FCC Test Report

FCC ID	:	**MXF-WAPQ-245**
Equipment	:	**Router**
Model No.	:	**AC3000**
Brand Name	:	**Onelink**
Applicant	:	**Gemtek Technology Co., Ltd.**
Address	:	**No.15-1 Zhoughua Rd, Hsinchu Industrial Park, Hukou, Hsinchu, Taiwan, R.O.C**
Standard	:	**47 CFR FCC Part 15.407**
Received Date	:	**Oct. 29, 2018**
Tested Date	:	**Oct. 30 ~ Nov. 15, 2018**

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

Reviewed by: **Approved by:**

Along Chen / Assistant Manager **Gary Chang / Manager**

Testing Laboratory 2732

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Release Record

Report No.	Version	Description	Issued Date
FR8O3101AN	Rev. 01	Initial issue	Nov. 26, 2018

Summary of Test Results

FCC Rules	Test Items	Measured	Result
15.207	Conducted Emissions	[dBuV]: 0.465MHz 38.53 (Margin -8.07dB) - AV	Pass
15.407(b) 15.209	Radiated Emissions	[dBuV/m at 3m]: 15600.00MHz 52.99 (Margin -1.01dB) – AV	Pass
15.407(a)	Emission Bandwidth	Meet the requirement of limit	Pass
15.407(e)	6dB bandwidth	Meet the requirement of limit	Pass
15.407(a)	RF Output Power	Max Power [dBm]: ***Non-beamforming mode*** 5150-5250MHz: 23.89 5725-5850MHz: 29.42 ***Beamforming mode*** 5725-5850MHz: 25.77	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

1 General Description

1.1 Information

1.1.1 Specification of the Equipment under Test (EUT)

RF General Information					
Frequency Range (MHz)	**IEEE Std. 802.11**	**Ch. Freq. (MHz)**	**Channel Number**	**Transmit Chains (N_{TX})**	**Data Rate / MCS**
5150-5250	a	5180-5240	36-48 [4]	2	6-54 Mbps
5150-5250	n (HT20)	5180-5240	36-48 [4]	2	MCS 0-15
5150-5250	n (HT40)	5190-5230	38-46 [2]	2	MCS 0-15
5150-5250	ac (VHT20)	5180-5240	36-48 [4]	2	MCS 0-9
5150-5250	ac (VHT40)	5190-5230	38-46 [2]	2	MCS 0-9
5150-5250	ac (VHT80)	5210	42 [1]	2	MCS 0-9
Note 1: RF output power specifies that Maximum Conducted Output Power. Note 2: 802.11a/n/ac uses a combination of OFDM-BPSK, QPSK, 16QAM, 64QAM, 256QAM modulation.					

RF General Information					
Frequency Range (MHz)	**IEEE Std. 802.11**	**Ch. Freq. (MHz)**	**Channel Number**	**Transmit Chains (N_{TX})**	**Data Rate / MCS**
5725-5850	a	5745-5825	149-165 [5]	4	6-54 Mbps
5725-5850	n (HT20)	5745-5825	149-165 [5]	4	MCS 0-31
5725-5850	n (HT40)	5755-5795	151-159 [2]	4	MCS 0-31
5725-5850	ac (VHT20)	5745-5825	149-165 [5]	4	MCS 0-9
5725-5850	ac (VHT40)	5755-5795	151-159 [2]	4	MCS 0-9
5725-5850	ac (VHT80)	5775	155 [1]	4	MCS 0-9
Note 1: RF output power specifies that Maximum Conducted Output Power. Note 2: 802.11a/n/ac uses a combination of OFDM-BPSK, QPSK, 16QAM, 64QAM, 256QAM modulation. Note 3: 802.11ac supports beamforming function.					

1.1.2 Antenna Details

Ant. No.	Model	Type	Connector	Operating Frequency (MHz) / Gain (dBi)	
				5150~5250	5725~5850
1	5GHz, Low Band,A1	PIFA	UFL	5.1	---
2	5GHz, Low Band,A2	PIFA	UFL	3.7	---
3	5GHz, high Band,A3	PIFA	UFL	---	4.8
4	5GHz, high Band,A4	PIFA	UFL	---	3.5
5	5GHz, high Band,A5	PIFA	UFL	---	3.1
6	5GHz, high Band,A6	PIFA	UFL	---	3.8

1.1.3 Power Supply Type of Equipment under Test (EUT)

Power Supply Type	12Vdc from adapter

1.1.4 Accessories

Accessories		
No.	**Equipment**	**Description**
1	AC Adapter	Brand: APD Model: WB-24J12FU Power Rating: I/P: 100-120Vac, 60Hz, 0.7A Max O/P: 12Vdc, 2.0A Power Line: 1.8m non-shielded cable w/o core
2	RJ45 cable (white)	1.45m non-shielded cable w/o core

1.1.5 Channel List

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

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

1.1.6 Test Tool and Duty Cycle

Test Tool	QRCT, V. 3.0.298.0				
Duty Cycle and Duty Factor	Mode	Non-beamforming		Beamforming	
		Duty cycle (%)	Duty factor (dB)	Duty cycle (%)	Duty factor (dB)
	11a	97.95%	0.09	---	---
	VHT20	99.57%	0.02	95.33%	0.21
	VHT40	98.16%	0.08	91.80%	0.37
	VHT80	95.34%	0.21	85.76%	0.67

1.1.7 Power Setting

For Frequency band 5150-5250 MHz		
Modulation Mode	Test Frequency (MHz)	Power Set
		Non-Beamforming
11a	5180	19.0
11a	5200	19.0
11a	5240	20.0
VHT20	5180	19.0
VHT20	5200	19.0
VHT20	5240	20.0
VHT40	5190	16.5
VHT40	5230	20.0
VHT80	5210	15.5

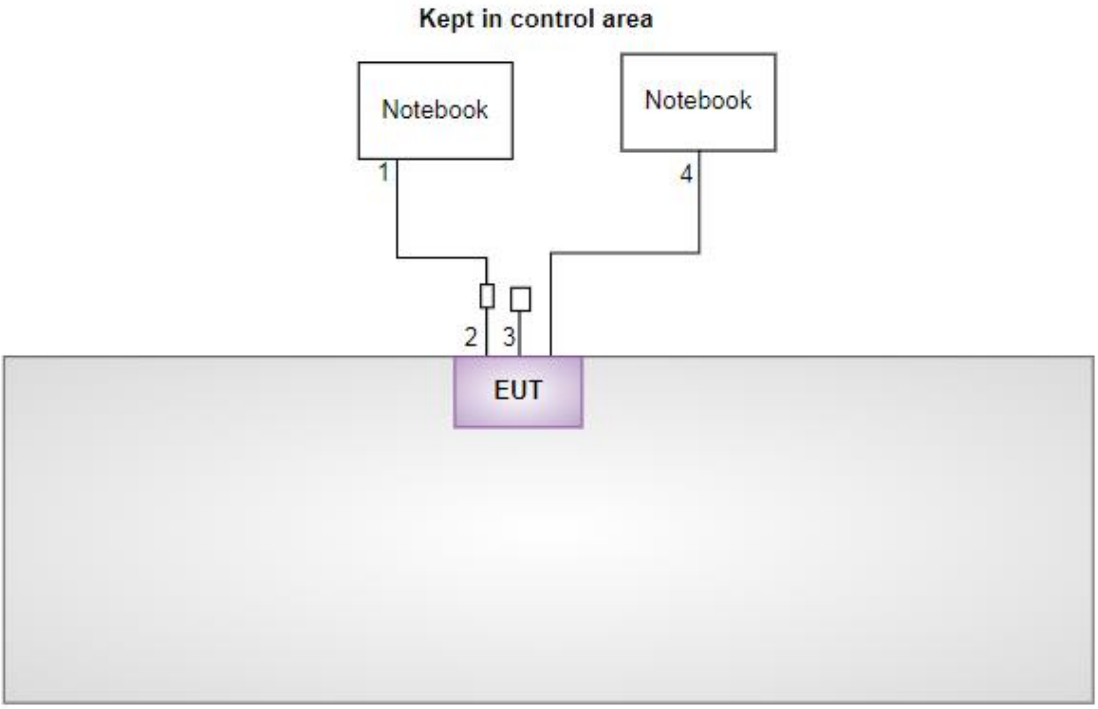
For Frequency band 5725~5850 MHz			
Modulation Mode	Test Frequency (MHz)	Power Set	
		Non-Beamforming	Beamforming
11a	5745	21.5	---
11a	5785	22.5	---
11a	5825	22.5	---
VHT20	5745	21.5	25
VHT20	5785	22.5	25
VHT20	5825	22.5	25
VHT40	5755	20.5	25
VHT40	5795	22.0	25
VHT80	5775	17.0	23

1.2 Local Support Equipment List

Support Equipment List					
No.	**Equipment**	**Brand**	**Model**	**FCC ID**	**Remarks**
1	Notebook	DELL	Latitude E5470	DoC	---
2	Notebook	DELL	Latitude E6430	DoC	---
3	Notebook	DELL	Latitude E6430	DoC	---

1.3 Test Setup Chart

Test Setup Diagram



No.	Signal cable / Length (m)
1	RJ45, 10m non-shielded.
2	RJ45, 1.45m non-shielded.
3	RJ45, 1m non-shielded with load.
4	RJ45, 10m non-shielded.

1.4 The Equipment List

Test Item	Conducted Emission				
Test Site	Conduction room 1 / (CO01-WS)				
Tested Date	Nov. 12, 2018				
Instrument	**Manufacturer**	**Model No.**	**Serial No.**	**Calibration Date**	**Calibration Until**
Receiver	R&S	ESR3	101657	Jan. 05, 2018	Jan. 04, 2019
LISN	SCHWARZBECK	Schwarzbeck 8127	8127-667	Nov. 13, 2017	Nov. 12, 2018
RF Cable-CON	EMC	EMCCFD300-BM-BM-6000	50821	Dec. 18, 2017	Dec. 17, 2018
Measurement Software	AUDIX	e3	6.120210k	NA	NA
Note: Calibration Interval of instruments listed above is one year.					

Test Item	Radiated Emission				
Test Site	966 chamber 3 / (03CH03-WS)				
Tested Date	Oct. 30 ~ Nov. 09, 2018				
Instrument	**Manufacturer**	**Model No.**	**Serial No.**	**Calibration Date**	**Calibration Until**
Spectrum Analyzer	R&**S**	FSV40	101499	Jan. 03, 2018	Jan. 02, 2019
Receiver	R&**S**	ESR3	101658	Nov. 20, 2017	Nov. 19, 2018
Bilog Antenna	SCHWARZBECK	VULB9168	VULB9168-685	Apr. 19, 2018	Apr. 18, 2019
Horn Antenna 1G-18G	SCHWARZBECK	BBHA 9120 D	BBHA 9120 D 1206	Jan. 18, 2018	Jan. 17, 2019
Horn Antenna 18G-40G	SCHWARZBECK	BBHA 9170	BBHA 9170517	Nov. 23, 2017	Nov. 22, 2018
Loop Antenna	TESEQ	HLA 6120	31244	Mar. 29, 2018	Mar. 28, 2019
Preamplifier	EMC	EMC02325	980187	Aug. 24, 2018	Aug. 23, 2019
Preamplifier	Agilent	83017A	MY53270014	Aug. 09, 2018	Aug. 08, 2019
Preamplifier	EMC	EMC184045B	980192	Aug. 09, 2018	Aug. 08, 2019
RF cable-3M	HUBER+SUHNER	SUCOFLEX104	MY22620/4	Nov. 27, 2017	Nov. 26, 2018
RF cable-8M	HUBER+SUHNER	SUCOFLEX104	MY32487/4	Nov. 27, 2017	Nov. 26, 2018
RF cable-1M	HUBER+SUHNER	SUCOFLEX104	MY22624/4	Nov. 27, 2017	Nov. 26, 2018
LF cable-0.8M	EMC	EMC8D-NM-NM-800	EMC8D-NM-NM-800-001	Nov. 27, 2017	Nov. 26, 2018
LF cable-3M	EMC	EMC8D-NM-NM-3000	131103	Nov. 27, 2017	Nov. 26, 2018
LF cable-13M	EMC	EMC8D-NM-NM-13000	131104	Nov. 27, 2017	Nov. 26, 2018
Measurement Software	AUDIX	e3	6.120210g	NA	NA
Note: Calibration Interval of instruments listed above is one year.					

Test Item	RF Conducted				
Test Site	(TH01-WS)				
Tested Date	Nov. 13 ~ Nov. 15, 2018				
Instrument	**Manufacturer**	**Model No.**	**Serial No.**	**Calibration Date**	**Calibration Until**
Spectrum Analyzer	R&S	FSV40	101063	Apr. 16, 2018	Apr. 15, 2019
Power Meter	Anritsu	ML2495A	1241002	Oct. 09, 2018	Oct. 08, 2019
Power Sensor	Anritsu	MA2411B	1207366	Oct. 09, 2018	Oct. 08, 2019
AC POWER SOURCE	APC	AFC-500W	F312060012	Dec. 01, 2017	Nov. 30, 2018
Measurement Software	Sporton	Sporton_1	1.3.30	NA	NA
Note: Calibration Interval of instruments listed above is one year.					

1.5 Testing Applied Standards

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

47 CFR FCC Part 15.407
ANSI C63.10-2013
FCC KDB 789033 D02 General UNII Test Procedures New Rules v02r01
FCC KDB 662911 D01 Multiple Transmitter Output v02r01
FCC KDB 412172 D01 Determining ERP and EIRP v01r01

1.6 Measurement Uncertainty

ISO/IEC 17025 requires that an estimate of the measurement uncertainties associated with the emissions test results be included in the report. The measurement uncertainties given below are based on a 95% confidence level (based on a coverage factor (k=2)

Measurement Uncertainty	
Parameters	**Uncertainty**
Bandwidth	±34.134 Hz
Conducted power	±0.808 dB
Frequency error	±34.134 Hz
Power density	±0.463 dB
Conducted emission	±2.670 dB
AC conducted emission	±2.90 dB
Radiated emission ≤ 1GHz	±3.66 dB
Radiated emission > 1GHz	±5.37 dB
Time	±0.1%
Temperature	±0.6 ^{o}C

2 Test Configuration

2.1 Testing Condition

Test Item	Test Site	Ambient Condition	Tested By
AC Conduction	CO01-WS	24°C / 58%	Alex Tsai
Radiated Emissions	03CH03-WS	24-25°C / 62-66%	Akun Chung Aska Huang Roger Lu
RF Conducted	TH01-WS	22°C / 64%	Aska Huang

- FCC Designation No.: TW0009
- FCC site registration No.: 207696
- IC site registration No.: 10807C-1

2.2 The Worst Test Modes and Channel Details

Non-beamforming mode

For Frequency band 5150-5250 MHz				
Test item	**Modulation Mode**	**Test Frequency (MHz)**	**Data Rate (Mbps) / MCS**	**Test Configuration**
Conducted Emissions	VHT40	5230	MCS 0	---
Radiated Emissions ≤1GHz	VHT40	5230	MCS 0	---
RF Output Power	11a VHT20 VHT40 VHT80	5180 / 5200 / 5240 5180 / 5200 / 5240 5190 / 5230 5210	6 Mbps MCS 0 MCS 0 MCS 0	---
Radiated Emissions >1GHz Emission Bandwidth Peak Power Spectral Density	11a VHT20 VHT40 VHT80	5180 / 5200 / 5240 5180 / 5200 / 5240 5190 / 5230 5210	6 Mbps MCS 0 MCS 0 MCS 0	---
Frequency Stability	Un-modulation	5200	---	---

For Frequency band 5725-5850 MHz				
Test item	**Modulation Mode**	**Test Frequency (MHz)**	**Data Rate (Mbps) / MCS**	**Test Configuration**
Conducted Emissions	11a	5825	6 Mbps	---
Radiated Emissions ≤1GHz	11a	5825	6 Mbps	---
RF Output Power	11a VHT20 VHT40 VHT80	5745 / 5785 / 5825 5745 / 5785 / 5825 5755 / 5795 5775	6 Mbps MCS 0 MCS 0 MCS 0	---
Radiated Emissions >1GHz Emission Bandwidth 6dB bandwidth Peak Power Spectral Density	11a VHT20 VHT40 VHT80	5745 / 5785 / 5825 5745 / 5785 / 5825 5755 / 5795 5775	6 Mbps MCS 0 MCS 0 MCS 0	---
Frequency Stability	Un-modulation	5785	---	---

Beamforming mode

For Frequency band 5725-5850 MHz				
Test item	**Modulation Mode**	**Test Frequency (MHz)**	**Data Rate (Mbps) / MCS**	**Test Configuration**
Conducted Emissions	VHT20	5825	MCS 0	---
Radiated Emissions ≤1GHz	VHT20	5825	MCS 0	---
RF Output Power	VHT20 VHT40 VHT80	5745 / 5785 / 5825 5755 / 5795 5775	MCS 0 MCS 0 MCS 0	---
Radiated Emissions >1GHz Emission Bandwidth 6dB bandwidth Peak Power Spectral Density	VHT20 VHT40 VHT80	5745 / 5785 / 5825 5755 / 5795 5775	MCS 0 MCS 0 MCS 0	---

3 Transmitter Test Results

3.1 Conducted Emissions

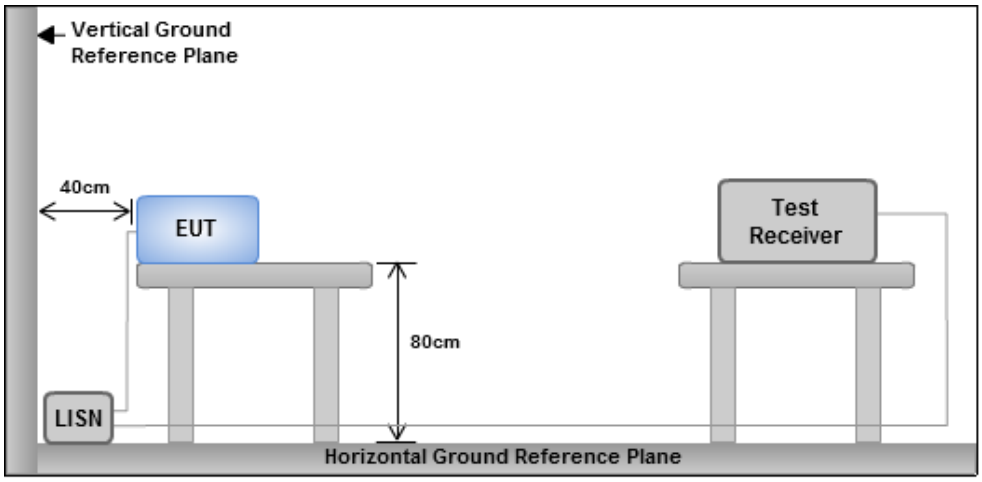
3.1.1 Limit of Conducted Emissions

Conducted Emissions Limit		
Frequency Emission (MHz)	**Quasi-Peak**	**Average**
0.15-0.5	66 - 56 *	56 - 46 *
0.5-5	56	46
5-30	60	50
Note 1: * Decreases with the logarithm of the frequency.		

3.1.2 Test Procedures

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

3.1.3 Test Setup

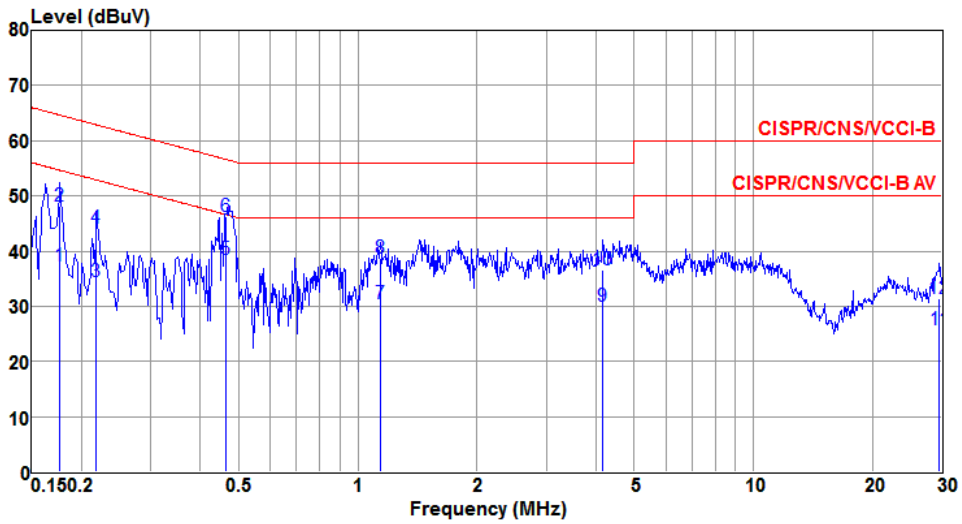


Note: 1. Support units were connected to second LISN.
2. Both of LISNs (AMN) are 80 cm from EUT and at least 80 cm from other units and other metal planes

3.1.4 Test Result of Conducted Emissions

Non-beamforming mode

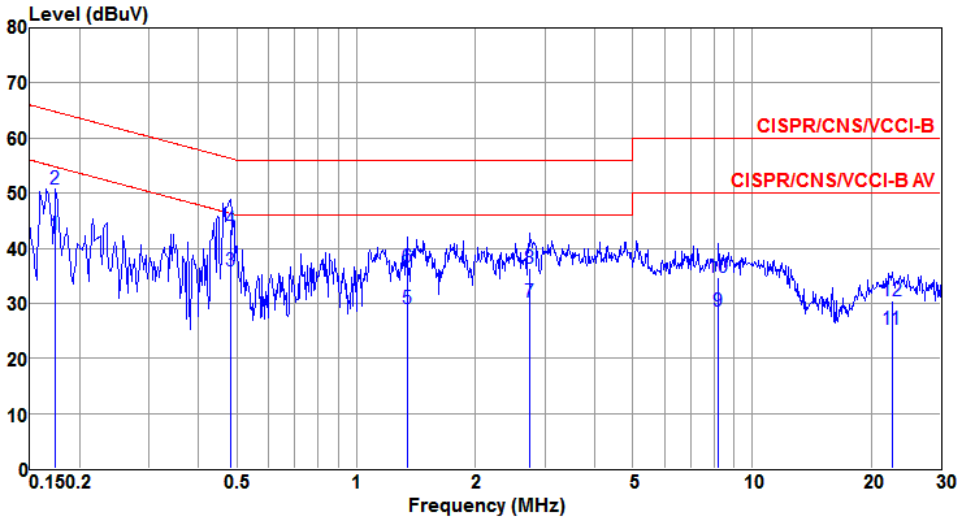
Modulation	VHT40	**Test Freq. (MHz)**	5230
Power Phase	Line		



	Freq MHz	Level dBuV	Limit Line dBuV	Over Limit dB	Read Level dBuV	LISN factor dB	cable loss dB	Remark
1	0.177	37.20	54.64	-17.44	37.15	0.03	0.02	Average
2	0.177	48.13	64.64	-16.51	48.08	0.03	0.02	QP
3	0.219	34.35	52.88	-18.53	34.29	0.03	0.03	Average
4	0.219	44.25	62.88	-18.63	44.19	0.03	0.03	QP
5*	0.465	38.53	46.60	-8.07	38.48	0.03	0.02	Average
6	0.465	46.21	56.60	-10.39	46.16	0.03	0.02	QP
7	1.141	30.48	46.00	-15.52	30.40	0.04	0.04	Average
8	1.141	38.70	56.00	-17.30	38.62	0.04	0.04	QP
9	4.158	29.89	46.00	-16.11	29.59	0.08	0.22	Average
10	4.158	36.53	56.00	-19.47	36.23	0.08	0.22	QP
11	29.527	25.67	50.00	-24.33	24.88	0.39	0.40	Average
12	29.527	31.50	60.00	-28.50	30.71	0.39	0.40	QP

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

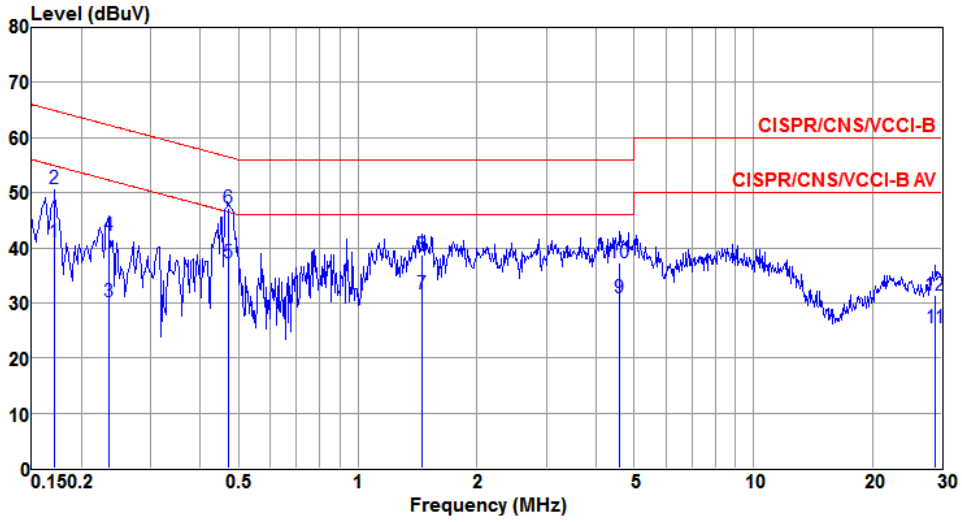
Modulation	VHT40	Test Freq. (MHz)	5230
Power Phase	Neutral		



	Freq MHz	Level dBuV	Limit Line dBuV	Over Limit dB	Read Level dBuV	LISN factor dB	cable loss dB	Remark
1	0.174	42.39	54.77	-12.38	42.34	0.03	0.02	Average
2	0.174	50.72	64.77	-14.05	50.67	0.03	0.02	QP
3*	0.481	35.91	46.32	-10.41	35.86	0.03	0.02	Average
4	0.481	43.52	56.32	-12.80	43.47	0.03	0.02	QP
5	1.345	29.05	46.00	-16.95	28.94	0.05	0.06	Average
6	1.345	36.55	56.00	-19.45	36.44	0.05	0.06	QP
7	2.736	30.24	46.00	-15.76	30.02	0.07	0.15	Average
8	2.736	36.29	56.00	-19.71	36.07	0.07	0.15	QP
9	8.235	28.65	50.00	-21.35	28.21	0.14	0.30	Average
10	8.235	34.78	60.00	-25.22	34.34	0.14	0.30	QP
11	22.535	25.20	50.00	-24.80	24.56	0.27	0.37	Average
12	22.535	30.53	60.00	-29.47	29.89	0.27	0.37	QP

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

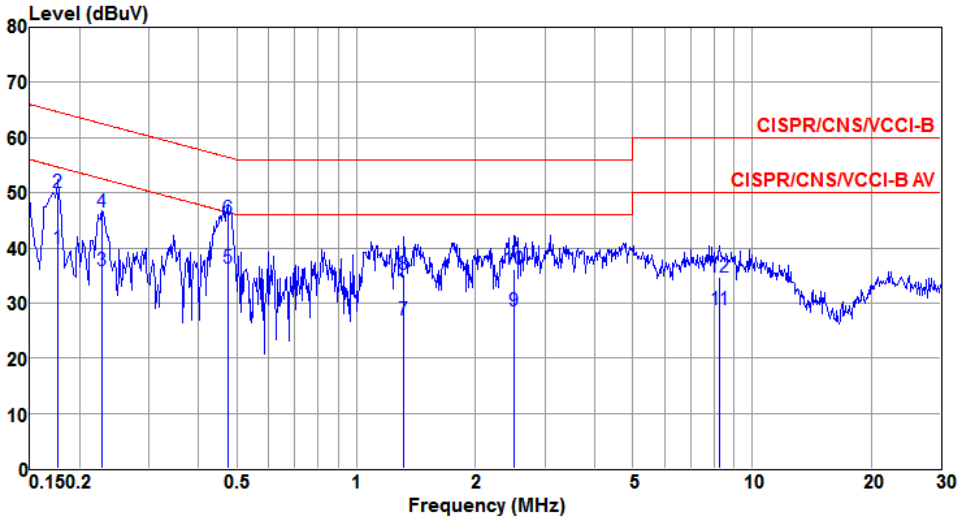
Modulation	11a	Test Freq. (MHz)	5825
Power Phase	Line		



	Freq MHz	Level dBuV	Limit Line dBuV	Over Limit dB	Read Level dBuV	LISN factor dB	cable loss dB	Remark
1	0.171	41.17	54.90	-13.73	41.12	0.03	0.02	Average
2	0.171	50.70	64.90	-14.20	50.65	0.03	0.02	QP
3	0.234	30.15	52.30	-22.15	30.09	0.03	0.03	Average
4	0.234	42.26	62.30	-20.04	42.20	0.03	0.03	QP
5*	0.470	37.26	46.51	-9.25	37.21	0.03	0.02	Average
6	0.470	47.10	56.51	-9.41	47.05	0.03	0.02	QP
7	1.454	31.54	46.00	-14.46	31.42	0.05	0.07	Average
8	1.454	38.80	56.00	-17.20	38.68	0.05	0.07	QP
9	4.580	30.87	46.00	-15.13	30.55	0.09	0.23	Average
10	4.580	37.29	56.00	-18.71	36.97	0.09	0.23	QP
11	28.908	25.41	50.00	-24.59	24.63	0.38	0.40	Average
12	28.908	31.48	60.00	-28.52	30.70	0.38	0.40	QP

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

Modulation	11a	Test Freq. (MHz)	5825
Power Phase	Neutral		

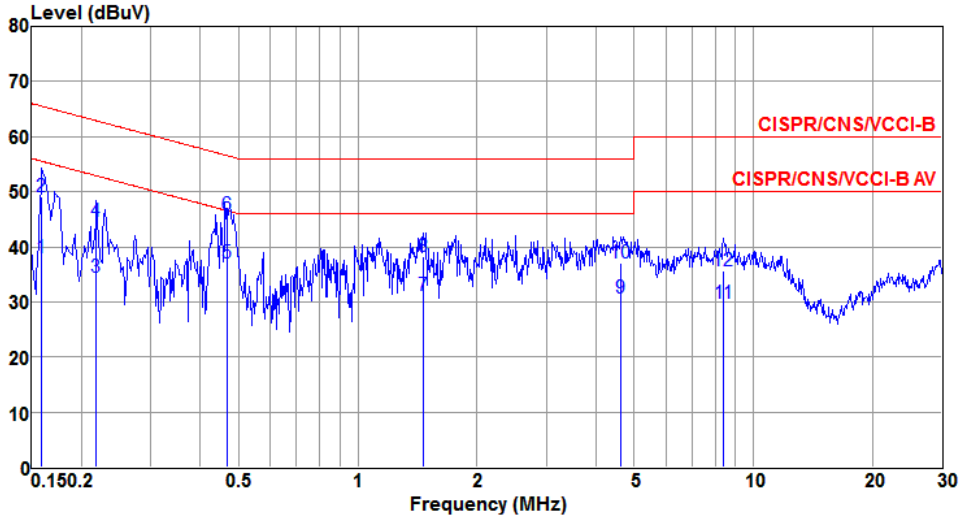


	Freq MHz	Level dBuV	Limit Line dBuV	Over Limit dB	Read Level dBuV	LISN factor dB	cable loss dB	Remark
1	0.177	39.93	54.64	-14.71	39.88	0.03	0.02	Average
2	0.177	50.14	64.64	-14.50	50.09	0.03	0.02	QP
3	0.228	35.79	52.52	-16.73	35.73	0.03	0.03	Average
4	0.228	46.40	62.52	-16.12	46.34	0.03	0.03	QP
5*	0.474	36.30	46.45	-10.15	36.25	0.03	0.02	Average
6	0.474	45.34	56.45	-11.11	45.29	0.03	0.02	QP
7	1.317	26.97	46.00	-19.03	26.86	0.05	0.06	Average
8	1.317	35.15	56.00	-20.85	35.04	0.05	0.06	QP
9	2.500	28.49	46.00	-17.51	28.28	0.07	0.14	Average
10	2.500	36.12	56.00	-19.88	35.91	0.07	0.14	QP
11	8.279	28.88	50.00	-21.12	28.44	0.14	0.30	Average
12	8.279	34.82	60.00	-25.18	34.38	0.14	0.30	QP

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

Beamforming mode

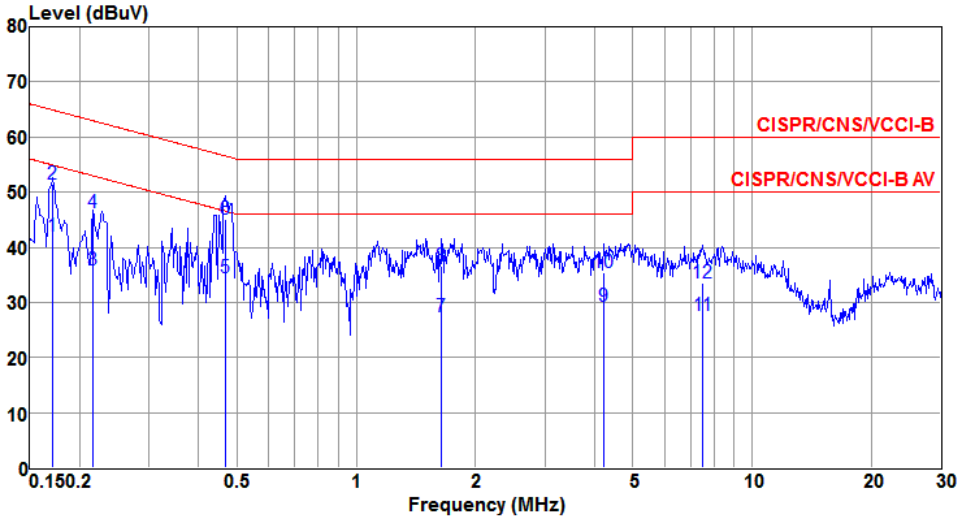
Modulation	VHT20	**Test Freq. (MHz)**	5825
Power Phase	Line		



	Freq MHz	Level dBuV	Limit Line dBuV	Over Limit dB	Read Level dBuV	LISN factor dB	cable loss dB	Remark
1	0.159	38.04	55.52	-17.48	38.00	0.03	0.01	Average
2	0.159	49.02	65.52	-16.50	48.98	0.03	0.01	QP
3	0.219	34.47	52.88	-18.41	34.41	0.03	0.03	Average
4	0.219	44.67	62.88	-18.21	44.61	0.03	0.03	QP
5*	0.468	37.14	46.55	-9.41	37.09	0.03	0.02	Average
6	0.468	45.89	56.55	-10.66	45.84	0.03	0.02	QP
7	1.464	31.24	46.00	-14.76	31.12	0.05	0.07	Average
8	1.464	38.35	56.00	-17.65	38.23	0.05	0.07	QP
9	4.622	30.74	46.00	-15.26	30.41	0.09	0.24	Average
10	4.622	37.00	56.00	-19.00	36.67	0.09	0.24	QP
11	8.412	29.83	50.00	-20.17	29.38	0.15	0.30	Average
12	8.412	35.74	60.00	-24.26	35.29	0.15	0.30	QP

