DEKRA Testing and Certification (Suzhou) Co., Ltd.
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Test report No:
24B0779R-RF-US-P06V01

FCC TEST REPORT

Product Name	Cat4 indoor CPE
Trademark	Smawave
Model and /or type reference	SRD221-b
FCC ID	2AU8HSRD221-B
Applicant´s name / address	Shanghai Smawave Technology Co. ,Ltd 2/F, Building 8, 1001 North Qinzhou Road，Xuhui District, Shanghai, China
Test method requested, standard	47 CFR FCC Part 15 (Section 15.247) ANSI C63.10: 2013
Verdict Summary	IN COMPLIANCE
Tested By (name / position & signature)	Tim Cao / Project Manager
Approved by (name / position & signature)	Jack Zhang / Manager
Date of issue	2024-12-25
Report Version	V1.0
Report template No	Template_FCC Part 15C-RF-V1.0

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COMPETENCES AND GUARANTEES

DEKRA is a testing laboratory competent to carry out the tests described in this report.
In order to assure the traceability to other national and international laboratories, DEKRA has a calibration and maintenance program for its measurement equipment.

DEKRA guarantees the reliability of the data presented in this report, which is the result of the measurements and the tests performed to the item under test on the date and under the conditions stated in the report and it is based on the knowledge and technical facilities available at DEKRA at the time of performance of the test.

DEKRA is liable to the client for the maintenance of the confidentiality of all information related to the item under test and the results of the test.

The results presented in this Test Report apply only to the particular item under test established in this document.

GENERAL CONDITIONS

Test Location	No. 99, Hongye Road, Suzhou Industrial Park Suzhou, 215006, P.R. China
Date(receive sample)	Nov. 25, 2024
Date (start test)	Nov. 30, 2024
Date (finish test)	Dec. 25, 2024

1. This report is only referred to the item that has undergone the test.
2. This report does not constitute or imply on its own an approval of the product by the Certification Bodies or Competent Authorities.
3. This document is only valid if complete; no partial reproduction can be made without previous written permission of DEKRA.
4. This test report cannot be used partially or in full for publicity and/or promotional purposes without previous written permission of DEKRA.

ENVIRONMENTAL CONDITIONS

The climatic conditions during the tests are within the limits specified by the manufacturer for the operation of the EUT and the test equipment. The climatic conditions during the tests were within the following limits:

Ambient temperature	15 °C – 35 °C
Relative Humidity air	30% - 60%

If explicitly required in the basic standard or applied product / product family standard the climatic values are recorded and documented separately in this test report.

POSSIBLE TEST CASE VERDICTS

Test case does not apply to test object	N/A
Test object does meet requirement	P (Pass) / PASS
Test object does not meet requirement	F (Fail) / FAIL
Not measured	N/M

ABBREVIATIONS

For the purposes of the present document, the following abbreviations apply:

EUT	:	Equipment Under Test
QP	:	Quasi-Peak
CAV	:	CISPR Average
AV	:	Average
CDN	:	Coupling Decoupling Network
SAC	:	Semi-Anechoic Chamber
OATS	:	Open Area Test Site
BW	:	Bandwidth
AM	:	Amplitude Modulation
PM	:	Pulse Modulation
HCP	:	Horizontal Coupling Plane
VCP	:	Vertical Coupling Plane
U_N	:	Nominal voltage
*T*x	:	Transmitter
*R*x	:	Receiver
N/A	:	Not Applicable
N/M	:	Not Measured

DOCUMENT HISTORY

Report No.	Version	Description	Issued Date
24B0779R-RF-US-P06V01	V1.0	Initial issue of report.	2024-12-25

REMARKS AND COMMENTS

1. The equipment under test (EUT) does meet the essential requirements of the stated standard(s)/test(s).
2. These test results on a sample of the device are for the purpose of demonstrating Compliance with 47 CFR FCC Part 15 (Section 15.247).
3. The measurement result is considered in conformance with the requirement if it is within the prescribed limit, It is not necessary to account the uncertainty associated with the measurement result.
4. The test results presented in this report relate only to the object tested.
5. The test report shall not be reproduced without the written approval of DEKRA Testing and Certification (Suzhou) Co., Ltd.
6. This report will not be used for social proof function in China market.
7. DEKRA declines any responsibility with the following test data provided by customer that may affect the validity of result:

- Chapter 1.1 General Description of the Item(s);
- Chapter 1.2 Antenna Informaion;
- Chapter 1.3 Data Rate;
- Chapter 1.4 Channel List;

USED EQUIPMENT

Conducted Test/ TR8

Instrument	Manufacturer	Model No.	Serial No.	Cal. Date	Next Cal. Date	Firmware Version	Software version
Wireless Connectivity Tester	R&S	CMW 270	102593	2024.05.15	2025.05.14	V 4.0.60	N/A
Coaxial Cable	N/A	N/A	2477	2024.06.11	2025.06.10	N/A	N/A
Coaxial Cable	N/A	N/A	2478	2024.06.11	2025.06.10	N/A	N/A
High and low temperature and fast temperature change test box	ASTUOD	ASTD-FBT-225K	N/A	2024.04.21	2025.04.20	N/A	N/A
Temperature/Humidity Meter	RTS	RTS-1909	THM-032	2024.05.17	2025.05.16	N/A	N/A
Test system							
Instrument	Manufacturer	Model No.	Serial No.	Cal. Date	Next Cal. Date	Firmware Version	Software version
MAX Signal Analyzer	Keysight	N9010A	MY48030494	2024.10.26	2025.10.25	A.14.03	N/A
RF Control Unit	Tonscend	JS0806-2	22G8060594	2024.01.31	2025.01.30	N/A	N/A
MXG-B RF Vector Signal Generator	Keysight	N5182B	MY61252529	2024.05.12	2025.05.11	B.01.96	N/A
Frequency extender for EXG or MXG	Keysight	N5182BX07	MY59362500	2024.05.12	2025.05.11	N/A	N/A
EXG-B MW Analog Signal Generator	Keysight	N5173B	MY61252566	2024.07.06	2025.07.05	B.01.95	N/A
Test Software	Tonscend	TS1120	JS1120-3	N/A	N/A	N/A	V3.0.22

AC Power Line Conducted Emission / TR1

Instrument	Manufacturer	Model No.	Serial No.	Cal. Date	Next Cal. Date	Firmware Version	Software version
EMI Test Receiver	R&S	ESCI	100726	2024.07.06	2025.07.05	4.42 SP1	N/A
Two-Line V-Network	R&S	ENV 216	101044	2024.10.26	2025.10.25	N/A	N/A
Two-Line V-Network	R&S	ENV 216	101189	2024.07.06	2025.07.05	N/A	N/A
50ohm Coaxial Switch	Anritsu	MP59B	6200464462	2024.07.06	2025.07.05	N/A	N/A
Coaxial Cable	Huber+Suhner	RG 223	TR1-C1	2024.07.06	2025.07.05	N/A	N/A
Impedance Stabilization Network	Teseq GmbH	ISN T800	57318	2024.01.20	2025.01.19	N/A	N/A
Temperature/Humidity Meter	RTS	RTS-1909	THM-011	2024.05.17	2025.05.16	N/A	N/A
Dekra test software	Dekra	N/A	N/A	N/A	N/A	N/A	N/A

Radiated Emission(9KHz-1GHz) / AC2

Instrument	Manufacturer	Model No.	Serial No.	Cal. Date	Next Cal. Date	Firmware Version	Software version
EMI Test Receiver	R&S	ESCI	100176	2024.05.12	2025.05.11	4.42 SP3	N/A
Loop Antenna	R&S	HFH2-Z2E	101149	2024.03.27	2025.03.26	N/A	N/A
Bilog Antenna	Teseq GmbH	CBL6112D	27611	2024.03.20	2025.03.19	N/A	N/A
Antenna Pedestal	MF	MFT-515DBSN	1308282	N/A	N/A	N/A	N/A
Temperature/Humidity Meter	RTS	RTS-1909	THM-021	2024.05.17	2025.05.16	N/A	N/A
Coaxial Cable	Huber+Suhner	SUCOFLEX 106	AC2-C	2024.04.27	2025.04.26	N/A	N/A
Dekra test software	Dekra	N/A	N/A	N/A	N/A	N/A	3

Radiated Emission (1GHz-40GHz) / AC5

Instrument	Manufacturer	Model No.	Serial No.	Cal. Date	Next Cal. Date	Firmware Version	Software version
EXA Spectrum Analyzer	Keysight	N9020B	MY601122218	2024.11.02	2025.11.01	A.31.05	N/A
Pre-Amplifier	SKET	LNPA_0118G-45	SK2021090101	2024.04.27	2025.04.26	N/A	N/A
Preamplifier	CHENGYI	EMC184045SE	980263	2024.07.06	2025.07.05	N/A	N/A
DRG Horn	ETS-Lindgren	3117	00123988	2024.09.16	2025.09.15	N/A	N/A
Antenna Pedestal	MF	MFT-515DBSN	1308702	N/A	N/A	N/A	N/A
Broad-Band Horn Antenna	Schwarzbeck	BBHA9170	294	2024.05.30	2025.05.29	N/A	N/A
Filter Switch Box	MVE	MSW-F196	C070001S	2024.04.20	2025.04.19	N/A	N/A
Coaxial Cable	ROSENBERGER	LA1-C011-2000/3000	AC5-40G	2024.01.25	2025.01.24	N/A	N/A
Coaxial Cable	ROSENBERGER	LA1-C011-2000/3000	AC5-40G-2	2024.05.26	2025.05.25	N/A	N/A
Cable	Rosenberger	LA1-C011-1000	0523	2024.05.26	2025.05.25	N/A	N/A
Temperature/ Humidity Meter	RTS	RTS-1909	THM-001	2024.07.11	2025.07.10	N/A	N/A
Temperature/ Humidity Meter	RTS	RTS-1909	THM-024	2024.05.17	2025.05.16	N/A	N/A
Dekra test software	Dekra	N/A	N/A	N/A	N/A	N/A	3

UNCERTAINTY

Uncertainties have been calculated according to the DEKRA internal document. The reported expanded uncertainties are based on a standard uncertainty multiplied by a coverage factor of k=2, providing a level of confidence of approximately 95%.

Test item	Uncertainty
AC Power Line Conducted Emission	± 2.92 dB
Peak Power Output	± 1.13 dB
Radiated Emission(30MHz~1GHz)	Horizontal: 30MHz~200MHz: 4.60 dB 200MHz~1GHz: 4.10 dB Vertical: 30MHz~200MHz: 4.80 dB 200MHz~1GHz: 4.10 dB
Radiated Emission(1GHz~40GHz)	Horizontal: 1GHz~18GHz: 5.00 dB Vertical: 1GHz~18GHz: 4.80 dB Horizontal: 18GHz~40GHz: 4.70 dB Vertical: 18GHz~40GHz: 4.60 dB
RF antenna conducted test	± 1.13 dB
Radiated Emission Band Edge	± 5.00 dB
DTS Bandwidth	± 279 Hz
Occupied Bandwidth	± 279 Hz
Power Density	± 1.13 dB

1 GENERAL INFORMATION

1.1 General Description of the Item(s)

Product Name..... :	Cat4 indoor CPE
Model No. ..... :	SRD221-b
Trademark. ..... :	Smawave
FCC ID..... :	2AU8HSRD221-B
Hardware Version ..... :	V1.0
Software Version..... :	STX1160_V1.0.1
Manufacturer..... :	Shanghai Smawave Technology Co. ,Ltd
Manufacturer Address..... :	2/F, Building 8, 1001 North Qinzhou Road，Xuhui District, Shanghai, China
Factory..... :	Shanghai Smawave Technology Co. ,Ltd
Factory address ..... :	2/F, Building 8, 1001 North Qinzhou Road，Xuhui District, Shanghai, China
Operating temperature ..... :	-10℃~45℃

Wireless specifiction..... :	WIFI	
Operating frequency range(s)..... :	2412~2462MHz	
Number of channel..... :	802.11b/g/n(20MHz) : 11 802.11n(40MHz) : 07	
Type of Modulation & Data Rate.... :	Refer to Clause 1.3	
Device category ..... :	☐	Fixed point-to-point
	☐	Emit multiple directional beams, simultaneously or sequentially
	☒	Other cases

Rated power supply .....:	Voltage and Frequency	
	☐	AC: 220 - 240 V, 50/60 Hz
	☐	AC: 100 - 240 V, 50/60 Hz
	☒	Adapter:
Adapter Model.....:	TPA259-18120-US	
	Input: 100-240V ~ 50/60Hz,0.6A Output: 12.0V / 1.5 A	
UPS Model.....:	KFL-U02-5000	
	Input: 12.0V / 1.5 A Output: 12.0V / 1.5 A (Max)	
Mounting position.....:	☐	Tabletop equipment
	☒	Wall/Ceiling mounted equipment
	☐	Floor standing equipment
	☐	Hand-held/Portable equipment
	☐	Other:

1.2 Antenna Information

Antenna Manufacture ..... :	TUYA			
Antenna Serial Number ..... :	T5-E1-IPEX Antenna			
Antenna Delivery ..... :	☒	1TX + 1RX		
	☒	2TX + 2RX		
	☐	Others: ……		
Antenna Technology ..... :	☒	SISO		
	☒	MIMO	☒	CDD
			☐	Beam-forming
Antenna Type..... :	☐	External	☐	Dipole
			☐	PIFA
	☒	Internal	☒	PCB
			☐	Others……..
Antenna Gain ..... :	Antenna 1 (dBi)		Antenna 2 (dBi)	
	3.15		2.66	

1.3 Data Rate

IEEE 802.11b

Modulation	Data Rate(Mb/s)
DSSS	1
DSSS	2
CCK	5.5
CCK	11

IEEE 802.11g

Modulation	R	Data Rate(Mb/s)
BPSK	1/2	6
BPSK	3/4	9
QPSK	1/2	12
QPSK	3/4	18
16-QAM	1/2	24
16-QAM	3/4	36
64-QAM	2/3	48
64-QAM	3/4	54

IEEE 802.11n

Spatial streames	MCS Index	Modulation	R	Data Rate(Mb/s)			
				800ns GI		400ns GI	
				20MHz	40MHz	20MHz	40MHz
1	0	BPSK	1/2	6.5	13.5	7.2	15.0
1	1	QPSK	1/2	13.0	27.0	14.4	30.0
1	2	QPSK	3/4	19.5	40.5	21.7	45.0
1	3	16-QAM	1/2	26.0	54.0	28.9	60.0
1	4	16-QAM	3/4	39.0	81.0	43.3	90.0
1	5	64-QAM	2/3	52.0	108.0	57.8	120.0
1	6	64-QAM	3/4	58.5	121.5	65.0	135.0
1	7	64-QAM	5/6	65.0	135.0	72.2	150.0
2	8	BPSK	1/2	13	27	14.4	30
2	9	QPSK	1/2	26	54	28.8	60
2	10	QPSK	3/4	39	81	43.4	90
2	11	16-QAM	1/2	52	108	57.8	120
2	12	16-QAM	3/4	78	162	86.6	180
2	13	64-QAM	2/3	104	216	115.6	240
2	14	64-QAM	3/4	117	243	130	270
2	15	64-QAM	5/6	130	270	144.4	300

Symbol	Explanation
R	Code rate
GI	guard interval

Note: We have evaluated low/mid/high data rate, the blue font is the highest power data rate.

1.4 Channel List

IEEE 802.11b/g & IEEE 802.11n (20MHz)

Working Frequency of Each Channel							
Channel	Frequency	Channel	Frequency	Channel	Frequency	Channel	Frequency
1	2412 MHz	2	2417 MHz	3	2422 MHz	4	2427 MHz
5	2432 MHz	6	2437 MHz	7	2442 MHz	8	2447 MHz
9	2452 MHz	10	2457 MHz	11	2462 MHz	-	-

IEEE 802.11n (40MHz)

Working Frequency of Each Channel							
Channel	Frequency	Channel	Frequency	Channel	Frequency	Channel	Frequency
3	2422 MHz	4	2427 MHz	5	2432 MHz	6	2437 MHz
7	2442 MHz	8	2447 MHz	9	2452 MHz	-	-

Note: The General Description of the Item, antenna information,Test Data Rate and Channel List in clause 1 are provided and confirmed by the client.

2 DESCRIPTION OF TEST SETUP

2.1 Operating mode(s) used for tests

During the tests the following operating mode(s) has(have) been used.

Test Mode	Mode 1: Transmit by 802.11b
	Mode 2: Transmit by 802.11g
	Mode 3: Transmit by 802.11n(20MHz)
	Mode 4: Transmit by 802.11n(40MHz)

Note 1: Regards to the frequency band operation: the lowest, middle and highest frequency channel were selected to perform the test, then shown on this report.

Note 2: For portable device, radiated tests was verified over X, Y, Z axis, and shown the worst case on this report.

Note 3: We evaluated/tested both SISO and MIMO mode,shown in report is the worst data.

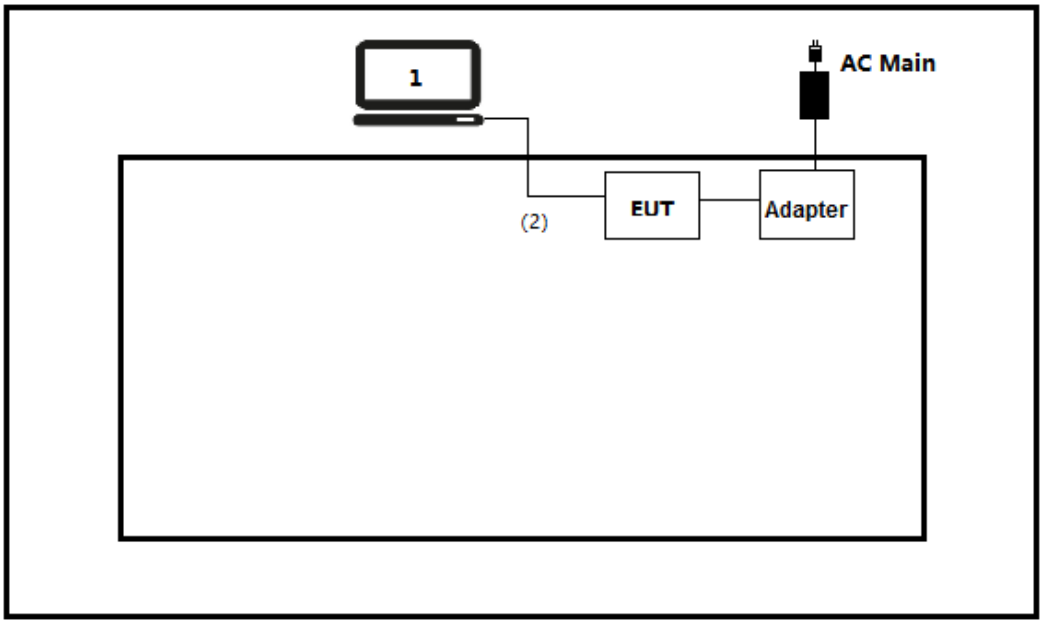
2.2 Auxiliary equipment / Test software for the EUT

Auxiliary equipment	Type / Version	Manufacturer	Supplied by
(1) Notebook	Think pad x220	Lenovo	Adapter
(2) USB Control Cable	N/A	N/A	N/A
(3) USB Control Cable	N/A	N/A	N/
software	Type / Version	Manufacturer	Supplied by
QA-package	V5.02	N/A	N/A

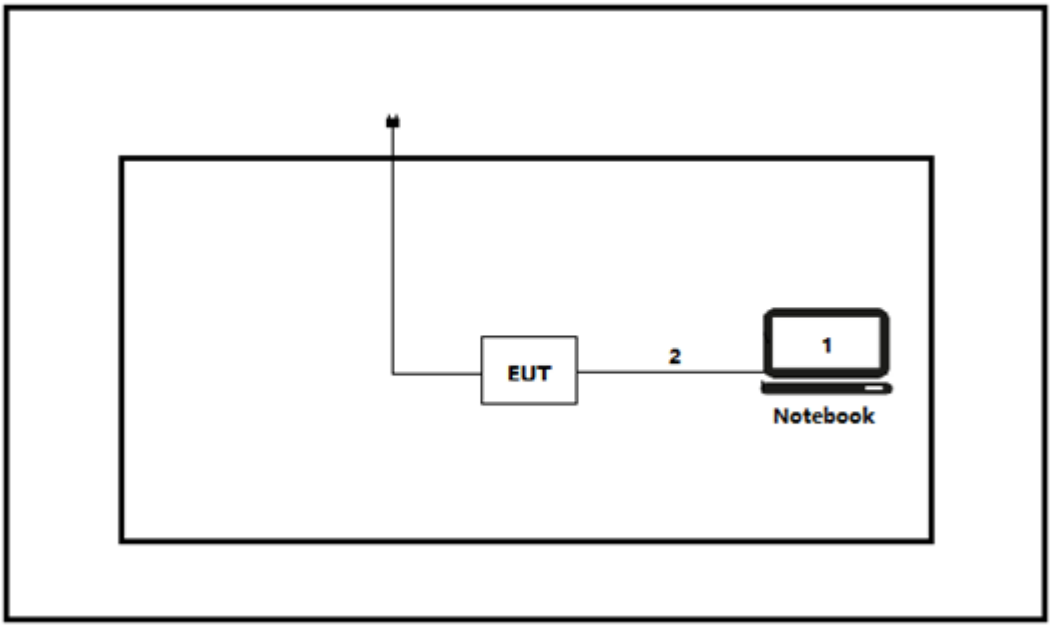
Accessories Information	Cable		
	Length used during test [m]	Attached during test	Shielded
(2)USB Control Cable	1	☒	☒
(3)USB Control Cable	8	☒	☒

2.3 Test Configuration / Block diagram used for tests

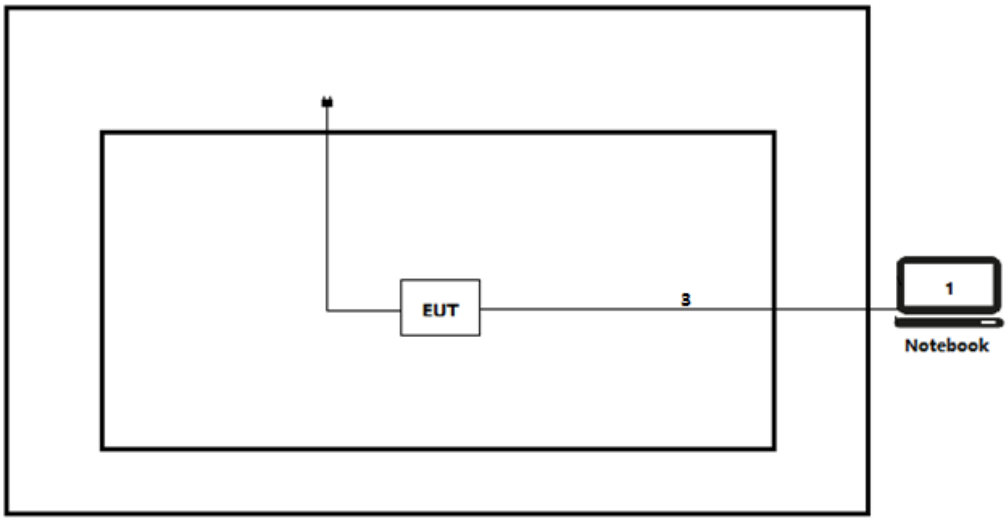
Test setup Diagram- AC Line Conducted Emission Test



Test setup Diagram- Conducted test



Test setup Diagram- Radiated Emission



2.4 Testing process

1	Setup the EUT as shown in Section 2.3.
2	Run the software “QA-package” on the notebook computer.
3	Configure the test mode, the test channel, and the data rate.
4	Verify that the EUT works properly.

3 VERDICT SUMMARY SECTION

This chapter presents an overview of standards and results. Refer to the next chapters for details of measured test results and applied test levels.

3.1 Standards

Standard	Year	Description
FCC CFR Title 47 Part 15 Subpart C Section 15.247	2024	Operation within the bands 902–928 MHz, 2400–2483.5 MHz, and 5725–5850 MHz.
ANSI C63.10	2013	American National Standard of Procedures for Compliance Testing of Unlicensed Wireless Devices
KDB 558074 D01V05r02	2019	Guidance for performing compliance measurements on Digital Transmission System (DTS) operating under section 15.247
KDB 662911	2020	Provision to Allow Measurement of Directional Gain of Multi-Antenna Systems for Compliance Verification

3.2 Deviation(s) from the Standard(s) / Test Specification(s)

The following deviation(s) was / were made from the published requirements of the listed standards: N/A.

(Please define the deviations from the standard(s) if applicable)

3.3 Overview of results

Requirement – Test Item	Standard(s)	Verdict	Remark
20dB Emission Bandwidth	FCC 15.247(a)(2)	PASS	Test data please refer to **Appendix A**
Maximum conducted output power	15.247 (b)(3)	PASS	Test data please refer to **Appendix B**
Maximum power spectral density	FCC 15.247(e)	PASS	Test data please refer to **Appendix C**
Band edge measurements	FCC 15.247(d) FCC 15.205 FCC 15.209	PASS	Test data please refer to **Appendix D**
Conducted Spurious Emission	FCC 15.247(d), FCC 15.209	PASS	Test data please refer to **Appendix E**
Duty cycle	ANSI C63.10:2013	PASS	Test data please refer to **Appendix F**
Emissions in Restricted Bands	FCC 15.205 FCC 15.209	PASS	Test data please refer to **Appendix G**
AC Power Line Conducted Emission	FCC 15.207	PASS	Test data please refer to **Appendix H**
Antenna Requirement	FCC 15.203	PASS	---

3.4 Power setting in test

Mode	Channel	Frequency (MHz)	Power setting		
			Ant 1	Ant 2	Ant 1+2
Mode1	01	2412	20	21	1A
	06	2437	1F	20	19
	11	2462	20	21	1A
Mode2	01	2412	19	1A	19
	06	2437	18	19	18
	11	2462	19	1A	19
Mode3	01	2412	19	1A	19
	06	2437	18	19	18
	11	2462	19	1A	19
Mode4	03	2422	19	1A	19
	06	2437	18	19	18
	09	2452	19	1A	19

3.5 Test Matrix

Test item	Model : Cat4 indoor CPE	
	SN: Nl1Hv8Dn9Vw6	SN: Nl1Hv8Dn9Vw6
DTS Bandwidth	☒	☐
Maximum conducted output power	☒	☐
Maximum power spectral density	☒	☐
Band edge measurements	☐	☒
Conducted Spurious Emission	☒	☐
Duty cycle	☒	☐
Emissions in Restricted Bands	☐	☒
AC Power Line Conducted Emission	☐	☒
Note1: The only difference between sample #1 and sample #2 is whether to keep the original antenna, sample #1 is a conduction test product that removes the original antenna and is equipped with SMA wires, and sample #2 is a complete product that retains the original antenna.		

3.6 Test Facility

USA	**:**	**FCC Designation Number: CN1199**

4 TEST RESULTS

4.1 Emissions in restricted frequency bands	VERDICT: PASS

4.1.1 Limit

Standard	FCC Part 15 Subpart C Paragraph 15.205; 15.209

Restricted Bands of operation for FCC

Frequency (MHz)	Frequency (MHz)	Frequency (MHz)	Frequency (GHz)
0.090 – 0.110	16.42 – 16.423	399.9 – 410	4.5 – 5.15
0.495 – 0.505	16.69475 –16.69525	608 – 614	5.35 – 5.46
2.1735 – 2.1905	16.80425 – 16.80475	960 – 1240	7.25 – 7.75
4.125 – 4.128	25.5 – 25.67	1300 – 1427	8.025 – 8.5
4.17725 – 4.17775	37.5 – 38.25	1435 – 1626.5	9.0 – 9.2
4.20725 – 4.20775	73 – 74.6	1645.5 – 1646.5	9.3 – 9.5
6.215 – 6.218	74.8 – 75.2	1660 – 1710	10.6 – 12.7
6.26775 – 6.26825	108 – 121.94	1718.8 – 1722.2	13.25 – 13.4
6.31175 – 6.31225	123 – 138	2200 – 2300	14.47 – 14.5
8.291 – 8.294	149.9 – 150.05	2310 – 2390	15.35 – 16.2
8.362 – 8.366	156.52475 – 156.52525	2483.5 – 2500	17.7 – 21.4
8.37625 – 8.38675	156.7 – 156.9	2690 – 2900	22.01 – 23.12
8.81425 – 8.81475	162.0125 – 167.17	3260 – 3267	23.6 – 24.0
12.29 – 12.293	167.72 – 173.2	3332 – 3339	31.2 – 31.8
12.51975–12.52025	240 – 285	3345.8 – 3358	36.43 – 36.5
12.57675–12.57725	322 – 335.4	3600 – 4400	Above 38.6
13.36 – 13.41	--	--	--

Restricted Band Emissions Limit

Frequency (MHz)	Field strength (μV/m)	Field strength (dBμV/m)	Measurement distance (m)
0.009 - 0.49	2400/F(kHz)	48.5 – 13.8	300(Note 1)
0.49 - 1.705	24000/F(kHz)	33.8 - 23	30(Note 1)
1.705 - 30	30	29.5	30(Note 1)
30 - 88	100	40	3(Note 2)
88 - 216	150	43.5	3(Note 2)
216 - 960	200	46	3(Note 2)
Above 960	500	54	3(Note 2)

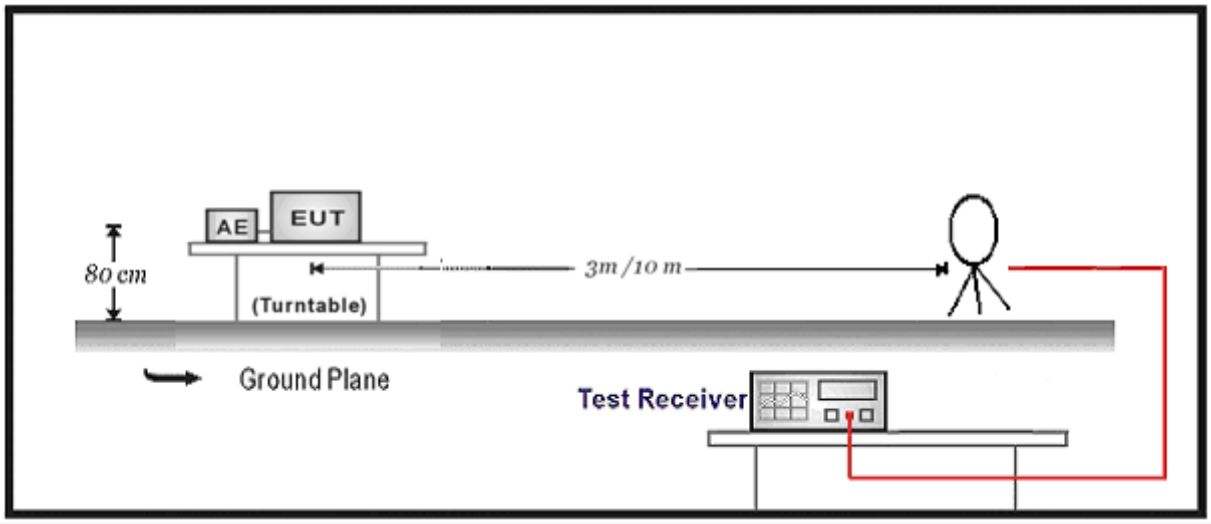
Note 1: At frequencies below 30 MHz, measurements may be performed at a distance closer than that specified in the regulations; however, an attempt should be made to avoid making measurements in the near field. Pending the development of an appropriate measurement procedure for measurements performed below 30 MHz, when performing measurements at a closer distance than specified, the results shall be extrapolated to the specified distance by either making measurements at a minimum of two distances on at least one radial to determine the proper extrapolation factor or by using the square of an inverse linear distance extrapolation factor (40 dB/decade).

Note 2: At frequencies at or above 30 MHz, measurements may be performed at a distance other than what is specified provided: measurements are not made in the near field except where it can be shown that near field

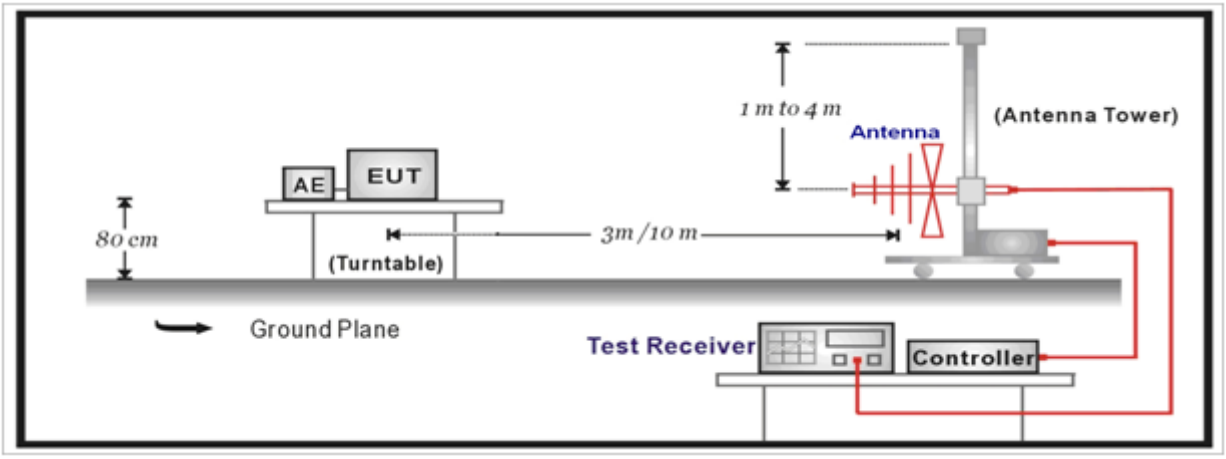
measurements are appropriate due to the characteristics of the device; and it can be demonstrated that the signal levels needed to be measured at the distance employed can be detected by the measurement equipment. Measurements shall not be performed at a distance greater than 30 meters unless it can be further demonstrated that measurements at a distance of 30 meters or less are impractical. When performing measurements at a distance other than that specified, the results shall be extrapolated to the specified distance using an extrapolation factor of 20 dB/decade (inverse linear-distance for field strength measurements; inverse-linear-distance-squared for power density measurements).

4.1.2 Test Setup

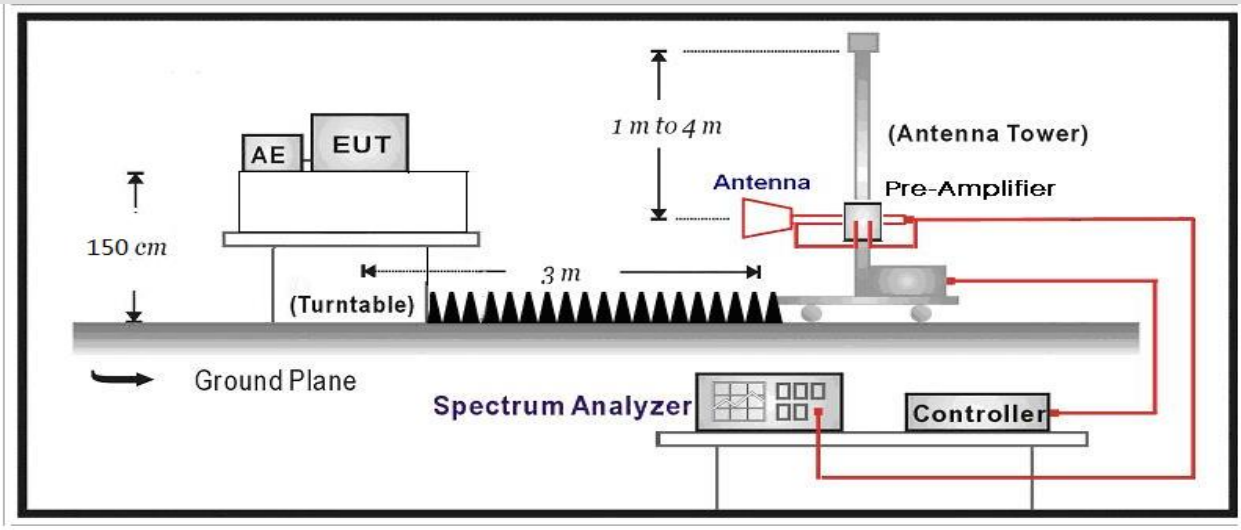
Below 30MHz Test Setup:



30MHz-1GHz Test Setup:



Above 1GHz Test Setup:



4.1.3 Test Procedure

	References Rule	Chapter	Description
☒	ANSI C63.10	11.12	Emissions in restricted frequency bands
	☒ ANSI C63.10	11.12.1	Radiated emission measurements
	☒ ANSI C63.10	6.3	Radiated spurious emission test
	☒ ANSI C63.10	6.4	Radiated emissions from unlicensed wireless devices below 30 MHz
	☒ ANSI C63.10	6.5	Radiated emissions from unlicensed wireless devices in the frequency range of 30 MHz to 1000 MHz
	☒ ANSI C63.10	6.6	Radiated emissions from unlicensed wireless devices above 1 GHz
	☐ ANSI C63.10	11.12.2	Antenna-port conducted measurements
	☐ ANSI C63.10	11.12.2.3	Quasi-peak measurement procedure
	☐ ANSI C63.10	11.12.2.4	Peak power measurement procedure
	☐ ANSI C63.10	11.12.2.5	Average power measurement procedures
	☐ ANSI C63.10	11.12.2.5.1	Trace averaging with continuous EUT transmission at full power
	☐ ANSI C63.10	11.12.2.5.2	Trace averaging across ON and OFF times of the EUT transmissions followed by duty cycle correction
	☐ ANSI C63.10	11.12.2.5.3	Reduced VBW averaging across ON and OFF times of the EUT transmissions with max hold

4.2 Emissions in non-restricted frequency band	VERDICT: PASS

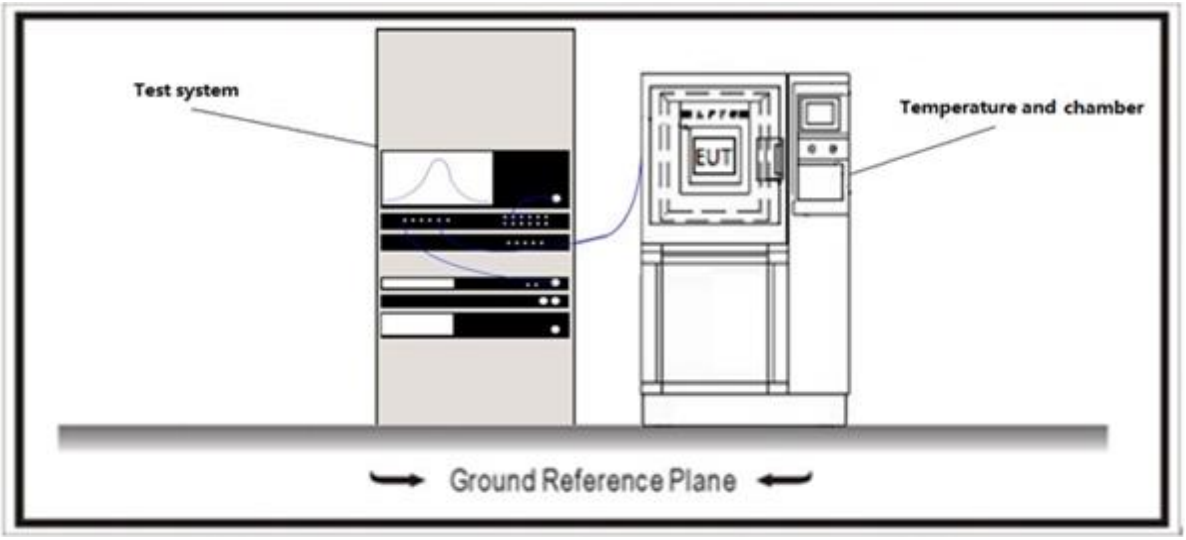
4.2.1 Limit

Standard	FCC Part 15 Subpart C Paragraph 15.247(d)
RF Output power (Detection methods)	Limit(dB)
RF Output power(Average detector)	30dBc(Note1)
RF Output power(PK detector)	20dBc(Note2)

Note 1: If maximum conducted (average) output power was used to demonstrate compliance as described in 9.2, then the peak power in any 100 kHz bandwidth outside of the authorized frequency band shall be attenuated by at least 30 dB relative to the maximum in-band peak PSD level in 100 kHz (i.e., 30 dBc).

Note 2: If the maximum peak conducted output power procedure was used, then the peak output power measured in any 100 kHz bandwidth outside of the authorized frequency band shall be attenuated by at least 20 dB relative to the maximum in-band peak PSD level in 100 kHz (i.e., 20 dBc).

