Supplemental “Transmit Simultaneously” Test Report

Report No.:	RFBCMA-WTW-P23110753-2
FCC ID:	RAXWE6204430
Test Model:	T-Mobile Internet Wi-Fi Mesh Access Point
Received Date:	2022/11/2
Test Date:	2023/12/4 ~ 2023/12/14
Issued Date:	2024/1/8
Applicant:	Arcadyan Technology Corporation
Address:	No.8, Sec.2, Guangfu Rd.,Hsinchu City 30071, Taiwan, R.O.C.
Issued By:	Bureau Veritas Consumer Products Services (H.K.) Ltd., Taoyuan Branch Hsin Chu Laboratory
Lab Address:	E-2, No.1, Li Hsin 1st Road, Hsinchu Science Park, Hsinchu City 300, Taiwan
Test Location:	E-2, No.1, Li Hsin 1st Road, Hsinchu Science Park, Hsinchu City 300, Taiwan
FCC Registration / Designation Number:	723255 / TW2022

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Release Control Record

Issue No.	Description	Date Issued
RFBCMA-WTW-P23110753-2	Original release.	2024/1/8

1 Certificate of Conformity

Product:	Wi-Fi Extender
Brand:	T-Mobile
Test Model:	T-Mobile Internet Wi-Fi Mesh Access Point
Sample Status:	Engineering sample
Applicant:	Arcadyan Technology Corporation
Test Date:	2023/12/4 ~ 2023/12/14
Standards:	47 CFR FCC Part 15, Subpart C (Section 15.247) 47 CFR FCC Part 15, Subpart E (Section 15.407)

The above equipment has been tested by **Bureau Veritas Consumer Products Services (H.K.) Ltd., Taoyuan Branch**, and found compliance with the requirement of the above standards. The test record, data evaluation & Equipment Under Test (EUT) configurations represented herein are true and accurate accounts of the measurements of the sample's EMC characteristics under the conditions specified in this report.

Prepared by : _____ , **Date:** 2024/1/8

Claire Kuan / Specialist

Approved by : _____ , **Date:** 2024/1/8

May Chen / Manager

2 Summary of Test Results

FCC Part 15, Subpart C, E (Section 15.247, 15.407)			
FCC Clause	Test Item	Result	Remarks
15.205 / 15.209 / 15.247(d) 15.407(b) (1/2/3/4(i)/9/10)	Radiated Emissions and Band Edge Measurement	Pass	Meet the requirement of limit. Minimum passing margin is -5.4 dB at 53.80 MHz.

Note: Determining compliance based on the results of the compliance measurement, not taking into account measurement instrumentation uncertainty.

2.1 Measurement Uncertainty

Where relevant, the following measurement uncertainty levels have been estimated for tests performed on the EUT as specified in CISPR 16-4-2:

Measurement	Specification	Expanded Uncertainty (k=2) (±)
Radiated Emissions below 1 GHz	9 kHz ~ 30 MHz	3.1 dB
	30 MHz ~ 1 GHz	5.1 dB
Radiated Emissions above 1 GHz	1 GHz ~ 18 GHz	5.1 dB
	18 GHz ~ 40 GHz	5.3 dB

2.2 Modification Record

There were no modifications required for compliance.

3 General Information

3.1 General Description of EUT

Product	Wi-Fi Extender
Brand	T-Mobile
Test Model	T-Mobile Internet Wi-Fi Mesh Access Point
Status of EUT	Engineering sample
Power Supply Rating	15Vdc from adapter
Modulation Type	CCK, DQPSK, DBPSK for DSSS 64QAM, 16QAM, QPSK, BPSK for OFDM 256QAM for OFDM in 11ac mode and VHT (20/40) mode in 2.4GHz 1024QAM for OFDMA in 11ax mode
Modulation Technology	DSSS, OFDM, OFDMA
Transfer Rate	802.11b: up to 11 Mbps 802.11a/g: up to 54 Mbps 802.11n: up to 600 Mbps VHT: up to 800 Mbps 802.11ac: up to 1733.3 Mbps 802.11ax: up to 4803.9 Mbps
Operating Frequency	**2.4GHz:** 2.412 GHz ~ 2.462 GHz **5GHz:** 5.18 GHz ~ 5.32 GHz, 5.5 GHz ~ 5.72 GHz, 5.745 GHz ~ 5.825 GHz
Antenna Type	Refer to Note
Antenna Connector	Refer to Note
Accessory Device	Refer to Note
Data Cable Supplied	NA

Note:

1. The EUT uses following accessories.

Adapter		
Brand	Model	Specification
Lucent	1D17	AC Input : 100-240V, 0.8 A, 50/60Hz DC Output : 5.0V , 3.0A, 15.0W；9.0V, 3.0A, 27.0W；12.0V, 2.5A, 30.0W；15.0V, 2.0A, 30.0W DC Output Cable : 1.8 M , non-shielded cable, W/O ferrite core Plug : US

