FCC Radio Test Report

FCC ID: G95UCW4060MCS

Report No.	:	BTL-FCCP-3-2306C197
Equipment	:	Set Top Box
Model Name	:	UCW4060MCS
Brand Name	:	Vantiva
Applicant	:	Vantiva USA LLC
Address	:	4855 Peachtree Industrial Blvd, Suite 200, Norcross, GA 30092, USA
Manufacturer	:	Vantiva USA LLC
Address	:	4855 Peachtree Industrial Blvd, Suite 200, Norcross, GA 30092, USA
Factory	:	PT PEGATRON TECHNOLOGY INDONESIA
Address	:	Jalan Beringin Lot 2/Lot 5, Kawasan industrial Batamindo, Kel Mukakuning Kec Sei Beduk, Kota Batam Kepulauan, Batam, 29433, Indonesia
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	:	2023/7/4
Date of Test	:	2023/7/18 ~ 2023/8/7
Issued Date	:	2023/8/15

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

Prepared by : Eddie Lee, Engineer

Approved by : Jerry Chuang, Supervisor

BTL Inc.

No.18, Ln. 171, Sec. 2, Jiuzong Rd., Neihu Dist., Taipei City 114, Taiwan

Tel: +886-2-2657-3299 Fax: +886-2-2657-3331 Web: www.newbtl.com Service mail: btl_qa@newbtl.com

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** shall have no liability for any declarations, inferences or generalizations drawn by the client or others from **BTL** issued reports.

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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.

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REVISION HISTORY

Report No.	Version	Description	Issued Date	Note
BTL-FCCP-3-2306C197	R00	Original Report.	2023/8/15	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	Pass	------
15.247(a)	Bandwidth	APPENDIX D	Pass	------
15.247(b)	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:
(1) ”N/A” denotes test is not applicable in this Test Report.
(2) The report format version is TP.1.1.1.

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:
No. 68-1, Ln. 169, Sec. 2, Datong Rd., Xizhi Dist., New Taipei City 221, Taiwan
(FCC DN: TW0659)

☐ C05 ☐ CB08 ☐ CB11 ☒ SR10 ☐ SR11

No. 72, Ln. 169, Sec. 2, Datong Rd., Xizhi Dist., New Taipei City 221, Taiwan
(FCC DN: TW0659)

☒ C06 ☒ CB21 ☐ CB22

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)
C06	CISPR	150 kHz ~ 30MHz	3.44

B. Radiated emissions test:

Test Site	Measurement Frequency Range	U (dB)
CB21	0.03 GHz ~ 0.2 GHz	4.17
	0.2 GHz ~ 1 GHz	4.72
	1 GHz ~ 6 GHz	5.21
	6 GHz ~ 18 GHz	5.51
	18 GHz ~ 26 GHz	3.69
	26 GHz ~ 40 GHz	4.23

C. Conducted test:

Test Item	U (dB)
Occupied Bandwidth	0.5334
Output power	0.3669
Power Spectral Density	0.6591
Conducted Spurious emissions	0.5416
Conducted Band edges	0.5348

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

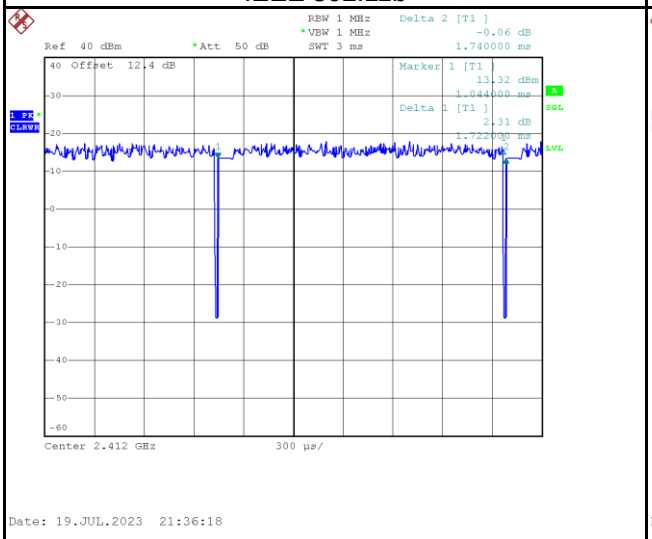
Test Item	Environment Condition	Test Voltage	Tested by
AC Power Line Conducted Emissions	26 °C, 52 %	AC 120V	Cora Lin
Radiated emissions below 1 GHz	24 °C, 53 %	AC 120V	Mark Wang
Radiated emissions above 1 GHz	22-27 °C, 50-60 %	AC 120V	Mark Wang
Bandwidth	24.2 °C, 40 %	AC 120V	Jay Tien
Output Power	24.1-25.4 °C, 48-50 %	AC 120V	Sean Huang
Power Spectral Density	24.1 °C, 50 %	AC 120V	Sean Huang
Antenna conducted Spurious Emission	24.2 °C, 40 %	AC 120V	Jay Tien

1.4 DUTY CYCLE

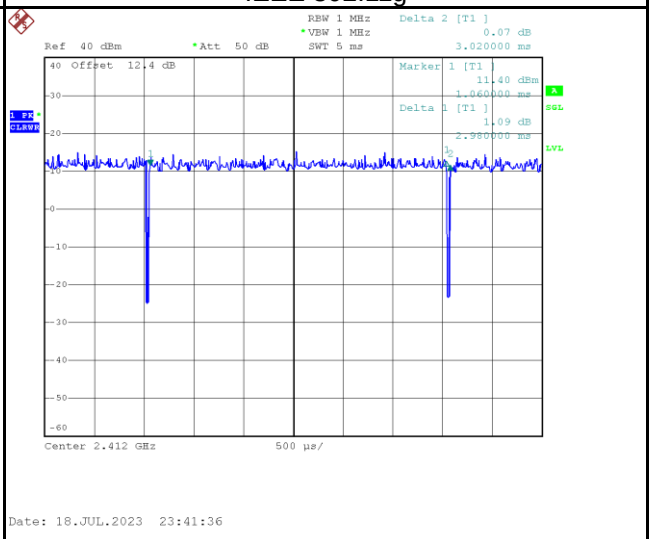
If duty cycle is ≥ 98 %, duty factor is not required.
If duty cycle is < 98 %, duty factor shall be considered.

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	1.722	1	1.722	1.740	98.97%	0.05
IEEE 802.11g	2.980	1	2.980	3.020	98.68%	0.06
IEEE 802.11n (HT20)	2.780	1	2.780	2.810	98.93%	0.05
IEEE 802.11ax (HE20)	2.120	1	2.120	2.160	98.15%	0.08

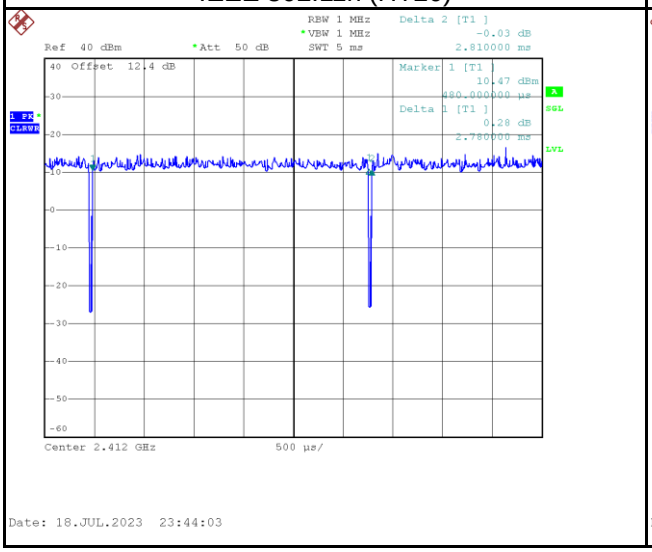
IEEE 802.11b



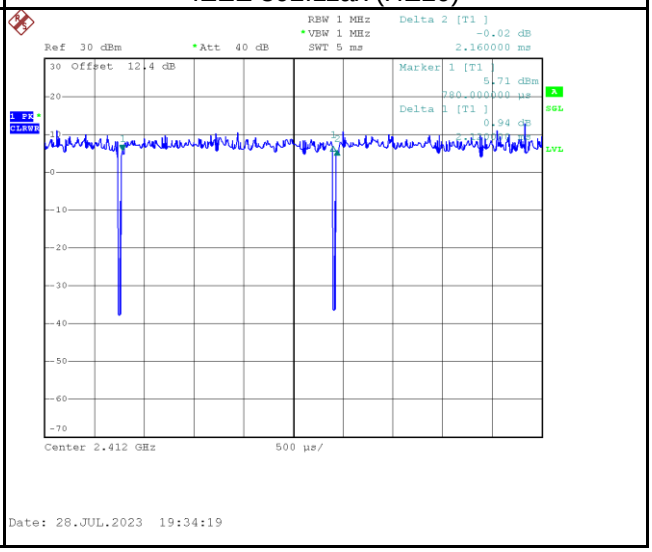
IEEE 802.11g



IEEE 802.11n (HT20)



IEEE 802.11ax (HE20)



2 GENERAL INFORMATION

2.1 DESCRIPTION OF EUT

Equipment	Set Top Box
Model Name	UCW4060MCS
Brand Name	Vantiva
Model Difference	N/A
Power Source	DC voltage supplied from AC/DC Adapter.
Power Rating	I/P: 120V~ 0.5A 60Hz O/P: 12V⎓1.5A 18W
Products Covered	1 * Adapter: CHICONY POWER TECHNOLOGY CO LTD / EPS10R4-15
HW Version	Rev B (LAB2)
SW Version	HC_2.0
Operation Band	2400 MHz ~ 2483.5 MHz
Operation Frequency	2412 MHz ~ 2462 MHz
Modulation Technology	IEEE 802.11b: DSSS IEEE 802.11g/n: OFDM IEEE 802.11ax: OFDMA
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 144.4 Mbps IEEE 802.11ax: up to 286.8 Mbps
Output Power Max. - Non Beamforming	IEEE 802.11b: 23.36 dBm (0.2168 W) IEEE 802.11g: 21.21 dBm (0.1321 W) IEEE 802.11n (HT20): 21.36 dBm (0.1368 W) IEEE 802.11ax (HE20): 21.45 dBm (0.1397 W)
Output Power Max. - Beamforming	IEEE 802.11n (HT20): 20.86 dBm (0.1219 W) IEEE 802.11ax (HE20): 20.80 dBm (0.1202 W)
Operating Software	Tera Term v4.97
Test Model	UCW4060MCS
Sample Status	Engineering Sample
EUT Modification(s)	N/A

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:

Channel	Frequency (MHz)	Channel	Frequency (MHz)	Channel	Frequency (MHz)
01	2412	06	2437	11	2462
02	2417	07	2442		
03	2422	08	2447		
04	2427	09	2452		
05	2432	10	2457		

(3) Table for Filed Antenna:

Ant.	Brand	Model Name	Antenna Type	Connector	Frequency (MHz)	Gain (dBi)
DB1	N/A	N/A	PIFA	I-PEX	2400-2483.5	2.72
DB2	N/A	N/A	PIFA	I-PEX	2400-2483.5	3.37

NOTE:

(a) For CDD: Directional Gain=2.83 dBi.

$$DirectionalGain = 10 \cdot \log\left[\frac{\sum_{j=1}^{N_{SS}}\left\{\sum_{k=1}^{N_{ANT}} g_{j,k}\right\}^2}{N_{ANT}}\right]$$

where

Each antenna is driven by no more than one spatial stream;

N_{SS} = the number of independent spatial streams of data;

N_{ANT} = the total number of antennas

$g_{j,k} = 10^{G_k/20}$ if the kth antenna is being fed by spatial stream j, or zero if it is not;

G_k is the gain in dBi of the kth antenna.

(b) For TXBF: Directional Gain=10log[$(10^{G1/20}+10^{G2/20}+...10^{GN/20})^2/N_{ANT}$]=5.57dBi.

(c) The antenna gain is provided by the manufacturer.

(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.

(5) Operating Mode and Antenna Configuration

Operating Mode \ TX Mode	1 TX (SISO)	2 TX (MIMO)
IEEE 802.11b	V (DB1 or DB2)	V (DB1+ DB2)
IEEE 802.11g	V (DB1 or DB2)	V (DB1+ DB2)
IEEE 802.11n (HT20)	V (DB1 or DB2)	V (DB1+ DB2)
IEEE 802.11ax (HE20)	V (DB1 or DB2)	V (DB1+ DB2)

2.2 TEST MODES

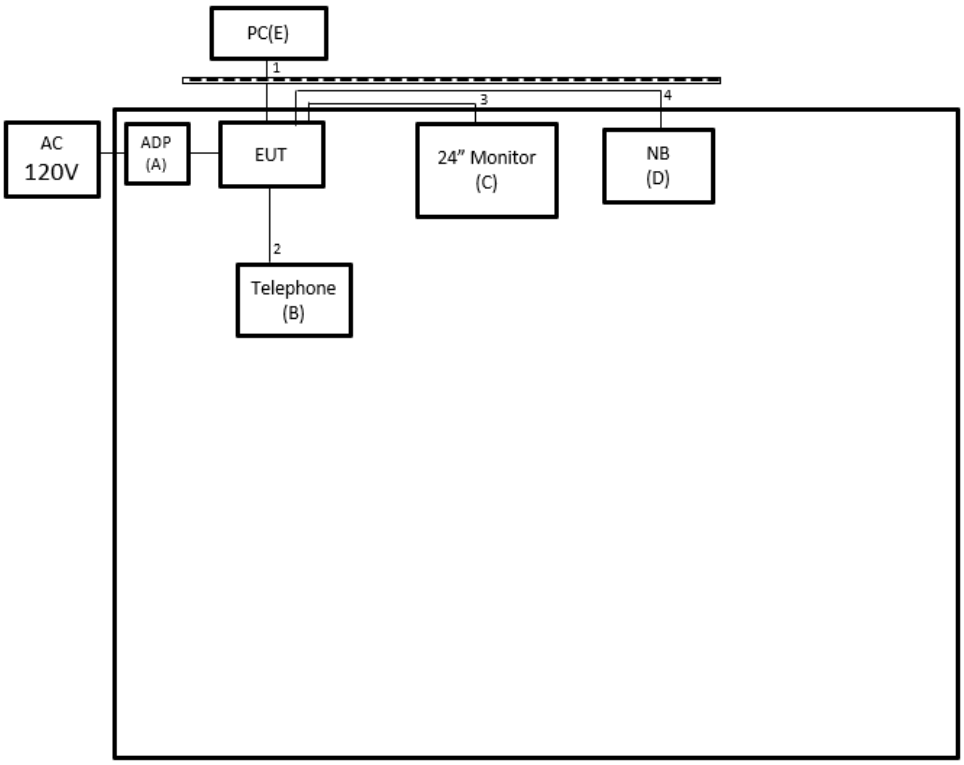
Test Items	Test mode	Channel	Note
AC power line conducted emissions	Normal/Idle	-	-
Transmitter Radiated Emissions (below 1GHz)	TX Mode_IEEE 802.11b	11	-
Transmitter Radiated Emissions (above 1GHz)	TX Mode_IEEE 802.11b	01/11	Bandedge
	TX Mode_IEEE 802.11g		
	TX Mode_IEEE 802.11n (HT20)		
	TX Mode_IEEE 802.11ax (HE20)		
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 802.11ax (HE20)		
Bandwidth & 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 802.11ax (HE20)		

NOTE:
(1) For radiated emission band edge test, both Vertical and Horizontal are evaluated, but only the worst case (Horizontal) is recorded.
(2) All X, Y and Z axes are evaluated, but only the worst case (X axis) is recorded.
(3) For IEEE 802.11ax modes, refer to TCB Workshop presentations on October 3, 2018, after evaluated, all testing are performed under fully loaded conditions (Full RU). In the test data, only the partially loaded conditions data are marked with tones.
(4) The measurements for Output Power are tested, the Non Beamforming and Beamforming are recorded in the report. The worst case is Non Beamforming and only the worst case is documented for other test items.

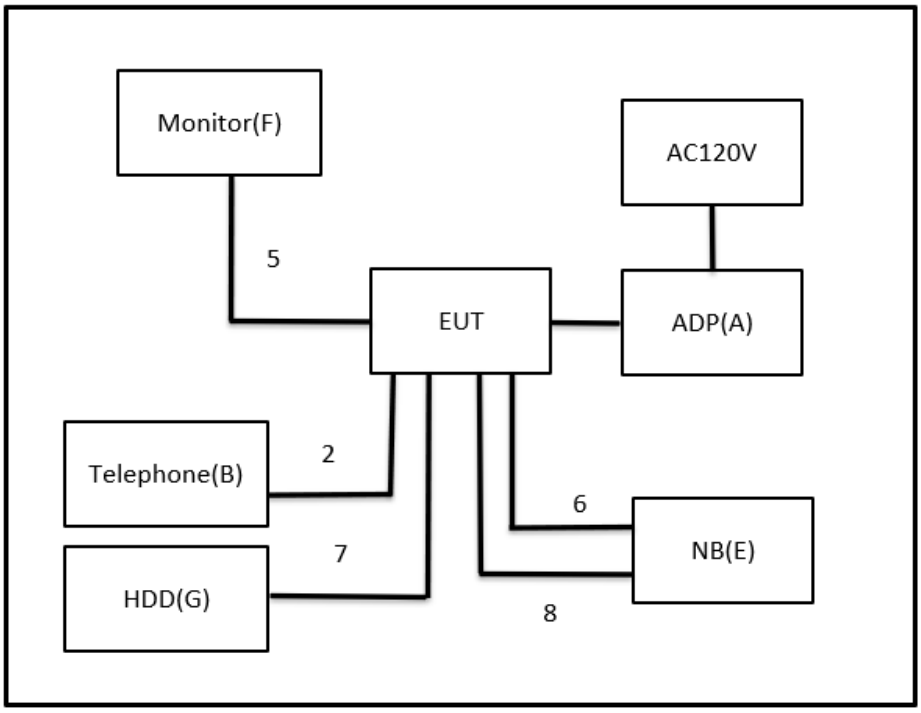
2.3 BLOCK DIAGRAM SHOWING THE CONFIGURATION OF SYSTEM TESTED

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

Item	Equipment	Brand	Model No.	Series No.	Remarks
A	ADAPTER	CHICONY POWER TECHNOLOGY CO LTD	EPS10R4-15	CS10E222AC260	Supplied by test requester
B	Telephone	Sweetone	RS-802HF	N/A	Furnished by test lab.
C	24” Monitor	DELL	P2415Qb	CN-0J1P7F-QDC00-7BH-1L19B-A06	Furnished by test lab.
D	NB	HP	TPN-I119	N/A	Furnished by test lab.
E	NB	Asus	B500-P45VA-0141A3230M	N/A	Furnished by test lab.
F	27” Monitor	DELL	U2720Q	CN-0834VF-WSL00-0B7-299L-A05	Furnished by test lab.
G	USB 3.0 HDD	WD	WDBC3C0010BSL-0B	WX81A88ALJUC	Furnished by test lab.

Item	Shielded	Ferrite Core	Length	Cable Type	Remarks
1	No	No	6m	RJ45 Cable	Furnished by test lab.
2	No	No	1m	RJ 11	Furnished by test lab.
3	No	No	1.7m	HDMI Cable	Furnished by test lab.
4	No	No	1.7m	HDMI Cable	Furnished by test lab.
5	No	No	1.8m	HDMI Cable	Furnished by test lab.
6	No	No	1m	RJ45 Cable	Furnished by test lab.
7	No	No	1m	USB3.0 TO USB	Furnished by test lab.
8	No	No	1m	HDMI Cable	Furnished by test lab.

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		Correct Factor		Measurement Value
38.22	+	3.45	=	41.67

Measurement Value		Limit Value		Margin Level
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

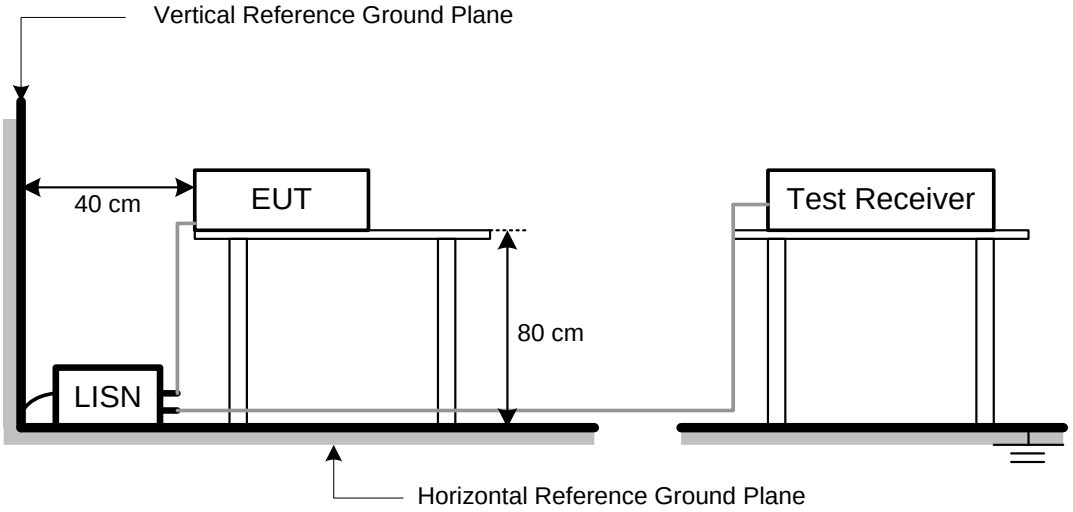
a. The EUT was placed 0.8 m above the horizontal ground plane with the EUT being connected to the power mains through a line impedance stabilization network (LISN).
All other support equipment were powered from an additional LISN(s).
The LISN provides 50 Ohm/50uH of impedance for the measuring instrument.
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		Correct Factor		Measurement Value
19.11	+	2.11	=	21.22

Measurement Value		Limit Value		Margin Level
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

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

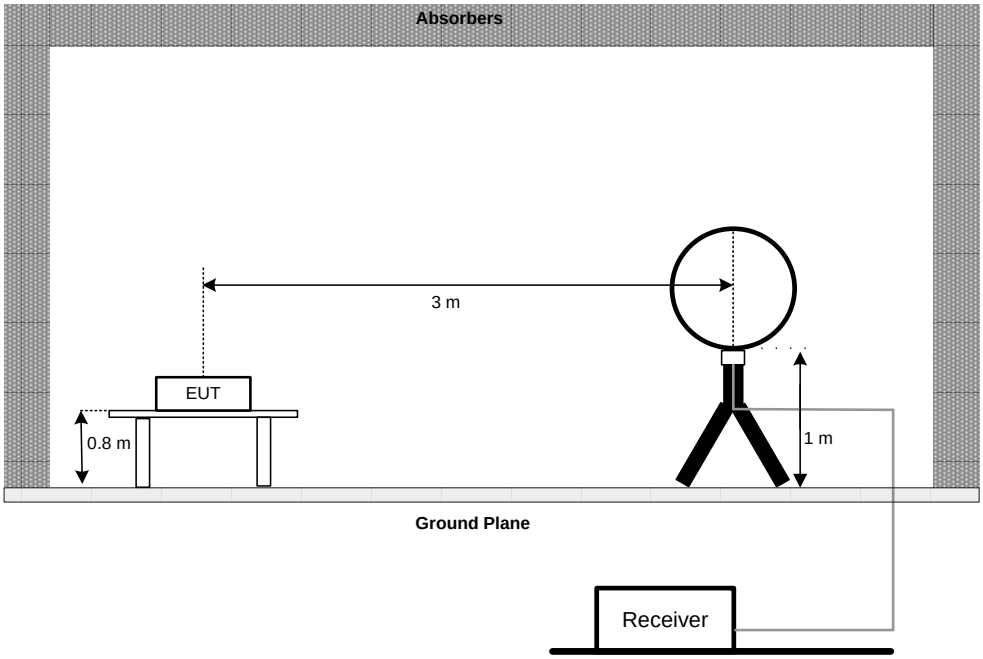
a. The measuring distance of 3 m shall be used for measurements. The EUT was placed on the top of a rotating table 0.8 meter above the ground at a 3 meter semi-anechoic chamber. The table was rotated 360 degrees to determine the position of the highest radiation.(below 1GHz)
b. The measuring distance 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

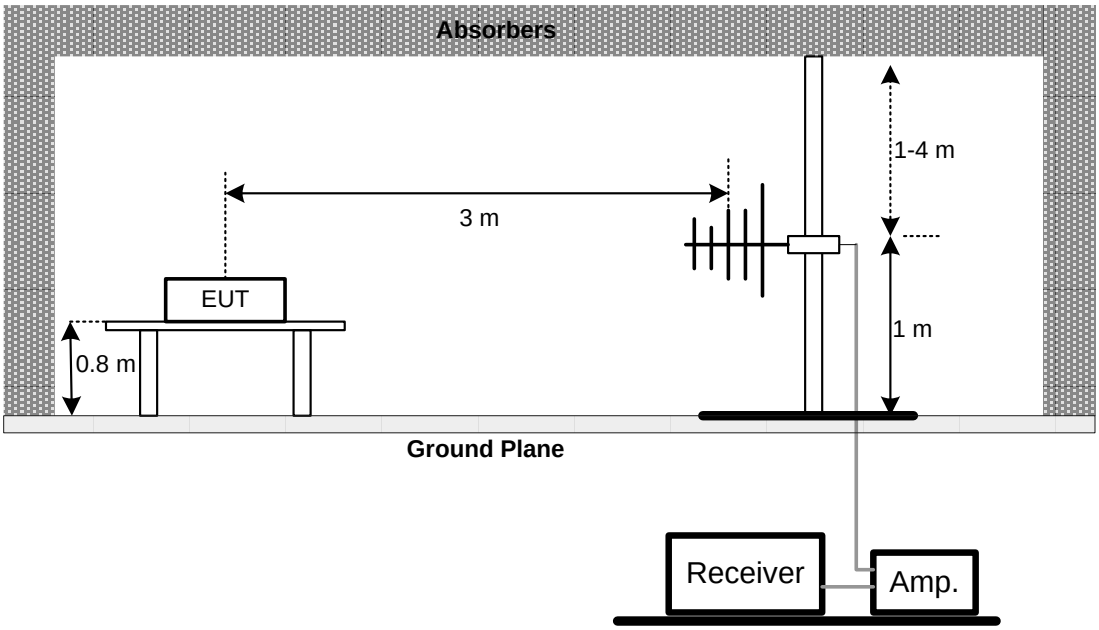
No deviation.

4.4 TEST SETUP

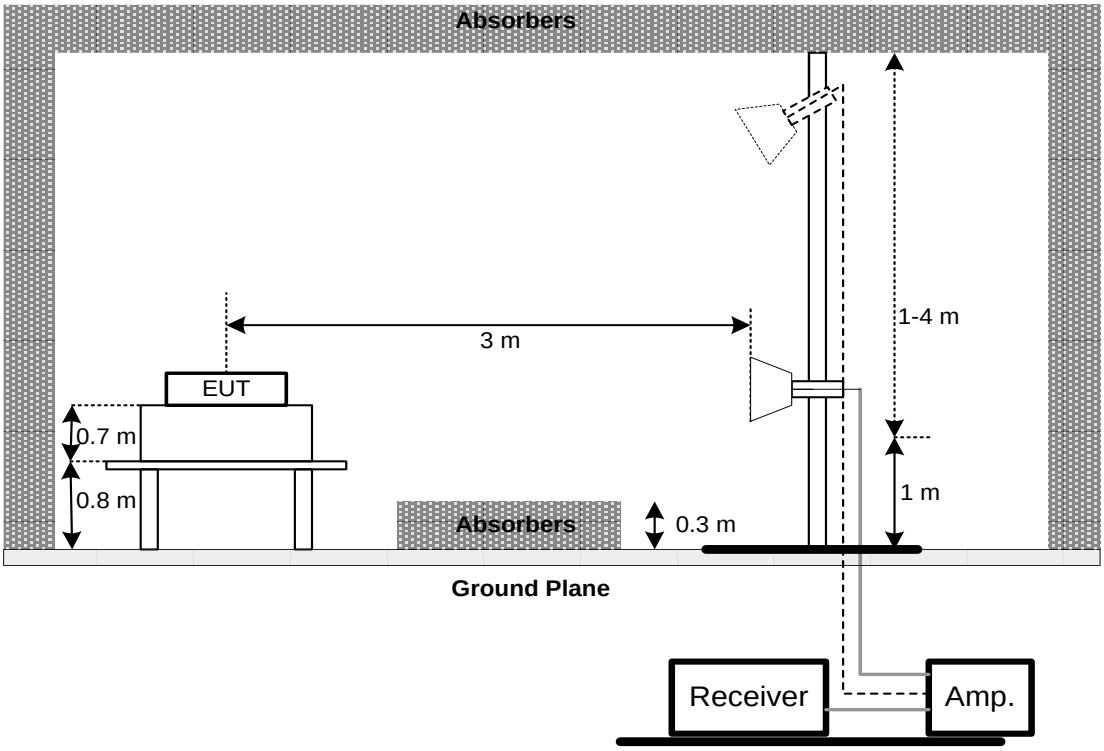
9 kHz to 30 MHz



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 – BELOW 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

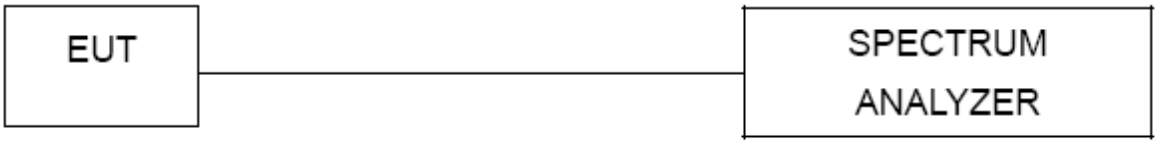
5.2 TEST PROCEDURE

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 OUTPUT POWER TEST

6.1 LIMIT

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

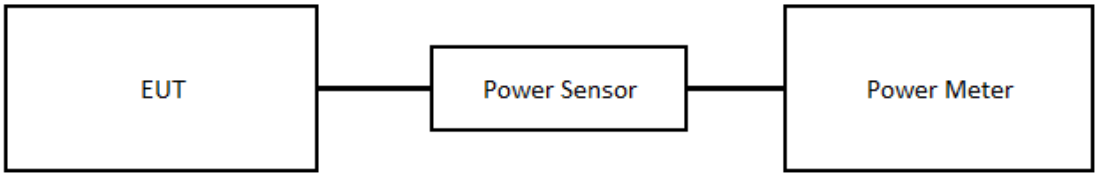
6.2 TEST PROCEDURE

a. The EUT was directly connected to the power meter 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)

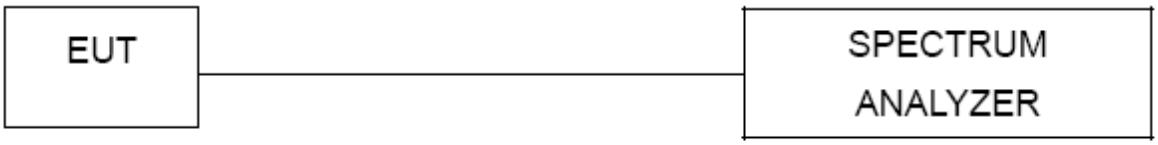
7.2 TEST PROCEDURE

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.

