

TEST REPORT

CERTIFICATE OF CONFORMITY

Standard: 47 CFR FCC Part 15, Subpart C (Section 15.247)
47 CFR FCC Part 15, Subpart E (Section 15.407)

Report No.: RFBEIH-WTW-P24090570-6

FCC ID: P27XB10

Product: Comcast Xfinity DOCSIS 4.0 gateway with Wi-Fi 7

Brand: Comcast Xfinity

Model No.: XB10

Series Model: SG417DBCT

Received Date: 2024/10/9

Test Date: 2024/11/8 ~ 2025/2/11

Issued Date: 2025/2/18

Applicant: Sercomm Corporation

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Issued By: Bureau Veritas Consumer Products Services (H.K.) Ltd., Taoyuan Branch
Lin Kou Laboratories

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Test Location(2): No. 70, Wenming Rd., Guishan Dist., Taoyuan City 333, Taiwan

FCC Registration / Test Location:

Designation Number: 198487 / TW2021 for Test Location(1)
281270 / TW0032 for Test Location(2)

Approved by:

Jeremy Lin

Jeremy Lin / Project Engineer

Date:

2025/2/18

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Prepared by : Annie Chang / Senior Specialist

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Table of Contents

Release Control Record	3
1 Certificate.....	4
2 Summary of Test Results	5
2.1 Measurement Uncertainty	5
2.2 Supplementary Information	5
3 General Information	6
3.1 General Description of EUT	6
3.2 Antenna Description of EUT	7
3.3 Test Mode Applicability and Tested Channel Detail.....	8
3.4 Test Program Used and Operation Descriptions	9
3.5 Connection Diagram of EUT and Peripheral Devices	9
3.6 Configuration of Peripheral Devices and Cable Connections	10
4 Test Instruments	11
4.1 Unwanted Emissions below 1 GHz	11
4.2 Unwanted Emissions above 1 GHz.....	12
5 Limits of Test Items.....	13
5.1 Unwanted Emissions below 1 GHz	13
5.2 Unwanted Emissions above 1 GHz.....	14
6 Test Arrangements.....	16
6.1 Unwanted Emissions below 1 GHz	16
6.1.1 Test Setup	16
6.1.2 Test Procedure.....	17
6.2 Unwanted Emissions above 1 GHz.....	18
6.2.1 Test Setup	18
6.2.2 Test Procedure.....	18
7 Test Results of Test Item	19
7.1 Unwanted Emissions below 1 GHz	19
7.2 Unwanted Emissions above 1 GHz.....	23
8 Pictures of Test Arrangements	25
9 Information of the Testing Laboratories	26

Release Control Record

Issue No.	Description	Date Issued
RFBEIH-WTW-P24090570-6	Original release.	2025/2/18

1 Certificate

Product: Comcast Xfinity DOCSIS 4.0 gateway with Wi-Fi 7

Brand: Comcast Xfinity

Test Model: XB10

Series Model: SG417DBCT

Sample Status: Engineering sample

Applicant: Sercomm Corporation

Test Date: 2024/11/8 ~ 2025/2/11

Standard: 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 RF characteristics under the conditions specified in this report.

2 Summary of Test Results

Standard / Clause	Test Item	Result	Remark
15.205 /15.209 /15.247(d) 15.407(b)(9)	Unwanted Emissions below 1 GHz	Pass	Meet the requirement of limit.
15.205 /15.209 /15.247(d) 15.407(b) (1/2/3/4(i)/10) 15.407(b)(6)/15.407(b)(10)	Unwanted Emissions above 1 GHz	Pass	Meet the requirement of limit.

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:

Parameter	Specification	Uncertainty (±)
Radiated Spurious Emissions below 1GHz	9 kHz ~ 30 MHz	2.85 dB
	30 MHz ~ 1 GHz	5.7 dB
Radiated Spurious Emissions above 1GHz	1 GHz ~ 18 GHz	1.76 dB
	18 GHz ~ 40 GHz	1.77 dB

The other instruments specified are routine verified to remain within the calibrated levels, no measurement uncertainty is required to be calculated.

2.2 Supplementary Information

There is not any deviation from the test standards for the test method, and no modifications required for compliance.

3 General Information

3.1 General Description of EUT

Product	Comcast Xfinity DOCSIS 4.0 gateway with Wi-Fi 7	
Brand	Comcast Xfinity	
Test Model	XB10	
Series Model	SG417DBCT	
Model Difference	Marketing Differentiation	
Modulation Technology	BT-LE	DTS
	WLAN	DSSS, OFDM, OFDMA
Operating Frequency	BT-LE	2.402 GHz ~ 2.48 GHz
	Zigbee	2.405 GHz ~ 2.475 GHz
	WLAN	2.412 GHz ~ 2.462 GHz 5.18 GHz ~ 5.25 GHz, 5.26 GHz ~ 5.32 GHz, 5.5 GHz ~ 5.72 GHz 5.745 GHz ~ 5.825 GHz 5.955 GHz ~ 6.105 GHz, 6.425 GHz ~ 6.505 GHz, 6.535 GHz ~ 6.565 GHz, 6.905 GHz ~ 7.095 GHz

Note:

1. The EUT uses following accessories.

Item	Brand	Model	Specification
AC Adapter 1	NETBIT ELECTRONICS LTD	NBC80B150533VU	AC I/P: 120V, 60Hz, 1.8A DC O/P: 15.0V, 5.33A AC 2-Pin, Non-shielded DC cable (1.8m)
AC Adapter 2	LEADER ELECTRONICS INC	ML80-1150533-A1	AC I/P: 120V, 60Hz, 2.0A DC O/P: 15.0V, 5.33A AC 2-Pin, Non-shielded DC cable (1.8m)
AC Adapter 3	Delta	ADH-80AW BA	AC I/P: 120V, 60Hz, 1.6A DC O/P: 15.0V, 5.33A AC 2-Pin, Non-shielded DC cable (1.8m)

2. There are Bluetooth, Zigbee and WLAN (2.4 GHz & 5 GHz & 6 GHz) technology used for the EUT.

3. Simultaneously transmission combination.

Combination	Technology		
1	WLAN (2.4 GHz)	WLAN (5 GHz)	WLAN (6 GHz)

Note: The emission of the simultaneous operation has been evaluated and no non-compliance was found.

4. The directional antenna gain information is declared by manufacturer and more detailed features description please refer to operation description of antenna specifications exhibit.

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

3.2 Antenna Description of EUT

The antenna information is listed as below.

No.	Technology	Ant. Type	Connector	Model
1	WLAN	Dipole	U.FL	N06CTANG-PK1-LB1X80BU Rev F
2				N06CTANH-PK1-LP1X135BU Rev G
3				N06CTANE-PK1-LG1X180BU Rev G
4				N06CTANF-PK1-LW1X125BU Rev F
5				N03CTAND-PK1-Y1X205BU Rev E
6				N03CTANR-PK1-B1X150BU Rev A
7				N03CTANS-PK1-A1X240BU Rev B
8				N03CTANA-PK1-R1X215BU Rev E
9	Zigbee	Dipole	U.FL	N01CTANJ-PK1-B1X230BU Rev F
10				N01CTANK-PK1-Q1X245BU Rev G
11	Bluetooth	Dipole	ipex	-

Frequency Range (GHz)	Antenna gain (dBi)										
	Ant 1	Ant 2	Ant 3	Ant 4	Ant 5	Ant 6	Ant 7	Ant 8	Ant 9	Ant 10	Ant 11
2.4~2.4835					4.8	4.8	5.1	4.6	4.7	4.7	3.44
5.15~5.85					5	5	4.9	5			
5.925~7.125	5.2	5	5.3	4.9							

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

3.3 Test Mode Applicability and Tested Channel Detail

Pre-Scan:	1. EUT has AC Adapter 1(NETBIT ELECTRONICS LTD)/ AC Adapter 2(LEADER ELECTRONICS INC)/ AC Adapter 3(Delta) modes of power supply. Pre-scan these modes and find the worst case as a representative test condition.
Worst Case:	1. AC Adapter 3(Delta) is the worst case as a representative test condition.

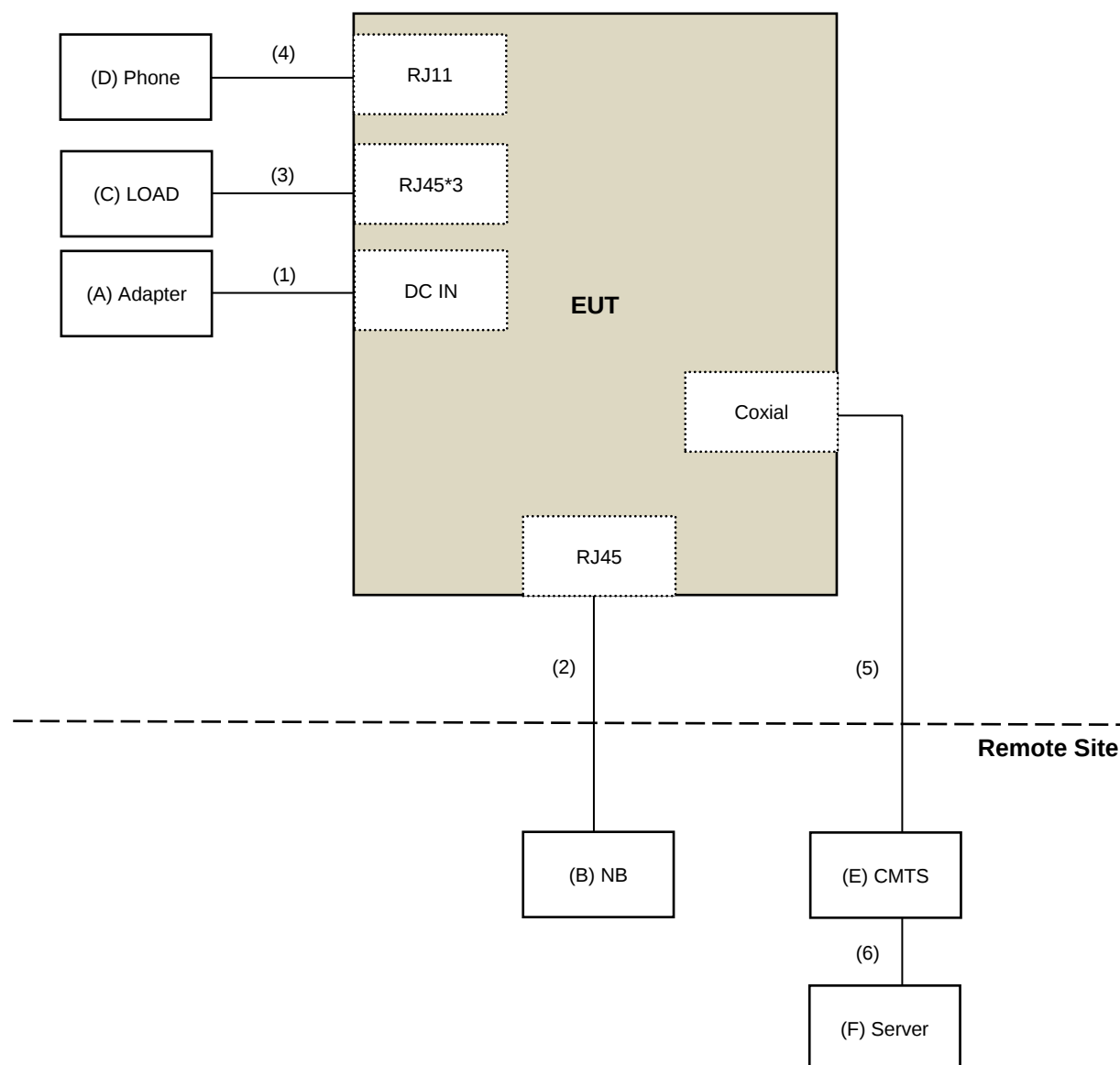
Following channel(s) was (were) selected for the final test as listed below:

Following channel(s) was (were) selected for the final test as listed below:				
Test Item	EUT Configure Mode	Combination	Mode	Tested Channel
Unwanted Emissions below 1 GHz	A	1	802.11b	1
			802.11a	40
			802.11be (EHT320)	127
	B		802.11be (EHT20)	1
			802.11be (EHT40)	159
			802.11be (EHT320)	63
Unwanted Emissions above 1 GHz	A	1	802.11b	1
			802.11a	40
			802.11be (EHT320)	127
	B		802.11be (EHT20)	1
			802.11be (EHT40)	159
			802.11be (EHT320)	63
EUT Configure Mode:	A	CDD Mode		
	B	Beamforming Mode		

3.4 Test Program Used and Operation Descriptions

Controlling software (accessMTool 3.3.0.9) has been activated to set the EUT under transmission condition continuously at specific channel frequency.

3.5 Connection Diagram of EUT and Peripheral Devices



3.6 Configuration of Peripheral Devices and Cable Connections

ID	Product	Brand	Model No.	Serial No.	FCC ID	Remarks
A	Adapter	Delta	ADH-80AW BA	N/A	N/A	Supplied by applicant
B	NB	DELL	LA65NS2-01	N/A	N/A	Provided by Lab
C	LOAD	BV	BV	N/A	N/A	Provided by Lab
D	Phone	ISit0	IS-333	N/A	N/A	Provided by Lab
E	CMTS	Harmonic	D4.0 CMTS System	N/A	N/A	Supplied by applicant
F	Server	Harmonic	D4.0 CMTS System	N/A	N/A	Supplied by applicant

ID	Cable Descriptions	Qty.	Length (m)	Shielding (Yes/No)	Cores (Qty.)	Remarks
1	Adapter DC cable	1	1.8	N	0	Supplied by applicant
2	LAN cable	1	10	N	0	Provided by Lab
3	LAN cable	3	1.5	N	0	Provided by Lab
4	Telecom	1	2.17	N	0	Provided by Lab
5	Coaxial	1	10	Y	0	Provided by Lab
6	Coaxial	1	15	Y	0	Supplied by applicant

4 Test Instruments

The calibration interval of the all test instruments are 12 months and the calibrations are traceable to NML/ROC and NIST/USA.

4.1 Unwanted Emissions below 1 GHz

Description Manufacturer	Model No.	Serial No.	Calibrated Date	Calibrated Until
Bi_Log Antenna Schwarzbeck	VULB 9168	137	2024/10/9	2025/10/8
Coupling / Decoupling Network Schwarzbeck	CDNE-M2	00097	2024/5/28	2025/5/27
	CDNE-M3	00091	2024/5/28	2025/5/27
MXE EMI Receiver Agilent	N9038A	MY51210129	2024/3/22	2025/3/21
Preamplifier Agilent	8447D	2944A11064	2024/2/15	2025/2/14
Preamplifier EMCI	EMC001340	980269	2024/6/25	2025/6/24
Radiating Loop Antenna TESEQ	RLA 6120-20	80002	2024/7/30	2025/7/29
RF Coaxial Cable Pacific	8D-FB	Cable-CH6-02	2024/6/25	2025/6/24
Signal Analyzer R&S	FSV40	101544	2024/6/20	2025/6/19
Software BVADT	Radiated_V7.7.1.1.1	N/A	N/A	N/A
	Radiated_V8.7.08	N/A	N/A	N/A
Tower ADT	AT100	0306	N/A	N/A
Turn Table ADT	TT100	0306	N/A	N/A

