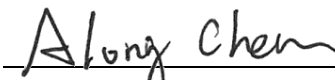


FCC Spot Check Test Report

FCC ID : I88WAC6103D-IA
Equipment : 802.11 ac Unified Pro Access Point
(Please refer to section 1.1.1 for more details)
Model No. : WAC6103D-I
(Please refer to section 1.1.1 for more details)
Brand Name : ZYXEL
Applicant : Zyxel Communications Corporation
Address : No.2 Industry East RD. IX, Hsinchu Science
Park, Hsinchu 30075, Taiwan, R.O.C
Standard : 47 CFR FCC Part 15.407
Received Date : Jul. 4, 2019
Tested Date : Oct. 24, 2019 ~ Mar. 30, 2020

We, International Certification Corp., would like to declare that the tested sample has been evaluated and in compliance with the requirement of the above standards. The test results contained in this report refer exclusively to the product. It may be duplicated completely for legal use with the approval of the applicant. It shall not be reproduced except in full without the written approval of our laboratory.

Reviewed by:


Along Chen / Assistant Manager

Approved by:


Gary Chang / Manager



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Release Record

Report No.	Version	Description	Issued Date
FR563002-11AN	Rev. 01	Initial issue	Jun. 08, 2020

Summary of Test Results

FCC Rules	Test Items	Measured	Result
15.207	Conducted Emissions	[dBuV]: 14.288MHz 43.92 (Margin -6.08dB) - AV	Pass
15.407(b) 15.209	Radiated Emissions	[dBuV/m at 3m]: 30.88MHz 38.88(Margin -1.12dB) - QP	Pass

Declaration of Conformity:

The test results with all measurement uncertainty excluded are presented in accordance with the regulation limits or requirements declared by manufacturers.

Comments and Explanations:

The declared of product specification for EUT presented in the report are provided by the manufacturer, and the manufacturer takes all the responsibilities for the accuracy of product specification.

1 General Description

1.1 Information

1.1.1 Product Details

The following models are provided to this EUT.

Brand Name	Model Name	Product Name	Description
ZYXEL	WAC6103D-I	802.11 ac Unified Pro Access Point	For marketing purpose
	NAP203	802.11ac Dual-Radio Nebula Cloud Managed Access Point	
	NWA1123-AC PRO	802.11ac Dual-Radio Dual-Mount PoE Access Point	

1.1.2 Specification of the Equipment under Test (EUT)

RF General Information					
Frequency Range (MHz)	IEEE Std. 802.11	Ch. Freq. (MHz)	Channel Number	Transmit Chains (N _{TX})	Data Rate / MCS
5150-5250	a	5180-5240	36-48 [4]	3	6-54 Mbps
5150-5250	n (HT20)	5180-5240	36-48 [4]	3	MCS 0-23
5150-5250	n (HT40)	5190-5230	38-46 [2]	3	MCS 0-23
5150-5250	ac (VHT20)	5180-5240	36-48 [4]	3	MCS 0-9
5150-5250	ac (VHT40)	5190-5230	38-46 [2]	3	MCS 0-9
5150-5250	ac (VHT80)	5210	42 [1]	3	MCS 0-9

Note 1: RF output power specifies that Maximum Conducted Output Power.
Note 2: 802.11a/n/ac uses a combination of OFDM-BPSK, QPSK, 16QAM, 64QAM, 256QAM modulation.

RF General Information					
Frequency Range (MHz)	IEEE Std. 802.11	Ch. Freq. (MHz)	Channel Number	Transmit Chains (N _{TX})	Data Rate / MCS
5725-5850	a	5745-5825	149-165 [5]	3	6-54 Mbps
5725-5850	n (HT20)	5745-5825	149-165 [5]	3	MCS 0-23
5725-5850	n (HT40)	5755-5795	151-159 [2]	3	MCS 0-23
5725-5850	ac (VHT20)	5745-5825	149-165 [5]	3	MCS 0-9
5725-5850	ac (VHT40)	5755-5795	151-159 [2]	3	MCS 0-9
5725-5850	ac (VHT80)	5775	155 [1]	3	MCS 0-9

Note 1: RF output power specifies that Maximum Conducted Output Power.
Note 2: 802.11a/n/ac uses a combination of OFDM-BPSK, QPSK, 16QAM, 64QAM, 256QAM modulation.

1.1.3 Antenna Details

Brand / Model	Ant. No.	Type	Connector	Frequencies (MHz) / Antenna Gain (dBi)			Remark
				2400~2483.5	5150~5250	5725~5850	
SINBON / 2.4G & 5G Metal & PCB Antenna	1	PIFA	UFL	3.28	---	---	Ceiling mounted: Antenna 1 / 2 / 3
	2	PIFA	UFL	3.37	---	---	
	3	PIFA	UFL	3.15	---	---	
	4	Dipole	UFL	4.33	---	---	Wall mounted: Antenna 1 / 2 / 4
	5	LOOP	UFL	---	4.38	4.23	Ceiling mounted: Antenna 5 / 6 / 7
	6	LOOP	UFL	---	4.31	4.22	
	7	LOOP	UFL	---	4.38	4.36	Wall mounted: Antenna 5 / 6 / 8
	8	Dipole	UFL	---	5.12	5.20	

Note:

1. The device has a hardware control switch to change operating mode as Ceiling or Wall mounted mode. The difference between both operating modes is only transmission antennas combination.
2. The antenna set includes 8 antennas as above table.

1.1.4 Power Supply Type of Equipment under Test (EUT)

Power Supply Type	48Vdc from PoE
-------------------	----------------

1.1.5 Accessories (For Model: NWA1123-AC PRO only)

Accessories		
No.	Equipment	Description
1	POE	Brand: SHENZHEN TOPOW ELECTRONICS CO., LTD. Model: TPT24S48A Power Rating: I/P: 100-240Vac, 50/60Hz, 0.5A MAX O/P: 48Vdc, 500mA Power line: AC power cord, 1.75m, non- shielded, w/o core
2	RJ45 cable	Brand: Nien-Yi Model: NYS2676 Power line: 1.45m, non-shielded, w/o core

The above POE and RJ45 cable are not bundled in market for model WAC6103D-I and NAP203.

1.1.6 Channel List

For Frequency band 5150-5250 MHz			
802.11 a / HT20 / VHT20		HT40 / VHT40	
Channel	Frequency(MHz)	Channel	Frequency(MHz)
36	5180	38	5190
40	5200	46	5230
44	5220	VHT80	
48	5240	42	5210

For Frequency band 5725~5850 MHz			
802.11 a / HT20 / VHT20		HT40 / VHT40	
Channel	Frequency(MHz)	Channel	Frequency(MHz)
149	5745	151	5755
153	5765	159	5795
157	5785	VHT80	
161	5805	155	5775
165	5825	---	---

2 Referencing Test Data

2.1 Introduction

The variant model (FCC ID: I88WAC6103D-IA) references the test data of original model (FCC ID: I88WAC6103D-I).

Reference FCC ID	Equipment Class	Frequency bands	Reference Report Title
I88WAC6103D-I	NII	5180-5240 MHz 5745-5825 MHz	FR563002AN

FCC ID: I88WAC6103D-I / I88WAC6103D-IA use the same internal printed circuit board, antenna and software version for 5G Wi-Fi function. POE and RJ 45 cable are not the same thus AC power line conducted emission and radiated emission below 1GHz are re-tested and recorded in section 4.

Applicant takes full responsibility that the test data as referenced below represents compliance for the FCC ID: I88WAC6103D-IA.

2.2 Difference

Difference between FCC ID: I88WAC6103D-IA / I88WAC6103D-I is only filter and power amplifier of 2.4 GHz.

Characteristic		FCC ID: I88WAC6103D-IA	FCC ID: I88WAC6103D-I
Wi-Fi function	Frequency band	2412-2462 MHz 5180-5240 MHz 5745-5825 MHz	2412-2462 MHz 5180-5240 MHz 5745-5825 MHz
	2.4GHz Antenna	PIFA Dipole	PIFA Dipole
	5 GHz Antenna	LOOP Dipole	LOOP Dipole
	Operation modes	11a 11n: HT20 / HT40 11ac / VHT20 / VHT40 / VHT 80	11a 11n: HT20 / HT40 11ac / VHT20 / VHT40 / VHT 80

2.3 Spot Check Verification Data

Test Item	Mode	FCC ID: I88WAC6103D-I	FCC ID: I88WAC6103D-IA	Difference (dB)
Average Conducted Power (dBm)	802.11a	28.32	28.13	0.19
	802.11n HT20	28.27	28	0.27
	802.11n HT40	24.06	24.02	0.04
	802.11ac VHT20	28.33	28.16	0.17
	802.11ac VHT40	24.14	24.13	0.01
	802.11ac VHT80	13.99	13.69	0.3
RSE (Band Edge. Harmonic dBuV/m)	802.11ac VHT40 5.2G Ceiling	52.95	52.03	0.92
	802.11a 5.8G Ceiling	68.65	67.58	1.07
	802.11a 5.2G Wall	52.99	52.86	0.13
	802.11a 5.8G Wall	67.4	66.74	0.66

2.4 Reference

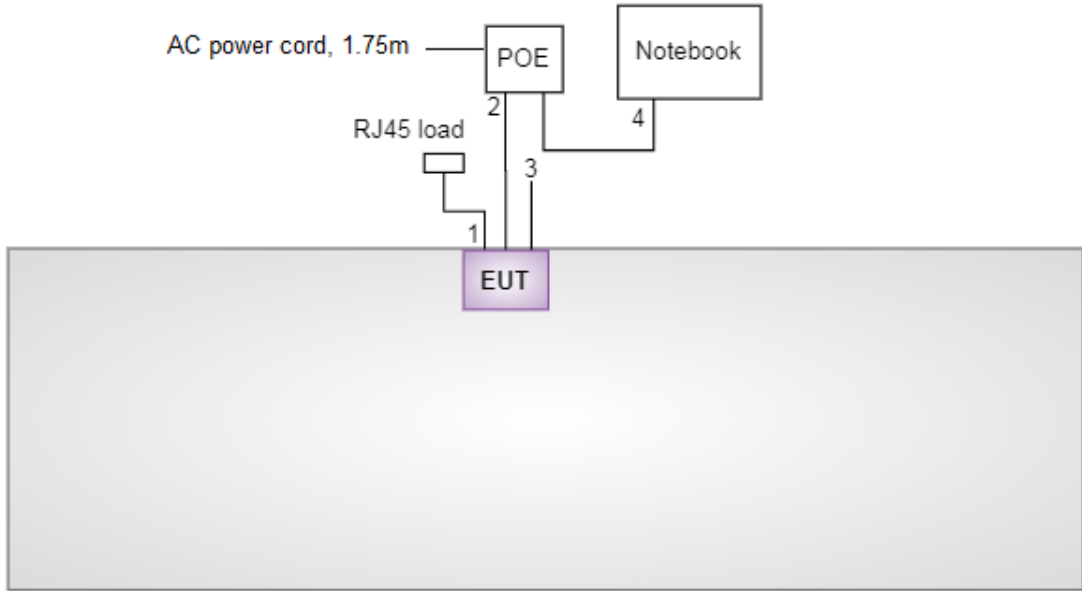
Equipment Class	Reference FCC ID	Type Grant	Reference application	Reference Report Title
NII	I88WAC6103D-I	Original	I88WAC6103D-IA	FR563002AN

2.5 Local Support Equipment List

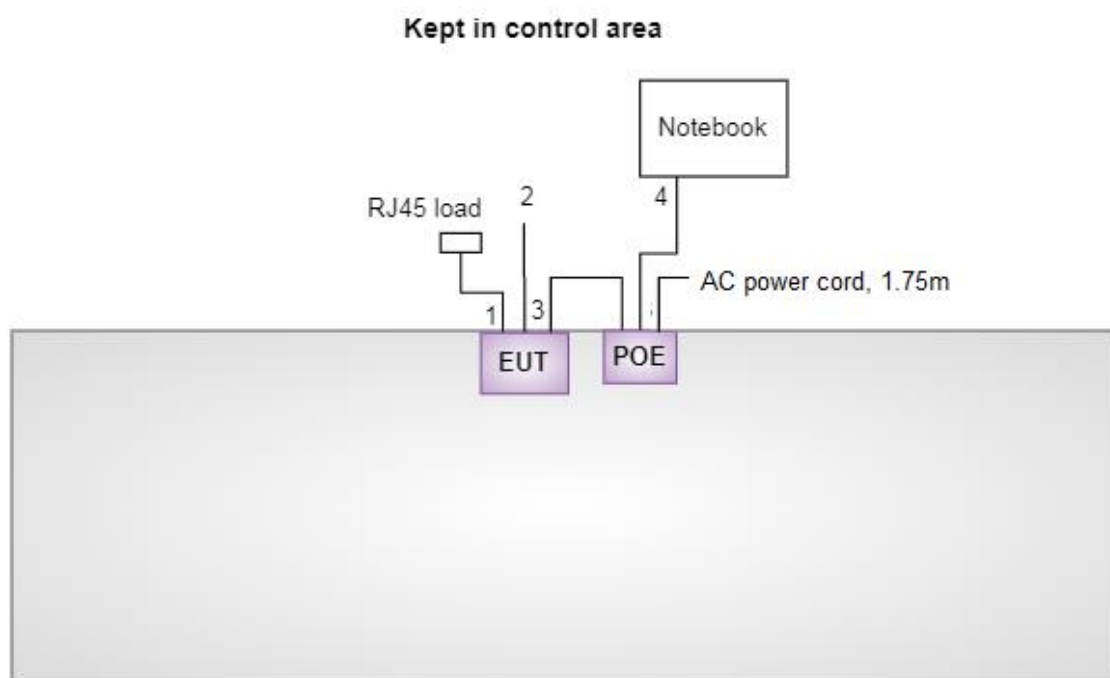
Support Equipment List (Model: WAC6103D-I, NAP203)					
No.	Equipment	Brand	Model	FCC ID	Remarks
1	Notebook	DELL	Latitude E6440	DoC	---

Support Equipment List (Model: NWA1123-AC PRO)					
No.	Equipment	Brand	Model	FCC ID	Remarks
1	Notebook	DELL	Latitude E6440	DoC	---
2	POE	SHENZHEN TOPOW ELECTRONICS CO., LTD.	TPT24S48A	---	Provided by applicant.

