

FCC Radio Test Report

FCC ID: 2AXLP-WINCHECKS2

Report No. : BTL-FCCP-1-2210T119
Equipment : WinCheck™ S2
Model Name : WinCheck™ S2
Brand Name : IGT
Applicant : International Game Technology
Address : 9295 Prototype Drive, Reno, NV

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 : 2022/11/17
Date of Test : 2022/11/29 ~ 2023/6/28
Issued Date : 2023/7/17

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** 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-1-2210T119	R00	Original Report.	2023/7/17	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 $y \pm U$, 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 %**. 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)
C05	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	19 °C, 65 %	AC 120V	Paul Shen
Radiated emissions below 1 GHz	Refer to data	AC 120V	Mark Wang
Radiated emissions above 1 GHz	Refer to data	AC 120V	Mark Wang
Bandwidth	23 °C, 51 %	AC 120V	Paul Shen
Output Power	23 °C, 51 %	AC 120V	Paul Shen
Power Spectral Density	23 °C, 51 %	AC 120V	Paul Shen
Antenna conducted Spurious Emission	23 °C, 51 %	AC 120V	Paul Shen

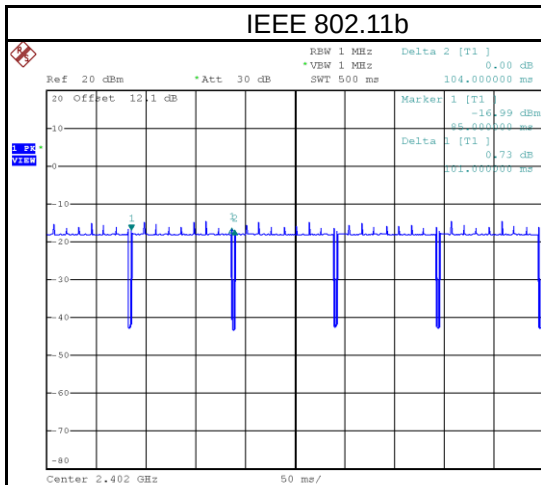
1.4 TABLE OF PARAMETERS OF TEXT SOFTWARE SETTING

Test Software	Tera Term V.4.84					
Mode	2412 MHz	2437 MHz	2462 MHz	2467 MHz	2472 MHz	Data Rate
IEEE 802.11b	35	36	37	37	22	1 Mbps
IEEE 802.11g	47	48	48	43	33	6 Mbps
IEEE 802.11n (HT20)	47	48	47	47.5	33	HT 0
Mode	2422 MHz	2437 MHz	2452 MHz	2457 MHz	2462 MHz	Data Rate
IEEE 802.11n (HT40)	41.5	47	45.5	44	41	HT 0

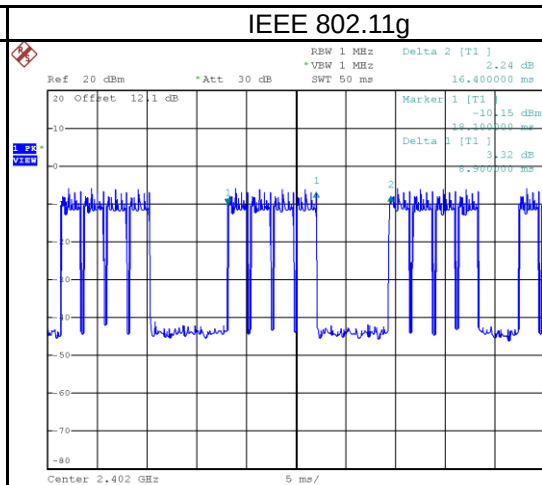
1.5 DUTY CYCLE

If duty cycle is $\geq 98\%$, duty factor is not required.
If duty cycle is $< 98\%$, duty factor shall be considered.

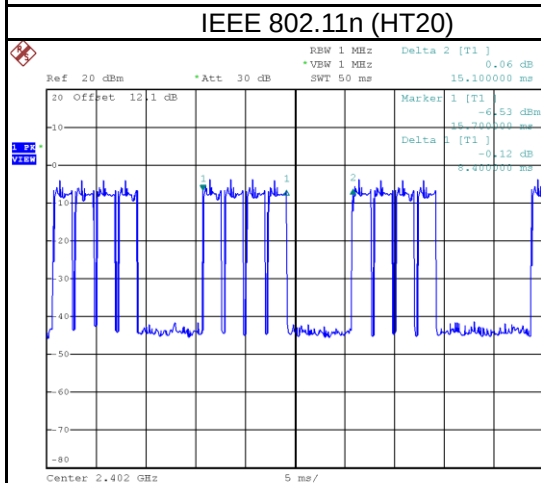
Remark	Delta 1			Delta 2	On Time/Period	10 log(1/Duty Cycle)
Mode	ON (ms)	Numbers (ON)	On Time (B) (ms)	Period (ON+OFF) (ms)	Duty Cycle (%)	Duty Factor (dB)
IEEE 802.11b	101.000	1	101.000	104.000	97.12%	0.13
IEEE 802.11g	8.900	1	8.900	16.400	54.27%	2.65
IEEE 802.11n (HT20)	8.400	1	8.400	15.100	55.63%	2.55
IEEE 802.11n (HT40)	4.500	1	4.500	10.000	45.00%	3.47



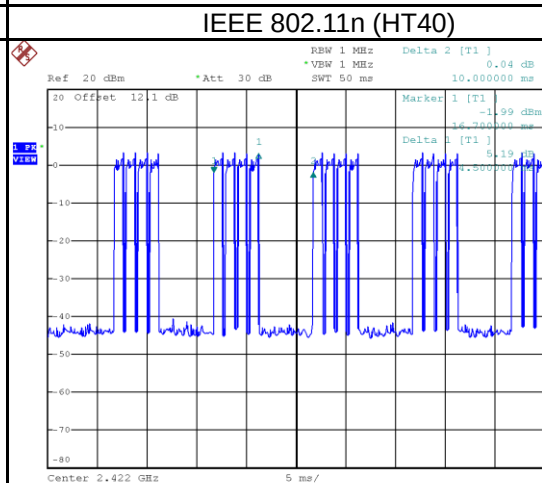
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Date: 23.DEC.2022 17:43:49



Date: 23.DEC.2022 17:45:34



Date: 23.DEC.2022 17:47:12

2 GENERAL INFORMATION

2.1 DESCRIPTION OF EUT

Equipment	WinCheck™ S2
Model Name	WinCheck™ S2
Brand Name	IGT
Model Difference	N/A
Power Source	DC Voltage supplied from AC/DC adapter.
Power Rating	EUT: 5V $\overline{\text{---}}$, 1A For Adapter: I/P: 100-240V~50/60Hz 0.3A O/P: 5.0V $\overline{\text{---}}$ 2.0A 10.0W
Products Covered	1 * Adapter: NETZTEIL / ICP12-050-2000D
Operation Band	2400 MHz ~ 2483.5 MHz
Operation Frequency	2412 MHz ~ 2472 MHz
Modulation Technology	IEEE 802.11b: DSSS IEEE 802.11g: OFDM IEEE 802.11n: OFDM
Transfer Rate	IEEE 802.11b: 11/5.5/2/1 Mbps IEEE 802.11g: 54/48/36/24/18/12/9/6 Mbps IEEE 802.11n: up to 150 Mbps
Output Power Max.	IEEE 802.11b: 18.56 dBm (0.0718 W) IEEE 802.11g: 24.03 dBm (0.2529 W) IEEE 802.11n (HT20): 24.09 dBm (0.2564 W) IEEE 802.11n (HT40): 23.45 dBm (0.2213 W)
Test Model	WinCheck™ S2
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:

CH01 - CH13 for IEEE 802.11b, IEEE 802.11g, IEEE 802.11n (HT20)					
CH03 - CH11 for IEEE 802.11n (HT40)					
Channel	Frequency (MHz)	Channel	Frequency (MHz)	Channel	Frequency (MHz)
01	2412	06	2437	11	2462
02	2417	07	2442	12	2467
03	2422	08	2447	13	2472
04	2427	09	2452		
05	2432	10	2457		

(3) Table for Filed Antenna:

Antenna	Manufacture	Model	Type	Connector	Frequency Range (MHz)	Gain (dBi)
1	Bi Qing Technology Co., Ltd.	SA-3225	Printer Antenna	N/A	2400-2500	5.8
					5150-5250	4.5
					5250-5350	4.5
					5470-5725	5.0
					5725-5850	5.6

(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 802.11n (HT20)	06	-
Transmitter Radiated Emissions (above 1GHz)	TX Mode_ IEEE 802.11b	01/11/12/13	Bandedge
	TX Mode_ IEEE 802.11g		
	TX Mode_ IEEE 802.11n (HT20)		
	TX Mode_ IEEE 802.11n (HT40)	03/09/10/11	
Transmitter Radiated Emissions (above 1GHz)	TX Mode_ IEEE 802.11b	01/06/11/12/13	Harmonic
	TX Mode_ IEEE 802.11g		
	TX Mode_ IEEE 802.11n (HT20)		
	TX Mode_ IEEE 802.11n (HT40)	03/06/09/10/11	
Bandwidth & Output Power & Power Spectral Density & Antenna conducted Spurious Emission	TX Mode_ IEEE 802.11b	01/06/11/12/13	-
	TX Mode_ IEEE 802.11g		
	TX Mode_ IEEE 802.11n (HT20)		
	TX Mode_ IEEE 802.11n (HT40)	03/06/09/10/11	

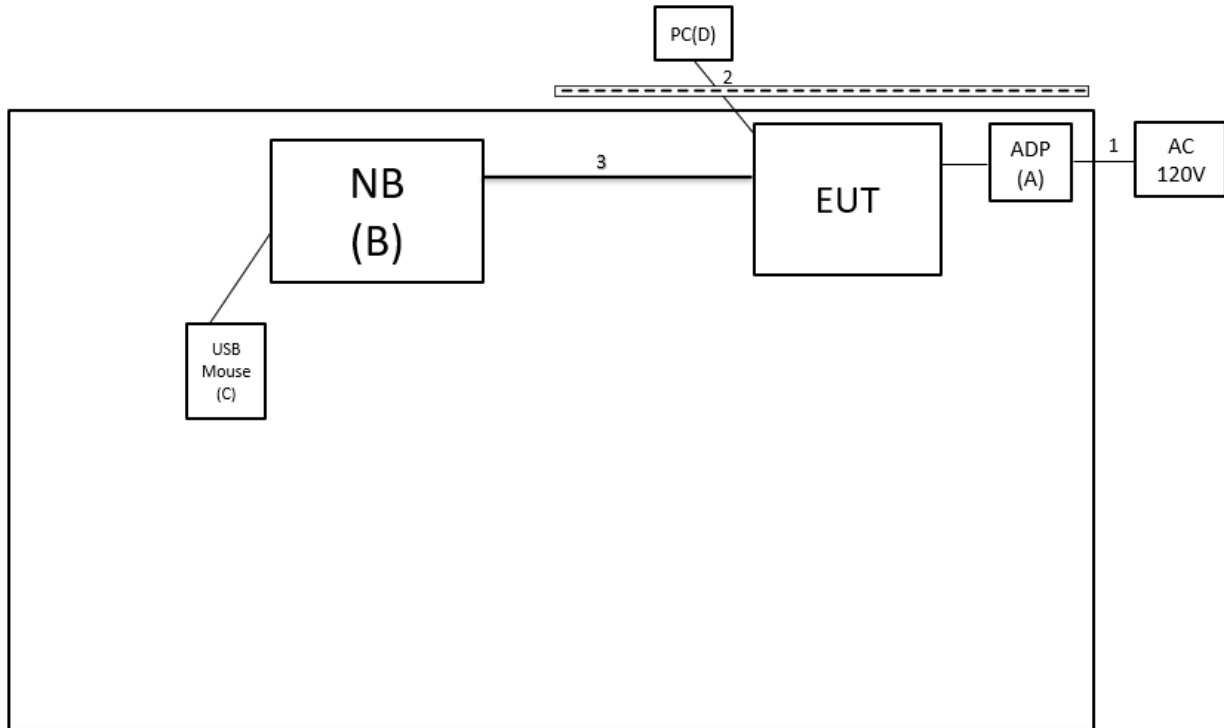
NOTE:

- (1) For radiated emission band edge test, both Vertical and Horizontal are evaluated, but only the worst case (Vertical) is recorded.
- (2) All X, Y and Z axes are evaluated, but only the worst case (X axis) is recorded.

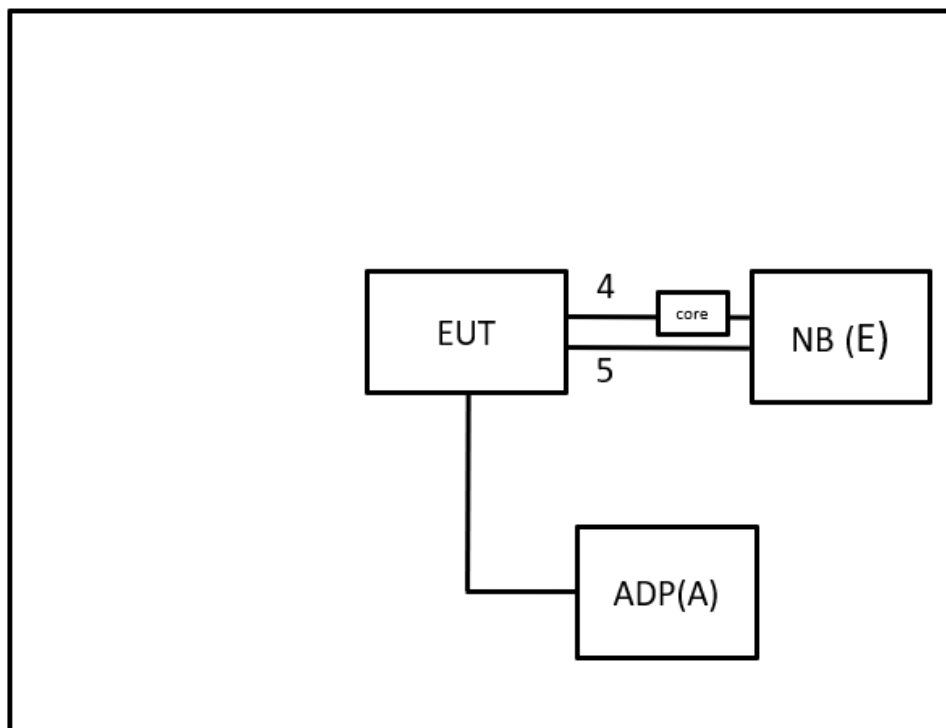
2.3 BLOCK DIAGRAM SHOWING THE CONFIGURATION OF SYSTEM TESTED

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	Adapter	NETZTEIL	ICP12-050-2000D	N/A	Supplied by test requester.
B	NB	ASUS	X450J	N/A	Furnished by test lab.
C	USB Mouse	DELL	MOCZUL	CN-049TWY-PR C00-79E-01HA	Furnished by test lab.
D	PC	DELL	OptiPlex 7080	9T3HN A00	Furnished by test lab.
E	NB	HP	TPN-I119	N/A	Furnished by test lab.

Item	Shielded	Ferrite Core	Length	Cable Type	Remarks
1	N/A	N/A	1.2m	Power Cable	Furnished by test lab.
2	N/A	N/A	2m	RJ-45 Cable	Furnished by test lab.
3	N/A	N/A	1.2m	USB A to B	Furnished by test lab.
4	N/A	FC1000	1m	RJ45 Cable	Furnished by test lab.
5	N/A	N/A	1.8m	Type A To USB Cable	Supplied by test requester.

3 AC POWER LINE CONDUCTED EMISSIONS TEST

3.1 LIMIT

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

NOTE:

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

Reading Level		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.

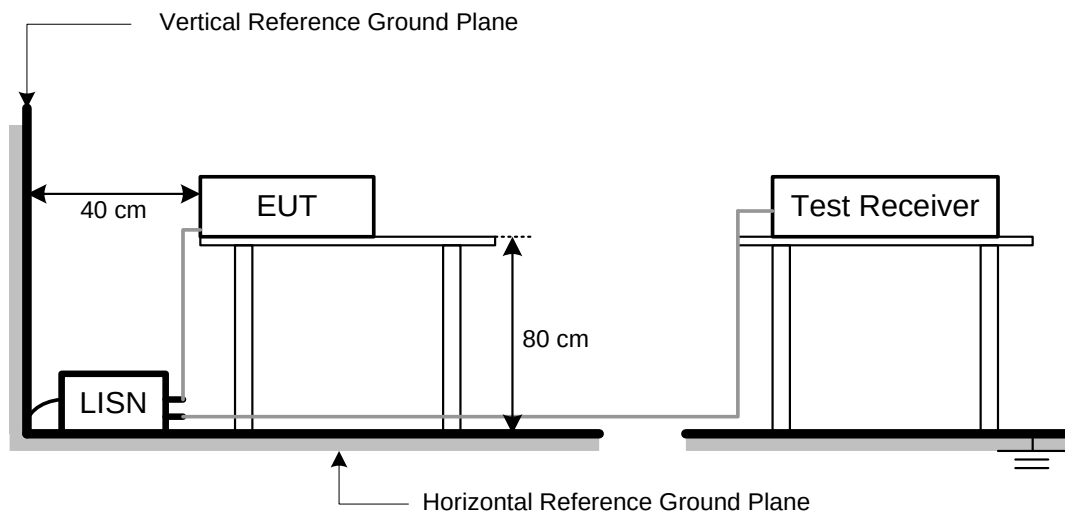
NOTE:

- (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

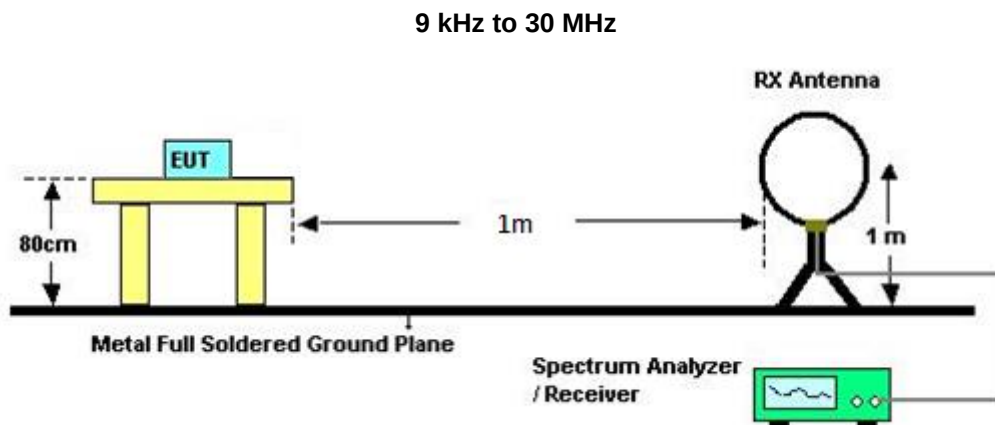
4.2 TEST PROCEDURE

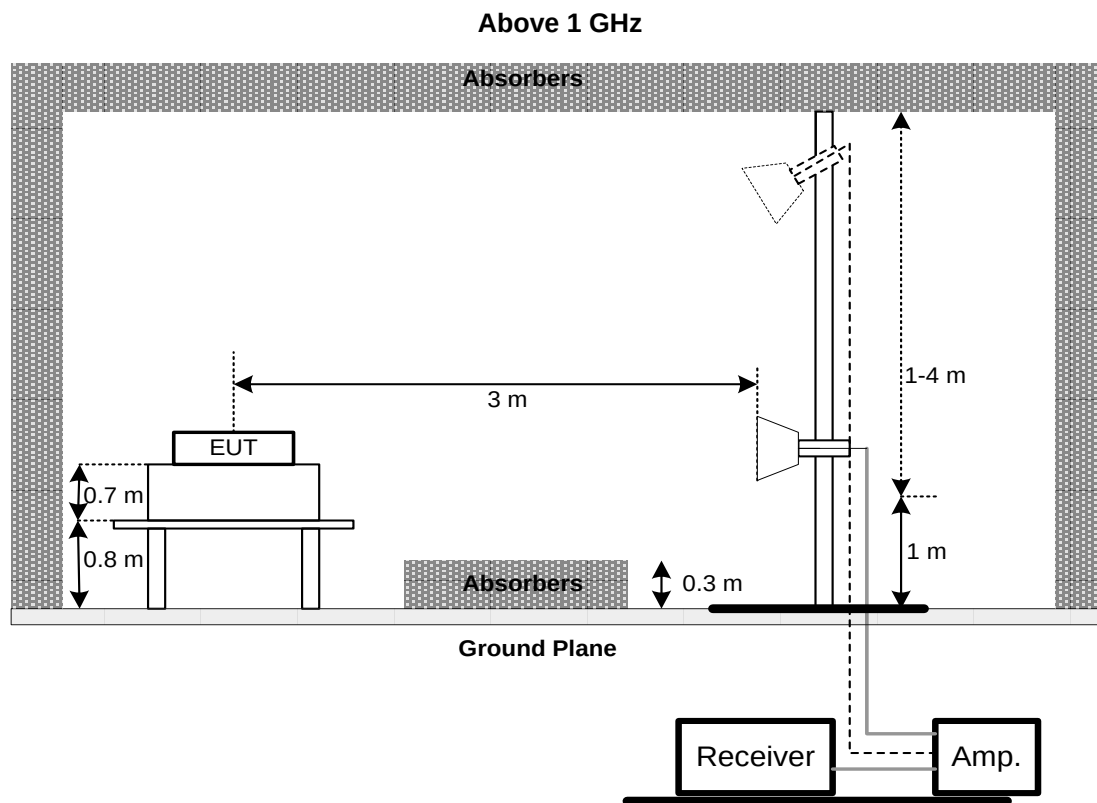
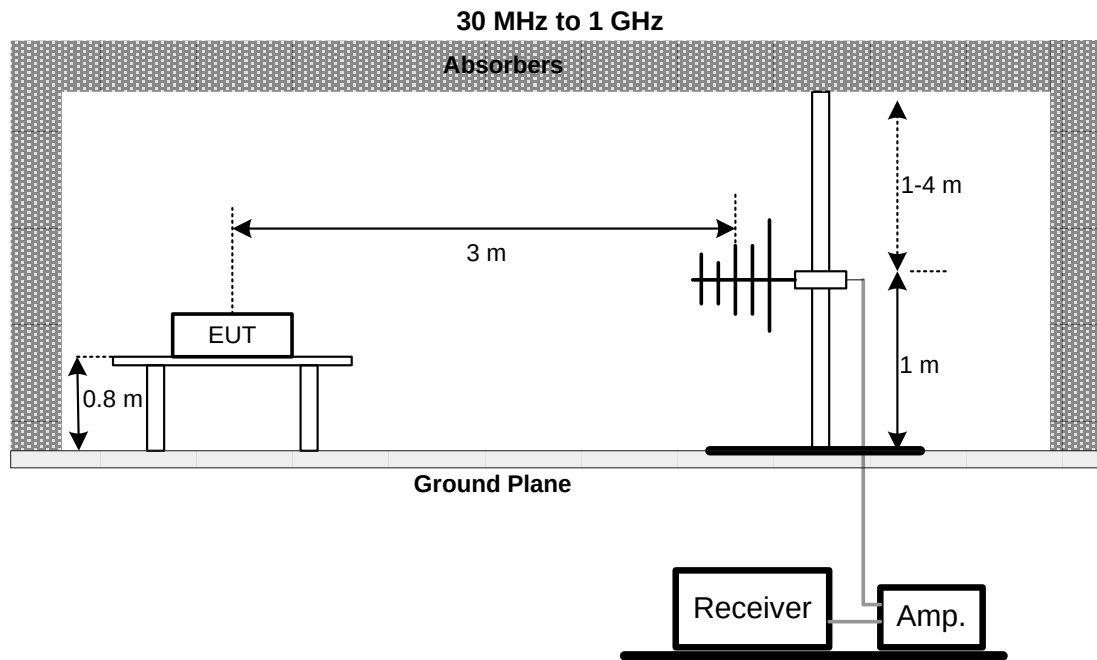
- The measuring distance of 3 m shall be used for measurements. The EUT was placed on the top of a rotating table 0.8 meter above the ground at a 3 meter semi-anechoic chamber. The table was rotated 360 degrees to determine the position of the highest radiation.(below 1GHz)
- The measuring distance of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





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

- 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 D.

6 OUTPUT POWER TEST

6.1 LIMIT

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

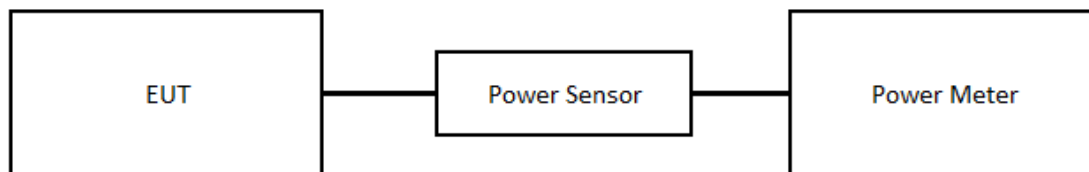
6.2 TEST PROCEDURE

- 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 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

- 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 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

- 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 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	101521	2022/9/28	2023/9/27
2	Test Cable	EMCI	EMCCFD300-BM-BMR-5000	220331	2022/3/31	2023/3/30
3	EMI Test Receiver	R&S	ESR 7	101433	2022/11/16	2023/11/15
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	2022/3/8	2023/3/7
3	Preamplifier	EMCI	EMC184045SE	980882	2022/2/9	2023/2/8
4	Preamplifier	EMCI	EMC001340	980579	2022/9/30	2023/9/29
5	Test Cable	EMCI	EMC104-SM-SM-1000	220319	2022/3/15	2023/3/14
6	Test Cable	EMCI	EMC104-SM-SM-3000	220322	2022/3/15	2023/3/14
7	Test Cable	EMCI	EMC104-SM-SM-7000	220324	2022/3/15	2023/3/14
8	EXA Signal Analyzer	keysight	N9020B	MY57120120	2022/3/7	2023/3/6
9	Loop Ant	Electro-Metrics	EMCI-LPA600	291	2022/9/19	2023/9/18
10	Horn Antenna	RFSPIN	DRH18-E	211202A18EN	2022/5/18	2023/5/17
11	Horn Ant	Schwarzbeck	BBHA 9170D	1136	2022/5/18	2023/5/17
12	Log-bicon Antenna	Schwarzbeck	VULB9168	1369	2022/5/20	2023/5/19
13	6dB Attenuator	EMCI	EMCI-N-6-06	AT-N0625	2022/5/20	2023/5/19
14	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-SM-1000	220319	2023/3/14	2024/3/13
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	FSP38	101139	2022/3/2	2023/3/1

Output Power						
Item	Kind of Equipment	Manufacturer	Type No.	Serial No.	Calibrated Date	Calibrated Until
1	Spectrum Analyzer	R&S	FSV7	103032	2022/8/9	2023/8/8
2	Spectrum Analyzer	R&S	FSP38	101139	2022/3/2	2023/3/1

Power Spectral Density						
Item	Kind of Equipment	Manufacturer	Type No.	Serial No.	Calibrated Date	Calibrated Until
1	Spectrum Analyzer	R&S	FSP38	101139	2022/3/2	2023/3/1

Antenna conducted Spurious Emission						
Item	Kind of Equipment	Manufacturer	Type No.	Serial No.	Calibrated Date	Calibrated Until
1	Spectrum Analyzer	R&S	FSP38	101139	2022/3/2	2023/3/1

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

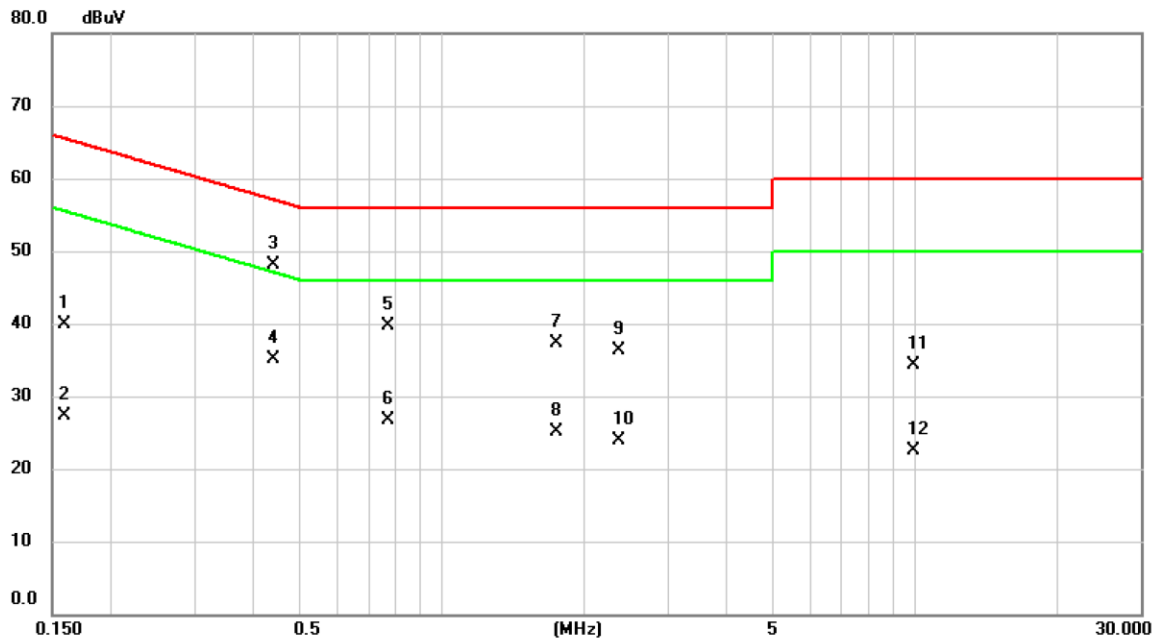
Please refer to document Appendix No.: TP-2210T119-FCCP-1 (APPENDIX-TEST PHOTOS).

11 EUT PHOTOS

Please refer to document Appendix No.: EP-2210T119-3 (APPENDIX-EUT PHOTOS).

APPENDIX A AC POWER LINE CONDUCTED EMISSIONS

Test Mode	Normal	Tested Date	2022/12/22
Test Frequency	-	Phase	Line

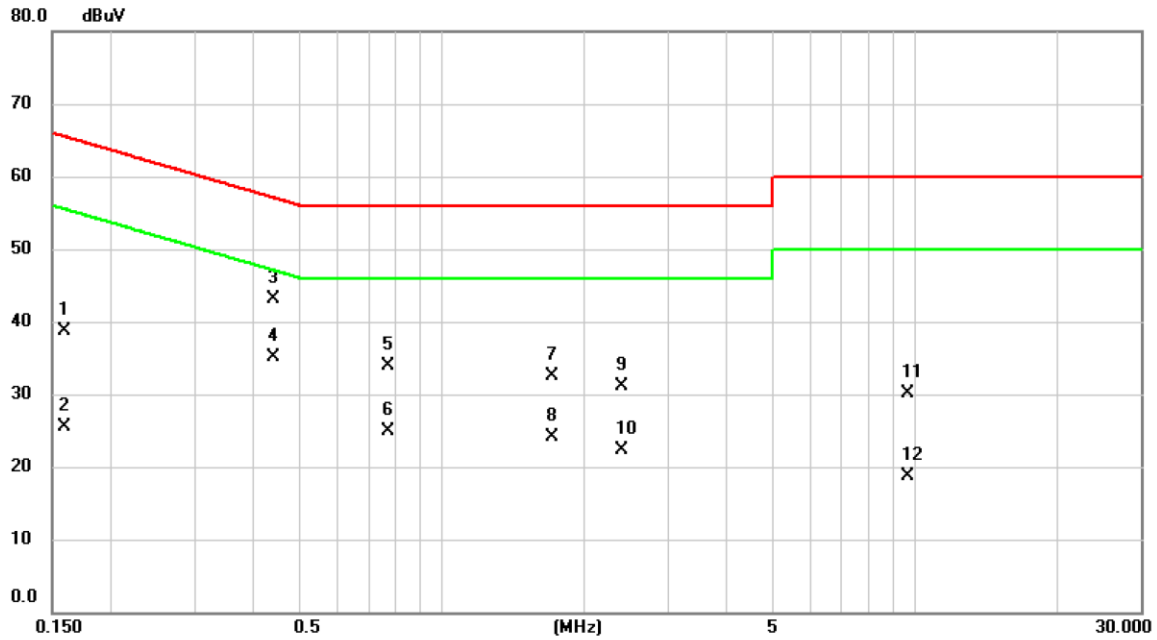


No.	Mk.	Freq.	Reading Level	Correct Factor	Measurement	Limit	Margin		
		MHz	dBuV	dB	dBuV	dBuV	dB	Detector	Comment
1		0.1590	30.27	9.64	39.91	65.52	-25.61	QP	
2		0.1590	17.74	9.64	27.38	55.52	-28.14	AVG	
3	*	0.4402	38.38	9.66	48.04	57.06	-9.02	QP	
4		0.4402	25.36	9.66	35.02	47.06	-12.04	AVG	
5		0.7687	29.93	9.69	39.62	56.00	-16.38	QP	
6		0.7687	17.07	9.69	26.76	46.00	-19.24	AVG	
7		1.7430	27.68	9.72	37.40	56.00	-18.60	QP	
8		1.7430	15.34	9.72	25.06	46.00	-20.94	AVG	
9		2.3708	26.51	9.74	36.25	56.00	-19.75	QP	
10		2.3708	14.17	9.74	23.91	46.00	-22.09	AVG	
11		9.9194	24.44	9.95	34.39	60.00	-25.61	QP	
12		9.9194	12.55	9.95	22.50	50.00	-27.50	AVG	

REMARKS:

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

Test Mode	Normal	Tested Date	2022/12/22
Test Frequency	-	Phase	Neutral

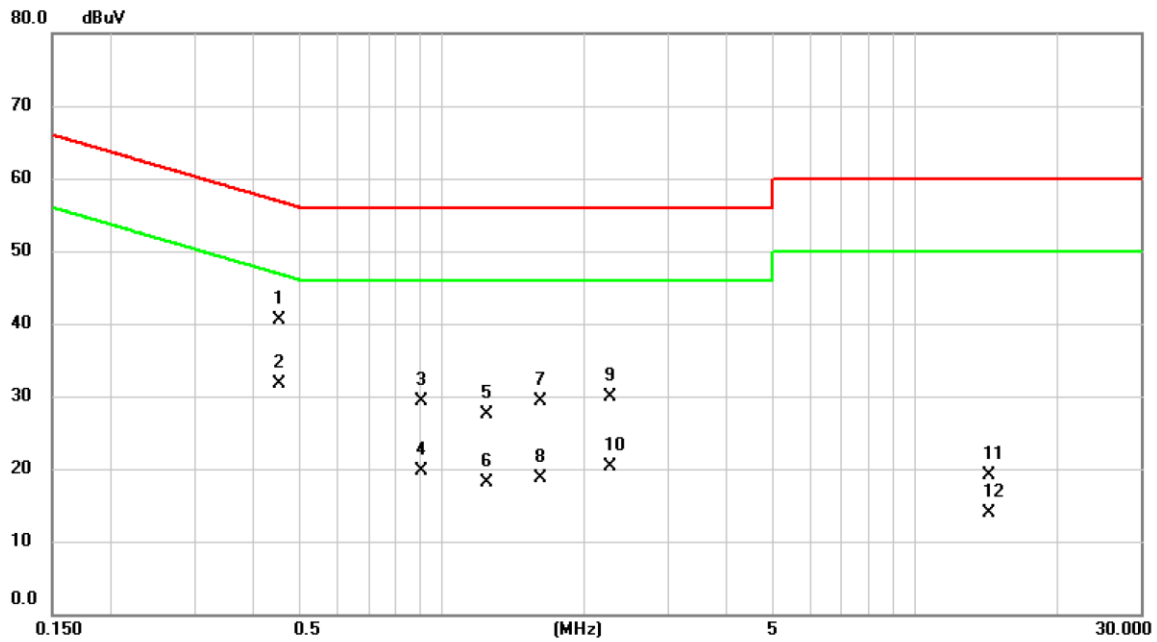


No.	Mk.	Freq.	Reading Level	Correct Factor	Measurement	Limit	Margin		
		MHz	dBuV	dB	dBuV	dBuV	dB	Detector	Comment
1		0.1590	29.01	9.65	38.66	65.52	-26.86	QP	
2		0.1590	15.90	9.65	25.55	55.52	-29.97	AVG	
3		0.4402	33.37	9.67	43.04	57.06	-14.02	QP	
4	*	0.4402	25.45	9.67	35.12	47.06	-11.94	AVG	
5		0.7710	24.24	9.70	33.94	56.00	-22.06	QP	
6		0.7710	15.11	9.70	24.81	46.00	-21.19	AVG	
7		1.7115	22.81	9.73	32.54	56.00	-23.46	QP	
8		1.7115	14.43	9.73	24.16	46.00	-21.84	AVG	
9		2.3955	21.27	9.76	31.03	56.00	-24.97	QP	
10		2.3955	12.56	9.76	22.32	46.00	-23.68	AVG	
11		9.6630	20.03	9.98	30.01	60.00	-29.99	QP	
12		9.6630	8.63	9.98	18.61	50.00	-31.39	AVG	

REMARKS:

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

Test Mode	Idle	Tested Date	2022/12/22
Test Frequency	-	Phase	Line

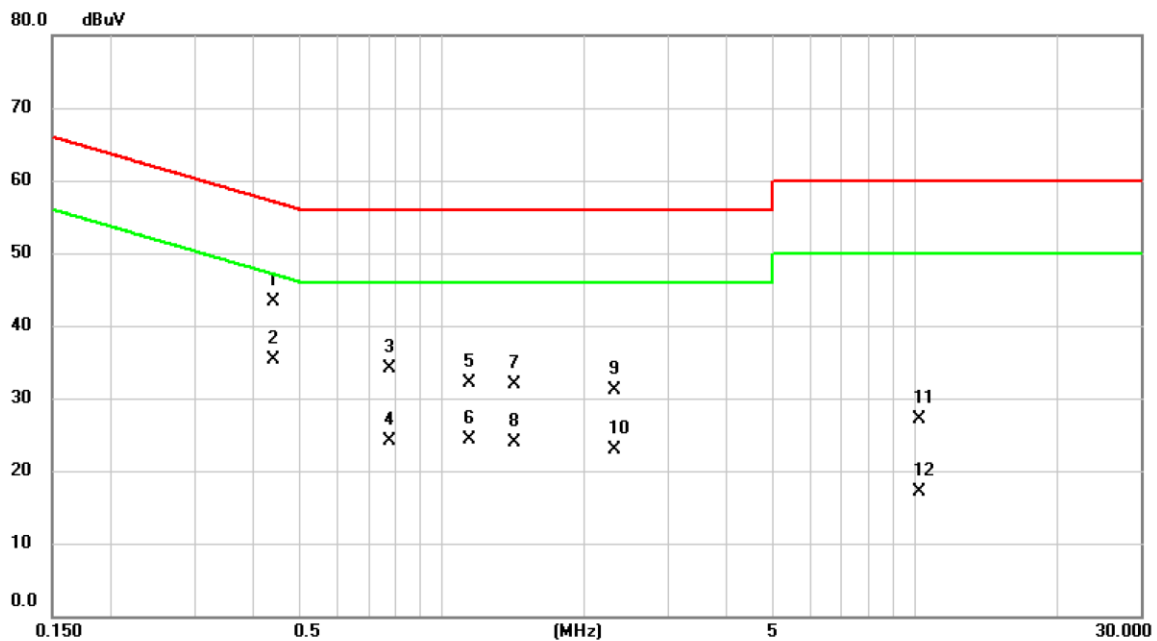


No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV	Limit dBuV	Margin dB	Detector	Comment
1		0.4537	30.82	9.67	40.49	56.81	-16.32	QP	
2	*	0.4537	22.10	9.67	31.77	46.81	-15.04	AVG	
3		0.9082	19.54	9.70	29.24	56.00	-26.76	QP	
4		0.9082	10.03	9.70	19.73	46.00	-26.27	AVG	
5		1.2435	17.84	9.71	27.55	56.00	-28.45	QP	
6		1.2435	8.49	9.71	18.20	46.00	-27.80	AVG	
7		1.6125	19.49	9.73	29.22	56.00	-26.78	QP	
8		1.6125	8.95	9.73	18.68	46.00	-27.32	AVG	
9		2.2740	20.21	9.75	29.96	56.00	-26.04	QP	
10		2.2740	10.47	9.75	20.22	46.00	-25.78	AVG	
11		14.3362	9.01	10.06	19.07	60.00	-40.93	QP	
12		14.3362	3.91	10.06	13.97	50.00	-36.03	AVG	