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

Modulation	VHT20	Test Freq. (MHz)	5825
Power Phase	Neutral		



	Freq MHz	Level dBuV	Limit Line dBuV	Over Limit dB	Read Level dBuV	LISN factor dB	cable loss dB	Remark
1	0.171	42.13	54.90	-12.77	42.08	0.03	0.02	Average
2	0.171	51.44	64.90	-13.46	51.39	0.03	0.02	QP
3	0.216	35.98	52.96	-16.98	35.92	0.03	0.03	Average
4	0.216	46.28	62.96	-16.68	46.22	0.03	0.03	QP
5	0.469	34.57	46.54	-11.97	34.52	0.03	0.02	Average
6*	0.469	45.11	56.54	-11.43	45.06	0.03	0.02	QP
7	1.645	27.45	46.00	-18.55	27.32	0.05	0.08	Average
8	1.645	36.66	56.00	-19.34	36.53	0.05	0.08	QP
9	4.224	29.35	46.00	-16.65	29.04	0.08	0.23	Average
10	4.224	35.46	56.00	-20.54	35.15	0.08	0.23	QP
11	7.526	27.65	50.00	-22.35	27.22	0.14	0.29	Average
12	7.526	33.60	60.00	-26.40	33.17	0.14	0.29	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 Limit of Emission bandwidth

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

3.2.2 Test Procedures

26dB Bandwidth

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

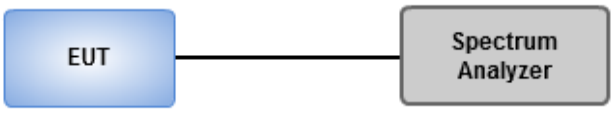
Occupied Bandwidth

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

6dB Bandwidth

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

3.2.3 Test Setup



3.2.4 Test Result of Emission Bandwidth

Non-beamforming mode

Summary

Mode	Max-N dB (Hz)	Max-OBW (Hz)	ITU-Code	Min-N dB (Hz)	Min-OBW (Hz)
5.15-5.25GHz	-	-	-	-	-
802.11a_Nss1,(6Mbps)_2TX	25.29M	16.643M	16M6D1D	20.217M	16.425M
802.11ac VHT20_Nss1,(MCS0)_2TX	29.928M	17.8M	17M8D1D	20.58M	17.583M
802.11ac VHT40_Nss1,(MCS0)_2TX	65.507M	36.324M	36M3D1D	39.565M	35.745M
802.11ac VHT80_Nss1,(MCS0)_2TX	83.188M	75.543M	75M5D1D	82.609M	75.543M
5.725-5.85GHz	-	-	-	-	-
802.11a_Nss1,(6Mbps)_4TX	16.377M	40.087M	40M1D1D	15.435M	16.715M
802.11ac VHT20_Nss1,(MCS0)_4TX	17.681M	41.751M	41M8D1D	15.725M	17.8M
802.11ac VHT40_Nss1,(MCS0)_4TX	35.217M	72.359M	72M4D1D	32.754M	35.89M
802.11ac VHT80_Nss1,(MCS0)_4TX	75.652M	75.832M	75M8D1D	74.493M	75.832M

Max-N dB = Maximum6dB downbandwidth for 5.725-5.85GHz band / Maximum26dB downbandwidth for other band;
Max-OBW = Maximum99% occupied bandwidth;
Min-N dB = Minimum6dB downbandwidth for 5.725-5.85GHz band / Maximum26dB downbandwidth for other band;
Min-OBW = Minimum99% occupied bandwidth;

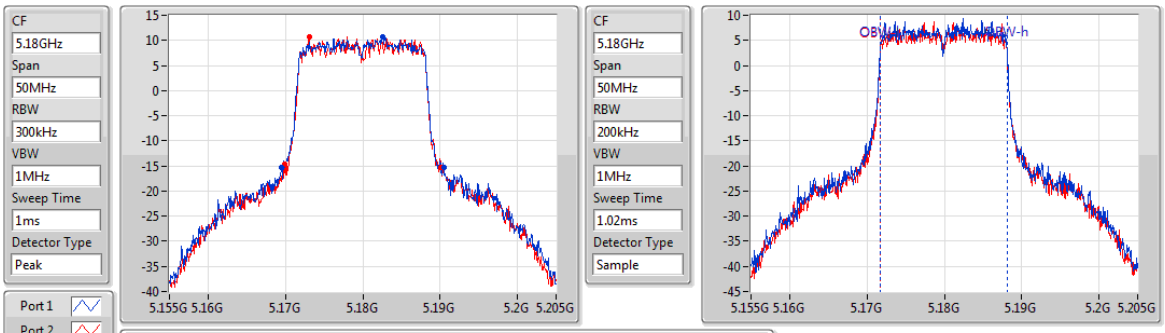
Result

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)	Port4 -OBW (Hz)
802.11a_Nss1,(6Mbps)_2TX	-	-	-	-	-	-	-	-	-	-
5180MHz	Pass	Inf	21.014M	16.425M	20.217M	16.425M				
5200MHz	Pass	Inf	20.507M	16.425M	20.29M	16.425M				
5240MHz	Pass	Inf	24.71M	16.57M	25.29M	16.643M				
802.11a_Nss1,(6Mbps)_4TX	-	-	-	-	-	-	-	-	-	-
5745MHz	Pass	500k	16.014M	35.673M	16.304M	17.004M	16.304M	16.715M	16.304M	16.86M
5785MHz	Pass	500k	16.377M	40.087M	16.304M	26.122M	16.304M	17.366M	16.304M	25.326M
5825MHz	Pass	500k	16.377M	37.844M	15.435M	23.444M	16.087M	16.715M	16.304M	22.504M
802.11ac VHT20_Nss1,(MCS0)_2TX	-	-	-	-	-	-	-	-	-	-
5180MHz	Pass	Inf	20.58M	17.583M	20.725M	17.583M				
5200MHz	Pass	Inf	20.942M	17.583M	20.942M	17.583M				
5240MHz	Pass	Inf	22.971M	17.728M	29.928M	17.8M				
802.11ac VHT20_Nss1,(MCS0)_4TX	-	-	-	-	-	-	-	-	-	-
5745MHz	Pass	500k	17.609M	37.41M	15.725M	17.8M	17.174M	17.8M	17.609M	17.873M
5785MHz	Pass	500k	17.681M	41.679M	16.522M	27.135M	17.246M	18.741M	17.609M	28.22M
5825MHz	Pass	500k	17.609M	41.751M	16.884M	23.806M	17.609M	17.945M	17.681M	24.168M
802.11ac VHT40_Nss1,(MCS0)_2TX	-	-	-	-	-	-	-	-	-	-
5190MHz	Pass	Inf	39.565M	35.745M	39.855M	35.89M				
5230MHz	Pass	Inf	63.623M	36.324M	65.507M	36.324M				
802.11ac VHT40_Nss1,(MCS0)_4TX	-	-	-	-	-	-	-	-	-	-
5755MHz	Pass	500k	35.217M	51.23M	35.217M	36.035M	35.217M	35.89M	35.217M	36.035M
5795MHz	Pass	500k	33.913M	72.359M	32.754M	38.35M	33.913M	36.469M	35.217M	42.113M
802.11ac VHT80_Nss1,(MCS0)_2TX	-	-	-	-	-	-	-	-	-	-
5210MHz	Pass	Inf	83.188M	75.543M	82.609M	75.543M				
802.11ac VHT80_Nss1,(MCS0)_4TX	-	-	-	-	-	-	-	-	-	-
5775MHz	Pass	500k	75.652M	75.832M	75.652M	75.832M	74.493M	75.832M	75.652M	75.832M

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

802.11a_Nss1,(6Mbps)_2TX EBW

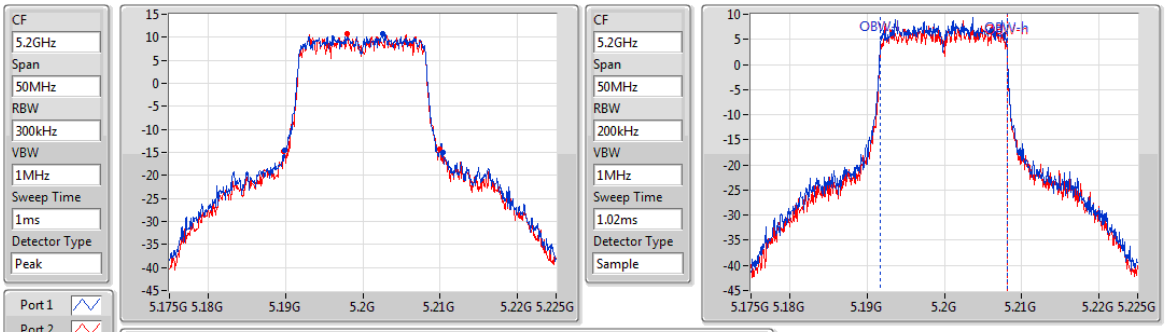
5180MHz



26dB(Hz)	Fl-26dB(Hz)	Fh-26dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
21.014M	5.169493G	5.190507G	16.425M	5.171679G	5.188104G	Inf	1
20.217M	5.169928G	5.190145G	16.425M	5.171679G	5.188104G	Inf	2

802.11a_Nss1,(6Mbps)_2TX EBW

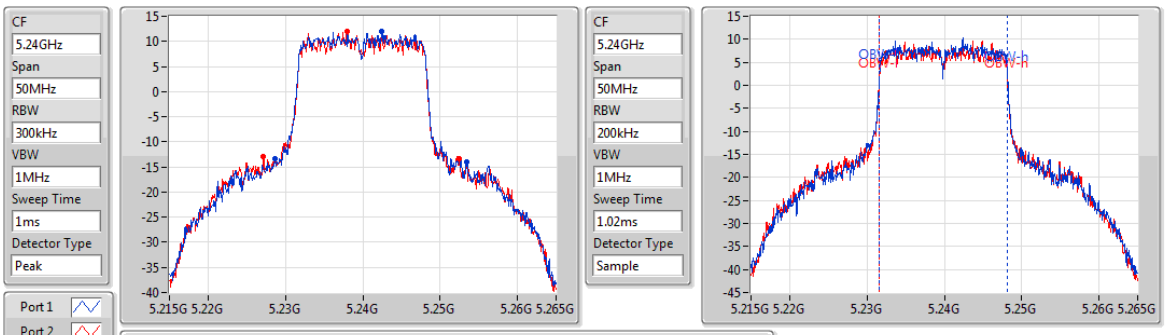
5200MHz



26dB(Hz)	Fl-26dB(Hz)	Fh-26dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
20.507M	5.189928G	5.210435G	16.425M	5.191679G	5.208104G	Inf	1
20.29M	5.18971G	5.21G	16.425M	5.191679G	5.208104G	Inf	2

802.11a_Nss1,(6Mbps)_2TX EBW

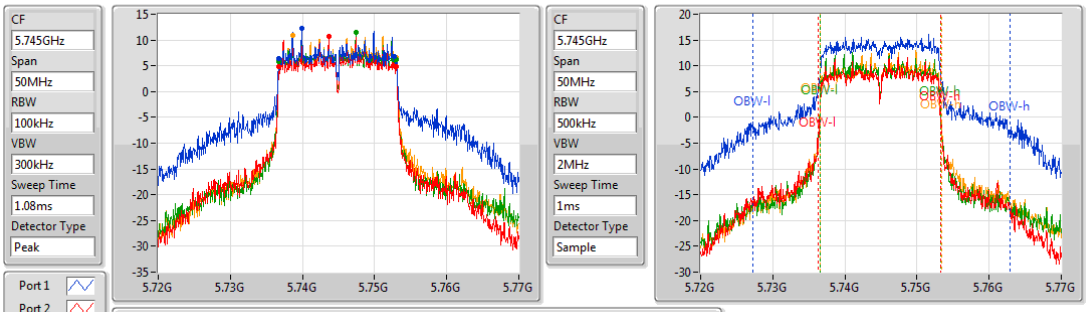
5240MHz



26dB(Hz)	Fl-26dB(Hz)	Fh-26dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
24.71M	5.228696G	5.253406G	16.57M	5.231606G	5.248177G	Inf	1
25.29M	5.227174G	5.252464G	16.643M	5.231534G	5.248177G	Inf	2

802.11a_Nss1,(6Mbps)_4TX EBW

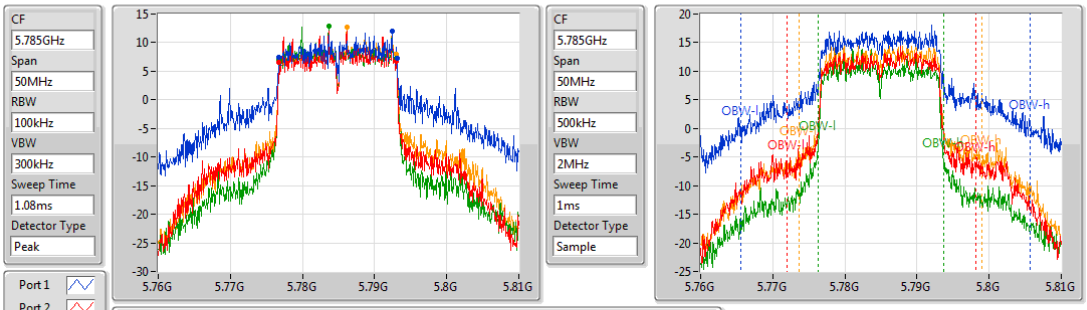
5745MHz



6dB(Hz)	Fl-6dB(Hz)	Fh-6dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
16.014M	5.736739G	5.752754G	35.673M	5.727272G	5.762945G	500k	1
16.304M	5.736739G	5.753043G	17.004M	5.736317G	5.753321G	500k	2
16.304M	5.736739G	5.753043G	16.715M	5.736534G	5.753249G	500k	3
16.304M	5.736739G	5.753043G	16.86M	5.736534G	5.753394G	500k	4

802.11a_Nss1,(6Mbps)_4TX EBW

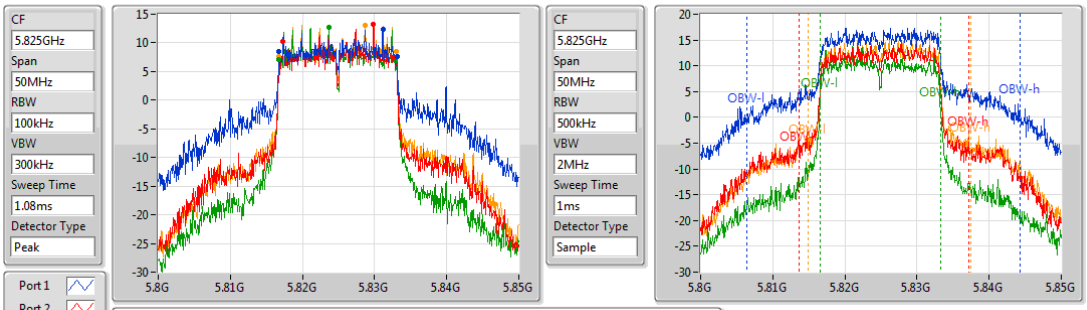
5785MHz



6dB(Hz)	Fl-6dB(Hz)	Fh-6dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
16.377M	5.776739G	5.793116G	40.087M	5.765608G	5.805695G	500k	1
16.304M	5.776739G	5.793043G	26.122M	5.771975G	5.798097G	500k	2
16.304M	5.776739G	5.793043G	17.366M	5.776317G	5.793683G	500k	3
16.304M	5.776739G	5.793043G	25.326M	5.77364G	5.798965G	500k	4

802.11a_Nss1,(6Mbps)_4TX EBW

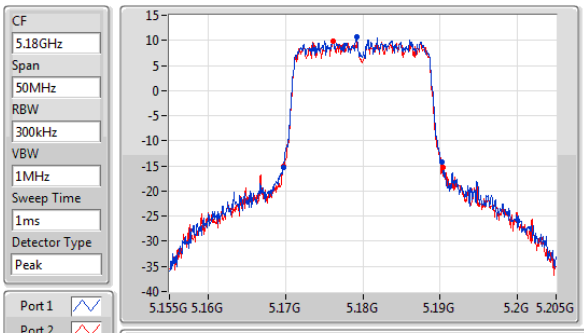
5825MHz

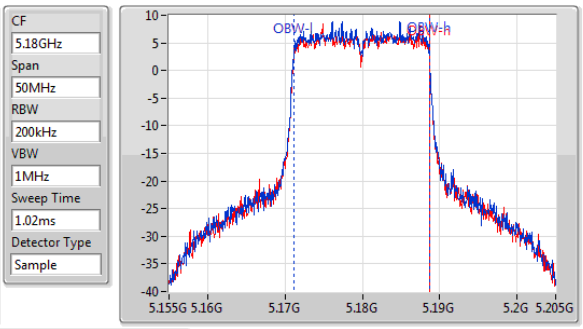


6dB(Hz)	Fl-6dB(Hz)	Fh-6dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
16.377M	5.816739G	5.833116G	37.844M	5.806404G	5.844247G	500k	1
15.435M	5.817319G	5.832754G	23.444M	5.813712G	5.837156G	500k	2
16.087M	5.816739G	5.832826G	16.715M	5.816534G	5.833249G	500k	3
16.304M	5.816739G	5.833043G	22.504M	5.814942G	5.837446G	500k	4

802.11ac VHT20_Nss1,(MCS0)_2TX EBW

5180MHz

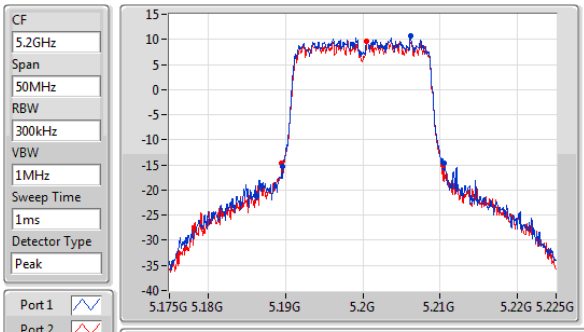


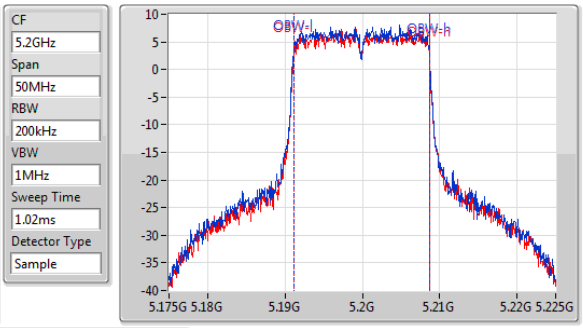


26dB(Hz)	Fl-26dB(Hz)	Fh-26dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
20.58M	5.16971G	5.19029G	17.583M	5.1711G	5.188683G	Inf	1
20.725M	5.16971G	5.190435G	17.583M	5.1711G	5.188683G	Inf	2

802.11ac VHT20_Nss1,(MCS0)_2TX EBW

5200MHz

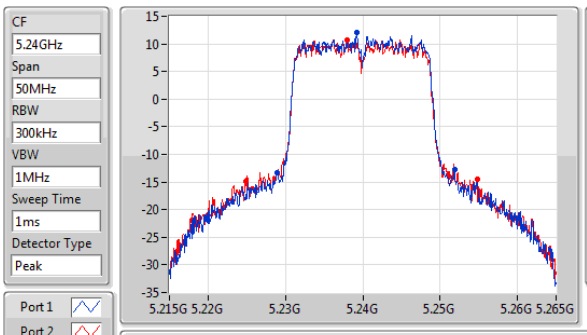


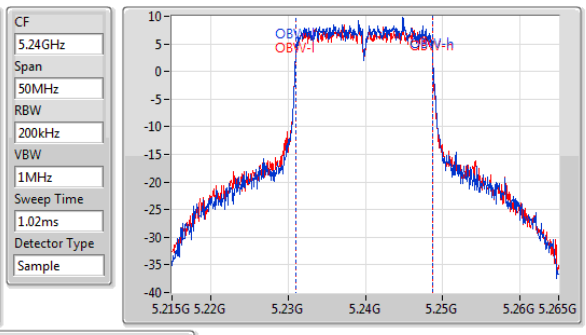


26dB(Hz)	Fl-26dB(Hz)	Fh-26dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
20.942M	5.189638G	5.21058G	17.583M	5.1911G	5.208683G	Inf	1
20.942M	5.189493G	5.210435G	17.583M	5.1911G	5.208683G	Inf	2

802.11ac VHT20_Nss1,(MCS0)_2TX EBW

5240MHz

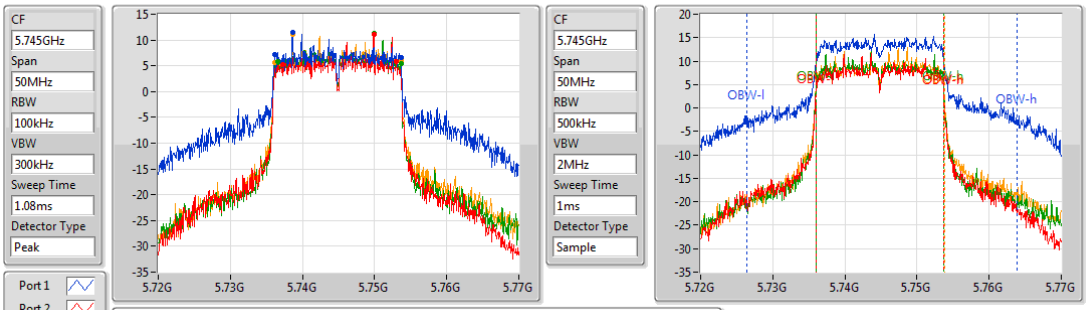




26dB(Hz)	Fl-26dB(Hz)	Fh-26dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
22.971M	5.228913G	5.251884G	17.728M	5.231027G	5.248755G	Inf	1
29.928M	5.224855G	5.254783G	17.8M	5.230955G	5.248755G	Inf	2

802.11ac VHT20_Nss1,(MCS0)_4TX EBW

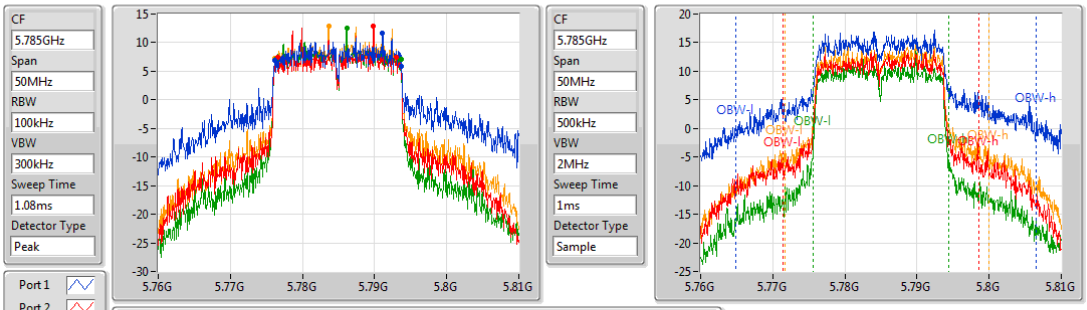
5745MHz



6dB(Hz)	Fl-6dB(Hz)	Fh-6dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
17.609M	5.736087G	5.753696G	37.41M	5.726404G	5.763813G	500k	1
15.725M	5.737319G	5.753043G	17.8M	5.735955G	5.753755G	500k	2
17.174M	5.736522G	5.753696G	17.8M	5.735955G	5.753755G	500k	3
17.609M	5.736087G	5.753696G	17.873M	5.735955G	5.753828G	500k	4

802.11ac VHT20_Nss1,(MCS0)_4TX EBW

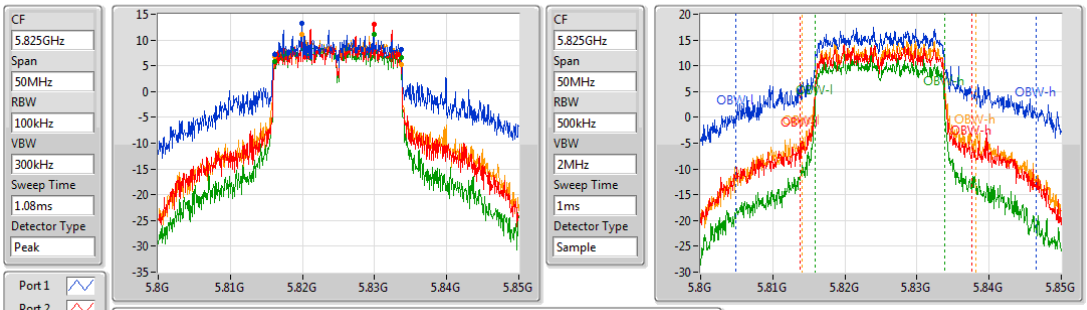
5785MHz



6dB(Hz)	Fl-6dB(Hz)	Fh-6dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
17.681M	5.776087G	5.793768G	41.679M	5.764884G	5.806563G	500k	1
16.522M	5.776522G	5.793043G	27.135M	5.771397G	5.798531G	500k	2
17.246M	5.776449G	5.793696G	18.741M	5.775666G	5.794407G	500k	3
17.609M	5.776087G	5.793696G	28.22M	5.771758G	5.799978G	500k	4

802.11ac VHT20_Nss1,(MCS0)_4TX EBW

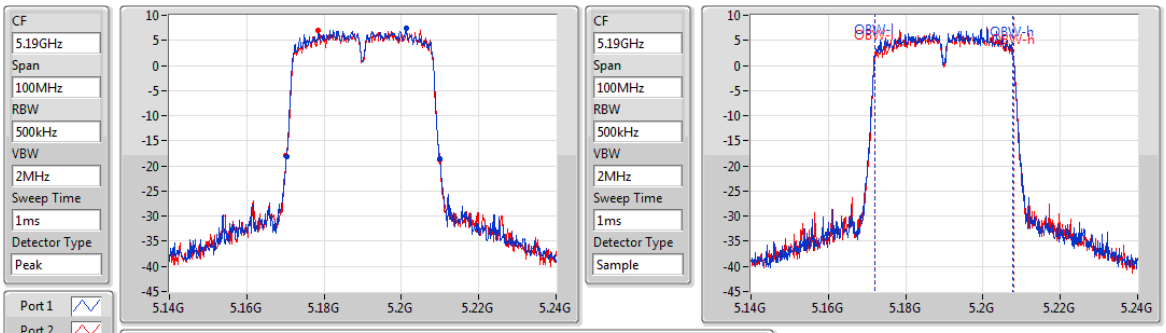
5825MHz



6dB(Hz)	Fl-6dB(Hz)	Fh-6dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
17.609M	5.816087G	5.833696G	41.751M	5.804812G	5.846563G	500k	1
16.884M	5.816449G	5.833333G	23.806M	5.813857G	5.837663G	500k	2
17.609M	5.816087G	5.833696G	17.945M	5.815883G	5.833828G	500k	3
17.681M	5.816087G	5.833768G	24.168M	5.814001G	5.838169G	500k	4

802.11ac VHT40_Nss1,(MCS0)_2TX EBW

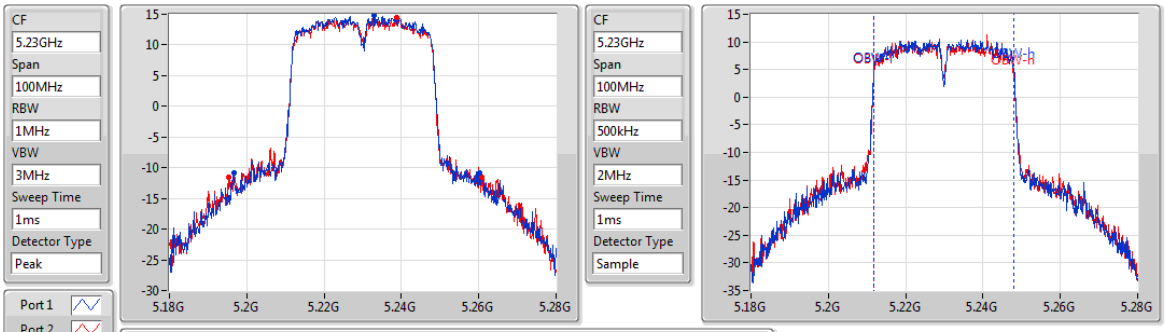
5190MHz



26dB(Hz)	Fl-26dB(Hz)	Fh-26dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
39.565M	5.17029G	5.209855G	35.745M	5.172055G	5.2078G	Inf	1
39.855M	5.170145G	5.21G	35.89M	5.172055G	5.207945G	Inf	2

802.11ac VHT40_Nss1,(MCS0)_2TX EBW

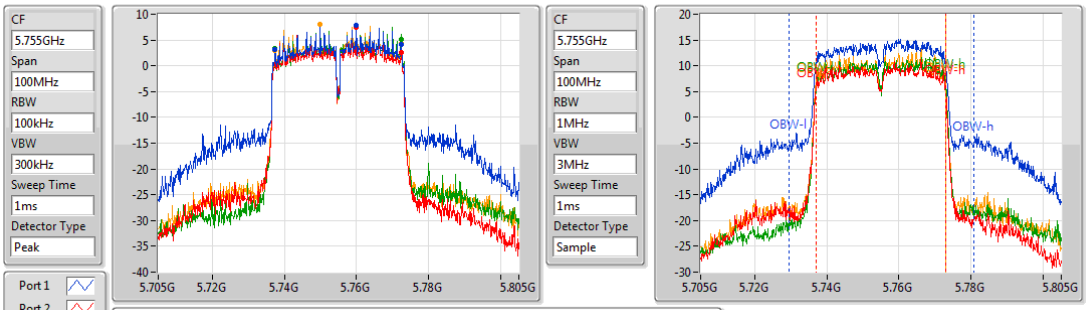
5230MHz



26dB(Hz)	Fl-26dB(Hz)	Fh-26dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
63.623M	5.196667G	5.26029G	36.324M	5.211766G	5.24809G	Inf	1
65.507M	5.195217G	5.260725G	36.324M	5.211766G	5.24809G	Inf	2

802.11ac VHT40_Nss1,(MCS0)_4TX EBW

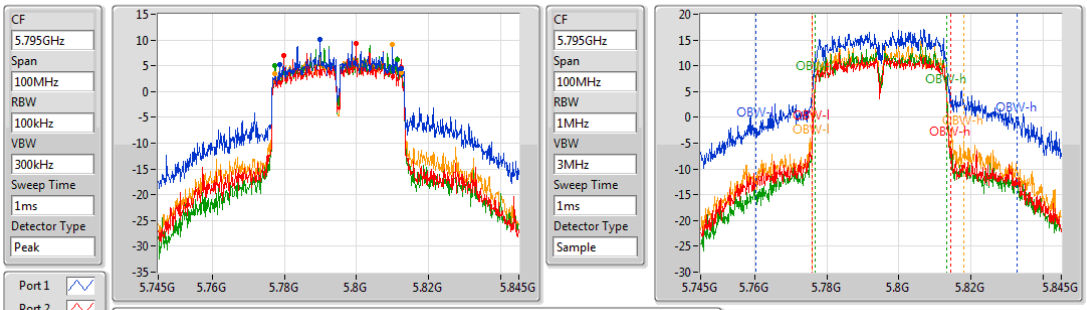
5755MHz



6dB(Hz)	Fl-6dB(Hz)	Fh-6dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
35.217M	5.737319G	5.772536G	51.23M	5.72953G	5.78076G	500k	1
35.217M	5.737319G	5.772536G	36.035M	5.73691G	5.772945G	500k	2
35.217M	5.737319G	5.772536G	35.89M	5.737055G	5.772945G	500k	3
35.217M	5.737319G	5.772536G	36.035M	5.73691G	5.772945G	500k	4

802.11ac VHT40_Nss1,(MCS0)_4TX EBW

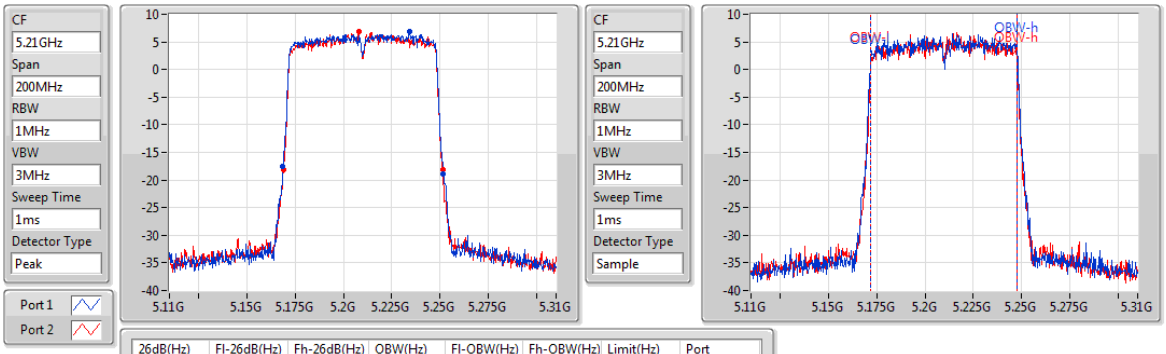
5795MHz



6dB(Hz)	Fl-6dB(Hz)	Fh-6dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
33.913M	5.778623G	5.812536G	72.359M	5.760412G	5.832771G	500k	1
32.754M	5.779783G	5.812536G	38.35M	5.776042G	5.814392G	500k	2
33.913M	5.777319G	5.811232G	36.469M	5.776766G	5.813234G	500k	3
35.217M	5.777319G	5.812536G	42.113M	5.775897G	5.81801G	500k	4

802.11ac VHT80_Nss1,(MCS0)_2TX EBW

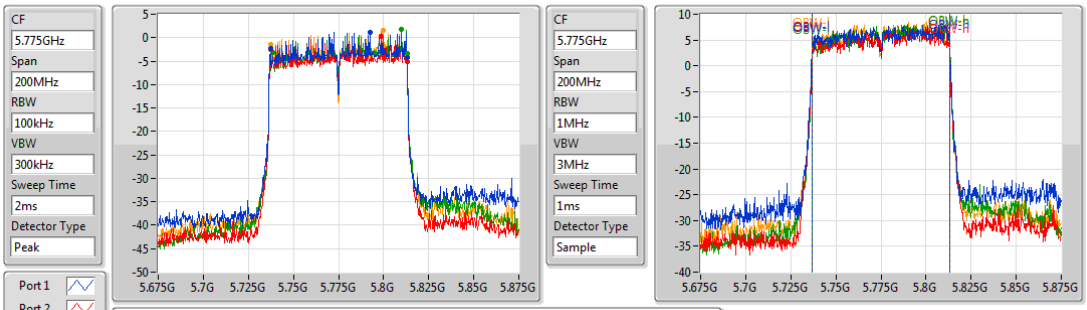
5210MHz



26dB(Hz)	Fl-26dB(Hz)	Fh-26dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
83.188M	5.168551G	5.251739G	75.543M	5.172084G	5.247627G	Inf	1
82.609M	5.168841G	5.251449G	75.543M	5.172084G	5.247627G	Inf	2

