FCC C2PC 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	:	**Mar. 29, 2019**
Tested Date	:	**Nov. 13 ~ Nov. 15, 2018 (for original test)** **Apr. 10 ~ Jun. 06, 2019 (for new test)**

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

Table of Contents

1 GENERAL DESCRIPTION 5

1.1 Information 5
1.2 Local Support Equipment List 9
1.3 Test Setup Chart 10
1.4 The Equipment List 12
1.5 Testing Applied Standards 13
1.6 Deviation from Test Standard and Measurement Procedure 13
1.7 Measurement Uncertainty 14

2 TEST CONFIGURATION 15

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

3 TRANSMITTER TEST RESULTS 17

3.1 Conducted Emissions 17
3.2 Emission Bandwidth 26
3.3 RF Output Power 41
3.4 Peak Power Spectral Density 46
3.5 Transmitter Radiated and Band Edge Emissions 62
3.6 Frequency Stability 133

4 TEST LABORATORY INFORMATION 135

Release Record

Report No.	Version	Description	Issued Date
FR8O3101-01AN	Rev. 01	Initial issue	Aug. 02, 2019

Summary of Test Results

FCC Rules	Test Items	Measured	Result
15.207	Conducted Emissions	[dBuV]: 0.345MHz 36.93 (Margin -12.16dB) - AV	Pass
15.407(b) 15.209	Radiated Emissions	[dBuV/m at 3m]: 5150.00MHz 53.76 (Margin -0.24dB) - 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*** 5150-5250MHz: 23.08 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

Declaration of Conformity:
The test results with all measurement uncertainty excluded are presented in accordance with the regulation limits or requirements declared by manufacturers.
Comments and Explanations:
The declared of product specification for EUT presented in the report are provided by the manufacturer, and the manufacturer takes all the responsibilities for the accuracy of product specification.

1 General Description

1.1 Information

This is a Class II Permissive Change report (C2PC).
This report is issued as a duplicate report to the original ICC report no. FR8O3101AN. . The difference is concerned with following items:

- ✧ Antenna change and enable beamforming function for 5GHz UNII band 1 and 3 by software setting
- ✧ Hardware minor change of non-RF PCB layout is to reserve coexistence function.

Note:
Previous version of hardware: V03A
Current version (Re-layout) of hardware: V04

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. Note 3: 802.11ac supports beamforming function.					

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	5.3	---
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	---	3.8
5	5GHz, high Band,A5	PIFA	UFL	---	3.6
6	5GHz, high Band,A6	PIFA	UFL	---	4.2

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, V3.0298.0				
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 Index of Test Tool

For Frequency band 5150-5250 MHz			
Modulation Mode	Test Frequency (MHz)	Power Index	
		Non-Beamforming	Beamforming
11a	5180	19	---
11a	5200	19	---
11a	5240	20	---
VHT20	5180	19	22
VHT20	5200	19	22
VHT20	5240	20	23
VHT40	5190	16.5	19
VHT40	5230	20	23
VHT80	5210	15	18

For Frequency band 5725~5850 MHz			
Modulation Mode	Test Frequency (MHz)	Power Index	
		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	25
VHT80	5775	17	22

1.2 Local Support Equipment List

Non-beamforming mode

Support Equipment List					
No.	**Equipment**	**Brand**	**Model**	**FCC ID**	**Remarks**
1	Notebook	DELL	Latitude E5470	DoC	---
2	Notebook	DELL	Latitude E5470	DoC	---
3	RJ45 load	ICC	---	---	---

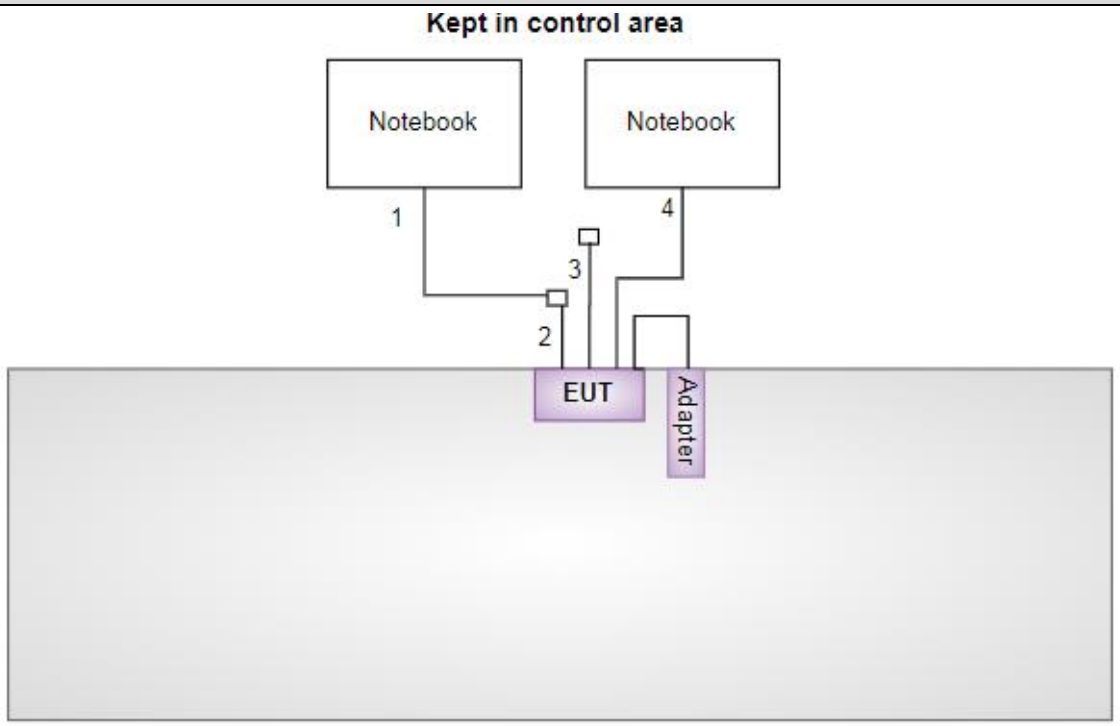
Beamforming mode

Support Equipment List					
No.	**Equipment**	**Brand**	**Model**	**FCC ID**	**Remarks**
1	Notebook	DELL	Latitude E5470	DoC	---
2	Notebook	DELL	Latitude E5470	DoC	---
3	Notebook	DELL	Latitude E5470	DoC	---
4	RJ45 load	ICC	---	---	---
5	Beamforming	---	T4011	---	Provided by applicant.

1.3 Test Setup Chart

Non-beamforming mode

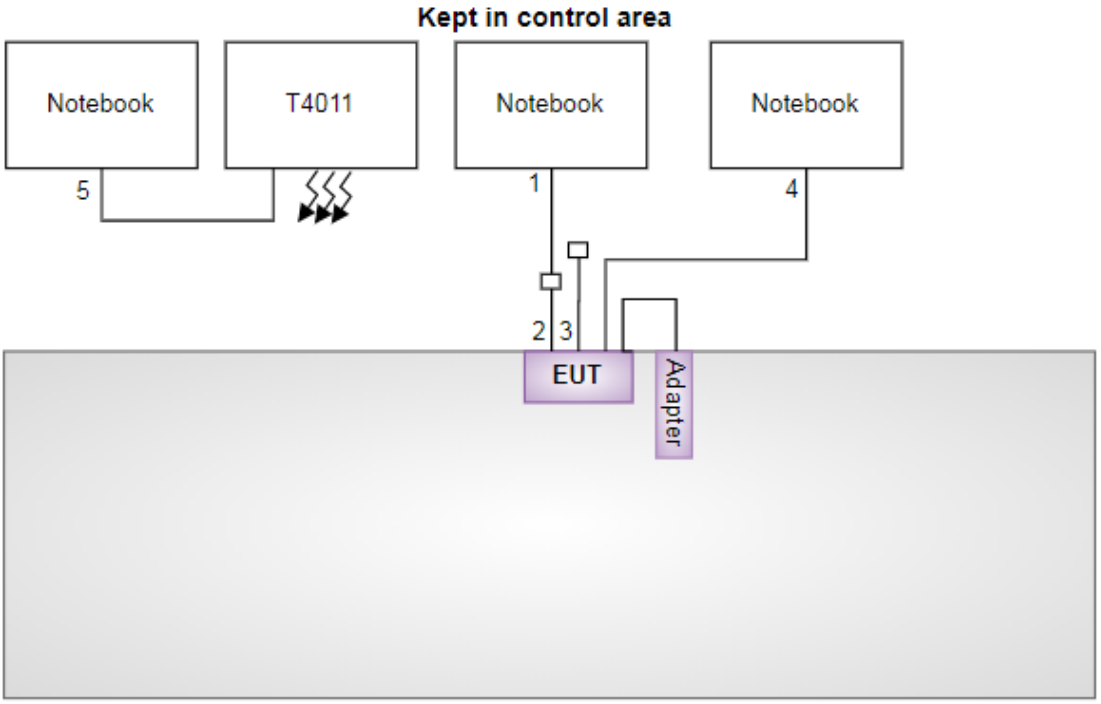
Test Setup Diagram



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.

Beamforming mode

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.
5	RJ45, 1m non-shielded.

1.4 The Equipment List

Test Item	Conducted Emission				
Test Site	Conduction room 1 / (CO01-WS)				
Tested Date	May 30, 2019				
Instrument	**Manufacturer**	**Model No.**	**Serial No.**	**Calibration Date**	**Calibration Until**
Receiver	R&S	ESR3	101657	Jan. 08, 2019	Jan. 07, 2020
LISN	R&S	ENV216	101579	Mar. 08, 2019	Mar. 07, 2020
RF Cable-CON	Woken	CFD200-NL	CFD200-NL-001	Oct. 23, 2018	Oct. 23, 2019
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 1 / (03CH01-WS)				
Tested Date	Apr. 10 ~ May 24, 2019				
Instrument	**Manufacturer**	**Model No.**	**Serial No.**	**Calibration Date**	**Calibration Until**
Spectrum Analyzer	R&S	FSV40	101498	Dec. 27, 2018	Dec. 26, 2019
Receiver	R&S	ESR3	101658	Dec. 11, 2018	Dec. 10, 2019
Bilog Antenna	SCHWARZBECK	VULB9168	VULB9168-522	Jul. 18, 2018	Jul. 17, 2019
Horn Antenna 1G-18G	SCHWARZBECK	BBHA 9120 D	BBHA 9120 D 1096	Dec. 18, 2018	Dec. 17, 2019
Horn Antenna 18G-40G	SCHWARZBECK	BBHA 9170	BBHA 9170517	Nov. 15, 2018	Nov. 14, 2019
Loop Antenna	R&S	HFH2-Z2	100330	Nov. 09, 2018	Nov. 08, 2019
Loop Antenna Cable	KOAX KABEL	101354-BW	101354-BW	Oct. 08, 2018	Oct. 07, 2019
Preamplifier	EMC	EMC02325	980225	Jul. 20, 2018	Jul. 19, 2019
Preamplifier	Agilent	83017A	MY39501308	Oct. 04, 2018	Oct. 03, 2019
Preamplifier	EMC	EMC184045B	980192	Aug. 09, 2018	Aug. 08, 2019
RF Cable	EMC	EMC104-SM-SM-8000	181106	Oct. 08, 2018	Oct. 07, 2019
RF Cable	HUBER+SUHNER	SUCOFLEX104	MY16019/4	Oct. 08, 2018	Oct. 07, 2019
RF Cable	HUBER+SUHNER	SUCOFLEX104	MY16014/4	Oct. 08, 2018	Oct. 07, 2019
LF cable 1M	EMC	EMCCFD400-NM-NM-1000	160502	Oct. 08, 2018	Oct. 07, 2019
LF cable 3M	Woken	CFD400NL-LW	CFD400NL-001	Oct. 08, 2018	Oct. 07, 2019
LF cable 10M	Woken	CFD400NL-LW	CFD400NL-002	Oct. 08, 2018	Oct. 07, 2019
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	Jun. 06, 2019				
Instrument	**Manufacturer**	**Model No.**	**Serial No.**	**Calibration Date**	**Calibration Until**
Spectrum Analyzer	R&S	FSV40	101063	Apr. 17, 2019	Apr. 16, 2020
Power Meter	Anritsu	ML2495A	1241002	Oct. 09, 2018	Oct. 08, 2019
Power Sensor	Anritsu	MA2411B	1207366	Oct. 09, 2018	Oct. 08, 2019
AC POWER SOURCE	APC	AFC-500W	F312060012	Nov. 29, 2018	Nov. 28, 2019
Measurement Software	Sporton	SENSE-15407_NII	V5.10	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 Deviation from Test Standard and Measurement Procedure

None

1.7 Measurement Uncertainty

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

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

2 Test Configuration

2.1 Testing Condition

Test Item	Test Site	Ambient Condition	Tested By
AC Conduction	CO01-WS	21°C / 64%	Alex Tsai
Radiated Emissions	03CH01-WS	23°C / 64-66%	Akun Chung Aska Huang
RF Conducted	TH01-WS	22°C / 64%	Roger Lu Aska Huang

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

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 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	VHT20 VHT40 VHT80	5180 / 5200 / 5240 5190 / 5230 5210	MCS 0 MCS 0 MCS 0	---
Radiated Emissions >1GHz Emission Bandwidth Peak Power Spectral Density	VHT20 VHT40 VHT80	5180 / 5200 / 5240 5190 / 5230 5210	MCS 0 MCS 0 MCS 0	---

For Frequency band 5725-5850 MHz				
Test item	**Modulation Mode**	**Test Frequency (MHz)**	**Data Rate (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

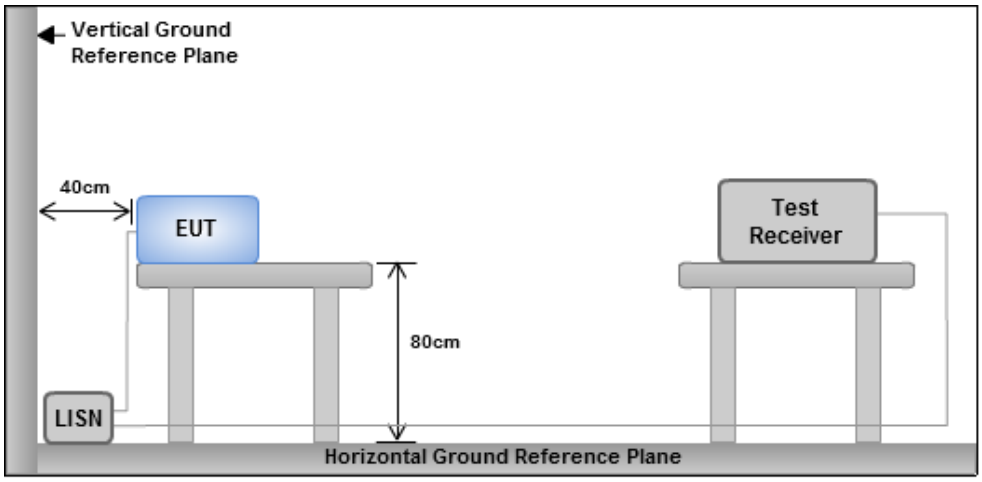
3.1.1 Limit of Conducted Emissions

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

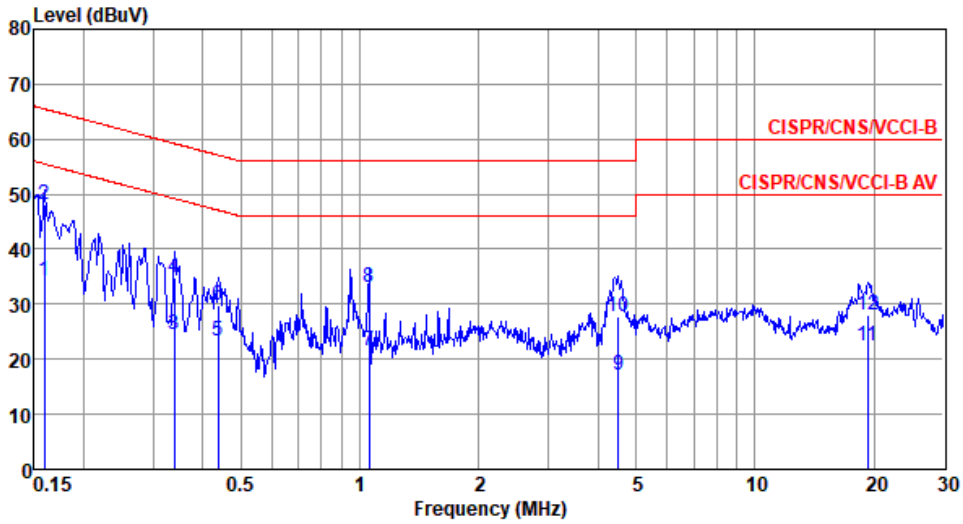


Note: 1. Support units were connected to second LISN.
2. Both of LISNs (AMN) are 80 cm from EUT and at least 80 cm from other units and other metal planes

3.1.4 Test Result of Conducted Emissions

Non-beamforming mode

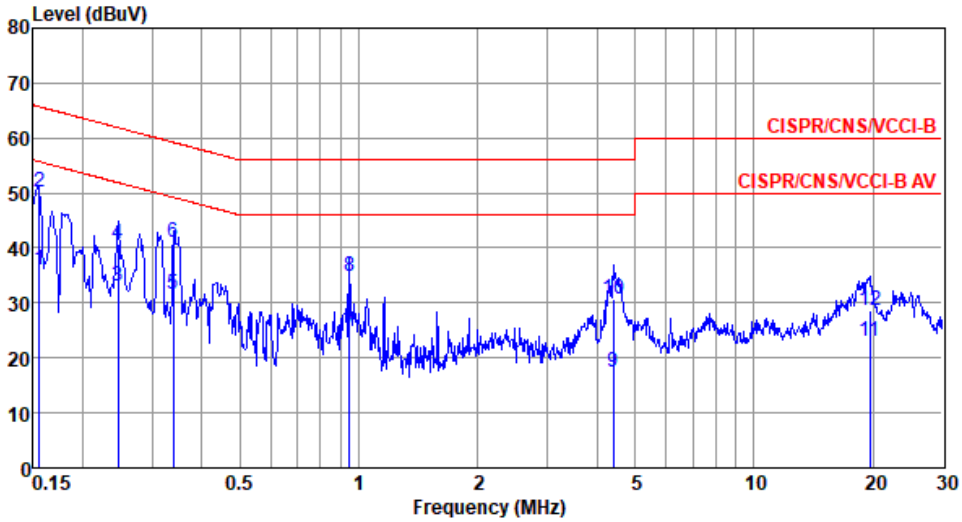
Modulation	VHT40	**Test Freq. (MHz)**	5230
Power Phase	Line		



	Freq MHz	Level dBuV	Limit Line dBuV	Over Limit dB	Read Level dBuV	LISN factor dB	cable loss dB	Remark
1	0.159	34.23	55.52	-21.29	24.52	9.53	0.05	Average
2*	0.159	48.19	65.52	-17.33	38.48	9.53	0.05	QP
3	0.339	24.41	49.22	-24.81	14.53	9.56	0.08	Average
4	0.339	34.70	59.22	-24.52	24.82	9.56	0.08	QP
5	0.437	23.35	47.11	-23.76	13.44	9.57	0.08	Average
6	0.437	29.92	57.11	-27.19	20.01	9.57	0.08	QP
7	1.054	21.56	46.00	-24.44	11.56	9.60	0.10	Average
8	1.054	32.95	56.00	-23.05	22.95	9.60	0.10	QP
9	4.501	17.10	46.00	-28.90	6.81	9.61	0.30	Average
10	4.501	27.67	56.00	-28.33	17.38	9.61	0.30	QP
11	19.326	22.51	50.00	-27.49	11.65	9.66	0.60	Average
12	19.326	28.08	60.00	-31.92	17.22	9.66	0.60	QP

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

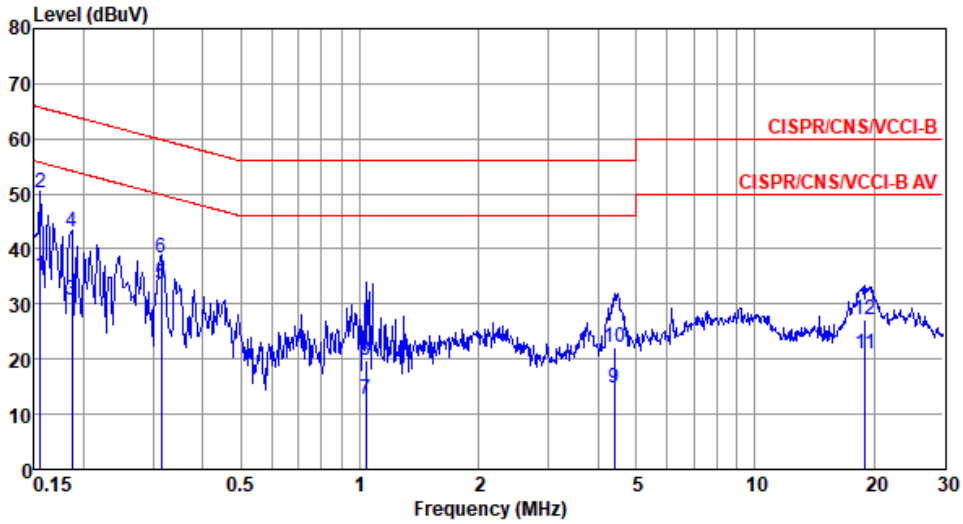
Modulation	VHT40	Test Freq. (MHz)	5230
Power Phase	Neutral		



	Freq MHz	Level dBuV	Limit Line dBuV	Over Limit dB	Read Level dBuV	LISN factor dB	cable loss dB	Remark
1	0.156	35.90	55.69	-19.79	26.17	9.57	0.05	Average
2*	0.156	50.05	65.69	-15.64	40.32	9.57	0.05	QP
3	0.246	32.98	51.91	-18.93	23.19	9.59	0.07	Average
4	0.246	40.73	61.91	-21.18	30.94	9.59	0.07	QP
5	0.339	31.59	49.22	-17.63	21.79	9.60	0.08	Average
6	0.339	40.94	59.22	-18.28	31.14	9.60	0.08	QP
7	0.948	24.43	46.00	-21.57	14.47	9.64	0.10	Average
8	0.948	34.71	56.00	-21.29	24.75	9.64	0.10	QP
9	4.407	17.38	46.00	-28.62	7.15	9.67	0.30	Average
10	4.407	30.75	56.00	-25.25	20.52	9.67	0.30	QP
11	19.635	22.97	50.00	-27.03	12.11	9.81	0.60	Average
12	19.635	28.60	60.00	-31.40	17.74	9.81	0.60	QP

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

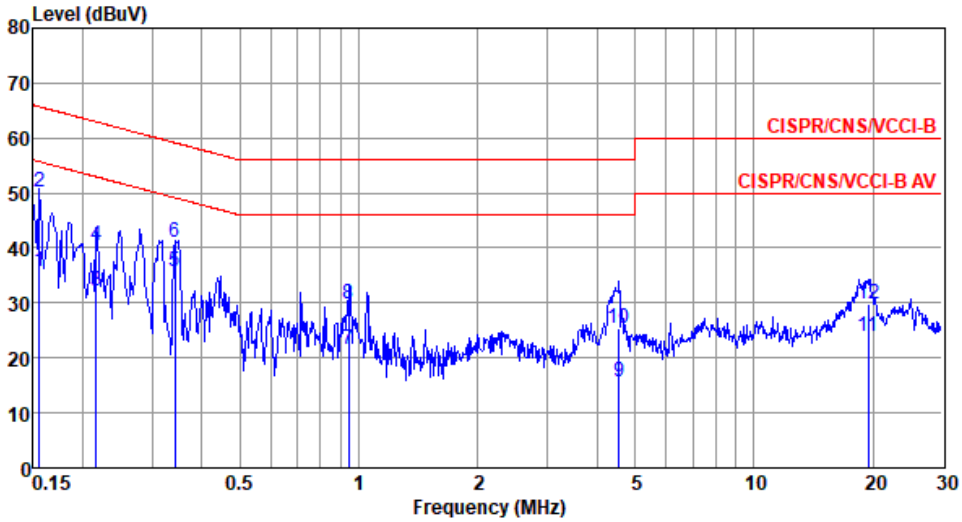
Modulation	11a	Test Freq. (MHz)	5825
Power Phase	Line		



	Freq MHz	Level dBuV	Limit Line dBuV	Over Limit dB	Read Level dBuV	LISN factor dB	cable loss dB	Remark
1	0.156	35.13	55.69	-20.56	25.42	9.53	0.05	Average
2*	0.156	50.07	65.69	-15.62	40.36	9.53	0.05	QP
3	0.186	30.79	54.20	-23.41	21.01	9.54	0.07	Average
4	0.186	43.13	64.20	-21.07	33.35	9.54	0.07	QP
5	0.315	33.75	49.84	-16.09	23.87	9.56	0.08	Average
6	0.315	38.52	59.84	-21.32	28.64	9.56	0.08	QP
7	1.037	12.74	46.00	-33.26	2.74	9.60	0.10	Average
8	1.037	19.79	56.00	-36.21	9.79	9.60	0.10	QP
9	4.407	14.73	46.00	-31.27	4.44	9.61	0.30	Average
10	4.407	22.10	56.00	-33.90	11.81	9.61	0.30	QP
11	19.021	20.98	50.00	-29.02	10.14	9.66	0.59	Average
12	19.021	27.07	60.00	-32.93	16.23	9.66	0.59	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		

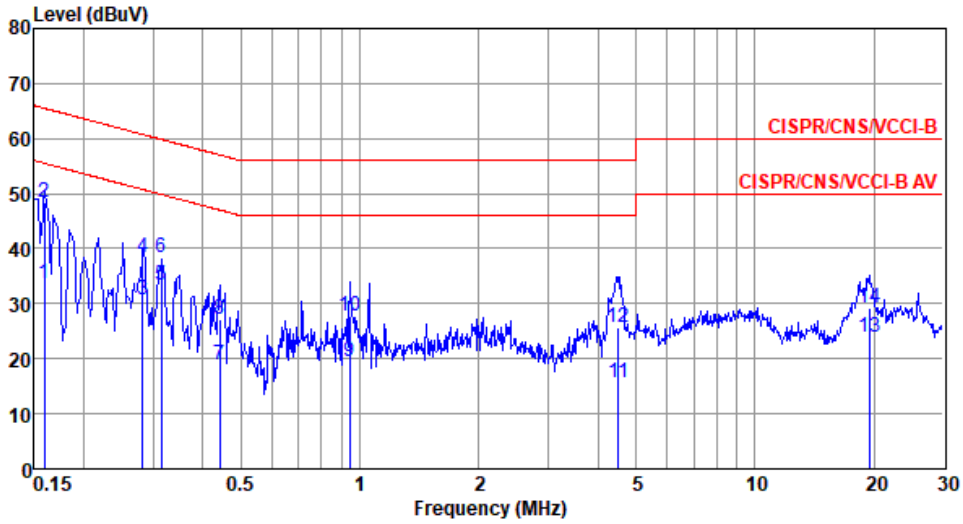


	Freq MHz	Level dBuV	Limit Line dBuV	Over Limit dB	Read Level dBuV	LISN factor dB	cable loss dB	Remark
1	0.156	35.79	55.69	-19.90	26.06	9.57	0.05	Average
2	0.156	50.13	65.69	-15.56	40.40	9.57	0.05	QP
3	0.216	32.11	52.96	-20.85	22.32	9.58	0.07	Average
4	0.216	40.56	62.96	-22.40	30.77	9.58	0.07	QP
5*	0.343	35.61	49.13	-13.52	25.81	9.60	0.08	Average
6	0.343	41.02	59.13	-18.11	31.22	9.60	0.08	QP
7	0.943	21.48	46.00	-24.52	11.52	9.64	0.10	Average
8	0.943	29.67	56.00	-26.33	19.71	9.64	0.10	QP
9	4.549	15.51	46.00	-30.49	5.27	9.67	0.30	Average
10	4.549	25.39	56.00	-30.61	15.15	9.67	0.30	QP
11	19.428	24.00	50.00	-26.00	13.14	9.81	0.60	Average
12	19.428	29.67	60.00	-30.33	18.81	9.81	0.60	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

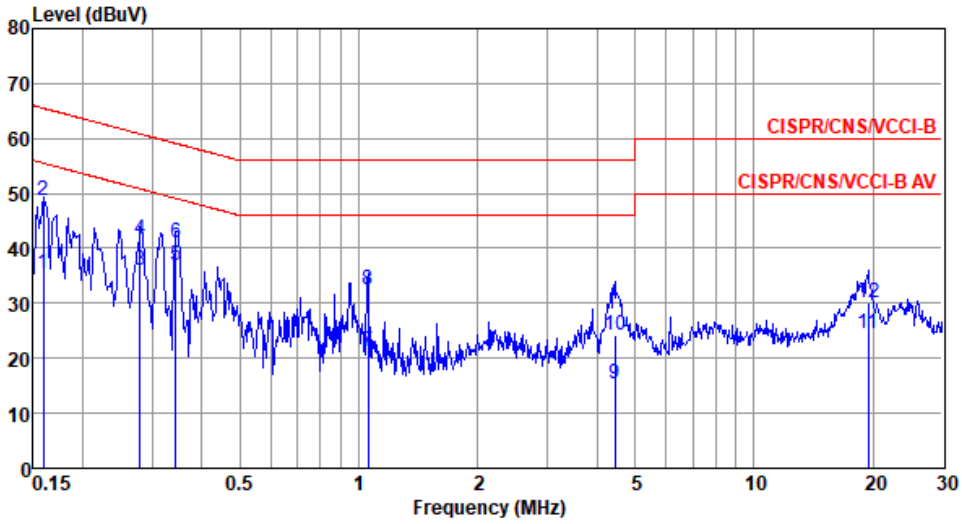
Modulation	VHT40	**Test Freq. (MHz)**	5230
Power Phase	Line		



	Freq MHz	Level dBuV	Limit Line dBuV	Over Limit dB	Read Level dBuV	LISN factor dB	cable loss dB	Remark
1	0.159	33.80	55.52	-21.72	24.09	9.53	0.05	Average
2	0.159	48.45	65.52	-17.07	38.74	9.53	0.05	QP
3	0.282	30.83	50.76	-19.93	20.97	9.56	0.08	Average
4	0.282	38.44	60.76	-22.32	28.58	9.56	0.08	QP
5*	0.315	33.34	49.84	-16.50	23.46	9.56	0.08	Average
6	0.315	38.26	59.84	-21.58	28.38	9.56	0.08	QP
7	0.442	19.00	47.02	-28.02	9.09	9.57	0.08	Average
8	0.442	27.03	57.02	-29.99	17.12	9.57	0.08	QP
9	0.943	19.57	46.00	-26.43	9.57	9.60	0.10	Average
10	0.943	27.83	56.00	-28.17	17.83	9.60	0.10	QP
11	4.501	15.56	46.00	-30.44	5.27	9.61	0.30	Average
12	4.501	25.75	56.00	-30.25	15.46	9.61	0.30	QP
13	19.428	24.03	50.00	-25.97	13.17	9.66	0.60	Average
14	19.428	29.10	60.00	-30.90	18.24	9.66	0.60	QP

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

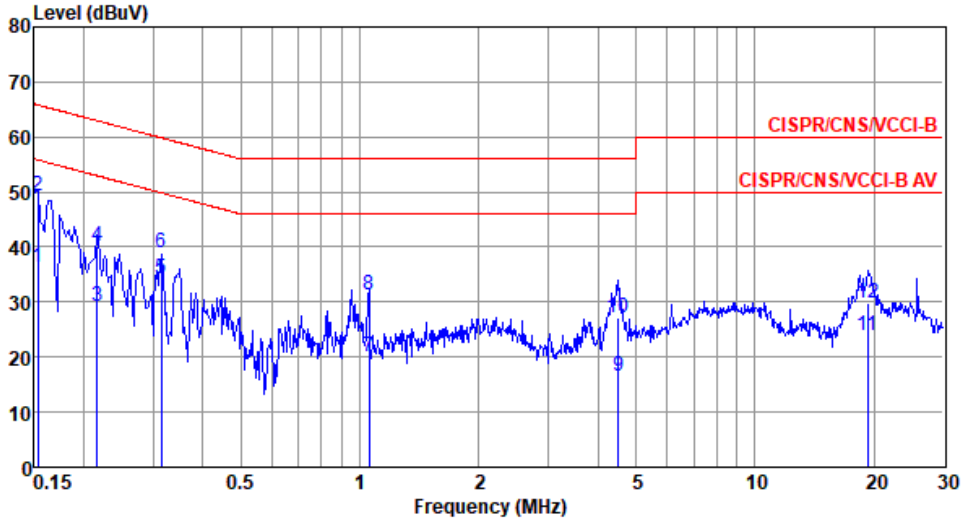
Modulation	VHT40	Test Freq. (MHz)	5230
Power Phase	Neutral		



	Freq MHz	Level dBuV	Limit Line dBuV	Over Limit dB	Read Level dBuV	LISN factor dB	cable loss dB	Remark
1	0.159	35.38	55.52	-20.14	25.64	9.57	0.05	Average
2	0.159	48.65	65.52	-16.87	38.91	9.57	0.05	QP
3	0.279	36.15	50.85	-14.70	26.36	9.59	0.07	Average
4	0.279	41.59	60.85	-19.26	31.80	9.59	0.07	QP
5*	0.345	36.93	49.09	-12.16	27.13	9.60	0.08	Average
6	0.345	41.13	59.09	-17.96	31.33	9.60	0.08	QP
7	1.054	21.20	46.00	-24.80	11.23	9.64	0.10	Average
8	1.054	32.49	56.00	-23.51	22.52	9.64	0.10	QP
9	4.454	15.23	46.00	-30.77	5.00	9.67	0.30	Average
10	4.454	24.14	56.00	-31.86	13.91	9.67	0.30	QP
11	19.428	24.62	50.00	-25.38	13.76	9.81	0.60	Average
12	19.428	30.10	60.00	-29.90	19.24	9.81	0.60	QP

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

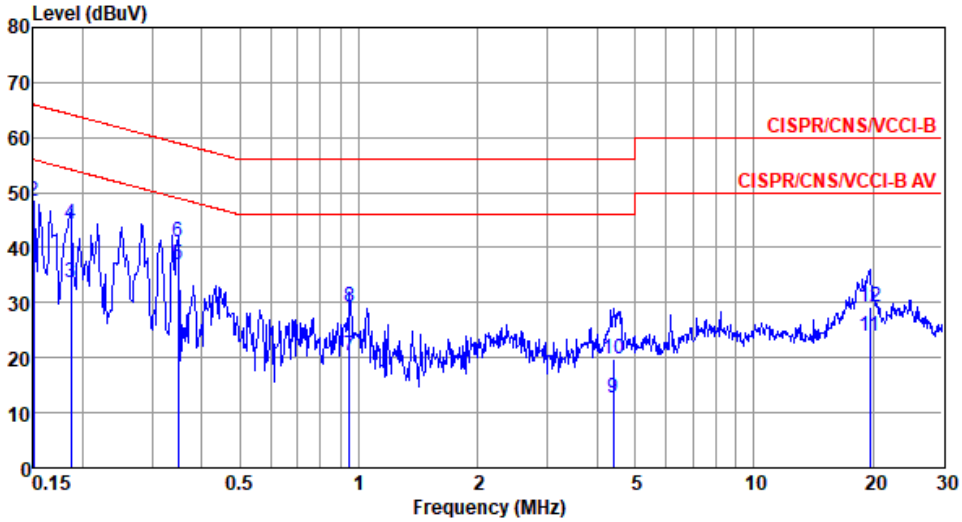
Modulation	VHT20	Test Freq. (MHz)	5825
Power Phase	Line		



	Freq MHz	Level dBuV	Limit Line dBuV	Over Limit dB	Read Level dBuV	LISN factor dB	cable loss dB	Remark
1	0.153	36.24	55.82	-19.58	26.53	9.53	0.05	Average
2	0.153	49.24	65.82	-16.58	39.53	9.53	0.05	QP
3	0.216	29.10	52.96	-23.86	19.29	9.54	0.07	Average
4	0.216	40.17	62.96	-22.79	30.36	9.54	0.07	QP
5*	0.315	34.13	49.84	-15.71	24.25	9.56	0.08	Average
6	0.315	38.94	59.84	-20.90	29.06	9.56	0.08	QP
7	1.054	20.19	46.00	-25.81	10.19	9.60	0.10	Average
8	1.054	31.24	56.00	-24.76	21.24	9.60	0.10	QP
9	4.501	16.48	46.00	-29.52	6.19	9.61	0.30	Average
10	4.501	27.13	56.00	-28.87	16.84	9.61	0.30	QP
11	19.326	24.05	50.00	-25.95	13.19	9.66	0.60	Average
12	19.326	29.72	60.00	-30.28	18.86	9.66	0.60	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	0.150	36.21	56.00	-19.79	26.48	9.57	0.05	Average
2	0.150	48.52	66.00	-17.48	38.79	9.57	0.05	QP
3	0.186	33.57	54.20	-20.63	23.79	9.58	0.07	Average
4	0.186	44.36	64.20	-19.84	34.58	9.58	0.07	QP
5*	0.348	36.83	49.00	-12.17	27.03	9.60	0.08	Average
6	0.348	41.03	59.00	-17.97	31.23	9.60	0.08	QP
7	0.948	20.41	46.00	-25.59	10.45	9.64	0.10	Average
8	0.948	29.27	56.00	-26.73	19.31	9.64	0.10	QP
9	4.407	12.82	46.00	-33.18	2.59	9.67	0.30	Average
10	4.407	19.74	56.00	-36.26	9.51	9.67	0.30	QP
11	19.635	23.93	50.00	-26.07	13.07	9.81	0.60	Average
12	19.635	29.32	60.00	-30.68	18.46	9.81	0.60	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.

