Test Report No.:
FCC2021-0025-RF3

RF Test Report

EUT	**:**	**AI Vision Sensor**
MODEL	**:**	**VS121-915M**
BRAND NAME	**:**	**Milesight**
CLIENT	**:**	**Xiamen Milesight IoT Co., Ltd.**
Classification Of Test	**:**	**N/A**

CVC Testing Technology Co., Ltd.

Client	**Name : Xiamen Milesight IoT Co., Ltd.** **Address : Building C09, Software Park Phase III, Xiamen 361024, Fujian, China**
Manufacturer	**Name : Xiamen Milesight IoT Co., Ltd.** **Address : Building C09, Software Park Phase III, Xiamen 361024, Fujian, China**
Equipment Under Test	**Name : AI Vision Sensor** **Model/Type: VS121-915M** **Trade mark : Milesight** **Serial NO.:N/A** **Sample NO.:6-1**

Date of Receipt.	**2021.09.08**	Date of Testing	**2021.09.08～2022.04.14**

Test Specification	**Test Result**
FCC Part 15, Subpart C, Section 15.247	PASS

Evaluation of Test Result	The equipment under test was found to comply with the requirements of the standards applied. **Issue Date: 2022.04.14**

Tested by:	Reviewed by:	Approved by:
Xu Zhenfei	Liu yonghai	Chenhuawen
Xu ZhenFei	**Liu YongHai**	**Chen HuaWen**
Name Signature	Name Signature	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
FCC2021-0025-RF3	Original release	2022.04.14

1 SUMMARY OF TEST RESULTS

The EUT has been tested according to the following specifications:

PPLIED STANDARD: FCC Part 15, Subpart C			
STANDARD SECTION	**TEST TYPE AND LIMIT**	**RESULT**	**REMARK**
15.207	AC Power Conducted Emission	PASS	Meet the requirement of limit.
15.247(d) 15.209	Radiated Emissions	PASS	Meet the requirement of limit.
15.247(d)	Band Edge Measurement	PASS	Meet the requirement of limit.
15.247(a)(2)	6dB bandwidth	PASS	Meet the requirement of limit.
15.247(b)	Conducted Output power	PASS	Meet the requirement of limit.
15.247(e)	Power Spectral Density	PASS	Meet the requirement of limit.
15.203	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 SpuriousTest 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	WRCJV12-4900-5100-5900-6100-50EE	1	DZ-000186	WI	2022/12/20
Comprehensive tester	CMW500	159000	DZ-000240-2	R&S	2022/12/20

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	AI Vision Sensor
BRAND	Milesight
MODEL	VS121-915M
ADDITIONAL MODEL	N/A
FCC ID	2AYHY-VS121
POWER SUPPLY	DC 5V From Adapter
MODULATIONTECHNOLOGY	DSSS, OFDM
MODULATION TYPE	CCK, DQPSK, DBPSK for DSSS 64QAM, 16QAM, QPSK, BPSK for OFDM
OPERATING FREQUENCY	2412MHz ~ 2462MHz for 11b/g/n(HT20) 2422MHz ~ 2452MHz for 11n(HT40)
NUMBER OF CHANNEL	802.11b/g/n (HT20): 11 802.11n (HT40): 7
PEAK OUTPUT POWER	WLAN: 20.76dBm (Maximum)
ANTENNA TYPE	WLAN: PCB Antenna, 1dBi Gain
I/O PORTS	Refer to user's manual
CABLE SUPPLIED	USB Line: Unshielded Detachable 1.0m

Remark:

1. For more detailed features description, please refer to the manufacturer's specifications or the User's Manual.
2. For the test results, the EUT had been tested with all conditions. But only the worst case was shown in test report.
3. Please refer to the EUT photo document for detailed product photo. (Report NO.: FCC2021-0025-E)
4. The EUT have SISO function, provides 1 completed transmitter and 1 receiver.

2.2 Description of Accessories

Adapter	
BRAND	CWT
Model No.:	2AEA010BC3D
Input:	100-240 V~50/60 Hz 0.35 A Max
Output:	5.0 V ⎓ 2 A
AC Cable:	N/A
DC Cable:	N/A

2.3 OTHER INFORMATION

Operating frequency of each channel

2.4G WIFI					
802.11b/g/n (HT20)					
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		
802.11/n (HT40)					
CHANNEL	**FREQ. (MHz)**	**CHANNEL**	**FREQ. (MHz)**	**CHANNEL**	**FREQ. (MHz)**
3	**2422**	**6**	**2437**	**9**	**2452**
4	2427	7	2442		
5	2432	8	2447		

Note: 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.

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**

Where **RE<1G:** Radiated Emission below 1GHz **RE≥1G:** Radiated Emission above 1GHz
PLC: Power Line Conducted Emission **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 (Mbps)
A	802.11b	1 to 11	1, 6, 11	DSSS	DBPSK	1.0
A	802.11g	1 to 11	1, 6, 11	OFDM	BPSK	6.0
A	802.11n(HT20)	1 to 11	1, 6, 11	OFDM	BPSK	6.5
A	802.11n(HT40)	3 to 9	3, 6, 9	OFDM	BPSK	13.5

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
-	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
A	802.11g	1 to 11	1, 6, 11	OFDM	BPSK	6.0
A	802.11n(HT20)	1 to 11	1, 6, 11	OFDM	BPSK	6.5
A	802.11n(HT40)	3 to 9	3, 6, 9	OFDM	BPSK	13.5

TEST CONDITION:

APPLICABLE TO	ENVIRONMENTAL CONDITIONS	TEST VOLTAGE (SYSTEM)	TESTED BY
RE<1G	24deg. C, 55%RH	AC 120V/60Hz	Liu ShiWei
RE≥1G	24deg. C, 55%RH	AC 120V/60Hz	Liu ShiWei
PLC	24deg. C, 55%RH	AC 120V/60Hz	Liu ShiWei
APCM	25deg. C, 58%RH	AC 120V/60Hz	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

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

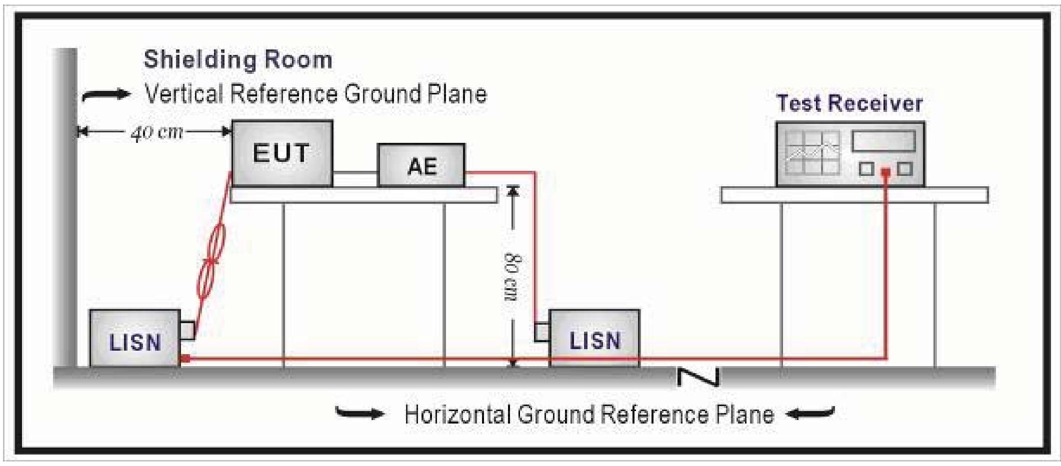
Frequency (MHz)	Conducted Limits(dBμV)	
	Quasi-peak	Average
0.15 - 0.5	66 to 56 *	56 to 46*
0.5 - 5	56	46
5 - 30	60	50

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

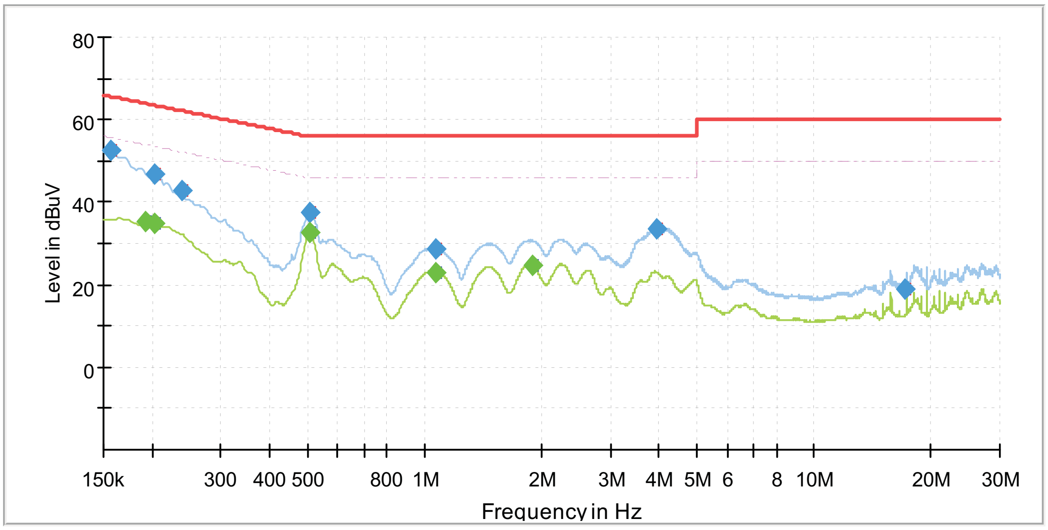
a. The EUT was placed on a platform of nominal size, 1 m by 1.5 m, raised 80 cm above the conducting ground plane. The vertical conducting plane was located 40 cm to the rear of the EUT. All other surfaces of EUT were at least 80 cm from any other grounded conducting surface. The EUT and simulators are 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 be1.5m above the ground,
b. 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.
c. 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

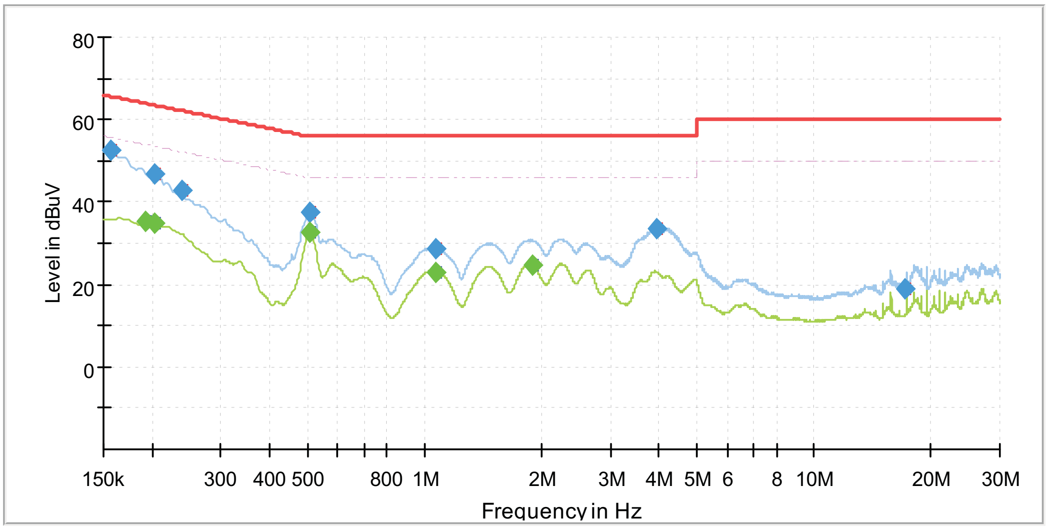
Test Mode	**2.4G WIFI Link**	**Frequency Range**	150KHz ~ 30MHz
PHASE	Line (L)		



NO	Frequency (MHz)	QuasiPeak (dBuV)	Average (dBuV)	Limit (dBuV)	Margin (dB)	Line	Corr.Factor (dB)
1	0.157	52.4	---	65.6	13.2	L1	19.5
2	0.193	---	35.4	53.9	18.5	L1	19.5
3	0.204	---	34.9	53.4	18.5	L1	19.5
4	0.204	47.0	---	63.4	16.5	L1	19.5
5	0.238	42.7	---	62.2	19.5	L1	19.5
6	0.506	---	32.5	46.0	13.5	L1	19.5
7	0.508	37.7	---	56.0	18.3	L1	19.5
8	1.073	---	22.9	46.0	23.1	L1	19.5
9	1.075	28.7	---	56.0	27.3	L1	19.5
10	1.896	---	24.7	46.0	21.3	L1	19.6
11	3.932	33.4	---	56.0	22.6	L1	19.6
12	17.203	19.0	---	60.0	41.0	L1	19.9

Remark: The emission levels of other frequencies were very low against the limit.