2.6 Test Setup Chart

Test Setup Diagram (Model: WAC6103D-I, NAP203)	
Kept in control area 	
No.	Signal cable / Length (m)
1	RJ45, 1m non-shielded.
2	RJ45, 10m non-shielded.
3	Console cable, 1m non-shielded.
4	RJ45, 1m non-shielded.

Test Setup Diagram (Model: NWA1123-AC PRO)



No.	Signal cable / Length (m)
1	RJ45, 1m non-shielded.
2	Console cable, 1m non-shielded.
3	RJ45, 1.4m non-shielded.
4	RJ45, 10m non-shielded.

2.7 The Equipment List

Test Item	Conducted Emission				
Test Site	Conduction room 1 / (CO01-WS)				
Tested Date	Nov. 01, 2019				
Instrument	Manufacturer	Model No.	Serial No.	Calibration Date	Calibration Until
Receiver	R&S	ESR3	101657	Jan. 08, 2019	Jan. 07, 2020
LISN	R&S	ENV216	101579	Mar. 08, 2019	Mar. 07, 2020
RF Cable-CON	Woken	CFD200-NL	CFD200-NL-001	Oct. 22, 2019	Oct. 21, 2020
Measurement Software	AUDIX	e3	6.120210k	NA	NA
Note: Calibration Interval of instruments listed above is one year.					

Test Item	Conducted Emission				
Test Site	Conduction room 1 / (CO01-WS)				
Tested Date	Mar. 30, 2020				
Instrument	Manufacturer	Model No.	Serial No.	Calibration Date	Calibration Until
Receiver	R&S	ESR3	101657	Feb. 14, 2020	Feb. 13, 2021
LISN	R&S	ENV216	101579	Mar. 12, 2020	Mar. 11, 2021
RF Cable-CON	Woken	CFD200-NL	CFD200-NL-001	Oct. 22, 2019	Oct. 21, 2020
Measurement Software	AUDIX	e3	6.120210k	NA	NA
Note: Calibration Interval of instruments listed above is one year.					

Test Item	Radiated Emission				
Test Site	966 chamber1 / (03CH01-WS)				
Tested Date	Oct. 24, 2019				
Instrument	Manufacturer	Model No.	Serial No.	Calibration Date	Calibration Until
Spectrum Analyzer	R&S	FSV40	101498	Dec. 27, 2018	Dec. 26, 2019
Receiver	R&S	ESR3	101658	Dec. 11, 2018	Dec. 10, 2019
Bilog Antenna	SCHWARZBECK	VULB9168	VULB9168-522	Jul. 12, 2019	Jul. 11, 2020
Horn Antenna 1G-18G	SCHWARZBECK	BBHA 9120 D	BBHA 9120 D 1096	Dec. 18, 2018	Dec. 17, 2019
Horn Antenna 18G-40G	SCHWARZBECK	BBHA 9170	BBHA 9170517	Nov. 15, 2018	Nov. 14, 2019
Loop Antenna	R&S	HFH2-Z2	100330	Nov. 09, 2018	Nov. 08, 2019
Loop Antenna Cable	KOAX KABEL	101354-BW	101354-BW	Oct. 07, 2019	Oct. 06, 2020
Preamplifier	EMC	EMC02325	980225	Jul. 09, 2019	Jul. 08, 2020
Preamplifier	Agilent	83017A	MY39501308	Oct. 08, 2019	Oct. 07, 2020
Preamplifier	EMC	EMC184045B	980192	Aug. 01, 2019	Jul. 31, 2020
RF Cable	EMC	EMC104-SM-SM-80 00	181106	Oct. 07, 2019	Oct. 06, 2020
RF Cable	HUBER+SUHNER	SUCOFLEX104	MY16019/4	Oct. 07, 2019	Oct. 06, 2020
RF Cable	HUBER+SUHNER	SUCOFLEX104	MY16014/4	Oct. 07, 2019	Oct. 06, 2020
LF cable 1M	EMC	EMCCFD400-NM-N M-1000	160502	Oct. 07, 2019	Oct. 06, 2020
LF cable 3M	Woken	CFD400NL-LW	CFD400NL-001	Oct. 07, 2019	Oct. 06, 2020
LF cable 10M	Woken	CFD400NL-LW	CFD400NL-002	Oct. 07, 2019	Oct. 06, 2020
Measurement Software	AUDIX	e3	6.120210g	NA	NA
Note: Calibration Interval of instruments listed above is one year.					

Test Item	RF Conducted				
Test Site	(TH01-WS)				
Tested Date	Nov. 04, 2019				
Instrument	Manufacturer	Model No.	Serial No.	Calibration Date	Calibration Until
Spectrum Analyzer	R&S	FSV40	101063	Apr. 17, 2019	Apr. 16, 2020
Power Meter	Anritsu	ML2495A	1241002	Oct. 23, 2019	Oct. 22, 2020
Power Sensor	Anritsu	MA2411B	1207366	Oct. 23, 2019	Oct. 22, 2020
DC POWER SOURCE	GW INSTRON	GPC-6030D	GES855395	Oct. 29, 2019	Oct. 28, 2020
Measurement Software	Sporton	Sporton_1	1.3.30	NA	NA
Note: Calibration Interval of instruments listed above is one year.					

Test Item	Radiated Emission				
Test Site	966 chamber1 / (03CH01-WS)				
Tested Date	Mar. 20, 2020				
Instrument	Manufacturer	Model No.	Serial No.	Calibration Date	Calibration Until
Spectrum Analyzer	R&S	FSV40	101498	Dec. 17, 2019	Dec. 16, 2020
Receiver	R&S	ESR3	101657	Feb. 14, 2020	Feb. 13, 2021
Bilog Antenna	SCHWARZBECK	VULB9168	VULB9168-522	Jul. 12, 2019	Jul. 11, 2020
Horn Antenna 1G-18G	SCHWARZBECK	BBHA 9120 D	BBHA 9120 D 1096	Dec. 12, 2019	Dec. 11, 2020
Horn Antenna 18G-40G	SCHWARZBECK	BBHA 9170	BBHA 9170517	Nov. 15, 2019	Nov. 14, 2020
Loop Antenna	R&S	HFH2-Z2	100330	Nov. 13, 2019	Nov. 12, 2020
Loop Antenna Cable	KOAX KABEL	101354-BW	101354-BW	Oct. 07, 2019	Oct. 06, 2020
Preamplifier	EMC	EMC02325	980225	Jul. 09, 2019	Jul. 08, 2020
Preamplifier	Agilent	83017A	MY39501308	Oct. 08, 2019	Oct. 07, 2020
Preamplifier	EMC	EMC184045B	980192	Aug. 01, 2019	Jul. 31, 2020
RF Cable	EMC	EMC104-SM-SM-80 00	181106	Oct. 07, 2019	Oct. 06, 2020
RF Cable	HUBER+SUHNER	SUCOFLEX104	MY16019/4	Oct. 07, 2019	Oct. 06, 2020
RF Cable	HUBER+SUHNER	SUCOFLEX104	MY16014/4	Oct. 07, 2019	Oct. 06, 2020
LF cable 1M	EMC	EMCCFD400-NM-N M-1000	160502	Oct. 07, 2019	Oct. 06, 2020
LF cable 3M	Woken	CFD400NL-LW	CFD400NL-001	Oct. 07, 2019	Oct. 06, 2020
LF cable 10M	Woken	CFD400NL-LW	CFD400NL-002	Oct. 07, 2019	Oct. 06, 2020
Measurement Software	AUDIX	e3	6.120210g	NA	NA
Note: Calibration Interval of instruments listed above is one year.					

2.8 Testing Applied Standards

According to the specification of EUT, the EUT must comply with following standards and KDB documents.

47 CFR FCC Part 15.407

ANSI C63.10-2013

FCC KDB 789033 D02 General UNII Test Procedures New Rules v02r01

FCC KDB 662911 D01 Multiple Transmitter Output v02r01

FCC KDB 412172 D01 Determining ERP and EIRP v01r01

2.9 Deviation from Test Standard and Measurement Procedure

None

2.10 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 ($k=2$)).

Measurement Uncertainty	
Parameters	Uncertainty
Bandwidth	± 34.130 Hz
Conducted power	± 0.808 dB
Frequency error	$\pm 1 \times 10^{-9}$
Power density	± 0.583 dB
Conducted emission	± 2.715 dB
AC conducted emission	± 2.92 dB
Radiated emission ≤ 1 GHz	± 3.41 dB
Radiated emission > 1 GHz	± 4.59 dB
Time	$\pm 0.1\%$
Temperature	± 0.4 °C

3 Test Configuration

3.1 Testing Condition

Test Item	Test Site	Ambient Condition	Tested By
AC Conduction	CO01-WS	22°C / 63% 20°C / 63%	AKun Chung Alex Tsai
Radiated Emissions	03CH01-WS	25°C / 62-65% 23°C / 68%	Akun Chung Roger Lu
RF Conducted	TH01-WS	21°C / 63%	Brad Wu

- FCC Designation No.: TW2732
- FCC site registration No.: 181692
- ISSED#: 10807A
- CAB identifier: TW2732

3.2 The Worst Test Modes and Channel Details

For Frequency band 5150-5250 MHz For Frequency band 5725-5850 MHz				
Test item	Modulation Mode	Test Frequency (MHz)	Data Rate	Test Configuration
Conducted Emissions	11a VHT20	5240 5785	6 Mbps MCS 0	2, 4
Radiated Emissions ≤1GHz	11a VHT20	5240 5785	6 Mbps MCS 0	1, 2, 3, 4
NOTE: - The EUT was pretested with 3 orientations placed on the table for the radiated emission measurement – X, Y, and Z-plane. The Y-plane and Z-plane results were found as the worst case and were shown in this report as below test configuration. - The device was designed to be ceiling mounted or wall mounted with different group of antenna. Each group of antenna was selected to perform radiated emission test as below test configuration. - Test Configurations are listed as below: - Configuration 1: Model WAC6103D-I, NAP203: Ceiling mounted, Z-plane. - Configuration 2: Model WAC6103D-I, NAP203: Wall mounted, Y-plane - Configuration 3: Model NWA1123-AC PRO: Ceiling mounted, Z-plane. - Configuration 4: Model NWA1123-AC PRO: Wall mounted, Y-plane				

4 Transmitter Test Results

4.1 Conducted Emissions

4.1.1 Limit of Conducted Emissions

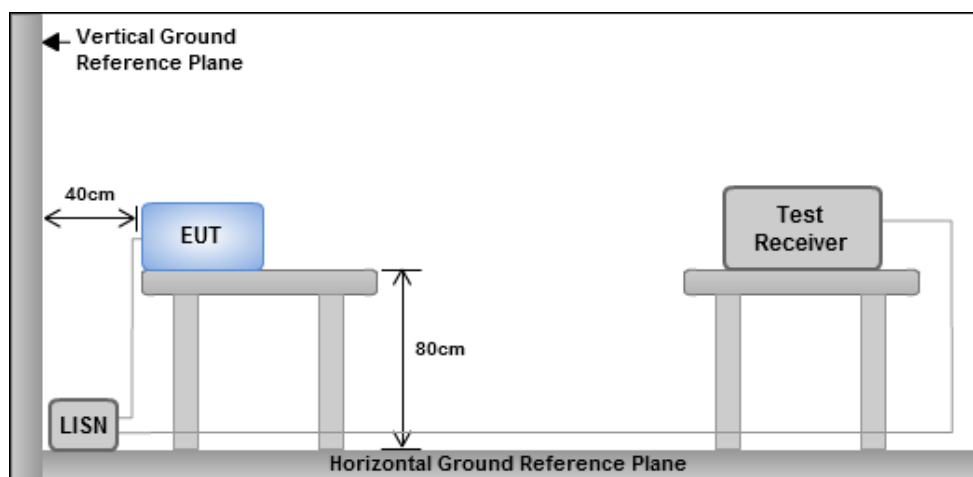
Conducted Emissions Limit		
Frequency Emission (MHz)	Quasi-Peak	Average
0.15-0.5	66 - 56 *	56 - 46 *
0.5-5	56	46
5-30	60	50

Note 1: * Decreases with the logarithm of the frequency.

