FCC Test Report

FCC ID	:	**UIDSBX-AC1200P**
Equipment	:	**AC1200 Wi-Fi Extender with RipCurrent™ Technology**
Model No.	:	**SBX-AC1200P**
Brand Name	:	**ARRIS**
Applicant	:	**ARRIS Group, Inc.**
Address	:	**3871 Lakefield Drive, Suite 300, Suwanee, Georgia 30024, United States**
Standard	:	**47 CFR FCC Part 15.407**
Received Date	:	**Sep. 30, 2015**
Tested Date	:	**Oct. 15 ~ Dec. 01, 2015**

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.

Approved & Reviewed by:

Gary Chang / Manager

Testing Laboratory 2732

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Release Record

Report No.	Version	Description	Issued Date
FR593001AN	Rev. 01	Initial issue	Dec. 15, 2015

Summary of Test Results

FCC Rules	Test Items	Measured	Result
15.207	Conducted Emissions	[dBuV]: 0.199MHz 46.33 (Margin -7.34dB) - AV	Pass
15.407(b) 15.209	Radiated Emissions	[dBuV/m at 3m]: 5850.00MHz 77.19 (Margin -1.01dB) – PK [dBuV/m at 3m]: 5150.00MHz 72.99 (Margin -1.01dB) – PK [dBuV/m at 3m]: 5715.00MHz 72.99 (Margin -1.01dB) - PK	Pass
15.407(a)	Emission Bandwidth	Meet the requirement of limit	Pass
15.407(e)	6dB bandwidth	Meet the requirement of limit	Pass
15.407(a)	RF Output Power	Max Power [dBm]: ***Non-beamforming mode*** 5150-5250MHz: 23.29 5725-5850MHz: 23.16 ***Beamforming mode*** 5150-5250MHz: 23.34 5725-5850MHz: 22.69	Pass
15.407(a)	Peak Power Spectral Density	Meet the requirement of limit	Pass
15.407(g)	Frequency Stability	Meet the requirement of limit	Pass
15.203	Antenna Requirement	Meet the requirement of limit	Pass

1 General Description

1.1 Information

1.1.1 Specification of the Equipment under Test (EUT)

RF General Information					
Frequency Range (MHz)	IEEE Std. 802.11	Ch. Freq. (MHz)	Channel Number	Transmit Chains (N_{TX})	Data Rate / MCS
5150-5250	a	5180-5240	36-48 [4]	2	6-54 Mbps
5150-5250	n (HT20)	5180-5240	36-48 [4]	2	MCS 0-15
5150-5250	n (HT40)	5190-5230	38-46 [2]	2	MCS 0-15
5150-5250	ac (VHT20)	5180-5240	36-48 [4]	2	MCS 0-9
5150-5250	ac (VHT40)	5190-5230	38-46 [2]	2	MCS 0-9
5150-5250	ac (VHT80)	5210	42 [1]	2	MCS 0-9
5725-5850	a	5745-5825	149-165 [5]	2	6-54 Mbps
5725-5850	n (HT20)	5745-5825	149-165 [5]	2	MCS 0-15
5725-5850	n (HT40)	5755-5795	151-159 [2]	2	MCS 0-15
5725-5850	ac (VHT20)	5745-5825	149-165 [5]	2	MCS 0-9
5725-5850	ac (VHT40)	5755-5795	151-159 [2]	2	MCS 0-9
5725-5850	ac (VHT80)	5775	155 [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: 802.11n/ac supports beamforming function.					

1.1.2 Antenna Details

Ant. No.	Model	Type	Connector	Operating Frequency (MHz) / Gain (dBi)		
				2400~2483.5	5150~5250	5725~5850
1	617210L2	Dipole	I-pex	3.1	3.34	2.7
2	617210L3	Dipole	I-pex	2.85	2.37	3.44

1.1.3 Power Supply Type of Equipment under Test (EUT)

Power Supply Type	100-240Vac, 50-60Hz, 0.6A Power line: 1m non-shielded without core

1.1.4 Accessories

Accessories		
No.	**Equipment**	**Description**
1	RJ45 cable	1m non-shielded without 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	MTool, version: 2.0.2.7				
Duty Cycle and Duty Factor	Mode	Non-beamforming		Beamforming	
		Duty cycle (%)	Duty factor (dB)	Duty cycle (%)	Duty factor (dB)
	11a	99.31%	0.03	---	---
	HT20	99.26%	0.03	98.23%	0.08
	HT40	98.08%	0.08	98.52%	0.06
	VHT20	99.26%	0.03	98.23%	0.08
	VHT40	98.08%	0.08	98.52%	0.06
	VHT80	99.62%	0.02	98.54%	0.06

1.1.7 Power Setting

For Frequency band 5150-5250 MHz			
Modulation Mode	Test Frequency (MHz)	Power Set	
		Non-Beamforming	Beamforming
11a	5180	68	---
11a	5200	76	---
11a	5240	80	---
HT20	5180	64	64
HT20	5200	72	72
HT20	5240	80	80
HT40	5190	48	48
HT40	5230	72	72
VHT20	5180	64	64
VHT20	5200	72	72
VHT20	5240	80	80
VHT40	5190	48	48
VHT40	5230	72	72
VHT80	5210	48	48

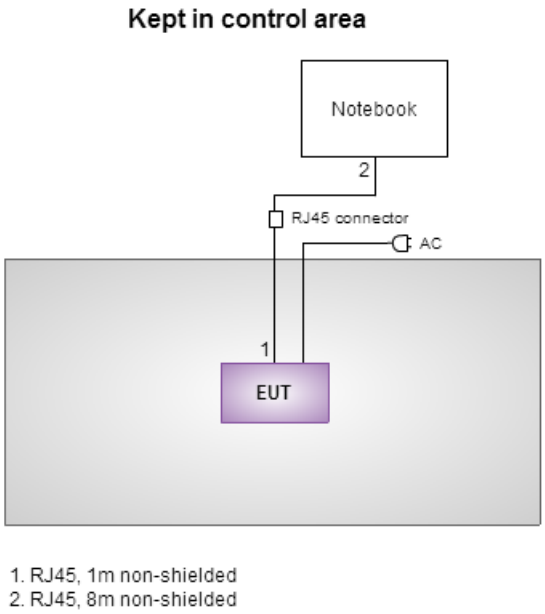
For Frequency band 5725~5850 MHz			
Modulation Mode	Test Frequency (MHz)	Power Set	
		Non-Beamforming	Beamforming
11a	5745	58	---
11a	5785	80	---
11a	5825	68	---
HT20	5745	54	54
HT20	5785	80	78
HT20	5825	66	64
HT40	5755	42	42
HT40	5795	64	64
VHT20	5745	54	54
VHT20	5785	80	78
VHT20	5825	66	64
VHT40	5755	42	42
VHT40	5795	64	64
VHT80	5775	44	44

1.2 Local Support Equipment List

Support Equipment List					
No.	**Equipment**	**Brand**	**Model**	**FCC ID**	**Signal cable / Length (m)**
1	Notebook	DELL	Latitude E6430	DoC	RJ45, 10m non-shielded.

1.3 Test Setup Chart

Test Setup Diagram



1.4 The Equipment List

Test Item	Conducted Emission				
Test Site	Conduction room 1 / (CO01-WS)				
Tested Date	Nov. 26, 2015				
Instrument	**Manufacturer**	**Model No.**	**Serial No.**	**Calibration Date**	**Calibration Until**
EMC Receiver	R&S	ESCS 30	100169	Oct. 21, 2015	Oct. 20, 2016
LISN	SCHWARZBECK	Schwarzbeck 8127	8127-667	Nov. 13, 2015	Nov. 12, 2016
RF Cable-CON	Woken	CFD200-NL	CFD200-NL-001	Dec. 31, 2014	Dec. 30, 2015
Measurement Software	AUDIX	e3	6.120210k	NA	NA
Note: Calibration Interval of instruments listed above is one year.					

Test Item	Radiated Emission below 1GHz test				
Test Site	966 chamber 2 / (03CH02-WS)				
Tested Date	Nov. 24, 2015				
Instrument	**Manufacturer**	**Model No.**	**Serial No.**	**Calibration Date**	**Calibration Until**
Receiver	R&S	ESR3	101657	Jan. 15, 2015	Jan. 14, 2016
Bilog Antenna	SCHWARZBECK	VULB9168	VULB9168-523	Nov. 09, 2015	Nov. 08, 2016
Preamplifier	Burgeon	BPA-530	100218	Nov. 03, 2015	Nov. 02, 2016
LF cable 3M	Woken	CFD400NL-LW	CFD400NL-003	Dec. 16, 2014	Dec. 15, 2015
LF cable 10M	EMCC	CFD400-E	CFD400-001	Jun. 17, 2015	Jun. 16, 2016
Measurement Software	AUDIX	e3	6.120210g	NA	NA
Note: Calibration Interval of instruments listed above is one year.					

Test Item	Radiated Emission above 1GHz test				
Test Site	966 chamber 2 / (03CH02-WS)				
Tested Date	Oct. 15 ~ Oct. 17, 2015				
Instrument	**Manufacturer**	**Model No.**	**Serial No.**	**Calibration Date**	**Calibration Until**
Spectrum Analyzer	R&S	FSV40	101499	Dec. 31, 2014	Dec. 30, 2015
Horn Antenna 1G-18G	SCHWARZBECK	BBHA 9120 D	BBHA 9120 D 1095	Oct. 07, 2015	Oct. 06, 2016
Horn Antenna 18G-40G	SCHWARZBECK	BBHA 9170	BBHA 9170517	Nov. 10, 2014	Nov. 09, 2015
Preamplifier	Agilent	83017A	MY39501309	Sep. 22, 2015	Sep. 21, 2016
Preamplifier	EMC	EMC184045B	980192	Sep. 01, 2015	Aug. 31, 2016
RF Cable	HUBER+SUHNER	SUCOFLEX104	MY16140/4	Dec. 16, 2014	Dec. 15, 2015
RF Cable	HUBER+SUHNER	SUCOFLEX104	MY16018/4	Dec. 16, 2014	Dec. 15, 2015
RF Cable	HUBER+SUHNER	SUCOFLEX104	MY16015/4	Dec. 16, 2014	Dec. 15, 2015
Measurement Software	AUDIX	e3	6.120210g	NA	NA
Note: Calibration Interval of instruments listed above is one year.					

Test Item	RF Conducted				
Test Site	(TH01-WS)				
Tested Date	Nov. 27 ~ Dec. 01, 2015				
Instrument	**Manufacturer**	**Model No.**	**Serial No.**	**Calibration Date**	**Calibration Until**
Spectrum Analyzer	R&S	FSV40	101063	Feb. 03, 2015	Feb. 02, 2016
TEMP&HUMIDITY CHAMBER	GIANT FORCE	GCT-225-40-SP-SD	MAF1212-002	Dec. 03, 2014	Dec. 02, 2015
Power Meter	Anritsu	ML2495A	1241002	Sep. 21, 2015	Sep. 20, 2016
Power Sensor	Anritsu	MA2411B	1207366	Sep. 21, 2015	Sep. 20, 2016
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 v01
FCC KDB 644545 D03 Guidance for IEEE 802 11ac New Rules v01
FCC KDB 662911 D01 Multiple Transmitter Output v02r01
FCC KDB 412172 D01 Determining ERP and EIRP v01r01

1.6 Measurement Uncertainty

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

Measurement Uncertainty	
Parameters	**Uncertainty**
Bandwidth	±34.134 Hz
Conducted power	±0.808 dB
Frequency error	±34.134 Hz
Power density	±0.463 dB
Conducted emission	±2.670 dB
AC conducted emission	±2.92 dB
Radiated emission ≤ 1GHz	±3.62 dB
Radiated emission > 1GHz	±5.60 dB
Time	±0.1%
Temperature	±0.6 °C

2 Test Configuration

2.1 Testing Condition

Test Item	Test Site	Ambient Condition	Tested By
AC Conduction	CO01-WS	21°C / 43%	Peter Lin
Radiated Emissions	03CH02-WS	21-23°C / 61-62%	Anderson Hung Morgan Chen
RF Conducted	TH01-WS	21°C / 61%	Alex Huang

- FCC site registration No.: 657002
- IC site registration No.: 10807A-2

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**	**Test Configuration**
Conducted Emissions	HT20	5240	MCS 0	---
Radiated Emissions ≤1GHz	HT20	5240	MCS 0	---
RF Output Power	11a HT20 HT40 VHT20 VHT40 VHT80	5180 / 5200 / 5240 5180 / 5200 / 5240 5190 / 5230 5180 / 5200 / 5240 5190 / 5230 5210	6 Mbps MCS 0 MCS 0 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	---	---
NOTE: 1. The EUT was pretested with 3 orientations placed on the table for the radiated emission measurement – X, Y, and Z-plane. The **Y-plane** results were found as the worst case and were shown in this report.				

For Frequency band 5725-5850 MHz				
Test item	**Modulation Mode**	**Test Frequency (MHz)**	**Data Rate**	**Test Configuration**
Conducted Emissions	VHT20	5785	MCS 0	---
Radiated Emissions ≤1GHz	VHT20	5785	MCS 0	---
RF Output Power	11a HT20 HT40 VHT20 VHT40 VHT80	5745 / 5785 / 5825 5745 / 5785 / 5825 5755 / 5795 5745 / 5785 / 5825 5755 / 5795 5775	6 Mbps MCS 0 MCS 0 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	---	---
NOTE: 1. The EUT was pretested with 3 orientations placed on the table for the radiated emission measurement – X, Y, and Z-plane. The **Y-plane** results were found as the worst case and were shown in this report.				

Beamforming mode

For Frequency band 5150-5250 MHz				
Test item	**Modulation Mode**	**Test Frequency (MHz)**	**Data Rate**	**Test Configuration**
Conducted Emissions	VHT20	5240	MCS 0	---
Radiated Emissions ≤1GHz	VHT20	5240	MCS 0	---
RF Output Power	HT20 HT40 VHT20 VHT40 VHT80	5180 / 5200 / 5240 5190 / 5230 5180 / 5200 / 5240 5190 / 5230 5210	MCS 0 MCS 0 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	---
NOTE: 1. The EUT was pretested with 3 orientations placed on the table for the radiated emission measurement – X, Y, and Z-plane. The **Y-plane** results were found as the worst case and were shown in this report.				

For Frequency band 5725-5850 MHz				
Test item	**Modulation Mode**	**Test Frequency (MHz)**	**Data Rate**	**Test Configuration**
Conducted Emissions	VHT20	5785	MCS 0	---
Radiated Emissions ≤1GHz	VHT20	5785	MCS 0	---
RF Output Power	HT20 HT40 VHT20 VHT40 VHT80	5745 / 5785 / 5825 5755 / 5795 5745 / 5785 / 5825 5755 / 5795 5775	MCS 0 MCS 0 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	---
NOTE: 1. The EUT was pretested with 3 orientations placed on the table for the radiated emission measurement – X, Y, and Z-plane. The **Y-plane** results were found as the worst case and were shown in this report.				

3 Transmitter Test Results

3.1 Conducted Emissions

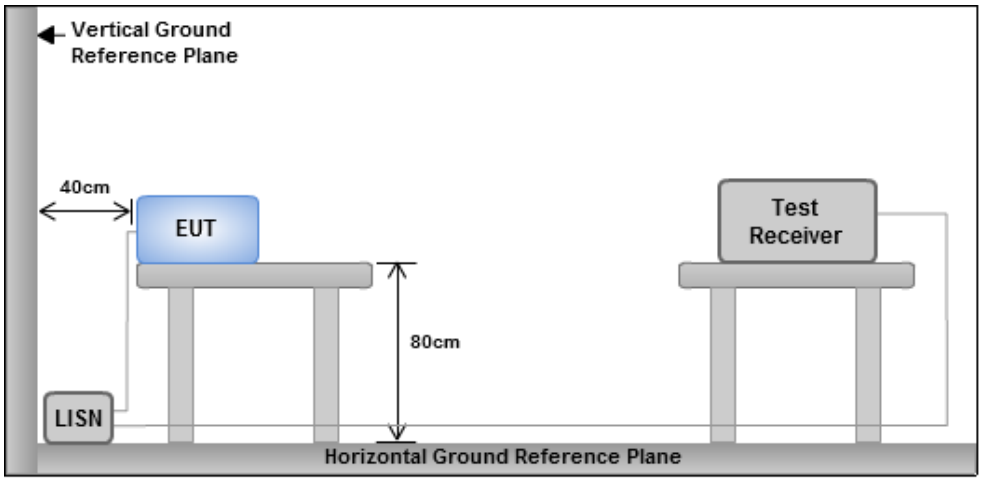
3.1.1 Limit of Conducted Emissions

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

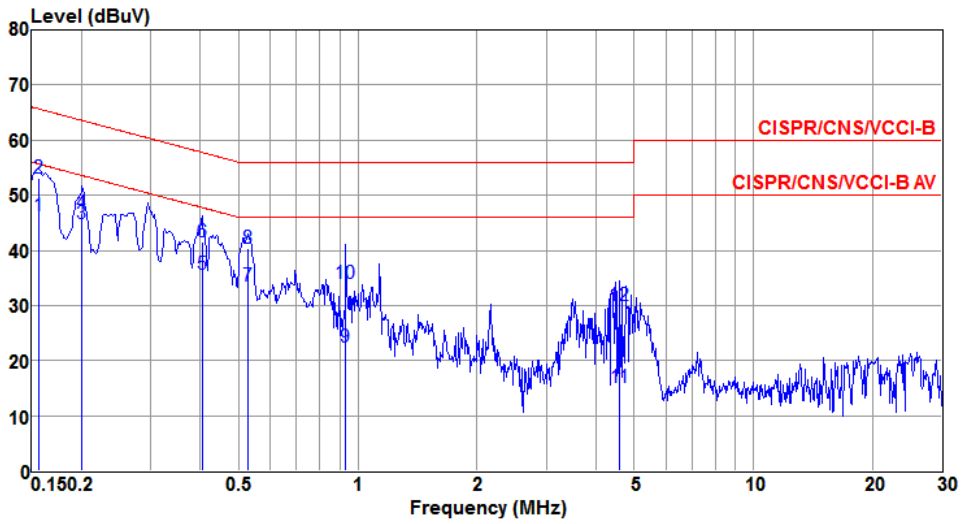


Note: 1. Support units were connected to second LISN.
2. Both of LISNs (AMN) are 80 cm from EUT and at least 80 cm from other units and other metal planes

3.1.4 Test Result of Conducted Emissions

Non-beamforming mode

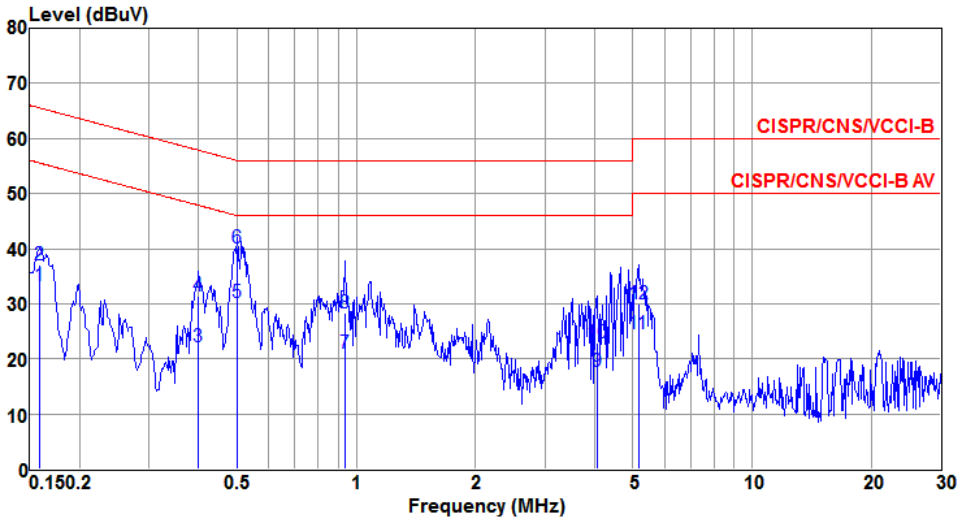
Modulation	HT20	**Test Freq. (MHz)**	5240
Power Phase	Line		



	Freq MHz	Level dBuV	Limit Line dBuV	Over Limit dB	Read Level dBuV	LISN factor dB	cable loss dB	Remark
1	0.156	46.16	55.65	-9.49	46.03	0.11	0.02	Average
2	0.156	53.07	65.65	-12.58	52.94	0.11	0.02	QP
3@	0.201	44.86	53.58	-8.72	44.73	0.11	0.02	Average
4	0.201	46.85	63.58	-16.73	46.72	0.11	0.02	QP
5	0.404	35.69	47.77	-12.08	35.53	0.13	0.03	Average
6	0.404	41.59	57.77	-16.18	41.43	0.13	0.03	QP
7	0.529	33.62	46.00	-12.38	33.45	0.13	0.04	Average
8	0.529	40.27	56.00	-15.73	40.10	0.13	0.04	QP
9	0.933	22.46	46.00	-23.54	22.27	0.13	0.06	Average
10	0.933	34.06	56.00	-21.94	33.87	0.13	0.06	QP
11	4.598	15.01	46.00	-30.99	14.68	0.20	0.13	Average
12	4.598	30.08	56.00	-25.92	29.75	0.20	0.13	QP

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

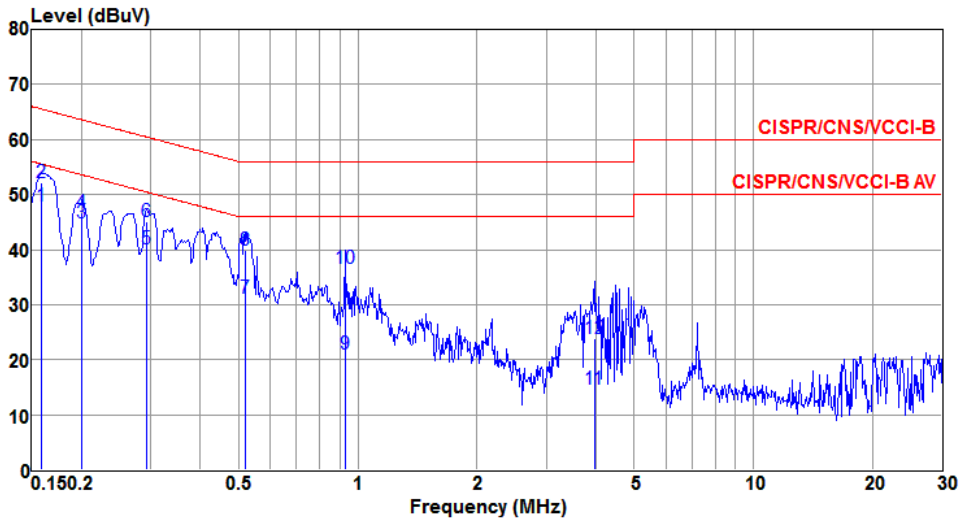
Modulation	HT20	Test Freq. (MHz)	5240
Power Phase	Neutral		



	Freq MHz	Level dBuV	Limit Line dBuV	Over Limit dB	Read Level dBuV	LISN factor dB	cable loss dB	Remark
1	0.159	33.39	55.52	-22.13	33.25	0.12	0.02	Average
2	0.159	37.13	65.52	-28.39	36.99	0.12	0.02	QP
3	0.400	22.24	47.86	-25.62	22.07	0.14	0.03	Average
4	0.400	31.39	57.86	-26.47	31.22	0.14	0.03	QP
5	0.502	30.11	46.00	-15.89	29.93	0.14	0.04	Average
6@	0.502	40.19	56.00	-15.81	40.01	0.14	0.04	QP
7	0.938	21.11	46.00	-24.89	20.92	0.13	0.06	Average
8	0.938	28.25	56.00	-27.75	28.06	0.13	0.06	QP
9	4.070	17.71	46.00	-28.29	17.42	0.17	0.12	Average
10	4.070	22.95	56.00	-33.05	22.66	0.17	0.12	QP
11	5.166	24.62	50.00	-25.38	24.29	0.20	0.13	Average
12	5.166	30.02	60.00	-29.98	29.69	0.20	0.13	QP

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

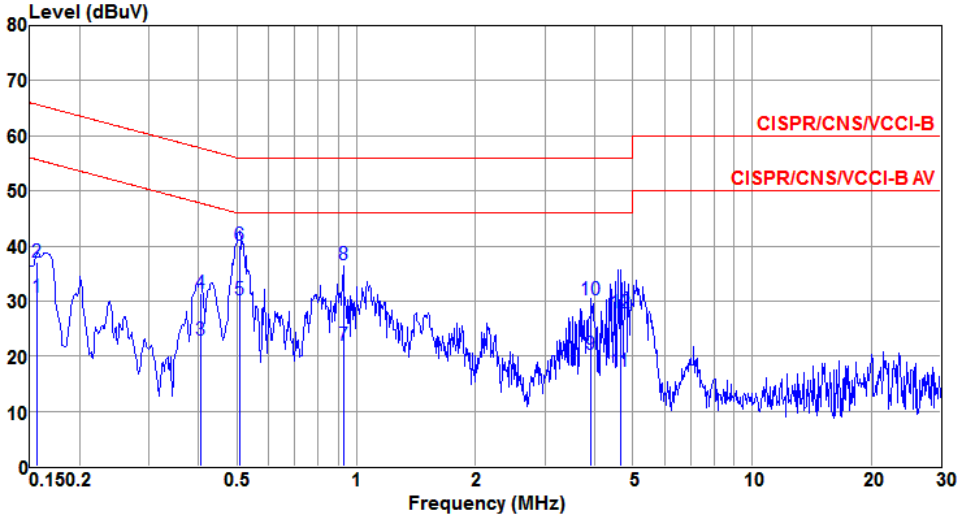
Modulation	VHT20	Test Freq. (MHz)	5785
Power Phase	Line		



	Freq MHz	Level dBuV	Limit Line dBuV	Over Limit dB	Read Level dBuV	LISN factor dB	cable loss dB	Remark
1@	0.159	48.00	55.52	-7.52	47.87	0.11	0.02	Average
2	0.159	52.25	65.52	-13.27	52.12	0.11	0.02	QP
3	0.201	44.86	53.58	-8.72	44.73	0.11	0.02	Average
4	0.201	46.85	63.58	-16.73	46.72	0.11	0.02	QP
5	0.292	40.05	50.46	-10.41	39.90	0.12	0.03	Average
6	0.292	45.07	60.46	-15.39	44.92	0.12	0.03	QP
7	0.518	31.08	46.00	-14.92	30.91	0.13	0.04	Average
8	0.518	39.91	56.00	-16.09	39.74	0.13	0.04	QP
9	0.928	21.11	46.00	-24.89	20.92	0.13	0.06	Average
10	0.928	36.52	56.00	-19.48	36.33	0.13	0.06	QP
11	3.964	14.65	46.00	-31.35	14.34	0.19	0.12	Average
12	3.964	23.91	56.00	-32.09	23.60	0.19	0.12	QP

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

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

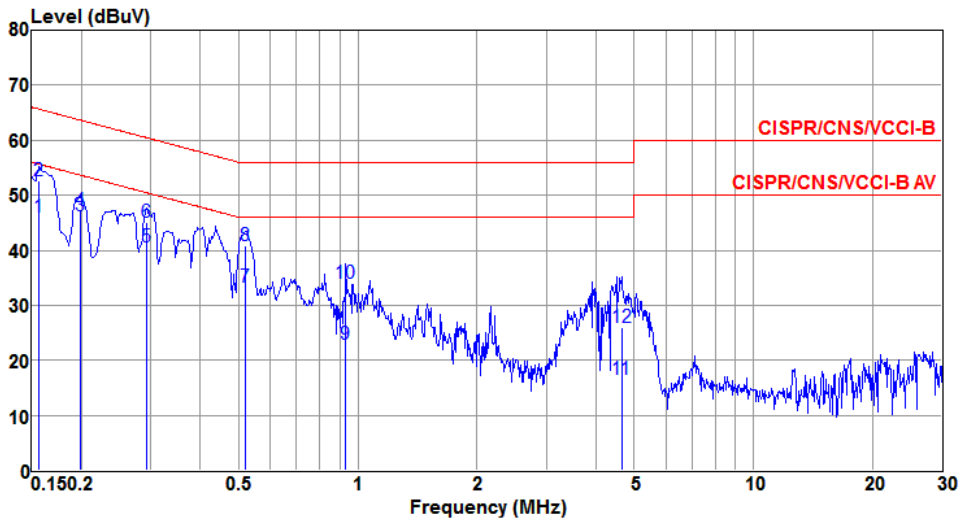


	Freq MHz	Level dBuV	Limit Line dBuV	Over Limit dB	Read Level dBuV	LISN factor dB	cable loss dB	Remark
1	0.156	30.72	55.65	-24.93	30.57	0.13	0.02	Average
2	0.156	37.09	65.65	-28.56	36.94	0.13	0.02	QP
3	0.404	22.86	47.77	-24.91	22.69	0.14	0.03	Average
4	0.404	31.41	57.77	-26.36	31.24	0.14	0.03	QP
5@	0.507	30.28	46.00	-15.72	30.10	0.14	0.04	Average
6	0.507	40.16	56.00	-15.84	39.98	0.14	0.04	QP
7	0.928	21.91	46.00	-24.09	21.72	0.13	0.06	Average
8	0.928	36.48	56.00	-19.52	36.29	0.13	0.06	QP
9	3.922	20.34	46.00	-25.66	20.05	0.17	0.12	Average
10	3.922	30.31	56.00	-25.69	30.02	0.17	0.12	QP
11	4.647	17.27	46.00	-28.73	16.95	0.19	0.13	Average
12	4.647	27.95	56.00	-28.05	27.63	0.19	0.13	QP