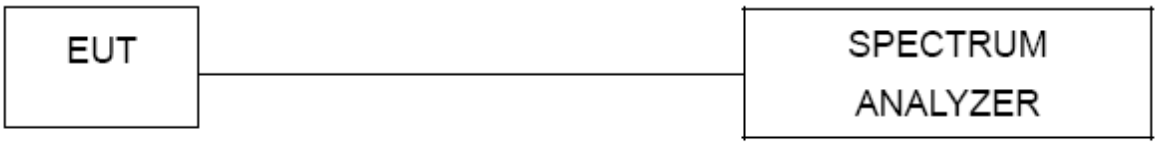
8.2 TEST PROCEDURE

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	101497	2023/5/18	2024/5/17
2	Test Cable	EMCI	EMC400-BM-BM-5000	170501	2022/8/3	2023/8/3
3	EMI Test Receiver	R&S	ESR3	102950	2023/4/12	2024/4/11
4	Measurement Software	EZ	EZ_EMC (Version 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	Preamplifier	EMCI	EMC330N	980850	2022/9/19	2023/9/18
2	Preamplifier	EMCI	EMC118A45SE	980819	2023/3/7	2024/3/6
3	Pre-Amplifier	EMCI	EMC184045SE	980907	2022/9/28	2023/9/27
4	Preamplifier	EMCI	EMC001340	980579	2022/9/30	2023/9/29
5	Test Cable	EMCI	EMC104-SM-1000	180809	2023/7/10	2024/7/9
6	Test Cable	EMCI	EMC104-SM-SM-3000	220322	2023/3/14	2024/3/13
7	Test Cable	EMCI	EMC104-SM-SM-7000	220324	2023/3/14	2024/3/13
8	EXA Signal Analyzer	keysight	N9020B	MY57120120	2023/2/24	2024/2/23
9	Loop Ant	Electro-Metrics	EMCI-LPA600	291	2022/9/19	2023/9/18
10	Horn Antenna	RFSPIN	DRH18-E	211202A18EN	2023/5/12	2024/5/11
11	Horn Ant	Schwarzbeck	BBHA 9170D	1136	2023/5/12	2024/5/11
12	Log-bicon Antenna	Schwarzbeck	VULB9168	1369	2023/5/9	2024/5/8
13	6dB Attenuator	EMCI	EMCI-N-6-06	AT-06001	2023/5/9	2024/5/8
14	Test Cable	EMCI	EMC101G-KM-KM-3000	220329	2023/3/14	2024/3/13
15	Test Cable	EMCI	EMC102-KM-KM-1000	220327	2023/3/14	2024/3/13
16	Measurement Software	EZ	EZ_EMC (Version 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 40	100129	2023/3/27	2024/3/26

Output Power						
Item	Kind of Equipment	Manufacturer	Type No.	Serial No.	Calibrated Date	Calibrated Until
1	Power Meter	Anritsu	ML2495A	1128008	2023/5/12	2024/5/11
2	Power Sensor	Anritsu	MA2411B	1126001	2023/5/12	2024/5/11

Power Spectral Density						
Item	Kind of Equipment	Manufacturer	Type No.	Serial No.	Calibrated Date	Calibrated Until
1	Spectrum Analyzer	R&S	FSP 40	100129	2023/3/27	2024/3/26

Antenna conducted Spurious Emission						
Item	Kind of Equipment	Manufacturer	Type No.	Serial No.	Calibrated Date	Calibrated Until
1	Spectrum Analyzer	R&S	FSP 40	100129	2023/3/27	2024/3/26

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

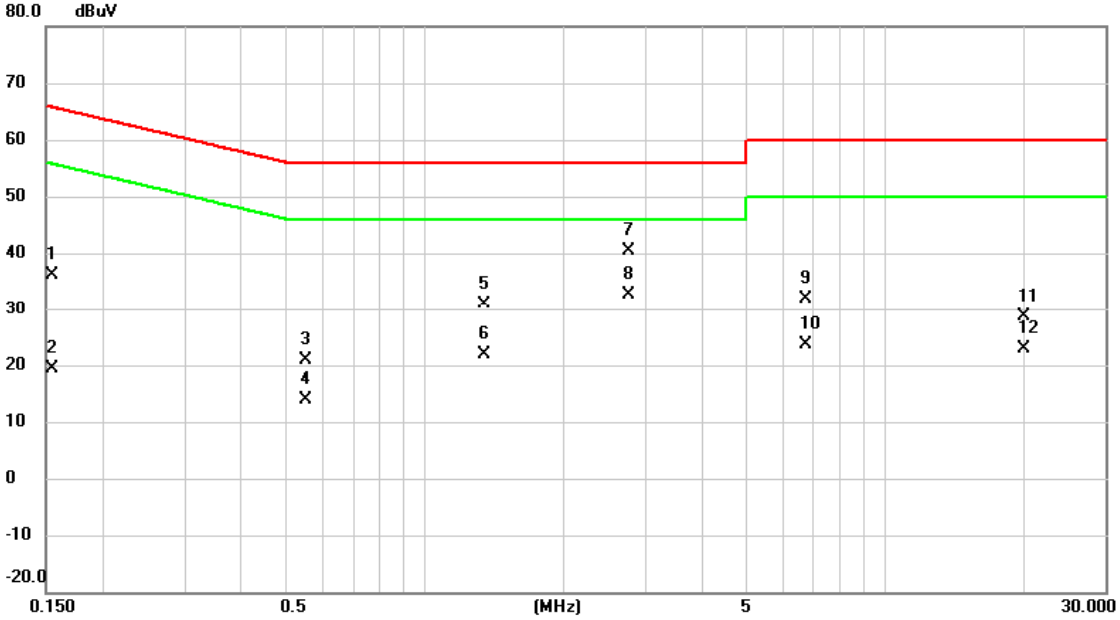
Please refer to document Appendix No.: TP-2306C197-FCCP-1 (APPENDIX-TEST PHOTOS).

11 EUT PHOTOS

Please refer to document Appendix No.: EP-2306C197-1 (APPENDIX-EUT PHOTOS).

APPENDIX A AC POWER LINE CONDUCTED EMISSIONS

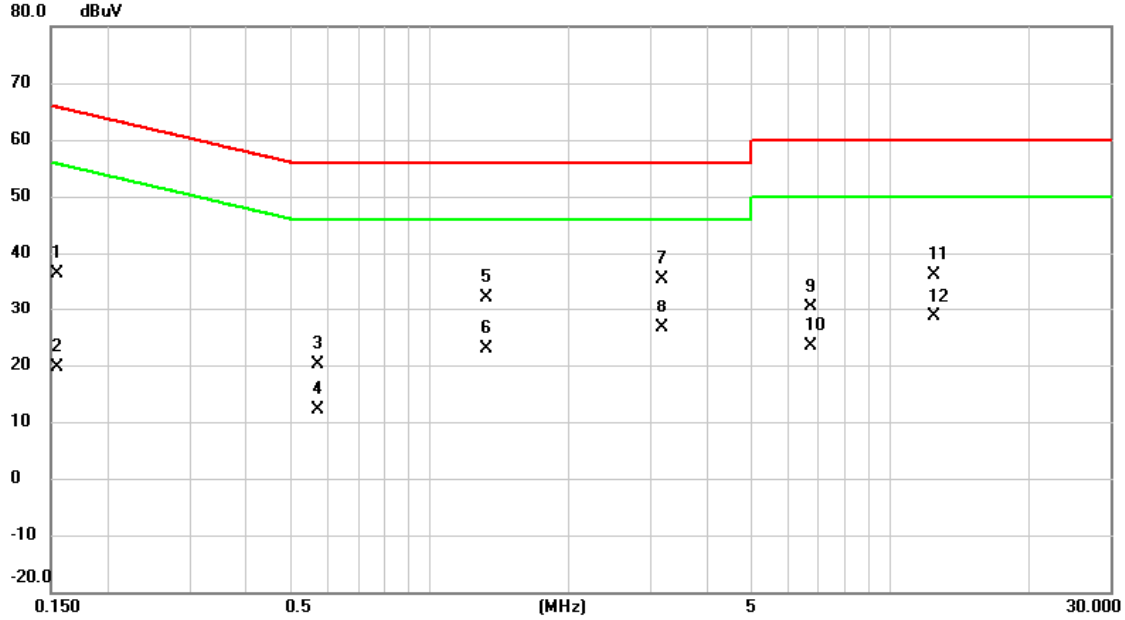
Test Mode	Normal	Tested Date	2023/7/11
Test Frequency	-	Phase	Line



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Margin		
		MHz	dBuV	dB	dBuV	dBuV	dB	Detector	Comment
1		0.1544	36.12	0.03	36.15	65.76	-29.61	QP	
2		0.1544	19.35	0.03	19.38	55.76	-36.38	AVG	
3		0.5527	20.85	0.05	20.90	56.00	-35.10	QP	
4		0.5527	13.95	0.05	14.00	46.00	-32.00	AVG	
5		1.3447	30.85	0.06	30.91	56.00	-25.09	QP	
6		1.3447	21.88	0.06	21.94	46.00	-24.06	AVG	
7		2.7577	40.21	0.11	40.32	56.00	-15.68	QP	
8	*	2.7577	32.46	0.11	32.57	46.00	-13.43	AVG	
9		6.7222	31.67	0.17	31.84	60.00	-28.16	QP	
10		6.7222	23.39	0.17	23.56	50.00	-26.44	AVG	
11		20.0220	28.24	0.29	28.53	60.00	-31.47	QP	
12		20.0220	22.47	0.29	22.76	50.00	-27.24	AVG	

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

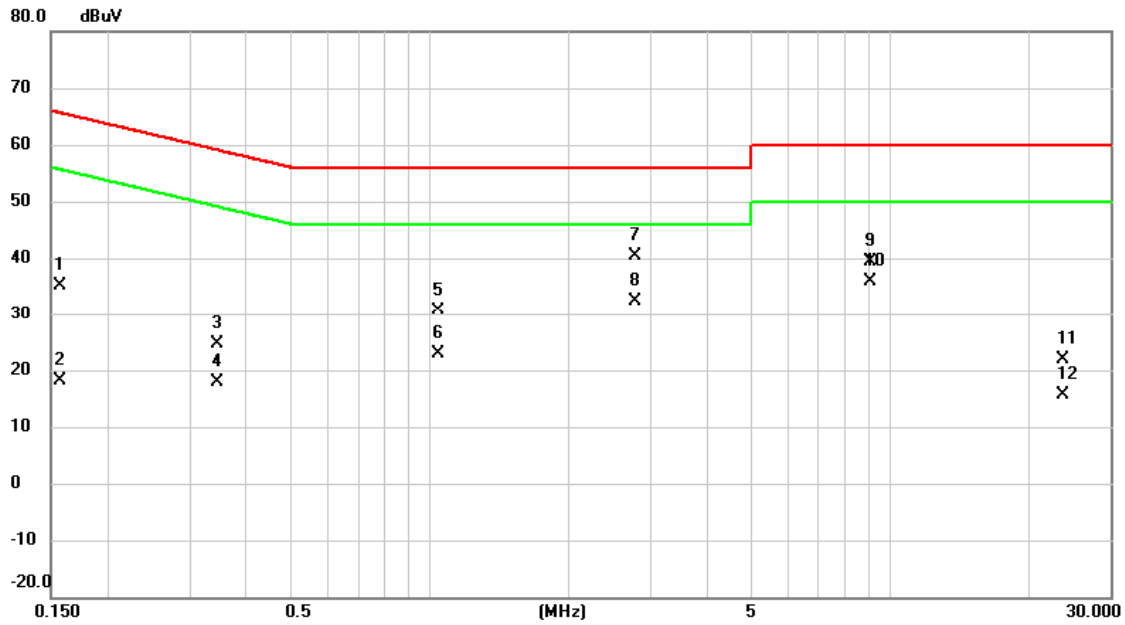
Test Mode	Normal	Tested Date	2023/7/11
Test Frequency	-	Phase	Neutral



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Margin		
		MHz	dBuV	dB	dBuV	dBuV	dB	Detector	Comment
1		0.1545	36.25	0.03	36.28	65.75	-29.47	QP	
2		0.1545	19.54	0.03	19.57	55.75	-36.18	AVG	
3		0.5707	20.01	0.05	20.06	56.00	-35.94	QP	
4		0.5707	12.03	0.05	12.08	46.00	-33.92	AVG	
5		1.3223	31.95	0.06	32.01	56.00	-23.99	QP	
6		1.3223	22.70	0.06	22.76	46.00	-23.24	AVG	
7		3.1830	35.31	0.11	35.42	56.00	-20.58	QP	
8	*	3.1830	26.46	0.11	26.57	46.00	-19.43	AVG	
9		6.7470	30.18	0.17	30.35	60.00	-29.65	QP	
10		6.7470	23.15	0.17	23.32	50.00	-26.68	AVG	
11		12.4103	36.02	0.21	36.23	60.00	-23.77	QP	
12		12.4103	28.48	0.21	28.69	50.00	-21.31	AVG	

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

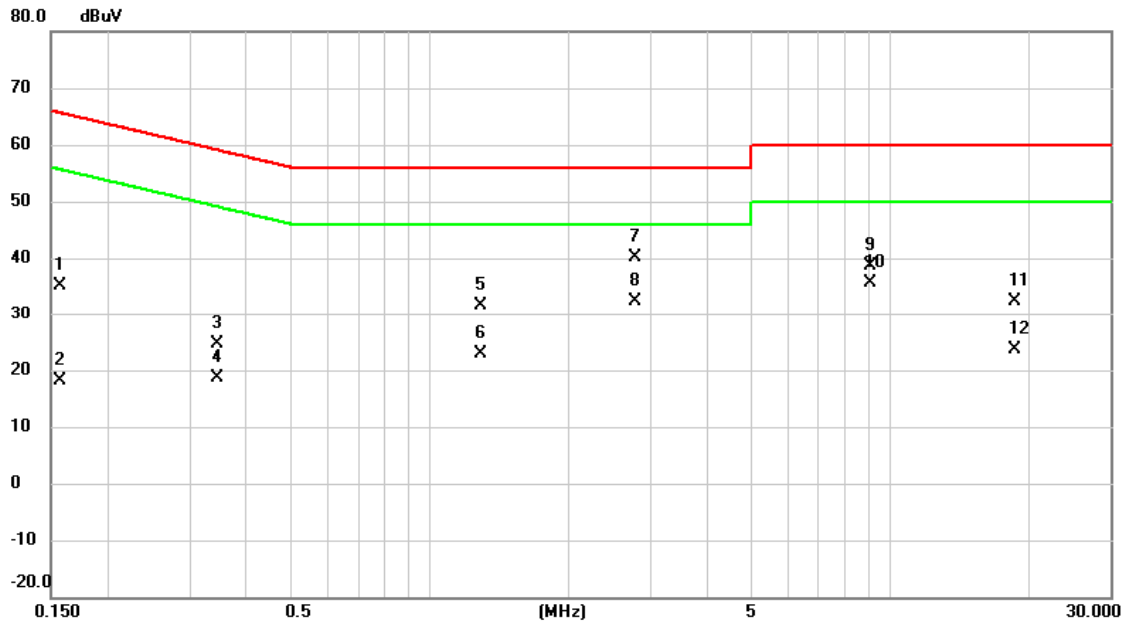
Test Mode	Idle	Tested Date	2023/7/11
Test Frequency	-	Phase	Line



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Margin		
		MHz	dBuV	dB	dBuV	dBuV	dB	Detector	Comment
1		0.1567	35.01	0.03	35.04	65.64	-30.60	QP	
2		0.1567	18.00	0.03	18.03	55.64	-37.61	AVG	
3		0.3457	24.67	0.04	24.71	59.07	-34.36	QP	
4		0.3457	17.79	0.04	17.83	49.07	-31.24	AVG	
5		1.0410	30.59	0.05	30.64	56.00	-25.36	QP	
6		1.0410	22.72	0.05	22.77	46.00	-23.23	AVG	
7		2.7870	40.35	0.11	40.46	56.00	-15.54	QP	
8	*	2.7870	32.38	0.11	32.49	46.00	-13.51	AVG	
9		9.0420	39.15	0.18	39.33	60.00	-20.67	QP	
10		9.0420	35.76	0.18	35.94	50.00	-14.06	AVG	
11		23.6602	21.60	0.31	21.91	60.00	-38.09	QP	
12		23.6602	15.37	0.31	15.68	50.00	-34.32	AVG	

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

Test Mode	Idle	Tested Date	2023/7/11
Test Frequency	-	Phase	Neutral

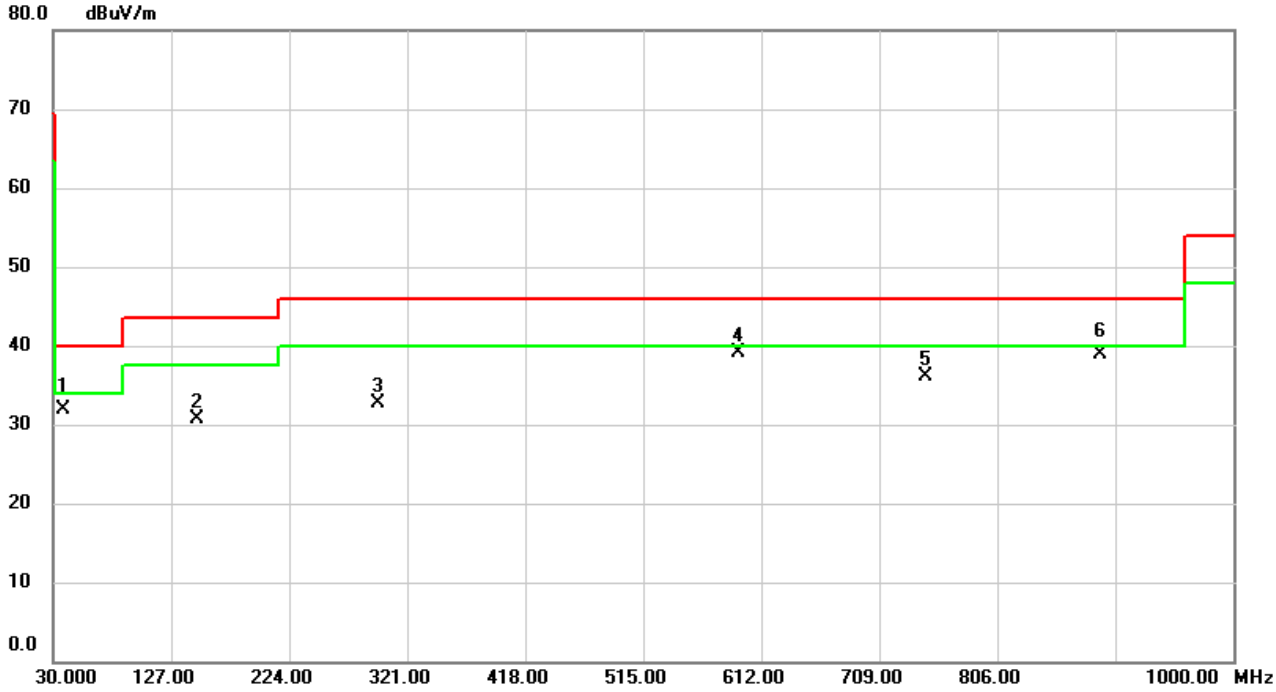


No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Margin		
		MHz	dBuV	dB	dBuV	dBuV	dB	Detector	Comment
1		0.1567	35.04	0.03	35.07	65.64	-30.57	QP	
2		0.1567	18.12	0.03	18.15	55.64	-37.49	AVG	
3		0.3457	24.67	0.04	24.71	59.07	-34.36	QP	
4		0.3457	18.68	0.04	18.72	49.07	-30.35	AVG	
5		1.2907	31.61	0.06	31.67	56.00	-24.33	QP	
6		1.2907	22.73	0.06	22.79	46.00	-23.21	AVG	
7		2.7870	39.98	0.11	40.09	56.00	-15.91	QP	
8	*	2.7870	32.28	0.11	32.39	46.00	-13.61	AVG	
9		9.0420	38.56	0.18	38.74	60.00	-21.26	QP	
10		9.0420	35.54	0.18	35.72	50.00	-14.28	AVG	
11		18.6315	32.07	0.27	32.34	60.00	-27.66	QP	
12		18.6315	23.46	0.27	23.73	50.00	-26.27	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

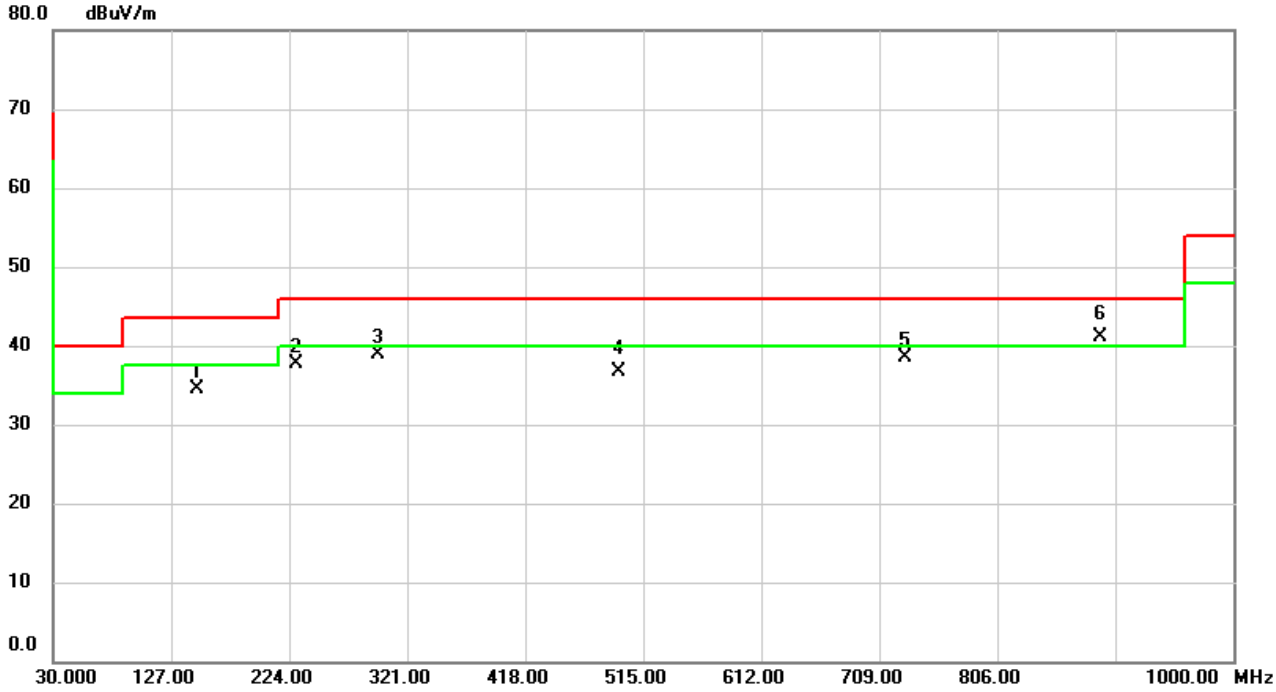
Test Mode	IEEE 802.11b	Test Date	2023/7/28
Test Frequency	2462MHz	Polarization	Vertical
Temp	24°C	Hum.	53%



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1		38.5360	43.80	-11.85	31.95	40.00	-8.05	QP	
2		148.3723	42.67	-11.87	30.80	43.50	-12.70	peak	
3		296.6853	44.01	-11.28	32.73	46.00	-13.27	peak	
4	*	593.4083	43.23	-4.04	39.19	46.00	-6.81	peak	
5		746.6360	37.49	-1.43	36.06	46.00	-9.94	peak	
6		890.1313	38.38	0.44	38.82	46.00	-7.18	QP	

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

Test Mode	IEEE 802.11b	Test Date	2023/7/28
Test Frequency	2462MHz	Polarization	Horizontal
Temp	24°C	Hum.	53%

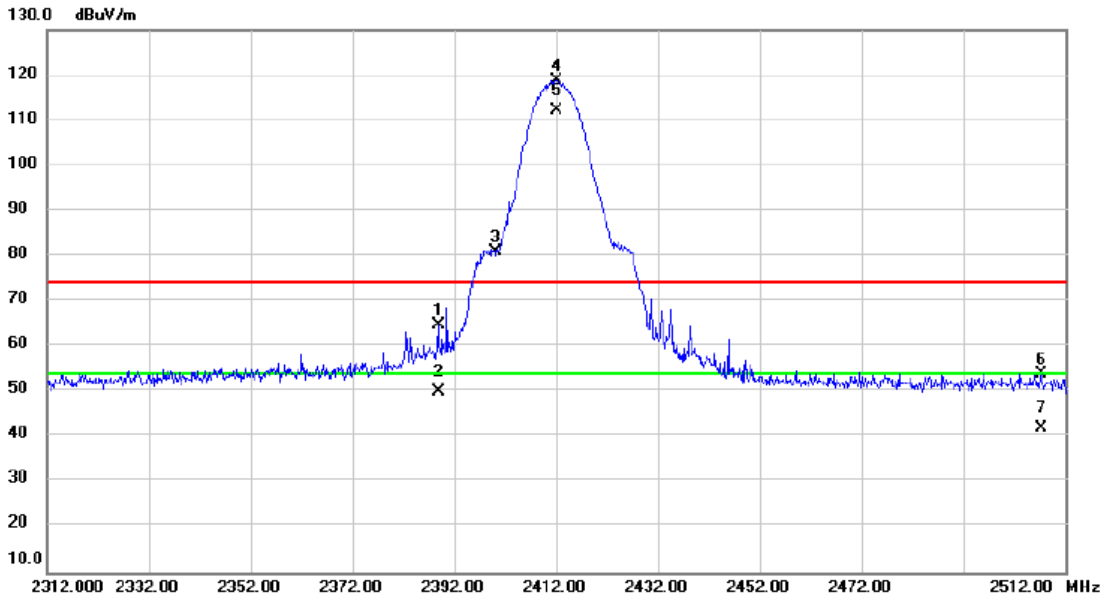


No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1		148.3400	46.44	-11.88	34.56	43.50	-8.94	peak	
2		230.2403	52.21	-14.49	37.72	46.00	-8.28	peak	
3		296.6853	50.17	-11.28	38.89	46.00	-7.11	peak	
4		494.5007	43.12	-6.33	36.79	46.00	-9.21	QP	
5		730.2753	40.40	-1.81	38.59	46.00	-7.41	peak	
6	*	890.1637	40.70	0.44	41.14	46.00	-4.86	QP	

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

APPENDIX C RADIATED EMISSIONS - ABOVE 1 GHZ

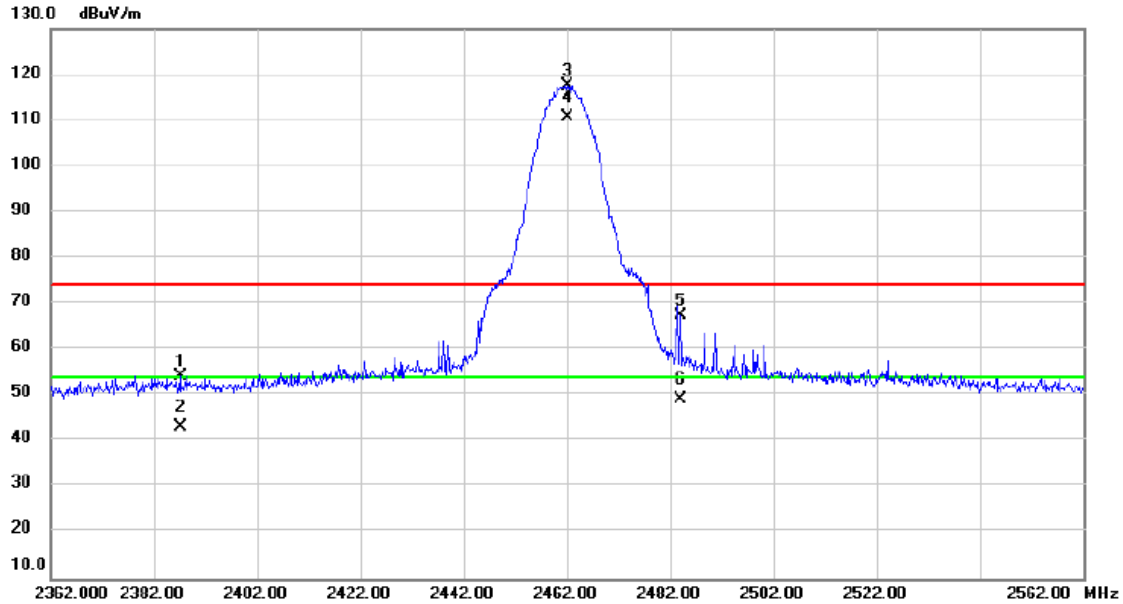
Test Mode	IEEE 802.11b	Test Date	2023/8/4
Test Frequency	2412MHz	Polarization	Horizontal
Temp	22°C	Hum.	51%



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Margin		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1		2388.820	70.25	-5.58	64.67	74.00	-9.33	peak	
2		2388.820	55.52	-5.58	49.94	54.00	-4.06	AVG	
3	X	2400.000	86.47	-5.56	80.91	74.00	6.91	peak	No Limit
4	X	2412.000	124.4	-5.53	118.89	74.00	44.89	peak	No Limit
5	*	2412.000	117.5	-5.53	112.06	54.00	58.06	AVG	No Limit
6		2507.273	59.40	-5.35	54.05	74.00	-19.95	peak	
7		2507.273	47.16	-5.35	41.81	54.00	-12.19	AVG	

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

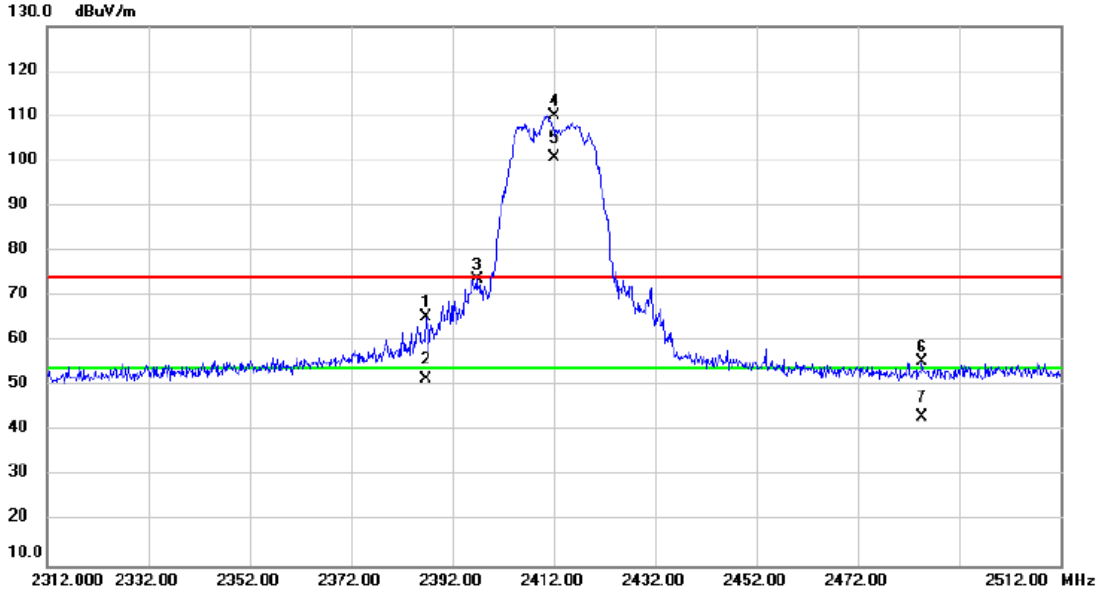
Test Mode	IEEE 802.11b	Test Date	2023/8/4
Test Frequency	2462MHz	Polarization	Horizontal
Temp	22°C	Hum.	51%



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Margin		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1		2387.120	59.88	-5.58	54.30	74.00	-19.70	peak	
2		2387.120	48.88	-5.58	43.30	54.00	-10.70	AVG	
3	X	2462.000	123.1	-5.45	117.69	74.00	43.69	peak	No Limit
4	*	2462.000	116.1	-5.45	110.66	54.00	56.66	AVG	No Limit
5		2484.100	72.75	-5.42	67.33	74.00	-6.67	peak	
6		2484.100	54.57	-5.42	49.15	54.00	-4.85	AVG	

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

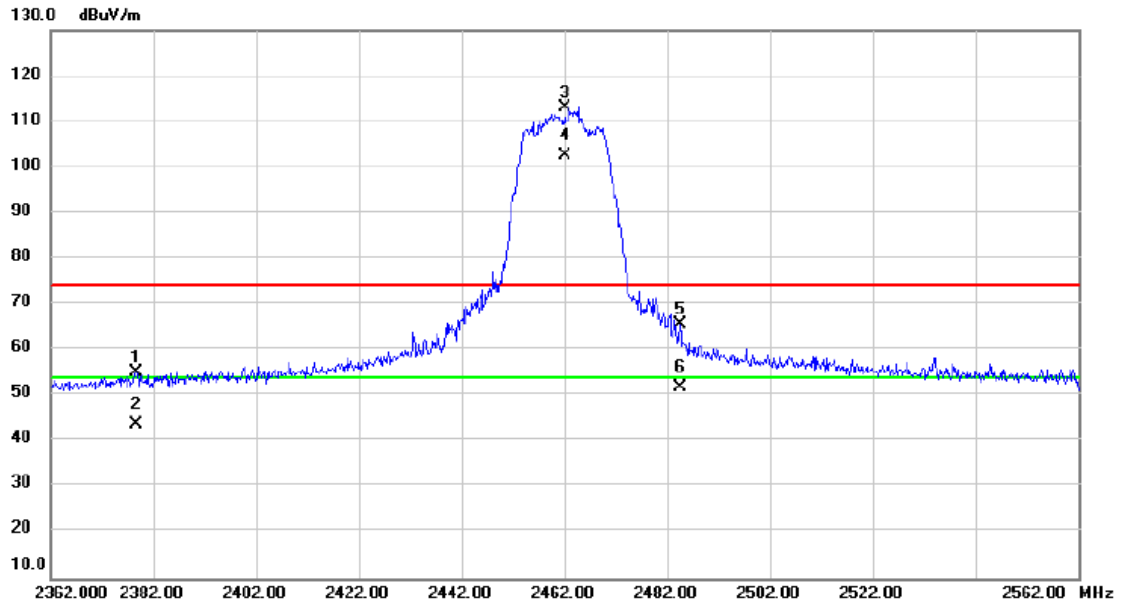
Test Mode	IEEE 802.11g	Test Date	2023/8/4
Test Frequency	2412MHz	Polarization	Horizontal
Temp	22°C	Hum.	51%



