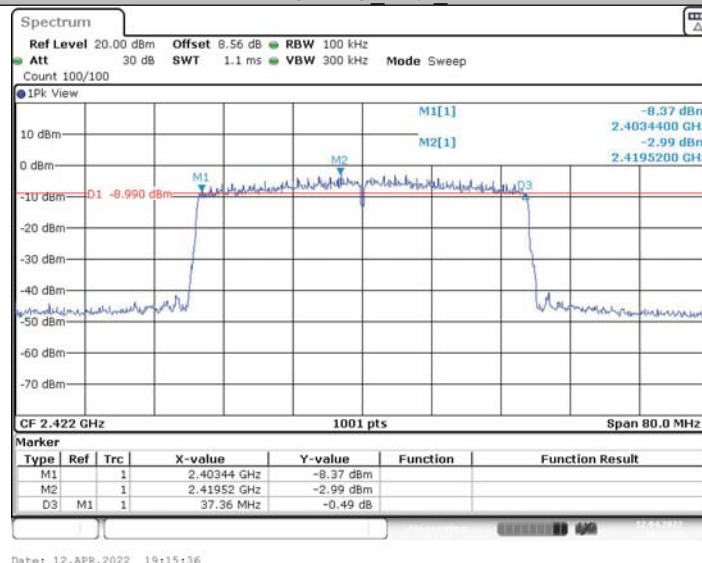
11N40MIMO_Ant1_2452



11N40MIMO_Ant2_2452

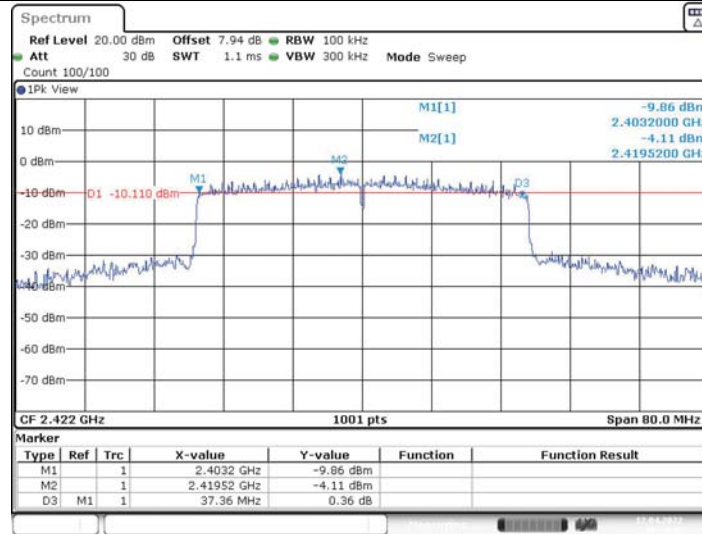


11AX40MIMO_Ant1_2422

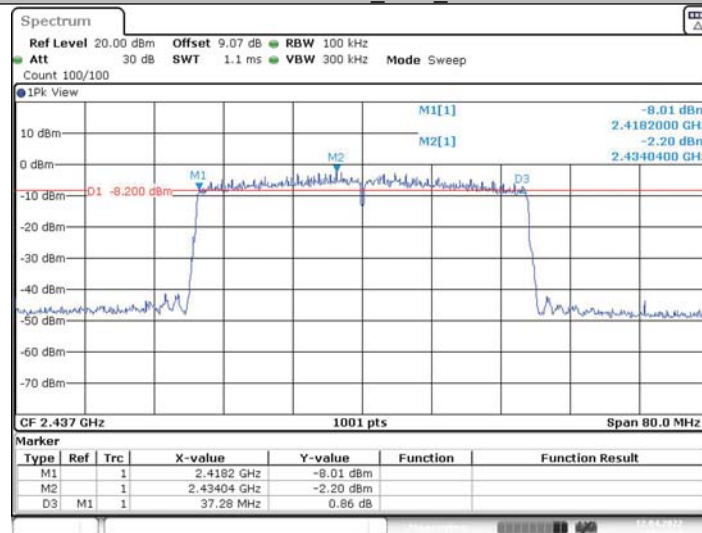




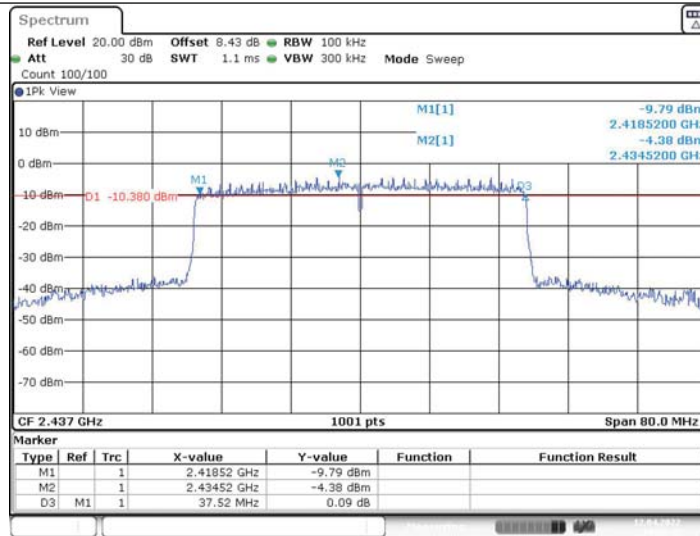
11AX40MIMO_Ant2_2422



11AX40MIMO_Ant1_2437

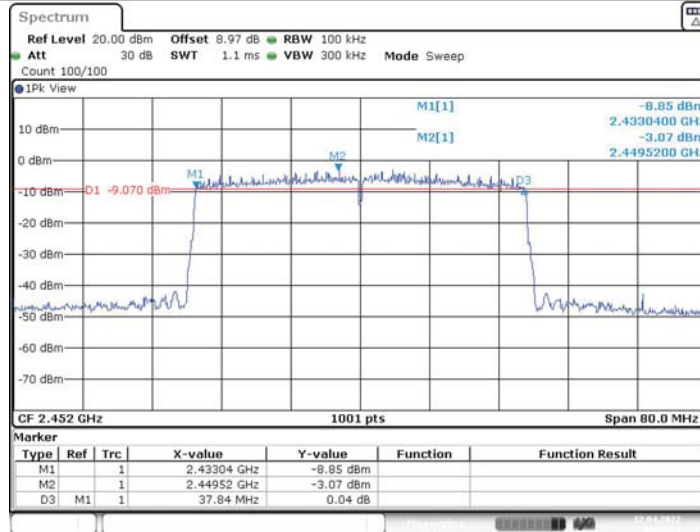


11AX40MIMO_Ant2_2437



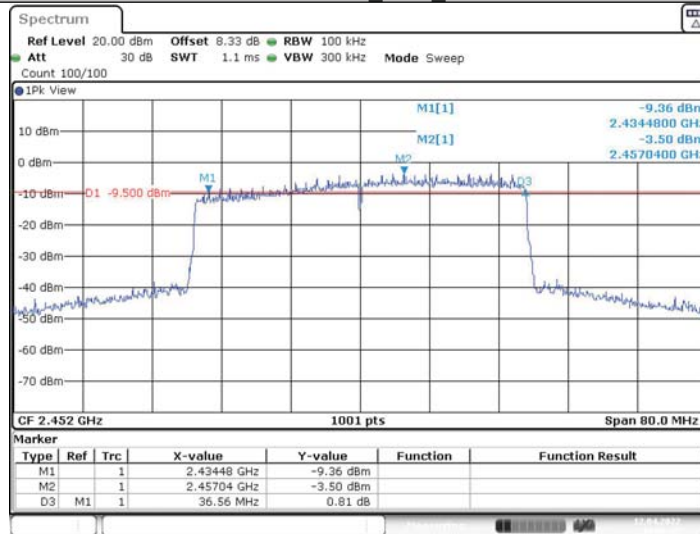
Date: 12.APR.2022 19:28:18

11AX40MIMO_Ant1_2452



Date: 12.APR.2022 19:32:24

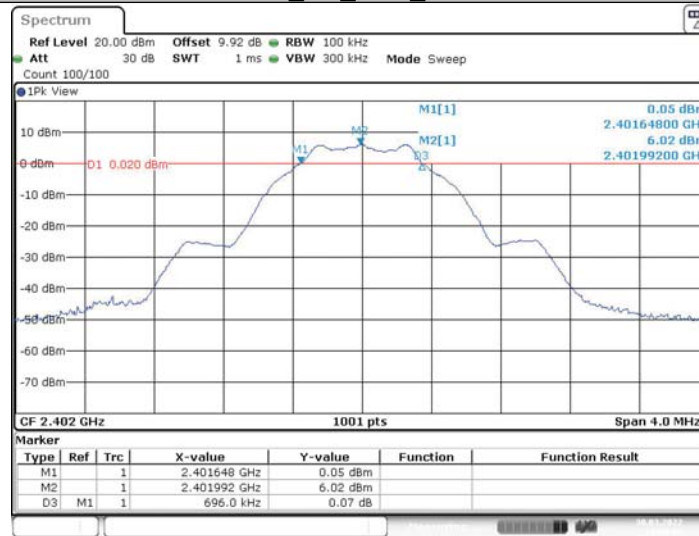
11AX40MIMO_Ant2_2452



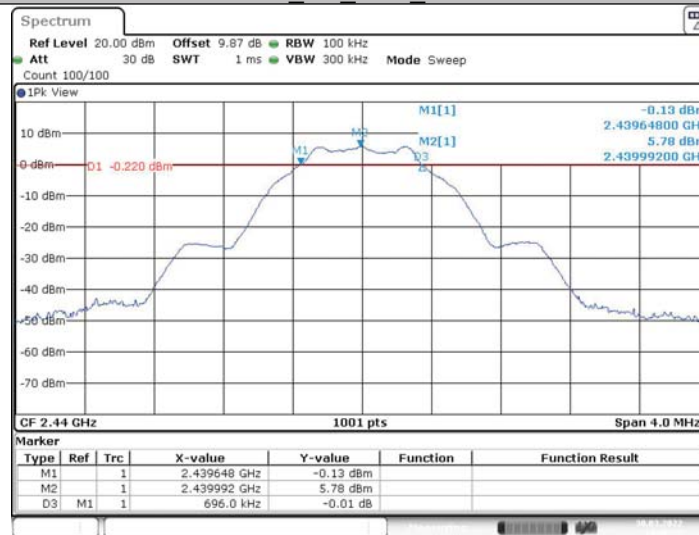
Date: 12.APR.2022 19:36:37



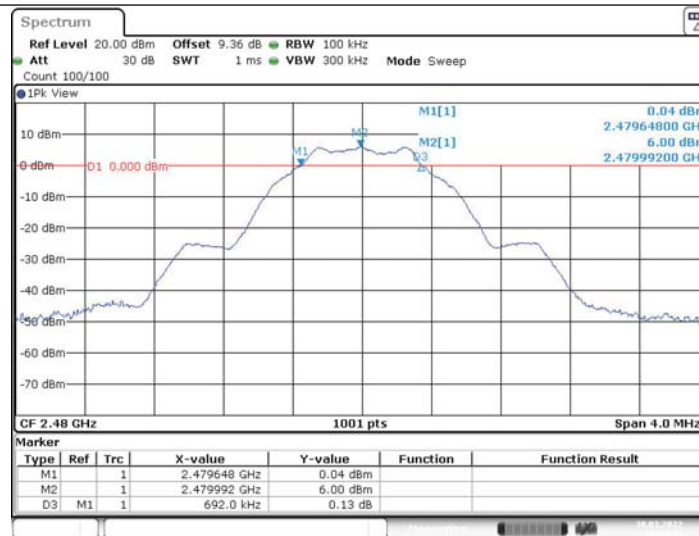
BLE_1M_Ant1_2402



BLE_1M_Ant1_2440



BLE_1M_Ant1_2480



Date: 30.MAR.2022 10:50:41



6.2 Occupied Channel Bandwidth

6.2.1 Test Result

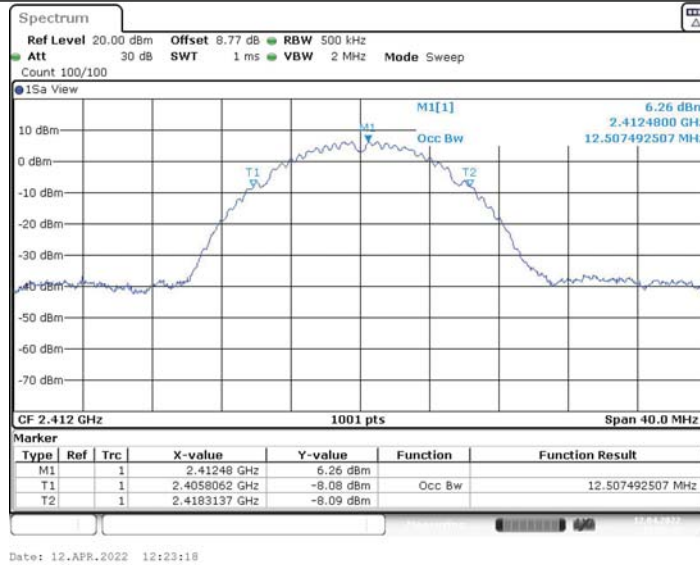
TestMode	Antenna	Channel Frequency[MHz]	OCB [MHz]	FL[MHz]	FH[MHz]	Limit[MHz]	Verdict
11B	Ant1	2412	12.507	2405.806	2418.314	---	---
	Ant2	2412	12.228	2405.806	2418.034	---	---
	Ant1	2437	12.587	2430.646	2443.234	---	---
	Ant2	2437	12.388	2430.846	2443.234	---	---
	Ant1	2462	12.627	2455.726	2468.354	---	---