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

Beamforming mode

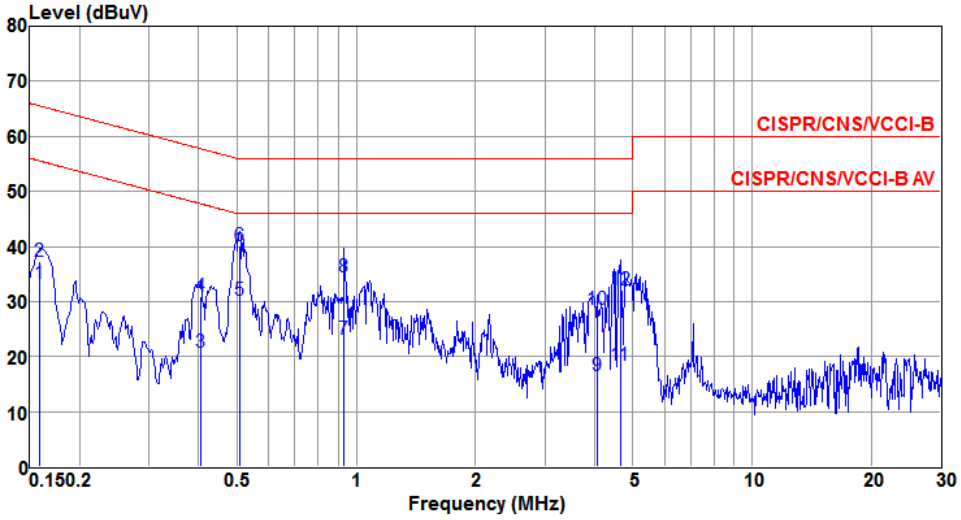
Modulation	VHT20	**Test Freq. (MHz)**	5240
Power Phase	Line		



	Freq MHz	Level dBuV	Limit Line dBuV	Over Limit dB	Read Level dBuV	LISN factor dB	cable loss dB	Remark
1	0.156	46.05	55.65	-9.60	45.92	0.11	0.02	Average
2	0.156	52.62	65.65	-13.03	52.49	0.11	0.02	QP
3@	0.199	46.33	53.67	-7.34	46.20	0.11	0.02	Average
4	0.199	47.23	63.67	-16.44	47.10	0.11	0.02	QP
5	0.292	40.51	50.46	-9.95	40.36	0.12	0.03	Average
6	0.292	45.09	60.46	-15.37	44.94	0.12	0.03	QP
7	0.521	33.36	46.00	-12.64	33.19	0.13	0.04	Average
8	0.521	40.78	56.00	-15.22	40.61	0.13	0.04	QP
9	0.933	22.83	46.00	-23.17	22.64	0.13	0.06	Average
10	0.933	34.02	56.00	-21.98	33.83	0.13	0.06	QP
11	4.647	16.43	46.00	-29.57	16.10	0.20	0.13	Average
12	4.647	25.95	56.00	-30.05	25.62	0.20	0.13	QP

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

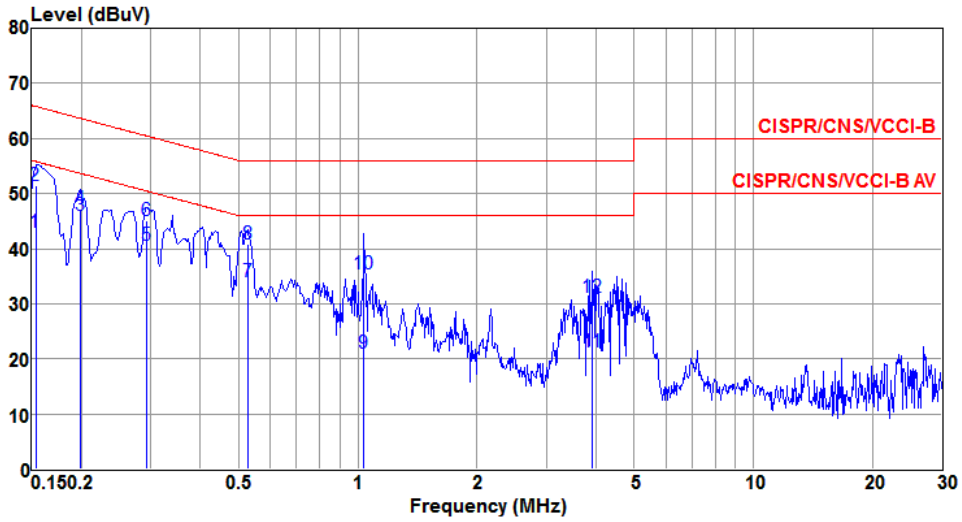
Modulation	VHT20	Test Freq. (MHz)	5240
Power Phase	Neutral		



	Freq MHz	Level dBuV	Limit Line dBuV	Over Limit dB	Read Level dBuV	LISN factor dB	cable loss dB	Remark
1	0.159	33.39	55.52	-22.13	33.25	0.12	0.02	Average
2	0.159	37.24	65.52	-28.28	37.10	0.12	0.02	QP
3	0.406	20.82	47.73	-26.91	20.65	0.14	0.03	Average
4	0.406	30.91	57.73	-26.82	30.74	0.14	0.03	QP
5@	0.507	30.28	46.00	-15.72	30.10	0.14	0.04	Average
6	0.507	40.12	56.00	-15.88	39.94	0.14	0.04	QP
7	0.933	23.15	46.00	-22.85	22.96	0.13	0.06	Average
8	0.933	34.52	56.00	-21.48	34.33	0.13	0.06	QP
9	4.049	16.57	46.00	-29.43	16.28	0.17	0.12	Average
10	4.049	28.50	56.00	-27.50	28.21	0.17	0.12	QP
11	4.647	18.43	46.00	-27.57	18.11	0.19	0.13	Average
12	4.647	32.18	56.00	-23.82	31.86	0.19	0.13	QP

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

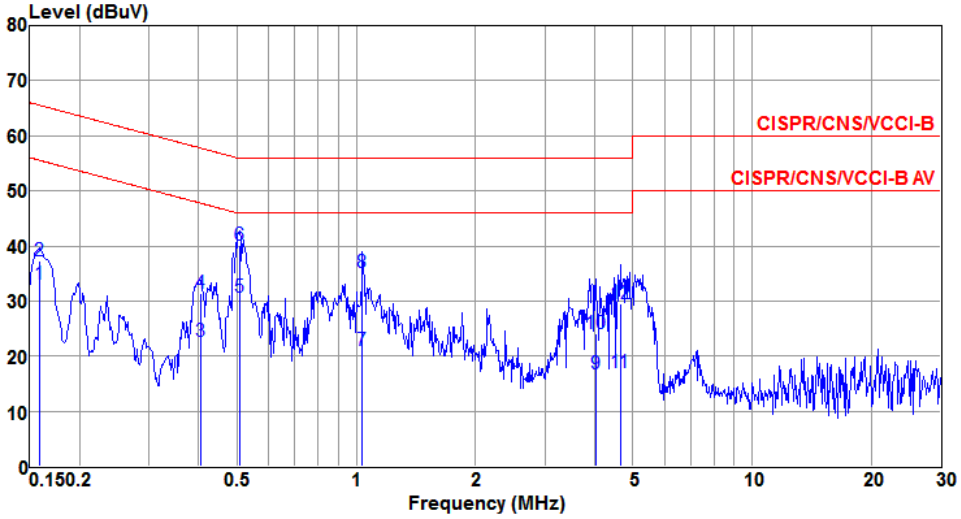
Modulation	VHT20	Test Freq. (MHz)	5785
Power Phase	Line		



	Freq MHz	Level dBuV	Limit Line dBuV	Over Limit dB	Read Level dBuV	LISN factor dB	cable loss dB	Remark
1	0.153	42.99	55.82	-12.83	42.86	0.11	0.02	Average
2	0.153	51.50	65.82	-14.32	51.37	0.11	0.02	QP
3@	0.199	46.06	53.67	-7.61	45.93	0.11	0.02	Average
4	0.199	47.30	63.67	-16.37	47.17	0.11	0.02	QP
5	0.292	40.69	50.46	-9.77	40.54	0.12	0.03	Average
6	0.292	45.13	60.46	-15.33	44.98	0.12	0.03	QP
7	0.527	33.97	46.00	-12.03	33.80	0.13	0.04	Average
8	0.527	40.76	56.00	-15.24	40.59	0.13	0.04	QP
9	1.037	20.99	46.00	-25.01	20.80	0.13	0.06	Average
10	1.037	35.52	56.00	-20.48	35.33	0.13	0.06	QP
11	3.922	21.30	46.00	-24.70	20.99	0.19	0.12	Average
12	3.922	31.12	56.00	-24.88	30.81	0.19	0.12	QP

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

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



	Freq MHz	Level dBuV	Limit Line dBuV	Over Limit dB	Read Level dBuV	LISN factor dB	cable loss dB	Remark
1	0.159	33.07	55.52	-22.45	32.93	0.12	0.02	Average
2	0.159	37.20	65.52	-28.32	37.06	0.12	0.02	QP
3	0.404	22.75	47.77	-25.02	22.58	0.14	0.03	Average
4	0.404	31.43	57.77	-26.34	31.26	0.14	0.03	QP
5@	0.507	30.67	46.00	-15.33	30.49	0.14	0.04	Average
6	0.507	40.10	56.00	-15.90	39.92	0.14	0.04	QP
7	1.037	21.12	46.00	-24.88	20.93	0.13	0.06	Average
8	1.037	35.11	56.00	-20.89	34.92	0.13	0.06	QP
9	4.027	16.88	46.00	-29.12	16.59	0.17	0.12	Average
10	4.027	23.99	56.00	-32.01	23.70	0.17	0.12	QP
11	4.647	16.97	46.00	-29.03	16.65	0.19	0.13	Average
12	4.647	29.54	56.00	-26.46	29.22	0.19	0.13	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.

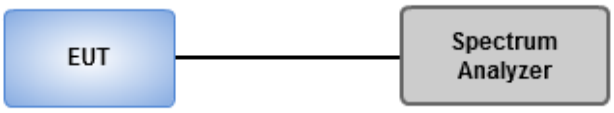
Occupied Bandwidth

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

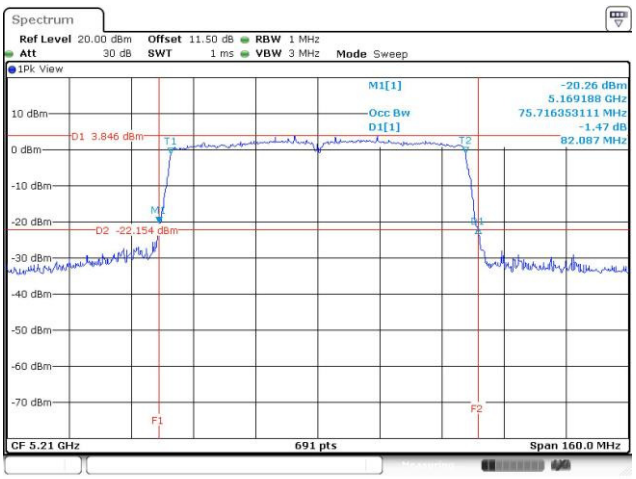
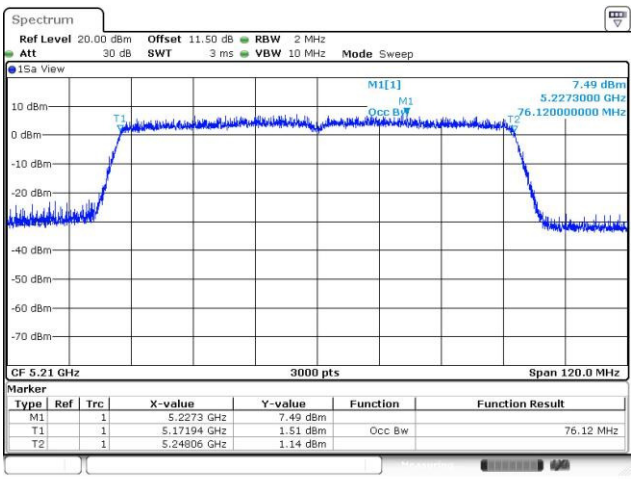
3.2.3 Test Setup



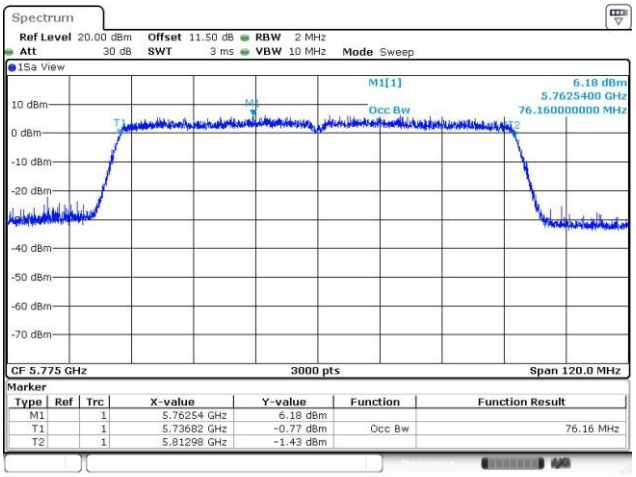
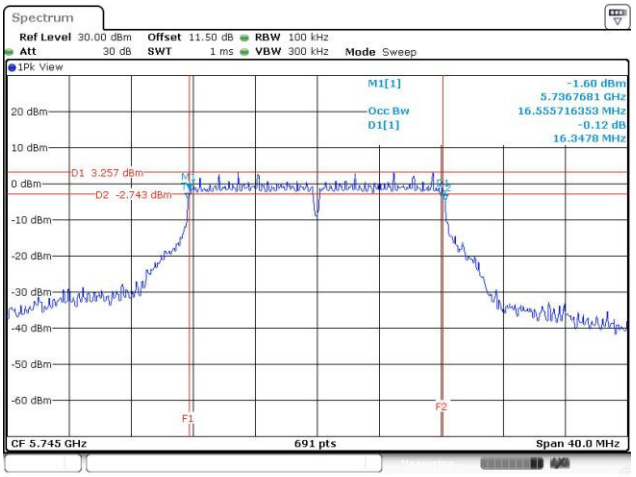
3.2.4 Test Result of Emission Bandwidth

Non-beamforming mode

For Frequency band 5150-5250 MHz										
Emission Bandwidth										
Mode	N_{TX}	Freq. (MHz)	26dB Bandwidth (MHz)				99% Bandwidth (MHz)			
			Chain 0	Chain 1	Chain 2	Chain 3	Chain 0	Chain 1	Chain 2	Chain 3
11a	2	5180	25.22	26.20	---	---	17.07	17.13	---	---
11a	2	5200	35.43	39.13	---	---	17.52	17.47	---	---
11a	2	5240	33.77	39.20	---	---	18.73	18.82	---	---
VHT20	2	5180	25.10	27.30	---	---	17.98	18.19	---	---
VHT20	2	5200	38.70	38.77	---	---	18.14	18.38	---	---
VHT20	2	5240	37.39	38.77	---	---	19.20	19.29	---	---
VHT40	2	5190	40.81	41.62	---	---	36.58	36.68	---	---
VHT40	2	5230	77.10	77.54	---	---	37.10	37.36	---	---
VHT80	2	5210	81.62	82.09	---	---	76.04	76.12	---	---

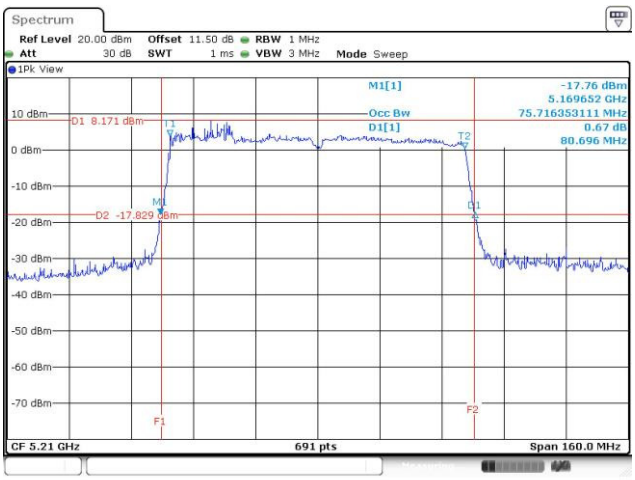
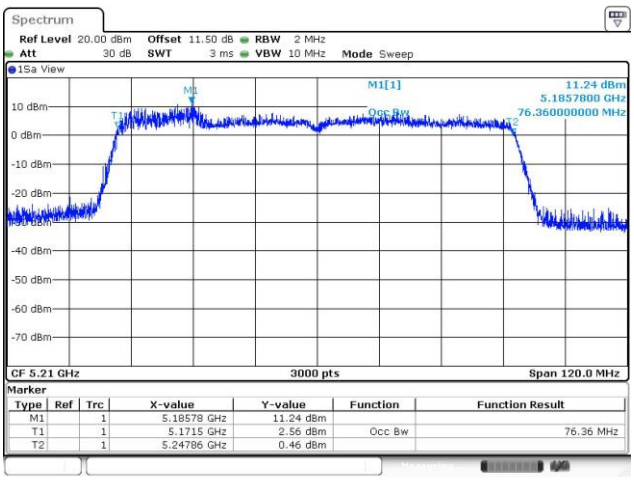
Worst Plot of 26dB Bandwidth	Worst Plot of 99% Bandwidth
	

For Frequency band 5725-5850 MHz											
Emission Bandwidth											
Mode	N_{TX}	Freq. (MHz)	OBW Bandwidth (MHz)				6dB Bandwidth (MHz)				
			Chain 0	Chain 1	Chain 2	Chain 3	Chain 0	Chain 1	Chain 2	Chain 3	6dB BW Limit (MHz)
11a	2	5745	16.95	17.11	---	---	16.35	16.41	---	---	0.5
11a	2	5785	18.78	20.41	---	---	16.35	16.35	---	---	0.5
11a	2	5825	17.15	17.19	---	---	16.35	16.35	---	---	0.5
VHT20	2	5745	17.97	18.15	---	---	17.62	17.57	---	---	0.5
VHT20	2	5785	19.26	19.96	---	---	17.62	17.62	---	---	0.5
VHT20	2	5825	18.05	18.25	---	---	17.62	17.62	---	---	0.5
VHT40	2	5755	36.64	36.72	---	---	36.29	36.29	---	---	0.5
VHT40	2	5795	36.76	36.92	---	---	36.29	36.29	---	---	0.5
VHT80	2	5775	76.04	76.16	---	---	76.29	75.83	---	---	0.5

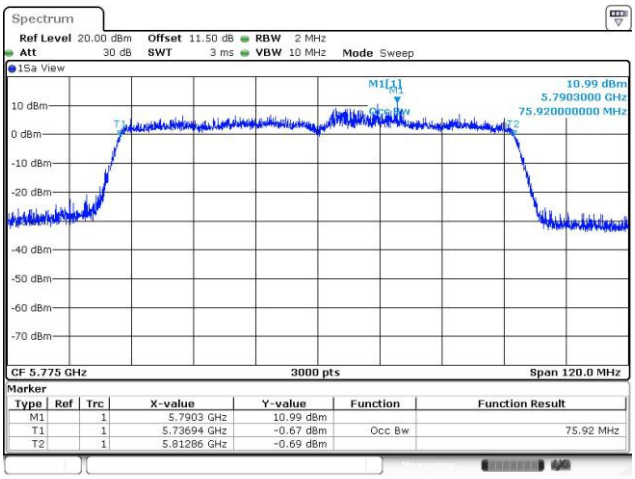
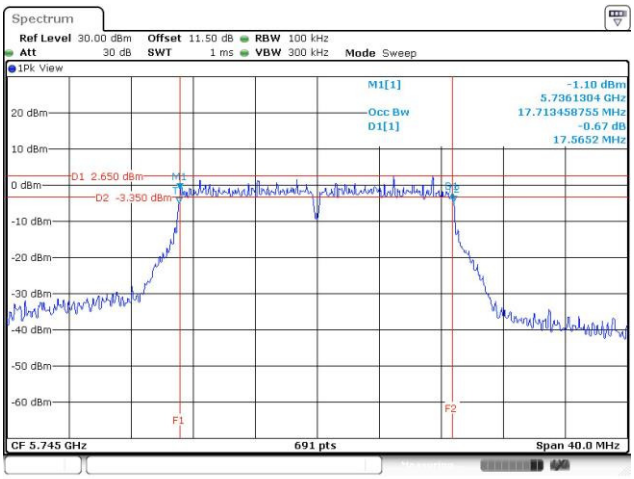
Worst Plot of 99% Bandwidth	Worst Plot of 6dB Bandwidth
	

Beamforming mode

For Frequency band 5150-5250 MHz										
Emission Bandwidth										
Mode	N_{TX}	Freq. (MHz)	26dB Bandwidth (MHz)				99% Bandwidth (MHz)			
			Chain 0	Chain 1	Chain 2	Chain 3	Chain 0	Chain 1	Chain 2	Chain 3
VHT20	2	5180	21.57	22.09	---	---	17.92	18.13	---	---
VHT20	2	5200	38.04	39.42	---	---	18.03	18.24	---	---
VHT20	2	5240	33.04	37.10	---	---	19.54	19.37	---	---
VHT40	2	5190	40.70	41.16	---	---	36.54	36.64	---	---
VHT40	2	5230	65.51	68.55	---	---	37.06	37.36	---	---
VHT80	2	5210	80.70	80.70	---	---	76.16	76.36	---	---

Worst Plot of 26dB Bandwidth	Worst Plot of 99% Bandwidth
	

For Frequency band 5725-5850 MHz											
Emission Bandwidth											
Mode	N_{TX}	Freq. (MHz)	OBW Bandwidth (MHz)				6dB Bandwidth (MHz)				
			Chain 0	Chain 1	Chain 2	Chain 3	Chain 0	Chain 1	Chain 2	Chain 3	6dB BW Limit (MHz)
VHT20	2	5745	17.89	18.12	---	---	17.57	17.62	---	---	0.5
VHT20	2	5785	18.85	19.40	---	---	17.62	17.62	---	---	0.5
VHT20	2	5825	17.93	18.17	---	---	17.62	17.62	---	---	0.5
VHT40	2	5755	36.54	36.68	---	---	35.36	36.29	---	---	0.5
VHT40	2	5795	36.72	36.90	---	---	36.29	35.71	---	---	0.5
VHT80	2	5775	75.88	75.92	---	---	76.25	75.13	---	---	0.5

Worst Plot of 99% Bandwidth	Worst Plot of 6dB Bandwidth
	

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
☐	Mobile and portable client devices	Conducted Power: 250 mW

Frequency Band (MHz)		**Limit**
☐	5250 ~ 5350	250mW or 11dBm+10 log B
☐	5470 ~ 5725	250mW or 11dBm+10 log B
☒	5725 ~ 5850	1 W
Note: “B” is the 26dB emission bandwidth in MHz.		

3.3.2 Test Procedures

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

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

3.3.3 Test Setup

3.3.4 Test Result of Maximum Conducted Output Power

Non-beamforming mode

For Frequency band 5150-5250 MHz									
Mode	N_{TX}	Freq. (MHz)	Conducted Power (dBm)				Total Power (mW)	Total Power (dBm)	Limit (dBm)
			Chain 0	Chain 1	Chain 2	Chain 3			
11a	2	5180	16.77	16.23	---	---	89.509	19.52	30.00
11a	2	5200	19.26	18.43	---	---	153.996	21.88	30.00
11a	2	5240	20.46	19.77	---	---	206.015	23.14	30.00
HT20	2	5180	15.42	15.27	---	---	68.485	18.36	30.00
HT20	2	5200	18.01	17.55	---	---	120.126	20.80	30.00
HT20	2	5240	20.57	19.86	---	---	210.853	23.24	30.00
HT40	2	5190	12.42	11.71	---	---	32.283	15.09	30.00
HT40	2	5230	18.24	18.57	---	---	138.626	21.42	30.00
VHT20	2	5180	15.46	15.32	---	---	69.197	18.40	30.00
VHT20	2	5200	18.05	17.60	---	---	121.370	20.84	30.00
VHT20	2	5240	20.63	19.89	---	---	213.110	**23.29**	30.00
VHT40	2	5190	12.44	11.75	---	---	32.501	15.12	30.00
VHT40	2	5230	18.3	18.62	---	---	140.386	21.47	30.00
VHT80	2	5210	12.16	11.74	---	---	31.372	14.97	30.00

For Frequency band 5725-5850 MHz									
Mode	N_{TX}	Freq. (MHz)	Conducted Power (dBm)				Total Power (mW)	Total Power (dBm)	Limit (dBm)
			Chain 0	Chain 1	Chain 2	Chain 3			
11a	2	5745	14.49	14.33	---	---	55.221	17.42	30.00
11a	2	5785	19.88	20.09	---	---	199.369	23.00	30.00
11a	2	5825	17.35	16.6	---	---	100.034	20.00	30.00
HT20	2	5745	14.02	13.61	---	---	48.196	16.83	30.00
HT20	2	5785	20.02	20.16	---	---	204.214	23.10	30.00
HT20	2	5825	16.72	16.29	---	---	89.549	19.52	30.00
HT40	2	5755	10.42	10.33	---	---	21.805	13.39	30.00
HT40	2	5795	16.02	15.49	---	---	75.394	18.77	30.00
VHT20	2	5745	14.11	13.66	---	---	48.991	16.90	30.00
VHT20	2	5785	20.07	20.22	---	---	206.821	**23.16**	30.00
VHT20	2	5825	16.8	16.35	---	---	91.015	19.59	30.00
VHT40	2	5755	10.55	10.4	---	---	22.315	13.49	30.00
VHT40	2	5795	16.06	15.56	---	---	76.339	18.83	30.00
VHT80	2	5775	10.77	10.44	---	---	23.006	13.62	30.00

Beamforming mode

For Frequency band 5150-5250 MHz									
Mode	N_{TX}	Freq. (MHz)	Conducted Power (dBm)				Total Power (mW)	Total Power (dBm)	Limit (dBm)
			Chain 0	Chain 1	Chain 2	Chain 3			
HT20	2	5180	15.25	15.51	---	---	69.060	18.39	30.00
HT20	2	5200	18.23	17.37	---	---	121.103	20.83	30.00
HT20	2	5240	20.77	19.75	---	---	213.805	23.30	30.00
HT40	2	5190	12.53	12.18	---	---	34.426	15.37	30.00
HT40	2	5230	18.78	18.75	---	---	150.499	21.78	30.00
VHT20	2	5180	15.31	15.58	---	---	70.104	18.46	30.00
VHT20	2	5200	18.26	17.41	---	---	122.069	20.87	30.00
VHT20	2	5240	20.82	19.78	---	---	215.842	**23.34**	30.00
VHT40	2	5190	12.59	12.22	---	---	34.828	15.42	30.00
VHT40	2	5230	18.82	18.78	---	---	151.717	21.81	30.00
VHT80	2	5210	11.85	11.42	---	---	29.178	14.65	30.00

For Frequency band 5725-5850 MHz									
Mode	N_{TX}	Freq. (MHz)	Conducted Power (dBm)				Total Power (mW)	Total Power (dBm)	Limit (dBm)
			Chain 0	Chain 1	Chain 2	Chain 3			
HT20	2	5745	13.89	13.86	---	---	48.813	16.89	29.91
HT20	2	5785	19.67	19.57	---	---	183.256	22.63	29.91
HT20	2	5825	15.97	15.82	---	---	77.731	18.91	29.91
HT40	2	5755	10.88	10.58	---	---	23.675	13.74	29.91
HT40	2	5795	16.51	16.02	---	---	84.766	19.28	29.91
VHT20	2	5745	13.94	13.91	---	---	49.378	16.94	29.91
VHT20	2	5785	19.73	19.63	---	---	185.806	22.69	29.91
VHT20	2	5825	16.02	15.87	---	---	78.631	18.96	29.91
VHT40	2	5755	10.93	10.63	---	---	23.949	13.79	29.91
VHT40	2	5795	16.55	16.06	---	---	85.550	19.32	29.91
VHT80	2	5775	11.11	10.75	---	---	24.797	13.94	29.91

Note:

1. Directional gain = $10 * \log((10^{2.7/20}+10^{3.44/20})^2/2)$ = 6.09 dBi > 6 dBi
   Limit shall be reduced to 30 dBm – (6.09 dBi – 6 dBi) = 29.91 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
☐	Mobile and portable client devices	11 dBm / MHz

Frequency Band (MHz)		**Limit**
☐	5250 ~ 5350	11 dBm / MHz
☐	5470 ~ 5725	11 dBm / MHz
☒	5725 ~ 5850	30 dBm /500 kHz

3.4.2 Test Procedures

For 5150 ~ 5250 MHz

☒ Method SA-1

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.

