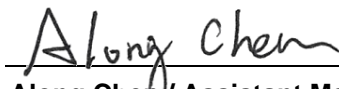


FCC Test Report

FCC ID : 2AAS9-MO10
Equipment : Wi-Fi 6 AX6600 Tri-Radio Outdoor Mesh Router
Model No. : MO10
Brand Name : PRISM
Applicant : Browan Communications Incorporation
Address : No.15-1, Zhonghua Rd., Hsinchu Industrial Park,
Hukou Hsinchu Hsien Taiwan 303
Standard : 47 CFR FCC Part 15.407
Received Date : Oct. 12, 2021
Tested Date : Oct. 18 ~ Nov. 23, 2021

We, International Certification Corporation, 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
FR1O1201AN	Rev. 01	Initial issue	Dec. 16, 2021

Summary of Test Results

FCC Rules	Test Items	Measured	Result
15.207	Conducted Emissions	[dBuV]: 0.474MHz 34.89 (Margin -11.56dB) - AV	Pass
15.407(b) 15.209	Radiated Emissions	[dBuV/m at 3m]: 5925.00MHz 67.02 (Margin -1.18dB) - PK	Pass
15.407(a)	Emission Bandwidth	Meet the requirement of limit	Pass
15.407(e)	6dB bandwidth	Meet the requirement of limit	Pass
15.407(a)	RF Output Power	Max Power [dBm]: 5150~5250MHz: 16.14 5725~5850MHz: 28.62	Pass
15.407(a)	Peak Power Spectral Density	Meet the requirement of limit	Pass
15.407(g)	Frequency Stability	Meet the requirement of limit	Pass
15.203	Antenna Requirement	Meet the requirement of limit	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 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 5725-5850	a	5180-5240 5745-5825	36-48 [4] 149-165 [5]	2 4	6-54 Mbps
5150-5250 5725-5850	n (HT20)	5180-5240 5745-5825	36-48 [4] 149-165 [5]	2 4	MCS 0-15 MCS 0-31
5150-5250 5725-5850	n (HT40)	5190-5230 5755-5795	38-46 [2] 151-159 [2]	2 4	MCS 0-15 MCS 0-31
5150-5250 5725-5850	ac (VHT20)	5180-5240 5745-5825	36-48 [4] 149-165 [5]	2 4	MCS 0-9
5150-5250 5725-5850	ac (VHT40)	5190-5230 5755-5795	38-46 [2] 151-159 [2]	2 4	MCS 0-9
5150-5250 5725-5850	ac (VHT80)	5210 5775	42 [1] 155 [1]	2 4	MCS 0-9
5150-5250 5725-5850	ax (HE20)	5180-5240 5745-5825	36-48 [4] 149-165 [5]	2 4	MCS 0-11
5150-5250 5725-5850	ax (HE40)	5190-5230 5755-5795	38-46 [2] 151-159 [2]	2 4	MCS 0-11
5150-5250 5725-5850	ax (HE80)	5210 5775	42 [1] 155 [1]	2 4	MCS 0-11

Note: OFDM/OFDMA- BPSK, QPSK, 16QAM, 64QAM, 256QAM and 1024QAM modulation.

1.1.2 Antenna Details

Ant. No.	Model	Type	Connector	Operating Frequencies (MHz) / Antenna Gain (dBi)		
				2400~2483.5	5150~5250	5725~5850
1	ANT3	Dipole	N type	5.6	4.3	--
2	ANT1	Dipole	N type	7.4	5.3	--
3	ANT6	Dipole	N type	--	--	4.9
4	ANT2	Dipole	N type	--	--	6.8
5	ANT5	Dipole	N type	--	--	4.8
6	ANT4	Dipole	N type	--	--	6.3

1.1.3 Radio Details

Radio	Function
1	5.15 GHz ~ 5.35 GHz, 2T2R
2	5.725 GHz ~ 5.85 GHz, 4T4R
3	2.4 GHz, 2T2R

1.1.4 Power Supply Type of Equipment under Test (EUT)

Power Supply Type	56Vdc from POE I/P: 100-240V~ 1.5A, 50-60Hz O/P: 56V= 0.805A
--------------------------	--

Note: The above power supply is not bundled in market.

1.1.5 Accessories

Accessories		
No.	Equipment	Description
1	Core	Brand: King core Model: KCF-130-B
2	Toolkit	--

1.1.6 Channel List

802.11a / n HT20 / ac VHT20 / ax HE20		802.11n HT40 / ac VHT40 / ax HE40	
Channel	Frequency(MHz)	Channel	Frequency(MHz)
36	5180	38	5190
40	5200	46	5230
44	5220	151	5755
48	5240	159	5795
149	5745	802.11ac VHT80 / ax HE80	
153	5765	42	5210
157	5785	155	5775
161	5805	-	-
165	5825	-	-

1.1.7 Test Tool and Duty Cycle

Test Tool	QPSR, V5.0-00199		
Duty Cycle and Duty Factor	Mode	Duty Cycle (%)	Duty Factor (dB)
	11a	93.01%	0.31
	ax (HE20) -OFDMA	97.41%	0.11
	ax (HE40) -OFDMA	97.41%	0.11
	ax (HE80) -OFDMA	73.28%	1.35

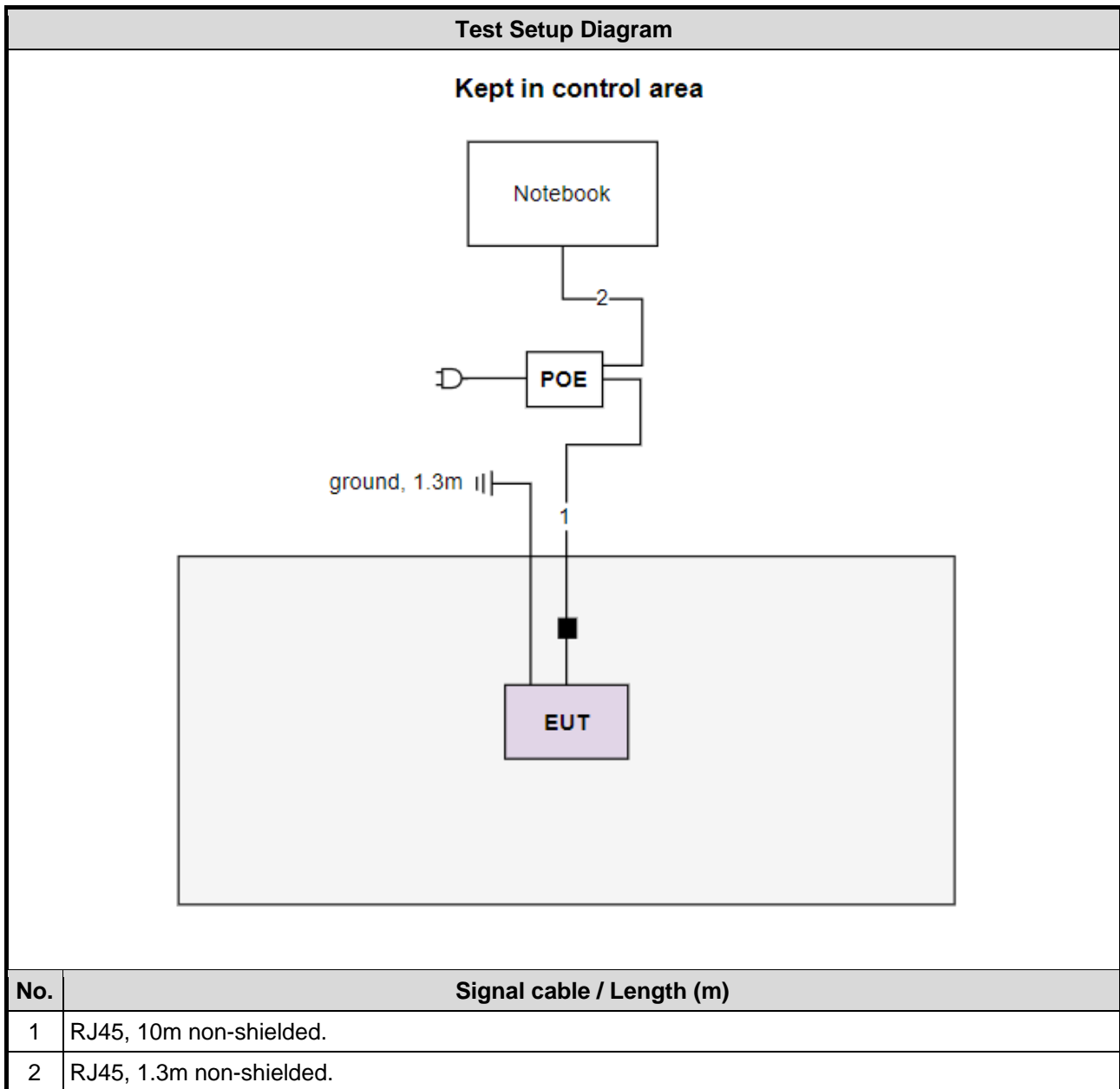
1.1.8 Power Index of Test Tool

Modulation Mode	Test Frequency (MHz)	Power Index
11a	5180	14.5
11a	5200	14.5
11a	5240	14
11a	5745	23
11a	5785	23
11a	5825	23
ax (HE20)-OFDMA	5180	14.5
ax (HE20)-OFDMA	5200	14.5
ax (HE20)-OFDMA	5240	14
ax (HE20)-OFDMA	5745	23
ax (HE20)-OFDMA	5785	23
ax (HE20)-OFDMA	5825	23
ax (HE40)-OFDMA	5190	14
ax (HE40)-OFDMA	5230	14
ax (HE40)-OFDMA	5755	23
ax (HE40)-OFDMA	5795	22.5
ax (HE80)-OFDMA	5210	14
ax (HE80)-OFDMA	5775	22

1.2 Local Support Equipment List

Support Equipment List					
No.	Equipment	Brand	Model	FCC ID	Remarks
1	Notebook	DELL	Latitude E5470	DoC	---
2	POE	DELTA	ADH-45AR B	---	Provided by applicant.

1.3 Test Setup Chart



1.4 The Equipment List

Test Item	Radiated Emission Below 1GHz				
Test Site	966 chamber1 / (03CH01-WS)				
Tested Date	Nov. 23, 2021				
Instrument	Brand	Model No.	Serial No.	Calibration Date	Calibration Until
Receiver	R&S	ESR3	101657	Mar. 12, 2021	Mar. 11, 2022
Loop Antenna	R&S	HFH2-Z2	100330	Nov. 08, 2021	Nov. 07, 2022
Bilog Antenna	SCHWARZBECK	VULB9168	VULB9168-522	Jun. 30, 2021	Jun. 29, 2022
Preamplifier	EMC	EMC02325	980225	Jun. 29, 2021	Jun. 28, 2022
Loop Antenna Cable	KOAX KABEL	101354-BW	101354-BW	Oct. 05, 2021	Oct. 04, 2022
LF cable 3M	Woken	CFD400NL-LW	CFD400NL-001	Oct. 05, 2021	Oct. 04, 2022
LF cable 11M	EMC	EMCCFD400-NW-N W-11000	200801	Oct. 05, 2021	Oct. 04, 2022
LF cable 1M	EMC	EMCCFD400-NM-N M-1000	160502	Oct. 05, 2021	Oct. 04, 2022
Measurement Software	AUDIX	e3	6.120210g	NA	NA

Note: Calibration Interval of instruments listed above is one year.

Test Item	Radiated Emission Above 1GHz				
Test Site	966 chamber1 / (03CH01-WS)				
Tested Date	Oct. 18 ~ Oct. 22, 2021				
Instrument	Brand	Model No.	Serial No.	Calibration Date	Calibration Until
Spectrum Analyzer	R&S	FSV40	101498	Dec. 04, 2020	Dec. 03, 2021
Horn Antenna 1G-18G	SCHWARZBECK	BBHA 9120 D	BBHA 9120 D 1096	Dec. 11, 2020	Dec. 10, 2021
Horn Antenna 18G-40G	SCHWARZBECK	BBHA 9170	BBHA 9170508	Dec. 31, 2020	Dec. 30, 2021
Preamplifier	Agilent	83017A	MY39501308	Sep. 28, 2021	Sep. 27, 2022
Preamplifier	EMC	EMC184045B	980192	Jul. 14, 2021	Jul. 13, 2022
RF Cable	HUBER+SUHNER	SUCOFLEX104	MY16019/4	Oct. 05, 2021	Oct. 04, 2022
RF Cable	HUBER+SUHNER	SUCOFLEX104	MY16014/4	Oct. 05, 2021	Oct. 04, 2022
Measurement Software	AUDIX	e3	6.120210g	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	Nov. 23, 2021				
Instrument	Brand	Model No.	Serial No.	Calibration Date	Calibration Until
Receiver	R&S	ESR3	101658	Feb. 08, 2021	Feb. 07, 2022
LISN	R&S	ENV216	101579	Mar. 17, 2021	Mar. 16, 2022
LISN (Support Unit)	SCHWARZBECK	Schwarzbeck 8127	8127-666	Dec. 29, 2020	Dec. 28, 2021
RF Cable-CON	Woken	CFD200-NL	CFD200-NL-001	Oct. 19, 2021	Oct. 18, 2022
50 ohm terminal (Support Unit)	NA	50	04	May 25, 2021	May 24, 2022
Measurement Software	AUDIX	e3	6.120210k	NA	NA
Note: Calibration Interval of instruments listed above is one year.					

Test Item	RF Conducted				
Test Site	(TH01-WS)				
Tested Date	Nov. 12 ~ Nov. 15, 2021				
Instrument	Brand	Model No.	Serial No.	Calibration Date	Calibration Until
Spectrum Analyzer	R&S	FSV40	101498	Dec. 04, 2020	Dec. 03, 2021
Power Meter	Anritsu	ML2495A	1218007	Jan. 26, 2021	Jan. 25, 2022
Power Sensor	Anritsu	MA2411B	1207367	Jan. 26, 2021	Jan. 25, 2022
AC POWER SOURCE	APC	AFC-500W	F312060012	Dec. 04, 2020	Dec. 03, 2021
TEMP&HUMIDITY CHAMBER	GIANT FORCE	GCT-225-40-SP-SD	MAF1212-002	May 25, 2021	May 24, 2022
Measurement Software	Sporton	SENSE-15407_NII	V5.10	NA	NA
Note: Calibration Interval of instruments listed above is one year.					

1.5 Test Standards

47 CFR FCC Part 15.407

ANSI C63.10-2013

1.6 Reference Guidance

FCC KDB 412172 D01 Determining ERP and EIRP v01r01

FCC KDB 662911 D01 Multiple Transmitter Output v02r01

FCC KDB 789033 D02 General UNII Test Procedures New Rules v02r01

1.7 Deviation from Test Standard and Measurement Procedure

None

1.8 Measurement Uncertainty

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	±1×10 ⁻⁹
Power density	±0.583 dB
Conducted emission	±2.715 dB
AC conducted emission	±2.92 dB
Radiated emission ≤ 1GHz	±3.41 dB
Radiated emission > 1GHz	±4.59 dB
Time	±0.1%
Temperature	±0.4 °C

2 Test Configuration

2.1 Testing Facility

Test Laboratory	International Certification Corporation
Test Site	CO01-WS, 03CH01-WS, TH01-WS
Address of Test Site	No.3-1, Lane 6, Wen San 3rd St., Kwei Shan Dist., Tao Yuan City 33381, Taiwan (R.O.C.)

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

2.2 The Worst Test Modes and Channel Details

For Frequency band 5150-5250 MHz				
Test item	Modulation Mode	Test Frequency (MHz)	Data Rate	Test Configuration
Non-beamforming mode				
Conducted Emissions Radiated Emissions ≤1GHz	11a	5180	6 Mbps	---
RF Output Power Radiated Emissions >1GHz Emission Bandwidth Peak Power Spectral Density	11a ax (HE20)-OFDMA ax (HE40)-OFDMA ax (HE80)-OFDMA	5180 / 5200 / 5240 5180 / 5200 / 5240 5190 / 5230 5210	6 Mbps MCS 0 MCS 0 MCS 0	---
Frequency Stability	Un-modulation	5200	---	---
Beamforming mode				
RF Output Power	ax (HE20)-OFDMA ax (HE40)-OFDMA ax (HE80)-OFDMA	5180 / 5200 / 5240 5190 / 5230 5210	MCS 0 MCS 0 MCS 0	---
For Frequency band 5725-5850 MHz				
Test item	Modulation Mode	Test Frequency (MHz)	Data Rate	Test Configuration
Non-beamforming mode				
Conducted Emissions Radiated Emissions ≤1GHz	11a	5785	6 Mbps	---
Radiated Emissions >1GHz Emission Bandwidth 6dB bandwidth Peak Power Spectral Density	11a ax (HE20)-OFDMA ax (HE40)-OFDMA ax (HE80)-OFDMA	5745 / 5785 / 5825 5745 / 5785 / 5825 5755 / 5795 5775	6 Mbps MCS 0 MCS 0 MCS 0	---
Frequency Stability	Un-modulation	5785	---	---
Beamforming mode				
RF Output Power	ax (HE20)-OFDMA ax (HE40)-OFDMA ax (HE80)-OFDMA	5745 / 5785 / 5825 5755 / 5795 5775	MCS 0 MCS 0 MCS 0	---

3 Transmitter Test Results

3.1 Conducted Emissions

3.1.1 Limit of Conducted Emissions

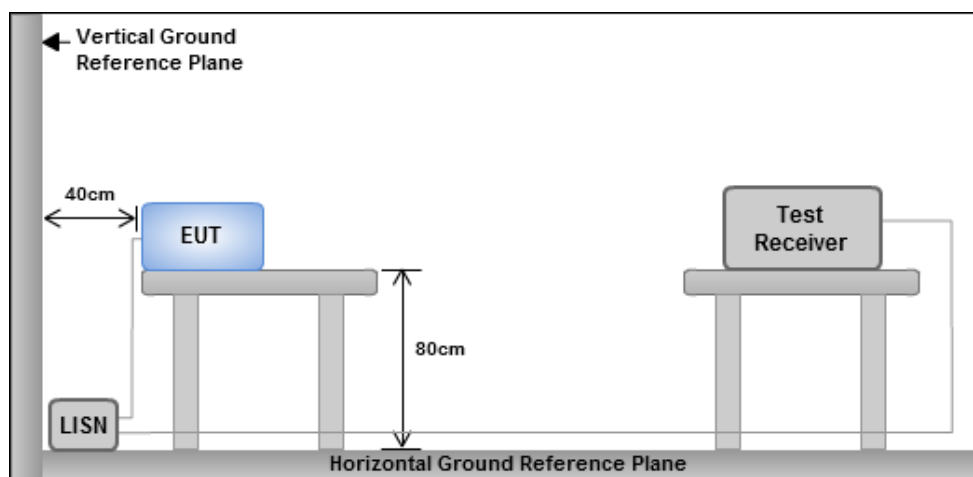
Conducted Emissions Limit		
Frequency Emission (MHz)	Quasi-Peak	Average
0.15-0.5	66 - 56 *	56 - 46 *
0.5-5	56	46
5-30	60	50

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

3.1.2 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

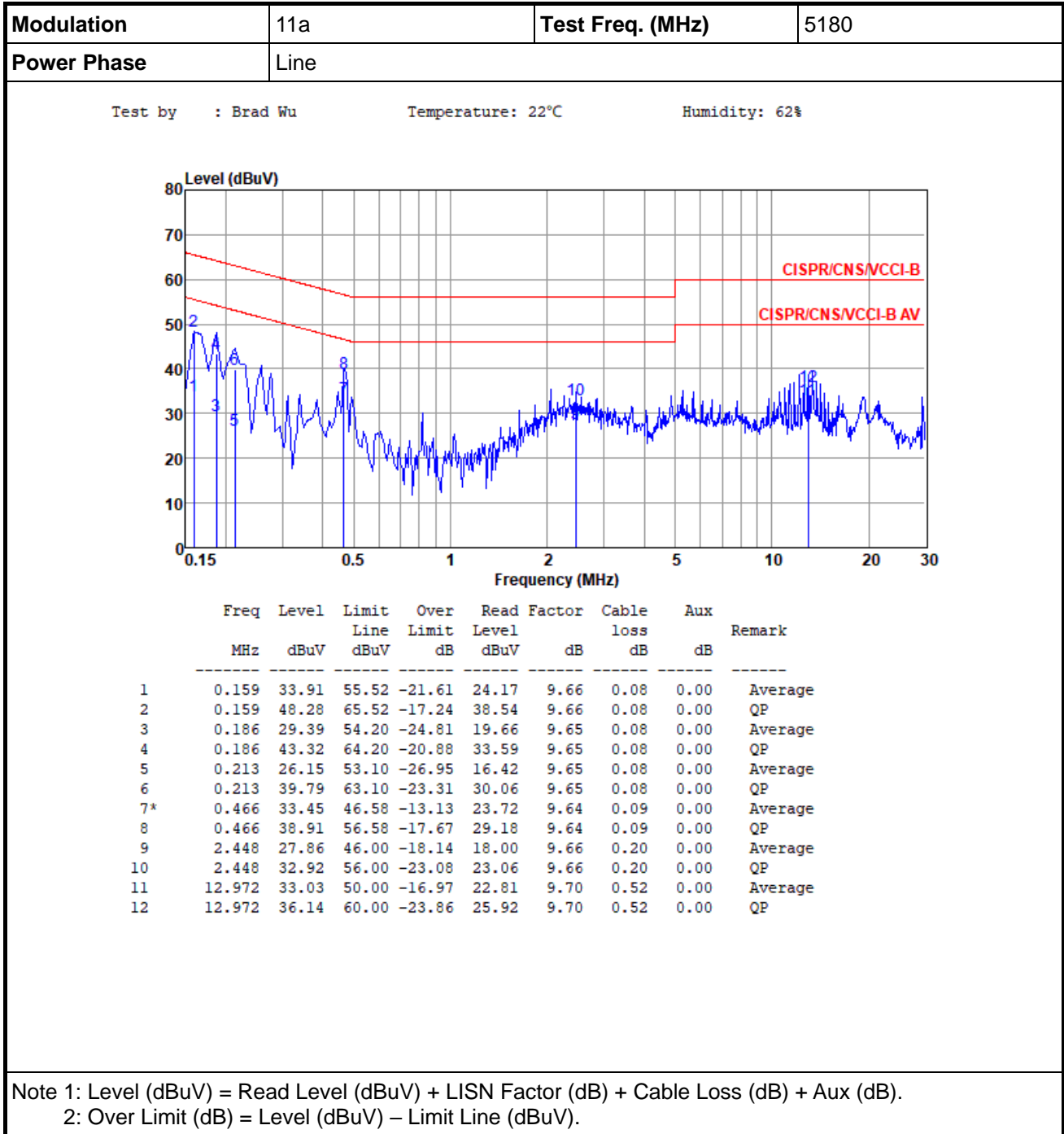
3.1.3 Test Setup



Note: 1. Support units were connected to second LISN.

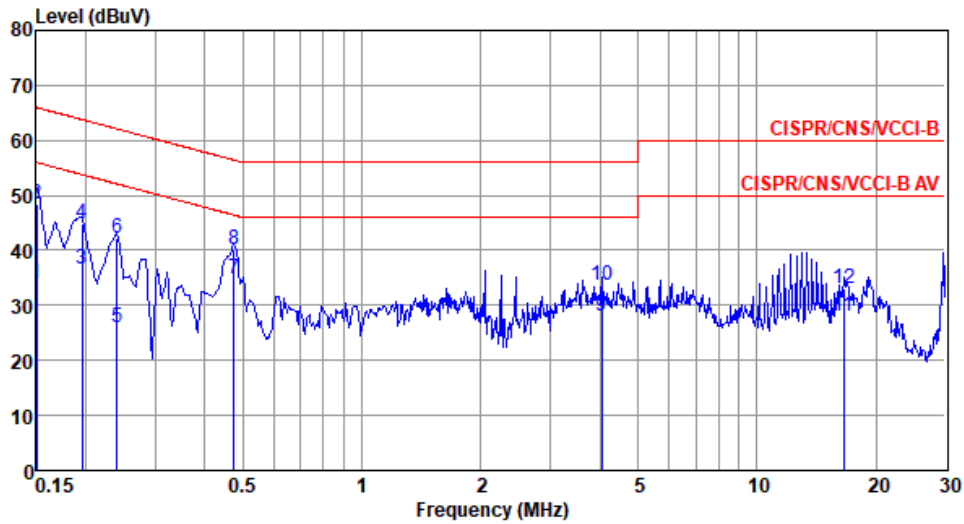
2. Both of LISNs (AMN) are 80 cm from EUT and at least 80 cm from other units and other metal planes

3.1.4 Test Result of Conducted Emissions



Modulation	11a	Test Freq. (MHz)	5180
Power Phase	Neutral		

Test by : Brad Wu Temperature: 22°C Humidity: 62%

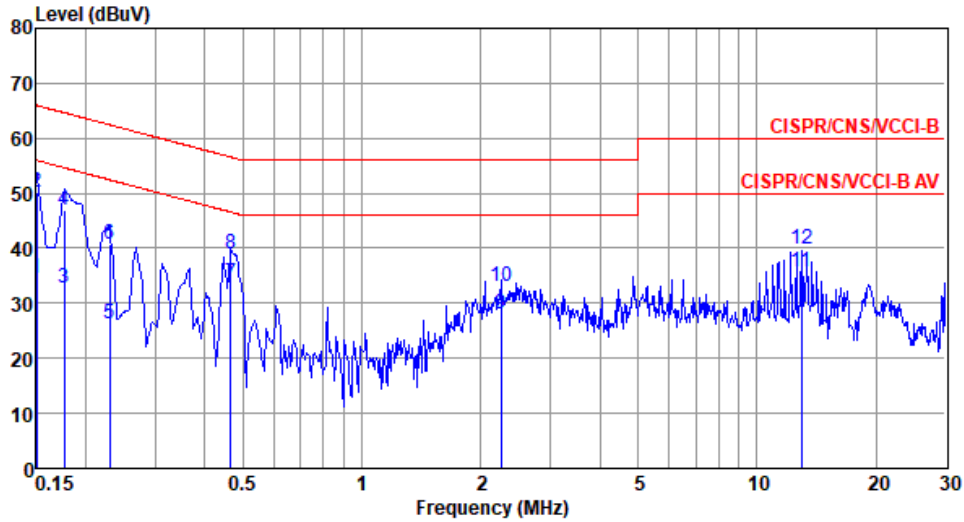


	Freq MHz	Level dBuV	Limit Line dBuV	Over Limit dB	Read Level dBuV	Factor dB	Cable loss dB	Aux dB	Remark
1	0.150	33.84	56.00	-22.16	24.07	9.69	0.08	0.00	Average
2	0.150	48.30	66.00	-17.70	38.53	9.69	0.08	0.00	QP
3	0.195	36.49	53.80	-17.31	26.73	9.68	0.08	0.00	Average
4	0.195	44.81	63.80	-18.99	35.05	9.68	0.08	0.00	QP
5	0.240	26.01	52.08	-26.07	16.25	9.68	0.08	0.00	Average
6	0.240	42.29	62.08	-19.79	32.53	9.68	0.08	0.00	QP
7*	0.474	34.89	46.45	-11.56	25.13	9.67	0.09	0.00	Average
8	0.474	40.14	56.45	-16.31	30.38	9.67	0.09	0.00	QP
9	4.049	28.00	46.00	-18.00	18.09	9.70	0.21	0.00	Average
10	4.049	33.77	56.00	-22.23	23.86	9.70	0.21	0.00	QP
11	16.573	28.13	50.00	-21.87	17.72	9.82	0.59	0.00	Average
12	16.573	33.05	60.00	-26.95	22.64	9.82	0.59	0.00	QP

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

Modulation	11a	Test Freq. (MHz)	5785
Power Phase	Line		

Test by : Brad Wu Temperature: 22°C Humidity: 62%

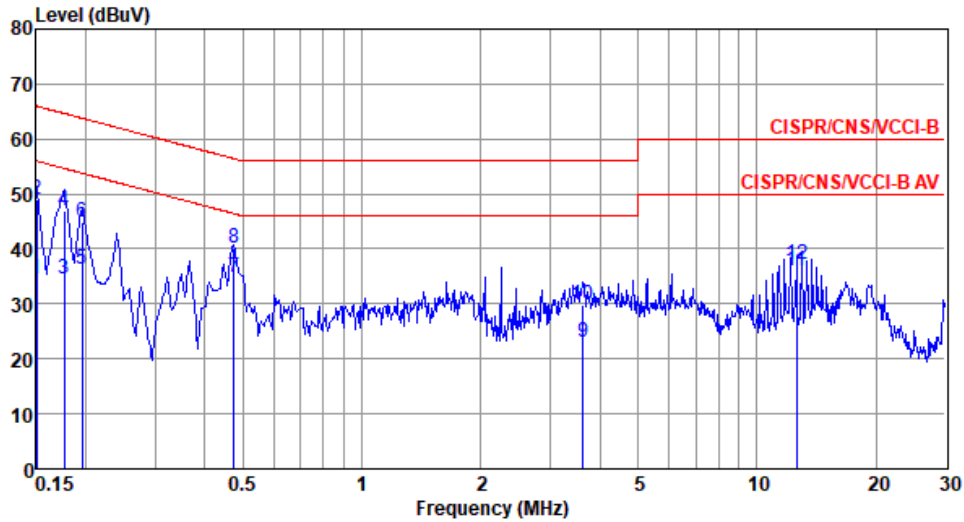


	Freq MHz	Level dBuV	Limit Line dBuV	Over Limit dB	Read Level dBuV	Factor dB	Cable loss dB	Aux dB	Remark
1	0.150	34.53	56.00	-21.47	24.79	9.66	0.08	0.00	Average
2	0.150	50.20	66.00	-15.80	40.46	9.66	0.08	0.00	QP
3	0.177	32.68	54.64	-21.96	22.95	9.65	0.08	0.00	Average
4	0.177	46.86	64.64	-17.78	37.13	9.65	0.08	0.00	QP
5	0.230	26.20	52.44	-26.24	16.47	9.65	0.08	0.00	Average
6	0.230	40.70	62.44	-21.74	30.97	9.65	0.08	0.00	QP
7*	0.466	33.65	46.58	-12.93	23.92	9.64	0.09	0.00	Average
8	0.466	39.00	56.58	-17.58	29.27	9.64	0.09	0.00	QP
9	2.249	28.06	46.00	-17.94	18.20	9.66	0.20	0.00	Average
10	2.249	33.04	56.00	-22.96	23.18	9.66	0.20	0.00	QP
11	12.981	35.77	50.00	-14.23	25.55	9.70	0.52	0.00	Average
12	12.981	39.73	60.00	-20.27	29.51	9.70	0.52	0.00	QP

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

Modulation	11a	Test Freq. (MHz)	5785
Power Phase	Neutral		

Test by : Brad Wu Temperature: 22°C Humidity: 62%



	Freq MHz	Level dBUV	Limit Line dBUV	Over Limit dB	Read Level dBUV	Factor dB	Cable loss dB	Aux dB	Remark
1	0.150	34.59	56.00	-21.41	24.82	9.69	0.08	0.00	Average
2	0.150	48.87	66.00	-17.13	39.10	9.69	0.08	0.00	QP
3	0.177	34.52	54.64	-20.12	24.76	9.68	0.08	0.00	Average
4	0.177	46.87	64.64	-17.77	37.11	9.68	0.08	0.00	QP
5	0.195	36.20	53.80	-17.60	26.44	9.68	0.08	0.00	Average
6	0.195	44.95	63.80	-18.85	35.19	9.68	0.08	0.00	QP
7*	0.474	34.75	46.45	-11.70	24.99	9.67	0.09	0.00	Average
8	0.474	40.20	56.45	-16.25	30.44	9.67	0.09	0.00	QP
9	3.623	22.94	46.00	-23.06	13.03	9.70	0.21	0.00	Average
10	3.623	29.95	56.00	-26.05	20.04	9.70	0.21	0.00	QP
11	12.572	35.95	50.00	-14.05	25.65	9.79	0.51	0.00	Average
12	12.572	37.10	60.00	-22.90	26.80	9.79	0.51	0.00	QP

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

3.2 Emission Bandwidth

3.2.1 Limit of Emission Bandwidth

Within the 5.725-5.85 GHz band, the minimum 6 dB bandwidth of U-NII devices shall be at least 500 kHz.