4.2.2 Test Setup



4.2.3 Test Procedure

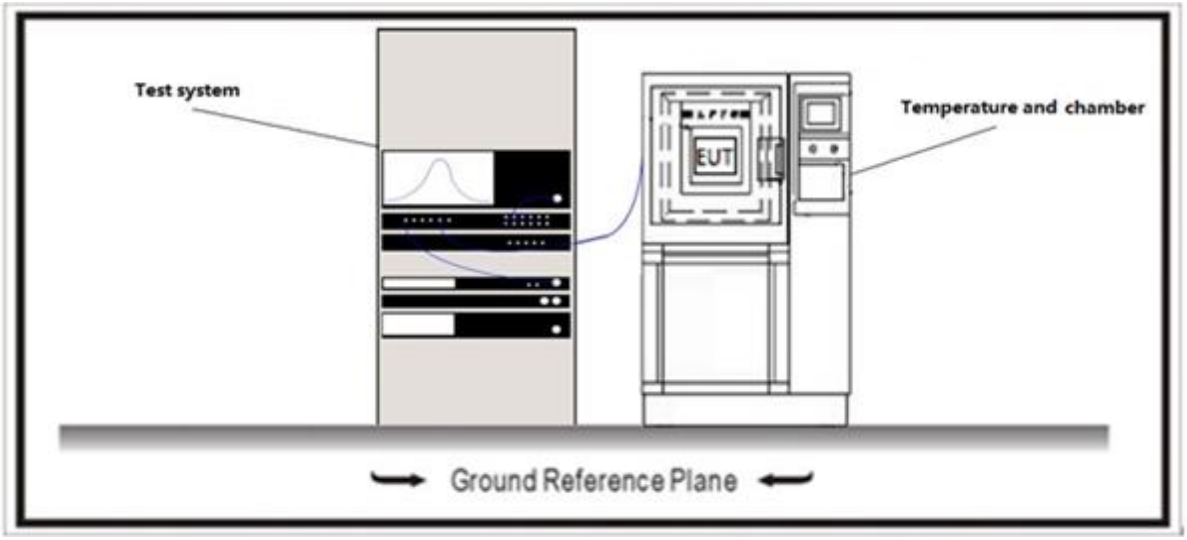
References Rule			Chapter	Description
☒	ANSI C63.10		11.11	Emissions in non-restricted frequency bands
	☒	ANSI C63.10	11.11.1	General
	☒	ANSI C63.10	11.11.2	Reference level measurement
	☒	ANSI C63.10	11.11.3	Emission level measurement

4.3 Duty cycle	VERDICT: PASS

4.3.1 Limit

N/A

4.3.2 Test Setup



4.3.3 Test Procedure			
References Rule		Chapter	Description
☒	ANSI C63.10	11.6	Duty cycle (D), transmission duration (T), and maximum power control level

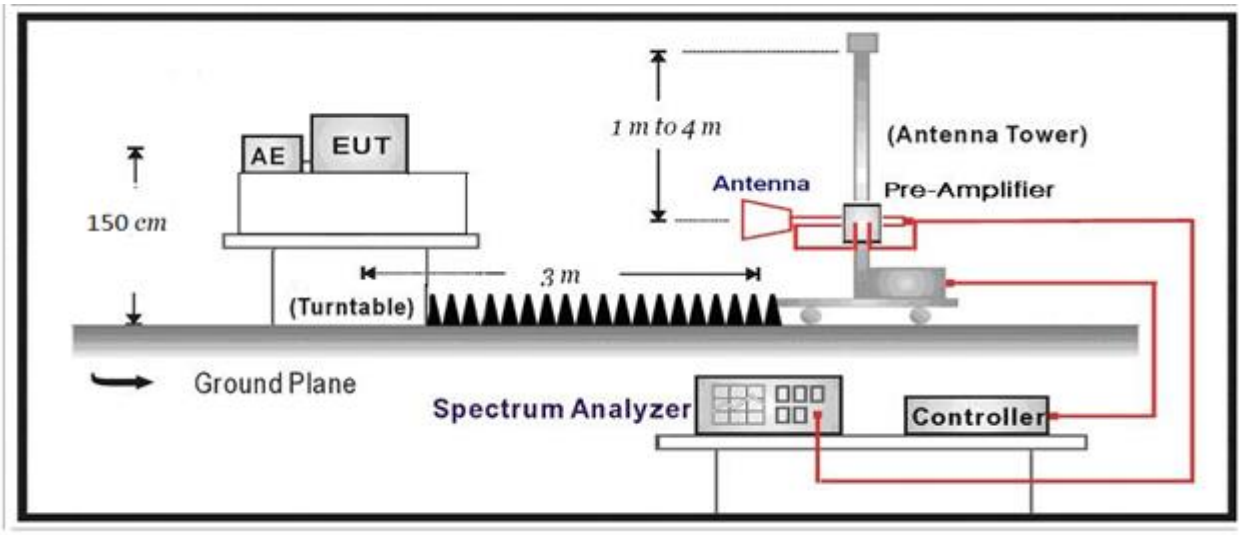
4.4 Radiated Emission Band Edge	VERDICT: PASS

4.4.1 Limit

Standard	FCC Part 15 Subpart C Paragraph 15.247(d) , 15.205, 15.209			
Frequency bands (MHz)	Detector	Limit (dBμV/m)	RBW (MHz)	Distance (m)
2310-2390 2483.5-2500	PK	74	1	3
	AV	54	1	3
Note: The field strength of emissions appearing within these frequency bands shall not exceed the limits.				

4.4.2 Test Setup

Above 1GHz Test Setup:



4.4.3 Test Procedure

	References Rule	Chapter	Description
☒	ANSI C63.10	6.10	Band-edge testing
	☒ ANSI C63.10	6.10.5	Restricted-band band-edge measurements
	☐ ANSI C63.10	6.10.6	Marker-delta method
☒	ANSI C63.10	11.12	Emissions in restricted frequency bands
	☒ ANSI C63.10	11.12.1	Radiated emission measurements
	☒ ANSI C63.10	6.3	Radiated spurious emission test
☐	ANSI C63.10	6.4	Radiated emissions from unlicensed wireless devices below 30 MHz
☐	ANSI C63.10	6.5	Radiated emissions from unlicensed wireless devices in the frequency range of 30 MHz to 1000 MHz
☒	ANSI C63.10	6.6	Radiated emissions from unlicensed wireless devices above 1 GHz

4.5 DTS Bandwidth	VERDICT: PASS

4.5.1 Limit

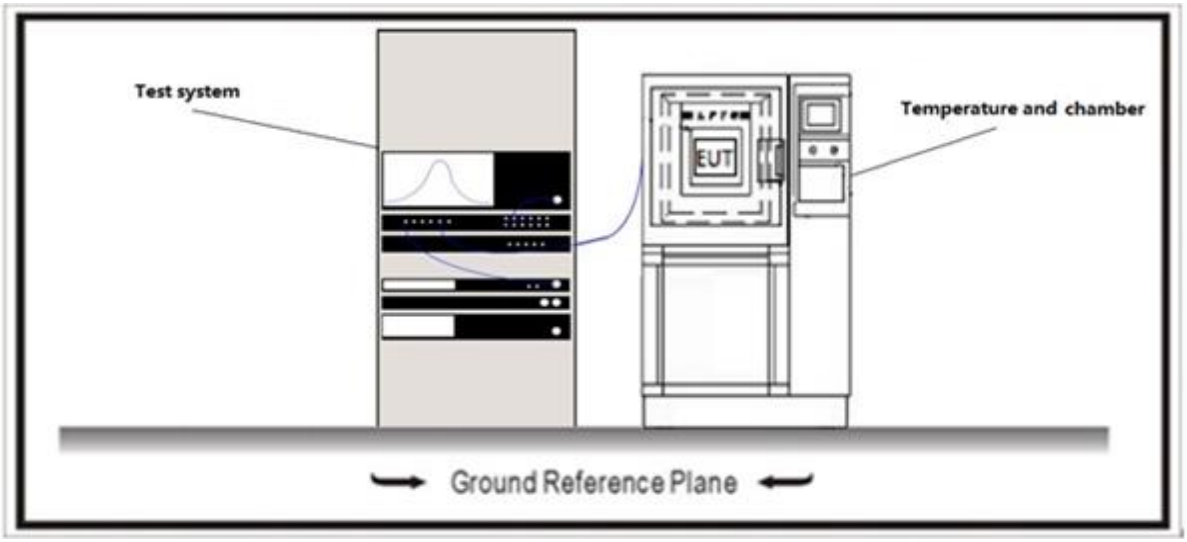
Standard	FCC Part 15 Subpart C Paragraph 15.247 (a)(2)

Systems using digital modulation techniques operate in the2400-2483.5 MHz .The minimum 6 dB bandwidth shall be at least 500 kHz

Standard	ANSI C63.10 Paragraph 6.7

The occupied bandwidth or 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. The occupied bandwidth should within the required frequency range.

4.5.2 Test Setup



4.5.3 Test Procedure

	Reference Rule		Chapter	Description
☒	ANSI C63.10		11.8	DTS bandwidth
	☒	ANSI C63.10	11.8.1	Option 1
	☐	ANSI C63.10	11.8.2	Option 2
☒	ANSI C63.10		6.9	Occupied bandwidth
	☐	ANSI C63.10	6.9.2	relative measurement procedure
	☒	ANSI C63.10	6.9.3	power bandwidth (99%) measurement procedure

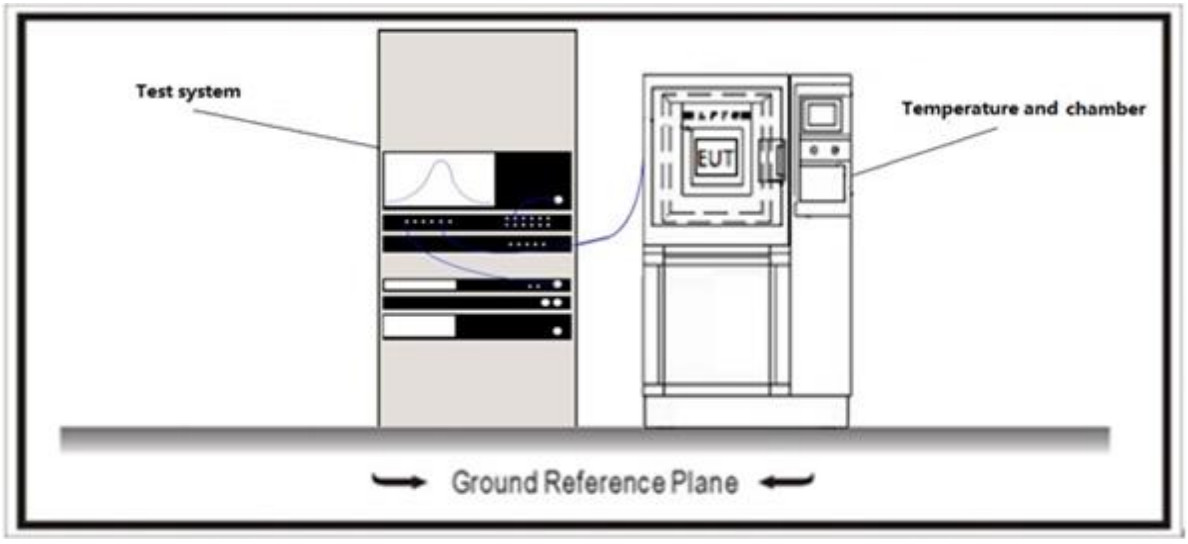
4.6 Fundamental emission output power	VERDICT: PASS

4.6.1 Limit

Standard			FCC Part 15 Subpart C Paragraph 15.247 (b)(3)
☒	GTX ＜6dBi		Pout≤30dBm
☐	GTX ＞6dBi		
	☐	Non-Fix point-point	Pout≤30-(GTX -6)
	☐	Fix point-point	Pout≤30-[(GTX-6)]/3
	☐	Point-to-multipoint	Pout≤30-(GTX-6)
	☐	Overlap Beams	Pout≤30-[(GTX-6)]/3
	☐	Avgregate power transmitted simultaneously on all beams	Pout≤30-[(GTX-6)]/3
	☐	single directional beam	Pout≤30-[(GTX-6)]/3+8dB

Note 1 : GTX directional gain of transmitting antennas.
Note 2 : Pout is maximum conducted output power .

4.6.2 Test Setup



4.6.3 Test Procedure

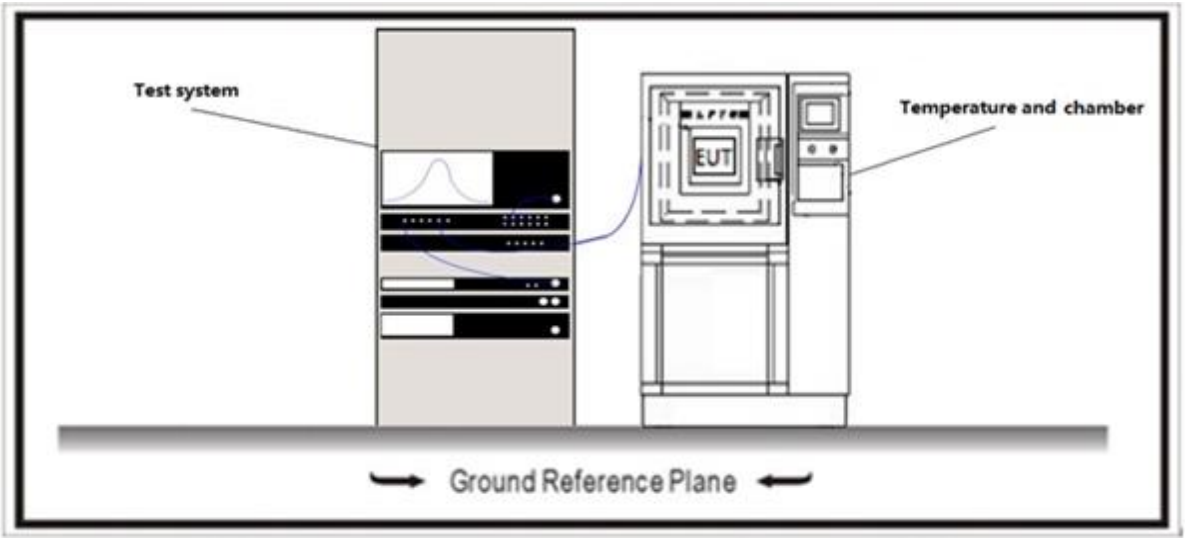
	References Rule	Chapter	Description
☒	ANSI C63.10	11.9	Fundamental emission output power
	☐ ANSI C63.10	11.9.1	Maximum peak conducted output power
	☐ ANSI C63.10	11.9.1.1	RBW ≥ DTS bandwidth
	☐ ANSI C63.10	11.9.1.2	Integrated band power method
	☐ ANSI C63.10	11.9.1.3	PKPM1 Peak power meter method
	☒ ANSI C63.10	11.9.2	Maximum conducted (average) output power
	☐ ANSI C63.10	11.9.2.2	Measurement using a spectrum analyzer (SA)
	☐ ANSI C63.10	11.9.2.2.2	Method AVGSA-1(Duty cycle≥98%)
	☐ ANSI C63.10	11.9.2.2.3	Method AVGSA-1A(Duty cycle≥98%)
	☐ ANSI C63.10	11.9.2.2.4	Method AVGSA-2(Duty cycle≤98%)
	☐ ANSI C63.10	11.9.2.2.5	Method AVGSA-2A(Duty cycle≤98%)
	☐ ANSI C63.10	11.9.2.2.4	Method AVGSA-3
	☐ ANSI C63.10	11.9.2.2.5	Method AVGSA-3A
	☒ ANSI C63.10	11.9.2.3	Measurement using a power meter (PM)
	☒ ANSI C63.10	11.9.2.3.1	Method AVGPM
	☐ ANSI C63.10	11.9.2.3.2	Method AVGPM-G

Directional Gain Calculations for In-Band test method				
	References Rule		Chapter	Description
☐	KDB 662911		F2)a)	Basic methodology
	☐	KDB 662911	F2)a) (i)	transmit signals are correlated
	☐	KDB 662911	F2)a) (ii)	transmit signals are uncorrelated
☐	KDB 662911		F2)b)	Sectorized antenna systems.
☐	KDB 662911		F2)c)	Cross-polarized antennas
	☐	ANSI C63.10	F2)c) (i)	Cross-polarized antennas
	☐	ANSI C63.10	F2)c) (ii)	Multiple antennas
☐	KDB 662911		F2)e)	Spatial stream
	☐	KDB 662911	F2)e) (i)	Antennas have the same gain
	☐	KDB 662911	F2)e) (ii)	Antenna have the different gain with one spatial stream
	☐	KDB 662911	F2)e) (iii)	Antenna have the different gain with more than one spatial stream
☒	KDB 662911		F2)f)	Cyclic Delay Diversity (CDD)
	☒	KDB 662911	F2)f) (i)	Antennas have the same gain
	☐	KDB 662911	F2)f) (ii)	Antenna have the different gain with one spatial stream
	☐	KDB 662911	F2)f) (iii)	Antenna have the different gain with more than one spatial stream

4.7 Power Density	VERDICT: PASS

4.7.1 Limit:	
Standard	FCC Part 15 Subpart C Paragraph 15.247 (e)
Power Spectral Density≤8dBm/3kHz	

4.7.2 Test Setup



4.7.3 Test Procedure

	References Rule		Chapter	Description
☒	ANSI C63.10		11.10	Maximum power spectral density level in the fundamental emission
	☐	ANSI C63.10	11.10.2	Method PKPSD (peak PSD)
	☐	ANSI C63.10	11.10.3	Method AVGPSD-1(Duty cycle≥98%)
	☐	ANSI C63.10	11.10.4	Method AVGPSD-1A(Duty cycle≥98%)
	☐	ANSI C63.10	11.10.5	Method AVGPSD-2(Duty cycle＜98%)
	☐	ANSI C63.10	11.10.6	Method AVGPSD-2A(Duty cycle＜98%)
	☒	ANSI C63.10	11.10.7	Method AVGPSD-3
	☐	ANSI C63.10	11.10.8	Method AVGPSD-3A

Directional Gain Calculations for In-Band test method				
	References Rule		Chapter	Description
☐	KDB 662911		F2)a)	Basic methodology
	☐	KDB 662911	F2)a) (i)	transmit signals are correlated
	☐	KDB 662911	F2)a) (ii)	transmit signals are uncorrelated
☐	KDB 662911		F2)b)	Sectorized antenna systems.
☐	KDB 662911		F2)c)	Cross-polarized antennas
	☐	ANSI C63.10	F2)c) (i)	Cross-polarized antennas
	☐	ANSI C63.10	F2)c) (ii)	Multiple antennas
☐	KDB 662911		F2)e)	Spatial stream
	☐	KDB 662911	F2)e) (i)	Antennas have the same gain
	☐	KDB 662911	F2)e) (ii)	Antenna have the different gain with one spatial stream
	☐	KDB 662911	F2)e) (iii)	Antenna have the different gain with more than one spatial stream
☒	KDB 662911		F2)f)	Cyclic Delay Diversity (CDD)
	☒	KDB 662911	F2)f) (i)	Antennas have the same gain
	☐	KDB 662911	F2)f) (ii)	Antenna have the different gain with one spatial stream
	☐	KDB 662911	F2)f) (iii)	Antenna have the different gain with more than one spatial stream

4.8 AC Power Line Conducted Emission	VERDICT: PASS

4.8.1 Limit

Standard	FCC Part 15 Subpart C Paragraph 15.207.	
Frequency range [MHz]	Limit: QP [dB(μV)[1)]]	Limit: AV [dB(μV) [1)]]
0,15 - 0,50	66 – 56 [2)]	56 - 46 [2)]
0,50 - 5,0	56	46
5,0 - 30	60	50

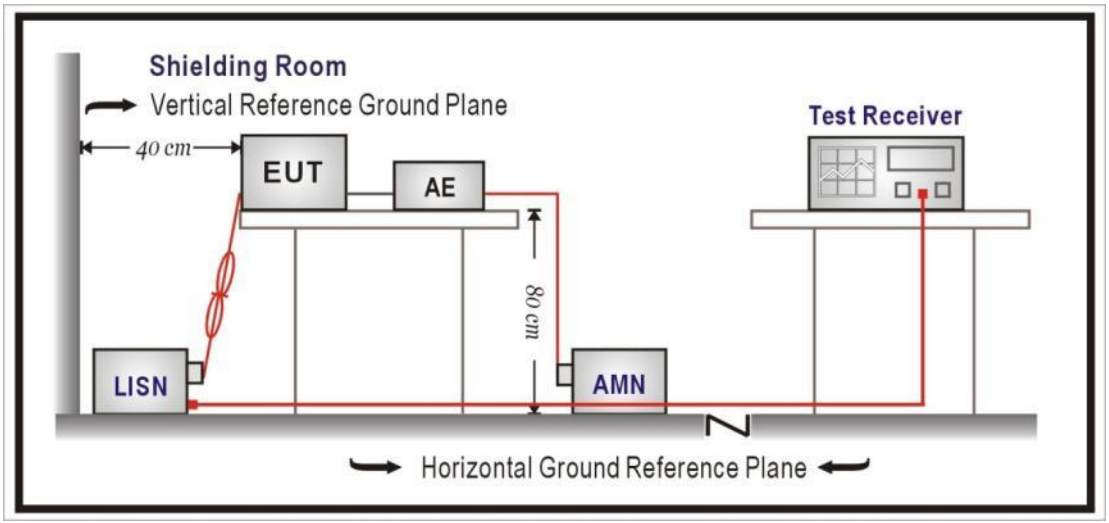
[1)] At the transition frequency, the lower limit applies.

[2)] The limit decreases linearly with the logarithm of the frequency.

NOTE 1: The exclusion band for transmitters shall be considered for transmitters operating at frequencies below 30 MHz.

NOTE 2: Where the AC output port is directly connected (or via a circuit breaker) to the AC power input port of the EUT the AC power output port need not to be tested.

4.8.2 Test Setup



4.8.3 Test Procedure

	References Rule	Chapter	Item
☒	ANSI C63.10-2013	6.2	Standard test method for ac power-line conducted emissions from unlicensed wireless devices

4.9 Antenna Requirement	VERDICT: PASS

4.9.1 Limit:	
Standard	FCC Part 15 Subpart C Paragraph 15.203
An intentional radiator shall be designed to ensure that no antenna other than that furnished by the responsible party shall be used with the device. The use of a permanently attached antenna or of an antenna that uses a unique coupling to the intentional radiator shall be considered sufficient to comply with the provisions of this section. The manufacturer may design the unit so that a broken antenna can be replaced by the user, but the use of a standard antenna jack or electrical connector is prohibited. This requirement does not apply to carrier current devices or to devices operated under the provisions of §15.211, §15.213, §15.217, §15.219, or §15.221. Further, this requirement does not apply to intentional radiators that must be professionally installed, such as perimeter protection systems and some field disturbance sensors, or to other intentional radiators which, in accordance with §15.31(d), must be measured at the installation site. However, the installer shall be responsible for ensuring that the proper antenna is employed so that the limits in this part are not exceeded.	

4.9.2 Antenna Connector Construction:	
☒	The use of a permanently attached antenna
☐	The antenna use of a unique coupling to the intentional radiator
☐	The use of a nonstandard antenna jack or electrical connector
Please refer to the attached document “Internal Photograph” to show the antenna connector.	

5 TEST SETUP PHOTO AND EUT PHOTO

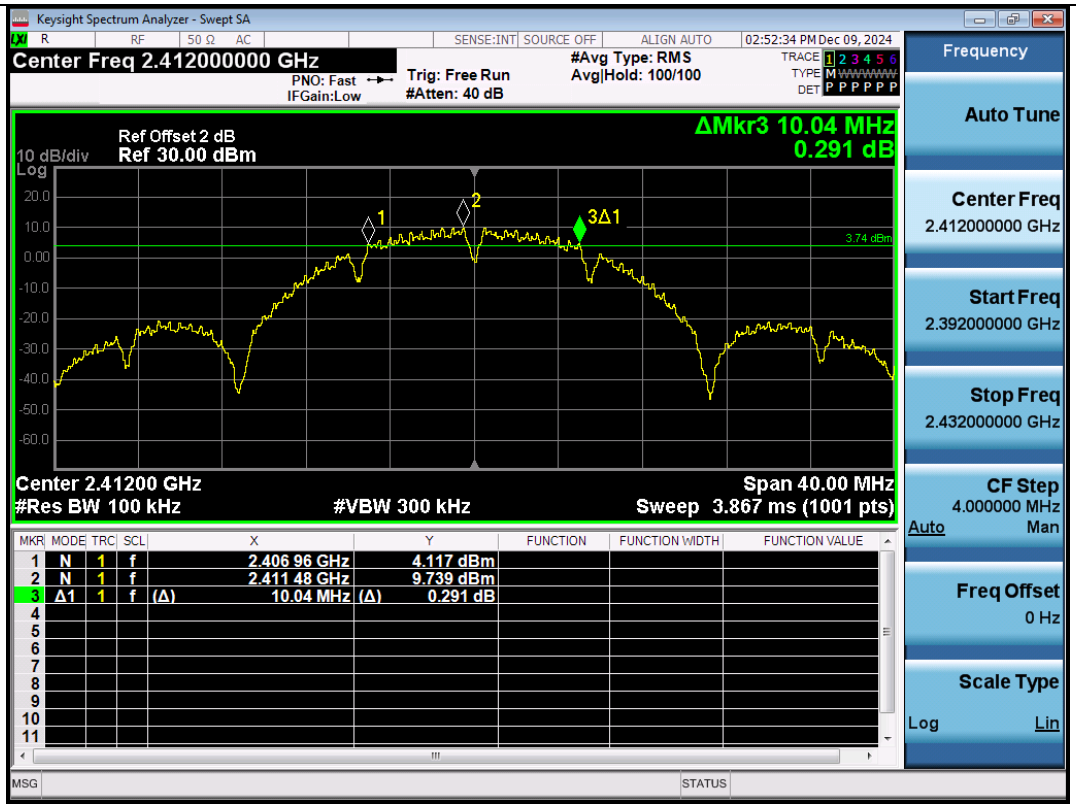
Remark: The test setup photo and EUT Photo please see appendix.

6 TEST RESULT

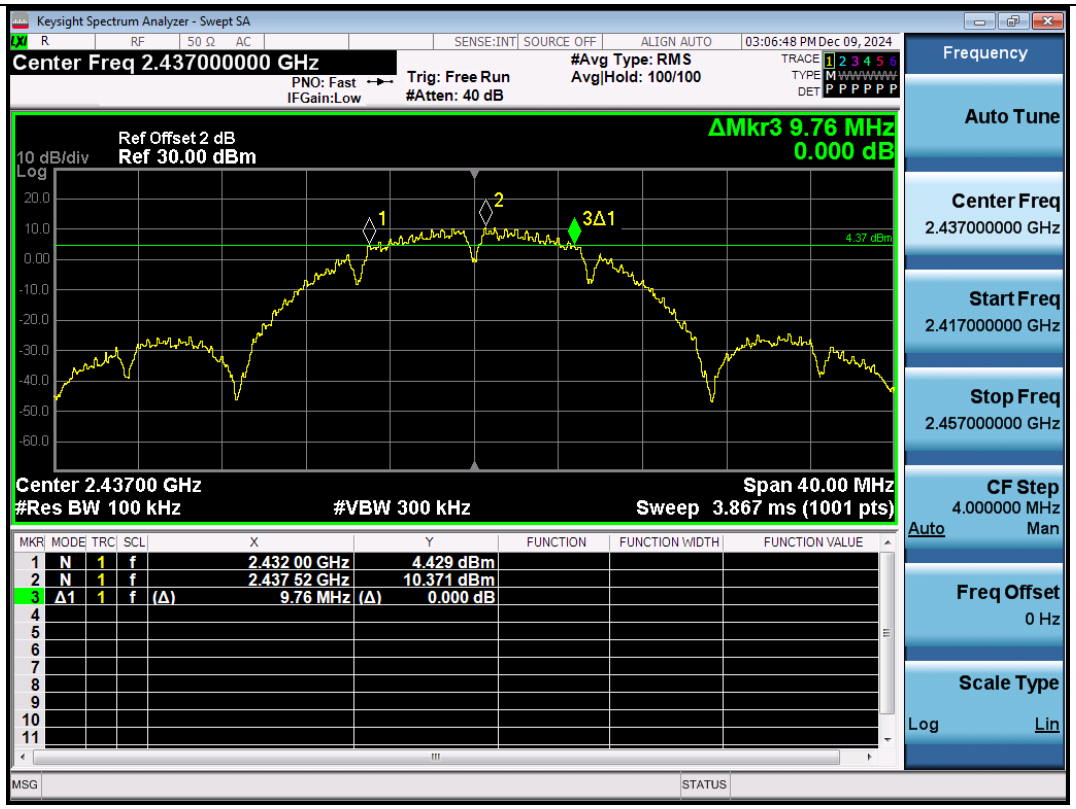
Appendix A: DTS Bandwidth

TestMode	Frequency[MHz]	DTS BW [MHz]	FL[MHz]	FH[MHz]	Limit[MHz]	Verdict
11B	2412	10.040	2406.960	2417.000	0.5	PASS
	2437	9.760	2432.000	2441.760	0.5	PASS
	2462	10.000	2457.040	2467.040	0.5	PASS
11G	2412	15.040	2404.480	2419.520	0.5	PASS
	2437	15.000	2429.480	2444.480	0.5	PASS
	2462	15.040	2454.480	2469.520	0.5	PASS
11N20SISO	2412	15.000	2404.480	2419.480	0.5	PASS
	2437	15.000	2429.520	2444.520	0.5	PASS
	2462	15.080	2454.440	2469.520	0.5	PASS
11N40SISO	2422	35.040	2404.480	2439.520	0.5	PASS
	2437	30.080	2421.960	2452.040	0.5	PASS
	2452	33.680	2434.560	2468.240	0.5	PASS

