FCC C2PC Test Report

FCC ID	:	**SWX-UDR**
Equipment	:	**UniFi Dream Router**
Model No.	:	**UDR**
Brand Name	:	**UBIQUITI**
Applicant	:	**Ubiquiti Inc.**
Address	:	**685 Third Avenue, (27th Floor) New York, New York 10017 USA**
Standard	:	**47 CFR FCC Part 15.407**
Received Date	:	**Jun. 08, 2021**
Tested Date	:	**Jul. 14 ~ Oct. 08, 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

Testing Laboratory 2732

Table of Contents

1 GENERAL DESCRIPTION 5

1.1 Information 5
1.2 Local Support Equipment List 11
1.3 Test Setup Chart 11
1.4 The Equipment List 12
1.5 Test Standards 14
1.6 Reference Guidance 14
1.7 Deviation from Test Standard and Measurement Procedure 14
1.8 Measurement Uncertainty 14

2 TEST CONFIGURATION 15

2.1 Testing Facility 15
2.2 The Worst Test Modes and Channel Details 15

3 TRANSMITTER TEST RESULTS 17

3.1 Conducted Emissions 17
3.2 Emission Bandwidth 24
3.3 RF Output Power 38
3.4 Peak Power Spectral Density 42
3.5 Transmitter Radiated and Band Edge Emissions 57
3.6 Frequency Stability 118

4 TEST LABORATORY INFORMATION 120

Release Record

Report No.	Version	Description	Issued Date
FR160801-02AN	Rev. 01	Initial issue	Nov. 11, 2021

Summary of Test Results

FCC Rules	Test Items	Measured	Result
15.207	Conducted Emissions	[dBuV]: 0.564MHz 42.98 (Margin -3.02dB) - AV	Pass
15.407(b) 15.209	Radiated Emissions	[dBuV/m at 3m]: 11340.00MHz 53.75 (Margin -0.25dB) - AV	Pass
15.407(a)	Emission Bandwidth	Meet the requirement of limit	Pass
15.407(a)	RF Output Power	Max Power [dBm]: 5250~5350MHz: 21.25 5470~5725MHz: 23.48	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

This is a Class II Permissive Change report (C2PC).
This report is issued as a supplementary report to original ICC report no. FR160801AN. The modification is concerned with following items:

- ✧ LCM spi clk pin R8421 change to 33 ohm
- ✧ LED DIN pin R8408 change to 47 ohm
- ✧ Vendor of power transformer is changed.
- ✧ Conductive fabric is added on RJ45 port
- ✧ 5.5.25 ~ 5.35GHz and 5.47 ~ 5.725 GHz is enabled by software setting

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 5250-5350 5470-5725 5725-5850	a	5180-5240 5260-5320 5500-5720 5745-5825	36-48 [4] 52-64 [4] 100-144 [12] 149-165 [5]	4	6-54 Mbps
5150-5250 5250-5350 5470-5725 5725-5850	n (HT20)	5180-5240 5260-5320 5500-5720 5745-5825	36-48 [4] 52-64 [4] 100-144 [12] 149-165 [5]	4	MCS 0-31
5150-5250 5250-5350 5470-5725 5725-5850	n (HT40)	5190-5230 5270-5310 5510-5710 5755-5795	38-46 [2] 54-62 [2] 102-142 [6] 151-159 [2]	4	MCS 0-31
5150-5250 5250-5350 5470-5725 5725-5850	ac (VHT20)	5180-5240 5260-5320 5500-5720 5745-5825	36-48 [4] 52-64 [4] 100-144 [12] 149-165 [5]	4	MCS 0-9
5150-5250 5250-5350 5470-5725 5725-5850	ac (VHT40)	5190-5230 5270-5310 5510-5710 5755-5795	38-46 [2] 54-62 [2] 102-142 [6] 151-159 [2]	4	MCS 0-9
5150-5250 5250-5350 5470-5725 5725-5850	ac (VHT80)	5210 5290 5530~5690 5775	42 [1] 58 [1] 106-138 [3] 155 [1]	4	MCS 0-9
5150-5250 5250-5350 5470-5725 5725-5850	ax (HE20)	5180-5240 5260-5320 5500-5720 5745-5825	36-48 [4] 52-64 [4] 100-144 [12] 149-165 [5]	4	MCS 0-11
5150-5250 5250-5350 5470-5725 5725-5850	ax (HE40)	5190-5230 5270-5310 5510-5710 5755-5795	38-46 [2] 54-62 [2] 102-142 [6] 151-159 [2]	4	MCS 0-11
5150-5250 5250-5350 5470-5725 5725-5850	ax (HE80)	5210 5290 5530~5690 5775	42 [1] 58 [1] 106-138 [3] 155 [1]	4	MCS 0-11
Note: The device supports BPSK, QPSK, 16QAM, 64QAM, 256QAM and 1024QAM modulation.					

Combination of channel list for 80+80MHz mode

Mode	Channels
1	CH42 (5210 MHz) + CH58 (5290 MHz)
2	CH106(5530 MHz) + CH122 (5610 MHz)

1.1.2 Antenna Details

Ant. No.	Brand	Model	Type	Connector	Operating Frequencies (MHz) / Antenna Gain (dBi)			
					5150~5250	5250~5350	5470~5725	5725~5850
1	UBIQUITI	ANT 0	Short-circuited Monopole	I-PEX	4.3	4.3	4.3	4.3
2	UBIQUITI	ANT 1	Short-circuited Monopole	I-PEX	4.3	4.3	4.3	4.3
3	UBIQUITI	ANT 2	Short-circuited Monopole	I-PEX	4.3	4.3	4.3	4.3
4	UBIQUITI	ANT 3	Short-circuited Monopole	I-PEX	4.3	4.3	4.3	4.3

1.1.3 Power Supply Type of Equipment under Test (EUT)

Power Supply Type	100-240V~1.1A Max, 50/60Hz

1.1.4 Accessories

Accessories		
No.	**Equipment**	**Description**
1	Power cord	2m, non-shielded without core

1.1.5 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	54	5270
48	5240	62	5310
52	5260	102	5510
56	5280	110	5550
60	5300	118	5590
64	5320	126	5630
100	5500	134	5670
104	5520	142	5710
108	5540	151	5755
112	5560	159	5795
116	5580	**802.11ac VHT80 / ax HE80**	
120	5600	42	5210
124	5620	58	5290
128	5640	106	5530
132	5660	122	5610
136	5680	138	5690
140	5700	155	5775
144	5720	---	---
149	5745	---	---
153	5765	---	---
157	5785	---	---
161	5805	---	---
165	5825	---	---

802.11ac VHT80+80 / ax HE80 +80	
42	5210
58	5290
106	5530
122	5610

1.1.6 Test Tool and Duty Cycle

Test Tool	MT7915, Version: QA0.0.2.16		
Duty Cycle and Duty Factor	**Mode**	**Duty Cycle (%)**	**Duty Factor (dB)**
	11a	98.97%	0.04
	ax (HE20)	98.29%	0.07
	ax (HE40)	95.72%	0.19
	ax (HE80)	91.33%	0.39
	ax (HE80+80)	85.31%	0.69

1.1.7 Power Index of Test Tool

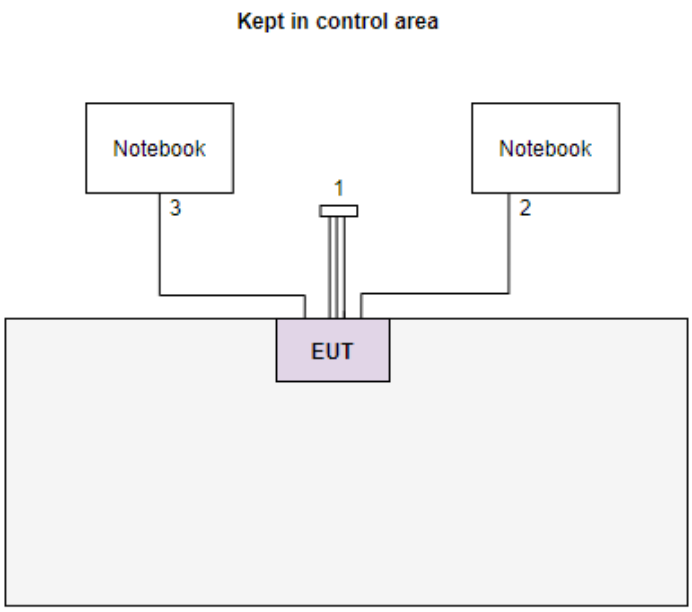
Modulation Mode	Test Frequency (MHz)	Power Index
11a	5260	9.5
11a	5300	9.5
11a	5320	9.5
11a	5500	10
11a	5580	10
11a	5700	10
11a	5720	10
ax (HE20)	5260	10
ax (HE20)	5300	10
ax (HE20)	5320	10
ax (HE20)	5500	10.5
ax (HE20)	5580	10.5
ax (HE20)	5700	10.5
ax (HE20)	5720	10.5
ax (HE40)	5270	12.5
ax (HE40)	5310	12.5
ax (HE40)	5510	13
ax (HE40)	5590	12.5
ax (HE40)	5670	12.5
ax (HE40)	5710	13
ax (HE80)	5290	12
ax (HE80)	5530	13
ax (HE80)	5610	13.5
ax (HE80)	5690	14.5
ax (HE80+80)	5210 + 5290 MHz	11.5
ax (HE80+80)	5530 + 5610 MHz	14

1.2 Local Support Equipment List

Support Equipment List					
No.	**Equipment**	**Brand**	**Model**	**FCC ID**	**Remarks**
1	RJ45	ICC	RJ45-10m	---	---
2	RJ45	ICC	RJ45-10m	---	---
3	RJ45	ICC	RJ45-1m	---	---
4	RJ45	ICC	RJ45-1m	---	---
5	RJ45	ICC	RJ45-1m	---	---
6	RJ45 Load	ICC	--	---	---
7	Notebook	DELL	Latitude 5400	DoC	---
8	Notebook	DELL	Latitude E5470	DoC	---

1.3 Test Setup Chart

Test Setup Diagram



No.	Signal cable / Length (m)
1	RJ45, 1m(x3) non-shielded with load
2	RJ45, 10m non-shielded.
2	RJ45, 10m non-shielded.

1.4 The Equipment List

Test Item	Conducted Emission				
Test Site	Conduction room 1 / (CO01-WS)				
Test Date	Oct. 08, 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. 21, 2020	Oct. 20, 2021
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	Radiated Emission below 1GHz				
Test Site	966 chamber1 / (03CH01-WS)				
Test Date	Oct. 08, 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. 17, 2020	Nov. 16, 2021
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-NW-11000	200801	Oct. 05, 2021	Oct. 04, 2022
LF cable 1M	EMC	EMCCFD400-NM-NM-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)				
Test Date	Aug. 17 ~ Sep. 15, 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 9170517	Nov. 06, 2020	Nov. 05, 2021
Preamplifier	Agilent	83017A	MY39501308	Sep. 26, 2020	Sep. 25, 2021
Preamplifier	EMC	EMC184045B	980192	Jul. 14, 2021	Jul. 13, 2022
RF Cable	HUBER+SUHNER	SUCOFLEX104	MY16019/4	Oct. 06, 2020	Oct. 05, 2021
RF Cable	HUBER+SUHNER	SUCOFLEX104	MY16014/4	Oct. 06, 2020	Oct. 05, 2021
Measurement Software	AUDIX	e3	6.120210g	NA	NA
Note: Calibration Interval of instruments listed above is one year.					

Test Item	RF Conducted				
Test Site	(TH01-WS)				
Test Date	Jul. 14 ~ Sep. 15, 2021				
Instrument	**Brand**	**Model No.**	**Serial No.**	**Calibration Date**	**Calibration Until**
Spectrum Analyzer	R&S	FSV40	101063	Apr. 19, 2021	Apr. 18, 2022
Power Meter	Anritsu	ML2495A	1241002	Nov. 04, 2020	Nov. 03, 2021
Power Sensor	Anritsu	MA2411B	1207366	Nov. 04, 2020	Nov. 03, 2021
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	$\pm 1 \times 10^{-9}$
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

Frequency band 5150~5350 MHz / 5470~5725 MHz				
Test item	**Modulation Mode**	**Test Frequency (MHz)**	**Data Rate (Mbps) / MCS**	**Test Configuration**
Conducted Emissions	ax (HE40)	5230	MCS 0	---
	ax HE80	5690		
Radiated Emissions ≤1GHz	ax (HE40)	5230	MCS 0	---
	ax HE80	5690		
RF Output Power	11a	5260 / 5300 / 5320 5500 / 5580 / 5700 / 5720	6 Mbps	---
	ax HE20	5260 / 5300 / 5320 5500 / 5580 / 5700 / 5720	MCS 0	
	ax HE40	5270 / 5310 5510 / 5590 / 5670 / 5710	MCS 0	
	ax HE80	5290 / 5530 / 5610 / 5690	MCS 0	
	ax (HE80+80)	5210 + 5290 / 5530 + 5610	MCS 0	
Radiated Emissions >1GHz Emission Bandwidth Peak Power Spectral Density	11a	5260 / 5300 / 5320 5500 / 5580 / 5700 / 5720	6 Mbps	---
	ax HE20	5260 / 5300 / 5320 5500 / 5580 / 5700 / 5720	MCS 0	
	ax HE40	5270 / 5310 5510 / 5590 / 5670 / 5710	MCS 0	
	ax HE80	5290 / 5530 / 5610 / 5690	MCS 0	
	ax (HE80+80)	5210 + 5290 / 5530 + 5610	MCS 0	
Frequency Stability	Un-modulation	5320	---	---

For Frequency band 5725-5850 MHz				
Test item	**Modulation Mode**	**Test Frequency (MHz)**	**Data Rate**	**Test Configuration**
Conducted Emissions	ax (HE20)	5825	MCS 0	---
Radiated Emissions ≤1GHz	ax (HE20)	5825	MCS 0	---

3 Transmitter Test Results

3.1 Conducted Emissions

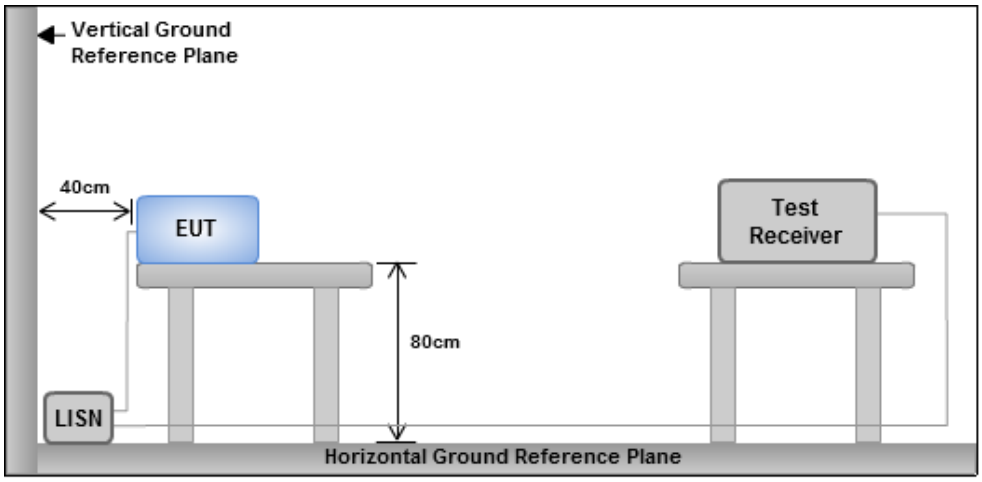
3.1.1 Limit of Conducted Emissions

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

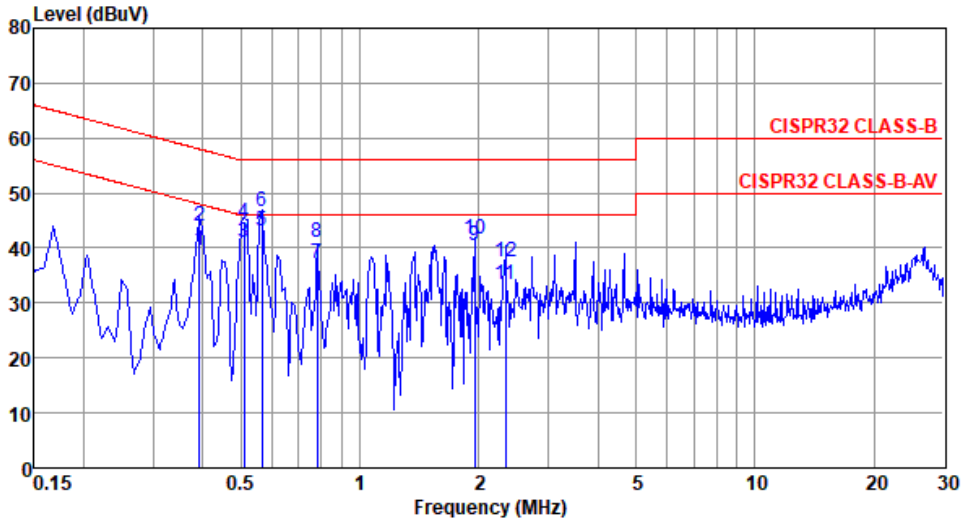


Note: 1. Support units were connected to second LISN.
2. Both of LISNs (AMN) are 80 cm from EUT and at least 80 cm from other units and other metal planes

3.1.4 Test Result of Conducted Emissions

Modulation	ax (HE40)	Test Freq. (MHz)	5230
Power Phase	Line		

Test by : Joe Liao Temperature: 22°C Humidity: 68%

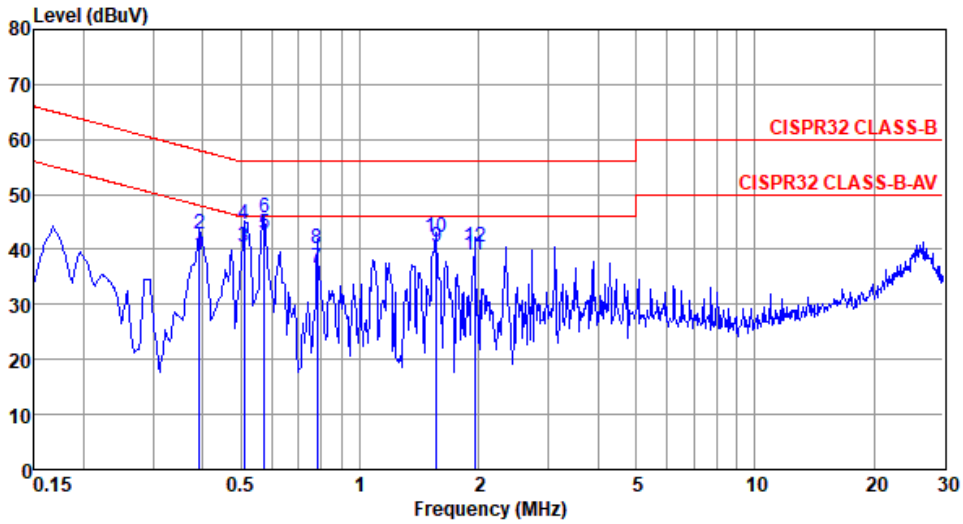


	Freq MHz	Level dBuV	Limit Line dBuV	Over Limit dB	Read Level dBuV	Factor dB	Cable loss dB	Remark
1	0.393	39.57	47.99	-8.42	29.85	9.64	0.08	Average
2	0.393	43.98	57.99	-14.01	34.26	9.64	0.08	QP
3	0.510	40.92	46.00	-5.08	31.19	9.64	0.09	Average
4	0.510	44.57	56.00	-11.43	34.84	9.64	0.09	QP
5*	0.564	42.97	46.00	-3.03	33.23	9.64	0.10	Average
6	0.564	46.69	56.00	-9.31	36.95	9.64	0.10	QP
7	0.779	37.27	46.00	-8.73	27.51	9.65	0.11	Average
8	0.779	40.89	56.00	-15.11	31.13	9.65	0.11	QP
9	1.949	40.52	46.00	-5.48	30.68	9.66	0.18	Average
10	1.949	41.75	56.00	-14.25	31.91	9.66	0.18	QP
11	2.334	33.24	46.00	-12.76	23.38	9.66	0.20	Average
12	2.334	37.54	56.00	-18.46	27.68	9.66	0.20	QP

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

Modulation	ax (HE40)	Test Freq. (MHz)	5230
Power Phase	Neutral		

Test by : Joe Liao Temperature: 22°C Humidity: 68%

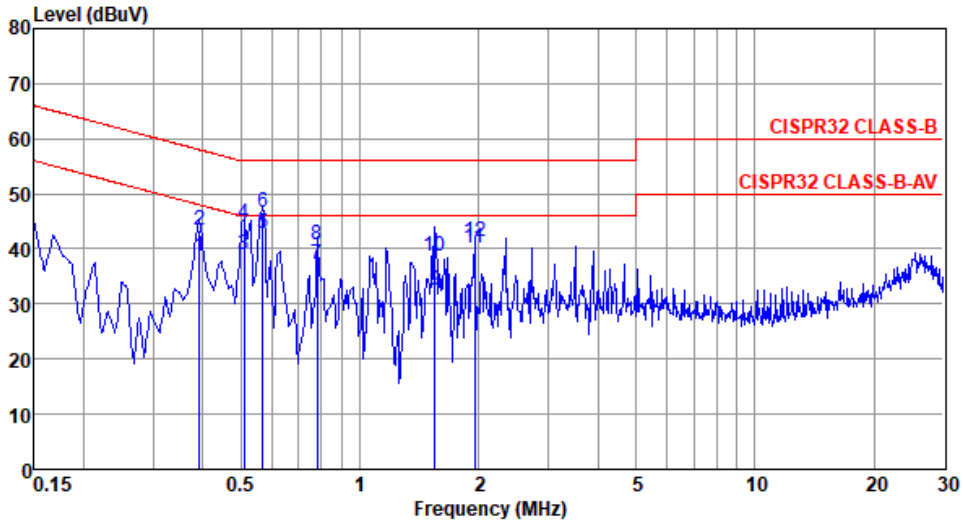


	Freq MHz	Level dBuV	Limit Line dBuV	Over Limit dB	Read Level dBuV	Factor dB	Cable loss dB	Remark
1	0.393	38.93	47.99	-9.06	29.18	9.67	0.08	Average
2	0.393	42.91	57.99	-15.08	33.16	9.67	0.08	QP
3	0.510	40.55	46.00	-5.45	30.79	9.67	0.09	Average
4	0.510	44.56	56.00	-11.44	34.80	9.67	0.09	QP
5*	0.573	42.72	46.00	-3.28	32.95	9.67	0.10	Average
6	0.573	45.72	56.00	-10.28	35.95	9.67	0.10	QP
7	0.779	36.75	46.00	-9.25	26.96	9.68	0.11	Average
8	0.779	40.26	56.00	-15.74	30.47	9.68	0.11	QP
9	1.560	40.47	46.00	-5.53	30.62	9.69	0.16	Average
10	1.560	42.12	56.00	-13.88	32.27	9.69	0.16	QP
11	1.949	38.91	46.00	-7.09	29.04	9.69	0.18	Average
12	1.949	40.46	56.00	-15.54	30.59	9.69	0.18	QP

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

Modulation	ax HE80	Test Freq. (MHz)	5690
Power Phase	Line		

Test by : Joe Liao Temperature: 22°C Humidity: 68%

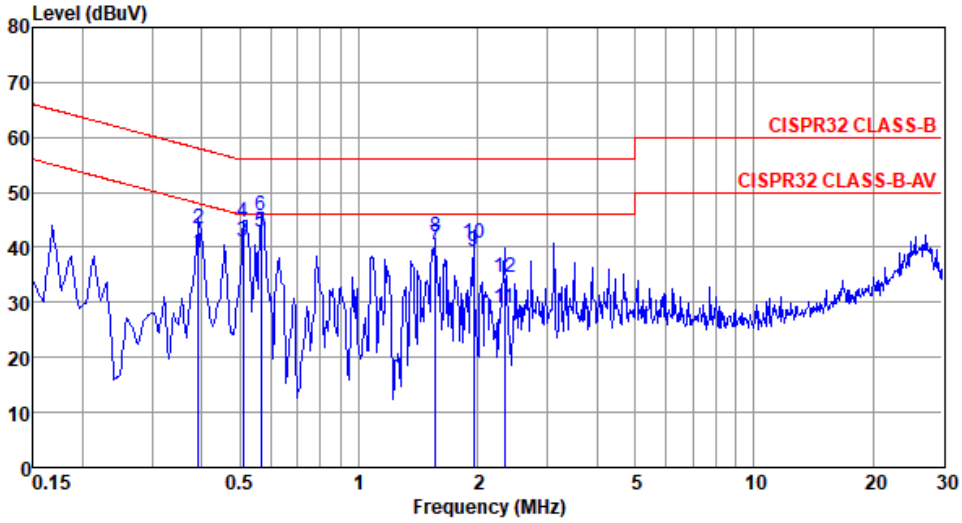


	Freq MHz	Level dBuV	Limit Line dBuV	Over Limit dB	Read Level dBuV	Factor dB	Cable loss dB	Remark
1	0.393	38.65	47.99	-9.34	28.93	9.64	0.08	Average
2	0.393	43.28	57.99	-14.71	33.56	9.64	0.08	QP
3	0.510	38.83	46.00	-7.17	29.10	9.64	0.09	Average
4	0.510	44.44	56.00	-11.56	34.71	9.64	0.09	QP
5*	0.567	42.94	46.00	-3.06	33.20	9.64	0.10	Average
6	0.567	46.54	56.00	-9.46	36.80	9.64	0.10	QP
7	0.779	37.15	46.00	-8.85	27.39	9.65	0.11	Average
8	0.779	40.82	56.00	-15.18	31.06	9.65	0.11	QP
9	1.552	32.33	46.00	-13.67	22.51	9.66	0.16	Average
10	1.552	38.61	56.00	-17.39	28.79	9.66	0.16	QP
11	1.949	40.11	46.00	-5.89	30.27	9.66	0.18	Average
12	1.949	41.40	56.00	-14.60	31.56	9.66	0.18	QP

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

Modulation	ax HE80	Test Freq. (MHz)	5690
Power Phase	Neutral		

Test by : Joe Liao Temperature: 22℃ Humidity: 68%

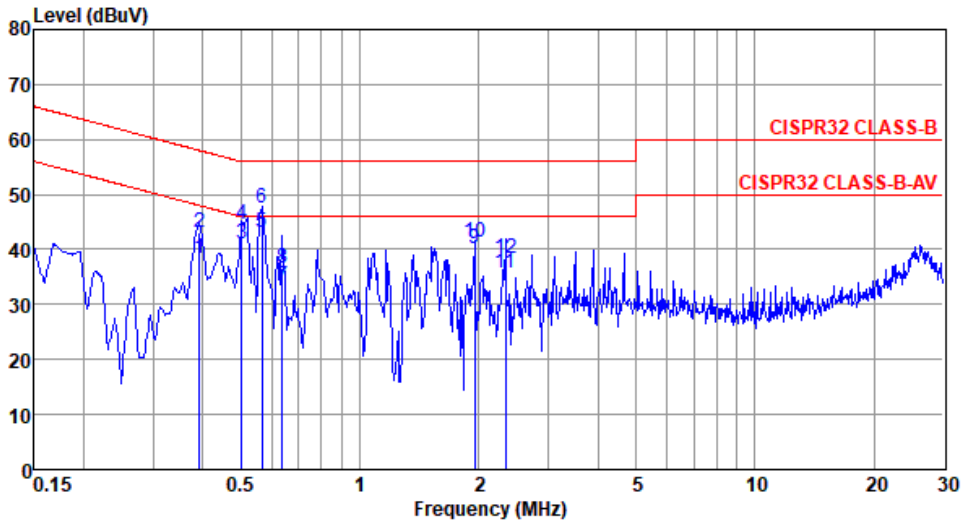


	Freq MHz	Level dBuV	Limit Line dBuV	Over Limit dB	Read Level dBuV	Factor dB	Cable loss dB	Remark
1	0.393	38.97	47.99	-9.02	29.22	9.67	0.08	Average
2	0.393	43.26	57.99	-14.73	33.51	9.67	0.08	QP
3	0.510	41.11	46.00	-4.89	31.35	9.67	0.09	Average
4	0.510	44.50	56.00	-11.50	34.74	9.67	0.09	QP
5*	0.564	42.69	46.00	-3.31	32.92	9.67	0.10	Average
6	0.564	45.80	56.00	-10.20	36.03	9.67	0.10	QP
7	1.560	40.39	46.00	-5.61	30.54	9.69	0.16	Average
8	1.560	41.94	56.00	-14.06	32.09	9.69	0.16	QP
9	1.949	39.41	46.00	-6.59	29.54	9.69	0.18	Average
10	1.949	40.86	56.00	-15.14	30.99	9.69	0.18	QP
11	2.334	28.95	46.00	-17.05	19.06	9.69	0.20	Average
12	2.334	34.47	56.00	-21.53	24.58	9.69	0.20	QP

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

Modulation	ax (HE20)	Test Freq. (MHz)	5825
Power Phase	Line		

Test by : Joe Liao Temperature: 22°C Humidity: 68%

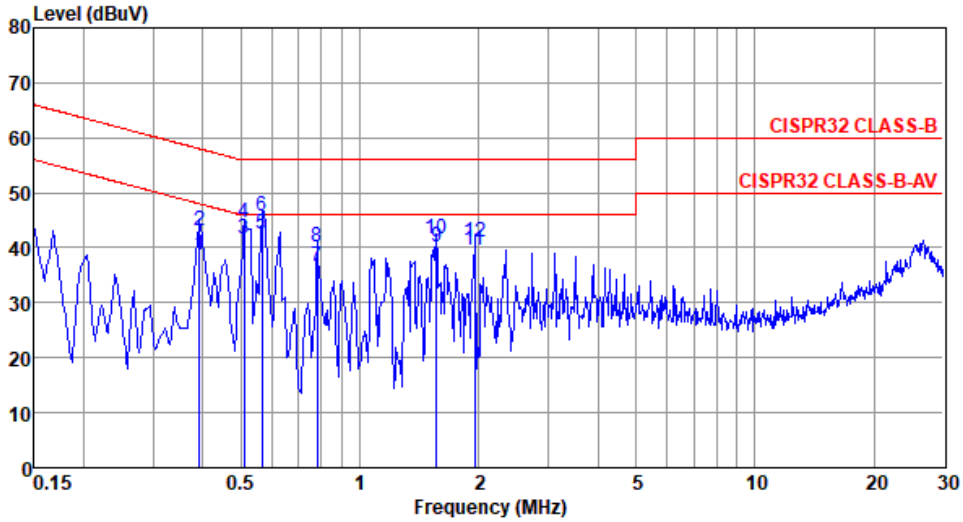


	Freq MHz	Level dBuV	Limit Line dBuV	Over Limit dB	Read Level dBuV	Factor dB	Cable loss dB	Remark
1	0.393	38.47	47.99	-9.52	28.75	9.64	0.08	Average
2	0.393	43.23	57.99	-14.76	33.51	9.64	0.08	QP
3	0.502	41.17	46.00	-4.83	31.44	9.64	0.09	Average
4	0.502	44.53	56.00	-11.47	34.80	9.64	0.09	QP
5*	0.564	42.98	46.00	-3.02	33.24	9.64	0.10	Average
6	0.564	47.51	56.00	-8.49	37.77	9.64	0.10	QP
7	0.637	33.28	46.00	-12.72	23.53	9.65	0.10	Average
8	0.637	36.61	56.00	-19.39	26.86	9.65	0.10	QP
9	1.949	40.05	46.00	-5.95	30.21	9.66	0.18	Average
10	1.949	41.41	56.00	-14.59	31.57	9.66	0.18	QP
11	2.334	35.84	46.00	-10.16	25.98	9.66	0.20	Average
12	2.334	38.51	56.00	-17.49	28.65	9.66	0.20	QP

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

Modulation	ax (HE20)	Test Freq. (MHz)	5825
Power Phase	Neutral		

Test by : Joe Liao Temperature: 22°C Humidity: 68%



	Freq MHz	Level dBuV	Limit Line dBuV	Over Limit dB	Read Level dBuV	Factor dB	Cable loss dB	Remark
1	0.393	38.79	47.99	-9.20	29.04	9.67	0.08	Average
2	0.393	43.18	57.99	-14.81	33.43	9.67	0.08	QP
3	0.510	41.65	46.00	-4.35	31.89	9.67	0.09	Average
4	0.510	44.48	56.00	-11.52	34.72	9.67	0.09	QP
5*	0.564	42.62	46.00	-3.38	32.85	9.67	0.10	Average
6	0.564	45.83	56.00	-10.17	36.06	9.67	0.10	QP
7	0.779	36.67	46.00	-9.33	26.88	9.68	0.11	Average
8	0.779	40.27	56.00	-15.73	30.48	9.68	0.11	QP
9	1.560	40.20	46.00	-5.80	30.35	9.69	0.16	Average
10	1.560	41.66	56.00	-14.34	31.81	9.69	0.16	QP
11	1.949	39.52	46.00	-6.48	29.65	9.69	0.18	Average
12	1.949	40.93	56.00	-15.07	31.06	9.69	0.18	QP

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

3.2 Emission Bandwidth

3.2.1 Test Procedures

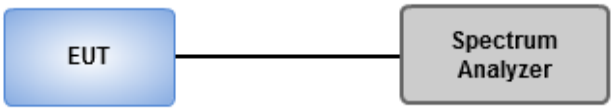
26dB Bandwidth

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 ≥ 3 RBW.
3. Sample detection and single sweep mode shall be used.
4. Use the 99 % power bandwidth function of the instrument.