3.2.2 Test Procedures

26dB Bandwidth

1. Set RBW = approximately 1% of the emission bandwidth.
2. Set the VBW > RBW, Detector = Peak.
3. Trace mode = max hold.
4. Measure the maximum width of the emission that is 26 dB down from the peak of the emission.

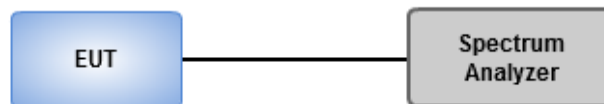
Occupied Bandwidth

1. Set RBW = 1 % to 5 % of the OBW.
2. Set VBW \geq 3 RBW.
3. Sample detection and single sweep mode shall be used.
4. Use the 99 % power bandwidth function of the instrument.

6dB Bandwidth

1. Set RBW = 100kHz, VBW = 300kHz.
2. Detector = Peak, Trace mode = max hold.
3. Allow the trace to stabilize.
4. Measure the maximum width of the emission that is constrained by the frequencies associated with the two outermost amplitude points (upper and lower frequencies) that are attenuated by 6 dB relative to the maximum level measured in the fundamental emission.

3.2.3 Test Setup



3.2.4 Test Result of Emission Bandwidth

Ambient Condition	21-23°C / 63-65%	Tested By	Brad Wu
--------------------------	------------------	------------------	---------

Summary

Mode	Max-N dB (Hz)	Max-OBW (Hz)	ITU-Code	Min-N dB (Hz)	Min-OBW (Hz)
5.15-5.25GHz	-	-	-	-	-
802.11a_Nss1,(6Mbps)_2TX	20.725M	16.353M	16M4D1D	19.928M	16.353M
802.11ax HEW20_Nss1,(MCS0)_2TX -OFDMA	20.942M	18.813M	18M8D1D	20.507M	18.741M
802.11ax HEW40_Nss1,(MCS0)_2TX -OFDMA	40.58M	37.627M	37M6D1D	39.855M	37.627M
802.11ax HEW80_Nss1,(MCS0)_2TX -OFDMA	82.319M	77.279M	77M3D1D	82.029M	76.99M
5.725-5.85GHz	-	-	-	-	-
802.11a_Nss1,(6Mbps)_4TX	16.377M	16.57M	16M6D1D	16.377M	16.425M
802.11ax HEW20_Nss1,(MCS0)_4TX -OFDMA	18.986M	19.03M	19M0D1D	18.841M	18.813M
802.11ax HEW40_Nss1,(MCS0)_4TX -OFDMA	37.971M	37.916M	37M9D1D	37.971M	37.771M
802.11ax HEW80_Nss1,(MCS0)_4TX -OFDMA	76.522M	77.279M	77M3D1D	75.362M	76.99M

Max-N dB = Maximum 6dB down bandwidth for 5.725-5.85GHz band / Maximum 26dB down bandwidth for other band;

Max-OBW = Maximum 99% occupied bandwidth;

Min-N dB = Minimum 6dB down bandwidth for 5.725-5.85GHz band / Maximum 26dB down bandwidth for other band;

Min-OBW = Minimum 99% occupied bandwidth;

Result

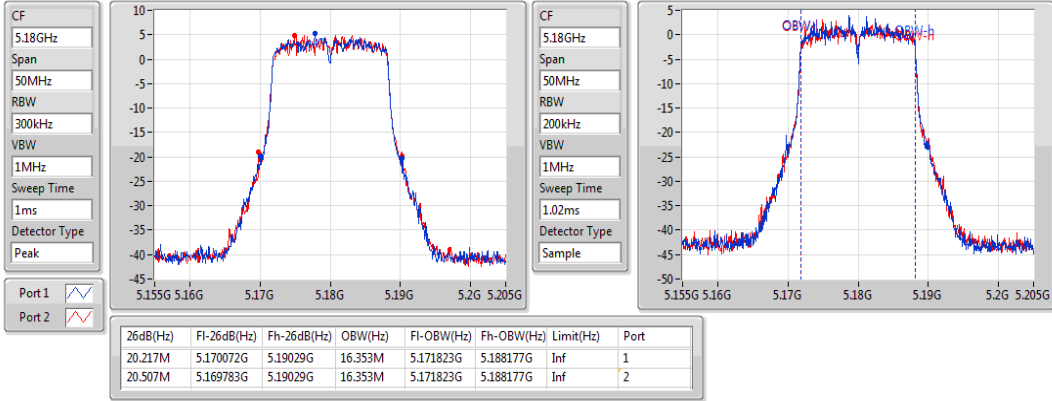
Mode	Result	Limit (Hz)	Port 1-N dB (Hz)	Port 1-OBW (Hz)	Port 2-N dB (Hz)	Port 2-OBW (Hz)	Port 3-N dB (Hz)	Port 3-OBW (Hz)	Port 4-N dB (Hz)	Port 4-OBW (Hz)
802.11a_Nss1,(6Mbps)_2TX	-	-	-	-	-	-	-	-	-	-
5180MHz	Pass	Inf	20.217M	16.353M	20.507M	16.353M	-	-	-	-
5200MHz	Pass	Inf	20.435M	16.353M	20.725M	16.353M	-	-	-	-
5240MHz	Pass	Inf	19.928M	16.353M	20.507M	16.353M	-	-	-	-
802.11a_Nss1,(6Mbps)_4TX	-	-	-	-	-	-	-	-	-	-
5745MHz	Pass	500k	16.377M	16.498M	16.377M	16.498M	16.377M	16.57M	16.377M	16.57M
5785MHz	Pass	500k	16.377M	16.498M	16.377M	16.498M	16.377M	16.57M	16.377M	16.57M
5825MHz	Pass	500k	16.377M	16.57M	16.377M	16.425M	16.377M	16.57M	16.377M	16.57M
802.11ax HEW20_Nss1,(MCS0)_2TX -OFDMA	-	-	-	-	-	-	-	-	-	-
5180MHz	Pass	Inf	20.942M	18.813M	20.652M	18.741M	-	-	-	-
5200MHz	Pass	Inf	20.797M	18.741M	20.942M	18.741M	-	-	-	-
5240MHz	Pass	Inf	20.507M	18.741M	20.725M	18.741M	-	-	-	-
802.11ax HEW20_Nss1,(MCS0)_4TX -OFDMA	-	-	-	-	-	-	-	-	-	-
5745MHz	Pass	500k	18.913M	18.813M	18.913M	18.886M	18.986M	18.958M	18.986M	18.958M
5785MHz	Pass	500k	18.986M	18.886M	18.913M	18.886M	18.841M	18.958M	18.986M	19.03M
5825MHz	Pass	500k	18.986M	18.886M	18.986M	18.886M	18.913M	18.886M	18.841M	18.886M
802.11ax HEW40_Nss1,(MCS0)_2TX -OFDMA	-	-	-	-	-	-	-	-	-	-
5190MHz	Pass	Inf	40.435M	37.627M	40.58M	37.627M	-	-	-	-
5230MHz	Pass	Inf	39.855M	37.627M	40M	37.627M	-	-	-	-
802.11ax HEW40_Nss1,(MCS0)_4TX -OFDMA	-	-	-	-	-	-	-	-	-	-
5755MHz	Pass	500k	37.971M	37.771M	37.971M	37.771M	37.971M	37.916M	37.971M	37.916M
5795MHz	Pass	500k	37.971M	37.771M	37.971M	37.771M	37.971M	37.916M	37.971M	37.771M
802.11ax HEW80_Nss1,(MCS0)_2TX -OFDMA	-	-	-	-	-	-	-	-	-	-
5210MHz	Pass	Inf	82.319M	77.279M	82.029M	76.99M	-	-	-	-
802.11ax HEW80_Nss1,(MCS0)_4TX -OFDMA	-	-	-	-	-	-	-	-	-	-
5775MHz	Pass	500k	76.522M	77.279M	76.522M	77.279M	75.362M	76.99M	76.522M	76.99M

Port X-N dB = Port X 6dB down bandwidth for 5.725-5.85GHz band / 26dB down bandwidth for other band
Port X-OBW = Port X 99% occupied bandwidth;