Test Mode	**2.4G WIFI Link**	**Frequency Range**	150KHz ~ 30MHz
PHASE	Line (L)		



NO	Frequency (MHz)	QuasiPeak (dBuV)	Average (dBuV)	Limit (dBuV)	Margin (dB)	Line	Corr.Factor (dB)
1	0.157	52.4	---	65.6	13.2	L1	19.5
2	0.193	---	35.4	53.9	18.5	L1	19.5
3	0.204	---	34.9	53.4	18.5	L1	19.5
4	0.204	47.0	---	63.4	16.5	L1	19.5
5	0.238	42.7	---	62.2	19.5	L1	19.5
6	0.506	---	32.5	46.0	13.5	L1	19.5
7	0.508	37.7	---	56.0	18.3	L1	19.5
8	1.073	---	22.9	46.0	23.1	L1	19.5
9	1.075	28.7	---	56.0	27.3	L1	19.5
10	1.896	---	24.7	46.0	21.3	L1	19.6
11	3.932	33.4	---	56.0	22.6	L1	19.6
12	17.203	19.0	---	60.0	41.0	L1	19.9

Remark: The emission levels of other frequencies were very low against the limit.

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

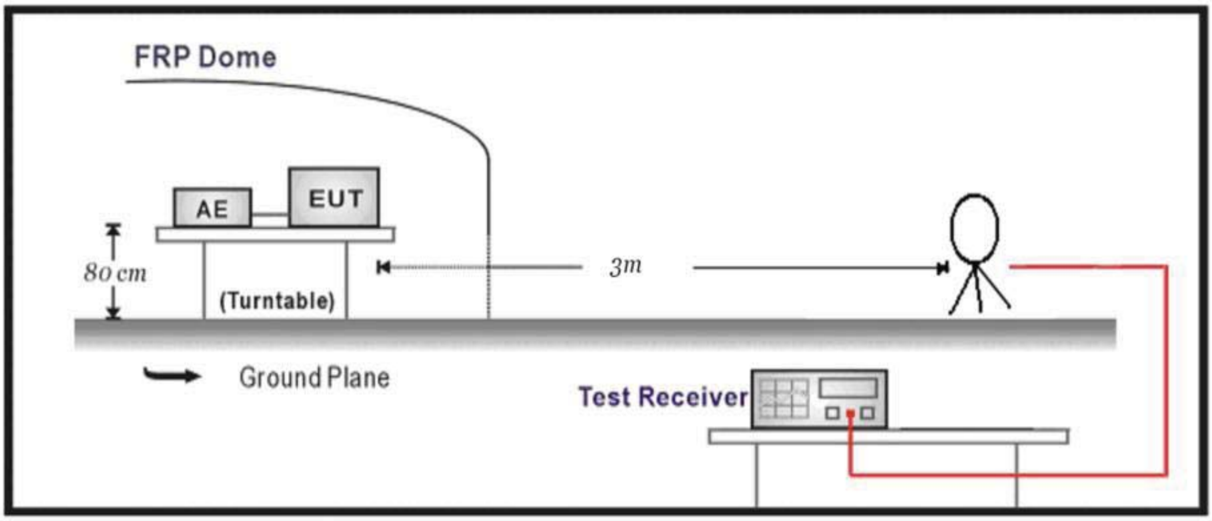
a. The EUT was placed on the top of a rotating table 1.5 meters(above 1GHz) and 0.8 meters(below 1GHz) above the ground at a 3 meters semi-anechoic chamber. The table was rotated 360 degrees to determine the position of the highest radiation.
b. The EUT was set 3 meters away from the interference-receiving antenna, which was mounted on the top of a variable-height antenna tower.
c. 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.
d. 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.
e. The test-receiver system was set to Peak Detect Function and Specified Bandwidth with Maximum Hold Mode.
f. 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.
g. 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:

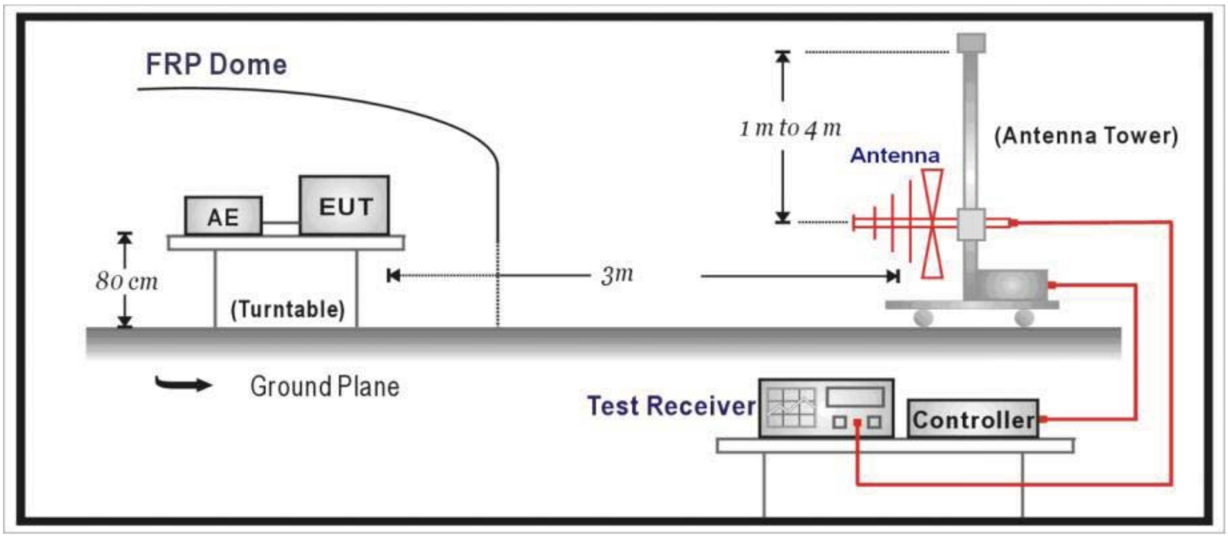
1. The resolution bandwidth and video bandwidth of test receiver/spectrum analyzer is 120kHz for Quasi-peak detection at frequency below 1GHz.
2. The resolution bandwidth of test receiver/spectrum analyzer is 1 MHz and video bandwidth is 3MHz for Peak detection at frequency above 1GHz.
3. The resolution bandwidth of test receiver/spectrum analyzer is 1MHz and the video bandwidth is ⩾ 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

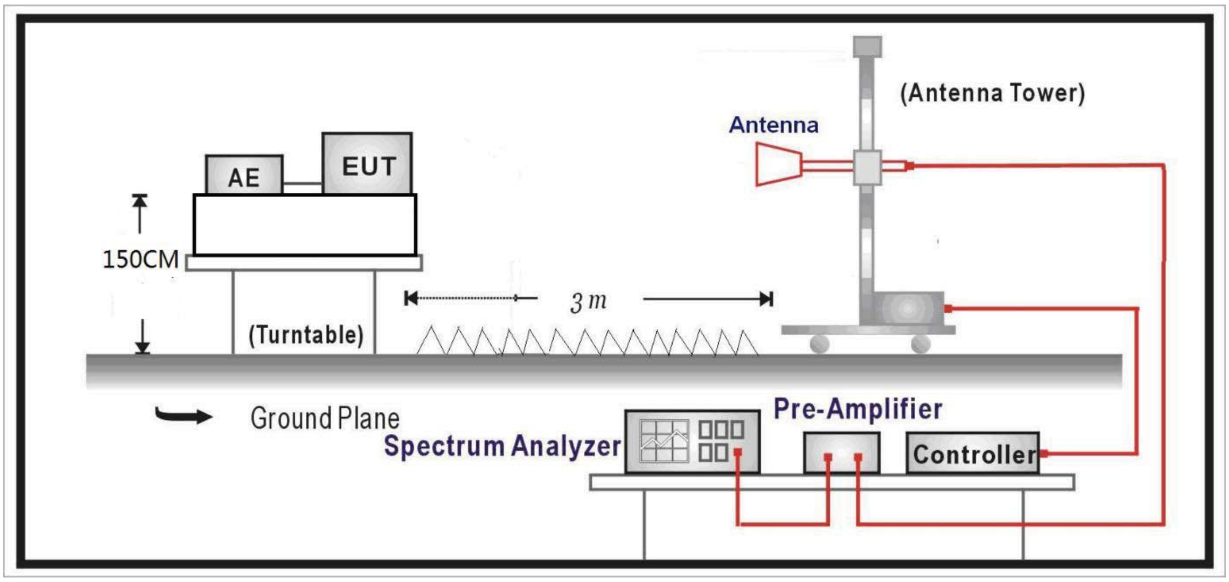
Below 30MHz Test Setup:



Below 1GHz Test Setup:



Above 1GHz Test Setup:

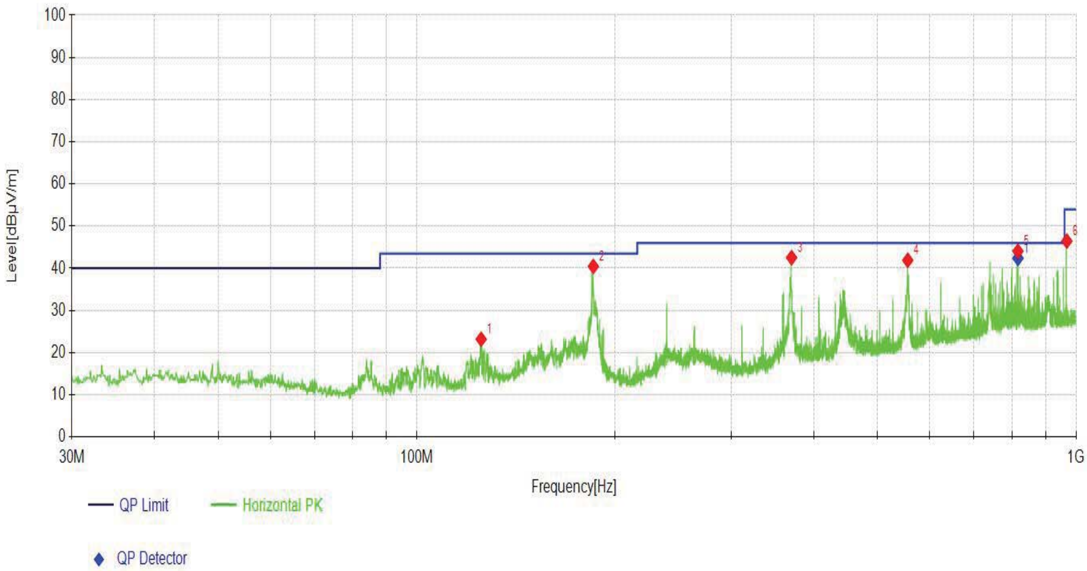


3.2.4 Test results

BELOW 1GHz WORST-CASE DATA:

Worst Test Mode	**802.11b**	**Channel**	CH 1
Frequency Range	9KHz ~ 1GHz	**Detector Function**	Quasi-Peak (QP)

Horizontal

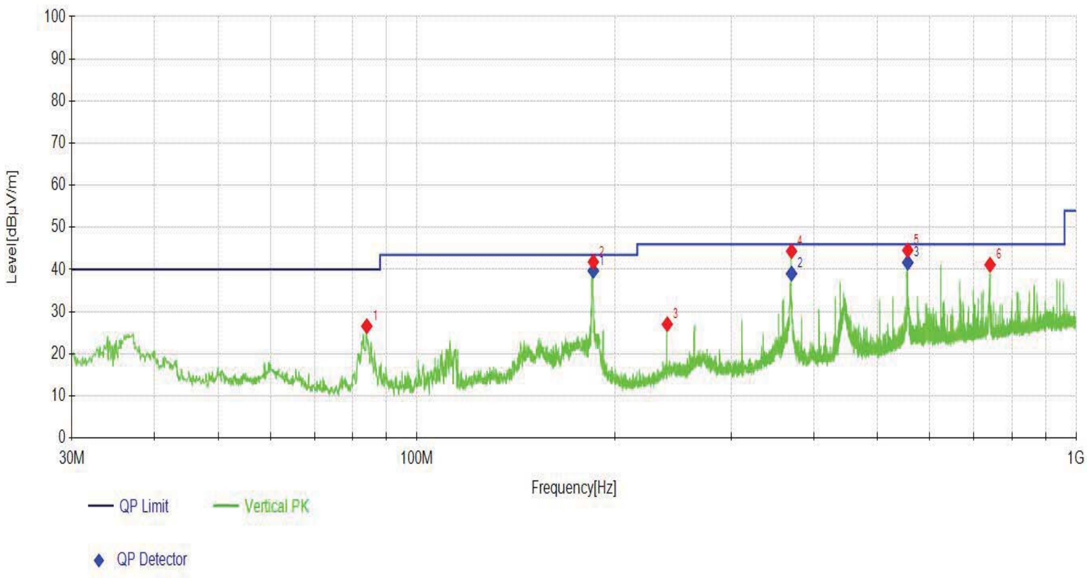


NO.	Freq. [MHz]	Reading [dBμV/m]	Level [dBμV/m]	Factor [dB]	Limit [dBμV/m]	Margin [dB]	Height [cm]	Angle [°]
1	125.2635	9.95	23.17	13.22	43.50	20.33	200	174
2	**185.3125**	**27.74**	**40.45**	**12.71**	**43.50**	**3.05**	**100**	**27**
3	370.3100	26.19	42.52	16.33	46.00	3.48	100	148
4	555.5016	21.79	41.89	20.10	46.00	4.11	200	16
5	816.0696	18.13	42.37	24.24	46.00	3.63	100	75
6	968.0838	20.87	46.44	25.57	54.00	7.56	100	196

