

FCC ID: 2AF82-BXP100

Report No. Equipment Model Name Brand Name Applicant Address	 BTL-FCCP-3-2104T005 Box PC BXP-100, xxxBXP-1XXXX (Where "x" and "X" may be any alphanumeric character, blank, "_" or "-" for marketing purpose only.) Qbic Qbic Technology Co., Ltd. 26F12, NO.99, SEC. 1, XINTAI 5TH RD., XIZHI DIST., NEW TAIPEI CITY 22175, TAIWAN
Radio Function	: WLAN 2.4 GHz
FCC Rule Part(s) Measurement Procedure(s)	: FCC Part15, Subpart C (15.247) : ANSI C63.10-2013
Date of Receipt Date of Test Issued Date	: 2021/6/22 : 2021/6/22 ~ 2021/7/19 : 2021/7/29

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

Prepared by ang, Supervisor Jerry **ac-MRA** Testing Laboratory 0659 Approved by Peter Chen, Vice Manager BTL Inc. No.18, Ln. 171, Sec. 2, Jiuzong Rd., Neihu Dist., Taipei City 114, Taiwan Tel: +886-2-2657-3299 Fax: +886-2-2657-3331 Web: www.newbtl.com





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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REVISON HISTORY

/ersion	Description	Issued Date
R00	Original Report.	2021/7/29
		20211120

SUMMARY OF TEST RESULTS 1

Test procedures according to the technical standards.

FCC Part 15, Subpart C (15.247)							
Standard(s) Section	Description	on Test Result		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 facilities used to collect the test data in this report:

No. 68-1, Ln. 169, Sec. 2, Datong Rd., Xizhi Dist., New Taipei City 221, Taiwan The test sites and facilities are covered under FCC RN: 674415 and DN: TW0659.

\boxtimes	C05	CB08	CB11	\boxtimes	CB15	CB16
\boxtimes	SR05					

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)
	0.03 GHz ~ 0.2 GHz	4.17
	0.2 GHz ~ 1 GHz	4.72
CB15	1 GHz ~ 6 GHz	5.21
CB15	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, 56 %	AC 120V	Paul Shen
Radiated emissions below 1 GHz	23 °C, 57 %	AC 120V	Hunter Chiang
Radiated emissions above 1 GHz	23 °C, 57 %	AC 120V	Hunter Chiang
Bandwidth	25.3 °C, 52 %	AC 120V	Tim Lee
Output Power	25.3 °C, 52 %	AC 120V	Tim Lee
Power Spectral Density	25.3 °C, 52 %	AC 120V	Tim Lee
Antenna conducted Spurious Emission	25.3 °C, 52 %	AC 120V	Tim Lee



1.4 TABLE OF PARAMETERS OF TEXT SOFTWARE SETTING

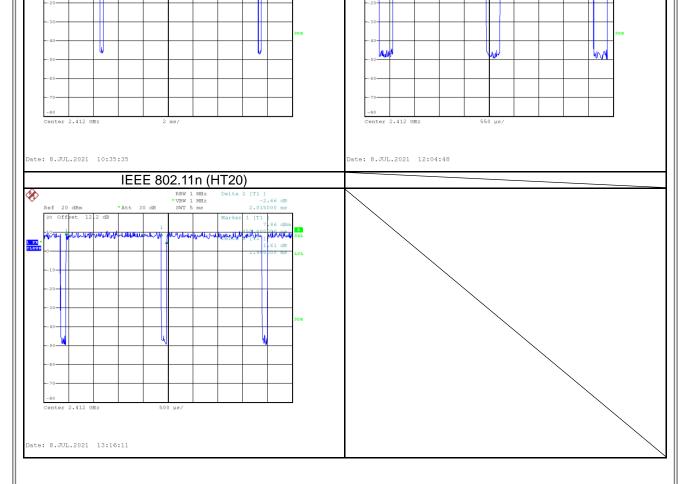
Test Software		N	/A	
Mode	2412 MHz	2437 MHz	2462 MHz	Data Rate
IEEE 802.11b	19	24	18	1 Mbps
IEEE 802.11g	15	24	16	6 Mbps
IEEE 802.11n (HT20)	15	24	16	MCS 0



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	Numbers	On Time (B)	Period (ON+OFF)	Duty Cycle	Duty Factor
Mode	(ms)	(ON)	(ms)	(ms)	(%)	(dB)
IEEE 802.11b	12.45	1	12.45	12.74	97.72%	0.10
IEEE 802.11g	2.035	1	2.035	2.365	86.05%	0.65
IEEE 802.11n (HT20)	1.905	1	1.905	2.015	94.54%	0.24
^	EE 802.11				IEEE 802.11g	
IE	EE 802 11	h			IEEE 802 11a	
*	RBW 1 MHz •VBW 1 MHz	Delta 2 [T1] -0.18 c	iB 🔇	\$	*VBW 1 MHz	ta 2 [T1] -0.41 dB
Ref 20 dBm *Att 30 dB	SWT 20 ms	12.738000 1	n#	Ref 20 dBm Att	· · · · · · · · · · · · · · · · · · ·	2.365000 ms
20 Offset 12.2 dB		Marker 1 [T1		20 Offset 12.2 dB	Mar	
		121.56		1.	2	10.58 dBm
		121.56 0 4.00000 1 Delta 1 [T.] -0.09 0 128000 1	iB CL	222	aparticutes and the second	



2 GENERAL INFORMATION

2.1 DESCRIPTION OF EUT

Equipment	Box PC
Model Name	BXP-100, xxxBXP-1XXXX (Where "x" and "X" may be any alphanumeric character, blank, "_" or "-" for marketing purpose only.)
Brand Name	Qbic
Model Difference	Different models distribtute to different area.
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 * Adapter: PHIHONG / PSM10R-050 4 * Plug 1 * Screw
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: 25.01 dBm (0.3170 W) IEEE 802.11g: 25.12 dBm (0.3251W) IEEE 802.11n (HT20): 25.13 dBm (0.3258 W)
Test Model	BXP-100
Sample Status	Engineering Sample
EUT Modification(s)	N/A

NOTE:

(1) For a more detailed features description, please refer to the manufacturer's specifications or the 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	Project	Туре	Connector	Frequency (MHz)	Gain (dBi)
			DCD		2400-2500	2.58
1	INPAQ	BXP-100	PCB Dipole	N/A	5150-5250	2.55
			Dipole		5725-5850	2.73



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	01	-
	TX Mode_IEEE 802.11b		
	TX Mode_IEEE 802.11g	01/11	Bandedge
Transmitter Radiated Emissions	TX Mode_IEEE 802.11n (HT20)		
(above 1GHz)	TX Mode_IEEE 802.11b		Harmonic
	TX Mode_IEEE 802.11g	01/06/11	
	TX Mode_IEEE 802.11n (HT20)		
Bandwidth &	TX Mode_IEEE 802.11b		
Power Spectral Density &	TX Mode_IEEE 802.11g	01/06/11	-
Antenna conducted Spurious Emission	TX Mode_IEEE 802.11n (HT20)		
	TX Mode_IEEE 802.11b		
Output Power	TX Mode_IEEE 802.11g	01/06/11	-
	TX Mode_IEEE 802.11n (HT20)		

NOTE:

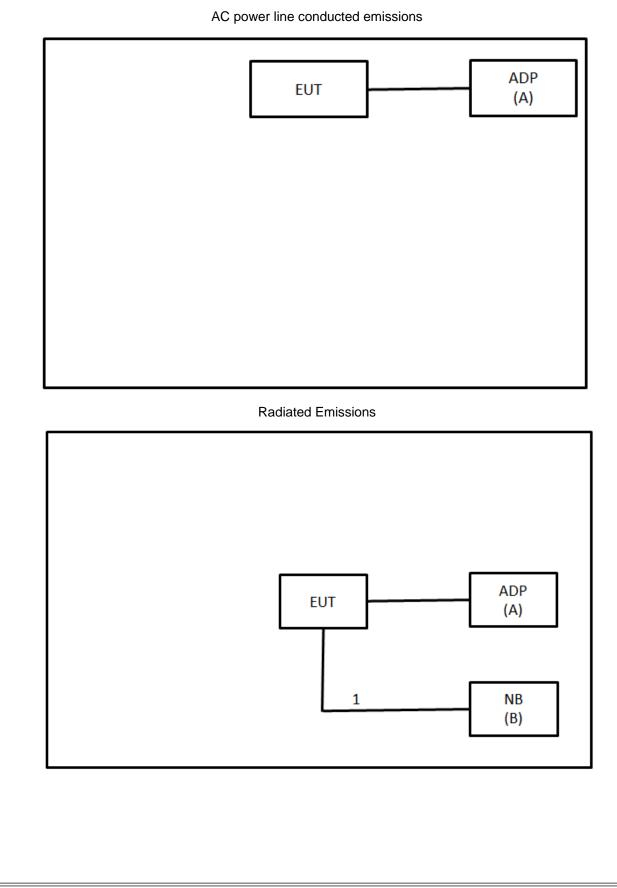
(1) For radiated emission band edge test, both Vertical and Horizontal are evaluated, but only the worst case (Vertical) is recorded.