802.11a_Nss1,(6Mbps)_2TX

EBW

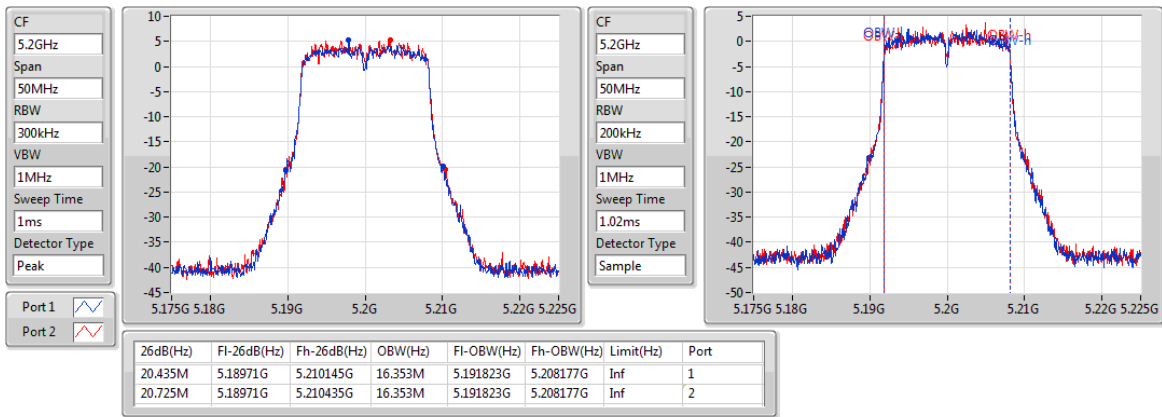
5180MHz



802.11a_Nss1,(6Mbps)_2TX

EBW

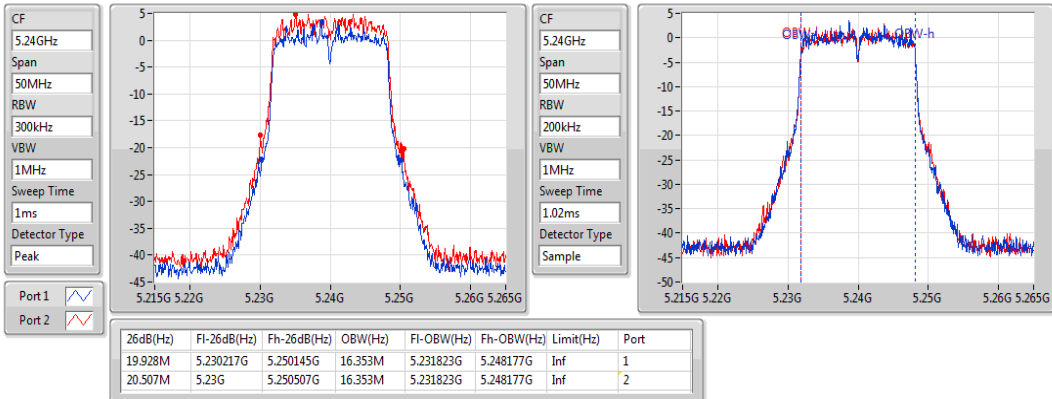
5200MHz



802.11a_Nss1,(6Mbps)_2TX

EBW

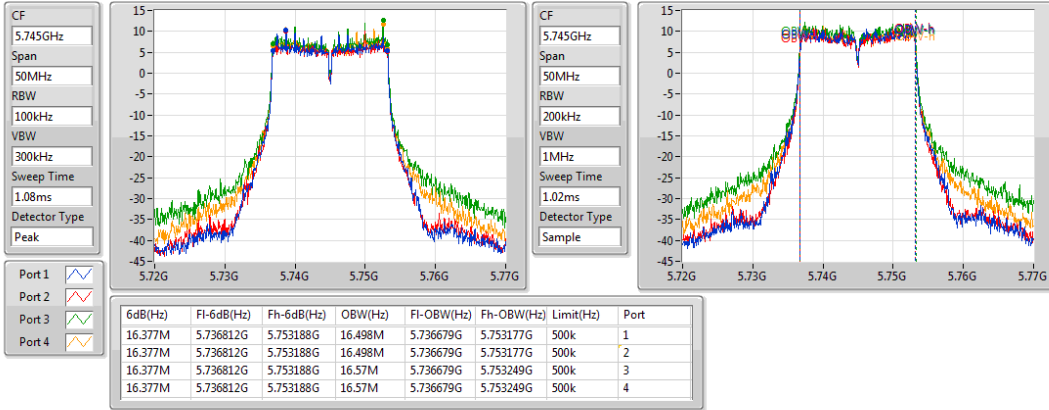
5240MHz



802.11a_Nss1,(6Mbps)_4TX

EBW

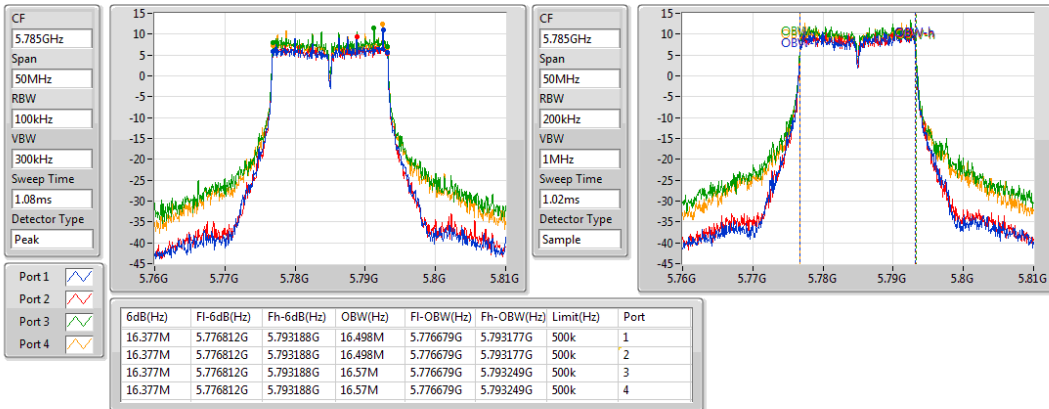
5745MHz



802.11a_Nss1,(6Mbps)_4TX

EBW

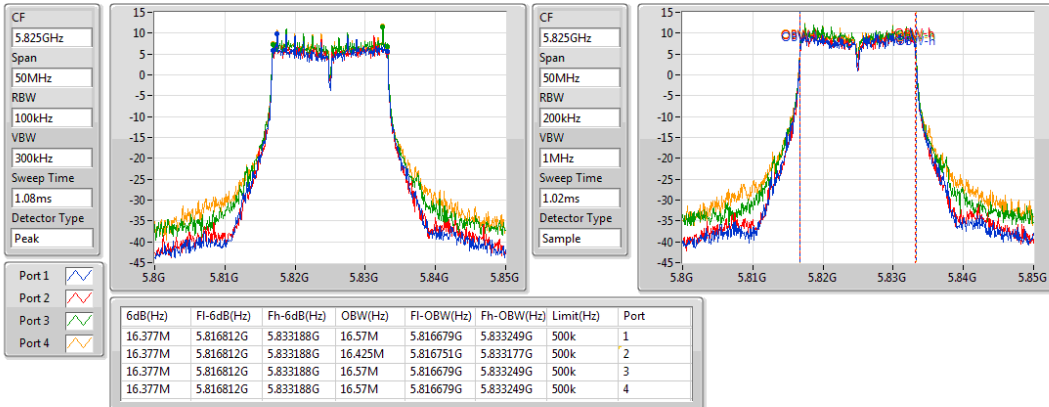
5785MHz



802.11a_Nss1,(6Mbps)_4TX

EBW

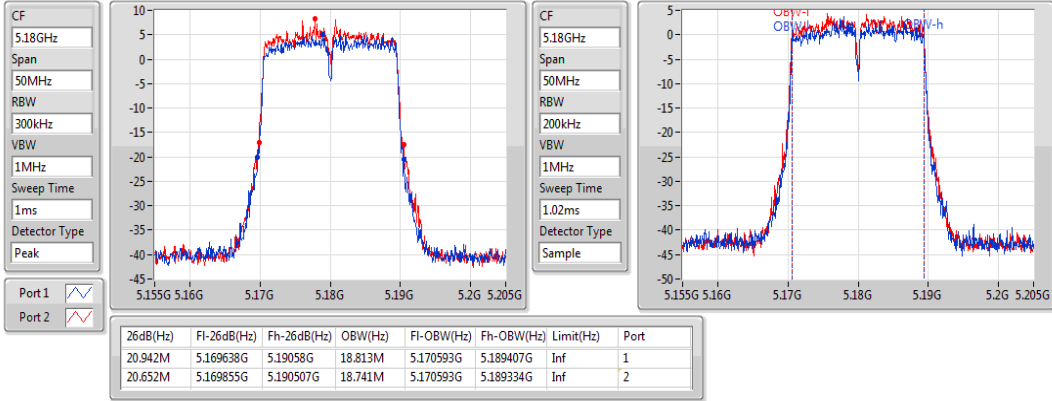
5825MHz



802.11ax HEW20_Nss1,(MCS0)_2TX

EBW

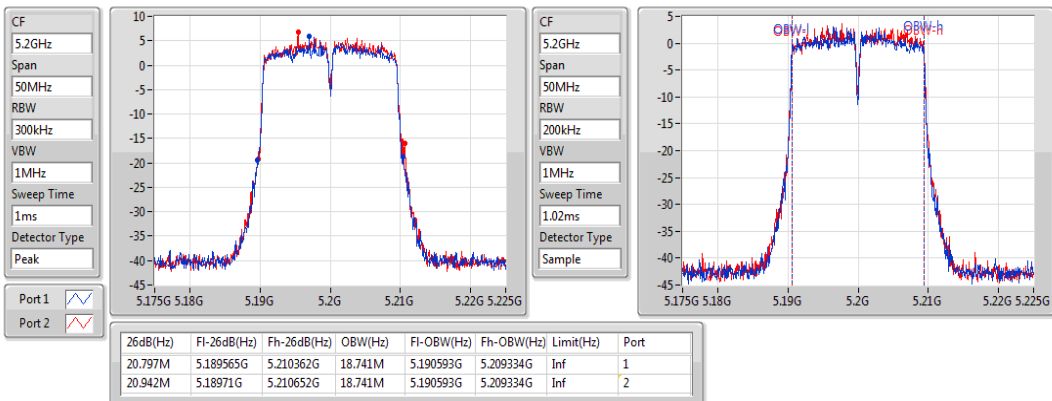
5180MHz



802.11ax HEW20_Nss1,(MCS0)_2TX

EBW

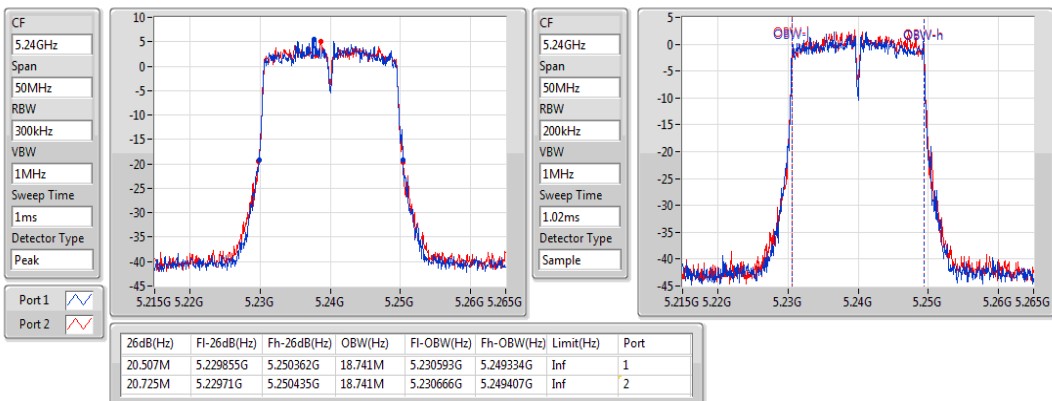
5200MHz



802.11ax HEW20_Nss1,(MCS0)_2TX

EBW

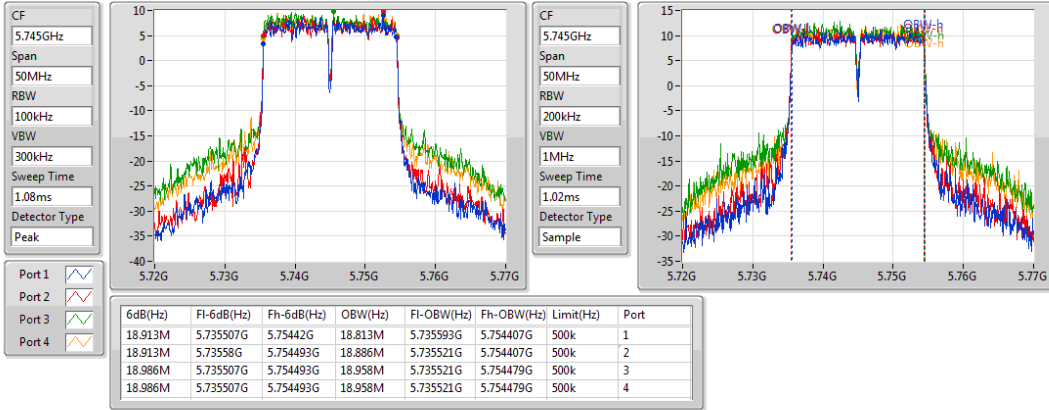
5240MHz



802.11ax HEW20_Nss1,(MCS0)_4TX

EBW

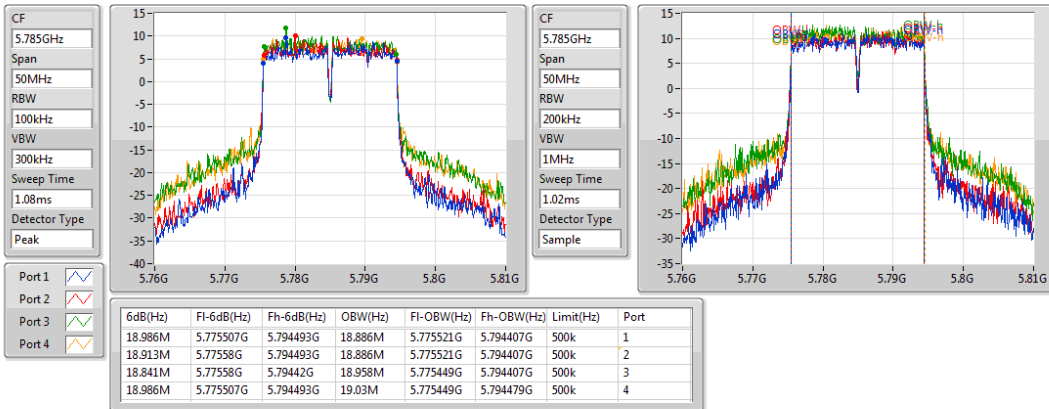
5745MHz



802.11ax HEW20_Nss1,(MCS0)_4TX

EBW

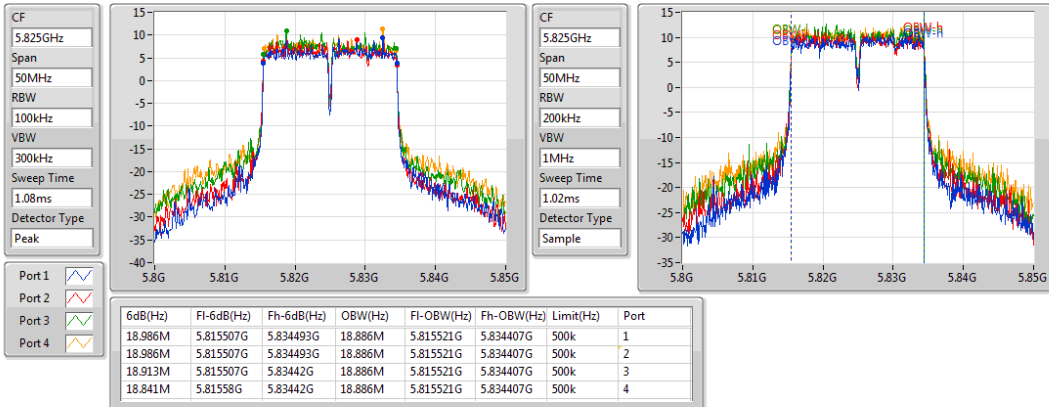
5785MHz



802.11ax HEW20_Nss1,(MCS0)_4TX

EBW

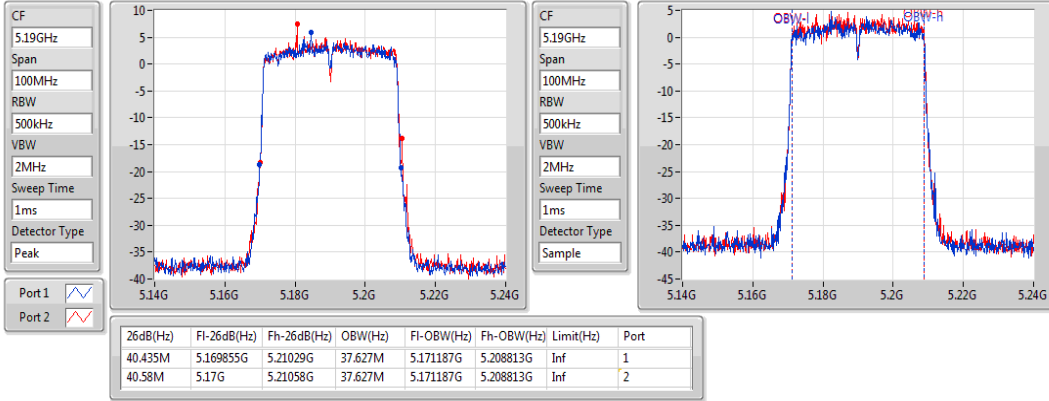
5825MHz



802.11ax HEW40_Nss1,(MCS0)_2TX

EBW

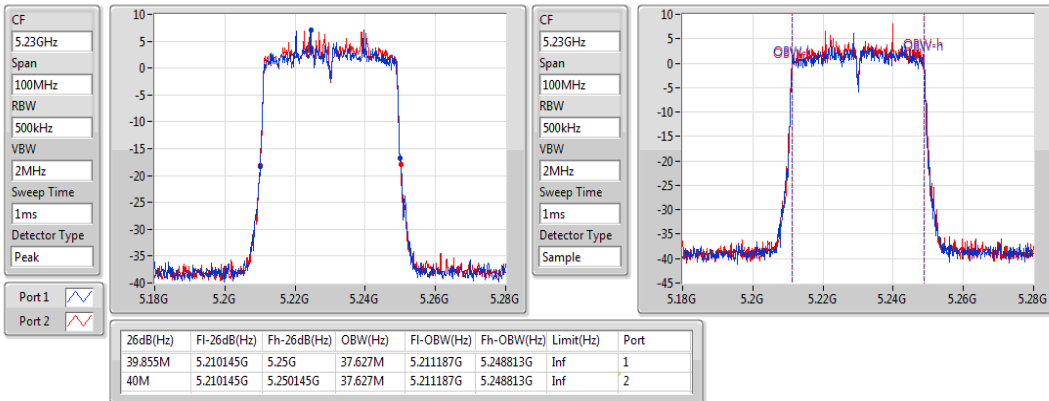
5190MHz



802.11ax HEW40_Nss1,(MCS0)_2TX

EBW

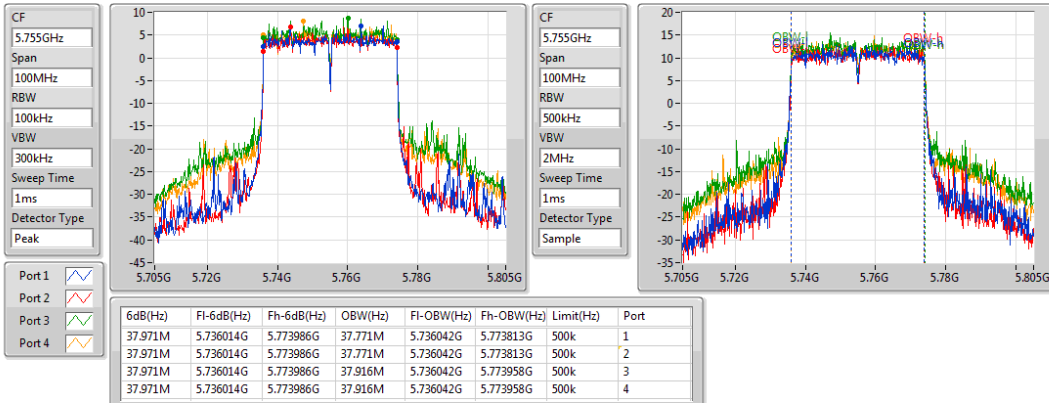
5230MHz



802.11ax HEW40_Nss1,(MCS0)_4TX

EBW

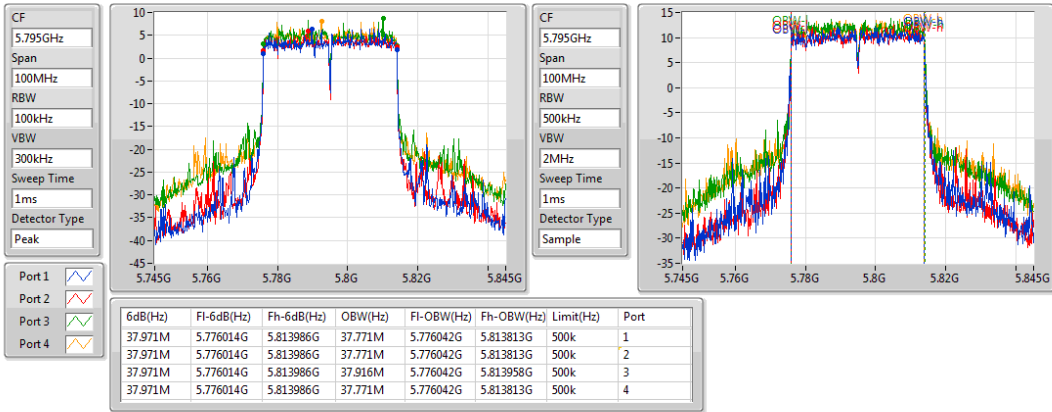
5755MHz



802.11ax HEW40_Nss1,(MCS0)_4TX

EBW

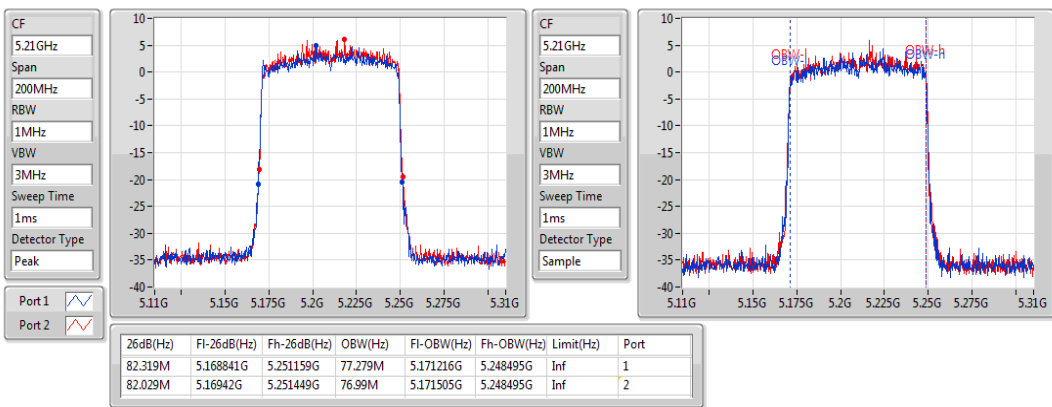
5795MHz



802.11ax HEW80_Nss1,(MCS0)_2TX

EBW

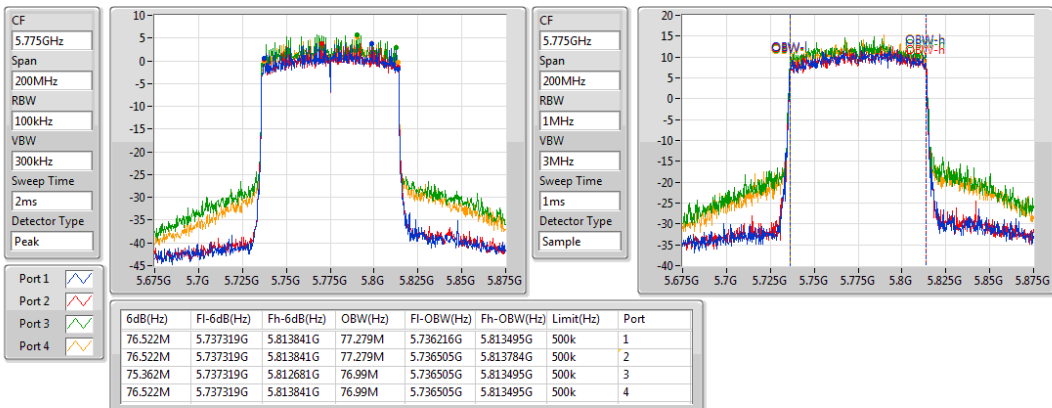
5210MHz



802.11ax HEW80_Nss1,(MCS0)_4TX

EBW

5775MHz



3.3 RF Output Power

3.3.1 Limit of RF Output Power

Frequency band 5150-5250 MHz	
Operating Mode	Limit
<input checked="" type="checkbox"/> Outdoor access point	Conducted Power: 1 W The maximum e.i.r.p. at any elevation angle above 30 degrees as measured from the horizon must not exceed 125 mW (21 dBm)
<input type="checkbox"/> Indoor access point	Conducted Power: 1 W
<input type="checkbox"/> Fixed point-to-point access points	Conducted Power: 1 W
<input type="checkbox"/> Client devices	Conducted Power: 250 mW

Frequency Band (MHz)	Limit
<input checked="" type="checkbox"/> 5725 ~ 5850	Conducted Power: 1 W

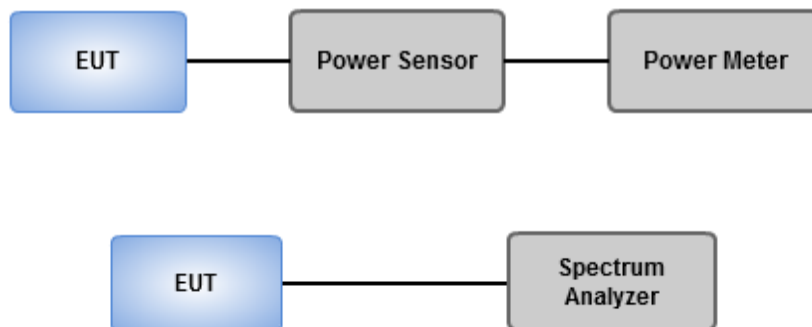
Note: "B" is the 26dB emission bandwidth in MHz.

3.3.2 Test Procedures

Method PM-G (Measurement using a gated RF average power meter)

Measurements is performed using a wideband gated RF power meter provided that the gate parameters are adjusted such that the power is measured only when the EUT is transmitting at its maximum power control level. Since the measurement is made only during the ON time of the transmitter, no duty cycle correction factor is required.

3.3.3 Test Setup



3.3.4 Test Result of Maximum Conducted Output Power

Ambient Condition	21-23°C / 63-65%	Tested By	Brad Wu
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Non-beamforming mode

Summary

Mode	Total Power (dBm)	Total Power (W)	EIRP (dBm)	EIRP (W)
5.15-5.25GHz	-	-	-	-
802.11a_Nss1,(6Mbps)_2TX	16.14	0.04111	21.44	0.13932
802.11ax HEW20_Nss1,(MCS0)_2TX -OFDMA	16.04	0.04018	21.34	0.13614
802.11ax HEW40_Nss1,(MCS0)_2TX -OFDMA	15.93	0.03917	21.23	0.13274
802.11ax HEW80_Nss1,(MCS0)_2TX -OFDMA	15.75	0.03758	21.05	0.12735
5.725-5.85GHz	-	-	-	-
802.11a_Nss1,(6Mbps)_4TX	28.62	0.72778	35.42	3.48337
802.11ax HEW20_Nss1,(MCS0)_4TX -OFDMA	28.51	0.70958	35.31	3.39625
802.11ax HEW40_Nss1,(MCS0)_4TX -OFDMA	28.46	0.70146	35.26	3.35738
802.11ax HEW80_Nss1,(MCS0)_4TX -OFDMA	27.56	0.57016	34.36	2.72898

Result

Mode	Result	DG (dBi)	Port 1 (dBm)	Port 2 (dBm)	Port 3 (dBm)	Port 4 (dBm)	Total Power (dBm)	Power Limit (dBm)	EIRP (dBm)	EIRP Limit (dBm)
802.11a_Nss1,(6Mbps)_2TX	-	-	-	-	-	-	-	-	-	-
5180MHz	Pass	5.30	13.12	13.14	-	-	16.14	30.00	21.44	36.00
5200MHz	Pass	5.30	13.15	13.05	-	-	16.11	30.00	21.41	36.00
5240MHz	Pass	5.30	12.96	12.65	-	-	15.82	30.00	21.12	36.00
802.11a_Nss1,(6Mbps)_4TX	-	-	-	-	-	-	-	-	-	-
5745MHz	Pass	6.80	21.81	21.82	23.36	22.51	28.44	29.20	35.24	36.00
5785MHz	Pass	6.80	21.73	21.83	23.67	22.86	28.62	29.20	35.42	36.00
5825MHz	Pass	6.80	21.16	21.78	22.71	22.66	28.15	29.20	34.95	36.00
802.11ax HEW20_Nss1,(MCS0)_2TX -OFDMA	-	-	-	-	-	-	-	-	-	-
5180MHz	Pass	5.30	13.11	12.95	-	-	16.04	30.00	21.34	36.00
5200MHz	Pass	5.30	13.14	12.89	-	-	16.03	30.00	21.33	36.00
5240MHz	Pass	5.30	13.01	12.46	-	-	15.75	30.00	21.05	36.00
802.11ax HEW20_Nss1,(MCS0)_4TX -OFDMA	-	-	-	-	-	-	-	-	-	-
5745MHz	Pass	6.80	21.68	21.92	23.35	22.43	28.41	29.20	35.21	36.00
5785MHz	Pass	6.80	21.65	21.87	23.51	22.67	28.51	29.20	35.31	36.00
5825MHz	Pass	6.80	21.16	21.71	22.72	22.62	28.12	29.20	34.92	36.00
802.11ax HEW40_Nss1,(MCS0)_2TX -OFDMA	-	-	-	-	-	-	-	-	-	-
5190MHz	Pass	5.30	13.05	12.77	-	-	15.92	30.00	21.22	36.00
5230MHz	Pass	5.30	13.12	12.7	-	-	15.93	30.00	21.23	36.00
802.11ax HEW40_Nss1,(MCS0)_4TX -OFDMA	-	-	-	-	-	-	-	-	-	-
5755MHz	Pass	6.80	21.66	21.58	23.43	22.81	28.46	29.20	35.26	36.00
5795MHz	Pass	6.80	21.01	21.12	22.86	22.23	27.90	29.20	34.70	36.00
802.11ax HEW80_Nss1,(MCS0)_2TX -OFDMA	-	-	-	-	-	-	-	-	-	-
5210MHz	Pass	5.30	13.01	12.45	-	-	15.75	30.00	21.05	36.00
802.11ax HEW80_Nss1,(MCS0)_4TX -OFDMA	-	-	-	-	-	-	-	-	-	-
5775MHz	Pass	6.80	20.67	20.66	22.53	21.97	27.56	29.20	34.36	36.00

DG = Directional Gain;

Directional Gain of 5.725 ~ 5.85 GHz is 6.8dBi > 6dBi, so the limit shall be reduced to 30 dBm – (6.8dBi – 6dBi) =29.2 dBm.

Port X = Port X output power

Beamforming mode

Summary

Mode	Total Power (dBm)	Total Power (W)	EIRP (dBm)	EIRP (W)
5.15-5.25GHz	-	-	-	-
802.11ax HEW20-BF_Nss1,(MCS0)_2TX -OFDMA	13.03	0.02009	20.85	0.12162
802.11ax HEW40-BF_Nss1,(MCS0)_2TX -OFDMA	12.92	0.01959	20.74	0.11858
802.11ax HEW80-BF_Nss1,(MCS0)_2TX -OFDMA	12.74	0.01879	20.56	0.11376
5.725-5.85GHz	-	-	-	-
802.11ax HEW20-BF_Nss1,(MCS0)_4TX -OFDMA	22.49	0.17742	34.25	2.66073
802.11ax HEW40-BF_Nss1,(MCS0)_4TX -OFDMA	22.44	0.17539	34.20	2.63027
802.11ax HEW80-BF_Nss1,(MCS0)_4TX -OFDMA	21.54	0.14256	33.30	2.13796

Result

Mode	Result	DG (dBi)	Port 1 (dBm)	Port 2 (dBm)	Port 3 (dBm)	Port 4 (dBm)	Total Power (dBm)	Power Limit (dBm)	EIRP (dBm)	EIRP Limit (dBm)
802.11ax HEW20-BF_Nss1,(MCS0)_2TX -OFDMA	-	-	-	-	-	-	-	-	-	-
5180MHz	Pass	7.82	10.1	9.94	-	-	13.03	28.18	20.85	36.00
5200MHz	Pass	7.82	10.13	9.88	-	-	13.02	28.18	20.84	36.00
5240MHz	Pass	7.82	10	9.45	-	-	12.74	28.18	20.56	36.00
802.11ax HEW20-BF_Nss1,(MCS0)_4TX -OFDMA	-	-	-	-	-	-	-	-	-	-
5745MHz	Pass	11.76	15.66	15.9	17.33	16.41	22.39	24.24	34.15	36.00
5785MHz	Pass	11.76	15.63	15.85	17.49	16.65	22.49	24.24	34.25	36.00
5825MHz	Pass	11.76	15.14	15.69	16.7	16.6	22.10	24.24	33.86	36.00
802.11ax HEW40-BF_Nss1,(MCS0)_2TX -OFDMA	-	-	-	-	-	-	-	-	-	-
5190MHz	Pass	7.82	10.04	9.76	-	-	12.91	28.18	20.73	36.00
5230MHz	Pass	7.82	10.11	9.69	-	-	12.92	28.18	20.74	36.00
802.11ax HEW40-BF_Nss1,(MCS0)_4TX -OFDMA	-	-	-	-	-	-	-	-	-	-
5755MHz	Pass	11.76	15.64	15.56	17.41	16.79	22.44	24.24	34.20	36.00
5795MHz	Pass	11.76	14.99	15.1	16.84	16.21	21.88	24.24	33.64	36.00
802.11ax HEW80-BF_Nss1,(MCS0)_2TX -OFDMA	-	-	-	-	-	-	-	-	-	-
5210MHz	Pass	7.82	10	9.44	-	-	12.74	28.18	20.56	36.00
802.11ax HEW80-BF_Nss1,(MCS0)_4TX -OFDMA	-	-	-	-	-	-	-	-	-	-
5775MHz	Pass	11.76	14.65	14.64	16.51	15.95	21.54	24.24	33.30	36.00

DG = Directional Gain; **Port X** = Port X output power

For 5150~5250MHz:

Directional gain = $10 \times \log((10^{4.3/20} + 10^{5.3/20})^2 / 2) = 7.82 \text{ dBi} > 6 \text{ dBi}$, Limit shall be reduced to 30 dBm – (7.82 dBi – 6 dBi) = 28.18 dBm.

For 5725~5850MHz:

Directional gain = $10 \times \log((10^{4.9/20} + 10^{6.8/20} + 10^{4.8/20} + 10^{6.3/20})^2 / 4) = 11.76 \text{ dBi} > 6 \text{ dBi}$, Limit shall be reduced to 30 dBm – (11.76 dBi – 6 dBi) = 24.24 dBm.

3.3.5 Test Result of EIRP above 30°

Ambient Condition	21-23°C / 63-65%	Tested By	Brad Wu
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Non-beamforming mode

Mode	N _{TX}	Freq. (MHz)	Measured value of each antenna port (dBm)		Gain above 30° (dB)	E.I.R.P Power above 30° (dBm)	Total E.I.R.P above 30° (dBm)	E.I.R.P Limit (dBm)
			ANT 1	ANT 3				
11a	2	5180	ANT 1	13.12	5.2	18.32	20.87	21
			ANT 3	13.14	4.2	17.34		
11a	2	5200	ANT 1	13.15	5.2	18.35	20.85	21
			ANT 3	13.05	4.2	17.25		
11a	2	5240	ANT 1	12.96	5.2	18.16	20.56	21
			ANT 3	12.65	4.2	16.85		
11ax HE20 -OFDMA	2	5180	ANT 1	13.11	5.2	18.31	20.78	21
			ANT 3	12.95	4.2	17.15		
11ax HE20 -OFDMA	2	5200	ANT 1	13.14	5.2	18.34	20.77	21
			ANT 3	12.89	4.2	17.09		
11ax HE20 -OFDMA	2	5240	ANT 1	13.01	5.2	18.21	20.51	21
			ANT 3	12.46	4.2	16.66		
11ax HE40 -OFDMA	2	5190	ANT 1	13.05	5.2	18.25	20.67	21
			ANT 3	12.77	4.2	16.97		
11ax HE40 -OFDMA	2	5230	ANT 1	13.12	5.2	18.32	20.68	21
			ANT 3	12.7	4.2	16.9		
11ax HE80 -OFDMA	2	5210	ANT 1	13.01	5.2	18.21	20.51	21
			ANT 3	12.45	4.2	16.65		

Beamforming mode

Mode	N _{TX}	Freq. (MHz)	Measured value of each antenna port (dBm)		Directional Gain above 30° (dB)	Total E.I.R.P above 30° (dBm)	E.I.R.P Limit (dBm)
11ax HE20 -OFDMA	2	5180	ANT 1	10.1	7.72	20.75	21
			ANT 3	9.94			
11ax HE20 -OFDMA	2	5200	ANT 1	10.13	7.72	20.74	21
			ANT 3	9.88			
11ax HE20 -OFDMA	2	5240	ANT 1	10	7.72	20.46	21
			ANT 3	9.45			
11ax HE40 -OFDMA	2	5190	ANT 1	10.04	7.72	20.63	21
			ANT 3	9.76			
11ax HE40 -OFDMA	2	5230	ANT 1	10.11	7.72	20.64	21
			ANT 3	9.69			
11ax HE80 -OFDMA	2	5210	ANT 1	10	7.72	20.46	21
			ANT 3	9.44			

Directional gain = $10 \times \log\left(\frac{10^{5.2/20} + 10^{4.2/20}}{2}\right) = 7.72$ dBi

3.4 Peak Power Spectral Density

3.4.1 Limit of Peak Power Spectral Density

Frequency band 5150-5250 MHz		
Operating Mode		Limit
<input checked="" type="checkbox"/>	Outdoor access point	17 dBm / MHz
<input type="checkbox"/>	Indoor access point	17 dBm / MHz
<input type="checkbox"/>	Fixed point-to-point access points	17 dBm / MHz
<input type="checkbox"/>	Client devices	11 dBm / MHz

Frequency Band (MHz)	Limit
<input checked="" type="checkbox"/> 5725 ~ 5850	30 dBm /500 kHz

3.4.2 Test Procedures

For 5150 ~ 5250 MHz

Duty cycle \geq 98 %

1. Set RBW = 1 MHz, VBW = 3 MHz, Sweep time = auto, Detector = RMS.
2. Trace average 100 traces.
3. Use the peak marker function to determine the maximum amplitude level.

Duty cycle $<$ 98 %

1. Set RBW = 1 MHz, VBW = 3 MHz, Detector = RMS.
2. Set sweep time $\geq 10 * (\text{number of points in sweep}) * (\text{total on/off period of the transmitted signal})$.
3. Perform a single sweep.
4. Use the peak marker function to determine the maximum amplitude level.
5. Add $10 \log(1/x)$, where x is the duty cycle.

For 5725 ~ 5850 MHz

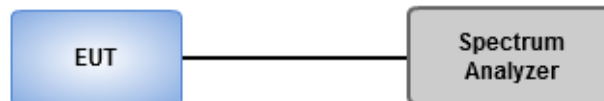
Duty cycle \geq 98 %

1. Set RBW = 500 kHz, VBW = 3 MHz, Sweep time = auto, Detector = RMS.
2. Trace average 100 traces.
3. Use the peak marker function to determine the maximum amplitude level.

Duty cycle $<$ 98 %

1. Set RBW = 500 kHz, VBW = 3 MHz, Detector = RMS.
2. Set sweep time $\geq 10 * (\text{number of points in sweep}) * (\text{total on/off period of the transmitted signal})$.
3. Perform a single sweep.
4. Use the peak marker function to determine the maximum amplitude level.
5. Add $10 \log(1/x)$, where x is the duty cycle.

3.4.3 Test Setup



3.4.4 Test Result of Peak Power Spectral Density

Ambient Condition	21-23°C / 63-65%	Tested By	Brad Wu
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Summary

Mode	PD (dBm/RBW)	EIRP PD (dBm/RBW)
5.15-5.25GHz	-	-
802.11a_Nss1,(6Mbps)_2TX	3.61	11.43
802.11ax HEW20_Nss1,(MCS0)_2TX -OFDMA	2.82	10.64
802.11ax HEW40_Nss1,(MCS0)_2TX -OFDMA	-0.46	7.36
802.11ax HEW80_Nss1,(MCS0)_2TX -OFDMA	-3.14	4.68
5.725-5.85GHz	-	-
802.11a_Nss1,(6Mbps)_4TX	14.34	26.10
802.11ax HEW20_Nss1,(MCS0)_4TX -OFDMA	13.38	25.14
802.11ax HEW40_Nss1,(MCS0)_4TX -OFDMA	10.28	22.04
802.11ax HEW80_Nss1,(MCS0)_4TX -OFDMA	7.45	19.21

RBW = 500kHz for 5.725-5.85GHz band / 1MHz for other band;

Result

Mode	Result	DG (dBi)	Port 1 (dBm/RBW)	Port 2 (dBm/RBW)	Port 3 (dBm/RBW)	Port 4 (dBm/RBW)	PD (dBm/RBW)	PD Limit (dBm/RBW)	EIRP PD (dBm/RBW)	EIRP PD Limit (dBm/RBW)
802.11a_Nss1,(6Mbps)_2TX	-	-	-	-	-	-	-	-	-	-
5180MHz	Pass	7.82	0.77	0.56	-	-	3.57	15.18	11.39	23.00
5200MHz	Pass	7.82	0.66	0.70	-	-	3.61	15.18	11.43	23.00
5240MHz	Pass	7.82	0.16	0.34	-	-	3.20	15.18	11.02	23.00
802.11a_Nss1,(6Mbps)_4TX	-	-	-	-	-	-	-	-	-	-
5745MHz	Pass	11.76	7.52	7.50	9.21	8.22	14.16	24.24	25.92	36.00
5785MHz	Pass	11.76	7.60	7.48	9.37	8.79	14.34	24.24	26.10	36.00
5825MHz	Pass	11.76	7.18	7.10	8.27	8.25	13.71	24.24	25.47	36.00
802.11ax HEW20_Nss1,(MCS0)_2TX -OFDMA	-	-	-	-	-	-	-	-	-	-
5180MHz	Pass	7.82	-0.66	0.74	-	-	2.82	15.18	10.64	23.00
5200MHz	Pass	7.82	-1.00	-0.57	-	-	2.14	15.18	9.96	23.00
5240MHz	Pass	7.82	-1.49	-0.99	-	-	1.68	15.18	9.50	23.00
802.11ax HEW20_Nss1,(MCS0)_4TX -OFDMA	-	-	-	-	-	-	-	-	-	-
5745MHz	Pass	11.76	7.04	6.82	8.22	7.40	13.17	24.24	24.93	36.00
5785MHz	Pass	11.76	6.98	6.96	8.65	7.98	13.38	24.24	25.14	36.00
5825MHz	Pass	11.76	6.49	6.82	7.94	7.56	12.93	24.24	24.69	36.00
802.11ax HEW40_Nss1,(MCS0)_2TX -OFDMA	-	-	-	-	-	-	-	-	-	-
5190MHz	Pass	7.82	-3.37	-3.12	-	-	-0.46	15.18	7.36	23.00
5230MHz	Pass	7.82	-3.71	-3.07	-	-	-0.48	15.18	7.34	23.00
802.11ax HEW40_Nss1,(MCS0)_4TX -OFDMA	-	-	-	-	-	-	-	-	-	-
5755MHz	Pass	11.76	3.96	3.72	5.39	4.73	10.28	24.24	22.04	36.00
5795MHz	Pass	11.76	3.44	3.42	5.07	4.58	9.95	24.24	21.71	36.00
802.11ax HEW80_Nss1,(MCS0)_2TX -OFDMA	-	-	-	-	-	-	-	-	-	-
5210MHz	Pass	7.82	-6.23	-5.87	-	-	-3.14	15.18	4.68	23.00
802.11ax HEW80_Nss1,(MCS0)_4TX -OFDMA	-	-	-	-	-	-	-	-	-	-
5775MHz	Pass	11.76	0.83	0.76	2.55	1.92	7.45	24.24	19.21	36.00

RBW = 500kHz for 5.725-5.85GHz band / 1MHz for other band;

PD = trace bin-by-bin of each transmits port summing can be performed maximum power density; **Port X** = Port X power density;

DG = Directional Gain;

For 5150~5250MHz:

Directional gain = $10 \times \log((10^{4.3/20} + 10^{5.3/20})^2 / 2) = 7.82 \text{ dBi} > 6 \text{ dBi}$, Limit shall be reduced to $17 \text{ dBm} - (7.82 \text{ dBi} - 6 \text{ dBi}) = 15.18 \text{ dBm}$.