	Ant2	2462	12.308	2456.046	2468.354	---	---
11G	Ant1	2412	17.143	2403.449	2420.591	---	---
	Ant2	2412	28.611	2397.894	2426.505	---	---
	Ant1	2437	18.781	2427.370	2446.151	---	---
	Ant2	2437	23.417	2424.972	2448.389	---	---
	Ant1	2462	19.061	2452.490	2471.550	---	---
	Ant2	2462	18.941	2453.089	2472.030	---	---
11N20MIMO	Ant1	2412	17.942	2403.049	2420.991	---	---
	Ant2	2412	17.982	2402.969	2420.951	---	---
	Ant1	2437	19.66	2426.970	2446.630	---	---
	Ant2	2437	18.941	2427.569	2446.510	---	---
	Ant1	2462	19.9	2452.090	2471.990	---	---
	Ant2	2462	18.741	2453.009	2471.750	---	---
11N40MIMO	Ant1	2422	36.204	2403.938	2440.142	---	---
	Ant2	2422	42.597	2400.821	2443.419	---	---
	Ant1	2437	36.284	2418.858	2455.142	---	---
	Ant2	2437	36.683	2418.778	2455.462	---	---
	Ant1	2452	36.523	2433.698	2470.222	---	---
	Ant2	2452	36.204	2434.258	2470.462	---	---
11AX40MIMO	Ant1	2422	37.722	2403.139	2440.861	---	---
	Ant2	2422	38.601	2402.819	2441.421	---	---
	Ant1	2437	37.802	2418.059	2455.861	---	---
	Ant2	2437	37.882	2418.139	2456.021	---	---
	Ant1	2452	37.802	2433.059	2470.861	---	---
	Ant2	2452	37.722	2433.379	2471.101	---	---

