

FCC Radio Test Report

FCC ID: 2AF82-FHD200

Report No. : BTL-FCCP-3-2104T005D
Equipment : Box PC
Model Name : FHD-200
Brand Name : Qbic
Applicant : Qbic Technology Co., Ltd.
Address : 26F.-12, NO.99, SEC. 1, XINTAI 5TH RD., XIZHI DIST., NEW TAIPEI CITY
22175, TAIWAN

Radio Function : WLAN 2.4 GHz

FCC Rule Part(s) : FCC CFR Title 47, Part 15, Subpart C (15.247)
Measurement Procedure(s) : ANSI C63.10-2013

Date of Receipt : 2024/5/28
Date of Test : 2024/6/24 ~ 2024/7/26
Issued Date : 2024/8/9

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

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Declaration

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

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

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

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

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

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

Limitation

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

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

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REVISION HISTORY

Report No.	Version	Description	Issued Date	Note
BTL-FCCP-3-2104T005D	R00	Original Report.	2024/8/9	Valid

1 SUMMARY OF TEST RESULTS

Test procedures according to the technical standards.

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

Statement of Conformity

The statement of conformity is based on the binary decision rule according to IEC Guide 115 and ILAC G8 "simple acceptance" principle. Without considering measurement uncertainty, its specific risk is less than 50% PFA. (PFA: Probability of False Accept)

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. 68-2, Ln. 169, Sec. 2, Datong Rd., Xizhi Dist., New Taipei City 221, Taiwan
(FCC DN: TW0659)

☐ CB12 ☒ SR05

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 $y \pm U$, 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 %**.

A. AC power line conducted emissions test:

Test Site	Method	Measurement Frequency Range	U (dB)
SR05	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

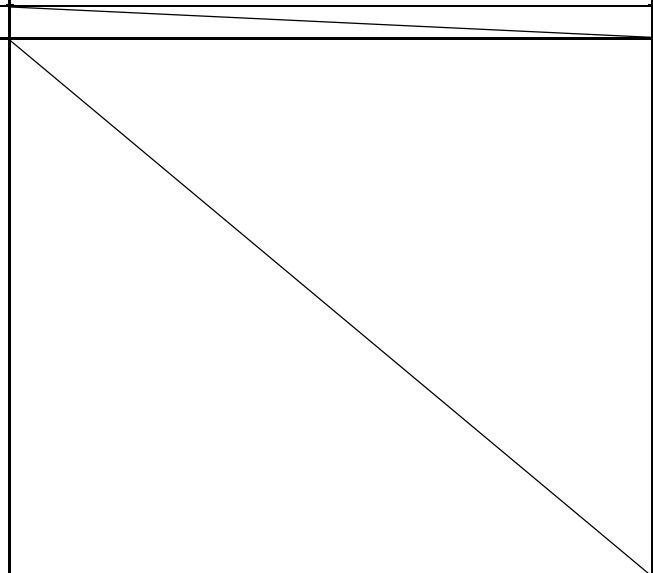
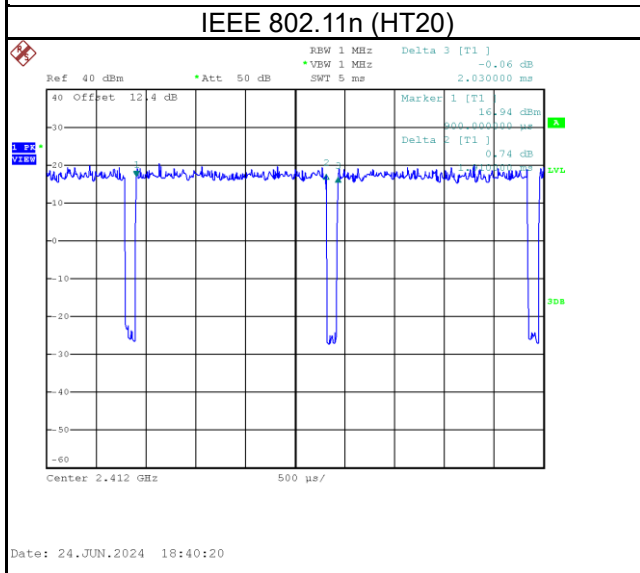
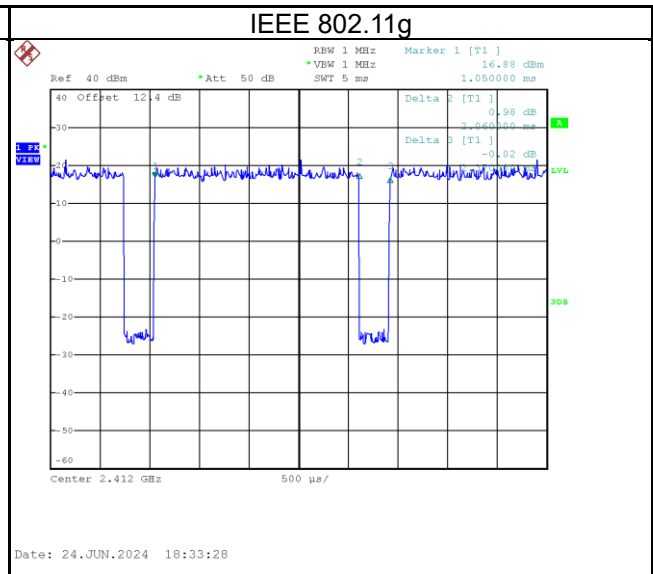
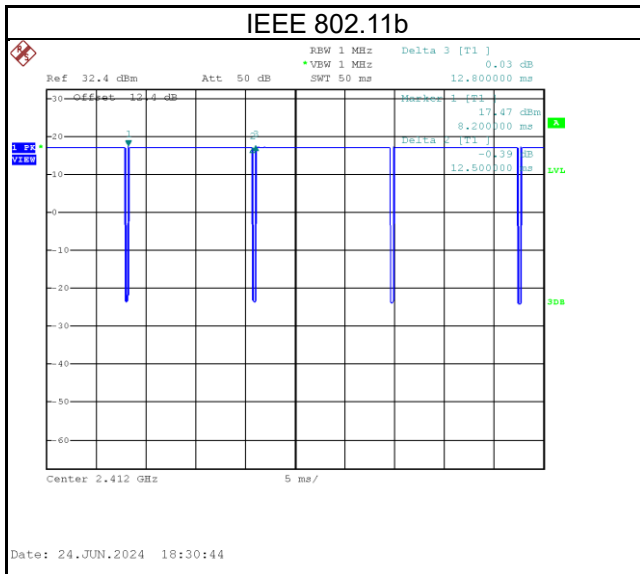
Test Item	Environment Condition	Test Voltage	Tested by
AC Power Line Conducted Emissions	22 °C, 50 %	AC 120V	Ken Lan
Radiated emissions below 1 GHz	Refer to data	AC 120V	Sean Huang
Radiated emissions above 1 GHz	Refer to data	AC 120V	Sean Huang
Bandwidth	23 °C, 50 %	AC 120V	Ken Lan
Output Power	23 °C, 50 %	AC 120V	Ken Lan
Power Spectral Density	23 °C, 50 %	AC 120V	Ken Lan
Antenna conducted Spurious Emission	23 °C, 50 %	AC 120V	Ken Lan

1.4 DUTY CYCLE

If duty cycle is $\geq 98\%$, duty factor is not required.

If duty cycle is $< 98\%$, duty factor shall be considered.

Remark	Delta 2			Delta 3	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	12.50	1	12.50	12.80	97.66%	0.10
IEEE 802.11g	2.060	1	2.060	2.370	86.92%	0.61
IEEE 802.11n (HT20)	1.910	1	1.910	2.030	94.09%	0.26



2 GENERAL INFORMATION

2.1 DESCRIPTION OF EUT

Equipment	Box PC
Model Name	FHD-200
Brand Name	Qbic
Model Difference	N/A
Power Source	DC Voltage supplied from AC/DC adapter.
Power Rating	I/P: 100-240V~, 50-60Hz, 300mA O/P: +5V, 2A MAX 10.0W
Products Covered	1 * Power Adapter: PHIHONG /PSM10R-050 1 * VESA Mounting: QBIC /MBP0400X01G01 1 * Veicro Tie: 3M /NBP0400101O01 1 * Power Plug for US.CE.US.AUS: PHIHONG /KPAD01005PH01 1 * Antenna: Joymax /TWX-100BRS3B-1242
Operation Band	2400 MHz ~ 2483.5 MHz
Operation Frequency	2412 MHz ~ 2462 MHz
Modulation Technology	IEEE 802.11b: DSSS IEEE 802.11g: OFDM IEEE 802.11n: OFDM
Transfer Rate	IEEE 802.11b: 11/5.5/2/1 Mbps IEEE 802.11g: 54/48/36/24/18/12/9/6 Mbps IEEE 802.11n: up to 72.2 Mbps
Output Power Max.	IEEE 802.11b: 25.78 dBm (0.3784 W) IEEE 802.11g: 25.81 dBm (0.3811W) IEEE 802.11n (HT20): 25.89 dBm (0.3882 W)
Test Software Version	ADB
Test Model	FHD-200
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	05	2432	09	2452
02	2417	06	2437	10	2457
03	2422	07	2442	11	2462
04	2427	08	2447		

(3) Table for Filed Antenna:

Antenna	Manufacture	Model name	Type	Connector	Frequency (MHz)	Gain (dBi)
1	Joymax	TWX-100BRS3B-1242	Dipole	RP SMA Plug	2400-2500	2.08
					5150-5250	4.05
					5555-5850	4.11

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

2.2 TEST MODES

Test Items	Test mode	Channel	Note
AC power line conducted emissions	Normal/Idle	-	-
Transmitter Radiated Emissions (below 1GHz)	TX Mode_ IEEE 802.11b	06	-
Transmitter Radiated Emissions (above 1GHz)	TX Mode_ IEEE 802.11b	01/11	Bandedge
	TX Mode_ IEEE 802.11g		
	TX Mode_ IEEE 802.11n (HT20)		
	TX Mode_ IEEE 802.11b	01/06/11	Harmonic
	TX Mode_ IEEE 802.11g		
	TX Mode_ IEEE 802.11n (HT20)		
Transmitter Radiated Emissions (above 18GHz)	TX Mode_ IEEE 802.11b	06	-
Bandwidth & 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)		
Output Power	TX Mode_ IEEE 802.11b	01/06/11	-
	TX Mode_ IEEE 802.11g		
	TX Mode_ IEEE 802.11n (HT20)		

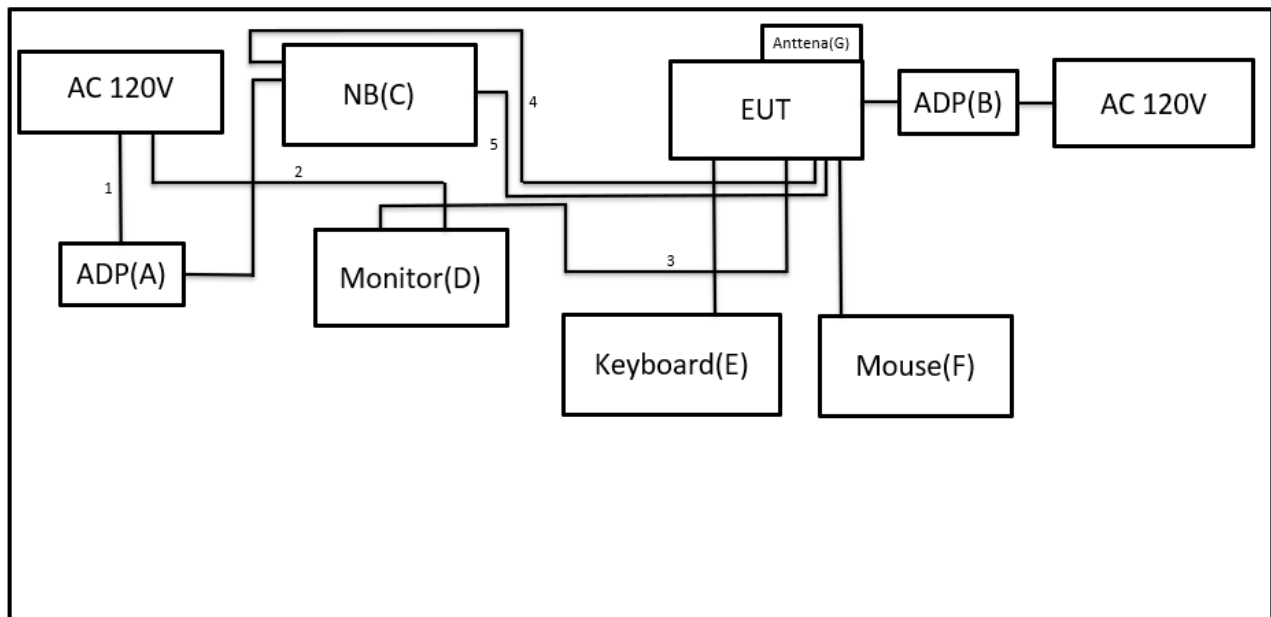
NOTE:

- (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.

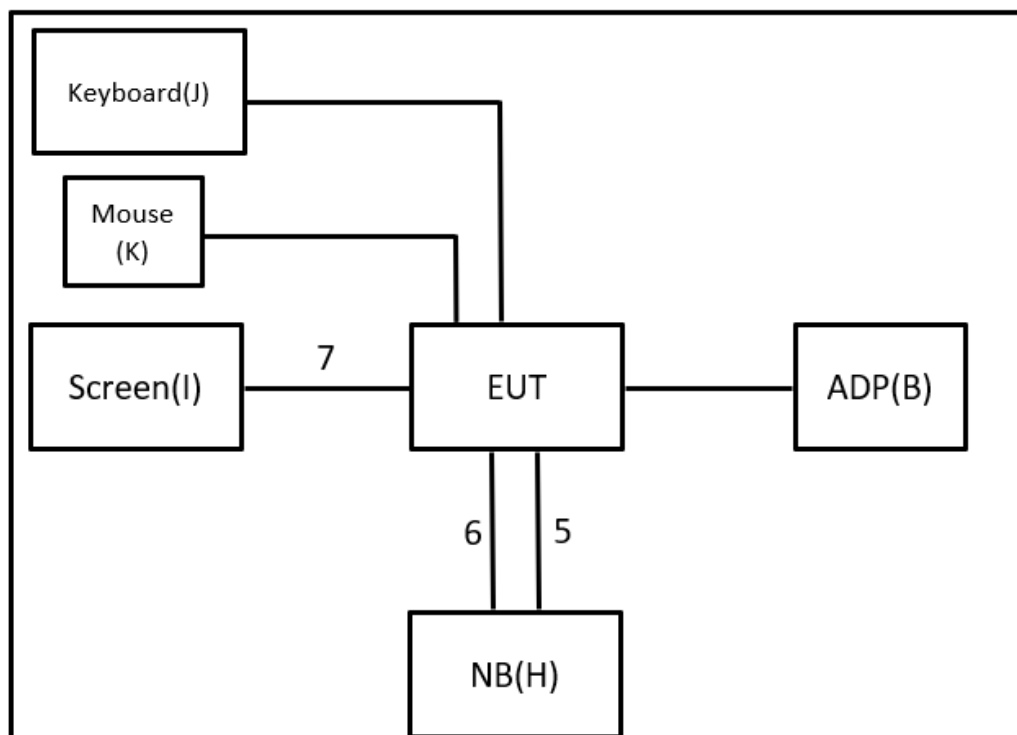
2.3 BLOCK DIAGRAM SHOWING THE CONFIGURATION OF SYSTEM TESTED

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	ADP	HP	HSTNN-CA40	N/A	Furnished by test lab.
B	ADP	PHIHONG	PSM10R-050	N/A	Supplied by test requester
C	NB	HP	240 G5	N/A	Furnished by test lab.
D	Monitor	DELL	U2720Q	N/A	Furnished by test lab.
E	Keyborad	DELL	KB216t	N/A	Furnished by test lab.
F	Mouse	DELL	MOCZUL	N/A	Furnished by test lab.
G	Anttena	JOEMAX	TWX-100BRS3B-1242	N/A	Supplied by test requester
H	NB	HP	TPN-I119	N/A	Furnished by test lab.
I	Screen	DELL	U2720Q	N/A	Furnished by test lab.
J	Keyboard	Bloody	KB-8	N/A	Furnished by test lab.
K	Mouse	Logitech	B100	N/A	Furnished by test lab.

Item	Shielded	Ferrite Core	Length	Cable Type	Remarks
1	No	No	1.8m	Power Cord	Furnished by test lab.
2	No	No	1.8m	Power Cord	Furnished by test lab.
3	No	No	1.5m	HDMI Cable	Furnished by test lab.
4	No	No	0.5m	LAN Cable	Furnished by test lab.
5	No	No	1.5m	USB - A to Micro-USB	Furnished by test lab.
6	No	No	1m	LAN Cable	Furnished by test lab.
7	No	No	1.8m	HDMI	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 (dBμV)		Correct Factor (dB)		Measurement Value (dBμV)
38.22	+	3.45	=	41.67

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

The following table is the setting of the receiver.

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

3.2 TEST PROCEDURE

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

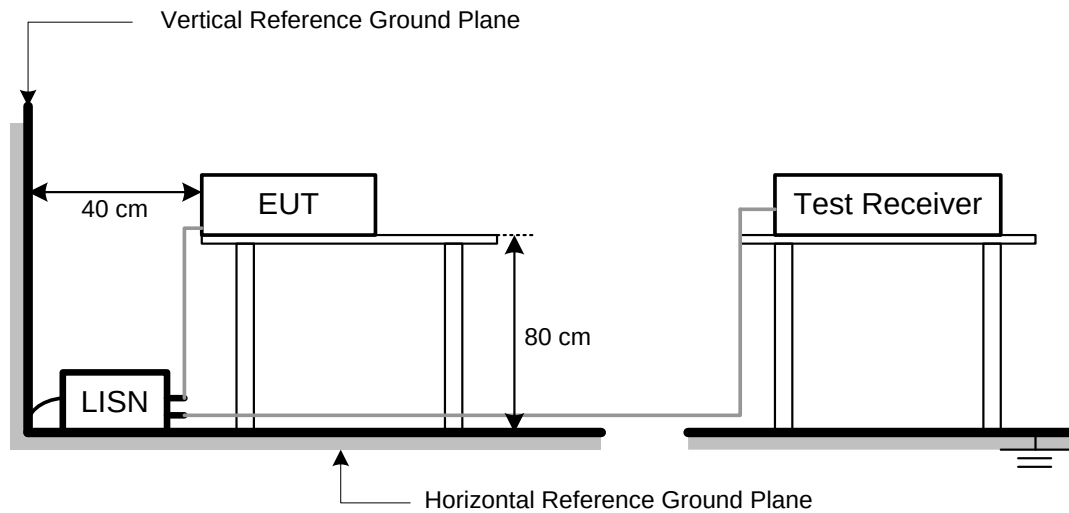
NOTE:

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

3.3 DEVIATION FROM TEST STANDARD

No deviation.

3.4 TEST SETUP



3.5 TEST RESULT

Please refer to the APPENDIX A.

4 RADIATED EMISSIONS TEST

4.1 LIMIT

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

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

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

LIMITS OF RADIATED EMISSIONS MEASUREMENT (Above 1000 MHz)

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

NOTE:

- (1) The limit for radiated test was performed according to FCC CFR Title 47, Part 15, Subpart C.
- (2) The tighter limit applies at the band edges.
- (3) Emission level (dBuV/m)=20log Emission level (uV/m).
- (4) The test result calculated as following:

Measurement Value = Reading Level + Correct Factor

Correct Factor = Antenna Factor + Cable Loss - Amplifier Gain(if use)

Margin Level = Measurement Value - Limit Value

Calculation example:

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

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

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

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

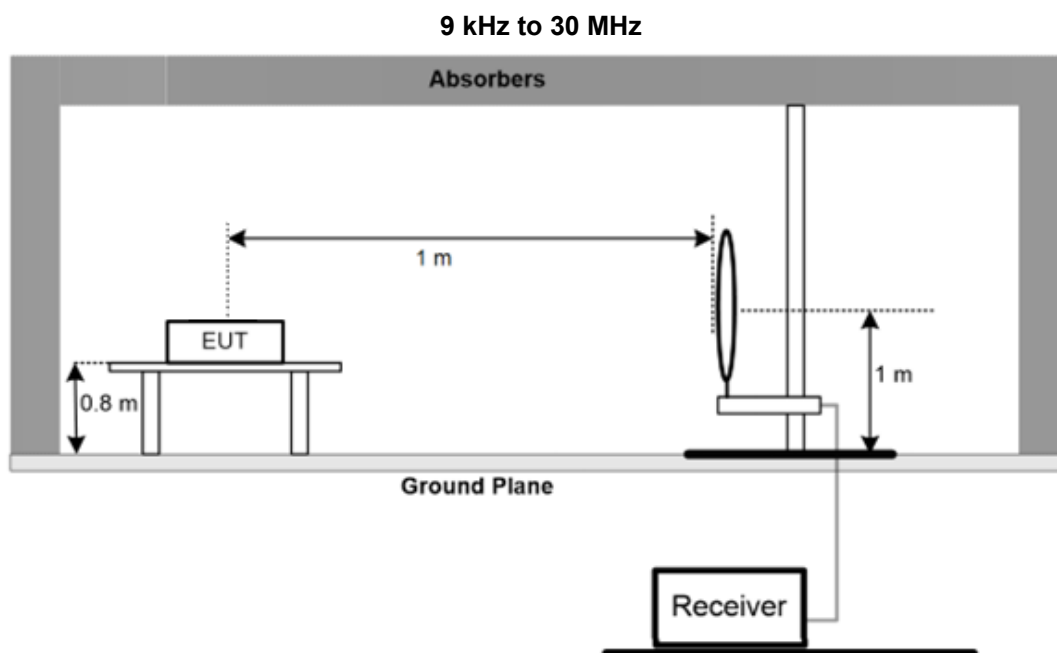
4.2 TEST PROCEDURE

- The measuring distance of 1 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 30MHz)
- 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)
- 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)
- 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.
- 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).
- 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.
- 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.
- 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)
- 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)
- For the actual test configuration, please refer to the related Item – EUT TEST PHOTO.

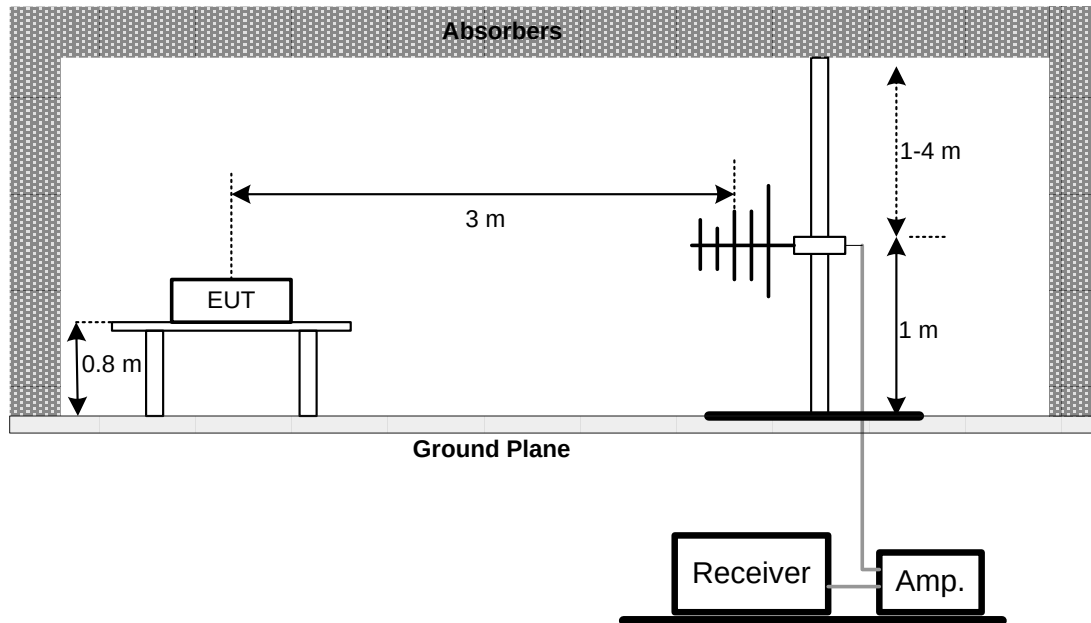
4.3 DEVIATION FROM TEST STANDARD

No deviation.