4.1.2 Test Procedures

1. The device is placed on a test table, raised 80 cm above the reference ground plane. The vertical conducting plane is located 40 cm to the rear of the device.
2. The device is connected to line impedance stabilization network (LISN) and other accessories are connected to other LISN. Measured levels of AC power line conducted emission are across the 50 Ω LISN port.
3. AC conducted emission measurements is made over frequency range from 150 kHz to 30 MHz.
4. This measurement was performed with AC 120V / 60Hz.

4.1.3 Test Setup

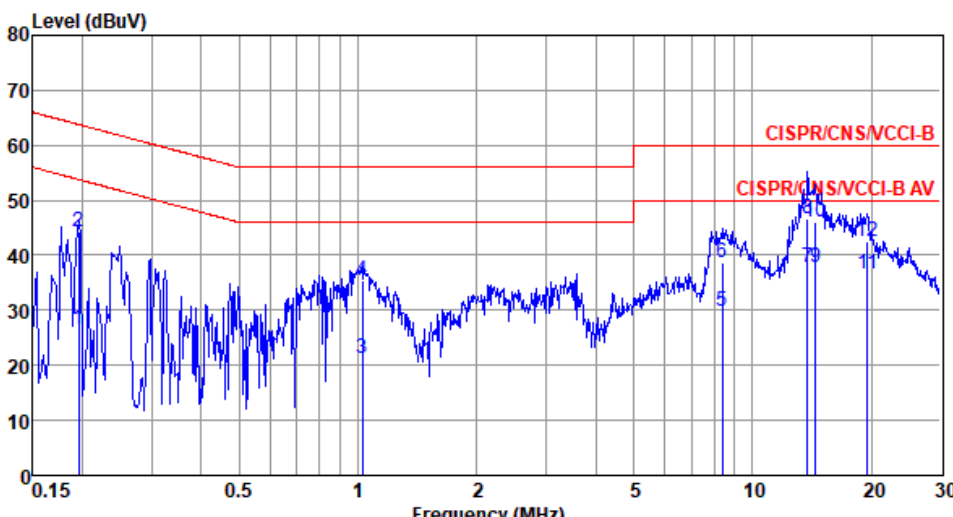


- Note: 1. Support units were connected to second LISN.
 2. Both of LISNs (AMN) are 80 cm from EUT and at least 80 cm from other units and other metal planes

Configuration 2: Model WAC6103D-I, NAP203: Wall mounted, Y-plane

4.1.4 Test Result of Conducted Emissions

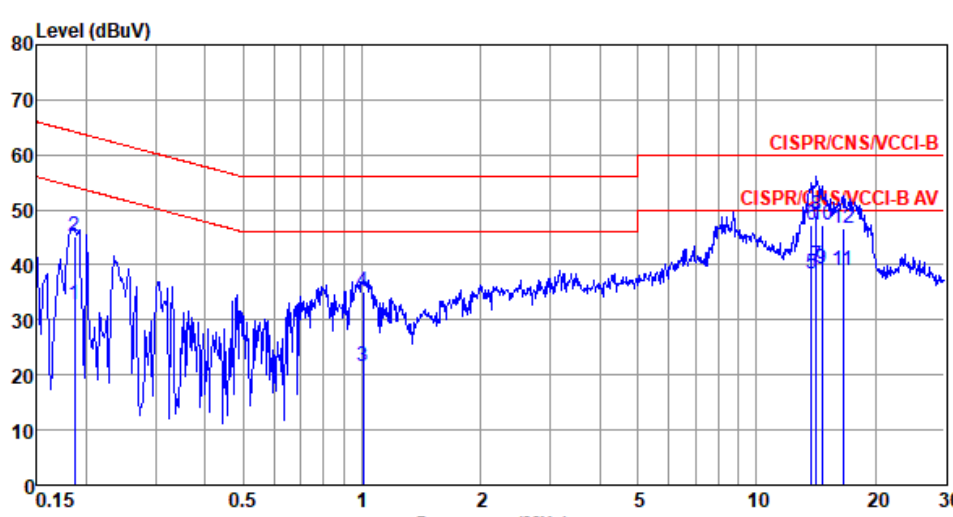
Modulation	11a	Test Freq. (MHz)	5240
Power Phase	Line		



	Freq MHz	Level dBuV	Limit Line dBuV	Over Limit dB	Read Level dBuV	LISN factor dB	cable loss dB	Remark
1	0.195	26.59	53.80	-27.21	16.99	9.54	0.06	Average
2	0.195	44.18	63.80	-19.62	34.58	9.54	0.06	QP
3	1.027	21.36	46.00	-24.64	11.64	9.60	0.12	Average
4	1.027	35.40	56.00	-20.60	25.68	9.60	0.12	QP
5	8.367	29.81	50.00	-20.19	19.80	9.64	0.37	Average
6	8.367	38.71	60.00	-21.29	28.70	9.64	0.37	QP
7*	13.768	37.72	50.00	-12.28	27.52	9.65	0.55	Average
8	13.768	46.78	60.00	-13.22	36.58	9.65	0.55	QP
9	14.440	37.70	50.00	-12.30	27.46	9.66	0.58	Average
10	14.440	45.95	60.00	-14.05	35.71	9.66	0.58	QP
11	19.532	36.65	50.00	-13.35	26.34	9.66	0.65	Average
12	19.532	42.57	60.00	-17.43	32.26	9.66	0.65	QP

Note 1: Level (dBuV) = Read Level (dBuV) + LISN Factor (dB) + Cable Loss (dB).
 2: Over Limit (dB) = Level (dBuV) – Limit Line (dBuV).

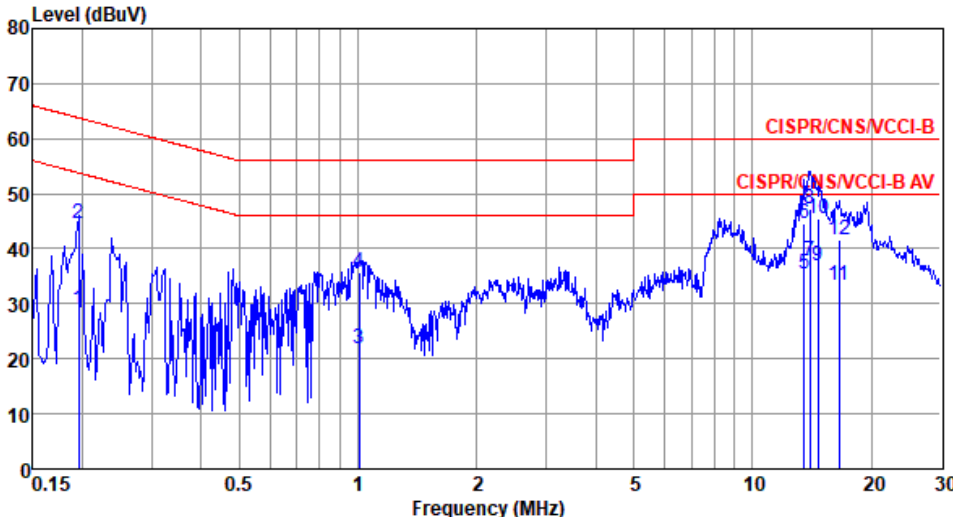
Modulation	11a	Test Freq. (MHz)	5240
Power Phase	Neutral		



	Freq MHz	Level dBUV	Limit Line dBUV	Over Limit dB	Read Level dBUV	LISN factor dB	cable loss dB	Remark
1	0.186	32.64	54.20	-21.56	23.00	9.58	0.06	Average
2	0.186	45.24	64.20	-18.96	35.60	9.58	0.06	QP
3	1.005	21.62	46.00	-24.38	11.86	9.64	0.12	Average
4	1.005	35.04	56.00	-20.96	25.28	9.64	0.12	QP
5	13.768	38.30	50.00	-11.70	27.99	9.76	0.55	Average
6	13.768	47.17	60.00	-12.83	36.86	9.76	0.55	QP
7*	14.213	39.90	50.00	-10.10	29.57	9.76	0.57	Average
8	14.213	48.92	60.00	-11.08	38.59	9.76	0.57	QP
9	14.672	39.31	50.00	-10.69	28.95	9.77	0.59	Average
10	14.672	47.34	60.00	-12.66	36.98	9.77	0.59	QP
11	16.573	38.89	50.00	-11.11	28.49	9.78	0.62	Average
12	16.573	46.50	60.00	-13.50	36.10	9.78	0.62	QP

Note 1: Level (dBUV) = Read Level (dBUV) + LISN Factor (dB) + Cable Loss (dB).
 2: Over Limit (dB) = Level (dBUV) – Limit Line (dBUV).

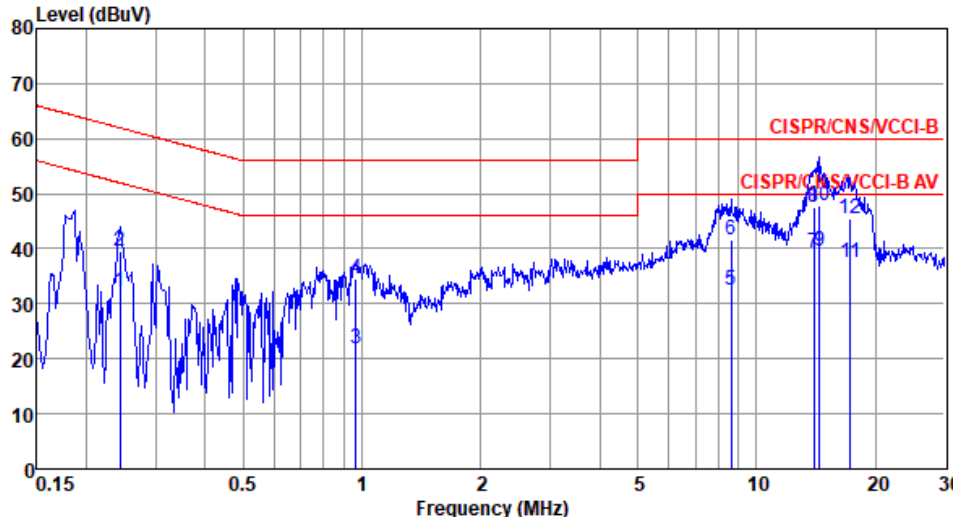
Modulation	VHT20	Test Freq. (MHz)	5785
Power Phase	Line		



	Freq	Level	Limit	Over	Read	LISN	cable	Remark
	MHz	dBuV	dBuV	dB	dBuV	dB	dB	
1	0.195	28.83	53.80	-24.97	19.23	9.54	0.06	Average
2	0.195	44.47	63.80	-19.33	34.87	9.54	0.06	QP
3	1.005	21.76	46.00	-24.24	12.04	9.60	0.12	Average
4	1.005	35.63	56.00	-20.37	25.91	9.60	0.12	QP
5	13.551	35.29	50.00	-14.71	25.09	9.65	0.55	Average
6	13.551	44.44	60.00	-15.56	34.24	9.65	0.55	QP
7*	13.989	37.93	50.00	-12.07	27.72	9.65	0.56	Average
8	13.989	47.09	60.00	-12.91	36.88	9.65	0.56	QP
9	14.672	36.83	50.00	-13.17	26.58	9.66	0.59	Average
10	14.672	45.56	60.00	-14.44	35.31	9.66	0.59	QP
11	16.573	33.47	50.00	-16.53	23.19	9.66	0.62	Average
12	16.573	41.59	60.00	-18.41	31.31	9.66	0.62	QP

Note 1: Level (dBuV) = Read Level (dBuV) + LISN Factor (dB) + Cable Loss (dB).
 2: Over Limit (dB) = Level (dBuV) – Limit Line (dBuV).

