

FCC Test Report

FCC ID : 2ADYF-A20
Equipment : 802.11AC Wireless Internet Router
Model No. : A20
Brand Name : Art2Wave
Applicant : Art2Wave Inc
Address : 1901 South Bascom Ave, Suite 1300,
Campbell, CA 95008, USA
Standard : 47 CFR FCC Part 15.407
Received Date : Mar. 19, 2015
Tested Date : Apr. 14 ~ Apr. 27, 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



Table of Contents

1	GENERAL DESCRIPTION	5
1.1	Information.....	5
1.2	Local Support Equipment List	8
1.3	Test Setup Chart	8
1.4	The Equipment List	9
1.5	Testing Applied Standards	10
1.6	Measurement Uncertainty	10
2	TEST CONFIGURATION	10
2.1	Testing Condition	11
2.2	The Worst Test Modes and Channel Details	12
3	TRANSMITTER TEST RESULTS.....	14
3.1	Conducted Emissions.....	14
3.2	Emission Bandwidth	31
3.3	RF Output Power	36
3.4	Peak Power Spectral Density	39
3.5	Transmitter Radiated and Band Edge Emissions	45
3.6	Frequency Stability	124
4	TEST LABORATORY INFORMATION	127

Release Record

Report No.	Version	Description	Issued Date
FR531903AN	Rev. 01	Initial issue	May 25, 2015

Summary of Test Results

FCC Rules	Test Items	Measured	Result
15.207	Conducted Emissions	[dBuV]: 0.434MHz 41.61 (Margin -5.56dB) – AV	Pass
15.407(b) 15.209	Radiated Emissions	[dBuV/m at 3m]: 5000.00MHz 53.00 (Margin -1.00dB) – AV [dBuV/m at 3m]: 5150.00MHz 53.00 (Margin -1.00dB) – AV	Pass
15.407(a)	Emission Bandwidth	Meet the requirement of limit	Pass
15.407(e)	6dB bandwidth	Meet the requirement of limit	Pass
15.407(a)	RF Output Power	Max Power [dBm]: Non-beamforming mode 5150-5250MHz: 17.51 5725-5850MHz: 24.17 Beamforming mode 5150-5250MHz: 14.25 5725-5850MHz: 24.12	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]	1	6-54 Mbps
5150-5250	n (HT20)	5180-5240	36-48 [4]	2	MCS 0-15
5150-5250	n (HT40)	5190-5230	38-46 [2]	2	MCS 0-15
5150-5250	ac (VHT20)	5180-5240	36-48 [4]	2	MCS 0-9
5150-5250	ac (VHT40)	5190-5230	38-46 [2]	2	MCS 0-9
5150-5250	ac (VHT80)	5210	42 [1]	2	MCS 0-9

Note 1: RF output power specifies that Maximum Conducted Output Power.
 Note 2: 802.11a/n/ac uses a combination of OFDM-BPSK, QPSK, 16QAM, 64QAM, 256QAM modulation.
 Note 3: 802.11n/ac supports beamforming mode.

RF General Information					
Frequency Range (MHz)	IEEE Std. 802.11	Ch. Freq. (MHz)	Channel Number	Transmit Chains (N _{TX})	Data Rate / MCS
5725-5850	a	5745-5825	149-165 [5]	1	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 mode.

1.1.2 Antenna Details

Ant. No.	Type	Connector	Operating Frequencies (MHz) / Antenna Gain (dBi)		
			2400~2483.5	5150~5250	5725~5850
1	PIFA	UFL	3.5	5.4	6.2

1.1.3 Power Supply Type of Equipment under Test (EUT)

Power Supply Type	12Vdc from adapter 56Vdc from POE (POE is for support unit only)
-------------------	---

1.1.4 Accessories

Accessories		
No.	Equipment	Description
1	AC Adapter	Brand Name: DVE Model Name: DSA-20CA-12 Power Rating: I/P: 100-240Vac, 50/60Hz, 0.8A O/P: 12Vdc, 1.5A Power Line: 1.5m non-shielded cable w/o core
2	RJ45 cable	1.5m non-shielded cable 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	VHT 80	
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	Hyperterminal, Version: 5.1				
Duty Cycle and Duty Factor	Mode	Non-Beamforming		Beamforming	
		Duty cycle (%)	Duty factor (dB)	Duty cycle (%)	Duty factor (dB)
	11a	99.29%	0.03	---	---
	VHT20	99.26%	0.03	98.10%	0.08
	VHT40	98.23%	0.08	98.47%	0.07
	VHT80	95.27%	0.21	98.07%	0.08

1.1.7 Power Setting

For Frequency band 5150-5250 MHz			
Modulation Mode	Test Frequency (MHz)	Power Set	
		Non-Beamforming	Beamforming
11a	5180	64	---
11a	5200	64	---
11a	5240	64	---
HT20	5180	46	44
HT20	5200	46	44
HT20	5240	46	44
HT40	5190	62	48
HT40	5230	62	48
VHT20	5180	46	44
VHT20	5200	46	44
VHT20	5240	46	44
VHT40	5190	62	48
VHT40	5230	62	48
VHT80	5210	54	46

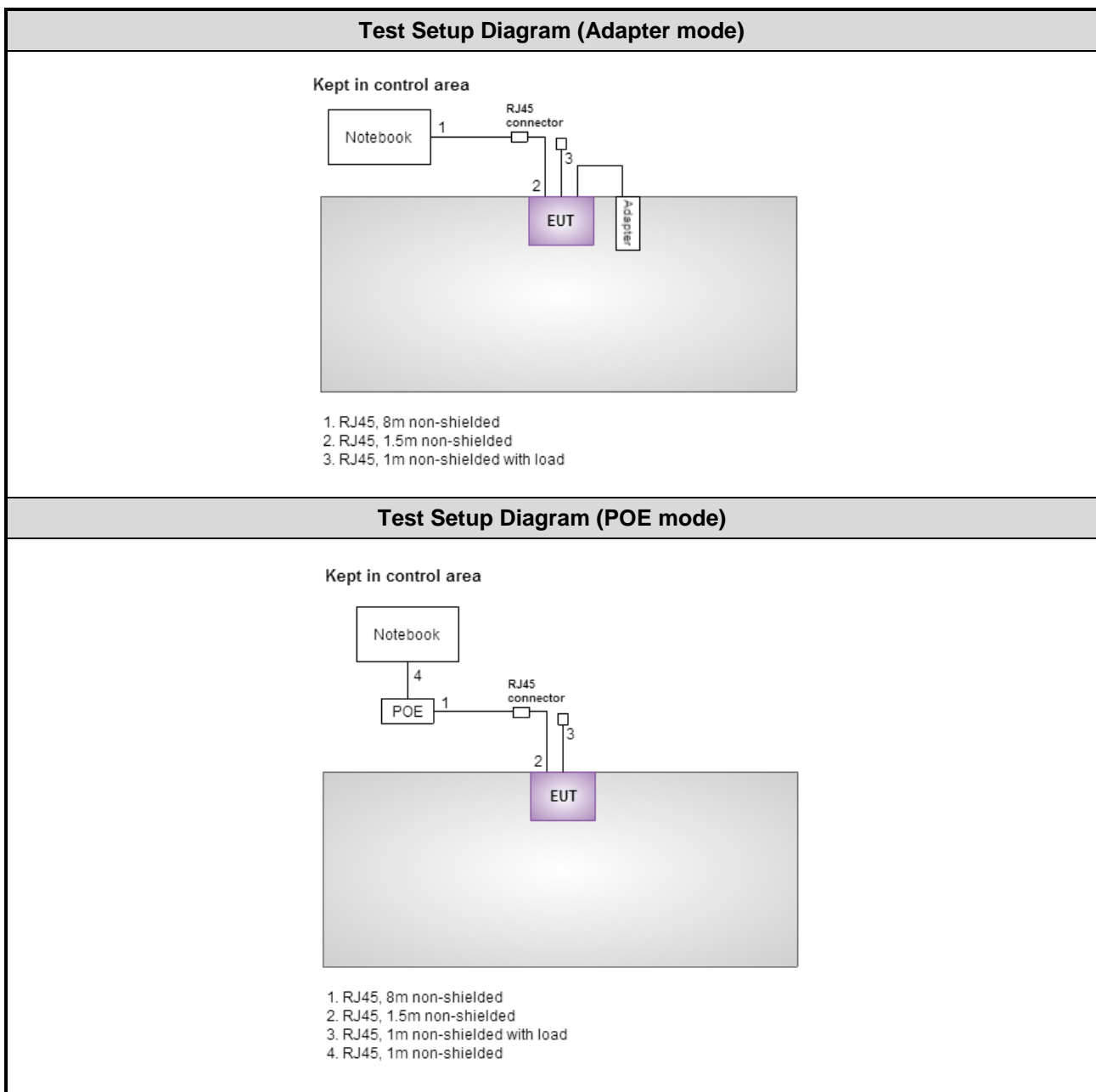
For Frequency band 5725~5850 MHz			
Modulation Mode	Test Frequency (MHz)	Power Set	
		Non-Beamforming	Beamforming
11a	5745	74	---
11a	5785	90	---
11a	5825	86	---
HT20	5745	70	66
HT20	5785	90	90
HT20	5825	84	78
HT40	5755	68	64
HT40	5795	86	82
VHT20	5745	70	66
VHT20	5785	90	90
VHT20	5825	84	78
VHT40	5755	68	64
VHT40	5795	86	82
VHT80	5775	58	56

1.2 Local Support Equipment List

Support Equipment List					
No.	Equipment	Brand	Model	FCC ID	Signal cable / Length (m)
1	Notebook	DELL	Latitude E5420	DoC	RJ45, 8m non-shielded.
2	POE	CISCO	AIR-PWRINJ1500-2	---	RJ45, 8m non-shielded.

Note: POE is provided by applicant.

1.3 Test Setup Chart



1.4 The Equipment List

Test Item	Conducted Emission				
Test Site	Conduction room 1 / (CO01-WS)				
Instrument	Manufacturer	Model No.	Serial No.	Calibration Date	Calibration Until
EMC Receiver	R&S	ESCS 30	100169	Oct. 17, 2014	Oct. 16, 2015
LISN	SCHWARZBECK	Schwarzbeck 8127	8127-667	Nov. 17, 2014	Nov. 16, 2015
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				
Test Site	966 chamber 3 / (03CH03-WS)				
Instrument	Manufacturer	Model No.	Serial No.	Calibration Date	Calibration Until
Spectrum Analyzer	Agilent	N9010A	MY53400091	Sep. 16, 2014	Sep. 15, 2015
Receiver	Agilent	N9038A	MY53290044	Oct. 21, 2014	Oct. 20, 2015
Bilog Antenna	SCHWARZBECK	VULB9168	VULB9168-562	Jan. 19, 2015	Jan. 18, 2016
Horn Antenna 1G-18G	SCHWARZBECK	BBHA 9120 D	BBHA 9120 D 1206	Feb. 03, 2015	Feb. 02, 2016
Horn Antenna 18G-40G	SCHWARZBECK	BBHA 9170	BBHA 9170517	Nov. 10, 2014	Nov. 09, 2015
Loop Antenna	R&S	HFH2-Z2	11900	Nov. 10, 2014	Nov. 09, 2015
Preamplifier	EMC	EMC02325	980187	Sep. 26, 2014	Sep. 25, 2015
Preamplifier	Agilent	83017A	MY53270014	Sep. 17, 2014	Sep. 16, 2015
Preamplifier	EMC	EMC184045B	980192	Aug. 26, 2014	Aug. 25, 2015
RF cable-3M	HUBER+SUHNER	SUCOFLEX104	MY22620/4	Feb. 09, 2015	Feb. 08, 2016
RF cable-8M	HUBER+SUHNER	SUCOFLEX104	MY22601/4	Feb. 09, 2015	Feb. 08, 2016
RF cable-1M	HUBER+SUHNER	SUCOFLEX104	MY22624/4	Feb. 09, 2015	Feb. 08, 2016
LF cable-0.8M	EMC	EMC8D-NM-NM-800	EMC8D-NM-NM-800-001	Feb. 09, 2015	Feb. 08, 2016
LF cable-3M	EMC	EMC8D-NM-NM-3000	131103	Feb. 09, 2015	Feb. 08, 2016
LF cable-13M	EMC	EMC8D-NM-NM-13000	131104	Feb. 09, 2015	Feb. 08, 2016
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)				
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. 29, 2014	Sep. 28, 2015
Power Sensor	Anritsu	MA2411B	1207366	Sep. 29, 2014	Sep. 28, 2015
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 C63.10-2009

FCC 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 v01

Note: FCC's permission to use 1.5m as an alternative per TCBC Conf call of Dec. 02, 2014.

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	±3.99 dB
Radiated emission > 1GHz	±5.52 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	20°C / 66%	Kevin Ma
Radiated Emissions	03CH03-WS	24°C / 61%	Aska Huang Anderson Hung
RF Conducted	TH01-WS	22°C / 61%	Felix Sung

➤ FCC site registration No.: 390588

➤ IC site registration No.: 10807C-1

2.2 The Worst Test Modes and Channel Details

For Frequency band 5150-5250 MHz				
Test item	Modulation Mode	Test Frequency (MHz)	Data Rate (Mbps) / MCS	Test Configuration
Conducted Emissions	VHT40	5230	MCS 0	1, 2, 3, 4
Radiated Emissions ≤1GHz	VHT40	5230	MCS 0	1, 2, 3, 4
RF Output Power	11a	5180 / 5200 / 5240	6 Mbps	1, 3
	HT20	5180 / 5200 / 5240	MCS 0	
	HT40	5190 / 5230	MCS 0	
	VHT20	5180 / 5200 / 5240	MCS 0	
	VHT40	5190 / 5230	MCS 0	
	VHT80	5210	MCS 0	
Radiated Emissions >1GHz Emission Bandwidth Peak Power Spectral Density	11a	5180 / 5200 / 5240	6 Mbps	1
	VHT20	5180 / 5200 / 5240	MCS 0	
	VHT40	5190 / 5230	MCS 0	
	VHT80	5210	MCS 0	
Radiated Emissions >1GHz Emission Bandwidth Peak Power Spectral Density	VHT20	5180 / 5200 / 5240	MCS 0	3
	VHT40	5190 / 5230	MCS 0	
	VHT80	5210	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 X-plane results were found as the worst case and were shown in this report.				
2. Test configurations are listed as below:				
1) Configuration 1: Non-beamforming mode, Adapter mode				
2) Configuration 2: Non-beamforming mode, PoE mode				
3) Configuration 3: Beamforming mode, Adapter mode				
4) Configuration 2: Beamforming mode, PoE mode				

For Frequency band 5725-5850 MHz				
Test item	Modulation Mode	Test Frequency (MHz)	Data Rate (Mbps) / MCS	Test Configuration
Conducted Emissions	VHT20	5785	MCS 0	1, 2, 3, 4
Radiated Emissions ≤1GHz	VHT20	5785	MCS 0	1, 2, 3, 4
RF Output Power	11a	5745 / 5785 / 5825	6 Mbps	1, 3
	HT20	5745 / 5785 / 5825	MCS 0	
	HT40	5755 / 5795	MCS 0	
	VHT20	5745 / 5785 / 5825	MCS 0	
	VHT40	5755 / 5795	MCS 0	
	VHT80	5775	MCS 0	
Radiated Emissions >1GHz	11a	5745 / 5785 / 5825	6 Mbps	1
Emission Bandwidth	VHT20	5745 / 5785 / 5825	MCS 0	
6dB bandwidth	VHT40	5755 / 5795	MCS 0	
Peak Power Spectral Density	VHT80	5775	MCS 0	
Radiated Emissions >1GHz	VHT20	5745 / 5785 / 5825	MCS 0	3
Emission Bandwidth	VHT40	5755 / 5795	MCS 0	
6dB bandwidth	VHT80	5775	MCS 0	
Peak Power Spectral Density				
Frequency Stability	Un-modulation	5785	---	1, 3
NOTE: 1. The EUT was pretested with 3 orientations placed on the table for the radiated emission measurement – X, Y, and Z-plane. The X-plane results were found as the worst case and were shown in this report. 2. Test configurations are listed as below: 1) Configuration 1: Non-beamforming mode, Adapter mode 2) Configuration 2: Non-beamforming mode, PoE mode 3) Configuration 3: Beamforming mode, Adapter mode 4) Configuration 2: Beamforming mode, PoE mode				

3 Transmitter Test Results

3.1 Conducted Emissions

3.1.1 Limit of Conducted Emissions

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

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

3.1.2 Test Procedures

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

3.1.3 Test Setup

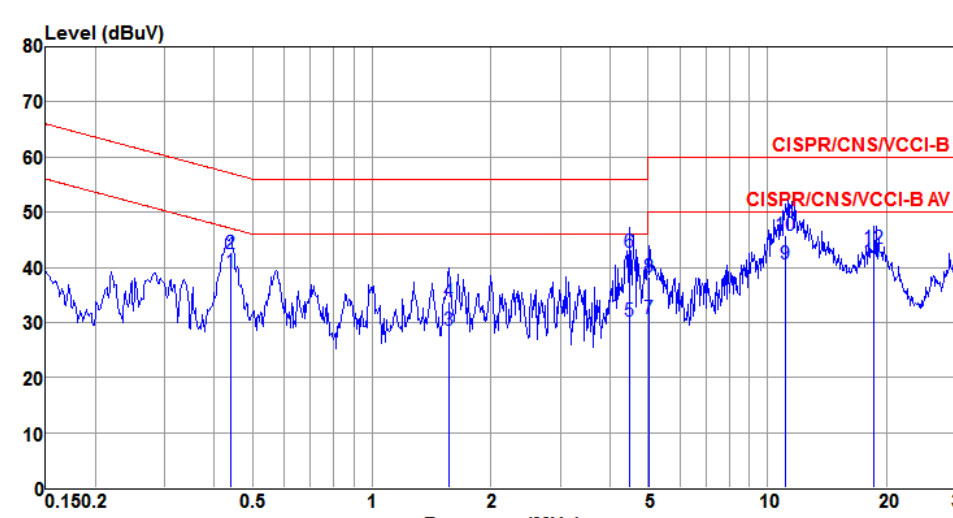


- Note: 1. Support units were connected to second LISN.
2. Both of LISNs (AMN) are 80 cm from EUT and at least 80 cm from other units and other metal planes

3.1.4 Test Result of Conducted Emissions

Non- beamforming mode

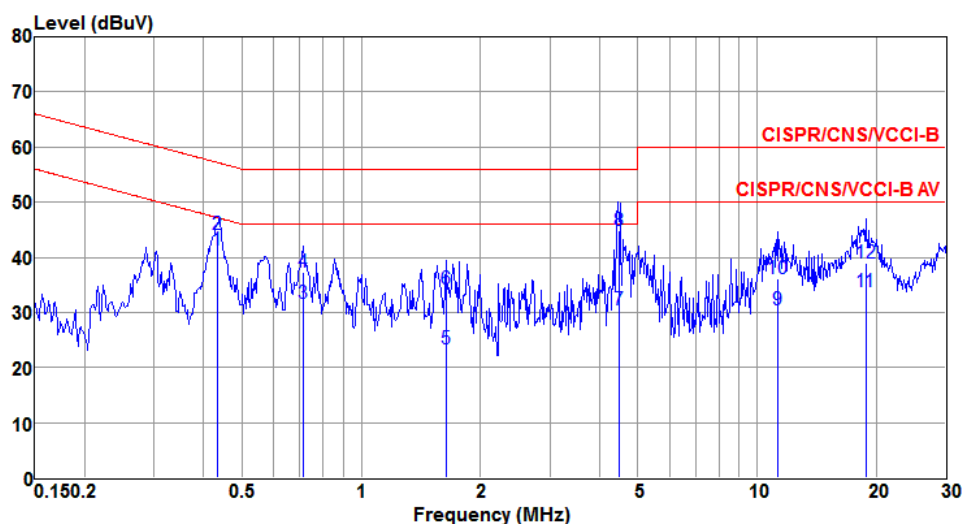
Modulation	VHT40	Test Freq. (MHz)	5230
Power Phase	Line	Test Configuration	1



	Freq MHz	Level dBuV	Limit Line dBuV	Over Limit dB	Read Level dBuV	LISN factor dB	cable loss dB	Remark
1*	0.439	39.12	47.09	-7.97	38.94	0.07	0.11	Average
2	0.439	42.45	57.09	-14.64	42.27	0.07	0.11	QP
3	1.568	28.67	46.00	-17.33	28.37	0.09	0.21	Average
4	1.568	33.76	56.00	-22.24	33.46	0.09	0.21	QP
5	4.478	30.15	46.00	-15.85	29.71	0.13	0.31	Average
6	4.478	42.66	56.00	-13.34	42.22	0.13	0.31	QP
7	5.031	30.80	50.00	-19.20	30.35	0.14	0.31	Average
8	5.031	38.34	60.00	-21.66	37.89	0.14	0.31	QP
9	11.076	40.66	50.00	-9.34	40.15	0.23	0.28	Average
10	11.076	45.78	60.00	-14.22	45.27	0.23	0.28	QP
11	18.571	41.11	50.00	-8.89	40.73	0.31	0.07	Average
12	18.571	43.37	60.00	-16.63	42.99	0.31	0.07	QP

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

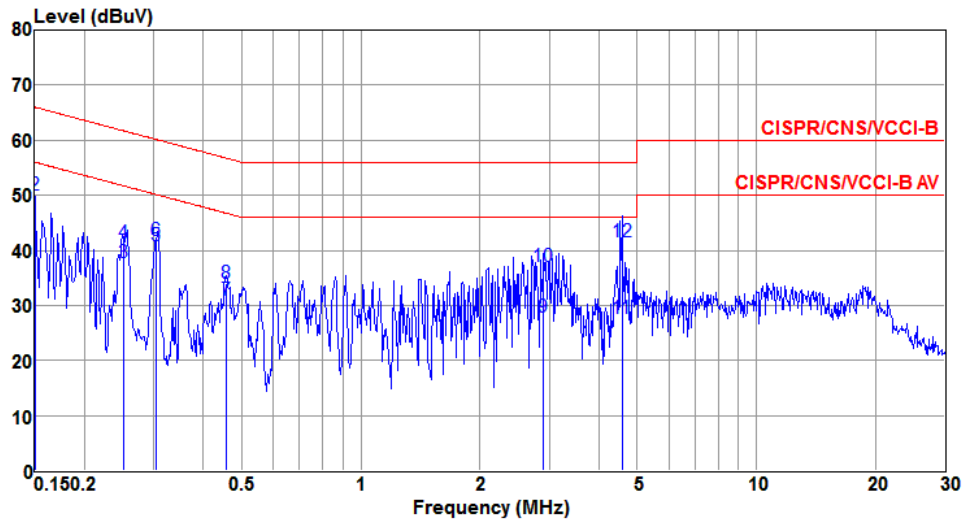
Modulation	VHT40	Test Freq. (MHz)	5230
Power Phase	Neutral	Test Configuration	1



	Freq	Level	Limit	Over	Read	LISN	cable	
	MHz	dBuV	Line	Limit	Level	factor	loss	Remark
			dBuV	dB	dBuV	dB	dB	
1*	0.435	41.21	47.16	-5.95	41.03	0.07	0.11	Average
2	0.435	44.13	57.16	-13.03	43.95	0.07	0.11	QP
3	0.712	31.66	46.00	-14.34	31.44	0.08	0.14	Average
4	0.712	37.29	56.00	-18.71	37.07	0.08	0.14	QP
5	1.636	23.45	46.00	-22.55	23.14	0.09	0.22	Average
6	1.636	34.12	56.00	-21.88	33.81	0.09	0.22	QP
7	4.478	30.42	46.00	-15.58	29.97	0.14	0.31	Average
8	4.478	44.90	56.00	-11.10	44.45	0.14	0.31	QP
9	11.257	30.38	50.00	-19.62	29.86	0.25	0.27	Average
10	11.257	36.17	60.00	-23.83	35.65	0.25	0.27	QP
11	18.820	33.81	50.00	-16.19	33.42	0.33	0.06	Average
12	18.820	38.87	60.00	-21.13	38.48	0.33	0.06	QP

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

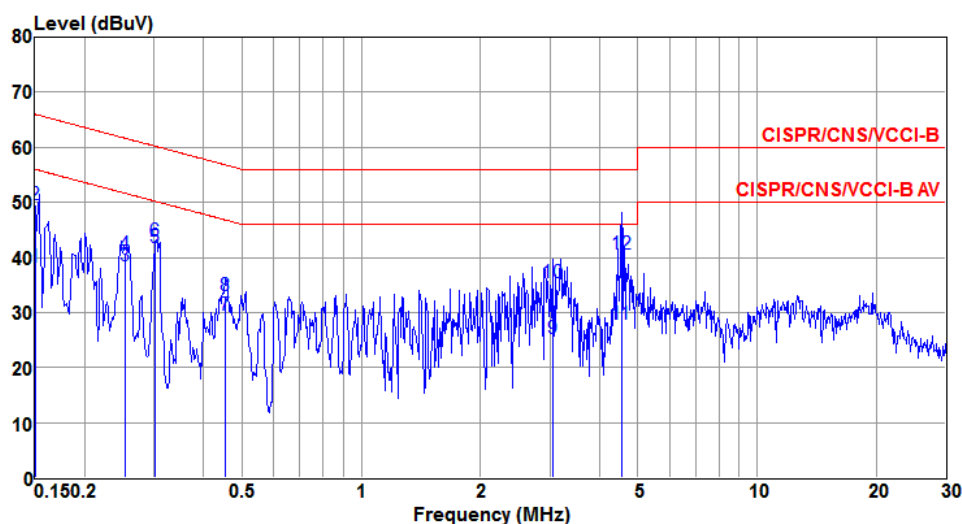
Modulation	VHT20	Test Freq. (MHz)	5785
Power Phase	Line	Test Configuration	1



	Freq MHz	Level dBuV	Limit Line dBuV	Over Limit dB	Read Level dBuV	LISN factor dB	cable loss dB	Remark
1	0.150	38.38	56.00	-17.62	37.38	0.92	0.08	Average
2	0.150	49.96	66.00	-16.04	48.96	0.92	0.08	QP
3	0.252	37.71	51.70	-13.99	37.38	0.23	0.10	Average
4	0.252	41.39	61.70	-20.31	41.06	0.23	0.10	QP
5*	0.304	40.77	50.13	-9.36	40.46	0.21	0.10	Average
6	0.304	41.85	60.13	-18.28	41.54	0.21	0.10	QP
7	0.456	30.81	46.76	-15.95	30.52	0.17	0.12	Average
8	0.456	33.96	56.76	-22.80	33.67	0.17	0.12	QP
9	2.900	27.83	46.00	-18.17	27.12	0.43	0.28	Average
10	2.900	37.06	56.00	-18.94	36.35	0.43	0.28	QP
11	4.574	27.58	46.00	-18.42	26.95	0.32	0.31	Average
12	4.574	41.55	56.00	-14.45	40.92	0.32	0.31	QP