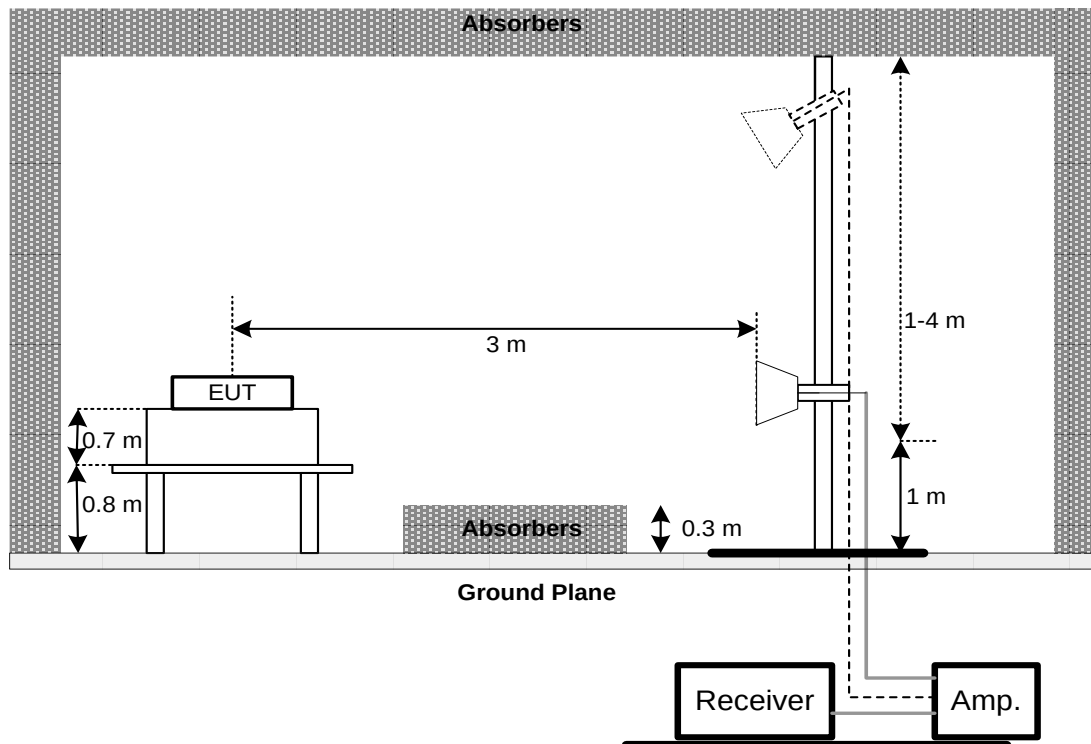
4.4 TEST SETUP



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 – 9 KHZ TO 30 MHZ

Please refer to the APPENDIX BAPPENDIX B.

4.7 TEST RESULT – 30 MHZ TO 1 GHZ

Please refer to the APPENDIX C.

4.8 TEST RESULT – ABOVE 1 GHZ

Please refer to the APPENDIX D.

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

- The EUT was directly connected to the spectrum analyzer and antenna output port as show in the block diagram below.
- 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 E.

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

- The EUT was directly connected to the power meter and antenna output port as show in the block diagram below.
- The maximum peak conducted output power was performed in accordance with FCC KDB 558074 D01 15.247 Meas Guidance.
- 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 F.

7 POWER SPECTRAL DENSITY

7.1 LIMIT

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

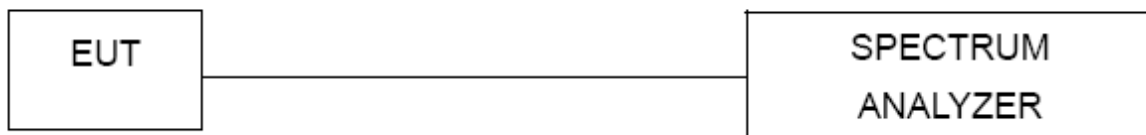
7.2 TEST PROCEDURE

- The EUT was directly connected to the spectrum analyzer and antenna output port as show in the block diagram below.
- 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 G.

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

- The EUT was directly connected to the spectrum analyzer and antenna output port as show in the block diagram below.
- Spectrum Setting: RBW = 100 kHz, VBW=300 kHz, Sweep time = Auto.
- 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 H.

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	2024/5/20	2025/5/19
2	Test Cable	EMCI	EMC400-BM-BM-5000	170501	2023/8/1	2024/7/31
3	EMI Test Receiver	R&S	ESR3	102950	2024/4/12	2025/4/11
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	2023/9/6	2024/9/5
2	Preamplifier	EMCI	EMC118A45SE	980819	2024/3/6	2025/3/5
3	Pre-Amplifier	EMCI	EMC184045SE	980907	2023/9/21	2024/9/20
4	Preamplifier	EMCI	EMC001340	980579	2023/9/6	2024/9/5
5	Test Cable	EMCI	EMC104-SM-1000	180809	2024/3/8	2025/3/7
6	Test Cable	EMCI	EMC104-SM-SM-3000	220322	2024/3/8	2025/3/7
7	Test Cable	EMCI	EMC104-SM-SM-7000	220324	2024/3/8	2025/3/7
8	EXA Signal Analyzer	keysight	N9020B	MY57120120	2024/2/23	2025/2/22
9	Loop Ant	Electro-Metrics	EMCI-LPA600	291	2023/9/12	2024/9/11
10	Horn Antenna	RFSPIN	DRH18-E	211202A18EN	2024/5/9	2025/5/8
11	Horn Ant	Schwarzbeck	BBHA 9170D	1136	2024/5/17	2025/5/16
12	Log-bicon Antenna	Schwarzbeck	VULB9168	1369	2024/6/14	2025/6/13
13	6dB Attenuator	EMCI	EMCI-N-6-06	AT-06001	2024/6/14	2025/6/13
14	Test Cable	EMCI	EMC101G-KM-KM-3000	220329	2024/3/13	2025/3/12
15	Test Cable	EMCI	EMC102-KM-KM-1000	220327	2024/3/13	2025/3/12
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	101139	2024/3/8	2025/3/7

Output Power						
Item	Kind of Equipment	Manufacturer	Type No.	Serial No.	Calibrated Date	Calibrated Until
1	Power Meter	Anritsu	ML2495A	1128008	2024/5/11	2025/5/10
2	Power Sensor	Anritsu	MA2411B	1126001	2024/5/11	2025/5/10

Power Spectral Density						
Item	Kind of Equipment	Manufacturer	Type No.	Serial No.	Calibrated Date	Calibrated Until
1	Spectrum Analyzer	R&S	FSP 40	101139	2024/3/8	2025/3/7

Antenna conducted Spurious Emission						
Item	Kind of Equipment	Manufacturer	Type No.	Serial No.	Calibrated Date	Calibrated Until
1	Spectrum Analyzer	R&S	FSP 40	101139	2024/3/8	2025/3/7

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

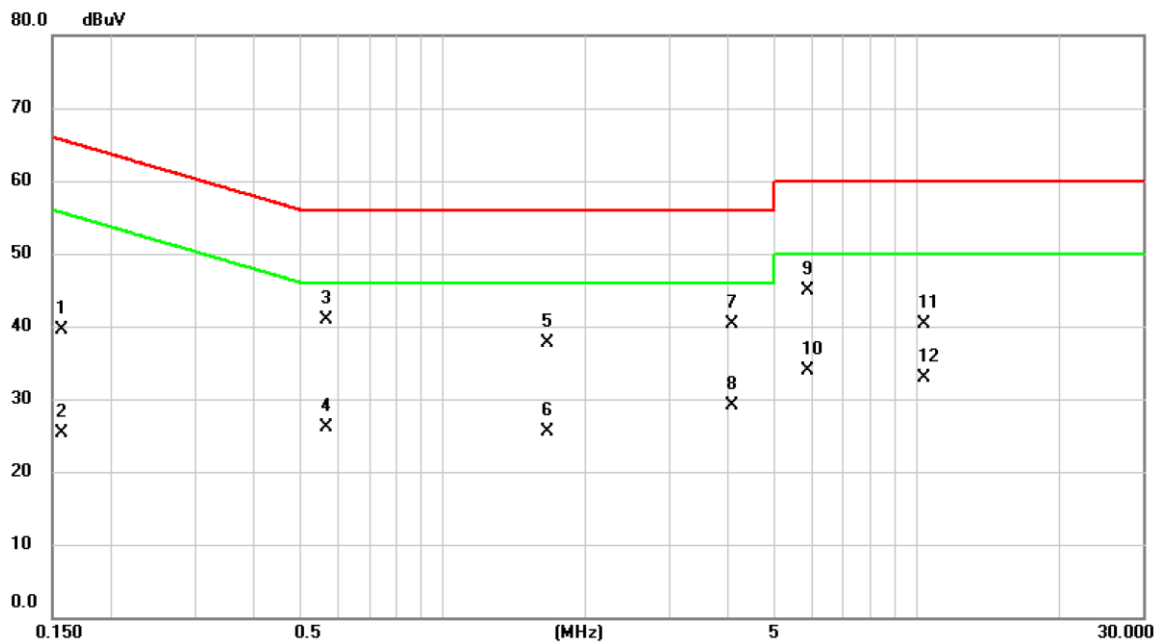
Please refer to document Appendix No.: TP-2104T005D-FCCP-1 (APPENDIX-TEST PHOTOS).

11 EUT PHOTOS

Please refer to document Appendix No.: EP-2104T005D-2 (APPENDIX-EUT PHOTOS).

APPENDIX A AC POWER LINE CONDUCTED EMISSIONS

Test Mode	Normal	Tested Date	2024/6/25
Test Frequency	-	Phase	Line



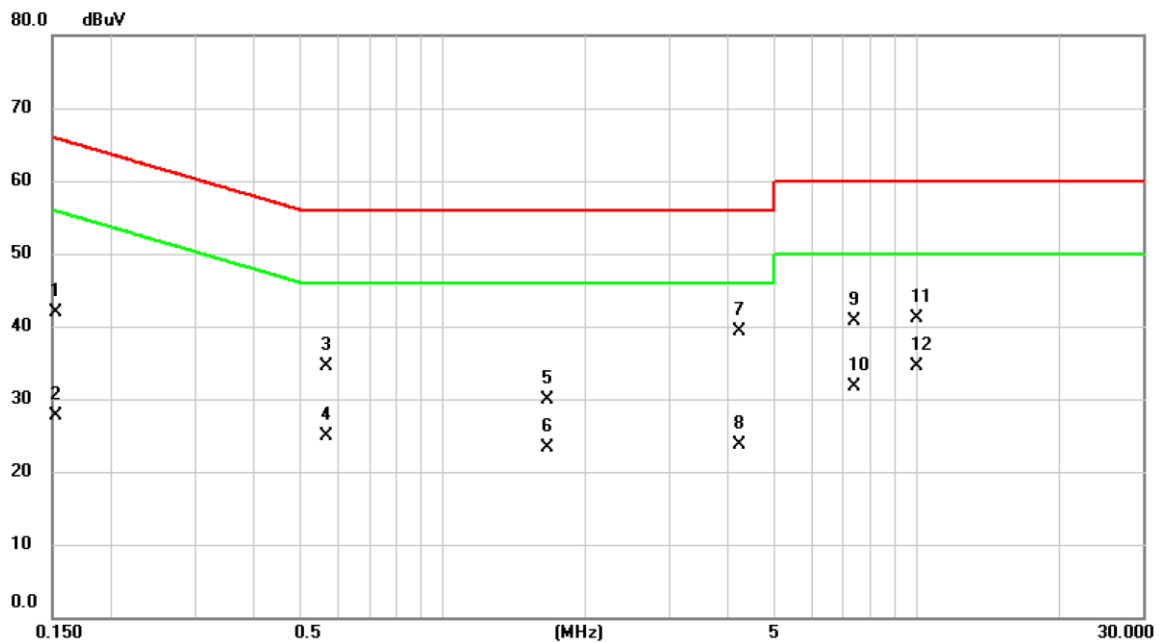
No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV	Limit dBuV	Margin dB	Detector	Comment
1		0.1568	29.84	9.59	39.43	65.63	-26.20	QP	
2		0.1568	15.65	9.59	25.24	55.63	-30.39	AVG	
3	*	0.5685	31.39	9.59	40.98	56.00	-15.02	QP	
4		0.5685	16.45	9.59	26.04	46.00	-19.96	AVG	
5		1.6620	28.06	9.63	37.69	56.00	-18.31	QP	
6		1.6620	15.97	9.63	25.60	46.00	-20.40	AVG	
7		4.0695	30.52	9.71	40.23	56.00	-15.77	QP	
8		4.0695	19.37	9.71	29.08	46.00	-16.92	AVG	
9		5.8763	35.22	9.74	44.96	60.00	-15.04	QP	
10		5.8763	24.21	9.74	33.95	50.00	-16.05	AVG	
11		10.3830	30.44	9.79	40.23	60.00	-19.77	QP	
12		10.3830	23.19	9.79	32.98	50.00	-17.02	AVG	

REMARKS:

(1) Measurement Value = Reading Level + Correct Factor.

(2) Margin Level = Measurement Value - Limit Value.

Test Mode	Normal	Tested Date	2024/6/25
Test Frequency	-	Phase	Neutral



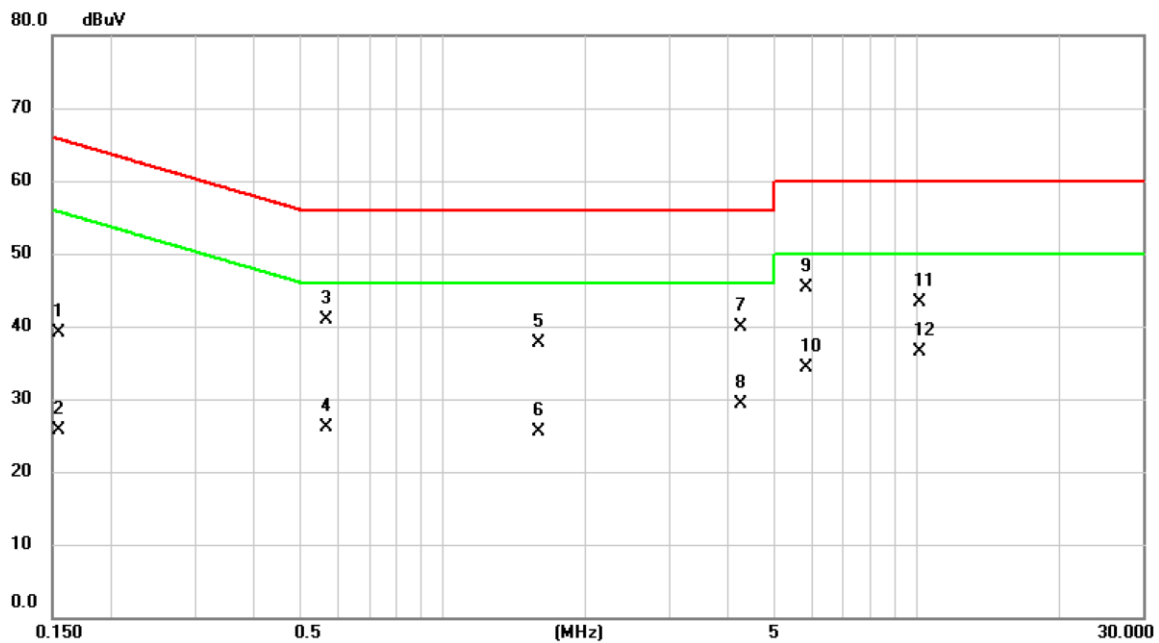
No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Margin		
		MHz	dBuV	dB	dBuV	dBuV	dB	Detector	Comment
1		0.1522	32.40	9.57	41.97	65.88	-23.91	QP	
2		0.1522	18.18	9.57	27.75	55.88	-28.13	AVG	
3		0.5685	24.96	9.60	34.56	56.00	-21.44	QP	
4		0.5685	15.22	9.60	24.82	46.00	-21.18	AVG	
5		1.6665	20.36	9.64	30.00	56.00	-26.00	QP	
6		1.6665	13.72	9.64	23.36	46.00	-22.64	AVG	
7		4.2338	29.63	9.74	39.37	56.00	-16.63	QP	
8		4.2338	13.88	9.74	23.62	46.00	-22.38	AVG	
9		7.3815	30.94	9.80	40.74	60.00	-19.26	QP	
10		7.3815	21.82	9.80	31.62	50.00	-18.38	AVG	
11		10.0163	31.24	9.83	41.07	60.00	-18.93	QP	
12	*	10.0163	24.70	9.83	34.53	50.00	-15.47	AVG	

REMARKS:

(1) Measurement Value = Reading Level + Correct Factor.

(2) Margin Level = Measurement Value - Limit Value.

Test Mode	Idle	Tested Date	2024/6/25
Test Frequency	-	Phase	Line



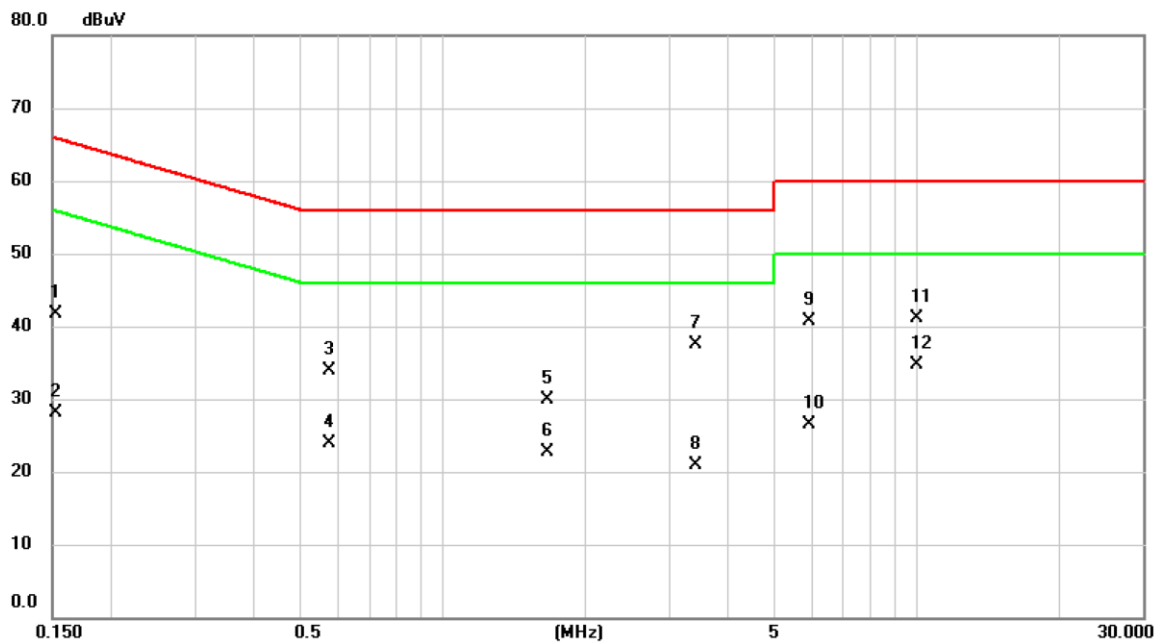
No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Margin		
		MHz	dBuV	dB	dBuV	dBuV	dB	Detector	Comment
1		0.1545	29.57	9.59	39.16	65.75	-26.59	QP	
2		0.1545	16.11	9.59	25.70	55.75	-30.05	AVG	
3		0.5685	31.33	9.59	40.92	56.00	-15.08	QP	
4		0.5685	16.44	9.59	26.03	46.00	-19.97	AVG	
5		1.5968	28.05	9.63	37.68	56.00	-18.32	QP	
6		1.5968	15.80	9.63	25.43	46.00	-20.57	AVG	
7		4.2563	30.29	9.71	40.00	56.00	-16.00	QP	
8		4.2563	19.66	9.71	29.37	46.00	-16.63	AVG	
9		5.8515	35.63	9.74	45.37	60.00	-14.63	QP	
10		5.8515	24.65	9.74	34.39	50.00	-15.61	AVG	
11		10.1243	33.60	9.79	43.39	60.00	-16.61	QP	
12	*	10.1243	26.73	9.79	36.52	50.00	-13.48	AVG	

REMARKS:

(1) Measurement Value = Reading Level + Correct Factor.

(2) Margin Level = Measurement Value - Limit Value.

Test Mode	Idle	Tested Date	2024/6/25
Test Frequency	-	Phase	Neutral



No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV	Limit dBuV	Margin dB	Detector	Comment
1		0.1522	32.19	9.57	41.76	65.88	-24.12	QP	
2		0.1522	18.54	9.57	28.11	55.88	-27.77	AVG	
3		0.5775	24.27	9.60	33.87	56.00	-22.13	QP	
4		0.5775	14.26	9.60	23.86	46.00	-22.14	AVG	
5		1.6620	20.36	9.64	30.00	56.00	-26.00	QP	
6		1.6620	13.16	9.64	22.80	46.00	-23.20	AVG	
7		3.4238	27.77	9.71	37.48	56.00	-18.52	QP	
8		3.4238	11.23	9.71	20.94	46.00	-25.06	AVG	
9		5.9213	31.02	9.78	40.80	60.00	-19.20	QP	
10		5.9213	16.65	9.78	26.43	50.00	-23.57	AVG	
11		10.0163	31.30	9.83	41.13	60.00	-18.87	QP	
12	*	10.0163	24.91	9.83	34.74	50.00	-15.26	AVG	

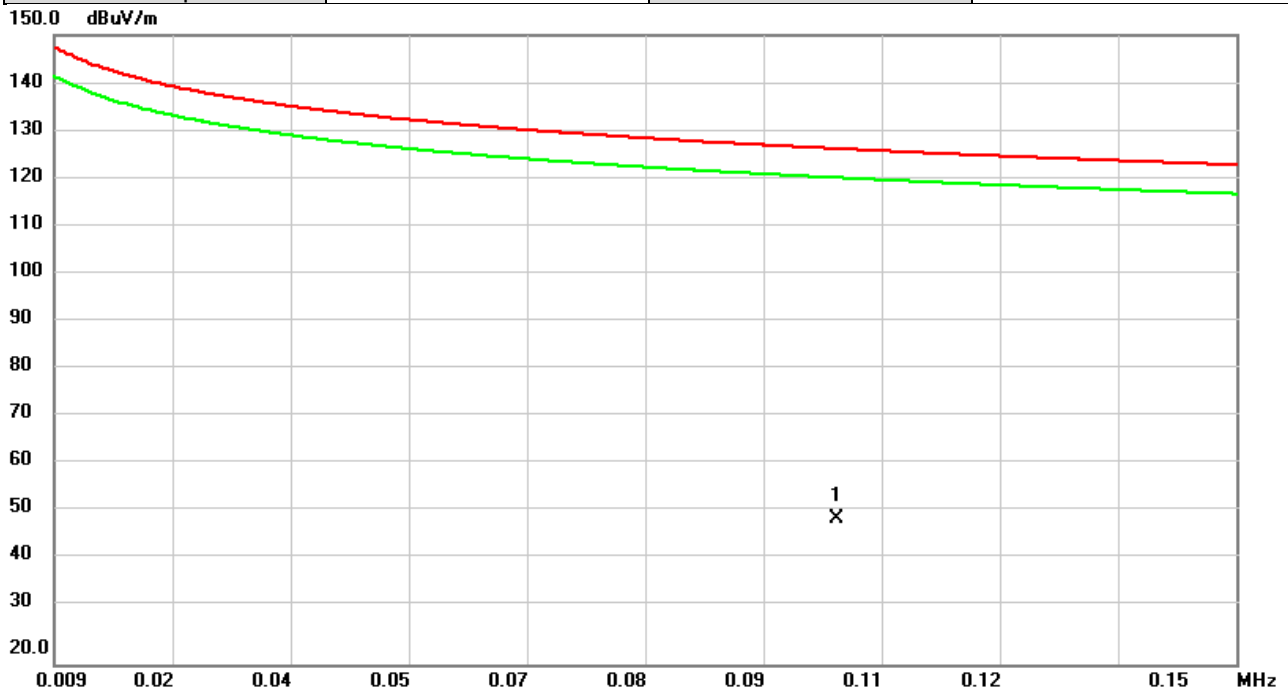
REMARKS:

(1) Measurement Value = Reading Level + Correct Factor.