REMARKS:

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

Test Mode	Idle	Tested Date	2022/12/22
Test Frequency	-	Phase	Neutral



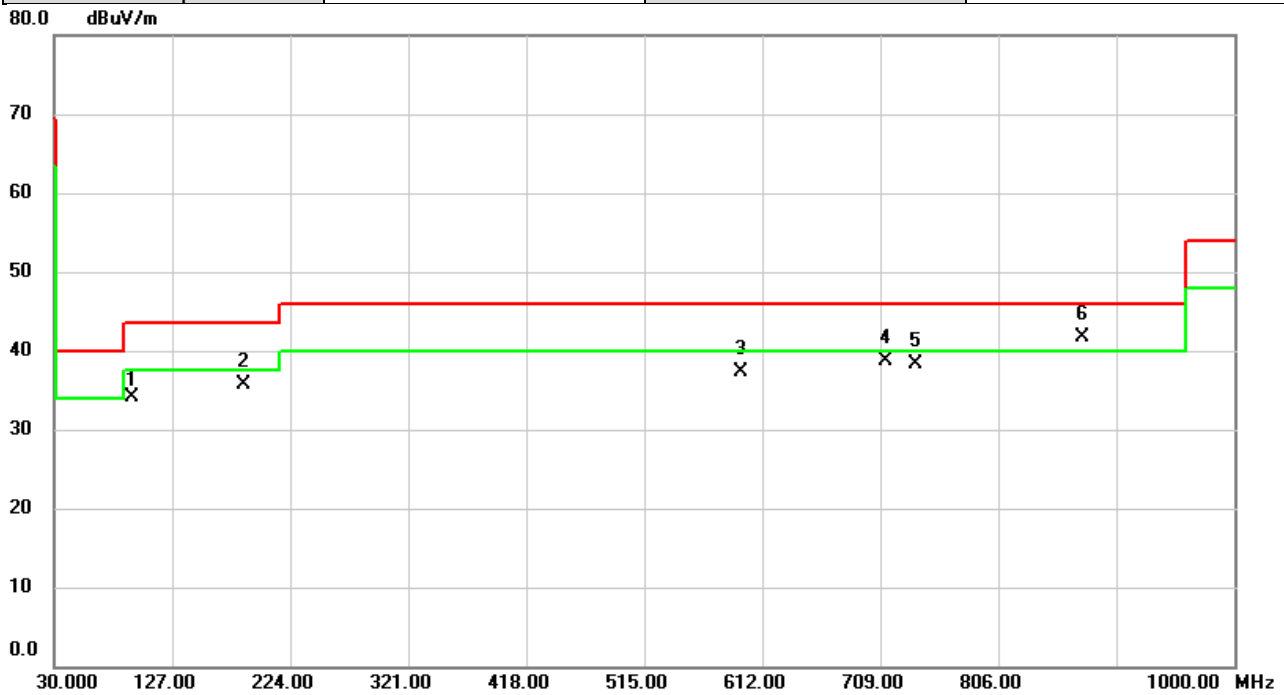
No.	Mk.	Freq.	Reading Level	Correct Factor	Measurement	Limit	Margin		
		MHz	dBuV	dB	dBuV	dBuV	dB	Detector	Comment
1		0.4402	33.70	9.67	43.37	57.06	-13.69	QP	
2	*	0.4402	25.60	9.67	35.27	47.06	-11.79	AVG	
3		0.7731	24.31	9.70	34.01	56.00	-21.99	QP	
4		0.7731	14.32	9.70	24.02	46.00	-21.98	AVG	
5		1.1422	22.43	9.71	32.14	56.00	-23.86	QP	
6		1.1422	14.69	9.71	24.40	46.00	-21.60	AVG	
7		1.4235	22.25	9.72	31.97	56.00	-24.03	QP	
8		1.4235	14.23	9.72	23.95	46.00	-22.05	AVG	
9		2.3212	21.26	9.75	31.01	56.00	-24.99	QP	
10		2.3212	13.08	9.75	22.83	46.00	-23.17	AVG	
11		10.2030	17.04	9.98	27.02	60.00	-32.98	QP	
12		10.2030	7.10	9.98	17.08	50.00	-32.92	AVG	

REMARKS:

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

APPENDIX B RADIATED EMISSIONS - 30 MHZ TO 1 GHZ

Test Mode	IEEE 802.11n (HT20)	Test Date	2023/6/28
Test Frequency	2437MHz	Polarization	Vertical
Temp	25°C	Hum.	51%

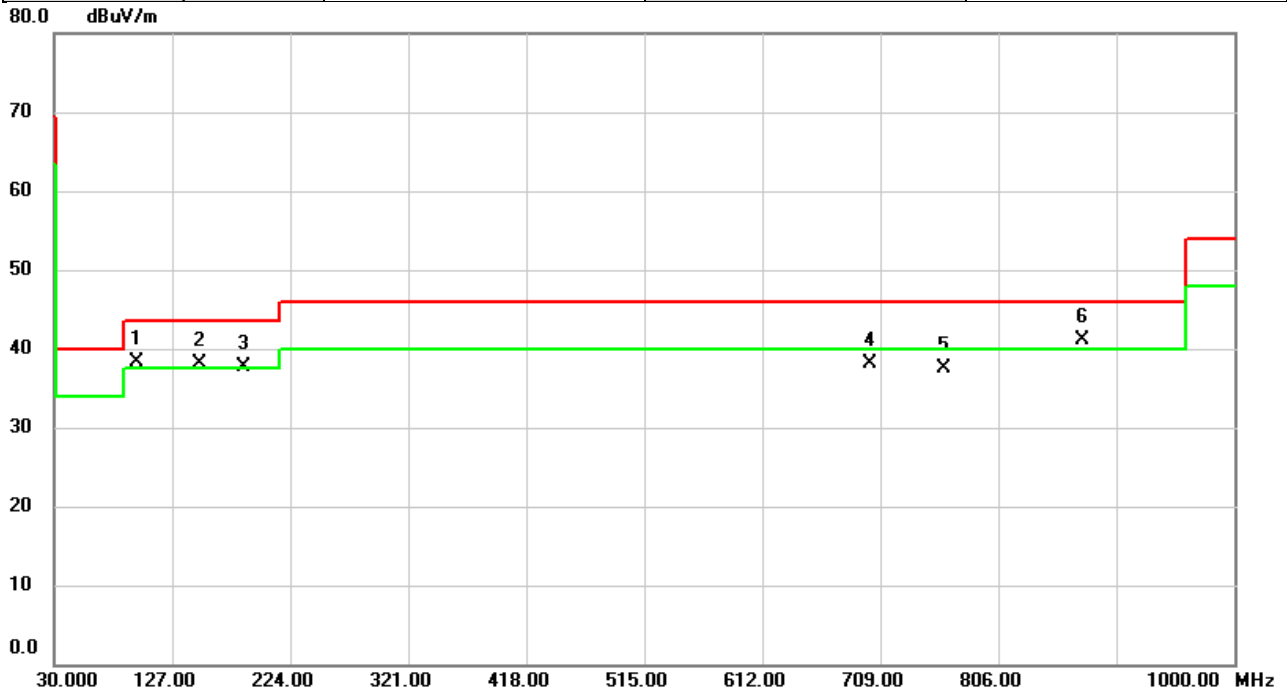


No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1		94.3756	51.45	-17.36	34.09	43.50	-9.41	peak	
2		185.9760	49.83	-14.10	35.73	43.50	-7.77	QP	
3		594.0226	41.44	-4.14	37.30	46.00	-8.70	QP	
4		713.7853	41.05	-2.37	38.68	46.00	-7.32	QP	
5		738.1322	40.06	-1.80	38.26	46.00	-7.74	QP	
6	*	874.9993	41.60	0.16	41.76	46.00	-4.24	QP	

REMARKS:

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

Test Mode	IEEE 802.11n (HT20)	Test Date	2023/6/28
Test Frequency	2437MHz	Polarization	Horizontal
Temp	25°C	Hum.	51%



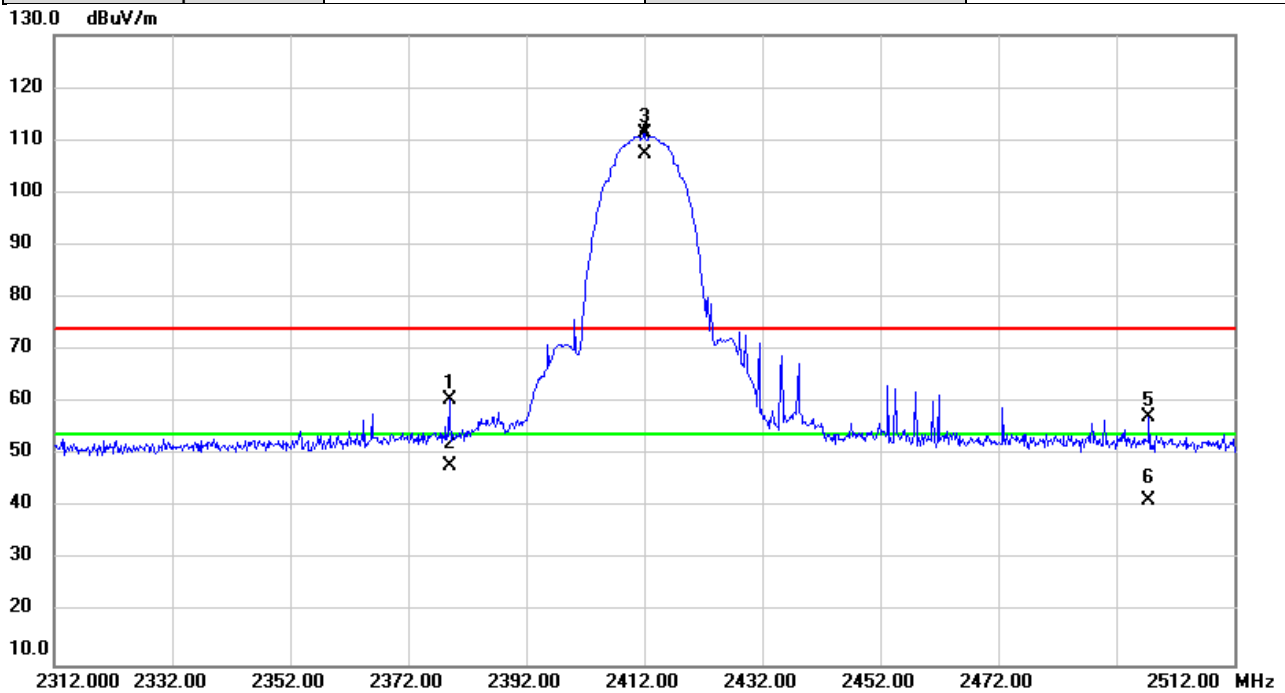
No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1		98.4173	55.24	-16.95	38.29	43.50	-5.21	QP	
2		149.9567	50.12	-11.95	38.17	43.50	-5.33	QP	
3		185.9760	51.87	-14.10	37.77	43.50	-5.73	QP	
4		699.9467	40.85	-2.71	38.14	46.00	-7.86	QP	
5		761.9943	38.79	-1.36	37.43	46.00	-8.57	QP	
6	*	874.9993	41.02	0.16	41.18	46.00	-4.82	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	2022/12/19
Test Frequency	2412MHz	Polarization	Vertical
Temp	23°C	Hum.	59%

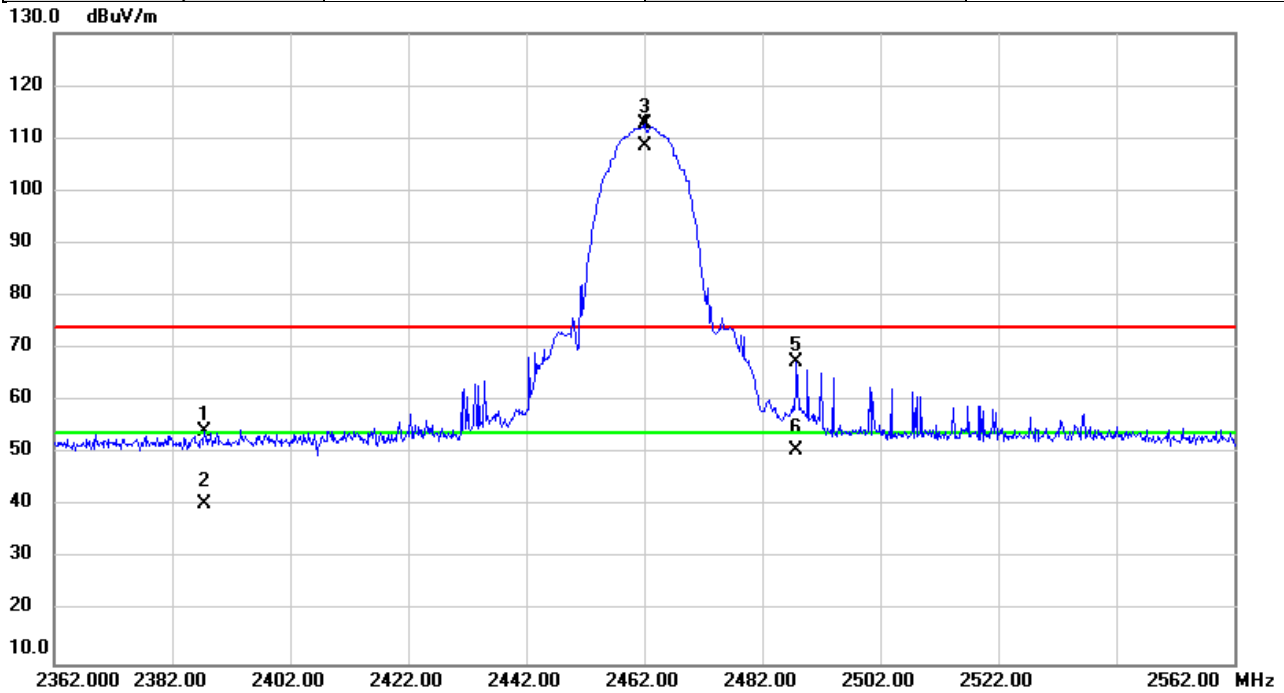


No.	Mk.	Freq.	Reading Level	Correct Factor	Measurement	Limit	Over		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1		2379.173	66.20	-5.79	60.41	74.00	-13.59	peak	
2		2379.173	53.75	-5.79	47.96	54.00	-6.04	AVG	
3	X	2412.000	116.85	-5.74	111.11	74.00	37.11	peak	No Limit
4	*	2412.000	113.11	-5.74	107.37	54.00	53.37	AVG	No Limit
5		2497.500	62.89	-5.62	57.27	74.00	-16.73	peak	
6		2497.500	47.02	-5.62	41.40	54.00	-12.60	AVG	

REMARKS:

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

Test Mode	IEEE 802.11b	Test Date	2022/12/19
Test Frequency	2462MHz	Polarization	Vertical
Temp	23°C	Hum.	59%

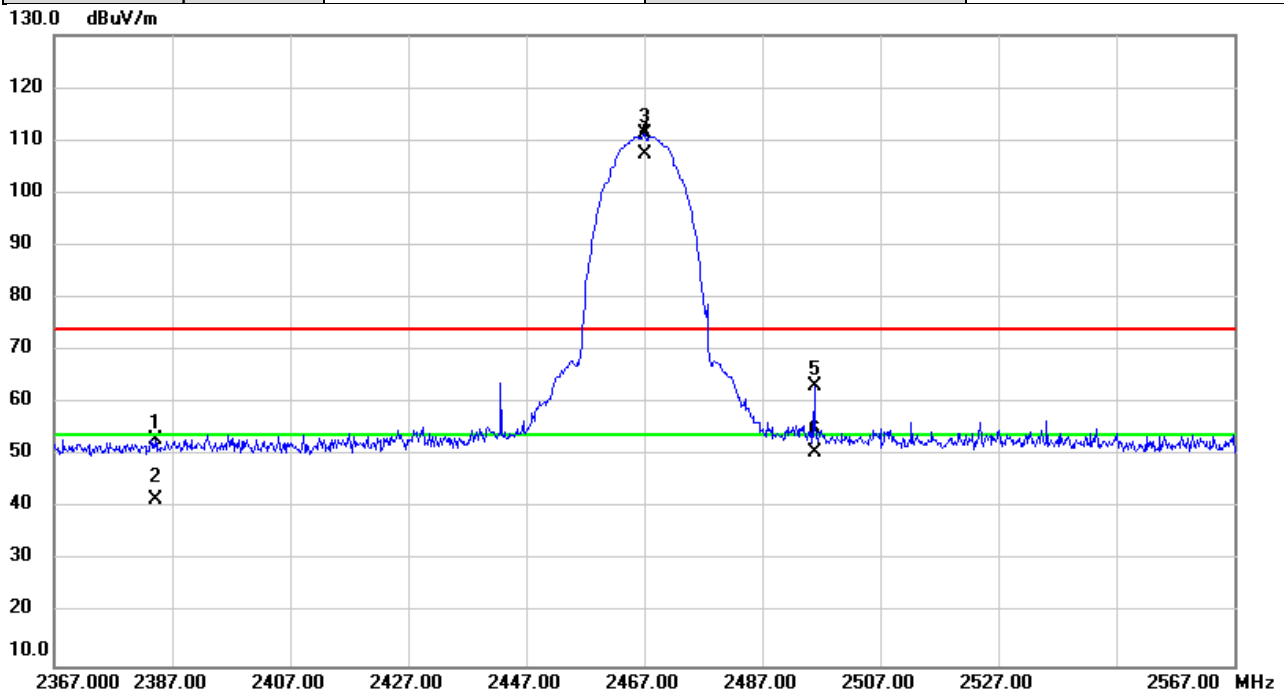


No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1		2387.593	59.92	-5.77	54.15	74.00	-19.85	peak	
2		2387.593	46.17	-5.77	40.40	54.00	-13.60	AVG	
3	X	2462.000	118.43	-5.68	112.75	74.00	38.75	peak	No Limit
4	*	2462.000	114.25	-5.68	108.57	54.00	54.57	AVG	No Limit
5		2487.820	73.02	-5.63	67.39	74.00	-6.61	peak	
6		2487.820	56.26	-5.63	50.63	54.00	-3.37	AVG	

REMARKS:

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

Test Mode	IEEE 802.11b	Test Date	2022/12/19
Test Frequency	2467MHz	Polarization	Vertical
Temp	23°C	Hum.	59%

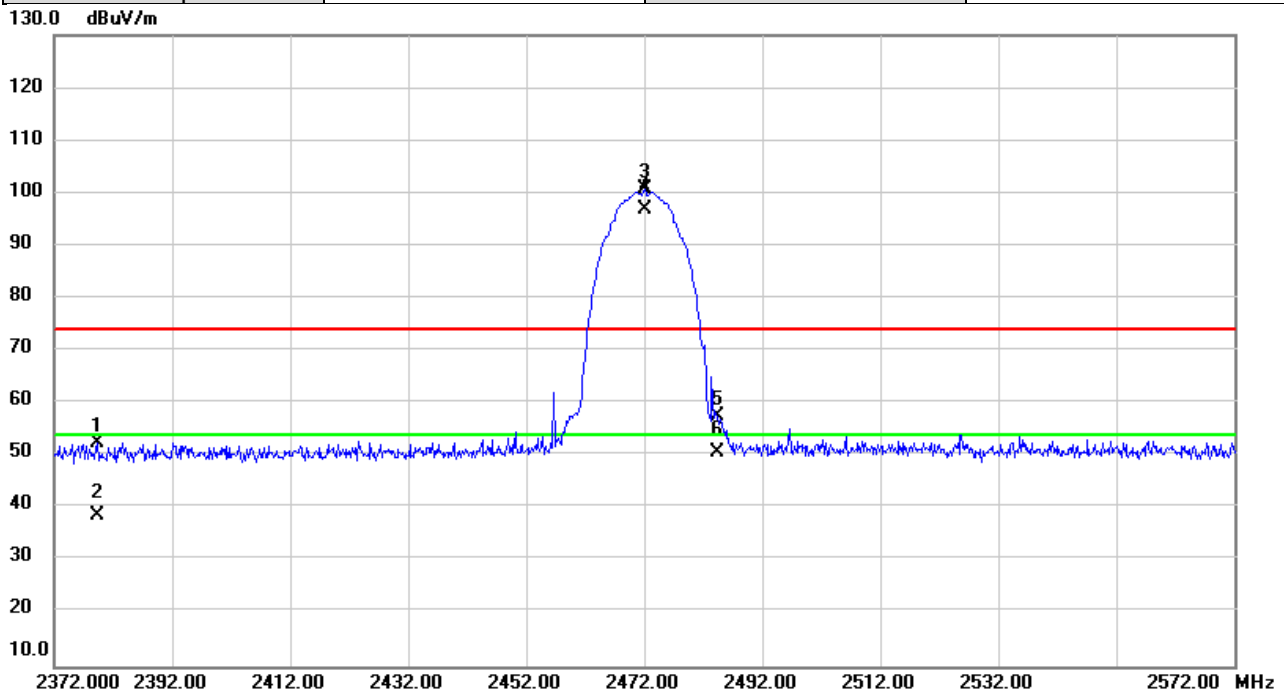


No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1		2384.100	58.90	-5.78	53.12	74.00	-20.88	peak	
2		2384.100	47.49	-5.78	41.71	54.00	-12.29	AVG	
3	X	2467.000	116.83	-5.66	111.17	74.00	37.17	peak	No Limit
4	*	2467.000	113.11	-5.66	107.45	54.00	53.45	AVG	No Limit
5		2495.960	68.89	-5.62	63.27	74.00	-10.73	peak	
6		2495.960	56.39	-5.62	50.77	54.00	-3.23	AVG	

REMARKS:

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

Test Mode	IEEE 802.11b	Test Date	2022/12/19
Test Frequency	2472MHz	Polarization	Vertical
Temp	23°C	Hum.	59%

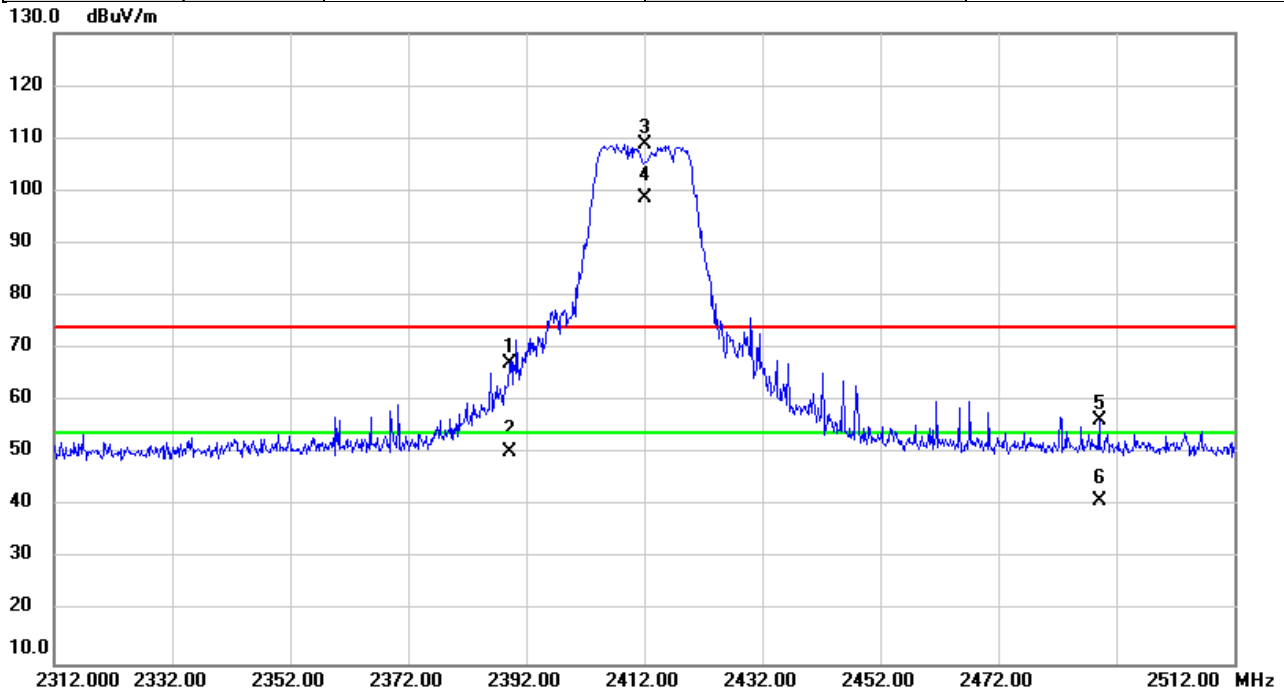


No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1		2379.460	58.31	-5.79	52.52	74.00	-21.48	peak	
2		2379.460	44.43	-5.79	38.64	54.00	-15.36	AVG	
3	X	2472.000	106.35	-5.66	100.69	74.00	26.69	peak	No Limit
4	*	2472.000	102.46	-5.66	96.80	54.00	42.80	AVG	No Limit
5		2484.413	63.30	-5.64	57.66	74.00	-16.34	peak	
6		2484.413	56.42	-5.64	50.78	54.00	-3.22	AVG	

REMARKS:

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

Test Mode	IEEE 802.11g	Test Date	2022/12/19
Test Frequency	2412MHz	Polarization	Vertical
Temp	23°C	Hum.	59%

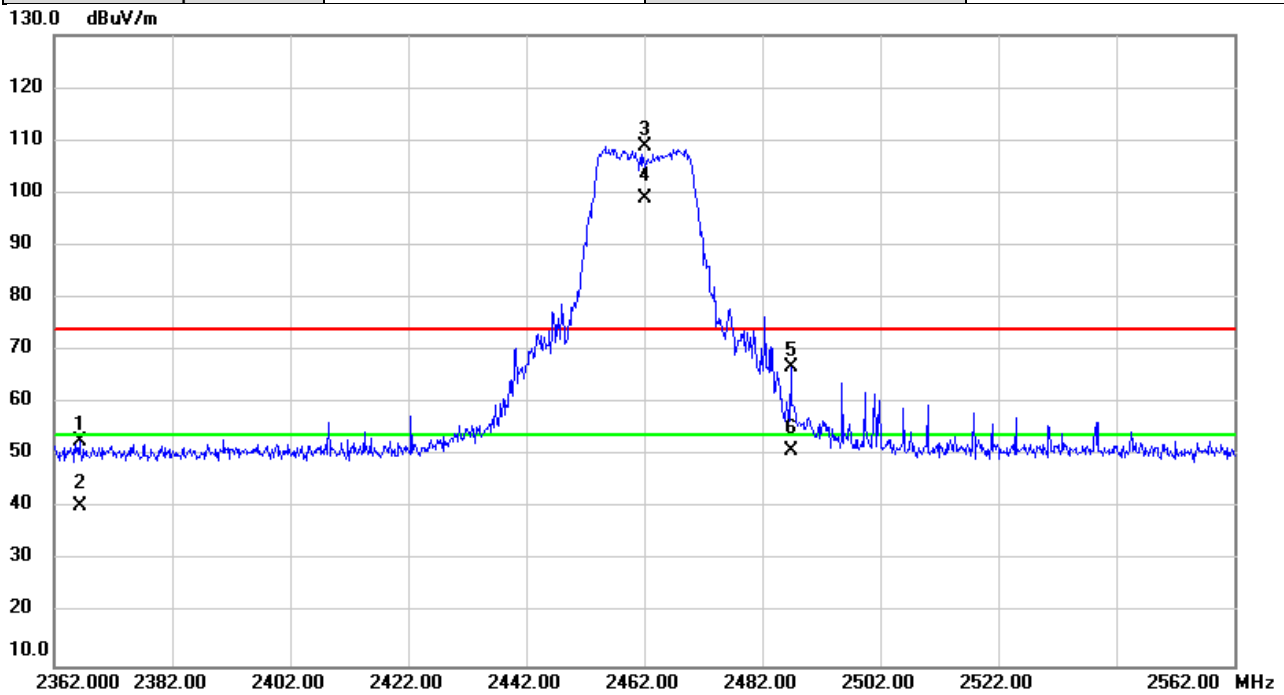


No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1		2389.087	72.89	-5.77	67.12	74.00	-6.88	peak	
2		2389.087	56.17	-5.77	50.40	54.00	-3.60	AVG	
3	X	2412.000	114.59	-5.74	108.85	74.00	34.85	peak	No Limit
4	*	2412.000	104.46	-5.74	98.72	54.00	44.72	AVG	No Limit
5		2489.080	62.11	-5.63	56.48	74.00	-17.52	peak	
6		2489.080	46.67	-5.63	41.04	54.00	-12.96	AVG	

REMARKS:

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

Test Mode	IEEE 802.11g	Test Date	2022/12/19
Test Frequency	2462MHz	Polarization	Vertical
Temp	23°C	Hum.	59%

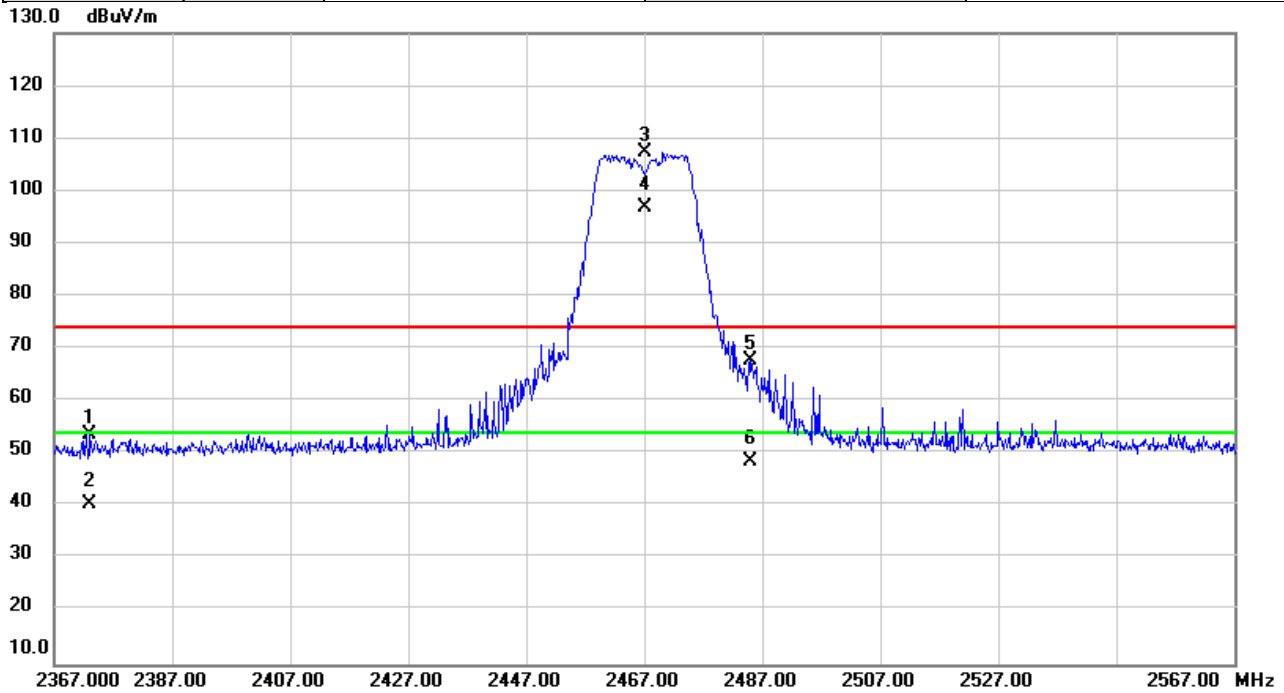


No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1		2366.380	58.54	-5.80	52.74	74.00	-21.26	peak	
2		2366.380	46.37	-5.80	40.57	54.00	-13.43	AVG	
3	X	2462.000	114.44	-5.68	108.76	74.00	34.76	peak	No Limit
4	*	2462.000	104.70	-5.68	99.02	54.00	45.02	AVG	No Limit
5		2486.933	72.59	-5.63	66.96	74.00	-7.04	peak	
6		2486.933	56.55	-5.63	50.92	54.00	-3.08	AVG	

REMARKS:

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

Test Mode	IEEE 802.11g	Test Date	2022/12/19
Test Frequency	2467MHz	Polarization	Vertical
Temp	23°C	Hum.	59%

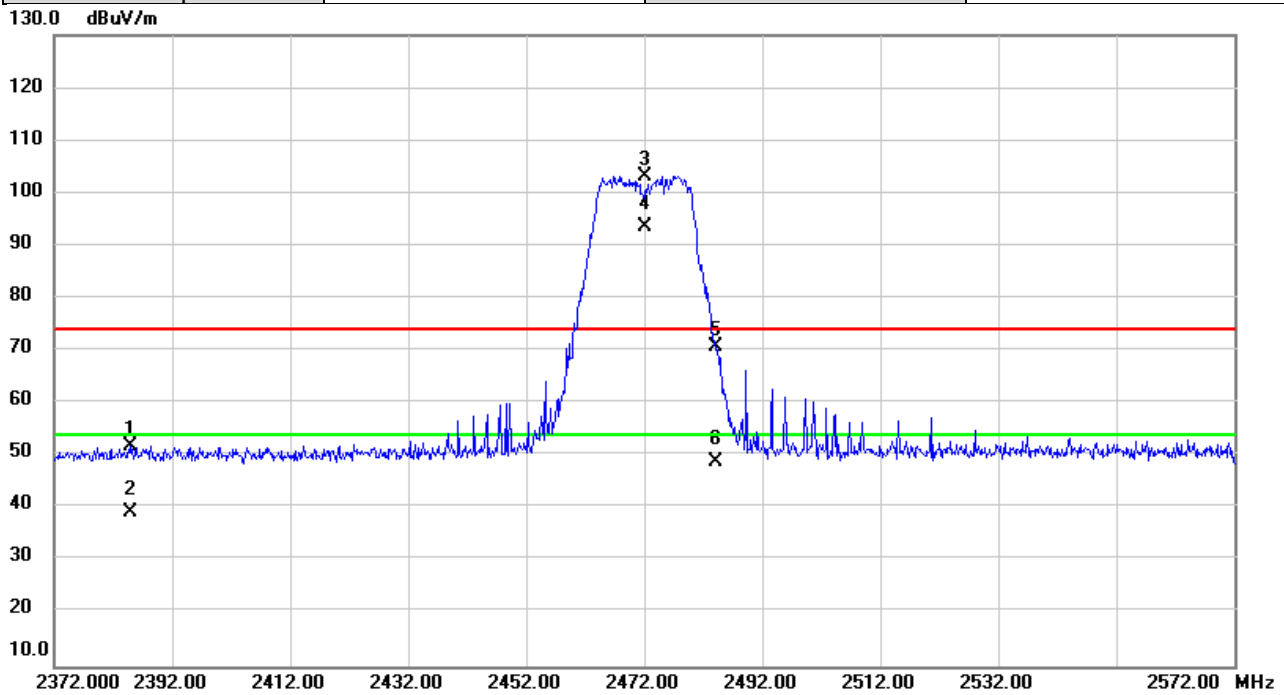


No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1		2373.093	59.56	-5.79	53.77	74.00	-20.23	peak	
2		2373.093	46.33	-5.79	40.54	54.00	-13.46	AVG	
3	X	2467.000	112.90	-5.66	107.24	74.00	33.24	peak	No Limit
4	*	2467.000	102.43	-5.66	96.77	54.00	42.77	AVG	No Limit
5		2485.060	73.45	-5.63	67.82	74.00	-6.18	peak	
6		2485.060	54.23	-5.63	48.60	54.00	-5.40	AVG	

REMARKS:

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

Test Mode	IEEE 802.11g	Test Date	2022/12/19
Test Frequency	2472MHz	Polarization	Vertical
Temp	23°C	Hum.	59%

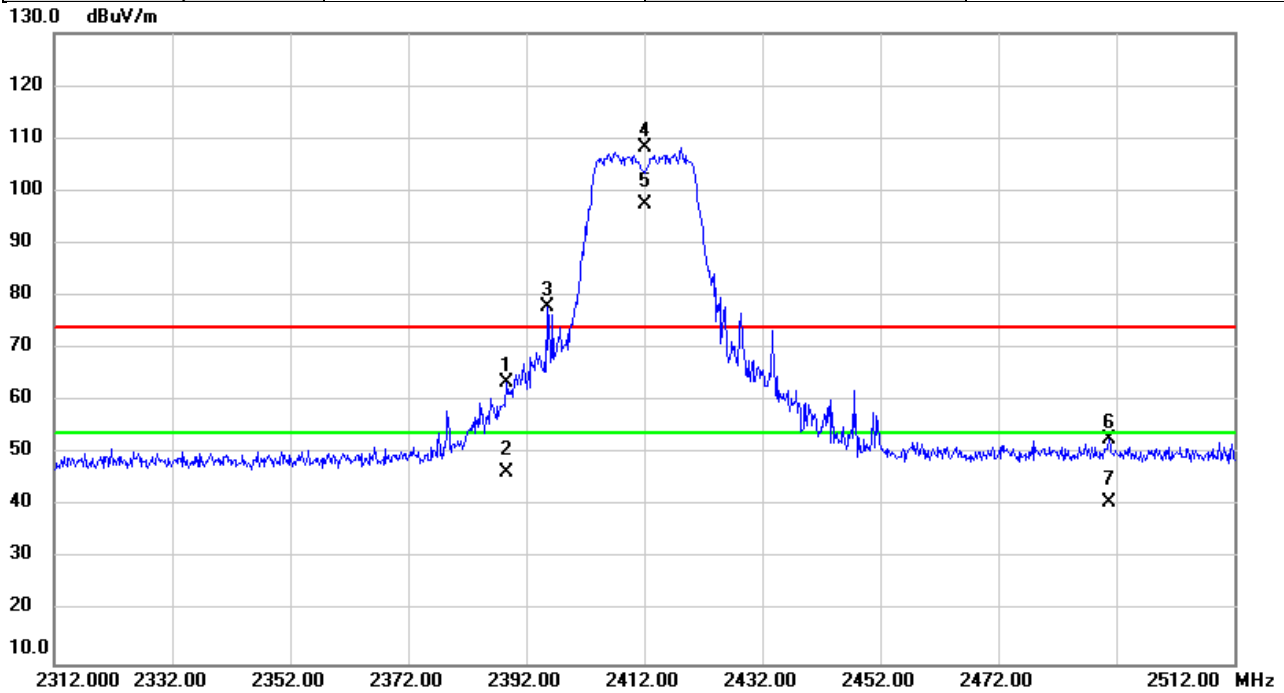


No.	Mk.	Freq.	Reading Level	Correct Factor	Measurement	Limit	Over		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1		2384.867	57.66	-5.78	51.88	74.00	-22.12	peak	
2		2384.867	44.94	-5.78	39.16	54.00	-14.84	AVG	
3	X	2472.000	108.92	-5.66	103.26	74.00	29.26	peak	No Limit
4	*	2472.000	99.12	-5.66	93.46	54.00	39.46	AVG	No Limit
5		2484.220	76.32	-5.65	70.67	74.00	-3.33	peak	
6		2484.220	54.37	-5.65	48.72	54.00	-5.28	AVG	