2. The EUT has two radios as following table:

Radio 1	Radio 2
WLAN 2.4GHz	WLAN 5GHz

3. Simultaneously transmission condition.

Condition	Technology	
1	WLAN 2.4GHz	WLAN 5GHz

4. The antenna information is listed as below.

Antenna NO.	RF Chain NO.	Brand	Model	Antenna Net Gain(dBi)	Frequency range	Antenna Type	Connector Type	Cable Length (mm)	Cable Loss (dB)
Blue	ant2	LITE	520101-7000-23R	3.58 4.09 2.57 3.12 2.39	2.4~2.4835GHz 5.15~5.25GHz 5.25~5.35GHz 5.47~5.725GHz 5.725~5.85GHz	Dipole	ipex(MHF)	83	Yes
White	ant3	LITE	520101-7003-23R	4.14 3.85 2.68 3.38 2.48	2.4~2.4835GHz 5.15~5.25GHz 5.25~5.35GHz 5.47~5.725GHz 5.725~5.85GHz	Dipole	ipex(MHF)	38	Yes
Black	ant1	LITE	520101-7002-23R	4.17 3.87 2.34 2.39 2.52	2.4~2.4835GHz 5.15~5.25GHz 5.25~5.35GHz 5.47~5.725GHz 5.725~5.85GHz	Dipole	ipex(MHF)	105	Yes
Gray	ant0	LITE	520101-7001-23R	3.59 3.79 2.64 3.29 2.64	2.4~2.4835GHz 5.15~5.25GHz 5.25~5.35GHz 5.47~5.725GHz 5.725~5.85GHz	Dipole	ipex(MHF)	70	Yes

* Detail antenna specification please refer to antenna datasheet and/or antenna measurement report.

The directional antenna gain, please refer to the following table:

Frequency Range (GHz)	Directional Antenna Gain (dBi)	Antenna Type	Antenna Connector
2.4~2.4835	5.28	Dipole	ipex(MHF)
5.15 ~ 5.25	4.7		
5.25 ~ 5.35	3.39		
5.47 ~ 5.725	4.01		
5.725 ~ 5.85	3.13		

5. The EUT incorporates a MIMO function:

2.4 GHz Band		
Modulation Mode	**TX & RX Configuration**	
802.11b	4TX	4RX
802.11g	4TX	4RX
802.11n (HT20)	4TX	4RX
802.11n (HT40)	4TX	4RX
VHT20	4TX	4RX
VHT40	4TX	4RX
802.11ax (HE20)	4TX	4RX
802.11ax (HE40)	4TX	4RX

5 GHz Band		
Modulation Mode	**TX & RX Configuration**	
802.11a	4TX	4RX
802.11n (HT20)	4TX	4RX
802.11n (HT40)	4TX	4RX
802.11ac (VHT20)	4TX	4RX
802.11ac (VHT40)	4TX	4RX
802.11ac (VHT80)	4TX	4RX
802.11ac (VHT160)	4TX	4RX
802.11ax (HE20)	4TX	4RX
802.11ax (HE40)	4TX	4RX
802.11ax (HE80)	4TX	4RX
802.11ax (HE160)	4TX	4RX

6. The above EUT information is declared by manufacturer and for more detailed features description, please refer to the manufacturer's specifications or user's manual.

3.1.1 Test Mode Applicability and Tested Channel Detail

EUT Configure Mode	Applicable To			Description
	RE≥1G	RE<1G	OB	
-	√	√	√	-

Where **RE≥1G:** Radiated Emission above 1GHz & Bandedge Measurement **RE<1G:** Radiated Emission below 1GHz
OB: Conducted Out-Band Emission Measurement

Note: The EUT had been pre-tested on the positioned of each Wall Mount/ Standing. The worst case was found when worst condition on Standing.

Radiated Emission Test (Above 1GHz):

☒ The tested configurations represent the worst-case mode from all possible combinations by the maximum power.
☒ Following channel(s) was (were) selected for the final test as listed below.

Mode	Available Channel	Tested Channel	Modulation Technology	Modulation Type
802.11b + 802.11ax (HE20)	1 to 11	6	DSSS	DBPSK
	36 to 48 52 to 64 100 to 144 149 to 165	157	OFDMA	BPSK

Radiated Emission Test (Below 1GHz):

☒ The tested configurations represent the worst-case mode from all possible combinations by the maximum power.
☒ Following channel(s) was (were) selected for the final test as listed below.

Mode	Available Channel	Tested Channel	Modulation Technology	Modulation Type
802.11b + 802.11ax (HE20)	1 to 11	6	DSSS	DBPSK
	36 to 48 52 to 64 100 to 144 149 to 165	157	OFDMA	BPSK

Conducted Out-Band Emission Measurement:

☒ The tested configurations represent the worst-case mode from all possible combinations by the maximum power.
☒ Following channel(s) was (were) selected for the final test as listed below.