Notes:

1. The test was performed in Linkou 966 Chamber 6 (CH 6).
2. Tested Date: 2024/11/8 ~ 2025/2/11

4.2 Unwanted Emissions above 1 GHz

Description Manufacturer	Model No.	Serial No.	Calibrated Date	Calibrated Until
Antenna Tower Max-Full	MFA-515BSN	N/A	N/A	N/A
EXA Signal Analyzer Agilent	N9010A	MY52220207	2023/12/28 2024/12/30	2024/12/27 2025/12/29
Horn Antenna RFSPIN	DRH18-E	210104A18E	2024/11/10	2025/11/9
Horn Antenna Schwarzbeck	BBHA 9170	9170-1049	2024/11/10	2025/11/9
MXE EMI Receiver Agilent	N9038A	MY52260177	2024/9/19	2025/9/18
Preamplifier Agilent	83017A	MY39501357	2024/6/12	2025/6/11
Preamplifier EMCI	EMC184045SE	980788	2024/1/15 2025/1/14	2025/1/14 2026/1/13
RF Coaxial Cable EMCI	EMC101G-KM-KM-2000	201254	2024/1/15 2025/1/14	2025/1/14 2026/1/13
	EMC101G-KM-KM-3000	201258	2024/1/15 2025/1/14	2025/1/14 2026/1/13
	EMC101G-KM-KM-5000	201261	2024/1/15 2025/1/14	2025/1/14 2026/1/13
	EMC104-SM-SM-1000	210103	2024/1/15 2025/1/14	2025/1/14 2026/1/13
	EMC104-SM-SM-3000	201241	2024/1/15 2025/1/14	2025/1/14 2026/1/13
	EMC104-SM-SM-9000	201244	2024/1/15 2025/1/14	2025/1/14 2026/1/13
Software BV ADT	ADT_Radiated_ V7.6.15.9.5	N/A	N/A	N/A
Turn Table Max-Full	MFT-201SS	N/A	N/A	N/A
Turn Table Controller Max-Full	MF-7802BS	MF780208676	N/A	N/A

Notes:

1. The test was performed in WM - 966 chamber 9.
2. Tested Date: 2024/11/27 ~ 2025/2/11

5 Limits of Test Items

5.1 Unwanted Emissions below 1 GHz

For FCC 15.247:

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

Notes:

1. The lower limit shall apply at the transition frequencies.
2. Emission level (dBuV/m) = 20 log Emission level (uV/m).

For FCC 15.407:

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

Notes:

1. The lower limit shall apply at the transition frequencies.
2. Emission level (dBuV/m) = 20 log Emission level (uV/m).

5.2 Unwanted Emissions above 1 GHz

For FCC 15.247:

Frequencies (MHz)	Field Strength (microvolts/meter)	Measurement Distance (meters)
Above 960	500	3

Notes:

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 1000 MHz, 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 20 dB under any condition of modulation.

For FCC 15.407 transmitters operating in the 5.150-5.850 GHz band:

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)
Above 960	500	3

Notes:

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 1000 MHz, 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 20 dB 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 3 m	
	PK: 74 (dBμV/m)	AV: 54 (dBμV/m)

Applicable To	EIRP Limit	Equivalent Field Strength at 3 m
15.407(b)(1)	PK: -27 (dBm/MHz)	PK: 68.2 (dBμV/m) *
15.407(b)(2)	PK: -27 (dBm/MHz)	PK: 68.2 (dBμV/m) *
15.407(b)(3)	PK: -27 (dBm/MHz)	PK: 68.2 (dBμV/m) *
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:

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

For FCC 15.407 transmitters operating in the 5.925-7.125 GHz band:

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)
Above 960	500	3

Notes:

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 1000 MHz, 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 20 dB under any condition of modulation.

Limits of unwanted emission out of the restricted bands

Frequencies (MHz)	EIRP Limit	Equivalent Field Strength at 3 m
5925 MHz > F > 7125 MHz	Peak: -7 (dBm/MHz)	88.2 (dBuV/m)
	Average: -27 (dBm/MHz)	68.2 (dBuV/m)

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

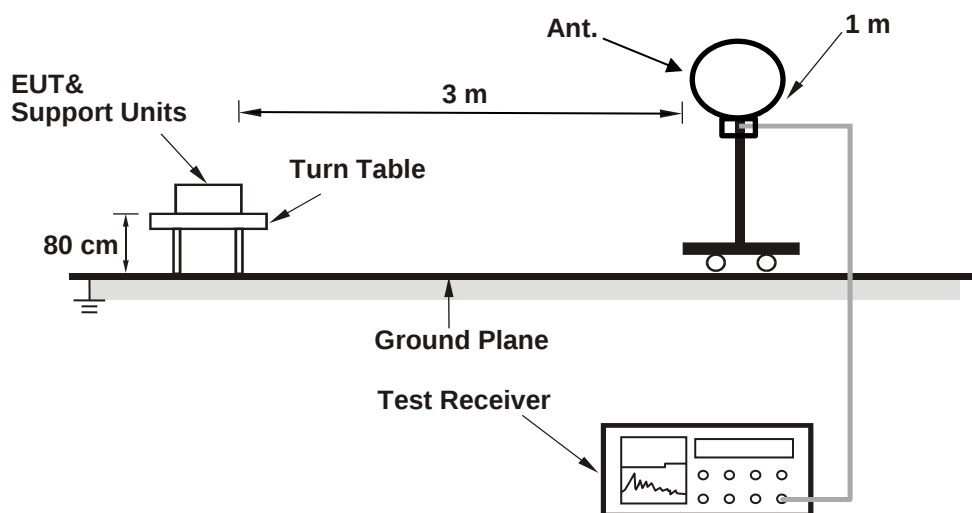
$$E = \frac{1000000\sqrt{30P}}{3} \quad \mu\text{V/m, where P is the eirp (Watts).}$$