TestMode	Antenna	Frequency[MHz]	OCB [MHz]	FL[MHz]	FH[MHz]	Limit[MHz]	Verdict
BLE_1M	Ant1	2402	1.039	2401.489	2402.527	---	---
		2440	1.035	2439.489	2440.523	---	---
		2480	1.035	2479.489	2480.523	---	---

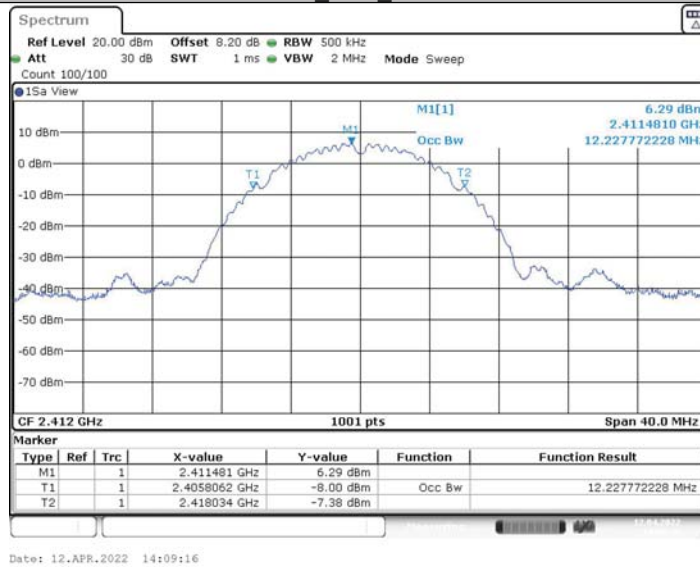


6.2.2 Test Graphs

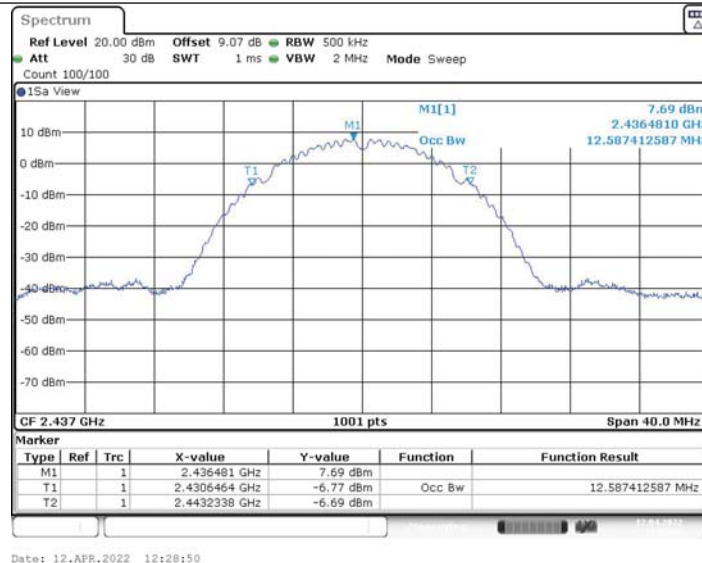
11B_Ant1_2412



11B_Ant2_2412



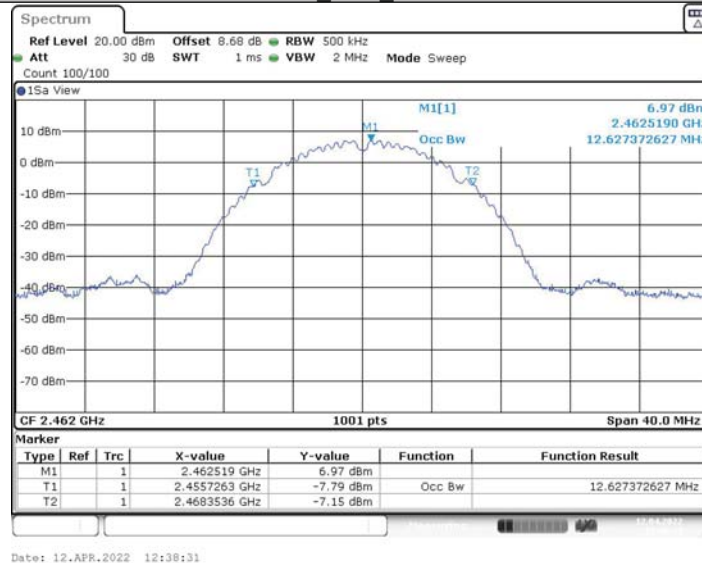
11B_Ant1_2437



11B_Ant2_2437



11B_Ant1_2462

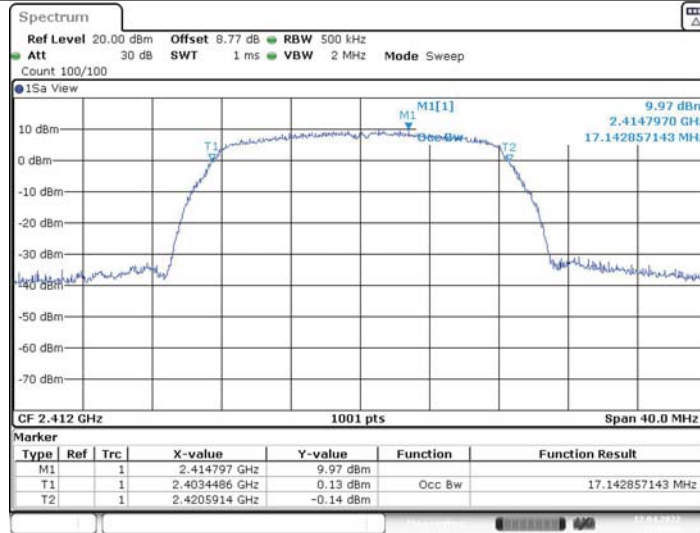




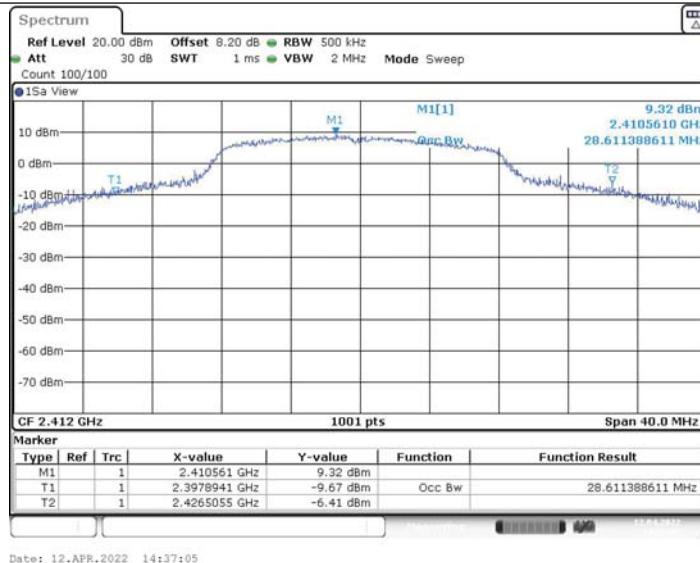
11B_Ant2_2462



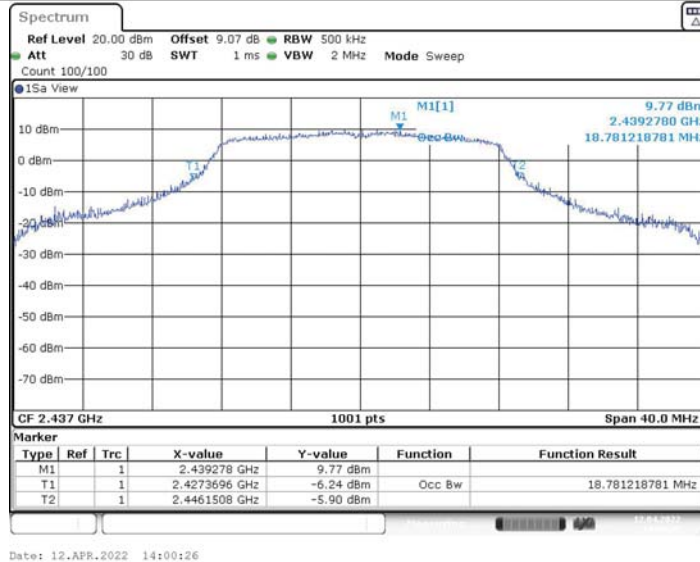
11G_Ant1_2412



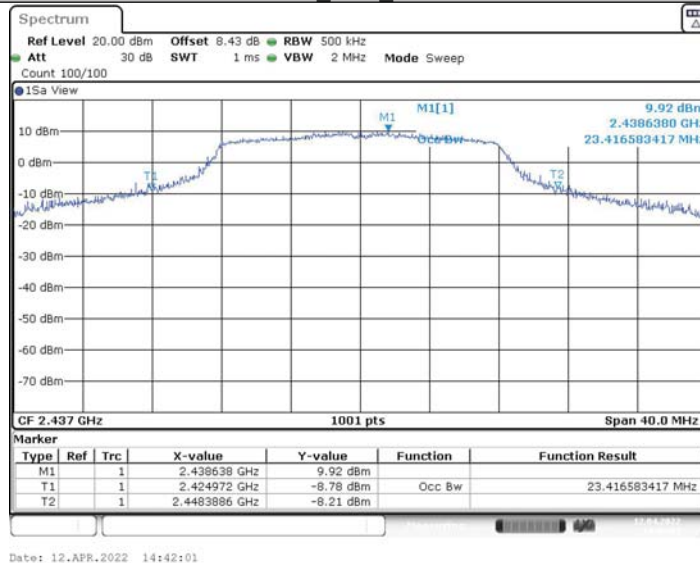
11G_Ant2_2412



11G_Ant1_2437

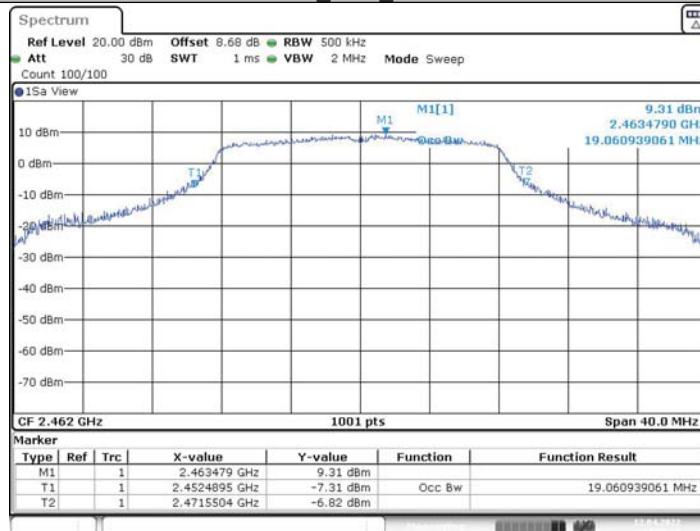


11G_Ant2_2437

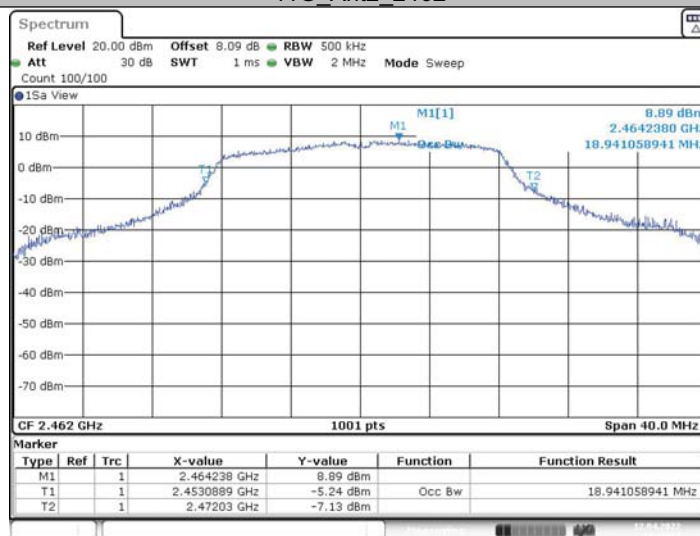




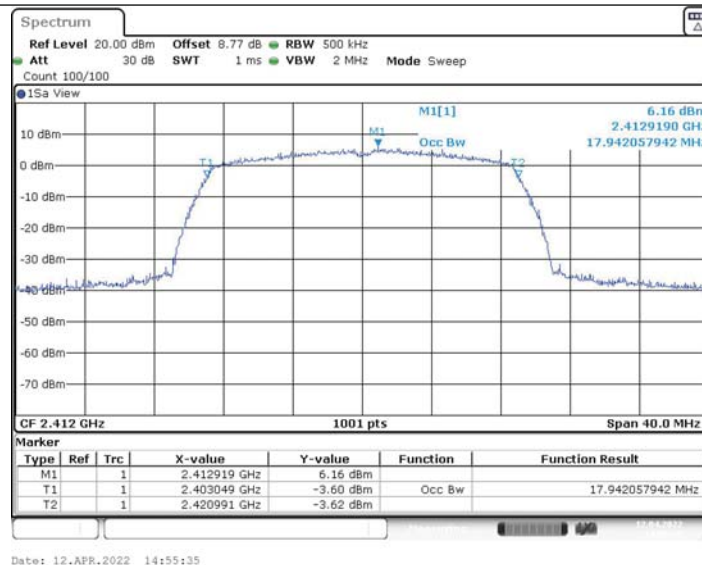
11G_Ant1_2462



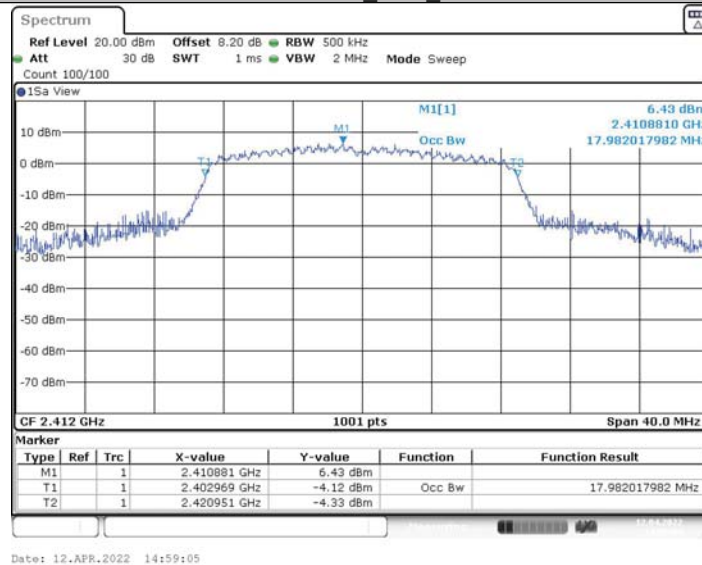
11G_Ant2_2462



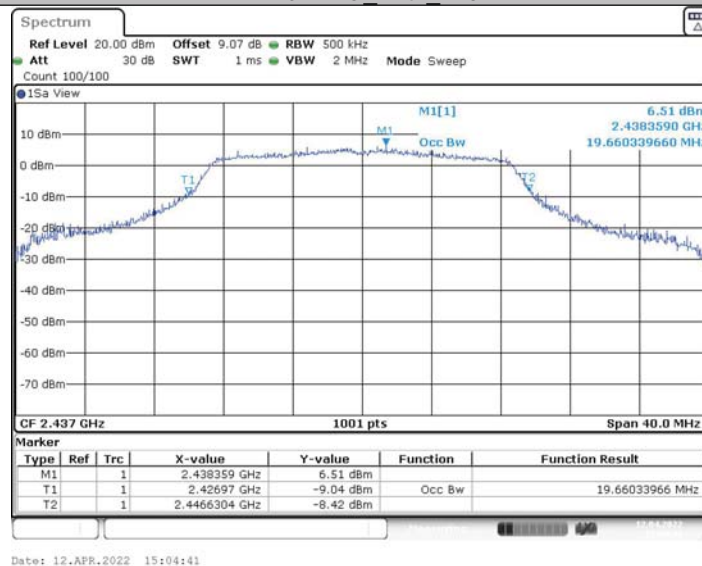
11N20MIMO_Ant1_2412



11N20MIMO_Ant2_2412

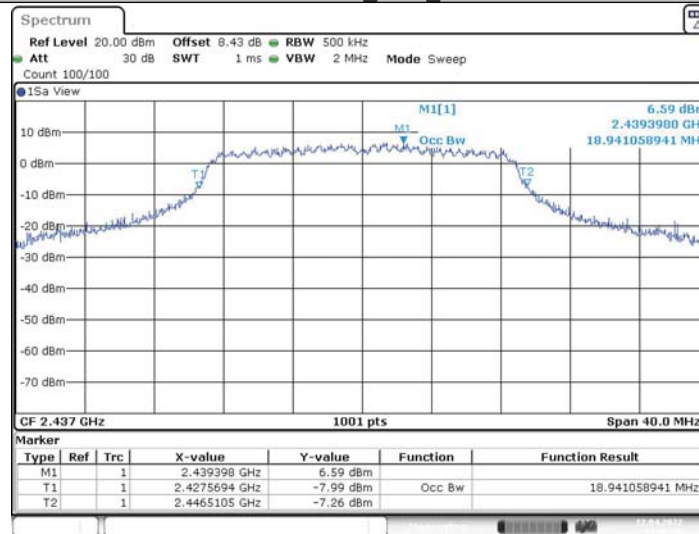


11N20MIMO_Ant1_2437



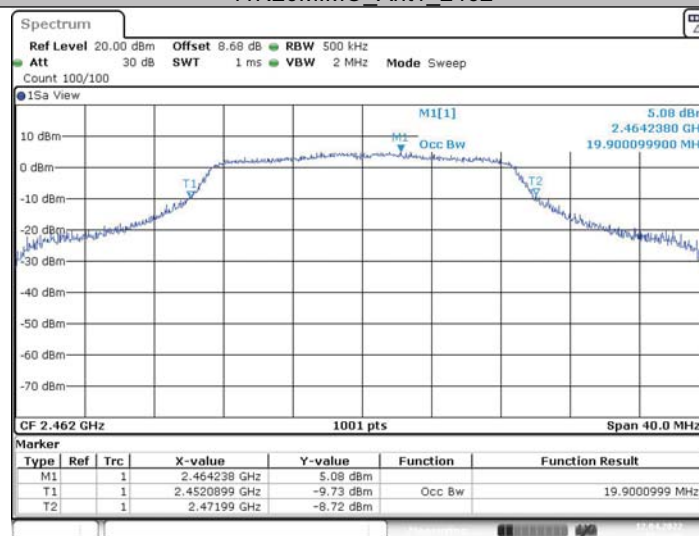