Modulation	VHT20	Test Freq. (MHz)	5785
Power Phase	Neutral		



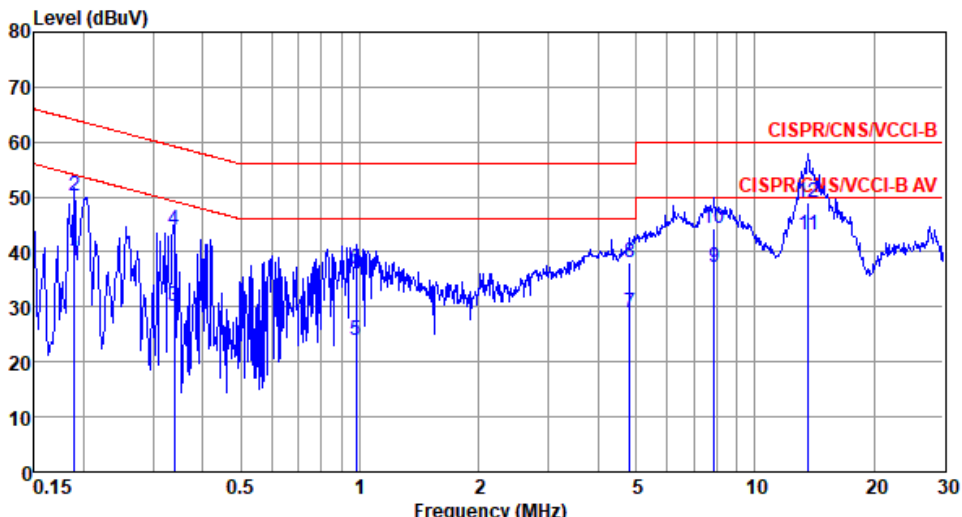
	Freq MHz	Level dBuV	Limit dBuV	Over Limit dB	Read Level dBuV	LISN factor dB	cable loss dB	Remark
1	0.243	32.16	52.00	-19.84	22.50	9.59	0.07	Average
2	0.243	39.63	62.00	-22.37	29.97	9.59	0.07	QP
3	0.963	21.92	46.00	-24.08	12.16	9.64	0.12	Average
4	0.963	34.46	56.00	-21.54	24.70	9.64	0.12	QP
5	8.637	32.52	50.00	-17.48	22.45	9.70	0.37	Average
6	8.637	41.49	60.00	-18.51	31.42	9.70	0.37	QP
7	13.989	39.28	50.00	-10.72	28.96	9.76	0.56	Average
8	13.989	47.65	60.00	-12.35	37.33	9.76	0.56	QP
9*	14.440	39.69	50.00	-10.31	29.35	9.76	0.58	Average
10	14.440	47.94	60.00	-12.06	37.60	9.76	0.58	QP
11	17.291	37.52	50.00	-12.48	27.10	9.79	0.63	Average
12	17.291	45.59	60.00	-14.41	35.17	9.79	0.63	QP

Note 1: Level (dBuV) = Read Level (dBuV) + LISN Factor (dB) + Cable Loss (dB).
 2: Over Limit (dB) = Level (dBuV) – Limit Line (dBuV).

Configuration 4: Model NWA1123-AC PRO: Wall mounted, Y-plane

4.1.5 Test Result of Conducted Emissions

Modulation	11a	Test Freq. (MHz)	5240
Power Phase	Line		

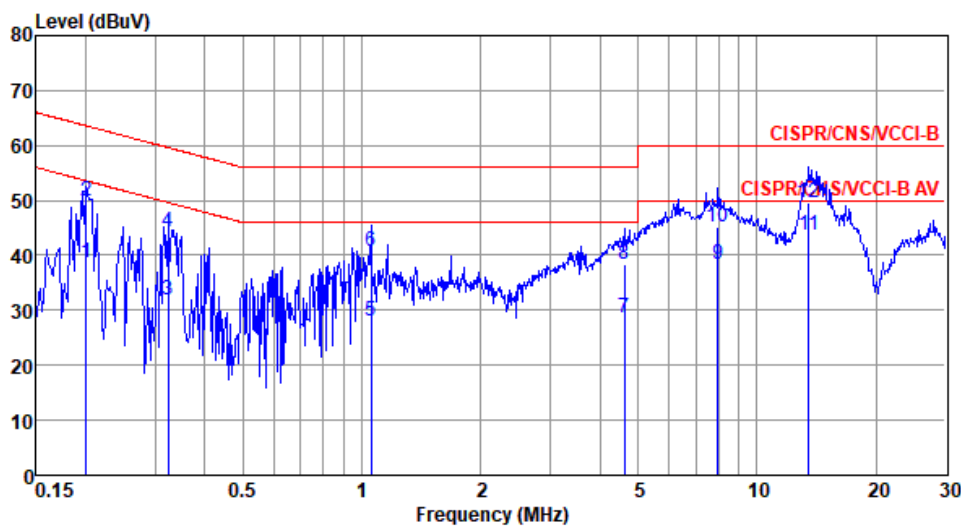


	Freq	Level	Limit	Over	Read	LISN	cable	Remark
	MHz	dBuV	dBuV	dB	dBuV	dB	dB	
1	0.189	38.25	54.06	-15.81	28.56	9.63	0.06	Average
2	0.189	50.05	64.06	-14.01	40.36	9.63	0.06	QP
3	0.339	30.17	49.22	-19.05	20.46	9.63	0.08	Average
4	0.339	43.93	59.22	-15.29	34.22	9.63	0.08	QP
5	0.979	23.80	46.00	-22.20	14.05	9.63	0.12	Average
6	0.979	36.86	56.00	-19.14	27.11	9.63	0.12	QP
7	4.822	28.78	46.00	-17.22	18.81	9.66	0.31	Average
8	4.822	38.21	56.00	-17.79	28.24	9.66	0.31	QP
9	7.893	37.11	50.00	-12.89	27.07	9.68	0.36	Average
10	7.893	44.31	60.00	-15.69	34.27	9.68	0.36	QP
11*	13.623	43.25	50.00	-6.75	33.00	9.70	0.55	Average
12	13.623	49.14	60.00	-10.86	38.89	9.70	0.55	QP

Note 1: Level (dBuV) = Read Level (dBuV) + LISN Factor (dB) + Cable Loss (dB).

2: Over Limit (dB) = Level (dBuV) – Limit Line (dBuV).

Modulation	11a	Test Freq. (MHz)	5240
Power Phase	Neutral		

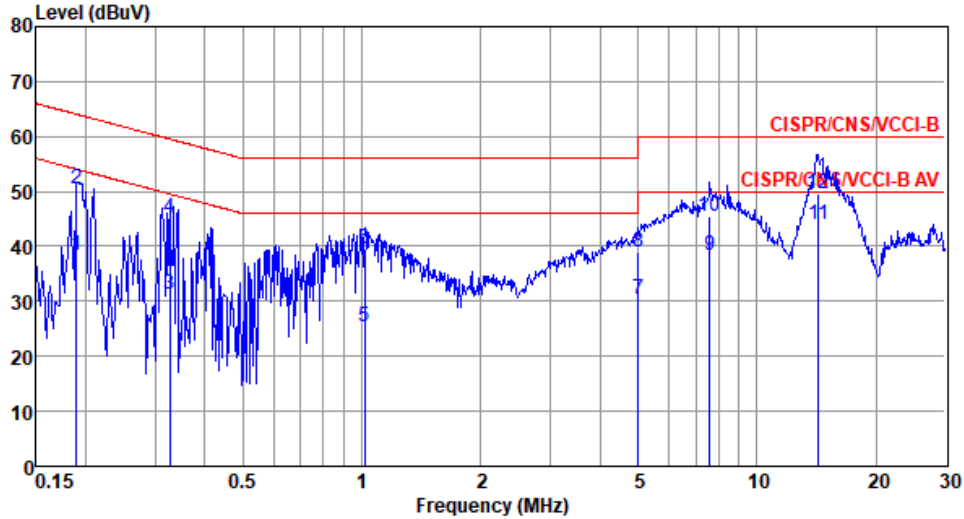


The graph displays the measured level in dBuV against frequency in MHz. The y-axis ranges from 0 to 80 dBuV, and the x-axis ranges from 0.15 to 30 MHz. Two red limit lines are shown: CISPR/CNS/VCCI-B (upper) and CISPR/CNS/VCCI-B AV (lower). A blue line represents the measured signal, which fluctuates between approximately 20 and 50 dBuV. Vertical blue lines mark specific frequency points corresponding to the data table below.

	Freq MHz	Level dBuV	Limit Line dBuV	Over Limit dB	Read Level dBuV	LISN factor dB	cable loss dB	Remark
1	0.201	38.65	53.58	-14.93	28.94	9.65	0.06	Average
2	0.201	49.87	63.58	-13.71	40.16	9.65	0.06	QP
3	0.323	31.91	49.62	-17.71	22.19	9.65	0.07	Average
4	0.323	44.38	59.62	-15.24	34.66	9.65	0.07	QP
5	1.054	28.03	46.00	-17.97	18.26	9.65	0.12	Average
6	1.054	40.65	56.00	-15.35	30.88	9.65	0.12	QP
7	4.622	28.53	46.00	-17.47	18.54	9.68	0.31	Average
8	4.622	38.43	56.00	-17.57	28.44	9.68	0.31	QP
9	7.977	38.35	50.00	-11.65	28.26	9.72	0.37	Average
10	7.977	45.27	60.00	-14.73	35.18	9.72	0.37	QP
11*	13.551	43.64	50.00	-6.36	33.31	9.78	0.55	Average
12	13.551	49.61	60.00	-10.39	39.28	9.78	0.55	QP

Note 1: Level (dBuV) = Read Level (dBuV) + LISN Factor (dB) + Cable Loss (dB).
 2: Over Limit (dB) = Level (dBuV) – Limit Line (dBuV).

Modulation	VHT20	Test Freq. (MHz)	5785
Power Phase	Line		

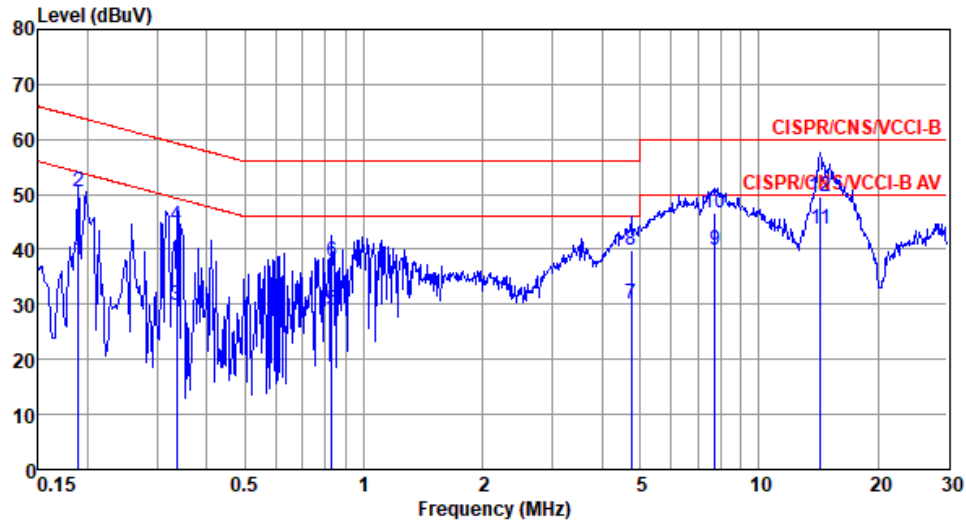


The graph displays the measured level (dBUV) on the y-axis (0 to 80) against frequency (MHz) on the x-axis (0.15 to 30). Two red limit lines are shown: CISPR/CNS/VCCI-B (upper) and CISPR/CIS/VCCI-B AV (lower). A blue line represents the measured signal, with several peaks labeled with numbers 1 through 12. The signal generally stays below the limits, with a notable peak at 14.288 MHz (labeled 11*) that is highlighted in the table below.