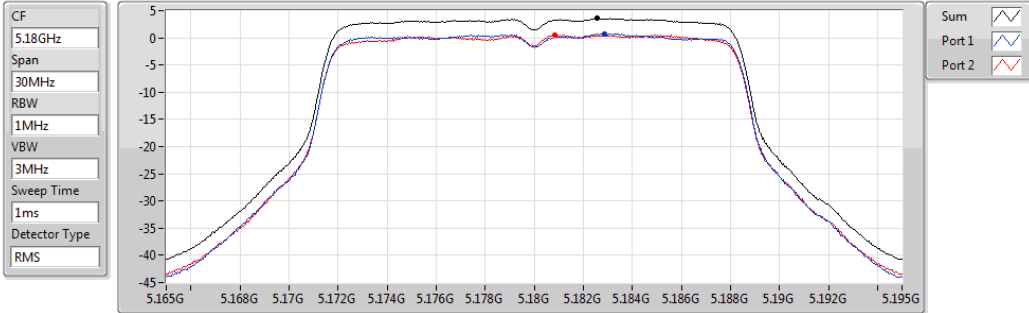
For 5725~5850MHz:

Directional gain = $10 \times \log((10^{4.9/20} + 10^{6.8/20} + 10^{4.8/20} + 10^{6.3/20})^2 / 4) = 11.76 \text{ dBi} > 6 \text{ dBi}$, Limit shall be reduced to $30 \text{ dBm} - (11.76 \text{ dBi} - 6 \text{ dBi}) = 24.24 \text{ dBm}$.

802.11a_Nss1,(6Mbps)_2TX

PSD

5180MHz

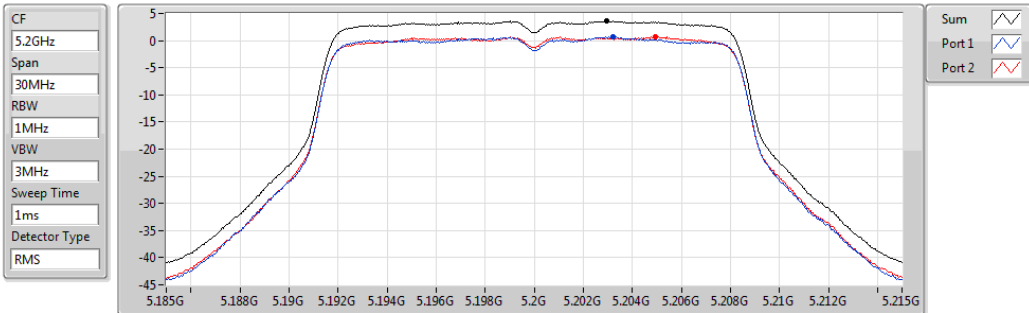


Sum	PD	Port 1	Port 2
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
3.57	3.57	0.77	0.56

802.11a_Nss1,(6Mbps)_2TX

PSD

5200MHz

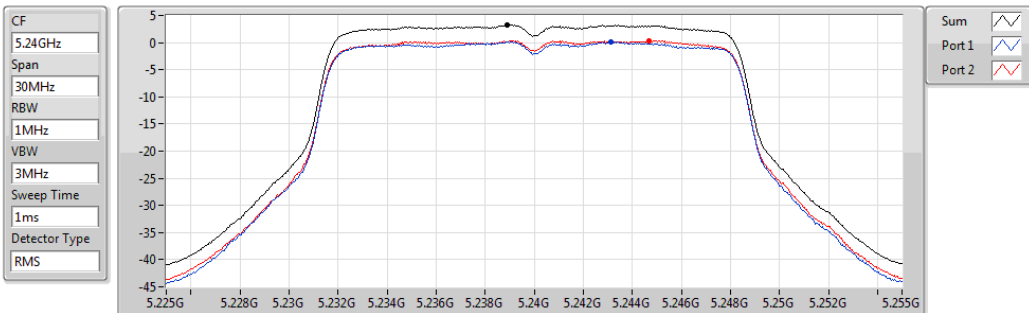


Sum	PD	Port 1	Port 2
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
3.61	3.61	0.66	0.70

802.11a_Nss1,(6Mbps)_2TX

PSD

5240MHz

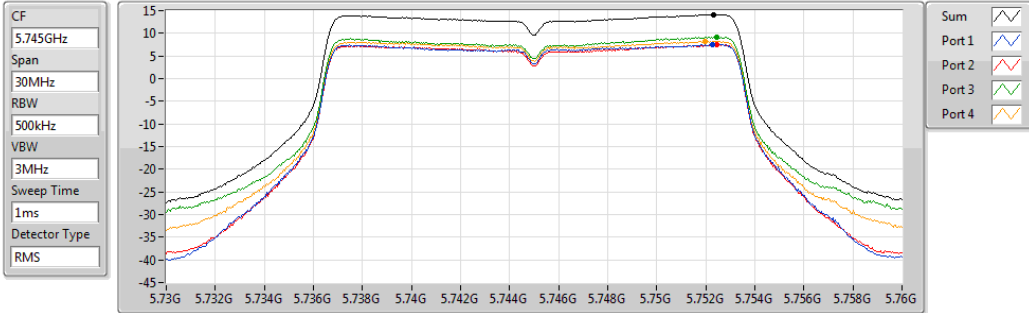


Sum	PD	Port 1	Port 2
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
3.20	3.20	0.16	0.34

802.11a_Nss1,(6Mbps)_4TX

PSD

5745MHz

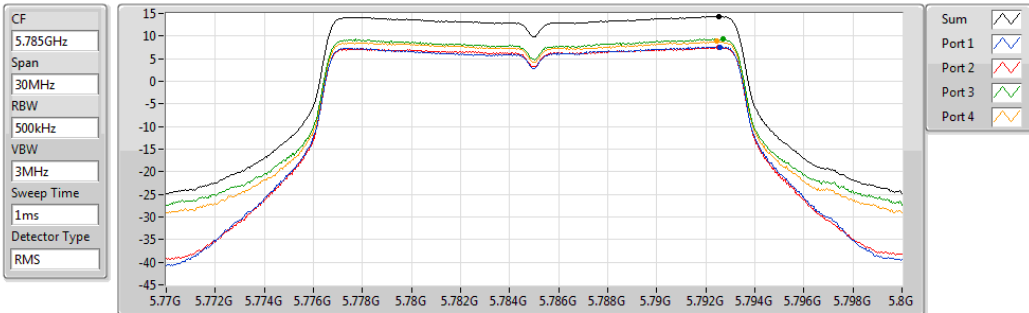


Sum	PD	Port 1	Port 2	Port 3	Port 4
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
14.16	14.16	7.52	7.50	9.21	8.22

802.11a_Nss1,(6Mbps)_4TX

PSD

5785MHz

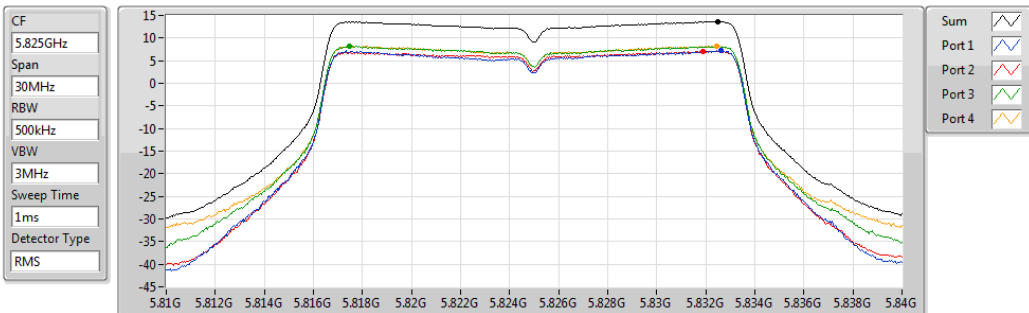


Sum	PD	Port 1	Port 2	Port 3	Port 4
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
14.34	14.34	7.60	7.48	9.37	8.79

802.11a_Nss1,(6Mbps)_4TX

PSD

5825MHz

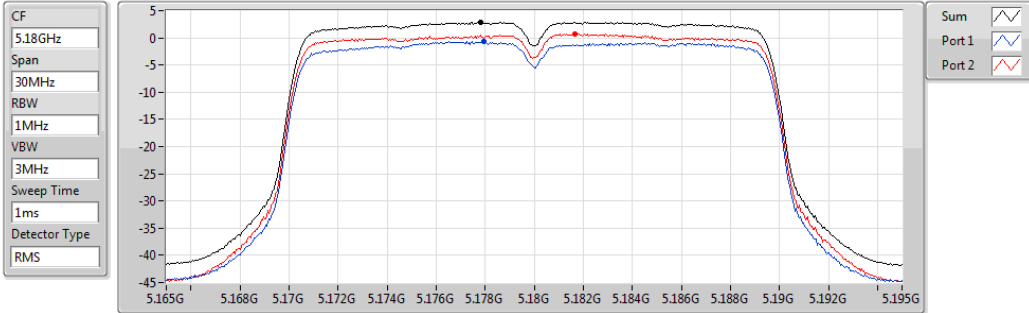


Sum	PD	Port 1	Port 2	Port 3	Port 4
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
13.71	13.71	7.18	7.10	8.27	8.25

802.11ax HEW20_Nss1,(MCS0)_2TX

PSD

5180MHz

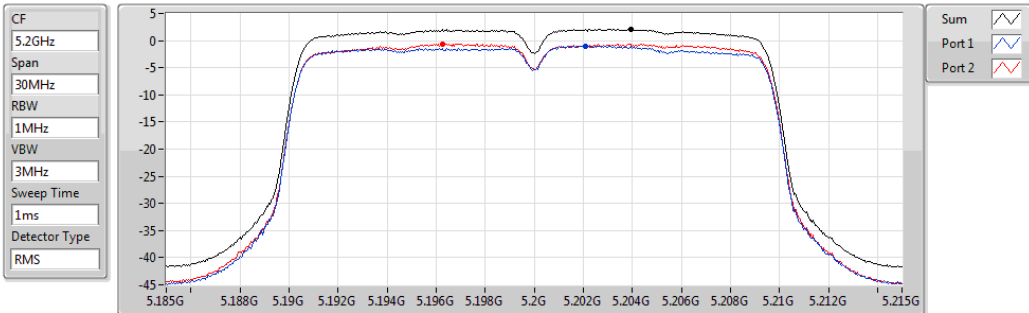


Sum	PD	Port 1	Port 2
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
2.82	2.82	-0.66	0.74

802.11ax HEW20_Nss1,(MCS0)_2TX

PSD

5200MHz

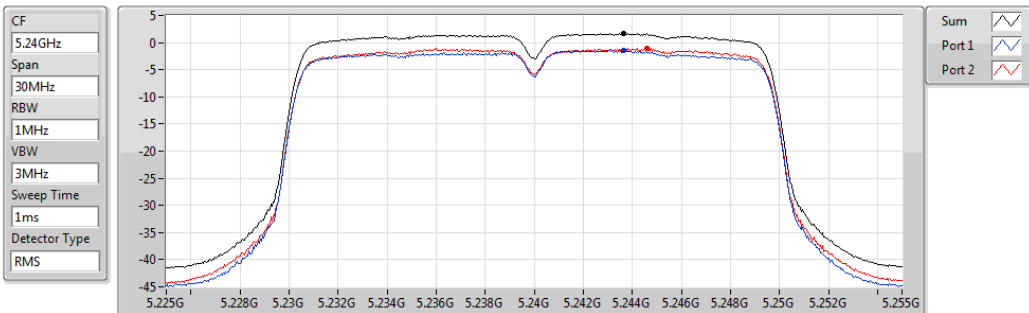


Sum	PD	Port 1	Port 2
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
2.14	2.14	-1.00	-0.57

802.11ax HEW20_Nss1,(MCS0)_2TX

PSD

5240MHz

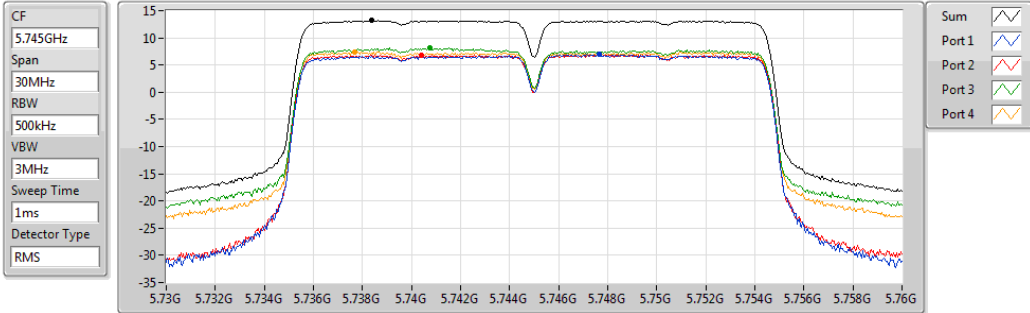


Sum	PD	Port 1	Port 2
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
1.68	1.68	-1.49	-0.99

802.11ax HEW20_Nss1,(MCS0)_4TX

PSD

5745MHz

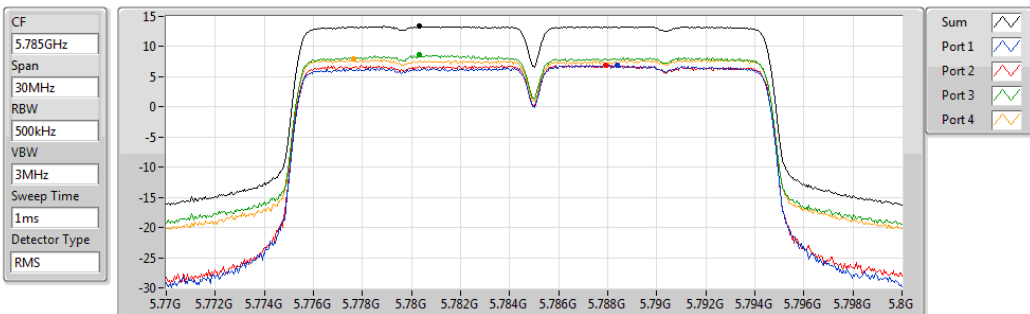


Sum	PD	Port 1	Port 2	Port 3	Port 4
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
13.17	13.17	7.04	6.82	8.22	7.40

802.11ax HEW20_Nss1,(MCS0)_4TX

PSD

5785MHz

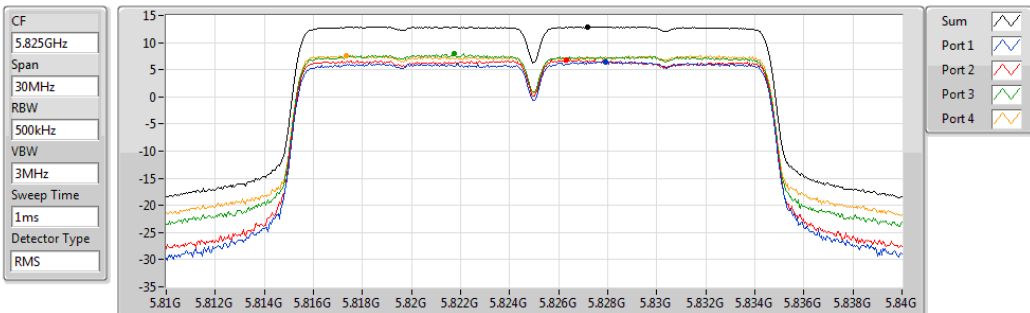


Sum	PD	Port 1	Port 2	Port 3	Port 4
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
13.38	13.38	6.98	6.96	8.65	7.98

802.11ax HEW20_Nss1,(MCS0)_4TX

PSD

5825MHz

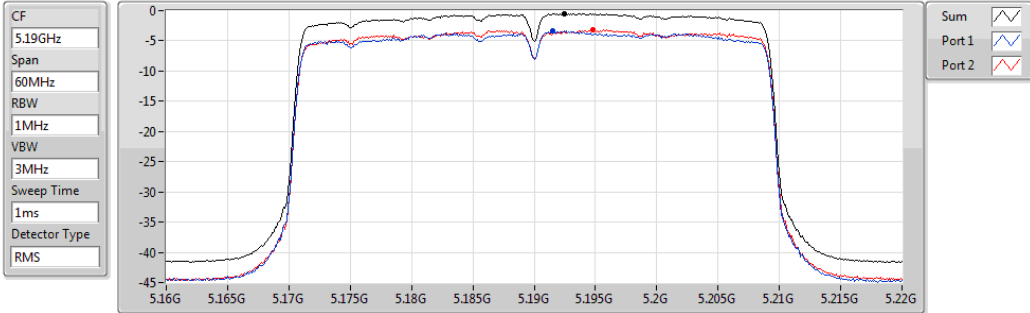


Sum	PD	Port 1	Port 2	Port 3	Port 4
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
12.93	12.93	6.49	6.82	7.94	7.56

802.11ax HEW40_Nss1,(MCS0)_2TX

PSD

5190MHz

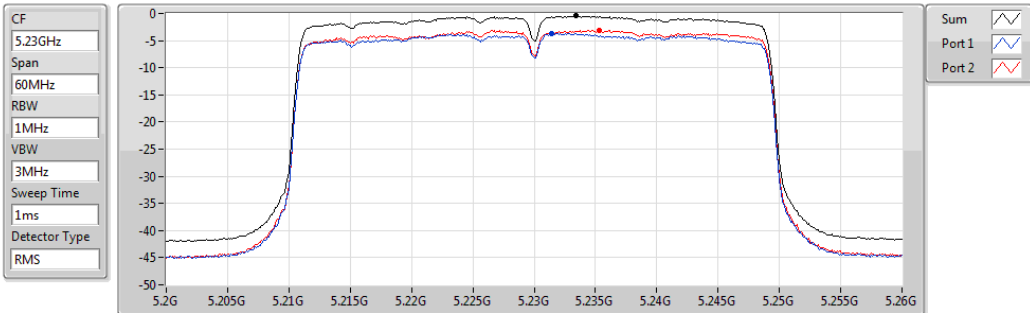


Sum	PD	Port 1	Port 2
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
-0.46	-0.46	-3.37	-3.12

802.11ax HEW40_Nss1,(MCS0)_2TX

PSD

5230MHz

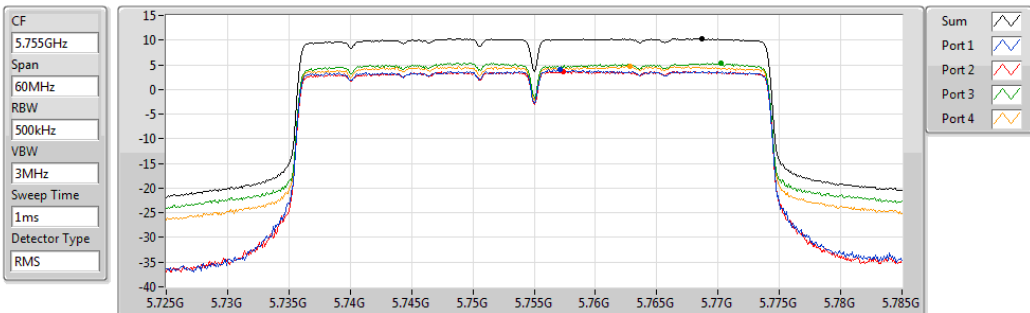


Sum	PD	Port 1	Port 2
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
-0.48	-0.48	-3.71	-3.07

802.11ax HEW40_Nss1,(MCS0)_4TX

PSD

5755MHz

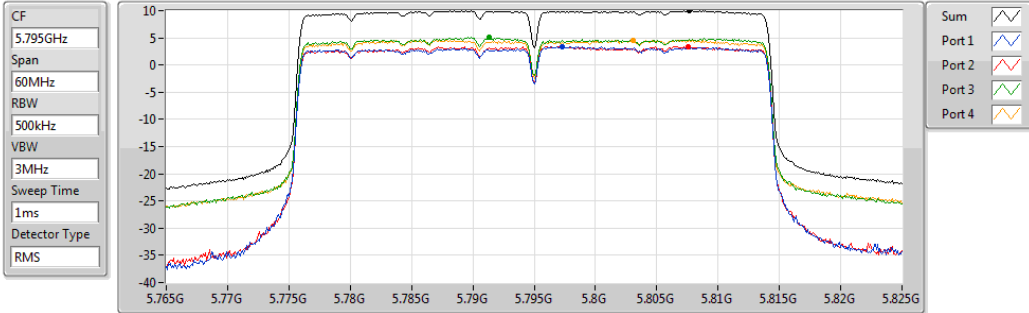


Sum	PD	Port 1	Port 2	Port 3	Port 4
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
10.28	10.28	3.96	3.72	5.39	4.73

802.11ax HEW40_Nss1,(MCS0)_4TX

PSD

5795MHz

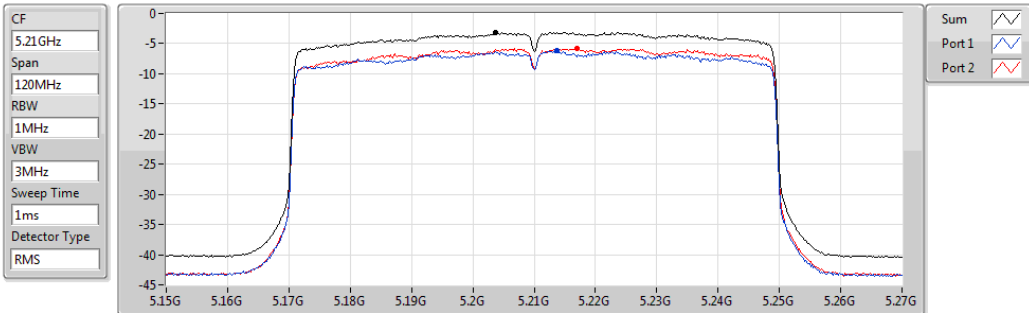


Sum	PD	Port 1	Port 2	Port 3	Port 4
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
9.95	9.95	3.44	3.42	5.07	4.58

802.11ax HEW80_Nss1,(MCS0)_2TX

PSD

5210MHz

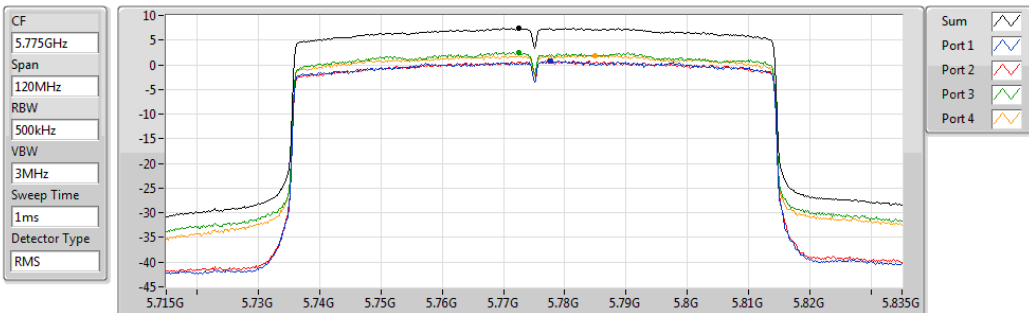


Sum	PD	Port 1	Port 2
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
-3.14	-3.14	-6.23	-5.87

802.11ax HEW80_Nss1,(MCS0)_4TX

PSD

5775MHz



Sum	PD	Port 1	Port 2	Port 3	Port 4
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
7.45	7.45	0.83	0.76	2.55	1.92

3.5 Transmitter Radiated and Band Edge Emissions

3.5.1 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.

Un-restricted band emissions above 1GHz Limit	
Operating Band	Limit
5.15 - 5.25 GHz	e.i.r.p. -27 dBm [68.2 dBuV/m@3m]
5.725 - 5.850 GHz	All emissions shall be limited to a level of -27 dBm/MHz at 75 MHz or more above or below the band edge increasing linearly to 10 dBm/MHz at 25 MHz above or below the band edge, and from 25 MHz above or below the band edge increasing linearly to a level of 15.6 dBm/MHz at 5 MHz above or below the band edge, and from 5 MHz above or below the band edge increasing linearly to a level of 27 dBm/MHz at the band edge.

Note 1: Measurements may be performed at a distance other than the limit distance provided they are not performed in the near field and the emissions to be measured can be detected by the measurement equipment. When performing measurements at a distance other than that specified, the results shall be extrapolated to the specified distance using an extrapolation factor of 20 dB/decade (inverse of linear distance for field-strength measurements, inverse of linear distance-squared for power-density measurements).

3.5.2 Test Procedures

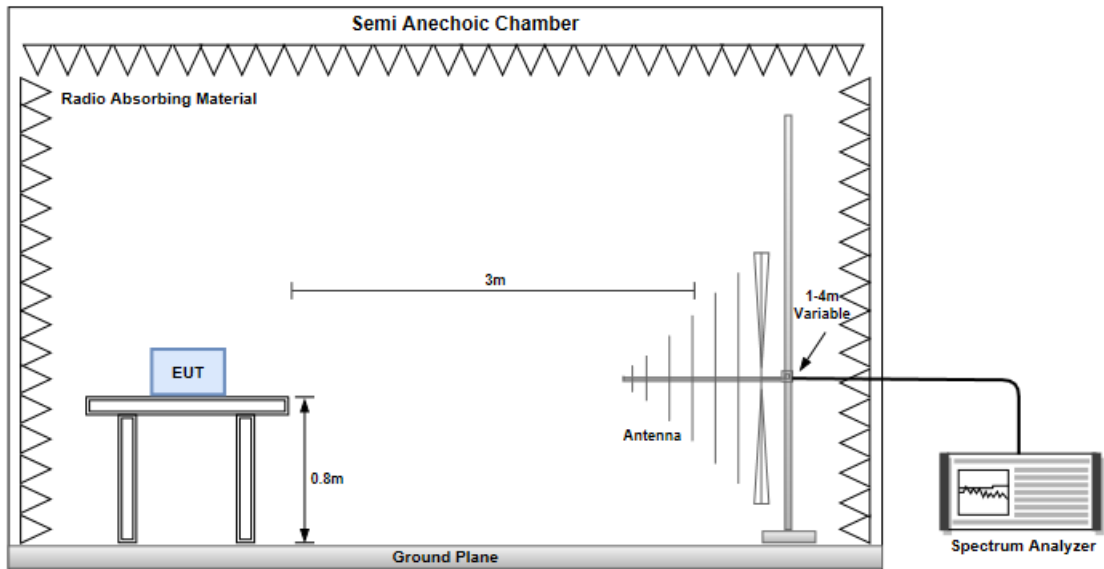
1. Measurement is made at a semi-anechoic chamber that incorporates a turntable allowing a EUT rotation of 360°. A continuously-rotating, remotely-controlled turntable is installed at the test site to support the EUT and facilitate determination of the direction of maximum radiation for each EUT emission 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. For emission measurements above 1 GHz, the table height is 1.5 m
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:

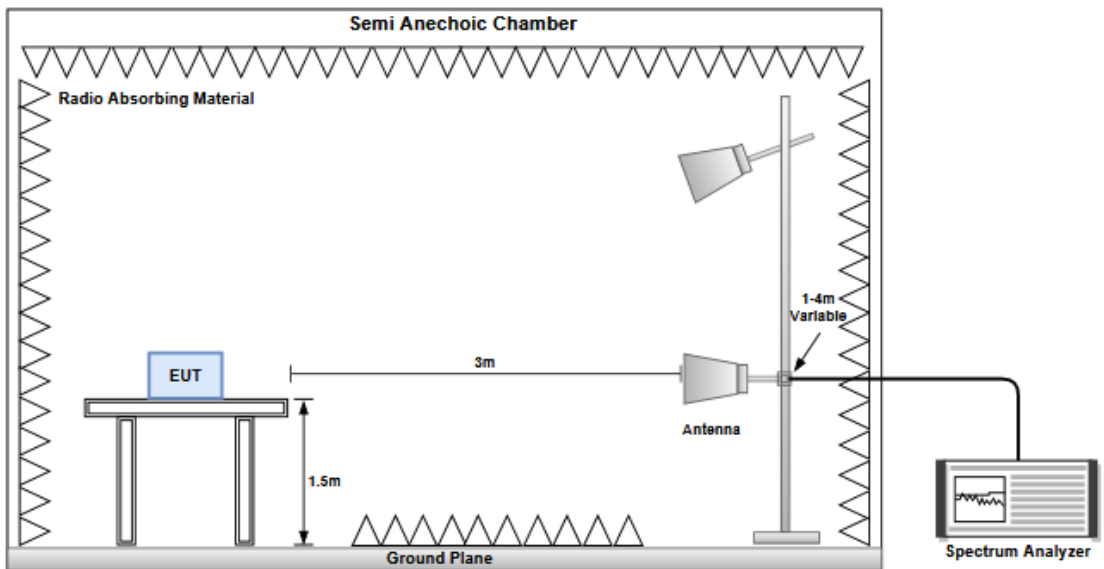
1. 120kHz measurement bandwidth of test receiver and Quasi-peak detector is for radiated emission below 1GHz.
2. RBW=1MHz, VBW=3MHz and Peak detector is for peak measured value of radiated emission above 1GHz.
3. RBW=1MHz, VBW=1/T and Peak detector is for average measured value of radiated emission above 1GHz.

