FCC Radio Test Report

FCC ID: 2BCGWHB710

This report concerns: Class II Permissive Changes

Project No.	:	2405G048A
Equipment	:	1) BE21000 Whole Home Mesh Wi-Fi 7 AP 2) BE18000 Whole Home Mesh Wi-Fi 7 AP
Brand Name	:	tp-link
Test Model	:	1) HB710
Series Model	:	2) Hexagon PB70
Applicant	:	TP-LINK CORPORATION PTE. LTD.
Address	:	7 Temasek Boulevard #29-03 Suntec Tower One, Singapore 038987
Manufacturer	:	TP-LINK CORPORATION PTE. LTD.
Address	:	7 Temasek Boulevard #29-03 Suntec Tower One, Singapore 038987
Date of Receipt	:	Mar. 10, 2025
Date of Test	:	Mar. 12, 2025 ~ Apr. 07, 2025
Issued Date	:	Jul. 23, 2025
Test Sample	:	Engineering Sample No.: DG20250310230 for power, DG20250310229 for others.
Standard(s)	:	FCC CFR Title 47, Part 15, Subpart E

The above equipment has been tested and found compliance with the requirement of the relative standards by BTL Inc. (Dongguan)

Prepared by : Grani Zhou

Grani Zhou

Approved by : Chay . Cai

Chay Cai

No.3, Jinshagang 1st Road, Dalang, Dongguan, Guangdong People's Republic of China.
Tel: +86-769-8318-3000 Web: www.newbtl.com Service mail: btl_qa@newbtl.com

Declaration

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

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

The report must not be used by the client to claim product certification, approval, or endorsement by A2LA or any agency of the U.S. Government.

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

BTL's laboratory quality assurance procedures are in compliance with the ISO/IEC 17025: 2017 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.

Table of Contents

Page

REPORT ISSUED HISTORY 4
1 . APPLICABLE STANDARDS 5
2 . SUMMARY OF TEST RESULTS 5
2.1 TEST FACILITY 6
2.2 MEASUREMENT UNCERTAINTY 6
2.3 TEST ENVIRONMENT CONDITIONS 6
3 . GENERAL INFORMATION 7
3.1 GENERAL DESCRIPTION OF EUT 7
3.2 TEST MODES 11
3.3 CUSTOMER INFORMATION DESCRIPTION 11
4 . RADIATED EMISSIONS 12
4.1 LIMIT 12
4.2 TEST PROCEDURE 13
4.3 DEVIATION FROM TEST STANDARD 14
4.4 TEST SETUP 14
4.5 EUT OPERATION CONDITIONS 15
4.6 TEST RESULTS - 30 MHZ TO 1000 MHZ 15
4.7 TEST RESULTS - ABOVE 1000 MHZ 15
5 . MAXIMUM OUTPUT POWER 16
5.1 LIMIT 16
5.2 TEST PROCEDURE 16
5.3 DEVIATION FROM STANDARD 16
5.4 TEST SETUP 16
5.5 EUT OPERATION CONDITIONS 16
5.6 TEST RESULTS 16
6 . MEASUREMENT INSTRUMENTS LIST 17
7 . EUT TEST PHOTOS 19
APPENDIX A - RADIATED EMISSION - 30 MHZ TO 1000 MHZ 22
APPENDIX B - RADIATED EMISSION - ABOVE 1000 MHZ 25
APPENDIX C - MAXIMUM OUTPUT POWER 32

REPORT ISSUED HISTORY

Report No.	Version	Description	Issued Date	Note
BTL-FCCP-2-2405G048A	R00	This is a supplementary report to the original test report (BTL-FCCP-2-2405G048). Changed the FEM(The FEM is pin to pin, the pin function is exactly the same, and the layout do not change). So tested the worst case of Power and Radiated Emissions above 30MHz and recorded. In this report only recorded the new test data. Other original test results please refer to original report.	Jul. 23, 2025	Valid

1. APPLICABLE STANDARDS

According to the specifications of the manufacturer, the EUT must comply with the requirements of the following standards:
ANSI C63.10-2013
The following reference test guidance is not within the scope of accreditation of A2LA:
KDB 789033 D02 General UNII Test Procedures New Rules v02r01
KDB 662911 D01 Multiple Transmitter Output v02r01

2. SUMMARY OF TEST RESULTS

Test procedures according to the technical standard(s):

FCC CFR Title 47, Part 15, Subpart E				
Standard(s) Section	**Test Item**	**Test Result**	**Judgment**	**Remark**
15.407(b) 15.205(a) 15.209(a)	Radiated Emissions	APPENDIX A APPENDIX B	PASS	------
15.407(a)	Maximum Output Power	APPENDIX C	PASS	------

Note:
(1) “N/A” denotes test is not applicable in this test report.
(2) The other test records and results please refer to the test report number: BTL-FCCP-2-2405G048, issued date is Jul. 22, 2024.
This report is only valid conjunction with the above referenced test report.

2.1 TEST FACILITY

The test facilities used to collect the test data in this report is at the location of No.3, Jinshagang 1st Road, Dalang, Dongguan, Guangdong People's Republic of China.
BTL's Registration Number for FCC: 747969
BTL's Designation Number for FCC: CN1377

2.2 MEASUREMENT UNCERTAINTY

ISO/IEC 17025 requires that an estimate of the measurement uncertainties associated with the emissions test results be included in the report. The measurement uncertainties given below are based on a 95% confidence level (based on a coverage factor (k=2))
The BTL measurement uncertainty as below table:

A. Radiated emissions test:

Test Site	Method	Measurement Frequency Range	Ant. H / V	*U*,(dB)
DG-CB03 (3m)	CISPR	30MHz ~ 200MHz	V	4.40
		30MHz ~ 200MHz	H	3.62
		200MHz ~ 1,000MHz	V	4.58
		200MHz ~ 1,000MHz	H	3.98

Test Site	Method	Measurement Frequency Range	*U*,(dB)
DG-CB03 (3m)	CISPR	1GHz ~ 6GHz	4.08
		6GHz ~ 18GHz	4.62

Test Site	Method	Measurement Frequency Range	*U*,(dB)
DG-CB03 (1m)	CISPR	18 ~ 26.5 GHz	3.36
		26.5 ~ 40 GHz	3.58

B. Other Measurement test:

Test Item	Uncertainty
Maximum Output Power	1.3 dB
Temperature	0.8 °C
Humidity	2.2 %

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

2.3 TEST ENVIRONMENT CONDITIONS

Test Item	Temperature	Humidity	Test Voltage	Tested By	Test Date
Radiated Emissions -30MHz to 1000MHz	23°C	42%	AC 120V/60Hz	Chen Mo	Apr. 02, 2025
Radiated Emissions -Above 1000 MHz	24°C	58%	AC 120V/60Hz	Chen Mo	Mar. 22, 2025
	23°C	42%	AC 120V/60Hz	Chen Mo	Apr. 02, 2025
Maximum Output Power	25°C	55%	AC 120V/60Hz	Andrew Jiang	Mar. 26, 2025

3. GENERAL INFORMATION

3.1 GENERAL DESCRIPTION OF EUT

Equipment	1) BE21000 Whole Home Mesh Wi-Fi 7 AP 2) BE18000 Whole Home Mesh Wi-Fi 7 AP
Brand Name	tp-link
Test Model	1) HB710
Series Model	2) Hexagon PB70
Model Difference(s)	Only differ in model name and product name.
Software Version	V1.0
Hardware Version	V1.0
Power Source	DC voltage supplied from AC adapter. Model: T120330-2B4
Power Rating	I/P: 100-240V~ 50/60Hz 1A O/P: 12.0V⎓3.3A
Operation Frequency Band(s)	UNII-1: 5150 MHz ~ 5250 MHz UNII-2A: 5250 MHz ~ 5350 MHz UNII-2C: 5470 MHz ~ 5725 MHz UNII-3: 5725 MHz ~ 5850 MHz
Modulation Type	IEEE 802.11a/n/ac: OFDM IEEE 802.11ax/be: OFDMA
Bit Rate of Transmitter	IEEE 802.11a: 54/48/36/24/18/12/9/6 Mbps IEEE 802.11n: up to 600 Mbps IEEE 802.11ac: up to 3466.8 Mbps IEEE 802.11ax: up to 4804 Mbps IEEE 802.11be: up to 5764 Mbps
Maximum Output Power	IEEE 802.11a: 29.50 dBm (0.8913 W)