(2) Margin Level = Measurement Value - Limit Value.

APPENDIX B RADIATED EMISSIONS - 9 KHZ TO 30 MHZ

Test Mode	IEEE 802.11b	Test Date	2024/7/2
Test Frequency	2437MHz	Polarization	Vertical
Temp	27°C	Hum.	53%

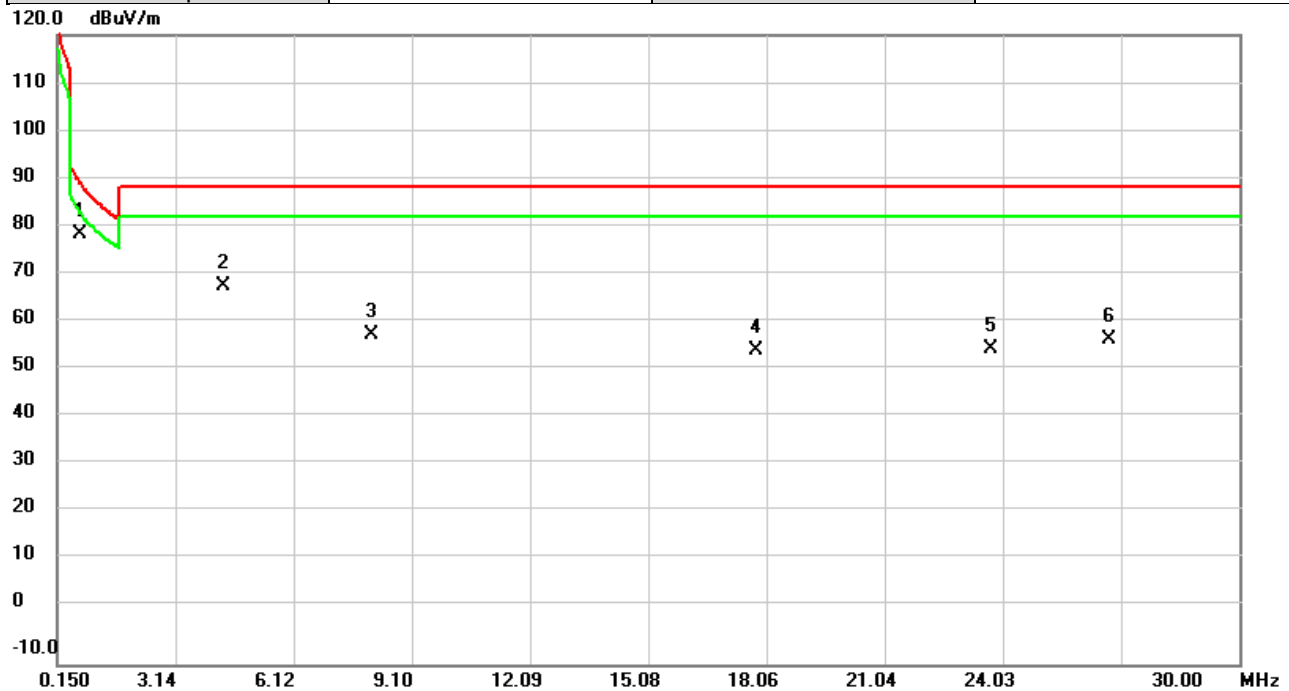


No.	Mk.	Freq.	Reading Level	Correct Factor	Measurement	Limit	Over		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1	*	0.1024	33.49	16.55	50.04	126.48	-76.44	AVG	

REMARKS:

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

Test Mode	IEEE 802.11b	Test Date	2024/7/2
Test Frequency	2437MHz	Polarization	Vertical
Temp	27°C	Hum.	53%

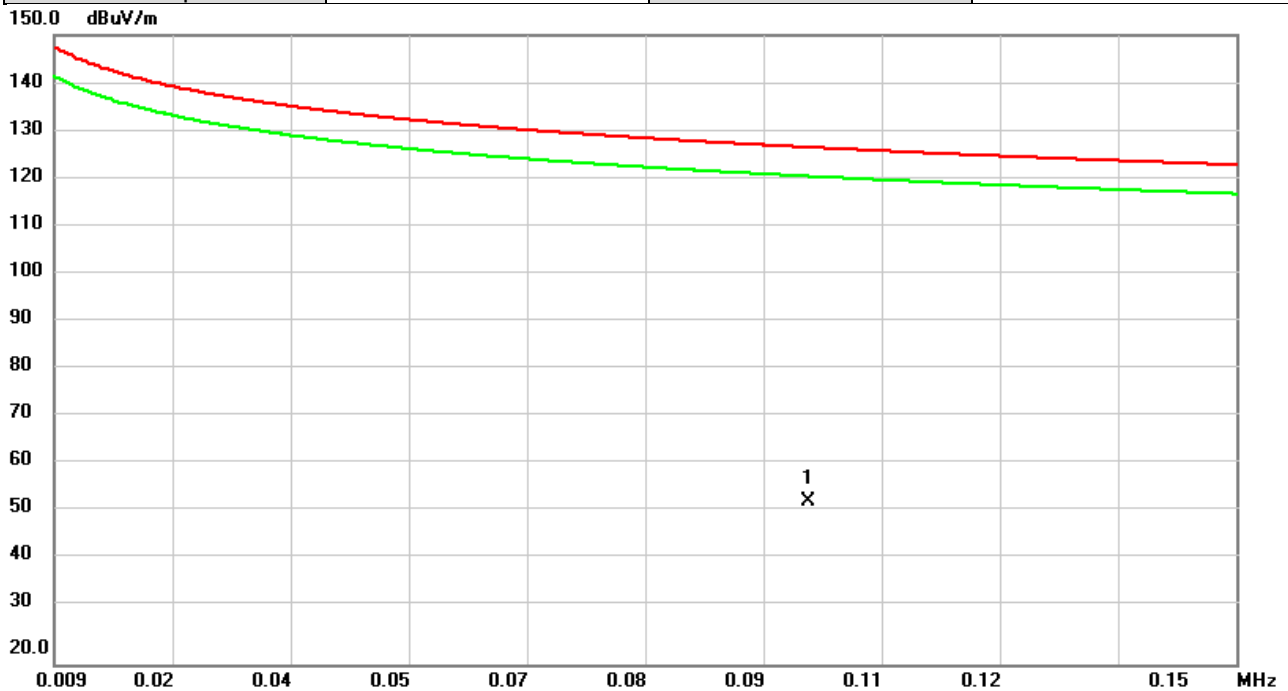


No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1	*	0.7460	75.89	3.11	79.00	89.23	-10.23	QP	
2		4.3420	72.23	-4.20	68.03	88.62	-20.59	QP	
3		8.0821	61.83	-3.65	58.18	88.62	-30.44	QP	
4		17.8072	58.87	-3.89	54.98	88.62	-33.64	QP	
5		23.7384	57.49	-2.32	55.17	88.62	-33.45	QP	
6		26.7035	58.08	-0.91	57.17	88.62	-31.45	QP	

REMARKS:

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

Test Mode	IEEE 802.11b	Test Date	2024/7/2
Test Frequency	2437MHz	Polarization	Horizontal
Temp	27°C	Hum.	53%

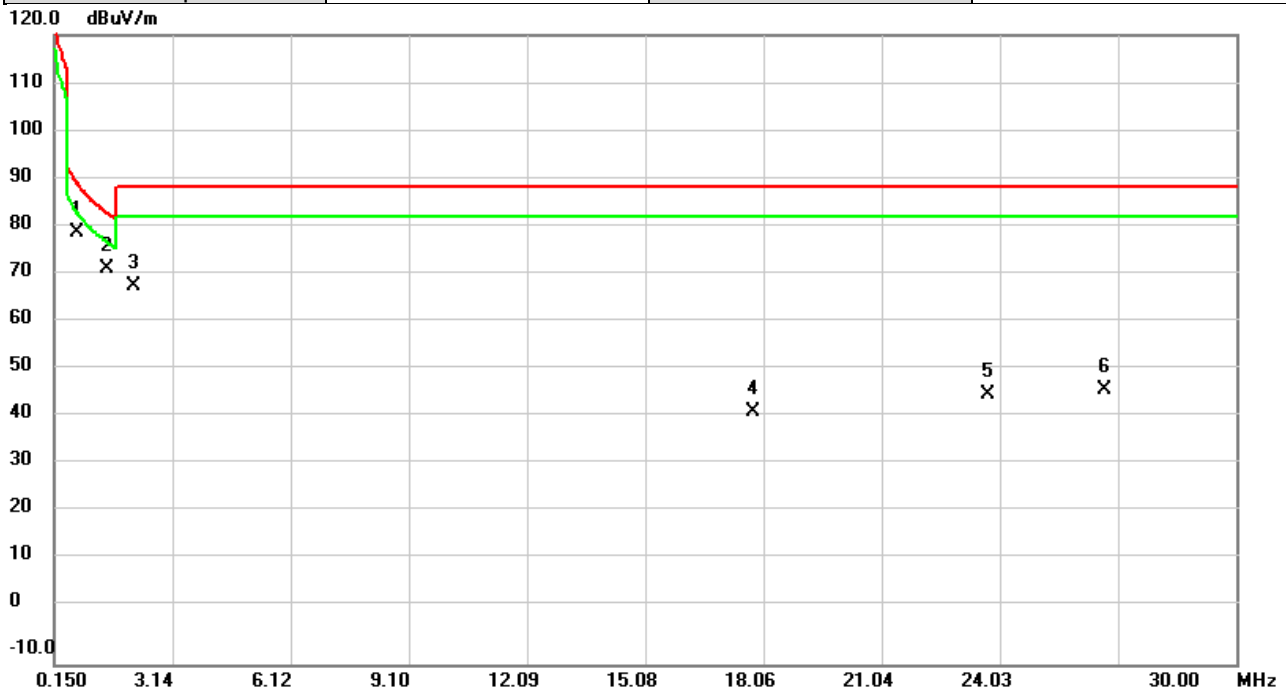


No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1	*	0.0990	36.85	16.78	53.63	126.77	-73.14	AVG	

REMARKS:

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

Test Mode	IEEE 802.11b	Test Date	2024/7/2
Test Frequency	2437MHz	Polarization	Horizontal
Temp	27°C	Hum.	53%



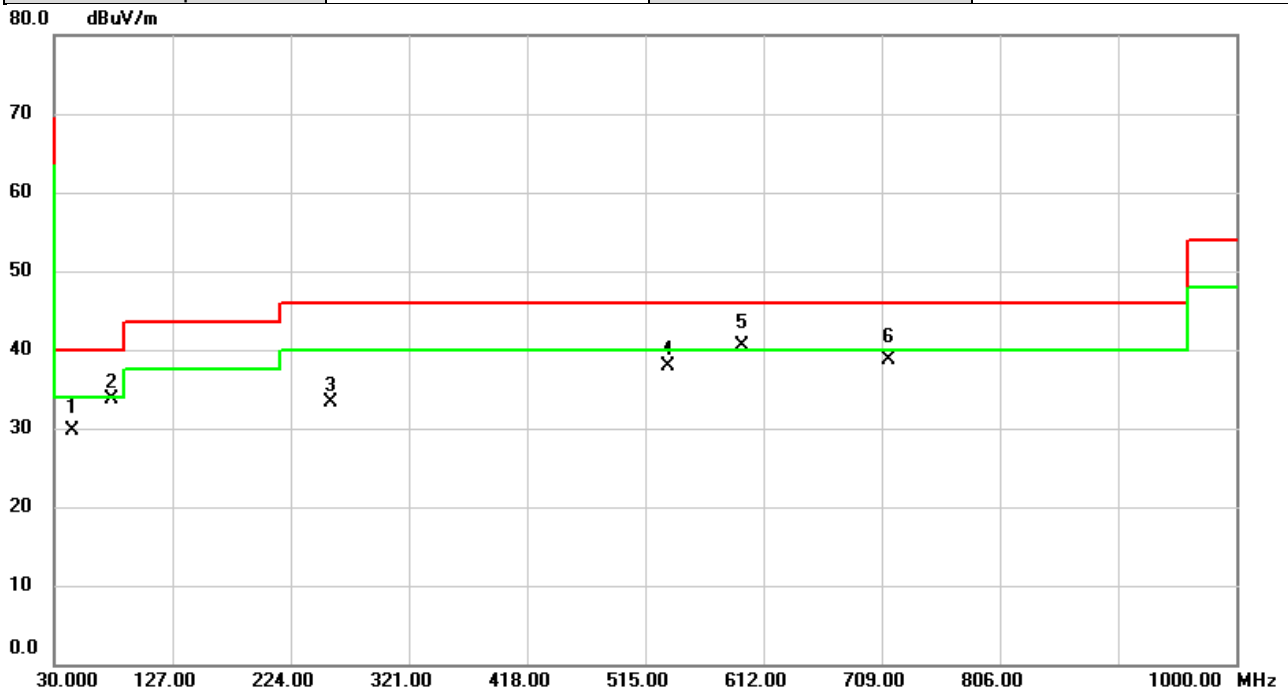
No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over	Detector	Comment
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB		
1	*	0.7460	76.24	3.11	79.35	89.23	-9.88	QP	
2		1.5022	72.11	-0.44	71.67	83.14	-11.47	QP	
3		2.1580	70.31	-2.06	68.25	88.62	-20.37	QP	
4		17.7973	46.14	-3.89	42.25	88.62	-46.37	QP	
5		23.7126	47.93	-2.33	45.60	88.62	-43.02	QP	
6		26.6936	47.66	-0.92	46.74	88.62	-41.88	QP	

REMARKS:

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

APPENDIX C RADIATED EMISSIONS - 30 MHZ TO 1 GHZ

Test Mode	IEEE 802.11b	Test Date	2024/7/26
Test Frequency	2437MHz	Polarization	Vertical
Temp	21°C	Hum.	56%



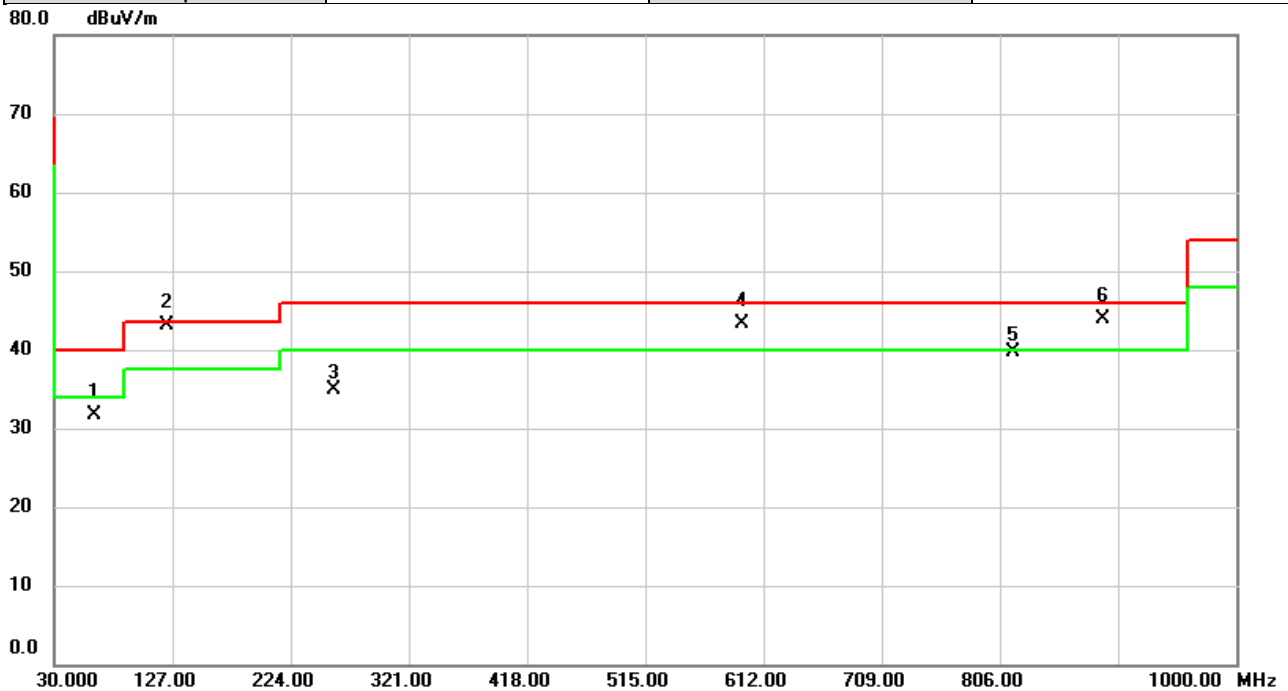
No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV/m	Limit dBuV/m	Over dB	Detector	Comment
1		45.4727	41.47	-11.83	29.64	40.00	-10.36	QP	
2		77.2390	49.86	-16.25	33.61	40.00	-6.39	peak	
3		257.0446	46.50	-13.11	33.39	46.00	-12.61	peak	
4		533.1390	44.00	-6.06	37.94	46.00	-8.06	peak	
5	*	593.9917	45.17	-4.60	40.57	46.00	-5.43	QP	
6		714.6357	41.27	-2.54	38.73	46.00	-7.27	QP	

REMARKS:

(1) Measurement Value = Reading Level + Correct Factor.

(2) Margin Level = Measurement Value - Limit Value.

Test Mode	IEEE 802.11b	Test Date	2024/7/26
Test Frequency	2437MHz	Polarization	Horizontal
Temp	21°C	Hum.	56%



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1		62.3520	44.50	-12.77	31.73	40.00	-8.27	QP	
2	*	122.8947	57.33	-14.22	43.11	43.50	-0.39	QP	
3		259.1132	48.05	-13.06	34.99	46.00	-11.01	peak	
4	!	593.8970	48.00	-4.61	43.39	46.00	-2.61	QP	
5		816.7250	40.78	-1.10	39.68	46.00	-6.32	peak	
6	!	890.9715	44.21	-0.24	43.97	46.00	-2.03	QP	

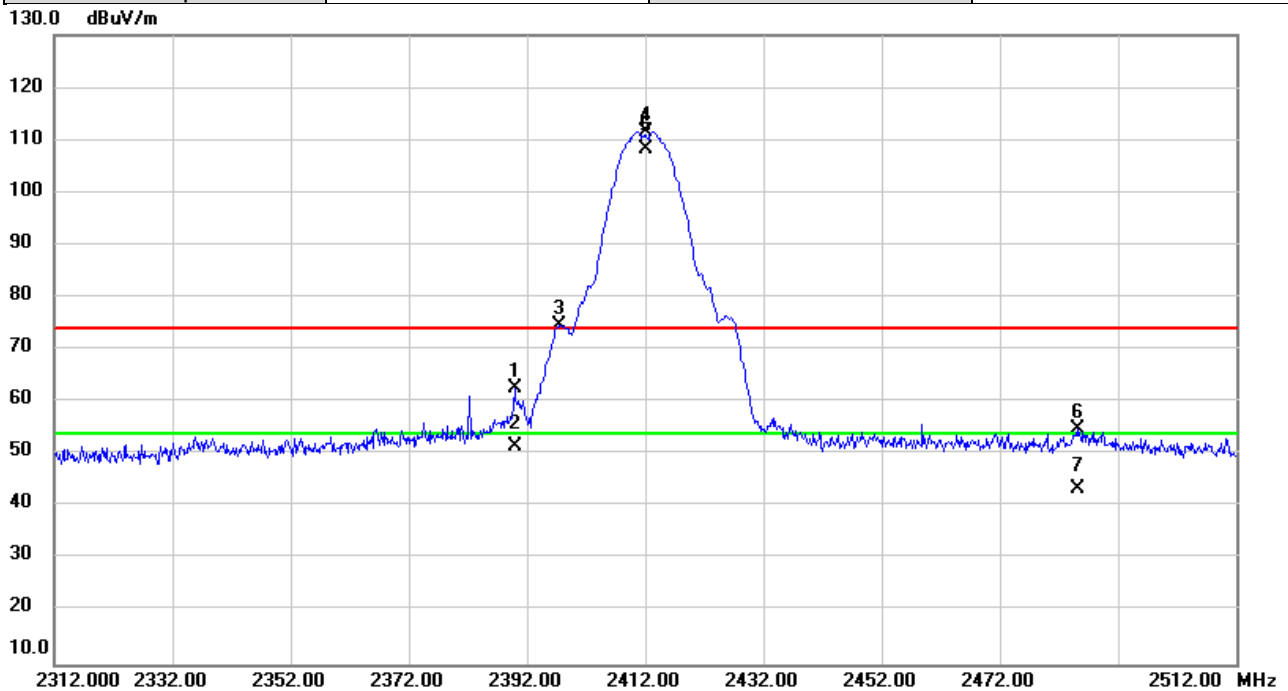
REMARKS:

(1) Measurement Value = Reading Level + Correct Factor.

(2) Margin Level = Measurement Value - Limit Value.