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

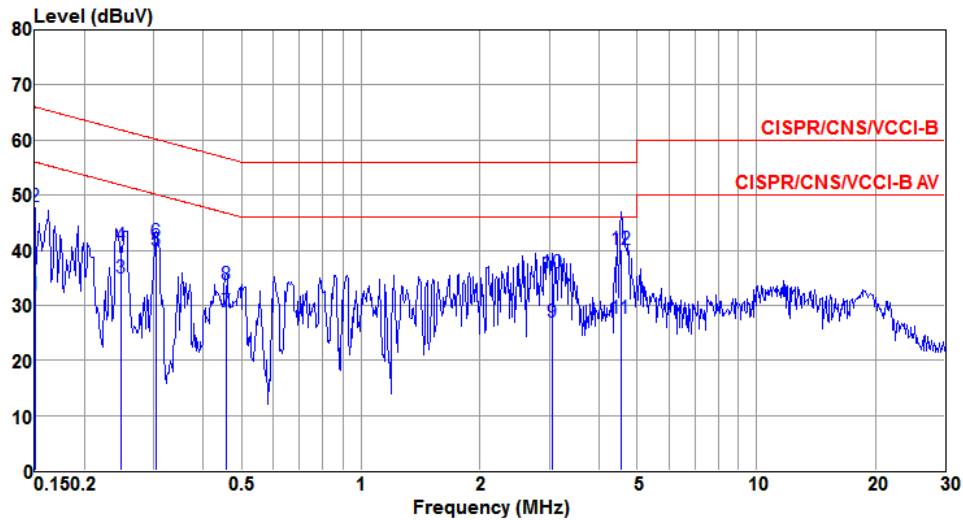
Modulation	VHT20	Test Freq. (MHz)	5785
Power Phase	Neutral	Test Configuration	1



	Freq	Level	Limit	Over	Read	LISN	cable	
	MHz	dBuV	Line	Limit	Level	factor	loss	Remark
			dBuV	dB	dBuV	dB	dB	
1	0.150	38.16	56.00	-17.84	37.23	0.85	0.08	Average
2	0.150	49.57	66.00	-16.43	48.64	0.85	0.08	QP
3	0.253	38.36	51.65	-13.29	38.06	0.20	0.10	Average
4	0.253	40.49	61.65	-21.16	40.19	0.20	0.10	QP
5*	0.302	41.82	50.18	-8.36	41.55	0.17	0.10	Average
6	0.302	43.00	60.18	-17.18	42.73	0.17	0.10	QP
7	0.454	29.51	46.80	-17.29	29.24	0.15	0.12	Average
8	0.454	33.04	56.80	-23.76	32.77	0.15	0.12	QP
9	3.041	25.31	46.00	-20.69	24.50	0.53	0.28	Average
10	3.041	35.36	56.00	-20.64	34.55	0.53	0.28	QP
11	4.549	27.90	46.00	-18.10	26.88	0.71	0.31	Average
12	4.549	40.54	56.00	-15.46	39.52	0.71	0.31	QP

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

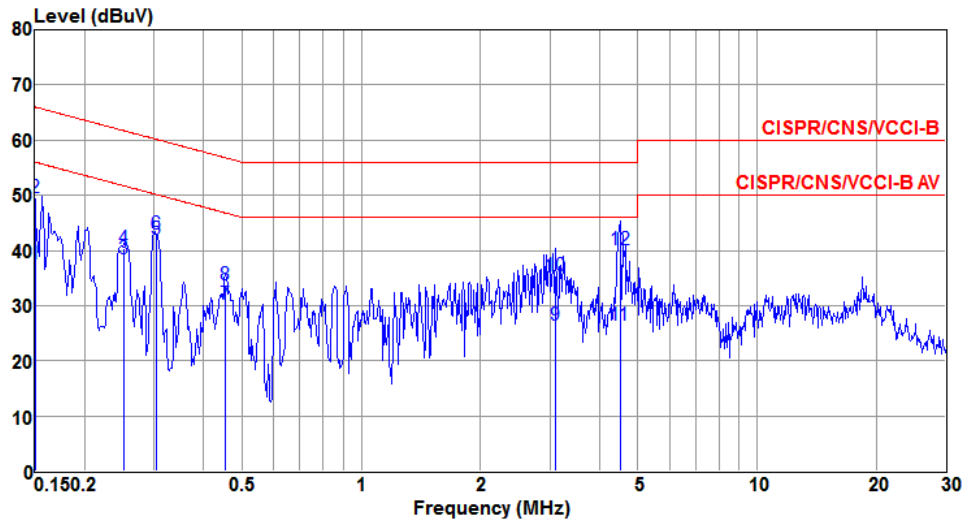
Modulation	VHT40	Test Freq. (MHz)	5230
Power Phase	Line	Test Configuration	2



	Freq	Level	Limit	Over	Read	LISN	cable	
	MHz	dBuV	Line	Limit	Level	factor	loss	Remark
			dBuV	dB	dBuV	dB	dB	
1	0.150	31.78	56.00	-24.22	30.78	0.92	0.08	Average
2	0.150	47.98	66.00	-18.02	46.98	0.92	0.08	QP
3	0.247	35.02	51.87	-16.85	34.69	0.23	0.10	Average
4	0.247	40.78	61.87	-21.09	40.45	0.23	0.10	QP
5*	0.305	39.89	50.11	-10.22	39.58	0.21	0.10	Average
6	0.305	41.61	60.11	-18.50	41.30	0.21	0.10	QP
7	0.456	28.74	46.76	-18.02	28.45	0.17	0.12	Average
8	0.456	33.64	56.76	-23.12	33.35	0.17	0.12	QP
9	3.041	26.85	46.00	-19.15	26.16	0.41	0.28	Average
10	3.041	35.86	56.00	-20.14	35.17	0.41	0.28	QP
11	4.549	27.50	46.00	-18.50	26.88	0.31	0.31	Average
12	4.549	40.02	56.00	-15.98	39.40	0.31	0.31	QP

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

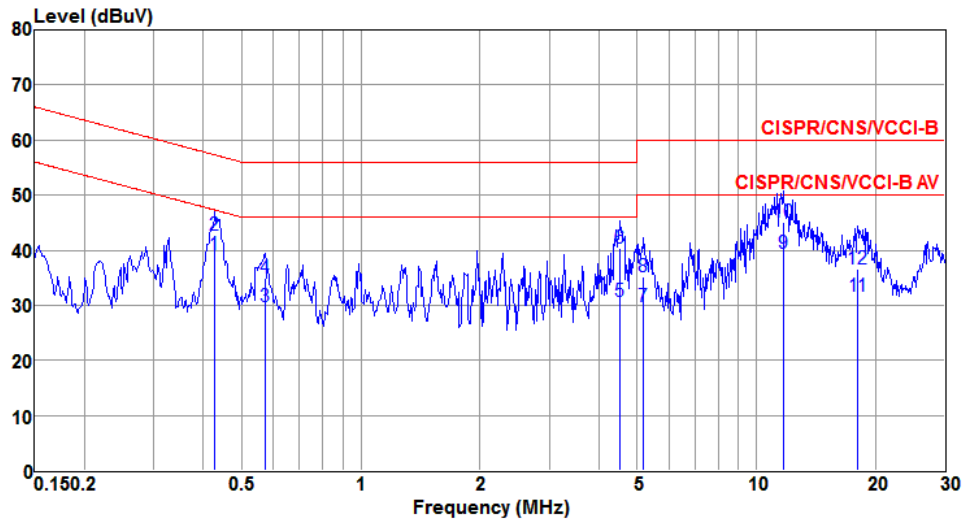
Modulation	VHT40	Test Freq. (MHz)	5230
Power Phase	Neutral	Test Configuration	2



	Freq MHz	Level dBuV	Limit Line dBuV	Over Limit dB	Read Level dBuV	LISN factor dB	cable loss dB	Remark
1	0.150	37.50	56.00	-18.50	36.57	0.85	0.08	Average
2	0.150	49.45	66.00	-16.55	48.52	0.85	0.08	QP
3	0.252	38.51	51.69	-13.18	38.21	0.20	0.10	Average
4	0.252	40.42	61.69	-21.27	40.12	0.20	0.10	QP
5*	0.303	42.08	50.16	-8.08	41.81	0.17	0.10	Average
6	0.303	42.99	60.16	-17.17	42.72	0.17	0.10	QP
7	0.454	30.19	46.80	-16.61	29.92	0.15	0.12	Average
8	0.454	33.71	56.80	-23.09	33.44	0.15	0.12	QP
9	3.090	26.50	46.00	-19.50	25.67	0.55	0.28	Average
10	3.090	35.31	56.00	-20.69	34.48	0.55	0.28	QP
11	4.501	26.47	46.00	-19.53	25.45	0.71	0.31	Average
12	4.501	40.03	56.00	-15.97	39.01	0.71	0.31	QP

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

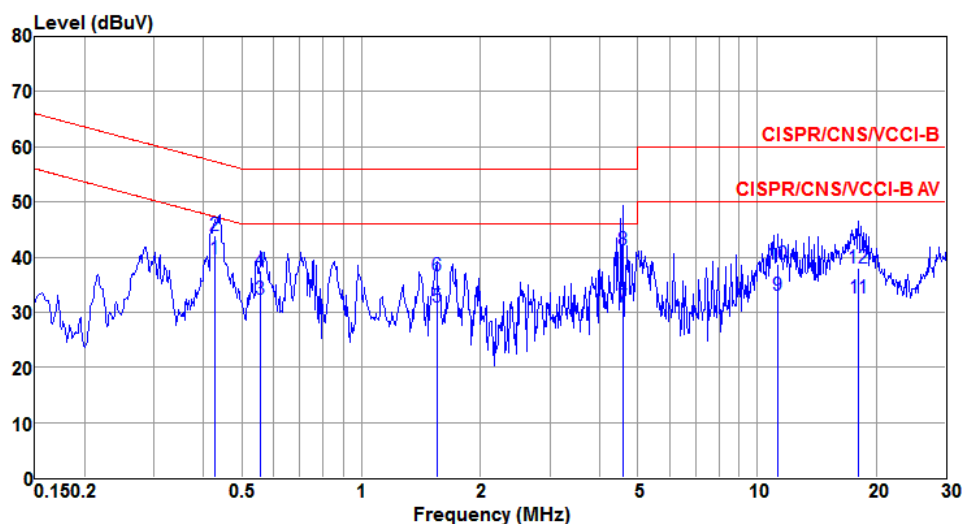
Modulation	VHT20	Test Freq. (MHz)	5785
Power Phase	Line	Test Configuration	2



	Freq	Level	Limit	Over	Read	LISN	cable	
	MHz	dBuV	Line	Limit	Level	factor	loss	Remark
			dBuV	dB	dBuV	dB	dB	
1*	0.428	39.30	47.29	-7.99	39.12	0.07	0.11	Average
2	0.428	42.83	57.29	-14.46	42.65	0.07	0.11	QP
3	0.573	29.80	46.00	-16.20	29.60	0.07	0.13	Average
4	0.573	34.86	56.00	-21.14	34.66	0.07	0.13	QP
5	4.525	30.74	46.00	-15.26	30.30	0.13	0.31	Average
6	4.525	40.38	56.00	-15.62	39.94	0.13	0.31	QP
7	5.194	29.67	50.00	-20.33	29.21	0.15	0.31	Average
8	5.194	35.16	60.00	-24.84	34.70	0.15	0.31	QP
9	11.683	39.41	50.00	-10.59	38.92	0.23	0.26	Average
10	11.683	45.09	60.00	-14.91	44.60	0.23	0.26	QP
11	18.039	31.60	50.00	-18.40	31.21	0.30	0.09	Average
12	18.039	36.70	60.00	-23.30	36.31	0.30	0.09	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	Test Configuration	2

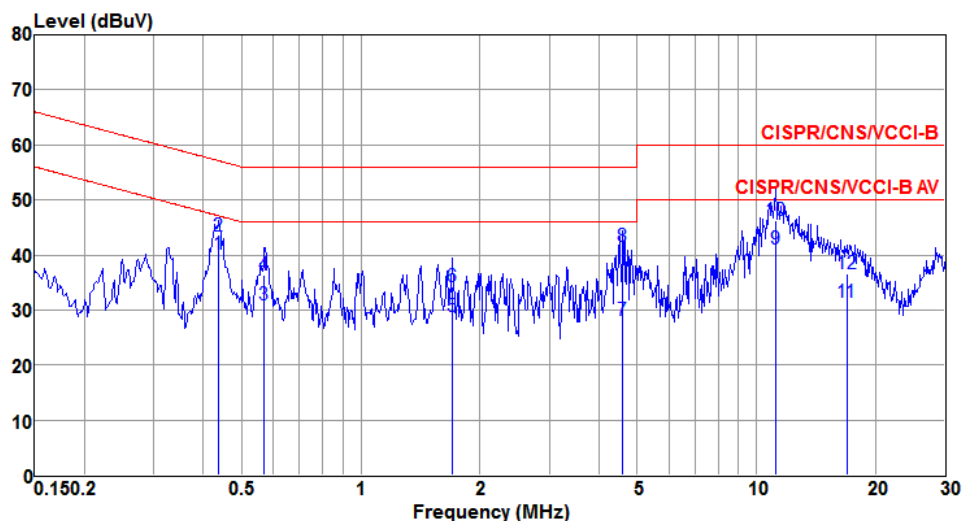


	Freq	Level	Limit	Over	Read	LISN	cable	
	MHz	dBuV	Line	Limit	Level	factor	loss	Remark
			dBuV	dB	dBuV	dB	dB	
1*	0.426	39.72	47.33	-7.61	39.54	0.07	0.11	Average
2	0.426	43.89	57.33	-13.44	43.71	0.07	0.11	QP
3	0.558	32.36	46.00	-13.64	32.16	0.07	0.13	Average
4	0.558	37.51	56.00	-18.49	37.31	0.07	0.13	QP
5	1.552	30.84	46.00	-15.16	30.54	0.09	0.21	Average
6	1.552	36.51	56.00	-19.49	36.21	0.09	0.21	QP
7	4.574	30.86	46.00	-15.14	30.41	0.14	0.31	Average
8	4.574	41.32	56.00	-14.68	40.87	0.14	0.31	QP
9	11.257	33.12	50.00	-16.88	32.60	0.25	0.27	Average
10	11.257	38.79	60.00	-21.21	38.27	0.25	0.27	QP
11	18.039	32.63	50.00	-17.37	32.22	0.32	0.09	Average
12	18.039	37.89	60.00	-22.11	37.48	0.32	0.09	QP

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

Beamforming mode

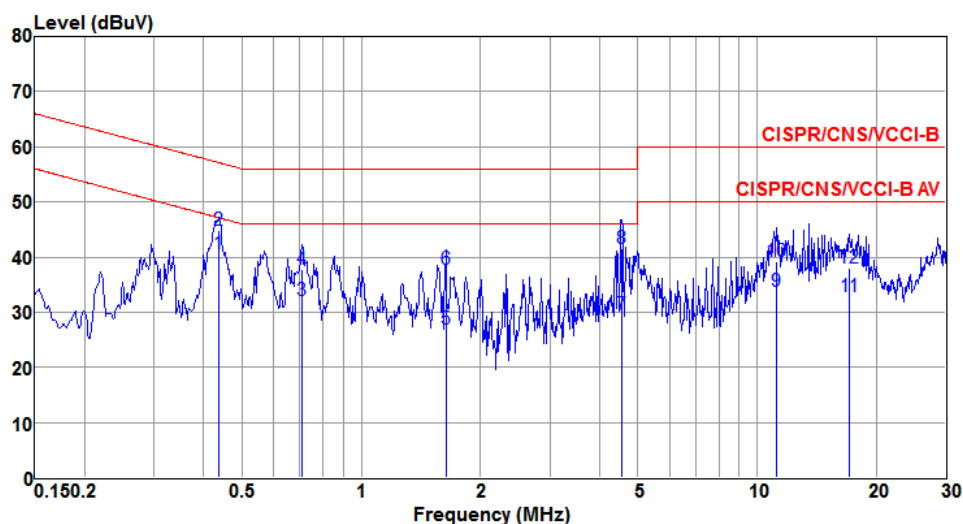
Modulation	VHT40	Test Freq. (MHz)	5230
Power Phase	Line	Test Configuration	3



	Freq MHz	Level dBuV	Limit Line dBuV	Over Limit dB	Read Level dBuV	LISN factor dB	cable loss dB	Remark
1*	0.437	40.03	47.11	-7.08	39.85	0.07	0.11	Average
2	0.437	43.33	57.11	-13.78	43.15	0.07	0.11	QP
3	0.570	30.90	46.00	-15.10	30.70	0.07	0.13	Average
4	0.570	36.45	56.00	-19.55	36.25	0.07	0.13	QP
5	1.698	28.91	46.00	-17.09	28.59	0.10	0.22	Average
6	1.698	34.18	56.00	-21.82	33.86	0.10	0.22	QP
7	4.598	28.04	46.00	-17.96	27.60	0.13	0.31	Average
8	4.598	41.65	56.00	-14.35	41.21	0.13	0.31	QP
9	11.198	40.98	50.00	-9.02	40.48	0.23	0.27	Average
10	11.198	46.15	60.00	-13.85	45.65	0.23	0.27	QP
11	16.928	31.43	50.00	-18.57	31.01	0.29	0.13	Average
12	16.928	36.59	60.00	-23.41	36.17	0.29	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).

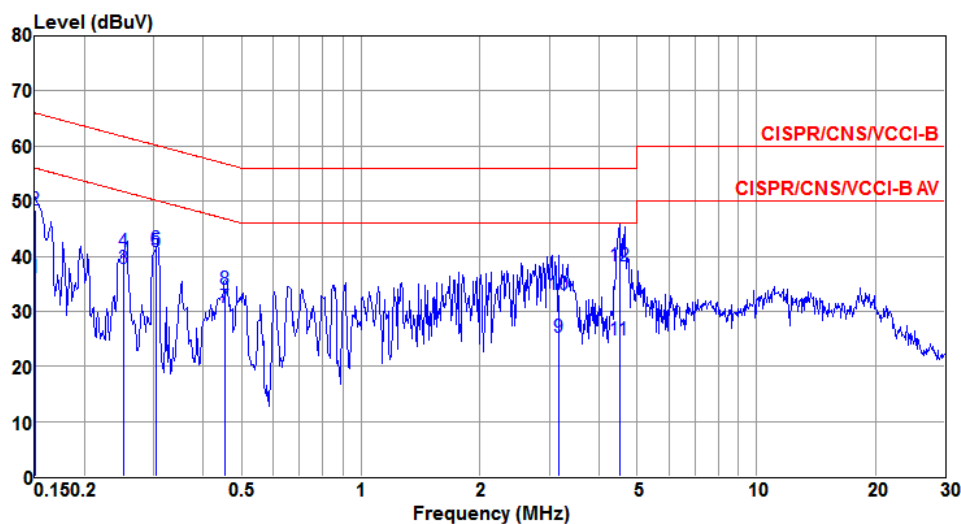
Modulation	VHT40	Test Freq. (MHz)	5230
Power Phase	Neutral	Test Configuration	3



	Freq	Level	Limit	Over	Read	LISN	cable	
	MHz	dBuV	Line	Limit	Level	factor	loss	Remark
			dBuV	dB	dBuV	dB	dB	
1*	0.437	40.71	47.11	-6.40	40.53	0.07	0.11	Average
2	0.437	44.93	57.11	-12.18	44.75	0.07	0.11	QP
3	0.708	32.22	46.00	-13.78	32.00	0.08	0.14	Average
4	0.708	37.72	56.00	-18.28	37.50	0.08	0.14	QP
5	1.636	26.82	46.00	-19.18	26.51	0.09	0.22	Average
6	1.636	37.84	56.00	-18.16	37.53	0.09	0.22	QP
7	4.549	29.50	46.00	-16.50	29.05	0.14	0.31	Average
8	4.549	41.63	56.00	-14.37	41.18	0.14	0.31	QP
9	11.198	33.87	50.00	-16.13	33.35	0.25	0.27	Average
10	11.198	39.08	60.00	-20.92	38.56	0.25	0.27	QP
11	17.109	32.76	50.00	-17.24	32.32	0.32	0.12	Average
12	17.109	37.96	60.00	-22.04	37.52	0.32	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).

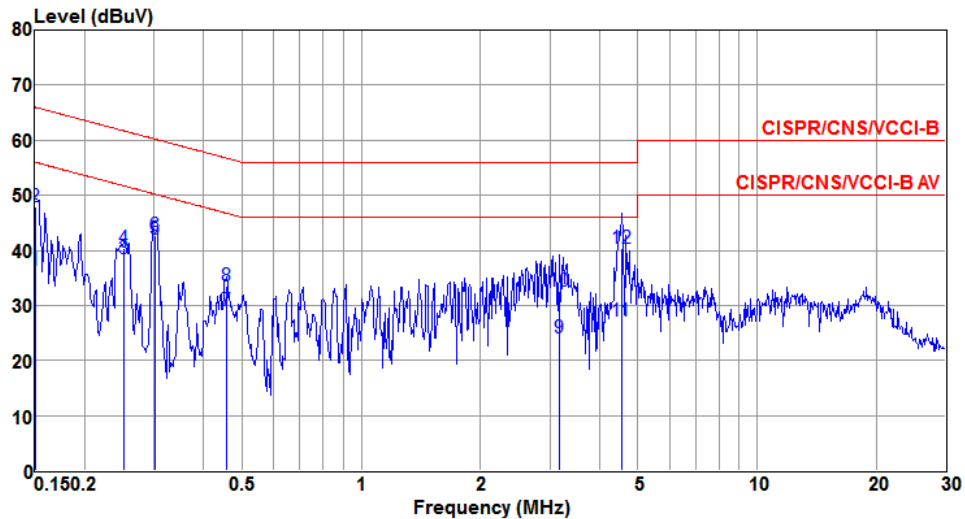
Modulation	VHT20	Test Freq. (MHz)	5785
Power Phase	Line	Test Configuration	3



	Freq	Level	Limit	Over	Read	LISN	cable	
	MHz	dBuV	Line	Limit	Level	factor	loss	Remark
			dBuV	dB	dBuV	dB	dB	
1	0.150	36.23	56.00	-19.77	35.23	0.92	0.08	Average
2	0.150	48.46	66.00	-17.54	47.46	0.92	0.08	QP
3	0.251	37.87	51.72	-13.85	37.54	0.23	0.10	Average
4	0.251	40.90	61.72	-20.82	40.57	0.23	0.10	QP
5*	0.303	40.73	50.17	-9.44	40.42	0.21	0.10	Average
6	0.303	41.40	60.17	-18.77	41.09	0.21	0.10	QP
7	0.454	30.66	46.80	-16.14	30.37	0.17	0.12	Average
8	0.454	33.98	56.80	-22.82	33.69	0.17	0.12	QP
9	3.156	25.32	46.00	-20.68	24.64	0.39	0.29	Average
10	3.156	32.93	56.00	-23.07	32.25	0.39	0.29	QP
11	4.501	24.83	46.00	-21.17	24.21	0.31	0.31	Average
12	4.501	38.29	56.00	-17.71	37.67	0.31	0.31	QP

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

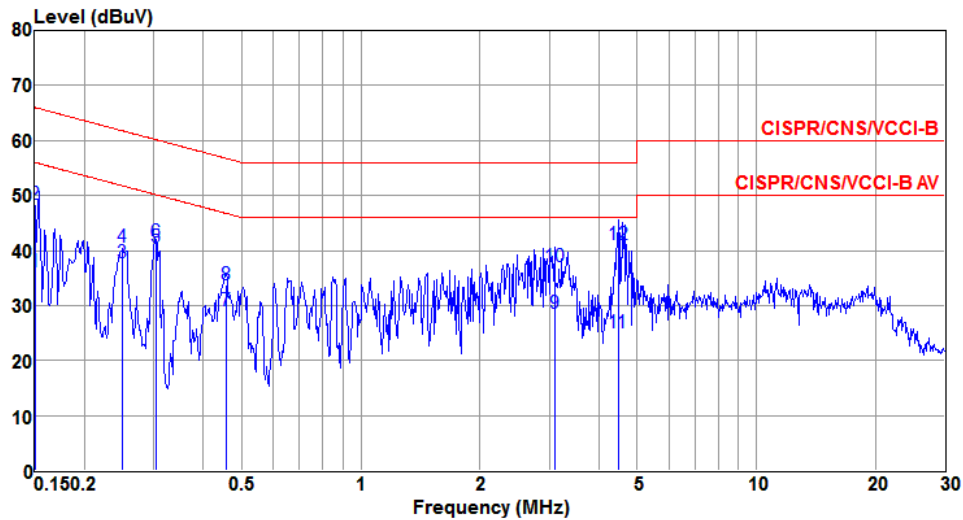
Modulation	VHT20	Test Freq. (MHz)	5785
Power Phase	Neutral	Test Configuration	3



	Freq	Level	Limit	Over	Read	LISN	cable	
	MHz	dBuV	Line	Limit	Level	factor	loss	Remark
			dBuV	dB	dBuV	dB	dB	
1	0.150	36.45	56.00	-19.55	35.52	0.85	0.08	Average
2	0.150	47.81	66.00	-18.19	46.88	0.85	0.08	QP
3	0.252	38.37	51.69	-13.32	38.07	0.20	0.10	Average
4	0.252	40.48	61.69	-21.21	40.18	0.20	0.10	QP
5*	0.302	42.09	50.18	-8.09	41.82	0.17	0.10	Average
6	0.302	42.78	60.18	-17.40	42.51	0.17	0.10	QP
7	0.456	29.14	46.76	-17.62	28.87	0.15	0.12	Average
8	0.456	33.53	56.76	-23.23	33.26	0.15	0.12	QP
9	3.156	24.07	46.00	-21.93	23.22	0.56	0.29	Average
10	3.156	32.68	56.00	-23.32	31.83	0.56	0.29	QP
11	4.549	27.05	46.00	-18.95	26.03	0.71	0.31	Average
12	4.549	40.28	56.00	-15.72	39.26	0.71	0.31	QP

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

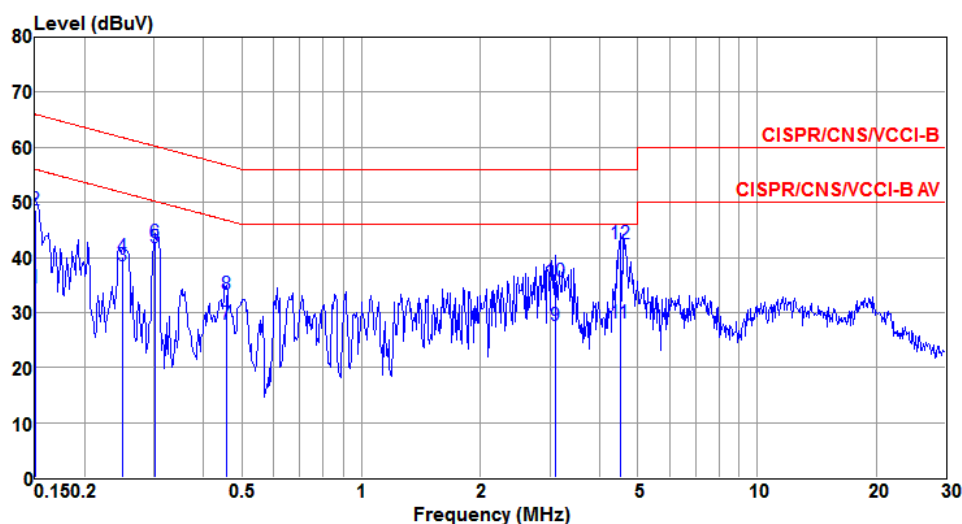
Modulation	VHT40	Test Freq. (MHz)	5230
Power Phase	Line	Test Configuration	4