Remark: 1. 9KHz~30MHz have been test and test data more than 20dB margin.
2. The emission levels of other frequencies were greater than 20dB margin.
3. Level (dBuV/m) = Reading (dBuV/m) + Factor (dB).
4. Factor (dB/m) = Antenna Factor (dB/m) + Cable Factor (dB).
5. Margin(dB) = Limit[dBμV/m] - Level [dBμV/m]

Worst Test Mode	802.11b	Channel	CH 1
Frequency Range	9KHz ~ 1GHz	Detector Function	Quasi-Peak (QP)

Vertical



NO .	Freq. [MHz]	Reading [dBμV/m]	Level [dBμV/m]	Factor [dB]	Limit [dBμV/m]	Margin [dB]	Height [cm]	Angle [°]
1	84.0344	16.16	26.55	10.39	40.00	13.45	100	122
2	185.3125	26.98	39.69	12.71	43.50	3.81	100	35
3	239.9290	13.58	27.02	13.44	46.00	18.98	200	99
4	370.2130	22.69	39.02	16.33	46.00	6.98	100	165
5	555.5986	21.56	41.66	20.10	46.00	4.34	200	62
6	740.4991	17.78	41.15	23.37	46.00	4.85	100	195

Remark: 1. 9KHz~30MHz have been test and test data more than 20dB margin.
2. The emission levels of other frequencies were greater than 20dB margin.
3. Level (dBuV/m) = Reading (dBuV/m) + Factor (dB).
4. Factor (dB/m) = Antenna Factor (dB/m) + Cable Factor (dB).
5. Margin(dB) = Limit[dBμV/m] - Level [dBμV/m]

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	36.50	-0.15	36.35	54.00	17.65	287	203	AV
2	2390	44.99	-0.15	44.84	74.00	29.16	287	150	PK
3	2412	80.74	0.14	80.88			287	117	AV
4	2412	82.81	0.15	82.96			287	117	PK
5	4824	39.36	9.67	49.03	54.00	4.97	168	52	AV
6	4824	48.06	9.68	57.74	74.00	16.26	168	45	PK
7	7236	39.23	12.85	52.08	54.00	1.92	168	288	AV
8	7236	44.18	12.85	57.03	74.00	16.97	168	288	PK
9	9648	27.36	13.14	40.50	54.00	13.50	168	11	AV
10	9648	31.57	13.14	44.71	74.00	29.29	168	17	PK

Vertical

NO.	Freq. [MHz]	Reading [dBμV/m]	Level [dBμV/m]	Factor [dB]	Limit [dBμV/m]	Margin [dB]	Height [cm]	Angle [°]	Remark
1	2390	44.32	-0.15	44.17	74.00	29.83	247	138	PK
2	2390	36.50	-0.15	36.35	54.00	17.65	247	359	AV
3	2412	80.35	0.14	80.49			247	151	AV
4	2412	82.45	0.15	82.60			247	151	PK
5	4824	46.73	9.68	56.41	74.00	17.59	193	51	PK
6	4824	42.46	9.68	52.14	54.00	1.86	193	70	AV
7	7236	41.48	12.85	54.33	74.00	19.67	193	144	PK
8	7236	36.96	12.85	49.81	54.00	4.19	193	38	AV
9	9648	20.72	13.13	33.85	54.00	20.15	193	130	AV
10	9648	27.35	13.13	40.48	74.00	33.52	193	58	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[dBμV/m] - Level [dBμV/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	42.25	9.70	51.95	74.00	22.05	244	32	PK
2	4874	34.66	9.70	44.36	54.00	9.64	244	328	AV
3	7311	21.38	11.03	32.41	54.00	21.59	244	357	AV
4	7311	27.06	11.03	38.09	74.00	35.91	244	130	PK
5	9748	26.48	13.23	39.71	74.00	34.29	244	196	PK
6	9748	20.46	13.23	33.69	54.00	20.31	244	242	AV

Vertical

NO.	Freq. [MHz]	Reading [dBμV/m]	Level [dBμV/m]	Factor [dB]	Limit [dBμV/m]	Margin [dB]	Height [cm]	Angle [°]	Remark
1	4874	42.07	9.70	51.77	74.00	22.23	106	137	PK
2	4874	34.70	9.70	44.40	54.00	9.60	106	357	AV
3	7311	21.38	11.03	32.41	54.00	21.59	106	177	AV
4	7311	28.70	11.03	39.73	74.00	34.27	106	243	PK
5	9748	27.37	13.23	40.60	74.00	33.40	106	25	PK
6	9748	20.51	13.23	33.74	54.00	20.26	106	25	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	802.11b 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	83.01	0.66	83.67			222	122	PK
2	2462	81.09	0.68	81.77			222	122	AV
3	2483.5	36.08	0.46	36.54	54.00	17.46	222	115	AV
4	2483.5	43.94	0.46	44.40	74.00	29.60	222	205	PK
5	4924	43.27	10.07	53.34	74.00	20.66	104	171	PK
6	4924	33.89	10.07	43.96	54.00	10.04	104	33	AV
7	7386	22.22	9.80	32.02	54.00	21.98	104	308	AV
8	7386	30.12	9.80	39.92	74.00	34.08	104	38	PK
9	9848	27.12	13.24	40.36	74.00	33.64	104	58	PK
10	9848	19.97	13.24	33.21	54.00	20.79	104	50	AV

Vertical

NO.	Freq. [MHz]	Reading [dBμV/m]	Level [dBμV/m]	Factor [dB]	Limit [dBμV/m]	Margin [dB]	Height [cm]	Angle [°]	Remark
1	2462	83.72	0.66	84.38			290	88	PK
2	2462	81.82	0.66	82.48			290	88	AV
3	2483.5	36.56	0.46	37.02	54.00	16.98	290	1	AV
4	2483.5	44.26	0.46	44.72	74.00	29.28	290	1	PK
5	4924	42.39	10.07	52.46	74.00	21.54	162	261	PK
6	4924	33.69	10.07	43.76	54.00	10.24	162	70	AV
7	7386	22.09	9.80	31.89	54.00	22.11	162	59	AV
8	7386	28.55	9.80	38.35	74.00	35.65	162	328	PK
9	9848	27.08	13.24	40.32	74.00	33.68	162	124	PK
10	9848	19.65	13.24	32.89	54.00	21.11	162	341	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	802.11g 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	36.25	-0.15	36.10	54.00	17.90	187	40	AV
2	2390	44.73	-0.15	44.58	74.00	29.42	187	350	PK
3	2412	75.49	0.13	75.62			187	122	AV
4	2412	81.75	0.14	81.89			187	122	PK
5	4824	44.38	9.68	54.06	74.00	19.94	169	72	PK
6	4824	38.03	9.68	47.71	54.00	6.29	169	66	AV
7	7236	21.18	12.39	33.57	54.00	20.43	169	91	AV
8	7236	28.78	12.39	41.17	74.00	32.83	169	247	PK
9	9648	20.93	13.13	34.06	54.00	19.94	169	71	AV
10	9648	28.05	13.13	41.18	74.00	32.82	169	71	PK

Vertical

NO.	Freq. [MHz]	Reading [dBμV/m]	Level [dBμV/m]	Factor [dB]	Limit [dBμV/m]	Margin [dB]	Height [cm]	Angle [°]	Remark
1	2390	36.25	-0.15	36.10	54.00	17.90	207	220	AV
2	2390	45.32	-0.15	45.17	74.00	28.83	207	48	PK
3	2412	81.88	0.14	82.02			207	152	PK
4	2412	75.79	0.14	75.93			207	82	AV
5	4824	45.27	9.68	54.95	74.00	19.05	286	131	PK
6	4824	37.34	9.68	47.02	54.00	6.98	286	85	AV
7	7236	21.62	12.39	34.01	54.00	19.99	286	242	AV
8	7236	28.42	12.39	40.81	74.00	33.19	286	34	PK
9	9648	29.04	13.13	42.17	74.00	31.83	286	230	PK
10	9648	22.31	13.13	35.44	54.00	18.56	286	230	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	802.11g 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	44.47	9.70	54.17	74.00	19.83	151	85	PK
2	4874	36.03	9.70	45.73	54.00	8.27	151	85	AV
3	7311	21.86	11.03	32.89	54.00	21.11	151	299	AV
4	7311	29.10	11.03	40.13	74.00	33.87	151	299	PK
5	9748	29.96	13.23	43.19	74.00	30.81	151	33	PK
6	9748	24.86	13.23	38.09	54.00	15.91	151	357	AV

Vertical

NO.	Freq. [MHz]	Reading [dBμV/m]	Level [dBμV/m]	Factor [dB]	Limit [dBμV/m]	Margin [dB]	Height [cm]	Angle [°]	Remark
1	4874	42.92	9.70	52.62	74.00	21.38	279	215	PK
2	4874	34.94	9.70	44.64	54.00	9.36	279	229	AV
3	7311	22.38	11.03	33.41	54.00	20.59	279	300	AV
4	7311	27.72	11.03	38.75	74.00	35.25	279	63	PK
5	9748	30.95	13.23	44.18	74.00	29.82	279	69	PK
6	9748	24.24	13.23	37.47	54.00	16.53	279	69	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	802.11g 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	82.37	0.67	83.04			130	122	PK
2	2462	76.09	0.70	76.79			130	122	AV
3	2483.5	36.22	0.46	36.68	54.00	17.32	130	122	AV
4	2483.5	44.55	0.46	45.01	74.00	28.99	130	231	PK
5	4924	42.95	10.07	53.02	74.00	20.98	296	64	PK
6	4924	34.67	10.07	44.74	54.00	9.26	296	64	AV
7	7386	21.83	9.80	31.63	54.00	22.37	296	100	AV
8	7386	28.87	9.80	38.67	74.00	35.33	296	264	PK
9	9848	26.40	13.24	39.64	74.00	34.36	296	162	PK
10	9848	20.47	13.24	33.71	54.00	20.29	296	162	AV

Vertical

NO.	Freq. [MHz]	Reading [dBμV/m]	Level [dBμV/m]	Factor [dB]	Limit [dBμV/m]	Margin [dB]	Height [cm]	Angle [°]	Remark
1	2462	76.88	0.69	77.57			176	89	AV
2	2462	83.08	0.70	83.78			176	89	PK
3	2483.5	36.94	0.46	37.40	54.00	16.60	176	75	AV
4	2483.5	45.09	0.46	45.55	74.00	28.45	176	238	PK
5	4924	43.09	10.07	53.16	74.00	20.84	246	175	PK
6	4924	34.03	10.07	44.10	54.00	9.90	246	264	AV
7	7386	21.69	9.80	31.49	54.00	22.51	246	359	AV
8	7386	27.99	9.80	37.79	74.00	36.21	246	359	PK
9	9848	27.75	13.24	40.99	74.00	33.01	246	4	PK
10	9848	20.60	13.24	33.84	54.00	20.16	246	307	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	36.69	-0.15	36.54	54.00	17.46	125	358	AV
2	2390	43.74	-0.15	43.59	74.00	30.41	125	1	PK
3	2412	81.14	0.14	81.28			125	123	PK
4	2412	74.69	0.15	74.84			125	123	AV
5	4824	45.41	9.68	55.09	74.00	18.91	198	61	PK
6	4824	37.88	9.68	47.56	54.00	6.44	198	68	AV
7	7236	21.08	12.39	33.47	54.00	20.53	198	279	AV
8	7236	27.90	12.39	40.29	74.00	33.71	198	67	PK
9	9648	28.30	13.13	41.43	74.00	32.57	198	360	PK
10	9648	21.97	13.13	35.10	54.00	18.90	198	26	AV