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Margin		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1		2386.673	70.86	-5.58	65.28	74.00	-8.72	peak	
2		2386.673	57.25	-5.58	51.67	54.00	-2.33	AVG	
3		2396.913	79.38	-5.56	73.82	74.00	-0.18	peak	No Limit
4	X	2412.000	115.4	-5.53	109.96	74.00	35.96	peak	No Limit
5	*	2412.000	106.2	-5.53	100.73	54.00	46.73	AVG	No Limit
6		2484.773	60.76	-5.40	55.36	74.00	-18.64	peak	
7		2484.773	48.52	-5.40	43.12	54.00	-10.88	AVG	

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

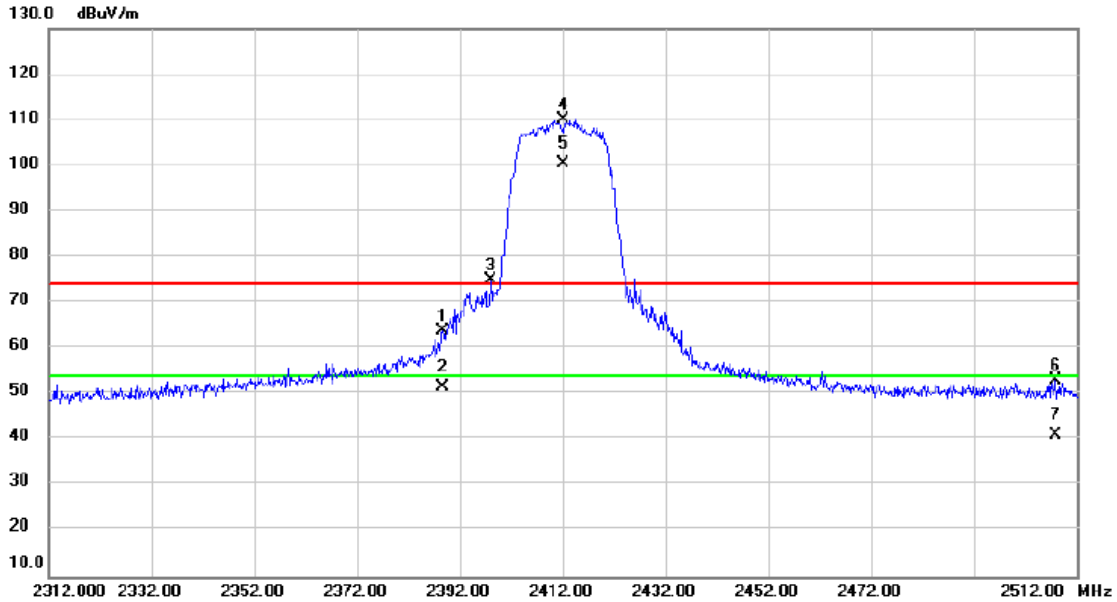
Test Mode	IEEE 802.11g	Test Date	2023/8/4
Test Frequency	2462MHz	Polarization	Horizontal
Temp	22°C	Hum.	51%



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Margin		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1		2378.787	60.62	-5.59	55.03	74.00	-18.97	peak	
2		2378.787	49.40	-5.59	43.81	54.00	-10.19	AVG	
3	X	2462.000	118.6	-5.45	113.20	74.00	39.20	peak	No Limit
4	*	2462.000	107.9	-5.45	102.52	54.00	48.52	AVG	No Limit
5		2484.460	71.11	-5.40	65.71	74.00	-8.29	peak	
6		2484.460	57.19	-5.40	51.79	54.00	-2.21	AVG	

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

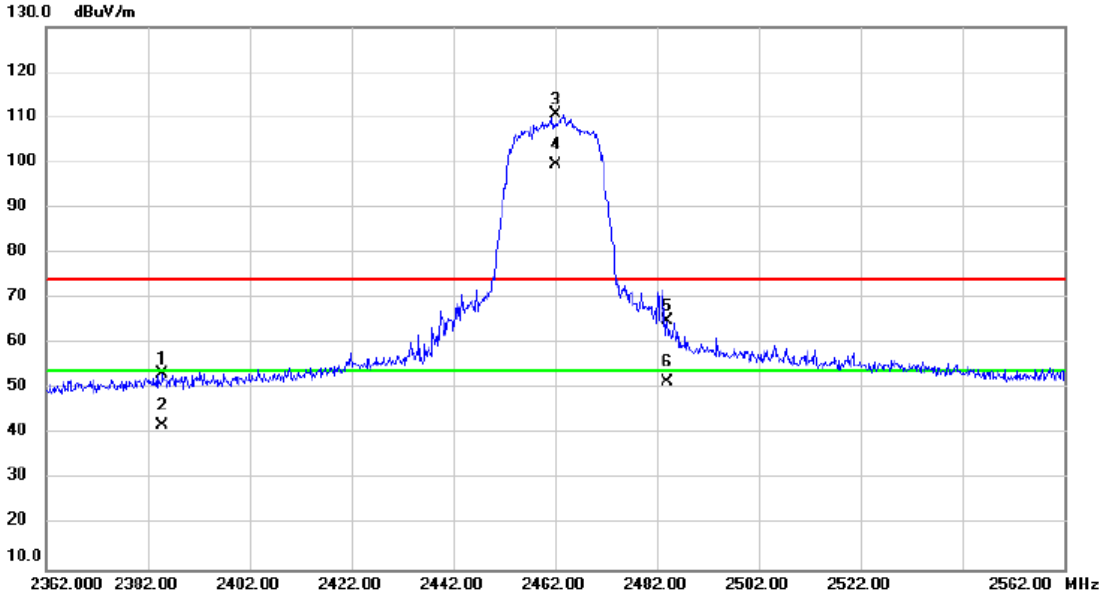
Test Mode	IEEE 802.11n (HT20)	Test Date	2023/8/4
Test Frequency	2412MHz	Polarization	Horizontal
Temp	22°C	Hum.	51%



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Margin		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1		2388.627	69.53	-5.58	63.95	74.00	-10.05	peak	
2		2388.627	57.20	-5.58	51.62	54.00	-2.38	AVG	
3	X	2398.000	80.37	-5.56	74.81	74.00	0.81	peak	No Limit
4	X	2412.000	115.6	-5.53	110.12	74.00	36.12	peak	No Limit
5	*	2412.000	105.9	-5.53	100.37	54.00	46.37	AVG	No Limit
6		2507.867	58.30	-5.35	52.95	74.00	-21.05	peak	
7		2507.867	46.38	-5.35	41.03	54.00	-12.97	AVG	

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

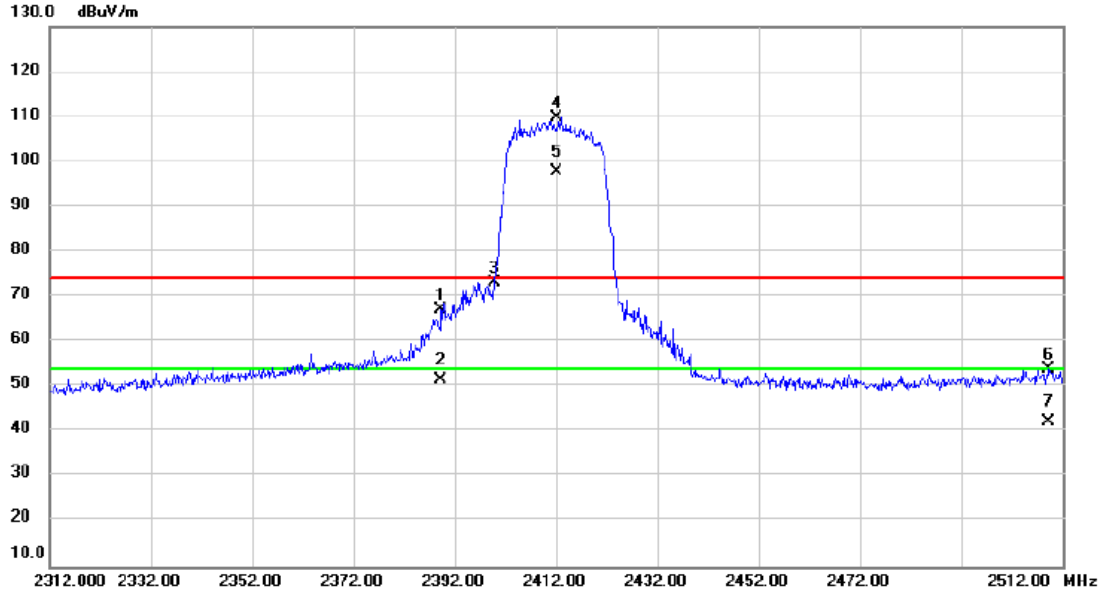
Test Mode	IEEE 802.11n (HT20)	Test Date	2023/8/4
Test Frequency	2462MHz	Polarization	Horizontal
Temp	22°C	Hum.	51%



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Margin		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1		2384.927	58.82	-5.58	53.24	74.00	-20.76	peak	
2		2384.927	47.66	-5.58	42.08	54.00	-11.92	AVG	
3	X	2462.000	116.0	-5.45	110.56	74.00	36.56	peak	No Limit
4	*	2462.000	105.0	-5.45	99.61	54.00	45.61	AVG	No Limit
5		2484.027	70.46	-5.42	65.04	74.00	-8.96	peak	
6		2484.027	56.87	-5.42	51.45	54.00	-2.55	AVG	

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

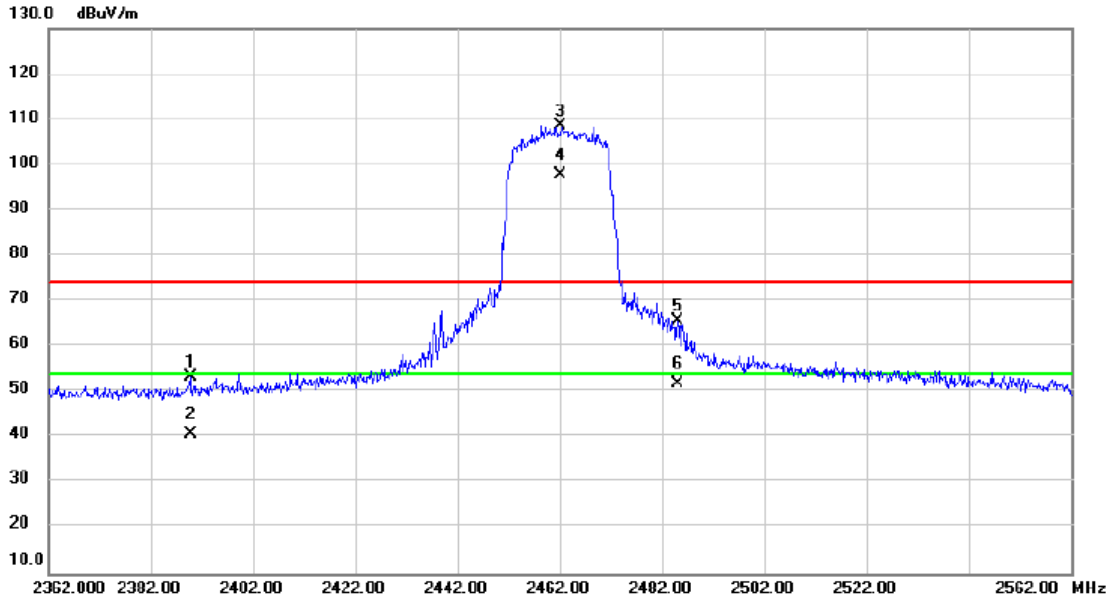
Test Mode	IEEE 802.11ax (HE20)	Test Date	2023/8/4
Test Frequency	2412MHz	Polarization	Horizontal
Temp	22°C	Hum.	51%



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Margin		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1		2389.287	72.75	-5.58	67.17	74.00	-6.83	peak	
2		2389.287	57.12	-5.58	51.54	54.00	-2.46	AVG	
3		2399.793	78.84	-5.56	73.28	74.00	-0.72	peak	No Limit
4	X	2412.000	115.2	-5.53	109.71	74.00	35.71	peak	No Limit
5	*	2412.000	103.2	-5.53	97.74	54.00	43.74	AVG	No Limit
6		2509.267	59.18	-5.35	53.83	74.00	-20.17	peak	
7		2509.267	47.45	-5.35	42.10	54.00	-11.90	AVG	

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

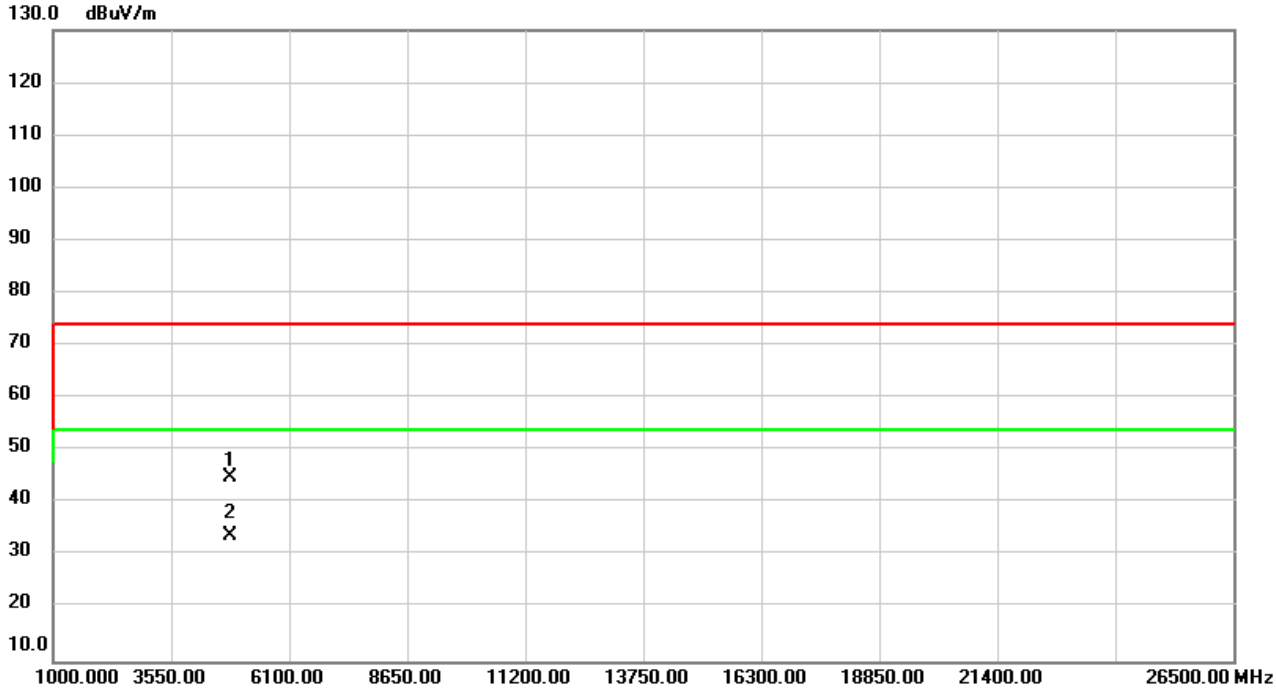
Test Mode	IEEE 802.11ax (HE20)	Test Date	2023/8/4
Test Frequency	2462MHz	Polarization	Horizontal
Temp	22°C	Hum.	51%



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Margin		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1		2389.767	58.96	-5.58	53.38	74.00	-20.62	peak	
2		2389.767	46.24	-5.58	40.66	54.00	-13.34	AVG	
3	X	2462.000	113.8	-5.45	108.44	74.00	34.44	peak	No Limit
4	*	2462.000	103.2	-5.45	97.82	54.00	43.82	AVG	No Limit
5		2485.147	71.12	-5.40	65.72	74.00	-8.28	peak	
6		2485.147	57.11	-5.40	51.71	54.00	-2.29	AVG	

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

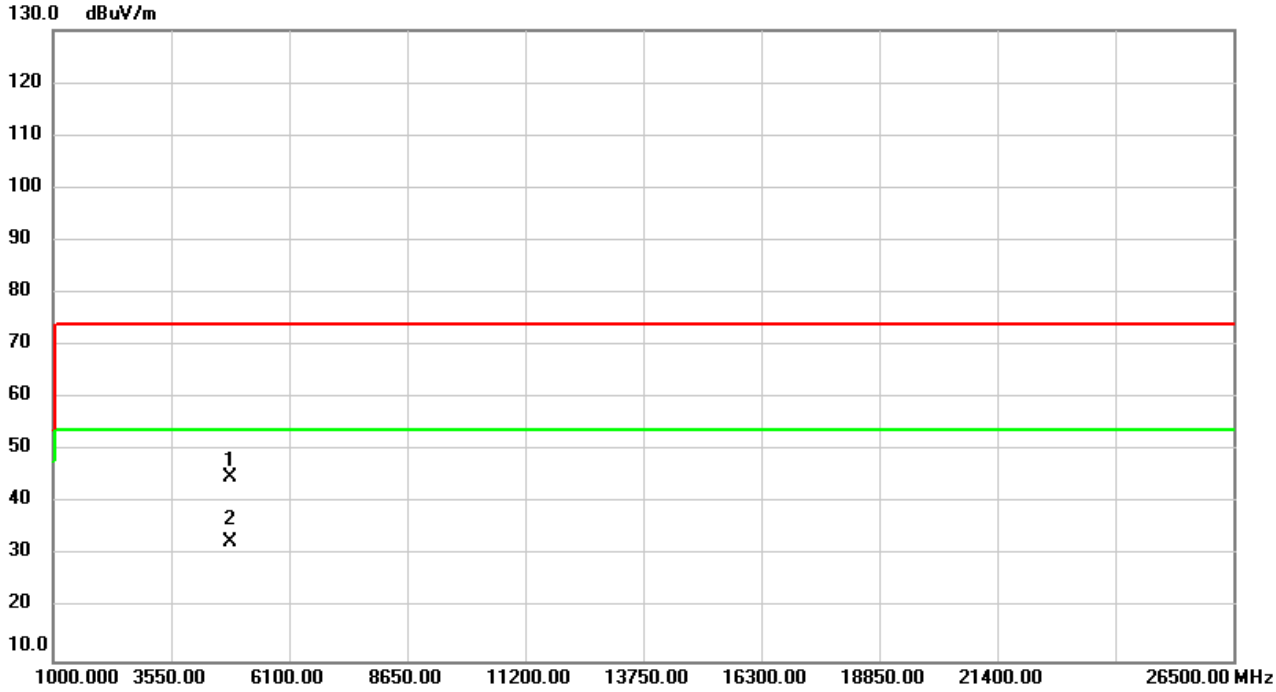
Test Mode	IEEE 802.11b	Test Date	2023/7/25
Test Frequency	2412MHz	Polarization	Vertical
Temp	23°C	Hum.	50%



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1		4824.000	44.41	0.57	44.98	74.00	-29.02	peak	
2	*	4824.000	33.17	0.57	33.74	54.00	-20.26	AVG	

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

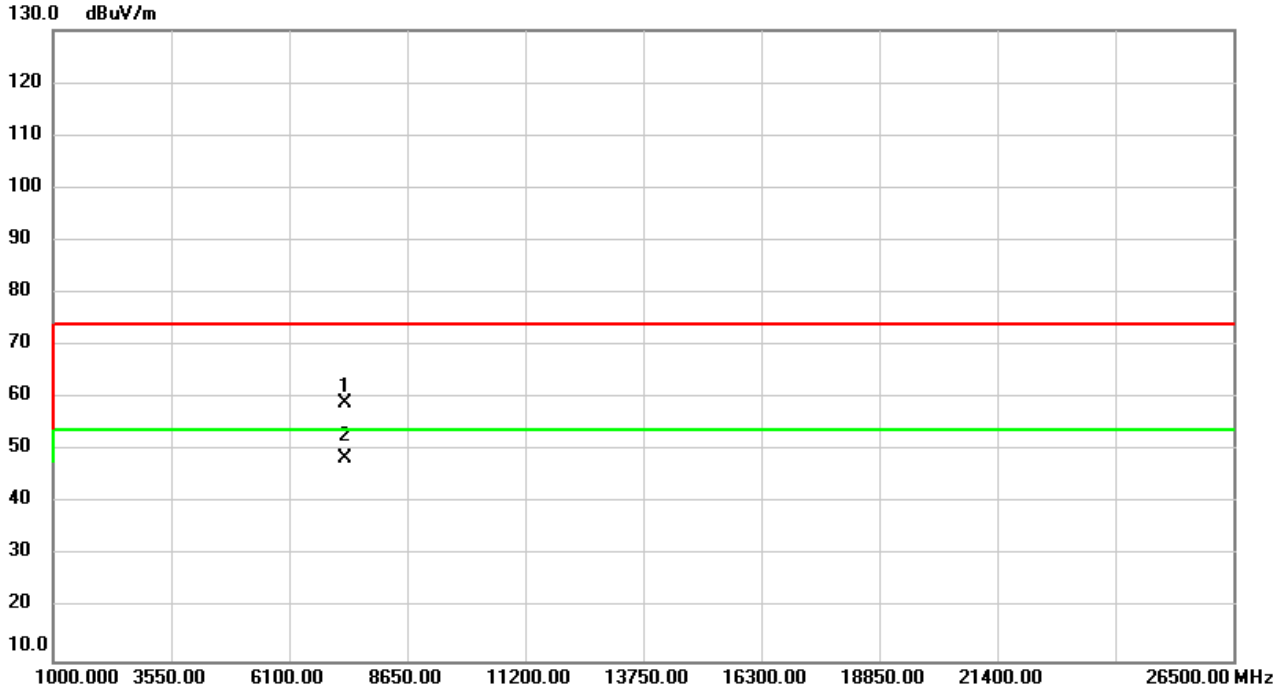
Test Mode	IEEE 802.11b	Test Date	2023/7/25
Test Frequency	2412MHz	Polarization	Horizontal
Temp	23°C	Hum.	50%



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1		4824.000	44.44	0.57	45.01	74.00	-28.99	peak	
2	*	4824.000	32.04	0.57	32.61	54.00	-21.39	AVG	

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

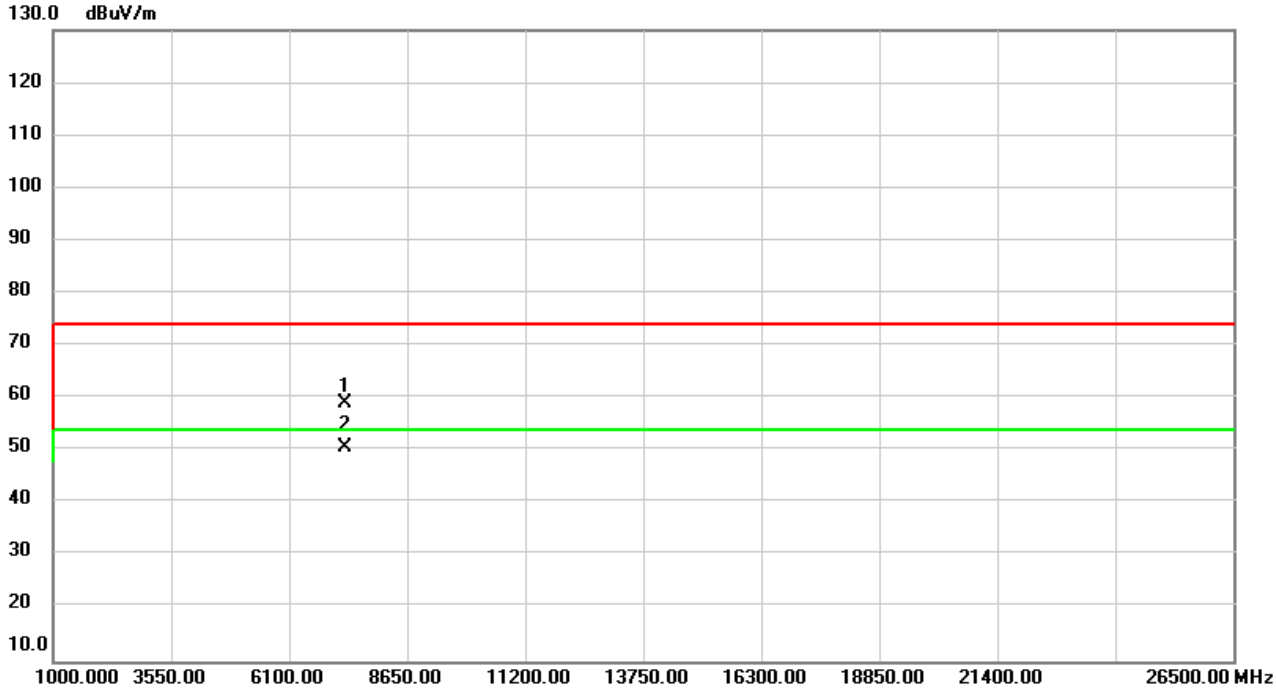
Test Mode	IEEE 802.11b	Test Date	2023/7/25
Test Frequency	2437MHz	Polarization	Vertical
Temp	23°C	Hum.	50%



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1		7311.000	53.08	5.91	58.99	74.00	-15.01	peak	
2	*	7311.000	42.51	5.91	48.42	54.00	-5.58	AVG	

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

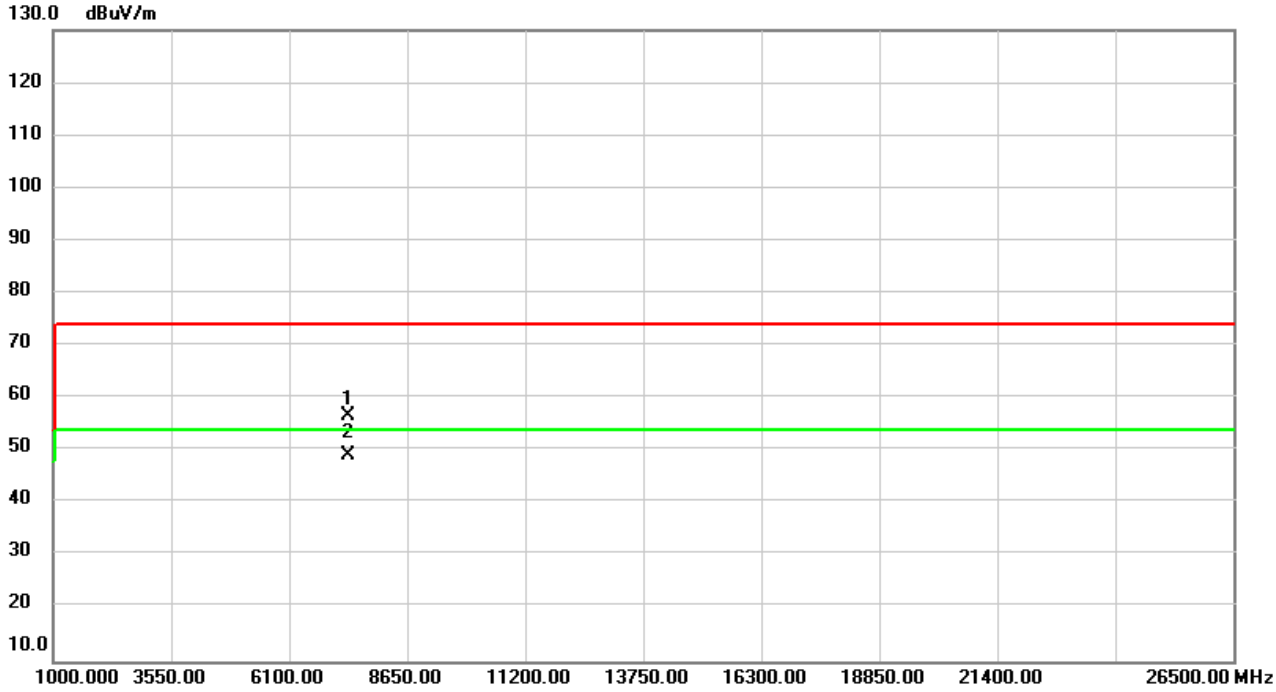
Test Mode	IEEE 802.11b	Test Date	2023/7/25
Test Frequency	2437MHz	Polarization	Horizontal
Temp	23°C	Hum.	50%



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1		7311.000	53.24	5.91	59.15	74.00	-14.85	peak	
2	*	7311.000	44.73	5.91	50.64	54.00	-3.36	AVG	

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

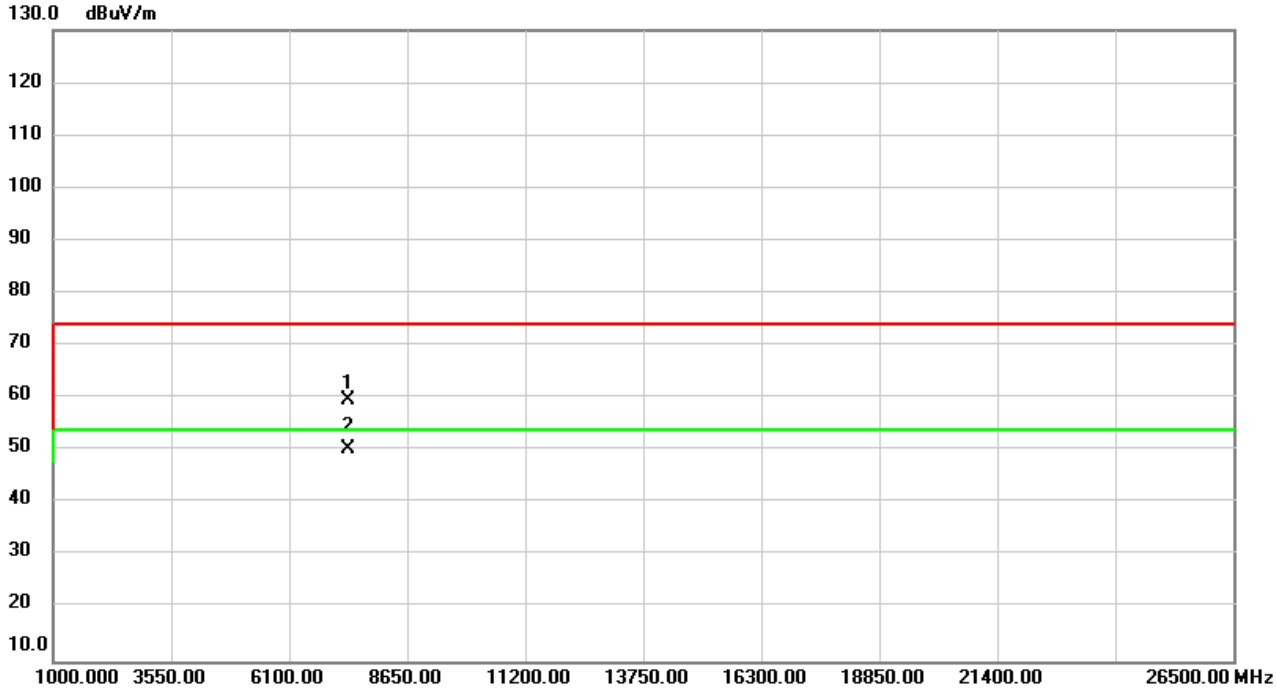
Test Mode	IEEE 802.11b	Test Date	2023/7/25
Test Frequency	2462MHz	Polarization	Vertical
Temp	23°C	Hum.	50%



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1		7386.000	50.82	5.90	56.72	74.00	-17.28	peak	
2	*	7386.000	43.23	5.90	49.13	54.00	-4.87	AVG	