	Freq MHz	Level dBuV	Limit Line dBuV	Over Limit dB	Read Level dBuV	LISN factor dB	cable loss dB	Remark
1	0.189	38.37	54.06	-15.69	28.68	9.63	0.06	Average
2	0.189	50.37	64.06	-13.69	40.68	9.63	0.06	QP
3	0.327	31.42	49.53	-18.11	21.72	9.63	0.07	Average
4	0.327	45.05	59.53	-14.48	35.35	9.63	0.07	QP
5	1.016	25.43	46.00	-20.57	15.68	9.63	0.12	Average
6	1.016	39.61	56.00	-16.39	29.86	9.63	0.12	QP
7	5.005	30.29	50.00	-19.71	20.32	9.66	0.31	Average
8	5.005	38.93	60.00	-21.07	28.96	9.66	0.31	QP
9	7.606	38.39	50.00	-11.61	28.35	9.68	0.36	Average
10	7.606	45.38	60.00	-14.62	35.34	9.68	0.36	QP
11*	14.288	43.92	50.00	-6.08	33.64	9.71	0.57	Average
12	14.288	49.58	60.00	-10.42	39.30	9.71	0.57	QP

Note 1: Level (dBUV) = Read Level (dBUV) + LISN Factor (dB) + Cable Loss (dB).
 2: Over Limit (dB) = Level (dBUV) – Limit Line (dBUV).

Modulation	VHT20	Test Freq. (MHz)	5785
Power Phase	Neutral		



	Freq	Level	Limit	Over	Read	LISN	cable	
	MHz	dBuV	Line	Limit	Level	factor	loss	Remark
			dBuV	dB	dBuV	dB	dB	
1	0.189	38.08	54.06	-15.98	28.37	9.65	0.06	Average
2	0.189	50.38	64.06	-13.68	40.67	9.65	0.06	QP
3	0.336	29.92	49.31	-19.39	20.20	9.65	0.07	Average
4	0.336	44.22	59.31	-15.09	34.50	9.65	0.07	QP
5	0.830	28.94	46.00	-17.06	19.18	9.65	0.11	Average
6	0.830	37.82	56.00	-18.18	28.06	9.65	0.11	QP
7	4.746	30.25	46.00	-15.75	20.26	9.68	0.31	Average
8	4.746	39.92	56.00	-16.08	29.93	9.68	0.31	QP
9	7.728	39.99	50.00	-10.01	29.92	9.71	0.36	Average
10	7.728	46.74	60.00	-13.26	36.67	9.71	0.36	QP
11*	14.288	43.71	50.00	-6.29	33.35	9.79	0.57	Average
12	14.288	49.71	60.00	-10.29	39.35	9.79	0.57	QP

Note 1: Level (dBuV) = Read Level (dBuV) + LISN Factor (dB) + Cable Loss (dB).
 2: Over Limit (dB) = Level (dBuV) - Limit Line (dBuV).

4.2 Transmitter Radiated and Band Edge Emissions

4.2.1 Limit of Transmitter Radiated and Band Edge Emissions

Restricted Band Emissions Limit			
Frequency Range (MHz)	Field Strength (uV/m)	Field Strength (dBuV/m)	Measure Distance (m)
0.009~0.490	2400/F(kHz)	48.5 - 13.8	300
0.490~1.705	24000/F(kHz)	33.8 - 23	30
1.705~30.0	30	29	30
30~88	100	40	3
88~216	150	43.5	3
216~960	200	46	3
Above 960	500	54	3

Note 1:
Qusai-Peak value is measured for frequency below 1GHz except for 9~90 kHz, 110~490 kHz frequency band. Peak and average value are measured for frequency above 1GHz. The limit on average radio frequency emission is as above table. The limit on peak radio frequency emissions is 20 dB above the maximum permitted average emission limit

Note 2:
Measurements may be performed at a distance other than what is specified provided. When performing measurements at a distance other than that specified, the results shall be extrapolated to the specified distance using an extrapolation factor as below, Frequency at or above 30 MHz: 20 dB/decade Frequency below 30 MHz: 40 dB/decade.

4.2.2 Test Procedures

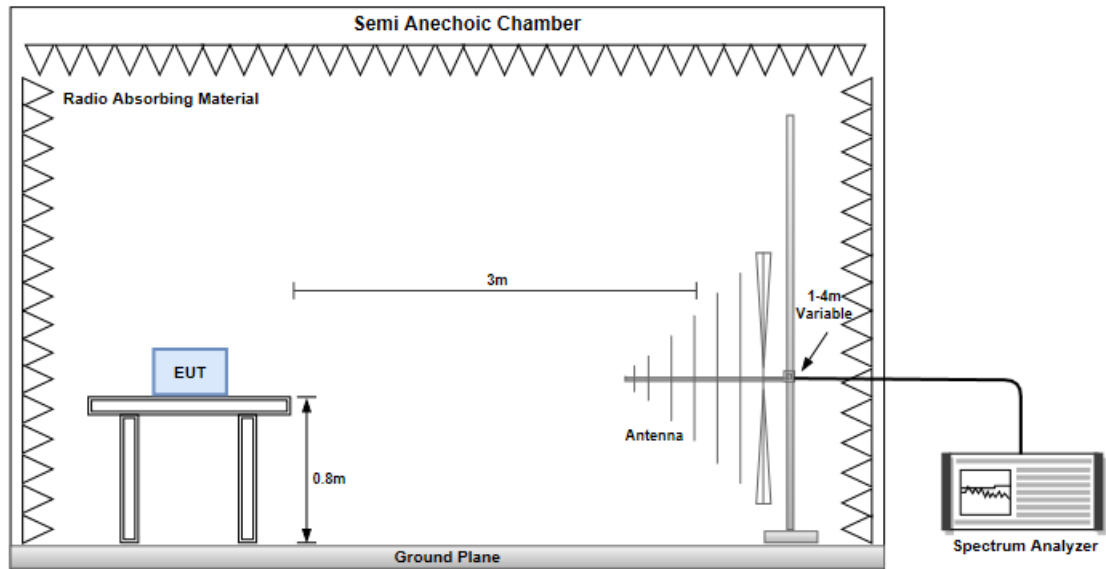
1. Measurement is made at a semi-anechoic chamber that incorporates a turntable allowing a EUT rotation of 360°. A continuously-rotating, remotely-controlled turntable is installed at the test site to support the EUT and facilitate determination of the direction of maximum radiation for each EUT emission frequency. The EUT is placed at test table. For emissions testing at or below 1 GHz, the table height is 80 cm above the reference ground plane.
2. Measurement is made with the antenna positioned in both the horizontal and vertical planes of polarization. The measurement antenna is varied in height (1m ~ 4m) above the reference ground plane to obtain the maximum signal strength. Distance between EUT and antenna is 3 m.
3. This investigation is performed with the EUT rotated 360°, the antenna height scanned between 1 m and 4 m, and the antenna rotated to repeat the measurements for both the horizontal and vertical antenna polarizations.

Note:

1. 120kHz measurement bandwidth of test receiver and Quasi-peak detector is for radiated emission below 1GHz.

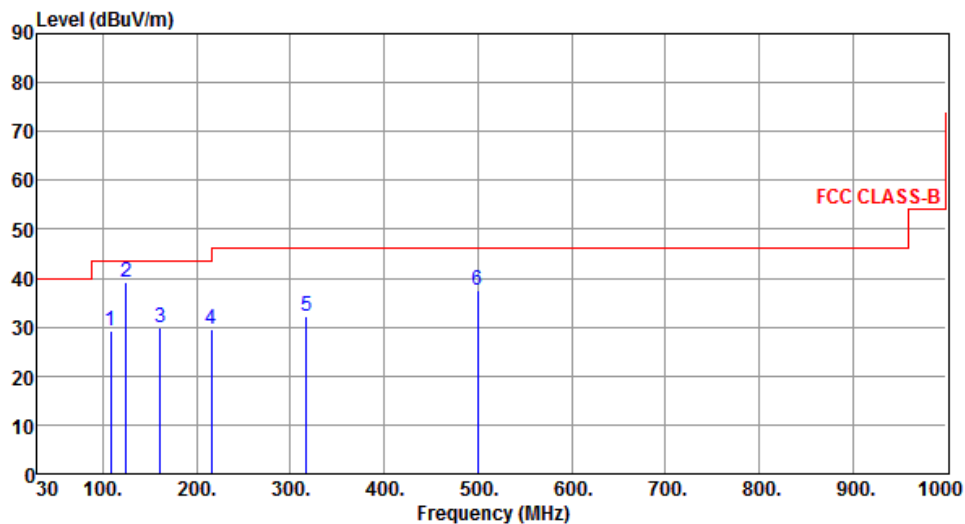
4.2.3 Test Setup

Radiated Emissions below 1 GHz



4.2.4 Transmitter Radiated Unwanted Emissions (Below 1GHz)

Modulation	11a	Test Freq. (MHz)	5240
Polarization	Horizontal	Test Configuration	1



	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	108.61	29.12	43.50	-14.38	40.80	-11.68	Peak	---	---
2	124.85	39.15	43.50	-4.35	49.34	-10.19	QP	157	109
3	160.90	29.88	43.50	-13.62	38.31	-8.43	Peak	---	---
4	215.54	29.48	43.50	-14.02	41.52	-12.04	Peak	---	---
5	317.15	32.19	46.00	-13.81	39.66	-7.47	Peak	---	---
6	499.48	37.66	46.00	-8.34	40.79	-3.13	Peak	---	---

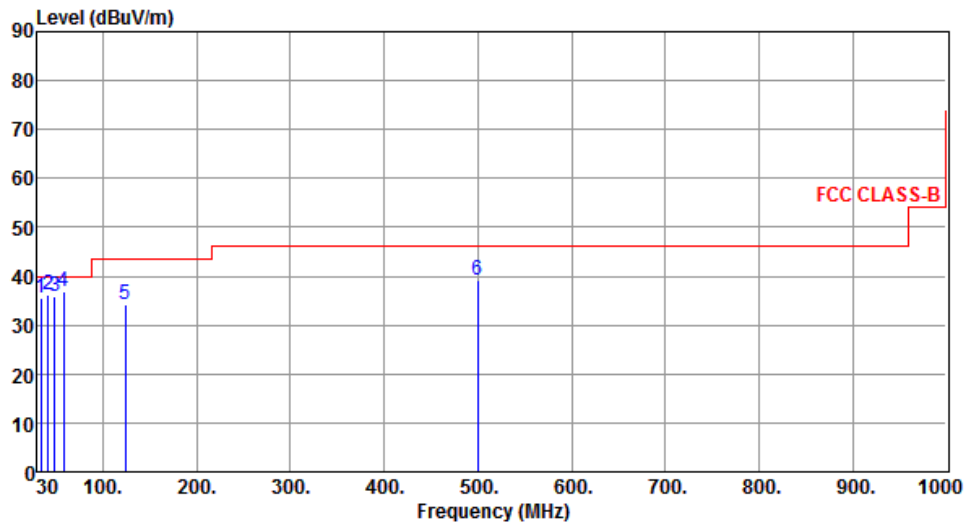
Note 1: Emission Level (dBuV/m) = SA Reading (dBuV/m) + Factor* (dB)

*Factor includes antenna factor , cable loss and amplifier gain

Note 2: Margin (dB) = Emission level (dBuV/m) – Limit (dBuV/m).

Note 3: All spurious emissions below 30MHz are more than 20 dB below the limit.

Modulation	11a	Test Freq. (MHz)	5240
Polarization	Vertical	Test Configuration	1



	Freq. MHz	Emission level dBUV/m	Limit dBUV/m	Margin dB	SA reading dBUV	Factor dB	Remark	ANT High cm	Turn Table deg
1	33.68	35.69	40.00	-4.31	45.20	-9.51	QP	100	165
2	41.65	36.29	40.00	-3.71	44.69	-8.40	QP	100	153
3	48.31	35.71	40.00	-4.29	44.08	-8.37	QP	100	277
4	58.26	36.84	40.00	-3.16	45.77	-8.93	Peak	---	---
5	124.12	34.36	43.50	-9.14	44.63	-10.27	Peak	---	---
6	499.51	39.18	46.00	-6.82	42.31	-3.13	Peak	---	---

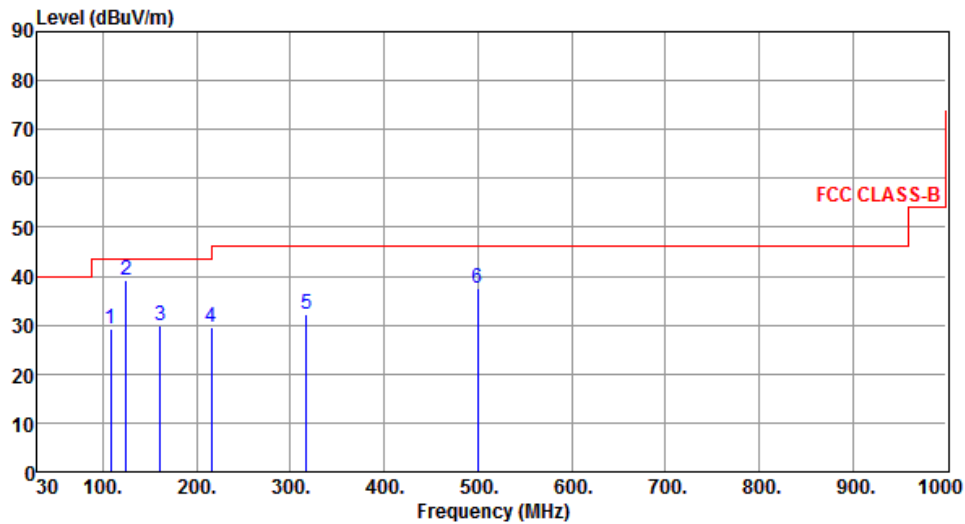
Note 1: Emission Level (dBUV/m) = SA Reading (dBUV/m) + Factor* (dB)

*Factor includes antenna factor , cable loss and amplifier gain

Note 2: Margin (dB) = Emission level (dBUV/m) – Limit (dBUV/m).