☐ Method SA-2 Alternative

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

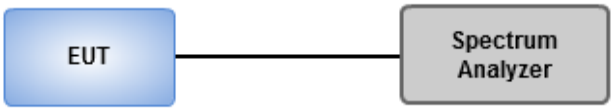
☒ Method SA-1

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

☐ Method SA-2 Alternative

1. Set RBW = 500 kHz, VBW = 2 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



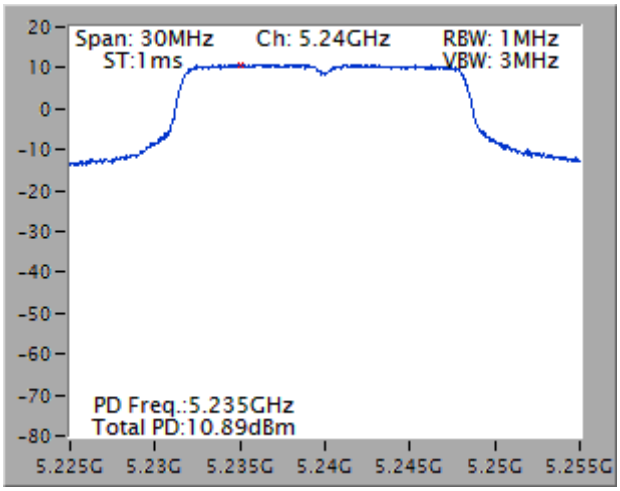
3.4.4 Test Result of Peak Power Spectral Density

Non-beamforming mode

For Frequency band 5150-5250 MHz						
Condition			Peak Power Spectral Density (dBm/MHz)			
Modulation Mode	N_{TX}	Freq. (MHz)	PPSD w/o D.F (dBm/MHz)	Duty Factor (dB)	PPSD with D.F (dBm/MHz)	PPSD Limit (dBm/MHz)
11a	2	5180	7.05	0.00	7.05	17
11a	2	5200	9.60	0.00	9.60	17
11a	2	5240	10.89	0.00	10.89	17
VHT20	2	5180	5.60	0.00	5.60	17
VHT20	2	5200	7.96	0.00	7.96	17
VHT20	2	5240	10.41	0.00	10.41	17
VHT40	2	5190	3.40	0.00	3.40	17
VHT40	2	5230	5.62	0.00	5.62	17
VHT80	2	5210	-3.79	0.00	-3.79	17

Note:
1. D.F is duty factor.
2. Test result is bin-by-bin summing measured value of each TX port.

Worst Plot

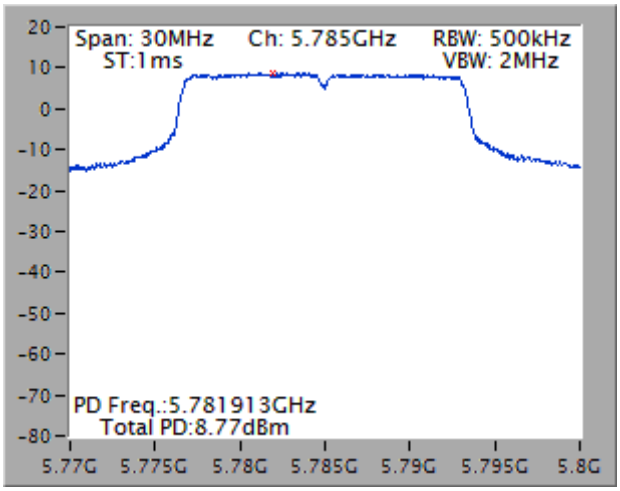


For Frequency band 5725-5850 MHz						
Condition			Peak Power Spectral Density (dBm/500kHz)			
Modulation Mode	N_{TX}	Freq. (MHz)	PPSD w/o D.F (dBm/500kHz)	Duty Factor (dB)	PPSD with D.F (dBm/500kHz)	PPSD Limit (dBm/500kHz)
11a	2	5745	3.10	0.00	3.10	29.91
11a	2	5785	8.77	0.00	8.77	29.91
11a	2	5825	5.58	0.00	5.58	29.91
VHT20	2	5745	1.81	0.00	1.81	29.91
VHT20	2	5785	8.30	0.00	8.30	29.91
VHT20	2	5825	4.66	0.00	4.66	29.91
VHT40	2	5755	-4.42	0.00	-4.42	29.91
VHT40	2	5795	1.04	0.00	1.04	29.91
VHT80	2	5775	-6.99	0.00	-6.99	29.91

Note:

1. D.F is duty factor.
2. Test result is bin-by-bin summing measured value of each TX port.
3. Directional gain = $10 * \log((10^{2.7/20}+10^{3.44/20})^2/2)$ = 6.09 dBi > 6 dBi
   Limit shall be reduced to 30 dBm – (6.09 dBi – 6 dBi) = 29.91 dBm.

Worst Plot

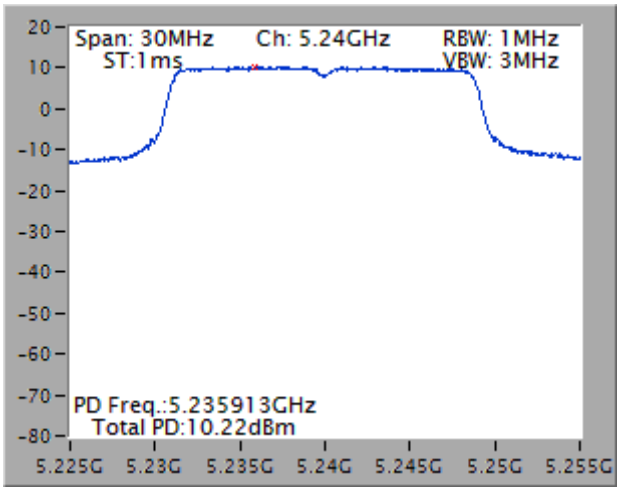


Beamforming mode

For Frequency band 5150-5250 MHz						
Condition			Peak Power Spectral Density (dBm/MHz)			
Modulation Mode	N_{TX}	Freq. (MHz)	PPSD w/o D.F (dBm/MHz)	Duty Factor (dB)	PPSD with D.F (dBm/MHz)	PPSD Limit (dBm/MHz)
VHT20	2	5180	5.23	0.00	5.23	17
VHT20	2	5200	7.73	0.00	7.73	17
VHT20	2	5240	10.22	0.00	10.22	17
VHT40	2	5190	-1.01	0.00	-1.01	17
VHT40	2	5230	5.71	0.00	5.71	17
VHT80	2	5210	-4.08	0.00	-4.08	17

Note:
1. D.F is duty factor.
2. Test result is bin-by-bin summing measured value of each TX port.

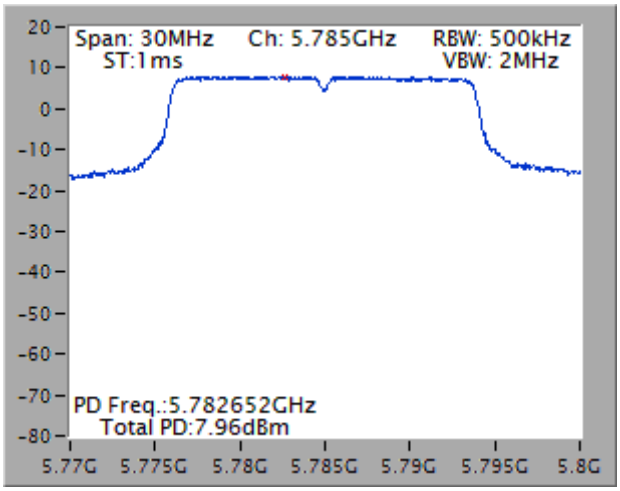
Worst Plot



For Frequency band 5725-5850 MHz						
Condition			Peak Power Spectral Density (dBm/500kHz)			
Modulation Mode	N_{TX}	Freq. (MHz)	PPSD w/o D.F (dBm/500kHz)	Duty Factor (dB)	PPSD with D.F (dBm/500kHz)	PPSD Limit (dBm/500kHz)
VHT20	2	5745	2.10	0.00	2.10	29.91
VHT20	2	5785	7.96	0.00	7.96	29.91
VHT20	2	5825	4.24	0.00	4.24	29.91
VHT40	2	5755	-3.89	0.00	-3.89	29.91
VHT40	2	5795	1.55	0.00	1.55	29.91
VHT80	2	5775	-6.52	0.00	-6.52	29.91

Note:
1. D.F is duty factor.
2. Test result is bin-by-bin summing measured value of each TX port.
3. Directional gain = 10 * log((10$^{2.7/20}$+10$^{3.44/20}$)^2/2) = 6.09 dBi > 6 dBi
   Limit shall be reduced to 30 dBm – (6.09 dBi – 6 dBi) = 29.91 dBm.

Worst Plot



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]
5.25 - 5.35 GHz	e.i.r.p. -27 dBm [68.2 dBuV/m@3m]
5.47 - 5.725 GHz	e.i.r.p. -27 dBm [68.2 dBuV/m@3m]
5.725 - 5.850 GHz	5.715 5.725 GHz: e.i.r.p. -17 dBm [78.2 dBuV/m@3m] 5.85 5.86 GHz: e.i.r.p. -17 dBm [78.2 dBuV/m@3m] Other un-restricted band: e.i.r.p. -27 dBm [68.2 dBuV/m@3m]

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

3.5.2 Test Procedures

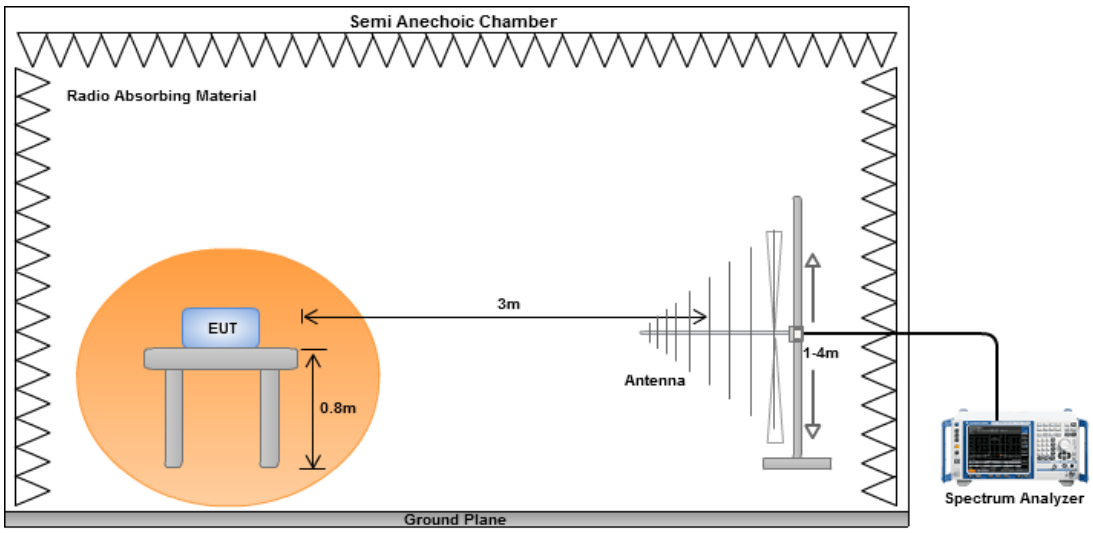
1. Measurement is made at a semi-anechoic chamber that incorporates a turntable allowing a EUT rotation of 360°. A continuously-rotating, remotely-controlled turntable is installed at the test site to support the EUT and facilitate determination of the direction of maximum radiation for each EUT emission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

Note:

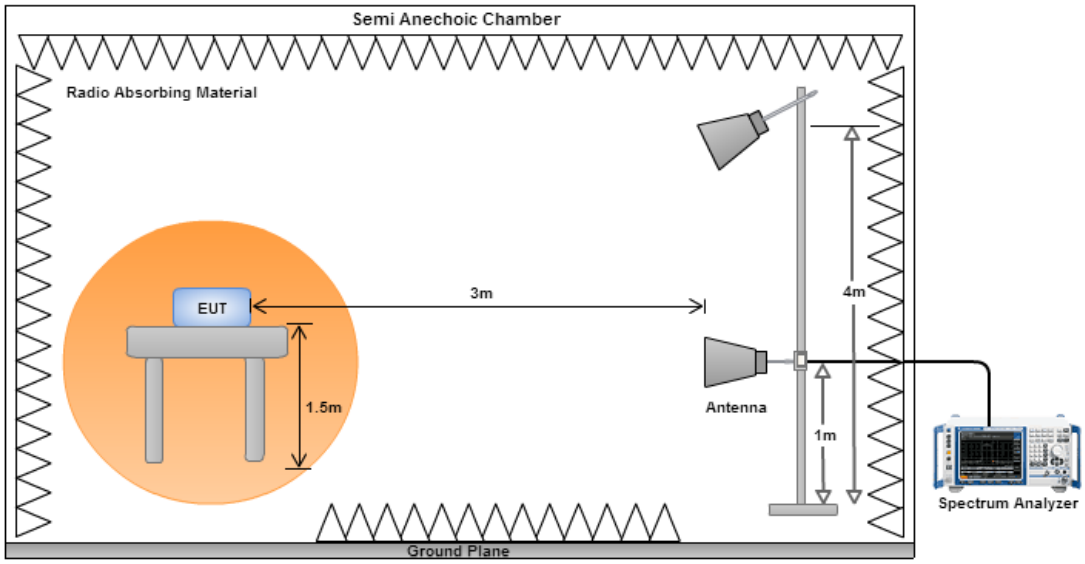
1. 120kHz measurement bandwidth of test receiver and Quasi-peak detector is for radiated emission below 1GHz.
2. RBW=1MHz, VBW=3MHz and Peak detector is for peak measured value of radiated emission above 1GHz.
3. RBW=1MHz, VBW=1/T and Peak detector is for average measured value of radiated emission above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

3.5.3 Test Setup

Radiated Emissions below 1 GHz



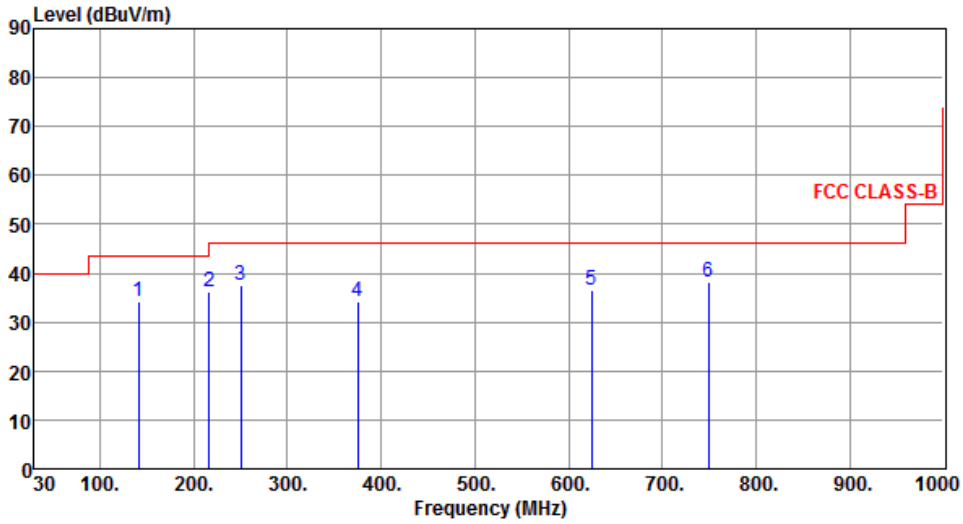
Radiated Emissions above 1 GHz



Non- beamforming mode

3.5.4 Transmitter Radiated Unwanted Emissions (Below 1GHz)

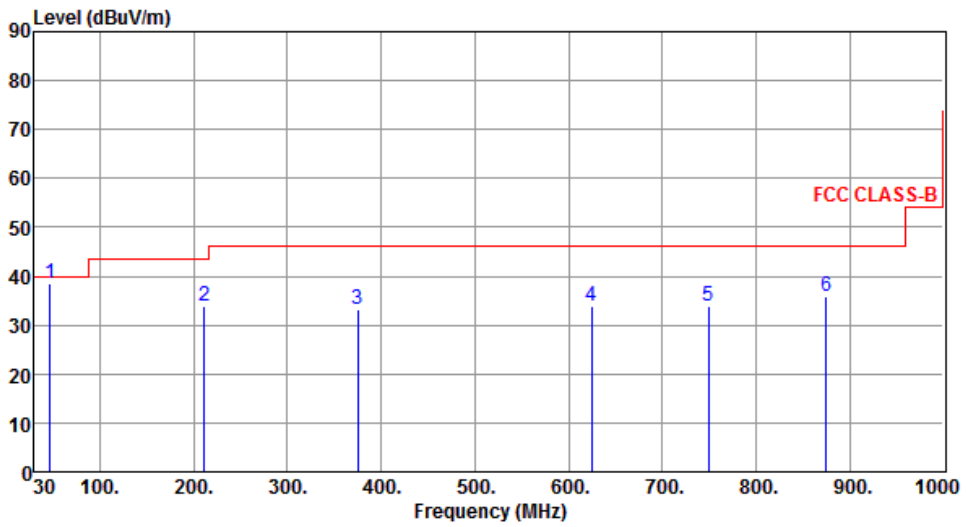
Modulation	HT20	**Test Freq. (MHz)**	5240
Polarization	Horizontal		



	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	141.55	34.26	43.50	-9.24	46.45	-12.19	Peak	---	---
2	216.24	36.18	46.00	-9.82	50.51	-14.33	Peak	---	---
3	250.19	37.50	46.00	-8.50	50.29	-12.79	Peak	---	---
4	375.32	34.31	46.00	-11.69	43.64	-9.33	Peak	---	---
5	624.61	36.61	46.00	-9.39	40.94	-4.33	Peak	---	---
6	749.74	38.17	46.00	-7.83	40.68	-2.51	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.

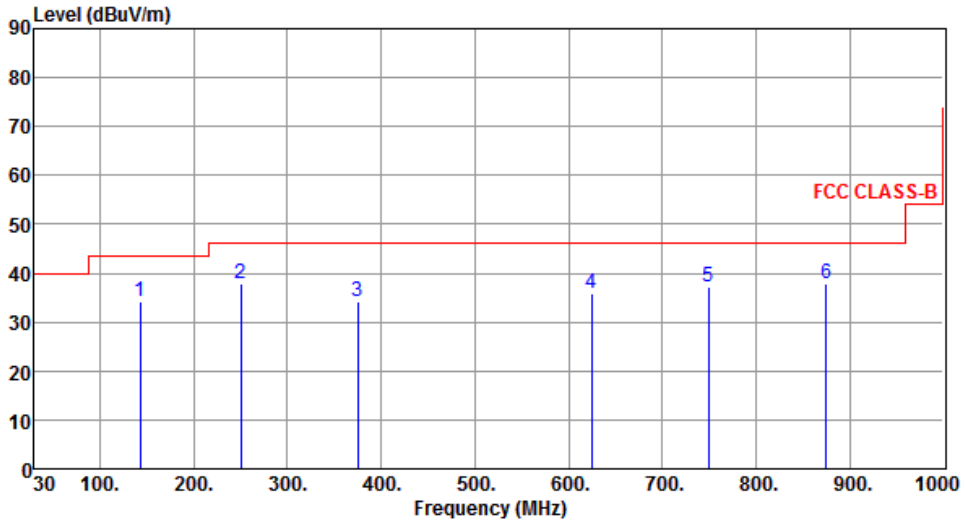
Modulation	HT20	Test Freq. (MHz)	5240
Polarization	Vertical		



	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	46.49	38.49	40.00	-1.51	50.09	-11.60	QP	---	---
2	211.39	34.01	43.50	-9.49	48.41	-14.40	Peak	---	---
3	375.32	33.05	46.00	-12.95	42.38	-9.33	Peak	---	---
4	624.61	33.97	46.00	-12.03	38.30	-4.33	Peak	---	---
5	749.74	34.03	46.00	-11.97	36.54	-2.51	Peak	---	---
6	874.87	35.81	46.00	-10.19	36.78	-0.97	Peak	---	---

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

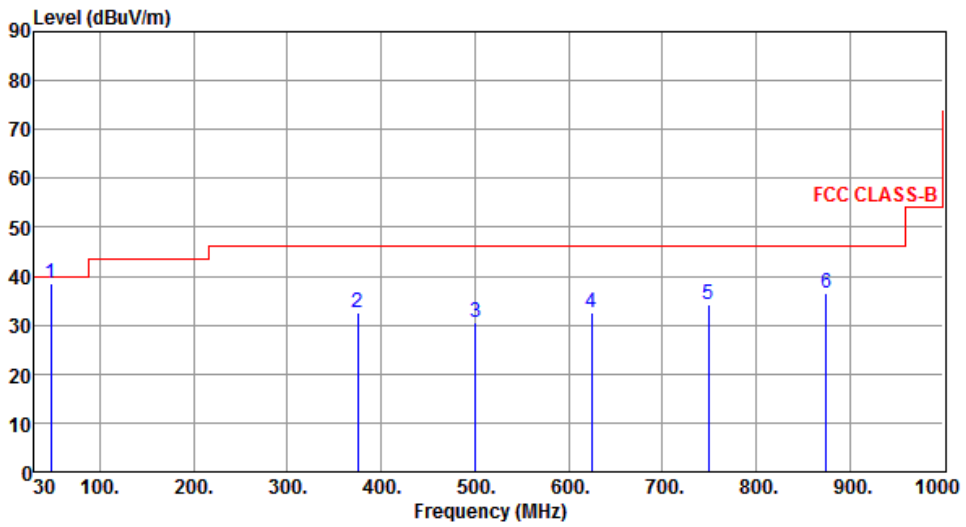
Modulation	VHT20	Test Freq. (MHz)	5785
Polarization	Horizontal		



	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	142.52	34.07	43.50	-9.43	46.22	-12.15	Peak	---	---
2	250.19	37.99	46.00	-8.01	50.78	-12.79	Peak	---	---
3	375.32	34.08	46.00	-11.92	43.41	-9.33	Peak	---	---
4	624.61	36.01	46.00	-9.99	40.34	-4.33	Peak	---	---
5	749.74	37.06	46.00	-8.94	39.57	-2.51	Peak	---	---
6	874.87	37.94	46.00	-8.06	38.91	-0.97	Peak	---	---

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

Modulation	VHT20	Test Freq. (MHz)	5785
Polarization	Vertical		

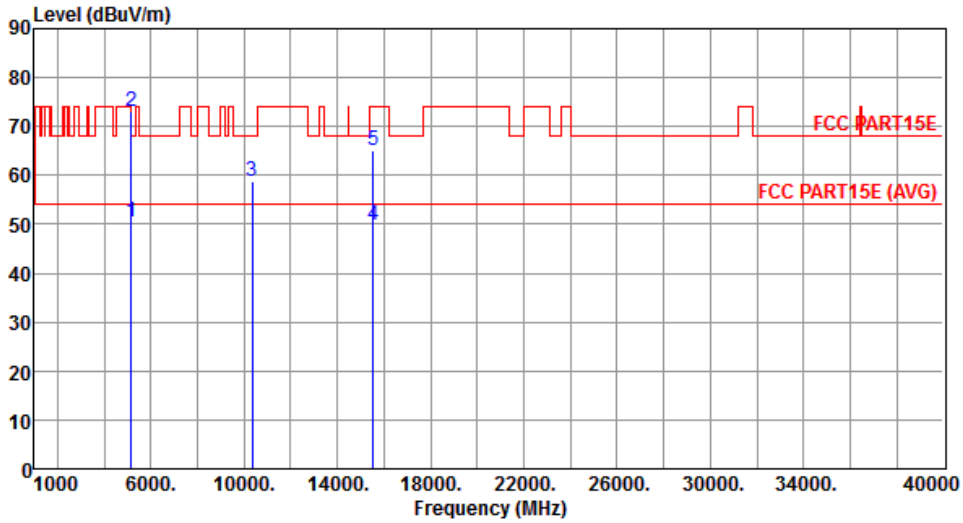


	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	47.46	38.50	40.00	-1.50	50.11	-11.61	QP	---	---
2	375.32	32.60	46.00	-13.40	41.93	-9.33	Peak	---	---
3	500.45	30.51	46.00	-15.49	37.04	-6.53	Peak	---	---
4	624.61	32.59	46.00	-13.41	36.92	-4.33	Peak	---	---
5	749.74	34.29	46.00	-11.71	36.80	-2.51	Peak	---	---
6	874.87	36.51	46.00	-9.49	37.48	-0.97	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

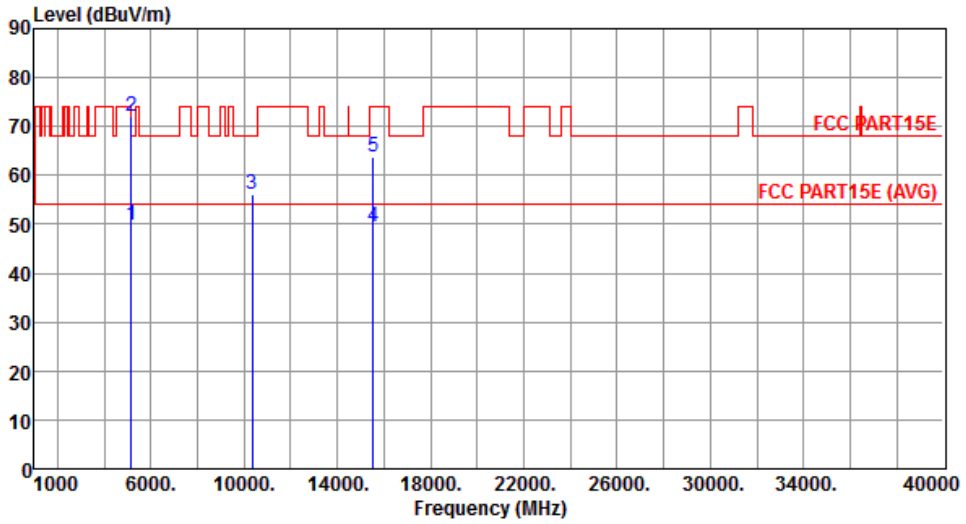
Modulation	11a	Test Freq. (MHz)	5180
Polarization	Horizontal		



	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	5150.00	50.32	54.00	-3.68	44.59	5.73	Average	193	17
2	5150.00	72.93	74.00	-1.07	67.20	5.73	Peak	193	17
3	10360.00	58.78	68.20	-9.42	44.29	14.49	Peak	153	23
4	15540.00	49.85	54.00	-4.15	33.15	16.70	Average	207	311
5	15540.00	64.98	74.00	-9.02	48.28	16.70	Peak	207	311

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).