802.11ac VHT80_Nss1,(MCS0)_4TX EBW

5775MHz



6dB(Hz)	Fl-6dB(Hz)	Fh-6dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
75.652M	5.737319G	5.812971G	75.832M	5.737084G	5.812916G	500k	1
75.652M	5.737319G	5.812971G	75.832M	5.737084G	5.812916G	500k	2
74.493M	5.738478G	5.812971G	75.832M	5.737084G	5.812916G	500k	3
75.652M	5.737319G	5.812971G	75.832M	5.737084G	5.812916G	500k	4

Beamforming mode

Summary

Mode	Max-N dB (Hz)	Max-OBW (Hz)	ITU-Code	Min-N dB (Hz)	Min-OBW (Hz)
5.725-5.85GHz	-	-	-	-	-
802.11ac VHT20-BF_Nss1,(MCS0)_4TX	17.609M	17.728M	17M7D1D	15.072M	17.583M
802.11ac VHT40-BF_Nss1,(MCS0)_4TX	35.797M	36.469M	36M5D1D	31.304M	35.89M
802.11ac VHT80-BF_Nss1,(MCS0)_4TX	76.522M	76.122M	76M1D1D	73.913M	75.543M

Max-N dB = Maximum6dB downbandwidth for 5.725-5.85GHz band / Maximum26dB downbandwidth for other band;
Max-OBW = Maximum99% occupied bandwidth;
Min-N dB = Minimum6dB downbandwidth for 5.725-5.85GHz band / Maximum26dB downbandwidth for other band;
Min-OBW = Minimum99% occupied bandwidth;

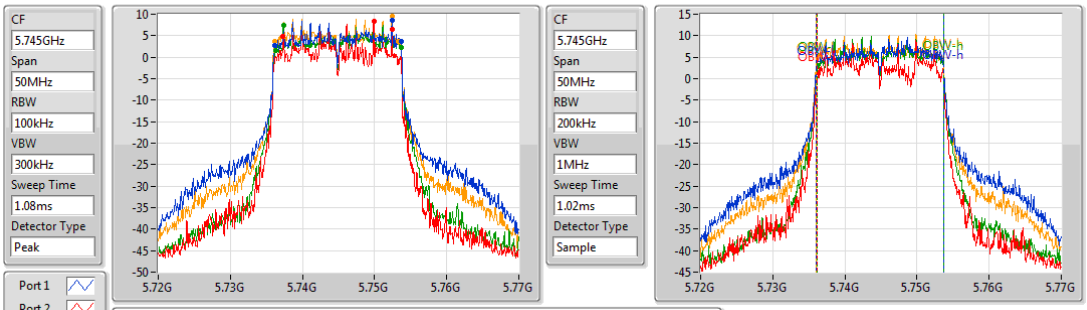
Result

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)
802.11ac VHT20-BF_Nss1 ,(MCS0)_4TX	-	-	-	-	-	-	-	-	-	-
5745MHz	Pass	500k	17.609M	17.728M	15.072M	17.583M	17.464M	17.583M	17.174M	17.656M
5785MHz	Pass	500k	17.391M	17.728M	17.609M	17.656M	17.246M	17.583M	17.391M	17.656M
5825MHz	Pass	500k	16.594M	17.728M	15.87M	17.656M	17.536M	17.656M	17.391M	17.656M
802.11ac VHT40-BF_Nss1 ,(MCS0)_4TX	-	-	-	-	-	-	-	-	-	-
5755MHz	Pass	500k	35.362M	36.179M	31.304M	36.179M	35.507M	35.89M	33.768M	36.469M
5795MHz	Pass	500k	32.029M	36.469M	35.797M	35.89M	35.797M	36.035M	33.913M	36.469M
802.11ac VHT80-BF_Nss1 ,(MCS0)_4TX	-	-	-	-	-	-	-	-	-	-
5775MHz	Pass	500k	73.913M	75.832M	75.652M	76.122M	74.493M	75.543M	76.522M	75.832M

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

802.11ac VHT20-BF_Nss1,(MCS0)_4TX EBW

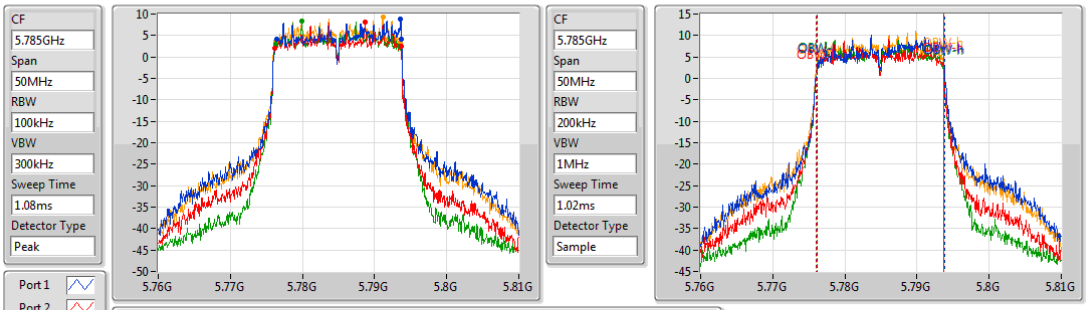
5745MHz



6dB(Hz)	Fl-6dB(Hz)	Fh-6dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
17.609M	5.736087G	5.753696G	17.728M	5.736027G	5.753755G	500k	1
15.072M	5.737319G	5.752391G	17.583M	5.7361G	5.753683G	500k	2
17.464M	5.736232G	5.753696G	17.583M	5.7361G	5.753683G	500k	3
17.174M	5.736087G	5.753261G	17.656M	5.736027G	5.753683G	500k	4

802.11ac VHT20-BF_Nss1,(MCS0)_4TX EBW

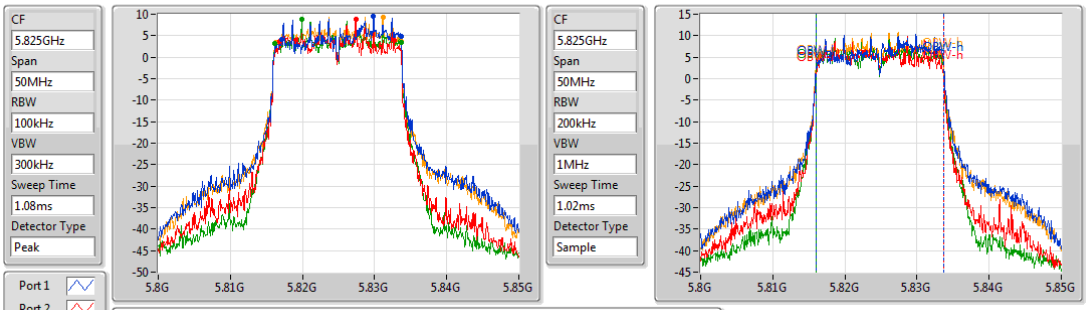
5785MHz



6dB(Hz)	Fl-6dB(Hz)	Fh-6dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
17.391M	5.776377G	5.793768G	17.728M	5.7761G	5.793828G	500k	1
17.609M	5.776087G	5.793696G	17.656M	5.776027G	5.793683G	500k	2
17.246M	5.776232G	5.793478G	17.583M	5.7761G	5.793683G	500k	3
17.391M	5.776232G	5.793623G	17.656M	5.776027G	5.793683G	500k	4

802.11ac VHT20-BF_Nss1,(MCS0)_4TX EBW

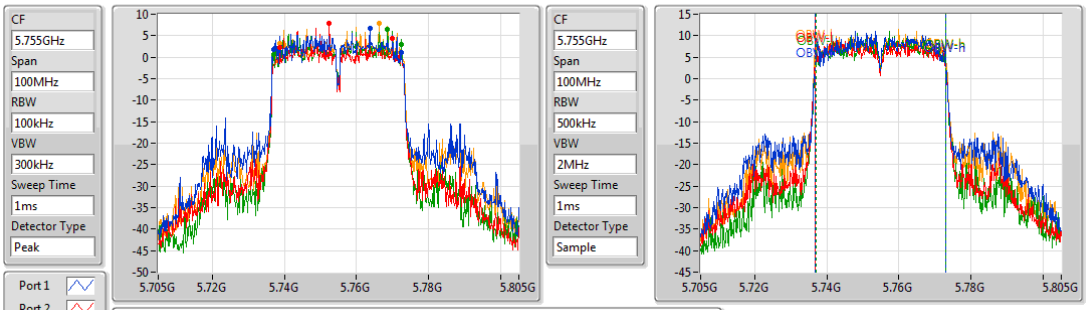
5825MHz



6dB(Hz)	Fl-6dB(Hz)	Fh-6dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
16.594M	5.817101G	5.833696G	17.728M	5.816027G	5.833755G	500k	1
15.87M	5.816812G	5.832681G	17.656M	5.816027G	5.833683G	500k	2
17.536M	5.816159G	5.833696G	17.656M	5.816027G	5.833683G	500k	3
17.391M	5.816304G	5.833696G	17.656M	5.816027G	5.833683G	500k	4

802.11ac VHT40-BF_Nss1,(MCS0)_4TX EBW

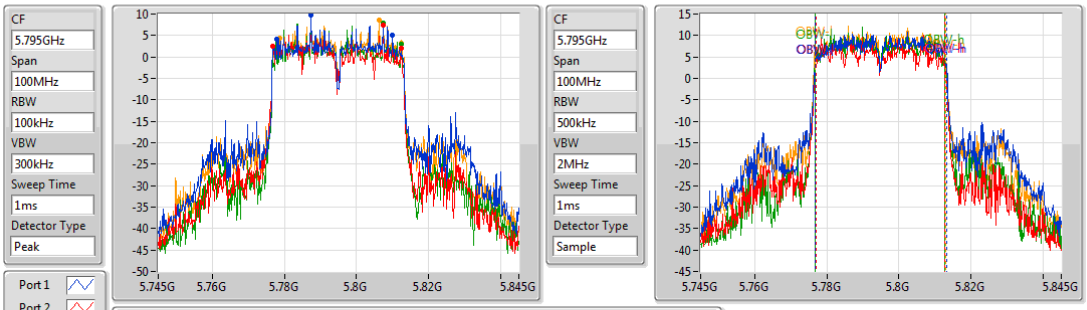
5755MHz



6dB(Hz)	Fl-6dB(Hz)	Fh-6dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
35.362M	5.737029G	5.772391G	36.179M	5.736766G	5.772945G	500k	1
31.304M	5.738623G	5.769928G	36.179M	5.736766G	5.772945G	500k	2
35.507M	5.737029G	5.772536G	35.89M	5.737055G	5.772945G	500k	3
33.768M	5.738623G	5.772391G	36.469M	5.736621G	5.77309G	500k	4

802.11ac VHT40-BF_Nss1,(MCS0)_4TX EBW

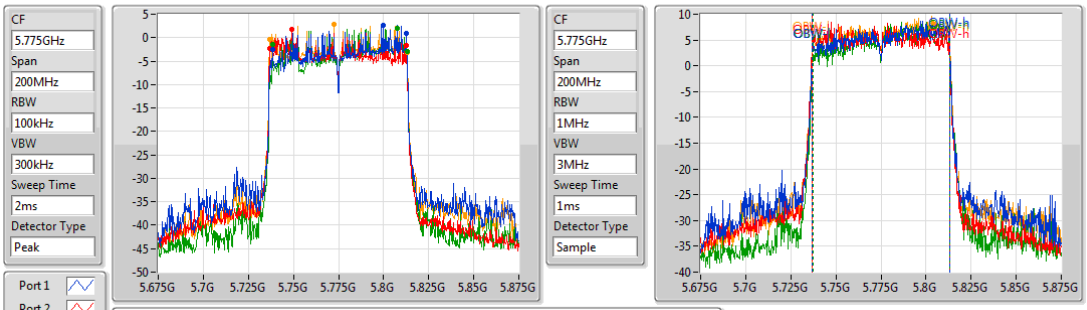
5795MHz



6dB(Hz)	Fl-6dB(Hz)	Fh-6dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
32.029M	5.777899G	5.809928G	36.469M	5.776766G	5.813234G	500k	1
35.797M	5.776739G	5.812536G	35.89M	5.77691G	5.8128G	500k	2
35.797M	5.776739G	5.812536G	36.035M	5.776766G	5.8128G	500k	3
33.913M	5.778623G	5.812536G	36.469M	5.776621G	5.81309G	500k	4

802.11ac VHT80-BF_Nss1,(MCS0)_4TX EBW

5775MHz



6dB(Hz)	Fl-6dB(Hz)	Fh-6dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
73.913M	5.738478G	5.812391G	75.832M	5.737084G	5.812916G	500k	1
75.652M	5.736739G	5.812391G	76.122M	5.736795G	5.812916G	500k	2
74.493M	5.738478G	5.812971G	75.543M	5.737373G	5.812916G	500k	3
76.522M	5.736739G	5.813261G	75.832M	5.737084G	5.812916G	500k	4

3.3 RF Output Power

3.3.1 Limit of RF Output Power

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

Frequency Band (MHz)		Limit
☒	5725 ~ 5850	1 W
Note: “B” is the 26dB emission bandwidth in MHz.		

3.3.2 Test Procedures

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

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

3.3.3 Test Setup

3.3.4 Test Result of Maximum Conducted Output Power

Non-beamforming mode

Summary

Mode	Total Power (dBm)	Total Power (W)	EIRP (dBm)	EIRP (W)
5.15-5.25GHz	-	-	-	-
802.11a_Nss1,(6Mbps)_2TX	23.48	0.22284	28.58	0.72111
802.11ac VHT20_Nss1,(MCS0)_2TX	23.43	0.22029	28.53	0.71285
802.11ac VHT40_Nss1,(MCS0)_2TX	23.89	0.24491	28.99	0.79250
802.11ac VHT80_Nss1,(MCS0)_2TX	19.14	0.08204	24.24	0.26546
5.725-5.85GHz	-	-	-	-
802.11a_Nss1,(6Mbps)_4TX	29.42	0.87498	33.80	2.39883
802.11ac VHT20_Nss1,(MCS0)_4TX	29.37	0.86497	33.75	2.37137
802.11ac VHT40_Nss1,(MCS0)_4TX	28.86	0.76913	33.24	2.10863
802.11ac VHT80_Nss1,(MCS0)_4TX	23.67	0.23281	28.05	0.63826

Result

Mode	Result	DG (dBi)	Port 1 (dBm)	Port 2 (dBm)	Port 3 (dBm)	Port 4 (dBm)	Total Power (dBm)	Power Limit (dBm)	EIRP (dBm)	EIRP Limit (dBm)
802.11a_Nss1,(6Mbps)_2TX	-	-	-	-	-	-	-	-	-	-
5180MHz	Pass	5.10	19.68	19.32			22.51	30.00	27.61	36.00
5200MHz	Pass	5.10	19.78	19.22			22.52	30.00	27.62	36.00
5240MHz	Pass	5.10	20.76	20.15			23.48	30.00	28.58	36.00
802.11a_Nss1,(6Mbps)_4TX	-	-	-	-	-	-	-	-	-	-
5745MHz	Pass	4.38	23.03	21.57	22.19	22.62	28.41	30.00	32.79	36.00
5785MHz	Pass	4.38	23.64	22.66	23.01	23.83	29.33	30.00	33.71	36.00
5825MHz	Pass	4.38	23.68	23.16	23.05	23.66	29.42	30.00	33.80	36.00
802.11ac VHT20_Nss1,(MCS0)_2TX	-	-	-	-	-	-	-	-	-	-
5180MHz	Pass	5.10	19.62	19.3			22.47	30.00	27.57	36.00
5200MHz	Pass	5.10	19.77	19.16			22.49	30.00	27.59	36.00
5240MHz	Pass	5.10	20.7	20.12			23.43	30.00	28.53	36.00
802.11ac VHT20_Nss1,(MCS0)_4TX	-	-	-	-	-	-	-	-	-	-
5745MHz	Pass	4.38	23.01	21.42	22.04	22.51	28.30	30.00	32.68	36.00
5785MHz	Pass	4.38	23.61	22.89	22.88	23.71	29.31	30.00	33.69	36.00
5825MHz	Pass	4.38	23.71	23.16	22.89	23.59	29.37	30.00	33.75	36.00
802.11ac VHT40_Nss1,(MCS0)_2TX	-	-	-	-	-	-	-	-	-	-
5190MHz	Pass	5.10	17.41	17.02			20.23	30.00	25.33	36.00
5230MHz	Pass	5.10	21.06	20.69			23.89	30.00	28.99	36.00
802.11ac VHT40_Nss1,(MCS0)_4TX	-	-	-	-	-	-	-	-	-	-
5755MHz	Pass	4.38	21.46	20.58	21.13	21.56	27.22	30.00	31.60	36.00
5795MHz	Pass	4.38	23.13	22.34	22.65	23.2	28.86	30.00	33.24	36.00
802.11ac VHT80_Nss1,(MCS0)_2TX	-	-	-	-	-	-	-	-	-	-
5210MHz	Pass	5.10	16.33	15.92			19.14	30.00	24.24	36.00
802.11ac VHT80_Nss1,(MCS0)_4TX	-	-	-	-	-	-	-	-	-	-
5775MHz	Pass	4.38	17.8	17.04	17.55	18.15	23.67	30.00	28.05	36.00

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

Beamforming mode

Summary

Mode	Total Power (dBm)	Total Power (W)	EIRP (dBm)	EIRP (W)
5.725-5.85GHz	-	-	-	-
802.11ac VHT20-BF_Nss1,(MCS0)_4TX	25.77	0.37757	35.61	3.63915
802.11ac VHT40-BF_Nss1,(MCS0)_4TX	25.43	0.34914	35.27	3.36512
802.11ac VHT80-BF_Nss1,(MCS0)_4TX	23.31	0.21429	33.15	2.06538

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)
802.11ac VHT20-BF _Nss1,(MCS0)_4TX	-	-	-	-	-	-	-	-	-	-
5745MHz	Pass	9.84	19.34	18.45	19.37	20.15	25.39	26.16	35.23	36.00
5785MHz	Pass	9.84	19.86	18.72	19.23	20.51	25.65	26.16	35.49	36.00
5825MHz	Pass	9.84	19.89	18.83	19.22	20.81	25.77	26.16	35.61	36.00
802.11ac VHT40-BF _Nss1,(MCS0)_4TX	-	-	-	-	-	-	-	-	-	-
5755MHz	Pass	9.84	19.54	18.23	19.05	19.81	25.22	26.16	35.06	36.00
5795MHz	Pass	9.84	19.62	18.72	19.01	20.16	25.43	26.16	35.27	36.00
802.11ac VHT80-BF _Nss1,(MCS0)_4TX	-	-	-	-	-	-	-	-	-	-
5775MHz	Pass	9.84	17.51	16.45	17.37	17.72	23.31	26.16	33.15	36.00

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

Note:

1. Directional gain = $10 * \log((10^{4.8/20}+10^{3.5/20}+10^{3.1/20}+10^{3.8/20})^2/4)$= 9.84 dBi > 6 dBi.
   Limit shall be reduced to 30 dBm – (9.84 dBi – 6 dBi) = 26.16 dBm.

3.4 Peak Power Spectral Density

3.4.1 Limit of Peak Power Spectral Density

Frequency band 5150-5250 MHz		
Operating Mode		**Limit**
☐	Outdoor access point	17 dBm / MHz
☒	Indoor access point	17 dBm / MHz
☐	Fixed point-to-point access points	17 dBm / MHz
☐	Client devices	11 dBm / MHz

Frequency Band (MHz)		**Limit**
☒	5725 ~ 5850	30 dBm /500 kHz

3.4.2 Test Procedures

For 5150 ~ 5250 MHz

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.

For 5725 ~ 5850 MHz

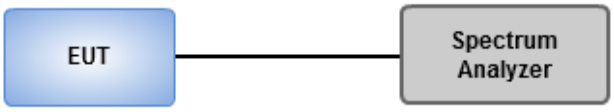
Duty cycle ≥ 98 %

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

Duty cycle < 98 %

1. Set RBW = 500 kHz, VBW = 3 MHz, Detector = RMS.
2. Set sweep time ≥ 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

Non-beamforming mode

Summary

Mode	PD (dBm/RBW)	EIRP PD (dBm/RBW)
5.15-5.25GHz	-	-
802.11a_Nss1,(6Mbps)_2TX	10.16	17.60
802.11ac VHT20_Nss1,(MCS0)_2TX	10.19	17.63
802.11ac VHT40_Nss1,(MCS0)_2TX	7.55	14.99
802.11ac VHT80_Nss1,(MCS0)_2TX	-0.51	6.93
5.725-5.85GHz	-	-
802.11a_Nss1,(6Mbps)_4TX	14.89	24.73
802.11ac VHT20_Nss1,(MCS0)_4TX	14.65	24.49
802.11ac VHT40_Nss1,(MCS0)_4TX	11.10	20.94
802.11ac VHT80_Nss1,(MCS0)_4TX	2.83	12.67

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

Result

Mode	Result	DG (dBi)	Port 1 (dBm/RBW)	Port 2 (dBm/RBW)	Port 3 (dBm/RBW)	Port 4 (dBm/RBW)	PD (dBm/RBW)	PD Limit (dBm/RBW)	EIRP PD (dBm/RBW)	EIRP PD Limit (dBm/RBW)
802.11a_Nss1,(6Mbps)_2TX	-	-	-	-	-	-	-	-	-	-
5180MHz	Pass	7.44	6.49	6.02			9.25	15.56	16.69	23.00
5200MHz	Pass	7.44	6.51	5.94			9.23	15.56	16.67	23.00
5240MHz	Pass	7.44	7.41	6.94			10.16	15.56	17.60	23.00
802.11a_Nss1,(6Mbps)_4TX	-	-	-	-	-	-	-	-	-	-
5745MHz	Pass	9.84	7.35	6.62	7.30	7.68	13.21	26.16	23.05	36.00
5785MHz	Pass	9.84	8.79	8.14	8.57	9.13	14.61	26.16	24.45	36.00
5825MHz	Pass	9.84	9.20	8.63	8.62	9.37	14.89	26.16	24.73	36.00
802.11ac VHT20_Nss1,(MCS0)_2TX	-	-	-	-	-	-	-	-	-	-
5180MHz	Pass	7.44	6.60	6.17			9.26	15.56	16.70	23.00
5200MHz	Pass	7.44	6.54	6.21			9.27	15.56	16.71	23.00
5240MHz	Pass	7.44	7.55	7.18			10.19	15.56	17.63	23.00
802.11ac VHT20_Nss1,(MCS0)_4TX	-	-	-	-	-	-	-	-	-	-
5745MHz	Pass	9.84	7.40	6.49	7.42	7.83	13.02	26.16	22.86	36.00
5785MHz	Pass	9.84	8.74	8.27	8.86	9.32	14.41	26.16	24.25	36.00
5825MHz	Pass	9.84	9.00	8.67	8.62	9.56	14.65	26.16	24.49	36.00
802.11ac VHT40_Nss1,(MCS0)_2TX	-	-	-	-	-	-	-	-	-	-
5190MHz	Pass	7.44	1.09	0.67			3.89	15.56	11.33	23.00
5230MHz	Pass	7.44	4.74	4.41			7.55	15.56	14.99	23.00
802.11ac VHT40_Nss1,(MCS0)_4TX	-	-	-	-	-	-	-	-	-	-
5755MHz	Pass	9.84	3.32	2.50	3.23	3.89	9.19	26.16	19.03	36.00
5795MHz	Pass	9.84	5.27	4.51	5.13	5.71	11.10	26.16	20.94	36.00
802.11ac VHT80_Nss1,(MCS0)_2TX	-	-	-	-	-	-	-	-	-	-
5210MHz	Pass	7.44	-3.36	-3.65			-0.51	15.56	6.93	23.00
802.11ac VHT80_Nss1,(MCS0)_4TX	-	-	-	-	-	-	-	-	-	-
5775MHz	Pass	9.84	-2.99	-3.91	-2.60	-2.31	2.83	26.16	12.67	36.00

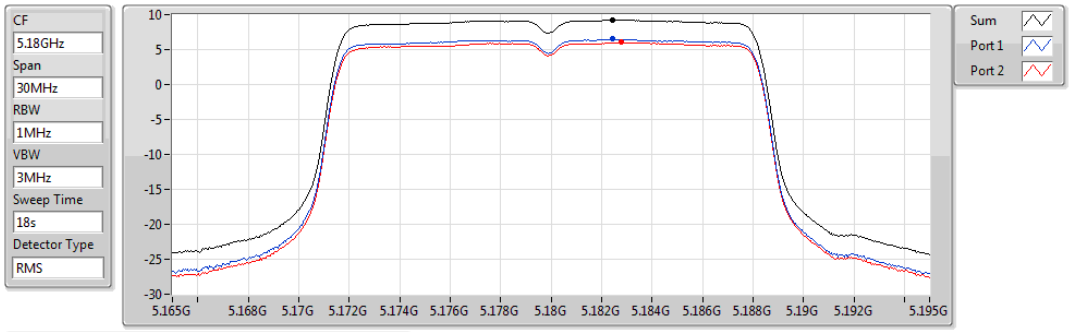
DG = Directional Gain; **RBW** = 500kHz for 5.725-5.85GHz band / 1MHz for other band;
PD = trace bin-by-bin of each transmits port summing can be performed maximum power density; **Port X** = Port Xpower density;
For 5150 ~ 5250 MHz
Directional gain = $10^* \log((10^{5.1/20}+10^{3.7/20})^2/2)$ = 7.44 dBi
Limit shall be reduced to 17 dBm – (7.44 dBi – 6 dBi) = 15.56dBm.

For 5725 ~ 5850 MHz

Directional gain = $10 * \log((10^{4.8/20}+10^{3.5/20}+10^{3.1/20}+10^{3.8/20})^2/4)$= 9.84 dBi > 6 dBi.
Limit shall be reduced to 30 dBm – (9.84 dBi – 6 dBi) = 26.16 dBm.

802.11a_Nss1,(6Mbps)_2TX PSD

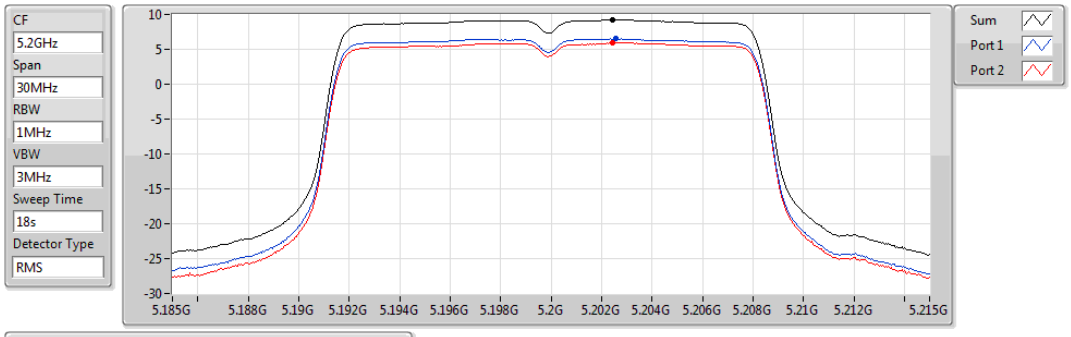
5180MHz



Sum	PD	Port 1	Port 2
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
9.25	9.25	6.49	6.02

802.11a_Nss1,(6Mbps)_2TX PSD

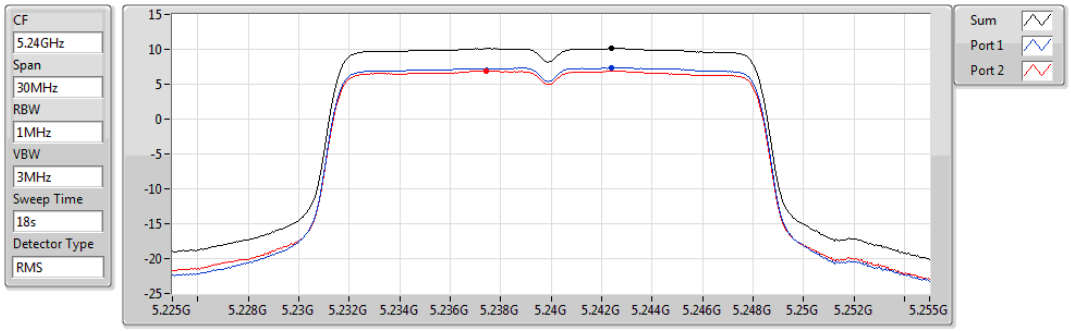
5200MHz



Sum	PD	Port 1	Port 2
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
9.23	9.23	6.51	5.94

802.11a_Nss1,(6Mbps)_2TX PSD

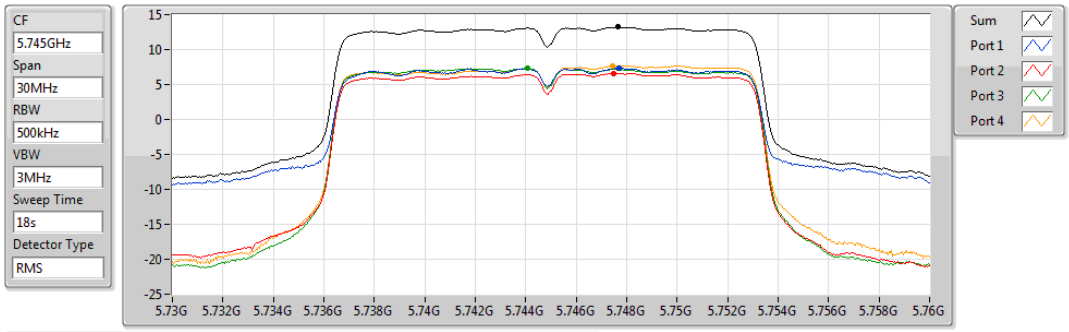
5240MHz



Sum	PD	Port 1	Port 2
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
10.16	10.16	7.41	6.94

802.11a_Nss1,(6Mbps)_4TX PSD

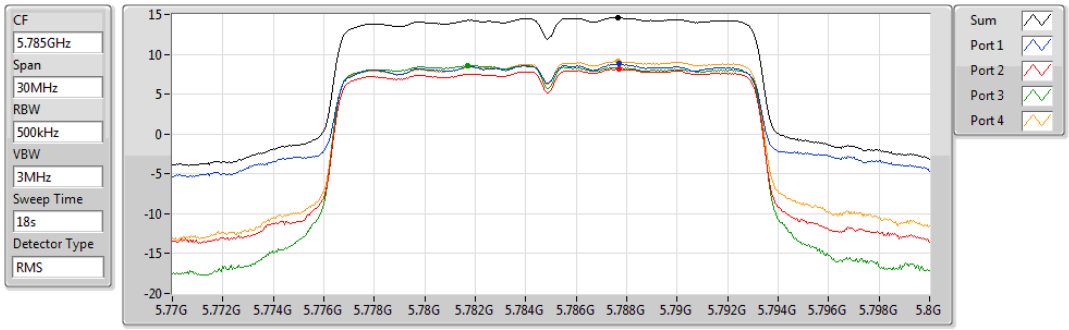
5745MHz



Sum	PD	Port 1	Port 2	Port 3	Port 4
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
13.21	13.21	7.35	6.62	7.30	7.68

802.11a_Nss1,(6Mbps)_4TX PSD

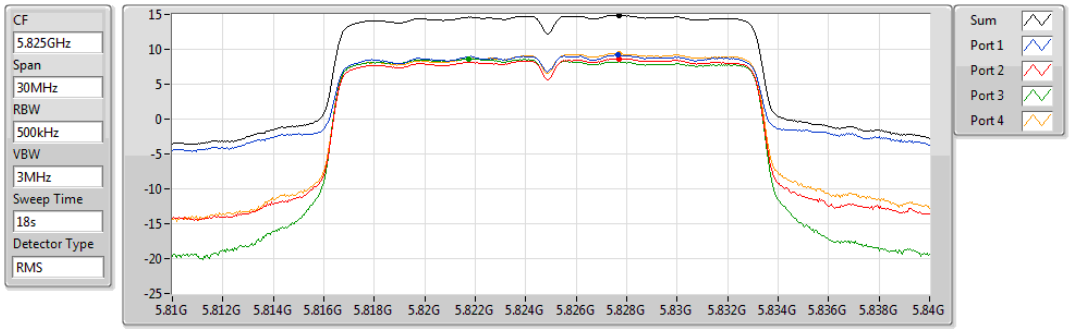
5785MHz



Sum	PD	Port 1	Port 2	Port 3	Port 4
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
14.61	14.61	8.79	8.14	8.57	9.13

802.11a_Nss1,(6Mbps)_4TX PSD

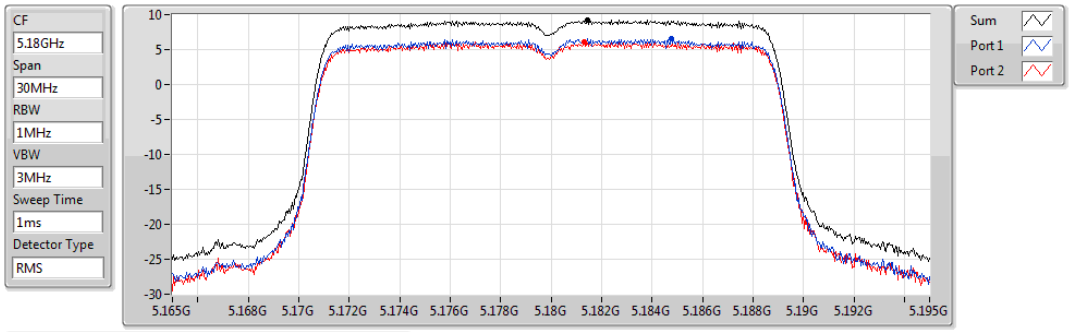
5825MHz



Sum	PD	Port 1	Port 2	Port 3	Port 4
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
14.89	14.89	9.20	8.63	8.62	9.37