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

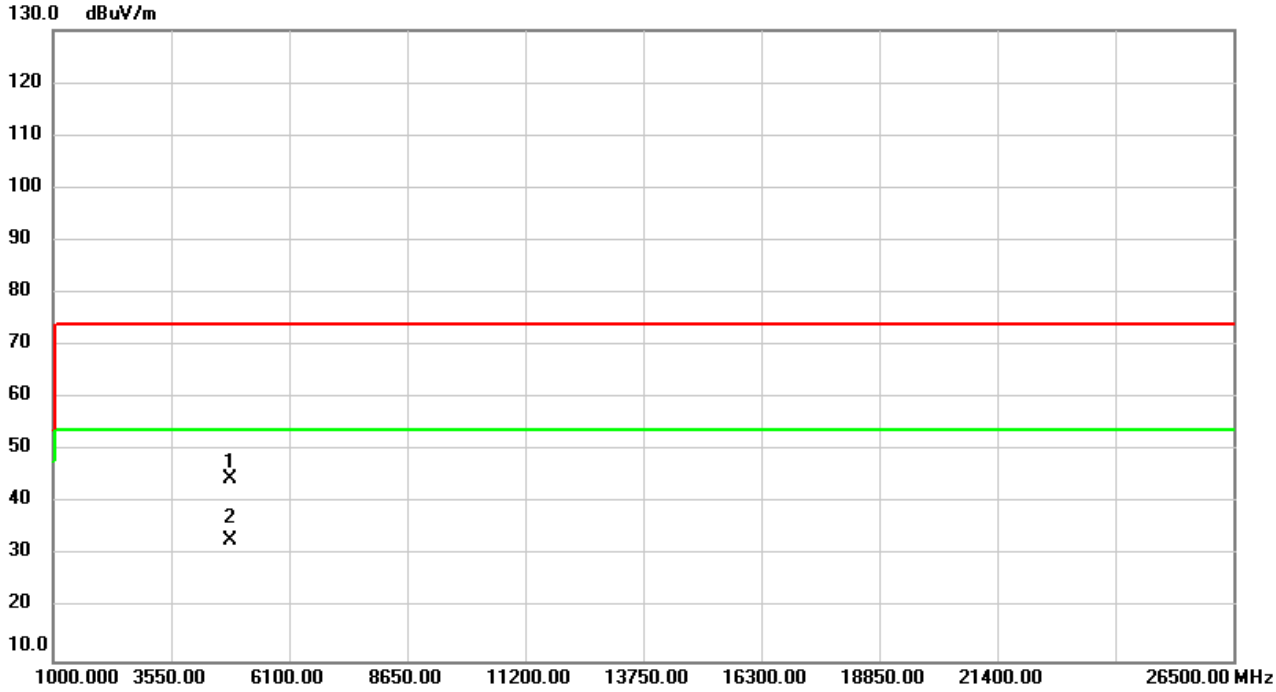
Test Mode	IEEE 802.11b	Test Date	2023/7/25
Test Frequency	2462MHz	Polarization	Horizontal
Temp	23°C	Hum.	50%



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1		7386.000	53.76	5.90	59.66	74.00	-14.34	peak	
2	*	7386.000	44.57	5.90	50.47	54.00	-3.53	AVG	

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

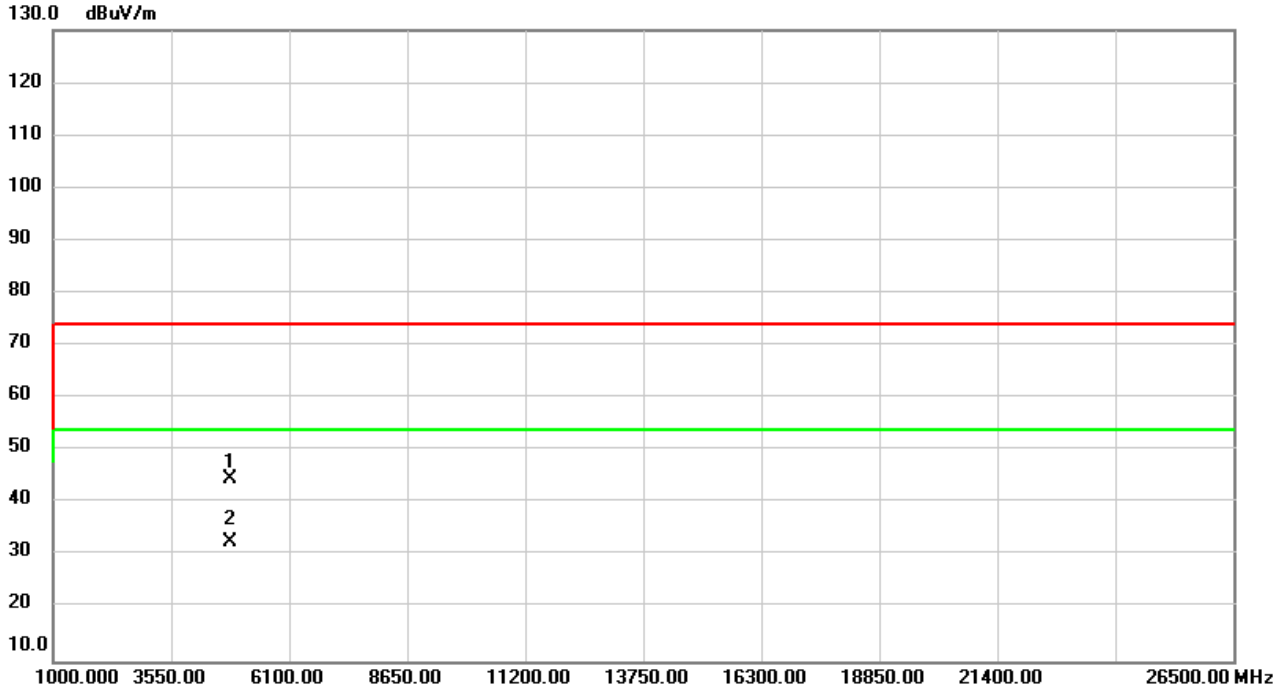
Test Mode	IEEE 802.11g	Test Date	2023/7/25
Test Frequency	2412MHz	Polarization	Vertical
Temp	23°C	Hum.	50%



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1		4824.000	44.19	0.57	44.76	74.00	-29.24	peak	
2	*	4824.000	32.26	0.57	32.83	54.00	-21.17	AVG	

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

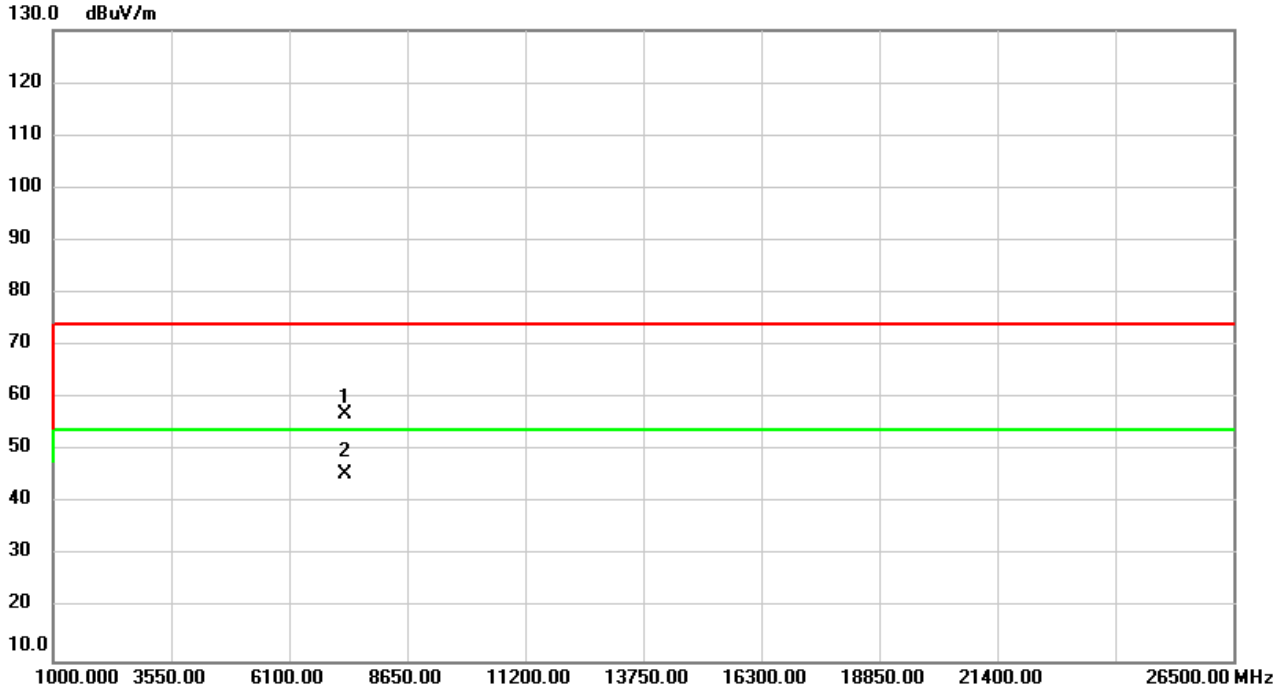
Test Mode	IEEE 802.11g	Test Date	2023/7/25
Test Frequency	2412MHz	Polarization	Horizontal
Temp	23°C	Hum.	50%



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1		4824.000	43.95	0.57	44.52	74.00	-29.48	peak	
2	*	4824.000	32.01	0.57	32.58	54.00	-21.42	AVG	

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

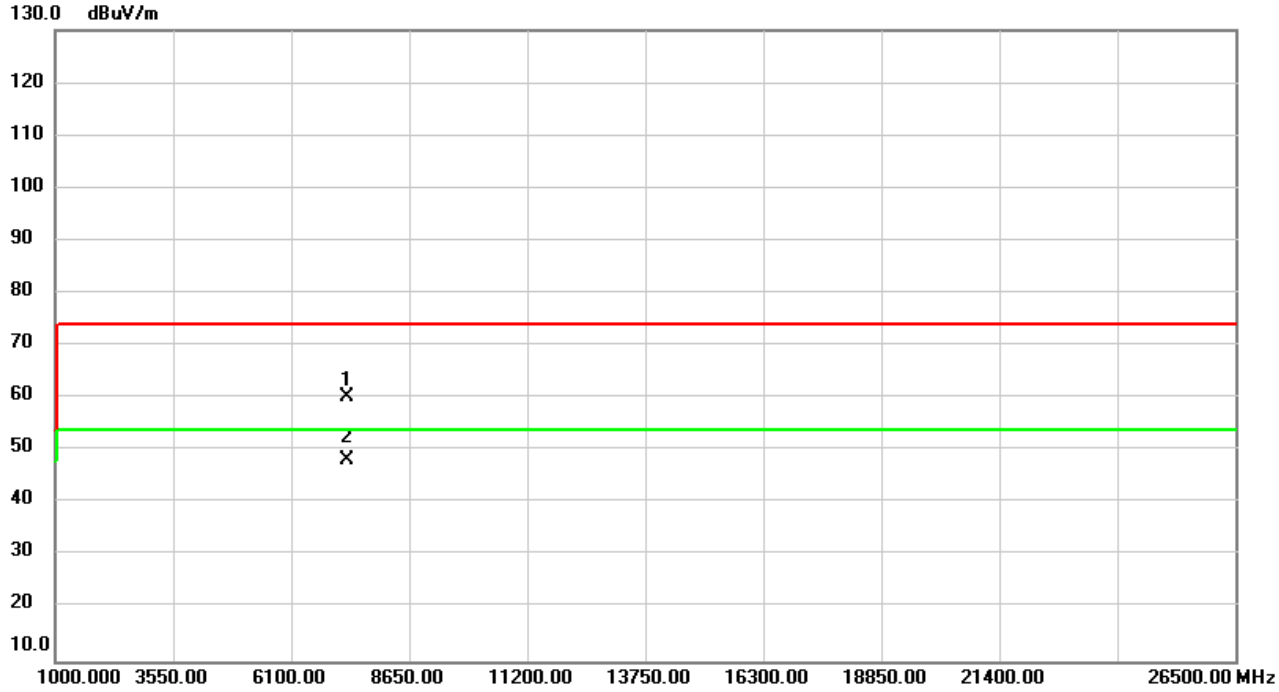
Test Mode	IEEE 802.11g	Test Date	2023/7/25
Test Frequency	2437MHz	Polarization	Vertical
Temp	23°C	Hum.	50%



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1		7311.000	50.94	5.91	56.85	74.00	-17.15	peak	
2	*	7311.000	39.52	5.91	45.43	54.00	-8.57	AVG	

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

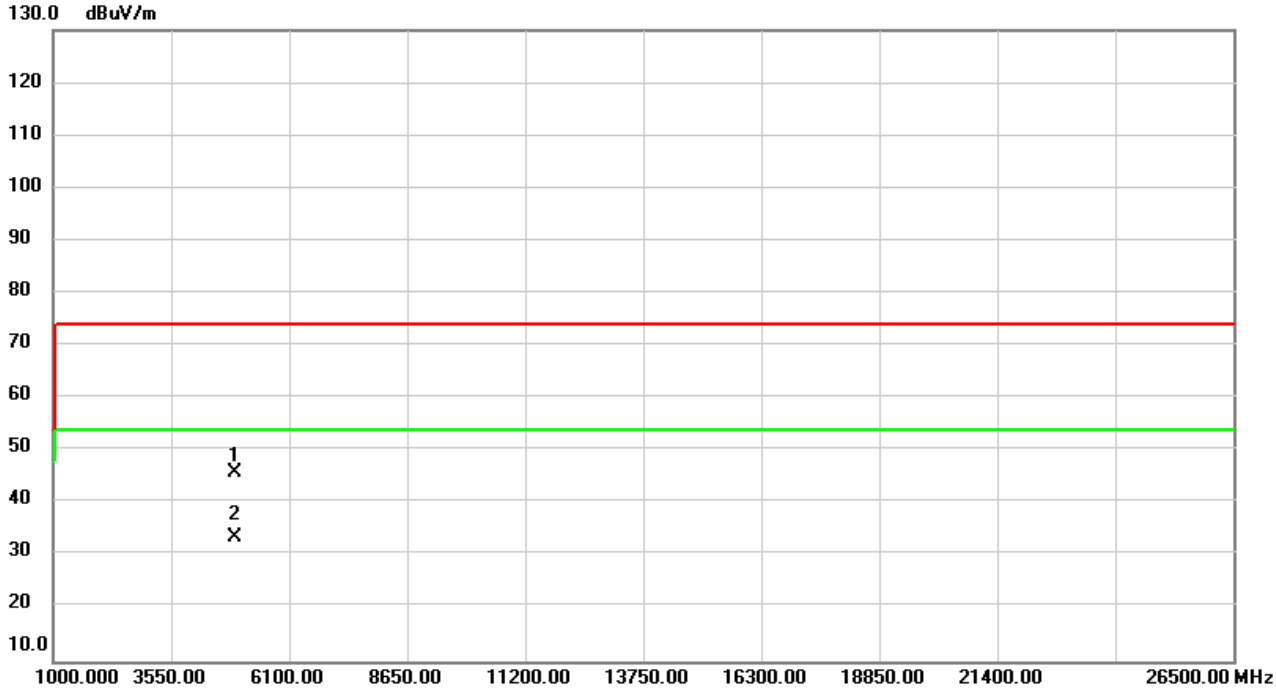
Test Mode	IEEE 802.11g	Test Date	2023/7/25
Test Frequency	2437MHz	Polarization	Horizontal
Temp	23°C	Hum.	50%



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1		7311.000	54.49	5.91	60.40	74.00	-13.60	peak	
2	*	7311.000	42.44	5.91	48.35	54.00	-5.65	AVG	

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

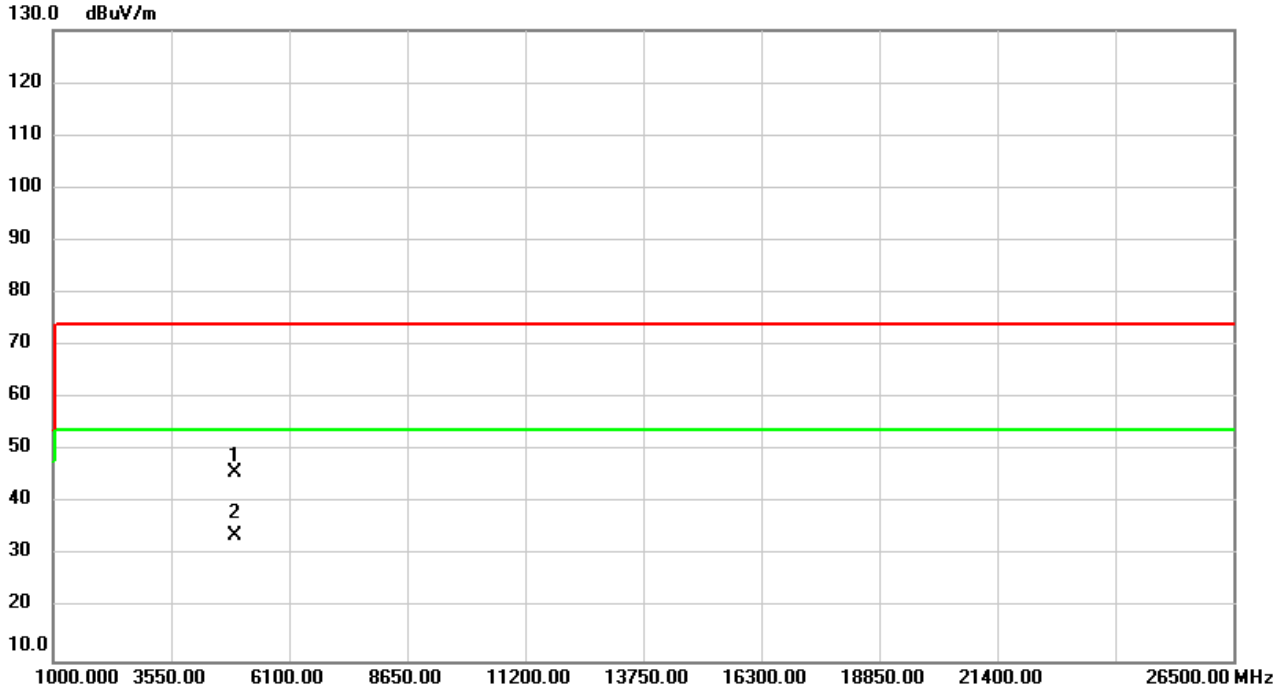
Test Mode	IEEE 802.11g	Test Date	2023/7/25
Test Frequency	2462MHz	Polarization	Vertical
Temp	23°C	Hum.	50%



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1		4924.000	45.01	0.87	45.88	74.00	-28.12	peak	
2	*	4924.000	32.81	0.87	33.68	54.00	-20.32	AVG	

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

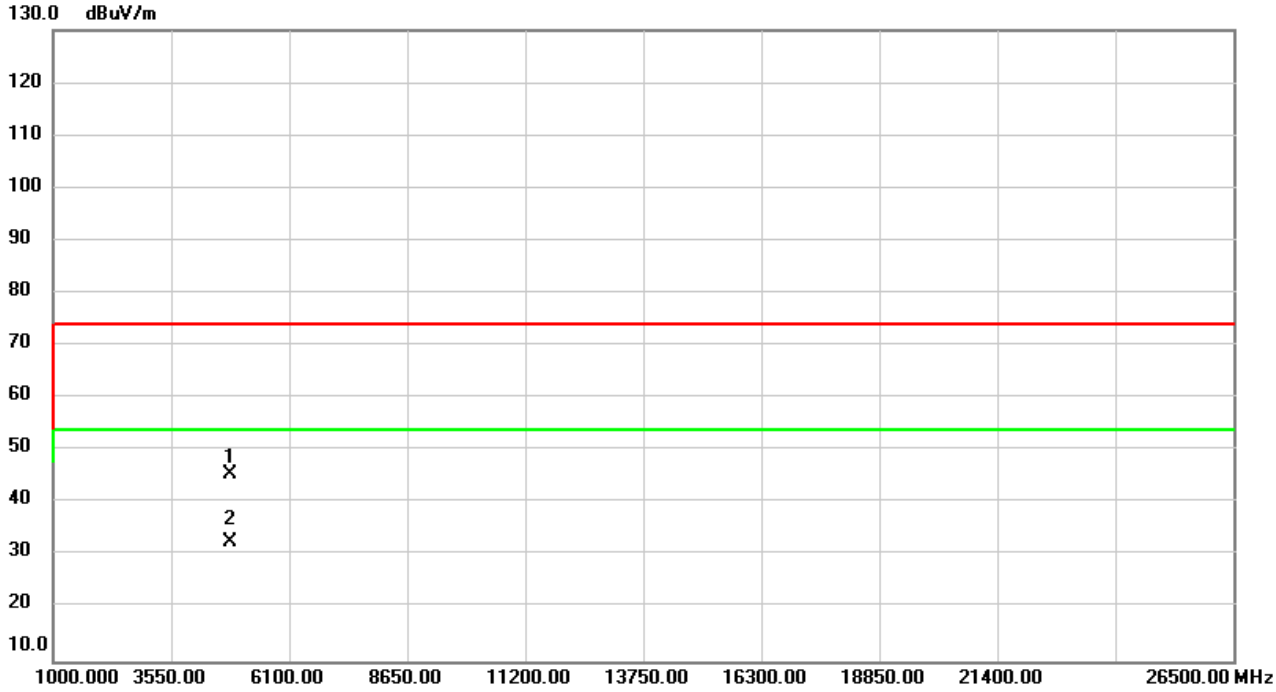
Test Mode	IEEE 802.11g	Test Date	2023/7/25
Test Frequency	2462MHz	Polarization	Horizontal
Temp	23°C	Hum.	50%



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1		4924.000	45.00	0.87	45.87	74.00	-28.13	peak	
2	*	4924.000	32.89	0.87	33.76	54.00	-20.24	AVG	

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

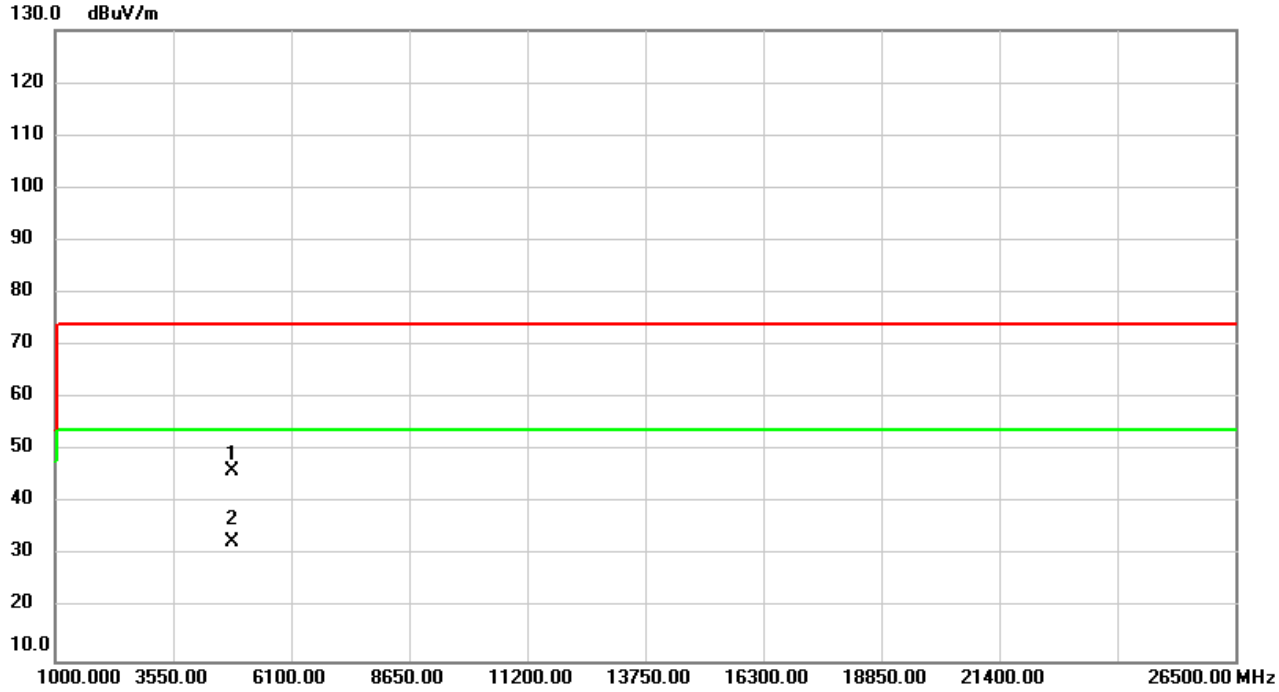
Test Mode	IEEE 802.11n (HT20)	Test Date	2023/7/25
Test Frequency	2412MHz	Polarization	Vertical
Temp	23°C	Hum.	50%



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1		4824.000	45.06	0.57	45.63	74.00	-28.37	peak	
2	*	4824.000	32.16	0.57	32.73	54.00	-21.27	AVG	

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

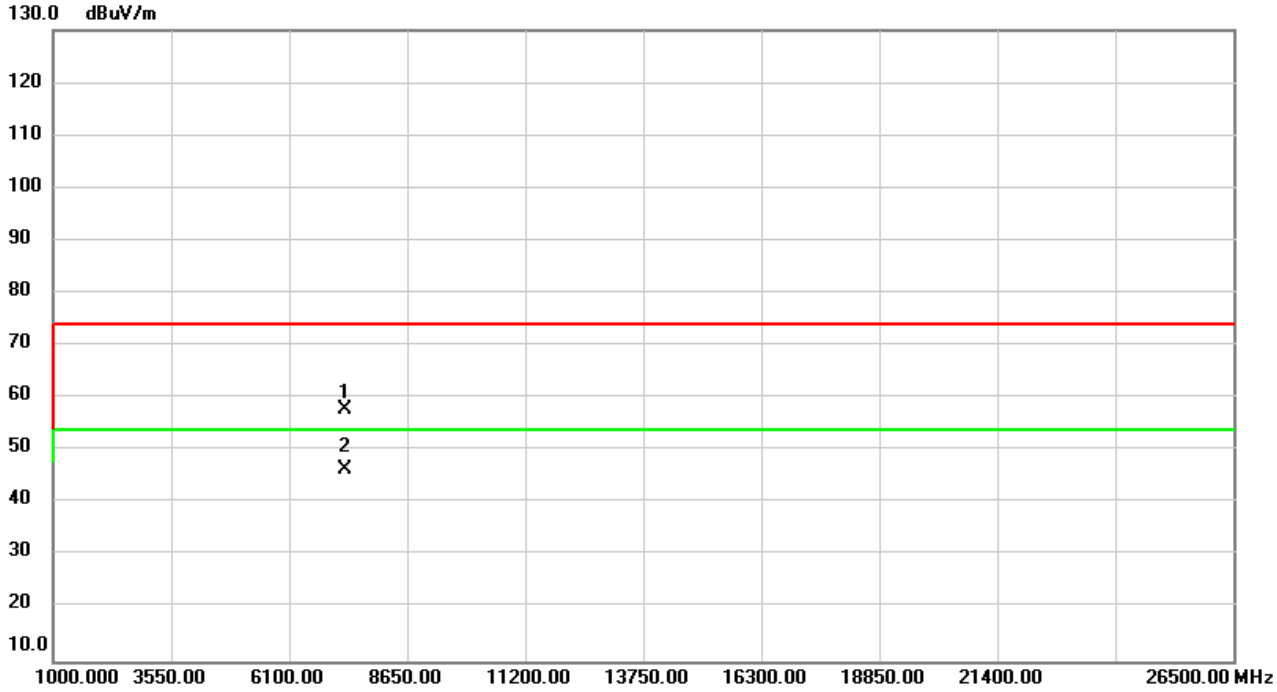
Test Mode	IEEE 802.11n (HT20)	Test Date	2023/7/25
Test Frequency	2412MHz	Polarization	Horizontal
Temp	23°C	Hum.	50%



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1		4824.000	45.59	0.57	46.16	74.00	-27.84	peak	
2	*	4824.000	32.10	0.57	32.67	54.00	-21.33	AVG	

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

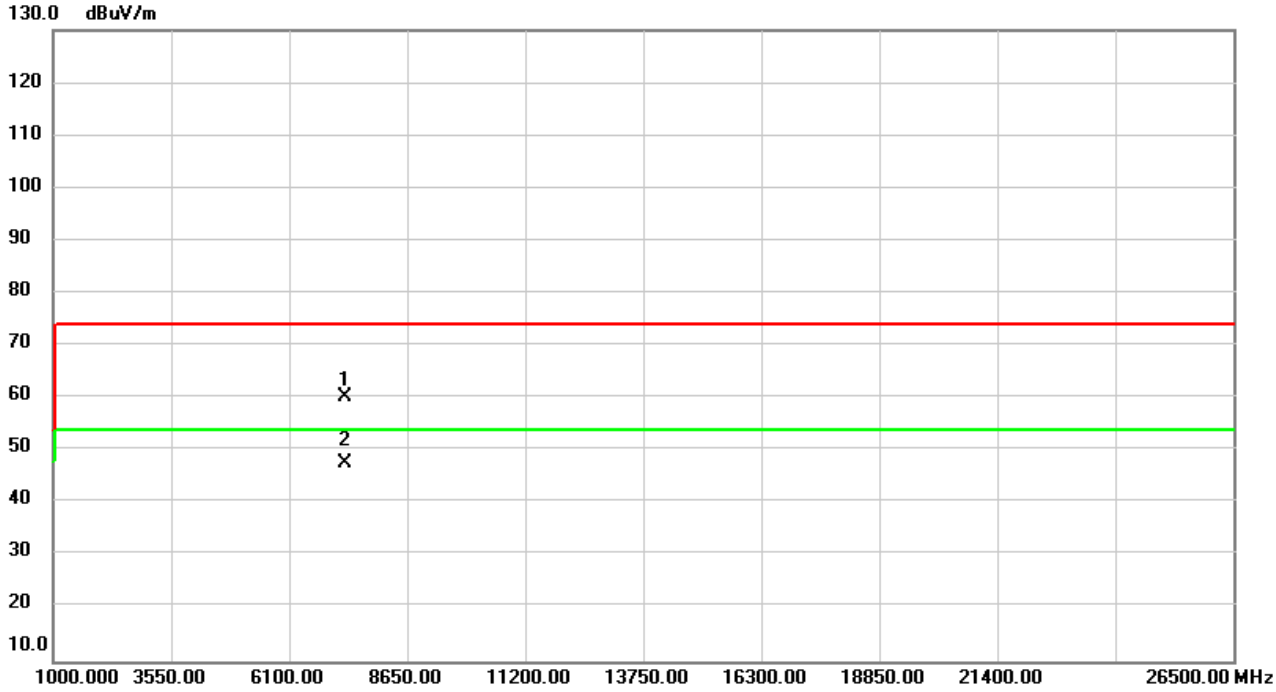
Test Mode	IEEE 802.11n (HT20)	Test Date	2023/7/25
Test Frequency	2437MHz	Polarization	Vertical
Temp	23°C	Hum.	50%



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1		7311.000	51.79	5.91	57.70	74.00	-16.30	peak	
2	*	7311.000	40.65	5.91	46.56	54.00	-7.44	AVG	

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

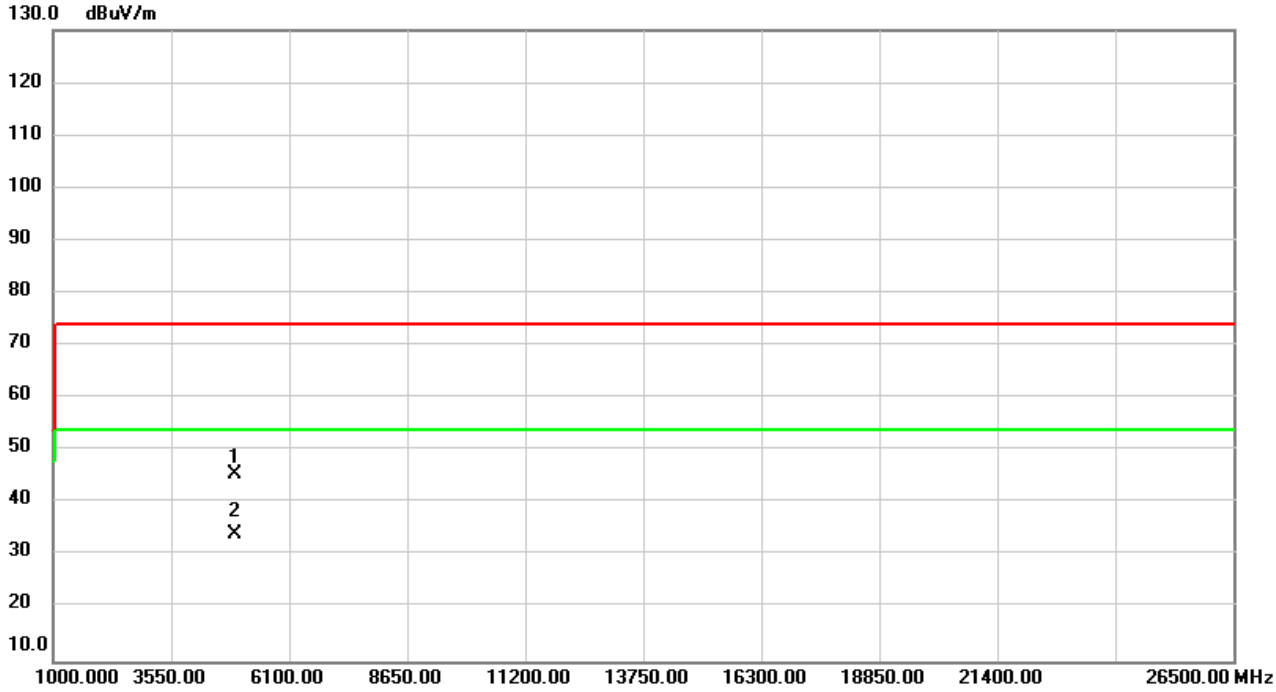
Test Mode	IEEE 802.11n (HT20)	Test Date	2023/7/25
Test Frequency	2437MHz	Polarization	Horizontal
Temp	23°C	Hum.	50%