APPENDIX D RADIATED EMISSIONS - ABOVE 1 GHZ

Test Mode	IEEE 802.11b	Test Date	2024/6/28
Test Frequency	2412MHz	Polarization	Horizontal
Temp	27°C	Hum.	66%

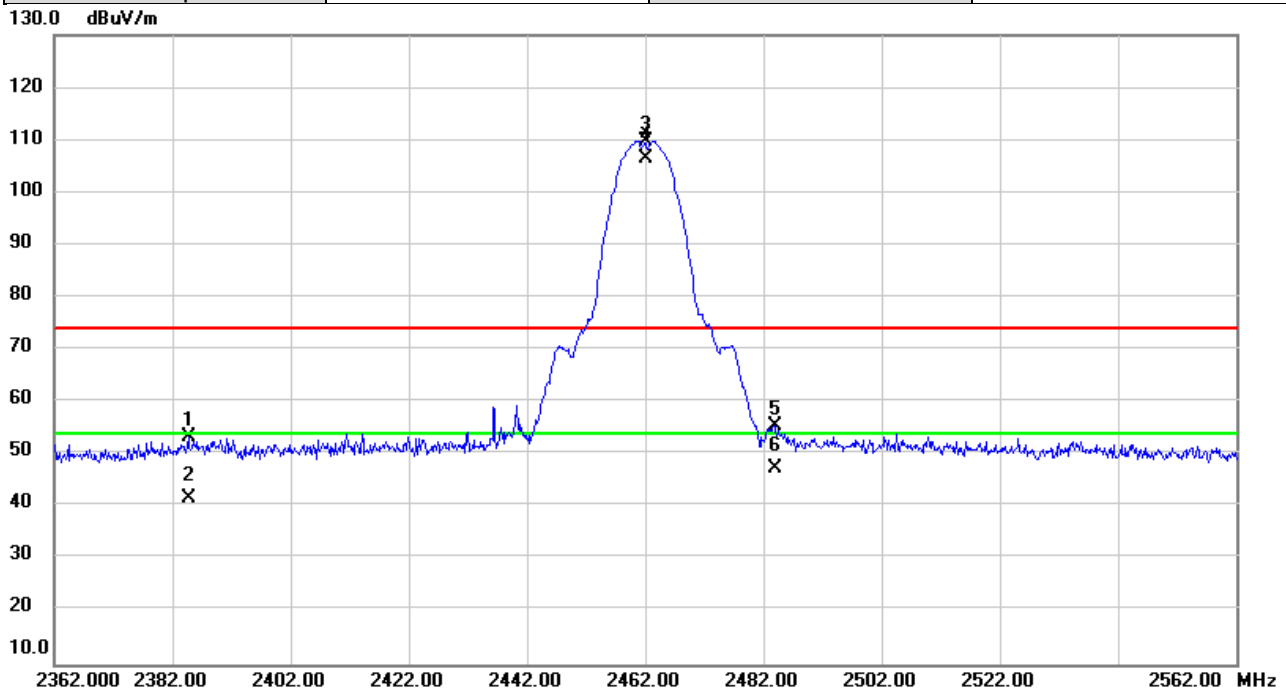


No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1		2389.960	67.61	-5.01	62.60	74.00	-11.40	peak	
2		2389.960	56.53	-5.01	51.52	54.00	-2.48	AVG	
3	X	2397.587	79.70	-4.99	74.71	74.00	0.71	peak	No Limit
4	X	2412.000	116.44	-4.97	111.47	74.00	37.47	peak	No Limit
5	*	2412.000	113.12	-4.97	108.15	54.00	54.15	AVG	No Limit
6		2485.180	59.85	-4.88	54.97	74.00	-19.03	peak	
7		2485.180	48.45	-4.88	43.57	54.00	-10.43	AVG	

REMARKS:

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

Test Mode	IEEE 802.11b	Test Date	2024/6/28
Test Frequency	2462MHz	Polarization	Horizontal
Temp	27°C	Hum.	66%



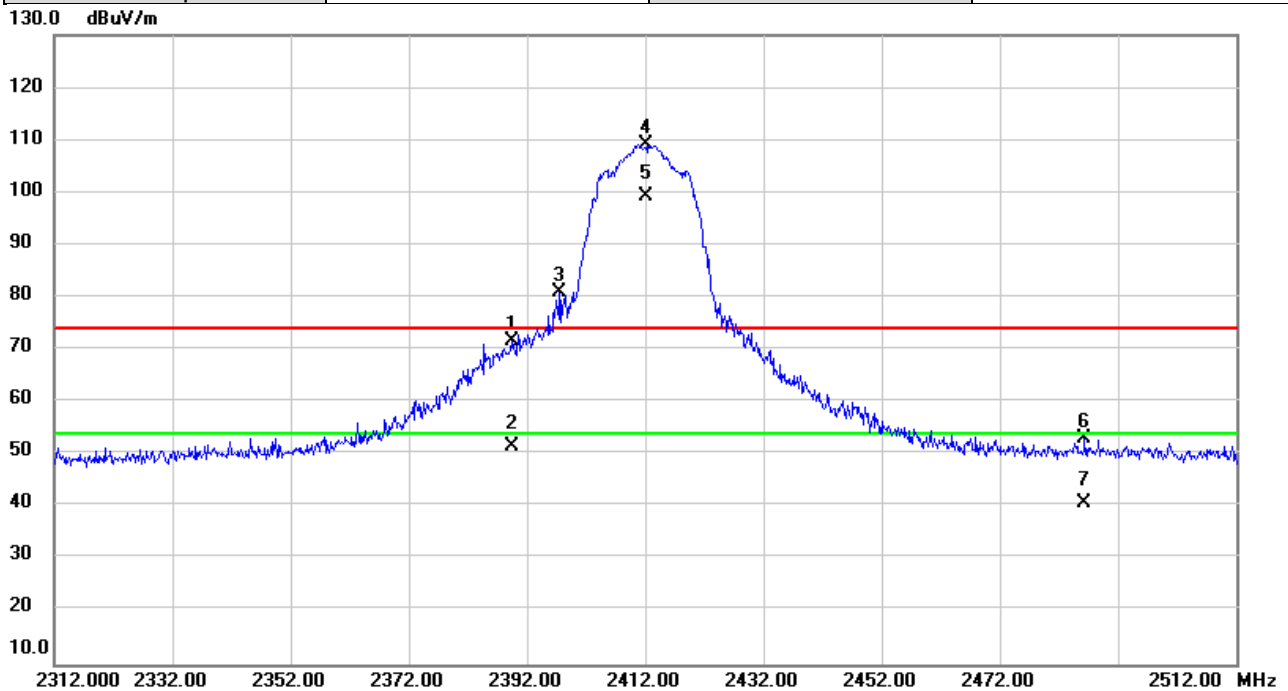
No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1		2384.760	58.31	-5.01	53.30	74.00	-20.70	peak	
2		2384.760	46.68	-5.01	41.67	54.00	-12.33	AVG	
3	X	2462.000	114.79	-4.91	109.88	74.00	35.88	peak	No Limit
4	*	2462.000	111.42	-4.91	106.51	54.00	52.51	AVG	No Limit
5		2483.900	60.27	-4.87	55.40	74.00	-18.60	peak	
6		2483.900	52.12	-4.87	47.25	54.00	-6.75	AVG	

REMARKS:

(1) Measurement Value = Reading Level + Correct Factor.

(2) Margin Level = Measurement Value - Limit Value.

Test Mode	IEEE 802.11g	Test Date	2024/6/28
Test Frequency	2412MHz	Polarization	Horizontal
Temp	27°C	Hum.	66%

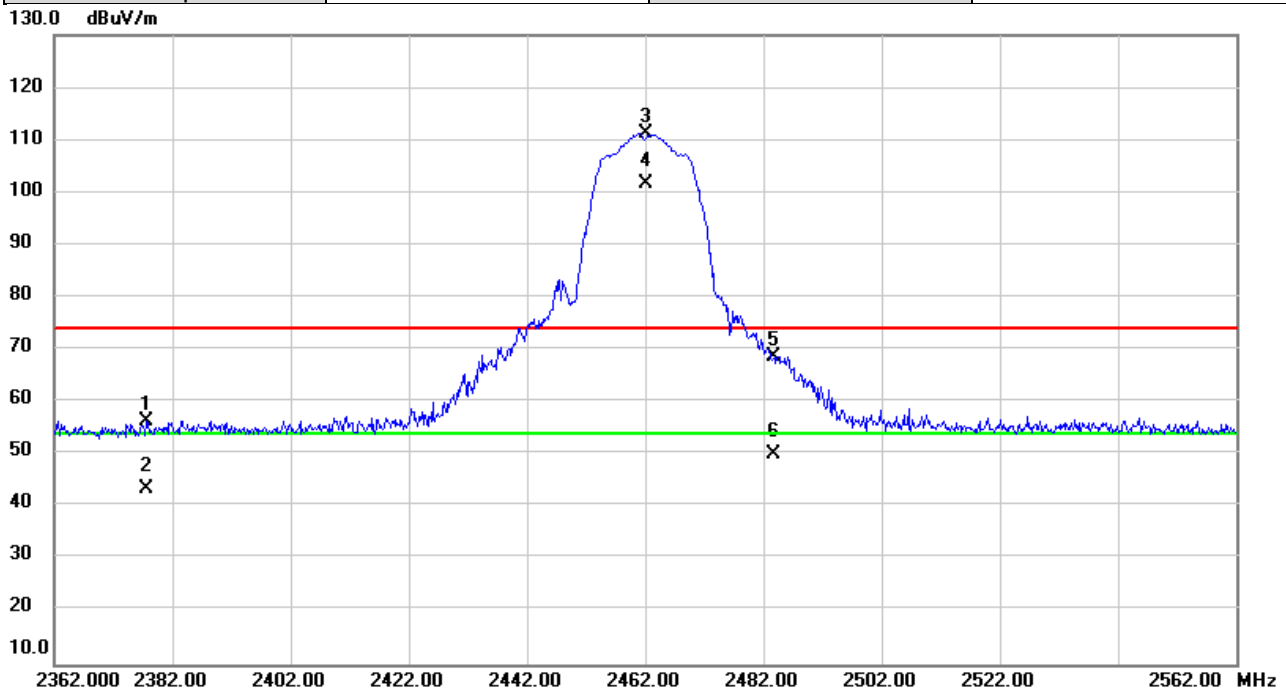


No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1		2389.380	76.73	-5.01	71.72	74.00	-2.28	peak	
2		2389.380	56.43	-5.01	51.42	54.00	-2.58	AVG	
3	X	2397.440	85.86	-4.99	80.87	74.00	6.87	peak	No Limit
4	X	2412.000	113.99	-4.97	109.02	74.00	35.02	peak	No Limit
5	*	2412.000	104.17	-4.97	99.20	54.00	45.20	AVG	No Limit
6		2486.227	57.88	-4.88	53.00	74.00	-21.00	peak	
7		2486.227	45.56	-4.88	40.68	54.00	-13.32	AVG	

REMARKS:

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

Test Mode	IEEE 802.11g	Test Date	2024/6/28
Test Frequency	2462MHz	Polarization	Horizontal
Temp	27°C	Hum.	66%



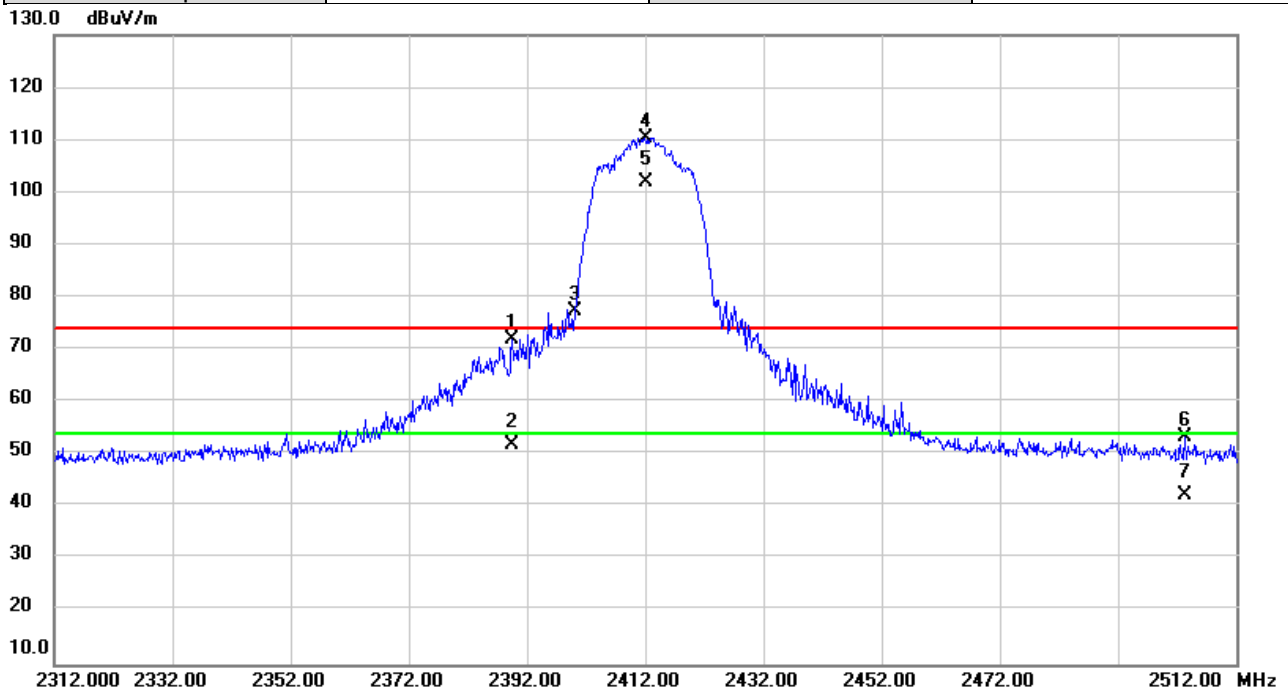
No.	Mk.	Freq.	Reading Level	Correct Factor	Measurement	Limit	Over		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1		2377.600	61.51	-5.02	56.49	74.00	-17.51	peak	
2		2377.600	48.38	-5.02	43.36	54.00	-10.64	AVG	
3	X	2462.000	116.15	-4.91	111.24	74.00	37.24	peak	No Limit
4	*	2462.000	106.49	-4.91	101.58	54.00	47.58	AVG	No Limit
5		2483.800	73.59	-4.87	68.72	74.00	-5.28	peak	
6		2483.800	54.84	-4.87	49.97	54.00	-4.03	AVG	

REMARKS:

(1) Measurement Value = Reading Level + Correct Factor.

(2) Margin Level = Measurement Value - Limit Value.

Test Mode	IEEE 802.11n (HT20)	Test Date	2024/6/28
Test Frequency	2412MHz	Polarization	Horizontal
Temp	27°C	Hum.	66%

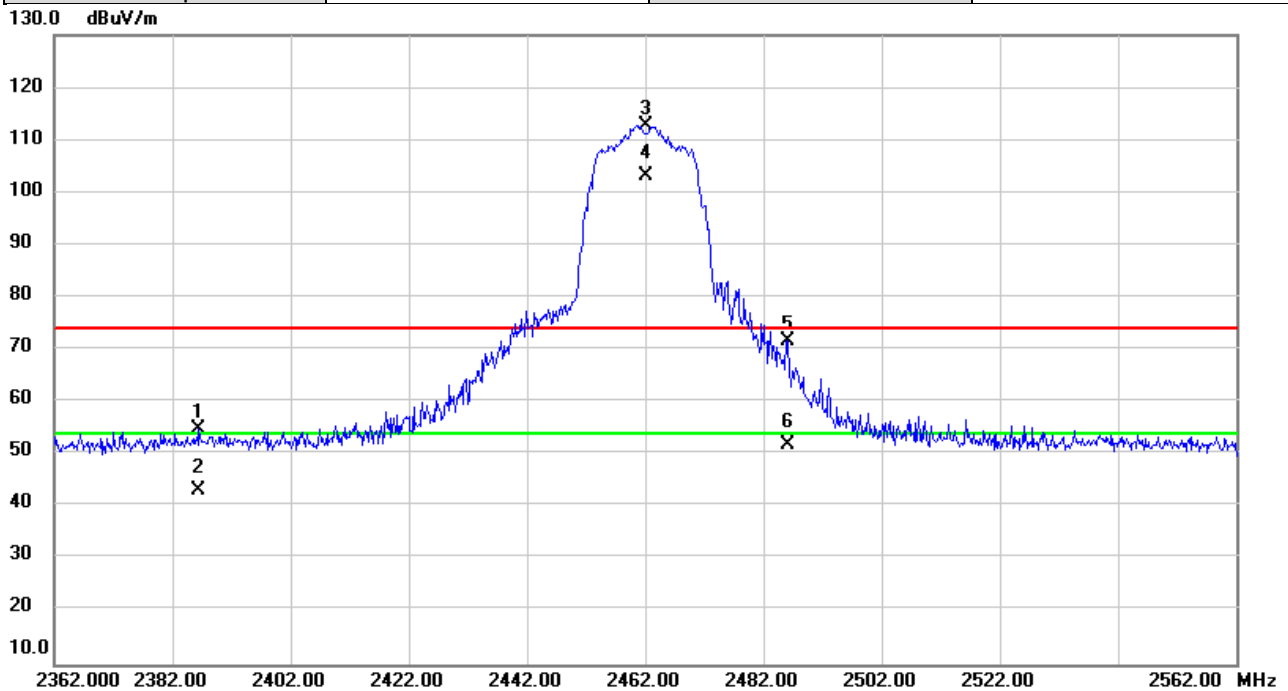


No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV/m	Limit dBuV/m	Over dB	Detector	Comment
1		2389.473	76.97	-5.01	71.96	74.00	-2.04	peak	
2		2389.473	56.92	-5.01	51.91	54.00	-2.09	AVG	
3	X	2400.000	82.27	-4.99	77.28	74.00	3.28	peak	No Limit
4	X	2412.000	115.44	-4.97	110.47	74.00	36.47	peak	No Limit
5	*	2412.000	106.99	-4.97	102.02	54.00	48.02	AVG	No Limit
6		2503.240	58.07	-4.85	53.22	74.00	-20.78	peak	
7		2503.240	46.99	-4.85	42.14	54.00	-11.86	AVG	

REMARKS:

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

Test Mode	IEEE 802.11n (HT20)	Test Date	2024/6/28
Test Frequency	2462MHz	Polarization	Horizontal
Temp	27°C	Hum.	66%



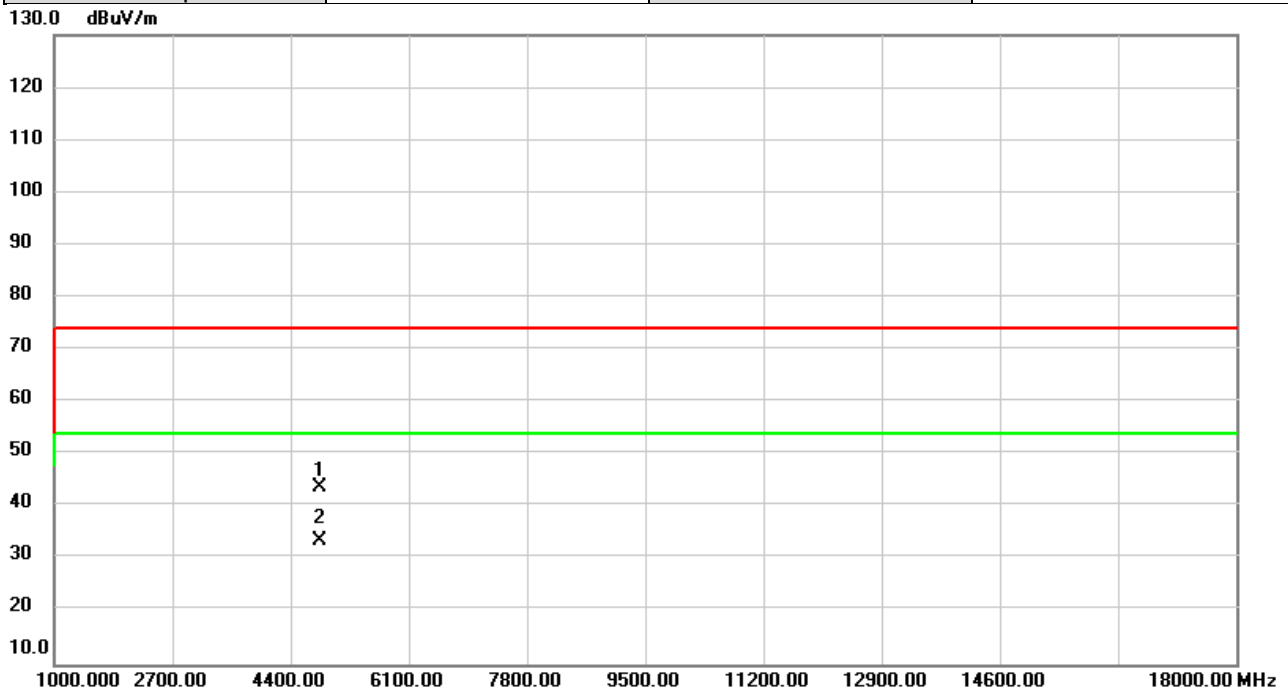
No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1		2386.507	59.97	-5.01	54.96	74.00	-19.04	peak	
2		2386.507	48.17	-5.01	43.16	54.00	-10.84	AVG	
3	X	2462.000	117.56	-4.91	112.65	74.00	38.65	peak	No Limit
4	*	2462.000	107.97	-4.91	103.06	54.00	49.06	AVG	No Limit
5		2486.000	76.60	-4.88	71.72	74.00	-2.28	peak	
6		2486.000	56.77	-4.88	51.89	54.00	-2.11	AVG	

REMARKS:

(1) Measurement Value = Reading Level + Correct Factor.

(2) Margin Level = Measurement Value - Limit Value.

Test Mode	IEEE 802.11b	Test Date	2024/6/28
Test Frequency	2412MHz	Polarization	Vertical
Temp	27°C	Hum.	66%



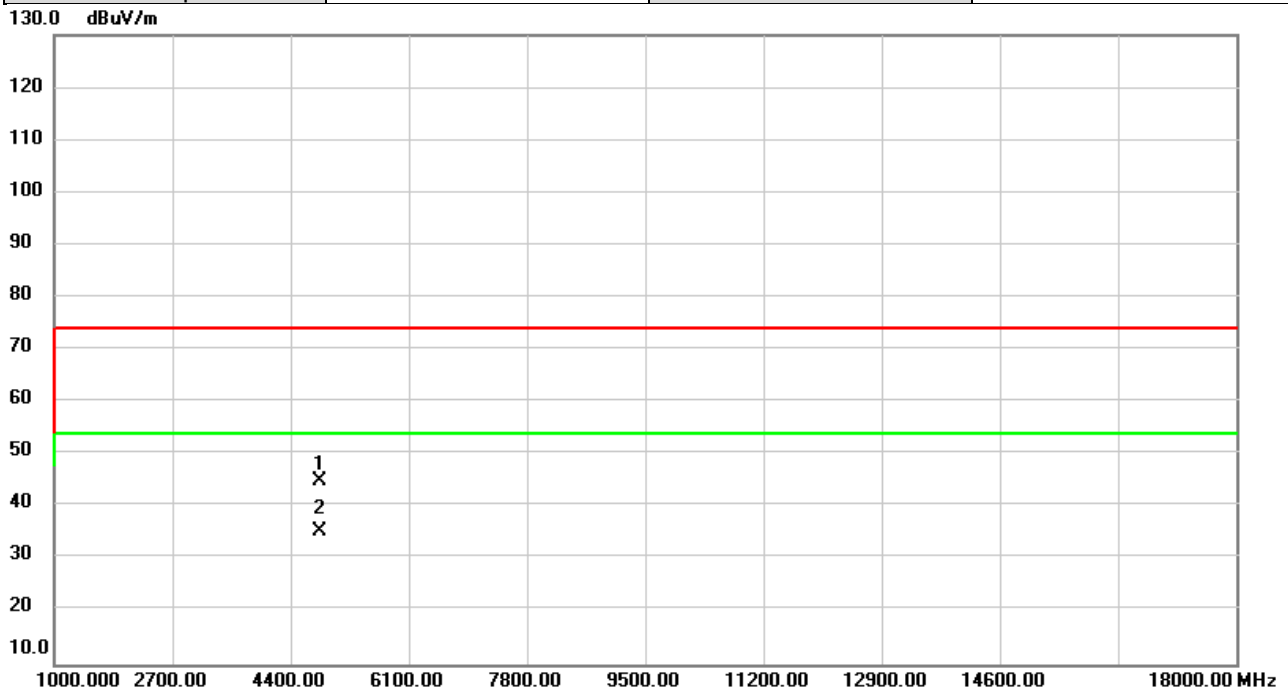
No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV/m	Limit dBuV/m	Over dB	Detector	Comment
1		4824.000	42.77	0.92	43.69	74.00	-30.31	peak	
2	*	4824.000	32.63	0.92	33.55	54.00	-20.45	AVG	

REMARKS:

(1) Measurement Value = Reading Level + Correct Factor.