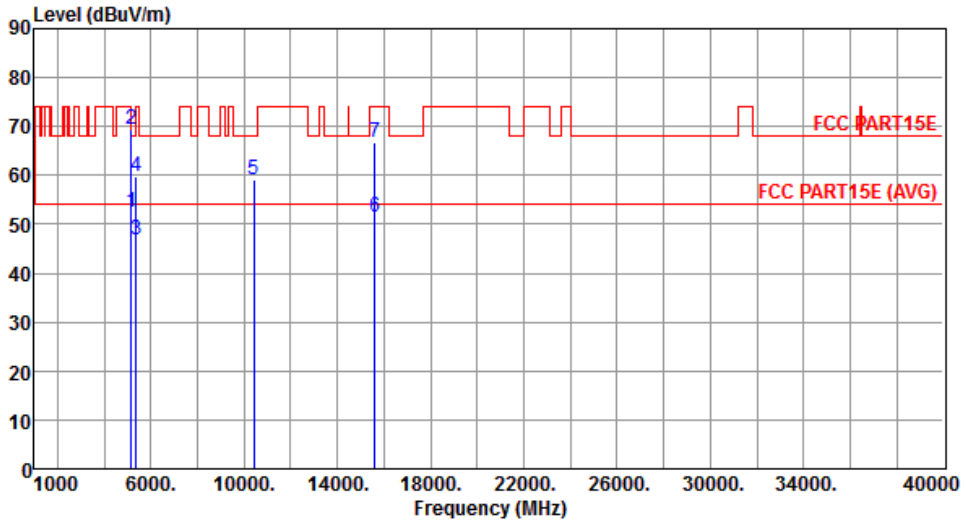
Modulation	11a	Test Freq. (MHz)	5180
Polarization	Vertical		



	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	5150.00	49.72	54.00	-4.28	43.99	5.73	Average	169	323
2	5150.00	72.03	74.00	-1.97	66.30	5.73	Peak	169	323
3	10360.00	56.08	68.20	-12.12	41.59	14.49	Peak	189	26
4	15540.00	49.43	54.00	-4.57	32.73	16.70	Average	175	47
5	15540.00	63.87	74.00	-10.13	47.17	16.70	Peak	175	47

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

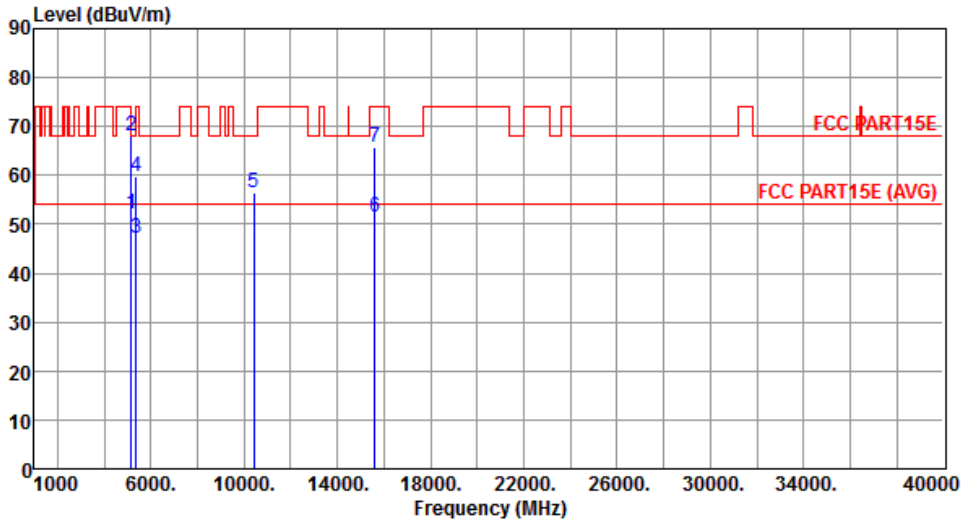
Modulation	11a	Test Freq. (MHz)	5200
Polarization	Horizontal		



	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	5150.00	52.58	54.00	-1.42	46.85	5.73	Average	189	9
2	5150.00	69.47	74.00	-4.53	63.74	5.73	Peak	189	9
3	5350.00	46.74	54.00	-7.26	40.78	5.96	Average	189	9
4	5350.00	59.90	74.00	-14.10	53.94	5.96	Peak	189	9
5	10400.00	59.01	68.20	-9.19	44.43	14.58	Peak	157	22
6	15600.00	51.54	54.00	-2.46	34.96	16.58	Average	204	318
7	15600.00	66.83	74.00	-7.17	50.25	16.58	Peak	204	318

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).

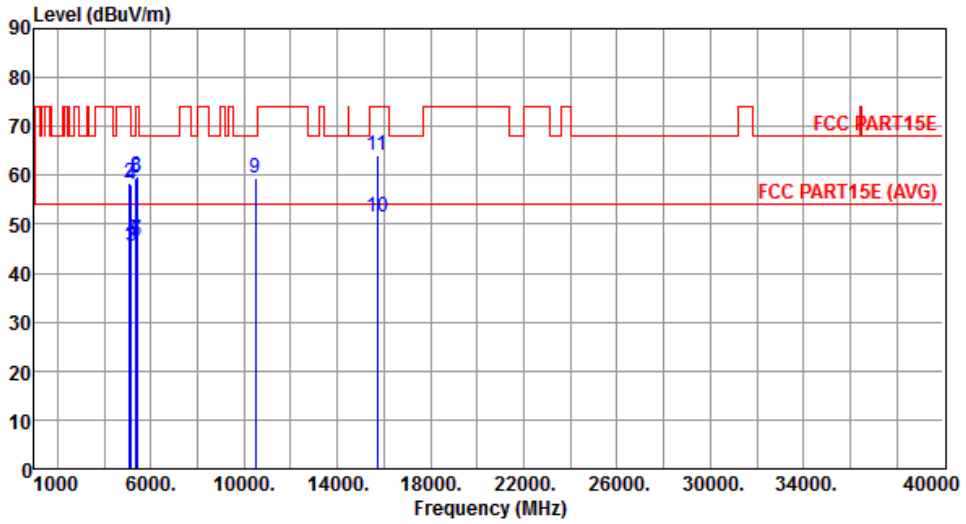
Modulation	11a	Test Freq. (MHz)	5200
Polarization	Vertical		



	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	5150.00	52.17	54.00	-1.83	46.44	5.73	Average	161	330
2	5150.00	68.25	74.00	-5.75	62.52	5.73	Peak	161	330
3	5350.00	47.06	54.00	-6.94	41.10	5.96	Average	161	330
4	5350.00	59.65	74.00	-14.35	53.69	5.96	Peak	161	330
5	10400.00	56.30	68.20	-11.90	41.72	14.58	Peak	184	28
6	15600.00	51.35	54.00	-2.65	34.77	16.58	Average	170	41
7	15600.00	65.63	74.00	-8.37	49.05	16.58	Peak	170	41

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).

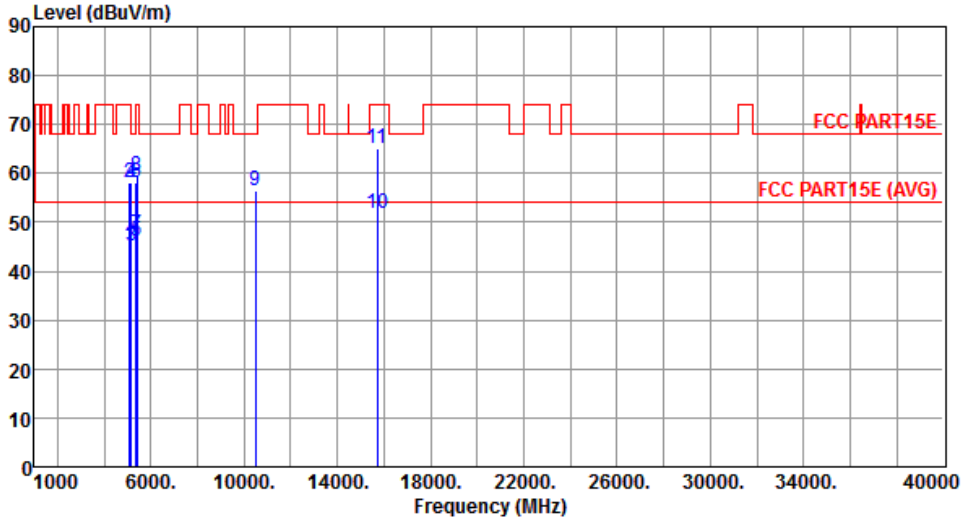
Modulation	11a	Test Freq. (MHz)	5240
Polarization	Horizontal		



	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	5080.00	45.37	54.00	-8.63	39.81	5.56	Average	255	20
2	5080.00	58.51	74.00	-15.49	52.95	5.56	Peak	255	20
3	5150.00	45.40	54.00	-8.60	39.67	5.73	Average	255	20
4	5150.00	58.05	74.00	-15.95	52.32	5.73	Peak	255	20
5	5350.00	46.64	54.00	-7.36	40.68	5.96	Average	255	20
6	5350.00	59.37	74.00	-14.63	53.41	5.96	Peak	255	20
7	5400.00	46.86	54.00	-7.14	40.86	6.00	Average	255	20
8	5400.00	59.72	74.00	-14.28	53.72	6.00	Peak	255	20
9	10480.00	59.33	68.20	-8.87	44.55	14.78	Peak	154	36
10	15720.00	51.33	54.00	-2.67	35.02	16.31	Average	243	312
11	15720.00	64.23	74.00	-9.77	47.92	16.31	Peak	243	312

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).

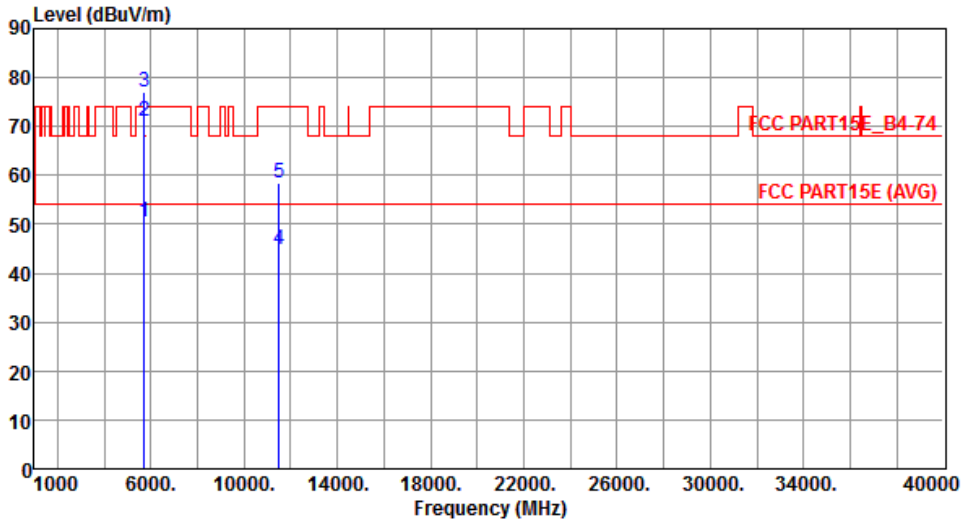
Modulation	11a	Test Freq. (MHz)	5240
Polarization	Vertical		



	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	5080.00	45.20	54.00	-8.80	39.64	5.56	Average	167	336
2	5080.00	58.00	74.00	-16.00	52.44	5.56	Peak	167	336
3	5150.00	45.29	54.00	-8.71	39.56	5.73	Average	167	336
4	5150.00	58.20	74.00	-15.80	52.47	5.73	Peak	167	336
5	5350.00	46.31	54.00	-7.69	40.35	5.96	Average	167	336
6	5350.00	58.26	74.00	-15.74	52.30	5.96	Peak	167	336
7	5400.00	47.54	54.00	-6.46	41.54	6.00	Average	167	336
8	5400.00	59.47	74.00	-14.53	53.47	6.00	Peak	167	336
9	10480.00	56.54	68.20	-11.66	41.76	14.78	Peak	187	22
10	15720.00	51.70	54.00	-2.30	35.39	16.31	Average	177	44
11	15720.00	65.11	74.00	-8.89	48.80	16.31	Peak	177	44

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).

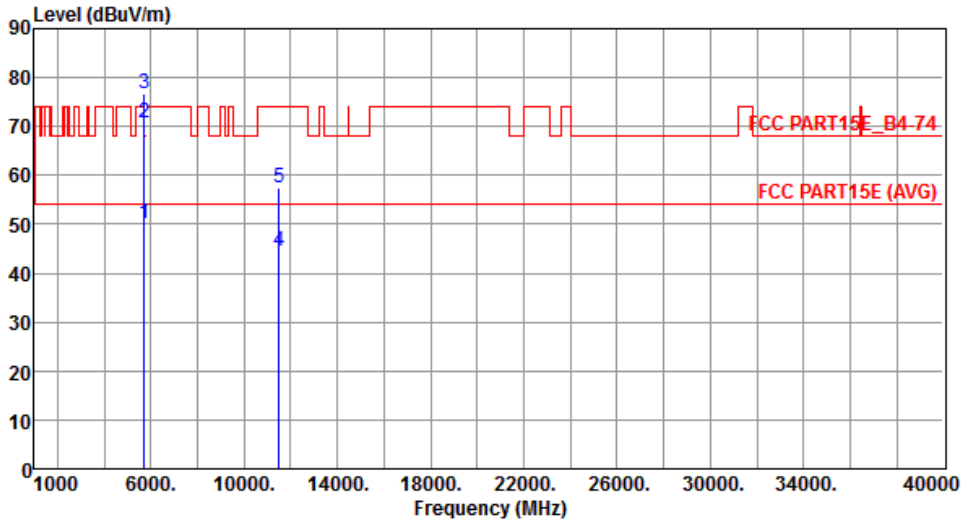
Modulation	11a	Test Freq. (MHz)	5745
Polarization	Horizontal		



	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	5715.00	50.49	54.00	-3.51	43.88	6.61	Average	203	160
2	5715.00	71.14	74.00	-2.86	64.53	6.61	Peak	203	160
3	5725.00	77.02	78.20	-1.18	70.40	6.62	Peak	203	160
4	11490.00	44.91	54.00	-9.09	28.88	16.03	Average	195	176
5	11490.00	58.33	74.00	-15.67	42.30	16.03	Peak	195	176

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).

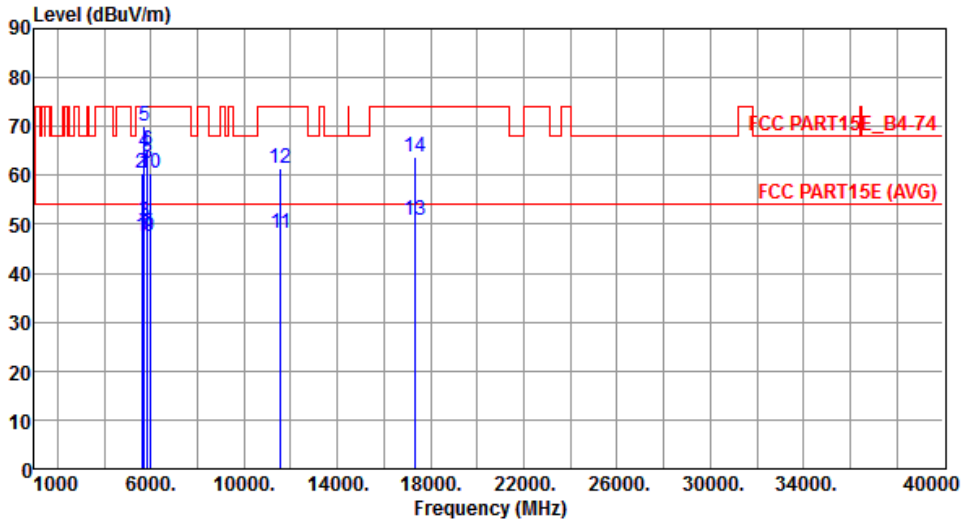
Modulation	11a	Test Freq. (MHz)	5745
Polarization	Vertical		



	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	5715.00	50.02	54.00	-3.98	43.41	6.61	Average	193	122
2	5715.00	70.85	74.00	-3.15	64.24	6.61	Peak	193	122
3	5725.00	76.55	78.20	-1.65	69.93	6.62	Peak	193	122
4	11490.00	44.47	54.00	-9.53	28.44	16.03	Average	258	158
5	11490.00	57.55	74.00	-16.45	41.52	16.03	Peak	258	158

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).

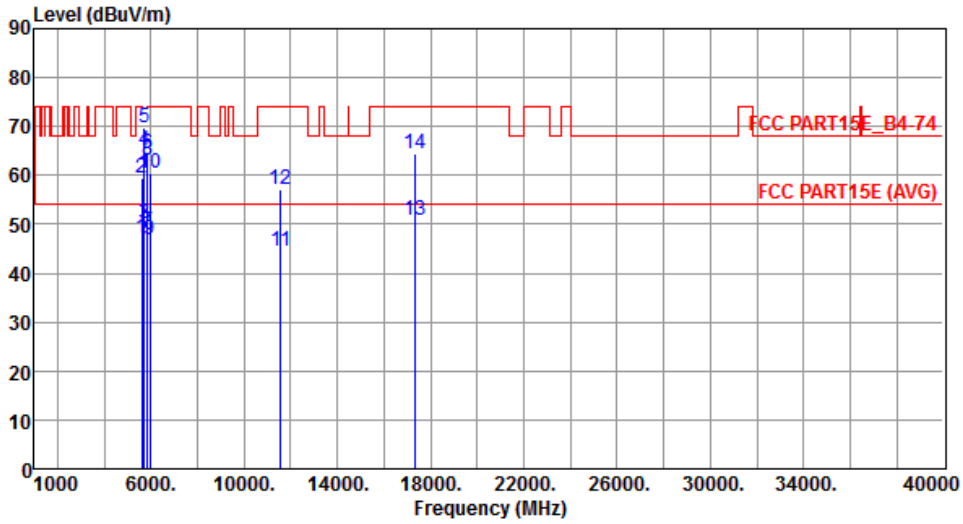
Modulation	11a	Test Freq. (MHz)	5785
Polarization	Horizontal		



	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	5625.00	47.39	54.00	-6.61	40.96	6.43	Average	286	321
2	5625.00	60.48	74.00	-13.52	54.05	6.43	Peak	286	321
3	5715.00	50.41	54.00	-3.59	43.80	6.61	Average	284	312
4	5715.00	64.91	74.00	-9.09	58.30	6.61	Peak	284	312
5	5725.00	70.01	78.20	-8.19	63.39	6.62	Peak	284	312
6	5850.00	65.11	78.20	-13.09	58.25	6.86	Peak	284	312
7	5860.00	48.24	54.00	-5.76	41.37	6.87	Average	284	312
8	5860.00	62.36	74.00	-11.64	55.49	6.87	Peak	284	312
9	5945.00	47.61	54.00	-6.39	40.60	7.01	Average	286	330
10	5945.00	60.37	74.00	-13.63	53.36	7.01	Peak	286	330
11	11570.00	48.11	54.00	-5.89	32.19	15.92	Average	230	315
12	11570.00	61.37	74.00	-12.63	45.45	15.92	Peak	230	315
13	17355.00	50.88	54.00	-3.12	29.19	21.69	Average	171	338
14	17355.00	63.68	74.00	-10.32	41.99	21.69	Peak	171	338

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).

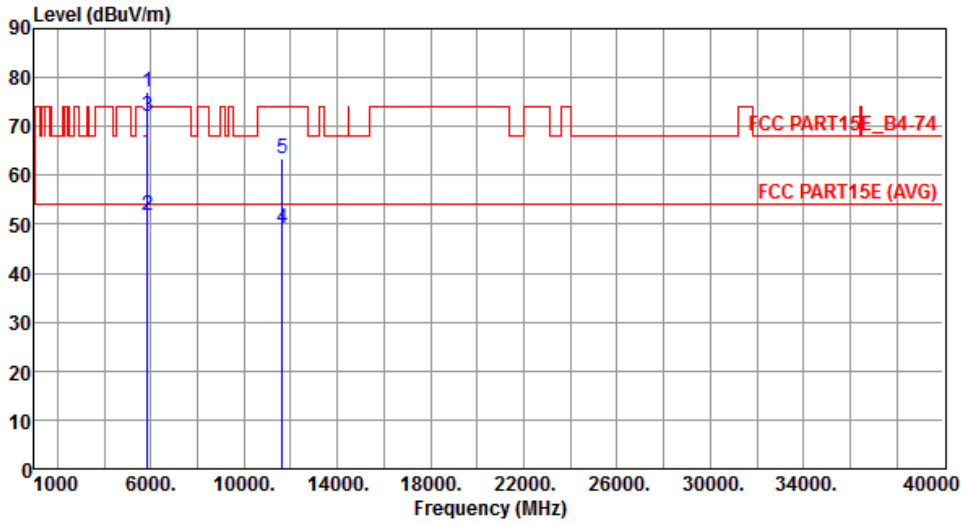
Modulation	11a	Test Freq. (MHz)	5785
Polarization	Vertical		



	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	5625.00	47.16	54.00	-6.84	40.73	6.43	Average	278	16
2	5625.00	59.42	74.00	-14.58	52.99	6.43	Peak	278	16
3	5715.00	50.21	54.00	-3.79	43.60	6.61	Average	172	304
4	5715.00	64.95	74.00	-9.05	58.34	6.61	Peak	172	304
5	5725.00	69.79	78.20	-8.41	63.17	6.62	Peak	172	304
6	5850.00	64.43	78.20	-13.77	57.57	6.86	Peak	172	304
7	5860.00	48.64	54.00	-5.36	41.77	6.87	Average	172	304
8	5860.00	63.03	74.00	-10.97	56.16	6.87	Peak	172	304
9	5945.00	46.93	54.00	-7.07	39.92	7.01	Average	278	16
10	5945.00	60.47	74.00	-13.53	53.46	7.01	Peak	278	16
11	11570.00	44.60	54.00	-9.40	28.68	15.92	Average	235	12
12	11570.00	57.11	74.00	-16.89	41.19	15.92	Peak	235	12
13	17355.00	50.92	54.00	-3.08	29.23	21.69	Average	216	331
14	17355.00	64.40	74.00	-9.60	42.71	21.69	Peak	216	331

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).

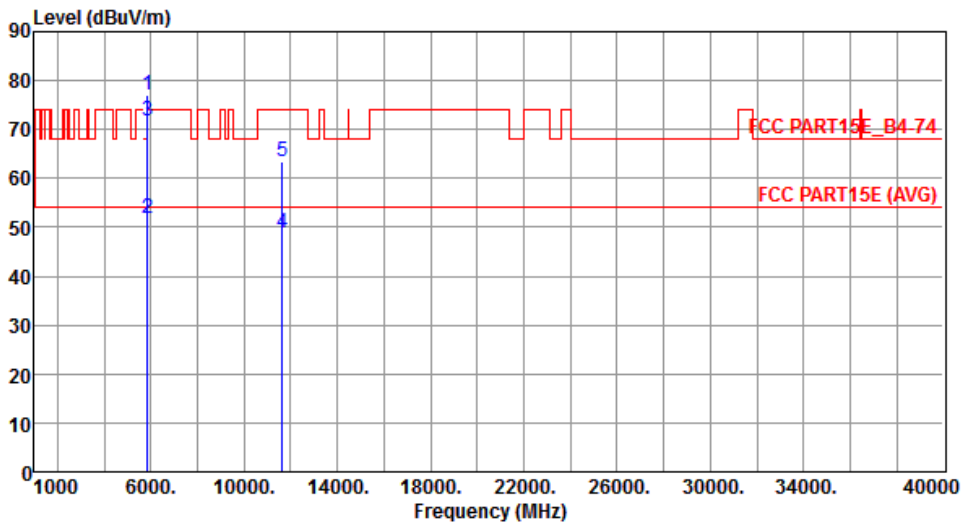
Modulation	11a	Test Freq. (MHz)	5825
Polarization	Horizontal		



	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	5850.00	77.19	78.20	-1.01	70.33	6.86	Peak	165	177
2	5860.00	51.85	54.00	-2.15	44.98	6.87	Average	165	177
3	5860.00	72.09	74.00	-1.91	65.22	6.87	Peak	165	177
4	11650.00	49.05	54.00	-4.95	33.25	15.80	Average	215	97
5	11650.00	63.54	74.00	-10.46	47.74	15.80	Peak	215	97

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		

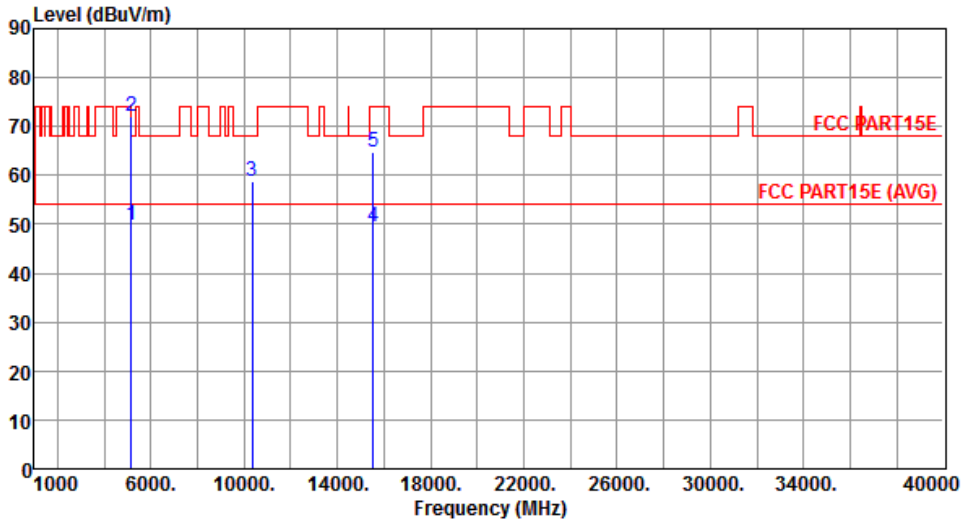


	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	5850.00	77.11	78.20	-1.09	70.25	6.86	Peak	193	146
2	5860.00	51.77	54.00	-2.23	44.90	6.87	Average	188	132
3	5860.00	71.87	74.00	-2.13	65.00	6.87	Peak	188	132
4	11650.00	48.95	54.00	-5.05	33.15	15.80	Average	189	341
5	11650.00	63.32	74.00	-10.68	47.52	15.80	Peak	189	341

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

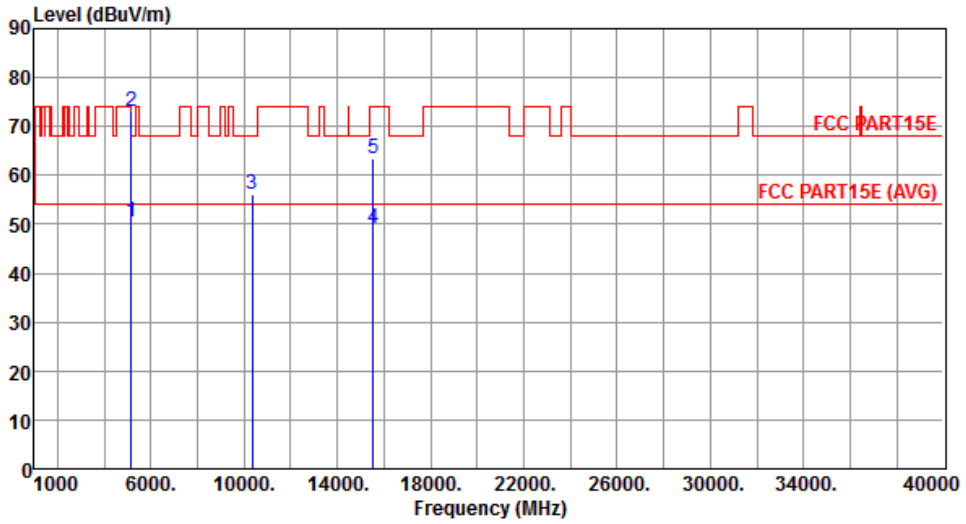
Modulation	VHT20	**Test Freq. (MHz)**	5180
Polarization	Horizontal		



	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	5150.00	49.86	54.00	-4.14	44.13	5.73	Average	195	160
2	5150.00	72.19	74.00	-1.81	66.46	5.73	Peak	195	160
3	10360.00	58.65	68.20	-9.55	44.16	14.49	Peak	252	186
4	15540.00	49.55	54.00	-4.45	32.85	16.70	Average	196	223
5	15540.00	64.72	74.00	-9.28	48.02	16.70	Peak	196	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).

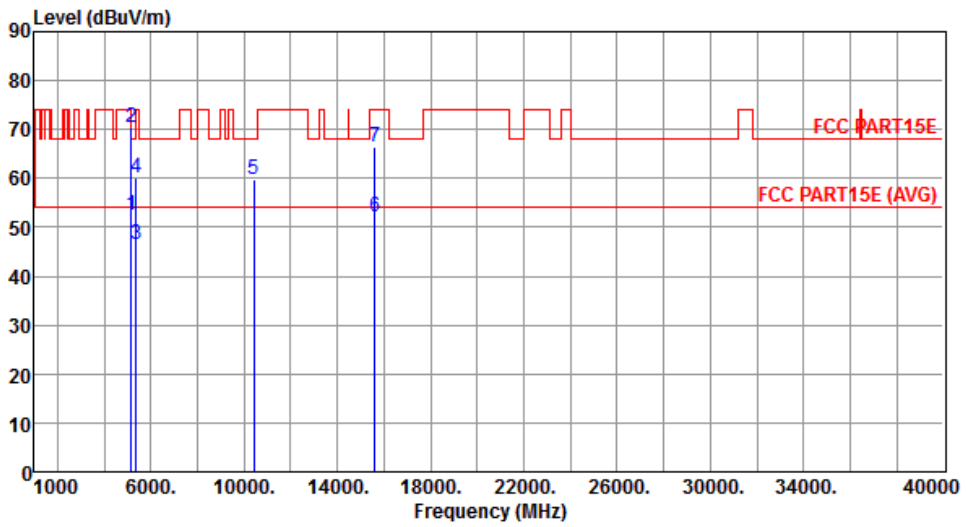
Modulation	VHT20	Test Freq. (MHz)	5180
Polarization	Vertical		



	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	5150.00	50.43	54.00	-3.57	44.70	5.73	Average	200	147
2	5150.00	72.99	74.00	-1.01	67.26	5.73	Peak	200	147
3	10360.00	55.98	68.20	-12.22	41.49	14.49	Peak	182	163
4	15540.00	49.02	54.00	-4.98	32.32	16.70	Average	198	143
5	15540.00	63.52	74.00	-10.48	46.82	16.70	Peak	198	143

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).