(2) All X, Y and Z axes are evaluated, but only the worst case (Z 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.





2.4 SUPPORT UNITS

Item	Equipment	Brand	Model No.	Series No.	Remarks
A	ADP	PHIHONG	PSM10R-050	N/A	Supplied by test requester
В	NB	Asus	X450JN	N/A	Furnished by test lab.
Item	Shielded	Ferrite Core	Length	Cable Type	Remarks
1	N/A	N/A	1m	Micro USB donale	Furnished by test lab.



3 AC POWER LINE CONDUCTED EMISSIONS TEST

3.1 LIMIT

Frequency	Limit (dBµV)		
(MHz)	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	1	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.

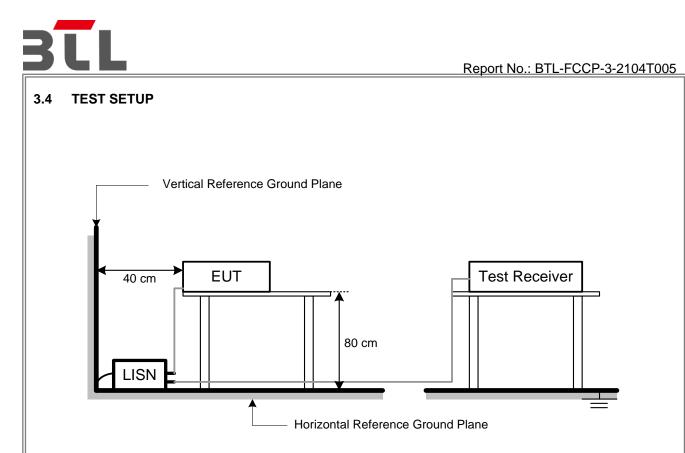
- b. Interconnecting cables that hang closer than 40 cm to the ground plane shall be folded back and forth in the center forming a bundle to keep the cable above 40 cm.
- c. Excess I/O cables that are not connected to a peripheral shall be bundled in the center. The end of the cable will be terminated, 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:

- 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.



3.5 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 I (dBu	Emissions V/m)	Measurement Distance
(11172)	Peak	Average	(meters)
Above 1000	74	54	3

NOTE:

- (1) The limit for radiated test was performed according to FCC 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	Π	21.22

Measurement Value		Limit Value		Margin Level
21.22	-	54	Π	-32.78

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

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



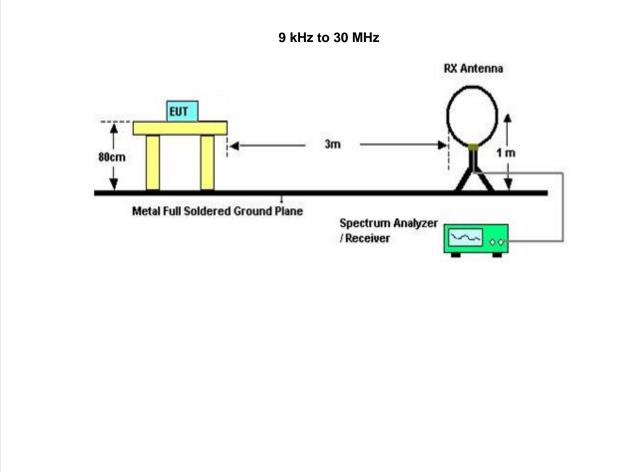
4.2 TEST PROCEDURE

- a. The measuring distance of 3 m shall be used for measurements. The EUT was placed on the top of a rotating table 0.8 meter above the ground at a 3 meter semi-anechoic chamber. The table was rotated 360 degrees to determine the position of the highest radiation.(below 1GHz)
- b. The measuring distance of 3 m shall be used for measurements. The EUT was placed on the top of a rotating table 1.5 meter above the ground at a 3 meter semi-anechoic chamber. The table was rotated 360 degrees to determine the position of the highest radiation.(above 1GHz)
- c. The height of the equipment or of the substitution antenna shall be 0.8 m or 1.5 m, the height of the test antenna shall vary between 1 m to 4 m. Both horizontal and vertical polarizations of the antenna are set to make the measurement.
- d. For each suspected emission, the EUT was arranged to its worst case and then the antenna was tuned to heights find the maximum reading (used Bore sight function).
- e. The receiver system was set to peak and average detect function and specified bandwidth with maximum hold mode when the test frequency is above 1GHz.
- f. The initial step in collecting radiated emission data is a receiver peak detector mode pre-scanning the measurement frequency range. Significant peaks are then marked and then Quasi Peak detector mode re-measured.
- g. All readings are Peak unless otherwise stated QP in column of Note. Peak denotes that the Peak reading compliance with the QP Limits and then QP Mode measurement didn't perform. (below 1GHz)
- All readings are Peak Mode value unless otherwise stated AVG in column of Note. If the Peak Mode Measured value compliance with the Peak Limits and lower than AVG Limits, the EUT shall be deemed to meet both Peak & AVG Limits and then only Peak Mode was measured, but AVG Mode didn't perform. (above 1GHz)
- i. For the actual test configuration, please refer to the related Item EUT TEST PHOTO.

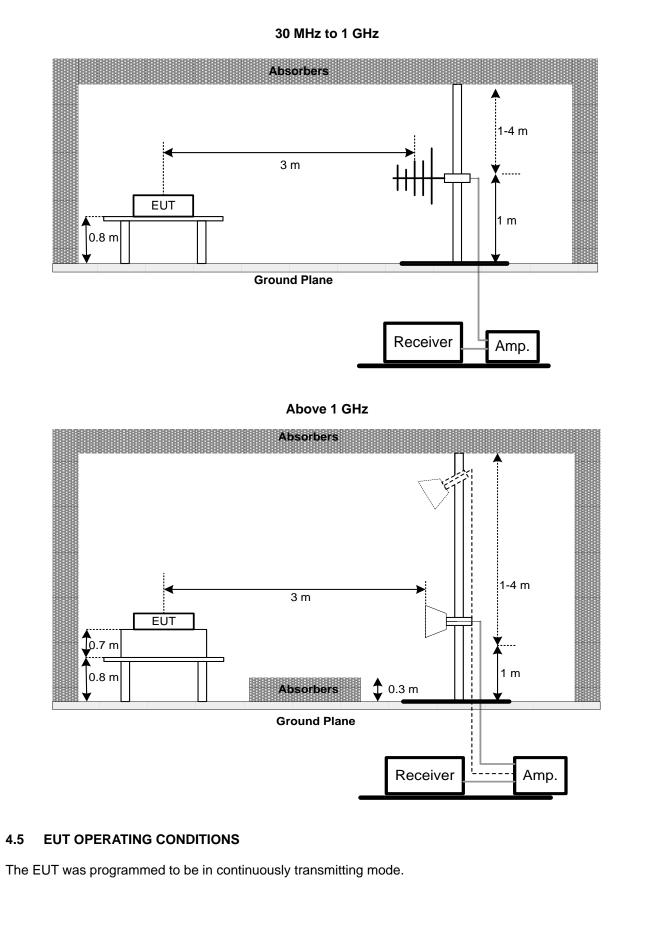
4.3 DEVIATION FROM TEST STANDARD

No deviation.

4.4 TEST SETUP









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

FCC Part15, Subpart C (15.247)				
Section	Test Item	Limit		
15.247(a)	6 dB Bandwidth	500 kHz		

5.2 TEST PROCEDURE

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

5.3 DEVIATION FROM TEST STANDARD

No deviation.

5.4 TEST SETUP



5.5 EUT OPERATING CONDITIONS

The EUT was programmed to be in continuously transmitting mode.