(2) Margin Level = Measurement Value - Limit Value.

Test Mode	IEEE 802.11b	Test Date	2024/6/28
Test Frequency	2412MHz	Polarization	Horizontal
Temp	27°C	Hum.	66%

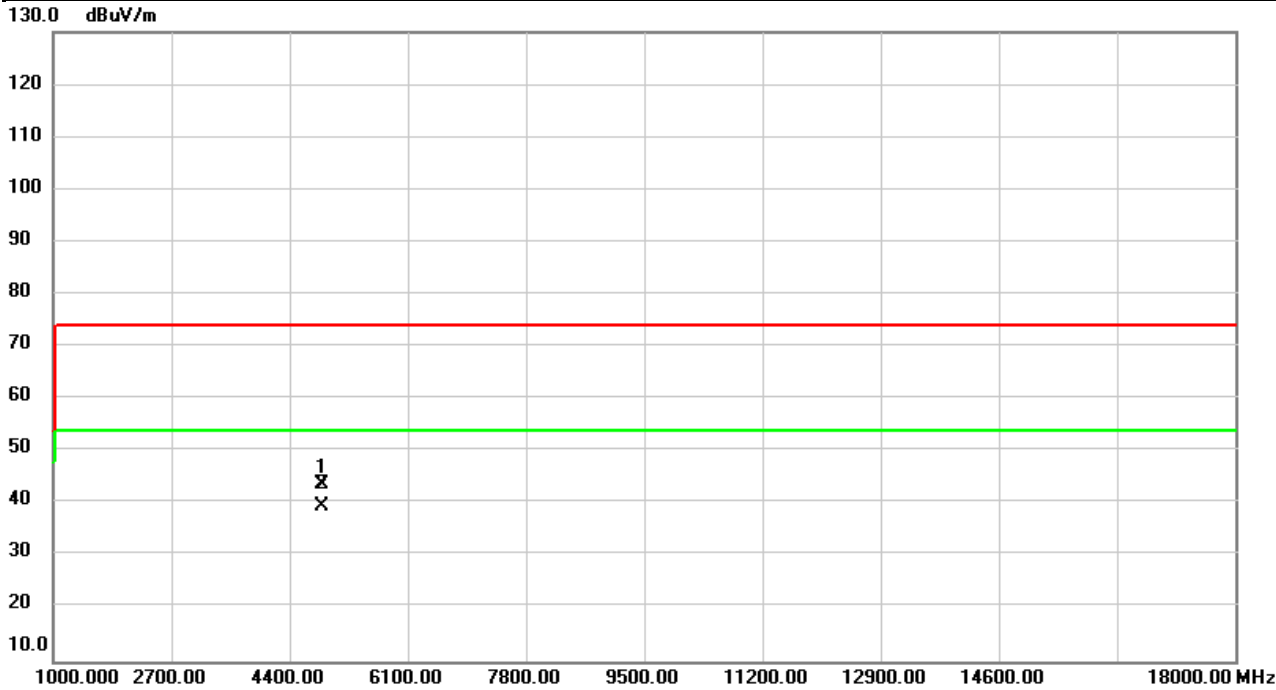


No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1		4824.000	43.90	0.92	44.82	74.00	-29.18	peak	
2	*	4824.000	34.46	0.92	35.38	54.00	-18.62	AVG	

REMARKS:

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

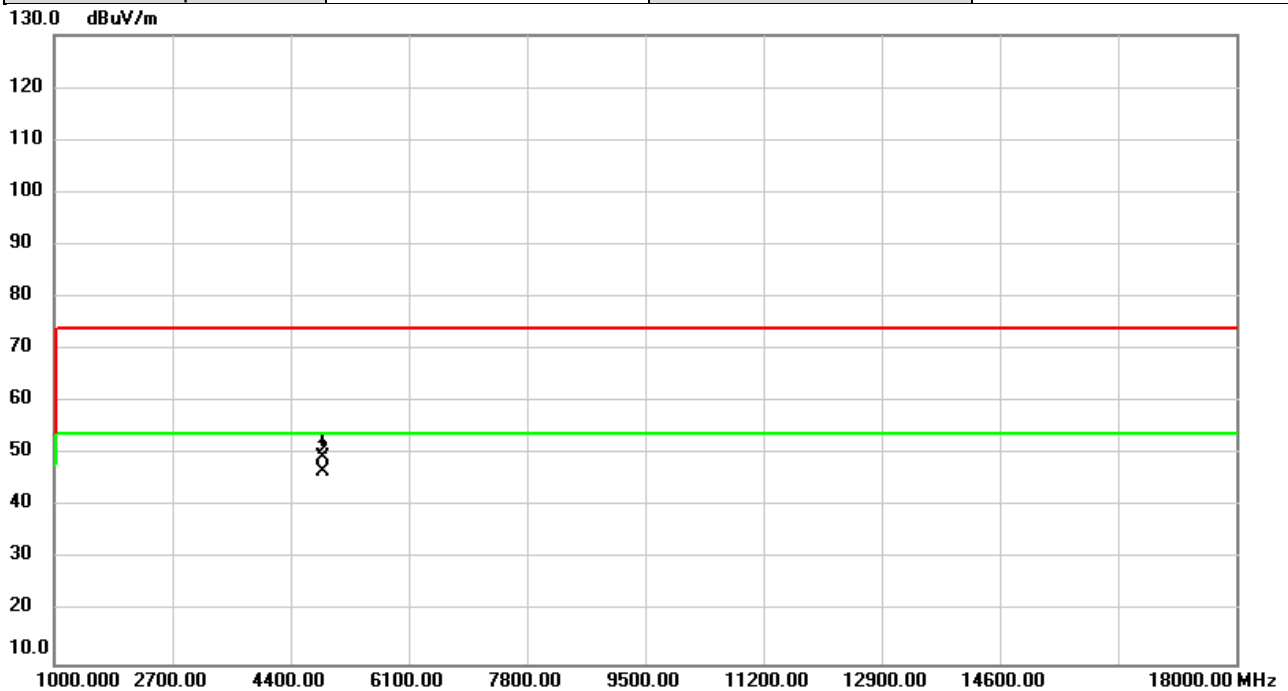
Test Mode	IEEE 802.11b	Test Date	2024/6/28
Test Frequency	2437MHz	Polarization	Vertical
Temp	27°C	Hum.	66%



No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV/m	Limit dBuV/m	Over dB	Detector	Comment
1		4874.000	42.72	1.02	43.74	74.00	-30.26	peak	
2	*	4874.000	38.47	1.02	39.49	54.00	-14.51	AVG	

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

Test Mode	IEEE 802.11b	Test Date	2024/6/28
Test Frequency	2437MHz	Polarization	Horizontal
Temp	27°C	Hum.	66%

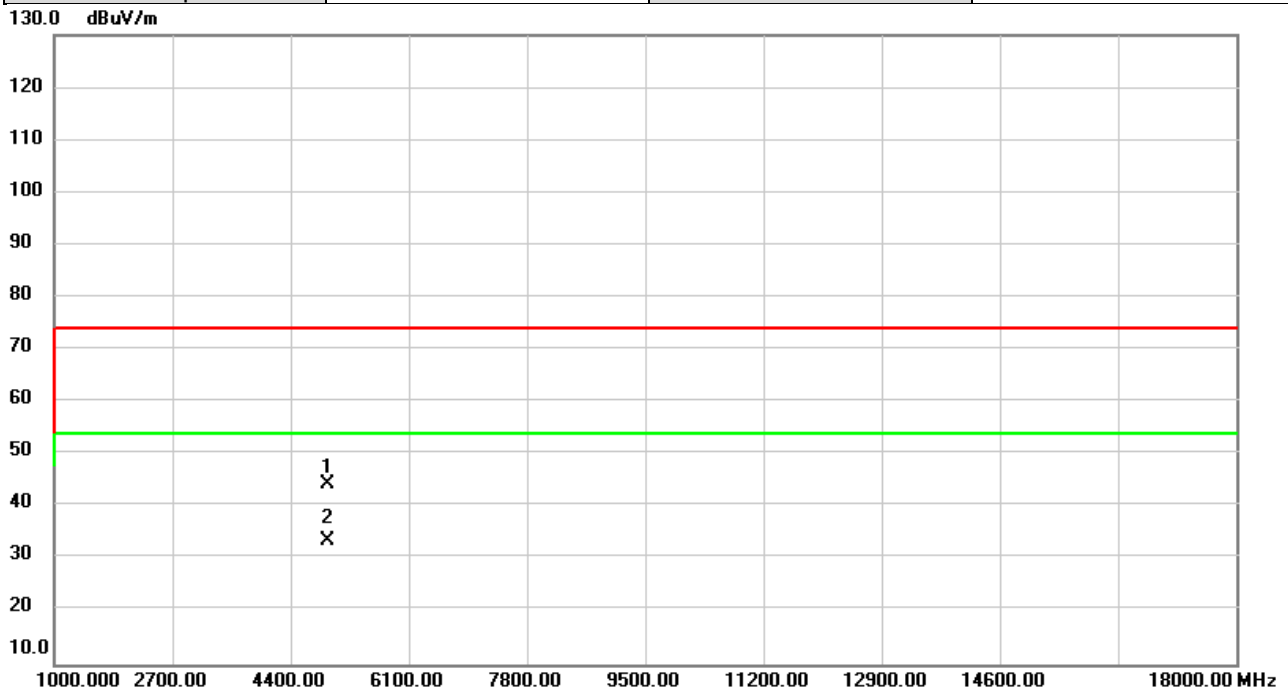


No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1		4874.000	48.45	1.02	49.47	74.00	-24.53	peak	
2	*	4874.000	45.78	1.02	46.80	54.00	-7.20	AVG	

REMARKS:

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

Test Mode	IEEE 802.11b	Test Date	2024/6/28
Test Frequency	2462MHz	Polarization	Vertical
Temp	27°C	Hum.	66%

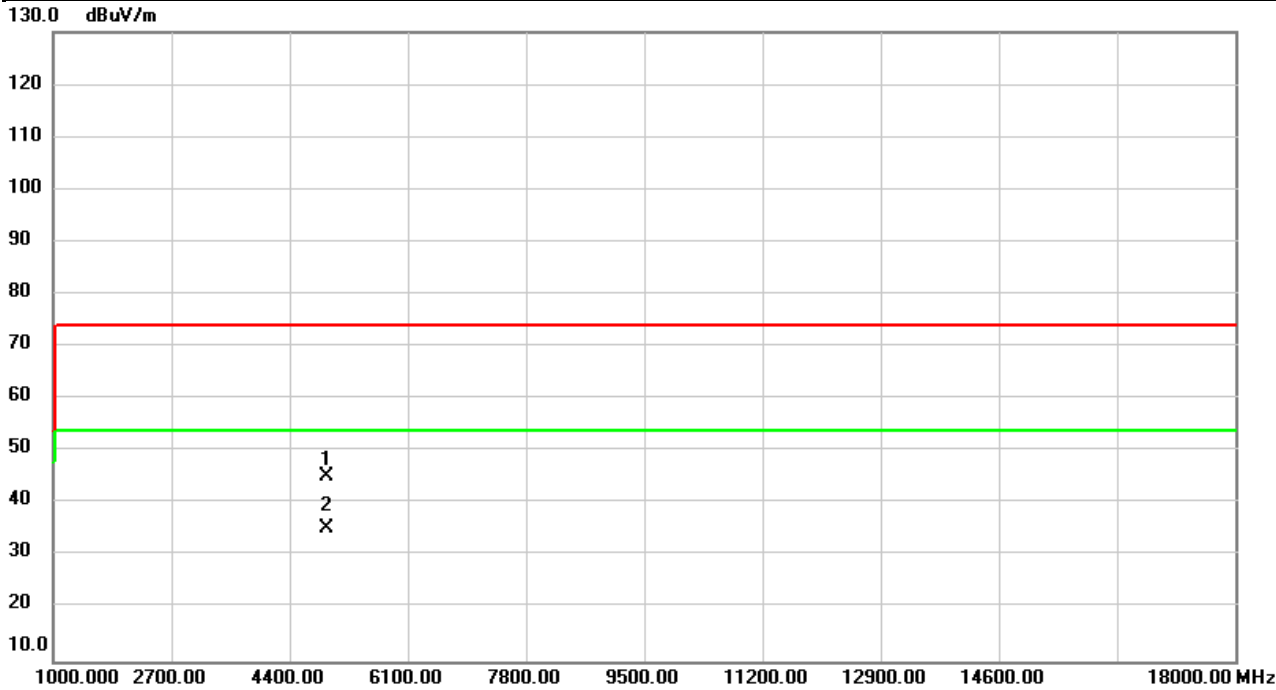


No.	Mk.	Freq.	Reading Level	Correct Factor	Measure- ment	Limit	Over		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1		4924.000	43.15	1.13	44.28	74.00	-29.72	peak	
2	*	4924.000	32.38	1.13	33.51	54.00	-20.49	AVG	

REMARKS:

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

Test Mode	IEEE 802.11b	Test Date	2024/6/28
Test Frequency	2462MHz	Polarization	Horizontal
Temp	27°C	Hum.	66%

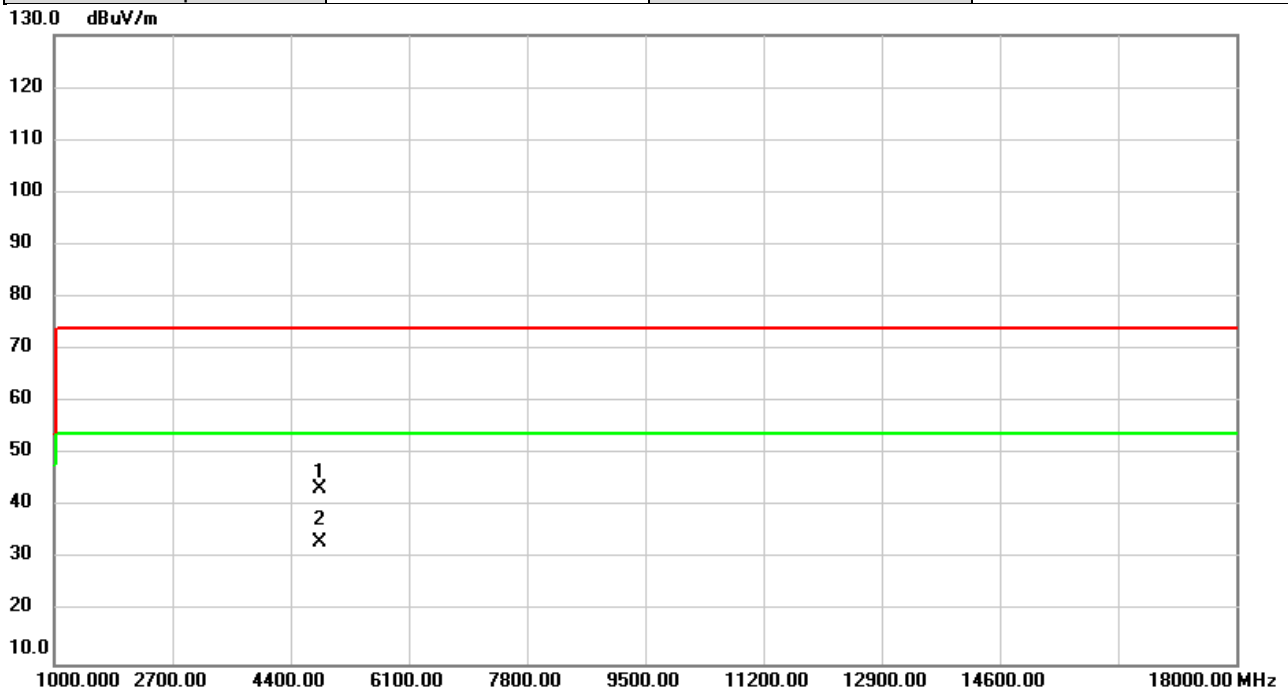


No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1		4924.000	44.09	1.13	45.22	74.00	-28.78	peak	
2	*	4924.000	34.25	1.13	35.38	54.00	-18.62	AVG	

REMARKS:

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

Test Mode	IEEE 802.11g	Test Date	2024/6/28
Test Frequency	2412MHz	Polarization	Vertical
Temp	27°C	Hum.	66%



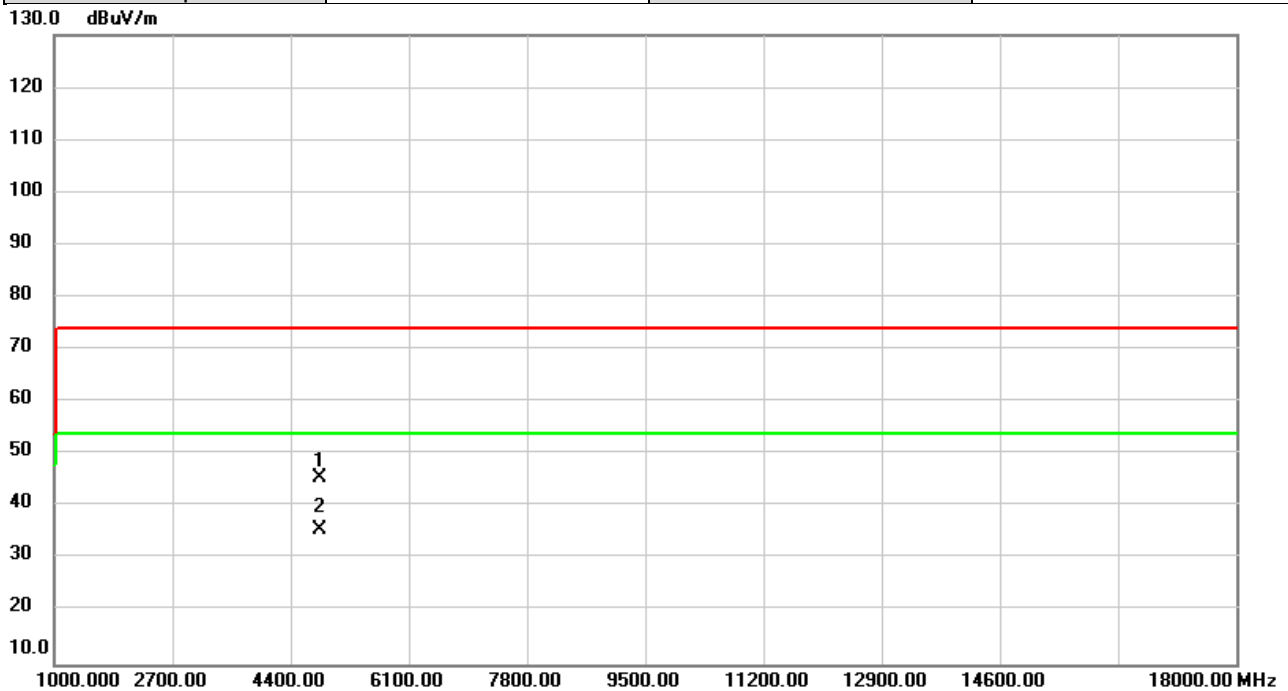
No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1		4824.000	42.64	0.92	43.56	74.00	-30.44	peak	
2	*	4824.000	32.39	0.92	33.31	54.00	-20.69	AVG	

REMARKS:

(1) Measurement Value = Reading Level + Correct Factor.

(2) Margin Level = Measurement Value - Limit Value.