802.11ac VHT20_Nss1,(MCS0)_2TX PSD

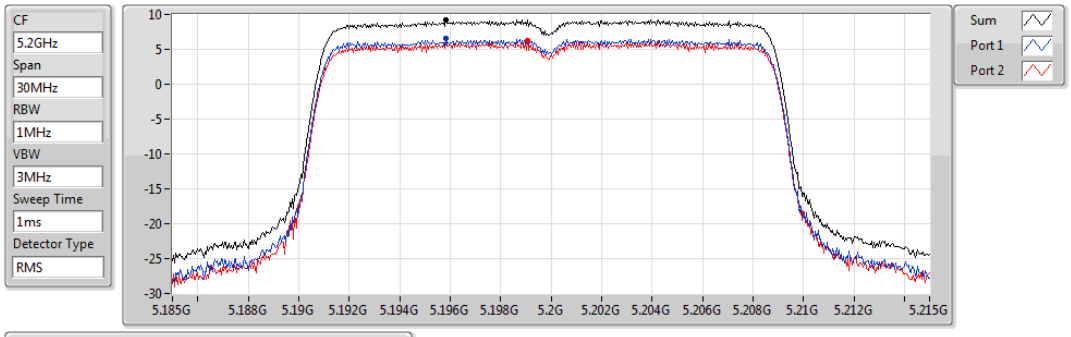
5180MHz



Sum	PD	Port 1	Port 2
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
9.26	9.26	6.60	6.17

802.11ac VHT20_Nss1,(MCS0)_2TX PSD

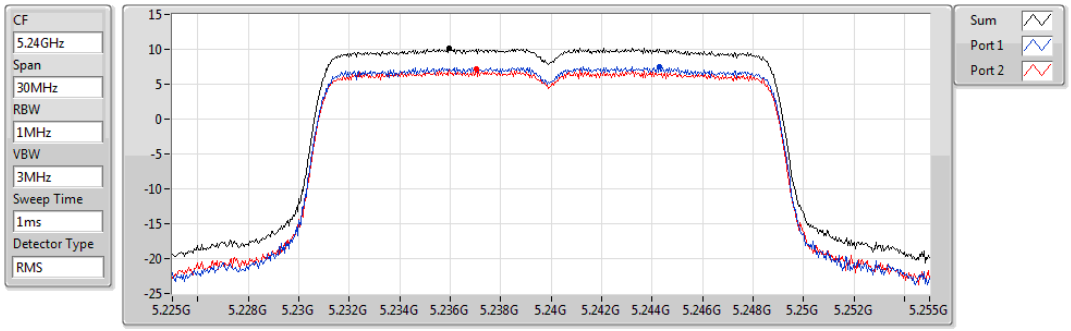
5200MHz



Sum	PD	Port 1	Port 2
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
9.27	9.27	6.54	6.21

802.11ac VHT20_Nss1,(MCS0)_2TX PSD

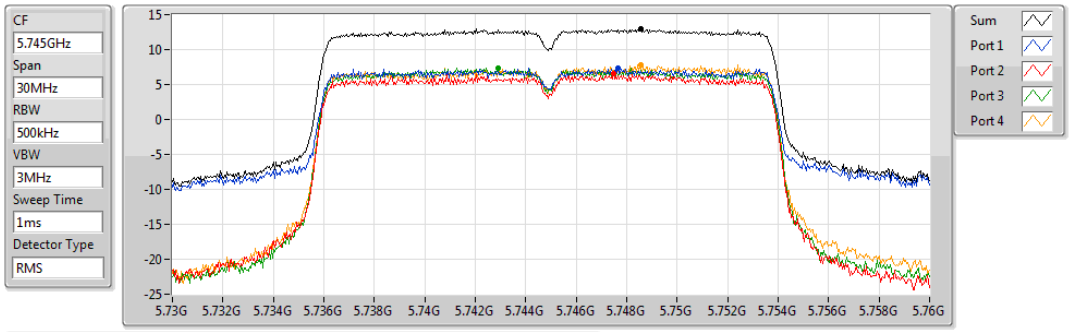
5240MHz



Sum	PD	Port 1	Port 2
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
10.19	10.19	7.55	7.18

802.11ac VHT20_Nss1,(MCS0)_4TX PSD

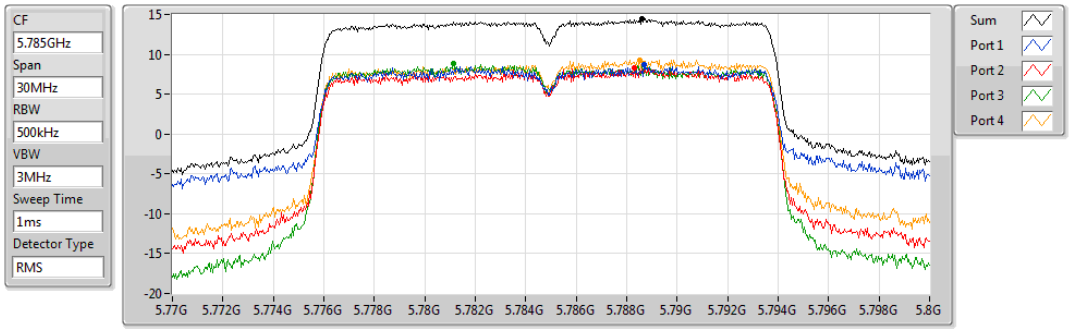
5745MHz



Sum	PD	Port 1	Port 2	Port 3	Port 4
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
13.02	13.02	7.40	6.49	7.42	7.83

802.11ac VHT20_Nss1,(MCS0)_4TX PSD

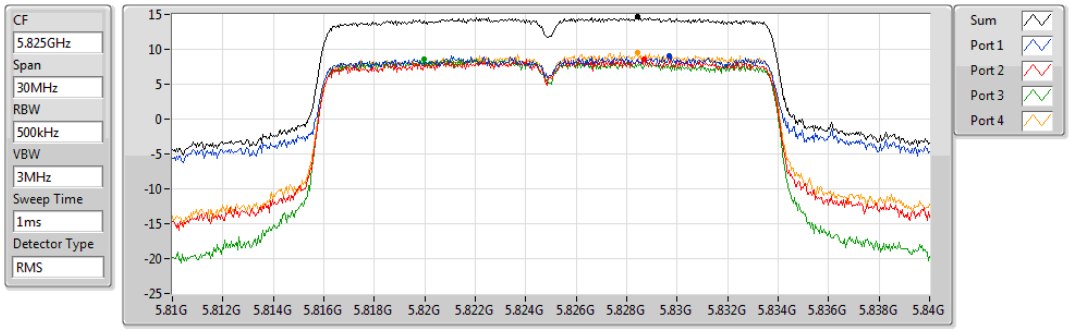
5785MHz



Sum	PD	Port 1	Port 2	Port 3	Port 4
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
14.41	14.41	8.74	8.27	8.86	9.32

802.11ac VHT20_Nss1,(MCS0)_4TX PSD

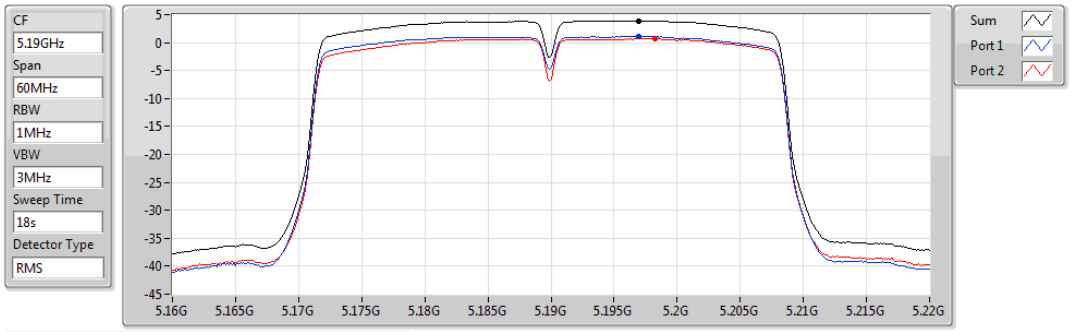
5825MHz



Sum	PD	Port 1	Port 2	Port 3	Port 4
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
14.65	14.65	9.00	8.67	8.62	9.56

802.11ac VHT40_Nss1,(MCS0)_2TX PSD

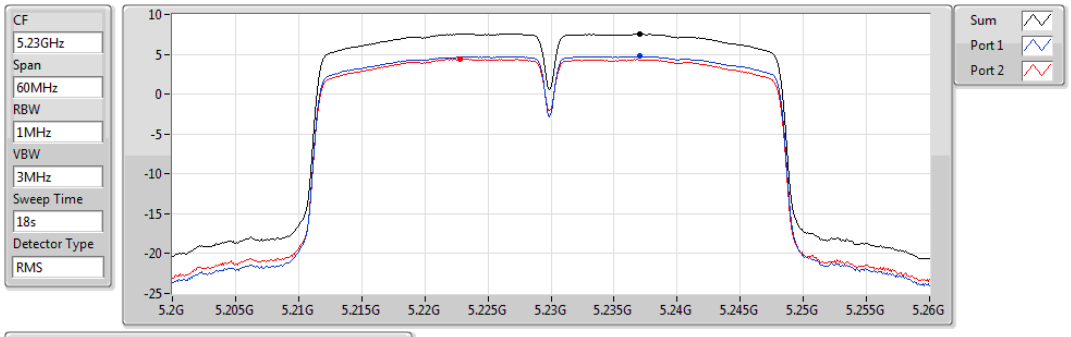
5190MHz



Sum	PD	Port 1	Port 2
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
3.89	3.89	1.09	0.67

802.11ac VHT40_Nss1,(MCS0)_2TX PSD

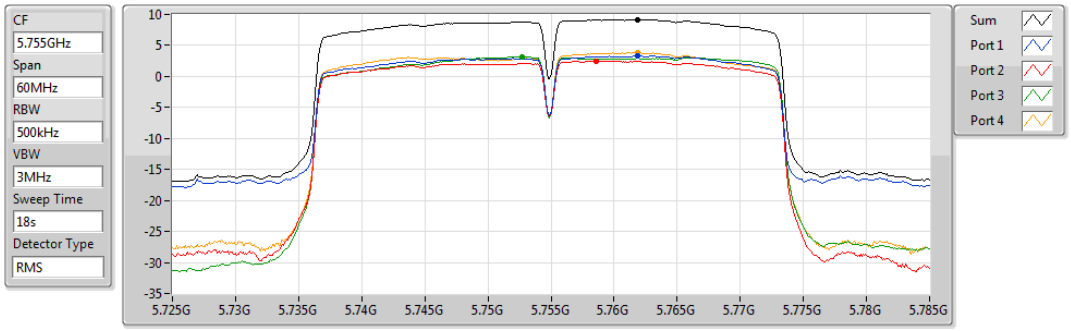
5230MHz



Sum	PD	Port 1	Port 2
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
7.55	7.55	4.74	4.41

802.11ac VHT40_Nss1,(MCS0)_4TX PSD

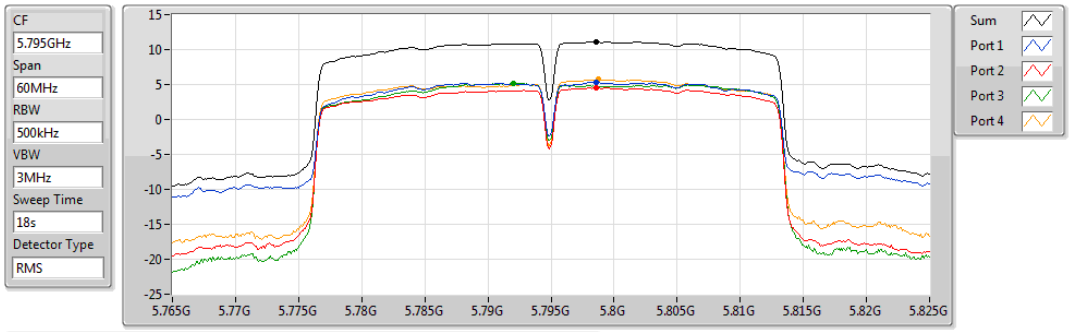
5755MHz



Sum	PD	Port 1	Port 2	Port 3	Port 4
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
9.19	9.19	3.32	2.50	3.23	3.89

802.11ac VHT40_Nss1,(MCS0)_4TX PSD

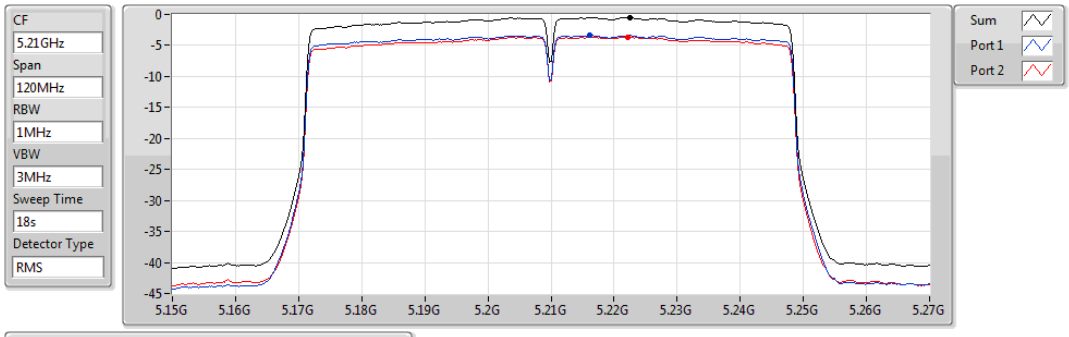
5795MHz



Sum	PD	Port 1	Port 2	Port 3	Port 4
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
11.10	11.10	5.27	4.51	5.13	5.71

802.11ac VHT80_Nss1,(MCS0)_2TX PSD

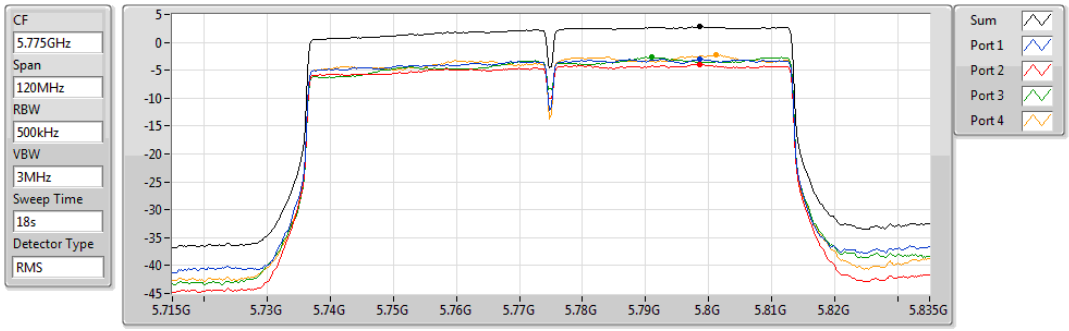
5210MHz



Sum	PD	Port 1	Port 2
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
-0.51	-0.51	-3.36	-3.65

802.11ac VHT80_Nss1,(MCS0)_4TX PSD

5775MHz



Sum	PD	Port 1	Port 2	Port 3	Port 4
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
2.83	2.83	-2.99	-3.91	-2.60	-2.31

Beamforming mode

Summary

Mode	PD (dBm/RBW)	EIRP PD (dBm/RBW)
5.725-5.85GHz	-	-
802.11ac VHT20-BF_Nss1,(MCS0)_4TX	10.63	20.47
802.11ac VHT40-BF_Nss1,(MCS0)_4TX	7.33	17.17
802.11ac VHT80-BF_Nss1,(MCS0)_4TX	2.46	12.30

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

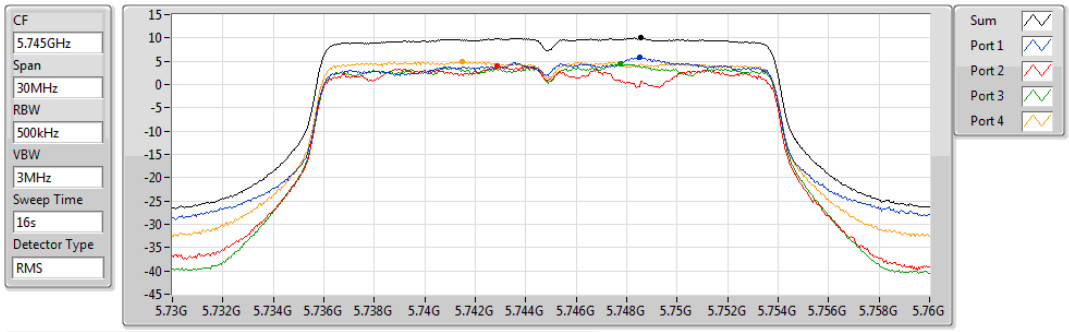
Result

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)
802.11ac VHT20-BF_Nss1,(MCS0)_4TX	-	-	-	-	-	-	-	-	-	-
5745MHz	Pass	9.84	5.88	3.91	4.38	4.92	10.02	26.16	19.86	36.00
5785MHz	Pass	9.84	5.85	4.47	4.98	4.98	10.60	26.16	20.44	36.00
5825MHz	Pass	9.84	5.28	4.48	4.84	6.24	10.63	26.16	20.47	36.00
802.11ac VHT40-BF_Nss1,(MCS0)_4TX	-	-	-	-	-	-	-	-	-	-
5755MHz	Pass	9.84	2.97	1.37	2.40	2.37	7.33	26.16	17.17	36.00
5795MHz	Pass	9.84	1.89	1.71	1.92	2.70	7.22	26.16	17.06	36.00
802.11ac VHT80-BF_Nss1,(MCS0)_4TX	-	-	-	-	-	-	-	-	-	-
5775MHz	Pass	9.84	-3.46	-4.22	-2.19	-2.76	2.46	26.16	12.30	36.00

DG = Directional Gain; **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 Xpower density;
Directional gain = $10 * \log((10^{4.8/20}+10^{3.5/20}+10^{3.1/20}+10^{3.8/20})^2/4)$= 9.84 dBi > 6 dBi.
Limit shall be reduced to 30 dBm – (9.84 dBi – 6 dBi) = 26.16 dBm.

802.11ac VHT20-BF_Nss1,(MCS0)_4TX PSD

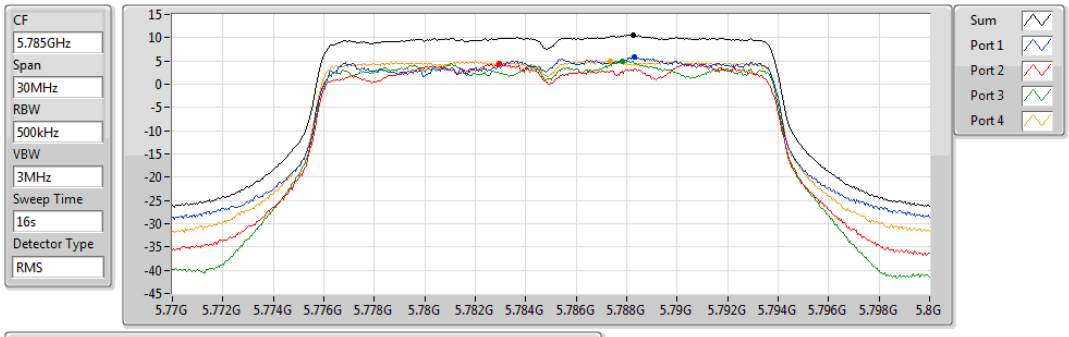
5745MHz



Sum	PD	Port 1	Port 2	Port 3	Port 4
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
10.02	10.02	5.88	3.91	4.38	4.92

802.11ac VHT20-BF_Nss1,(MCS0)_4TX PSD

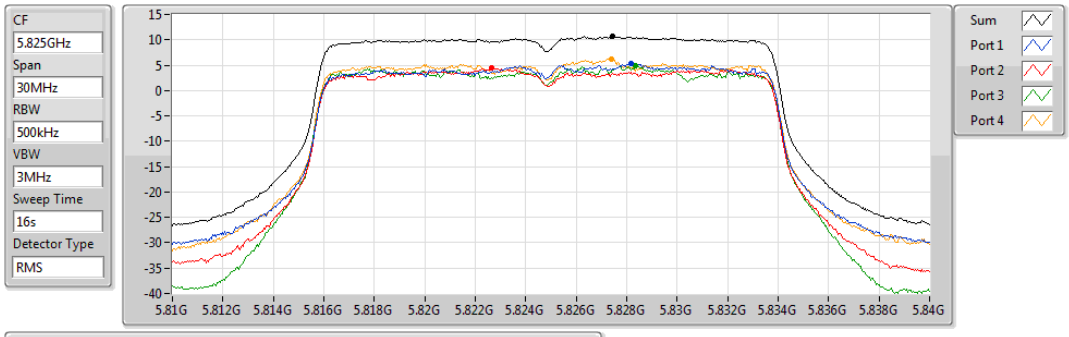
5785MHz



Sum	PD	Port 1	Port 2	Port 3	Port 4
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
10.60	10.60	5.85	4.47	4.98	4.98

802.11ac VHT20-BF_Nss1,(MCS0)_4TX PSD

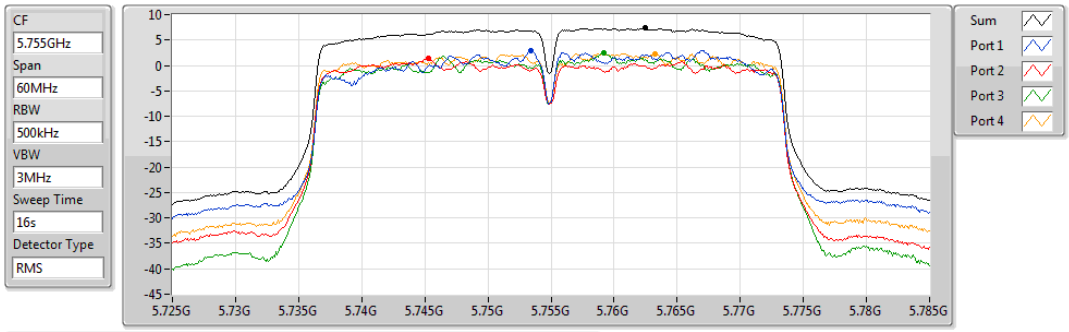
5825MHz



Sum	PD	Port 1	Port 2	Port 3	Port 4
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
10.63	10.63	5.28	4.48	4.84	6.24

802.11ac VHT40-BF_Nss1,(MCS0)_4TX PSD

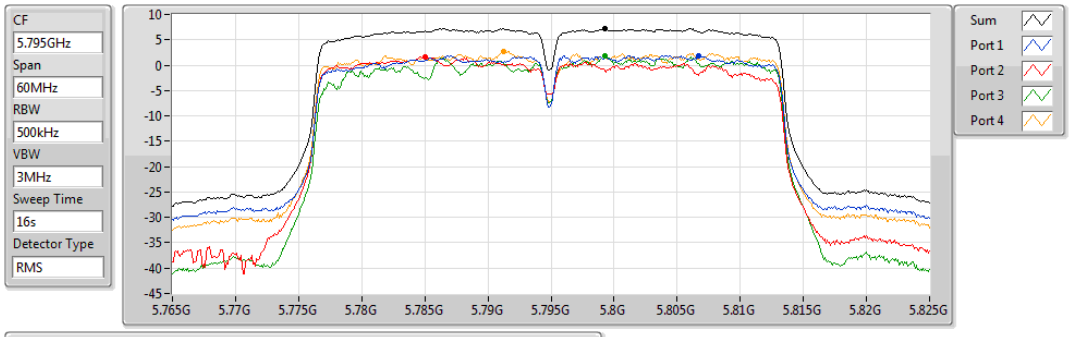
5755MHz



Sum	PD	Port 1	Port 2	Port 3	Port 4
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
7.33	7.33	2.97	1.37	2.40	2.37

802.11ac VHT40-BF_Nss1,(MCS0)_4TX PSD

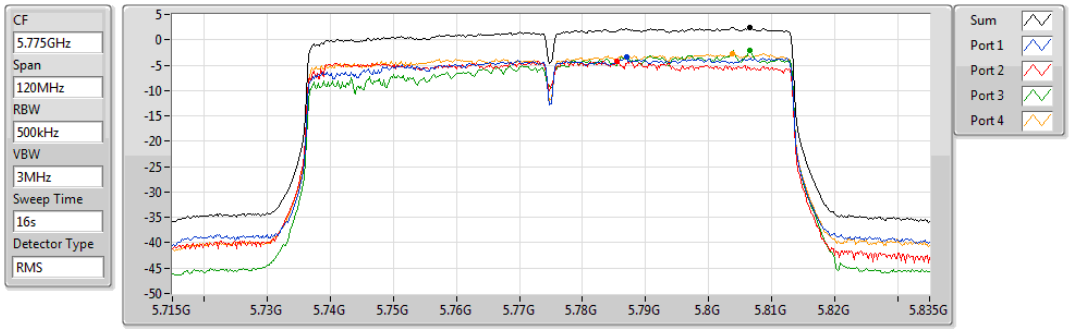
5795MHz



Sum	PD	Port 1	Port 2	Port 3	Port 4
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
7.22	7.22	1.89	1.71	1.92	2.70

802.11ac VHT80-BF_Nss1,(MCS0)_4TX PSD

5775MHz



Sum	PD	Port 1	Port 2	Port 3	Port 4
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
2.46	2.46	-3.46	-4.22	-2.19	-2.76

3.5 Transmitter Radiated and Band Edge Emissions

3.5.1 Limit of Transmitter Radiated and Band Edge Emissions

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

Note 1:
Qusai-Peak value is measured for frequency below 1GHz except for 9–90 kHz, 110–490 kHz frequency band. Peak and average value are measured for frequency above 1GHz. The limit on average radio frequency emission is as above table. The limit on peak radio frequency emissions is 20 dB above the maximum permitted average emission limit
Note 2:
Measurements may be performed at a distance other than what is specified provided. When performing measurements at a distance other than that specified, the results shall be extrapolated to the specified distance using an extrapolation factor as below, Frequency at or above 30 MHz: 20 dB/decade Frequency below 30 MHz: 40 dB/decade.

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

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

3.5.2 Test Procedures

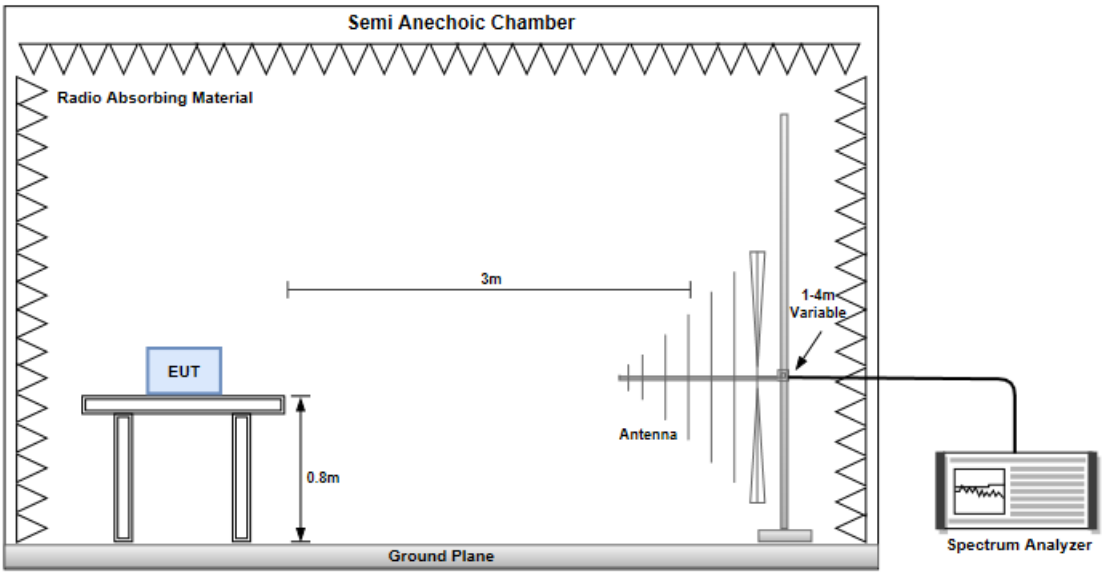
1. Measurement is made at a semi-anechoic chamber that incorporates a turntable allowing a EUT rotation of 360°. A continuously-rotating, remotely-controlled turntable is installed at the test site to support the EUT and facilitate determination of the direction of maximum radiation for each EUT emission frequency. The EUT is placed at test table. For emissions testing at or below 1 GHz, the table height is 80 cm above the reference ground plane. For emission measurements above 1 GHz, the table height is 1.5 m
2. Measurement is made with the antenna positioned in both the horizontal and vertical planes of polarization. The measurement antenna is varied in height (1m ~ 4m) above the reference ground plane to obtain the maximum signal strength. Distance between EUT and antenna is 3 m.
3. This investigation is performed with the EUT rotated 360°, the antenna height scanned between 1 m and 4 m, and the antenna rotated to repeat the measurements for both the horizontal and vertical antenna polarizations.

Note:

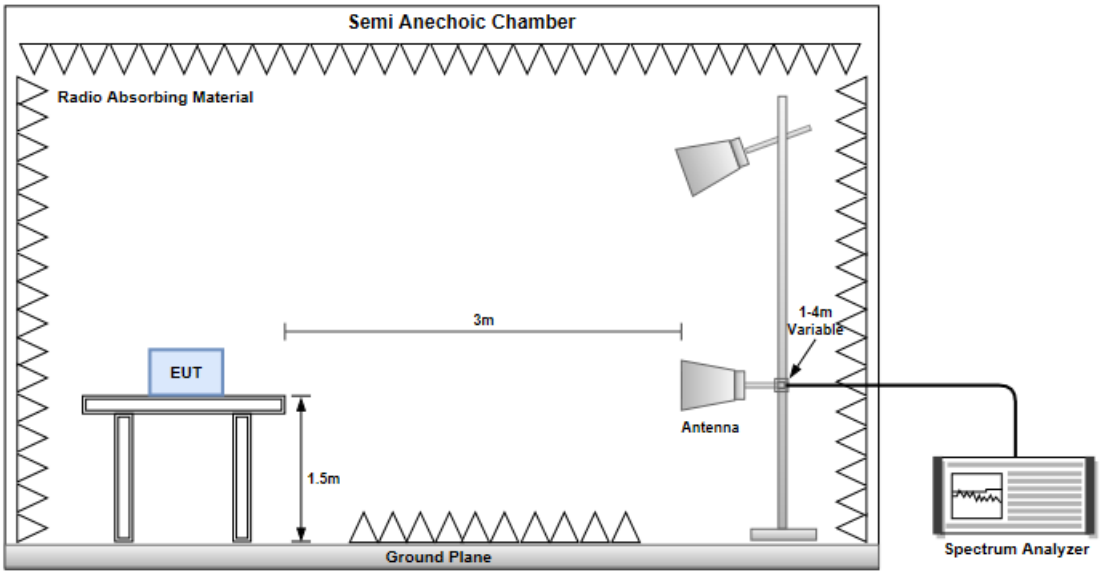
1. 120kHz measurement bandwidth of test receiver and Quasi-peak detector is for radiated emission below 1GHz.
2. RBW=1MHz, VBW=3MHz and Peak detector is for peak measured value of radiated emission above 1GHz.
3. RBW=1MHz, VBW=1/T and Peak detector is for average measured value of radiated emission above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

3.5.3 Test Setup

Radiated Emissions below 1 GHz



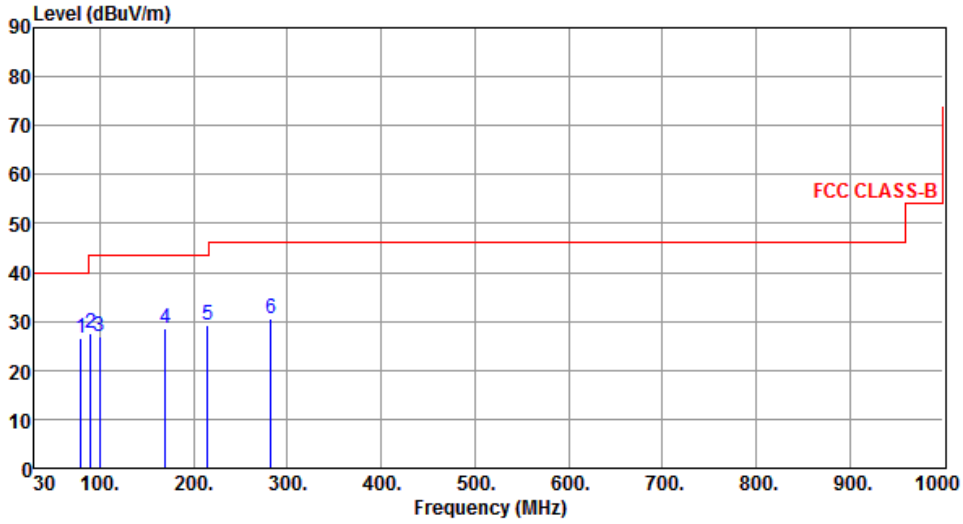
Radiated Emissions above 1 GHz



Non- beamforming mode

3.5.4 Transmitter Radiated Unwanted Emissions (Below 1GHz)

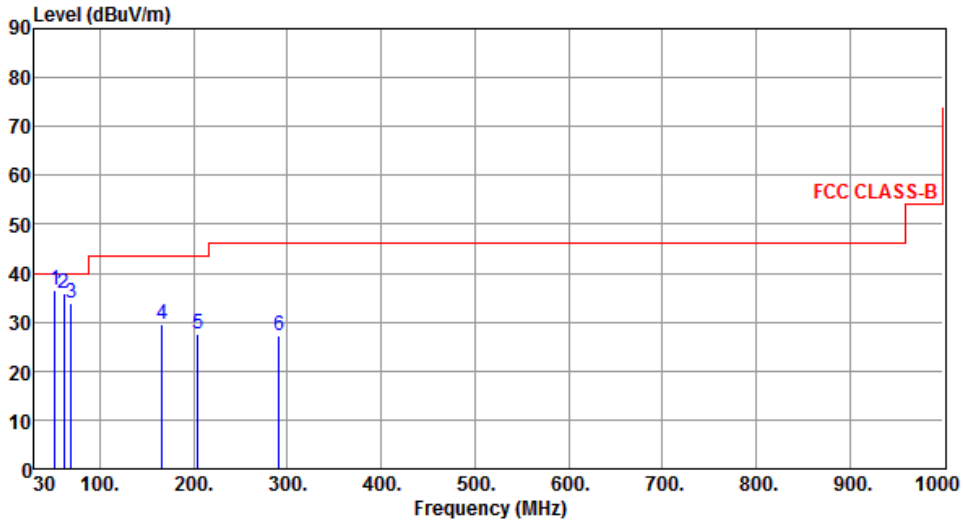
Modulation	VHT40	**Test Freq. (MHz)**	5230
Polarization	Horizontal		



	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	79.88	26.43	40.00	-13.57	39.34	-12.91	Peak	---	---
2	90.35	27.69	43.50	-15.81	42.12	-14.43	Peak	---	---
3	99.54	26.74	43.50	-16.76	40.30	-13.56	Peak	---	---
4	170.12	28.55	43.50	-14.95	37.06	-8.51	Peak	---	---
5	214.58	29.39	43.50	-14.11	40.36	-10.97	Peak	---	---
6	282.32	30.66	46.00	-15.34	38.76	-8.10	Peak	---	---

Note 1: Emission Level (dBuV/m) = SA Reading (dBuV/m) + Factor* (dB)
*Factor includes antenna factor , cable loss and amplifier gain
Note 2: Margin (dB) = Emission level (dBuV/m) – Limit (dBuV/m).
Note 3: All spurious emissions below 30MHz are more than 20 dB below the limit.