Note:

1. For a more detailed features description, please refer to the manufacturer's specifications or the user's manual.

2. Channel List:

IEEE 802.11a IEEE 802.11n(HT20) IEEE 802.11ac(VHT20) IEEE 802.11ax(HE20) IEEE 802.11be(EHT20)		IEEE 802.11n(HT40) IEEE 802.11ac(VHT40) IEEE 802.11ax(HE40) IEEE 802.11be(EHT40)		IEEE 802.11ac(VHT80) IEEE 802.11ax(HE80) IEEE 802.11be(EHT80)	
UNII-1		UNII-1		UNII-1	
Channel	Frequency (MHz)	Channel	Frequency (MHz)	Channel	Frequency (MHz)
36	5180	38	5190	42	5210
40	5200	46	5230		
44	5220				
48	5240				

IEEE 802.11a IEEE 802.11n(HT20) IEEE 802.11ac(VHT20) IEEE 802.11ax(HE20) IEEE 802.11be(EHT20)		IEEE 802.11n(HT40) IEEE 802.11ac(VHT40) IEEE 802.11ax(HE40) IEEE 802.11be(EHT40)		IEEE 802.11ac(VHT80) IEEE 802.11ax(HE80) IEEE 802.11be(EHT80)	
UNII-2A		UNII-2A		UNII-2A	
Channel	Frequency (MHz)	Channel	Frequency (MHz)	Channel	Frequency (MHz)
52	5260	54	5270	58	5290
56	5280	62	5310		
60	5300				
64	5320				

IEEE 802.11a IEEE 802.11n(HT20) IEEE 802.11ac(VHT20) IEEE 802.11ax(HE20) IEEE 802.11be(EHT20)		IEEE 802.11n(HT40) IEEE 802.11ac(VHT40) IEEE 802.11ax(HE40) IEEE 802.11be(EHT40)		IEEE 802.11ac(VHT80) IEEE 802.11ax(HE80) IEEE 802.11be(EHT80)	
UNII-2C		UNII-2C		UNII-2C	
Channel	Frequency (MHz)	Channel	Frequency (MHz)	Channel	Frequency (MHz)
100	5500	102	5510	106	5530
104	5520	110	5550	122	5610
108	5540	118	5590	138	5690
112	5560	126	5630		
116	5580	134	5670		
120	5600	142	5710		
124	5620				
128	5640				
132	5660				
136	5680				
140	5700				
144	5720				

IEEE 802.11a IEEE 802.11n(HT20) IEEE 802.11ac(VHT20) IEEE 802.11ax(HE20) IEEE 802.11be(EHT20)		IEEE 802.11n(HT40) IEEE 802.11ac(VHT40) IEEE 802.11ax(HE40) IEEE 802.11be(EHT40)		IEEE 802.11ac(VHT80) IEEE 802.11ax(HE80) IEEE 802.11be(EHT80)	
UNII-3		UNII-3		UNII-3	
Channel	Frequency (MHz)	Channel	Frequency (MHz)	Channel	Frequency (MHz)
149	5745	151	5755	155	5775
153	5765	159	5795		
157	5785				
161	5805				
165	5825				

IEEE 802.11ac(VHT160) IEEE 802.11ax(HE160) IEEE 802.11be(EHT160)	
Channel	Frequency (MHz)
50	5250
114	5570

3. Antenna Specification:

Ant.	Brand	P/N	Antenna Type	Connector	Gain (dBi)
1	TP-LINK	3101506916	Dipole	N/A	2.97
2	TP-LINK	3101506913	Dipole	N/A	2.56
3	TP-LINK	3101506917	Dipole	N/A	2.77
4	TP-LINK	3101506915	Dipole	N/A	2.92

Note:

1) This EUT supports CDD, and all antenna gains are not equal, Directional gain = G_{ANT} + Array Gain,
For Power measurement, Array Gain = 0 dB($N_{ANT} \leqslant 4$), so Directional gain=2.97+0=2.97.
For Power Spectral Density measurement, N_{ANT} =4, N_{SS} =1 and N_{SS} =4 ,
So the NSS1 Directional gain= G_{ANT} + Array Gain = G_{ANT} + 10 log(N_{ANT}/N_{ss}) =2.97+10 log(4/1)=9.
Then, the UNII-1 power spectral density limit is 17-(9-6)=14, the UNII-2A, UNII-2C power spectral density limit is 11-(9-6)=8, the UNII-3 power spectral density limit is 30-(9-6)=27.
The NSS4 Directional gain= G_{ANT} + Array Gain = G_{ANT} + 10 log(N_{ANT}/N_{ss}) =2.97+10 log(4/4)=2.97.
2) The beamforming gain is 6dB. So Directional gain=2.97+6=8.97dBi.
So, the UNII-1 and UNII-3 output power limit is 30-(8.97-6)=27, UNII-2A and UNII-2C output power limit is 23.98-(8.97-6)=21.

4. Table for Antenna Configuration:

For Non Beamforming:

Operating Mode / TX Mode	4TX
IEEE 802.11a	V (Ant. 1 + Ant. 2 + Ant. 3 + Ant. 4)
IEEE 802.11n(HT20)	V (Ant. 1 + Ant. 2 + Ant. 3 + Ant. 4)
IEEE 802.11n(HT40)	V (Ant. 1 + Ant. 2 + Ant. 3 + Ant. 4)
IEEE 802.11ac(VHT20)	V (Ant. 1 + Ant. 2 + Ant. 3 + Ant. 4)
IEEE 802.11ac(VHT40)	V (Ant. 1 + Ant. 2 + Ant. 3 + Ant. 4)
IEEE 802.11ac(VHT80)	V (Ant. 1 + Ant. 2 + Ant. 3 + Ant. 4)
IEEE 802.11ac(VHT160)	V (Ant. 1 + Ant. 2 + Ant. 3 + Ant. 4)
IEEE 802.11ax(HE20)	V (Ant. 1 + Ant. 2 + Ant. 3 + Ant. 4)
IEEE 802.11ax(HE40)	V (Ant. 1 + Ant. 2 + Ant. 3 + Ant. 4)
IEEE 802.11ax(HE80)	V (Ant. 1 + Ant. 2 + Ant. 3 + Ant. 4)
IEEE 802.11ax(HE160)	V (Ant. 1 + Ant. 2 + Ant. 3 + Ant. 4)
IEEE 802.11be(EHT20)	V (Ant. 1 + Ant. 2 + Ant. 3 + Ant. 4)
IEEE 802.11be(EHT40)	V (Ant. 1 + Ant. 2 + Ant. 3 + Ant. 4)
IEEE 802.11be(EHT80)	V (Ant. 1 + Ant. 2 + Ant. 3 + Ant. 4)
IEEE 802.11be(EHT160)	V (Ant. 1 + Ant. 2 + Ant. 3 + Ant. 4)

For Beamforming:

Operating Mode / TX Mode	4TX
IEEE 802.11n(HT20)	V (Ant. 1 + Ant. 2 + Ant. 3 + Ant. 4)
IEEE 802.11n(HT40)	V (Ant. 1 + Ant. 2 + Ant. 3 + Ant. 4)
IEEE 802.11ac(VHT20)	V (Ant. 1 + Ant. 2 + Ant. 3 + Ant. 4)
IEEE 802.11ac(VHT40)	V (Ant. 1 + Ant. 2 + Ant. 3 + Ant. 4)
IEEE 802.11ac(VHT80)	V (Ant. 1 + Ant. 2 + Ant. 3 + Ant. 4)
IEEE 802.11ac(VHT160)	V (Ant. 1 + Ant. 2 + Ant. 3 + Ant. 4)
IEEE 802.11ax(HE20)	V (Ant. 1 + Ant. 2 + Ant. 3 + Ant. 4)
IEEE 802.11ax(HE40)	V (Ant. 1 + Ant. 2 + Ant. 3 + Ant. 4)
IEEE 802.11ax(HE80)	V (Ant. 1 + Ant. 2 + Ant. 3 + Ant. 4)
IEEE 802.11ax(HE160)	V (Ant. 1 + Ant. 2 + Ant. 3 + Ant. 4)
IEEE 802.11be(EHT20)	V (Ant. 1 + Ant. 2 + Ant. 3 + Ant. 4)
IEEE 802.11be(EHT40)	V (Ant. 1 + Ant. 2 + Ant. 3 + Ant. 4)
IEEE 802.11be(EHT80)	V (Ant. 1 + Ant. 2 + Ant. 3 + Ant. 4)
IEEE 802.11be(EHT160)	V (Ant. 1 + Ant. 2 + Ant. 3 + Ant. 4)

3.2 TEST MODES

The test system was pre-tested based on the consideration of all possible combinations of EUT operation mode.