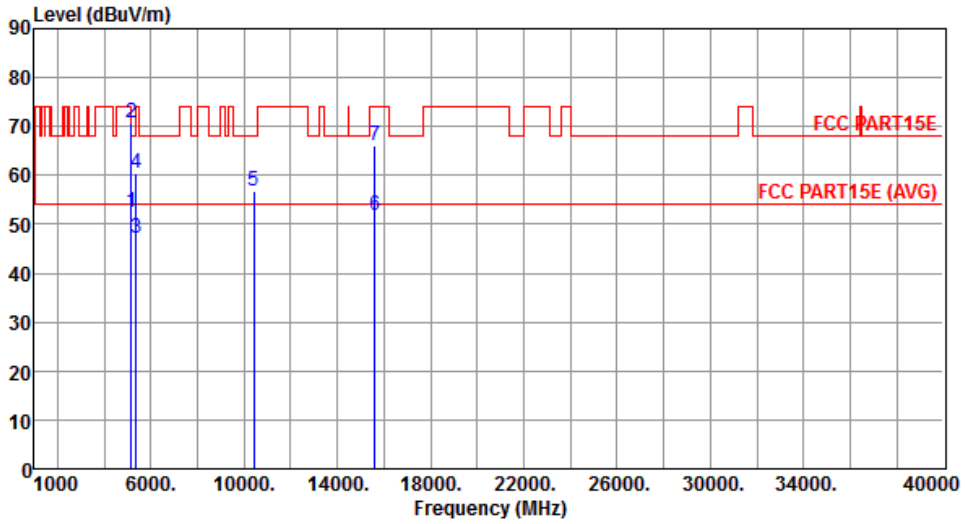
Modulation	VHT20	Test Freq. (MHz)	5200
Polarization	Horizontal		



	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	5150.00	52.32	54.00	-1.68	46.59	5.73	Average	182	193
2	5150.00	70.52	74.00	-3.48	64.79	5.73	Peak	182	193
3	5350.00	46.52	54.00	-7.48	40.56	5.96	Average	182	193
4	5350.00	59.95	74.00	-14.05	53.99	5.96	Peak	182	193
5	10400.00	59.93	68.20	-8.27	45.35	14.58	Peak	222	165
6	15600.00	51.98	54.00	-2.02	35.40	16.58	Average	239	277
7	15600.00	66.58	74.00	-7.42	50.00	16.58	Peak	239	277

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).

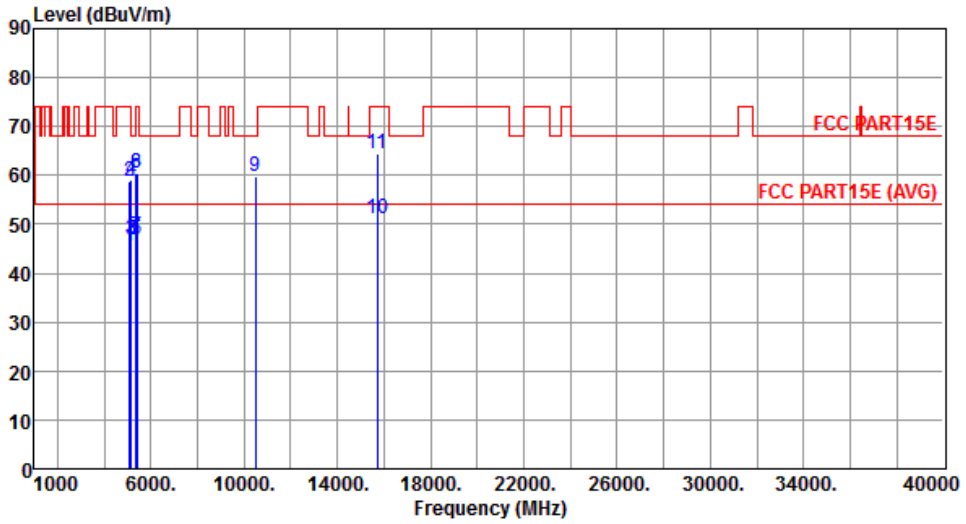
Modulation	VHT20	Test Freq. (MHz)	5200
Polarization	Vertical		



	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	5150.00	52.38	54.00	-1.62	46.65	5.73	Average	161	145
2	5150.00	70.83	74.00	-3.17	65.10	5.73	Peak	161	145
3	5350.00	47.19	54.00	-6.81	41.23	5.96	Average	162	147
4	5350.00	60.53	74.00	-13.47	54.57	5.96	Peak	162	147
5	10400.00	56.88	68.20	-11.32	42.30	14.58	Peak	185	196
6	15600.00	51.85	54.00	-2.15	35.27	16.58	Average	175	174
7	15600.00	66.22	74.00	-7.78	49.64	16.58	Peak	175	174

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).

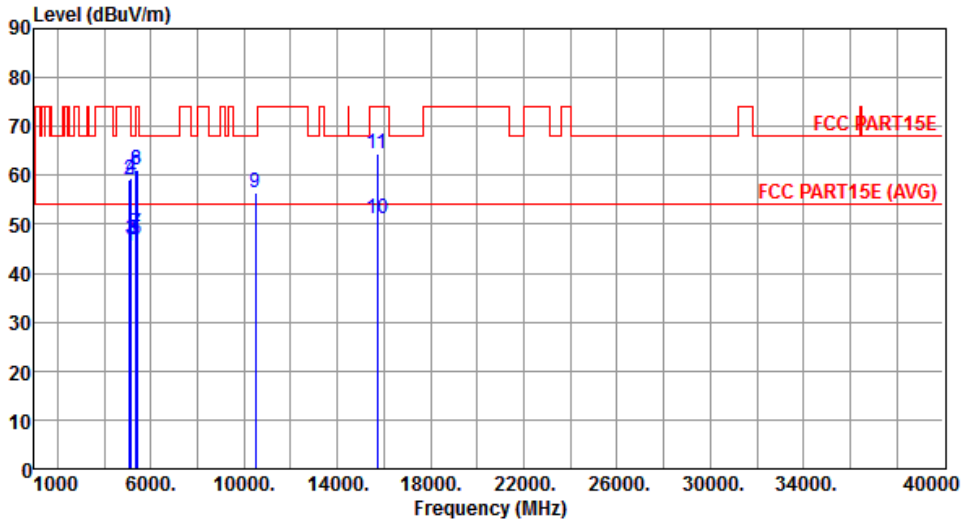
Modulation	VHT20	Test Freq. (MHz)	5240
Polarization	Horizontal		



	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	5080.00	45.35	54.00	-8.65	39.79	5.56	Average	184	190
2	5080.00	58.92	74.00	-15.08	53.36	5.56	Peak	184	190
3	5150.00	46.93	54.00	-7.07	41.20	5.73	Average	184	190
4	5150.00	59.13	74.00	-14.87	53.40	5.73	Peak	184	190
5	5350.00	46.76	54.00	-7.24	40.80	5.96	Average	184	190
6	5350.00	60.60	74.00	-13.40	54.64	5.96	Peak	184	190
7	5400.00	47.52	54.00	-6.48	41.52	6.00	Average	184	190
8	5400.00	60.35	74.00	-13.65	54.35	6.00	Peak	184	190
9	10480.00	59.67	68.20	-8.53	44.89	14.78	Peak	169	326
10	15720.00	51.00	54.00	-3.00	34.69	16.31	Average	153	320
11	15720.00	64.32	74.00	-9.68	48.01	16.31	Peak	153	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).

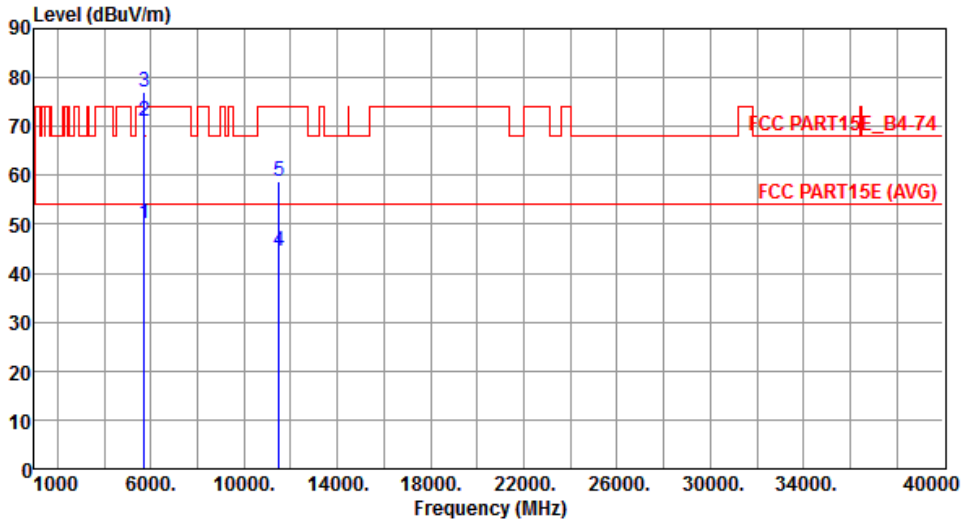
Modulation	VHT20	Test Freq. (MHz)	5240
Polarization	Vertical		



	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	5080.00	45.44	54.00	-8.56	39.88	5.56	Average	176	156
2	5080.00	58.96	74.00	-15.04	53.40	5.56	Peak	176	156
3	5150.00	46.99	54.00	-7.01	41.26	5.73	Average	186	151
4	5150.00	59.61	74.00	-14.39	53.88	5.73	Peak	186	151
5	5350.00	46.95	54.00	-7.05	40.99	5.96	Average	186	151
6	5350.00	61.22	74.00	-12.78	55.26	5.96	Peak	186	151
7	5400.00	48.08	54.00	-5.92	42.08	6.00	Average	176	156
8	5400.00	60.96	74.00	-13.04	54.96	6.00	Peak	176	156
9	10480.00	56.41	68.20	-11.79	41.63	14.78	Peak	1450	199
10	15720.00	51.19	54.00	-2.81	34.88	16.31	Average	153	226
11	15720.00	64.43	74.00	-9.57	48.12	16.31	Peak	153	226

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).

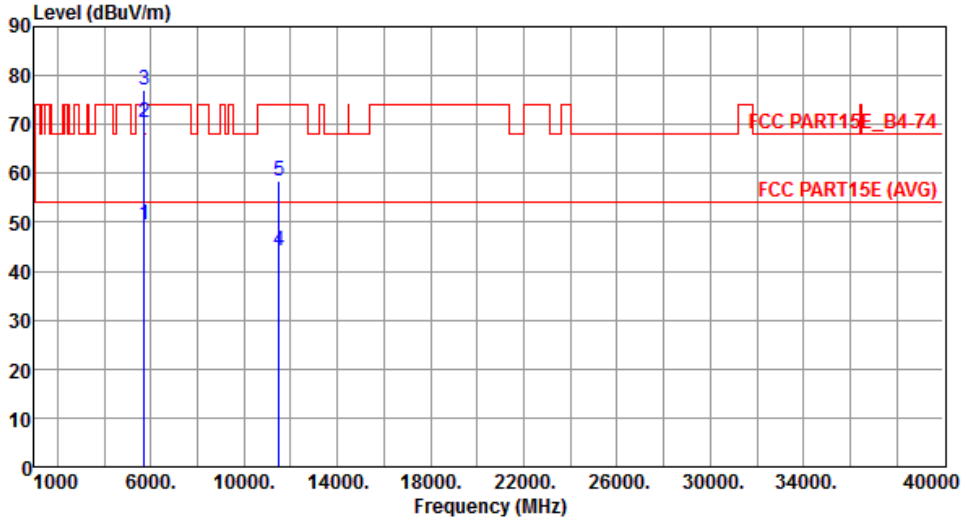
Modulation	VHT20	Test Freq. (MHz)	5745
Polarization	Horizontal		



	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	5715.00	50.12	54.00	-3.88	43.51	6.61	Average	195	158
2	5715.00	71.18	74.00	-2.82	64.57	6.61	Peak	195	158
3	5725.00	77.12	78.20	-1.08	70.50	6.62	Peak	195	158
4	11490.00	44.35	54.00	-9.65	28.32	16.03	Average	234	180
5	11490.00	58.69	74.00	-15.31	42.66	16.03	Peak	234	180

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).

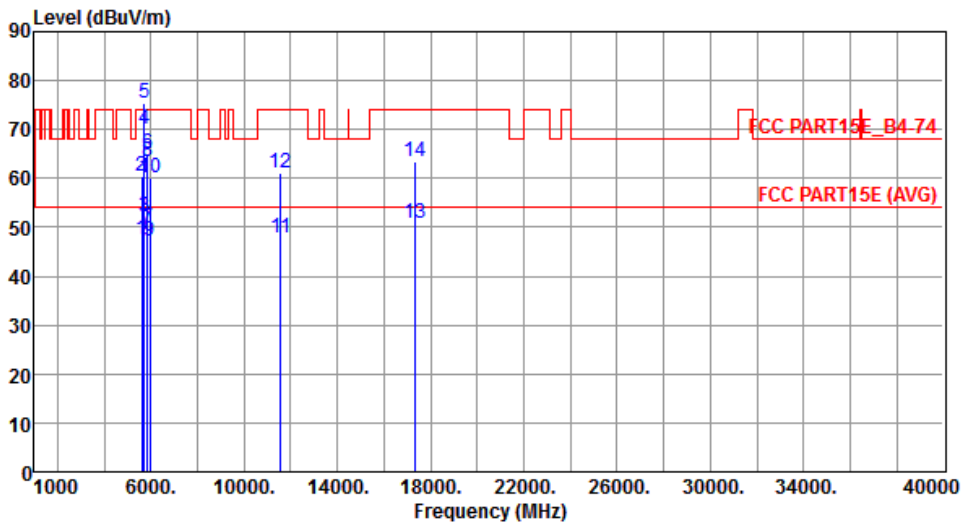
Modulation	VHT20	Test Freq. (MHz)	5745
Polarization	Vertical		



	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	5715.00	49.60	54.00	-4.40	42.99	6.61	Average	209	159
2	5715.00	70.51	74.00	-3.49	63.90	6.61	Peak	209	159
3	5725.00	76.91	78.20	-1.29	70.29	6.62	Peak	209	159
4	11490.00	44.02	54.00	-9.98	27.99	16.03	Average	245	176
5	11490.00	58.41	74.00	-15.59	42.38	16.03	Peak	245	176

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).

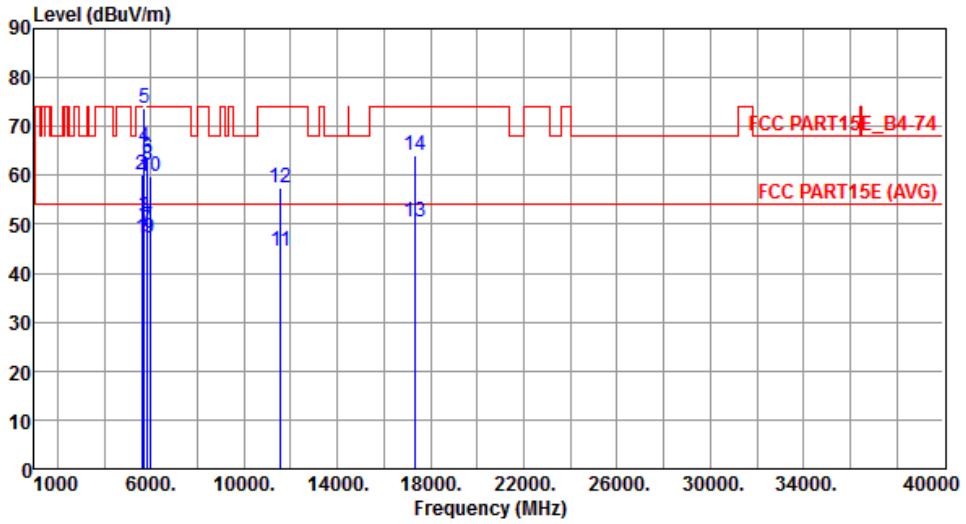
Modulation	VHT20	Test Freq. (MHz)	5785
Polarization	Horizontal		



	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	5625.00	47.56	54.00	-6.44	41.13	6.43	Average	179	15
2	5625.00	60.38	74.00	-13.62	53.95	6.43	Peak	179	15
3	5715.00	52.02	54.00	-1.98	45.41	6.61	Average	190	152
4	5715.00	70.01	74.00	-3.99	63.40	6.61	Peak	190	152
5	5725.00	75.23	78.20	-2.97	68.61	6.62	Peak	190	152
6	5850.00	65.11	78.20	-13.09	58.25	6.86	Peak	190	152
7	5860.00	49.70	54.00	-4.30	42.83	6.87	Average	190	152
8	5860.00	63.32	74.00	-10.68	56.45	6.87	Peak	190	152
9	5945.00	47.13	54.00	-6.87	40.12	7.01	Average	185	24
10	5945.00	60.16	74.00	-13.84	53.15	7.01	Peak	185	24
11	11570.00	47.86	54.00	-6.14	31.94	15.92	Average	212	223
12	11570.00	61.10	74.00	-12.90	45.18	15.92	Peak	212	223
13	17355.00	50.77	54.00	-3.23	29.08	21.69	Average	255	345
14	17355.00	63.55	74.00	-10.45	41.86	21.69	Peak	255	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).

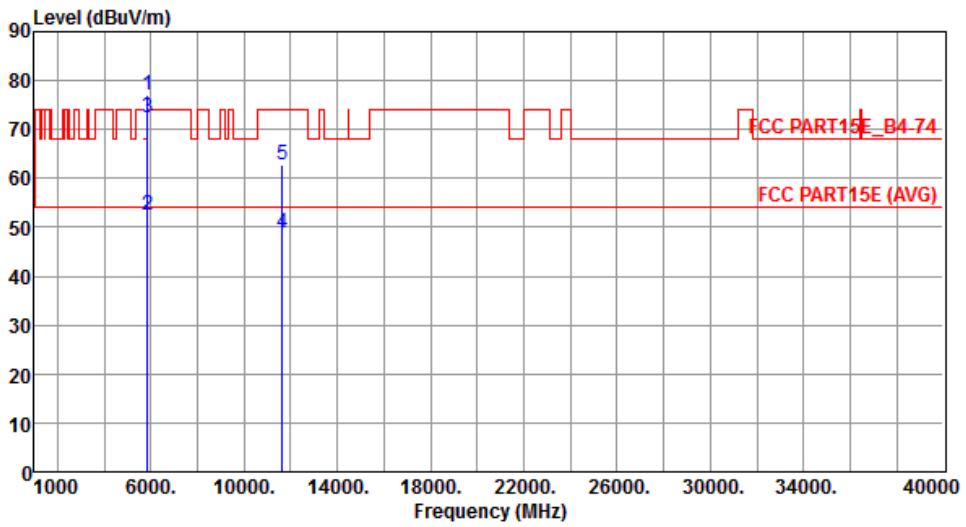
Modulation	VHT20	Test Freq. (MHz)	5785
Polarization	Vertical		



	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	5625.00	47.31	54.00	-6.69	40.88	6.43	Average	173	158
2	5625.00	60.02	74.00	-13.98	53.59	6.43	Peak	173	158
3	5715.00	51.53	54.00	-2.47	44.92	6.61	Average	177	149
4	5715.00	65.76	74.00	-8.24	59.15	6.61	Peak	177	149
5	5725.00	73.65	78.20	-4.55	67.03	6.62	Peak	177	149
6	5850.00	63.55	78.20	-14.65	56.69	6.86	Peak	177	149
7	5860.00	49.55	54.00	-4.45	42.68	6.87	Average	177	149
8	5860.00	62.07	74.00	-11.93	55.20	6.87	Peak	177	149
9	5945.00	47.00	54.00	-7.00	39.99	7.01	Average	173	158
10	5945.00	59.90	74.00	-14.10	52.89	7.01	Peak	173	158
11	11570.00	44.41	54.00	-9.59	28.49	15.92	Average	158	208
12	11570.00	57.33	74.00	-16.67	41.41	15.92	Peak	158	208
13	17355.00	50.56	54.00	-3.44	28.87	21.69	Average	163	174
14	17355.00	64.12	74.00	-9.88	42.43	21.69	Peak	163	174

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).

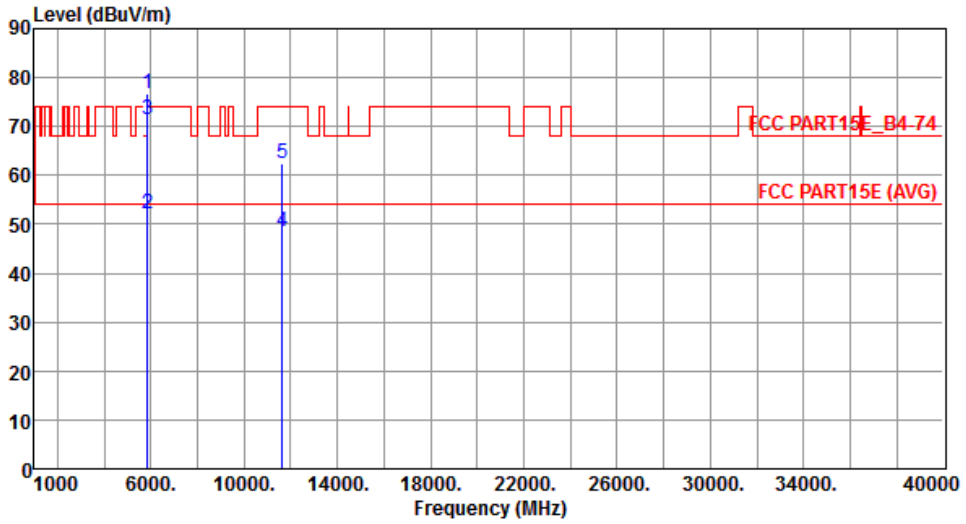
Modulation	VHT20	Test Freq. (MHz)	5825
Polarization	Horizontal		



	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	5850.00	77.06	78.20	-1.14	70.20	6.86	Peak	173	161
2	5860.00	52.46	54.00	-1.54	45.59	6.87	Average	173	161
3	5860.00	72.47	74.00	-1.53	65.60	6.87	Peak	173	161
4	11650.00	48.71	54.00	-5.29	32.91	15.80	Average	252	319
5	11650.00	62.85	74.00	-11.15	47.05	15.80	Peak	252	319

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		

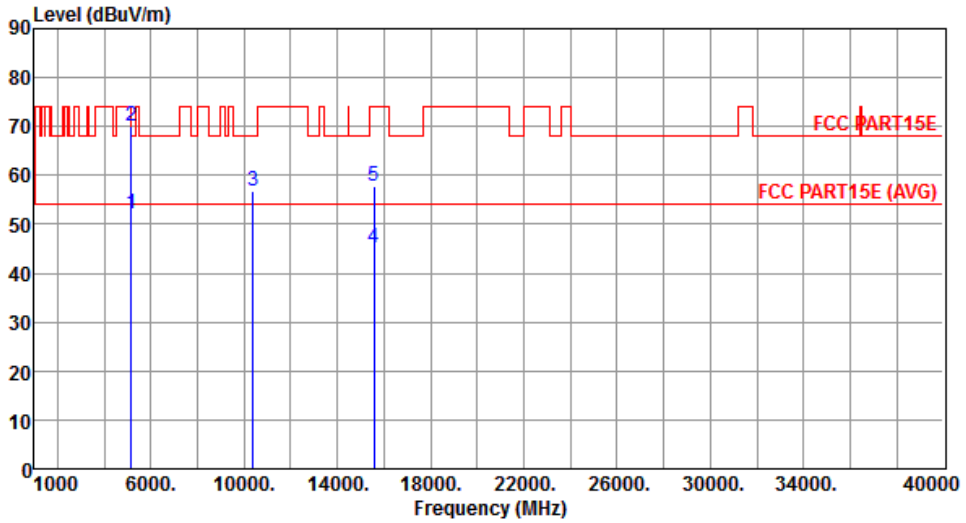


	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	5850.00	76.64	78.20	-1.56	69.78	6.86	Peak	175	135
2	5860.00	52.02	54.00	-1.98	45.15	6.87	Average	173	166
3	5860.00	71.56	74.00	-2.44	64.69	6.87	Peak	173	166
4	11650.00	48.39	54.00	-5.61	32.59	15.80	Average	223	23
5	11650.00	62.29	74.00	-11.71	46.49	15.80	Peak	223	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).

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

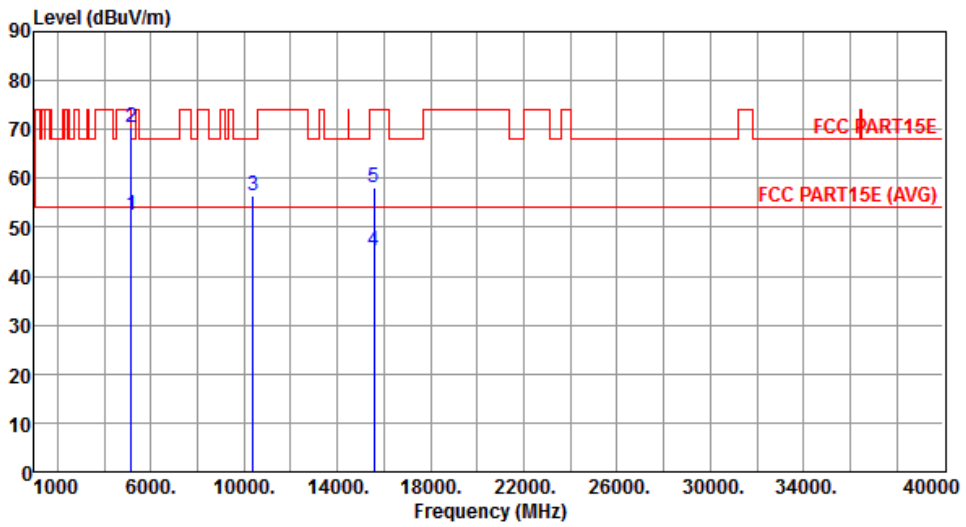
Modulation	VHT40	**Test Freq. (MHz)**	5190
Polarization	Horizontal		



	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	5150.00	52.13	54.00	-1.87	46.40	5.73	Average	196	154
2	5150.00	70.23	74.00	-3.77	64.50	5.73	Peak	196	154
3	10380.00	56.82	68.20	-11.38	42.29	14.53	Peak	169	332
4	15570.00	45.06	54.00	-8.94	28.41	16.65	Average	205	284
5	15570.00	57.63	74.00	-16.37	40.98	16.65	Peak	205	284

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).

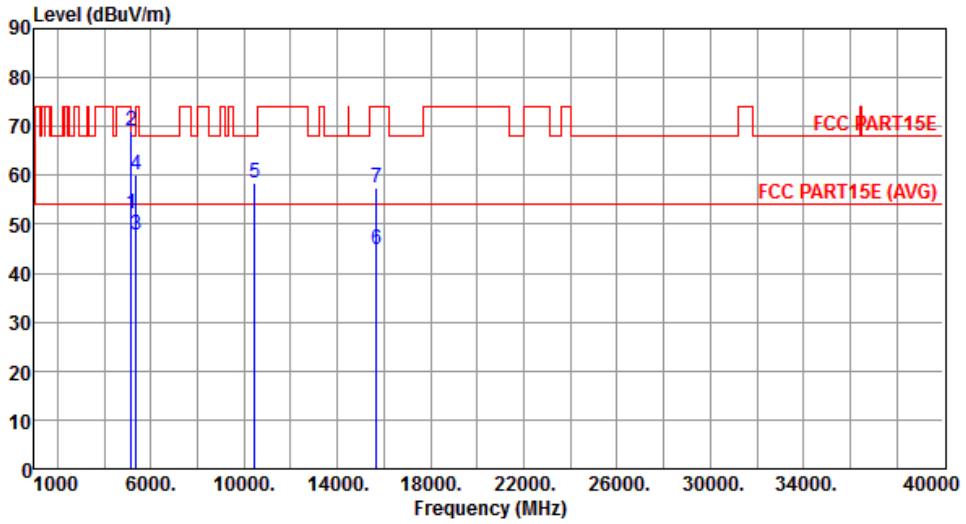
Modulation	VHT40	Test Freq. (MHz)	5190
Polarization	Vertical		



	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	5150.00	52.48	54.00	-1.52	46.75	5.73	Average	189	150
2	5150.00	70.38	74.00	-3.62	64.65	5.73	Peak	189	150
3	10380.00	56.41	68.20	-11.79	41.88	14.53	Peak	172	24
4	15570.00	45.23	54.00	-8.77	28.58	16.65	Average	185	198
5	15570.00	58.09	74.00	-15.91	41.44	16.65	Peak	185	198

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).