Vertical

NO.	Freq. [MHz]	Reading [dBμV/m]	Level [dBμV/m]	Factor [dB]	Limit [dBμV/m]	Margin [dB]	Height [cm]	Angle [°]	Remark
1	2390	36.66	-0.15	36.51	54.00	17.49	153	291	AV
2	2390	45.76	-0.15	45.61	74.00	28.39	153	168	PK
3	2412	81.24	0.13	81.37			153	154	PK
4	2412	75.16	0.14	75.30			153	154	AV
5	4824	43.48	9.68	53.16	74.00	20.84	109	237	PK
6	4824	36.74	9.68	46.42	54.00	7.58	109	80	AV
7	7236	22.07	12.39	34.46	54.00	19.54	109	258	AV
8	7236	28.36	12.39	40.75	74.00	33.25	109	245	PK
9	9648	28.50	13.13	41.63	74.00	32.37	109	299	PK
10	9648	20.40	13.13	33.53	54.00	20.47	109	218	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 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	42.97	9.70	52.67	74.00	21.33	152	68	PK
2	4874	35.62	9.70	45.32	54.00	8.68	152	76	AV
3	7311	21.47	11.03	32.50	54.00	21.50	152	297	AV
4	7311	28.89	11.03	39.92	74.00	34.08	152	256	PK
5	9748	31.04	13.23	44.27	74.00	29.73	152	74	PK
6	9748	25.38	13.23	38.61	54.00	15.39	152	74	AV

Vertical

NO.	Freq. [MHz]	Reading [dBμV/m]	Level [dBμV/m]	Factor [dB]	Limit [dBμV/m]	Margin [dB]	Height [cm]	Angle [°]	Remark
1	4874	42.90	9.70	52.60	74.00	21.40	216	317	PK
2	4874	35.81	9.70	45.51	54.00	8.49	216	73	AV
3	7311	21.82	11.03	32.85	54.00	21.15	216	56	AV
4	7311	28.61	11.03	39.64	74.00	34.36	216	279	PK
5	9748	28.57	13.23	41.80	74.00	32.20	216	62	PK
6	9748	23.21	13.23	36.44	54.00	17.56	216	76	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 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	76.17	0.57	76.74			102	123	AV
2	2462	82.52	0.70	83.22			102	123	PK
3	2483.5	43.77	0.46	44.23	74.00	29.77	102	157	PK
4	2483.5	36.64	0.46	37.10	54.00	16.90	102	299	AV
5	4924	41.62	10.07	51.69	74.00	22.31	261	353	PK
6	4924	34.38	10.07	44.45	54.00	9.55	261	353	AV
7	7386	21.67	9.80	31.47	54.00	22.53	261	61	AV
8	7386	28.02	9.80	37.82	74.00	36.18	261	54	PK
9	9848	26.78	13.24	40.02	74.00	33.98	261	149	PK
10	9848	20.32	13.24	33.56	54.00	20.44	261	1	AV

Vertical

NO.	Freq. [MHz]	Reading [dBμV/m]	Level [dBμV/m]	Factor [dB]	Limit [dBμV/m]	Margin [dB]	Height [cm]	Angle [°]	Remark
1	2462	83.36	0.69	84.05			244	89	PK
2	2462	76.77	0.69	77.46			244	89	AV
3	2483.5	44.20	0.46	44.66	74.00	29.34	244	150	PK
4	2483.5	36.11	0.46	36.57	54.00	17.43	244	96	AV
5	4924	42.09	10.07	52.16	74.00	21.84	146	176	PK
6	4924	34.38	10.07	44.45	54.00	9.55	146	332	AV
7	7386	21.41	9.80	31.21	54.00	22.79	146	225	AV
8	7386	27.72	9.80	37.52	74.00	36.48	146	69	PK
9	9848	27.33	13.24	40.57	74.00	33.43	146	69	PK
10	9848	20.99	13.24	34.23	54.00	19.77	146	259	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	802.11n40 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	44.13	-0.15	43.98	74.00	30.02	261	60	PK
2	2390	36.24	-0.15	36.09	54.00	17.91	261	300	AV
3	2422	79.60	0.38	79.98			261	122	PK
4	2422	72.30	0.38	72.68			261	122	AV
5	4844	43.37	9.94	53.31	74.00	20.69	137	80	PK
6	4844	36.05	9.94	45.99	54.00	8.01	137	59	AV
7	7266	21.17	11.99	33.16	54.00	20.84	137	131	AV
8	7266	28.82	11.99	40.81	74.00	33.19	137	34	PK
9	9688	30.26	13.15	43.41	74.00	30.59	137	3	PK
10	9688	22.80	13.15	35.95	54.00	18.05	137	14	AV

Vertical

NO.	Freq. [MHz]	Reading [dBμV/m]	Level [dBμV/m]	Factor [dB]	Limit [dBμV/m]	Margin [dB]	Height [cm]	Angle [°]	Remark
1	2390	36.41	-0.15	36.26	54.00	17.74	225	324	AV
2	2390	43.80	-0.15	43.65	74.00	30.35	225	346	PK
3	2422	79.43	0.37	79.80			225	80	PK
4	2422	72.36	0.38	72.74			225	158	AV
5	4844	43.01	9.94	52.95	74.00	21.05	172	357	PK
6	4844	35.32	9.94	45.26	54.00	8.74	172	319	AV
7	7266	21.60	11.99	33.59	54.00	20.41	172	211	AV
8	7266	29.01	11.99	41.00	74.00	33.00	172	353	PK
9	9688	27.41	13.15	40.56	74.00	33.44	172	47	PK
10	9688	20.42	13.15	33.57	54.00	20.43	172	47	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	802.11n40 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	44.24	9.70	53.94	74.00	20.06	221	57	PK
2	4874	36.29	9.70	45.99	54.00	8.01	221	57	AV
3	7311	21.80	11.03	32.83	54.00	21.17	221	73	AV
4	7311	28.55	11.03	39.58	74.00	34.42	221	7	PK
5	9748	31.05	13.23	44.28	74.00	29.72	221	20	PK
6	9748	25.17	13.23	38.40	54.00	15.60	221	20	AV

Vertical

NO.	Freq. [MHz]	Reading [dBµV/m]	Level [dBµV/m]	Factor [dB]	Limit [dBµV/m]	Margin [dB]	Height [cm]	Angle [°]	Remark
1	4874	42.83	9.70	52.53	74.00	21.47	129	358	PK
2	4874	35.51	9.70	45.21	54.00	8.79	129	135	AV
3	7311	22.50	11.03	33.53	54.00	20.47	129	307	AV
4	7311	30.89	11.03	41.92	74.00	32.08	129	307	PK
5	9748	28.70	13.23	41.93	74.00	32.07	129	68	PK
6	9748	23.38	13.23	36.61	54.00	17.39	129	68	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	802.11n40 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	79.43	0.69	80.12			164	123	AV
2	2452	72.92	0.69	73.61			164	123	PK
3	2483.5	36.45	0.46	36.91	54.00	17.09	164	279	PK
4	2483.5	43.94	0.46	44.40	74.00	29.60	164	204	AV
5	4904	42.71	10.10	52.81	74.00	21.19	107	88	PK
6	4904	34.88	10.10	44.98	54.00	9.02	107	61	AV
7	7356	22.27	10.31	32.58	54.00	21.42	107	258	AV
8	7356	27.68	10.31	37.99	74.00	36.01	107	40	PK
9	9808	30.00	13.20	43.20	74.00	30.80	107	360	PK
10	9808	24.99	13.20	38.19	54.00	15.81	107	60	AV

Vertical

NO.	Freq. [MHz]	Reading [dBμV/m]	Level [dBμV/m]	Factor [dB]	Limit [dBμV/m]	Margin [dB]	Height [cm]	Angle [°]	Remark
1	2452	80.18	0.70	80.88			140	88	PK
2	2452	73.55	0.70	74.25			140	88	AV
3	2483.5	36.67	0.46	37.13	54.00	16.87	140	116	AV
4	2483.5	44.92	0.46	45.38	74.00	28.62	140	156	PK
5	4904	42.87	10.10	52.97	74.00	21.03	217	122	PK
6	4904	34.94	10.10	45.04	54.00	8.96	217	122	AV
7	7356	21.76	10.31	32.07	54.00	21.93	217	60	AV
8	7356	27.71	10.31	38.02	74.00	35.98	217	101	PK
9	9808	29.90	13.20	43.10	74.00	30.90	217	60	PK
10	9808	25.45	13.20	38.65	54.00	15.35	217	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]

3.3 6dB BANDWIDTH MEASUREMENT

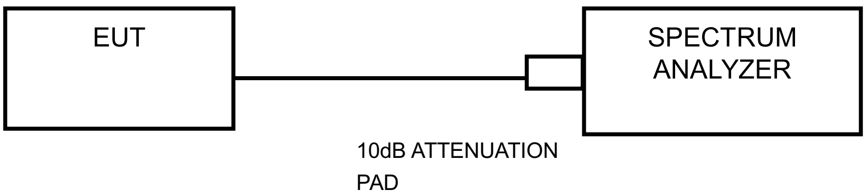
3.3.1 Limits

The minimum of 6dB Bandwidth Measurement is 0.5 MHz.

3.3.2 Measurement procedure

a. Set resolution bandwidth (RBW) = 100KHz
b. Set the video bandwidth (VBW) ≥ 3 x RBW, Detector = Peak.
c. Trace mode = max hold.
d. Sweep = auto couple.
e. Measure the maximum width of the emission that is constrained by the frequencies associatedwith the two amplitude points (upper and lower) that are attenuated by 6 dB relative to themaximum 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

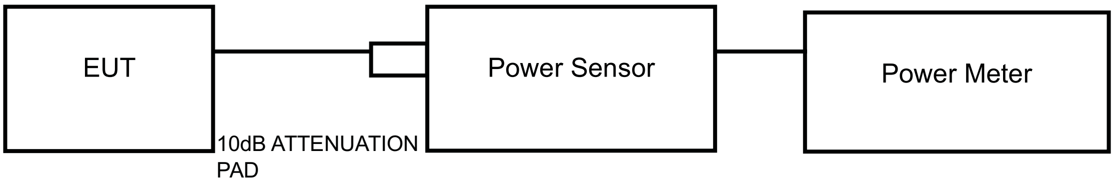
3.4.1 Limits

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

3.4.2 Measurement procedure

a. 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.
b. Anaverage power sensor was used on the output port of the EUT. A power meter was used to read the response of the average power senso 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

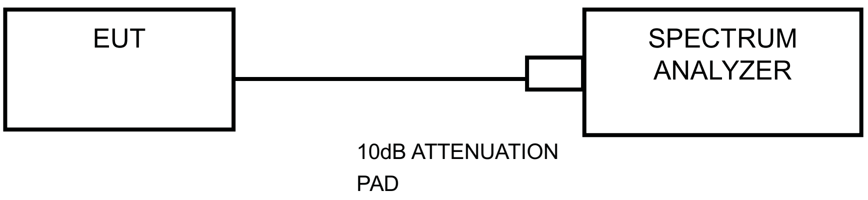
3.5.1 Limits

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

3.5.2 Measurement procedure

a. Set instrument center frequency to DTS channel center frequency.
b. Set the span to 1.5 times the DTS bandwidth.
c. Set RBW to: 3KHz
d. Set VBW ≥3 x RBW.
e. Detector = peak
f. Ensure that the number of measurement points in the sweep ≥ 2 x span/RBW.
g. Sweep time = auto couple.
h. 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

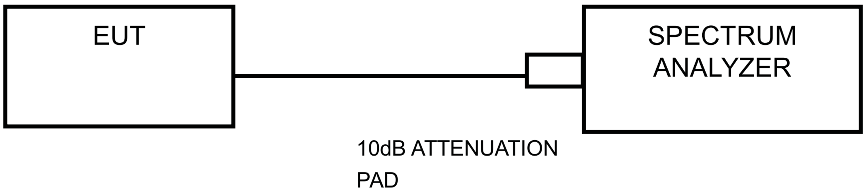
Measurement Procedure -Reference Level

a. Set the RBW = 100 kHz.
b. Set the VBW ≥ 300 kHz.
c. Detector = peak.
d. Sweep time = auto couple.
e. Trace mode = max hold.
f. Allow trace to fully stabilize.
g. 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

a. Set RBW = 100 kHz.
b. Set VBW ≥ 300 kHz.
c. Set span to encompass the spectrum to be examined
d. Detector = peak.
e. Trace Mode = max hold.
f. Sweep = auto couple.

3.6.3 Test setup



3.6.4 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.