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1		7311.000	54.37	5.91	60.28	74.00	-13.72	peak	
2	*	7311.000	41.86	5.91	47.77	54.00	-6.23	AVG	

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

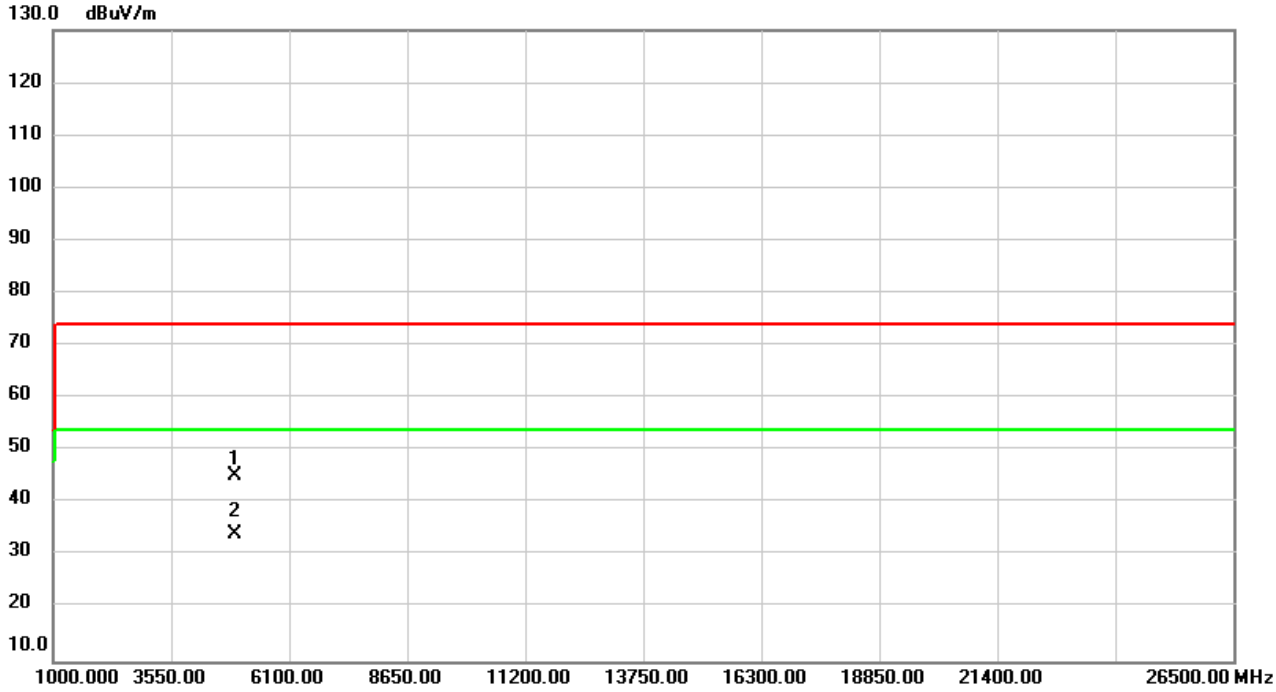
Test Mode	IEEE 802.11n (HT20)	Test Date	2023/7/25
Test Frequency	2462MHz	Polarization	Vertical
Temp	23°C	Hum.	50%



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1		4924.000	44.54	0.87	45.41	74.00	-28.59	peak	
2	*	4924.000	33.16	0.87	34.03	54.00	-19.97	AVG	

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

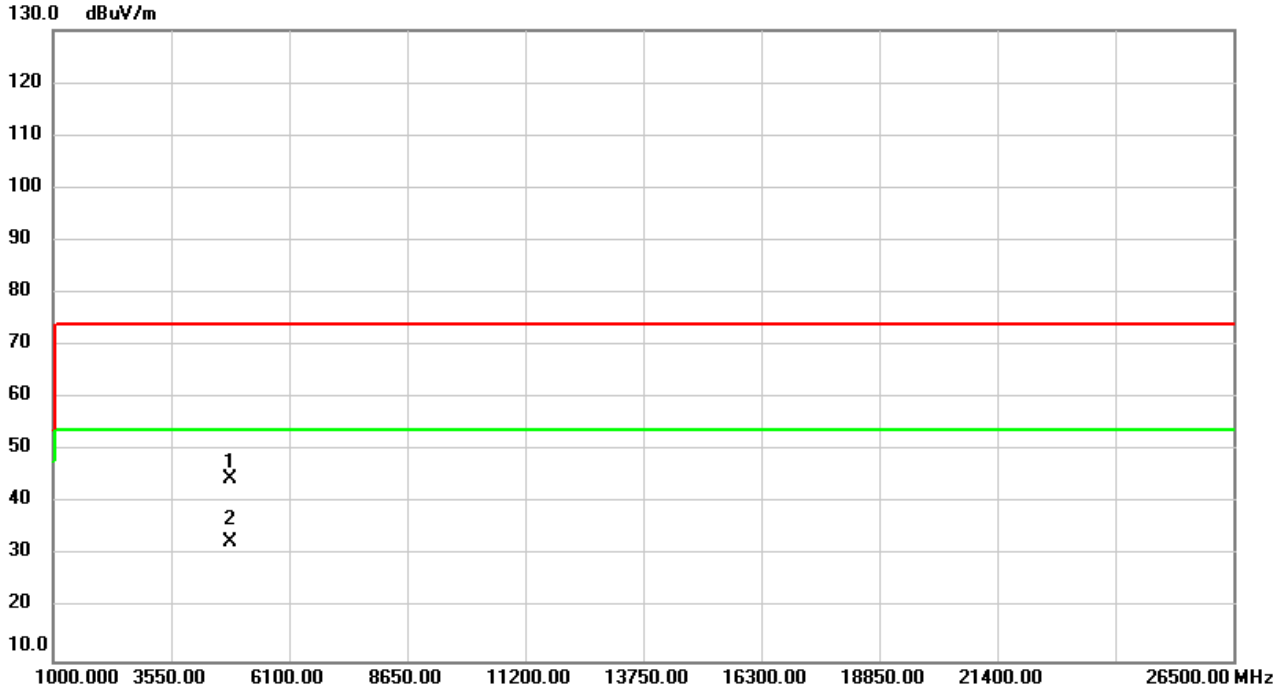
Test Mode	IEEE 802.11n (HT20)	Test Date	2023/7/25
Test Frequency	2462MHz	Polarization	Horizontal
Temp	23°C	Hum.	50%



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1		4924.000	44.46	0.87	45.33	74.00	-28.67	peak	
2	*	4924.000	33.14	0.87	34.01	54.00	-19.99	AVG	

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

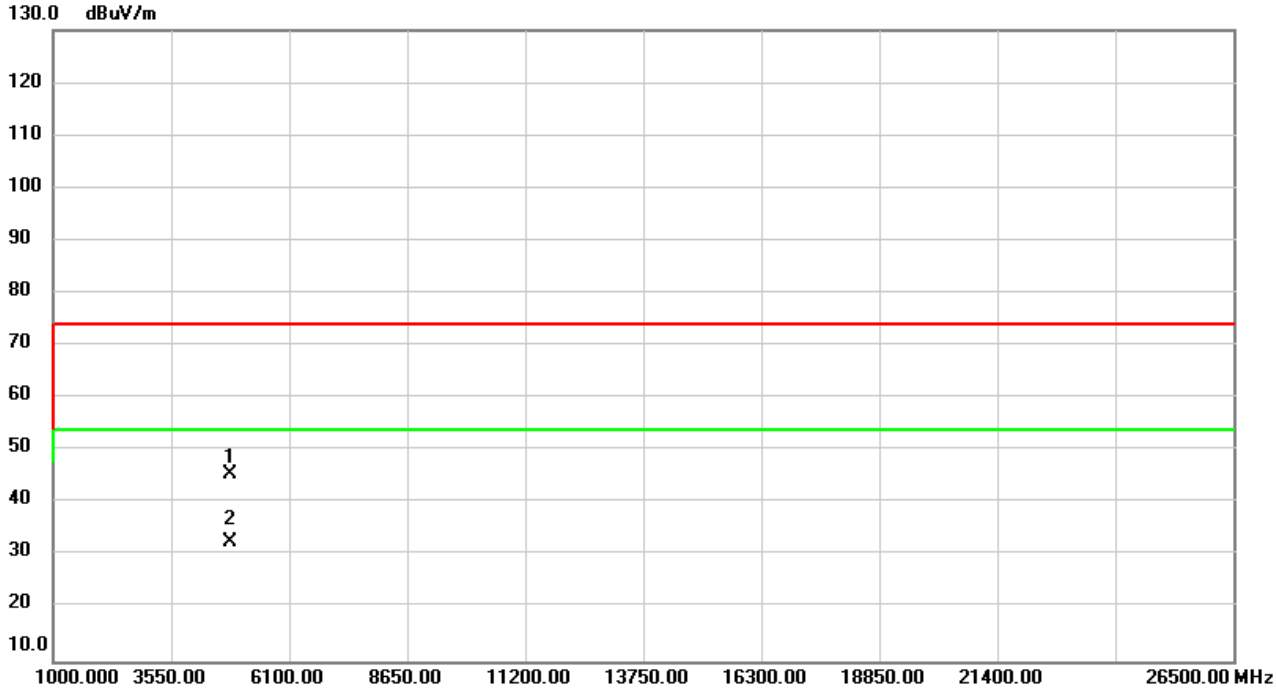
Test Mode	IEEE 802.11ax (HE20)	Test Date	2023/7/25
Test Frequency	2412MHz	Polarization	Vertical
Temp	23°C	Hum.	50%



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1		4824.000	44.01	0.57	44.58	74.00	-29.42	peak	
2	*	4824.000	32.18	0.57	32.75	54.00	-21.25	AVG	

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

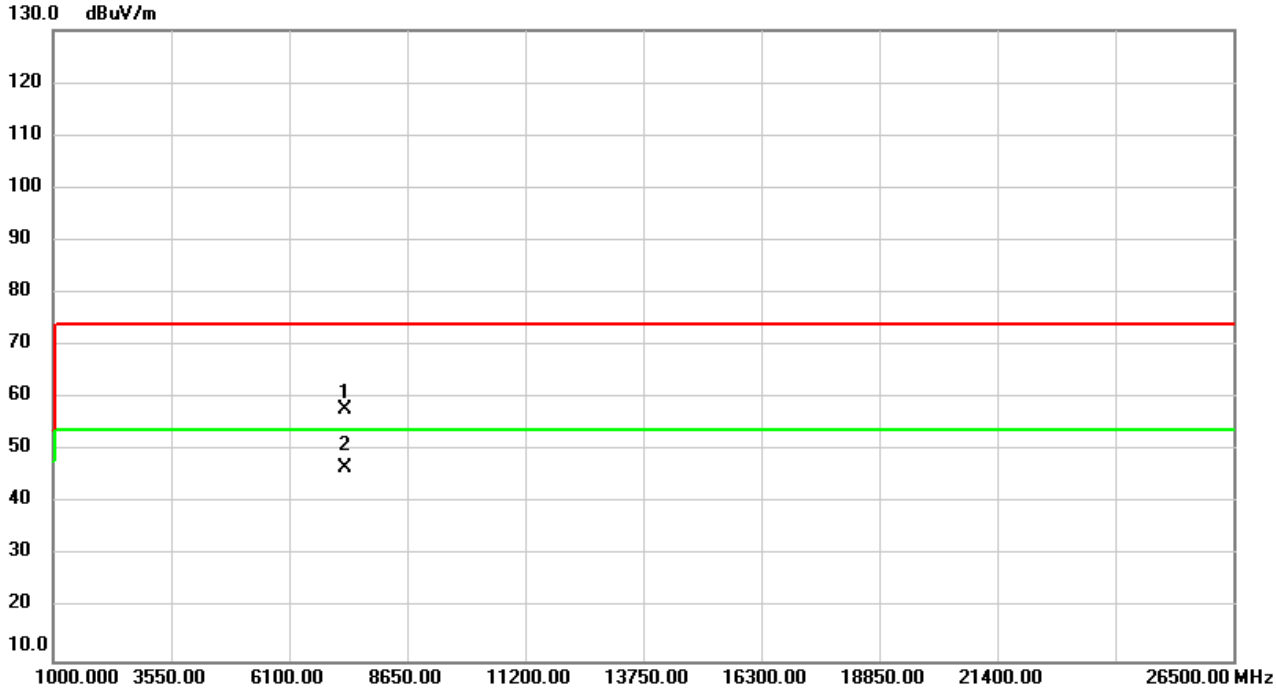
Test Mode	IEEE 802.11ax (HE20)	Test Date	2023/7/25
Test Frequency	2412MHz	Polarization	Horizontal
Temp	23°C	Hum.	50%



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1		4824.000	44.89	0.57	45.46	74.00	-28.54	peak	
2	*	4824.000	32.06	0.57	32.63	54.00	-21.37	AVG	

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

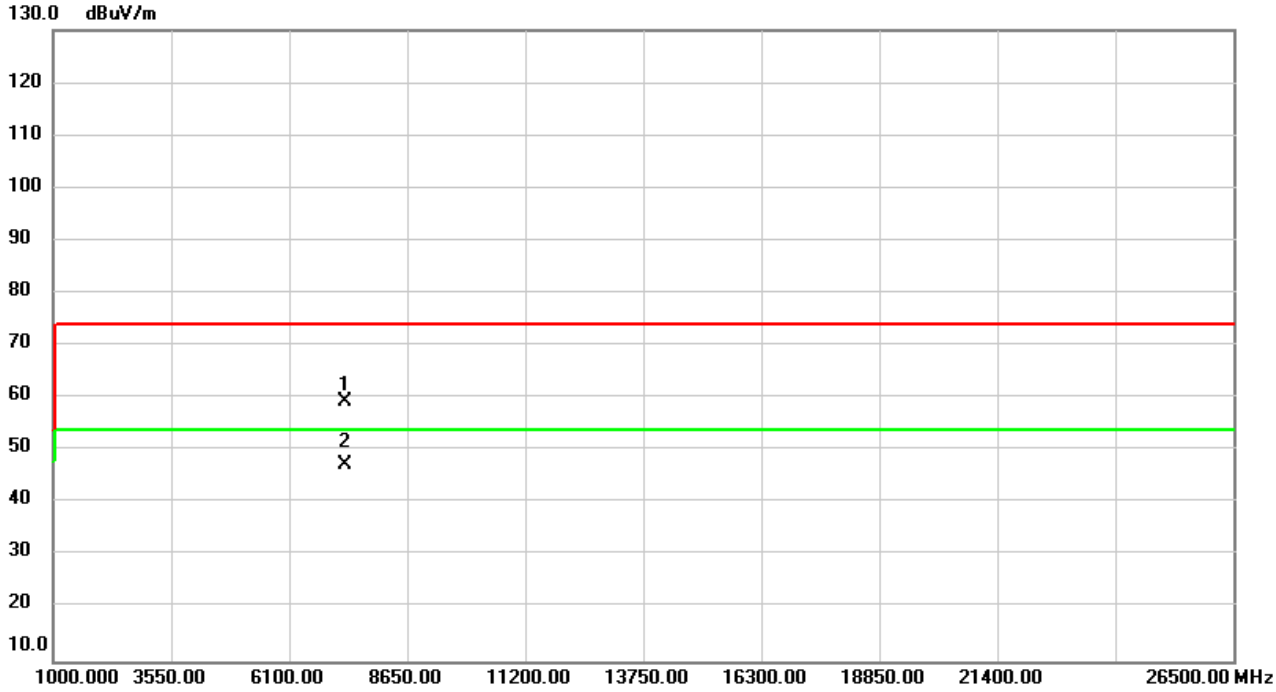
Test Mode	IEEE 802.11ax (HE20)	Test Date	2023/7/25
Test Frequency	2437MHz	Polarization	Vertical
Temp	23°C	Hum.	50%



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1		7311.000	52.08	5.91	57.99	74.00	-16.01	peak	
2	*	7311.000	40.79	5.91	46.70	54.00	-7.30	AVG	

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

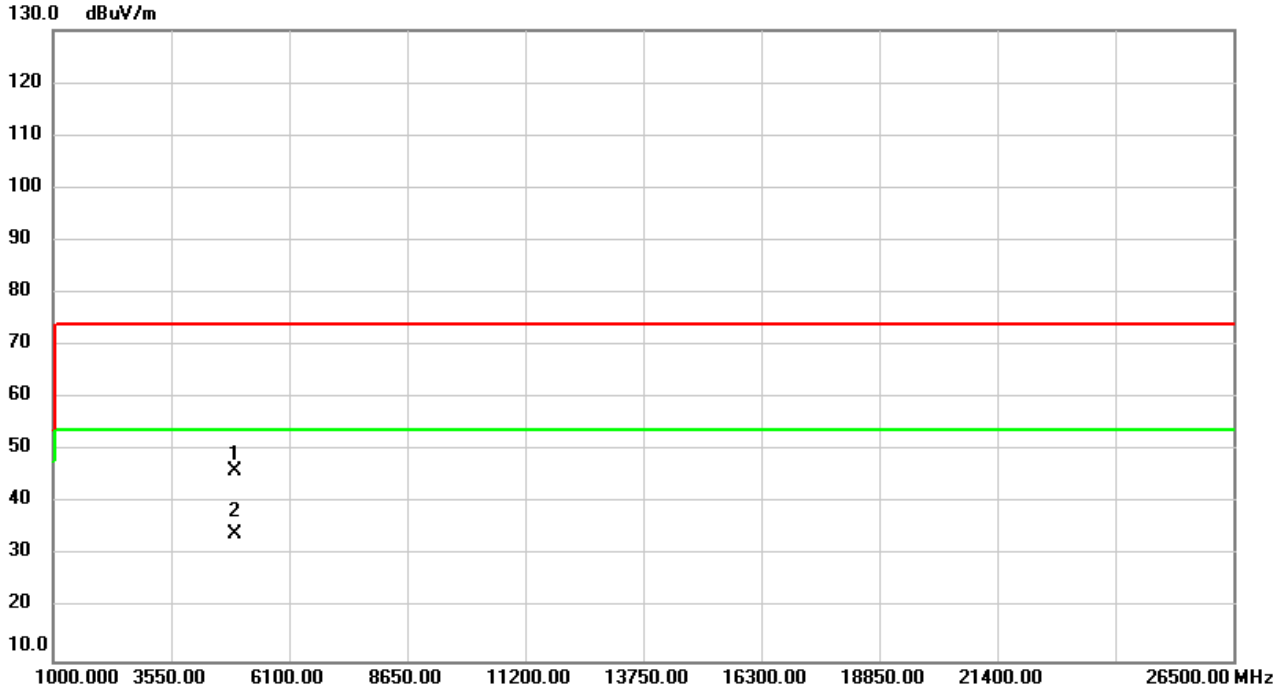
Test Mode	IEEE 802.11ax (HE20)	Test Date	2023/7/25
Test Frequency	2437MHz	Polarization	Horizontal
Temp	23°C	Hum.	50%



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1		7311.000	53.59	5.91	59.50	74.00	-14.50	peak	
2	*	7311.000	41.53	5.91	47.44	54.00	-6.56	AVG	

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

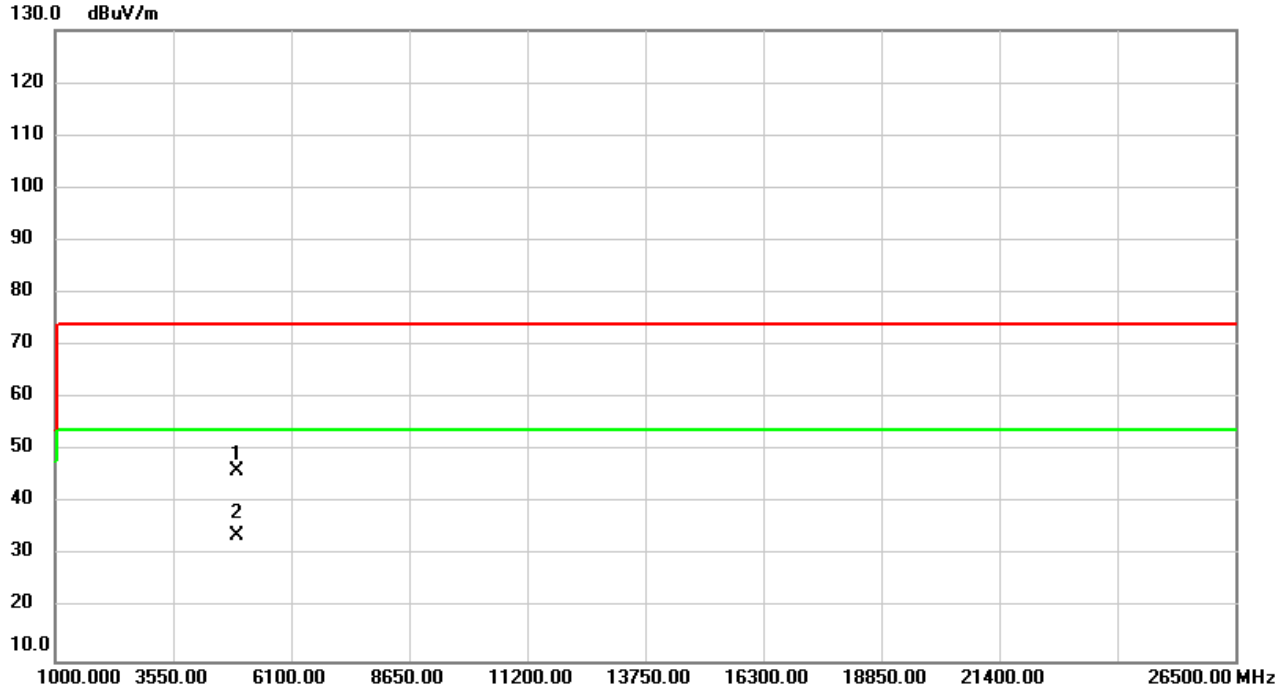
Test Mode	IEEE 802.11ax (HE20)	Test Date	2023/7/25
Test Frequency	2462MHz	Polarization	Vertical
Temp	23°C	Hum.	50%



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1		4924.000	45.15	0.87	46.02	74.00	-27.98	peak	
2	*	4924.000	33.22	0.87	34.09	54.00	-19.91	AVG	

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

Test Mode	IEEE 802.11ax (HE20)	Test Date	2023/7/25
Test Frequency	2462MHz	Polarization	Horizontal
Temp	23°C	Hum.	50%



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1		4924.000	45.21	0.87	46.08	74.00	-27.92	peak	
2	*	4924.000	33.05	0.87	33.92	54.00	-20.08	AVG	

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

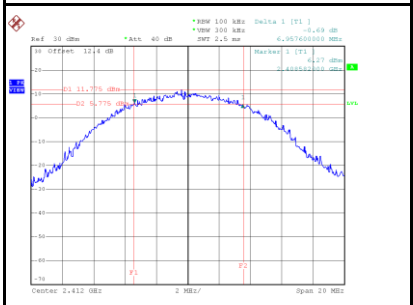
APPENDIX D BANDWIDTH

Test Mode	IEEE 802.11b_Antenna DB1

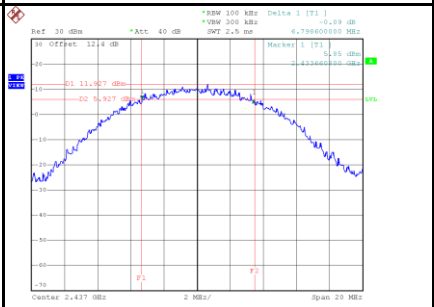
Test Frequency (MHz)	6 dB Bandwidth (MHz)	99 % Occupied Bandwidth (MHz)	Minimum 6 dB Bandwidth Limit (kHz)	Result
2412	6.96	11.84	≥ 500	Pass
2437	6.80	12.00	≥ 500	Pass
2462	8.10	12.00	≥ 500	Pass

6dB Bandwidth

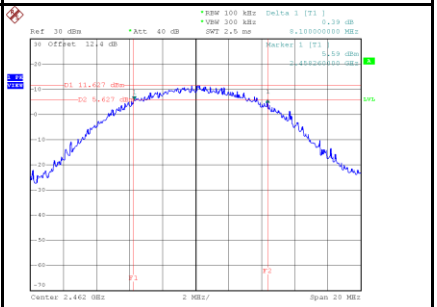
2412 MHz



2437 MHz

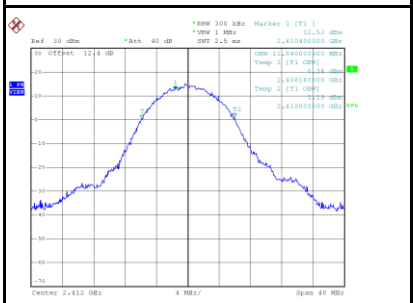


2462 MHz

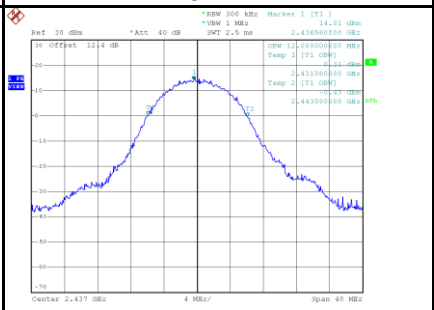


99% Occupied BW

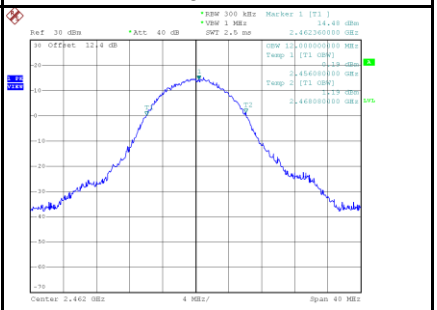
2412 MHz



2437 MHz

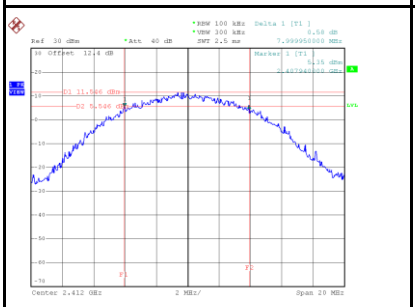
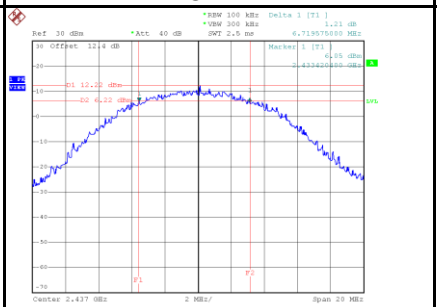
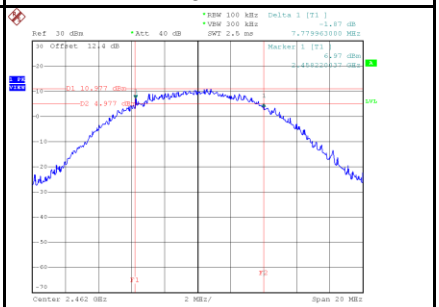
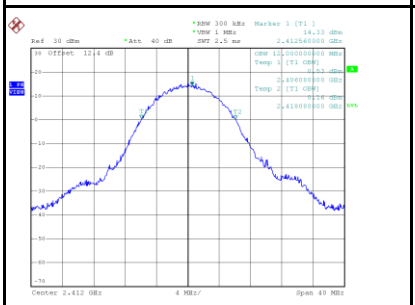
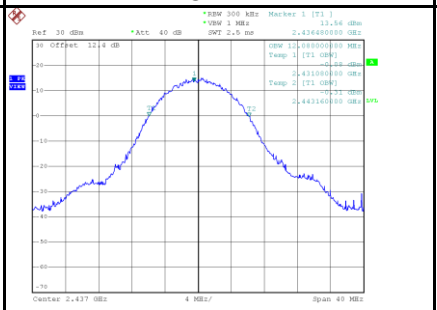
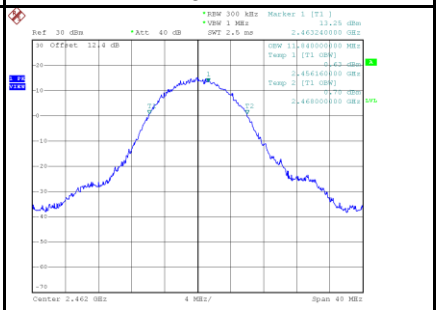


2462 MHz



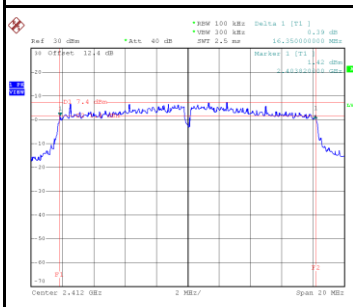
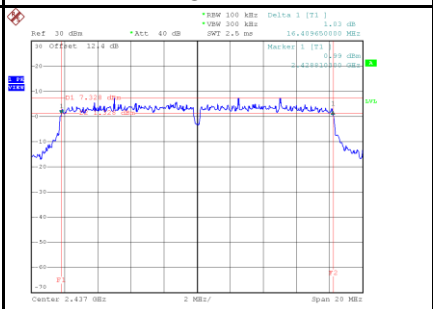
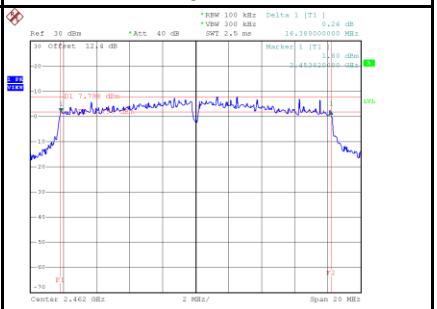
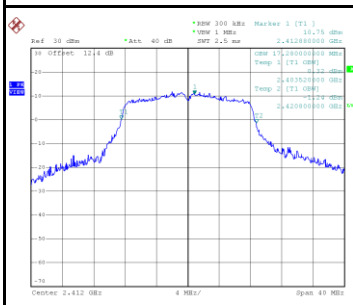
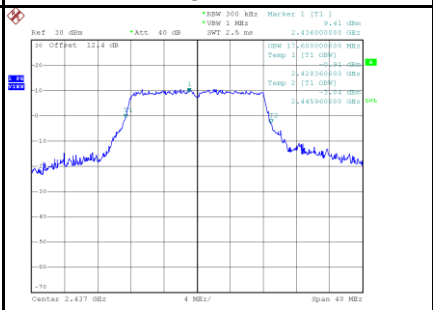
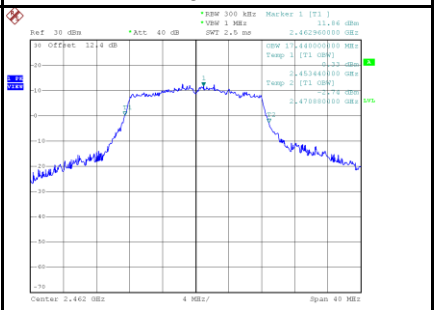
Test Mode	IEEE 802.11b_Antenna DB2

Test Frequency (MHz)	6 dB Bandwidth (MHz)	99 % Occupied Bandwidth (MHz)	Minimum 6 dB Bandwidth Limit (kHz)	Result
2412	8.00	12.00	≥ 500	Pass
2437	6.72	12.08	≥ 500	Pass
2462	7.78	11.84	≥ 500	Pass