5.6 TEST RESULT

Please refer to the APPENDIX D.



6 OUTPUT POWER TEST

6.1 LIMIT

FCC Part15, Subpart C (15.247)				
Section Test Item Limit				
15.247(b)	Maximum Output Power	1 Watt or 30dBm		

6.2 TEST PROCEDURE

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

FCC Part15, Subpart C (15.247)					
Section	Test Item	Limit			
15.247(e)	Power Spectral Density	8 dBm (in any 3 kHz)			

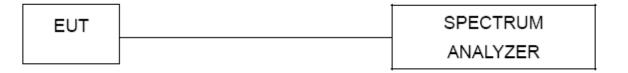
7.2 TEST PROCEDURE

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

7.3 DEVIATION FROM TEST STANDARD

No deviation.

7.4 TEST SETUP



7.5 EUT OPERATING CONDITIONS

The EUT was programmed to be in continuously transmitting mode.

7.6 TEST RESULT

Please refer to the APPENDIX F.





8 ANTENNA CONDUCTED SPURIOUS EMISSIONS TEST

8.1 LIMIT

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

8.2 TEST PROCEDURE

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

8.3 DEVIATION FROM TEST STANDARD

No deviation.

8.4 TEST SETUP



8.5 EUT OPERATING CONDITIONS

The EUT was programmed to be in continuously transmitting mode.

8.6 TEST RESULT

Please refer to the APPENDIX G.



9 LIST OF MEASURING EQUIPMENTS

	AC Power Line Conducted Emissions						
Item	Kind of Equipment	Manufacturer	Type No.	Serial No.	Calibrated Date	Calibrated Until	
1	TWO-LINE V-NETWORK	R&S	ENV216	101339	2021/3/10	2022/3/9	
2	Test Cable	EMCI	EMCRG58-BM-B M-9000	210501	2021/5/3	2022/5/2	
3	EMI Test Receiver	R&S	ESR 7	101433	2020/12/11	2021/12/10	
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	EMC02325B	980217	2021/4/8	2022/4/7		
2	Preamplifier	EMCI	EMC012645B	980267	2021/4/8	2022/4/7		
3	Preamplifier	EMCI	EMC001340	980555	2021/4/8	2022/4/7		
4	Test Cable	EMCI	EMC-SM-SM-100 0	180809	2021/4/8	2022/4/7		
5	Test Cable	EMCI	EMC104-SM-SM- 3000	151205	2021/4/8	2022/4/7		
6	Test Cable	EMCI	EMC-SM-SM-700 0	180408	2021/4/8	2022/4/7		
7	MXE EMI Receiver	Agilent	N9038A	MY554200087	2021/5/27	2022/5/26		
8	Signal Analyzer	Agilent	N9010A	MY56480554	2020/8/25	2021/8/24		
9	Loop Ant	Electro-Metrics	EMCI-LPA600	274	2021/6/1	2022/5/31		
10	Horn Ant	SCHWARZBECK	BBHA 9120D	9120D-1342	2021/6/2	2022/6/1		
11	Broad-Band Horn Antenna	Schwarzbeck	BBHA 9170	764	2021/7/2	2022/7/1		
12	Trilog-Broadband Antenna	Schwarzbeck	VULB 9168	VULB 9168-352	2020/7/24	2021/7/23		
13	5dB Attenuator	EMCI	EMCI-N-6-05	AT-N0625	2020/7/24	2021/7/23		
14	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	2021/3/5	2022/3/4

	Output Power					
Item	Kind of Equipment	Manufacturer	Type No.	Serial No.	Calibrated Date	Calibrated Until
1	Power Meter	Anritsu	ML2487A	6K00004714	2020/9/3	2021/9/2
2	Power Sensor	Anritsu	MA2491A	034138	2020/9/3	2021/9/2



Power Spectral Density						
Item	Kind of Equipment	Manufacturer	Type No.	Serial No.	Calibrated Date	Calibrated Until
1	Spectrum Analyzer	R&S	FSP38	101139	2021/3/5	2022/3/4

Antenna conducted Spurious Emission						
Item	Kind of Equipment	Manufacturer	Type No.	Serial No.	Calibrated Date	Calibrated Until
1	Spectrum Analyzer	R&S	FSP38	101139	2021/3/5	2022/3/4

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-2104T005-FCCP-1 (APPENDIX-TEST PHOTOS).

11 EUT PHOTOS

Please refer to document Appendix No.: EP-2104T005-1 (APPENDIX-EUT PHOTOS).



APPENDIX A AC POWER LINE CONDUCTED EMISSIONS

3 3 L I

								-		-
Test Mo	de	Normal						Tested Da	te	2021/7/14
Test Fre	equency	-						Phase		Line
80.0	dBuV									
70										
60										
50										
40	1 X									
40			3 X	5					11	
30	2 X		4	×	7 ×		9 X		× 12	
20			X	6 X	8		10		x	
10							×			
0										
-10										
-20.0										
-20.0 0.	150		0.5		(MHz)		5			30.000
0.	150	Reading	Correct	Measure-		0.000	5			30.000
	150 k. Freq.	Reading Level	Correct Factor	ment	Limit	Over		Comment		30.000
d. No. Mi	150 k. Freq. MHz	Reading Level dBuV	Correct Factor dB	m ent dBu∨	Limit dBu∨	dB	Detector	Comment		30.000
0.	150 k. Freq.	Reading Level	Correct Factor	ment	Limit			Comment		30.000
0. No. Mi 1	150 k. Freq. MHz 0.1928	Reading Level dBuV 32.46	Correct Factor dB 9.70	ment dBu∨ 42.16	Limit dBuV 63.92	dB -21.76	Detector	Comment		30.000
0. No. Mi 1 2 3 * 4	 150 k. Freq. MHz 0.1928 0.1928 0.5842 0.5842 	Reading Level dBuV 32.46 15.17	Correct Factor dB 9.70 9.70	ment dBuV 42.16 24.87	Limit dBuV 63.92 53.92	dB -21.76 -29.05	Detector QP AVG	Comment		30.000
0. No. MI 1 2 3 * 4 5	 Freq. MHz 0.1928 0.1928 0.5842 0.5842 1.0702 	Reading Level dBuV 32.46 15.17 25.21 12.64 19.74	Correct Factor dB 9.70 9.70 9.71 9.71 9.72	ment dBuV 42.16 24.87 34.92 22.35 29.46	Limit dBuV 63.92 53.92 56.00 46.00 56.00	dB -21.76 -29.05 -21.08 -23.65 -26.54	Detector QP AVG QP AVG QP	Comment		30.000
0. No. Mi 1 2 3 * 4 5 6	 Freq. MHz 0.1928 0.1928 0.5842 0.5842 1.0702 1.0702 	Reading Level dBuV 32.46 15.17 25.21 12.64 19.74 8.43	Correct Factor dB 9.70 9.70 9.71 9.71 9.72 9.72	ment dBuV 42.16 24.87 34.92 22.35 29.46 18.15	Limit dBu∨ 63.92 53.92 56.00 46.00 56.00 46.00	dB -21.76 -29.05 -21.08 -23.65 -26.54 -27.85	Detector QP AVG QP AVG QP AVG	Comment		30.000
0. No. MI 1 2 3 * 4 5 6 7	 Freq. MHz 0.1928 0.1928 0.5842 0.5842 1.0702 1.0702 2.4360 	Reading Level dBuV 32.46 15.17 25.21 12.64 19.74 8.43 14.83	Correct Factor dB 9.70 9.70 9.71 9.71 9.72 9.72 9.77	ment dBuV 42.16 24.87 34.92 22.35 29.46 18.15 24.60	Limit dBu∨ 63.92 53.92 56.00 46.00 56.00 46.00 56.00	dB -21.76 -29.05 -21.08 -23.65 -26.54 -27.85 -31.40	Detector QP AVG QP AVG QP AVG QP	Comment		30.000
0. No. Mi 1 2 3 * 4 5 6 7 8	ISO k. Freq. MHz 0.1928 0.1928 0.5842 0.5842 1.0702 1.0702 2.4360 2.4360 2.4360	Reading Level dBuV 32.46 15.17 25.21 12.64 19.74 8.43 14.83 5.76	Correct Factor dB 9.70 9.70 9.71 9.71 9.72 9.72 9.77 9.77	ment dBuV 42.16 24.87 34.92 22.35 29.46 18.15 24.60 15.53	Limit dBu∨ 63.92 53.92 56.00 46.00 56.00 46.00 56.00 46.00	dB -21.76 -29.05 -21.08 -23.65 -26.54 -27.85 -31.40 -30.47	Detector QP AVG QP AVG QP AVG QP AVG	Comment		30.000
0. No. MI 1 2 3 * 4 5 6 7 8 9	IS0 k. Freq. MHz 0.1928 0.1928 0.5842 0.5842 0.5842 1.0702 1.0702 2.4360 2.4360 5.5455 1.05455	Reading Level dBuV 32.46 15.17 25.21 12.64 19.74 8.43 14.83 5.76 13.15	Correct Factor dB 9.70 9.70 9.71 9.71 9.72 9.72 9.77 9.77 9.99	ment dBuV 42.16 24.87 34.92 22.35 29.46 18.15 24.60 15.53 23.14	Limit dBuV 63.92 53.92 56.00 46.00 56.00 46.00 56.00 46.00 60.00	dB -21.76 -29.05 -21.08 -23.65 -26.54 -27.85 -31.40 -30.47 -36.86	Detector QP AVG QP AVG QP AVG QP AVG QP	Comment		30.000
0. No. Mi 1 2 3 * 4 5 6 7 8	ISO k. Freq. MHz 0.1928 0.1928 0.5842 0.5842 1.0702 1.0702 2.4360 2.4360 2.4360	Reading Level dBuV 32.46 15.17 25.21 12.64 19.74 8.43 14.83 5.76	Correct Factor dB 9.70 9.70 9.71 9.71 9.72 9.72 9.77 9.77	ment dBuV 42.16 24.87 34.92 22.35 29.46 18.15 24.60 15.53	Limit dBu∨ 63.92 53.92 56.00 46.00 56.00 46.00 56.00 46.00	dB -21.76 -29.05 -21.08 -23.65 -26.54 -27.85 -31.40 -30.47	Detector QP AVG QP AVG QP AVG QP AVG	Comment		30.000
0. No. Mi 1 2 3 * 4 5 6 7 8 9 9	ISO k. Freq. MHz 0.1928 0.1928 0.5842 0.5842 1.0702 1.0702 2.4360 5.5455 5.5455	Reading Level dBuV 32.46 15.17 25.21 12.64 19.74 8.43 14.83 5.76 13.15 4.43	Correct Factor dB 9.70 9.70 9.71 9.71 9.72 9.72 9.77 9.77 9.99 9.99	ment dBuV 42.16 24.87 34.92 22.35 29.46 18.15 24.60 15.53 23.14 14.42	Limit dBu∨ 63.92 53.92 56.00 46.00 56.00 46.00 56.00 46.00 50.00	dB -21.76 -29.05 -21.08 -23.65 -26.54 -27.85 -31.40 -30.47 -36.86 -35.58	Detector QP AVG QP AVG QP AVG QP AVG QP AVG	Comment		30.000