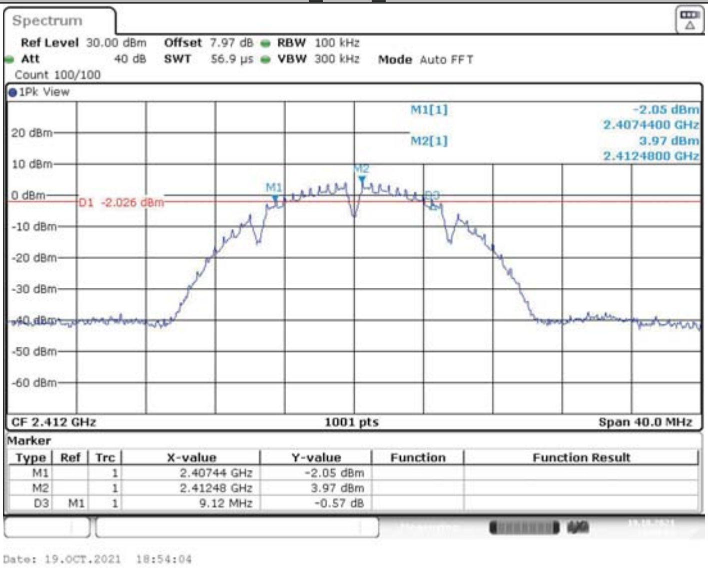
6.1 6DB BANDWIDTH MEASUREMENT

6.1.1 Test Result

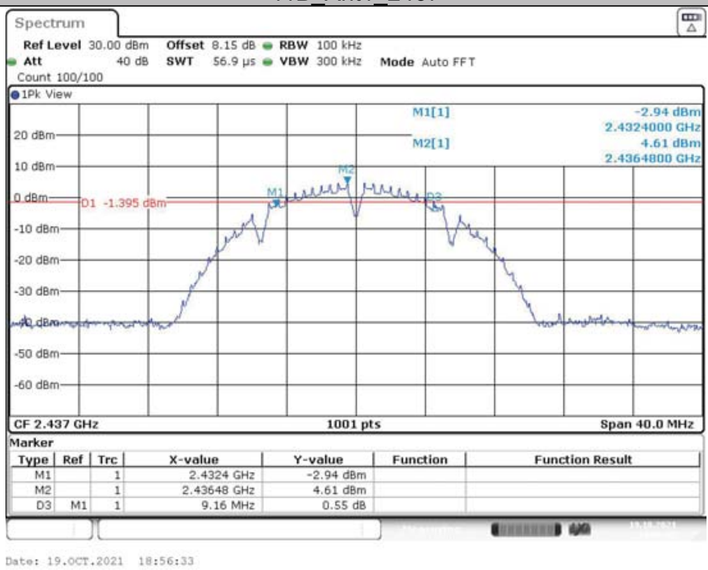
TestMode	Antenna	Frequency[MHz]	DTS BW [MHz]	FL[MHz]	FH[MHz]	Limit[MHz]	Verdict
11B	Ant1	2412	9.120	2407.440	2416.560	0.5	PASS
		2437	9.160	2432.400	2441.560	0.5	PASS
		2462	9.120	2457.440	2466.560	0.5	PASS
11G	Ant1	2412	16.640	2403.680	2420.320	0.5	PASS
		2437	16.680	2428.640	2445.320	0.5	PASS
		2462	16.680	2453.640	2470.320	0.5	PASS
11N20SISO	Ant1	2412	17.880	2403.080	2420.960	0.5	PASS
		2437	17.880	2428.040	2445.920	0.5	PASS
		2462	17.840	2453.080	2470.920	0.5	PASS
11N40SISO	Ant1	2422	36.560	2403.760	2440.320	0.5	PASS
		2437	36.640	2418.680	2455.320	0.5	PASS
		2452	36.640	2433.680	2470.320	0.5	PASS