Pretest Mode	Description
Mode 1	TX A Mode Channel 157 (UNII-3)

Following mode(s) was (were) found to be the worst case(s) and selected for the final test.

Radiated Emissions Test - Below 1GHz	
Final Test Mode	Description
Mode 1	TX A Mode Channel 157 (UNII-3)

Radiated Emissions Test - Above 1GHz	
Final Test Mode	Description
Mode 1	TX A Mode Channel 157 (UNII-3)

Output Power Test	
Final Test Mode	Description
Mode 1	TX A Mode Channel 157 (UNII-3)

3.3 CUSTOMER INFORMATION DESCRIPTION

1) The antenna gain and beamforming gain are provided by the manufacturer.

4. RADIATED EMISSIONS

4.1 LIMIT

In case the emission fall within the restricted band specified on 15.205(a), then the 15.209(a) 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
Above 960	500	3

LIMITS OF UNWANTED EMISSION OUT OF THE RESTRICTED BANDS (Above 1000 MHz)

Frequency (MHz)	EIRP Limit (dBm/MHz)	Band edge at 3m (dBμV/m)	Harmonic at 1m (dBμV/m)
5150-5250	-27	68.2	77.7 (Note 3)
5250-5350	-27	68.2	77.7 (Note 3)
5470-5725	-27	68.2	77.7 (Note 3)
5725-5850 **NOTE (2)**	-27	68.2	77.7 (Note 3)
	10	105.2	114.7 (Note 3)
	15.6	110.8	120.3 (Note 3)
	27	122.2	131.7 (Note 3)

NOTE:

(1) The following formula is used to convert the equipment isotropic radiated power (eirp) to field strength:

$$E = \frac{1000000\sqrt{30P}}{3}$$ μV/m, where P is the eirp (Watts)

(2) According to 15.407(b)(4)(i), all emissions shall be limited to a level of -27 dBm/MHz at 75 MHz or more above or below the band edge increasing linearly to 10 dBm/MHz at 25 MHz above or below the band edge, and from 25 MHz above or below the band edge increasing linearly to a level of 15.6 dBm/MHz at 5 MHz above or below the band edge, and from 5 MHz above or below the band edge increasing linearly to a level of 27 dBm/MHz at the band edge.

(3)

$$FS_{\text{limit}} = FS_{\max} - 20\log\left(\frac{d_{\text{limit}}}{d_{\text{measure}}}\right)$$

20log ($d_{limit}/d_{measure}$)=20log (3/1)=9.5 dB.
FS_{limit}: Harmonic at 3m Peak and Average limit.
FS_{max}: Harmonic at 1m Peak and Average Maximum value.
d_{limit}: Harmonic at 3m test distance.
$d_{measure}$: Harmonic Actual test distance.

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 or 1m 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 0.8m or 1.5m; 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 1 GHz.
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 1 GHz)
h. All readings are Peak Mode value unless otherwise stated AVG in column of Note. If the Peak Mode Measured value compliance with the Peak Limits and lower than AVG Limits, the EUT shall be deemed to meet both Peak & AVG Limits and then only Peak Mode was measured, but AVG Mode didn‘t perform. (above 1 GHz)
i. For the actual test configuration, please refer to the related Item –EUT Test Photos.

The following table is the setting of the receiver:

Spectrum Parameters	Setting
Start ~ Stop Frequency	9 kHz~150 kHz for RBW 200 Hz
Start ~ Stop Frequency	0.15 MHz~30 MHz for RBW 9 kHz
Start ~ Stop Frequency	30 MHz~1000 MHz for RBW 100 kHz

Spectrum Parameters	Setting
Start Frequency	1000 MHz
Stop Frequency	10th carrier harmonic or 40 GHz, whichever is lower
RBW / VBW (Emission in restricted band)	1 MHz / 3 MHz for PK value 1 MHz / 1/T Hz for AVG value

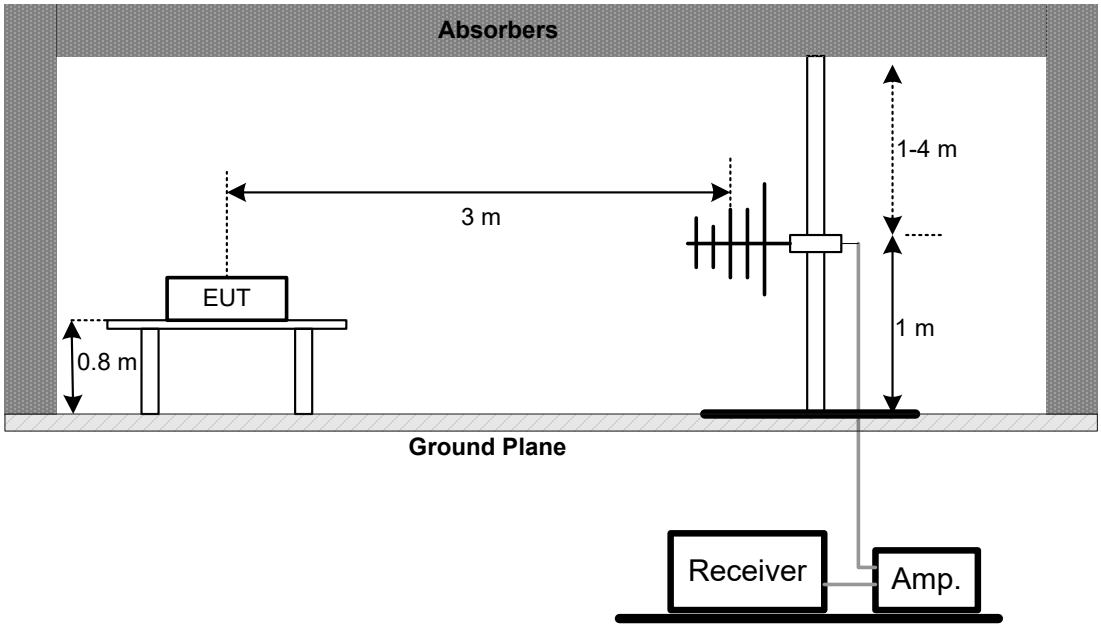
Receiver Parameters	Setting
Start ~ Stop Frequency	9 kHz~90 kHz for PK/AVG detector
Start ~ Stop Frequency	90 kHz~110 kHz for QP detector
Start ~ Stop Frequency	110 kHz~490 kHz for PK/AVG detector
Start ~ Stop Frequency	490 kHz~30 MHz for QP detector
Start ~ Stop Frequency	30 MHz~1000 MHz for QP detector
Start ~ Stop Frequency	1 GHz~40 GHz for PK/AVG detector

4.3 DEVIATION FROM TEST STANDARD

No deviation.