Mode	Available Channel	Tested Channel	Modulation Technology	Modulation Type
802.11b + 802.11ax (HE20)	1 to 11	6	DSSS	DBPSK
	36 to 48 52 to 64 100 to 144 149 to 165	157	OFDMA	BPSK

Test Condition:

Applicable To	Environmental Conditions	Input Power	Tested By
RE≥1G	25deg. C, 73%RH	120Vac, 60Hz	Louis Yang
RE<1G	25deg. C, 72%RH	120Vac, 60Hz	Louis Yang
OB	25deg. C, 60%RH	120Vac, 60Hz	Willy Lin

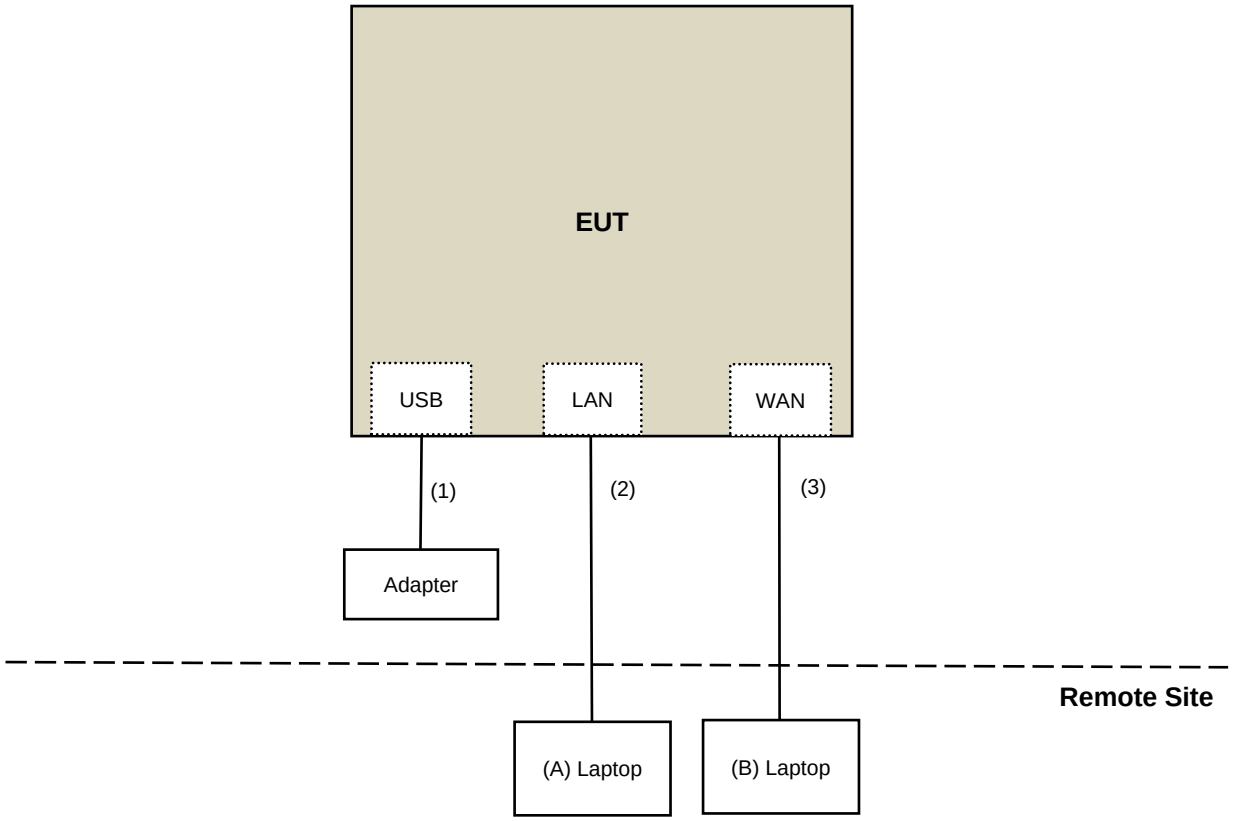
3.2 Description of Support Units

The EUT has been tested as an independent unit together with other necessary accessories or support units. The following support units or accessories were used to form a representative test configuration during the tests.

ID	Product	Brand	Model No.	Serial No.	FCC ID	Remarks
A	Laptop	DELL	E5430	4YV4VY1	DoC	Provided by Lab
B	Laptop	DELL	E5430	HYV4VY1	DoC	Provided by Lab

ID	Cable Descriptions	Qty.	Length (m)	Shielding (Yes/No)	Cores (Qty.)	Remarks
1	DC Cable	1	1.8	No	0	Supplied by applicant
2	RJ-45 Cable	1	10	No	0	Provided by Lab
3	RJ-45 Cable	1	10	No	0	Provided by Lab

3.2.1 Configuration of System under Test



4 Test Types and Results

4.1 Radiated Emission and Bandedge Measurement

4.1.1 Limits of Radiated Emission and Bandedge Measurement

Radiated emissions which fall in the restricted bands must comply with the radiated emission limits specified as below table.

Frequencies (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

Note:

1. The lower limit shall apply at the transition frequencies.
2. Emission level (dBuV/m) = 20 log Emission level (uV/m).
3. For frequencies above 1000MHz, the field strength limits are based on average detector, however, the peak field strength of any emission shall not exceed the maximum permitted average limits, specified above by more than 20dB under any condition of modulation.