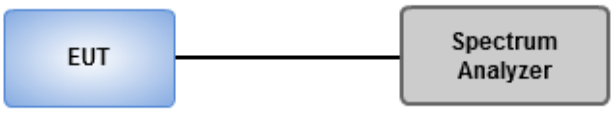
Occupied Bandwidth

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	83.478M	75.832M	75M8D1D	83.188M	75.832M
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	76.232M	76.122M	76M1D1D	75.942M	75.543M

Max-N dB = Maximum 6dB down bandwidth for 5.725-5.85GHz band / Maximum 26dB down bandwidth for other band;
Max-OBW = Maximum 99% occupied bandwidth;
Min-N dB = Minimum 6dB down bandwidth for 5.725-5.85GHz band / Maximum 26dB down bandwidth for other band;
Min-OBW = Minimum 99% occupied bandwidth;

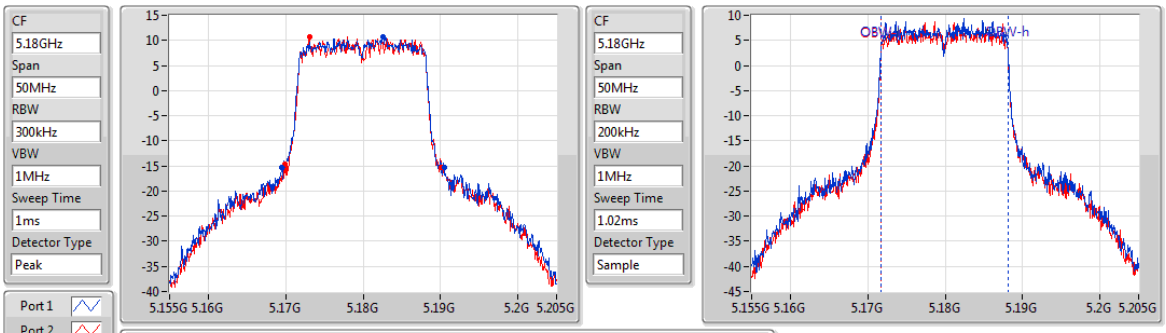
Result

Mode	Result	Limit (Hz)	Port 1-N dB (Hz)	Port 1-OBW (Hz)	Port 2-N dB (Hz)	Port 2-OBW (Hz)	Port 3-N dB (Hz)	Port 3-OBW (Hz)	Port 4-N dB (Hz)	Port 4-OBW (Hz)
802.11a_Nss1,(6Mbps)_2TX	-	-	-	-	-	-	-	-	-	-
5180MHz	Pass	Inf	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	83.478M	75.832M	83.188M	75.832M				
802.11ac VHT80_Nss1,(MCS0)_4TX	-	-	-	-	-	-	-	-	-	-
5775MHz	Pass	500k	76.232M	75.832M	76.232M	75.832M	75.942M	76.122M	75.942M	75.543M

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

802.11a_Nss1,(6Mbps)_2TX EBW

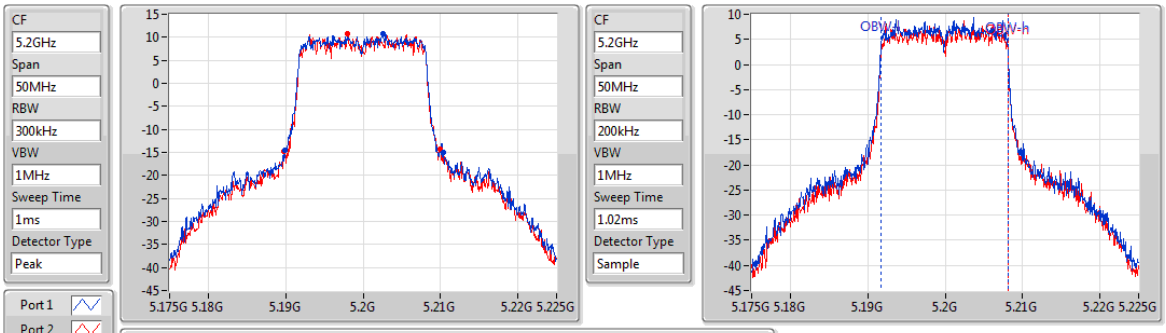
5180MHz



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

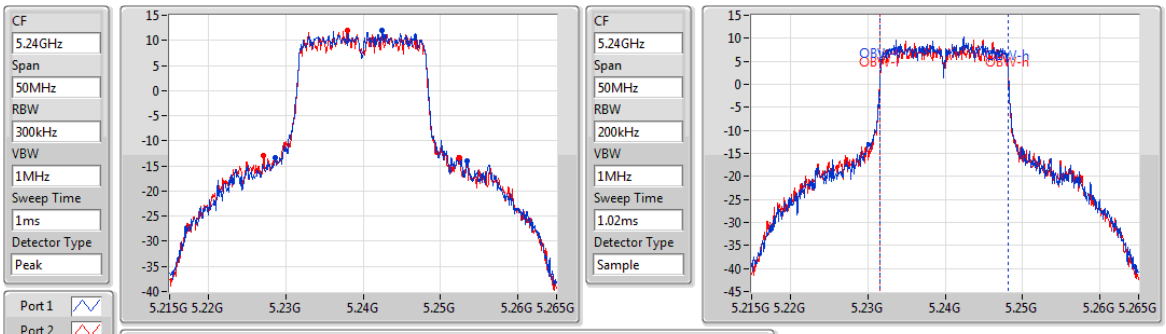
5200MHz



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

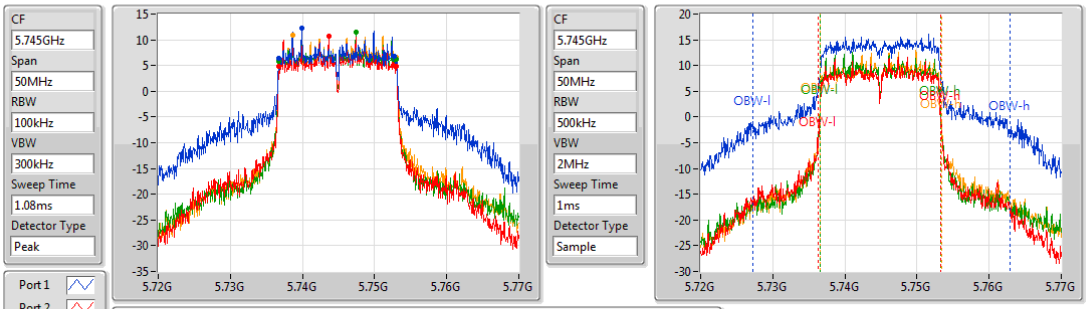
5240MHz



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**

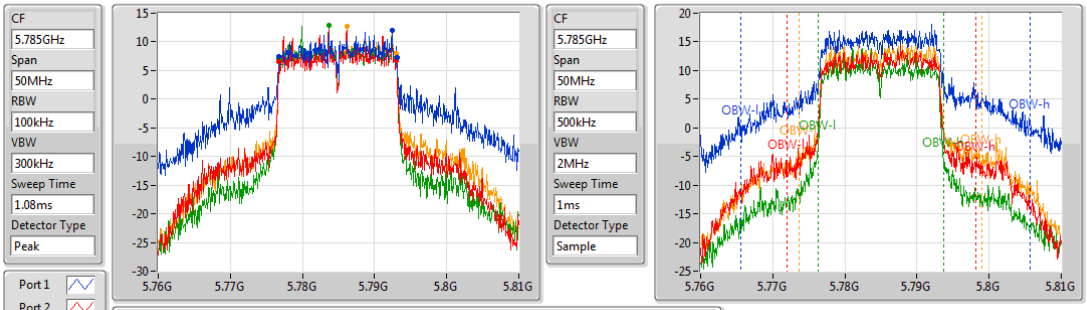
5745MHz



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**

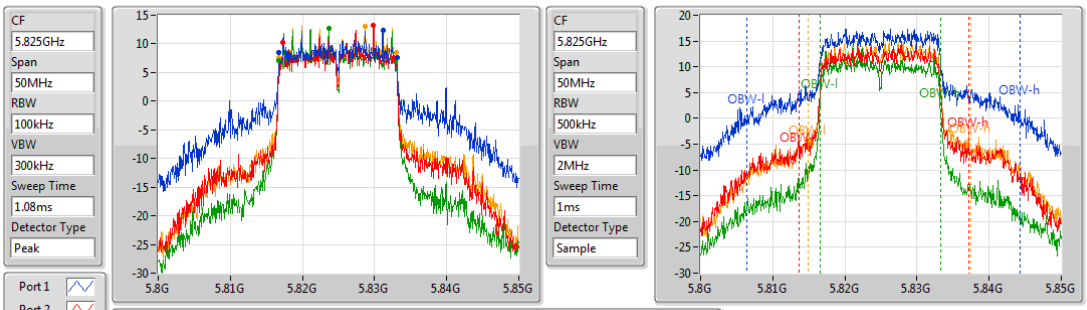
5785MHz



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**

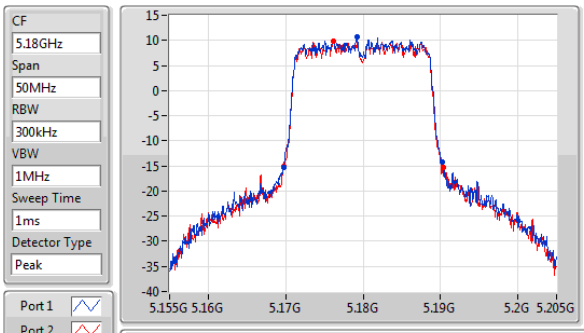
5825MHz

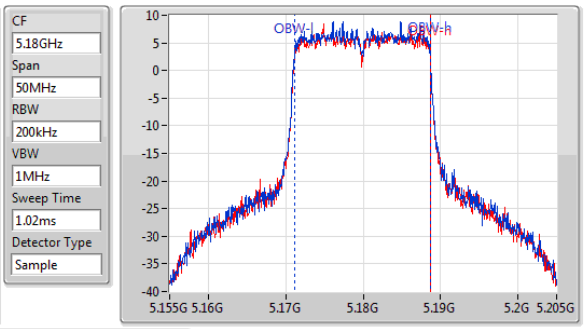


6dB(Hz)	Fl-6dB(Hz)	Fh-6dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
16.377M	5.816739G	5.833116G	37.844M	5.806404G	5.844247G	500k	1
15.435M	5.817319G	5.832754G	23.444M	5.813712G	5.837156G	500k	2
16.087M	5.816739G	5.832826G	16.715M	5.816534G	5.833249G	500k	3
16.304M	5.816739G	5.833043G	22.504M	5.814942G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

802.11ac VHT20_Nss1,(MCS0)_2TX EBW

5180MHz

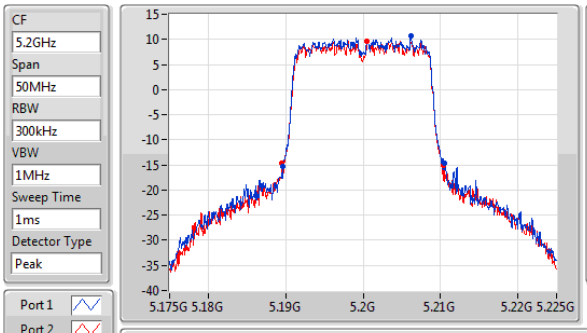


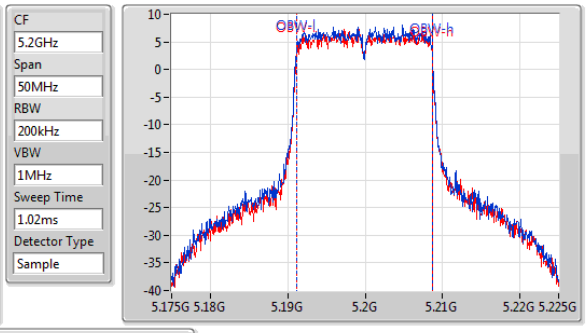


26dB(Hz)	Fl-26dB(Hz)	Fh-26dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
20.58M	5.16971G	5.19029G	17.583M	5.1711G	5.188683G	Inf	1
20.725M	5.16971G	5.190435G	17.583M	5.1711G	5.188683G	Inf	2

802.11ac VHT20_Nss1,(MCS0)_2TX EBW

5200MHz

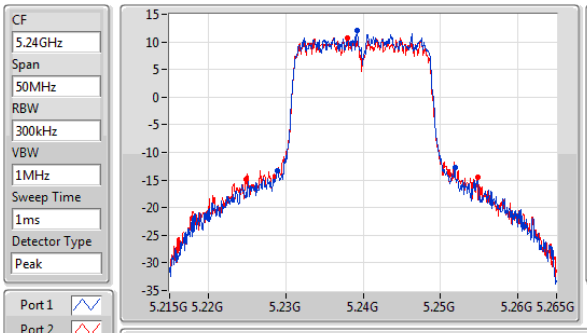


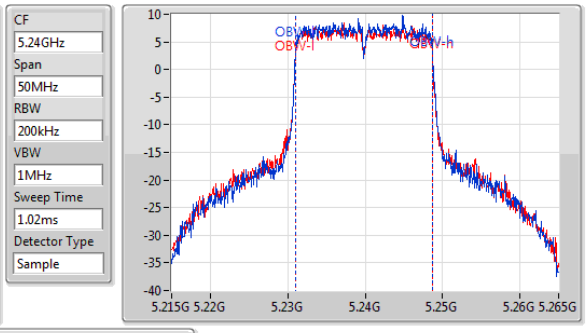


26dB(Hz)	Fl-26dB(Hz)	Fh-26dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
20.942M	5.189638G	5.21058G	17.583M	5.1911G	5.208683G	Inf	1
20.942M	5.189493G	5.210435G	17.583M	5.1911G	5.208683G	Inf	2

802.11ac VHT20_Nss1,(MCS0)_2TX EBW

5240MHz

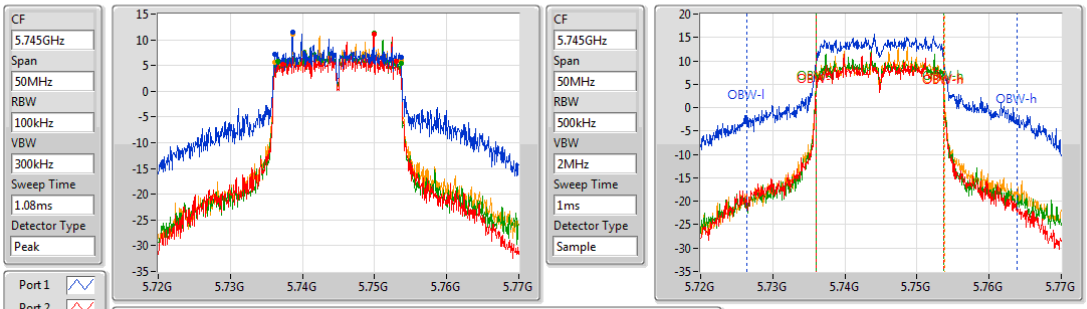




26dB(Hz)	Fl-26dB(Hz)	Fh-26dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
22.971M	5.228913G	5.251884G	17.728M	5.231027G	5.248755G	Inf	1
29.928M	5.224855G	5.254783G	17.8M	5.230955G	5.248755G	Inf	2

802.11ac VHT20_Nss1,(MCS0)_4TX EBW

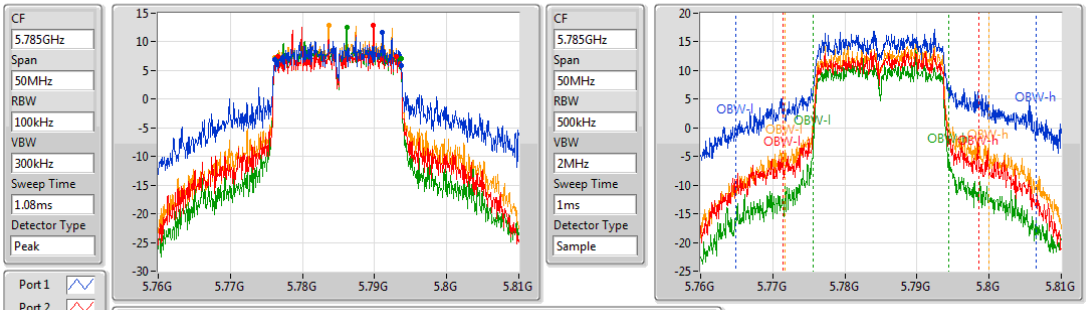
5745MHz



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

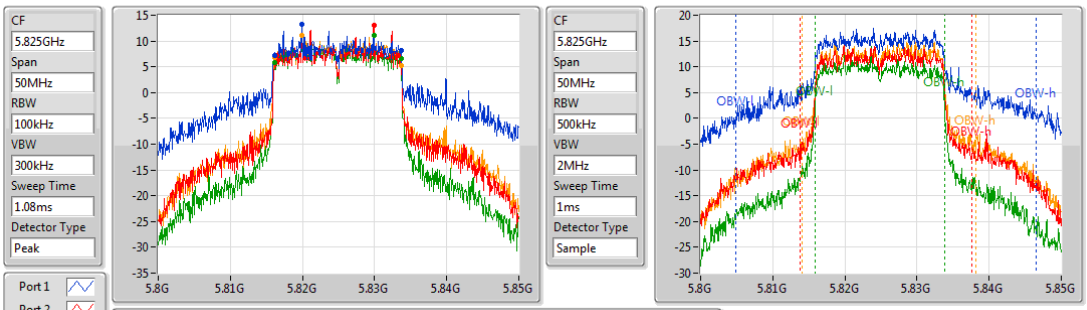
5785MHz



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

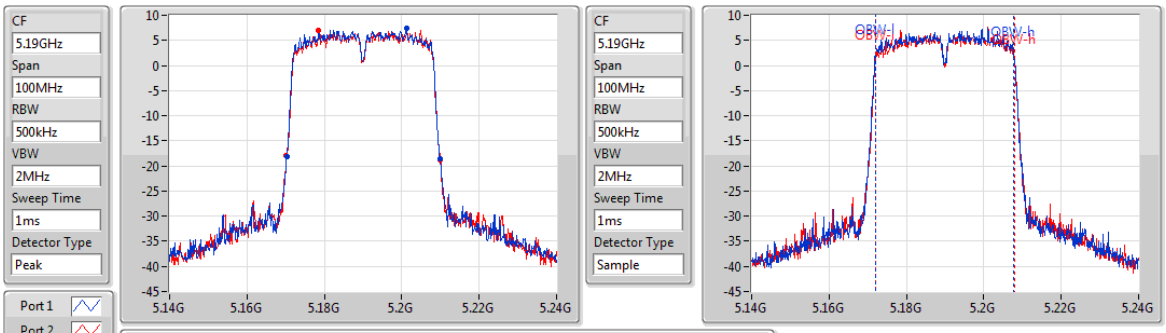
5825MHz



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

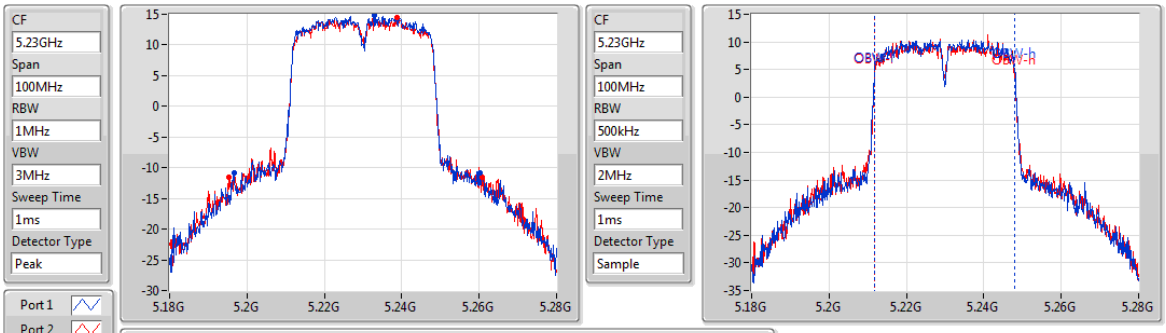
5190MHz



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

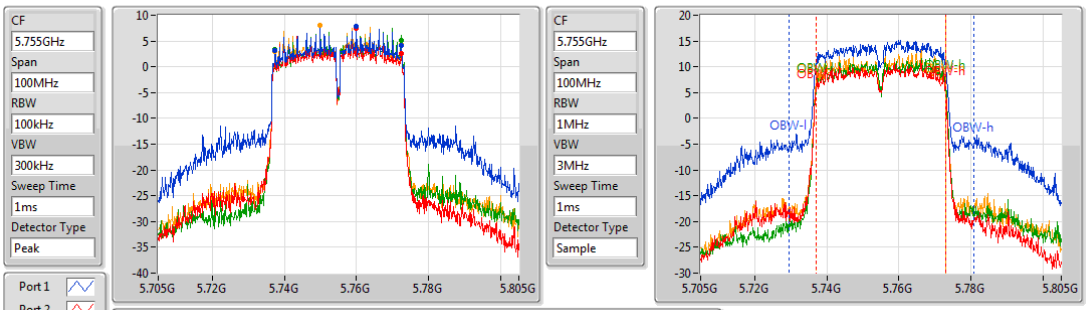
5230MHz



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

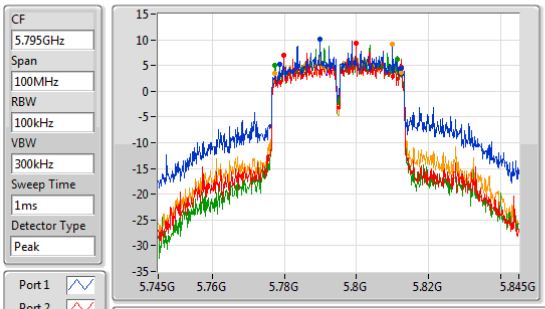
5755MHz

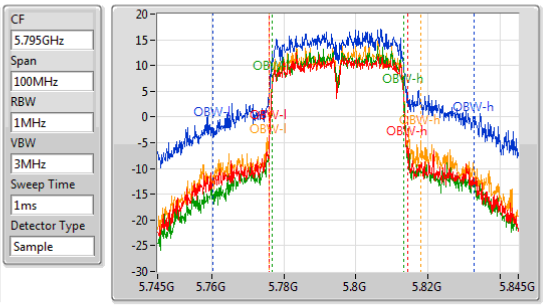


6dB(Hz)	Fl-6dB(Hz)	Fh-6dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
35.217M	5.737319G	5.772536G	51.23M	5.72953G	5.78076G	500k	1
35.217M	5.737319G	5.772536G	36.035M	5.73691G	5.772945G	500k	2
35.217M	5.737319G	5.772536G	35.89M	5.737055G	5.772945G	500k	3
35.217M	5.737319G	5.772536G	36.035M	5.73691G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

802.11ac VHT40_Nss1,(MCS0)_4TX EBW

5795MHz

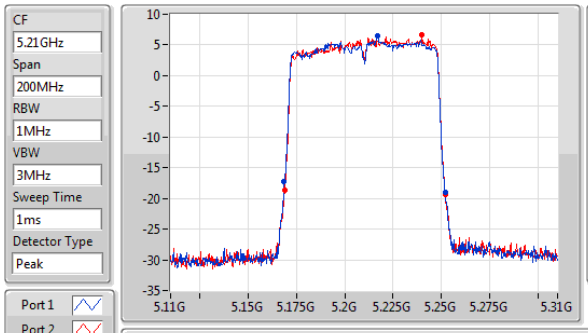


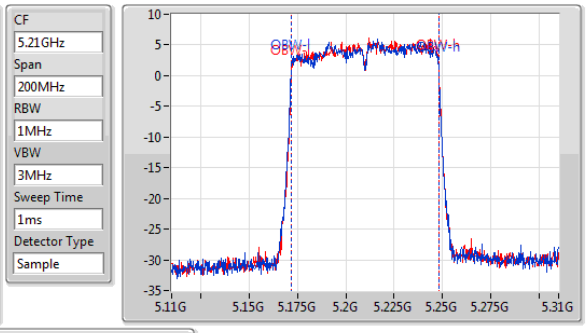


6dB(Hz)	Fl-6dB(Hz)	Fh-6dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
33.913M	5.778623G	5.812536G	72.359M	5.760412G	5.832771G	500k	1
32.754M	5.779783G	5.812536G	38.35M	5.776042G	5.814392G	500k	2
33.913M	5.777319G	5.811232G	36.469M	5.776766G	5.813234G	500k	3
35.217M	5.777319G	5.812536G	42.113M	5.775897G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

802.11ac VHT80_Nss1,(MCS0)_2TX EBW

5210MHz

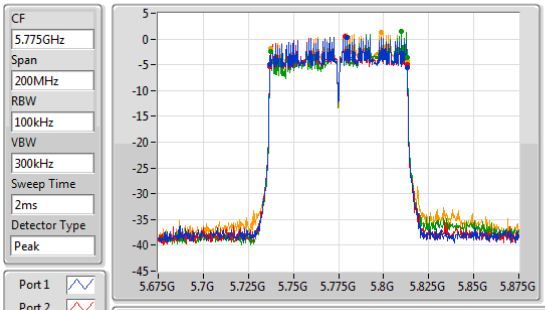


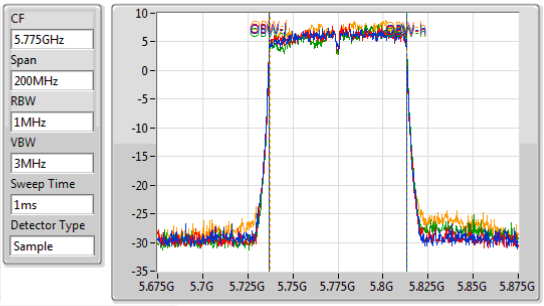


26dB(Hz)	Fl-26dB(Hz)	Fh-26dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
83.478M	5.168551G	5.252029G	75.832M	5.172084G	5.247916G	Inf	1
83.188M	5.168841G	5.252029G	75.832M	5.172084G	5.247916G	Inf	2

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
76.232M	5.737029G	5.813261G	75.832M	5.737084G	5.812916G	500k	1
76.232M	5.736739G	5.812971G	75.832M	5.737084G	5.812916G	500k	2
75.942M	5.737319G	5.813261G	76.122M	5.737084G	5.813205G	500k	3
75.942M	5.737319G	5.813261G	75.543M	5.737373G	5.812916G	500k	4

Beamforming mode

Summary

Mode	Max-N dB (Hz)	Max-OBW (Hz)	ITU-Code	Min-N dB (Hz)	Min-OBW (Hz)
5.15-5.25GHz	-	-	-	-	-
802.11ac VHT20-BF_Nss1,(MCS0)_2TX	22.681M	17.656M	17M7D1D	20M	17.583M
802.11ac VHT40-BF_Nss1,(MCS0)_2TX	39.42M	36.179M	36M2D1D	38.841M	36.035M
802.11ac VHT80-BF_Nss1,(MCS0)_2TX	80.87M	76.122M	76M1D1D	80.29M	75.832M
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	75.832M	75M8D1D	74.203M	75.543M

Max-N dB = Maximum 6dB down bandwidth for 5.725-5.85GHz band / Maximum 26dB down bandwidth for other band;
Max-OBW = Maximum 99% occupied bandwidth;
Min-N dB = Minimum 6dB down bandwidth for 5.725-5.85GHz band / Maximum 26dB down bandwidth for other band;
Min-OBW = Minimum 99% occupied bandwidth;

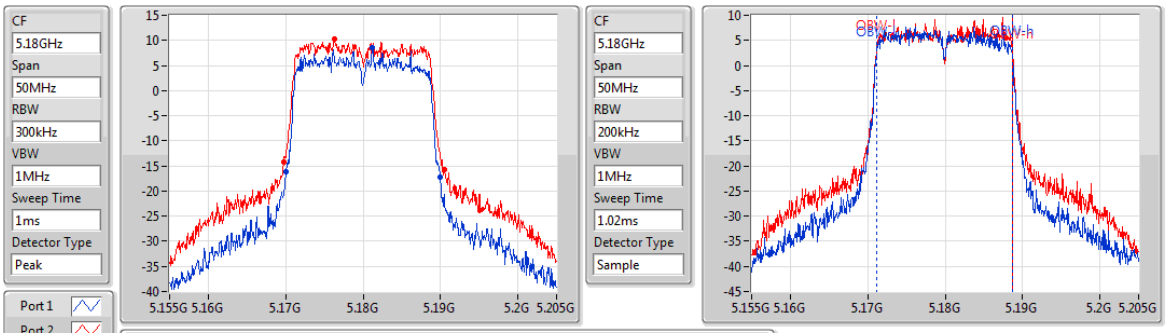
Result

Mode	Result	Limit (Hz)	Port 1-N dB (Hz)	Port 1-OBW (Hz)	Port 2-N dB (Hz)	Port 2-OBW (Hz)	Port 3-N dB (Hz)	Port 3-OBW (Hz)	Port 4-N dB (Hz)	Port 4-OBW (Hz)
802.11ac VHT20-BF_Nss1,(MCS0)_2TX	-	-	-	-	-	-	-	-	-	-
5180MHz	Pass	Inf	20M	17.583M	20.87M	17.656M				
5200MHz	Pass	Inf	20.29M	17.656M	20.87M	17.656M				
5240MHz	Pass	Inf	22.319M	17.656M	22.681M	17.656M				
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)_2TX	-	-	-	-	-	-	-	-	-	-
5190MHz	Pass	Inf	39.13M	36.179M	38.841M	36.035M				
5230MHz	Pass	Inf	38.986M	36.035M	39.42M	36.035M				
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)_2TX	-	-	-	-	-	-	-	-	-	-
5210MHz	Pass	Inf	80.87M	75.832M	80.29M	76.122M				
802.11ac VHT80-BF_Nss1,(MCS0)_4TX	-	-	-	-	-	-	-	-	-	-
5775MHz	Pass	500k	75.362M	75.543M	76.522M	75.832M	74.203M	75.543M	75.942M	75.543M

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

802.11ac VHT20-BF_Nss1,(MCS0)_2TX EBW

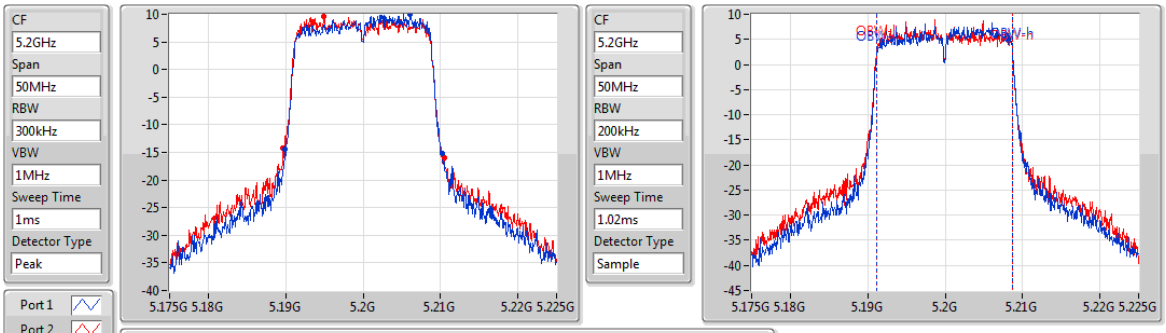
5180MHz



26dB(Hz)	Fl-26dB(Hz)	Fh-26dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
20M	5.17G	5.19G	17.583M	5.1711G	5.188683G	Inf	1
20.87M	5.16971G	5.19058G	17.656M	5.1711G	5.188755G	Inf	2

802.11ac VHT20-BF_Nss1,(MCS0)_2TX EBW

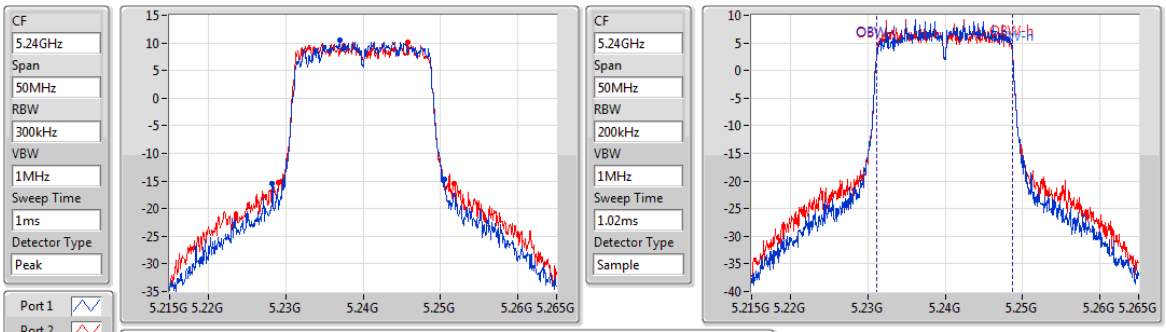
5200MHz



26dB(Hz)	Fl-26dB(Hz)	Fh-26dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
20.29M	5.189928G	5.210217G	17.656M	5.1911G	5.208755G	Inf	1
20.87M	5.189638G	5.210507G	17.656M	5.1911G	5.208755G	Inf	2

802.11ac VHT20-BF_Nss1,(MCS0)_2TX EBW

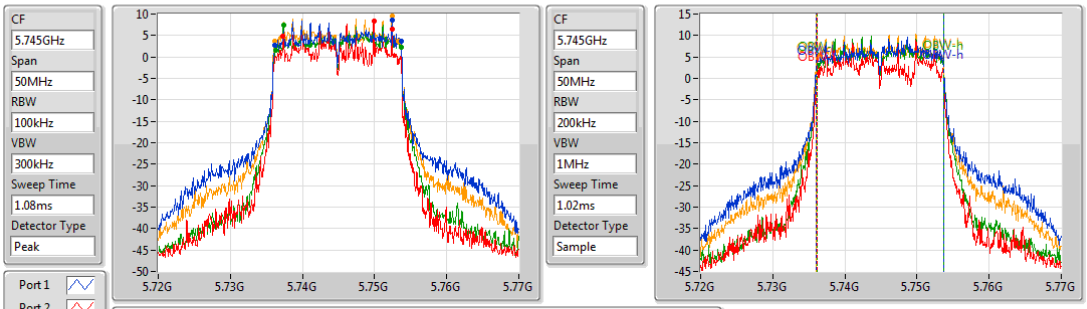
5240MHz



26dB(Hz)	Fl-26dB(Hz)	Fh-26dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
22.319M	5.228261G	5.25058G	17.656M	5.2311G	5.248755G	Inf	1
22.681M	5.22913G	5.251812G	17.656M	5.2311G	5.248755G	Inf	2

802.11ac VHT20-BF_Nss1,(MCS0)_4TX EBW

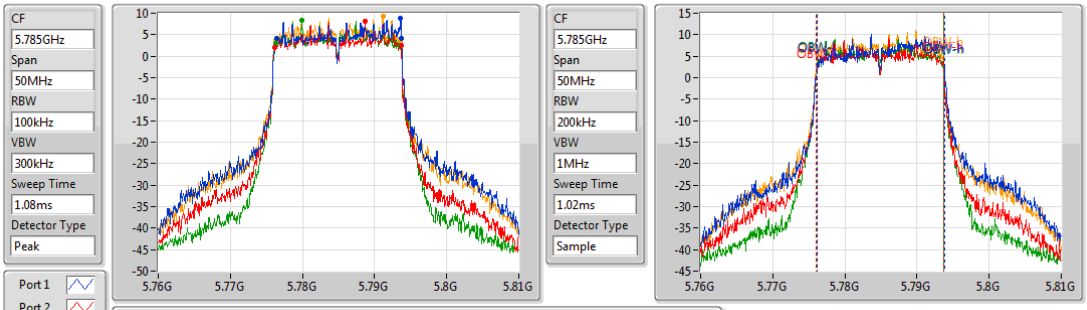
5745MHz



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

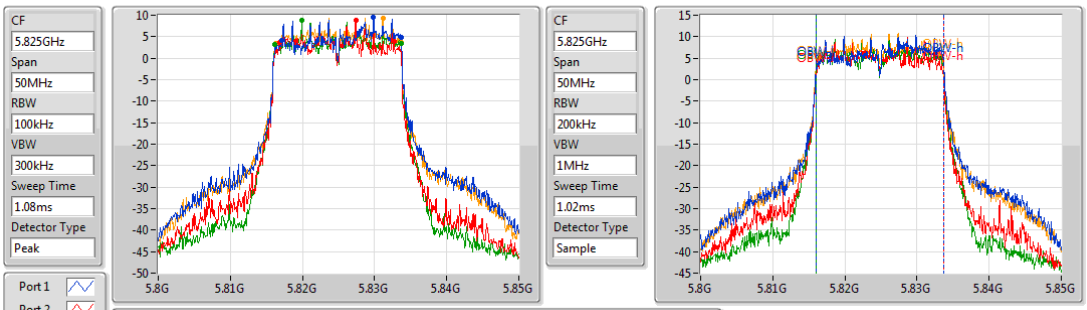
5785MHz



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

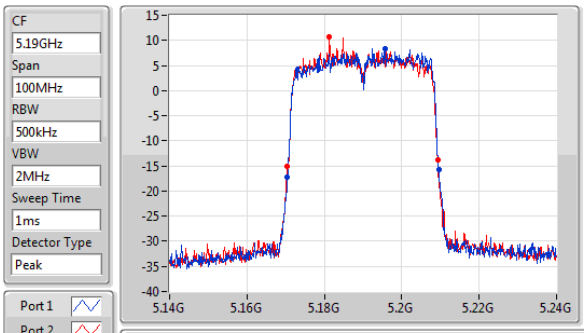
5825MHz

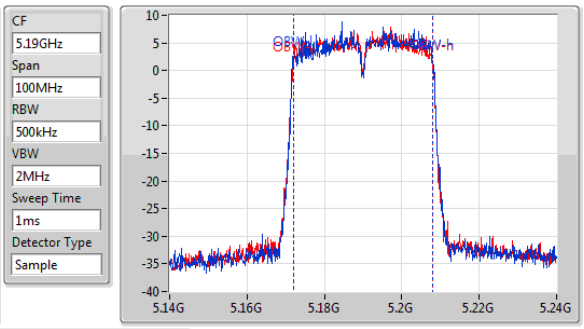


6dB(Hz)	Fl-6dB(Hz)	Fh-6dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
16.594M	5.817101G	5.833696G	17.728M	5.816027G	5.833755G	500k	1
15.87M	5.816812G	5.832681G	17.656M	5.816027G	5.833683G	500k	2
17.536M	5.816159G	5.833696G	17.656M	5.816027G	5.833683G	500k	3
17.391M	5.816304G	5.833696G	17.656M	5.816027G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

