FCC Radio Test Report

FCC ID: 2BH7FC410V2

Report No.	:	BTL-FCCP-1-2408G145
Equipment	:	1) Battery-Powered Outdoor Security Camera 2) Wire-Free Indoor/Outdoor Security Camera
Model Name	:	1) Tapo C410
Series Model	:	1) TC82 2) Tapo C402, Tapo C403, TCB82
Brand Name	:	tp-link
Applicant	:	TP-Link Systems Inc.
Address	:	10 Mauchly, Irvine, CA 92618
Radio Function	:	WLAN 2.4 GHz
FCC Rule Part(s)	:	FCC CFR Title 47, Part 15, Subpart C (15.247)
Measurement Procedure(s)	:	ANSI C63.10-2013
Date of Receipt	:	2024/9/27
Date of Test	:	2024/9/27 ~ 2024/10/17
Issued Date	:	2024/11/1

The above equipment has been tested and found in compliance with the requirement of the above standards by BTL Inc.

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Approved by : Peter Chen, Manager

BTL Inc.

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Declaration

BTL represents to the client that testing is done in accordance with standard procedures as applicable and that test instruments used has been calibrated with standards traceable to international standard(s) and/or national standard(s).

BTL's reports apply only to the specific samples tested under conditions. It is manufacture's responsibility to ensure that additional production units of this model are manufactured with the identical electrical and mechanical components. **BTL** assumes no responsibility for the data provided by the Customer, any statements, inferences or generalizations drawn by the customer or others from the reports issued by **BTL**.

This report is the confidential property of the client. As a mutual protection to the clients, the public and ourselves, the test report shall not be reproduced, except in full, without our written approval.

BTL's laboratory quality assurance procedures are in compliance with the **ISO/IEC 17025** requirements, and accredited by the conformity assessment authorities listed in this test report.

BTL is not responsible for the sampling stage, so the results only apply to the sample as received.

The information, data and test plan are provided by manufacturer which may affect the validity of results, so it is manufacturer's responsibility to ensure that the apparatus meets the essential requirements of applied standards and in all the possible configurations as representative of its intended use.

Limitation

For the use of the authority's logo is limited unless the Test Standard(s)/Scope(s)/Item(s) mentioned in this test report is (are) included in the conformity assessment authorities acceptance respective.

Please note that the measurement uncertainty is provided for informational purpose only and are not use in determining the Pass/Fail results.

CONTENTS

REVISION HISTORY

Report No.	Version	Description	Issued Date	Note
BTL-FCCP-1-2408G145	R00	Original Report.	2024/11/1	Valid

1 SUMMARY OF TEST RESULTS

Test procedures according to the technical standards.

Standard(s) Section	Description	Test Result	Judgement	Remark
15.207	AC Power Line Conducted Emissions	APPENDIX A	Pass	------
15.205 15.209 15.247(d)	Radiated Emissions	APPENDIX B APPENDIX C APPENDIX D	Pass	------
15.247(a)	Bandwidth	APPENDIX D	Pass	------
15.247(b)	Maximum Output Power	APPENDIX E	Pass	------
15.247(e)	Power Spectral Density	APPENDIX F	Pass	------
15.247(d)	Antenna conducted Spurious Emission	APPENDIX G	Pass	------
15.203	Antenna Requirement	------	Pass	**NOTE (3)**

NOTE:
(1) ”N/A” denotes test is not applicable in this Test Report.
(2) The report format version is TP.1.1.1.
(3) The device what use replaceable antennas with non-standard interfaces are considered sufficient to com ply with the provisions of 15.203.

1.1 TEST FACILITY

The test locations stated below are under the TAF Accreditation Number 0659.
The test location(s) used to collect the test data in this report are:
(FCC DN: TW0659)
No. 72, Ln. 169, Sec. 2, Datong Rd., Xizhi Dist., New Taipei City 221, Taiwan
☒ CB20 ☒ C01

1.2 MEASUREMENT UNCERTAINTY

The reported uncertainty of measurement **y** ± **U**, where expanded uncertainty **U** is based on a standard uncertainty multiplied by a coverage factor of **k = 2**, providing a level of confidence of approximately **95 %**. The measurement instrumentation uncertainty considerations contained in CISPR 16-4-2. The BTL measurement uncertainty is less than the CISPR 16-4-2 U_{cispr} requirement.

A. AC power line conducted emissions test:

Test Site	Method	Measurement Frequency Range	U (dB)
C01	CISPR	150 kHz ~ 30MHz	2.4498

B. Radiated emissions test:

Test Site	Measurement Frequency Range	U (dB)
CB20	0.03 GHz ~ 0.2 GHz	4.17
	0.2 GHz ~ 1 GHz	4.72
	1 GHz ~ 6 GHz	5.20
	6 GHz ~ 18 GHz	5.50
	18 GHz ~ 26 GHz	3.69

C. Conducted test:

Test Item	U (dB)
Occupied Bandwidth	1.0502
Output power	1.0406
Power Spectral Density	1.20
Conducted Spurious emissions	1.20
Conducted Band edges	1.0518

NOTE:
Unless specifically mentioned, the uncertainty of measurement has not been taken into account to declare the compliance or non-compliance to the specification.

1.3 TEST ENVIRONMENT CONDITIONS

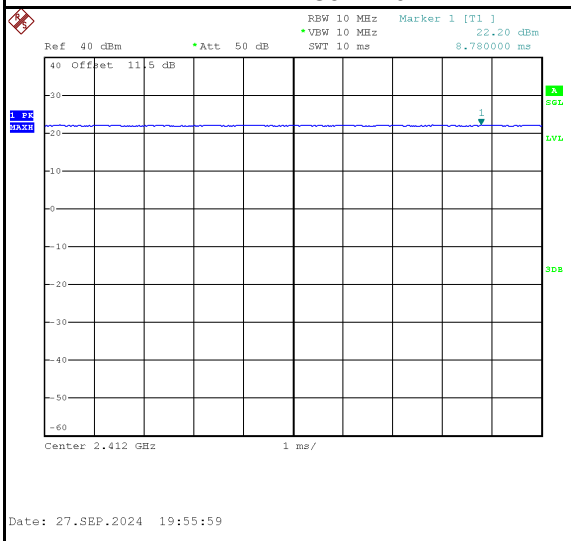
Test Item	Environment Condition	Test Voltage	Tested by
AC Power Line Conducted Emissions	25°C, 45%	AC 120 V	Ken Lu
Radiated emissions below 1 GHz	25°C, 65%	AC 120 V	Ken Lu
Radiated emissions above 1 GHz	25°C, 65%	AC 120 V	Ken Lu
Bandwidth	25°C, 80%	AC 120 V	Cheng Tsai
Maximum Output Power	25°C, 80%	AC 120 V	Cheng Tsai
Power Spectral Density	25°C, 80%	AC 120 V	Cheng Tsai
Antenna conducted Spurious Emission	25°C, 80%	AC 120 V	Cheng Tsai

1.4 DUTY CYCLE

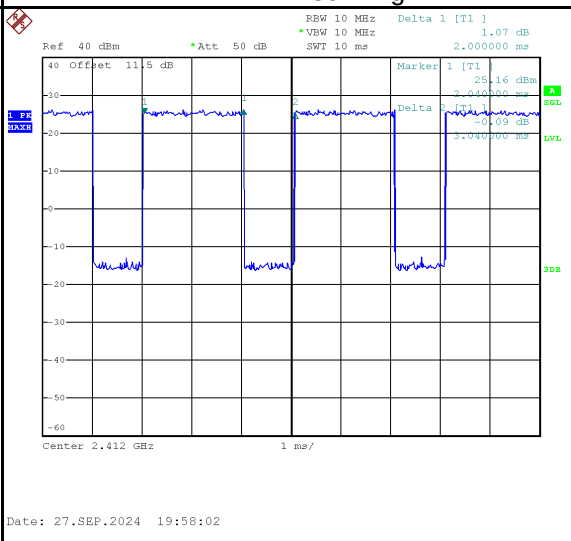
If duty cycle is ≥ 98 %, duty factor is not required.
If duty cycle is < 98 %, duty factor shall be considered.

Remark	Delta 1			Delta 2	On Time/Period	10 log(1/Duty Cycle)
Mode	ON (ms)	Numbers (ON)	On Time (B) (ms)	Period (ON+OFF) (ms)	Duty Cycle (%)	Duty Factor (dB)
IEEE 802.11b	8.780	1	8.780	8.780	100.00%	0.00
IEEE 802.11g	2.000	1	2.000	3.040	65.79%	1.82
IEEE 802.11n (HT20)	1.860	1	1.860	2.900	64.14%	1.93
IEEE 802.11n (HT40)	0.880	1	0.880	1.940	45.36%	3.43

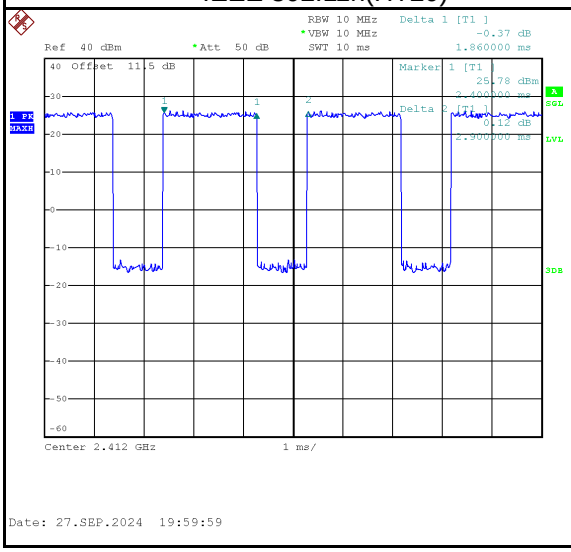
IEEE 802.11b



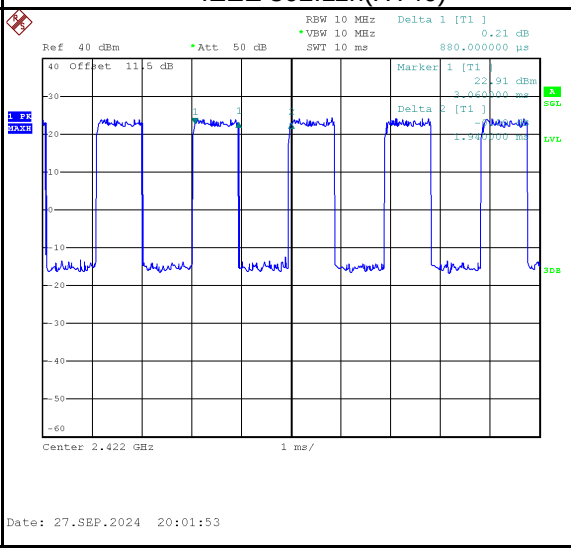
IEEE 802.11g



IEEE 802.11n(HT20)



IEEE 802.11n(HT40)



2 GENERAL INFORMATION

2.1 DESCRIPTION OF EUT

Equipment	1) Battery-Powered Outdoor Security Camera 2) Wire-Free Indoor/Outdoor Security Camera
Brand Name	tp-link
Model Name	1) Tapo C410
Series Model	1) TC82 2) Tapo C402, Tapo C403, TCB82
Model Difference	TC82 and Tapo C410 are only differ in model name, Tapo C402 and Tapo C410 are only differ in product name and model name, TCB82 and Tapo C410 are only differ in product name and model name, Tapo C403 and Tapo C410 differ in product name, model name and shell color while Tapo C403 is black.
Hardware Version	N/A
Software Version	N/A
Power Source	1# DC Voltage supplied from AC adapter (support unit). 2# Supplied from battery. Model: CMICR18650F8 3# Supplied from USB port.
Power Rating	1# 5V ⎓ 1A 2# DC 3.7V, 2600mAh 3# DC 5V
Operation Band	2400 MHz ~ 2483.5 MHz
Operation Frequency	2412 MHz ~ 2462 MHz
Modulation Technology	IEEE 802.11b: DSSS IEEE 802.11g: OFDM IEEE 802.11n: OFDM
Transfer Rate	IEEE 802.11b: 11/5.5/2/1 Mbps IEEE 802.11g: 54/48/36/24/18/12/9/6 Mbps IEEE 802.11n: up to 150 Mbps
Maximum Output Power	IEEE 802.11n(HT40): 25.31 dBm (0.3396 W)

NOTE:
(1) The above EUT information is declared by manufacturer and for more detailed features description, please refers to the manufacturer's specifications or user's manual.

(2) Channel List:

CH01 - CH11 for IEEE 802.11b, IEEE 802.11g, IEEE 802.11n(HT20) CH03 - CH09 for IEEE 802.11n(HT40)							
Channel	Frequency (MHz)	Channel	Frequency (MHz)	Channel	Frequency (MHz)	Channel	Frequency (MHz)
01	2412	04	2427	07	2442	10	2457
02	2417	05	2432	08	2447	11	2462
03	2422	06	2437	09	2452		

(3) Table for Filed Antenna:

Ant.	Manufacturer	P/N	Type	Connector	Gain (dBi)
1	TP-Link Systems Inc.	3101507115	Dipole	N/A	0

(4) The above Antenna information are derived from the antenna data sheet provided by manufacturer and for more detailed features description, please refer to the manufacturer's specifications, the laboratory shall not be held responsible.

2.2 TEST MODES

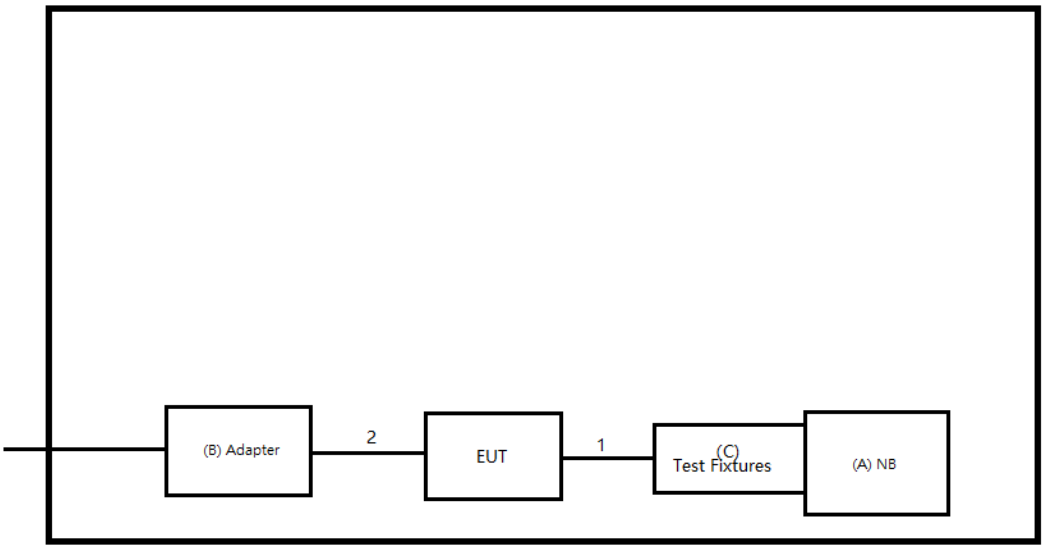
Test Items	Test mode	Channel	Note
AC power line conducted emissions	Normal	-	-
Transmitter Radiated Emissions (below 1GHz)	TX Mode_IEEE 802.11n(HT40)	06	-
Transmitter Radiated Emissions (above 1GHz)	TX Mode_IEEE 802.11b	01/11	Bandedge
	TX Mode_IEEE 802.11g		
	TX Mode_IEEE 802.11n(HT20)		
	TX Mode_IEEE 802.11n(HT40)	03/09	
Transmitter Radiated Emissions (above 1GHz)	TX Mode_IEEE 802.11b	01/06/11	Harmonic
	TX Mode_IEEE 802.11g		
	TX Mode_IEEE 802.11n(HT20)		
	TX Mode_IEEE 802.11n(HT40)	03/06/09	
Transmitter Radiated Emissions (above 18GHz)	TX Mode_IEEE 802.11n(HT40)	06	-
Bandwidth & Maximum Output Power & Power Spectral Density & Antenna conducted Spurious Emission	TX Mode_IEEE 802.11b	01/06/11	-
	TX Mode_IEEE 802.11g		
	TX Mode_IEEE 802.11n(HT20)		
	TX Mode_IEEE 802.11n(HT40)	03/06/09	

NOTE:
(1) For radiated emission band edge test, both Vertical and Horizontal are evaluated, but only the worst case (Horizontal) is recorded.
(2) For radiated emission below 1 GHz test, the TX Mode_IEEE 802.11n(HT40) Channel 06 is found to be the worst case and recorded.
(3) For radiated emission Harmonic 18-26.5GHz test, only tested the worst case and recorded.

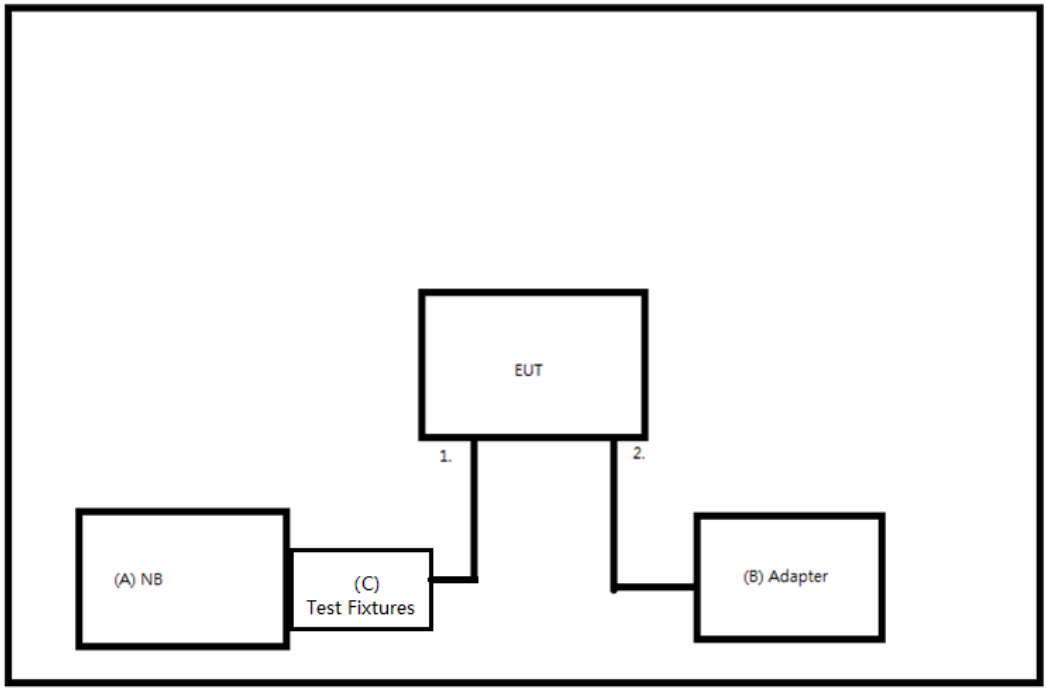
2.3 BLOCK DIAGRAM SHOWING THE CONFIGURATION OF SYSTEM TESTED

Equipment letters and Cable numbers refer to item numbers described in the tables of clause 2.4.

AC power line conducted emissions



Radiated Emissions



2.4 SUPPORT UNITS

AC power line conducted emissions

Item	Equipment	Brand	Model No.	Series No.	Remarks
A	Notebook	Lenovo	ThinkBook 14 G4 IAP	MP28KHAH	Furnished by test lab.
B	Adapter	N/A	A8-501000	A2309059451	Supplied by test requester
C	Test Fixtures	JunYan	CH340	N/A	Supplied by test requester

Item	Shielded	Ferrite Core	Length	Cable Type	Remarks
1	Fixtures Cable	NO	NO	0.03m	Supplied by test requester
2	USB to Type C Cable	NO	NO	0.53m	Supplied by test requester

Radiated Emissions

Item	Equipment	Brand	Model No.	Series No.	Remarks
A	Notebook	Lenovo	ThinkBook 14 G4 IAP	MP28KHAH	Furnished by test lab.
B	Adapter	N/A	A8-501000	A2309059451	Supplied by test requester
C	Test Fixtures	JunYan	CH340	N/A	Supplied by test requester

Item	Shielded	Ferrite Core	Length	Cable Type	Remarks
1	Fixtures Cable	NO	NO	0.03m	Supplied by test requester
2	USB to Type C Cable	NO	NO	0.53m	Supplied by test requester

3 AC POWER LINE CONDUCTED EMISSIONS TEST

3.1 LIMIT

Frequency (MHz)	Limit (dBμV)	
	Quasi-peak	Average
0.15 - 0.5	66 - 56 *	56 - 46 *
0.50 - 5.0	56	46
5.0 - 30.0	60	50

NOTE:
(1) The tighter limit applies at the band edges.
(2) The limit of " * " marked band means the limitation decreases linearly with the logarithm of the frequency in the range.
(3) The test result calculated as following:
Measurement Value = Reading Level + Correct Factor
Correct Factor = Insertion Loss + Cable Loss + Attenuator Factor (if use)
Margin Level = Measurement Value – Limit Value
Calculation example:

Reading Level (dBμV)		Correct Factor (dB)		Measurement Value (dBμV)
38.22	+	3.45	=	41.67

Measurement Value (dBμV)		Limit Value (dBμV)		Margin Level (dB)
41.67	-	60	=	-18.33

The following table is the setting of the receiver.