Limits of unwanted emission out of the restricted bands

Applicable To		Limit	
789033 D02 General UNII Test Procedure New Rules v02r01		Field Strength at 3m	
		PK:74 (dBµV/m)	AV:54 (dBµV/m)
Frequency Band	Applicable To	EIRP Limit	Equivalent Field Strength at 3m
5150~5250 MHz	15.407(b)(1)	PK:-27 (dBm/MHz)	PK:68.2(dBµV/m)
5250~5350 MHz	15.407(b)(2)		
5470~5725 MHz	15.407(b)(3)		
5725~5850 MHz	15.407(b)(4)(i)	PK: -27 (dBm/MHz) *1 PK: 10 (dBm/MHz) *2 PK: 15.6 (dBm/MHz) *3 PK: 27 (dBm/MHz) *4	PK: 68.2(dBµV/m) *1 PK: 105.2 (dBµV/m) *2 PK: 110.8(dBµV/m) *3 PK: 122.2 (dBµV/m) *4

*1 beyond 75 MHz or more above of the band edge.
*2 below the band edge increasing linearly to 10 dBm/MHz at 25 MHz above.
*3 below the band edge increasing linearly to a level of 15.6 dBm/MHz at 5 MHz above.
*4 from 5 MHz above or below the band edge increasing linearly to a level of 27 dBm/MHz at the band edge.

Note: 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).

4.1.2 Test Instruments

Radiated Emission (Below 1GHz):

Description Manufacturer	Model No.	Serial No.	Calibrated Date	Calibrated Until
Bi_Log Antenna Schwarzbeck	VULB 9168	9168-0842	2023/10/12	2024/10/11
Boresight Antenna Tower & Turn Table Max-Full	MF-7802BS	MF780208530	N/A	N/A
EMI Test Receiver R&S	ESR3	102528	2023/2/10	2024/2/9
Fixed Attenuator Mini-Circuits	UNAT-5+	PAD-ATT5-02	2022/12/28	2023/12/27
Loop Antenna Electro-Metrics	EM-6879	264	2023/2/21	2024/2/20
MXA Signal Analyzer Keysight	N9020B	MY60112410	2023/3/6	2024/3/5
Preamplifier EMCI	EMC330N	980538	2023/4/6	2024/4/5
	EMC001340	980142	2023/5/8	2024/5/7
PXA Signal Analyzer Keysight	N9030B	MY57141948	2023/5/19	2024/5/18
RF Coaxial Cable JYEBAO	5D-FB	LOOPCAB-001	2022/12/19	2023/12/18
		LOOPCAB-002	2022/12/19	2023/12/18
RF Coaxial Cable PEWC	8D	966-5-1	2023/4/6	2024/4/5
		966-5-2	2023/4/6	2024/4/5
		966-5-3	2023/4/6	2024/4/5
Software	ADT_Radiated_V8.7.08	N/A	N/A	N/A

Notes:

1. The calibration interval of the all test instruments are 12 months and the calibrations are traceable to NML/ROC and NIST/USA.
2. The test was performed in 966 Chamber No. 5.
3. Tested Date: 2023/12/4

Radiated Emission (Above 1GHz):

Description Manufacturer	Model No.	Serial No.	Calibrated Date	Calibrated Until
Boresight Antenna Tower & Turn Table Max-Full	MF-7802BS	MF780208530	N/A	N/A
EMI Test Receiver R&S	ESR3	102528	2023/2/10	2024/2/9
Horn Antenna Schwarzbeck	BBHA 9120D	9120D-1819	2022/11/13 2023/11/12	2023/11/12 2024/11/11
	BBHA 9170	9170-739	2022/11/13 2023/11/12	2023/11/12 2024/11/11
MXA Signal Analyzer Keysight	N9020B	MY60112410	2023/3/6	2024/3/5
Preamplifier EMCI	EMC12630SE	980509	2023/4/7	2024/4/6
	EMC184045SE	980387	2023/8/9	2024/8/8
RF Coaxial Cable EMCI	EMC-KM-KM-4000	200214	2023/2/20	2024/2/19
	EMC102-KM-KM-1200	160924	2023/8/9	2024/8/8
	EMC104-SM-SM-1500	180503	2023/4/7	2024/4/6
	EMC104-SM-SM-2000	180501	2023/4/7	2024/4/6
	EMC104-SM-SM-6000	180506	2023/4/7	2024/4/6
Software	ADT_Radiated_V8.7.08	N/A	N/A	N/A

Notes:

1. The calibration interval of the all test instruments are 12 months and the calibrations are traceable to NML/ROC and NIST/USA.
2. The test was performed in 966 Chamber No. 4.
3. Tested Date: 2023/12/14

4.1.3 Test Procedures

For Radiated emission below 30MHz

a. The EUT was placed on the top of a rotating table 0.8 meters above the ground at a 3 meter chamber room. The table was rotated 360 degrees to determine the position of the highest radiation.

b. The EUT was set 3 meters away from the interference-receiving antenna, which was mounted on the top of a variable-height antenna tower.

c. Parallel, perpendicular, and ground-parallel orientations of the antenna are set to make the measurement.

d. For each suspected emission, the EUT was arranged to its worst case and the rotatable table was turned from 0 degrees to 360 degrees to find the maximum reading.

e. The test-receiver system was set to Quasi-Peak Detect Function and Specified Bandwidth with Maximum Hold Mode.