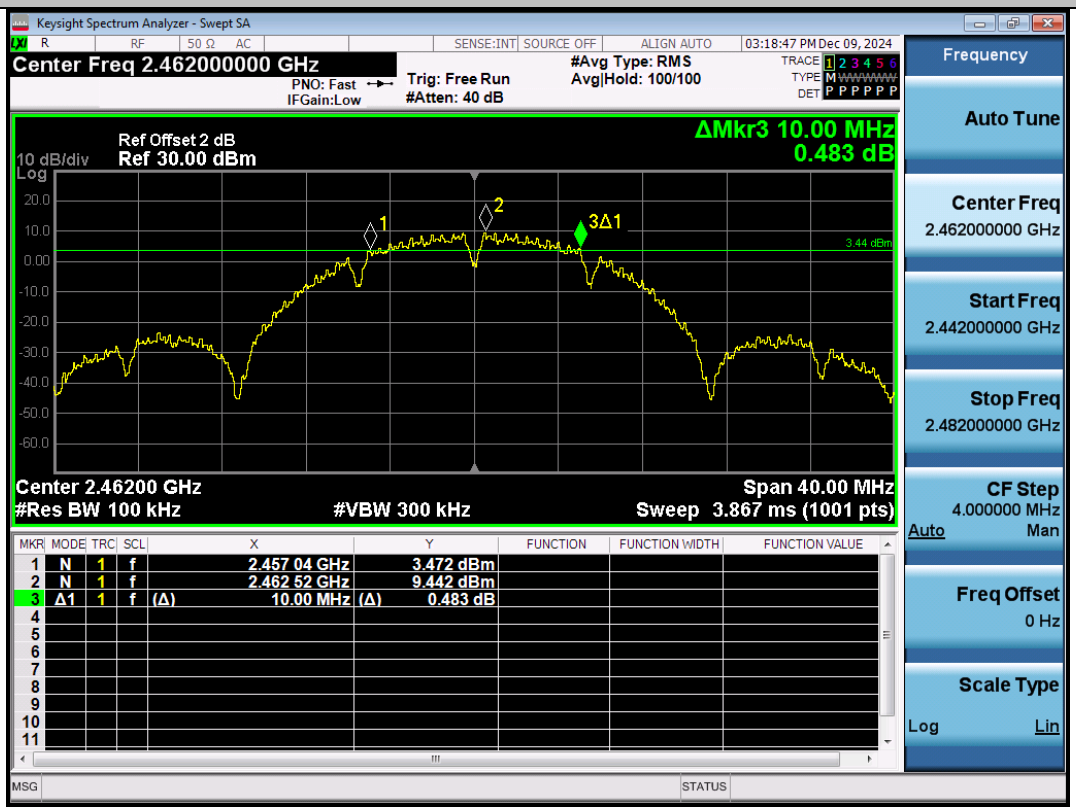
Test Graphs



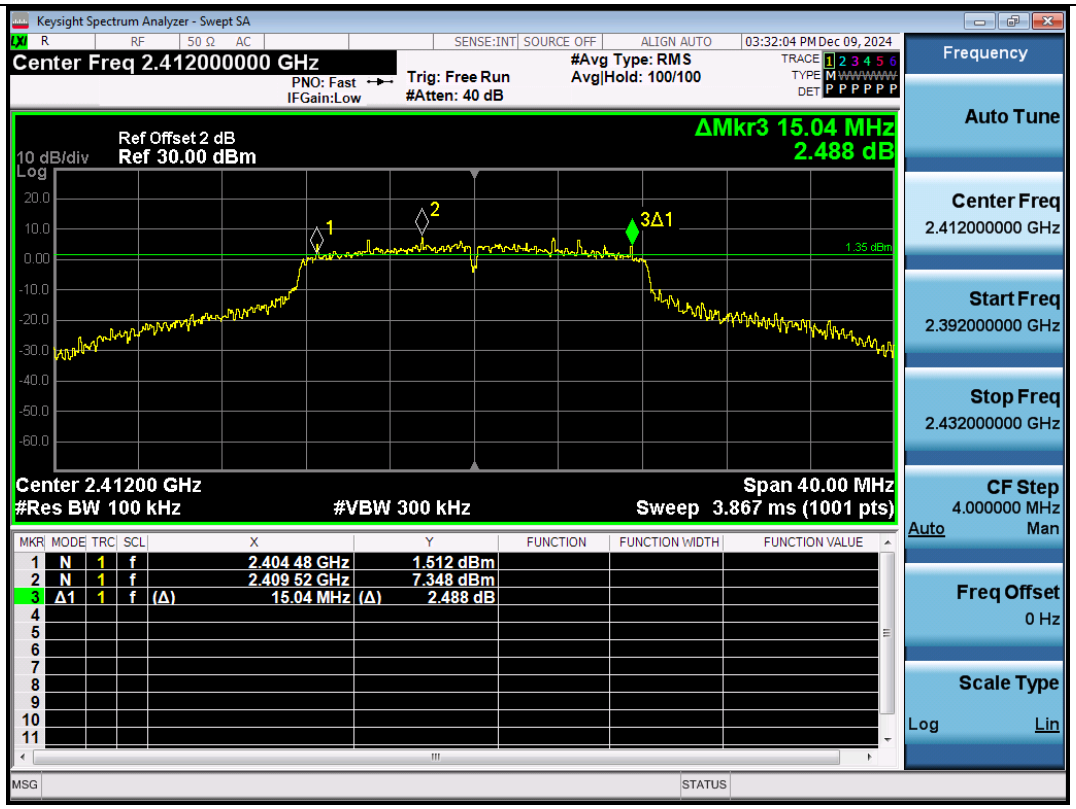
11B-Ant1-2412-PASS



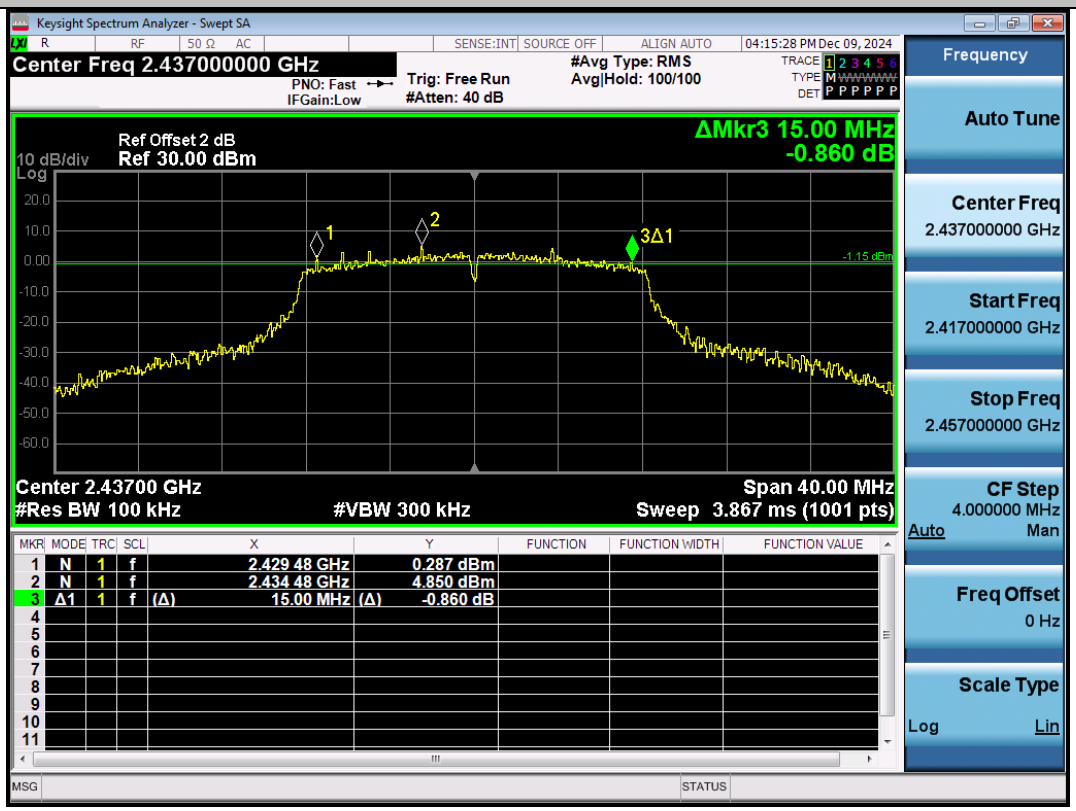
11B-Ant1-2437-PASS



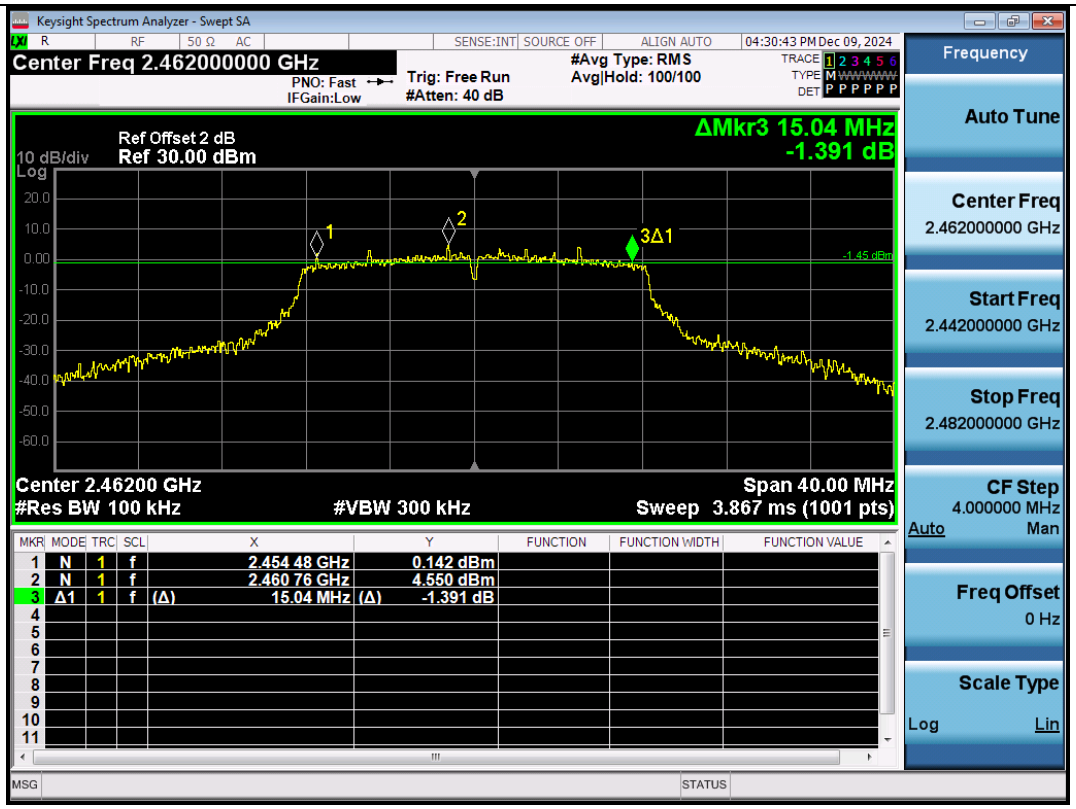
11B-Ant1-2462-PASS



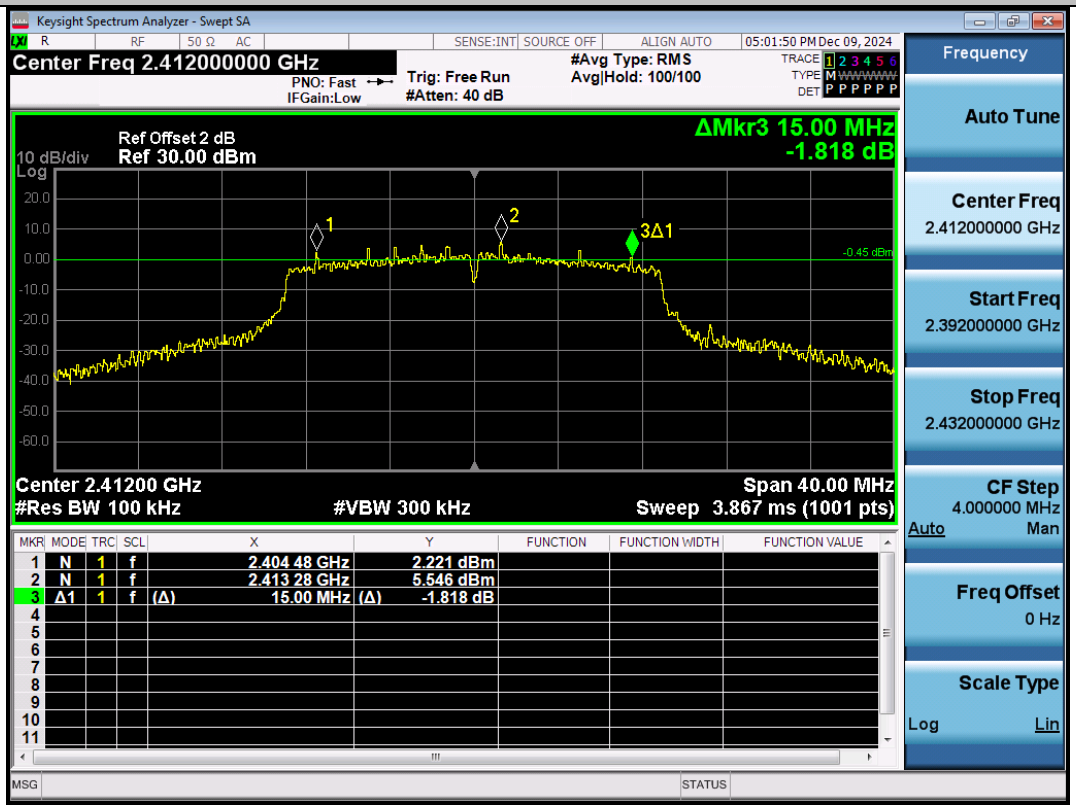
11G-Ant1-2412-PASS



11G-Ant1-2437-PASS



11G-Ant1-2462-PASS



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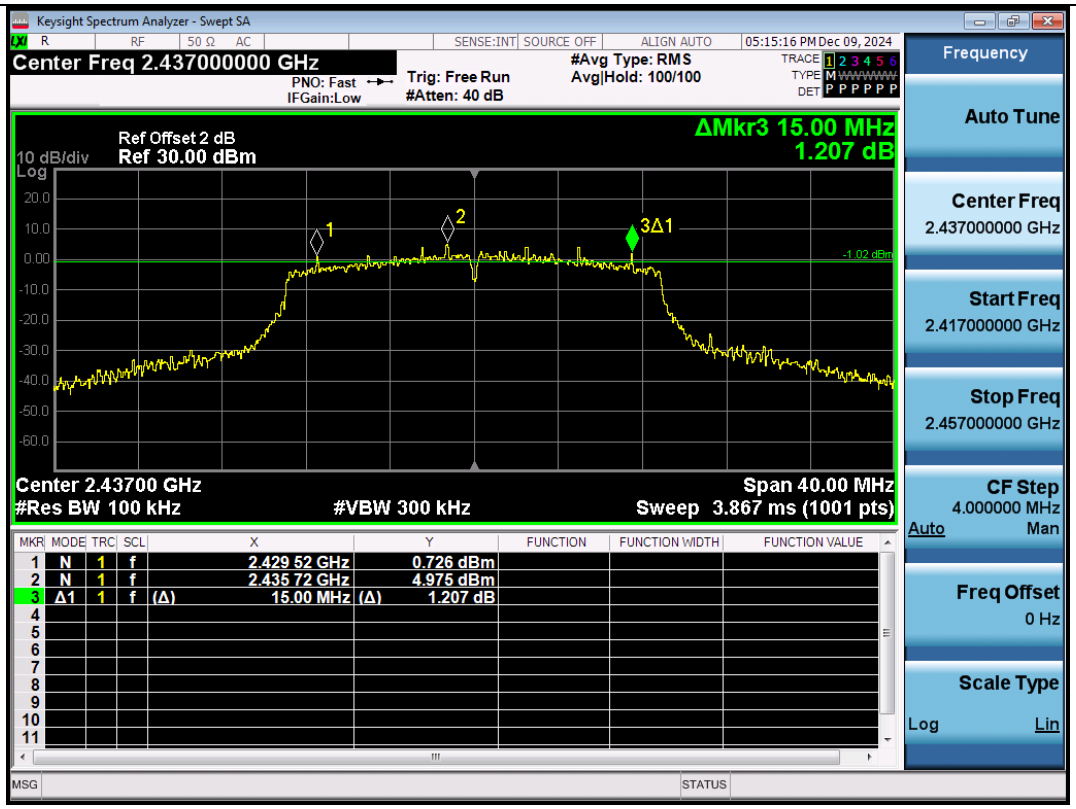
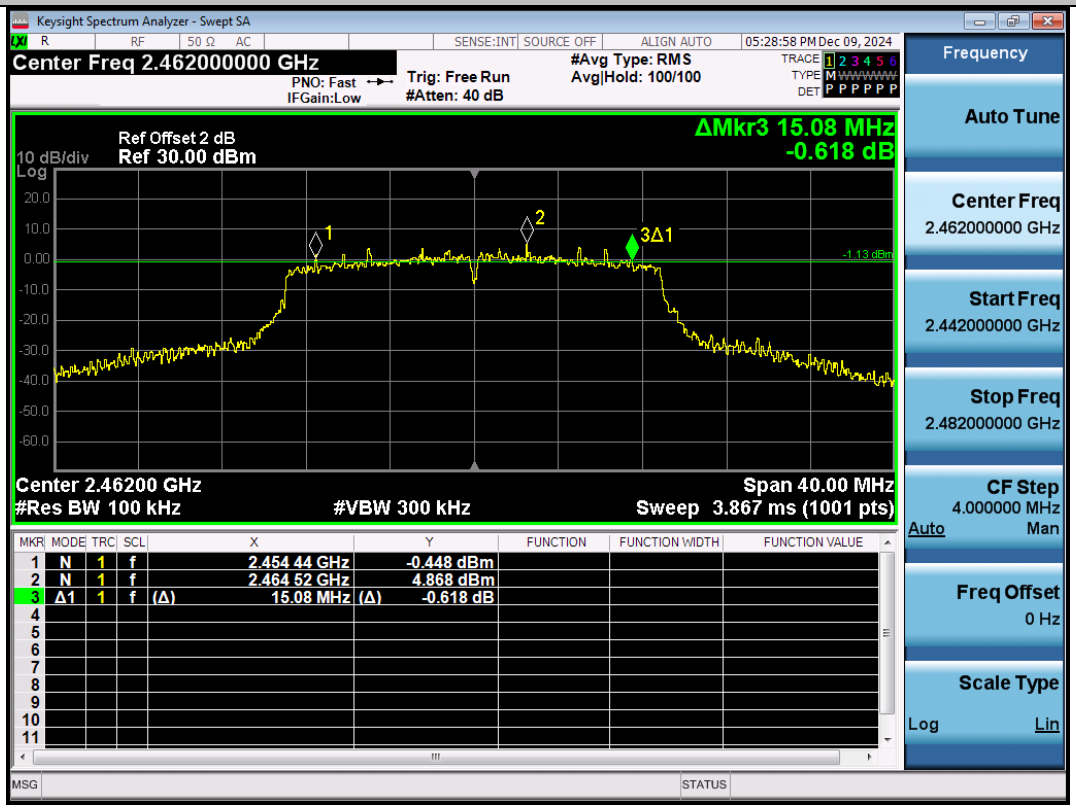
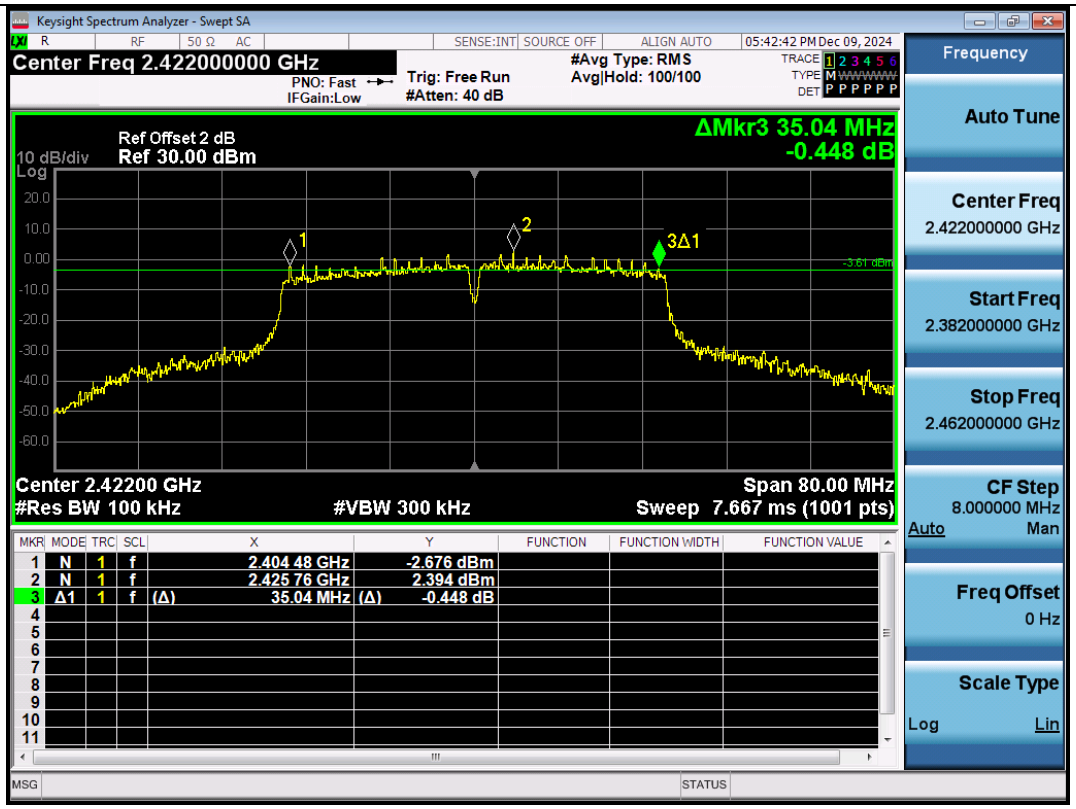


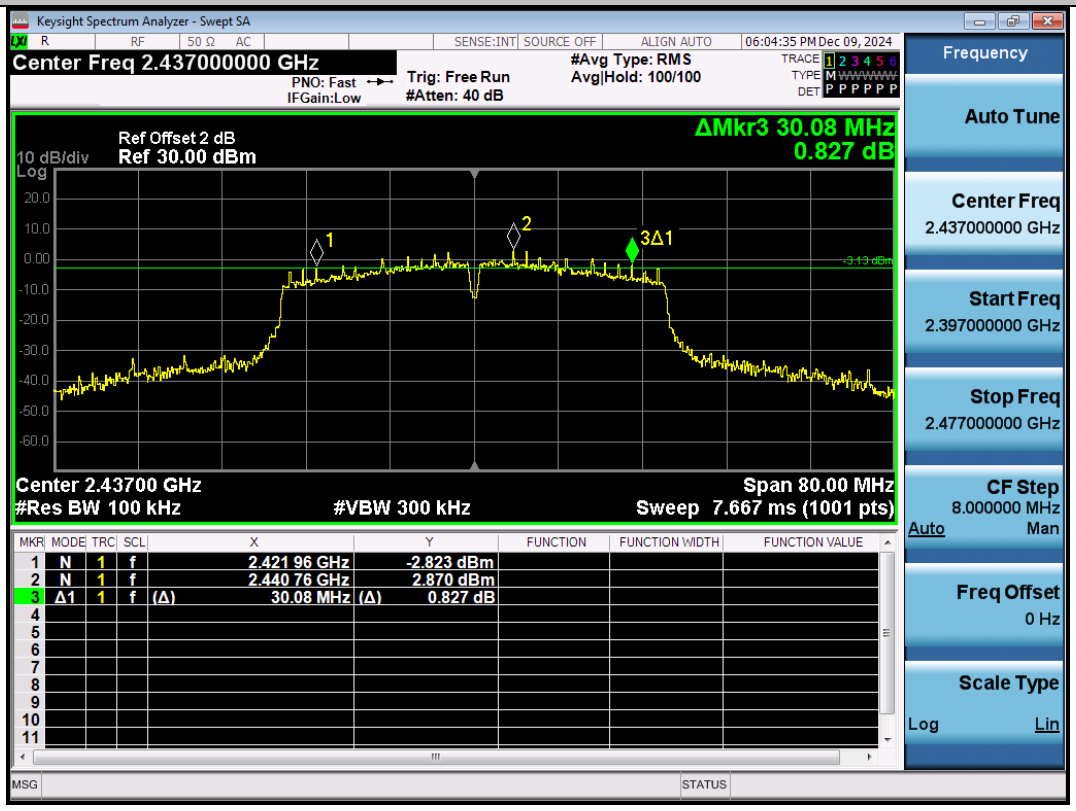
11N20SISO-Ant1-2437-PASS



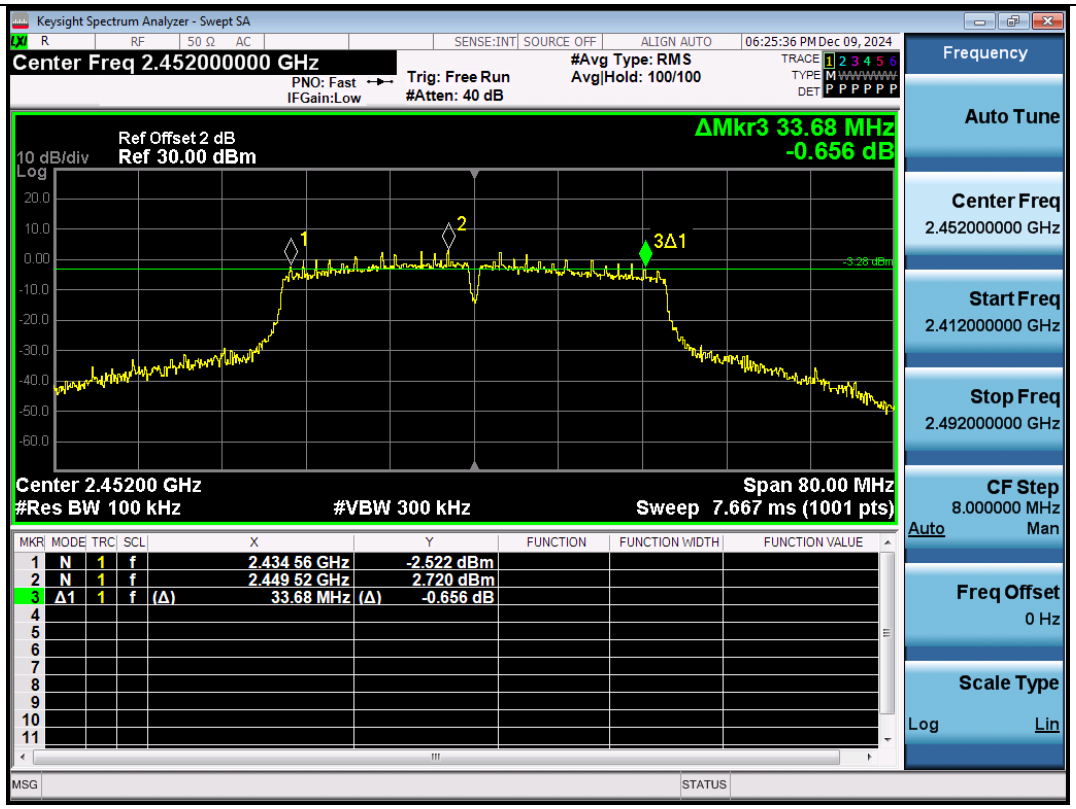
11N20SISO-Ant1-2462-PASS



11N40SISO-Ant1-2422-PASS



11N40SISO-Ant1-2437-PASS



11N40SISO-Ant1-2452-PASS

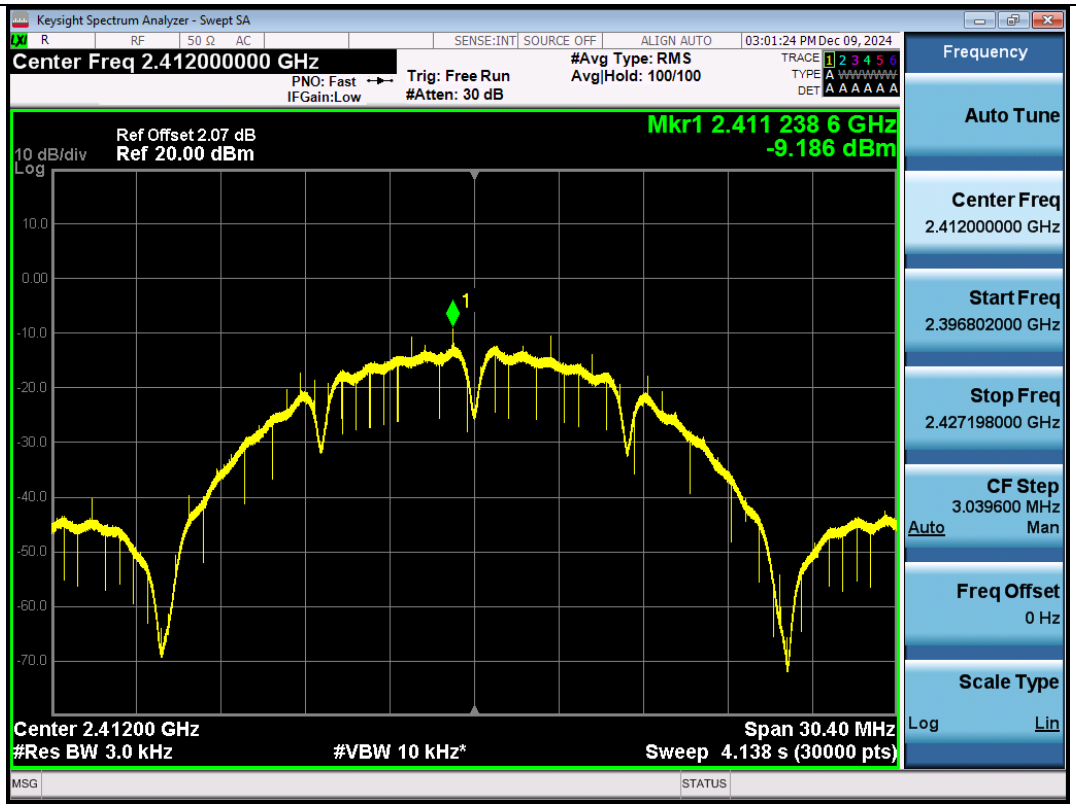
Appendix B: Maximum conducted output power

Mode	Channel	Frequency (MHz)	Average power (dBm) Ant 1	Average power (dBm) Ant 2	Average power (dBm) Ant 1+2	Limit [dBm]	Verdict
802.11b 1Mbps	1	2412	19.67	19.55	19.70	≤30.00	PASS
	6	2437	19.55	19.16	19.50	≤30.00	PASS
	11	2462	19.64	19.67	19.73	≤30.00	PASS
802.11g 6Mbps	1	2412	15.39	15.64	18.39	≤30.00	PASS
	6	2437	15.46	15.20	18.31	≤30.00	PASS
	11	2462	15.51	15.49	18.46	≤30.00	PASS
802.11n-HT20 MCS0	1	2412	15.44	15.48	18.43	≤30.00	PASS
	6	2437	15.47	15.07	18.34	≤30.00	PASS
	11	2462	15.42	15.42	18.53	≤30.00	PASS
802.11n-HT40 MCS0	3	2422	15.60	15.45	18.24	≤30.00	PASS
	6	2437	15.53	15.29	18.04	≤30.00	PASS
	9	2452	15.80	15.64	18.59	≤30.00	PASS

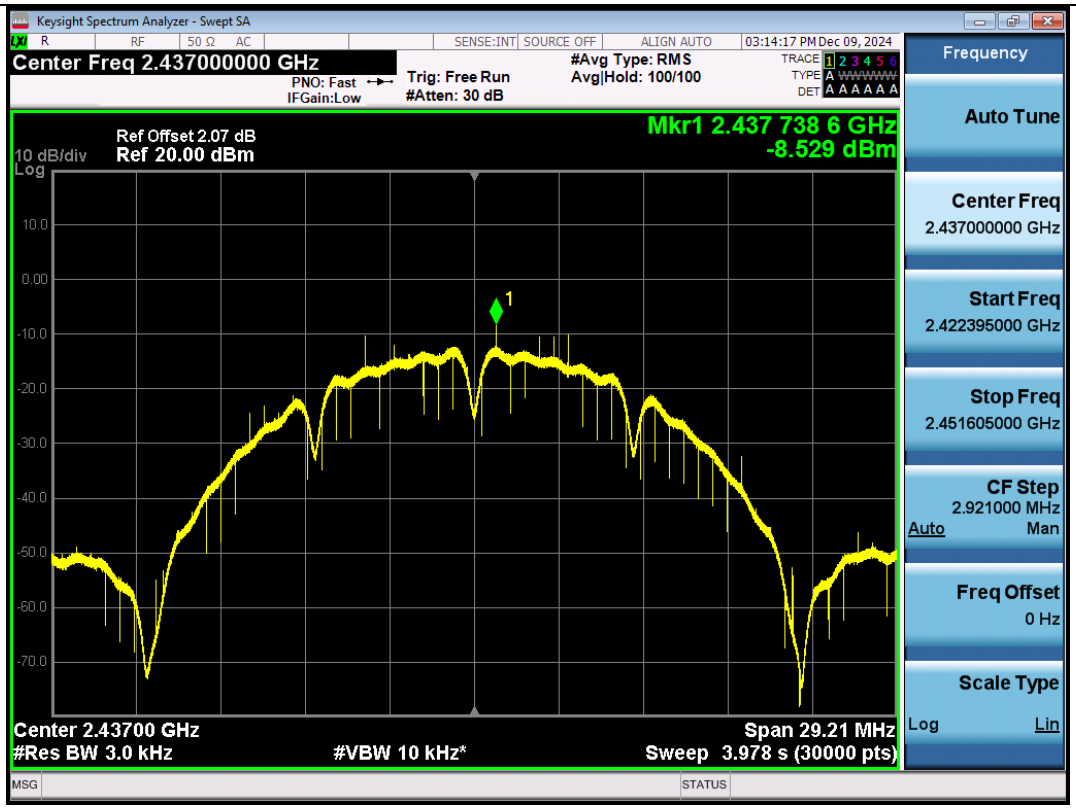
Appendix C: Maximum power spectral density

TestMode	Frequency[MHz]	Result[dBm/3-100kHz]	Limit[dBm/3kHz]	Verdict
11B	2412	-9.19	≤8.00	PASS
	2437	-8.53	≤8.00	PASS
	2462	-10.25	≤8.00	PASS
11G	2412	-15.77	≤8.00	PASS
	2437	-15.51	≤8.00	PASS
	2462	-16.32	≤8.00	PASS
11N20SISO	2412	-16.31	≤8.00	PASS
	2437	-16.17	≤8.00	PASS
	2462	-16.47	≤8.00	PASS
11N40SISO	2422	-18.71	≤8.00	PASS
	2437	-17.76	≤8.00	PASS
	2452	-18.64	≤8.00	PASS

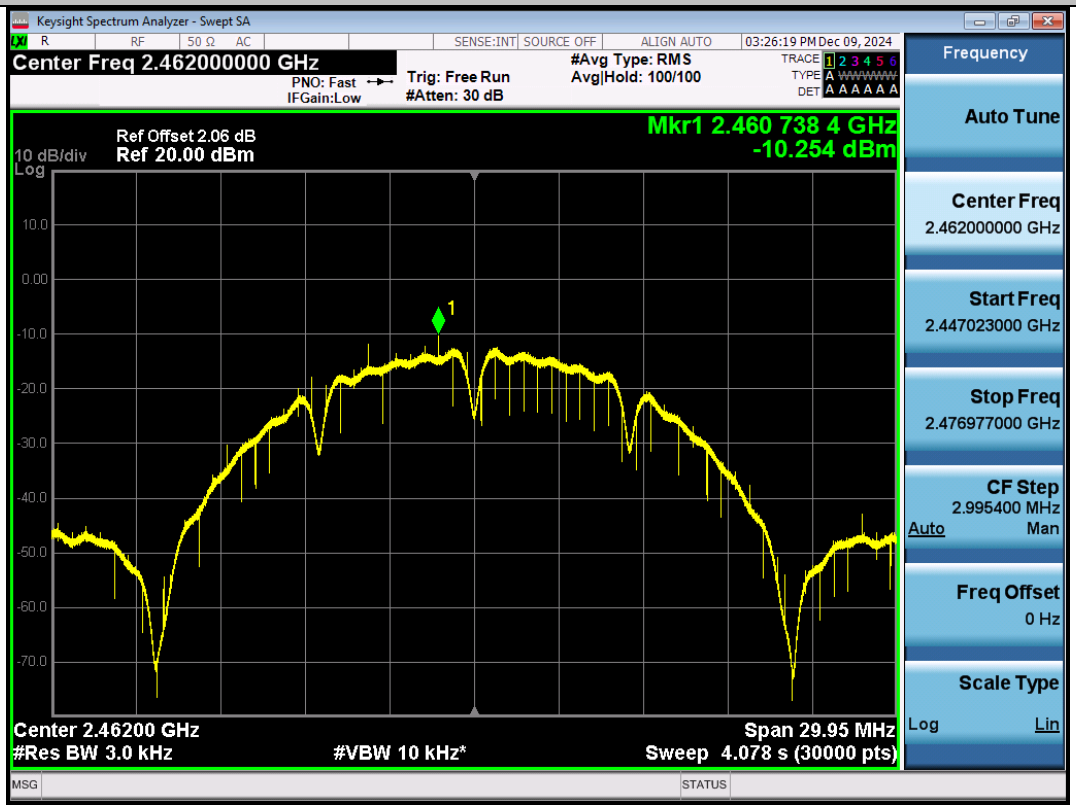
Test Graphs



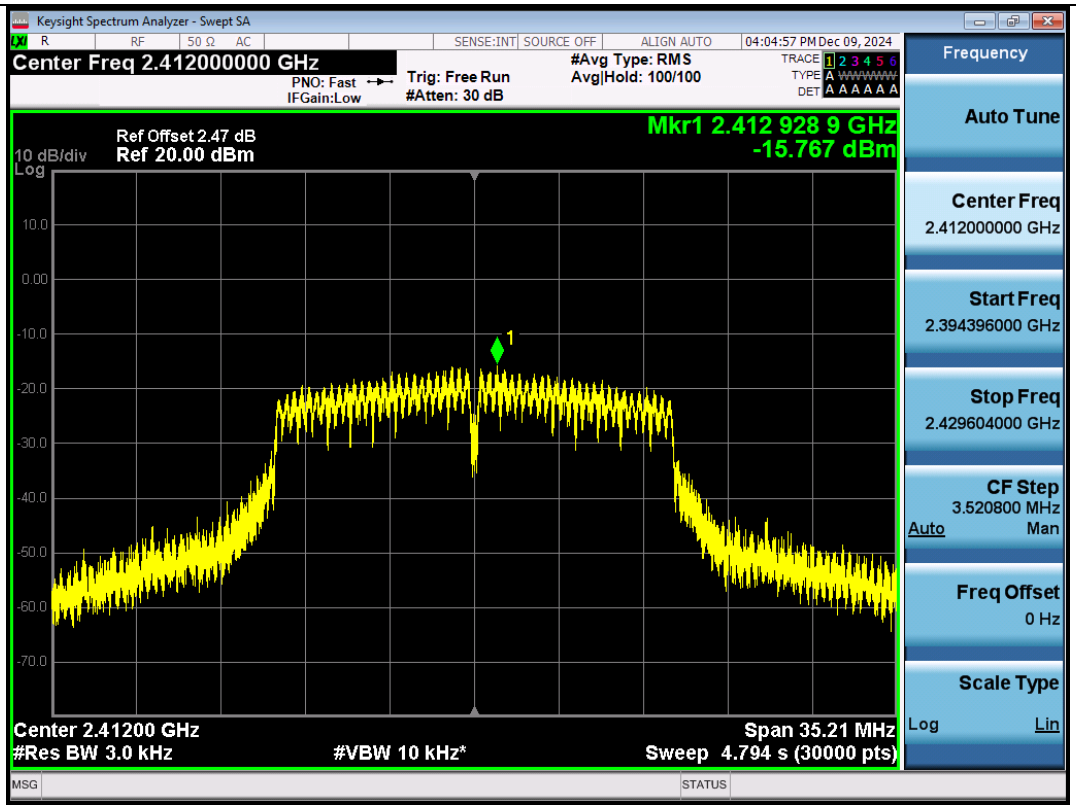
11B-Ant1-2412-PASS



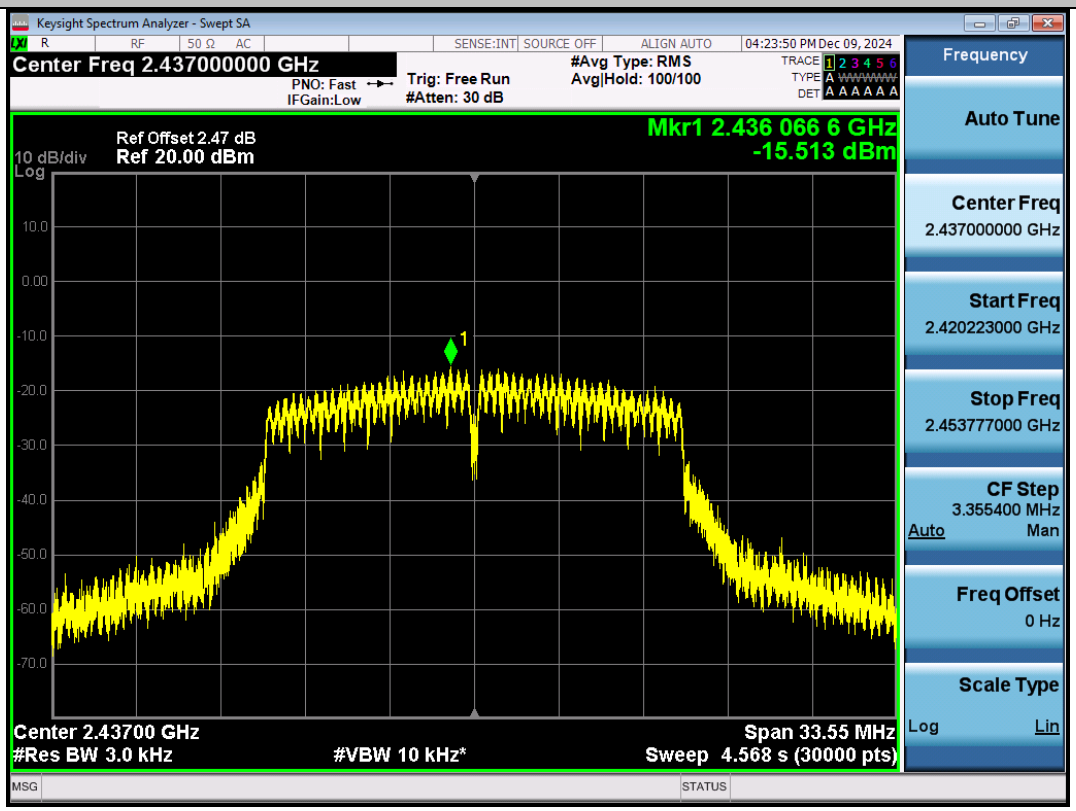
11B-Ant1-2437-PASS



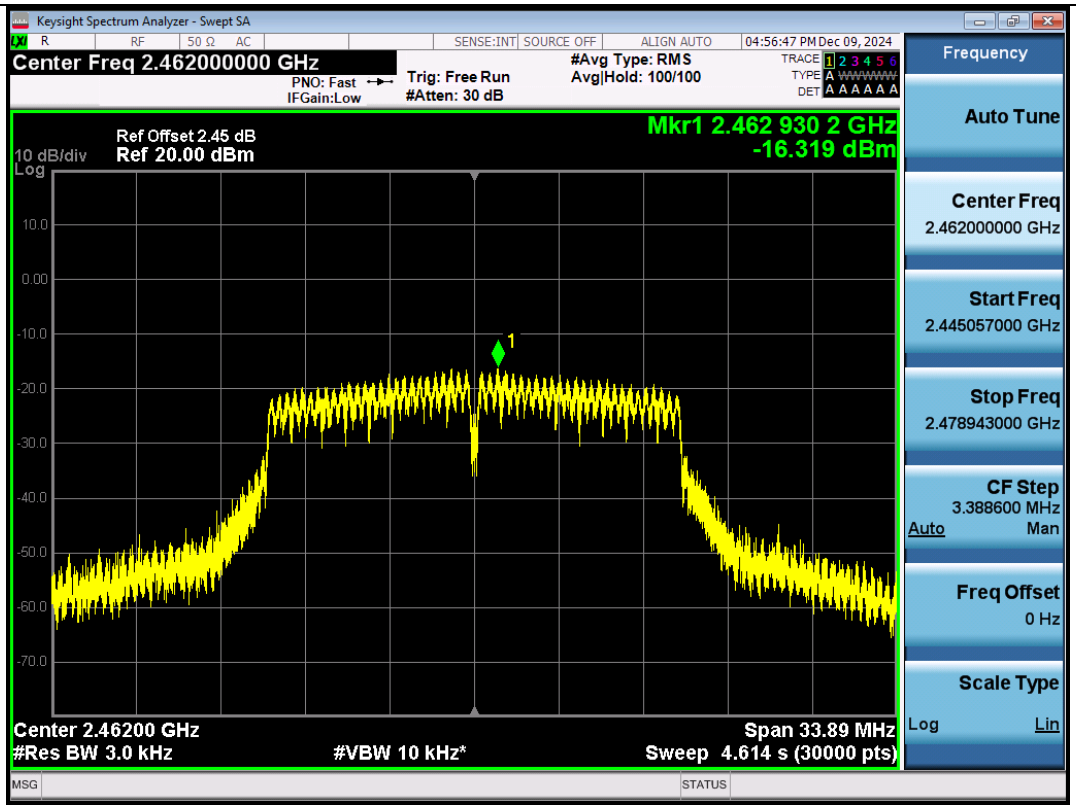
11B-Ant1-2462-PASS



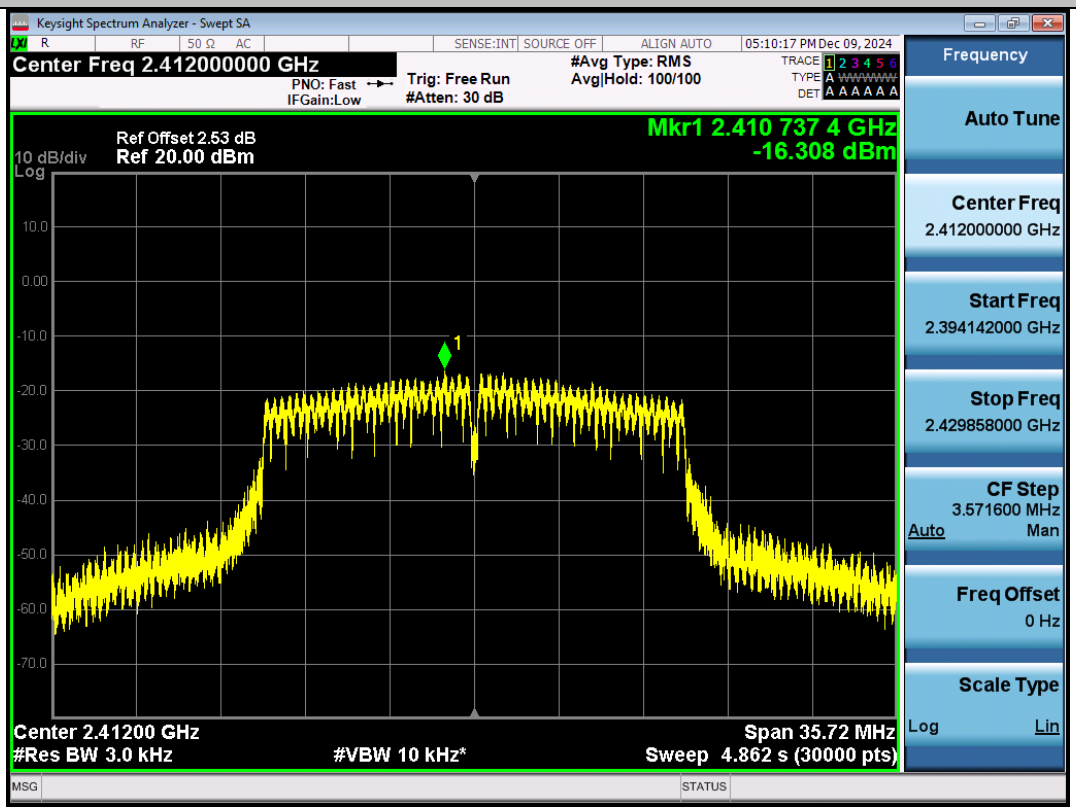
11G-Ant1-2412-PASS



11G-Ant1-2437-PASS



11G-Ant1-2462-PASS



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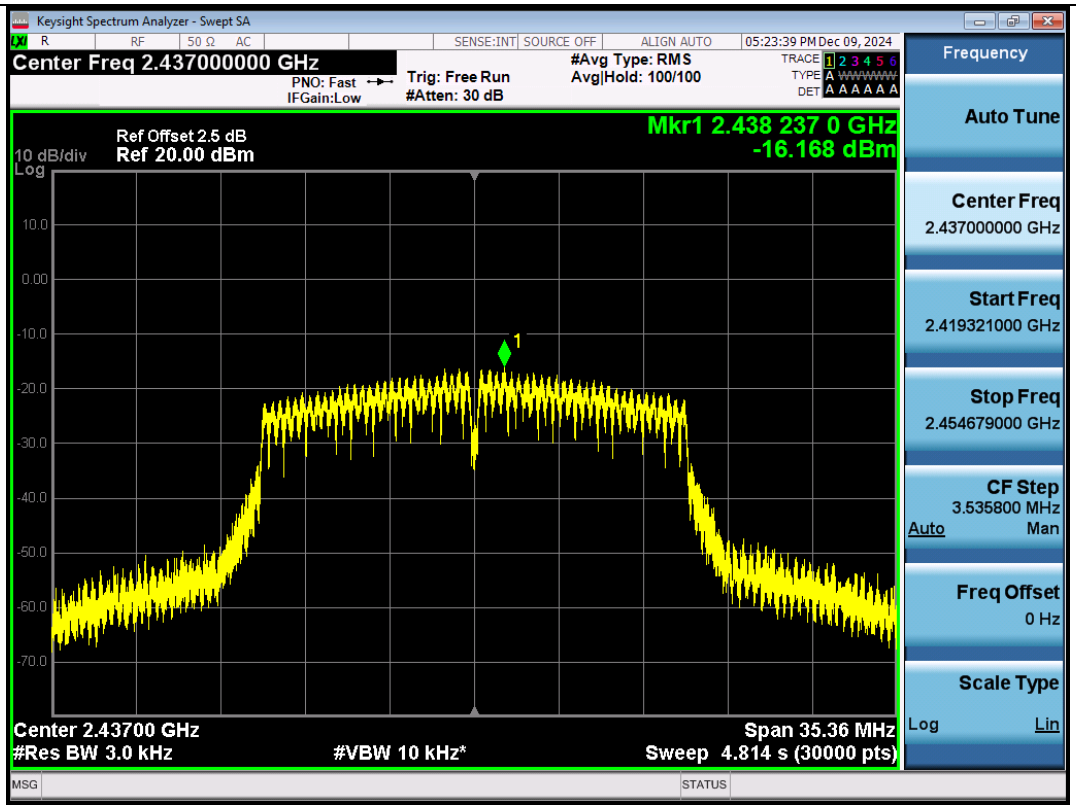
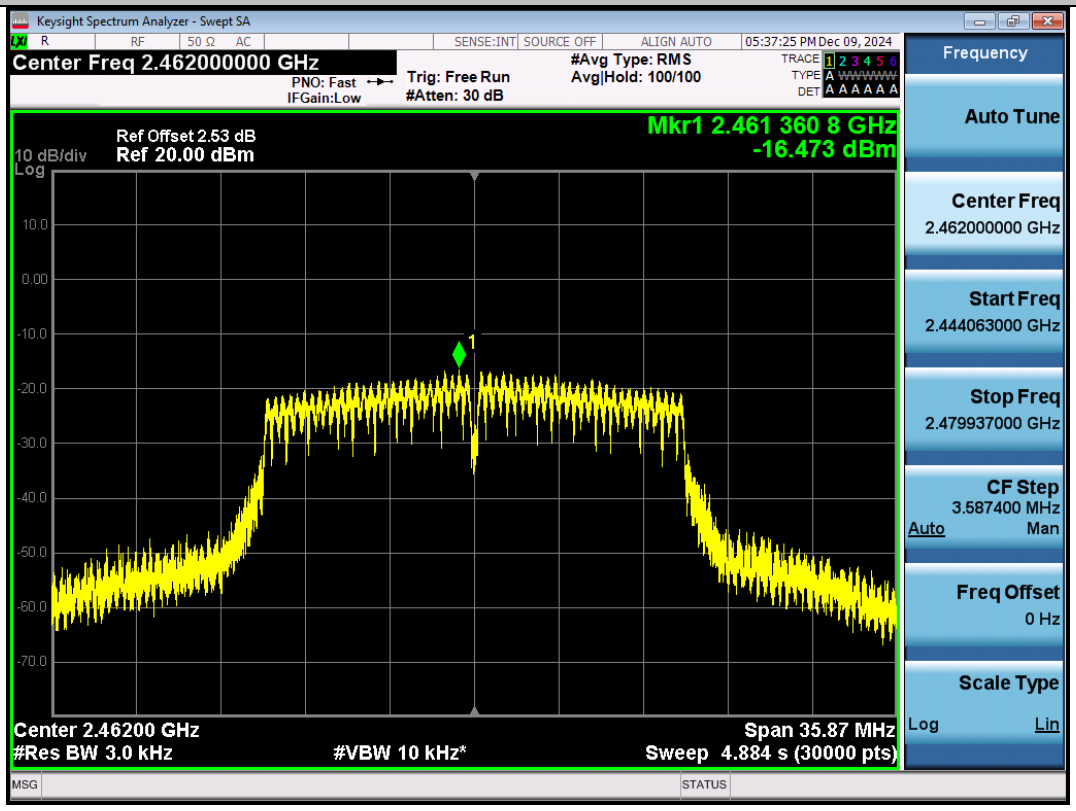