Receiver Parameter	Setting
Attenuation	10 dB
Start Frequency	0.15 MHz
Stop Frequency	30 MHz
IF Bandwidth	9 KHz

3.2 TEST PROCEDURE

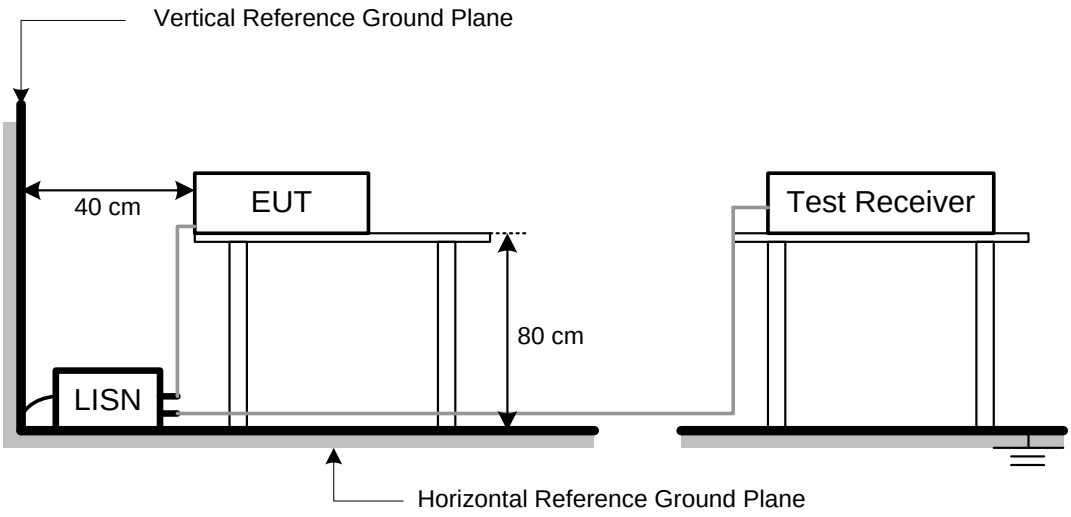
a. The EUT was placed 0.8 m above the horizontal ground plane with the EUT being connected to the power mains through a line impedance stabilization network (LISN).
All other support equipment were powered from an additional LISN(s).
The LISN provides 50 Ohm/50uH of impedance for the measuring instrument.
b. Interconnecting cables that hang closer than 40 cm to the ground plane shall be folded back and forth in the center forming a bundle to keep the cable above 40 cm.
c. Excess I/O cables that are not connected to a peripheral shall be bundled in the center.
The end of the cable will be terminated, using the correct terminating impedance.
The overall length shall not exceed 1 m.
d. The LISN is spaced at least 80 cm from the nearest part of the EUT chassis.
e. For the actual test configuration, please refer to the related Item – EUT TEST PHOTO.

NOTE:
(1) In the results, each reading is marked as Peak, QP or AVG per the detector used.
BW=9 kHz (6 dB Bandwidth)
(2) All readings are Peak unless otherwise stated QP or AVG in column of Note. Both the QP and the AVG readings must be less than the limit for compliance.

3.3 DEVIATION FROM TEST STANDARD

No deviation.

3.4 TEST SETUP



3.5 TEST RESULT

Please refer to the APPENDIX A.

4 RADIATED EMISSIONS TEST

4.1 LIMIT

In case the emission fall within the restricted band specified on 15.205, then the 15.209 limit in the table below has to be followed.

LIMITS OF RADIATED EMISSIONS MEASUREMENT (9 kHz to 1000 MHz)

Frequency (MHz)	Field Strength (microvolts/meter)	Measurement Distance (meters)
0.009~0.490	2400/F(KHz)	300
0.490~1.705	24000/F(KHz)	30
1.705~30.0	30	30
30~88	100	3
88~216	150	3
216~960	200	3
960~1000	500	3

LIMITS OF RADIATED EMISSIONS MEASUREMENT (Above 1000 MHz)

Frequency (MHz)	Radiated Emissions (dBuV/m)		Measurement Distance (meters)
	Peak	Average	
Above 1000	74	54	3

NOTE:
(1) The limit for radiated test was performed according to FCC CFR Title 47, Part 15, Subpart C.
(2) The tighter limit applies at the band edges.
(3) Emission level (dBuV/m)=20log Emission level (uV/m).
(4) The test result calculated as following:
Measurement Value = Reading Level + Correct Factor
Correct Factor = Antenna Factor + Cable Loss - Amplifier Gain(if use)
Margin Level = Measurement Value - Limit Value
Calculation example:

Reading Level (dBµV)		Correct Factor (dB/m)		Measurement Value (dBµV/m)
19.11	+	2.11	=	21.22

Measurement Value (dBµV/m)		Limit Value (dBµV/m)		Margin Level (dB)
21.22	-	54	=	-32.78

Spectrum Parameter	Setting
Attenuation	Auto
Start Frequency	1000 MHz
Stop Frequency	10th carrier harmonic
RBW / VBW (Emission in restricted band)	1MHz / 3MHz for Peak, 1MHz / 1/T for Average

Mode	VBW(Hz)
IEEE 802.11b	1.8k
IEEE 802.11g	750
IEEE 802.11n(HT20)	300
IEEE 802.11ax (HE20)	300

Spectrum Parameter	Setting
Attenuation	Auto
Start ~ Stop Frequency	9KHz~90KHz for PK/AVG detector
Start ~ Stop Frequency	90KHz~110KHz for QP detector
Start ~ Stop Frequency	110KHz~490KHz for PK/AVG detector
Start ~ Stop Frequency	490KHz~30MHz for QP detector
Start ~ Stop Frequency	30MHz~1000MHz for QP detector

4.2 TEST PROCEDURE

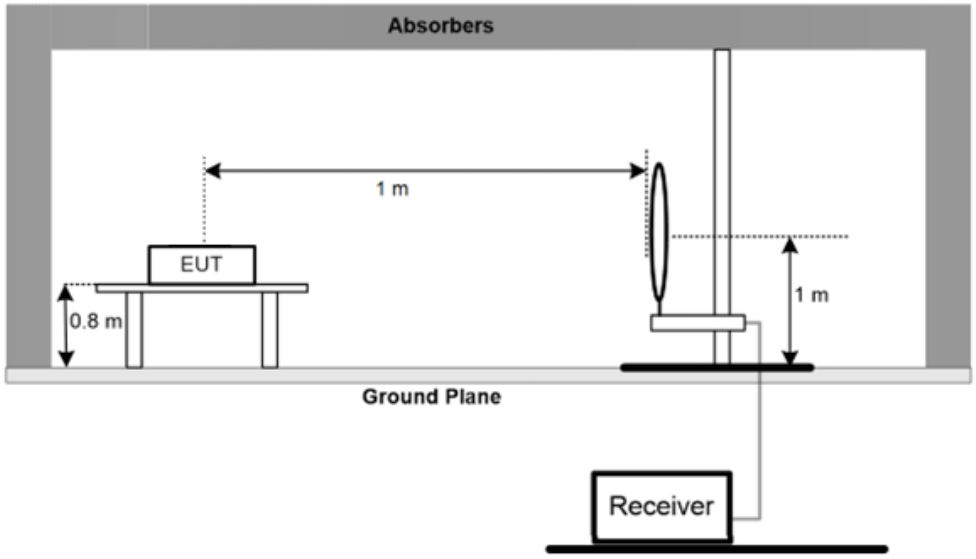
a. The measuring distance of 3 m shall be used for measurements. The EUT was placed on the top of a rotating table 0.8 meter above the ground at a 3 meter semi-anechoic chamber. The table was rotated 360 degrees to determine the position of the highest radiation.(below 1GHz)
b. The measuring distance of 3 m shall be used for measurements. The EUT was placed on the top of a rotating table 1.5 meter above the ground at a 3 meter semi-anechoic chamber. The table was rotated 360 degrees to determine the position of the highest radiation.(above 1GHz)
c. The height of the equipment or of the substitution antenna shall be 0.8 m or 1.5 m, the height of the test antenna shall vary between 1 m to 4 m. Both horizontal and vertical polarizations of the antenna are set to make the measurement.
d. For each suspected emission, the EUT was arranged to its worst case and then the antenna was tuned to heights find the maximum reading (used Bore sight function).
e. The receiver system was set to peak and average detect function and specified bandwidth with maximum hold mode when the test frequency is above 1GHz.
f. The initial step in collecting radiated emission data is a receiver peak detector mode pre-scanning the measurement frequency range. Significant peaks are then marked and then Quasi Peak detector mode re-measured.
g. All readings are Peak unless otherwise stated QP in column of Note. Peak denotes that the Peak reading compliance with the QP Limits and then QP Mode measurement didn‘t perform. (below 1GHz)
h. All readings are Peak Mode value unless otherwise stated AVG in column of Note. If the Peak Mode Measured value compliance with the Peak Limits and lower than AVG Limits, the EUT shall be deemed to meet both Peak & AVG Limits and then only Peak Mode was measured, but AVG Mode didn‘t perform. (above 1GHz)
i. For the actual test configuration, please refer to the related Item – EUT TEST PHOTO.

4.3 DEVIATION FROM TEST STANDARD

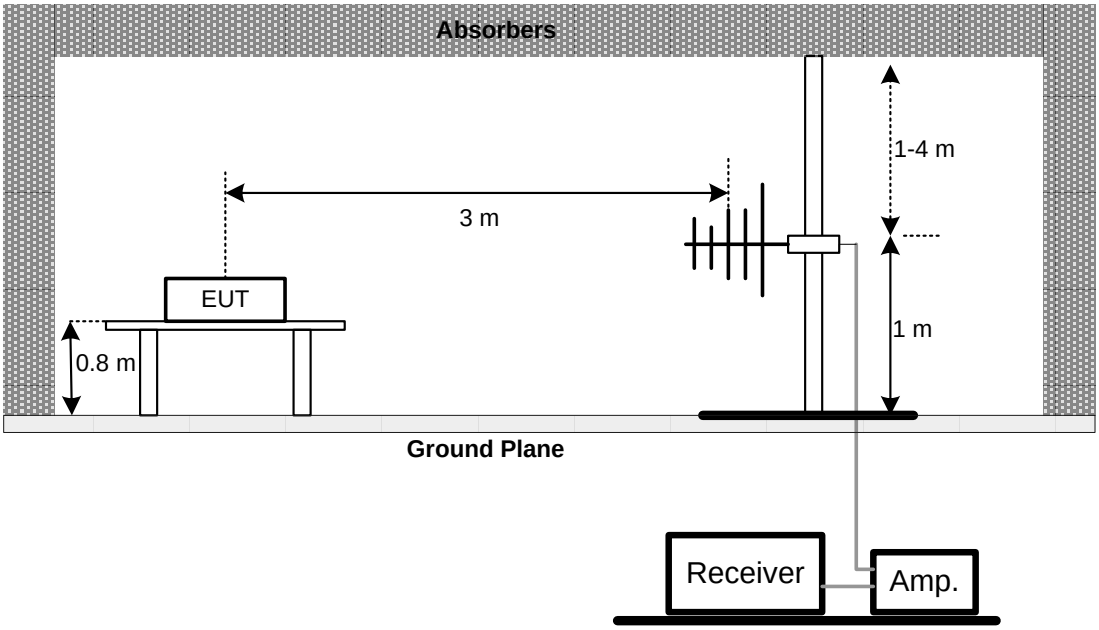
No deviation.

4.4 TEST SETUP

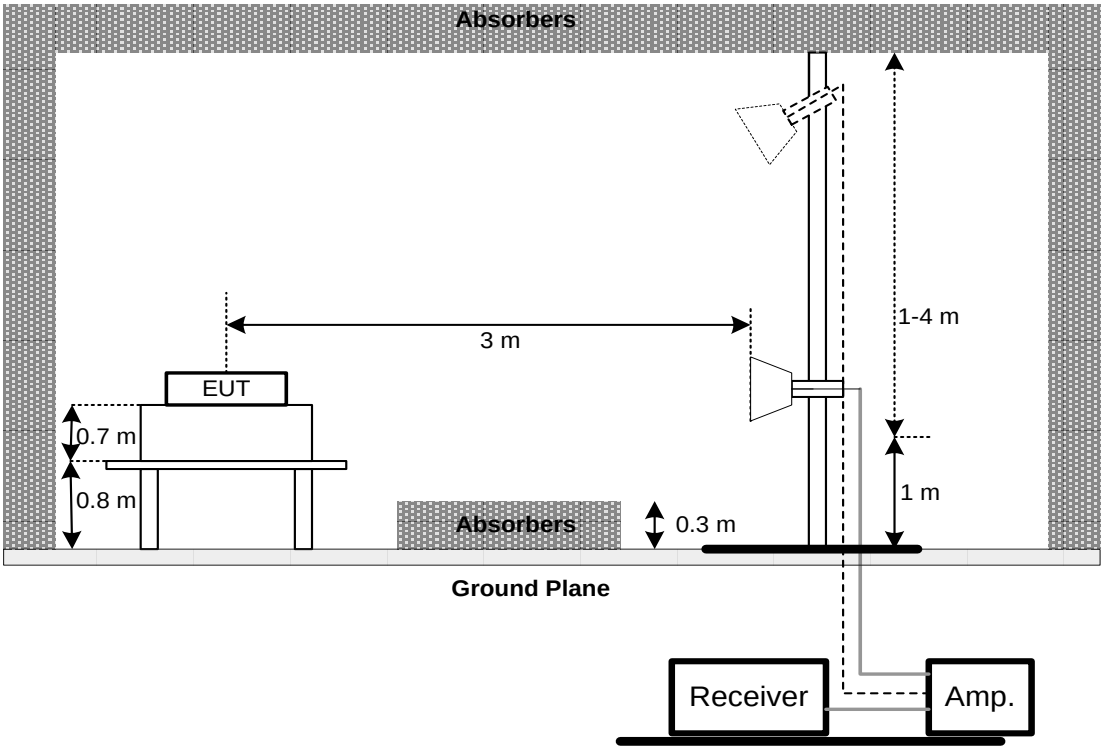
9 kHz to 30 MHz



30 MHz to 1 GHz



Above 1 GHz



4.5 EUT OPERATING CONDITIONS

The EUT was programmed to be in continuously transmitting mode.

4.6 TEST RESULT – 9kHz TO 30 MHz

There were no emissions found below 30 MHz within 20 dB of the limit.

4.7 TEST RESULT – 30 MHZ TO 1 GHZ

Please refer to the APPENDIX B.

4.8 TEST RESULT – ABOVE 1 GHZ

Please refer to the APPENDIX C.

NOTE:

(1) No limit: This is fundamental signal, the judgment is not applicable.
For fundamental signal judgment was referred to Peak output test.

5 BANDWIDTH TEST

5.1 LIMIT

Section	Test Item	Limit
15.247(a)	6 dB Bandwidth	500 kHz

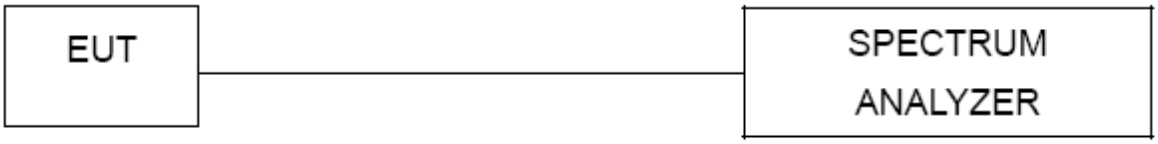
5.2 TEST PROCEDURE

a. The EUT was directly connected to the spectrum analyzer and antenna output port as show in the block diagram below.
b. Spectrum Setting: RBW= 100KHz, VBW=300KHz, Sweep time = 2.5 ms.

5.3 DEVIATION FROM TEST STANDARD

No deviation.

5.4 TEST SETUP



5.5 EUT OPERATING CONDITIONS

The EUT was programmed to be in continuously transmitting mode.

5.6 TEST RESULT

Please refer to the APPENDIX D.

6 MAXIMUM OUTPUT POWER TEST

6.1 LIMIT

Section	Test Item	Limit
15.247(b)	Maximum Output Power	1 Watt or 30dBm

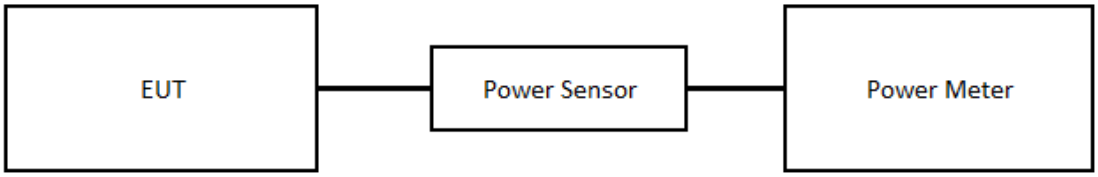
6.2 TEST PROCEDURE

a. The EUT was directly connected to the Peak Power Analyzer and antenna output port as show in the block diagram below.
b. The maximum peak conducted output power was performed in accordance with FCC KDB 558074 D01 15.247 Meas Guidance.
c. Subclause 11.9.1.1 of ANSI C63.10 is applied. The maximum peak conducted output power may be measured using a broadband peak RF power meter.
The power meter shall have a video bandwidth that is greater than or equal to the DTS bandwidth and shall use a fast-responding diode detector.

6.3 DEVIATION FROM TEST STANDARD

No deviation.

6.4 TEST SETUP



6.5 EUT OPERATING CONDITIONS

The EUT was programmed to be in continuously transmitting mode.

6.6 TEST RESULT

Please refer to the APPENDIX E.

7 POWER SPECTRAL DENSITY

7.1 LIMIT

Section	Test Item	Limit
15.247(e)	Power Spectral Density	8 dBm (in any 3 kHz)

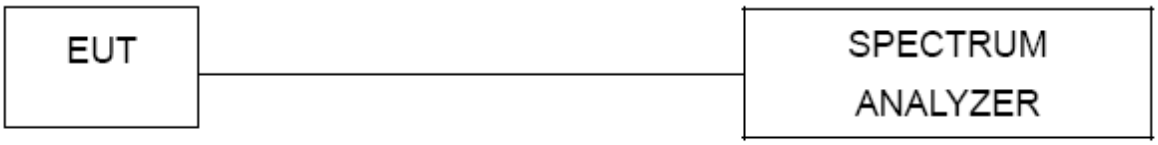
7.2 TEST PROCEDURE

a. The EUT was directly connected to the spectrum analyzer and antenna output port as show in the block diagram below.
b. Spectrum Setting: RBW = 3 kHz, VBW = 10 kHz, Sweep time = Auto.

7.3 DEVIATION FROM TEST STANDARD

No deviation.

7.4 TEST SETUP



7.5 EUT OPERATING CONDITIONS

The EUT was programmed to be in continuously transmitting mode.

7.6 TEST RESULT

Please refer to the APPENDIX F.

8 ANTENNA CONDUCTED SPURIOUS EMISSIONS TEST

8.1 LIMIT

In any 100 kHz bandwidth outside the frequency band in which the spread spectrum or digitally modulated device is operating, the RF power that is produced shall be at least 20 dB below that in the 100 kHz bandwidth within the band that contains the highest level of the desired power, based on either an RF conducted or a radiated measurement, provided that the transmitter demonstrates compliance with the peak conducted power limits.

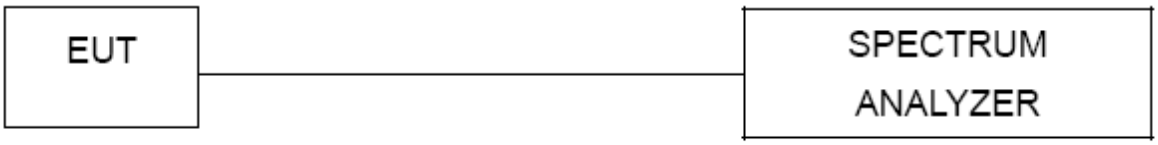
8.2 TEST PROCEDURE

a. The EUT was directly connected to the spectrum analyzer and antenna output port as show in the block diagram below.
b. Spectrum Setting: RBW = 100 kHz, VBW=300 kHz, Sweep time = Auto.
c. Offset = antenna gain + cable loss.

8.3 DEVIATION FROM TEST STANDARD

No deviation.

8.4 TEST SETUP



8.5 EUT OPERATING CONDITIONS

The EUT was programmed to be in continuously transmitting mode.

8.6 TEST RESULT

Please refer to the APPENDIX G.