REMARKS:

Measurement Value = Reading Level + Correct Factor.
 Margin Level = Measurement Value - Limit Value.

est Moo	de	Normal						2021/7/14	
est Fre	requency -						Phase	Neutral	
80.0 70 60	dBuV								
50	1 X								
40			3 X						
30 20	2 X		4 ×	5 × 7 × 8		9 X 10		11 X 12	
10 0				×		×		×	
-10									
-20.0									
0.1	150		.5		(MHz)		5		30.000
No. Mk	. Freq.	Reading Level	Correct Factor	Measure- ment	Limit	Over			
	MHz	dBu∨	dB	dBu∨	dBu∨	dB	Detector	Comment	
1 *	0.1905	32.10	9.70	41.80	64.01	-22.21	QP		
2	0.1905	12.10	9.70	21.80	54.01	-32.21	AVG		
3	0.5955	21.60	9.71	31.31	56.00	-24.69	QP		
4	0.5955	10.70	9.71	20.41	46.00	-25.59	AVG		
5	1.1017	15.45	9.73	25.18	56.00	-30.82	QP		
6	1.1017	5.72	9.73	15.45	46.00	-30.55	AVG		
7	1.4865	11.45	9.74	21.19	56.00	-34.81	QP		
8	1.4865	1.98	9.74	11.72	46.00	-34.28	AVG		
9	3.3855	7.92	9.82	17.74	56.00	-38.26	QP		
10	3.3855	1.09	9.82	10.91	46.00	-35.09	AVG		
11	13.9493	10.46	10.23	20.69	60.00	-39.31	QP		

REMARKS:

13.9493

12

Measurement Value = Reading Level + Correct Factor.
 Margin Level = Measurement Value - Limit Value.

10.23

11.50

50.00 -38.50 AVG

1.27

								1		
est Mo	de	Idle						Tested Date	2021/7/14	
est Fre	Frequency -		- Pr						Line	
80.0	dBuV									
70										
60										
50										
	1 X									
40			3 ×							
30	2 X		4	5 ×	7			11		
20			×	6 X	X 8	9 X		12 X		
10					X	10 X		×		
0										
-10										
-20.0										
0.	150	().5		(MHz)		5		30.000	
No. Mł	k. Freq.	Reading Level	Correct Factor	Measure ment	- Limit	Over				
	MHz	dBu∨	dB	dBu∨	dBu∨	dB	Detector	Comment		
1 *	0.1928	34.08	9.70	43.78	63.92	-20.14	QP			
2	0.1928	14.26	9.70	23.96	53.92	-29.96	AVG			
3	0.5910	21.56	9.71	31.27	56.00	-24.73	QP			
4	0.5910	9.75	9.71	19.46	46.00	-26.54	AVG			
5	1.0837	14.88	9.73	24.61	56.00	-31.39	QP			
6	1.0837	4.87	9.73	14.60	46.00	-31.40	AVG			
7	1.5945	10.31	9.74	20.05	56.00	-35.95	QP			
8	1.5945	1.89	9.74	11.63	46.00	-34.37	AVG			
9	3.7185	6.65	9.86	16.51	56.00	-39.49	QP			
10	3.7185	-0.21	9.86	9.65	46.00	-36.35	AVG			
11	13.8570	10.44	10.23	20.67	60.00	-39.33	QP			
10	40.0570	4.07	10.00	44.00	50.00	00.40				

REMARKS:

13.8570

12

Measurement Value = Reading Level + Correct Factor.
 Margin Level = Measurement Value - Limit Value.

10.23

11.60

50.00

-38.40 AVG

1.37

		1							
est Mo	de	Idle Tested Date						2021/7/14	
Test Frequency -							Phase	Neutral	
80.0 70 60 50	dBuV								
40	3 X		5 X						
30	2 X 4		6 X	7 X		9		11 X	
20 10	^			8 ×		× 10 ×		12 X	
0									
-10 -20.0									
	150	().5		(MHz)		5		30.000
No. Mł	k. Freq.	Reading Level	Correct Factor	Measure- ment	Limit	Over			
	MHz	dBu∨	dB	dBu∨	dBu∨	dB	Detector	Comment	
1 *	0.1928	32.74	9.70	42.44	63.92	-21.48	QP		
2	0.1928	14.56	9.70	24.26	53.92	-29.66	AVG		
3	0.2580	26.31	9.71	36.02	61.50	-25.48	QP		
4	0.2580	10.54	9.71	20.25	51.50	-31.25	AVG		
5	0.5977	21.80	9.71	31.51	56.00	-24.49	QP		
6	0.5977	11.35	9.71	21.06	46.00	-24.94	AVG		
7	1.4595		9.74	21.36	56.00	-34.64			
8	1.4595		9.74	12.17	46.00	-33.83	AVG		
9	3.3518 3.3518		9.82 9.82	17.85 10.95	56.00 46.00	-38.15	QP AVG		
	0.0010	1.10	0.0Z	10.80	40.00	-55.05	AVG		
10 11	13.5150		10.21	21.13	60.00	-38.87	QP		

REMARKS:

Measurement Value = Reading Level + Correct Factor.
 Margin Level = Measurement Value - Limit Value.