	Freq	Level	Limit	Over	Read	LISN	cable	
	MHz	dBuV	Line	Limit	Level	factor	loss	Remark
			dBuV	dB	dBuV	dB	dB	
1	0.150	36.01	56.00	-19.99	35.01	0.92	0.08	Average
2	0.150	48.42	66.00	-17.58	47.42	0.92	0.08	QP
3	0.249	37.73	51.78	-14.05	37.40	0.23	0.10	Average
4	0.249	40.69	61.78	-21.09	40.36	0.23	0.10	QP
5*	0.303	40.60	50.17	-9.57	40.29	0.21	0.10	Average
6	0.303	41.46	60.17	-18.71	41.15	0.21	0.10	QP
7	0.456	29.15	46.76	-17.61	28.86	0.17	0.12	Average
8	0.456	33.86	56.76	-22.90	33.57	0.17	0.12	QP
9	3.090	28.59	46.00	-17.41	27.91	0.40	0.28	Average
10	3.090	37.05	56.00	-18.95	36.37	0.40	0.28	QP
11	4.478	24.95	46.00	-21.05	24.33	0.31	0.31	Average
12	4.478	41.02	56.00	-14.98	40.40	0.31	0.31	QP

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

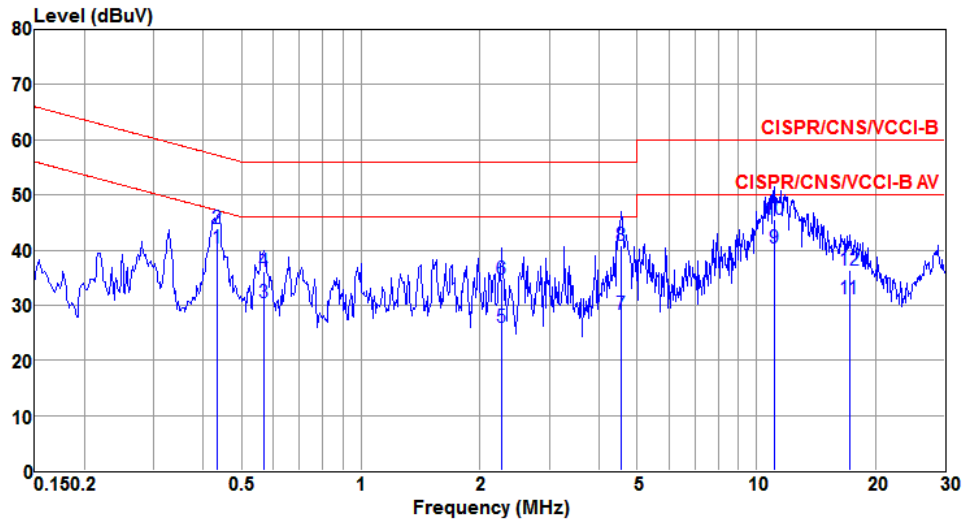
Modulation	VHT40	Test Freq. (MHz)	5230
Power Phase	Neutral	Test Configuration	4



	Freq	Level	Limit	Over	Read	LISN	cable	
	MHz	dBuV	Line	Limit	Level	factor	loss	Remark
			dBuV	dB	dBuV	dB	dB	
1	0.150	34.57	56.00	-21.43	33.64	0.85	0.08	Average
2	0.150	48.59	66.00	-17.41	47.66	0.85	0.08	QP
3	0.250	38.52	51.76	-13.24	38.22	0.20	0.10	Average
4	0.250	40.09	61.76	-21.67	39.79	0.20	0.10	QP
5*	0.302	41.68	50.20	-8.52	41.41	0.17	0.10	Average
6	0.302	42.68	60.20	-17.52	42.41	0.17	0.10	QP
7	0.456	27.92	46.76	-18.84	27.65	0.15	0.12	Average
8	0.456	33.22	56.76	-23.54	32.95	0.15	0.12	QP
9	3.090	27.67	46.00	-18.33	26.84	0.55	0.28	Average
10	3.090	35.61	56.00	-20.39	34.78	0.55	0.28	QP
11	4.508	28.08	46.00	-17.92	27.06	0.71	0.31	Average
12	4.508	42.44	56.00	-13.56	41.42	0.71	0.31	QP

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

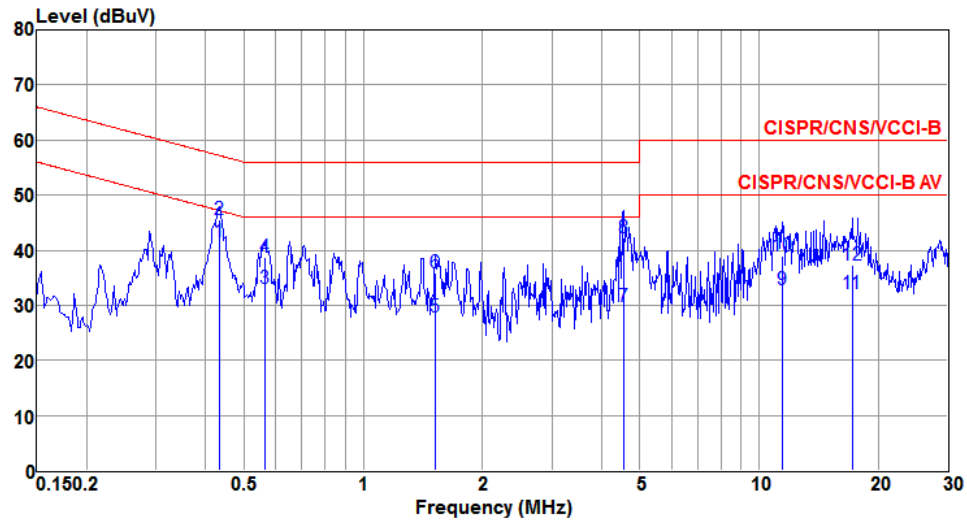
Modulation	VHT20	Test Freq. (MHz)	5785
Power Phase	Line	Test Configuration	4



	Freq	Level	Limit	Over	Read	LISN	cable	Remark
	MHz	dBuV	Line	Limit	Level	factor	loss	
			dBuV	dB	dBuV	dB	dB	
1*	0.433	40.42	47.20	-6.78	40.24	0.07	0.11	Average
2	0.433	43.96	57.20	-13.24	43.78	0.07	0.11	QP
3	0.570	30.56	46.00	-15.44	30.36	0.07	0.13	Average
4	0.570	36.15	56.00	-19.85	35.95	0.07	0.13	QP
5	2.273	26.02	46.00	-19.98	25.67	0.10	0.25	Average
6	2.273	34.60	56.00	-21.40	34.25	0.10	0.25	QP
7	4.549	28.23	46.00	-17.77	27.79	0.13	0.31	Average
8	4.549	40.82	56.00	-15.18	40.38	0.13	0.31	QP
9	11.139	40.44	50.00	-9.56	39.94	0.23	0.27	Average
10	11.139	45.63	60.00	-14.37	45.13	0.23	0.27	QP
11	17.199	31.23	50.00	-18.77	30.81	0.30	0.12	Average
12	17.199	36.41	60.00	-23.59	35.99	0.30	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	Test Configuration	4



	Freq	Level	Limit	Over	Read	LISN	cable	
	MHz	dBuV	Line	Limit	Level	factor	loss	Remark
			dBuV	dB	dBuV	dB	dB	
1*	0.434	41.61	47.17	-5.56	41.43	0.07	0.11	Average
2	0.434	45.65	57.17	-11.52	45.47	0.07	0.11	QP
3	0.564	33.09	46.00	-12.91	32.89	0.07	0.13	Average
4	0.564	38.63	56.00	-17.37	38.43	0.07	0.13	QP
5	1.519	27.82	46.00	-18.18	27.52	0.09	0.21	Average
6	1.519	35.88	56.00	-20.12	35.58	0.09	0.21	QP
7	4.549	29.71	46.00	-16.29	29.26	0.14	0.31	Average
8	4.549	42.37	56.00	-13.63	41.92	0.14	0.31	QP
9	11.438	32.80	50.00	-17.20	32.28	0.25	0.27	Average
10	11.438	38.89	60.00	-21.11	38.37	0.25	0.27	QP
11	17.199	32.16	50.00	-17.84	31.72	0.32	0.12	Average
12	17.199	37.25	60.00	-22.75	36.81	0.32	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).

3.2 Emission Bandwidth

3.2.1 Limit of Emission bandwidth

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

3.2.2 Test Procedures

26dB Bandwidth

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

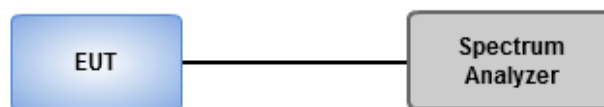
Occupied Bandwidth

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

6dB Bandwidth

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

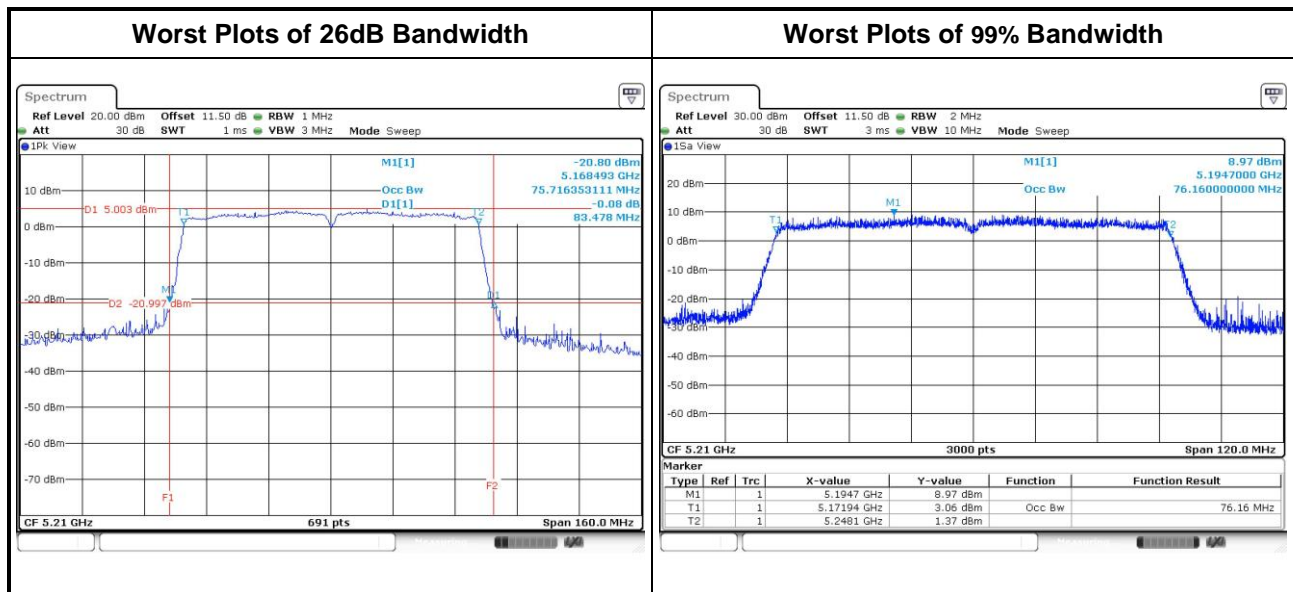
3.2.3 Test Setup



3.2.4 Test Result of Emission Bandwidth

Non-beamforming mode - Test Configuration 1

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	1	5180	20.64	---	---	---	16.92	---	---	---
11a	1	5200	20.64	---	---	---	16.95	---	---	---
11a	1	5240	20.64	---	---	---	16.93	---	---	---
VHT20	2	5180	20.87	20.52	---	---	17.93	17.79	---	---
VHT20	2	5200	20.87	20.52	---	---	17.96	17.78	---	---
VHT20	2	5240	20.87	20.70	---	---	17.94	17.79	---	---
VHT40	2	5190	41.04	41.04	---	---	36.56	36.58	---	---
VHT40	2	5230	40.70	43.36	---	---	36.54	36.56	---	---
VHT80	2	5210	83.48	82.32	---	---	76.16	76.08	---	---

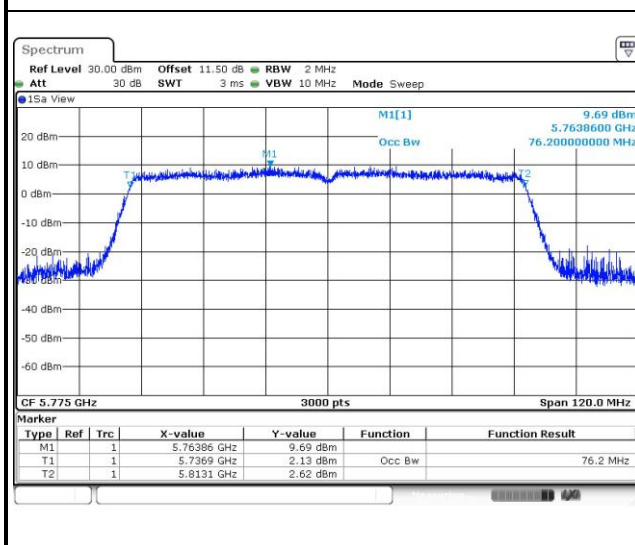


For Frequency band 5725-5850 MHz

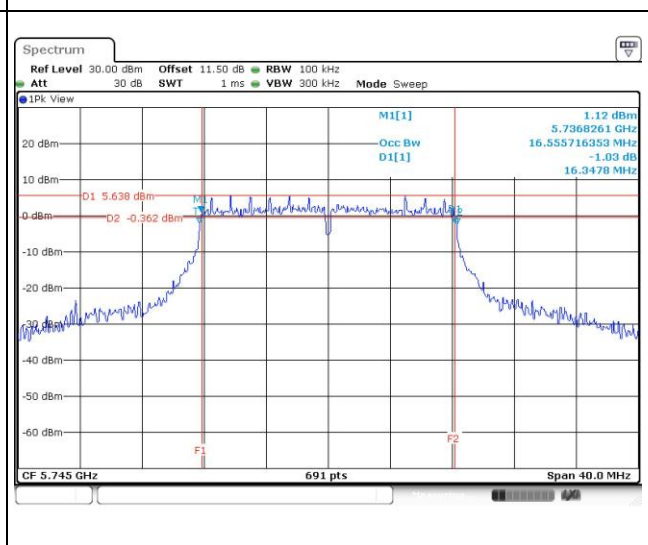
Emission Bandwidth

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	1	5745	17.06	---	---	---	16.35	---	---	---	0.5
11a	1	5785	22.37	---	---	---	16.35	---	---	---	0.5
11a	1	5825	19.27	---	---	---	16.35	---	---	---	0.5
VHT20	2	5745	18.05	17.82	---	---	17.57	17.57	---	---	0.5
VHT20	2	5785	22.22	19.91	---	---	17.57	17.57	---	---	0.5
VHT20	2	5825	18.71	18.15	---	---	17.57	17.57	---	---	0.5
VHT40	2	5755	36.70	36.52	---	---	36.41	36.41	---	---	0.5
VHT40	2	5795	37.32	36.86	---	---	36.41	36.41	---	---	0.5
VHT80	2	5775	76.20	76.00	---	---	75.36	76.52	---	---	0.5

Worst Plots of 99% Bandwidth



Worst Plots of 6dB Bandwidth

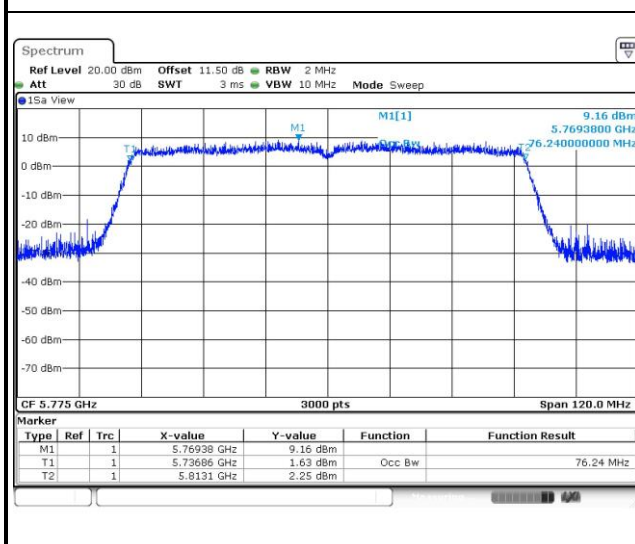


For Frequency band 5725-5850 MHz

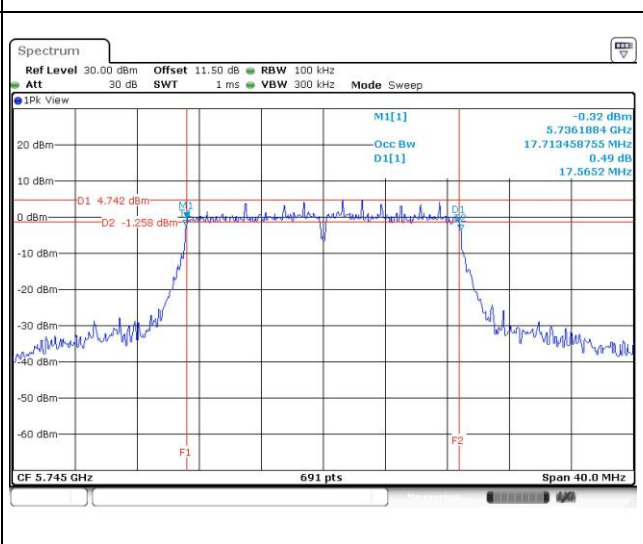
Emission Bandwidth

Mode	N _{TX}	Freq. (MHz)	OBW Bandwidth (MHz)				6dB Bandwidth (MHz)				6dB BW Limit (MHz)
			Chain 0	Chain 1	Chain 2	Chain 3	Chain 0	Chain 1	Chain 2	Chain 3	
VHT20	2	5745	17.96	17.81	---	---	17.57	17.57	---	---	0.5
VHT20	2	5785	21.56	19.43	---	---	17.62	17.57	---	---	0.5
VHT20	2	5825	18.11	17.91	---	---	17.57	17.62	---	---	0.5
VHT40	2	5755	36.54	36.48	---	---	36.41	36.41	---	---	0.5
VHT40	2	5795	36.84	36.60	---	---	36.41	36.41	---	---	0.5
VHT80	2	5775	76.24	76.04	---	---	75.36	76.06	---	---	0.5

Worst Plots of 99% Bandwidth



Worst Plots of 6dB Bandwidth



3.3 RF Output Power

3.3.1 Limit of RF Output Power

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

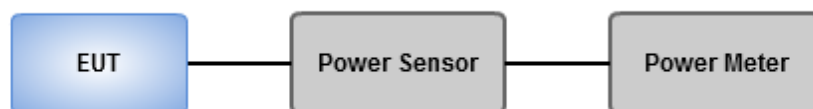
Frequency Band (MHz)		Limit
<input type="checkbox"/>	5250 ~ 5350	250mW or 11dBm+10 log B
<input type="checkbox"/>	5470 ~ 5725	250mW or 11dBm+10 log B
<input checked="" type="checkbox"/>	5725 ~ 5850	1 W

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 may 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 - Test Configuration 1

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	1	5180	16.42	---	---	---	43.853	16.42	30.00
11a	1	5200	16.38	---	---	---	43.451	16.38	30.00
11a	1	5240	16.49	---	---	---	44.566	16.49	30.00
HT20	2	5180	11.96	10.18	---	---	26.127	14.17	30.00
HT20	2	5200	12.14	10.25	---	---	26.961	14.31	30.00
HT20	2	5240	12.21	10.28	---	---	27.300	14.36	30.00
HT40	2	5190	13.54	15.05	---	---	54.583	17.37	30.00
HT40	2	5230	13.58	15.06	---	---	54.866	17.39	30.00
VHT20	2	5180	12.06	10.25	---	---	26.662	14.26	30.00
VHT20	2	5200	12.22	10.31	---	---	27.412	14.38	30.00
VHT20	2	5240	12.24	10.33	---	---	27.539	14.40	30.00
VHT40	2	5190	13.65	15.13	---	---	55.758	17.46	30.00
VHT40	2	5230	13.69	15.19	---	---	56.425	17.51	30.00
VHT80	2	5210	14.02	12.38	---	---	42.533	16.29	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	1	5745	17.85	---	---	---	60.954	17.85	29.80
11a	1	5785	21.21	---	---	---	132.130	21.21	29.80
11a	1	5825	20.45	---	---	---	110.917	20.45	29.80
HT20	2	5745	16.72	15.65	---	---	83.718	19.23	29.80
HT20	2	5785	21.11	21.02	---	---	255.596	24.08	29.80
HT20	2	5825	19.93	19.56	---	---	188.766	22.76	29.80
HT40	2	5755	15.73	14.66	---	---	66.653	18.24	29.80
HT40	2	5795	19.43	18.84	---	---	164.260	22.16	29.80
VHT20	2	5745	16.82	15.71	---	---	85.323	19.31	29.80
VHT20	2	5785	21.22	21.1	---	---	261.259	24.17	29.80
VHT20	2	5825	20.02	19.62	---	---	192.084	22.83	29.80
VHT40	2	5755	15.82	14.75	---	---	68.048	18.33	29.80
VHT40	2	5795	19.50	18.95	---	---	167.649	22.24	29.80
VHT80	2	5775	13.90	12.92	---	---	44.136	16.45	29.80

Note: The maximum antenna gain 6.20dBi is higher than 6dBi, so the limit shall be reduced to 30 dBm – (6.2dBi – 6dBi) =29.8 dBm.

Beamforming mode - Test Configuration 3

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	11.52	9.68	---	---	23.480	13.71	27.59
HT20	2	5200	11.63	9.76	---	---	24.017	13.81	27.59
HT20	2	5240	11.65	9.78	---	---	24.128	13.83	27.59
HT40	2	5190	10.19	11.85	---	---	25.758	14.11	27.59
HT40	2	5230	10.23	11.88	---	---	25.961	14.14	27.59
VHT20	2	5180	11.65	9.78	---	---	24.128	13.83	27.59
VHT20	2	5200	11.72	9.89	---	---	24.609	13.91	27.59
VHT20	2	5240	11.73	9.83	---	---	24.510	13.89	27.59
VHT40	2	5190	10.26	11.98	---	---	26.393	14.21	27.59
VHT40	2	5230	10.34	11.99	---	---	26.627	14.25	27.59
VHT80	2	5210	11.89	10.38	---	---	26.367	14.21	27.59

Note:

- Directional gain = $5.40 + 10 \cdot \log(2/1) = 8.41$ dBi > 6 dBi.
Limit shall be reduced to 30 dBm – (8.41 dBi – 6 dBi) = 27.59 dBm.

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	15.66	14.52	---	---	65.127	18.14	26.79
HT20	2	5785	21.07	21.05	---	---	255.288	24.07	26.79
HT20	2	5825	18.24	18.03	---	---	130.214	21.15	26.79
HT40	2	5755	14.58	13.55	---	---	51.354	17.11	26.79
HT40	2	5795	18.36	17.63	---	---	126.492	21.02	26.79
VHT20	2	5745	15.73	14.62	---	---	66.384	18.22	26.79
VHT20	2	5785	21.13	21.08	---	---	257.951	24.12	26.79
VHT20	2	5825	18.36	18.12	---	---	133.412	21.25	26.79
VHT40	2	5755	14.72	13.65	---	---	52.822	17.23	26.79
VHT40	2	5795	18.43	17.78	---	---	129.642	21.13	26.79
VHT80	2	5775	13.43	12.43	---	---	39.528	15.97	26.79

Note:

- Directional gain = $6.20 + 10 \cdot \log(2/1) = 9.21$ dBi > 6 dBi.
Limit shall be reduced to 30 dBm – (9.21 dBi – 6 dBi) = 26.79 dBm.

3.4 Peak Power Spectral Density

3.4.1 Limit of Peak Power Spectral Density

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

Frequency Band (MHz)		Limit
<input type="checkbox"/>	5250 ~ 5350	11 dBm / MHz
<input type="checkbox"/>	5470 ~ 5725	11 dBm / MHz
<input checked="" type="checkbox"/>	5725 ~ 5850	30 dBm /500 kHz

3.4.2 Test Procedures

For 5150 ~ 5250 MHz

☒ Method SA-1 (802.11a/VHT20/VHT40)

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 (VHT80 only)

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

For 5725 ~ 5850 MHz

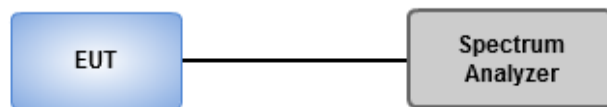
☒ Method SA-1 (802.11a/VHT20)

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 (VHT40/VHT80)

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

3.4.3 Test Setup



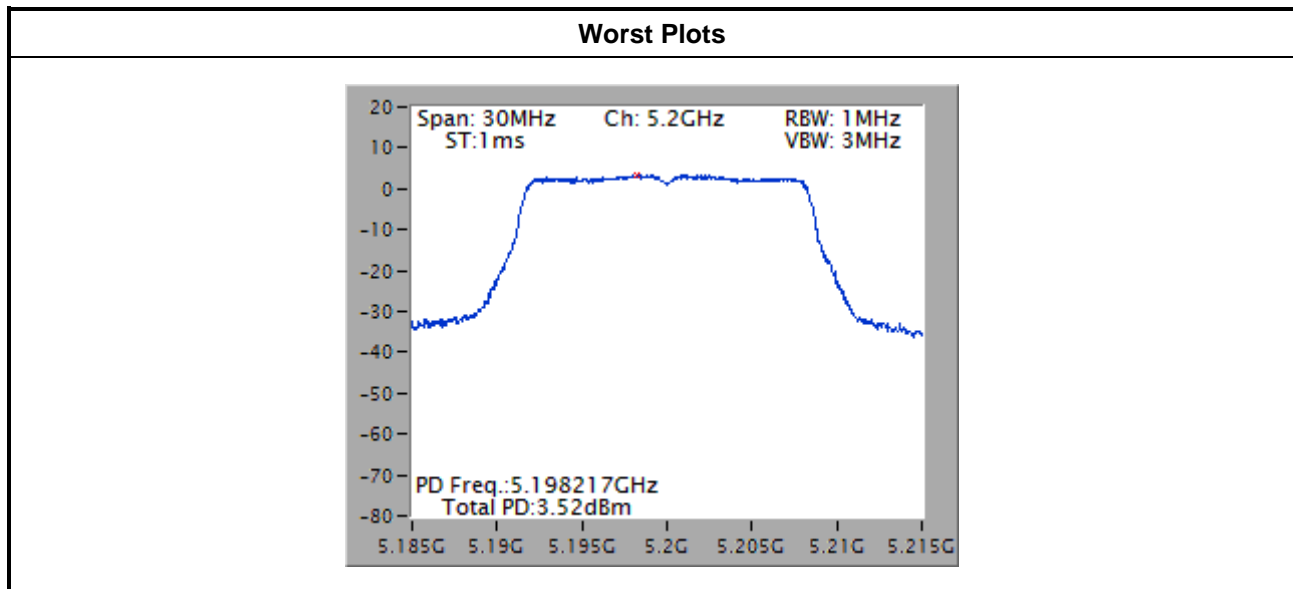
3.4.4 Test Result of Peak Power Spectral Density

Non-beamforming mode - Test Configuration 1

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	1	5180	3.41	0.00	3.41	17.00
11a	1	5200	3.52	0.00	3.52	17.00
11a	1	5240	3.40	0.00	3.40	17.00
VHT20	2	5180	0.66	0.00	0.66	14.59
VHT20	2	5200	0.63	0.00	0.63	14.59
VHT20	2	5240	0.69	0.00	0.69	14.59
VHT40	2	5190	1.39	0.00	1.39	14.59
VHT40	2	5230	1.19	0.00	1.19	14.59
VHT80	2	5210	-3.66	0.21	-3.45	14.59

Note:

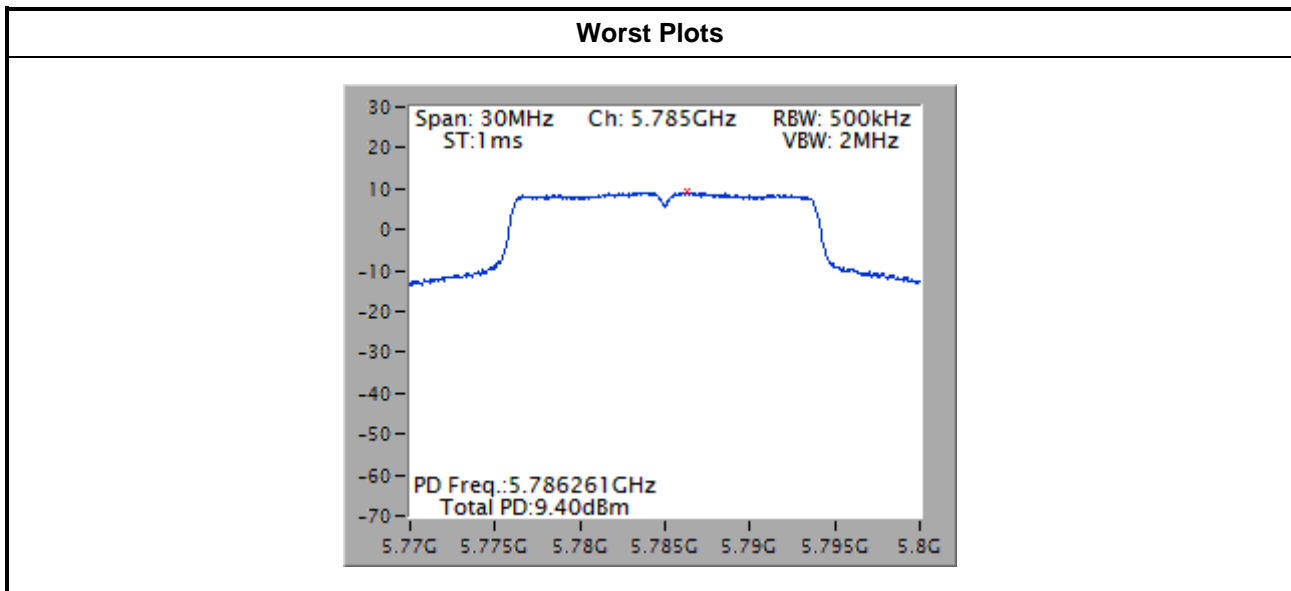
1. D.F is duty factor.
2. Test results of VHT20/VHT40/VHT80 are bin-by-bin summing measured value of each TX port.
3. For 2TX mode, Directional gain = $5.4 + 10 \cdot \log(2/1) = 8.41$ dBi > 6 dBi.
Limit shall be reduced to 17 dBm – (8.41 dBi – 6 dBi) = 14.59 dBm.