3.5.3 Test Setup

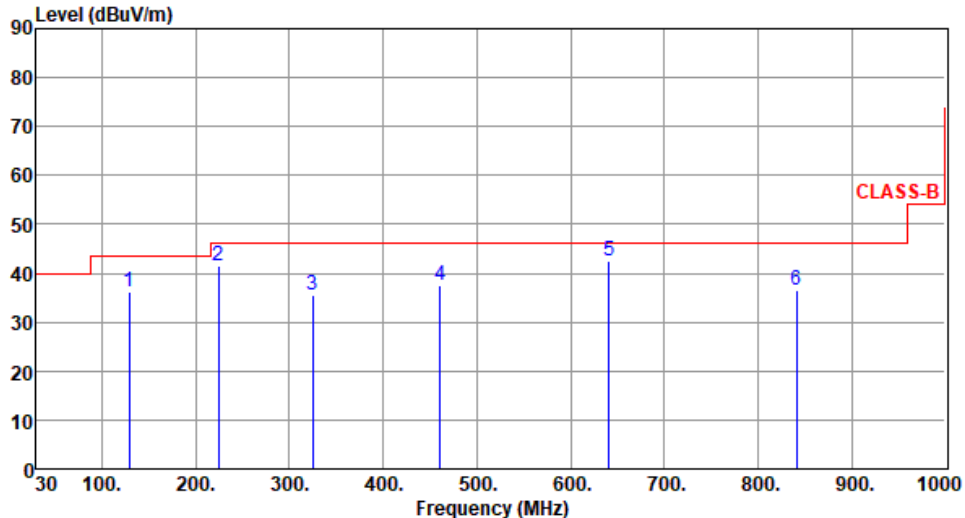
Radiated Emissions below 1 GHz



Radiated Emissions above 1 GHz

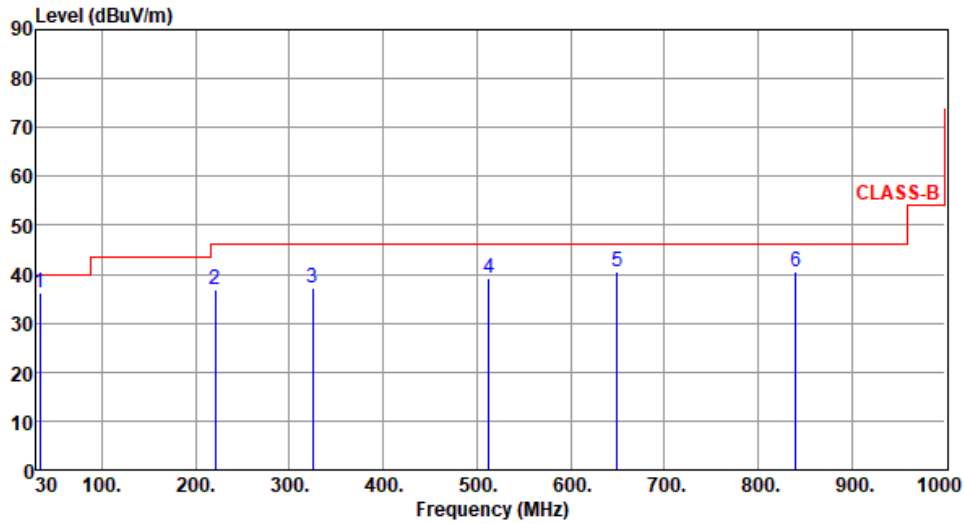


3.5.4 Transmitter Radiated Unwanted Emissions (Below 1GHz)

Modulation	11a	Test Freq. (MHz)	5180						
Polarization	Horizontal								
Test By : Roger Lu Temperature(°C):23 Humidity(%):65									
 <p>The graph plots Level (dBuV/m) on the y-axis (0 to 90) against Frequency (MHz) on the x-axis (30 to 1000). A red line represents the CLASS-B limit, which is constant at 45 dBuV/m from 30 MHz to 900 MHz, then steps up to 55 dBuV/m at 1000 MHz. Six blue vertical lines indicate emission peaks at 129.45 MHz (1), 224.26 MHz (2), 324.56 MHz (3), 461.22 MHz (4), 641.31 MHz (5), and 841.26 MHz (6). The peak levels are approximately 36.25, 41.66, 35.45, 37.48, 42.55, and 36.54 dBuV/m respectively.</p>									
	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB/m	Remark	ANT High cm	Turn Table deg
1	129.45	36.25	43.50	-7.25	46.08	-9.83	Peak	---	---
2	224.26	41.66	46.00	-4.34	53.68	-12.02	Peak	---	---
3	324.56	35.45	46.00	-10.55	42.91	-7.46	Peak	---	---
4	461.22	37.48	46.00	-8.52	41.57	-4.09	Peak	---	---
5	641.31	42.55	46.00	-3.45	42.97	-0.42	QP	166	112
6	841.26	36.54	46.00	-9.46	34.02	2.52	Peak	---	---
<p>Note 1: Emission Level (dBuV/m) = SA Reading (dBuV) + Factor* (dB/m) *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.</p>									

Modulation	11a	Test Freq. (MHz)	5180
Polarization	Vertical		

Test By :Roger Lu Temperature(°C):23 Humidity(%):65



	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB/m	Remark	ANT High cm	Turn Table deg
1	34.15	36.33	40.00	-3.67	45.76	-9.43	Peak	---	---
2	221.23	36.95	46.00	-9.05	48.90	-11.95	Peak	---	---
3	324.55	37.15	46.00	-8.85	44.61	-7.46	Peak	---	---
4	513.25	39.25	46.00	-6.75	42.24	-2.99	Peak	---	---
5	649.38	40.64	46.00	-5.36	41.05	-0.41	QP	100	254
6	840.26	40.56	46.00	-5.44	38.06	2.50	Peak	---	---

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

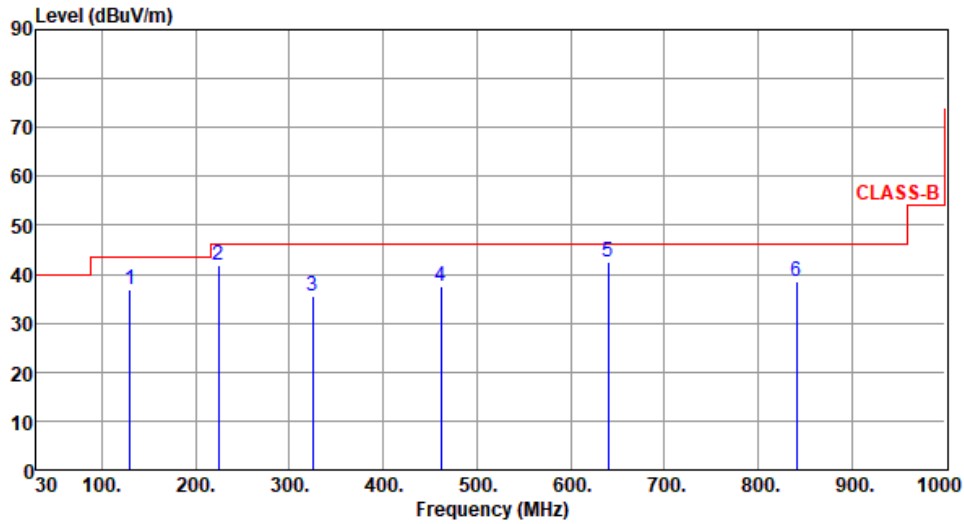
*Factor includes antenna factor , cable loss and amplifier gain

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)	5785
Polarization	Horizontal		

Test By :Roger Lu Temperature(°C):23 Humidity(%):65



	Freq. MHz	Emission level dBUV/m	Limit dBUV/m	Margin dB	SA reading dBUV	Factor dB/m	Remark	ANT High cm	Turn Table deg
1	130.35	36.90	43.50	-6.60	46.64	-9.74	Peak	---	---
2	224.26	41.68	46.00	-4.32	53.70	-12.02	Peak	---	---
3	325.12	35.45	46.00	-10.55	42.90	-7.45	Peak	---	---
4	461.59	37.49	46.00	-8.51	41.57	-4.08	Peak	---	---
5	640.33	42.55	46.00	-3.45	42.97	-0.42	QP	166	117
6	841.26	38.69	46.00	-7.31	36.17	2.52	Peak	---	---

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

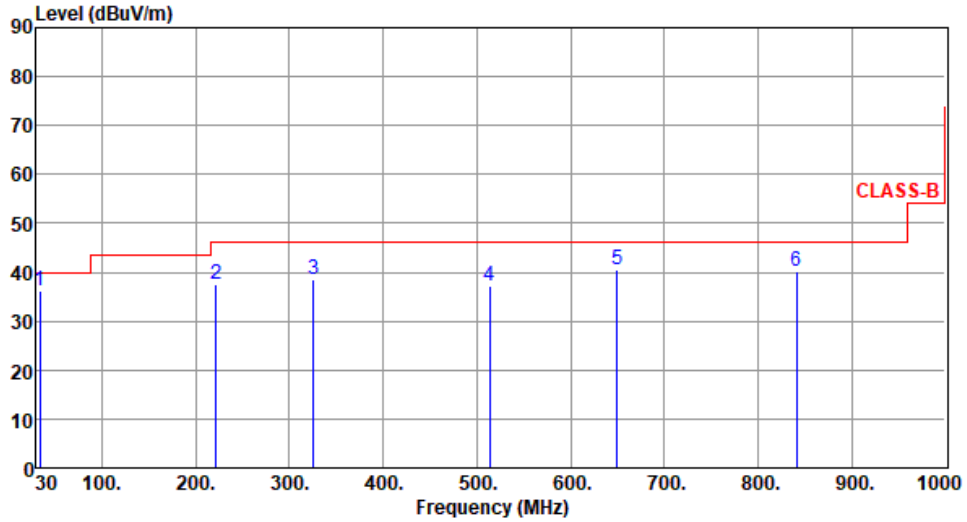
*Factor includes antenna factor , cable loss and amplifier gain

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)	5785
Polarization	Vertical		

Test By :Roger Lu Temperature(°C):23 Humidity(%):65



	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB/m	Remark	ANT High cm	Turn Table deg
1	33.56	36.22	40.00	-3.78	45.81	-9.59	Peak	---	---
2	221.38	37.45	46.00	-8.55	49.41	-11.96	Peak	---	---
3	325.29	38.46	46.00	-7.54	45.91	-7.45	Peak	---	---
4	513.64	37.11	46.00	-8.89	40.09	-2.98	Peak	---	---
5	650.13	40.61	46.00	-5.39	41.01	-0.40	QP	100	250
6	841.26	40.15	46.00	-5.85	37.63	2.52	Peak	---	---

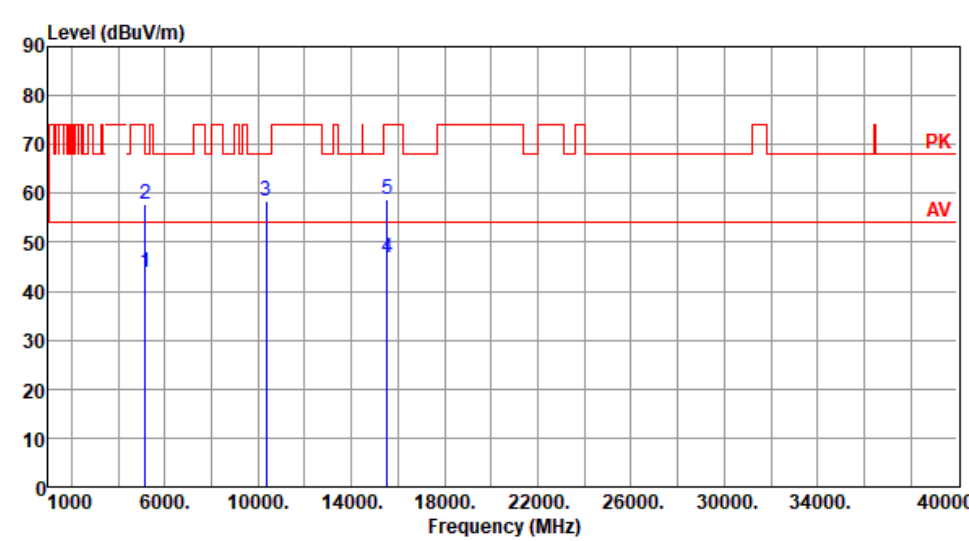
Note 1: Emission Level (dBuV/m) = SA Reading (dBuV) + Factor* (dB/m)

*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.

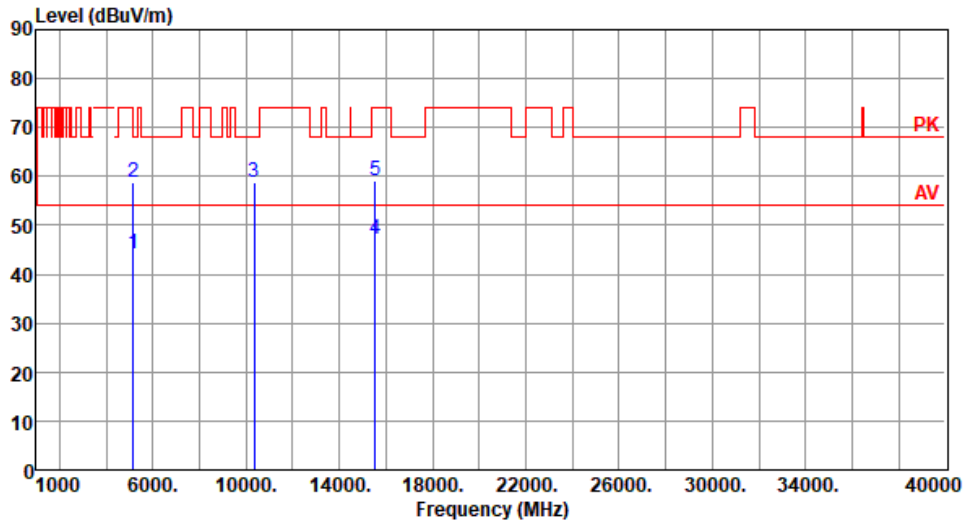
3.5.5 Transmitter Radiated Unwanted Emissions (Above 1GHz) for 11a

Modulation	11a	Test Freq. (MHz)	5180						
Polarization	Horizontal								
Test By : Akun Chung Temperature(°C): 23 Humidity(%): 69									
									
	Freq. MHz	Emission level dBUV/m	Limit dBUV/m	Margin dB	SA reading dBUV	Factor dB/m	Remark	ANT High cm	Turn Table deg
1	5150.00	43.79	54.00	-10.21	39.58	4.21	Average	100	294
2	5150.00	57.85	74.00	-16.15	53.64	4.21	Peak	100	294
3	10360.00	58.58	68.20	-9.62	44.59	13.99	Peak	100	45
4	15540.00	46.74	54.00	-7.26	32.56	14.18	Average	100	60
5	15540.00	58.77	74.00	-15.23	44.59	14.18	Peak	100	60

Note 1: Emission Level (dBUV/m) = SA Reading (dBUV) + Factor* (dB/m)
 *Factor includes antenna factor , cable loss and amplifier gain
 Note 2: Margin (dB) = Emission level (dBUV/m) – Limit (dBUV/m).

Modulation	11a	Test Freq. (MHz)	5180
Polarization	Vertical		

Test By :Akun Chung Temperature(°C):23 Humidity(%):69



	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB/m	Remark	ANT High cm	Turn Table deg
1	5150.00	44.32	54.00	-9.68	40.11	4.21	Average	333	201
2	5150.00	58.76	74.00	-15.24	54.55	4.21	Peak	333	201
3	10360.00	58.95	68.20	-9.25	44.96	13.99	Peak	100	115
4	15540.00	47.06	54.00	-6.94	32.88	14.18	Average	100	118
5	15540.00	58.96	74.00	-15.04	44.78	14.18	Peak	100	118

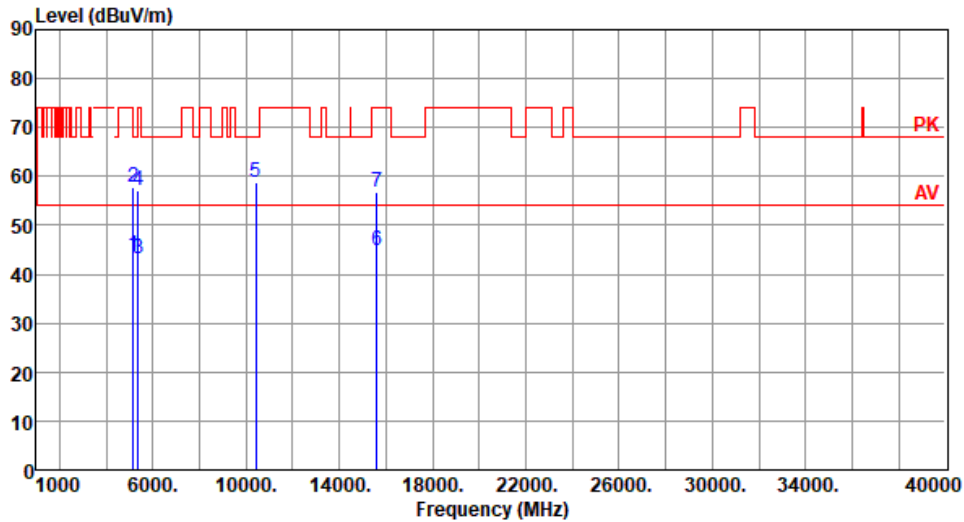
Note 1: Emission Level (dBuV/m) = SA Reading (dBuV) + Factor* (dB/m)

*Factor includes antenna factor , cable loss and amplifier gain

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

Modulation	11a	Test Freq. (MHz)	5200
Polarization	Horizontal		

Test By : Akun Chung Temperature(°C): 23 Humidity(%): 69



	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB/m	Remark	ANT High cm	Turn Table deg
1	5150.00	43.89	54.00	-10.11	39.68	4.21	Average	105	295
2	5150.00	57.67	74.00	-16.33	53.46	4.21	Peak	105	295
3	5350.00	43.34	54.00	-10.66	39.46	3.88	Average	105	295
4	5350.00	57.13	74.00	-16.87	53.25	3.88	Peak	105	295
5	10400.00	58.72	68.20	-9.48	44.66	14.06	Peak	100	58
6	15600.00	44.75	54.00	-9.25	30.66	14.09	Average	100	52
7	15600.00	56.74	74.00	-17.26	42.65	14.09	Peak	100	52

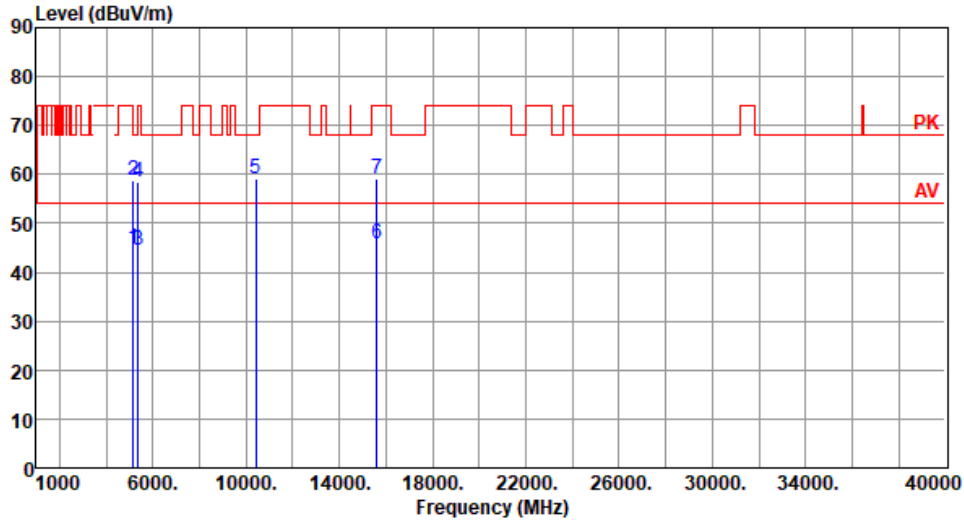
Note 1: Emission Level (dBuV/m) = SA Reading (dBuV) + Factor* (dB/m)

*Factor includes antenna factor , cable loss and amplifier gain

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

Modulation	11a	Test Freq. (MHz)	5200
Polarization	Vertical		

Test By :Akun Chung Temperature(°C):23 Humidity(%):69

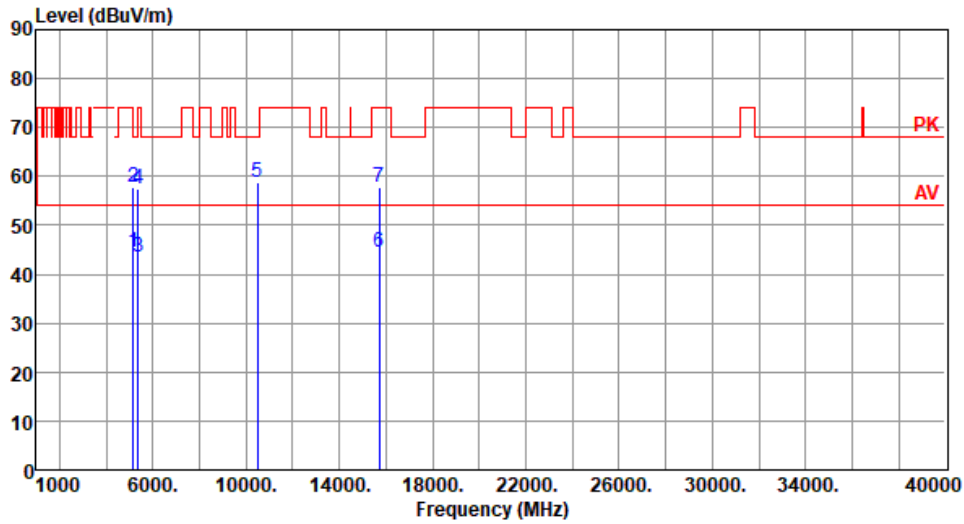


	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB/m	Remark	ANT High cm	Turn Table deg
1	5150.00	44.76	54.00	-9.24	40.55	4.21	Average	357	191
2	5150.00	58.73	74.00	-15.27	54.52	4.21	Peak	357	191
3	5350.00	44.53	54.00	-9.47	40.65	3.88	Average	357	191
4	5350.00	58.44	74.00	-15.56	54.56	3.88	Peak	357	191
5	10400.00	59.17	68.20	-9.03	45.11	14.06	Peak	100	102
6	15600.00	45.97	54.00	-8.03	31.88	14.09	Average	100	104
7	15600.00	58.97	74.00	-15.03	44.88	14.09	Peak	100	104

Note 1: Emission Level (dBuV/m) = SA Reading (dBuV) + Factor* (dB/m)
 *Factor includes antenna factor , cable loss and amplifier gain
 Note 2: Margin (dB) = Emission level (dBuV/m) – Limit (dBuV/m).

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

Test By : Akun Chung Temperature(°C): 23 Humidity(%): 69



	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB/m	Remark	ANT High cm	Turn Table deg
1	5150.00	44.46	54.00	-9.54	40.25	4.21	Average	110	296
2	5150.00	57.80	74.00	-16.20	53.59	4.21	Peak	110	296
3	5350.00	43.56	54.00	-10.44	39.68	3.88	Average	110	296
4	5350.00	57.37	74.00	-16.63	53.49	3.88	Peak	110	296
5	10480.00	58.67	68.20	-9.53	44.56	14.11	Peak	100	54
6	15720.00	44.58	54.00	-9.42	30.60	13.98	Average	100	50
7	15720.00	57.63	74.00	-16.37	43.65	13.98	Peak	100	50

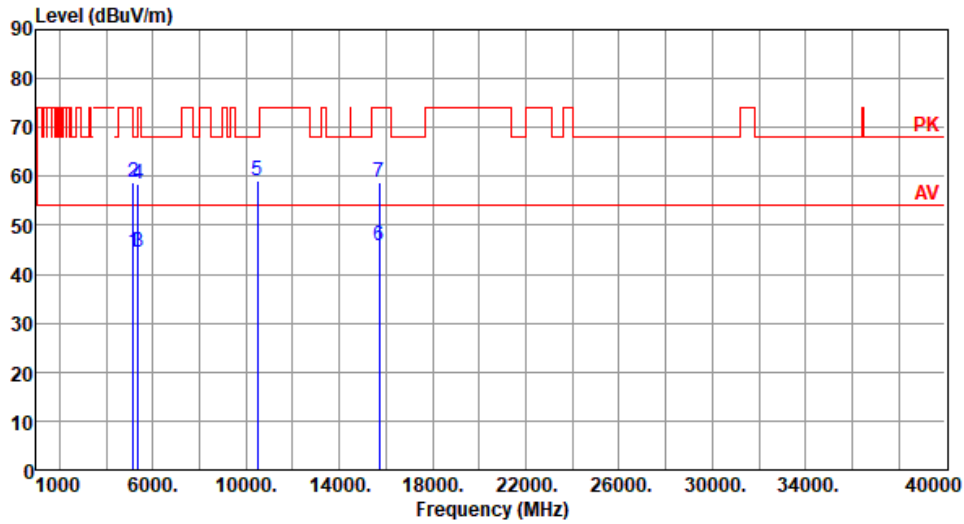
Note 1: Emission Level (dBuV/m) = SA Reading (dBuV) + Factor* (dB/m)

*Factor includes antenna factor , cable loss and amplifier gain

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

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

Test By : Akun Chung Temperature(°C): 23 Humidity(%): 69



	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB/m	Remark	ANT High cm	Turn Table deg
1	5150.00	44.66	54.00	-9.34	40.45	4.21	Average	355	202
2	5150.00	58.66	74.00	-15.34	54.45	4.21	Peak	355	202
3	5350.00	44.36	54.00	-9.64	40.48	3.88	Average	355	202
4	5350.00	58.36	74.00	-15.64	54.48	3.88	Peak	355	202
5	10480.00	58.98	68.20	-9.22	44.87	14.11	Peak	100	118
6	15720.00	45.77	54.00	-8.23	31.79	13.98	Average	100	101
7	15720.00	58.76	74.00	-15.24	44.78	13.98	Peak	100	101

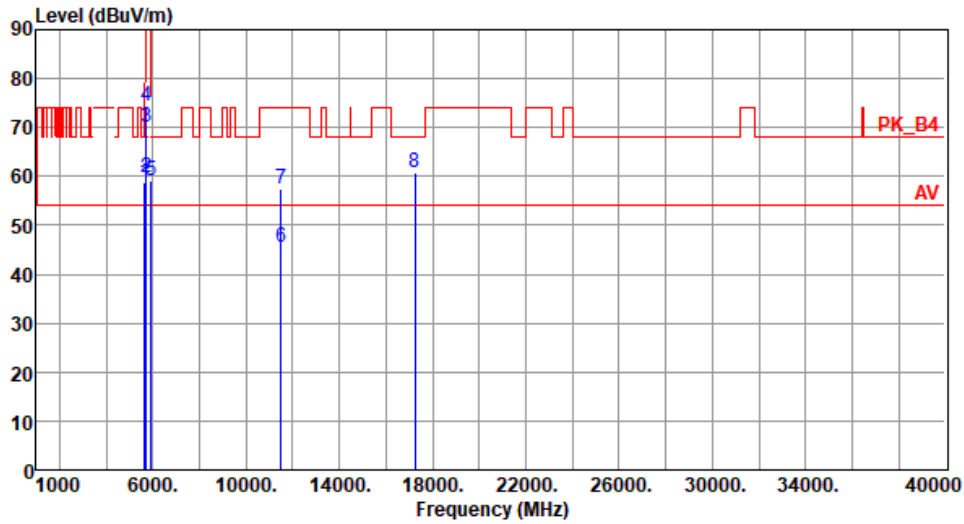
Note 1: Emission Level (dBuV/m) = SA Reading (dBuV) + Factor* (dB/m)

*Factor includes antenna factor , cable loss and amplifier gain

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

Modulation	11a	Test Freq. (MHz)	5745
Polarization	Horizontal		

Test By : Akun Chung Temperature(°C): 25 Humidity(%): 63



	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB/m	Remark	ANT High cm	Turn Table deg
1	5650.00	58.68	68.20	-9.52	54.26	4.42	Peak	155	232
2	5700.00	59.93	105.20	-45.27	55.26	4.67	Peak	155	232
3	5720.00	70.23	110.80	-40.57	65.46	4.77	Peak	155	232
4	5725.00	74.46	122.20	-47.74	69.66	4.80	Peak	155	232
5	5925.00	59.09	68.20	-9.11	53.66	5.43	Peak	155	232
6	11490.00	45.38	54.00	-8.62	31.45	13.93	Average	105	33
7	11490.00	57.49	74.00	-16.51	43.56	13.93	Peak	105	33
8	17235.00	60.81	68.20	-7.39	43.49	17.32	Peak	288	25