802.11ac VHT40-BF_Nss1,(MCS0)_2TX EBW

5190MHz

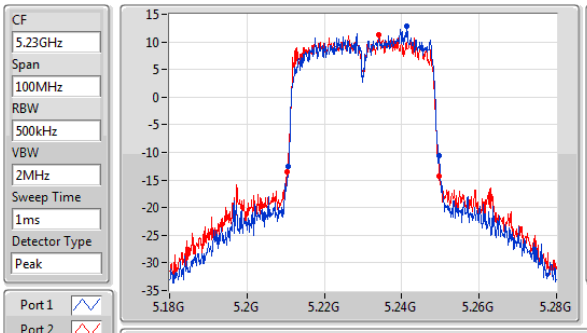


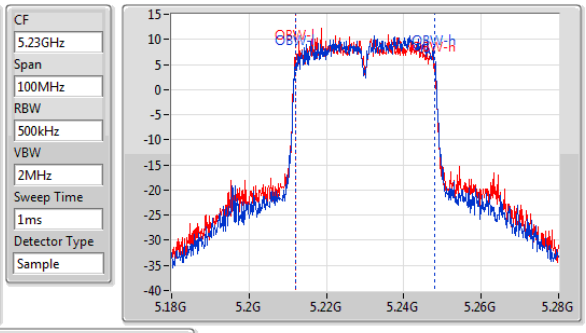


26dB(Hz)	Fl-26dB(Hz)	Fh-26dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
39.13M	5.170435G	5.209565G	36.179M	5.17191G	5.20809G	Inf	1
38.841M	5.170435G	5.209275G	36.035M	5.17191G	5.207945G	Inf	2

802.11ac VHT40-BF_Nss1,(MCS0)_2TX EBW

5230MHz

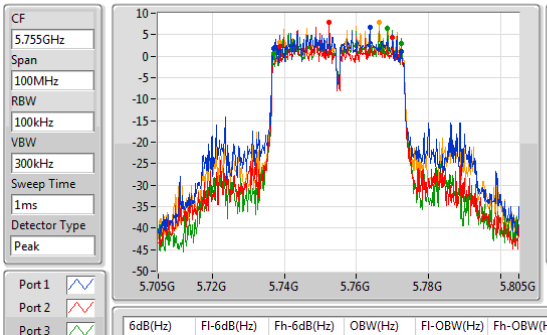


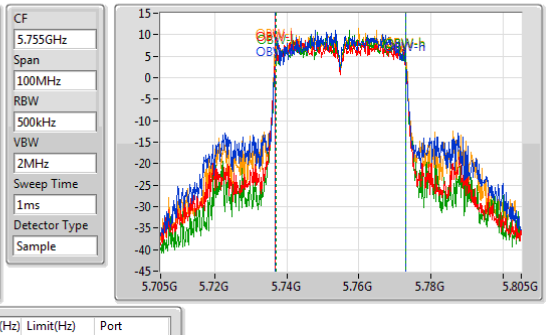


26dB(Hz)	Fl-26dB(Hz)	Fh-26dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
38.986M	5.210725G	5.24971G	36.035M	5.212055G	5.24809G	Inf	1
39.42M	5.21029G	5.24971G	36.035M	5.21191G	5.247945G	Inf	2

802.11ac VHT40-BF_Nss1,(MCS0)_4TX EBW

5755MHz

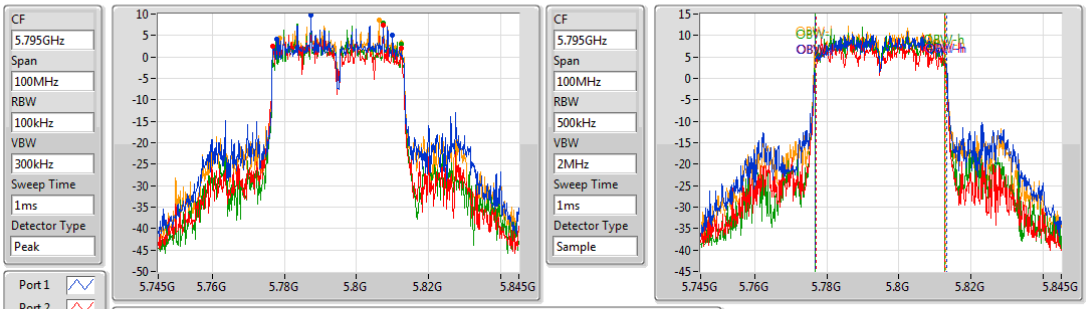




6dB(Hz)	Fl-6dB(Hz)	Fh-6dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
35.362M	5.737029G	5.772391G	36.179M	5.736766G	5.772945G	500k	1
31.304M	5.738623G	5.769928G	36.179M	5.736766G	5.772945G	500k	2
35.507M	5.737029G	5.772536G	35.89M	5.737055G	5.772945G	500k	3
33.768M	5.738623G	5.772391G	36.469M	5.736621G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

802.11ac VHT40-BF_Nss1,(MCS0)_4TX EBW

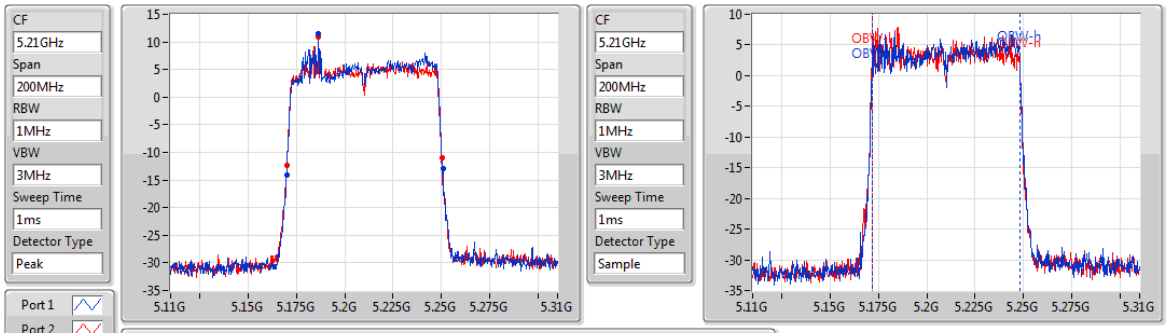
5795MHz



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)_2TX EBW

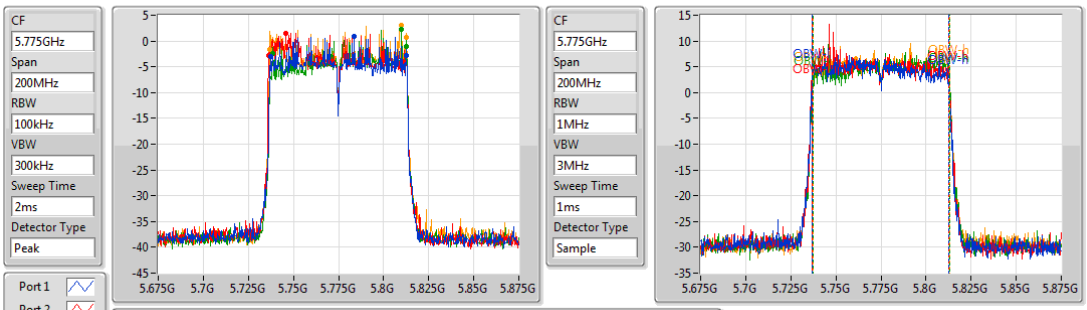
5210MHz



26dB(Hz)	Fl-26dB(Hz)	Fh-26dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
80.87M	5.17G	5.25087G	75.832M	5.172084G	5.247916G	Inf	1
80.29M	5.17G	5.25029G	76.122M	5.171795G	5.247916G	Inf	2

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
75.362M	5.737319G	5.812681G	75.543M	5.737084G	5.812627G	500k	1
76.522M	5.736159G	5.812681G	75.832M	5.736795G	5.812627G	500k	2
74.203M	5.738478G	5.812681G	75.543M	5.737373G	5.812916G	500k	3
75.942M	5.736739G	5.812681G	75.543M	5.737373G	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	Conducted Power: 1 W

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	28.78	0.75509
802.11ac VHT20_Nss1,(MCS0)_2TX	23.43	0.22029	28.73	0.74645
802.11ac VHT40_Nss1,(MCS0)_2TX	**23.89**	0.24491	29.19	0.82985
802.11ac VHT80_Nss1,(MCS0)_2TX	18.44	0.06982	23.74	0.23659
5.725-5.85GHz	-	-	-	-
802.11a_Nss1,(6Mbps)_4TX	**29.42**	0.87498	34.22	2.64241
802.11ac VHT20_Nss1,(MCS0)_4TX	29.37	0.86497	34.17	2.61216
802.11ac VHT40_Nss1,(MCS0)_4TX	28.86	0.76913	33.66	2.32274
802.11ac VHT80_Nss1,(MCS0)_4TX	23.16	0.20701	27.96	0.62517

Result

Mode	Result	DG (dBi)	Port 1 (dBm)	Port 2 (dBm)	Port 3 (dBm)	Port 4 (dBm)	Total Power (dBm)	Power Limit (dBm)	EIRP (dBm)	EIRP Limit (dBm)
802.11a_Nss1,(6Mbps)_2TX	-	-	-	-	-	-	-	-	-	-
5180MHz	Pass	5.30	19.68	19.32			22.51	30.00	27.81	36.00
5200MHz	Pass	5.30	19.78	19.22			22.52	30.00	27.82	36.00
5240MHz	Pass	5.30	20.76	20.15			23.48	30.00	28.78	36.00
802.11a_Nss1,(6Mbps)_4TX	-	-	-	-	-	-	-	-	-	-
5745MHz	Pass	4.80	23.03	21.57	22.19	22.62	28.41	30.00	33.21	36.00
5785MHz	Pass	4.80	23.64	22.66	23.01	23.83	29.33	30.00	34.13	36.00
5825MHz	Pass	4.80	23.68	23.16	23.05	23.66	**29.42**	30.00	34.22	36.00
802.11ac VHT20_Nss1,(MCS0)_2TX	-	-	-	-	-	-	-	-	-	-
5180MHz	Pass	5.30	19.62	19.3			22.47	30.00	27.77	36.00
5200MHz	Pass	5.30	19.77	19.16			22.49	30.00	27.79	36.00
5240MHz	Pass	5.30	20.7	20.12			23.43	30.00	28.73	36.00
802.11ac VHT20_Nss1,(MCS0)_4TX	-	-	-	-	-	-	-	-	-	-
5745MHz	Pass	4.80	23.01	21.42	22.04	22.51	28.30	30.00	33.10	36.00
5785MHz	Pass	4.80	23.61	22.89	22.88	23.71	29.31	30.00	34.11	36.00
5825MHz	Pass	4.80	23.71	23.16	22.89	23.59	29.37	30.00	34.17	36.00
802.11ac VHT40_Nss1,(MCS0)_2TX	-	-	-	-	-	-	-	-	-	-
5190MHz	Pass	5.30	17.41	17.02			20.23	30.00	25.53	36.00
5230MHz	Pass	5.30	21.06	20.69			**23.89**	30.00	29.19	36.00
802.11ac VHT40_Nss1,(MCS0)_4TX	-	-	-	-	-	-	-	-	-	-
5755MHz	Pass	4.80	21.46	20.58	21.13	21.56	27.22	30.00	32.02	36.00
5795MHz	Pass	4.80	23.13	22.34	22.65	23.2	28.86	30.00	33.66	36.00
802.11ac VHT80_Nss1,(MCS0)_2TX	-	-	-	-	-	-	-	-	-	-
5210MHz	Pass	5.30	15.62	15.23			18.44	30.00	23.74	36.00
802.11ac VHT80_Nss1,(MCS0)_4TX	-	-	-	-	-	-	-	-	-	-
5775MHz	Pass	4.80	17.21	16.95	16.54	17.78	23.16	30.00	27.96	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)
5.15-5.25GHz	-	-	-	-
802.11ac VHT20-BF_Nss1,(MCS0)_2TX	23.02	0.20045	30.57	1.14025
802.11ac VHT40-BF_Nss1,(MCS0)_2TX	**23.08**	0.20324	30.63	1.15611
802.11ac VHT80-BF_Nss1,(MCS0)_2TX	18.30	0.06761	25.85	0.38459
5.725-5.85GHz	-	-	-	-
802.11ac VHT20-BF_Nss1,(MCS0)_4TX	**25.77**	0.37757	35.90	3.89045
802.11ac VHT40-BF_Nss1,(MCS0)_4TX	25.43	0.34914	35.56	3.59749
802.11ac VHT80-BF_Nss1,(MCS0)_4TX	22.23	0.16711	32.36	1.72187

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)_2TX	-	-	-	-	-	-	-	-	-	-
5180MHz	Pass	7.55	19.28	19.55			22.43	28.45	29.98	36.00
5200MHz	Pass	7.55	19.33	19.15			22.25	28.45	29.80	36.00
5240MHz	Pass	7.55	19.86	20.15			23.02	28.45	30.57	36.00
802.11ac VHT20-BF_Nss1,(MCS0)_4TX	-	-	-	-	-	-	-	-	-	-
5745MHz	Pass	10.13	19.34	18.45	19.37	20.15	25.39	25.87	35.52	36.00
5785MHz	Pass	10.13	19.86	18.72	19.23	20.51	25.65	25.87	35.78	36.00
5825MHz	Pass	10.13	19.89	18.83	19.22	20.81	**25.77**	25.87	35.90	36.00
802.11ac VHT40-BF_Nss1,(MCS0)_2TX	-	-	-	-	-	-	-	-	-	-
5190MHz	Pass	7.55	16.67	17.05			19.87	28.45	27.42	36.00
5230MHz	Pass	7.55	20.12	20.01			**23.08**	28.45	30.63	36.00
802.11ac VHT40-BF_Nss1,(MCS0)_4TX	-	-	-	-	-	-	-	-	-	-
5755MHz	Pass	10.13	19.54	18.23	19.05	19.81	25.22	25.87	35.35	36.00
5795MHz	Pass	10.13	19.62	18.72	19.01	20.16	25.43	25.87	35.56	36.00
802.11ac VHT80-BF_Nss1,(MCS0)_2TX	-	-	-	-	-	-	-	-	-	-
5210MHz	Pass	7.55	15.21	15.37			18.30	28.45	25.85	36.00
802.11ac VHT80-BF_Nss1,(MCS0)_4TX	-	-	-	-	-	-	-	-	-	-
5775MHz	Pass	10.13	16.38	15.43	16.19	16.72	22.23	25.87	32.36	36.00

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

Note:

5150-5250 MHz

Directional gain = $10 * \log((10^{5.3/20}+10^{3.7/20})^2/2=7.55$ dBi > 6 dBi

Limit shall be reduced to 30 dBm – (7.55 dBi – 6 dBi) = 28.45 dBm.

5725 ~ 5850 MHz

Directional gain = $10 * \log((10^{4.8/20}+10^{3.8/20}+10^{3.6/20}+10^{4.2/20})^2/4)= 10.13$ dBi > 6 dBi.

Limit shall be reduced to 30 dBm – (10.13 dBi – 6 dBi) = 25.87 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

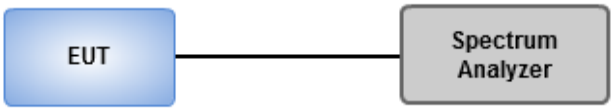
Duty cycle ≥ 98 %

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	17.71
802.11ac VHT20_Nss1,(MCS0)_2TX	10.19	17.74
802.11ac VHT40_Nss1,(MCS0)_2TX	7.55	15.10
802.11ac VHT80_Nss1,(MCS0)_2TX	-1.35	6.20
5.725-5.85GHz	-	-
802.11a_Nss1,(6Mbps)_4TX	14.89	25.02
802.11ac VHT20_Nss1,(MCS0)_4TX	14.65	24.78
802.11ac VHT40_Nss1,(MCS0)_4TX	11.1	21.23
802.11ac VHT80_Nss1,(MCS0)_4TX	2.35	12.48

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	7.55	6.49	6.02			9.25	15.45	16.80	23.00
5200MHz	Pass	7.55	6.51	5.94			9.23	15.45	16.78	23.00
5240MHz	Pass	7.55	7.41	6.94			10.16	15.45	17.71	23.00
802.11a_Nss1,(6Mbps)_4TX	-	-	-	-	-	-	-	-	-	-
5745MHz	Pass	10.13	7.35	6.62	7.3	7.68	13.21	25.87	23.34	36.00
5785MHz	Pass	10.13	8.79	8.14	8.57	9.13	14.61	25.87	24.74	36.00
5825MHz	Pass	10.13	9.2	8.63	8.62	9.37	14.89	25.87	25.02	36.00
802.11ac VHT20_Nss1,(MCS0)_2TX	-	-	-	-	-	-	-	-	-	-
5180MHz	Pass	7.55	6.6	6.17			9.26	15.45	16.81	23.00
5200MHz	Pass	7.55	6.54	6.21			9.27	15.45	16.82	23.00
5240MHz	Pass	7.55	7.55	7.18			10.19	15.45	17.74	23.00
802.11ac VHT20_Nss1,(MCS0)_4TX	-	-	-	-	-	-	-	-	-	-
5745MHz	Pass	10.13	7.4	6.49	7.42	7.83	13.02	25.87	23.15	36.00
5785MHz	Pass	10.13	8.74	8.27	8.86	9.32	14.41	25.87	24.54	36.00
5825MHz	Pass	10.13	9	8.67	8.62	9.56	14.65	25.87	24.78	36.00
802.11ac VHT40_Nss1,(MCS0)_2TX	-	-	-	-	-	-	-	-	-	-
5190MHz	Pass	7.55	1.09	0.67			3.89	15.45	11.44	23.00
5230MHz	Pass	7.55	4.74	4.41			7.55	15.45	15.10	23.00
802.11ac VHT40_Nss1,(MCS0)_4TX	-	-	-	-	-	-	-	-	-	-
5755MHz	Pass	10.13	3.32	2.5	3.23	3.89	9.19	25.87	19.32	36.00
5795MHz	Pass	10.13	5.27	4.51	5.13	5.71	11.10	25.87	21.23	36.00
802.11ac VHT80_Nss1,(MCS0)_2TX	-	-	-	-	-	-	-	-	-	-
5210MHz	Pass	7.55	-4.10	-4.36			-1.35	15.45	6.20	23.00
802.11ac VHT80_Nss1,(MCS0)_4TX	-	-	-	-	-	-	-	-	-	-
5775MHz	Pass	10.13	-3.93	-3.85	-3.08	-2.55	2.35	25.87	12.48	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;

Note:

5150-5250 MHz
Directional gain = $10 * \log((10^{5.3/20}+10^{3.7/20})^2/2=7.55$ dBi > 6 dBi

Limit shall be reduced to 17 dBm – (7.55 dBi – 6 dBi) = 15.45 dBm.

5725 ~ 5850 MHz
Directional gain = $10 * \log((10^{4.8/20}+10^{3.8/20}+10^{3.6/20}+10^{4.2/20})^2/4)= 10.13$ dBi > 6 dBi.

Limit shall be reduced to 30 dBm – (10.13 dBi – 6 dBi) = 25.87 dBm.

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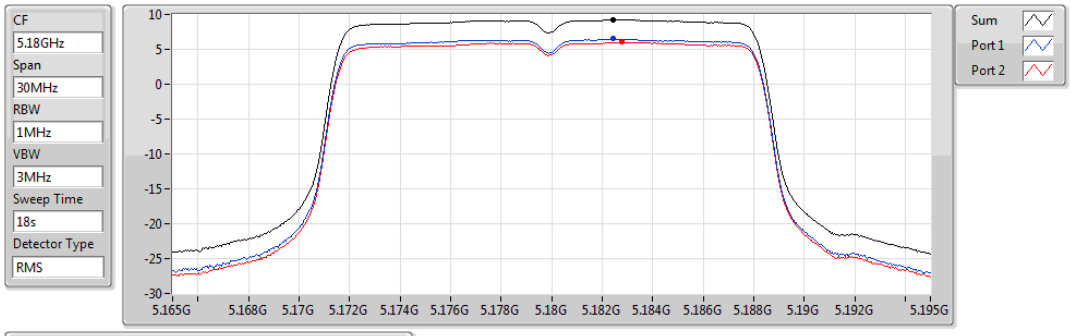
802.11a_Nss1,(6Mbps)_2TX PSD

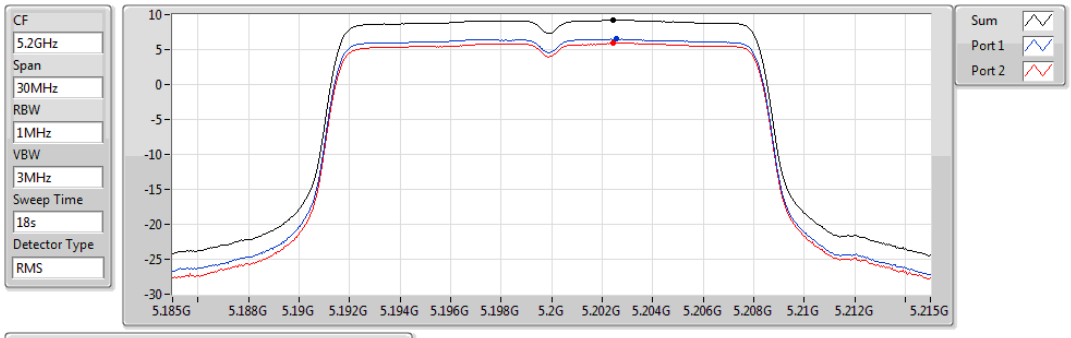
5180MHz



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

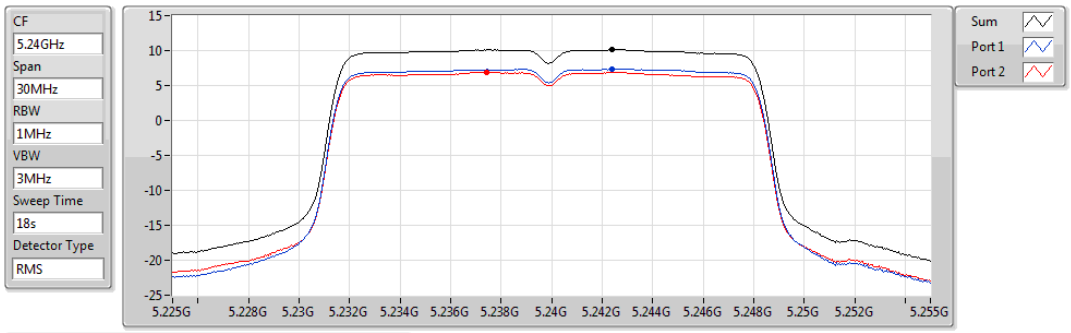
5200MHz



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

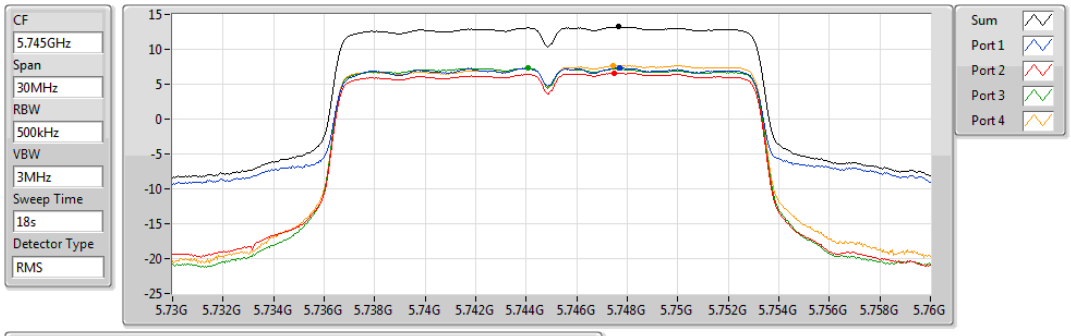
5240MHz



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

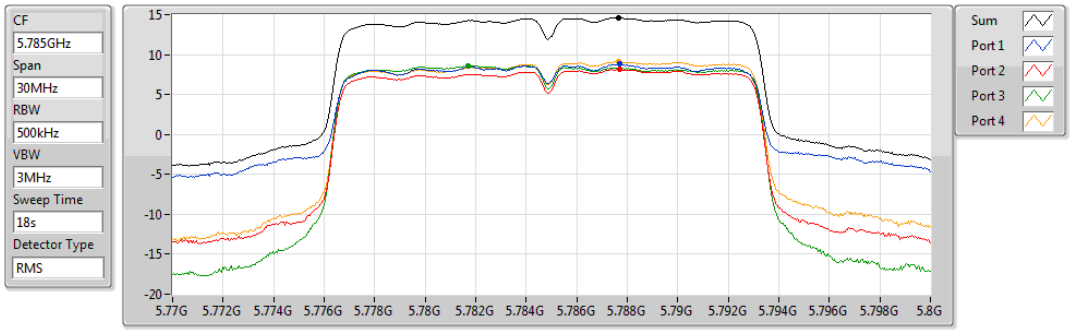
5745MHz



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

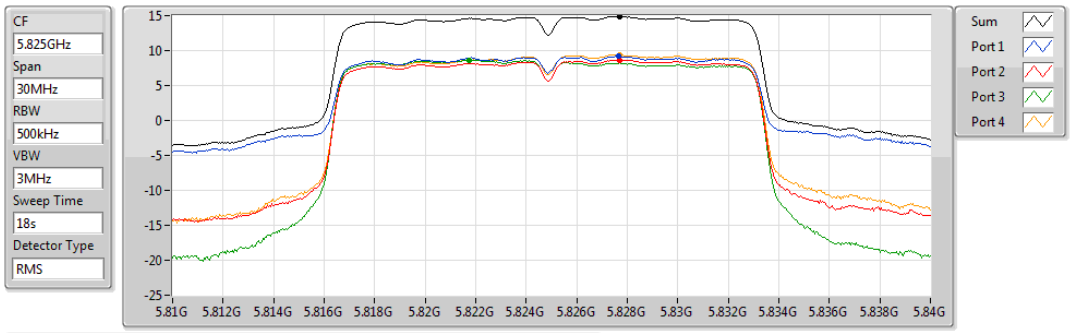
5785MHz



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

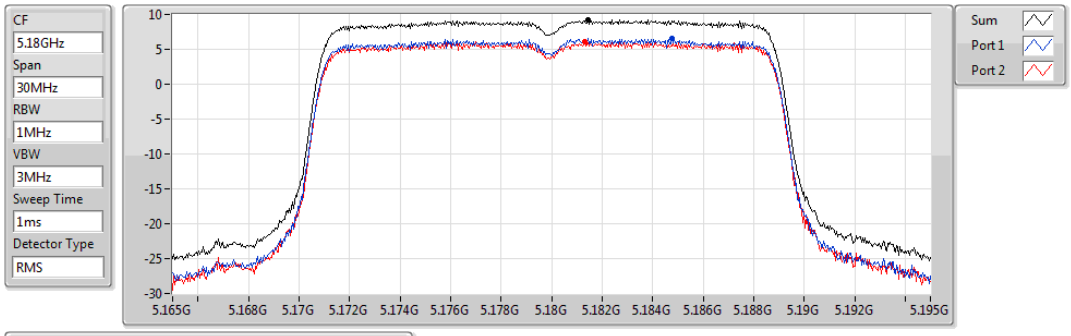
5825MHz



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

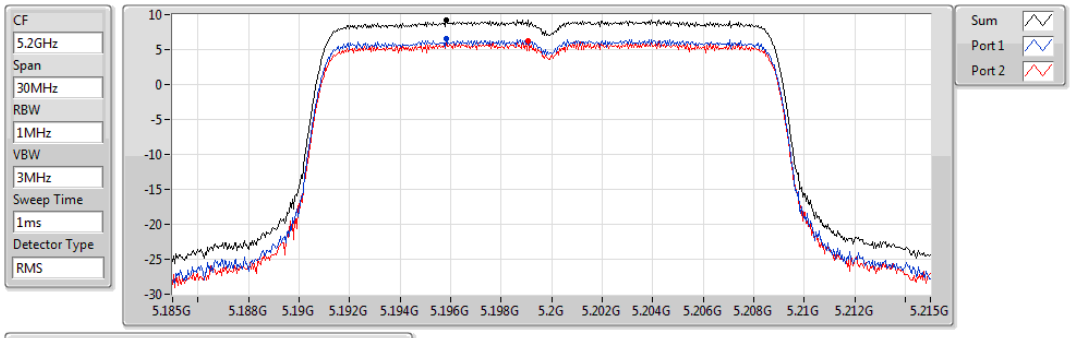
5180MHz



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

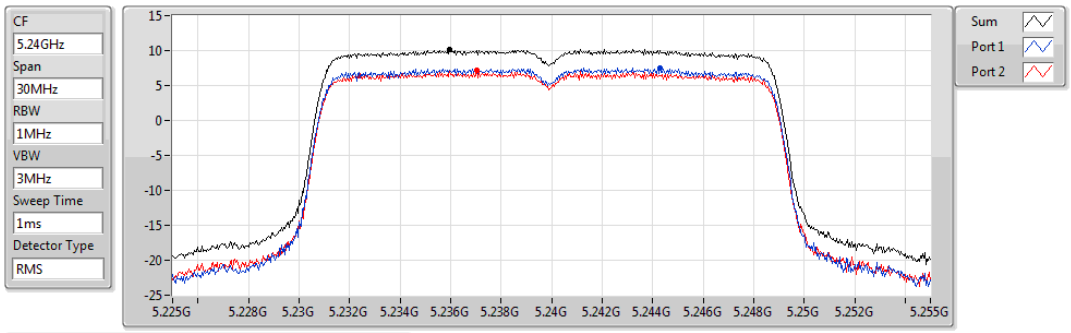
5200MHz



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

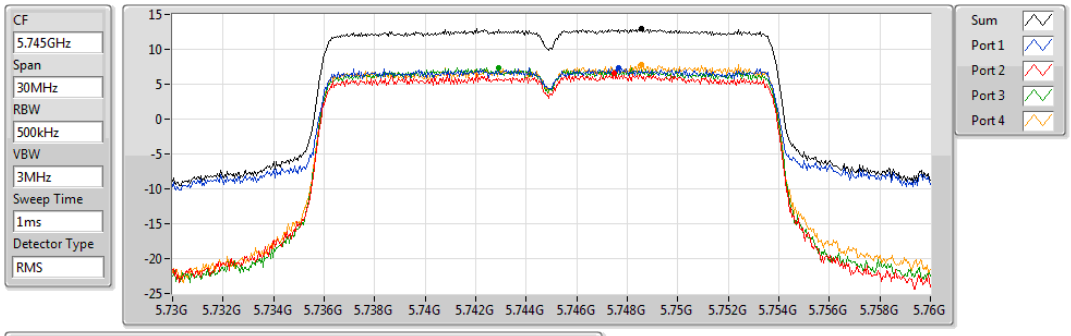
5240MHz



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

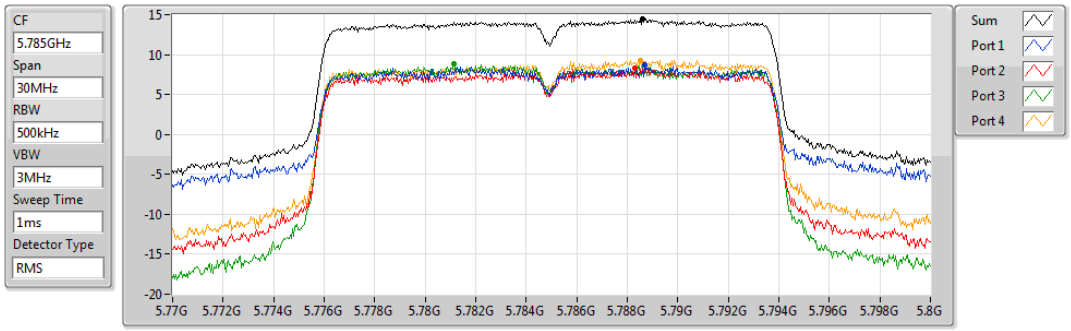
5745MHz



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

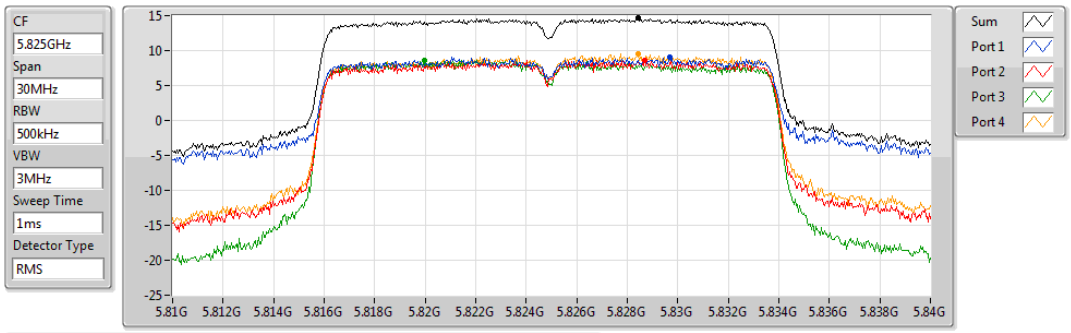
5785MHz



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

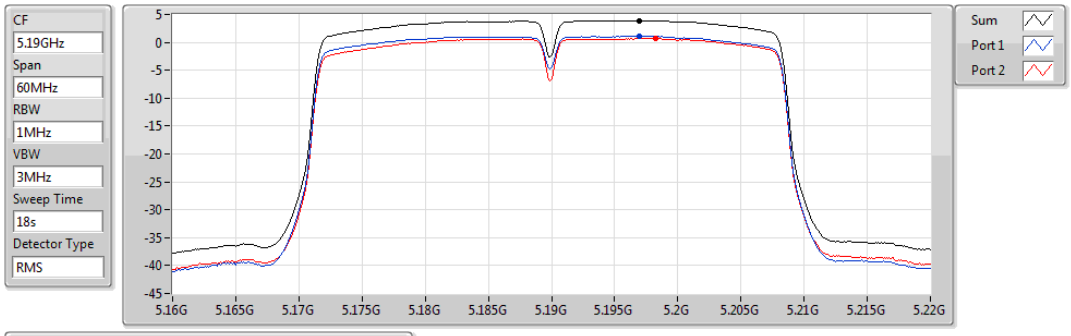
5825MHz



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

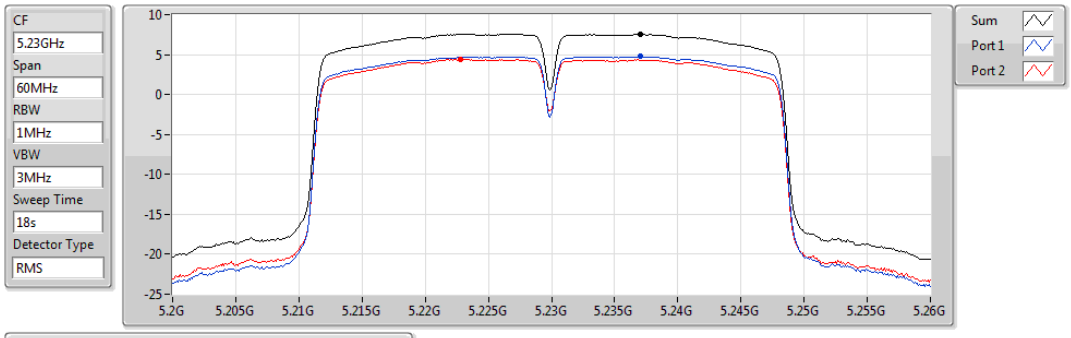
5190MHz



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

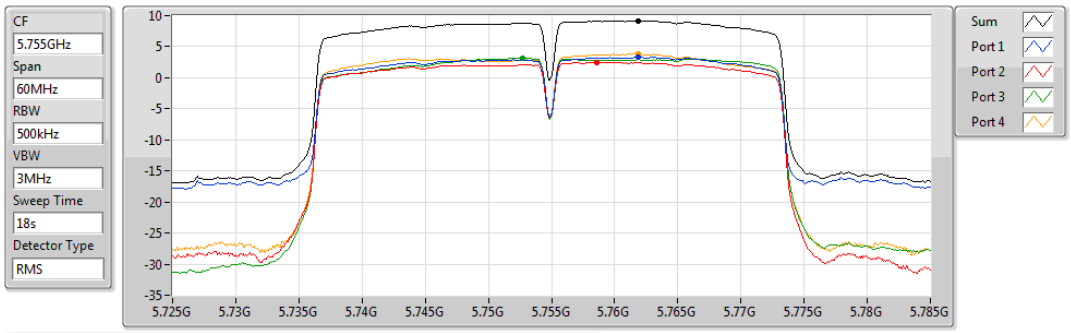
5230MHz



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

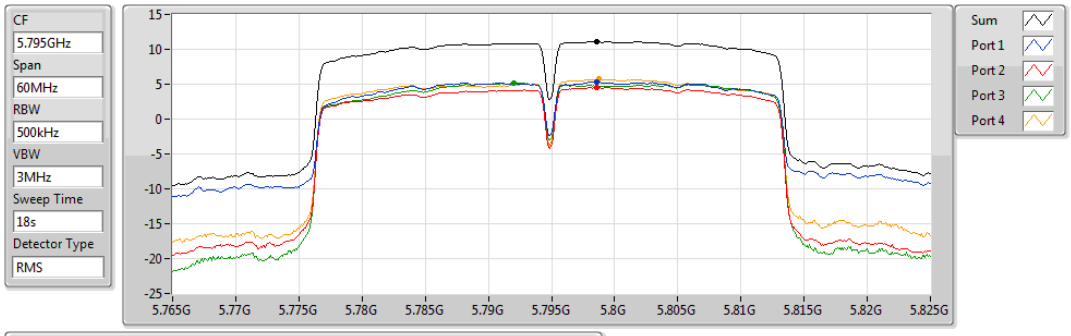
5755MHz



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

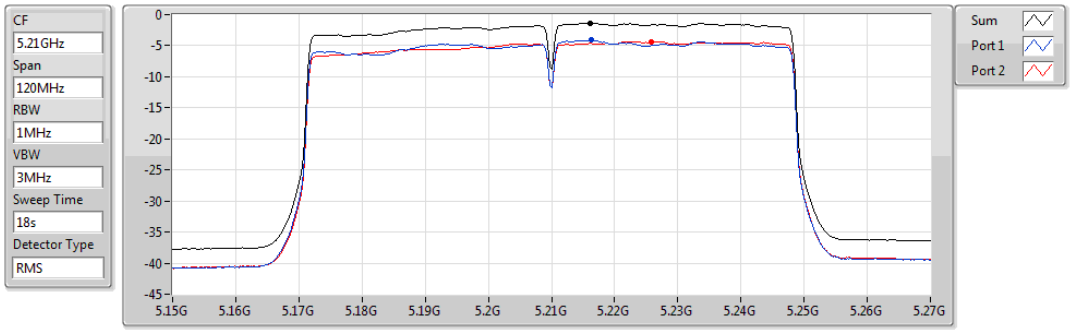
5795MHz



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

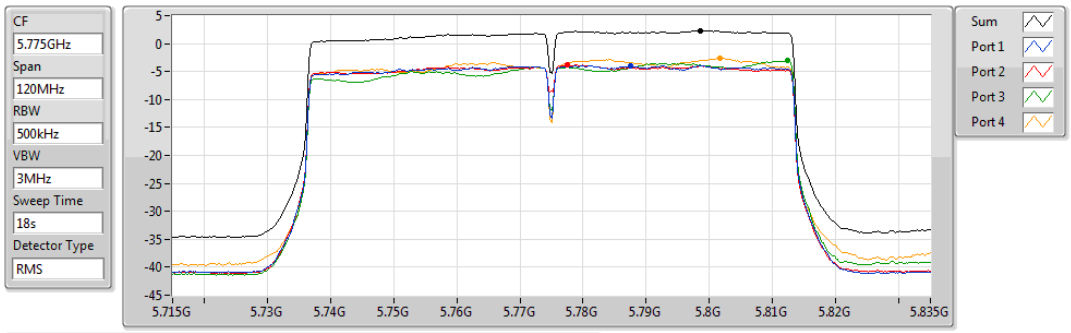
5210MHz



Sum	PD	Port 1	Port 2
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
-1.35	-1.35	-4.10	-4.36