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	1	5745	3.62	0.00	3.62	29.80
11a	1	5785	7.01	0.00	7.01	29.80
11a	1	5825	6.14	0.00	6.14	29.80
VHT20	2	5745	4.46	0.00	4.46	26.79
VHT20	2	5785	9.40	0.00	9.40	26.79
VHT20	2	5825	8.02	0.00	8.02	26.79
VHT40	2	5755	0.66	0.00	0.66	26.79
VHT40	2	5795	4.41	0.00	4.41	26.79
VHT80	2	5775	-4.72	0.21	-4.51	26.79

Note:

1. D.F is duty factor.
2. For 1TX mode, The maximum antenna gain 6.20dBi is higher than 6dBi, so the limit shall be reduced 30dBm – (6.2dBi-6dBi) = 29.8dBm.
3. Test results of VHT20/VHT40/VHT80 are bin-by-bin summing measured value of each TX port.
4. For 2TX mode, directional gain = $6.2 + 10 \cdot \log(2/1) = 9.21 \text{ dBi} > 6 \text{ dBi}$.
Limit shall be reduced to 30 dBm – (9.21 dBi – 6 dBi) = 26.79 dBm.

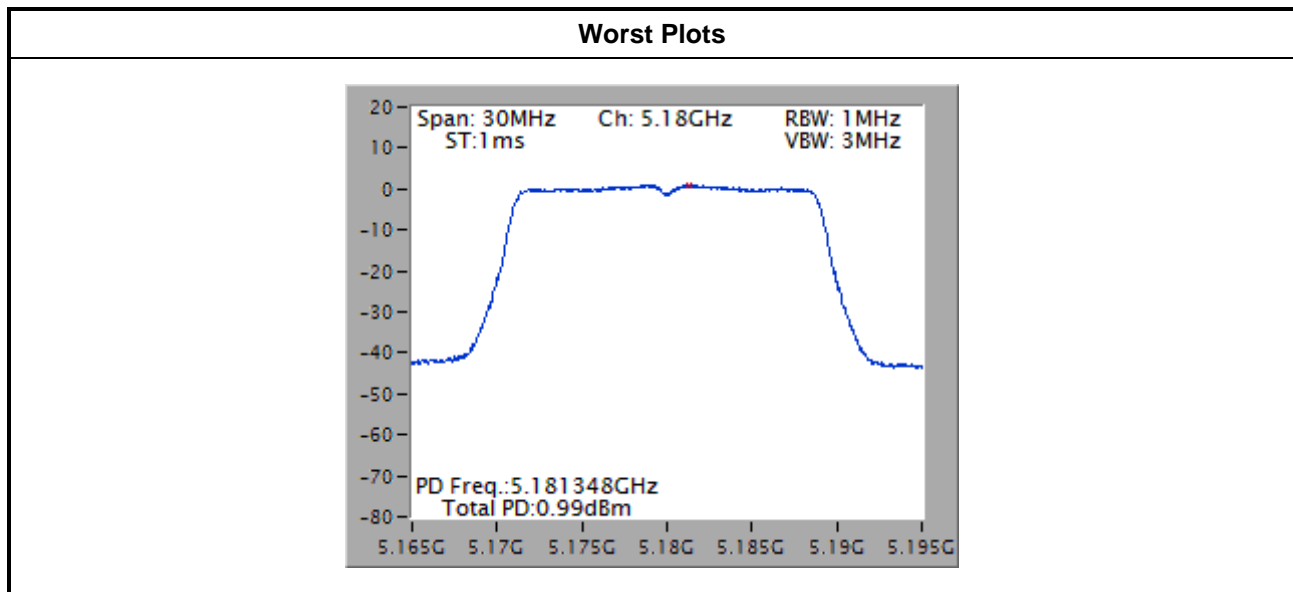


Beamforming mode - Test Configuration 3

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	0.99	0.00	0.99	14.59
VHT20	2	5200	0.99	0.00	0.99	14.59
VHT20	2	5240	0.97	0.00	0.97	14.59
VHT40	2	5190	-1.09	0.00	-1.09	14.59
VHT40	2	5230	-0.82	0.00	-0.82	14.59
VHT80	2	5210	-4.77	0.00	-4.77	14.59

Note:

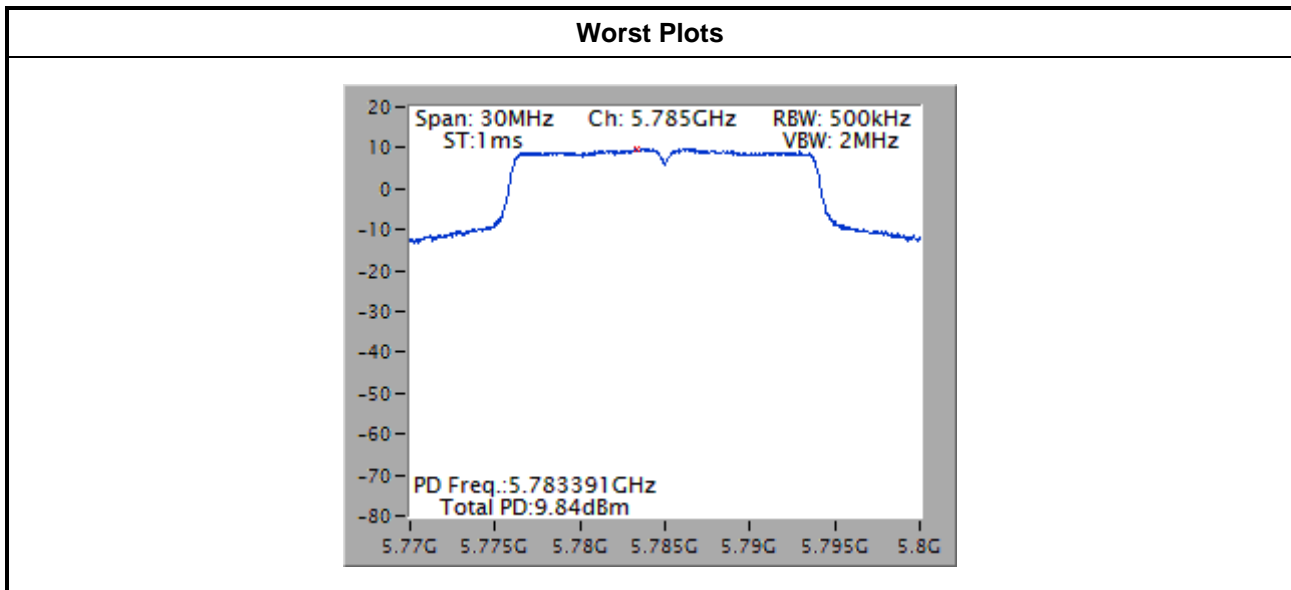
1. D.F is duty factor.
2. Test result is bin-by-bin summing measured value of each TX port.
3. Directional gain = $5.4 + 10 \cdot \log(2/1) = 8.41 \text{ dBi} > 6 \text{ dBi}$.
Limit shall be reduced to $17 \text{ dBm} - (8.41 \text{ dBi} - 6 \text{ dBi}) = 14.59 \text{ dBm}$.



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	4.13	0.00	4.13	26.79
VHT20	2	5785	9.84	0.00	9.84	26.79
VHT20	2	5825	7.20	0.00	7.20	26.79
VHT40	2	5755	0.19	0.00	0.19	26.79
VHT40	2	5795	3.95	0.00	3.95	26.79
VHT80	2	5775	-4.58	0.00	-4.58	26.79

Note:

1. D.F is duty factor.
2. The maximum antenna gain 6.20dBi is higher than 6dBi, so the limit of 802.11a shall be reduced by 0.2dB.
3. Test results of VHT20/VHT40/VHT80 are bin-by-bin summing measured value of each TX port.
4. Directional gain = $6.2 + 10 \cdot \log(2/1) = 9.21 \text{ dBi} > 6 \text{ dBi}$.
Limit shall be reduced to $30 \text{ dBm} - (9.21 \text{ dBi} - 6 \text{ dBi}) = 26.79 \text{ dBm}$.



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:

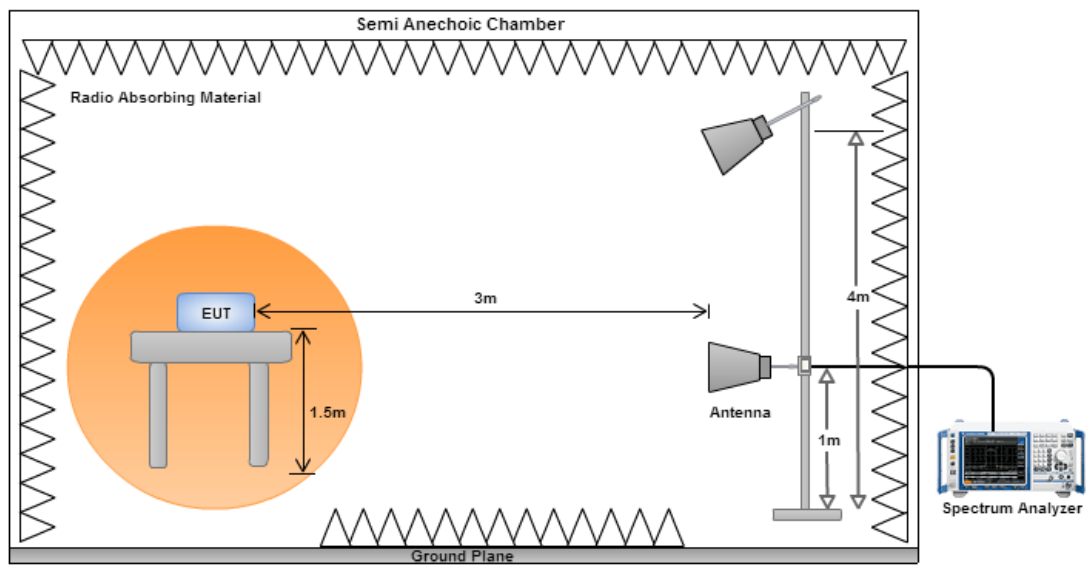
1. 120kHz measurement bandwidth of test receiver and Quasi-peak detector is for radiated emission below 1GHz.
2. RBW=1MHz, VBW=3MHz and Peak detector is for peak measured value of radiated emission above 1GHz.
3. RBW=1MHz, VBW=1/T and Peak detector is for average measured value of radiated emission above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

3.5.3 Test Setup

Radiated Emissions below 1 GHz



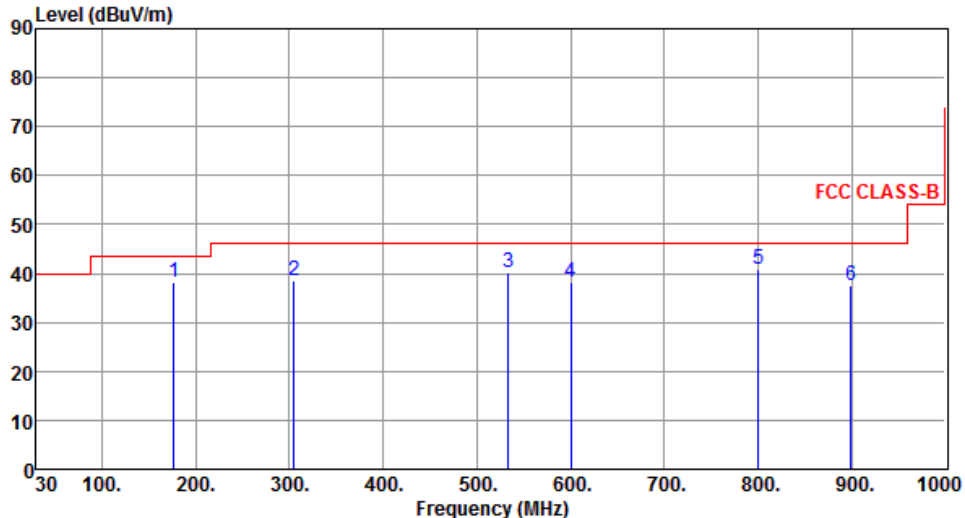
Radiated Emissions above 1 GHz



Non- beamforming mode

3.5.4 Transmitter Radiated Unwanted Emissions (Below 1GHz)

Modulation	VHT40	Test Freq. (MHz)	5230
Polarization	Horizontal	Test Configuration	1

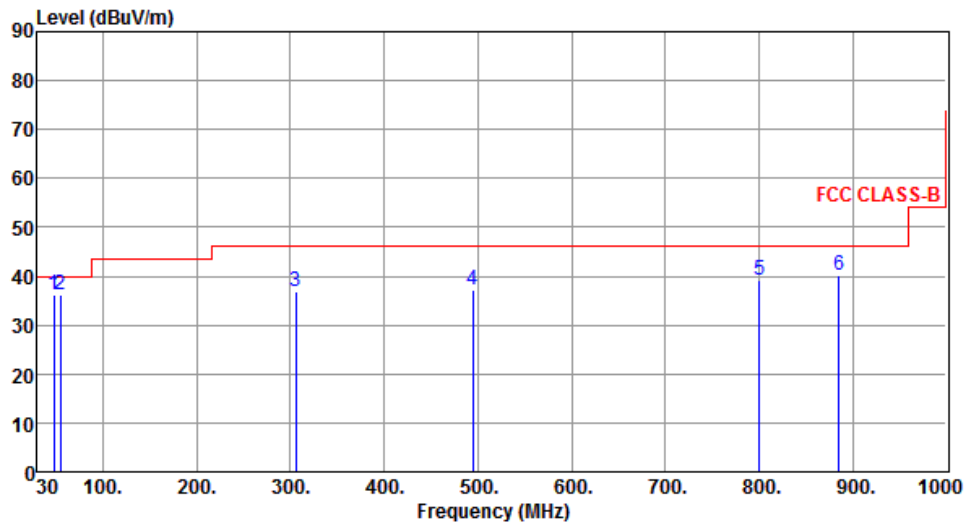


The graph displays the emission level in dBuV/m on the y-axis (0 to 90) against frequency in MHz on the x-axis (30 to 1000). A red line represents the FCC CLASS-B limit, which is 40 dBuV/m from 30 to 100 MHz, 45 dBuV/m from 100 to 300 MHz, and 55 dBuV/m from 300 to 1000 MHz. Six vertical blue lines indicate specific emission peaks, labeled 1 through 6, with their frequencies and levels listed in the table below.

	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	176.47	38.26	43.50	-5.24	53.12	-14.86	Peak	---	---
2	304.51	38.43	46.00	-7.57	50.97	-12.54	Peak	---	---
3	533.43	40.33	46.00	-5.67	47.59	-7.26	Peak	---	---
4	600.36	38.29	46.00	-7.71	44.01	-5.72	Peak	---	---
5	800.18	40.76	46.00	-5.24	43.32	-2.56	Peak	---	---
6	899.12	37.56	46.00	-8.44	38.24	-0.68	Peak	---	---

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

Modulation	VHT40	Test Freq. (MHz)	5230
Polarization	Vertical	Test Configuration	1



	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	36.21	40.00	-3.79	49.09	-12.88	QP	---	---
2	54.97	36.17	40.00	-3.83	49.79	-13.62	QP	---	---
3	305.48	36.74	46.00	-9.26	49.25	-12.51	Peak	---	---
4	494.63	37.25	46.00	-8.75	45.02	-7.77	Peak	---	---
5	800.18	39.16	46.00	-6.84	41.72	-2.56	Peak	---	---
6	885.54	40.25	46.00	-5.75	41.22	-0.97	Peak	---	---

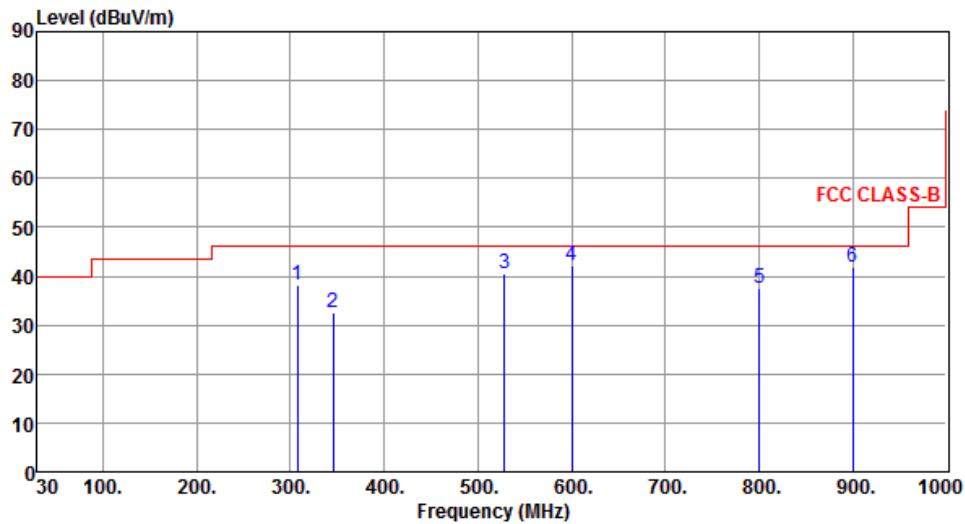
Note 1: Emission Level (dBUV/m) = SA Reading (dBUV/m) + Factor* (dB)

*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	Test Configuration	1



	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	307.42	38.25	46.00	-7.75	50.71	-12.46	Peak	---	---
2	345.25	32.45	46.00	-13.55	44.02	-11.57	Peak	---	---
3	528.58	40.53	46.00	-5.47	47.84	-7.31	Peak	---	---
4	600.36	42.34	46.00	-3.66	48.06	-5.72	Peak	---	---
5	800.18	37.50	46.00	-8.50	40.06	-2.56	Peak	---	---
6	900.09	41.76	46.00	-4.24	42.43	-0.67	Peak	---	---

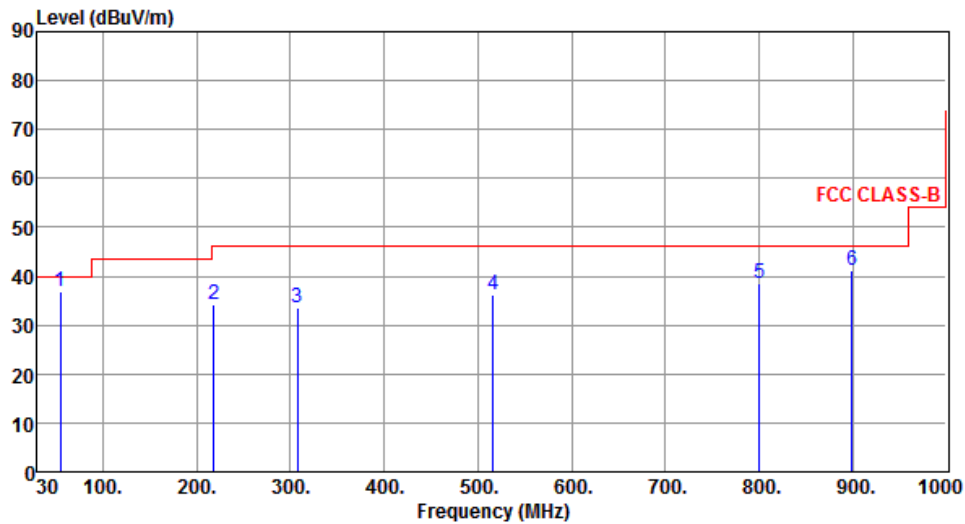
Note 1: Emission Level (dBuV/m) = SA Reading (dBuV/m) + Factor* (dB)

*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	Test Configuration	1



	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	54.25	36.85	40.00	-3.15	50.37	-13.52	QP	---	---
2	218.18	34.17	46.00	-11.83	50.23	-16.06	Peak	---	---
3	307.42	33.59	46.00	-12.41	46.05	-12.46	Peak	---	---
4	515.97	36.09	46.00	-9.91	43.54	-7.45	Peak	---	---
5	800.18	38.48	46.00	-7.52	41.04	-2.56	Peak	---	---
6	899.12	41.28	46.00	-4.72	41.96	-0.68	Peak	---	---

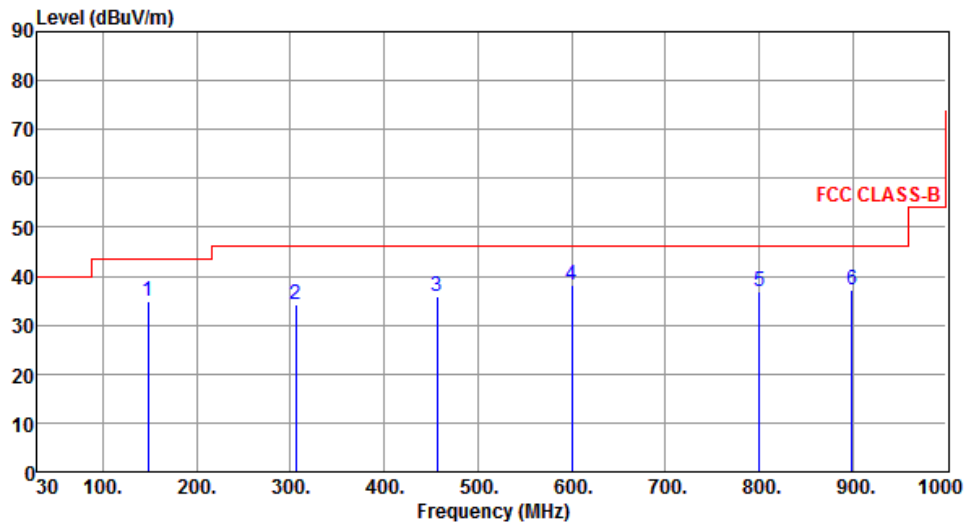
Note 1: Emission Level (dBuV/m) = SA Reading (dBuV/m) + Factor* (dB)

*Factor includes antenna factor , cable loss and amplifier gain

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

Note 3: All spurious emissions below 30MHz are more than 20 dB below the limit.

Modulation	VHT40	Test Freq. (MHz)	5230
Polarization	Horizontal	Test Configuration	2



	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	148.34	34.95	43.50	-8.55	48.42	-13.47	Peak	---	---
2	305.48	34.06	46.00	-11.94	46.57	-12.51	Peak	---	---
3	456.80	35.97	46.00	-10.03	44.59	-8.62	Peak	---	---
4	600.36	38.28	46.00	-7.72	44.00	-5.72	Peak	---	---
5	800.18	37.02	46.00	-8.98	39.58	-2.56	Peak	---	---
6	899.12	37.25	46.00	-8.75	37.93	-0.68	Peak	---	---

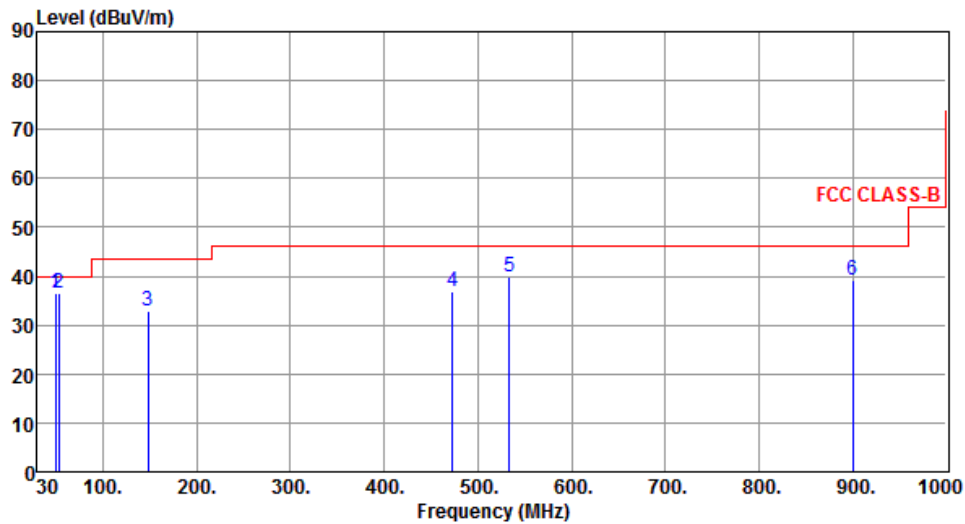
Note 1: Emission Level (dBuV/m) = SA Reading (dBuV/m) + Factor* (dB)

*Factor includes antenna factor , cable loss and amplifier gain

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

Note 3: All spurious emissions below 30MHz are more than 20 dB below the limit.