3.2.2 Test Setup



3.2.3 Test Result of Emission Bandwidth

Ambient Condition	23~24°C / 66~67%	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	-	-	-	-	-
802.11ax HEW80+80_Nss1,(MCS0)_2TX	80.29M	76.7M	76M7D1D	80.29M	76.411M
5.25-5.35GHz	-	-	-	-	-
802.11a_Nss1,(6Mbps)_4TX	19.928M	16.57M	16M6D1D	19.638M	16.425M
802.11ax HEW20_Nss1,(MCS0)_4TX	27.464M	19.03M	19M0D1D	22.029M	18.886M
802.11ax HEW40_Nss1,(MCS0)_4TX	39.71M	37.627M	37M6D1D	39.565M	37.482M
802.11ax HEW80_Nss1,(MCS0)_4TX	80.29M	76.99M	77M0D1D	80.29M	76.7M
802.11ax HEW80+80_Nss1,(MCS0)_2TX	80.29M	76.99M	77M0D1D	80.29M	76.411M
5.47-5.725GHz	-	-	-	-	-
802.11a_Nss1,(6Mbps)_4TX	20M	16.57M	16M6D1D	14.87M	13.242M
802.11ax HEW20_Nss1,(MCS0)_4TX	28.841M	19.03M	19M0D1D	15.87M	14.501M
802.11ax HEW40_Nss1,(MCS0)_4TX	39.855M	37.627M	37M6D1D	34.696M	33.531M
802.11ax HEW80_Nss1,(MCS0)_4TX	80.58M	76.99M	77M0D1D	74.783M	72.721M
802.11ax HEW80+80_Nss1,(MCS0)_2TX	160.58M	153.98M	154MD1D	160.29M	153.4M
5.725-5.85GHz	-	-	-	-	-
802.11a_Nss1,(6Mbps)_4TX	3.188M	3.878M	3M88D1D	3.13M	3.763M
802.11ax HEW20_Nss1,(MCS0)_4TX	4.464M	4.978M	4M98D1D	4.406M	4.747M
802.11ax HEW40_Nss1,(MCS0)_4TX	4M	4.284M	4M28D1D	3.884M	4.052M
802.11ax HEW80_Nss1,(MCS0)_4TX	4.058M	16.903M	16M9D1D	3.768M	4.457M

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;

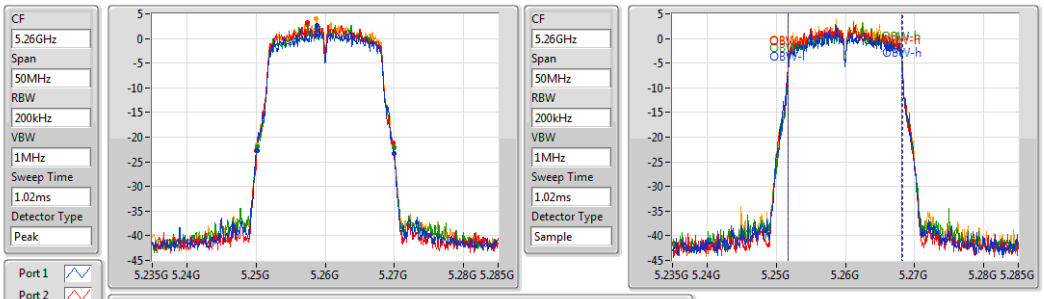
Result

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)_4TX	-	-	-	-	-	-	-	-	-	-
5260MHz	Pass	Inf	19.783M	16.57M	19.783M	16.425M	19.783M	16.425M	19.71M	16.425M
5300MHz	Pass	Inf	19.928M	16.498M	19.638M	16.498M	19.783M	16.425M	19.783M	16.425M
5320MHz	Pass	Inf	19.928M	16.57M	19.783M	16.425M	19.783M	16.425M	19.783M	16.498M
5500MHz	Pass	Inf	19.855M	16.57M	19.71M	16.425M	19.855M	16.425M	20M	16.498M
5580MHz	Pass	Inf	20M	16.425M	19.783M	16.425M	19.855M	16.425M	19.855M	16.498M
5700MHz	Pass	Inf	19.855M	16.57M	19.928M	16.425M	19.783M	16.425M	19.638M	16.425M
5720MHz Straddle 5.47-5.725GHz	Pass	Inf	15M	13.242M	14.87M	13.242M	14.913M	13.242M	14.957M	13.242M
5720MHz Straddle 5.725-5.85GHz	Pass	500k	3.13M	3.821M	3.13M	3.821M	3.188M	3.878M	3.13M	3.763M
802.11ax HEW20_Nss1,(MCS0)_4TX	-	-	-	-	-	-	-	-	-	-
5260MHz	Pass	Inf	22.681M	19.03M	26.812M	18.958M	24.42M	19.03M	26.087M	19.03M
5300MHz	Pass	Inf	27.464M	19.03M	22.246M	19.03M	22.029M	19.03M	26.087M	18.958M
5320MHz	Pass	Inf	22.101M	19.03M	22.826M	19.03M	22.826M	18.886M	22.971M	18.958M
5500MHz	Pass	Inf	22.826M	19.03M	25.435M	18.958M	22.464M	19.03M	28.841M	19.03M
5580MHz	Pass	Inf	22.391M	19.03M	22.246M	19.03M	22.391M	19.03M	21.957M	19.03M
5700MHz	Pass	Inf	24.275M	19.03M	23.116M	18.958M	23.696M	18.958M	23.478M	18.958M
5720MHz Straddle 5.47-5.725GHz	Pass	Inf	17.13M	14.544M	16.435M	14.501M	15.957M	14.501M	15.87M	14.501M
5720MHz Straddle 5.725-5.85GHz	Pass	500k	4.464M	4.978M	4.406M	4.747M	4.406M	4.747M	4.406M	4.747M
802.11ax HEW40_Nss1,(MCS0)_4TX	-	-	-	-	-	-	-	-	-	-
5270MHz	Pass	Inf	39.565M	37.482M	39.71M	37.482M	39.565M	37.482M	39.565M	37.627M
5310MHz	Pass	Inf	39.71M	37.627M	39.565M	37.482M	39.565M	37.627M	39.71M	37.482M
5510MHz	Pass	Inf	39.565M	37.627M	39.855M	37.627M	39.565M	37.627M	39.71M	37.482M
5590MHz	Pass	Inf	39.42M	37.627M	39.71M	37.482M	39.42M	37.482M	39.71M	37.482M
5670MHz	Pass	Inf	39.42M	37.482M	39.565M	37.627M	39.565M	37.337M	39.71M	37.627M
5710MHz Straddle 5.47-5.725GHz	Pass	Inf	34.797M	33.531M	34.696M	33.531M	34.696M	33.531M	34.696M	33.531M
5710MHz Straddle 5.725-5.85GHz	Pass	500k	4M	4.284M	4M	4.052M	4M	4.168M	3.884M	4.052M
802.11ax HEW80_Nss1,(MCS0)_4TX	-	-	-	-	-	-	-	-	-	-
5290MHz	Pass	Inf	80.29M	76.99M	80.29M	76.7M	80.29M	76.99M	80.29M	76.99M
5530MHz	Pass	Inf	80.29M	76.99M	80.29M	76.7M	80.29M	76.7M	80.29M	76.411M
5610MHz	Pass	Inf	80.29M	76.7M	80.29M	76.7M	80.58M	76.7M	80.29M	76.7M
5690MHz Straddle 5.47-5.725GHz	Pass	Inf	75M	72.938M	74.783M	72.938M	75M	72.721M	75M	72.721M
5690MHz Straddle 5.725-5.85GHz	Pass	500k	4.058M	16.903M	3.826M	8.336M	3.884M	14.645M	3.768M	4.457M
802.11ax HEW80+80_Nss1,(MCS0)_2TX	-	-	-	-	-	-	-	-	-	-
5210MHz	Pass	Inf	80.29M	76.411M	80.29M	76.7M	-	-	-	-
5290MHz	Pass	Inf	-	-	-	-	80.29M	76.99M	80.29M	76.411M
802.11ax HEW80+80_Nss1,(MCS0)_2TX	-	-	-	-	-	-	-	-	-	-
5530MHz	Pass	Inf	80.29M	76.99M	80.29M	76.7M	-	-	-	-
5610MHz	Pass	Inf	-	-	-	-	80.29M	76.99M	80M	76.7M

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)_4TX **EBW**

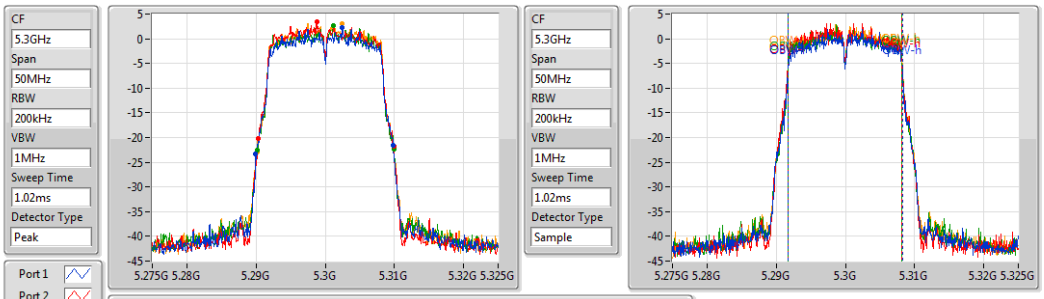
5260MHz



26dB(Hz)	Fl-26dB(Hz)	Fh-26dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
19.783M	5.250145G	5.269928G	16.57M	5.251679G	5.268249G	Inf	1
19.783M	5.250072G	5.269855G	16.425M	5.251751G	5.268177G	Inf	2
19.783M	5.250145G	5.269928G	16.425M	5.251751G	5.268177G	Inf	3
19.71M	5.250217G	5.269928G	16.425M	5.251751G	5.268177G	Inf	4

802.11a_Nss1,(6Mbps)_4TX **EBW**

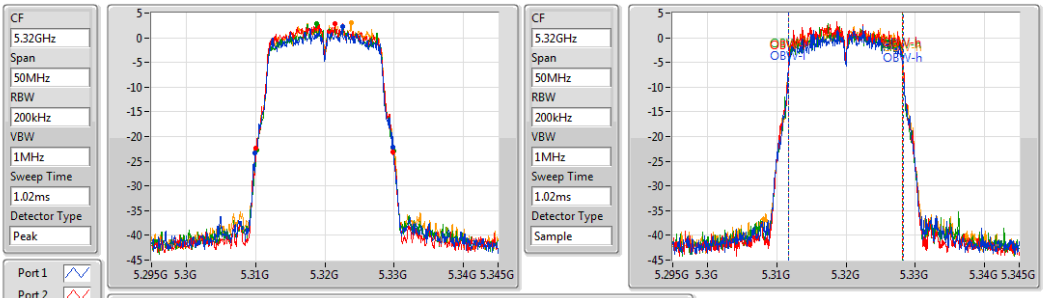
5300MHz



26dB(Hz)	Fl-26dB(Hz)	Fh-26dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
19.928M	5.289928G	5.309855G	16.498M	5.291751G	5.308249G	Inf	1
19.638M	5.29029G	5.309928G	16.498M	5.291679G	5.308177G	Inf	2
19.783M	5.290145G	5.309928G	16.425M	5.291751G	5.308177G	Inf	3
19.783M	5.290145G	5.309928G	16.425M	5.291751G	5.308177G	Inf	4

802.11a_Nss1,(6Mbps)_4TX **EBW**

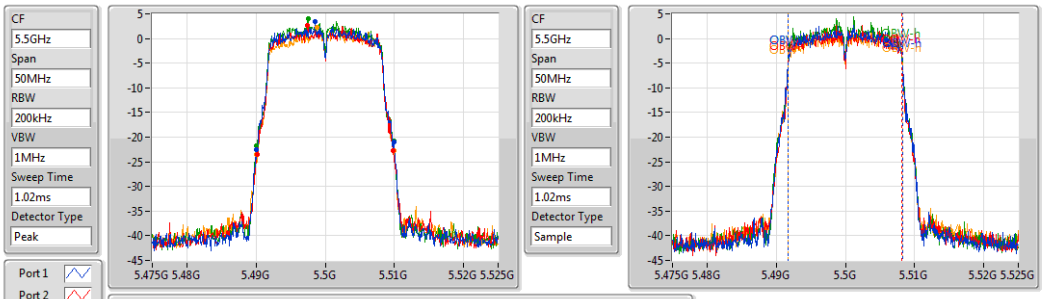
5320MHz



26dB(Hz)	Fl-26dB(Hz)	Fh-26dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
19.928M	5.309928G	5.329855G	16.57M	5.311679G	5.328249G	Inf	1
19.783M	5.310072G	5.329855G	16.425M	5.311751G	5.328177G	Inf	2
19.783M	5.310145G	5.329928G	16.425M	5.311751G	5.328177G	Inf	3
19.783M	5.310072G	5.329855G	16.498M	5.311751G	5.328249G	Inf	4

802.11a_Nss1,(6Mbps)_4TX **EBW**

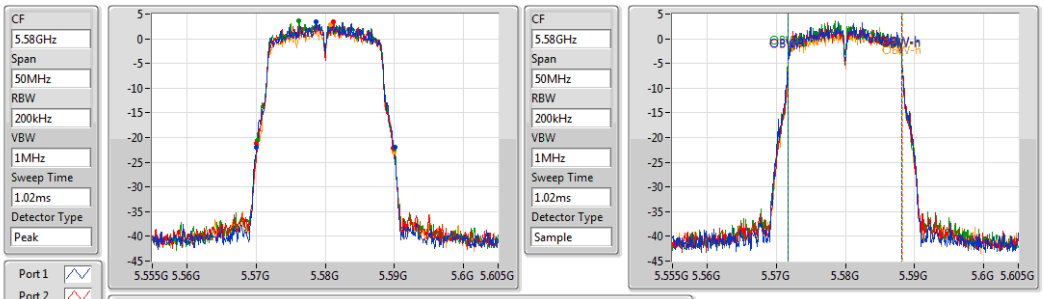
5500MHz



26dB(Hz)	Fl-26dB(Hz)	Fh-26dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
19.855M	5.490072G	5.509928G	16.57M	5.491679G	5.508249G	Inf	1
19.71M	5.490145G	5.509855G	16.425M	5.491751G	5.508177G	Inf	2
19.855M	5.490072G	5.509928G	16.425M	5.491751G	5.508177G	Inf	3
20M	5.49G	5.51G	16.498M	5.491751G	5.508249G	Inf	4

802.11a_Nss1,(6Mbps)_4TX **EBW**

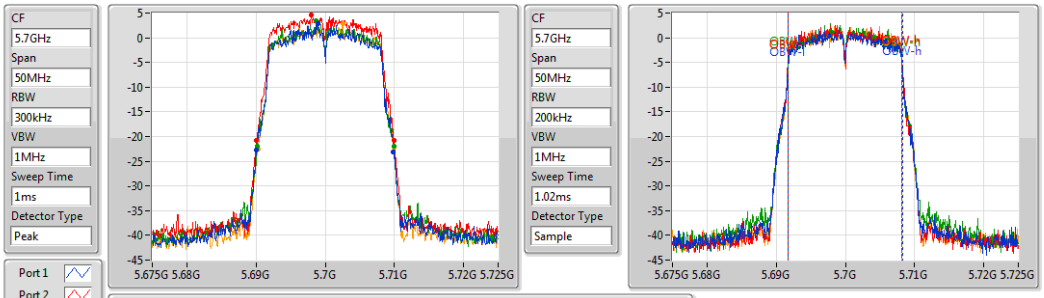
5580MHz



26dB(Hz)	Fl-26dB(Hz)	Fh-26dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
20M	5.570072G	5.590072G	16.425M	5.571751G	5.588177G	Inf	1
19.783M	5.570072G	5.589855G	16.425M	5.571751G	5.588177G	Inf	2
19.855M	5.570145G	5.59G	16.425M	5.571751G	5.588177G	Inf	3
19.855M	5.570072G	5.589928G	16.498M	5.571751G	5.588249G	Inf	4

802.11a_Nss1,(6Mbps)_4TX **EBW**

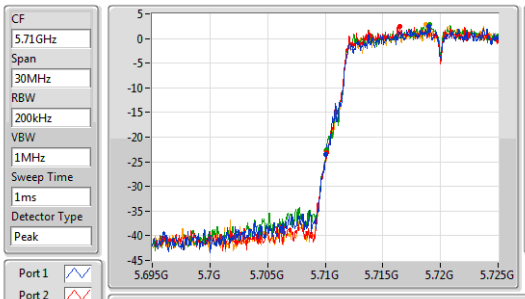
5700MHz

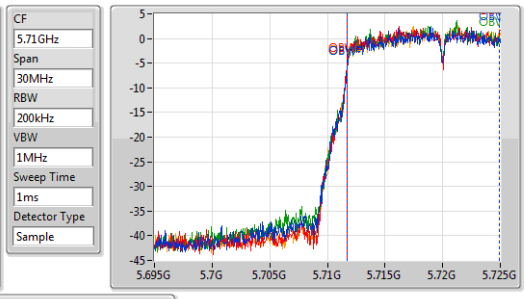


26dB(Hz)	Fl-26dB(Hz)	Fh-26dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
19.855M	5.69G	5.709855G	16.57M	5.691679G	5.708249G	Inf	1
19.928M	5.690072G	5.71G	16.425M	5.691751G	5.708177G	Inf	2
19.783M	5.690145G	5.709928G	16.425M	5.691751G	5.708177G	Inf	3
19.638M	5.69029G	5.709928G	16.425M	5.691751G	5.708177G	Inf	4

802.11a_Nss1,(6Mbps)_4TX **EBW**

5720MHz Straddle 5.47-5.725GHz

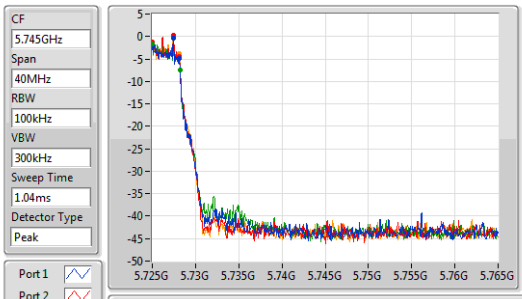


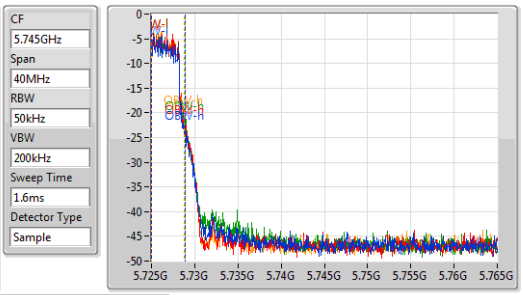


26dB(Hz)	Fl-26dB(Hz)	Fh-26dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
15M	5.71G	5.725G	13.242M	5.711693G	5.724935G	Inf	1
14.87M	5.71013G	5.725G	13.242M	5.711693G	5.724935G	Inf	2
14.913M	5.710087G	5.725G	13.242M	5.711693G	5.724935G	Inf	3
14.957M	5.710043G	5.725G	13.242M	5.711693G	5.724935G	Inf	4

802.11a_Nss1,(6Mbps)_4TX **EBW**

5720MHz Straddle 5.725-5.85GHz

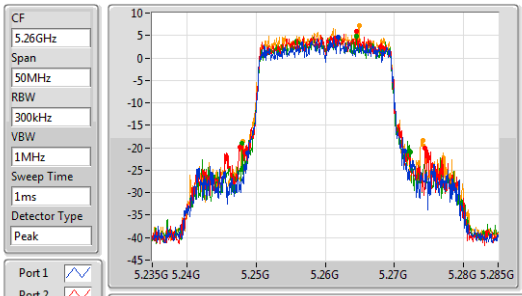


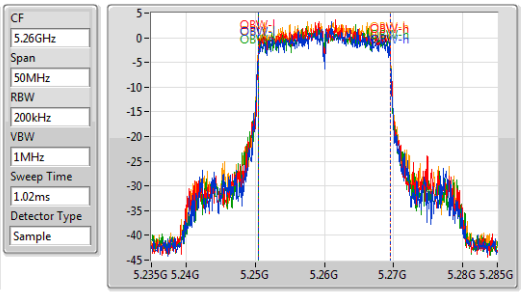


6dB(Hz)	Fl-6dB(Hz)	Fh-6dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
3.13M	5.725G	5.72813G	3.821M	5.725029G	5.728849G	500k	1
3.13M	5.725G	5.72813G	3.821M	5.725029G	5.728849G	500k	2
3.188M	5.725G	5.728188G	3.878M	5.725029G	5.728907G	500k	3
3.13M	5.725G	5.72813G	3.763M	5.725029G	5.728792G	500k	4

802.11ax HEW20_Nss1,(MCS0)_4TX **EBW**

5260MHz

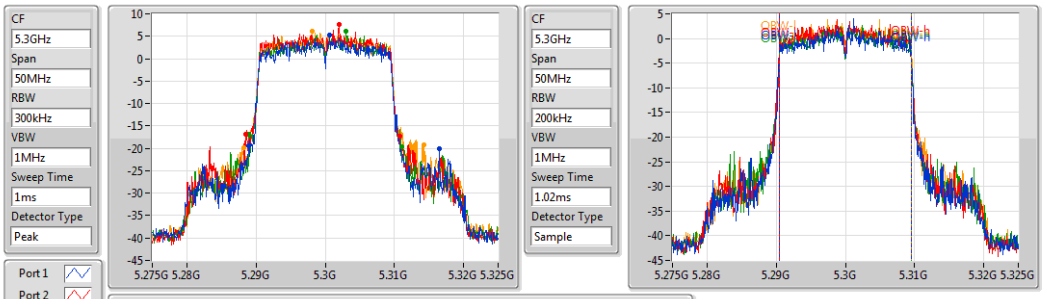




26dB(Hz)	Fl-26dB(Hz)	Fh-26dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
22.681M	5.248768G	5.271449G	19.03M	5.250449G	5.269479G	Inf	1
26.812M	5.247609G	5.27442G	18.958M	5.250521G	5.269479G	Inf	2
24.42M	5.247971G	5.272391G	19.03M	5.250449G	5.269479G	Inf	3
26.087M	5.248043G	5.27413G	19.03M	5.250449G	5.269479G	Inf	4

802.11ax HEW20_Nss1,(MCS0)_4TX **EBW**

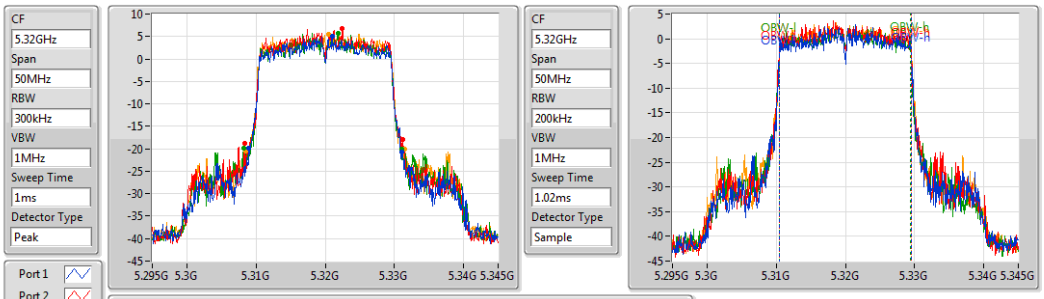
5300MHz



26dB(Hz)	Fl-26dB(Hz)	Fh-26dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
27.464M	5.288986G	5.316449G	19.03M	5.290449G	5.309479G	Inf	1
22.246M	5.288478G	5.310725G	19.03M	5.290449G	5.309479G	Inf	2
22.029M	5.288986G	5.311014G	19.03M	5.290449G	5.309479G	Inf	3
26.087M	5.288188G	5.314275G	18.958M	5.290521G	5.309479G	Inf	4

802.11ax HEW20_Nss1,(MCS0)_4TX **EBW**

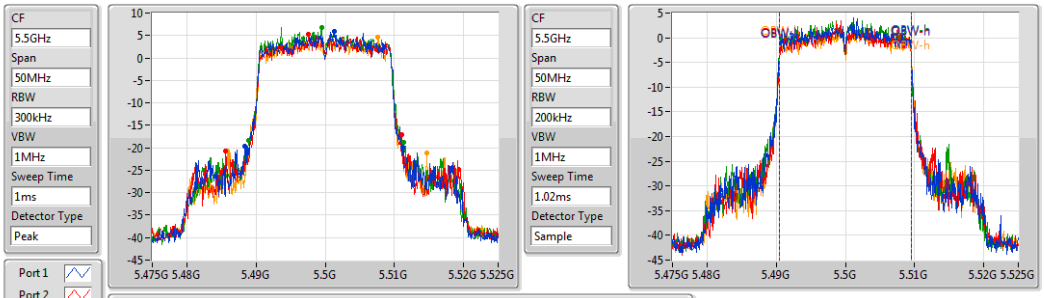
5320MHz



26dB(Hz)	Fl-26dB(Hz)	Fh-26dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
22.101M	5.308986G	5.331087G	19.03M	5.310449G	5.329479G	Inf	1
22.826M	5.308333G	5.331159G	19.03M	5.310449G	5.329479G	Inf	2
22.826M	5.308188G	5.331014G	18.886M	5.310521G	5.329407G	Inf	3
22.971M	5.308478G	5.331449G	18.958M	5.310521G	5.329479G	Inf	4

802.11ax HEW20_Nss1,(MCS0)_4TX **EBW**

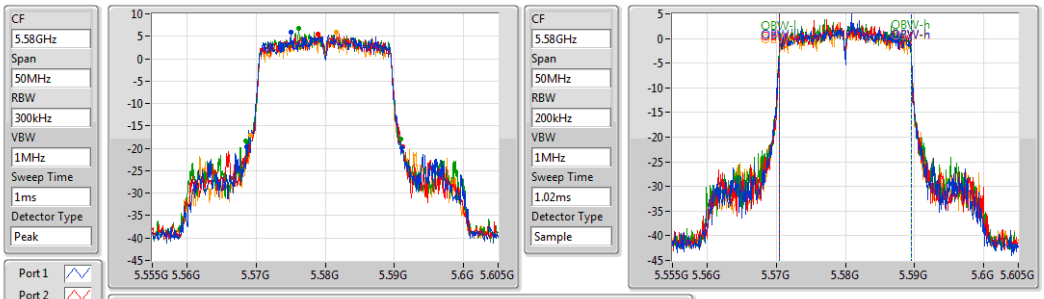
5500MHz



26dB(Hz)	Fl-26dB(Hz)	Fh-26dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
22.826M	5.488406G	5.511232G	19.03M	5.490449G	5.509479G	Inf	1
25.435M	5.485652G	5.511087G	18.958M	5.490521G	5.509479G	Inf	2
22.464M	5.488913G	5.511377G	19.03M	5.490449G	5.509479G	Inf	3
28.841M	5.485797G	5.514638G	19.03M	5.490521G	5.509551G	Inf	4

802.11ax HEW20_Nss1,(MCS0)_4TX **EBW**

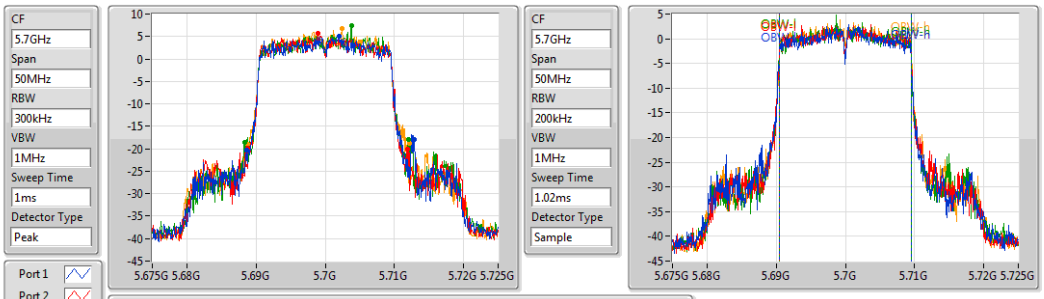
5580MHz



26dB(Hz)	Fl-26dB(Hz)	Fh-26dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
22.391M	5.568623G	5.591014G	19.03M	5.570449G	5.589479G	Inf	1
22.246M	5.568986G	5.591232G	19.03M	5.570449G	5.589479G	Inf	2
22.391M	5.568551G	5.590942G	19.03M	5.570449G	5.589479G	Inf	3
21.957M	5.569203G	5.591159G	19.03M	5.570449G	5.589479G	Inf	4

802.11ax HEW20_Nss1,(MCS0)_4TX **EBW**

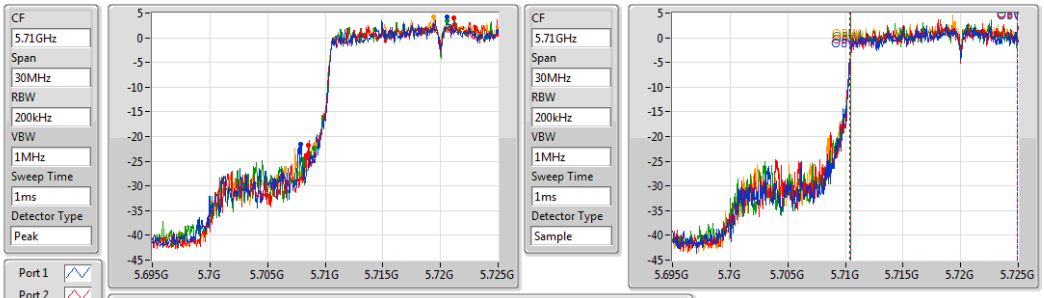
5700MHz



26dB(Hz)	Fl-26dB(Hz)	Fh-26dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
24.275M	5.688623G	5.712899G	19.03M	5.690449G	5.709479G	Inf	1
23.116M	5.688841G	5.711957G	18.958M	5.690521G	5.709479G	Inf	2
23.696M	5.688406G	5.712101G	18.958M	5.690521G	5.709479G	Inf	3
23.478M	5.688768G	5.712246G	18.958M	5.690521G	5.709479G	Inf	4

802.11ax HEW20_Nss1,(MCS0)_4TX **EBW**

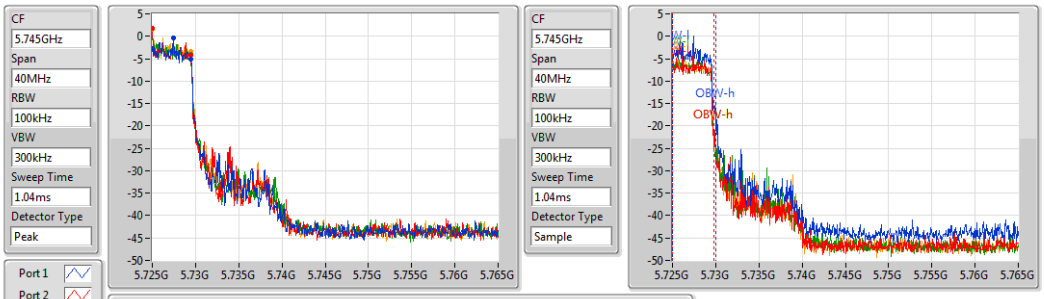
5720MHz Straddle 5.47-5.725GHz



26dB(Hz)	Fl-26dB(Hz)	Fh-26dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
17.13M	5.70787G	5.725G	14.544M	5.710391G	5.724935G	Inf	1
16.435M	5.708565G	5.725G	14.501M	5.710434G	5.724935G	Inf	2
15.957M	5.709043G	5.725G	14.501M	5.710434G	5.724935G	Inf	3
15.87M	5.70913G	5.725G	14.501M	5.710434G	5.724935G	Inf	4

802.11ax HEW20_Nss1,(MCS0)_4TX **EBW**

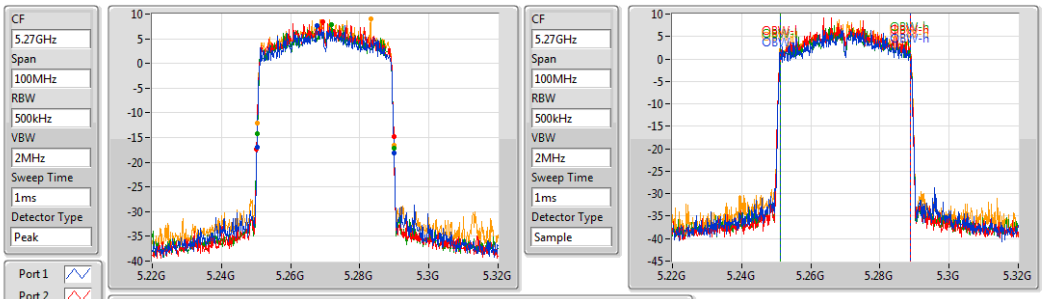
5720MHz Straddle 5.725-5.85GHz



6dB(Hz)	Fl-6dB(Hz)	Fh-6dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
4.464M	5.725G	5.729464G	4.978M	5.725029G	5.730007G	500k	1
4.406M	5.725G	5.729406G	4.747M	5.725029G	5.729776G	500k	2
4.406M	5.725G	5.729406G	4.747M	5.725029G	5.729776G	500k	3
4.406M	5.725G	5.729406G	4.747M	5.725029G	5.729776G	500k	4

802.11ax HEW40_Nss1,(MCS0)_4TX **EBW**

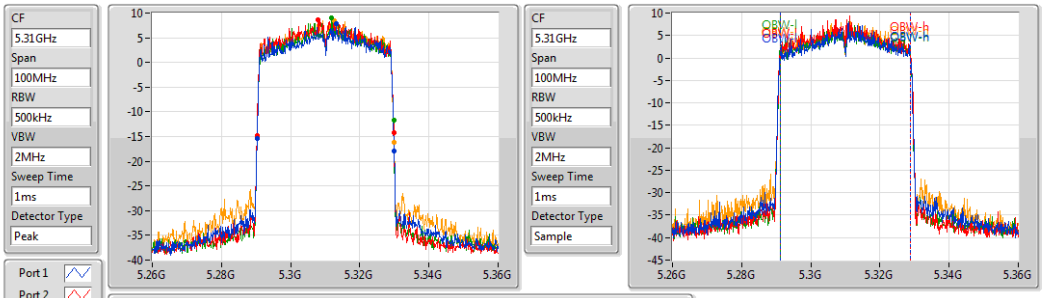
5270MHz



26dB(Hz)	Fl-26dB(Hz)	Fh-26dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
39.565M	5.25029G	5.289855G	37.482M	5.251187G	5.288669G	Inf	1
39.71M	5.250145G	5.289855G	37.482M	5.251331G	5.288813G	Inf	2
39.565M	5.25029G	5.289855G	37.482M	5.251187G	5.288669G	Inf	3
39.565M	5.25029G	5.289855G	37.627M	5.251187G	5.288813G	Inf	4

802.11ax HEW40_Nss1,(MCS0)_4TX **EBW**

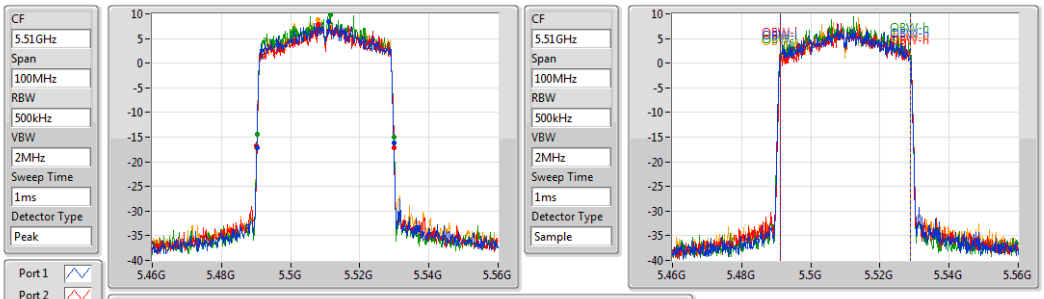
5310MHz



26dB(Hz)	Fl-26dB(Hz)	Fh-26dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
39.71M	5.29029G	5.33G	37.627M	5.291187G	5.328813G	Inf	1
39.565M	5.29029G	5.329855G	37.482M	5.291187G	5.328669G	Inf	2
39.565M	5.29029G	5.329855G	37.627M	5.291187G	5.328813G	Inf	3
39.71M	5.29029G	5.33G	37.482M	5.291187G	5.328669G	Inf	4

802.11ax HEW40_Nss1,(MCS0)_4TX **EBW**

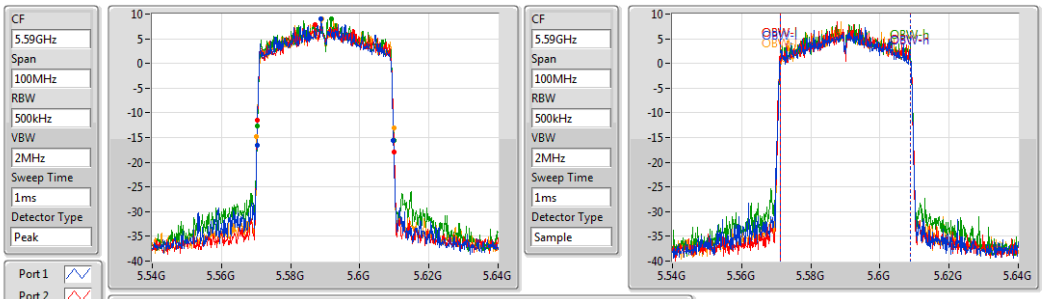
5510MHz



26dB(Hz)	Fl-26dB(Hz)	Fh-26dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
39.565M	5.49029G	5.529855G	37.627M	5.491187G	5.528813G	Inf	1
39.855M	5.490145G	5.53G	37.627M	5.491187G	5.528813G	Inf	2
39.565M	5.49029G	5.529855G	37.627M	5.491187G	5.528813G	Inf	3
39.71M	5.490145G	5.529855G	37.482M	5.491331G	5.528813G	Inf	4

802.11ax HEW40_Nss1,(MCS0)_4TX **EBW**

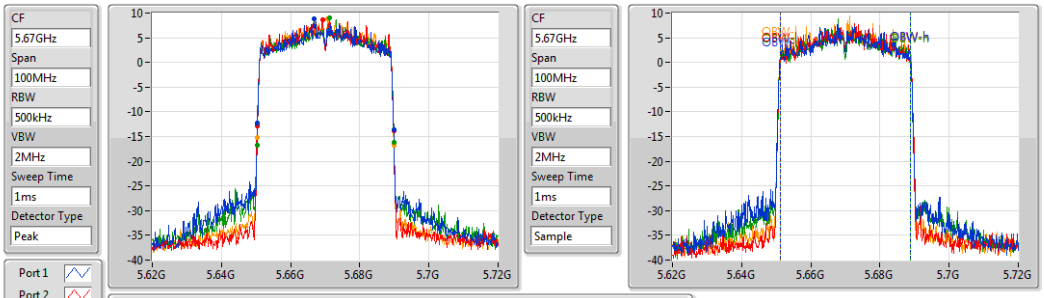
5590MHz



26dB(Hz)	Fl-26dB(Hz)	Fh-26dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
39.42M	5.57029G	5.60971G	37.627M	5.571187G	5.608813G	Inf	1
39.71M	5.57029G	5.61G	37.482M	5.571187G	5.608669G	Inf	2
39.42M	5.570435G	5.609855G	37.482M	5.571331G	5.608813G	Inf	3
39.71M	5.570145G	5.609855G	37.482M	5.571187G	5.608669G	Inf	4