Note 3: All spurious emissions below 30MHz are more than 20 dB below the limit.

Modulation	VHT20	Test Freq. (MHz)	5785
Polarization	Horizontal	Test Configuration	1



	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	108.61	29.15	43.50	-14.35	40.83	-11.68	Peak	---	---
2	124.86	39.24	43.50	-4.26	49.43	-10.19	QP	161	110
3	160.81	29.87	43.50	-13.63	38.30	-8.43	Peak	---	---
4	215.31	29.48	43.50	-14.02	41.52	-12.04	Peak	---	---
5	317.13	32.18	46.00	-13.82	39.65	-7.47	Peak	---	---
6	499.51	37.68	46.00	-8.32	40.81	-3.13	Peak	---	---

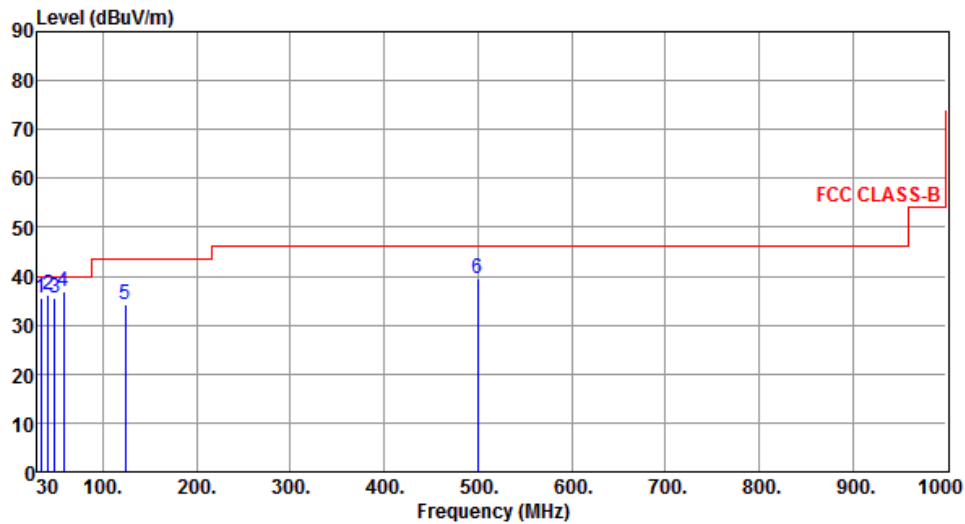
Note 1: Emission Level (dBuV/m) = SA Reading (dBuV/m) + Factor* (dB)

*Factor includes antenna factor , cable loss and amplifier gain

Note 2: Margin (dB) = Emission level (dBuV/m) – Limit (dBuV/m).

Note 3: All spurious emissions below 30MHz are more than 20 dB below the limit.

Modulation	VHT20	Test Freq. (MHz)	5785
Polarization	Vertical	Test Configuration	1



	Freq. MHz	Emission level dBUV/m	Limit dBUV/m	Margin dB	SA reading dBUV	Factor dB	Remark	ANT High cm	Turn Table deg
1	33.66	35.69	40.00	-4.31	45.19	-9.50	QP	100	167
2	41.68	36.34	40.00	-3.66	44.73	-8.39	QP	100	154
3	48.31	35.58	40.00	-4.42	43.95	-8.37	QP	100	282
4	58.26	36.81	40.00	-3.19	45.74	-8.93	Peak	---	---
5	124.12	34.31	43.50	-9.19	44.58	-10.27	Peak	---	---
6	499.51	39.37	46.00	-6.63	42.50	-3.13	Peak	---	---

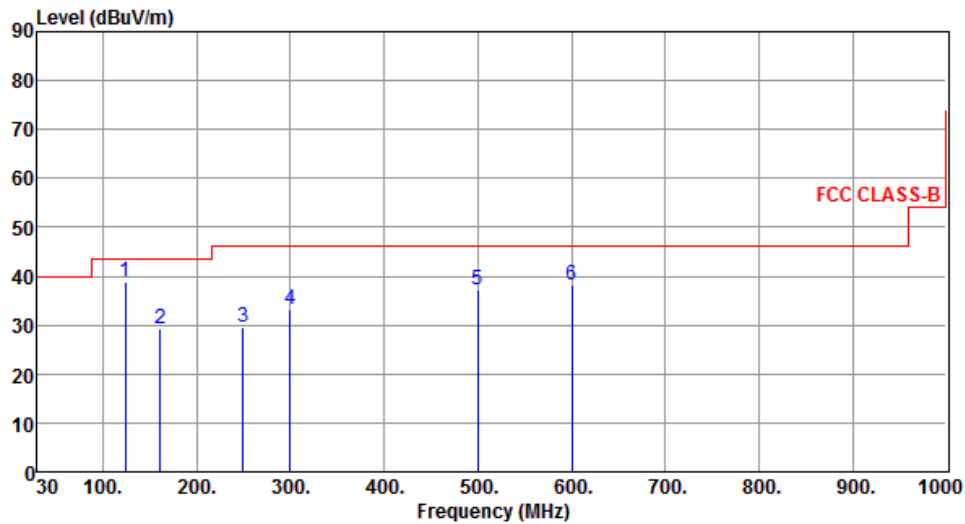
Note 1: Emission Level (dBUV/m) = SA Reading (dBUV/m) + Factor* (dB)

*Factor includes antenna factor , cable loss and amplifier gain

Note 2: Margin (dB) = Emission level (dBUV/m) – Limit (dBUV/m).

Note 3: All spurious emissions below 30MHz are more than 20 dB below the limit.

Modulation	11a	Test Freq. (MHz)	5240
Polarization	Horizontal	Test Configuration	2



	Freq. MHz	Emission level dBUV/m	Limit dBUV/m	Margin dB	SA reading dBUV	Factor dB	Remark	ANT High cm	Turn Table deg
1	124.11	38.81	43.50	-4.69	49.08	-10.27	QP	146	125
2	160.81	29.18	43.50	-14.32	37.61	-8.43	Peak	---	---
3	249.31	29.61	46.00	-16.39	39.57	-9.96	Peak	---	---
4	299.51	33.25	46.00	-12.75	41.35	-8.10	Peak	---	---
5	499.51	37.36	46.00	-8.64	40.49	-3.13	Peak	---	---
6	600.36	38.21	46.00	-7.79	39.17	-0.96	Peak	---	---

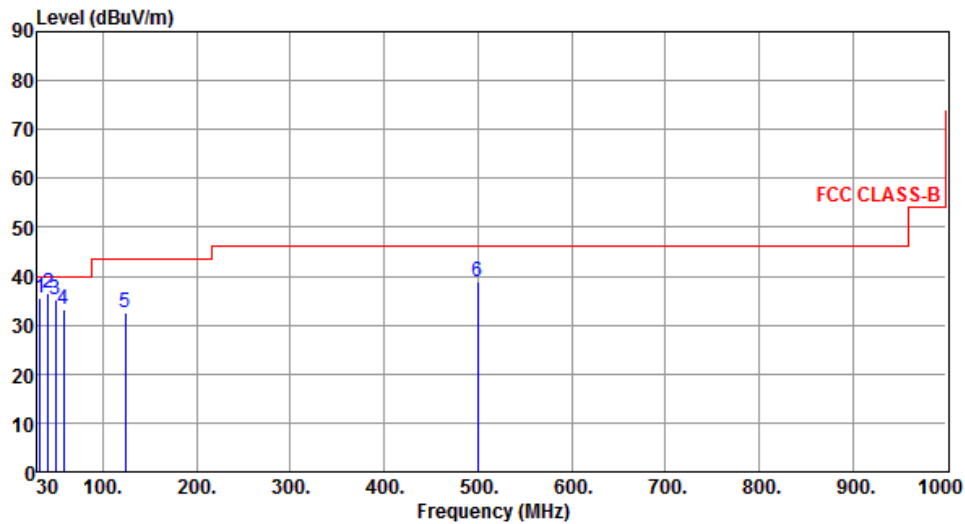
Note 1: Emission Level (dBUV/m) = SA Reading (dBUV/m) + Factor* (dB)

*Factor includes antenna factor , cable loss and amplifier gain

Note 2: Margin (dB) = Emission level (dBUV/m) – Limit (dBUV/m).

Note 3: All spurious emissions below 30MHz are more than 20 dB below the limit.

Modulation	11a	Test Freq. (MHz)	5240
Polarization	Vertical	Test Configuration	2



	Freq. MHz	Emission level dBUV/m	Limit dBUV/m	Margin dB	SA reading dBUV	Factor dB	Remark	ANT High cm	Turn Table deg
1	32.77	35.69	40.00	-4.31	45.14	-9.45	QP	100	176
2	41.61	36.48	40.00	-3.52	44.89	-8.41	QP	100	156
3	49.21	35.28	40.00	-4.72	43.59	-8.31	QP	100	276
4	58.12	33.16	40.00	-6.84	42.07	-8.91	Peak	---	---
5	124.18	32.41	43.50	-11.09	42.67	-10.26	Peak	---	---
6	499.51	38.87	46.00	-7.13	42.00	-3.13	Peak	---	---

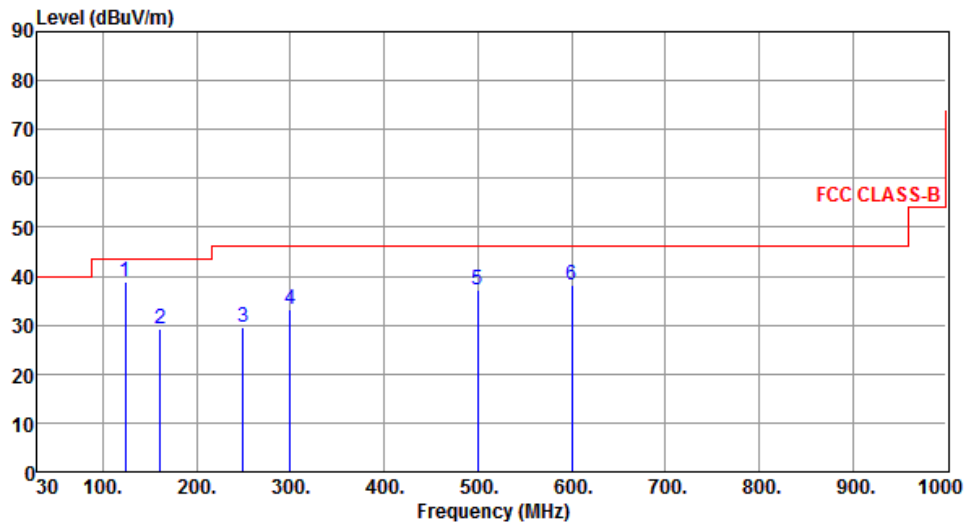
Note 1: Emission Level (dBUV/m) = SA Reading (dBUV/m) + Factor* (dB)

*Factor includes antenna factor , cable loss and amplifier gain

Note 2: Margin (dB) = Emission level (dBUV/m) – Limit (dBUV/m).

Note 3: All spurious emissions below 30MHz are more than 20 dB below the limit.