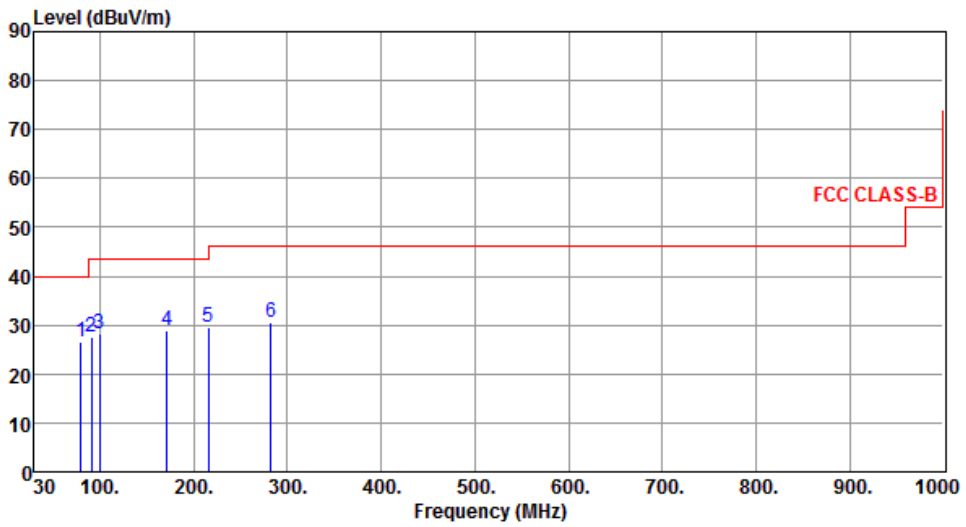
Modulation	VHT40	Test Freq. (MHz)	5230
Polarization	Vertical		



	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	52.14	36.58	40.00	-3.42	44.62	-8.04	Peak	---	---
2	61.54	35.88	40.00	-4.12	44.83	-8.95	Peak	---	---
3	69.58	33.88	40.00	-6.12	44.30	-10.42	Peak	---	---
4	166.54	29.54	43.50	-13.96	37.95	-8.41	Peak	---	---
5	204.31	27.55	43.50	-15.95	38.56	-11.01	Peak	---	---
6	290.66	27.16	46.00	-18.84	35.07	-7.91	Peak	---	---

Note 1: Emission Level (dBuV/m) = SA Reading (dBuV/m) + Factor* (dB)
*Factor includes antenna factor , cable loss and amplifier gain
Note 2: Margin (dB) = Emission level (dBuV/m) – Limit (dBuV/m).
Note 3: All spurious emissions below 30MHz are more than 20 dB below the limit.

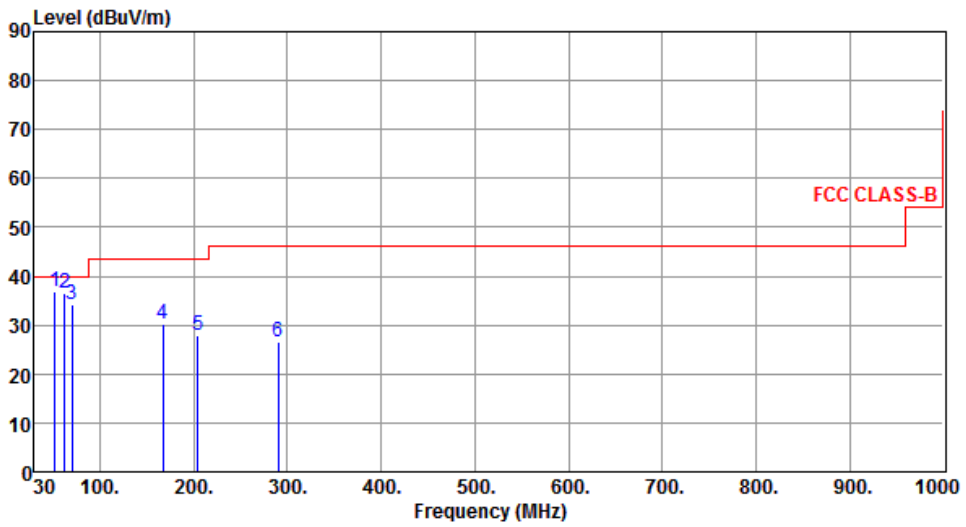
Modulation	11a	Test Freq. (MHz)	5825
Polarization	Horizontal		



	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	79.50	26.54	40.00	-13.46	39.36	-12.82	Peak	---	---
2	90.65	27.55	43.50	-15.95	41.95	-14.40	Peak	---	---
3	100.01	28.31	43.50	-15.19	41.82	-13.51	Peak	---	---
4	171.32	28.88	43.50	-14.62	37.54	-8.66	Peak	---	---
5	215.69	29.66	43.50	-13.84	40.63	-10.97	Peak	---	---
6	282.34	30.58	46.00	-15.42	38.68	-8.10	Peak	---	---

Note 1: Emission Level (dBuV/m) = SA Reading (dBuV/m) + Factor* (dB)
*Factor includes antenna factor , cable loss and amplifier gain
Note 2: Margin (dB) = Emission level (dBuV/m) – Limit (dBuV/m).
Note 3: All spurious emissions below 30MHz are more than 20 dB below the limit.

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

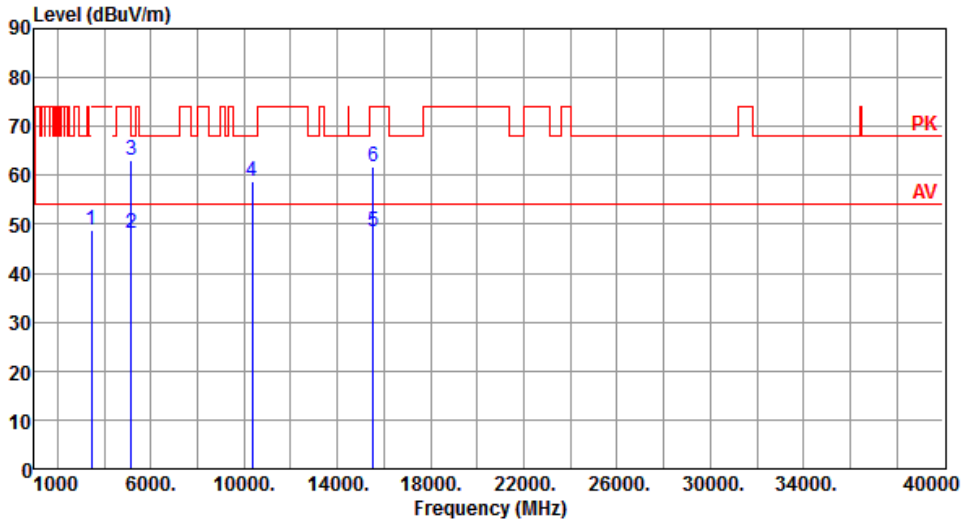


	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	52.11	36.78	40.00	-3.22	44.82	-8.04	Peak	---	---
2	62.66	36.56	40.00	-3.44	45.72	-9.16	Peak	---	---
3	69.88	34.14	40.00	-5.86	44.61	-10.47	Peak	---	---
4	167.58	30.21	43.50	-13.29	38.64	-8.43	Peak	---	---
5	204.87	27.80	43.50	-15.70	38.81	-11.01	Peak	---	---
6	290.32	26.58	46.00	-19.42	34.49	-7.91	Peak	---	---

Note 1: Emission Level (dBuV/m) = SA Reading (dBuV/m) + Factor* (dB)
*Factor includes antenna factor , cable loss and amplifier gain
Note 2: Margin (dB) = Emission level (dBuV/m) – Limit (dBuV/m).
Note 3: All spurious emissions below 30MHz are more than 20 dB below the limit.

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

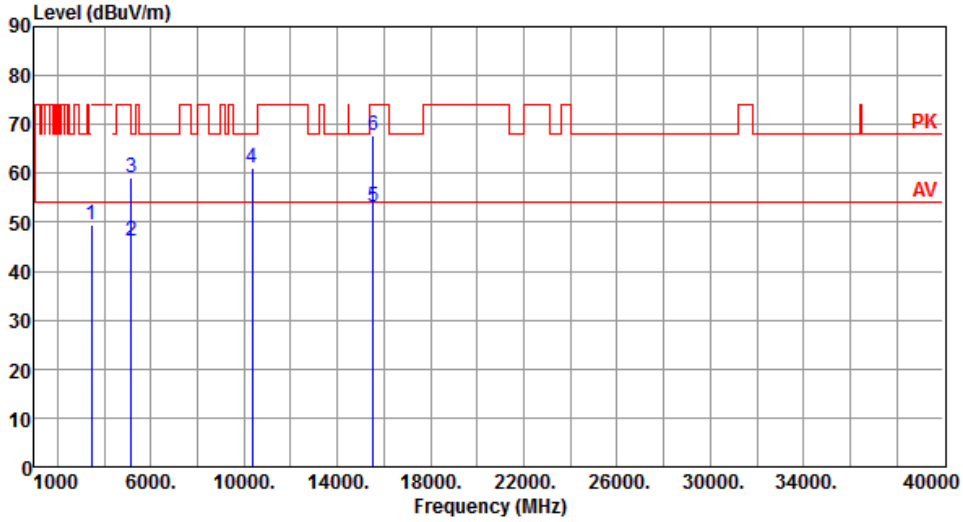
Modulation	11a	Test Freq. (MHz)	5180
Polarization	Horizontal		



	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	3453.33	48.67	68.20	-19.53	47.22	1.45	Peak	115	25
2	5150.00	48.31	54.00	-5.69	42.22	6.09	Average	100	25
3	5150.00	63.09	74.00	-10.91	57.00	6.09	Peak	100	25
4	10360.00	58.84	68.20	-9.36	43.13	15.71	Peak	100	315
5	15540.00	48.65	54.00	-5.35	32.33	16.32	Average	100	235
6	15540.00	61.74	74.00	-12.26	45.42	16.32	Peak	100	235

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

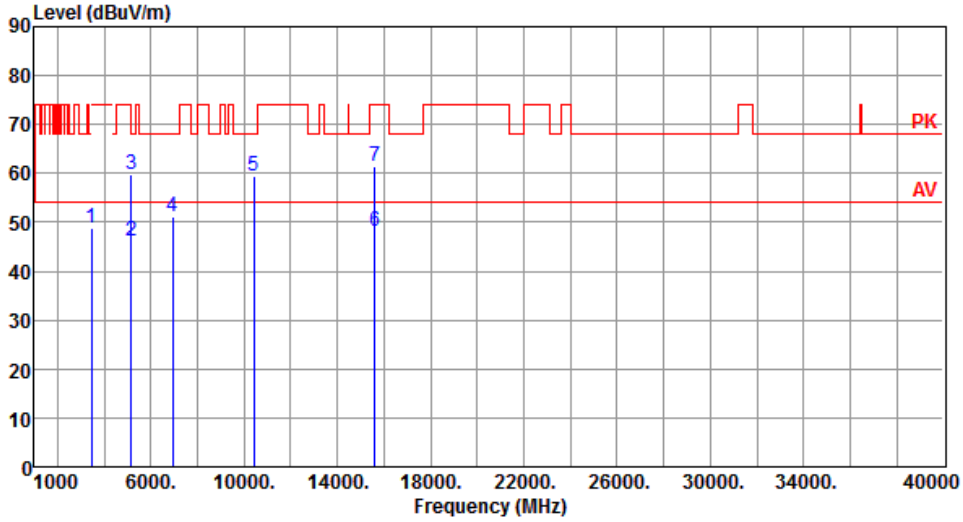
Modulation	11a	Test Freq. (MHz)	5180
Polarization	Vertical		



	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	3453.33	49.58	68.20	-18.62	48.13	1.45	Peak	100	223
2	5150.00	46.21	54.00	-7.79	40.12	6.09	Average	100	105
3	5150.00	59.21	74.00	-14.79	53.12	6.09	Peak	100	105
4	10360.00	61.25	68.20	-6.95	45.54	15.71	Peak	100	0
5	15540.00	52.98	54.00	-1.02	36.66	16.32	Average	100	12
6	15540.00	67.62	74.00	-6.38	51.30	16.32	Peak	100	12

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

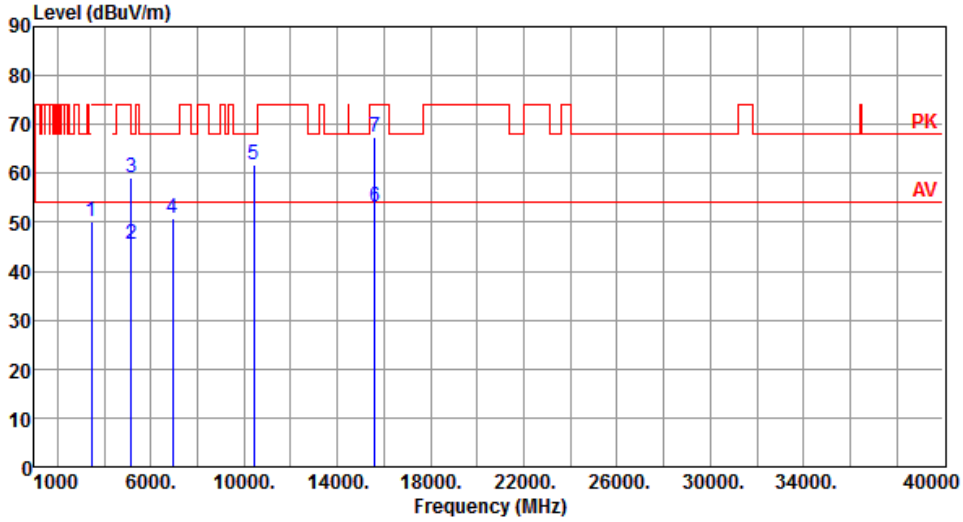
Modulation	11a	Test Freq. (MHz)	5200
Polarization	Horizontal		



	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	3466.66	48.89	68.20	-19.31	47.42	1.47	Peak	117	20
2	5150.00	46.13	54.00	-7.87	40.04	6.09	Average	273	28
3	5150.00	59.89	74.00	-14.11	53.80	6.09	Peak	273	28
4	6933.33	51.04	68.20	-17.16	40.92	10.12	Peak	100	342
5	10400.00	59.31	68.20	-8.89	43.57	15.74	Peak	100	318
6	15600.00	48.08	54.00	-5.92	31.88	16.20	Average	100	231
7	15600.00	61.46	74.00	-12.54	45.26	16.20	Peak	100	231

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

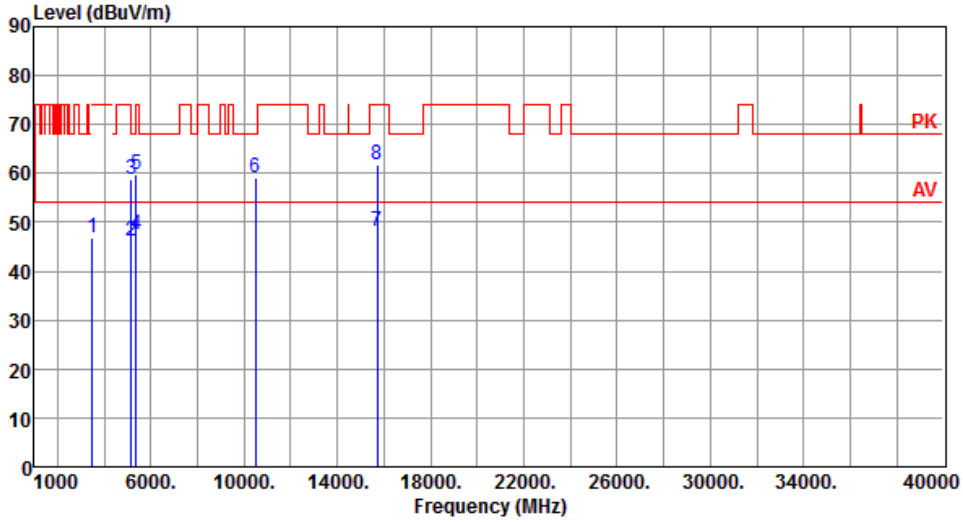
Modulation	11a	Test Freq. (MHz)	5200
Polarization	Vertical		



	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	3466.66	50.30	68.20	-17.90	48.83	1.47	Peak	100	223
2	5150.00	45.54	54.00	-8.46	39.45	6.09	Average	100	104
3	5150.00	59.03	74.00	-14.97	52.94	6.09	Peak	100	104
4	6933.33	50.73	68.20	-17.47	40.61	10.12	Peak	100	318
5	10400.00	61.65	68.20	-6.55	45.91	15.74	Peak	100	2
6	15600.00	52.99	54.00	-1.01	36.79	16.20	Average	100	13
7	15600.00	67.28	74.00	-6.72	51.08	16.20	Peak	100	13

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

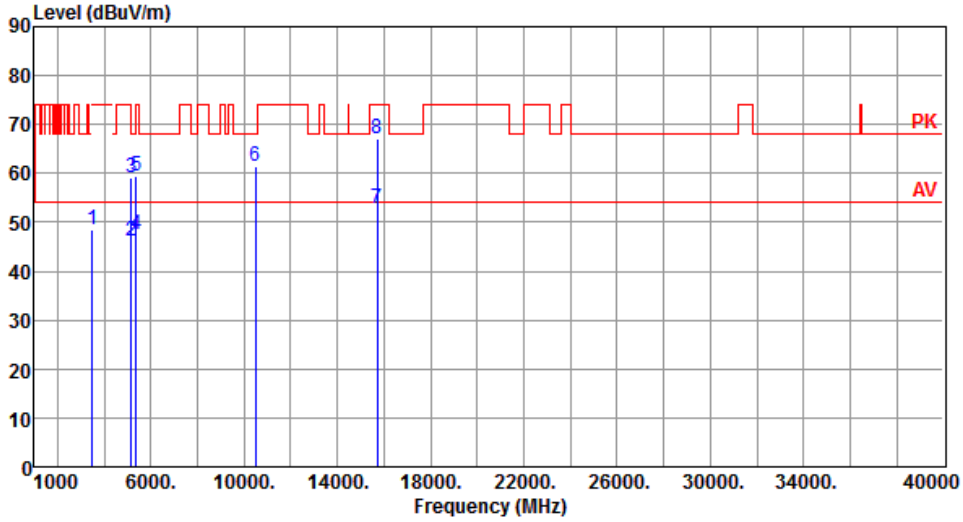
Modulation	11a	Test Freq. (MHz)	5240
Polarization	Horizontal		



	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	3493.33	46.81	68.20	-21.39	45.31	1.50	Peak	115	26
2	5150.00	46.21	54.00	-7.79	40.12	6.09	Average	100	48
3	5150.00	58.77	74.00	-15.23	52.68	6.09	Peak	100	48
4	5350.00	47.51	54.00	-6.49	41.14	6.37	Average	100	48
5	5350.00	59.73	74.00	-14.27	53.36	6.37	Peak	100	48
6	10480.00	59.13	68.20	-9.07	43.33	15.80	Peak	100	314
7	15720.00	48.10	54.00	-5.90	32.16	15.94	Average	100	234
8	15720.00	61.62	74.00	-12.38	45.68	15.94	Peak	100	234

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

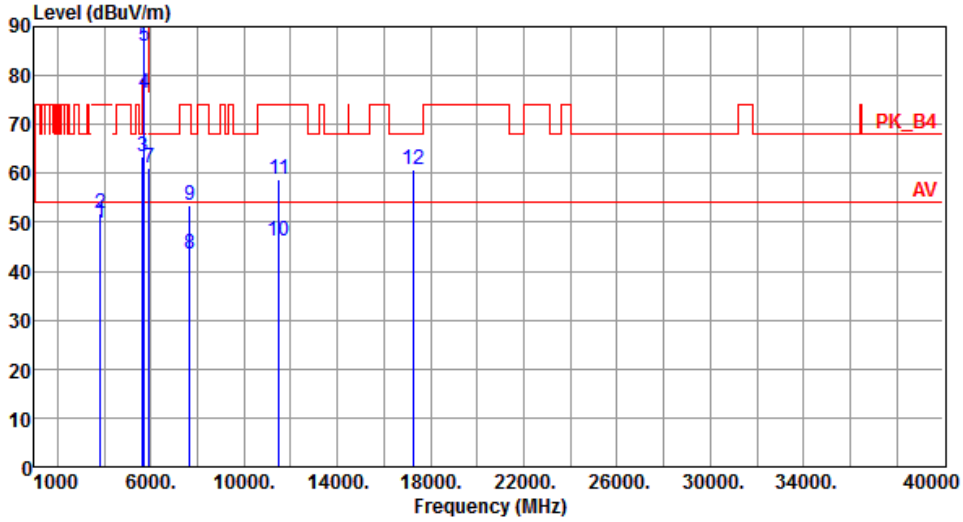
Modulation	11a	Test Freq. (MHz)	5240
Polarization	Vertical		



	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	3493.33	48.34	68.20	-19.86	46.84	1.50	Peak	100	223
2	5150.00	46.25	54.00	-7.75	40.16	6.09	Average	100	106
3	5150.00	59.11	74.00	-14.89	53.02	6.09	Peak	100	106
4	5350.00	47.40	54.00	-6.60	41.03	6.37	Average	100	106
5	5350.00	59.58	74.00	-14.42	53.21	6.37	Peak	100	106
6	10480.00	61.50	68.20	-6.70	45.70	15.80	Peak	100	1
7	15720.00	52.82	54.00	-1.18	36.88	15.94	Average	104	12
8	15720.00	67.15	74.00	-6.85	51.21	15.94	Peak	104	12

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

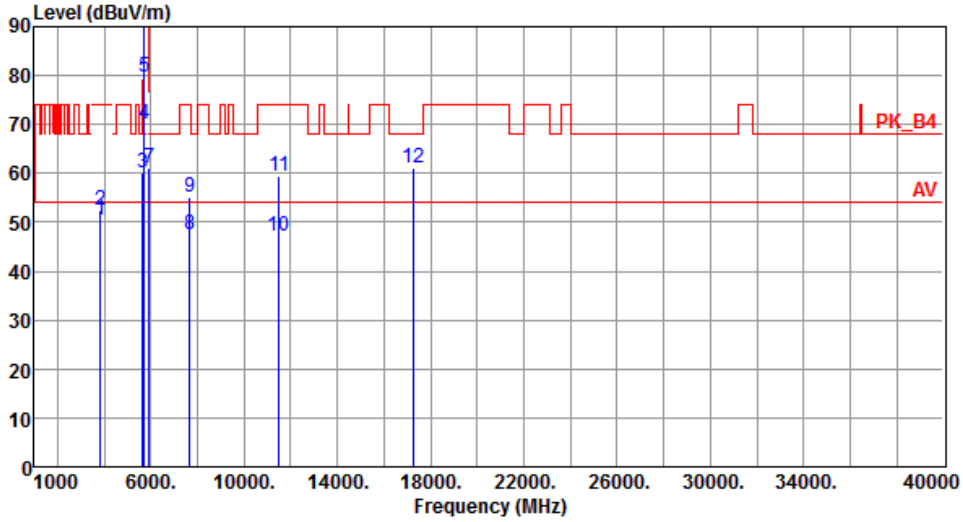
Modulation	11a	Test Freq. (MHz)	5745
Polarization	Horizontal		



	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	3830.00	49.76	54.00	-4.24	47.32	2.44	Average	125	285
2	3830.00	51.76	74.00	-22.24	49.32	2.44	Peak	125	285
3	5650.00	63.29	68.20	-4.91	56.48	6.81	Peak	100	142
4	5700.00	76.45	105.20	-28.75	69.54	6.91	Peak	100	142
5	5720.00	85.91	110.80	-24.89	78.96	6.95	Peak	100	142
6	5725.00	96.12	122.20	-26.08	89.16	6.96	Peak	100	142
7	5925.00	61.07	68.20	-7.13	53.73	7.34	Peak	100	142
8	7660.00	43.48	54.00	-10.52	32.11	11.37	Average	100	98
9	7660.00	53.37	74.00	-20.63	42.00	11.37	Peak	100	98
10	11490.00	46.12	54.00	-7.88	29.66	16.46	Average	100	239
11	11490.00	58.74	74.00	-15.26	42.28	16.46	Peak	100	239
12	17235.00	60.79	68.20	-7.41	42.48	18.31	Peak	100	30

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

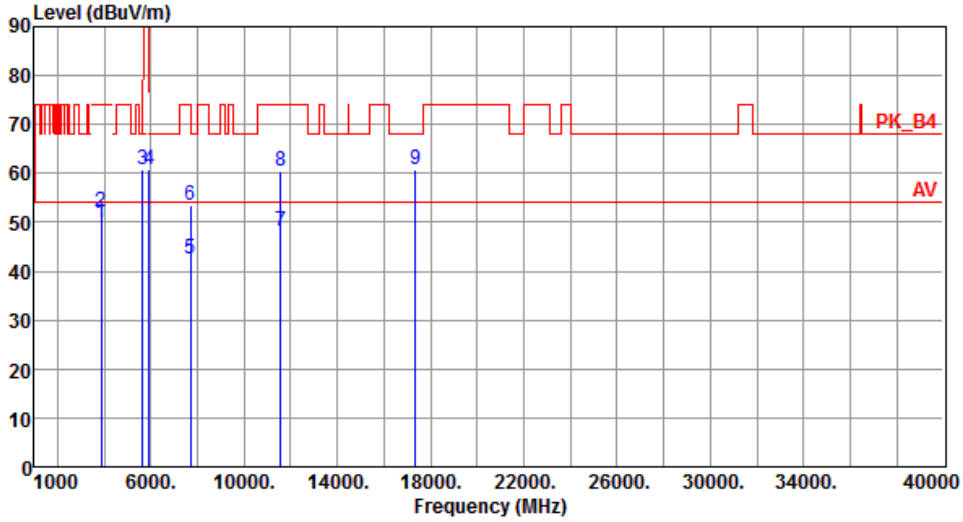
Modulation	11a	Test Freq. (MHz)	5745
Polarization	Vertical		



	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	3830.00	50.34	54.00	-3.66	47.90	2.44	Average	100	304
2	3830.00	52.32	74.00	-21.68	49.88	2.44	Peak	100	304
3	5650.00	60.06	68.20	-8.14	53.25	6.81	Peak	100	239
4	5700.00	70.14	105.20	-35.06	63.23	6.91	Peak	100	239
5	5720.00	79.78	110.80	-31.02	72.83	6.95	Peak	100	239
6	5725.00	91.17	122.20	-31.03	84.21	6.96	Peak	100	239
7	5925.00	61.00	68.20	-7.20	53.66	7.34	Peak	100	239
8	7660.00	47.37	54.00	-6.63	36.00	11.37	Average	100	355
9	7660.00	54.97	74.00	-19.03	43.60	11.37	Peak	100	355
10	11490.00	47.19	54.00	-6.81	30.73	16.46	Average	100	339
11	11490.00	59.51	74.00	-14.49	43.05	16.46	Peak	100	339
12	17235.00	61.00	68.20	-7.20	42.69	18.31	Peak	100	50

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

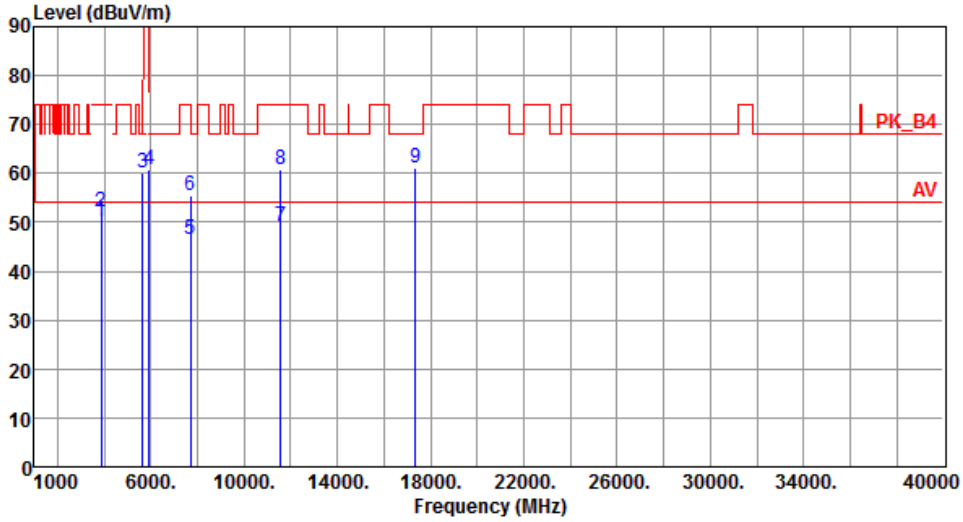
Modulation	11a	Test Freq. (MHz)	5785
Polarization	Horizontal		



	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	3856.66	49.85	54.00	-4.15	47.33	2.52	Average	126	286
2	3856.66	52.17	74.00	-21.83	49.65	2.52	Peak	126	286
3	5650.00	60.69	68.20	-7.51	53.88	6.81	Peak	100	142
4	5925.00	60.78	68.20	-7.42	53.44	7.34	Peak	100	142
5	7713.33	42.55	54.00	-11.45	31.20	11.35	Average	100	96
6	7713.33	53.44	74.00	-20.56	42.09	11.35	Peak	100	96
7	11570.00	48.11	54.00	-5.89	31.75	16.36	Average	100	241
8	11570.00	60.37	74.00	-13.63	44.01	16.36	Peak	100	241
9	17355.00	60.61	68.20	-7.59	41.94	18.67	Peak	100	20

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

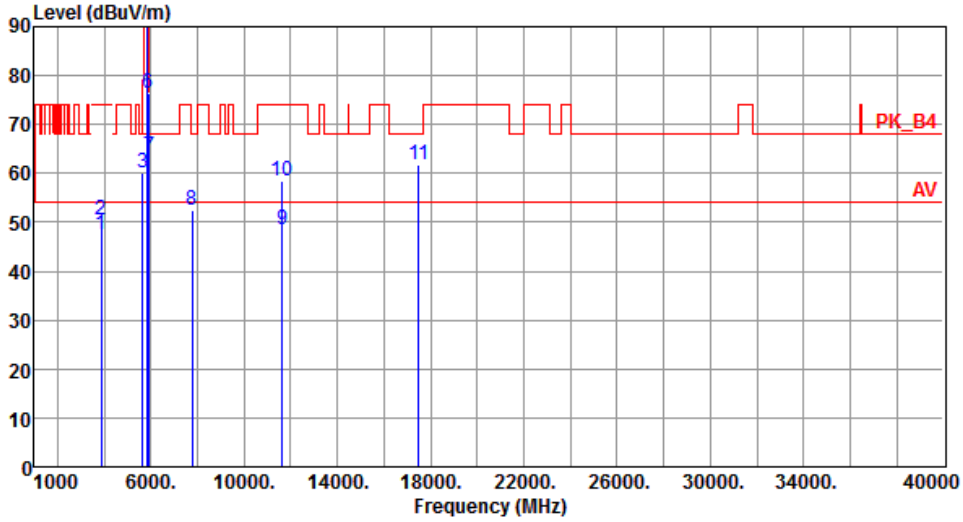
Modulation	11a	Test Freq. (MHz)	5785
Polarization	Vertical		



	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	3856.66	50.27	54.00	-3.73	47.75	2.52	Average	100	304
2	3856.66	52.27	74.00	-21.73	49.75	2.52	Peak	100	304
3	5650.00	59.95	68.20	-8.25	53.14	6.81	Peak	102	240
4	5925.00	60.88	68.20	-7.32	53.54	7.34	Peak	102	240
5	7713.33	46.49	54.00	-7.51	35.14	11.35	Average	100	350
6	7713.33	55.37	74.00	-18.63	44.02	11.35	Peak	100	350
7	11570.00	49.12	54.00	-4.88	32.76	16.36	Average	100	319
8	11570.00	60.75	74.00	-13.25	44.39	16.36	Peak	100	319
9	17355.00	61.22	68.20	-6.98	42.55	18.67	Peak	100	30

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

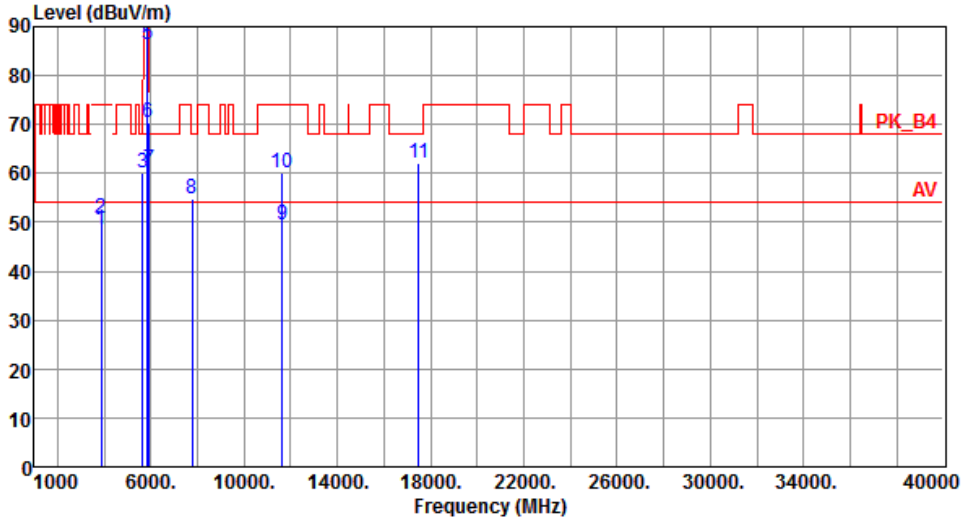
Modulation	11a	Test Freq. (MHz)	5825
Polarization	Horizontal		