Note:

1. The resolution bandwidth and video bandwidth of test receiver/spectrum analyzer is 9kHz at frequency below 30MHz.

For Radiated emission above 30MHz

a. The EUT was placed on the top of a rotating table 0.8 meters (for 30MHz ~ 1GHz) / 1.5 meters (for above 1GHz) above the ground at 3 meter chamber room for test. The table was rotated 360 degrees to determine the position of the highest radiation.

b. The EUT was set 3 meters away from the interference-receiving antenna, which was mounted on the top of a variable-height antenna tower.

c. The height of antenna is varied from one meter to four meters above the ground to determine the maximum value of the field strength. 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 from 1 meter to 4 meters and the rotatable table was turned from 0 degrees to 360 degrees to find the maximum reading.

e. The test-receiver system was set to quasi-peak detect function and specified bandwidth with maximum hold mode when the test frequency is below 1 GHz.

f. The test-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. If the peak reading value also meets average limit, measurement with the average detector is unnecessary.

Note:

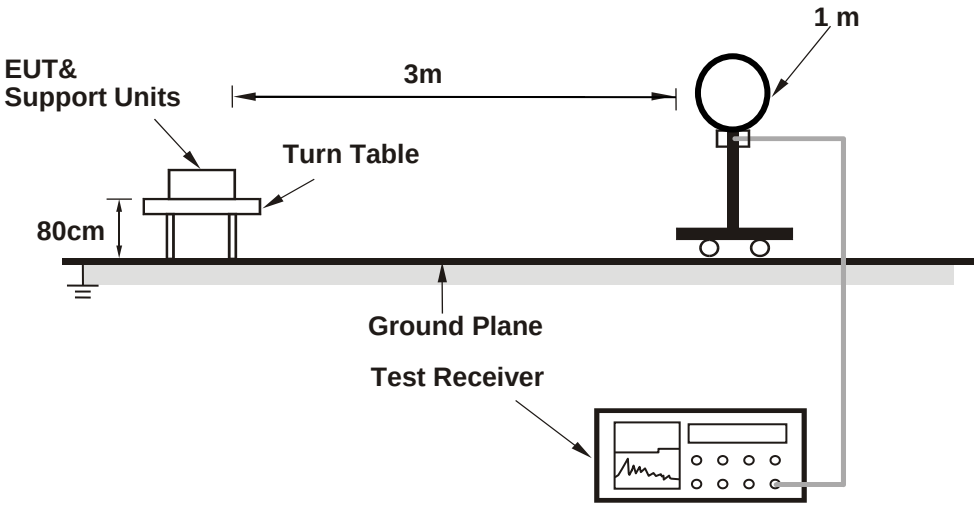
1. The resolution bandwidth and video bandwidth of test receiver/spectrum analyzer is 120kHz for Quasi-peak detection (QP) at frequency below 1GHz.
2. The resolution bandwidth of test receiver/spectrum analyzer is 1 MHz and the video bandwidth is 3 MHz for Peak detection (PK) at frequency above 1GHz.
3. The resolution bandwidth of test receiver/spectrum analyzer is 1MHz and the video bandwidth is ≥ 1/T (Duty cycle < 98%) or 10Hz (Duty cycle ≥ 98%) for Average detection (AV) at frequency above 1GHz.
4. All modes of operation were investigated and the worst-case emissions are reported.

4.1.4 Deviation from Test Standard

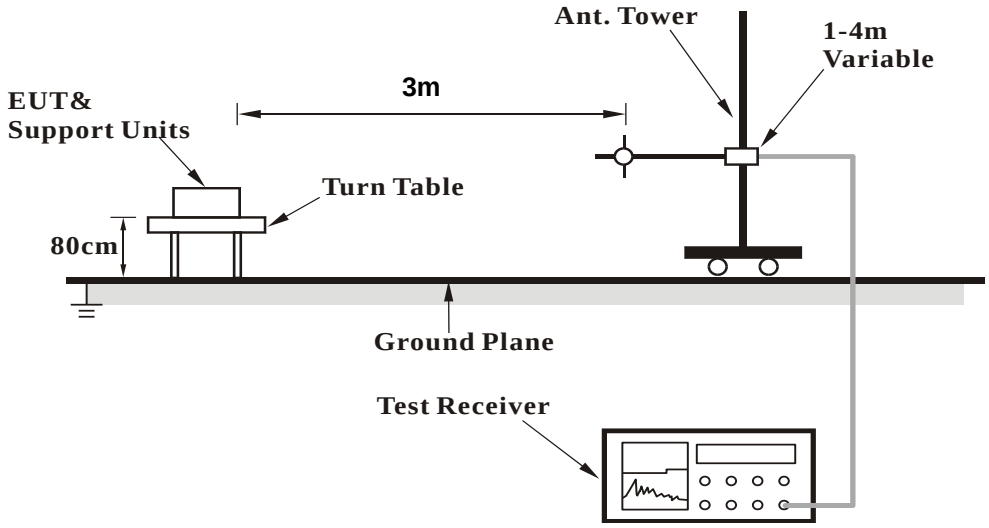
No deviation.