Modulation	VHT20	Test Freq. (MHz)	5785
Polarization	Horizontal	Test Configuration	2



	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	124.19	38.85	43.50	-4.65	49.11	-10.26	QP	146	124
2	160.81	29.17	43.50	-14.33	37.60	-8.43	Peak	---	---
3	249.22	29.45	46.00	-16.55	39.41	-9.96	Peak	---	---
4	299.57	33.26	46.00	-12.74	41.36	-8.10	Peak	---	---
5	499.51	37.21	46.00	-8.79	40.34	-3.13	Peak	---	---
6	600.42	38.29	46.00	-7.71	39.25	-0.96	Peak	---	---

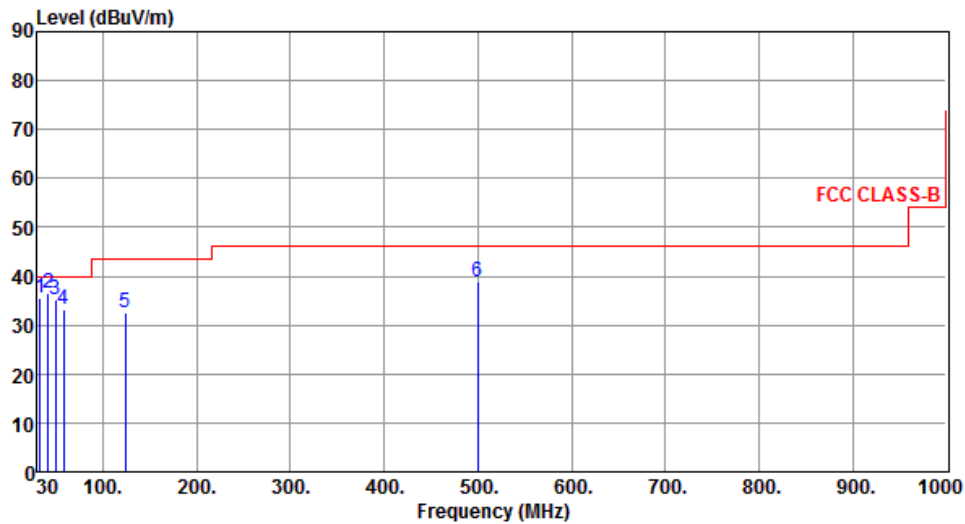
Note 1: Emission Level (dBuV/m) = SA Reading (dBuV/m) + Factor* (dB)

*Factor includes antenna factor , cable loss and amplifier gain

Note 2: Margin (dB) = Emission level (dBuV/m) – Limit (dBuV/m).

Note 3: All spurious emissions below 30MHz are more than 20 dB below the limit.

Modulation	VHT20	Test Freq. (MHz)	5785
Polarization	Vertical	Test Configuration	2



	Freq. MHz	Emission level dBUV/m	Limit dBUV/m	Margin dB	SA reading dBUV	Factor dB	Remark	ANT High cm	Turn Table deg
1	32.74	35.69	40.00	-4.31	45.15	-9.46	QP	100	176
2	41.61	36.48	40.00	-3.52	44.89	-8.41	QP	100	157
3	49.28	35.21	40.00	-4.79	43.53	-8.32	QP	100	279
4	58.22	33.29	40.00	-6.71	42.21	-8.92	Peak	---	---
5	124.09	32.48	43.50	-11.02	42.75	-10.27	Peak	---	---
6	499.48	38.96	46.00	-7.04	42.09	-3.13	Peak	---	---

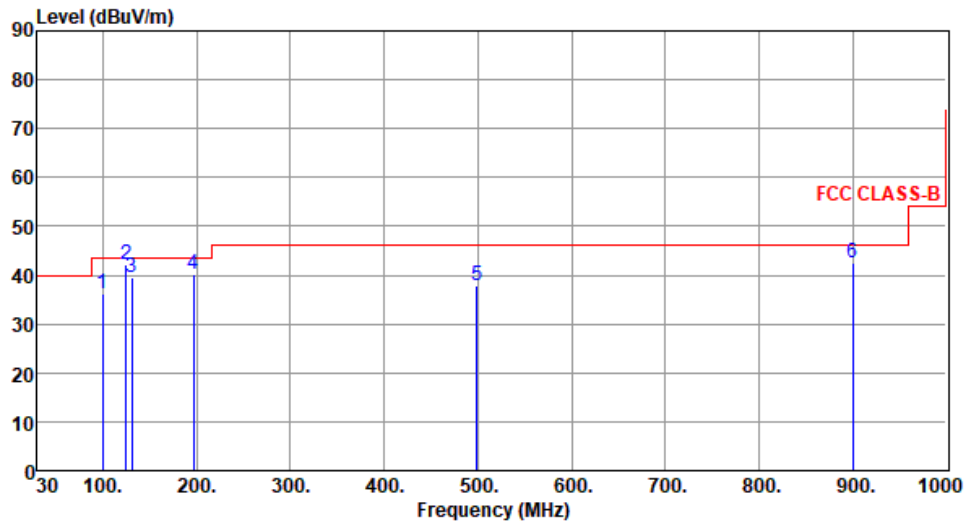
Note 1: Emission Level (dBUV/m) = SA Reading (dBUV/m) + Factor* (dB)

*Factor includes antenna factor , cable loss and amplifier gain

Note 2: Margin (dB) = Emission level (dBUV/m) – Limit (dBUV/m).

Note 3: All spurious emissions below 30MHz are more than 20 dB below the limit.

Modulation	11a	Test Freq. (MHz)	5240
Polarization	Horizontal	Test Configuration	3



	Freq. MHz	Emission level dBUV/m	Limit dBUV/m	Margin dB	SA reading dBUV	Factor dB	Remark	ANT High cm	Turn Table deg
1	99.55	36.32	43.50	-7.18	49.43	-13.11	Peak	---	---
2	125.00	42.19	43.50	-1.31	52.37	-10.18	QP	130	100
3	130.55	39.37	43.50	-4.13	48.98	-9.61	Peak	---	---
4	196.58	40.02	43.50	-3.48	51.81	-11.79	QP	100	165
5	499.25	37.77	46.00	-8.23	40.90	-3.13	Peak	---	---
6	900.11	42.41	46.00	-3.59	38.33	4.08	Peak	---	---

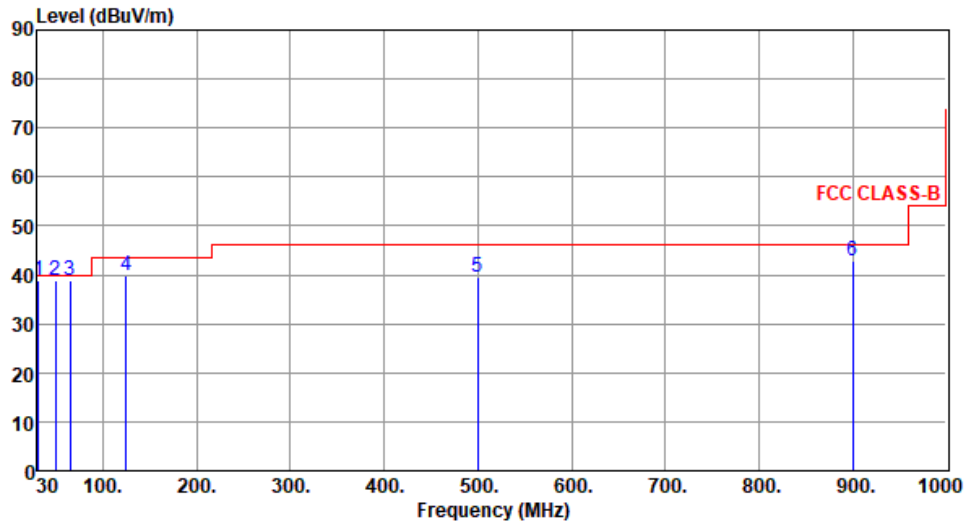
Note 1: Emission Level (dBUV/m) = SA Reading (dBUV/m) + Factor* (dB)

*Factor includes antenna factor , cable loss and amplifier gain

Note 2: Margin (dB) = Emission level (dBUV/m) – Limit (dBUV/m).

Note 3: All spurious emissions below 30MHz are more than 20 dB below the limit.

Modulation	11a	Test Freq. (MHz)	5240
Polarization	Vertical	Test Configuration	3



	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	30.88	38.88	40.00	-1.12	48.49	-9.61	QP	100	166
2	49.55	38.74	40.00	-1.26	47.09	-8.35	QP	100	187
3	64.85	38.75	40.00	-1.25	48.28	-9.53	QP	100	198
4	124.55	40.00	43.50	-3.50	50.23	-10.23	Peak	---	---
5	499.85	39.52	46.00	-6.48	42.65	-3.13	Peak	---	---
6	900.00	42.88	46.00	-3.12	38.80	4.08	Peak	---	---

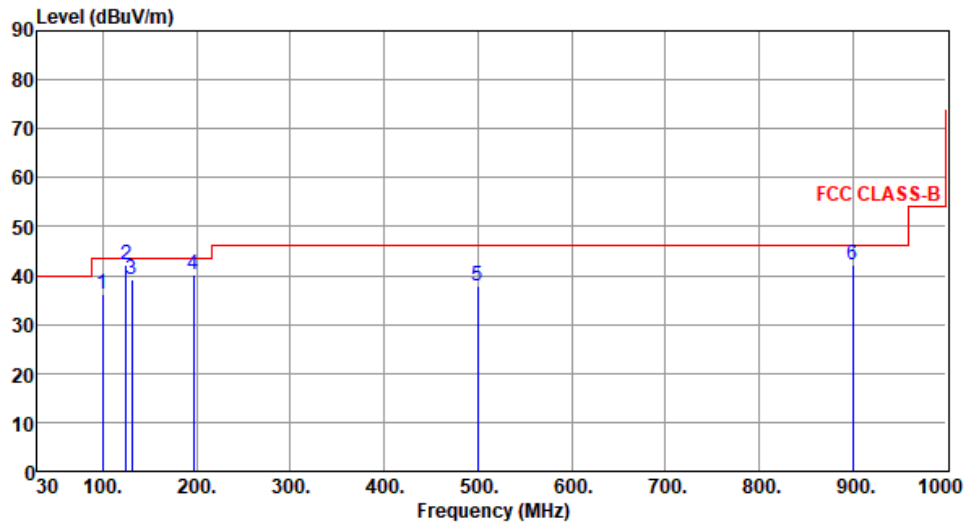
Note 1: Emission Level (dBuV/m) = SA Reading (dBuV/m) + Factor* (dB)

*Factor includes antenna factor , cable loss and amplifier gain

Note 2: Margin (dB) = Emission level (dBuV/m) – Limit (dBuV/m).

Note 3: All spurious emissions below 30MHz are more than 20 dB below the limit.

Modulation	VHT20	Test Freq. (MHz)	5785
Polarization	Horizontal	Test Configuration	3



	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	99.66	36.25	43.50	-7.25	49.34	-13.09	Peak	---	---
2	125.00	42.11	43.50	-1.39	52.29	-10.18	QP	133	101
3	130.52	39.27	43.50	-4.23	48.89	-9.62	Peak	---	---
4	196.77	40.02	43.50	-3.48	51.81	-11.79	QP	100	160
5	499.48	37.86	46.00	-8.14	40.99	-3.13	Peak	---	---
6	900.23	42.25	46.00	-3.75	38.17	4.08	Peak	---	---

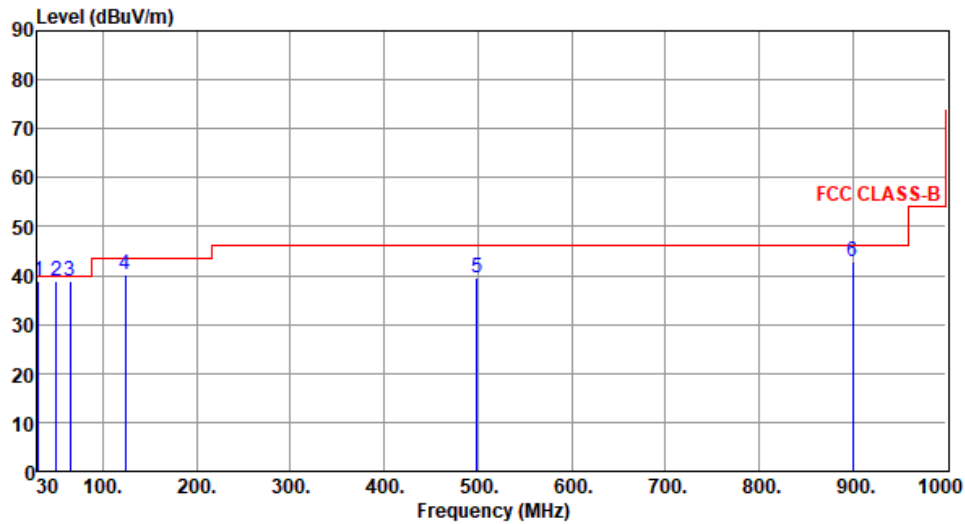
Note 1: Emission Level (dBuV/m) = SA Reading (dBuV/m) + Factor* (dB)

*Factor includes antenna factor , cable loss and amplifier gain

Note 2: Margin (dB) = Emission level (dBuV/m) – Limit (dBuV/m).