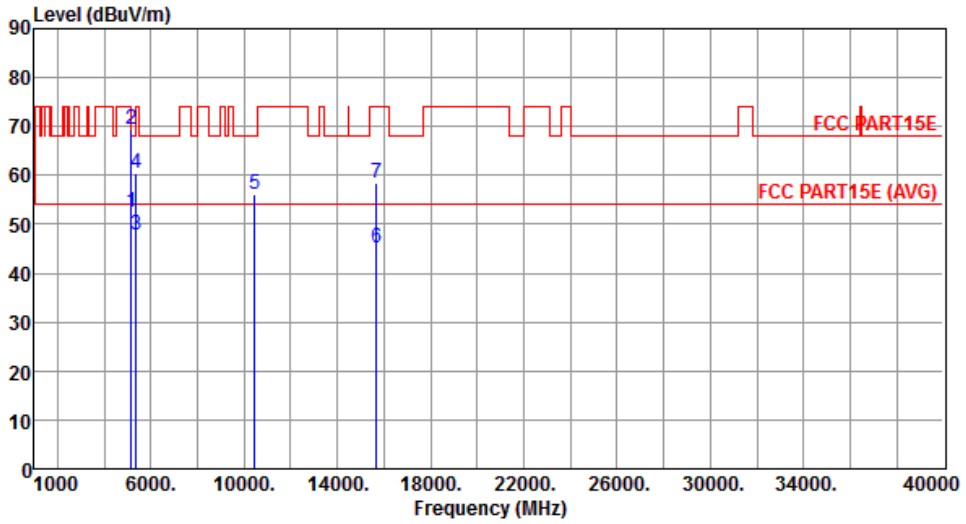
Modulation	VHT40	Test Freq. (MHz)	5230
Polarization	Horizontal		



	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	5150.00	52.25	54.00	-1.75	46.52	5.73	Average	189	188
2	5150.00	69.24	74.00	-4.76	63.51	5.73	Peak	189	188
3	5350.00	47.66	54.00	-6.34	41.70	5.96	Average	189	188
4	5350.00	59.99	74.00	-14.01	54.03	5.96	Peak	189	188
5	10460.00	58.47	68.20	-9.73	43.74	14.73	Peak	176	331
6	15690.00	44.92	54.00	-9.08	28.55	16.37	Average	201	288
7	15690.00	57.60	74.00	-16.40	41.23	16.37	Peak	201	288

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).

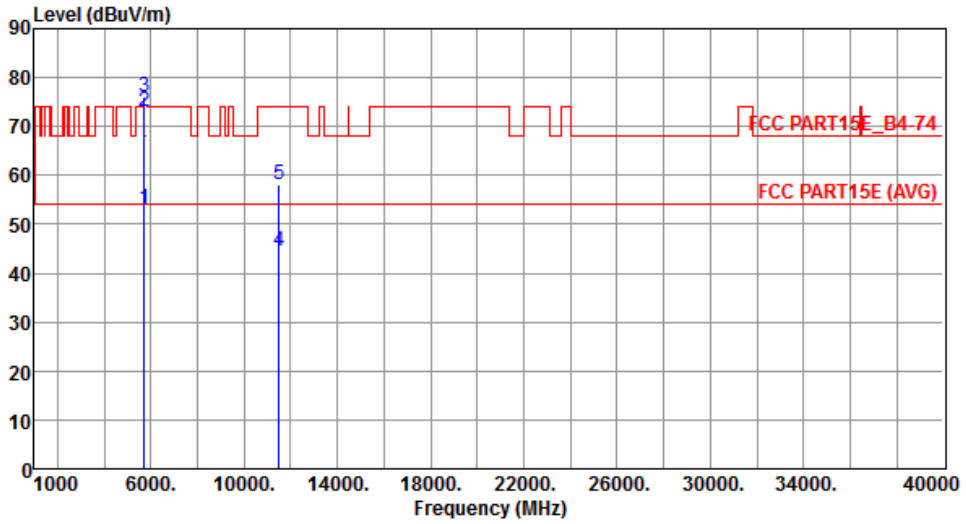
Modulation	VHT40	Test Freq. (MHz)	5230
Polarization	Vertical		



	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	5150.00	52.42	54.00	-1.58	46.69	5.73	Average	169	147
2	5150.00	69.42	74.00	-4.58	63.69	5.73	Peak	169	147
3	5350.00	47.91	54.00	-6.09	41.95	5.96	Average	169	147
4	5350.00	60.54	74.00	-13.46	54.58	5.96	Peak	169	147
5	10460.00	56.02	68.20	-12.18	41.29	14.73	Peak	181	186
6	15690.00	45.30	54.00	-8.70	28.93	16.37	Average	185	193
7	15690.00	58.36	74.00	-15.64	41.99	16.37	Peak	185	193

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).

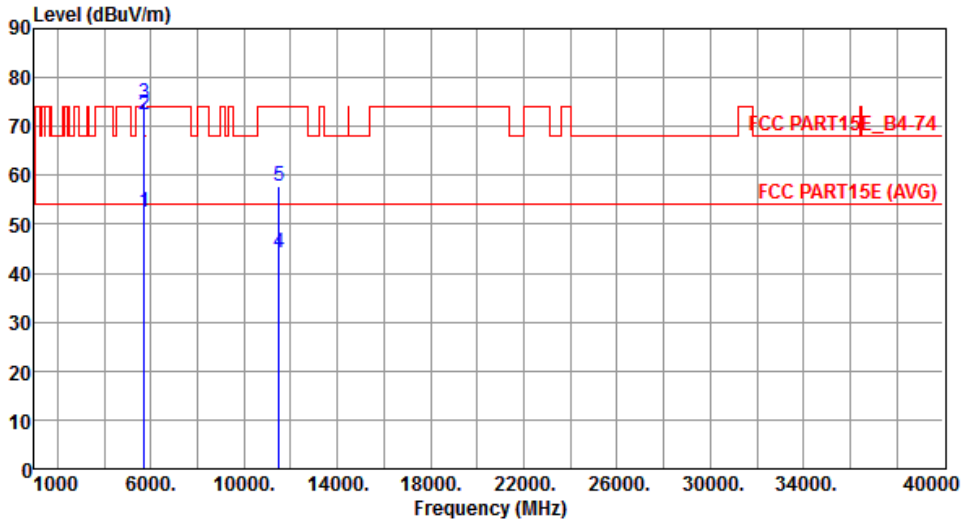
Modulation	VHT40	Test Freq. (MHz)	5755
Polarization	Horizontal		



	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	5715.00	52.98	54.00	-1.02	46.37	6.61	Average	190	156
2	5715.00	72.99	74.00	-1.01	66.38	6.61	Peak	190	156
3	5725.00	76.08	78.20	-2.12	69.46	6.62	Peak	190	156
4	11510.00	44.36	54.00	-9.64	28.35	16.01	Average	179	355
5	11510.00	58.07	74.00	-15.93	42.06	16.01	Peak	179	355

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).

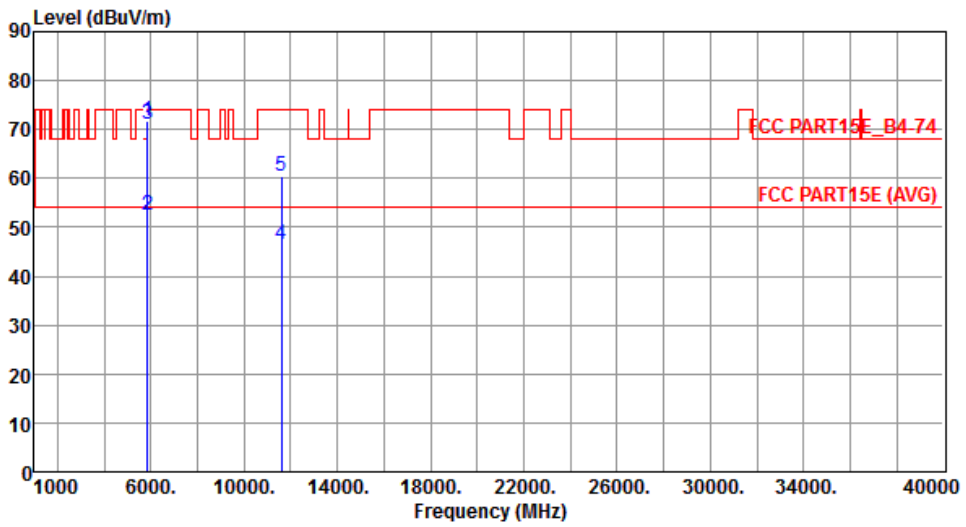
Modulation	VHT40	Test Freq. (MHz)	5755
Polarization	Vertical		



	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	5715.00	52.61	54.00	-1.39	46.00	6.61	Average	178	140
2	5715.00	72.51	74.00	-1.49	65.90	6.61	Peak	178	140
3	5725.00	74.75	78.20	-3.45	68.13	6.62	Peak	178	140
4	11510.00	44.17	54.00	-9.83	28.16	16.01	Average	183	59
5	11510.00	57.70	74.00	-16.30	41.69	16.01	Peak	183	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).

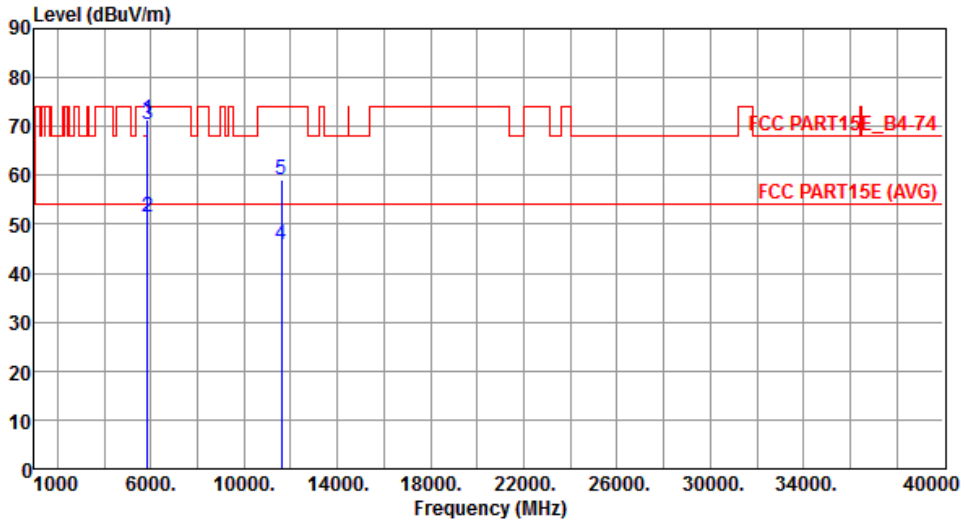
Modulation	VHT40	Test Freq. (MHz)	5795
Polarization	Horizontal		



	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	5850.00	71.82	78.20	-6.38	64.96	6.86	Peak	180	156
2	5860.00	52.60	54.00	-1.40	44.97	7.63	Average	180	156
3	5860.00	71.03	74.00	-2.97	64.16	6.87	Peak	180	156
4	11590.00	46.44	54.00	-7.56	30.55	15.89	Average	178	302
5	11590.00	60.28	74.00	-13.72	44.39	15.89	Peak	178	302

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		

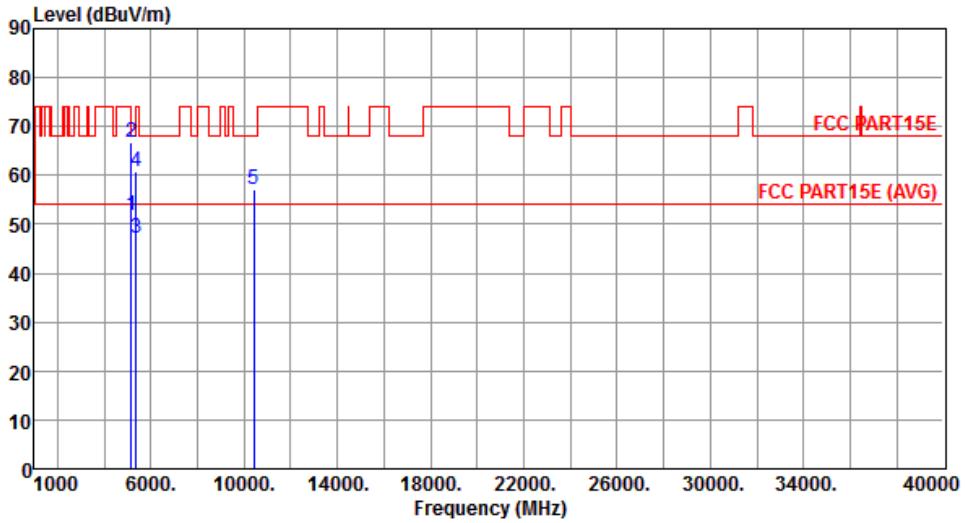


	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	5850.00	71.50	78.20	-6.70	64.64	6.86	Peak	163	147
2	5860.00	51.59	54.00	-2.41	44.72	6.87	Average	163	147
3	5860.00	70.42	74.00	-3.58	63.55	6.87	Peak	163	147
4	11590.00	45.77	54.00	-8.23	29.88	15.89	Average	170	150
5	11590.00	59.18	74.00	-14.82	43.29	15.89	Peak	170	150

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

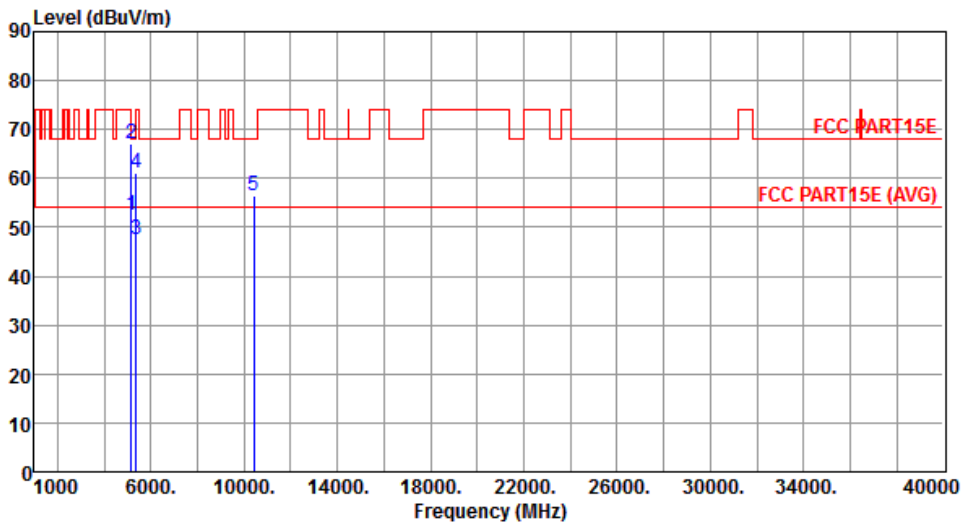
Modulation	VHT80	**Test Freq. (MHz)**	5210
Polarization	Horizontal		



	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	5150.00	51.77	54.00	-2.23	46.04	5.73	Average	210	160
2	5150.00	66.74	74.00	-7.26	61.01	5.73	Peak	210	160
3	5350.00	47.31	54.00	-6.69	41.35	5.96	Average	210	160
4	5350.00	60.85	74.00	-13.15	54.89	5.96	Peak	210	160
5	10420.00	57.21	68.20	-10.99	42.59	14.62	Peak	170	329

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).

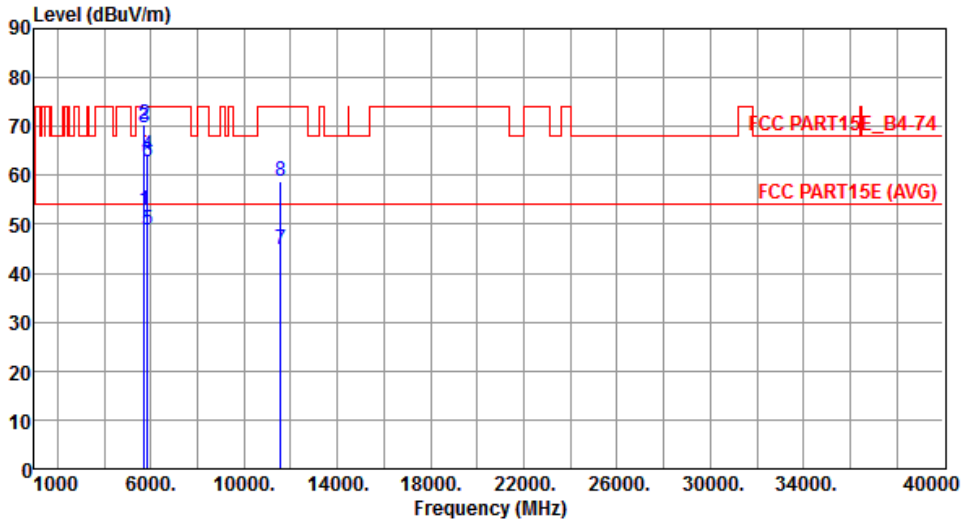
Modulation	VHT80	Test Freq. (MHz)	5210
Polarization	Vertical		



	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	5150.00	52.59	54.00	-1.41	45.47	7.12	Average	159	160
2	5150.00	66.93	74.00	-7.07	61.20	5.73	Peak	159	160
3	5350.00	47.35	54.00	-6.65	41.39	5.96	Average	159	160
4	5350.00	61.00	74.00	-13.00	55.04	5.96	Peak	159	160
5	10420.00	56.56	68.20	-11.64	41.94	14.62	Peak	179	39

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

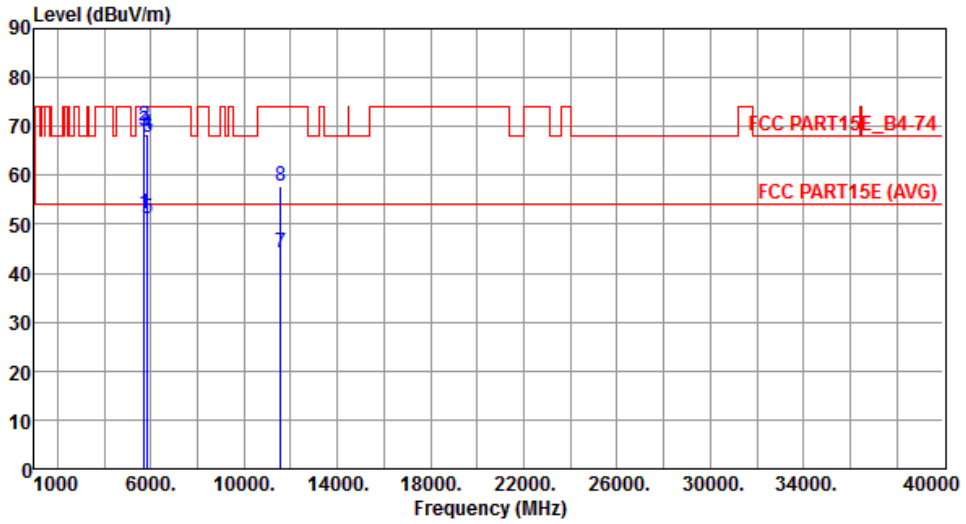
Modulation	VHT80	Test Freq. (MHz)	5775
Polarization	Horizontal		



	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	5715.00	52.69	54.00	-1.31	45.17	7.52	Average	177	163
2	5715.00	70.53	74.00	-3.47	63.92	6.61	Peak	177	163
3	5725.00	69.78	78.20	-8.42	63.16	6.62	Peak	182	156
4	5850.00	64.11	78.20	-14.09	57.25	6.86	Peak	177	163
5	5860.00	48.80	54.00	-5.20	41.93	6.87	Average	177	163
6	5860.00	62.90	74.00	-11.10	56.03	6.87	Peak	177	163
7	11550.00	44.83	54.00	-9.17	28.88	15.95	Average	157	278
8	11550.00	58.84	74.00	-15.16	42.89	15.95	Peak	157	278

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		



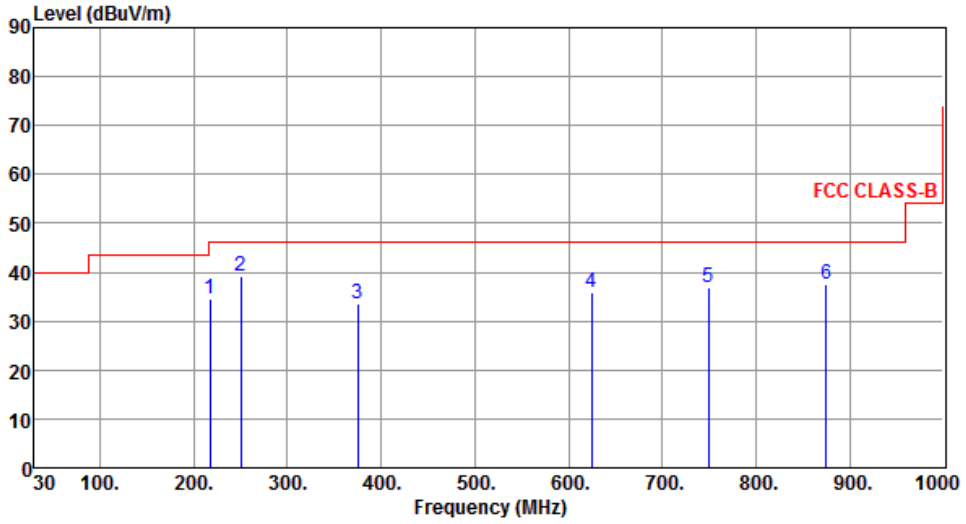
	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	5715.00	52.02	54.00	-1.98	45.41	6.61	Average	169	144
2	5715.00	70.13	74.00	-3.87	63.52	6.61	Peak	169	144
3	5725.00	68.92	78.20	-9.28	62.30	6.62	Peak	169	144
4	5850.00	68.53	78.20	-9.67	61.67	6.86	Peak	168	131
5	5860.00	51.10	54.00	-2.90	44.23	6.87	Average	168	131
6	5860.00	67.76	74.00	-6.24	60.89	6.87	Peak	168	131
7	11550.00	44.04	54.00	-9.96	28.09	15.95	Average	173	34
8	11550.00	57.72	74.00	-16.28	41.77	15.95	Peak	173	34

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

Beamforming mode

3.5.9 Transmitter Radiated Unwanted Emissions (Below 1GHz)

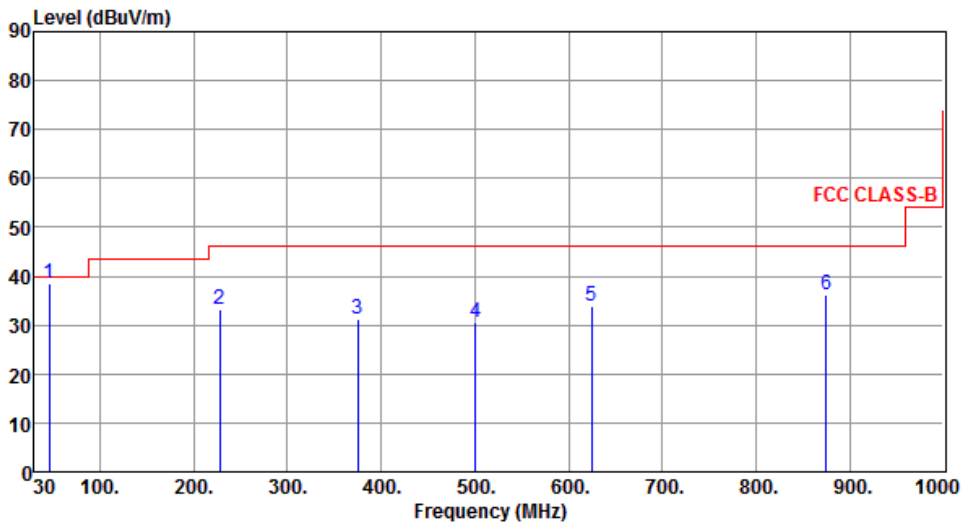
Modulation	VHT20	**Test Freq. (MHz)**	5240
Polarization	Horizontal		



	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	217.21	34.52	46.00	-11.48	48.84	-14.32	Peak	---	---
2	250.19	39.05	46.00	-6.95	51.84	-12.79	Peak	---	---
3	375.32	33.40	46.00	-12.60	42.73	-9.33	Peak	---	---
4	624.61	35.78	46.00	-10.22	40.11	-4.33	Peak	---	---
5	749.74	36.74	46.00	-9.26	39.25	-2.51	Peak	---	---
6	874.87	37.48	46.00	-8.52	38.45	-0.97	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.

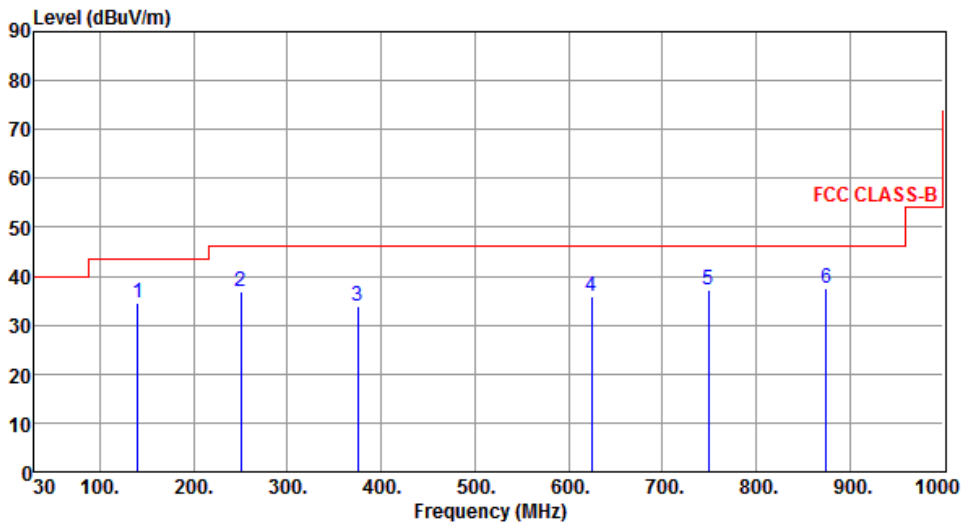
Modulation	VHT20	Test Freq. (MHz)	5240
Polarization	Vertical		



	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	45.52	38.55	40.00	-1.45	50.13	-11.58	QP	---	---
2	227.88	33.07	46.00	-12.93	47.01	-13.94	Peak	---	---
3	375.32	31.12	46.00	-14.88	40.45	-9.33	Peak	---	---
4	500.45	30.51	46.00	-15.49	37.04	-6.53	Peak	---	---
5	624.61	33.92	46.00	-12.08	38.25	-4.33	Peak	---	---
6	874.87	36.21	46.00	-9.79	37.18	-0.97	Peak	---	---

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

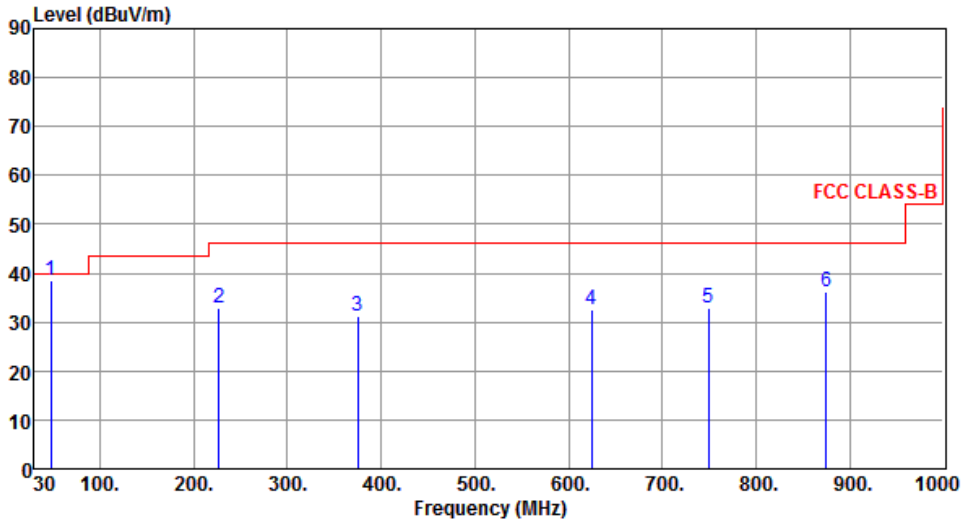
Modulation	VHT20	Test Freq. (MHz)	5785
Polarization	Horizontal		



	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	140.58	34.51	43.50	-8.99	46.74	-12.23	Peak	---	---
2	250.19	37.01	46.00	-8.99	49.80	-12.79	Peak	---	---
3	375.32	33.90	46.00	-12.10	43.23	-9.33	Peak	---	---
4	624.61	35.77	46.00	-10.23	40.10	-4.33	Peak	---	---
5	749.74	37.08	46.00	-8.92	39.59	-2.51	Peak	---	---
6	874.87	37.36	46.00	-8.64	38.33	-0.97	Peak	---	---

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

Modulation	VHT20	Test Freq. (MHz)	5785
Polarization	Vertical		

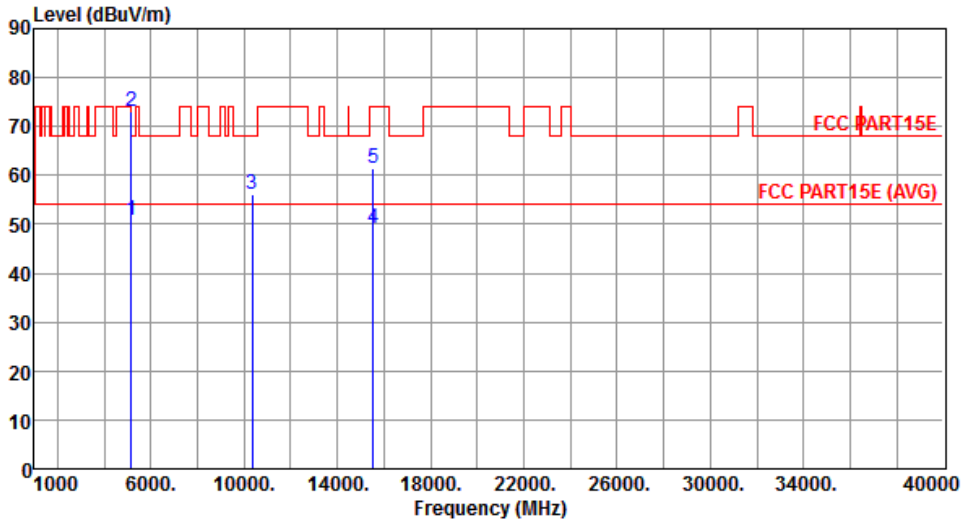


	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	47.46	38.42	40.00	-1.58	50.03	-11.61	QP	---	---
2	226.91	32.82	46.00	-13.18	46.80	-13.98	Peak	---	---
3	375.32	31.05	46.00	-14.95	40.38	-9.33	Peak	---	---
4	624.61	32.48	46.00	-13.52	36.81	-4.33	Peak	---	---
5	749.74	32.98	46.00	-13.02	35.49	-2.51	Peak	---	---
6	874.87	36.34	46.00	-9.66	37.31	-0.97	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

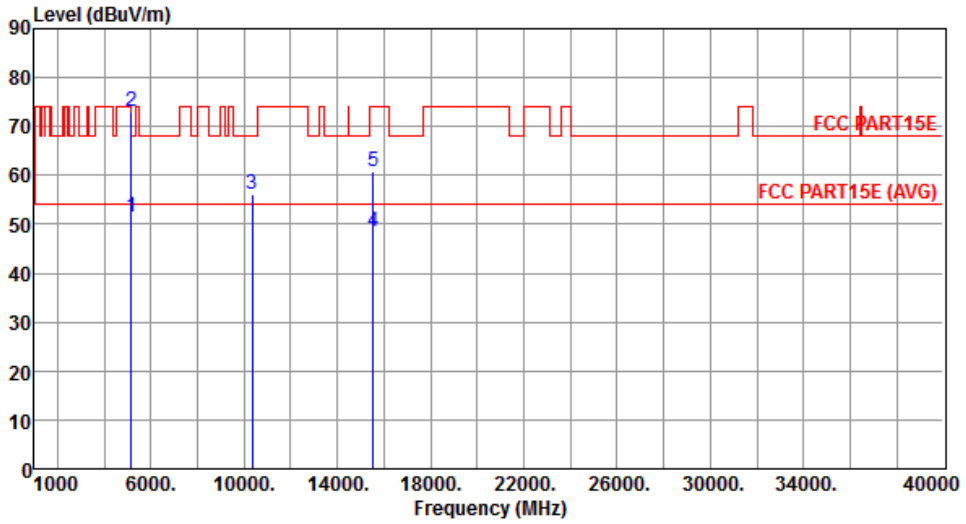
Modulation	VHT20	**Test Freq. (MHz)**	5180
Polarization	Horizontal		



	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	5150.00	50.79	54.00	-3.21	45.06	5.73	Average	286	329
2	5150.00	72.93	74.00	-1.07	67.20	5.73	Peak	286	329
3	10360.00	56.12	68.20	-12.08	41.63	14.49	Peak	236	68
4	15540.00	49.04	54.00	-4.96	32.34	16.70	Average	301	322
5	15540.00	61.33	74.00	-12.67	44.63	16.70	Peak	301	322

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).