802.11ax HEW40_Nss1,(MCS0)_4TX **EBW**

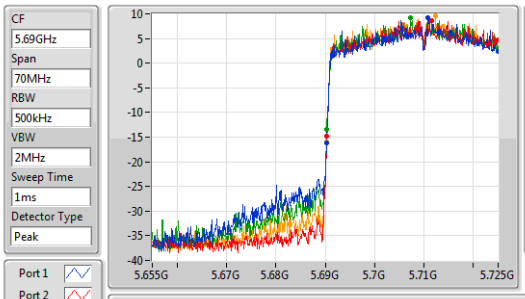
5670MHz

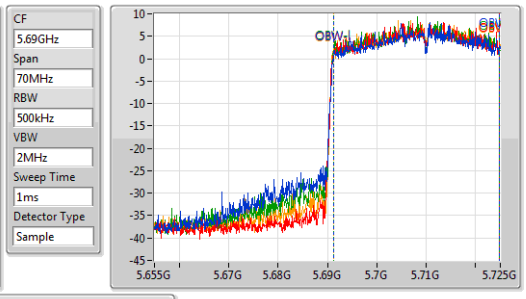


26dB(Hz)	Fl-26dB(Hz)	Fh-26dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
39.42M	5.650435G	5.689855G	37.482M	5.651187G	5.688669G	Inf	1
39.565M	5.65029G	5.689855G	37.627M	5.651187G	5.688813G	Inf	2
39.565M	5.65029G	5.689855G	37.337M	5.651331G	5.688669G	Inf	3
39.71M	5.65029G	5.69G	37.627M	5.651187G	5.688813G	Inf	4

802.11ax HEW40_Nss1,(MCS0)_4TX **EBW**

5710MHz Straddle 5.47-5.725GHz

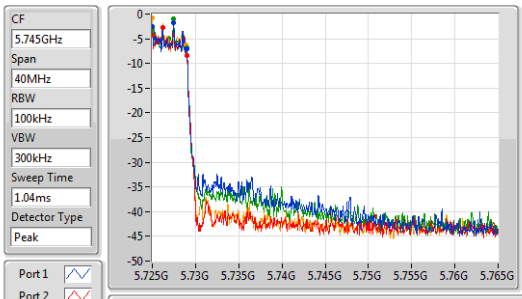


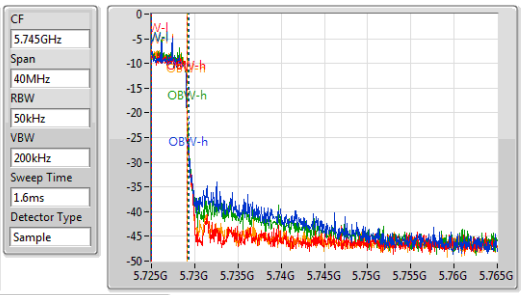


26dB(Hz)	Fl-26dB(Hz)	Fh-26dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
34.797M	5.690203G	5.725G	33.531M	5.691216G	5.724747G	Inf	1
34.696M	5.690304G	5.725G	33.531M	5.691216G	5.724747G	Inf	2
34.696M	5.690304G	5.725G	33.531M	5.691216G	5.724747G	Inf	3
34.696M	5.690304G	5.725G	33.531M	5.691216G	5.724747G	Inf	4

802.11ax HEW40_Nss1,(MCS0)_4TX **EBW**

5710MHz Straddle 5.725-5.85GHz

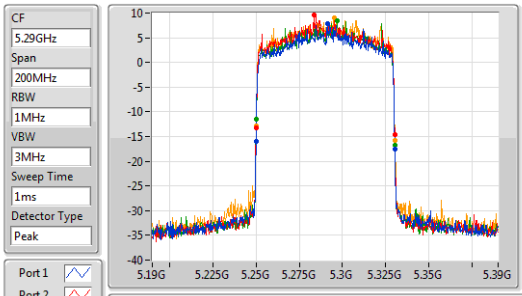


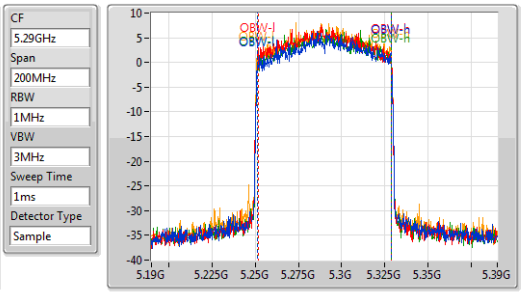


6dB(Hz)	Fl-6dB(Hz)	Fh-6dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
4M	5.725G	5.729G	4.284M	5.725029G	5.729313G	500k	1
4M	5.725G	5.729G	4.052M	5.725029G	5.729081G	500k	2
4M	5.725G	5.729G	4.168M	5.725029G	5.729197G	500k	3
3.884M	5.725G	5.728884G	4.052M	5.725029G	5.729081G	500k	4

802.11ax HEW80_Nss1,(MCS0)_4TX **EBW**

5290MHz

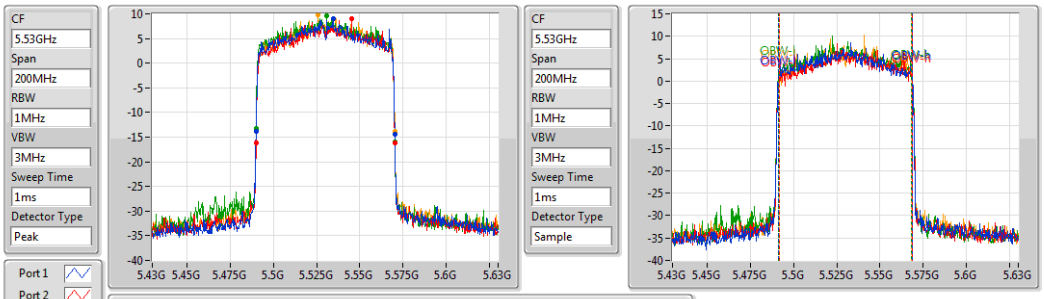




26dB(Hz)	Fl-26dB(Hz)	Fh-26dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
80.29M	5.25G	5.33029G	76.99M	5.251505G	5.328495G	Inf	1
80.29M	5.25G	5.33029G	76.7M	5.251795G	5.328495G	Inf	2
80.29M	5.25G	5.33029G	76.99M	5.251505G	5.328495G	Inf	3
80.29M	5.25G	5.33029G	76.99M	5.251505G	5.328495G	Inf	4

802.11ax HEW80_Nss1,(MCS0)_4TX **EBW**

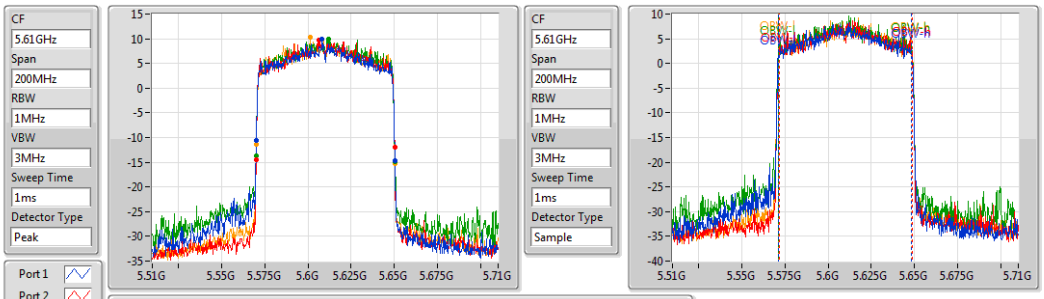
5530MHz



26dB(Hz)	Fl-26dB(Hz)	Fh-26dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
80.29M	5.49G	5.57029G	76.99M	5.491505G	5.568495G	Inf	1
80.29M	5.49G	5.57029G	76.7M	5.491795G	5.568495G	Inf	2
80.29M	5.49G	5.57029G	76.7M	5.491505G	5.568205G	Inf	3
80.29M	5.49G	5.57029G	76.411M	5.491795G	5.568205G	Inf	4

802.11ax HEW80_Nss1,(MCS0)_4TX **EBW**

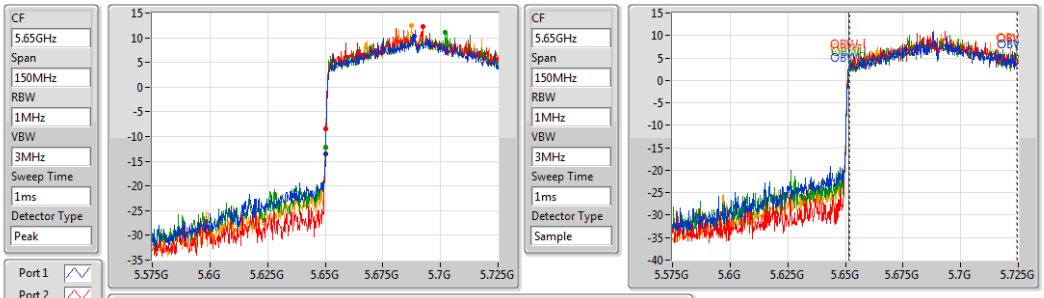
5610MHz



26dB(Hz)	Fl-26dB(Hz)	Fh-26dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
80.29M	5.57G	5.65029G	76.7M	5.571505G	5.648205G	Inf	1
80.29M	5.57G	5.65029G	76.7M	5.571795G	5.648495G	Inf	2
80.58M	5.57G	5.65058G	76.7M	5.571505G	5.648205G	Inf	3
80.29M	5.57G	5.65029G	76.7M	5.571505G	5.648205G	Inf	4

802.11ax HEW80_Nss1,(MCS0)_4TX **EBW**

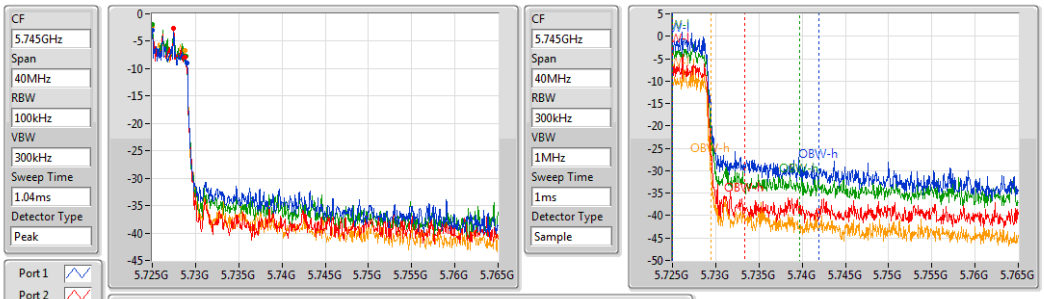
5690MHz Straddle 5.47-5.725GHz



26dB(Hz)	Fl-26dB(Hz)	Fh-26dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
75M	5.65G	5.725G	72.938M	5.65152G	5.724457G	Inf	1
74.783M	5.650217G	5.725G	72.938M	5.65152G	5.724457G	Inf	2
75M	5.65G	5.725G	72.721M	5.651737G	5.724457G	Inf	3
75M	5.65G	5.725G	72.721M	5.65152G	5.72424G	Inf	4

802.11ax HEW80_Nss1,(MCS0)_4TX **EBW**

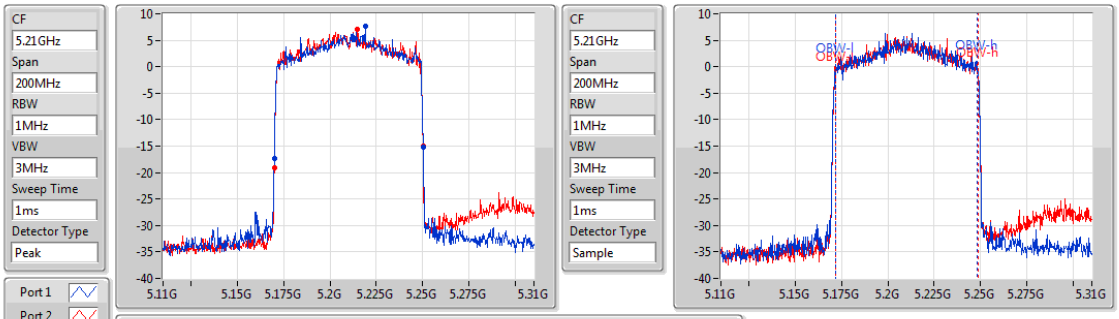
5690MHz Straddle 5.725-5.85GHz



6dB(Hz)	Fl-6dB(Hz)	Fh-6dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
4.058M	5.725G	5.729058G	16.903M	5.725029G	5.741932G	500k	1
3.826M	5.725G	5.728826G	8.336M	5.725029G	5.733365G	500k	2
3.884M	5.725G	5.728884G	14.645M	5.725029G	5.739674G	500k	3
3.768M	5.725G	5.728768G	4.457M	5.725029G	5.729486G	500k	4

802.11ax HEW80+80_Nss1,(MCS0)_2TX **EBW**

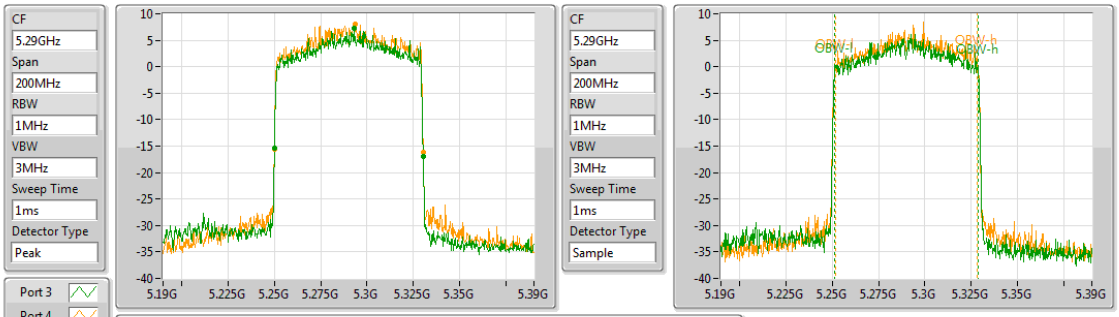
5210MHz



26dB(Hz)	Fl-26dB(Hz)	Fh-26dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
80.29M	5.17G	5.25029G	76.411M	5.171795G	5.248205G	Inf	1
80.29M	5.17G	5.25029G	76.7M	5.171795G	5.248495G	Inf	2

802.11ax HEW80+80_Nss1,(MCS0)_2TX **EBW**

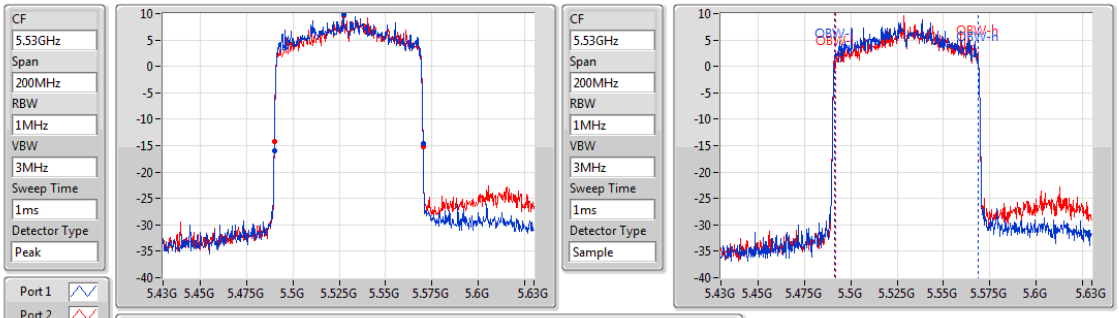
5290MHz



26dB(Hz)	Fl-26dB(Hz)	Fh-26dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
80.29M	5.25G	5.33029G	76.99M	5.251505G	5.328495G	Inf	3
80.29M	5.25G	5.33029G	76.411M	5.251795G	5.328205G	Inf	4

802.11ax HEW80+80_Nss1,(MCS0)_2TX **EBW**

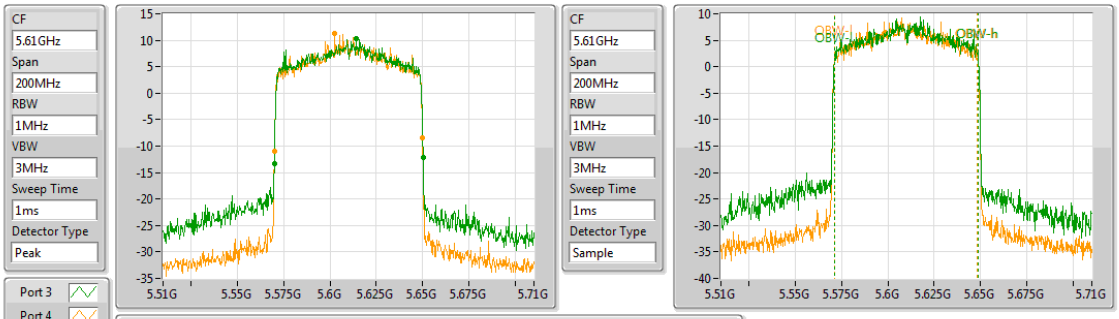
5530MHz



26dB(Hz)	Fl-26dB(Hz)	Fh-26dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
80.29M	5.49G	5.57029G	76.99M	5.491505G	5.568495G	Inf	1
80.29M	5.49G	5.57029G	76.7M	5.491795G	5.568495G	Inf	2

802.11ax HEW80+80_Nss1,(MCS0)_2TX **EBW**

5610MHz



26dB(Hz)	Fl-26dB(Hz)	Fh-26dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
80.29M	5.57G	5.65029G	76.99M	5.571505G	5.648495G	Inf	3
80M	5.57G	5.65G	76.7M	5.571505G	5.648205G	Inf	4

3.3 RF Output Power

3.3.1 Limit of RF Output Power

Frequency Band (MHz)		Limit
☒	5250 ~ 5350	Conducted Power: 250mW or 11dBm+10 log B
☒	5470 ~ 5725	Conducted Power: 250mW or 11dBm+10 log B
Note: “B” is the 26dB emission bandwidth in MHz.		

3.3.2 Test Procedures

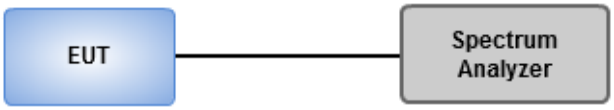
Method PM-G (Measurement using a gated RF average power meter)

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.

Spectrum analyzer (For channel that extends across the 5.725 GHz boundary)

1. Set RBW = 1MHz, VBW = 3MHz, Sweep time = Auto, Detector = RMS.
2. Trace average at least 100 traces in power averaging mode.
3. Compute power by integrating the spectrum across the 26 dB EBW.
4. Add 10 log(1/X, X:duty cycle) if duty cycle is <98%).

3.3.3 Test Setup



3.3.4 Test Result of Maximum Conducted Output Power

Ambient Condition	23~24°C / 66~67%	Tested By	Brad Wu

Summary

Mode	Total Power (dBm)	Total Power (W)	EIRP (dBm)	EIRP (W)
5.15-5.25GHz	-	-	-	-
802.11ax HEW80+80_Nss1,(MCS0)_2TX	16.71	0.04688	21.01	0.12618
5.25-5.35GHz	-	-	-	-
802.11a_Nss1,(6Mbps)_4TX	18.57	0.07194	22.87	0.19364
802.11ax HEW20_Nss1,(MCS0)_4TX	18.59	0.07228	22.89	0.19454
802.11ax HEW40_Nss1,(MCS0)_4TX	21.25	0.13335	25.55	0.35892
802.11ax HEW80_Nss1,(MCS0)_4TX	20.49	0.11194	24.79	0.30130
802.11ax HEW80+80_Nss1,(MCS0)_2TX	17.28	0.05346	21.58	0.14388
5.47-5.725GHz	-	-	-	-
802.11a_Nss1,(6Mbps)_4TX	19.00	0.07943	23.30	0.21380
802.11ax HEW20_Nss1,(MCS0)_4TX	19.04	0.08017	23.34	0.21577
802.11ax HEW40_Nss1,(MCS0)_4TX	21.38	0.13740	25.68	0.36983
802.11ax HEW80_Nss1,(MCS0)_4TX	23.48	0.22284	27.78	0.59979
802.11ax HEW80+80_Nss1,(MCS0)_2TX	22.37	0.17258	26.67	0.46452
5.725-5.85GHz	-	-	-	-
802.11a_Nss1,(6Mbps)_4TX	10.75	0.01189	15.05	0.03199
802.11ax HEW20_Nss1,(MCS0)_4TX	12.69	0.01858	16.99	0.05000
802.11ax HEW40_Nss1,(MCS0)_4TX	10.05	0.01012	14.35	0.02723
802.11ax HEW80_Nss1,(MCS0)_4TX	8.49	0.00706	12.79	0.01901

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)_4TX	-	-	-	-	-	-	-	-	-	-
5260MHz	Pass	4.30	11.89	12.71	12.22	13.21	18.56	23.95	22.86	29.95
5300MHz	Pass	4.30	12.03	12.7	12.21	13.16	18.57	23.93	22.87	29.93
5320MHz	Pass	4.30	11.88	12.65	12.13	12.78	18.40	23.96	22.70	29.96
5500MHz	Pass	4.30	12.76	12.45	13.38	12.56	18.82	23.95	23.12	29.95
5580MHz	Pass	4.30	12.86	12.59	13.31	13.11	19.00	23.96	23.30	29.96
5700MHz	Pass	4.30	12.46	12.81	12.92	12.71	18.75	23.93	23.05	29.93
5720MHz Straddle 5.47-5.725GHz	Pass	4.30	11.61	12.03	12.13	11.82	17.92	22.72	22.22	28.72
5720MHz Straddle 5.725-5.85GHz	Pass	4.30	4.34	4.73	4.78	5.05	10.75	30.00	15.05	36.00
802.11ax HEW20_Nss1,(MCS0)_4TX	-	-	-	-	-	-	-	-	-	-
5260MHz	Pass	4.30	11.89	12.86	12.22	13.2	18.59	24.00	22.89	30.00
5300MHz	Pass	4.30	11.82	12.85	12.26	12.86	18.49	24.00	22.79	30.00
5320MHz	Pass	4.30	11.82	12.88	12.36	13.1	18.59	24.00	22.89	30.00
5500MHz	Pass	4.30	12.73	12.16	13.2	12.21	18.62	24.00	22.92	30.00
5580MHz	Pass	4.30	13.02	12.61	13.05	13.35	19.04	24.00	23.34	30.00
5700MHz	Pass	4.30	12.66	12.95	13.21	13.02	18.99	24.00	23.29	30.00
5720MHz Straddle 5.47-5.725GHz	Pass	4.30	12.04	12.46	12.59	12.77	18.49	23.01	22.79	29.01
5720MHz Straddle 5.725-5.85GHz	Pass	4.30	6.29	6.57	6.81	6.97	12.69	30.00	16.99	36.00
802.11ax HEW40_Nss1,(MCS0)_4TX	-	-	-	-	-	-	-	-	-	-
5270MHz	Pass	4.30	14.45	15.51	15.02	15.82	21.25	24.00	25.55	30.00
5310MHz	Pass	4.30	14.69	15.42	15.01	14.92	21.04	24.00	25.34	30.00
5510MHz	Pass	4.30	15.01	15.01	15.65	14.68	21.12	24.00	25.42	30.00
5590MHz	Pass	4.30	15.12	15.09	15.67	15.02	21.25	24.00	25.55	30.00
5670MHz	Pass	4.30	14.62	15.02	14.52	15.19	20.87	24.00	25.17	30.00
5710MHz Straddle 5.47-5.725GHz	Pass	4.30	15.02	15.38	15.51	15.52	21.38	24.00	25.68	30.00
5710MHz Straddle 5.725-5.85GHz	Pass	4.30	3.68	3.93	4.25	4.25	10.05	30.00	14.35	36.00
802.11ax HEW80_Nss1,(MCS0)_4TX	-	-	-	-	-	-	-	-	-	-
5290MHz	Pass	4.30	13.57	14.82	14.24	15.11	20.49	24.00	24.79	30.00
5530MHz	Pass	4.30	14.97	14.58	15.6	14.62	20.98	24.00	25.28	30.00
5610MHz	Pass	4.30	15.72	15.86	16.41	16.03	22.03	24.00	26.33	30.00
5690MHz Straddle 5.47-5.725GHz	Pass	4.30	17.18	17.6	17.42	17.64	23.48	24.00	27.78	30.00
5690MHz Straddle	Pass	4.30	2.19	2.42	2.51	2.73	8.49	30.00	12.79	36.00

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)
5.725-5.85GHz										
802.11ax HEW80+80_Nss1,(MCS0)_2TX	-	-	-	-	-	-	-	-	-	-
5210MHz	Pass	4.30	13.69	13.71	-	-	16.71	30.00	21.01	36.00
5290MHz	Pass	4.30	-	-	13.79	14.71	17.28	24.00	21.58	30.00
802.11ax HEW80+80_Nss1,(MCS0)_2TX	-	-	-	-	-	-	-	-	-	-
5530MHz	Pass	4.30	16.12	15.75	-	-	22.37	24.00	26.67	30.00
5610MHz	Pass		-	-	16.92	16.53				

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

3.4 Peak Power Spectral Density

3.4.1 Limit of Peak Power Spectral Density

Frequency Band (MHz)		Limit
☒	5250 ~ 5350	11 dBm / MHz
☒	5470 ~ 5725	11 dBm / MHz

3.4.2 Test Procedures

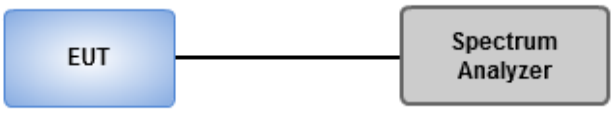
Duty cycle ≥ 98 %

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 ≥ 10 * (number of points in sweep) * (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	23~24°C / 66~67%	Tested By	Brad Wu

Summary

Mode	PD (dBm/RBW)	EIRP PD (dBm/RBW)
5.15-5.25GHz	-	-
802.11ax HEW80+80_Nss1,(MCS0)_2TX	-1.17	6.14
5.25-5.35GHz	-	-
802.11a_Nss1,(6Mbps)_4TX	6.00	16.32
802.11ax HEW20_Nss1,(MCS0)_4TX	6.11	16.43
802.11ax HEW40_Nss1,(MCS0)_4TX	6.23	16.55
802.11ax HEW80_Nss1,(MCS0)_4TX	2.8	13.12
802.11ax HEW80+80_Nss1,(MCS0)_2TX	-0.71	6.60
5.47-5.725GHz	-	-
802.11a_Nss1,(6Mbps)_4TX	6.36	16.68
802.11ax HEW20_Nss1,(MCS0)_4TX	6.34	16.66
802.11ax HEW40_Nss1,(MCS0)_4TX	6.44	16.76
802.11ax HEW80_Nss1,(MCS0)_4TX	5.36	15.68
802.11ax HEW80+80_Nss1,(MCS0)_2TX	1.14	8.45
802.11ax HEW80+80_Nss1,(MCS0)_2TX	1.84	9.15
5.725-5.85GHz	-	-
802.11a_Nss1,(6Mbps)_4TX	3.42	13.74
802.11ax HEW20_Nss1,(MCS0)_4TX	3.71	14.03
802.11ax HEW40_Nss1,(MCS0)_4TX	1.47	11.79
802.11ax HEW80_Nss1,(MCS0)_4TX	-0.11	10.21

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

Result

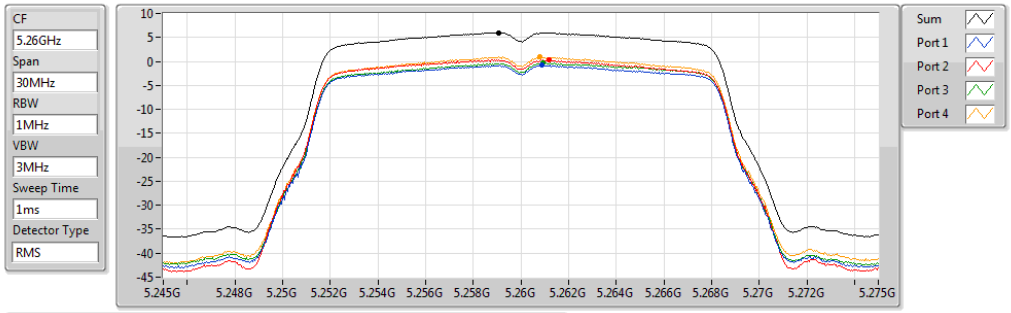
Mode	Result	DG (dBi)	Port 1 (dBm/RBW)	Port 2 (dBm/RBW)	Port 3 (dBm/RBW)	Port 4 (dBm/RBW)	PD (dBm/RBW)	PD Limit (dBm/RBW)	EIRP PD (dBm/RBW)	EIRP PD Limit (dBm/RBW)
802.11a_Nss1,(6Mbps)_4TX	-	-	-	-	-	-	-	-	-	-
5260MHz	Pass	10.32	-0.78	0.29	-0.36	0.92	6.00	6.68	16.32	17.00
5300MHz	Pass	10.32	-0.78	0.29	-0.09	0.37	5.90	6.68	16.22	17.00
5320MHz	Pass	10.32	-0.79	0.35	-0.12	0.39	5.88	6.68	16.20	17.00
5500MHz	Pass	10.32	0.28	-0.12	1.19	-0.18	6.24	6.68	16.56	17.00
5580MHz	Pass	10.32	0.49	0.26	1.08	-0.20	6.36	6.68	16.68	17.00
5700MHz	Pass	10.32	-0.03	0.27	0.69	0.17	6.21	6.68	16.53	17.00
5720MHz Straddle 5.47-5.725GHz	Pass	10.32	-0.04	0.35	0.72	0.32	6.22	6.68	16.54	17.00
5720MHz Straddle 5.725-5.85GHz	Pass	10.32	-3.02	-2.54	-2.44	-2.28	3.42	25.68	13.74	36.00
802.11ax HEW20_Nss1,(MCS0)_4TX	-	-	-	-	-	-	-	-	-	-
5260MHz	Pass	10.32	-0.63	0.44	-0.25	1.00	6.05	6.68	16.37	17.00
5300MHz	Pass	10.32	-0.61	0.73	0.06	0.46	6.07	6.68	16.39	17.00
5320MHz	Pass	10.32	-0.46	0.69	-0.01	0.56	6.11	6.68	16.43	17.00
5500MHz	Pass	10.32	0.32	-0.05	0.80	-0.41	6.06	6.68	16.38	17.00
5580MHz	Pass	10.32	0.49	0.58	0.92	-0.23	6.34	6.68	16.66	17.00
5700MHz	Pass	10.32	0.02	0.51	0.48	0.66	6.29	6.68	16.61	17.00
5720MHz Straddle 5.47-5.725GHz	Pass	10.32	-0.02	0.58	0.54	0.73	6.34	6.68	16.66	17.00
5720MHz Straddle 5.725-5.85GHz	Pass	10.32	-2.38	-2.51	-2.16	-1.87	3.71	25.68	14.03	36.00
802.11ax HEW40_Nss1,(MCS0)_4TX	-	-	-	-	-	-	-	-	-	-
5270MHz	Pass	10.32	-0.43	0.62	-0.08	0.98	6.19	6.68	16.51	17.00
5310MHz	Pass	10.32	-0.34	0.96	0.19	0.51	6.23	6.68	16.55	17.00
5510MHz	Pass	10.32	0.31	0.19	1.22	0.57	6.44	6.68	16.76	17.00
5590MHz	Pass	10.32	0.07	0.26	0.63	0.39	6.16	6.68	16.48	17.00
5670MHz	Pass	10.32	-0.07	0.53	0.08	0.62	6.20	6.68	16.52	17.00
5710MHz Straddle 5.47-5.725GHz	Pass	10.32	0.15	0.55	0.75	0.61	6.43	6.68	16.75	17.00
5710MHz Straddle 5.725-5.85GHz	Pass	10.32	-4.66	-4.56	-4.34	-4.11	1.47	25.68	11.79	36.00
802.11ax HEW80_Nss1,(MCS0)_4TX	-	-	-	-	-	-	-	-	-	-
5290MHz	Pass	10.32	-3.94	-2.56	-3.28	-2.49	2.80	6.68	13.12	17.00
5530MHz	Pass	10.32	-2.82	-3.2	-2.31	-2.81	3.11	6.68	13.43	17.00
5610MHz	Pass	10.32	-1.87	-1.6	-1.01	-1.65	4.41	6.68	14.73	17.00
5690MHz Straddle 5.47-5.725GHz	Pass	10.32	-0.88	-0.41	-0.59	-0.35	5.36	6.68	15.68	17.00
5690MHz Straddle 5.725-5.85GHz	Pass	10.32	-6.42	-5.94	-6.07	-5.89	-0.11	25.68	10.21	36.00
802.11ax	-	-	-	-	-	-	-	-	-	-

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)
HEW80+80_Nss1,(MCS0)_2TX										
5210MHz	Pass	7.31	-4.04	-4.33	-	-	-1.17	15.69	6.14	23.00
5290MHz	Pass	7.31	-	-	-4.17	-3.22	-0.71	9.69	6.60	17.00
802.11ax HEW80+80_Nss1,(MCS0)_2TX	-	-	-	-	-	-	-	-	-	-
5530MHz	Pass	7.31	-1.68	-1.98	-	-	1.14	9.69	8.45	17.00
5610MHz	Pass	7.31	-	-	-1.01	-1.22	1.84	9.69	9.15	17.00

DG = Directional Gain;
For 5.15 ~ 5.25 GHz / 2TX
Directional Gain = 4.3 + 10*log(2/1) = 7.31 dBi > 6 dBi, limit shall be reduced to 17 dBm – (7.31 dBi - 6dBi) = 15.69 dBm
For 5.25 ~ 5.35 GHz / 2TX , For 5.47 ~ 5.725 GHz / 2TX
Directional Gain = 4.3 + 10*log(2/1) = 7.31 dBi > 6 dBi, limit shall be reduced to 11 dBm – (7.31 dBi - 6dBi) = 9.69 dBm
For 5.25 ~ 5.35 GHz / 4TX , For 5.47 ~ 5.725 GHz / 4TX
Directional Gain = 4.3 + 10*log(4/1) =10.32 dBi > 6 dBi, limit shall be reduced to 11 dBm – (10.32 dBi - 6dBi) = 6.68 dBm
For 5.725 ~ 5.85 GHz / 4TX
Directional Gain = 4.3 + 10*log(4/1) =10.32 dBi > 6 dBi, limit shall be reduced to 30 dBm – (10.32 dBi - 6dBi) = 25.68 dBm
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;

802.11a_Nss1,(6Mbps)_4TX **PSD**

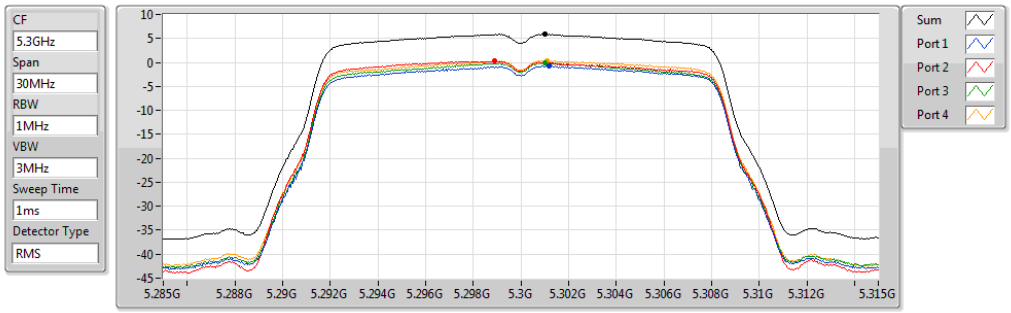
5260MHz



Sum	PD	Port 1	Port 2	Port 3	Port 4
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
6.00	6.00	-0.78	0.29	-0.36	0.92

802.11a_Nss1,(6Mbps)_4TX **PSD**

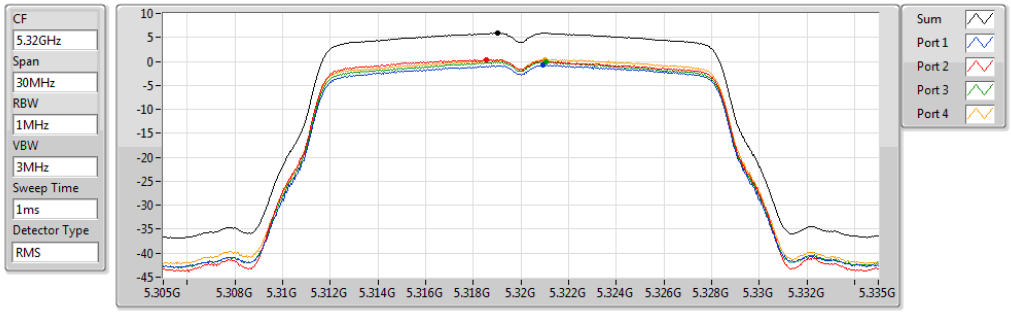
5300MHz



Sum	PD	Port 1	Port 2	Port 3	Port 4
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
5.90	5.90	-0.78	0.29	-0.09	0.37