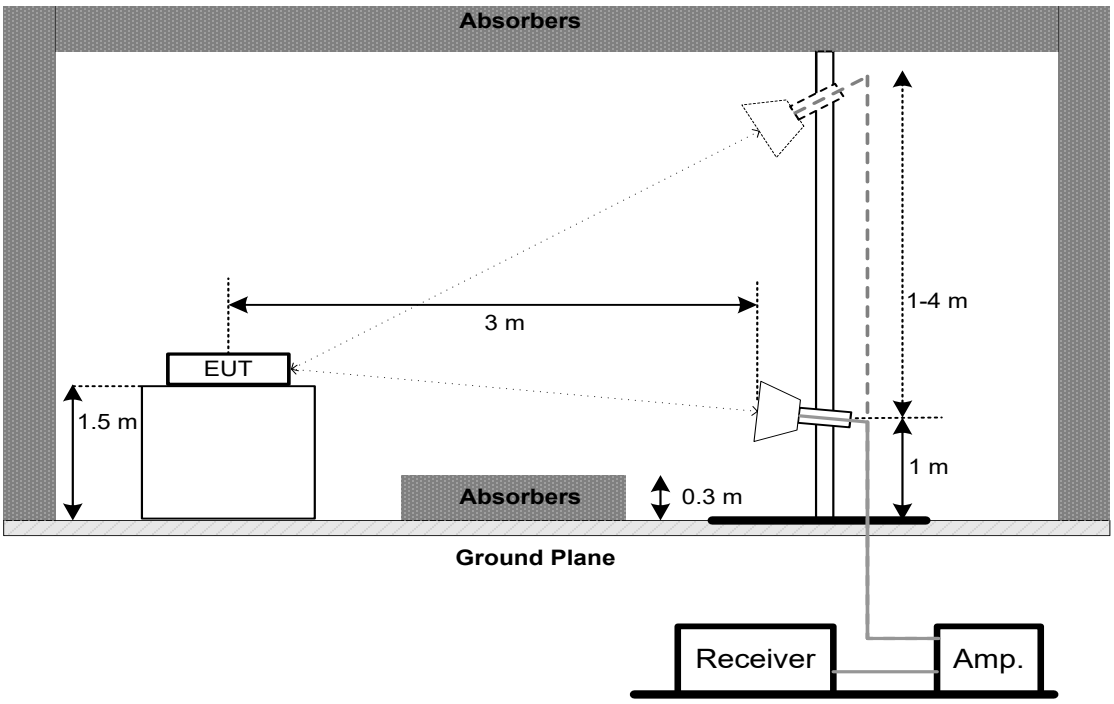
4.4 TEST SETUP

30 MHz to 1 GHz

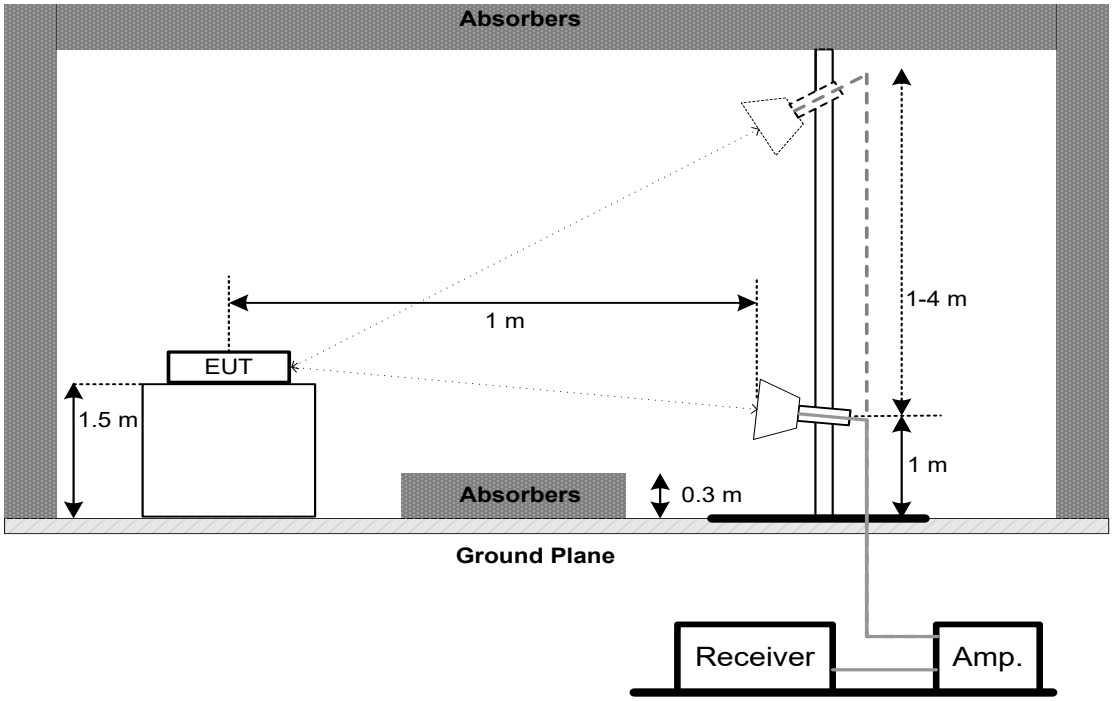


Above 1 GHz

Band edge & Harmonic (1 GHz to 18 GHz)



Harmonic (18 GHz to 40 GHz)



4.5 EUT OPERATION CONDITIONS

The EUT tested system was configured as the statements of 3.5 unless otherwise a special operating condition is specified in the follows during the testing.

4.6 TEST RESULTS - 30 MHZ TO 1000 MHZ

Please refer to the APPENDIX A.

4.7 TEST RESULTS - ABOVE 1000 MHZ

Please refer to the APPENDIX B.

Remark:

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

5. MAXIMUM OUTPUT POWER

5.1 LIMIT

Section	Test Item	Limit	Frequency Range (MHz)
FCC 15.407(a)	Maximum Output Power	AP device: 1 Watt (30 dBm) Client device: 250 mW (23.98 dBm)	5150-5250
		250 mW (23.98 dBm)	5250-5350
		250 mW (23.98 dBm)	5470-5725
		1 Watt (30dBm)	5725-5850

Note:

a. For an indoor access point operating in the band 5.15-5.25 GHz, the maximum conducted output power over the frequency band of operation shall not exceed 1 W provided the maximum antenna gain does not exceed 6 dBi. In addition, the maximum power spectral density shall not exceed 17 dBm in any 1 megahertz band. If transmitting antennas of directional gain greater than 6 dBi are used, both the maximum conducted output power and the maximum power spectral density shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi.

b. For the 5.25-5.35 GHz and 5.47-5.725 GHz bands, the maximum conducted output power over the frequency bands of operation shall not exceed the lesser of 250 mW or 11 dBm + 10log B, where B is the 26dB Bandwidth in megahertz.

5.2 TEST PROCEDURE

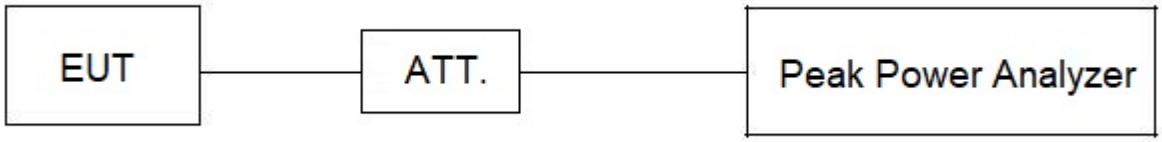
a. The EUT was directly connected to the peak power analyzer and antenna output port as show in the block diagram below.

b. The test was performed in accordance with method of FCC KDB 789033 D02 General UNII Test Procedures New Rules v02r01.

5.3 DEVIATION FROM STANDARD

No deviation.

5.4 TEST SETUP



5.5 EUT OPERATION CONDITIONS

The EUT was programmed to be in continuously transmitting mode.

5.6 TEST RESULTS

Please refer to the APPENDIX C.

6. MEASUREMENT INSTRUMENTS LIST

Radiated Emissions - 30 MHz to 1 GHz					
Item	Kind of Equipment	Manufacturer	Type No.	Serial No.	Calibrated until
1	Trilog-Broadband Antenna	Schwarzbeck	VULB 9168	01462	Dec. 14, 2025
2	Attenuator	EMC INSTRUMENT	EMCI-N-6-06	AT-06009	Dec. 14, 2025
3	Preamplifier	EMC INSTRUMENT	EMC001330	980998	May 31, 2025
4	Cable	RegalWay	LMR400-NMNM-12.5m	N/A	Jun. 06, 2025
5	Cable	RegalWay	LMR400-NMNM-3m	N/A	Jun. 06, 2025
6	Cable	RegalWay	LMR400-NMNM-0.5m	N/A	Jun. 06, 2025
7	Receiver	Agilent	N9038A	MY52130039	Jan. 10, 2026
8	Positioning Controller	MF	MF-7802	N/A	N/A
9	Measurement Software	Farad	EZ-EMC Ver.NB-03A1-01	N/A	N/A
10	966 Chamber room	CM	9*6*6	N/A	May 16, 2025

Radiated Emissions - 1 GHz to 18 GHz					
Item	Kind of Equipment	Manufacturer	Type No.	Serial No.	Calibrated until
1	Multi-Device Controller	ETS-Lindgren	N/A	N/A	N/A
2	Measurement Software	Farad	EZ-EMC Ver.NB-03A1-01	N/A	N/A
3	MXA Signal Analyzer	KEYSIGHT	N9020B	MY63380204	Oct. 29, 2025
4	Cable	RegalWay	RWLP50-4.0A-SMSM -1.3M	N/A	Jan. 09, 2025
5	Cable	RegalWay	RWLP50-2.6A-3.5M2. 92MRA-3M	N/A	Jan. 09, 2025
6	Cable	RegalWay	RWLP50-4.0A-SMSM -9M	N/A	Jan. 09, 2025
7	966 Chamber room	ETS	RFD-100（SVSWR）	Q2179	Jan. 09, 2025
8	Double Ridged Horn Antenna	EMC INSTRUMENT	DRH18-E	210509A18ES	Aug. 28, 2025
9	Preamplifier	EMC INSTRUMENT	EMC118A45SE	981001	May 31, 2025
10	Attenuator	Talent Microwave	TA10A2-S-18	N/A	N/A
11	Filter	STI	STI15-9969	N/A	Oct. 29, 2025