11N20MIMO_Ant2_2437



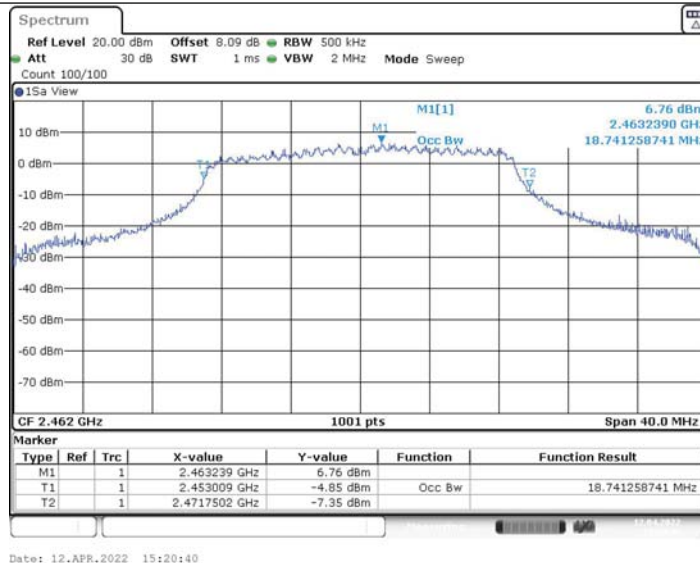
Date: 12.APR.2022 15:07:59

11N20MIMO_Ant1_2462

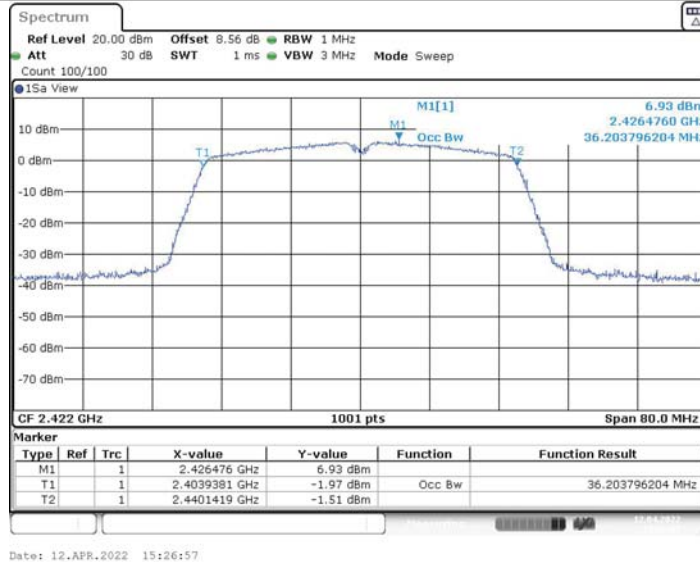


Date: 12.APR.2022 15:17:09

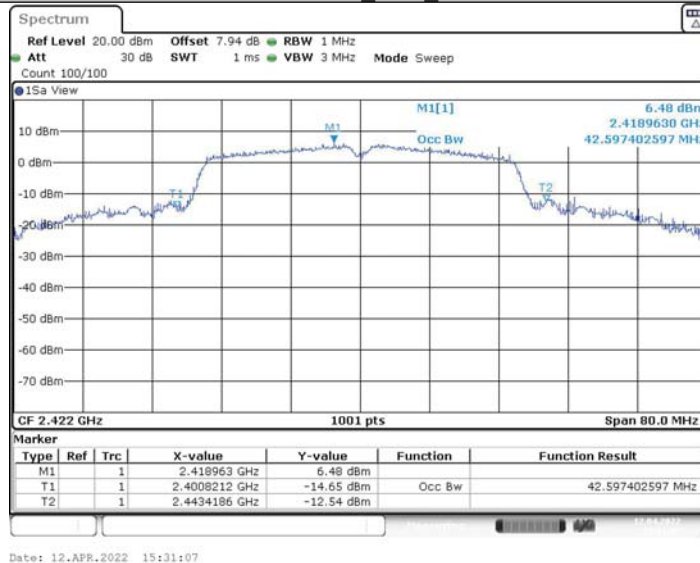
11N20MIMO_Ant2_2462



11N40MIMO_Ant1_2422

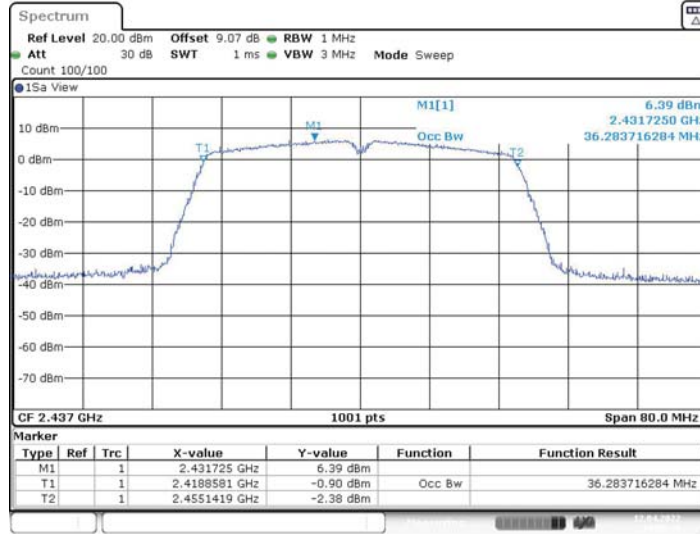


11N40MIMO_Ant2_2422



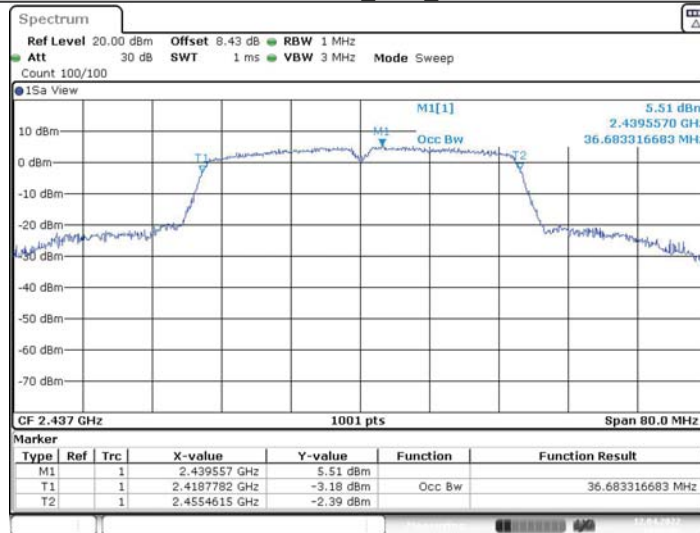


11N40MIMO_Ant1_2437



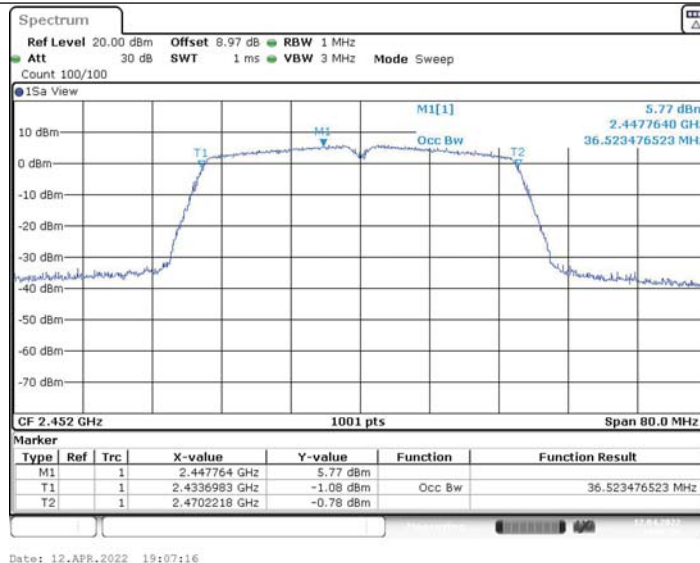
Date: 12.APR.2022 18:59:18

11N40MIMO_Ant2_2437

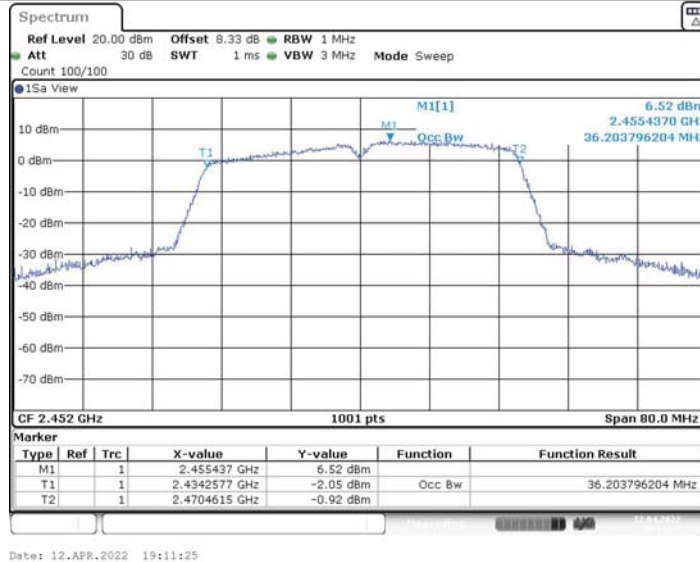


Date: 12.APR.2022 19:03:09

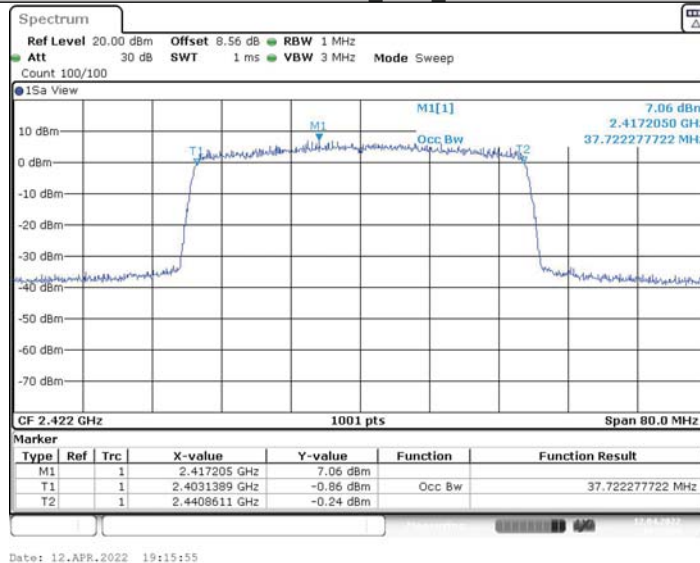
11N40MIMO_Ant1_2452



11N40MIMO_Ant2_2452

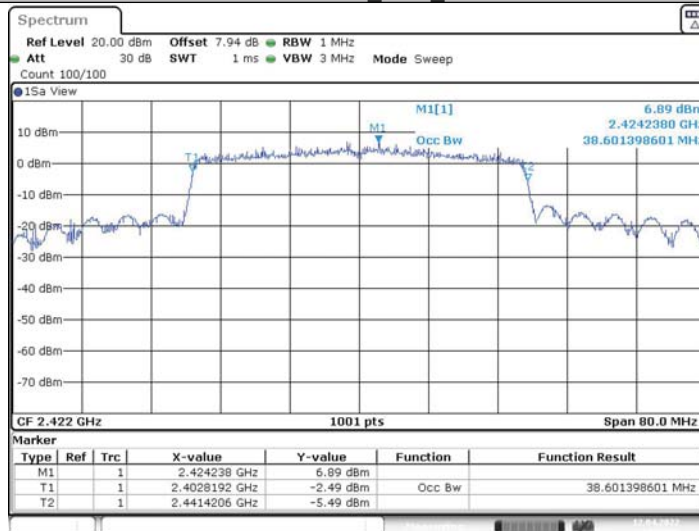


11AX40MIMO_Ant1_2422



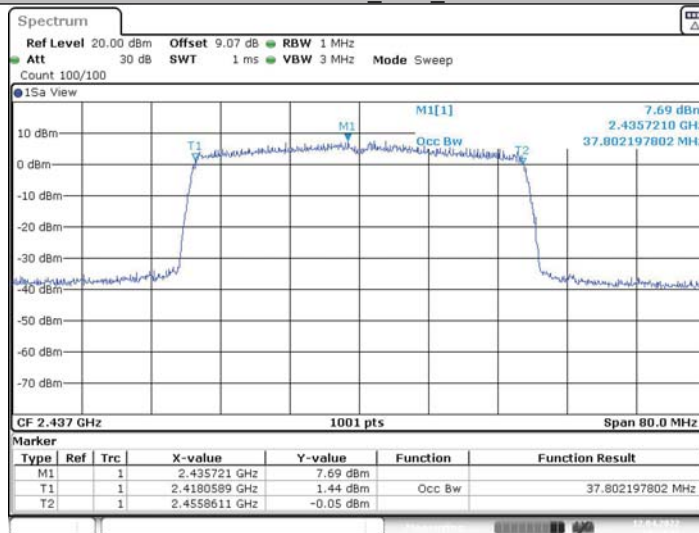


11AX40MIMO_Ant2_2422



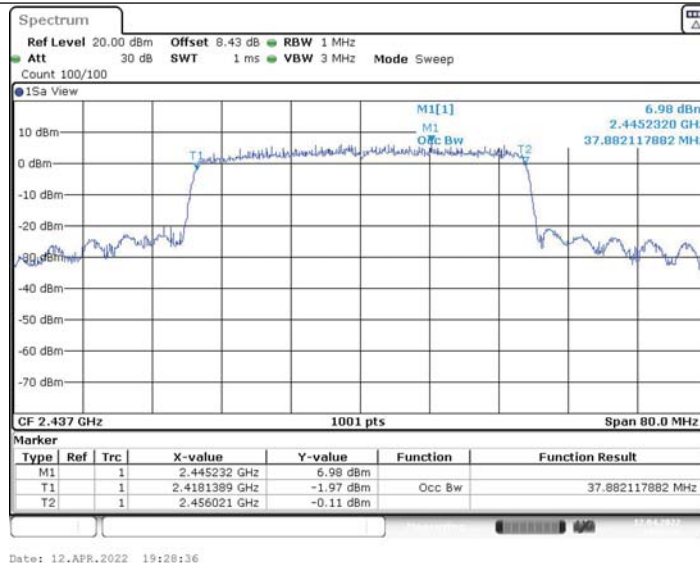
Date: 12.APR.2022 19:20:06

11AX40MIMO_Ant1_2437

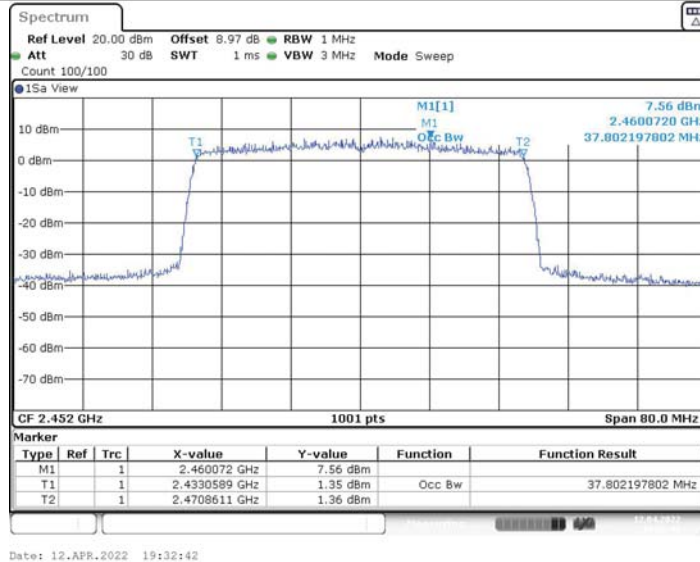


Date: 12.APR.2022 19:24:42

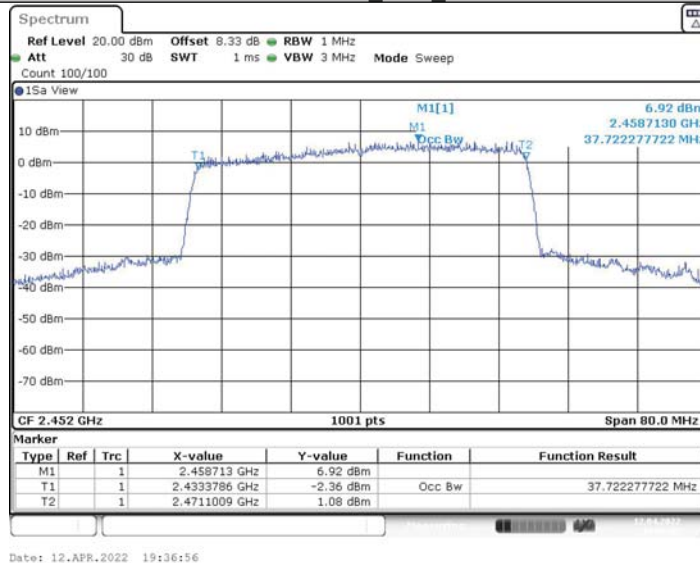
11AX40MIMO_Ant2_2437



11AX40MIMO_Ant1_2452