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)
2.35	2.35	-3.93	-3.85	-3.08	-2.55

Beamforming mode

Summary

Mode	PD (dBm/RBW)	EIRP PD (dBm/RBW)
5.15-5.25GHz	-	-
802.11ac VHT20-BF_Nss1,(MCS0)_2TX	9.52	17.07
802.11ac VHT40-BF_Nss1,(MCS0)_2TX	7.02	14.57
802.11ac VHT80-BF_Nss1,(MCS0)_2TX	-0.98	6.57
5.725-5.85GHz	-	-
802.11ac VHT20-BF_Nss1,(MCS0)_4TX	10.63	20.76
802.11ac VHT40-BF_Nss1,(MCS0)_4TX	7.33	17.46
802.11ac VHT80-BF_Nss1,(MCS0)_4TX	1.76	11.89

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)_2TX	-	-	-	-	-	-	-	-	-	-
5180MHz	Pass	7.55	6.37	6.07			8.99	15.45	16.54	23.00
5200MHz	Pass	7.55	6.60	6.00			8.95	15.45	16.50	23.00
5240MHz	Pass	7.55	6.84	6.34			9.52	15.45	17.07	23.00
802.11ac VHT20-BF_Nss1,(MCS0)_4TX	-	-	-	-	-	-	-	-	-	-
5745MHz	Pass	10.13	5.88	3.91	4.38	4.92	10.02	25.87	20.15	36.00
5785MHz	Pass	10.13	5.85	4.47	4.98	4.98	10.60	25.87	20.73	36.00
5825MHz	Pass	10.13	5.28	4.48	4.84	6.24	10.63	25.87	20.76	36.00
802.11ac VHT40-BF_Nss1,(MCS0)_2TX	-	-	-	-	-	-	-	-	-	-
5190MHz	Pass	7.55	1.09	0.48			3.70	15.45	11.25	23.00
5230MHz	Pass	7.55	4.43	3.93			7.02	15.45	14.57	23.00
802.11ac VHT40-BF_Nss1,(MCS0)_4TX	-	-	-	-	-	-	-	-	-	-
5755MHz	Pass	10.13	2.97	1.37	2.40	2.37	7.33	25.87	17.46	36.00
5795MHz	Pass	10.13	1.89	1.71	1.92	2.70	7.22	25.87	17.35	36.00
802.11ac VHT80-BF_Nss1,(MCS0)_2TX	-	-	-	-	-	-	-	-	-	-
5210MHz	Pass	7.55	-3.31	-4.33			-0.98	15.45	6.57	23.00
802.11ac VHT80-BF_Nss1,(MCS0)_4TX	-	-	-	-	-	-	-	-	-	-
5775MHz	Pass	10.13	-3.97	-4.72	-3.01	-3.34	1.76	25.87	11.89	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;

Note:

5150-5250 MHz
Directional gain = $10 * \log((10^{5.3/20}+10^{3.7/20})^2/2=7.55$ dBi > 6 dBi

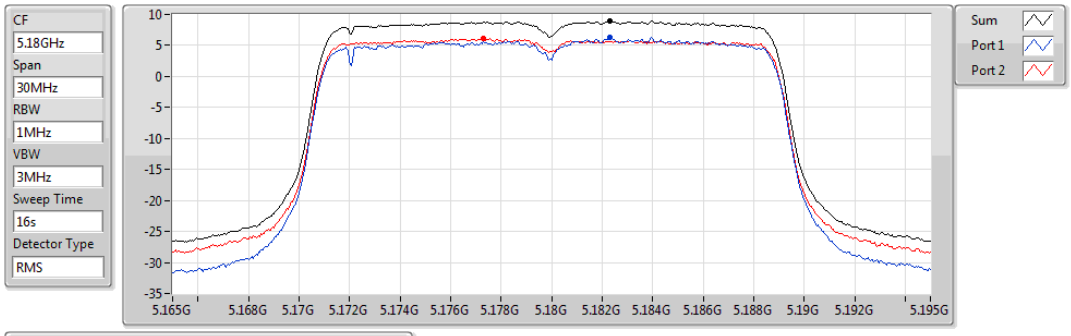
Limit shall be reduced to 17 dBm – (7.55 dBi – 6 dBi) = 15.45 dBm.

5725 ~ 5850 MHz
Directional gain = $10 * \log((10^{4.8/20}+10^{3.8/20}+10^{3.6/20}+10^{4.2/20})^2/4)= 10.13$ dBi > 6 dBi.

Limit shall be reduced to 30 dBm – (10.13 dBi – 6 dBi) = 25.87 dBm.

802.11ac VHT20-BF_Nss1,(MCS0)_2TX PSD

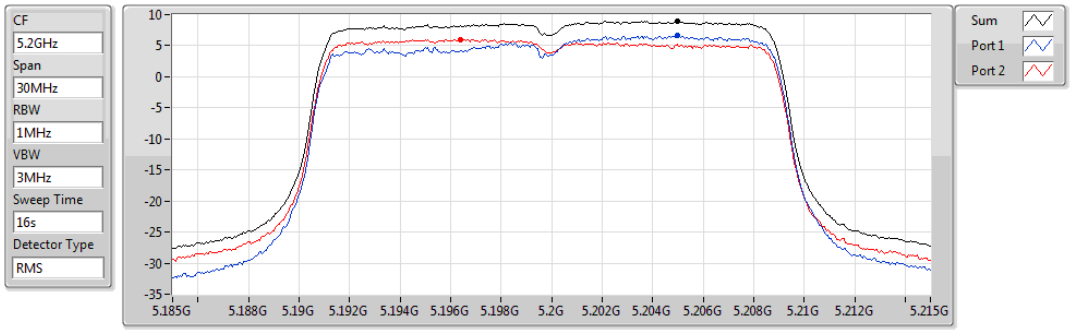
5180MHz



Sum	PD	Port 1	Port 2
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
8.99	8.99	6.37	6.07

802.11ac VHT20-BF_Nss1,(MCS0)_2TX PSD

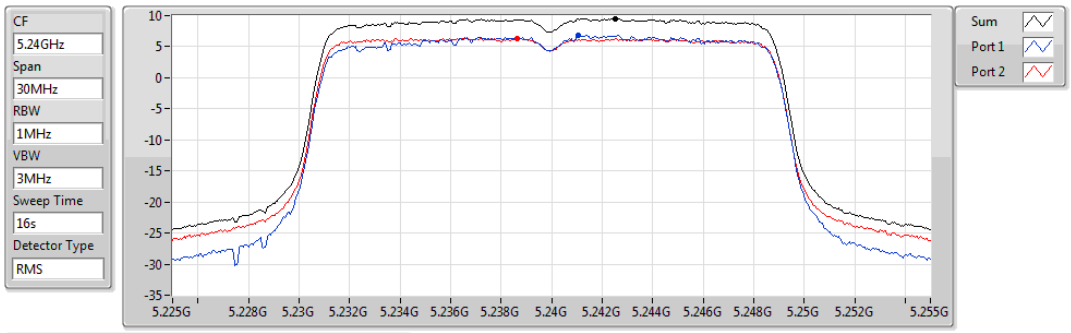
5200MHz



Sum	PD	Port 1	Port 2
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
8.95	8.95	6.60	6.00

802.11ac VHT20-BF_Nss1,(MCS0)_2TX PSD

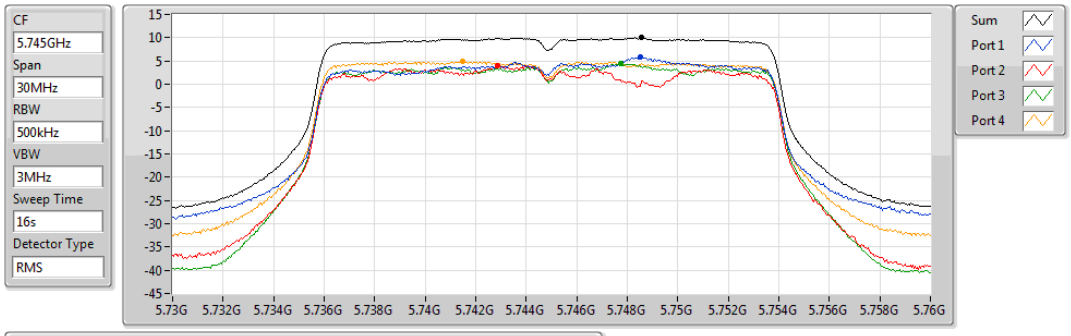
5240MHz



Sum	PD	Port 1	Port 2
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
9.52	9.52	6.84	6.34

802.11ac VHT20-BF_Nss1,(MCS0)_4TX PSD

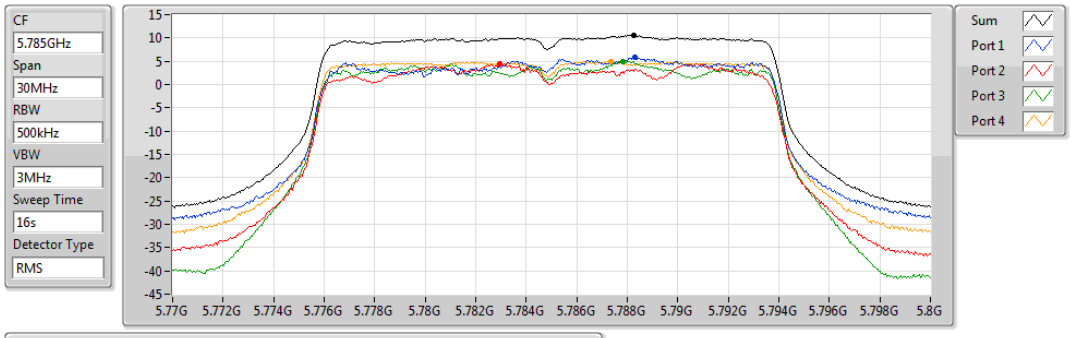
5745MHz



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

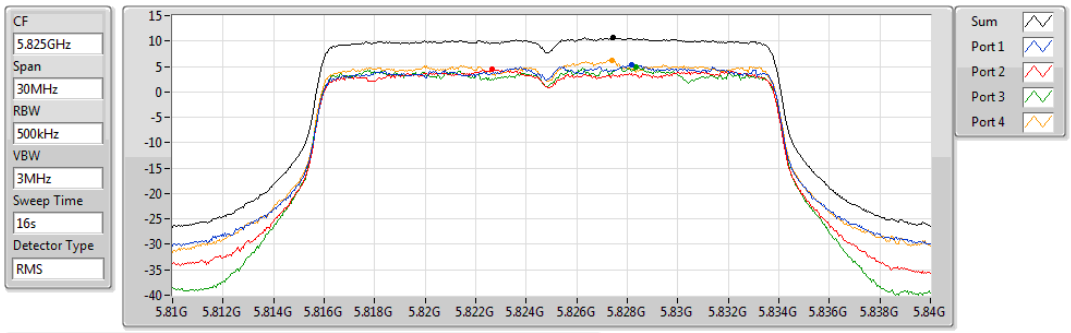
5785MHz



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

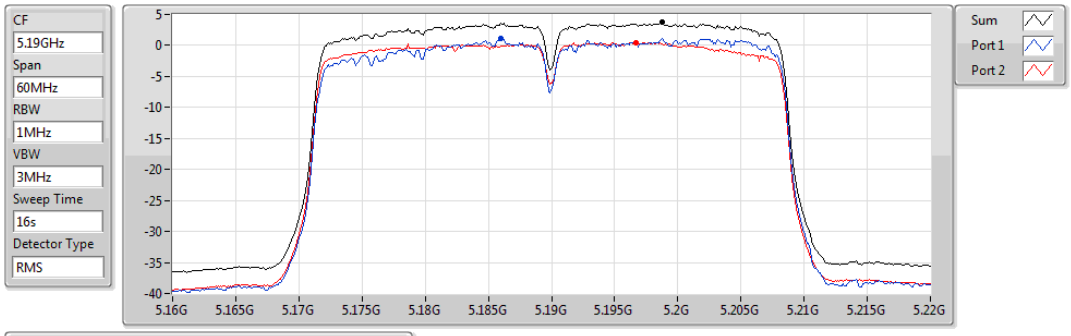
5825MHz



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)_2TX PSD

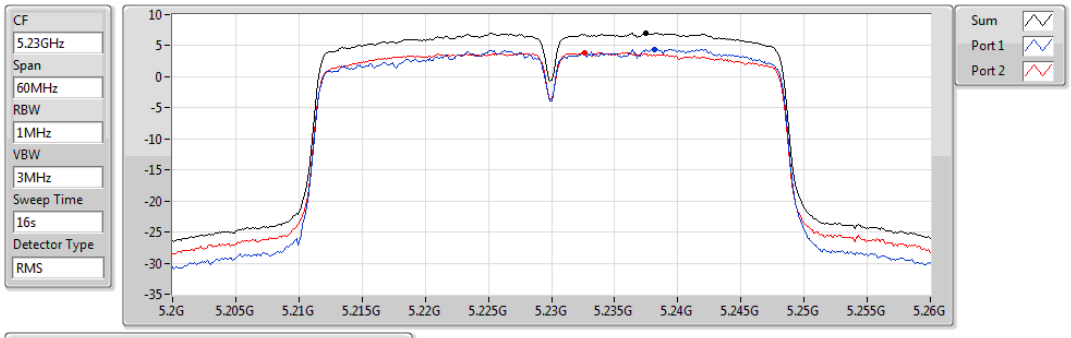
5190MHz



Sum	PD	Port 1	Port 2
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
3.70	3.70	1.09	0.48

802.11ac VHT40-BF_Nss1,(MCS0)_2TX PSD

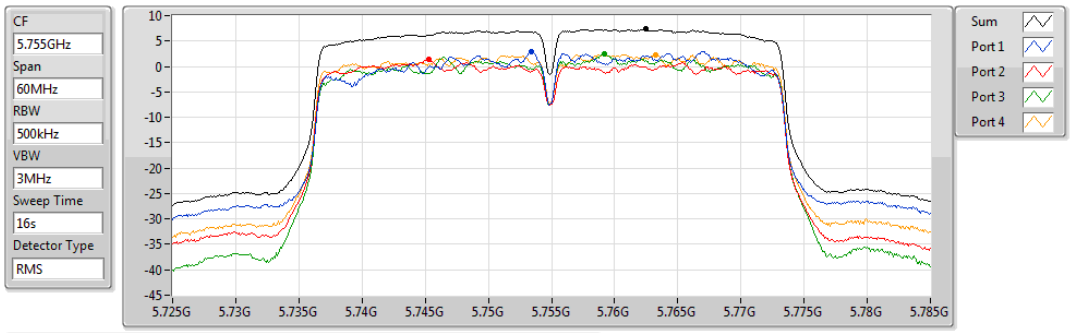
5230MHz



Sum	PD	Port 1	Port 2
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
7.02	7.02	4.43	3.93

802.11ac VHT40-BF_Nss1,(MCS0)_4TX PSD

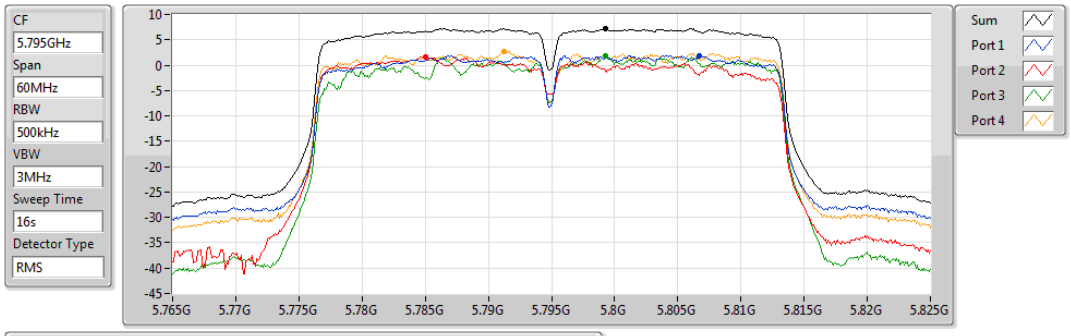
5755MHz



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

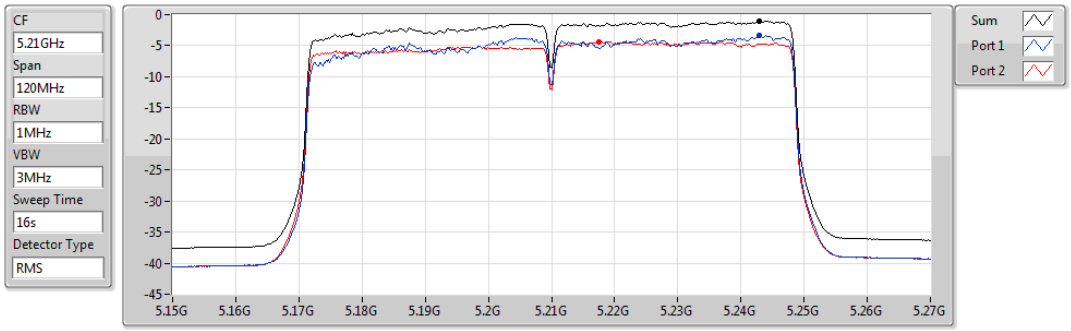
5795MHz



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)_2TX PSD

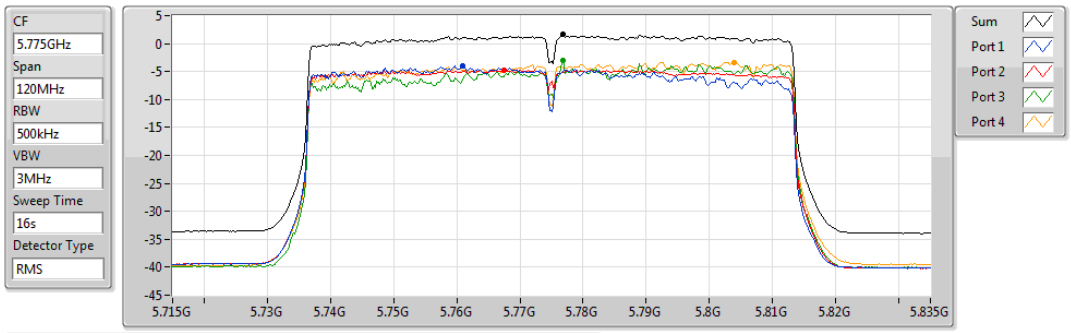
5210MHz



Sum	PD	Port 1	Port 2
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
-0.98	-0.98	-3.31	-4.33

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)
1.76	1.76	-3.97	-4.72	-3.01	-3.34

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

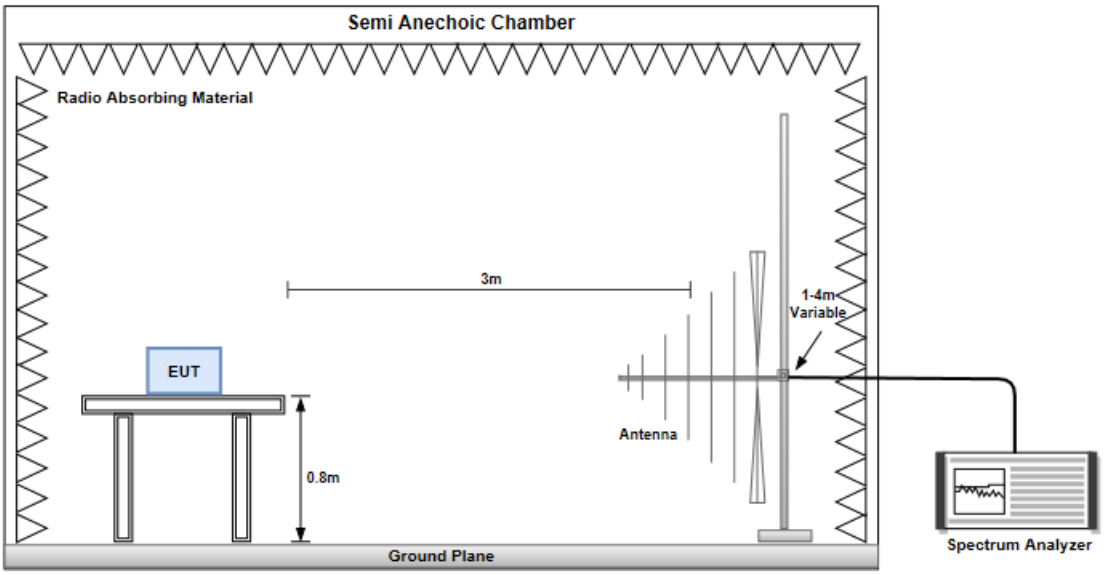
1. Measurement is made at a semi-anechoic chamber that incorporates a turntable allowing a EUT rotation of 360°. A continuously-rotating, remotely-controlled turntable is installed at the test site to support the EUT and facilitate determination of the direction of maximum radiation for each EUT emission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

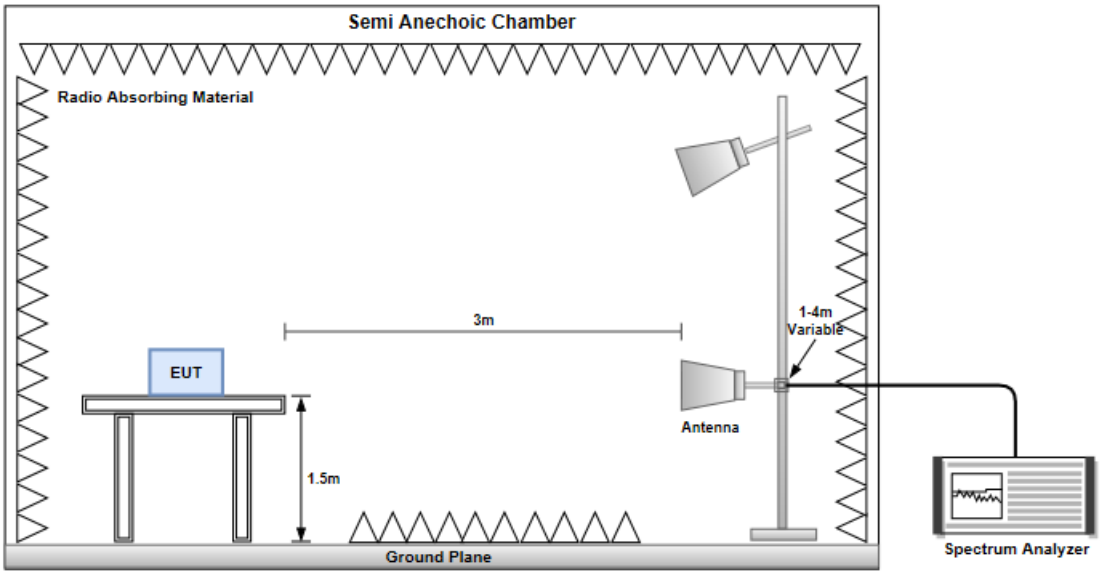
1. 120kHz measurement bandwidth of test receiver and Quasi-peak detector is for radiated emission below 1GHz.
2. RBW=1MHz, VBW=3MHz and Peak detector is for peak measured value of radiated emission above 1GHz.
3. RBW=1MHz, VBW=1/T and Peak detector is for average measured value of radiated emission above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

3.5.3 Test Setup

Radiated Emissions below 1 GHz



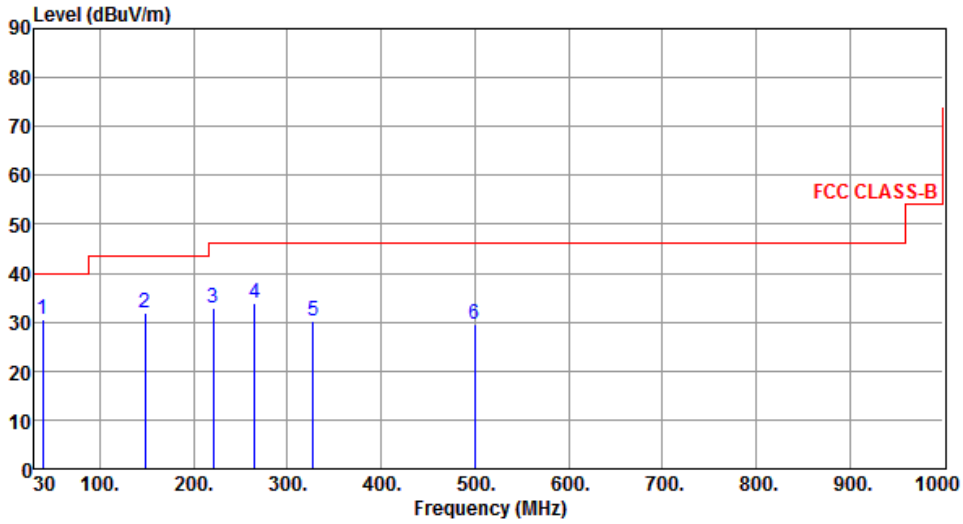
Radiated Emissions above 1 GHz



Non- beamforming mode

3.5.4 Transmitter Radiated Unwanted Emissions (Below 1GHz)

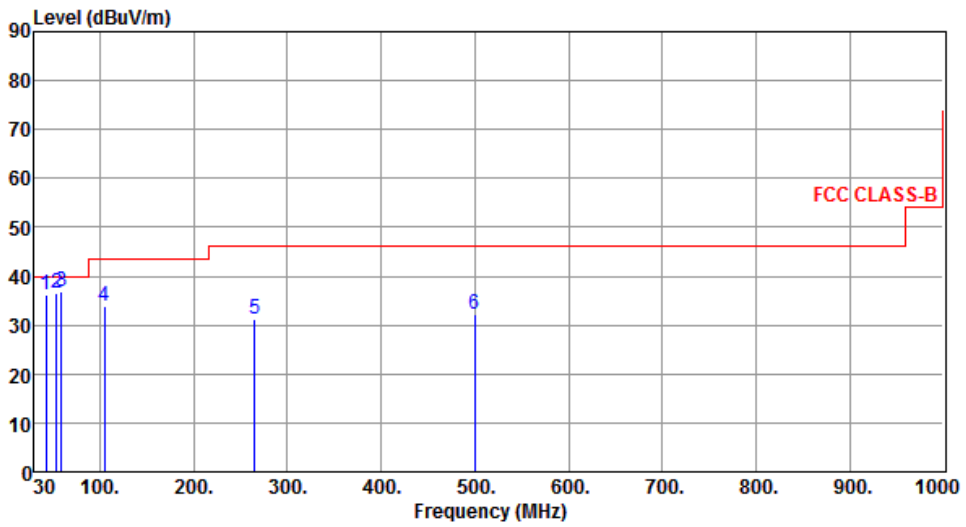
Modulation	VHT40	**Test Freq. (MHz)**	5230
Polarization	Horizontal		



	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	38.73	30.52	40.00	-9.48	38.78	-8.26	Peak	---	---
2	148.34	32.01	43.50	-11.49	40.36	-8.35	Peak	---	---
3	221.09	32.88	46.00	-13.12	43.74	-10.86	Peak	---	---
4	264.74	33.89	46.00	-12.11	42.71	-8.82	Peak	---	---
5	327.79	30.15	46.00	-15.85	37.16	-7.01	Peak	---	---
6	499.48	29.63	46.00	-16.37	32.49	-2.86	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.

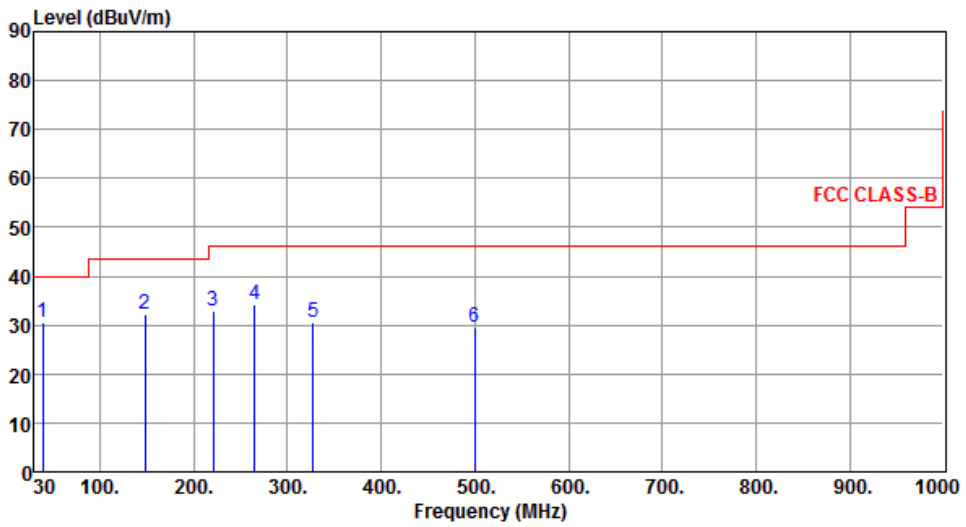
Modulation	VHT40	Test Freq. (MHz)	5230
Polarization	Vertical		



	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	42.61	36.13	40.00	-3.87	44.05	-7.92	Peak	---	---
2	53.85	36.68	40.00	-3.32	44.68	-8.00	QP	100	16
3	58.96	36.79	40.00	-3.21	45.40	-8.61	QP	100	18
4	104.69	33.98	43.50	-9.52	46.09	-12.11	Peak	---	---
5	264.74	31.15	46.00	-14.85	39.97	-8.82	Peak	---	---
6	499.48	32.16	46.00	-13.84	35.02	-2.86	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.

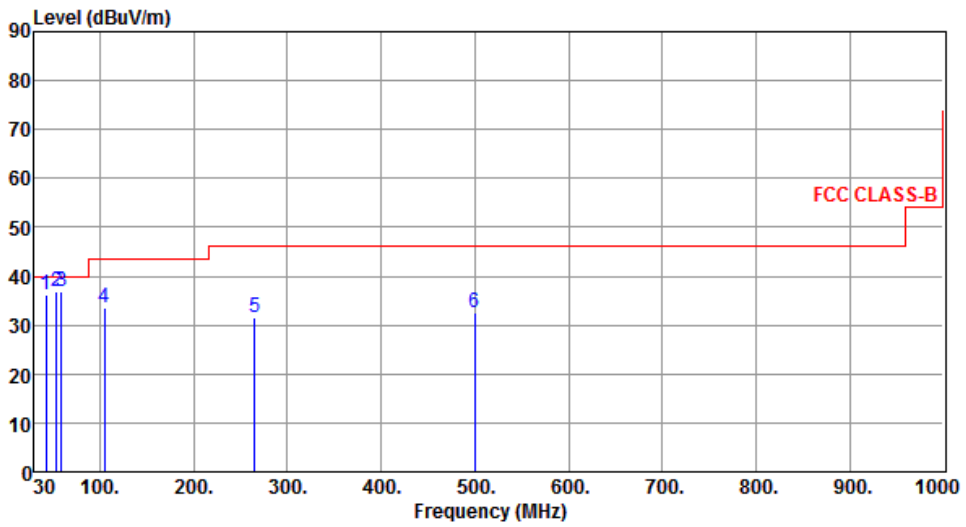
Modulation	11a	Test Freq. (MHz)	5825
Polarization	Horizontal		



	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	38.92	30.48	40.00	-9.52	38.72	-8.24	Peak	---	---
2	148.53	32.33	43.50	-11.17	40.68	-8.35	Peak	---	---
3	221.21	32.76	46.00	-13.24	43.62	-10.86	Peak	---	---
4	264.68	34.31	46.00	-11.69	43.13	-8.82	Peak	---	---
5	327.53	30.42	46.00	-15.58	37.44	-7.02	Peak	---	---
6	499.53	29.68	46.00	-16.32	32.54	-2.86	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		

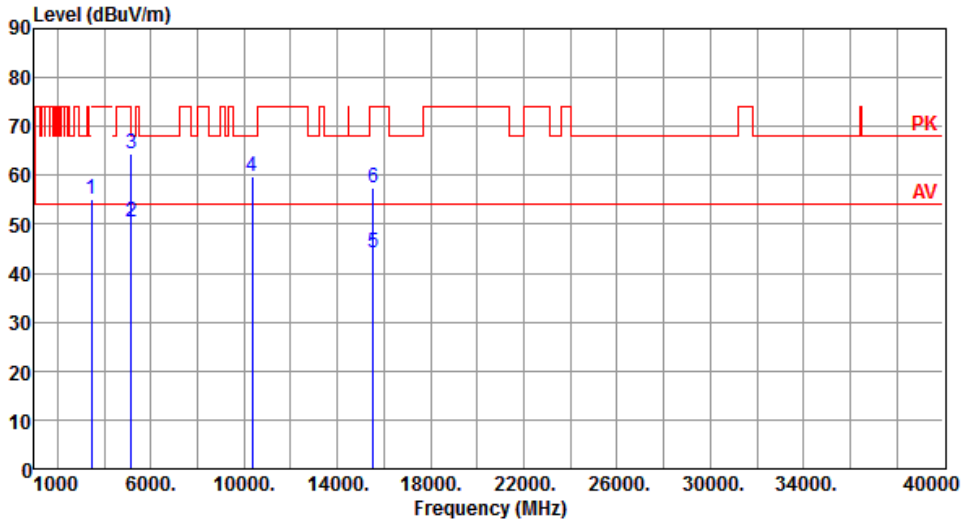


	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	42.75	36.32	40.00	-3.68	44.21	-7.89	Peak	---	---
2	53.71	36.72	40.00	-3.28	44.69	-7.97	QP	100	18
3	58.75	36.85	40.00	-3.15	45.39	-8.54	QP	100	19
4	104.53	33.48	43.50	-10.02	45.62	-12.14	Peak	---	---
5	264.75	31.45	46.00	-14.55	40.27	-8.82	Peak	---	---
6	499.65	32.48	46.00	-13.52	35.33	-2.85	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

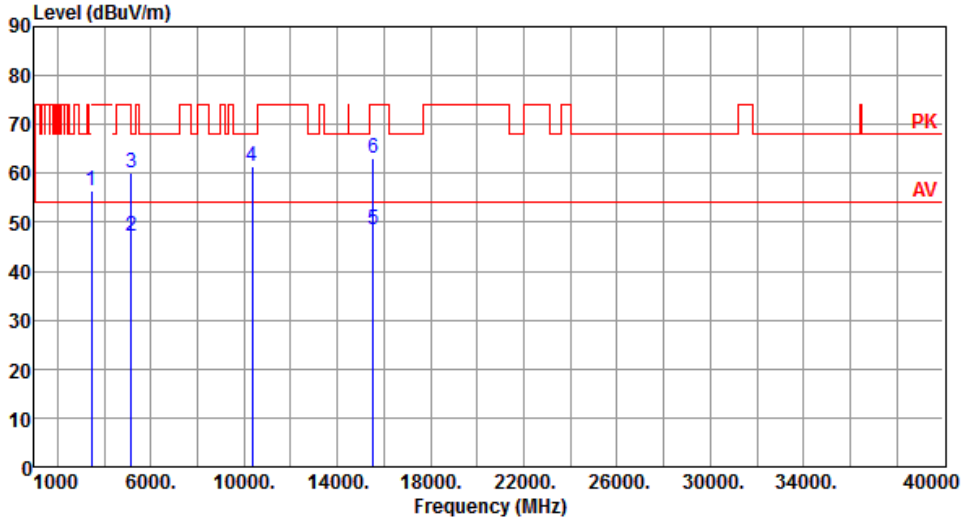
Modulation	11a	**Test Freq. (MHz)**	5180
Polarization	Horizontal		



	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	55.27	68.20	-12.93	55.99	-0.72	Peak	100	23
2	5150.00	50.49	54.00	-3.51	45.95	4.54	Average	100	1
3	5150.00	64.44	74.00	-9.56	59.90	4.54	Peak	100	1
4	10360.00	59.90	68.20	-8.30	46.12	13.78	Peak	100	223
5	15540.00	44.21	54.00	-9.79	29.93	14.28	Average	100	29
6	15540.00	57.53	74.00	-16.47	43.25	14.28	Peak	100	29

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).