11N20SISO-Ant1-2437-PASS



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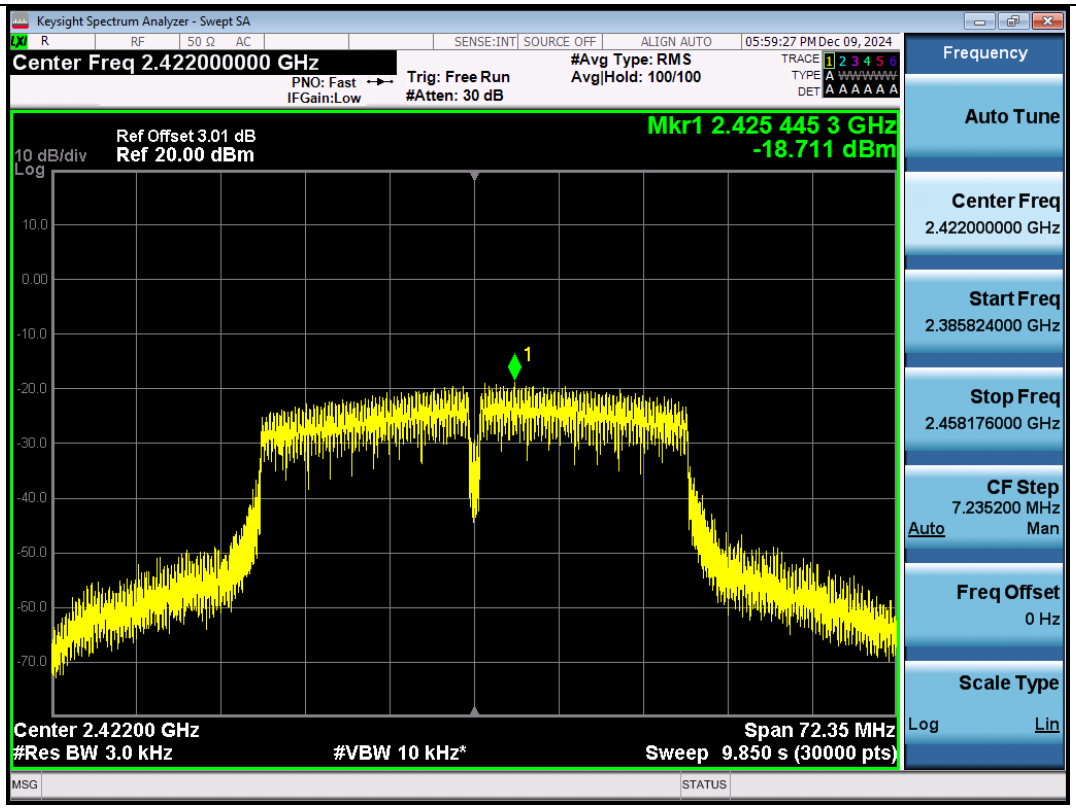
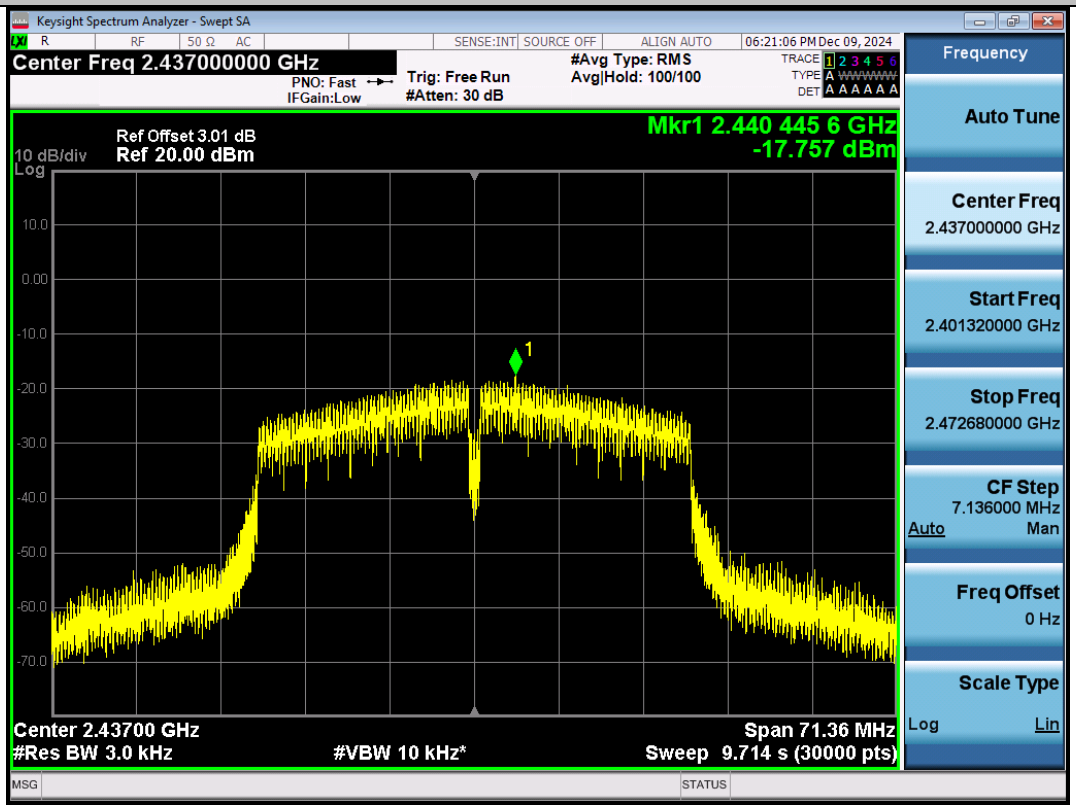
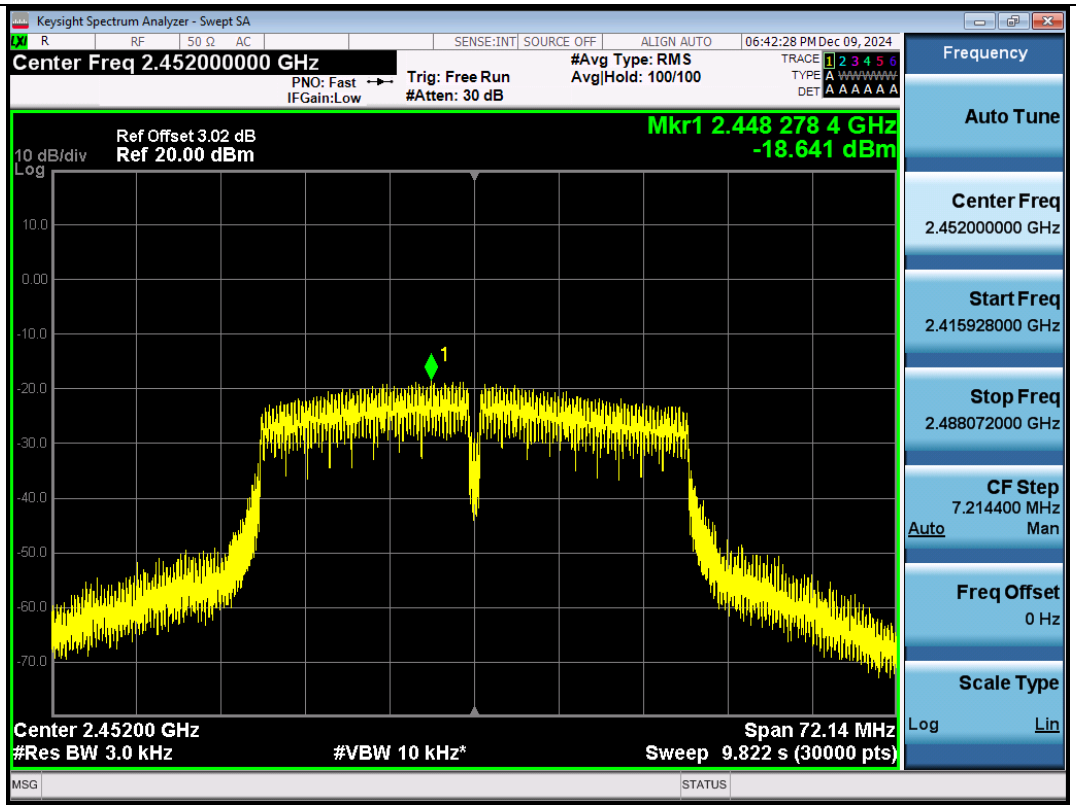


11N40SISO-Ant1-2422-PASS



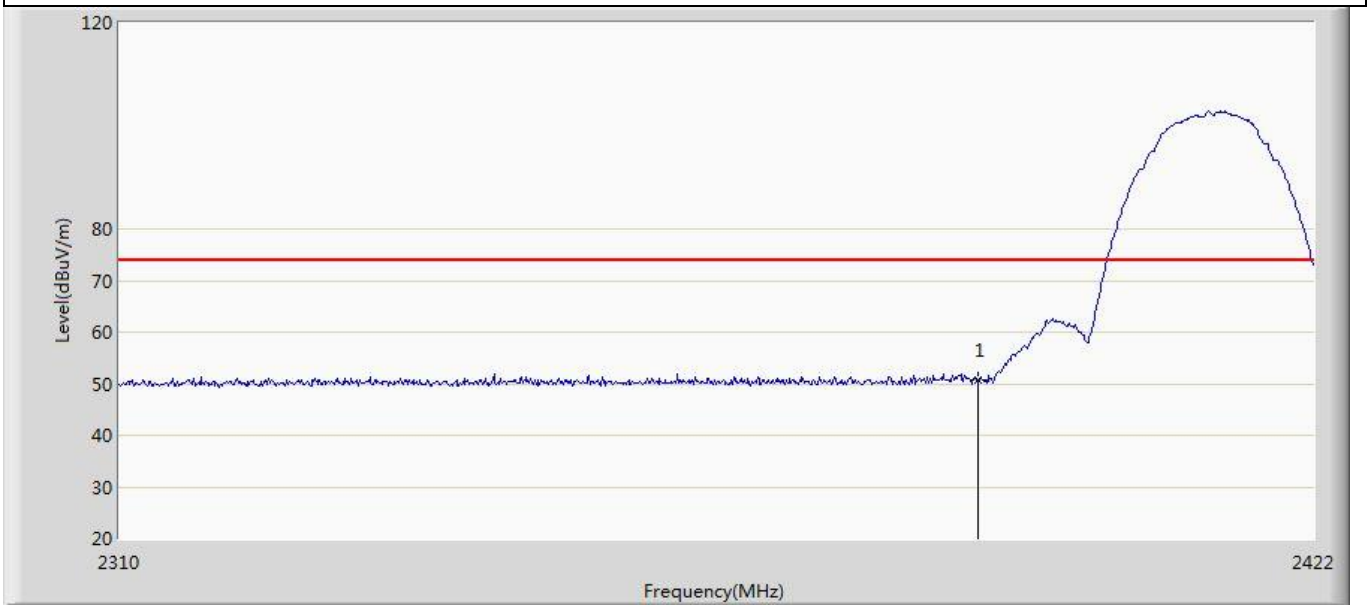
11N40SISO-Ant1-2437-PASS



11N40SISO-Ant1-2452-PASS

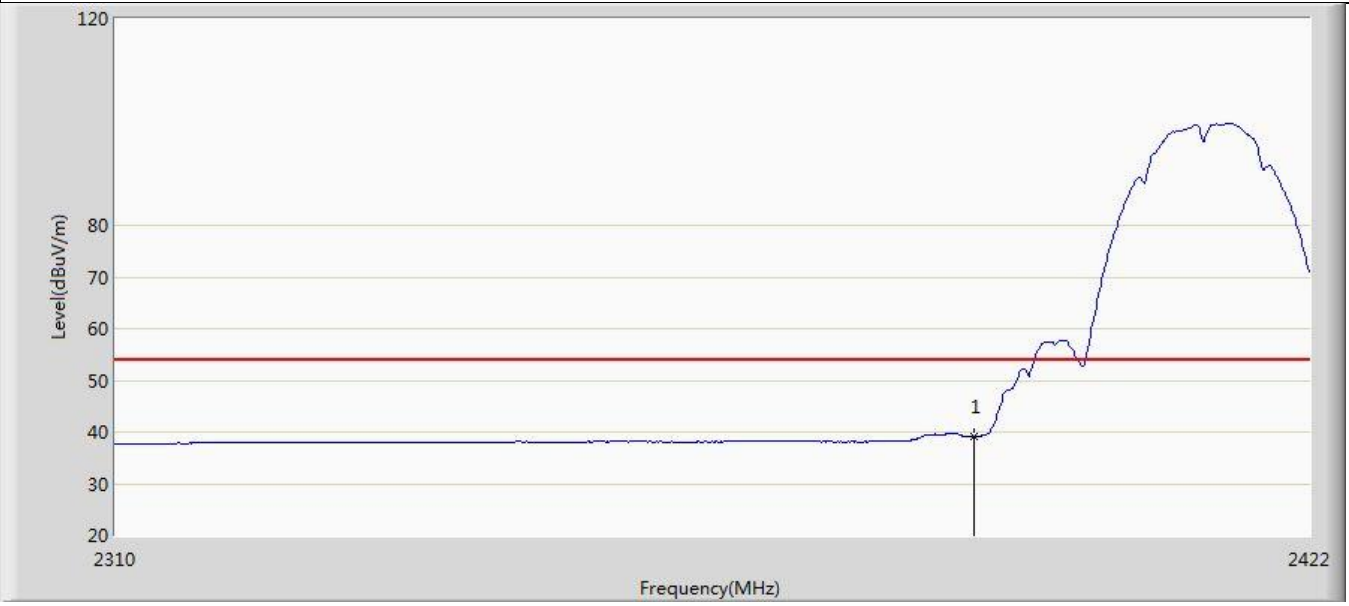
Appendix D: Band edge measurements

Profile: 24B0779R	Page No.: 1
Engineer: Yuliu	
Site: AC5	Time: 2024/12/10 - 17:10
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055_(1-18GHz)	Polarity: Horizontal
EUT: Cat4 indoor CPE	Power: 230 Vac / 50 Hz
Note: Mode 1：Transmit at 2412MHz by 802.11b	



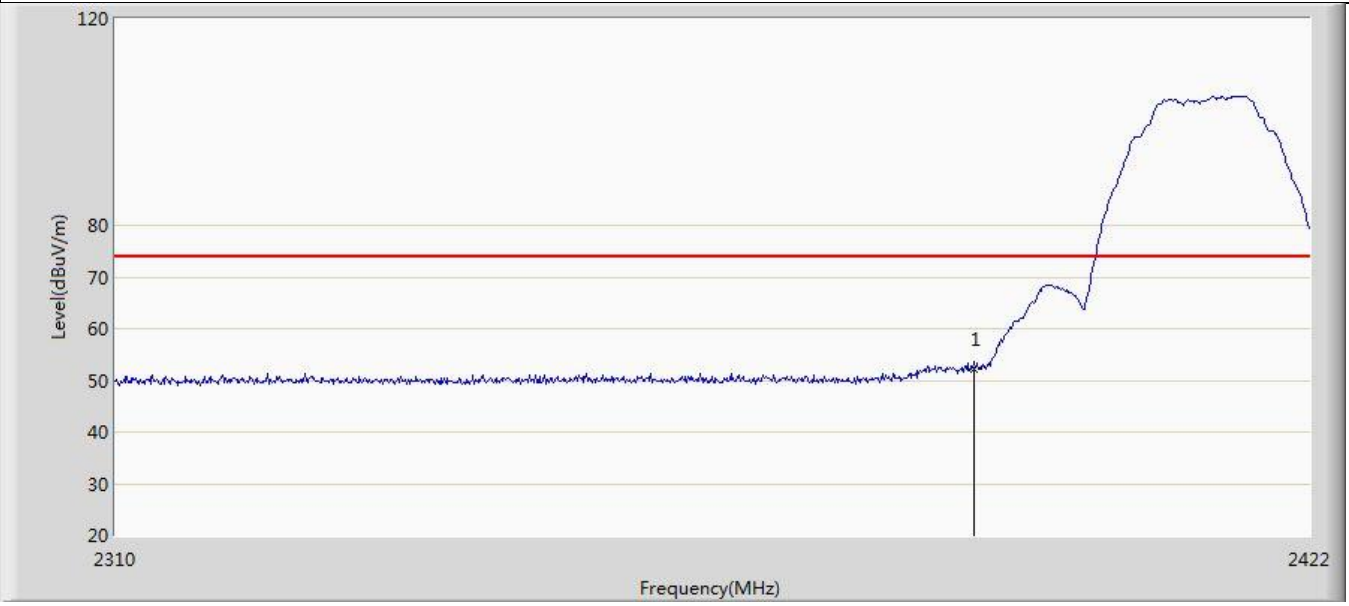
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1	*	2390.000	50.698	16.597	-23.302	74.000	34.102	PK

Profile: 24B0779R	Page No.: 2
Engineer: Yuliu	
Site: AC5	Time: 2024/12/10 - 17:10
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055_(1-18GHz)	Polarity: Horizontal
EUT: Cat4 indoor CPE	Power: 230 Vac / 50 Hz
Note: Mode 1：Transmit at 2412MHz by 802.11b	



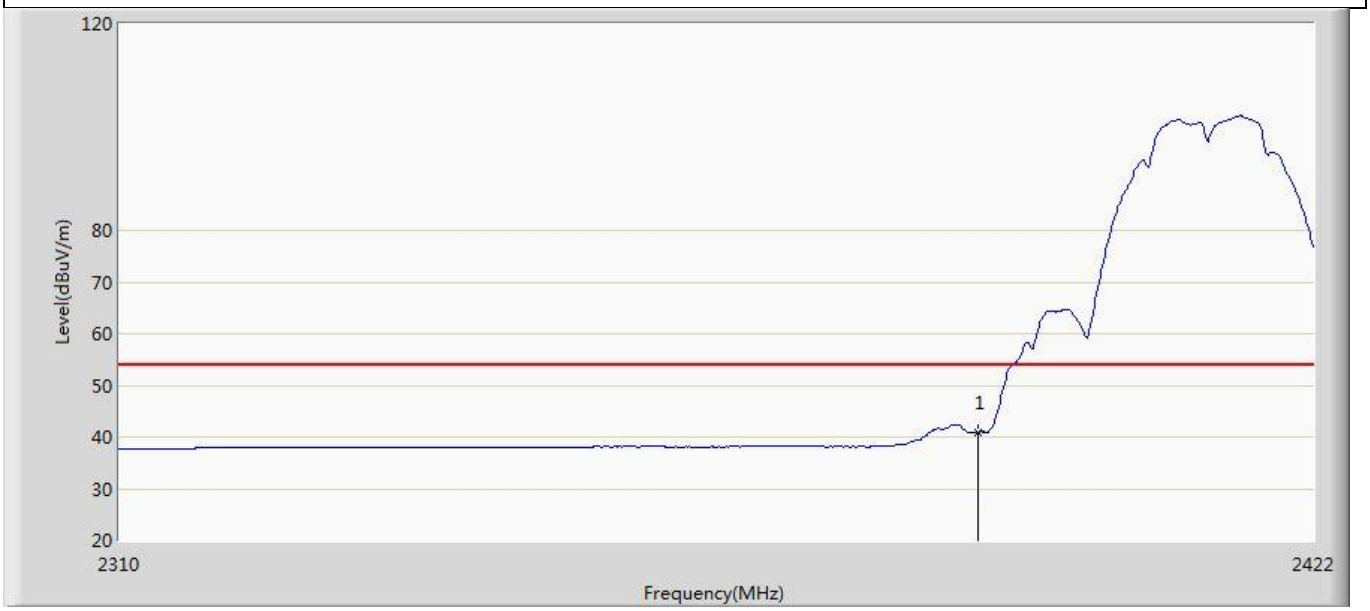
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1	*	2390.000	39.153	5.052	-14.847	54.000	34.102	AV

Profile: 24B0779R	Page No.: 3
Engineer: Yuliu	
Site: AC5	Time: 2024/12/10 - 17:13
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055_(1-18GHz)	Polarity: Vertical
EUT: Cat4 indoor CPE	Power: 230 Vac / 50 Hz
Note: Mode 1：Transmit at 2412MHz by 802.11b	



No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1	*	2390.000	52.236	18.135	-21.764	74.000	34.102	PK

Profile: 24B0779R	Page No.: 4
Engineer: Yuliu	
Site: AC5	Time: 2024/12/10 - 17:15
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055_(1-18GHz)	Polarity: Vertical
EUT: Cat4 indoor CPE	Power: 230 Vac / 50 Hz
Note: Mode 1：Transmit at 2412MHz by 802.11b	

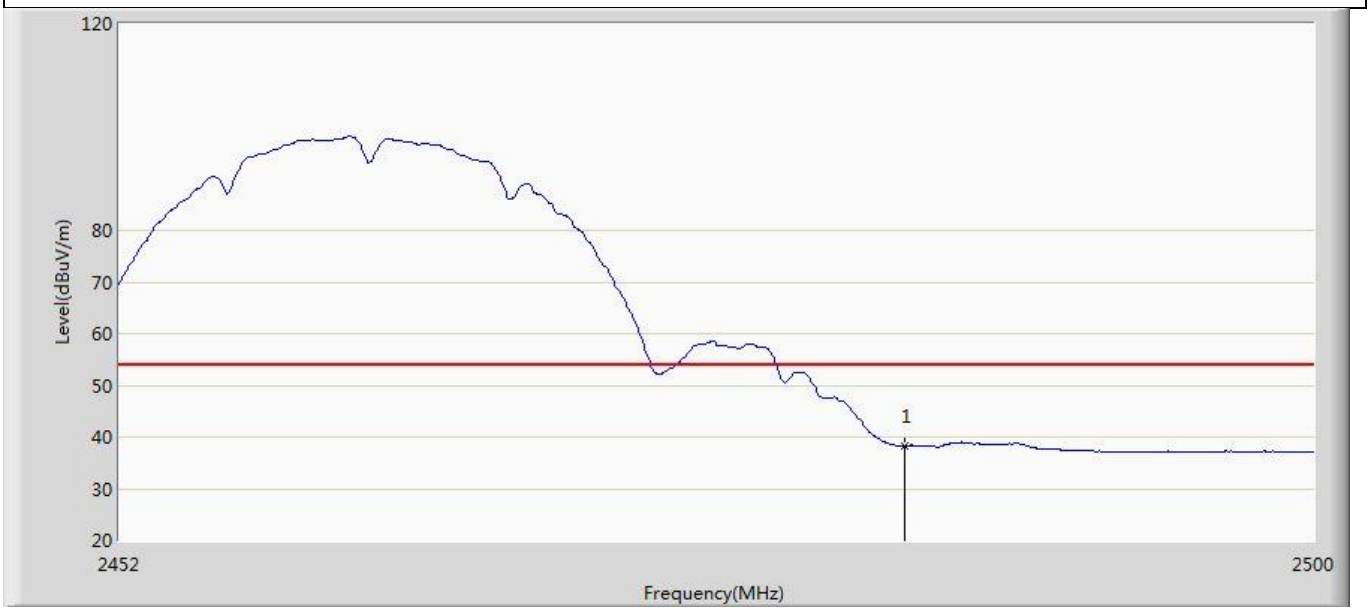


No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1	*	2390.000	40.960	6.859	-13.040	54.000	34.102	AV

Profile: 24B0779R	Page No.: 5
Engineer: Yuliu	
Site: AC5	Time: 2024/12/10 - 17:17
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055_(1-18GHz)	Polarity: Horizontal
EUT: Cat4 indoor CPE	Power: 230 Vac / 50 Hz
Note: Mode 1：Transmit at 2462MHz by 802.11b	

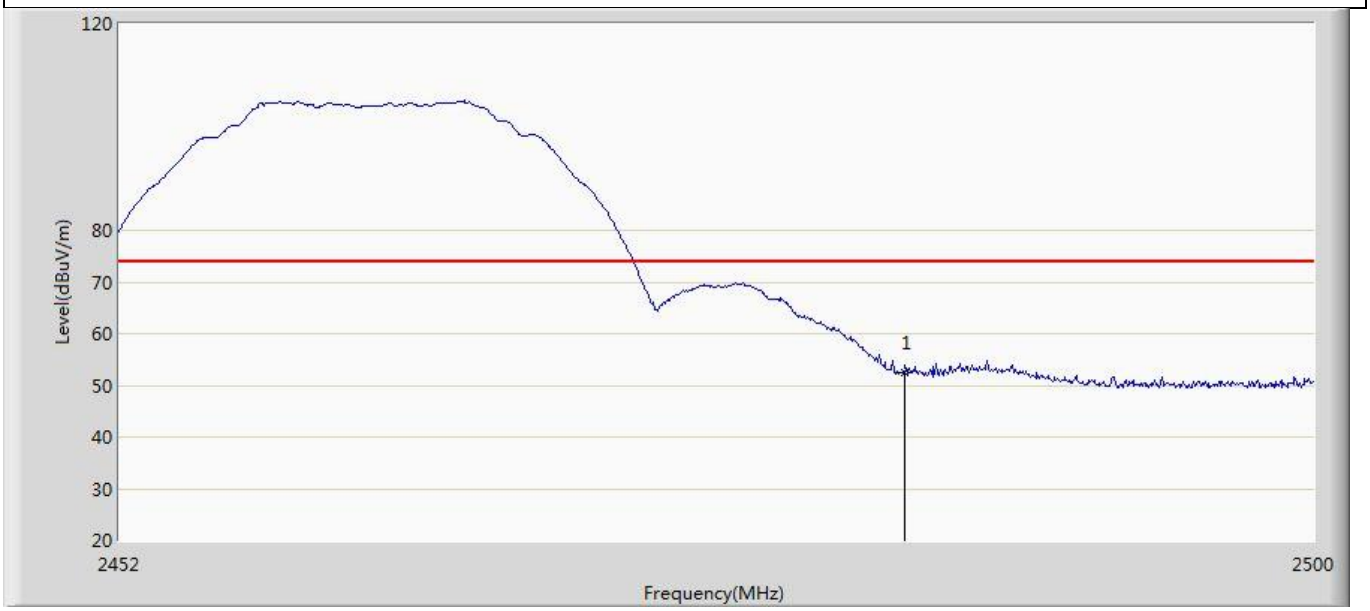
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1	*	2483.500	51.521	17.408	-22.479	74.000	34.114	PK

Profile: 24B0779R	Page No.: 6
Engineer: Yuliu	
Site: AC5	Time: 2024/12/10 - 17:24
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055_(1-18GHz)	Polarity: Horizontal
EUT: Cat4 indoor CPE	Power: 230 Vac / 50 Hz
Note: Mode 1：Transmit at 2462MHz by 802.11b	



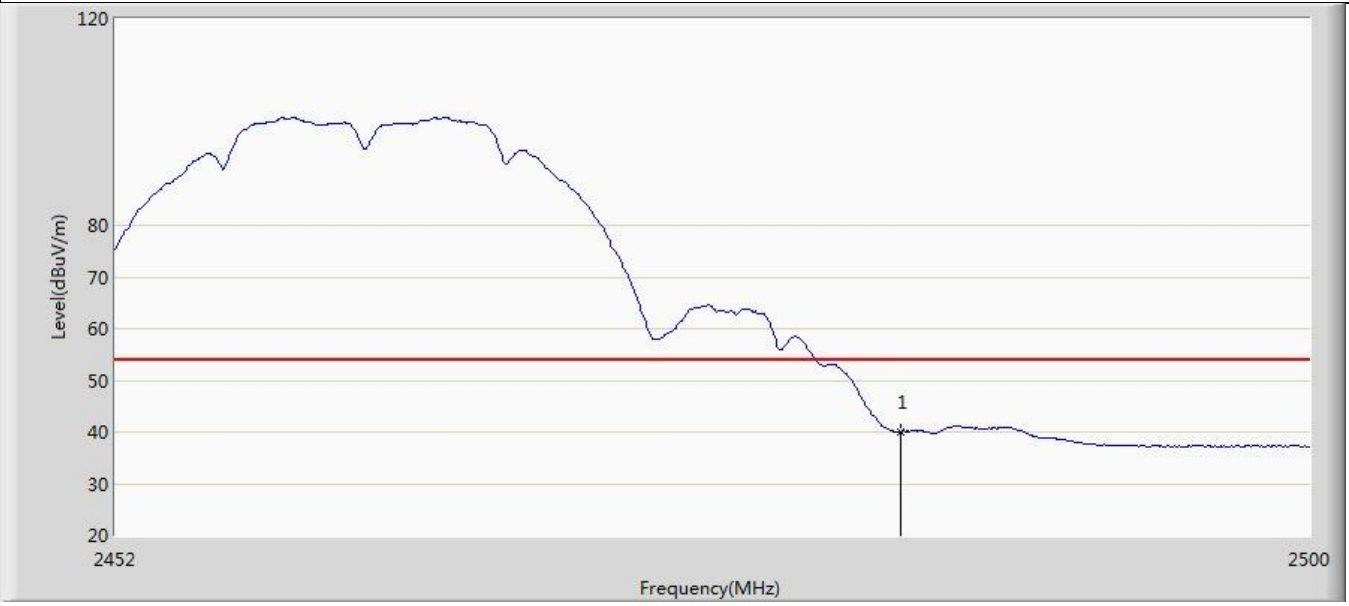
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1	*	2483.500	38.238	4.125	-15.762	54.000	34.114	AV

Profile: 24B0779R	Page No.: 7
Engineer: Yuliu	
Site: AC5	Time: 2024/12/10 - 17:25
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055_(1-18GHz)	Polarity: Vertical
EUT: Cat4 indoor CPE	Power: 230 Vac / 50 Hz
Note: Mode 1：Transmit at 2462MHz by 802.11b	



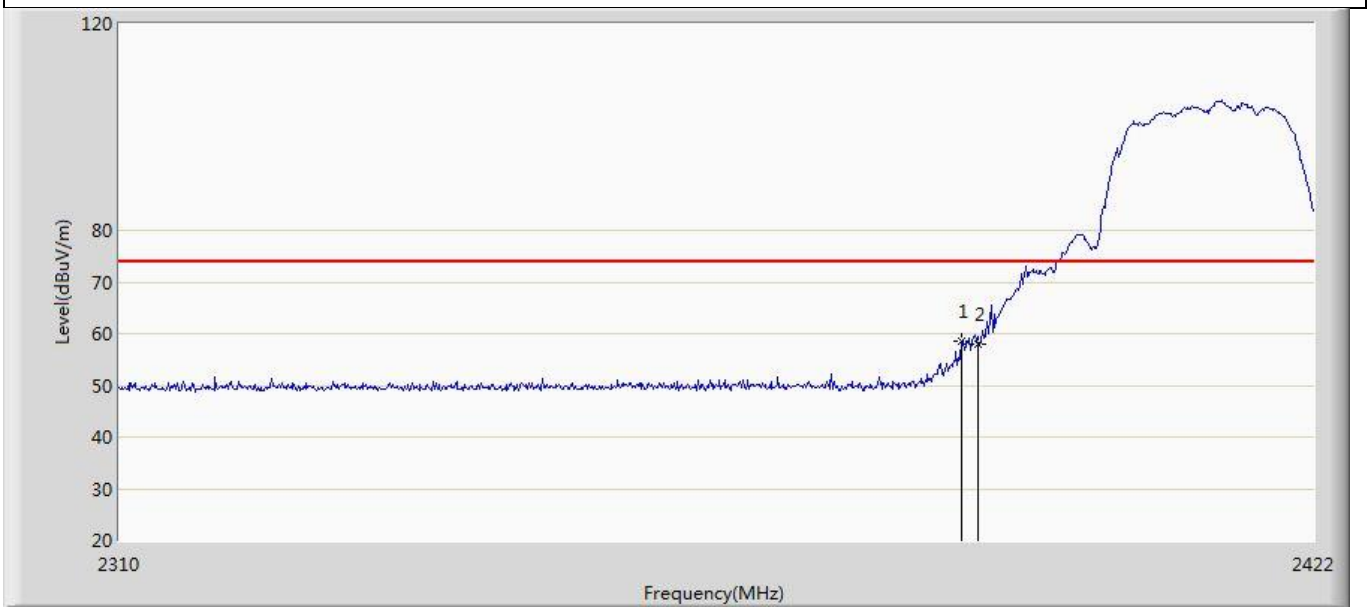
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1	*	2483.500	52.567	18.454	-21.433	74.000	34.114	PK

Profile: 24B0779R	Page No.: 8
Engineer: Yuliu	
Site: AC5	Time: 2024/12/10 - 17:27
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055_(1-18GHz)	Polarity: Vertical
EUT: Cat4 indoor CPE	Power: 230 Vac / 50 Hz
Note: Mode 1：Transmit at 2462MHz by 802.11b	



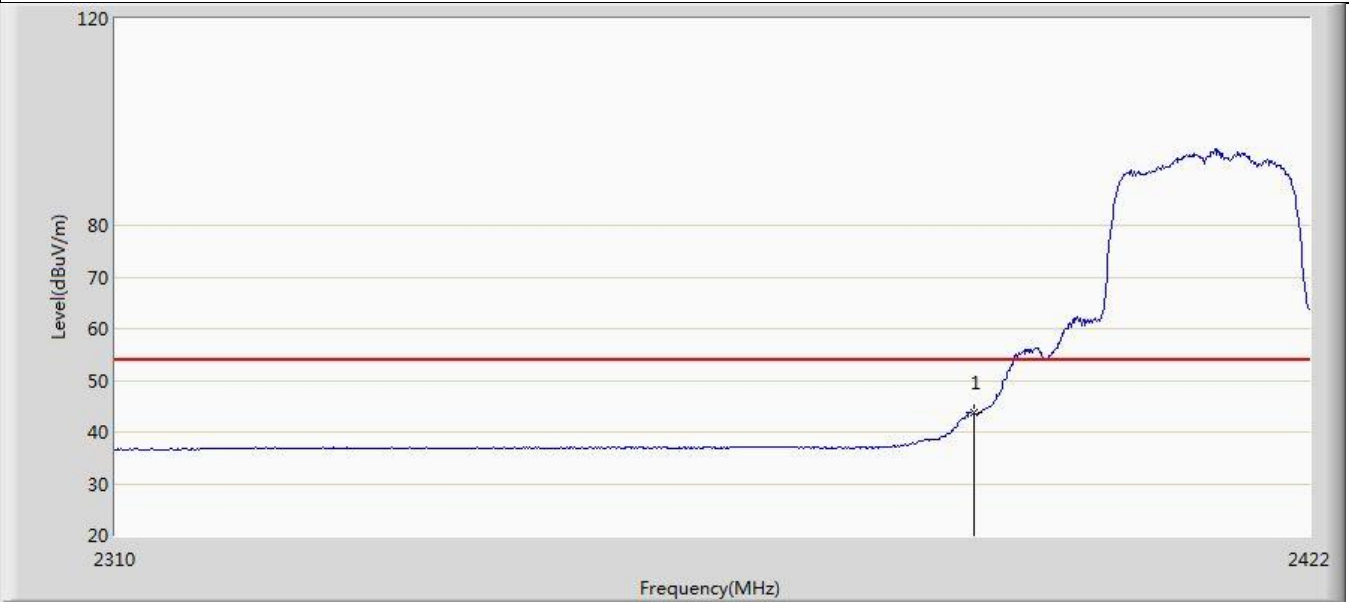
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1	*	2483.500	40.104	5.991	-13.896	54.000	34.114	AV

Profile: 24B0779R	Page No.: 9
Engineer: Yuliu	
Site: AC5	Time: 2024/12/10 - 17:28
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055_(1-18GHz)	Polarity: Horizontal
EUT: Cat4 indoor CPE	Power: 230 Vac / 50 Hz
Note: Mode 2：Transmit at 2412MHz by 802.11g	



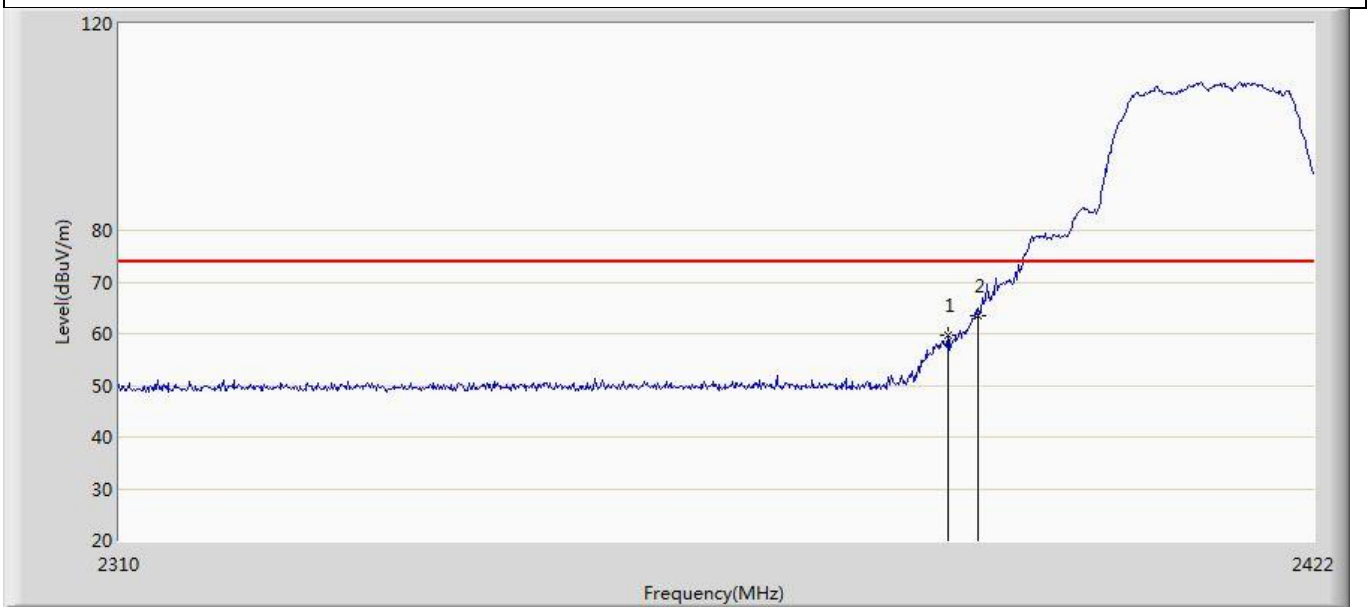
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1	*	2388.400	58.469	24.370	-15.531	74.000	34.099	PK
2		2390.000	57.919	23.818	-16.081	74.000	34.102	PK

Profile: 24B0779R	Page No.: 10
Engineer: Yuliu	
Site: AC5	Time: 2024/12/10 - 17:30
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055_(1-18GHz)	Polarity: Horizontal
EUT: Cat4 indoor CPE	Power: 230 Vac / 50 Hz
Note: Mode 2：Transmit at 2412MHz by 802.11g	



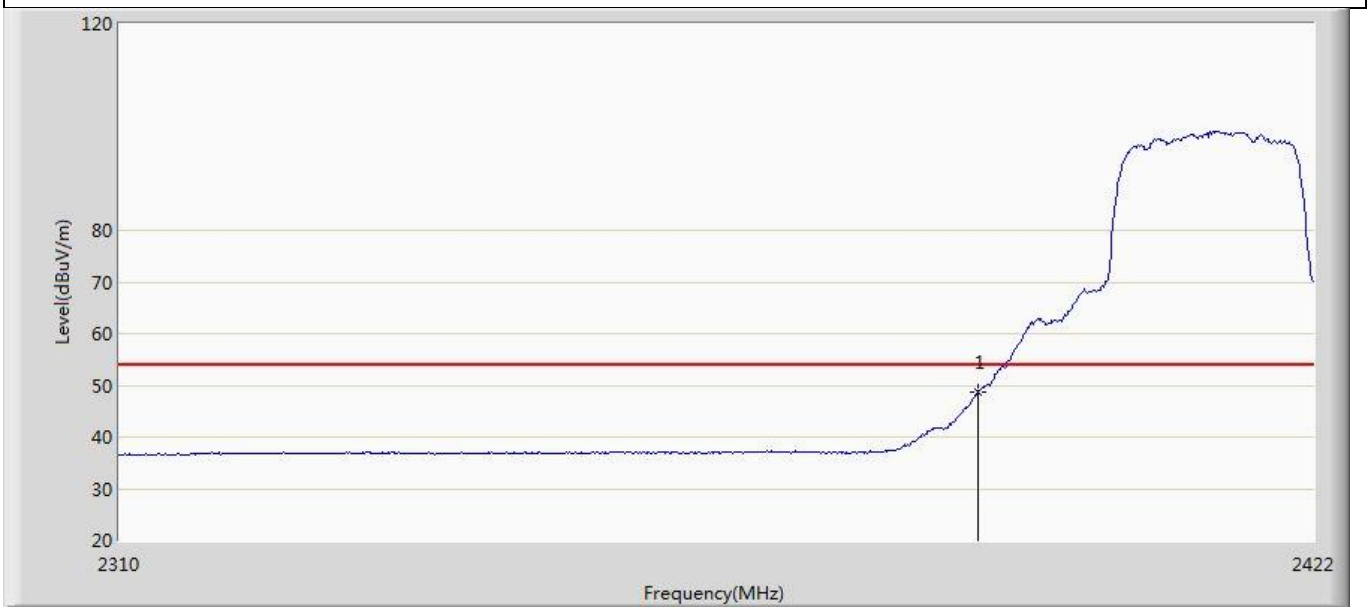
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1	*	2390.000	43.626	9.525	-10.374	54.000	34.102	AV