Modulation	VHT40	Test Freq. (MHz)	5230
Polarization	Vertical	Test Configuration	2



	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	49.40	36.46	40.00	-3.54	49.40	-12.94	QP	---	---
2	53.28	36.50	40.00	-3.50	49.90	-13.40	QP	---	---
3	148.34	33.04	43.50	-10.46	46.51	-13.47	Peak	---	---
4	473.29	36.86	46.00	-9.14	45.10	-8.24	Peak	---	---
5	533.43	39.83	46.00	-6.17	47.09	-7.26	Peak	---	---
6	900.09	39.34	46.00	-6.66	40.01	-0.67	Peak	---	---

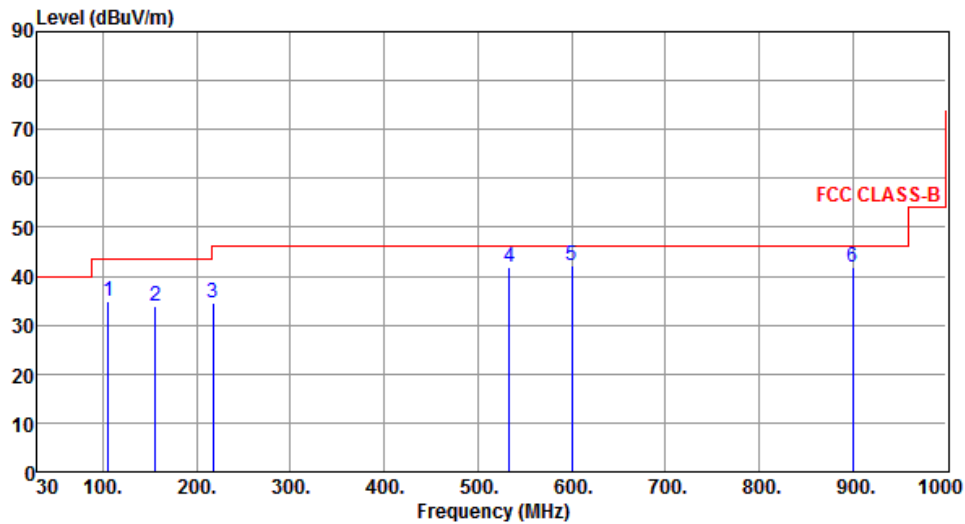
Note 1: Emission Level (dBuV/m) = SA Reading (dBuV/m) + Factor* (dB)

*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	Test Configuration	2



	Freq. MHz	Emission level dBUV/m	Limit dBUV/m	Margin dB	SA reading dBUV	Factor dB	Remark	ANT High cm	Turn Table deg
1	105.66	34.95	43.50	-8.55	52.35	-17.40	Peak	---	---
2	156.10	33.79	43.50	-9.71	47.33	-13.54	Peak	---	---
3	217.21	34.60	46.00	-11.40	50.71	-16.11	Peak	---	---
4	533.43	41.92	46.00	-4.08	49.18	-7.26	Peak	---	---
5	600.36	42.11	46.00	-3.89	47.83	-5.72	Peak	---	---
6	900.09	41.83	46.00	-4.17	42.50	-0.67	Peak	---	---

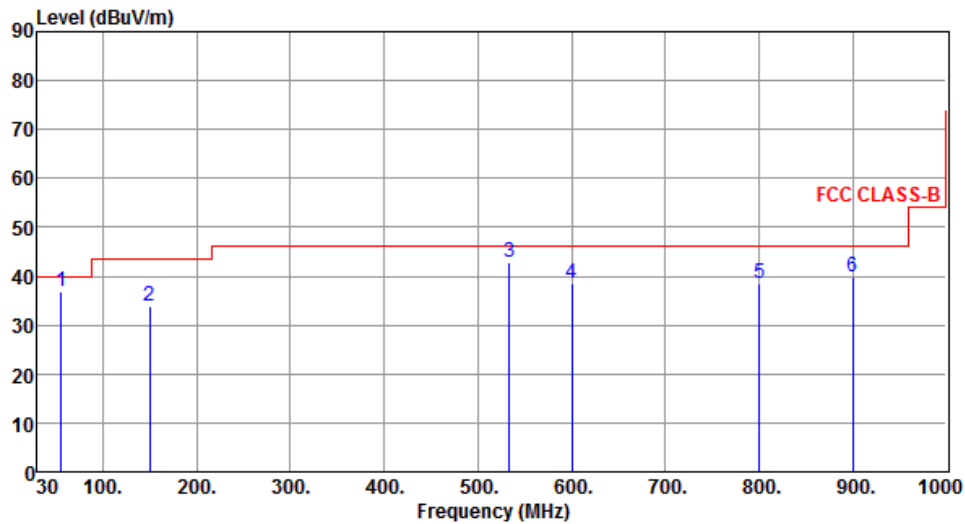
Note 1: Emission Level (dBUV/m) = SA Reading (dBUV/m) + Factor* (dB)

*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	Test Configuration	2



	Freq. MHz	Emission level dBUV/m	Limit dBUV/m	Margin dB	SA reading dBUV	Factor dB	Remark	ANT High cm	Turn Table deg
1	55.22	36.91	40.00	-3.09	50.56	-13.65	QP	---	---
2	150.28	33.87	43.50	-9.63	47.30	-13.43	Peak	---	---
3	533.43	42.87	46.00	-3.13	50.13	-7.26	QP	---	---
4	600.36	38.36	46.00	-7.64	44.08	-5.72	Peak	---	---
5	800.18	38.48	46.00	-7.52	41.04	-2.56	Peak	---	---
6	900.09	39.87	46.00	-6.13	40.54	-0.67	Peak	---	---

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

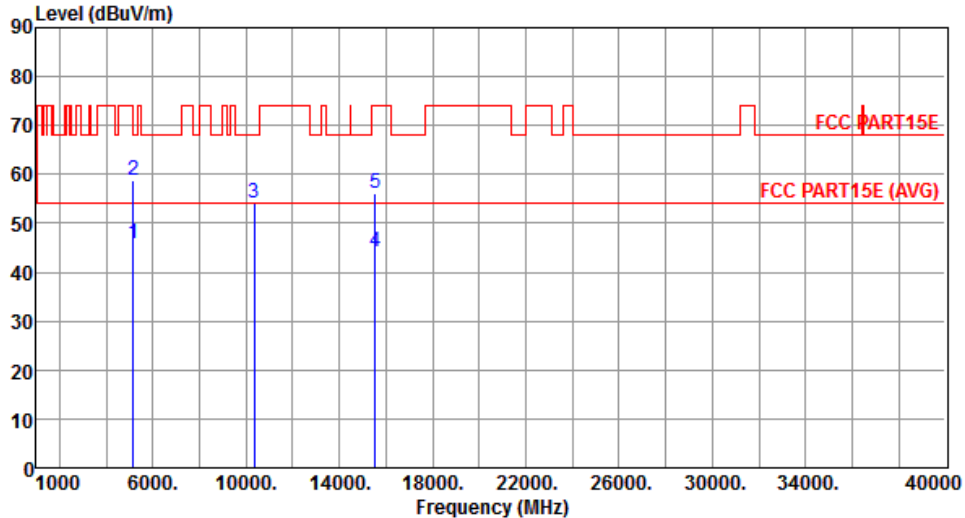
*Factor includes antenna factor , cable loss and amplifier gain

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

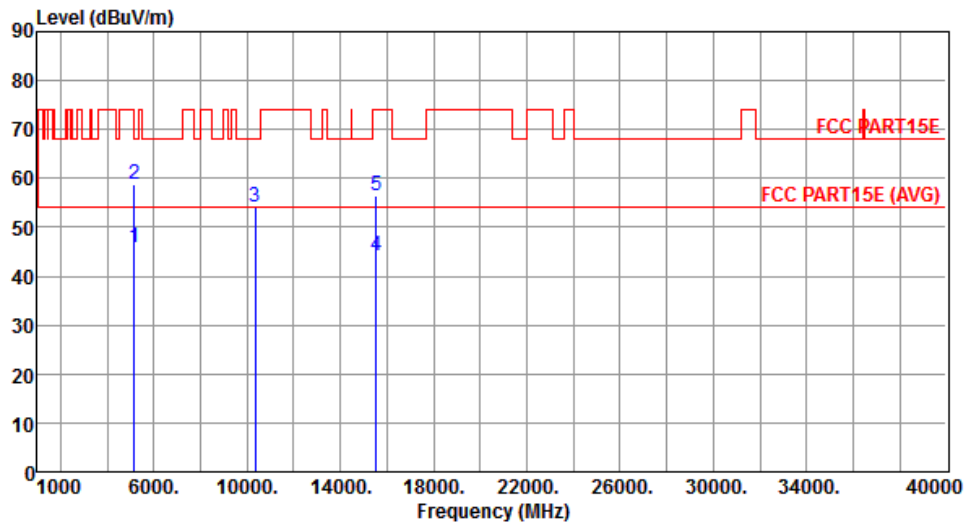
Modulation	11a	Test Freq. (MHz)	5180
Polarization	Horizontal	Test Configuration	1



	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	45.69	54.00	-8.31	39.11	6.58	Average	---	---
2	5150.00	58.85	74.00	-15.15	52.27	6.58	Peak	---	---
3	10360.00	54.24	68.20	-13.96	37.83	16.41	Peak	---	---
4	15540.00	44.08	54.00	-9.92	26.16	17.92	Average	---	---
5	15540.00	56.02	74.00	-17.98	38.10	17.92	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).

Modulation	11a	Test Freq. (MHz)	5180
Polarization	Vertical	Test Configuration	1



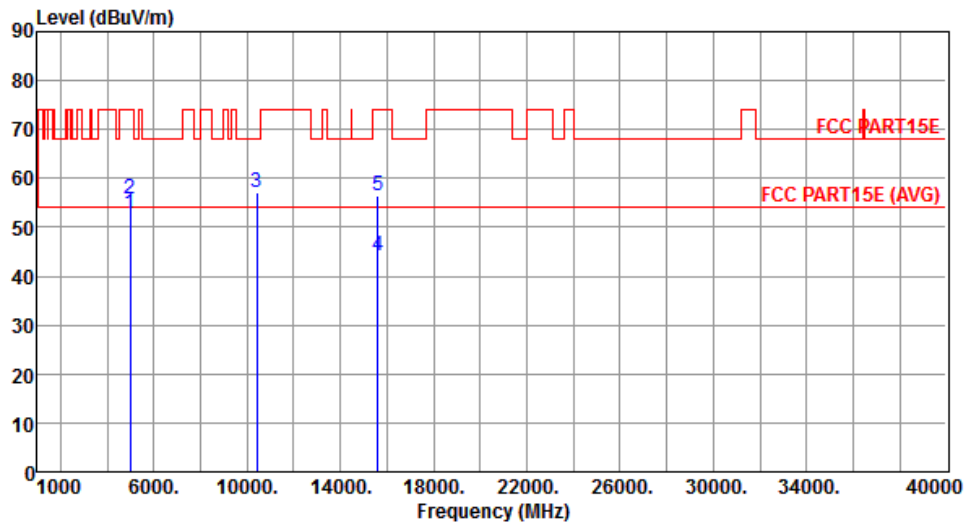
	Freq. MHz	Emission level dBUV/m	Limit dBUV/m	Margin dB	SA reading dBUV	Factor dB	Remark	ANT High cm	Turn Table deg
1	5150.00	45.93	54.00	-8.07	39.35	6.58	Average	---	---
2	5150.00	58.89	74.00	-15.11	52.31	6.58	Peak	---	---
3	10360.00	54.25	68.20	-13.95	37.84	16.41	Peak	---	---
4	15540.00	44.12	54.00	-9.88	26.20	17.92	Average	---	---
5	15540.00	56.57	74.00	-17.43	38.65	17.92	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).

Modulation	11a	Test Freq. (MHz)	5200
Polarization	Horizontal	Test Configuration	1



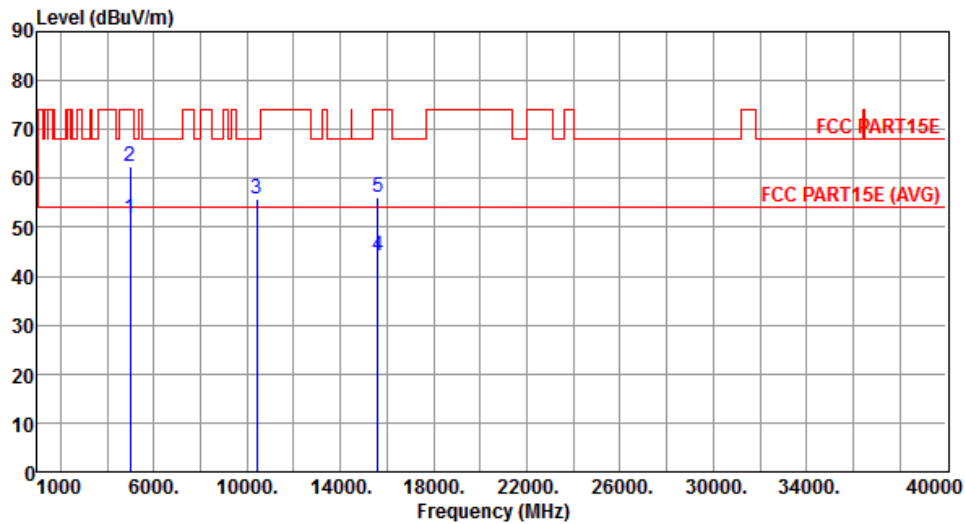
	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	5000.00	52.75	54.00	-1.25	46.45	6.30	Average	---	---
2	5000.00	55.76	74.00	-18.24	49.46	6.30	Peak	---	---
3	10400.00	57.07	68.20	-11.13	40.58	16.49	Peak	---	---
4	15600.00	44.11	54.00	-9.89	26.38	17.73	Average	---	---
5	15600.00	56.36	74.00	-17.64	38.63	17.73	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).

Modulation	11a	Test Freq. (MHz)	5200
Polarization	Vertical	Test Configuration	1



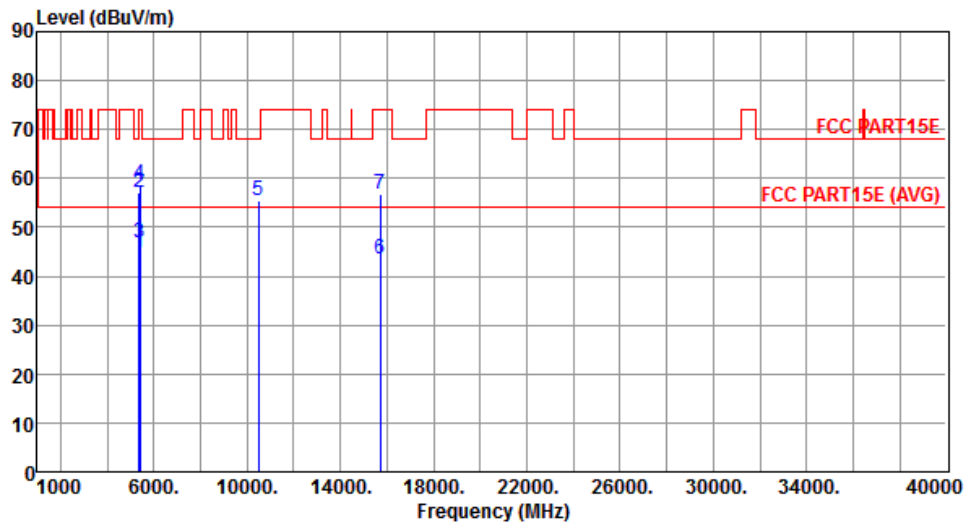
	Freq. MHz	Emission level dBUV/m	Limit dBUV/m	Margin dB	SA reading dBUV	Factor dB	Remark	ANT High cm	Turn Table deg
1	5000.00	51.79	54.00	-2.21	45.49	6.30	Average	---	---
2	5000.00	62.30	74.00	-11.70	56.00	6.30	Peak	---	---
3	10400.00	55.88	68.20	-12.32	39.39	16.49	Peak	---	---
4	15600.00	44.28	54.00	-9.72	26.55	17.73	Average	---	---
5	15600.00	56.27	74.00	-17.73	38.54	17.73	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).

Modulation	11a	Test Freq. (MHz)	5240
Polarization	Horizontal	Test Configuration	1



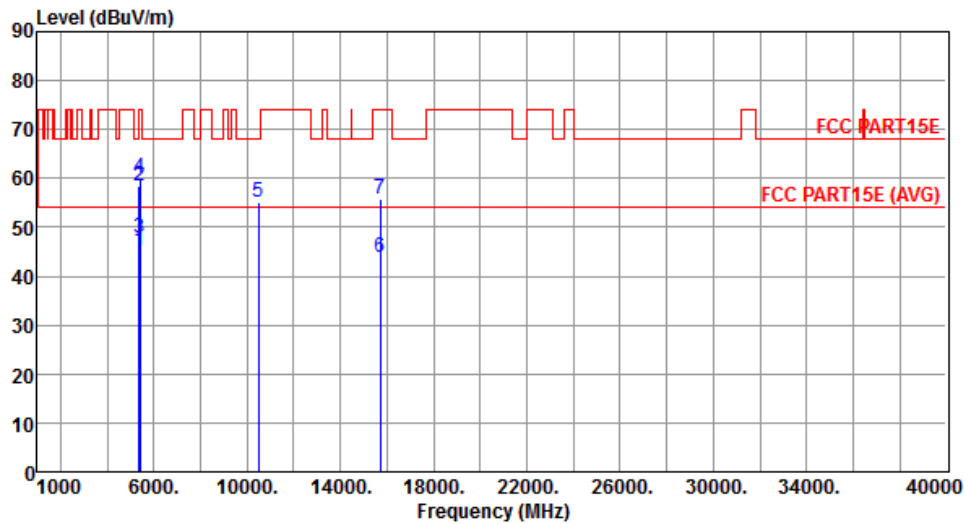
	Freq. MHz	Emission level dBUV/m	Limit dBUV/m	Margin dB	SA reading dBUV	Factor dB	Remark	ANT High cm	Turn Table deg
1	5350.00	44.72	54.00	-9.28	37.69	7.03	Average	---	---
2	5350.00	57.25	74.00	-16.75	50.22	7.03	Peak	---	---
3	5398.00	46.89	54.00	-7.11	39.75	7.14	Average	---	---
4	5398.00	58.70	74.00	-15.30	51.56	7.14	Peak	---	---
5	10480.00	55.57	68.20	-12.63	38.91	16.66	Peak	---	---
6	15720.00	43.40	54.00	-10.60	26.03	17.37	Average	---	---
7	15720.00	56.70	74.00	-17.30	39.33	17.37	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).

Modulation	11a	Test Freq. (MHz)	5240
Polarization	Vertical	Test Configuration	1



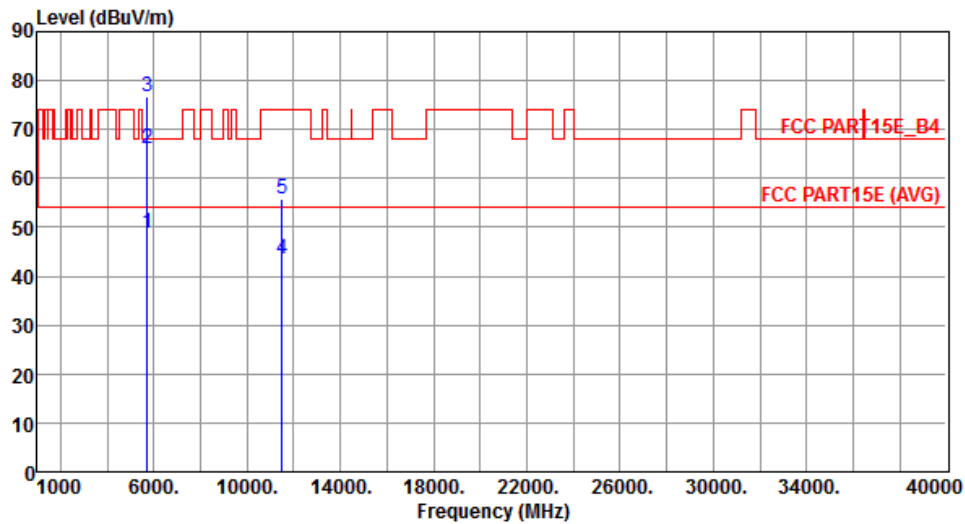
	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	5350.00	45.07	54.00	-8.93	38.04	7.03	Average	---	---
2	5350.00	58.47	74.00	-15.53	51.44	7.03	Peak	---	---
3	5398.00	47.80	54.00	-6.20	40.66	7.14	Average	---	---
4	5398.00	60.22	74.00	-13.78	53.08	7.14	Peak	---	---
5	10480.00	55.01	68.20	-13.19	38.35	16.66	Peak	---	---
6	15720.00	43.89	54.00	-10.11	26.52	17.37	Average	---	---
7	15720.00	55.89	74.00	-18.11	38.52	17.37	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).

Modulation	11a	Test Freq. (MHz)	5745
Polarization	Horizontal	Test Configuration	1



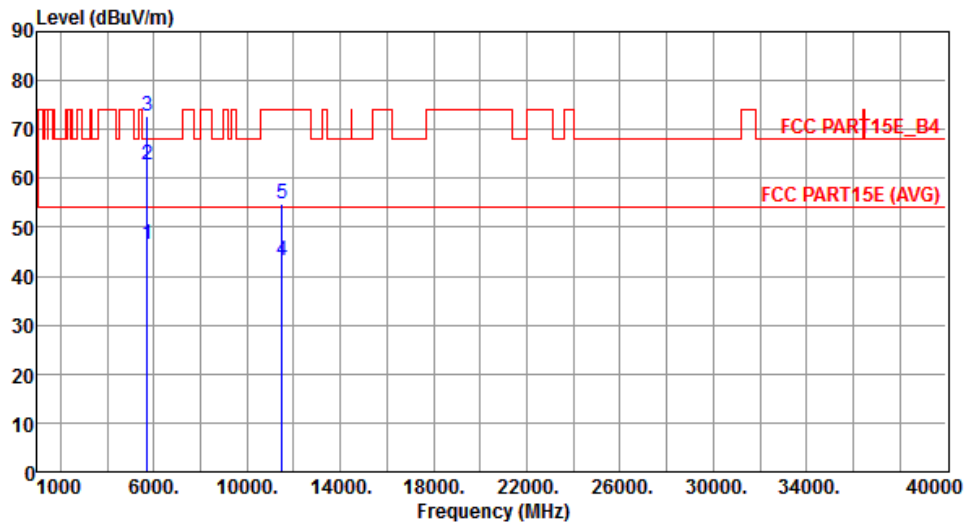
	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	5715.00	48.84	54.00	-5.16	41.31	7.53	Average	---	---
2	5715.00	66.18	68.20	-2.02	58.65	7.53	Peak	---	---
3	5725.00	76.56	78.20	-1.64	68.99	7.57	Peak	---	---
4	11490.00	43.63	54.00	-10.37	26.36	17.27	Average	---	---
5	11490.00	55.89	74.00	-18.11	38.62	17.27	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).

Modulation	11a	Test Freq. (MHz)	5745
Polarization	Vertical	Test Configuration	1



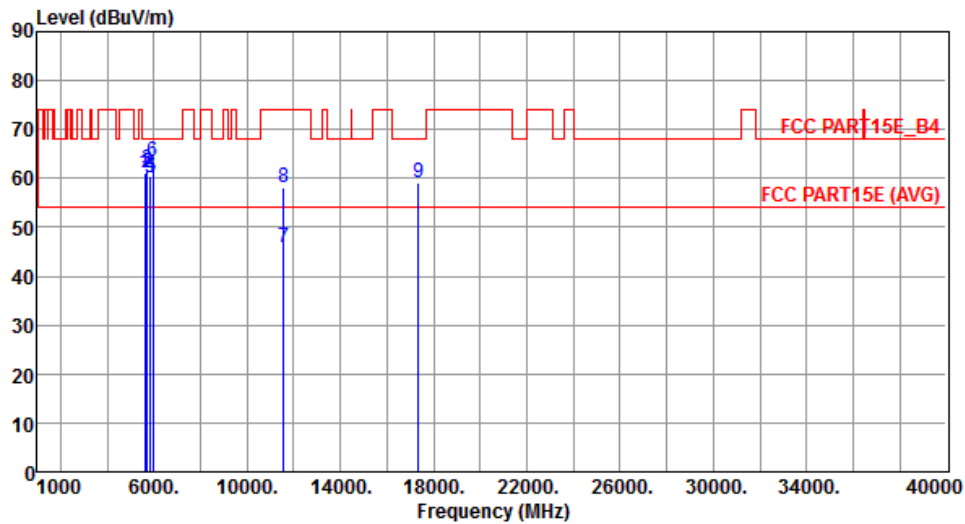
	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	5715.00	46.65	54.00	-7.35	39.12	7.53	Average	---	---
2	5715.00	62.64	68.20	-5.56	55.11	7.53	Peak	---	---
3	5725.00	72.76	78.20	-5.44	65.19	7.57	Peak	---	---
4	11490.00	43.06	54.00	-10.94	25.79	17.27	Average	---	---
5	11490.00	54.89	74.00	-19.11	37.62	17.27	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).

Modulation	11a	Test Freq. (MHz)	5785
Polarization	Horizontal	Test Configuration	1



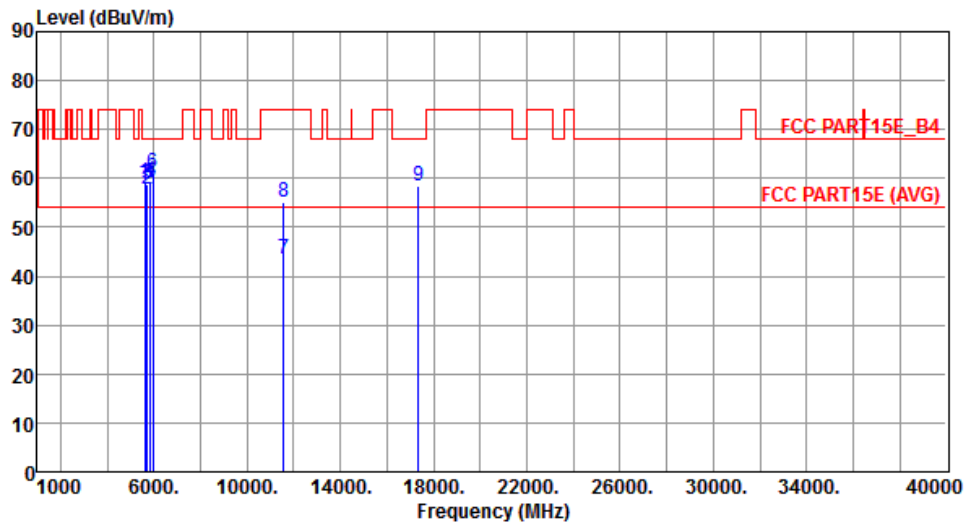
	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	5625.00	61.09	68.20	-7.11	53.83	7.26	Peak	---	---
2	5715.00	61.21	68.20	-6.99	53.68	7.53	Peak	---	---
3	5725.00	61.79	78.20	-16.41	54.22	7.57	Peak	---	---
4	5850.00	60.42	78.20	-17.78	52.53	7.89	Peak	---	---
5	5860.00	60.19	68.20	-8.01	52.28	7.91	Peak	---	---
6	5945.00	63.41	68.20	-4.79	55.33	8.08	Peak	---	---
7	11570.00	45.80	54.00	-8.20	28.62	17.18	Average	---	---
8	11570.00	58.21	74.00	-15.79	41.03	17.18	Peak	---	---
9	17355.00	58.97	68.20	-9.23	39.75	19.22	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).