Radiated Emissions - Above 18 GHz					
Item	Kind of Equipment	Manufacturer	Type No.	Serial No.	Calibrated until
1	EXA Spectrum Analyzer	Keysight	N9010A	MY55150209	Aug. 20, 2025
2	Preamplifier	EMC INSTRUMENT	EMC184045SE	980905	Oct. 29, 2025
3	Cable	RegalWay	RWLP50-2.6A-2.92M 2.92M-1.1M	N/A	Jul. 25, 2025
4	Cable	Tonscend	HF160-KMKM-3M	N/A	Jul. 25, 2025
5	Broad-Band Horn Antenna	Schwarzbeck	BBHA9170(3m)	9170-319	Jun. 16, 2025
6	966 Chamber room	CM	9*6*6	N/A	Dec. 28, 2025
7	Positioning Controller	MF	MF-7802	N/A	N/A
8	Measurement Software	Farad	EZ-EMC Ver.NB-03A1-01	N/A	N/A

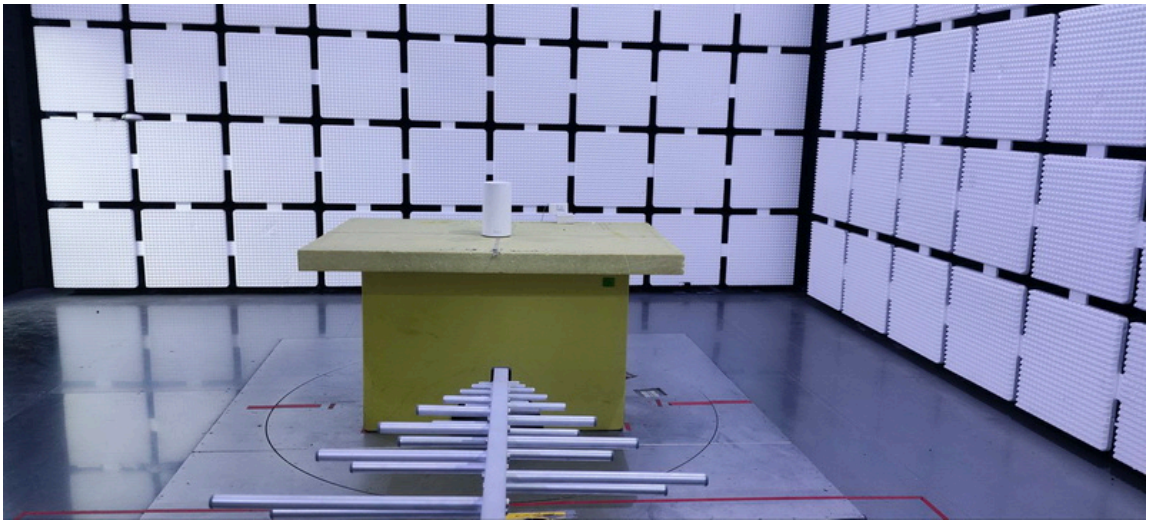
Maximum Output Power					
Item	Kind of Equipment	Manufacturer	Type No.	Serial No.	Calibrated until
1	Peak Power Analyzer	Keysight	8990B	MY51000506	May 31, 2025
2	Wideband power sensor	Keysight	N1923A	MY58310004	May 31, 2025
3	Isolation attenuator	Z-Link	ASMA-10-18-2W	N/A	N/A

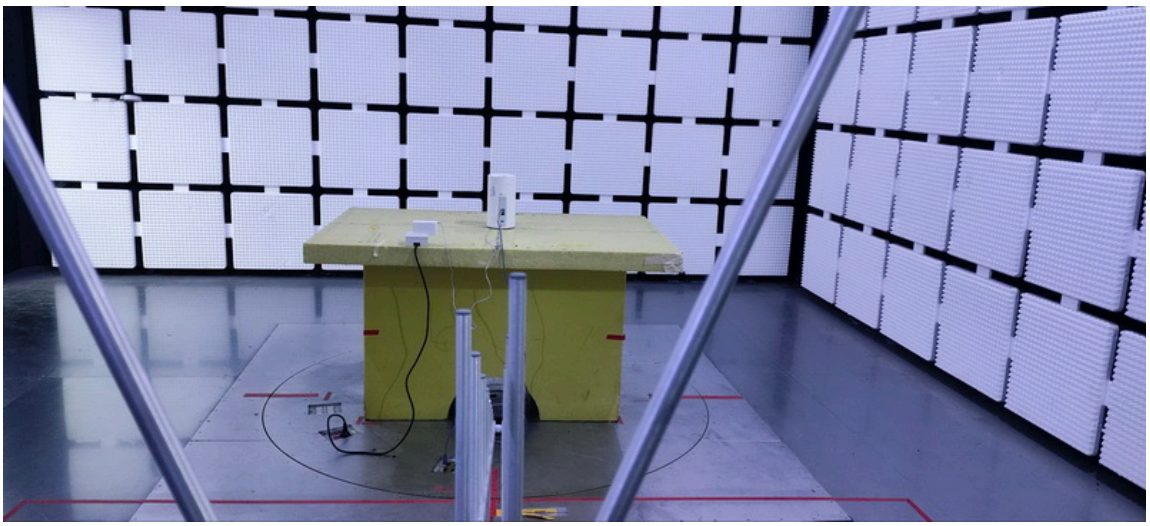
Remark: “N/A” denotes no model name, serial no. or calibration specified.
All calibration period of equipment list is one year.