Profile: 24B0779R	Page No.: 11
Engineer: Yuliu	
Site: AC5	Time: 2024/12/10 - 17:32
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055_(1-18GHz)	Polarity: Vertical
EUT: Cat4 indoor CPE	Power: 230 Vac / 50 Hz
Note: Mode 2：Transmit at 2412MHz by 802.11g	



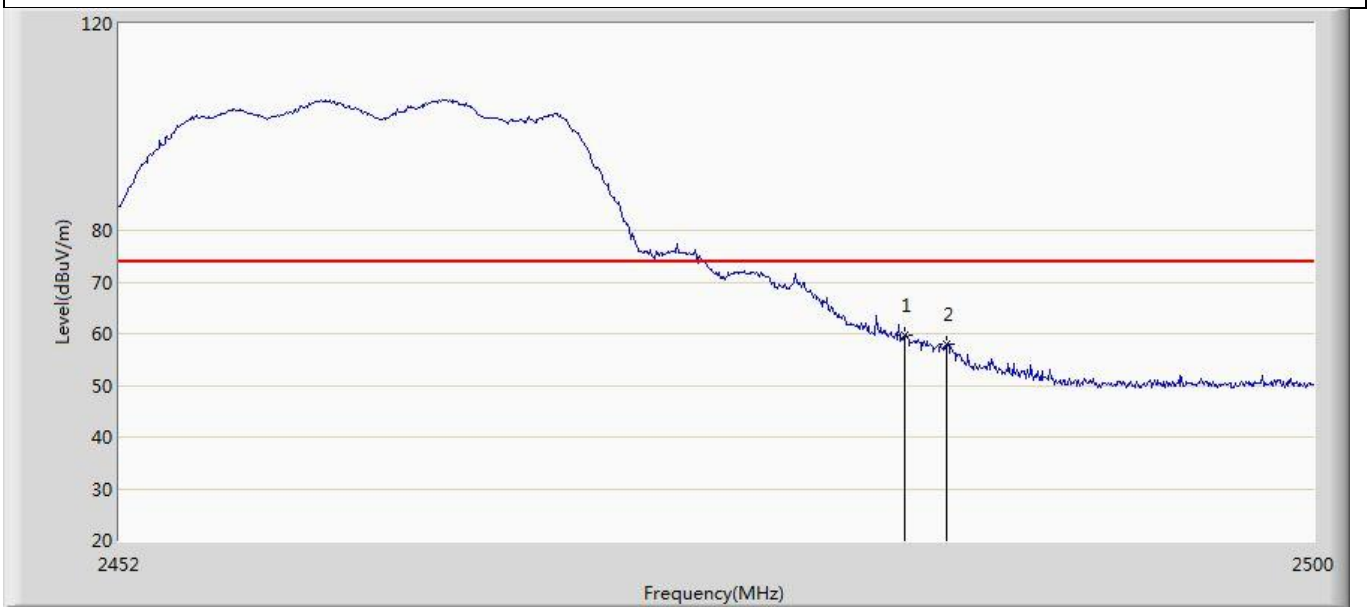
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		2387.168	59.794	25.697	-14.206	74.000	34.097	PK
2	*	2390.000	63.392	29.291	-10.608	74.000	34.102	PK

Profile: 24B0779R	Page No.: 12
Engineer: Yuliu	
Site: AC5	Time: 2024/12/10 - 17:33
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055_(1-18GHz)	Polarity: Vertical
EUT: Cat4 indoor CPE	Power: 230 Vac / 50 Hz
Note: Mode 2：Transmit at 2412MHz by 802.11g	



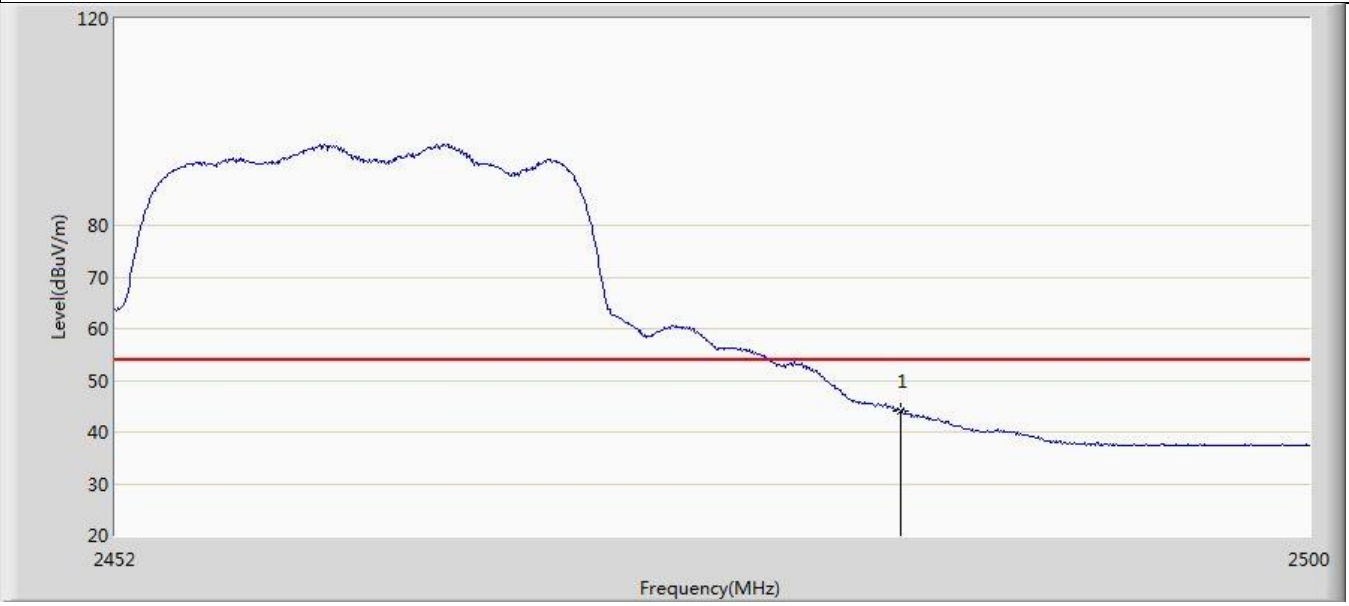
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1	*	2390.000	48.589	14.488	-5.411	54.000	34.102	AV

Profile: 24B0779R	Page No.: 13
Engineer: Yuliu	
Site: AC5	Time: 2024/12/10 - 17:35
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055_(1-18GHz)	Polarity: Horizontal
EUT: Cat4 indoor CPE	Power: 230 Vac / 50 Hz
Note: Mode 2：Transmit at 2462MHz by 802.11g	



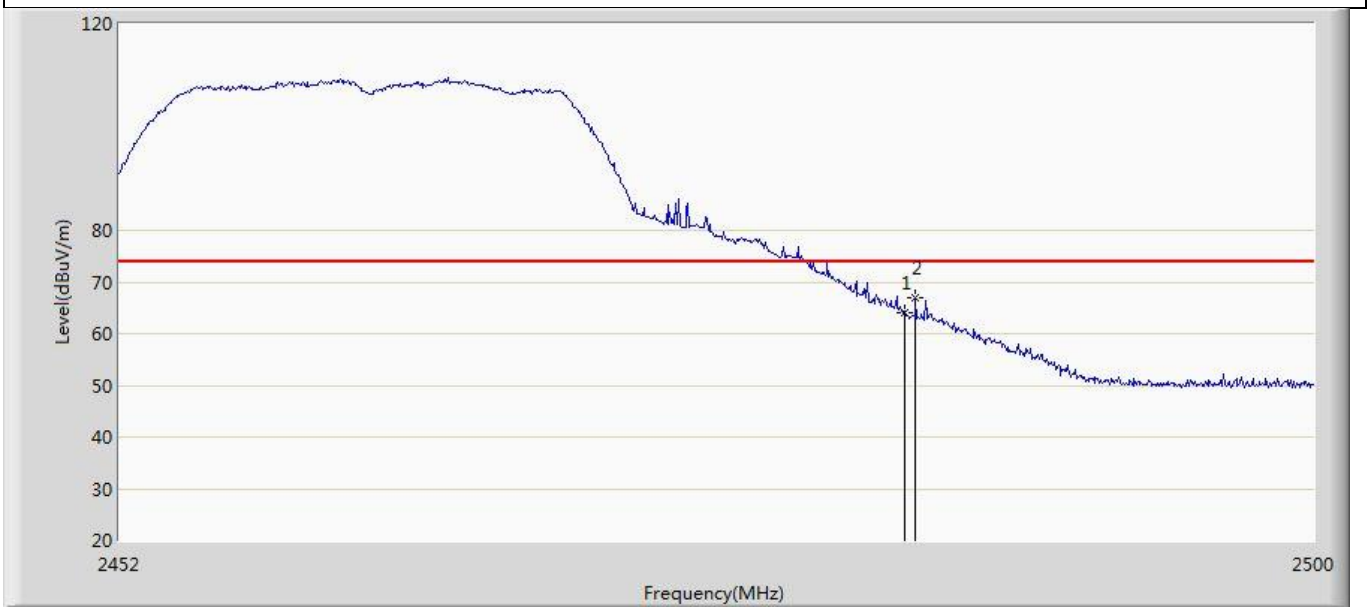
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1	*	2483.500	59.775	25.662	-14.225	74.000	34.114	PK
2		2485.168	58.047	23.920	-15.953	74.000	34.127	PK

Profile: 24B0779R	Page No.: 14
Engineer: Yuliu	
Site: AC5	Time: 2024/12/10 - 17:37
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055_(1-18GHz)	Polarity: Horizontal
EUT: Cat4 indoor CPE	Power: 230 Vac / 50 Hz
Note: Mode 2：Transmit at 2462MHz by 802.11g	



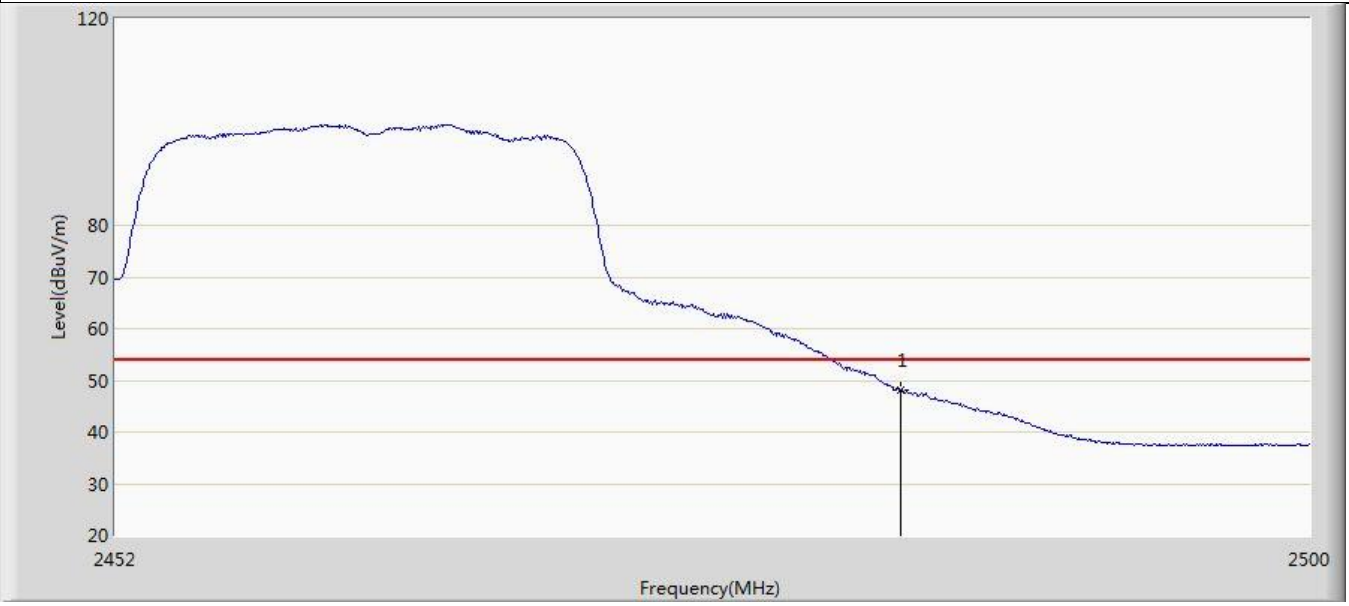
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1	*	2483.500	44.078	9.965	-9.922	54.000	34.114	AV

Profile: 24B0779R	Page No.: 15
Engineer: Yuliu	
Site: AC5	Time: 2024/12/10 - 17:38
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055_(1-18GHz)	Polarity: Vertical
EUT: Cat4 indoor CPE	Power: 230 Vac / 50 Hz
Note: Mode 2：Transmit at 2462MHz by 802.11g	



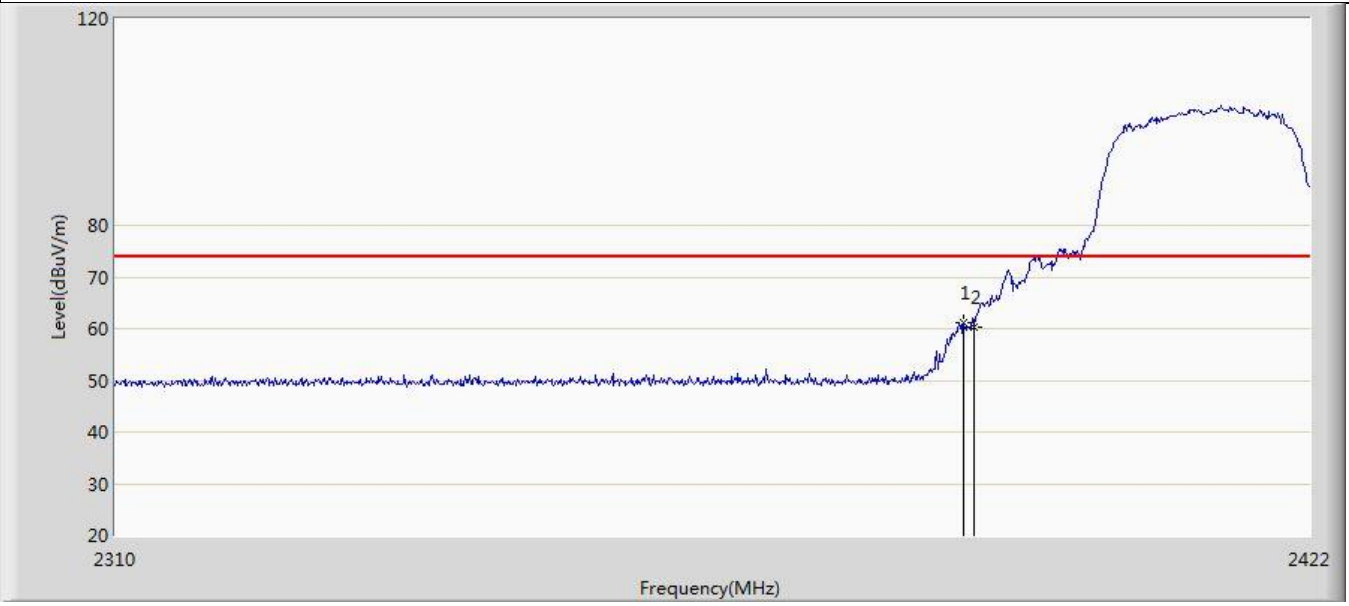
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		2483.500	64.152	30.039	-9.848	74.000	34.114	PK
2	*	2483.920	66.881	32.764	-7.119	74.000	34.117	PK

Profile: 24B0779R	Page No.: 16
Engineer: Yuliu	
Site: AC5	Time: 2024/12/10 - 17:39
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055_(1-18GHz)	Polarity: Vertical
EUT: Cat4 indoor CPE	Power: 230 Vac / 50 Hz
Note: Mode 2：Transmit at 2462MHz by 802.11g	



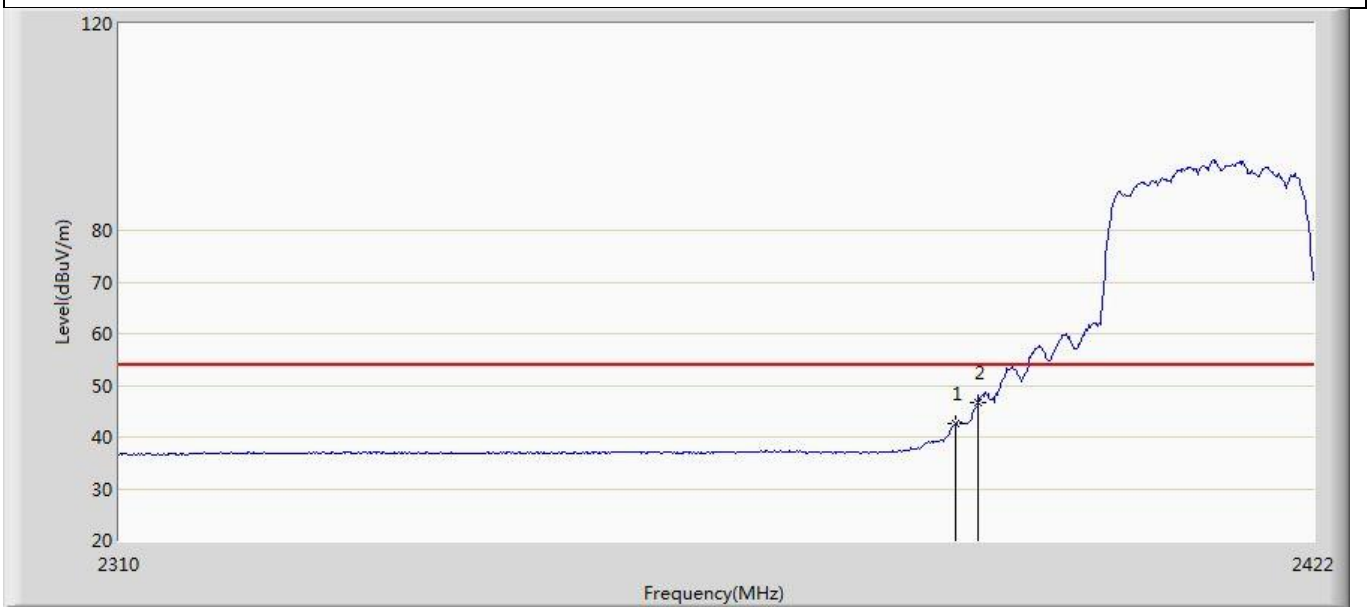
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1	*	2483.500	48.054	13.941	-5.946	54.000	34.114	AV

Profile: 24B0779R	Page No.: 17
Engineer: Yuliu	
Site: AC5	Time: 2024/12/10 - 17:41
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055_(1-18GHz)	Polarity: Horizontal
EUT: Cat4 indoor CPE	Power: 230 Vac / 50 Hz
Note: Mode 3：Transmit at 2412MHz by 802.11n(20MHz)	



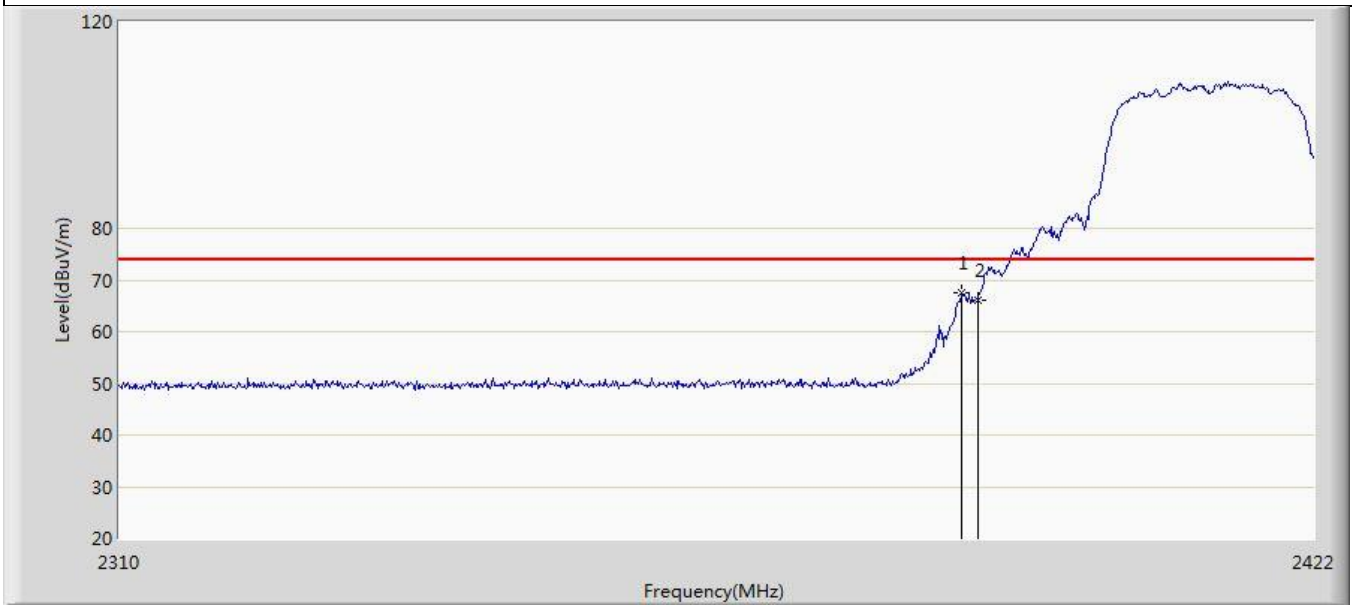
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1	*	2389.072	61.254	27.154	-12.746	74.000	34.100	PK
2		2390.000	60.361	26.260	-13.639	74.000	34.102	PK

Profile: 24B0779R	Page No.: 18
Engineer: Yuliu	
Site: AC5	Time: 2024/12/10 - 17:43
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055_(1-18GHz)	Polarity: Horizontal
EUT: Cat4 indoor CPE	Power: 230 Vac / 50 Hz
Note: Mode 3：Transmit at 2412MHz by 802.11n(20MHz)	



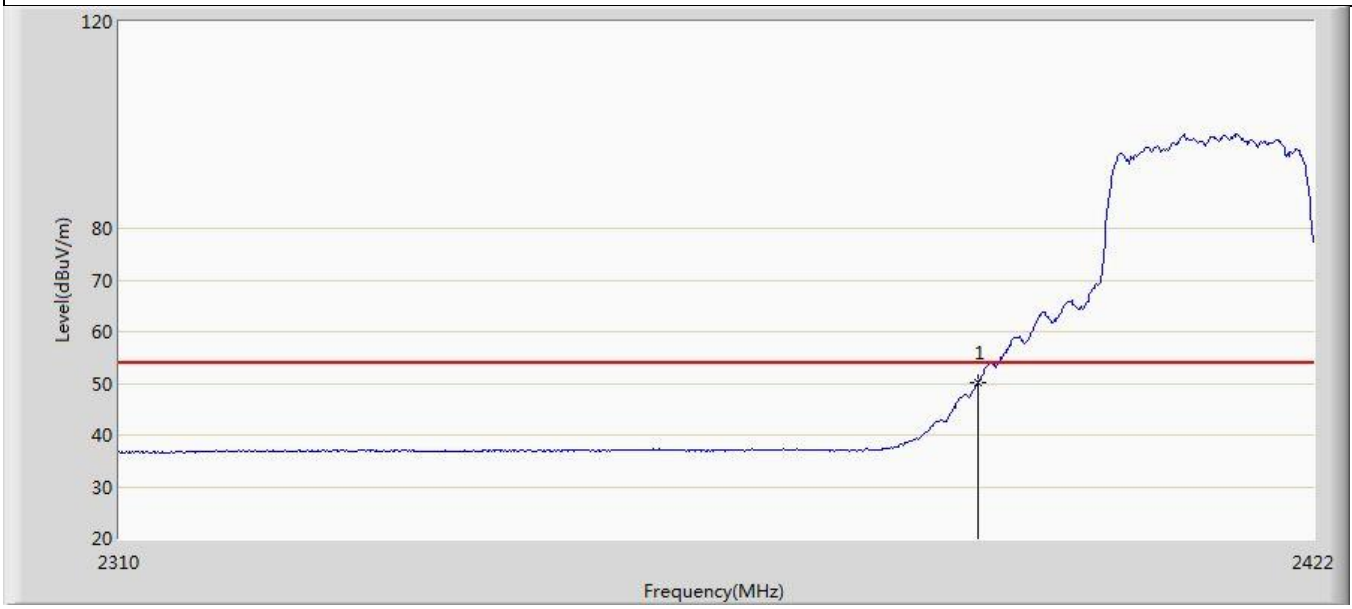
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		2387.952	42.541	8.443	-11.459	54.000	34.098	AV
2	*	2390.000	46.596	12.495	-7.404	54.000	34.102	AV

Profile: 24B0779R	Page No.: 19
Engineer: Yuliu	
Site: AC5	Time: 2024/12/10 - 17:45
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055_(1-18GHz)	Polarity: Vertical
EUT: Cat4 indoor CPE	Power: 230 Vac / 50 Hz
Note: Mode 3：Transmit at 2412MHz by 802.11n(20MHz)	



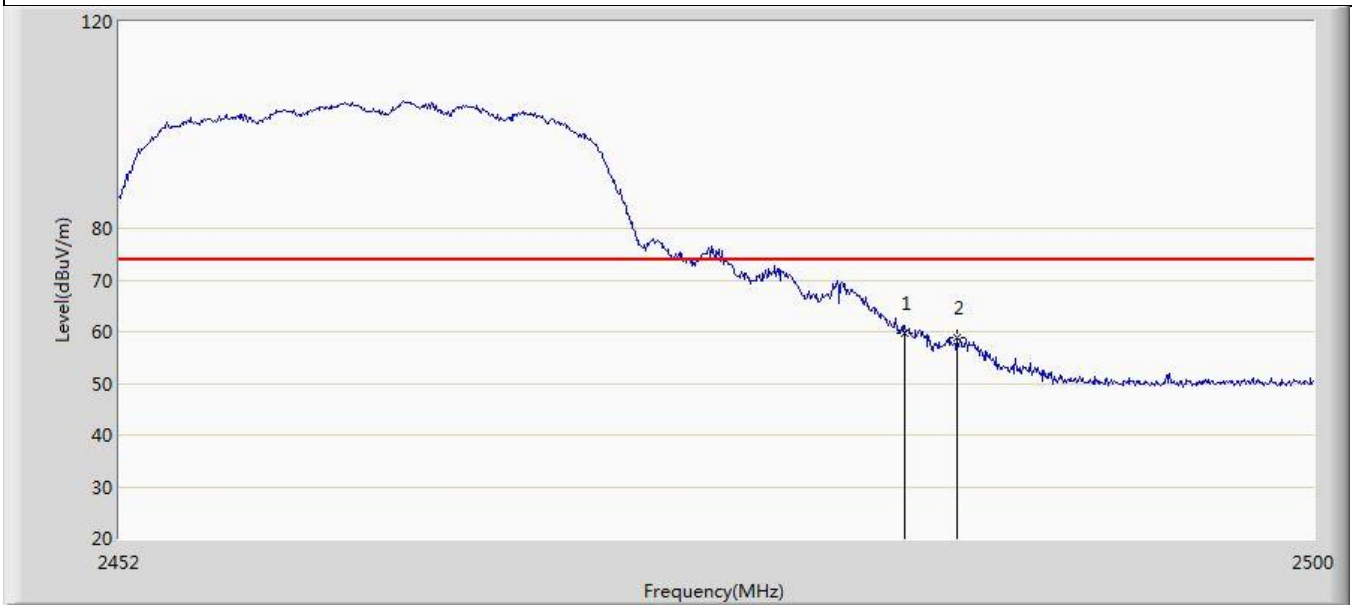
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1	*	2388.512	67.618	33.519	-6.382	74.000	34.099	PK
2		2390.000	66.157	32.056	-7.843	74.000	34.102	PK

Profile: 24B0779R	Page No.: 20
Engineer: Yuliu	
Site: AC5	Time: 2024/12/10 - 17:46
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055_(1-18GHz)	Polarity: Vertical
EUT: Cat4 indoor CPE	Power: 230 Vac / 50 Hz
Note: Mode 3：Transmit at 2412MHz by 802.11n(20MHz)	



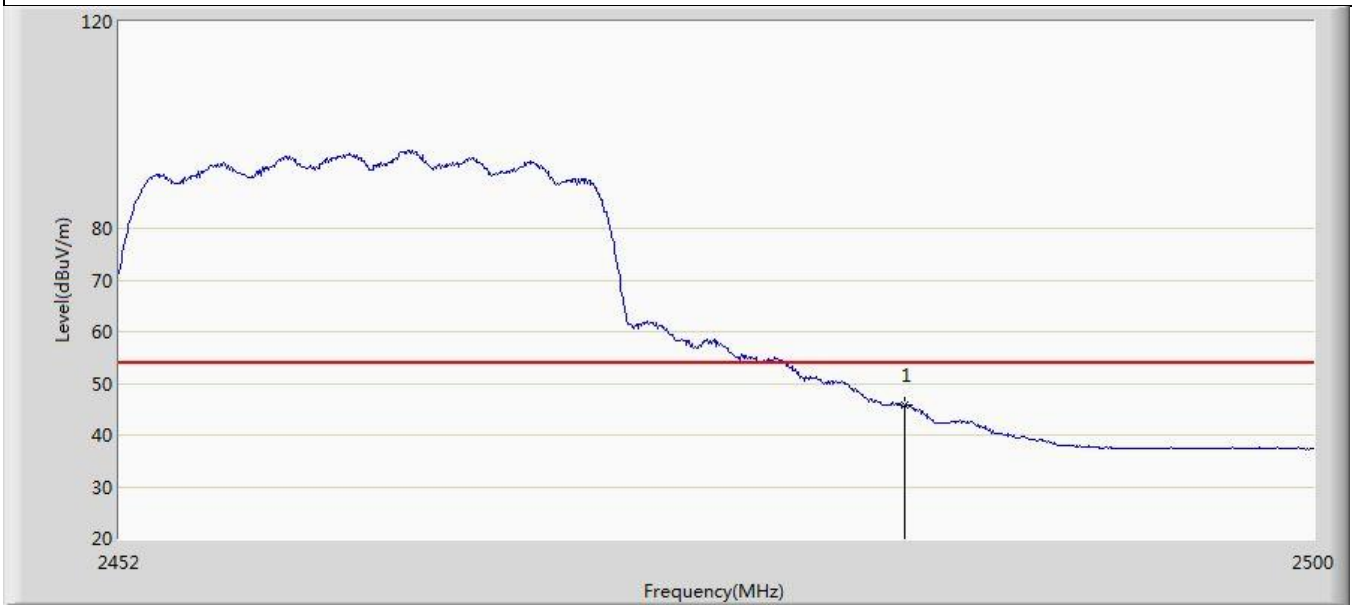
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1	*	2390.000	50.175	16.074	-3.825	54.000	34.102	AV

Profile: 24B0779R	Page No.: 21
Engineer: Yuliu	
Site: AC5	Time: 2024/12/10 - 17:47
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055_(1-18GHz)	Polarity: Horizontal
EUT: Cat4 indoor CPE	Power: 230 Vac / 50 Hz
Note: Mode 3：Transmit at 2462MHz by 802.11n(20MHz)	



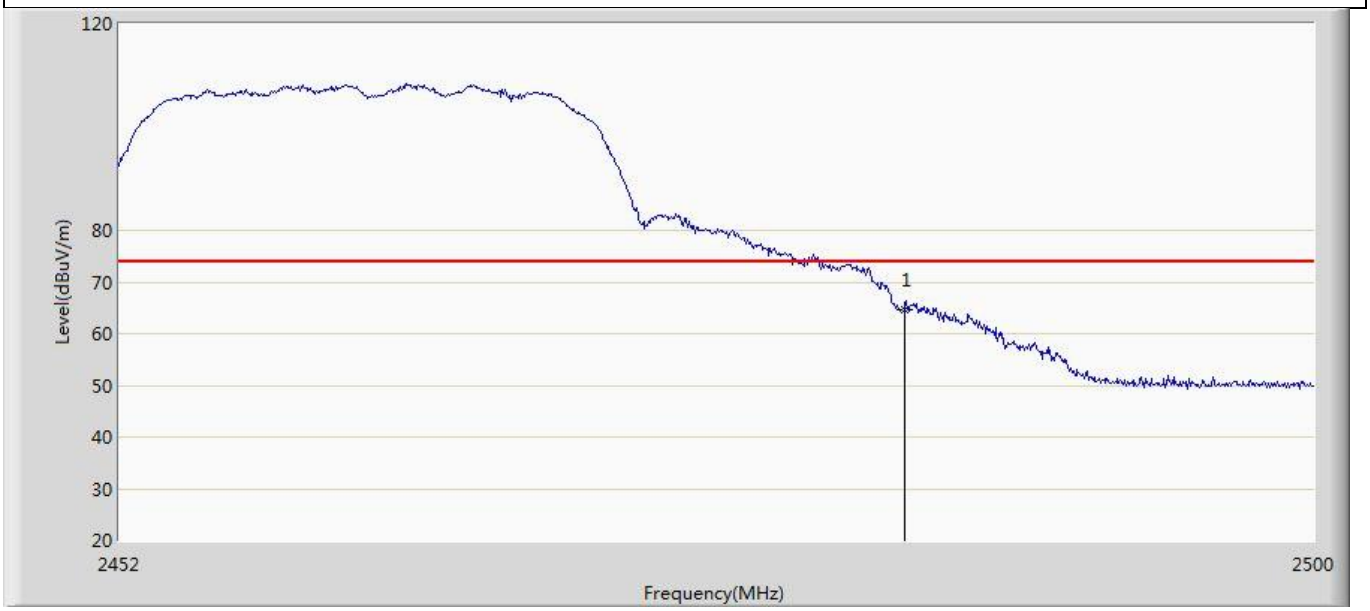
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1	*	2483.500	59.790	25.677	-14.210	74.000	34.114	PK
2		2485.600	58.876	24.746	-15.124	74.000	34.130	PK

Profile: 24B0779R	Page No.: 22
Engineer: Yuliu	
Site: AC5	Time: 2024/12/10 - 17:49
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055_(1-18GHz)	Polarity: Horizontal
EUT: Cat4 indoor CPE	Power: 230 Vac / 50 Hz
Note: Mode 3：Transmit at 2462MHz by 802.11n(20MHz)	



No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1	*	2483.500	45.713	11.600	-8.287	54.000	34.114	AV

Profile: 24B0779R	Page No.: 23
Engineer: Yuliu	
Site: AC5	Time: 2024/12/10 - 17:50
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055_(1-18GHz)	Polarity: Vertical
EUT: Cat4 indoor CPE	Power: 230 Vac / 50 Hz
Note: Mode 3：Transmit at 2462MHz by 802.11n(20MHz)	

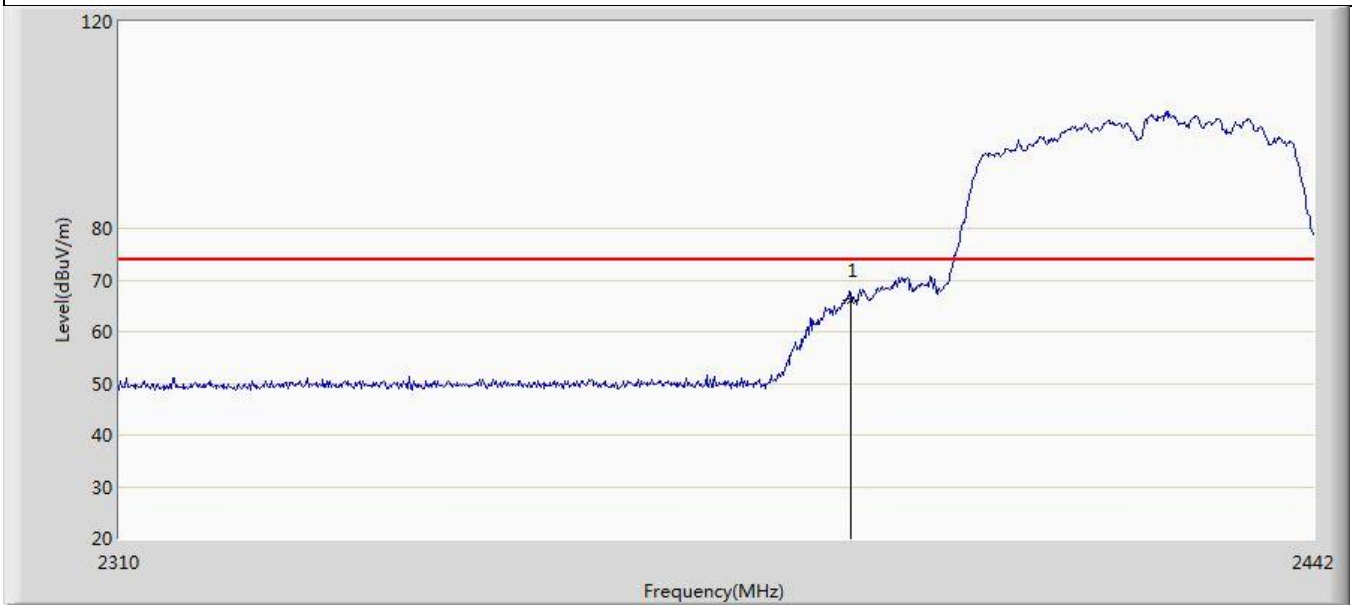


No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1	*	2483.500	64.628	30.515	-9.372	74.000	34.114	PK

Profile: 24B0779R	Page No.: 24
Engineer: Yuliu	
Site: AC5	Time: 2024/12/10 - 17:52
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055_(1-18GHz)	Polarity: Vertical
EUT: Cat4 indoor CPE	Power: 230 Vac / 50 Hz
Note: Mode 3：Transmit at 2462MHz by 802.11n(20MHz)	

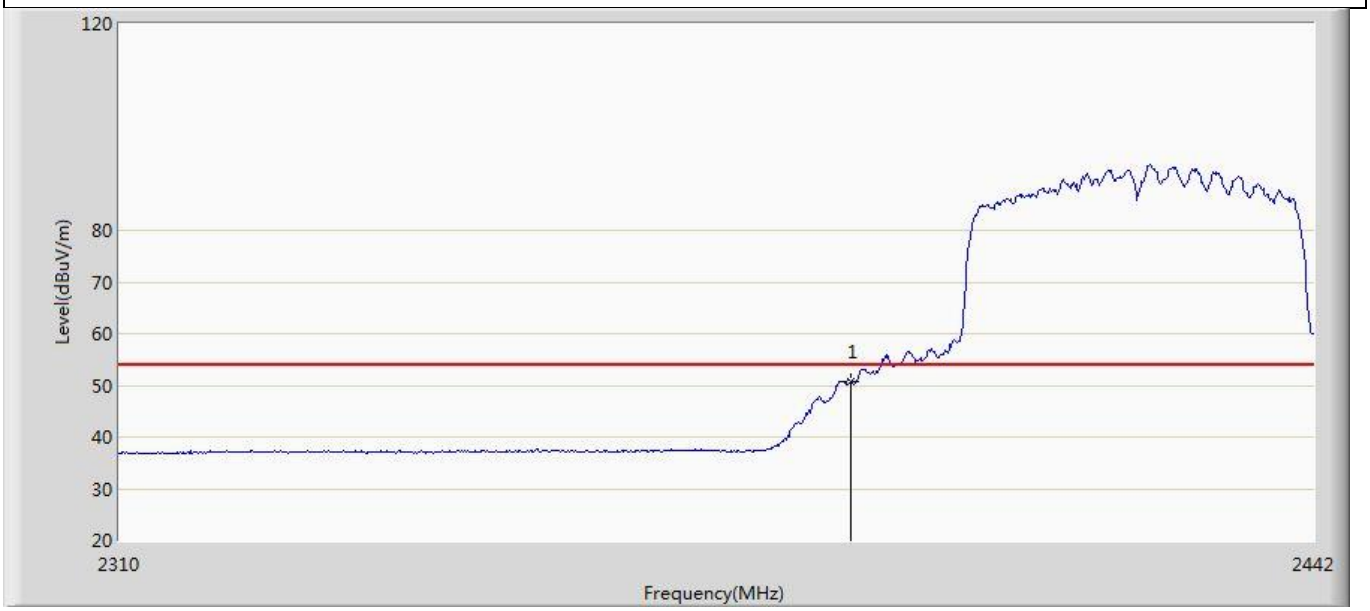
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1	*	2483.500	49.632	15.519	-4.368	54.000	34.114	AV