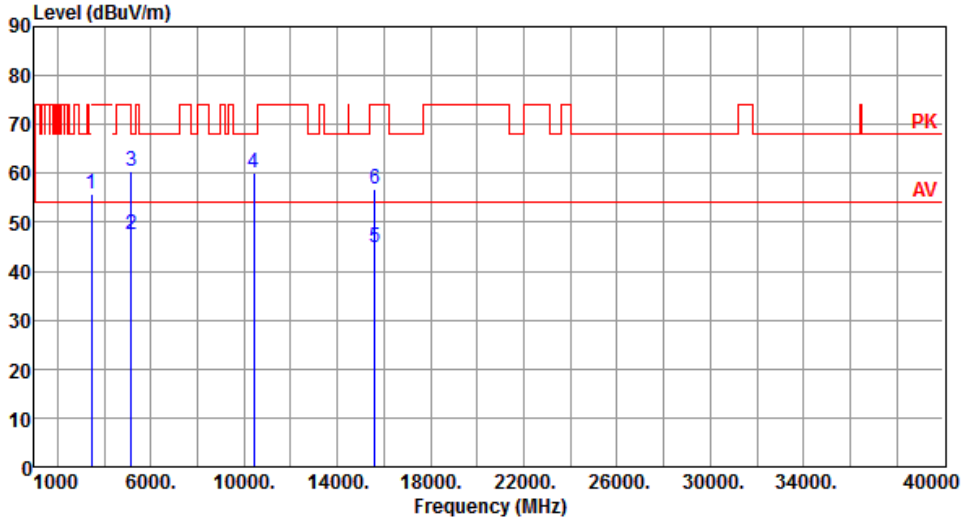
Modulation	11a	Test Freq. (MHz)	5180
Polarization	Vertical		



	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	56.50	68.20	-11.70	57.22	-0.72	Peak	100	61
2	5150.00	47.11	54.00	-6.89	42.57	4.54	Average	104	114
3	5150.00	59.99	74.00	-14.01	55.45	4.54	Peak	104	114
4	10360.00	61.45	68.20	-6.75	47.67	13.78	Peak	100	23
5	15540.00	48.39	54.00	-5.61	34.11	14.28	Average	100	28
6	15540.00	63.07	74.00	-10.93	48.79	14.28	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).

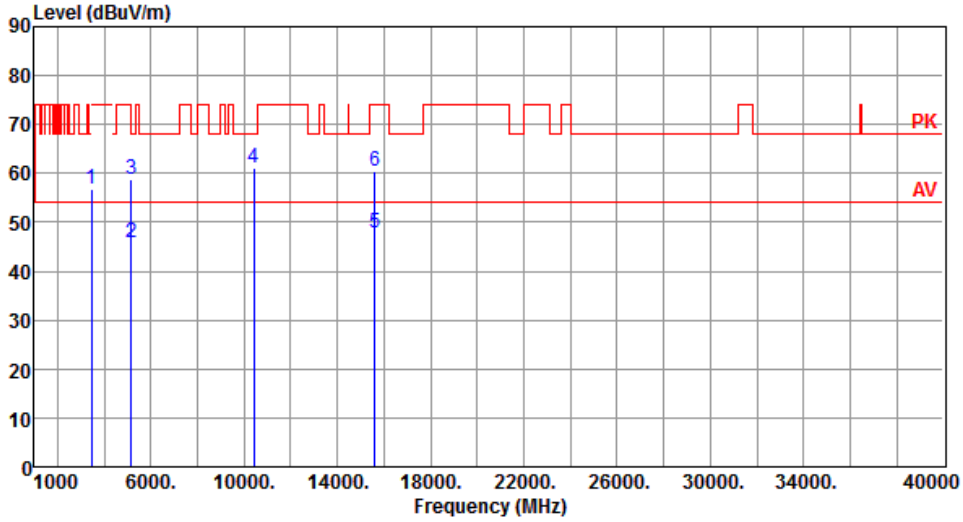
Modulation	11a	Test Freq. (MHz)	5200
Polarization	Horizontal		



	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	55.89	68.20	-12.31	56.51	-0.62	Peak	105	112
2	5150.00	47.40	54.00	-6.60	42.86	4.54	Average	105	0
3	5150.00	60.61	74.00	-13.39	56.07	4.54	Peak	105	0
4	10400.00	59.97	68.20	-8.23	46.08	13.89	Peak	100	221
5	15600.00	44.72	54.00	-9.28	30.62	14.10	Average	100	28
6	15600.00	56.86	74.00	-17.14	42.76	14.10	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).

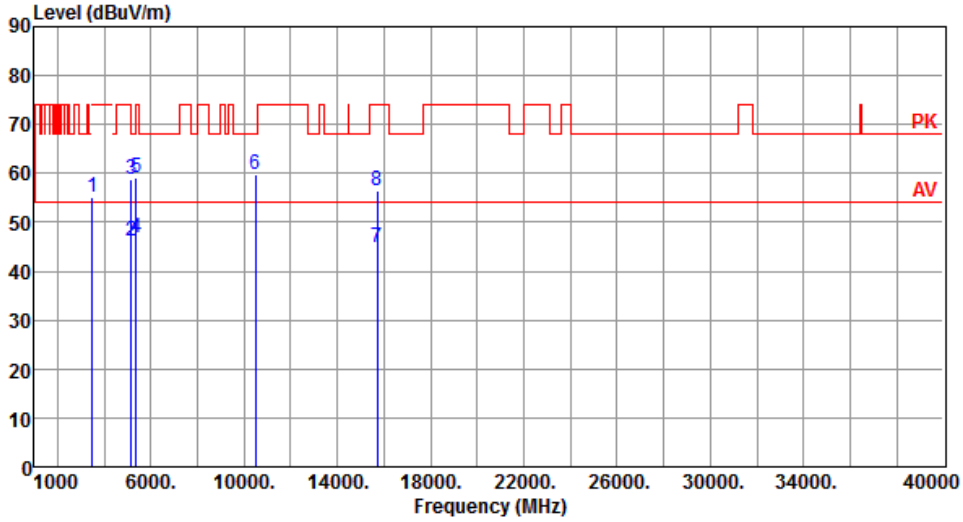
Modulation	11a	Test Freq. (MHz)	5200
Polarization	Vertical		



	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	56.81	68.20	-11.39	57.43	-0.62	Peak	100	61
2	5150.00	45.99	54.00	-8.01	41.45	4.54	Average	100	112
3	5150.00	58.62	74.00	-15.38	54.08	4.54	Peak	100	112
4	10400.00	61.05	68.20	-7.15	47.16	13.89	Peak	100	316
5	15600.00	47.86	54.00	-6.14	33.76	14.10	Average	100	25
6	15600.00	60.46	74.00	-13.54	46.36	14.10	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).

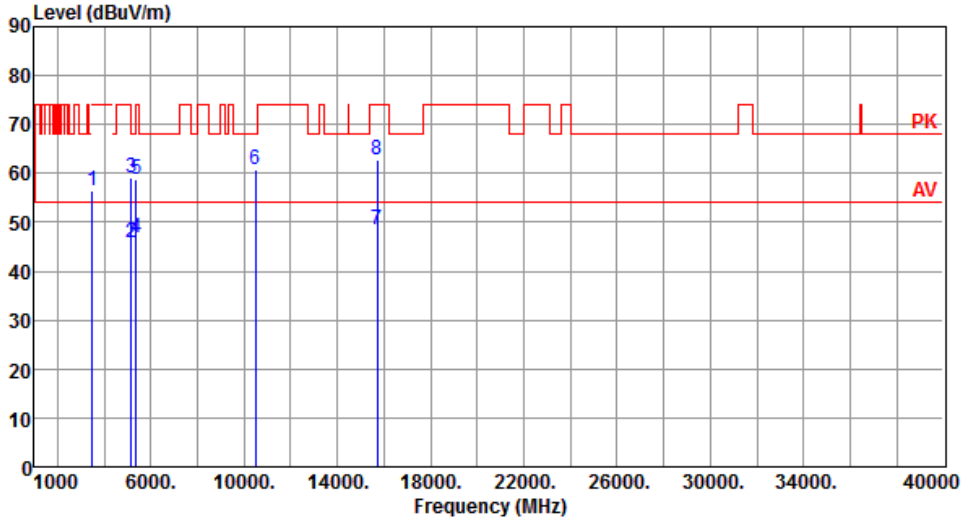
Modulation	11a	Test Freq. (MHz)	5240
Polarization	Horizontal		



	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	54.99	68.20	-13.21	55.41	-0.42	Peak	100	113
2	5150.00	46.18	54.00	-7.82	41.64	4.54	Average	100	18
3	5150.00	58.87	74.00	-15.13	54.33	4.54	Peak	100	18
4	5350.00	46.76	54.00	-7.24	42.63	4.13	Average	100	18
5	5350.00	59.24	74.00	-14.76	55.11	4.13	Peak	100	18
6	10480.00	59.65	68.20	-8.55	45.77	13.88	Peak	100	225
7	15720.00	44.93	54.00	-9.07	31.04	13.89	Average	100	31
8	15720.00	56.51	74.00	-17.49	42.62	13.89	Peak	100	31

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).

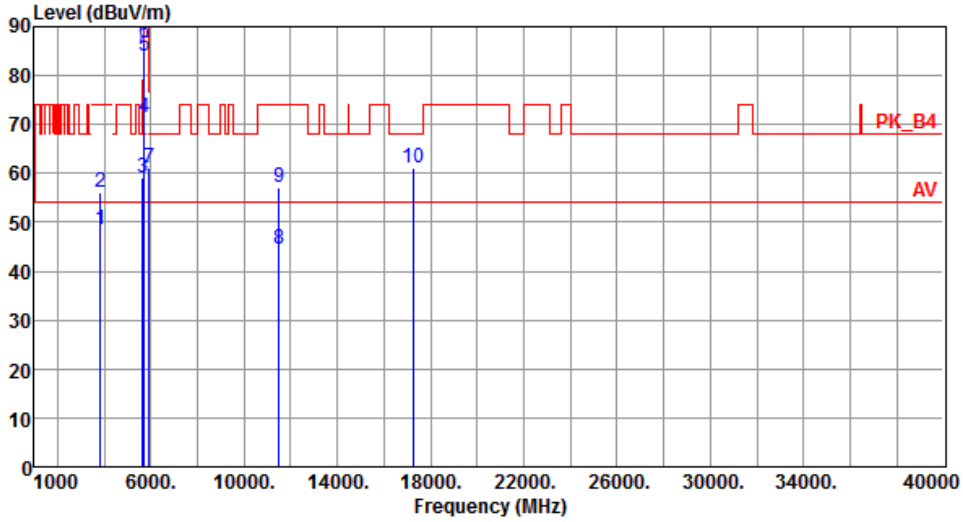
Modulation	11a	Test Freq. (MHz)	5240
Polarization	Vertical		



	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	56.40	68.20	-11.80	56.82	-0.42	Peak	108	63
2	5150.00	45.97	54.00	-8.03	41.43	4.54	Average	100	111
3	5150.00	58.97	74.00	-15.03	54.43	4.54	Peak	100	111
4	5350.00	46.74	54.00	-7.26	42.61	4.13	Average	100	111
5	5350.00	58.75	74.00	-15.25	54.62	4.13	Peak	100	111
6	10480.00	60.81	68.20	-7.39	46.93	13.88	Peak	100	23
7	15720.00	48.33	54.00	-5.67	34.44	13.89	Average	100	26
8	15720.00	62.78	74.00	-11.22	48.89	13.89	Peak	100	26

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).

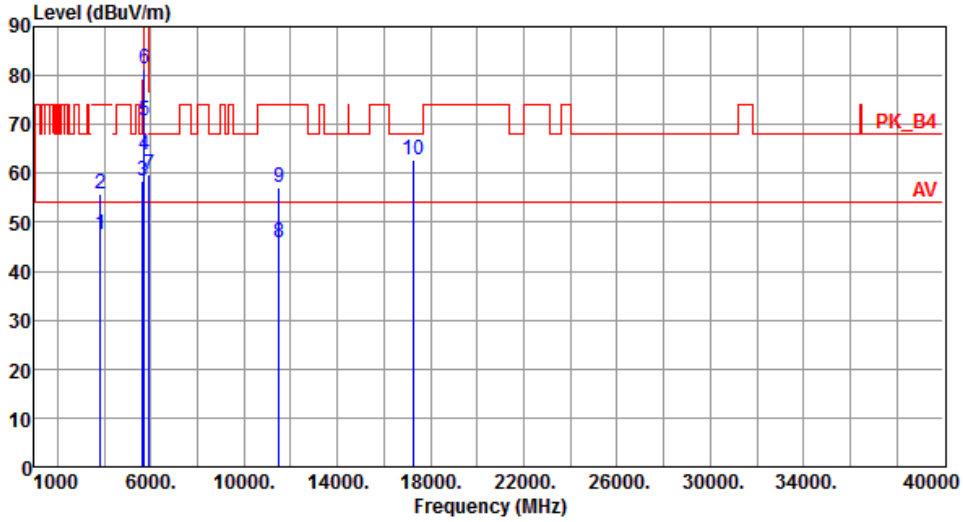
Modulation	11a	Test Freq. (MHz)	5745
Polarization	Horizontal		



	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	48.56	54.00	-5.44	47.70	0.86	Average	121	318
2	3830.00	56.05	74.00	-17.95	55.19	0.86	Peak	121	318
3	5650.00	59.22	68.20	-8.98	54.25	4.97	Peak	107	81
4	5700.00	71.45	105.20	-33.75	66.29	5.16	Peak	107	81
5	5720.00	84.05	110.80	-26.75	78.82	5.23	Peak	107	81
6	5725.00	86.60	122.20	-35.60	81.35	5.25	Peak	107	81
7	5925.00	61.12	68.20	-7.08	55.03	6.09	Peak	100	25
8	11490.00	44.54	54.00	-9.46	30.42	14.12	Average	100	230
9	11490.00	57.08	74.00	-16.92	42.96	14.12	Peak	100	230
10	17235.00	61.18	68.20	-7.02	43.95	17.23	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).

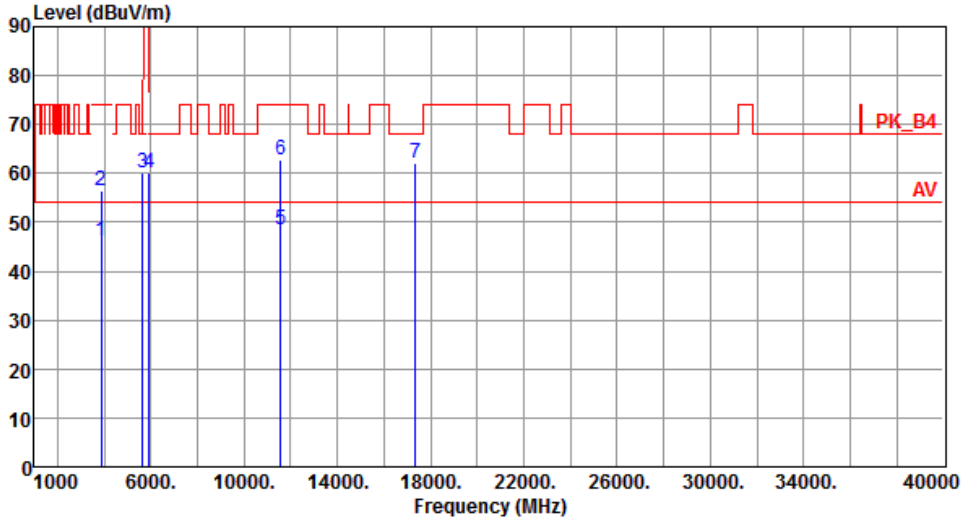
Modulation	11a	Test Freq. (MHz)	5745
Polarization	Vertical		



	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	47.39	54.00	-6.61	46.53	0.86	Average	100	311
2	3830.00	55.85	74.00	-18.15	54.99	0.86	Peak	100	311
3	5650.00	58.53	68.20	-9.67	53.56	4.97	Peak	100	125
4	5700.00	63.63	105.20	-41.57	58.47	5.16	Peak	100	125
5	5720.00	70.90	110.80	-39.90	65.67	5.23	Peak	100	125
6	5725.00	81.49	122.20	-40.71	76.24	5.25	Peak	100	125
7	5925.00	59.86	68.20	-8.34	53.77	6.09	Peak	100	125
8	11490.00	45.94	54.00	-8.06	31.82	14.12	Average	100	336
9	11490.00	57.13	74.00	-16.87	43.01	14.12	Peak	100	336
10	17235.00	62.63	68.20	-5.57	45.40	17.23	Peak	100	125

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).

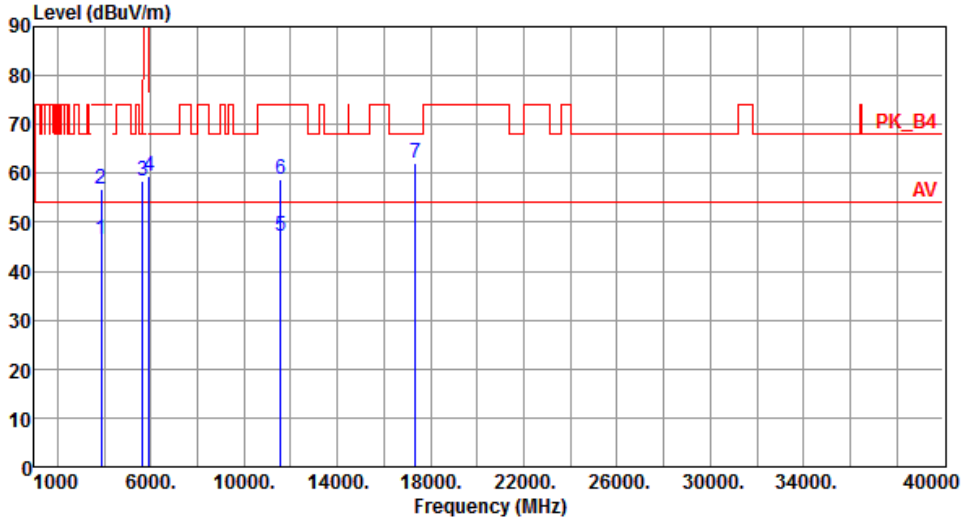
Modulation	11a	Test Freq. (MHz)	5785
Polarization	Horizontal		



	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	46.11	54.00	-7.89	45.13	0.98	Average	100	314
2	3856.66	56.53	74.00	-17.47	55.55	0.98	Peak	100	314
3	5650.00	60.10	68.20	-8.10	55.13	4.97	Peak	100	81
4	5925.00	60.22	68.20	-7.98	54.13	6.09	Peak	100	81
5	11570.00	48.48	54.00	-5.52	34.53	13.95	Average	100	338
6	11570.00	62.72	74.00	-11.28	48.77	13.95	Peak	100	338
7	17355.00	62.02	68.20	-6.18	44.40	17.62	Peak	100	31

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).

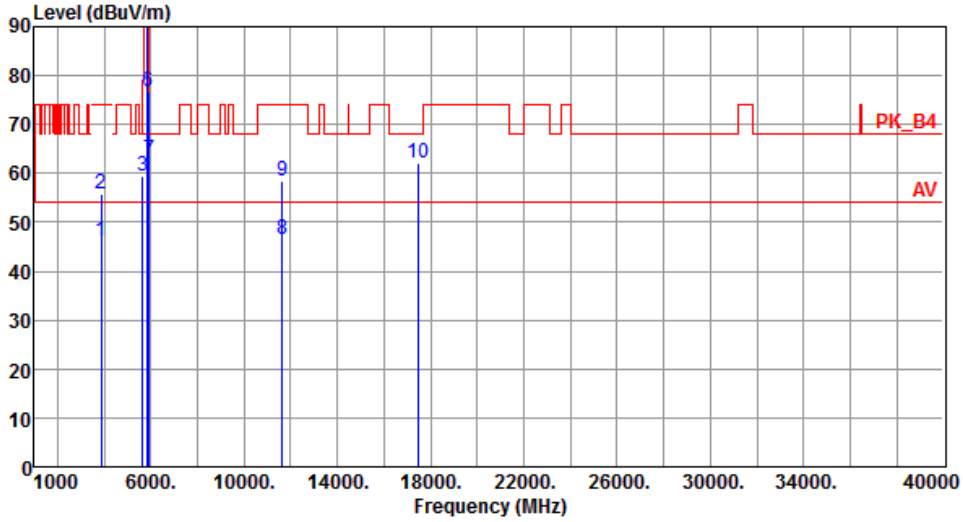
Modulation	11a	Test Freq. (MHz)	5785
Polarization	Vertical		



	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	46.65	54.00	-7.35	45.67	0.98	Average	100	310
2	3856.66	56.88	74.00	-17.12	55.90	0.98	Peak	100	310
3	5650.00	58.53	68.20	-9.67	53.56	4.97	Peak	100	224
4	5925.00	59.57	68.20	-8.63	53.48	6.09	Peak	100	224
5	11570.00	47.29	54.00	-6.71	33.34	13.95	Average	100	229
6	11570.00	58.86	74.00	-15.14	44.91	13.95	Peak	100	229
7	17355.00	61.98	68.20	-6.22	44.36	17.62	Peak	100	212

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).

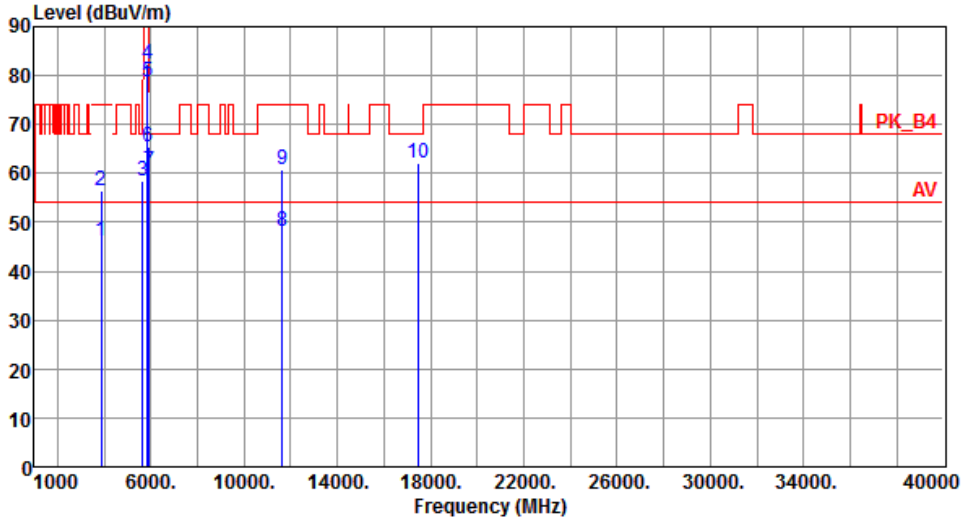
Modulation	11a	Test Freq. (MHz)	5825
Polarization	Horizontal		



	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	46.23	54.00	-7.77	45.17	1.06	Average	100	314
2	3883.33	55.74	74.00	-18.26	54.68	1.06	Peak	100	314
3	5650.00	59.38	68.20	-8.82	54.41	4.97	Peak	106	82
4	5850.00	91.66	122.20	-30.54	85.85	5.81	Peak	106	82
5	5855.00	89.36	110.80	-21.44	83.53	5.83	Peak	106	82
6	5875.00	76.63	105.20	-28.57	70.73	5.90	Peak	106	82
7	5925.00	62.75	68.20	-5.45	56.66	6.09	Peak	106	82
8	11650.00	46.62	54.00	-7.38	33.00	13.62	Average	100	322
9	11650.00	58.55	74.00	-15.45	44.93	13.62	Peak	100	322
10	17475.00	62.22	68.20	-5.98	44.32	17.90	Peak	100	316

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		

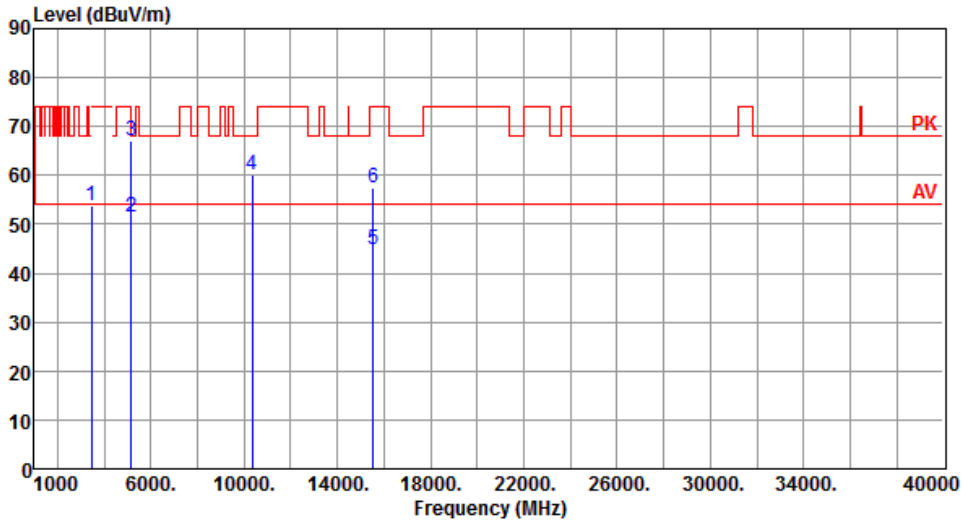


	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	3883.33	46.25	54.00	-7.75	45.19	1.06	Average	100	313
2	3883.33	56.60	74.00	-17.40	55.54	1.06	Peak	100	313
3	5650.00	58.61	68.20	-9.59	53.64	4.97	Peak	100	225
4	5850.00	82.44	122.20	-39.76	76.63	5.81	Peak	100	225
5	5855.00	78.68	110.80	-32.12	72.85	5.83	Peak	100	225
6	5875.00	65.34	105.20	-39.86	59.44	5.90	Peak	100	225
7	5925.00	60.53	68.20	-7.67	54.44	6.09	Peak	100	225
8	11650.00	48.04	54.00	-5.96	34.42	13.62	Average	100	341
9	11650.00	60.92	74.00	-13.08	47.30	13.62	Peak	100	341
10	17475.00	62.17	68.20	-6.03	44.27	17.90	Peak	100	342

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

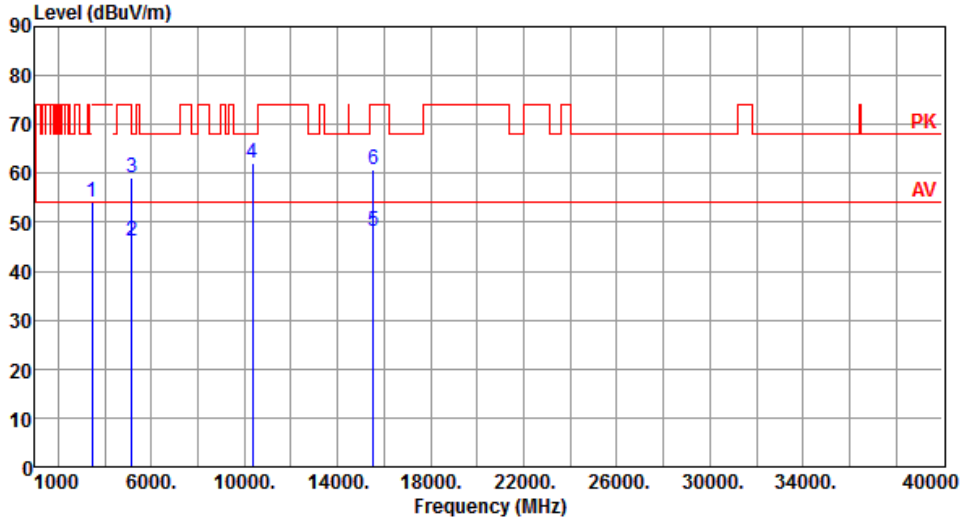
Modulation	VHT20	**Test Freq. (MHz)**	5180
Polarization	Horizontal		



	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	53.84	68.20	-14.36	54.56	-0.72	Peak	100	21
2	5150.00	51.33	54.00	-2.67	46.79	4.54	Average	100	356
3	5150.00	67.03	74.00	-6.97	62.49	4.54	Peak	100	356
4	10360.00	60.13	68.20	-8.07	46.35	13.78	Peak	100	221
5	15540.00	44.70	54.00	-9.30	30.42	14.28	Average	100	27
6	15540.00	57.51	74.00	-16.49	43.23	14.28	Peak	100	27

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).

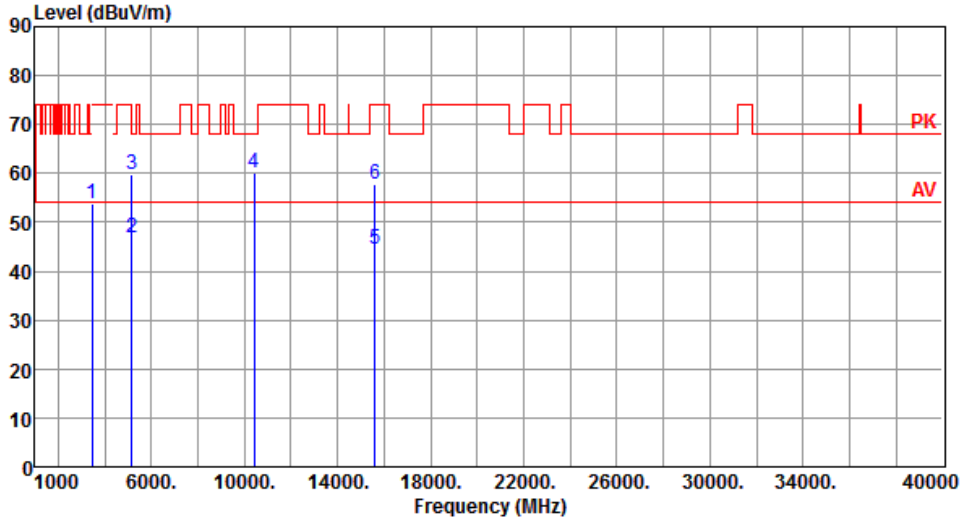
Modulation	VHT20	Test Freq. (MHz)	5180
Polarization	Vertical		



	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	54.01	68.20	-14.19	54.73	-0.72	Peak	100	62
2	5150.00	46.00	54.00	-8.00	41.46	4.54	Average	100	108
3	5150.00	59.13	74.00	-14.87	54.59	4.54	Peak	100	108
4	10360.00	62.12	68.20	-6.08	48.34	13.78	Peak	100	20
5	15540.00	48.12	54.00	-5.88	33.84	14.28	Average	100	26
6	15540.00	60.77	74.00	-13.23	46.49	14.28	Peak	100	26

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).

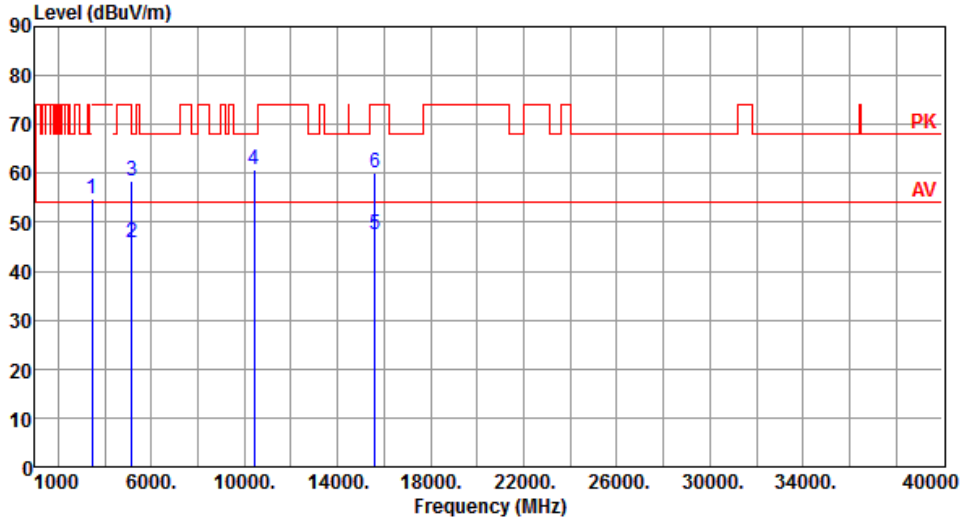
Modulation	VHT20	Test Freq. (MHz)	5200
Polarization	Horizontal		



	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	53.80	68.20	-14.40	54.42	-0.62	Peak	100	110
2	5150.00	46.68	54.00	-7.32	42.14	4.54	Average	100	1
3	5150.00	59.78	74.00	-14.22	55.24	4.54	Peak	100	1
4	10400.00	60.15	68.20	-8.05	46.26	13.89	Peak	100	218
5	15600.00	44.58	54.00	-9.42	30.48	14.10	Average	100	25
6	15600.00	57.63	74.00	-16.37	43.53	14.10	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).

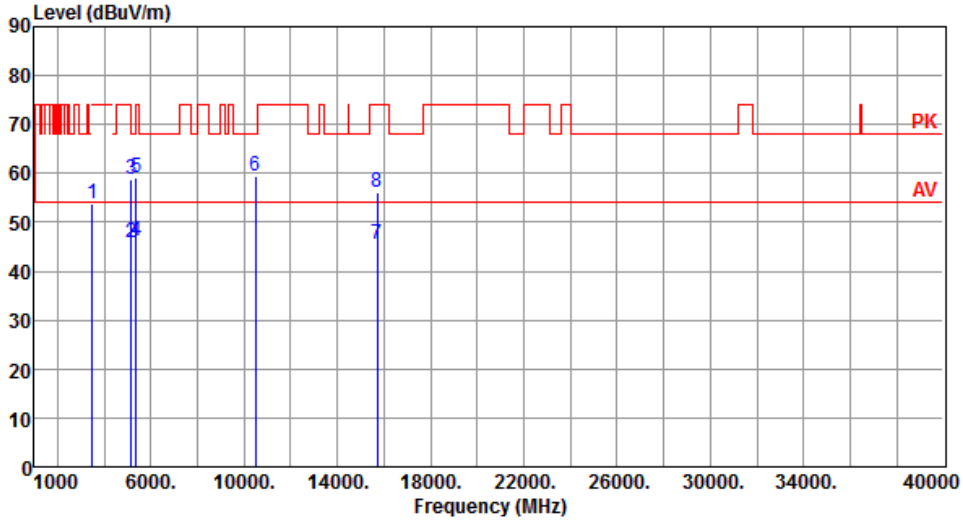
Modulation	VHT20	Test Freq. (MHz)	5200
Polarization	Vertical		



	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	54.65	68.20	-13.55	55.27	-0.62	Peak	100	60
2	5150.00	45.83	54.00	-8.17	41.29	4.54	Average	100	111
3	5150.00	58.42	74.00	-15.58	53.88	4.54	Peak	100	111
4	10400.00	60.76	68.20	-7.44	46.87	13.89	Peak	100	315
5	15600.00	47.56	54.00	-6.44	33.46	14.10	Average	100	23
6	15600.00	60.12	74.00	-13.88	46.02	14.10	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).

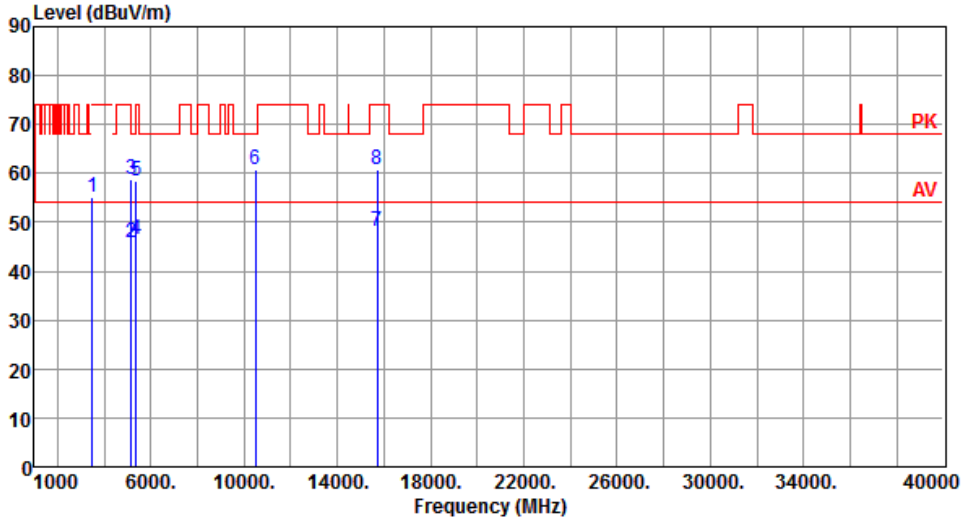
Modulation	VHT20	Test Freq. (MHz)	5240
Polarization	Horizontal		



	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	53.82	68.20	-14.38	54.24	-0.42	Peak	100	112
2	5150.00	45.97	54.00	-8.03	41.43	4.54	Average	100	16
3	5150.00	58.73	74.00	-15.27	54.19	4.54	Peak	100	16
4	5350.00	46.25	54.00	-7.75	42.12	4.13	Average	100	16
5	5350.00	58.98	74.00	-15.02	54.85	4.13	Peak	100	16
6	10480.00	59.51	68.20	-8.69	45.63	13.88	Peak	100	227
7	15720.00	45.42	54.00	-8.58	31.53	13.89	Average	100	29
8	15720.00	56.16	74.00	-17.84	42.27	13.89	Peak	100	29

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).