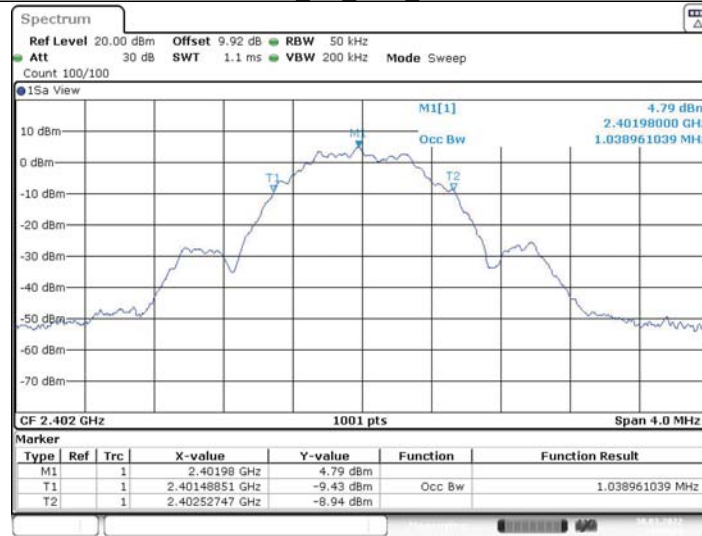


11AX40MIMO_Ant2_2452





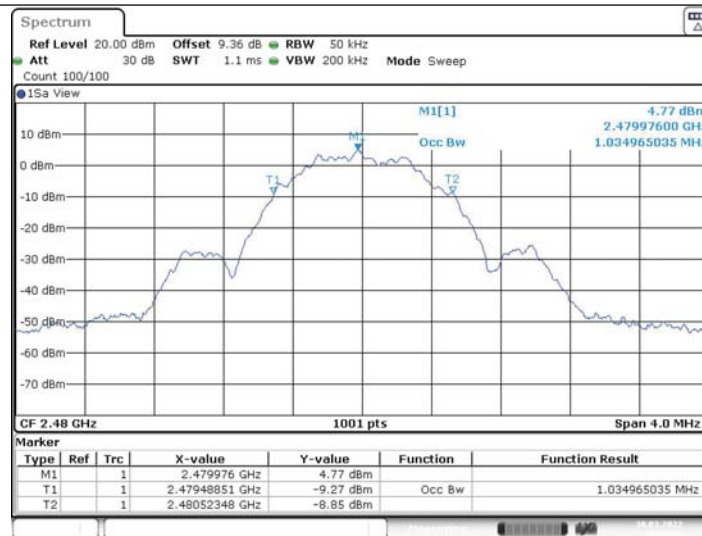
BLE_1M_Ant1_2402



BLE_1M_Ant1_2440



BLE_1M_Ant1_2480



Date: 30.MAR.2022 10:50:59



6.3 CONDUCTED OUTPUT POWER

6.3.1 Test Result

PK

TestMode	Antenna	Frequency[MHz]	Peak Power[dBm]	Conducted Limit[dBm]	EIRP [dBm]	EIRP Limit[dBm]	Verdict
11B	Ant1	2412	17.49	≤30.00	20.39	≤36.00	PASS
	Ant2	2412	16.29	≤30.00	19.19	≤36.00	PASS
	Ant1	2437	17.81	≤30.00	20.71	≤36.00	PASS
	Ant2	2437	16.90	≤30.00	19.80	≤36.00	PASS
	Ant1	2462	17.13	≤30.00	20.03	≤36.00	PASS
	Ant2	2462	16.76	≤30.00	19.66	≤36.00	PASS
11G	Ant1	2412	22.83	≤30.00	25.73	≤36.00	PASS
	Ant2	2412	22.79	≤30.00	25.69	≤36.00	PASS
	Ant1	2437	22.97	≤30.00	25.87	≤36.00	PASS
	Ant2	2437	23.95	≤30.00	26.85	≤36.00	PASS
	Ant1	2462	22.61	≤30.00	25.51	≤36.00	PASS
	Ant2	2462	21.99	≤30.00	24.89	≤36.00	PASS
11N20MIMO	Ant1	2412	18.62	≤30.00	21.52	≤36.00	PASS
	Ant2	2412	18.11	≤30.00	21.01	≤36.00	PASS
	total	2412	21.38	≤30.00	24.28	≤36.00	PASS
	Ant1	2437	19.17	≤30.00	22.07	≤36.00	PASS
	Ant2	2437	19.07	≤30.00	21.97	≤36.00	PASS