9 LIST OF MEASURING EQUIPMENTS

AC Power Line Conducted Emissions						
Item	Kind of Equipment	Manufacturer	Type No.	Serial No.	Calibrated Date	Calibrated Until
1	Two-Line V-Network	R&S	ENV216	101051	2024/6/26	2025/6/25
2	Test Cable	EMCI	EMCRG58-BM-BM-9000	210501	2023/12/11	2024/12/10
3	EMC Receiver	Keysight	N9038A	MY54130009	2024/6/27	2025/6/26
4	Measurement Software	Farad	EZ_EMC (Ver. NB-03A1-01)	N/A	N/A	N/A

Radiated Emissions						
Item	Kind of Equipment	Manufacturer	Type No.	Serial No.	Calibrated Date	Calibrated Until
1	Pre-Amplifier	EMCI	EMC184045SE	980512	2023/12/11	2024/12/10
2	Broad-Band Horn Antenna	Schwarzbeck	BBHA 9170	340	2024/6/27	2025/6/26
3	Test Cable	EMCI	EMC102-KM-KM-1000	220328	2023/12/11	2024/12/10
4	Test Cable	EMCI	EMC101G-KM-KM-3000	220330	2023/12/11	2024/12/10
5	Broad-Band Horn Antenna	RFSPIN	DRH18-E	210109A18E	2024/1/10	2025/1/9
6	Pre-Amplifier	EMCI	EMC051845SE	980779	2023/12/11	2024/12/10
7	Test Cable	EMCI	EMC105-SM-SM-1000	210119	2023/12/11	2024/12/10
8	Test Cable	EMCI	EMC105-SM-SM-3000	210118	2023/12/11	2024/12/10
9	Test Cable	EMCI	EMC105-SM-SM-7000	210117	2023/12/11	2024/12/10
10	EXA Spectrum Analyzer	keysight	N9010A	MY56480554/016	2024/9/13	2025/9/12
11	Trilog-Broadband Antenna	Schwarzbeck	VULB 9168	01207	2023/12/18	2024/12/17
12	EMC Receiver	Keysight	N9038A	MY54130009	2024/6/27	2025/6/26
13	Pre-Amplifier	EMCI	EMC001330-20201222	980807	2023/12/11	2024/12/10
14	Test Cable	EMCI	EMC-8D-NM-NM-5000	150106	2023/12/11	2024/12/10
15	Test Cable	EMCI	EMC-CFD-400-NM-NM-8000	200348	2023/12/11	2024/12/10
16	Test Cable	EMCI	EMC-CFD-400-NM-NM-3300	200343	2023/12/11	2024/12/10
17	Loop Ant.	Electro-Metrics	EMCI-LPA600	274	2024/7/5	2025/7/4
18	EMC Receiver	Keysight	N9038A	MY54130009	2024/6/27	2025/6/26
19	Pre-Amplifier	EMCI	EMC001340	980555	2023/12/1	2024/11/30
20	Measurement Software	Farad	EZ_EMC (Ver. NB-03A1-01)	N/A	N/A	N/A

Bandwidth						
Item	Kind of Equipment	Manufacturer	Type No.	Serial No.	Calibrated Date	Calibrated Until
1	Spectrum Analyzer	R&S	FSP 30	100854	2024/6/27	2025/6/26
2	10dbAttenuator	INMET	AHC-10dB	1	N/A	N/A
3	BTL-Conducred Test	N/A	1247788684	N/A	N/A	N/A

Maximum Output Power						
Item	Kind of Equipment	Manufacturer	Type No.	Serial No.	Calibrated Date	Calibrated Until
1	USB Peak Power Sensor	Anritsu	MA24408A	12589	2023/10/25	2024/10/24
2	20dbAttenuator	INMET	AHC-20dB	1	N/A	N/A
3	Measurement Software	Anritsu	MA2440A Peak Power analyzer(Ver1.1.0.0)	N/A	N/A	N/A

Power Spectral Density						
Item	Kind of Equipment	Manufacturer	Type No.	Serial No.	Calibrated Date	Calibrated Until
1	Spectrum Analyzer	R&S	FSP 30	100854	2024/6/27	2025/6/26
2	10dbAttenuator	INMET	AHC-10dB	1	N/A	N/A
3	BTL-Conducred Test	N/A	1247788684	N/A	N/A	N/A

Antenna conducted Spurious Emission						
Item	Kind of Equipment	Manufacturer	Type No.	Serial No.	Calibrated Date	Calibrated Until
1	Spectrum Analyzer	R&S	FSP 30	100854	2024/6/27	2025/6/26
2	10dbAttenuator	INMET	AHC-10dB	1	N/A	N/A
3	BTL-Conducred Test	N/A	1247788684	N/A	N/A	N/A

Remark: “N/A” denotes no model name, no serial no. or no calibration specified.
All calibration period of equipment list is one year.

10 EUT TEST PHOTO

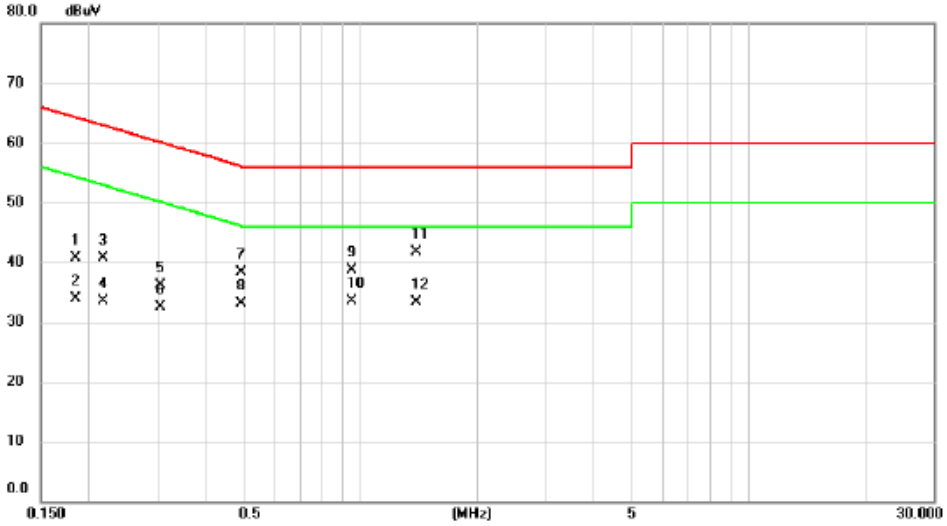
Please refer to document Appendix No.: TP-2408G145-FCCP-1 (APPENDIX-TEST PHOTOS).

11 EUT PHOTOS

Please refer to document Appendix No.: EP-2408G145-1 (APPENDIX-EUT PHOTOS).

APPENDIX A AC POWER LINE CONDUCTED EMISSIONS

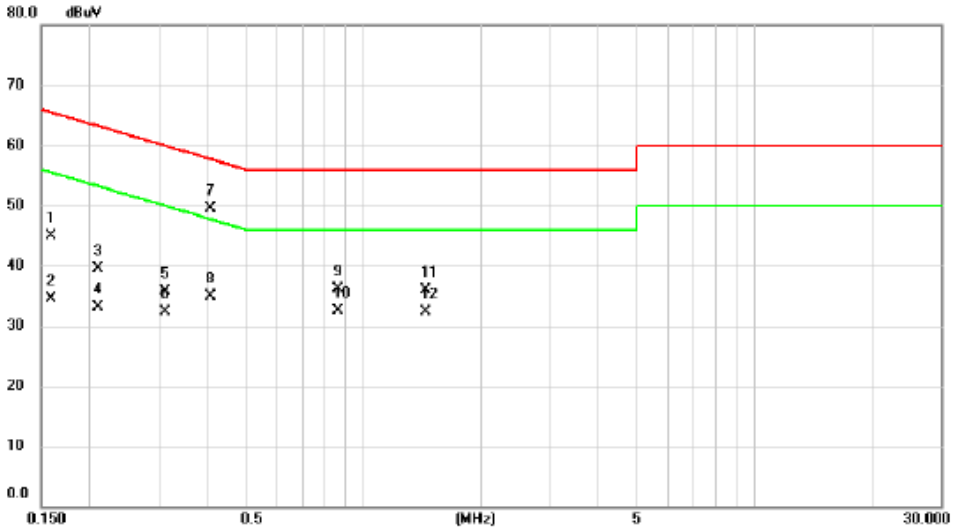
Test Mode	Normal	Tested Date	2024/10/1
Test Frequency	-	Phase	Line



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Margin		
		MHz	dBuV	dB	dBuV	dBuV	dB	Detector	Comment
1		0.1850	31.06	9.64	40.70	64.26	-23.56	QP	
2		0.1850	24.19	9.64	33.83	54.26	-20.43	AVG	
3		0.2180	31.05	9.64	40.69	62.89	-22.20	QP	
4		0.2180	23.89	9.64	33.53	52.89	-19.36	AVG	
5		0.3047	26.41	9.65	36.06	60.11	-24.05	QP	
6		0.3047	22.93	9.65	32.58	50.11	-17.53	AVG	
7		0.4944	28.65	9.66	38.31	56.09	-17.78	QP	
8		0.4944	23.36	9.66	33.02	46.09	-13.07	AVG	
9		0.9545	29.04	9.70	38.74	56.00	-17.26	QP	
10	*	0.9545	23.88	9.70	33.58	46.00	-12.42	AVG	
11		1.3910	32.07	9.73	41.80	56.00	-14.20	QP	
12		1.3910	23.64	9.73	33.37	46.00	-12.63	AVG	

REMARKS:
(1) Measurement Value = Reading Level + Correct Factor.
(2) Margin Level = Measurement Value - Limit Value.

Test Mode	Normal	Tested Date	2024/10/1
Test Frequency	-	Phase	Neutral

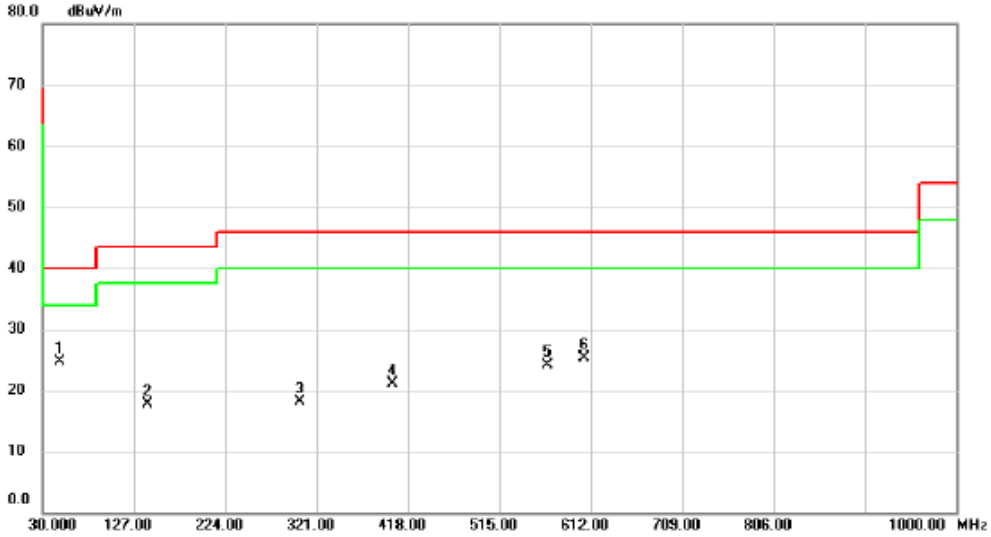


No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Margin		
		MHz	dBuV	dB	dBuV	dBuV	dB	Detector	Comment
1		0.1590	35.34	9.63	44.97	65.52	-20.55	QP	
2		0.1590	24.79	9.63	34.42	55.52	-21.10	AVG	
3		0.2098	29.82	9.63	39.45	63.21	-23.76	QP	
4		0.2098	23.54	9.63	33.17	53.21	-20.04	AVG	
5		0.3113	26.00	9.63	35.63	59.94	-24.31	QP	
6		0.3113	22.70	9.63	32.33	49.94	-17.61	AVG	
7	*	0.4080	39.91	9.63	49.54	57.69	-8.15	QP	
8		0.4080	25.34	9.63	34.97	47.69	-12.72	AVG	
9		0.8644	26.39	9.68	36.07	56.00	-19.93	QP	
10		0.8644	22.92	9.68	32.60	46.00	-13.40	AVG	
11		1.4404	26.26	9.73	35.99	56.00	-20.01	QP	
12		1.4404	22.57	9.73	32.30	46.00	-13.70	AVG	

REMARKS:
(1) Measurement Value = Reading Level + Correct Factor.
(2) Margin Level = Measurement Value - Limit Value.

APPENDIX B RADIATED EMISSIONS - 30 MHZ TO 1 GHZ

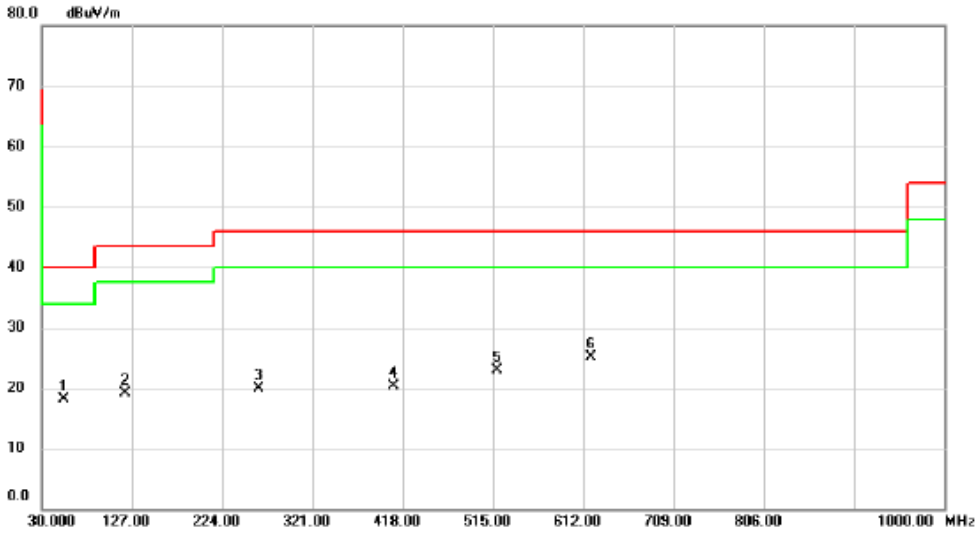
Test Mode	IEEE 802.11n(HT40)	Test Date	2024/9/30
Test Frequency	2437MHz	Polarization	Vertical



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Margin		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1	*	48.4300	36.19	-11.52	24.67	40.00	-15.33	peak	
2		141.5500	29.63	-11.85	17.78	43.50	-25.72	peak	
3		303.5400	28.34	-10.16	18.18	46.00	-27.82	peak	
4		401.5100	28.59	-7.43	21.16	46.00	-24.84	peak	
5		566.4100	27.74	-3.68	24.06	46.00	-21.94	peak	
6		605.2100	27.83	-2.49	25.34	46.00	-20.66	peak	

REMARKS:
(1) Measurement Value = Reading Level + Correct Factor.
(2) Margin Level = Measurement Value - Limit Value.

Test Mode	IEEE 802.11n(HT40)	Test Date	2024/9/30
Test Frequency	2437MHz	Polarization	Horizontal

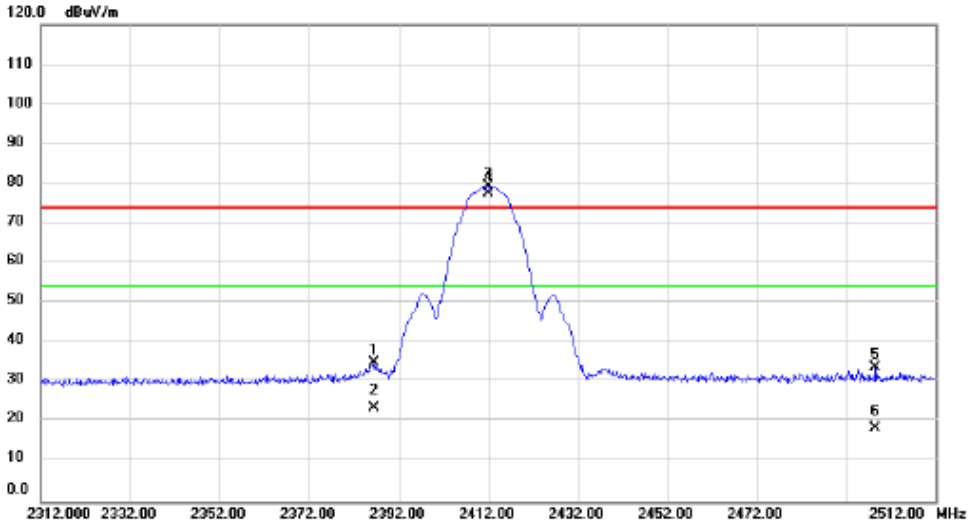


No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Margin		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1		54.2500	29.57	-11.55	18.02	40.00	-21.98	peak	
2		120.2100	33.04	-13.92	19.12	43.50	-24.38	peak	
3		263.7700	31.41	-11.54	19.87	46.00	-26.13	peak	
4		408.3000	27.56	-7.23	20.33	46.00	-25.67	peak	
5		518.8800	27.69	-4.85	22.84	46.00	-23.16	peak	
6	*	619.7600	27.28	-2.20	25.08	46.00	-20.92	peak	

REMARKS:
(1) Measurement Value = Reading Level + Correct Factor.
(2) Margin Level = Measurement Value - Limit Value.

APPENDIX C RADIATED EMISSIONS - ABOVE 1 GHZ

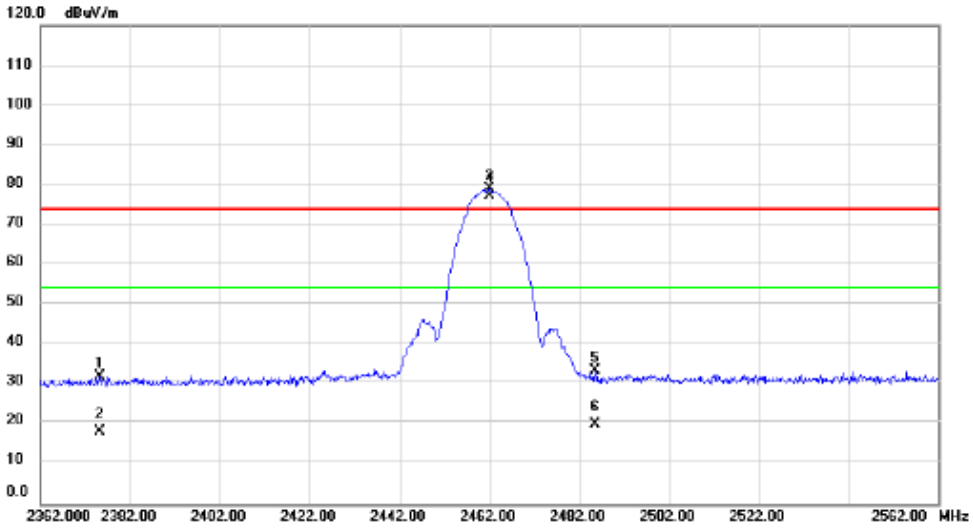
Test Mode	IEEE 802.11b	Test Date	2024/9/30
Test Frequency	2412MHz	Polarization	Horizontal



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Margin		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1		2386.600	41.17	-6.13	35.04	74.00	-38.96	peak	
2		2386.600	29.81	-6.13	23.68	54.00	-30.32	AVG	
3	X	2412.200	85.49	-6.07	79.42	74.00	5.42	peak	No Limit
4	*	2412.200	83.60	-6.07	77.53	54.00	23.53	AVG	No Limit
5		2498.600	39.48	-5.88	33.60	74.00	-40.40	peak	
6		2498.600	24.34	-5.88	18.46	54.00	-35.54	AVG	

REMARKS:
(1) Measurement Value = Reading Level + Correct Factor.
(2) Margin Level = Measurement Value - Limit Value.

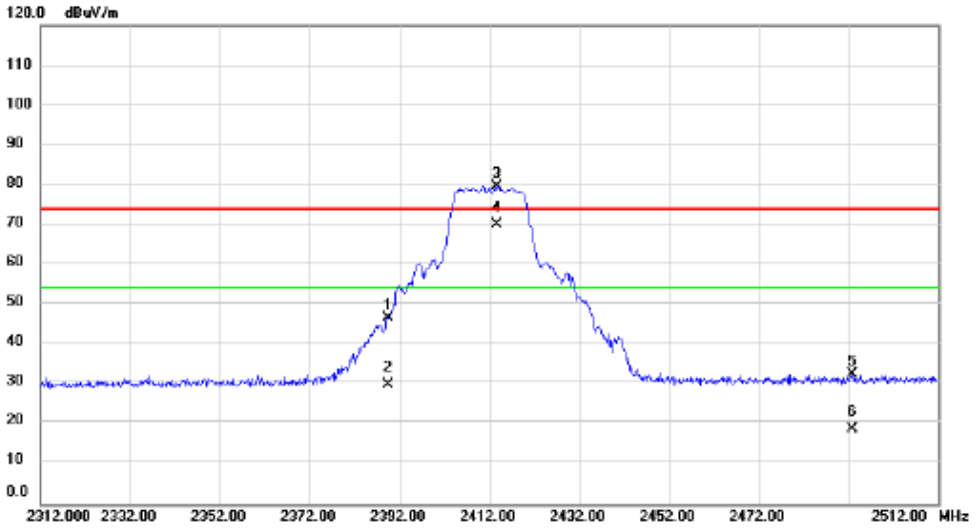
Test Mode	IEEE 802.11b	Test Date	2024/9/30
Test Frequency	2462MHz	Polarization	Horizontal



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Margin		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1		2375.200	38.02	-6.15	31.87	74.00	-42.13	peak	
2		2375.200	24.31	-6.15	18.16	54.00	-35.84	AVG	
3	X	2462.000	85.14	-5.97	79.17	74.00	5.17	peak	No Limit
4	*	2462.000	83.16	-5.97	77.19	54.00	23.19	AVG	No Limit
5		2485.600	39.29	-5.91	33.38	74.00	-40.62	peak	
6		2485.600	25.73	-5.91	19.82	54.00	-34.18	AVG	

REMARKS:
(1) Measurement Value = Reading Level + Correct Factor.
(2) Margin Level = Measurement Value - Limit Value.