REMARKS:

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

Test Mode	IEEE 802.11n (HT20)	Test Date	2023/6/26
Test Frequency	2412MHz	Polarization	Vertical
Temp	24°C	Hum.	58%



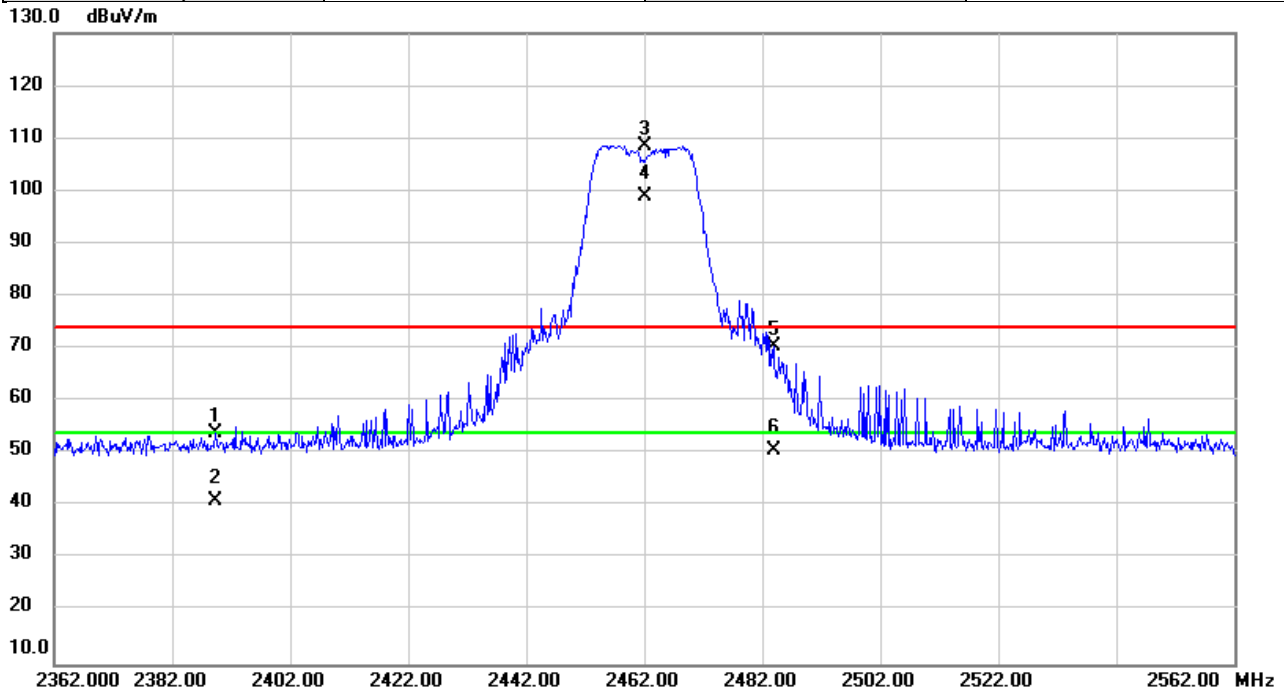
No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV/m	Limit dBuV/m	Over dB	Detector	Comment
1		2388.640	68.83	-5.39	63.44	74.00	-10.56	peak	
2		2388.640	51.90	-5.39	46.51	54.00	-7.49	AVG	
3	X	2395.513	83.26	-5.37	77.89	74.00	3.89	peak	No Limit
4	X	2412.000	113.45	-5.34	108.11	74.00	34.11	peak	No Limit
5	*	2412.000	102.94	-5.34	97.60	54.00	43.60	AVG	No Limit
6		2490.760	58.04	-5.20	52.84	74.00	-21.16	peak	
7		2490.760	46.04	-5.20	40.84	54.00	-13.16	AVG	

REMARKS:

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

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

Test Mode	IEEE 802.11n (HT20)	Test Date	2022/12/19
Test Frequency	2462MHz	Polarization	Vertical
Temp	23°C	Hum.	59%

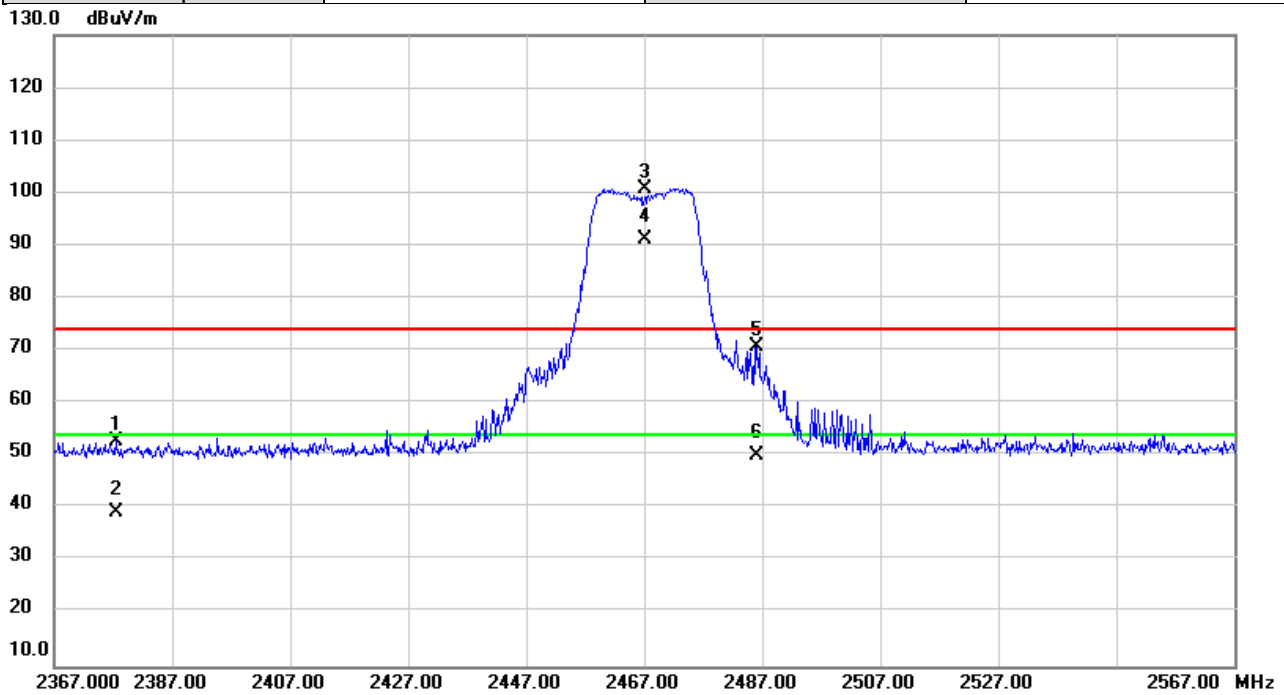


No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1		2389.287	59.62	-5.77	53.85	74.00	-20.15	peak	
2		2389.287	46.71	-5.77	40.94	54.00	-13.06	AVG	
3	X	2462.000	114.37	-5.68	108.69	74.00	34.69	peak	No Limit
4	*	2462.000	104.66	-5.68	98.98	54.00	44.98	AVG	No Limit
5		2483.960	76.02	-5.65	70.37	74.00	-3.63	peak	
6		2483.960	56.18	-5.65	50.53	54.00	-3.47	AVG	

REMARKS:

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

Test Mode	IEEE 802.11n (HT20)	Test Date	2022/12/19
Test Frequency	2467MHz	Polarization	Vertical
Temp	23°C	Hum.	59%

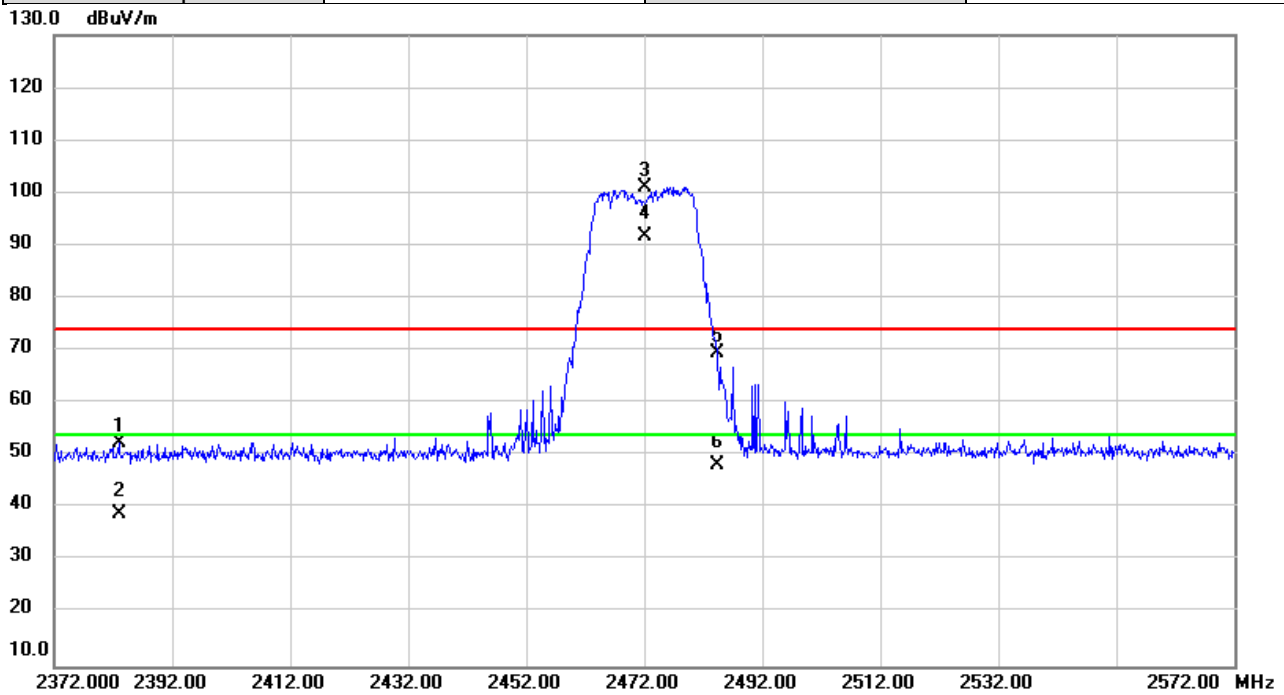


No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV/m	Limit dBuV/m	Over dB	Detector	Comment
1		2377.527	58.47	-5.78	52.69	74.00	-21.31	peak	
2		2377.527	45.05	-5.78	39.27	54.00	-14.73	AVG	
3	X	2467.000	106.55	-5.66	100.89	74.00	26.89	peak	No Limit
4	*	2467.000	96.76	-5.66	91.10	54.00	37.10	AVG	No Limit
5		2486.133	76.29	-5.63	70.66	74.00	-3.34	peak	
6		2486.133	55.78	-5.63	50.15	54.00	-3.85	AVG	

REMARKS:

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

Test Mode	IEEE 802.11n (HT20)	Test Date	2022/12/19
Test Frequency	2472MHz	Polarization	Vertical
Temp	23°C	Hum.	59%

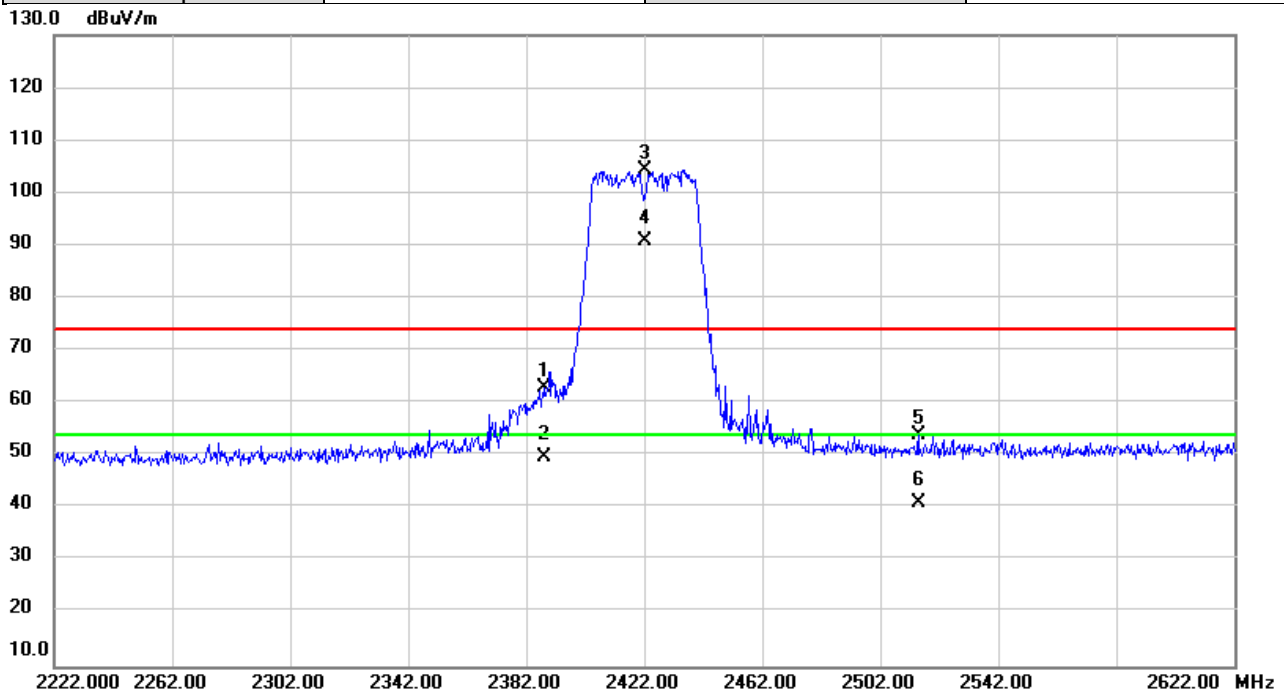


No.	Mk.	Freq.	Reading Level	Correct Factor	Measurement	Limit	Over		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1		2382.960	58.23	-5.78	52.45	74.00	-21.55	peak	
2		2382.960	44.74	-5.78	38.96	54.00	-15.04	AVG	
3	X	2472.000	106.74	-5.66	101.08	74.00	27.08	peak	No Limit
4	*	2472.000	97.41	-5.66	91.75	54.00	37.75	AVG	No Limit
5		2484.500	75.13	-5.64	69.49	74.00	-4.51	peak	
6		2484.500	53.95	-5.64	48.31	54.00	-5.69	AVG	

REMARKS:

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

Test Mode	IEEE 802.11n (HT40)	Test Date	2022/12/21
Test Frequency	2422MHz	Polarization	Vertical
Temp	23°C	Hum.	59%

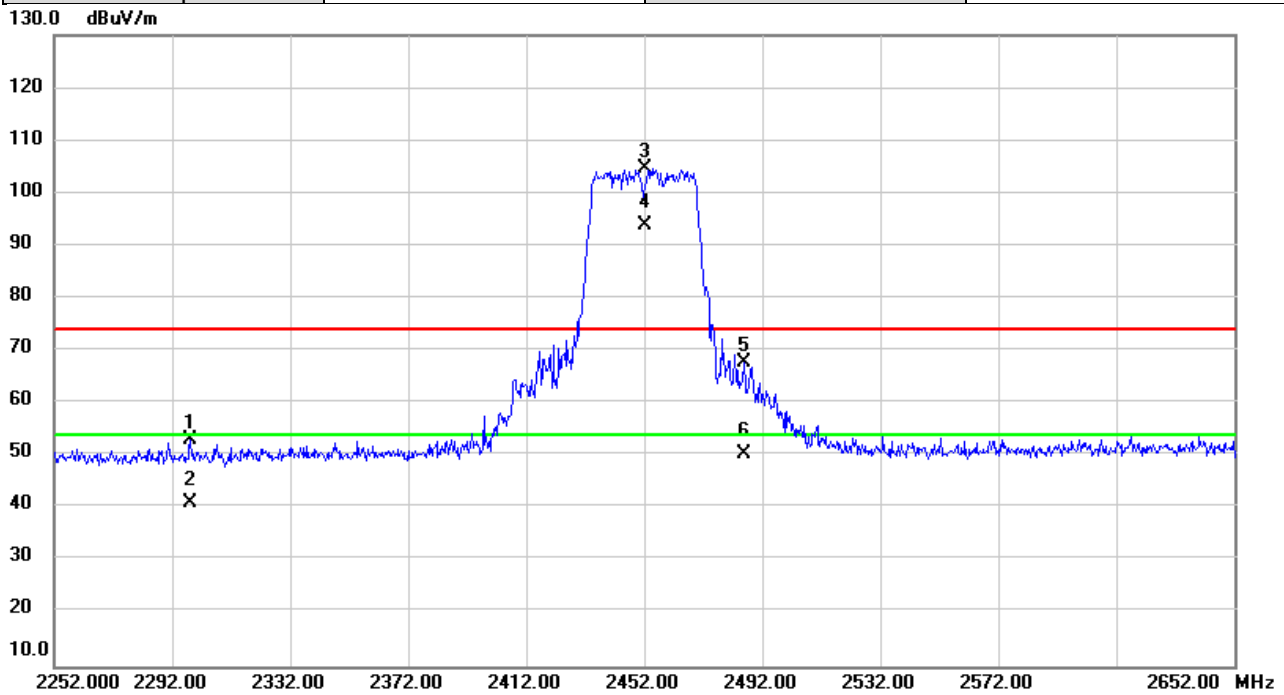


No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1		2387.893	68.58	-5.77	62.81	74.00	-11.19	peak	
2		2387.893	55.49	-5.77	49.72	54.00	-4.28	AVG	
3	X	2422.000	110.12	-5.72	104.40	74.00	30.40	peak	No Limit
4	*	2422.000	96.68	-5.72	90.96	54.00	36.96	AVG	No Limit
5		2514.920	59.50	-5.56	53.94	74.00	-20.06	peak	
6		2514.920	46.59	-5.56	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 (HT40)	Test Date	2022/12/21
Test Frequency	2452MHz	Polarization	Vertical
Temp	23°C	Hum.	59%

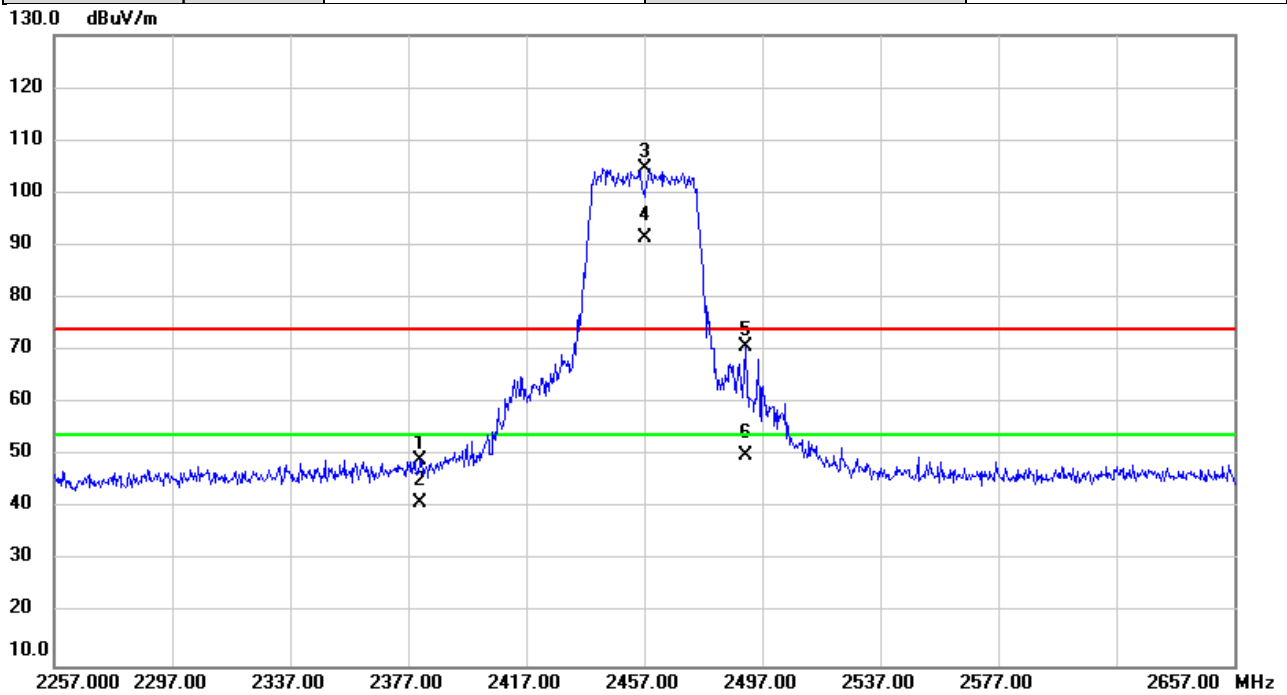


No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV/m	Limit dBuV/m	Over dB	Detector	Comment
1		2298.200	58.88	-5.88	53.00	74.00	-21.00	peak	
2		2298.200	47.00	-5.88	41.12	54.00	-12.88	AVG	
3	X	2452.000	110.47	-5.69	104.78	74.00	30.78	peak	No Limit
4	*	2452.000	99.61	-5.69	93.92	54.00	39.92	AVG	No Limit
5		2485.720	73.38	-5.63	67.75	74.00	-6.25	peak	
6		2485.720	56.08	-5.63	50.45	54.00	-3.55	AVG	

REMARKS:

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

Test Mode	IEEE 802.11n (HT40)	Test Date	2022/12/21
Test Frequency	2457MHz	Polarization	Vertical
Temp	23°C	Hum.	59%

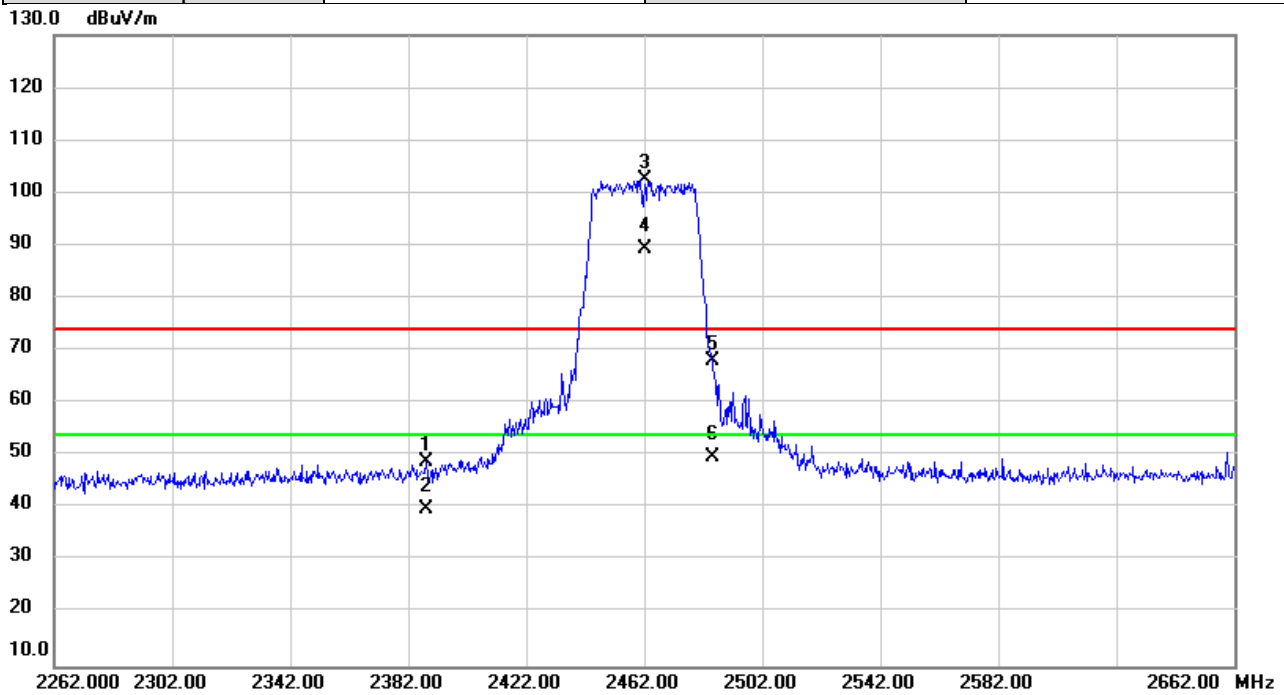


No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1		2381.000	55.05	-5.78	49.27	74.00	-24.73	peak	
2		2381.000	46.92	-5.78	41.14	54.00	-12.86	AVG	
3	X	2457.000	110.29	-5.67	104.62	74.00	30.62	peak	No Limit
4	*	2457.000	97.13	-5.67	91.46	54.00	37.46	AVG	No Limit
5		2491.373	76.30	-5.63	70.67	74.00	-3.33	peak	
6		2491.373	55.79	-5.63	50.16	54.00	-3.84	AVG	

REMARKS:

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

Test Mode	IEEE 802.11n (HT40)	Test Date	2022/12/21
Test Frequency	2462MHz	Polarization	Vertical
Temp	23°C	Hum.	59%

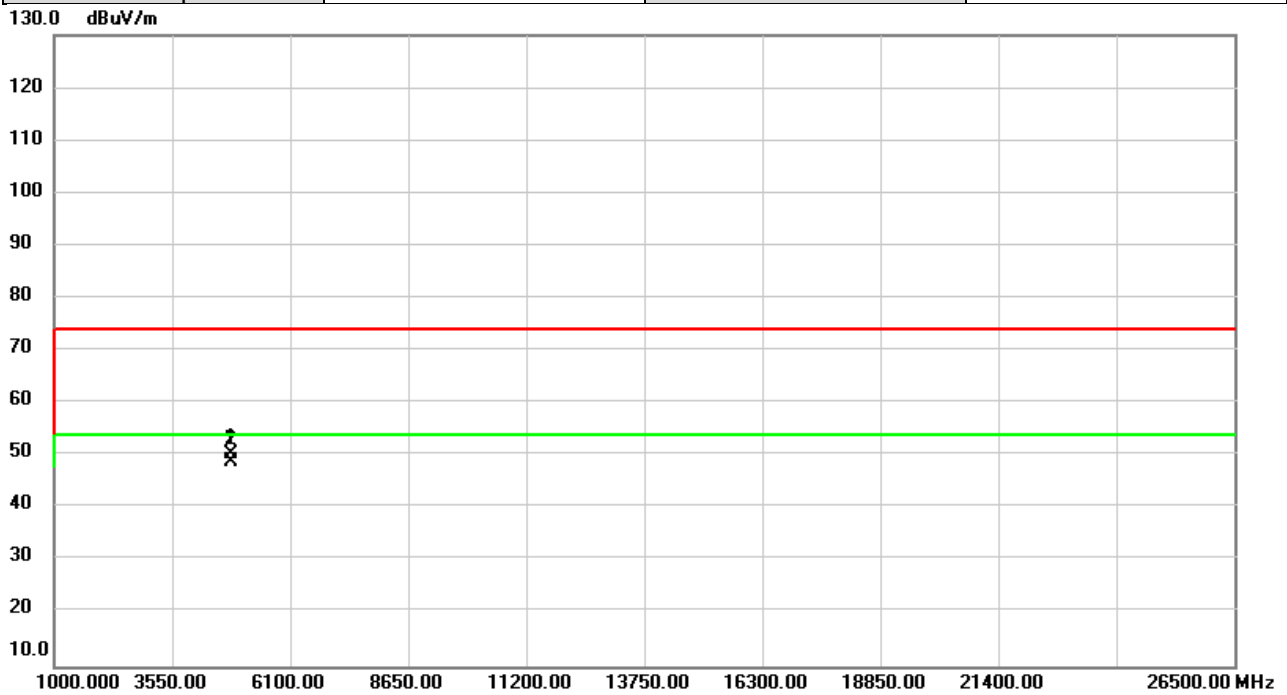


No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV/m	Limit dBuV/m	Over dB	Detector	Comment
1		2388.333	54.56	-5.77	48.79	74.00	-25.21	peak	
2		2388.333	45.68	-5.77	39.91	54.00	-14.09	AVG	
3	X	2462.000	108.10	-5.68	102.42	74.00	28.42	peak	No Limit
4	*	2462.000	94.99	-5.68	89.31	54.00	35.31	AVG	No Limit
5		2485.027	73.68	-5.63	68.05	74.00	-5.95	peak	
6		2485.027	55.49	-5.63	49.86	54.00	-4.14	AVG	

REMARKS:

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

Test Mode	IEEE 802.11b	Test Date	2022/12/21
Test Frequency	2412MHz	Polarization	Vertical
Temp	23°C	Hum.	59%

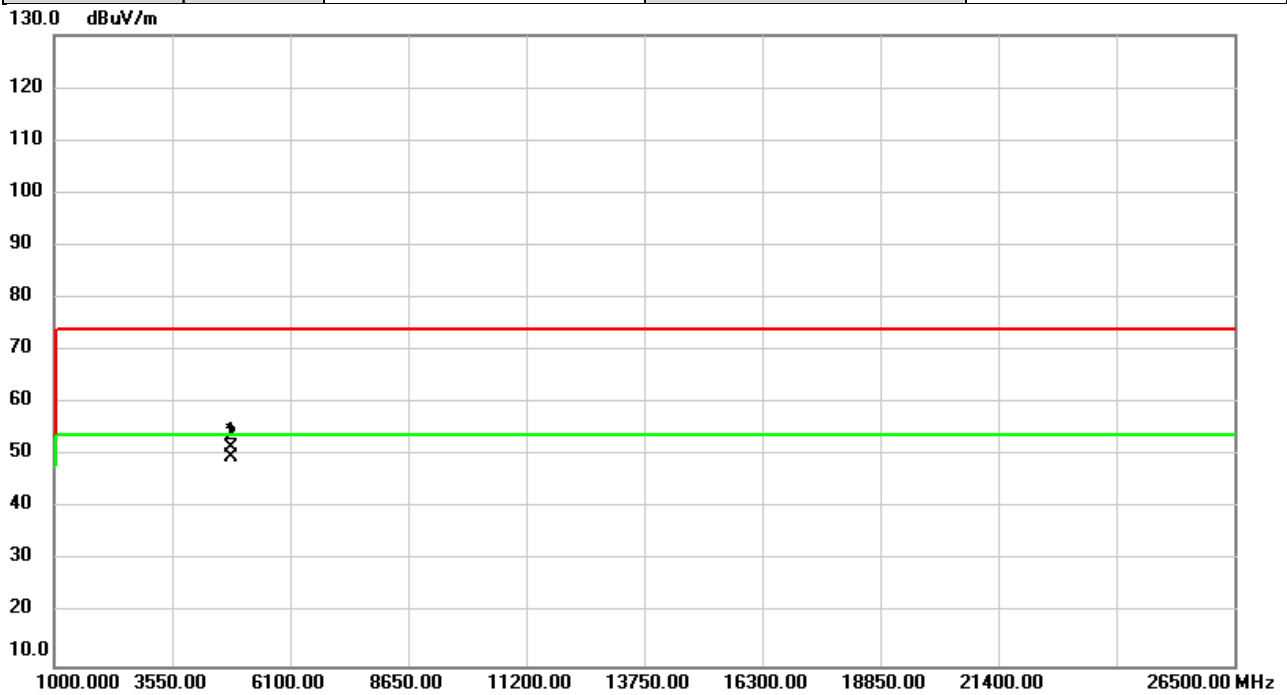


No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV/m	Limit dBuV/m	Over dB	Detector	Comment
1		4824.000	49.53	0.72	50.25	74.00	-23.75	peak	
2	*	4824.000	48.22	0.72	48.94	54.00	-5.06	AVG	

REMARKS:

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

Test Mode	IEEE 802.11b	Test Date	2022/12/21
Test Frequency	2412MHz	Polarization	Horizontal
Temp	23°C	Hum.	59%

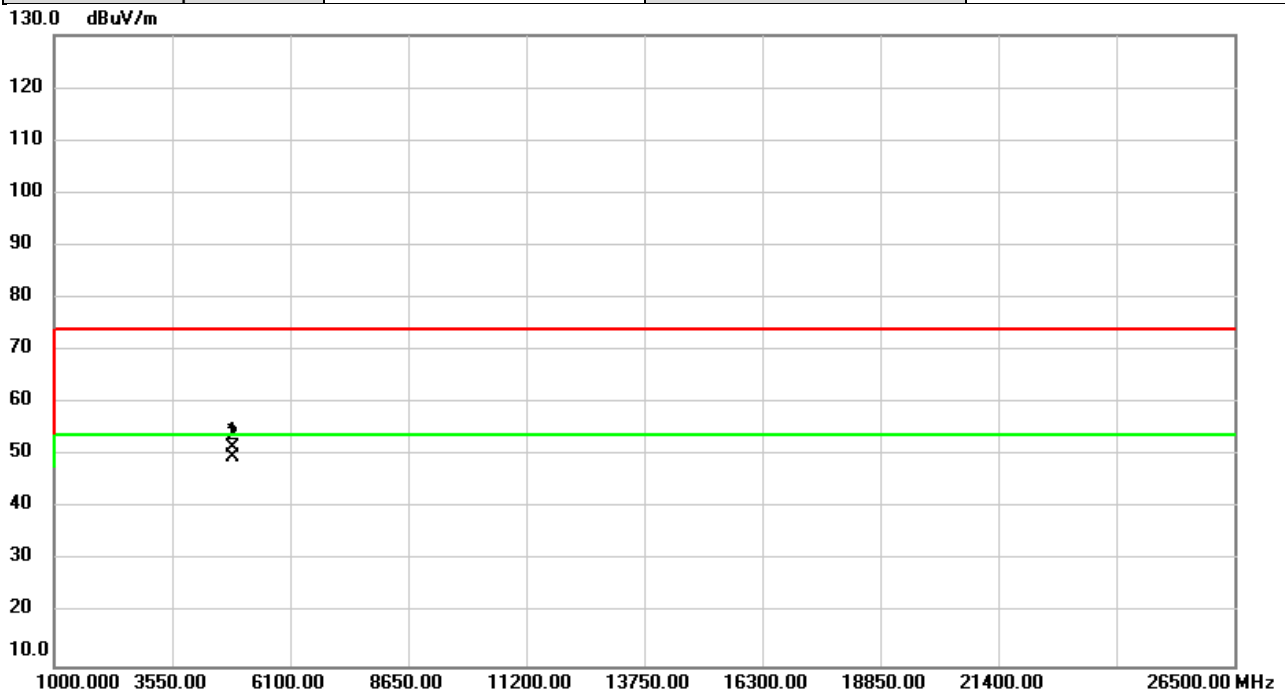


No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1		4824.000	50.79	0.72	51.51	74.00	-22.49	peak	
2	*	4824.000	49.07	0.72	49.79	54.00	-4.21	AVG	

REMARKS:

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

Test Mode	IEEE 802.11b	Test Date	2022/12/21
Test Frequency	2437MHz	Polarization	Vertical
Temp	23°C	Hum.	59%

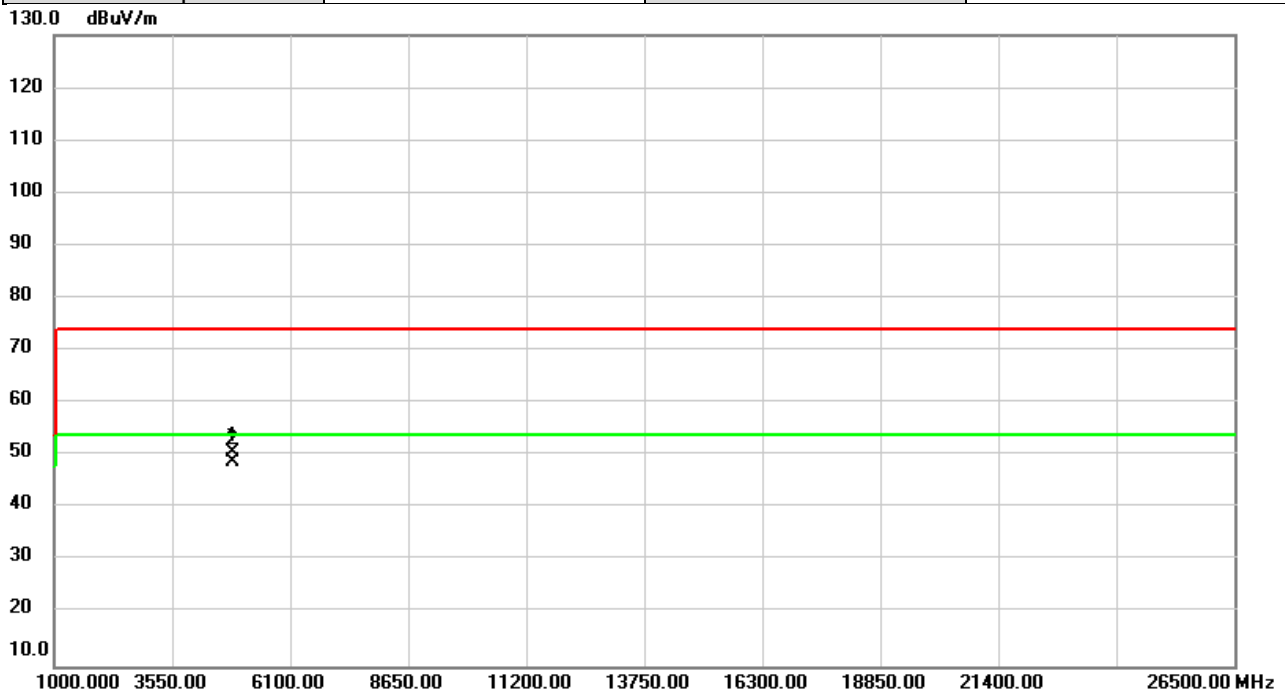


No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV/m	Limit dBuV/m	Over dB	Detector	Comment
1		4874.000	50.67	0.89	51.56	74.00	-22.44	peak	
2	*	4874.000	48.88	0.89	49.77	54.00	-4.23	AVG	

REMARKS:

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

Test Mode	IEEE 802.11b	Test Date	2022/12/21
Test Frequency	2437MHz	Polarization	Horizontal
Temp	23°C	Hum.	59%