Test Mode	IEEE 802.11g	Test Date	2024/6/28
Test Frequency	2412MHz	Polarization	Horizontal
Temp	27°C	Hum.	66%

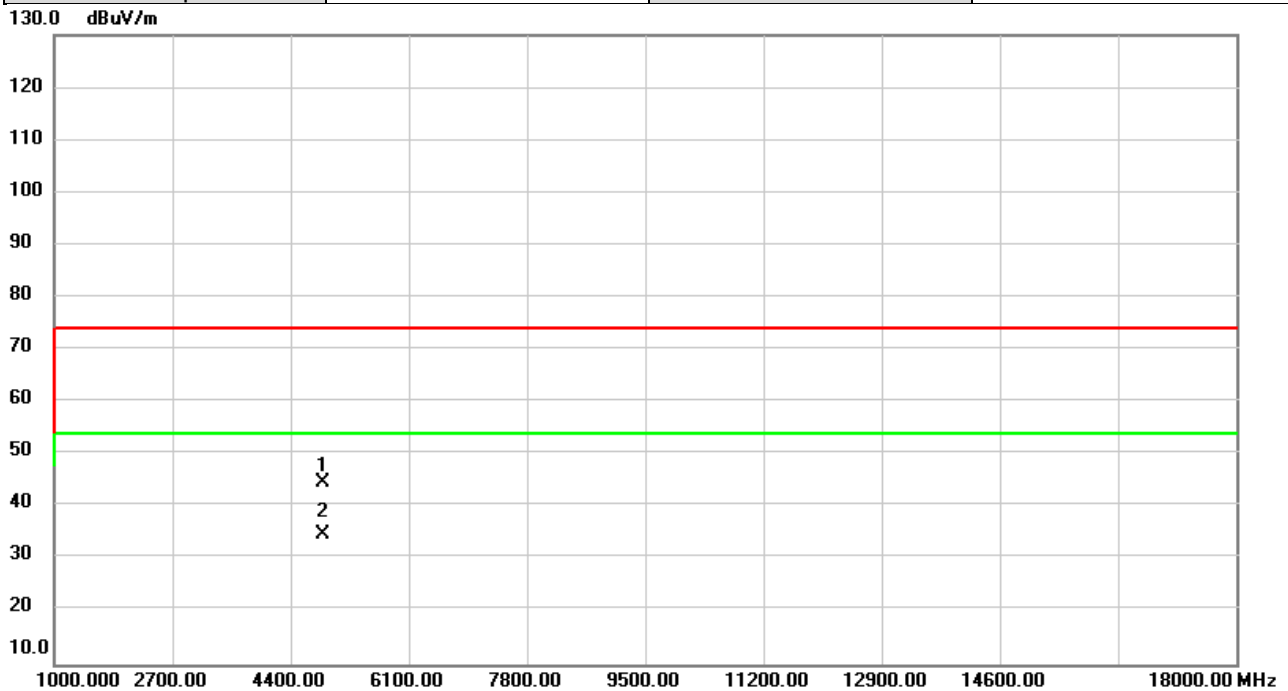


No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1		4824.000	44.51	0.92	45.43	74.00	-28.57	peak	
2	*	4824.000	34.77	0.92	35.69	54.00	-18.31	AVG	

REMARKS:

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

Test Mode	IEEE 802.11g	Test Date	2024/6/28
Test Frequency	2437MHz	Polarization	Vertical
Temp	27°C	Hum.	66%

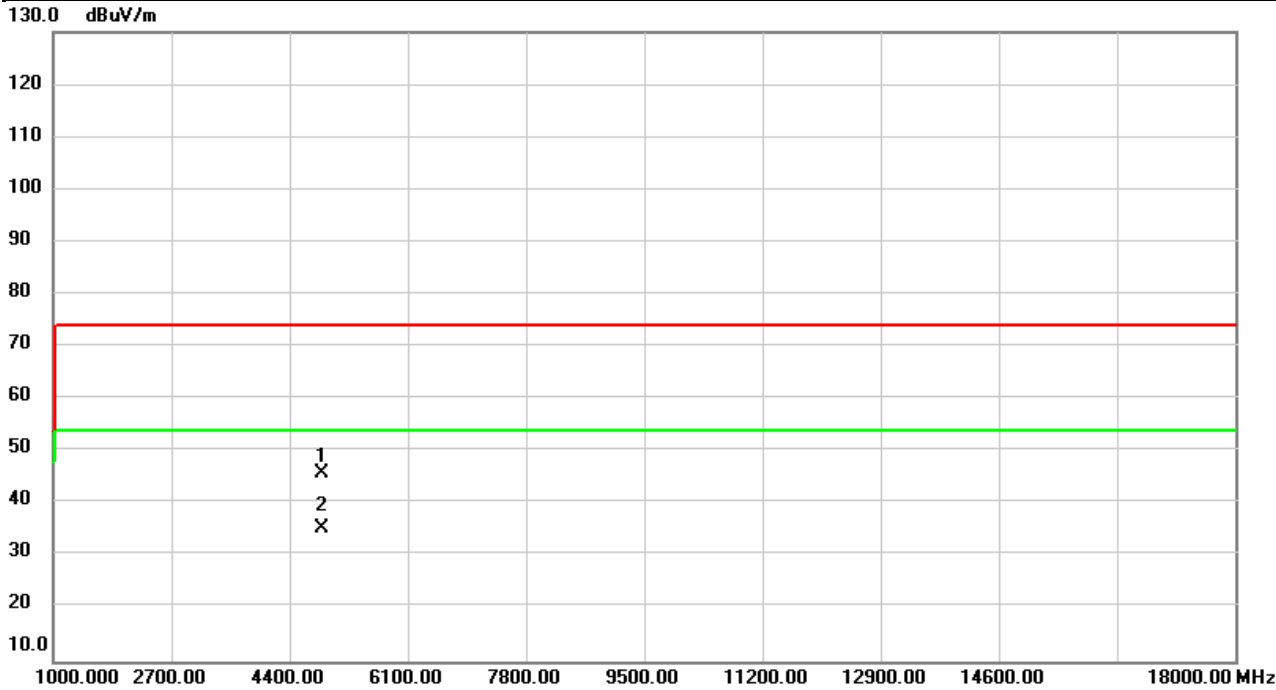


No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1		4874.000	43.75	1.02	44.77	74.00	-29.23	peak	
2	*	4874.000	33.63	1.02	34.65	54.00	-19.35	AVG	

REMARKS:

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

Test Mode	IEEE 802.11g	Test Date	2024/6/28
Test Frequency	2437MHz	Polarization	Horizontal
Temp	27°C	Hum.	66%

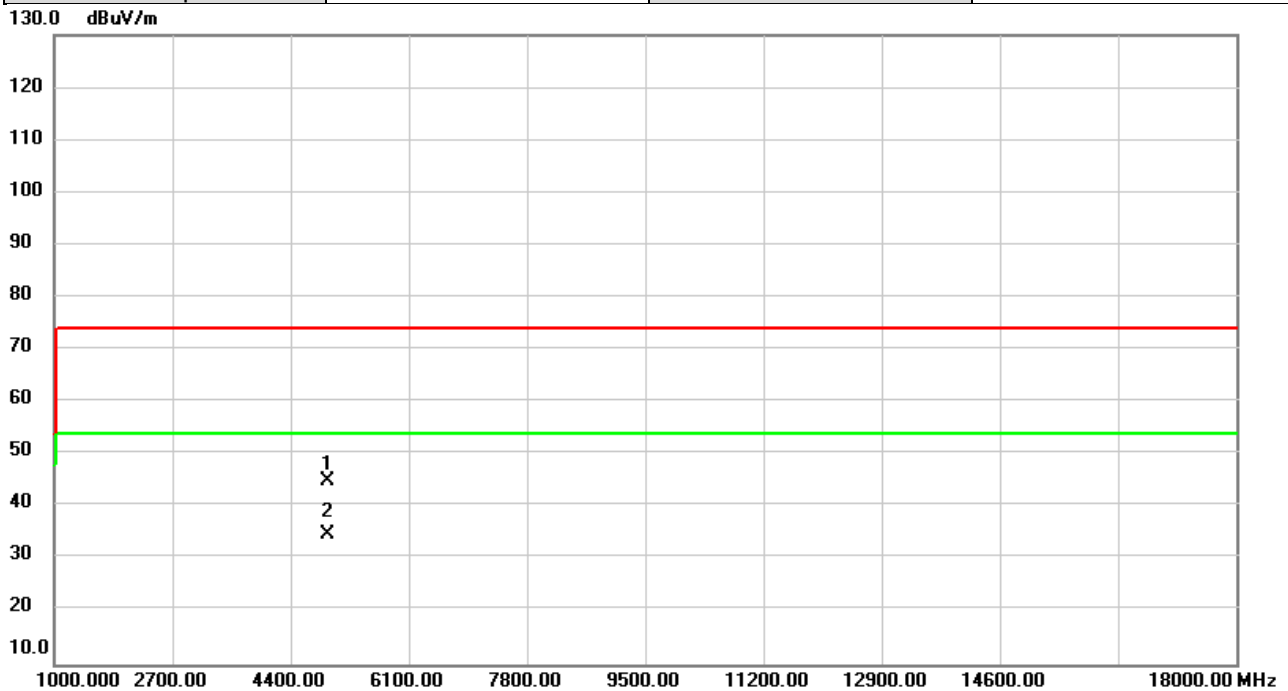


No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1		4874.000	44.80	1.02	45.82	74.00	-28.18	peak	
2	*	4874.000	34.27	1.02	35.29	54.00	-18.71	AVG	

REMARKS:

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

Test Mode	IEEE 802.11g	Test Date	2024/6/28
Test Frequency	2462MHz	Polarization	Vertical
Temp	27°C	Hum.	66%



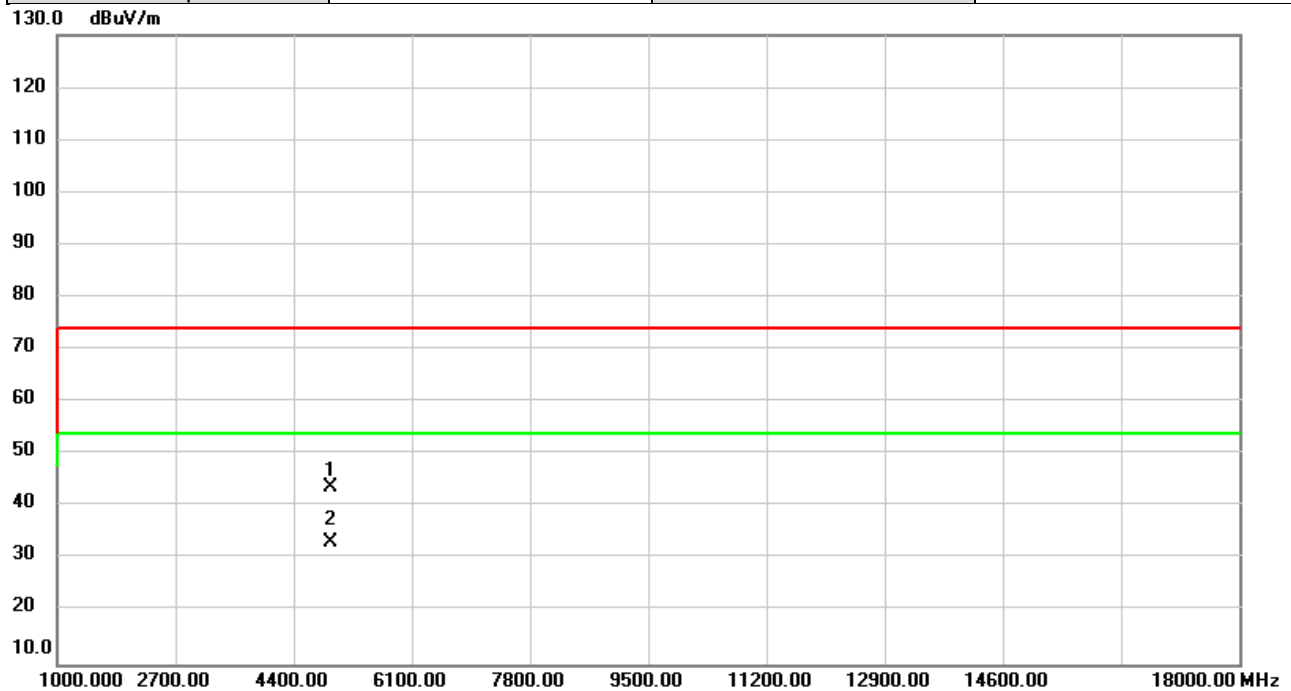
No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1		4924.000	43.71	1.13	44.84	74.00	-29.16	peak	
2	*	4924.000	33.77	1.13	34.90	54.00	-19.10	AVG	

REMARKS:

(1) Measurement Value = Reading Level + Correct Factor.

(2) Margin Level = Measurement Value - Limit Value.

Test Mode	IEEE 802.11g	Test Date	2024/6/28
Test Frequency	2462MHz	Polarization	Horizontal
Temp	27°C	Hum.	66%



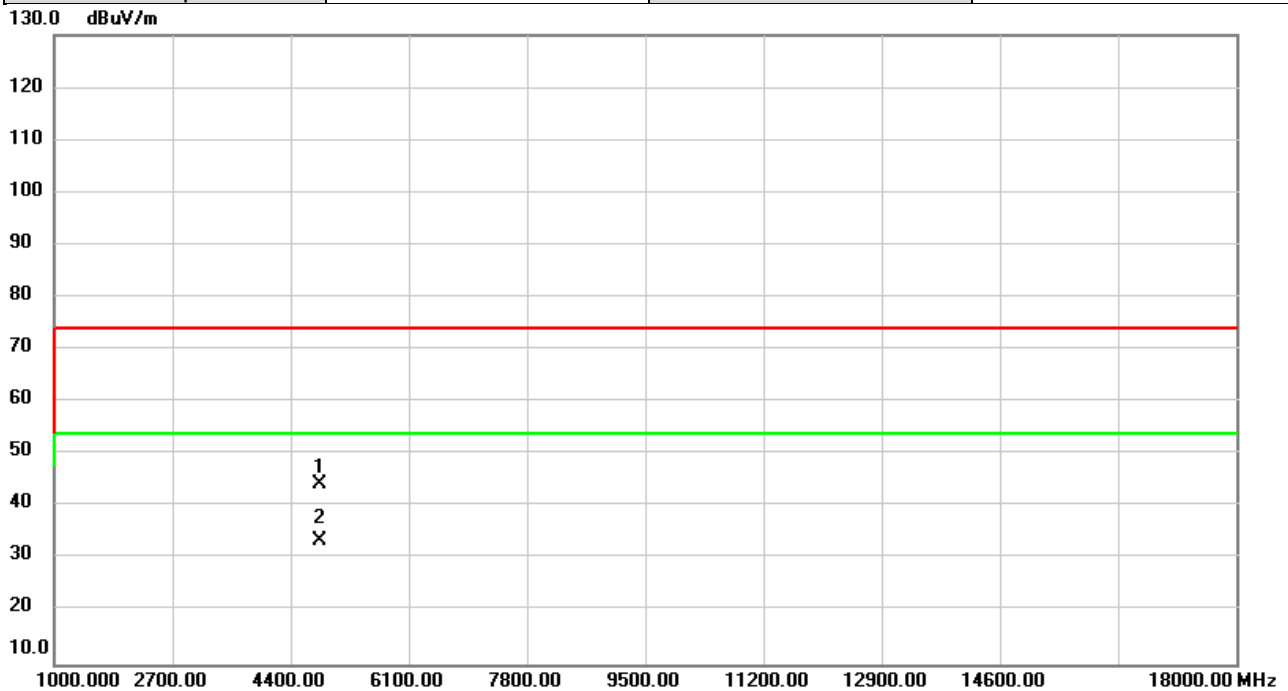
No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1		4924.000	42.74	1.13	43.87	74.00	-30.13	peak	
2	*	4924.000	32.15	1.13	33.28	54.00	-20.72	AVG	

REMARKS:

(1) Measurement Value = Reading Level + Correct Factor.

(2) Margin Level = Measurement Value - Limit Value.

Test Mode	IEEE 802.11n (HT20)	Test Date	2024/6/28
Test Frequency	2412MHz	Polarization	Vertical
Temp	27°C	Hum.	66%



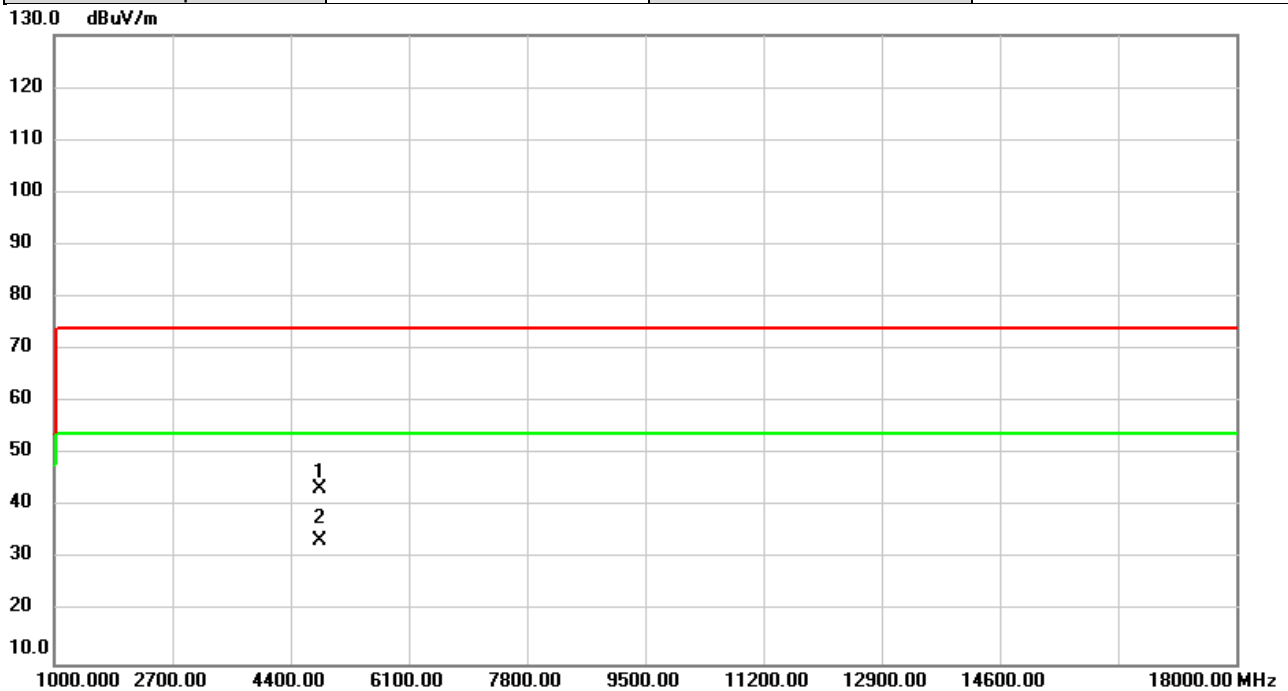
No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1		4824.000	43.47	0.92	44.39	74.00	-29.61	peak	
2	*	4824.000	32.57	0.92	33.49	54.00	-20.51	AVG	

REMARKS:

(1) Measurement Value = Reading Level + Correct Factor.

(2) Margin Level = Measurement Value - Limit Value.

Test Mode	IEEE 802.11n (HT20)	Test Date	2024/6/28
Test Frequency	2412MHz	Polarization	Horizontal
Temp	27°C	Hum.	66%



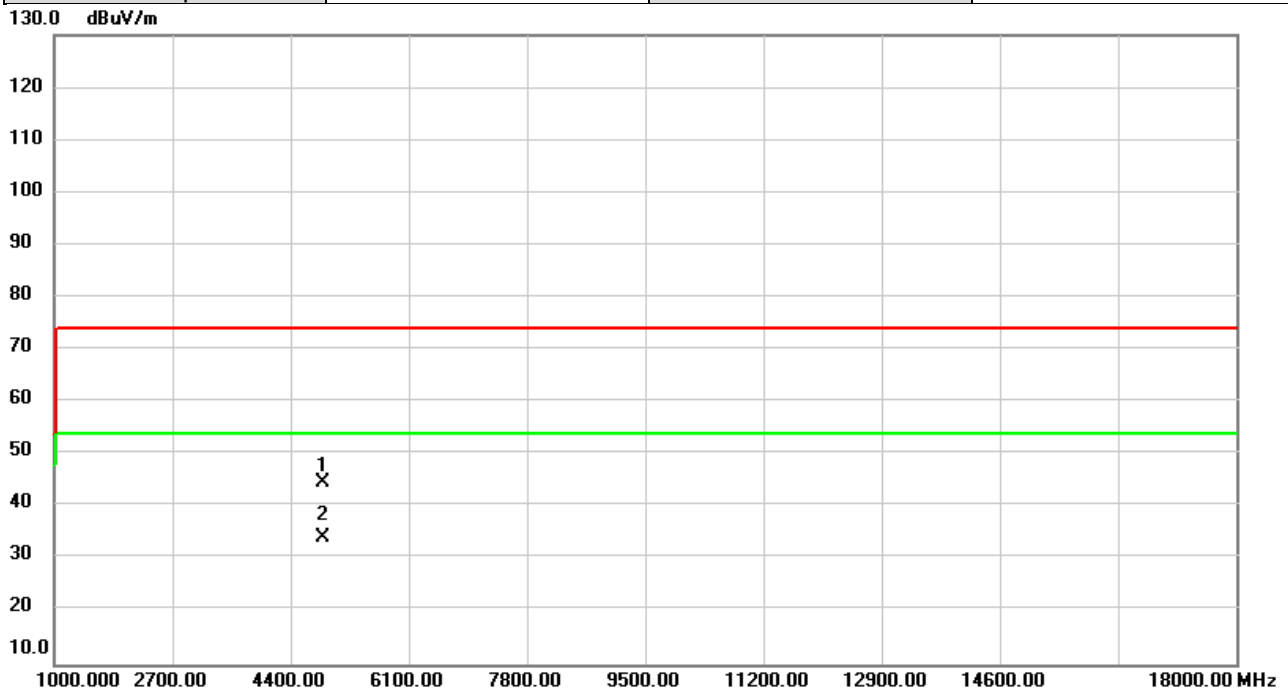
No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1		4824.000	42.40	0.92	43.32	74.00	-30.68	peak	
2	*	4824.000	32.77	0.92	33.69	54.00	-20.31	AVG	

REMARKS:

(1) Measurement Value = Reading Level + Correct Factor.

(2) Margin Level = Measurement Value - Limit Value.

Test Mode	IEEE 802.11n (HT20)	Test Date	2024/6/28
Test Frequency	2437MHz	Polarization	Vertical
Temp	27°C	Hum.	66%



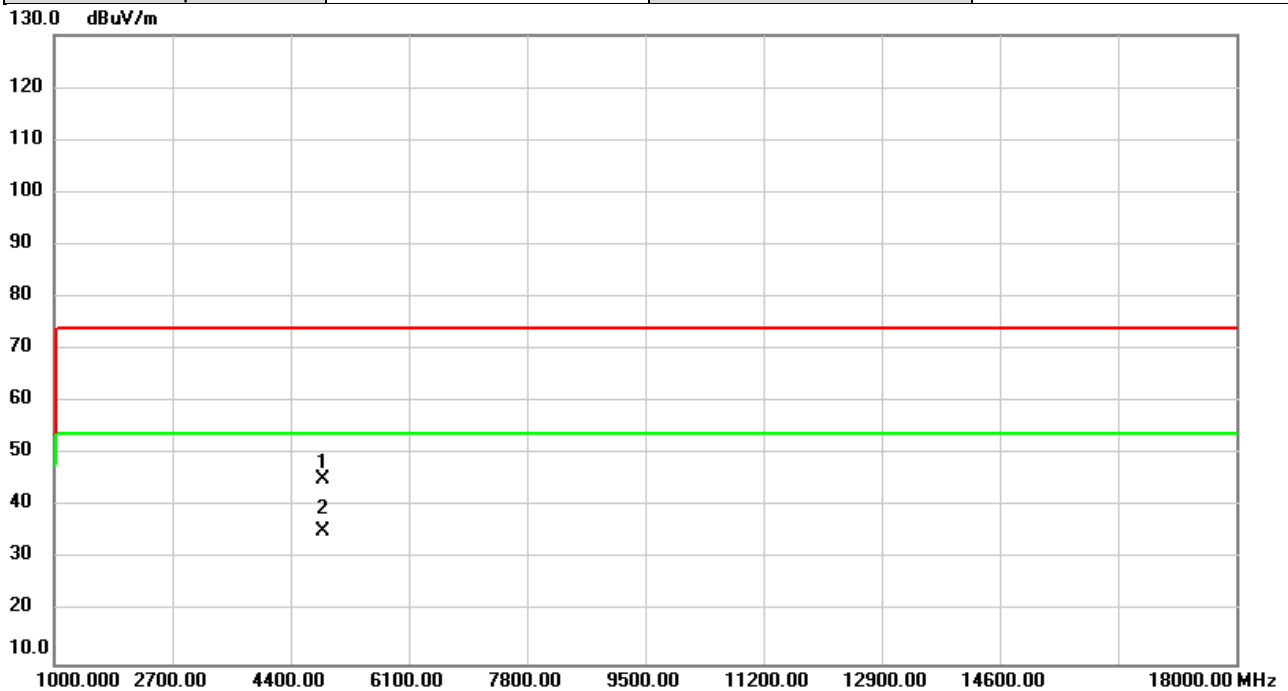
No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1		4874.000	43.59	1.02	44.61	74.00	-29.39	peak	
2	*	4874.000	33.27	1.02	34.29	54.00	-19.71	AVG	

REMARKS:

(1) Measurement Value = Reading Level + Correct Factor.

(2) Margin Level = Measurement Value - Limit Value.