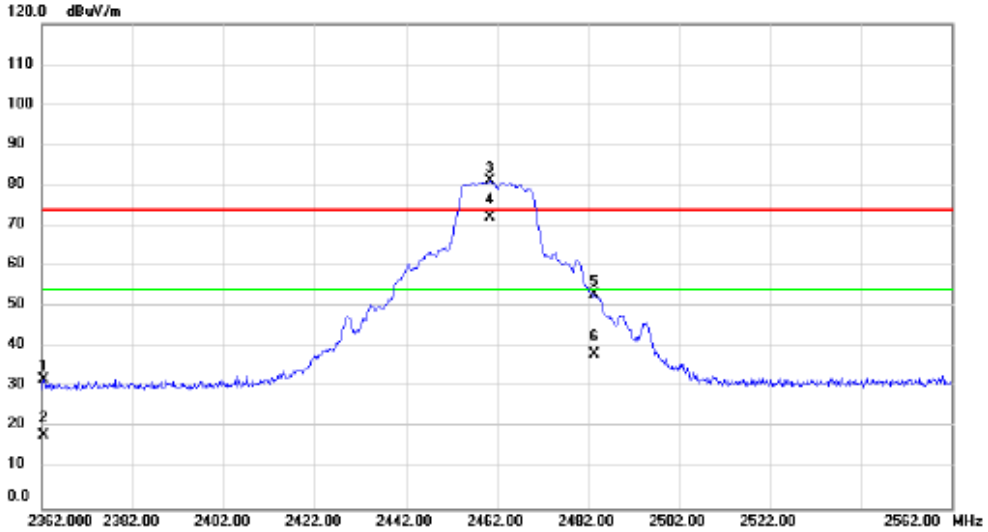
Test Mode	IEEE 802.11g	Test Date	2024/9/30
Test Frequency	2412MHz	Polarization	Horizontal



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Margin		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1		2389.400	52.85	-6.12	46.73	74.00	-27.27	peak	
2		2389.400	35.85	-6.12	29.73	54.00	-24.27	AVG	
3	X	2413.800	85.82	-6.06	79.76	74.00	5.76	peak	No Limit
4	*	2413.800	76.15	-6.06	70.09	54.00	16.09	AVG	No Limit
5		2492.800	38.51	-5.90	32.61	74.00	-41.39	peak	
6		2492.800	24.64	-5.90	18.74	54.00	-35.26	AVG	

REMARKS:
(1) Measurement Value = Reading Level + Correct Factor.
(2) Margin Level = Measurement Value - Limit Value.

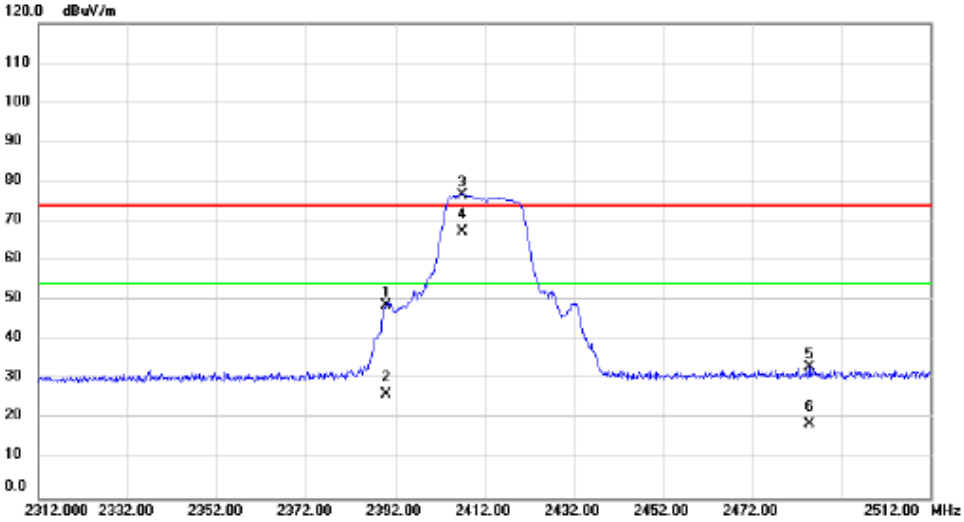
Test Mode	IEEE 802.11g	Test Date	2024/9/30
Test Frequency	2462MHz	Polarization	Horizontal



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Margin		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1		2362.400	38.20	-6.18	32.02	74.00	-41.98	peak	
2		2362.400	24.19	-6.18	18.01	54.00	-35.99	AVG	
3	X	2460.600	87.06	-5.97	81.09	74.00	7.09	peak	No Limit
4	*	2460.600	78.23	-5.97	72.26	54.00	18.26	AVG	No Limit
5		2483.600	58.80	-5.92	52.88	74.00	-21.12	peak	
6		2483.600	44.13	-5.92	38.21	54.00	-15.79	AVG	

REMARKS:
(1) Measurement Value = Reading Level + Correct Factor.
(2) Margin Level = Measurement Value - Limit Value.

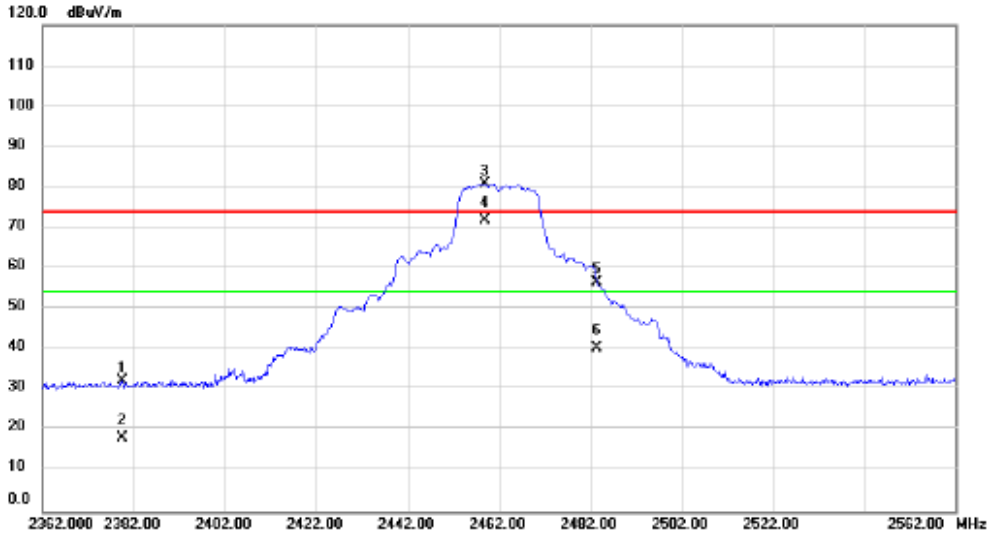
Test Mode	IEEE 802.11n(HT20)	Test Date	2024/9/30
Test Frequency	2412MHz	Polarization	Horizontal



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Margin		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1		2390.000	54.94	-6.12	48.82	74.00	-25.18	peak	
2		2390.000	32.46	-6.12	26.34	54.00	-27.66	AVG	
3	X	2407.200	82.88	-6.08	76.80	74.00	2.80	peak	No Limit
4	*	2407.200	73.34	-6.08	67.26	54.00	13.26	AVG	No Limit
5		2485.000	38.94	-5.91	33.03	74.00	-40.97	peak	
6		2485.000	24.61	-5.91	18.70	54.00	-35.30	AVG	

REMARKS:
(1) Measurement Value = Reading Level + Correct Factor.
(2) Margin Level = Measurement Value - Limit Value.

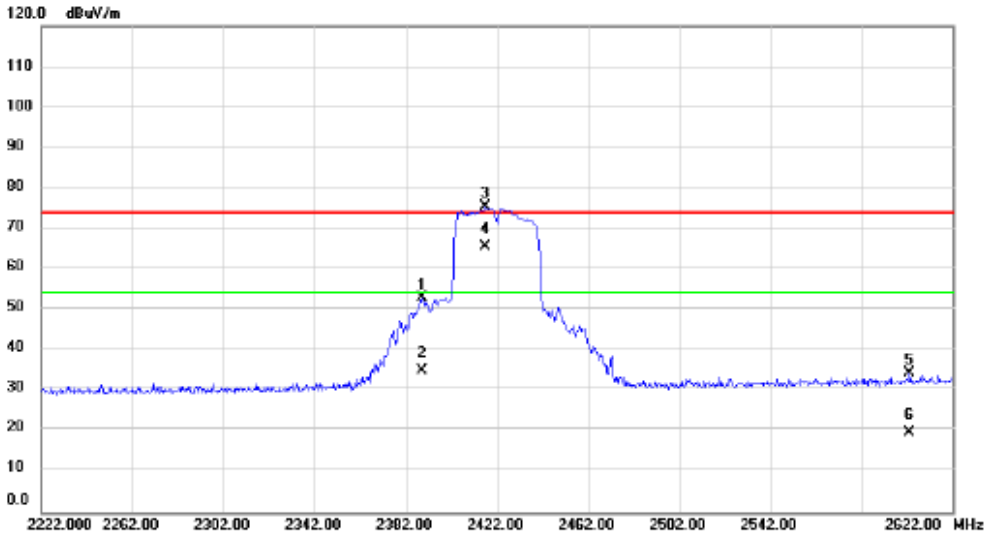
Test Mode	IEEE 802.11n(HT20)	Test Date	2024/9/30
Test Frequency	2462MHz	Polarization	Horizontal



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Margin		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1		2379.600	38.42	-6.14	32.28	74.00	-41.72	peak	
2		2379.600	24.28	-6.14	18.14	54.00	-35.86	AVG	
3	X	2459.000	86.96	-5.97	80.99	74.00	6.99	peak	No Limit
4	*	2459.000	77.69	-5.97	71.72	54.00	17.72	AVG	No Limit
5		2483.500	62.54	-5.92	56.62	74.00	-17.38	peak	
6		2483.500	46.25	-5.92	40.33	54.00	-13.67	AVG	

REMARKS:
(1) Measurement Value = Reading Level + Correct Factor.
(2) Margin Level = Measurement Value - Limit Value.

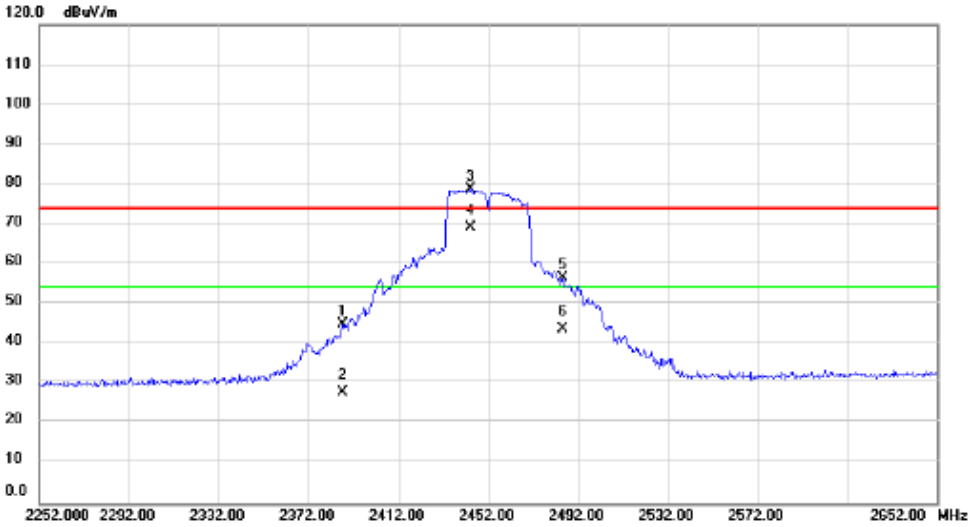
Test Mode	IEEE 802.11n(HT40)	Test Date	2024/9/30
Test Frequency	2422MHz	Polarization	Horizontal



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Margin		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1		2389.200	59.05	-6.12	52.93	74.00	-21.07	peak	
2		2389.200	41.19	-6.12	35.07	54.00	-18.93	AVG	
3	X	2417.200	81.42	-6.06	75.36	74.00	1.36	peak	No Limit
4	*	2417.200	71.71	-6.06	65.65	54.00	11.65	AVG	No Limit
5		2603.200	39.91	-5.46	34.45	74.00	-39.55	peak	
6		2603.200	25.21	-5.46	19.75	54.00	-34.25	AVG	

REMARKS:
(1) Measurement Value = Reading Level + Correct Factor.
(2) Margin Level = Measurement Value - Limit Value.

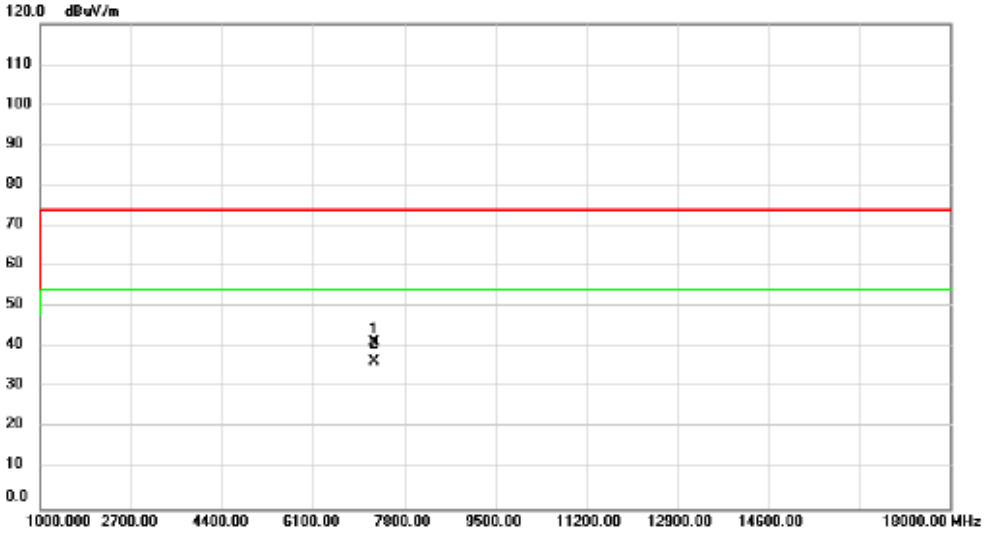
Test Mode	IEEE 802.11n(HT40)	Test Date	2024/9/30
Test Frequency	2452MHz	Polarization	Horizontal



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Margin		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1		2387.200	50.84	-6.13	44.71	74.00	-29.29	peak	
2		2387.200	33.81	-6.13	27.68	54.00	-26.32	AVG	
3	X	2444.400	84.71	-6.00	78.71	74.00	4.71	peak	No Limit
4	*	2444.400	75.14	-6.00	69.14	54.00	15.14	AVG	No Limit
5		2485.200	62.41	-5.91	56.50	74.00	-17.50	peak	
6		2485.200	49.70	-5.91	43.79	54.00	-10.21	AVG	

REMARKS:
(1) Measurement Value = Reading Level + Correct Factor.
(2) Margin Level = Measurement Value - Limit Value.

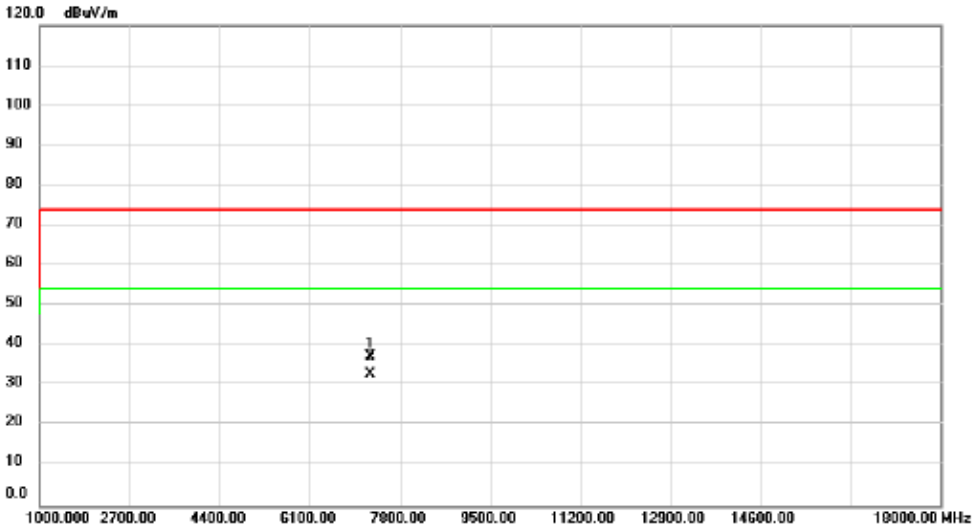
Test Mode	IEEE 802.11b	Test Date	2024/9/30
Test Frequency	2412MHz	Polarization	Vertical



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Margin		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1		7239.000	44.98	-3.63	41.35	74.00	-32.65	peak	
2	*	7239.000	40.18	-3.63	36.55	54.00	-17.45	AVG	

REMARKS:
(1) Measurement Value = Reading Level + Correct Factor.
(2) Margin Level = Measurement Value - Limit Value.

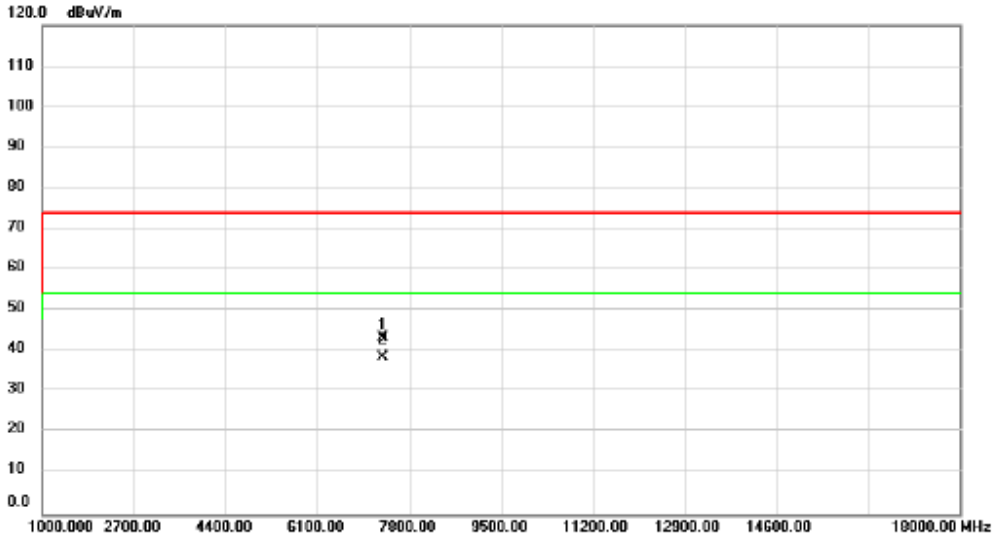
Test Mode	IEEE 802.11b	Test Date	2024/10/1
Test Frequency	2412MHz	Polarization	Horizontal



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Margin		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1		7239.000	41.12	-3.63	37.49	74.00	-36.51	peak	
2	*	7239.000	36.49	-3.63	32.86	54.00	-21.14	AVG	

REMARKS:
(1) Measurement Value = Reading Level + Correct Factor.
(2) Margin Level = Measurement Value - Limit Value.

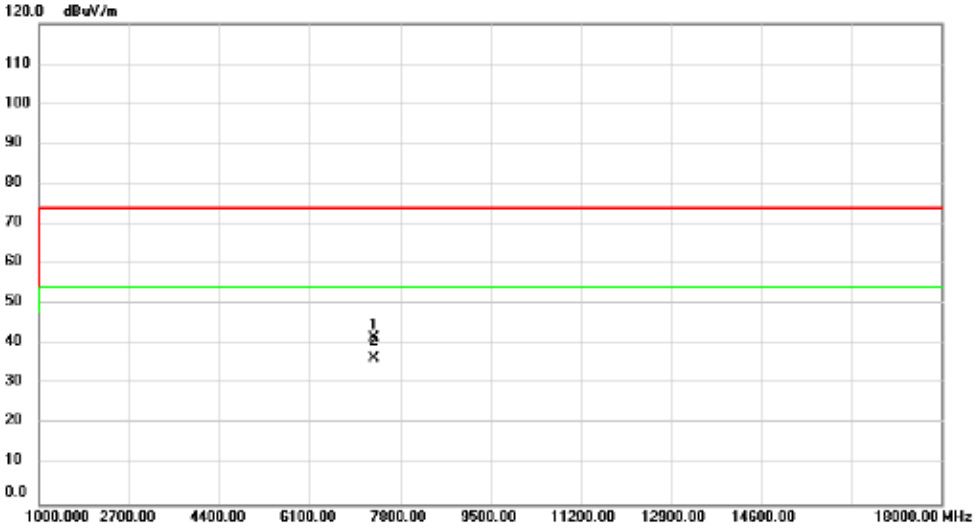
Test Mode	IEEE 802.11b	Test Date	2024/10/1
Test Frequency	2437MHz	Polarization	Vertical



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Margin		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1		7307.000	46.99	-3.51	43.48	74.00	-30.52	peak	
2	*	7307.000	42.10	-3.51	38.59	54.00	-15.41	AVG	

REMARKS:
(1) Measurement Value = Reading Level + Correct Factor.
(2) Margin Level = Measurement Value - Limit Value.