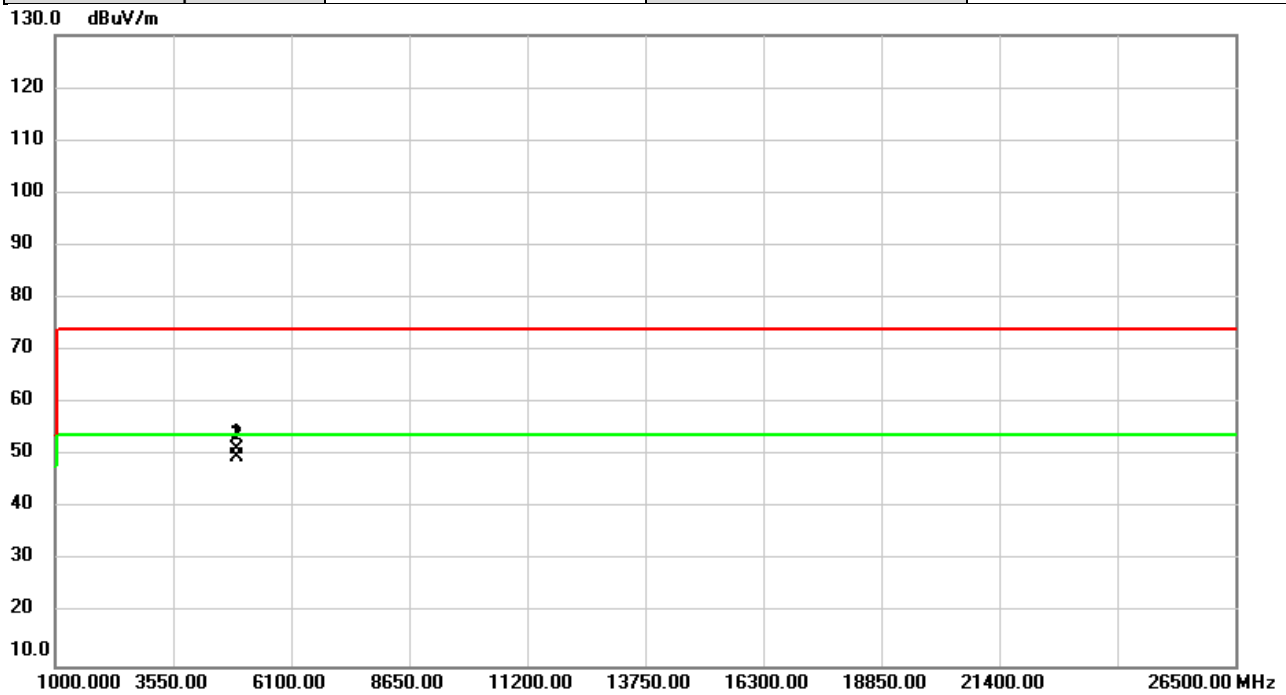


No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV/m	Limit dBuV/m	Over dB	Detector	Comment
1		4874.000	49.79	0.89	50.68	74.00	-23.32	peak	
2	*	4874.000	47.82	0.89	48.71	54.00	-5.29	AVG	

REMARKS:

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

Test Mode	IEEE 802.11b	Test Date	2022/12/21
Test Frequency	2462MHz	Polarization	Vertical
Temp	23°C	Hum.	59%

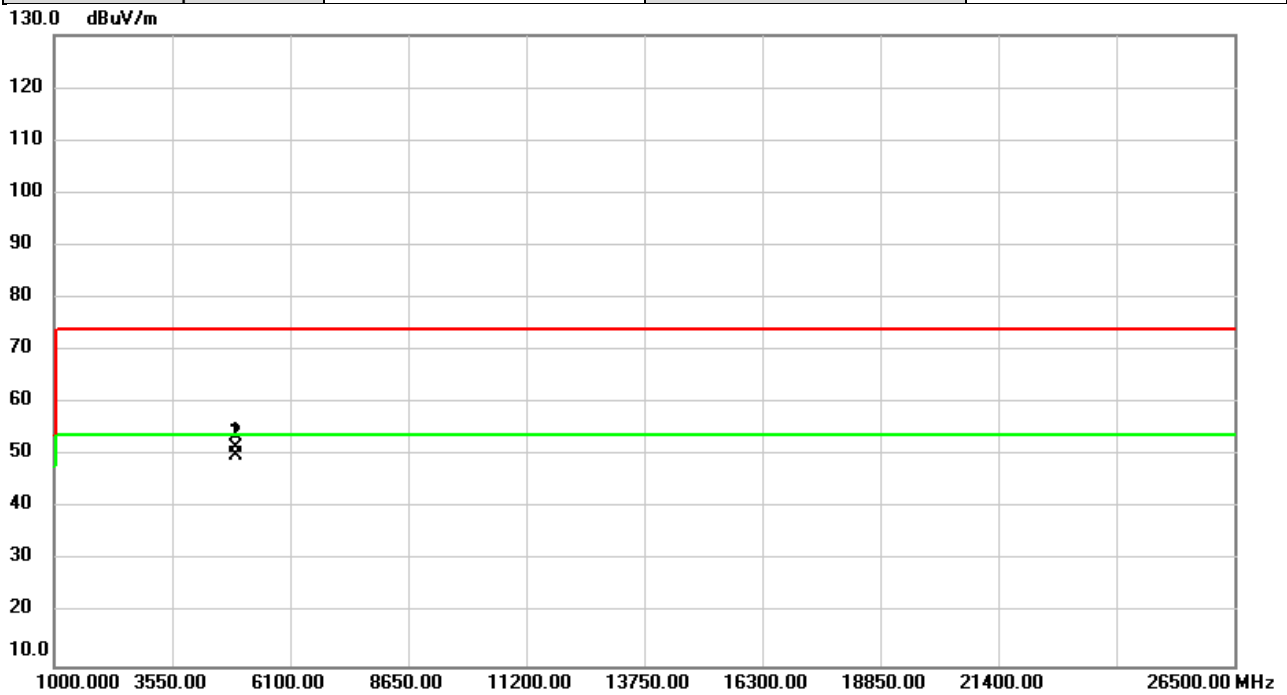


No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV/m	Limit dBuV/m	Over dB	Detector	Comment
1		4924.000	50.04	1.07	51.11	74.00	-22.89	peak	
2	*	4924.000	48.54	1.07	49.61	54.00	-4.39	AVG	

REMARKS:

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

Test Mode	IEEE 802.11b	Test Date	2022/12/21
Test Frequency	2462MHz	Polarization	Horizontal
Temp	23°C	Hum.	59%

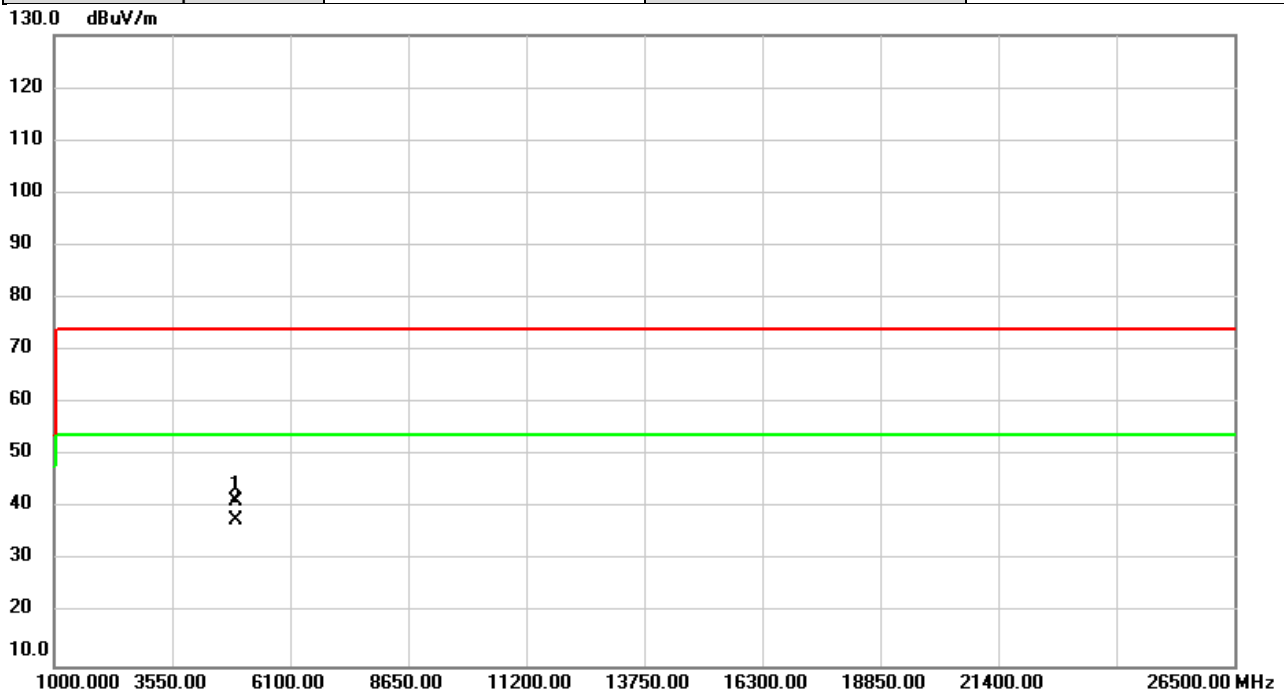


No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV/m	Limit dBuV/m	Over dB	Detector	Comment
1		4924.000	50.57	1.07	51.64	74.00	-22.36	peak	
2	*	4924.000	49.10	1.07	50.17	54.00	-3.83	AVG	

REMARKS:

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

Test Mode	IEEE 802.11b	Test Date	2022/12/21
Test Frequency	2467MHz	Polarization	Vertical
Temp	23°C	Hum.	59%

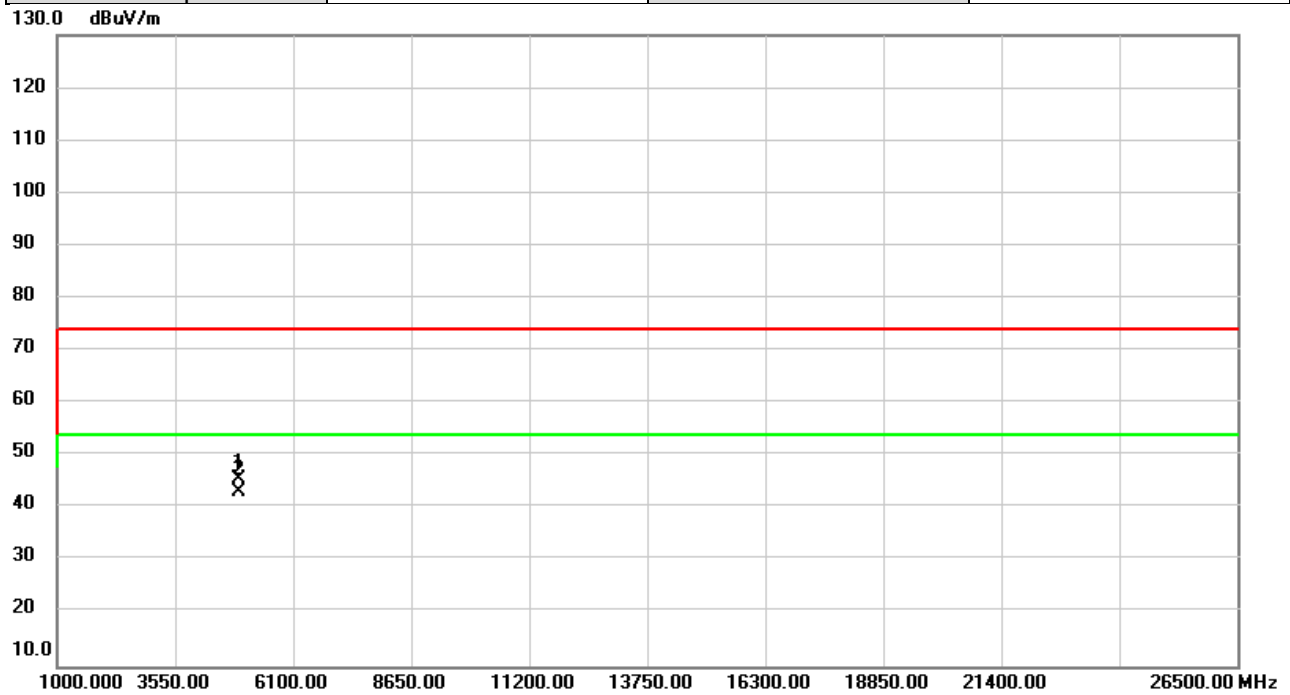


No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1		4934.000	40.11	1.10	41.21	74.00	-32.79	peak	
2	*	4934.000	36.67	1.10	37.77	54.00	-16.23	AVG	

REMARKS:

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

Test Mode	IEEE 802.11b	Test Date	2022/12/21
Test Frequency	2467MHz	Polarization	Horizontal
Temp	23°C	Hum.	59%

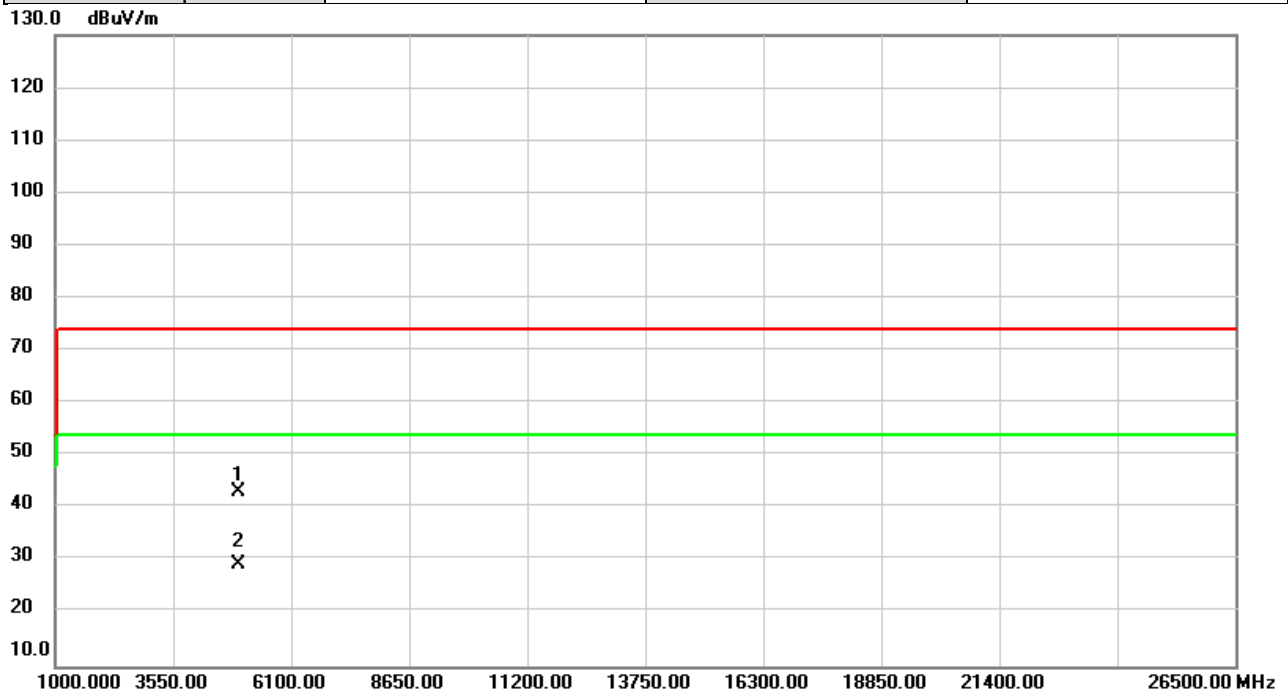


No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV/m	Limit dBuV/m	Over dB	Detector	Comment
1		4934.000	44.55	1.10	45.65	74.00	-28.35	peak	
2	*	4934.000	42.16	1.10	43.26	54.00	-10.74	AVG	

REMARKS:

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

Test Mode	IEEE 802.11b	Test Date	2022/12/21
Test Frequency	2472MHz	Polarization	Vertical
Temp	23°C	Hum.	59%

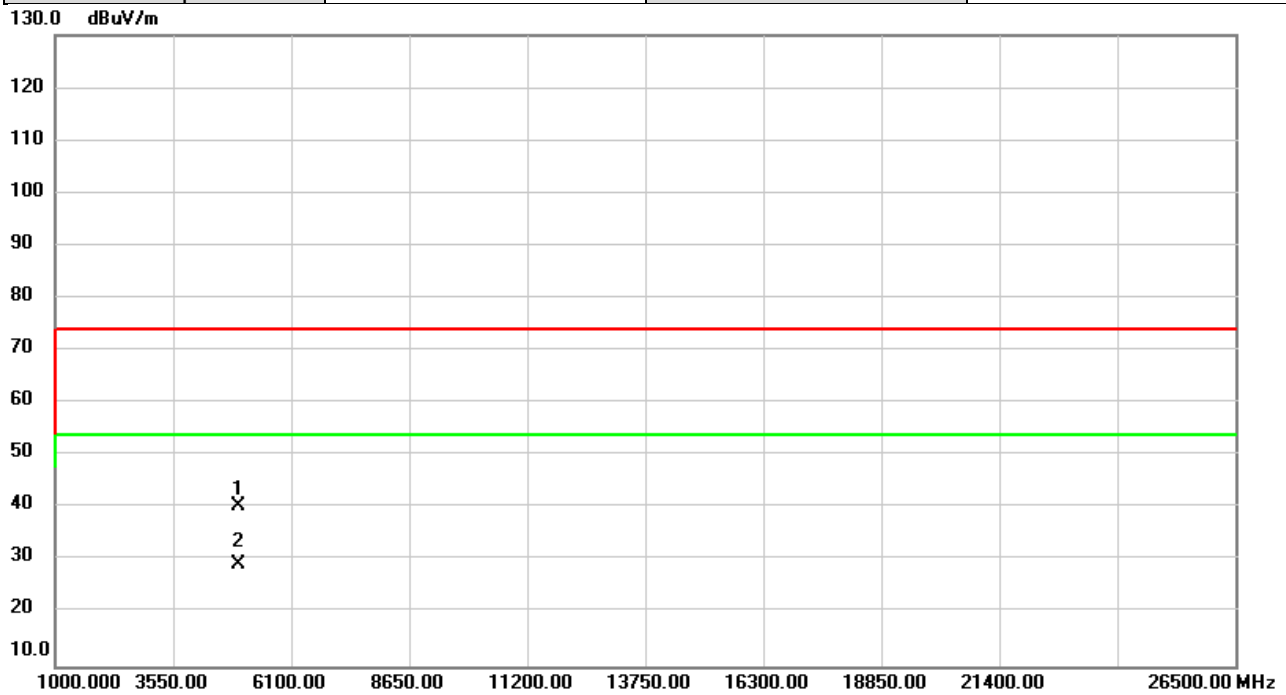


No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1		4944.000	42.11	1.13	43.24	74.00	-30.76	peak	
2	*	4944.000	28.29	1.13	29.42	54.00	-24.58	AVG	

REMARKS:

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

Test Mode	IEEE 802.11b	Test Date	2022/12/21
Test Frequency	2472MHz	Polarization	Horizontal
Temp	23°C	Hum.	59%

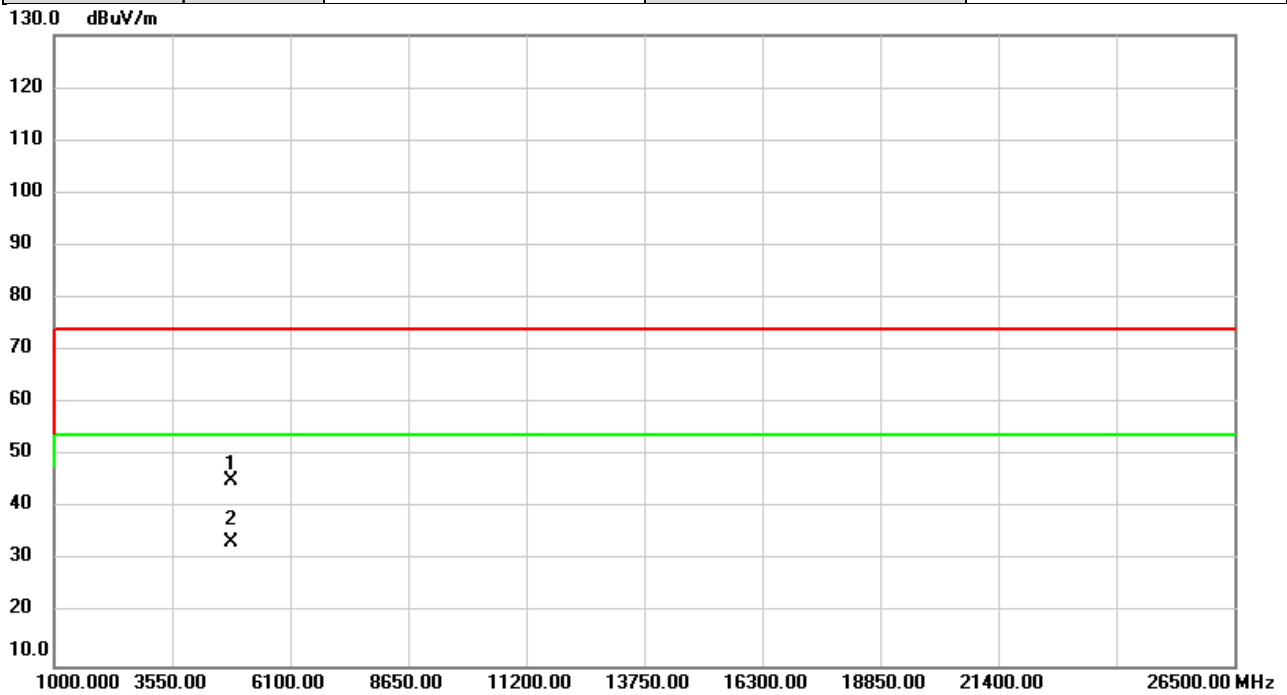


No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1		4944.000	39.40	1.13	40.53	74.00	-33.47	peak	
2	*	4944.000	28.13	1.13	29.26	54.00	-24.74	AVG	

REMARKS:

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

Test Mode	IEEE 802.11g	Test Date	2022/12/21
Test Frequency	2412MHz	Polarization	Vertical
Temp	23°C	Hum.	59%

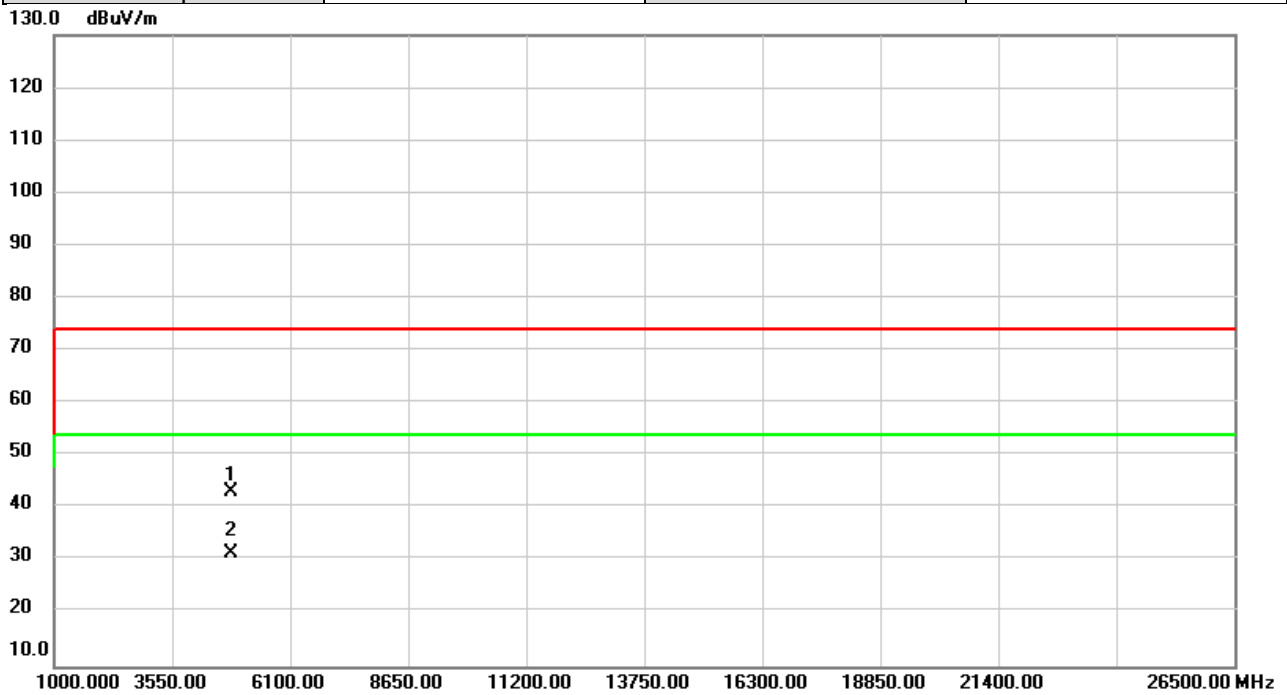


No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1		4824.000	44.64	0.72	45.36	74.00	-28.64	peak	
2	*	4824.000	32.86	0.72	33.58	54.00	-20.42	AVG	

REMARKS:

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

Test Mode	IEEE 802.11g	Test Date	2022/12/21
Test Frequency	2412MHz	Polarization	Horizontal
Temp	23°C	Hum.	59%

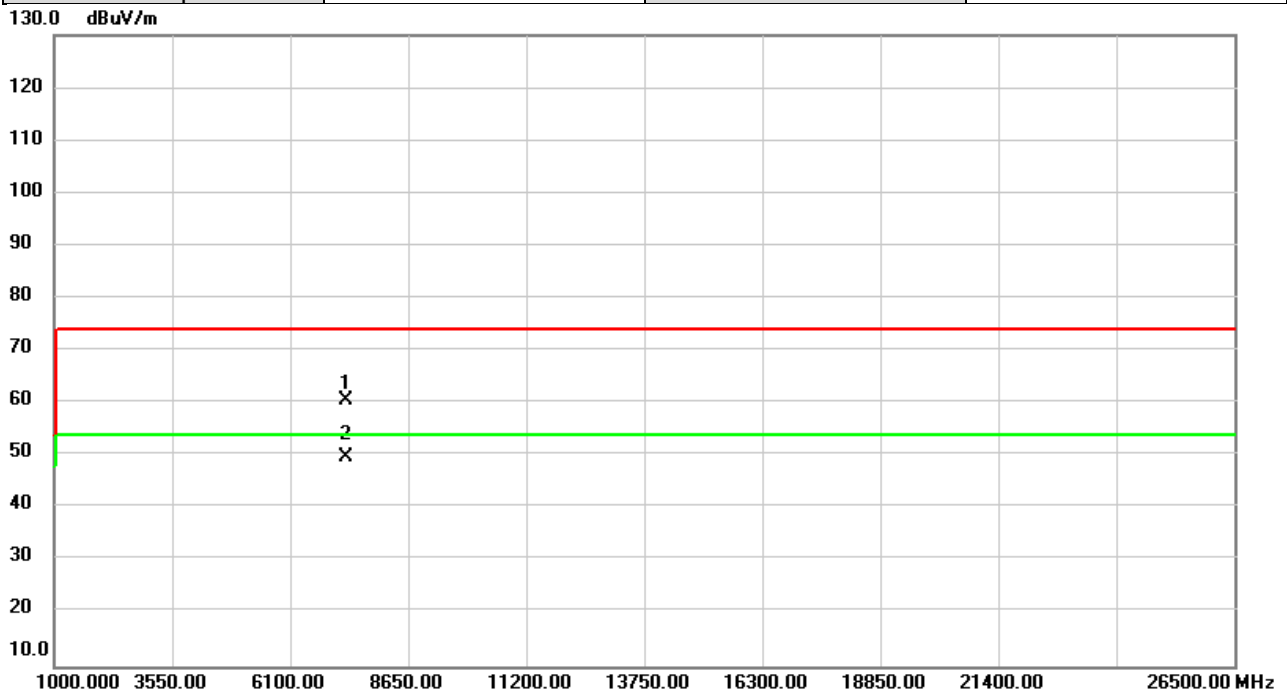


No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV/m	Limit dBuV/m	Over dB	Detector	Comment
1		4824.000	42.57	0.72	43.29	74.00	-30.71	peak	
2	*	4824.000	30.62	0.72	31.34	54.00	-22.66	AVG	

REMARKS:

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

Test Mode	IEEE 802.11g	Test Date	2022/12/21
Test Frequency	2437MHz	Polarization	Vertical
Temp	23°C	Hum.	59%

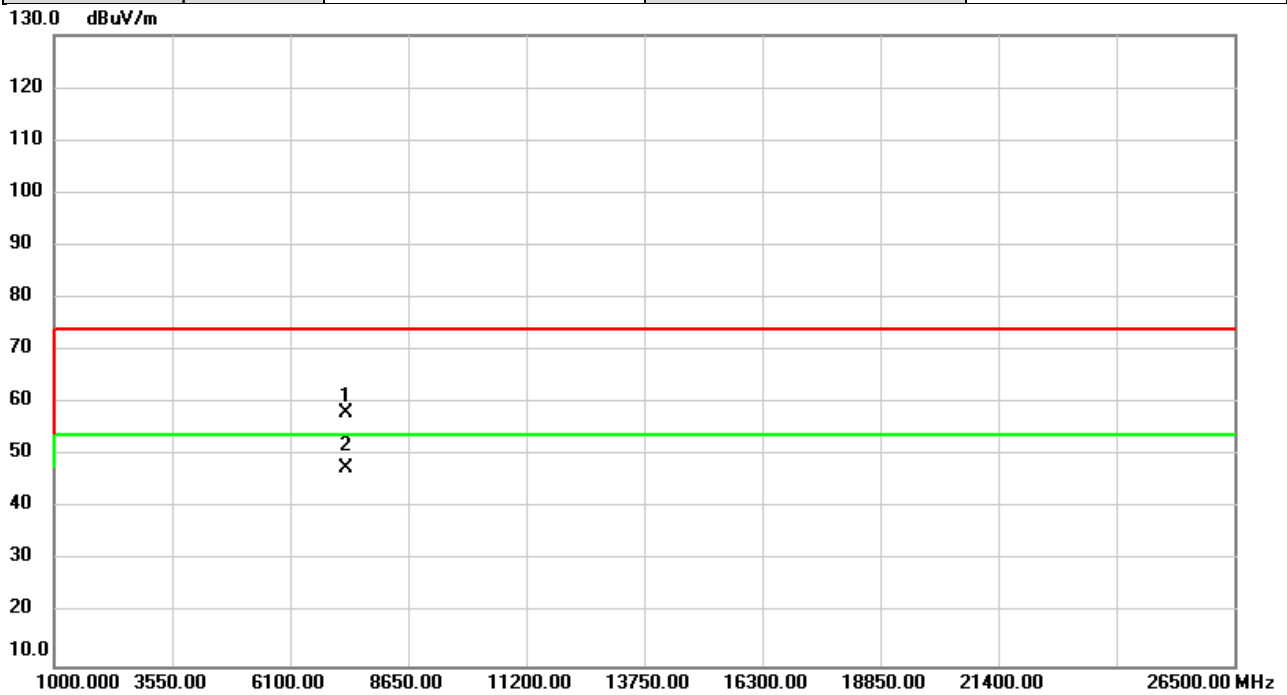


No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1		7311.000	54.90	5.57	60.47	74.00	-13.53	peak	
2	*	7311.000	44.22	5.57	49.79	54.00	-4.21	AVG	

REMARKS:

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

Test Mode	IEEE 802.11g	Test Date	2022/12/21
Test Frequency	2437MHz	Polarization	Horizontal
Temp	23°C	Hum.	59%

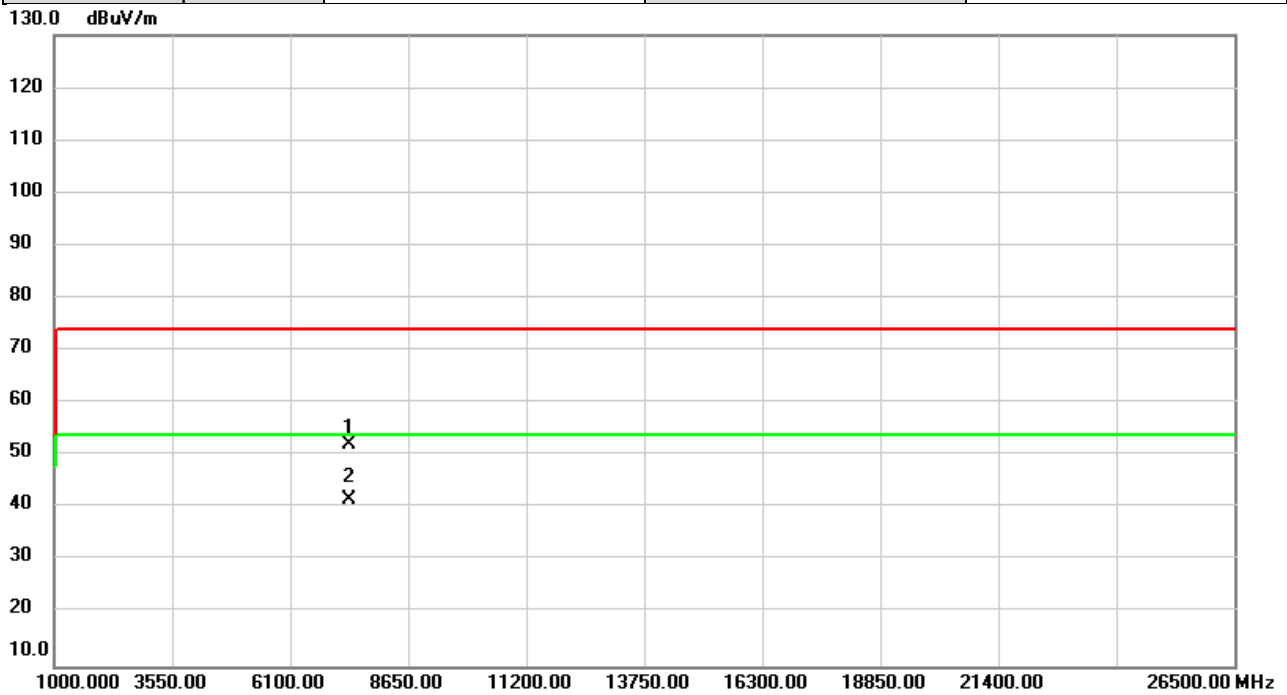


No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV/m	Limit dBuV/m	Over dB	Detector	Comment
1		7311.000	52.55	5.57	58.12	74.00	-15.88	peak	
2	*	7311.000	42.12	5.57	47.69	54.00	-6.31	AVG	

REMARKS:

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

Test Mode	IEEE 802.11g	Test Date	2022/12/21
Test Frequency	2462MHz	Polarization	Vertical
Temp	23°C	Hum.	59%

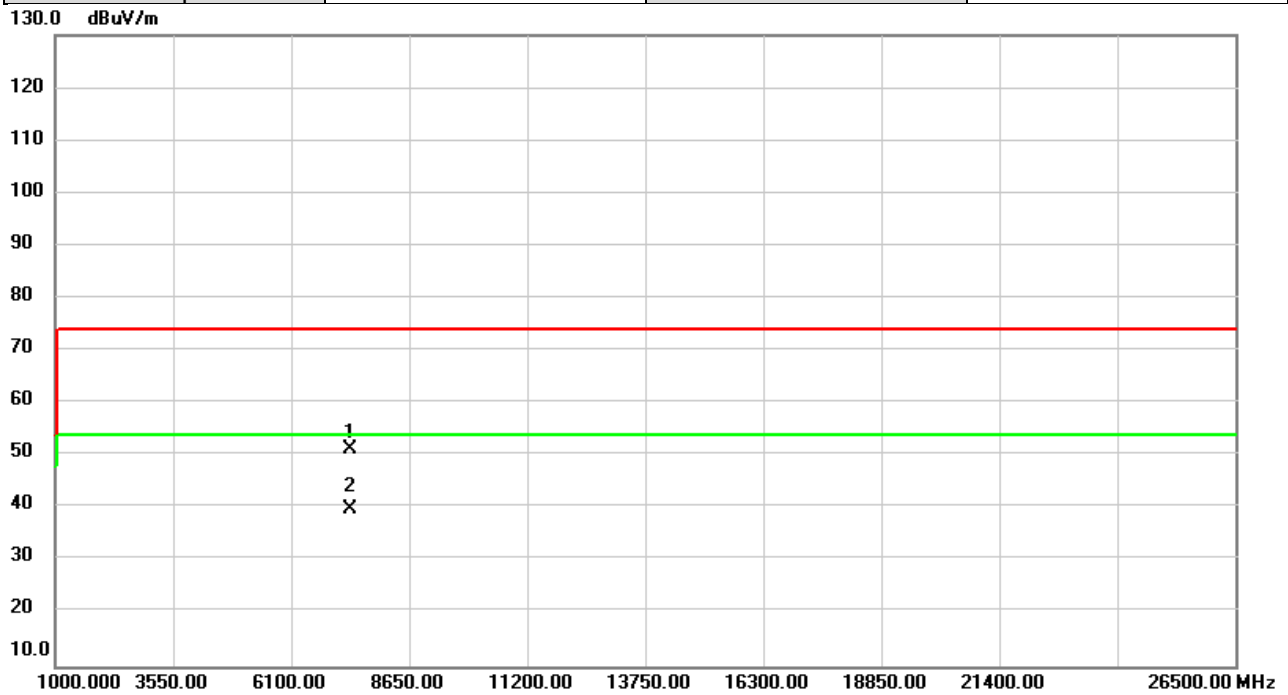


No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV/m	Limit dBuV/m	Over dB	Detector	Comment
1		7386.000	46.44	5.59	52.03	74.00	-21.97	peak	
2	*	7386.000	35.94	5.59	41.53	54.00	-12.47	AVG	

REMARKS:

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

Test Mode	IEEE 802.11g	Test Date	2022/12/21
Test Frequency	2462MHz	Polarization	Horizontal
Temp	23°C	Hum.	59%

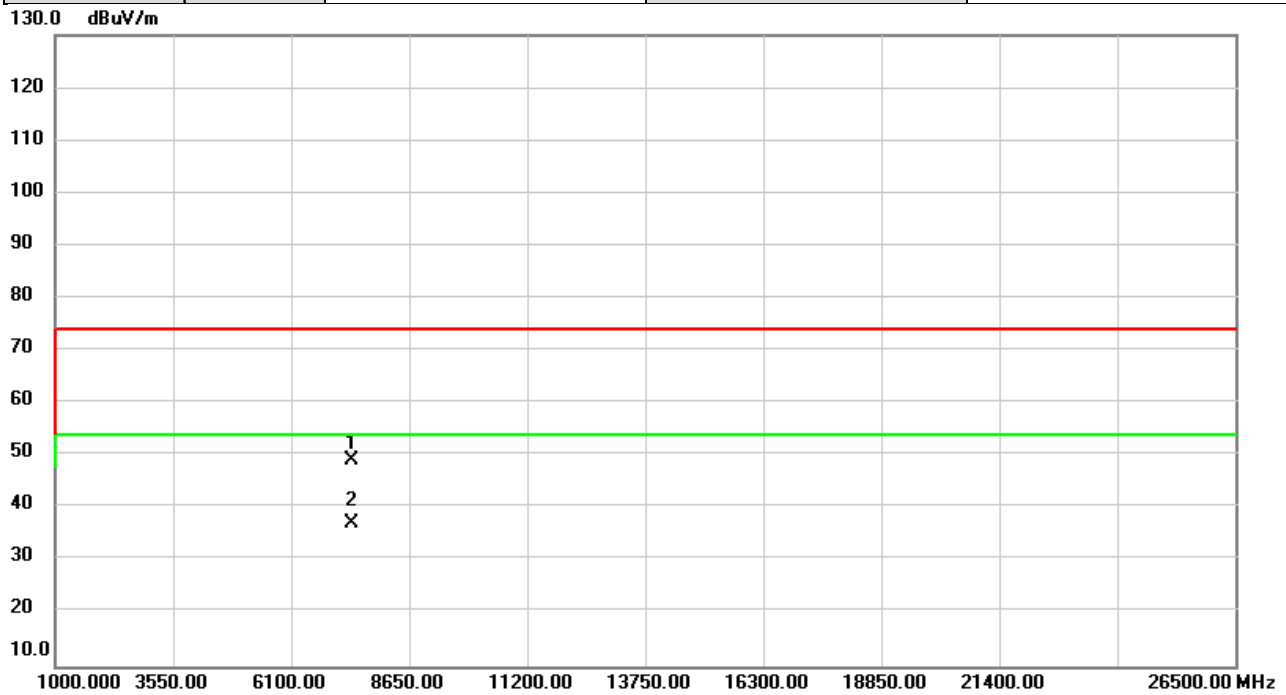


No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV/m	Limit dBuV/m	Over dB	Detector	Comment
1		7386.000	45.57	5.59	51.16	74.00	-22.84	peak	
2	*	7386.000	34.26	5.59	39.85	54.00	-14.15	AVG	