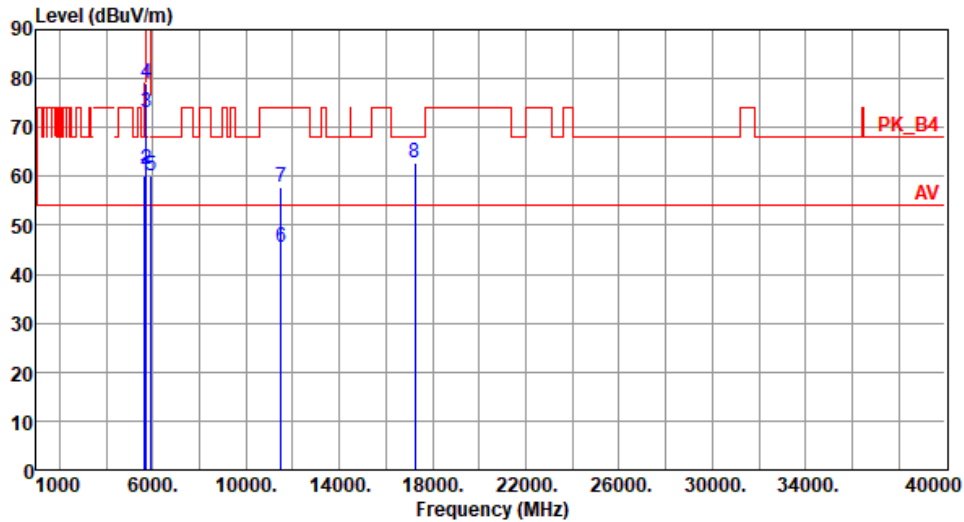
Note 1: Emission Level (dBuV/m) = SA Reading (dBuV) + Factor* (dB/m)

*Factor includes antenna factor , cable loss and amplifier gain

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

Modulation	11a	Test Freq. (MHz)	5745
Polarization	Vertical		

Test By : Akun Chung Temperature(°C): 25 Humidity(%): 63



	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB/m	Remark	ANT High cm	Turn Table deg
1	5650.00	60.00	68.20	-8.20	55.58	4.42	Peak	164	215
2	5700.00	61.52	105.20	-43.68	56.85	4.67	Peak	164	215
3	5720.00	73.13	110.80	-37.67	68.36	4.77	Peak	164	215
4	5725.00	79.08	122.20	-43.12	74.28	4.80	Peak	164	215
5	5925.00	60.19	68.20	-8.01	54.76	5.43	Peak	164	215
6	11490.00	45.61	54.00	-8.39	31.68	13.93	Average	155	352
7	11490.00	57.78	74.00	-16.22	43.85	13.93	Peak	155	352
8	17235.00	62.77	68.20	-5.43	45.45	17.32	Peak	309	42

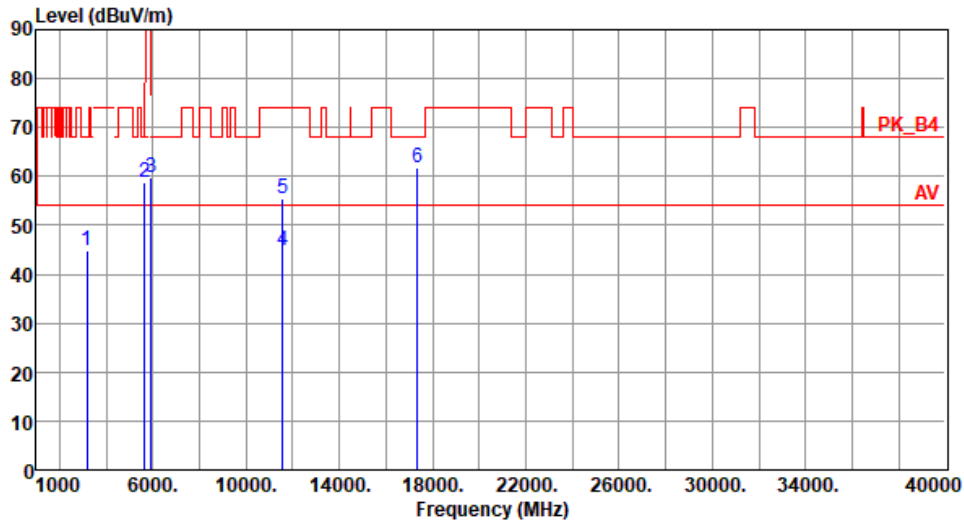
Note 1: Emission Level (dBuV/m) = SA Reading (dBuV) + Factor* (dB/m)

*Factor includes antenna factor , cable loss and amplifier gain

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

Modulation	11a	Test Freq. (MHz)	5785
Polarization	Horizontal		

Test By : Akun Chung Temperature(°C): 25 Humidity(%): 63



	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB/m	Remark	ANT High cm	Turn Table deg
1	3156.00	44.86	68.20	-23.34	45.56	-0.70	Peak	202	355
2	5650.00	58.68	68.20	-9.52	54.26	4.42	Peak	156	239
3	5925.00	59.75	68.20	-8.45	54.32	5.43	Peak	156	239
4	11570.00	44.95	54.00	-9.05	31.12	13.83	Average	103	35
5	11570.00	55.35	74.00	-18.65	41.52	13.83	Peak	103	35
6	17355.00	61.82	68.20	-6.38	43.89	17.93	Peak	285	29

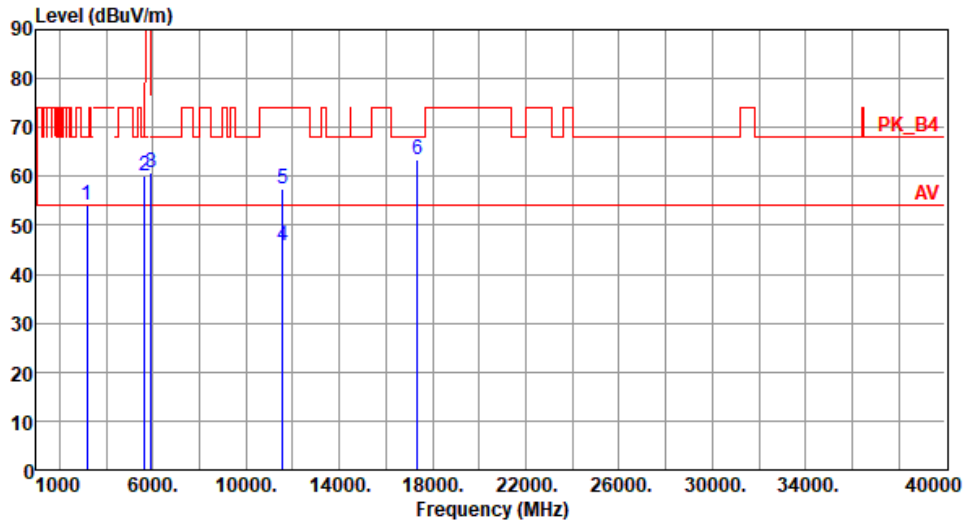
Note 1: Emission Level (dBuV/m) = SA Reading (dBuV) + Factor* (dB/m)

*Factor includes antenna factor , cable loss and amplifier gain

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

Modulation	11a	Test Freq. (MHz)	5785
Polarization	Vertical		

Test By : Akun Chung Temperature(°C): 25 Humidity(%): 63



	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB/m	Remark	ANT High cm	Turn Table deg
1	3156.00	54.02	68.20	-14.18	54.72	-0.70	Peak	300	40
2	5650.00	60.00	68.20	-8.20	55.58	4.42	Peak	168	357
3	5925.00	60.92	68.20	-7.28	55.49	5.43	Peak	168	357
4	11570.00	45.71	54.00	-8.29	31.88	13.83	Average	171	344
5	11570.00	57.50	74.00	-16.50	43.67	13.83	Peak	171	344
6	17355.00	63.52	68.20	-4.68	45.59	17.93	Peak	315	45

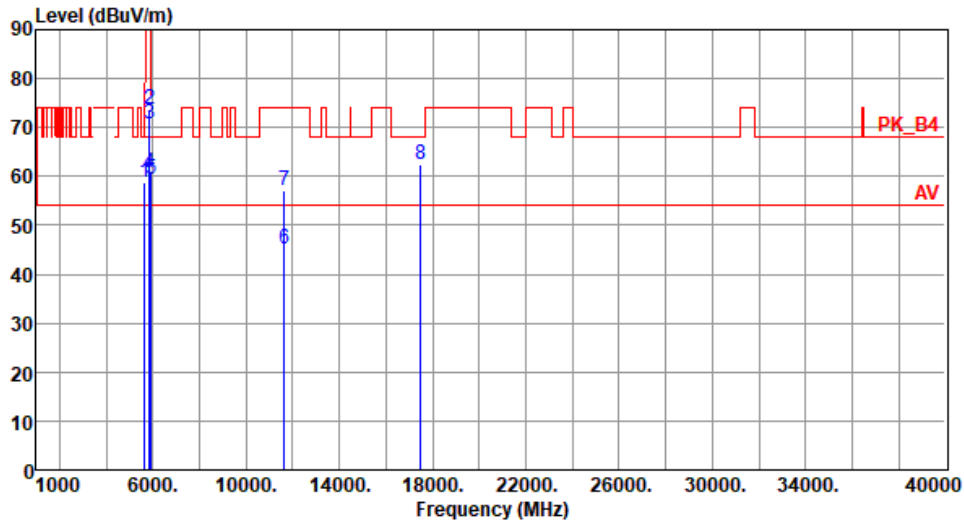
Note 1: Emission Level (dBuV/m) = SA Reading (dBuV) + Factor* (dB/m)

*Factor includes antenna factor , cable loss and amplifier gain

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

Modulation	11a	Test Freq. (MHz)	5825
Polarization	Horizontal		

Test By : Akun Chung Temperature(°C): 25 Humidity(%): 63



	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB/m	Remark	ANT High cm	Turn Table deg
1	5650.00	58.75	68.20	-9.45	54.33	4.42	Peak	105	34
2	5850.00	73.78	122.20	-48.42	68.59	5.19	Peak	105	34
3	5855.00	70.67	110.80	-40.13	65.46	5.21	Peak	105	34
4	5875.00	60.76	105.20	-44.44	55.46	5.30	Peak	105	34
5	5925.00	59.57	68.20	-8.63	54.14	5.43	Peak	105	34
6	11650.00	45.17	54.00	-8.83	31.59	13.58	Average	105	40
7	11650.00	56.97	74.00	-17.03	43.39	13.58	Peak	105	40
8	17475.00	62.29	68.20	-5.91	43.55	18.74	Peak	282	26

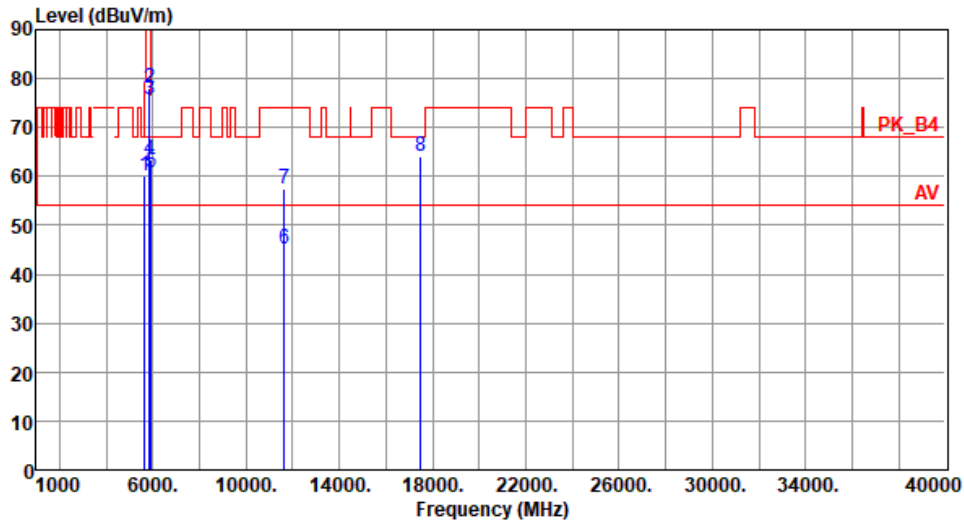
Note 1: Emission Level (dBuV/m) = SA Reading (dBuV) + Factor* (dB/m)

*Factor includes antenna factor , cable loss and amplifier gain

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

Modulation	11a	Test Freq. (MHz)	5825
Polarization	Vertical		

Test By : Akun Chung Temperature(°C): 25 Humidity(%): 63



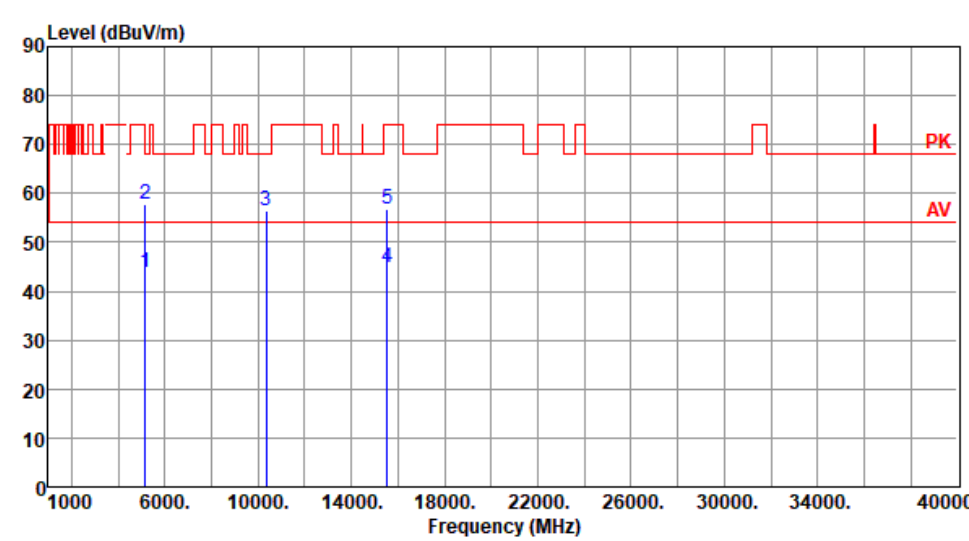
	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB/m	Remark	ANT High cm	Turn Table deg
1	5650.00	60.12	68.20	-8.08	55.70	4.42	Peak	102	220
2	5850.00	78.06	122.20	-44.14	72.87	5.19	Peak	102	220
3	5855.00	75.77	110.80	-35.03	70.56	5.21	Peak	102	220
4	5875.00	63.28	105.20	-41.92	57.98	5.30	Peak	102	220
5	5925.00	60.86	68.20	-7.34	55.43	5.43	Peak	102	220
6	11650.00	45.30	54.00	-8.70	31.72	13.58	Average	157	359
7	11650.00	57.33	74.00	-16.67	43.75	13.58	Peak	157	359
8	17475.00	64.16	68.20	-4.04	45.42	18.74	Peak	306	36

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

*Factor includes antenna factor , cable loss and amplifier gain

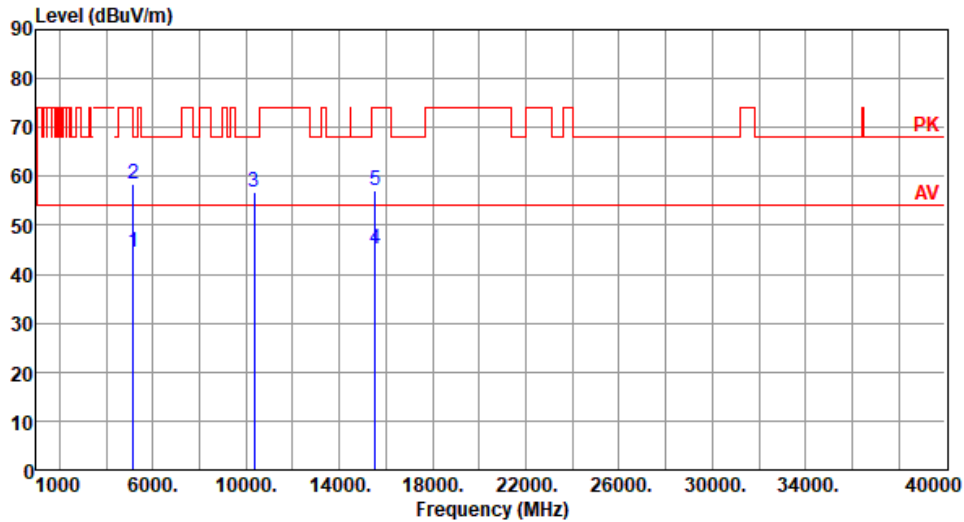
Note 2: Margin (dB) = Emission level (dBuV/m) – Limit (dBuV/m).

3.5.6 Transmitter Radiated Unwanted Emissions (Above 1GHz) for ax HE20-OFDMA

Modulation	ax HE20-OFDMA	Test Freq. (MHz)	5180																																																							
Polarization	Horizontal																																																									
Test By : Akun Chung Temperature(°C): 23 Humidity(%): 69																																																										
																																																										
	<table border="1"> <thead> <tr> <th>Freq. MHz</th> <th>Emission level dBuV/m</th> <th>Limit dBuV/m</th> <th>Margin dB</th> <th>SA reading dBuV</th> <th>Factor dB/m</th> <th>Remark</th> <th>ANT High cm</th> <th>Turn Table deg</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>5150.00</td> <td>43.77</td> <td>54.00</td> <td>-10.23</td> <td>39.56</td> <td>4.21</td> <td>Average</td> <td>109 295</td> </tr> <tr> <td>2</td> <td>5150.00</td> <td>57.89</td> <td>74.00</td> <td>-16.11</td> <td>53.68</td> <td>4.21</td> <td>Peak</td> <td>109 295</td> </tr> <tr> <td>3</td> <td>10360.00</td> <td>56.56</td> <td>68.20</td> <td>-11.64</td> <td>42.57</td> <td>13.99</td> <td>Peak</td> <td>100 55</td> </tr> <tr> <td>4</td> <td>15540.00</td> <td>44.76</td> <td>54.00</td> <td>-9.24</td> <td>30.58</td> <td>14.18</td> <td>Average</td> <td>100 50</td> </tr> <tr> <td>5</td> <td>15540.00</td> <td>56.82</td> <td>74.00</td> <td>-17.18</td> <td>42.64</td> <td>14.18</td> <td>Peak</td> <td>100 50</td> </tr> </tbody> </table>	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB/m	Remark	ANT High cm	Turn Table deg	1	5150.00	43.77	54.00	-10.23	39.56	4.21	Average	109 295	2	5150.00	57.89	74.00	-16.11	53.68	4.21	Peak	109 295	3	10360.00	56.56	68.20	-11.64	42.57	13.99	Peak	100 55	4	15540.00	44.76	54.00	-9.24	30.58	14.18	Average	100 50	5	15540.00	56.82	74.00	-17.18	42.64	14.18	Peak	100 50			
Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB/m	Remark	ANT High cm	Turn Table deg																																																		
1	5150.00	43.77	54.00	-10.23	39.56	4.21	Average	109 295																																																		
2	5150.00	57.89	74.00	-16.11	53.68	4.21	Peak	109 295																																																		
3	10360.00	56.56	68.20	-11.64	42.57	13.99	Peak	100 55																																																		
4	15540.00	44.76	54.00	-9.24	30.58	14.18	Average	100 50																																																		
5	15540.00	56.82	74.00	-17.18	42.64	14.18	Peak	100 50																																																		
<p>Note 1: Emission Level (dBuV/m) = SA Reading (dBuV) + Factor* (dB/m) *Factor includes antenna factor , cable loss and amplifier gain Note 2: Margin (dB) = Emission level (dBuV/m) – Limit (dBuV/m).</p>																																																										

Modulation	ax HE20-OFDMA	Test Freq. (MHz)	5180
Polarization	Vertical		

Test By :Akun Chung Temperature(°C):23 Humidity(%):69



	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB/m	Remark	ANT High cm	Turn Table deg
1	5150.00	44.44	54.00	-9.56	40.23	4.21	Average	338	203
2	5150.00	58.47	74.00	-15.53	54.26	4.21	Peak	338	203
3	10360.00	56.87	68.20	-11.33	42.88	13.99	Peak	100	107
4	15540.00	45.06	54.00	-8.94	30.88	14.18	Average	100	101
5	15540.00	56.98	74.00	-17.02	42.80	14.18	Peak	100	101

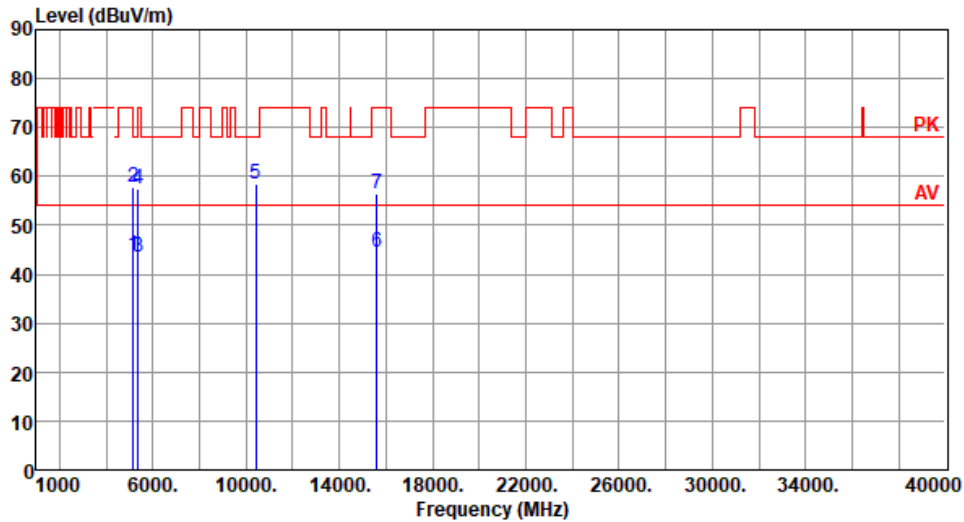
Note 1: Emission Level (dBuV/m) = SA Reading (dBuV) + Factor* (dB/m)

*Factor includes antenna factor , cable loss and amplifier gain

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

Modulation	ax HE20-OFDMA	Test Freq. (MHz)	5200
Polarization	Horizontal		

Test By : Akun Chung Temperature(°C): 23 Humidity(%): 69



	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB/m	Remark	ANT High cm	Turn Table deg
1	5150.00	43.88	54.00	-10.12	39.67	4.21	Average	100	294
2	5150.00	57.88	74.00	-16.12	53.67	4.21	Peak	100	294
3	5350.00	43.56	54.00	-10.44	39.68	3.88	Average	100	294
4	5350.00	57.52	74.00	-16.48	53.64	3.88	Peak	100	294
5	10400.00	58.50	68.20	-9.70	44.44	14.06	Peak	100	50
6	15600.00	44.57	54.00	-9.43	30.48	14.09	Average	100	55
7	15600.00	56.57	74.00	-17.43	42.48	14.09	Peak	100	55

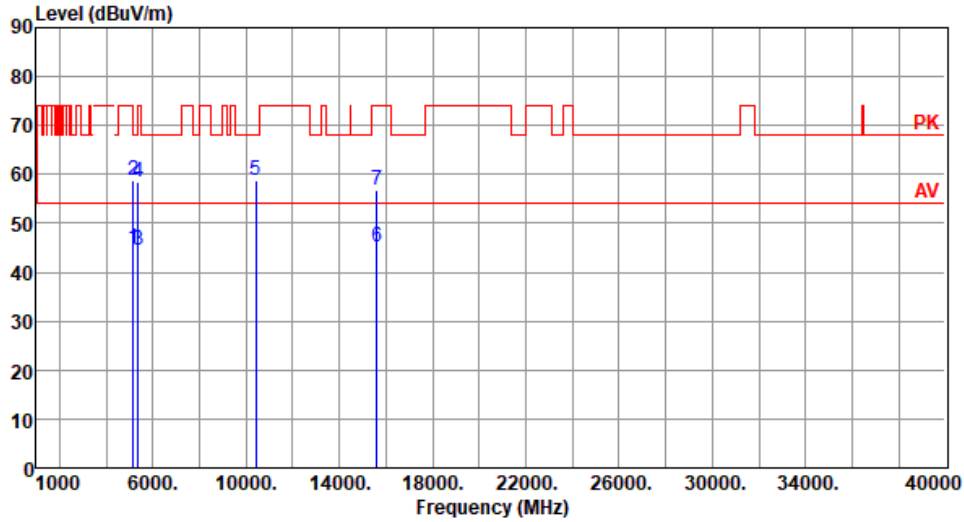
Note 1: Emission Level (dBuV/m) = SA Reading (dBuV) + Factor* (dB/m)

*Factor includes antenna factor , cable loss and amplifier gain

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

Modulation	ax HE20-OFDMA	Test Freq. (MHz)	5200
Polarization	Vertical		

Test By :Akun Chung Temperature(°C):23 Humidity(%):69



	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB/m	Remark	ANT High cm	Turn Table deg
1	5150.00	44.87	54.00	-9.13	40.66	4.21	Average	355	181
2	5150.00	58.89	74.00	-15.11	54.68	4.21	Peak	355	181
3	5350.00	44.59	54.00	-9.41	40.71	3.88	Average	355	181
4	5350.00	58.58	74.00	-15.42	54.70	3.88	Peak	355	181
5	10400.00	58.91	68.20	-9.29	44.85	14.06	Peak	100	99
6	15600.00	45.04	54.00	-8.96	30.95	14.09	Average	100	108
7	15600.00	56.94	74.00	-17.06	42.85	14.09	Peak	100	108

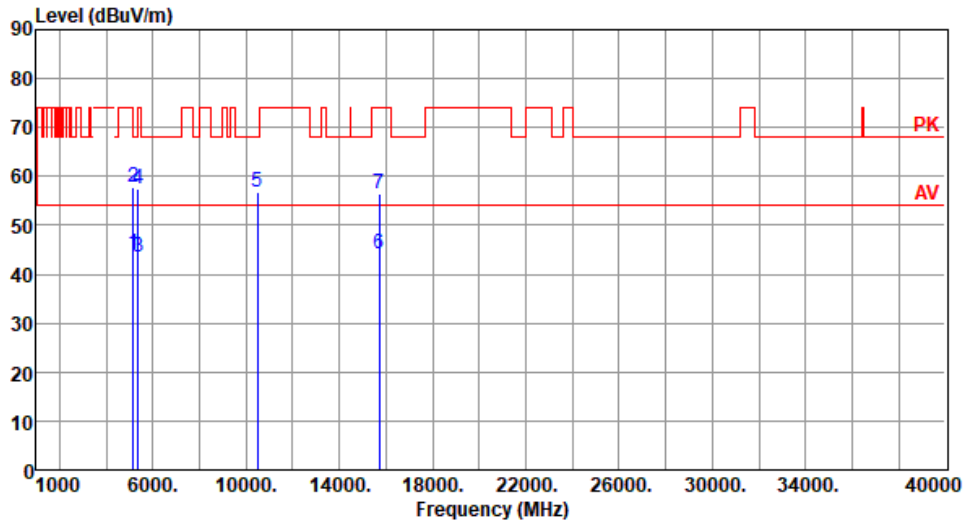
Note 1: Emission Level (dBuV/m) = SA Reading (dBuV) + Factor* (dB/m)

*Factor includes antenna factor , cable loss and amplifier gain

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

Modulation	ax HE20-OFDMA	Test Freq. (MHz)	5240
Polarization	Horizontal		

Test By :Akun Chung Temperature(°C):23 Humidity(%):69



	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB/m	Remark	ANT High cm	Turn Table deg
1	5150.00	44.10	54.00	-9.90	39.89	4.21	Average	106	294
2	5150.00	57.85	74.00	-16.15	53.64	4.21	Peak	106	294
3	5350.00	43.35	54.00	-10.65	39.47	3.88	Average	106	294
4	5350.00	57.52	74.00	-16.48	53.64	3.88	Peak	106	294
5	10480.00	56.66	68.20	-11.54	42.55	14.11	Peak	100	60
6	15720.00	44.14	54.00	-9.86	30.16	13.98	Average	100	55
7	15720.00	56.45	74.00	-17.55	42.47	13.98	Peak	100	55