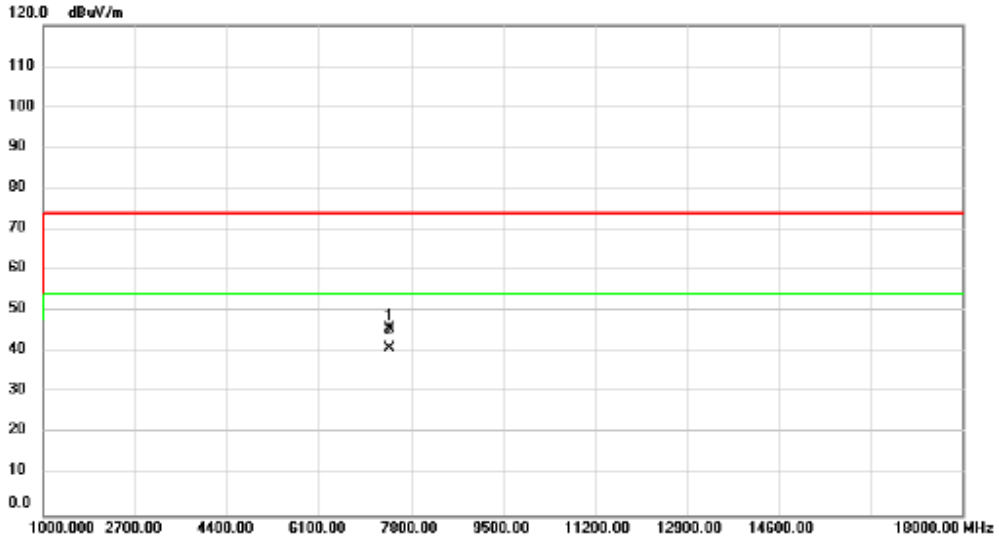
Test Mode	IEEE 802.11b	Test Date	2024/10/1
Test Frequency	2437MHz	Polarization	Horizontal



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Margin		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1		7307.000	45.07	-3.51	41.56	74.00	-32.44	peak	
2	*	7307.000	40.10	-3.51	36.59	54.00	-17.41	AVG	

REMARKS:
(1) Measurement Value = Reading Level + Correct Factor.
(2) Margin Level = Measurement Value - Limit Value.

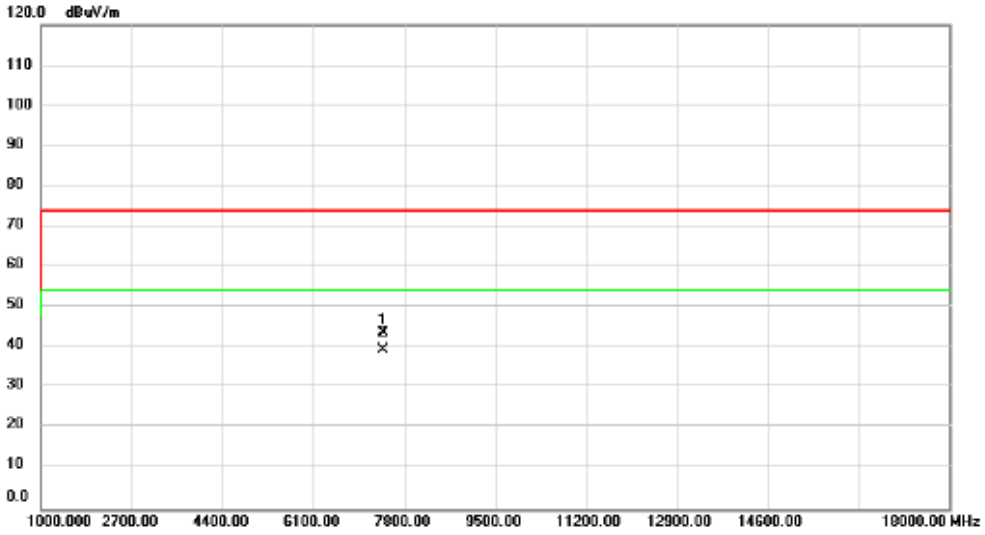
Test Mode	IEEE 802.11b	Test Date	2024/10/1
Test Frequency	2462MHz	Polarization	Vertical



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Margin		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1		7392.000	49.20	-3.35	45.85	74.00	-28.15	peak	
2	*	7392.000	44.33	-3.35	40.98	54.00	-13.02	AVG	

REMARKS:
(1) Measurement Value = Reading Level + Correct Factor.
(2) Margin Level = Measurement Value - Limit Value.

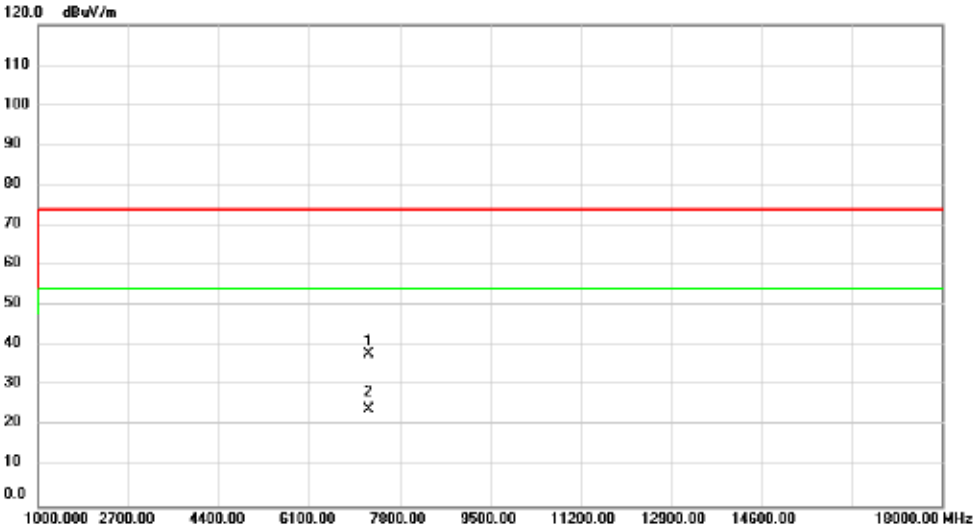
Test Mode	IEEE 802.11b	Test Date	2024/10/1
Test Frequency	2462MHz	Polarization	Horizontal



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Margin		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1		7392.000	47.13	-3.35	43.78	74.00	-30.22	peak	
2	*	7392.000	42.94	-3.35	39.59	54.00	-14.41	AVG	

REMARKS:
(1) Measurement Value = Reading Level + Correct Factor.
(2) Margin Level = Measurement Value - Limit Value.

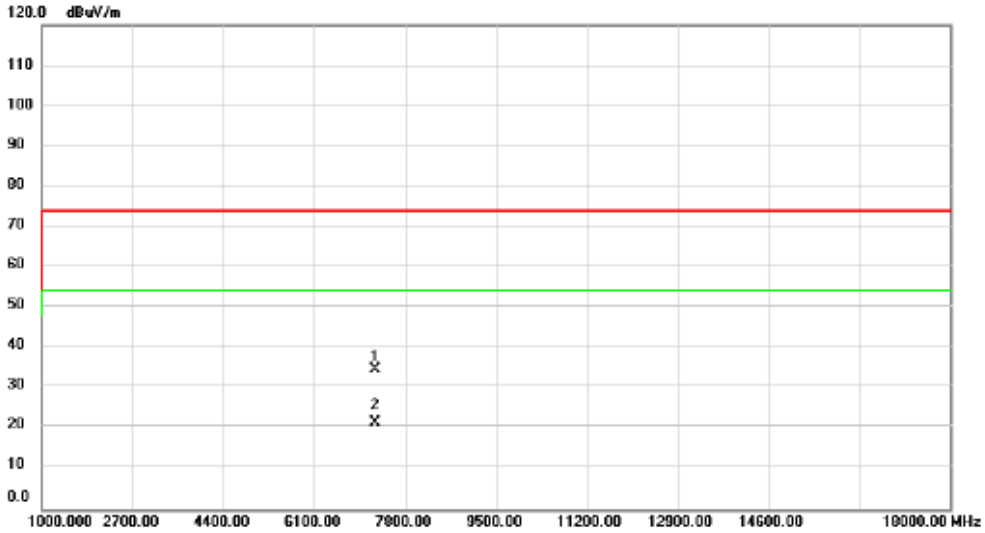
Test Mode	IEEE 802.11g	Test Date	2024/10/1
Test Frequency	2412MHz	Polarization	Vertical



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Margin		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1		7222.000	41.59	-3.66	37.93	74.00	-36.07	peak	
2	*	7222.000	27.91	-3.66	24.25	54.00	-29.75	AVG	

REMARKS:
(1) Measurement Value = Reading Level + Correct Factor.
(2) Margin Level = Measurement Value - Limit Value.

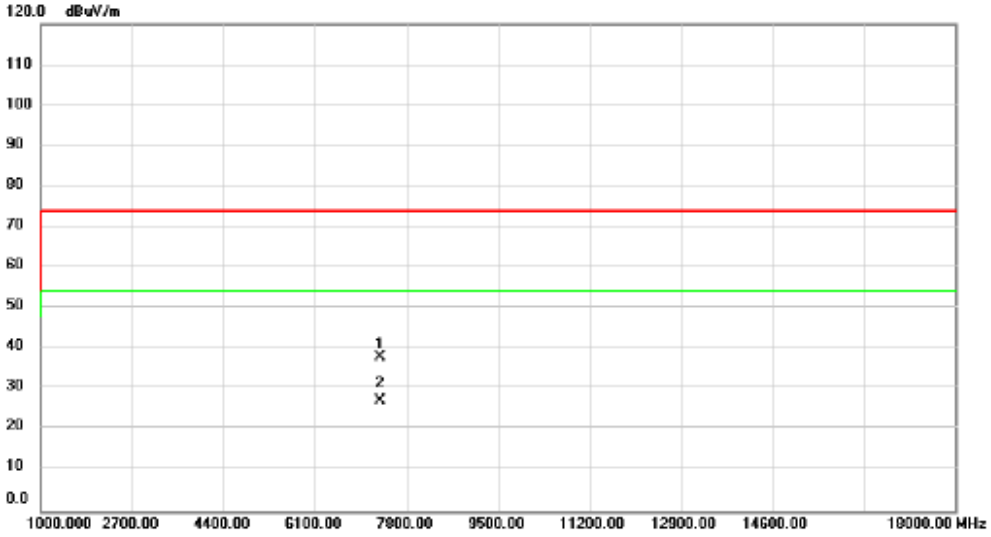
Test Mode	IEEE 802.11g	Test Date	2024/10/1
Test Frequency	2412MHz	Polarization	Horizontal



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Margin		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1		7239.000	38.29	-3.63	34.66	74.00	-39.34	peak	
2	*	7239.000	25.02	-3.63	21.39	54.00	-32.61	AVG	

REMARKS:
(1) Measurement Value = Reading Level + Correct Factor.
(2) Margin Level = Measurement Value - Limit Value.

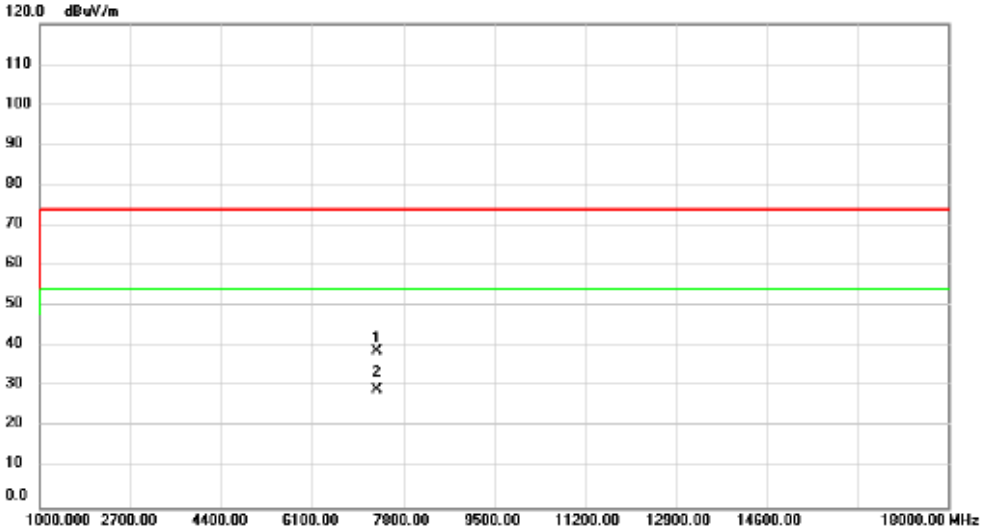
Test Mode	IEEE 802.11g	Test Date	2024/10/17
Test Frequency	2437MHz	Polarization	Vertical



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Margin		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1		7307.000	41.39	-3.51	37.88	74.00	-36.12	peak	
2	*	7307.000	30.80	-3.51	27.29	54.00	-26.71	AVG	

REMARKS:
(1) Measurement Value = Reading Level + Correct Factor.
(2) Margin Level = Measurement Value - Limit Value.

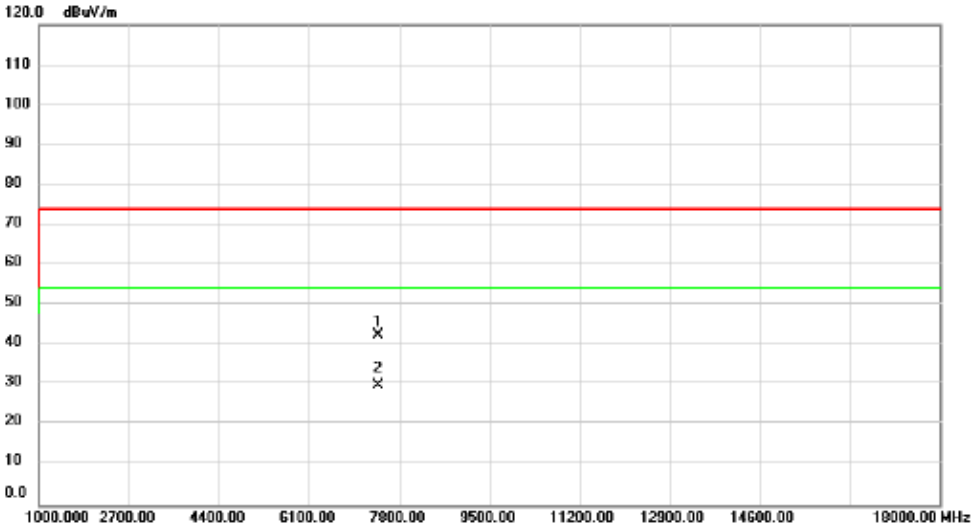
Test Mode	IEEE 802.11g	Test Date	2024/10/17
Test Frequency	2437MHz	Polarization	Horizontal



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Margin		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1		7307.000	42.39	-3.51	38.88	74.00	-35.12	peak	
2	*	7307.000	32.80	-3.51	29.29	54.00	-24.71	AVG	

REMARKS:
(1) Measurement Value = Reading Level + Correct Factor.
(2) Margin Level = Measurement Value - Limit Value.

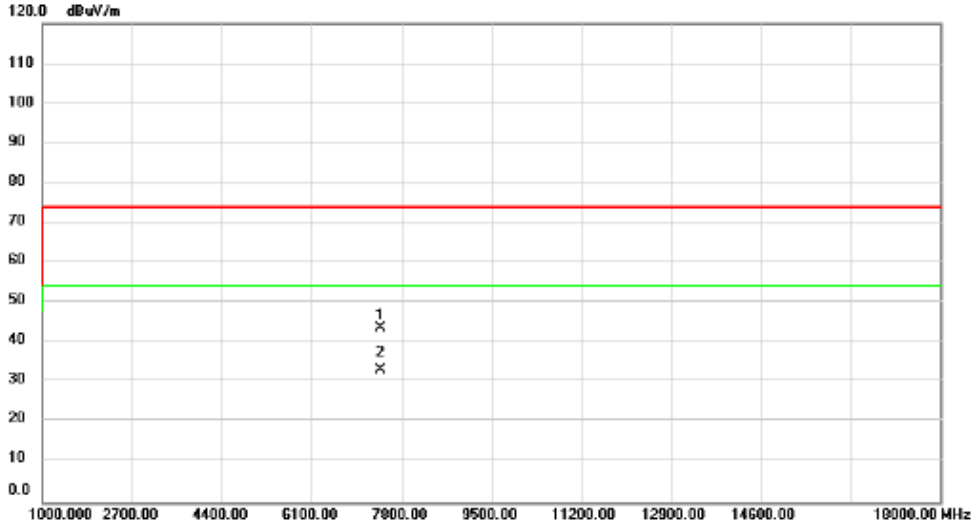
Test Mode	IEEE 802.11g	Test Date	2024/10/17
Test Frequency	2462MHz	Polarization	Vertical



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Margin		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1		7392.000	45.84	-3.35	42.49	74.00	-31.51	peak	
2	*	7392.000	33.22	-3.35	29.87	54.00	-24.13	AVG	

REMARKS:
(1) Measurement Value = Reading Level + Correct Factor.
(2) Margin Level = Measurement Value - Limit Value.

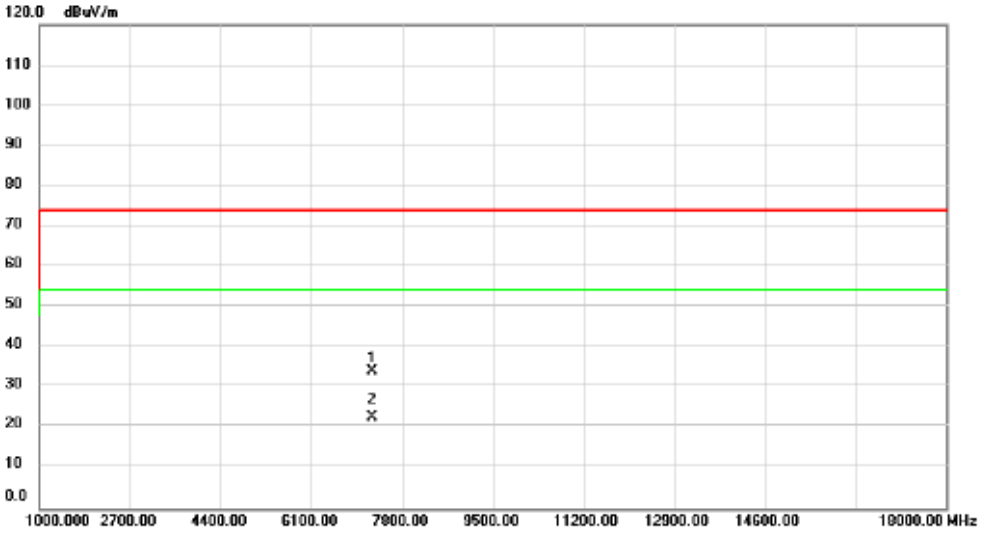
Test Mode	IEEE 802.11g	Test Date	2024/10/17
Test Frequency	2462MHz	Polarization	Horizontal



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Margin		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1		7392.000	47.05	-3.35	43.70	74.00	-30.30	peak	
2	*	7392.000	36.39	-3.35	33.04	54.00	-20.96	AVG	

REMARKS:
(1) Measurement Value = Reading Level + Correct Factor.
(2) Margin Level = Measurement Value - Limit Value.

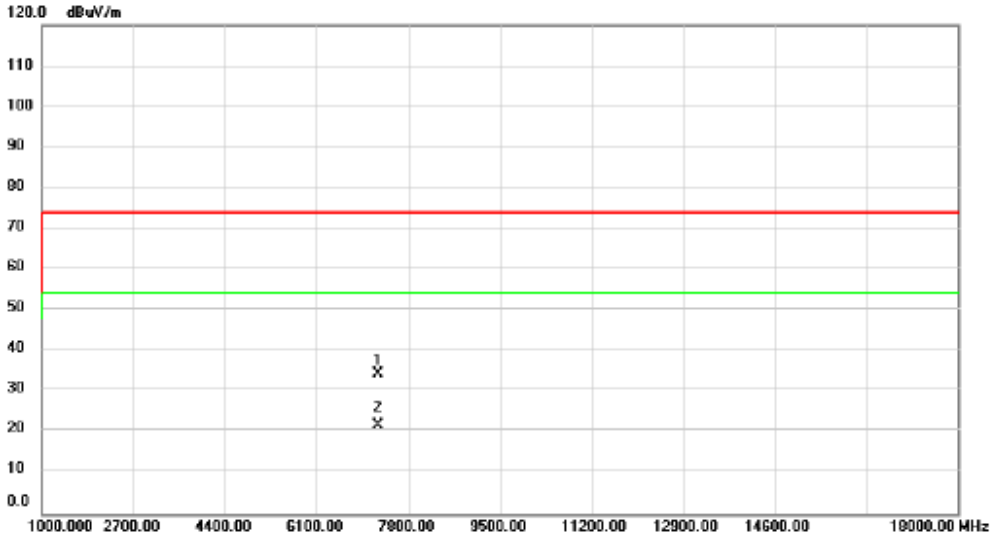
Test Mode	IEEE 802.11n(HT20)	Test Date	2024/10/1
Test Frequency	2412MHz	Polarization	Vertical



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Margin		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1		7239.000	37.54	-3.63	33.91	74.00	-40.09	peak	
2	*	7239.000	26.16	-3.63	22.53	54.00	-31.47	AVG	

REMARKS:
(1) Measurement Value = Reading Level + Correct Factor.
(2) Margin Level = Measurement Value - Limit Value.

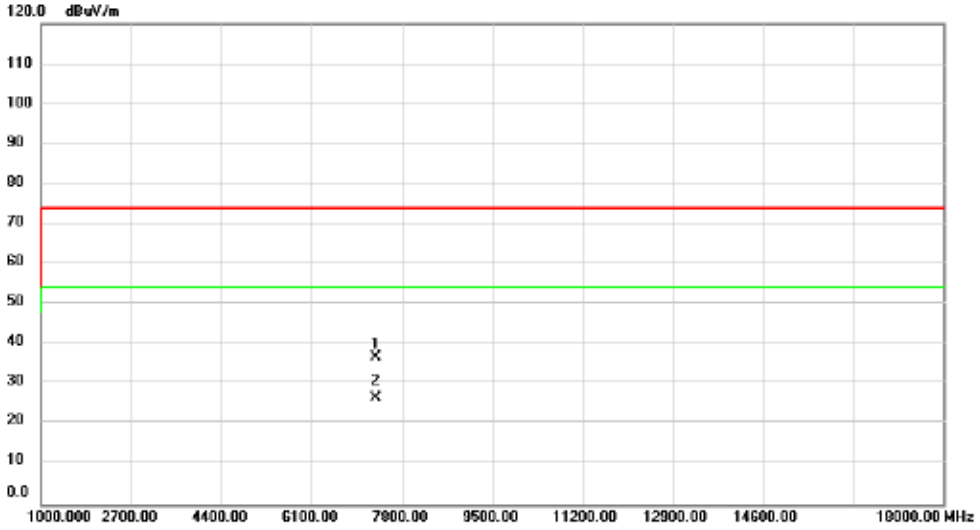
Test Mode	IEEE 802.11n(HT20)	Test Date	2024/10/1
Test Frequency	2412MHz	Polarization	Horizontal



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Margin		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1		7239.000	37.91	-3.63	34.28	74.00	-39.72	peak	
2	*	7239.000	25.31	-3.63	21.68	54.00	-32.32	AVG	

REMARKS:
(1) Measurement Value = Reading Level + Correct Factor.
(2) Margin Level = Measurement Value - Limit Value.

