



FCC TEST REPORT

FCC ID: 2BLUW-RCM01

Report Number.: ZKT-260615L1034E-3

Date of Test...... Feb. 08, 2026 to Jun. 11, 2026

Date of issue......: Jun. 12, 2026

Total number of pages 92

Test Result.....: PASS

Testing Laboratory.: **Shenzhen ZKT Technology Co., Ltd.**

Address: 1/F, No. 101, Building B, No. 6, Tangwei Community Industrial Avenue, Fuhai Street, Bao'an District, Shenzhen, China

Applicant's name: **FJ Dynamics Technology (Fujian) Co., Ltd.**

Address: Room 305, Unit 5, Huajian Building, No. 12, 16, and 18, East Keji Road, Shangjie Town, Minhou County, Fuzhou City, Fujian Province, China

Manufacturer's name: **FJ Dynamics Technology (Fujian) Co., Ltd.**

Address: Room 305, Unit 5, Huajian Building, No. 12, 16, and 18, East Keji Road, Shangjie Town, Minhou County, Fuzhou City, Fujian Province, China

Test specification:

Standard: FCC CFR Title 47 Part 15 Subpart C Section 15.247
ANSI C63.10-2020+Cor 1-2023

Test procedure: /

Non-standard test method: N/A

Test Report Form No.: TRF-EL-110_V0

Test Report Form(s) Originator: ZKT Testing

Master TRF: Dated: 2020-01-06

This device described above has been tested by ZKT, and the test results show that the equipment under test (EUT) is in compliance with the FCC requirements. And it is applicable only to the tested sample identified in the report.

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Product name.....: Robotic Cylinder Mower

Trademark: 

Model/Type reference.....: RCM01

Ratings.....: DC 51.2V, 40A via battery



Testing procedure and testing location:

Testing Laboratory.....: **Shenzhen ZKT Technology Co., Ltd.**

Address.....: 1/F, No. 101, Building B, No. 6, Tangwei Community
Industrial Avenue, Fuhai Street, Bao'an District,
Shenzhen, China

Tested by (name + signature): Jim.Liu

Reviewer (name + signature).....: Jackson.Fang

Approved (name + signature): Lake Xie





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1. VERSION

Report No.	Version	Description	Approved
ZKT-260615L1034E-3	Rev.01	Initial issue of report	Jun.12, 2026



2. SUMMARY OF TEST RESULTS

Test procedures according to the technical standards:

FCC Part15 (15.247), Subpart C			
Standard Section	Test Item	Result	Remark
FCC part 15.203/15.247 (c)	Antenna requirement	PASS	
FCC part 15.207	AC Power Line Conducted Emission	PASS	
FCC part 15.247 (b)(3)	Conducted Peak Output Power	PASS	
FCC part 15.247 (a)(2)	Channel Bandwidth& 99% OCB	PASS	
FCC part 15.247 (e)	Power Spectral Density	PASS	
FCC part 15.247(d)	RF conducted Band edge and Spurious Emission	PASS	
FCC part 15.205/15.209	Spurious Emission	PASS	

NOTE:

(1)" N/A" denotes test is not applicable in this Test Report



2.1 TEST FACILITY

Shenzhen ZKT Technology Co., Ltd.
Add: 1/F, No. 101, Building B, No. 6, Tangwei Community Industrial Avenue, Fuhai Street, Bao'an District, Shenzhen, China

FCC Test Firm Registration Number: 927491
Designation Number: CN1431
IC Registered No.: 27033
CAB identifier: CN0110

2.2 MEASUREMENT UNCERTAINTY

The reported uncertainty of measurement $y \pm U$ · where expended uncertainty U is based on a standard uncertainty multiplied by a coverage factor of $k=2$ · providing a level of confidence of approximately 95 % .

No.	Item	Uncertainty
1	3m camber Radiated spurious emission(9KHz-30MHz)	U=4.5dB
2	3m camber Radiated spurious emission(30MHz-1GHz)	U=4.8dB
3	3m chamber Radiated spurious emission(1GHz-6GHz)	U=4.9dB
4	3m chamber Radiated spurious emission(6GHz-40GHz)	U=5.0dB
5	Conducted disturbance	U=3.2dB
6	RF Band Edge	U=1.68dB
7	RF power conducted	U=1.86dB
8	RF conducted Spurious Emission	U=2.2dB
9	RF Occupied Bandwidth	U=1.8KHz
10	RF Power Spectral Density	U=1.75dB
11	humidity uncertainty	U=5.3%
12	Temperature uncertainty	U=0.59°C



3. GENERAL INFORMATION

3.1 GENERAL DESCRIPTION OF EUT

Product Name:	Robotic Cylinder Mower
Model No.:	RCM01
Model Different.:	N/A
Serial No.:	N/A
Sample ID	ZKT-260615L1034
Sample(s) Status:	Engineer sample
Channel numbers:	802.11b/802.11g /802.11n(HT20)
Channel separation:	5MHz
Modulation technology:	802.11b: Direct Sequence Spread Spectrum(DSSS) 802.11g/802.11n(HT20) Orthogonal Frequency Division Multiplexing(OFDM)
Antenna Type and Antenna gain:	802.11b/g/n: FPC Antenna Antenna gain: 802.11 b/g/n Ant 1 Max 2.48dBi, Ant 2 Max 2.48dBi
Power supply:	DC 51.2V, 40A via battery Model: BP2000-16 Rating: DC 51.2V, 40A,2048Wh
SWITCHING POWER ADAPTER:	Input: AC 90-264V, 50/60Hz, Max 16A Output: 60 VDC, 50A(Max)

Operation Frequency each of channel							
Channel	Frequency	Chann el	Frequency	Chann el	Frequency	Chann el	Frequency
1	2412MHz	4	2427MHz	7	2442MHz	10	2457MHz
2	2417MHz	5	2432MHz	8	2447MHz	11	2462MHz
3	2422MHz	6	2437MHz	9	2452MHz		

Note:

In section 15.31(m), regards to the operating frequency range over 10 MHz, the Lowest frequency, the middle frequency, and the highest frequency of channel were selected to perform the test, and the selected channel see below:

Test channel	Frequency (MHz)	
	802.11b/802.11g/802.11n(HT20)	/
Lowest channel	2412MHz	/
Middle channel	2437MHz	/
Highest channel	2462MHz	/



3.2 DESCRIPTION OF TEST MODES

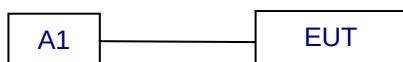
Transmitting mode	Keep the EUT in continuously transmitting mode
Remark: During the test, the duty cycle >98%, the test voltage was tuned from 85% to 115% of the nominal rated supply voltage, and found that the worst case was under the nominal rated supply condition. So the report just shows that condition's data.	

We have verified the construction and function in typical operation. All the test modes were carried out with the EUT in transmitting operation, which was shown in this test report and defined as follows:				
Pre-scan all kind of data rate in lowest channel, and found the follow list which it was worst case.				
Mode	802.11b	802.11g	802.11n(HT20)	
Data rate	1Mbps	6Mbps	6.5Mbps	

Test Software	MobaXterm.exe
Power level setup	14

3.3 BLOCK DIGRAM SHOWING THE CONFIGURATION OF SYSTEM TESTED

Conducted Emission



Radiated Emission



Conducted Spurious



3.4 DESCRIPTION OF SUPPORT UNITS(CONDUCTED MODE)

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.

Item	Equipment	Mfr/Brand	Model/Type No.	Series No.	Note
A-1	Adapter	FJ Dynamics	SMCN30-4850A	SN251227862863000	/

Item	Shielded Type	Ferrite Core	Length	Note
/	/	/	/	/

Note:

- (1) The support equipment was authorized by Declaration of Confirmation.
- (2) For detachable type I/O cable should be specified the length in cm in 『Length』 column.



3.5EQUIPMENTS LIST FOR ALL TEST ITEMS

Conduction Emissions Test

Item	Kind of Equipment	Manufacturer	Type No.	Serial No.	Firmware Version	Last calibration	Calibrated until
1	LISN	R&S	ENV216	101471	N/A	Sep. 23, 2025	Sep. 22, 2026
2	LISN	CYBERTEK	EM5040A	E1850400149	N/A	Sep. 19, 2025	Sep. 18, 2026
3	Test Cable	N/A	C-01	N/A	N/A	May. 22, 2025	May. 21, 2026
3	Test Cable	N/A	C-01	N/A	N/A	May. 22, 2026	May. 21, 2027
4	EMI Test Receiver	R&S	ESCI3	101393	4.42 SP3	Oct. 24, 2025	Oct. 23, 2026
5	EMC Software	Frad	EZ-EMC	Ver.EMC-CON 3A1.1	N/A	\	\

Radiation Emissions & Radiation Spurious Emissions Test

Item	Equipment	Manufacturer	Type No.	Serial No.	Firmware Version	Last calibration	Calibrated until
1	Spectrum Analyzer (9kHz-26.5GHz)	KEYSIGHT	N9020A	MY55370835	A.17.05	Sep. 20, 2025	Sep. 19, 2026
2	Spectrum Analyzer (10kHz-39.9GHz)	R&S	FSV40-N	100363	1.71 SP2	Sep. 20, 2025	Sep. 19, 2026
3	EMI Test Receiver (9kHz-7GHz)	R&S	ESCI7	100969	4.32	Oct. 24, 2025	Oct. 23, 2026
4	Bilog Antenna (30MHz-1500MHz)	Schwarzbeck	VULB9168	00877	N/A	Sep. 20, 2025	Sep. 19, 2026
5	Horn Antenna (1GHz-18GHz)	Agilent	AH-118	071145	N/A	Sep. 20, 2025	Sep. 19, 2026
6	Horn Antenna (15GHz-40GHz)	A.H.System	SAS-574	588	N/A	Sep. 30, 2025	Sep. 29, 2026
7	Loop Antenna	TESEQ	HLA6121	58357	N/A	Sep. 20, 2025	Sep. 19, 2026
8	Amplifier (30-1000MHz)	EM Electronics	EM330 Amplifier	60747	N/A	Sep. 19, 2025	Sep. 18, 2026
9	Amplifier (1GHz-26.5GHz)	HuiPu	8449B	3008A00315	N/A	Sep. 19, 2025	Sep. 18, 2026
10	Amplifier (500MHz-40GHz)	QuanJuDa	DLE-161	097	N/A	Oct. 24, 2025	Oct. 23, 2026
11	Test Cable	N/A	R-01	N/A	N/A	May. 22, 2025	May. 21, 2026
11	Test Cable	N/A	R-01	N/A	N/A	May. 22, 2026	May. 21, 2027
12	Test Cable	N/A	R-02	N/A	N/A	May. 22, 2025	May. 21, 2026
12	Test Cable	N/A	R-02	N/A	N/A	May. 22, 2026	May. 21, 2027
13	Test Cable	N/A	R-03	N/A	N/A	May. 22, 2025	May. 21, 2026
13	Test Cable	N/A	R-03	N/A	N/A	May. 22, 2026	May. 21, 2027
14	D.C. Power Supply	LongWei	TPR-6405D	N/A	N/A	\	\
15	EMC Software	Frad	EZ-EMC	Ver.EMC-CO N 3A1.1	N/A	\	\
16	Turntable	MF	MF-7802BS	N/A	N/A	\	\
17	Antenna tower	MF	MF-7802BS	N/A	N/A	\	\



RF Conducted Test

Item	Equipment	Manufacturer	Type No.	Serial No.	Firmware Version	Last calibration	Calibrated until
1	Spectrum Analyzer (9kHz-26.5GHz)	KEYSIGHT	N9020A	MY55370835	A.17.05	Sep. 20, 2025	Sep. 19, 2026
2	Spectrum Analyzer (10kHz-39.9GHz)	R&S	FSV40-N	100363	1.71 SP2	Sep. 20, 2025	Sep. 19, 2026
3	Test Cable	N/A	RF-01	N/A	N/A	May. 22, 2025	May. 21, 2026
3	Test Cable	N/A	RF-01	N/A	N/A	May. 22, 2026	May. 21, 2027
4	Test Cable	N/A	RF-02	N/A	N/A	May. 22, 2025	May. 21, 2026
4	Test Cable	N/A	RF-02	N/A	N/A	May. 22, 2026	May. 21, 2027
5	Test Cable	N/A	RF-03	N/A	N/A	May. 22, 2025	May. 21, 2026
5	Test Cable	N/A	RF-03	N/A	N/A	May. 22, 2026	May. 21, 2027
6	ESG Signal Generator	Agilent	E4421B	N/A	B.03.84	Sep. 19, 2025	Sep. 18, 2026
7	Signal Generator	Agilent	N5182A	N/A	A.01.87	Sep. 20, 2025	Sep. 19, 2026
8	Magnetic Field Probe Tester	Narda	ELT-400	0-0344/M-1752	N/A	Sep. 25, 2025	Sep. 24, 2026
9	SHIELD BOX	TESCOM	TC-5970C	5970C015553	N/A	Dec. 18, 2025	Dec. 17, 2026
10	Wideband Radio Communication Test	R&S	CMW500	106504	V 3.7.22	Sep. 28, 2025	Sep. 27, 2026
11	MWRF Power Meter Test system	MW	MW100-RF CB	N/A	N/A	Sep. 19, 2025	Sep. 18, 2026
12	D.C. Power Supply	LongWei	TPR-6405 D	N/A	N/A	\	\
13	RF Software	MW	MTS8310	V2.0.0.0	N/A	\	\



4. EMC EMISSION TEST

4.1 CONDUCTED EMISSION MEASUREMENT

Test Requirement:	FCC Part15 C Section 15.207
Test Method:	ANSI C63.10-2020+Cor 1-2023
Test Frequency Range:	150KHz to 30MHz
Receiver setup:	RBW=9KHz, VBW=30KHz, Sweep time=auto

4.1.1 POWER LINE CONDUCTED EMISSION Limits

FREQUENCY (MHz)	Limit (dBuV)		Standard
	Quasi-peak	Average	
0.15 -0.5	66 - 56 *	56 - 46 *	FCC
0.50 -5.0	56.00	46.00	FCC
5.0 -30.0	60.00	50.00	FCC

Note:

(1) *Decreases with the logarithm of the frequency.

4.1.2 TEST PROCEDURE

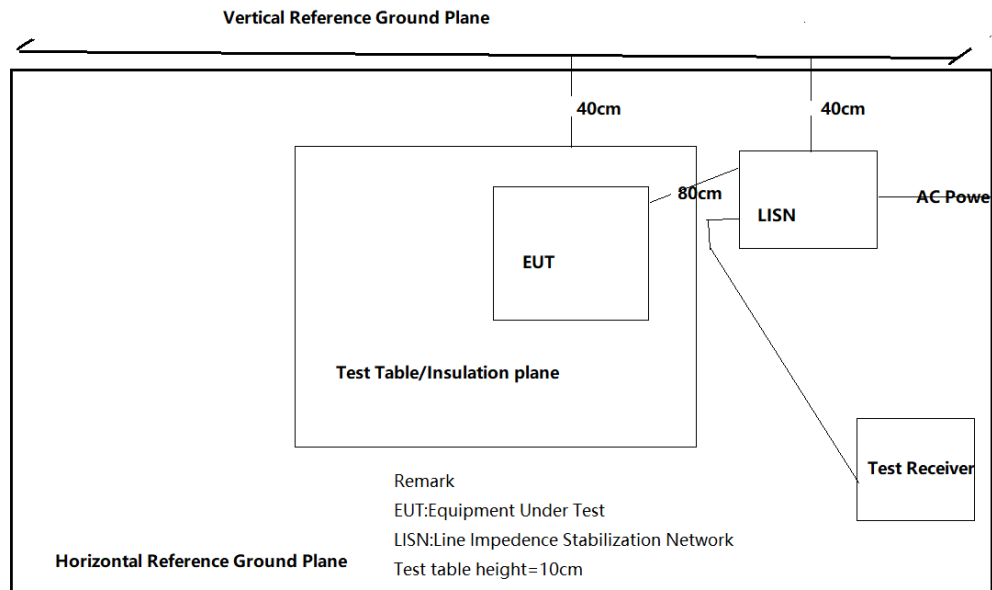
- The EUT was placed 0.1 meters from the horizontal ground plane with EUT being connected to the power mains through a line impedance stabilization network (LISN). All other support equipments powered from additional LISN(s). The LISN provide 50 Ohm/ 50uH of coupling impedance for the measuring instrument.
- Interconnecting cables that hang closer than 40 cm to the ground plane shall be folded back and forth in the center forming a bundle 30 to 40 cm long.
- I/O cables that are not connected to a peripheral shall be bundled in the center. The end of the cable may be terminated, if required, using the correct terminating impedance. The overall length shall not exceed 1 m.
- LISN at least 80 cm from nearest part of EUT chassis.
- For the actual test configuration, please refer to the related Item –EUT Test Photos.

4.1.3 DEVIATION FROM TEST STANDARD

No deviation



4.1.4 TEST SETUP



4.1.5 EUT OPERATING CONDITIONS

The EUT was configured for testing in a typical fashion (as a customer would normally use it). The EUT has been programmed to continuously transmit during test. This operating condition was tested and used to collect the included data.