6dB Bandwidth		
2412 MHz	2437 MHz	2462 MHz
		
99% Occupied BW		
2412 MHz	2437 MHz	2462 MHz
		

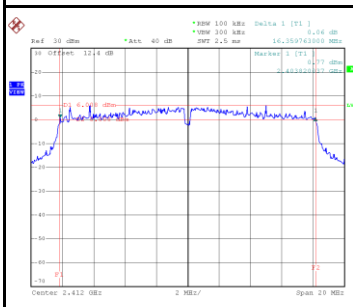
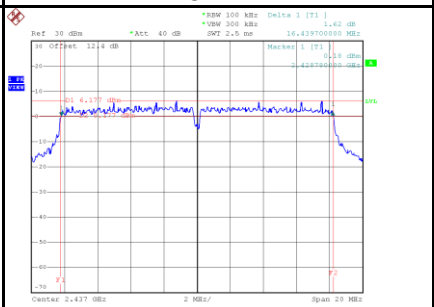
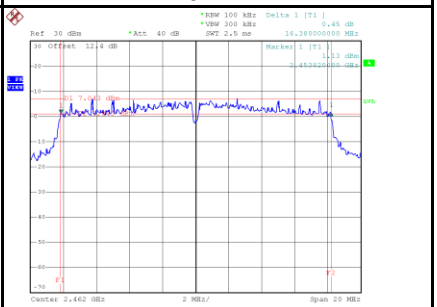
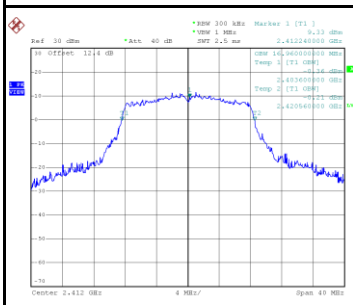
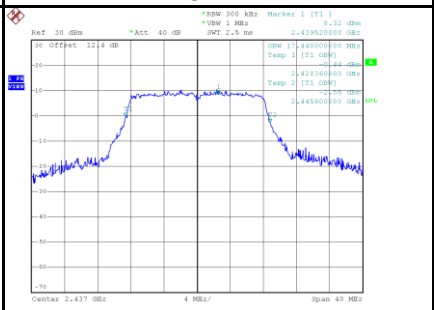
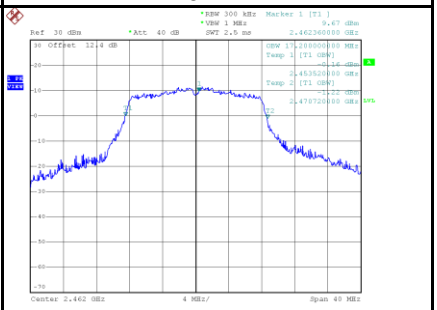
Test Mode	IEEE 802.11g_Antenna DB1

Test Frequency (MHz)	6 dB Bandwidth (MHz)	99 % Occupied Bandwidth (MHz)	Minimum 6 dB Bandwidth Limit (kHz)	Result
2412	16.35	17.28	≥ 500	Pass
2437	16.41	17.60	≥ 500	Pass
2462	16.38	17.44	≥ 500	Pass

6dB Bandwidth		
2412 MHz	2437 MHz	2462 MHz
		
99% Occupied BW		
2412 MHz	2437 MHz	2462 MHz
		

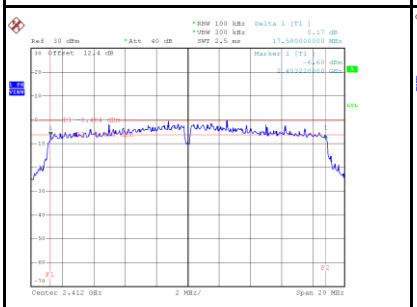
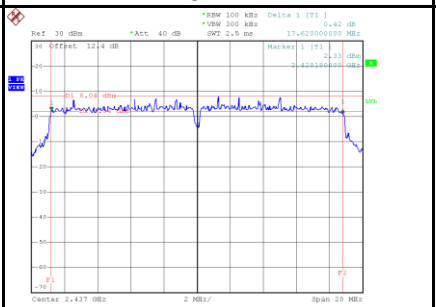
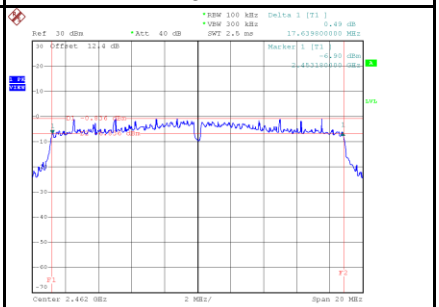
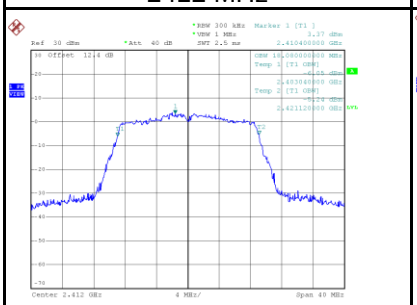
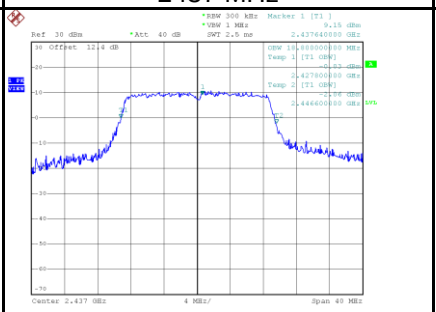
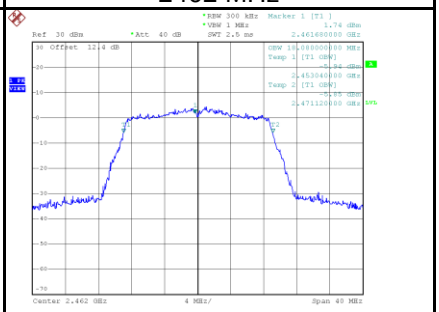
Test Mode	IEEE 802.11g_Antenna DB2

Test Frequency (MHz)	6 dB Bandwidth (MHz)	99 % Occupied Bandwidth (MHz)	Minimum 6 dB Bandwidth Limit (kHz)	Result
2412	16.36	16.96	≥ 500	Pass
2437	16.44	17.44	≥ 500	Pass
2462	16.38	17.20	≥ 500	Pass

6dB Bandwidth		
2412 MHz	2437 MHz	2462 MHz
		
99% Occupied BW		
2412 MHz	2437 MHz	2462 MHz
		

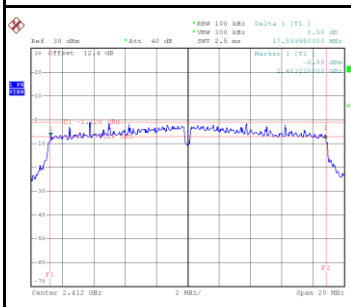
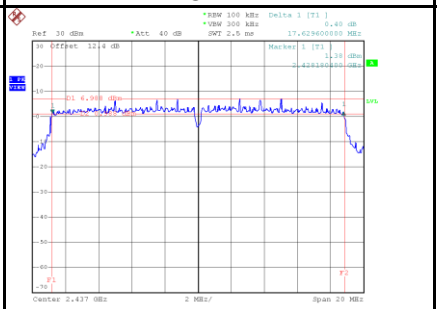
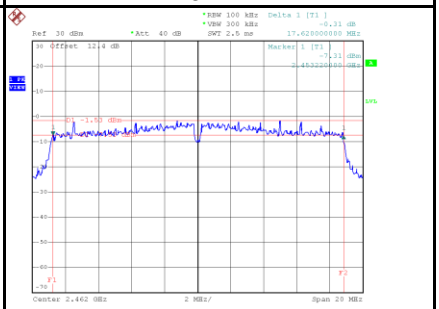
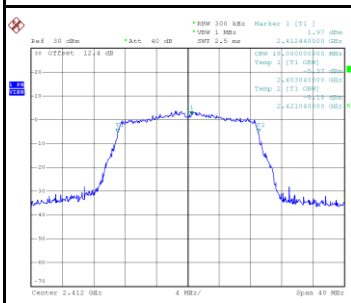
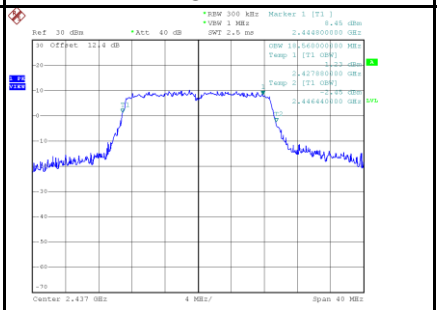
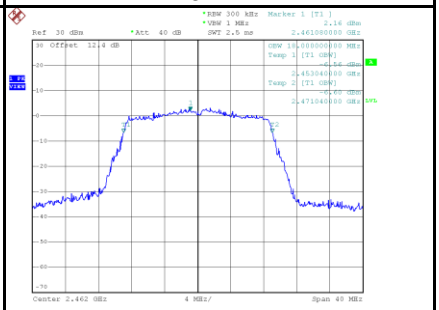
Test Mode	IEEE 802.11n (HT20)_Antenna DB1

Test Frequency (MHz)	6 dB Bandwidth (MHz)	99 % Occupied Bandwidth (MHz)	Minimum 6 dB Bandwidth Limit (kHz)	Result
2412	17.58	18.08	≥ 500	Pass
2437	17.62	18.80	≥ 500	Pass
2462	17.64	18.08	≥ 500	Pass

6dB Bandwidth		
2412 MHz	2437 MHz	2462 MHz
		
99% Occupied BW		
2412 MHz	2437 MHz	2462 MHz
		

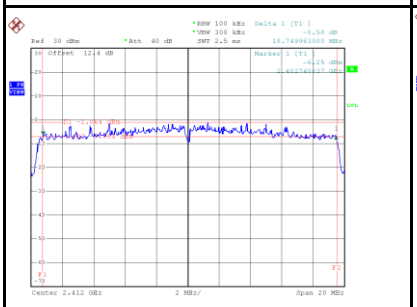
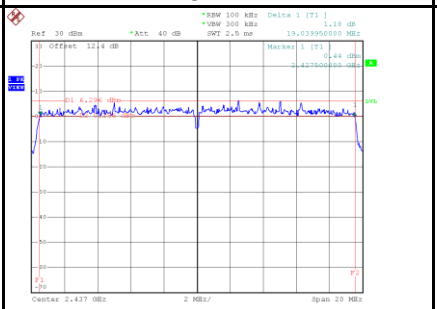
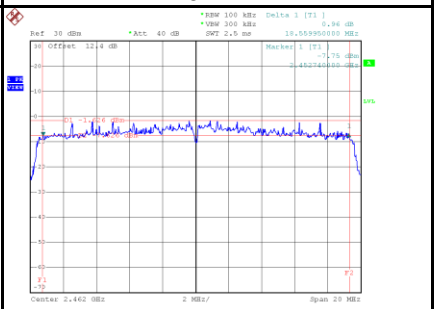
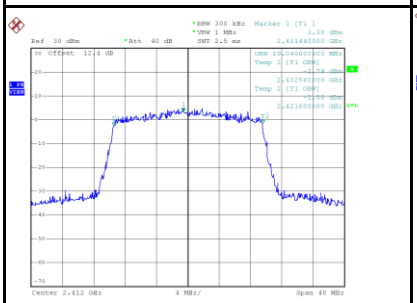
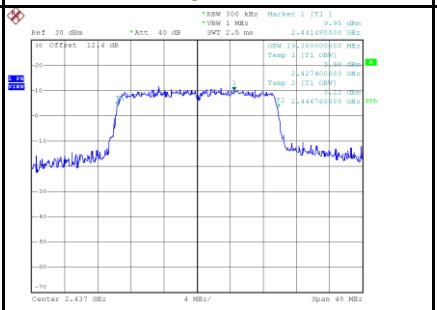
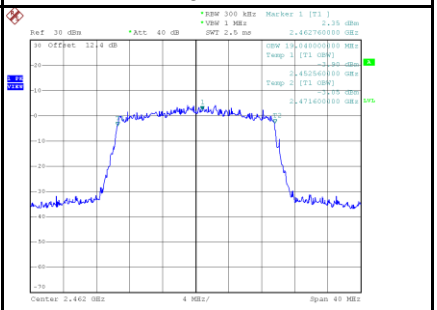
Test Mode	IEEE 802.11n (HT20)_Antenna DB2

Test Frequency (MHz)	6 dB Bandwidth (MHz)	99 % Occupied Bandwidth (MHz)	Minimum 6 dB Bandwidth Limit (kHz)	Result
2412	17.60	18.00	≥ 500	Pass
2437	17.63	18.56	≥ 500	Pass
2462	17.62	18.00	≥ 500	Pass

6dB Bandwidth		
2412 MHz	2437 MHz	2462 MHz
		
99% Occupied BW		
2412 MHz	2437 MHz	2462 MHz
		

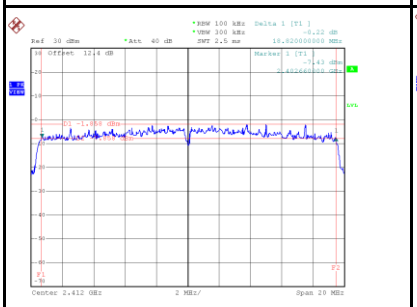
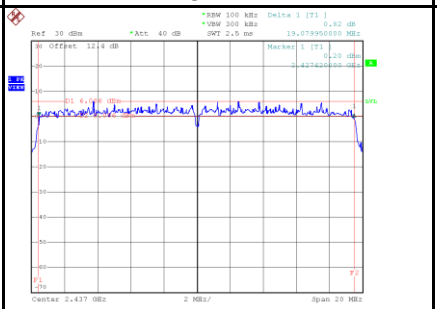
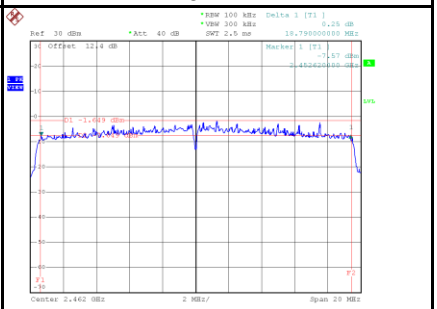
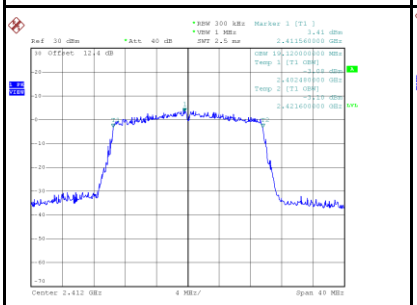
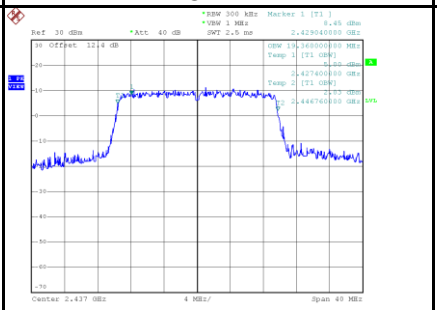
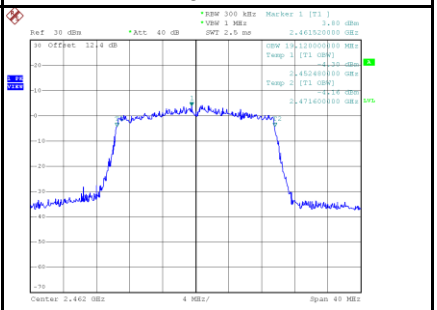
Test Mode	IEEE 802.11ax (HE20)_Antenna DB1

Test Frequency (MHz)	6 dB Bandwidth (MHz)	99 % Occupied Bandwidth (MHz)	Minimum 6 dB Bandwidth Limit (kHz)	Result
2412	18.75	19.04	≥ 500	Pass
2437	19.04	19.36	≥ 500	Pass
2462	18.56	19.04	≥ 500	Pass

6dB Bandwidth		
2412 MHz	2437 MHz	2462 MHz
		
99% Occupied BW		
2412 MHz	2437 MHz	2462 MHz
		

Test Mode	IEEE 802.11ax (HE20)_Antenna DB2

Test Frequency (MHz)	6 dB Bandwidth (MHz)	99 % Occupied Bandwidth (MHz)	Minimum 6 dB Bandwidth Limit (kHz)	Result
2412	18.82	19.12	≥ 500	Pass
2437	19.08	19.36	≥ 500	Pass
2462	18.79	19.12	≥ 500	Pass

6dB Bandwidth		
2412 MHz	2437 MHz	2462 MHz
		
99% Occupied BW		
2412 MHz	2437 MHz	2462 MHz
		

APPENDIX E OUTPUT POWER

Non Beamforming

Test Mode	IEEE 802.11b_Antenna DB1	Tested Date	2023/8/4

Frequency (MHz)	Conducted Power (dBm)	Conducted Power (W)	Limit (dBm)	Limit (W)	Result
2412	20.32	0.1076	30.00	1.0000	Pass
2437	20.43	0.1104	30.00	1.0000	Pass
2462	19.88	0.0973	30.00	1.0000	Pass

Test Mode	IEEE 802.11b_Antenna DB2	Tested Date	2023/8/4

Frequency (MHz)	Conducted Power (dBm)	Conducted Power (W)	Limit (dBm)	Limit (W)	Result
2412	20.37	0.1089	30.00	1.0000	Pass
2437	20.26	0.1062	30.00	1.0000	Pass
2462	19.91	0.0979	30.00	1.0000	Pass

Test Mode	IEEE 802.11b_Total	Tested Date	2023/8/4

Frequency (MHz)	Conducted Power (dBm)	Conducted Power (W)	Limit (dBm)	Limit (W)	Result
2412	23.36	0.2168	30.00	1.0000	Pass
2437	23.36	0.2168	30.00	1.0000	Pass
2462	22.91	0.1952	30.00	1.0000	Pass

Test Mode	IEEE 802.11g_Antenna DB1	Tested Date	2023/8/4

Frequency (MHz)	Conducted Power (dBm)	Conducted Power (W)	Limit (dBm)	Limit (W)	Result
2412	13.84	0.0242	30.00	1.0000	Pass
2437	18.34	0.0682	30.00	1.0000	Pass
2462	13.26	0.0212	30.00	1.0000	Pass

Test Mode	IEEE 802.11g_Antenna DB2	Tested Date	2023/8/4

Frequency (MHz)	Conducted Power (dBm)	Conducted Power (W)	Limit (dBm)	Limit (W)	Result
2412	13.41	0.0219	30.00	1.0000	Pass
2437	18.05	0.0638	30.00	1.0000	Pass
2462	12.88	0.0194	30.00	1.0000	Pass

Test Mode	IEEE 802.11g_Total	Tested Date	2023/8/4

Frequency (MHz)	Conducted Power (dBm)	Conducted Power (W)	Limit (dBm)	Limit (W)	Result
2412	16.64	0.0461	30.00	1.0000	Pass
2437	21.21	0.1321	30.00	1.0000	Pass
2462	16.08	0.0406	30.00	1.0000	Pass

Test Mode	IEEE 802.11n (HT20)_Antenna DB1	Tested Date	2023/8/4

Frequency (MHz)	Conducted Power (dBm)	Conducted Power (W)	Limit (dBm)	Limit (W)	Result
2412	12.51	0.0178	30.00	1.0000	Pass
2437	18.31	0.0678	30.00	1.0000	Pass
2462	12.62	0.0183	30.00	1.0000	Pass

Test Mode	IEEE 802.11n (HT20)_Antenna DB2	Tested Date	2023/8/4

Frequency (MHz)	Conducted Power (dBm)	Conducted Power (W)	Limit (dBm)	Limit (W)	Result
2412	12.21	0.0166	30.00	1.0000	Pass
2437	18.39	0.0690	30.00	1.0000	Pass
2462	12.24	0.0167	30.00	1.0000	Pass

Test Mode	IEEE 802.11n (HT20)_Total	Tested Date	2023/8/4

Frequency (MHz)	Conducted Power (dBm)	Conducted Power (W)	Limit (dBm)	Limit (W)	Result
2412	15.37	0.0345	30.00	1.0000	Pass
2437	21.36	0.1368	30.00	1.0000	Pass
2462	15.44	0.0350	30.00	1.0000	Pass

Test Mode	IEEE 802.11ax (HE20)_Antenna DB1	Tested Date	2023/8/4

Frequency (MHz)	Conducted Power (dBm)	Conducted Power (W)	Limit (dBm)	Limit (W)	Result
2412	11.88	0.0154	30.00	1.0000	Pass
2437	18.54	0.0714	30.00	1.0000	Pass
2462	12.44	0.0175	30.00	1.0000	Pass

Test Mode	IEEE 802.11ax (HE20)_Antenna DB2	Tested Date	2023/8/4

Frequency (MHz)	Conducted Power (dBm)	Conducted Power (W)	Limit (dBm)	Limit (W)	Result
2412	11.62	0.0145	30.00	1.0000	Pass
2437	18.34	0.0682	30.00	1.0000	Pass
2462	12.45	0.0176	30.00	1.0000	Pass

Test Mode	IEEE 802.11ax (HE20)_Total	Tested Date	2023/8/4

Frequency (MHz)	Conducted Power (dBm)	Conducted Power (W)	Limit (dBm)	Limit (W)	Result
2412	14.76	0.0299	30.00	1.0000	Pass
2437	21.45	0.1397	30.00	1.0000	Pass
2462	15.46	0.0351	30.00	1.0000	Pass

Beamforming

Test Mode	IEEE 802.11n (HT20)_Antenna DB1	Tested Date	2023/8/4

Frequency (MHz)	Conducted Power (dBm)	Conducted Power (W)	Limit (dBm)	Limit (W)	Result
2412	12.47	0.0177	30.00	1.0000	Pass
2437	18.01	0.0632	30.00	1.0000	Pass
2462	12.66	0.0185	30.00	1.0000	Pass

Test Mode	IEEE 802.11n (HT20)_Antenna DB2	Tested Date	2023/8/4

Frequency (MHz)	Conducted Power (dBm)	Conducted Power (W)	Limit (dBm)	Limit (W)	Result
2412	12.37	0.0173	30.00	1.0000	Pass
2437	17.69	0.0587	30.00	1.0000	Pass
2462	12.13	0.0163	30.00	1.0000	Pass

Test Mode	IEEE 802.11n (HT20)_Total	Tested Date	2023/8/4

Frequency (MHz)	Conducted Power (dBm)	Conducted Power (W)	Limit (dBm)	Limit (W)	Result
2412	15.43	0.0349	30.00	1.0000	Pass
2437	20.86	0.1219	30.00	1.0000	Pass
2462	15.41	0.0348	30.00	1.0000	Pass

Test Mode	IEEE 802.11ax (HE20)_Antenna DB1	Tested Date	2023/8/4

Frequency (MHz)	Conducted Power (dBm)	Conducted Power (W)	Limit (dBm)	Limit (W)	Result
2412	12.11	0.0163	30.00	1.0000	Pass
2437	17.88	0.0614	30.00	1.0000	Pass
2462	12.51	0.0178	30.00	1.0000	Pass

Test Mode	IEEE 802.11ax (HE20)_Antenna DB2	Tested Date	2023/8/4

Frequency (MHz)	Conducted Power (dBm)	Conducted Power (W)	Limit (dBm)	Limit (W)	Result
2412	11.99	0.0158	30.00	1.0000	Pass
2437	17.69	0.0587	30.00	1.0000	Pass
2462	12.32	0.0171	30.00	1.0000	Pass

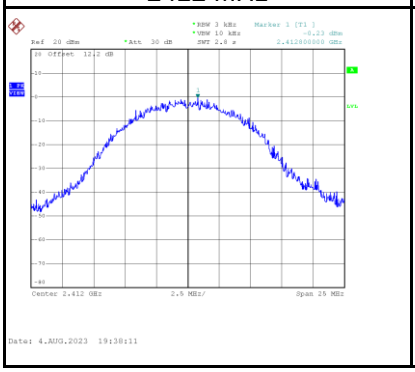
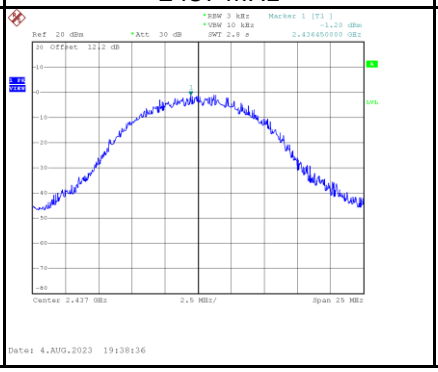
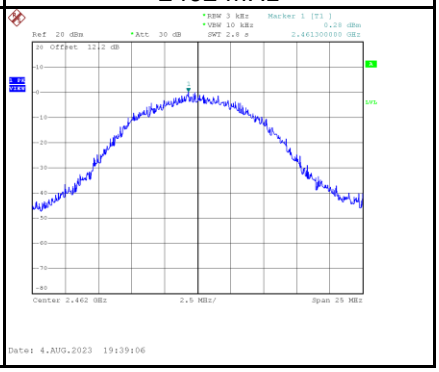
Test Mode	IEEE 802.11ax (HE20)_Total	Tested Date	2023/8/4

Frequency (MHz)	Conducted Power (dBm)	Conducted Power (W)	Limit (dBm)	Limit (W)	Result
2412	15.06	0.0321	30.00	1.0000	Pass
2437	20.80	0.1202	30.00	1.0000	Pass
2462	15.43	0.0349	30.00	1.0000	Pass

APPENDIX F POWER SPECTRAL DENSITY

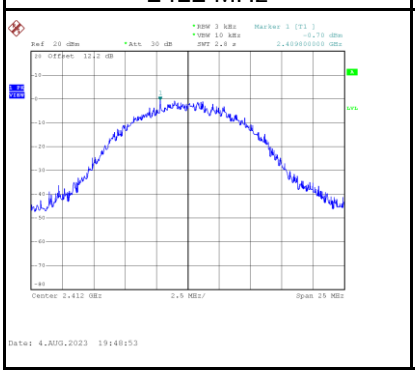
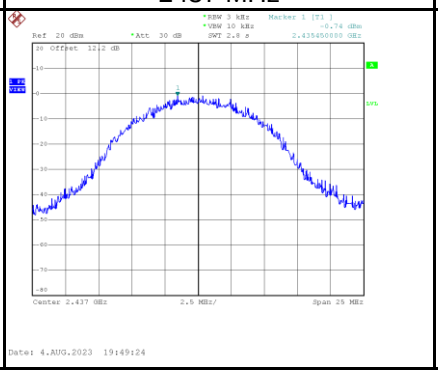
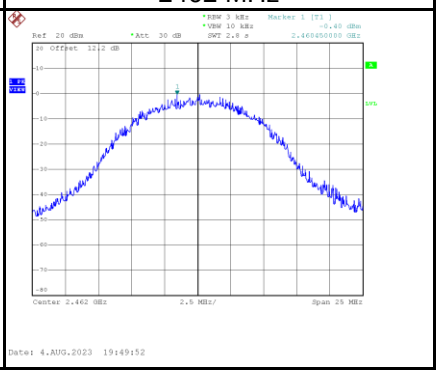
Test Mode	IEEE 802.11b_Antenna DB1

Test Frequency (MHz)	Power Spectral Density (dBm/3kHz)	Maximum Limit (dBm/3kHz)	Result
2412	-0.23	8.00	Pass
2437	-1.20	8.00	Pass
2462	0.28	8.00	Pass

2412 MHz	2437 MHz	2462 MHz
		

Test Mode	IEEE 802.11b_Antenna DB2

Test Frequency (MHz)	Power Spectral Density (dBm/3kHz)	Maximum Limit (dBm/3kHz)	Result
2412	-0.70	8.00	Pass
2437	-0.74	8.00	Pass
2462	-0.40	8.00	Pass

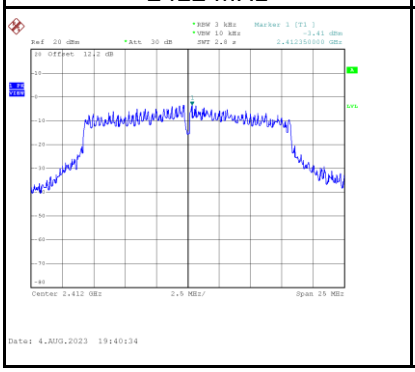
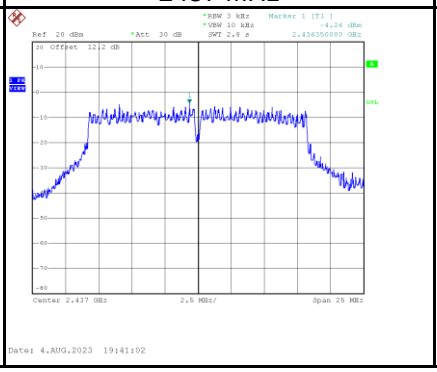
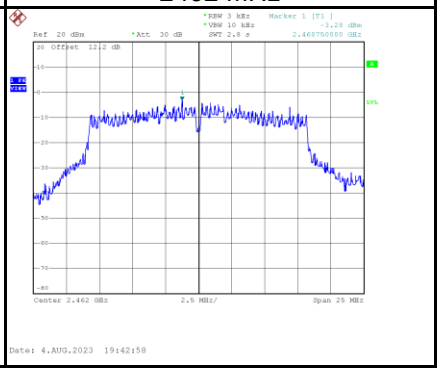
2412 MHz	2437 MHz	2462 MHz
		

Test Mode	IEEE 802.11b_Total

Test Frequency (MHz)	Power Spectral Density (dBm/3kHz)	Maximum Limit (dBm/3kHz)	Result
2412	2.55	8.00	Pass
2437	2.05	8.00	Pass
2462	2.96	8.00	Pass

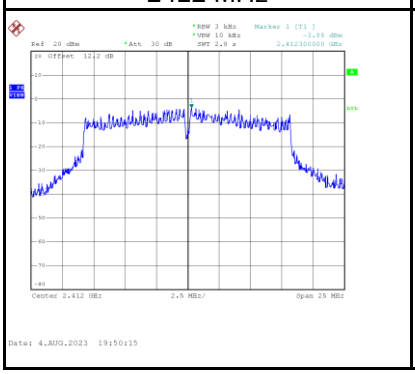
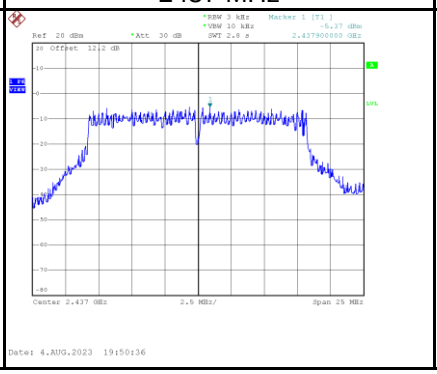
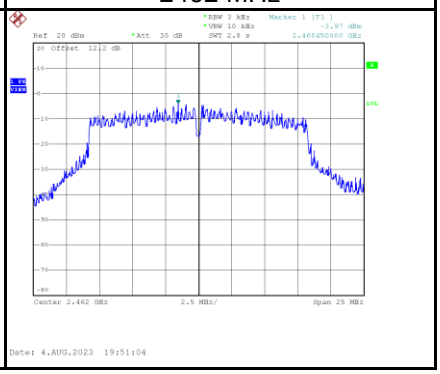
Test Mode	IEEE 802.11g_Antenna DB1

Test Frequency (MHz)	Power Spectral Density (dBm/3kHz)	Maximum Limit (dBm/3kHz)	Result
2412	-3.41	8.00	Pass
2437	-4.26	8.00	Pass
2462	-3.28	8.00	Pass

2412 MHz	2437 MHz	2462 MHz
		

Test Mode	IEEE 802.11g_Antenna DB2

Test Frequency (MHz)	Power Spectral Density (dBm/3kHz)	Maximum Limit (dBm/3kHz)	Result
2412	-3.88	8.00	Pass
2437	-5.37	8.00	Pass
2462	-3.97	8.00	Pass

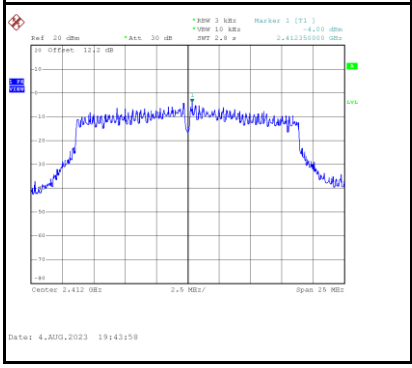
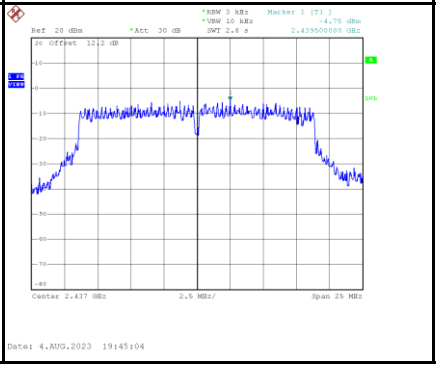
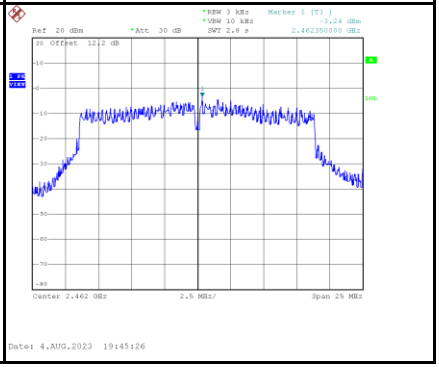
2412 MHz	2437 MHz	2462 MHz
		

Test Mode	IEEE 802.11g_Total

Test Frequency (MHz)	Power Spectral Density (dBm/3kHz)	Maximum Limit (dBm/3kHz)	Result
2412	-0.63	8.00	Pass
2437	-1.77	8.00	Pass
2462	-0.60	8.00	Pass