7. EUT TEST PHOTOS

Radiated Emissions Test Photos

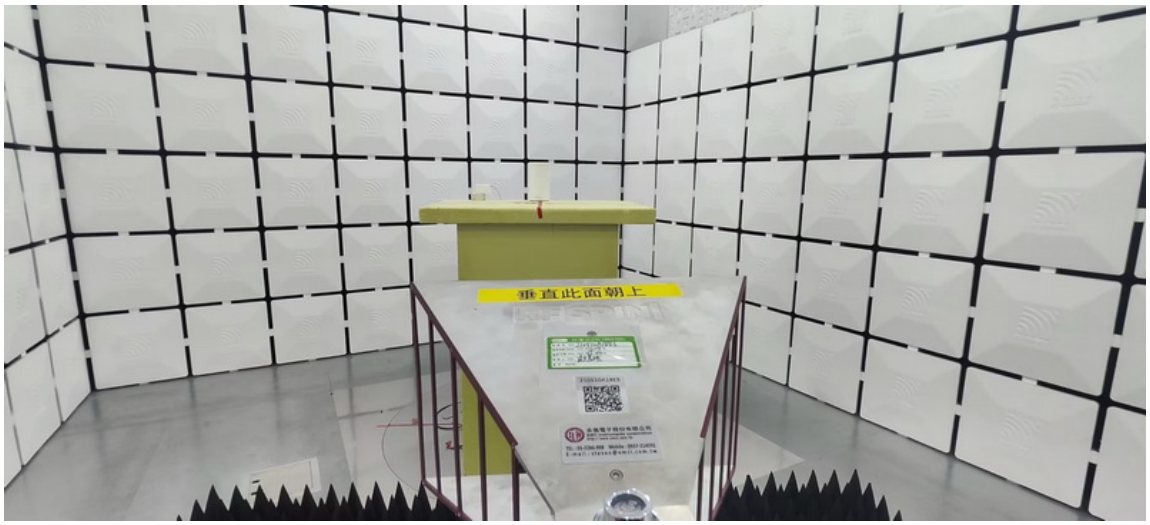
30 MHz to 1 GHz

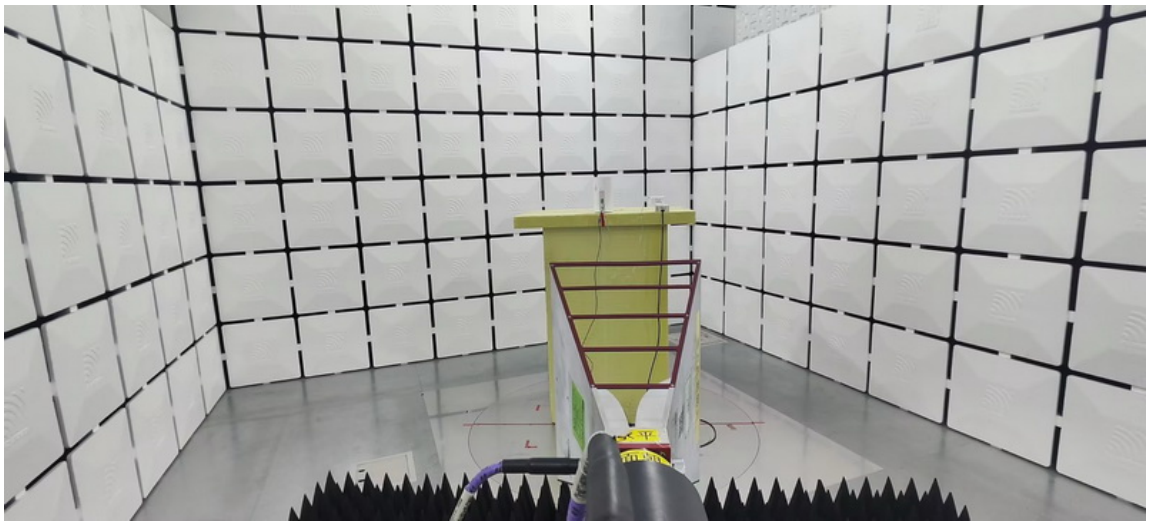




Radiated Emissions Test Photos

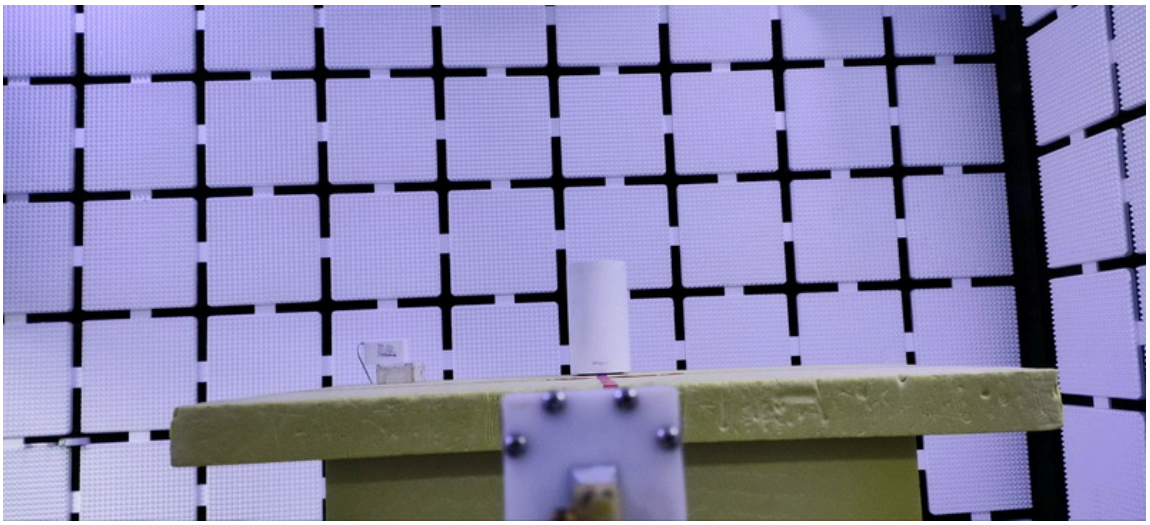
Above 1 GHz_Band edge & Harmonic(1 GHz to 18 GHz)

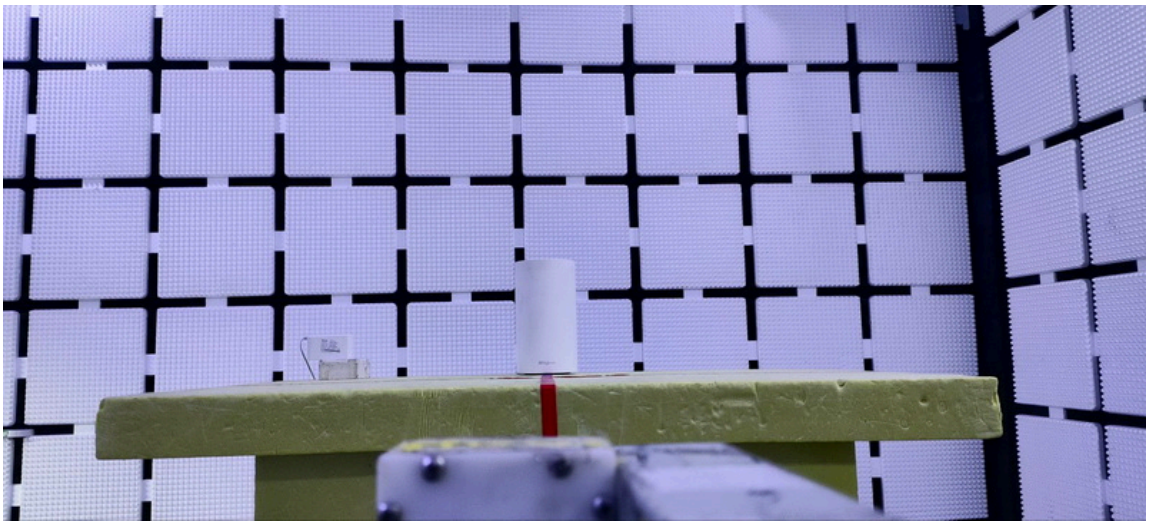




Radiated Emissions Test Photos

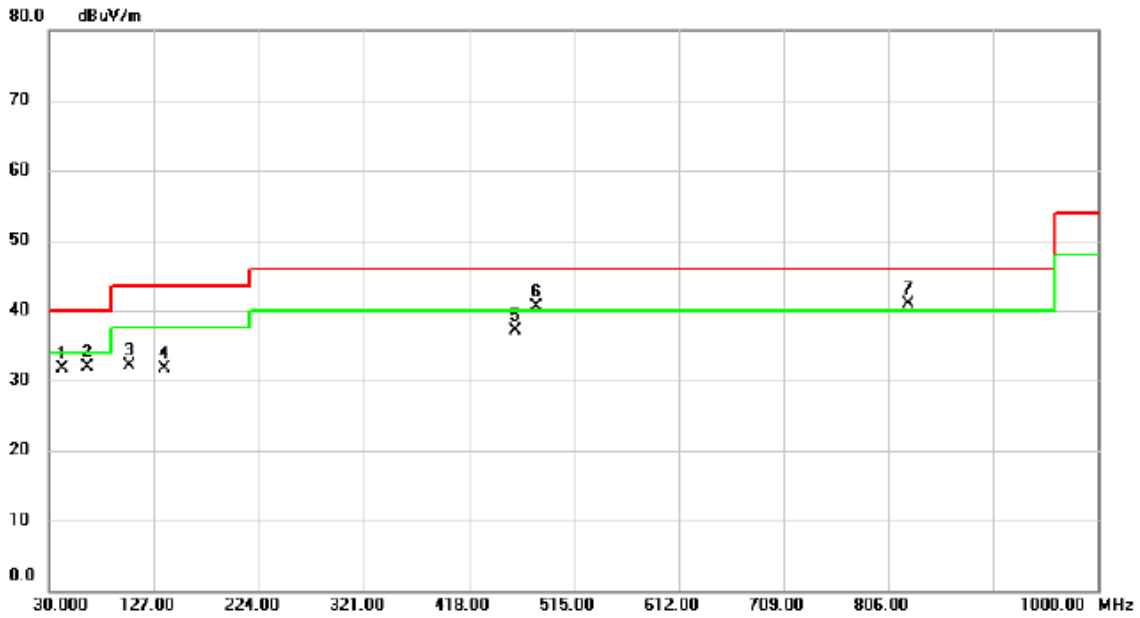
Above 1 GHz_ Harmonic(18 GHz to 26.5 GHz)