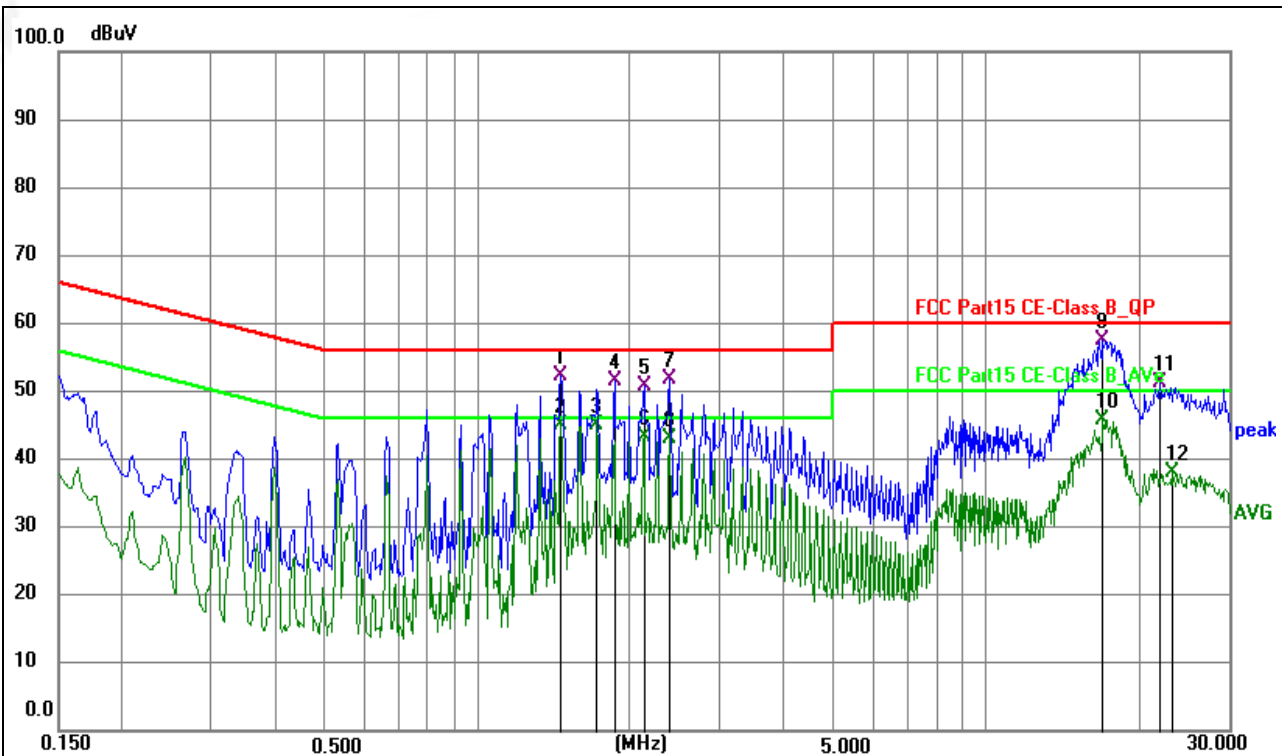
We pretest AC 120V and AC 230V, the worst voltage was AC 120V and the data recording in the report.



4.1.6 TEST RESULT

All modes have been tested, only shows data from the worst-performing mode N20-2412MHz MINO

Temperature:	26°C	Relative Humidity:	54%
Pressure:	101 kPa	Polarization:	L
Test Voltage:	AC 120V/60Hz		



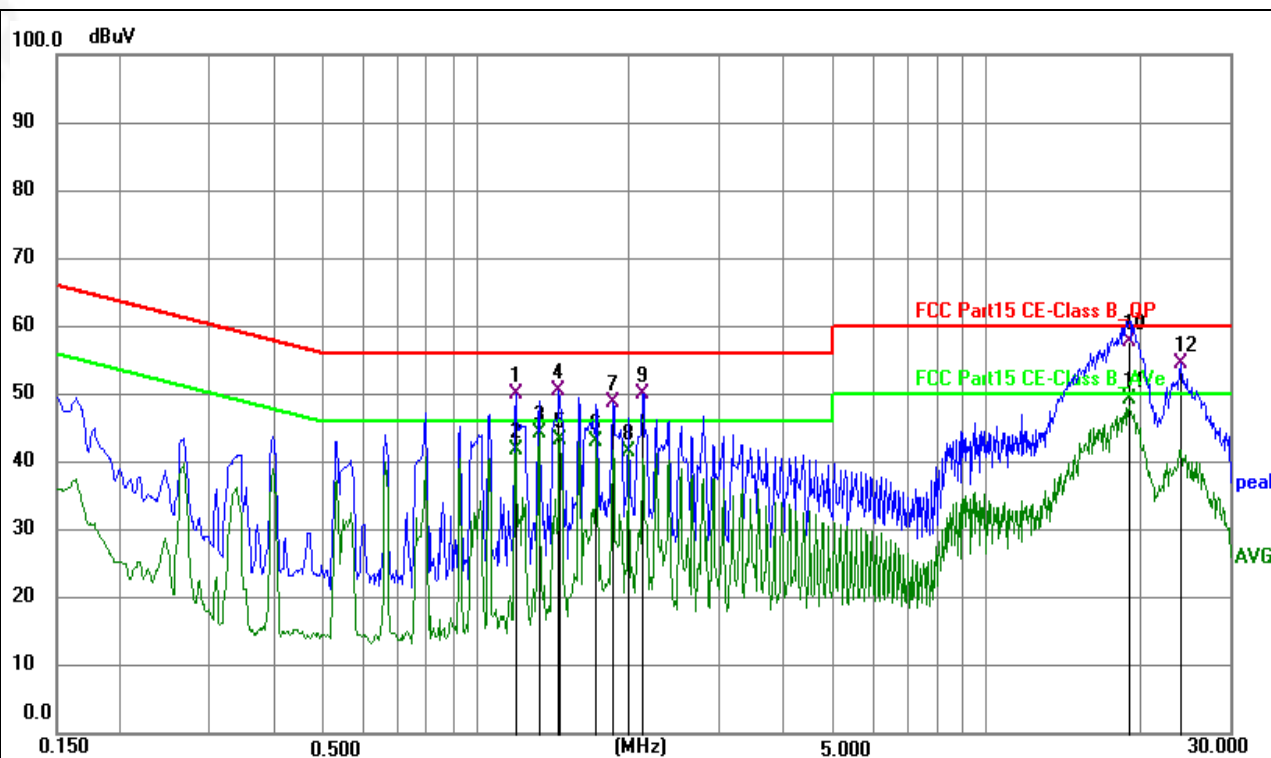
No.	Frequency (MHz)	Reading (dBuV)	Correct (dB)	Result (dBuV)	Limit (dBuV)	Margin (dB)	Remark
1	1.4562	31.95	20.35	52.30	56.00	-3.70	QP
2	1.4562	24.56	20.35	44.91	46.00	-1.09	AVG
3	1.7161	24.78	20.25	45.03	46.00	-0.97	AVG
4	1.8581	31.28	20.20	51.48	56.00	-4.52	QP
5	2.1213	30.45	20.20	50.65	56.00	-5.35	QP
6	2.1213	22.95	20.20	43.15	46.00	-2.85	AVG
7	2.3835	31.39	20.29	51.68	56.00	-4.32	QP
8	2.3835	22.77	20.29	43.06	46.00	-2.94	AVG
9	16.9281	36.60	20.79	57.39	60.00	-2.61	QP
10	16.9281	25.05	20.79	45.84	50.00	-4.16	AVG
11	21.9462	30.51	20.72	51.23	60.00	-8.77	QP
12	23.1403	17.46	20.58	38.04	50.00	-11.96	AVG

Notes:

1. An initial pre-scan was performed on the line and neutral lines with peak detector.
2. Quasi-Peak and Average measurement were performed at the frequencies with maximized peak emission.
3. Measurement Level = Reading level + Correct Factor



Temperature :	26°C	Relative Humidity:	54%
Pressure :	101kPa	Phase :	N
Test Voltage :	AC 120V/60Hz		



No.	Frequency (MHz)	Reading (dBuV)	Correct (dB)	Result (dBuV)	Limit (dBuV)	Margin (dB)	Remark
1	1.1906	29.46	20.44	49.90	56.00	-6.10	QP
2	1.1906	21.45	20.44	41.89	46.00	-4.11	AVG
3	1.3237	23.88	20.39	44.27	46.00	-1.73	AVG
4	1.4485	30.16	20.35	50.51	56.00	-5.49	QP
5	1.4562	22.92	20.35	43.27	46.00	-2.73	AVG
6	1.7161	22.78	20.25	43.03	46.00	-2.97	AVG
7	1.8483	28.62	20.20	48.82	56.00	-7.18	QP
8	1.9801	21.29	20.17	41.46	46.00	-4.54	AVG
9	2.1101	29.85	20.20	50.05	56.00	-5.95	QP
10	19.0210	36.93	20.91	57.84	60.00	-2.16	QP
11	19.0210	28.41	20.91	49.32	50.00	-0.68	AVG
12	24.0147	34.03	20.47	54.50	60.00	-5.50	QP

Notes:

- 1.An initial pre-scan was performed on the line and neutral lines with peak detector.
- 2.Quasi-Peak and Average measurement were performed at the frequencies with maximized peak emission.
- 3.Measurement Level = Reading level + Correct Factor



4.2 RADIATED EMISSION MEASUREMENT

Test Requirement:	FCC Part15 C Section 15.209				
Test Method:	ANSI C63.10-2020+Cor 1-2023				
Test Frequency Range:	9kHz to 25GHz				
Test site:	Measurement Distance: 3m				
Receiver setup:	Frequency	Detector	RBW	VBW	Value
	9KHz-150KHz	Quasi-peak	200Hz	600Hz	Quasi-peak
	150KHz-30MHz	Quasi-peak	9KHz	30KHz	Quasi-peak
	30MHz-1GHz	Quasi-peak	100KHz	300KHz	Quasi-peak
	Above 1GHz	Peak	1MHz	3MHz	Peak
		Peak	1MHz	10Hz	Average

4.2.1 RADIATED EMISSION LIMITS

Frequencies (MHz)	Field Strength (micровolts/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

LIMITS OF RADIATED EMISSION MEASUREMENT

FREQUENCY (MHz)	Limit (dBuV/m) (at 3M)	
	PEAK	AVERAGE
Above 1000	74	54

Notes:

- (1) The limit for radiated test was performed according to FCC PART 15C.
- (2) The tighter limit applies at the band edges.
- (3) Emission level (dBuV/m)=20log Emission level (uV/m).



4.2.2 TEST PROCEDURE

Below 1GHz test procedure as below:

- The EUT was placed on the top of a rotating table 0.1 meters above the ground at a 3 meter 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 variable-height antenna tower.
- The antenna 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 (for the test frequency of below 30MHz, the antenna was tuned to heights 1 meter) 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.
- If the emission level of the EUT in peak mode was 10dB lower than the limit specified, then testing could be stopped and the peak values of the EUT would be reported. Otherwise the emissions that did not have 10dB margin would be re-tested one by one using peak, quasi-peak or average method as specified and then reported in a data sheet.

Above 1GHz test procedure as below:

- Different from above is the test site, change from Semi- Anechoic Chamber to fully Anechoic Chamber and change from table 0.8 meter to 1.5 meter (Above 18GHz the distance is 1 meter and table is 1.5 meter).
- Test the EUT in the lowest channel, the middle channel, the Highest channel

Note:

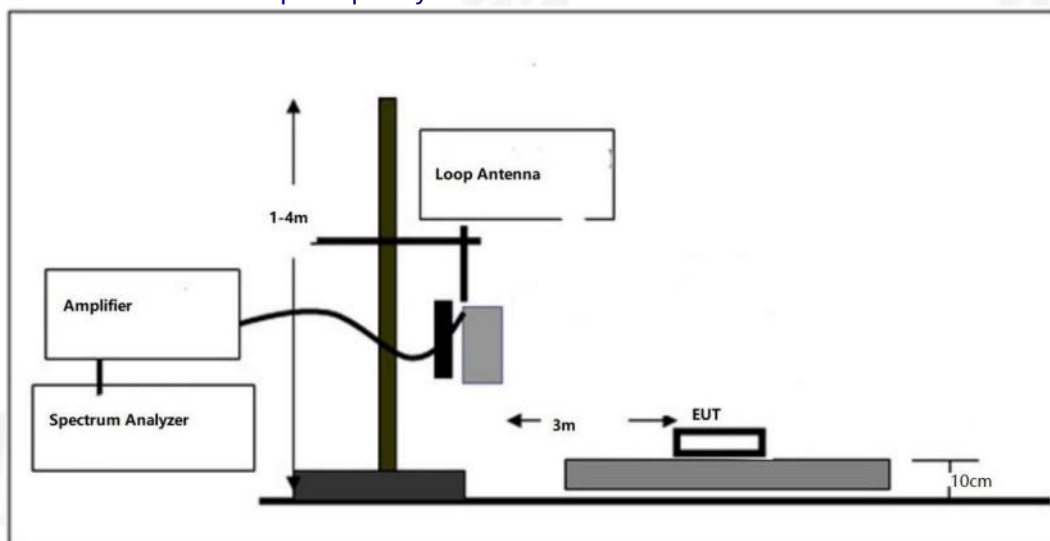
Both horizontal and vertical antenna polarities were tested and performed pretest to three orthogonal axis. The worst case emissions were reported

4.2.3 DEVIATION FROM TEST STANDARD

No deviation

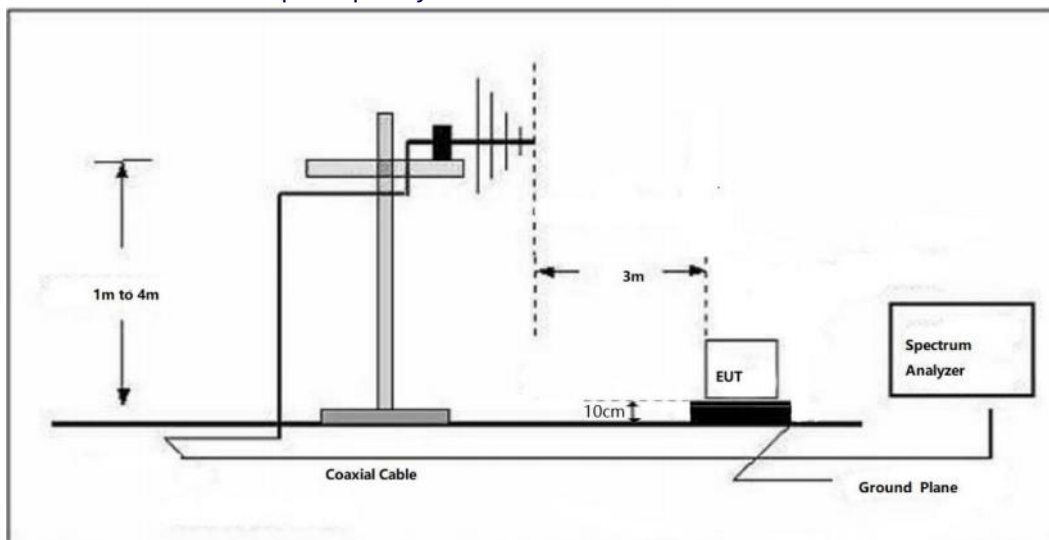
4.2.4 TEST SETUP

(A) Radiated Emission Test-Up Frequency Below 30MHz

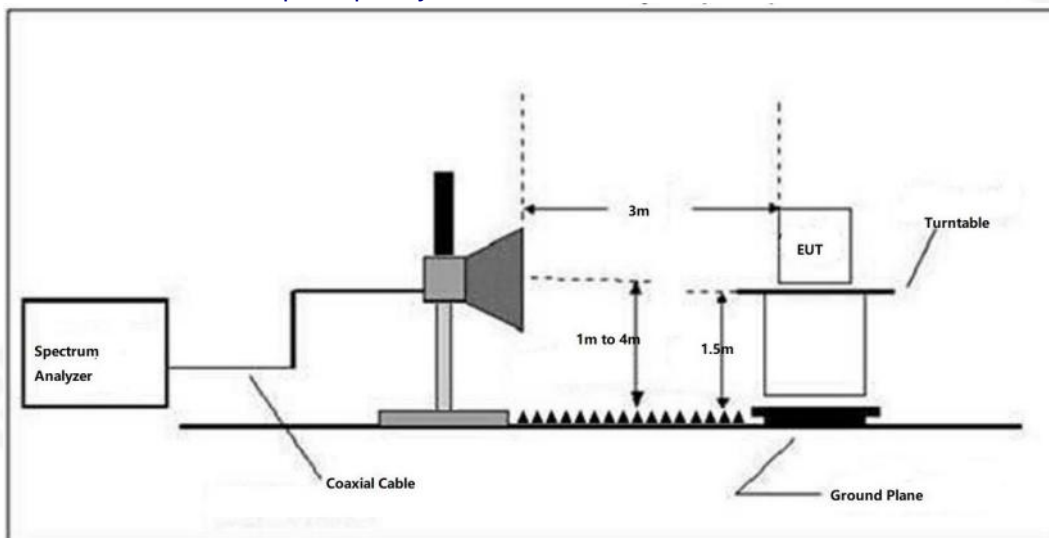




(B) Radiated Emission Test-Up Frequency 30MHz~1GHz



(C) Radiated Emission Test-Up Frequency Above 1GHz



4.2.5 EUT OPERATING CONDITIONS

The EUT tested system was configured as the statements of 2.4 Unless otherwise a special operating condition is specified in the follows during the testing.