Modulation	11a	Test Freq. (MHz)	5785
Polarization	Vertical	Test Configuration	1



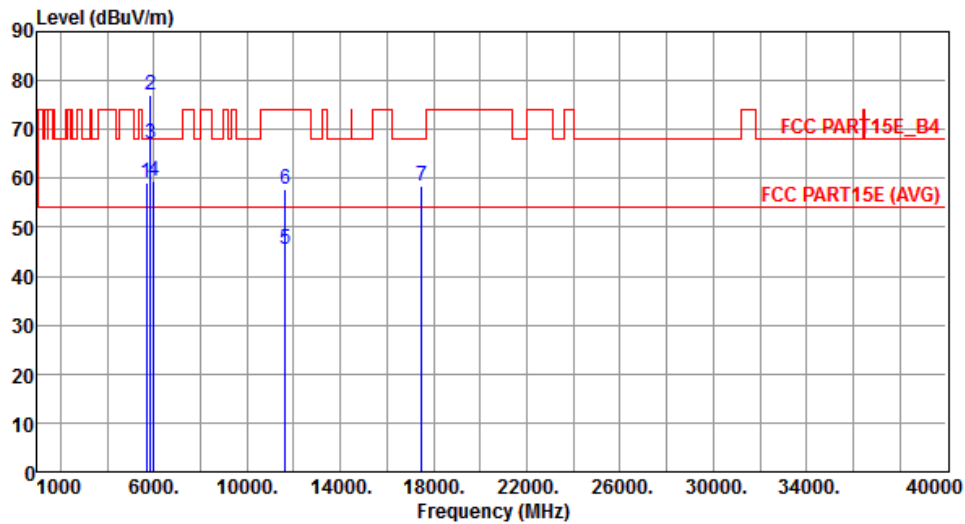
	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	5625.00	59.16	68.20	-9.04	51.90	7.26	Peak	---	---
2	5715.00	57.81	68.20	-10.39	50.28	7.53	Peak	---	---
3	5725.00	58.84	78.20	-19.36	51.27	7.57	Peak	---	---
4	5850.00	59.50	78.20	-18.70	51.61	7.89	Peak	---	---
5	5860.00	59.15	68.20	-9.05	51.24	7.91	Peak	---	---
6	5945.00	61.17	68.20	-7.03	53.09	8.08	Peak	---	---
7	11570.00	43.42	54.00	-10.58	26.24	17.18	Average	---	---
8	11570.00	55.04	74.00	-18.96	37.86	17.18	Peak	---	---
9	17355.00	58.29	68.20	-9.91	39.07	19.22	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).

Modulation	11a	Test Freq. (MHz)	5825
Polarization	Horizontal	Test Configuration	1



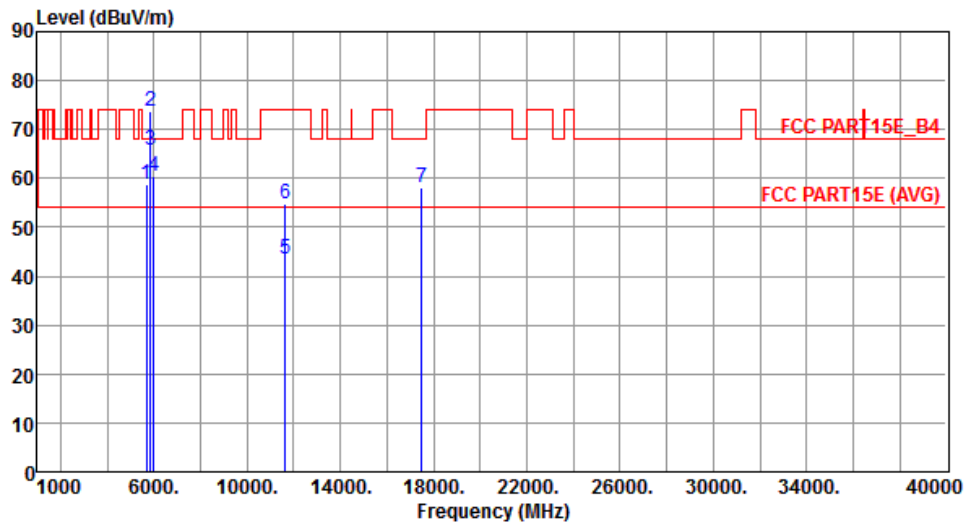
	Freq. MHz	Emission level dBUV/m	Limit dBUV/m	Margin dB	SA reading dBUV	Factor dB	Remark	ANT High cm	Turn Table deg
1	5670.00	59.19	68.20	-9.01	51.80	7.39	Peak	---	---
2	5850.00	77.00	78.20	-1.20	69.11	7.89	Peak	---	---
3	5860.00	67.18	68.20	-1.02	59.27	7.91	Peak	---	---
4	5983.00	59.43	68.20	-8.77	51.28	8.15	Peak	---	---
5	11650.00	45.45	54.00	-8.55	28.38	17.07	Average	---	---
6	11650.00	57.65	74.00	-16.35	40.58	17.07	Peak	---	---
7	17475.00	58.45	68.20	-9.75	39.08	19.37	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).

Modulation	11a	Test Freq. (MHz)	5825
Polarization	Vertical	Test Configuration	1



	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	5670.00	58.70	68.20	-9.50	51.31	7.39	Peak	---	---
2	5850.00	73.84	78.20	-4.36	65.95	7.89	Peak	---	---
3	5860.00	65.80	68.20	-2.40	57.89	7.91	Peak	---	---
4	5983.00	60.46	68.20	-7.74	52.31	8.15	Peak	---	---
5	11650.00	43.35	54.00	-10.65	26.28	17.07	Average	---	---
6	11650.00	54.96	74.00	-19.04	37.89	17.07	Peak	---	---
7	17475.00	58.02	68.20	-10.18	38.65	19.37	Peak	---	---

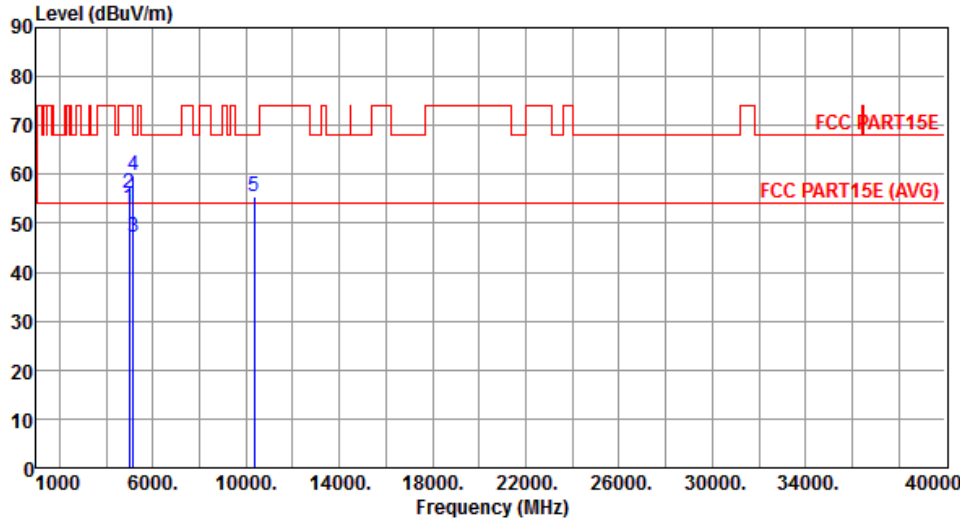
Note 1: Emission Level (dBuV/m) = SA Reading (dBuV/m) + Factor* (dB)

*Factor includes antenna factor , cable loss and amplifier gain

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

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

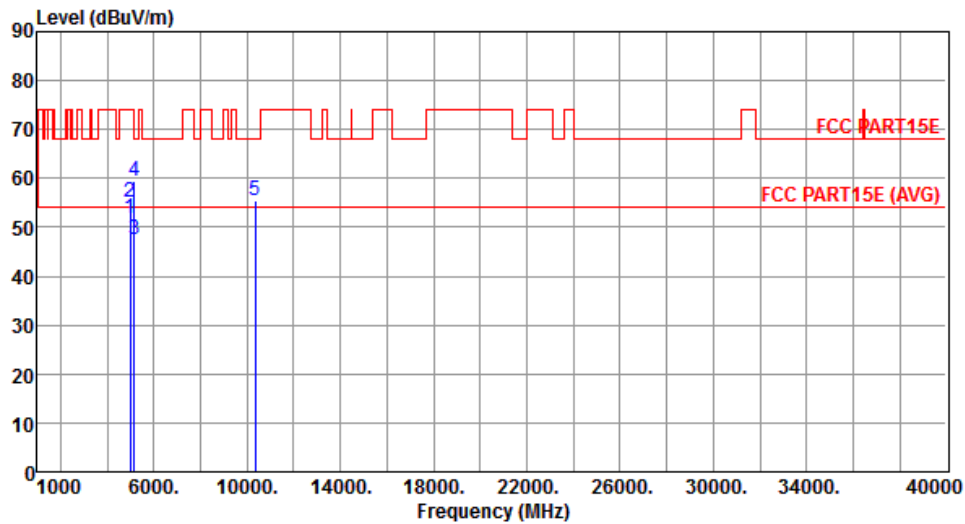
Modulation	VHT20	Test Freq. (MHz)	5180
Polarization	Horizontal	Test Configuration	1



	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	5000.00	53.00	54.00	-1.00	46.70	6.30	Average	---	---
2	5000.00	56.12	74.00	-17.88	49.82	6.30	Peak	---	---
3	5150.00	47.13	54.00	-6.87	40.55	6.58	Average	---	---
4	5150.00	59.83	74.00	-14.17	53.25	6.58	Peak	---	---
5	10360.00	55.36	68.20	-12.84	38.95	16.41	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).

Modulation	VHT20	Test Freq. (MHz)	5180
Polarization	Vertical	Test Configuration	1



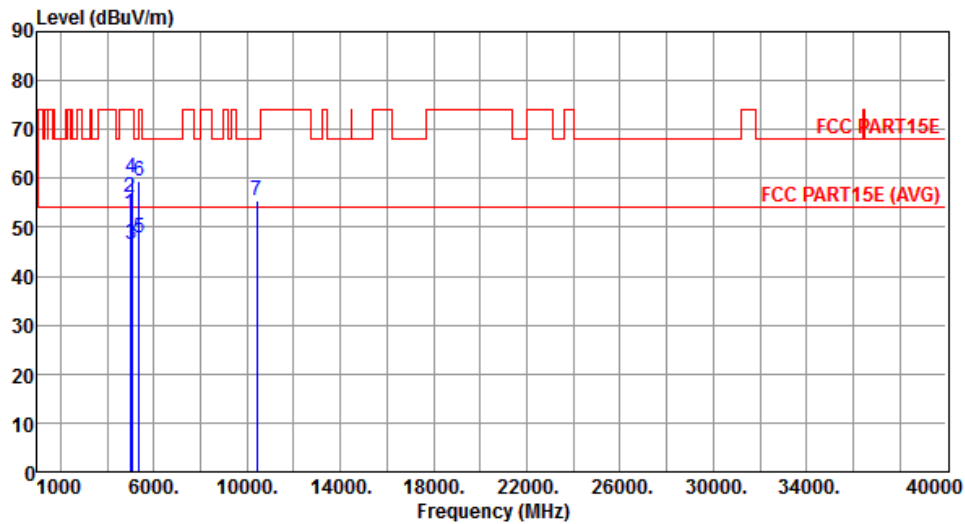
	Freq. MHz	Emission level dBUV/m	Limit dBUV/m	Margin dB	SA reading dBUV	Factor dB	Remark	ANT High cm	Turn Table deg
1	5000.00	51.89	54.00	-2.11	45.59	6.30	Average	---	---
2	5000.00	54.98	74.00	-19.02	48.68	6.30	Peak	---	---
3	5150.00	47.44	54.00	-6.56	40.86	6.58	Average	---	---
4	5150.00	59.32	74.00	-14.68	52.74	6.58	Peak	---	---
5	10360.00	55.36	68.20	-12.84	38.95	16.41	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).

Modulation	VHT20	Test Freq. (MHz)	5200
Polarization	Horizontal	Test Configuration	1



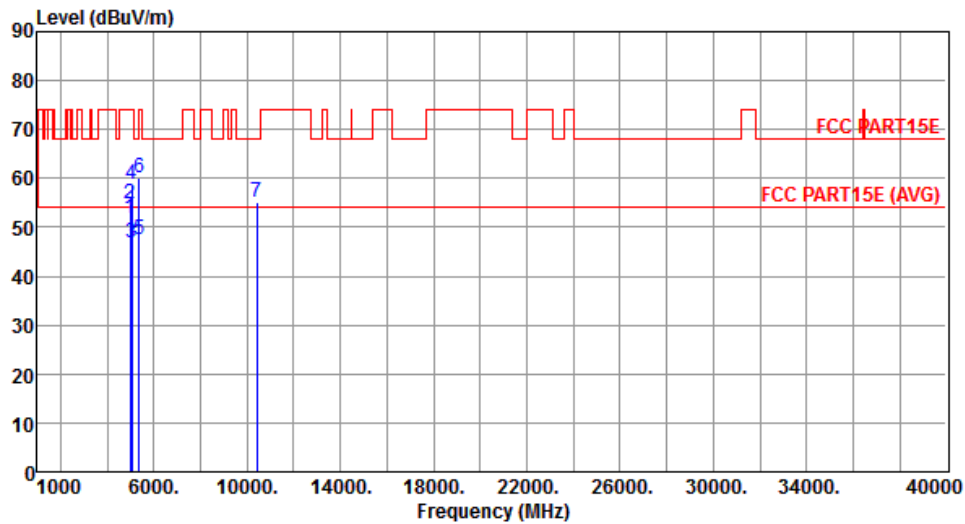
	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	5000.00	52.87	54.00	-1.13	46.57	6.30	Average	---	---
2	5000.00	56.15	74.00	-17.85	49.85	6.30	Peak	---	---
3	5040.00	46.65	54.00	-7.35	40.27	6.38	Average	---	---
4	5040.00	60.04	74.00	-13.96	53.66	6.38	Peak	---	---
5	5360.00	47.68	54.00	-6.32	40.62	7.06	Average	---	---
6	5360.00	59.33	74.00	-14.67	52.27	7.06	Peak	---	---
7	10400.00	55.42	68.20	-12.78	38.93	16.49	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).

Modulation	VHT20	Test Freq. (MHz)	5200
Polarization	Vertical	Test Configuration	1



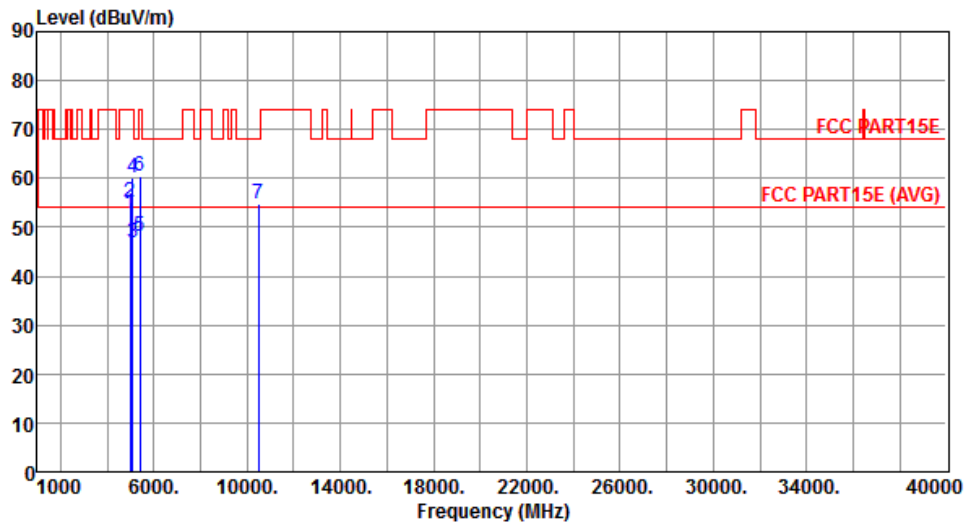
	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	5000.00	51.96	54.00	-2.04	45.66	6.30	Average	---	---
2	5000.00	54.91	74.00	-19.09	48.61	6.30	Peak	---	---
3	5040.00	46.80	54.00	-7.20	40.42	6.38	Average	---	---
4	5040.00	58.86	74.00	-15.14	52.48	6.38	Peak	---	---
5	5360.00	47.48	54.00	-6.52	40.42	7.06	Average	---	---
6	5360.00	60.26	74.00	-13.74	53.20	7.06	Peak	---	---
7	10400.00	55.05	68.20	-13.15	38.56	16.49	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).

Modulation	VHT20	Test Freq. (MHz)	5240
Polarization	Horizontal	Test Configuration	1



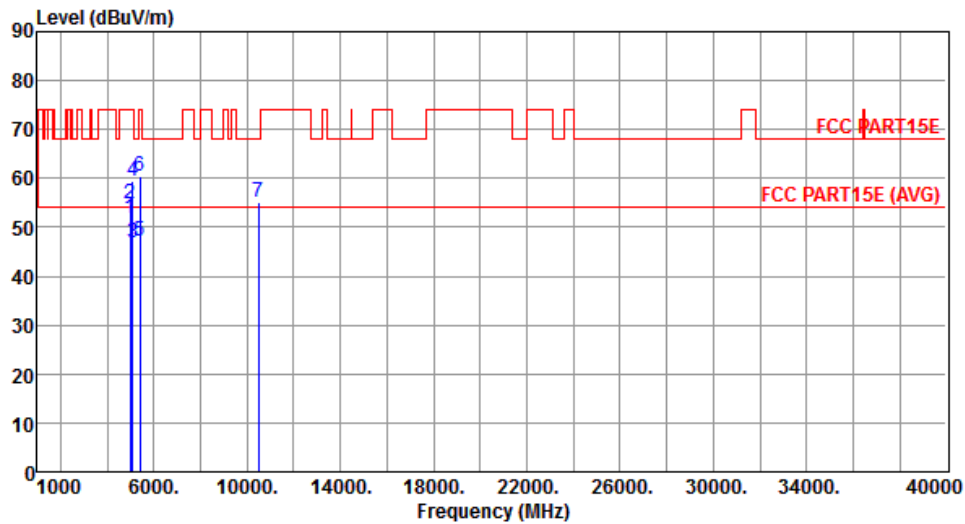
	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	5000.00	52.92	54.00	-1.08	46.62	6.30	Average	---	---
2	5000.00	55.02	74.00	-18.98	48.72	6.30	Peak	---	---
3	5080.00	46.76	54.00	-7.24	40.31	6.45	Average	---	---
4	5080.00	60.13	74.00	-13.87	53.68	6.45	Peak	---	---
5	5400.00	48.16	54.00	-5.84	41.02	7.14	Average	---	---
6	5400.00	60.47	74.00	-13.53	53.33	7.14	Peak	---	---
7	10480.00	54.91	68.20	-13.29	38.25	16.66	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).

Modulation	VHT20	Test Freq. (MHz)	5240
Polarization	Vertical	Test Configuration	1



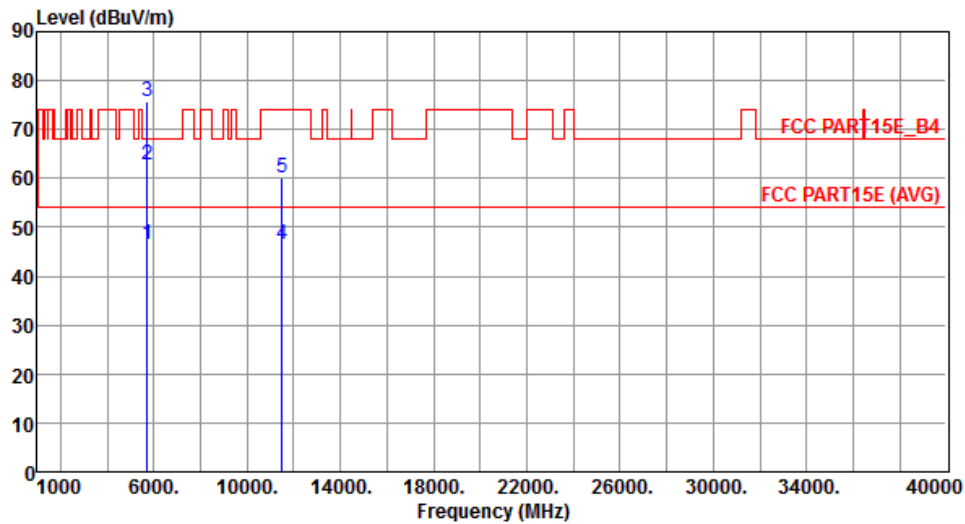
	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	5000.00	51.77	54.00	-2.23	45.47	6.30	Average	---	---
2	5000.00	54.83	74.00	-19.17	48.53	6.30	Peak	---	---
3	5080.00	46.78	54.00	-7.22	40.33	6.45	Average	---	---
4	5080.00	59.60	74.00	-14.40	53.15	6.45	Peak	---	---
5	5400.00	47.30	54.00	-6.70	40.16	7.14	Average	---	---
6	5400.00	60.45	74.00	-13.55	53.31	7.14	Peak	---	---
7	10480.00	55.26	68.20	-12.94	38.60	16.66	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).

Modulation	VHT20	Test Freq. (MHz)	5745
Polarization	Horizontal	Test Configuration	1



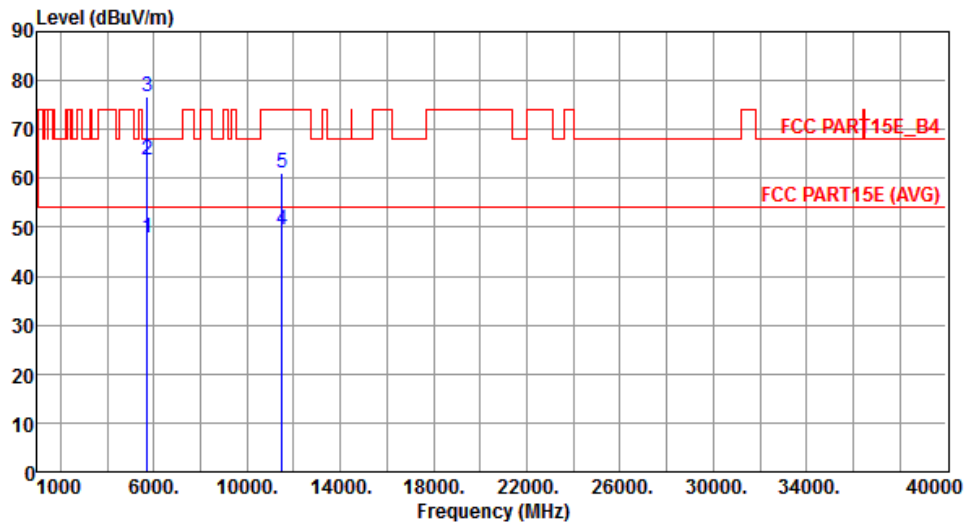
	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	5715.00	46.65	54.00	-7.35	39.12	7.53	Average	---	---
2	5715.00	62.85	68.20	-5.35	55.32	7.53	Peak	---	---
3	5725.00	75.67	78.20	-2.53	68.10	7.57	Peak	---	---
4	11490.00	46.45	54.00	-7.55	29.18	17.27	Average	---	---
5	11490.00	60.24	74.00	-13.76	42.97	17.27	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).

Modulation	VHT20	Test Freq. (MHz)	5745
Polarization	Vertical	Test Configuration	1



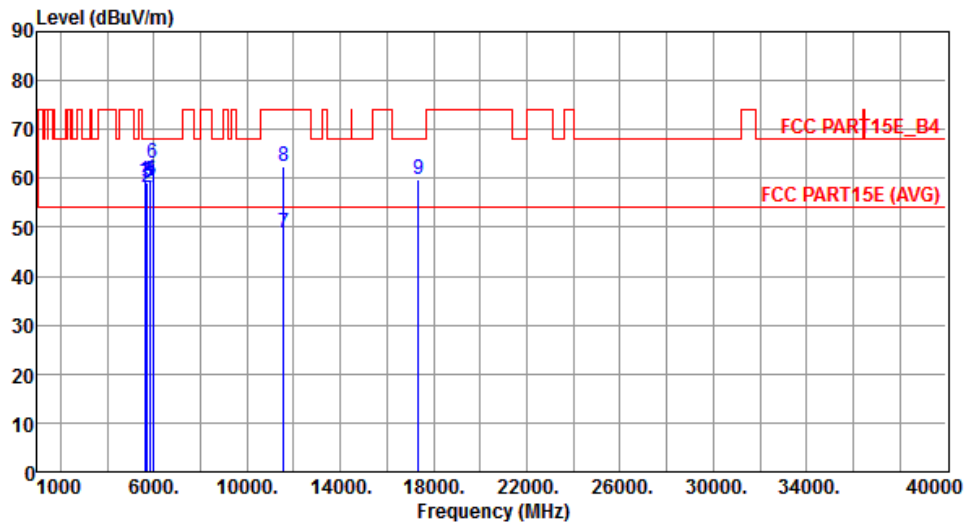
	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	5715.00	47.93	54.00	-6.07	40.40	7.53	Average	---	---
2	5715.00	63.63	68.20	-4.57	56.10	7.53	Peak	---	---
3	5725.00	76.85	78.20	-1.35	69.28	7.57	Peak	---	---
4	11490.00	49.53	54.00	-4.47	32.26	17.27	Average	---	---
5	11490.00	61.05	74.00	-12.95	43.78	17.27	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).

Modulation	VHT20	Test Freq. (MHz)	5785
Polarization	Horizontal	Test Configuration	1



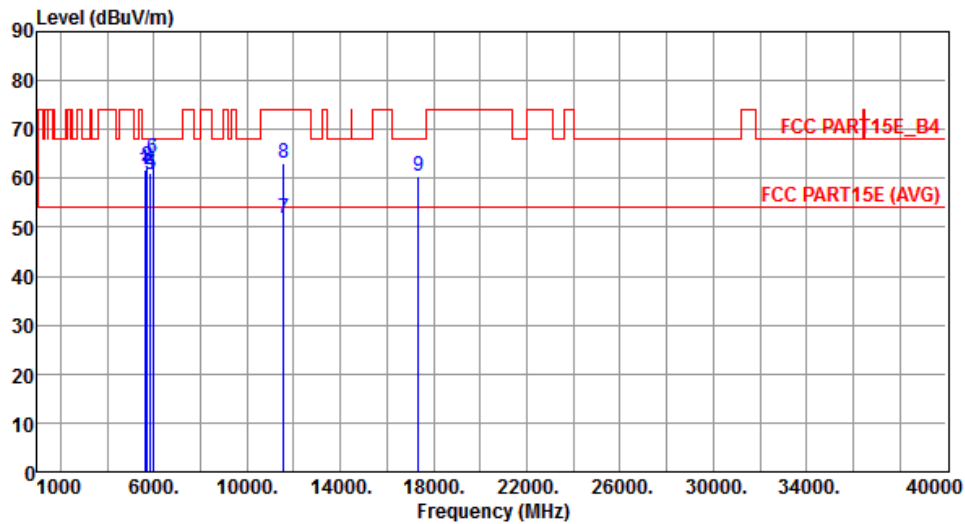
	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	5626.00	59.28	68.20	-8.92	52.02	7.26	Peak	---	---
2	5715.00	58.15	68.20	-10.05	50.62	7.53	Peak	---	---
3	5725.00	59.08	78.20	-19.12	51.51	7.57	Peak	---	---
4	5850.00	59.87	78.20	-18.33	51.98	7.89	Peak	---	---
5	5860.00	59.40	68.20	-8.80	51.49	7.91	Peak	---	---
6	5943.00	62.97	68.20	-5.23	54.90	8.07	Peak	---	---
7	11570.00	48.80	54.00	-5.20	31.62	17.18	Average	---	---
8	11570.00	62.33	74.00	-11.67	45.15	17.18	Peak	---	---
9	17355.00	59.84	68.20	-8.36	40.62	19.22	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).