APPENDIX A - RADIATED EMISSION - 30 MHZ TO 1000 MHZ

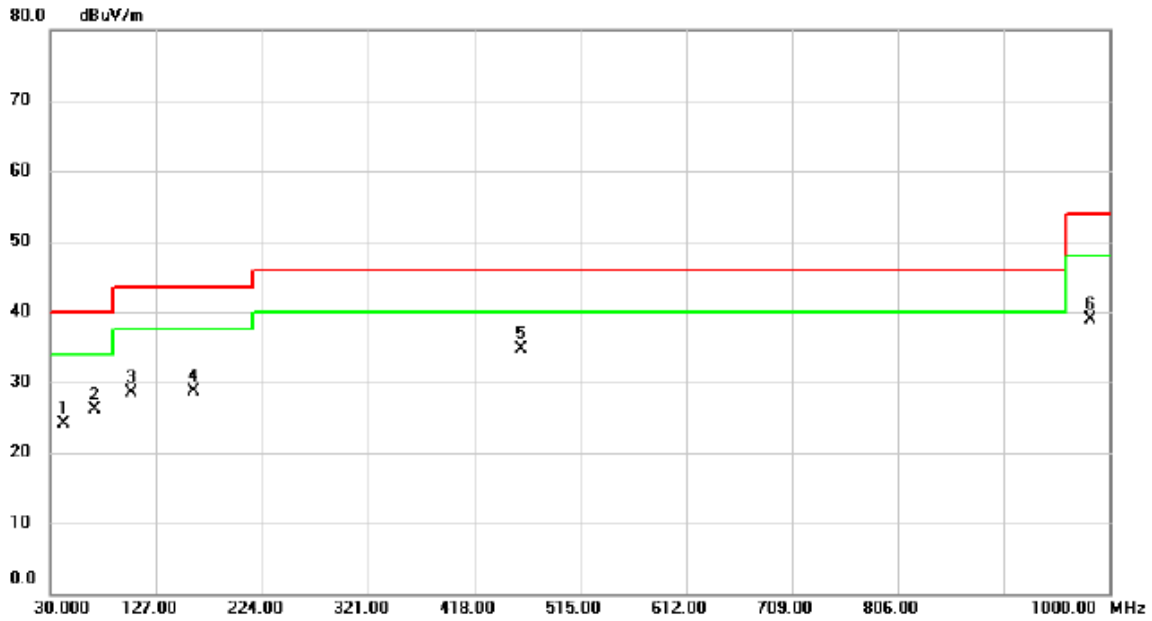
Test Mode	TX A Mode Channel 157 (UNII-3)	Polarization	Vertical



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Margin		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1		42.610	43.29	-11.59	31.70	40.00	-8.30	peak	
2		64.920	44.36	-12.51	31.85	40.00	-8.15	peak	
3		104.690	47.21	-15.13	32.08	43.50	-11.42	peak	
4		136.700	43.70	-11.96	31.74	43.50	-11.76	peak	
5		460.680	43.49	-6.42	37.07	46.00	-8.93	peak	
6	!	480.080	46.70	-6.13	40.57	46.00	-5.43	peak	
7	*	824.430	41.54	-0.68	40.86	46.00	-5.14	peak	

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

Test Mode	TX A Mode Channel 157 (UNII-3)	Polarization	Horizontal



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Margin		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1		41.640	35.72	-11.67	24.05	40.00	-15.95	peak	
2		70.740	39.57	-13.42	26.15	40.00	-13.85	peak	
3		104.690	43.69	-15.13	28.56	43.50	-14.94	peak	
4		160.950	39.84	-11.07	28.77	43.50	-14.73	peak	
5	*	460.680	41.12	-6.42	34.70	46.00	-11.30	peak	
6		982.540	37.92	0.96	38.88	54.00	-15.12	peak	

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

APPENDIX B - RADIATED EMISSION - ABOVE 1000 MHZ

Test Mode	UNII-1_TX A Mode 5785 MHz	Polarization	Vertical

No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Margin		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1	*	5789.000	108.94	15.48	124.42	122.20	2.22	peak	No Limit
2		5850.000	50.27	15.65	65.92	122.20	-56.28	peak	
3		5860.000	46.27	15.66	61.93	109.40	-47.47	peak	

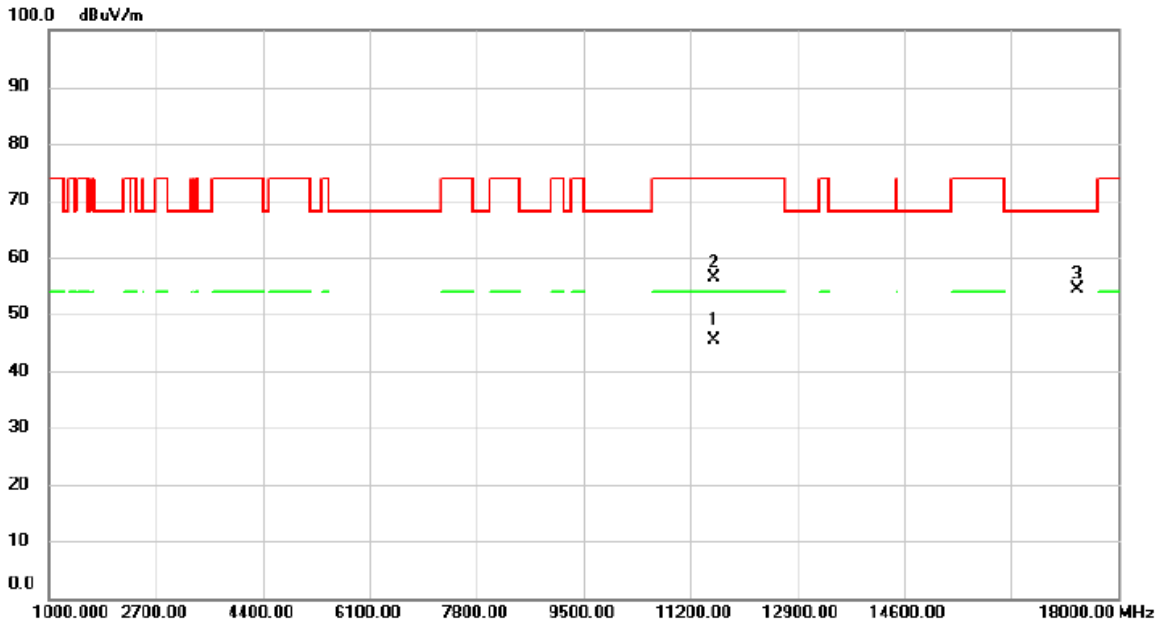
REMARKS:
(1) Measurement Value = Reading Level + Correct Factor.
(2) Margin Level = Measurement Value - Limit Value.

Test Mode	UNII-1_TX A Mode 5785 MHz	Polarization	Horizontal

No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Margin		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1	*	5787.600	94.08	15.48	109.56	122.20	-12.64	peak	No Limit
2		5850.000	44.36	15.65	60.01	122.20	-62.19	peak	
3		5860.000	43.82	15.66	59.48	109.40	-49.92	peak	

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

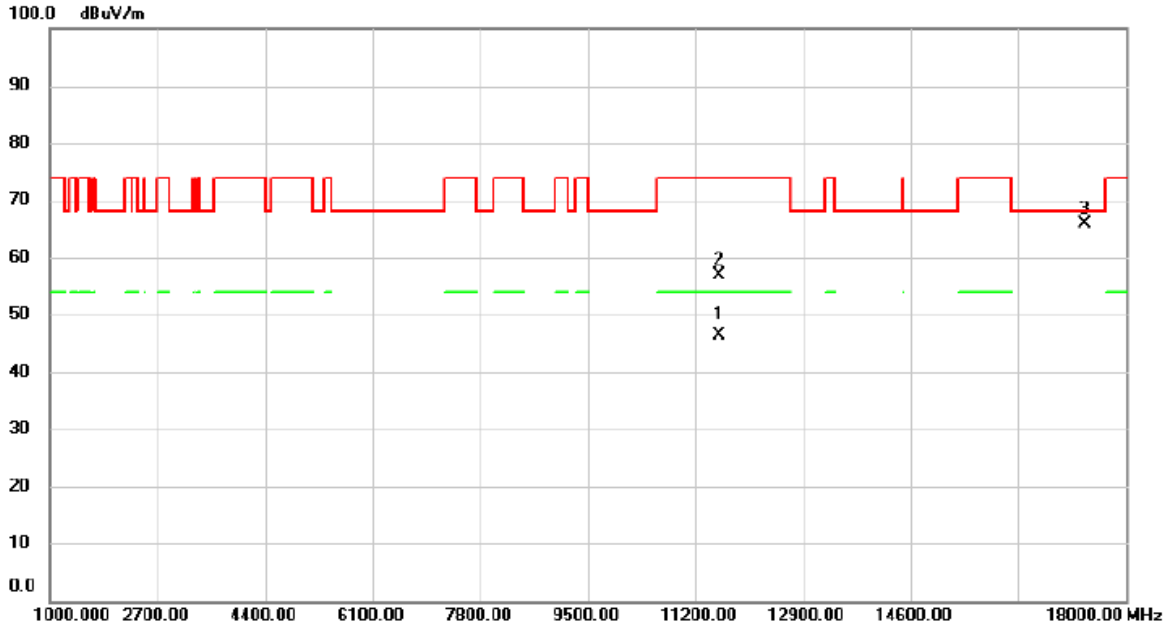
Test Mode	UNII-1_TX A Mode 5785 MHz	Polarization	Vertical