6.1.2 Test Graphs

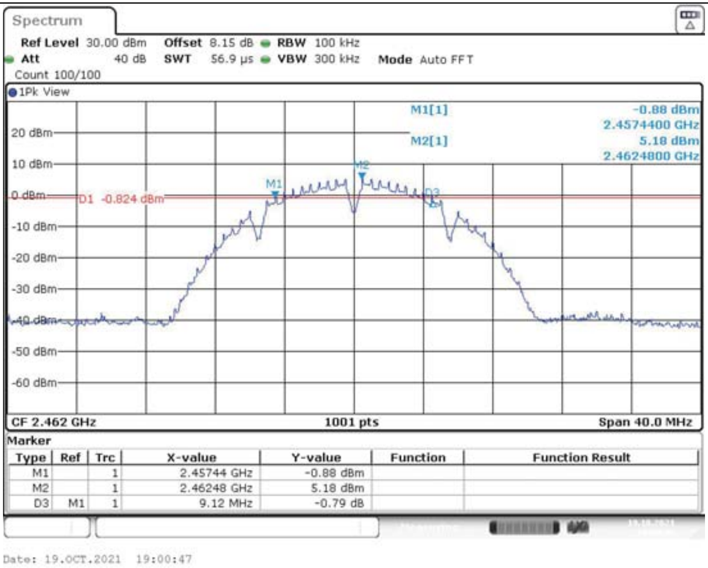
11B_Ant1_2412



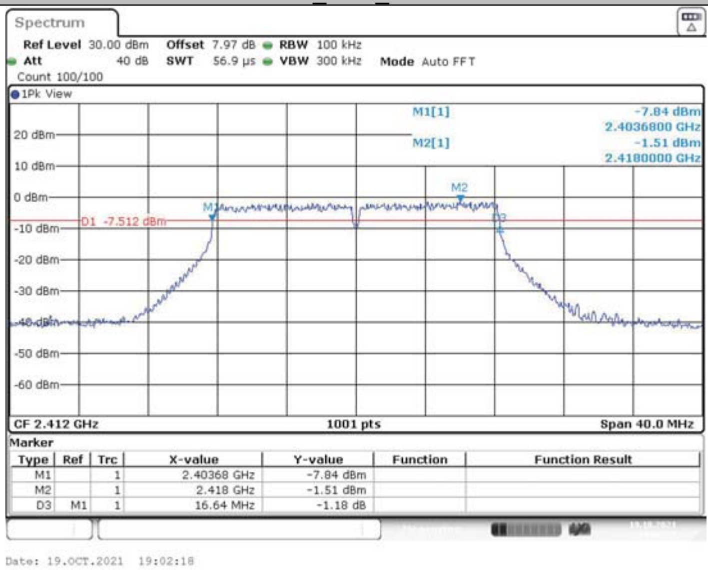
11B_Ant1_2437



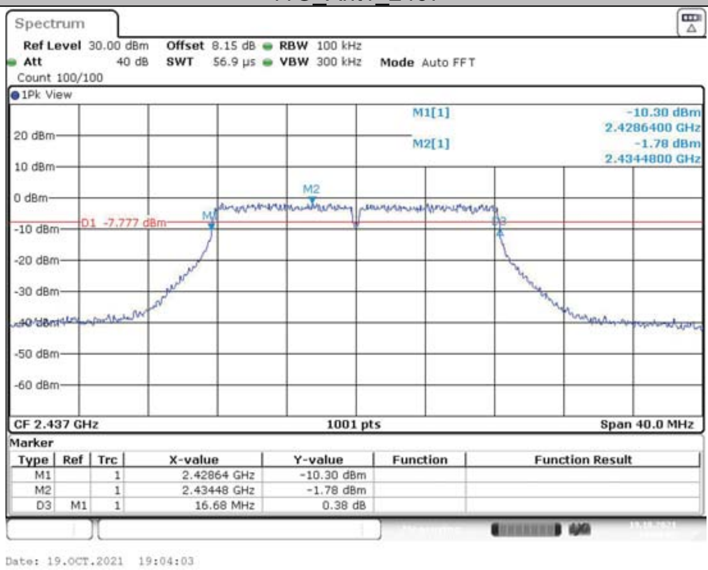
11B_Ant1_2462



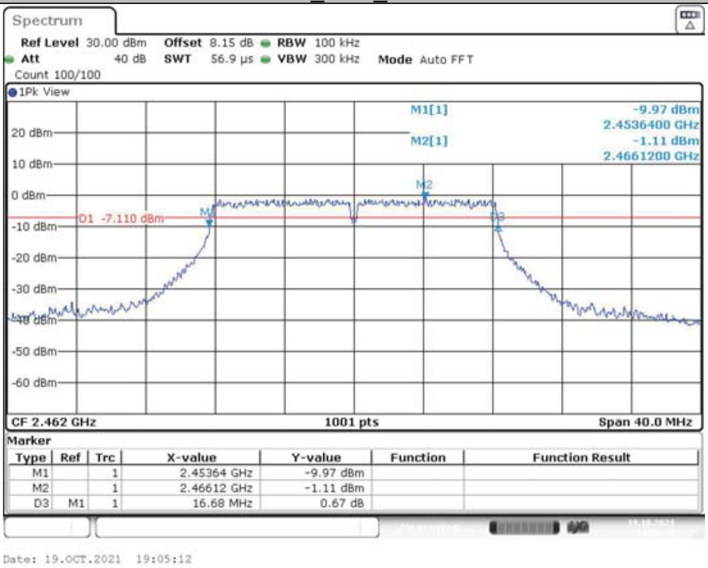
11G_Ant1_2412



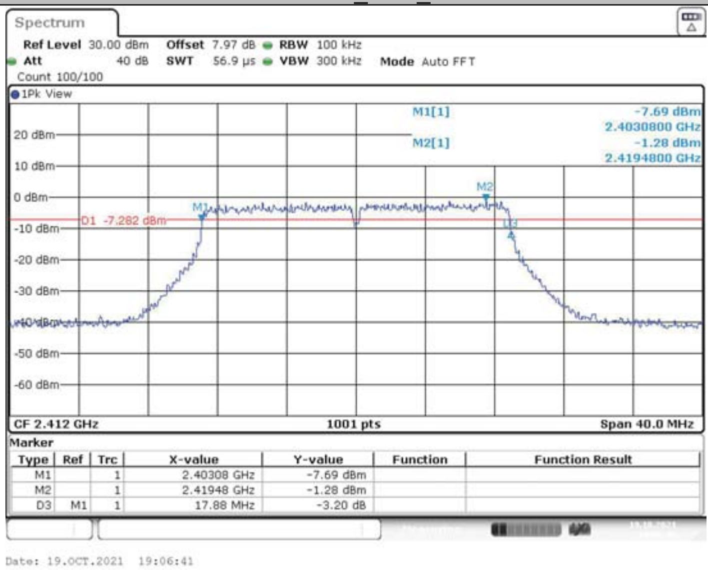
11G_Ant1_2437



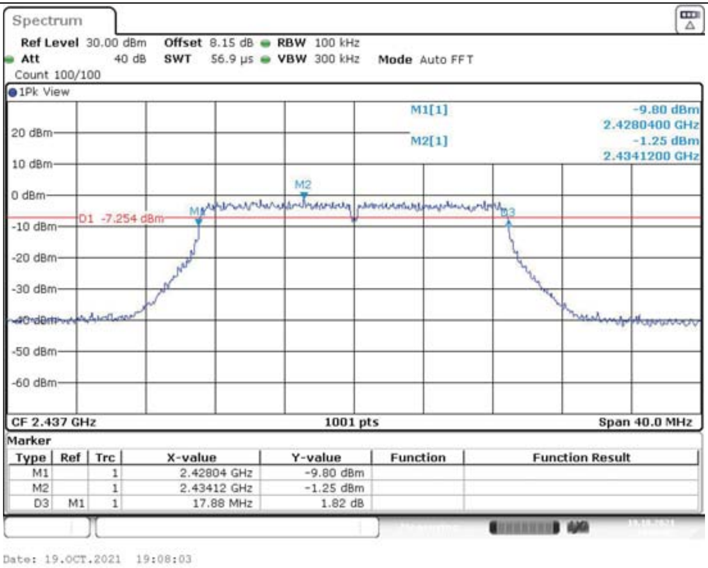
11G_Ant1_2462



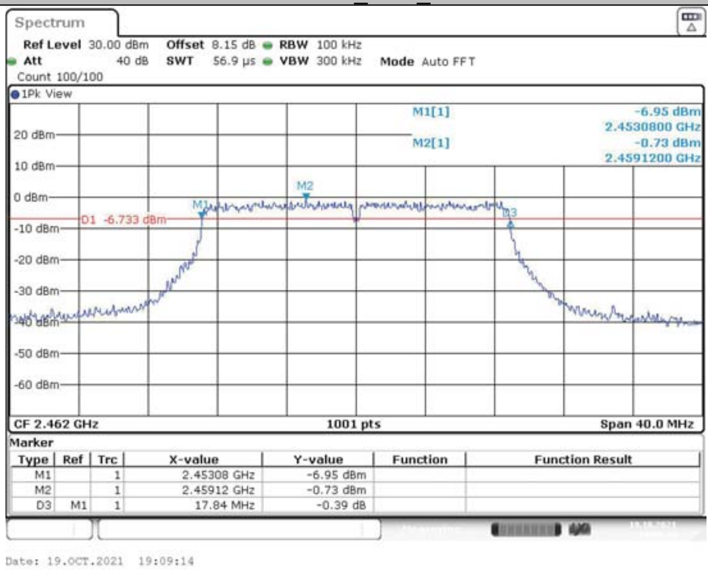
11N20SISO_Ant1_2412



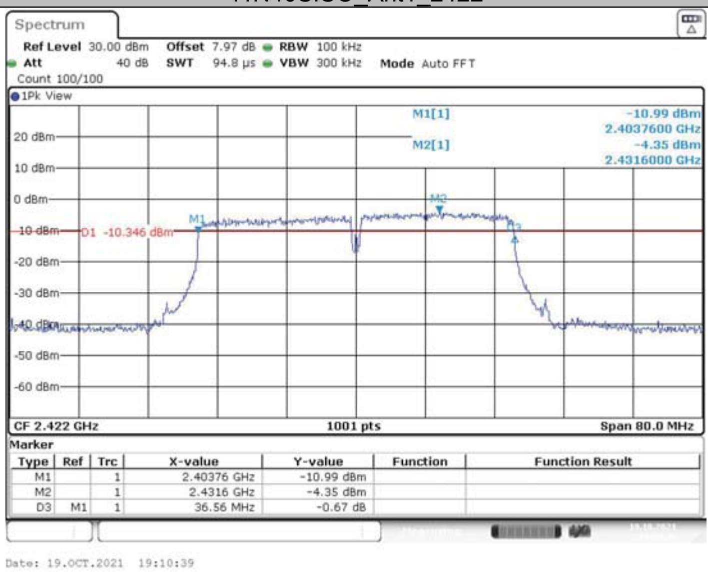
11N20SISO_Ant1_2437



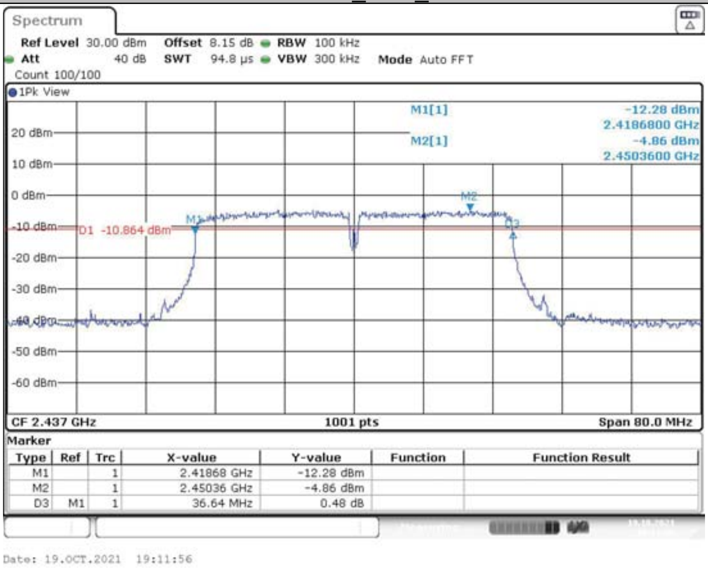
11N20SISO_Ant1_2462



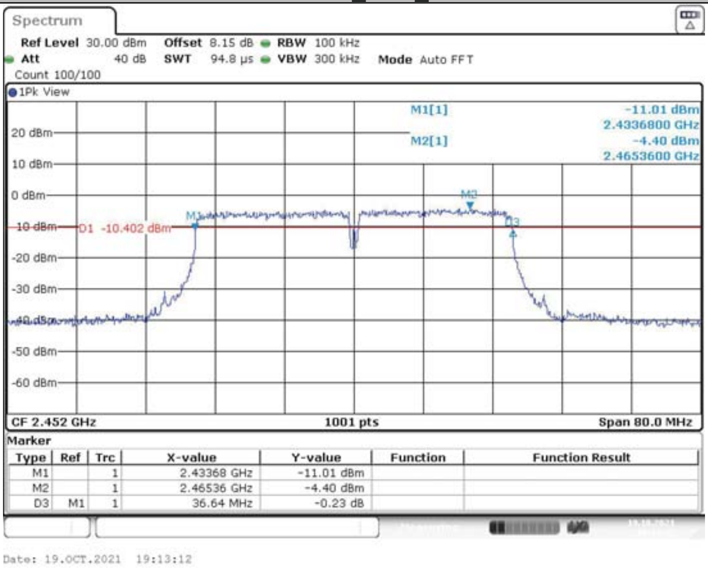
11N40SISO_Ant1_2422



11N40SISO_Ant1_2437



11N40SISO_Ant1_2452

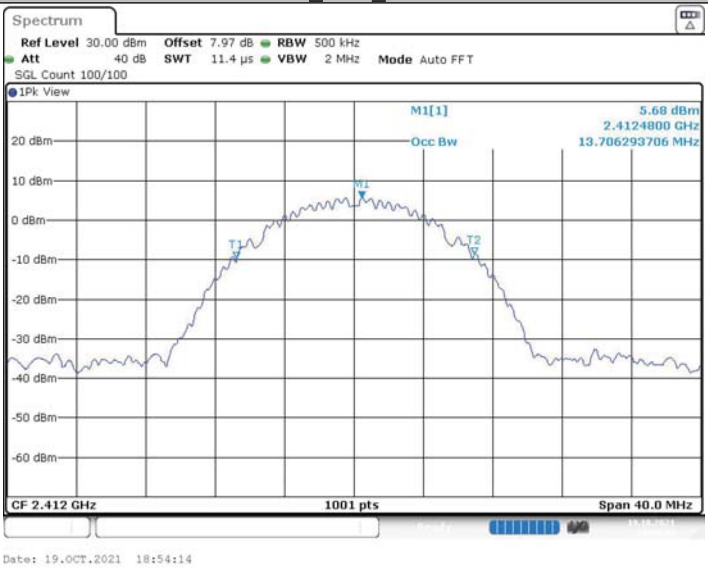
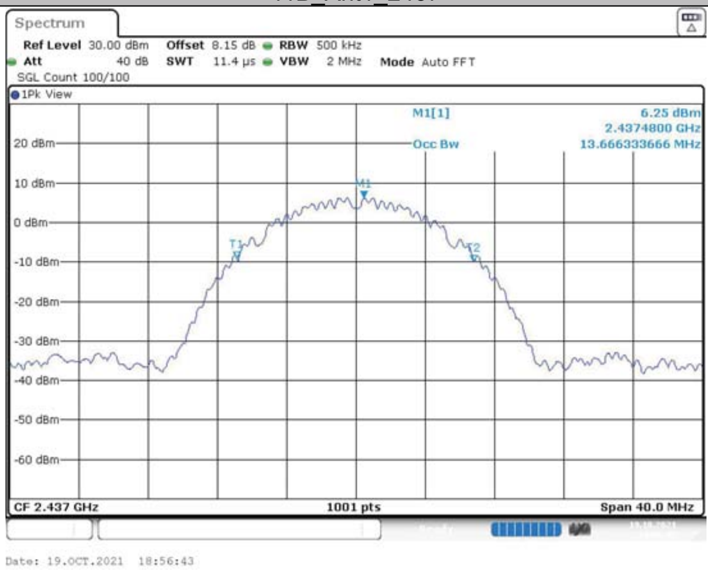


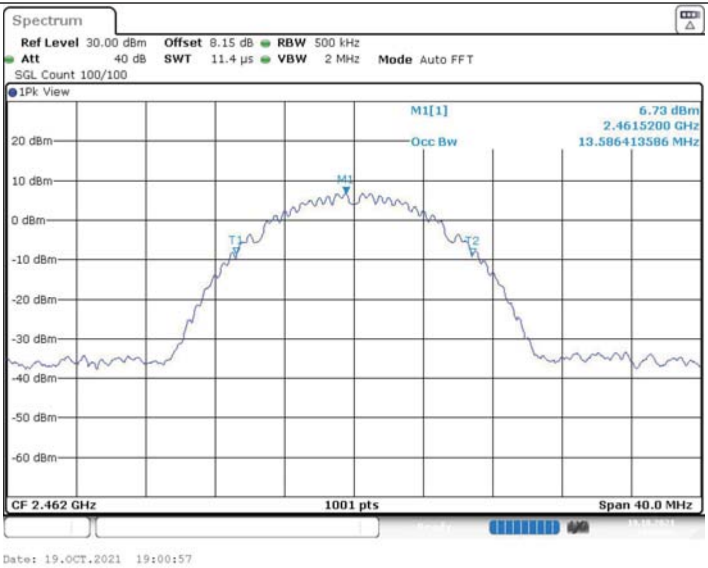
6.2 Occupied Channel Bandwidth

6.2.1 Test Result

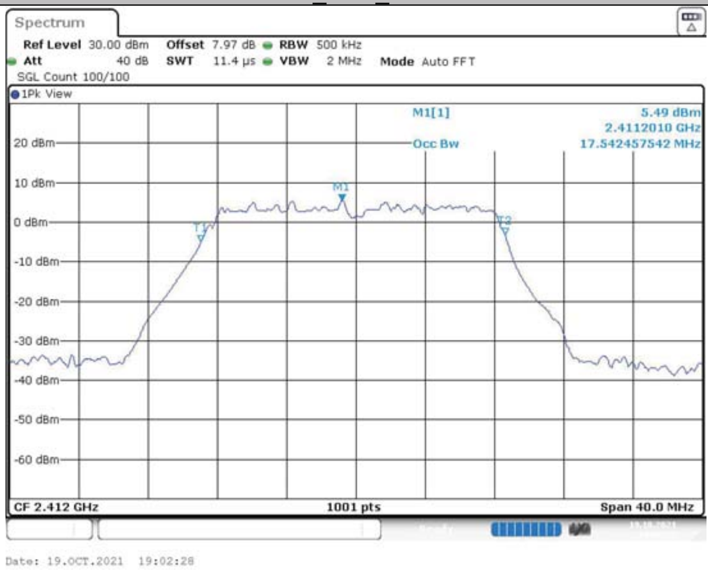
TestMode	Antenna	Channel Frequency[MHz]	OCB [MHz]	FL[MHz]	FH[MHz]	Limit[MHz]	Verdict
11B	Ant1	2412	13.706	2405.247	2418.953	---	PASS
		2437	13.666	2430.127	2443.793	---	PASS
		2462	13.586	2455.247	2468.833	---	PASS
11G	Ant1	2412	17.542	2403.049	2420.591	---	PASS
		2437	17.063	2428.449	2445.511	---	PASS
		2462	17.303	2453.249	2470.551	---	PASS
11N20SISO	Ant1	2412	17.782	2403.089	2420.871	---	PASS
		2437	18.182	2428.009	2446.191	---	PASS
		2462	17.902	2453.009	2470.911	---	PASS
11N40SISO	Ant1	2422	36.204	2404.018	2440.222	---	PASS
		2437	36.284	2418.938	2455.222	---	PASS
		2452	36.523	2433.778	2470.302	---	PASS