Test Mode	IEEE 802.11n (HT20)	Test Date	2024/6/28
Test Frequency	2437MHz	Polarization	Horizontal
Temp	27°C	Hum.	66%



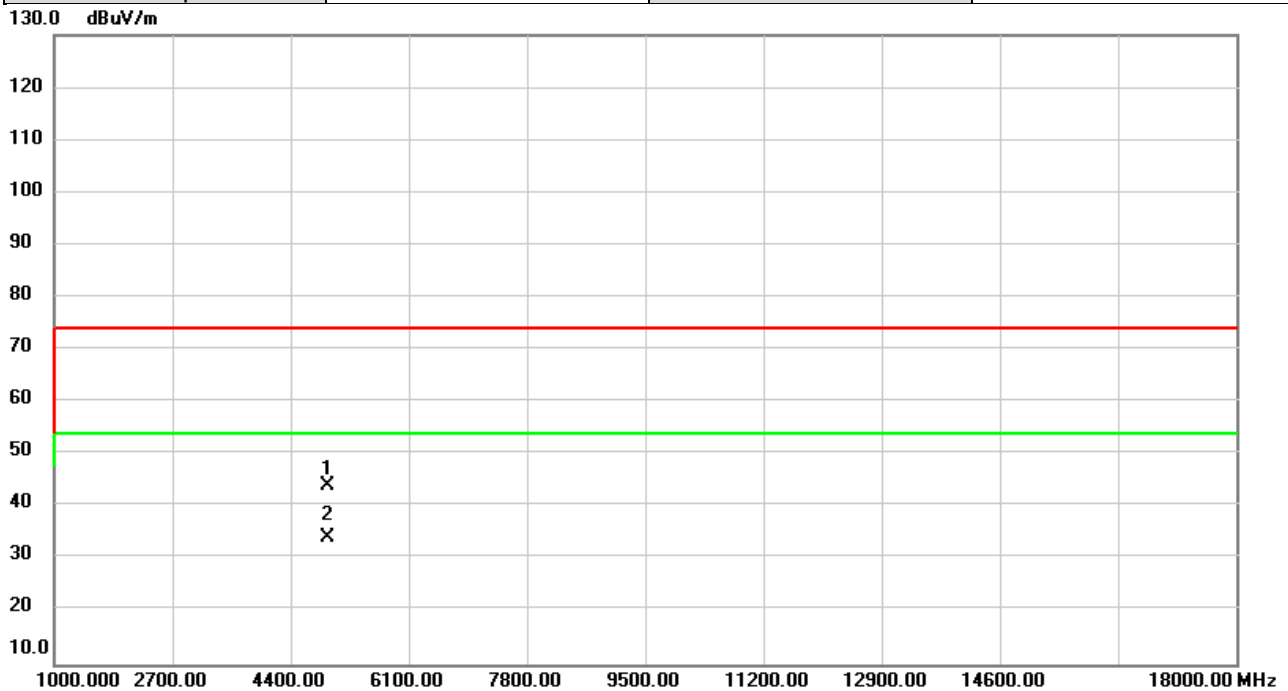
No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1		4874.000	44.22	1.02	45.24	74.00	-28.76	peak	
2	*	4874.000	34.28	1.02	35.30	54.00	-18.70	AVG	

REMARKS:

(1) Measurement Value = Reading Level + Correct Factor.

(2) Margin Level = Measurement Value - Limit Value.

Test Mode	IEEE 802.11n (HT20)	Test Date	2024/6/28
Test Frequency	2462MHz	Polarization	Vertical
Temp	27°C	Hum.	66%



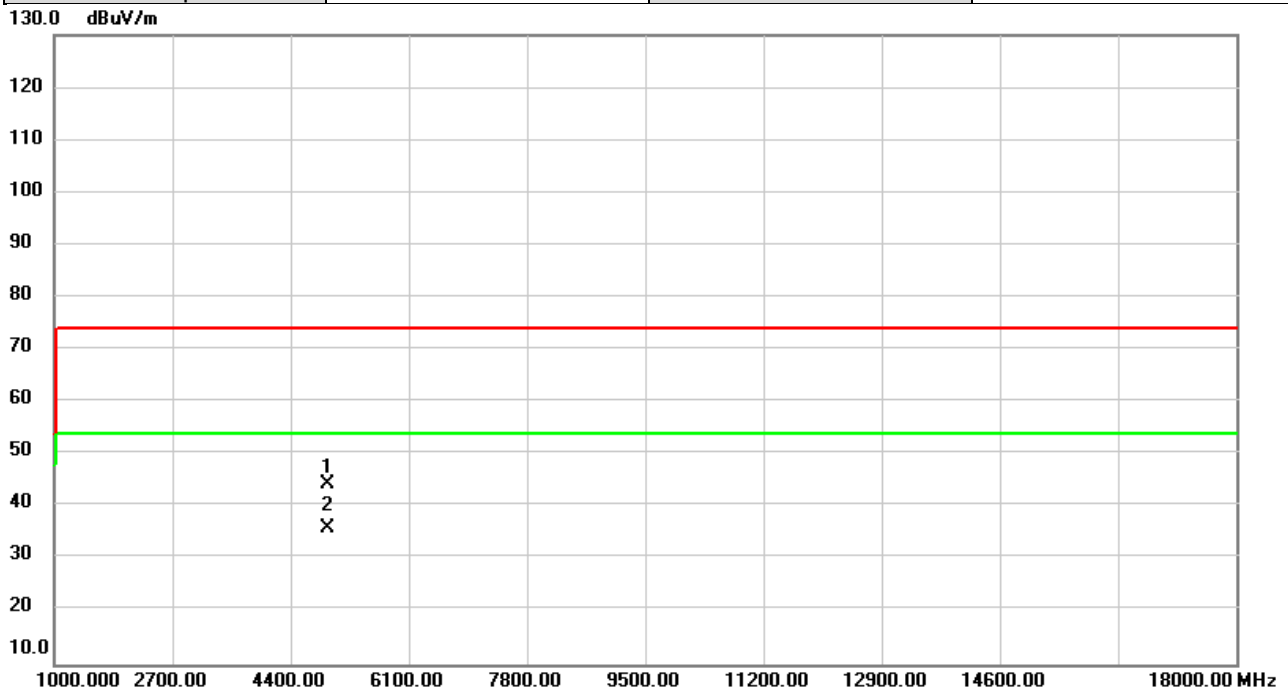
No.	Mk.	Freq.	Reading Level	Correct Factor	Measure- ment	Limit	Over		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1		4924.000	43.00	1.13	44.13	74.00	-29.87	peak	
2	*	4924.000	33.09	1.13	34.22	54.00	-19.78	AVG	

REMARKS:

(1) Measurement Value = Reading Level + Correct Factor.

(2) Margin Level = Measurement Value - Limit Value.

Test Mode	IEEE 802.11n (HT20)	Test Date	2024/6/28
Test Frequency	2462MHz	Polarization	Horizontal
Temp	27°C	Hum.	66%

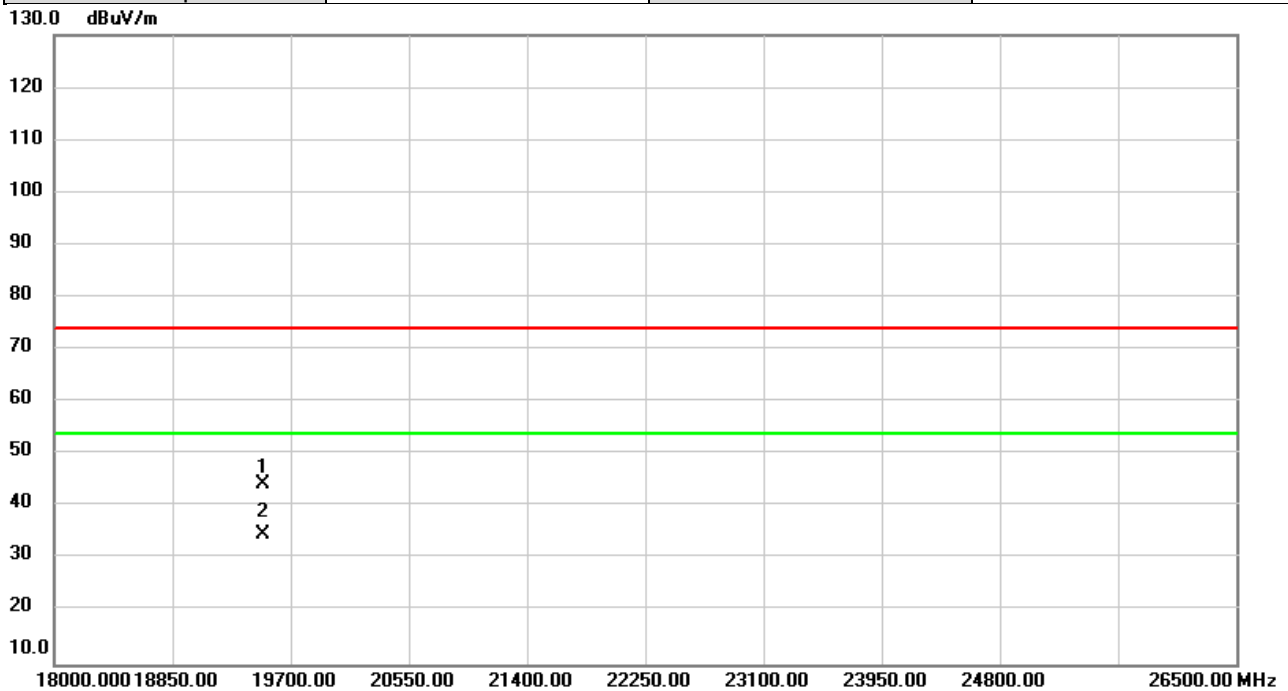


No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV/m	Limit dBuV/m	Over dB	Detector	Comment
1		4924.000	43.37	1.13	44.50	74.00	-29.50	peak	
2	*	4924.000	34.89	1.13	36.02	54.00	-17.98	AVG	

REMARKS:

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

Test Mode	IEEE 802.11b	Test Date	2024/7/1
Test Frequency	2437MHz	Polarization	Vertical
Temp	26°C	Hum.	60%



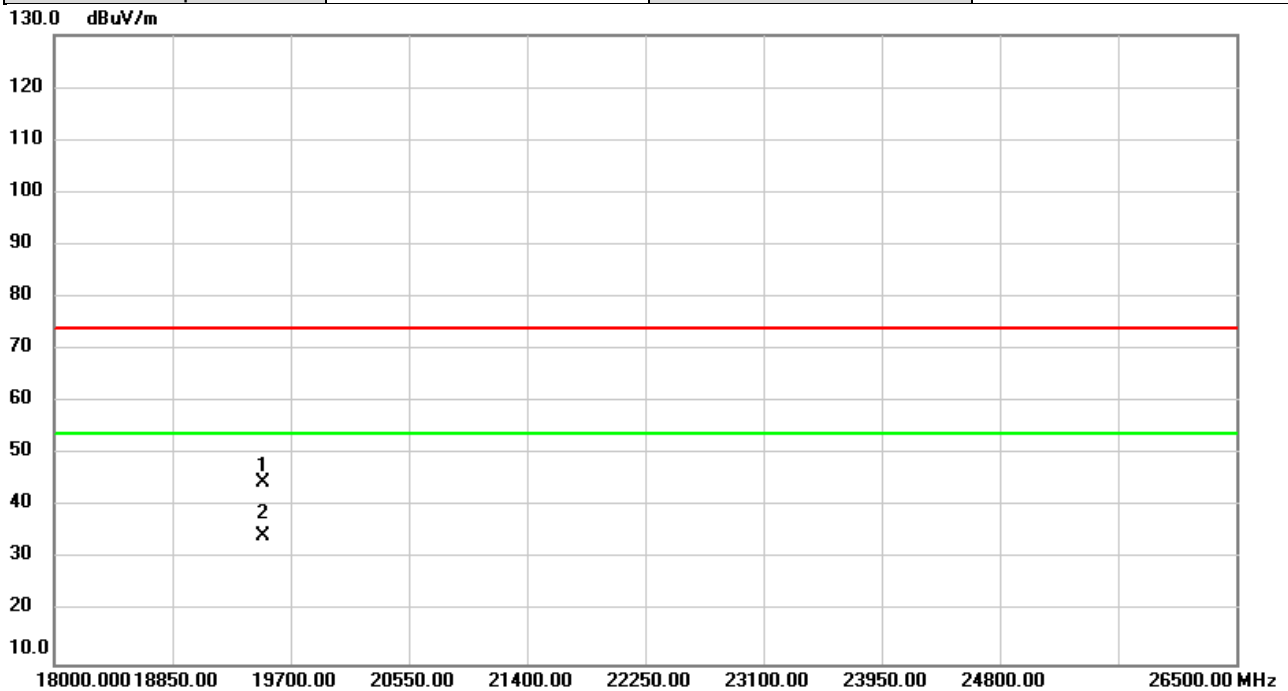
No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1		19496.00	50.02	-5.57	44.45	74.00	-29.55	peak	
2	*	19496.00	40.31	-5.57	34.74	54.00	-19.26	AVG	

REMARKS:

(1) Measurement Value = Reading Level + Correct Factor.

(2) Margin Level = Measurement Value - Limit Value.

Test Mode	IEEE 802.11b	Test Date	2024/7/1
Test Frequency	2437MHz	Polarization	Horizontal
Temp	26°C	Hum.	60%



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1		19496.00	50.13	-5.57	44.56	74.00	-29.44	peak	
2	*	19496.00	39.96	-5.57	34.39	54.00	-19.61	AVG	

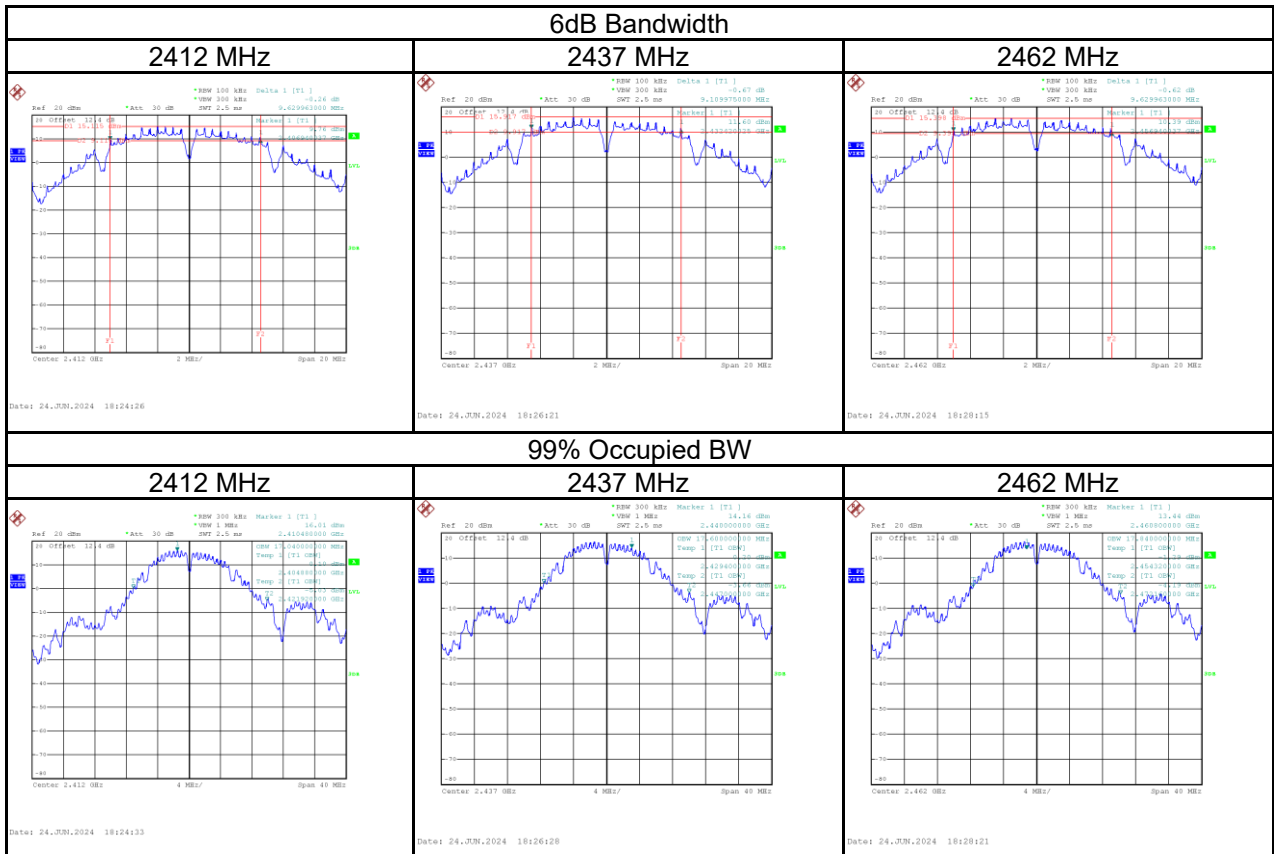
REMARKS:

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

APPENDIX E BANDWIDTH

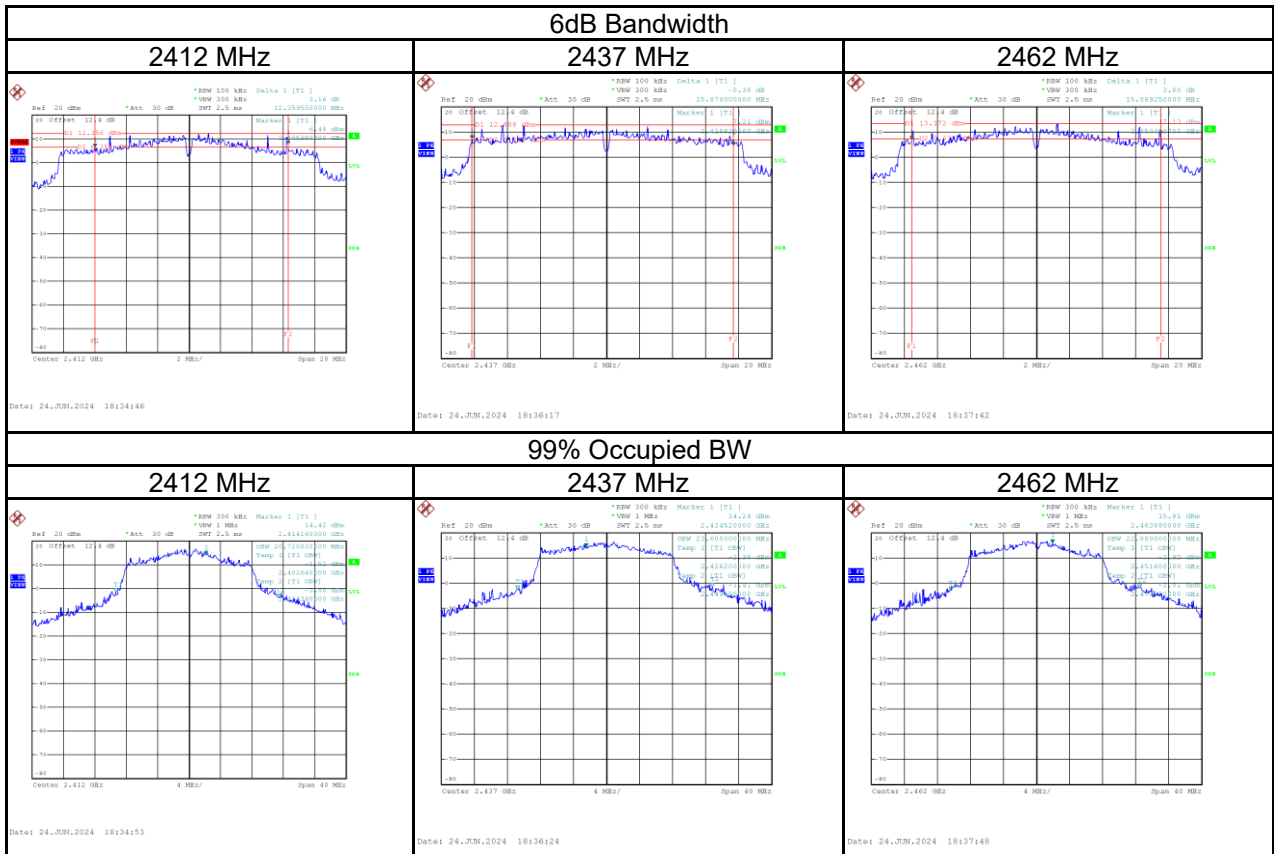
Test Mode	IEEE 802.11b
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Test Frequency (MHz)	6 dB Bandwidth (MHz)	99 % Occupied Bandwidth (MHz)	Minimum 6 dB Bandwidth Limit (kHz)	Result
2412	9.63	17.04	≥ 500	Pass
2437	9.11	17.60	≥ 500	Pass
2462	9.63	17.84	≥ 500	Pass



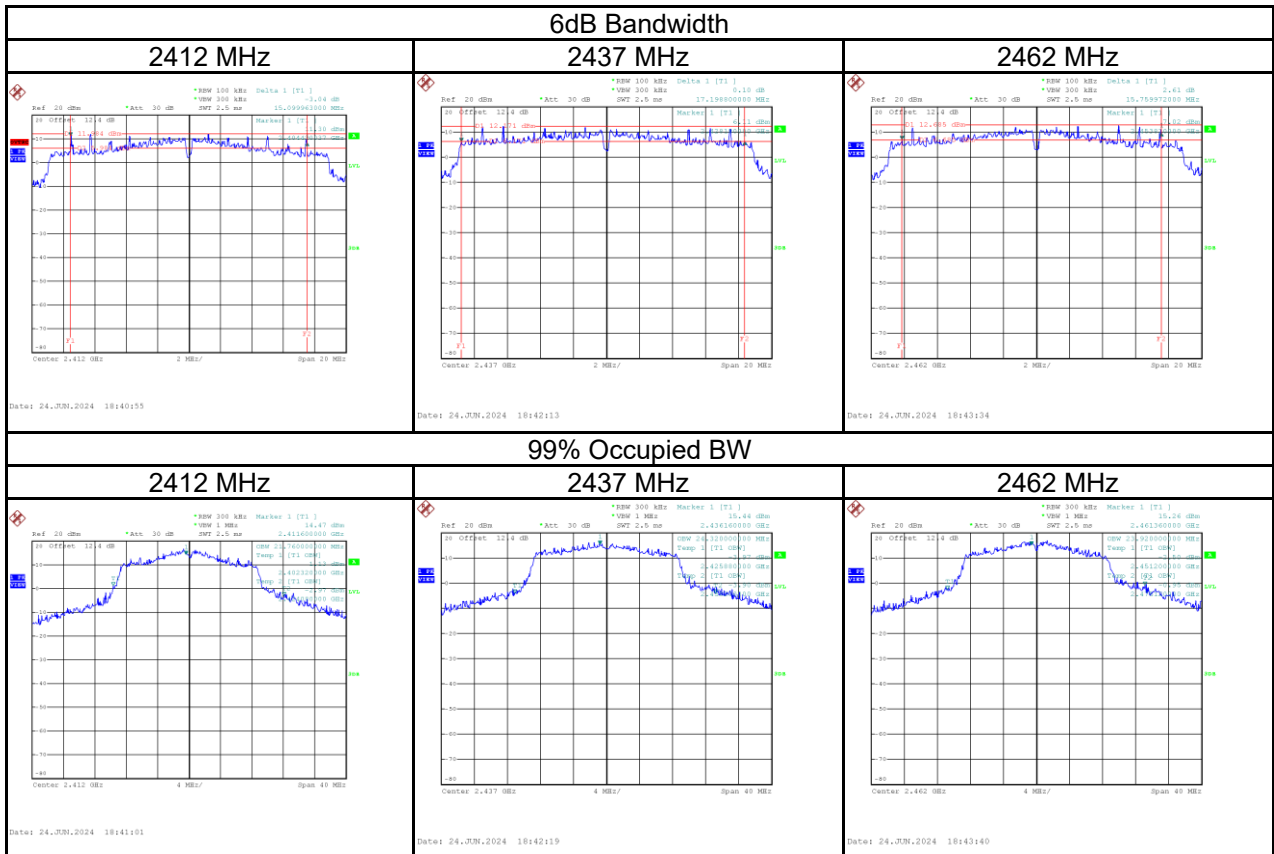
Test Mode	IEEE 802.11g
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Test Frequency (MHz)	6 dB Bandwidth (MHz)	99 % Occupied Bandwidth (MHz)	Minimum 6 dB Bandwidth Limit (kHz)	Result
2412	12.36	20.72	≥ 500	Pass
2437	15.87	23.60	≥ 500	Pass
2462	15.09	22.88	≥ 500	Pass