APPENDIX B RADIATED EMISSIONS - 30 MHZ TO 1 GHZ

	Test Mo		IE		802.11b			Test Dat				1/7/8	
Tes	st Frequ				2MHz			Polarizat	ion				
	Temp			23	3°C			Hum.			5	7%	
30.0 dB	uV/m												_
70													
:0													
50													
40													
ю	2 X	X				4 ×			5 X			6 X	
20													
0													
).0													
30.000	127.00	224.00	321.0	0	418.00	515.0)O 6	612.00 7	709.00	806.	00	1000.00	МН
No.	Mk.	Freq.	Read Lev		Correct Factor		easure- ment	Limit	Ov	rer			
		MHz	dBu	١V	dB	dE	3uV/m	dBuV/m	n di	В	Detector	Comm	ent
1	*	32.6513	44.	51	-9.00		35.51	40.00	-4.	49	QP		
2		132.0763	41.4	48	-9.26	3	32.22	43.50	-11	.28	peak		
3		239.9403	43.4	48	-9.61	3	33.87	46.00	-12	.13	peak		
4		510.0206			-2.62	2	28.42	46.00	-17		peak		
5		745.4396	31.3	30	1.77	3	3.07	46.00	-12	.93	peak		
6		941.7353			4.85	3	33.40	46.00	-12		peak		

REMARKS:

Measurement Value = Reading Level + Correct Factor.
 Margin Level = Measurement Value - Limit Value.

	Test Mo			802.11b		Test Date		2021/7/8 Horizontal		
Te	st Frequ			2MHz		Polarization	า			
	Temp		2	3°C		Hum.		5	7%	
BO.O de	3uV/m									
70										
50										
50										
40	1 2 1 X	3								
80	-¥				4 ×	5 X			6 X	
20										
0										
D.O										
30.000	127.00	224.00	321.00	418.00	515.00 61	2.00 709	.00 806	.00	1000.00 MH	
No.	Mk.	Freq.	Reading Level	Correct Factor	Measure- ment	Limit	Over			
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment	
1		83.2206	46.87	-13.41	33.46	40.00	-6.54	QP		
2		131.5590	45.15	-9.30	35.85	43.50	-7.65	peak		
3	*	238.4853	49.58	-9.72	39.86	46.00	-6.14	peak		
4		478.3986	30.84	-3.21	27.63	46.00	-18.37	peak		
5		665.3500	29.47	0.31	29.78	46.00	-16.22	peak		
6		977.6576	28.09	5.29	33.38	54.00	-20.62	peak		

REMARKS:

Measurement Value = Reading Level + Correct Factor.
 Margin Level = Measurement Value - Limit Value.



APPENDIX C RADIATED EMISSIONS - ABOVE 1 GHZ



	Test Mo			802.11b		Test Date		-	1/7/2
	Test Frequ		2412MHzPolarization23°CHum.				Vertical 57%		
130.0	Temp dBuV/m		2	3°C		Hum.		5	/%
130.0	abuv/m	1							
120					3				
110 -									
100					+				
90 -					$\left\{ - \right\}$				
80				al					
70				1					
60				, in the second		Very and			4 months and the second
50	water por manufa	where the management	ware build a second second	* ^{#**} 2 X		" " mader yolew	warender her water her and	al marked and the second	
40									6 ×
30									
20									
10.0									
	.000 2332.00	0 2352.00	2372.00	2392.00	2412.00 2	432.00 24	52.00 247	2.00	2512.00 MH
No.	Mk.	Freq.	Reading	Correct Factor	Measure- ment	Limit	Over	2.00	2012.00 1111
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1		2390.000	30.64	31.21	61.85	74.00	-12.15	peak	Commont
2		2390.000	20.34	31.21	51.55	54.00	-2.45	AVG	
3	Х	2412.000	81.90	31.28	113.18	74.00	39.18	peak	NoLimit
4	*	2412.000	78.48	31.28	109.76	54.00	55.76	AVG	NoLimit
5		2510.860	26.87	31.60	58.47	74.00	-15.53	peak	
6		2510.860	13.78	31.60	45.38	54.00	-8.62	AVG	

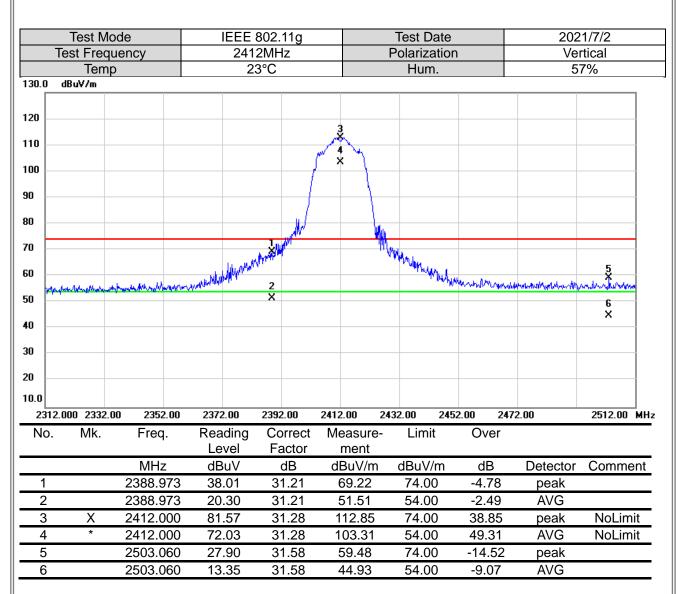
REMARKS:

Measurement Value = Reading Level + Correct Factor.
 Margin Level = Measurement Value - Limit Value.

T	Test Mo			802.11b		Test Date Polarizatio			1/7/2
IE	est Frequ	ency		3°C			n		rtical 7%
30.0 d	Temp IBu¥/m		2	30		Hum.		5	/%
50.0 0	10447111								
20									
10					X				
00					+ -				
90 -					\vdash				
30				/					
70				\sim	- h	\			
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10 <u> </u>		2 X							
30 -									
20 -									
10.0									
2362.0	00 2382.00) 2402.00	2422.00	2442.00	2462.00 2	482.00 25	02.00 252	2.00	2562.00 MH
No.	Mk.	Freq.	Reading Level	Correct Factor	Measure- ment	Limit	Over		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1		2388.767	26.88	31.21	58.09	74.00	-15.91	peak	
2		2388.767	9.34	31.21	40.55	54.00	-13.45	AVG	
3	Х	2462.000	79.05	31.44	110.49	74.00	36.49	peak	NoLimit
4	*	2462.000	75.77	31.44	107.21	54.00	53.21	AVG	NoLimit
5		2483.760	29.50	31.52	61.02	74.00	-12.98	peak	
6		2483.760	19.56	31.52	51.08	54.00	-2.92	AVG	

REMARKS:





REMARKS:

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

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



	Test Mo			802.11g		Test Date			1/7/2
<u> </u>	est Frequ	ency		S2MHz		Polarizatio	n		rtical
30.0	Temp dBuV/m		.2	3°C		Hum.		5	7%
130.0	abuv/m				1				
120									
10					4				
00				/	× \				
90 -									
30 -					h				
70			manakatomakatakatik	with the second		₩ 5			
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i0 <mark> ***</mark>	anter a la constanció de l	ndhadaanaa dahariin ahara				6 X	. As laster and right	a north the second standard	A Brahadra A AV
10 -	2 X								
30 -									
20									
10.0									
2362.	000 2382.00	2402.00	2422.00	2442.00	2462.00 24	182.00 250	02.00 252	2.00	2562.00 MH
No.	Mk.	Freq.	Reading Level	Correct Factor	Measure- ment	Limit	Over		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1		2381.953	26.34	31.18	57.52	74.00	-16.48	peak	
2		2381.953	7.58	31.18	38.76	54.00	-15.24	AVG	
3	Х	2462.000	81.00	31.44	112.44	74.00	38.44	peak	NoLimit
4	*	2462.000	71.46	31.44	102.90	54.00	48.90	AVG	NoLimit
5		2484.187	38.71	31.52	70.23	74.00	-3.77	peak	
6		2484.187	19.29	31.52	50.81	54.00	-3.19	AVG	

REMARKS:

_	Test Mo			02.11n(HT2	D)	Test Date			1/7/2
T	est Frequ		2	412MHz		Polarizatio	n		rtical
	Temp	1		23°C		Hum.		5	7%
30.0	dBu¥∕m								
20									
10					3				
00 -					r ×				
o									
o									
0 =			rwynwrennyddid			1 _{8 m}			
0				AMAR -		Why Man			5 X
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o									×
o									
0.0									
2312.	.000 2332.0	0 2352.00) 2372.00	2392.00	2412.00 2	432.00 24	52.00 247	2.00	2512.00 MH
No.	Mk.	Freq.	Readin Level	g Correct Factor	Measure- ment	Limit	Over		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1		2388.040) 37.72	31.21	68.93	74.00	-5.07	peak	
2		2388.040) 19.31	31.21	50.52	54.00	-3.48	AVG	
3	Х	2412.000) 80.73	31.28	112.01	74.00	38.01	peak	NoLimit
4	*	2412.000) 71.76	31.28	103.04	54.00	49.04	AVG	NoLimit
5		2497.713	3 26.78	31.56	58.34	74.00	-15.66	peak	
6		2497.713	3 5.46	31.56	37.02	54.00	-16.98	AVG	