6.2.2 Test Graphs

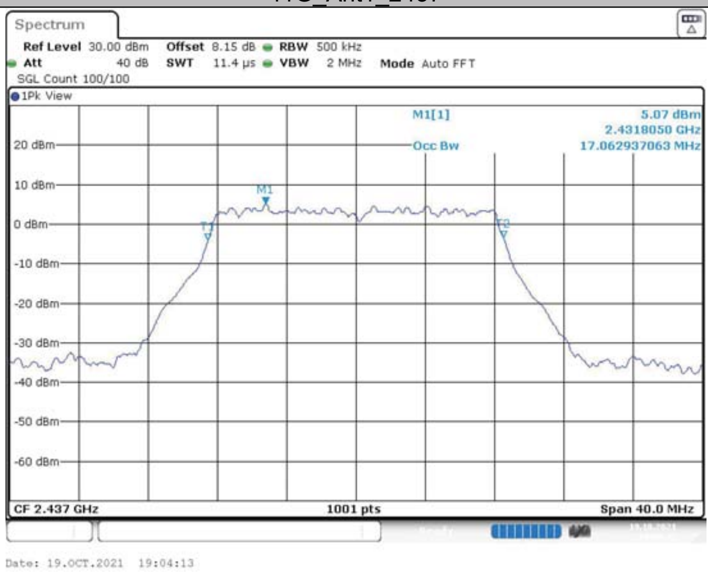
11B_Ant1_2412

11B_Ant1_2437

11B_Ant1_2462



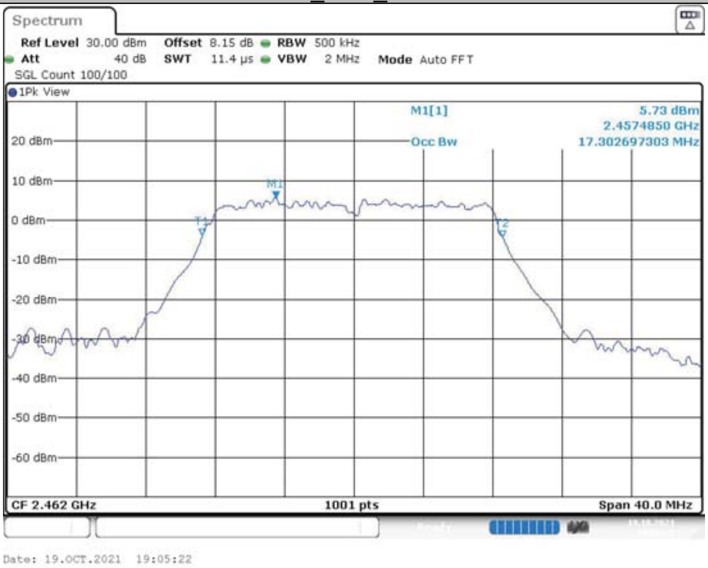
11G_Ant1_2412



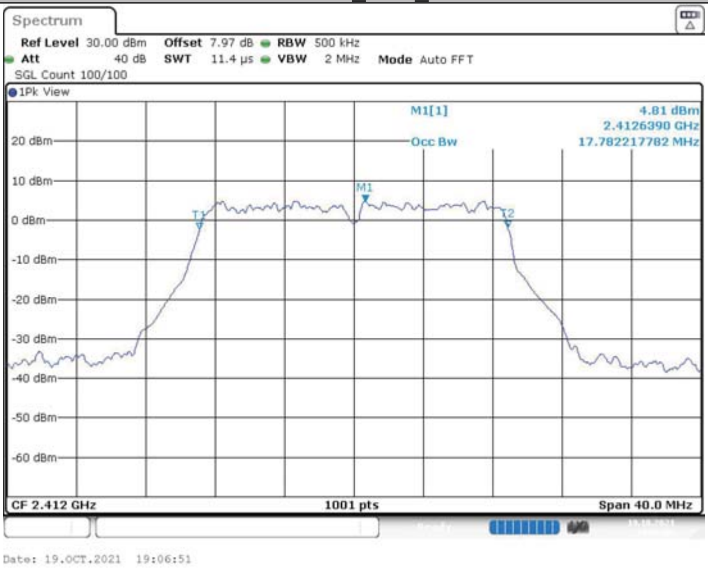
11G_Ant1_2437



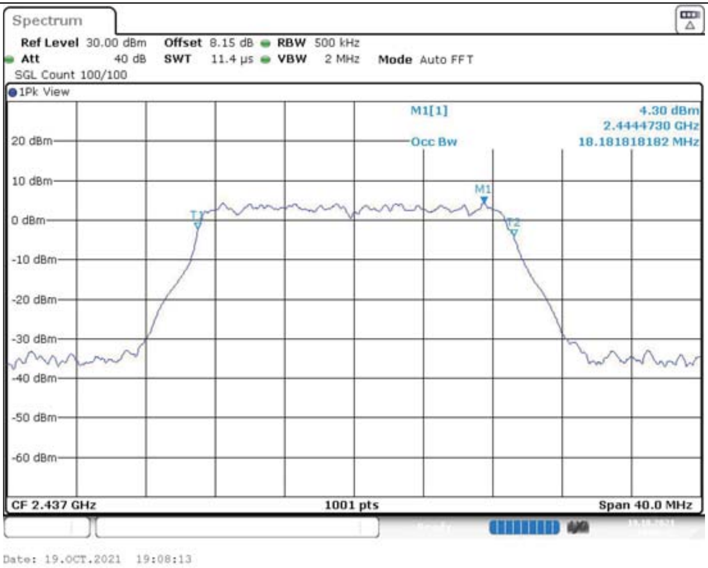
11G_Ant1_2462



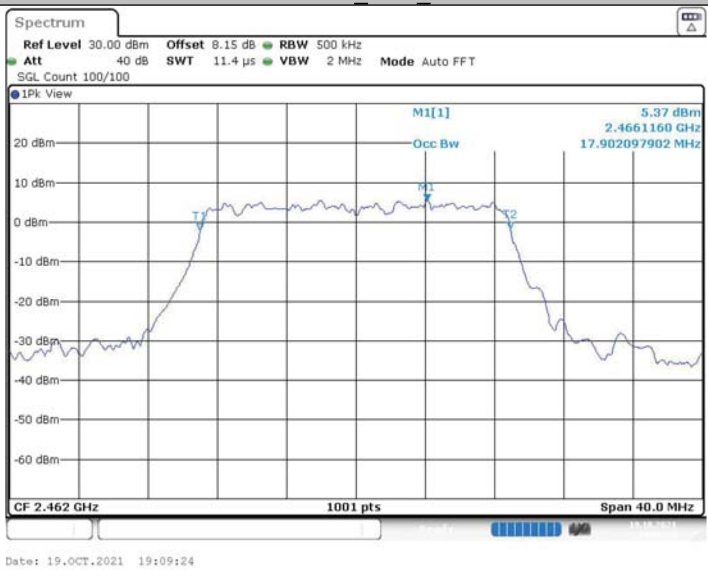
11N20SISO_Ant1_2412



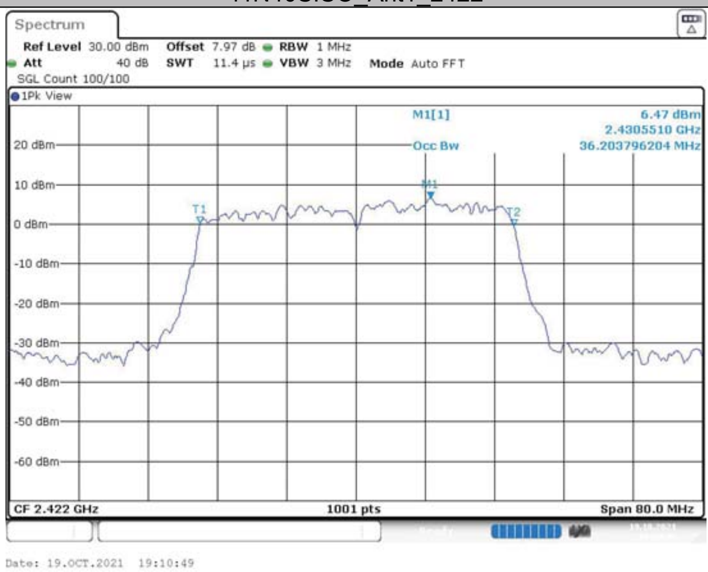
11N20SISO_Ant1_2437



11N20SISO_Ant1_2462



11N40SISO_Ant1_2422



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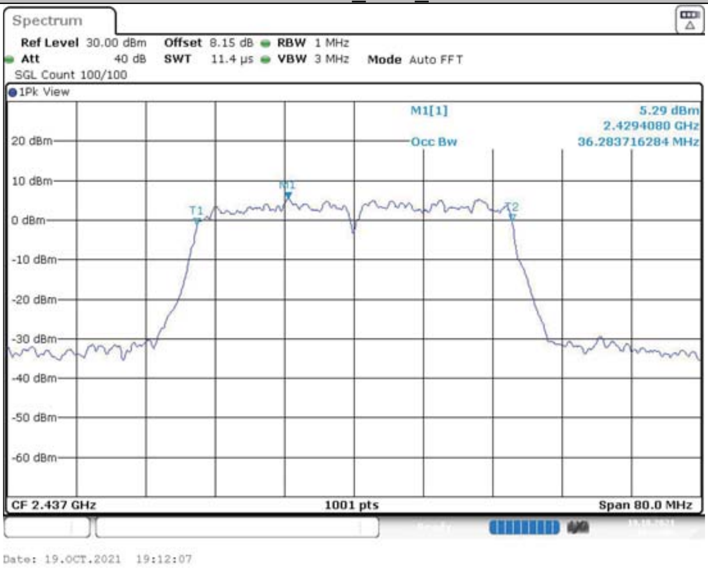
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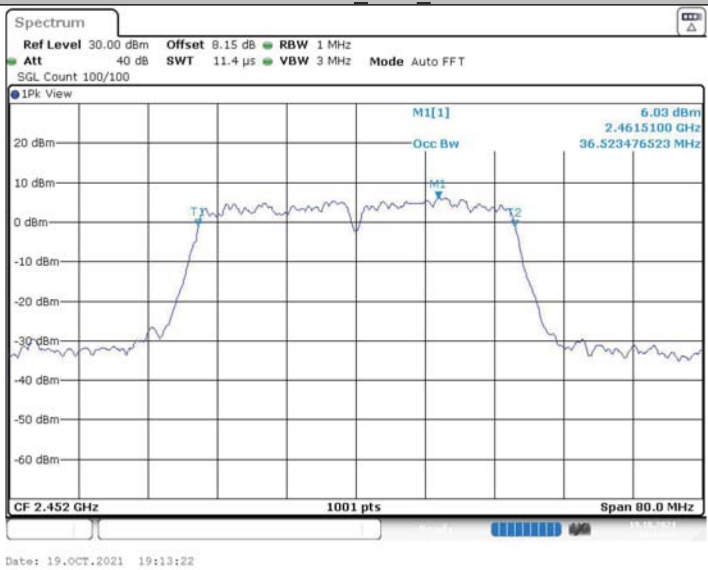
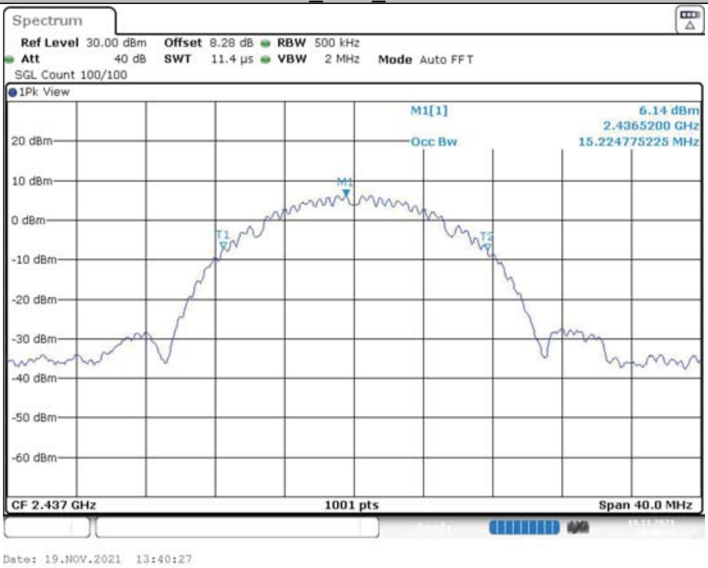