Test Mode	IEEE 802.11n (HT20)
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Test Frequency (MHz)	6 dB Bandwidth (MHz)	99 % Occupied Bandwidth (MHz)	Minimum 6 dB Bandwidth Limit (kHz)	Result
2412	15.10	21.76	≥ 500	Pass
2437	17.20	24.32	≥ 500	Pass
2462	15.76	23.92	≥ 500	Pass



APPENDIX F OUTPUT POWER

Test Mode	IEEE 802.11b	Tested Date	2024/6/21
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Frequency (MHz)	Conducted Power (dBm)	Conducted Power (W)	Limit (dBm)	Limit (W)	Result
2412	21.76	0.1500	30.00	1.0000	Pass
2437	25.78	0.3784	30.00	1.0000	Pass
2462	19.89	0.0975	30.00	1.0000	Pass

Test Mode	IEEE 802.11g	Tested Date	2024/6/21
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Frequency (MHz)	Conducted Power (dBm)	Conducted Power (W)	Limit (dBm)	Limit (W)	Result
2412	24.20	0.2630	30.00	1.0000	Pass
2437	25.81	0.3811	30.00	1.0000	Pass
2462	24.17	0.2612	30.00	1.0000	Pass

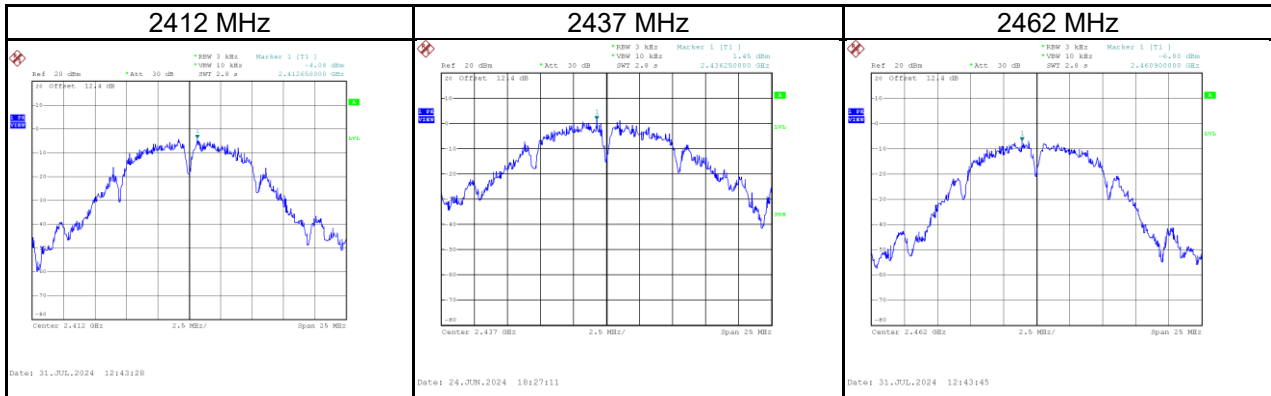
Test Mode	IEEE 802.11n (HT20)	Tested Date	2024/6/21
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Frequency (MHz)	Conducted Power (dBm)	Conducted Power (W)	Limit (dBm)	Limit (W)	Result
2412	24.81	0.3027	30.00	1.0000	Pass
2437	25.89	0.3882	30.00	1.0000	Pass
2462	24.78	0.3006	30.00	1.0000	Pass

APPENDIX G POWER SPECTRAL DENSITY

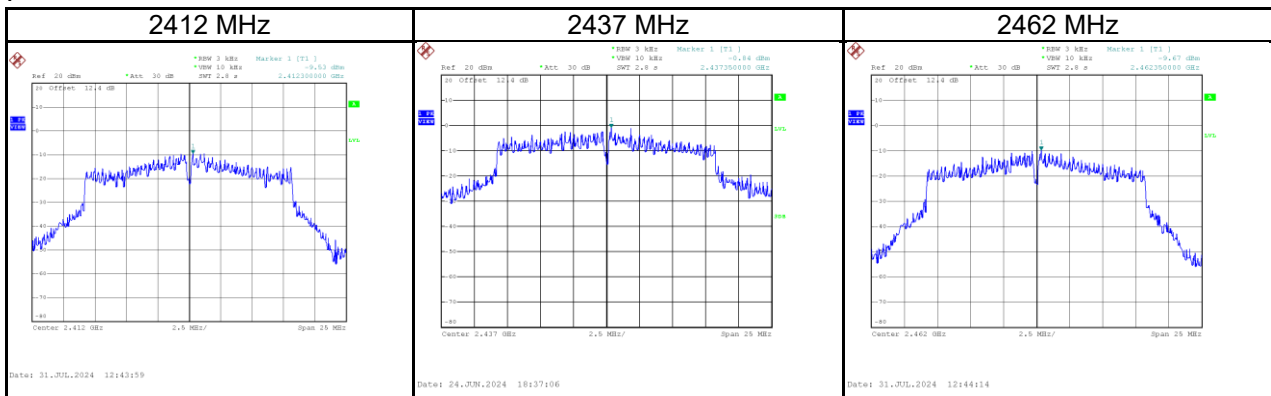
Test Mode	IEEE 802.11b
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Test Frequency (MHz)	Power Spectral Density (dBm/3kHz)	Maximum Limit (dBm/3kHz)	Result
2412	-4.08	8.00	Pass
2437	1.45	8.00	Pass
2462	-6.80	8.00	Pass



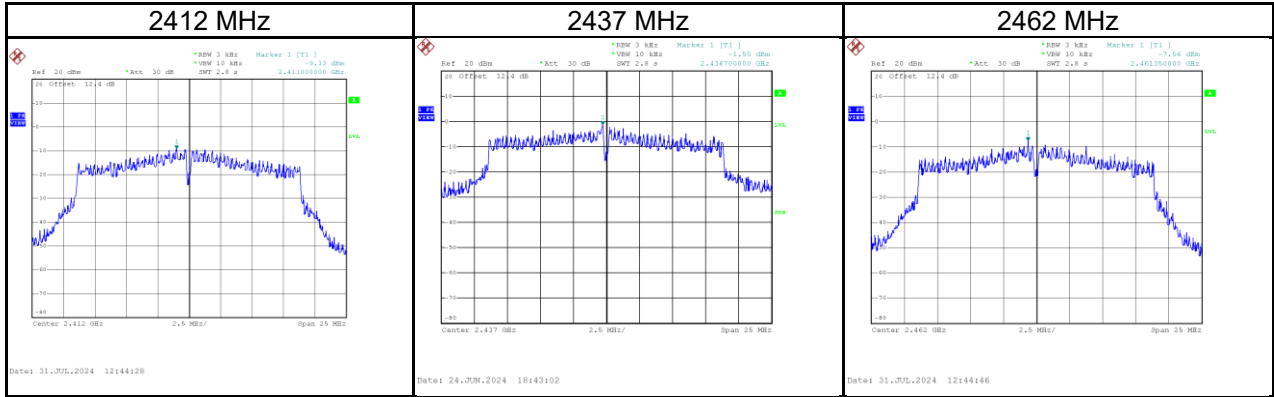
Test Mode	IEEE 802.11g
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Test Frequency (MHz)	Power Spectral Density (dBm/3kHz)	Maximum Limit (dBm/3kHz)	Result
2412	-9.53	8.00	Pass
2437	-0.84	8.00	Pass
2462	-9.67	8.00	Pass



Test Mode	IEEE 802.11n (HT20)
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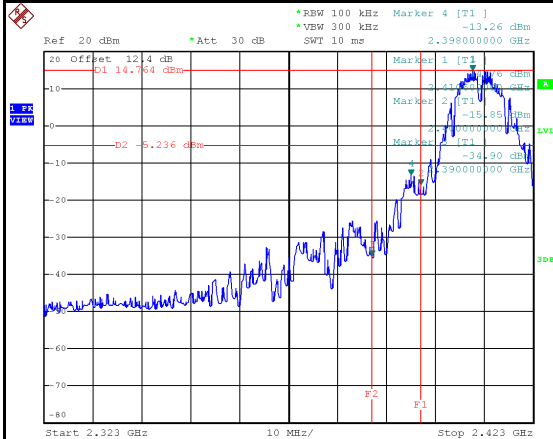
Test Frequency (MHz)	Power Spectral Density (dBm/3kHz)	Maximum Limit (dBm/3kHz)	Result
2412	-9.33	8.00	Pass
2437	-1.50	8.00	Pass
2462	-7.56	8.00	Pass



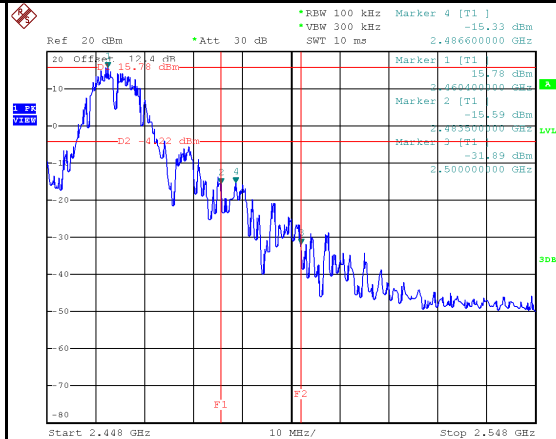
APPENDIX H ANTENNA CONDUCTED SPURIOUS EMISSIONS

Test Mode IEEE 802.11b

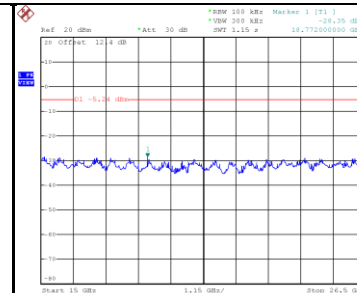
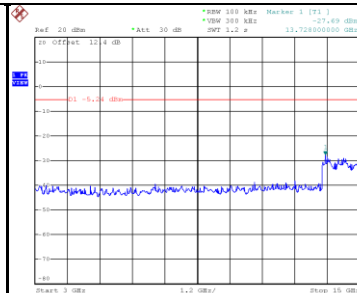
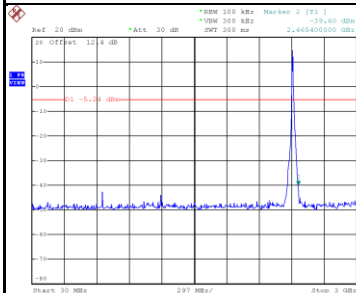
Low Bandedge-2412 MHz



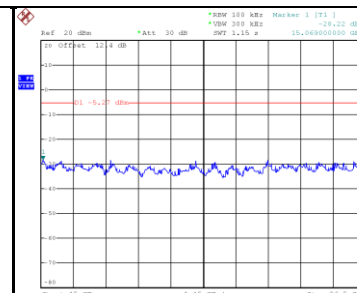
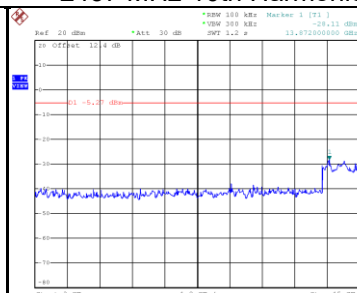
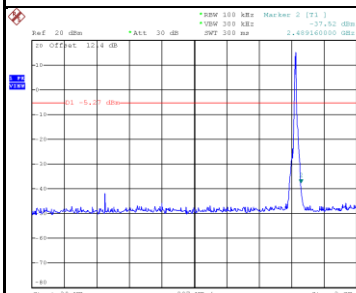
High Bandedge-2462 MHz



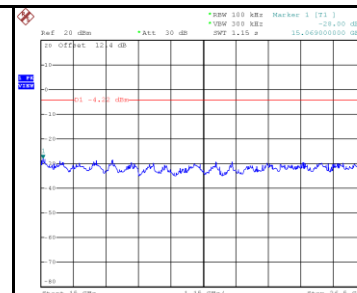
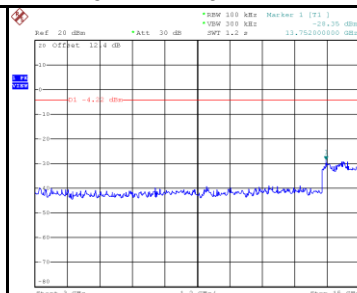
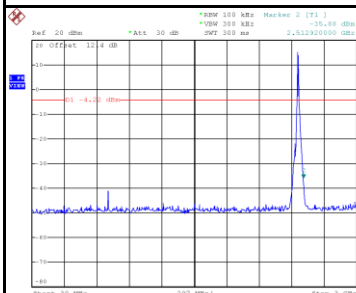
2412 MHz-10th Harmonics



2437 MHz-10th Harmonics

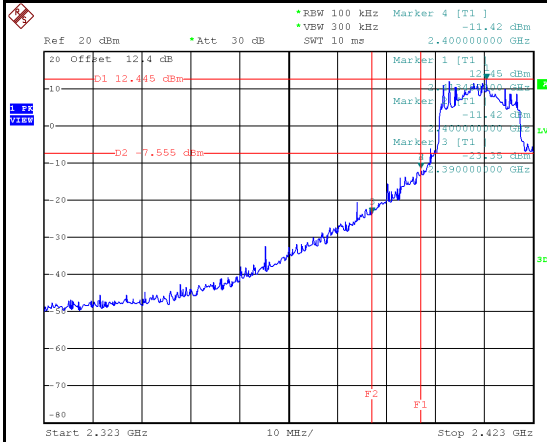


2462 MHz-10th Harmonics



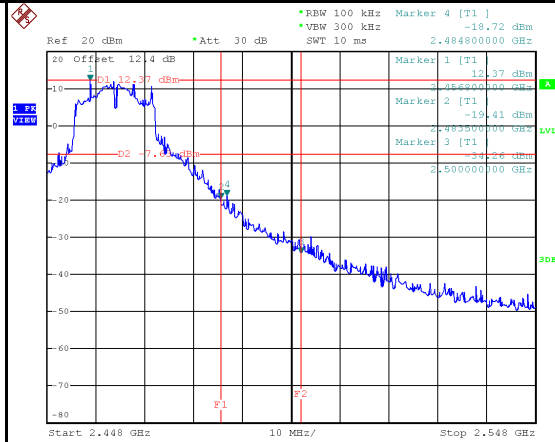
Test Mode IEEE 802.11g

Low Bandedge-2412 MHz



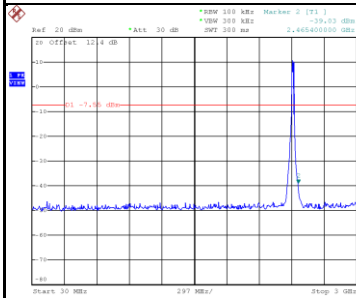
Date: 24.JUN.2024 18:35:00

High Bandedge-2462 MHz

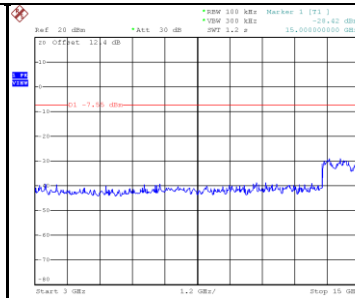


Date: 24.JUN.2024 18:37:55

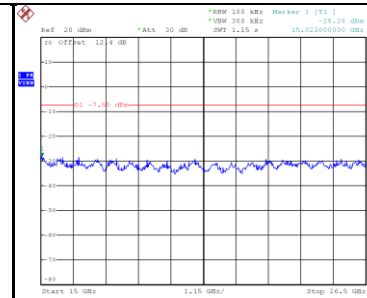
2412 MHz-10th Harmonics



Date: 24.JUN.2024 18:35:13

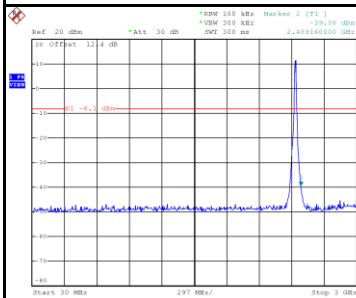


Date: 24.JUN.2024 18:35:20

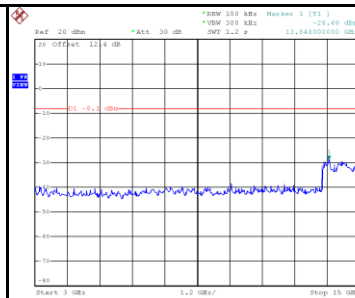


Date: 24.JUN.2024 18:35:27

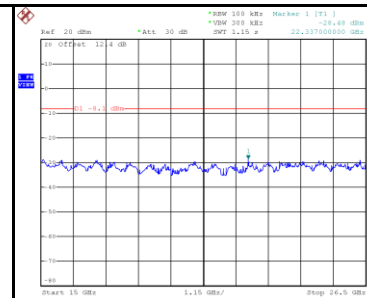
2437 MHz-10th Harmonics



Date: 24.JUN.2024 18:36:44

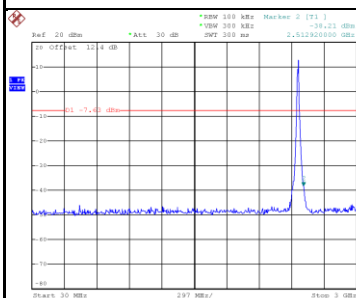


Date: 24.JUN.2024 18:36:51

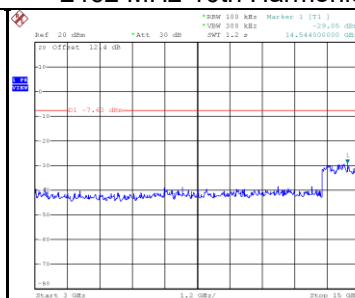


Date: 24.JUN.2024 18:36:58

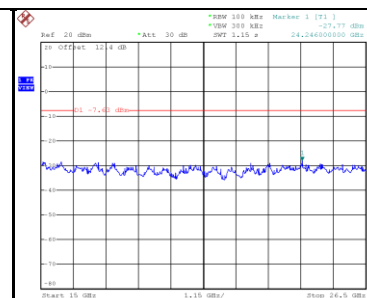
2462 MHz-10th Harmonics



Date: 24.JUN.2024 18:38:00



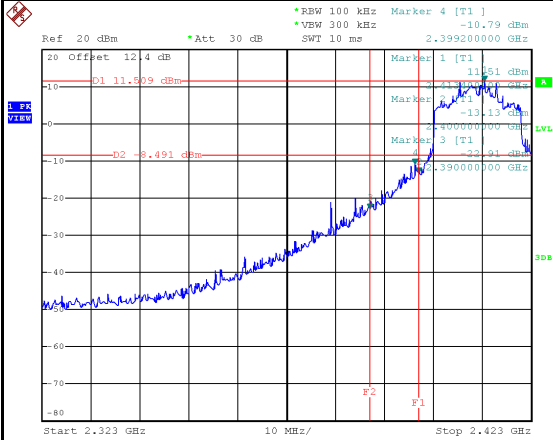
Date: 24.JUN.2024 18:38:15



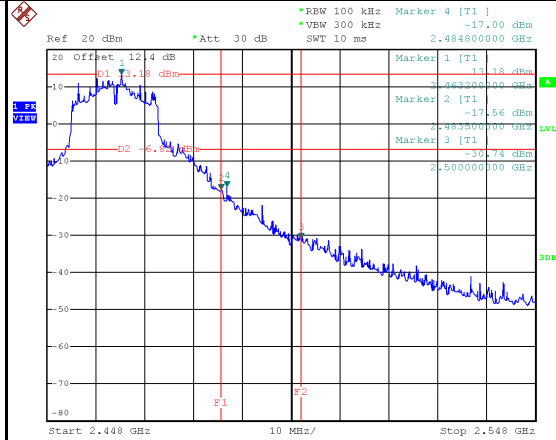
Date: 24.JUN.2024 18:38:22

Test Mode IEEE 802.11n (HT20)

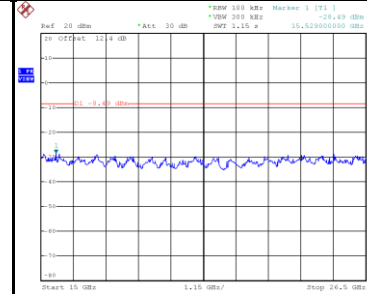
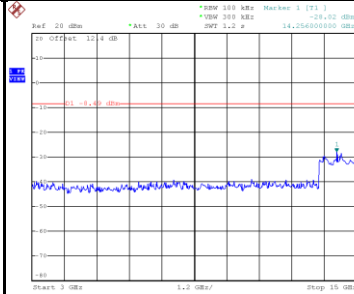
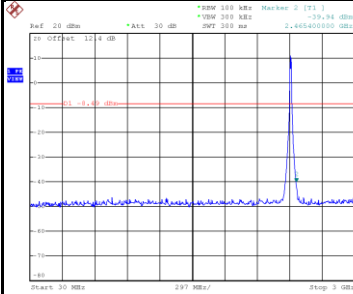
Low Bandedge-2412 MHz



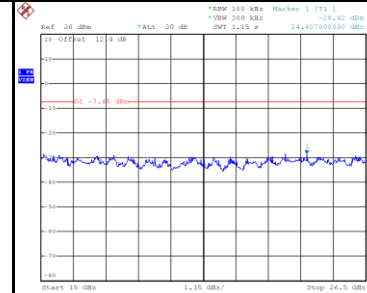
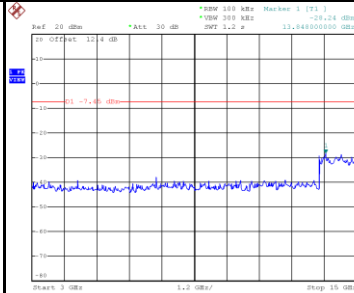
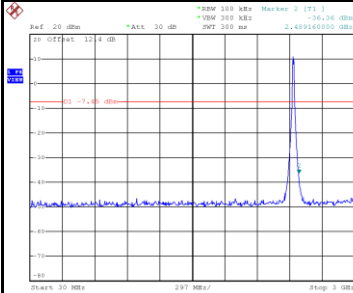
High Bandedge-2462 MHz



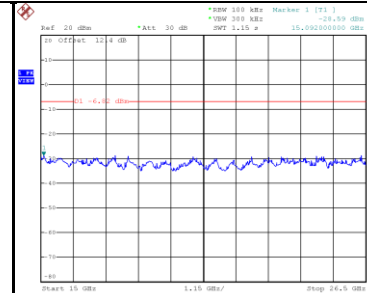
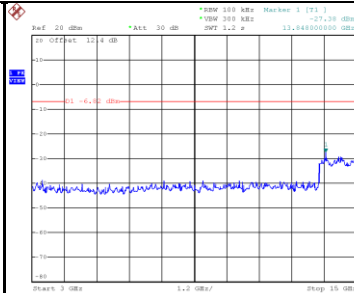
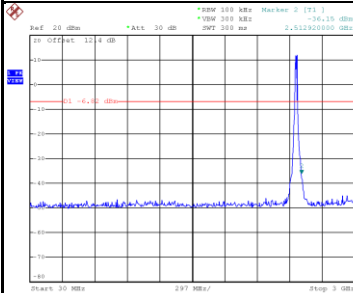
2412 MHz-10th Harmonics



2437 MHz-10th Harmonics



2462 MHz-10th Harmonics



End of Test Report