REMARKS:

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

Test Mode	IEEE 802.11g	Test Date	2022/12/21
Test Frequency	2467MHz	Polarization	Vertical
Temp	23°C	Hum.	59%

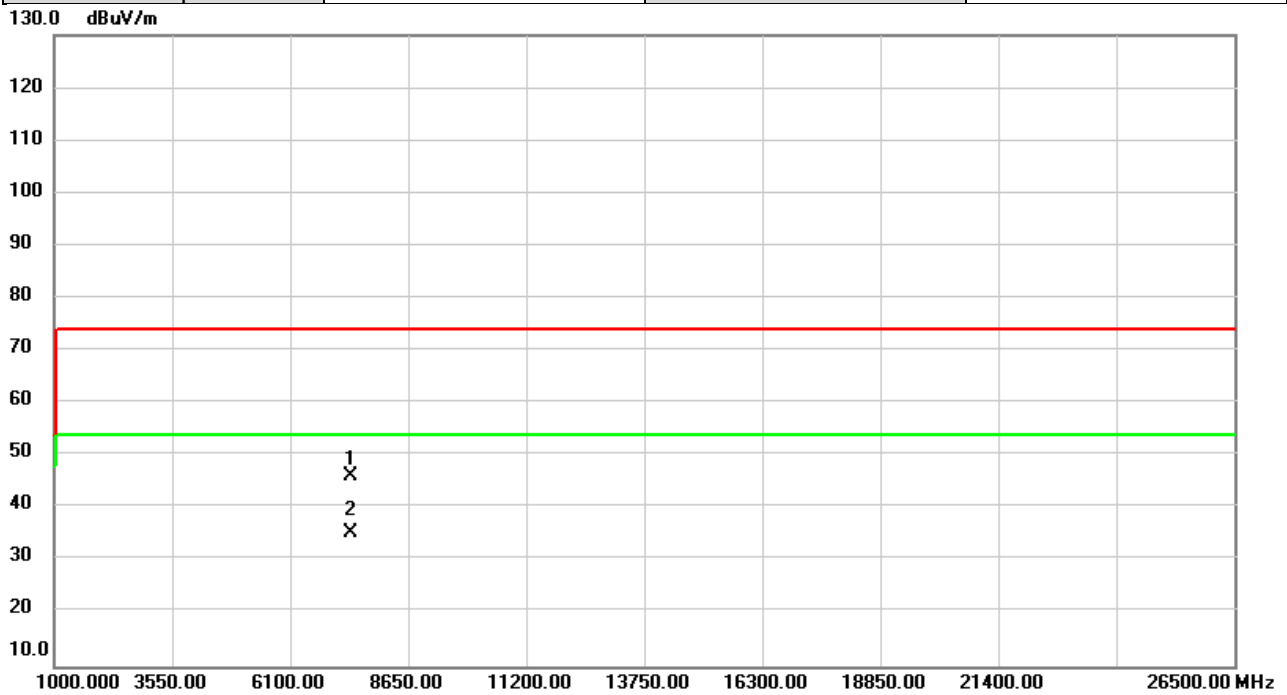


No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1		7401.000	43.63	5.60	49.23	74.00	-24.77	peak	
2	*	7401.000	31.61	5.60	37.21	54.00	-16.79	AVG	

REMARKS:

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

Test Mode	IEEE 802.11g	Test Date	2022/12/21
Test Frequency	2467MHz	Polarization	Horizontal
Temp	23°C	Hum.	59%

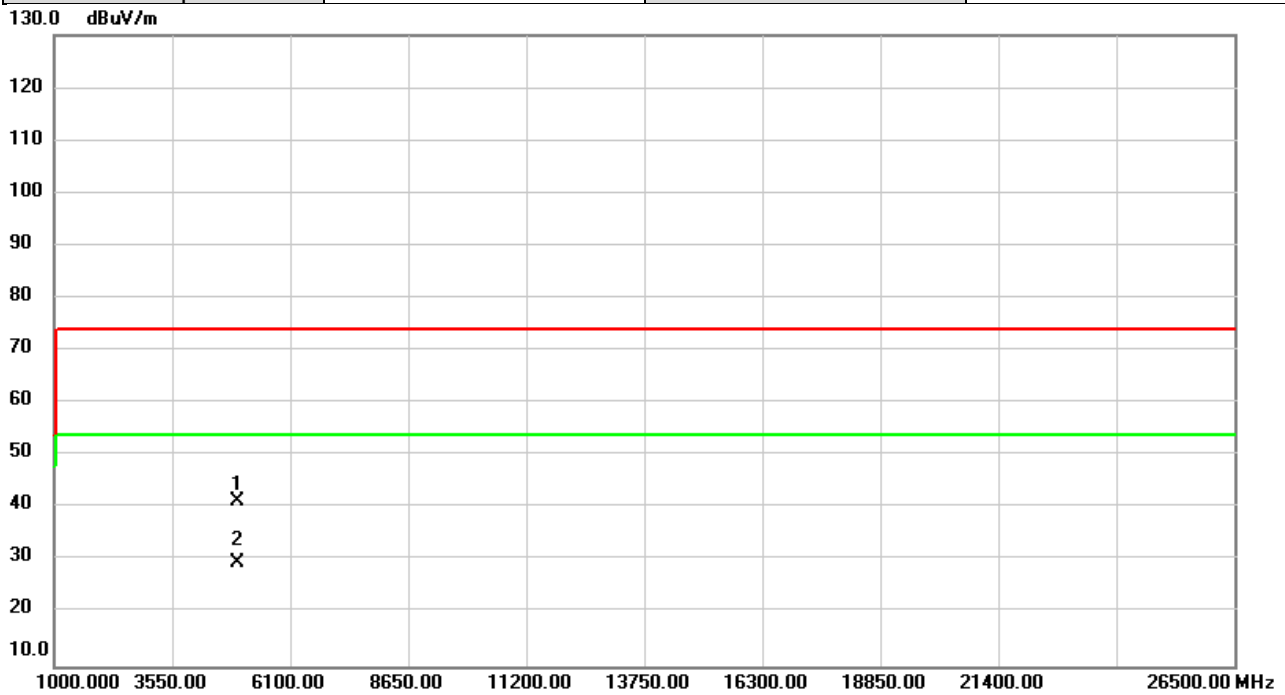


No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV/m	Limit dBuV/m	Over dB	Detector	Comment
1		7401.000	40.58	5.60	46.18	74.00	-27.82	peak	
2	*	7401.000	29.76	5.60	35.36	54.00	-18.64	AVG	

REMARKS:

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

Test Mode	IEEE 802.11g	Test Date	2022/12/21
Test Frequency	2472MHz	Polarization	Vertical
Temp	23°C	Hum.	59%

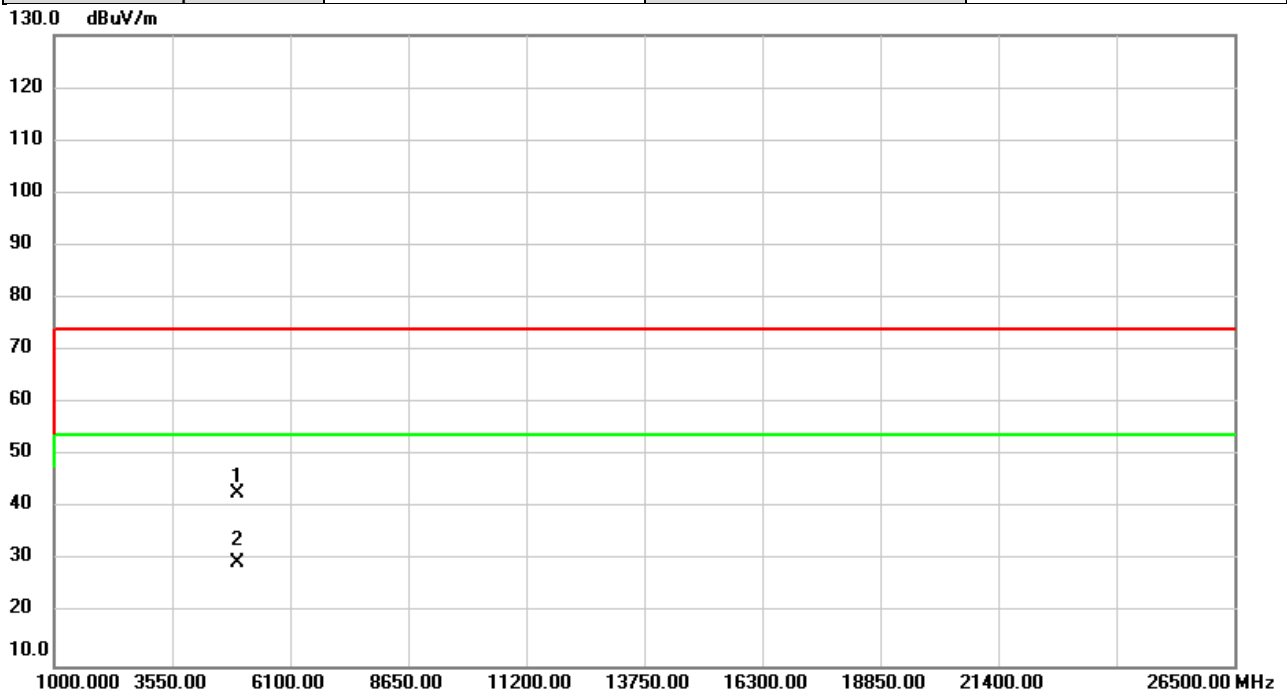


No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1		4944.000	40.24	1.13	41.37	74.00	-32.63	peak	
2	*	4944.000	28.60	1.13	29.73	54.00	-24.27	AVG	

REMARKS:

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

Test Mode	IEEE 802.11g	Test Date	2022/12/21
Test Frequency	2472MHz	Polarization	Horizontal
Temp	23°C	Hum.	59%

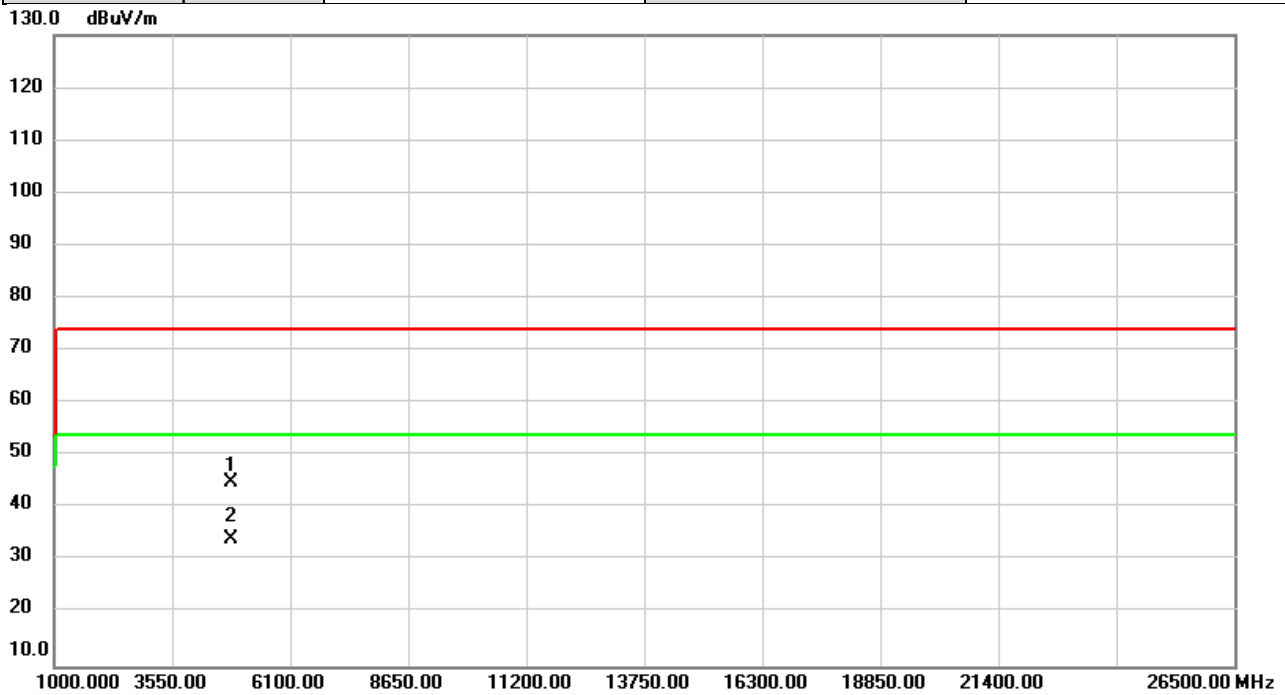


No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1		4944.000	41.65	1.13	42.78	74.00	-31.22	peak	
2	*	4944.000	28.56	1.13	29.69	54.00	-24.31	AVG	

REMARKS:

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

Test Mode	IEEE 802.11n (HT20)	Test Date	2022/12/21
Test Frequency	2412MHz	Polarization	Vertical
Temp	23°C	Hum.	59%

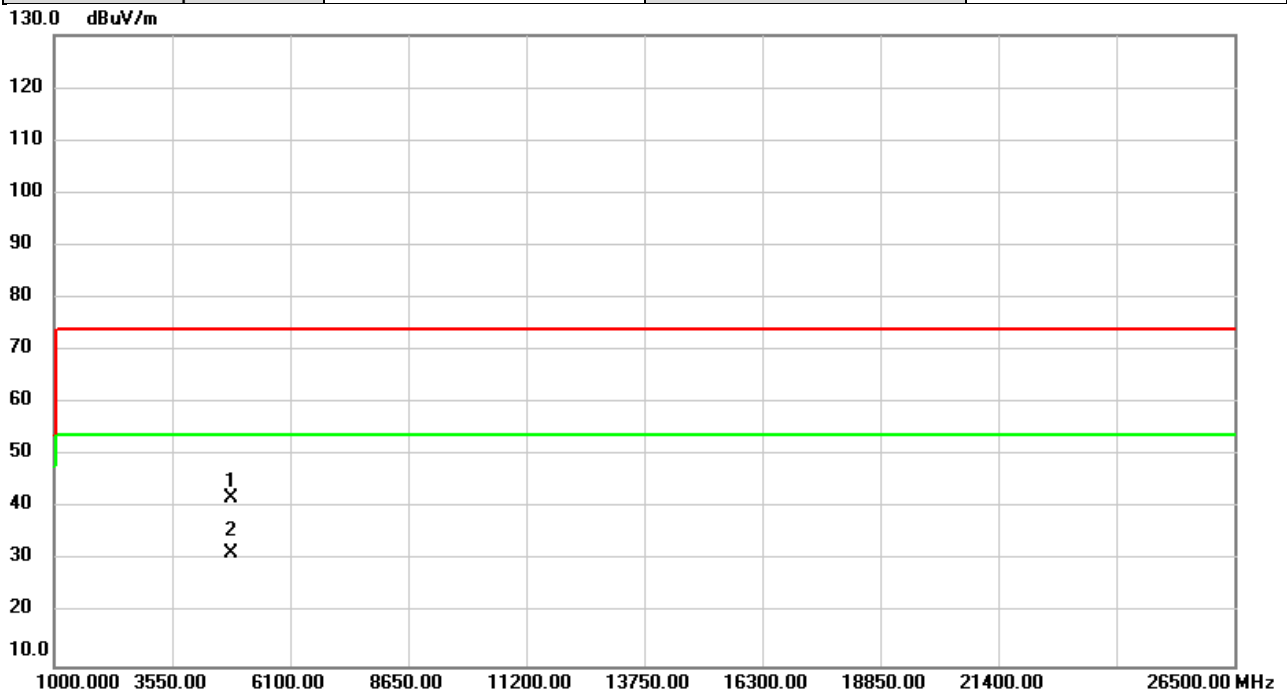


No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV/m	Limit dBuV/m	Over dB	Detector	Comment
1		4824.000	44.26	0.72	44.98	74.00	-29.02	peak	
2	*	4824.000	33.46	0.72	34.18	54.00	-19.82	AVG	

REMARKS:

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

Test Mode	IEEE 802.11n (HT20)	Test Date	2022/12/21
Test Frequency	2412MHz	Polarization	Horizontal
Temp	23°C	Hum.	59%

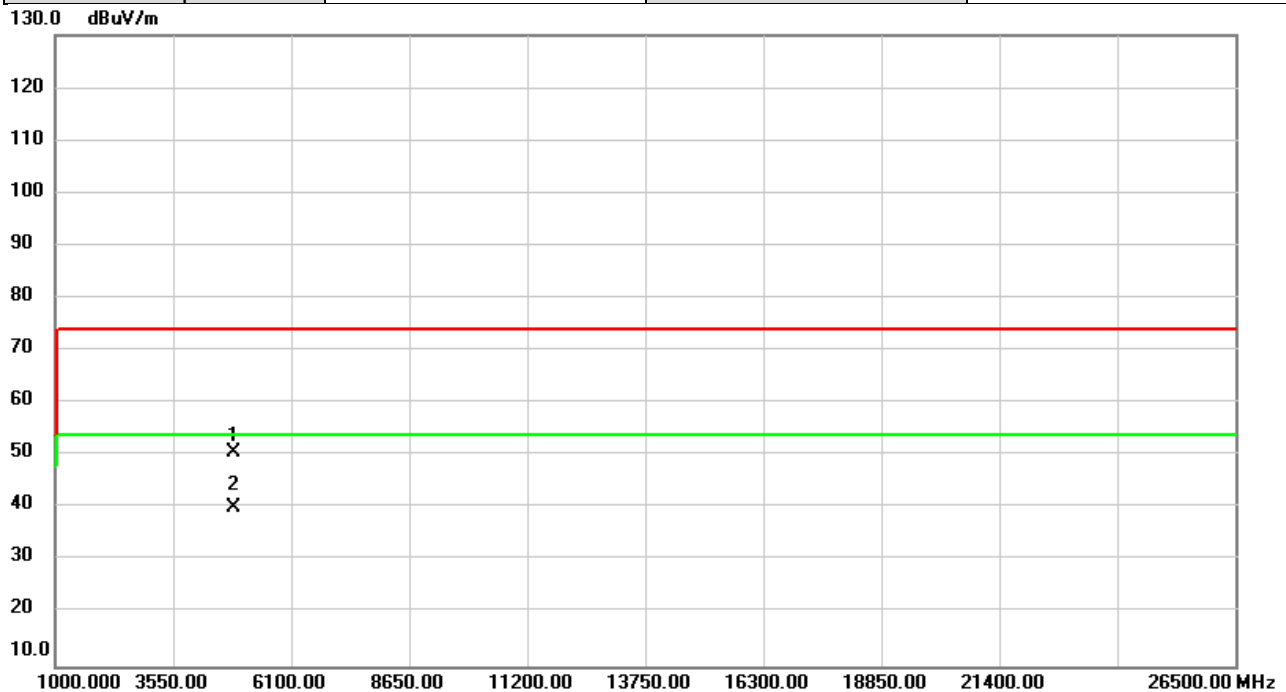


No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV/m	Limit dBuV/m	Over dB	Detector	Comment
1		4824.000	41.22	0.72	41.94	74.00	-32.06	peak	
2	*	4824.000	30.85	0.72	31.57	54.00	-22.43	AVG	

REMARKS:

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

Test Mode	IEEE 802.11n (HT20)	Test Date	2023/6/26
Test Frequency	2437MHz	Polarization	Vertical
Temp	24°C	Hum.	58%

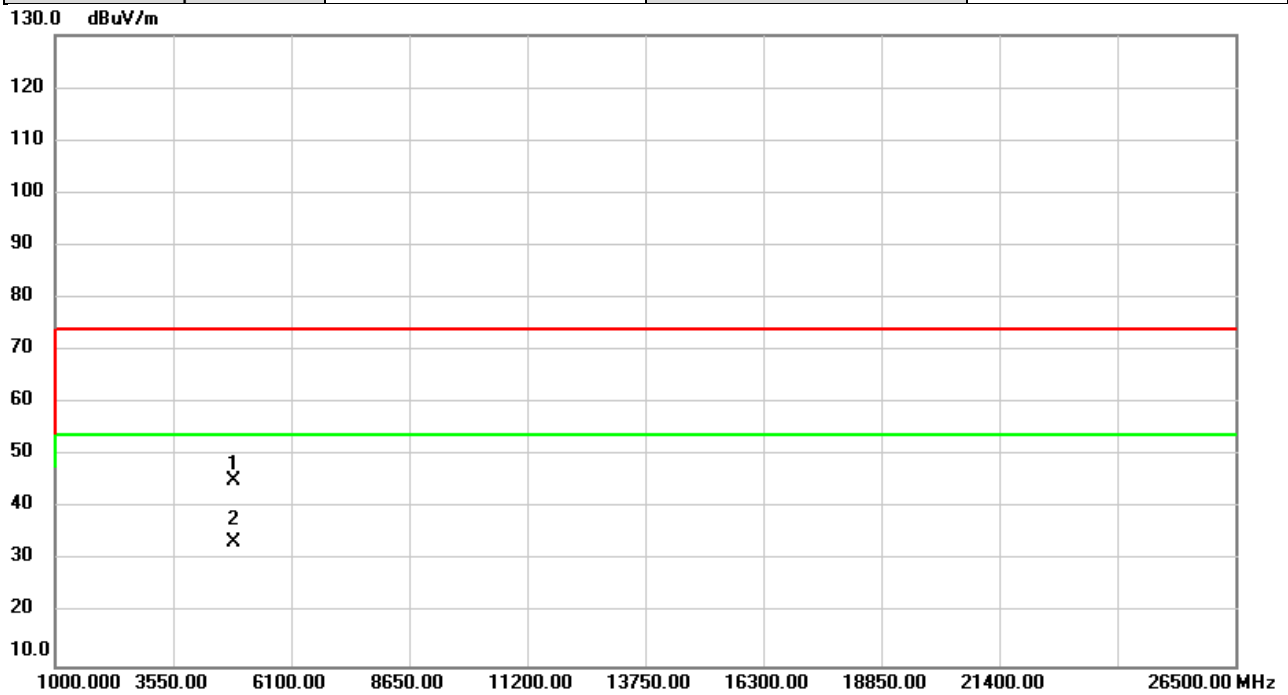


No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1		4874.000	49.81	0.74	50.55	74.00	-23.45	peak	
2	*	4874.000	39.52	0.74	40.26	54.00	-13.74	AVG	

REMARKS:

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

Test Mode	IEEE 802.11n (HT20)	Test Date	2023/6/26
Test Frequency	2437MHz	Polarization	Horizontal
Temp	24°C	Hum.	58%

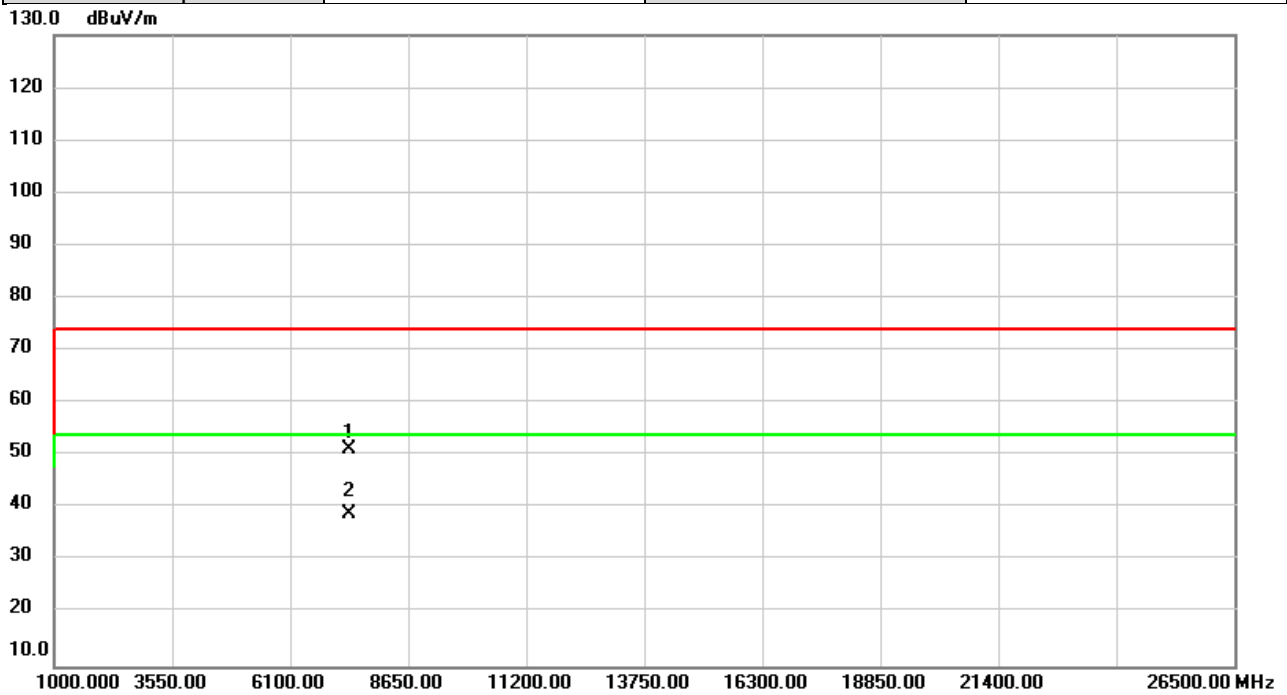


No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1		4874.000	44.63	0.74	45.37	74.00	-28.63	peak	
2	*	4874.000	32.85	0.74	33.59	54.00	-20.41	AVG	

REMARKS:

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

Test Mode	IEEE 802.11n (HT20)	Test Date	2022/12/21
Test Frequency	2462MHz	Polarization	Vertical
Temp	23°C	Hum.	59%

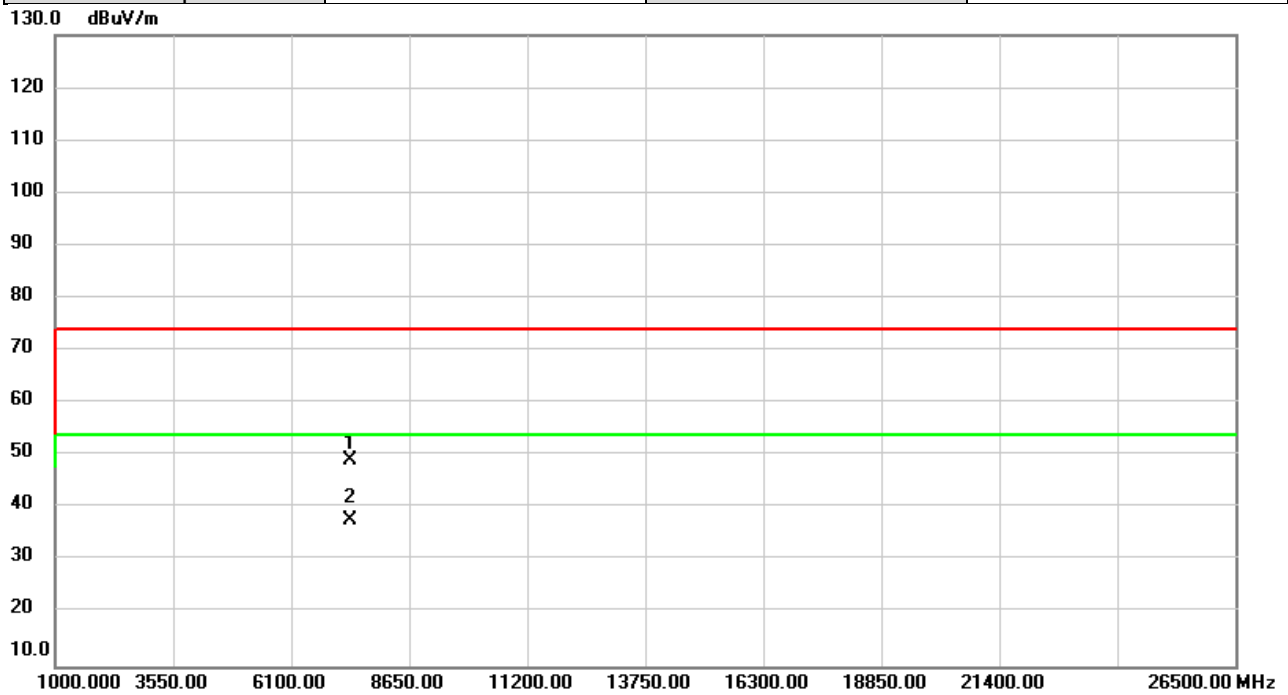


No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV/m	Limit dBuV/m	Over dB	Detector	Comment
1		7386.000	45.77	5.59	51.36	74.00	-22.64	peak	
2	*	7386.000	33.46	5.59	39.05	54.00	-14.95	AVG	

REMARKS:

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

Test Mode	IEEE 802.11n (HT20)	Test Date	2022/12/21
Test Frequency	2462MHz	Polarization	Horizontal
Temp	23°C	Hum.	59%

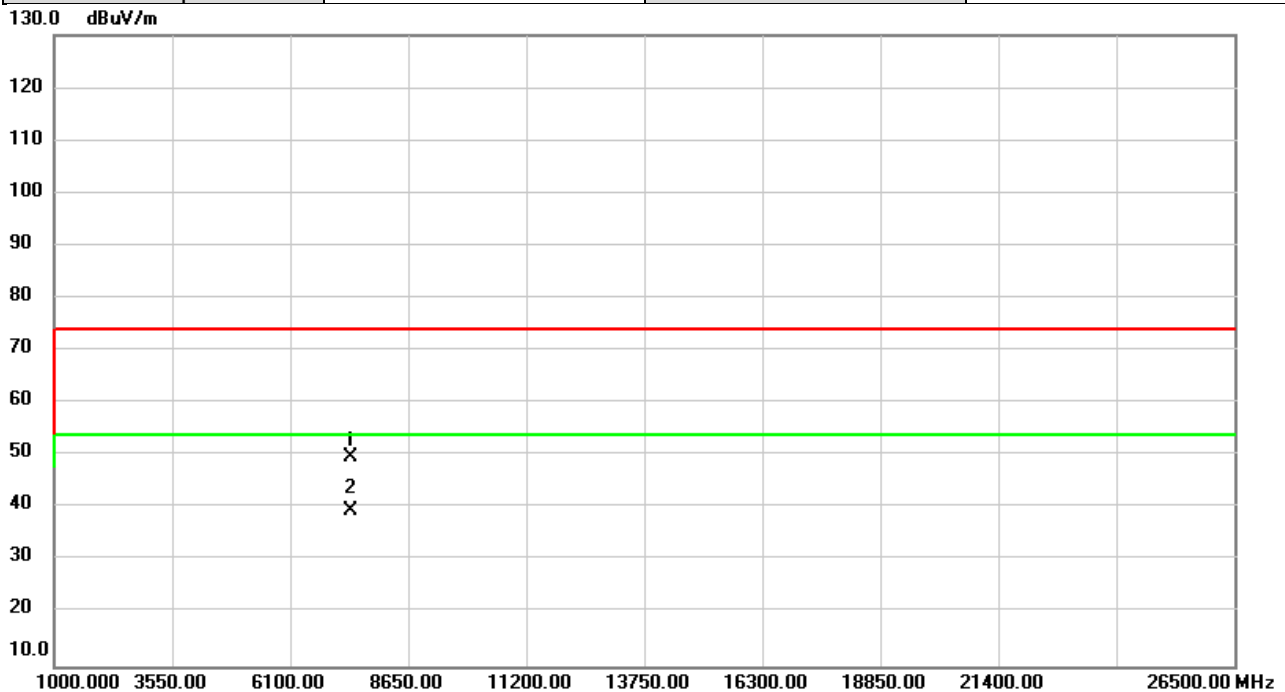


No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1		7386.000	43.66	5.59	49.25	74.00	-24.75	peak	
2	*	7386.000	32.31	5.59	37.90	54.00	-16.10	AVG	

REMARKS:

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

Test Mode	IEEE 802.11n (HT20)	Test Date	2022/12/21
Test Frequency	2467MHz	Polarization	Vertical
Temp	23°C	Hum.	59%

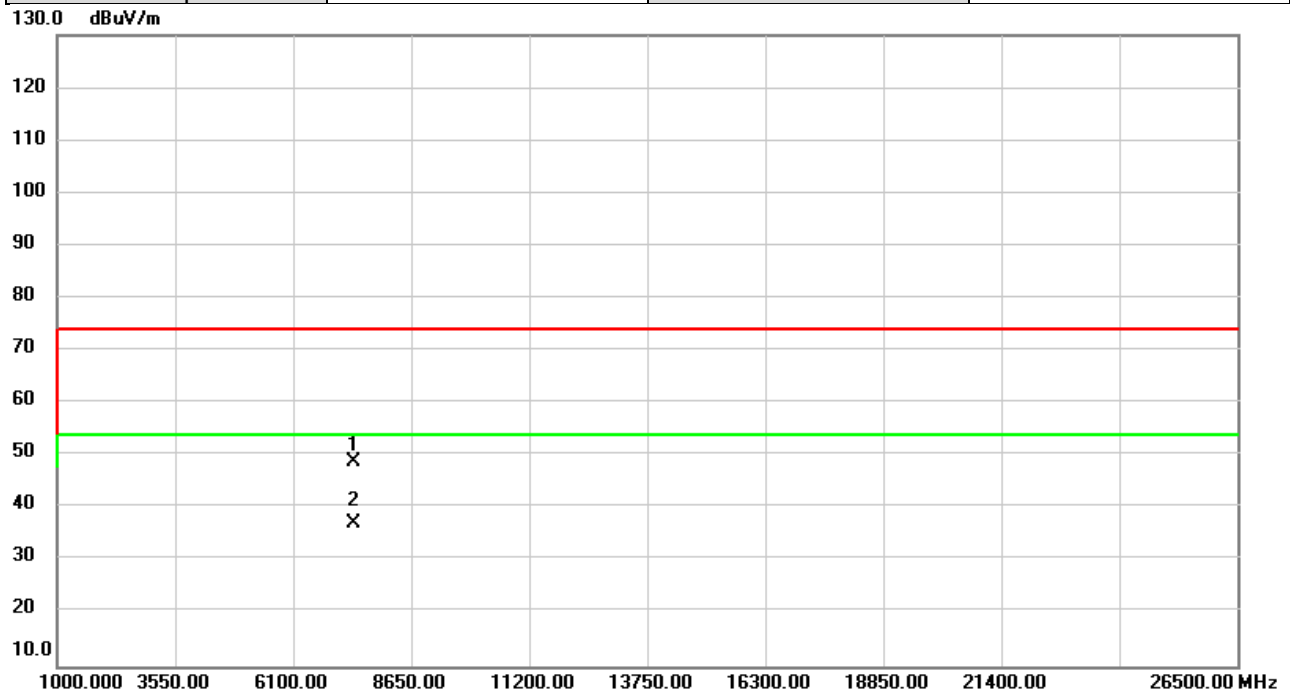


No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1		7401.000	44.14	5.60	49.74	74.00	-24.26	peak	
2	*	7401.000	34.03	5.60	39.63	54.00	-14.37	AVG	

REMARKS:

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

Test Mode	IEEE 802.11n (HT20)	Test Date	2022/12/21
Test Frequency	2467MHz	Polarization	Horizontal
Temp	23°C	Hum.	59%

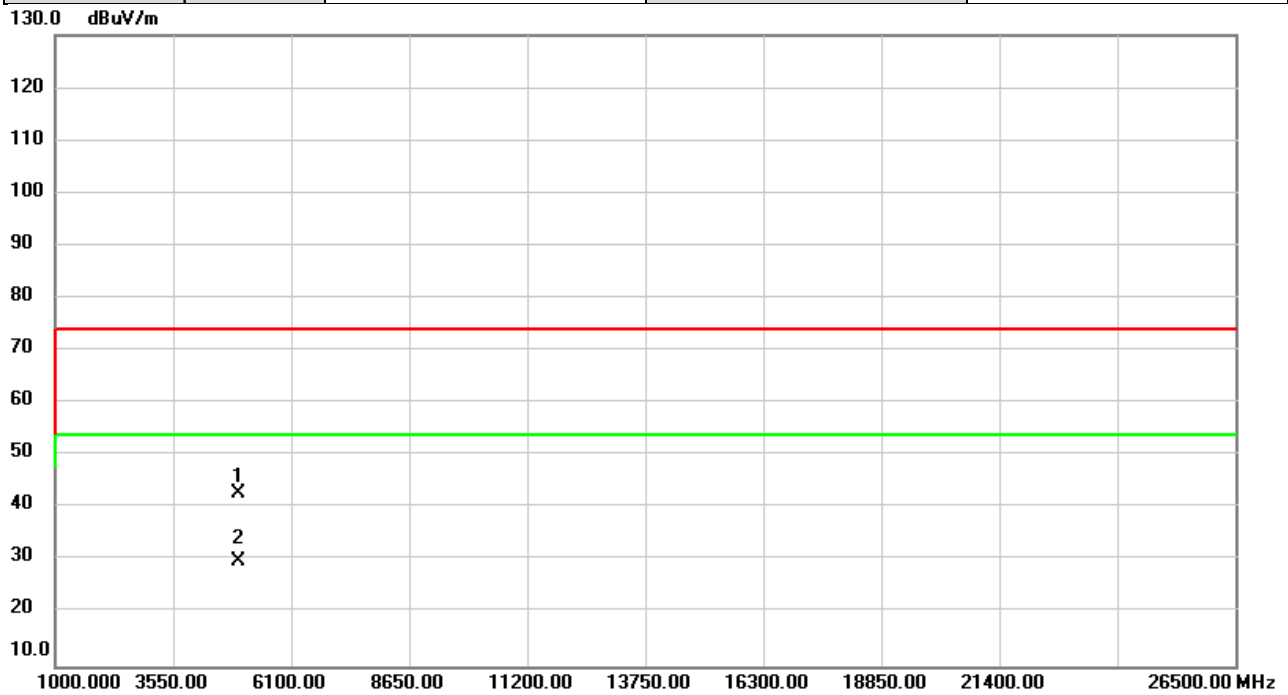


No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1		7401.000	43.28	5.60	48.88	74.00	-25.12	peak	
2	*	7401.000	31.41	5.60	37.01	54.00	-16.99	AVG	

REMARKS:

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

Test Mode	IEEE 802.11n (HT20)	Test Date	2022/12/21
Test Frequency	2472MHz	Polarization	Vertical
Temp	23°C	Hum.	59%