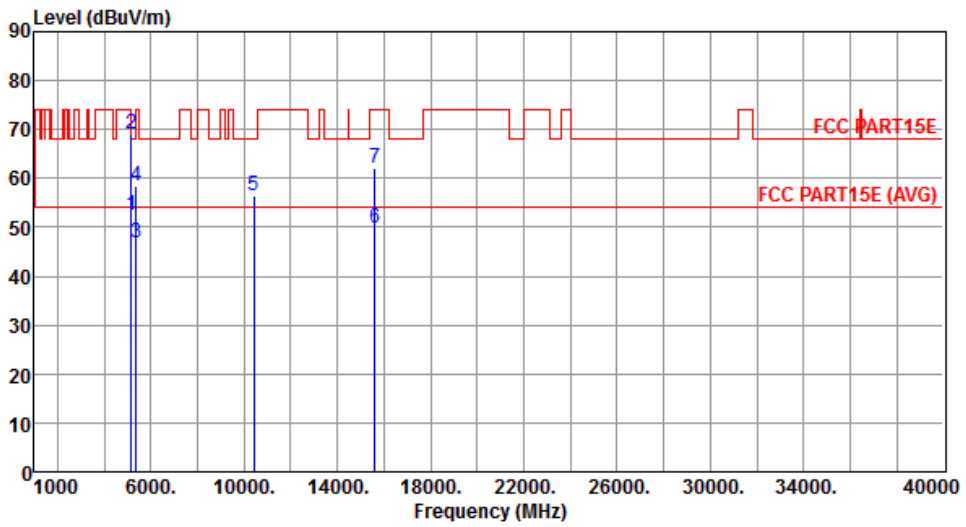
Modulation	VHT20	Test Freq. (MHz)	5180
Polarization	Vertical		



	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	5150.00	51.57	54.00	-2.43	45.84	5.73	Average	154	350
2	5150.00	72.98	74.00	-1.02	67.25	5.73	Peak	154	350
3	10360.00	56.04	68.20	-12.16	41.55	14.49	Peak	293	7
4	15540.00	48.62	54.00	-5.38	31.92	16.70	Average	261	24
5	15540.00	60.75	74.00	-13.25	44.05	16.70	Peak	261	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).

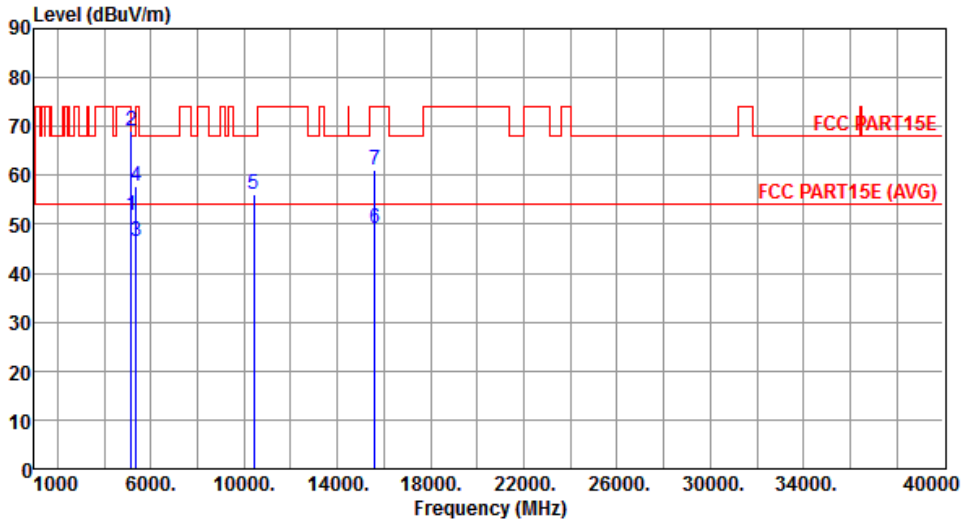
Modulation	VHT20	Test Freq. (MHz)	5200
Polarization	Horizontal		



	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	5150.00	52.38	54.00	-1.62	46.65	5.73	Average	280	326
2	5150.00	69.18	74.00	-4.82	63.45	5.73	Peak	280	326
3	5350.00	46.77	54.00	-7.23	40.81	5.96	Average	280	326
4	5350.00	58.40	74.00	-15.60	52.44	5.96	Peak	280	326
5	10400.00	56.51	68.20	-11.69	41.93	14.58	Peak	231	64
6	15600.00	49.86	54.00	-4.14	33.28	16.58	Average	306	339
7	15600.00	62.16	74.00	-11.84	45.58	16.58	Peak	306	339

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).

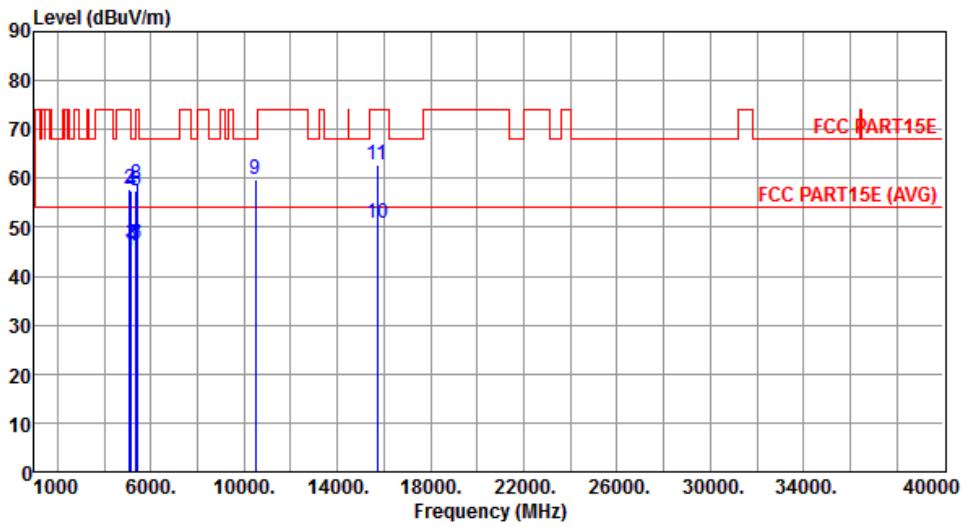
Modulation	VHT20	Test Freq. (MHz)	5200
Polarization	Vertical		



	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	5150.00	51.95	54.00	-2.05	46.22	5.73	Average	267	0
2	5150.00	68.95	74.00	-5.05	63.22	5.73	Peak	267	0
3	5350.00	46.37	54.00	-7.63	40.41	5.96	Average	267	0
4	5350.00	57.84	74.00	-16.16	51.88	5.96	Peak	267	0
5	10400.00	56.27	68.20	-11.93	41.69	14.58	Peak	296	5
6	15600.00	49.21	54.00	-4.79	32.63	16.58	Average	265	29
7	15600.00	61.13	74.00	-12.87	44.55	16.58	Peak	265	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).

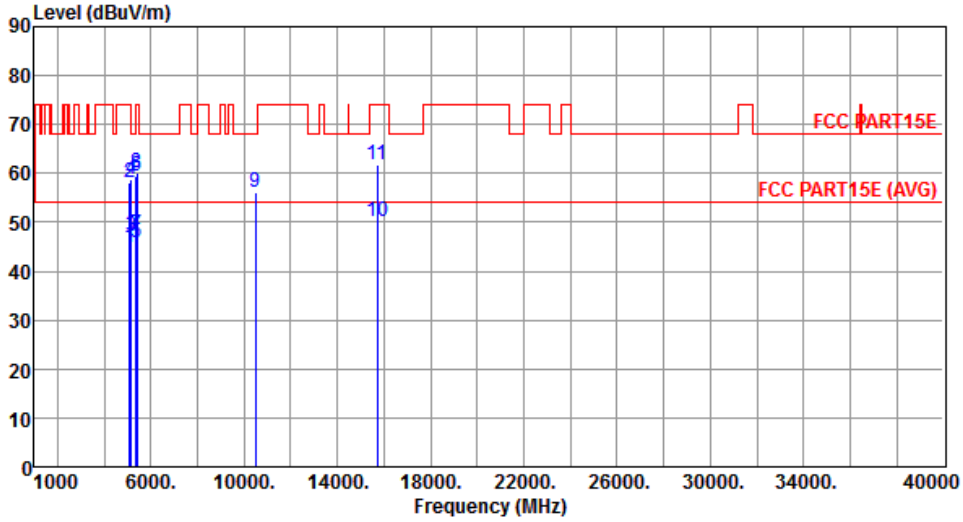
Modulation	VHT20	Test Freq. (MHz)	5240
Polarization	Horizontal		



	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	5080.00	45.29	54.00	-8.71	39.73	5.56	Average	255	324
2	5080.00	57.62	74.00	-16.38	52.06	5.56	Peak	255	324
3	5150.00	46.49	54.00	-7.51	40.76	5.73	Average	255	324
4	5150.00	57.58	74.00	-16.42	51.85	5.73	Peak	255	324
5	5350.00	46.36	54.00	-7.64	40.40	5.96	Average	255	324
6	5350.00	57.37	74.00	-16.63	51.41	5.96	Peak	255	324
7	5400.00	46.27	54.00	-7.73	40.27	6.00	Average	255	324
8	5400.00	58.77	74.00	-15.23	52.77	6.00	Peak	255	324
9	10480.00	59.66	68.20	-8.54	44.88	14.78	Peak	264	64
10	15720.00	50.71	54.00	-3.29	34.40	16.31	Average	328	337
11	15720.00	62.64	74.00	-11.36	46.33	16.31	Peak	328	337

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).

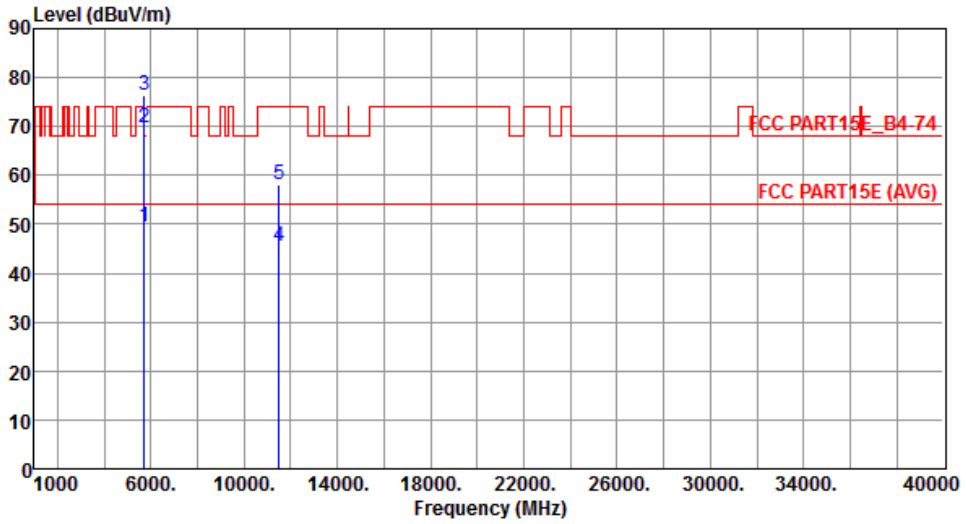
Modulation	VHT20	Test Freq. (MHz)	5240
Polarization	Vertical		



	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	5080.00	44.99	54.00	-9.01	39.43	5.56	Average	183	344
2	5080.00	58.17	74.00	-15.83	52.61	5.56	Peak	183	344
3	5150.00	47.07	54.00	-6.93	41.34	5.73	Average	183	344
4	5150.00	58.81	74.00	-15.19	53.08	5.73	Peak	183	344
5	5350.00	45.72	54.00	-8.28	39.76	5.96	Average	183	344
6	5350.00	59.49	74.00	-14.51	53.53	5.96	Peak	183	344
7	5400.00	47.59	54.00	-6.41	41.59	6.00	Average	183	344
8	5400.00	60.00	74.00	-14.00	54.00	6.00	Peak	183	344
9	10480.00	56.02	68.20	-12.18	41.24	14.78	Peak	302	111
10	15720.00	50.05	54.00	-3.95	33.74	16.31	Average	328	321
11	15720.00	61.87	74.00	-12.13	45.56	16.31	Peak	328	321

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).

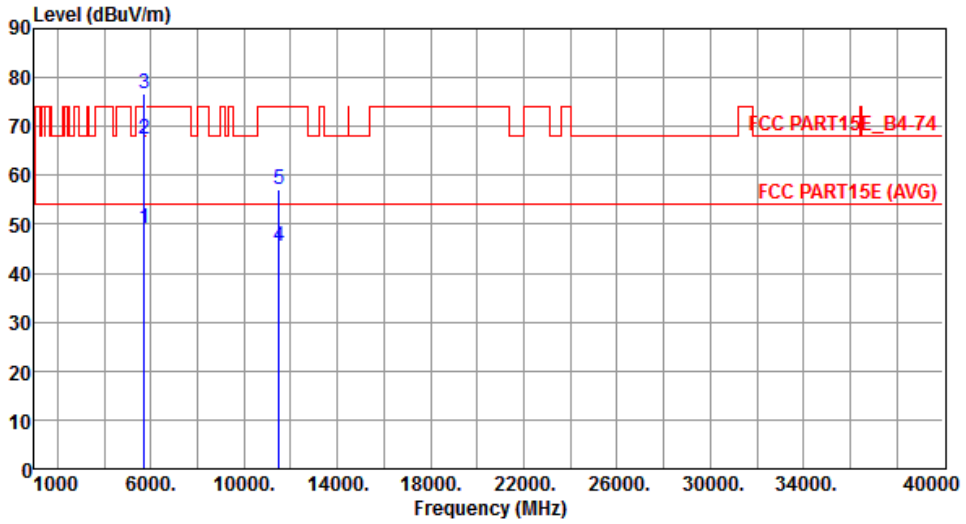
Modulation	VHT20	Test Freq. (MHz)	5745
Polarization	Horizontal		



	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	5715.00	49.56	54.00	-4.44	42.95	6.61	Average	275	212
2	5715.00	69.80	74.00	-4.20	63.19	6.61	Peak	275	212
3	5725.00	76.28	78.20	-1.92	69.66	6.62	Peak	275	212
4	11490.00	45.46	54.00	-8.54	29.43	16.03	Average	218	316
5	11490.00	58.12	74.00	-15.88	42.09	16.03	Peak	218	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).

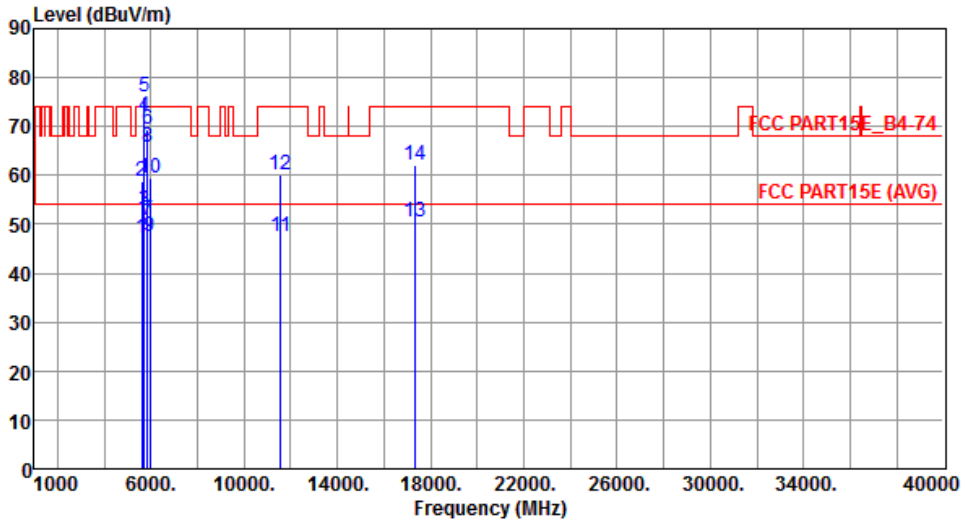
Modulation	VHT20	Test Freq. (MHz)	5745
Polarization	Vertical		



	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	5715.00	49.20	54.00	-4.80	42.59	6.61	Average	250	350
2	5715.00	67.55	74.00	-6.45	60.94	6.61	Peak	250	350
3	5725.00	76.83	78.20	-1.37	70.21	6.62	Peak	250	350
4	11490.00	45.52	54.00	-8.48	29.49	16.03	Average	284	324
5	11490.00	56.98	74.00	-17.02	40.95	16.03	Peak	284	324

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).

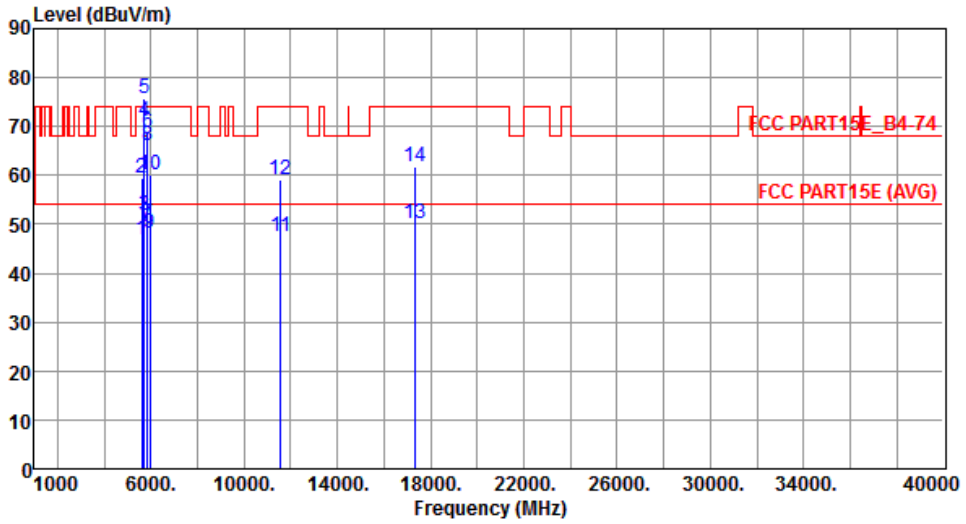
Modulation	VHT20	Test Freq. (MHz)	5785
Polarization	Horizontal		



	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	5625.00	47.22	54.00	-6.78	40.79	6.43	Average	360	320
2	5625.00	58.91	74.00	-15.09	52.48	6.43	Peak	360	320
3	5715.00	52.96	54.00	-1.04	46.35	6.61	Average	273	319
4	5715.00	72.03	74.00	-1.97	65.42	6.61	Peak	273	319
5	5725.00	76.08	78.20	-2.12	69.46	6.62	Peak	273	319
6	5850.00	69.35	78.20	-8.85	62.49	6.86	Peak	273	319
7	5860.00	50.75	54.00	-3.25	43.88	6.87	Average	273	319
8	5860.00	65.65	74.00	-8.35	58.78	6.87	Peak	273	319
9	5945.00	47.45	54.00	-6.55	40.44	7.01	Average	295	58
10	5945.00	59.40	74.00	-14.60	52.39	7.01	Peak	295	58
11	11570.00	47.41	54.00	-6.59	31.49	15.92	Average	213	319
12	11570.00	59.95	74.00	-14.05	44.03	15.92	Peak	213	319
13	17355.00	50.60	54.00	-3.40	28.91	21.69	Average	197	352
14	17355.00	62.16	74.00	-11.84	40.47	21.69	Peak	197	352

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).

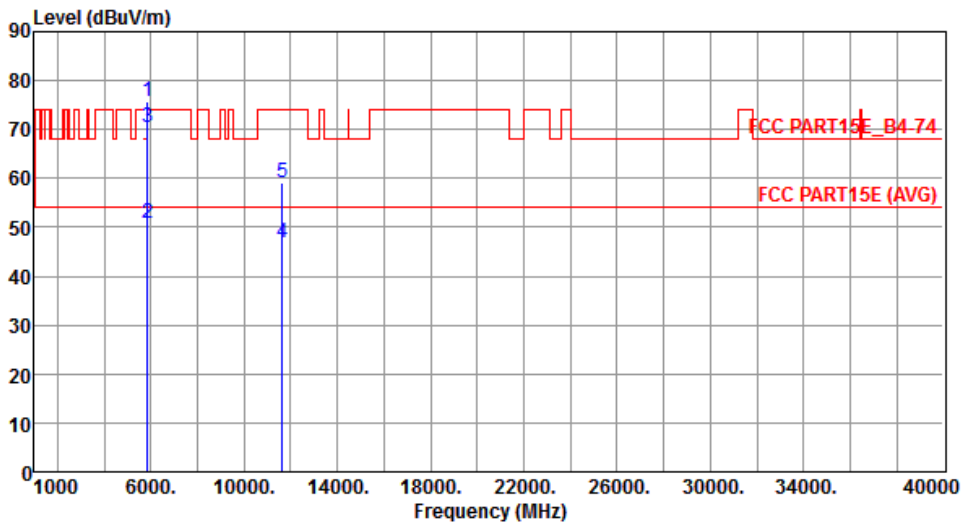
Modulation	VHT20	Test Freq. (MHz)	5785
Polarization	Vertical		



	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	5625.00	46.88	54.00	-7.12	40.45	6.43	Average	156	292
2	5625.00	59.51	74.00	-14.49	53.08	6.43	Peak	156	292
3	5715.00	51.74	54.00	-2.26	45.13	6.61	Average	303	340
4	5715.00	71.03	74.00	-2.97	64.42	6.61	Peak	303	340
5	5725.00	75.69	78.20	-2.51	69.07	6.62	Peak	303	340
6	5850.00	68.75	78.20	-9.45	61.89	6.86	Peak	160	282
7	5860.00	50.12	54.00	-3.88	43.25	6.87	Average	160	282
8	5860.00	66.08	74.00	-7.92	59.21	6.87	Peak	160	282
9	5945.00	48.23	54.00	-5.77	41.22	7.01	Average	389	124
10	5945.00	60.19	74.00	-13.81	53.18	7.01	Peak	389	124
11	11570.00	47.47	54.00	-6.53	31.55	15.92	Average	280	337
12	11570.00	59.18	74.00	-14.82	43.26	15.92	Peak	280	337
13	17355.00	50.26	54.00	-3.74	28.57	21.69	Average	215	300
14	17355.00	61.93	74.00	-12.07	40.24	21.69	Peak	215	300

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

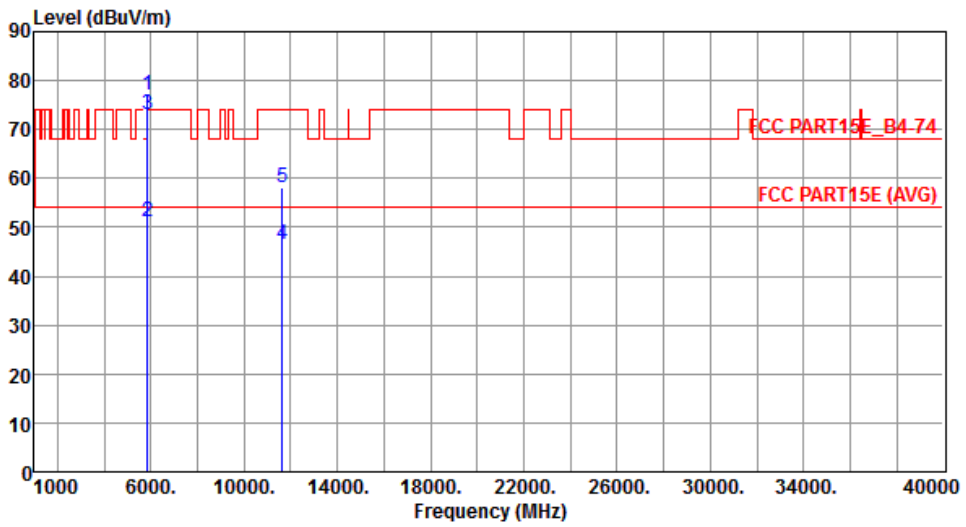
Modulation	VHT20	Test Freq. (MHz)	5825
Polarization	Horizontal		



	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	5850.00	75.87	78.20	-2.33	69.01	6.86	Peak	273	335
2	5860.00	50.95	54.00	-3.05	44.08	6.87	Average	273	335
3	5860.00	70.42	74.00	-3.58	63.55	6.87	Peak	273	335
4	11650.00	46.72	54.00	-7.28	30.92	15.80	Average	210	315
5	11650.00	59.00	74.00	-15.00	43.20	15.80	Peak	210	315

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		

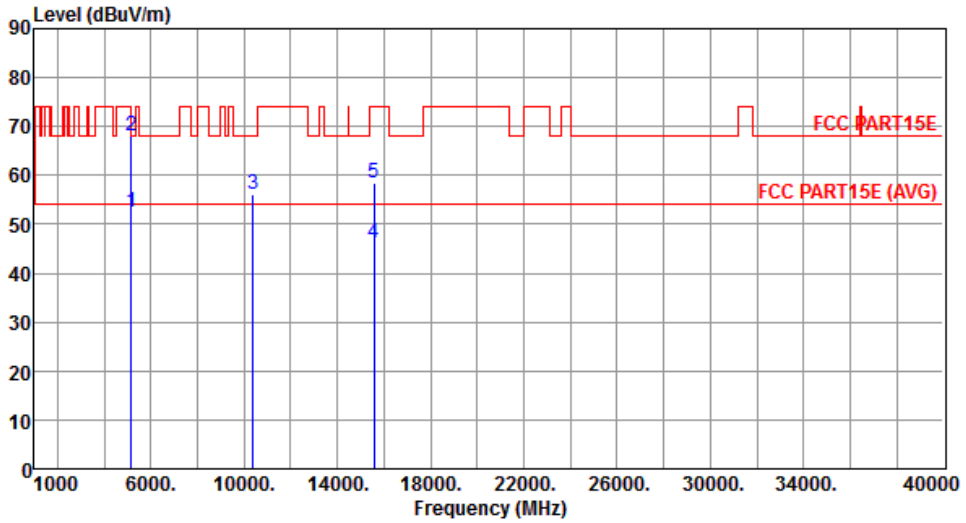


	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	5850.00	77.12	78.20	-1.08	70.26	6.86	Peak	335	132
2	5860.00	50.99	54.00	-3.01	44.12	6.87	Average	335	132
3	5860.00	72.91	74.00	-1.09	66.04	6.87	Peak	335	132
4	11650.00	46.53	54.00	-7.47	30.73	15.80	Average	288	326
5	11650.00	58.24	74.00	-15.76	42.44	15.80	Peak	288	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).