	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	3883.33	47.39	54.00	-6.61	44.79	2.60	Average	118	278
2	3883.33	50.45	74.00	-23.55	47.85	2.60	Peak	118	278
3	5650.00	60.02	68.20	-8.18	53.21	6.81	Peak	100	83
4	5850.00	98.16	122.20	-24.04	90.96	7.20	Peak	100	83
5	5855.00	93.52	110.80	-17.28	86.30	7.22	Peak	100	83
6	5875.00	76.46	105.20	-28.74	69.21	7.25	Peak	100	83
7	5925.00	63.43	68.20	-4.77	56.09	7.34	Peak	100	83
8	7766.66	52.60	68.20	-15.60	41.25	11.35	Peak	100	97
9	11650.00	48.52	54.00	-5.48	32.27	16.25	Average	100	240
10	11650.00	58.52	74.00	-15.48	42.27	16.25	Peak	100	240
11	17475.00	61.90	68.20	-6.30	42.85	19.05	Peak	100	30

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

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

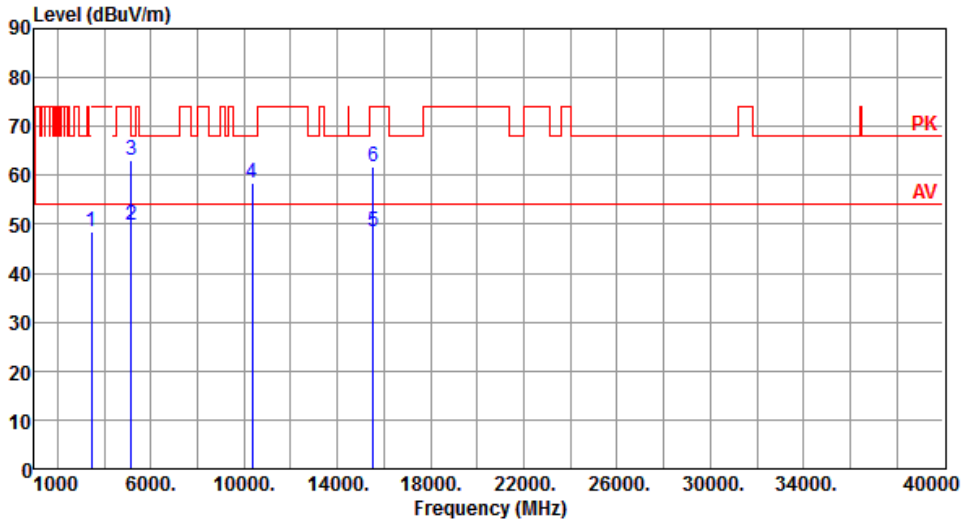


	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	3883.33	48.42	54.00	-5.58	45.82	2.60	Average	100	307
2	3883.33	50.74	74.00	-23.26	48.14	2.60	Peak	100	307
3	5650.00	59.95	68.20	-8.25	53.14	6.81	Peak	100	239
4	5850.00	91.06	122.20	-31.14	83.86	7.20	Peak	100	239
5	5855.00	86.42	110.80	-24.38	79.20	7.22	Peak	100	239
6	5875.00	70.48	105.20	-34.72	63.23	7.25	Peak	100	239
7	5925.00	60.61	68.20	-7.59	53.27	7.34	Peak	100	239
8	7766.66	54.78	68.20	-13.42	43.43	11.35	Peak	100	353
9	11650.00	49.40	54.00	-4.60	33.15	16.25	Average	100	316
10	11650.00	60.03	74.00	-13.97	43.78	16.25	Peak	100	316
11	17475.00	62.11	68.20	-6.09	43.06	19.05	Peak	100	200

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

3.5.6 Transmitter Radiated Unwanted Emissions (Above 1GHz) for VHT20

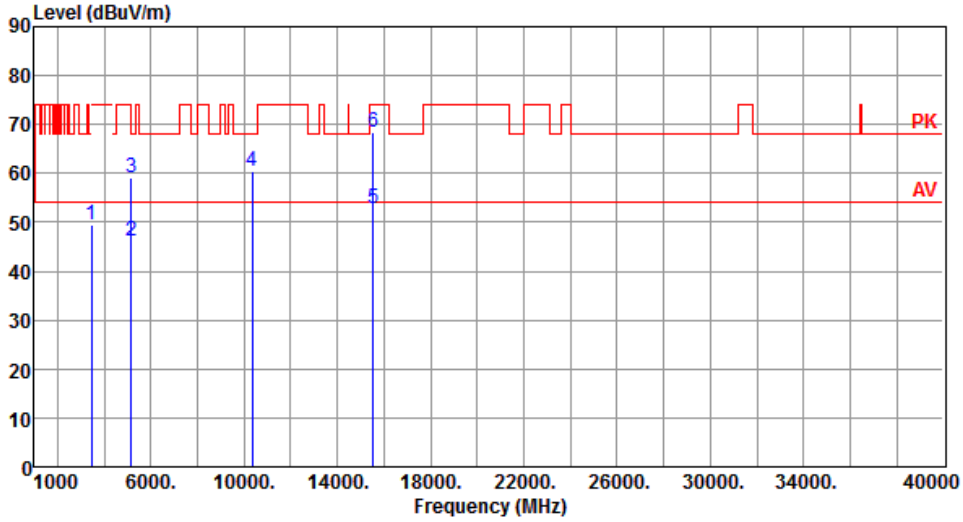
Modulation	VHT20	**Test Freq. (MHz)**	5180
Polarization	Horizontal		



	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	3453.33	48.59	68.20	-19.61	47.14	1.45	Peak	113	24
2	5150.00	49.87	54.00	-4.13	43.78	6.09	Average	100	48
3	5150.00	63.18	74.00	-10.82	57.09	6.09	Peak	100	48
4	10360.00	58.57	68.20	-9.63	42.86	15.71	Peak	100	314
5	15540.00	48.54	54.00	-5.46	32.22	16.32	Average	100	232
6	15540.00	61.74	74.00	-12.26	45.42	16.32	Peak	100	232

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

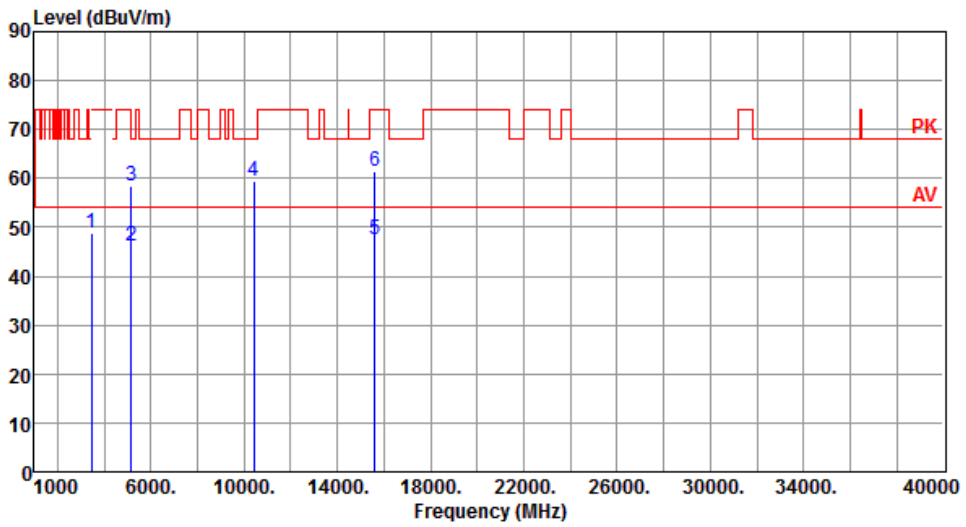
Modulation	VHT20	Test Freq. (MHz)	5180
Polarization	Vertical		



	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	3453.33	49.41	68.20	-18.79	47.96	1.45	Peak	100	224
2	5150.00	46.32	54.00	-7.68	40.23	6.09	Average	100	103
3	5150.00	59.25	74.00	-14.75	53.16	6.09	Peak	100	103
4	10360.00	60.34	68.20	-7.86	44.63	15.71	Peak	100	0
5	15540.00	52.90	54.00	-1.10	36.58	16.32	Average	100	11
6	15540.00	68.26	74.00	-5.74	51.94	16.32	Peak	100	11

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

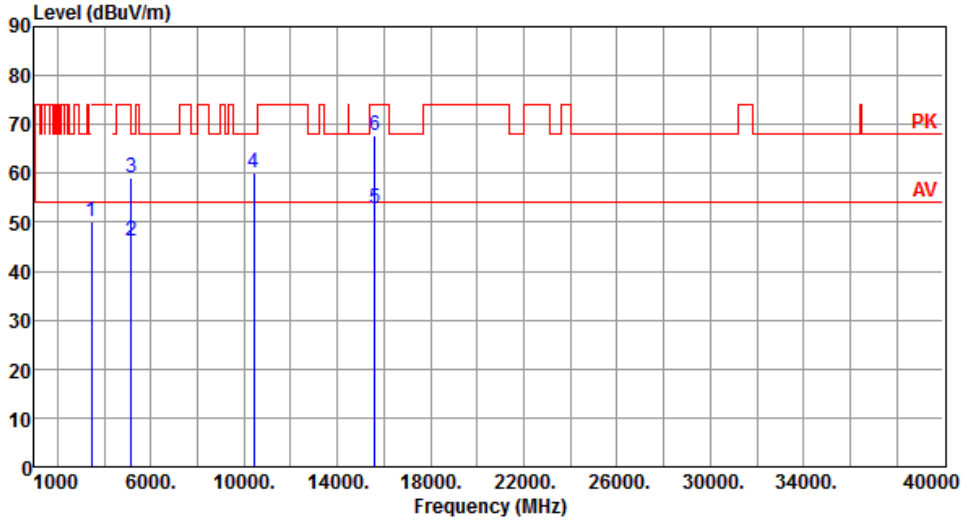
Modulation	VHT20	Test Freq. (MHz)	5200
Polarization	Horizontal		



	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	3466.66	48.80	68.20	-19.40	47.33	1.47	Peak	115	19
2	5150.00	46.11	54.00	-7.89	40.02	6.09	Average	270	24
3	5150.00	58.59	74.00	-15.41	52.50	6.09	Peak	270	24
4	10400.00	59.40	68.20	-8.80	43.66	15.74	Peak	100	316
5	15600.00	47.46	54.00	-6.54	31.26	16.20	Average	100	233
6	15600.00	61.34	74.00	-12.66	45.14	16.20	Peak	100	233

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

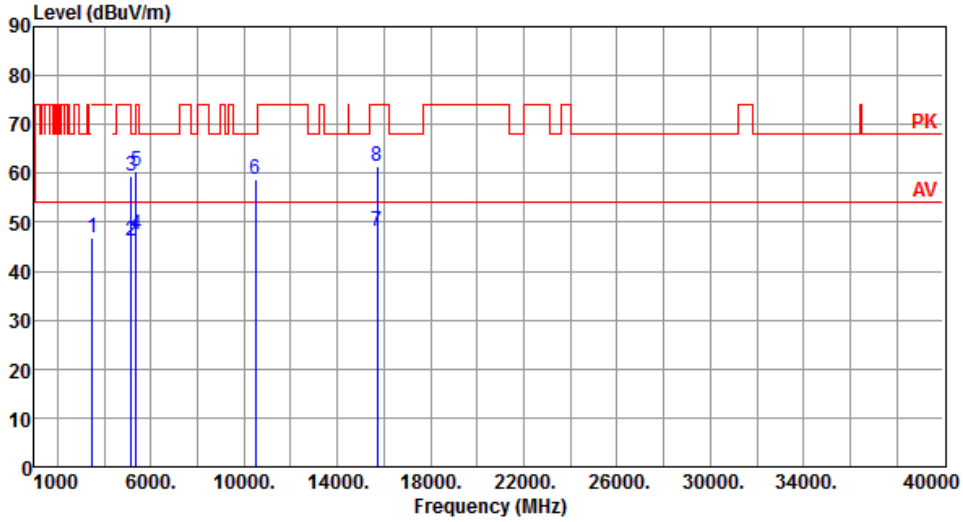
Modulation	VHT20	Test Freq. (MHz)	5200
Polarization	Vertical		



	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	3466.66	50.18	68.20	-18.02	48.71	1.47	Peak	100	220
2	5150.00	46.22	54.00	-7.78	40.13	6.09	Average	100	103
3	5150.00	59.11	74.00	-14.89	53.02	6.09	Peak	100	103
4	10400.00	60.00	68.20	-8.20	44.26	15.74	Peak	100	2
5	15600.00	52.88	54.00	-1.12	36.68	16.20	Average	100	10
6	15600.00	67.59	74.00	-6.41	51.39	16.20	Peak	100	10

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

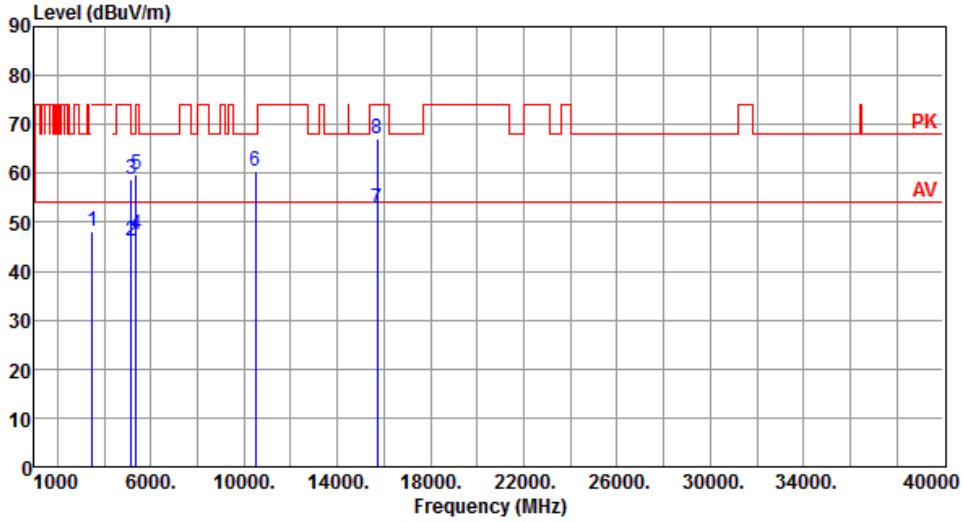
Modulation	VHT20	Test Freq. (MHz)	5240
Polarization	Horizontal		



	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	3493.33	46.68	68.20	-21.52	45.18	1.50	Peak	113	24
2	5150.00	46.21	54.00	-7.79	40.12	6.09	Average	100	56
3	5150.00	59.58	74.00	-14.42	53.49	6.09	Peak	100	56
4	5350.00	47.58	54.00	-6.42	41.21	6.37	Average	100	56
5	5350.00	60.49	74.00	-13.51	54.12	6.37	Peak	100	56
6	10480.00	58.77	68.20	-9.43	42.97	15.80	Peak	100	313
7	15720.00	48.18	54.00	-5.82	32.24	15.94	Average	100	236
8	15720.00	61.29	74.00	-12.71	45.35	15.94	Peak	100	236

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

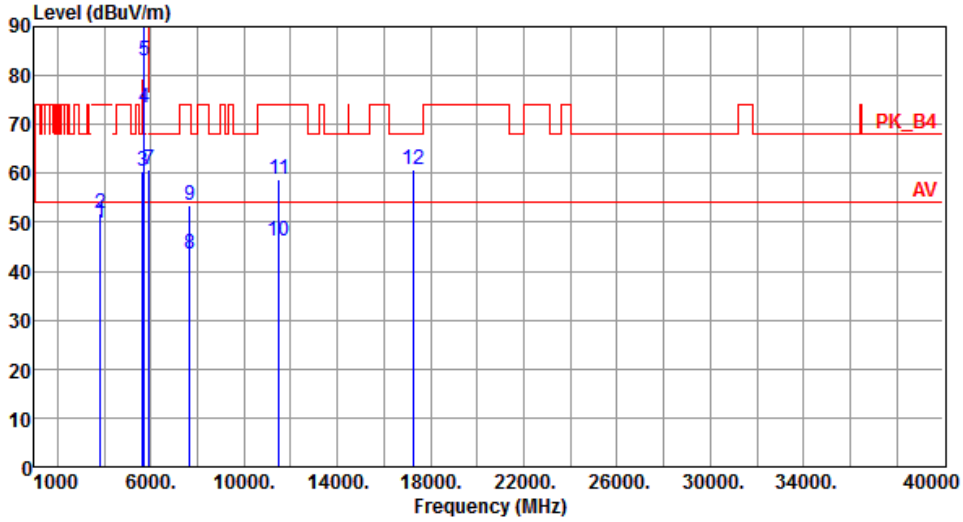
Modulation	VHT20	Test Freq. (MHz)	5240
Polarization	Vertical		



	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	3493.33	48.25	68.20	-19.95	46.75	1.50	Peak	100	221
2	5150.00	46.11	54.00	-7.89	40.02	6.09	Average	100	105
3	5150.00	58.77	74.00	-15.23	52.68	6.09	Peak	100	105
4	5350.00	47.41	54.00	-6.59	41.04	6.37	Average	100	105
5	5350.00	59.84	74.00	-14.16	53.47	6.37	Peak	100	105
6	10480.00	60.46	68.20	-7.74	44.66	15.80	Peak	100	1
7	15720.00	52.82	54.00	-1.18	36.88	15.94	Average	100	10
8	15720.00	66.98	74.00	-7.02	51.04	15.94	Peak	100	10

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

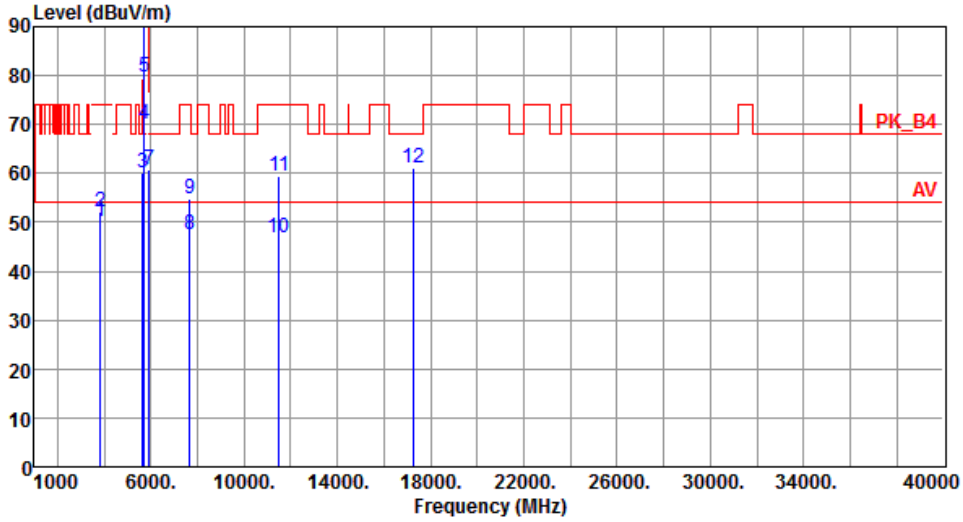
Modulation	VHT20	Test Freq. (MHz)	5745
Polarization	Horizontal		



	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	3830.00	49.70	54.00	-4.30	47.26	2.44	Average	124	284
2	3830.00	51.71	74.00	-22.29	49.27	2.44	Peak	124	284
3	5650.00	60.50	68.20	-7.70	53.69	6.81	Peak	100	143
4	5700.00	73.50	105.20	-31.70	66.59	6.91	Peak	100	143
5	5720.00	82.89	110.80	-27.91	75.94	6.95	Peak	100	143
6	5725.00	94.86	122.20	-27.34	87.90	6.96	Peak	100	143
7	5925.00	60.69	68.20	-7.51	53.35	7.34	Peak	100	143
8	7660.00	43.50	54.00	-10.50	32.13	11.37	Average	100	99
9	7660.00	53.37	74.00	-20.63	42.00	11.37	Peak	100	99
10	11490.00	46.03	54.00	-7.97	29.57	16.46	Average	100	240
11	11490.00	58.77	74.00	-15.23	42.31	16.46	Peak	100	240
12	17235.00	60.87	68.20	-7.33	42.56	18.31	Peak	100	50

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

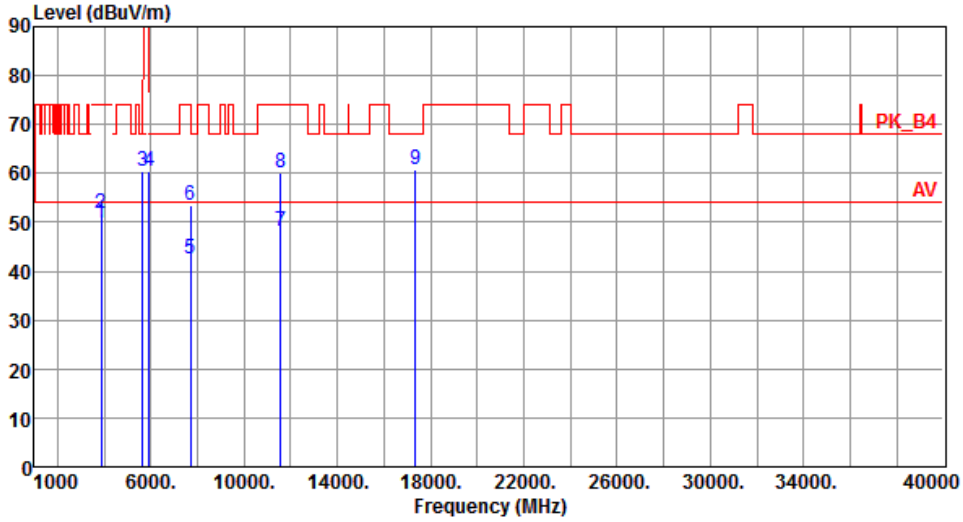
Modulation	VHT20	Test Freq. (MHz)	5745
Polarization	Vertical		



	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	3830.00	50.29	54.00	-3.71	47.85	2.44	Average	100	305
2	3830.00	52.23	74.00	-21.77	49.79	2.44	Peak	100	305
3	5650.00	60.12	68.20	-8.08	53.31	6.81	Peak	100	241
4	5700.00	70.22	105.20	-34.98	63.31	6.91	Peak	100	241
5	5720.00	79.54	110.80	-31.26	72.59	6.95	Peak	100	241
6	5725.00	91.13	122.20	-31.07	84.17	6.96	Peak	100	241
7	5925.00	60.90	68.20	-7.30	53.56	7.34	Peak	100	241
8	7660.00	47.41	54.00	-6.59	36.04	11.37	Average	100	354
9	7660.00	54.95	74.00	-19.05	43.58	11.37	Peak	100	354
10	11490.00	46.77	54.00	-7.23	30.31	16.46	Average	100	340
11	11490.00	59.44	74.00	-14.56	42.98	16.46	Peak	100	340
12	17235.00	61.00	68.20	-7.20	42.69	18.31	Peak	100	50

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

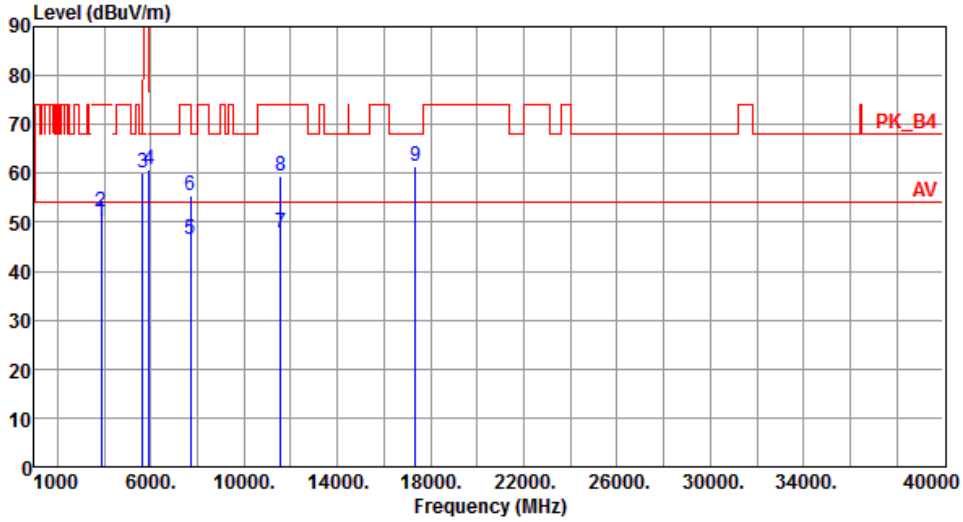
Modulation	VHT20	Test Freq. (MHz)	5785
Polarization	Horizontal		



	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	3856.66	49.78	54.00	-4.22	47.26	2.52	Average	123	282
2	3856.66	51.93	74.00	-22.07	49.41	2.52	Peak	123	282
3	5650.00	60.31	68.20	-7.89	53.50	6.81	Peak	114	69
4	5925.00	60.30	68.20	-7.90	52.96	7.34	Peak	114	69
5	7713.33	42.67	54.00	-11.33	31.32	11.35	Average	100	97
6	7713.33	53.49	74.00	-20.51	42.14	11.35	Peak	100	97
7	11570.00	48.05	54.00	-5.95	31.69	16.36	Average	100	238
8	11570.00	60.21	74.00	-13.79	43.85	16.36	Peak	100	238
9	17355.00	60.71	68.20	-7.49	42.04	18.67	Peak	100	30

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

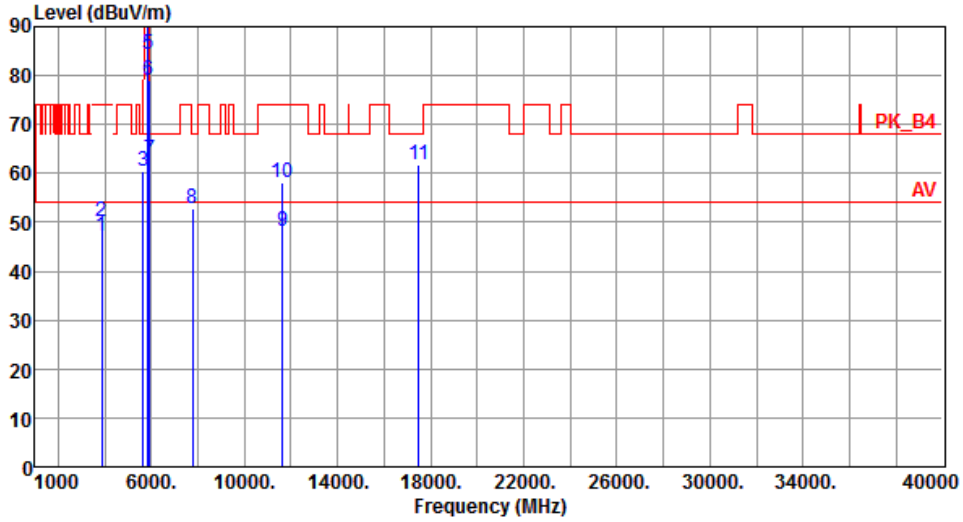
Modulation	VHT20	Test Freq. (MHz)	5785
Polarization	Vertical		



	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	3856.66	50.21	54.00	-3.79	47.69	2.52	Average	100	304
2	3856.66	52.18	74.00	-21.82	49.66	2.52	Peak	100	304
3	5650.00	60.06	68.20	-8.14	53.25	6.81	Peak	100	238
4	5925.00	60.76	68.20	-7.44	53.42	7.34	Peak	100	238
5	7713.33	46.47	54.00	-7.53	35.12	11.35	Average	100	348
6	7713.33	55.34	74.00	-18.66	43.99	11.35	Peak	100	348
7	11570.00	47.95	54.00	-6.05	31.59	16.36	Average	100	320
8	11570.00	59.57	74.00	-14.43	43.21	16.36	Peak	100	320
9	17355.00	61.29	68.20	-6.91	42.62	18.67	Peak	100	30

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

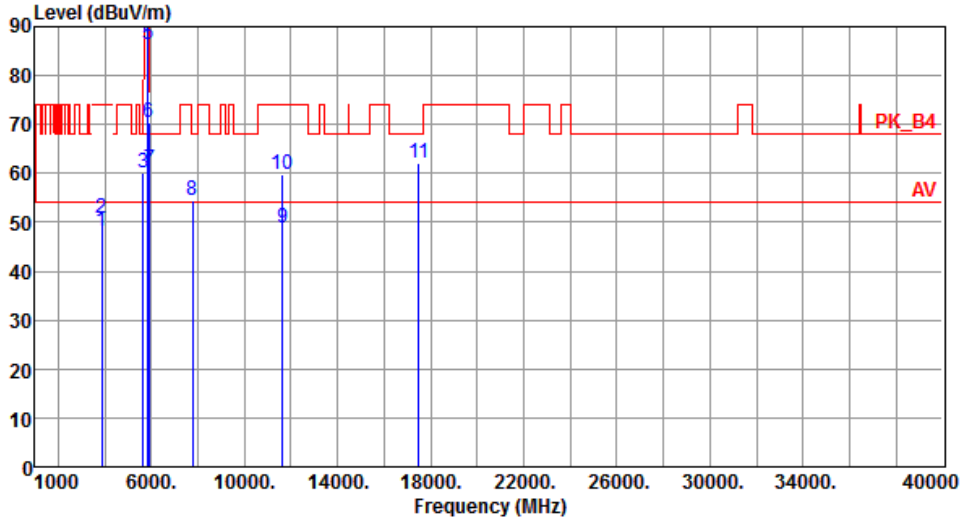
Modulation	VHT20	Test Freq. (MHz)	5825
Polarization	Horizontal		



	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	3883.33	47.16	54.00	-6.84	44.56	2.60	Average	117	280
2	3883.33	50.25	74.00	-23.75	47.65	2.60	Peak	117	280
3	5650.00	60.36	68.20	-7.84	53.55	6.81	Peak	100	65
4	5850.00	91.37	122.20	-30.83	84.17	7.20	Peak	100	65
5	5855.00	84.34	110.80	-26.46	77.12	7.22	Peak	100	65
6	5875.00	78.96	105.20	-26.24	71.71	7.25	Peak	100	65
7	5925.00	62.77	68.20	-5.43	55.43	7.34	Peak	100	65
8	7766.66	52.66	68.20	-15.54	41.31	11.35	Peak	100	99
9	11650.00	48.10	54.00	-5.90	31.85	16.25	Average	100	237
10	11650.00	58.11	74.00	-15.89	41.86	16.25	Peak	100	237
11	17475.00	61.84	68.20	-6.36	42.79	19.05	Peak	100	70

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

Modulation	VHT20	Test Freq. (MHz)	5825
Polarization	Vertical		

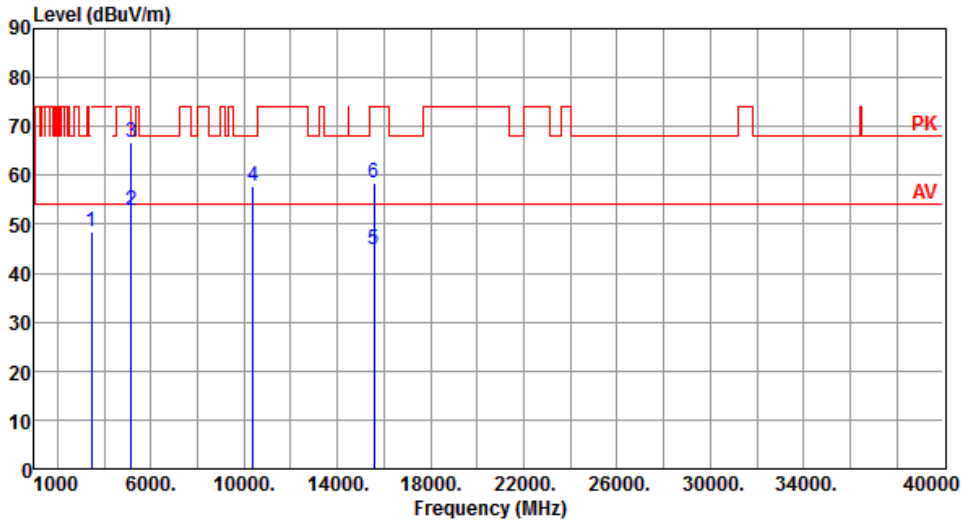


	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	3883.33	48.32	54.00	-5.68	45.72	2.60	Average	100	306
2	3883.33	50.72	74.00	-23.28	48.12	2.60	Peak	100	306
3	5650.00	60.08	68.20	-8.12	53.27	6.81	Peak	100	242
4	5850.00	90.77	122.20	-31.43	83.57	7.20	Peak	100	242
5	5855.00	86.38	110.80	-24.42	79.16	7.22	Peak	100	242
6	5875.00	70.42	105.20	-34.78	63.17	7.25	Peak	100	242
7	5925.00	60.72	68.20	-7.48	53.38	7.34	Peak	100	242
8	7766.66	54.58	68.20	-13.62	43.23	11.35	Peak	100	352
9	11650.00	48.94	54.00	-5.06	32.69	16.25	Average	100	318
10	11650.00	59.87	74.00	-14.13	43.62	16.25	Peak	100	318
11	17475.00	62.17	68.20	-6.03	43.12	19.05	Peak	100	250

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

3.5.7 Transmitter Radiated Unwanted Emissions (Above 1GHz) for VHT40

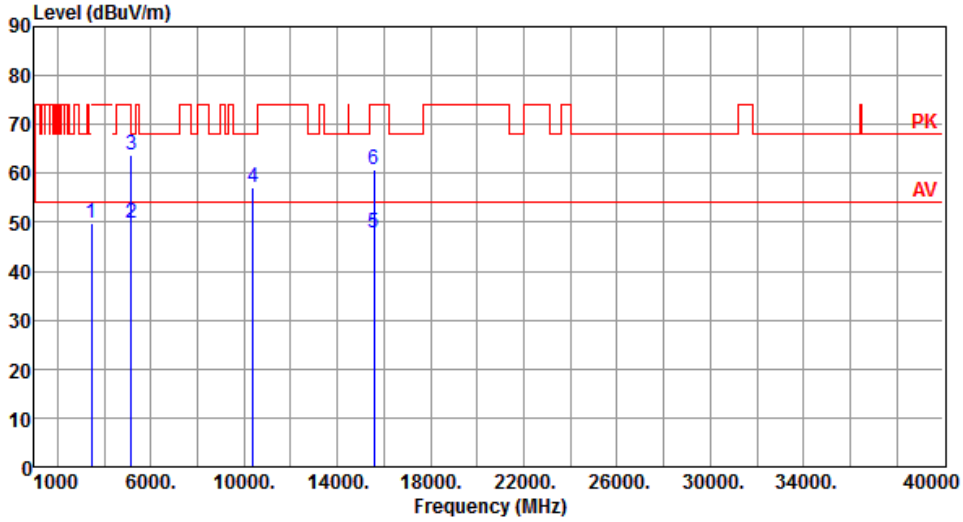
Modulation	VHT40	**Test Freq. (MHz)**	5190
Polarization	Horizontal		