802.11a_Nss1,(6Mbps)_4TX **PSD**

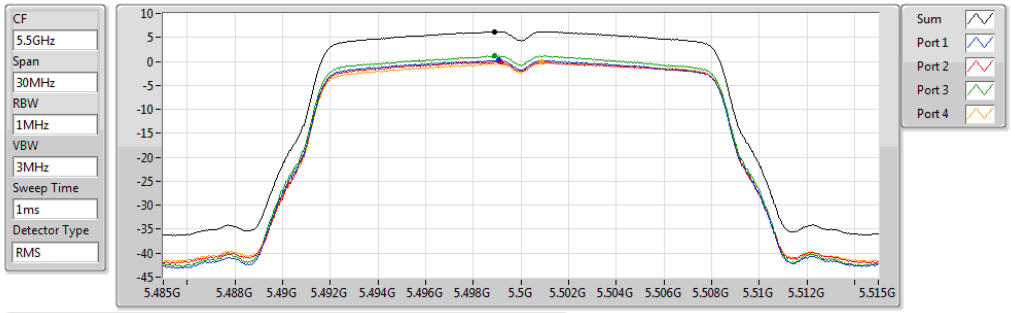
5320MHz



Sum	PD	Port 1	Port 2	Port 3	Port 4
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
5.88	5.88	-0.79	0.35	-0.12	0.39

802.11a_Nss1,(6Mbps)_4TX **PSD**

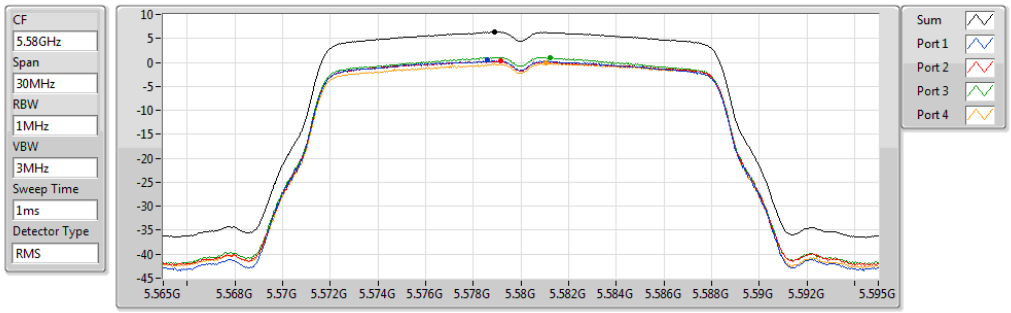
5500MHz



Sum	PD	Port 1	Port 2	Port 3	Port 4
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
6.24	6.24	0.28	-0.12	1.19	-0.18

802.11a_Nss1,(6Mbps)_4TX **PSD**

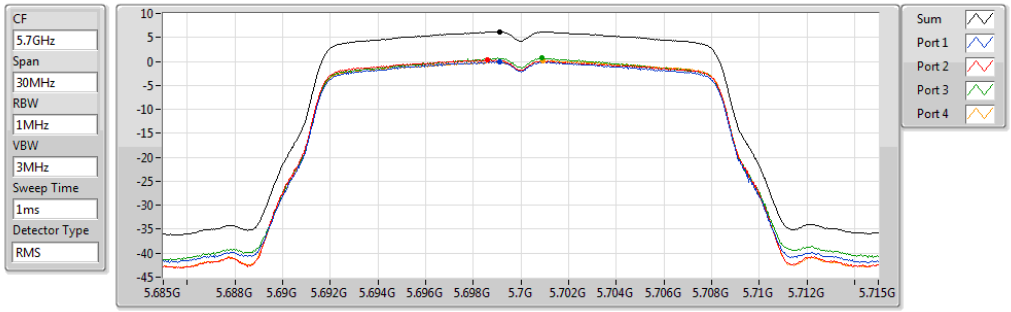
5580MHz



Sum	PD	Port 1	Port 2	Port 3	Port 4
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
6.36	6.36	0.49	0.26	1.08	-0.20

802.11a_Nss1,(6Mbps)_4TX **PSD**

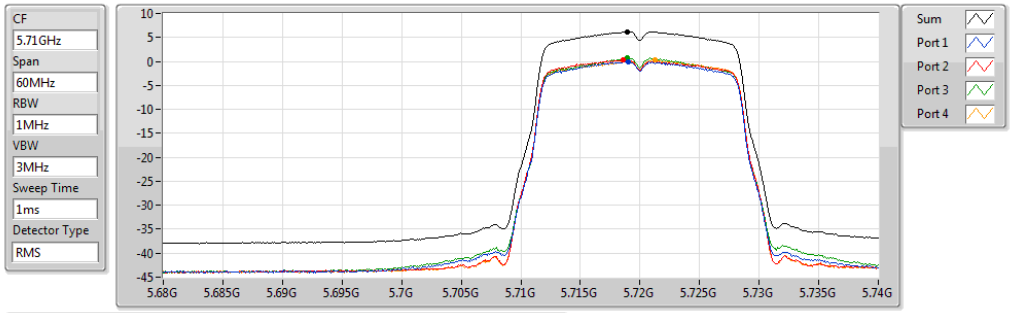
5700MHz



Sum	PD	Port 1	Port 2	Port 3	Port 4
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
6.21	6.21	-0.03	0.27	0.69	0.17

802.11a_Nss1,(6Mbps)_4TX **PSD**

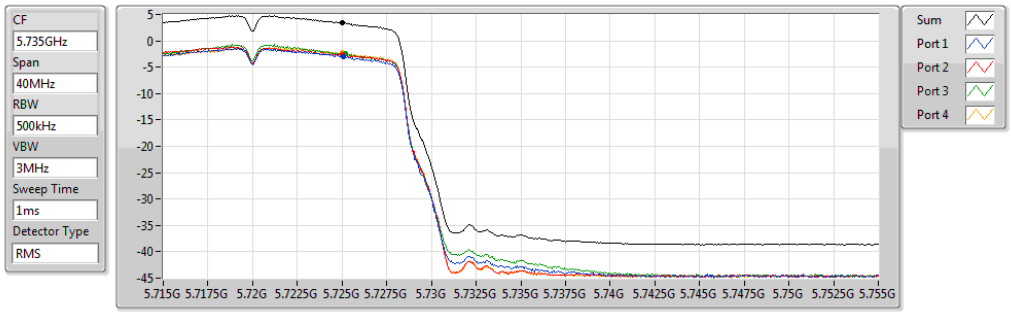
5720MHz Straddle 5.47-5.725GHz



Sum	PD	Port 1	Port 2	Port 3	Port 4
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
6.22	6.22	-0.04	0.35	0.72	0.32

802.11a_Nss1,(6Mbps)_4TX **PSD**

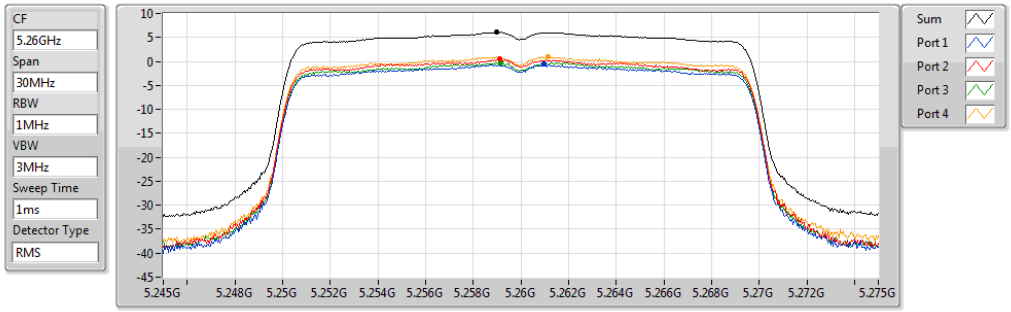
5720MHz Straddle 5.725-5.85GHz



Sum	PD	Port 1	Port 2	Port 3	Port 4
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
3.42	3.42	-3.02	-2.54	-2.44	-2.28

802.11ax HEW20_Nss1,(MCS0)_4TX **PSD**

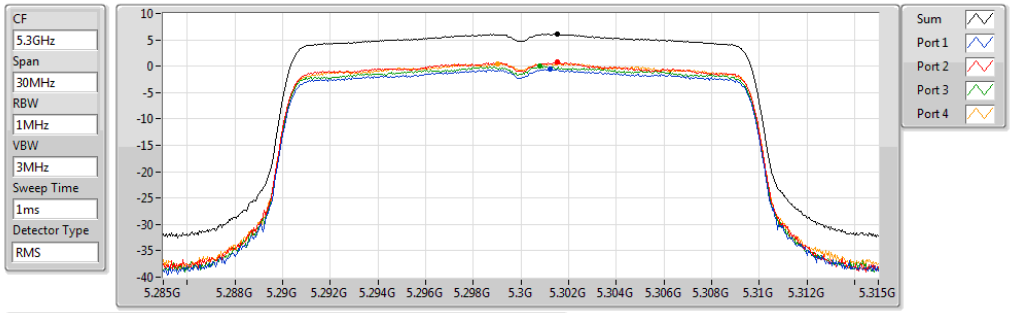
5260MHz



Sum	PD	Port 1	Port 2	Port 3	Port 4
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
6.05	6.05	-0.63	0.44	-0.25	1.00

802.11ax HEW20_Nss1,(MCS0)_4TX **PSD**

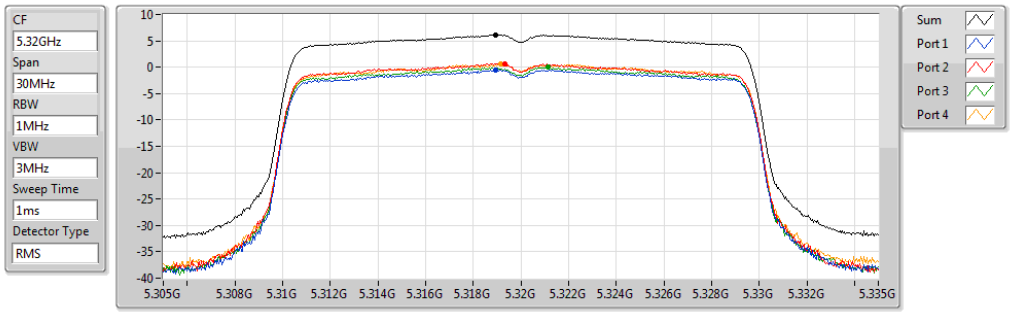
5300MHz



Sum	PD	Port 1	Port 2	Port 3	Port 4
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
6.07	6.07	-0.61	0.73	0.06	0.46

802.11ax HEW20_Nss1,(MCS0)_4TX **PSD**

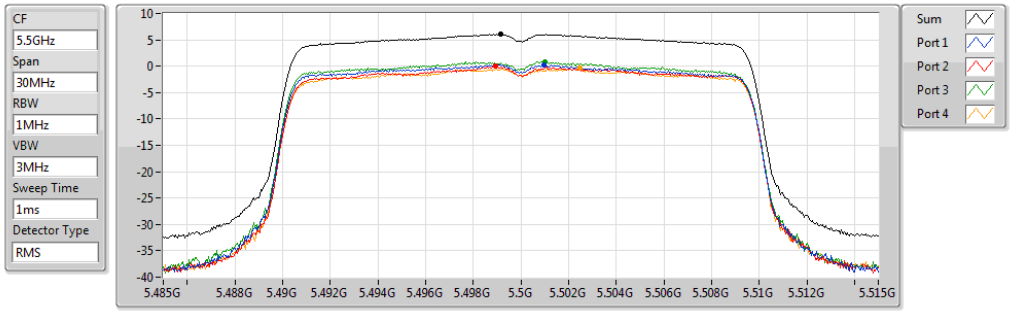
5320MHz



Sum	PD	Port 1	Port 2	Port 3	Port 4
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
6.11	6.11	-0.46	0.69	-0.01	0.56

802.11ax HEW20_Nss1,(MCS0)_4TX **PSD**

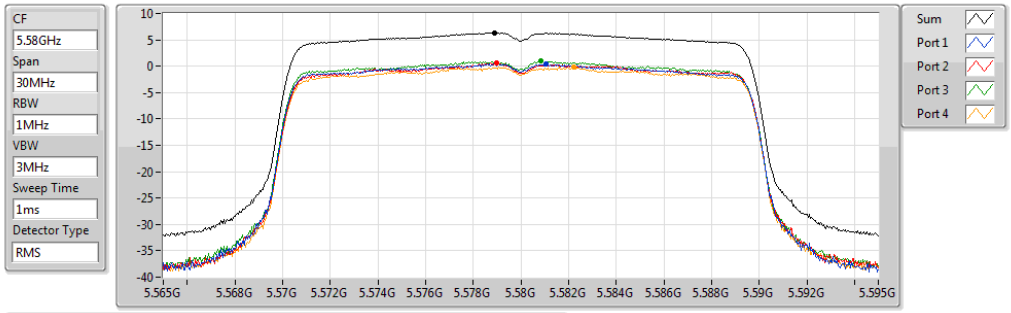
5500MHz



Sum	PD	Port 1	Port 2	Port 3	Port 4
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
6.06	6.06	0.32	-0.05	0.80	-0.41

802.11ax HEW20_Nss1,(MCS0)_4TX **PSD**

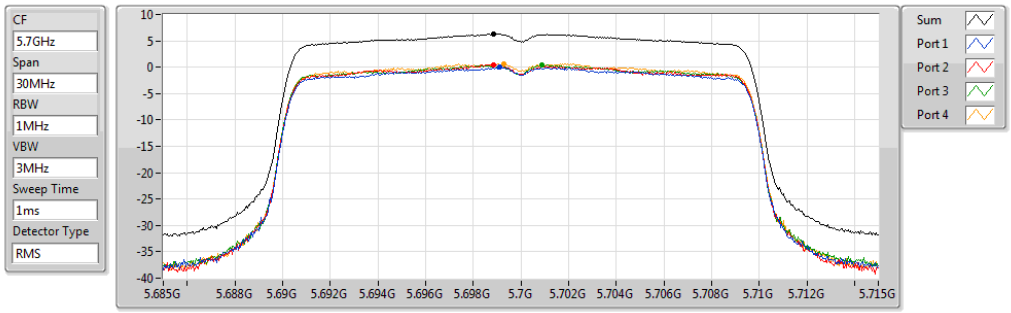
5580MHz



Sum	PD	Port 1	Port 2	Port 3	Port 4
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
6.34	6.34	0.49	0.58	0.92	-0.23

802.11ax HEW20_Nss1,(MCS0)_4TX **PSD**

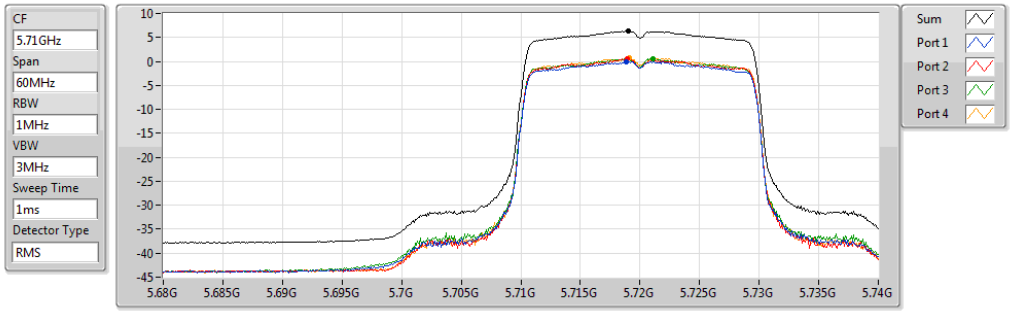
5700MHz



Sum	PD	Port 1	Port 2	Port 3	Port 4
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
6.29	6.29	0.02	0.51	0.48	0.66

802.11ax HEW20_Nss1,(MCS0)_4TX **PSD**

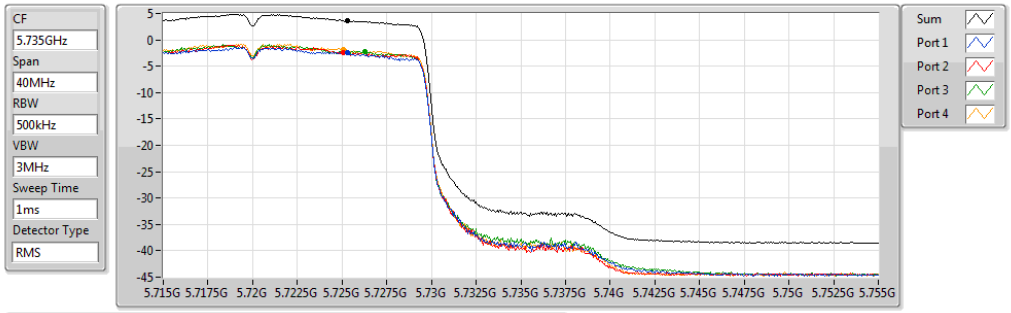
5720MHz Straddle 5.47-5.725GHz



Sum	PD	Port 1	Port 2	Port 3	Port 4
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
6.34	6.34	-0.02	0.58	0.54	0.73

802.11ax HEW20_Nss1,(MCS0)_4TX **PSD**

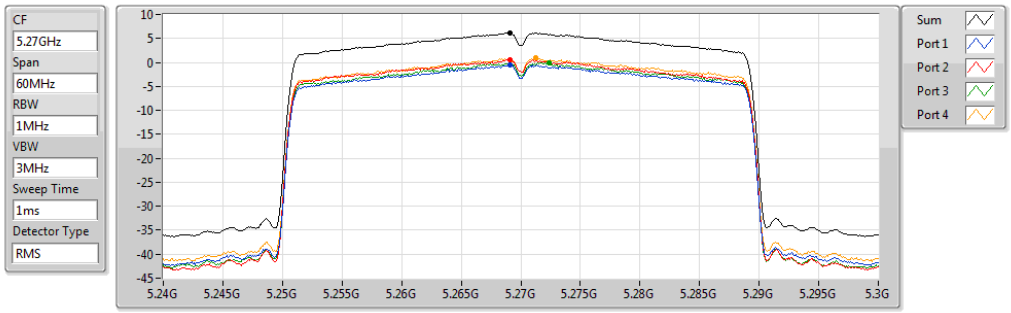
5720MHz Straddle 5.725-5.85GHz



Sum	PD	Port 1	Port 2	Port 3	Port 4
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
3.71	3.71	-2.38	-2.51	-2.16	-1.87

802.11ax HEW40_Nss1,(MCS0)_4TX **PSD**

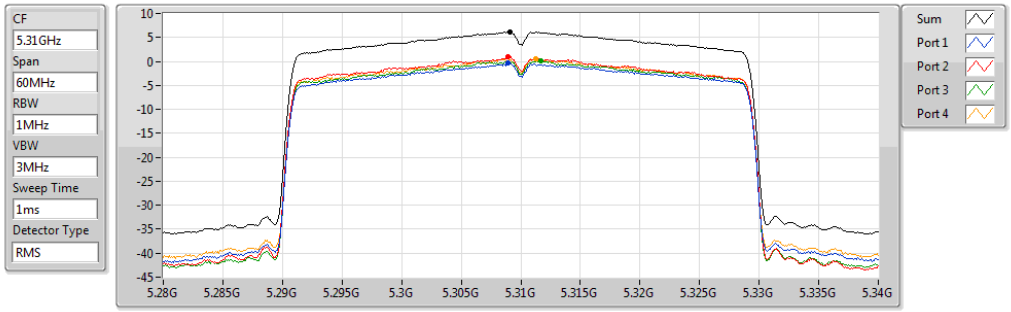
5270MHz



Sum	PD	Port 1	Port 2	Port 3	Port 4
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
6.19	6.19	-0.43	0.62	-0.08	0.98

802.11ax HEW40_Nss1,(MCS0)_4TX **PSD**

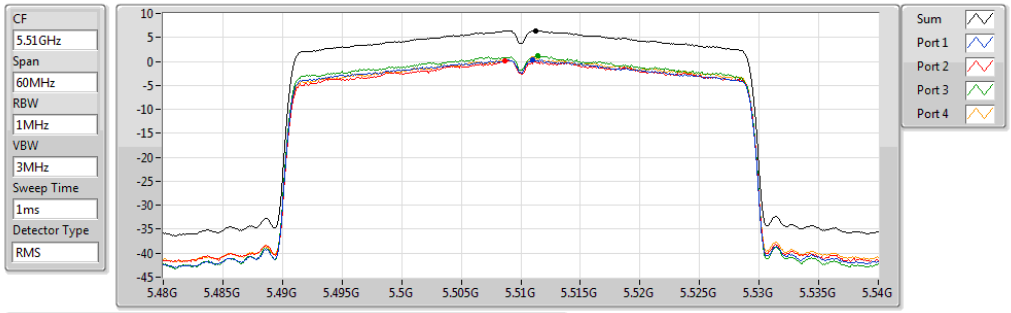
5310MHz



Sum	PD	Port 1	Port 2	Port 3	Port 4
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
6.23	6.23	-0.34	0.96	0.19	0.51

802.11ax HEW40_Nss1,(MCS0)_4TX **PSD**

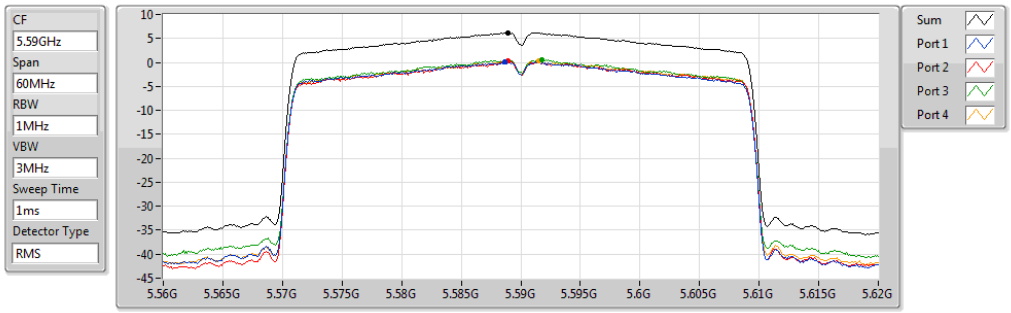
5510MHz



Sum	PD	Port 1	Port 2	Port 3	Port 4
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
6.44	6.44	0.31	0.19	1.22	0.57

802.11ax HEW40_Nss1,(MCS0)_4TX **PSD**

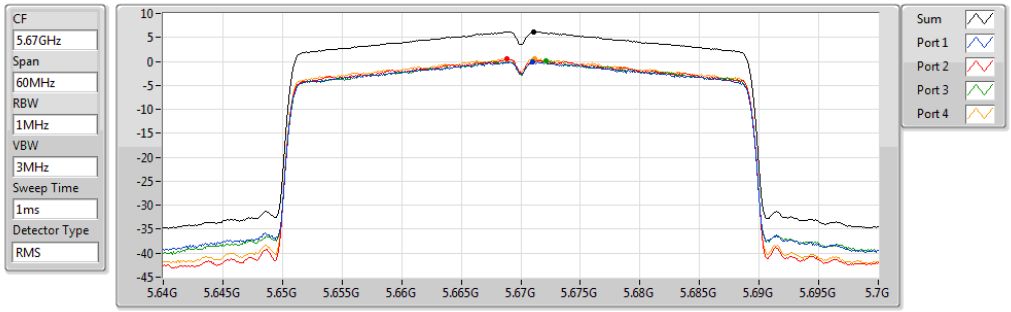
5590MHz



Sum	PD	Port 1	Port 2	Port 3	Port 4
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
6.16	6.16	0.07	0.26	0.63	0.39

802.11ax HEW40_Nss1,(MCS0)_4TX **PSD**

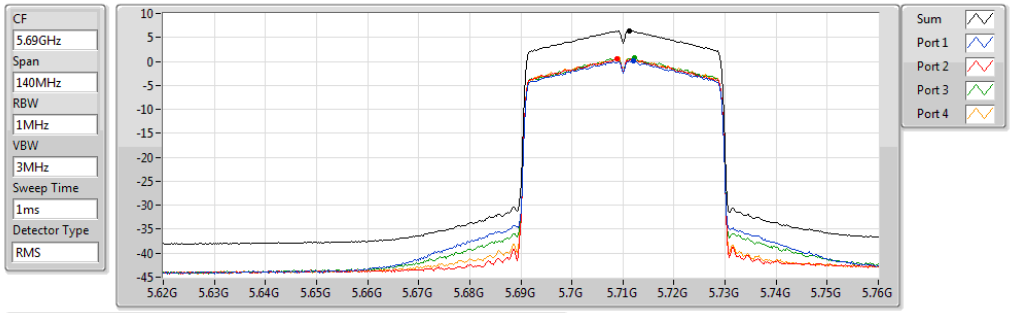
5670MHz



Sum	PD	Port 1	Port 2	Port 3	Port 4
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
6.20	6.20	-0.07	0.53	0.08	0.62

802.11ax HEW40_Nss1,(MCS0)_4TX **PSD**

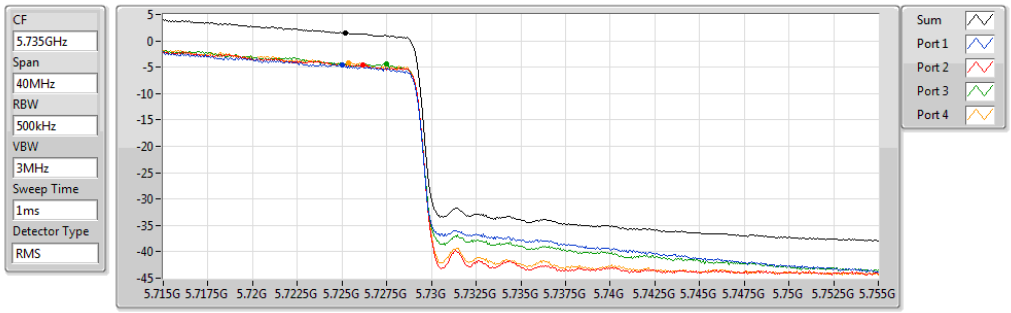
5710MHz Straddle 5.47-5.725GHz



Sum	PD	Port 1	Port 2	Port 3	Port 4
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
6.43	6.43	0.15	0.55	0.75	0.61

802.11ax HEW40_Nss1,(MCS0)_4TX **PSD**

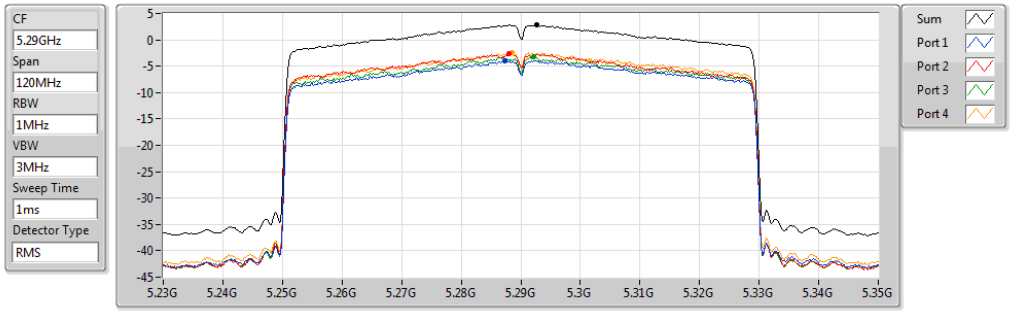
5710MHz Straddle 5.725-5.85GHz



Sum	PD	Port 1	Port 2	Port 3	Port 4
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
1.47	1.47	-4.66	-4.56	-4.34	-4.11

802.11ax HEW80_Nss1,(MCS0)_4TX **PSD**

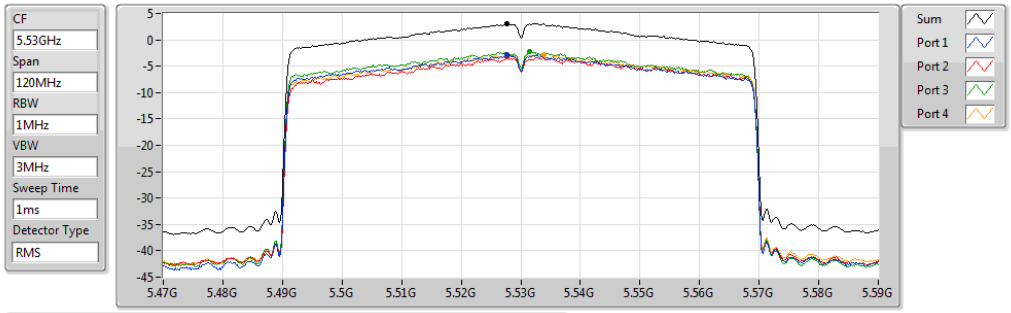
5290MHz



Sum	PD	Port 1	Port 2	Port 3	Port 4
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
2.80	2.80	-3.94	-2.56	-3.28	-2.49

802.11ax HEW80_Nss1,(MCS0)_4TX **PSD**

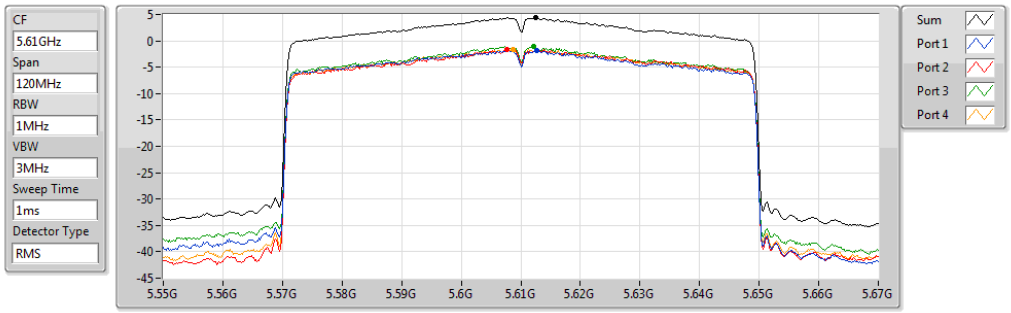
5530MHz



Sum	PD	Port 1	Port 2	Port 3	Port 4
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
3.11	3.11	-2.82	-3.20	-2.31	-2.81

802.11ax HEW80_Nss1,(MCS0)_4TX **PSD**

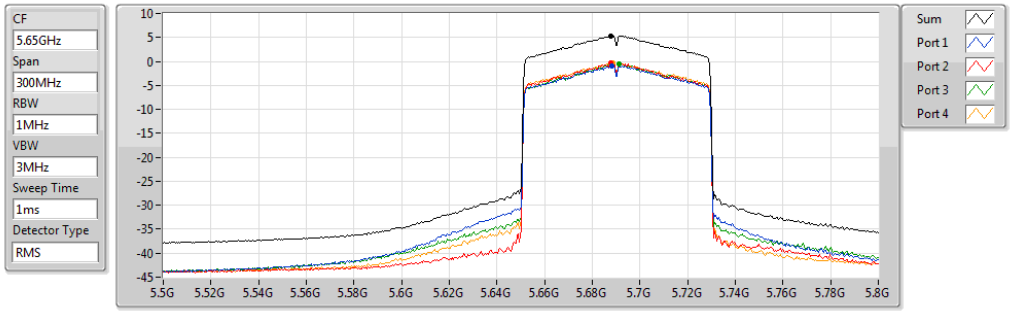
5610MHz



Sum	PD	Port 1	Port 2	Port 3	Port 4
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
4.41	4.41	-1.87	-1.60	-1.01	-1.65

802.11ax HEW80_Nss1,(MCS0)_4TX **PSD**

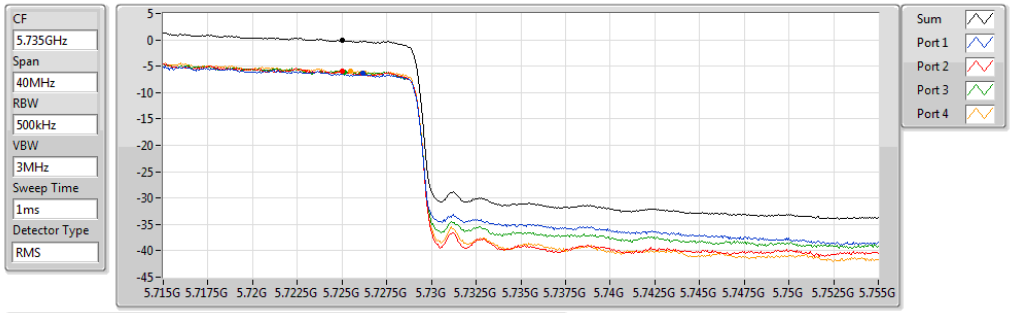
5690MHz Straddle 5.47-5.725GHz



Sum	PD	Port 1	Port 2	Port 3	Port 4
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
5.36	5.36	-0.88	-0.41	-0.59	-0.35

802.11ax HEW80_Nss1,(MCS0)_4TX **PSD**

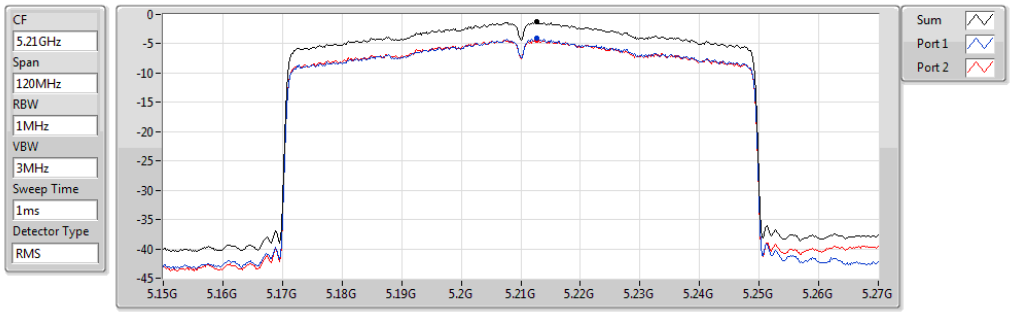
5690MHz Straddle 5.725-5.85GHz



Sum	PD	Port 1	Port 2	Port 3	Port 4
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
-0.11	-0.11	-6.42	-5.94	-6.07	-5.89

802.11ax HEW80+80_Nss1,(MCS0)_2TX **PSD**

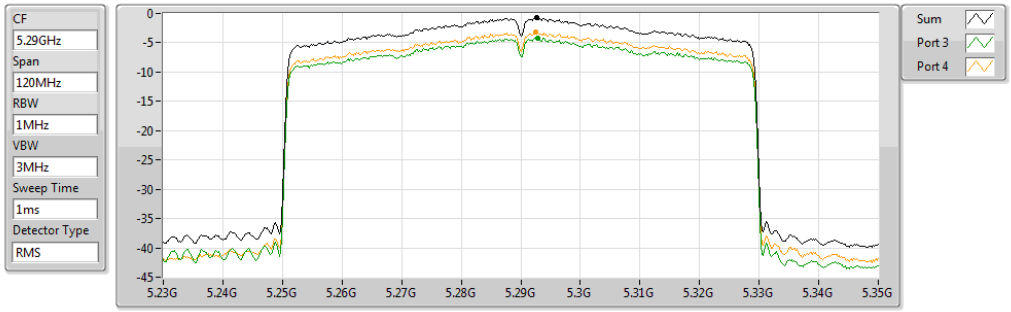
5210MHz



Sum	PD	Port 1	Port 2
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
-1.17	-1.17	-4.04	-4.33

802.11ax HEW80+80_Nss1,(MCS0)_2TX **PSD**

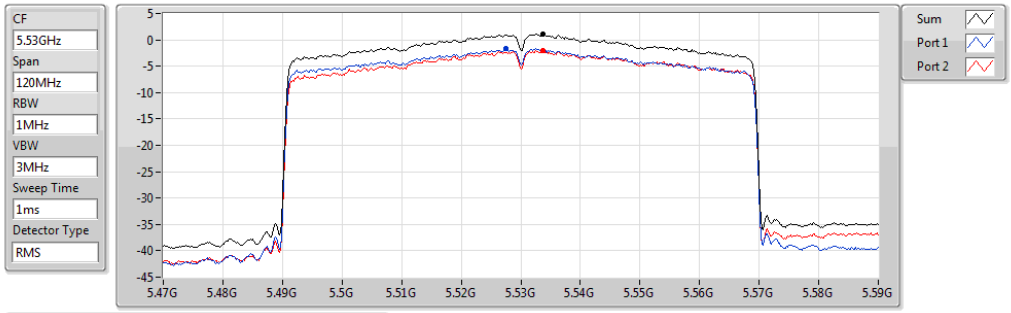
5290MHz



Sum	PD	Port 1	Port 2	Port 3	Port 4
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
-0.71	-0.71			-4.17	-3.22