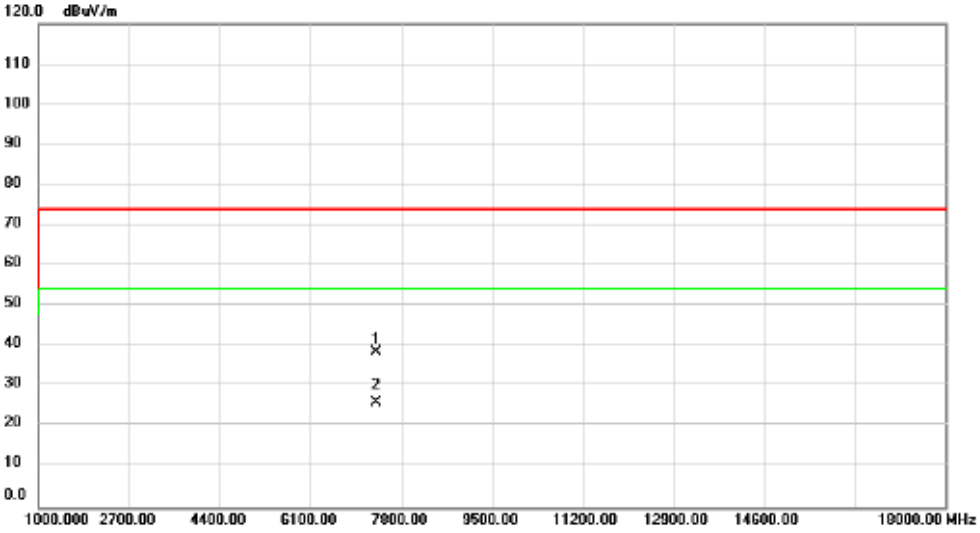
Test Mode	IEEE 802.11n(HT20)	Test Date	2024/10/17
Test Frequency	2437MHz	Polarization	Vertical



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Margin		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1		7307.000	40.32	-3.51	36.81	74.00	-37.19	peak	
2	*	7307.000	30.10	-3.51	26.59	54.00	-27.41	AVG	

REMARKS:
(1) Measurement Value = Reading Level + Correct Factor.
(2) Margin Level = Measurement Value - Limit Value.

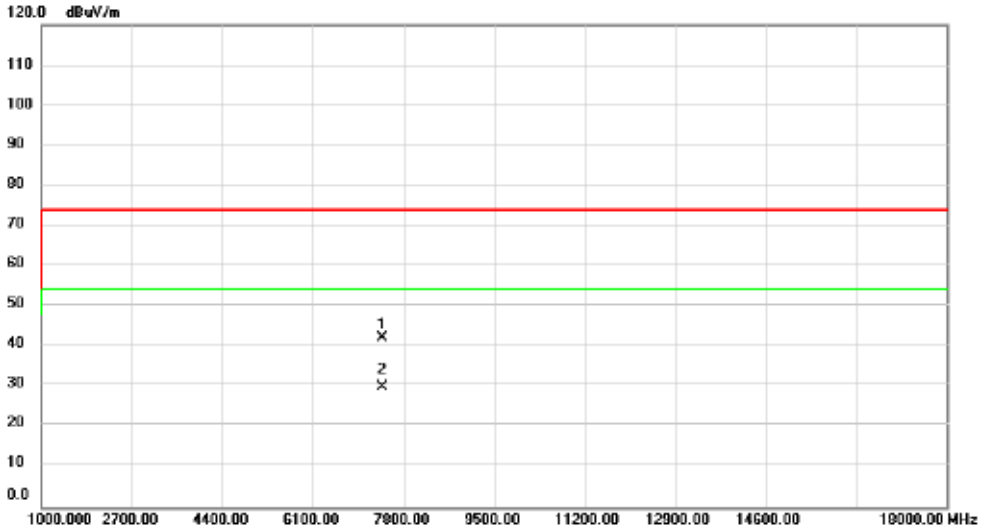
Test Mode	IEEE 802.11n(HT20)	Test Date	2024/10/17
Test Frequency	2437MHz	Polarization	Horizontal



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Margin		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1		7324.000	41.99	-3.47	38.52	74.00	-35.48	peak	
2	*	7324.000	29.50	-3.47	26.03	54.00	-27.97	AVG	

REMARKS:
(1) Measurement Value = Reading Level + Correct Factor.
(2) Margin Level = Measurement Value - Limit Value.

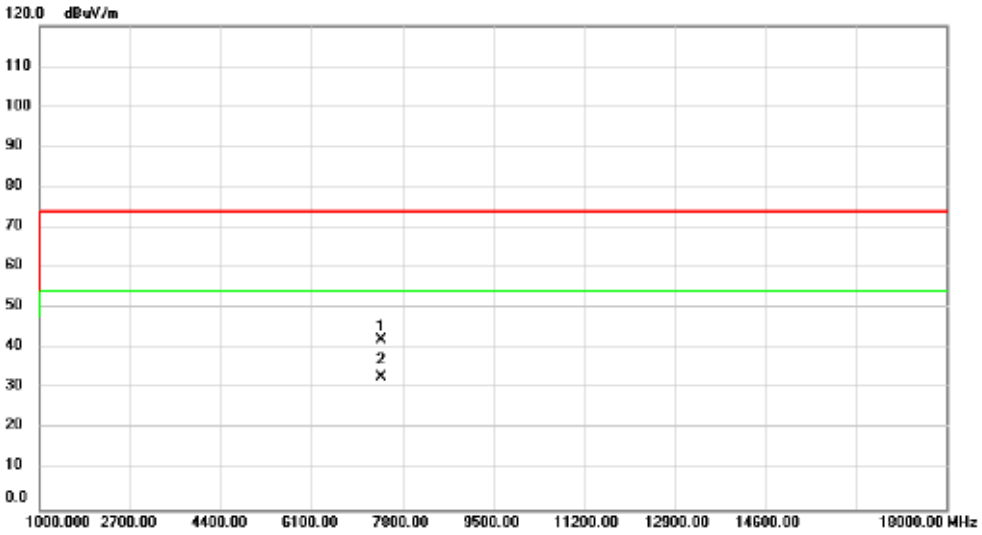
Test Mode	IEEE 802.11n(HT20)	Test Date	2024/10/17
Test Frequency	2462MHz	Polarization	Vertical



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Margin		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1		7392.000	45.41	-3.35	42.06	74.00	-31.94	peak	
2	*	7392.000	33.26	-3.35	29.91	54.00	-24.09	AVG	

REMARKS:
(1) Measurement Value = Reading Level + Correct Factor.
(2) Margin Level = Measurement Value - Limit Value.

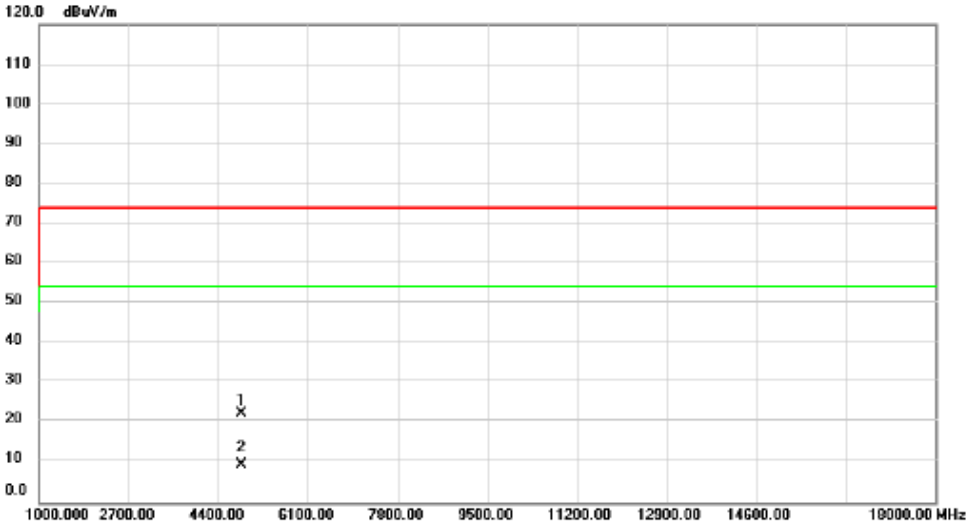
Test Mode	IEEE 802.11n(HT20)	Test Date	2024/10/17
Test Frequency	2462MHz	Polarization	Horizontal



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Margin		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1		7392.000	45.44	-3.35	42.09	74.00	-31.91	peak	
2	*	7392.000	36.23	-3.35	32.88	54.00	-21.12	AVG	

REMARKS:
(1) Measurement Value = Reading Level + Correct Factor.
(2) Margin Level = Measurement Value - Limit Value.

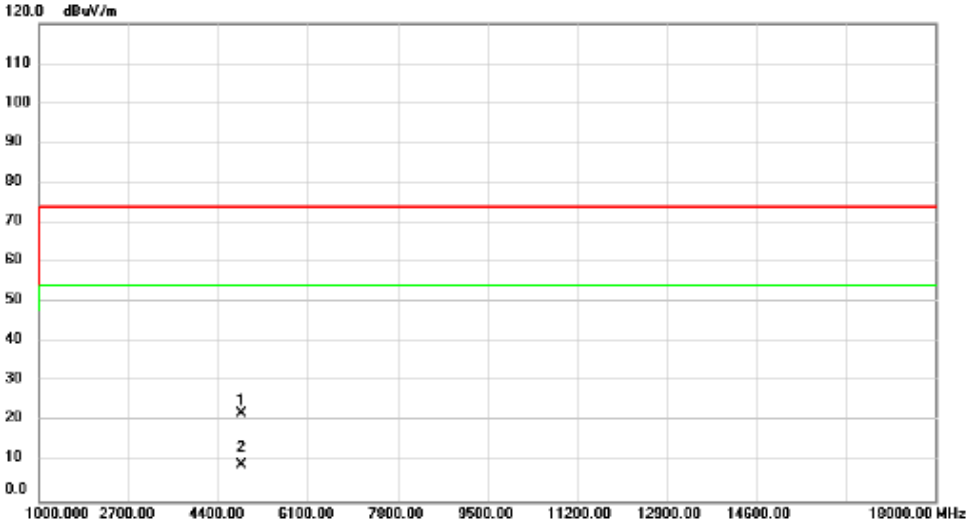
Test Mode	IEEE 802.11n(HT40)	Test Date	2024/10/1
Test Frequency	2422MHz	Polarization	Vertical



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Margin		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1		4844.000	31.02	-8.52	22.50	74.00	-51.50	peak	
2	*	4844.000	18.11	-8.52	9.59	54.00	-44.41	AVG	

REMARKS:
(1) Measurement Value = Reading Level + Correct Factor.
(2) Margin Level = Measurement Value - Limit Value.

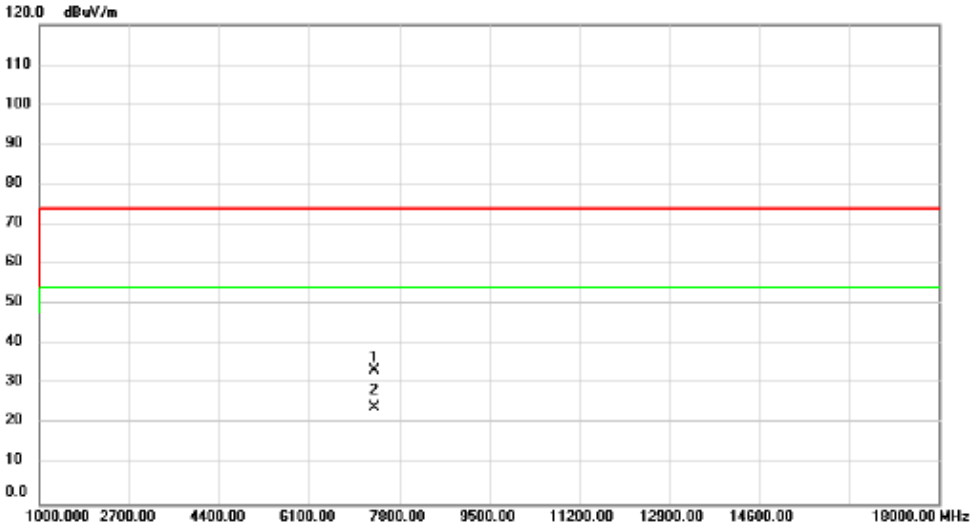
Test Mode	IEEE 802.11n(HT40)	Test Date	2024/10/1
Test Frequency	2422MHz	Polarization	Horizontal



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Margin		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1		4844.000	30.48	-8.52	21.96	74.00	-52.04	peak	
2	*	4844.000	17.78	-8.52	9.26	54.00	-44.74	AVG	

REMARKS:
(1) Measurement Value = Reading Level + Correct Factor.
(2) Margin Level = Measurement Value - Limit Value.

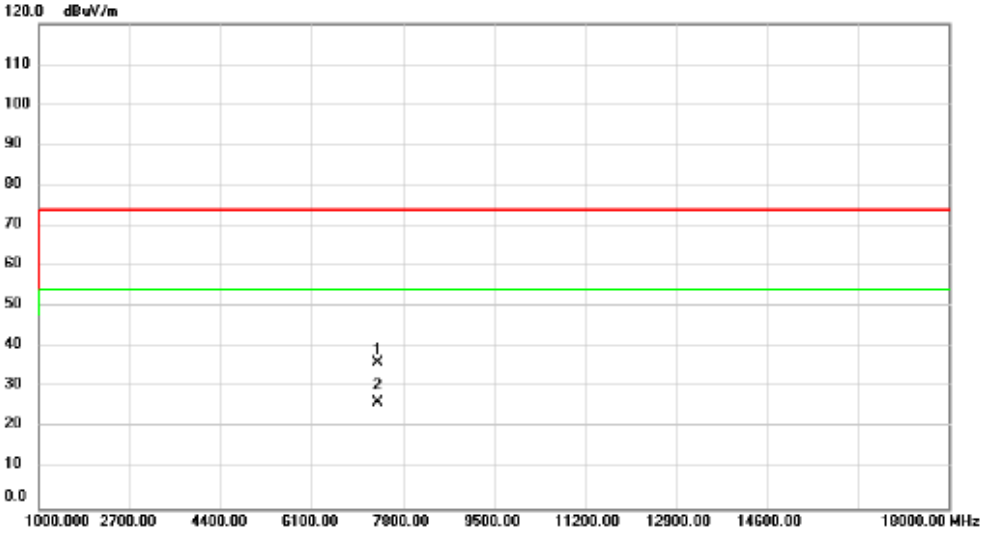
Test Mode	IEEE 802.11n(HT40)	Test Date	2024/10/17
Test Frequency	2437MHz	Polarization	Vertical



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Margin		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1		7324.000	36.99	-3.47	33.52	74.00	-40.48	peak	
2	*	7324.000	27.55	-3.47	24.08	54.00	-29.92	AVG	

REMARKS:
(1) Measurement Value = Reading Level + Correct Factor.
(2) Margin Level = Measurement Value - Limit Value.

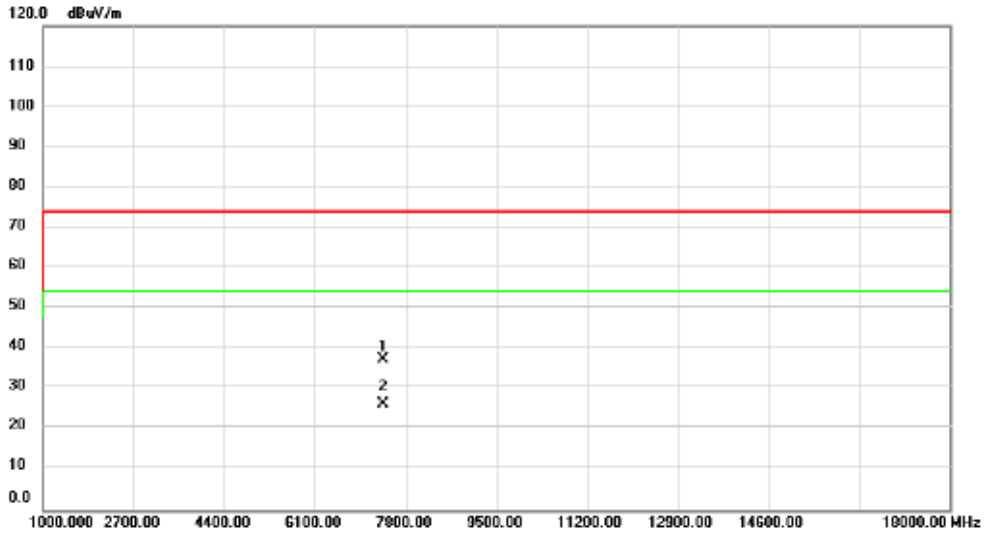
Test Mode	IEEE 802.11n(HT40)	Test Date	2024/10/17
Test Frequency	2437MHz	Polarization	Horizontal



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Margin		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1		7324.000	39.61	-3.47	36.14	74.00	-37.86	peak	
2	*	7324.000	29.83	-3.47	26.36	54.00	-27.64	AVG	

REMARKS:
(1) Measurement Value = Reading Level + Correct Factor.
(2) Margin Level = Measurement Value - Limit Value.

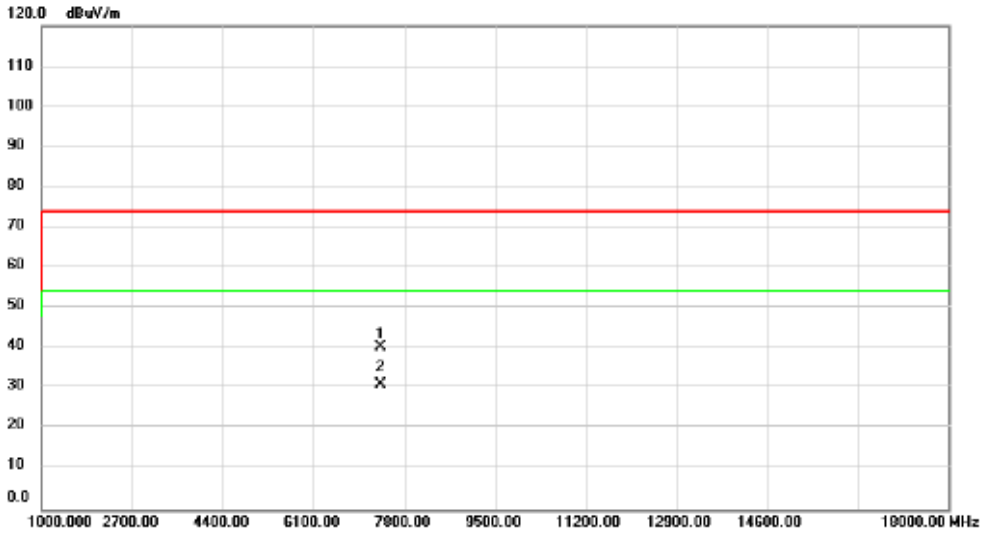
Test Mode	IEEE 802.11n(HT40)	Test Date	2024/10/17
Test Frequency	2452MHz	Polarization	Vertical



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Margin		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1		7375.000	40.87	-3.38	37.49	74.00	-36.51	peak	
2	*	7375.000	29.56	-3.38	26.18	54.00	-27.82	AVG	

REMARKS:
(1) Measurement Value = Reading Level + Correct Factor.
(2) Margin Level = Measurement Value - Limit Value.

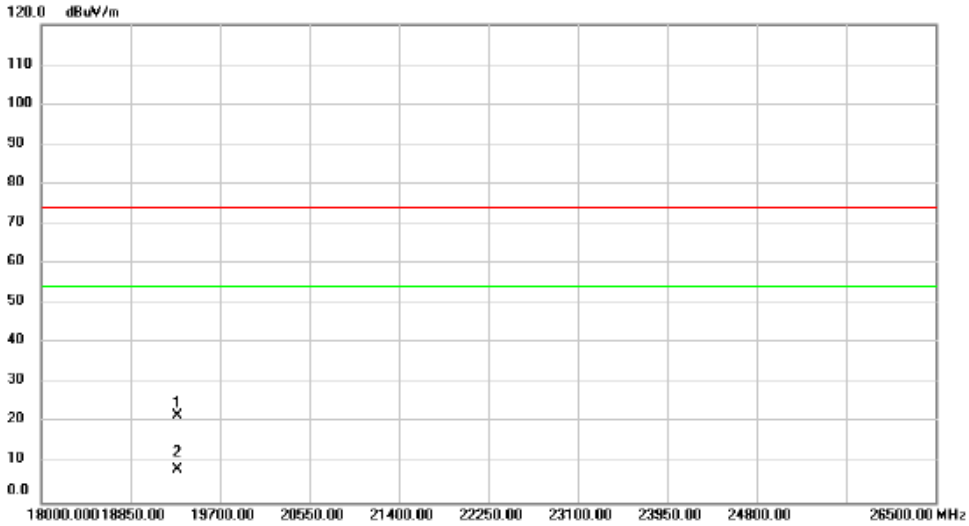
Test Mode	IEEE 802.11n(HT40)	Test Date	2024/10/17
Test Frequency	2452MHz	Polarization	Horizontal



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Margin		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1		7358.000	43.71	-3.41	40.30	74.00	-33.70	peak	
2	*	7358.000	34.52	-3.41	31.11	54.00	-22.89	AVG	

REMARKS:
(1) Measurement Value = Reading Level + Correct Factor.
(2) Margin Level = Measurement Value - Limit Value.