	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	3460.00	48.59	68.20	-19.61	47.12	1.47	Peak	113	23
2	5150.00	52.84	54.00	-1.16	46.75	6.09	Average	100	17
3	5150.00	66.69	74.00	-7.31	60.60	6.09	Peak	100	17
4	10380.00	57.80	68.20	-10.40	42.07	15.73	Peak	100	30
5	15570.00	44.71	54.00	-9.29	28.45	16.26	Average	100	50
6	15570.00	58.52	74.00	-15.48	42.26	16.26	Peak	100	50

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

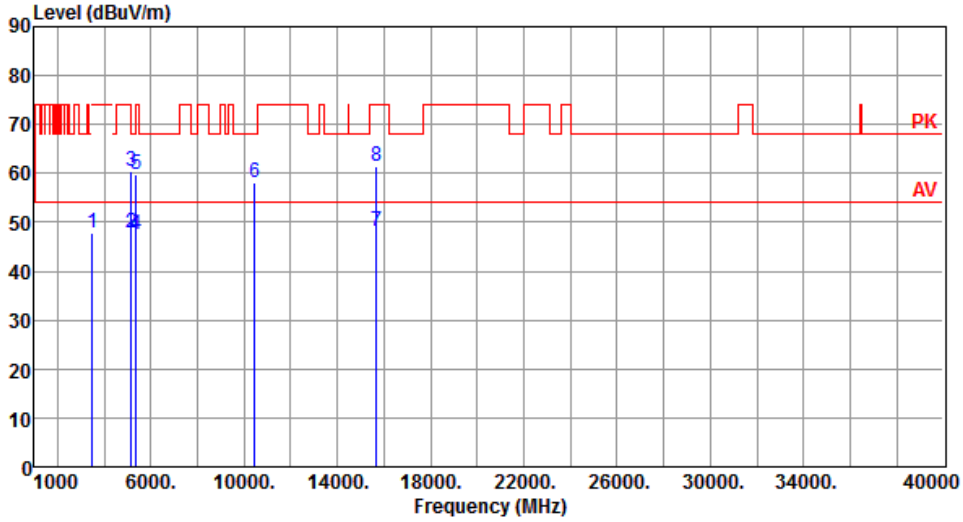
Modulation	VHT40	Test Freq. (MHz)	5190
Polarization	Vertical		



	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	3460.00	49.68	68.20	-18.52	48.21	1.47	Peak	100	223
2	5150.00	49.68	54.00	-4.32	43.59	6.09	Average	100	103
3	5150.00	63.72	74.00	-10.28	57.63	6.09	Peak	100	103
4	10380.00	57.05	68.20	-11.15	41.32	15.73	Peak	100	30
5	15570.00	47.68	54.00	-6.32	31.42	16.26	Average	100	60
6	15570.00	60.64	74.00	-13.36	44.38	16.26	Peak	100	60

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

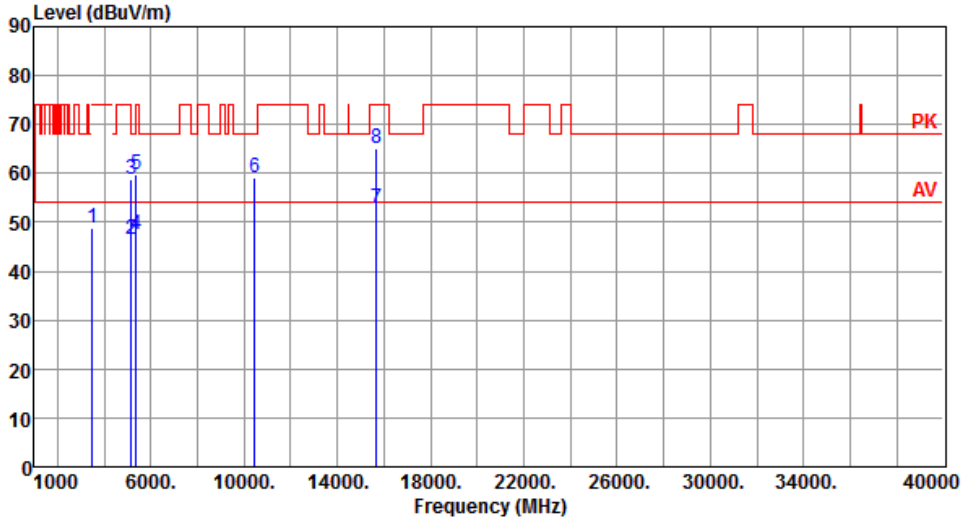
Modulation	VHT40	Test Freq. (MHz)	5230
Polarization	Horizontal		



	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	3486.66	47.67	68.20	-20.53	46.17	1.50	Peak	119	17
2	5150.00	47.69	54.00	-6.31	41.60	6.09	Average	100	30
3	5150.00	60.58	74.00	-13.42	54.49	6.09	Peak	100	30
4	5350.00	47.61	54.00	-6.39	41.24	6.37	Average	100	30
5	5350.00	59.84	74.00	-14.16	53.47	6.37	Peak	100	30
6	10460.00	58.10	68.20	-10.10	42.31	15.79	Peak	100	20
7	15690.00	48.25	54.00	-5.75	32.24	16.01	Average	100	234
8	15690.00	61.39	74.00	-12.61	45.38	16.01	Peak	100	234

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

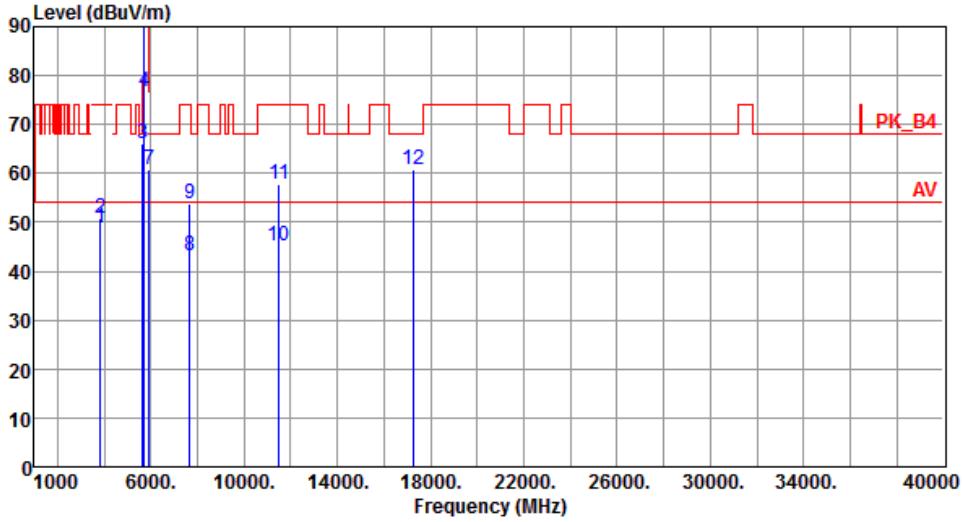
Modulation	VHT40	Test Freq. (MHz)	5230
Polarization	Vertical		



	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	3486.66	48.73	68.20	-19.47	47.23	1.50	Peak	100	222
2	5150.00	46.41	54.00	-7.59	40.32	6.09	Average	100	107
3	5150.00	58.76	74.00	-15.24	52.67	6.09	Peak	100	107
4	5350.00	47.44	54.00	-6.56	41.07	6.37	Average	100	107
5	5350.00	59.79	74.00	-14.21	53.42	6.37	Peak	100	107
6	10460.00	59.24	68.20	-8.96	43.45	15.79	Peak	100	10
7	15690.00	52.87	54.00	-1.13	36.86	16.01	Average	100	14
8	15690.00	65.25	74.00	-8.75	49.24	16.01	Peak	100	14

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

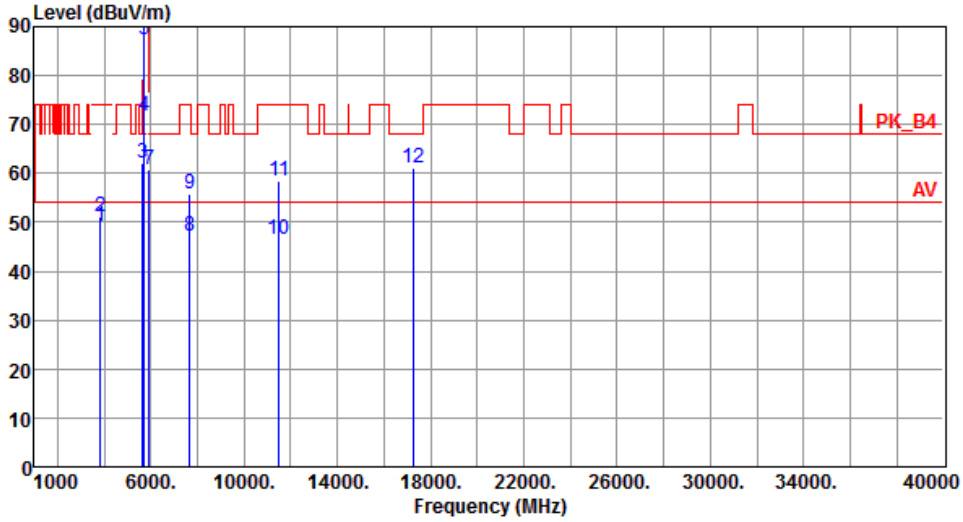
Modulation	VHT40	Test Freq. (MHz)	5755
Polarization	Horizontal		



	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	3836.66	48.78	54.00	-5.22	46.31	2.47	Average	100	284
2	3836.66	50.87	74.00	-23.13	48.40	2.47	Peak	100	284
3	5650.00	65.93	68.20	-2.27	59.12	6.81	Peak	100	139
4	5700.00	76.75	105.20	-28.45	69.84	6.91	Peak	100	139
5	5720.00	92.25	110.80	-18.55	85.30	6.95	Peak	100	139
6	5725.00	92.45	122.20	-29.75	85.49	6.96	Peak	100	139
7	5925.00	60.64	68.20	-7.56	53.30	7.34	Peak	100	139
8	7673.33	43.05	54.00	-10.95	31.69	11.36	Average	100	99
9	7673.33	53.73	74.00	-20.27	42.37	11.36	Peak	100	99
10	11510.00	45.09	54.00	-8.91	28.64	16.45	Average	100	30
11	11510.00	57.83	74.00	-16.17	41.38	16.45	Peak	100	30
12	17265.00	60.87	68.20	-7.33	42.47	18.40	Peak	100	50

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

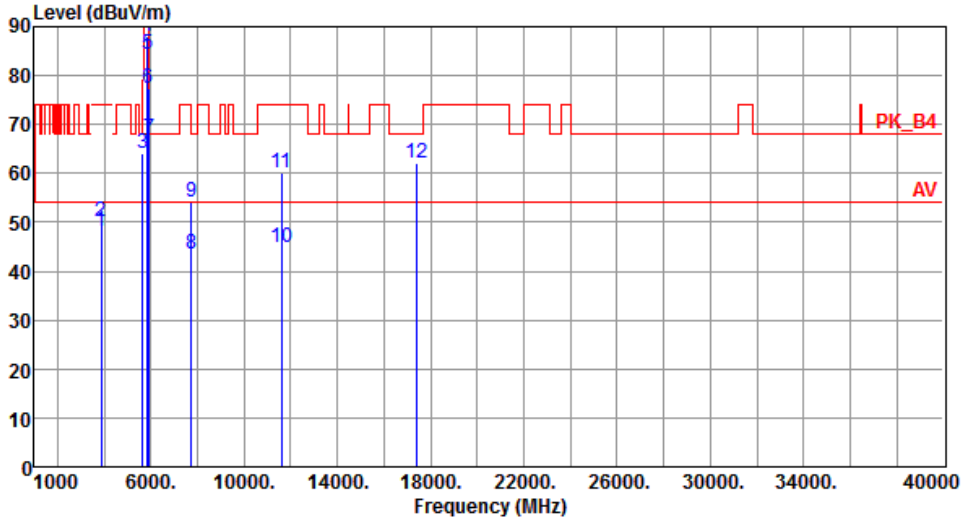
Modulation	VHT40	Test Freq. (MHz)	5755
Polarization	Vertical		



	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	3836.66	49.28	54.00	-4.72	46.81	2.47	Average	100	304
2	3836.66	51.19	74.00	-22.81	48.72	2.47	Peak	100	304
3	5650.00	62.20	68.20	-6.00	55.39	6.81	Peak	100	238
4	5700.00	71.60	105.20	-33.60	64.69	6.91	Peak	100	238
5	5720.00	87.18	110.80	-23.62	80.23	6.95	Peak	100	238
6	5725.00	92.19	122.20	-30.01	85.23	6.96	Peak	100	238
7	5925.00	60.61	68.20	-7.59	53.27	7.34	Peak	100	238
8	7673.33	47.25	54.00	-6.75	35.89	11.36	Average	100	349
9	7673.33	55.68	74.00	-18.32	44.32	11.36	Peak	100	349
10	11510.00	46.58	54.00	-7.42	30.13	16.45	Average	100	320
11	11510.00	58.61	74.00	-15.39	42.16	16.45	Peak	100	320
12	17265.00	60.94	68.20	-7.26	42.54	18.40	Peak	100	200

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

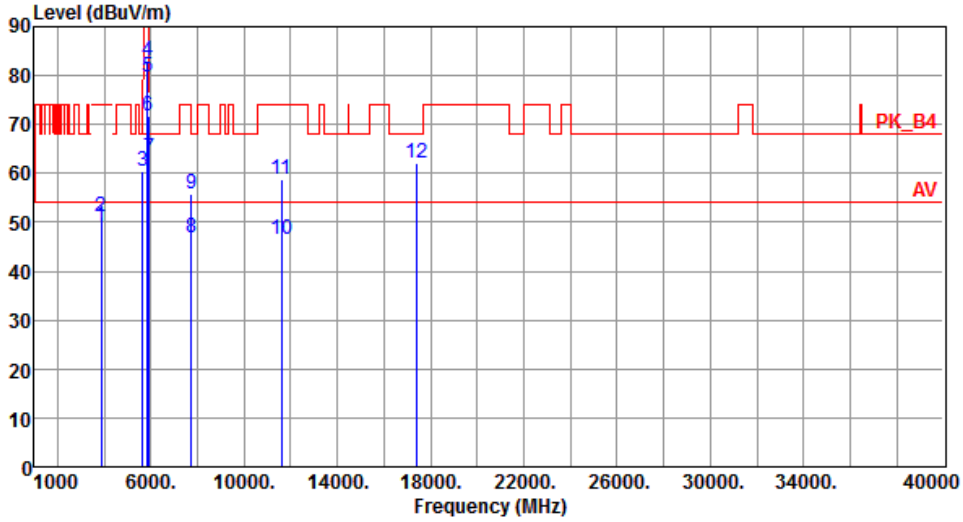
Modulation	VHT40	Test Freq. (MHz)	5795
Polarization	Horizontal		



	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	3863.33	48.10	54.00	-5.90	45.57	2.53	Average	113	284
2	3863.33	50.22	74.00	-23.78	47.69	2.53	Peak	113	284
3	5650.00	64.15	68.20	-4.05	57.34	6.81	Peak	100	64
4	5850.00	87.93	122.20	-34.27	80.73	7.20	Peak	100	64
5	5855.00	84.27	110.80	-26.53	77.05	7.22	Peak	100	64
6	5875.00	77.22	105.20	-27.98	69.97	7.25	Peak	100	64
7	5925.00	67.04	68.20	-1.16	59.70	7.34	Peak	100	64
8	7726.66	43.64	54.00	-10.36	32.28	11.36	Average	100	97
9	7726.66	54.04	74.00	-19.96	42.68	11.36	Peak	100	97
10	11590.00	44.97	54.00	-9.03	28.63	16.34	Average	100	30
11	11590.00	59.98	74.00	-14.02	43.64	16.34	Peak	100	30
12	17385.00	62.08	68.20	-6.12	43.31	18.77	Peak	100	50

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

Modulation	VHT40	Test Freq. (MHz)	5795
Polarization	Vertical		

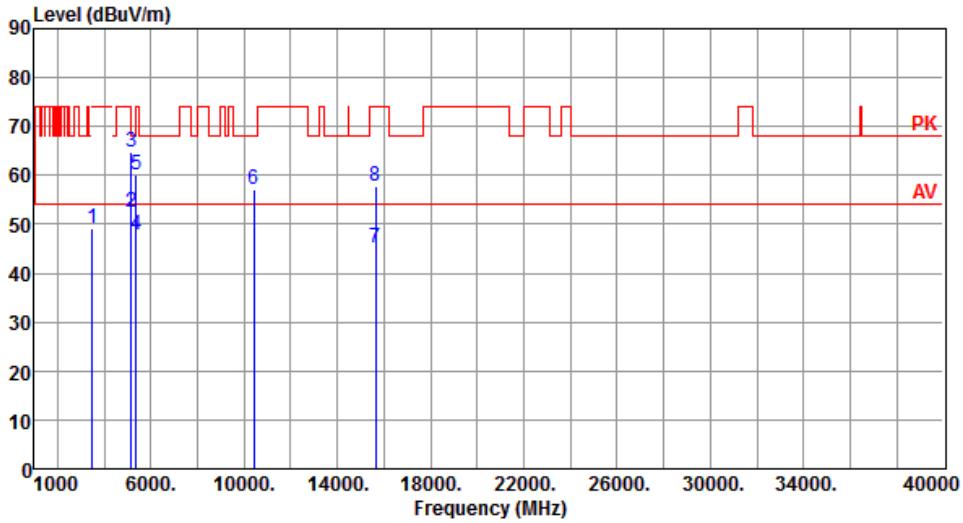


	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	3863.33	49.28	54.00	-4.72	46.75	2.53	Average	100	311
2	3863.33	51.18	74.00	-22.82	48.65	2.53	Peak	100	311
3	5650.00	60.48	68.20	-7.72	53.67	6.81	Peak	100	237
4	5850.00	82.89	122.20	-39.31	75.69	7.20	Peak	100	237
5	5855.00	79.66	110.80	-31.14	72.44	7.22	Peak	100	237
6	5875.00	71.63	105.20	-33.57	64.38	7.25	Peak	100	237
7	5925.00	63.21	68.20	-4.99	55.87	7.34	Peak	100	237
8	7726.66	46.69	54.00	-7.31	35.33	11.36	Average	100	348
9	7726.66	55.95	74.00	-18.05	44.59	11.36	Peak	100	348
10	11590.00	46.65	54.00	-7.35	30.31	16.34	Average	100	315
11	11590.00	58.62	74.00	-15.38	42.28	16.34	Peak	100	315
12	17385.00	62.01	68.20	-6.19	43.24	18.77	Peak	100	20

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

3.5.8 Transmitter Radiated Unwanted Emissions (Above 1GHz) for VHT80

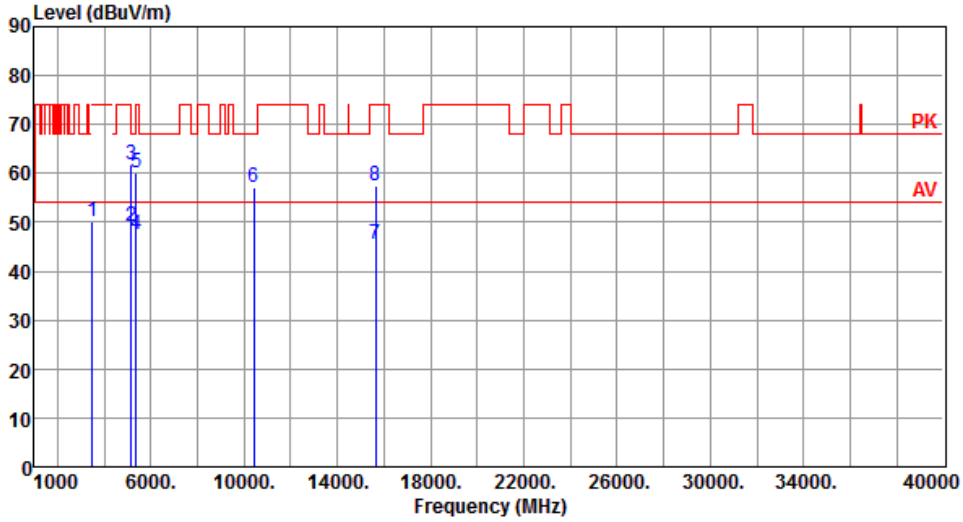
Modulation	VHT80	**Test Freq. (MHz)**	5210
Polarization	Horizontal		



	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	3473.33	49.16	68.20	-19.04	47.68	1.48	Peak	118	16
2	5150.00	52.43	54.00	-1.57	46.34	6.09	Average	100	57
3	5150.00	64.85	74.00	-9.15	58.76	6.09	Peak	100	57
4	5350.00	47.67	54.00	-6.33	41.30	6.37	Average	100	57
5	5350.00	60.18	74.00	-13.82	53.81	6.37	Peak	100	57
6	10420.00	57.17	68.20	-11.03	41.41	15.76	Peak	100	30
7	15630.00	45.30	54.00	-8.70	29.16	16.14	Average	100	25
8	15630.00	57.72	74.00	-16.28	41.58	16.14	Peak	100	25

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

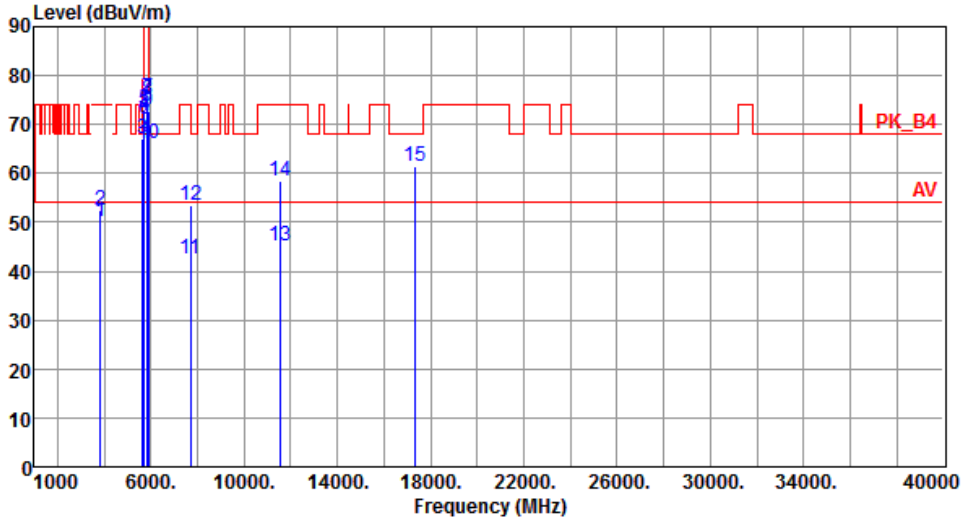
Modulation	VHT80	Test Freq. (MHz)	5210
Polarization	Vertical		



	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	3473.33	50.05	68.20	-18.15	48.57	1.48	Peak	100	223
2	5150.00	49.21	54.00	-4.79	43.12	6.09	Average	100	107
3	5150.00	61.76	74.00	-12.24	55.67	6.09	Peak	100	107
4	5350.00	47.62	54.00	-6.38	41.25	6.37	Average	100	107
5	5350.00	60.02	74.00	-13.98	53.65	6.37	Peak	100	107
6	10420.00	57.15	68.20	-11.05	41.39	15.76	Peak	100	20
7	15630.00	45.34	54.00	-8.66	29.20	16.14	Average	100	300
8	15630.00	57.50	74.00	-16.50	41.36	16.14	Peak	100	300

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

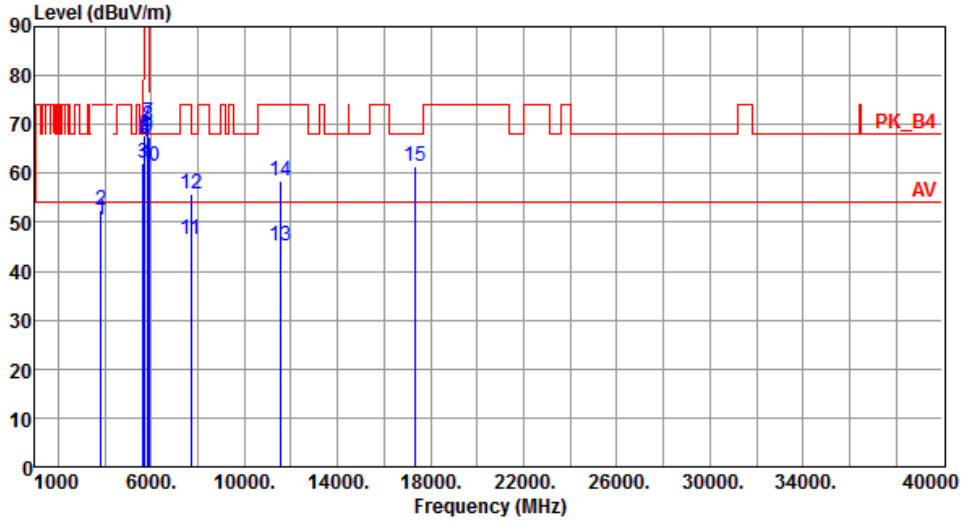
Modulation	VHT80	Test Freq. (MHz)	5775
Polarization	Horizontal		



	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	3850.00	50.06	54.00	-3.94	47.57	2.49	Average	113	283
2	3850.00	52.36	74.00	-21.64	49.87	2.49	Peak	113	283
3	5650.00	67.18	68.20	-1.02	60.37	6.81	Peak	100	70
4	5700.00	71.70	105.20	-33.50	64.79	6.91	Peak	100	70
5	5720.00	72.93	110.80	-37.87	65.98	6.95	Peak	100	70
6	5725.00	70.98	122.20	-51.22	64.02	6.96	Peak	100	70
7	5850.00	75.42	122.20	-46.78	68.22	7.20	Peak	100	70
8	5855.00	75.02	110.80	-35.78	67.80	7.22	Peak	100	70
9	5875.00	72.78	105.20	-32.42	65.53	7.25	Peak	100	70
10	5925.00	66.20	68.20	-2.00	58.86	7.34	Peak	100	70
11	7700.00	42.54	54.00	-11.46	31.18	11.36	Average	101	98
12	7700.00	53.53	74.00	-20.47	42.17	11.36	Peak	101	98
13	11550.00	45.04	54.00	-8.96	28.65	16.39	Average	100	20
14	11550.00	58.57	74.00	-15.43	42.18	16.39	Peak	100	20
15	17325.00	61.45	68.20	-6.75	42.87	18.58	Peak	100	50

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

Modulation	VHT80	Test Freq. (MHz)	5775
Polarization	Vertical		



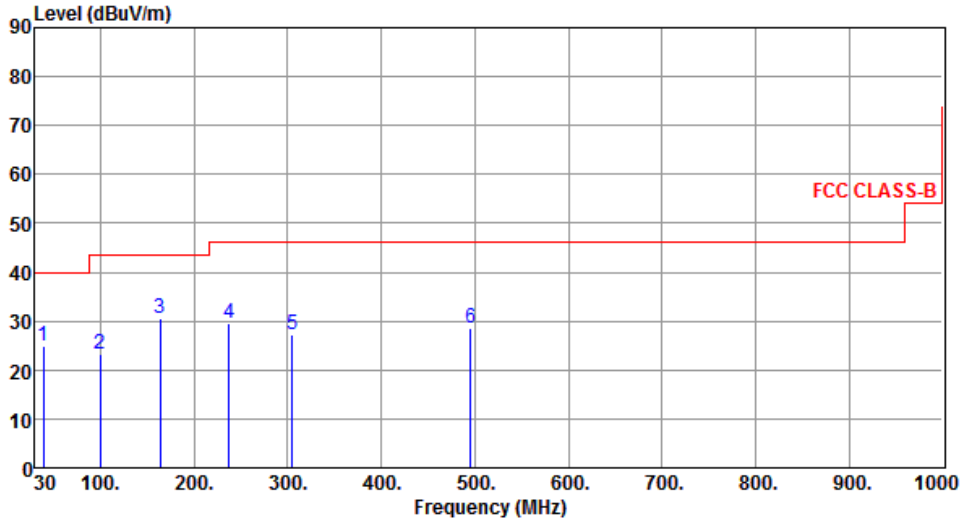
	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	3850.00	50.62	54.00	-3.38	48.13	2.49	Average	100	304
2	3850.00	52.54	74.00	-21.46	50.05	2.49	Peak	100	304
3	5650.00	62.18	68.20	-6.02	55.37	6.81	Peak	100	238
4	5700.00	66.27	105.20	-38.93	59.36	6.91	Peak	100	238
5	5720.00	67.81	110.80	-42.99	60.86	6.95	Peak	100	238
6	5725.00	67.08	122.20	-55.12	60.12	6.96	Peak	100	238
7	5850.00	70.33	122.20	-51.87	63.13	7.20	Peak	100	238
8	5855.00	69.77	110.80	-41.03	62.55	7.22	Peak	100	238
9	5875.00	67.57	105.20	-37.63	60.32	7.25	Peak	100	238
10	5925.00	61.55	68.20	-6.65	54.21	7.34	Peak	100	238
11	7700.00	46.57	54.00	-7.43	35.21	11.36	Average	100	349
12	7700.00	55.71	74.00	-18.29	44.35	11.36	Peak	100	349
13	11550.00	45.13	54.00	-8.87	28.74	16.39	Average	100	30
14	11550.00	58.60	74.00	-15.40	42.21	16.39	Peak	100	30
15	17325.00	61.50	68.20	-6.70	42.92	18.58	Peak	100	50

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

Beamforming mode

3.5.9 Transmitter Radiated Unwanted Emissions (Below 1GHz)

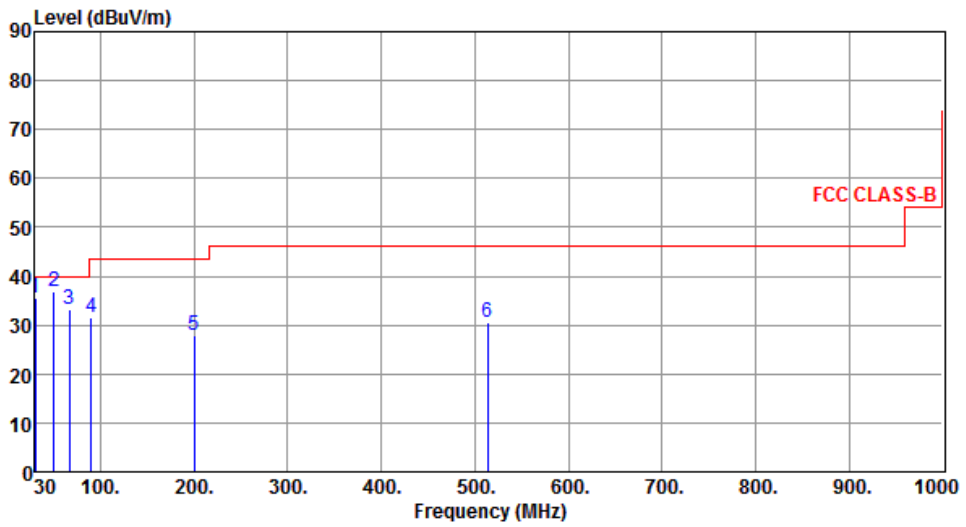
Modulation	VHT20	**Test Freq. (MHz)**	5825
Polarization	Horizontal		



	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	38.73	24.81	40.00	-15.19	33.41	-8.60	Peak	---	---
2	99.84	23.40	43.50	-20.10	36.93	-13.53	Peak	---	---
3	163.86	30.48	43.50	-13.02	38.81	-8.33	Peak	---	---
4	237.58	29.69	46.00	-16.31	39.37	-9.68	Peak	---	---
5	304.51	27.38	46.00	-18.62	34.95	-7.57	Peak	---	---
6	495.60	28.68	46.00	-17.32	31.63	-2.95	Peak	---	---

Note 1: Emission Level (dBuV/m) = SA Reading (dBuV/m) + Factor* (dB)
*Factor includes antenna factor , cable loss and amplifier gain
Note 2: Margin (dB) = Emission level (dBuV/m) – Limit (dBuV/m).
Note 3: All spurious emissions below 30MHz are more than 20 dB below the limit.

Modulation	VHT20	Test Freq. (MHz)	5825
Polarization	Vertical		

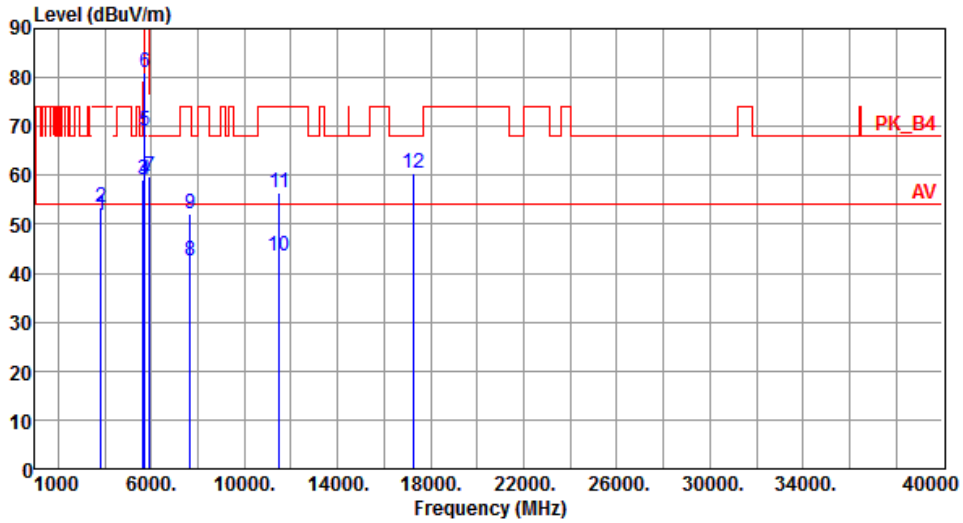


	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	30.00	35.49	40.00	-4.51	44.61	-9.12	Peak	---	---
2	50.37	36.85	40.00	-3.15	44.74	-7.89	Peak	---	---
3	66.86	33.14	40.00	-6.86	43.06	-9.92	Peak	---	---
4	90.14	31.64	43.50	-11.86	46.10	-14.46	Peak	---	---
5	199.75	27.97	43.50	-15.53	38.98	-11.01	Peak	---	---
6	514.03	30.71	46.00	-15.29	33.31	-2.60	Peak	---	---

Note 1: Emission Level (dBuV/m) = SA Reading (dBuV/m) + Factor* (dB)
*Factor includes antenna factor , cable loss and amplifier gain
Note 2: Margin (dB) = Emission level (dBuV/m) – Limit (dBuV/m).
Note 3: All spurious emissions below 30MHz are more than 20 dB below the limit.