	total	2437	22.13	≤30.00	25.03	≤36.00	PASS
	Ant1	2462	18.56	≤30.00	21.46	≤36.00	PASS
	Ant2	2462	18.58	≤30.00	21.48	≤36.00	PASS
	total	2462	21.58	≤30.00	24.48	≤36.00	PASS
11N40MIMO	Ant1	2422	19.19	≤30.00	22.09	≤36.00	PASS
	Ant2	2422	18.64	≤30.00	21.54	≤36.00	PASS
	total	2422	21.93	≤30.00	24.83	≤36.00	PASS
	Ant1	2437	19.46	≤30.00	22.36	≤36.00	PASS
	Ant2	2437	18.59	≤30.00	21.49	≤36.00	PASS
	total	2437	22.06	≤30.00	24.96	≤36.00	PASS
	Ant1	2452	19.25	≤30.00	22.15	≤36.00	PASS
	Ant2	2452	18.86	≤30.00	21.76	≤36.00	PASS
	total	2452	22.07	≤30.00	24.97	≤36.00	PASS
11AX40MIMO	Ant1	2422	19.12	≤30.00	22.02	≤36.00	PASS
	Ant2	2422	17.98	≤30.00	20.88	≤36.00	PASS
	total	2422	21.60	≤30.00	24.50	≤36.00	PASS
	Ant1	2437	19.51	≤30.00	22.41	≤36.00	PASS
	Ant2	2437	18.39	≤30.00	21.29	≤36.00	PASS
	total	2437	22.00	≤30.00	24.90	≤36.00	PASS
	Ant1	2452	19.25	≤30.00	22.15	≤36.00	PASS
	Ant2	2452	18.64	≤30.00	21.54	≤36.00	PASS
	total	2452	21.97	≤30.00	24.87	≤36.00	PASS



TestMode	Antenna	Frequency[MHz]	Conducted Peak Power[dBm]	Conducted Limit[dBm]	EIRP[dBm]	EIRP Limit[dBm]	Verdict