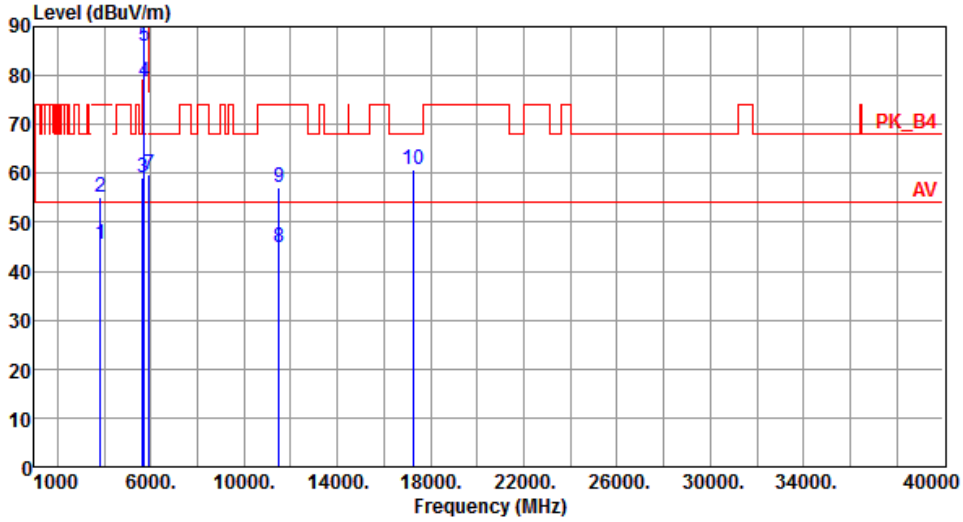
Modulation	VHT20	Test Freq. (MHz)	5240
Polarization	Vertical		



	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	55.29	68.20	-12.91	55.71	-0.42	Peak	100	62
2	5150.00	45.80	54.00	-8.20	41.26	4.54	Average	100	110
3	5150.00	58.77	74.00	-15.23	54.23	4.54	Peak	100	110
4	5350.00	46.54	54.00	-7.46	42.41	4.13	Average	100	110
5	5350.00	58.49	74.00	-15.51	54.36	4.13	Peak	100	110
6	10480.00	60.63	68.20	-7.57	46.75	13.88	Peak	100	21
7	15720.00	48.21	54.00	-5.79	34.32	13.89	Average	100	24
8	15720.00	60.64	74.00	-13.36	46.75	13.89	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).

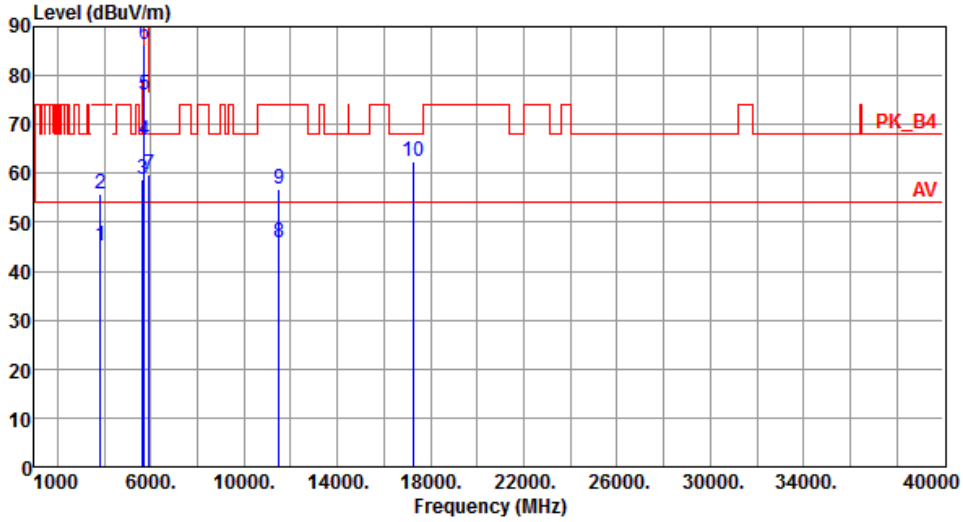
Modulation	VHT20	Test Freq. (MHz)	5745
Polarization	Horizontal		



	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	45.42	54.00	-8.58	44.56	0.86	Average	125	321
2	3830.00	55.08	74.00	-18.92	54.22	0.86	Peak	125	321
3	5650.00	59.00	68.20	-9.20	54.03	4.97	Peak	100	78
4	5700.00	78.81	105.20	-26.39	73.65	5.16	Peak	100	78
5	5720.00	86.08	110.80	-24.72	80.85	5.23	Peak	100	78
6	5725.00	97.04	122.20	-25.16	91.79	5.25	Peak	100	78
7	5925.00	59.66	68.20	-8.54	53.57	6.09	Peak	100	78
8	11490.00	44.71	54.00	-9.29	30.59	14.12	Average	100	236
9	11490.00	56.97	74.00	-17.03	42.85	14.12	Peak	100	236
10	17235.00	60.91	68.20	-7.29	43.68	17.23	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).

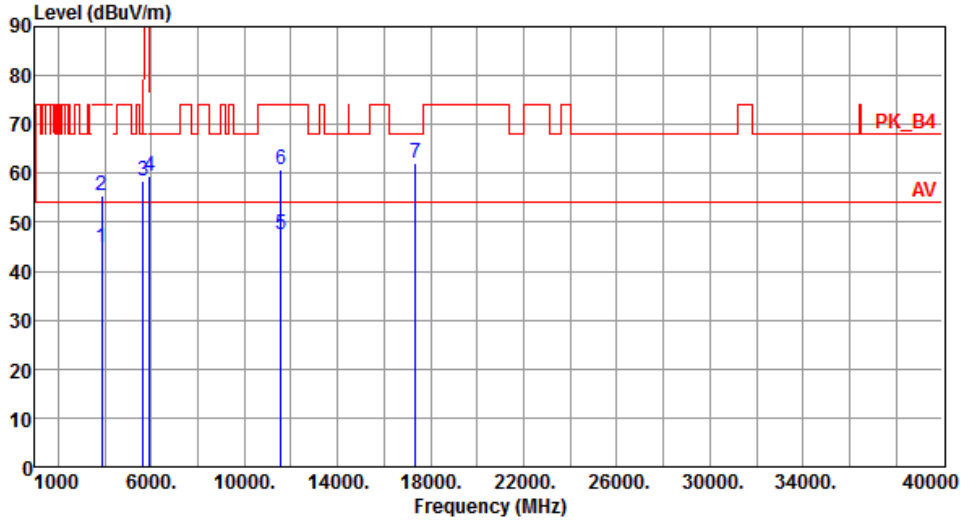
Modulation	VHT20	Test Freq. (MHz)	5745
Polarization	Vertical		



	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	45.29	54.00	-8.71	44.43	0.86	Average	100	328
2	3830.00	55.72	74.00	-18.28	54.86	0.86	Peak	100	328
3	5650.00	58.80	68.20	-9.40	53.83	4.97	Peak	100	132
4	5700.00	66.75	105.20	-38.45	61.59	5.16	Peak	100	132
5	5720.00	76.11	110.80	-34.69	70.88	5.23	Peak	100	132
6	5725.00	86.45	122.20	-35.75	81.20	5.25	Peak	100	132
7	5925.00	59.62	68.20	-8.58	53.53	6.09	Peak	100	132
8	11490.00	45.88	54.00	-8.12	31.76	14.12	Average	100	342
9	11490.00	56.95	74.00	-17.05	42.83	14.12	Peak	100	342
10	17235.00	62.56	68.20	-5.64	45.33	17.23	Peak	100	342

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).

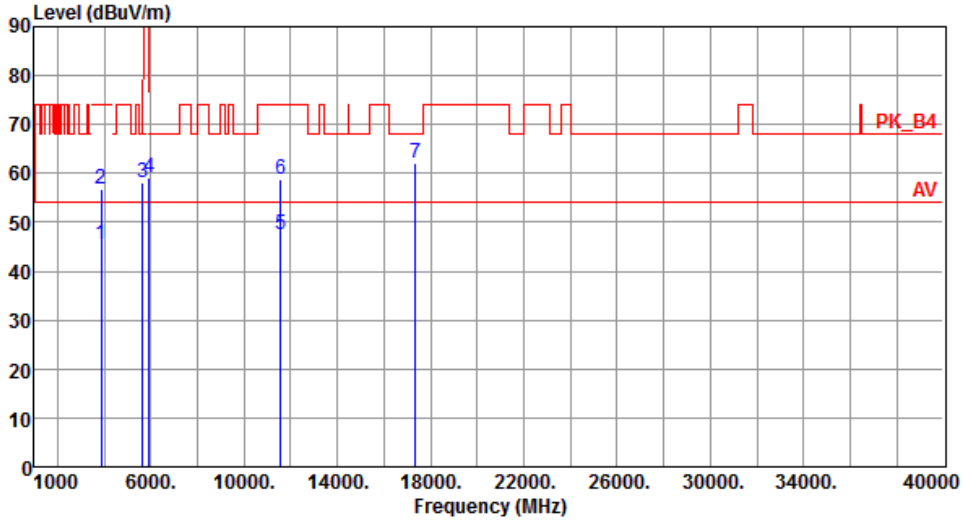
Modulation	VHT20	Test Freq. (MHz)	5785
Polarization	Horizontal		



	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	44.89	54.00	-9.11	43.91	0.98	Average	100	312
2	3856.66	55.57	74.00	-18.43	54.59	0.98	Peak	100	312
3	5650.00	58.54	68.20	-9.66	53.57	4.97	Peak	100	99
4	5925.00	59.50	68.20	-8.70	53.41	6.09	Peak	100	99
5	11570.00	47.53	54.00	-6.47	33.58	13.95	Average	100	340
6	11570.00	60.83	74.00	-13.17	46.88	13.95	Peak	100	340
7	17355.00	61.99	68.20	-6.21	44.37	17.62	Peak	100	32

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).

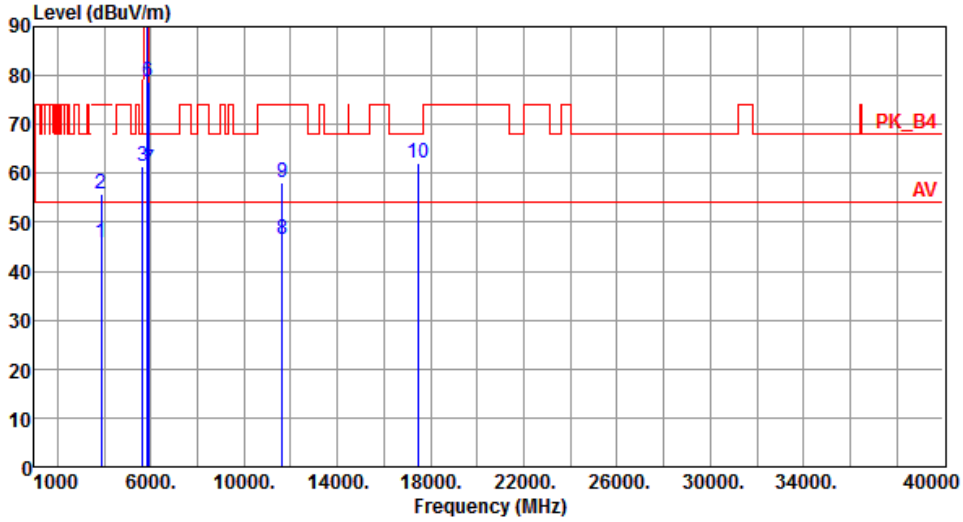
Modulation	VHT20	Test Freq. (MHz)	5785
Polarization	Vertical		



	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	45.63	54.00	-8.37	44.65	0.98	Average	100	308
2	3856.66	56.80	74.00	-17.20	55.82	0.98	Peak	100	308
3	5650.00	58.24	68.20	-9.96	53.27	4.97	Peak	100	223
4	5925.00	59.10	68.20	-9.10	53.01	6.09	Peak	100	223
5	11570.00	47.66	54.00	-6.34	33.71	13.95	Average	100	227
6	11570.00	58.81	74.00	-15.19	44.86	13.95	Peak	100	227
7	17355.00	61.99	68.20	-6.21	44.37	17.62	Peak	100	215

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).

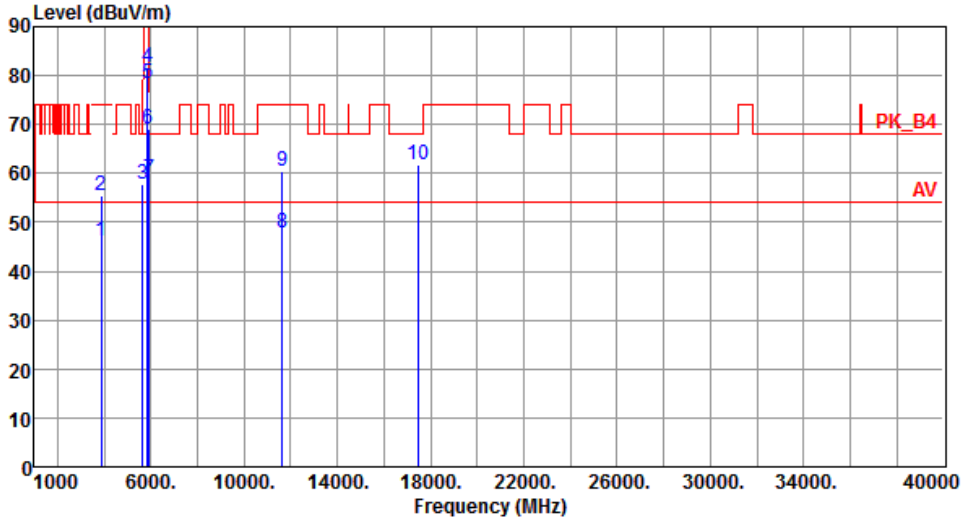
Modulation	VHT20	Test Freq. (MHz)	5825
Polarization	Horizontal		



	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	45.74	54.00	-8.26	44.68	1.06	Average	100	323
2	3883.33	55.63	74.00	-18.37	54.57	1.06	Peak	100	323
3	5650.00	61.53	68.20	-6.67	56.56	4.97	Peak	100	81
4	5850.00	93.36	122.20	-28.84	87.55	5.81	Peak	100	81
5	5855.00	89.05	110.80	-21.75	83.22	5.83	Peak	100	81
6	5875.00	78.87	105.20	-26.33	72.97	5.90	Peak	100	81
7	5925.00	60.94	68.20	-7.26	54.85	6.09	Peak	100	81
8	11650.00	46.48	54.00	-7.52	32.86	13.62	Average	100	329
9	11650.00	58.21	74.00	-15.79	44.59	13.62	Peak	100	329
10	17475.00	62.19	68.20	-6.01	44.29	17.90	Peak	100	320

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		

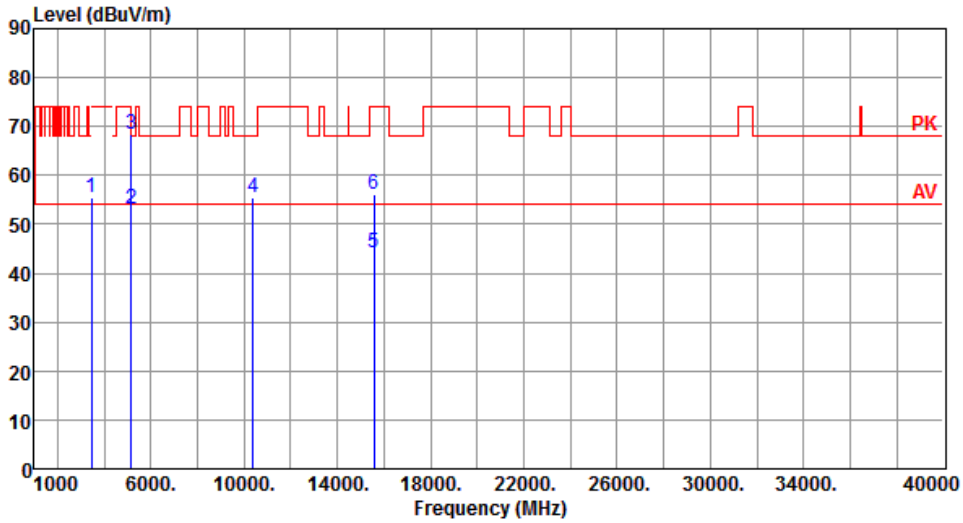


	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	3883.33	46.21	54.00	-7.79	45.15	1.06	Average	103	310
2	3883.33	55.38	74.00	-18.62	54.32	1.06	Peak	103	310
3	5650.00	57.79	68.20	-10.41	52.82	4.97	Peak	100	234
4	5850.00	81.68	122.20	-40.52	75.87	5.81	Peak	100	234
5	5855.00	78.41	110.80	-32.39	72.58	5.83	Peak	100	234
6	5875.00	69.13	105.20	-36.07	63.23	5.90	Peak	100	234
7	5925.00	58.94	68.20	-9.26	52.85	6.09	Peak	100	234
8	11650.00	47.91	54.00	-6.09	34.29	13.62	Average	100	342
9	11650.00	60.61	74.00	-13.39	46.99	13.62	Peak	100	342
10	17475.00	61.80	68.20	-6.40	43.90	17.90	Peak	100	345

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

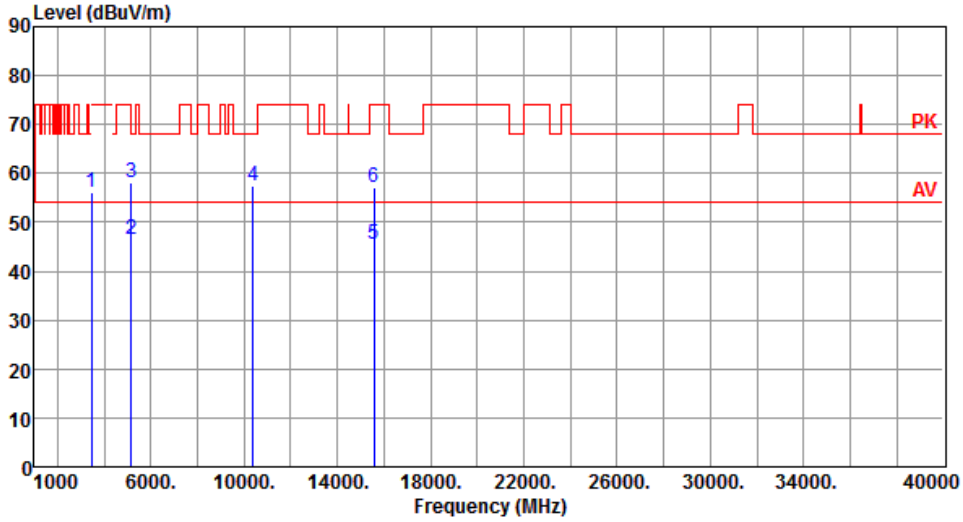
Modulation	VHT40	**Test Freq. (MHz)**	5190
Polarization	Horizontal		



	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	55.46	68.20	-12.74	56.14	-0.68	Peak	100	20
2	5150.00	52.99	54.00	-1.01	48.45	4.54	Average	100	23
3	5150.00	68.38	74.00	-5.62	63.84	4.54	Peak	100	23
4	10380.00	55.51	68.20	-12.69	41.67	13.84	Peak	100	219
5	15570.00	44.13	54.00	-9.87	29.94	14.19	Average	100	23
6	15570.00	55.96	74.00	-18.04	41.77	14.19	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).

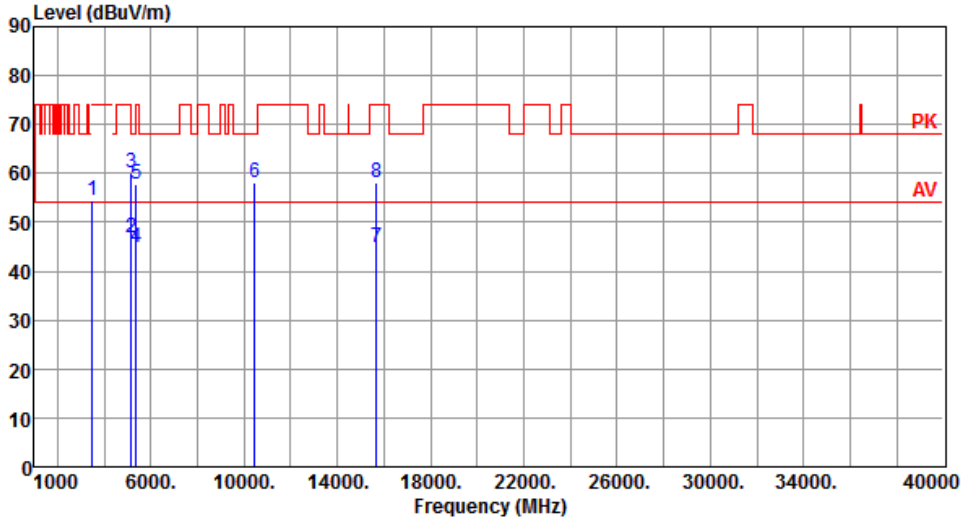
Modulation	VHT40	Test Freq. (MHz)	5190
Polarization	Vertical		



	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	56.09	68.20	-12.11	56.77	-0.68	Peak	100	60
2	5150.00	46.44	54.00	-7.56	41.90	4.54	Average	101	107
3	5150.00	58.27	74.00	-15.73	53.73	4.54	Peak	101	107
4	10380.00	57.38	68.20	-10.82	43.54	13.84	Peak	100	32
5	15570.00	45.58	54.00	-8.42	31.39	14.19	Average	100	32
6	15570.00	57.17	74.00	-16.83	42.98	14.19	Peak	100	217

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).

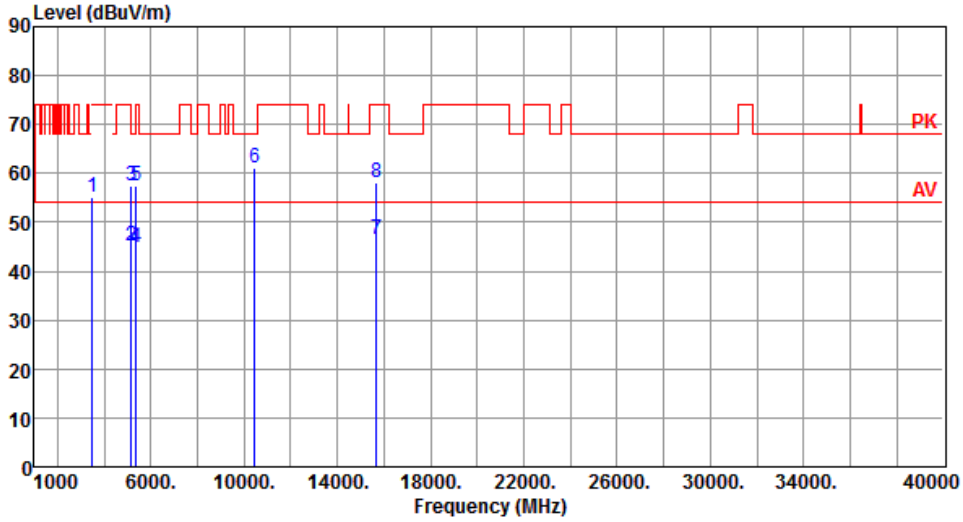
Modulation	VHT40	Test Freq. (MHz)	5230
Polarization	Horizontal		



	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	54.37	68.20	-13.83	54.85	-0.48	Peak	100	54
2	5150.00	46.78	54.00	-7.22	42.24	4.54	Average	100	0
3	5150.00	60.00	74.00	-14.00	55.46	4.54	Peak	100	0
4	5350.00	44.92	54.00	-9.08	40.79	4.13	Average	100	0
5	5350.00	57.67	74.00	-16.33	53.54	4.13	Peak	100	0
6	10460.00	58.23	68.20	-9.97	44.34	13.89	Peak	100	310
7	15690.00	44.90	54.00	-9.10	30.97	13.93	Average	100	219
8	15690.00	57.98	74.00	-16.02	44.05	13.93	Peak	100	219

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).

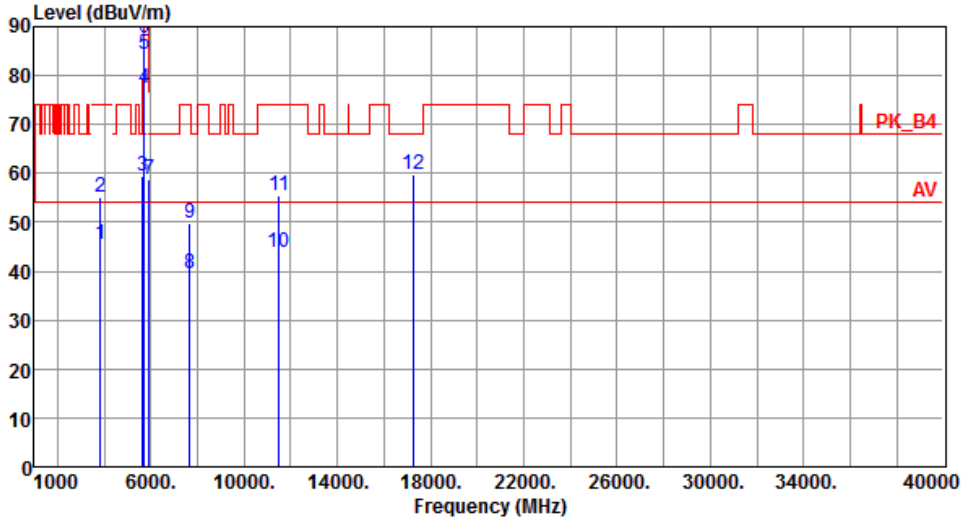
Modulation	VHT40	Test Freq. (MHz)	5230
Polarization	Vertical		



	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	55.10	68.20	-13.10	55.58	-0.48	Peak	100	332
2	5150.00	45.12	54.00	-8.88	40.58	4.54	Average	100	101
3	5150.00	57.41	74.00	-16.59	52.87	4.54	Peak	100	101
4	5350.00	44.68	54.00	-9.32	40.55	4.13	Average	100	101
5	5350.00	57.60	74.00	-16.40	53.47	4.13	Peak	100	101
6	10460.00	61.01	68.20	-7.19	47.12	13.89	Peak	100	216
7	15690.00	46.43	54.00	-7.57	32.50	13.93	Average	100	23
8	15690.00	58.23	74.00	-15.77	44.30	13.93	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).

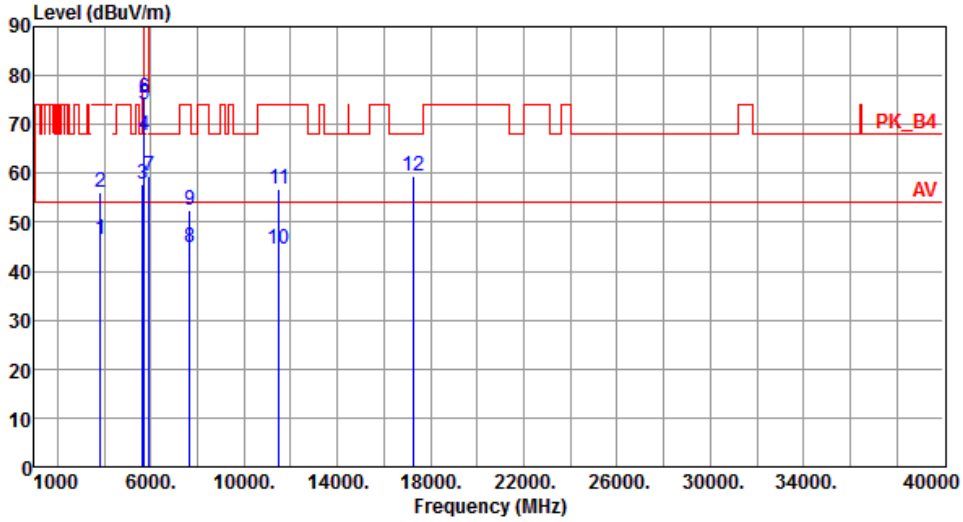
Modulation	VHT40	Test Freq. (MHz)	5755
Polarization	Horizontal		



	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	45.37	54.00	-8.63	44.48	0.89	Average	100	315
2	3836.66	55.20	74.00	-18.80	54.31	0.89	Peak	100	315
3	5650.00	59.50	68.20	-8.70	54.53	4.97	Peak	100	80
4	5700.00	77.52	105.20	-27.68	72.36	5.16	Peak	100	80
5	5720.00	84.48	110.80	-26.32	79.25	5.23	Peak	100	80
6	5725.00	87.74	122.20	-34.46	82.49	5.25	Peak	100	80
7	5925.00	58.95	68.20	-9.25	52.86	6.09	Peak	100	80
8	7673.33	39.56	54.00	-14.44	31.12	8.44	Average	100	223
9	7673.33	49.84	74.00	-24.16	41.40	8.44	Peak	100	223
10	11510.00	43.70	54.00	-10.30	29.59	14.11	Average	100	223
11	11510.00	55.56	74.00	-18.44	41.45	14.11	Peak	100	223
12	17235.00	59.84	68.20	-8.36	42.61	17.23	Peak	100	216

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).

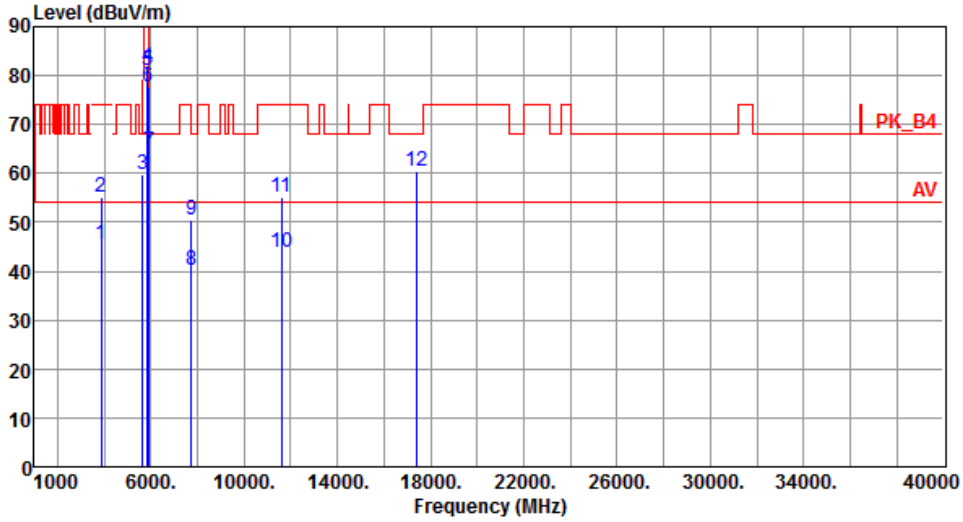
Modulation	VHT40	Test Freq. (MHz)	5755
Polarization	Vertical		



	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	46.49	54.00	-7.51	45.60	0.89	Average	100	307
2	3836.66	56.05	74.00	-17.95	55.16	0.89	Peak	100	307
3	5650.00	57.75	68.20	-10.45	52.78	4.97	Peak	100	217
4	5700.00	67.84	105.20	-37.36	62.68	5.16	Peak	100	217
5	5720.00	73.90	110.80	-36.90	68.67	5.23	Peak	100	217
6	5725.00	75.24	122.20	-46.96	69.99	5.25	Peak	100	217
7	5925.00	59.40	68.20	-8.80	53.31	6.09	Peak	100	217
8	7673.33	44.91	54.00	-9.09	36.47	8.44	Average	100	54
9	7673.33	52.31	74.00	-21.69	43.87	8.44	Peak	100	54
10	11510.00	44.39	54.00	-9.61	30.28	14.11	Average	100	168
11	11510.00	56.84	74.00	-17.16	42.73	14.11	Peak	100	168
12	17265.00	59.38	68.20	-8.82	42.07	17.31	Peak	100	183

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).

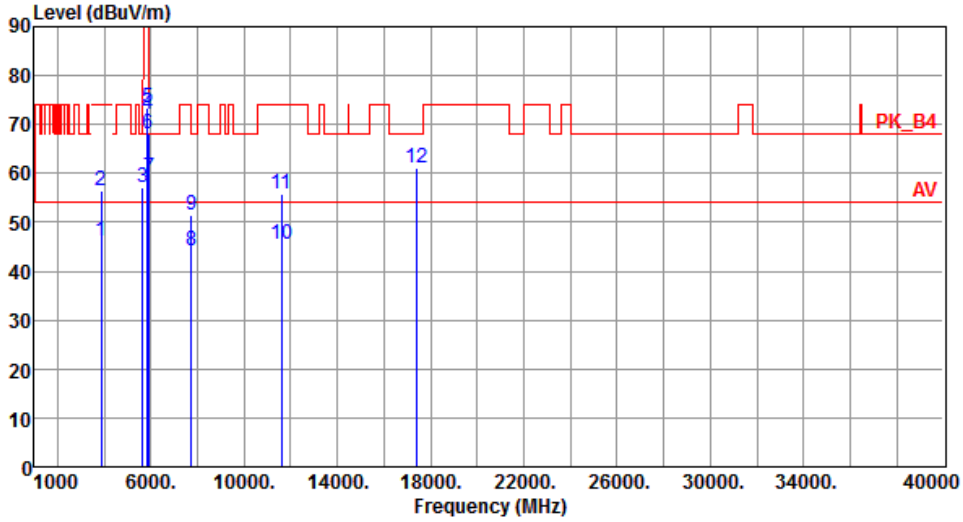
Modulation	VHT40	Test Freq. (MHz)	5795
Polarization	Horizontal		



	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	45.54	54.00	-8.46	44.54	1.00	Average	100	311
2	3863.33	55.22	74.00	-18.78	54.22	1.00	Peak	100	311
3	5650.00	59.68	68.20	-8.52	54.71	4.97	Peak	100	77
4	5850.00	81.78	122.20	-40.42	75.97	5.81	Peak	100	77
5	5855.00	80.95	110.80	-29.85	75.12	5.83	Peak	100	77
6	5875.00	77.83	105.20	-27.37	71.93	5.90	Peak	100	77
7	5925.00	64.38	68.20	-3.82	58.29	6.09	Peak	100	77
8	7726.66	40.31	54.00	-13.69	31.88	8.43	Average	100	225
9	7726.66	50.47	74.00	-23.53	42.04	8.43	Peak	100	225
10	11590.00	43.96	54.00	-10.04	30.07	13.89	Average	100	223
11	11590.00	55.20	74.00	-18.80	41.31	13.89	Peak	100	223
12	17385.00	60.38	68.20	-7.82	42.63	17.75	Peak	100	163

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		

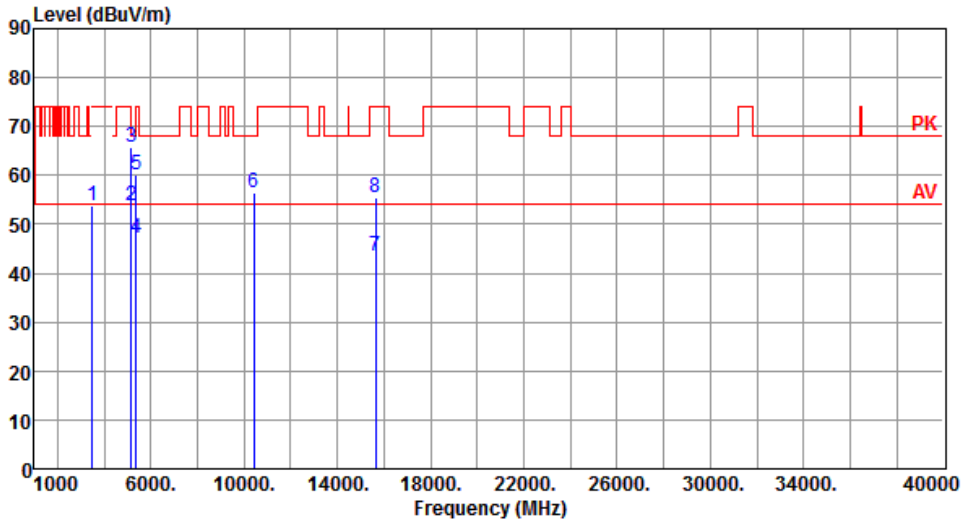


	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	3863.33	46.17	54.00	-7.83	45.17	1.00	Average	100	308
2	3863.33	56.36	74.00	-17.64	55.36	1.00	Peak	100	308
3	5650.00	57.08	68.20	-11.12	52.11	4.97	Peak	100	217
4	5850.00	72.11	122.20	-50.09	66.30	5.81	Peak	100	217
5	5855.00	73.43	110.80	-37.37	67.60	5.83	Peak	100	217
6	5875.00	68.09	105.20	-37.11	62.19	5.90	Peak	100	217
7	5925.00	59.20	68.20	-9.00	53.11	6.09	Peak	100	217
8	7726.66	44.33	54.00	-9.67	35.90	8.43	Average	100	53
9	7726.66	51.49	74.00	-22.51	43.06	8.43	Peak	100	53
10	11590.00	45.42	54.00	-8.58	31.53	13.89	Average	100	336
11	11590.00	55.81	74.00	-18.19	41.92	13.89	Peak	100	336
12	17385.00	61.16	68.20	-7.04	43.41	17.75	Peak	100	177

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

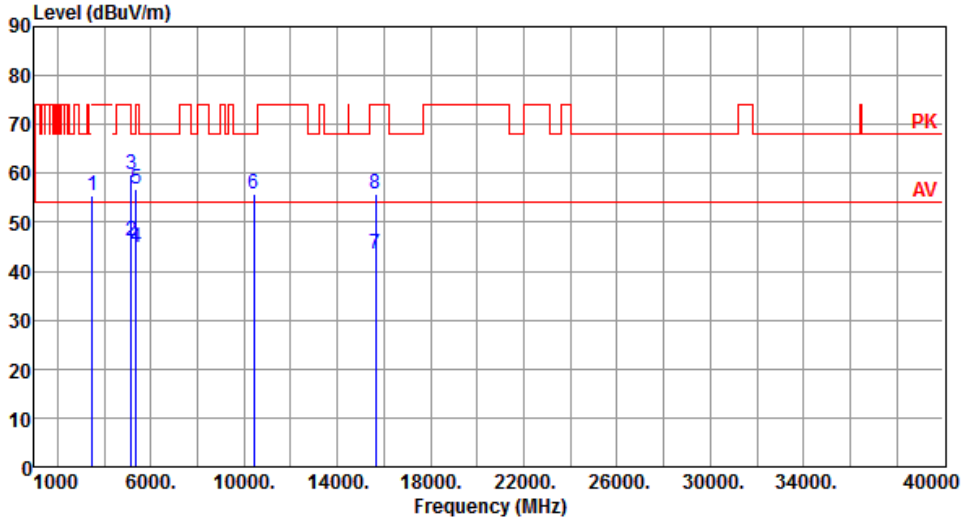
Modulation	VHT80	**Test Freq. (MHz)**	5210
Polarization	Horizontal		



	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	53.91	68.20	-14.29	54.49	-0.58	Peak	100	24
2	5150.00	53.76	54.00	-0.24	49.22	4.54	Average	100	0
3	5150.00	65.79	74.00	-8.21	61.25	4.54	Peak	100	0
4	5350.00	47.06	54.00	-6.94	42.93	4.13	Average	100	0
5	5350.00	60.15	74.00	-13.85	56.02	4.13	Peak	100	0
6	10420.00	56.41	68.20	-11.79	42.52	13.89	Peak	100	135
7	15630.00	43.60	54.00	-10.40	29.56	14.04	Average	100	156
8	15630.00	55.43	74.00	-18.57	41.39	14.04	Peak	100	156

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).