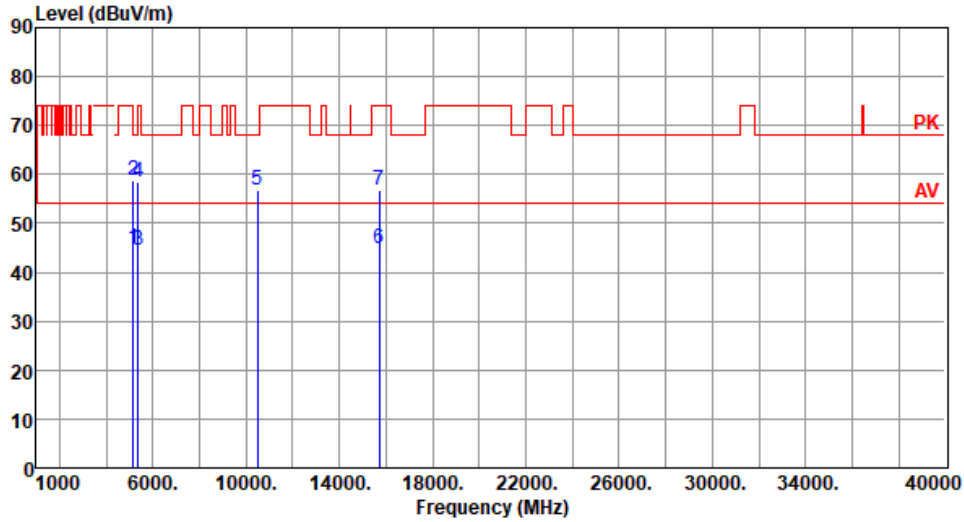
Note 1: Emission Level (dBuV/m) = SA Reading (dBuV) + Factor* (dB/m)

*Factor includes antenna factor , cable loss and amplifier gain

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

Modulation	ax HE20-OFDMA	Test Freq. (MHz)	5240
Polarization	Vertical		

Test By :Akun Chung Temperature(°C):23 Humidity(%):69



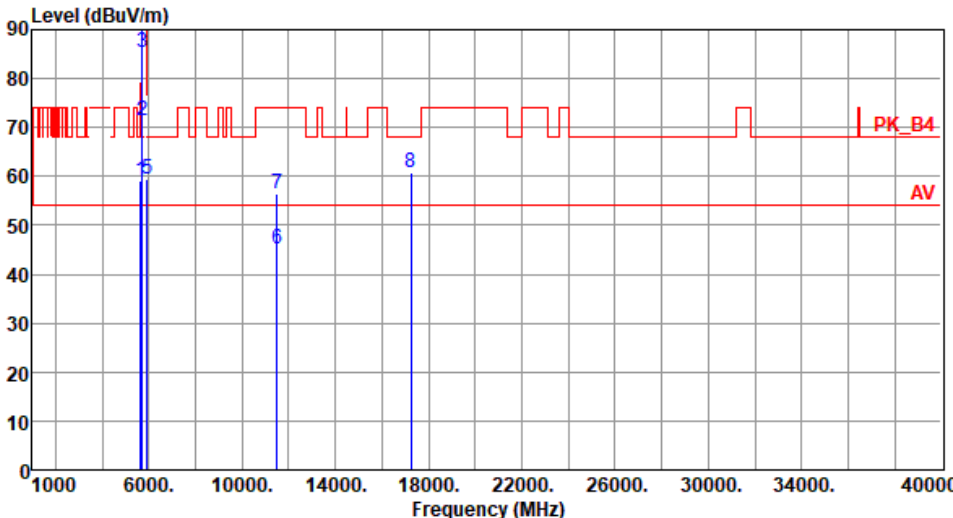
	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB/m	Remark	ANT High cm	Turn Table deg
1	5150.00	44.89	54.00	-9.11	40.68	4.21	Average	340	201
2	5150.00	58.79	74.00	-15.21	54.58	4.21	Peak	340	201
3	5350.00	44.46	54.00	-9.54	40.58	3.88	Average	340	201
4	5350.00	58.40	74.00	-15.60	54.52	3.88	Peak	340	201
5	10480.00	56.89	68.20	-11.31	42.78	14.11	Peak	100	109
6	15720.00	44.79	54.00	-9.21	30.81	13.98	Average	100	105
7	15720.00	56.84	74.00	-17.16	42.86	13.98	Peak	100	105

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

*Factor includes antenna factor , cable loss and amplifier gain

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

Modulation	ax HE20-OFDMA	Test Freq. (MHz)	5745
Polarization	Horizontal		
Test By : Akun Chung		Temperature(°C): 25	Humidity(%): 63

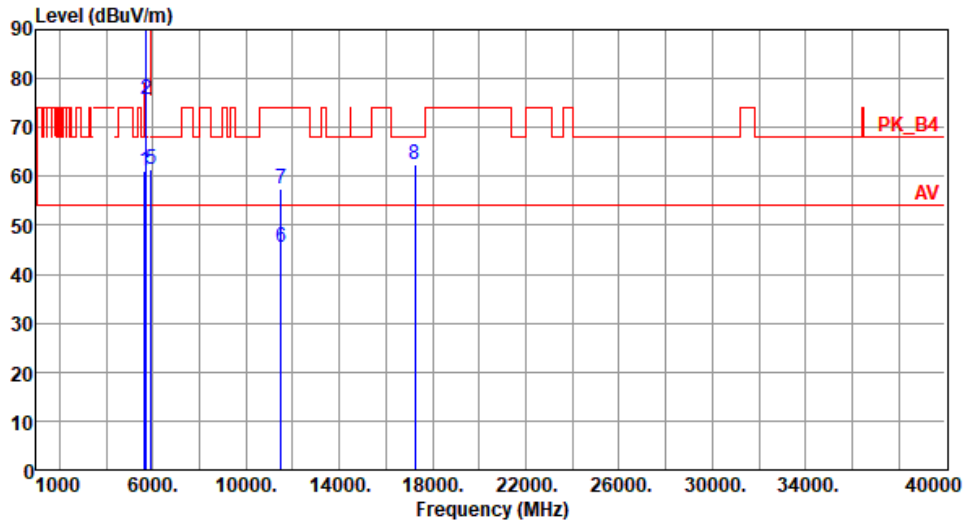


	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB/m	Remark	ANT High cm	Turn Table deg
1	5650.00	58.98	68.20	-9.22	54.56	4.42	Peak	155	232
2	5700.00	71.26	105.20	-33.94	66.59	4.67	Peak	155	232
3	5720.00	85.23	110.80	-25.57	80.46	4.77	Peak	155	232
4	5725.00	90.39	122.20	-31.81	85.59	4.80	Peak	155	232
5	5925.00	59.53	68.20	-8.67	54.10	5.43	Peak	155	232
6	11490.00	45.18	54.00	-8.82	31.25	13.93	Average	100	55
7	11490.00	56.58	74.00	-17.42	42.65	13.93	Peak	100	55
8	17235.00	60.91	68.20	-7.29	43.59	17.32	Peak	285	25

Note 1: Emission Level (dBuV/m) = SA Reading (dBuV) + Factor* (dB/m)
*Factor includes antenna factor , cable loss and amplifier gain
Note 2: Margin (dB) = Emission level (dBuV/m) – Limit (dBuV/m).

Modulation	ax HE20-OFDMA	Test Freq. (MHz)	5745
Polarization	Vertical		

Test By : Akun Chung Temperature(°C): 25 Humidity(%): 63



	Freq. MHz	Emission level dBUV/m	Limit dBUV/m	Margin dB	SA reading dBUV	Factor dB/m	Remark	ANT High cm	Turn Table deg
1	5650.00	61.27	68.20	-6.93	56.85	4.42	Peak	104	219
2	5700.00	75.56	105.20	-29.64	70.89	4.67	Peak	104	219
3	5720.00	89.35	110.80	-21.45	84.58	4.77	Peak	104	219
4	5725.00	95.26	122.20	-26.94	90.46	4.80	Peak	104	219
5	5925.00	61.28	68.20	-6.92	55.85	5.43	Peak	104	219
6	11490.00	45.61	54.00	-8.39	31.68	13.93	Average	147	342
7	11490.00	57.48	74.00	-16.52	43.55	13.93	Peak	147	342
8	17235.00	62.60	68.20	-5.60	45.28	17.32	Peak	325	45

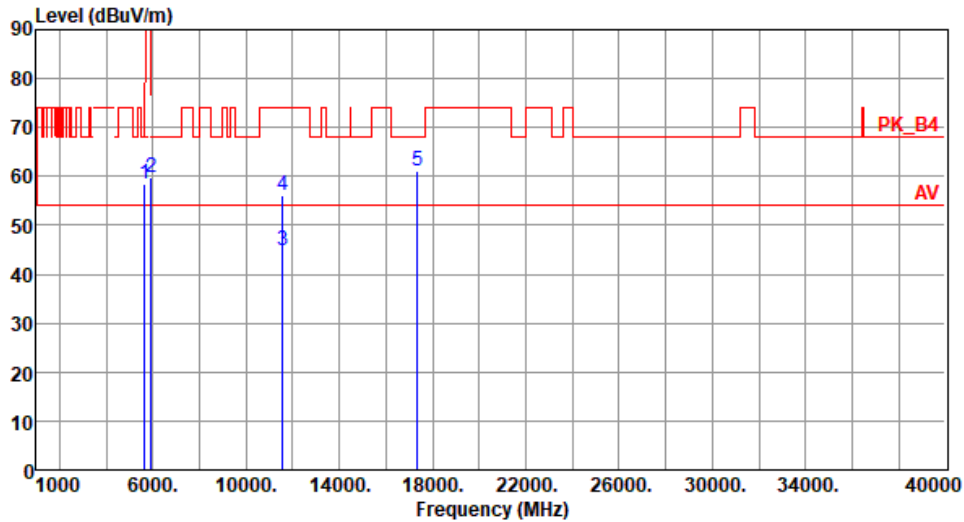
Note 1: Emission Level (dBUV/m) = SA Reading (dBUV) + Factor* (dB/m)

*Factor includes antenna factor , cable loss and amplifier gain

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

Modulation	ax HE20-OFDMA	Test Freq. (MHz)	5785
Polarization	Horizontal		

Test By : Akun Chung Temperature(°C): 25 Humidity(%): 63



	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB/m	Remark	ANT High cm	Turn Table deg
1	5650.00	58.57	68.20	-9.63	54.15	4.42	Peak	159	231
2	5925.00	59.64	68.20	-8.56	54.21	5.43	Peak	159	231
3	11570.00	44.88	54.00	-9.12	31.05	13.83	Average	110	33
4	11570.00	56.27	74.00	-17.73	42.44	13.83	Peak	110	33
5	17355.00	61.19	68.20	-7.01	43.26	17.93	Peak	274	30

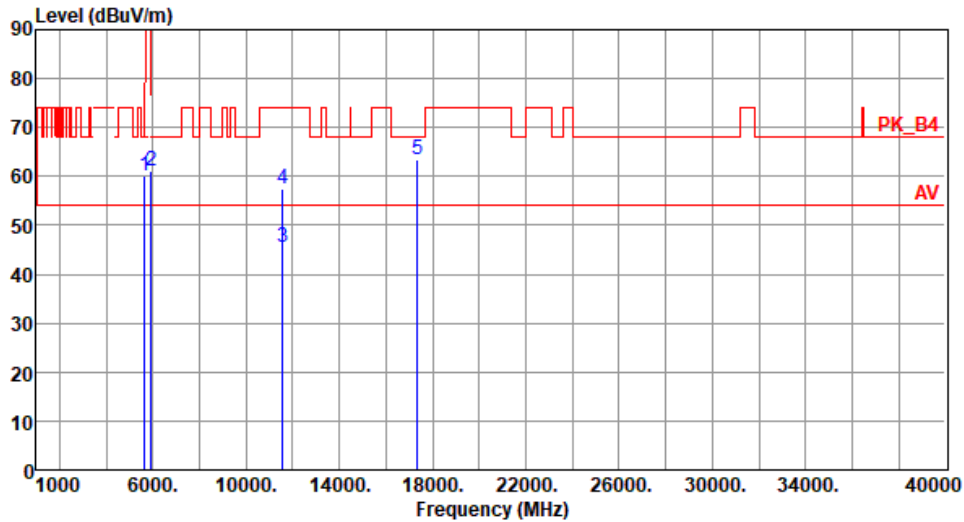
Note 1: Emission Level (dBuV/m) = SA Reading (dBuV) + Factor* (dB/m)

*Factor includes antenna factor , cable loss and amplifier gain

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

Modulation	ax HE20-OFDMA	Test Freq. (MHz)	5785
Polarization	Vertical		

Test By : Akun Chung Temperature(°C): 25 Humidity(%): 63



	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB/m	Remark	ANT High cm	Turn Table deg
1	5650.00	60.05	68.20	-8.15	55.63	4.42	Peak	109	206
2	5925.00	61.10	68.20	-7.10	55.67	5.43	Peak	109	206
3	11570.00	45.58	54.00	-8.42	31.75	13.83	Average	158	349
4	11570.00	57.41	74.00	-16.59	43.58	13.83	Peak	158	349
5	17355.00	63.33	68.20	-4.87	45.40	17.93	Peak	315	43

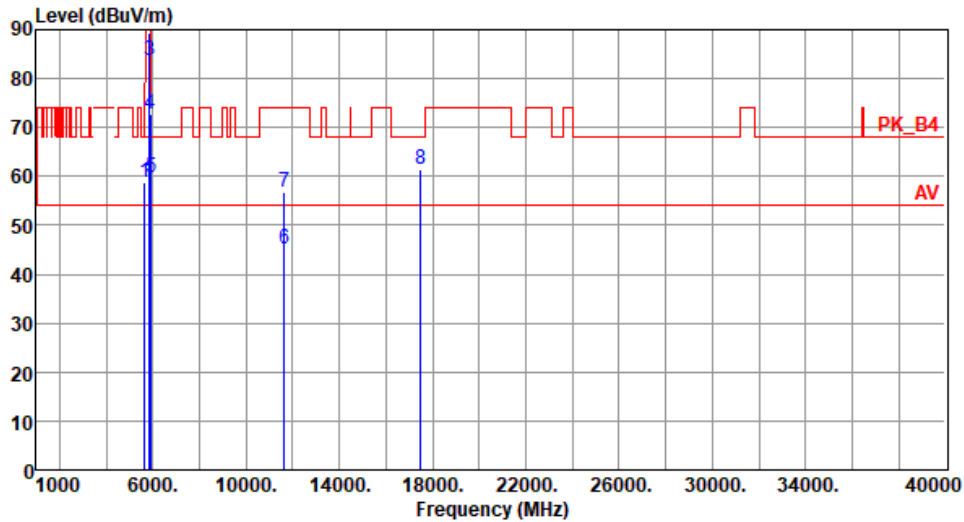
Note 1: Emission Level (dBuV/m) = SA Reading (dBuV) + Factor* (dB/m)

*Factor includes antenna factor , cable loss and amplifier gain

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

Modulation	ax HE20-OFDMA	Test Freq. (MHz)	5825
Polarization	Horizontal		

Test By : Akun Chung Temperature(°C): 25 Humidity(%): 63



	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB/m	Remark	ANT High cm	Turn Table deg
1	5650.00	58.68	68.20	-9.52	54.26	4.42	Peak	154	239
2	5850.00	89.41	122.20	-32.79	84.22	5.19	Peak	154	239
3	5855.00	83.80	110.80	-27.00	78.59	5.21	Peak	154	239
4	5875.00	72.79	105.20	-32.41	67.49	5.30	Peak	154	239
5	5925.00	59.75	68.20	-8.45	54.32	5.43	Peak	154	239
6	11650.00	45.03	54.00	-8.97	31.45	13.58	Average	105	33
7	11650.00	56.74	74.00	-17.26	43.16	13.58	Peak	105	33
8	17475.00	61.33	68.20	-6.87	42.59	18.74	Peak	288	26

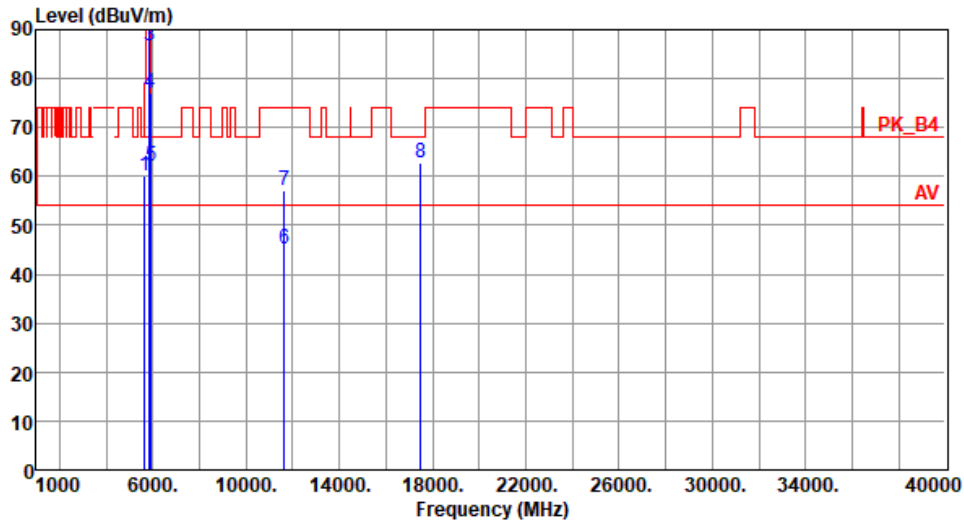
Note 1: Emission Level (dBuV/m) = SA Reading (dBuV) + Factor* (dB/m)

*Factor includes antenna factor , cable loss and amplifier gain

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

Modulation	ax HE20-OFDMA	Test Freq. (MHz)	5825
Polarization	Vertical		

Test By : Akun Chung Temperature(°C): 25 Humidity(%): 63



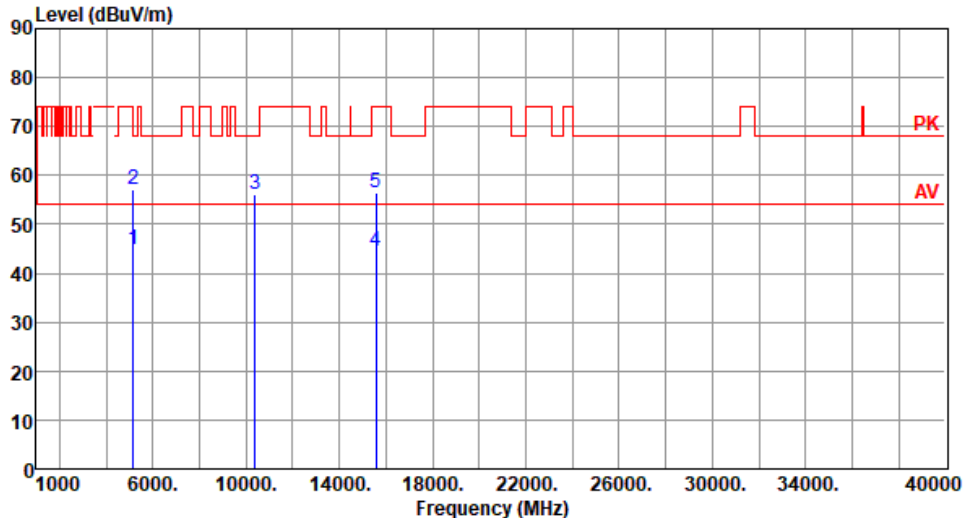
	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB/m	Remark	ANT High cm	Turn Table deg
1	5650.00	60.12	68.20	-8.08	55.70	4.42	Peak	110	218
2	5850.00	92.44	122.20	-29.76	87.25	5.19	Peak	110	218
3	5855.00	86.84	110.80	-23.96	81.63	5.21	Peak	110	218
4	5875.00	77.14	105.20	-28.06	71.84	5.30	Peak	110	218
5	5925.00	61.94	68.20	-6.26	56.51	5.43	Peak	110	218
6	11650.00	45.21	54.00	-8.79	31.63	13.58	Average	163	353
7	11650.00	57.06	74.00	-16.94	43.48	13.58	Peak	163	353
8	17475.00	62.70	68.20	-5.50	43.96	18.74	Peak	328	40

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

*Factor includes antenna factor , cable loss and amplifier gain

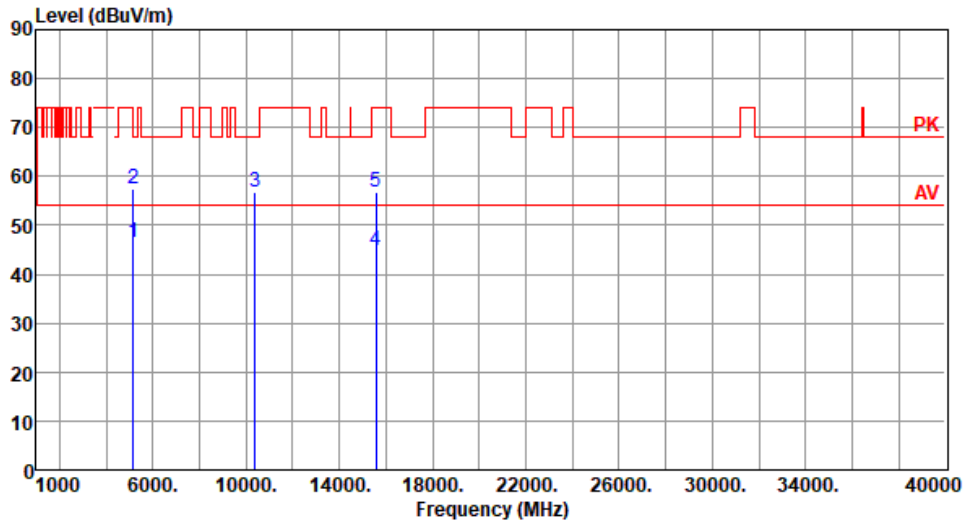
Note 2: Margin (dB) = Emission level (dBuV/m) – Limit (dBuV/m).

3.5.7 Transmitter Radiated Unwanted Emissions (Above 1GHz) for ax HE40-OFDMA

Modulation	ax HE40-OFDMA	Test Freq. (MHz)	5190																																																							
Polarization	Horizontal																																																									
Test By : Akun Chung Temperature(°C): 23 Humidity(%): 69																																																										
																																																										
	<table border="1"> <thead> <tr> <th>Freq. MHz</th> <th>Emission level dBuV/m</th> <th>Limit dBuV/m</th> <th>Margin dB</th> <th>SA reading dBuV</th> <th>Factor dB/m</th> <th>Remark</th> <th>ANT High cm</th> <th>Turn Table deg</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>5150.00</td> <td>44.77</td> <td>54.00</td> <td>-9.23</td> <td>40.56</td> <td>4.21</td> <td>Average</td> <td>103 296</td> </tr> <tr> <td>2</td> <td>5150.00</td> <td>57.23</td> <td>74.00</td> <td>-16.77</td> <td>53.02</td> <td>4.21</td> <td>Peak</td> <td>103 296</td> </tr> <tr> <td>3</td> <td>10380.00</td> <td>56.29</td> <td>68.20</td> <td>-11.91</td> <td>42.26</td> <td>14.03</td> <td>Peak</td> <td>100 40</td> </tr> <tr> <td>4</td> <td>15570.00</td> <td>44.39</td> <td>54.00</td> <td>-9.61</td> <td>30.26</td> <td>14.13</td> <td>Average</td> <td>100 30</td> </tr> <tr> <td>5</td> <td>15570.00</td> <td>56.36</td> <td>74.00</td> <td>-17.64</td> <td>42.23</td> <td>14.13</td> <td>Peak</td> <td>100 30</td> </tr> </tbody> </table>	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB/m	Remark	ANT High cm	Turn Table deg	1	5150.00	44.77	54.00	-9.23	40.56	4.21	Average	103 296	2	5150.00	57.23	74.00	-16.77	53.02	4.21	Peak	103 296	3	10380.00	56.29	68.20	-11.91	42.26	14.03	Peak	100 40	4	15570.00	44.39	54.00	-9.61	30.26	14.13	Average	100 30	5	15570.00	56.36	74.00	-17.64	42.23	14.13	Peak	100 30			
Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB/m	Remark	ANT High cm	Turn Table deg																																																		
1	5150.00	44.77	54.00	-9.23	40.56	4.21	Average	103 296																																																		
2	5150.00	57.23	74.00	-16.77	53.02	4.21	Peak	103 296																																																		
3	10380.00	56.29	68.20	-11.91	42.26	14.03	Peak	100 40																																																		
4	15570.00	44.39	54.00	-9.61	30.26	14.13	Average	100 30																																																		
5	15570.00	56.36	74.00	-17.64	42.23	14.13	Peak	100 30																																																		
Note 1: Emission Level (dBuV/m) = SA Reading (dBuV) + Factor* (dB/m) *Factor includes antenna factor , cable loss and amplifier gain Note 2: Margin (dB) = Emission level (dBuV/m) – Limit (dBuV/m).																																																										

Modulation	ax HE40-OFDMA	Test Freq. (MHz)	5190
Polarization	Vertical		

Test By :Akun Chung Temperature(°C):23 Humidity(%):69



	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB/m	Remark	ANT High cm	Turn Table deg
1	5150.00	46.61	54.00	-7.39	42.40	4.21	Average	337	198
2	5150.00	57.54	74.00	-16.46	53.33	4.21	Peak	337	198
3	10380.00	56.78	68.20	-11.42	42.75	14.03	Peak	100	104
4	15570.00	44.91	54.00	-9.09	30.78	14.13	Average	100	103
5	15570.00	56.92	74.00	-17.08	42.79	14.13	Peak	100	103

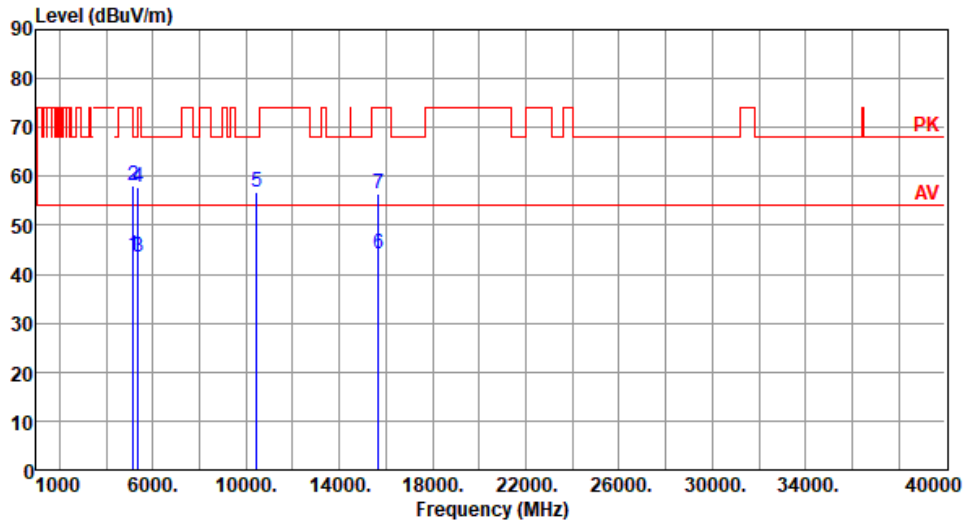
Note 1: Emission Level (dBuV/m) = SA Reading (dBuV) + Factor* (dB/m)

*Factor includes antenna factor , cable loss and amplifier gain

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

Modulation	ax HE40-OFDMA	Test Freq. (MHz)	5230
Polarization	Horizontal		

Test By : Akun Chung Temperature(°C): 23 Humidity(%): 69



	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB/m	Remark	ANT High cm	Turn Table deg
1	5150.00	43.77	54.00	-10.23	39.56	4.21	Average	104	298
2	5150.00	58.10	74.00	-15.90	53.89	4.21	Peak	104	298
3	5350.00	43.55	54.00	-10.45	39.67	3.88	Average	104	298
4	5350.00	57.83	74.00	-16.17	53.95	3.88	Peak	104	298
5	10460.00	56.65	68.20	-11.55	42.56	14.09	Peak	100	20
6	15690.00	44.19	54.00	-9.81	30.15	14.04	Average	100	70
7	15690.00	56.50	74.00	-17.50	42.46	14.04	Peak	100	70