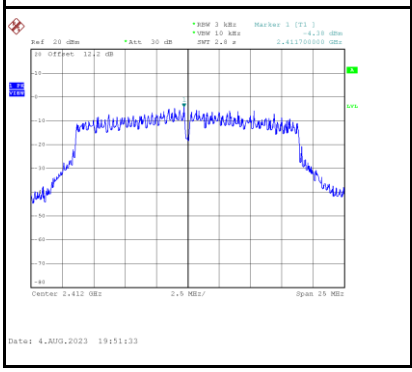
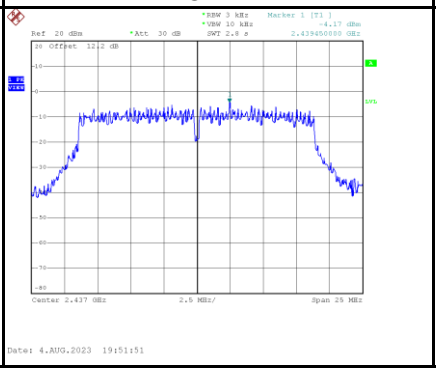
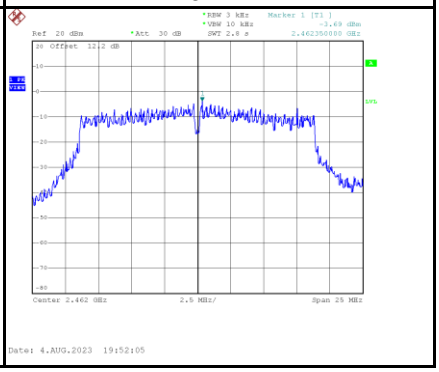
Test Mode	IEEE 802.11n (HT20)_Antenna DB1

Test Frequency (MHz)	Power Spectral Density (dBm/3kHz)	Maximum Limit (dBm/3kHz)	Result
2412	-4.00	8.00	Pass
2437	-4.75	8.00	Pass
2462	-3.24	8.00	Pass

2412 MHz	2437 MHz	2462 MHz
		

Test Mode	IEEE 802.11n (HT20)_Antenna DB2

Test Frequency (MHz)	Power Spectral Density (dBm/3kHz)	Maximum Limit (dBm/3kHz)	Result
2412	-4.38	8.00	Pass
2437	-4.17	8.00	Pass
2462	-3.69	8.00	Pass

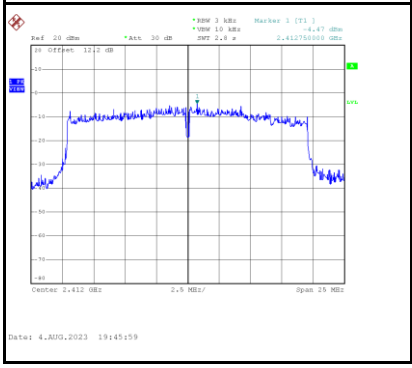
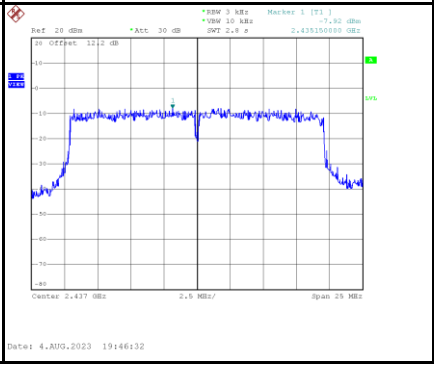
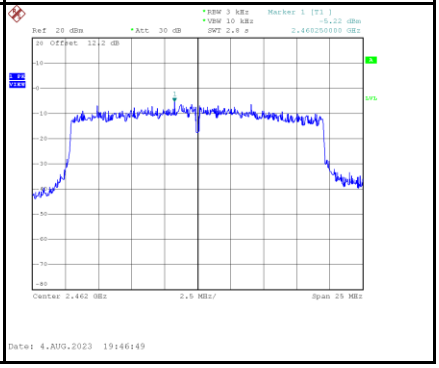
2412 MHz	2437 MHz	2462 MHz
		

Test Mode	IEEE 802.11n (HT20)_Total

Test Frequency (MHz)	Power Spectral Density (dBm/3kHz)	Maximum Limit (dBm/3kHz)	Result
2412	-1.18	8.00	Pass
2437	-1.44	8.00	Pass
2462	-0.45	8.00	Pass

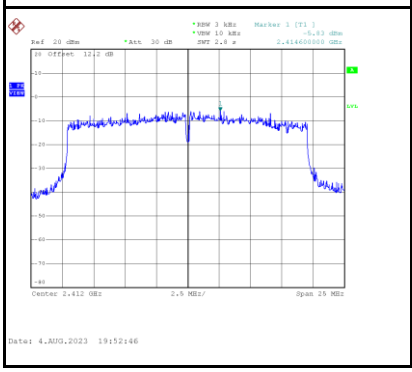
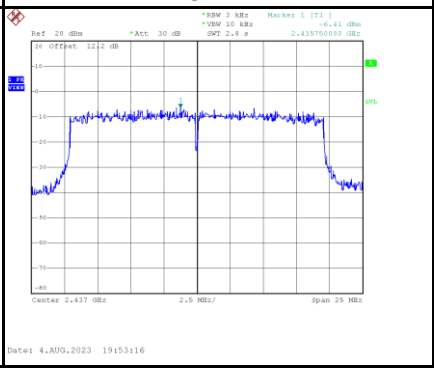
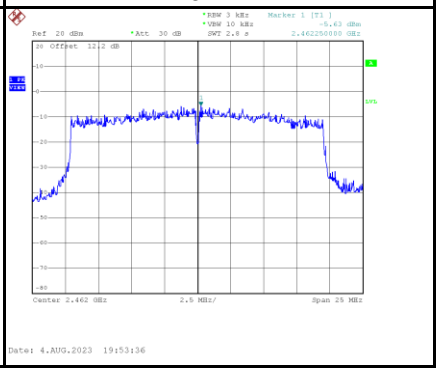
Test Mode	IEEE 802.11ax (HE20)_Antenna DB1

Test Frequency (MHz)	Power Spectral Density (dBm/3kHz)	Maximum Limit (dBm/3kHz)	Result
2412	-4.47	8.00	Pass
2437	-7.92	8.00	Pass
2462	-5.22	8.00	Pass

2412 MHz	2437 MHz	2462 MHz
		

Test Mode	IEEE 802.11ax (HE20)_Antenna DB2

Test Frequency (MHz)	Power Spectral Density (dBm/3kHz)	Maximum Limit (dBm/3kHz)	Result
2412	-5.83	8.00	Pass
2437	-6.41	8.00	Pass
2462	-5.63	8.00	Pass

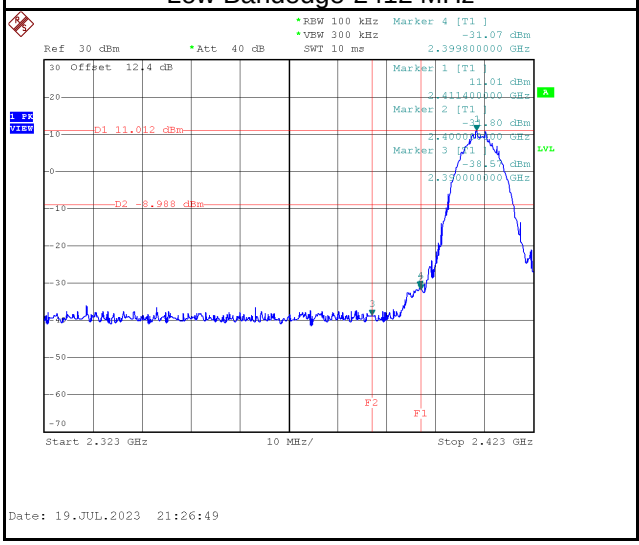
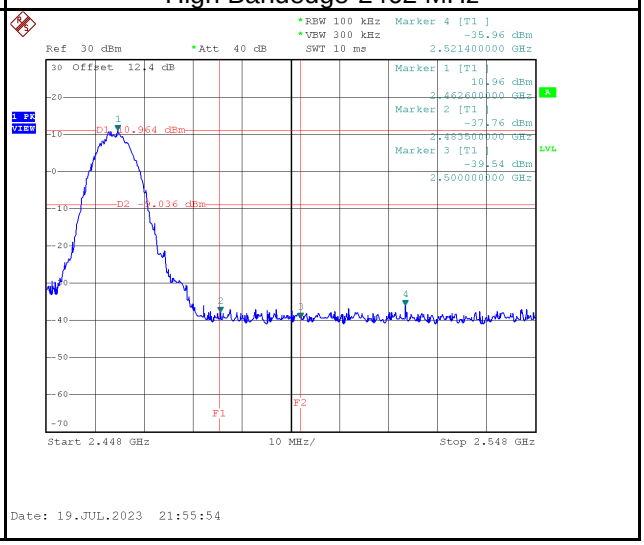
2412 MHz	2437 MHz	2462 MHz
		

Test Mode	IEEE 802.11ax (HE20)_Total

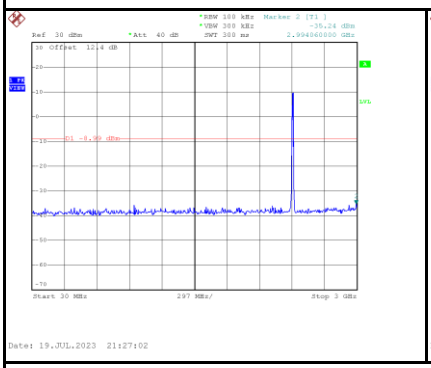
Test Frequency (MHz)	Power Spectral Density (dBm/3kHz)	Maximum Limit (dBm/3kHz)	Result
2412	-2.09	8.00	Pass
2437	-4.09	8.00	Pass
2462	-2.41	8.00	Pass

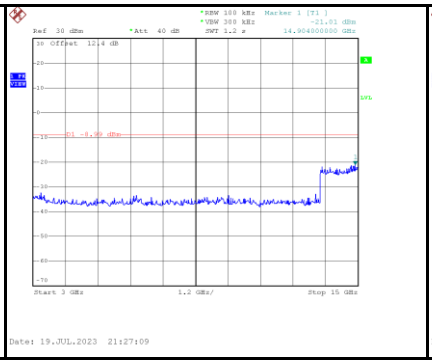
APPENDIX G ANTENNA CONDUCTED SPURIOUS EMISSIONS

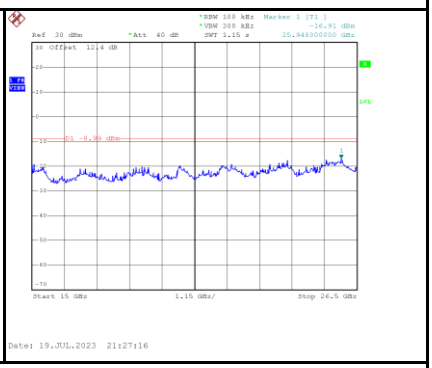
Test Mode	IEEE 802.11b_Antenna DB1

Low Bandedge-2412 MHz	High Bandedge-2462 MHz
	

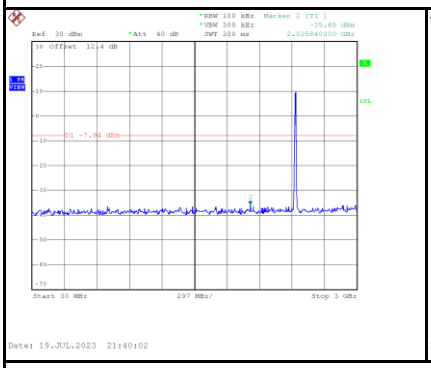
2412 MHz-10th Harmonics

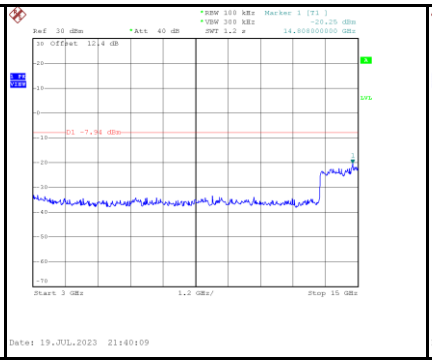


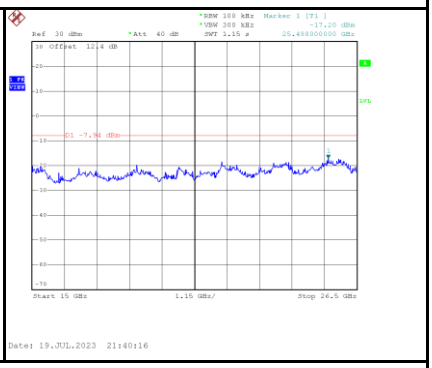




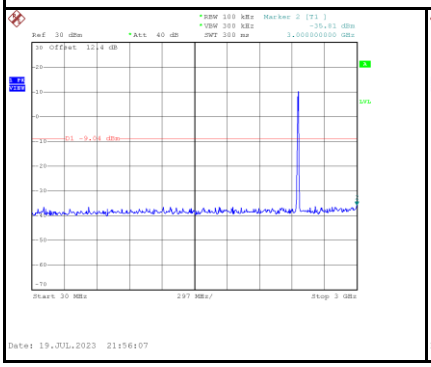
2437 MHz-10th Harmonics

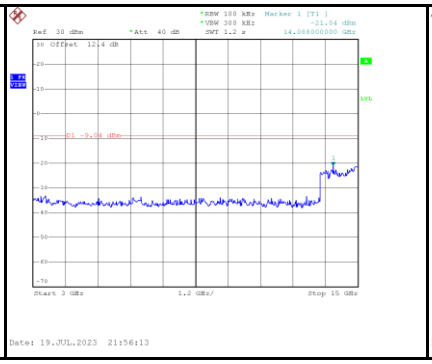


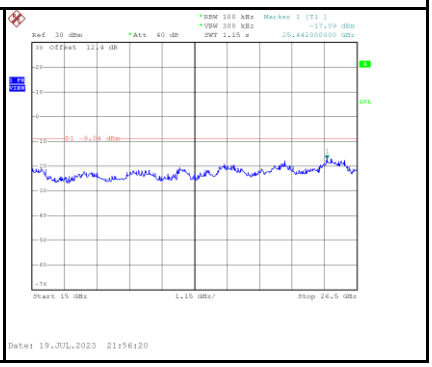




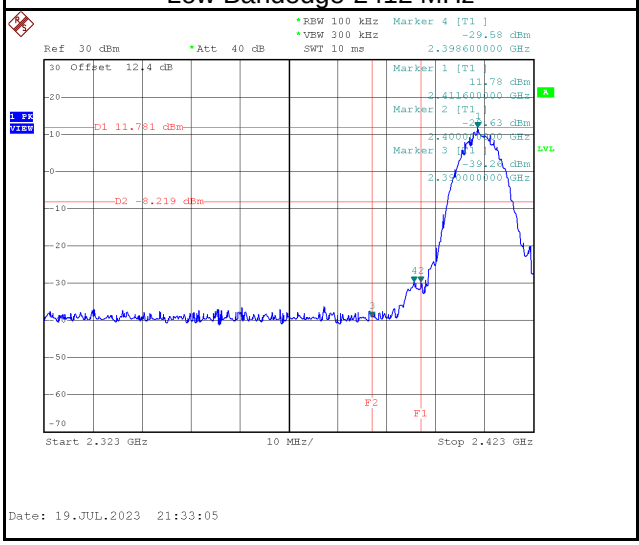
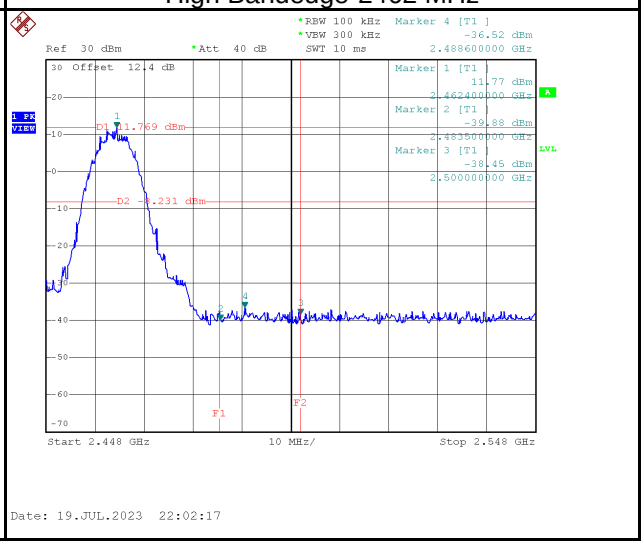
2462 MHz-10th Harmonics



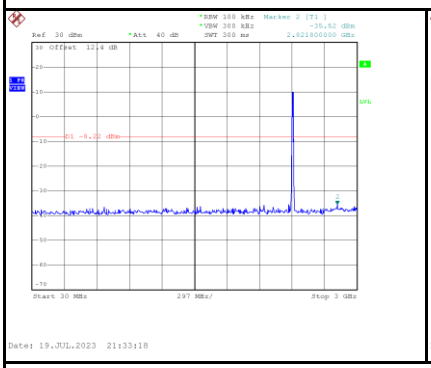


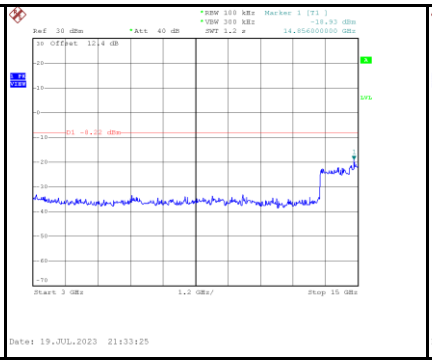


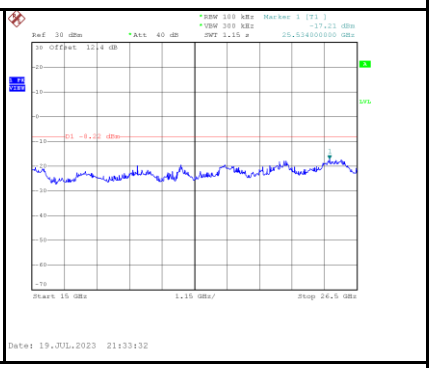
Test Mode	IEEE 802.11b_Antenna DB2

Low Bandedge-2412 MHz	High Bandedge-2462 MHz
	

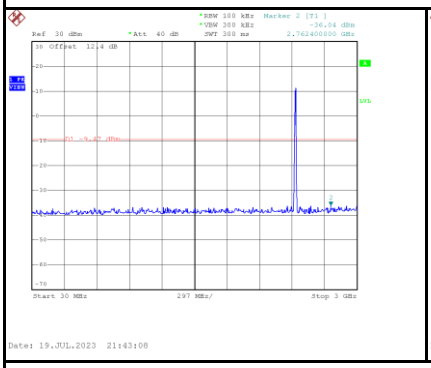
2412 MHz-10th Harmonics

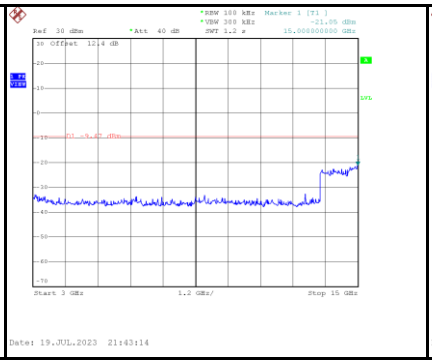


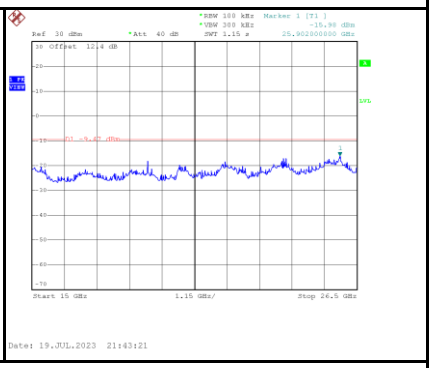




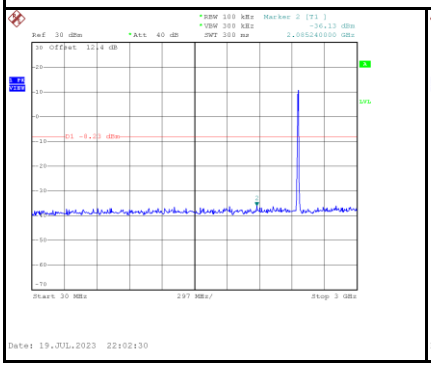
2437 MHz-10th Harmonics

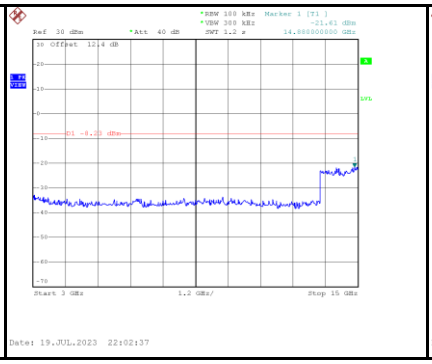


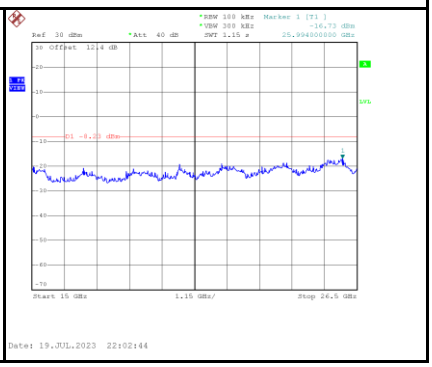




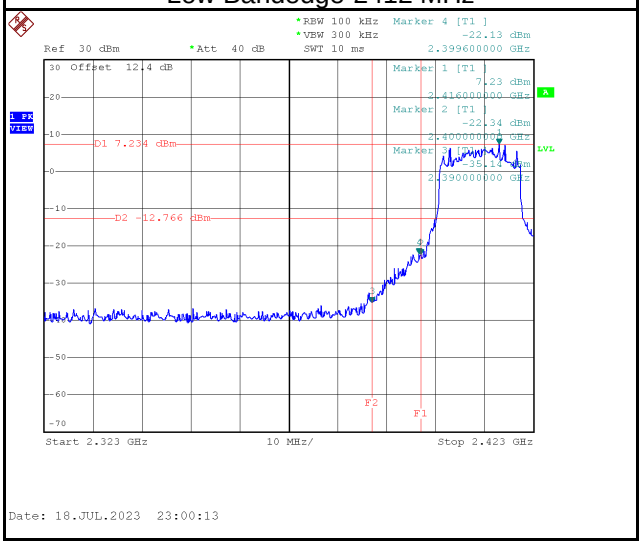
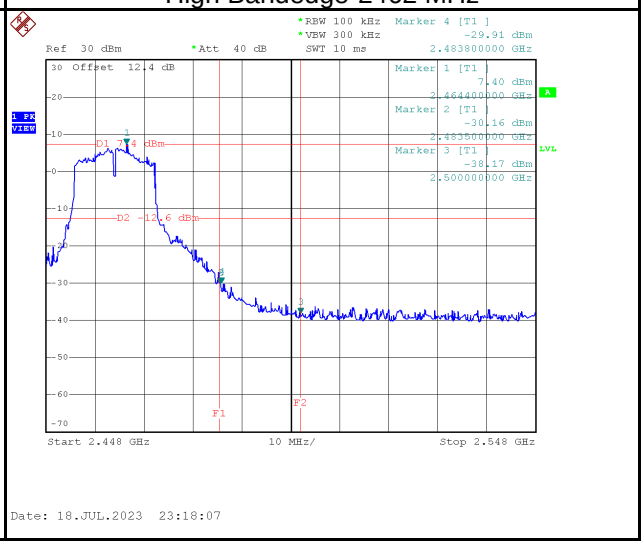
2462 MHz-10th Harmonics



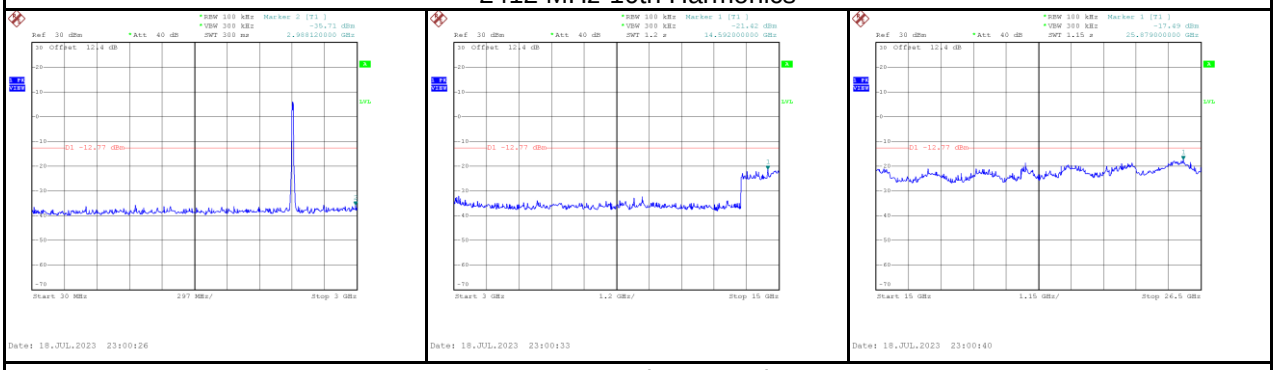




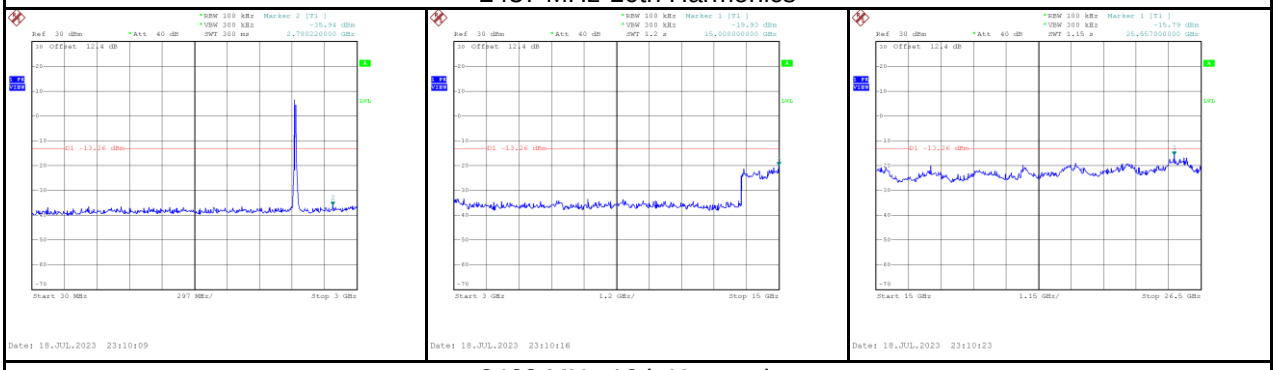
Test Mode	IEEE 802.11g_Antenna DB1

Low Bandedge-2412 MHz	High Bandedge-2462 MHz
	

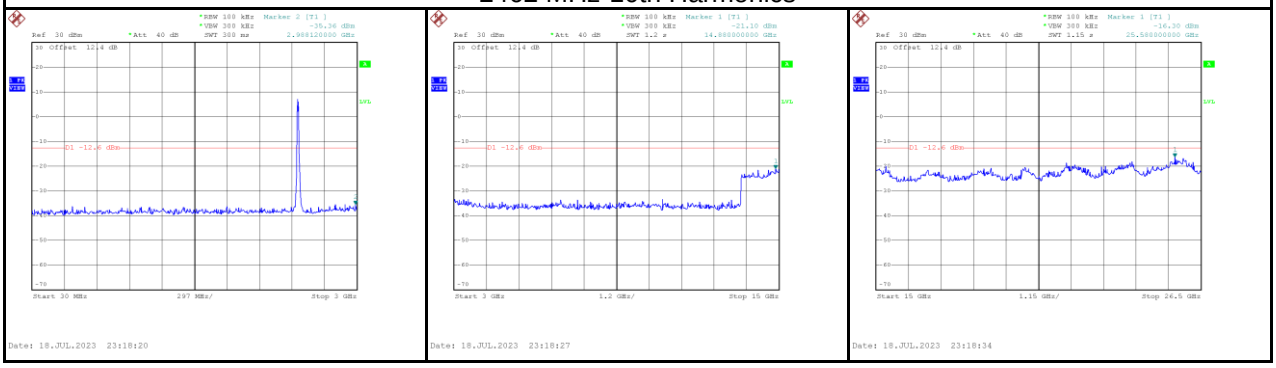
2412 MHz-10th Harmonics



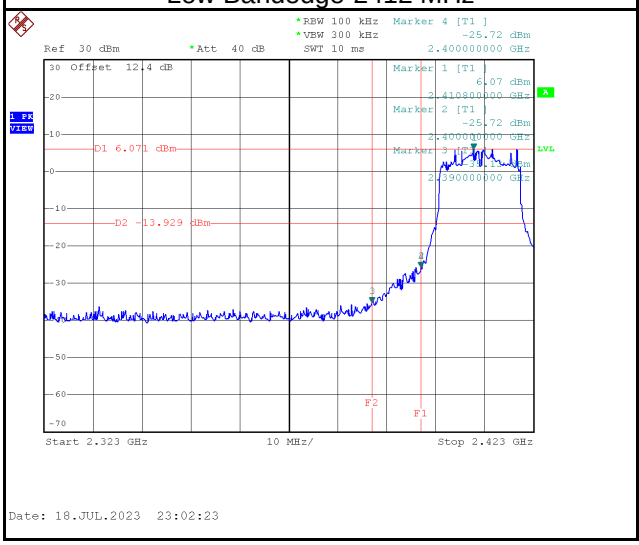
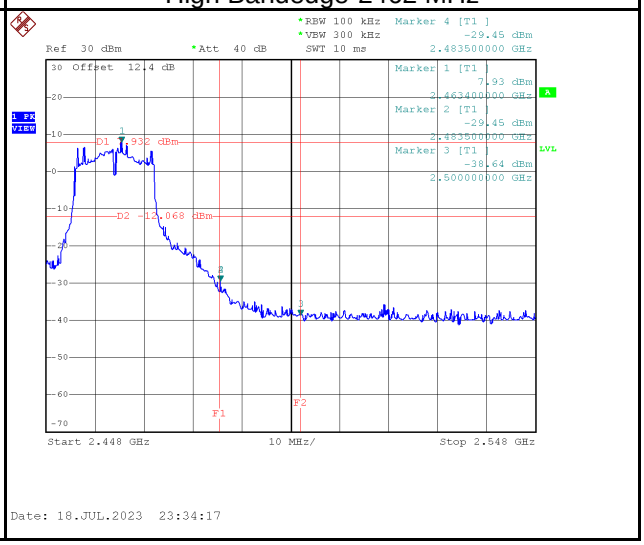
2437 MHz-10th Harmonics