Profile: 24B0779R	Page No.: 25
Engineer: Yuliu	
Site: AC5	Time: 2024/12/10 - 17:53
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055_(1-18GHz)	Polarity: Horizontal
EUT: Cat4 indoor CPE	Power: 230 Vac / 50 Hz
Note: Mode 4：Transmit at 2422MHz by 802.11n(40MHz)	



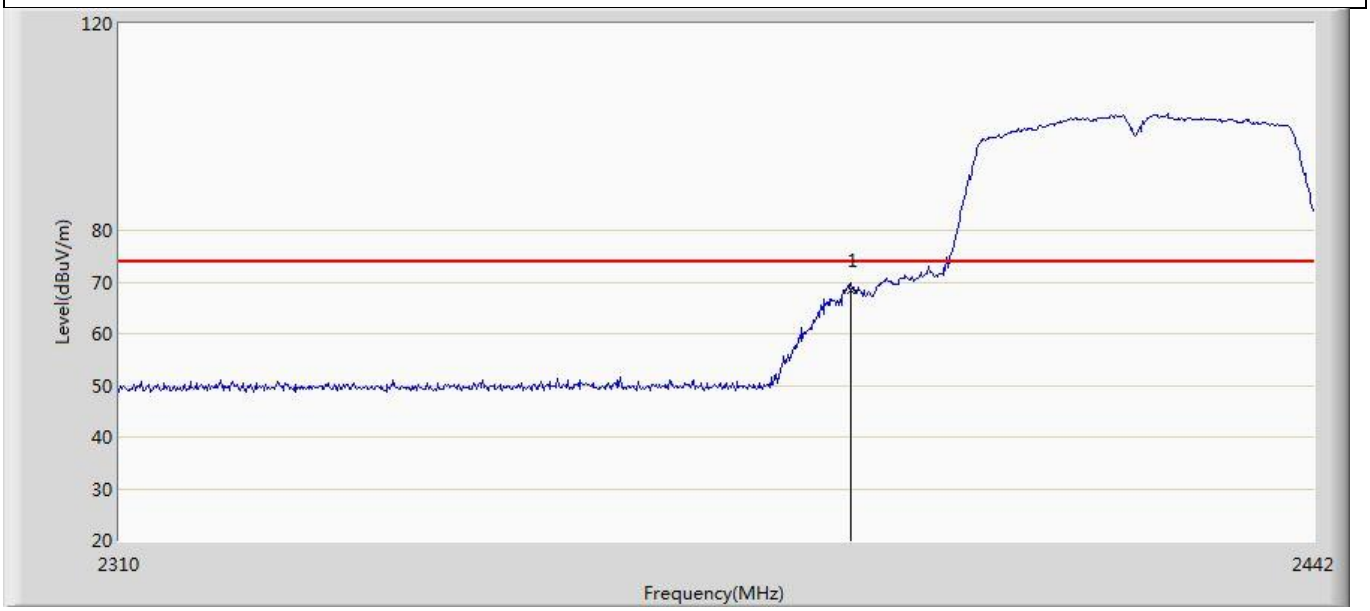
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1	*	2390.000	66.126	32.025	-7.874	74.000	34.102	PK

Profile: 24B0779R	Page No.: 26
Engineer: Yuliu	
Site: AC5	Time: 2024/12/10 - 17:54
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055_(1-18GHz)	Polarity: Horizontal
EUT: Cat4 indoor CPE	Power: 230 Vac / 50 Hz
Note: Mode 4：Transmit at 2422MHz by 802.11n(40MHz)	



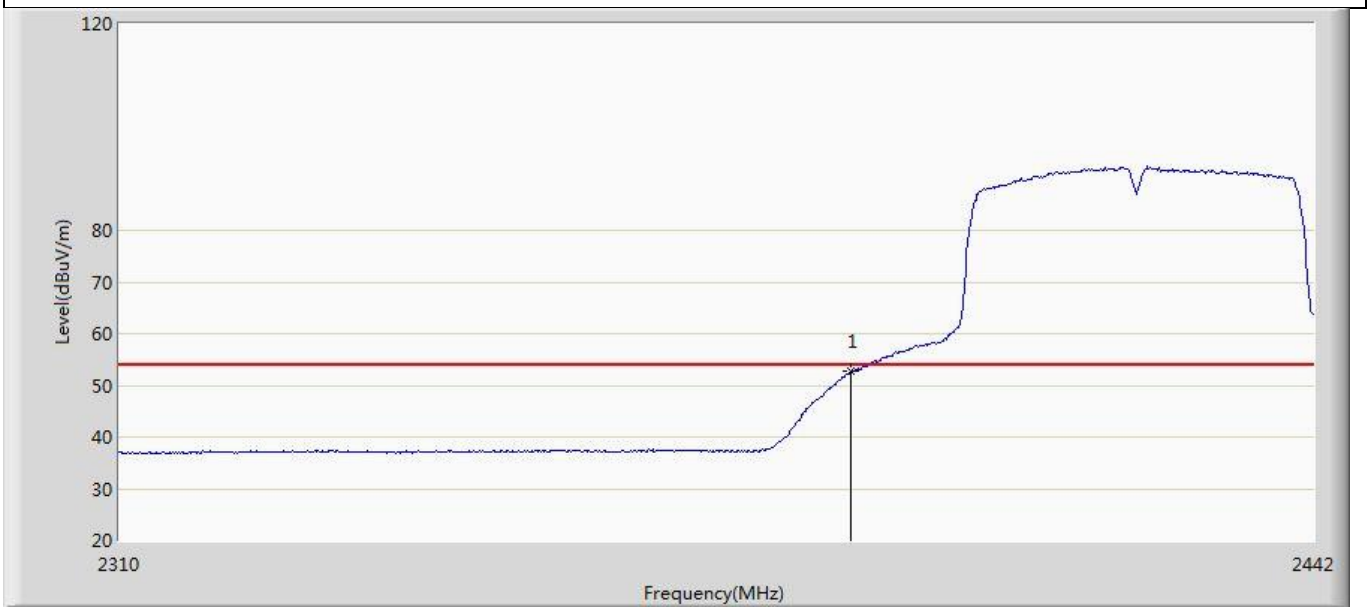
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1	*	2390.000	50.696	16.595	-3.304	54.000	34.102	AV

Profile: 24B0779R	Page No.: 27
Engineer: Yuliu	
Site: AC5	Time: 2024/12/10 - 17:57
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055_(1-18GHz)	Polarity: Vertical
EUT: Cat4 indoor CPE	Power: 230 Vac / 50 Hz
Note: Mode 4：Transmit at 2422MHz by 802.11n(40MHz)	



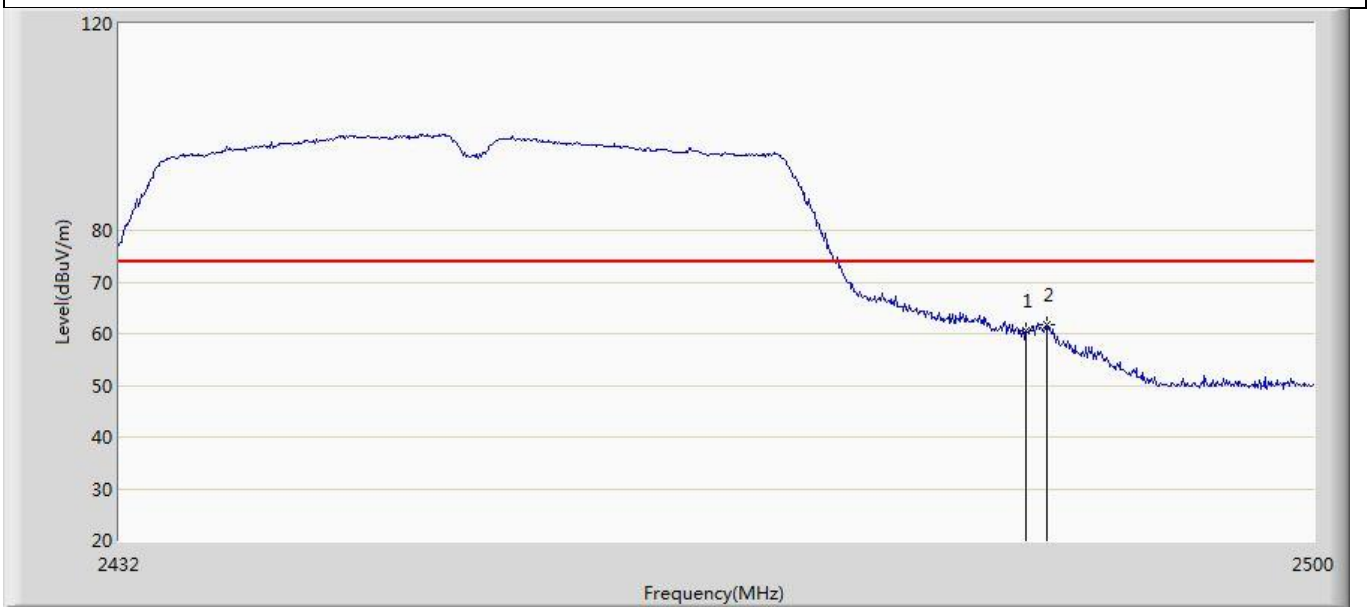
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1	*	2390.000	68.487	34.386	-5.513	74.000	34.102	PK

Profile: 24B0779R	Page No.: 28
Engineer: Yuliu	
Site: AC5	Time: 2024/12/10 - 17:58
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055_(1-18GHz)	Polarity: Vertical
EUT: Cat4 indoor CPE	Power: 230 Vac / 50 Hz
Note: Mode 4：Transmit at 2422MHz by 802.11n(40MHz)	



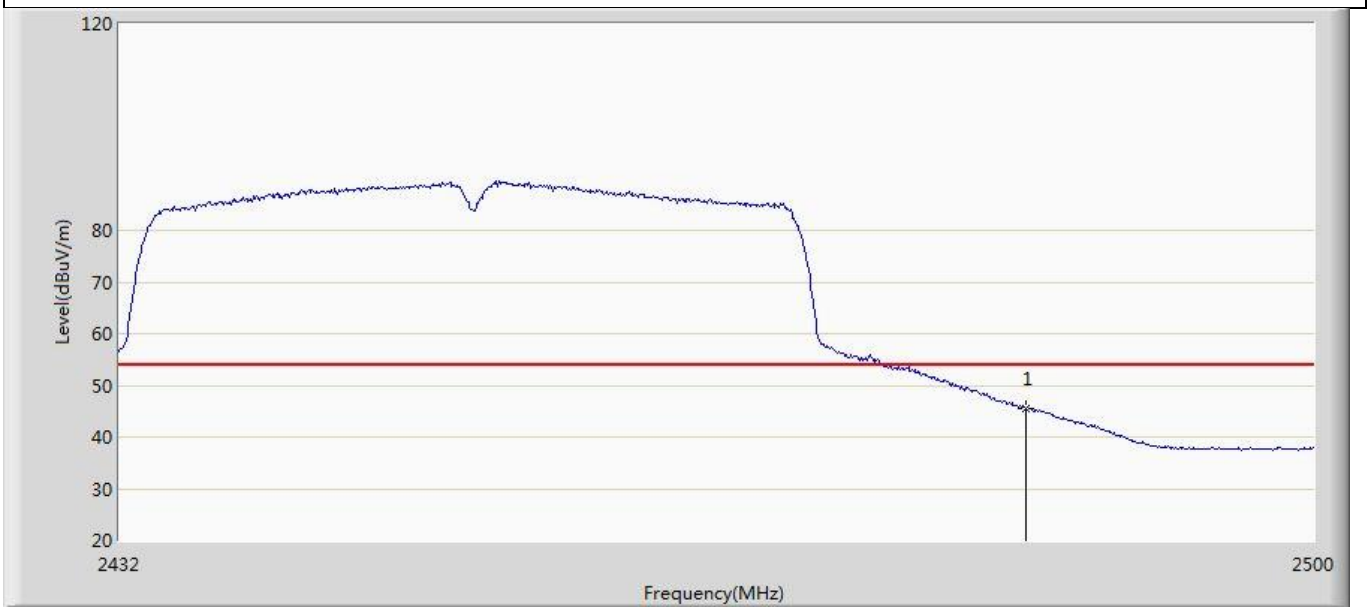
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1	*	2390.000	52.673	18.572	-1.327	54.000	34.102	AV

Profile: 24B0779R	Page No.: 29
Engineer: Yuliu	
Site: AC5	Time: 2024/12/10 - 18:00
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055_(1-18GHz)	Polarity: Horizontal
EUT: Cat4 indoor CPE	Power: 230 Vac / 50 Hz
Note: Mode 4：Transmit at 2452MHz by 802.11n(40MHz)	



No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		2483.500	60.523	26.410	-13.477	74.000	34.114	PK
2	*	2484.700	61.670	27.547	-12.330	74.000	34.123	PK

Profile: 24B0779R	Page No.: 30
Engineer: Yuliu	
Site: AC5	Time: 2024/12/10 - 18:01
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055_(1-18GHz)	Polarity: Horizontal
EUT: Cat4 indoor CPE	Power: 230 Vac / 50 Hz
Note: Mode 4：Transmit at 2452MHz by 802.11n(40MHz)	

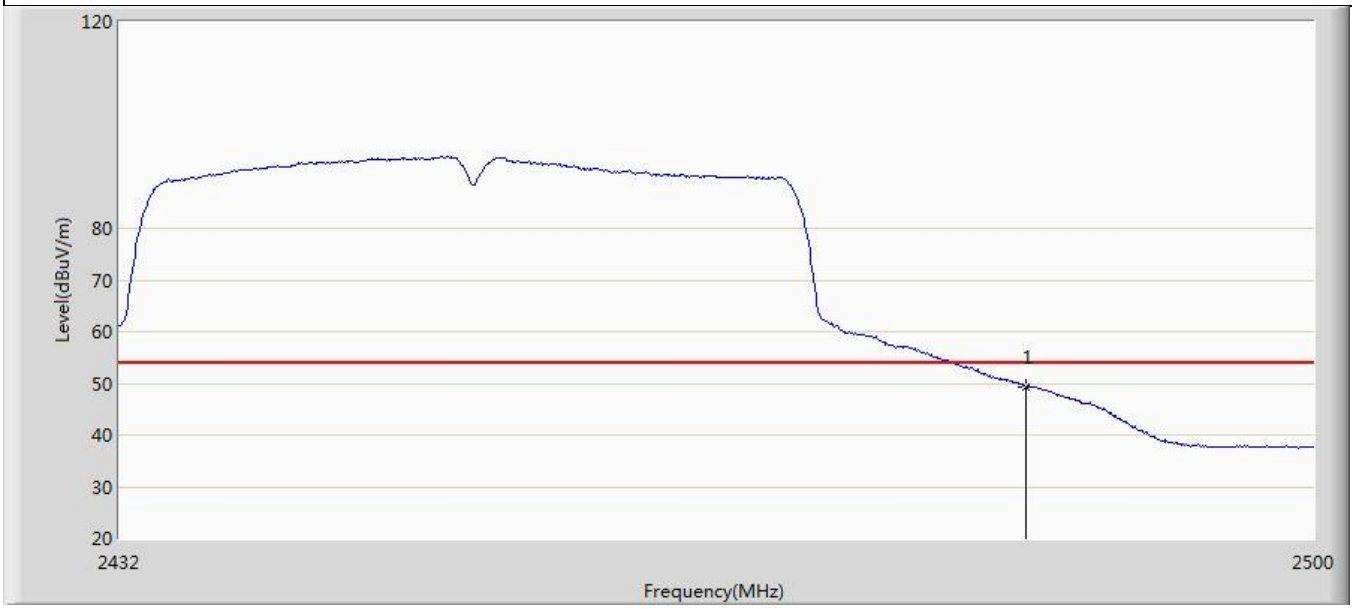


No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1	*	2483.500	45.594	11.481	-8.406	54.000	34.114	AV

Profile: 24B0779R	Page No.: 31
Engineer: Yuliu	
Site: AC5	Time: 2024/12/10 - 18:02
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055_(1-18GHz)	Polarity: Vertical
EUT: Cat4 indoor CPE	Power: 230 Vac / 50 Hz
Note: Mode 4：Transmit at 2452MHz by 802.11n(40MHz)	

No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		2483.500	66.071	31.958	-7.929	74.000	34.114	PK
2	*	2484.700	67.404	33.281	-6.596	74.000	34.123	PK

Profile: 24B0779R	Page No.: 32
Engineer: Yuliu	
Site: AC5	Time: 2024/12/10 - 18:03
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055_(1-18GHz)	Polarity: Vertical
EUT: Cat4 indoor CPE	Power: 230 Vac / 50 Hz
Note: Mode 4：Transmit at 2452MHz by 802.11n(40MHz)	



No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1	*	2483.500	49.412	15.299	-4.588	54.000	34.114	AV

Note:

1. " * ", means this data is the worst emission level.
2. Measurement Level = Reading Level + Factor(Probe+Cable-Amp)

Appendix E: Conducted Spurious Emission

Test Result for Reference level

TestMode	Freq(MHz)	Max.Point[MHz]	Result[dBm]
11B	2412	2412.51	9.70
11B	2437	2436.50	9.87
11B	2462	2461.51	9.73
11G	2412	2414.50	4.72
11G	2437	2434.50	4.48
11G	2462	2463.26	5.63
11N20SISO	2412	2413.29	5.36
11N20SISO	2437	2440.76	4.10
11N20SISO	2462	2460.73	4.99
11N40SISO	2422	2424.46	1.61
11N40SISO	2437	2440.74	2.81
11N40SISO	2452	2454.53	2.13

Test Result for Band edge

TestMode	ChName	Frequency[MHz]	RefLevel[dBm]	Result[dBm]	Limit[dBm]	Verdict
11B	Low	2412	9.70	-21.26	≤-20.3	PASS
11B	High	2462	9.73	-45.66	≤-20.27	PASS
11G	Low	2412	4.72	-25.92	≤-25.28	PASS
11G	High	2462	5.63	-45.18	≤-24.37	PASS
11N20SISO	Low	2412	5.36	-25.71	≤-24.64	PASS
11N20SISO	High	2462	4.99	-41.06	≤-25.01	PASS
11N40SISO	Low	2422	1.61	-29.09	≤-28.39	PASS
11N40SISO	High	2452	2.13	-36.8	≤-27.87	PASS

Test Result for Spurious Emission

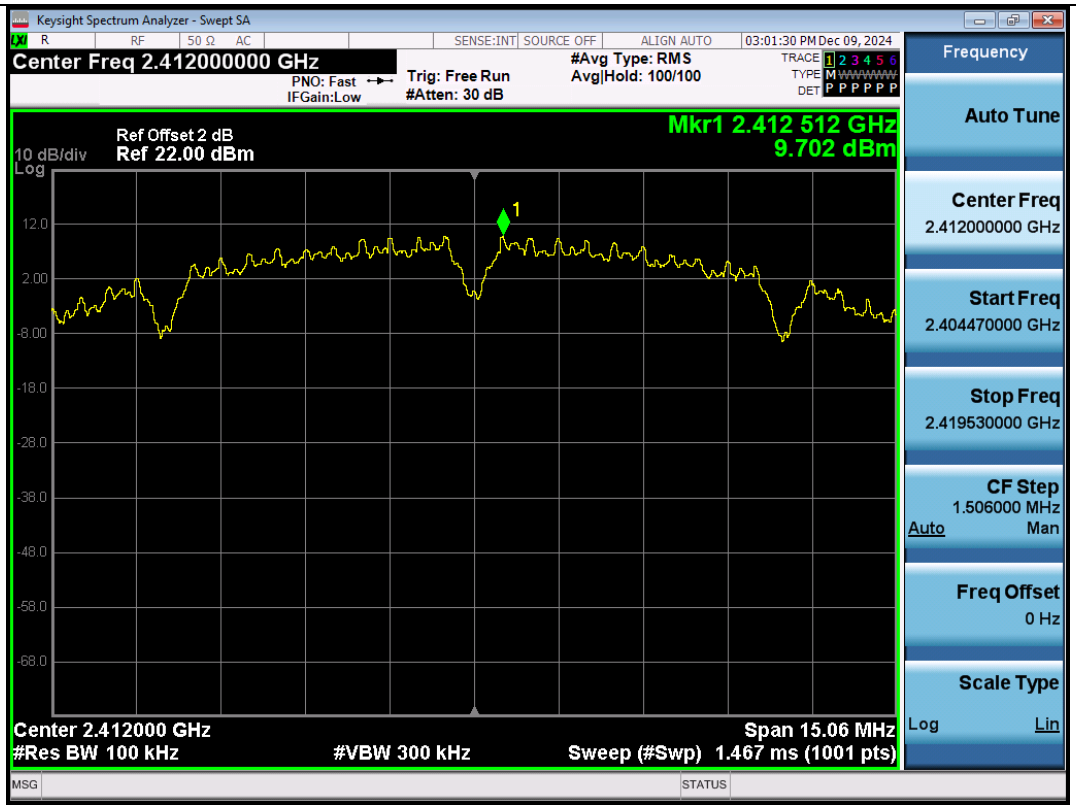
TestMode	Frequency[MHz]	FreqRange [Mhz]	RefLevel [dBm]	Result [dBm]	Limit [dBm]	Verdict
11B	2412	30~1000	9.70	-67.88	≤-20.3	PASS
11B	2412	1000~3000	9.70	-64.48	≤-20.3	PASS
11B	2412	3000~5000	9.70	-58.74	≤-20.3	PASS
11B	2412	5000~7000	9.70	-64.4	≤-20.3	PASS
11B	2412	7000~9000	9.70	-68.73	≤-20.3	PASS
11B	2412	9000~11000	9.70	-67.34	≤-20.3	PASS
11B	2412	11000~13000	9.70	-65.94	≤-20.3	PASS
11B	2412	13000~15000	9.70	-65.18	≤-20.3	PASS
11B	2412	15000~17000	9.70	-65.13	≤-20.3	PASS
11B	2412	17000~19000	9.70	-62.25	≤-20.3	PASS
11B	2412	19000~21000	9.70	-61.5	≤-20.3	PASS
11B	2412	21000~23000	9.70	-59.87	≤-20.3	PASS
11B	2412	23000~25000	9.70	-56.26	≤-20.3	PASS

11B	2437	30~1000	9.87	-68.06	≤-20.13	PASS
11B	2437	1000~3000	9.87	-63.63	≤-20.13	PASS
11B	2437	3000~5000	9.87	-58.01	≤-20.13	PASS
11B	2437	5000~7000	9.87	-68.19	≤-20.13	PASS
11B	2437	7000~9000	9.87	-68.87	≤-20.13	PASS
11B	2437	9000~11000	9.87	-67.31	≤-20.13	PASS
11B	2437	11000~13000	9.87	-66.04	≤-20.13	PASS
11B	2437	13000~15000	9.87	-65.3	≤-20.13	PASS
11B	2437	15000~17000	9.87	-64.67	≤-20.13	PASS
11B	2437	17000~19000	9.87	-61.82	≤-20.13	PASS
11B	2437	19000~21000	9.87	-61.96	≤-20.13	PASS
11B	2437	21000~23000	9.87	-60.73	≤-20.13	PASS
11B	2437	23000~25000	9.87	-56.35	≤-20.13	PASS
11B	2462	30~1000	9.73	-67.15	≤-20.27	PASS
11B	2462	1000~3000	9.73	-64.57	≤-20.27	PASS
11B	2462	3000~5000	9.73	-58.12	≤-20.27	PASS
11B	2462	5000~7000	9.73	-68.33	≤-20.27	PASS
11B	2462	7000~9000	9.73	-68.31	≤-20.27	PASS
11B	2462	9000~11000	9.73	-67.26	≤-20.27	PASS
11B	2462	11000~13000	9.73	-65.81	≤-20.27	PASS
11B	2462	13000~15000	9.73	-65.87	≤-20.27	PASS
11B	2462	15000~17000	9.73	-64.78	≤-20.27	PASS
11B	2462	17000~19000	9.73	-62.01	≤-20.27	PASS
11B	2462	19000~21000	9.73	-61.09	≤-20.27	PASS
11B	2462	21000~23000	9.73	-60.83	≤-20.27	PASS
11B	2462	23000~25000	9.73	-56.54	≤-20.27	PASS
11G	2412	30~1000	5.41	-66.56	≤-24.59	PASS
11G	2412	1000~3000	5.41	-64.28	≤-24.59	PASS
11G	2412	3000~5000	5.41	-66.31	≤-24.59	PASS
11G	2412	5000~7000	5.41	-68.32	≤-24.59	PASS
11G	2412	7000~9000	5.41	-68.32	≤-24.59	PASS
11G	2412	9000~11000	5.41	-67.13	≤-24.59	PASS
11G	2412	11000~13000	5.41	-65.43	≤-24.59	PASS
11G	2412	13000~15000	5.41	-65.29	≤-24.59	PASS
11G	2412	15000~17000	5.41	-64.97	≤-24.59	PASS
11G	2412	17000~19000	5.41	-60.73	≤-24.59	PASS
11G	2412	19000~21000	5.41	-61.22	≤-24.59	PASS
11G	2412	21000~23000	5.41	-60.66	≤-24.59	PASS
11G	2412	23000~25000	5.41	-55.43	≤-24.59	PASS
11G	2437	30~1000	4.48	-68.3	≤-25.52	PASS
11G	2437	1000~3000	4.48	-65.09	≤-25.52	PASS
11G	2437	3000~5000	4.48	-65.79	≤-25.52	PASS
11G	2437	5000~7000	4.48	-68.19	≤-25.52	PASS
11G	2437	7000~9000	4.48	-68.7	≤-25.52	PASS
11G	2437	9000~11000	4.48	-67.12	≤-25.52	PASS
11G	2437	11000~13000	4.48	-65.48	≤-25.52	PASS
11G	2437	13000~15000	4.48	-66.18	≤-25.52	PASS
11G	2437	15000~17000	4.48	-64.8	≤-25.52	PASS
11G	2437	17000~19000	4.48	-61.68	≤-25.52	PASS
11G	2437	19000~21000	4.48	-61.94	≤-25.52	PASS

11G	2437	21000~23000	4.48	-59.73	≤-25.52	PASS
11G	2437	23000~25000	4.48	-55.87	≤-25.52	PASS
11G	2462	30~1000	5.63	-67.93	≤-24.37	PASS
11G	2462	1000~3000	5.63	-65.52	≤-24.37	PASS
11G	2462	3000~5000	5.63	-66.15	≤-24.37	PASS
11G	2462	5000~7000	5.63	-67.62	≤-24.37	PASS
11G	2462	7000~9000	5.63	-68.81	≤-24.37	PASS
11G	2462	9000~11000	5.63	-67.34	≤-24.37	PASS
11G	2462	11000~13000	5.63	-66.01	≤-24.37	PASS
11G	2462	13000~15000	5.63	-65.57	≤-24.37	PASS
11G	2462	15000~17000	5.63	-65.16	≤-24.37	PASS
11G	2462	17000~19000	5.63	-61.29	≤-24.37	PASS
11G	2462	19000~21000	5.63	-61.62	≤-24.37	PASS
11G	2462	21000~23000	5.63	-60.46	≤-24.37	PASS
11G	2462	23000~25000	5.63	-55.94	≤-24.37	PASS
11N20SISO	2412	30~1000	5.36	-67.14	≤-24.64	PASS
11N20SISO	2412	1000~3000	5.36	-64.68	≤-24.64	PASS
11N20SISO	2412	3000~5000	5.36	-65.8	≤-24.64	PASS
11N20SISO	2412	5000~7000	5.36	-68.28	≤-24.64	PASS
11N20SISO	2412	7000~9000	5.36	-68.1	≤-24.64	PASS
11N20SISO	2412	9000~11000	5.36	-67.29	≤-24.64	PASS
11N20SISO	2412	11000~13000	5.36	-65.76	≤-24.64	PASS
11N20SISO	2412	13000~15000	5.36	-65.37	≤-24.64	PASS
11N20SISO	2412	15000~17000	5.36	-65.23	≤-24.64	PASS
11N20SISO	2412	17000~19000	5.36	-61.21	≤-24.64	PASS
11N20SISO	2412	19000~21000	5.36	-61.75	≤-24.64	PASS
11N20SISO	2412	21000~23000	5.36	-60.55	≤-24.64	PASS
11N20SISO	2412	23000~25000	5.36	-56.12	≤-24.64	PASS
11N20SISO	2437	30~1000	4.10	-68.09	≤-25.9	PASS
11N20SISO	2437	1000~3000	4.10	-65.04	≤-25.9	PASS
11N20SISO	2437	3000~5000	4.10	-65.97	≤-25.9	PASS
11N20SISO	2437	5000~7000	4.10	-68	≤-25.9	PASS
11N20SISO	2437	7000~9000	4.10	-67.98	≤-25.9	PASS
11N20SISO	2437	9000~11000	4.10	-66.75	≤-25.9	PASS
11N20SISO	2437	11000~13000	4.10	-65.94	≤-25.9	PASS
11N20SISO	2437	13000~15000	4.10	-65.52	≤-25.9	PASS
11N20SISO	2437	15000~17000	4.10	-64.7	≤-25.9	PASS
11N20SISO	2437	17000~19000	4.10	-61.53	≤-25.9	PASS
11N20SISO	2437	19000~21000	4.10	-60.93	≤-25.9	PASS
11N20SISO	2437	21000~23000	4.10	-60.02	≤-25.9	PASS
11N20SISO	2437	23000~25000	4.10	-56.06	≤-25.9	PASS
11N20SISO	2462	30~1000	4.99	-67.88	≤-25.01	PASS
11N20SISO	2462	1000~3000	4.99	-65.11	≤-25.01	PASS
11N20SISO	2462	3000~5000	4.99	-66.02	≤-25.01	PASS
11N20SISO	2462	5000~7000	4.99	-67.71	≤-25.01	PASS
11N20SISO	2462	7000~9000	4.99	-68.34	≤-25.01	PASS
11N20SISO	2462	9000~11000	4.99	-67.17	≤-25.01	PASS
11N20SISO	2462	11000~13000	4.99	-65.41	≤-25.01	PASS
11N20SISO	2462	13000~15000	4.99	-65.41	≤-25.01	PASS
11N20SISO	2462	15000~17000	4.99	-64.43	≤-25.01	PASS

11N20SISO	2462	17000~19000	4.99	-61.77	≤-25.01	PASS
11N20SISO	2462	19000~21000	4.99	-61.67	≤-25.01	PASS
11N20SISO	2462	21000~23000	4.99	-60.31	≤-25.01	PASS
11N20SISO	2462	23000~25000	4.99	-56.24	≤-25.01	PASS
11N40SISO	2422	30~1000	1.61	-68.41	≤-28.39	PASS
11N40SISO	2422	1000~3000	1.61	-64.18	≤-28.39	PASS
11N40SISO	2422	3000~5000	1.61	-65.72	≤-28.39	PASS
11N40SISO	2422	5000~7000	1.61	-67.61	≤-28.39	PASS
11N40SISO	2422	7000~9000	1.61	-68.5	≤-28.39	PASS
11N40SISO	2422	9000~11000	1.61	-67.19	≤-28.39	PASS
11N40SISO	2422	11000~13000	1.61	-65.96	≤-28.39	PASS
11N40SISO	2422	13000~15000	1.61	-65.51	≤-28.39	PASS
11N40SISO	2422	15000~17000	1.61	-64.8	≤-28.39	PASS
11N40SISO	2422	17000~19000	1.61	-62.22	≤-28.39	PASS
11N40SISO	2422	19000~21000	1.61	-61.31	≤-28.39	PASS
11N40SISO	2422	21000~23000	1.61	-60.83	≤-28.39	PASS
11N40SISO	2422	23000~25000	1.61	-55.79	≤-28.39	PASS
11N40SISO	2437	30~1000	2.81	-67.64	≤-27.19	PASS
11N40SISO	2437	1000~3000	2.81	-64.93	≤-27.19	PASS
11N40SISO	2437	3000~5000	2.81	-66.39	≤-27.19	PASS
11N40SISO	2437	5000~7000	2.81	-68.51	≤-27.19	PASS
11N40SISO	2437	7000~9000	2.81	-68.35	≤-27.19	PASS
11N40SISO	2437	9000~11000	2.81	-66.95	≤-27.19	PASS
11N40SISO	2437	11000~13000	2.81	-65.6	≤-27.19	PASS
11N40SISO	2437	13000~15000	2.81	-65.61	≤-27.19	PASS
11N40SISO	2437	15000~17000	2.81	-64.71	≤-27.19	PASS
11N40SISO	2437	17000~19000	2.81	-62.15	≤-27.19	PASS
11N40SISO	2437	19000~21000	2.81	-61.45	≤-27.19	PASS
11N40SISO	2437	21000~23000	2.81	-60.78	≤-27.19	PASS
11N40SISO	2437	23000~25000	2.81	-56.02	≤-27.19	PASS
11N40SISO	2452	30~1000	2.13	-67.98	≤-27.87	PASS
11N40SISO	2452	1000~3000	2.13	-65.45	≤-27.87	PASS
11N40SISO	2452	3000~5000	2.13	-65.78	≤-27.87	PASS
11N40SISO	2452	5000~7000	2.13	-68.24	≤-27.87	PASS
11N40SISO	2452	7000~9000	2.13	-68.35	≤-27.87	PASS
11N40SISO	2452	9000~11000	2.13	-66.37	≤-27.87	PASS
11N40SISO	2452	11000~13000	2.13	-65.98	≤-27.87	PASS
11N40SISO	2452	13000~15000	2.13	-65.2	≤-27.87	PASS
11N40SISO	2452	15000~17000	2.13	-64.03	≤-27.87	PASS
11N40SISO	2452	17000~19000	2.13	-61.82	≤-27.87	PASS
11N40SISO	2452	19000~21000	2.13	-61.98	≤-27.87	PASS
11N40SISO	2452	21000~23000	2.13	-60.6	≤-27.87	PASS
11N40SISO	2452	23000~25000	2.13	-56.48	≤-27.87	PASS