4.1.5 Test Setup

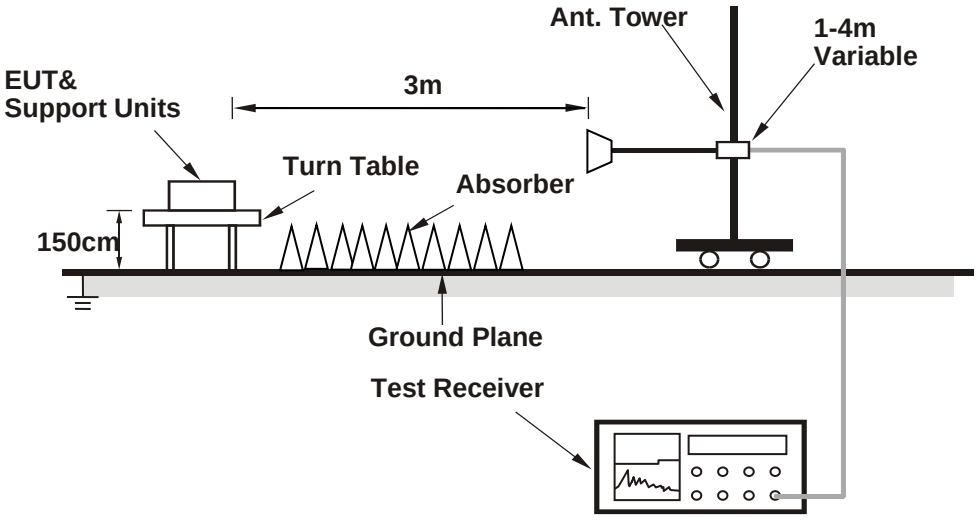
For Radiated emission below 30MHz



For Radiated emission 30MHz to 1GHz



For Radiated emission above 1GHz



For the actual test configuration, please refer to the attached file (Test Setup Photo).

4.1.6 EUT Operating Conditions

a. Placed the EUT on the testing table.
b. Controlling software (QATool_UIv2.73_DLLv6.79_ap_2021.11.02(V10)c) has been activated to set the EUT under transmission condition continuously at specific channel frequency using WLAN technology.

4.1.7 Test Results

Above 1GHz Data:

Frequency Range	1 GHz ~ 40 GHz	Detector Function & Bandwidth	Peak (PK) Average (AV)

Antenna Polarity & Test Distance : Horizontal at 3 m								
No	**Frequency (MHz)**	**Emission Level (dBuV/m)**	**Limit (dBuV/m)**	**Margin (dB)**	**Antenna Height (m)**	**Table Angle (Degree)**	**Raw Value (dBuV)**	**Correction Factor (dB/m)**
1	4874.00	40.4 PK	74.0	-33.6	1.55 H	208	38.2	2.2
2	4874.00	27.7 AV	54.0	-26.3	1.55 H	208	25.5	2.2
3	7311.00	44.1 PK	74.0	-29.9	1.12 H	134	36.4	7.7
4	7311.00	31.7 AV	54.0	-22.3	1.12 H	134	24.0	7.7
5	11570.00	57.2 PK	74.0	-16.8	1.64 H	190	44.0	13.2
6	11570.00	44.8 AV	54.0	-9.2	1.64 H	190	31.6	13.2
7	#17355.00	47.3 PK	68.2	-20.9	1.58 H	360	28.8	18.5
Antenna Polarity & Test Distance : Vertical at 3 m								
No	**Frequency (MHz)**	**Emission Level (dBuV/m)**	**Limit (dBuV/m)**	**Margin (dB)**	**Antenna Height (m)**	**Table Angle (Degree)**	**Raw Value (dBuV)**	**Correction Factor (dB/m)**
1	4874.00	38.6 PK	74.0	-35.4	1.43 V	181	36.4	2.2
2	4874.00	27.4 AV	54.0	-26.6	1.43 V	181	25.2	2.2
3	7311.00	43.7 PK	74.0	-30.3	2.72 V	69	36.0	7.7
4	7311.00	32.8 AV	54.0	-21.2	2.72 V	69	25.1	7.7
5	11570.00	56.6 PK	74.0	-17.4	1.68 V	219	43.4	13.2
6	11570.00	44.6 AV	54.0	-9.4	1.68 V	219	31.4	13.2
7	#17355.00	45.5 PK	68.2	-22.7	1.57 V	360	27.0	18.5

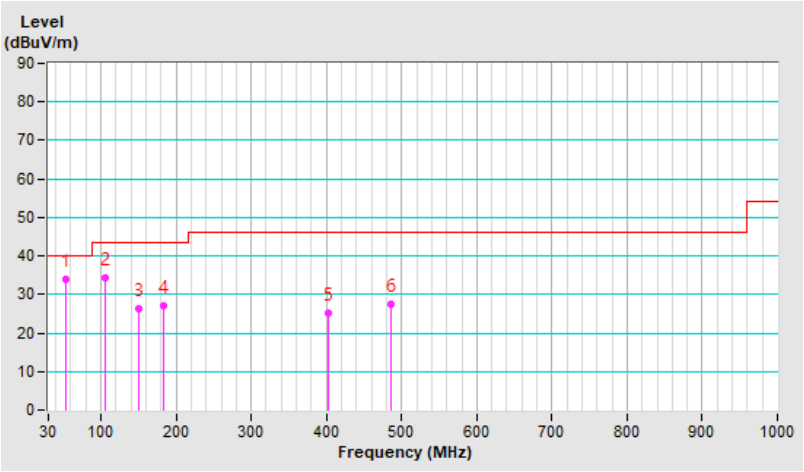
Below 1GHz Data:

Frequency Range	30 MHz ~ 1 GHz	Detector Function & Bandwidth	QP: RB=120kHz, DET=Quasi-Peak

Antenna Polarity & Test Distance : Horizontal at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	52.90	33.9 QP	40.0	-6.1	1.50 H	111	46.6	-12.7
2	104.88	34.3 QP	43.5	-9.2	1.50 H	275	50.7	-16.4
3	149.88	26.4 QP	43.5	-17.1	1.50 H	267	38.7	-12.3
4	183.46	27.0 QP	43.5	-16.5	2.00 H	89	41.7	-14.7
5	402.20	25.0 QP	46.0	-21.0	1.00 H	191	34.4	-9.4
6	485.23	27.4 QP	46.0	-18.6	2.00 H	135	34.8	-7.4

Remarks:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. Margin value = Emission Level – Limit value
4. The other emission levels were very low against the limit of frequency range 30 MHz ~ 1 GHz.
5. The frequency range 9 kHz ~ 30 MHz: all emissions are more than 20 dB below the limit, therefore do not be recorded in this report.

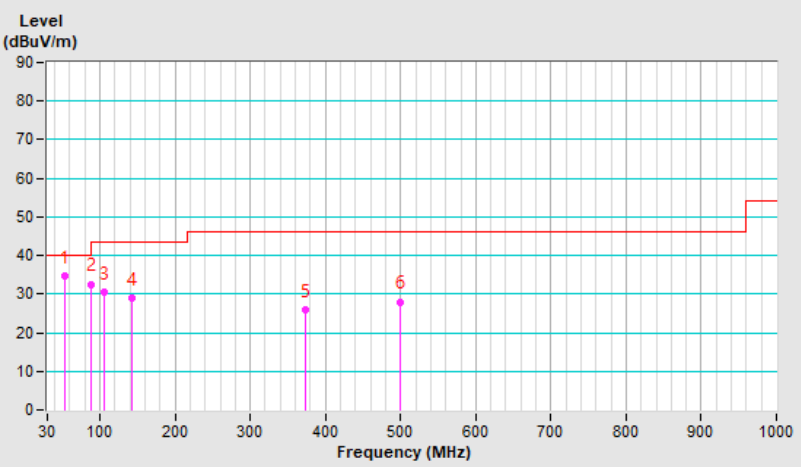


Frequency Range	30 MHz ~ 1 GHz	Detector Function & Bandwidth	QP: RB=120kHz, DET=Quasi-Peak

Antenna Polarity & Test Distance : Vertical at 3 m								
No	**Frequency (MHz)**	**Emission Level (dBuV/m)**	**Limit (dBuV/m)**	**Margin (dB)**	**Antenna Height (m)**	**Table Angle (Degree)**	**Raw Value (dBuV)**	**Correction Factor (dB/m)**
1	**53.80**	**34.6 QP**	**40.0**	**-5.4**	**1.00 V**	**186**	**47.4**	**-12.8**
2	88.14	32.6 QP	43.5	-10.9	1.00 V	247	51.1	-18.5
3	106.17	30.4 QP	43.5	-13.1	1.50 V	261	46.7	-16.3
4	142.73	28.9 QP	43.5	-14.6	1.00 V	196	41.6	-12.7
5	373.70	25.8 QP	46.0	-20.2	1.50 V	183	35.8	-10.0
6	498.86	28.0 QP	46.0	-18.0	1.50 V	237	35.2	-7.2

Remarks:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. Margin value = Emission Level – Limit value
4. The other emission levels were very low against the limit of frequency range 30 MHz ~ 1 GHz.
5. The frequency range 9 kHz ~ 30 MHz: all emissions are more than 20 dB below the limit, therefore do not be recorded in this report.

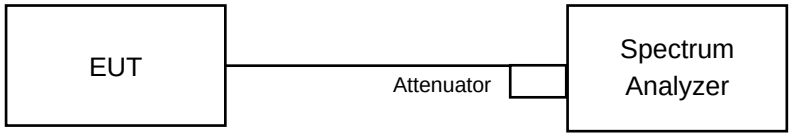


4.2 Conducted Out of Band Emission Measurement

4.2.1 Limits of Conducted Out of Band Emission Measurement

Below 30dB of the highest emission level of operating band (in 100kHz Resolution Bandwidth).

4.2.2 Test Setup



4.2.3 Test Instruments

Refer to section 4.1.2 to get information of above instrument.

4.2.4 Test Procedures

MEASUREMENT PROCEDURE REF

1. Set the RBW = 100 kHz.
2. Set the VBW ≥ 300 kHz.
3. Detector = peak.
4. Sweep time = auto couple.
5. Trace mode = max hold.
6. Allow trace to fully stabilize.
7. Use the peak marker function to determine the maximum power level in any 100 kHz band segment within the fundamental EBW.