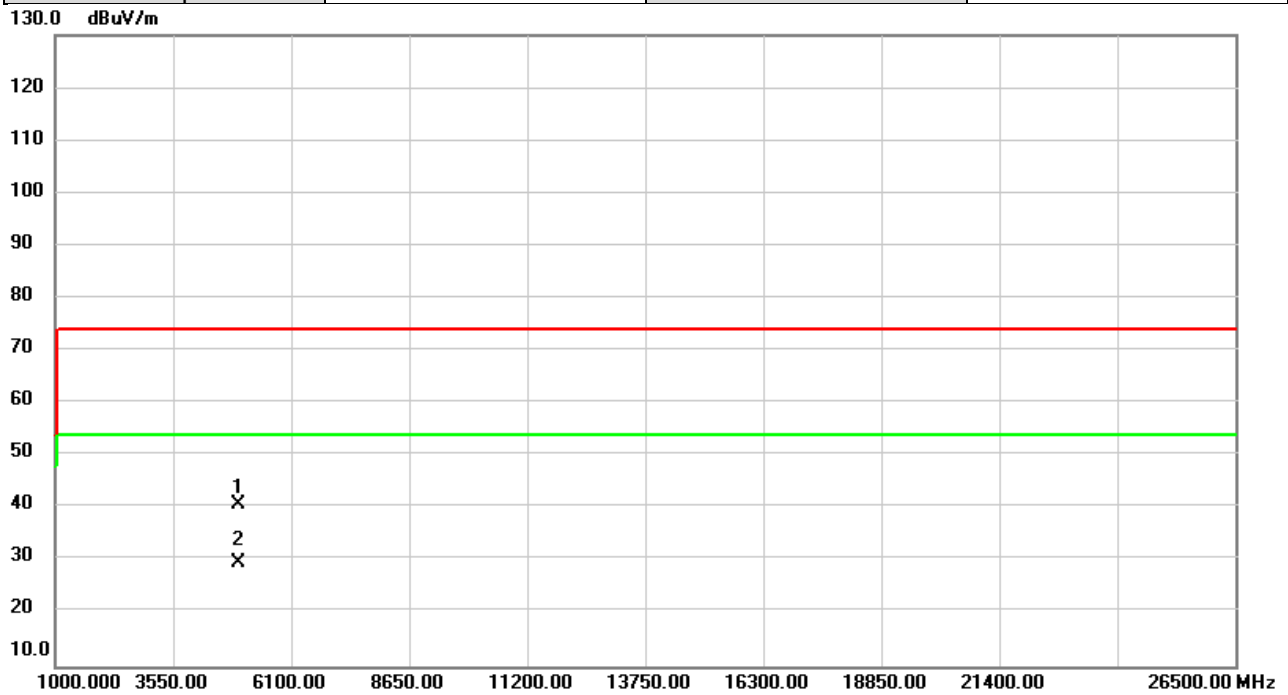


No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV/m	Limit dBuV/m	Over dB	Detector	Comment
1		4944.000	41.84	1.13	42.97	74.00	-31.03	peak	
2	*	4944.000	28.70	1.13	29.83	54.00	-24.17	AVG	

REMARKS:

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

Test Mode	IEEE 802.11n (HT20)	Test Date	2022/12/21
Test Frequency	2472MHz	Polarization	Horizontal
Temp	23°C	Hum.	59%

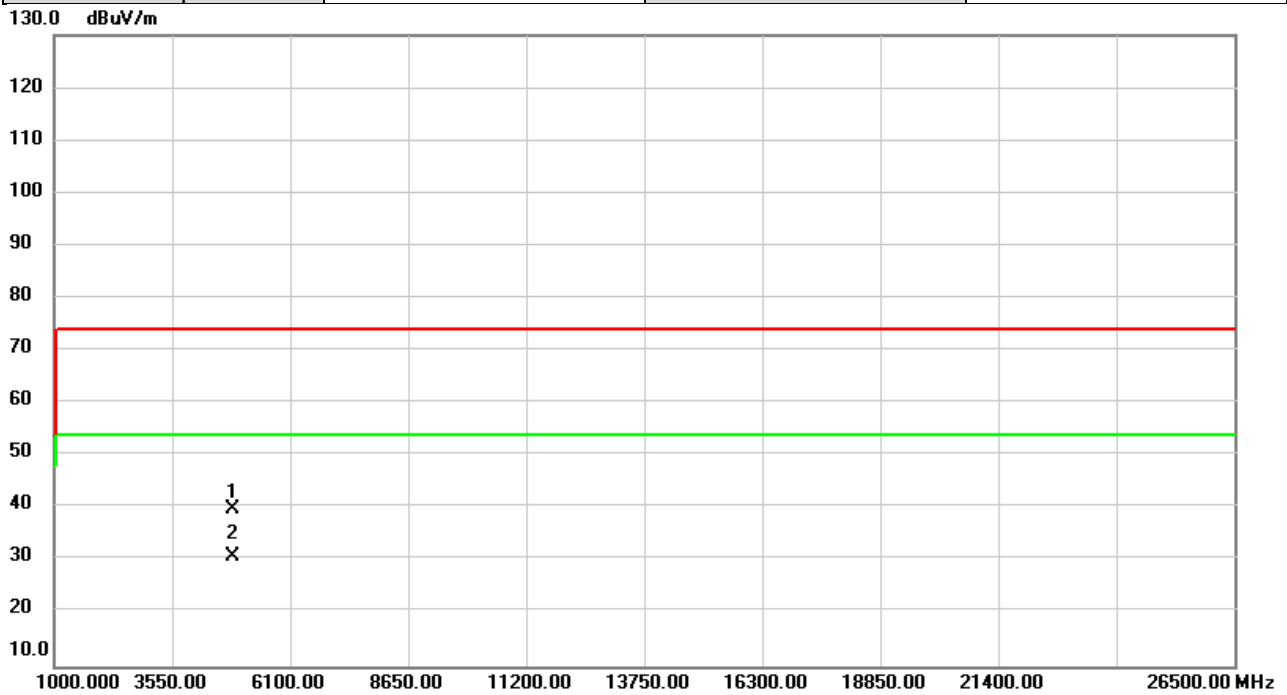


No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV/m	Limit dBuV/m	Over dB	Detector	Comment
1		4944.000	39.60	1.13	40.73	74.00	-33.27	peak	
2	*	4944.000	28.63	1.13	29.76	54.00	-24.24	AVG	

REMARKS:

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

Test Mode	IEEE 802.11n (HT40)	Test Date	2022/12/21
Test Frequency	2422MHz	Polarization	Vertical
Temp	23°C	Hum.	59%

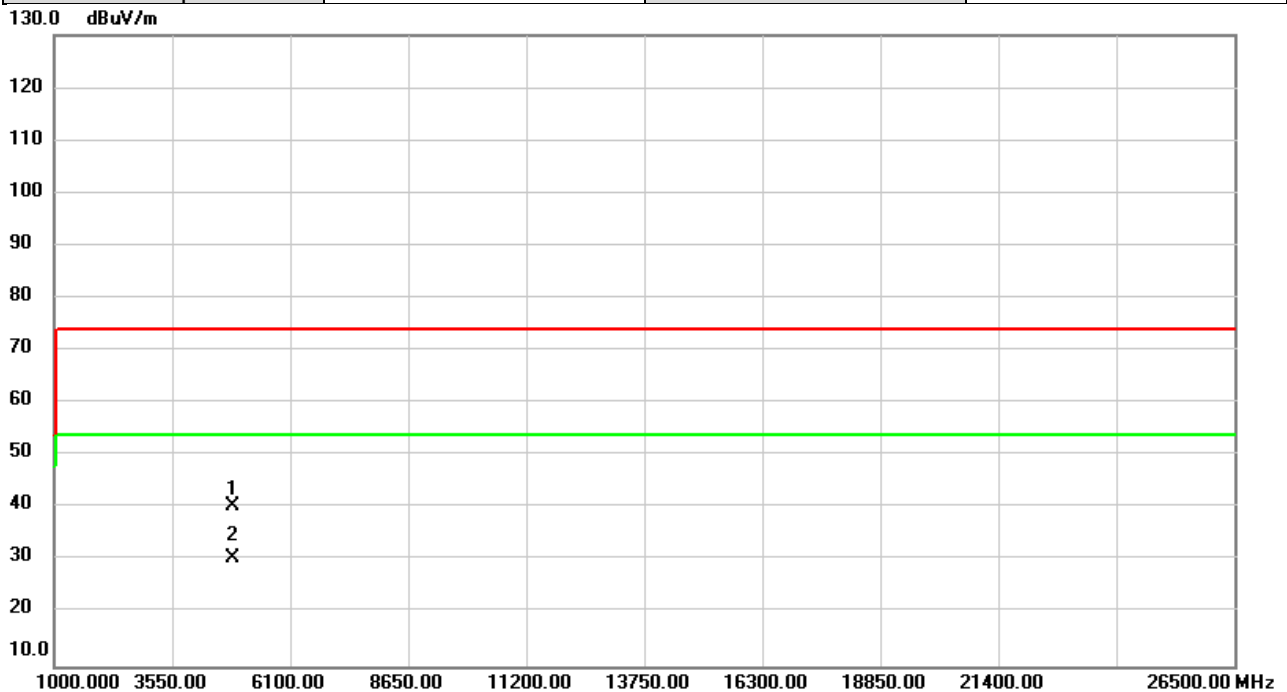


No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1		4844.000	39.10	0.78	39.88	74.00	-34.12	peak	
2	*	4844.000	30.10	0.78	30.88	54.00	-23.12	AVG	

REMARKS:

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

Test Mode	IEEE 802.11n (HT40)	Test Date	2022/12/21
Test Frequency	2422MHz	Polarization	Horizontal
Temp	23°C	Hum.	59%

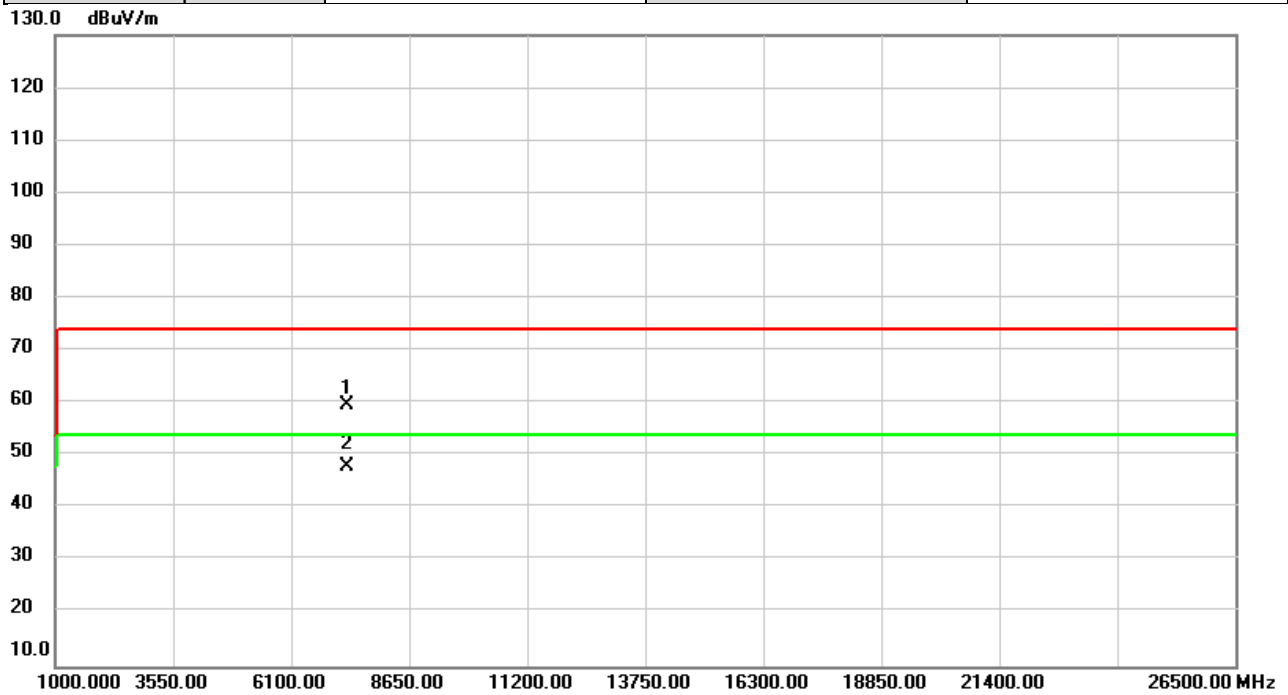


No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1		4844.000	39.79	0.78	40.57	74.00	-33.43	peak	
2	*	4844.000	29.86	0.78	30.64	54.00	-23.36	AVG	

REMARKS:

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

Test Mode	IEEE 802.11n (HT40)	Test Date	2022/12/21
Test Frequency	2437MHz	Polarization	Vertical
Temp	23°C	Hum.	59%

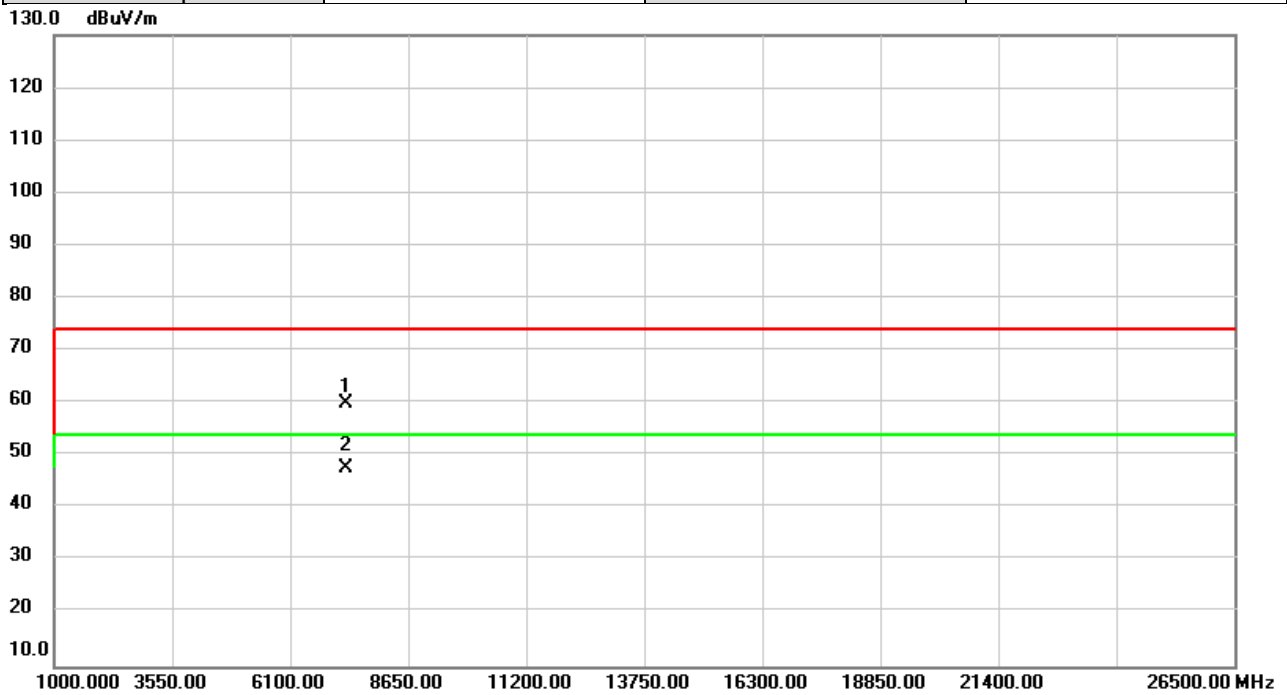


No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV/m	Limit dBuV/m	Over dB	Detector	Comment
1		7311.000	54.07	5.57	59.64	74.00	-14.36	peak	
2	*	7311.000	42.47	5.57	48.04	54.00	-5.96	AVG	

REMARKS:

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

Test Mode	IEEE 802.11n (HT40)	Test Date	2022/12/21
Test Frequency	2437MHz	Polarization	Horizontal
Temp	23°C	Hum.	59%

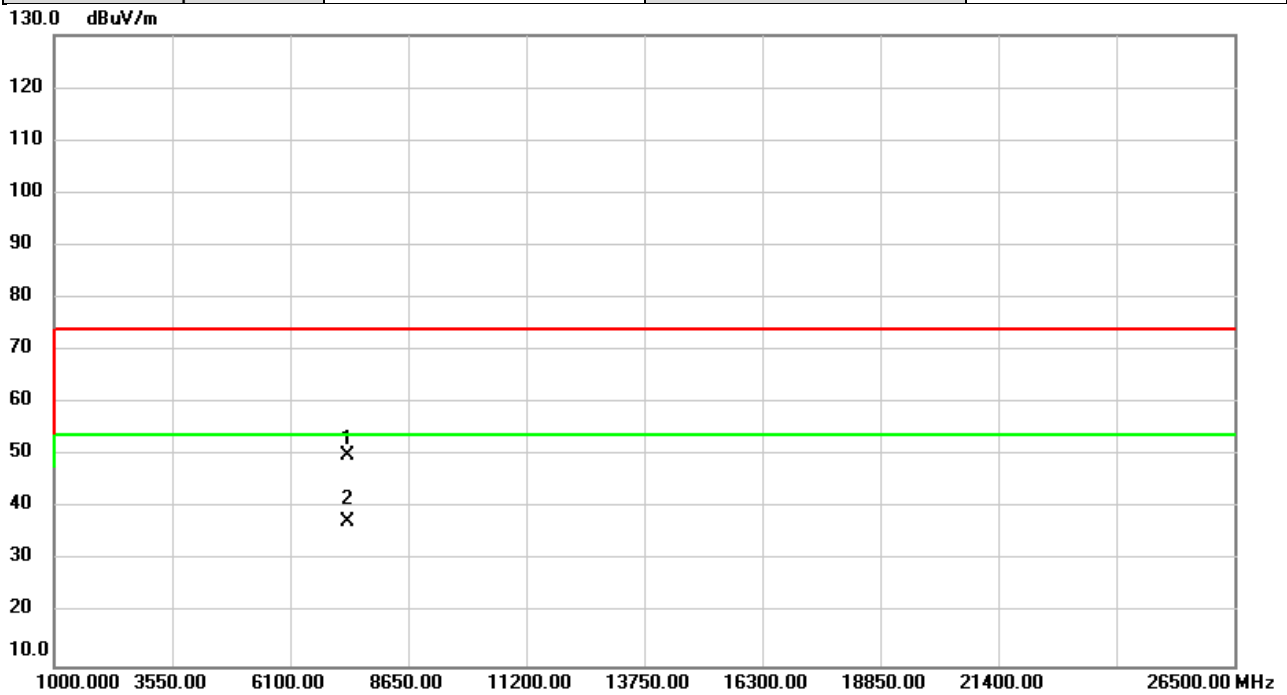


No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1		7311.000	54.49	5.57	60.06	74.00	-13.94	peak	
2	*	7311.000	41.94	5.57	47.51	54.00	-6.49	AVG	

REMARKS:

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

Test Mode	IEEE 802.11n (HT40)	Test Date	2022/12/21
Test Frequency	2452MHz	Polarization	Vertical
Temp	23°C	Hum.	59%

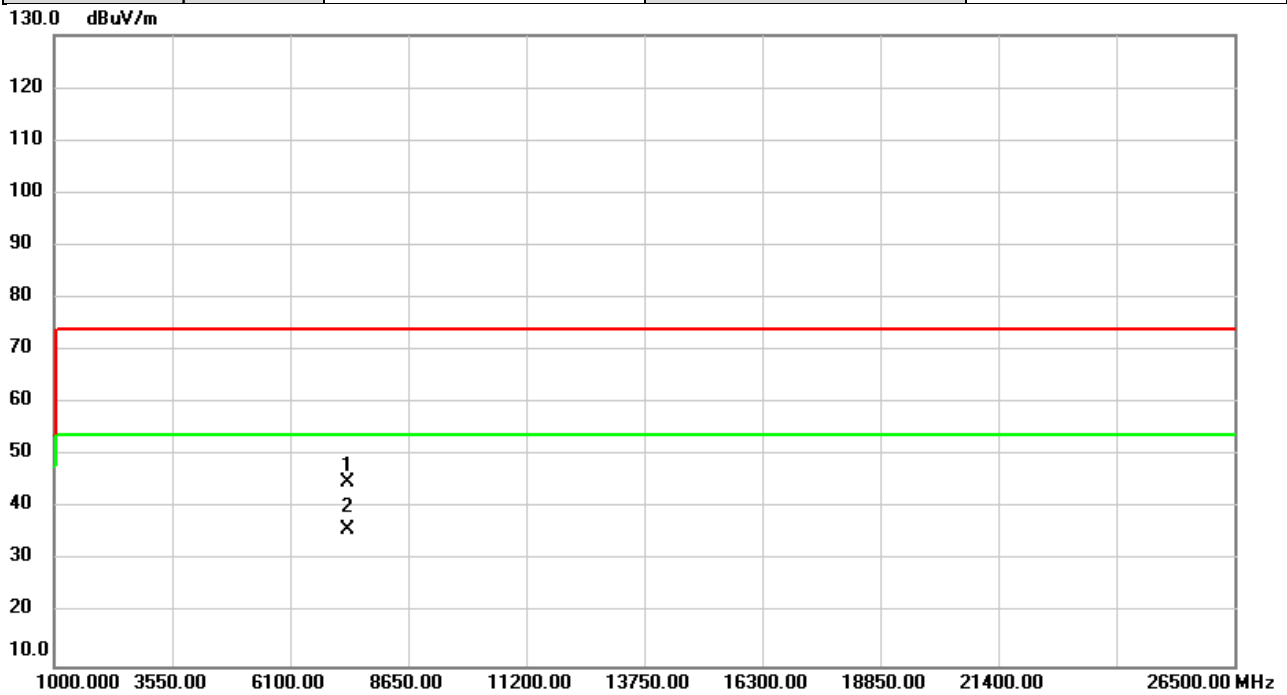


No.	Mk.	Freq.	Reading Level	Correct Factor	Measurement	Limit	Over		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1		7356.000	44.46	5.57	50.03	74.00	-23.97	peak	
2	*	7356.000	31.80	5.57	37.37	54.00	-16.63	AVG	

REMARKS:

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

Test Mode	IEEE 802.11n (HT40)	Test Date	2022/12/21
Test Frequency	2452MHz	Polarization	Horizontal
Temp	23°C	Hum.	59%

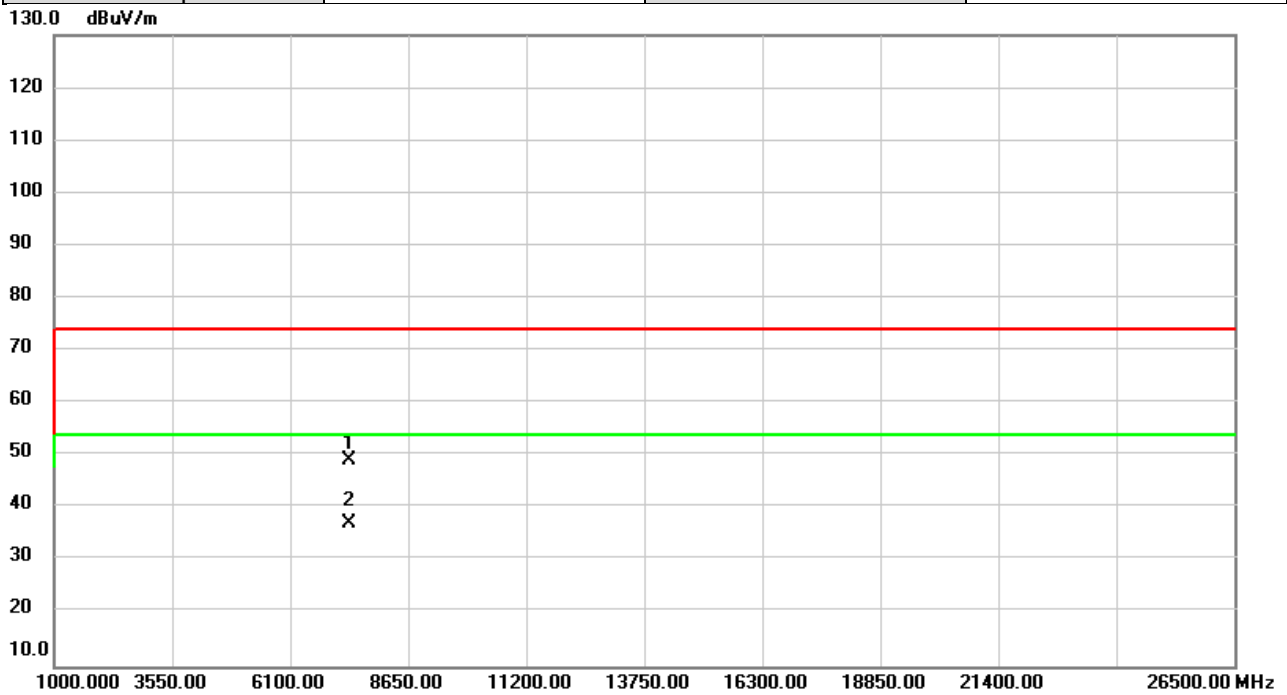


No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1		7356.000	39.42	5.57	44.99	74.00	-29.01	peak	
2	*	7356.000	30.41	5.57	35.98	54.00	-18.02	AVG	

REMARKS:

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

Test Mode	IEEE 802.11n (HT40)	Test Date	2022/12/21
Test Frequency	2457MHz	Polarization	Vertical
Temp	23°C	Hum.	59%

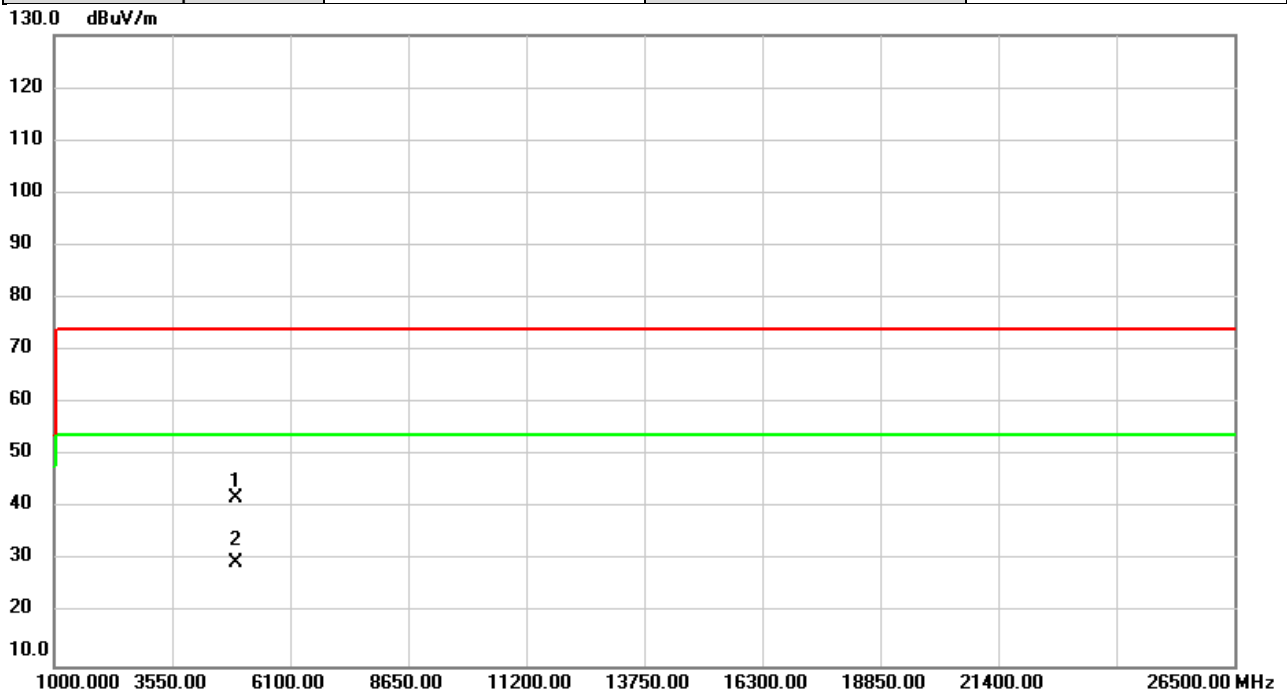


No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1		7371.000	43.45	5.58	49.03	74.00	-24.97	peak	
2	*	7371.000	31.65	5.58	37.23	54.00	-16.77	AVG	

REMARKS:

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

Test Mode	IEEE 802.11n (HT40)	Test Date	2022/12/21
Test Frequency	2457MHz	Polarization	Horizontal
Temp	23°C	Hum.	59%

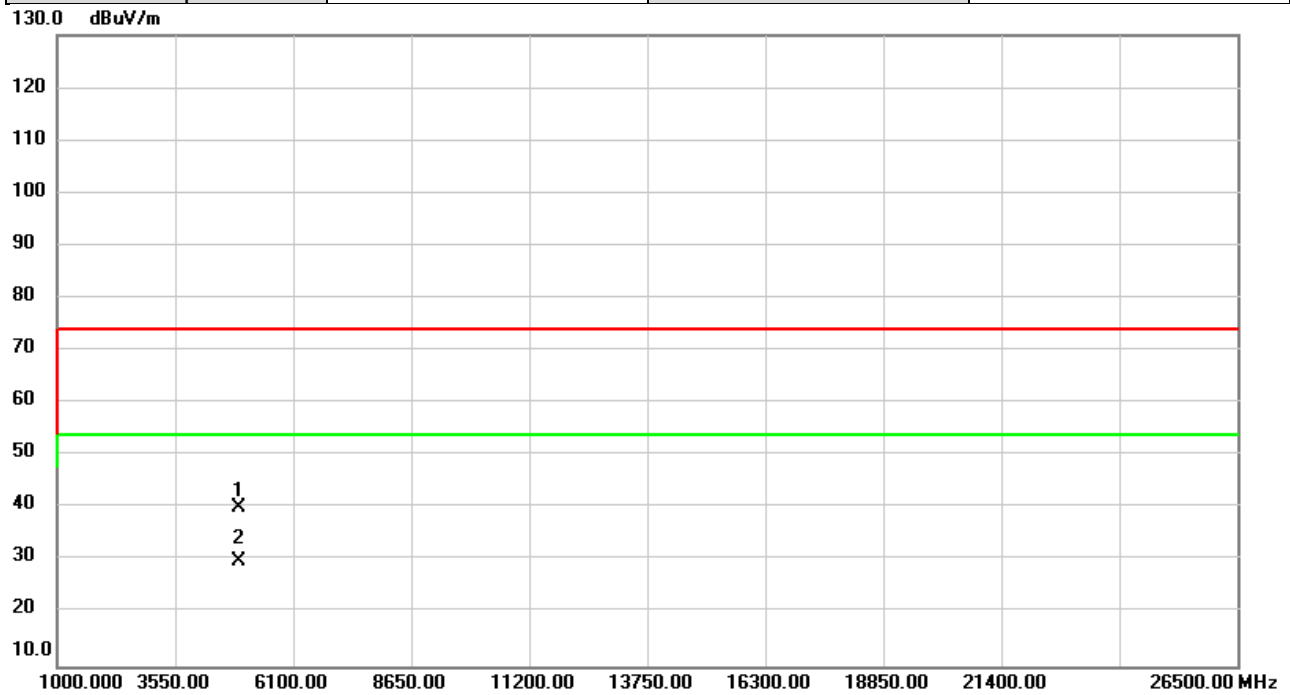


No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV/m	Limit dBuV/m	Over dB	Detector	Comment
1		4914.000	40.98	1.02	42.00	74.00	-32.00	peak	
2	*	4914.000	28.73	1.02	29.75	54.00	-24.25	AVG	

REMARKS:

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

Test Mode	IEEE 802.11n (HT40)	Test Date	2022/12/21
Test Frequency	2462MHz	Polarization	Vertical
Temp	23°C	Hum.	59%

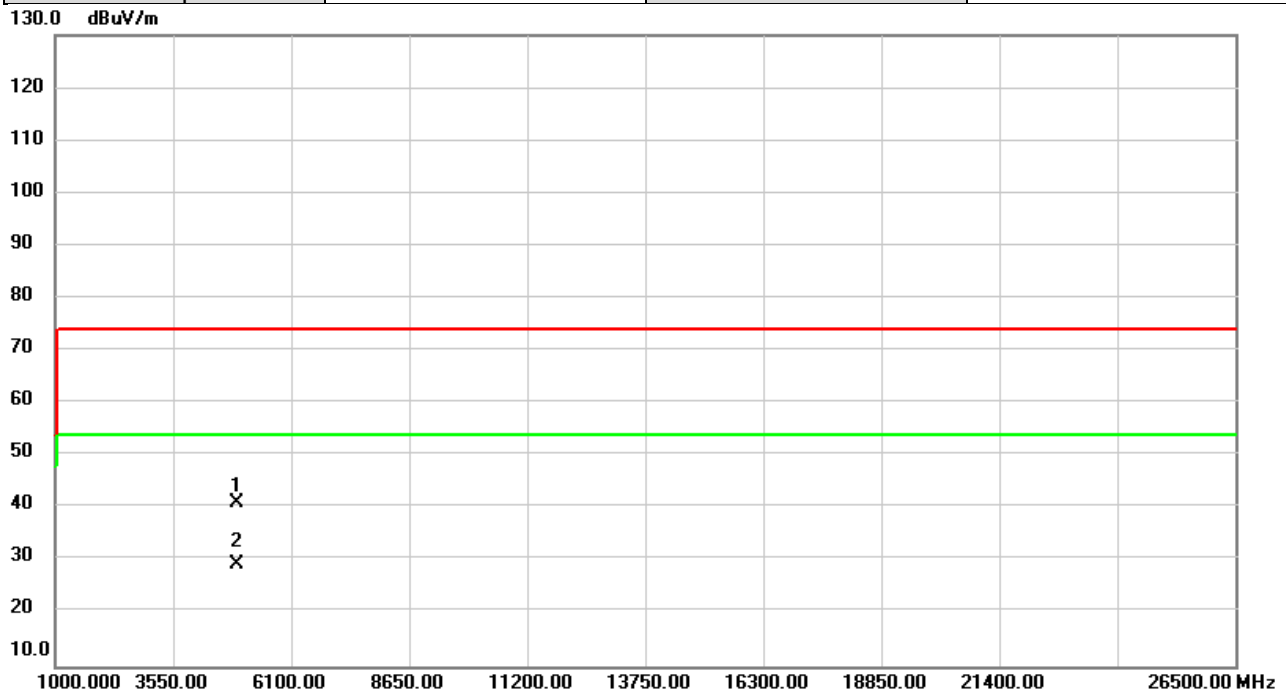


No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1		4924.000	38.96	1.07	40.03	74.00	-33.97	peak	
2	*	4924.000	28.86	1.07	29.93	54.00	-24.07	AVG	

REMARKS:

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

Test Mode	IEEE 802.11n (HT40)	Test Date	2022/12/21
Test Frequency	2462MHz	Polarization	Horizontal
Temp	23°C	Hum.	59%



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1		4924.000	40.02	1.07	41.09	74.00	-32.91	peak	
2	*	4924.000	28.31	1.07	29.38	54.00	-24.62	AVG	

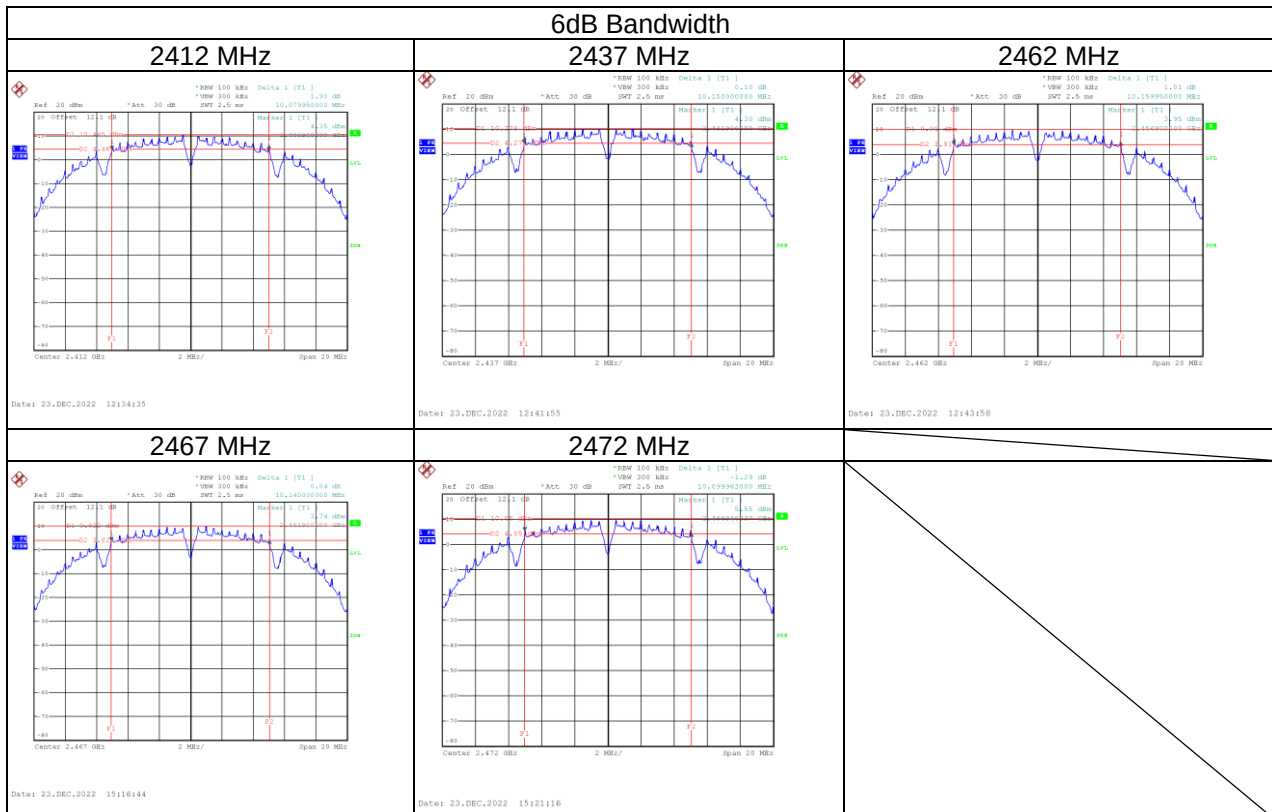
REMARKS:

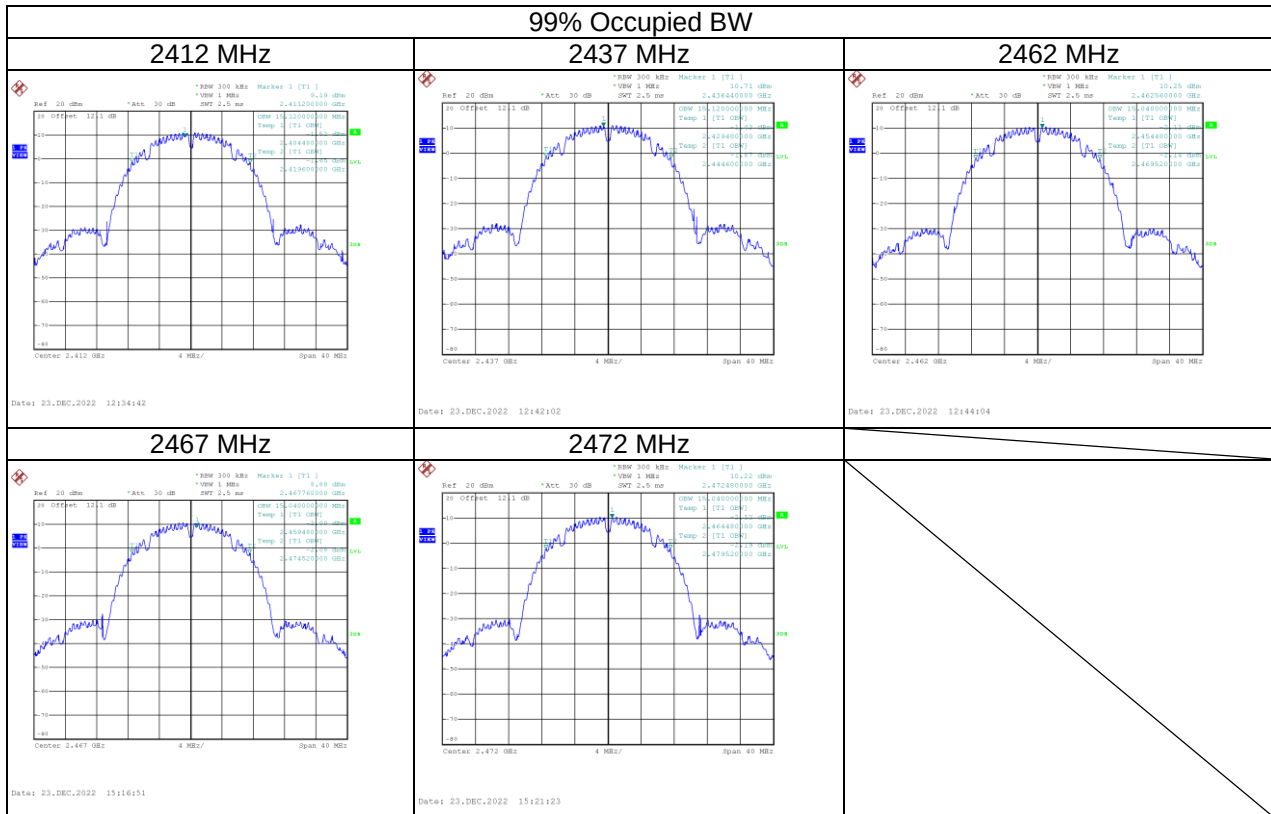
- (1) Measurement Value = Reading Level + Correct Factor.
- (2) Margin Level = Measurement Value - Limit Value.