802.11ax HEW80+80_Nss1,(MCS0)_2TX **PSD**

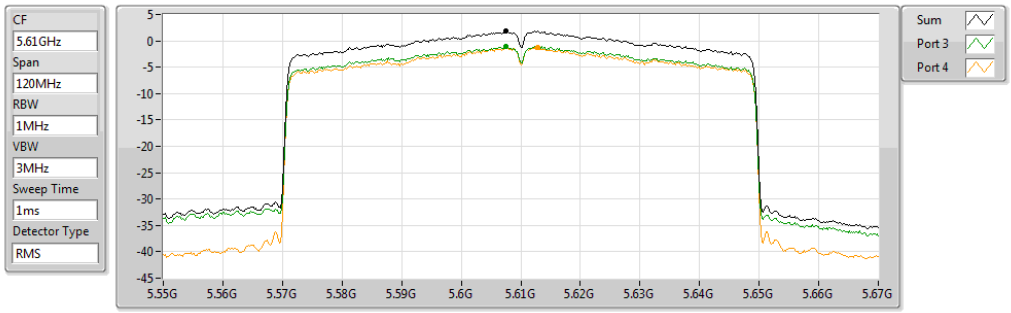
5530MHz



Sum	PD	Port 1	Port 2
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
1.14	1.14	-1.68	-1.98

802.11ax HEW80+80_Nss1,(MCS0)_2TX **PSD**

5610MHz



Sum	PD	Port 1	Port 2	Port 3	Port 4
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
1.84	1.84			-1.01	-1.22

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**
5.25 - 5.35 GHz	e.i.r.p. -27 dBm [68.2 dBuV/m@3m]
5.47 - 5.725 GHz	e.i.r.p. -27 dBm [68.2 dBuV/m@3m]

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

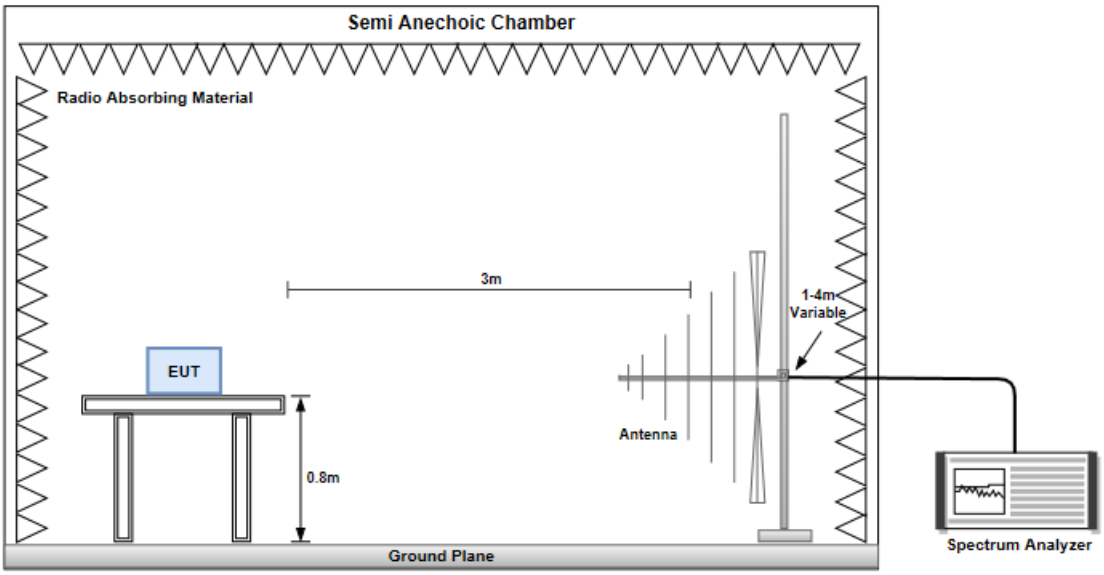
1. Measurement is made at a semi-anechoic chamber that incorporates a turntable allowing a EUT rotation of 360°. A continuously-rotating, remotely-controlled turntable is installed at the test site to support the EUT and facilitate determination of the direction of maximum radiation for each EUT emission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

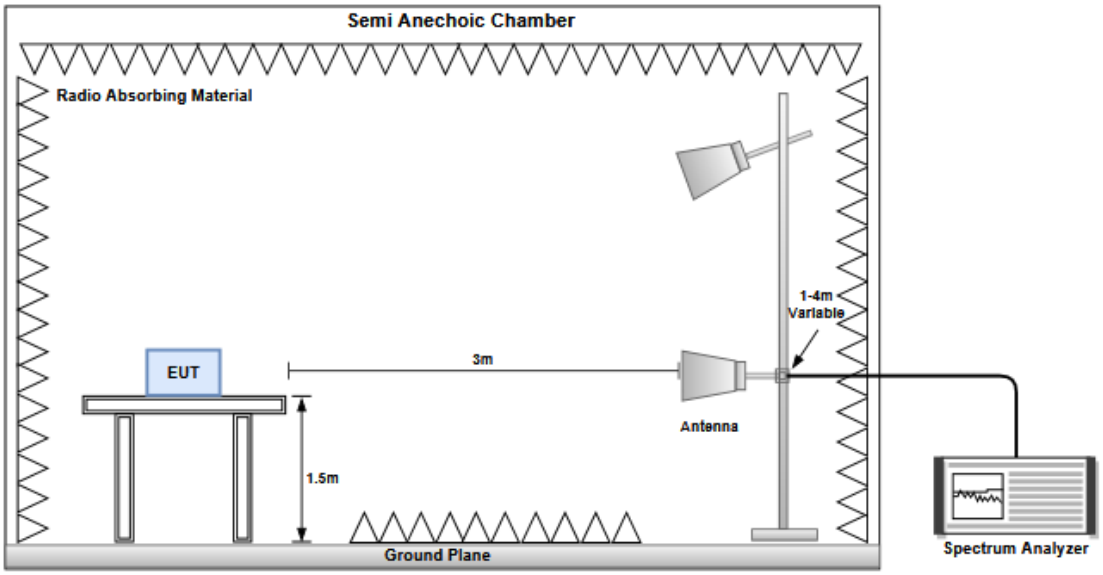
1. 120kHz measurement bandwidth of test receiver and Quasi-peak detector is for radiated emission below 1GHz.
2. RBW=1MHz, VBW=3MHz and Peak detector is for peak measured value of radiated emission above 1GHz.
3. RBW=1MHz, VBW=1/T and Peak detector is for average measured value of radiated emission above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

3.5.3 Test Setup

Radiated Emissions below 1 GHz



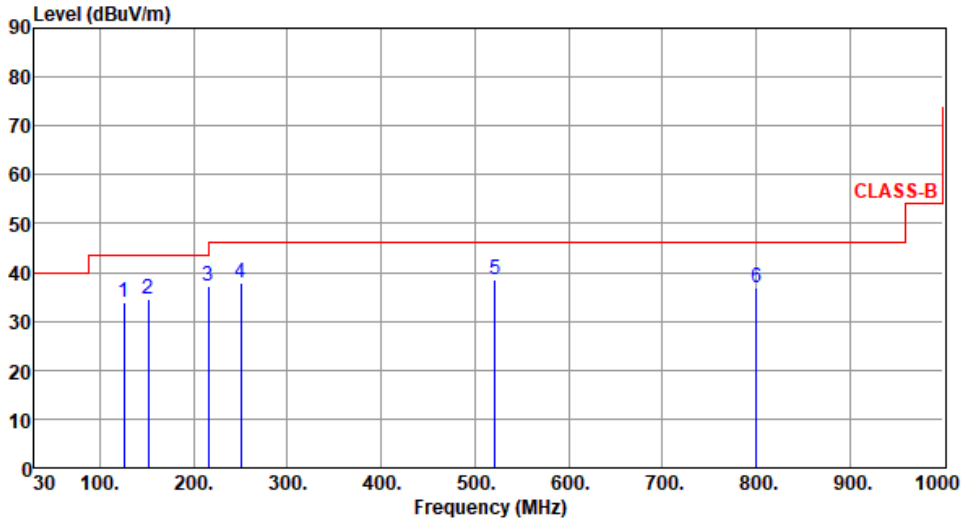
Radiated Emissions above 1 GHz



3.5.1 Transmitter Radiated Unwanted Emissions (Below 1GHz)

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

Test By :Akun Chung Temperature(℃):24 Humidity(%):67

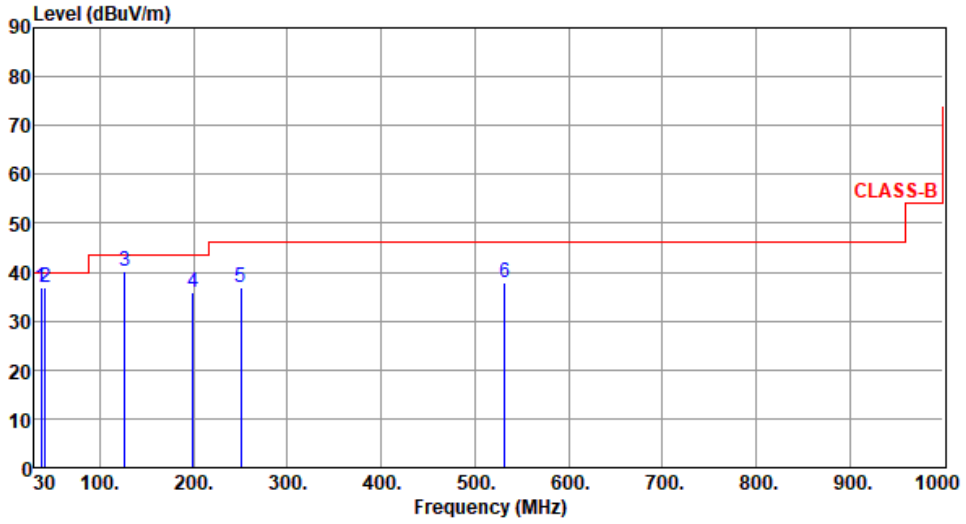


	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB/m	Remark	ANT High cm	Turn Table deg
1	125.58	33.95	43.50	-9.55	44.17	-10.22	Peak	---	---
2	151.55	34.52	43.50	-8.98	43.34	-8.82	Peak	---	---
3	215.66	37.15	43.50	-6.35	49.09	-11.94	Peak	---	---
4	250.33	37.95	46.00	-8.05	48.01	-10.06	Peak	---	---
5	521.77	38.66	46.00	-7.34	41.59	-2.93	Peak	---	---
6	800.66	36.99	46.00	-9.01	34.99	2.00	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	ax HE40	Test Freq. (MHz)	5230
Polarization	Vertical		

Test By :Akun Chung Temperature(℃):24 Humidity(%):67

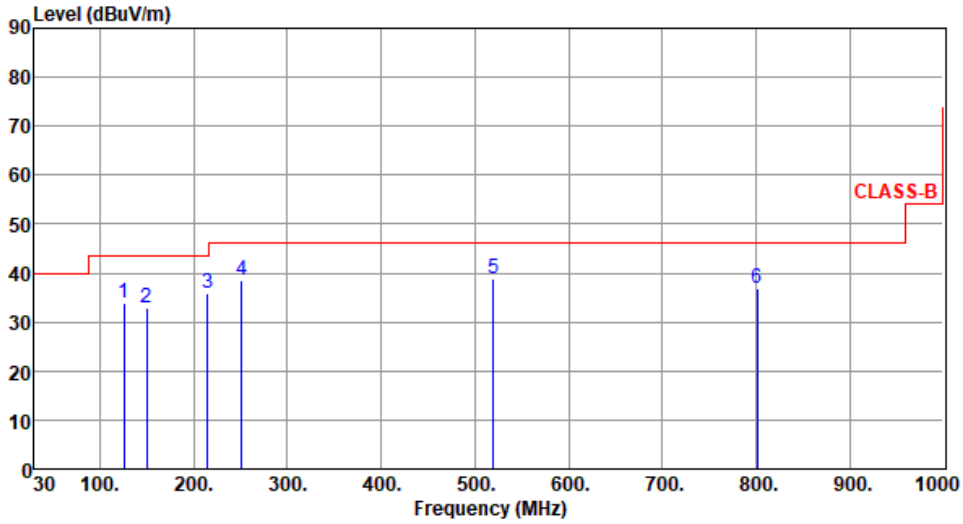


	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB/m	Remark	ANT High cm	Turn Table deg
1	36.88	36.92	40.00	-3.08	46.05	-9.13	QP	100	212
2	41.95	36.90	40.00	-3.10	45.31	-8.41	QP	100	149
3	126.88	40.24	43.50	-3.26	50.24	-10.00	QP	100	159
4	199.66	35.95	43.50	-7.55	47.80	-11.85	Peak	---	---
5	250.36	36.85	46.00	-9.15	46.91	-10.06	Peak	---	---
6	532.15	37.88	46.00	-8.12	40.73	-2.85	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	ax HE80	Test Freq. (MHz)	5690
Polarization	Horizontal		

Test By :Akun Chung Temperature(℃):24 Humidity(%):67

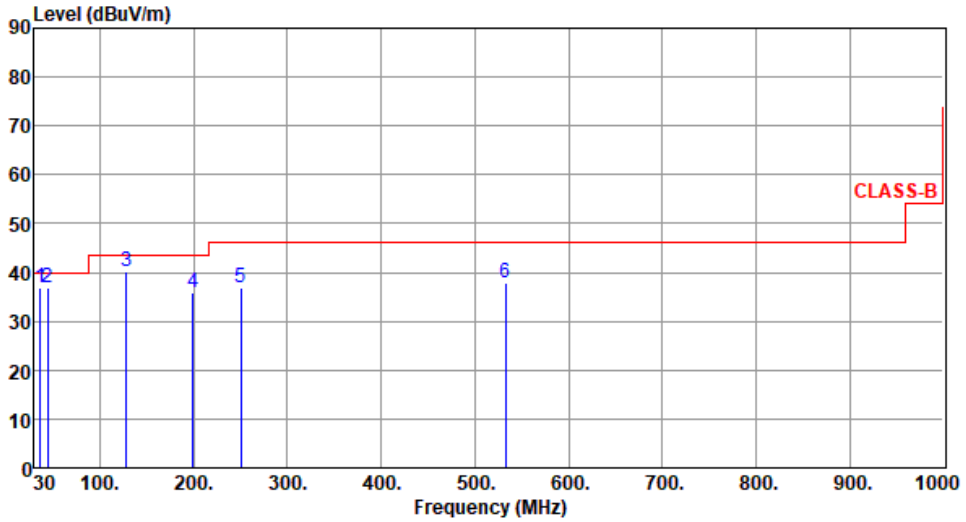


	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB/m	Remark	ANT High cm	Turn Table deg
1	125.59	33.99	43.50	-9.51	44.21	-10.22	Peak	---	---
2	149.58	32.98	43.50	-10.52	41.97	-8.99	Peak	---	---
3	215.21	35.77	43.50	-7.73	47.71	-11.94	Peak	---	---
4	251.25	38.44	46.00	-7.56	48.46	-10.02	Peak	---	---
5	519.66	38.92	46.00	-7.08	41.86	-2.94	Peak	---	---
6	801.66	36.99	46.00	-9.01	34.97	2.02	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	ax HE80	Test Freq. (MHz)	5690
Polarization	Vertical		

Test By :Akun Chung Temperature(℃):24 Humidity(%):67

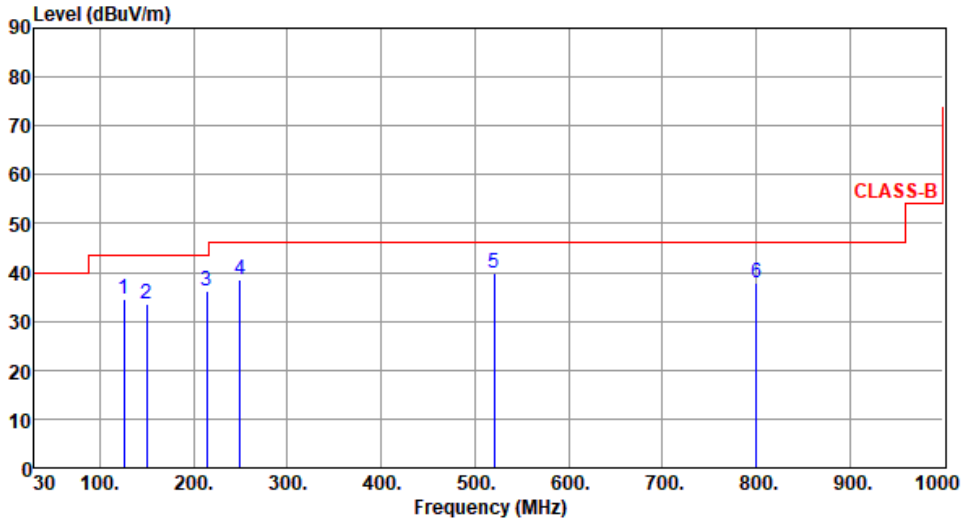


	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB/m	Remark	ANT High cm	Turn Table deg
1	35.98	36.89	40.00	-3.11	46.36	-9.47	QP	100	220
2	43.95	36.87	40.00	-3.13	45.46	-8.59	QP	100	149
3	128.55	40.27	43.50	-3.23	50.19	-9.92	QP	100	157
4	199.55	35.95	43.50	-7.55	47.79	-11.84	Peak	---	---
5	250.66	36.96	46.00	-9.04	47.00	-10.04	Peak	---	---
6	532.55	37.88	46.00	-8.12	40.73	-2.85	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	ax HE20	Test Freq. (MHz)	5825
Polarization	Horizontal		

Test By :Akun Chung Temperature(℃):24 Humidity(%):67

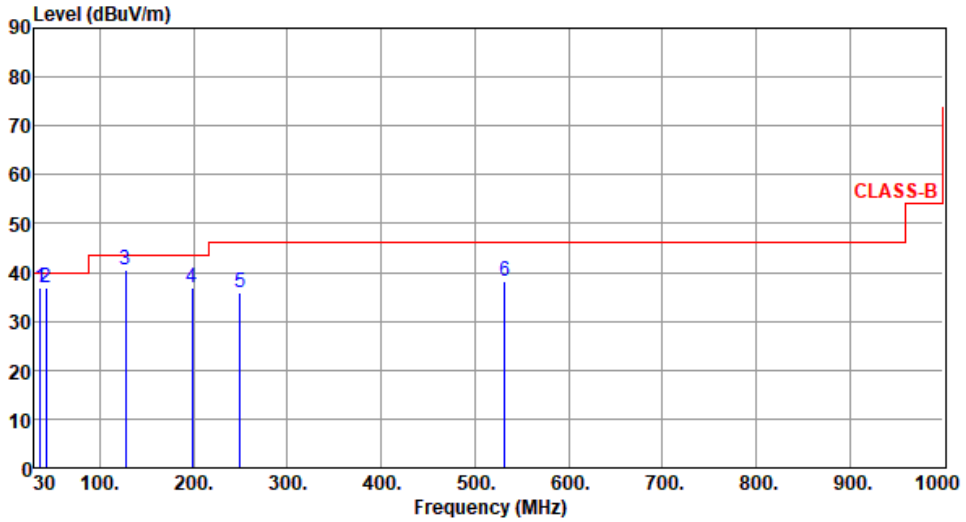


	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB/m	Remark	ANT High cm	Turn Table deg
1	126.03	34.38	43.50	-9.12	44.55	-10.17	Peak	---	---
2	150.28	33.49	43.50	-10.01	42.38	-8.89	Peak	---	---
3	214.30	36.27	43.50	-7.23	48.21	-11.94	Peak	---	---
4	249.22	38.60	46.00	-7.40	48.68	-10.08	Peak	---	---
5	520.82	39.93	46.00	-6.07	42.87	-2.94	Peak	---	---
6	800.18	37.70	46.00	-8.30	35.71	1.99	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	ax HE20	Test Freq. (MHz)	5825
Polarization	Vertical		

Test By :Akun Chung Temperature(℃):24 Humidity(%):67



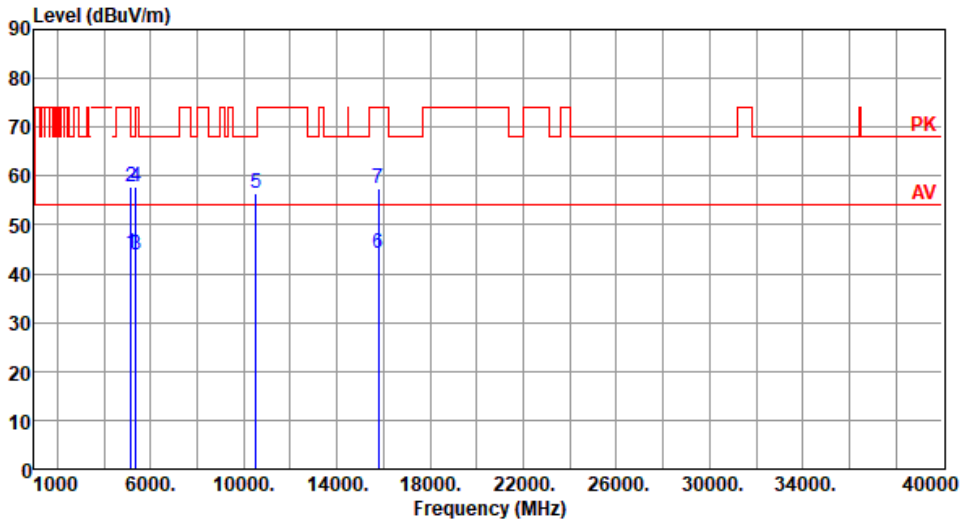
	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB/m	Remark	ANT High cm	Turn Table deg
1	36.79	36.94	40.00	-3.06	46.10	-9.16	QP	100	215
2	42.61	36.92	40.00	-3.08	45.37	-8.45	QP	100	144
3	127.00	40.36	43.50	-3.14	50.34	-9.98	QP	100	152
4	198.78	36.73	43.50	-6.77	48.53	-11.80	Peak	---	---
5	249.22	35.78	46.00	-10.22	45.86	-10.08	Peak	---	---
6	531.49	38.24	46.00	-7.76	41.08	-2.84	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.

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

Modulation	11a	Test Freq. (MHz)	5260
Polarization	Horizontal		

Test By :Felix Sung Temperature(℃):23 Humidity(%):62

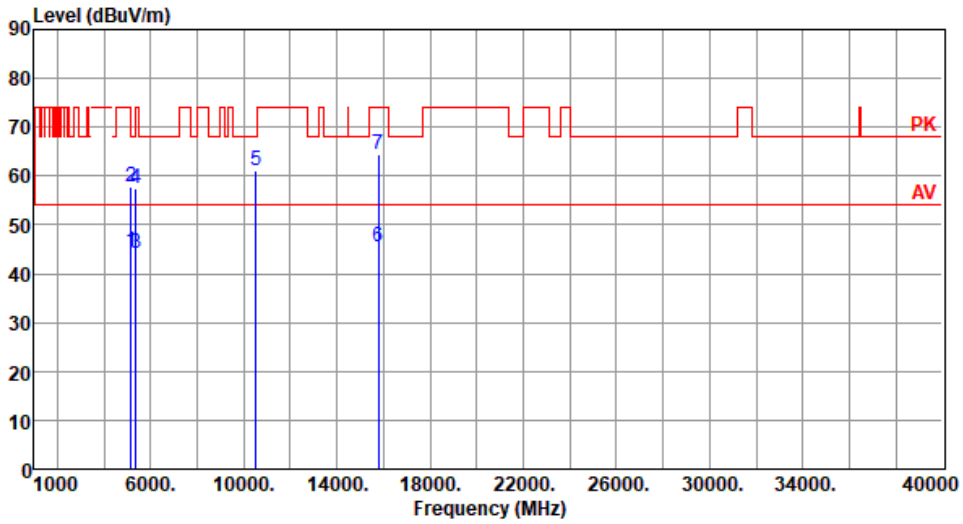


	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB/m	Remark	ANT High cm	Turn Table deg
1	5150.00	44.16	54.00	-9.84	39.78	4.38	Average	322	151
2	5150.00	57.88	74.00	-16.12	53.50	4.38	Peak	322	151
3	5350.00	43.87	54.00	-10.13	39.90	3.97	Average	322	151
4	5350.00	57.66	74.00	-16.34	53.69	3.97	Peak	322	151
5	10520.00	56.52	68.20	-11.68	41.95	14.57	Peak	100	18
6	15780.00	44.17	54.00	-9.83	29.98	14.19	Average	100	10
7	15780.00	57.49	74.00	-16.51	43.30	14.19	Peak	100	10

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)	5260
Polarization	Vertical		

Test By :Felix Sung Temperature(℃):23 Humidity(%):62

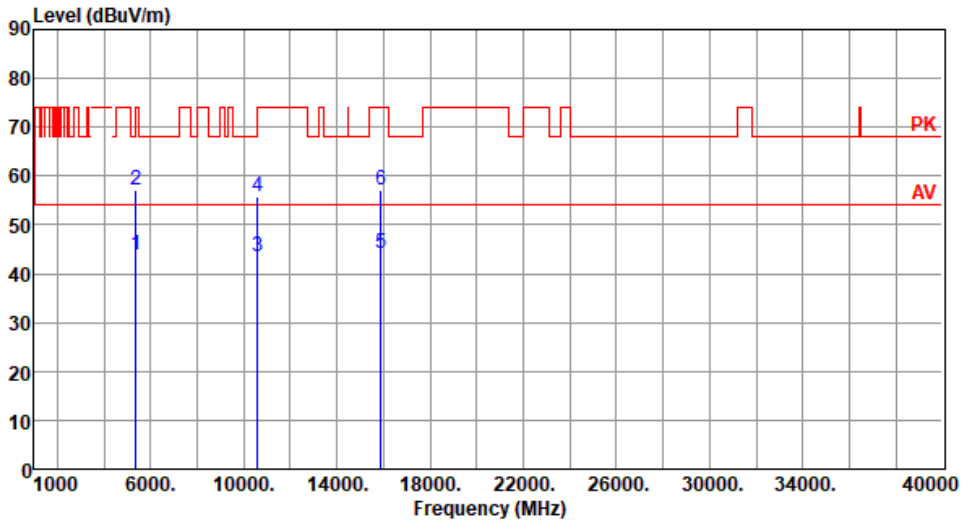


	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB/m	Remark	ANT High cm	Turn Table deg
1	5150.00	44.34	54.00	-9.66	39.96	4.38	Average	268	15
2	5150.00	57.73	74.00	-16.27	53.35	4.38	Peak	268	15
3	5350.00	44.06	54.00	-9.94	40.09	3.97	Average	268	15
4	5350.00	57.41	74.00	-16.59	53.44	3.97	Peak	268	15
5	10520.00	61.01	68.20	-7.19	46.44	14.57	Peak	115	275
6	15780.00	45.48	54.00	-8.52	31.29	14.19	Average	171	241
7	15780.00	64.37	74.00	-9.63	50.18	14.19	Peak	171	241

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)	5300
Polarization	Horizontal		

Test By :Felix Sung Temperature(℃):23 Humidity(%):62

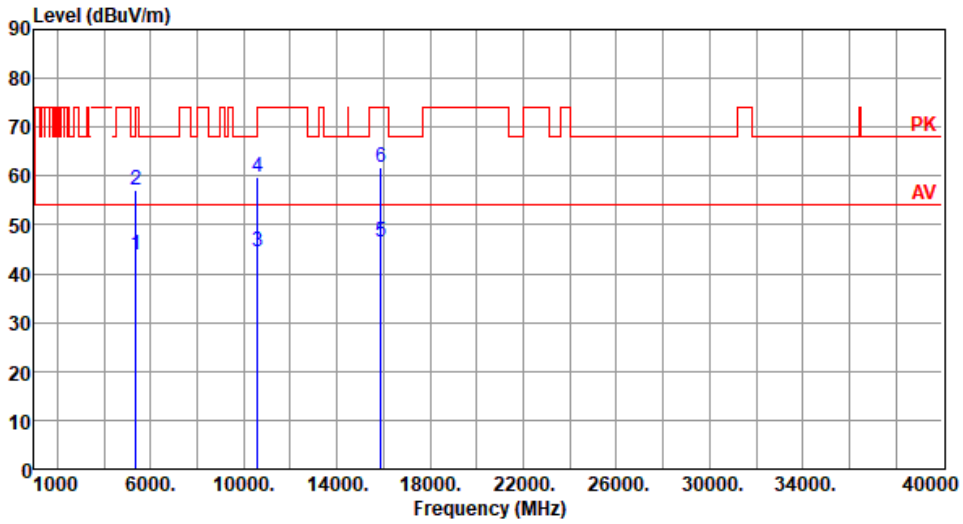


	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB/m	Remark	ANT High cm	Turn Table deg
1	5350.00	43.88	54.00	-10.12	39.91	3.97	Average	325	141
2	5350.00	57.14	74.00	-16.86	53.17	3.97	Peak	325	141
3	10600.00	43.49	54.00	-10.51	28.92	14.57	Average	100	15
4	10600.00	55.86	74.00	-18.14	41.29	14.57	Peak	100	15
5	15900.00	44.11	54.00	-9.89	29.88	14.23	Average	122	25
6	15900.00	57.17	74.00	-16.83	42.94	14.23	Peak	122	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)	5300
Polarization	Vertical		

Test By :Felix Sung Temperature(℃):23 Humidity(%):62

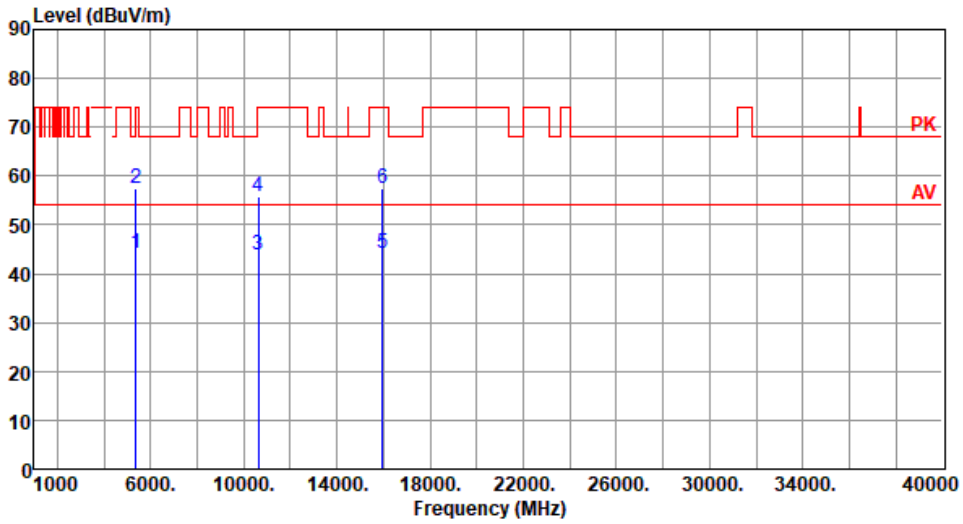


	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB/m	Remark	ANT High cm	Turn Table deg
1	5350.00	43.99	54.00	-10.01	40.02	3.97	Average	291	6
2	5350.00	57.17	74.00	-16.83	53.20	3.97	Peak	291	6
3	10600.00	44.62	54.00	-9.38	30.05	14.57	Average	115	281
4	10600.00	59.89	74.00	-14.11	45.32	14.57	Peak	115	281
5	15900.00	46.39	54.00	-7.61	32.16	14.23	Average	175	266
6	15900.00	61.93	74.00	-12.07	47.70	14.23	Peak	175	266

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)	5320
Polarization	Horizontal		

Test By :Felix Sung Temperature(℃):23 Humidity(%):62

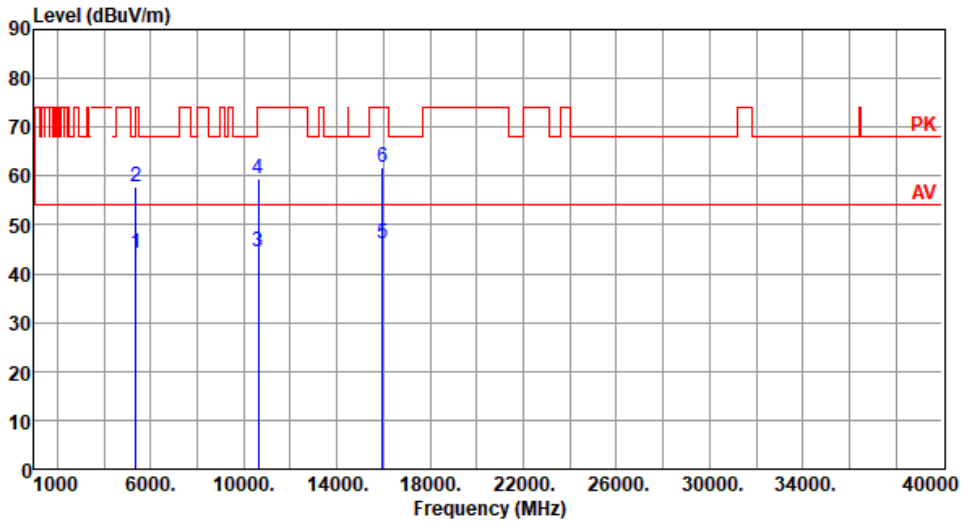


	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB/m	Remark	ANT High cm	Turn Table deg
1	5350.00	44.16	54.00	-9.84	40.19	3.97	Average	322	158
2	5350.00	57.58	74.00	-16.42	53.61	3.97	Peak	322	158
3	10640.00	43.71	54.00	-10.29	29.15	14.56	Average	100	25
4	10640.00	55.93	74.00	-18.07	41.37	14.56	Peak	100	25
5	15960.00	44.29	54.00	-9.71	30.01	14.28	Average	100	31
6	15960.00	57.38	74.00	-16.62	43.10	14.28	Peak	100	31

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)	5320
Polarization	Vertical		

Test By :Felix Sung Temperature(℃):23 Humidity(%):62

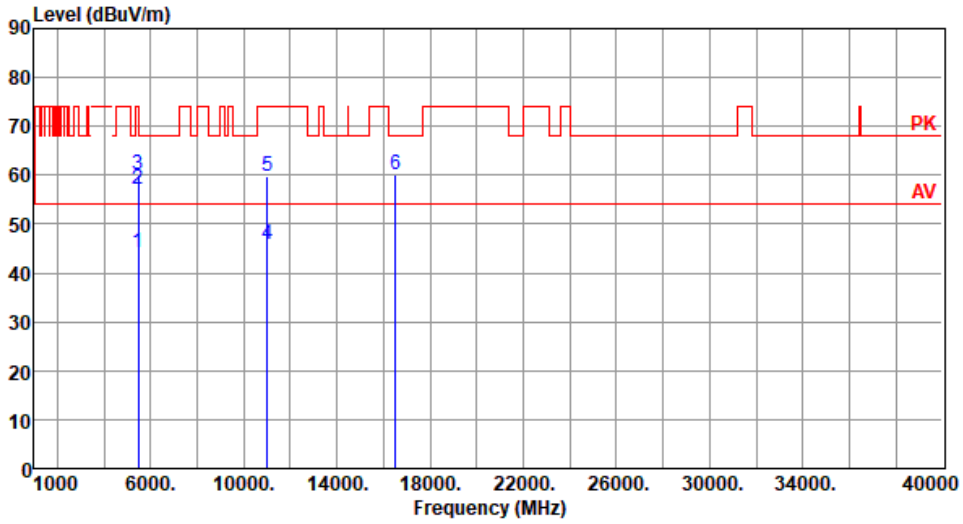


	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB/m	Remark	ANT High cm	Turn Table deg
1	5350.00	44.12	54.00	-9.88	40.15	3.97	Average	245	173
2	5350.00	57.73	74.00	-16.27	53.76	3.97	Peak	245	173
3	10640.00	44.43	54.00	-9.57	29.87	14.56	Average	122	275
4	10640.00	59.36	74.00	-14.64	44.80	14.56	Peak	122	275
5	15960.00	46.03	54.00	-7.97	31.75	14.28	Average	177	243
6	15960.00	61.85	74.00	-12.15	47.57	14.28	Peak	177	243

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)	5500
Polarization	Horizontal		