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Margin		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1	*	11577.440	34.93	10.57	45.50	54.00	-8.50	AVG	
2		11580.400	45.82	10.57	56.39	74.00	-17.61	peak	
3		17356.680	42.41	12.07	54.48	68.20	-13.72	peak	

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

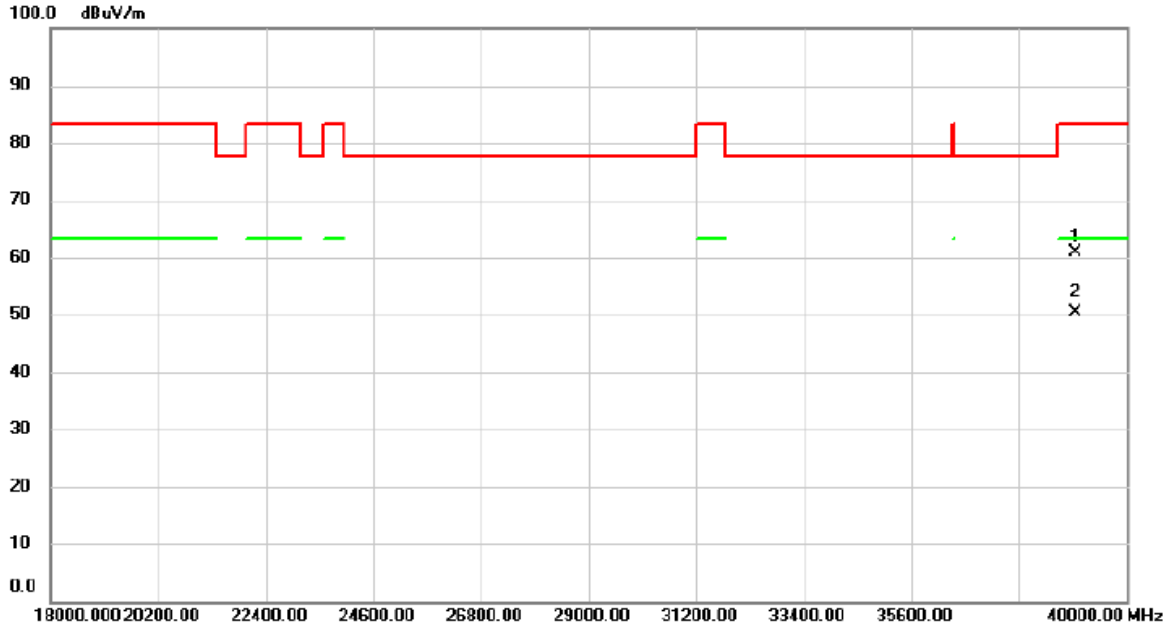
Test Mode	UNII-1_TX A Mode 5785 MHz	Polarization	Horizontal



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Margin		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1		11577.200	35.90	10.57	46.47	54.00	-7.53	AVG	
2		11577.350	46.30	10.57	56.87	74.00	-17.13	peak	
3	*	17360.600	53.79	12.07	65.86	68.20	-2.34	peak	

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

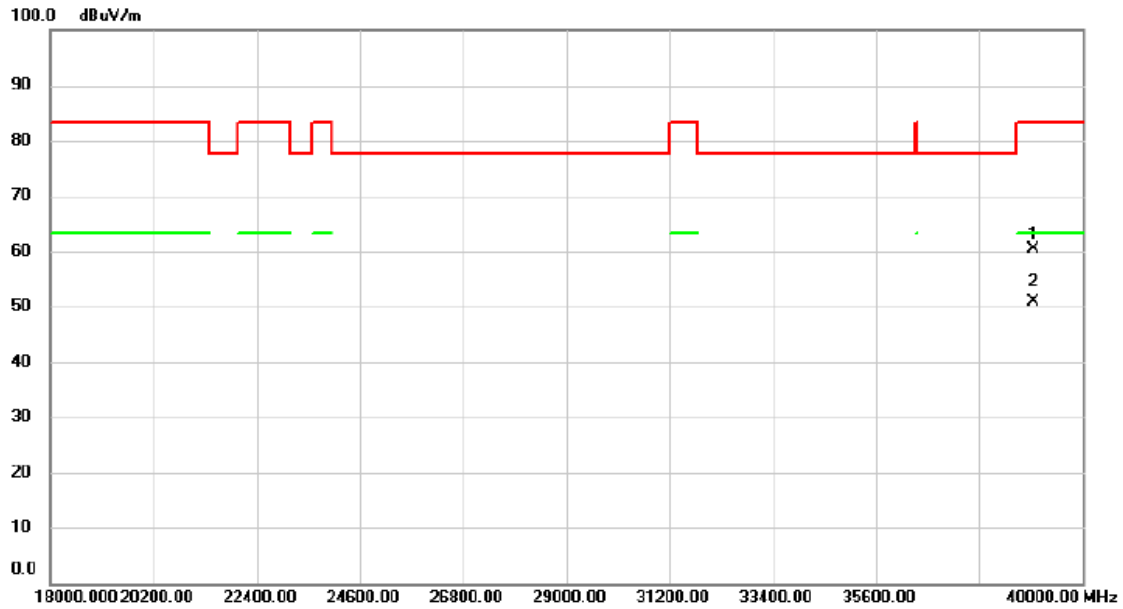
Test Mode	UNII-1_TX A Mode 5785 MHz	Polarization	Vertical



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Margin		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1		38966.000	49.69	11.26	60.95	83.50	-22.55	peak	
2	*	38966.000	39.12	11.26	50.38	63.50	-13.12	AVG	

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

Test Mode	UNII-1_TX A Mode 5785 MHz	Polarization	Horizontal



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Margin		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1		38966.000	49.11	11.26	60.37	83.50	-23.13	peak	
2	*	38966.000	39.51	11.26	50.77	63.50	-12.73	AVG	

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

APPENDIX C - MAXIMUM OUTPUT POWER

Test Mode	UNII-3_TX A Mode_Ant. 1

Channel	Frequency (MHz)	Output Power (dBm)	Duty Factor	Output Power + Duty Factor (dBm)	Max. Limit (dBm)	Max. Limit (W)	Result
157	5785	23.85	0.16	24.01	30.00	1.0000	Complies

Test Mode	UNII-3_TX A Mode_Ant. 2

Channel	Frequency (MHz)	Output Power (dBm)	Duty Factor	Output Power + Duty Factor (dBm)	Max. Limit (dBm)	Max. Limit (W)	Result
157	5785	23.08	0.16	23.24	30.00	1.0000	Complies

Test Mode	UNII-3_TX A Mode_Ant. 3

Channel	Frequency (MHz)	Output Power (dBm)	Duty Factor	Output Power + Duty Factor (dBm)	Max. Limit (dBm)	Max. Limit (W)	Result
157	5785	23.17	0.16	23.33	30.00	1.0000	Complies

Test Mode	UNII-3_TX A Mode_Ant. 4

Channel	Frequency (MHz)	Output Power (dBm)	Duty Factor	Output Power + Duty Factor (dBm)	Max. Limit (dBm)	Max. Limit (W)	Result
157	5785	23.13	0.16	23.29	30.00	1.0000	Complies

Test Mode	UNII-3_TX A Mode_Total

Channel	Frequency (MHz)	Output Power (dBm)	Max. Limit (dBm)	Max. Limit (W)	Result
157	5785	29.50	30.00	1.0000	Complies

End of Test report