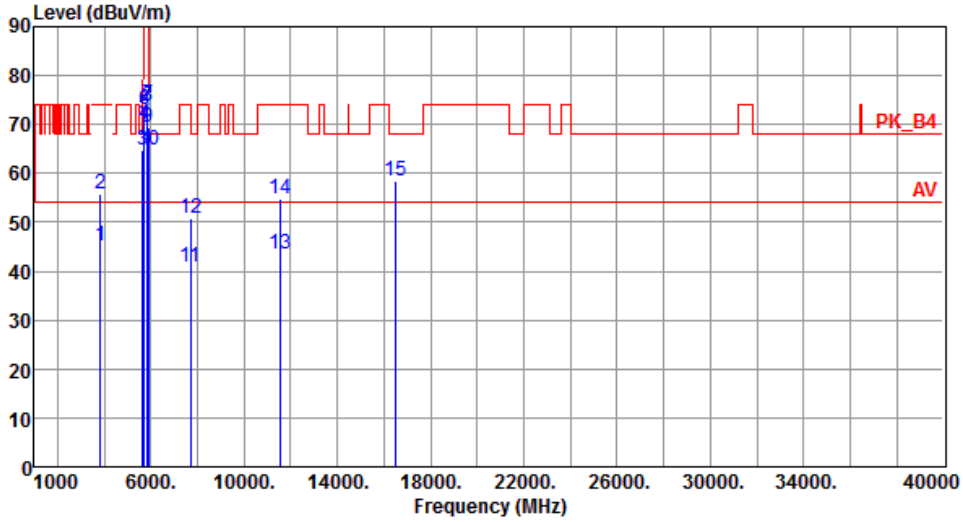
Modulation	VHT80	Test Freq. (MHz)	5210
Polarization	Vertical		



	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	55.31	68.20	-12.89	55.89	-0.58	Peak	106	62
2	5150.00	46.16	54.00	-7.84	41.62	4.54	Average	100	102
3	5150.00	59.76	74.00	-14.24	55.22	4.54	Peak	100	102
4	5350.00	44.67	54.00	-9.33	40.54	4.13	Average	100	102
5	5350.00	56.70	74.00	-17.30	52.57	4.13	Peak	100	102
6	10420.00	55.85	68.20	-12.35	41.96	13.89	Peak	100	177
7	15630.00	43.49	54.00	-10.51	29.45	14.04	Average	100	25
8	15630.00	55.80	74.00	-18.20	41.76	14.04	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).

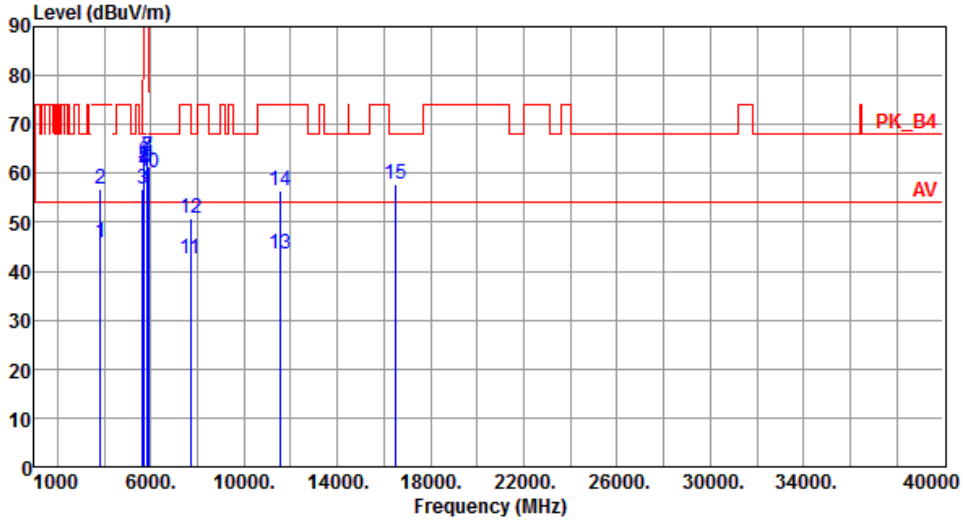
Modulation	VHT80	Test Freq. (MHz)	5775
Polarization	Horizontal		



	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	45.28	54.00	-8.72	44.33	0.95	Average	100	313
2	3850.00	55.89	74.00	-18.11	54.94	0.95	Peak	100	313
3	5650.00	64.80	68.20	-3.40	59.83	4.97	Peak	100	78
4	5700.00	70.12	105.20	-35.08	64.96	5.16	Peak	100	78
5	5720.00	71.98	110.80	-38.82	66.75	5.23	Peak	100	78
6	5725.00	73.00	122.20	-49.20	67.75	5.25	Peak	100	78
7	5850.00	73.95	122.20	-48.25	68.14	5.81	Peak	100	78
8	5855.00	73.56	110.80	-37.24	67.73	5.83	Peak	100	78
9	5875.00	69.54	105.20	-35.66	63.64	5.90	Peak	100	78
10	5925.00	64.62	68.20	-3.58	58.53	6.09	Peak	100	78
11	7700.00	40.79	54.00	-13.21	32.37	8.42	Average	100	226
12	7700.00	50.65	74.00	-23.35	42.23	8.42	Peak	100	226
13	11550.00	43.56	54.00	-10.44	29.56	14.00	Average	100	102
14	11550.00	54.69	74.00	-19.31	40.69	14.00	Peak	100	102
15	16500.00	58.57	68.20	-9.63	42.84	15.73	Peak	100	218

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		



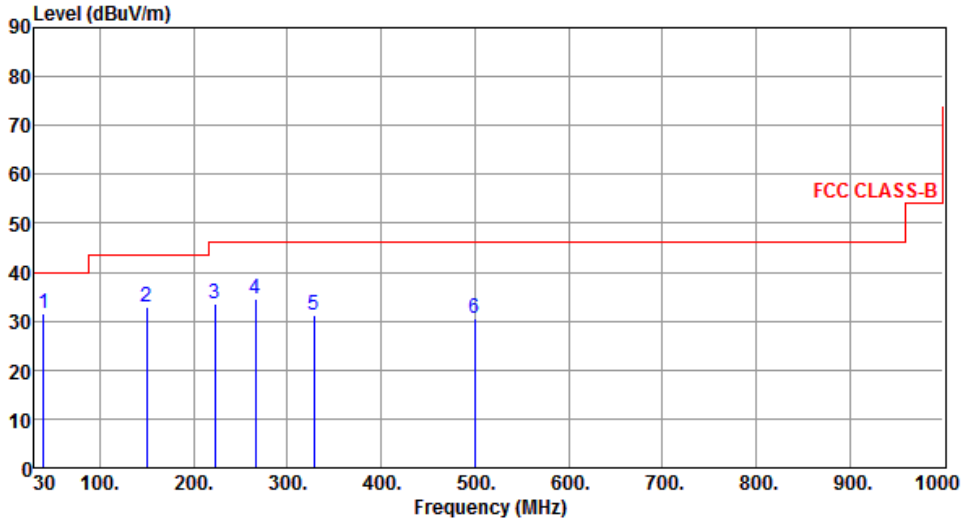
	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	3850.00	45.99	54.00	-8.01	45.04	0.95	Average	100	307
2	3850.00	56.68	74.00	-17.32	55.73	0.95	Peak	100	307
3	5650.00	56.75	68.20	-11.45	51.78	4.97	Peak	107	216
4	5700.00	60.51	105.20	-44.69	55.35	5.16	Peak	107	216
5	5720.00	61.59	110.80	-49.21	56.36	5.23	Peak	107	216
6	5725.00	62.50	122.20	-59.70	57.25	5.25	Peak	107	216
7	5850.00	63.55	122.20	-58.65	57.74	5.81	Peak	107	216
8	5855.00	63.35	110.80	-47.45	57.52	5.83	Peak	107	216
9	5875.00	61.38	105.20	-43.82	55.48	5.90	Peak	107	216
10	5925.00	60.21	68.20	-7.99	54.12	6.09	Peak	107	216
11	7700.00	42.55	54.00	-11.45	34.13	8.42	Average	100	320
12	7700.00	50.96	74.00	-23.04	42.54	8.42	Peak	100	320
13	11550.00	43.44	54.00	-10.56	29.44	14.00	Average	100	113
14	11550.00	56.31	74.00	-17.69	42.31	14.00	Peak	100	113
15	16500.00	57.79	68.20	-10.41	42.06	15.73	Peak	100	156

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)

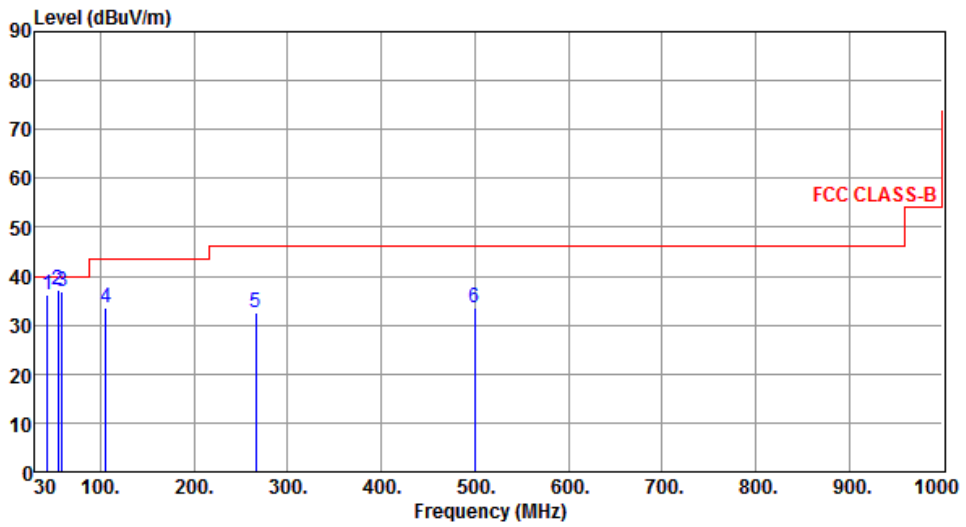
Modulation	VHT40	**Test Freq. (MHz)**	5230
Polarization	Horizontal		



	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	39.59	31.56	40.00	-8.44	39.72	-8.16	Peak	---	---
2	149.62	32.89	43.50	-10.61	41.24	-8.35	Peak	---	---
3	222.40	33.65	46.00	-12.35	44.50	-10.85	Peak	---	---
4	265.56	34.56	46.00	-11.44	43.35	-8.79	Peak	---	---
5	328.00	31.23	46.00	-14.77	38.23	-7.00	Peak	---	---
6	499.56	30.56	46.00	-15.44	33.42	-2.86	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.

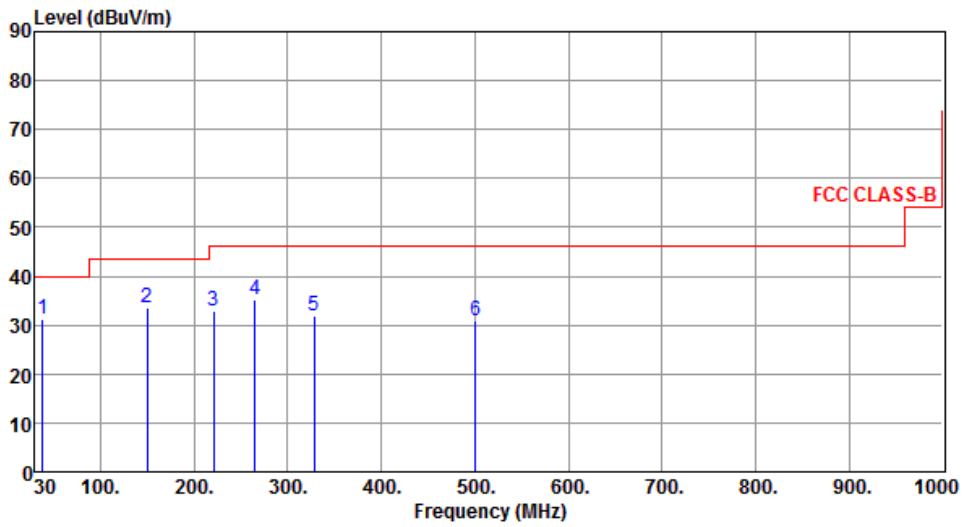
Modulation	VHT40	Test Freq. (MHz)	5230
Polarization	Vertical		



	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	43.54	36.21	40.00	-3.79	44.10	-7.89	Peak	---	---
2	54.28	37.05	40.00	-2.95	45.09	-8.04	QP	100	15
3	59.26	36.92	40.00	-3.08	45.53	-8.61	QP	100	23
4	105.53	33.56	43.50	-9.94	45.56	-12.00	Peak	---	---
5	265.65	32.56	46.00	-13.44	41.34	-8.78	Peak	---	---
6	499.89	33.65	46.00	-12.35	36.49	-2.84	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.

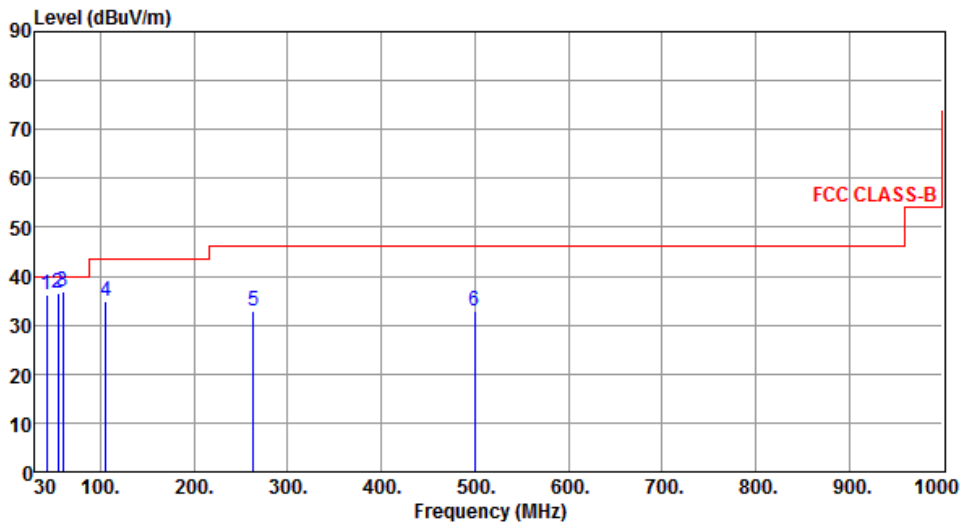
Modulation	VHT20	Test Freq. (MHz)	5825
Polarization	Horizontal		



	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	37.82	31.21	40.00	-8.79	39.58	-8.37	Peak	---	---
2	149.56	33.56	43.50	-9.94	41.91	-8.35	Peak	---	---
3	220.69	32.84	46.00	-13.16	43.70	-10.86	Peak	---	---
4	265.23	35.24	46.00	-10.76	44.04	-8.80	Peak	---	---
5	328.64	31.84	46.00	-14.16	38.81	-6.97	Peak	---	---
6	500.38	30.84	46.00	-15.16	33.66	-2.82	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		

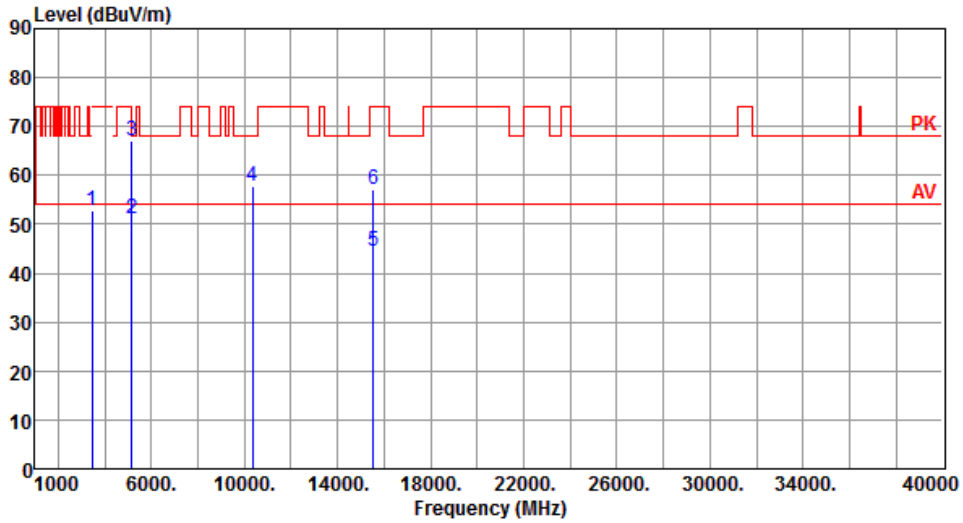


	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	42.71	36.17	40.00	-3.83	44.07	-7.90	Peak	---	---
2	54.34	36.41	40.00	-3.59	44.45	-8.04	QP	100	15
3	59.65	36.78	40.00	-3.22	45.39	-8.61	QP	100	14
4	105.64	34.89	43.50	-8.61	46.89	-12.00	Peak	---	---
5	263.57	32.92	46.00	-13.08	41.80	-8.88	Peak	---	---
6	499.85	32.89	46.00	-13.11	35.74	-2.85	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

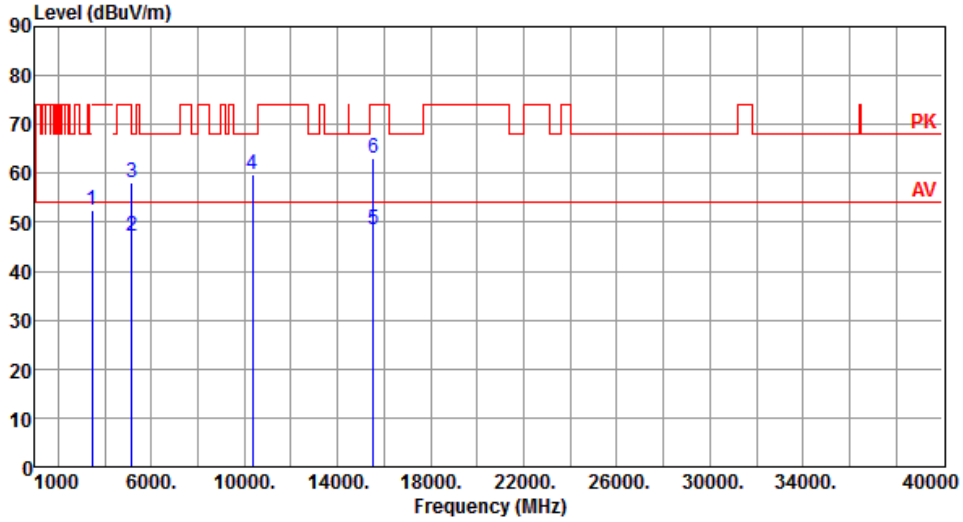
Modulation	VHT20	**Test Freq. (MHz)**	5180
Polarization	Horizontal		



	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	52.85	68.20	-15.35	53.57	-0.72	Peak	100	63
2	5150.00	51.12	54.00	-2.88	46.58	4.54	Average	100	18
3	5150.00	67.20	74.00	-6.80	62.66	4.54	Peak	100	18
4	10360.00	57.62	68.20	-10.58	43.84	13.78	Peak	100	7
5	15540.00	44.38	54.00	-9.62	30.10	14.28	Average	100	57
6	15540.00	57.16	74.00	-16.84	42.88	14.28	Peak	100	57

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).

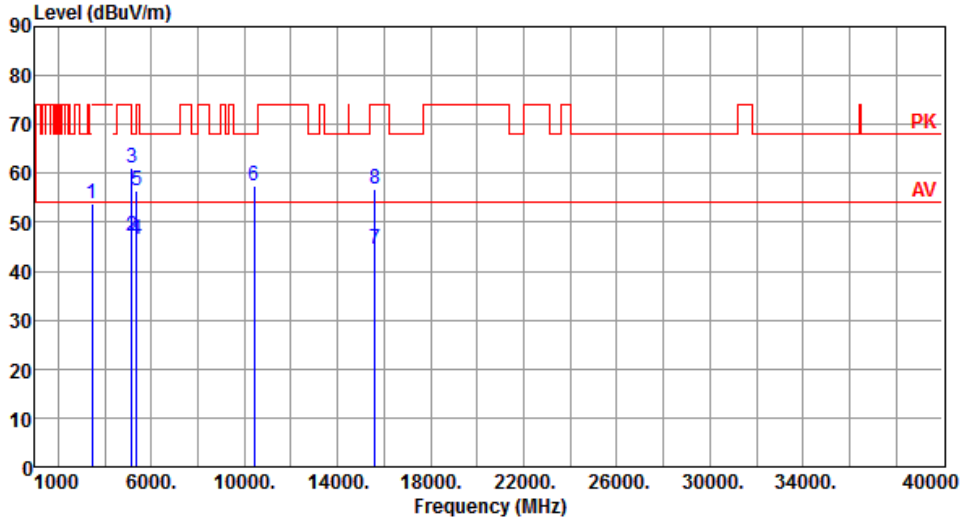
Modulation	VHT20	Test Freq. (MHz)	5180
Polarization	Vertical		



	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	52.52	68.20	-15.68	53.24	-0.72	Peak	100	299
2	5150.00	47.29	54.00	-6.71	42.75	4.54	Average	100	109
3	5150.00	58.05	74.00	-15.95	53.51	4.54	Peak	100	109
4	10360.00	59.63	68.20	-8.57	45.85	13.78	Peak	100	26
5	15540.00	48.49	54.00	-5.51	34.21	14.28	Average	100	9
6	15540.00	63.16	74.00	-10.84	48.88	14.28	Peak	100	9

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).

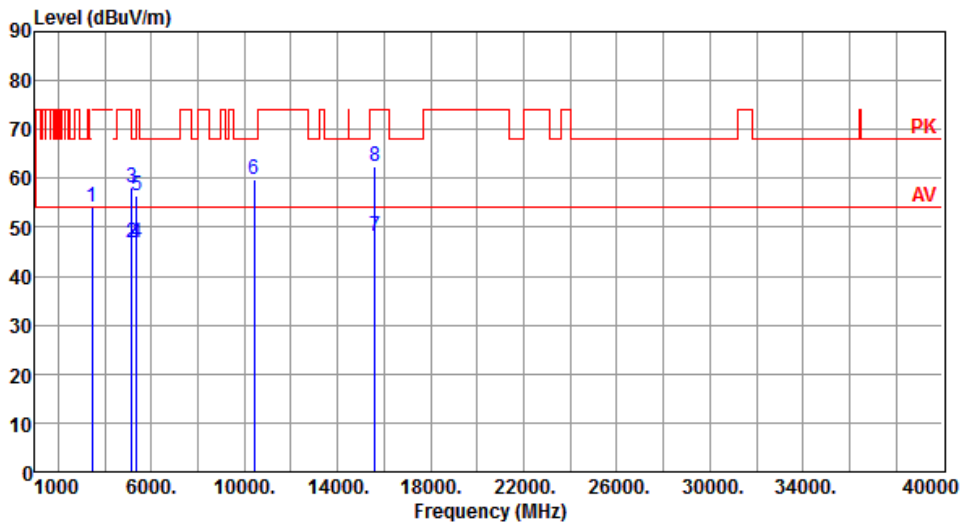
Modulation	VHT20	Test Freq. (MHz)	5200
Polarization	Horizontal		



	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	53.94	68.20	-14.26	54.56	-0.62	Peak	100	333
2	5150.00	47.02	54.00	-6.98	42.48	4.54	Average	100	20
3	5150.00	61.22	74.00	-12.78	56.68	4.54	Peak	100	20
4	5350.00	46.47	54.00	-7.53	42.34	4.13	Average	100	20
5	5350.00	56.60	74.00	-17.40	52.47	4.13	Peak	100	20
6	10400.00	57.38	68.20	-10.82	43.49	13.89	Peak	100	12
7	15600.00	44.38	54.00	-9.62	30.28	14.10	Average	100	54
8	15600.00	56.84	74.00	-17.16	42.74	14.10	Peak	100	54

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).

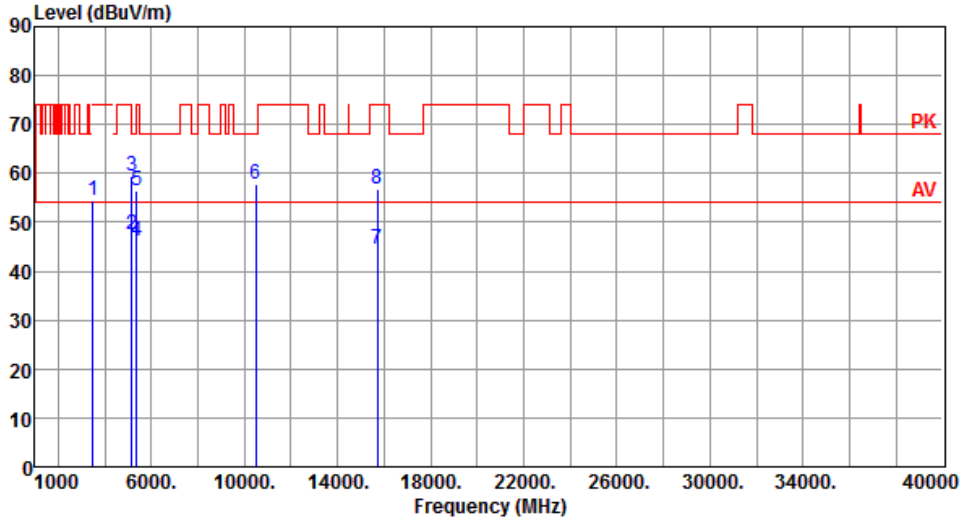
Modulation	VHT20	Test Freq. (MHz)	5200
Polarization	Vertical		



	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	54.05	68.20	-14.15	54.67	-0.62	Peak	100	325
2	5150.00	46.76	54.00	-7.24	42.22	4.54	Average	100	112
3	5150.00	57.96	74.00	-16.04	53.42	4.54	Peak	100	112
4	5350.00	46.96	54.00	-7.04	42.83	4.13	Average	100	112
5	5350.00	56.59	74.00	-17.41	52.46	4.13	Peak	100	112
6	10400.00	59.70	68.20	-8.50	45.81	13.89	Peak	100	23
7	15600.00	48.11	54.00	-5.89	34.01	14.10	Average	100	2
8	15600.00	62.55	74.00	-11.45	48.45	14.10	Peak	100	2

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).

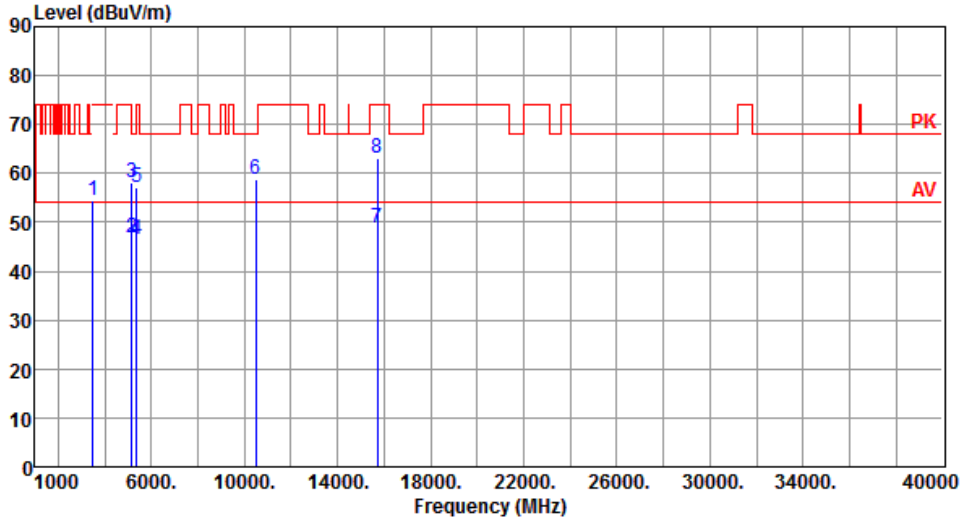
Modulation	VHT20	Test Freq. (MHz)	5240
Polarization	Horizontal		



	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	54.40	68.20	-13.80	54.82	-0.42	Peak	100	38
2	5150.00	47.53	54.00	-6.47	42.99	4.54	Average	100	22
3	5150.00	59.42	74.00	-14.58	54.88	4.54	Peak	100	22
4	5350.00	46.26	54.00	-7.74	42.13	4.13	Average	100	22
5	5350.00	56.29	74.00	-17.71	52.16	4.13	Peak	100	22
6	10480.00	57.77	68.20	-10.43	43.89	13.88	Peak	100	5
7	15720.00	44.45	54.00	-9.55	30.56	13.89	Average	100	59
8	15720.00	56.84	74.00	-17.16	42.95	13.89	Peak	100	59

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).

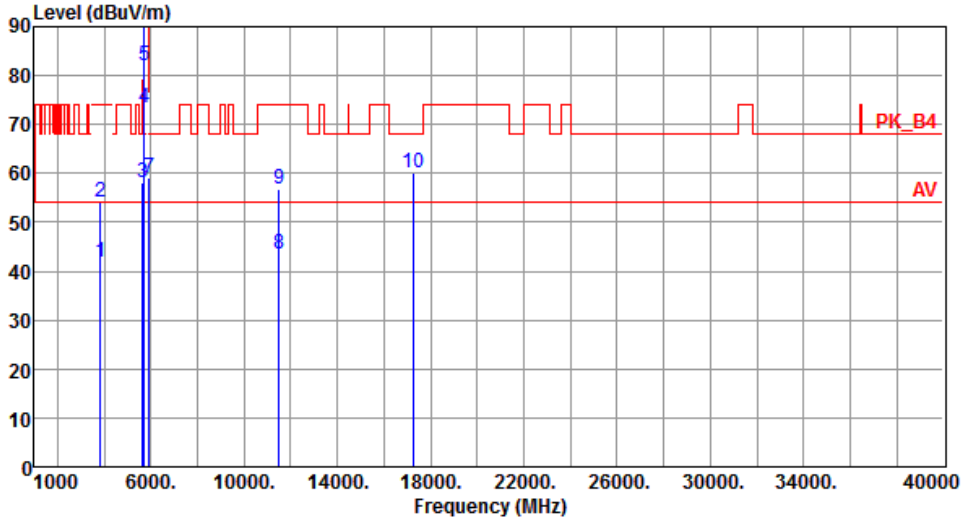
Modulation	VHT20	Test Freq. (MHz)	5240
Polarization	Vertical		



	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	54.53	68.20	-13.67	54.95	-0.42	Peak	100	327
2	5150.00	46.72	54.00	-7.28	42.18	4.54	Average	100	117
3	5150.00	58.19	74.00	-15.81	53.65	4.54	Peak	100	117
4	5350.00	46.51	54.00	-7.49	42.38	4.13	Average	100	117
5	5350.00	56.97	74.00	-17.03	52.84	4.13	Peak	100	117
6	10480.00	58.74	68.20	-9.46	44.86	13.88	Peak	100	24
7	15720.00	48.78	54.00	-5.22	34.89	13.89	Average	100	12
8	15720.00	63.06	74.00	-10.94	49.17	13.89	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).

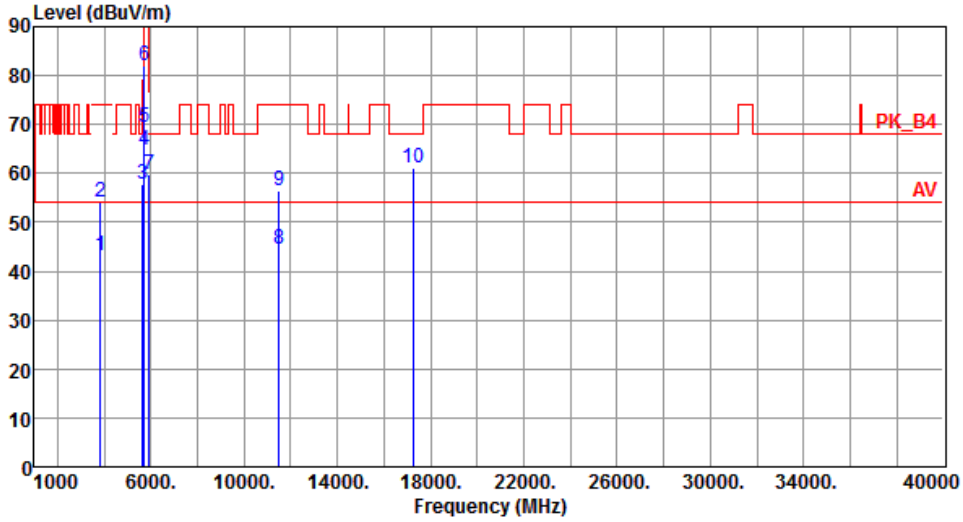
Modulation	VHT20	Test Freq. (MHz)	5745
Polarization	Horizontal		



	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	41.70	54.00	-12.30	40.84	0.86	Average	100	320
2	3830.00	54.09	74.00	-19.91	53.23	0.86	Peak	100	320
3	5650.00	58.18	68.20	-10.02	53.21	4.97	Peak	100	74
4	5700.00	73.47	105.20	-31.73	68.31	5.16	Peak	100	74
5	5720.00	82.11	110.80	-28.69	76.88	5.23	Peak	100	74
6	5725.00	91.10	122.20	-31.10	85.85	5.25	Peak	100	74
7	5925.00	59.05	68.20	-9.15	52.96	6.09	Peak	100	74
8	11490.00	43.54	54.00	-10.46	29.42	14.12	Average	100	234
9	11490.00	56.77	74.00	-17.23	42.65	14.12	Peak	100	234
10	17235.00	60.13	68.20	-8.07	42.90	17.23	Peak	100	22

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).

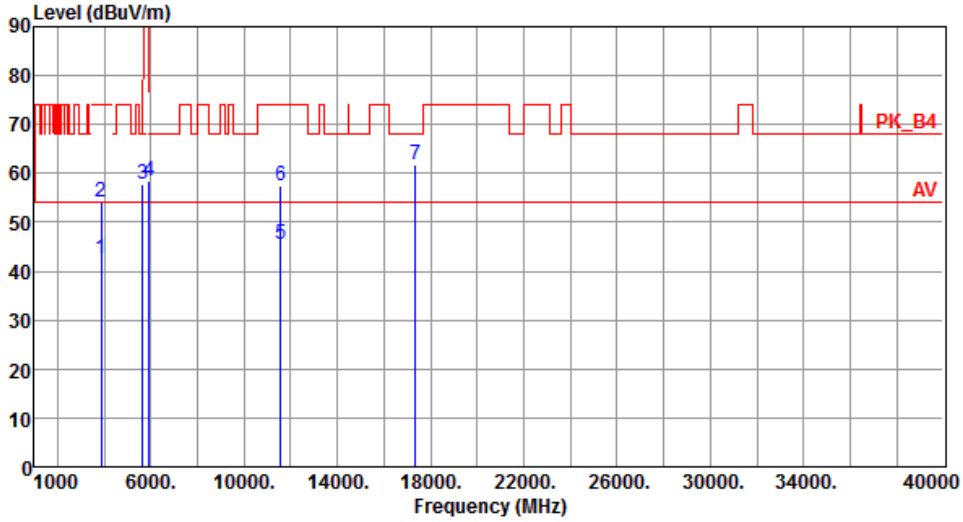
Modulation	VHT20	Test Freq. (MHz)	5745
Polarization	Vertical		



	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	43.06	54.00	-10.94	42.20	0.86	Average	100	325
2	3830.00	54.09	74.00	-19.91	53.23	0.86	Peak	100	325
3	5650.00	57.90	68.20	-10.30	52.93	4.97	Peak	100	142
4	5700.00	64.71	105.20	-40.49	59.55	5.16	Peak	100	142
5	5720.00	69.44	110.80	-41.36	64.21	5.23	Peak	100	142
6	5725.00	82.14	122.20	-40.06	76.89	5.25	Peak	100	142
7	5925.00	59.75	68.20	-8.45	53.66	6.09	Peak	100	142
8	11490.00	44.41	54.00	-9.59	30.29	14.12	Average	100	345
9	11490.00	56.60	74.00	-17.40	42.48	14.12	Peak	100	345
10	17235.00	61.09	68.20	-7.11	43.86	17.23	Peak	100	342

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).