Test Graphs for Reference level



11B-Ant1-2412-PASS

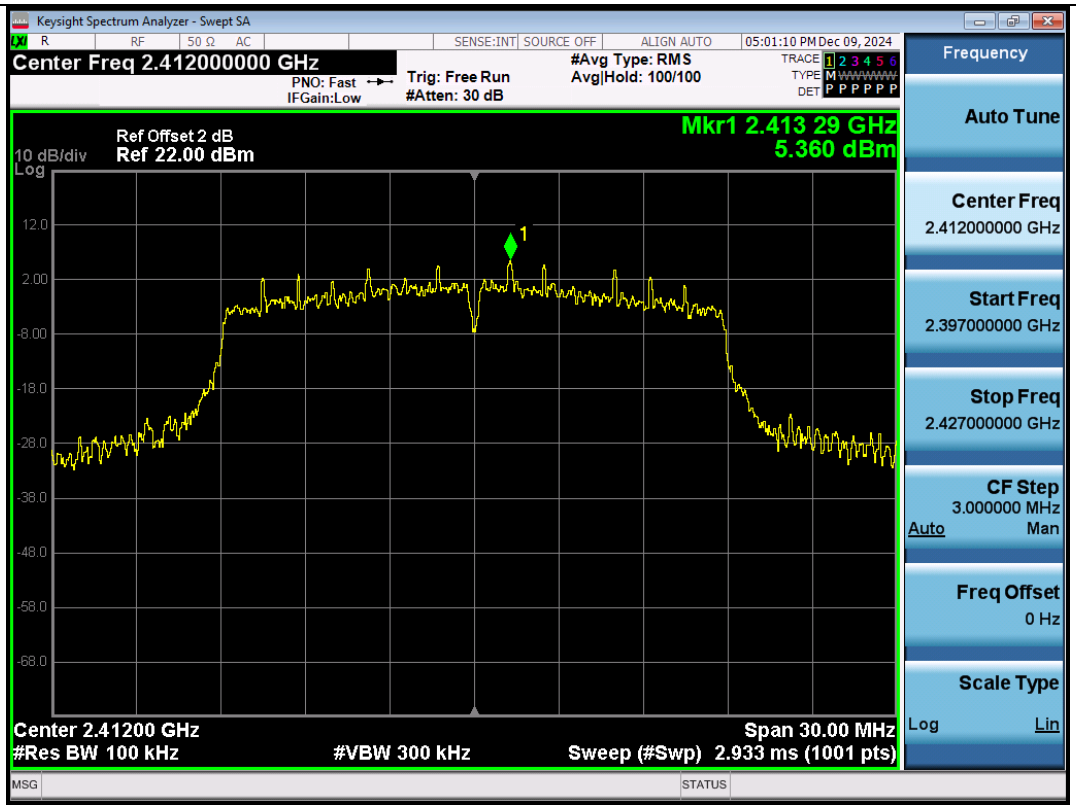
11B-Ant1-2437-PASS

11B-Ant1-2462-PASS

11G-Ant1-2412-PASS

11G-Ant1-2437-PASS

11G-Ant1-2462-PASS

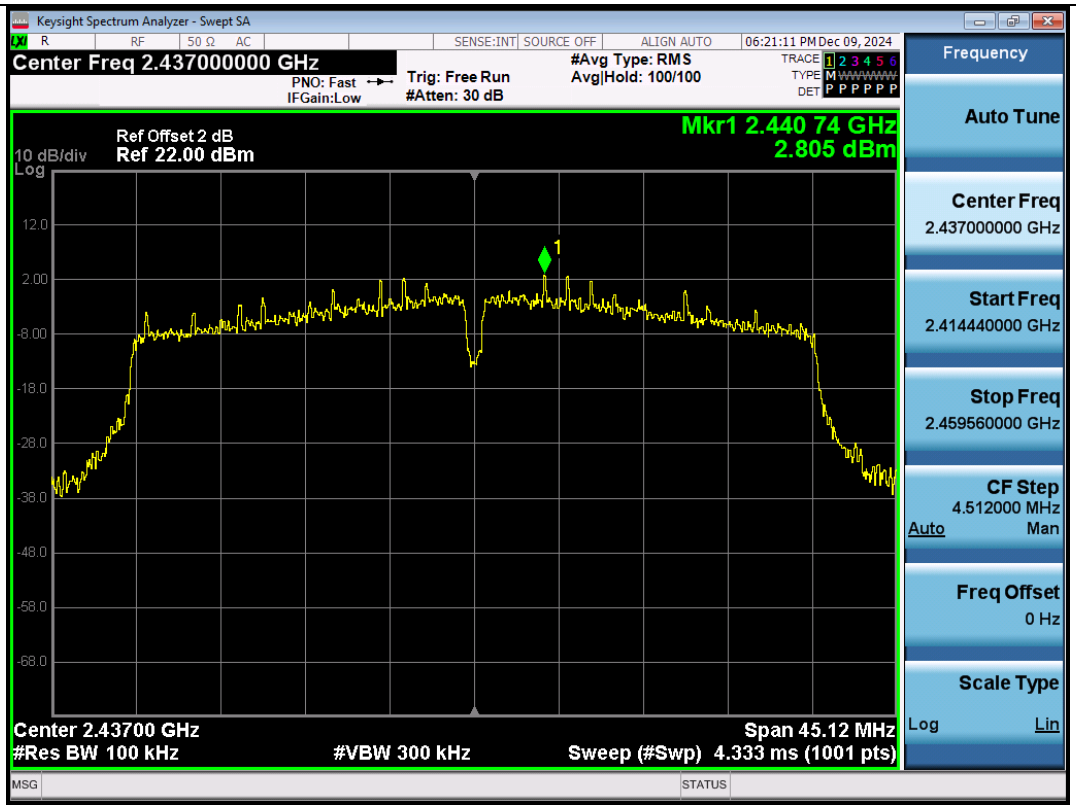


11N20SISO-Ant1-2412-PASS

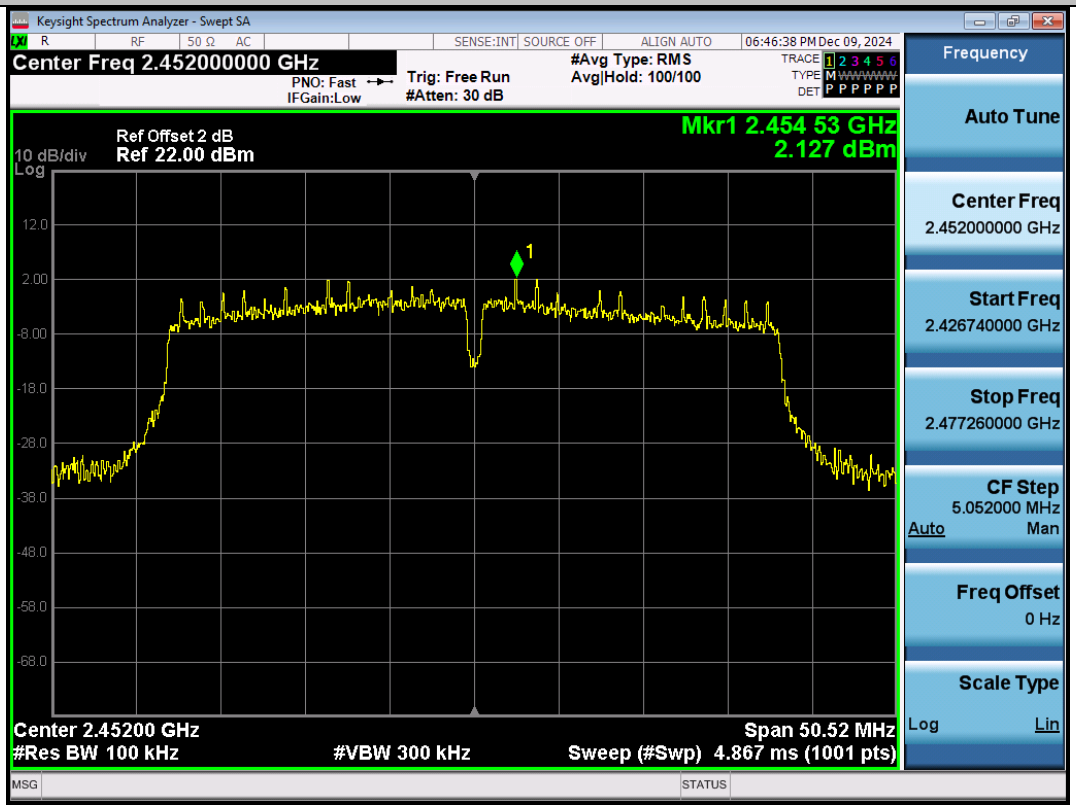
11N20SISO-Ant1-2437-PASS

11N20SISO-Ant1-2462-PASS

11N40SISO-Ant1-2422-PASS

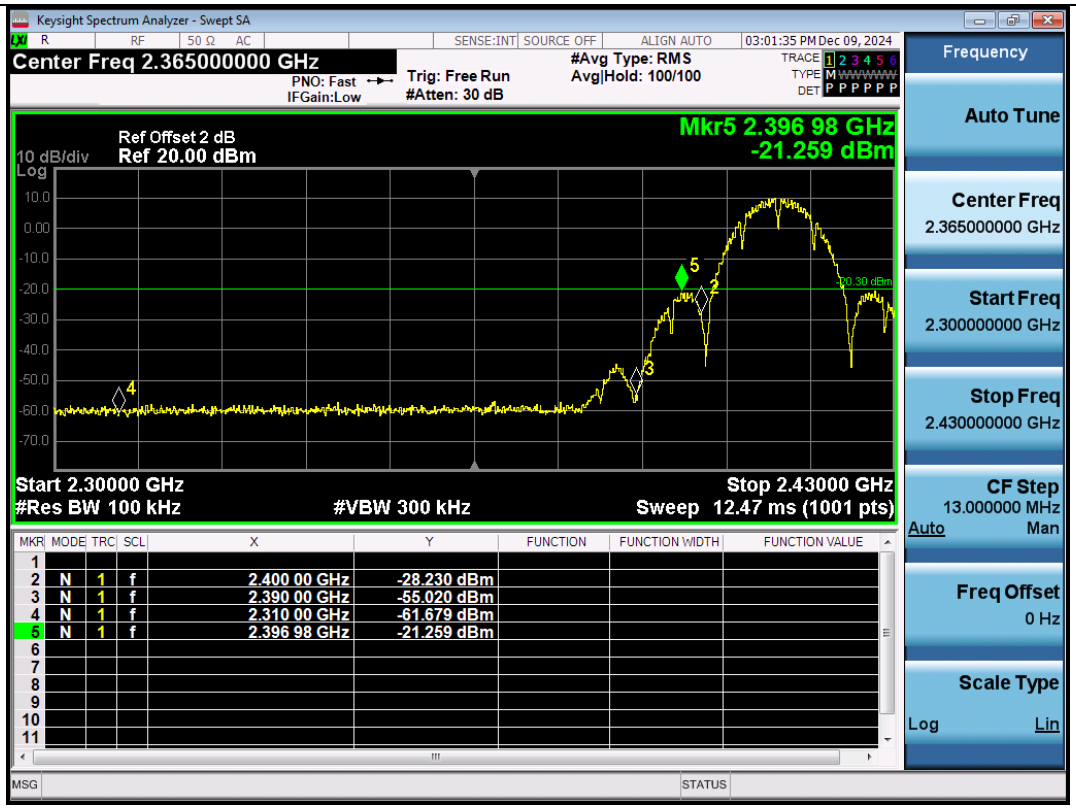


11N40SISO-Ant1-2437-PASS

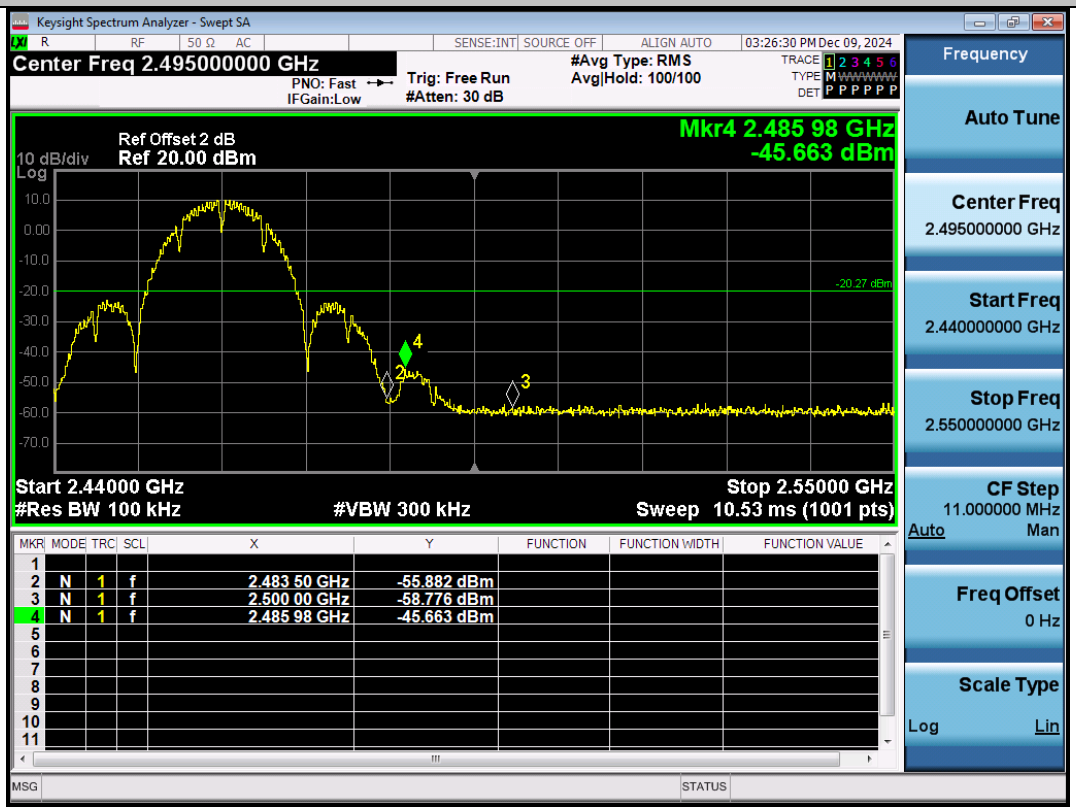


11N40SISO-Ant1-2452-PASS

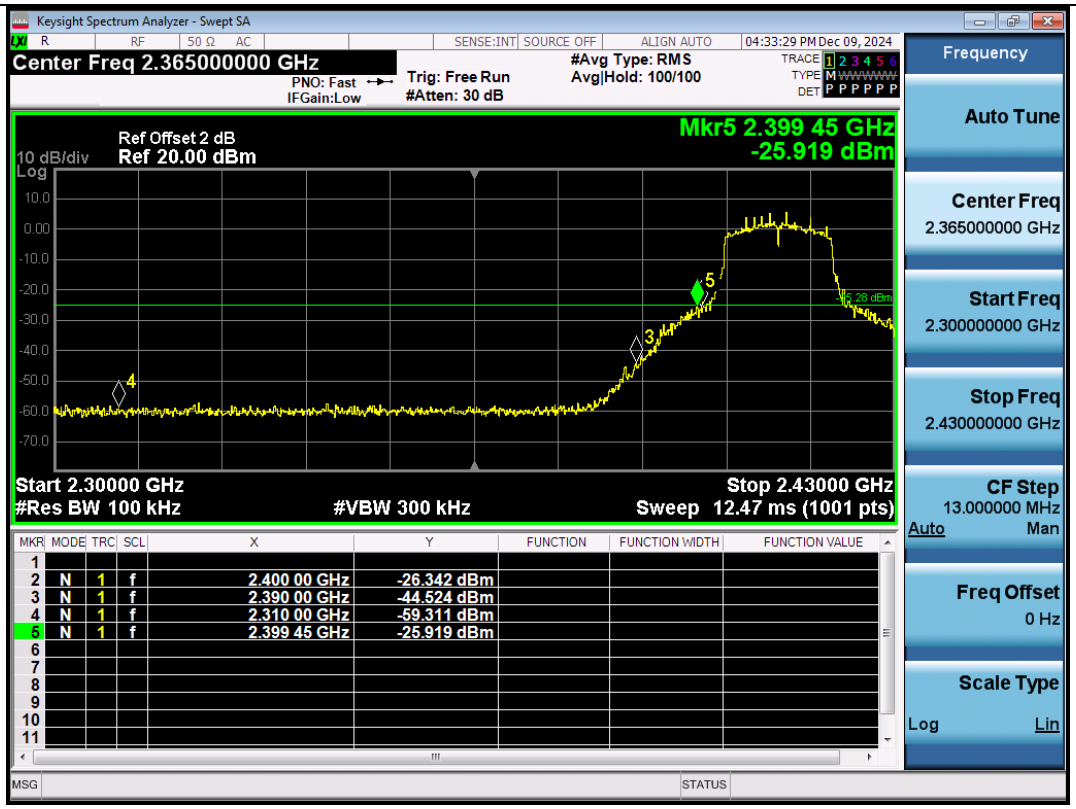
Test Graphs for Band edge



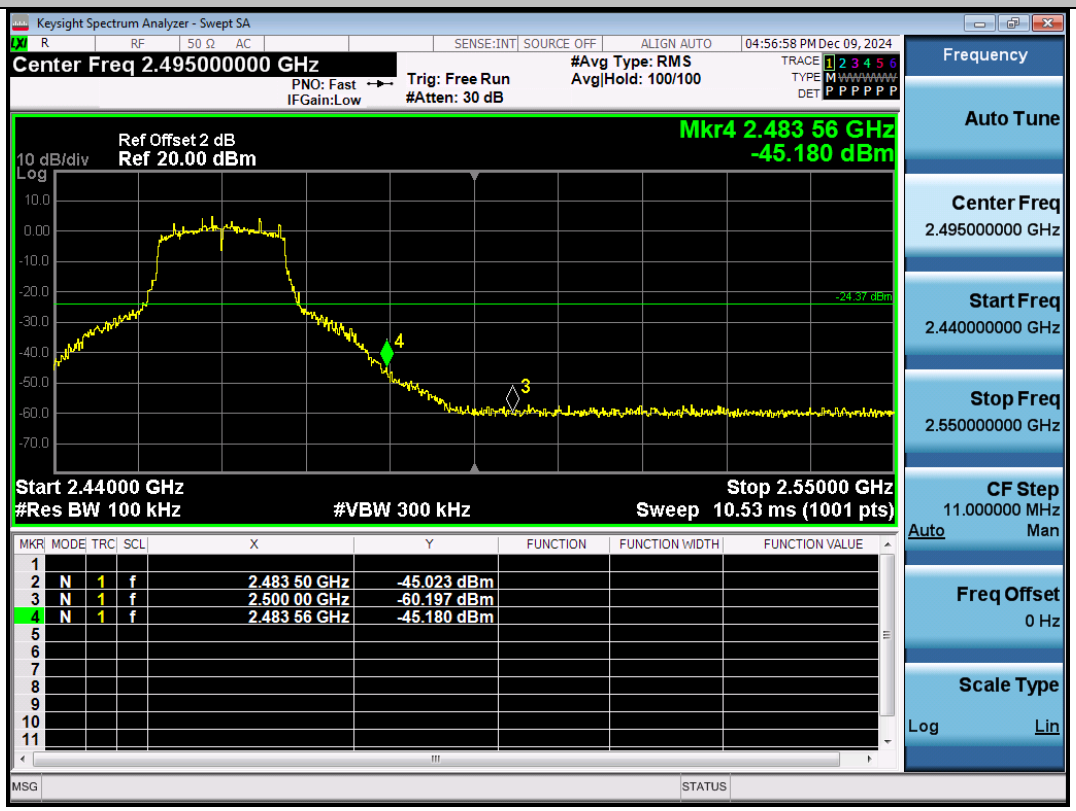
11B-Ant1-2412-PASS



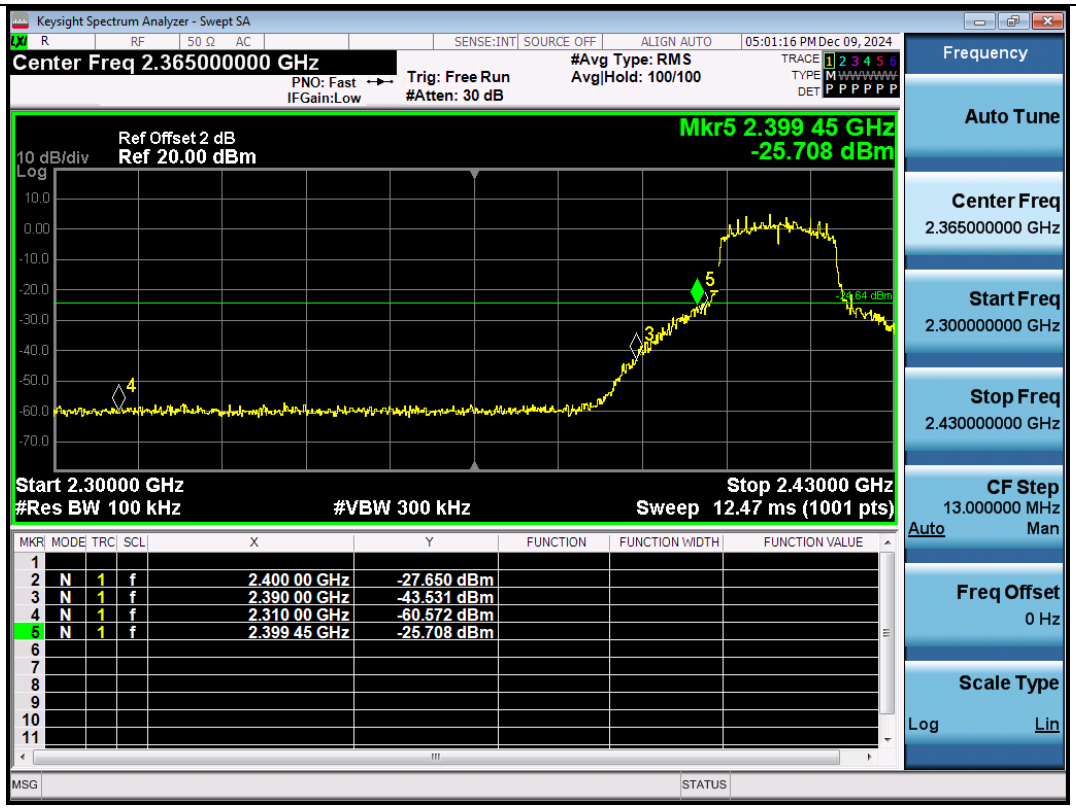
11B-Ant1-2462-PASS



11G-Ant1-2412-PASS

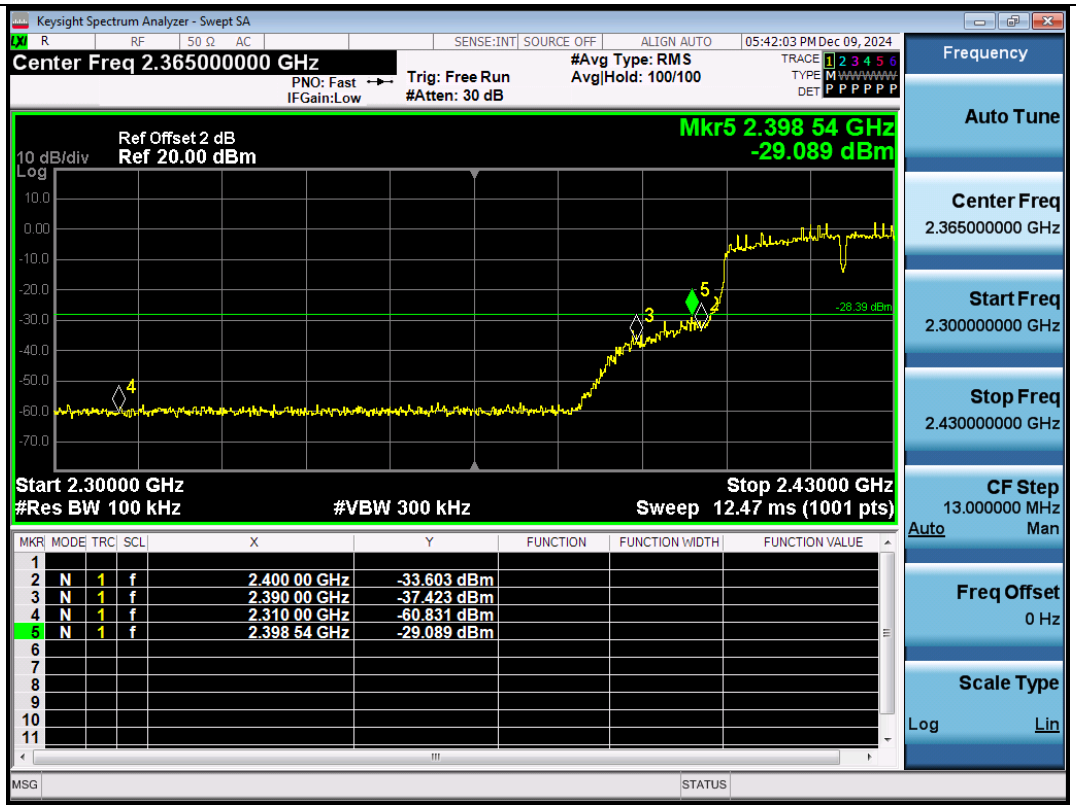


11G-Ant1-2462-PASS



11N20SISO-Ant1-2412-PASS

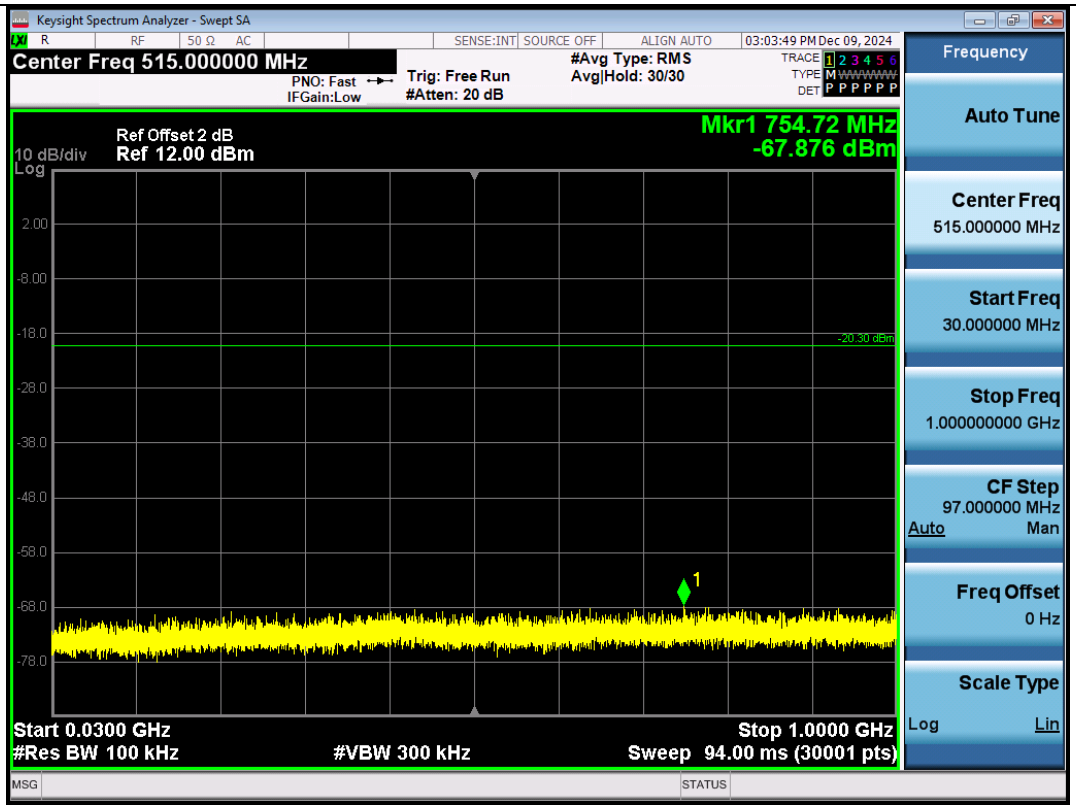
11N20SISO-Ant1-2462-PASS



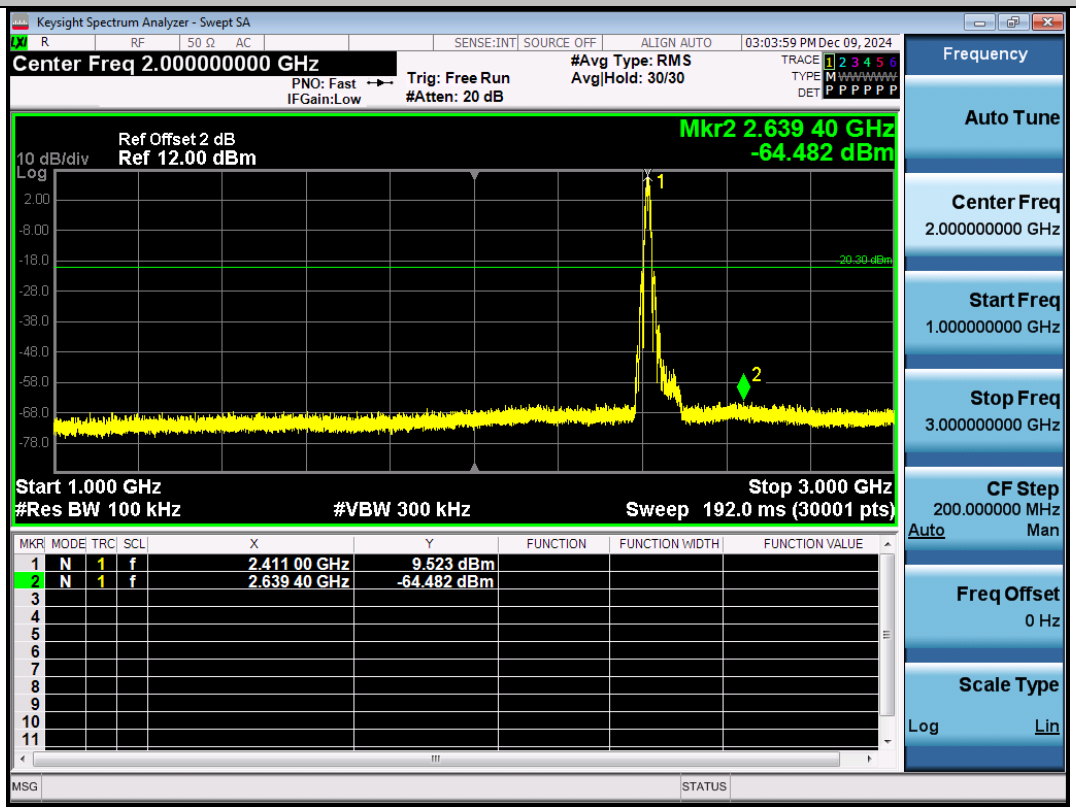
11N40SISO-Ant1-2422-PASS

11N40SISO-Ant1-2452-PASS

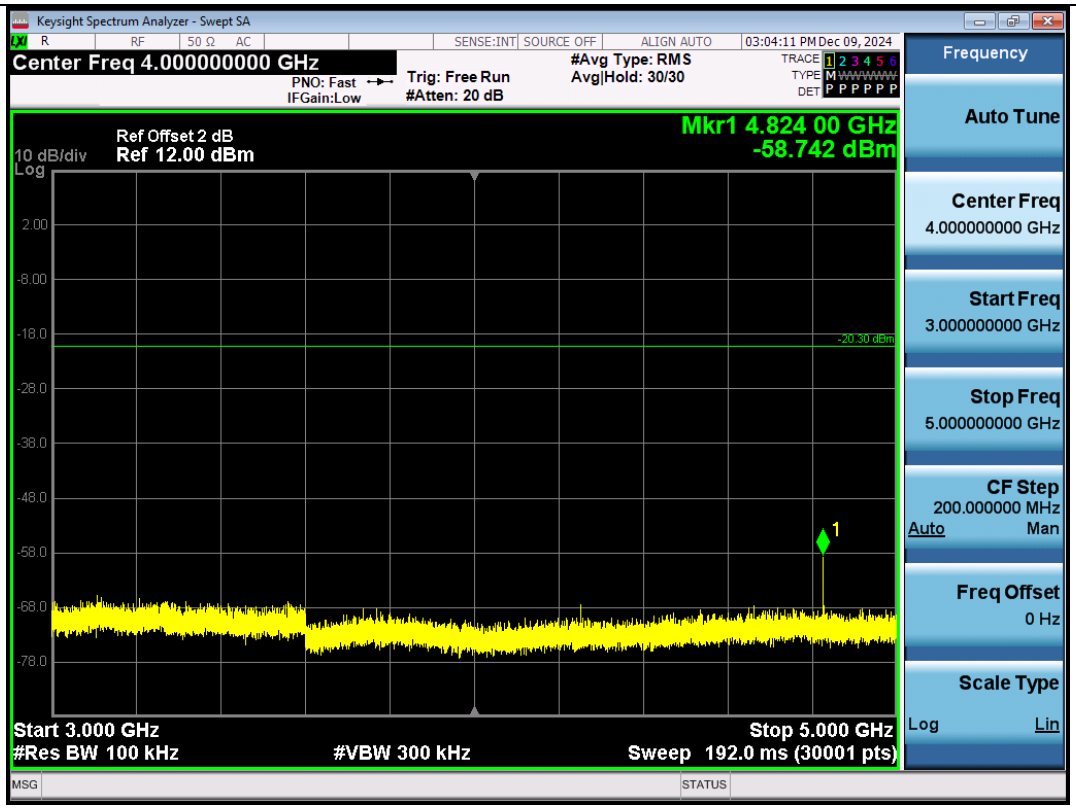
Test Graphs for Spurious Emission



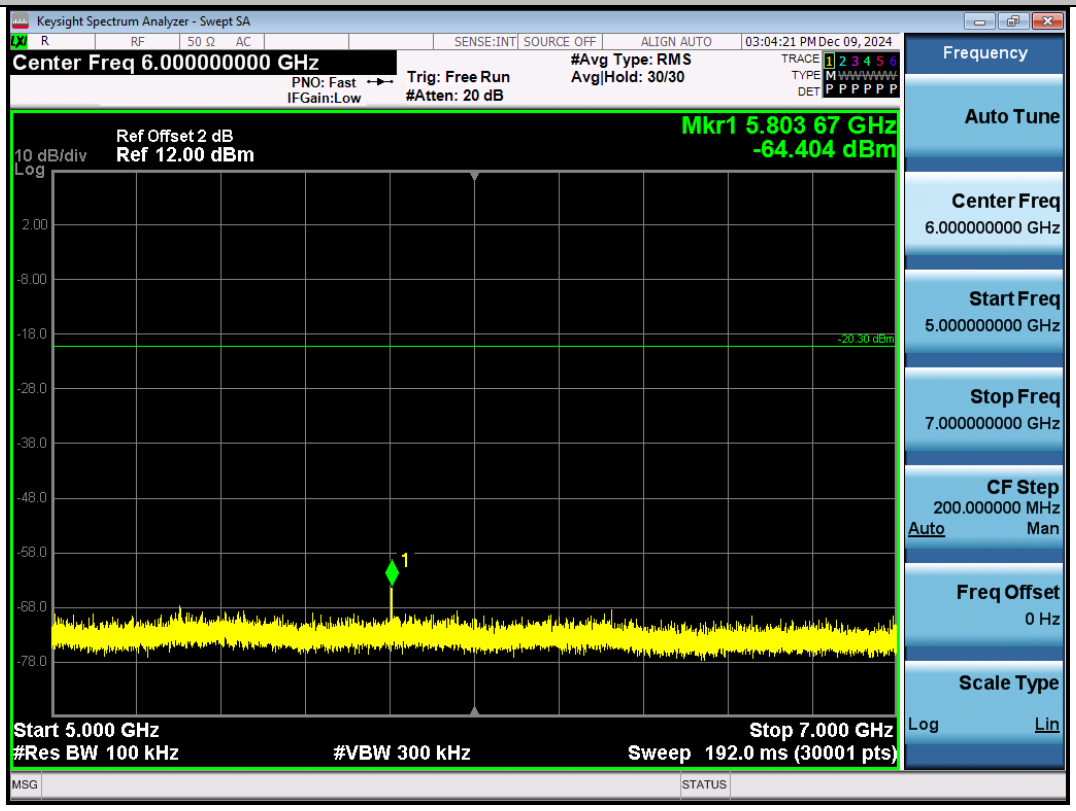
11B-Ant1-2412-30~1000-PASS



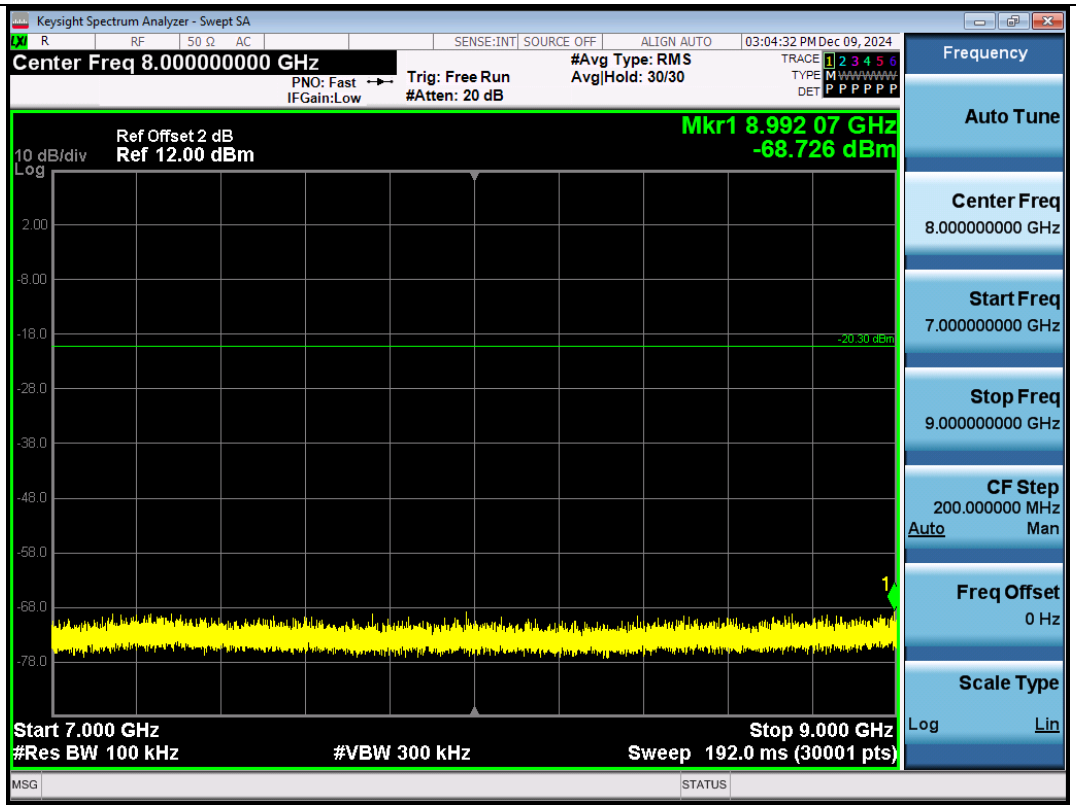
11B-Ant1-2412-1000~3000-PASS



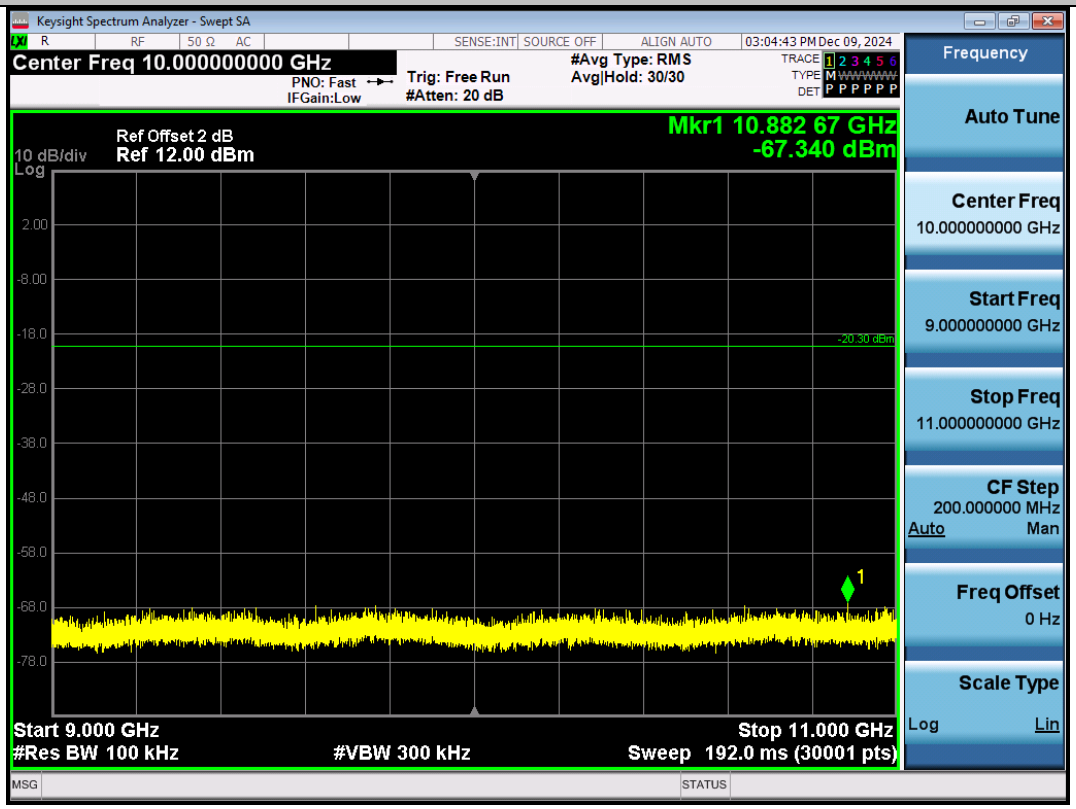
11B-Ant1-2412-3000~5000-PASS



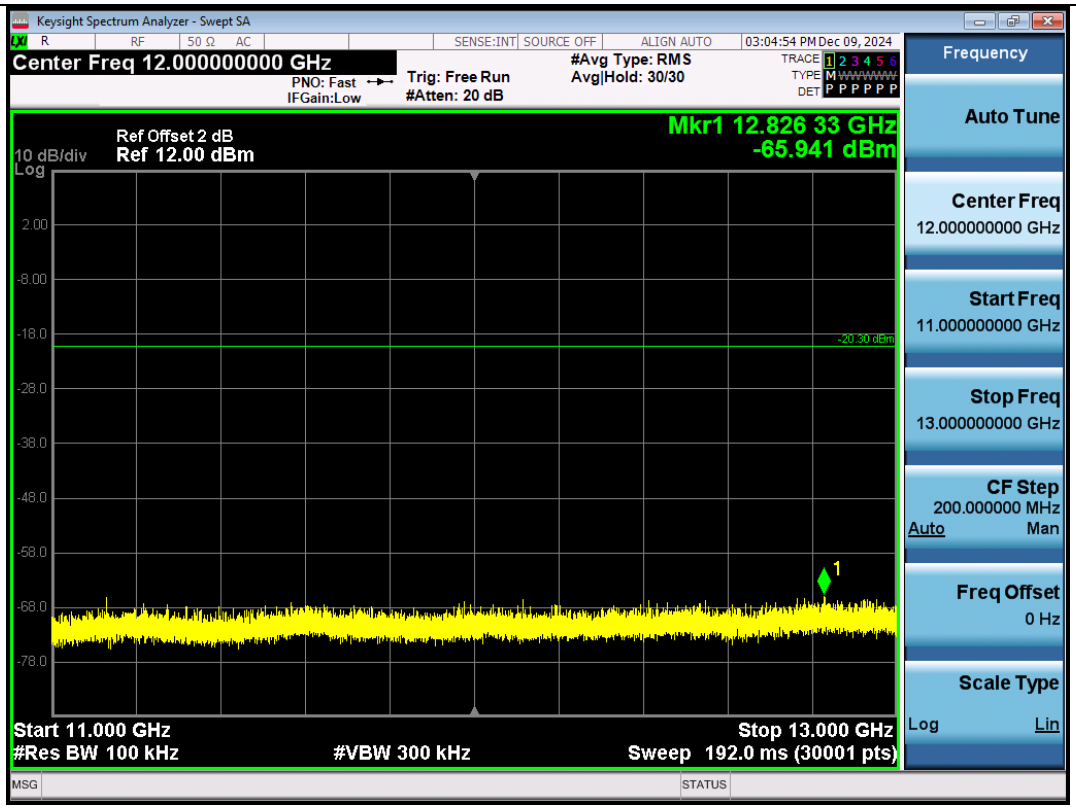