Note 3: All spurious emissions below 30MHz are more than 20 dB below the limit.

Modulation	VHT20	Test Freq. (MHz)	5785
Polarization	Vertical	Test Configuration	3



	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	30.88	38.74	40.00	-1.26	48.35	-9.61	QP	100	167
2	49.85	38.71	40.00	-1.29	47.09	-8.38	QP	100	193
3	64.85	38.71	40.00	-1.29	48.24	-9.53	QP	100	192
4	124.23	40.11	43.50	-3.39	50.37	-10.26	Peak	---	---
5	499.32	39.65	46.00	-6.35	42.78	-3.13	Peak	---	---
6	899.85	42.85	46.00	-3.15	38.77	4.08	Peak	---	---

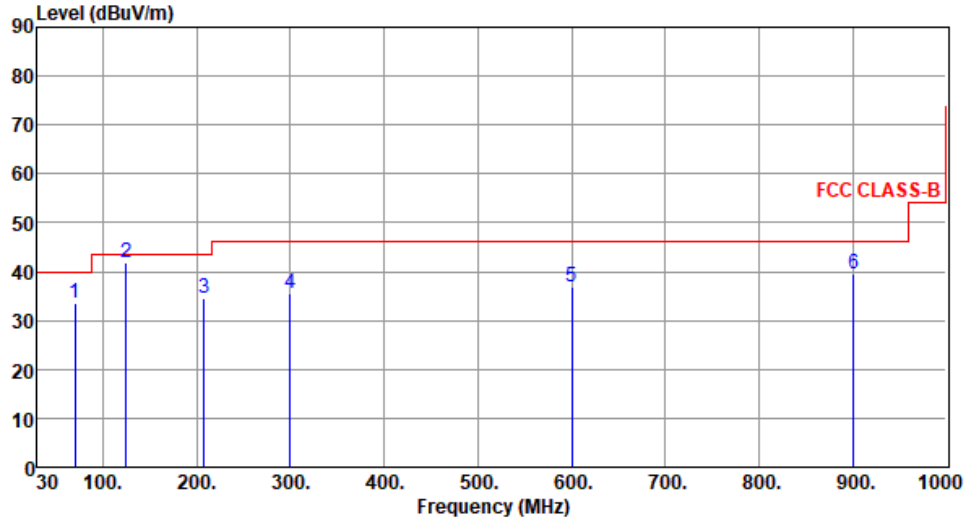
Note 1: Emission Level (dBuV/m) = SA Reading (dBuV/m) + Factor* (dB)

*Factor includes antenna factor , cable loss and amplifier gain

Note 2: Margin (dB) = Emission level (dBuV/m) – Limit (dBuV/m).

Note 3: All spurious emissions below 30MHz are more than 20 dB below the limit.

Modulation	11a	Test Freq. (MHz)	5240
Polarization	Horizontal	Test Configuration	4



	Freq. MHz	Emission level dBUV/m	Limit dBUV/m	Margin dB	SA reading dBUV	Factor dB	Remark	ANT High cm	Turn Table deg
1	70.55	33.66	40.00	-6.34	44.36	-10.70	Peak	---	---
2	124.88	42.00	43.50	-1.50	52.19	-10.19	QP	155	132
3	207.88	34.52	43.50	-8.98	46.59	-12.07	Peak	---	---
4	299.35	35.55	46.00	-10.45	43.65	-8.10	Peak	---	---
5	600.25	37.00	46.00	-9.00	37.97	-0.97	Peak	---	---
6	900.63	39.44	46.00	-6.56	35.35	4.09	Peak	---	---

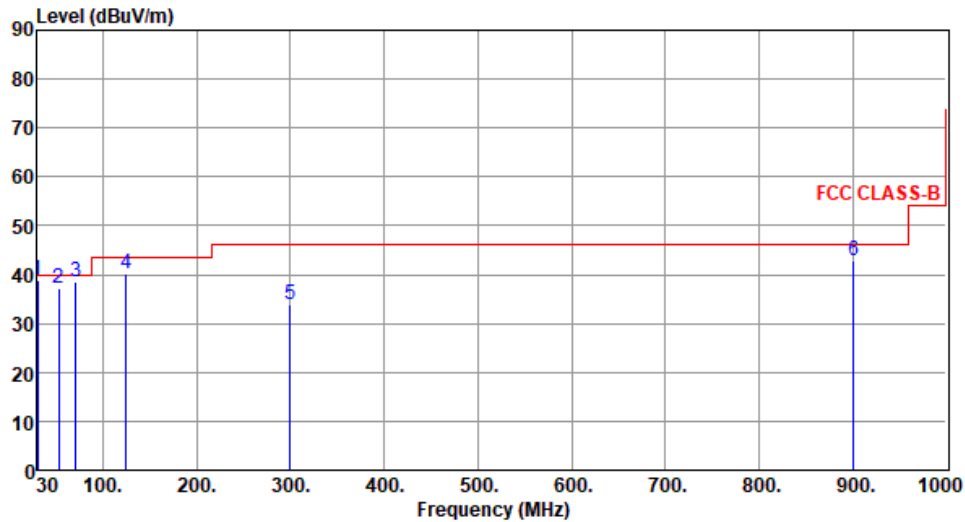
Note 1: Emission Level (dBUV/m) = SA Reading (dBUV/m) + Factor* (dB)

*Factor includes antenna factor , cable loss and amplifier gain

Note 2: Margin (dB) = Emission level (dBUV/m) – Limit (dBUV/m).

Note 3: All spurious emissions below 30MHz are more than 20 dB below the limit.

Modulation	11a	Test Freq. (MHz)	5240
Polarization	Vertical	Test Configuration	4



	Freq. MHz	Emission level dBUV/m	Limit dBUV/m	Margin dB	SA reading dBUV	Factor dB	Remark	ANT High cm	Turn Table deg
1	30.22	38.77	40.00	-1.23	48.46	-9.69	QP	100	162
2	53.25	37.20	40.00	-2.80	45.62	-8.42	QP	100	180
3	71.25	38.66	40.00	-1.34	49.43	-10.77	QP	100	141
4	124.85	40.20	43.50	-3.30	50.39	-10.19	QP	100	196
5	299.55	34.02	46.00	-11.98	42.12	-8.10	Peak	---	---
6	900.52	42.71	46.00	-3.29	38.62	4.09	Peak	---	---

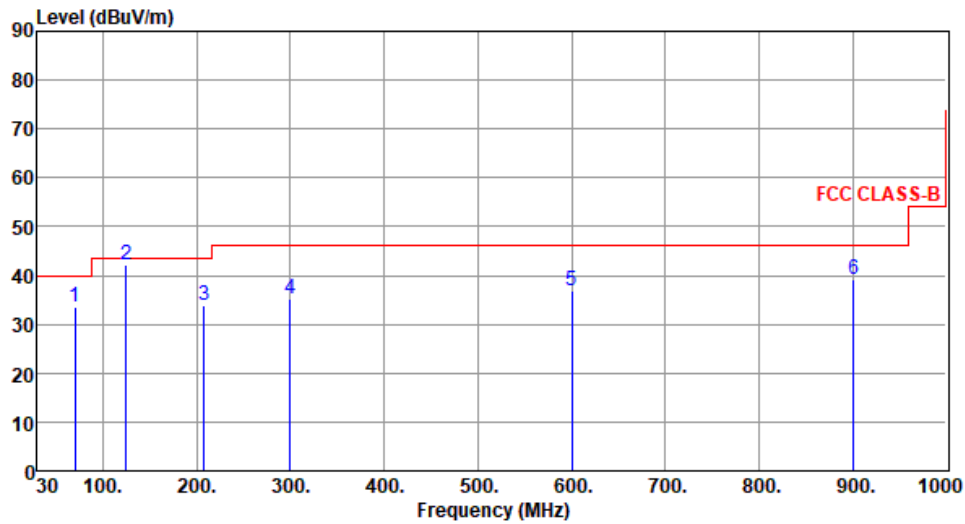
Note 1: Emission Level (dBUV/m) = SA Reading (dBUV/m) + Factor* (dB)

*Factor includes antenna factor , cable loss and amplifier gain

Note 2: Margin (dB) = Emission level (dBUV/m) – Limit (dBUV/m).

Note 3: All spurious emissions below 30MHz are more than 20 dB below the limit.

Modulation	VHT20	Test Freq. (MHz)	5785
Polarization	Horizontal	Test Configuration	4



	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	70.26	33.65	40.00	-6.35	44.33	-10.68	Peak	---	---
2	124.36	42.02	43.50	-1.48	52.26	-10.24	QP	155	132
3	207.90	33.99	43.50	-9.51	46.06	-12.07	Peak	---	---
4	299.63	35.26	46.00	-10.74	43.36	-8.10	Peak	---	---
5	600.11	36.88	46.00	-9.12	37.85	-0.97	Peak	---	---
6	900.55	39.22	46.00	-6.78	35.13	4.09	Peak	---	---

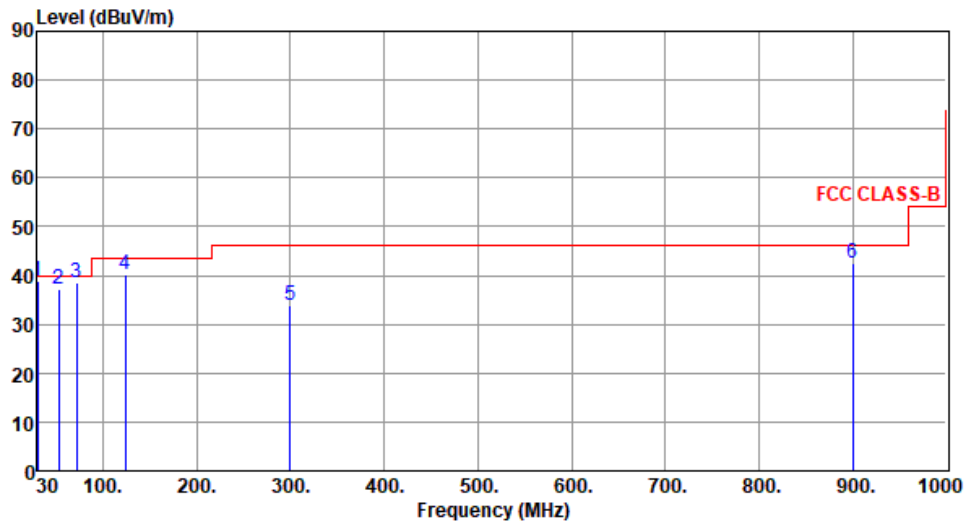
Note 1: Emission Level (dBuV/m) = SA Reading (dBuV/m) + Factor* (dB)

*Factor includes antenna factor , cable loss and amplifier gain

Note 2: Margin (dB) = Emission level (dBuV/m) – Limit (dBuV/m).

Note 3: All spurious emissions below 30MHz are more than 20 dB below the limit.

Modulation	VHT20	Test Freq. (MHz)	5785
Polarization	Vertical	Test Configuration	4



	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	30.22	38.77	40.00	-1.23	48.46	-9.69	QP	100	159
2	53.05	37.22	40.00	-2.78	45.61	-8.39	QP	100	171
3	71.66	38.55	40.00	-1.45	49.36	-10.81	QP	100	150
4	124.22	40.25	43.50	-3.25	50.51	-10.26	QP	100	196
5	299.66	34.02	46.00	-11.98	42.12	-8.10	Peak	---	---
6	900.25	42.65	46.00	-3.35	38.57	4.08	Peak	---	---

Note 1: Emission Level (dBuV/m) = SA Reading (dBuV/m) + Factor* (dB)

*Factor includes antenna factor , cable loss and amplifier gain

Note 2: Margin (dB) = Emission level (dBuV/m) – Limit (dBuV/m).

Note 3: All spurious emissions below 30MHz are more than 20 dB below the limit.

5 Test laboratory information

Established in 2012, ICC provides foremost EMC & RF Testing and advisory consultation services by our skilled engineers and technicians. Our services employ a wide variety of advanced edge test equipment and one of the widest certification extents in the business.

International Certification Corp (EMC and Wireless Communication Laboratory), it is our definitive objective is to institute long term, trust-based associations with our clients. The expectation we set up with our clients is based on outstanding service, practical expertise and devotion to a certified value structure. Our passion is to grant our clients with best EMC / RF services by oriented knowledgeable and accommodating staff.

Our Test sites are located at Linkou District and Kwei Shan District. Location map can be found on our website <http://www.icertifi.com.tw>.

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If you have any suggestion, please feel free to contact us as below information.

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