3.5.10 Transmitter Radiated Unwanted Emissions (Above 1GHz) for VHT20

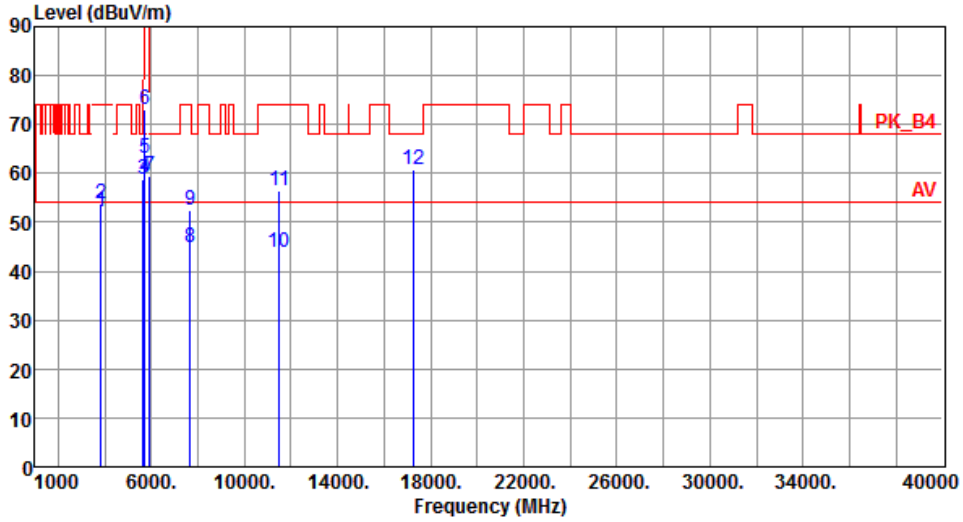
Modulation	VHT20	Test Freq. (MHz)	5745
Polarization	Horizontal		



	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	3830.00	51.75	54.00	-2.25	49.31	2.44	Average	110	286
2	3830.00	53.39	74.00	-20.61	50.95	2.44	Peak	110	286
3	5650.00	59.27	68.20	-8.93	52.46	6.81	Peak	100	41
4	5700.00	59.02	105.20	-46.18	52.11	6.91	Peak	100	41
5	5720.00	69.08	110.80	-41.72	62.13	6.95	Peak	100	41
6	5725.00	81.01	122.20	-41.19	74.05	6.96	Peak	100	41
7	5925.00	59.71	68.20	-8.49	52.37	7.34	Peak	100	41
8	7660.00	42.55	54.00	-11.45	31.18	11.37	Average	100	93
9	7660.00	52.08	74.00	-21.92	40.71	11.37	Peak	100	93
10	11490.00	43.56	54.00	-10.44	27.10	16.46	Average	100	254
11	11490.00	56.50	74.00	-17.50	40.04	16.46	Peak	100	254
12	17235.00	60.58	68.20	-7.62	42.27	18.31	Peak	100	24

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

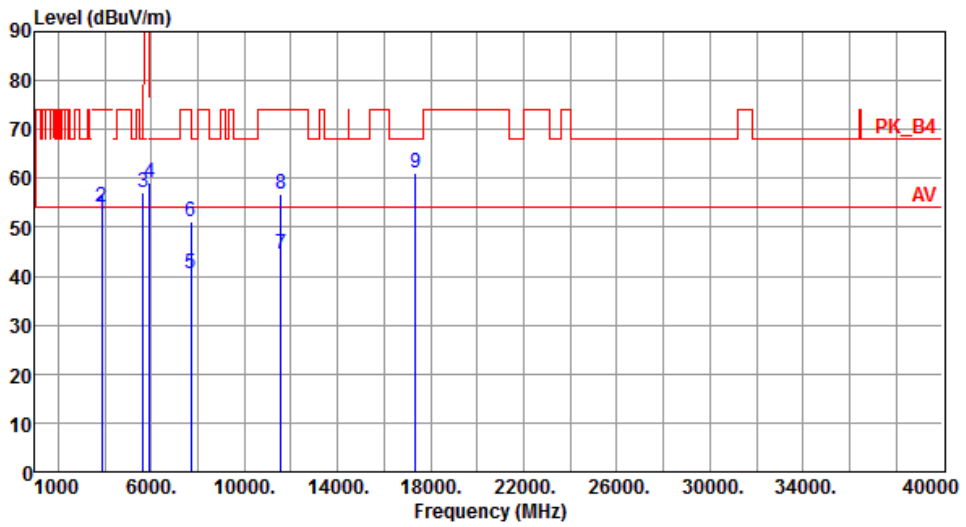
Modulation	VHT20	Test Freq. (MHz)	5745
Polarization	Vertical		



	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	3830.00	52.04	54.00	-1.96	49.60	2.44	Average	100	203
2	3830.00	53.88	74.00	-20.12	51.44	2.44	Peak	100	203
3	5650.00	58.90	68.20	-9.30	52.09	6.81	Peak	100	238
4	5700.00	59.08	105.20	-46.12	52.17	6.91	Peak	100	238
5	5720.00	62.97	110.80	-47.83	56.02	6.95	Peak	100	238
6	5725.00	72.91	122.20	-49.29	65.95	6.96	Peak	100	238
7	5925.00	59.58	68.20	-8.62	52.24	7.34	Peak	100	238
8	7660.00	44.69	54.00	-9.31	33.32	11.37	Average	111	323
9	7660.00	52.48	74.00	-21.52	41.11	11.37	Peak	111	323
10	11490.00	43.80	54.00	-10.20	27.34	16.46	Average	100	333
11	11490.00	56.57	74.00	-17.43	40.11	16.46	Peak	100	333
12	17235.00	60.66	68.20	-7.54	42.35	18.31	Peak	100	42

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

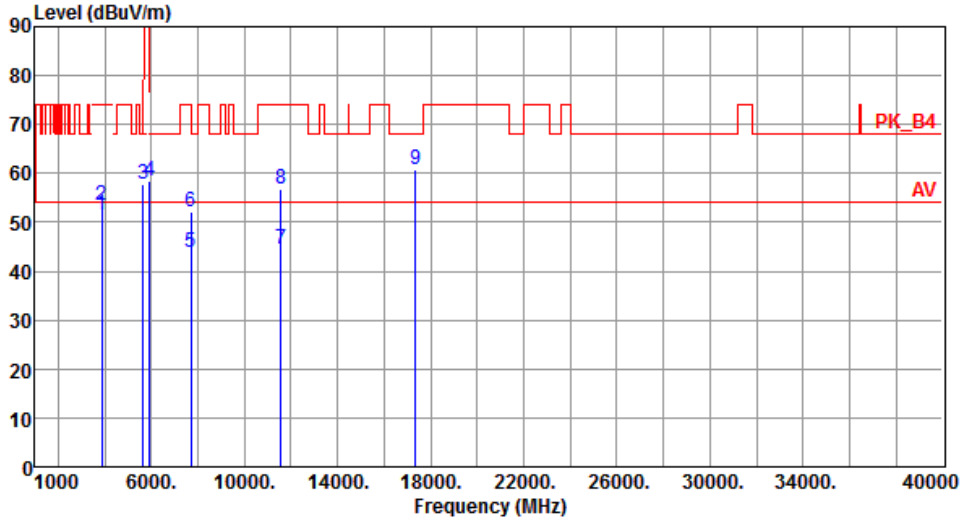
Modulation	VHT20	Test Freq. (MHz)	5785
Polarization	Horizontal		



	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	3856.66	52.33	54.00	-1.67	49.81	2.52	Average	111	284
2	3856.66	54.03	74.00	-19.97	51.51	2.52	Peak	111	284
3	5650.00	57.24	68.20	-10.96	50.43	6.81	Peak	100	8
4	5925.00	58.99	68.20	-9.21	51.65	7.34	Peak	100	8
5	7713.33	40.67	54.00	-13.33	29.32	11.35	Average	100	95
6	7713.33	51.02	74.00	-22.98	39.67	11.35	Peak	100	95
7	11570.00	44.48	54.00	-9.52	28.12	16.36	Average	100	251
8	11570.00	56.78	74.00	-17.22	40.42	16.36	Peak	100	251
9	17355.00	60.97	68.20	-7.23	42.30	18.67	Peak	100	23

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

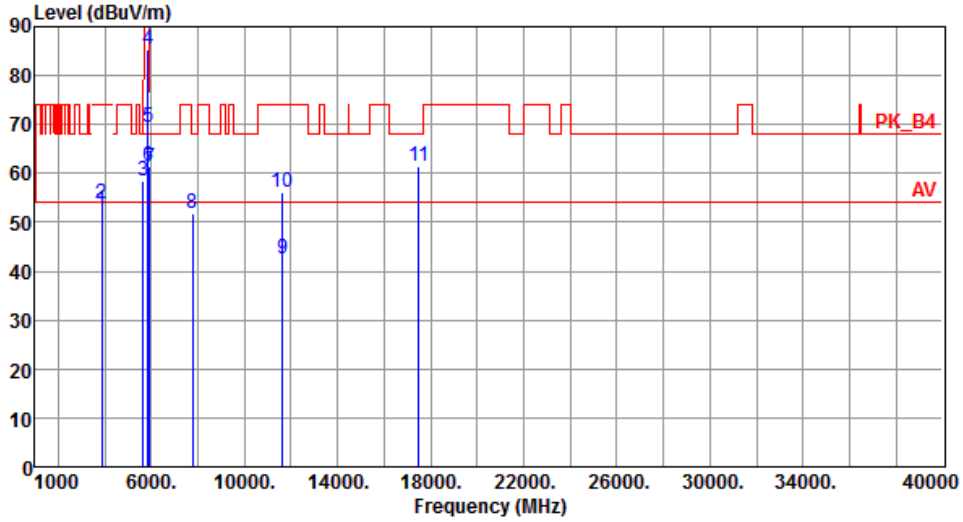
Modulation	VHT20	Test Freq. (MHz)	5785
Polarization	Vertical		



	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	3856.66	51.50	54.00	-2.50	48.98	2.52	Average	100	205
2	3856.66	53.56	74.00	-20.44	51.04	2.52	Peak	100	205
3	5650.00	57.68	68.20	-10.52	50.87	6.81	Peak	100	248
4	5925.00	58.35	68.20	-9.85	51.01	7.34	Peak	100	248
5	7713.33	43.98	54.00	-10.02	32.63	11.35	Average	105	353
6	7713.33	52.28	74.00	-21.72	40.93	11.35	Peak	105	353
7	11570.00	44.47	54.00	-9.53	28.11	16.36	Average	100	311
8	11570.00	56.79	74.00	-17.21	40.43	16.36	Peak	100	311
9	17355.00	60.76	68.20	-7.44	42.09	18.67	Peak	100	45

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

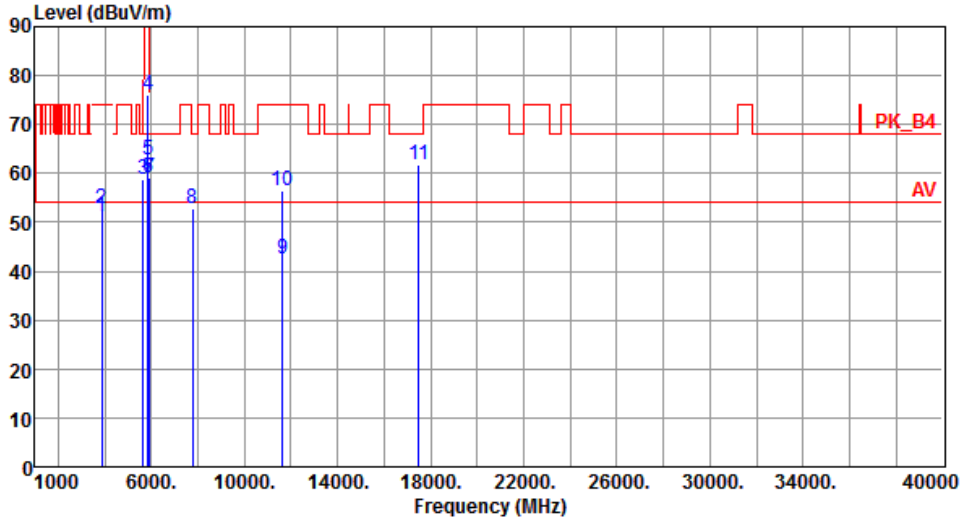
Modulation	VHT20	Test Freq. (MHz)	5825
Polarization	Horizontal		



	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	3883.33	52.38	54.00	-1.62	49.78	2.60	Average	108	282
2	3883.33	53.81	74.00	-20.19	51.21	2.60	Peak	108	282
3	5650.00	58.36	68.20	-9.84	51.55	6.81	Peak	100	4
4	5850.00	85.24	122.20	-36.96	78.04	7.20	Peak	100	4
5	5855.00	69.36	110.80	-41.44	62.14	7.22	Peak	100	4
6	5875.00	61.27	105.20	-43.93	54.02	7.25	Peak	100	4
7	5925.00	61.25	68.20	-6.95	53.91	7.34	Peak	100	4
8	7766.66	51.83	68.20	-16.37	40.48	11.35	Peak	100	95
9	11650.00	42.67	54.00	-11.33	26.42	16.25	Average	100	250
10	11650.00	56.16	74.00	-17.84	39.91	16.25	Peak	100	250
11	17475.00	61.40	68.20	-6.80	42.35	19.05	Peak	100	28

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

Modulation	VHT20	Test Freq. (MHz)	5825
Polarization	Vertical		

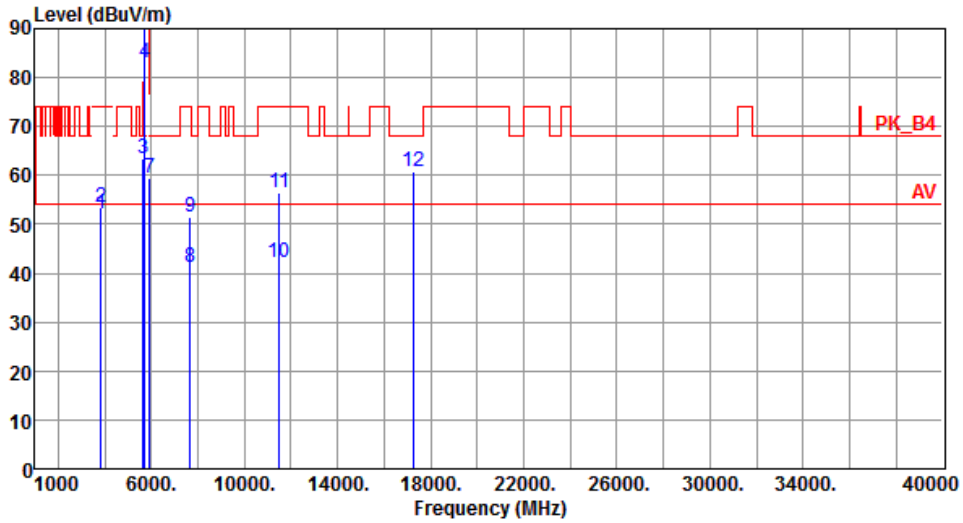


	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	3883.33	51.04	54.00	-2.96	48.44	2.60	Average	100	203
2	3883.33	52.67	74.00	-21.33	50.07	2.60	Peak	100	203
3	5650.00	58.93	68.20	-9.27	52.12	6.81	Peak	100	249
4	5850.00	76.03	122.20	-46.17	68.83	7.20	Peak	100	249
5	5855.00	62.87	110.80	-47.93	55.65	7.22	Peak	100	249
6	5875.00	59.26	105.20	-45.94	52.01	7.25	Peak	100	249
7	5925.00	59.13	68.20	-9.07	51.79	7.34	Peak	100	249
8	7766.66	52.76	68.20	-15.44	41.41	11.35	Peak	100	315
9	11650.00	42.38	54.00	-11.62	26.13	16.25	Average	100	330
10	11650.00	56.38	74.00	-17.62	40.13	16.25	Peak	100	330
11	17475.00	61.70	68.20	-6.50	42.65	19.05	Peak	100	50

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

3.5.11 Transmitter Radiated Unwanted Emissions (Above 1GHz) for VHT40

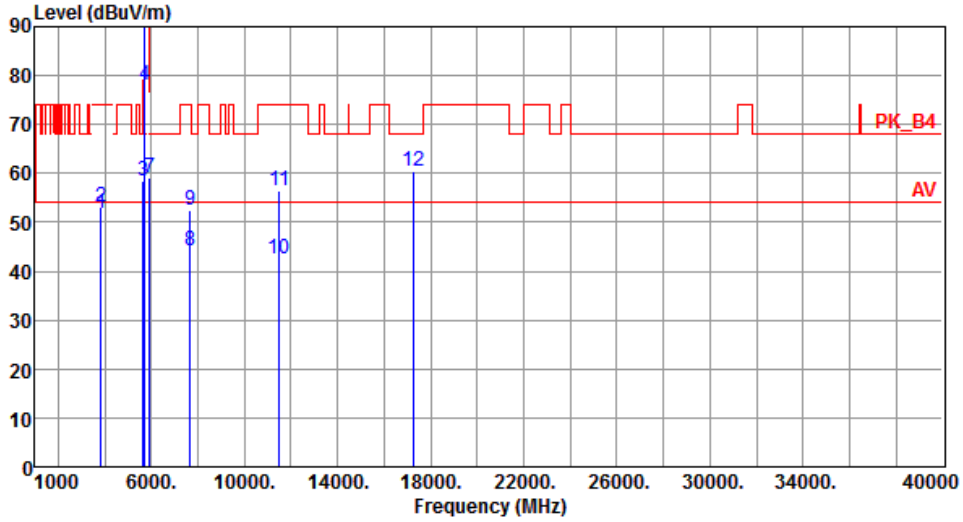
Modulation	VHT40	**Test Freq. (MHz)**	5755
Polarization	Horizontal		



	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	3836.66	52.09	54.00	-1.91	49.62	2.47	Average	113	285
2	3836.66	53.49	74.00	-20.51	51.02	2.47	Peak	113	285
3	5650.00	63.58	68.20	-4.62	56.77	6.81	Peak	100	9
4	5700.00	82.91	105.20	-22.29	76.00	6.91	Peak	100	9
5	5720.00	96.11	110.80	-14.69	89.16	6.95	Peak	100	9
6	5725.00	101.95	122.20	-20.25	94.99	6.96	Peak	100	9
7	5925.00	59.60	68.20	-8.60	52.26	7.34	Peak	100	9
8	7673.33	41.17	54.00	-12.83	29.81	11.36	Average	100	92
9	7673.33	51.61	74.00	-22.39	40.25	11.36	Peak	100	92
10	11510.00	42.33	54.00	-11.67	25.88	16.45	Average	100	257
11	11510.00	56.55	74.00	-17.45	40.10	16.45	Peak	100	257
12	17265.00	60.68	68.20	-7.52	42.28	18.40	Peak	100	21

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

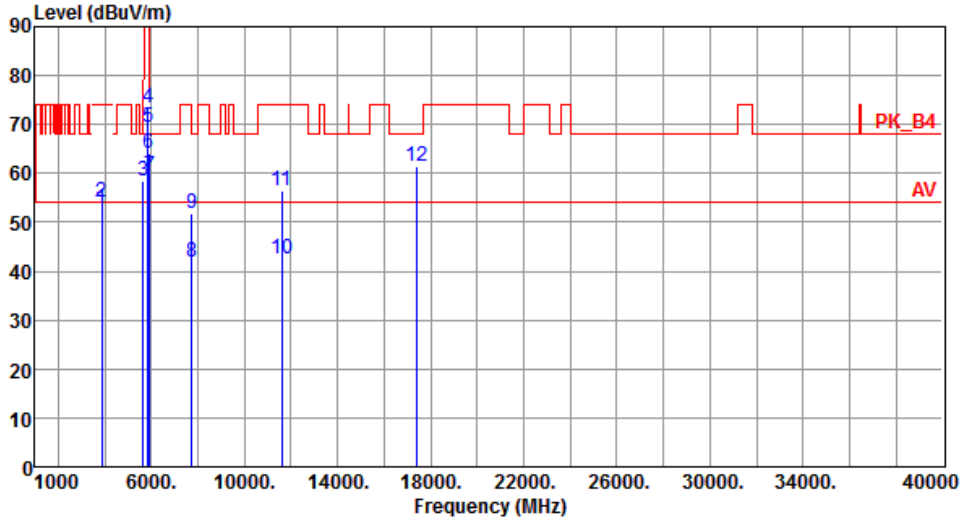
Modulation	VHT40	Test Freq. (MHz)	5755
Polarization	Vertical		



	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	3836.66	51.89	54.00	-2.11	49.42	2.47	Average	100	207
2	3836.66	53.14	74.00	-20.86	50.67	2.47	Peak	100	207
3	5650.00	58.60	68.20	-9.60	51.79	6.81	Peak	100	236
4	5700.00	78.05	105.20	-27.15	71.14	6.91	Peak	100	236
5	5720.00	90.72	110.80	-20.08	83.77	6.95	Peak	100	236
6	5725.00	92.38	122.20	-29.82	85.42	6.96	Peak	100	236
7	5925.00	59.17	68.20	-9.03	51.83	7.34	Peak	100	236
8	7673.33	44.06	54.00	-9.94	32.70	11.36	Average	100	329
9	7673.33	52.39	74.00	-21.61	41.03	11.36	Peak	100	329
10	11510.00	42.66	54.00	-11.34	26.21	16.45	Average	100	336
11	11510.00	56.48	74.00	-17.52	40.03	16.45	Peak	100	336
12	17265.00	60.53	68.20	-7.67	42.13	18.40	Peak	100	336

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

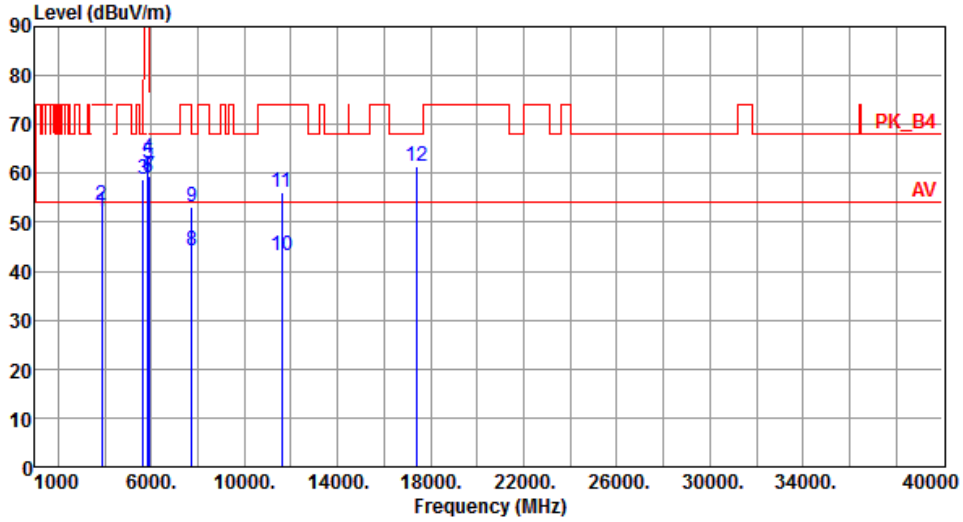
Modulation	VHT40	Test Freq. (MHz)	5795
Polarization	Horizontal		



	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	3863.33	52.65	54.00	-1.35	50.12	2.53	Average	113	284
2	3863.33	54.08	74.00	-19.92	51.55	2.53	Peak	113	284
3	5650.00	58.29	68.20	-9.91	51.48	6.81	Peak	100	19
4	5850.00	73.50	122.20	-48.70	66.30	7.20	Peak	100	19
5	5855.00	69.53	110.80	-41.27	62.31	7.22	Peak	100	19
6	5875.00	64.07	105.20	-41.13	56.82	7.25	Peak	100	19
7	5925.00	59.54	68.20	-8.66	52.20	7.34	Peak	100	19
8	7726.66	41.68	54.00	-12.32	30.32	11.36	Average	100	96
9	7726.66	51.92	74.00	-22.08	40.56	11.36	Peak	100	96
10	11590.00	42.45	54.00	-11.55	26.11	16.34	Average	100	249
11	11590.00	56.41	74.00	-17.59	40.07	16.34	Peak	100	249
12	17385.00	61.53	68.20	-6.67	42.76	18.77	Peak	100	30

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

Modulation	VHT40	Test Freq. (MHz)	5795
Polarization	Vertical		

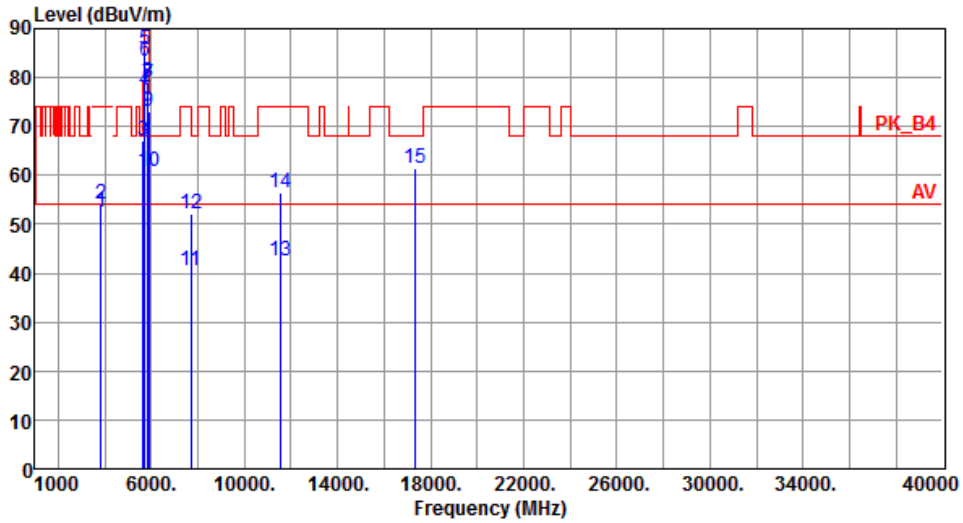


	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	3863.33	52.15	54.00	-1.85	49.62	2.53	Average	113	204
2	3863.33	53.53	74.00	-20.47	51.00	2.53	Peak	113	204
3	5650.00	58.88	68.20	-9.32	52.07	6.81	Peak	100	244
4	5850.00	62.97	122.20	-59.23	55.77	7.20	Peak	100	244
5	5855.00	62.00	110.80	-48.80	54.78	7.22	Peak	100	244
6	5875.00	59.15	105.20	-46.05	51.90	7.25	Peak	100	244
7	5925.00	59.48	68.20	-8.72	52.14	7.34	Peak	100	244
8	7726.66	44.06	54.00	-9.94	32.70	11.36	Average	100	310
9	7726.66	53.26	74.00	-20.74	41.90	11.36	Peak	100	310
10	11590.00	43.22	54.00	-10.78	26.88	16.34	Average	100	335
11	11590.00	56.23	74.00	-17.77	39.89	16.34	Peak	100	335
12	17385.00	61.36	68.20	-6.84	42.59	18.77	Peak	100	47

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

3.5.12 Transmitter Radiated Unwanted Emissions (Above 1GHz) for VHT80

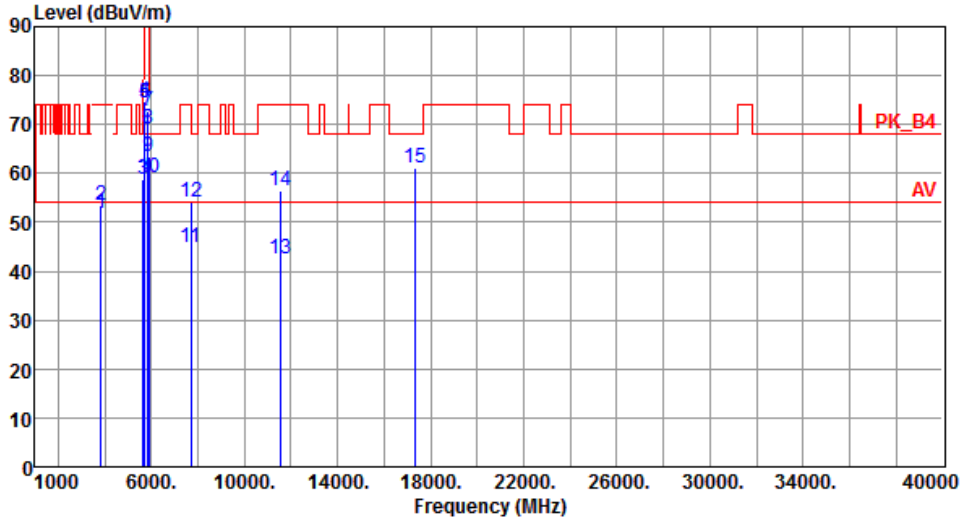
Modulation	VHT80	**Test Freq. (MHz)**	5775
Polarization	Horizontal		



	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	3850.00	52.56	54.00	-1.44	50.07	2.49	Average	132	285
2	3850.00	54.10	74.00	-19.90	51.61	2.49	Peak	132	285
3	5650.00	67.15	68.20	-1.05	60.34	6.81	Peak	105	7
4	5700.00	77.33	105.20	-27.87	70.42	6.91	Peak	105	7
5	5720.00	85.59	110.80	-25.21	78.64	6.95	Peak	105	7
6	5725.00	83.32	122.20	-38.88	76.36	6.96	Peak	105	7
7	5850.00	78.57	122.20	-43.63	71.37	7.20	Peak	105	7
8	5855.00	78.97	110.80	-31.83	71.75	7.22	Peak	105	7
9	5875.00	73.18	105.20	-32.02	65.93	7.25	Peak	105	7
10	5925.00	60.78	68.20	-7.42	53.44	7.34	Peak	105	7
11	7700.00	40.66	54.00	-13.34	29.30	11.36	Average	100	94
12	7700.00	52.10	74.00	-21.90	40.74	11.36	Peak	100	94
13	11550.00	42.43	54.00	-11.57	26.04	16.39	Average	100	253
14	11550.00	56.50	74.00	-17.50	40.11	16.39	Peak	100	253
15	17325.00	61.50	68.20	-6.70	42.92	18.58	Peak	100	18

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

Modulation	VHT80	Test Freq. (MHz)	5775
Polarization	Vertical		



	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	3850.00	51.81	54.00	-2.19	49.32	2.49	Average	112	205
2	3850.00	53.47	74.00	-20.53	50.98	2.49	Peak	112	205
3	5650.00	58.66	68.20	-9.54	51.85	6.81	Peak	100	240
4	5700.00	74.63	105.20	-30.57	67.72	6.91	Peak	100	240
5	5720.00	74.42	110.80	-36.38	67.47	6.95	Peak	100	240
6	5725.00	74.50	122.20	-47.70	67.54	6.96	Peak	100	240
7	5850.00	72.79	122.20	-49.41	65.59	7.20	Peak	100	240
8	5855.00	69.23	110.80	-41.57	62.01	7.22	Peak	100	240
9	5875.00	63.57	105.20	-41.63	56.32	7.25	Peak	100	240
10	5925.00	59.01	68.20	-9.19	51.67	7.34	Peak	100	240
11	7700.00	44.76	54.00	-9.24	33.40	11.36	Average	100	328
12	7700.00	54.12	74.00	-19.88	42.76	11.36	Peak	100	328
13	11550.00	42.49	54.00	-11.51	26.10	16.39	Average	100	340
14	11550.00	56.61	74.00	-17.39	40.22	16.39	Peak	100	340
15	17325.00	61.20	68.20	-7.00	42.62	18.58	Peak	100	39

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

3.6 Frequency Stability

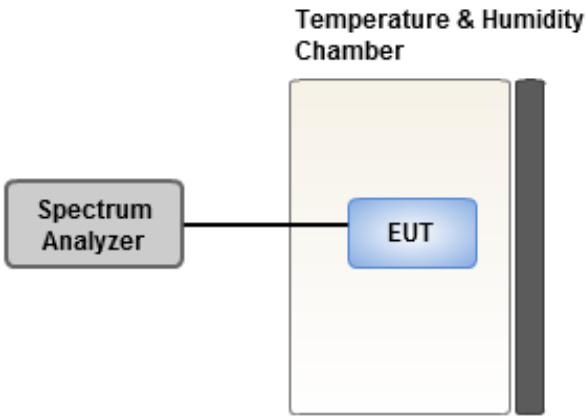
3.6.1 Limit of Frequency Stability

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

Frequency: 5200 MHz	Frequency Drift (ppm)			
Temperature (°C)	0 minute	2 minutes	5 minutes	10 minutes
T20°CVmax	-15.20	-14.86	-15.47	-15.19
T20°CVmin	-14.49	-13.96	-14.29	-14.53
T50°CVnom	-19.18	-19.00	-19.15	-18.79
T40°CVnom	-19.52	-19.22	-18.69	-18.96
T30°CVnom	-17.30	-17.57	-17.20	-16.88
T20°CVnom	-13.55	-13.43	-13.33	-13.32
T10°CVnom	-17.01	-16.98	-17.29	-16.64
T0°CVnom	-13.57	-12.94	-13.28	-13.16
T-10°CVnom	-13.50	-13.70	-13.19	-12.83
T-20°CVnom	-10.99	-10.80	-10.48	-10.35
T-30°CVnom	-7.57	-7.12	-7.07	-6.83
Vnom [Vac]: 120		Vmax [Vac]: 138		Vmin [Vac]: 102
Tnom [°C]: 20		Tmax [°C]: 50		Tmin [°C]: -30

Frequency: 5785 MHz	Frequency Drift (ppm)			
Temperature (°C)	0 minute	2 minutes	5 minutes	10 minutes
T20°CVmax	-13.67	-13.48	-13.18	-13.42
T20°CVmin	-13.03	-12.92	-12.89	-12.97
T50°CVnom	-17.24	-17.06	-17.55	-16.60
T40°CVnom	-17.54	-17.06	-17.46	-17.61
T30°CVnom	-15.55	-15.80	-15.59	-15.50
T20°CVnom	-12.18	-12.29	-12.40	-11.43
T10°CVnom	-15.29	-15.00	-14.71	-15.04
T0°CVnom	-12.20	-12.17	-12.17	-11.84
T-10°CVnom	-12.14	-12.28	-12.17	-12.11
T-20°CVnom	-9.88	-9.76	-9.47	-9.41
T-30°CVnom	-6.80	-6.14	-6.50	-6.78
Vnom [Vac]: 120		Vmax [Vac]: 138		Vmin [Vac]: 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 Corp (EMC and Wireless Communication Laboratory), it is our definitive objective is to institute long term, trust-based associations with our clients. The expectation we set up with our clients is based on outstanding service, practical expertise and devotion to a certified value structure. Our passion is to grant our clients with best EMC / RF services by oriented knowledgeable and accommodating staff.

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

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 District, Tao Yuan City 333, Taiwan, R.O.C.	No. 14-1, Lane 19, Wen San 3rd St., Kwei Shan District, 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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Email: ICC_Service@icertifi.com.tw

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