REMARKS:

	Test Mo			2.11n(HT20		Test Date			1/7/2
Т	Test Frequ			62MHz		Polarizatio	n		rtical
	Temp)		23°C		Hum.		5	7%
30.0	dBuV/m								
20									
0					3				
0				(* 4 * 1				
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		2 X							
.0									
2362.	.000 2382.0	0 2402.00	2422.00	2442.00	2462.00 24	182.00 250	02.00 252	2.00	2562.00 M
No.	Mk.	Freq.	Reading Level	Correct Factor	Measure- ment	Limit	Over		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Commen
1		2390.000) 24.17	31.21	55.38	74.00	-18.62	peak	
2		2390.000) 7.44	31.21	38.65	54.00	-15.35	AVG	
3	Х	2462.000		31.44	111.57	74.00	37.57	peak	NoLimit
4	*	2462.000		31.44	102.34	54.00	48.34	AVG	NoLimit
5		2483.513		31.52	71.49	74.00	-2.51	peak	
6		2483.513	3 17.48	31.52	49.00	54.00	-5.00	AVG	

REMARKS:

Te	Test M est Freq				802.11b 12MHz		Test Date Polarizatio			1/7/7 rtical
	Tem				23°C		Hum.			7%
30.0 d	BuV/m							1		
20										
10										
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		1 X								
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0.0										
1000.0	00 3550.	00 610).00	8650.00	11200.00	13750.00 1	6300.00 18	850.00 214	00.00	26500.00 MH
No.	Mk.	Fred	.	Reading Level	Correct Factor	Measure- ment	Limit	Over		
		MH	Z	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1		4824.0		53.04	-9.83	43.21	74.00	-30.79	peak	
2	*	4824.0	000	44.69	-9.83	34.86	54.00	-19.14	AVG	

REMARKS:

Тс	Test M est Free						802.1 2MHz					Test E Polariz		<u> </u>			21/7/7 izontal	
10	Ten		псу				3°C					Hur		<u> </u>			7%	
130.0 d	BuV/m					2	00					1101				0	170	
120																		
110																		
																		1
100																		-
90																		
50																		
80																		
70																		
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40			1 X															
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30			<u></u>															
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10.0																		
	00 3550	1 00	6100) 00	8650	00	11200	00	1375	0 00	16	300.00	199	50.00	21.40	0.00	26500.0	 ID M H :
No.	Mk.		Freq			ding		rect		easur		Lim		00.00 Ov			20000.0	0 111
110.	IVIIA.		rieq	•		vel		ctor		ment				00	01			
			MHz	2		uV		B		BuV/r		dBu∨	//m	d	3	Detector	Comm	ent
1			4824.0		53			83		13.42		74.0		-30		peak		
2	*		4824.0	000	44	.51	-9.	83	1	34.68		54.0	0	-19	32	AVG		

REMARKS:

	Test Mo				802.11b 7MHz			Test D Polariza				1/7/2 rtical
le	st Frequ Temp		-		3°C			Hun				7%
130.0 dE	lenp BuV/m			2	30			TIUI	1.		5	/ /0
120												
10												
100												
90												
BO												
70												
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50			1 X X									
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10.0												
1000.00	0 3550.0) 6100.0	0 8650).00	11200.00	13750.		6300.00		50.00 2 [.]	1400.00	26500.00 MH
No.	Mk.	Freq.		iding vel	Correct Factor		isure- ent	Limi	it	Over		
		MHz		BuV	dB		ıV/m	dBuV	/m	dB	Detector	Comment
1		7311.00		.15	-2.80		6.35	74.0		-17.65		
2	*	7311.00	0 52	.45	-2.80	49	.65	54.0	0	-4.35	AVG	

REMARKS:

Te	Test Mest Freq			IE		802.1 7MHz				_	Test E Polariz		<u> </u>			21/7/2 zontal	
	Tem					3°C	•			-	Hur		<u>.</u>			7%	
130.0 d	BuV/m	F														. ,.	
120]
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1000.0	00 3550.	00 610	D.00	8650.	00	11200	.00	1375	i0.00	16	300.00	188	50.00	2140	00.00	26500.0	БМН
No.	Mk.	Free	1.	Reac Lev		Cor Fac			easur ment		Lim	it	Ov	er			
		MH	Z	dBu		d			BuV/ı		dBuV	′/m	dE	3	Detector	Comm	ent
1		4874.0		56.4		-9.	78		46.65		74.0		-27.		peak		
2	*	4874.0	000	51.8	38	-9.	78	4	42.10)	54.0	0	-11.	90	AVG		

REMARKS:

	Fest M	ode Juency				802.1 2MH:				F	Test D Polariz)			1/7/2 rtical	
100	Tem					3°C	-			•	Hur		•			7%	
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1000.00		.00 61	00.00	8650		1120			50.00		300.00		50.00		00.00	26500.0	омн
No.	Mk.	Fre	eq.		ding vel		rrect ctor		easui ment		Lim	it	Ov	er			
		M	łz	dB			B		BuV/i		dBuV	//m	dE	3	Detector	Comm	ent
1		4924		53.			.72	2	43.41		74.0		-30.	.59	peak		
2	*	4924	.000	46	.63	-9	.72	3	36.91		54.0)0	-17.	.09	AVG		

REMARKS:

	Test N					IEEE						Test D					21/7/2	
Te	st Fre		ncy				2MH	Z				Polariz		۱			zontal	
130.0 d	Ten Bu∀/m	np				2	3°C					Hur	n.			5	7%	
130.0 u	DU¥7111																	
120																		
110																		
100																		
90																		
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F.0																		-
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30			x															
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10.0	00 055		0100		005		1100	0.00	107	0.00	10	200.00	100	F0.00	01.44	0.00	20500.0	
	00 3550	J.UU	6100 Erec		8650		1120			50.00		300.00		50.00		00.00	26500.0	UMH
No.	Mk.		Freq	•		ding vel		rrect ctor		easur ment		Lim	п	Ov	er			
			MHz	2		uV		B		BuV/ı		dBuV	//m	dE	3	Detector	Comm	ent
1			4924.0			.30	-9	.72		43.58		74.0		-30.	42	peak		
2	*		4924.0	000	45	.18	-9	.72		35.46	5	54.0	0	-18.	54	AVG		

REMARKS:

	Test N					IEEE						Test D					21/7/2	
IE	est Fre		ncy				2MH 3°C	Z				Polariz Hur		1			rtical 7%	
130.0 d	Ten BuV/m	ΠÞ				2	30					Πui	n.			0	07 %0	
	barrin																	
120																		
110																		1
100																		_
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20																		
10.0																		
	00 3550).00	6100).00	8650).00	1120	0.00	1375	50.00	16	300.00	188	50.00	2140	00.00	26500.0	 IO MHz
No.	Mk.		Frec		Rea	ding	Со	rrect	Me	easu	·e-	Lim	it	Ov	er			
				-	Le	vel		ctor		ment								
			MHz			SuV		dΒ		BuV/ı		dBuV		dE		Detector	Comm	ent
1			4824.0			.26		.83		42.43		74.0		-31.		peak		
2	*		4824.0	000	41	.91	-9	.83		32.08	3	54.0	00	-21.	92	AVG		

REMARKS:

-	Test M				802.11g		Test Date			1/7/2
le	est Frec				2MHz		Polarizatio	n		zontal
30.0 d	Tem BuV/m	ip		2	3°C		Hum.		5	7%
50.0 0										
20										
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80										
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io —		1								
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80		2 X								
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	00 3550.	.00 6100).00	8650.00	11200.00	13750.00 1			00.00	26500.00 MH
No.	Mk.	Freq		Reading Level	Correct Factor	Measure- ment	Limit	Over		
		MHz	2	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1		4824.0		53.73	-9.83	43.90	74.00	-30.10	peak	
2	*	4824.0	000	41.35	-9.83	31.52	54.00	-22.48	AVG	