MEASUREMENT PROCEDURE OOBE

1. Set RBW = 100 kHz.
2. Set VBW ≥ 300 kHz.
3. Detector = peak.
4. Sweep = auto couple.
5. Trace Mode = max hold.
6. Allow trace to fully stabilize.
7. Use the peak marker function to determine the maximum amplitude level.

4.2.5 Deviation from Test Standard

No deviation.

4.2.6 EUT Operating Conditions

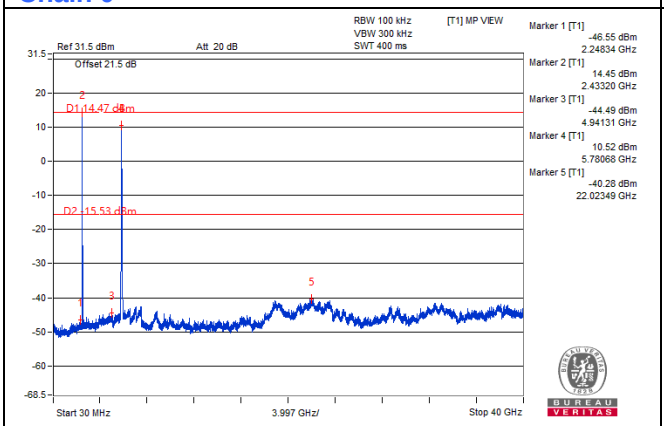
The software provided by client to enable the EUT under transmission condition continuously at specific channel frequencies individually.

4.2.7 Test Results

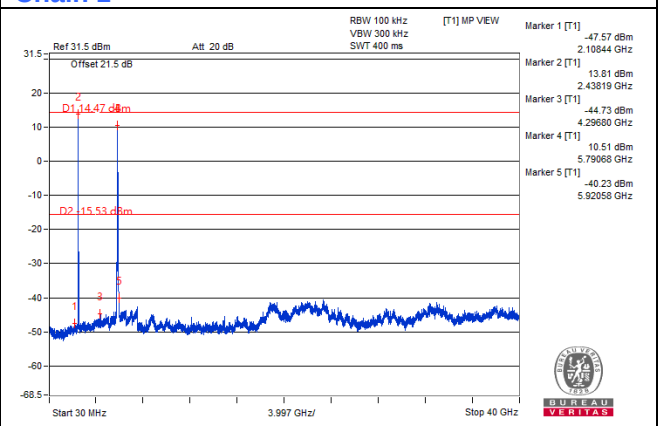
The spectrum plots are attached on the following pages. D1 line indicates the highest level, and D2 line indicates the 30dB offset below D1. It shows compliance with the requirement.

2.4GHz_802.11b CH6 + 5GHz_802.11ax CH157

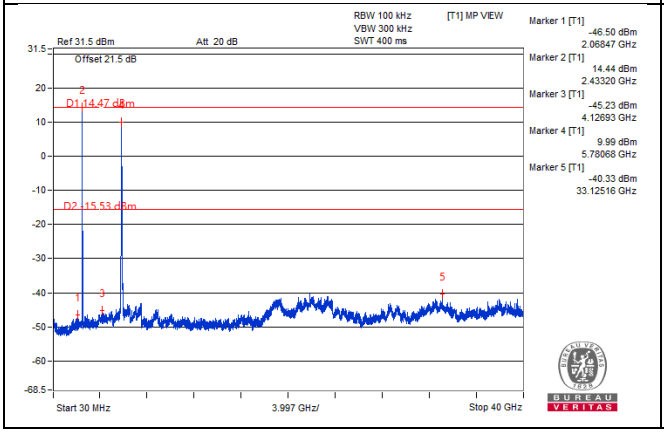
Chain 0



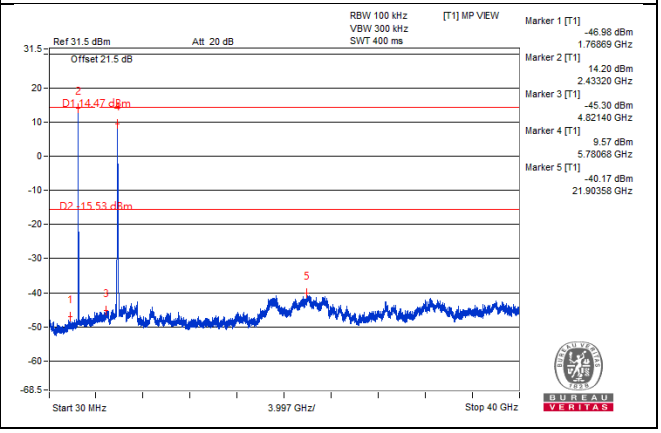
Chain 1



Chain 2



Chain 3



5 Pictures of Test Arrangements

Please refer to the attached file (Test Setup Photo).

Appendix – Information of the Testing Laboratories

We, Bureau Veritas Consumer Products Services (H.K.) Ltd., Taoyuan Branch, were founded in 1988 to provide our best service in EMC, Radio, Telecom and Safety consultation. Our laboratories are FCC recognized accredited test firms and accredited according to ISO/IEC 17025.

If you have any comments, please feel free to contact us at the following:

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Web Site: http://ee.bureauveritas.com.tw

The address and road map of all our labs can be found in our web site also.

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