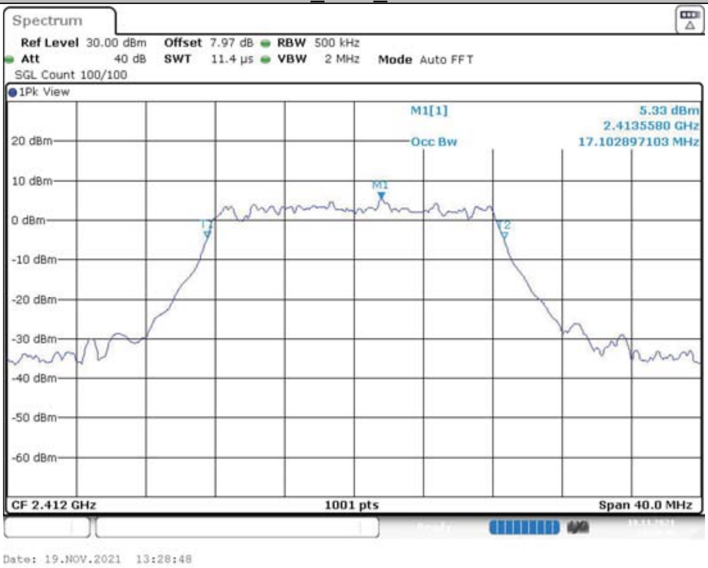
11B_Ant2_2437



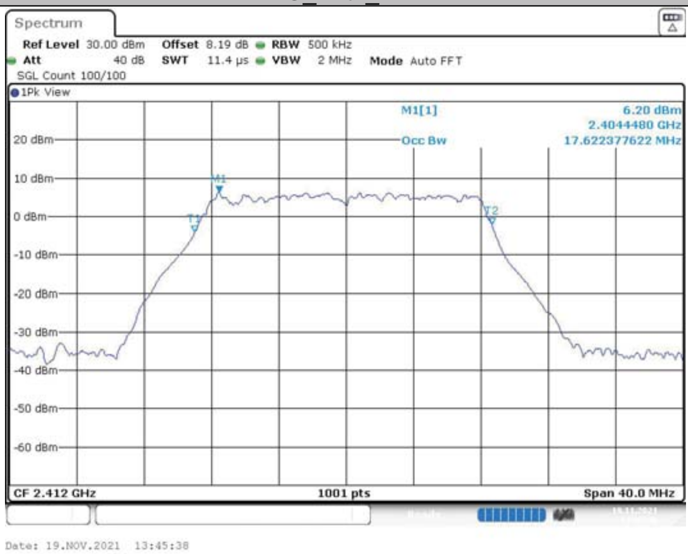
11B_Ant1_2462

11B_Ant2_2462

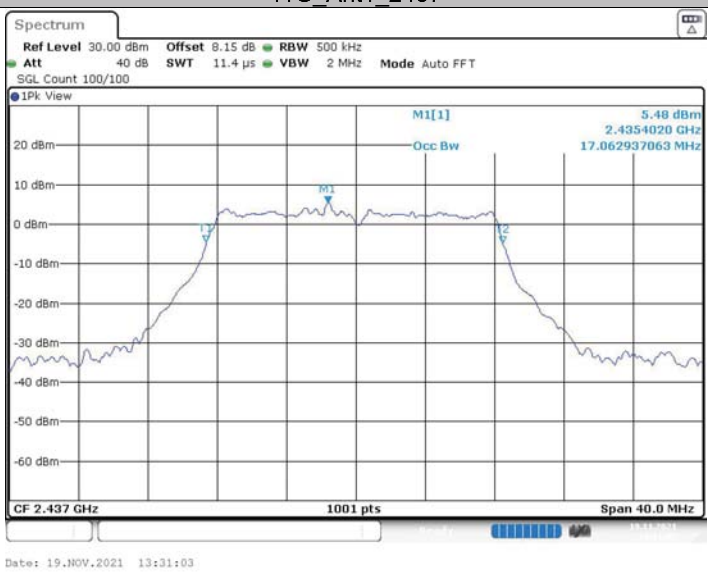
11G_Ant1_2412



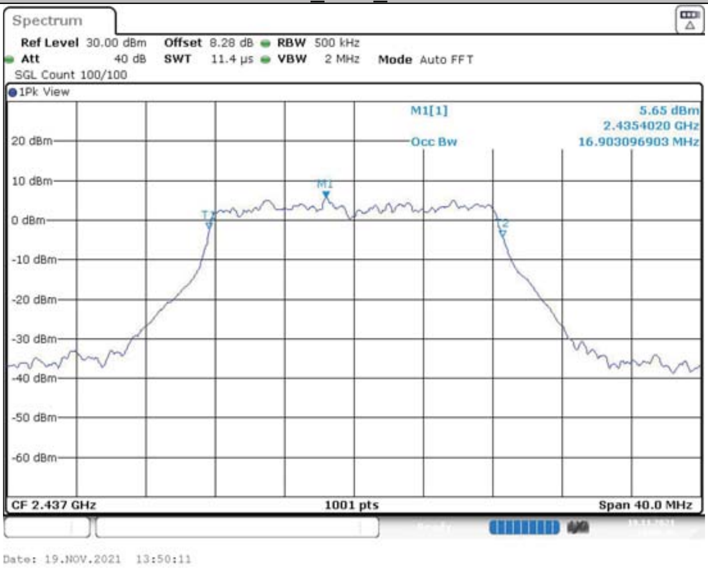
11G_Ant2_2412



11G_Ant1_2437



11G_Ant2_2437



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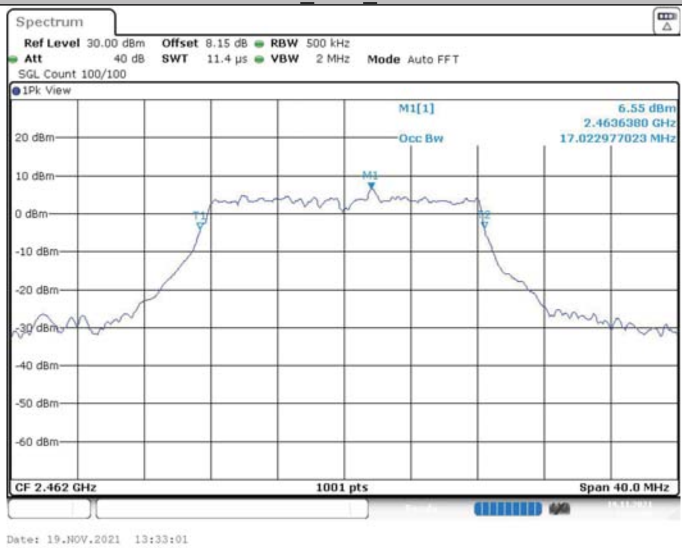
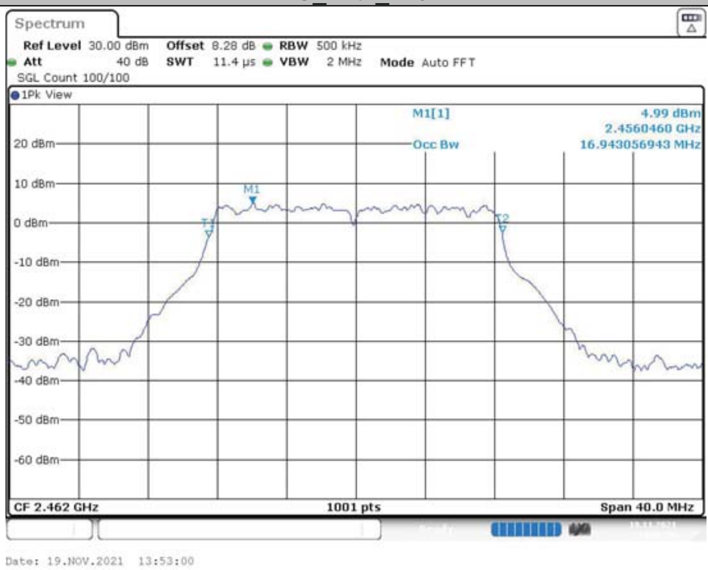
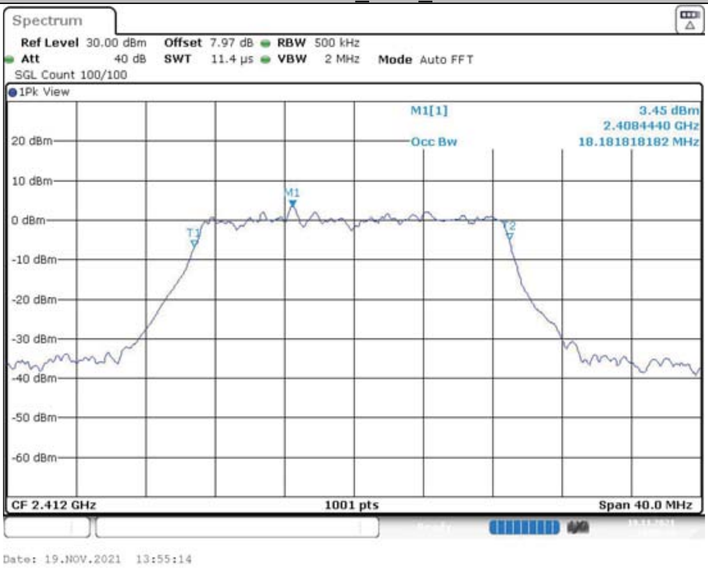


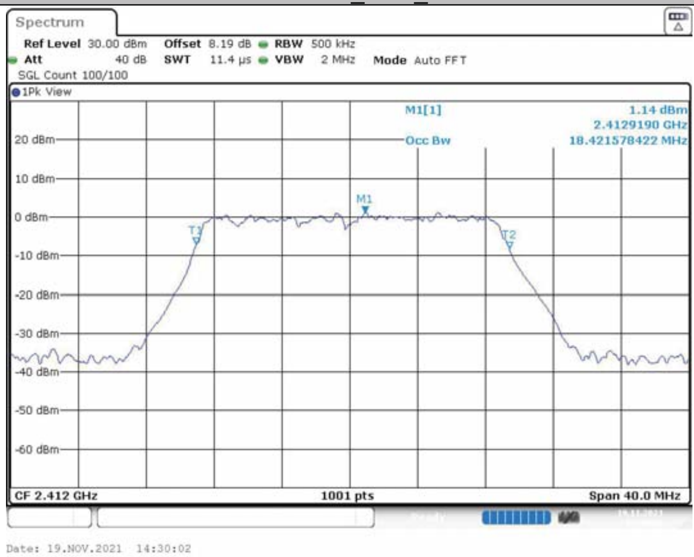
11G_Ant2_2462



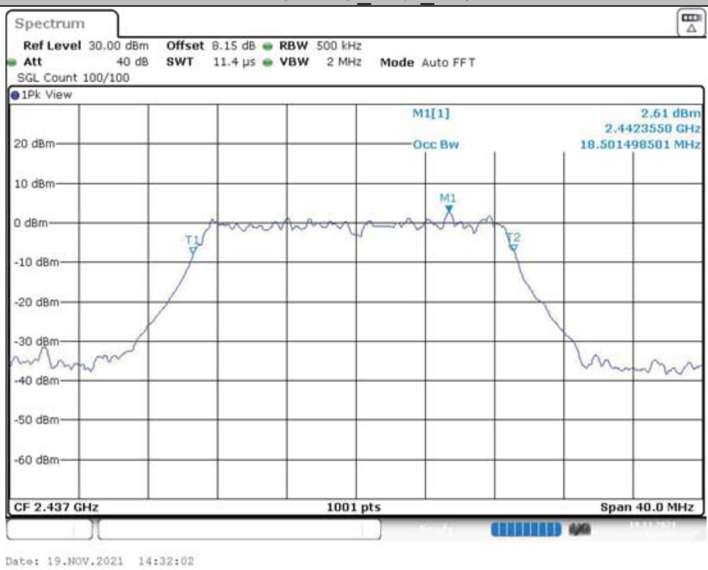
11N20MIMO_Ant1_2412



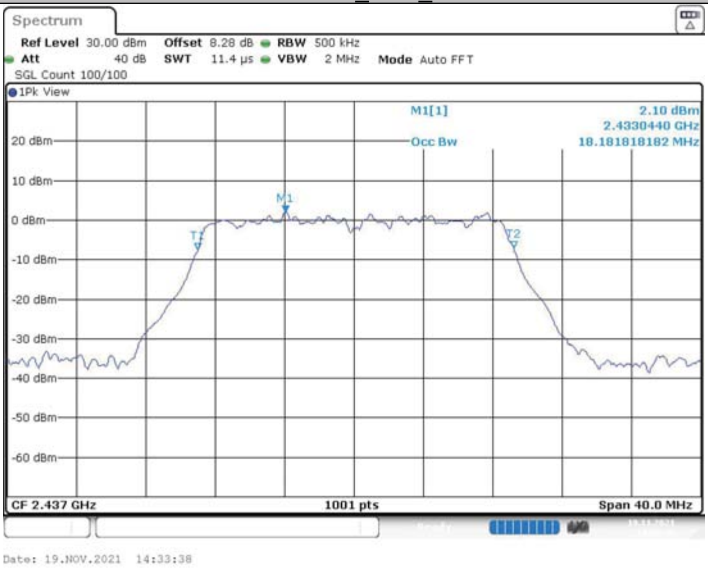
11N20MIMO_Ant2_2412



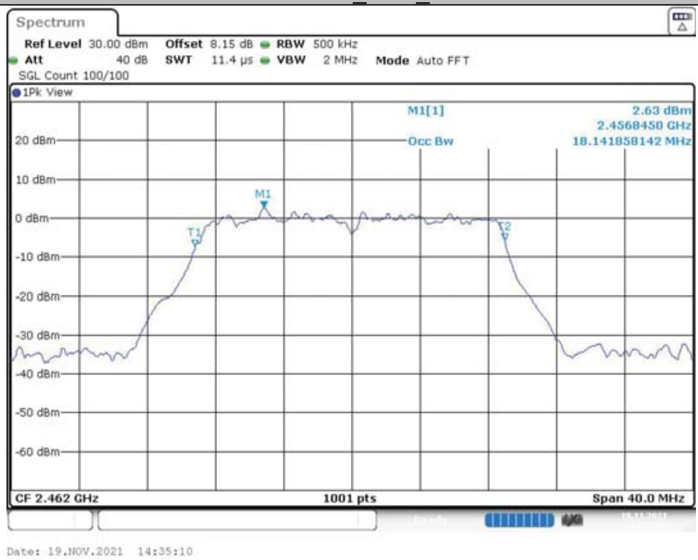
11N20MIMO_Ant1_2437



11N20MIMO_Ant2_2437



11N20MIMO_Ant1_2462



11N20MIMO_Ant2_2462