6 Test Arrangements

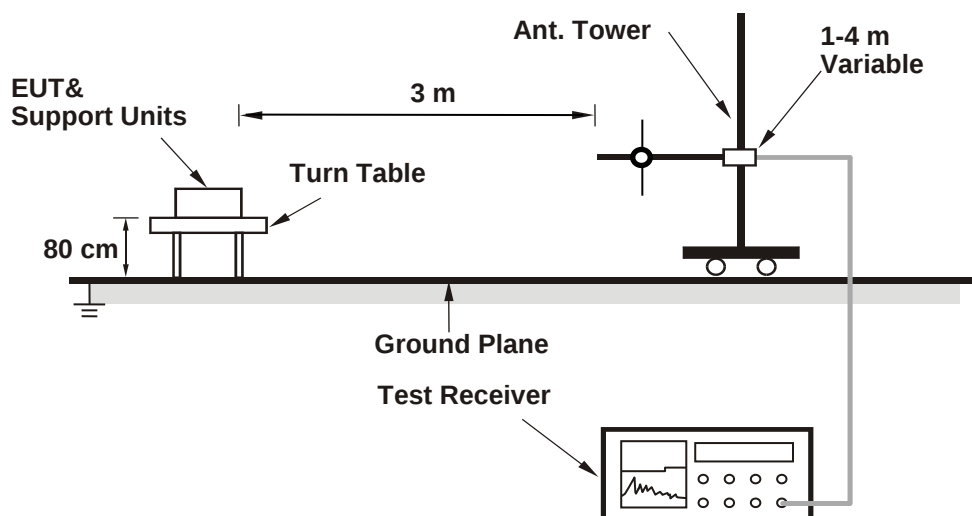
6.1 Unwanted Emissions below 1 GHz

6.1.1 Test Setup

For Radiated emission below 30 MHz



For Radiated emission above 30 MHz



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

6.1.2 Test Procedure

For Radiated emission below 30 MHz

- a. The EUT was placed on the top of a rotating table 0.8 meters 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. 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, except for the frequency band (9 kHz to 90 kHz and 110 kHz to 490 kHz) set to average detect function and peak detect function.

Notes:

1. The resolution bandwidth and video bandwidth of test receiver/spectrum analyzer is 200 Hz at frequency below 150 kHz.
2. The resolution bandwidth and video bandwidth of test receiver/spectrum analyzer is 9 kHz or 10 kHz at frequency (150 kHz to 30 MHz).
3. All modes of operation were investigated and the worst-case emissions are reported.

For Radiated emission above 30 MHz

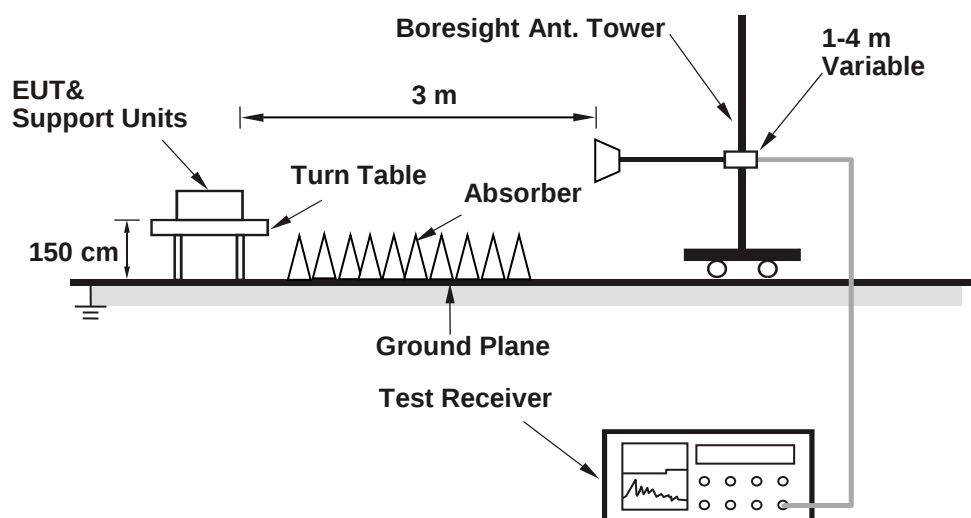
- a. The EUT was placed on the top of a rotating table 0.8 meters above the ground at 3 meter chamber room for test. The table was rotated 360 degrees to determine the position of the highest radiation.
- b. The EUT was set 3 meters away from the interference-receiving antenna, which was mounted on the 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.