Test By :Felix Sung Temperature(℃):23 Humidity(%):62

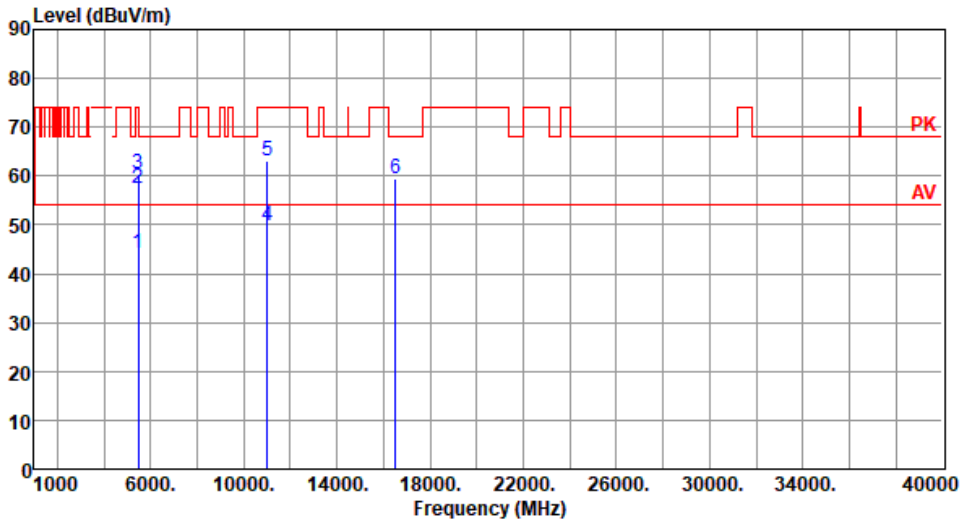


	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB/m	Remark	ANT High cm	Turn Table deg
1	5460.00	44.17	54.00	-9.83	39.80	4.37	Average	262	173
2	5460.00	57.07	74.00	-16.93	52.70	4.37	Peak	262	173
3	5470.00	60.27	68.20	-7.93	55.88	4.39	Peak	262	173
4	11000.00	45.86	54.00	-8.14	30.70	15.16	Average	148	299
5	11000.00	59.74	74.00	-14.26	44.58	15.16	Peak	148	299
6	16500.00	60.14	68.20	-8.06	43.79	16.35	Peak	100	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)	5500
Polarization	Vertical		

Test By :Felix Sung Temperature(℃):23 Humidity(%):62

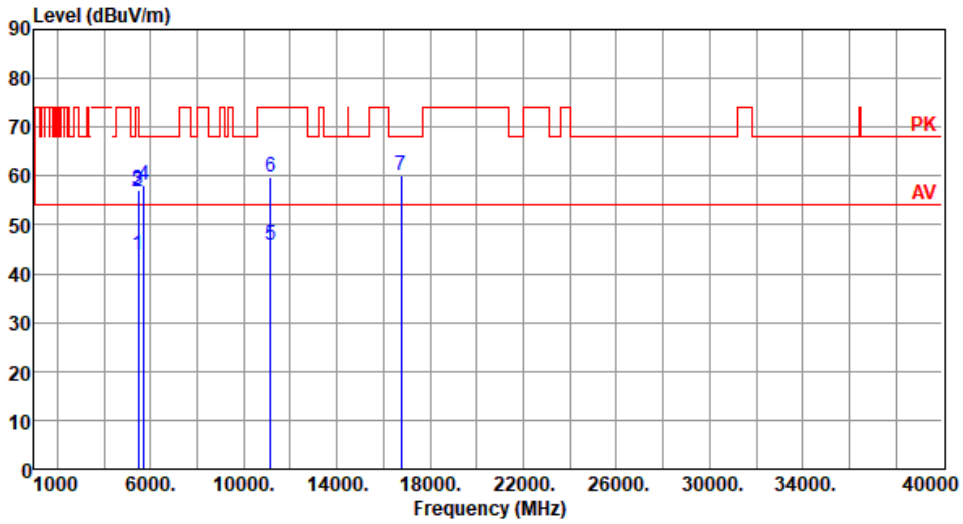


	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB/m	Remark	ANT High cm	Turn Table deg
1	5460.00	44.11	54.00	-9.89	39.74	4.37	Average	305	5
2	5460.00	57.48	74.00	-16.52	53.11	4.37	Peak	305	5
3	5470.00	60.49	68.20	-7.71	56.10	4.39	Peak	305	5
4	11000.00	49.73	54.00	-4.27	34.57	15.16	Average	225	298
5	11000.00	63.17	74.00	-10.83	48.01	15.16	Peak	225	298
6	16500.00	59.55	68.20	-8.65	43.20	16.35	Peak	100	28

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)	5580
Polarization	Horizontal		

Test By :Felix Sung Temperature(℃):23 Humidity(%):62

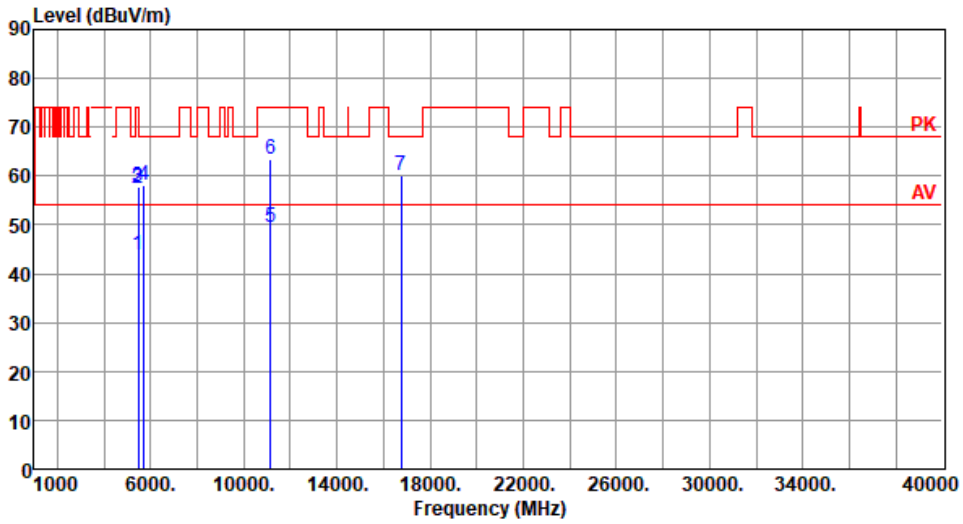


	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB/m	Remark	ANT High cm	Turn Table deg
1	5460.00	43.82	54.00	-10.18	39.45	4.37	Average	255	171
2	5460.00	56.73	74.00	-17.27	52.36	4.37	Peak	255	171
3	5470.00	57.02	68.20	-11.18	52.63	4.39	Peak	255	171
4	5725.00	57.98	68.20	-10.22	53.17	4.81	Peak	255	171
5	11160.00	45.79	54.00	-8.21	31.17	14.62	Average	145	299
6	11160.00	59.71	74.00	-14.29	45.09	14.62	Peak	145	299
7	16740.00	60.18	68.20	-8.02	43.10	17.08	Peak	100	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)	5580
Polarization	Vertical		

Test By :Felix Sung Temperature(℃):23 Humidity(%):62

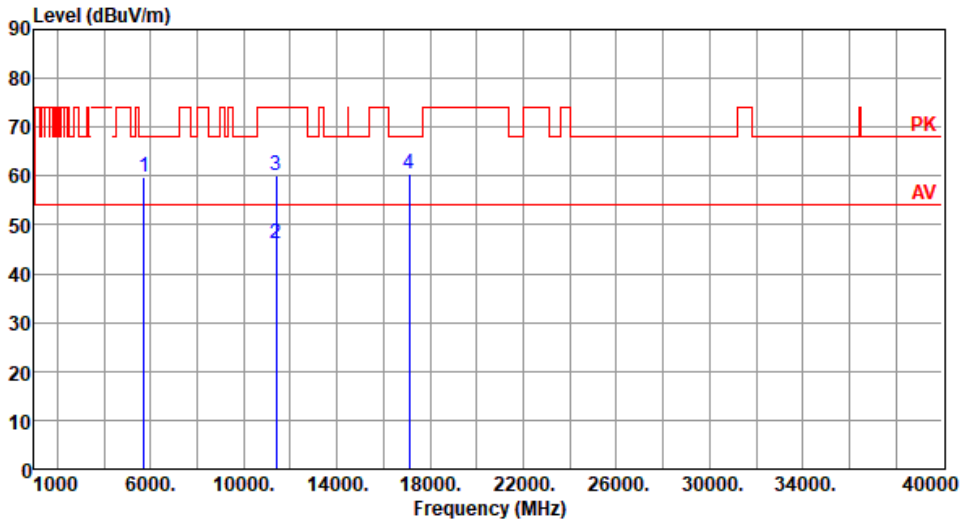


	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB/m	Remark	ANT High cm	Turn Table deg
1	5460.00	43.93	54.00	-10.07	39.56	4.37	Average	258	2
2	5460.00	57.44	74.00	-16.56	53.07	4.37	Peak	258	2
3	5470.00	57.83	68.20	-10.37	53.44	4.39	Peak	258	2
4	5725.00	58.19	68.20	-10.01	53.38	4.81	Peak	258	2
5	11160.00	49.35	54.00	-4.65	34.73	14.62	Average	221	295
6	11160.00	63.34	74.00	-10.66	48.72	14.62	Peak	221	295
7	16740.00	60.01	68.20	-8.19	42.93	17.08	Peak	100	21

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)	5700
Polarization	Horizontal		

Test By :Felix Sung Temperature(℃):23 Humidity(%):62

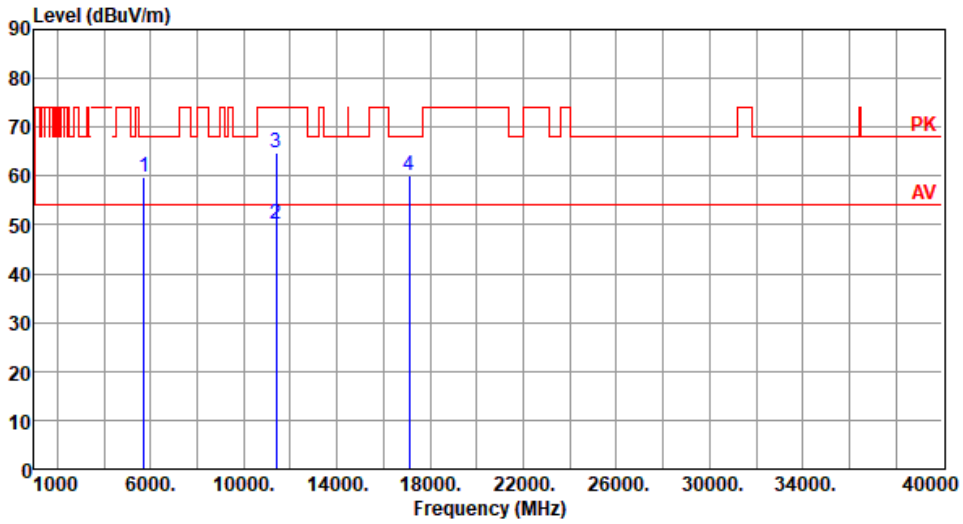


	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB/m	Remark	ANT High cm	Turn Table deg
1	5725.00	59.88	68.20	-8.32	55.07	4.81	Peak	248	172
2	11400.00	46.16	54.00	-7.84	31.31	14.85	Average	143	290
3	11400.00	60.07	74.00	-13.93	45.22	14.85	Peak	143	290
4	17100.00	60.35	68.20	-7.85	42.98	17.37	Peak	100	18

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)	5700
Polarization	Vertical		

Test By :Felix Sung Temperature(℃):23 Humidity(%):62

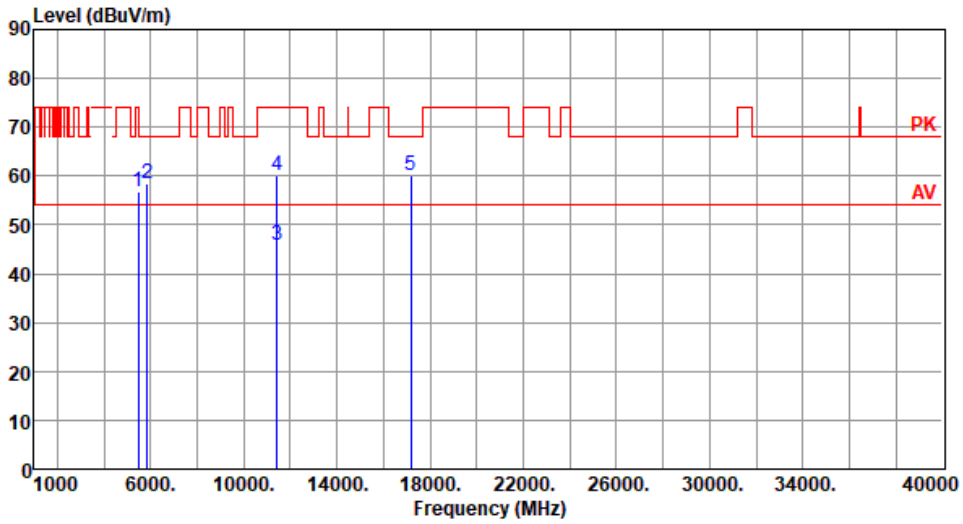


	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB/m	Remark	ANT High cm	Turn Table deg
1	5725.00	59.93	68.20	-8.27	55.12	4.81	Peak	268	4
2	11400.00	50.16	54.00	-3.84	35.31	14.85	Average	263	205
3	11400.00	64.77	74.00	-9.23	49.92	14.85	Peak	263	205
4	17100.00	60.14	68.20	-8.06	42.77	17.37	Peak	100	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	11a	Test Freq. (MHz)	5720
Polarization	Horizontal		

Test By :Felix Sung Temperature(℃):23 Humidity(%):62

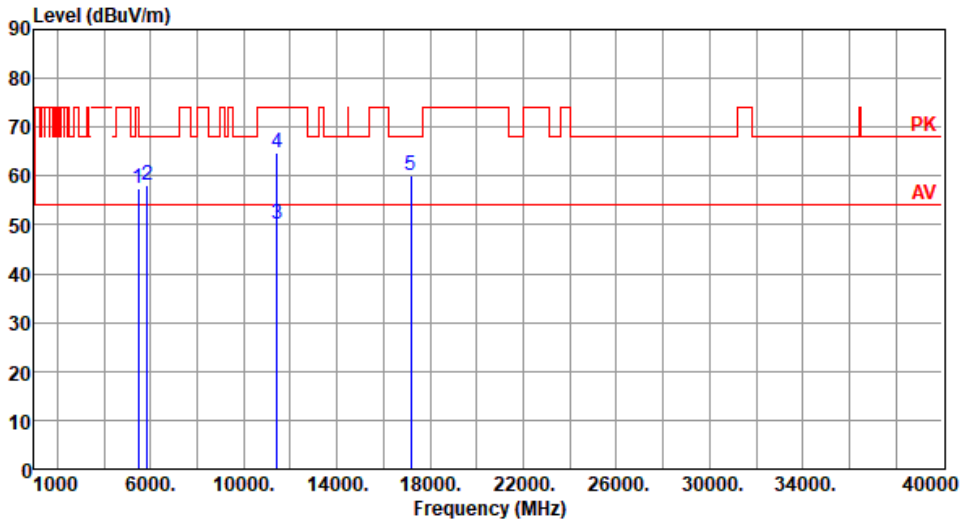


	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB/m	Remark	ANT High cm	Turn Table deg
1	5470.00	56.66	68.20	-11.54	52.27	4.39	Peak	258	173
2	5850.00	58.57	68.20	-9.63	53.39	5.18	Peak	258	173
3	11440.00	45.83	54.00	-8.17	31.02	14.81	Average	145	296
4	11440.00	60.08	74.00	-13.92	45.27	14.81	Peak	145	296
5	17160.00	60.02	68.20	-8.18	42.60	17.42	Peak	100	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	11a	Test Freq. (MHz)	5720
Polarization	Vertical		

Test By :Felix Sung Temperature(℃):23 Humidity(%):62



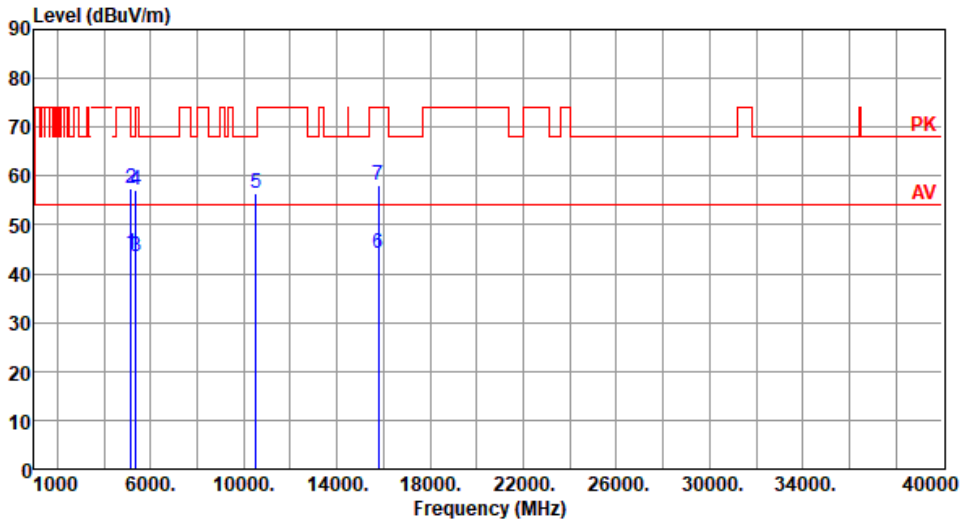
	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB/m	Remark	ANT High cm	Turn Table deg
1	5470.00	57.33	68.20	-10.87	52.94	4.39	Peak	248	21
2	5850.00	58.17	68.20	-10.03	52.99	5.18	Peak	248	21
3	11440.00	50.31	54.00	-3.69	35.50	14.81	Average	266	211
4	11440.00	64.89	74.00	-9.11	50.08	14.81	Peak	266	211
5	17160.00	60.27	68.20	-7.93	42.85	17.42	Peak	100	35

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).

3.5.3 Transmitter Radiated Unwanted Emissions (Above 1GHz) for ax HE20

Modulation	ax HE20	**Test Freq. (MHz)**	5260
Polarization	Horizontal		

Test By :Felix Sung Temperature(℃):23 Humidity(%):62

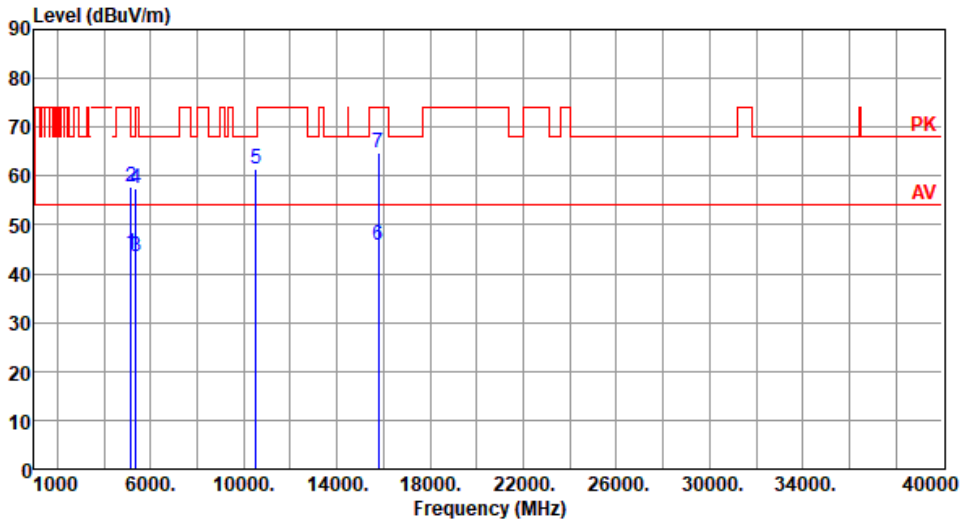


	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB/m	Remark	ANT High cm	Turn Table deg
1	5150.00	44.09	54.00	-9.91	39.71	4.38	Average	325	158
2	5150.00	57.49	74.00	-16.51	53.11	4.38	Peak	325	158
3	5350.00	43.37	54.00	-10.63	39.40	3.97	Average	325	158
4	5350.00	57.13	74.00	-16.87	53.16	3.97	Peak	325	158
5	10520.00	56.37	68.20	-11.83	41.80	14.57	Peak	100	22
6	15780.00	44.29	54.00	-9.71	30.10	14.19	Average	100	41
7	15780.00	58.27	74.00	-15.73	44.08	14.19	Peak	100	41

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	Test Freq. (MHz)	5260
Polarization	Vertical		

Test By :Felix Sung Temperature(℃):23 Humidity(%):62

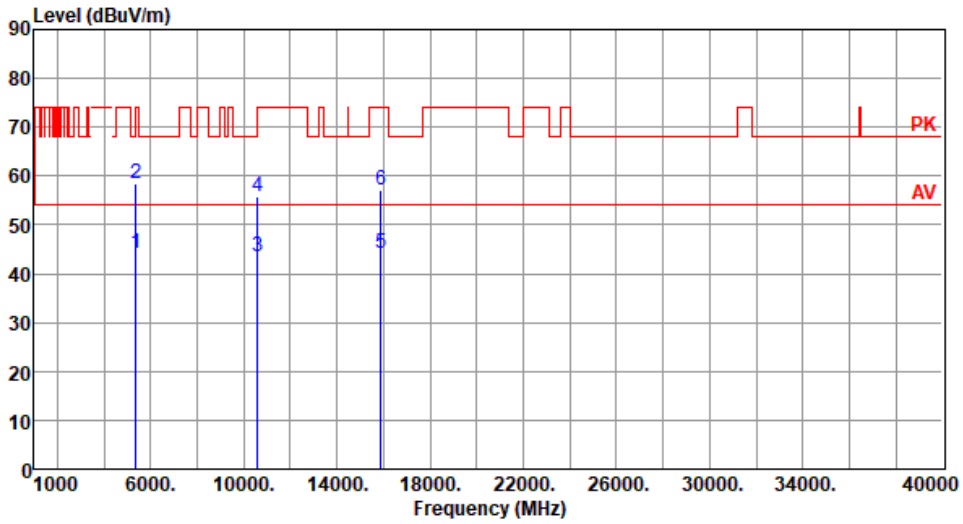


	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB/m	Remark	ANT High cm	Turn Table deg
1	5150.00	44.23	54.00	-9.77	39.85	4.38	Average	255	178
2	5150.00	57.77	74.00	-16.23	53.39	4.38	Peak	255	178
3	5350.00	43.62	54.00	-10.38	39.65	3.97	Average	255	178
4	5350.00	57.46	74.00	-16.54	53.49	3.97	Peak	255	178
5	10520.00	61.35	68.20	-6.85	46.78	14.57	Peak	177	278
6	15780.00	45.86	54.00	-8.14	31.67	14.19	Average	176	245
7	15780.00	64.91	74.00	-9.09	50.72	14.19	Peak	176	245

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	Test Freq. (MHz)	5300
Polarization	Horizontal		

Test By :Felix Sung Temperature(℃):23 Humidity(%):62

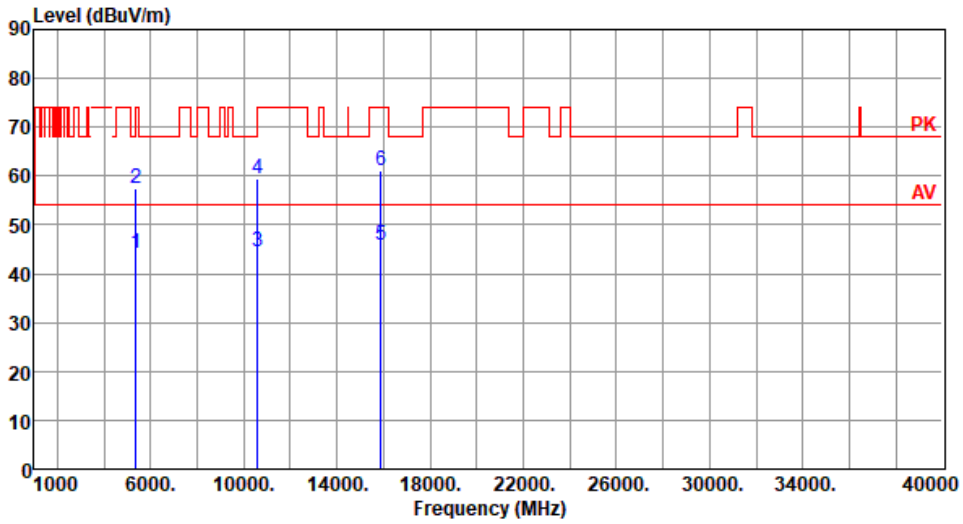


	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB/m	Remark	ANT High cm	Turn Table deg
1	5350.00	44.03	54.00	-9.97	40.06	3.97	Average	328	151
2	5350.00	58.35	74.00	-15.65	54.38	3.97	Peak	328	151
3	10600.00	43.53	54.00	-10.47	28.96	14.57	Average	100	15
4	10600.00	55.84	74.00	-18.16	41.27	14.57	Peak	100	15
5	15900.00	44.26	54.00	-9.74	30.03	14.23	Average	100	25
6	15900.00	57.28	74.00	-16.72	43.05	14.23	Peak	100	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	Test Freq. (MHz)	5300
Polarization	Vertical		

Test By :Felix Sung Temperature(℃):23 Humidity(%):62

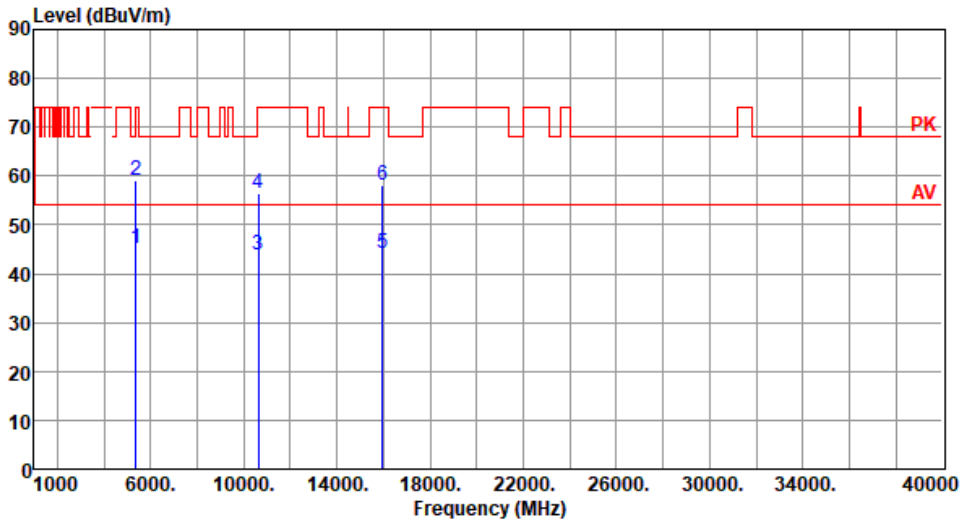


	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB/m	Remark	ANT High cm	Turn Table deg
1	5350.00	44.01	54.00	-9.99	40.04	3.97	Average	243	175
2	5350.00	57.61	74.00	-16.39	53.64	3.97	Peak	243	175
3	10600.00	44.62	54.00	-9.38	30.05	14.57	Average	108	276
4	10600.00	59.37	74.00	-14.63	44.80	14.57	Peak	108	276
5	15900.00	45.94	54.00	-8.06	31.71	14.23	Average	188	251
6	15900.00	61.17	74.00	-12.83	46.94	14.23	Peak	188	251

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	Test Freq. (MHz)	5320
Polarization	Horizontal		

Test By :Felix Sung Temperature(℃):23 Humidity(%):62

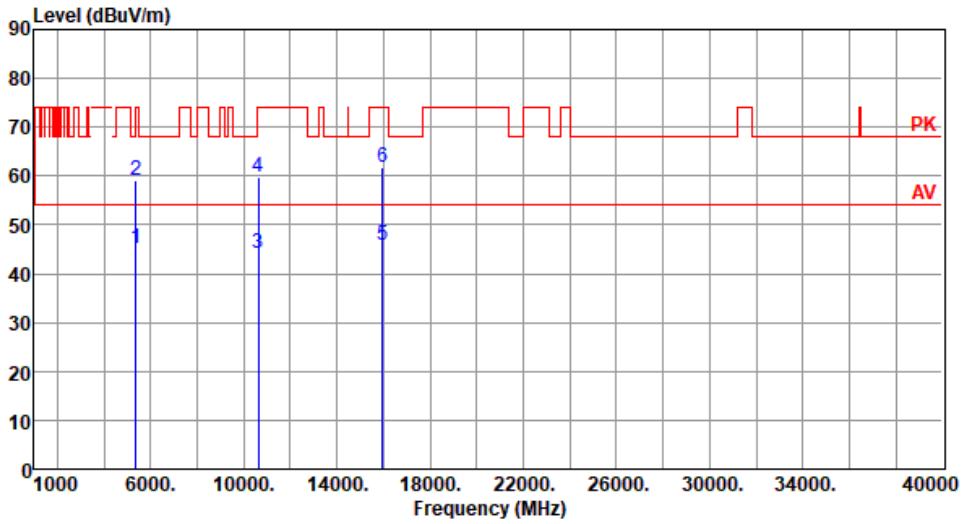


	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB/m	Remark	ANT High cm	Turn Table deg
1	5350.00	45.06	54.00	-8.94	41.09	3.97	Average	325	156
2	5350.00	59.03	74.00	-14.97	55.06	3.97	Peak	325	156
3	10640.00	43.74	54.00	-10.26	29.18	14.56	Average	100	21
4	10640.00	56.47	74.00	-17.53	41.91	14.56	Peak	100	21
5	15960.00	44.02	54.00	-9.98	29.74	14.28	Average	100	25
6	15960.00	58.16	74.00	-15.84	43.88	14.28	Peak	100	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	Test Freq. (MHz)	5320
Polarization	Vertical		

Test By :Felix Sung Temperature(℃):23 Humidity(%):62

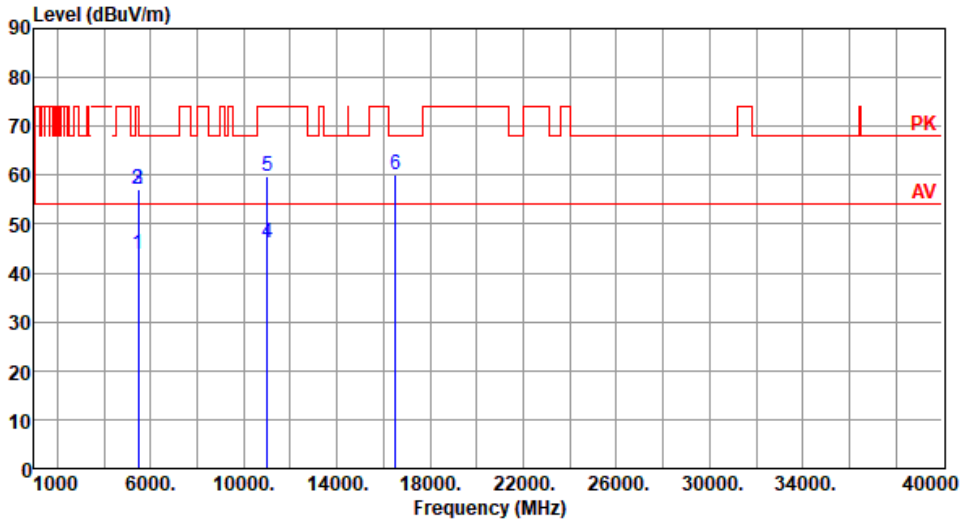


	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB/m	Remark	ANT High cm	Turn Table deg
1	5350.00	45.09	54.00	-8.91	41.12	3.97	Average	258	188
2	5350.00	59.11	74.00	-14.89	55.14	3.97	Peak	258	188
3	10640.00	44.32	54.00	-9.68	29.76	14.56	Average	116	282
4	10640.00	59.67	74.00	-14.33	45.11	14.56	Peak	116	282
5	15960.00	45.81	54.00	-8.19	31.53	14.28	Average	185	248
6	15960.00	61.69	74.00	-12.31	47.41	14.28	Peak	185	248

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	Test Freq. (MHz)	5500
Polarization	Horizontal		

Test By :Felix Sung Temperature(℃):23 Humidity(%):62

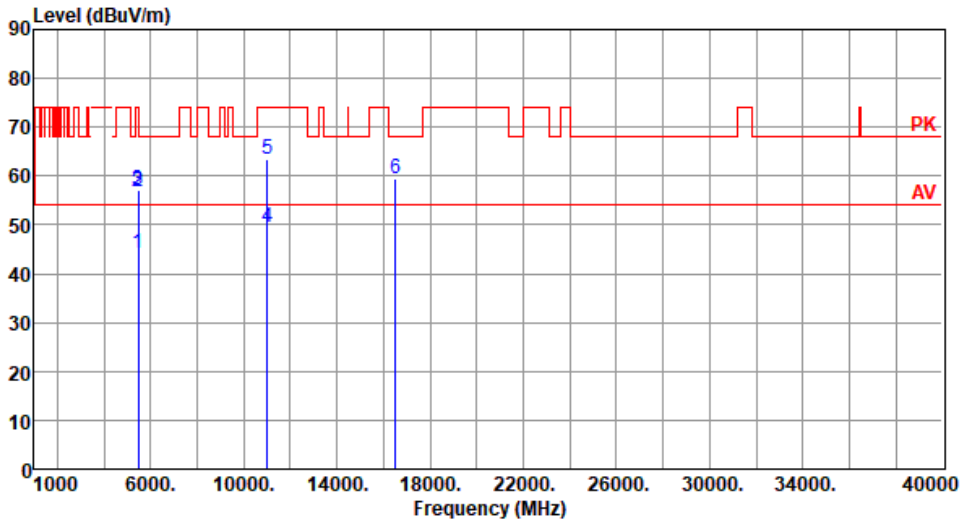


	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB/m	Remark	ANT High cm	Turn Table deg
1	5460.00	43.88	54.00	-10.12	39.51	4.37	Average	251	181
2	5460.00	57.03	74.00	-16.97	52.66	4.37	Peak	251	181
3	5470.00	57.14	68.20	-11.06	52.75	4.39	Peak	251	181
4	11000.00	46.28	54.00	-7.72	31.12	15.16	Average	146	301
5	11000.00	59.85	74.00	-14.15	44.69	15.16	Peak	146	301
6	16500.00	60.01	68.20	-8.19	43.66	16.35	Peak	100	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	Test Freq. (MHz)	5500
Polarization	Vertical		

Test By :Felix Sung Temperature(℃):23 Humidity(%):62

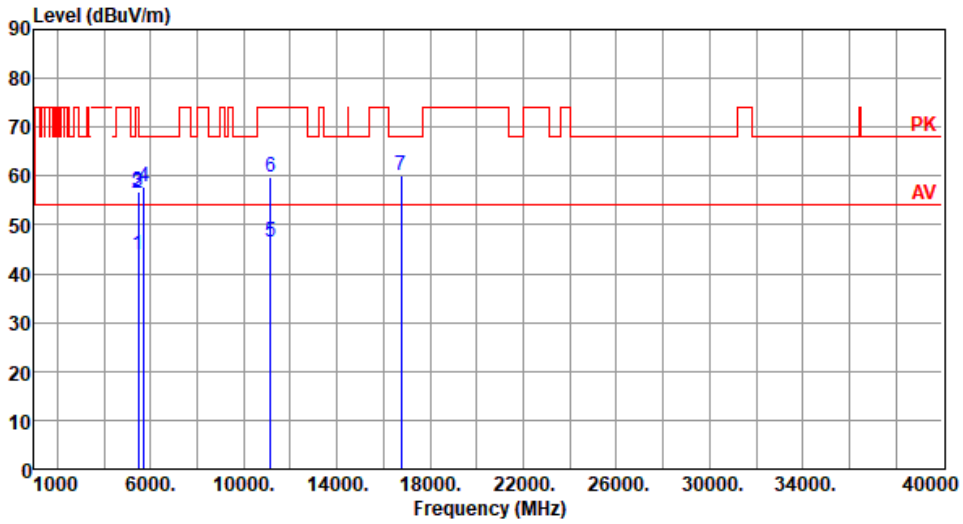


	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB/m	Remark	ANT High cm	Turn Table deg
1	5460.00	44.16	54.00	-9.84	39.79	4.37	Average	338	12
2	5460.00	56.66	74.00	-17.34	52.29	4.37	Peak	338	12
3	5470.00	57.00	68.20	-11.20	52.61	4.39	Peak	338	12
4	11000.00	49.62	54.00	-4.38	34.46	15.16	Average	222	301
5	11000.00	63.34	74.00	-10.66	48.18	15.16	Peak	222	301
6	16500.00	59.48	68.20	-8.72	43.13	16.35	Peak	100	48

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	Test Freq. (MHz)	5580
Polarization	Horizontal		

Test By :Felix Sung Temperature(℃):23 Humidity(%):62

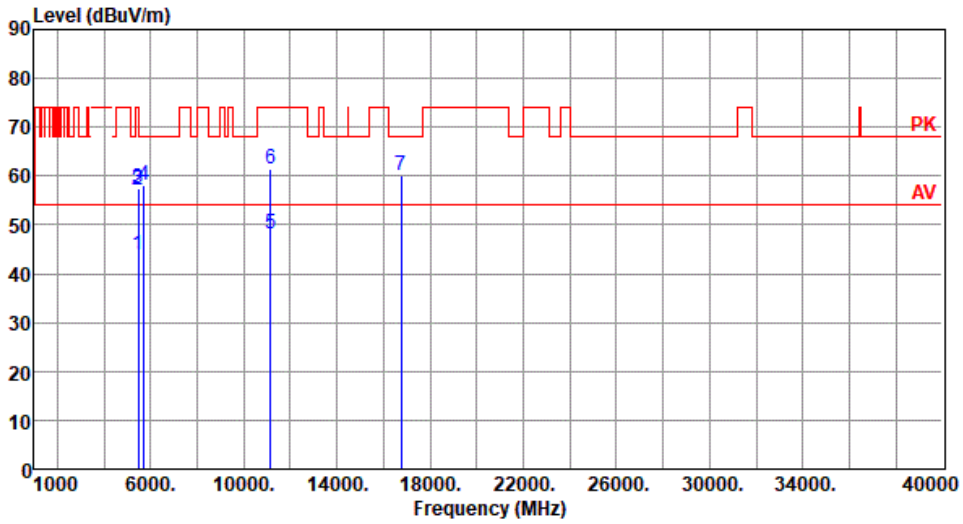


	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB/m	Remark	ANT High cm	Turn Table deg
1	5460.00	43.77	54.00	-10.23	39.40	4.37	Average	251	178
2	5460.00	56.55	74.00	-17.45	52.18	4.37	Peak	251	178
3	5470.00	56.91	68.20	-11.29	52.52	4.39	Peak	251	178
4	5725.00	57.83	68.20	-10.37	53.02	4.81	Peak	251	178
5	11160.00	46.62	54.00	-7.38	32.00	14.62	Average	143	295
6	11160.00	59.83	74.00	-14.17	45.21	14.62	Peak	143	295
7	16740.00	59.99	68.20	-8.21	42.91	17.08	Peak	100	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).