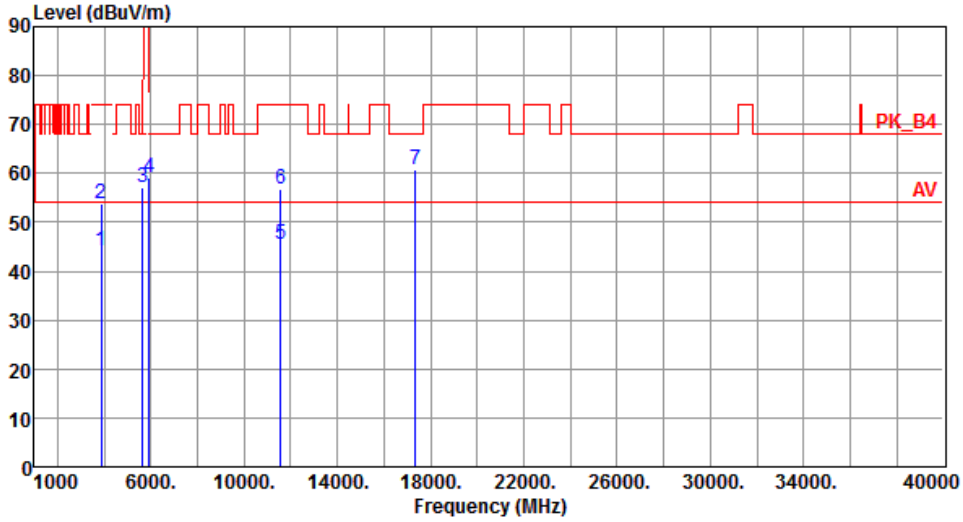
Modulation	VHT20	Test Freq. (MHz)	5785
Polarization	Horizontal		



	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	42.57	54.00	-11.43	41.59	0.98	Average	100	310
2	3856.66	54.22	74.00	-19.78	53.24	0.98	Peak	100	310
3	5650.00	57.63	68.20	-10.57	52.66	4.97	Peak	100	100
4	5925.00	58.29	68.20	-9.91	52.20	6.09	Peak	100	100
5	11570.00	45.51	54.00	-8.49	31.56	13.95	Average	100	342
6	11570.00	57.53	74.00	-16.47	43.58	13.95	Peak	100	342
7	17355.00	61.88	68.20	-6.32	44.26	17.62	Peak	100	35

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).

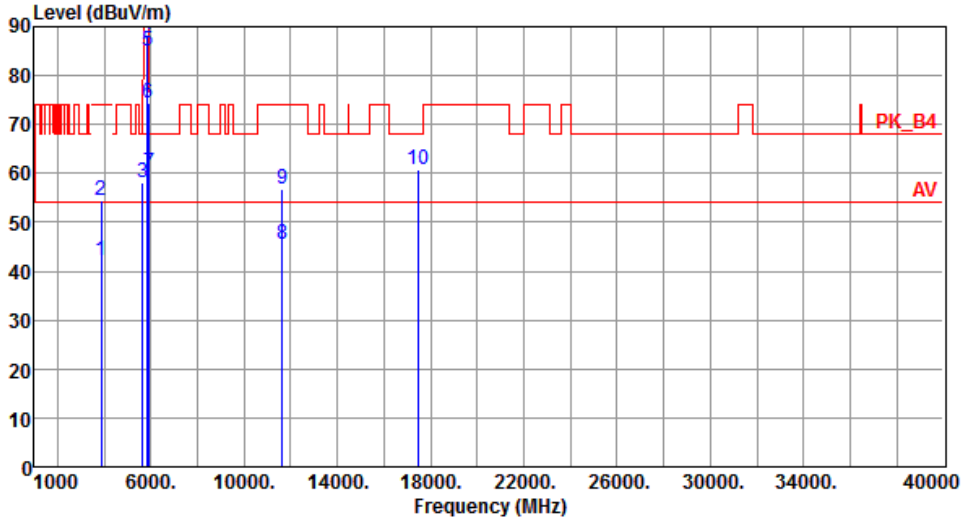
Modulation	VHT20	Test Freq. (MHz)	5785
Polarization	Vertical		



	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	44.26	54.00	-9.74	43.28	0.98	Average	100	311
2	3856.66	53.67	74.00	-20.33	52.69	0.98	Peak	100	311
3	5650.00	57.14	68.20	-11.06	52.17	4.97	Peak	100	218
4	5925.00	58.98	68.20	-9.22	52.89	6.09	Peak	100	218
5	11570.00	45.53	54.00	-8.47	31.58	13.95	Average	100	230
6	11570.00	56.91	74.00	-17.09	42.96	13.95	Peak	100	230
7	17355.00	60.87	68.20	-7.33	43.25	17.62	Peak	100	214

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).

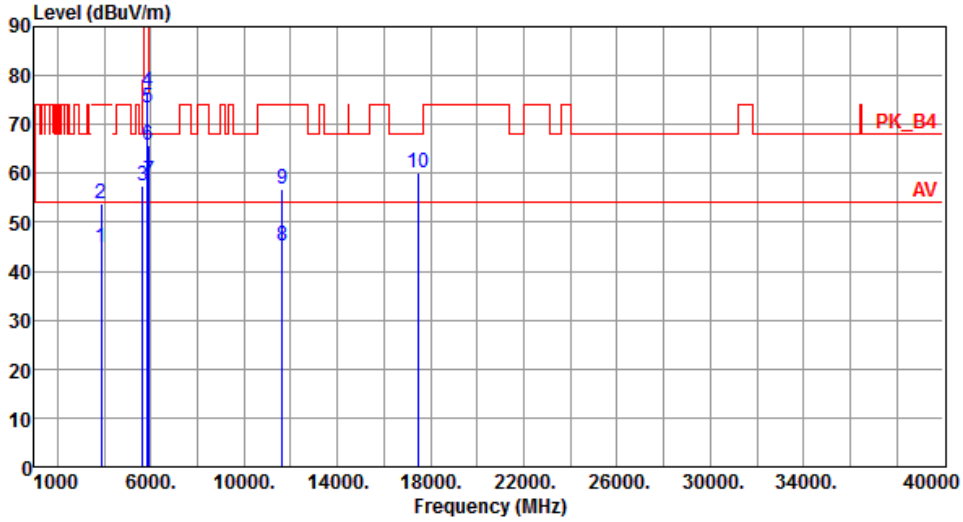
Modulation	VHT20	Test Freq. (MHz)	5825
Polarization	Horizontal		



	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	42.31	54.00	-11.69	41.25	1.06	Average	100	320
2	3883.33	54.30	74.00	-19.70	53.24	1.06	Peak	100	320
3	5650.00	58.21	68.20	-9.99	53.24	4.97	Peak	100	92
4	5850.00	88.38	122.20	-33.82	82.57	5.81	Peak	100	92
5	5855.00	85.05	110.80	-25.75	79.22	5.83	Peak	100	92
6	5875.00	74.45	105.20	-30.75	68.55	5.90	Peak	100	92
7	5925.00	60.05	68.20	-8.15	53.96	6.09	Peak	100	92
8	11650.00	45.59	54.00	-8.41	31.97	13.62	Average	100	321
9	11650.00	56.88	74.00	-17.12	43.26	13.62	Peak	100	321
10	17475.00	60.80	68.20	-7.40	42.90	17.90	Peak	100	326

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		

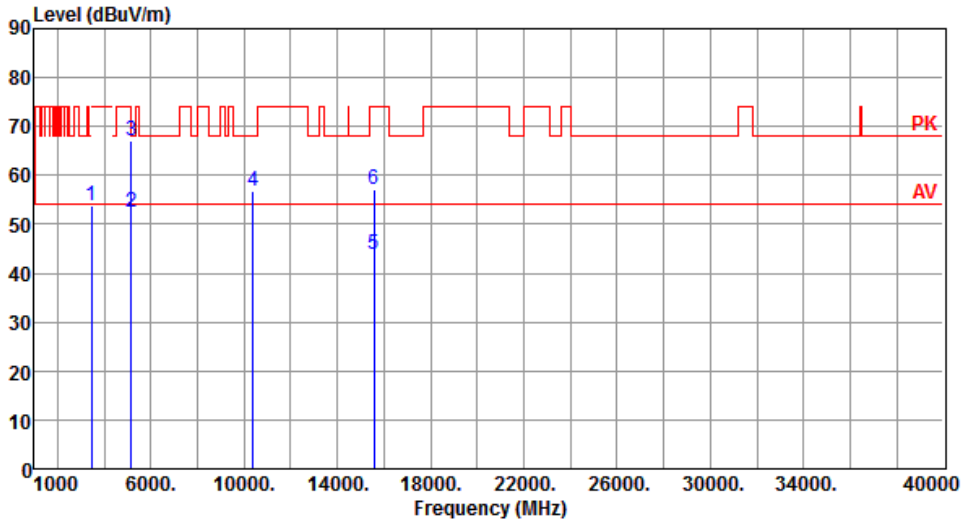


	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	3883.33	44.91	54.00	-9.09	43.85	1.06	Average	100	319
2	3883.33	53.75	74.00	-20.25	52.69	1.06	Peak	100	319
3	5650.00	57.44	68.20	-10.76	52.47	4.97	Peak	100	236
4	5850.00	76.67	122.20	-45.53	70.86	5.81	Peak	100	236
5	5855.00	73.35	110.80	-37.45	67.52	5.83	Peak	100	236
6	5875.00	65.76	105.20	-39.44	59.86	5.90	Peak	100	236
7	5925.00	58.56	68.20	-9.64	52.47	6.09	Peak	100	236
8	11650.00	45.21	54.00	-8.79	31.59	13.62	Average	100	344
9	11650.00	56.88	74.00	-17.12	43.26	13.62	Peak	100	344
10	17475.00	60.08	68.20	-8.12	42.18	17.90	Peak	100	350

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

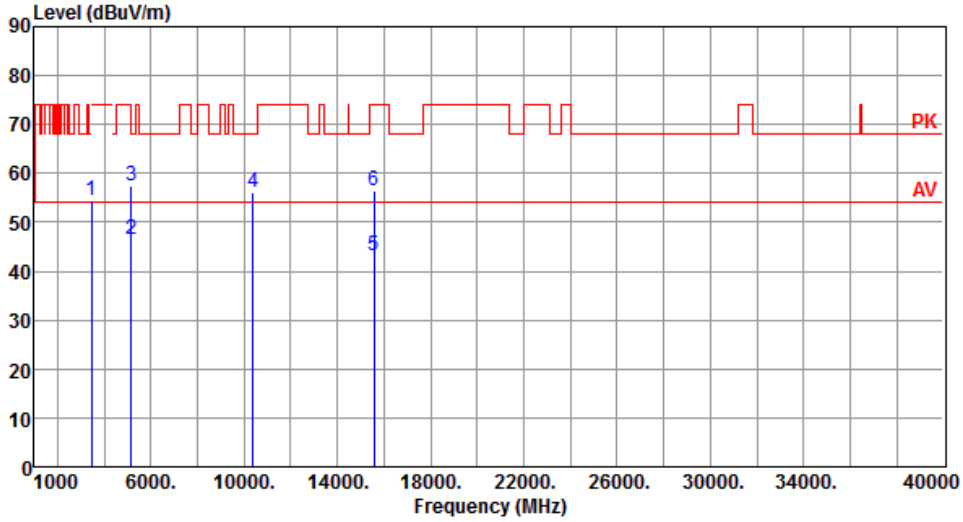
Modulation	VHT40	**Test Freq. (MHz)**	5190
Polarization	Horizontal		



	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	53.71	68.20	-14.49	54.39	-0.68	Peak	100	54
2	5150.00	52.45	54.00	-1.55	47.91	4.54	Average	105	36
3	5150.00	67.24	74.00	-6.76	62.70	4.54	Peak	105	36
4	10380.00	56.77	68.20	-11.43	42.93	13.84	Peak	100	7
5	15570.00	43.86	54.00	-10.14	29.67	14.19	Average	100	63
6	15570.00	57.05	74.00	-16.95	42.86	14.19	Peak	100	63

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).

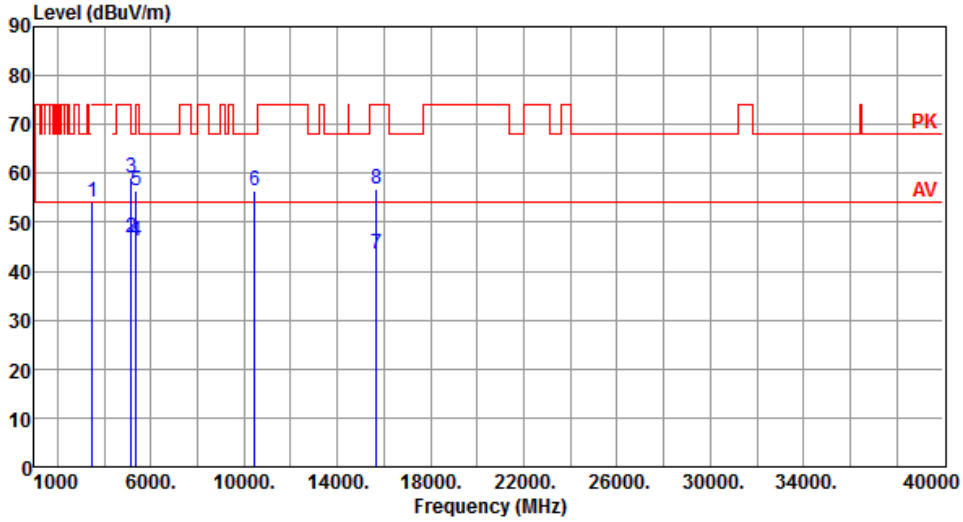
Modulation	VHT40	Test Freq. (MHz)	5190
Polarization	Vertical		



	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	54.31	68.20	-13.89	54.99	-0.68	Peak	100	327
2	5150.00	46.40	54.00	-7.60	41.86	4.54	Average	100	138
3	5150.00	57.54	74.00	-16.46	53.00	4.54	Peak	100	138
4	10380.00	56.01	68.20	-12.19	42.17	13.84	Peak	100	23
5	15570.00	43.12	54.00	-10.88	28.93	14.19	Average	100	14
6	15570.00	56.55	74.00	-17.45	42.36	14.19	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).

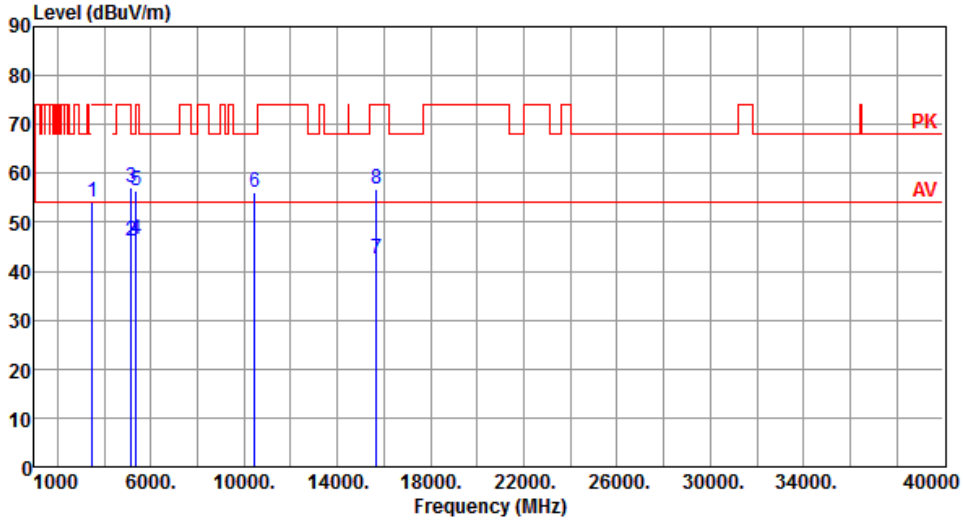
Modulation	VHT40	Test Freq. (MHz)	5230
Polarization	Horizontal		



	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	54.09	68.20	-14.11	54.57	-0.48	Peak	100	61
2	5150.00	46.72	54.00	-7.28	42.18	4.54	Average	100	42
3	5150.00	59.23	74.00	-14.77	54.69	4.54	Peak	100	42
4	5350.00	46.29	54.00	-7.71	42.16	4.13	Average	100	42
5	5350.00	56.48	74.00	-17.52	52.35	4.13	Peak	100	42
6	10460.00	56.30	68.20	-11.90	42.41	13.89	Peak	100	2
7	15690.00	43.57	54.00	-10.43	29.64	13.93	Average	100	48
8	15690.00	56.63	74.00	-17.37	42.70	13.93	Peak	100	48

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).

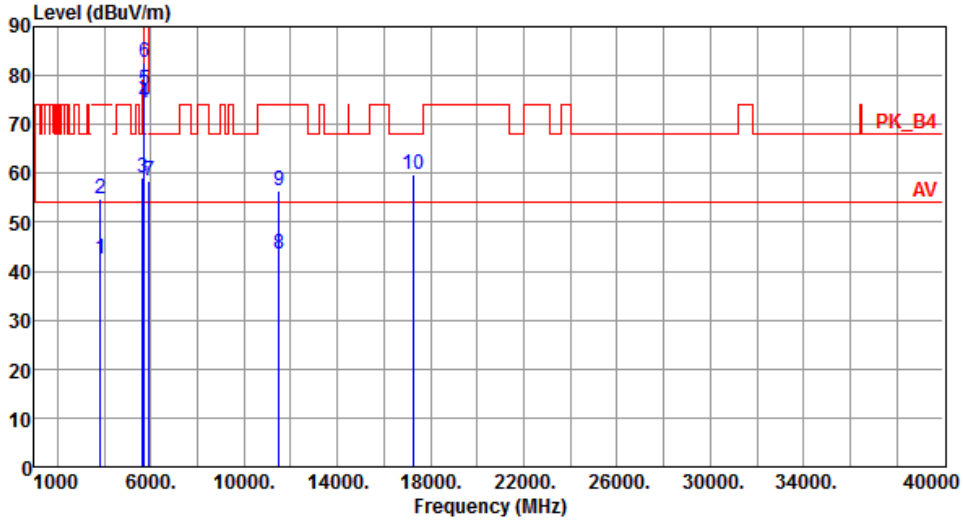
Modulation	VHT40	Test Freq. (MHz)	5230
Polarization	Vertical		



	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	54.22	68.20	-13.98	54.70	-0.48	Peak	100	328
2	5150.00	46.30	54.00	-7.70	41.76	4.54	Average	100	142
3	5150.00	56.96	74.00	-17.04	52.42	4.54	Peak	100	142
4	5350.00	46.36	54.00	-7.64	42.23	4.13	Average	100	142
5	5350.00	56.59	74.00	-17.41	52.46	4.13	Peak	100	142
6	10460.00	56.04	68.20	-12.16	42.15	13.89	Peak	100	21
7	15690.00	42.40	54.00	-11.60	28.47	13.93	Average	100	15
8	15690.00	56.68	74.00	-17.32	42.75	13.93	Peak	100	15

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).

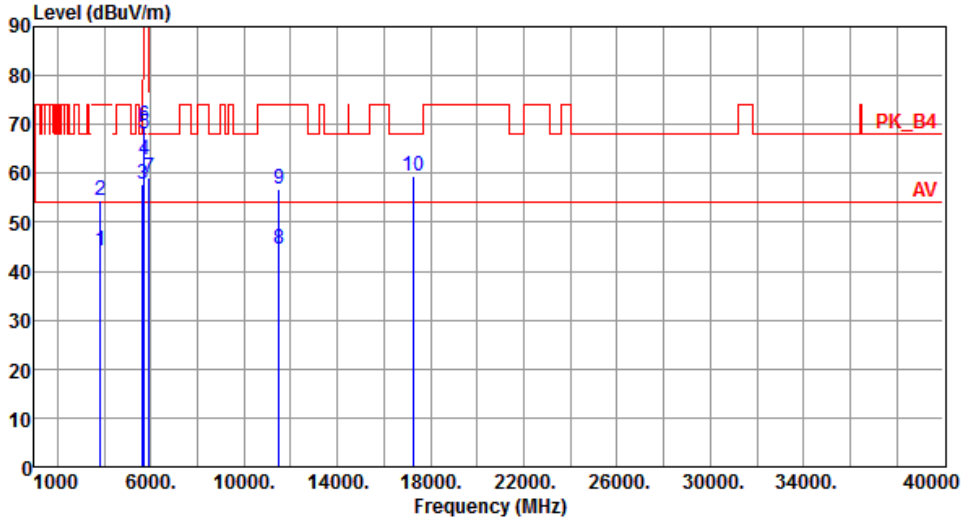
Modulation	VHT40	Test Freq. (MHz)	5755
Polarization	Horizontal		



	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	42.46	54.00	-11.54	41.57	0.89	Average	100	320
2	3836.66	54.70	74.00	-19.30	53.81	0.89	Peak	100	320
3	5650.00	59.19	68.20	-9.01	54.22	4.97	Peak	100	75
4	5700.00	74.37	105.20	-30.83	69.21	5.16	Peak	100	75
5	5720.00	77.11	110.80	-33.69	71.88	5.23	Peak	100	75
6	5725.00	82.57	122.20	-39.63	77.32	5.25	Peak	100	75
7	5925.00	58.53	68.20	-9.67	52.44	6.09	Peak	100	75
8	11510.00	43.65	54.00	-10.35	29.54	14.11	Average	100	214
9	11510.00	56.32	74.00	-17.68	42.21	14.11	Peak	100	214
10	17265.00	59.71	68.20	-8.49	42.40	17.31	Peak	100	223

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).

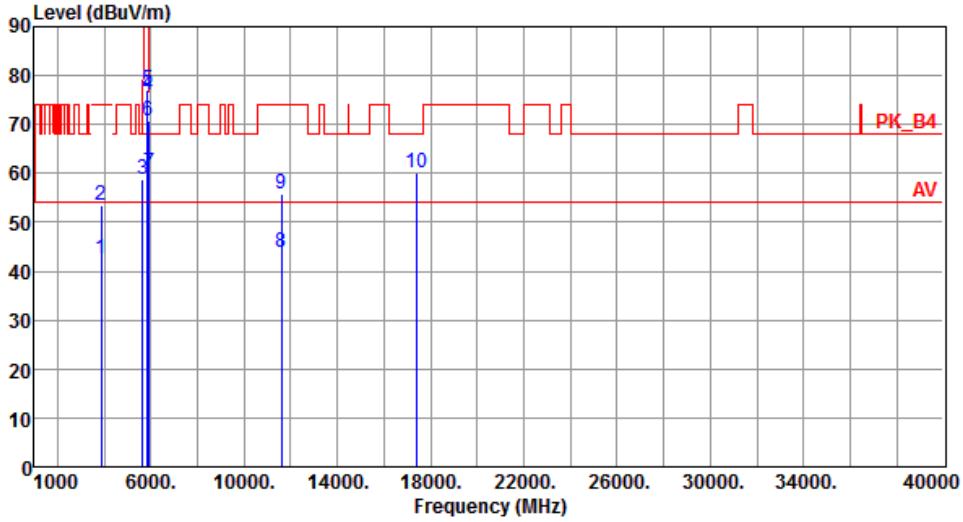
Modulation	VHT40	Test Freq. (MHz)	5755
Polarization	Vertical		



	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	44.18	54.00	-9.82	43.29	0.89	Average	100	311
2	3836.66	54.46	74.00	-19.54	53.57	0.89	Peak	100	311
3	5650.00	57.71	68.20	-10.49	52.74	4.97	Peak	100	214
4	5700.00	62.72	105.20	-42.48	57.56	5.16	Peak	100	214
5	5720.00	68.05	110.80	-42.75	62.82	5.23	Peak	100	214
6	5725.00	69.87	122.20	-52.33	64.62	5.25	Peak	100	214
7	5925.00	58.98	68.20	-9.22	52.89	6.09	Peak	100	214
8	11510.00	44.39	54.00	-9.61	30.28	14.11	Average	100	168
9	11510.00	56.84	74.00	-17.16	42.73	14.11	Peak	100	168
10	17265.00	59.38	68.20	-8.82	42.07	17.31	Peak	100	183

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).

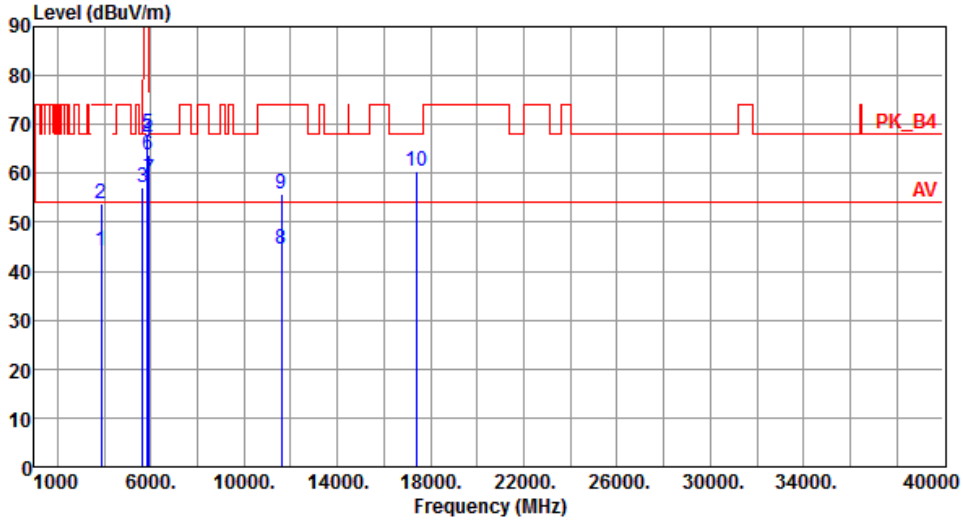
Modulation	VHT40	Test Freq. (MHz)	5795
Polarization	Horizontal		



	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	42.42	54.00	-11.58	41.42	1.00	Average	100	309
2	3863.33	53.57	74.00	-20.43	52.57	1.00	Peak	100	309
3	5650.00	58.81	68.20	-9.39	53.84	4.97	Peak	100	80
4	5850.00	76.04	122.20	-46.16	70.23	5.81	Peak	100	80
5	5855.00	77.04	110.80	-33.76	71.21	5.83	Peak	100	80
6	5875.00	70.73	105.20	-34.47	64.83	5.90	Peak	100	80
7	5925.00	60.05	68.20	-8.15	53.96	6.09	Peak	100	80
8	11590.00	43.77	54.00	-10.23	29.88	13.89	Average	100	220
9	11590.00	55.77	74.00	-18.23	41.88	13.89	Peak	100	220
10	17385.00	60.16	68.20	-8.04	42.41	17.75	Peak	100	165

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		

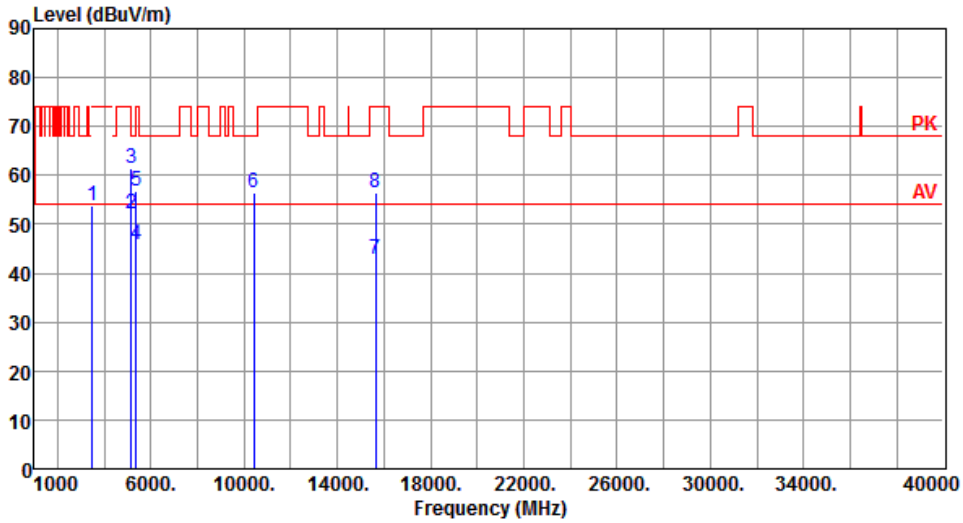


	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	3863.33	44.28	54.00	-9.72	43.28	1.00	Average	100	306
2	3863.33	53.66	74.00	-20.34	52.66	1.00	Peak	100	306
3	5650.00	57.23	68.20	-10.97	52.26	4.97	Peak	100	219
4	5850.00	66.90	122.20	-55.30	61.09	5.81	Peak	100	219
5	5855.00	68.19	110.80	-42.61	62.36	5.83	Peak	100	219
6	5875.00	63.79	105.20	-41.41	57.89	5.90	Peak	100	219
7	5925.00	58.75	68.20	-9.45	52.66	6.09	Peak	100	219
8	11590.00	44.44	54.00	-9.56	30.55	13.89	Average	100	340
9	11590.00	55.81	74.00	-18.19	41.92	13.89	Peak	100	340
10	17385.00	60.61	68.20	-7.59	42.86	17.75	Peak	100	182

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

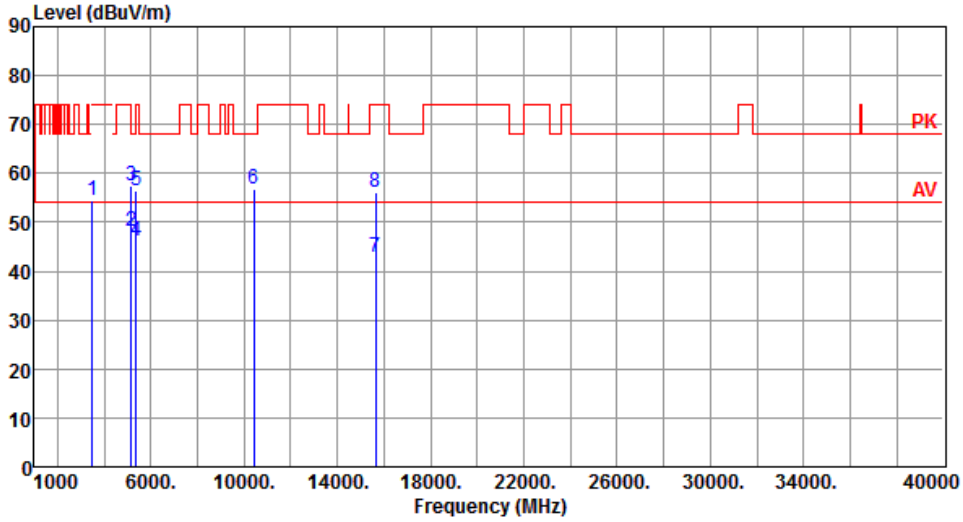
Modulation	VHT80	**Test Freq. (MHz)**	5210
Polarization	Horizontal		



	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	53.96	68.20	-14.24	54.54	-0.58	Peak	100	48
2	5150.00	52.29	54.00	-1.71	47.75	4.54	Average	124	355
3	5150.00	61.35	74.00	-12.65	56.81	4.54	Peak	124	355
4	5350.00	45.71	54.00	-8.29	41.58	4.13	Average	124	355
5	5350.00	56.79	74.00	-17.21	52.66	4.13	Peak	124	355
6	10420.00	56.39	68.20	-11.81	42.50	13.89	Peak	100	5
7	15630.00	42.95	54.00	-11.05	28.91	14.04	Average	100	58
8	15630.00	56.44	74.00	-17.56	42.40	14.04	Peak	100	58

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).

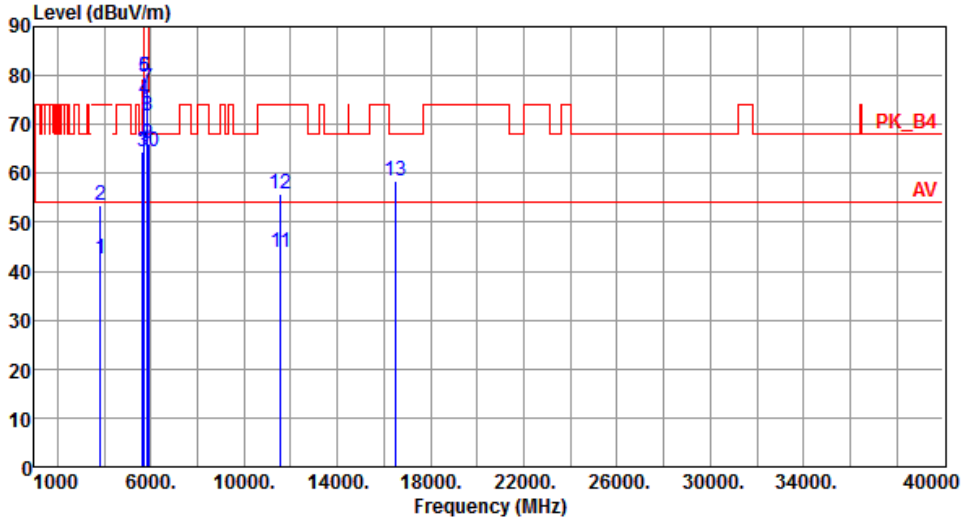
Modulation	VHT80	Test Freq. (MHz)	5210
Polarization	Vertical		



	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	54.38	68.20	-13.82	54.96	-0.58	Peak	100	332
2	5150.00	48.24	54.00	-5.76	43.70	4.54	Average	100	117
3	5150.00	57.45	74.00	-16.55	52.91	4.54	Peak	100	117
4	5350.00	46.00	54.00	-8.00	41.87	4.13	Average	100	117
5	5350.00	56.30	74.00	-17.70	52.17	4.13	Peak	100	117
6	10420.00	56.79	68.20	-11.41	42.90	13.89	Peak	100	23
7	15630.00	42.97	54.00	-11.03	28.93	14.04	Average	100	14
8	15630.00	56.22	74.00	-17.78	42.18	14.04	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).

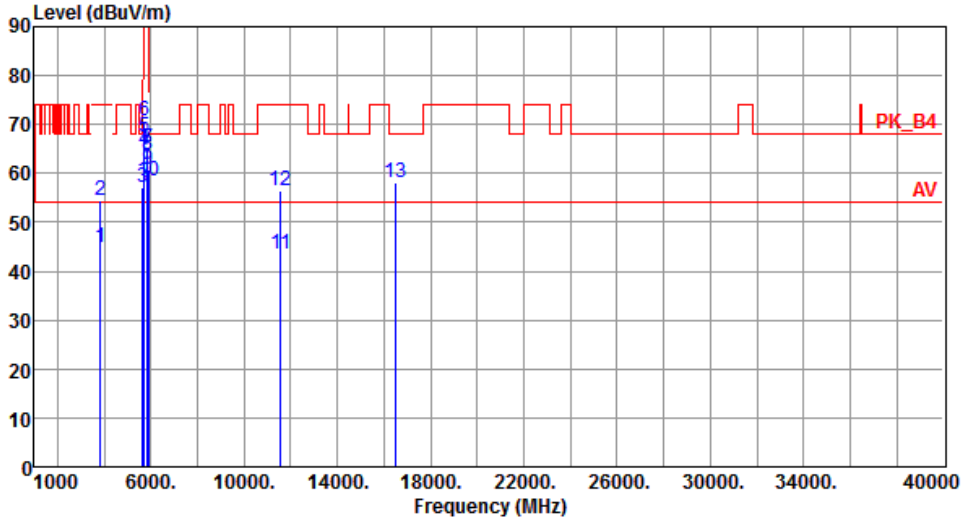
Modulation	VHT80	Test Freq. (MHz)	5775
Polarization	Horizontal		



	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	42.40	54.00	-11.60	41.45	0.95	Average	100	305
2	3850.00	53.54	74.00	-20.46	52.59	0.95	Peak	100	305
3	5650.00	64.32	68.20	-3.88	59.35	4.97	Peak	100	115
4	5700.00	74.90	105.20	-30.30	69.74	5.16	Peak	100	115
5	5720.00	79.82	110.80	-30.98	74.59	5.23	Peak	100	115
6	5725.00	79.54	122.20	-42.66	74.29	5.25	Peak	100	115
7	5850.00	77.53	122.20	-44.67	71.72	5.81	Peak	100	115
8	5855.00	71.64	110.80	-39.16	65.81	5.83	Peak	100	115
9	5875.00	66.07	105.20	-39.13	60.17	5.90	Peak	100	115
10	5925.00	64.41	68.20	-3.79	58.32	6.09	Peak	100	115
11	11550.00	43.88	54.00	-10.12	29.88	14.00	Average	100	105
12	11550.00	55.66	74.00	-18.34	41.66	14.00	Peak	100	105
13	16500.00	58.31	68.20	-9.89	42.58	15.73	Peak	100	220

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	44.87	54.00	-9.13	43.92	0.95	Average	100	312
2	3850.00	54.48	74.00	-19.52	53.53	0.95	Peak	100	312
3	5650.00	57.04	68.20	-11.16	52.07	4.97	Peak	100	258
4	5700.00	64.72	105.20	-40.48	59.56	5.16	Peak	100	258
5	5720.00	67.44	110.80	-43.36	62.21	5.23	Peak	100	258
6	5725.00	70.63	122.20	-51.57	65.38	5.25	Peak	100	258
7	5850.00	65.04	122.20	-57.16	59.23	5.81	Peak	100	258
8	5855.00	63.68	110.80	-47.12	57.85	5.83	Peak	100	258
9	5875.00	60.76	105.20	-44.44	54.86	5.90	Peak	100	258
10	5925.00	58.55	68.20	-9.65	52.46	6.09	Peak	100	258
11	11550.00	43.54	54.00	-10.46	29.54	14.00	Average	100	118
12	11550.00	56.52	74.00	-17.48	42.52	14.00	Peak	100	118
13	16500.00	58.17	68.20	-10.03	42.44	15.73	Peak	100	162

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

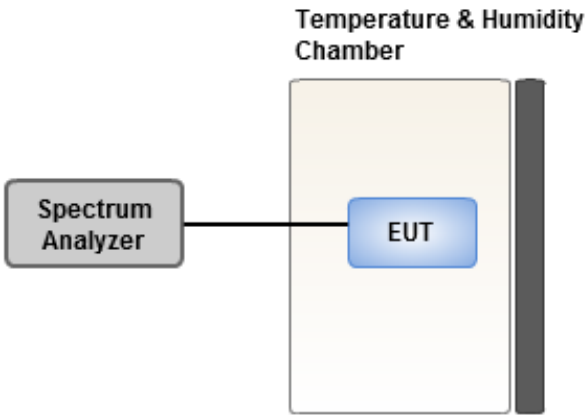
3.6.1 Limit of Frequency Stability

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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