Notes:

1. The resolution bandwidth and video bandwidth of test receiver/spectrum analyzer is 120 kHz for Quasi-peak detection (QP) at frequency below 1 GHz.
2. All modes of operation were investigated and the worst-case emissions are reported.

6.2 Unwanted Emissions above 1 GHz

6.2.1 Test Setup



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

6.2.2 Test Procedure

- The EUT was placed on the top of a rotating table 1.5 meters above the ground at 3 meter chamber room for test. The table was rotated 360 degrees to determine the position of the highest radiation.
- The EUT was set 3 meters away from the interference-receiving antenna, which was mounted on the top of a variable-height antenna tower.
- 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.
- 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.
- The test-receiver system was set to peak and average detects 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.

Notes:

- The resolution bandwidth of test receiver/spectrum analyzer is 1 MHz and the video bandwidth is 3 MHz for Peak detection (PK) and Average detection (AV) at frequency above 1 GHz.
- All modes of operation were investigated and the worst-case emissions are reported.

7 Test Results of Test Item

7.1 Unwanted Emissions below 1 GHz

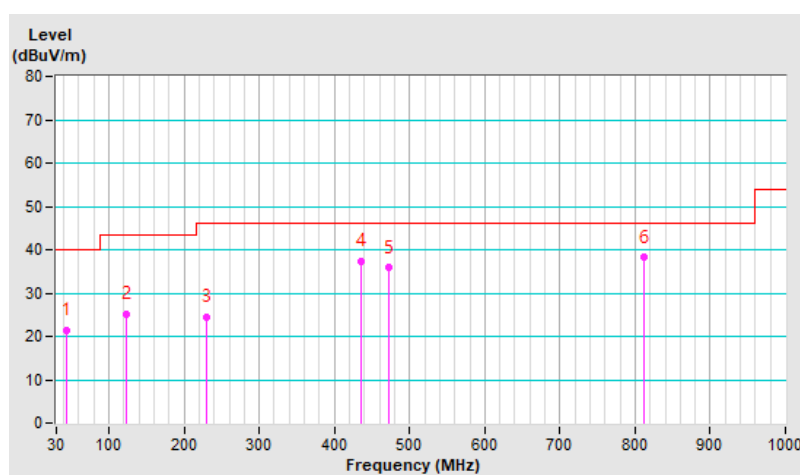
Mode A

RF Mode	802.11b 802.11a 802.11be (EHT320)	Channel	CH 1 : 2412 MHz CH 40 : 5200 MHz CH 127 : 6585 MHz
Frequency Range	30 MHz ~ 1 GHz	Detector Function & Bandwidth	QP: RB=120kHz, DET=Quasi-Peak
Input Power	120 Vac, 60 Hz	Environmental Conditions	21 °C, 66 % RH
Tested By	Jed Wu		

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	44.02	21.5 QP	40.0	-18.5	1.36 H	18	30.5	-9.0
2	122.93	25.1 QP	43.5	-18.4	1.54 H	245	35.1	-10.0
3	229.53	24.5 QP	46.0	-21.5	1.78 H	178	34.3	-9.8
4	435.85	37.4 QP	46.0	-8.6	1.69 H	328	39.7	-2.3
5	472.37	35.8 QP	46.0	-10.2	1.20 H	41	37.3	-1.5
6	811.97	38.2 QP	46.0	-7.8	1.11 H	325	32.5	5.7

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.

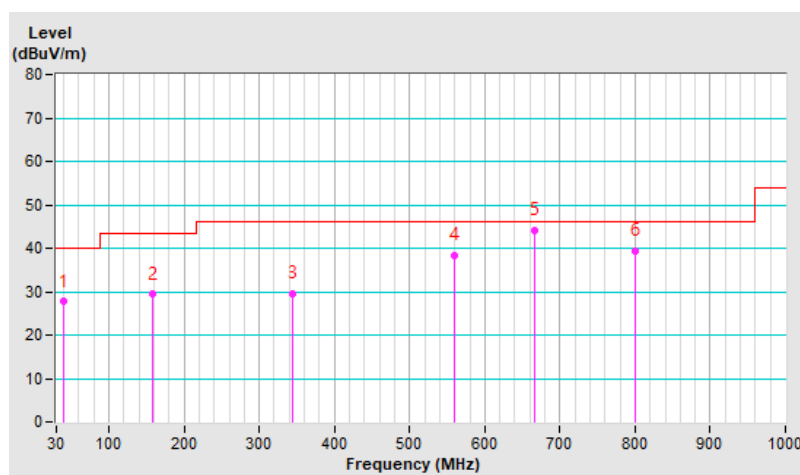


RF Mode	802.11b 802.11a 802.11be (EHT320)	Channel	CH 1 : 2412 MHz CH 40 : 5200 MHz CH 127 : 6585 MHz
Frequency Range	30 MHz ~ 1 GHz	Detector Function & Bandwidth	QP: RB=120kHz, DET=Quasi-Peak
Input Power	120 Vac, 60 Hz	Environmental Conditions	21 °C, 66 % RH
Tested By	Jed Wu		

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	39.75	27.7 QP	40.0	-12.3	1.35 V	147	37.2	-9.5
2	157.70	29.4 QP	43.5	-14.1	1.05 V	299	37.0	-7.6
3	343.31	29.5 QP	46.0	-16.5	1.24 V	114	34.1	-4.6
4	559.38	38.4 QP	46.0	-7.6	1.12 V	219	38.5	-0.1
5	666.56	44.2 QP	46.0	-1.8	1.78 V	16	41.7	2.5
6	800.08	39.4 QP	46.0	-6.6	1.96 V	144	33.9	5.5

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.