BLE_1M	Ant1	2402	6.66	≤30.00	9.56	≤36.00	PASS
		2440	6.27	≤30.00	9.17	≤36.00	PASS
		2480	6.33	≤30.00	9.23	≤36.00	PASS

AV

Test Mode	Antenna	Frequency[MHz]	Average power [dBm]	Limit [dBm]	Gain [dBi]	EIRP [dBm]	EIRP Limit [dBm]	Verdict
11B	Ant1	2412	13.81	≤30.00	2.90	16.71	≤36.00	PASS
	Ant2	2412	14.23	≤30.00	2.90	17.13	≤36.00	PASS
	Ant1	2437	13.70	≤30.00	2.90	16.60	≤36.00	PASS
	Ant2	2437	14.33	≤30.00	2.90	17.23	≤36.00	PASS
	Ant1	2462	13.70	≤30.00	2.90	16.60	≤36.00	PASS
	Ant2	2462	14.50	≤30.00	2.90	17.40	≤36.00	PASS
11G	Ant1	2412	13.72	≤30.00	2.90	16.62	≤36.00	PASS
	Ant2	2412	14.65	≤30.00	2.90	17.55	≤36.00	PASS
	Ant1	2437	13.50	≤30.00	2.90	16.40	≤36.00	PASS
	Ant2	2437	15.00	≤30.00	2.90	17.90	≤36.00	PASS
	Ant1	2462	13.76	≤30.00	2.90	16.66	≤36.00	PASS
	Ant2	2462	14.19	≤30.00	2.90	17.09	≤36.00	PASS
11N20MIMO	Ant1	2412	9.99	≤30.00	2.90	12.89	≤36.00	PASS
	Ant2	2412	10.52	≤30.00	2.90	13.42	≤36.00	PASS
	total	2412	13.27	≤30.00	---	16.17	≤36.00	PASS
	Ant1	2437	9.81	≤30.00	2.90	12.71	≤36.00	PASS
	Ant2	2437	10.70	≤30.00	2.90	13.60	≤36.00	PASS