APPENDIX D BANDWIDTH

Test Mode	IEEE 802.11b
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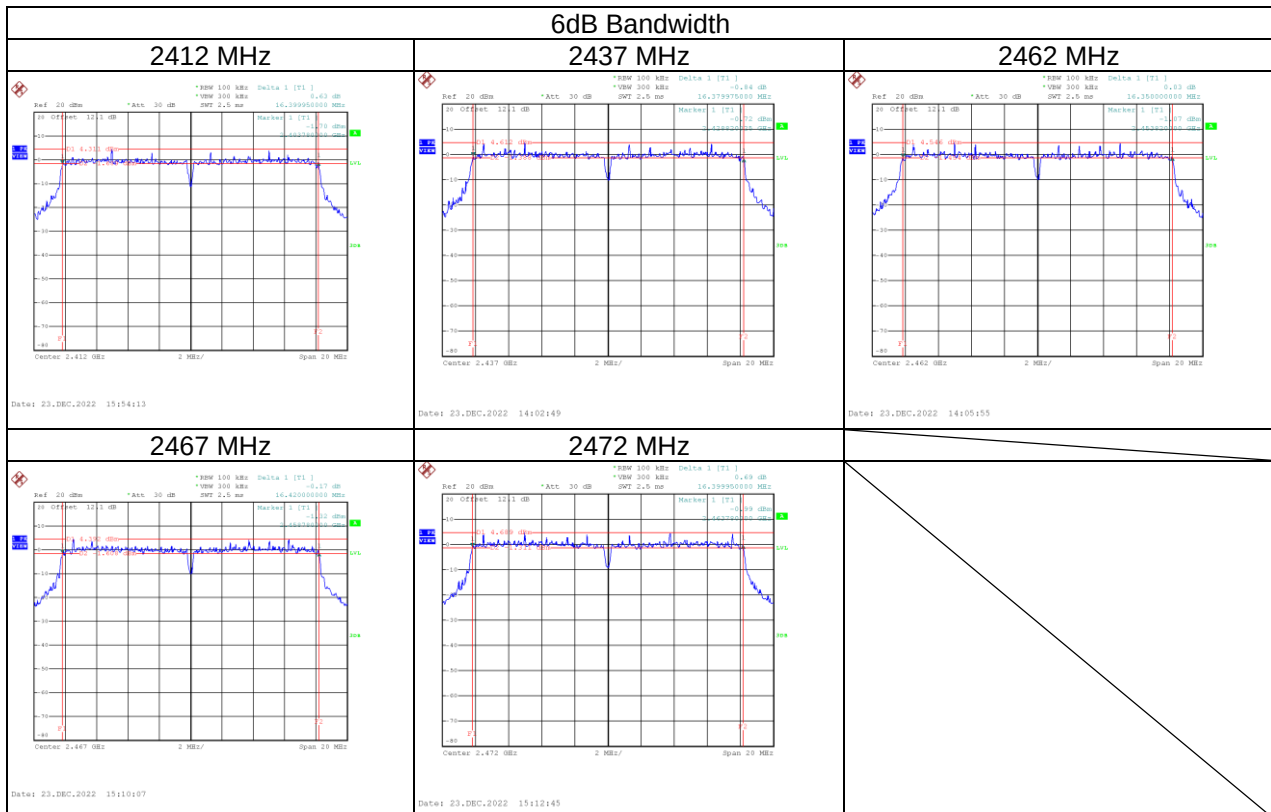
Test Frequency (MHz)	6 dB Bandwidth (MHz)	99 % Occupied Bandwidth (MHz)	Minimum 6 dB Bandwidth Limit (kHz)	Result
2412	10.08	15.12	≥ 500	Pass
2437	10.15	15.12	≥ 500	Pass
2462	10.16	15.04	≥ 500	Pass
2467	10.14	15.04	≥ 500	Pass
2472	10.10	15.04	≥ 500	Pass





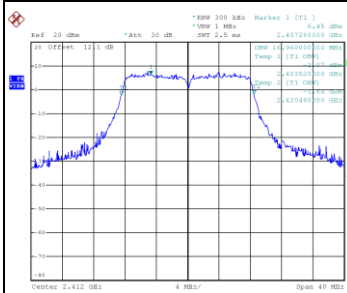
Test Mode	IEEE 802.11g
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Test Frequency (MHz)	6 dB Bandwidth (MHz)	99 % Occupied Bandwidth (MHz)	Minimum 6 dB Bandwidth Limit (kHz)	Result
2412	16.40	16.96	≥ 500	Pass
2437	16.38	17.12	≥ 500	Pass
2462	16.35	16.96	≥ 500	Pass
2467	16.42	16.96	≥ 500	Pass
2472	16.40	16.96	≥ 500	Pass



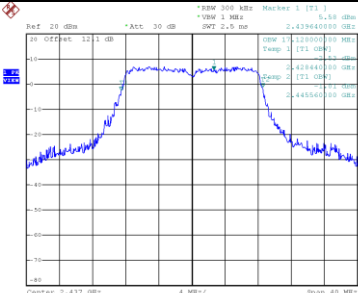
99% Occupied BW

2412 MHz



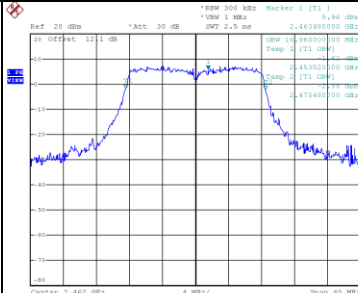
Date: 23.DEC.2022 13:55:46

2437 MHz



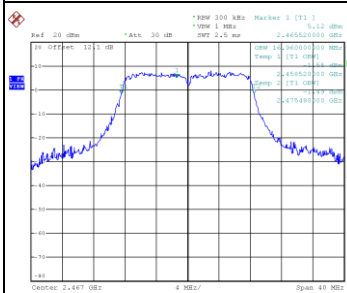
Date: 23.DEC.2022 14:02:56

2462 MHz



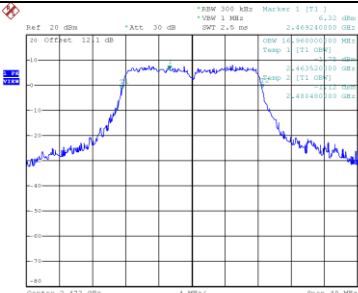
Date: 23.DEC.2022 14:06:01

2467 MHz



Date: 23.DEC.2022 15:10:14

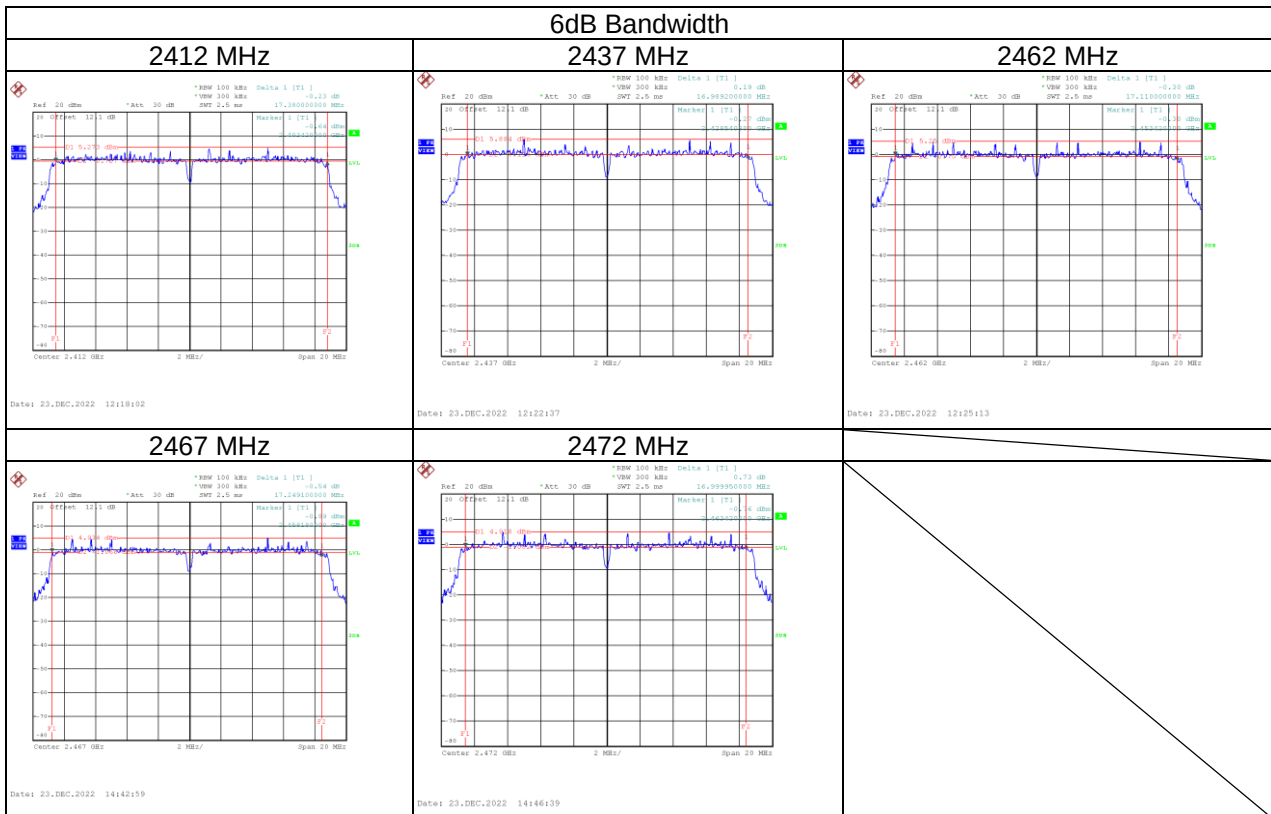
2472 MHz



Date: 23.DEC.2022 15:12:52

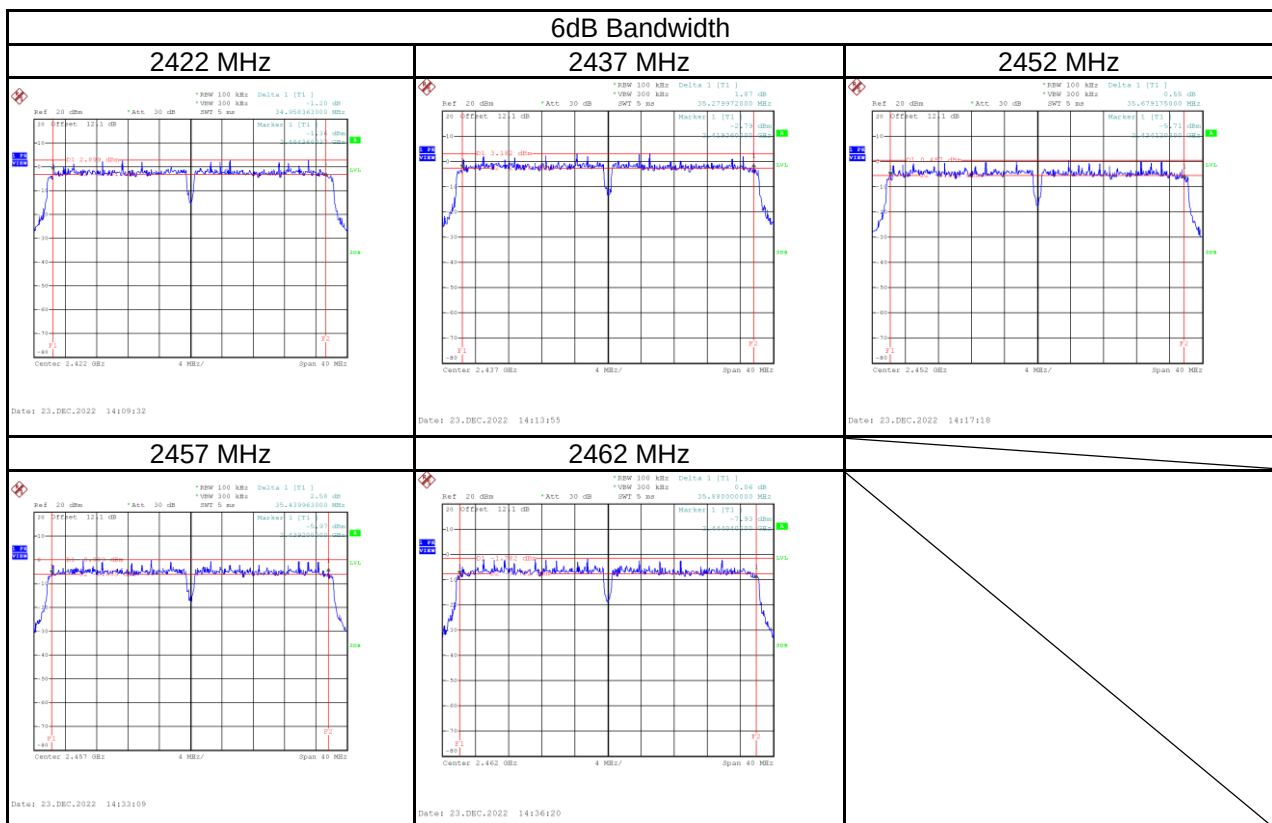
Test Mode	IEEE 802.11n (HT20)
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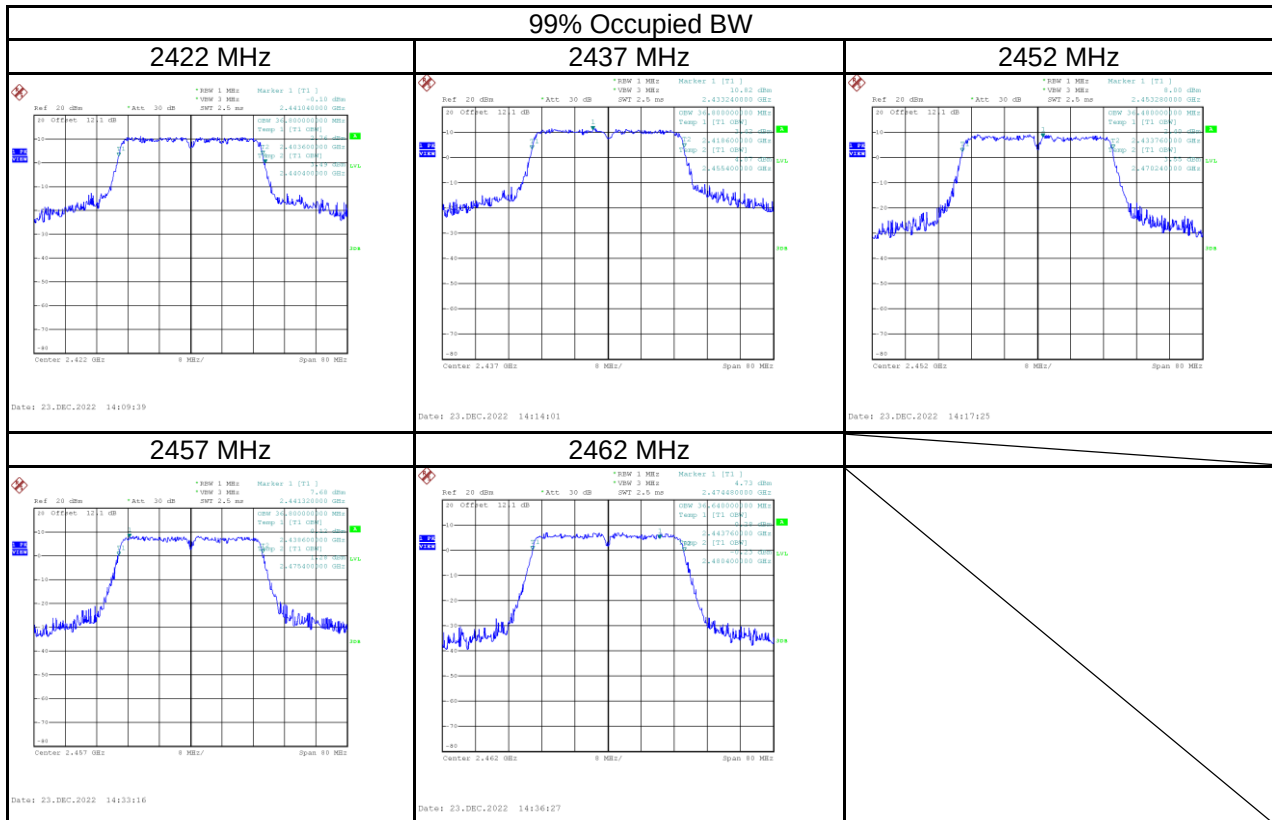
Test Frequency (MHz)	6 dB Bandwidth (MHz)	99 % Occupied Bandwidth (MHz)	Minimum 6 dB Bandwidth Limit (kHz)	Result
2412	17.38	17.92	≥ 500	Pass
2437	16.99	18.00	≥ 500	Pass
2462	17.11	18.00	≥ 500	Pass
2467	17.25	17.92	≥ 500	Pass
2472	17.00	18.00	≥ 500	Pass

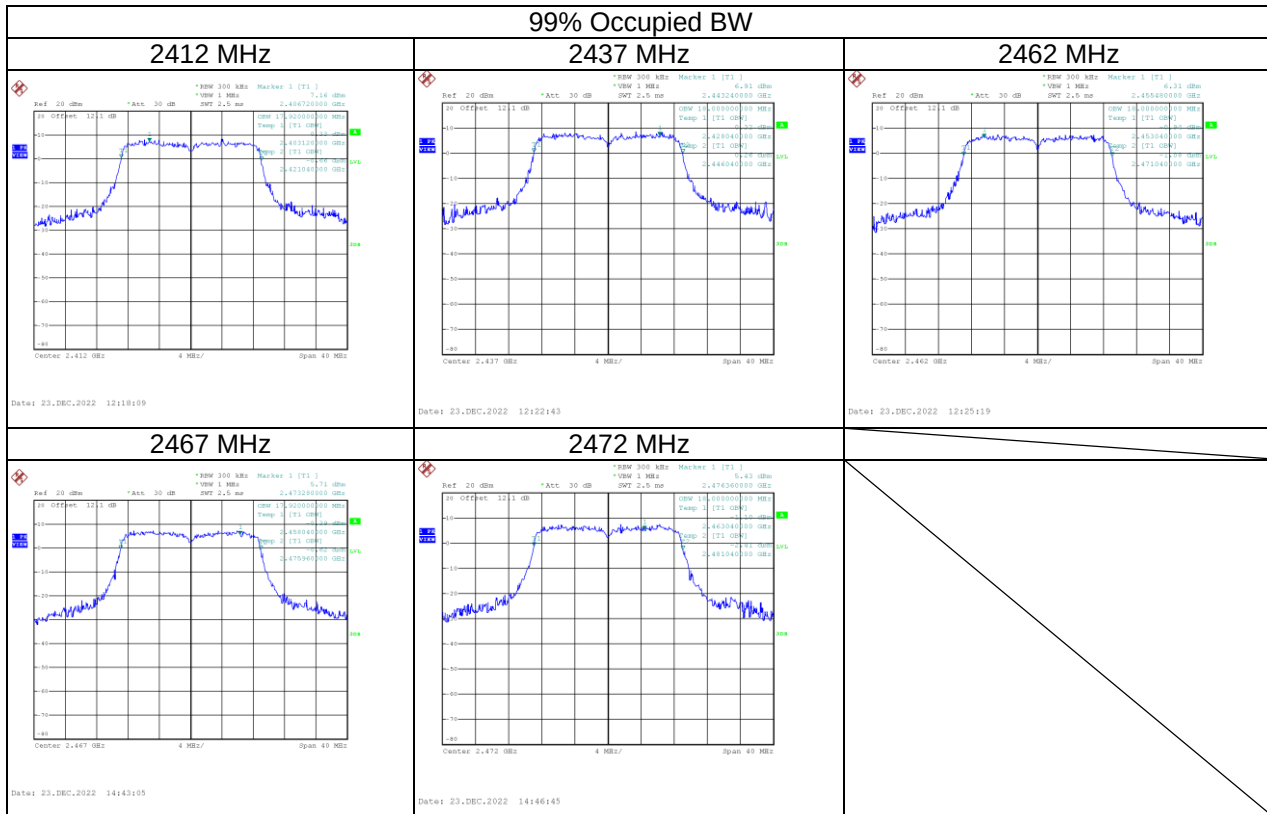


Test Mode	IEEE 802.11n (HT40)
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Test Frequency (MHz)	6 dB Bandwidth (MHz)	99 % Occupied Bandwidth (MHz)	Minimum 6 dB Bandwidth Limit (kHz)	Result
2422	34.96	36.80	≥ 500	Pass
2437	35.28	36.80	≥ 500	Pass
2452	35.68	36.48	≥ 500	Pass
2457	35.44	36.80	≥ 500	Pass
2462	35.88	36.64	≥ 500	Pass







APPENDIX E OUTPUT POWER

Test Mode	IEEE 802.11b	Tested Date	2022/12/21
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Frequency (MHz)	Conducted Power (dBm)	Conducted Power (W)	Limit (dBm)	Limit (W)	Result
2412	18.39	0.0690	30.00	1.0000	Complies
2437	18.44	0.0698	30.00	1.0000	Complies
2462	18.45	0.0700	30.00	1.0000	Complies
2467	18.56	0.0718	30.00	1.0000	Complies
2472	11.73	0.0149	30.00	1.0000	Complies

Test Mode	IEEE 802.11g	Tested Date	2022/12/21
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Frequency (MHz)	Conducted Power (dBm)	Conducted Power (W)	Limit (dBm)	Limit (W)	Result
2412	24.03	0.2529	30.00	1.0000	Complies
2437	23.71	0.2350	30.00	1.0000	Complies
2462	23.86	0.2432	30.00	1.0000	Complies
2467	23.85	0.2427	30.00	1.0000	Complies
2472	18.54	0.0714	30.00	1.0000	Complies

Test Mode	IEEE 802.11n (HT20)	Tested Date	2022/12/21
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Frequency (MHz)	Conducted Power (dBm)	Conducted Power (W)	Limit (dBm)	Limit (W)	Result
2412	23.34	0.2158	30.00	1.0000	Complies
2437	24.09	0.2564	30.00	1.0000	Complies
2462	23.23	0.2104	30.00	1.0000	Complies
2467	23.10	0.2042	30.00	1.0000	Complies
2472	19.51	0.0893	30.00	1.0000	Complies

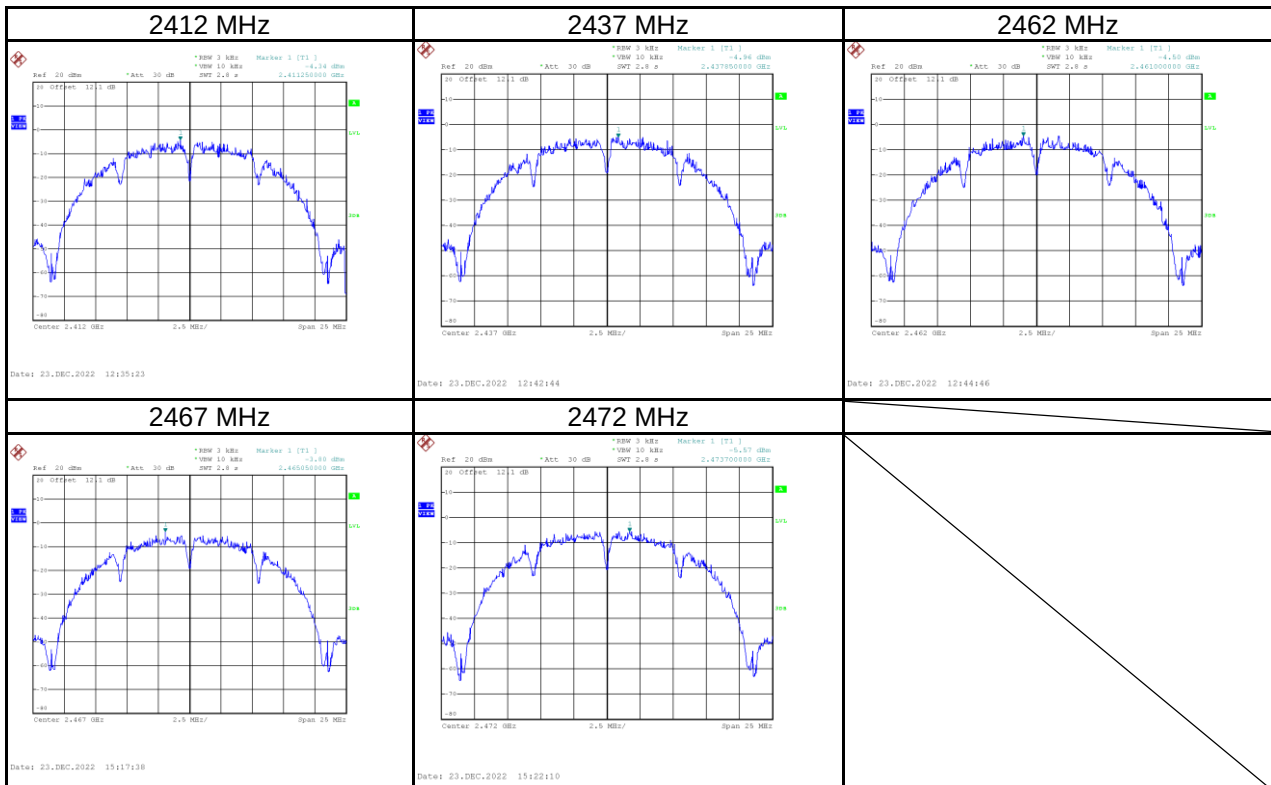
Test Mode	IEEE 802.11n (HT40)	Tested Date	2022/12/21
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Frequency (MHz)	Conducted Power (dBm)	Conducted Power (W)	Limit (dBm)	Limit (W)	Result
2422	22.43	0.1750	30.00	1.0000	Complies
2437	23.44	0.2208	30.00	1.0000	Complies
2452	23.39	0.2181	30.00	1.0000	Complies
2457	23.45	0.2213	30.00	1.0000	Complies
2462	22.58	0.1811	30.00	1.0000	Complies

APPENDIX F POWER SPECTRAL DENSITY

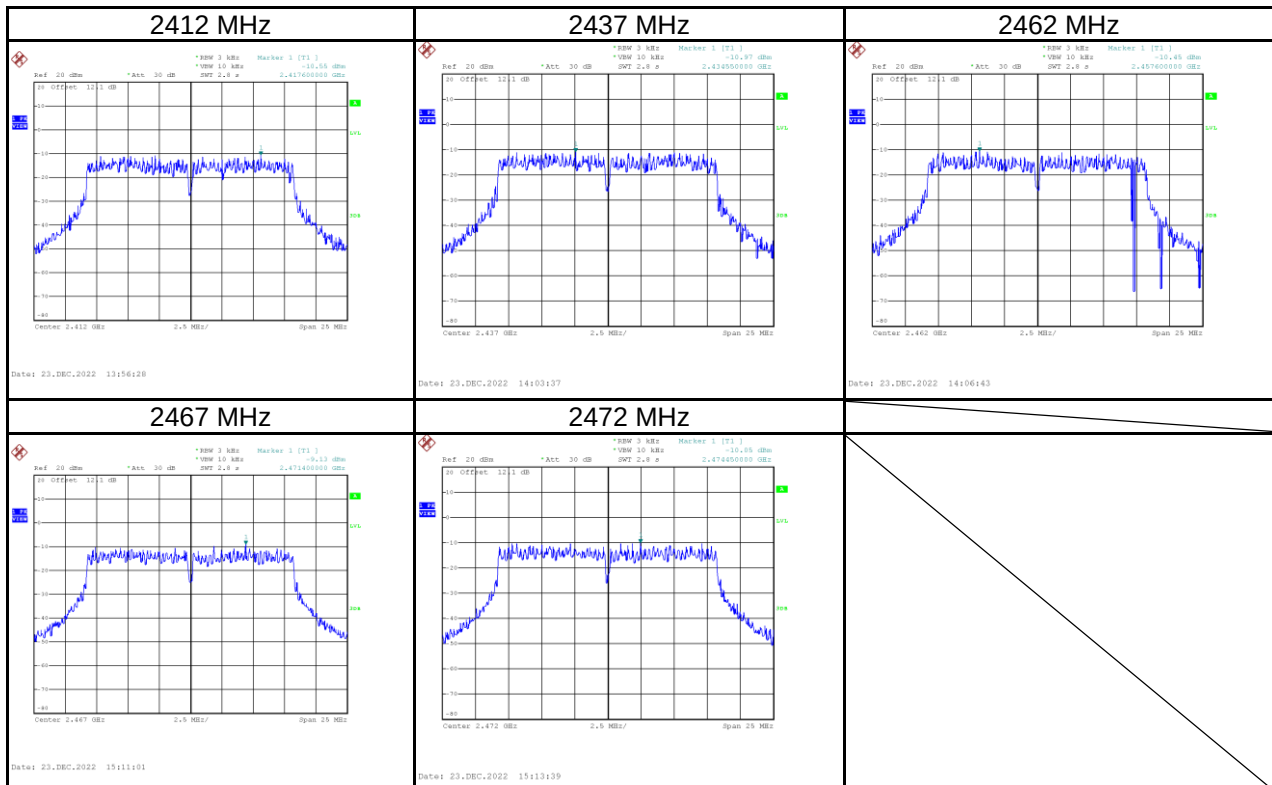
Test Mode	IEEE 802.11b
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Test Frequency (MHz)	Power Spectral Density (dBm/3kHz)	Maximum Limit (dBm/3kHz)	Result
2412	-4.34	8.00	Pass
2437	-4.96	8.00	Pass
2462	-4.50	8.00	Pass
2467	-3.80	8.00	Pass
2472	-5.57	8.00	Pass



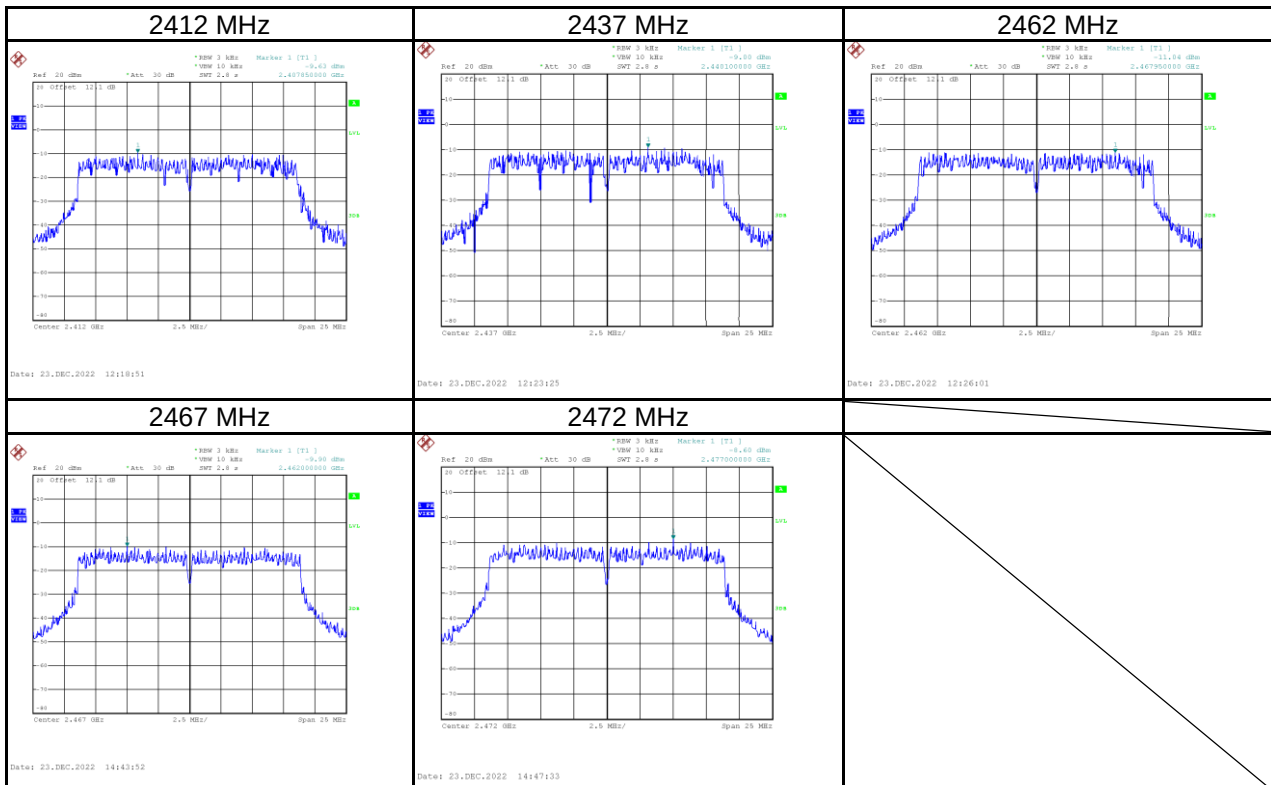
Test Mode	IEEE 802.11g
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Test Frequency (MHz)	Power Spectral Density (dBm/3kHz)	Maximum Limit (dBm/3kHz)	Result
2412	-10.55	8.00	Pass
2437	-10.97	8.00	Pass
2462	-10.45	8.00	Pass
2467	-9.13	8.00	Pass
2472	-10.05	8.00	Pass



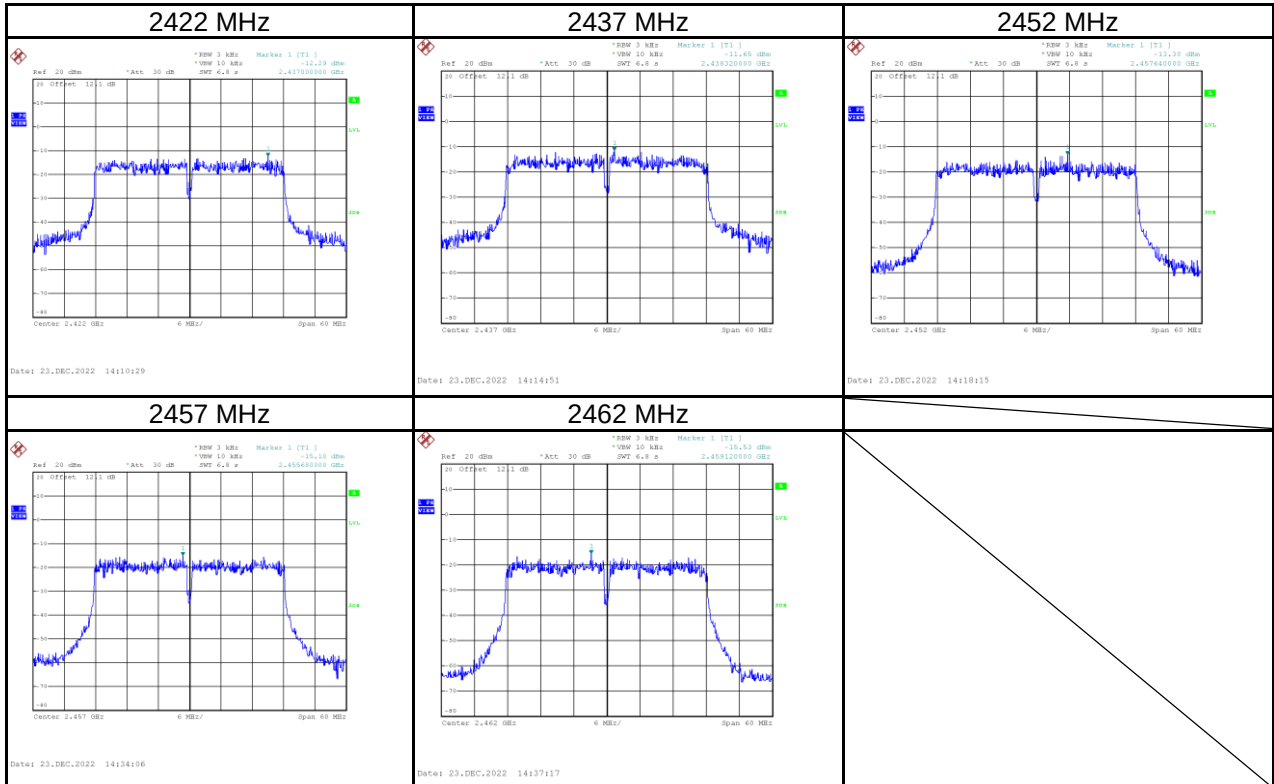
Test Mode	IEEE 802.11n (HT20)
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Test Frequency (MHz)	Power Spectral Density (dBm/3kHz)	Maximum Limit (dBm/3kHz)	Result
2412	-9.63	8.00	Pass
2437	-9.00	8.00	Pass
2462	-11.04	8.00	Pass
2467	-9.90	8.00	Pass
2472	-8.60	8.00	Pass