4.2.6 TEST RESULTS (BETWEEN 9KHZ – 30MHZ)

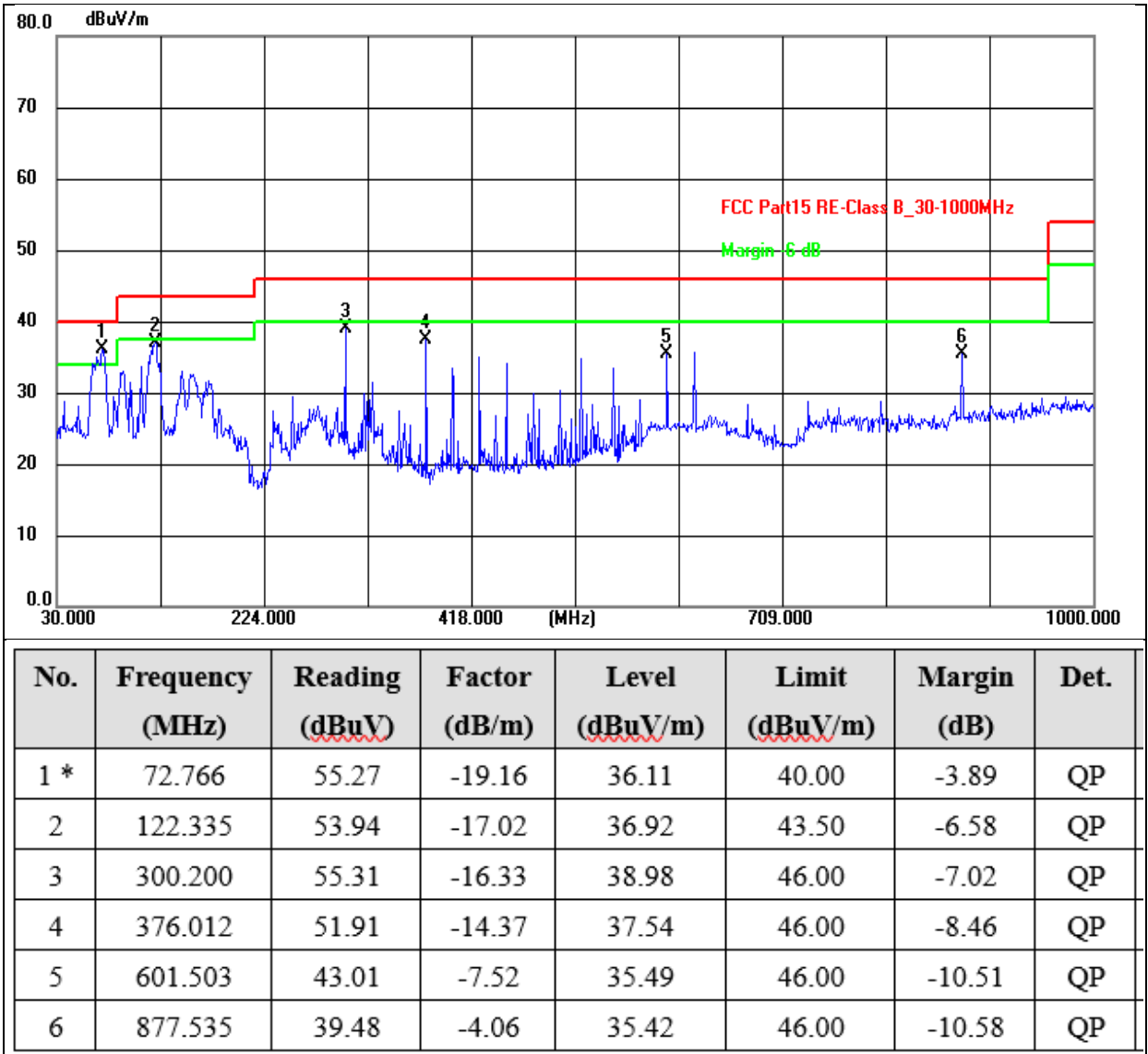
The emission from 9 kHz to 30MHz and 18GMHz to 40GMHz were pre-tested and found the result was 20dB lower than the limit, and according to 15.31(o) , the test result no need to reported.



Between 30MHz – 1GHz

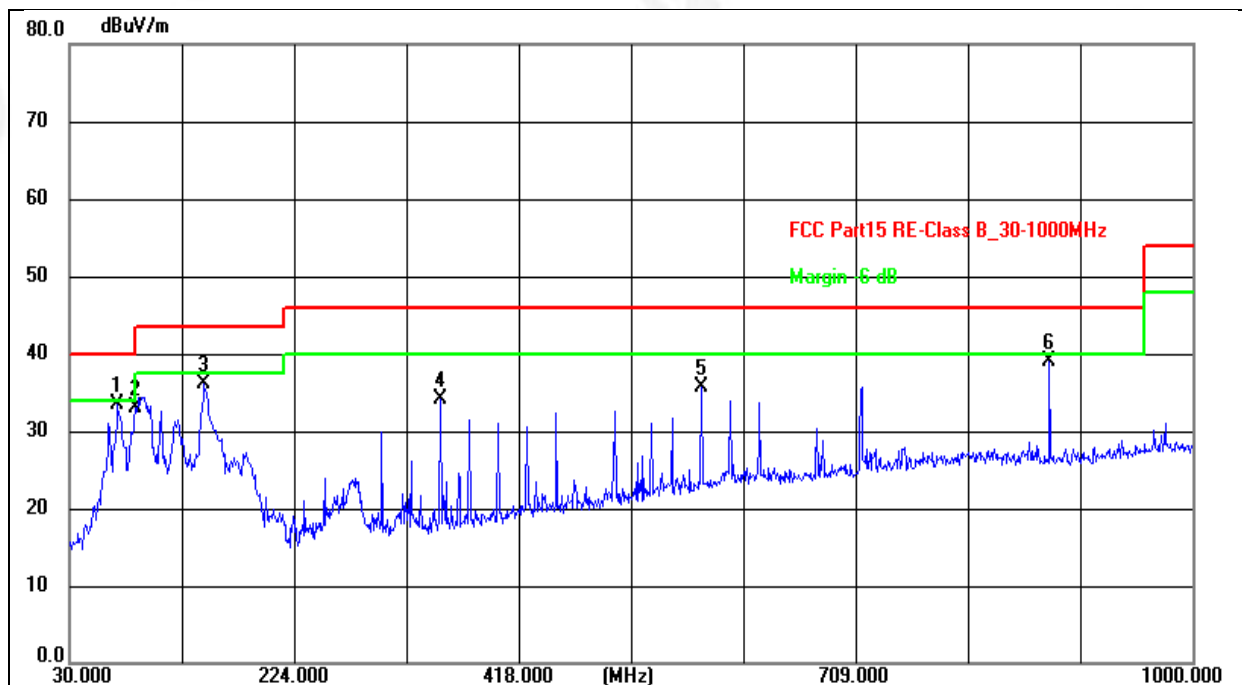
All modes have been tested, only shows data from the worst-performing mode N20-2412MHz MINO

Temperature:	26°C	Relative Humidity:	54%
Pressure:	101 kPa	Polarization:	Horizontal
Test Voltage:	DC 51.2V		





Temperature:	26°C	Relative Humidity:	54%
Pressure:	101kPa	Polarization:	Vertical
Test Voltage:	DC 51.2V		



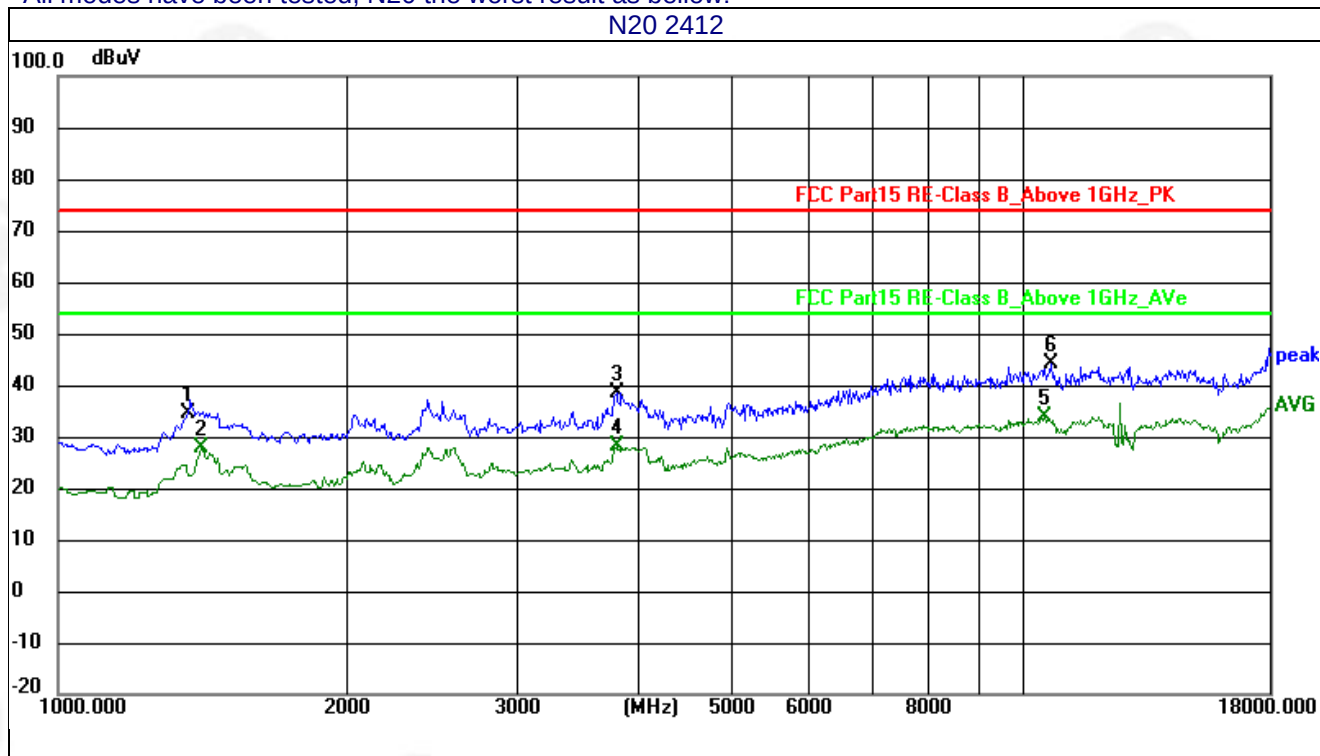
No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Det.
1 *	71.752	52.35	-18.96	33.39	40.00	-6.61	QP
2	87.287	52.98	-20.05	32.93	40.00	-7.07	QP
3	146.517	51.87	-15.73	36.14	43.50	-7.36	QP
4	350.420	49.02	-14.99	34.03	46.00	-11.97	QP
5	575.686	44.20	-8.52	35.68	46.00	-10.32	QP
6	876.687	43.04	-4.07	38.97	46.00	-7.03	QP

Remarks:

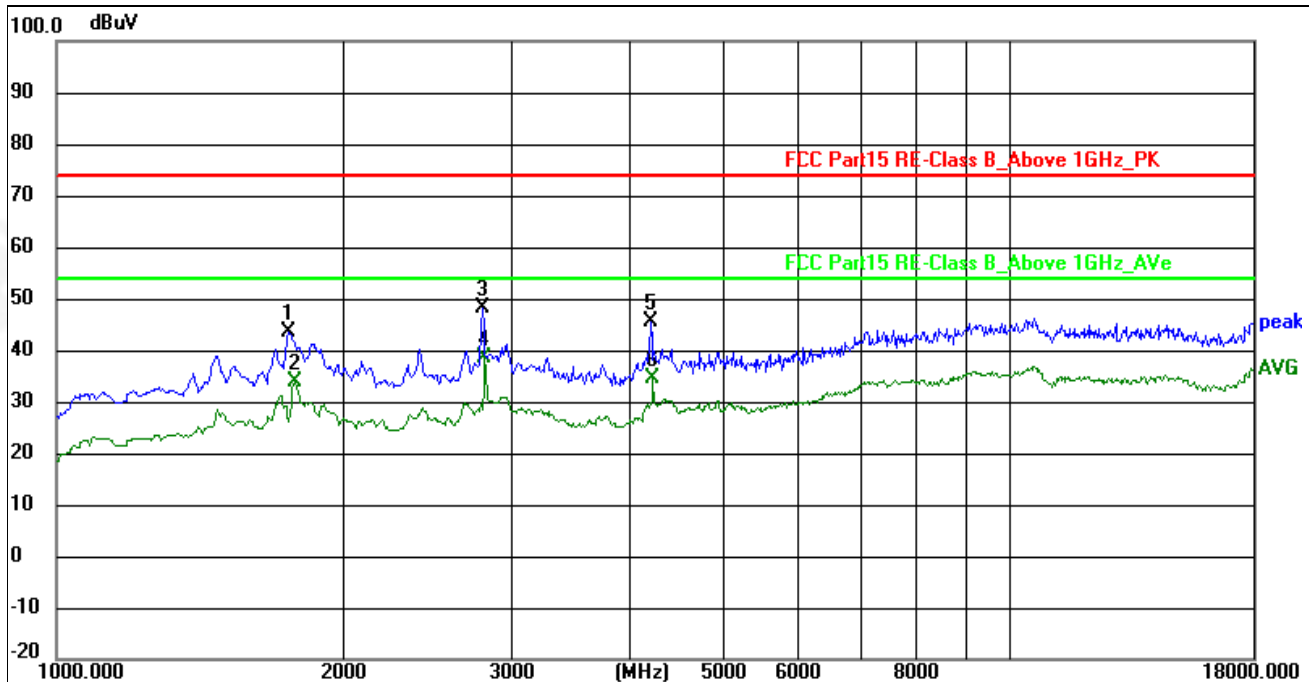
- 1.Final Level =Receiver Read level + Antenna Factor + Cable Loss – Preamplifier Factor
- 2.The emission levels of other frequencies are very lower than the limit and not show in test report.
- 3.The test data shows only the worst case 802.11N20.-2412MHz MINO



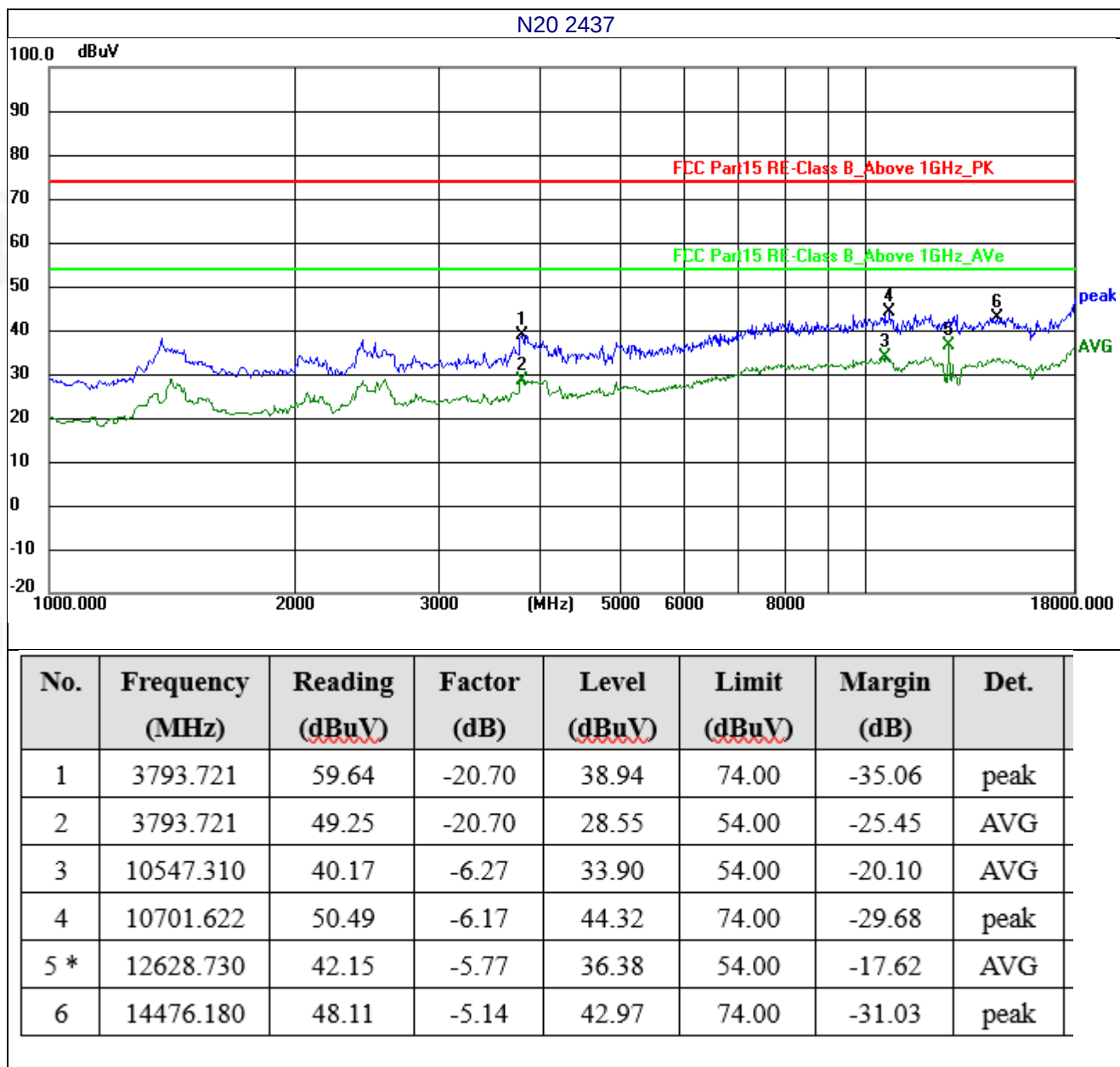
All modes have been tested, N20 the worst result as below:

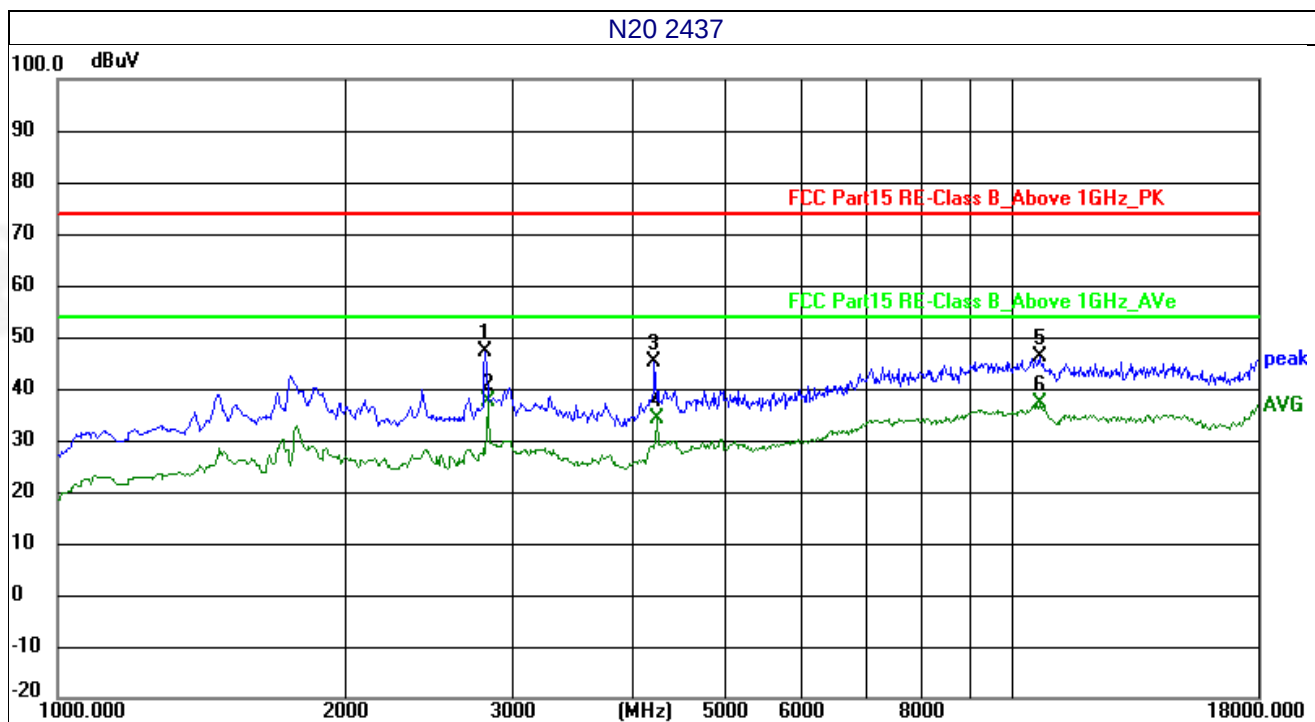


No.	Frequency (MHz)	Reading (dBuV)	Factor (dB)	Level (dBuV)	Limit (dBuV)	Margin (dB)	Det.
1	1364.123	61.39	-26.96	34.43	74.00	-39.57	peak
2	1408.371	54.83	-26.91	27.92	54.00	-26.08	AVG
3	3788.646	59.14	-20.71	38.43	74.00	-35.57	peak
4	3788.646	48.75	-20.71	28.04	54.00	-25.96	AVG
5 *	10522.391	40.17	-6.30	33.87	54.00	-20.13	AVG
6	10676.183	50.49	-6.18	44.31	74.00	-29.69	peak

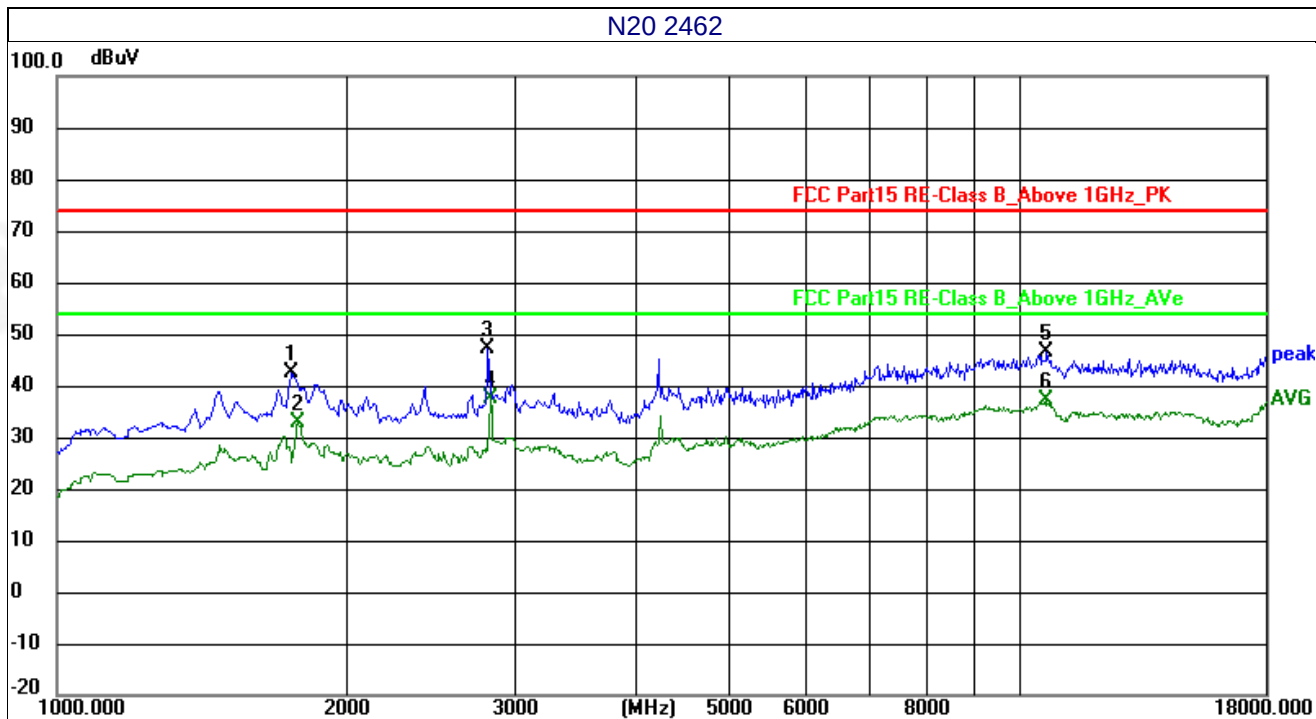


No.	Frequency (MHz)	Reading (dBuV)	Factor (dB)	Level (dBuV)	Limit (dBuV)	Margin (dB)	Det.
1	1751.802	69.72	-26.29	43.43	74.00	-30.57	peak
2	1777.432	60.13	-26.23	33.90	54.00	-20.10	AVG
3	2796.401	70.51	-22.32	48.19	74.00	-25.81	peak
4 *	2812.695	60.76	-22.25	38.51	54.00	-15.49	AVG
5	4199.724	65.29	-19.74	45.55	74.00	-28.45	peak
6	4224.194	54.25	-19.68	34.57	54.00	-19.43	AVG

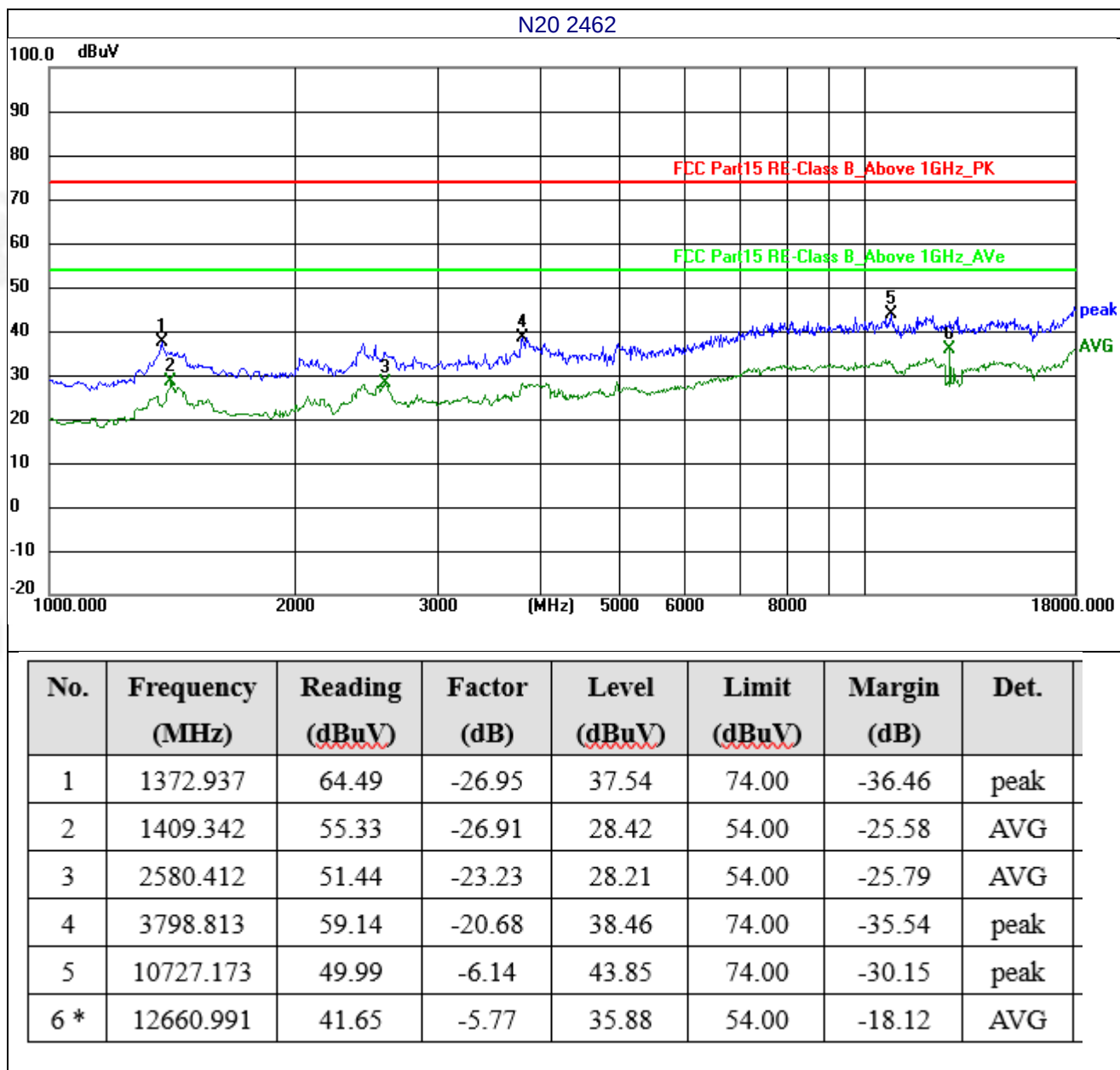




No.	Frequency (MHz)	Reading (dBuV)	Factor (dB)	Level (dBuV)	Limit (dBuV)	Margin (dB)	Det.
1	2799.296	69.51	-22.31	47.20	74.00	-26.80	peak
2 *	2815.623	59.76	-22.24	37.52	54.00	-16.48	AVG
3	4205.791	64.79	-19.73	45.06	74.00	-28.94	peak
4	4230.322	53.75	-19.67	34.08	54.00	-19.92	AVG
5	10634.002	52.54	-6.21	46.33	74.00	-27.67	peak
6	10634.002	43.22	-6.21	37.01	54.00	-16.99	AVG



No.	Frequency (MHz)	Reading (dBuV)	Factor (dB)	Level (dBuV)	Limit (dBuV)	Margin (dB)	Det.
1	1753.781	68.72	-26.27	42.45	74.00	-31.55	peak
2	1779.492	59.13	-26.22	32.91	54.00	-21.09	AVG
3	2802.199	69.51	-22.29	47.22	74.00	-26.78	peak
4 *	2818.559	59.76	-22.22	37.54	54.00	-16.46	AVG
5	10659.348	52.54	-6.20	46.34	74.00	-27.66	peak
6	10659.348	43.22	-6.20	37.02	54.00	-16.98	AVG