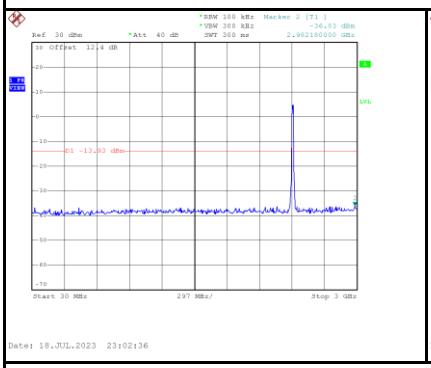
2462 MHz-10th Harmonics

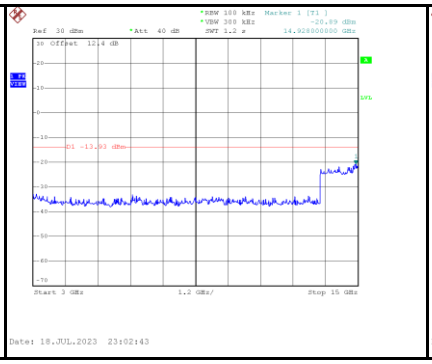


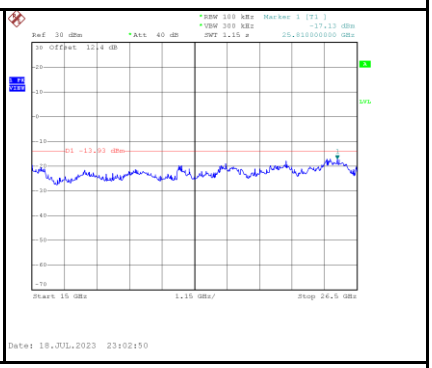
Test Mode	IEEE 802.11g_Antenna DB2

Low Bandedge-2412 MHz	High Bandedge-2462 MHz
	

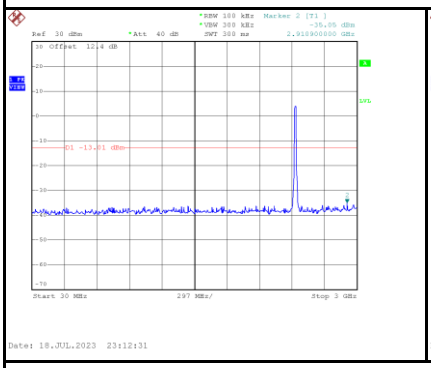
2412 MHz-10th Harmonics

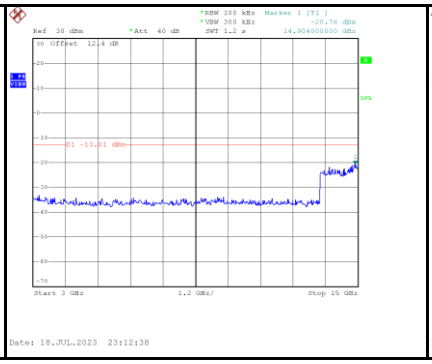


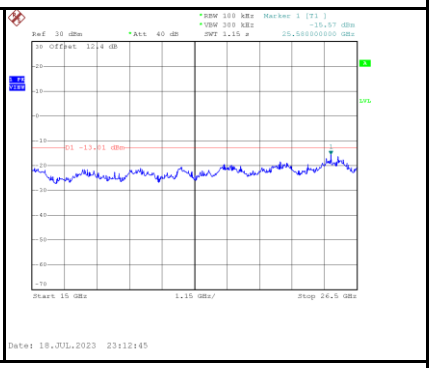




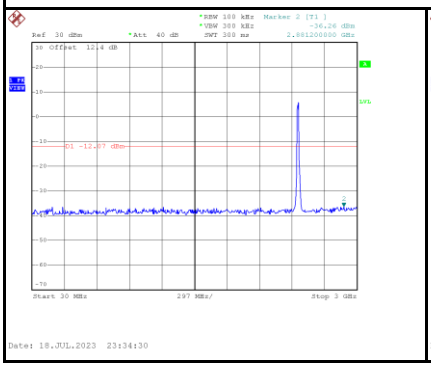
2437 MHz-10th Harmonics

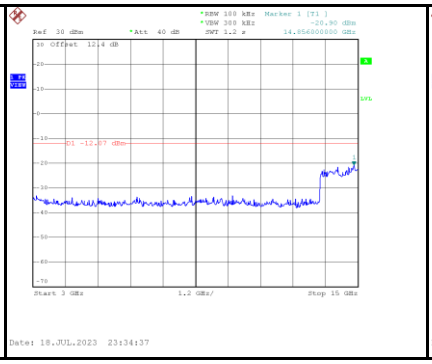


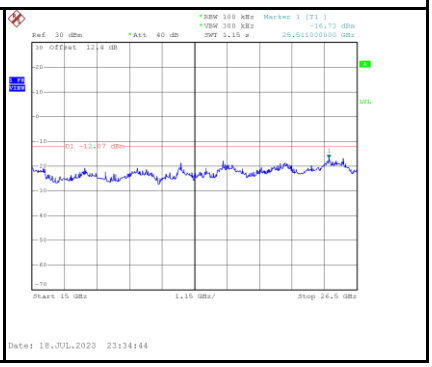




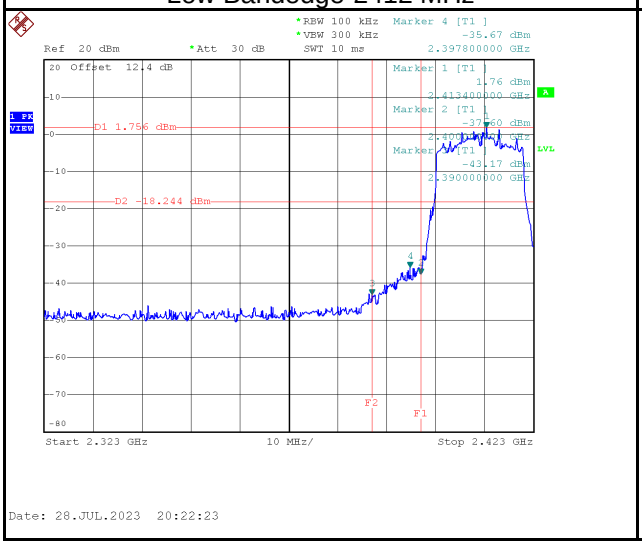
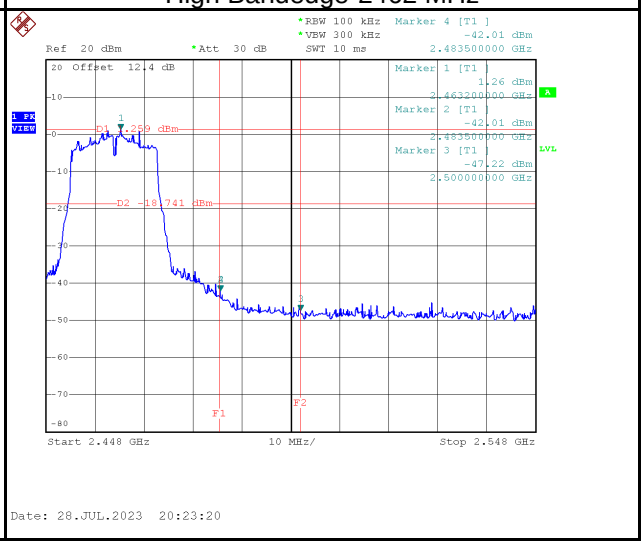
2462 MHz-10th Harmonics



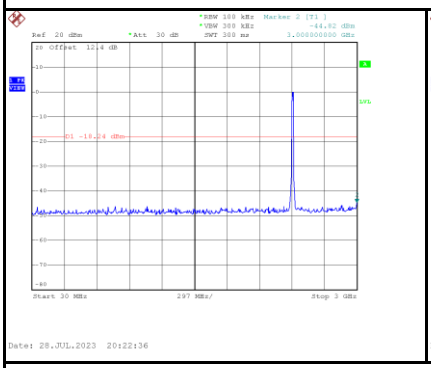


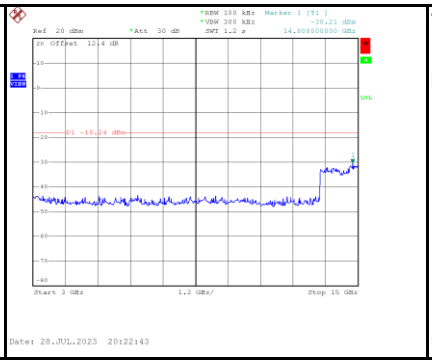


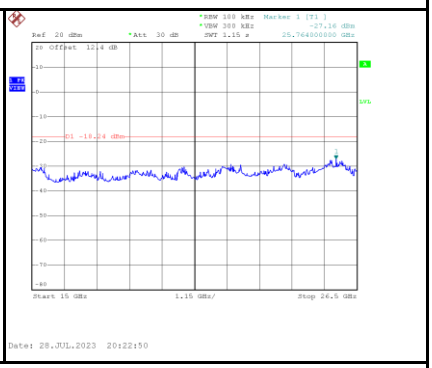
Test Mode	IEEE 802.11n (HT20)_Antenna DB1

Low Bandedge-2412 MHz	High Bandedge-2462 MHz
	

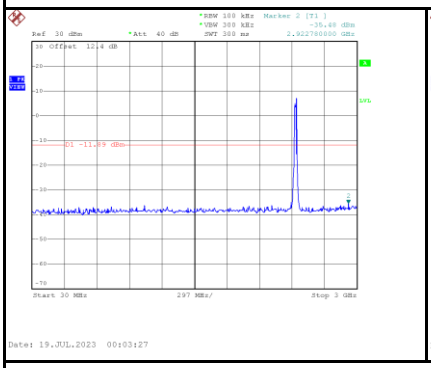
2412 MHz-10th Harmonics

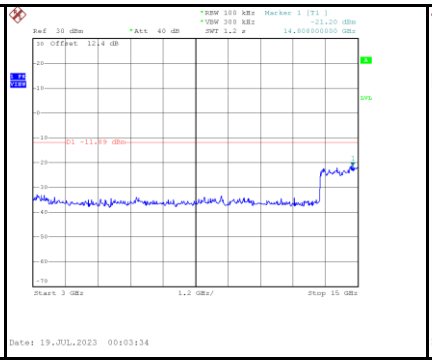


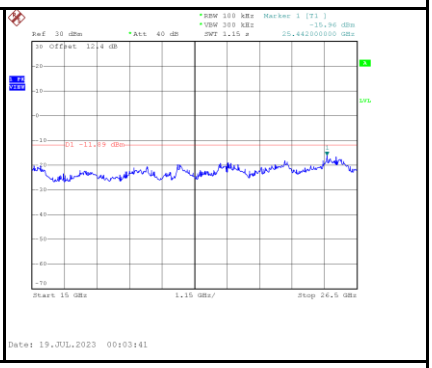




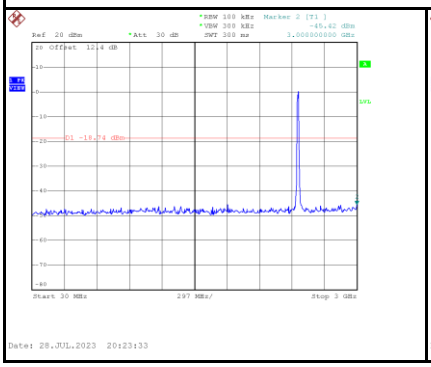
2437 MHz-10th Harmonics

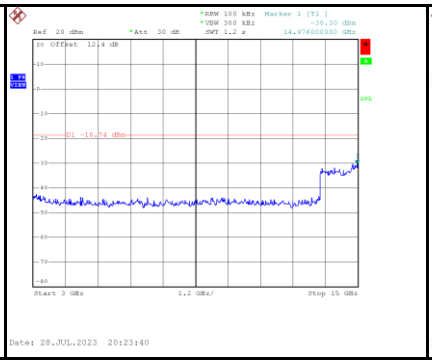


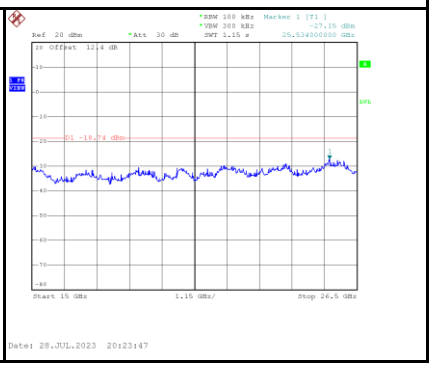




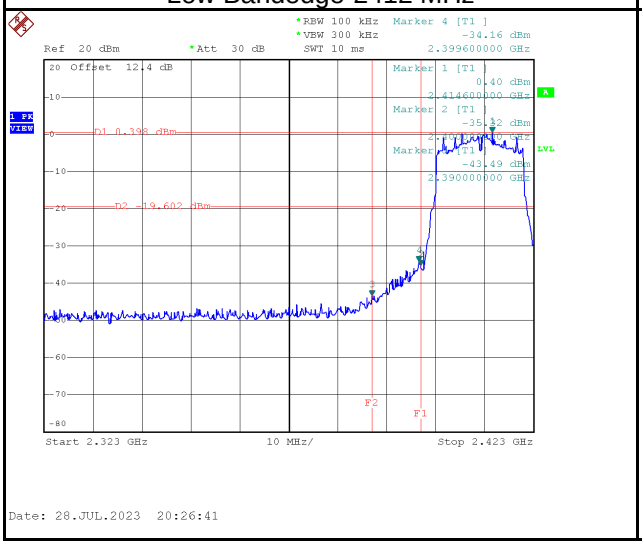
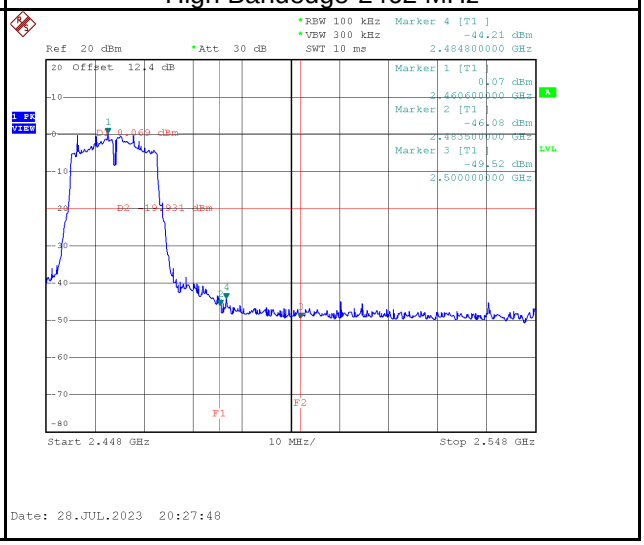
2462 MHz-10th Harmonics



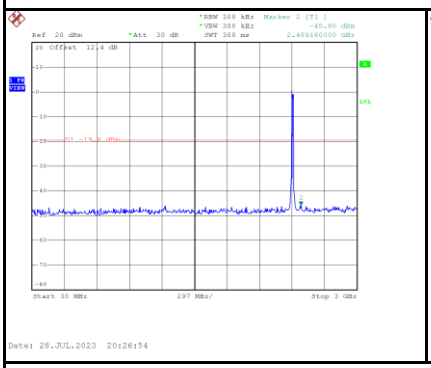


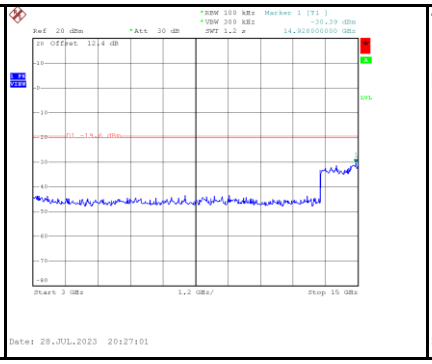


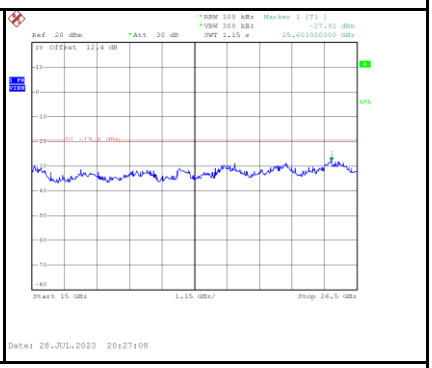
Test Mode	IEEE 802.11n (HT20)_Antenna DB2

Low Bandedge-2412 MHz	High Bandedge-2462 MHz
	

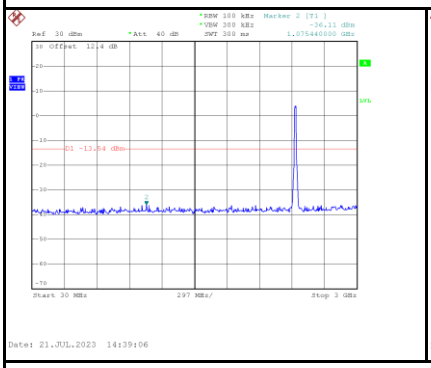
2412 MHz-10th Harmonics

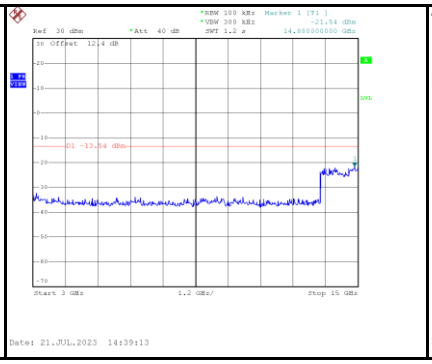


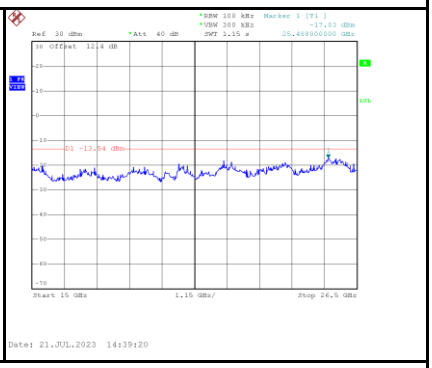




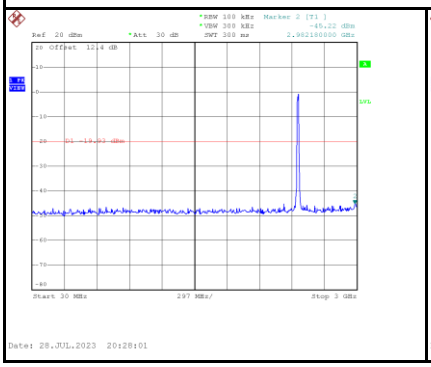
2437 MHz-10th Harmonics

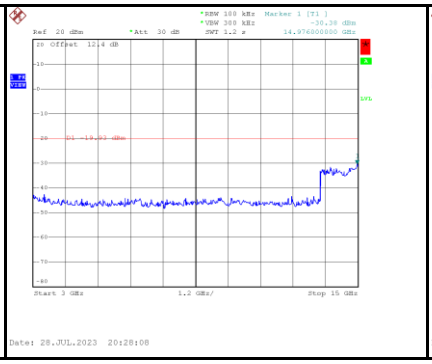


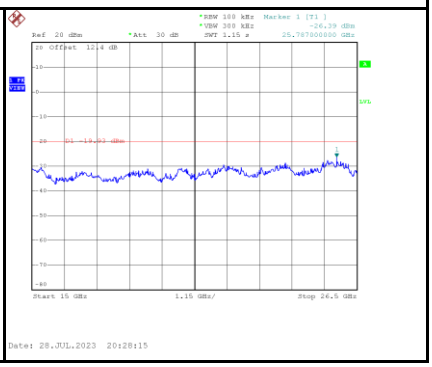




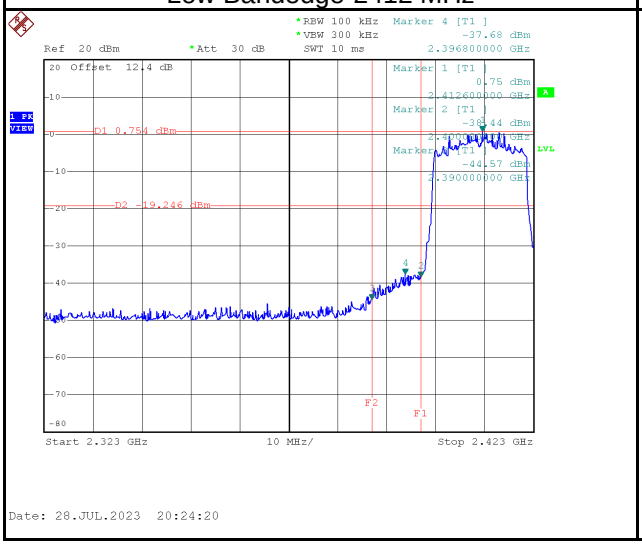
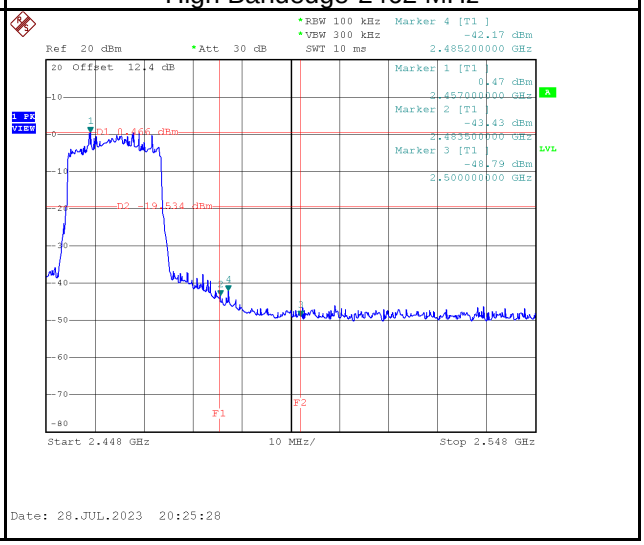
2462 MHz-10th Harmonics



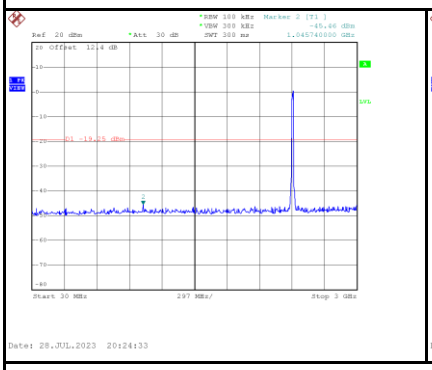


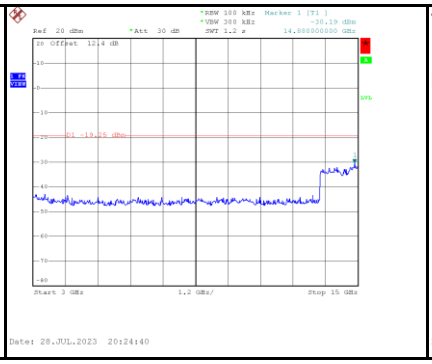


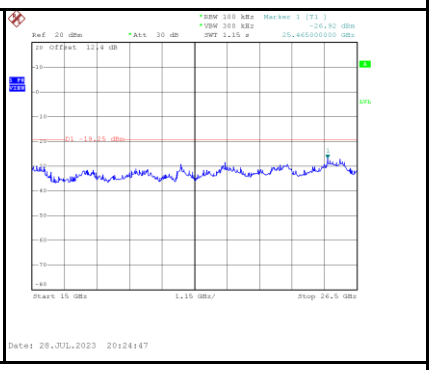
Test Mode	IEEE 802.11ax (HE20)_Antenna DB1

Low Bandedge-2412 MHz	High Bandedge-2462 MHz
	

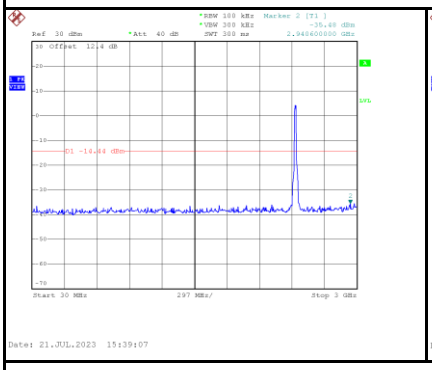
2412 MHz-10th Harmonics

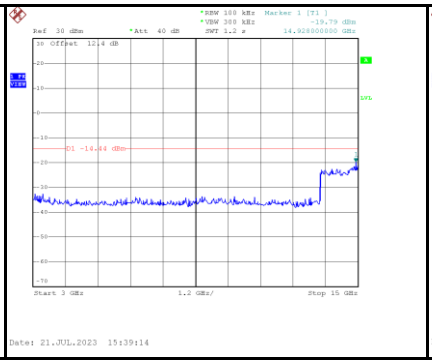


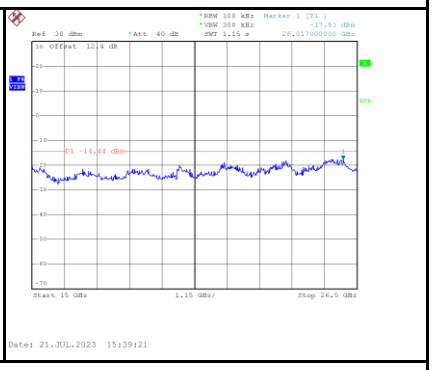




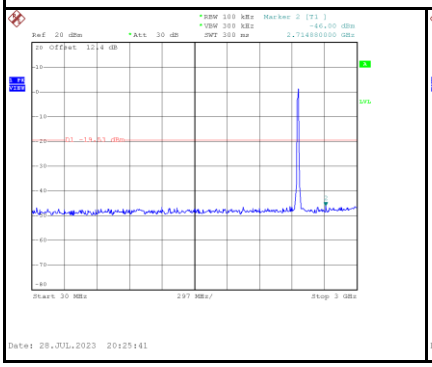
2437 MHz-10th Harmonics

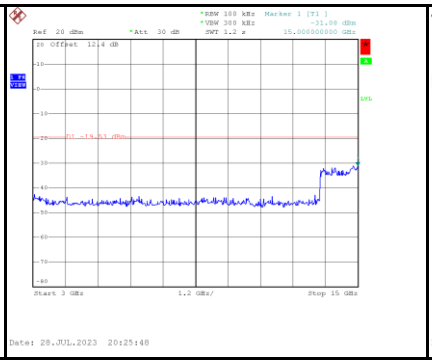


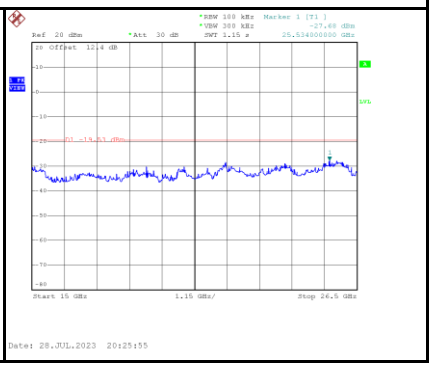




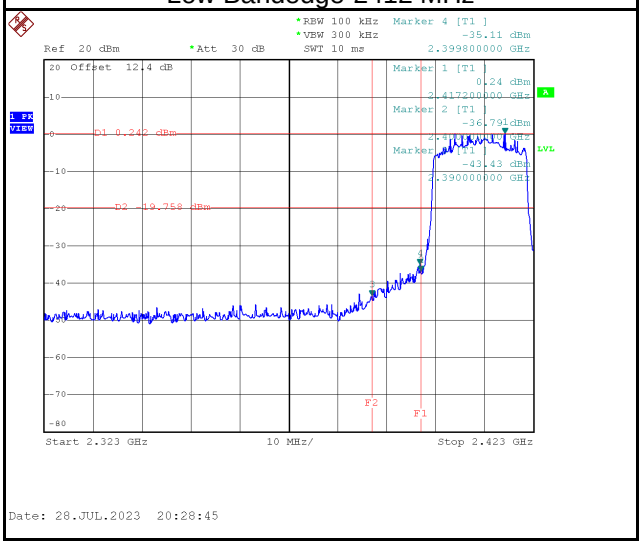
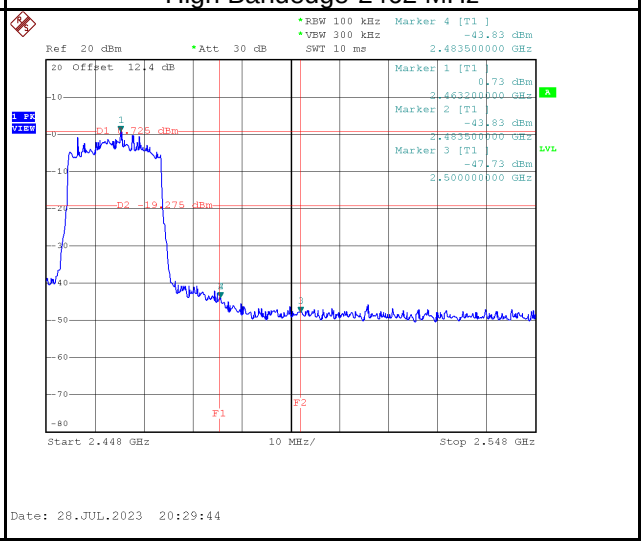
2462 MHz-10th Harmonics



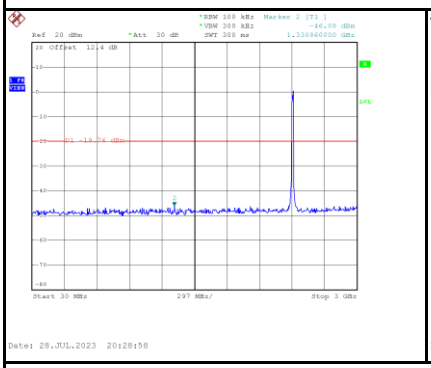


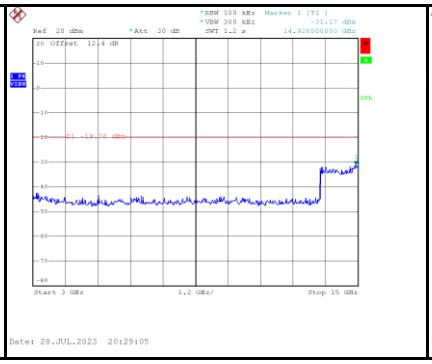


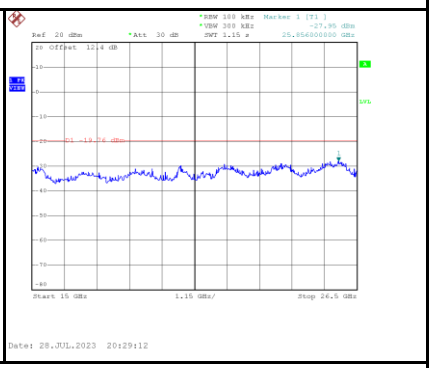
Test Mode	IEEE 802.11ax (HE20)_Antenna DB2

Low Bandedge-2412 MHz	High Bandedge-2462 MHz
	

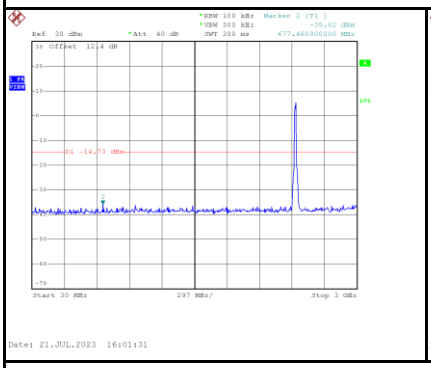
2412 MHz-10th Harmonics

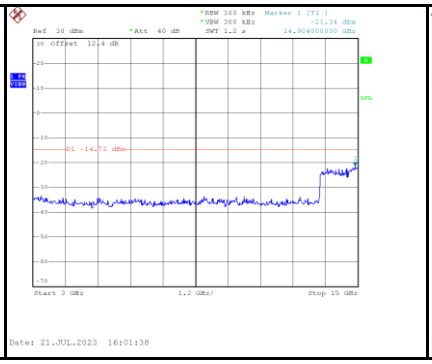


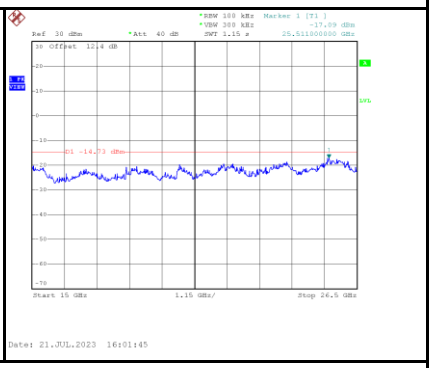




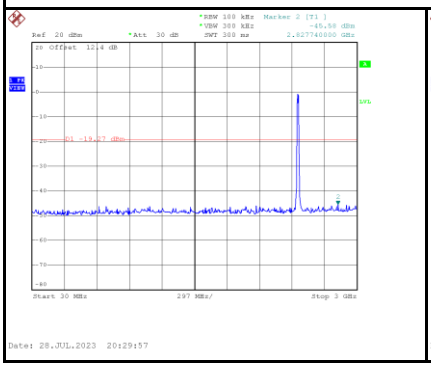
2437 MHz-10th Harmonics

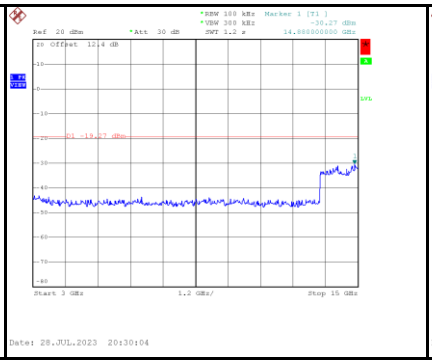


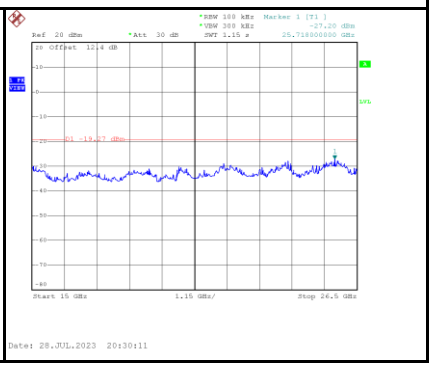




2462 MHz-10th Harmonics







End of Test Report