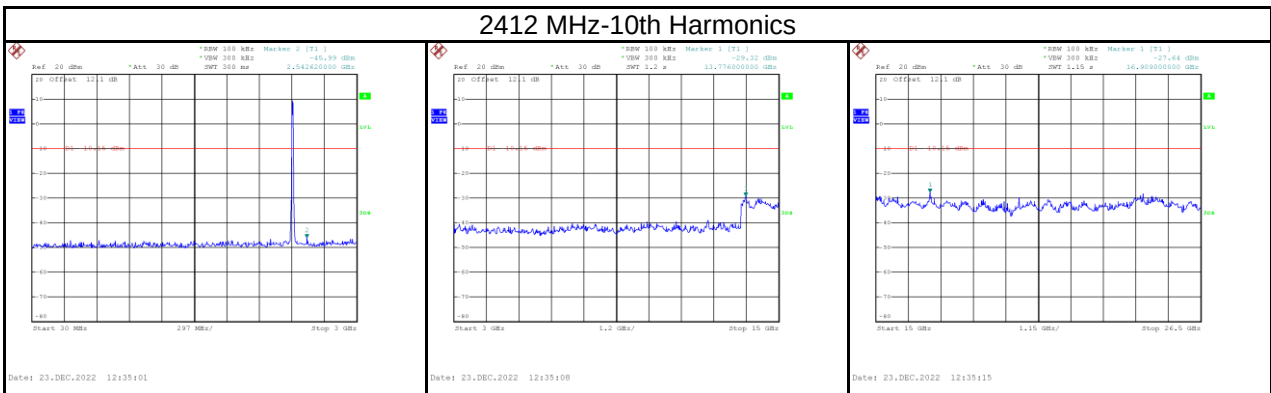
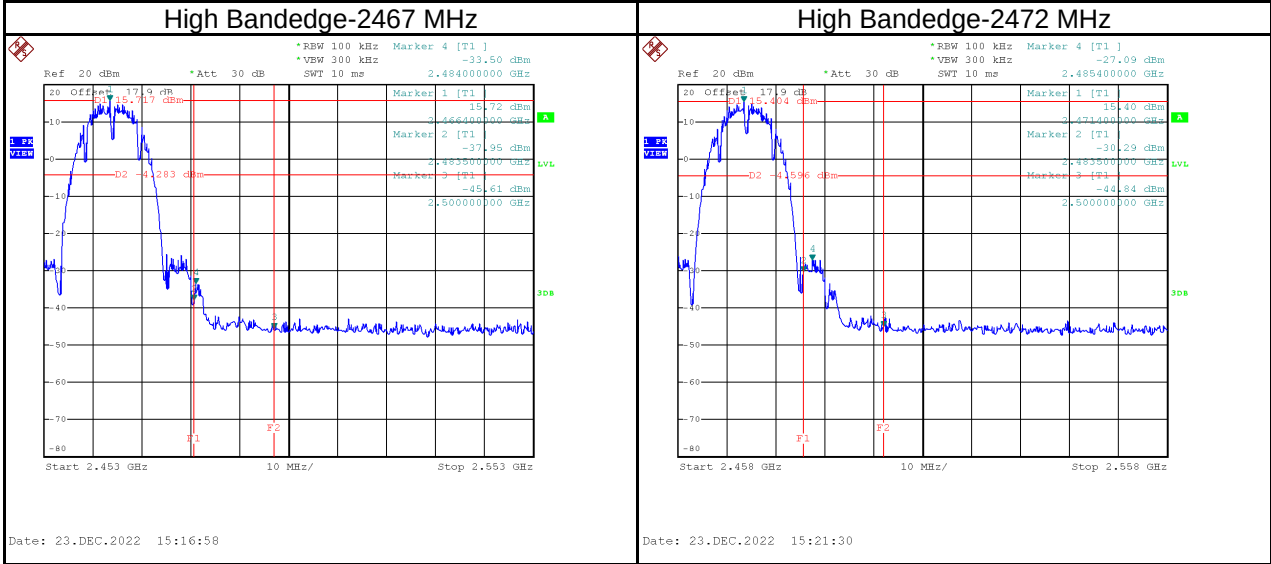
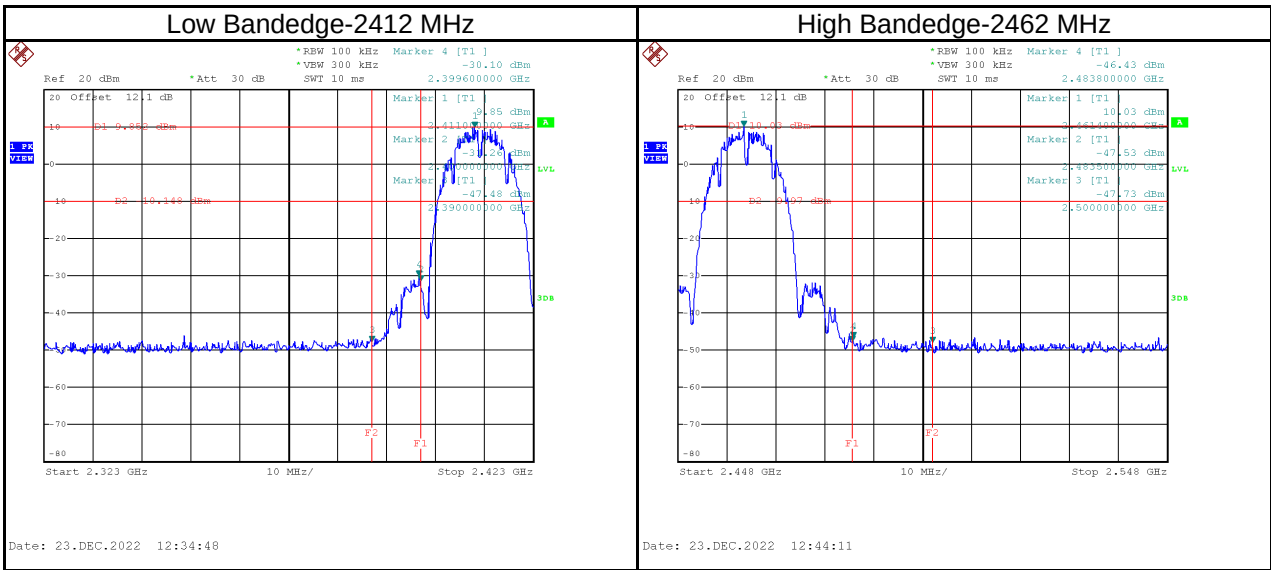
Test Mode	IEEE 802.11n (HT40)
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Test Frequency (MHz)	Power Spectral Density (dBm/3kHz)	Maximum Limit (dBm/3kHz)	Result
2422	-12.29	8.00	Pass
2437	-11.65	8.00	Pass
2452	-13.30	8.00	Pass
2457	-15.10	8.00	Pass
2462	-15.53	8.00	Pass

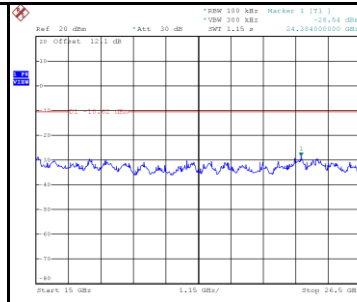
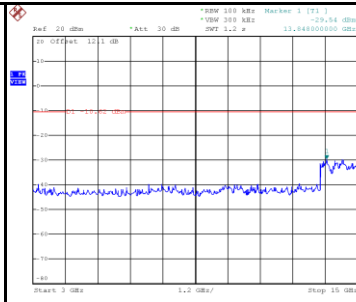
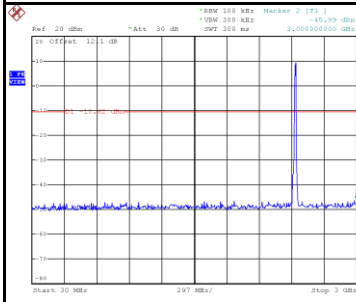


APPENDIX G ANTENNA CONDUCTED SPURIOUS EMISSIONS

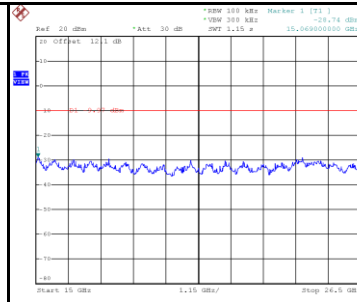
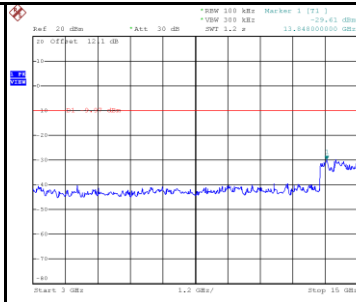
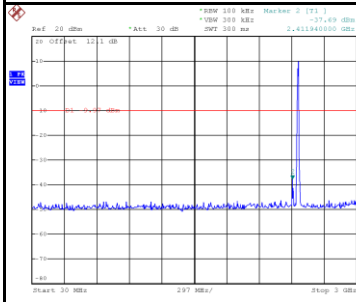
Test Mode	IEEE 802.11b
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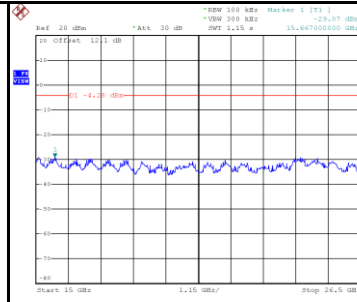
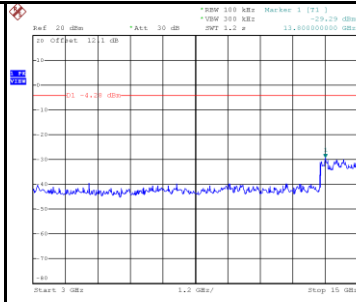
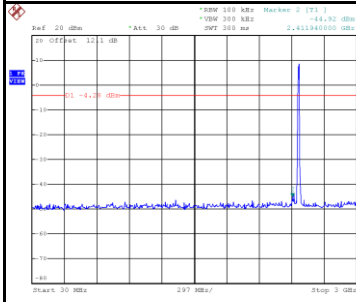
2437 MHz-10th Harmonics



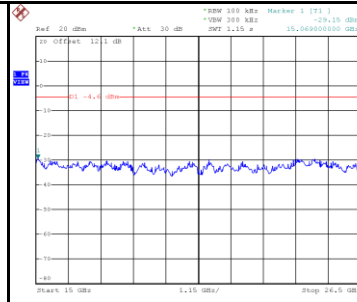
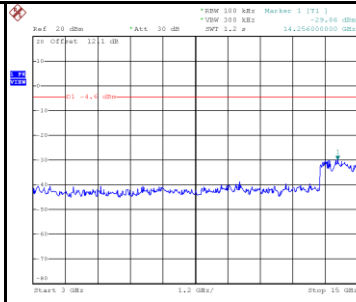
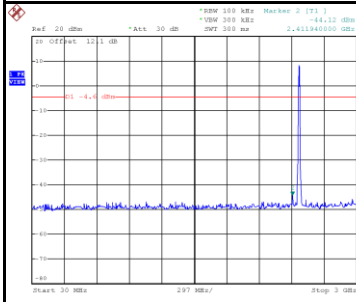
2462 MHz-10th Harmonics



2467 MHz-10th Harmonics

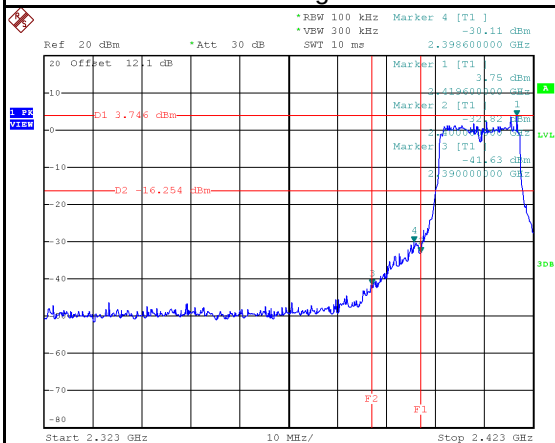


2472 MHz-10th Harmonics

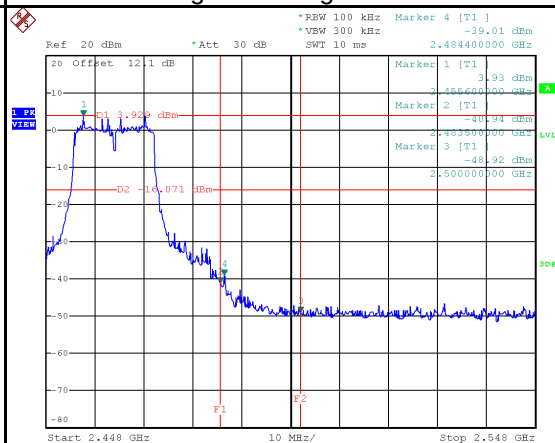


Test Mode IEEE 802.11g

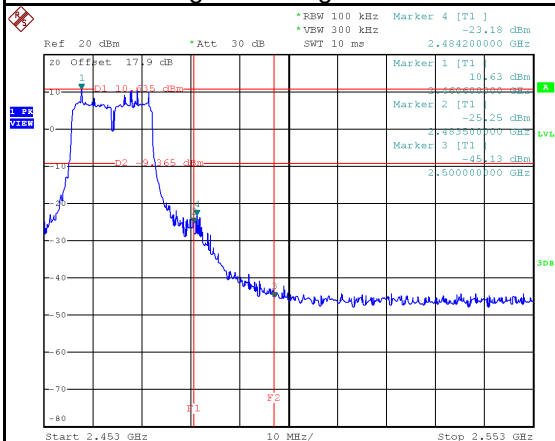
Low Bandedge-2412 MHz



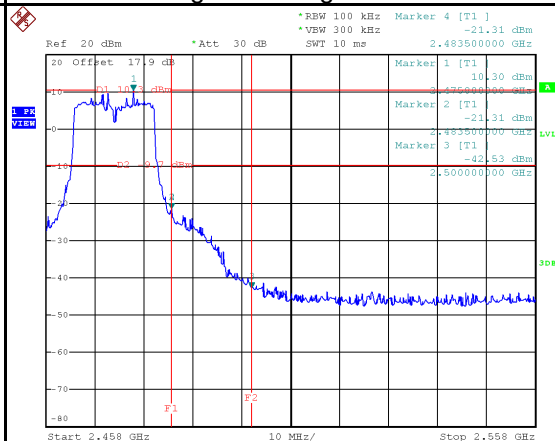
High Bandedge-2462 MHz



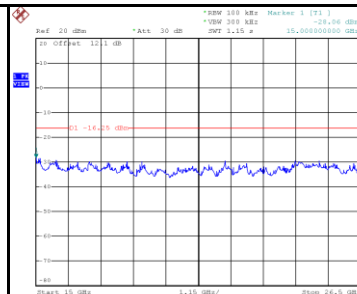
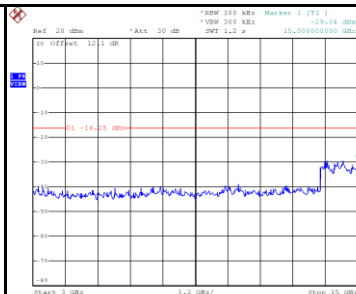
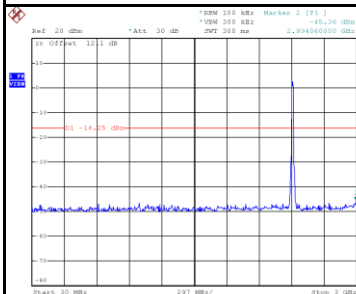
High Bandedge-2467 MHz



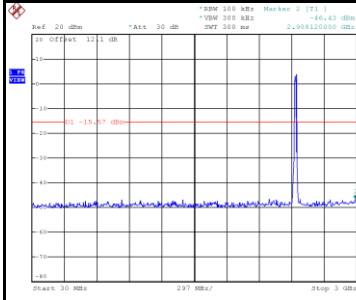
High Bandedge-2472 MHz



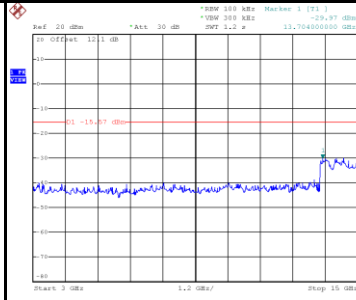
2412 MHz-10th Harmonics



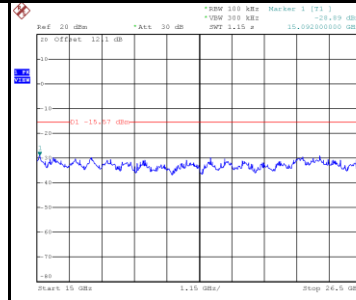
2437 MHz-10th Harmonics



Date: 23.DEC.2022 14:03:15

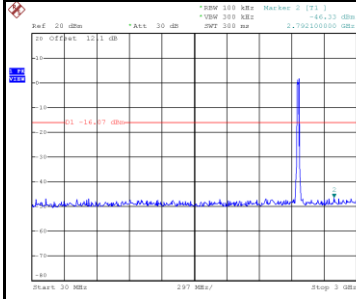


Date: 23.DEC.2022 14:03:22

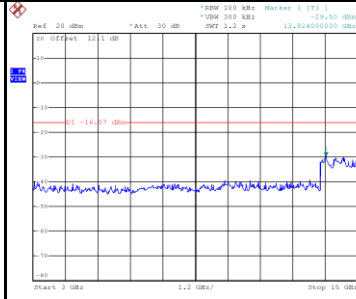


Date: 23.DEC.2022 14:03:29

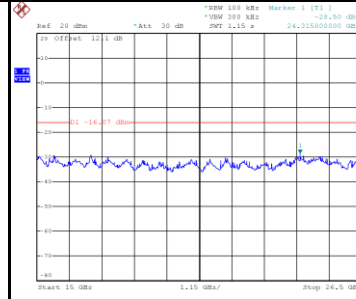
2462 MHz-10th Harmonics



Date: 23.DEC.2022 14:06:21

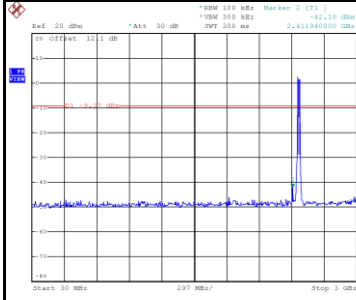


Date: 23.DEC.2022 14:06:28

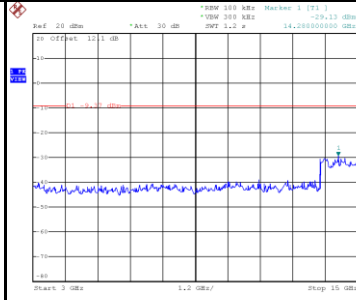


Date: 23.DEC.2022 14:06:35

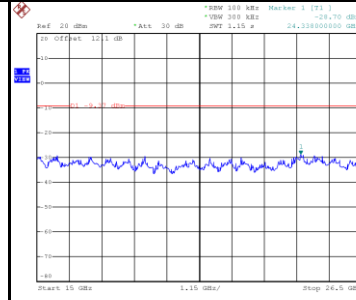
2467 MHz-10th Harmonics



Date: 23.DEC.2022 15:10:34

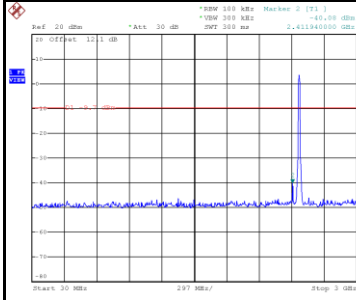


Date: 23.DEC.2022 15:10:41

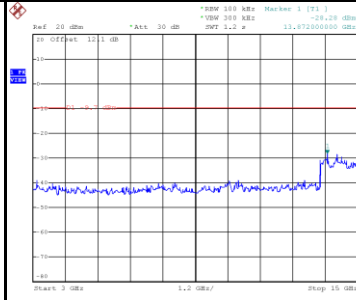


Date: 23.DEC.2022 15:10:47

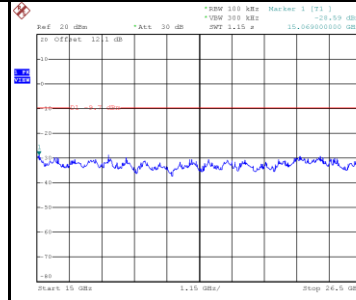
2472 MHz-10th Harmonics



Date: 23.DEC.2022 15:13:12



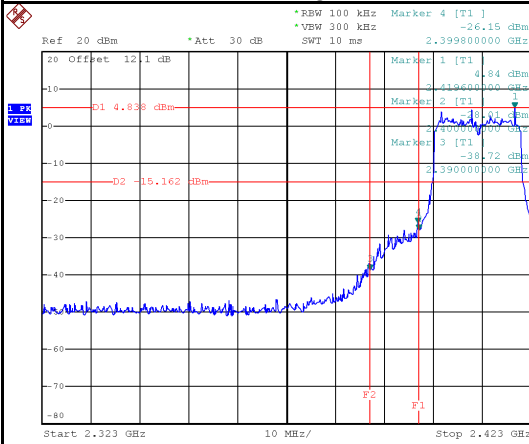
Date: 23.DEC.2022 15:13:19



Date: 23.DEC.2022 15:13:25

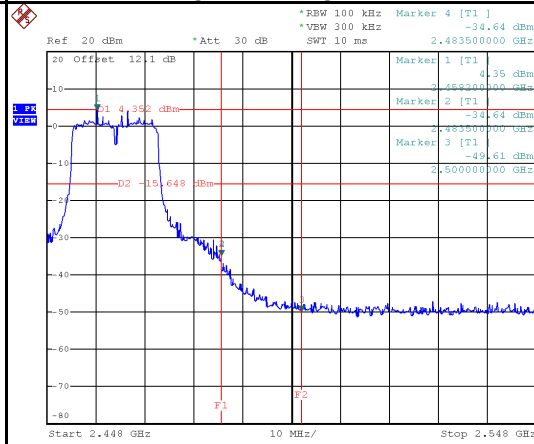
Test Mode IEEE 802.11n (HT20)

Low Bandedge-2412 MHz



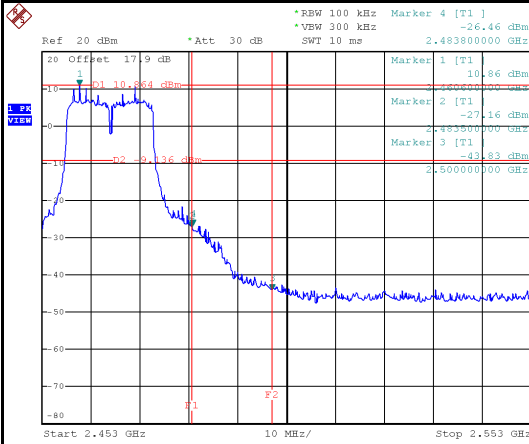
Date: 23.DEC.2022 12:18:16

High Bandedge-2462 MHz



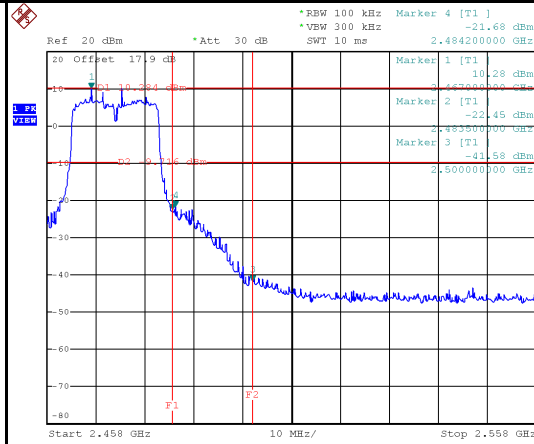
Date: 23.DEC.2022 12:25:26

High Bandedge-2467 MHz



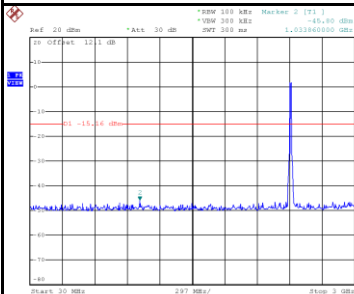
Date: 23.DEC.2022 14:43:12

High Bandedge-2472 MHz

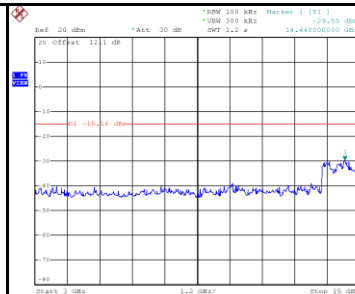


Date: 23.DEC.2022 14:46:52

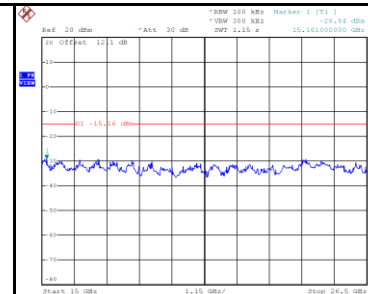
2412 MHz-10th Harmonics



Date: 23.DEC.2022 12:18:28

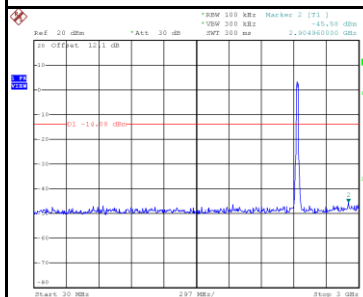


Date: 23.DEC.2022 12:18:35

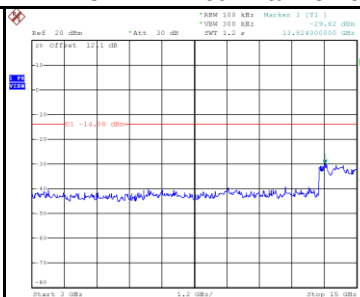


Date: 23.DEC.2022 12:18:42

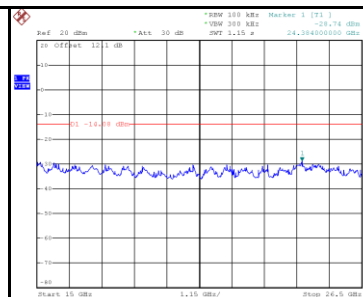
2437 MHz-10th Harmonics



Date: 23.DEC.2022 12:23:03

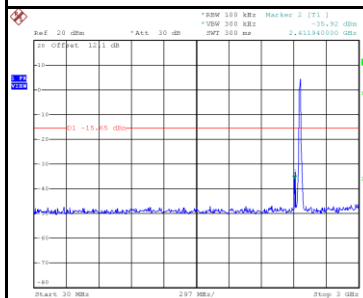


Date: 23.DEC.2022 12:23:10

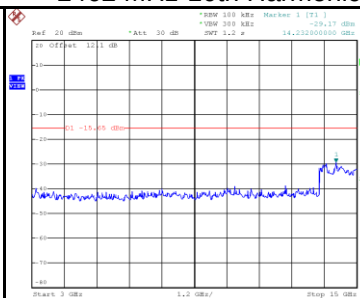


Date: 23.DEC.2022 12:23:17

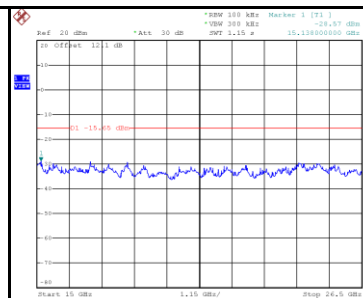
2462 MHz-10th Harmonics



Date: 23.DEC.2022 12:25:39

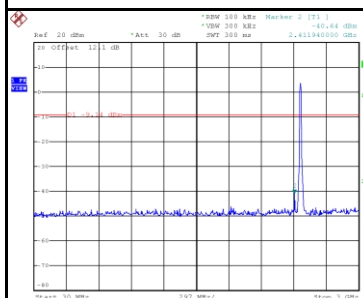


Date: 23.DEC.2022 12:25:46

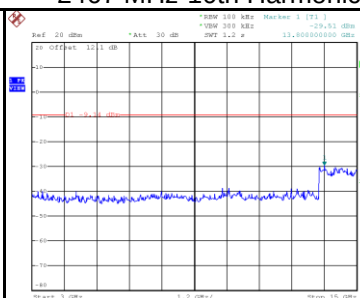


Date: 23.DEC.2022 12:25:53

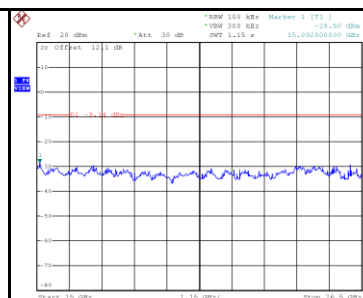
2467 MHz-10th Harmonics



Date: 23.DEC.2022 14:43:25

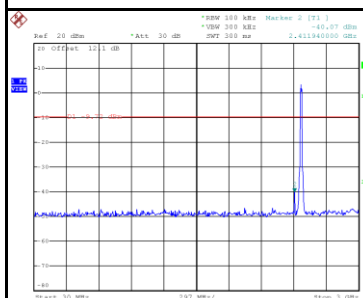


Date: 23.DEC.2022 14:43:32

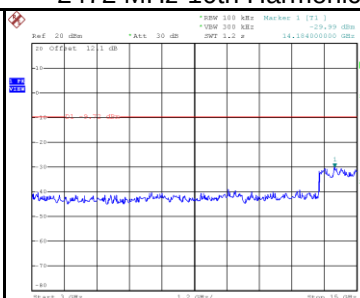


Date: 23.DEC.2022 14:43:39

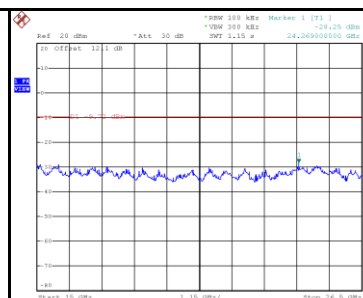
2472 MHz-10th Harmonics



Date: 23.DEC.2022 14:47:05



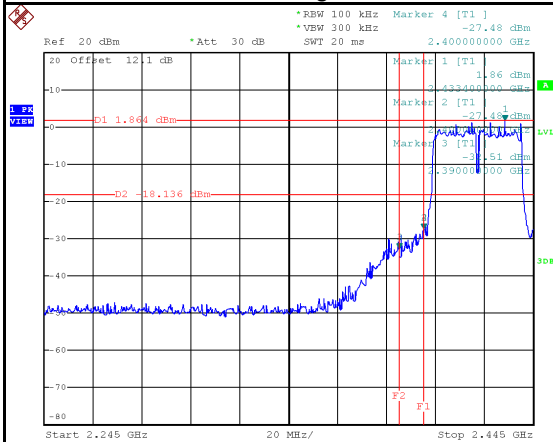
Date: 23.DEC.2022 14:47:12



Date: 23.DEC.2022 14:47:19

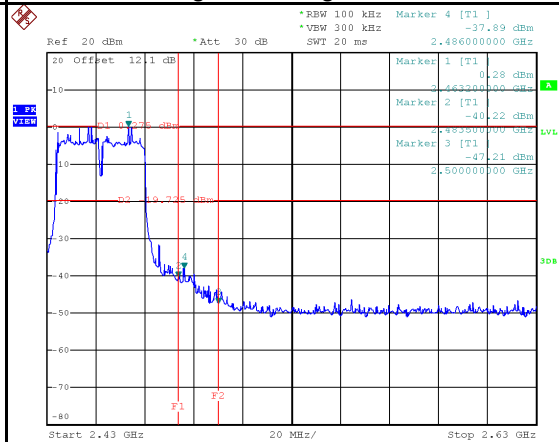
Test Mode IEEE 802.11n (HT40)

Low Bandedge-2422 MHz



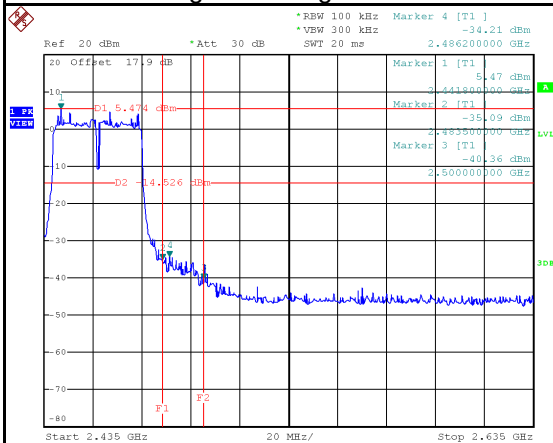
Date: 23.DEC.2022 14:09:46

High Bandedge-2452 MHz



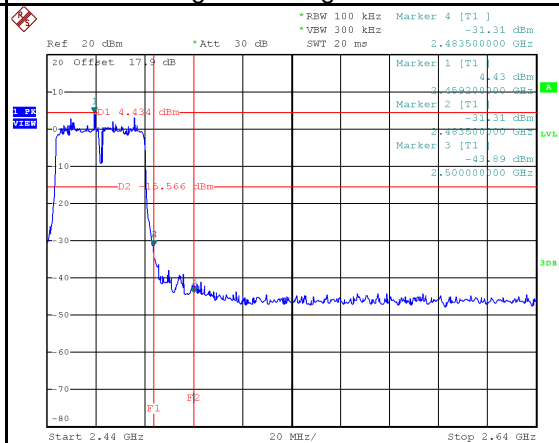
Date: 23.DEC.2022 14:17:31

High Bandedge-2457 MHz



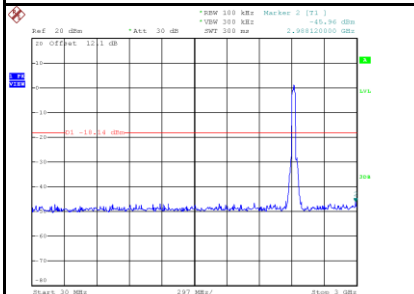
Date: 23.DEC.2022 14:33:23

High Bandedge-2462 MHz

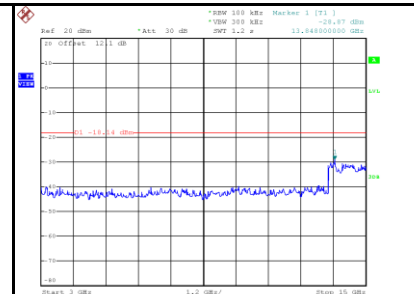


Date: 23.DEC.2022 14:36:34

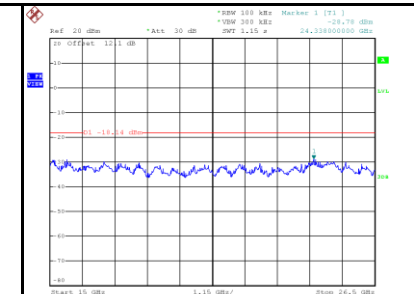
2422 MHz-10th Harmonics



Date: 23.DEC.2022 14:09:50

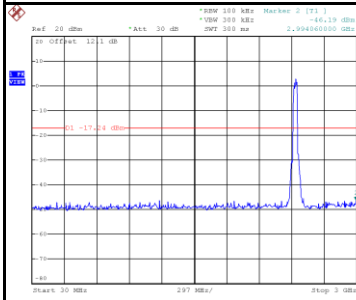


Date: 23.DEC.2022 14:10:05

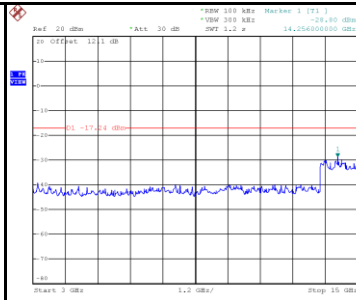


Date: 23.DEC.2022 14:10:12

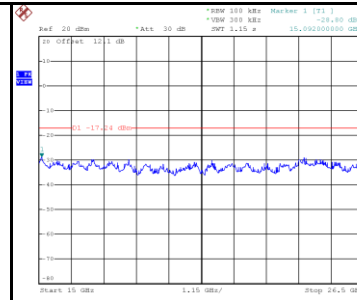
2437 MHz-10th Harmonics



Date: 23.DEC.2022 14:14:21

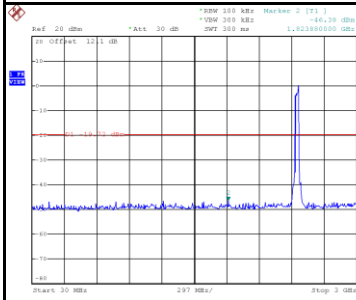


Date: 23.DEC.2022 14:14:28

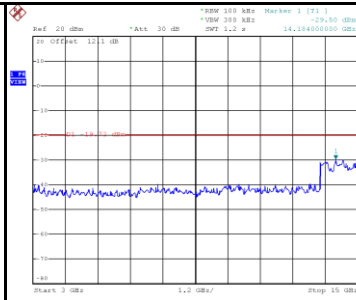


Date: 23.DEC.2022 14:14:35

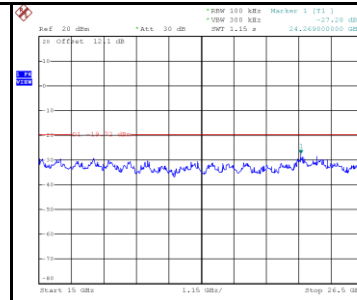
2452 MHz-10th Harmonics



Date: 23.DEC.2022 14:17:44

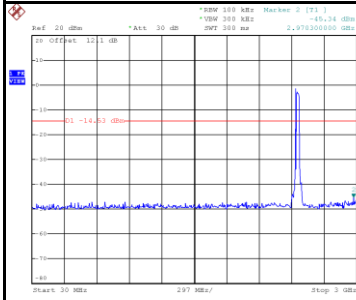


Date: 23.DEC.2022 14:17:51

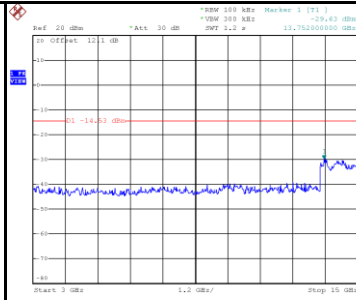


Date: 23.DEC.2022 14:17:58

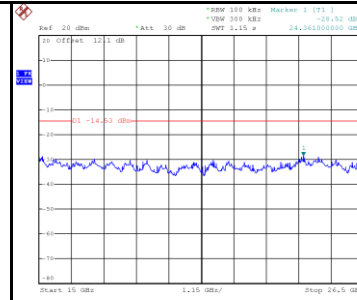
2457 MHz-10th Harmonics



Date: 23.DEC.2022 14:33:36

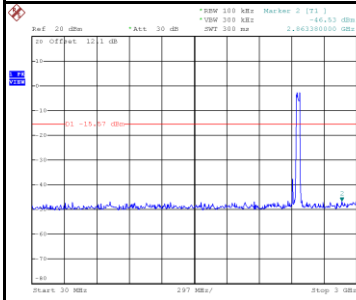


Date: 23.DEC.2022 14:33:43

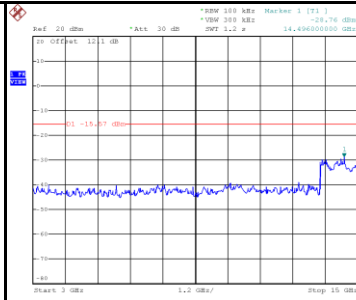


Date: 23.DEC.2022 14:33:50

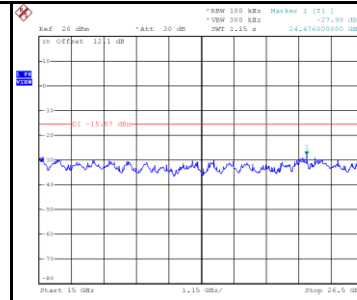
2462 MHz-10th Harmonics



Date: 23.DEC.2022 14:36:47



Date: 23.DEC.2022 14:36:54



Date: 23.DEC.2022 14:37:00

End of Test Report