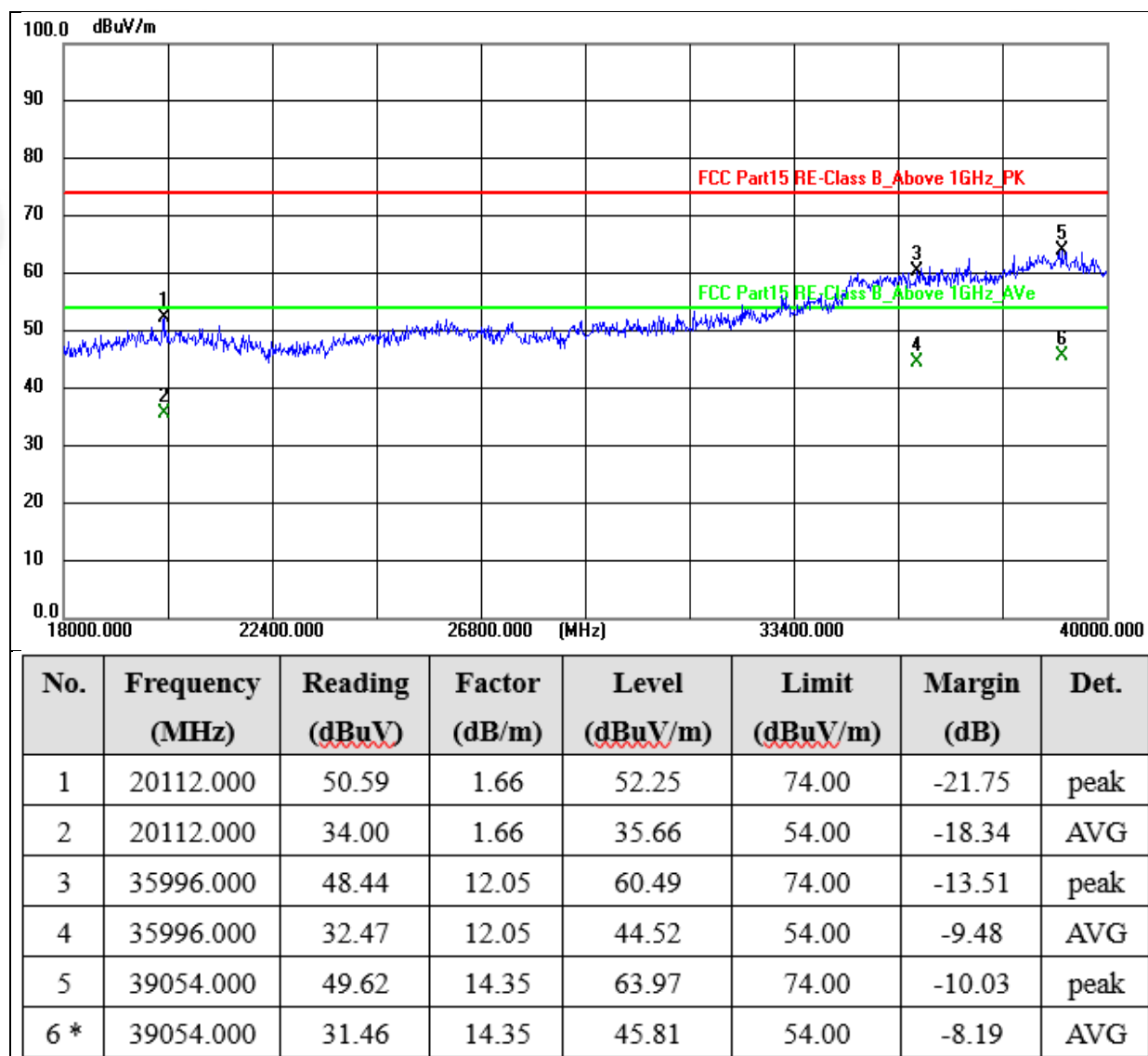


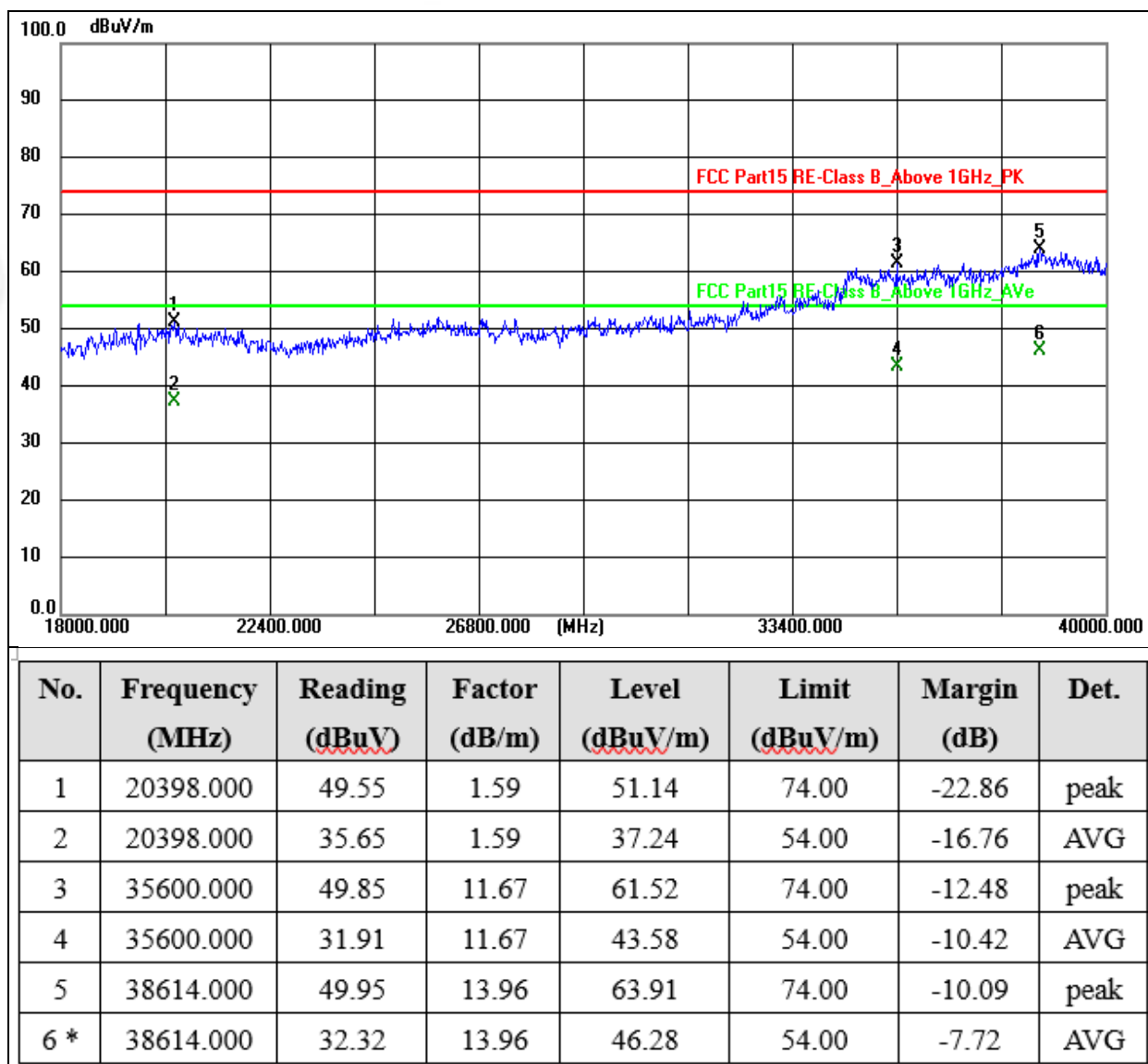
Remark:

1. Emission Level = Meter Reading + Antenna Factor + Cable Loss – Pre-amplifier, Margin= Emission Level - Limit
2. If peak below the average limit, the average emission was no test.
3. The amplitude of spurious emissions which are attenuated by more than 20dB below the permissible value has no need to be reported.
4. The test data shows only the worst case.



All modes have been tested, 802.11 N 2412MHz MINO he worst result as below:





Remarks:

1. An initial pre-scan was performed on the peak detector.
2. Quasi-Peak measurement were performed at the frequencies with maximized peak emission.
3. The emission levels of other frequencies are very lower than the limit and not show in test report.
4. Final Level = Reading level + Correct Factor.
5. Correct Factor = Antenna factor + Cable loss factor - Amplifier factor.
6. Margin = Measurement Level - Limit.
7. The test data shows only the worst case 802.11 N 2412MHz MINO.



5. RADIATED BAND EMISSION MEASUREMENT

5.1 TEST REQUIREMENT:

Test Requirement:	FCC Part 15 C Section 15.209 and 15.205				
Test Method:	ANSI C63.10-2020+Cor 1-2023				
Test Frequency Range:	All of the restrict bands were tested, only the worst band's (2310MHz to 2500MHz) data was showed.				
Test site:	Measurement Distance: 3m				
Receiver setup:	Frequency	Detector	RBW	VBW	Value
	Above	Peak	1MHz	3MHz	Peak
	1GHz	Average	1MHz	3MHz	Average

LIMITS OF RADIATED EMISSION MEASUREMENT (Above 1000MHz)

FREQUENCY (MHz)	Class B (dBuV/m) (at 3M)	
	PEAK	AVERAGE
Above 1000	74	54

Notes:

- (1) The limit for radiated test was performed according to FCC PART 15C.
- (2) The tighter limit applies at the band edges.
- (3) Emission level (dBuV/m) = 20log Emission level (uV/m).

5.2 TEST PROCEDURE

Above 1GHz test procedure as below:

1. The EUT was placed on the top of a rotating table 1.5 meters above the ground at a 3 meter camber. The table was rotated 360 degrees to determine the position of the highest radiation.
2. The EUT was set 3 meters away from the interference-receiving antenna, which was mounted on the top of a variable-height antenna tower.
3. The antenna 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.
4. 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 rota table was turned from 0 degrees to 360 degrees to find the maximum reading.
5. The test-receiver system was set to Peak Detect Function and Specified Bandwidth with Maximum Hold Mode.
6. If the emission level of the EUT in peak mode was 10dB lower than the limit specified, then testing could be stopped and the peak values of the EUT would be reported. Otherwise the emissions that did not have 10dB margin would be re-tested one by one using peak, quasi-peak or average method as specified and then reported in a data sheet.
7. Test the EUT in the lowest channel, the Highest channel

Note:

Both horizontal and vertical antenna polarities were tested and performed pretest to three orthogonal axis. The worst case emissions were reported

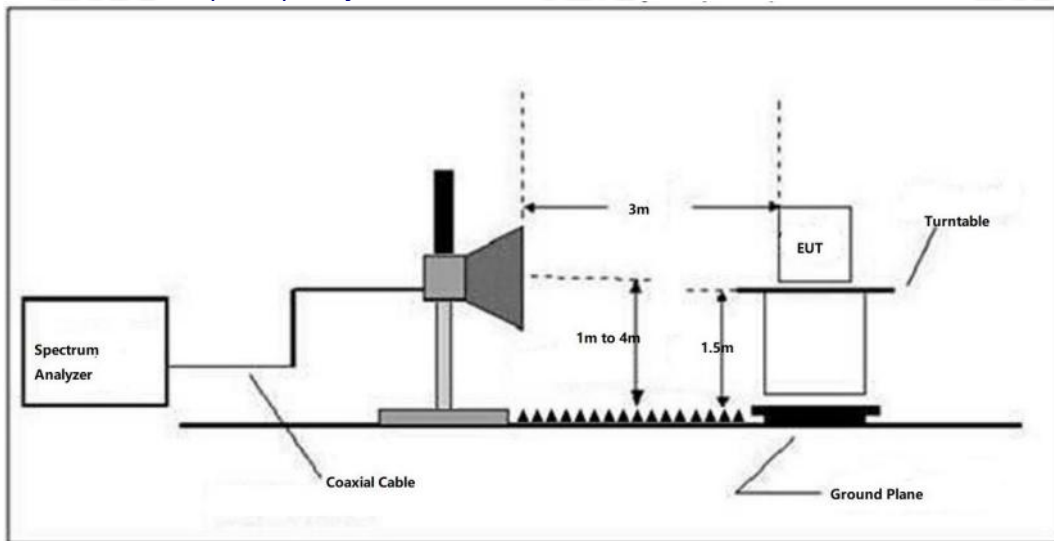
5.3 DEVIATION FROM TEST STANDARD

No deviation



5.4 TEST SETUP

Radiated Emission Test-Up Frequency Above 1GHz



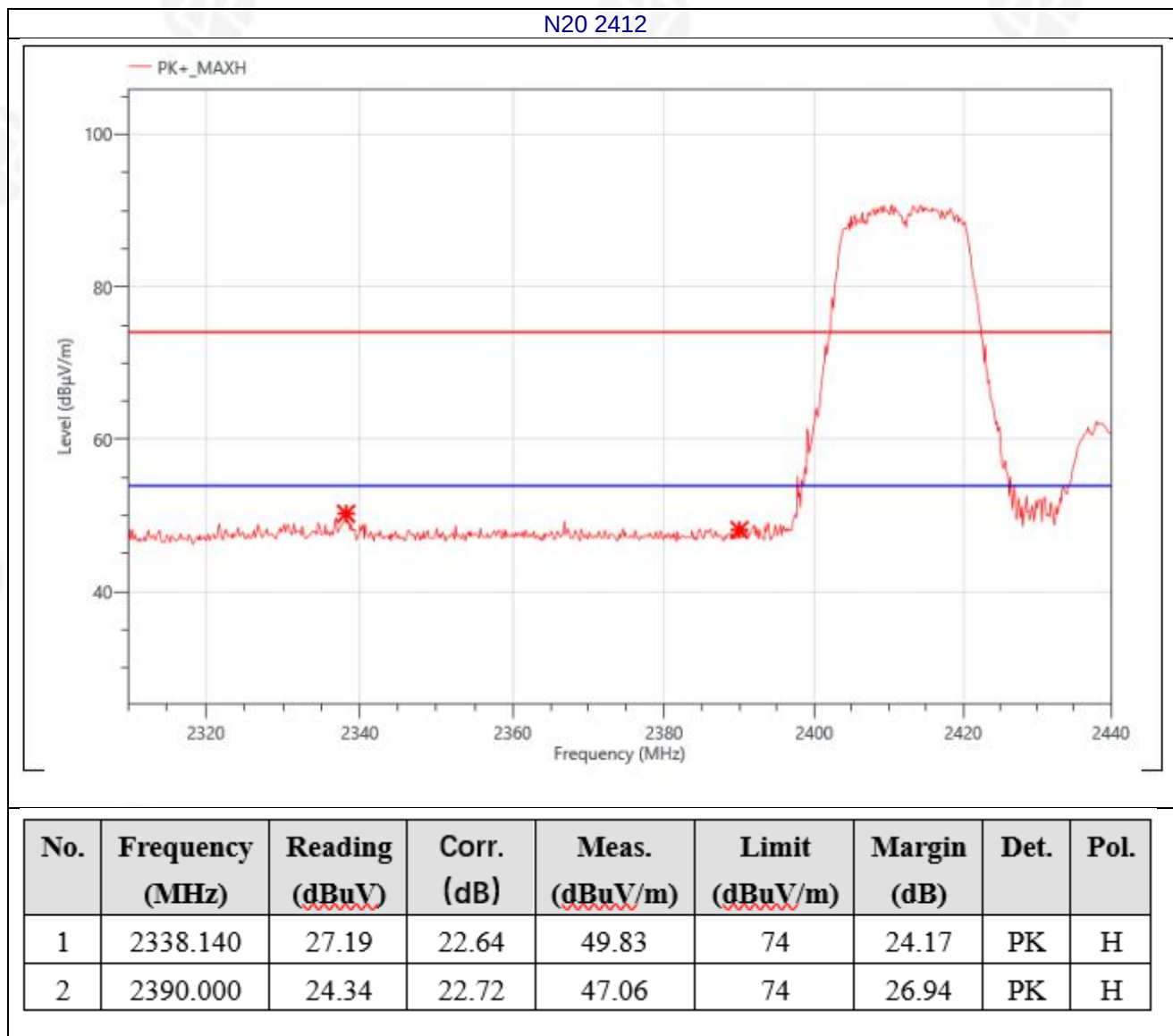
5.5 EUT OPERATING CONDITIONS

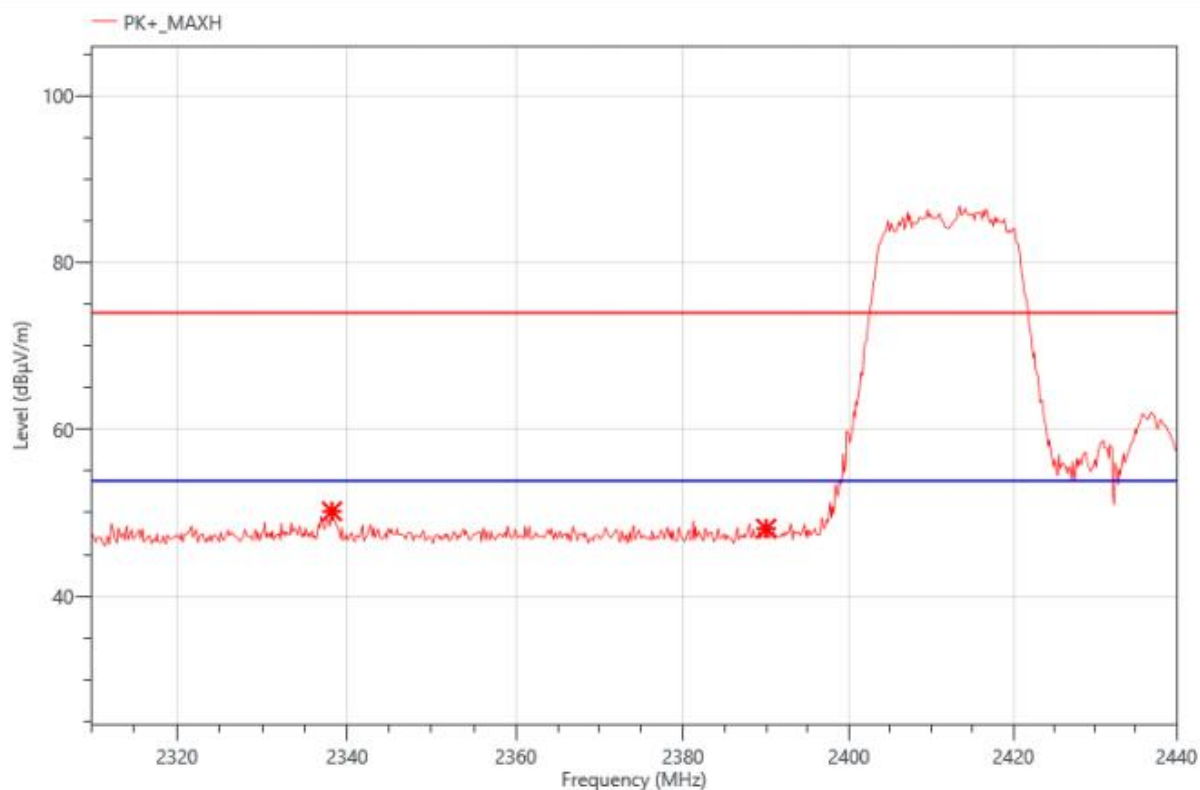
The EUT tested system was configured as the statements of 2.3 Unless otherwise a special operating condition is specified in the follows during the testing.