REMARKS:

Te	Test M	lode quency				802.11g 7MHz				Test D Polariza)			1/7/2 rtical	
	Tem					3°C				Hun		<u> </u>			7%	
130.0 d	BuV/m	'P			_						••				,,,	
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120																1
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1000.0	00 3550	.00 610	D.00	8650.0	0	11200.00	137	50.00	16	300.00	188	50.00	2140	00.00	26500.00	л и н
No.	Mk.	Fred	1.	Readi Leve		Correct Factor		easur ment		Limi	it	Ov	er			
		MH	Z	dBu		dB		BuV/r		dBuV	/m	dE	3	Detector	Comme	ent
1		4874.0	000	53.1	7	-9.78		43.39		74.0	0	-30.	61	peak		
2	*	4874.0	000	41.7	3	-9.78		31.95		54.0	0	-22.	05	AVG		

REMARKS:

	Test M st Fred						802.1 7MHz				[Test E Polariz		<u>,</u>			21/7/2 izontal	
10	Terr		ю				3°C	-				Hur		<u> </u>			7%	
130.0 d	BuV/m	γ				2	00					1101					1 /0	
																		7
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30																		1
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50																		
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1000.0	00 3550	.00	6100).00	865).00	11200	.00	1375	50.00	16	300.00	188	50.00	214	DO.OO	26500.0	O MH:
No.	Mk.		Freq			ding		rect	Me	easu	e-	Lim	it	Ov	er			
						vel		ctor		ment								
			MHz			SuV		В		BuV/ı		dBu∖		d		Detector	Comm	ent
1			4874.0			.47		78		43.69		74.0		-30.		peak		
2	*	4	4874.0	000	41	.66	-9.	78		31.88	3	54.0	00	-22.	.12	AVG		

REMARKS:

Те	Test Mo st Freq				E 802.11g 62MHz		Test Dat Polarizati			1/7/2 rtical
	Tem				23°C		Hum.			7%
130.0 d	BuV/m									
120										
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	00 3550.			8650.00	11200.00	13750.00			400.00	26500.00 MH
No.	Mk.	Freq	.	Reading Level	g Correct Factor	Measure ment	- Limit	Over		
		MHz	2	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1		4924.0	000	52.31	-9.72	42.59	74.00	-31.41	peak	
2	*	4924.0	000	41.67	-9.72	31.95	54.00	-22.05	AVG	

REMARKS:

	Test Mo st Frequ				802.11g 62MHz		Test Date Polarizatio			1/7/2 zontal
	Temp				3°C		Hum.			7%
130.0 de	uV/m									
120										
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o 📃										
io 📂		1								
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0		2 X								
:0										
0.0										
	0 3550.0			8650.00	11200.00				00.00	26500.00 MH
No.	Mk.	Freq		Reading Level	Correct Factor	Measure- ment	Limit	Over		
		MHz	2	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1		4924.0	00	53.53	-9.72	43.81	74.00	-30.19	peak	
2	*	4924.0	00	41.82	-9.72	32.10	54.00	-21.90	AVG	

REMARKS:

Te	Test M est Freq				2.11n(HT20 2MHz	0)	Test Date Polarization	n		1/7/2 rtical
	Tem				3°C		Hum.			7%
130.0 d	lBu¥/m									
120										
120										
10										
100										
90 -										
30 -										
70 -										
50										
50										
10 L		1 X								
		2 X								
80		×								
20										
10.0										
	00 3550.			8650.00	11200.00				00.00	26500.00 MH
No.	Mk.	Freq.		Reading Level	Correct Factor	Measure- ment	Limit	Over		
		MHz		dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1		4824.00		52.97	-9.83	43.14	74.00	-30.86	peak	
2	*	4824.00	00	41.79	-9.83	31.96	54.00	-22.04	AVG	

REMARKS:

Та	Test M				2.11n(HT20 2MHz))	Test Date Polarization			1/7/2 zontal
Te	est Fred Tem				2101112 3°C		Hum.	n		7%
130.0 d	IBuV/m	ιp		Ζ	30		i iuiii.		5	1 /0
120										
10										
100										
90 -										
30 -										
70 —										
50										
50										
40 L		1 X								
		2								
30		×								
20										
10.0										
1000.0	00 3550	.00 610	0.00	8650.00	11200.00	13750.00 10	6300.00 188	350.00 214	00.00	26500.00 MH
No.	Mk.	Free] .	Reading Level	Correct Factor	Measure- ment	Limit	Over		
		MH	Z	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1		4824.		53.88	-9.83	44.05	74.00	-29.95	peak	
2	*	4824.0	000	41.64	-9.83	31.81	54.00	-22.19	AVG	

REMARKS:

Te	Test M est Freq				11n(HT20 7MHz		Test Date Polarizatio			1/7/2 tical
	Tem				3°C		Hum.			7%
130.0 c	IBuV/m	Ρ		2	00				•	,,,
120										
110										
100										
90										
50										
BO										
70										
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50										
40 L		1 X								
+0		2 X								
30		×								
20										
10.0										
	00 3550.	.00 6100.	00	8650.00	11200.00	13750.00 10	5300.00 188	350.00 214	00.00	26500.00 MH;
No.	Mk.	Freq.		Reading	Correct	Measure-	Limit	Over		
				Level	Factor	ment		0.00		
		MHz		dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1		4874.0	00	52.75	-9.78	42.97	74.00	-31.03	peak	
2	*	4874.0	00	41.81	-9.78	32.03	54.00	-21.97	AVG	

REMARKS:

	Test Mo st Freq				2.11n(HT20 37MHz	D)	Test Date Polarizatio			1/7/2 zontal
Ie	Tem				3°C		Hum.	11		7%
130.0 dl	BuV/m	ρ		2	.5 0		Tium.		5	1 70
120										
110										
100										
90										
BO										
70										
60										
50		1								
40		1 X								
30		2 X								
50										
20										
10.0										
)0 3550.			8650.00	11200.00				00.00	26500.00 MH
No.	Mk.	Freq	•	Reading Level	Correct	Measure-	Limit	Over		
		MHz	,	dBuV	Factor dB	ment dBuV/m	dBuV/m	dB	Detector	Comment
1		4874.0		52.58	-9.78	42.80	74.00	-31.20	peak	Comment
2	*	4874.0		41.73	-9.78	31.95	54.00	-22.05	AVG	

REMARKS:

Te	Test Mo est Freq				2.11n(HT20 2MHz)	Test Date Polarization			1/7/2 rtical
	Tem				3°C		Hum.			7%
30.0 d	HBuV/m	9			00		i iuni.		0	770
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io 🗖										
		1 X								
0										
		2 X								
20										
0.0				050.00	11000.00	40750.00	0000.00 40			
	00 3550.0			650.00	11200.00				00.00	26500.00 MH
No.	Mk.	Freq.		eading Level	Correct Factor	Measure- ment	Limit	Over		
		MHz		dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1		4924.00		53.66	-9.72	43.94	74.00	-30.06	peak	
2	*	4924.00	0	41.57	-9.72	31.85	54.00	-22.15	AVG	

REMARKS:

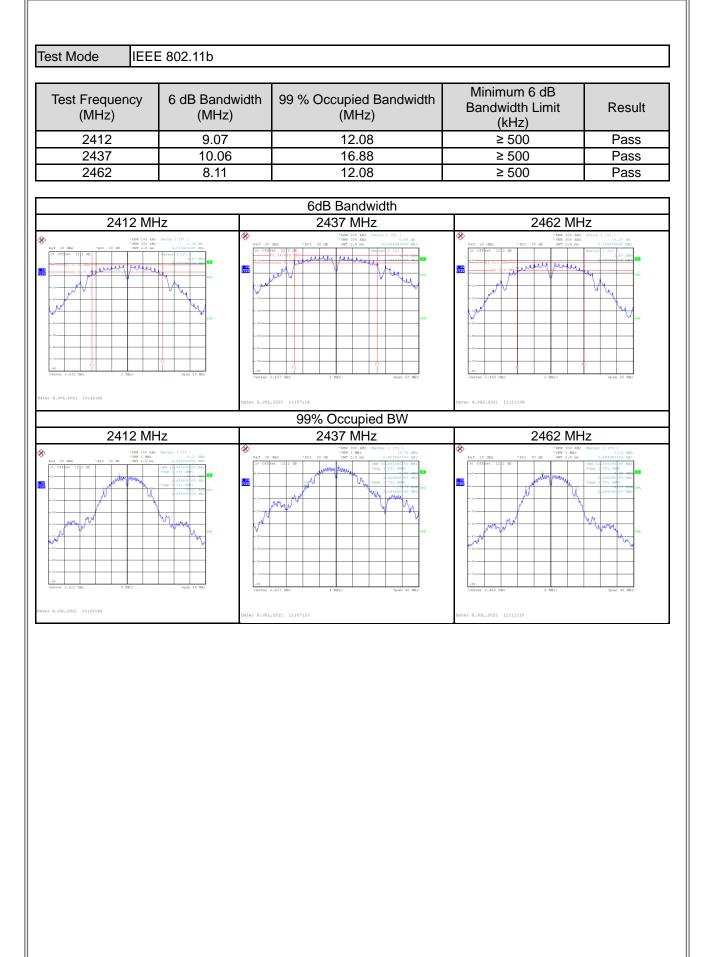
	Test N				IEE	E 802			D)			Test D					21/7/2	
Te	st Fre		ncy				2MH	Z			F	Polariz)			zontal	
130.0 d	Ten Bu¥/m	٦p				2	3°C					Hur	n.			5	7%	
130.0 a	BUY/M																	
120																		
10																		
100																		
90																		
BO																		
70																		
50																		
50																		
10			1 X															
30			2 X															
20																		
10.0																		
	00 3550	J.OO	6100		8650		1120		1375			300.00		50.00		00.00	26500.00 N	4H2
No.	Mk.		Freq			ding vel		rrect ctor		easur ment		Lim	It	Ov	er			
			MHz	2		ωV		B		BuV/r		dBuV	/m	dE	3	Detector	Commer	nt
1			4924.0			.00		.72		43.28		74.0		-30.		peak		
2	*		4924.0	000	41	.52	-9	.72		31.80)	54.0	0	-22.	20	AVG		

REMARKS:

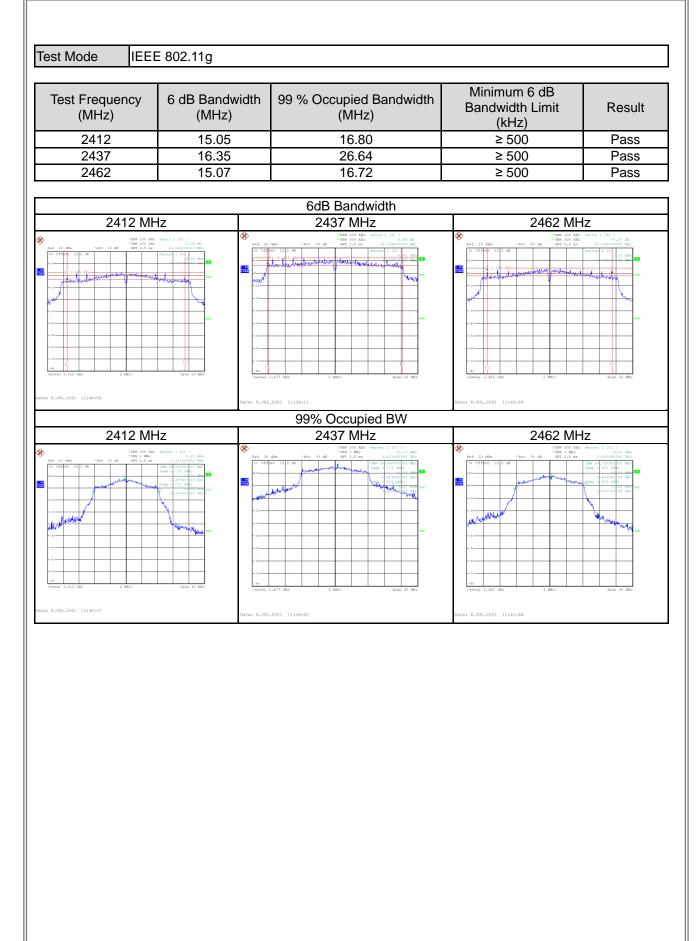


APPENDIX D BANDWIDTH











Test Mode IEEE 802.11n (HT20) Minimum 6 dB **Test Frequency** 6 dB Bandwidth 99 % Occupied Bandwidth **Bandwidth Limit** Result (MHz) (MHz) (MHz) (kHz) 2412 16.12 17.84 ≥ 500 Pass 2437 16.61 27.36 ≥ 500 Pass 2462 15.20 ≥ 500 17.84 Pass 6dB Bandwidth 2412 MHz 2437 MHz 2462 MHz NBW 100 kH: VBW 300 kH: + 99% Occupied BW





APPENDIX E OUTPUT POWER



Test Mode	IEEE 802.11b		Te	sted Date	2021/7/8
Frequency (MHz)	Conducted Power (dBm)	Conducted Power (W)	Limit (dBm)	Limit (W)	Result
2412	21.51	0.1416	30.00	1.0000	Complies
2437	25.01	0.3170	30.00	1.0000	Complies
2462	20.52	0.1127	30.00	1.0000	Complies
Test Mode	IEEE 802.11g		Te	sted Date	2021/7/8
Frequency (MHz)	Conducted Power (dBm)	Conducted Power (W)	Limit (dBm)	Limit (W)	Result
2412	24.22	0.2642	30.00	1.0000	Complies
2437	25.12	0.3251	30.00	1.0000	Complies
2462	24.36	0.2729	30.00	1.0000	Complies
Test Mode	IEEE 802.11n (HT2	20)	Tes	sted Date	2021/7/8
Frequency (MHz)	Conducted Power (dBm)	Conducted Power (W)	Limit (dBm)	Limit (W)	Result
2412	23.93	0.2472	30.00	1.0000	Complies
2437	25.13	0.3258	30.00	1.0000	Complies
2462	24.45	0.2786	30.00	1.0000	Complies

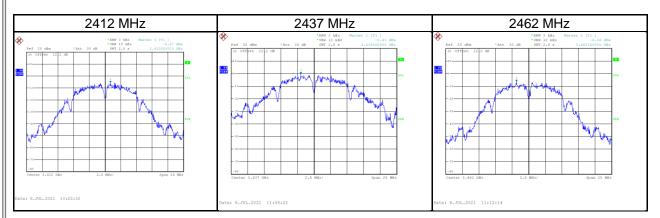


APPENDIX F POWER SPECTRAL DENSITY



Test Mode IEEE 802.11b

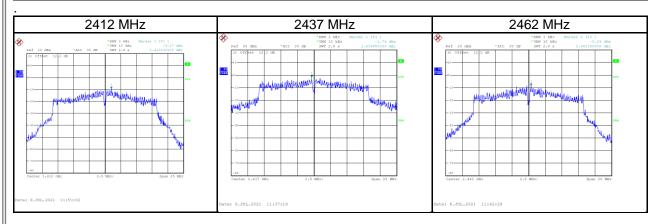
Test Frequency (MHz)	Power Spectral Density (dBm/3kHz)	Maximum Limit (dBm/3kHz)	Result
2412	-5.57	8.00	Pass
2437	-0.43	8.00	Pass
2462	-6.36	8.00	Pass





Test Mode IEEE 802.11g

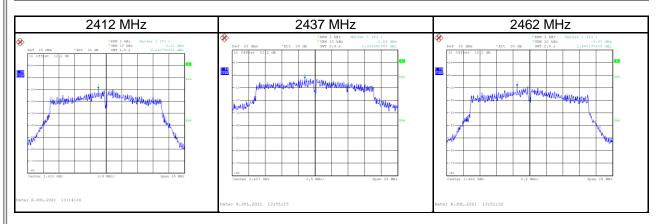
Test Frequency	Power Spectral Density	Maximum Limit	Deput
(MHz)	(dBm/3kHz)	(dBm/3kHz)	Result
2412	-9.17	8.00	Pass
2437	-1.74	8.00	Pass
2462	-8.29	8.00	Pass





Test Mode IEEE 802.11n (HT20)

Test Frequency (MHz)	Power Spectral Density (dBm/3kHz)	Maximum Limit (dBm/3kHz)	Result
2412	-9.32	8.00	Pass
2437	-2.64	8.00	Pass
2462	-8.63	8.00	Pass





APPENDIX G ANTENNA CONDUCTED SPURIOUS EMISSIONS