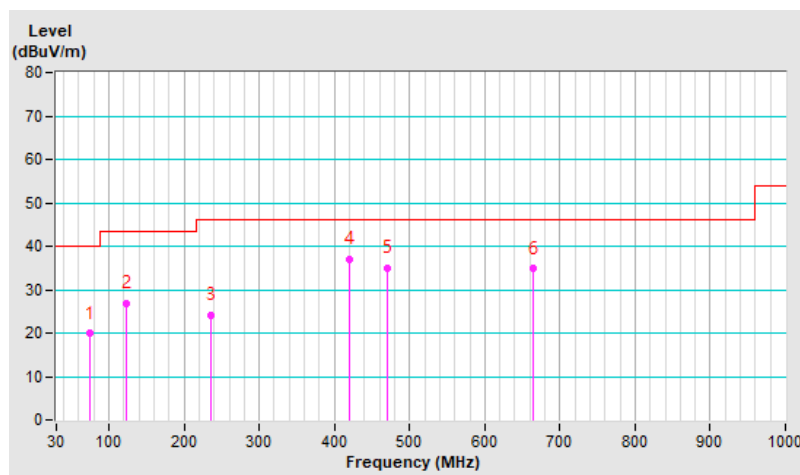
Mode B

RF Mode	802.11be (EHT20) 802.11be (EHT40) 802.11be (EHT320)	Channel	CH 1 : 2412 MHz CH 159 : 5795 MHz CH 63 : 6265 MHz
Frequency Range	30 MHz ~ 1 GHz	Detector Function & Bandwidth	QP: RB=120kHz, DET=Quasi-Peak
Input Power	120 Vac, 60 Hz	Environmental Conditions	21 °C, 66 % RH
Tested By	Jed Wu		

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	73.75	19.9 QP	40.0	-20.1	1.89 H	120	31.2	-11.3
2	122.88	26.9 QP	43.5	-16.6	1.43 H	249	36.9	-10.0
3	236.42	24.1 QP	46.0	-21.9	1.25 H	170	32.8	-8.7
4	419.89	36.9 QP	46.0	-9.1	1.73 H	68	39.7	-2.8
5	471.30	35.0 QP	46.0	-11.0	1.65 H	269	36.5	-1.5
6	665.11	34.8 QP	46.0	-11.2	1.15 H	306	32.3	2.5

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.

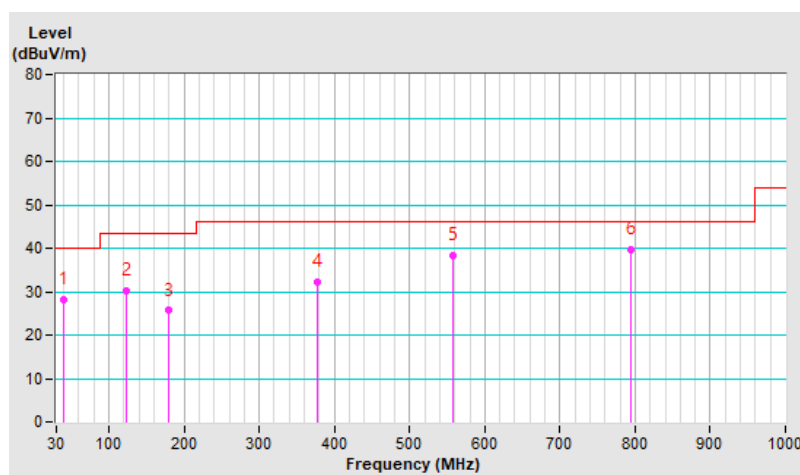


RF Mode	802.11be (EHT20) 802.11be (EHT40) 802.11be (EHT320)	Channel	CH 1 : 2412 MHz CH 159 : 5795 MHz CH 63 : 6265 MHz
Frequency Range	30 MHz ~ 1 GHz	Detector Function & Bandwidth	QP: RB=120kHz, DET=Quasi-Peak
Input Power	120 Vac, 60 Hz	Environmental Conditions	21 °C, 66 % RH
Tested By	Jed Wu		

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	39.55	28.1 QP	40.0	-11.9	1.86 V	218	37.7	-9.6
2	122.88	30.1 QP	43.5	-13.4	1.43 V	320	40.1	-10.0
3	179.43	25.6 QP	43.5	-17.9	1.57 V	306	34.4	-8.8
4	377.11	32.2 QP	46.0	-13.8	1.68 V	248	36.1	-3.9
5	557.87	38.4 QP	46.0	-7.6	1.20 V	96	38.6	-0.2
6	793.68	39.8 QP	46.0	-6.2	1.87 V	151	34.2	5.6

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.