Modulation	ax HE20	Test Freq. (MHz)	5580
Polarization	Vertical		

Test By :Felix Sung Temperature(℃):23 Humidity(%):62

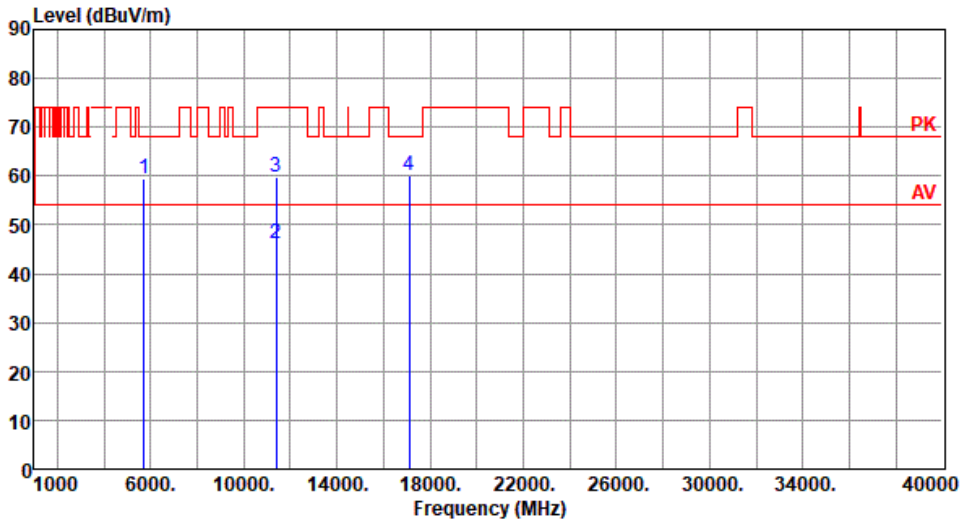


	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB/m	Remark	ANT High cm	Turn Table deg
1	5460.00	43.76	54.00	-10.24	39.39	4.37	Average	291	11
2	5460.00	57.11	74.00	-16.89	52.74	4.37	Peak	291	11
3	5470.00	57.41	68.20	-10.79	53.02	4.39	Peak	291	11
4	5725.00	58.19	68.20	-10.01	53.38	4.81	Peak	291	11
5	11160.00	48.06	54.00	-5.94	33.44	14.62	Average	188	285
6	11160.00	61.39	74.00	-12.61	46.77	14.62	Peak	188	285
7	16740.00	60.02	68.20	-8.18	42.94	17.08	Peak	100	23

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	Test Freq. (MHz)	5700
Polarization	Horizontal		

Test By :Felix Sung Temperature(℃):23 Humidity(%):62

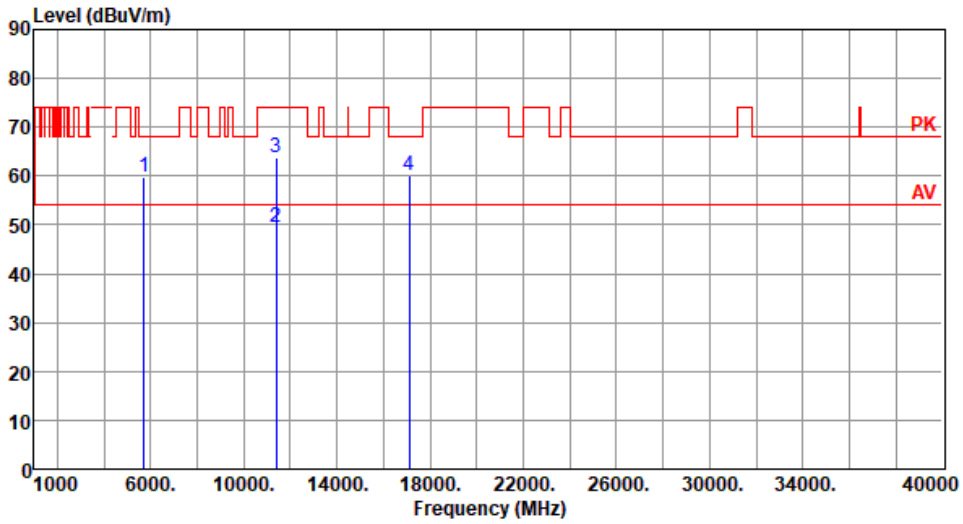


	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB/m	Remark	ANT High cm	Turn Table deg
1	5725.00	59.43	68.20	-8.77	54.62	4.81	Peak	257	176
2	11400.00	46.18	54.00	-7.82	31.33	14.85	Average	153	302
3	11400.00	59.74	74.00	-14.26	44.89	14.85	Peak	153	302
4	17100.00	60.06	68.20	-8.14	42.69	17.37	Peak	100	15

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	Test Freq. (MHz)	5700
Polarization	Vertical		

Test By :Felix Sung Temperature(℃):23 Humidity(%):62

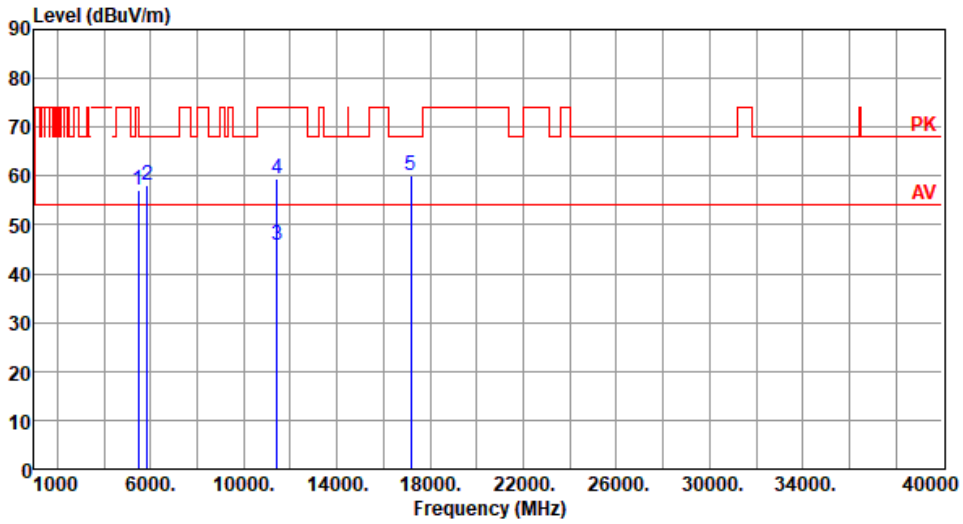


	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB/m	Remark	ANT High cm	Turn Table deg
1	5725.00	59.69	68.20	-8.51	54.88	4.81	Peak	292	15
2	11400.00	49.53	54.00	-4.47	34.68	14.85	Average	231	241
3	11400.00	63.74	74.00	-10.26	48.89	14.85	Peak	231	241
4	17100.00	60.17	68.20	-8.03	42.80	17.37	Peak	100	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	Test Freq. (MHz)	5720
Polarization	Horizontal		

Test By :Felix Sung Temperature(℃):23 Humidity(%):62

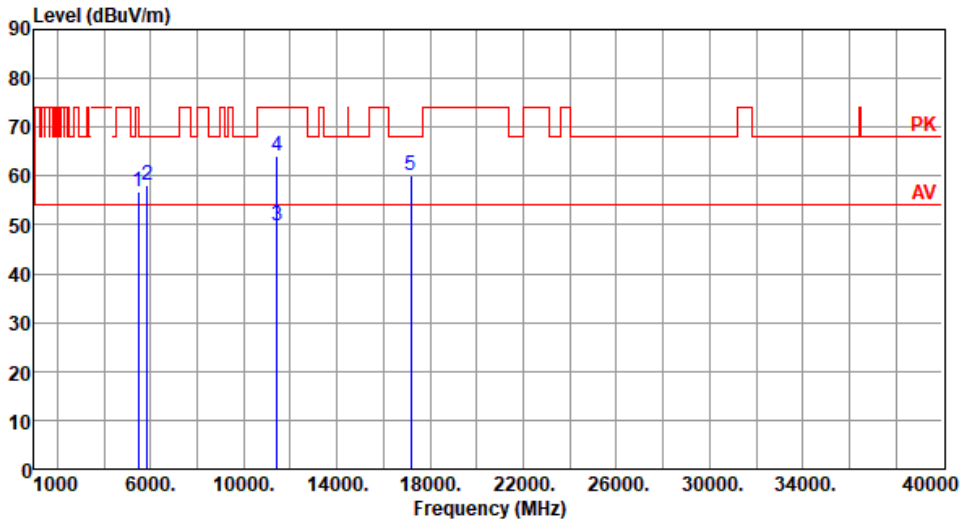


	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB/m	Remark	ANT High cm	Turn Table deg
1	5470.00	57.03	68.20	-11.17	52.64	4.39	Peak	251	183
2	5850.00	58.01	68.20	-10.19	52.83	5.18	Peak	251	183
3	11440.00	45.88	54.00	-8.12	31.07	14.81	Average	141	291
4	11440.00	59.47	74.00	-14.53	44.66	14.81	Peak	141	291
5	17160.00	60.18	68.20	-8.02	42.76	17.42	Peak	100	18

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	Test Freq. (MHz)	5720
Polarization	Vertical		

Test By :Felix Sung Temperature(℃):23 Humidity(%):62



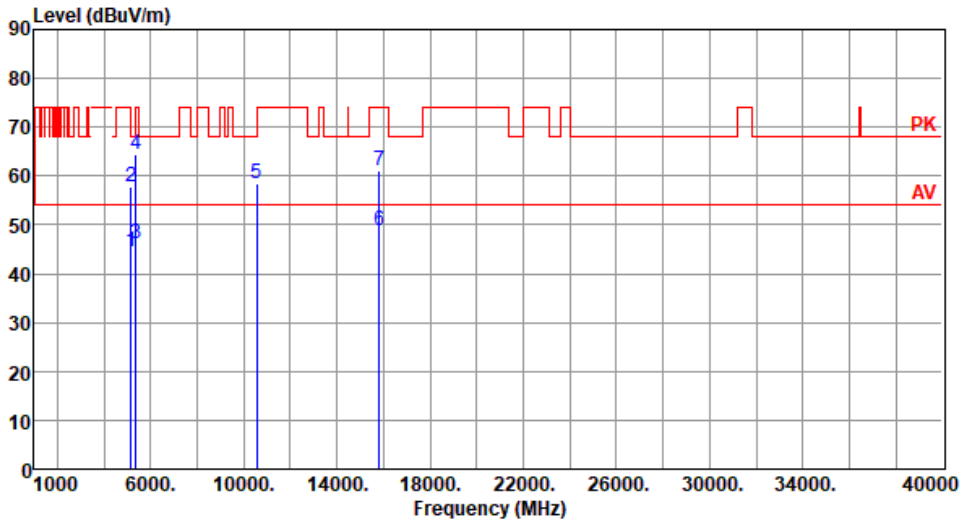
	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB/m	Remark	ANT High cm	Turn Table deg
1	5470.00	56.77	68.20	-11.43	52.38	4.39	Peak	251	15
2	5850.00	58.03	68.20	-10.17	52.85	5.18	Peak	251	15
3	11440.00	49.86	54.00	-4.14	35.05	14.81	Average	262	221
4	11440.00	64.17	74.00	-9.83	49.36	14.81	Peak	262	221
5	17160.00	60.08	68.20	-8.12	42.66	17.42	Peak	100	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).

3.5.4 Transmitter Radiated Unwanted Emissions (Above 1GHz) for ax HE40

Modulation	ax HE40	**Test Freq. (MHz)**	5270
Polarization	Horizontal		

Test By :Felix Sung Temperature(℃):23 Humidity(%):62

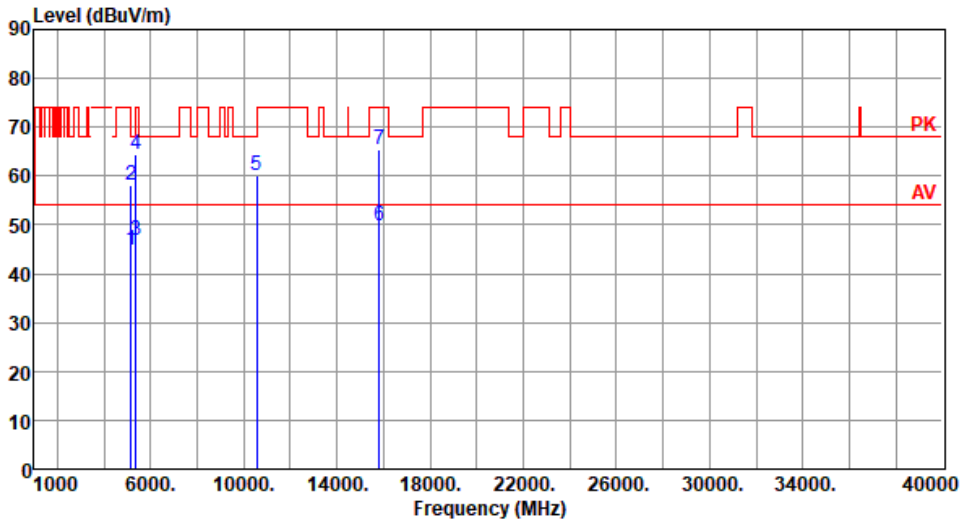


	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB/m	Remark	ANT High cm	Turn Table deg
1	5150.00	44.57	54.00	-9.43	40.19	4.38	Average	248	171
2	5150.00	57.63	74.00	-16.37	53.25	4.38	Peak	248	171
3	5350.00	46.09	54.00	-7.91	42.12	3.97	Average	248	171
4	5350.00	64.33	74.00	-9.67	60.36	3.97	Peak	248	171
5	10540.00	58.57	68.20	-9.63	44.00	14.57	Peak	100	175
6	15810.00	48.78	54.00	-5.22	34.65	14.13	Average	372	185
7	15810.00	61.23	74.00	-12.77	47.10	14.13	Peak	372	185

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	Test Freq. (MHz)	5270
Polarization	Vertical		

Test By :Felix Sung Temperature(℃):23 Humidity(%):62

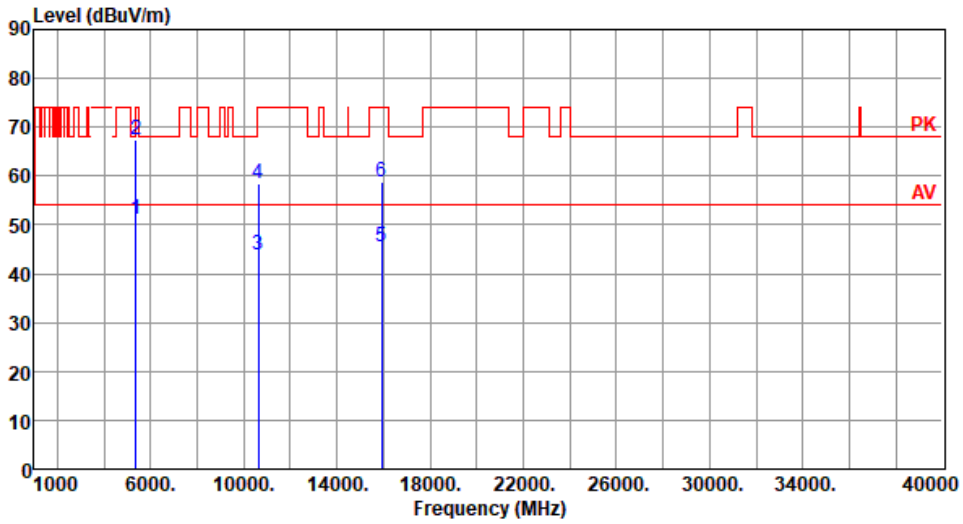


	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB/m	Remark	ANT High cm	Turn Table deg
1	5150.00	44.71	54.00	-9.29	40.33	4.38	Average	245	16
2	5150.00	58.09	74.00	-15.91	53.71	4.38	Peak	245	16
3	5350.00	46.92	54.00	-7.08	42.95	3.97	Average	245	16
4	5350.00	64.34	74.00	-9.66	60.37	3.97	Peak	245	16
5	10540.00	60.03	68.20	-8.17	45.46	14.57	Peak	121	278
6	15810.00	49.68	54.00	-4.32	35.55	14.13	Average	161	248
7	15810.00	65.57	74.00	-8.43	51.44	14.13	Peak	161	248

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	Test Freq. (MHz)	5310
Polarization	Horizontal		

Test By :Akun Chung Temperature(℃):25 Humidity(%):66

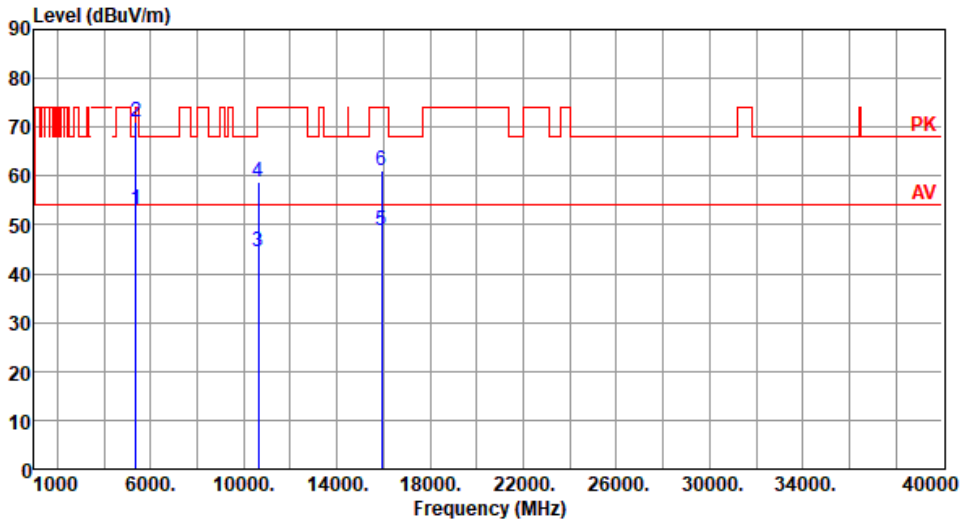


	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB/m	Remark	ANT High cm	Turn Table deg
1	5350.00	51.02	54.00	-2.98	47.05	3.97	Average	314	159
2	5350.00	67.45	74.00	-6.55	63.48	3.97	Peak	314	159
3	10620.00	43.69	54.00	-10.31	29.12	14.57	Average	100	39
4	10620.00	58.45	74.00	-15.55	43.88	14.57	Peak	100	39
5	15930.00	45.51	54.00	-8.49	31.26	14.25	Average	100	48
6	15930.00	58.64	74.00	-15.36	44.39	14.25	Peak	100	48

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	Test Freq. (MHz)	5310
Polarization	Vertical		

Test By :Akun Chung Temperature(℃):25 Humidity(%):66

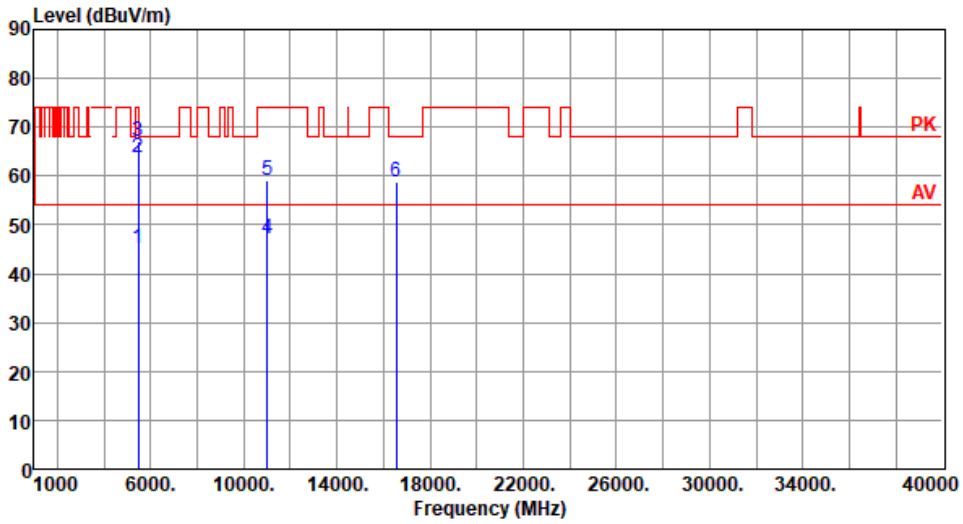


	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB/m	Remark	ANT High cm	Turn Table deg
1	5350.00	52.99	54.00	-1.01	49.02	3.97	Average	316	58
2	5350.00	70.97	74.00	-3.03	67.00	3.97	Peak	316	58
3	10620.00	44.42	54.00	-9.58	29.85	14.57	Average	122	285
4	10620.00	58.90	74.00	-15.10	44.33	14.57	Peak	122	285
5	15930.00	48.92	54.00	-5.08	34.67	14.25	Average	224	247
6	15930.00	61.00	74.00	-13.00	46.75	14.25	Peak	224	247

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	Test Freq. (MHz)	5510
Polarization	Horizontal		

Test By :Akun Chung Temperature(℃):25 Humidity(%):66

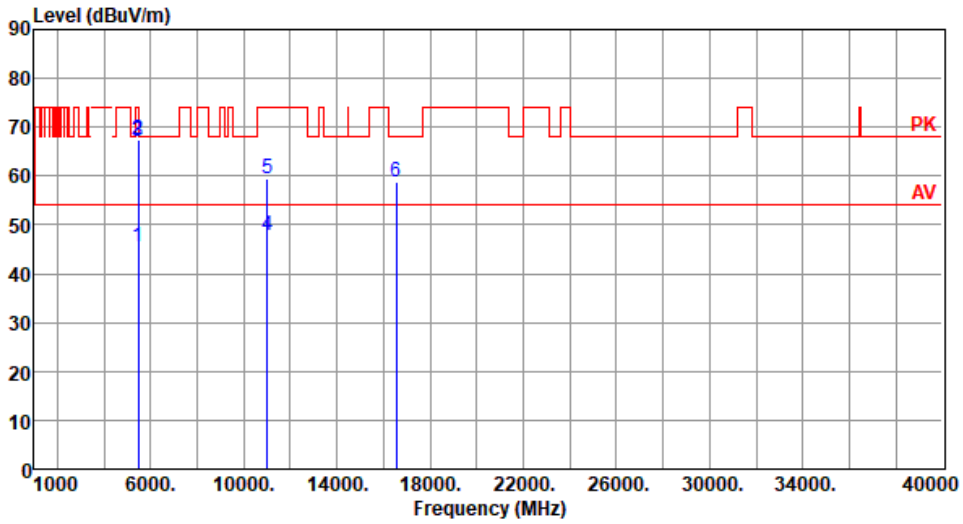


	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB/m	Remark	ANT High cm	Turn Table deg
1	5460.00	45.23	54.00	-8.77	40.86	4.37	Average	261	185
2	5460.00	63.65	74.00	-10.35	59.28	4.37	Peak	261	185
3	5470.00	67.19	68.20	-1.01	62.80	4.39	Peak	261	185
4	11020.00	47.15	54.00	-6.85	32.05	15.10	Average	205	153
5	11020.00	59.24	74.00	-14.76	44.14	15.10	Peak	205	153
6	16530.00	58.76	68.20	-9.44	42.45	16.31	Peak	100	182

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	Test Freq. (MHz)	5510
Polarization	Vertical		

Test By :Akun Chung Temperature(℃):25 Humidity(%):66

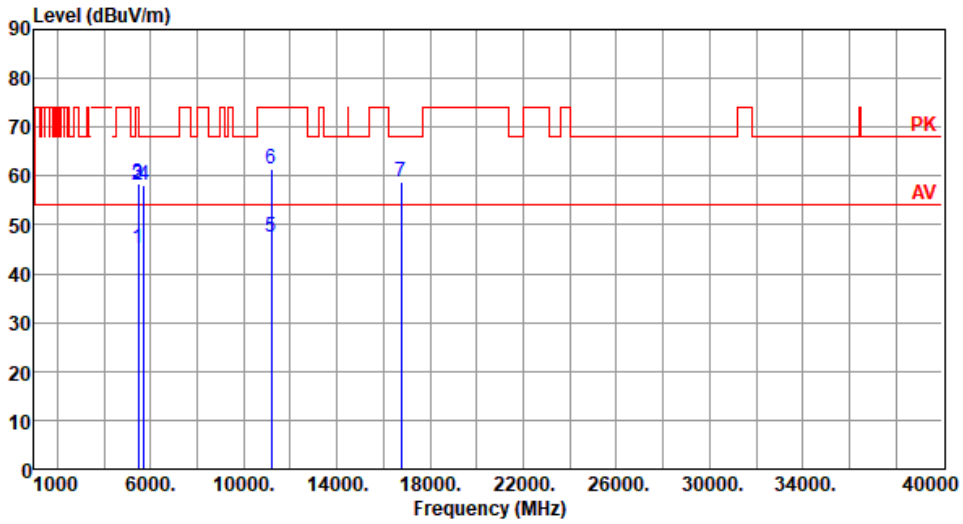


	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB/m	Remark	ANT High cm	Turn Table deg
1	5460.00	45.35	54.00	-8.65	40.98	4.37	Average	337	16
2	5460.00	67.32	74.00	-6.68	62.95	4.37	Peak	337	16
3	5470.00	66.99	68.20	-1.21	62.60	4.39	Peak	337	16
4	11020.00	47.91	54.00	-6.09	32.81	15.10	Average	341	11
5	11020.00	59.44	74.00	-14.56	44.34	15.10	Peak	341	11
6	16530.00	58.91	68.20	-9.29	42.60	16.31	Peak	100	13

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	Test Freq. (MHz)	5590
Polarization	Horizontal		

Test By :Felix Sung Temperature(℃):23 Humidity(%):62

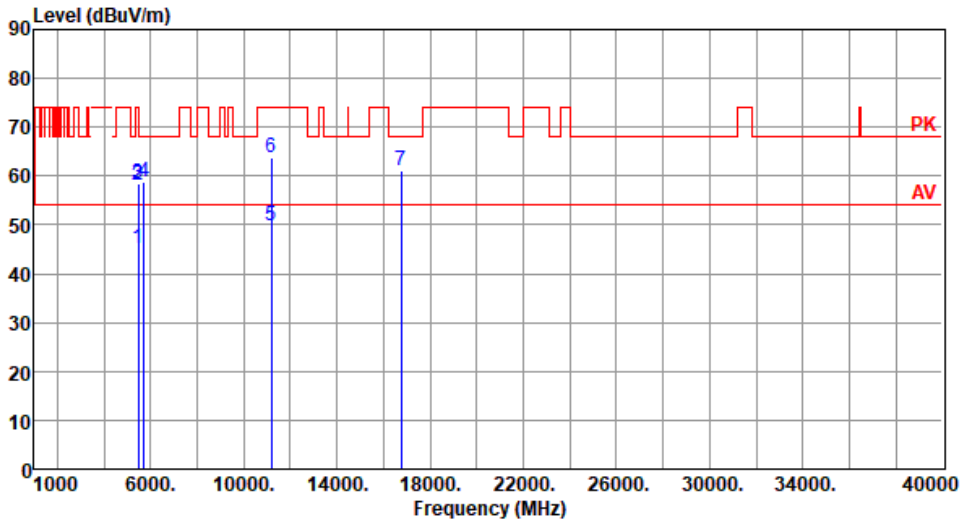


	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB/m	Remark	ANT High cm	Turn Table deg
1	5460.00	45.05	54.00	-8.95	40.68	4.37	Average	258	180
2	5460.00	58.24	74.00	-15.76	53.87	4.37	Peak	258	180
3	5470.00	58.35	68.20	-9.85	53.96	4.39	Peak	258	180
4	5725.00	58.26	68.20	-9.94	53.45	4.81	Peak	258	180
5	11180.00	47.33	54.00	-6.67	32.80	14.53	Average	217	166
6	11180.00	61.57	74.00	-12.43	47.04	14.53	Peak	217	166
7	16770.00	58.82	68.20	-9.38	41.60	17.22	Peak	100	182

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	Test Freq. (MHz)	5590
Polarization	Vertical		

Test By :Felix Sung Temperature(℃):23 Humidity(%):62

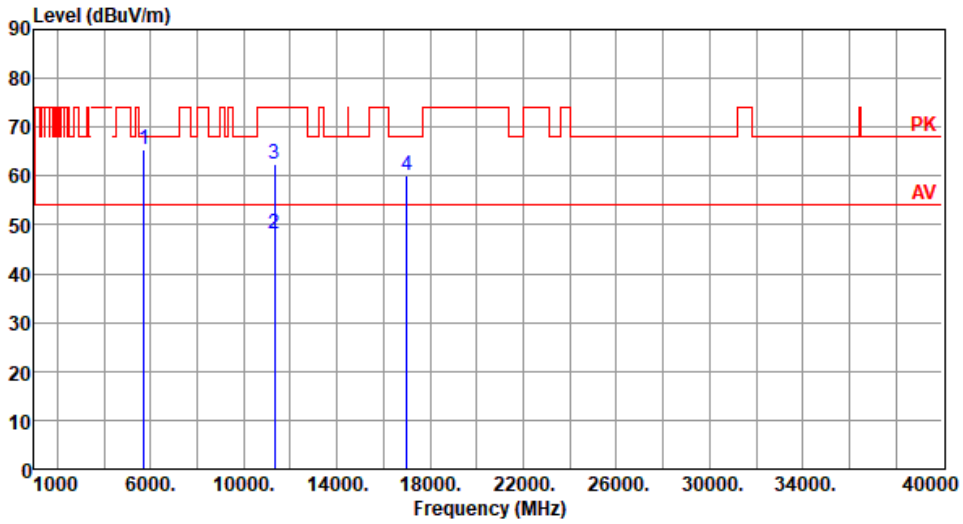


	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB/m	Remark	ANT High cm	Turn Table deg
1	5460.00	45.22	54.00	-8.78	40.85	4.37	Average	342	12
2	5460.00	58.20	74.00	-15.80	53.83	4.37	Peak	342	12
3	5470.00	58.47	68.20	-9.73	54.08	4.39	Peak	342	12
4	5725.00	58.66	68.20	-9.54	53.85	4.81	Peak	345	12
5	11180.00	49.65	54.00	-4.35	35.12	14.53	Average	337	13
6	11180.00	63.87	74.00	-10.13	49.34	14.53	Peak	337	13
7	16770.00	61.10	68.20	-7.10	43.88	17.22	Peak	100	3

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	Test Freq. (MHz)	5670
Polarization	Horizontal		

Test By :Akun Chung Temperature(℃):25 Humidity(%):66

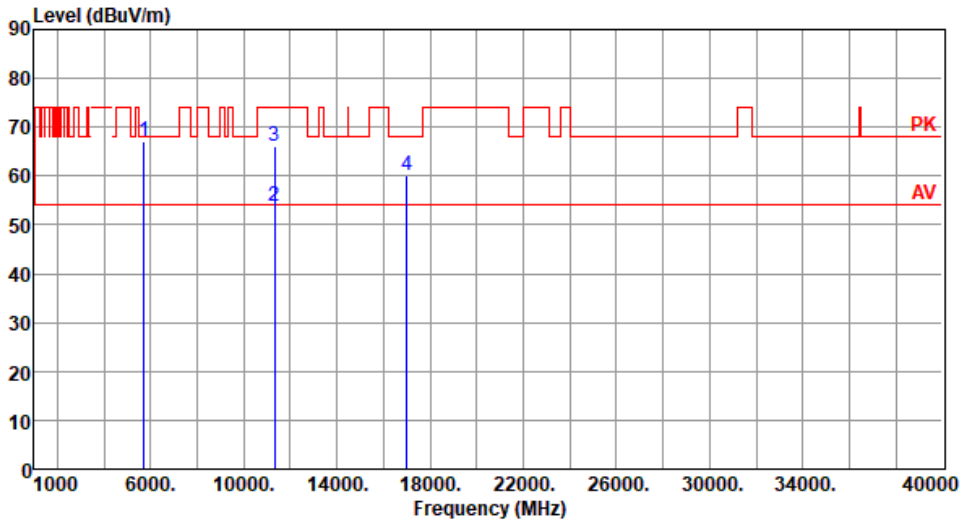


	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB/m	Remark	ANT High cm	Turn Table deg
1	5725.00	65.48	68.20	-2.72	60.67	4.81	Peak	254	182
2	11340.00	48.21	54.00	-5.79	33.54	14.67	Average	231	159
3	11340.00	62.35	74.00	-11.65	47.68	14.67	Peak	231	159
4	17010.00	60.16	68.20	-8.04	42.86	17.30	Peak	100	168

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	Test Freq. (MHz)	5670
Polarization	Vertical		

Test By :Akun Chung Temperature(℃):25 Humidity(%):66

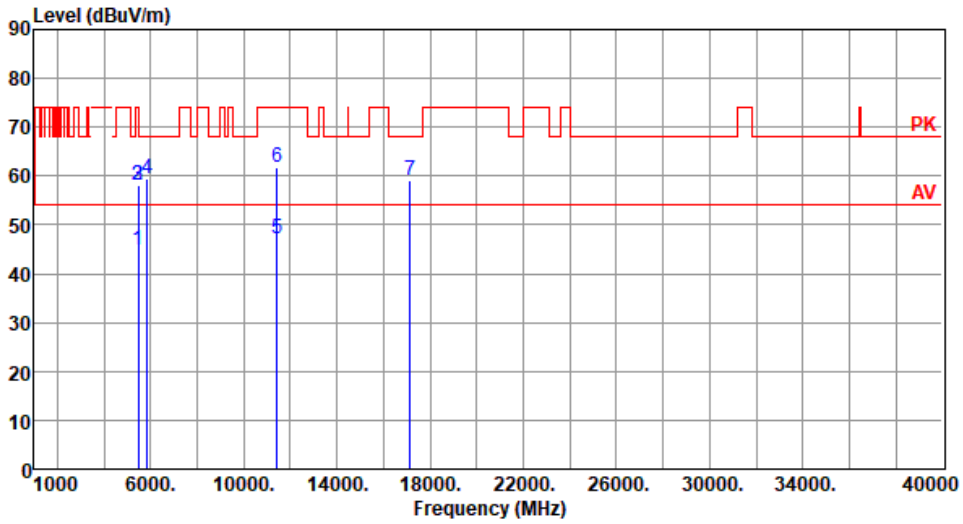


	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB/m	Remark	ANT High cm	Turn Table deg
1	5725.00	67.14	68.20	-1.06	62.33	4.81	Peak	303	17
2	11340.00	53.75	54.00	-0.25	39.08	14.67	Average	344	12
3	11340.00	66.22	74.00	-7.78	51.55	14.67	Peak	344	12
4	17010.00	60.00	68.20	-8.20	42.70	17.30	Peak	100	22