Modulation	VHT20	Test Freq. (MHz)	5785
Polarization	Vertical	Test Configuration	1



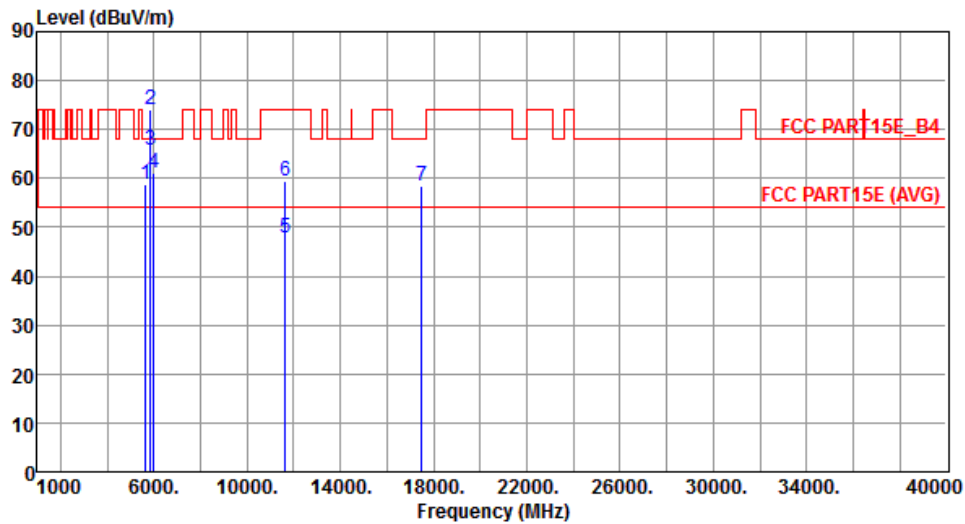
	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	5626.00	61.64	68.20	-6.56	54.38	7.26	Peak	---	---
2	5715.00	62.35	68.20	-5.85	54.82	7.53	Peak	---	---
3	5725.00	62.59	78.20	-15.61	55.02	7.57	Peak	---	---
4	5850.00	61.23	78.20	-16.97	53.34	7.89	Peak	---	---
5	5860.00	60.85	68.20	-7.35	52.94	7.91	Peak	---	---
6	5943.00	63.97	68.20	-4.23	55.90	8.07	Peak	---	---
7	11570.00	51.66	54.00	-2.34	34.48	17.18	Average	---	---
8	11570.00	63.13	74.00	-10.87	45.95	17.18	Peak	---	---
9	17355.00	60.31	68.20	-7.89	41.09	19.22	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).

Modulation	VHT20	Test Freq. (MHz)	5825
Polarization	Horizontal	Test Configuration	1



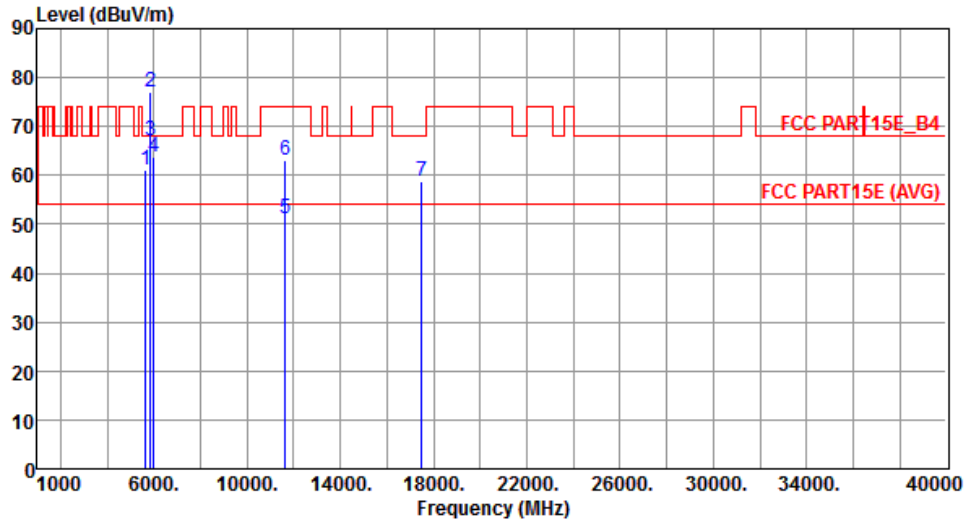
	Freq. MHz	Emission level dBUV/m	Limit dBUV/m	Margin dB	SA reading dBUV	Factor dB	Remark	ANT High cm	Turn Table deg
1	5656.00	58.94	68.20	-9.26	51.58	7.36	Peak	---	---
2	5850.00	74.22	78.20	-3.98	66.33	7.89	Peak	---	---
3	5860.00	65.61	68.20	-2.59	57.70	7.91	Peak	---	---
4	5983.00	61.03	68.20	-7.17	52.88	8.15	Peak	---	---
5	11650.00	47.68	54.00	-6.32	30.61	17.07	Average	---	---
6	11650.00	59.39	74.00	-14.61	42.32	17.07	Peak	---	---
7	17475.00	58.46	68.20	-9.74	39.09	19.37	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).

Modulation	VHT20	Test Freq. (MHz)	5825
Polarization	Vertical	Test Configuration	1



	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	5656.00	60.96	68.20	-7.24	53.60	7.36	Peak	---	---
2	5850.00	77.16	78.20	-1.04	69.27	7.89	Peak	---	---
3	5860.00	67.01	68.20	-1.19	59.10	7.91	Peak	---	---
4	5983.00	63.64	68.20	-4.56	55.49	8.15	Peak	---	---
5	11650.00	51.02	54.00	-2.98	33.95	17.07	Average	---	---
6	11650.00	63.08	74.00	-10.92	46.01	17.07	Peak	---	---
7	17475.00	58.87	68.20	-9.33	39.50	19.37	Peak	---	---

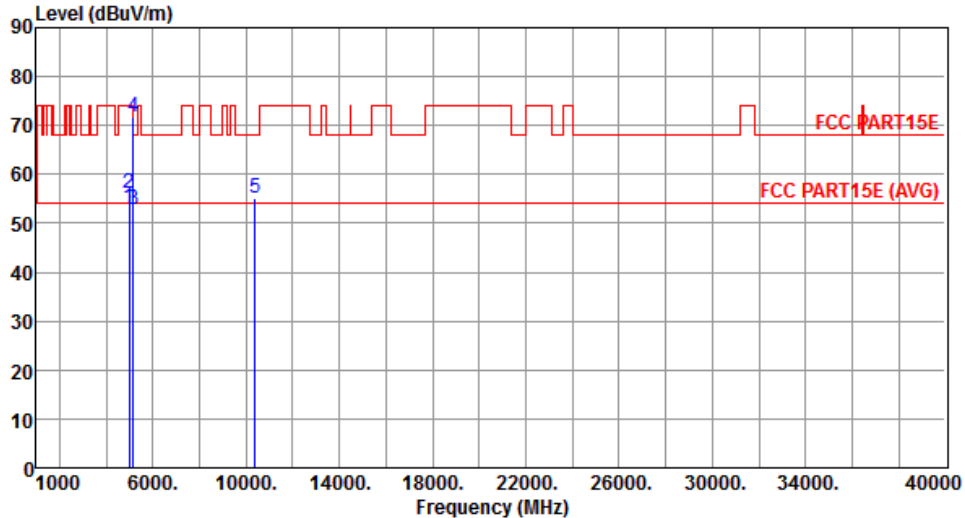
Note 1: Emission Level (dBuV/m) = SA Reading (dBuV/m) + Factor* (dB)

*Factor includes antenna factor , cable loss and amplifier gain

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

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

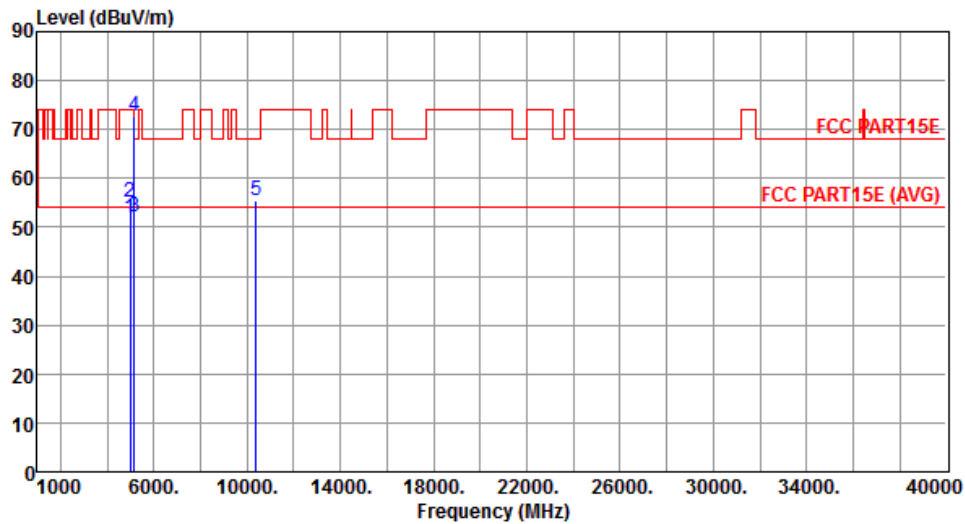
Modulation	VHT40	Test Freq. (MHz)	5190
Polarization	Horizontal	Test Configuration	1



	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	5000.00	52.98	54.00	-1.02	46.68	6.30	Average	---	---
2	5000.00	56.02	74.00	-17.98	49.72	6.30	Peak	---	---
3	5150.00	52.65	54.00	-1.35	46.07	6.58	Average	---	---
4	5150.00	71.81	74.00	-2.19	65.23	6.58	Peak	---	---
5	10380.00	55.08	68.20	-13.12	38.64	16.44	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).

Modulation	VHT40	Test Freq. (MHz)	5190
Polarization	Vertical	Test Configuration	1



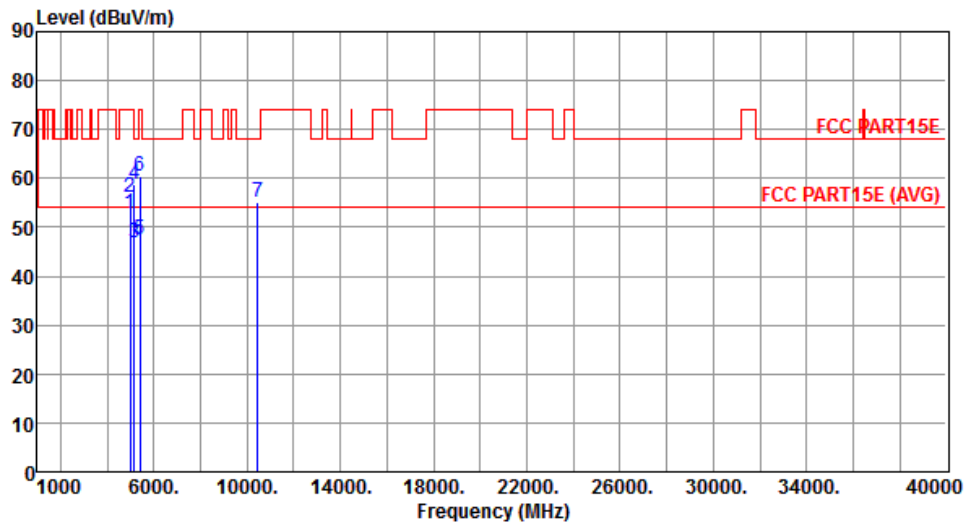
	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	5000.00	51.90	54.00	-2.10	45.60	6.30	Average	---	---
2	5000.00	55.05	74.00	-18.95	48.75	6.30	Peak	---	---
3	5150.00	52.29	54.00	-1.71	45.71	6.58	Average	---	---
4	5150.00	72.61	74.00	-1.39	66.03	6.58	Peak	---	---
5	10380.00	55.40	68.20	-12.80	38.96	16.44	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).

Modulation	VHT40	Test Freq. (MHz)	5230
Polarization	Horizontal	Test Configuration	1



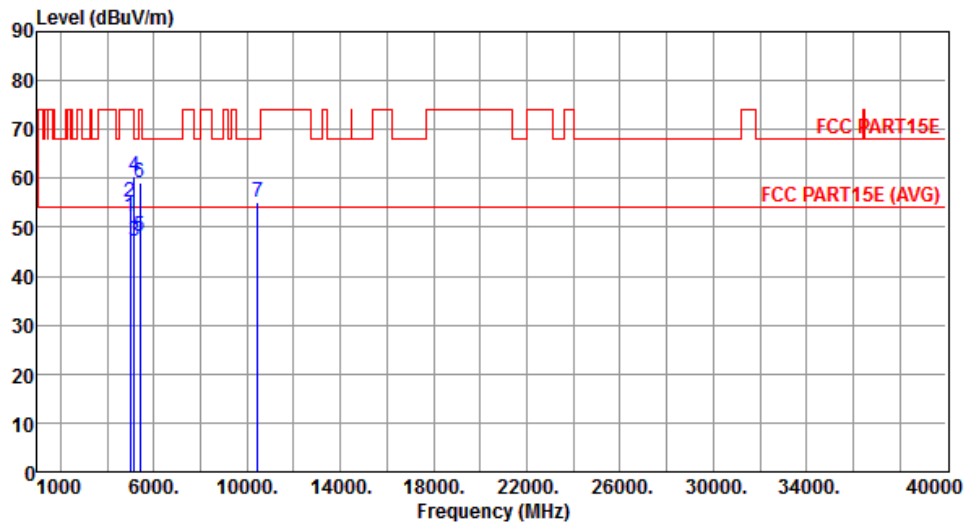
	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	5000.00	52.96	54.00	-1.04	46.66	6.30	Average	---	---
2	5000.00	56.13	74.00	-17.87	49.83	6.30	Peak	---	---
3	5150.00	46.92	54.00	-7.08	40.34	6.58	Average	---	---
4	5150.00	58.87	74.00	-15.13	52.29	6.58	Peak	---	---
5	5390.00	47.36	54.00	-6.64	40.25	7.11	Average	---	---
6	5390.00	60.33	74.00	-13.67	53.22	7.11	Peak	---	---
7	10460.00	55.28	68.20	-12.92	38.65	16.63	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).

Modulation	VHT40	Test Freq. (MHz)	5230
Polarization	Vertical	Test Configuration	1



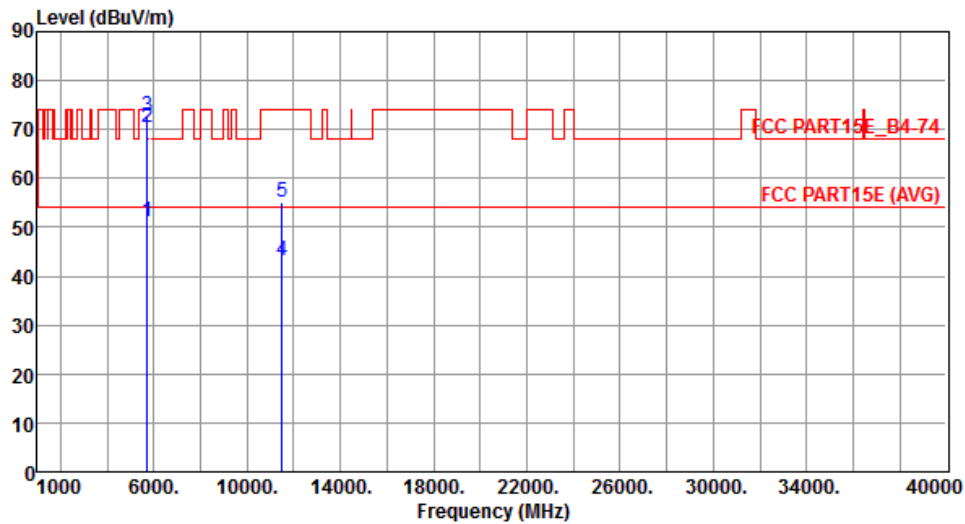
	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	5000.00	52.09	54.00	-1.91	45.79	6.30	Average	---	---
2	5000.00	54.98	74.00	-19.02	48.68	6.30	Peak	---	---
3	5150.00	47.02	54.00	-6.98	40.44	6.58	Average	---	---
4	5150.00	60.40	74.00	-13.60	53.82	6.58	Peak	---	---
5	5390.00	47.99	54.00	-6.01	40.88	7.11	Average	---	---
6	5390.00	59.04	74.00	-14.96	51.93	7.11	Peak	---	---
7	10460.00	55.11	68.20	-13.09	38.48	16.63	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).

Modulation	VHT40	Test Freq. (MHz)	5755
Polarization	Horizontal	Test Configuration	1



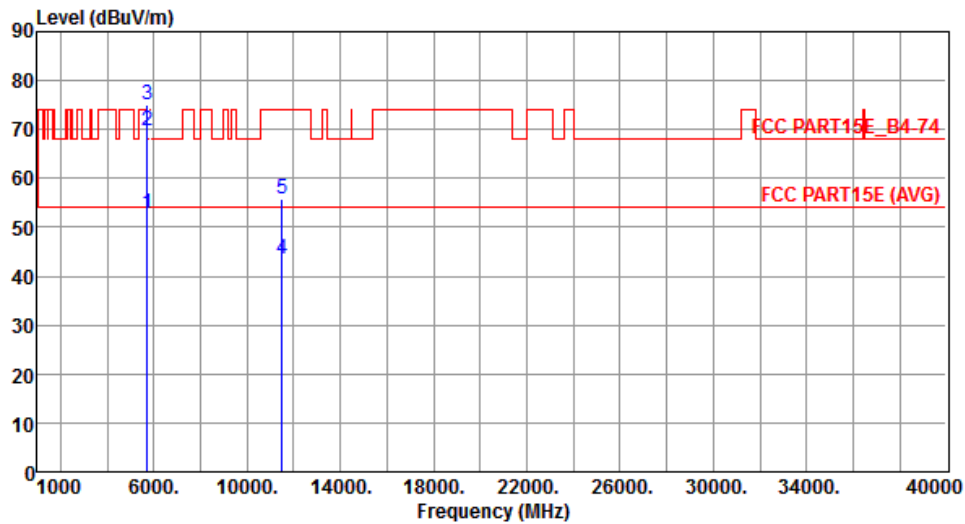
	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	5715.00	51.28	54.00	-2.72	43.75	7.53	Average	---	---
2	5715.00	70.29	74.00	-3.71	62.76	7.53	Peak	---	---
3	5725.00	72.74	78.20	-5.46	65.17	7.57	Peak	---	---
4	11510.00	43.12	54.00	-10.88	25.85	17.27	Average	---	---
5	11510.00	55.27	74.00	-18.73	38.00	17.27	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).

Modulation	VHT40	Test Freq. (MHz)	5755
Polarization	Vertical	Test Configuration	1



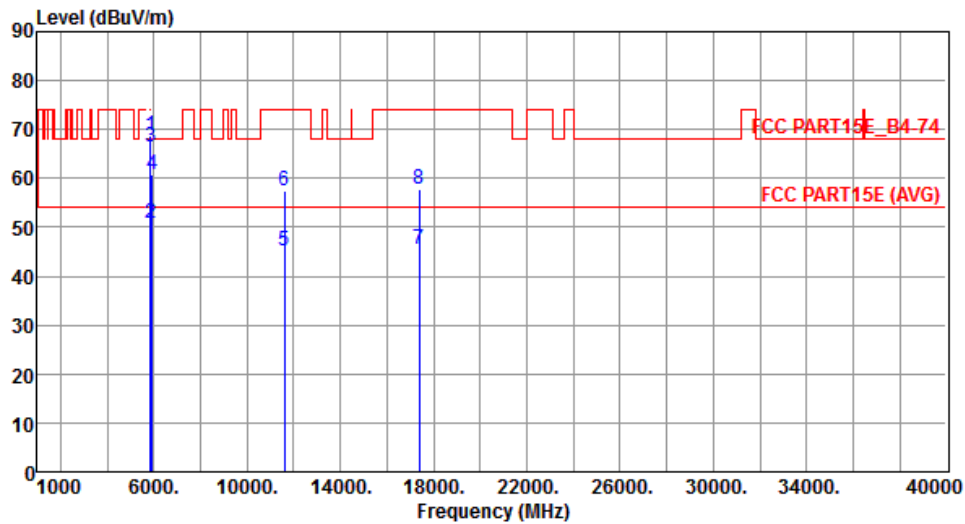
	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	5715.00	52.79	54.00	-1.21	45.26	7.53	Average	---	---
2	5715.00	69.63	74.00	-4.37	62.10	7.53	Peak	---	---
3	5725.00	75.05	78.20	-3.15	67.48	7.57	Peak	---	---
4	11510.00	43.55	54.00	-10.45	26.28	17.27	Average	---	---
5	11510.00	55.90	74.00	-18.10	38.63	17.27	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).

Modulation	VHT40	Test Freq. (MHz)	5795
Polarization	Horizontal	Test Configuration	1



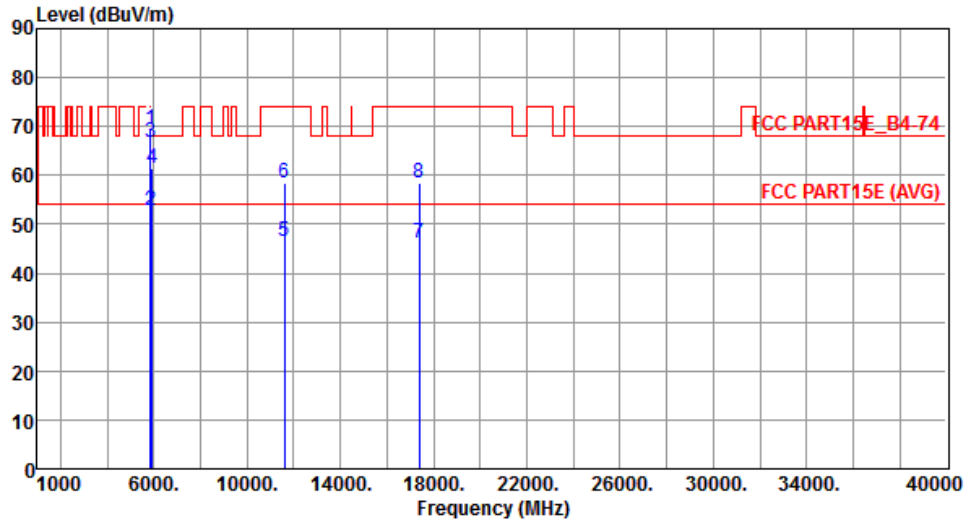
	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	5850.00	68.87	78.20	-9.33	60.98	7.89	Peak	---	---
2	5860.00	50.89	54.00	-3.11	42.98	7.91	Average	---	---
3	5860.00	66.32	74.00	-7.68	58.41	7.91	Peak	---	---
4	5937.00	60.81	68.20	-7.39	52.75	8.06	Peak	---	---
5	11590.00	45.20	54.00	-8.80	28.05	17.15	Average	---	---
6	11590.00	57.55	74.00	-16.45	40.40	17.15	Peak	---	---
7	17385.00	45.52	54.00	-8.48	26.25	19.27	Average	---	---
8	17385.00	57.78	74.00	-16.22	38.51	19.27	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).

Modulation	VHT40	Test Freq. (MHz)	5795
Polarization	Vertical	Test Configuration	1



	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	69.56	78.20	-8.64	61.67	7.89	Peak	---	---
2	5860.00	52.67	54.00	-1.33	44.76	7.91	Average	---	---
3	5860.00	66.87	74.00	-7.13	58.96	7.91	Peak	---	---
4	5937.00	61.38	68.20	-6.82	53.32	8.06	Peak	---	---
5	11590.00	46.59	54.00	-7.41	29.44	17.15	Average	---	---
6	11590.00	58.47	74.00	-15.53	41.32	17.15	Peak	---	---
7	17385.00	46.17	54.00	-7.83	26.90	19.27	Average	---	---
8	17385.00	58.29	74.00	-15.71	39.02	19.27	Peak	---	---

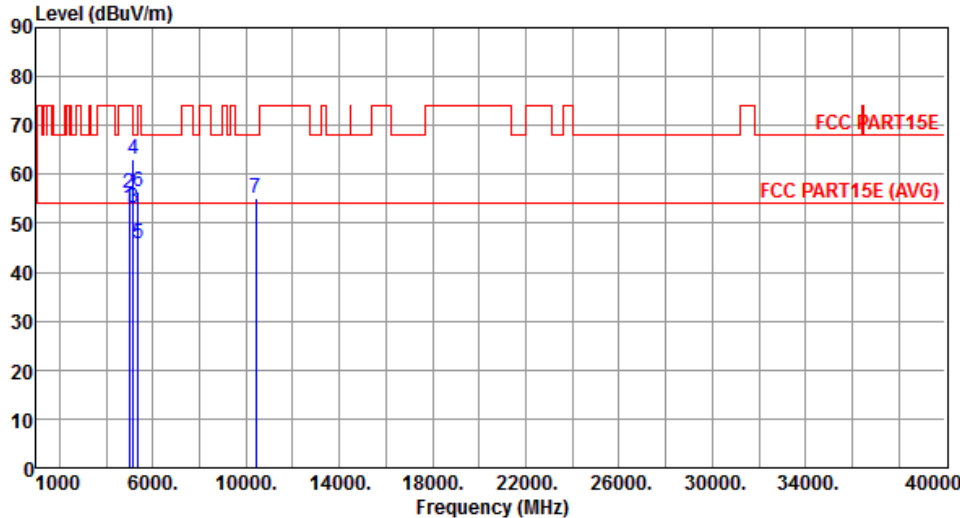
Note 1: Emission Level (dBuV/m) = SA Reading (dBuV/m) + Factor* (dB)

*Factor includes antenna factor , cable loss and amplifier gain

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

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

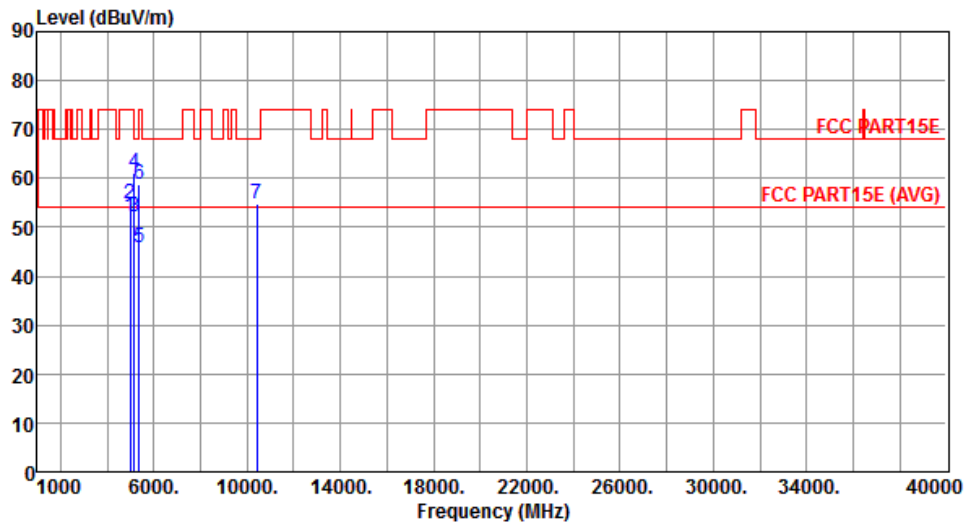
Modulation	VHT80	Test Freq. (MHz)	5210
Polarization	Horizontal	Test Configuration	1



	Freq. MHz	Emission level dBUV/m	Limit dBUV/m	Margin dB	SA reading dBUV	Factor dB	Remark	ANT High cm	Turn Table deg
1	5000.00	52.99	54.00	-1.01	46.69	6.30	Average	---	---
2	5000.00	56.05	74.00	-17.95	49.75	6.30	Peak	---	---
3	5150.00	53.00	54.00	-1.00	46.42	6.58	Average	---	---
4	5150.00	63.15	74.00	-10.85	56.57	6.58	Peak	---	---
5	5350.00	45.74	54.00	-8.26	38.71	7.03	Average	---	---
6	5350.00	56.46	74.00	-17.54	49.43	7.03	Peak	---	---
7	10420.00	55.19	68.20	-13.01	38.66	16.53	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).