11B-Ant1-2412-5000~7000-PASS



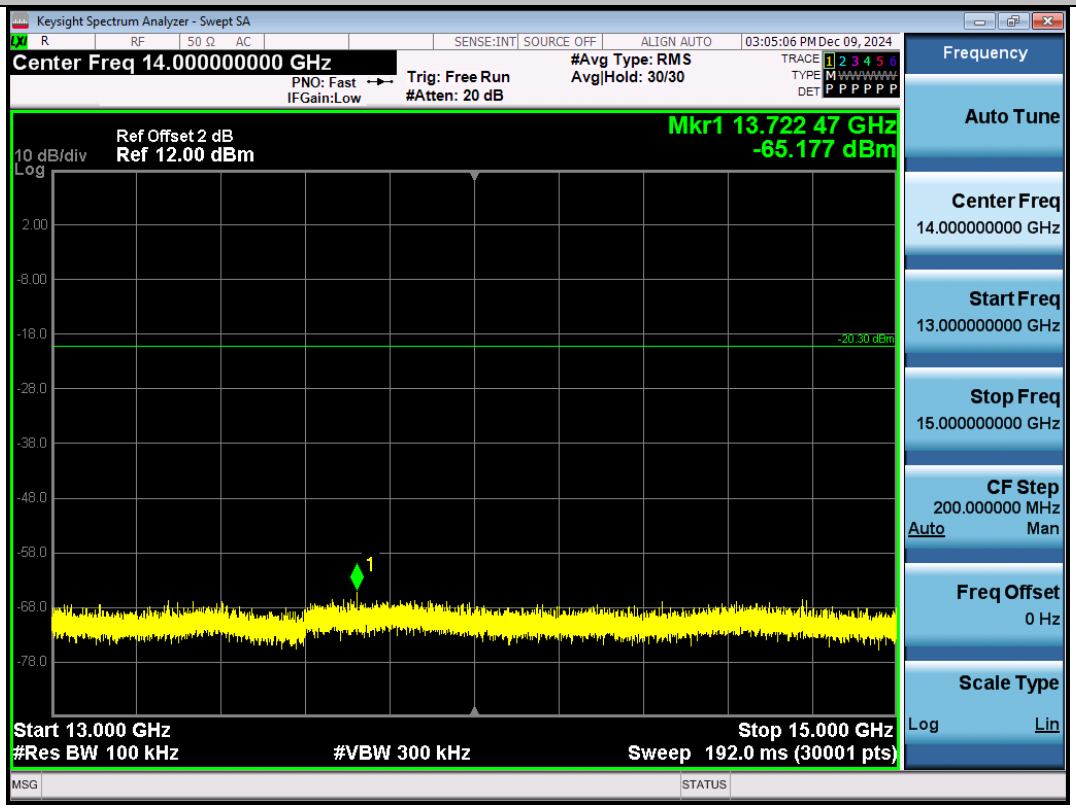
11B-Ant1-2412-7000~9000-PASS



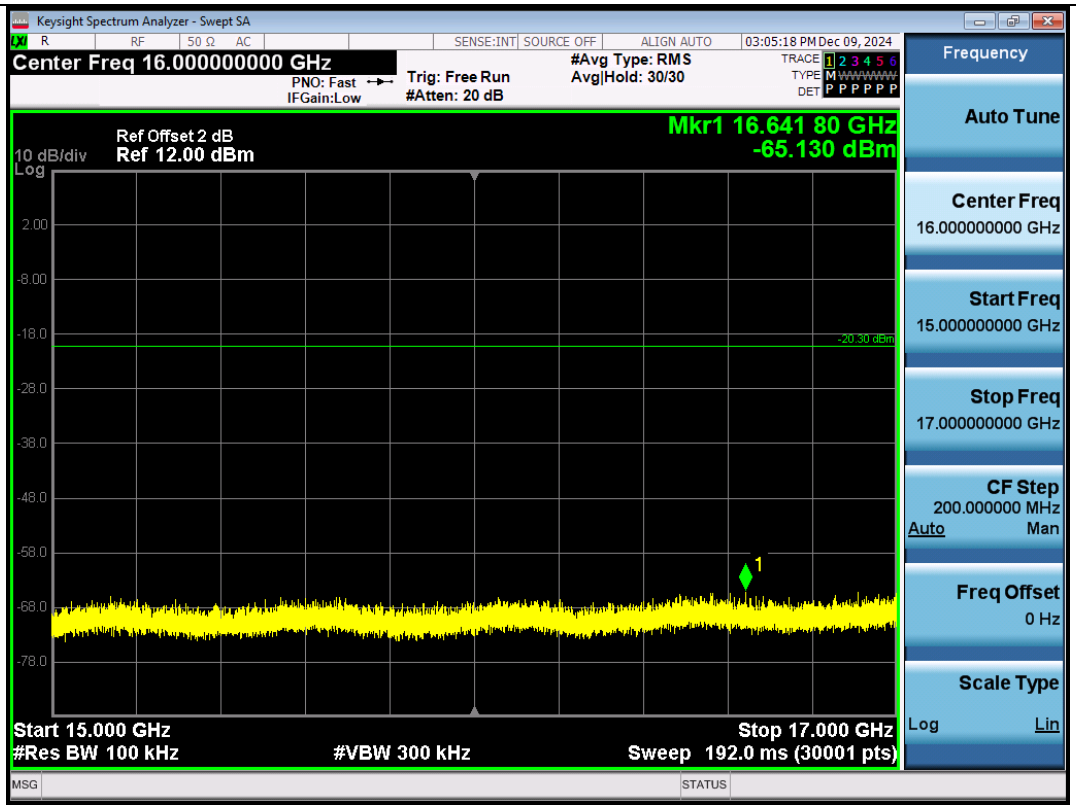
11B-Ant1-2412-9000~11000-PASS



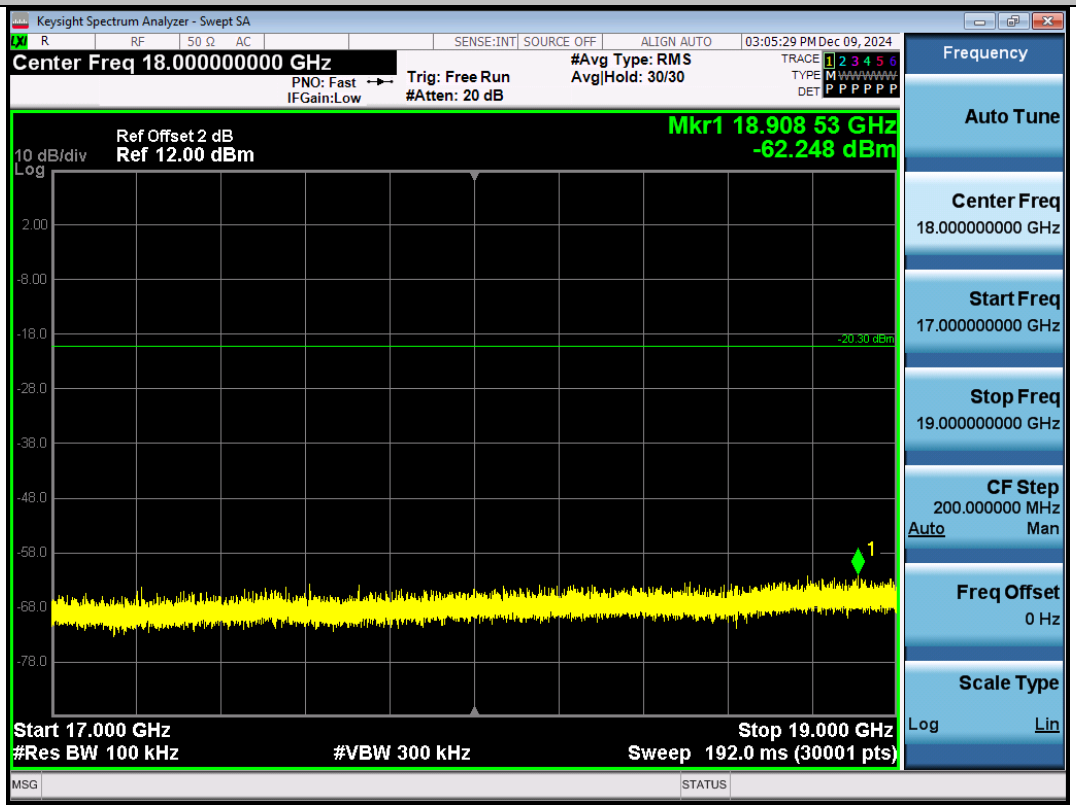
11B-Ant1-2412-11000~13000-PASS



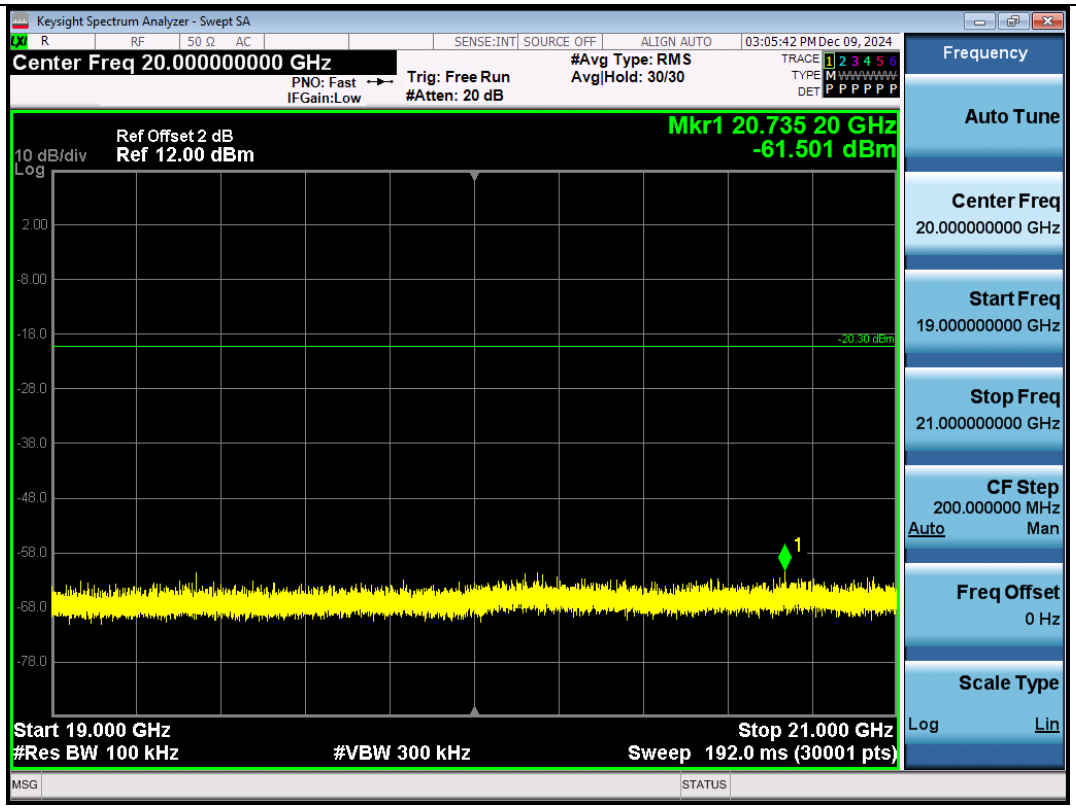
11B-Ant1-2412-13000~15000-PASS



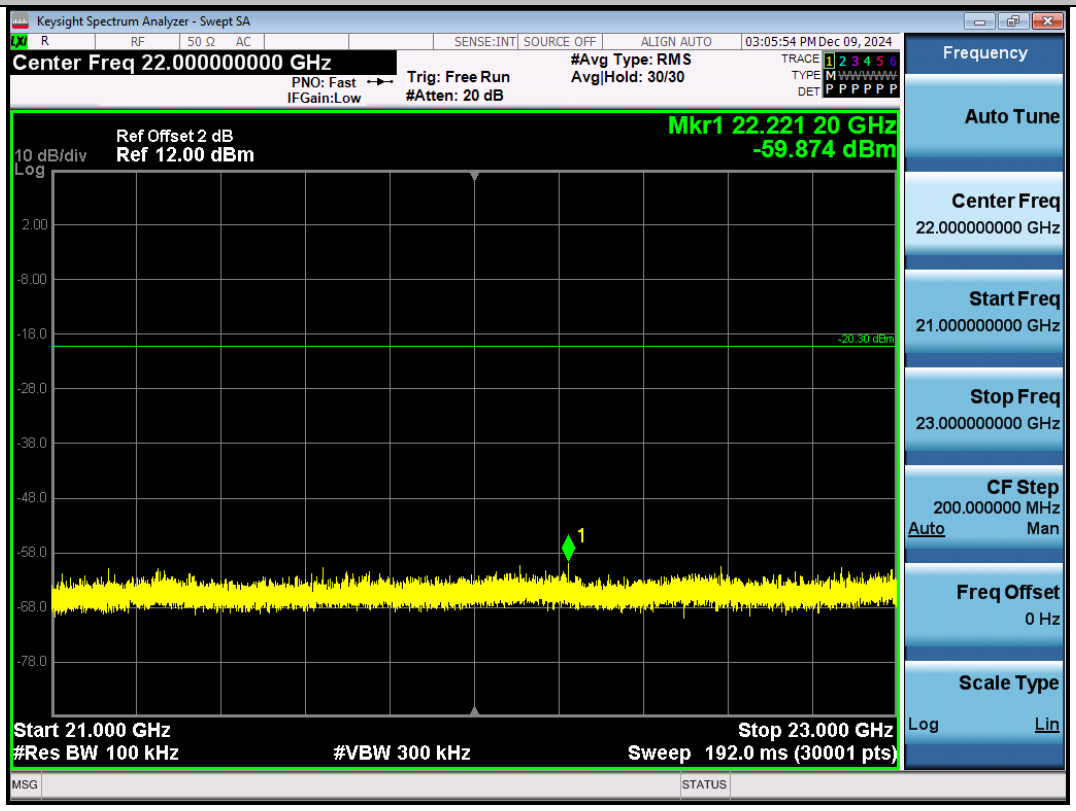
11B-Ant1-2412-15000~17000-PASS



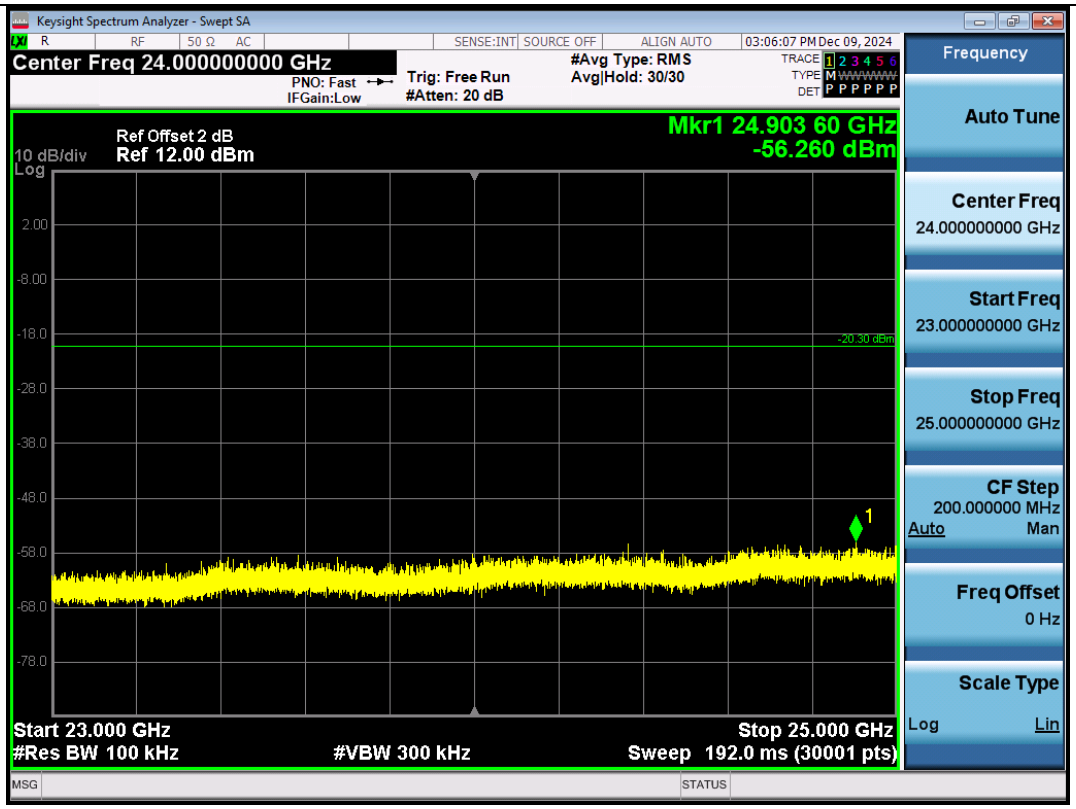
11B-Ant1-2412-17000~19000-PASS



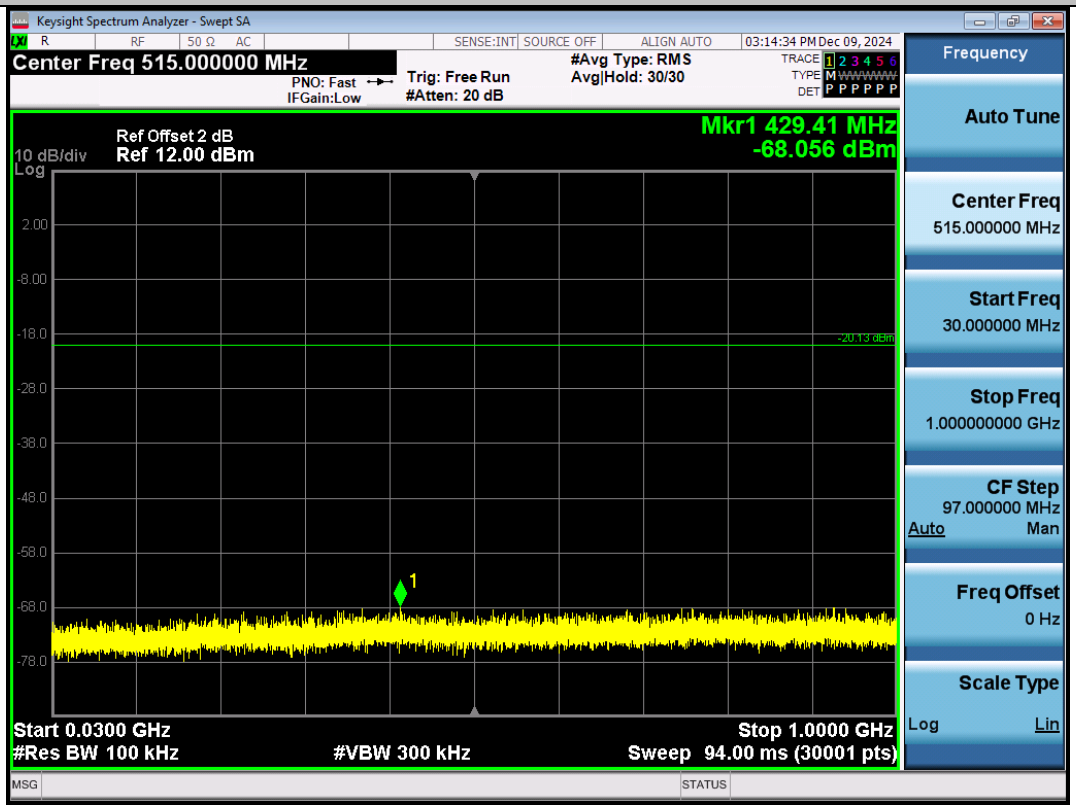
11B-Ant1-2412-19000~21000-PASS



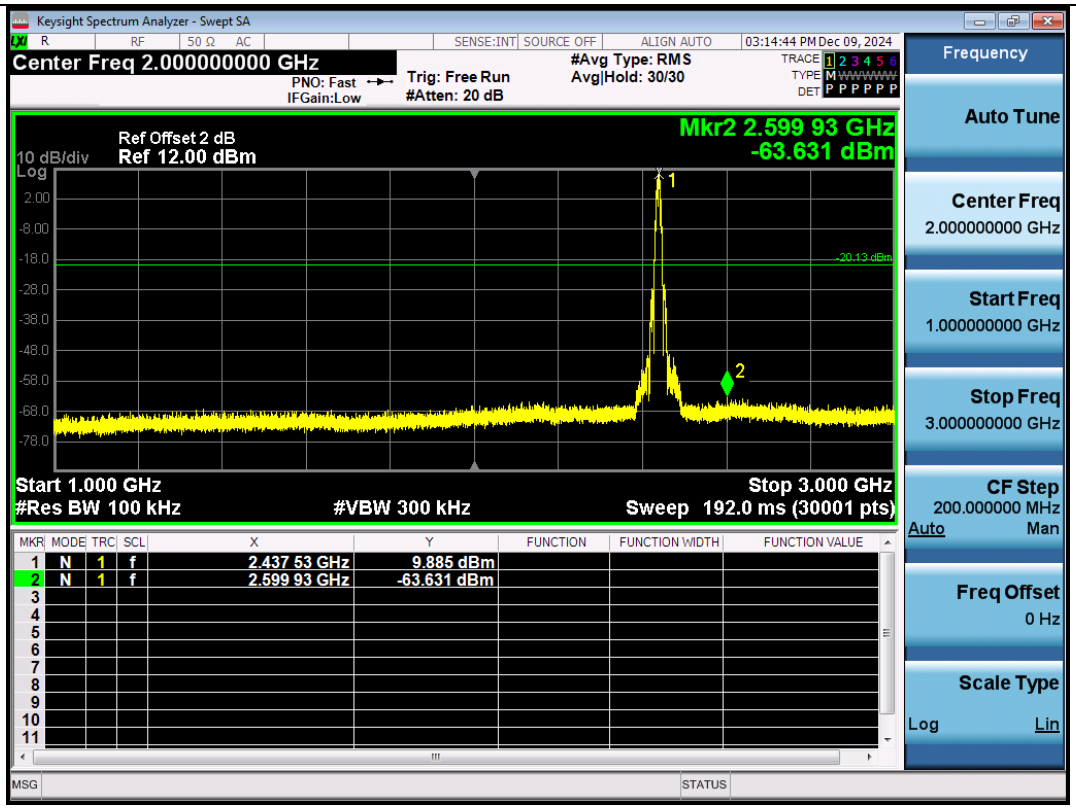
11B-Ant1-2412-21000~23000-PASS



11B-Ant1-2412-23000~25000-PASS

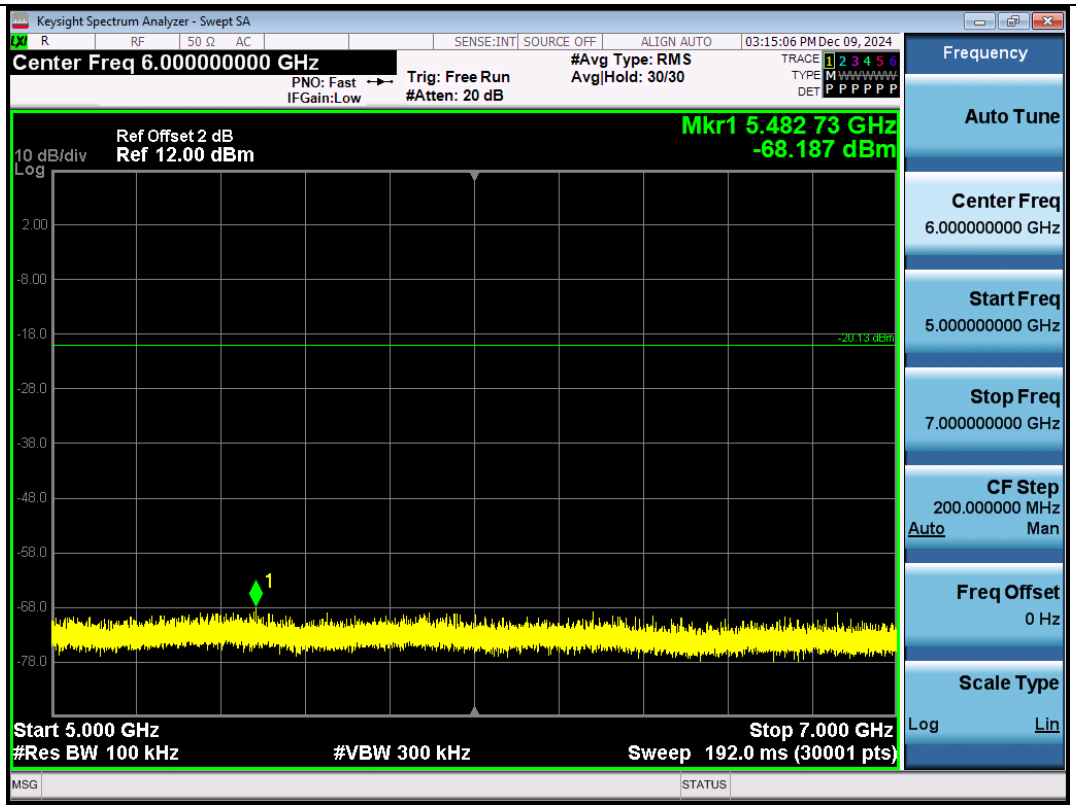


11B-Ant1-2437-30~1000-PASS

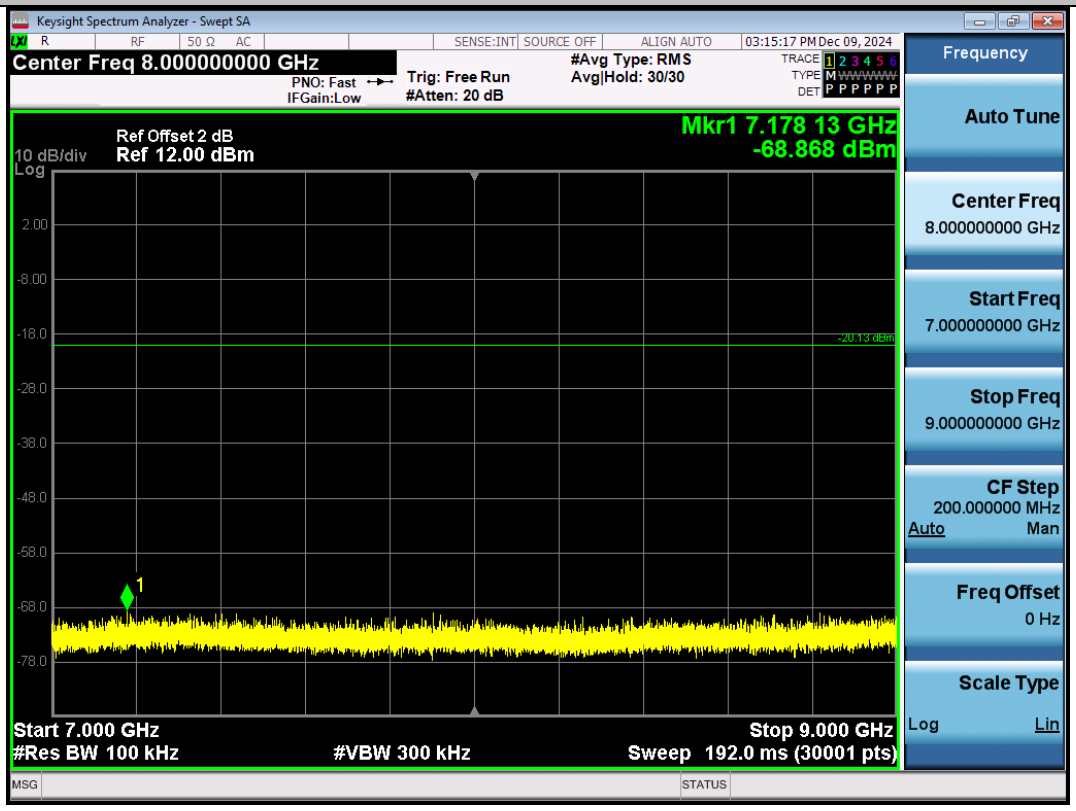


11B-Ant1-2437-1000~3000-PASS

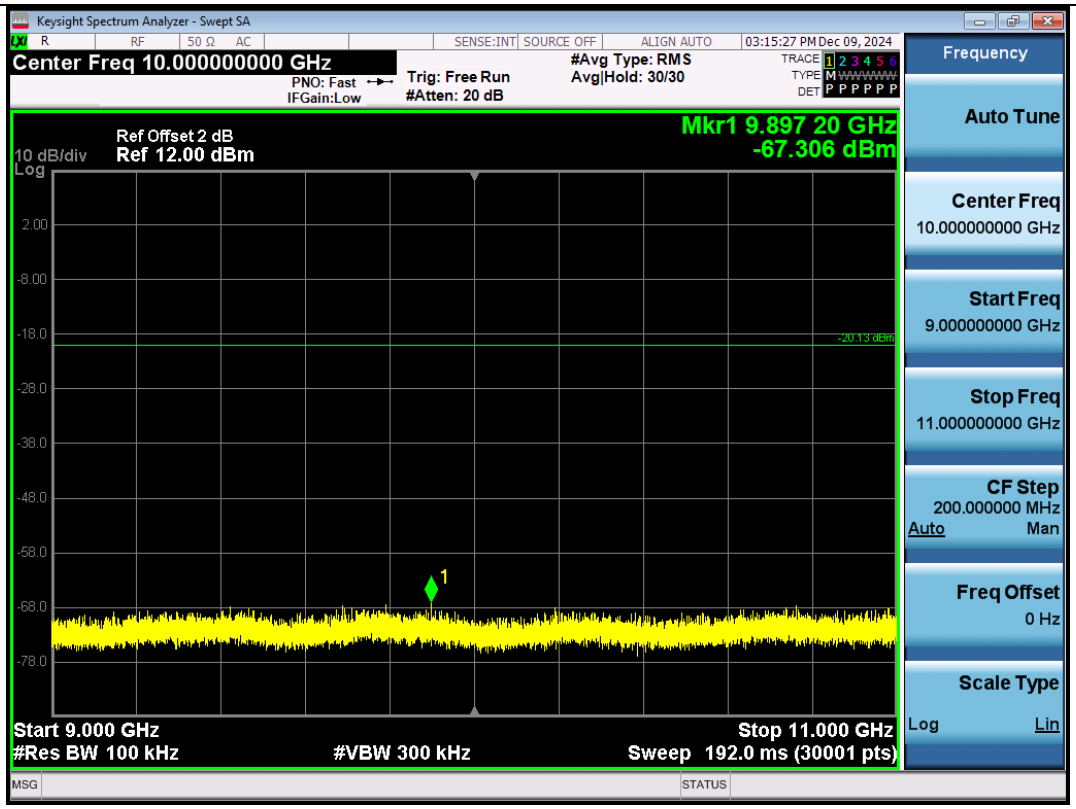
11B-Ant1-2437-3000~5000-PASS



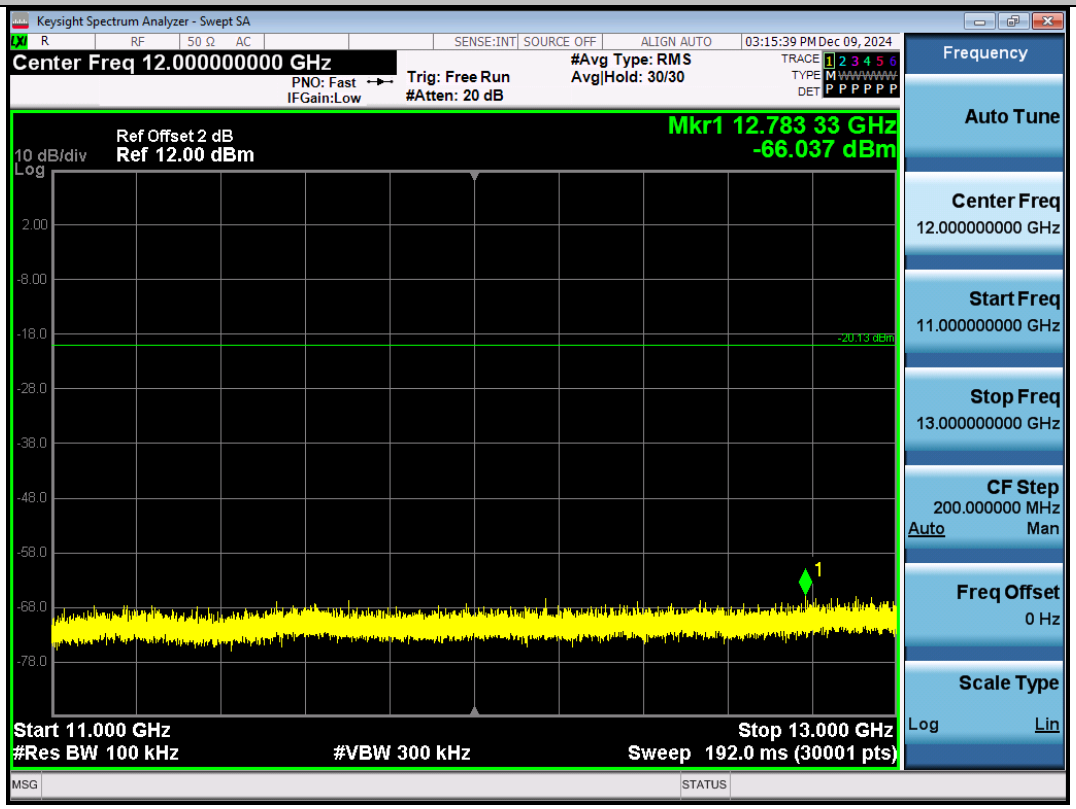
11B-Ant1-2437-5000~7000-PASS



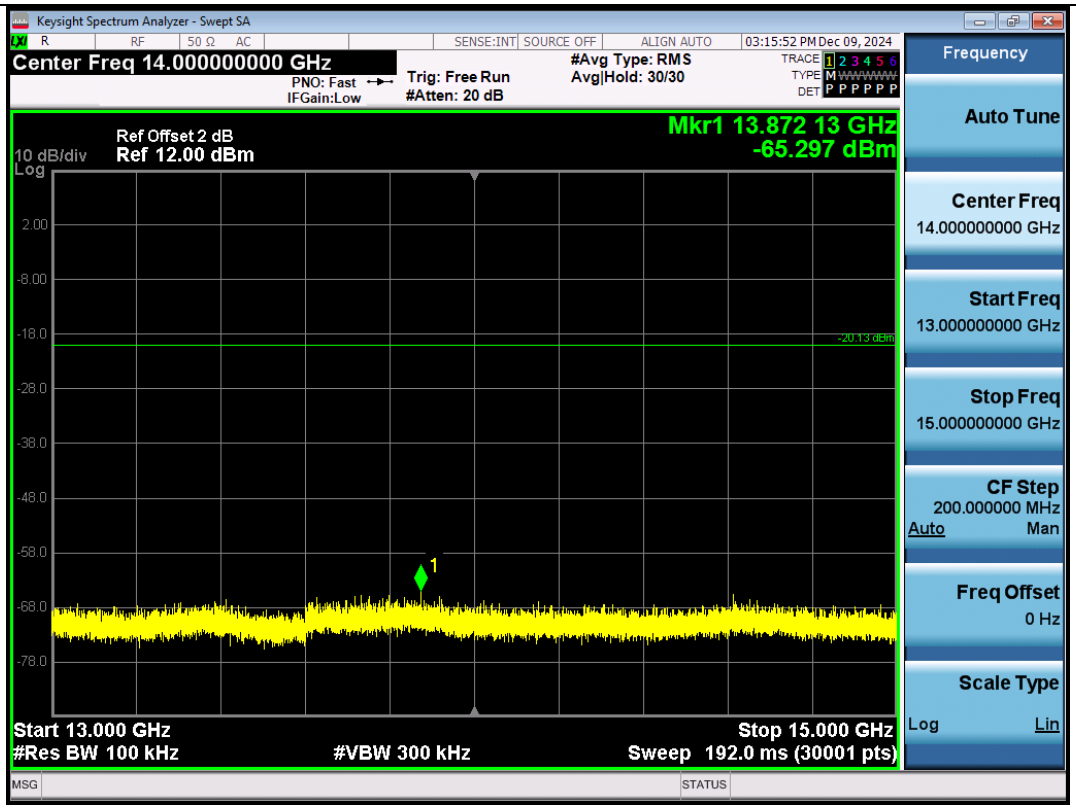
11B-Ant1-2437-7000~9000-PASS



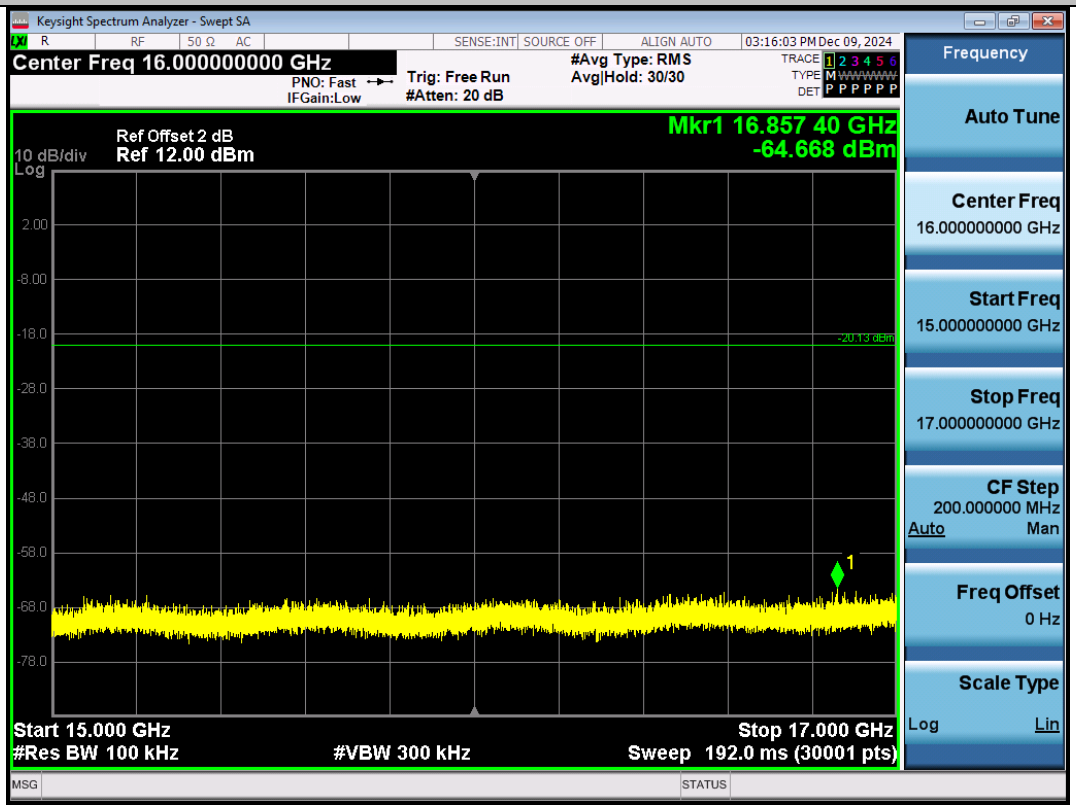
11B-Ant1-2437-9000~11000-PASS



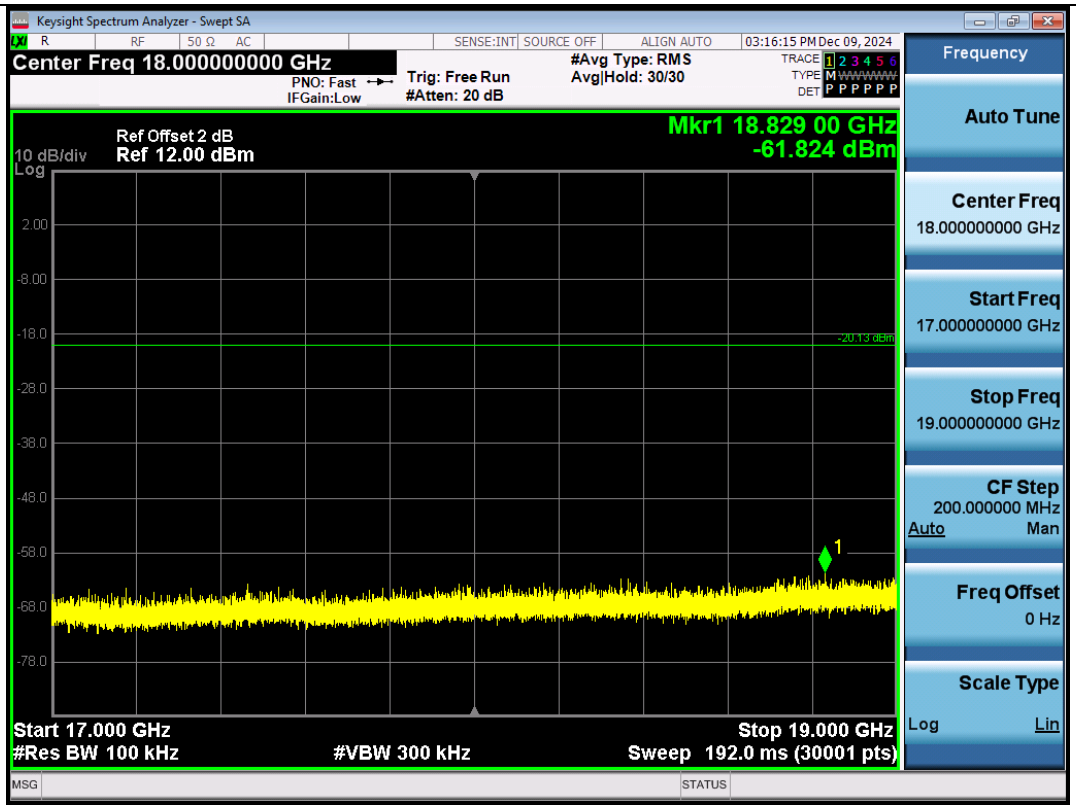
11B-Ant1-2437-11000~13000-PASS



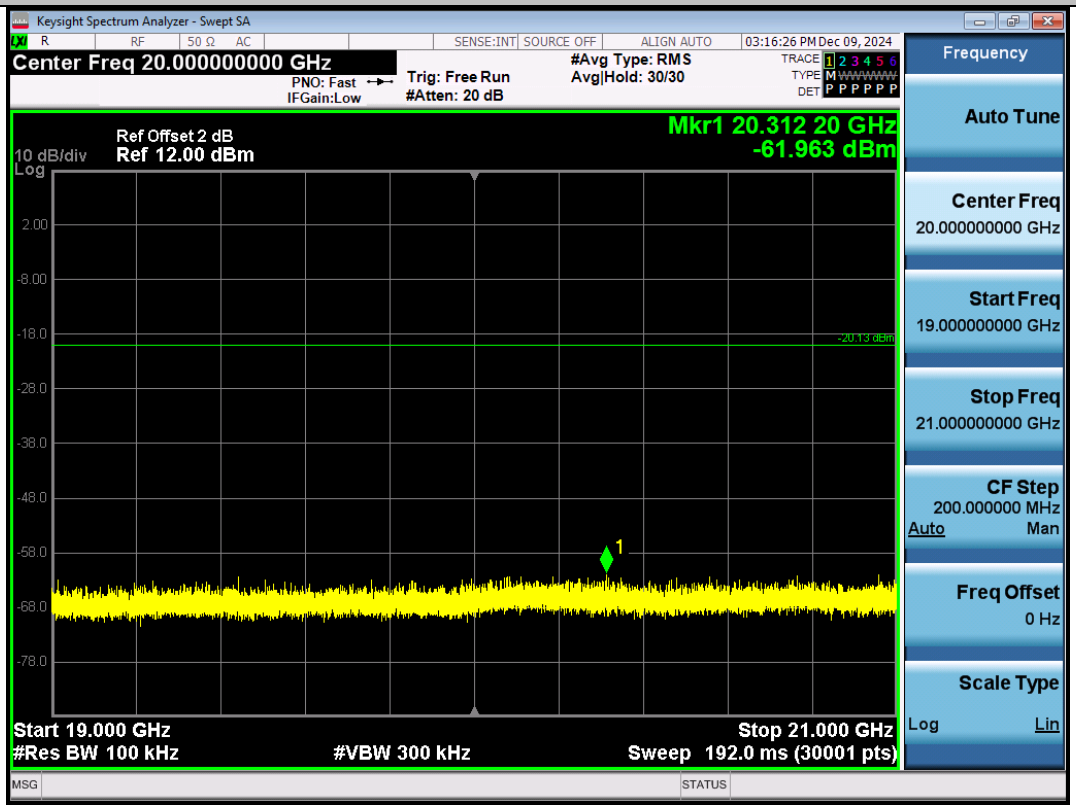
11B-Ant1-2437-13000~15000-PASS



11B-Ant1-2437-15000~17000-PASS



11B-Ant1-2437-17000~19000-PASS



11B-Ant1-2437-19000~21000-PASS