5.6 TEST RESULT

All modes have been tested, N20 MINO the worst result as bellow:

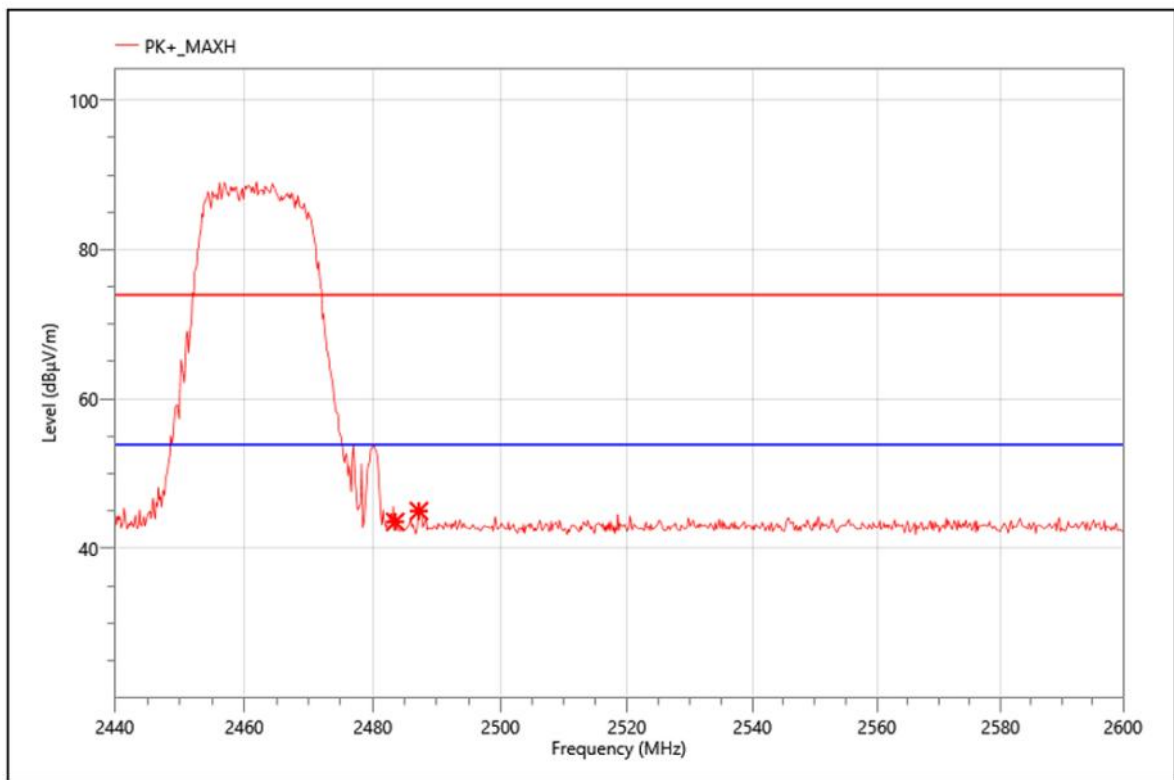




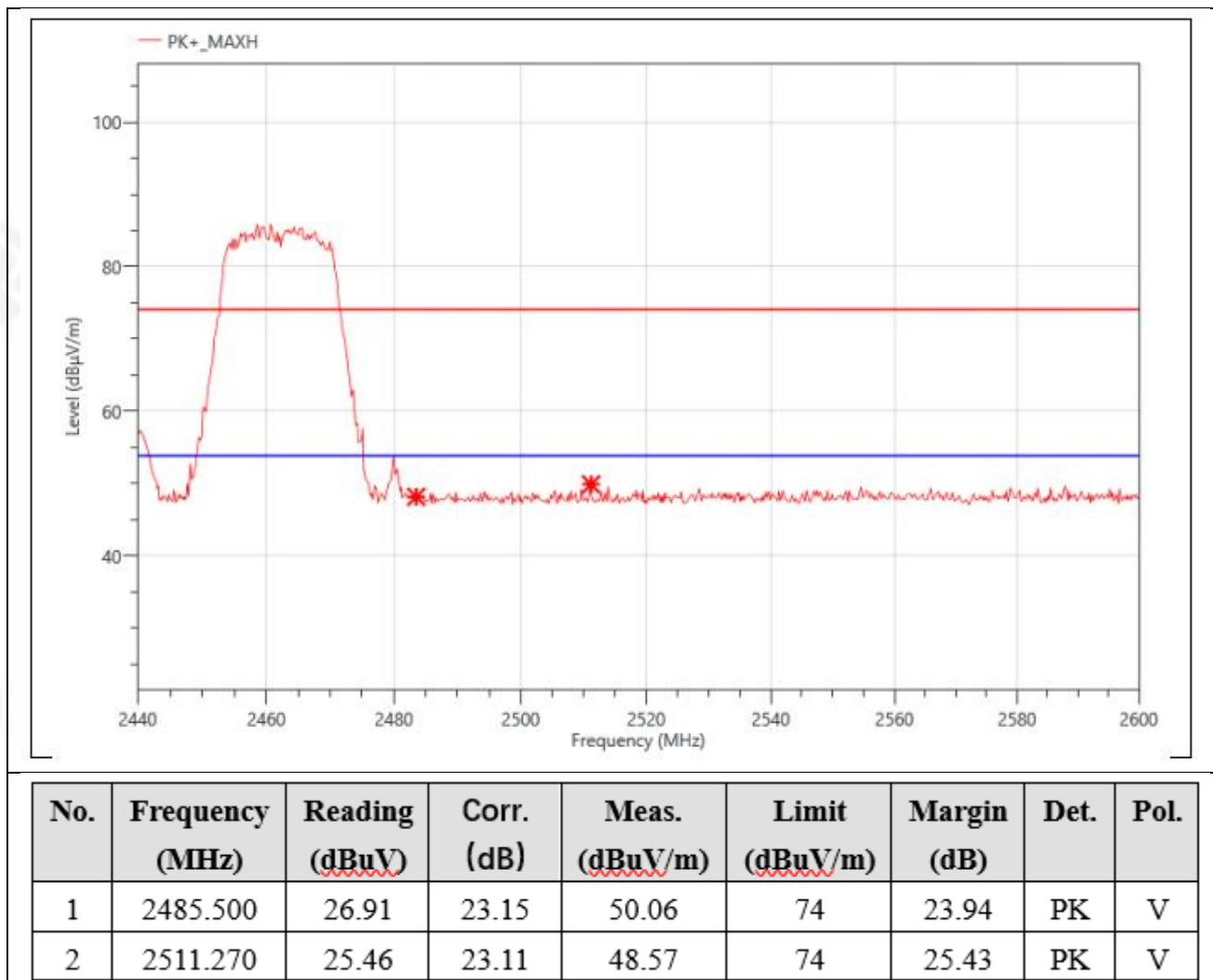
No.	Frequency (MHz)	Reading (dBuV)	Corr. (dB)	Meas. (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Det.	Pol.
1	2383.870	27.08	22.64	49.72	74	24.28	PK	V
2	2390.000	15.27	22.72	37.99	74	36.01	PK	V



N20 2462



No.	Frequency (MHz)	Reading (dBuV)	Corr. (dB)	Meas. (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Det.	Pol.
1	2485.500	19.97	23.15	43.12	74	30.88	PK	H
2	2487.460	21.22	23.14	44.36	74	29.64	PK	H



Remark:

1. Emission Level = Meter Reading + Antenna Factor + Cable Loss – Pre-amplifier, Margin= Emission Level – Limit

If peak below the average limit, the average emission was no test.



6. POWER SPECTRAL DENSITY TEST

Test Requirement:	FCC Part15 C Section 15.247 (e)
Test Method:	ANSI C63.10-2020+Cor 1-2023 and KDB558074 D01DTS Meas Guidancev05r02

6.1 APPLIED PROCEDURES / LIMIT

FCC Part15 (15.247), Subpart C				
Section	Test Item	Limit	Frequency Range (MHz)	Result
15.247	Power Spectral Density	8dBm/3kHz	2400-2483.5	PASS

6.2 TEST PROCEDURE

1. Set analyzer center frequency to DTS channel center frequency.
2. Set the span to 1.5 times the DTS bandwidth.
3. Set the RBW to: $3\text{ kHz} \leq \text{RBW} \leq 100\text{ kHz}$.
4. Set the VBW $\geq 3 \times \text{RBW}$.
5. Detector = peak.
6. Sweep time = auto couple.
7. Trace mode = max hold.
8. Allow trace to fully stabilize.
9. Use the peak marker function to determine the maximum amplitude level within the RBW.
10. If measured value exceeds limit, reduce RBW (no less than 3 kHz) and repeat.

6.3 DEVIATION FROM STANDARD

No deviation.

6.4 TEST SETUP



6.5 EUT OPERATION CONDITIONS

The EUT tested system was configured as the statements of 2.1 Unless otherwise a special operating condition is specified in the follows during the testing.



6.6 TEST RESULT

Temperature :	26°C	Relative Humidity :	54%
Pressure :	101kPa	Test Voltage :	DC 51.2V
Test Mode :	TX Mode		

Test Mode	Antenna	Frequency [MHz]	Result[dBm/3-100kHz]	Limit[dBm/3kHz]	Verdict
11B	Ant1	2412	1.54	≤8.00	PASS
	Ant2	2412	2.33	≤8.00	PASS
	Ant1	2437	2.25	≤8.00	PASS
	Ant2	2437	2.93	≤8.00	PASS
	Ant1	2462	2.23	≤8.00	PASS
	Ant2	2462	2.26	≤8.00	PASS
11G	Ant1	2412	-11.65	≤8.00	PASS
	Ant2	2412	-12.15	≤8.00	PASS
	Ant1	2437	-11.69	≤8.00	PASS
	Ant2	2437	-10.96	≤8.00	PASS
	Ant1	2462	-11.32	≤8.00	PASS
	Ant2	2462	-10.35	≤8.00	PASS
11N20MIMO	Ant1	2412	-11.45	≤8.00	PASS
	Ant2	2412	-12.41	≤8.00	PASS
	total	2412	-8.89	≤8.00	PASS
	Ant1	2437	-11.88	≤8.00	PASS
	Ant2	2437	-13.43	≤8.00	PASS
	total	2437	-9.58	≤8.00	PASS
	Ant1	2462	-11.47	≤8.00	PASS
	Ant2	2462	-12.37	≤8.00	PASS
	total	2462	-8.89	≤8.00	PASS

Remark:

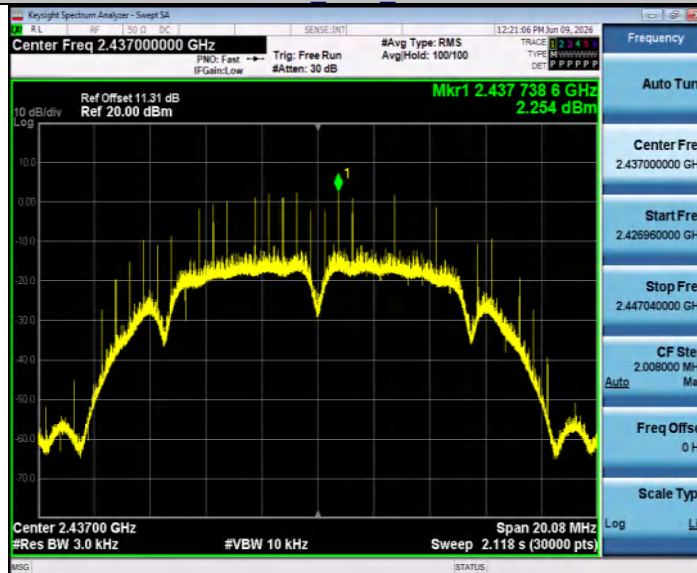
gain max 2.48 dBi



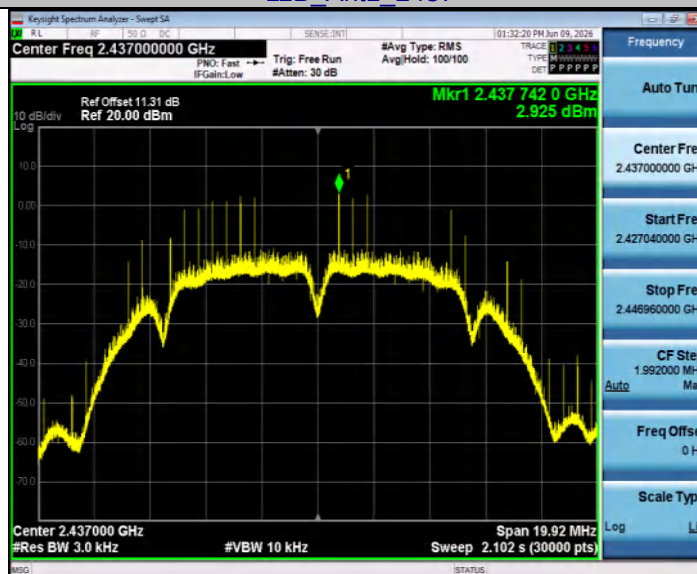
11B_Ant1_2412



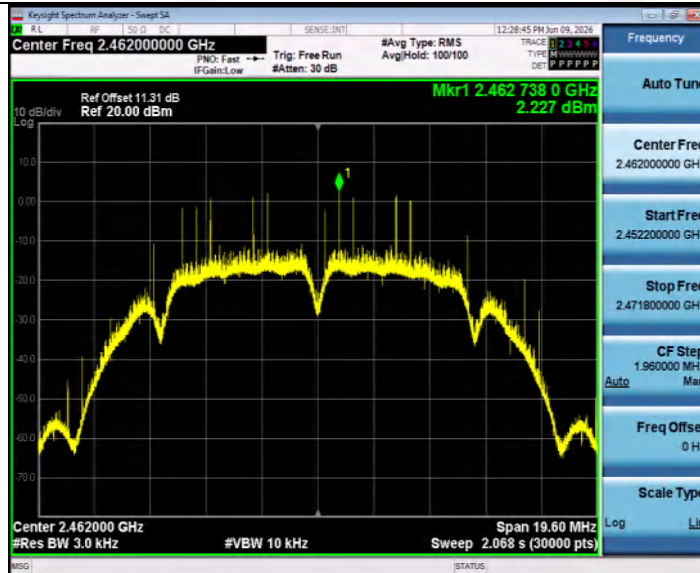
11B Ant2 2412



11B Ant1 2437



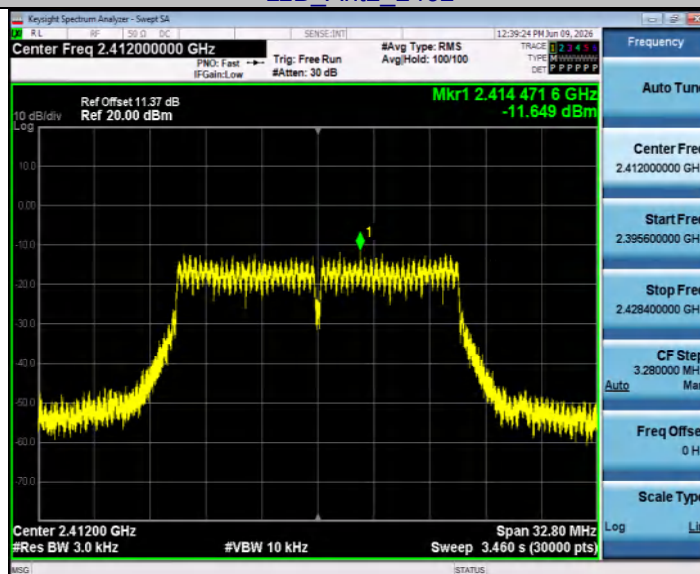
11B Ant2 2437



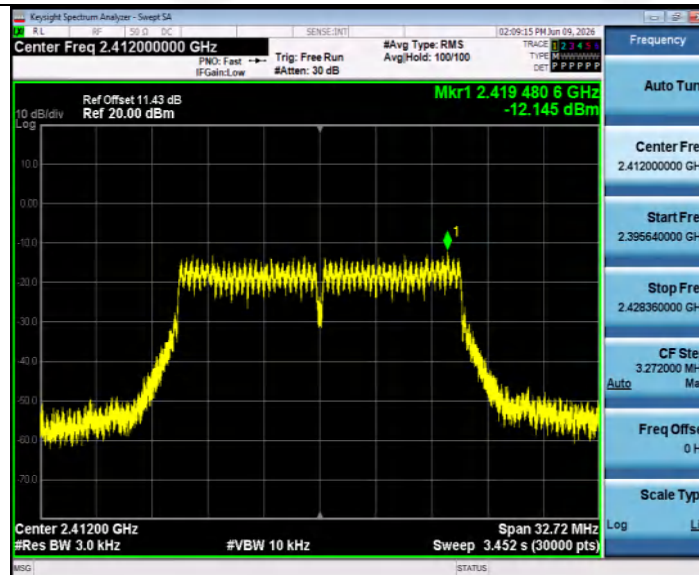
11B Ant1 2462



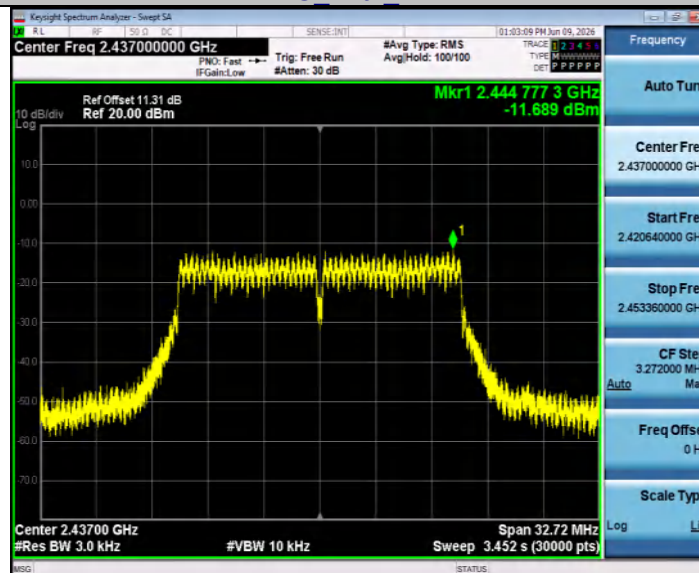
11B Ant2 2462



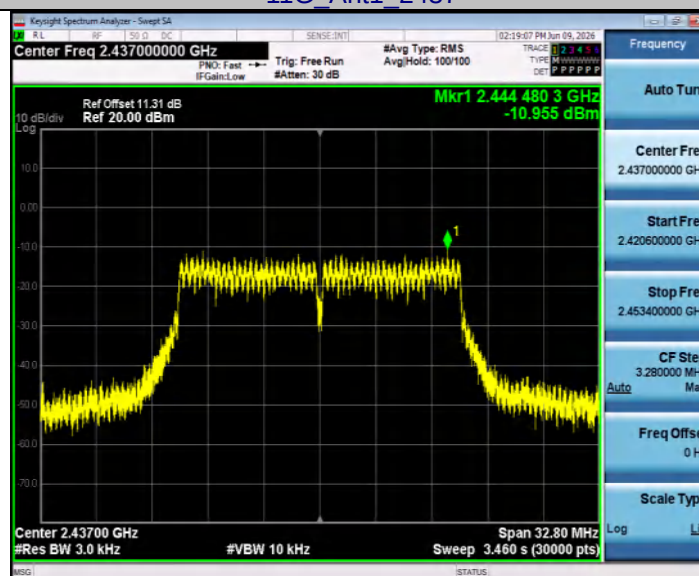
11G Ant1 2412



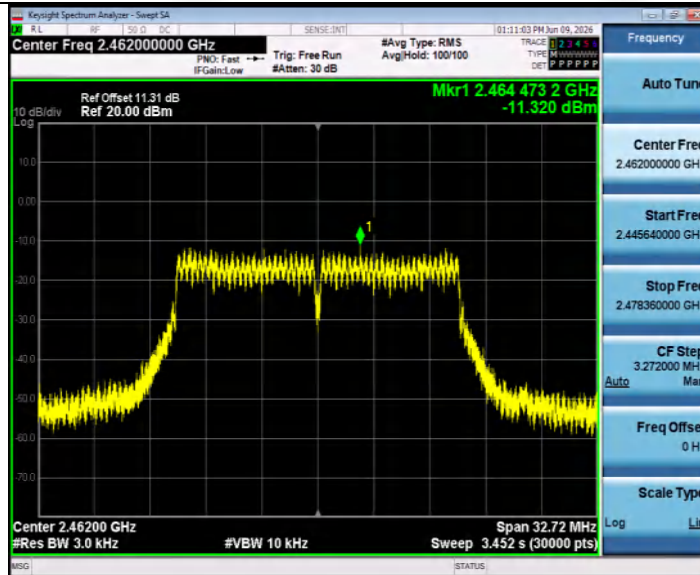
11G Ant2 2412



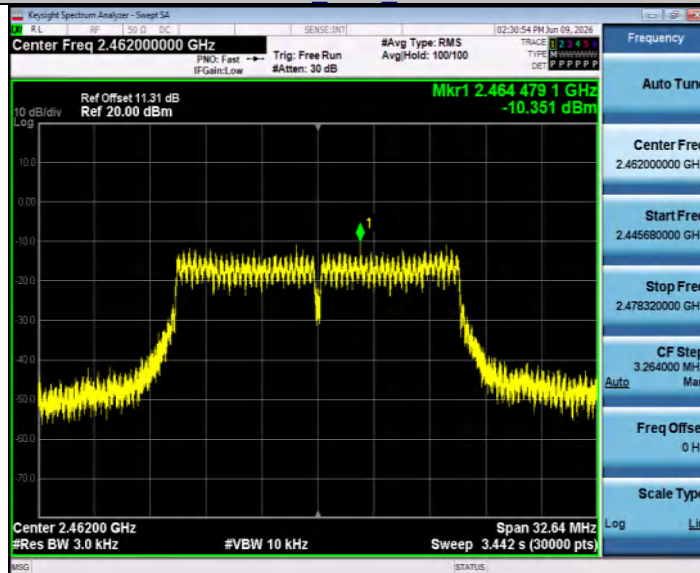
11G Ant1 2437



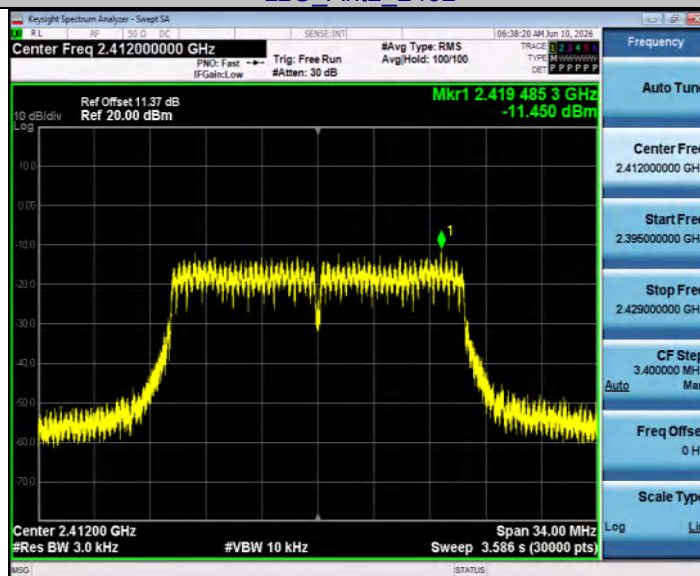
11G Ant2 2437



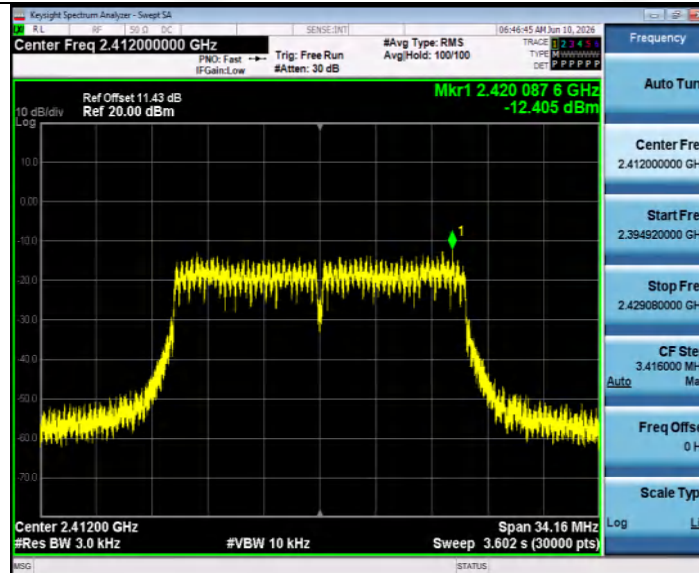
11G Ant1_2462



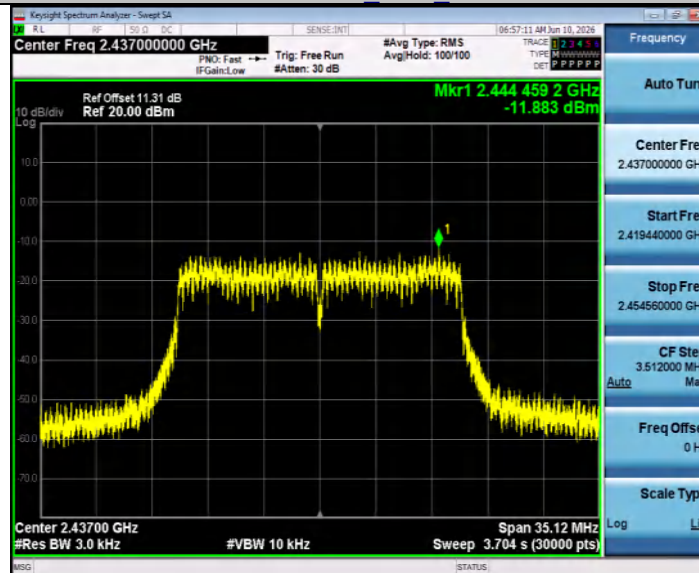
11G Ant2_2462



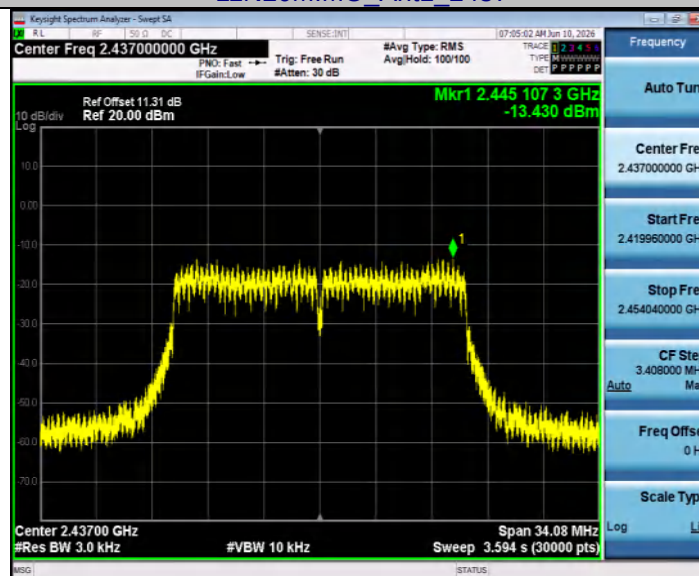
11N20MIMO Ant1_2412



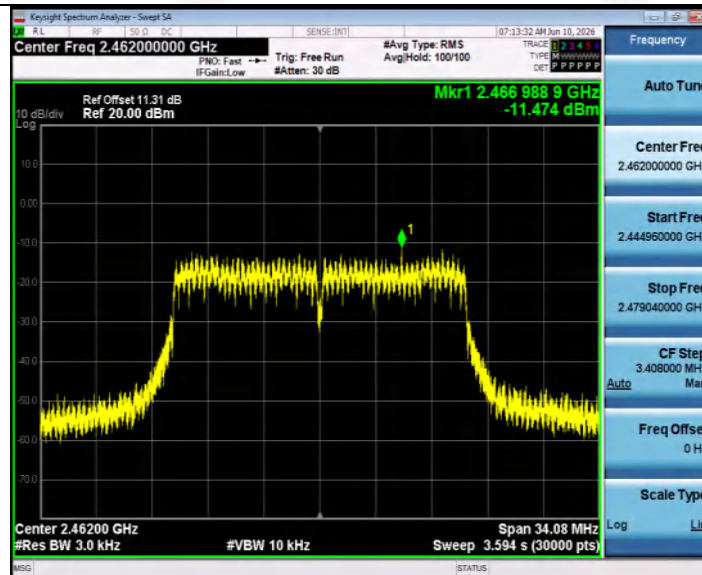
11N20MIMO_Ant2_2412



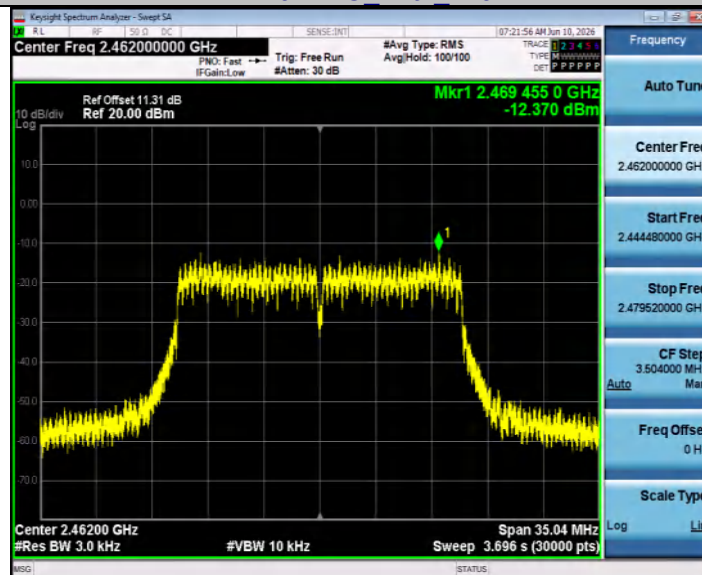
11N20MIMO_Ant1_2437



11N20MIMO_Ant2_2437



11N20MIMO_Ant1_2462



11N20MIMO_Ant2_2462



7. CHANNEL BANDWIDTH & 99% OCCUPY BANDWIDTH

Test Requirement:	FCC Part15 C Section 15.247 (a)(2)
Test Method:	ANSI C63.10-2020+Cor 1-2023 and KDB558074 D01DTS Meas Guidancev05r02

7.1 APPLIED PROCEDURES / LIMIT

FCC Part15 (15.247), Subpart C				
Section	Test Item	Limit	Frequency Range (MHz)	Result
15.247(a)(2)	Bandwidth	$\geq 500\text{KHz}$ (6dB bandwidth)	2400-2483.5	PASS

7.2 TEST PROCEDURE

1.The “99% emission bandwidth” is defined as the frequency range between two points, one above and the other below the carrier frequency, within which 99% of the total transmitted power of the fundamental transmitted emission is contained. The occupied bandwidth shall be reported for all equipment in addition to the specified bandwidth required in the applicable RSSs.

2.The “6dB bandwidth” is defined as the frequency range between two points, one at the lowest frequency below and one at the highest frequency above the carrier frequency, at which the maximum power level of the transmitted emission is attenuated 6dB below the maximum in-band power level of the modulated signal, where the two points are on the outskirts of the in-band emission.

3.The following conditions shall be observed for measuring the occupied bandwidth and 6dB bandwidth:

- The transmitter shall be operated at its maximum carrier power measured under normal test conditions.
- The span of the spectrum analyzer shall be set large enough to capture all products of the modulation process, including the emission skirts, around the carrier frequency, but small enough to avoid having other emissions (e.g. on adjacent channels) within the span.
- The detector of the spectrum analyzer shall be set to “Sample”. However, a peak, or peak hold, may be used in place of the sampling detector since this usually produces a wider bandwidth than the actual bandwidth (worst-case measurement). Use of a peak hold (or “Max Hold”) may be necessary to determine the occupied / 6dB bandwidth if the device is not transmitting continuously.
- The resolution bandwidth (RBW) shall be in the range of 1% to 5% of the actual occupied / 6dB bandwidth and the video bandwidth (VBW) shall not be smaller than three times the RBW value. Video averaging is not permitted.

Note: It may be necessary to repeat the measurement a few times until the RBW and VBW are in compliance with the above requirement.

For the 99% emission bandwidth, the trace data points are recovered and directly summed in linear power level terms. The recovered amplitude data points, beginning at the lowest frequency, are placed in a running sum until 0.5% of the total is reached, and that frequency recorded. The process is repeated for the highest frequency data points (starting at the highest frequency, at the right side of the span, and going down in frequency). This frequency is then recorded. The difference between the two recorded frequencies is the occupied bandwidth (or the 99% emission bandwidth).



The following procedure shall be used for measuring 6dB bandwidth:

1. Set RBW = shall be in the range of 1% to 5% of the OBW but not less than 100 kHz.
2. Set the video bandwidth (VBW) $\geq 3 \times$ RBW.
3. Detector = Peak.
4. Trace mode = max hold.
5. Sweep = auto couple.
6. Allow the trace to stabilize.
7. Measure the maximum width of the emission that is constrained by the frequencies associated with the two outermost amplitude points (upper and lower frequencies) that are attenuated by 6 dB relative to the maximum level measured in the fundamental emission.

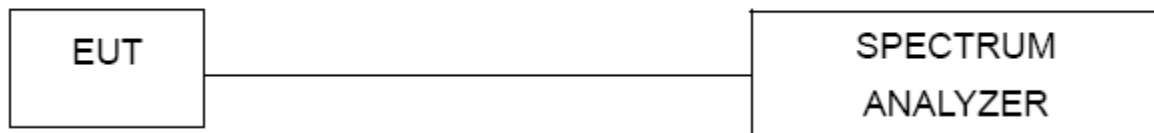
The following procedure shall be used for measuring (99 %) power bandwidth:

- a) Set center frequency to the nominal EUT channel center frequency.
- b) Set span = 1.5 times to 5.0 times the OBW.
- c) Set RBW = 1 % to 5 % of the OBW
- d) Set VBW $\geq 3 \times$ RBW
- e) Video averaging is not permitted. Where practical, a sample detection and single sweep mode shall be used. Otherwise, peak detection and max hold mode (until the trace stabilizes) shall be used

7.3 DEVIATION FROM STANDARD

No deviation.

7.4 TEST SETUP



7.5 EUT OPERATION CONDITIONS

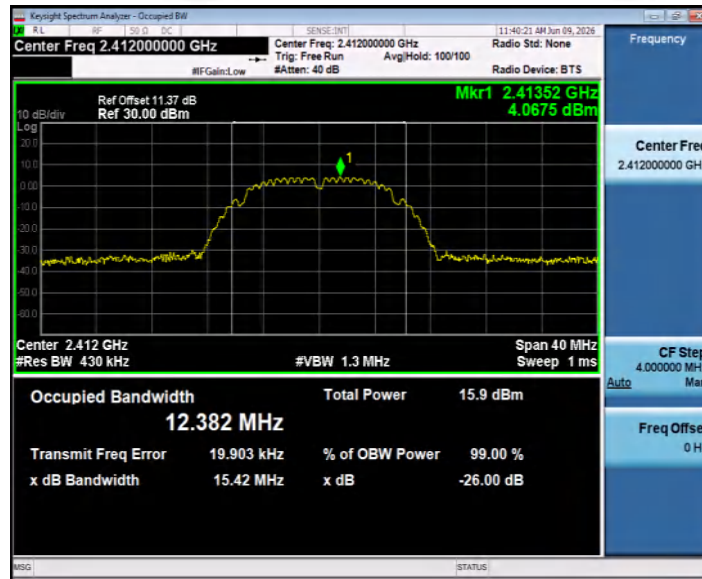
The EUT tested system was configured as the statements of 2.4 Unless otherwise a special operating condition is specified in the follows during the testing.