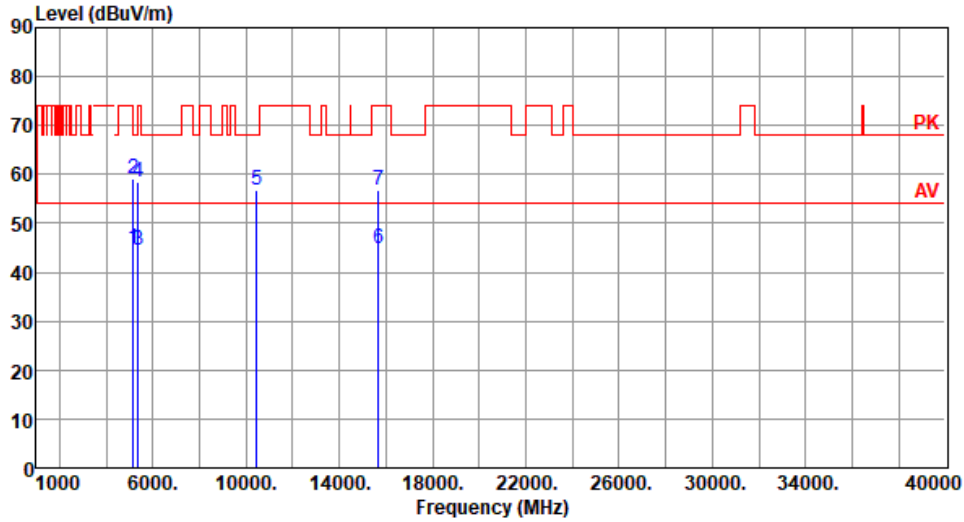
Note 1: Emission Level (dBuV/m) = SA Reading (dBuV) + Factor* (dB/m)

*Factor includes antenna factor , cable loss and amplifier gain

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

Modulation	ax HE40-OFDMA	Test Freq. (MHz)	5230
Polarization	Vertical		

Test By : Akun Chung Temperature(°C): 23 Humidity(%): 69



	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB/m	Remark	ANT High cm	Turn Table deg
1	5150.00	44.91	54.00	-9.09	40.70	4.21	Average	335	197
2	5150.00	58.96	74.00	-15.04	54.75	4.21	Peak	335	197
3	5350.00	44.60	54.00	-9.40	40.72	3.88	Average	335	197
4	5350.00	58.56	74.00	-15.44	54.68	3.88	Peak	335	197
5	10460.00	56.80	68.20	-11.40	42.71	14.09	Peak	100	99
6	15690.00	44.69	54.00	-9.31	30.65	14.04	Average	100	102
7	15690.00	56.72	74.00	-17.28	42.68	14.04	Peak	100	102

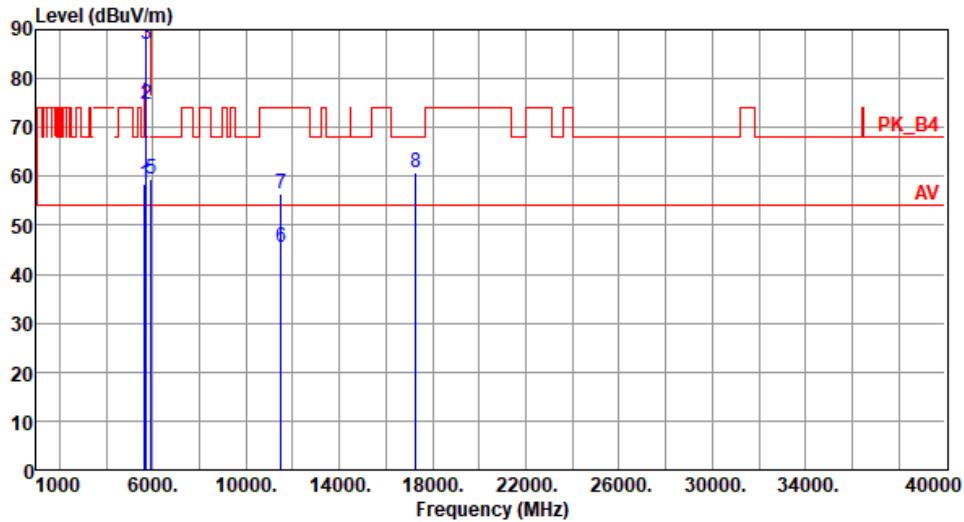
Note 1: Emission Level (dBuV/m) = SA Reading (dBuV) + Factor* (dB/m)

*Factor includes antenna factor , cable loss and amplifier gain

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

Modulation	ax HE40-OFDMA	Test Freq. (MHz)	5755
Polarization	Horizontal		

Test By : Akun Chung Temperature(°C): 25 Humidity(%): 63



	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB/m	Remark	ANT High cm	Turn Table deg
1	5650.00	58.57	68.20	-9.63	54.15	4.42	Peak	158	233
2	5700.00	74.82	105.20	-30.38	70.15	4.67	Peak	158	233
3	5720.00	87.03	110.80	-23.77	82.26	4.77	Peak	158	233
4	5725.00	89.11	122.20	-33.09	84.31	4.80	Peak	158	233
5	5925.00	59.45	68.20	-8.75	54.02	5.43	Peak	158	233
6	11510.00	45.36	54.00	-8.64	31.45	13.91	Average	100	30
7	11510.00	56.50	74.00	-17.50	42.59	13.91	Peak	100	30
8	17265.00	60.87	68.20	-7.33	43.45	17.42	Peak	100	50

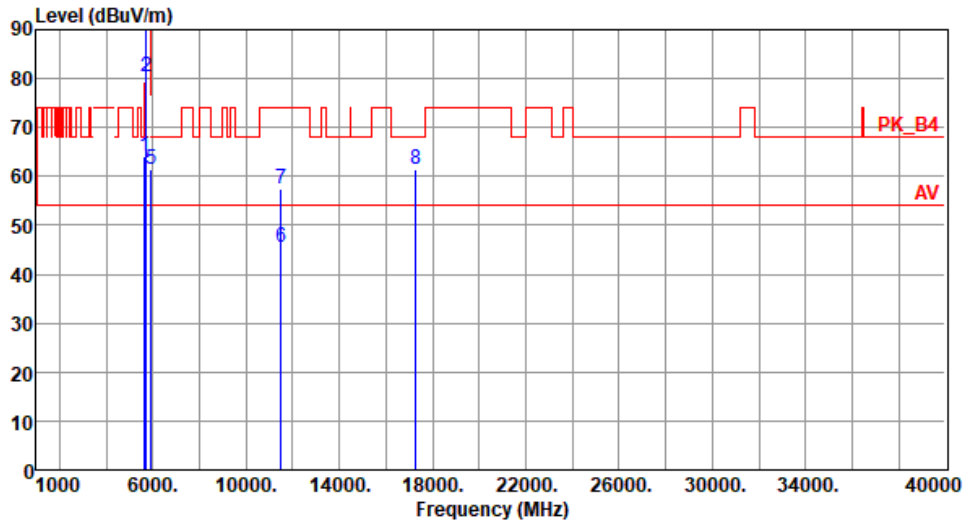
Note 1: Emission Level (dBuV/m) = SA Reading (dBuV) + Factor* (dB/m)

*Factor includes antenna factor , cable loss and amplifier gain

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

Modulation	ax HE40-OFDMA	Test Freq. (MHz)	5755
Polarization	Vertical		

Test By : Akun Chung Temperature(°C): 25 Humidity(%): 63



	Freq. MHz	Emission level dBUV/m	Limit dBUV/m	Margin dB	SA reading dBUV	Factor dB/m	Remark	ANT High cm	Turn Table deg
1	5650.00	64.25	68.20	-3.95	59.83	4.42	Peak	105	218
2	5700.00	80.37	105.20	-24.83	75.70	4.67	Peak	105	218
3	5720.00	92.10	110.80	-18.70	87.33	4.77	Peak	105	218
4	5725.00	94.05	122.20	-28.15	89.25	4.80	Peak	105	218
5	5925.00	61.37	68.20	-6.83	55.94	5.43	Peak	105	218
6	11510.00	45.58	54.00	-8.42	31.67	13.91	Average	160	344
7	11510.00	57.41	74.00	-16.59	43.50	13.91	Peak	160	344
8	17265.00	61.40	68.20	-6.80	43.98	17.42	Peak	100	50

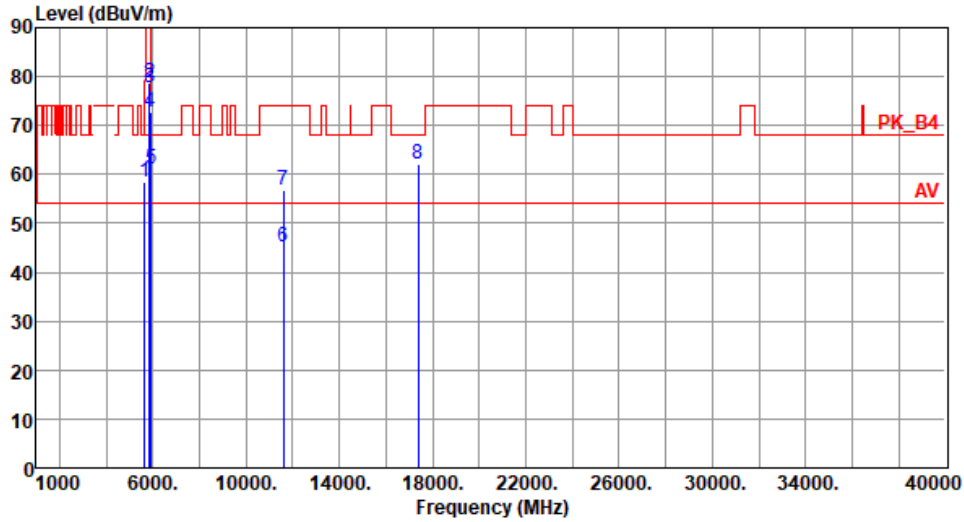
Note 1: Emission Level (dBUV/m) = SA Reading (dBUV) + Factor* (dB/m)

*Factor includes antenna factor , cable loss and amplifier gain

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

Modulation	ax HE40-OFDMA	Test Freq. (MHz)	5795
Polarization	Horizontal		

Test By : Akun Chung Temperature(°C): 25 Humidity(%): 63



	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB/m	Remark	ANT High cm	Turn Table deg
1	5650.00	58.58	68.20	-9.62	54.16	4.42	Peak	150	239
2	5850.00	78.84	122.20	-43.36	73.65	5.19	Peak	150	239
3	5855.00	77.67	110.80	-33.13	72.46	5.21	Peak	150	239
4	5875.00	72.89	105.20	-32.31	67.59	5.30	Peak	150	239
5	5925.00	61.01	68.20	-7.19	55.58	5.43	Peak	150	239
6	11590.00	45.06	54.00	-8.94	31.26	13.80	Average	100	35
7	11590.00	56.95	74.00	-17.05	43.15	13.80	Peak	100	35
8	17385.00	62.05	68.20	-6.15	43.89	18.16	Peak	100	20

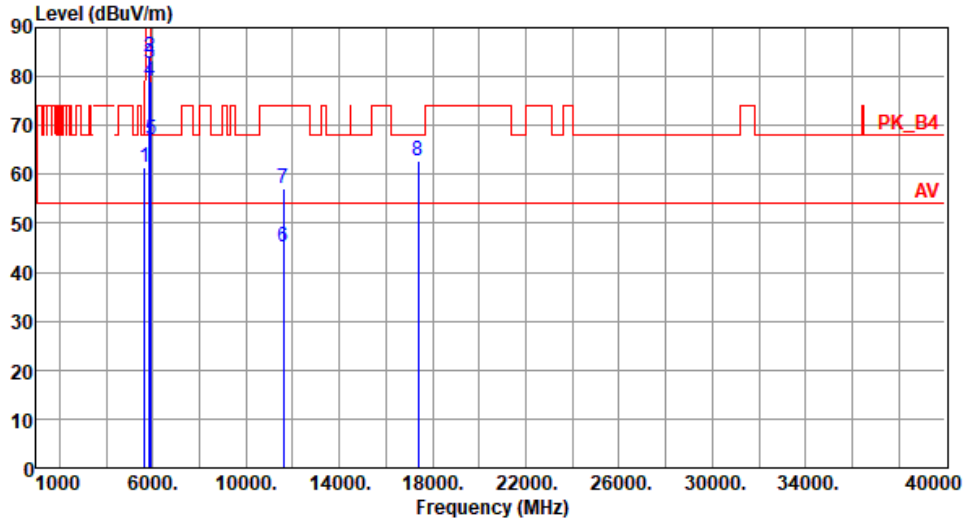
Note 1: Emission Level (dBuV/m) = SA Reading (dBuV) + Factor* (dB/m)

*Factor includes antenna factor , cable loss and amplifier gain

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

Modulation	ax HE40-OFDMA	Test Freq. (MHz)	5795
Polarization	Vertical		

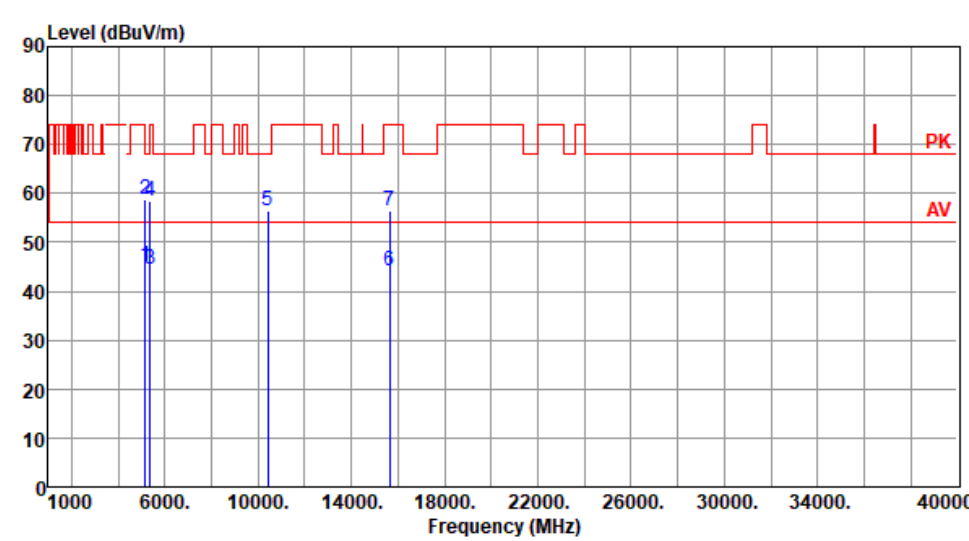
Test By : Akun Chung Temperature(°C): 25 Humidity(%): 63



	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB/m	Remark	ANT High cm	Turn Table deg
1	5650.00	61.37	68.20	-6.83	56.95	4.42	Peak	105	219
2	5850.00	84.06	122.20	-38.14	78.87	5.19	Peak	105	219
3	5855.00	82.76	110.80	-28.04	77.55	5.21	Peak	105	219
4	5875.00	79.14	105.20	-26.06	73.84	5.30	Peak	105	219
5	5925.00	67.02	68.20	-1.18	61.59	5.43	Peak	105	219
6	11590.00	45.24	54.00	-8.76	31.44	13.80	Average	144	339
7	11590.00	57.19	74.00	-16.81	43.39	13.80	Peak	144	339
8	17385.00	62.82	68.20	-5.38	44.66	18.16	Peak	100	55

Note 1: Emission Level (dBuV/m) = SA Reading (dBuV) + Factor* (dB/m)
 *Factor includes antenna factor , cable loss and amplifier gain
 Note 2: Margin (dB) = Emission level (dBuV/m) – Limit (dBuV/m).

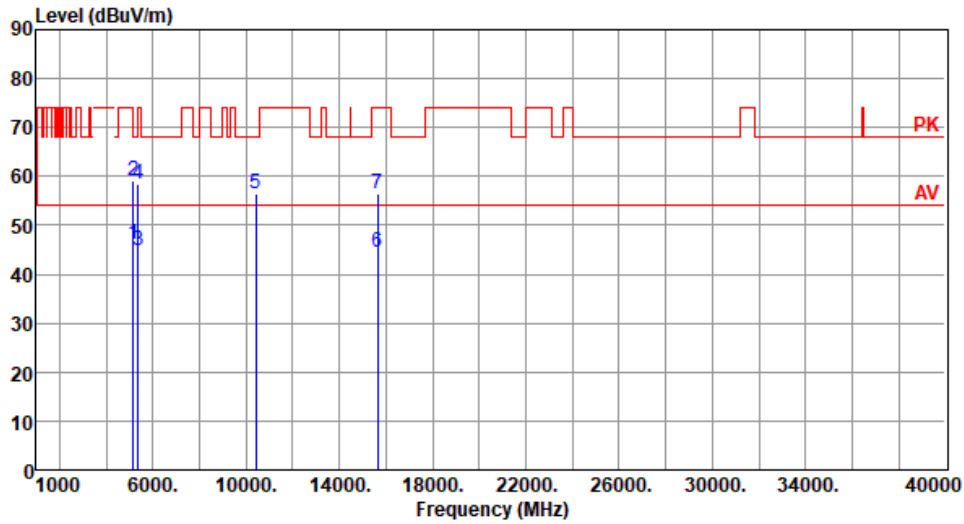
3.5.8 Transmitter Radiated Unwanted Emissions (Above 1GHz) for ax HE80-OFDMA

Modulation	ax HE80-OFDMA	Test Freq. (MHz)	5210						
Polarization	Horizontal								
Test By : Akun Chung Temperature(°C): 23 Humidity(%): 69									
									
	Freq.	Emission level	Limit	Margin	SA reading	Factor	Remark	ANT High	Turn Table
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB/m		cm	deg
1	5150.00	45.01	54.00	-8.99	40.80	4.21	Average	107	293
2	5150.00	58.76	74.00	-15.24	54.55	4.21	Peak	107	293
3	5350.00	44.58	54.00	-9.42	40.70	3.88	Average	107	293
4	5350.00	58.33	74.00	-15.67	54.45	3.88	Peak	107	293
5	10420.00	56.33	68.20	-11.87	42.26	14.07	Peak	100	50
6	15630.00	44.22	54.00	-9.78	30.15	14.07	Average	100	90
7	15630.00	56.53	74.00	-17.47	42.46	14.07	Peak	100	90

Note 1: Emission Level (dBuV/m) = SA Reading (dBuV) + Factor* (dB/m)
 *Factor includes antenna factor , cable loss and amplifier gain
 Note 2: Margin (dB) = Emission level (dBuV/m) – Limit (dBuV/m).

Modulation	ax HE80-OFDMA	Test Freq. (MHz)	5210
Polarization	Vertical		

Test By :Akun Chung Temperature(°C):23 Humidity(%):69



	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB/m	Remark	ANT High cm	Turn Table deg
1	5150.00	46.10	54.00	-7.90	41.89	4.21	Average	348	195
2	5150.00	59.08	74.00	-14.92	54.87	4.21	Peak	348	195
3	5350.00	44.75	54.00	-9.25	40.87	3.88	Average	348	195
4	5350.00	58.51	74.00	-15.49	54.63	3.88	Peak	348	195
5	10420.00	56.62	68.20	-11.58	42.55	14.07	Peak	100	100
6	15630.00	44.61	54.00	-9.39	30.54	14.07	Average	100	102
7	15630.00	56.59	74.00	-17.41	42.52	14.07	Peak	100	102

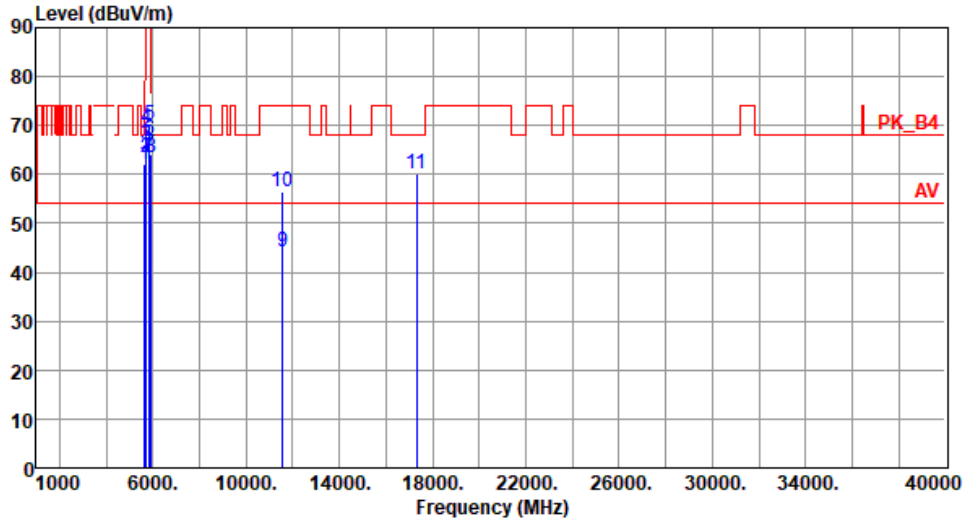
Note 1: Emission Level (dBuV/m) = SA Reading (dBuV) + Factor* (dB/m)

*Factor includes antenna factor , cable loss and amplifier gain

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

Modulation	ax HE80-OFDMA	Test Freq. (MHz)	5775
Polarization	Horizontal		

Test By : Akun Chung Temperature(°C): 25 Humidity(%): 63



	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB/m	Remark	ANT High cm	Turn Table deg
1	5650.00	62.09	68.20	-6.11	57.67	4.42	Peak	157	235
2	5700.00	63.52	105.20	-41.68	58.85	4.67	Peak	157	235
3	5720.00	66.12	110.80	-44.68	61.35	4.77	Peak	157	235
4	5725.00	69.32	122.20	-52.88	64.52	4.80	Peak	157	235
5	5850.00	69.94	122.20	-52.26	64.75	5.19	Peak	157	235
6	5855.00	67.16	110.80	-43.64	61.95	5.21	Peak	157	235
7	5875.00	63.93	105.20	-41.27	58.63	5.30	Peak	157	235
8	5925.00	63.31	68.20	-4.89	57.88	5.43	Peak	157	235
9	11550.00	44.11	54.00	-9.89	30.26	13.85	Average	100	60
10	11550.00	56.32	74.00	-17.68	42.47	13.85	Peak	100	60
11	17325.00	60.05	68.20	-8.15	42.33	17.72	Peak	100	50

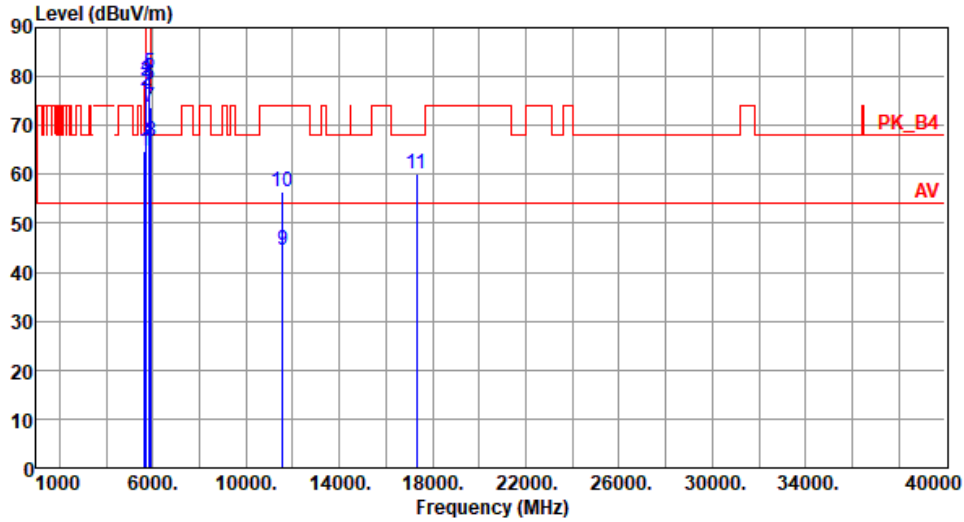
Note 1: Emission Level (dBuV/m) = SA Reading (dBuV) + Factor* (dB/m)

*Factor includes antenna factor , cable loss and amplifier gain

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

Modulation	ax HE80-OFDMA	Test Freq. (MHz)	5775
Polarization	Vertical		

Test By : Akun Chung Temperature(°C): 25 Humidity(%): 63



	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB/m	Remark	ANT High cm	Turn Table deg
1	5650.00	64.72	68.20	-3.48	60.30	4.42	Peak	283	151
2	5700.00	77.21	105.20	-27.99	72.54	4.67	Peak	283	151
3	5720.00	78.88	110.80	-31.92	74.11	4.77	Peak	283	151
4	5725.00	79.80	122.20	-42.40	75.00	4.80	Peak	283	151
5	5850.00	80.54	122.20	-41.66	75.35	5.19	Peak	283	151
6	5855.00	78.45	110.80	-32.35	73.24	5.21	Peak	283	151
7	5875.00	73.80	105.20	-31.40	68.50	5.30	Peak	283	151
8	5925.00	66.77	68.20	-1.43	61.34	5.43	Peak	283	151
9	11550.00	44.42	54.00	-9.58	30.57	13.85	Average	100	347
10	11550.00	56.44	74.00	-17.56	42.59	13.85	Peak	100	347
11	17325.00	60.17	68.20	-8.03	42.45	17.72	Peak	100	336

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

*Factor includes antenna factor , cable loss and amplifier gain

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

3.6 Frequency Stability

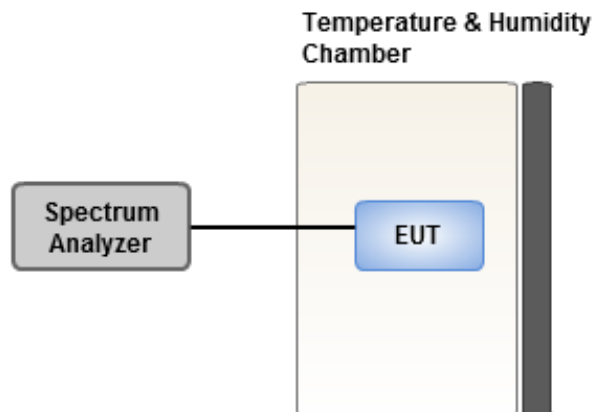
3.6.1 Limit of Frequency Stability

Manufacturers of U-NII devices are responsible for ensuring frequency stability such that an emission is maintained within the band of operation under all conditions of normal operation as specified in the user's manual.

3.6.2 Test Procedures

1. The EUT is installed in an environment test chamber with external power source.
2. Set the chamber to operate at 20 centigrade and external power source to output at nominal voltage of EUT.
3. A sufficient stabilization period at each temperature is used prior to each frequency measurement.
4. When temperature is stabled, measure the frequency stability.
5. The test shall be performed under normal and extreme condition for temperature and voltage.

3.6.3 Test Setup



3.6.4 Test Result of Frequency Stability

Ambient Condition	21-23°C / 63-65%	Tested By	Brad Wu
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Frequency: 5200 MHz	Frequency Drift (ppm)			
	0 minute	2 minutes	5 minutes	10 minutes
Temperature (°C)				
T20°C _{Vmax}	-4.03	-3.79	-4.48	-4.14
T20°C _{Vmin}	-4.72	-3.70	-4.11	-3.88
T60°C _{Vnom}	-4.39	-3.86	-4.70	-4.34
T50°C _{Vnom}	-3.72	-3.98	-4.17	-4.02
T40°C _{Vnom}	-3.52	-3.89	-3.67	-3.74
T30°C _{Vnom}	-4.66	-3.37	-4.35	-3.64
T20°C _{Vnom}	-4.43	-4.22	-4.33	-4.65
T10°C _{Vnom}	-4.08	-3.86	-4.84	-3.78
T0°C _{Vnom}	-4.14	-3.86	-4.23	-4.28
T-10°C _{Vnom}	-4.47	-3.67	-4.02	-4.21
T-20°C _{Vnom}	-3.66	-4.41	-4.24	-4.04
T-30°C _{Vnom}	-4.13	-3.98	-4.60	-4.88
Vnom [V]: 120		Vmax [V]: 138		Vmin [V]: 102
Tnom [°C]: 20		Tmax [°C]: 60		Tmin [°C]: -30

Frequency: 5785 MHz	Frequency Drift (ppm)			
Temperature (°C)	0 minute	2 minutes	5 minutes	10 minutes
T20°C Vmax	-3.96	-3.35	-3.42	-3.79
T20°C Vmin	-3.00	-3.20	-3.28	-2.94
T70°C Vnom	-3.82	-3.59	-3.50	-3.58
T60°C Vnom	-3.88	-4.02	-3.85	-3.65
T50°C Vnom	-2.39	-2.37	-3.36	-3.02
T40°C Vnom	-3.40	-3.61	-3.65	-4.27
T30°C Vnom	-2.91	-3.03	-3.13	-2.87
T20°C Vnom	-3.48	-3.88	-3.86	-3.60
T10°C Vnom	-3.29	-2.91	-3.29	-2.71
T0°C Vnom	-2.52	-3.31	-3.14	-2.53
T-10°C Vnom	-3.78	-3.42	-3.89	-3.56
T-20°C Vnom	-3.70	-3.33	-3.38	-3.34
T-30°C Vnom	-3.96	-3.35	-3.42	-3.79
Vnom [Vac]: 120	Vmax [Vac]: 138		Vmin [Vac]: 102	
Tnom [°C]: 20	Tmax [°C]: 60		Tmin [°C]: -30	

4 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 Corporation (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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Kwei Shan Site II

Tel: 886-3-271-8640

No.14-1, Lane 19, Wen San 3rd
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If you have any suggestion, please feel free to contact us as below information.

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