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	Test Freq. (MHz)	5710
Polarization	Horizontal		

Test By :Felix Sung Temperature(℃):23 Humidity(%):62

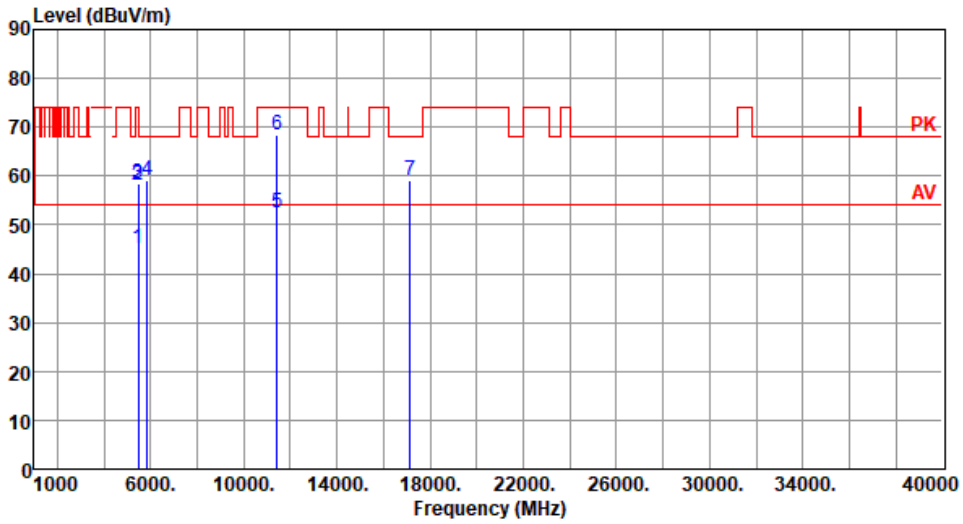


	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB/m	Remark	ANT High cm	Turn Table deg
1	5460.00	44.99	54.00	-9.01	40.62	4.37	Average	252	183
2	5460.00	58.26	74.00	-15.74	53.89	4.37	Peak	252	183
3	5470.00	58.03	68.20	-10.17	53.64	4.39	Peak	252	183
4	5850.00	59.47	68.20	-8.73	54.29	5.18	Peak	252	183
5	11420.00	47.22	54.00	-6.78	32.39	14.83	Average	215	162
6	11420.00	61.78	74.00	-12.22	46.95	14.83	Peak	215	162
7	17130.00	59.25	68.20	-8.95	41.85	17.40	Peak	100	46

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	Test Freq. (MHz)	5710
Polarization	Vertical		

Test By :Felix Sung Temperature(℃):23 Humidity(%):62



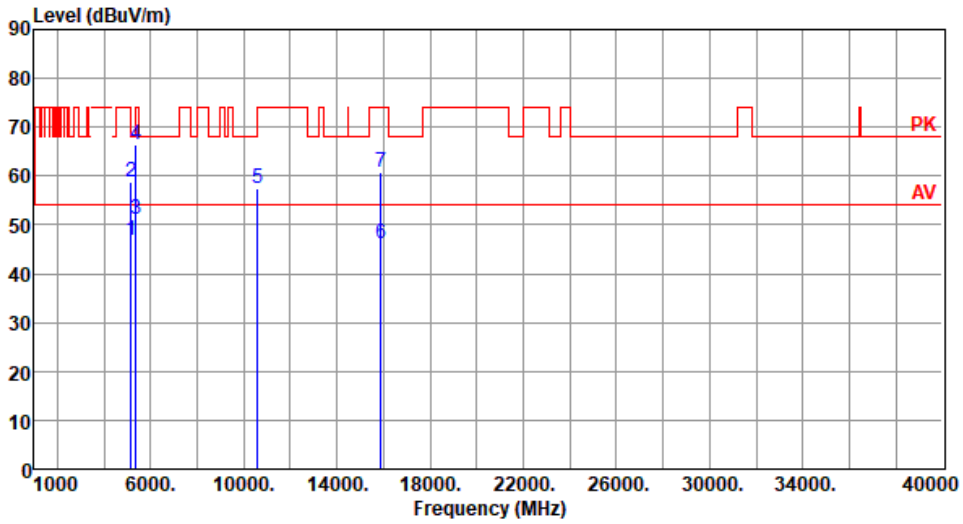
	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB/m	Remark	ANT High cm	Turn Table deg
1	5460.00	45.19	54.00	-8.81	40.82	4.37	Average	344	15
2	5460.00	58.08	74.00	-15.92	53.71	4.37	Peak	344	15
3	5470.00	58.30	68.20	-9.90	53.91	4.39	Peak	344	15
4	5850.00	59.23	68.20	-8.97	54.05	5.18	Peak	344	15
5	11420.00	52.58	54.00	-1.42	37.75	14.83	Average	327	8
6	11420.00	68.35	74.00	-5.65	53.52	14.83	Peak	327	8
7	17130.00	59.24	68.20	-8.96	41.84	17.40	Peak	100	16

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).

3.5.5 Transmitter Radiated Unwanted Emissions (Above 1GHz) for ax HE80

Modulation	ax HE80	**Test Freq. (MHz)**	5290
Polarization	Horizontal		

Test By :Akun Chung Temperature(℃):25 Humidity(%):66

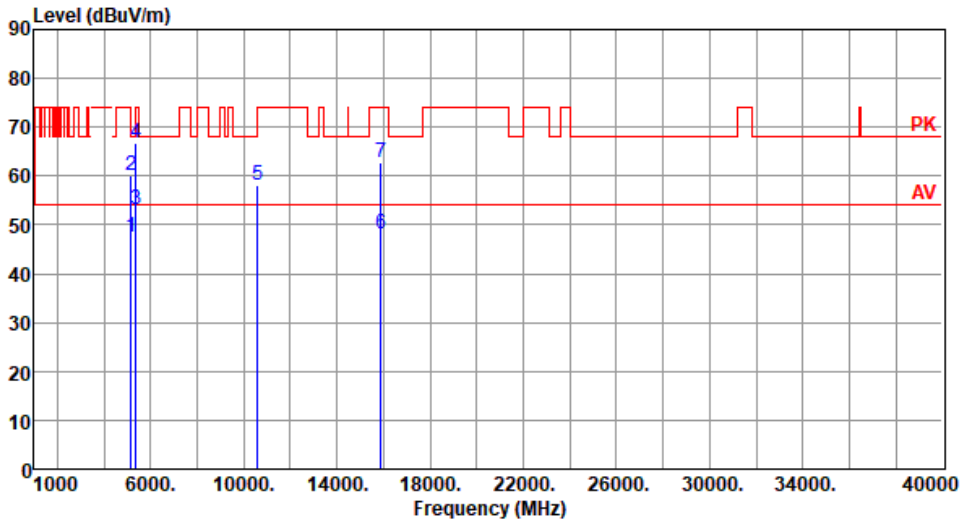


	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB/m	Remark	ANT High cm	Turn Table deg
1	5150.00	46.98	54.00	-7.02	42.60	4.38	Average	325	160
2	5150.00	58.78	74.00	-15.22	54.40	4.38	Peak	325	160
3	5350.00	51.29	54.00	-2.71	47.32	3.97	Average	325	160
4	5350.00	66.47	74.00	-7.53	62.50	3.97	Peak	325	160
5	10580.00	57.29	68.20	-10.91	42.72	14.57	Peak	100	45
6	15870.00	46.04	54.00	-7.96	31.85	14.19	Average	100	39
7	15870.00	60.65	74.00	-13.35	46.46	14.19	Peak	100	39

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	Test Freq. (MHz)	5290
Polarization	Vertical		

Test By :Akun Chung Temperature(℃):25 Humidity(%):66

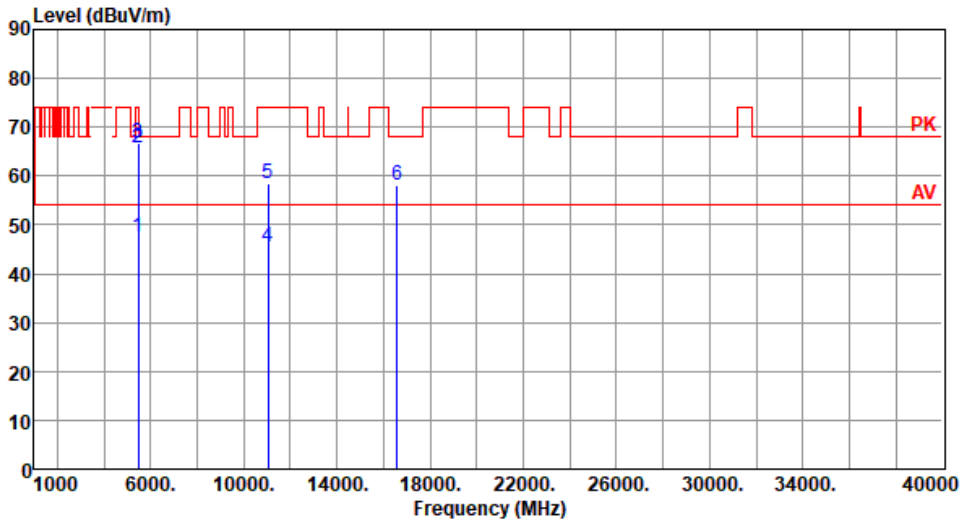


	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB/m	Remark	ANT High cm	Turn Table deg
1	5150.00	47.33	54.00	-6.67	42.95	4.38	Average	228	11
2	5150.00	60.25	74.00	-13.75	55.87	4.38	Peak	228	11
3	5350.00	52.98	54.00	-1.02	49.01	3.97	Average	299	66
4	5350.00	66.77	74.00	-7.23	62.80	3.97	Peak	299	66
5	10580.00	58.15	68.20	-10.05	43.58	14.57	Peak	100	280
6	15870.00	48.13	54.00	-5.87	33.94	14.19	Average	150	255
7	15870.00	62.71	74.00	-11.29	48.52	14.19	Peak	150	255

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	Test Freq. (MHz)	5530
Polarization	Horizontal		

Test By :Akun Chung Temperature(℃):25 Humidity(%):66

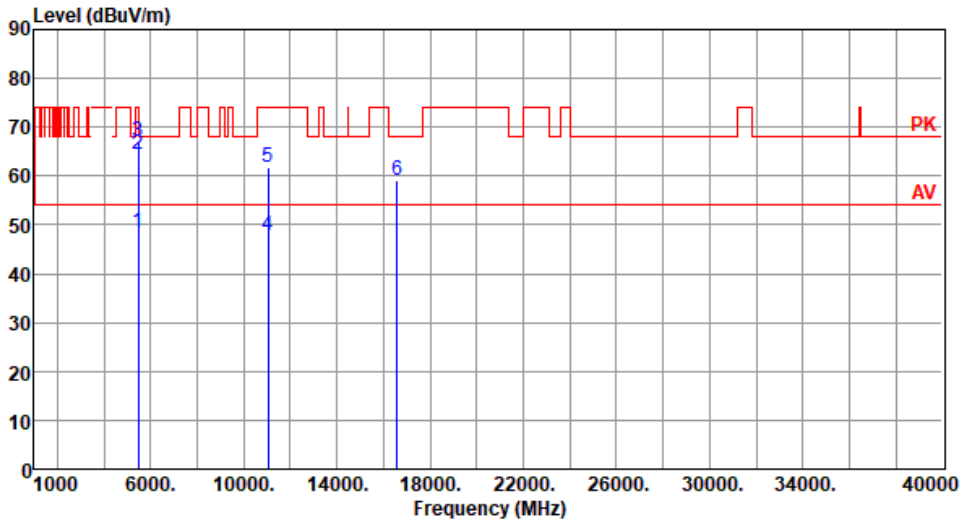


	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB/m	Remark	ANT High cm	Turn Table deg
1	5460.00	47.42	54.00	-6.58	43.05	4.37	Average	387	149
2	5460.00	65.87	74.00	-8.13	61.50	4.37	Peak	387	149
3	5470.00	66.60	68.20	-1.60	62.21	4.39	Peak	387	149
4	11060.00	45.65	54.00	-8.35	30.67	14.98	Average	100	22
5	11060.00	58.58	74.00	-15.42	43.60	14.98	Peak	100	22
6	16590.00	58.25	68.20	-9.95	42.02	16.23	Peak	100	39

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	Test Freq. (MHz)	5530
Polarization	Vertical		

Test By :Akun Chung Temperature(℃):25 Humidity(%):66

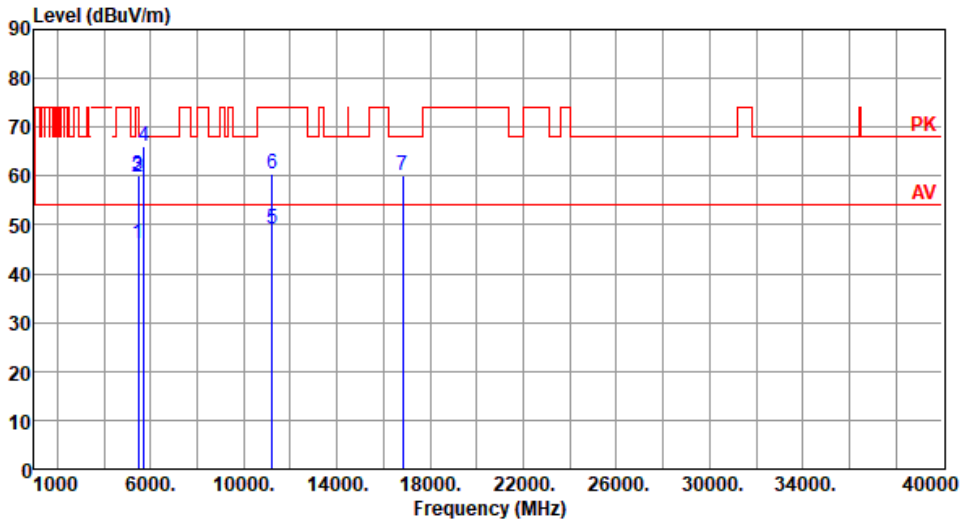


	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB/m	Remark	ANT High cm	Turn Table deg
1	5460.00	48.47	54.00	-5.53	44.10	4.37	Average	229	16
2	5460.00	64.37	74.00	-9.63	60.00	4.37	Peak	229	16
3	5470.00	67.19	68.20	-1.01	62.80	4.39	Peak	229	16
4	11060.00	47.88	54.00	-6.12	32.90	14.98	Average	348	10
5	11060.00	61.83	74.00	-12.17	46.85	14.98	Peak	348	10
6	16590.00	59.11	68.20	-9.09	42.88	16.23	Peak	100	11

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	Test Freq. (MHz)	5610
Polarization	Horizontal		

Test By :Akun Chung Temperature(℃):25 Humidity(%):66

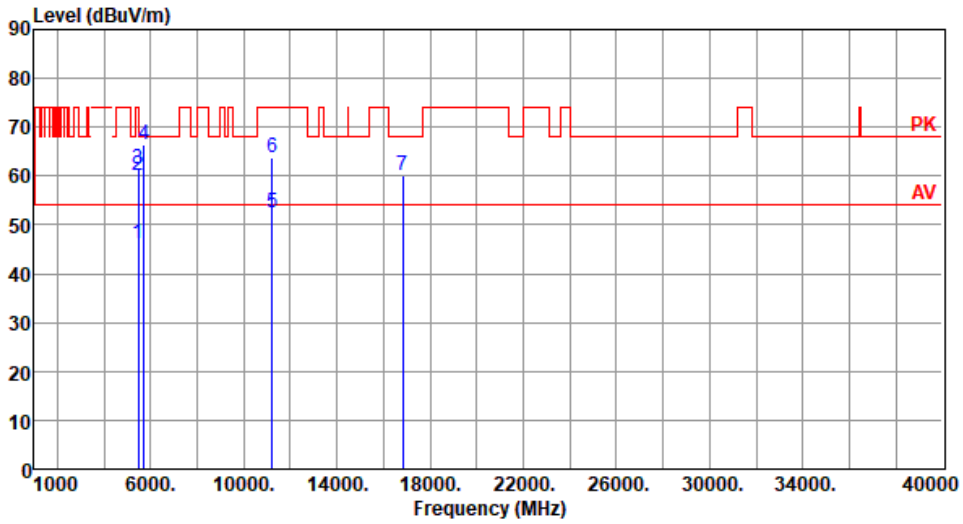


	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB/m	Remark	ANT High cm	Turn Table deg
1	5460.00	46.11	54.00	-7.89	41.74	4.37	Average	291	182
2	5460.00	59.87	74.00	-14.13	55.50	4.37	Peak	291	182
3	5470.00	60.09	68.20	-8.11	55.70	4.39	Peak	291	182
4	5725.00	66.01	68.20	-2.19	61.20	4.81	Peak	291	182
5	11220.00	49.21	54.00	-4.79	34.73	14.48	Average	100	152
6	11220.00	60.55	74.00	-13.45	46.07	14.48	Peak	100	152
7	16830.00	60.24	68.20	-7.96	42.92	17.32	Peak	100	47

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	Test Freq. (MHz)	5610
Polarization	Vertical		

Test By :Akun Chung Temperature(℃):25 Humidity(%):66

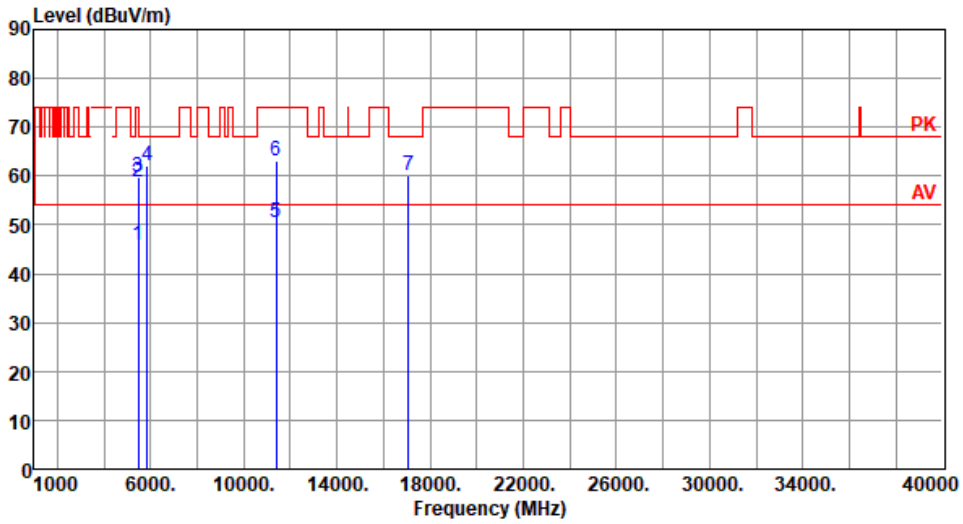


	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB/m	Remark	ANT High cm	Turn Table deg
1	5460.00	46.03	54.00	-7.97	41.66	4.37	Average	366	21
2	5460.00	60.07	74.00	-13.93	55.70	4.37	Peak	366	21
3	5470.00	61.38	68.20	-6.82	56.99	4.39	Peak	366	21
4	5725.00	66.39	68.20	-1.81	61.58	4.81	Peak	366	21
5	11220.00	52.38	54.00	-1.62	37.90	14.48	Average	345	10
6	11220.00	63.64	74.00	-10.36	49.16	14.48	Peak	345	10
7	16830.00	60.20	68.20	-8.00	42.88	17.32	Peak	100	15

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	Test Freq. (MHz)	5690
Polarization	Horizontal		

Test By :Akun Chung Temperature(℃):25 Humidity(%):66

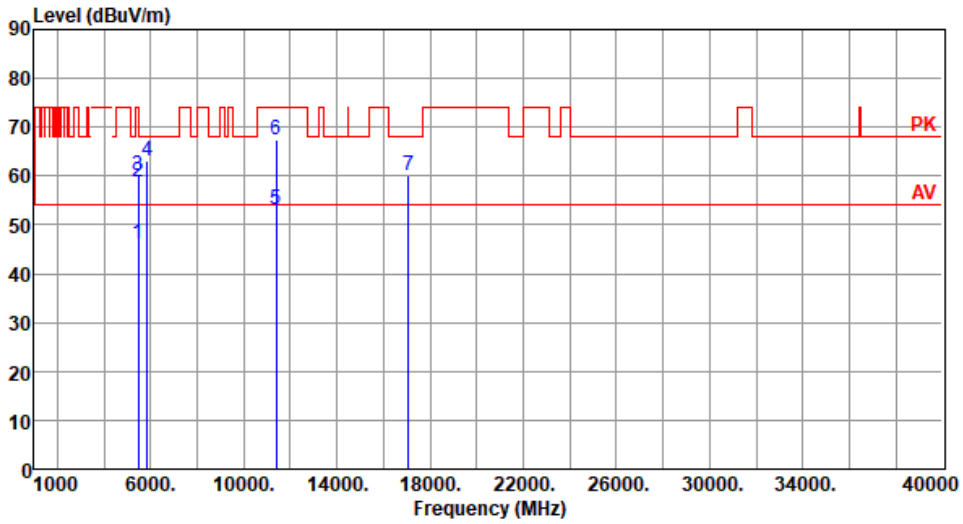


	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB/m	Remark	ANT High cm	Turn Table deg
1	5460.00	45.92	54.00	-8.08	41.55	4.37	Average	325	166
2	5460.00	58.76	74.00	-15.24	54.39	4.37	Peak	325	166
3	5470.00	59.93	68.20	-8.27	55.54	4.39	Peak	325	166
4	5850.00	61.94	68.20	-6.26	56.76	5.18	Peak	325	166
5	11380.00	50.54	54.00	-3.46	35.74	14.80	Average	100	27
6	11380.00	63.25	74.00	-10.75	48.45	14.80	Peak	100	27
7	17070.00	60.12	68.20	-8.08	42.77	17.35	Peak	100	11

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	Test Freq. (MHz)	5690
Polarization	Vertical		

Test By :Akun Chung Temperature(℃):25 Humidity(%):66

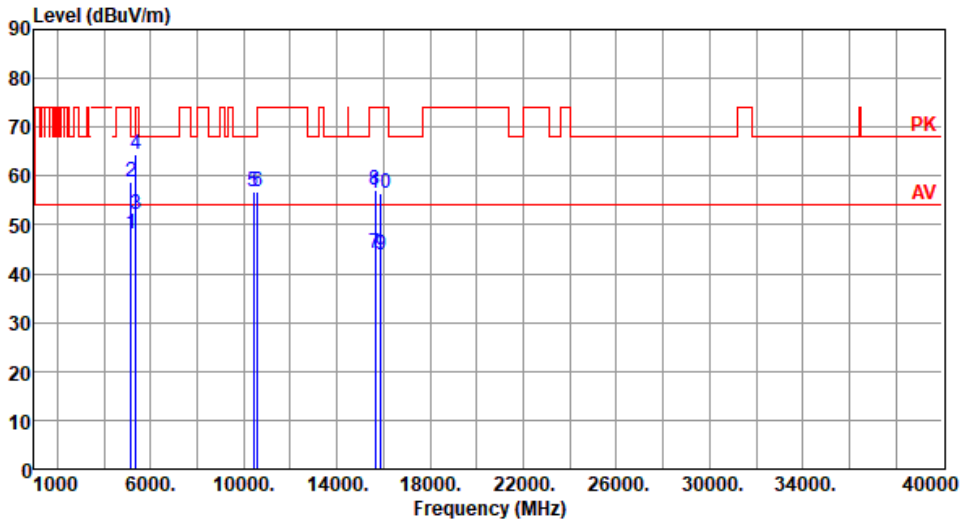


	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB/m	Remark	ANT High cm	Turn Table deg
1	5460.00	46.15	54.00	-7.85	41.78	4.37	Average	314	24
2	5460.00	58.95	74.00	-15.05	54.58	4.37	Peak	314	24
3	5470.00	60.09	68.20	-8.11	55.70	4.39	Peak	314	24
4	5850.00	63.06	74.00	-10.94	57.88	5.18	Peak	314	24
5	11380.00	53.27	54.00	-0.73	38.47	14.80	Average	343	9
6	11380.00	67.45	74.00	-6.55	52.65	14.80	Peak	343	9
7	17070.00	60.20	68.20	-8.00	42.85	17.35	Peak	100	12

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+80)	Test Freq. (MHz)	5210 + 5290
Polarization	Horizontal		

Test By :Roger Lu Temperature(℃):25 Humidity(%):66

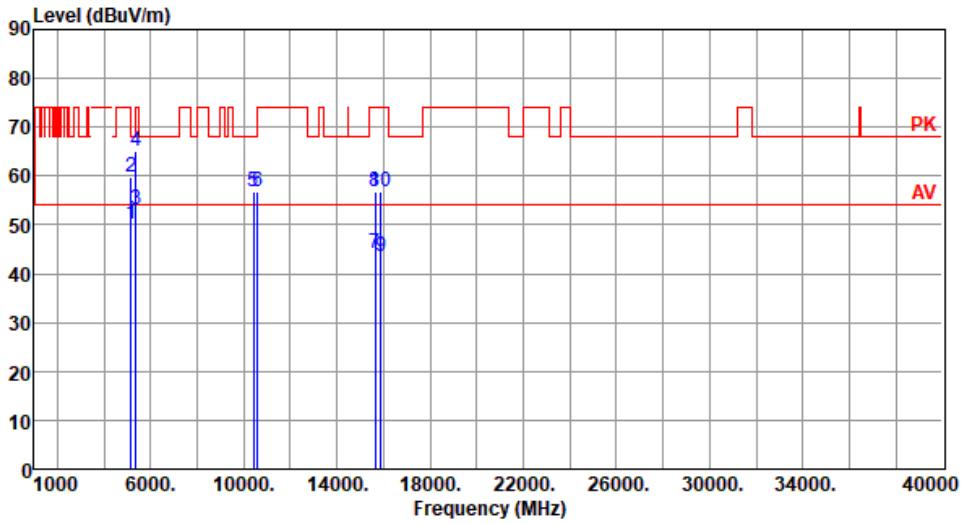


	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB/m	Remark	ANT High cm	Turn Table deg
1	5150.00	48.11	54.00	-5.89	43.73	4.38	Average	313	46
2	5150.00	58.64	74.00	-15.36	54.26	4.38	Peak	313	46
3	5350.00	51.98	54.00	-2.02	48.01	3.97	Average	298	96
4	5350.00	64.59	74.00	-9.41	60.62	3.97	Peak	298	96
5	10420.00	56.77	68.20	-11.43	42.27	14.50	Peak	100	60
6	10580.00	56.83	68.20	-11.37	42.26	14.57	Peak	100	90
7	15630.00	44.06	54.00	-9.94	29.56	14.50	Average	100	50
8	15630.00	57.14	74.00	-16.86	42.64	14.50	Peak	100	50
9	15870.00	43.77	54.00	-10.23	29.58	14.19	Average	100	80
10	15870.00	56.56	74.00	-17.44	42.37	14.19	Peak	100	80

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+80)	Test Freq. (MHz)	5210 + 5290
Polarization	Vertical		

Test By :Roger Lu Temperature(℃):25 Humidity(%):66

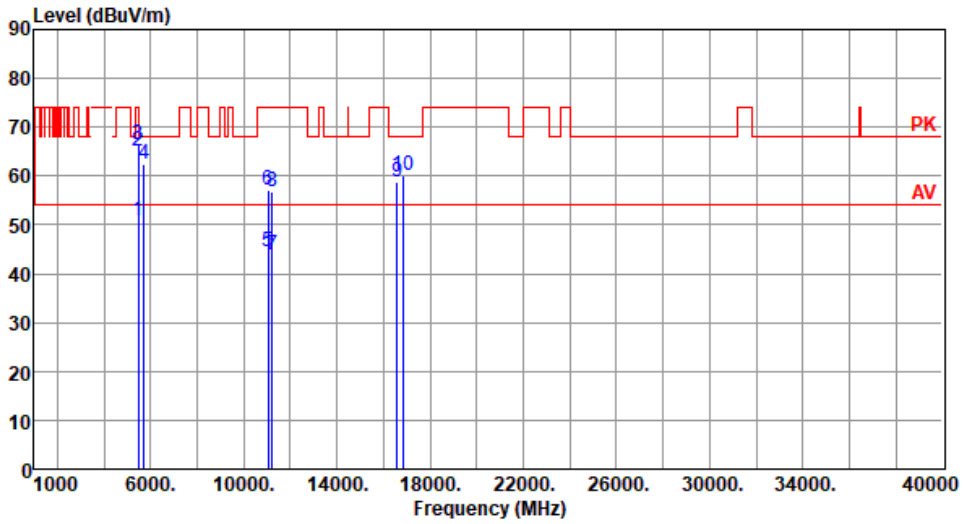


	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB/m	Remark	ANT High cm	Turn Table deg
1	5150.00	50.01	54.00	-3.99	45.63	4.38	Average	256	340
2	5150.00	59.62	74.00	-14.38	55.24	4.38	Peak	256	340
3	5350.00	52.99	54.00	-1.01	49.02	3.97	Average	110	274
4	5350.00	65.08	74.00	-8.92	61.11	3.97	Peak	110	274
5	10420.00	56.70	68.20	-11.50	42.20	14.50	Peak	100	40
6	10580.00	56.91	68.20	-11.29	42.34	14.57	Peak	100	60
7	15630.00	44.14	54.00	-9.86	29.64	14.50	Average	100	100
8	15630.00	56.88	74.00	-17.12	42.38	14.50	Peak	100	100
9	15870.00	43.66	54.00	-10.34	29.47	14.19	Average	100	20
10	15870.00	56.64	74.00	-17.36	42.45	14.19	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 (HE80+80)	Test Freq. (MHz)	5530 + 5610
Polarization	Horizontal		

Test By :Roger Lu Temperature(℃):25 Humidity(%):66

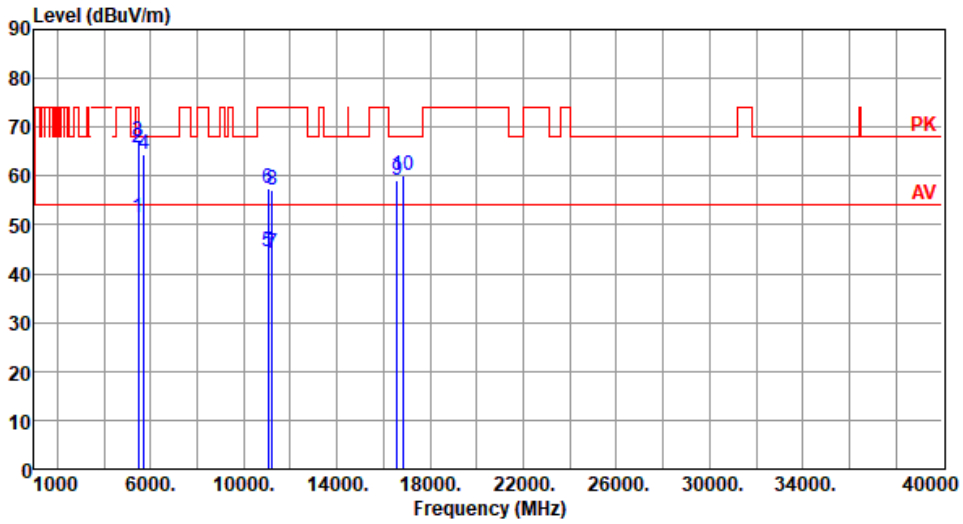


	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB/m	Remark	ANT High cm	Turn Table deg
1	5460.00	50.66	54.00	-3.34	46.29	4.37	Average	289	176
2	5460.00	64.97	74.00	-9.03	60.60	4.37	Peak	289	176
3	5470.00	66.54	68.20	-1.66	62.15	4.39	Peak	289	176
4	5725.00	62.55	68.20	-5.65	57.74	4.81	Peak	250	178
5	11060.00	44.44	54.00	-9.56	29.46	14.98	Average	100	50
6	11060.00	57.14	74.00	-16.86	42.16	14.98	Peak	100	50
7	11220.00	43.94	54.00	-10.06	29.46	14.48	Average	100	20
8	11220.00	56.94	74.00	-17.06	42.46	14.48	Peak	100	20
9	16590.00	58.70	68.20	-9.50	42.47	16.23	Peak	100	30
10	16830.00	60.17	68.20	-8.03	42.85	17.32	Peak	100	80

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+80)	Test Freq. (MHz)	5530 + 5610
Polarization	Vertical		

Test By :Roger Lu Temperature(℃):25 Humidity(%):66



	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	5460.00	51.32	54.00	-2.68	46.95	4.37	Average	242	208
2	5460.00	65.62	74.00	-8.38	61.25	4.37	Peak	242	208
3	5470.00	66.93	68.20	-1.27	62.54	4.39	Peak	242	208
4	5725.00	64.53	68.20	-3.67	59.72	4.81	Peak	175	193
5	11060.00	44.46	54.00	-9.54	29.48	14.98	Average	100	120
6	11060.00	57.57	74.00	-16.43	42.59	14.98	Peak	100	120
7	11220.00	44.02	54.00	-9.98	29.54	14.48	Average	100	80
8	11220.00	57.04	74.00	-16.96	42.56	14.48	Peak	100	80
9	16590.00	59.07	68.20	-9.13	42.84	16.23	Peak	100	150
10	16830.00	60.00	68.20	-8.20	42.68	17.32	Peak	100	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).

3.6 Frequency Stability

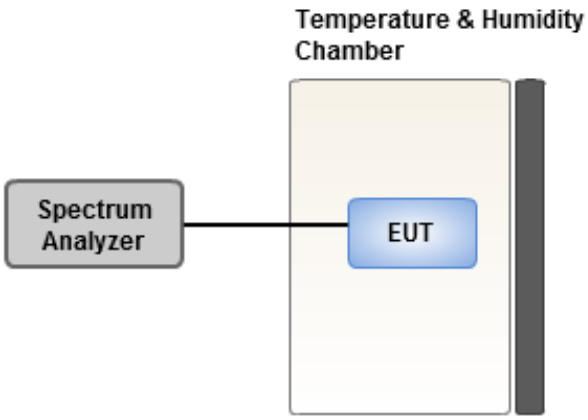
3.6.1 Limit of Frequency Stability

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	23~24°C / 66~67%	Tested By	Brad Wu

Frequency: 5320 MHz	Frequency Drift (ppm)			
Temperature (ºC)	0 minute	2 minutes	5 minutes	10 minutes
T20°CVmax	6.86	6.42	6.95	6.50
T20°CVmin	6.82	5.88	6.70	6.28
T50°CVnom	-3.79	-2.97	-3.50	-3.44
T40°CVnom	-8.52	-7.88	-8.47	-8.20
T30°CVnom	-6.40	-6.40	-6.47	-6.21
T20°CVnom	4.42	4.11	4.16	4.05
T10°CVnom	2.57	2.93	2.84	3.25
T0°CVnom	5.47	4.94	5.63	4.88
T-10°CVnom	7.64	7.95	7.89	8.18
T-20°CVnom	12.69	12.60	12.54	12.40
T-30°CVnom	19.10	19.06	18.84	19.48
Vnom [V]: 120		Vmax [V]: 138		Vmin [V]: 102
Tnom [˚C]: 20		Tmax [˚C]: 50		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.

Linkou	**Kwei Shan**	**Kwei Shan Site II**
Tel: 886-2-2601-1640	Tel: 886-3-271-8666	Tel: 886-3-271-8640
No.30-2, Ding Fwu Tsuen, Lin Kou District, New Taipei City, Taiwan (R.O.C.)	No.3-1, Lane 6, Wen San 3rd St., Kwei Shan Dist., Tao Yuan City 33381, Taiwan (R.O.C.) No.2-1, Lane 6, Wen San 3rd St., Kwei Shan Dist., Tao Yuan City 33381, Taiwan (R.O.C.)	No.14-1, Lane 19, Wen San 3rd St., Kwei Shan Dist., Tao Yuan City 333, Taiwan (R.O.C.)

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

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Fax: 886-3-318-0345
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