7.2 Unwanted Emissions above 1 GHz

Mode A

RF Mode	802.11b 802.11a 802.11be (EHT320)	Channel	CH 1 : 2412 MHz CH 40 : 5200 MHz CH 127 : 6585 MHz
Frequency Range	1 GHz ~ 40 GHz	Detector Function & Bandwidth	PK: RB=1 MHz, VB=3 MHz, DET=Peak AV: RB=1 MHz, VB=10 Hz, DET=Peak
Input Power	120 Vac, 60 Hz	Environmental Conditions	23 °C, 61 % RH
Tested By	Jed Wu		

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	2390.00	58.1 PK	74.0	-15.9	1.76 H	287	25.1	33.0
2	2390.00	49.3 AV	54.0	-4.7	1.76 H	287	16.3	33.0
3	4824.00	47.2 PK	74.0	-26.8	1.72 H	308	45.0	2.2
4	4824.00	37.0 AV	54.0	-17.0	1.72 H	308	34.8	2.2
5	5150.00	54.7 PK	74.0	-19.3	1.52 H	324	51.9	2.8
6	5150.00	46.3 AV	54.0	-7.7	1.52 H	324	43.5	2.8
7	#10400.00	55.6 PK	68.2	-12.6	1.55 H	192	46.4	9.2
8	#13170.00	61.4 PK	88.2	-26.8	1.90 H	168	50.9	10.5
9	#13170.00	47.0 AV	68.2	-21.2	1.90 H	168	36.5	10.5
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	2390.00	57.1 PK	74.0	-16.9	1.95 V	327	24.1	33.0
2	2390.00	47.9 AV	54.0	-6.1	1.95 V	327	14.9	33.0
3	4824.00	47.5 PK	74.0	-26.5	1.58 V	237	45.3	2.2
4	4824.00	37.3 AV	54.0	-16.7	1.58 V	237	35.1	2.2
5	5150.00	62.9 PK	74.0	-11.1	2.04 V	89	60.1	2.8
6	5150.00	53.8 AV	54.0	-0.2	2.04 V	89	51.0	2.8
7	#10400.00	57.2 PK	68.2	-11.0	2.74 V	138	48.0	9.2
8	#13170.00	62.5 PK	88.2	-25.7	1.90 V	168	52.0	10.5
9	#13170.00	48.0 AV	68.2	-20.2	1.90 V	168	37.5	10.5

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.
5. " # ": The radiated frequency is out of the restricted band.

Mode B

RF Mode	802.11be (EHT20) 802.11be (EHT40) 802.11be (EHT320)	Channel	CH 1 : 2412 MHz CH 159 : 5795 MHz CH 63 : 6265 MHz
Frequency Range	1 GHz ~ 40 GHz	Detector Function & Bandwidth	PK: RB=1 MHz, VB=3 MHz, DET=Peak AV: RB=1 MHz, VB=10 Hz, DET=Peak
Input Power	120 Vac, 60 Hz	Environmental Conditions	23 °C, 61 % RH
Tested By	Jed Wu		

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	2390.00	62.6 PK	74.0	-11.4	1.71 H	305	66.0	-3.4
2	2390.00	49.3 AV	54.0	-4.7	1.71 H	305	52.7	-3.4
3	4824.00	46.9 PK	74.0	-27.1	1.64 H	251	44.7	2.2
4	4824.00	35.7 AV	54.0	-18.3	1.64 H	251	33.5	2.2
5	#5647.68	60.8 PK	68.2	-7.4	3.04 H	287	56.9	3.9
6	#5929.99	59.2 PK	68.2	-9.0	3.04 H	287	54.7	4.5
7	11590.00	56.6 PK	74.0	-17.4	2.41 H	158	47.2	9.4
8	11590.00	44.5 AV	54.0	-9.5	2.41 H	158	35.1	9.4
9	12530.00	59.6 PK	74.0	-14.4	1.36 H	22	49.0	10.6
10	12530.00	45.8 AV	54.0	-8.2	1.36 H	22	35.2	10.6
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	2390.00	63.4 PK	74.0	-10.6	1.89 V	336	66.8	-3.4
2	2390.00	44.7 AV	54.0	-9.3	1.89 V	336	48.1	-3.4
3	4824.00	48.0 PK	74.0	-26.0	1.64 V	158	45.8	2.2
4	4824.00	36.4 AV	54.0	-17.6	1.64 V	158	34.2	2.2
5	#5646.16	64.2 PK	68.2	-4.0	1.67 V	258	60.3	3.9
6	#5943.87	59.3 PK	68.2	-8.9	1.67 V	258	54.8	4.5
7	11590.00	67.0 PK	74.0	-7.0	1.34 V	189	57.6	9.4
8	11590.00	53.8 AV	54.0	-0.2	1.34 V	189	44.4	9.4
9	12530.00	60.6 PK	74.0	-13.4	2.26 V	269	50.0	10.6
10	12530.00	46.3 AV	54.0	-7.7	2.26 V	269	35.7	10.6

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.
5. " # ": The radiated frequency is out of the restricted band.

8 Pictures of Test Arrangements

Please refer to the attached file (Test Setup Photo)

9 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.

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

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