	total	2437	13.29	≤30.00	---	16.19	≤36.00	PASS
	Ant1	2462	9.97	≤30.00	2.90	12.87	≤36.00	PASS
	Ant2	2462	10.57	≤30.00	2.90	13.47	≤36.00	PASS
	total	2462	13.29	≤30.00	---	16.19	≤36.00	PASS
11N40MIMO	Ant1	2422	10.31	≤30.00	2.90	13.21	≤36.00	PASS
	Ant2	2422	10.91	≤30.00	2.90	13.81	≤36.00	PASS
	total	2422	13.63	≤30.00	---	16.53	≤36.00	PASS
	Ant1	2437	10.18	≤30.00	2.90	13.08	≤36.00	PASS
	Ant2	2437	10.46	≤30.00	2.90	13.36	≤36.00	PASS
	total	2437	13.33	≤30.00	---	16.23	≤36.00	PASS
	Ant1	2452	11.13	≤30.00	2.90	14.03	≤36.00	PASS
	Ant2	2452	10.82	≤30.00	2.90	13.72	≤36.00	PASS
	total	2452	13.99	≤30.00	---	16.89	≤36.00	PASS
11AX40MIMO	Ant1	2422	9.55	≤30.00	2.90	12.45	≤36.00	PASS
	Ant2	2422	9.97	≤30.00	2.90	12.87	≤36.00	PASS
	total	2422	12.78	≤30.00	---	15.68	≤36.00	PASS
	Ant1	2437	9.56	≤30.00	2.90	12.46	≤36.00	PASS
	Ant2	2437	9.93	≤30.00	2.90	12.83	≤36.00	PASS
	total	2437	12.76	≤30.00	---	15.66	≤36.00	PASS
	Ant1	2452	9.58	≤30.00	2.90	12.48	≤36.00	PASS
	Ant2	2452	10.19	≤30.00	2.90	13.09	≤36.00	PASS
	total	2452	12.91	≤30.00	---	15.81	≤36.00	PASS