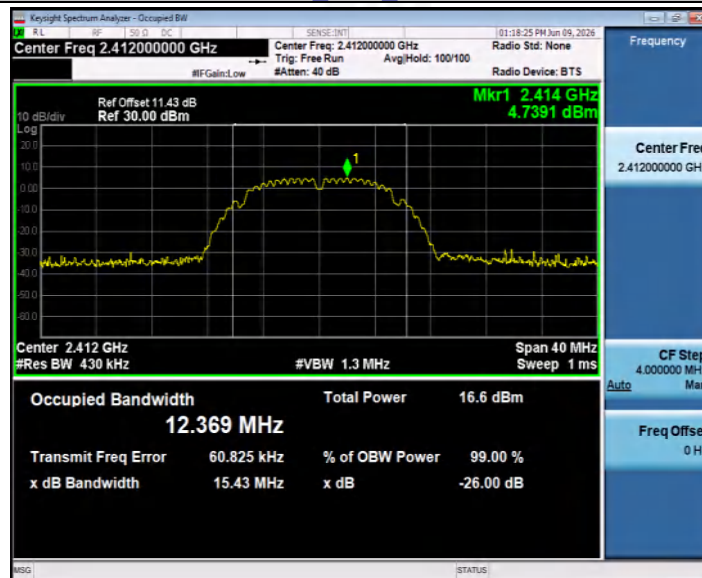
7.6 TEST RESULT

Temperature :	26°C	Relative Humidity :	54%
Pressure :	101kPa	Test Voltage :	DC 51.2V
Test Mode :	TX Mode		

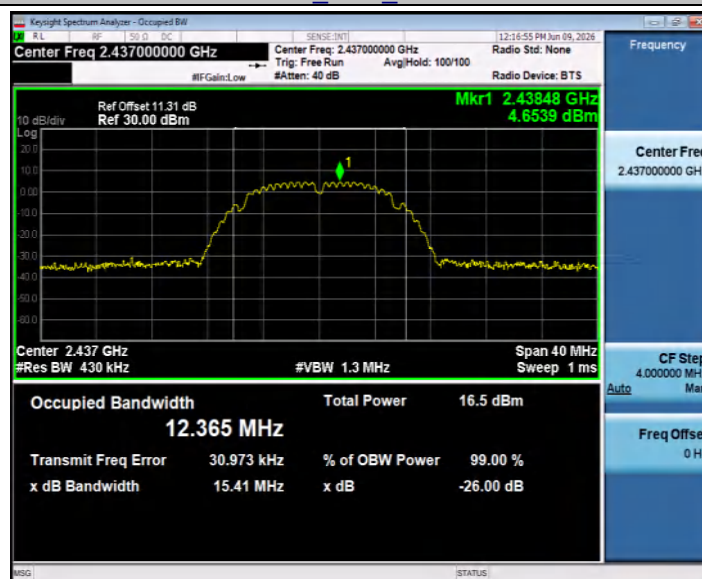
Test Mode	Antenna	Channel Frequency [MHz]	OCB [MHz]	FL[MHz]	FH[MHz]	Limit [MHz]	Verdict
11B	Ant1	2412	12.382	2405.8289	2418.2109	---	---
	Ant2	2412	12.369	2405.8763	2418.2453	---	---
	Ant1	2437	12.365	2430.8485	2443.2135	---	---
	Ant2	2437	12.349	2430.8382	2443.1872	---	---
	Ant1	2462	12.371	2455.7988	2468.1698	---	---
	Ant2	2462	12.379	2455.8434	2468.2224	---	---
11G	Ant1	2412	17.083	2403.4354	2420.5184	---	---
	Ant2	2412	17.035	2403.5113	2420.5463	---	---
	Ant1	2437	17.074	2428.4307	2445.5047	---	---
	Ant2	2437	17.119	2428.4093	2445.5283	---	---
	Ant1	2462	17.022	2453.4326	2470.4546	---	---
	Ant2	2462	17.123	2453.4274	2470.5504	---	---
11N20MIMO	Ant1	2412	17.839	2403.1183	2420.9573	---	---
	Ant2	2412	17.847	2403.1074	2420.9544	---	---
	Ant1	2437	17.867	2428.0795	2445.9465	---	---
	Ant2	2437	17.897	2428.0749	2445.9719	---	---
	Ant1	2462	17.908	2453.0479	2470.9559	---	---
	Ant2	2462	17.870	2453.0560	2470.9260	---	---



11B_Ant1_2412



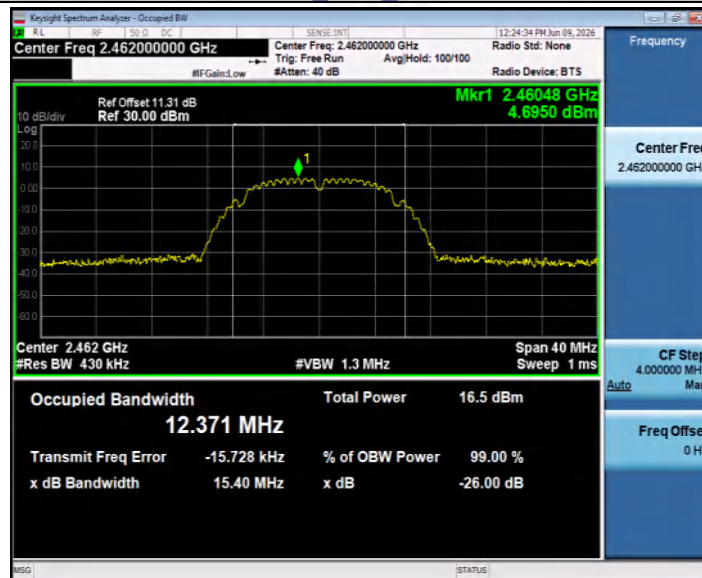
11B_Ant2_2412



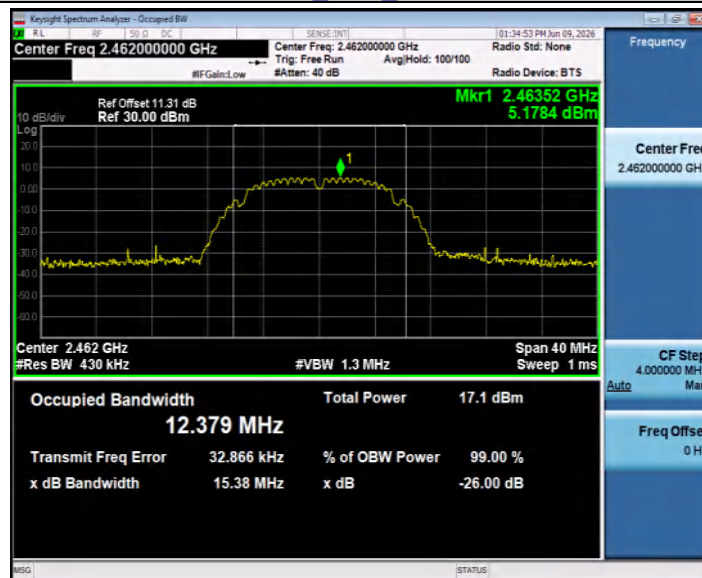
11B_Ant1_2437



11B_Ant2_2437



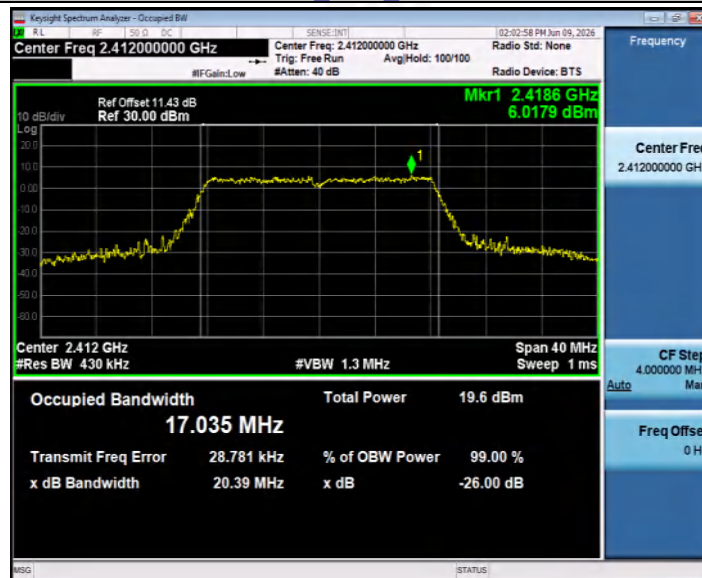
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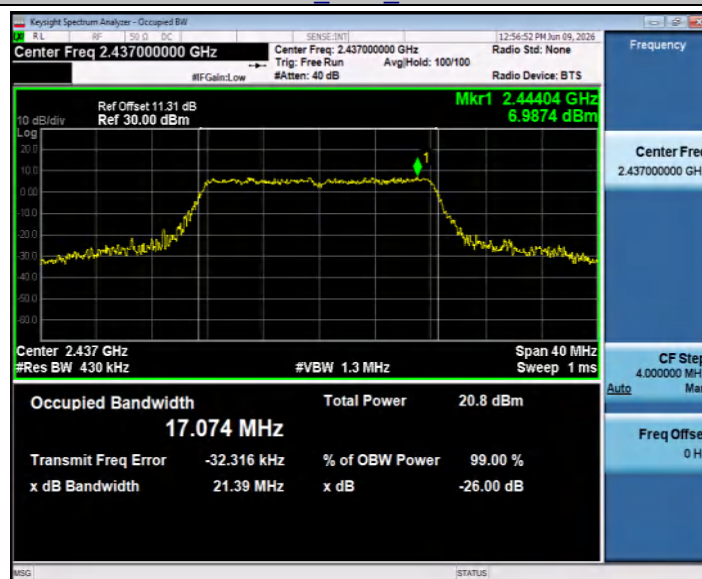
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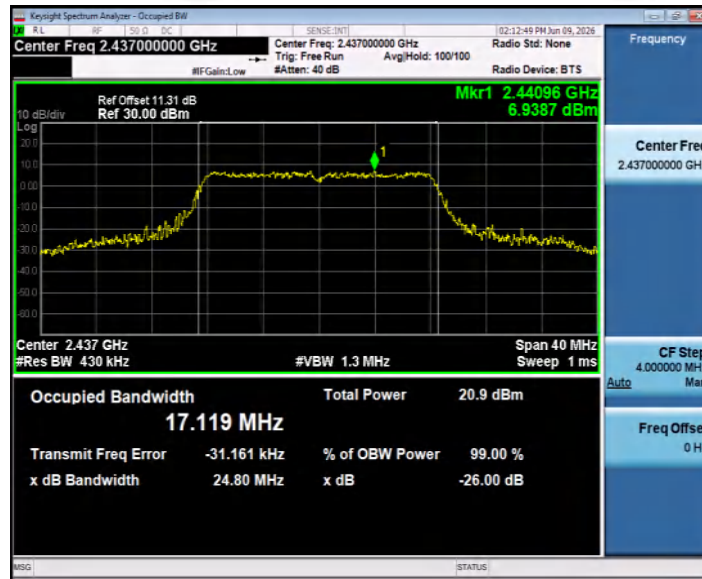
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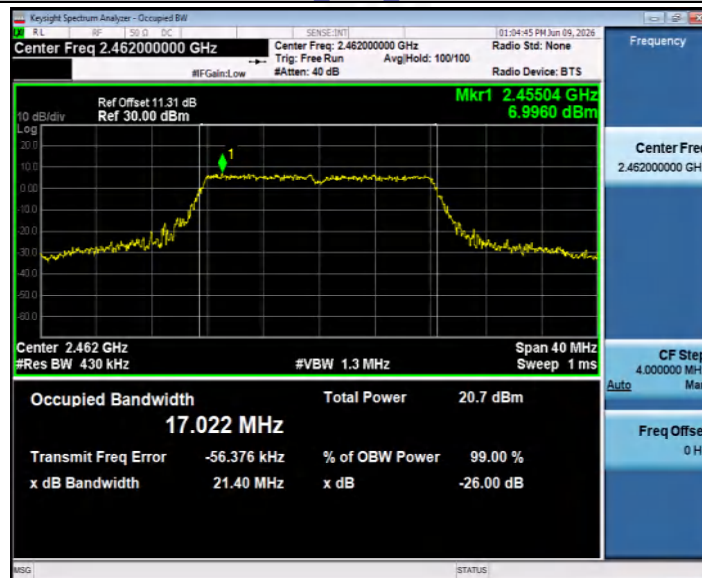
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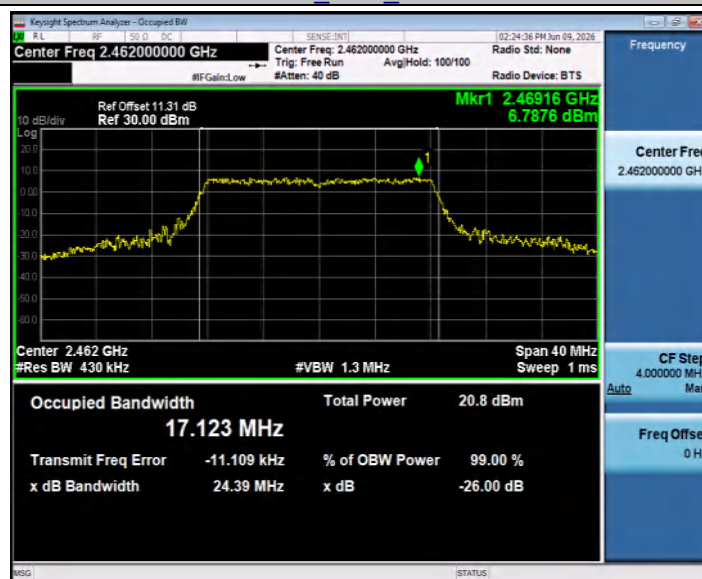
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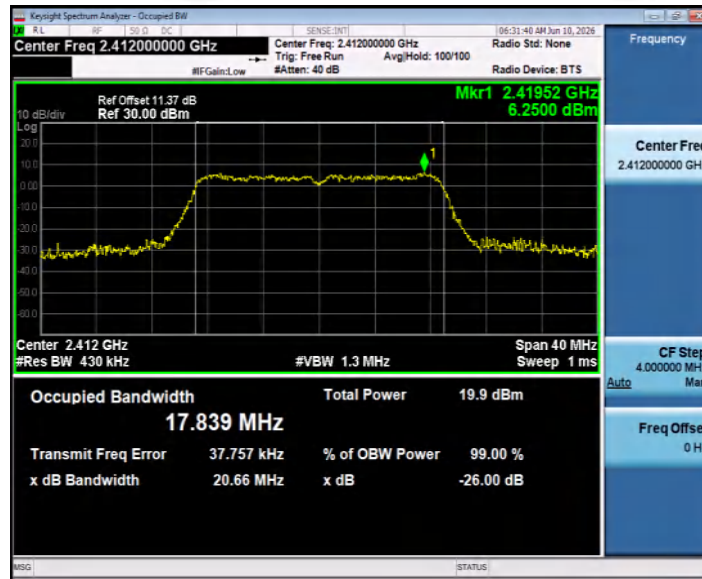
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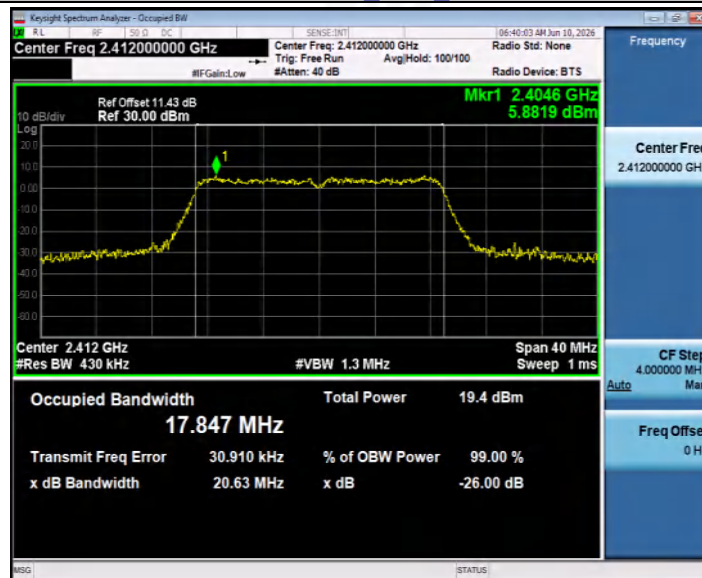
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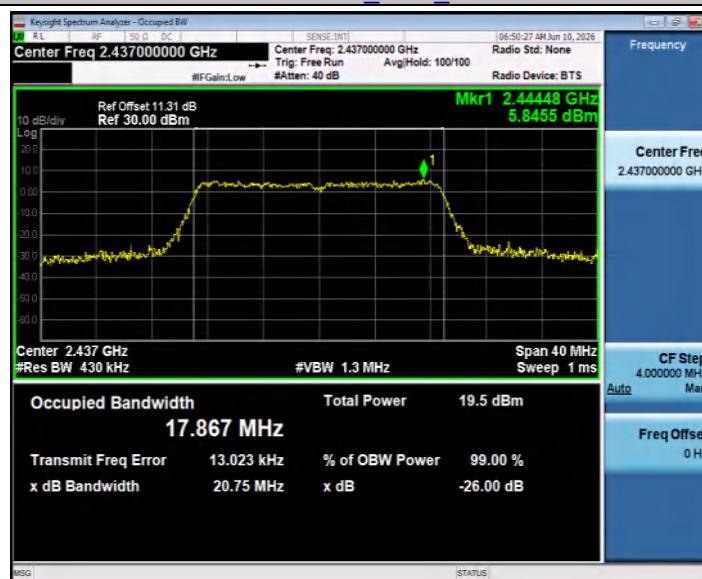
11G_Ant2_2462



11N20MIMO_Ant1_2412



11N20MIMO_Ant2_2412



11N20MIMO_Ant1_2437