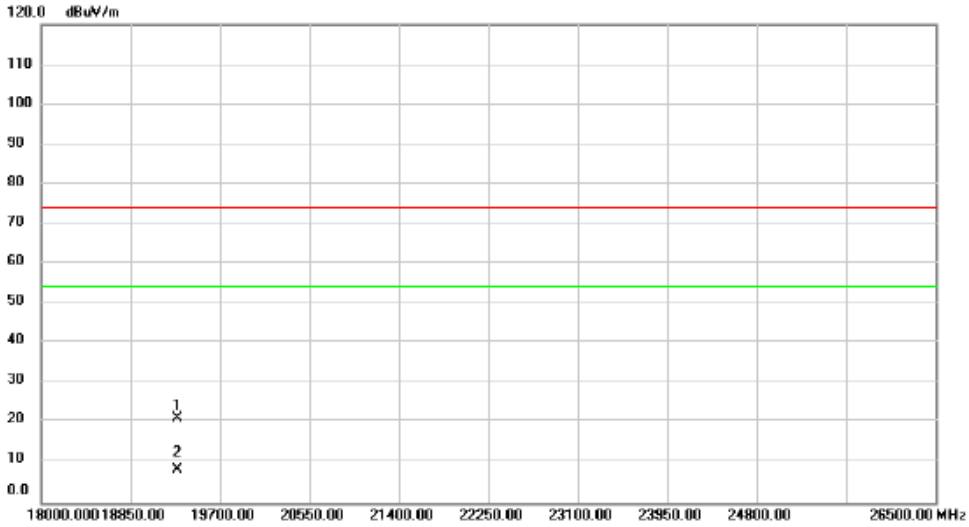
Test Mode	IEEE 802.11n(HT40)	Test Date	2024/10/17
Test Frequency	2437MHz	Polarization	Vertical



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Margin		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1		19296.00	32.26	-10.43	21.83	74.00	-52.17	peak	
2	*	19296.00	18.71	-10.43	8.28	54.00	-45.72	AVG	

REMARKS:
(1) Measurement Value = Reading Level + Correct Factor.
(2) Margin Level = Measurement Value - Limit Value.

Test Mode	IEEE 802.11n(HT40)	Test Date	2024/10/17
Test Frequency	2437MHz	Polarization	Horizontal



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Margin		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1		19296.00	31.52	-10.43	21.09	74.00	-52.91	peak	
2	*	19296.00	18.74	-10.43	8.31	54.00	-45.69	AVG	

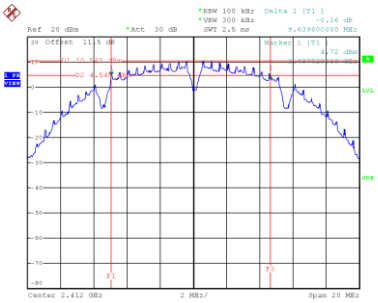
REMARKS:
(1) Measurement Value = Reading Level + Correct Factor.
(2) Margin Level = Measurement Value - Limit Value.

APPENDIX D BANDWIDTH

Test Mode	IEEE 802.11b

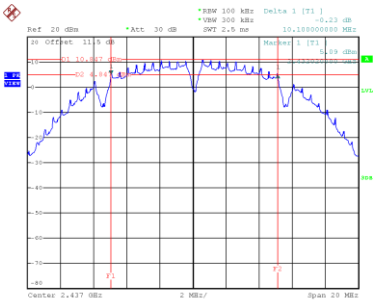
Channel	Frequency (MHz)	6 dB Bandwidth (MHz)	99 % Occupied Bandwidth (MHz)	6 dB Bandwidth Min. Limit (MHz)	Result
01	2412	9.640	13.840	0.5	Complies
06	2437	10.100	13.840	0.5	Complies
11	2462	10.100	13.600	0.5	Complies

CH01

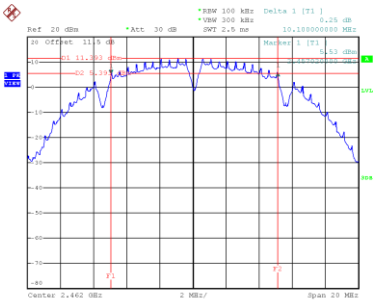


CH06

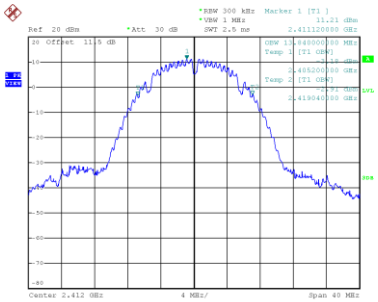
6 dB Bandwidth

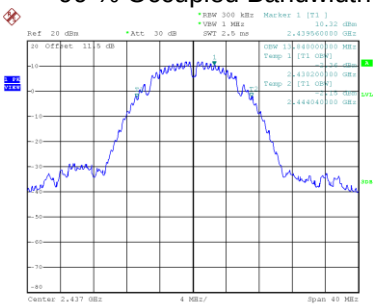


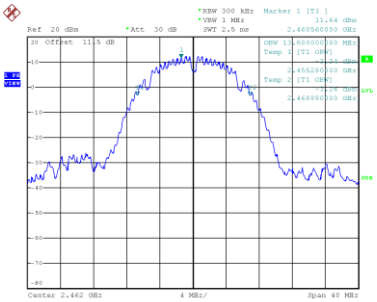
CH11



99 % Occupied Bandwidth



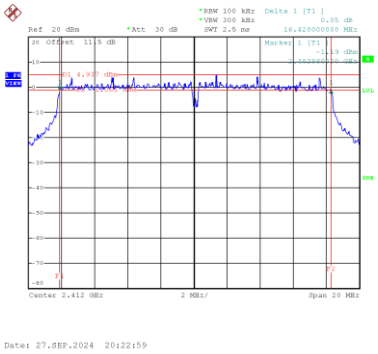




Test Mode	IEEE 802.11g

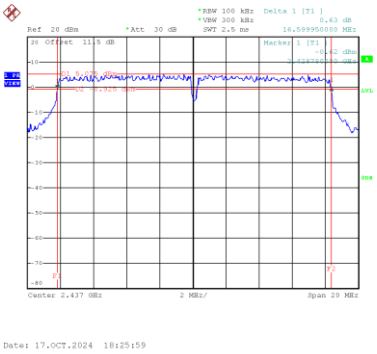
Channel	Frequency (MHz)	6 dB Bandwidth (MHz)	99 % Occupied Bandwidth (MHz)	6 dB Bandwidth Min. Limit (MHz)	Result
01	2412	16.420	17.040	0.5	Complies
06	2437	16.460	17.120	0.5	Complies
11	2462	16.430	17.040	0.5	Complies

CH01

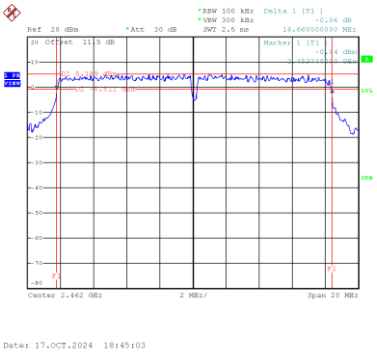


CH06

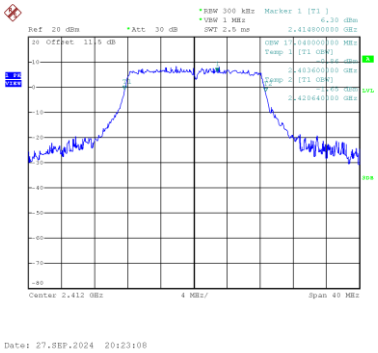
6 dB Bandwidth

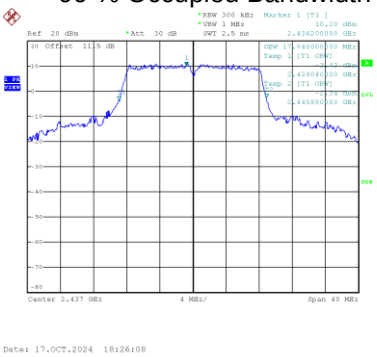


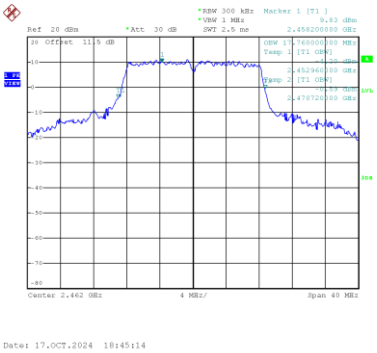
CH11



99 % Occupied Bandwidth







Test Mode	IEEE 802.11n(HT20)

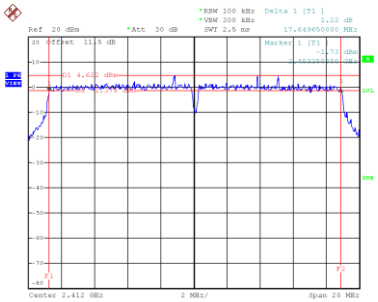
Channel	Frequency (MHz)	6 dB Bandwidth (MHz)	99 % Occupied Bandwidth (MHz)	6 dB Bandwidth Min. Limit (MHz)	Result
01	2412	17.650	18.320	0.5	Complies
06	2437	17.620	18.320	0.5	Complies
11	2462	17.650	18.240	0.5	Complies

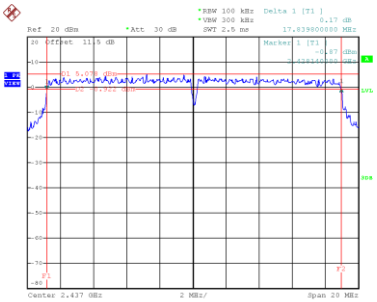
CH01

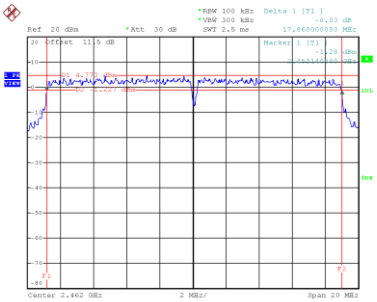
CH06

CH11

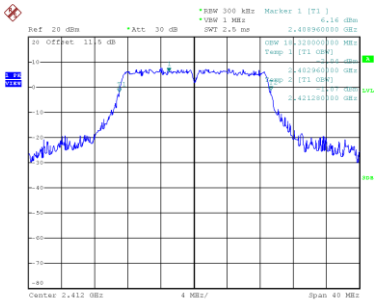
6 dB Bandwidth

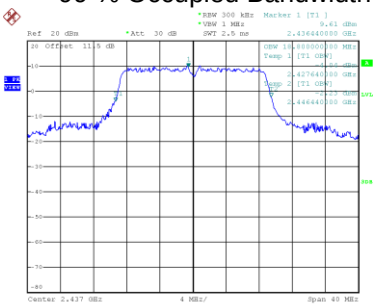


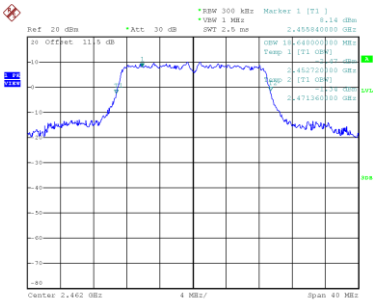




99 % Occupied Bandwidth



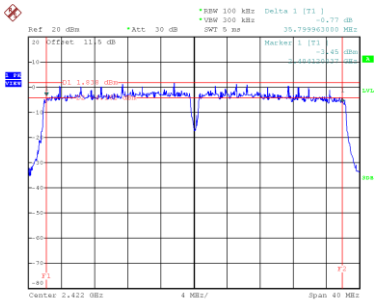




Test Mode	IEEE 802.11n(HT40)

Channel	Frequency (MHz)	6 dB Bandwidth (MHz)	99 % Occupied Bandwidth (MHz)	6 dB Bandwidth Min. Limit (MHz)	Result
01	2422	35.800	36.320	0.5	Complies
06	2437	35.238	36.320	0.5	Complies
11	2452	35.280	36.320	0.5	Complies

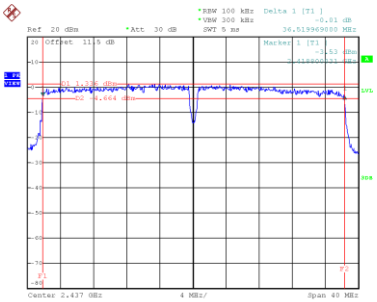
CH03



Date: 27.SEP.2024 20:37:56

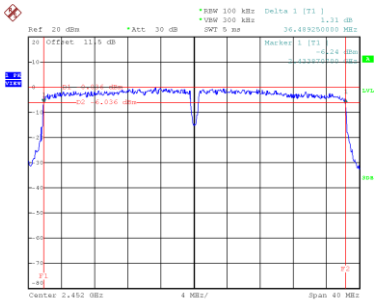
CH06

6 dB Bandwidth



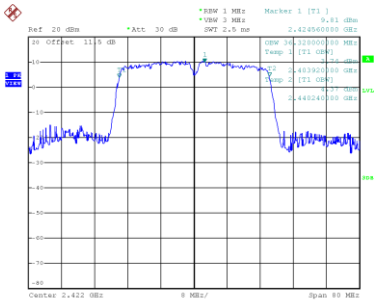
Date: 17.OCT.2024 19:00:14

CH09

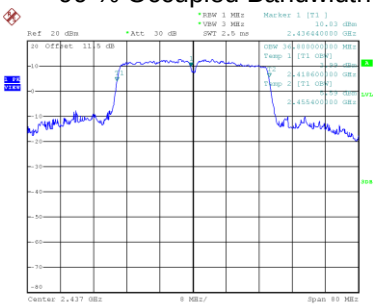


Date: 17.OCT.2024 19:05:48

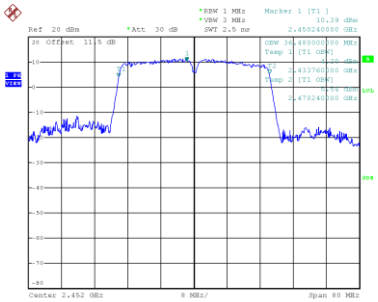
99 % Occupied Bandwidth



Date: 27.SEP.2024 20:38:04



Date: 17.OCT.2024 19:00:22



Date: 17.OCT.2024 19:05:56

APPENDIX E MAXIMUM OUTPUT POWER

Test Mode	IEEE 802.11b	Tested Date	2024/9/27-10/17

Channel	Frequency (MHz)	Output Power (dBm)	Duty Factor	Output Power + Duty Factor (dBm)	Max. Limit (dBm)	Max. Limit (W)	Result
01	2412	21.72	0.00	21.72	30.00	1.0000	Complies
06	2437	21.76	0.00	21.76	30.00	1.0000	Complies
11	2462	21.70	0.00	21.70	30.00	1.0000	Complies

Test Mode	IEEE 802.11g	Tested Date	2024/9/27-10/17

Channel	Frequency (MHz)	Output Power (dBm)	Duty Factor	Output Power + Duty Factor (dBm)	Max. Limit (dBm)	Max. Limit (W)	Result
01	2412	17.76	1.82	19.58	30.00	1.0000	Complies
06	2437	21.89	1.82	23.71	30.00	1.0000	Complies
11	2462	21.92	1.82	23.74	30.00	1.0000	Complies

Test Mode	IEEE 802.11n(HT20)	Tested Date	2024/9/27-10/17

Channel	Frequency (MHz)	Output Power (dBm)	Duty Factor	Output Power + Duty Factor (dBm)	Max. Limit (dBm)	Max. Limit (W)	Result
01	2412	17.75	1.93	19.68	30.00	1.0000	Complies
06	2437	21.96	1.93	23.89	30.00	1.0000	Complies
11	2462	21.85	1.93	23.78	30.00	1.0000	Complies

Test Mode	IEEE 802.11n(HT40)	Tested Date	2024/9/27-10/17

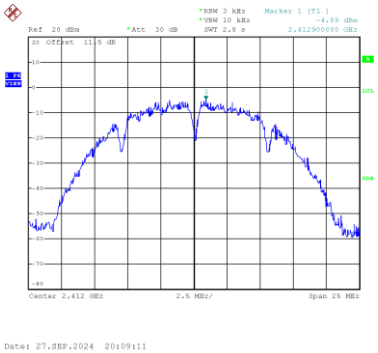
Channel	Frequency (MHz)	Output Power (dBm)	Duty Factor	Output Power + Duty Factor (dBm)	Max. Limit (dBm)	Max. Limit (W)	Result
01	2422	16.16	3.43	19.59	30.00	1.0000	Complies
06	2437	21.88	3.43	25.31	30.00	1.0000	Complies
11	2452	21.88	3.43	25.31	30.00	1.0000	Complies

APPENDIX F POWER SPECTRAL DENSITY

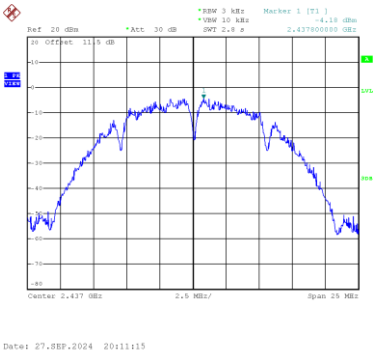
Test Mode	IEEE 802.11b

Channel	Frequency (MHz)	Power Spectral Density (dBm/3kHz)	Max. Limit (dBm/3kHz)	Result
01	2412	-4.89	8.00	Complies
06	2437	-4.18	8.00	Complies
11	2462	-3.30	8.00	Complies

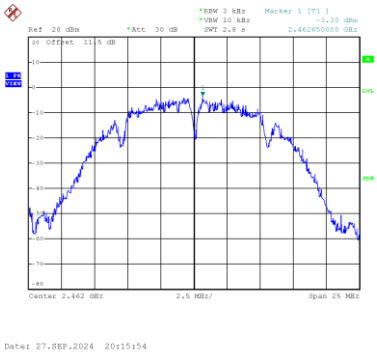
CH01



CH06



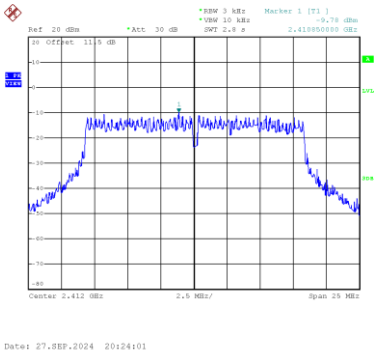
CH11



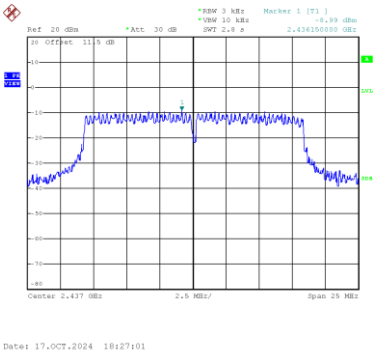
Test Mode	IEEE 802.11g

Channel	Frequency (MHz)	Power Spectral Density (dBm/3kHz)	Max. Limit (dBm/3kHz)	Result
01	2412	-9.78	8.00	Complies
06	2437	-10.25	8.00	Complies
11	2462	-10.62	8.00	Complies

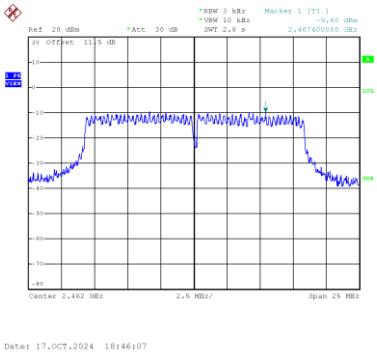
CH01



CH06



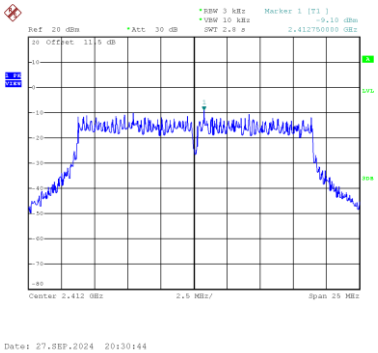
CH11



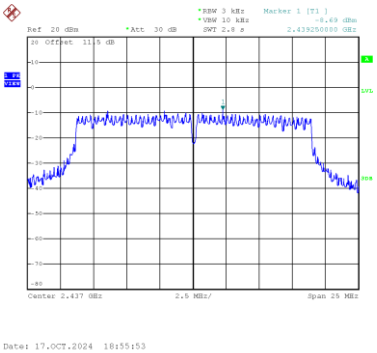
Test Mode	IEEE 802.11n(HT20)

Channel	Frequency (MHz)	Power Spectral Density (dBm/3kHz)	Max. Limit (dBm/3kHz)	Result
01	2412	-9.10	8.00	Complies
06	2437	-10.48	8.00	Complies
11	2462	-10.20	8.00	Complies