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

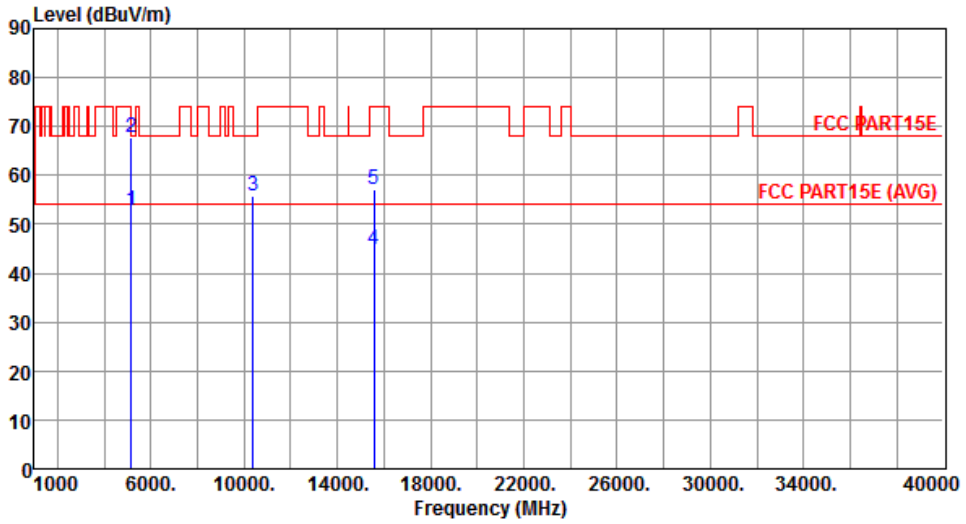
Modulation	VHT40	**Test Freq. (MHz)**	5190
Polarization	Horizontal		



	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	5150.00	52.34	54.00	-1.66	46.61	5.73	Average	326	325
2	5150.00	68.19	74.00	-5.81	62.46	5.73	Peak	326	325
3	10380.00	56.12	68.20	-12.08	41.59	14.53	Peak	278	86
4	15570.00	46.04	54.00	-7.96	29.39	16.65	Average	278	86
5	15570.00	58.36	74.00	-15.64	41.71	16.65	Peak	278	86

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).

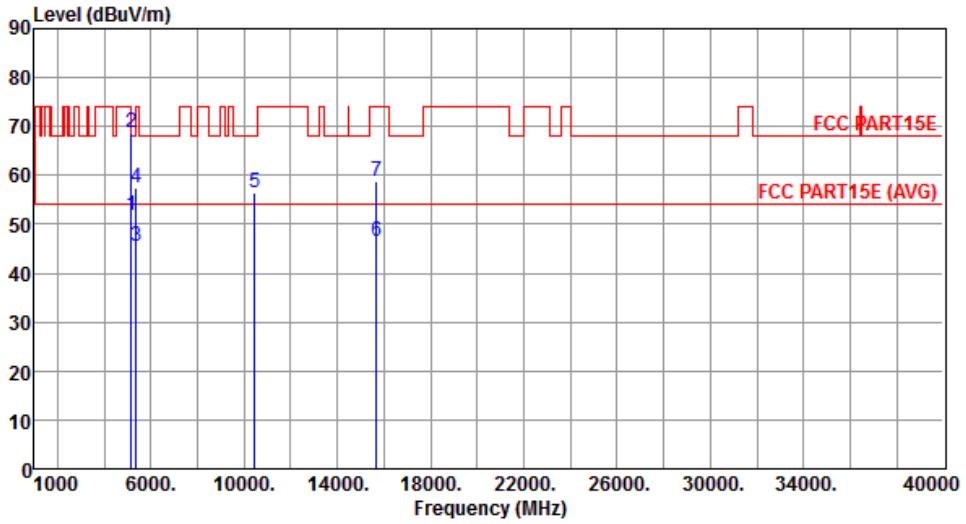
Modulation	VHT40	Test Freq. (MHz)	5190
Polarization	Vertical		



	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	5150.00	52.66	54.00	-1.34	46.93	5.73	Average	314	313
2	5150.00	67.66	74.00	-6.34	61.93	5.73	Peak	314	313
3	10380.00	55.78	68.20	-12.42	41.25	14.53	Peak	281	13
4	15570.00	44.92	54.00	-9.08	28.27	16.65	Average	262	338
5	15570.00	57.13	74.00	-16.87	40.48	16.65	Peak	262	338

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).

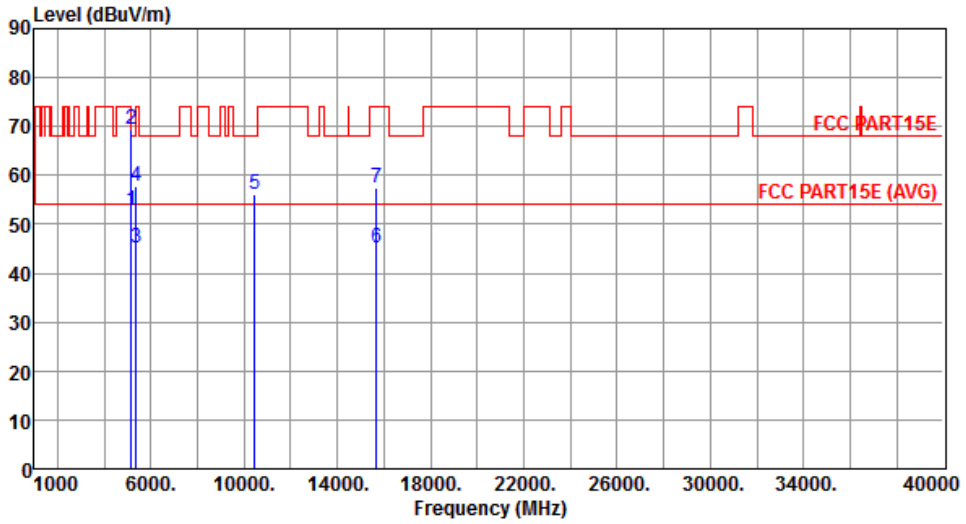
Modulation	VHT40	Test Freq. (MHz)	5230
Polarization	Horizontal		



	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	5150.00	51.89	54.00	-2.11	46.16	5.73	Average	256	329
2	5150.00	68.69	74.00	-5.31	62.96	5.73	Peak	256	329
3	5350.00	45.49	54.00	-8.51	39.53	5.96	Average	256	329
4	5350.00	57.44	74.00	-16.56	51.48	5.96	Peak	256	329
5	10460.00	56.50	68.20	-11.70	41.77	14.73	Peak	271	84
6	15690.00	46.54	54.00	-7.46	30.17	16.37	Average	241	322
7	15690.00	58.87	74.00	-15.13	42.50	16.37	Peak	241	322

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).

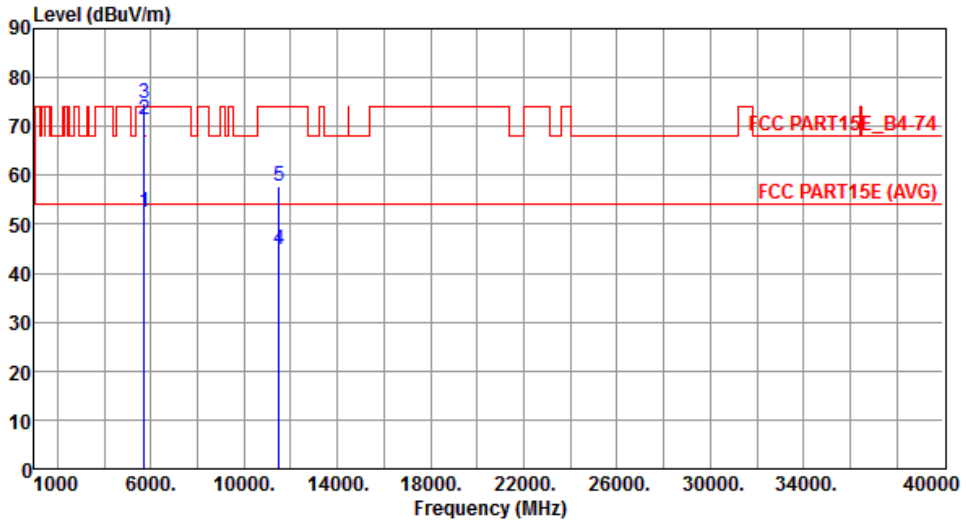
Modulation	VHT40	Test Freq. (MHz)	5230
Polarization	Vertical		



	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	5150.00	52.87	54.00	-1.13	47.14	5.73	Average	270	355
2	5150.00	69.42	74.00	-4.58	63.69	5.73	Peak	270	355
3	5350.00	45.21	54.00	-8.79	39.25	5.96	Average	270	355
4	5350.00	57.79	74.00	-16.21	51.83	5.96	Peak	270	355
5	10460.00	56.22	68.20	-11.98	41.49	14.73	Peak	284	8
6	15690.00	45.27	54.00	-8.73	28.90	16.37	Average	269	340
7	15690.00	57.61	74.00	-16.39	41.24	16.37	Peak	269	340

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).

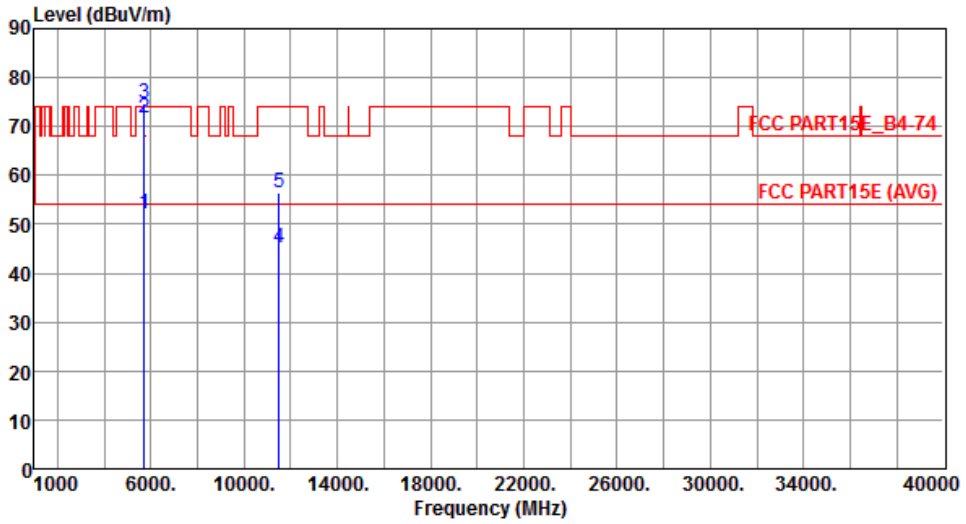
Modulation	VHT40	Test Freq. (MHz)	5755
Polarization	Horizontal		



	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	5715.00	52.31	54.00	-1.69	45.70	6.61	Average	258	323
2	5715.00	71.24	74.00	-2.76	64.63	6.61	Peak	258	323
3	5725.00	74.68	78.20	-3.52	68.06	6.62	Peak	258	323
4	11510.00	44.98	54.00	-9.02	28.97	16.01	Average	213	313
5	11510.00	57.71	74.00	-16.29	41.70	16.01	Peak	213	313

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).

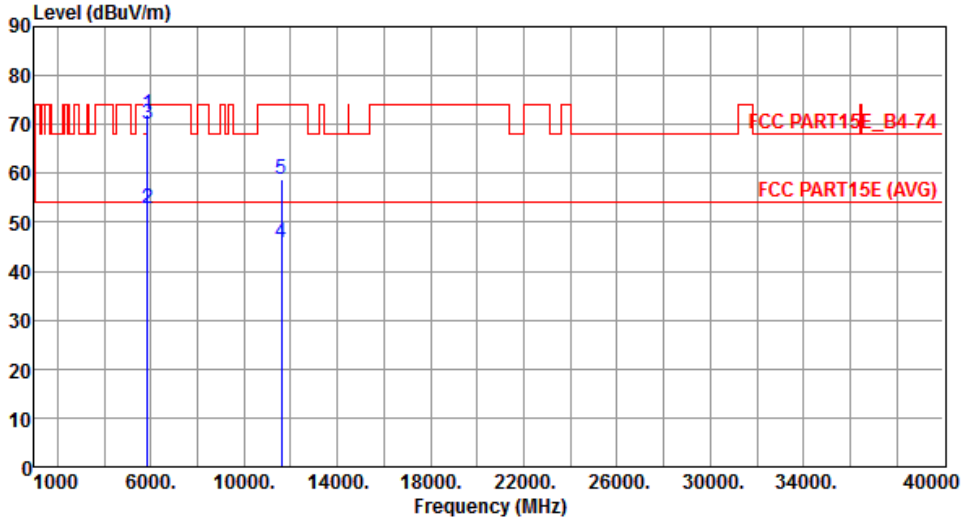
Modulation	VHT40	Test Freq. (MHz)	5755
Polarization	Vertical		



	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	5715.00	52.26	54.00	-1.74	45.65	6.61	Average	288	321
2	5715.00	71.63	74.00	-2.37	65.02	6.61	Peak	288	321
3	5725.00	74.67	78.20	-3.53	68.05	6.62	Peak	248	329
4	11510.00	45.21	54.00	-8.79	29.20	16.01	Average	288	321
5	11510.00	56.52	74.00	-17.48	40.51	16.01	Peak	288	321

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).

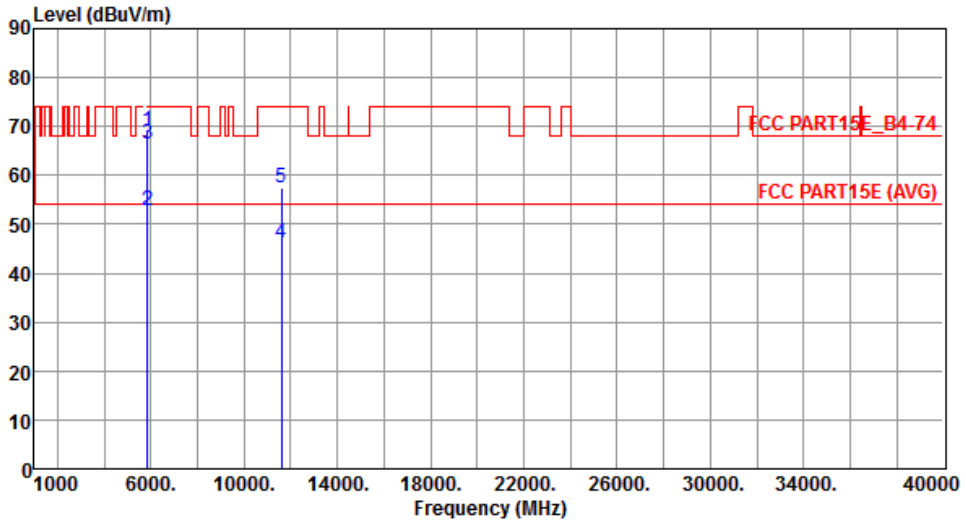
Modulation	VHT40	Test Freq. (MHz)	5795
Polarization	Horizontal		



	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	5850.00	72.11	78.20	-6.09	65.25	6.86	Peak	151	50
2	5860.00	52.81	54.00	-1.19	45.94	6.87	Average	150	50
3	5860.00	69.99	74.00	-4.01	63.12	6.87	Peak	150	50
4	11590.00	45.87	54.00	-8.13	29.98	15.89	Average	218	311
5	11590.00	58.65	74.00	-15.35	42.76	15.89	Peak	218	313

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		

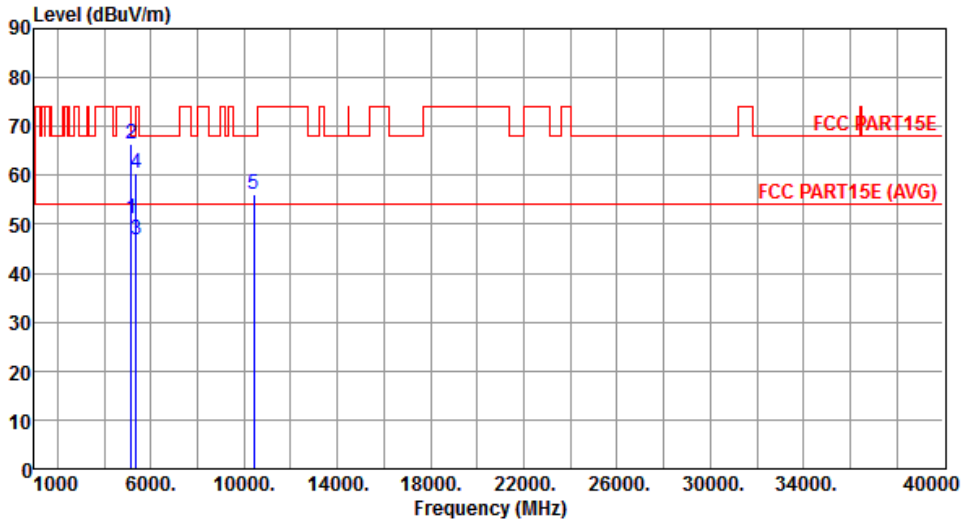


	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	5850.00	69.10	78.20	-9.10	62.24	6.86	Peak	219	324
2	5860.00	52.79	54.00	-1.21	45.92	6.87	Average	219	324
3	5860.00	66.33	74.00	-7.67	59.46	6.87	Peak	219	324
4	11590.00	46.08	54.00	-7.92	30.19	15.89	Average	281	329
5	11590.00	57.33	74.00	-16.67	41.44	15.89	Peak	281	329

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

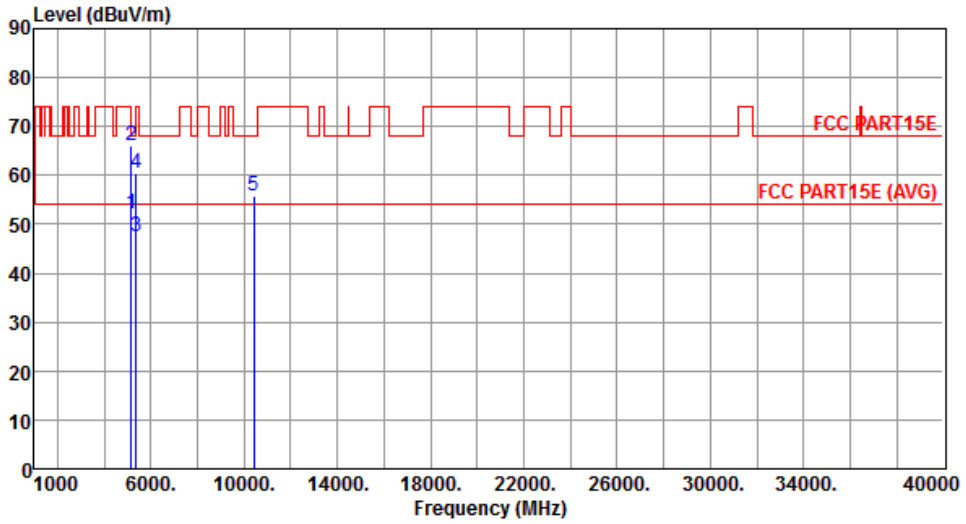
Modulation	VHT80	**Test Freq. (MHz)**	5210
Polarization	Horizontal		



	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	5150.00	51.29	54.00	-2.71	45.56	5.73	Average	301	320
2	5150.00	66.40	74.00	-7.60	60.67	5.73	Peak	301	320
3	5350.00	46.68	54.00	-7.32	40.72	5.96	Average	301	320
4	5350.00	60.48	74.00	-13.52	54.52	5.96	Peak	301	320
5	10420.00	56.24	68.20	-11.96	41.62	14.62	Peak	271	84

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).

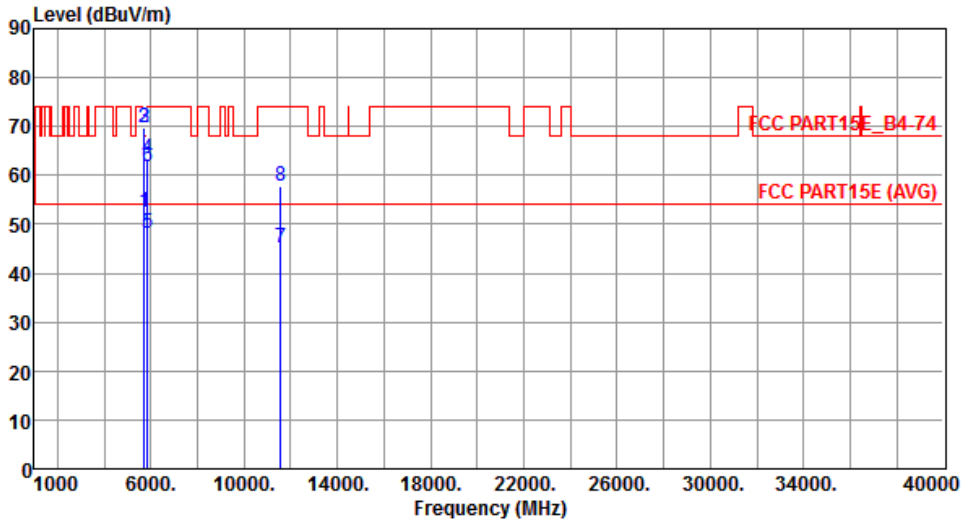
Modulation	VHT80	Test Freq. (MHz)	5210
Polarization	Vertical		



	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	5150.00	52.18	54.00	-1.82	46.45	5.73	Average	350	315
2	5150.00	66.07	74.00	-7.93	60.34	5.73	Peak	350	315
3	5350.00	47.55	54.00	-6.45	41.59	5.96	Average	159	337
4	5350.00	60.57	74.00	-13.43	54.61	5.96	Peak	159	337
5	10420.00	55.95	68.20	-12.25	41.33	14.62	Peak	288	19

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).

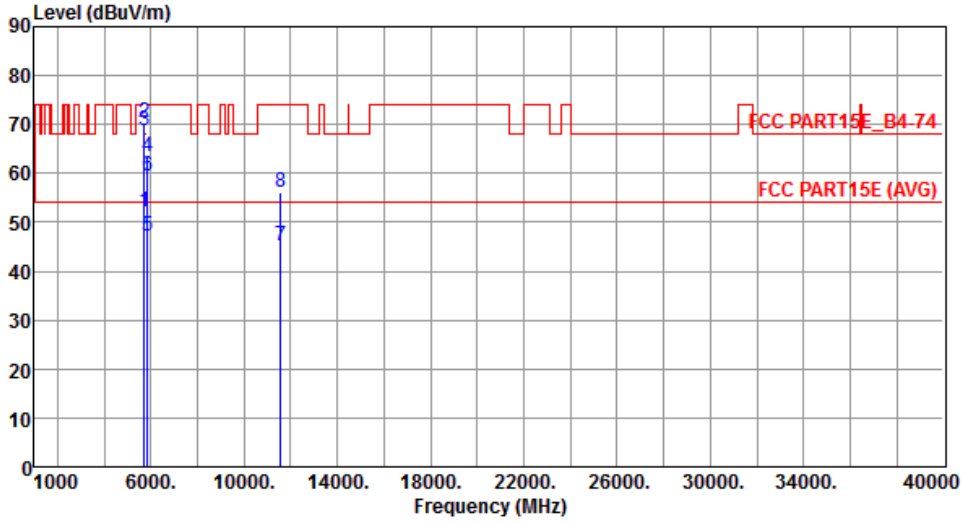
Modulation	VHT80	Test Freq. (MHz)	5775
Polarization	Horizontal		



	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	5715.00	52.34	54.00	-1.66	45.73	6.61	Average	254	331
2	5715.00	69.63	74.00	-4.37	63.02	6.61	Peak	254	331
3	5725.00	69.90	78.20	-8.30	63.28	6.62	Peak	254	331
4	5850.00	63.56	78.20	-14.64	56.70	6.86	Peak	284	214
5	5860.00	48.11	54.00	-5.89	41.24	6.87	Average	284	214
6	5860.00	61.65	74.00	-12.35	54.78	6.87	Peak	284	214
7	11550.00	45.13	54.00	-8.87	29.18	15.95	Average	211	319
8	11550.00	57.89	74.00	-16.11	41.94	15.95	Peak	211	319

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	5715.00	51.98	54.00	-2.02	45.37	6.61	Average	176	313
2	5715.00	70.34	74.00	-3.66	63.73	6.61	Peak	176	313
3	5725.00	68.58	78.20	-9.62	61.96	6.62	Peak	176	313
4	5850.00	63.41	78.20	-14.79	56.55	6.86	Peak	176	313
5	5860.00	47.06	54.00	-6.94	40.19	6.87	Average	176	313
6	5860.00	59.38	74.00	-14.62	52.51	6.87	Peak	176	313
7	11550.00	45.05	54.00	-8.95	29.10	15.95	Average	274	315
8	11550.00	56.23	74.00	-17.77	40.28	15.95	Peak	274	315

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

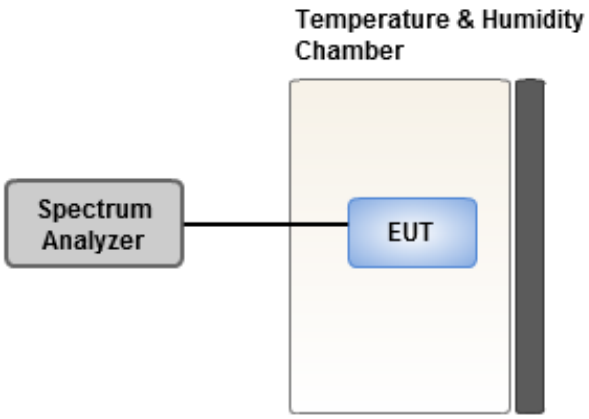
3.6.1 Limit of Frequency Stability

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 50 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 -30 to 50 centigrade and 85 to 115 percent of the nominal voltage. Change setting of chamber and external power source to complete all conditions.

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	-0.04	0.44	0.15	0.12
T20°CVmin	-0.35	-0.05	0.14	0.33
T50°CVnom	1.29	1.50	1.67	1.38
T40°CVnom	0.10	0.86	0.42	0.24
T30°CVnom	0.92	1.42	1.38	1.21
T20°CVnom	-0.30	0.31	-0.05	-0.04
T10°CVnom	0.57	0.93	0.53	0.93
T0°CVnom	-0.07	0.06	0.18	-0.48
T-10°CVnom	0.34	0.63	1.16	0.71
T-20°CVnom	0.04	0.42	0.58	0.43
T-30°CVnom	0.24	-0.10	0.36	0.55
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	4.82	4.77	4.63	4.53
T20°CVmin	3.46	4.05	3.12	3.45
T50°CVnom	4.39	4.39	4.84	4.59
T40°CVnom	2.45	3.07	2.68	2.64
T30°CVnom	2.45	3.09	2.85	2.60
T20°CVnom	2.69	2.59	3.19	2.67
T10°CVnom	2.22	2.08	2.05	2.13
T0°CVnom	2.49	2.10	2.48	3.04
T-10°CVnom	1.48	1.92	1.87	1.60
T-20°CVnom	0.75	0.69	0.85	0.32
T-30°CVnom	1.12	1.58	0.97	1.14
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, 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 Hsiang. 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 Hsiang, Tao Yuan Hsien 333, Taiwan, R.O.C.	No. 14-1, Lane 19, Wen San 3rd St., Kwei Shan Hsiang, Tao Yuan Hsien 333, Taiwan, R.O.C.

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

Tel: 886-3-271-8666
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