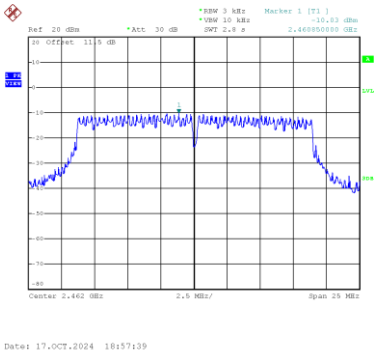
CH01



CH06



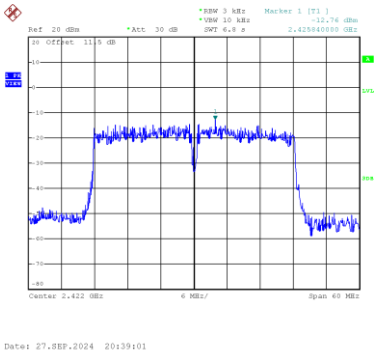
CH11



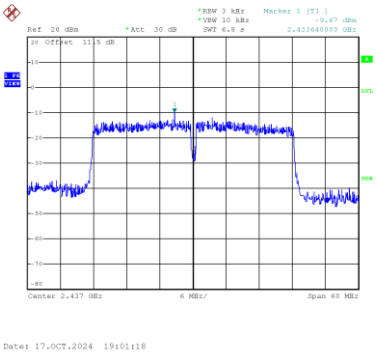
Test Mode	IEEE 802.11n(HT40)

Channel	Frequency (MHz)	Power Spectral Density (dBm/3kHz)	Max. Limit (dBm/3kHz)	Result
01	2422	-12.76	8.00	Complies
06	2437	-13.10	8.00	Complies
11	2452	-13.92	8.00	Complies

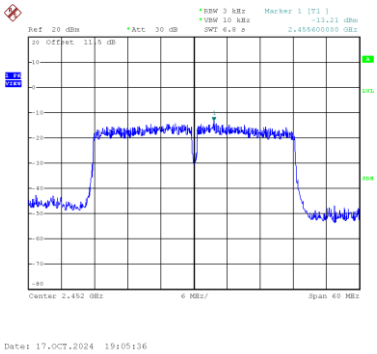
CH03



CH06



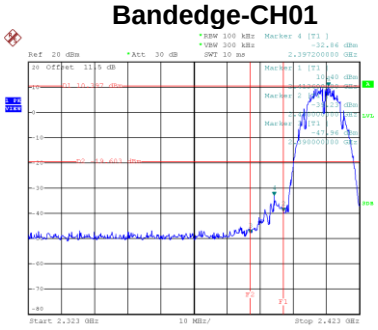
CH09



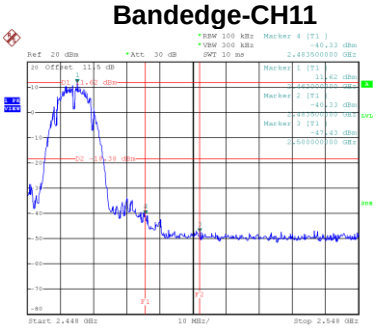
APPENDIX G ANTENNA CONDUCTED SPURIOUS EMISSIONS

Test Mode	IEEE 802.11b

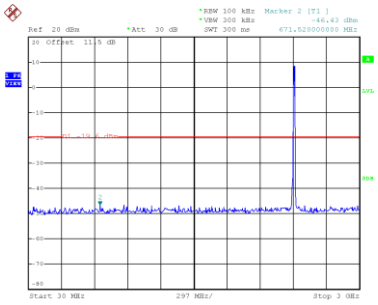
Bandedge-CH01

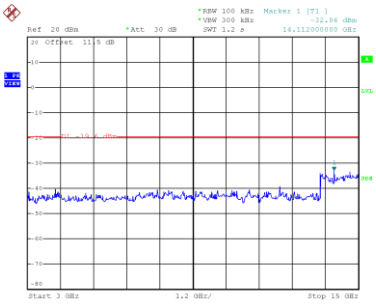


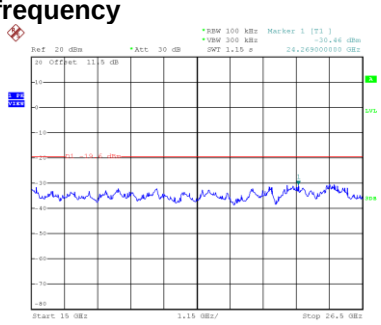
Bandedge-CH11



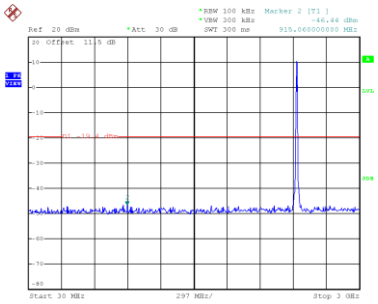
CH01 – 10th Harmonic of the fundamental frequency

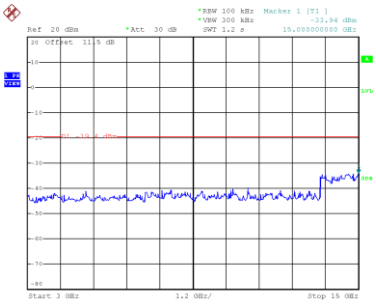


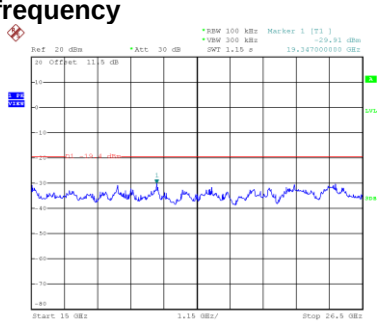




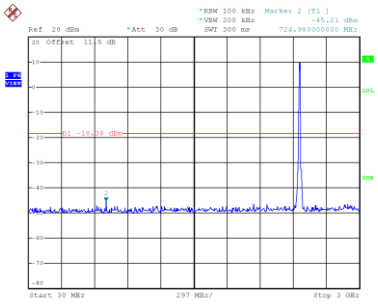
CH06 – 10th Harmonic of the fundamental frequency

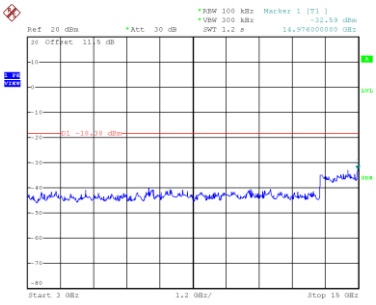


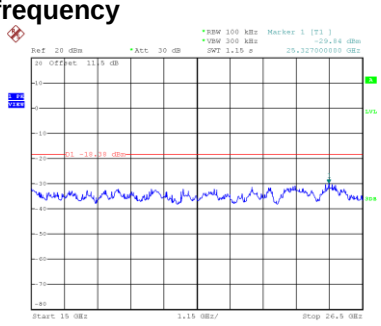




CH11 – 10th Harmonic of the fundamental frequency

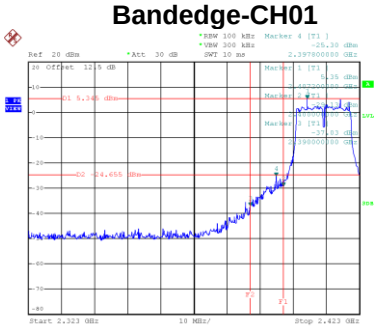




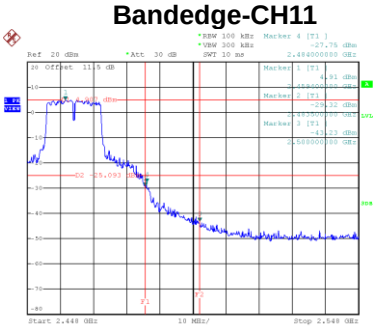


Test Mode	IEEE 802.11g

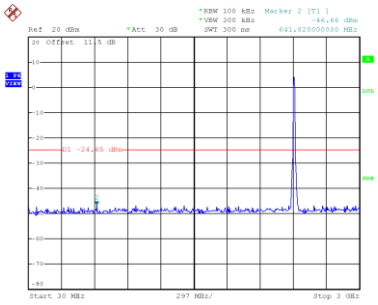
Bandedge-CH01

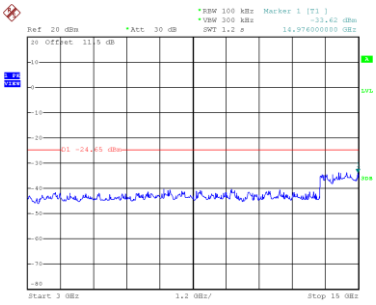


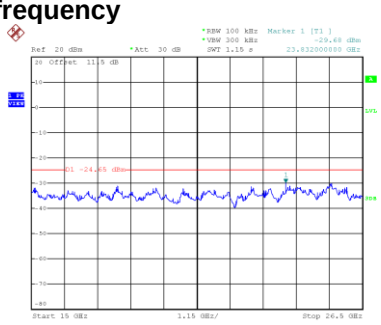
Bandedge-CH11



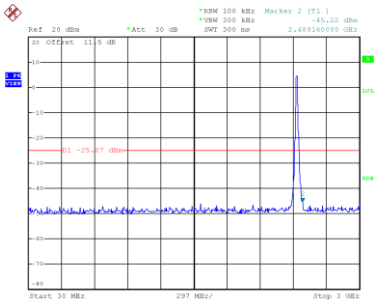
CH01 – 10th Harmonic of the fundamental frequency

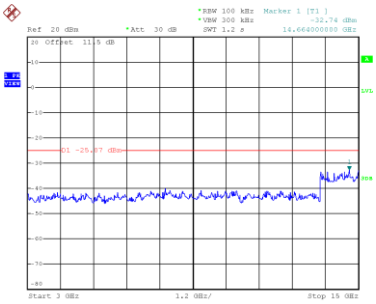


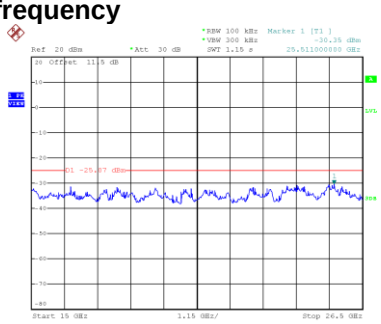




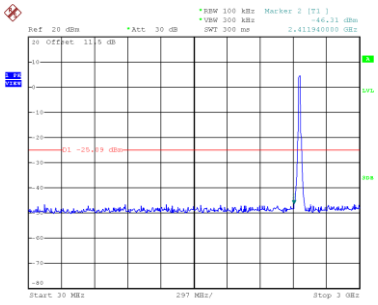
CH06 – 10th Harmonic of the fundamental frequency

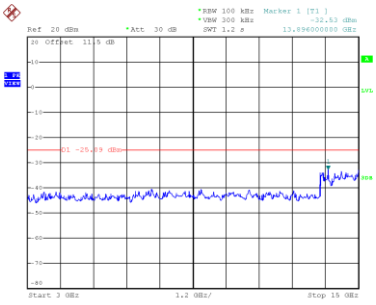


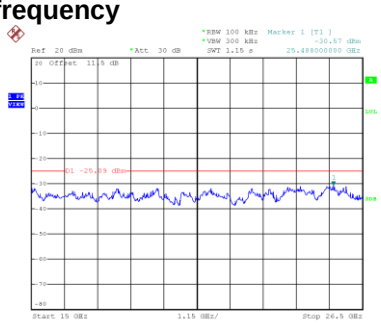




CH11 – 10th Harmonic of the fundamental frequency

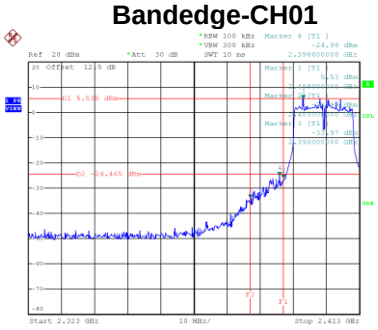




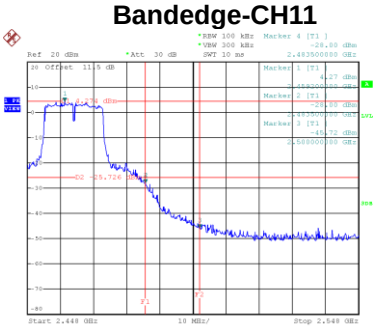


Test Mode	IEEE 802.11n(HT20)

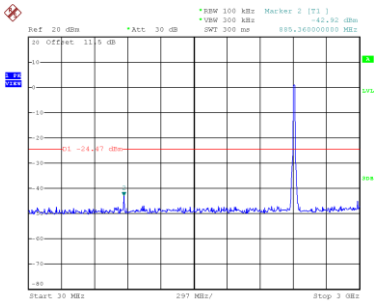
Bandedge-CH01

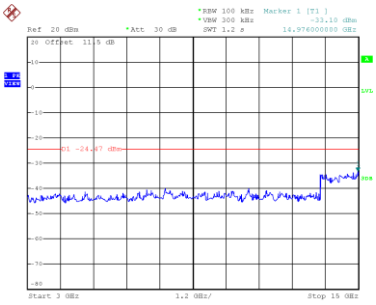


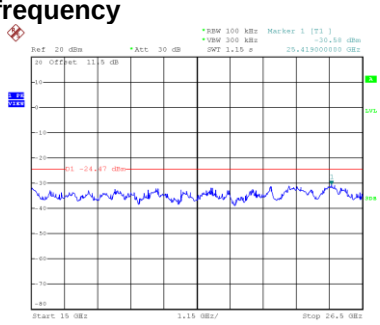
Bandedge-CH11



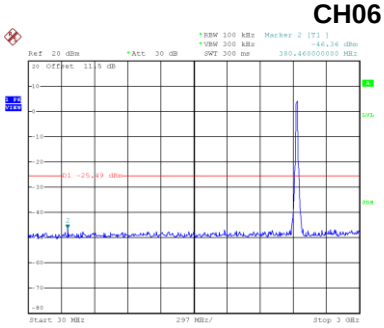
CH01 – 10th Harmonic of the fundamental frequency

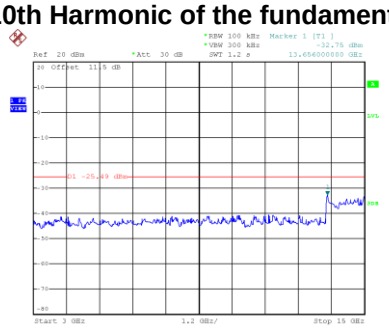


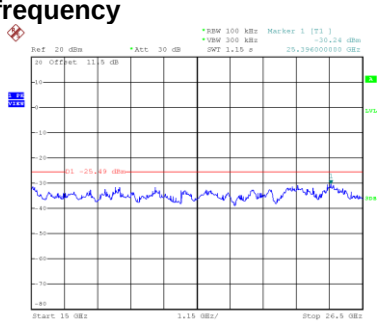




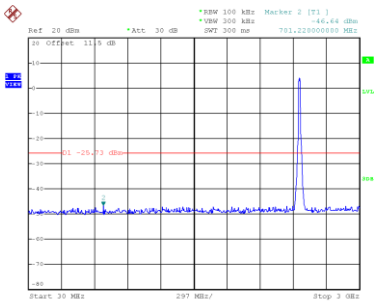
CH06 – 10th Harmonic of the fundamental frequency

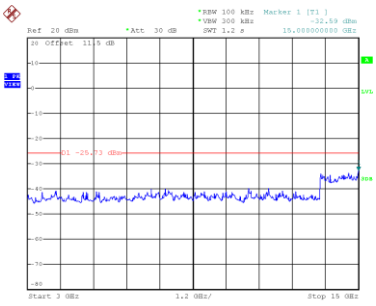


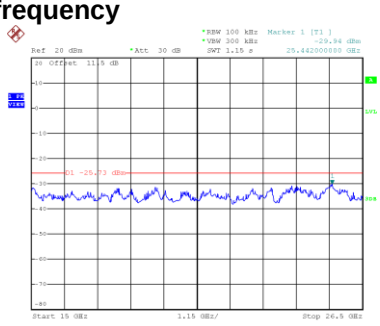




CH11 – 10th Harmonic of the fundamental frequency

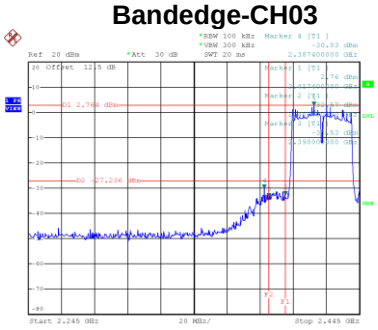




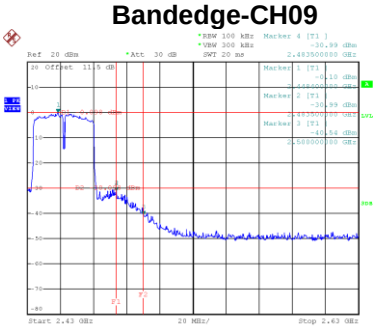


Test Mode	IEEE 802.11n(HT40)

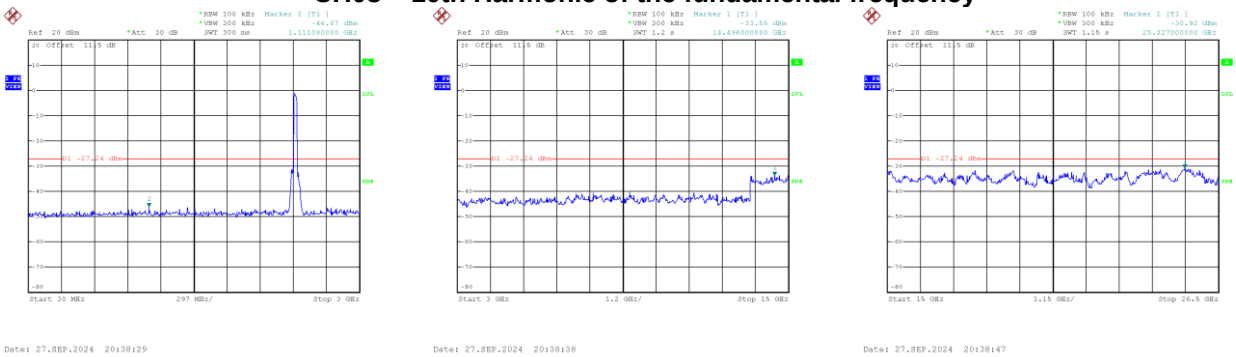
Bandedge-CH03



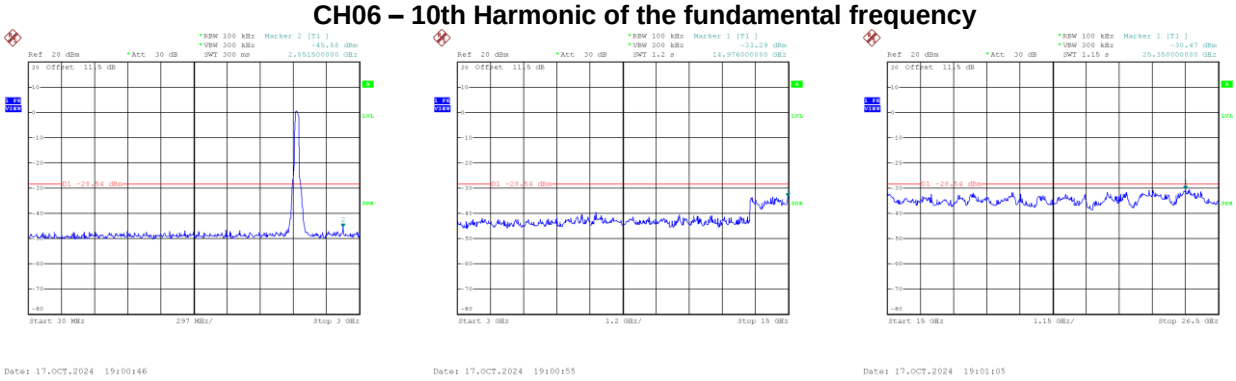
Bandedge-CH09



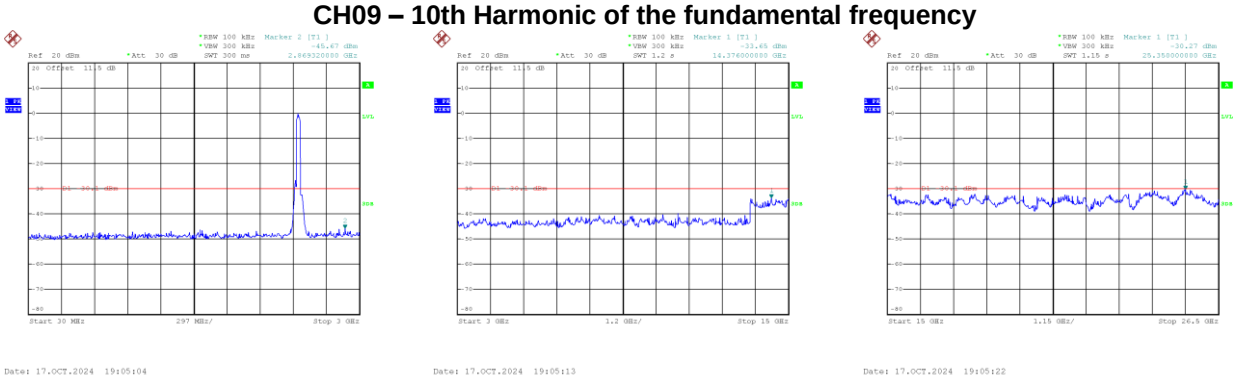
CH03 – 10th Harmonic of the fundamental frequency



CH06 – 10th Harmonic of the fundamental frequency



CH09 – 10th Harmonic of the fundamental frequency



End of Test Report