Modulation	VHT80	Test Freq. (MHz)	5210
Polarization	Vertical	Test Configuration	1



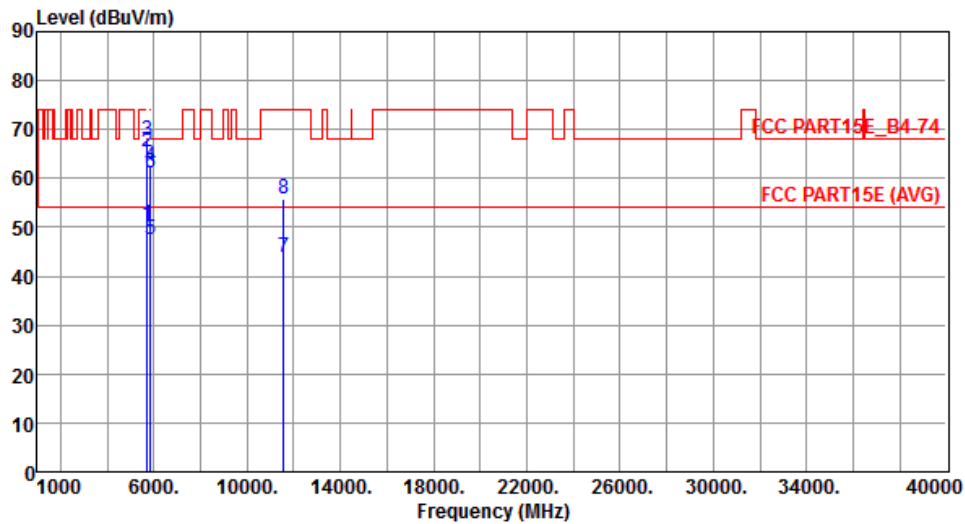
	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	5000.00	51.99	54.00	-2.01	45.69	6.30	Average	---	---
2	5000.00	54.74	74.00	-19.26	48.44	6.30	Peak	---	---
3	5150.00	52.03	54.00	-1.97	45.45	6.58	Average	---	---
4	5150.00	61.27	74.00	-12.73	54.69	6.58	Peak	---	---
5	5350.00	45.68	54.00	-8.32	38.65	7.03	Average	---	---
6	5350.00	58.71	74.00	-15.29	51.68	7.03	Peak	---	---
7	10420.00	54.96	68.20	-13.24	38.43	16.53	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).

Modulation	VHT80	Test Freq. (MHz)	5775
Polarization	Horizontal	Test Configuration	1



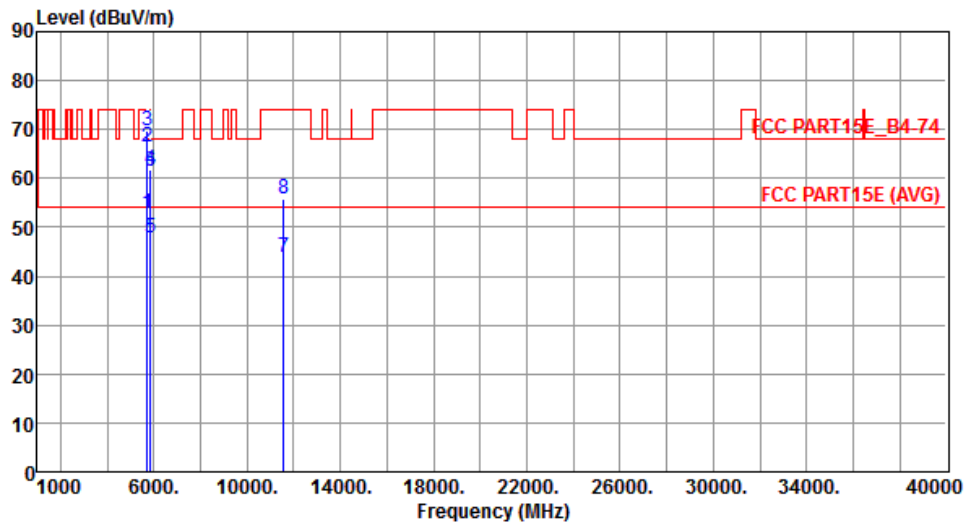
	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	5715.00	50.48	54.00	-3.52	42.95	7.53	Average	---	---
2	5715.00	65.39	74.00	-8.61	57.86	7.53	Peak	---	---
3	5725.00	67.80	78.20	-10.40	60.23	7.57	Peak	---	---
4	5850.00	62.36	78.20	-15.84	54.47	7.89	Peak	---	---
5	5860.00	47.54	54.00	-6.46	39.63	7.91	Average	---	---
6	5860.00	61.13	74.00	-12.87	53.22	7.91	Peak	---	---
7	11550.00	43.71	54.00	-10.29	26.50	17.21	Average	---	---
8	11550.00	55.66	74.00	-18.34	38.45	17.21	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).

Modulation	VHT80	Test Freq. (MHz)	5775
Polarization	Vertical	Test Configuration	1



	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	45.16	7.53	Average	---	---
2	5715.00	66.29	74.00	-7.71	58.76	7.53	Peak	---	---
3	5725.00	69.62	78.20	-8.58	62.05	7.57	Peak	---	---
4	5850.00	61.72	78.20	-16.48	53.83	7.89	Peak	---	---
5	5860.00	47.86	54.00	-6.14	39.95	7.91	Average	---	---
6	5860.00	61.32	74.00	-12.68	53.41	7.91	Peak	---	---
7	11550.00	43.84	54.00	-10.16	26.63	17.21	Average	---	---
8	11550.00	55.75	74.00	-18.25	38.54	17.21	Peak	---	---

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

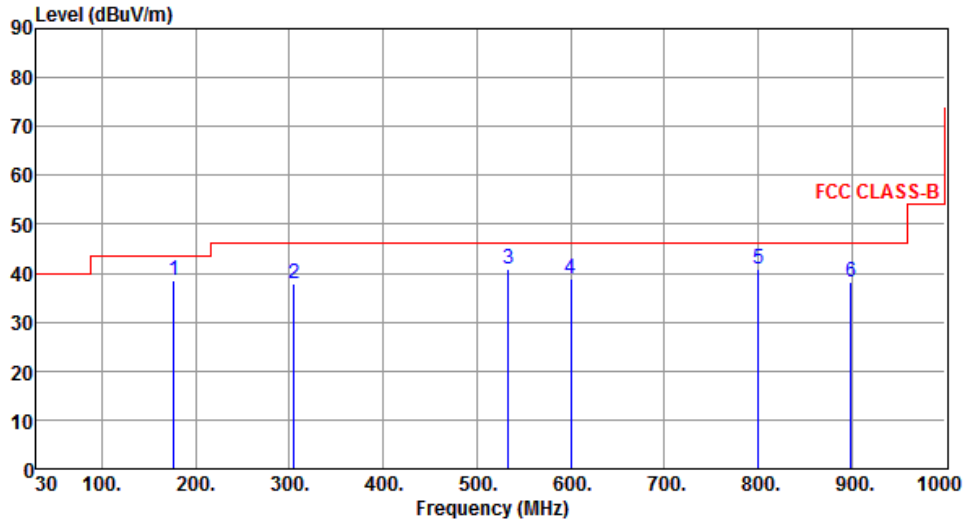
*Factor includes antenna factor , cable loss and amplifier gain

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

Beamforming mode

3.5.9 Transmitter Radiated Unwanted Emissions (Below 1GHz)

Modulation	VHT40	Test Freq. (MHz)	5230
Polarization	Horizontal	Test Configuration	3

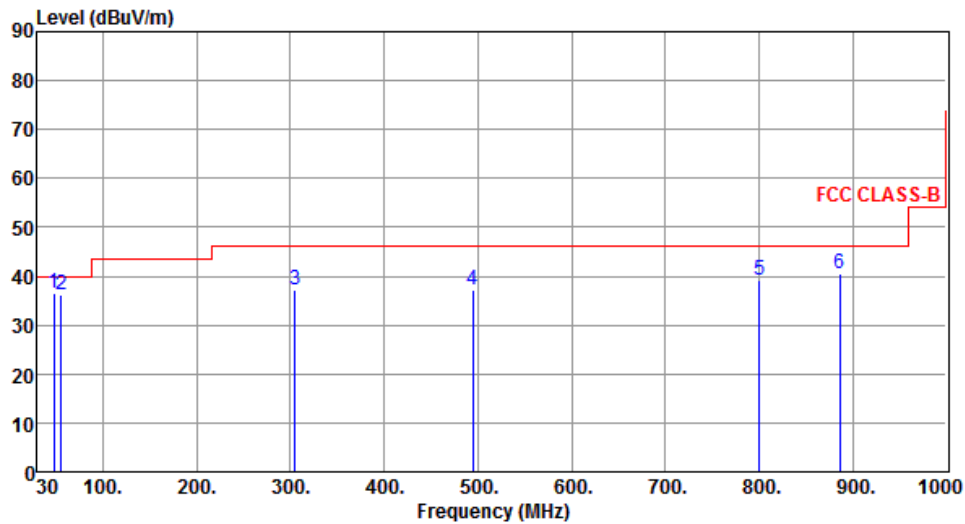


The graph displays the emission level in dBuV/m on the y-axis (0 to 90) against frequency in MHz on the x-axis (30 to 1000). A red line represents the FCC CLASS-B limit, which is 40 dBuV/m from 30 to 100 MHz, 45 dBuV/m from 100 to 300 MHz, and 55 dBuV/m from 300 to 1000 MHz. Six vertical blue lines indicate measured emission levels at specific frequencies, labeled 1 through 6. The measured levels are all below the FCC CLASS-B limit.

	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	176.42	38.60	43.50	-4.90	53.45	-14.85	Peak	---	---
2	304.53	37.93	46.00	-8.07	50.47	-12.54	Peak	---	---
3	533.39	40.71	46.00	-5.29	47.97	-7.26	Peak	---	---
4	600.24	38.93	46.00	-7.07	44.65	-5.72	Peak	---	---
5	800.16	40.89	46.00	-5.11	43.45	-2.56	Peak	---	---
6	899.25	38.27	46.00	-7.73	38.95	-0.68	Peak	---	---

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

Modulation	VHT40	Test Freq. (MHz)	5230
Polarization	Vertical	Test Configuration	3



	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	47.52	36.64	40.00	-3.36	49.53	-12.89	QP	---	---
2	55.21	36.18	40.00	-3.82	49.83	-13.65	QP	---	---
3	305.24	37.11	46.00	-8.89	49.63	-12.52	Peak	---	---
4	494.85	37.25	46.00	-8.75	45.01	-7.76	Peak	---	---
5	800.25	39.09	46.00	-6.91	41.65	-2.56	Peak	---	---
6	885.96	40.48	46.00	-5.52	41.44	-0.96	Peak	---	---

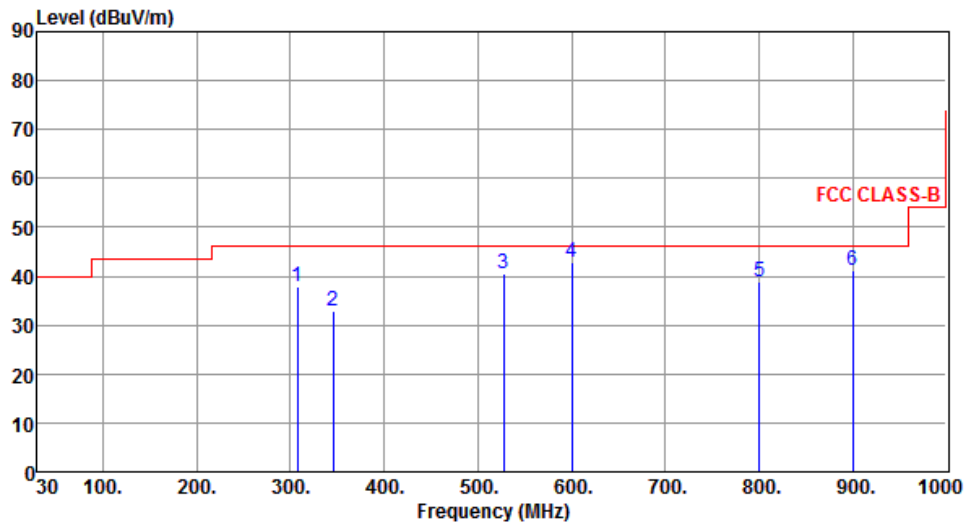
Note 1: Emission Level (dBuV/m) = SA Reading (dBuV/m) + Factor* (dB)

*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	Test Configuration	3



	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	307.51	37.97	46.00	-8.03	50.42	-12.45	Peak	---	---
2	345.41	32.99	46.00	-13.01	44.55	-11.56	Peak	---	---
3	527.35	40.64	46.00	-5.36	47.97	-7.33	Peak	---	---
4	600.27	42.71	46.00	-3.29	48.43	-5.72	Peak	---	---
5	800.18	38.79	46.00	-7.21	41.35	-2.56	Peak	---	---
6	900.09	41.29	46.00	-4.71	41.96	-0.67	Peak	---	---

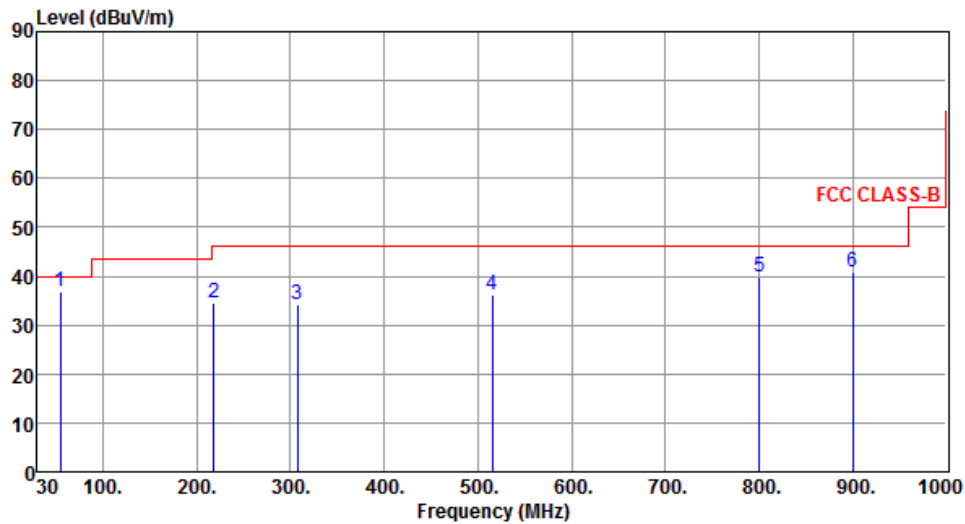
Note 1: Emission Level (dBuV/m) = SA Reading (dBuV/m) + Factor* (dB)

*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	Test Configuration	3



	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	54.33	36.92	40.00	-3.08	50.45	-13.53	QP	---	---
2	218.16	34.39	46.00	-11.61	50.45	-16.06	Peak	---	---
3	307.38	34.28	46.00	-11.72	46.74	-12.46	Peak	---	---
4	515.56	36.16	46.00	-9.84	43.61	-7.45	Peak	---	---
5	800.18	39.77	46.00	-6.23	42.33	-2.56	Peak	---	---
6	899.65	40.98	46.00	-5.02	41.66	-0.68	Peak	---	---

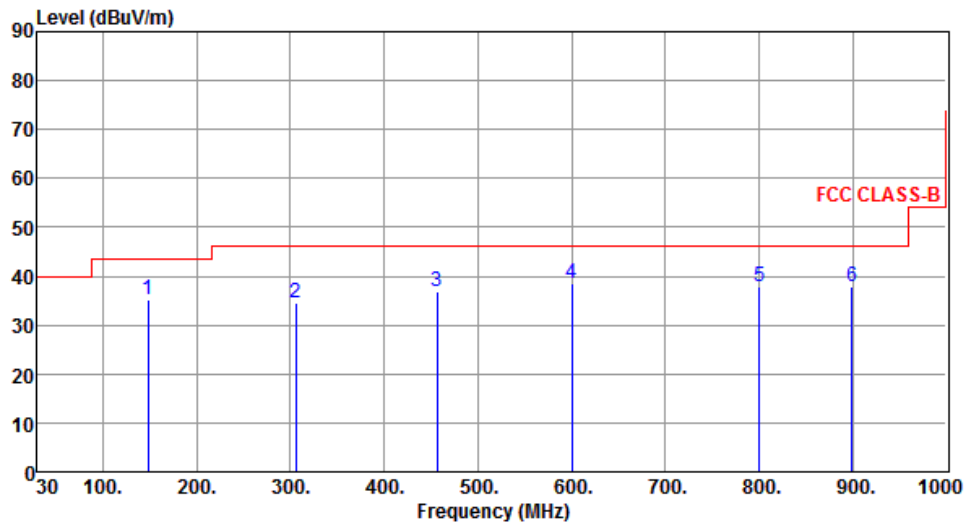
Note 1: Emission Level (dBuV/m) = SA Reading (dBuV/m) + Factor* (dB)

*Factor includes antenna factor , cable loss and amplifier gain

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

Note 3: All spurious emissions below 30MHz are more than 20 dB below the limit.

Modulation	VHT40	Test Freq. (MHz)	5230
Polarization	Horizontal	Test Configuration	4



	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	148.52	35.18	43.50	-8.32	48.64	-13.46	Peak	---	---
2	305.65	34.65	46.00	-11.35	47.16	-12.51	Peak	---	---
3	456.27	36.70	46.00	-9.30	45.33	-8.63	Peak	---	---
4	600.27	38.59	46.00	-7.41	44.31	-5.72	Peak	---	---
5	800.24	37.87	46.00	-8.13	40.43	-2.56	Peak	---	---
6	899.56	37.86	46.00	-8.14	38.54	-0.68	Peak	---	---

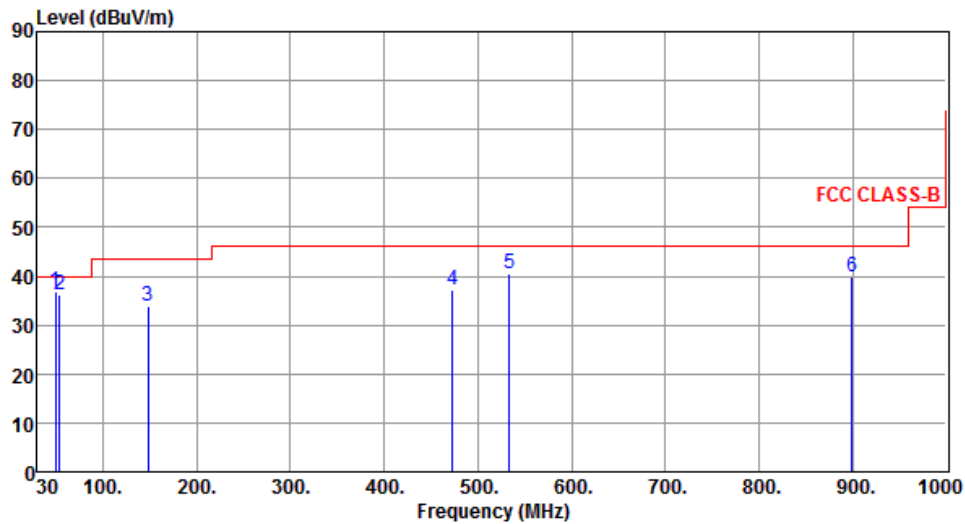
Note 1: Emission Level (dBuV/m) = SA Reading (dBuV/m) + Factor* (dB)

*Factor includes antenna factor , cable loss and amplifier gain

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

Note 3: All spurious emissions below 30MHz are more than 20 dB below the limit.

Modulation	VHT40	Test Freq. (MHz)	5230
Polarization	Vertical	Test Configuration	4



	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	49.51	36.71	40.00	-3.29	49.66	-12.95	QP	---	---
2	53.45	36.23	40.00	-3.77	49.65	-13.42	QP	---	---
3	148.42	33.84	43.50	-9.66	47.31	-13.47	Peak	---	---
4	473.35	37.22	46.00	-8.78	45.46	-8.24	Peak	---	---
5	533.62	40.60	46.00	-5.40	47.85	-7.25	Peak	---	---
6	899.36	39.87	46.00	-6.13	40.55	-0.68	Peak	---	---

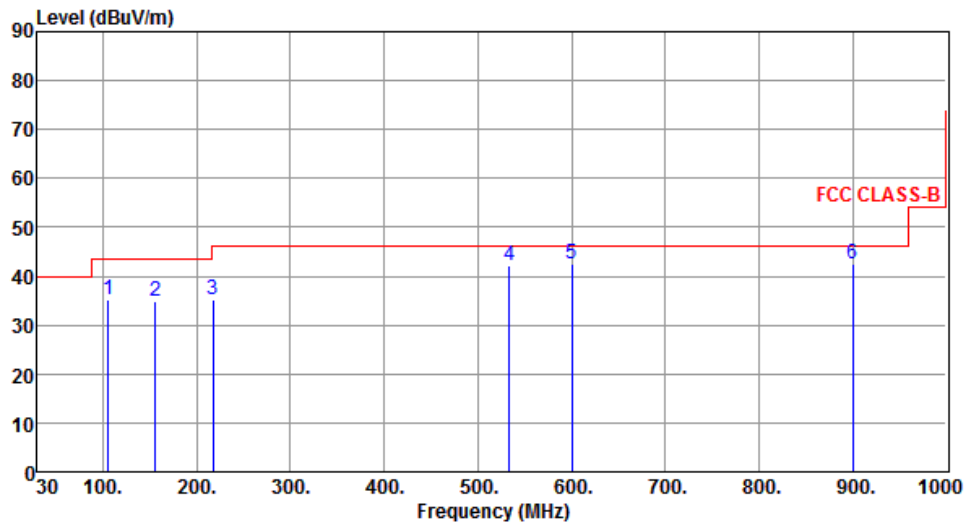
Note 1: Emission Level (dBuV/m) = SA Reading (dBuV/m) + Factor* (dB)

*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	Test Configuration	4



	Freq. MHz	Emission level dBUV/m	Limit dBUV/m	Margin dB	SA reading dBUV	Factor dB	Remark	ANT High cm	Turn Table deg
1	105.53	35.22	43.50	-8.28	52.64	-17.42	Peak	---	---
2	156.24	34.79	43.50	-8.71	48.33	-13.54	Peak	---	---
3	217.42	35.14	46.00	-10.86	51.24	-16.10	Peak	---	---
4	533.62	42.23	46.00	-3.77	49.48	-7.25	Peak	---	---
5	600.24	42.38	46.00	-3.62	48.10	-5.72	Peak	---	---
6	899.86	42.63	46.00	-3.37	43.30	-0.67	Peak	---	---

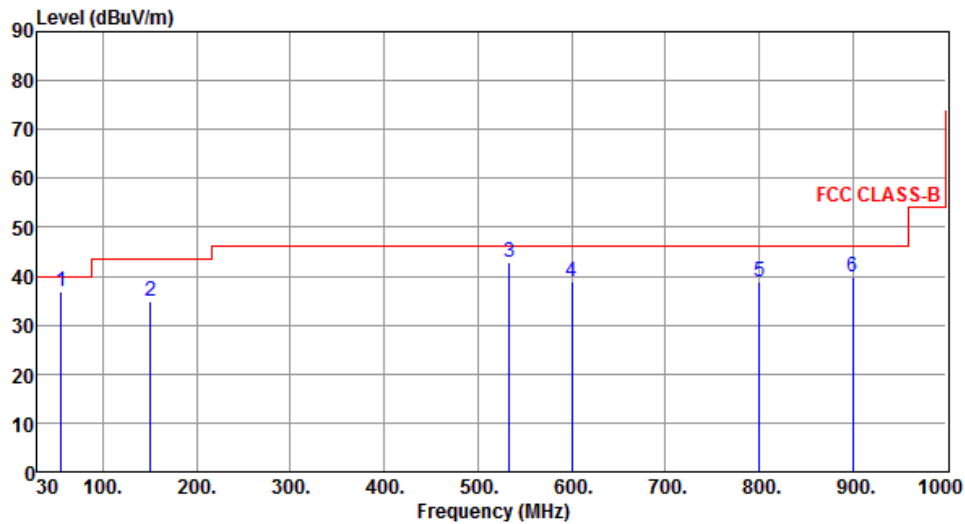
Note 1: Emission Level (dBUV/m) = SA Reading (dBUV/m) + Factor* (dB)

*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	Test Configuration	4



	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	55.38	36.75	40.00	-3.25	50.42	-13.67	QP	---	---
2	150.43	34.89	43.50	-8.61	48.32	-13.43	Peak	---	---
3	533.36	42.81	46.00	-3.19	50.07	-7.26	QP	---	---
4	600.16	38.73	46.00	-7.27	44.45	-5.72	Peak	---	---
5	800.18	38.97	46.00	-7.03	41.53	-2.56	Peak	---	---
6	899.96	39.75	46.00	-6.25	40.42	-0.67	Peak	---	---

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

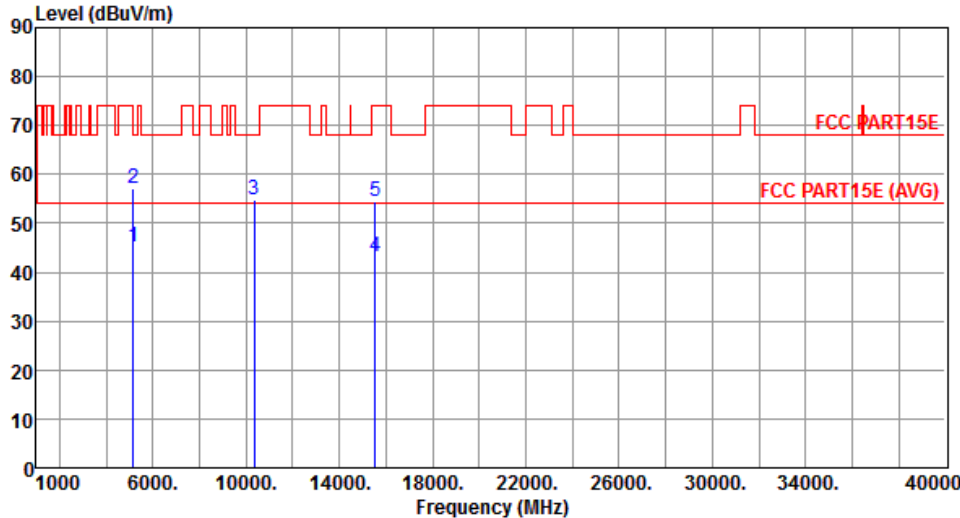
*Factor includes antenna factor , cable loss and amplifier gain

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

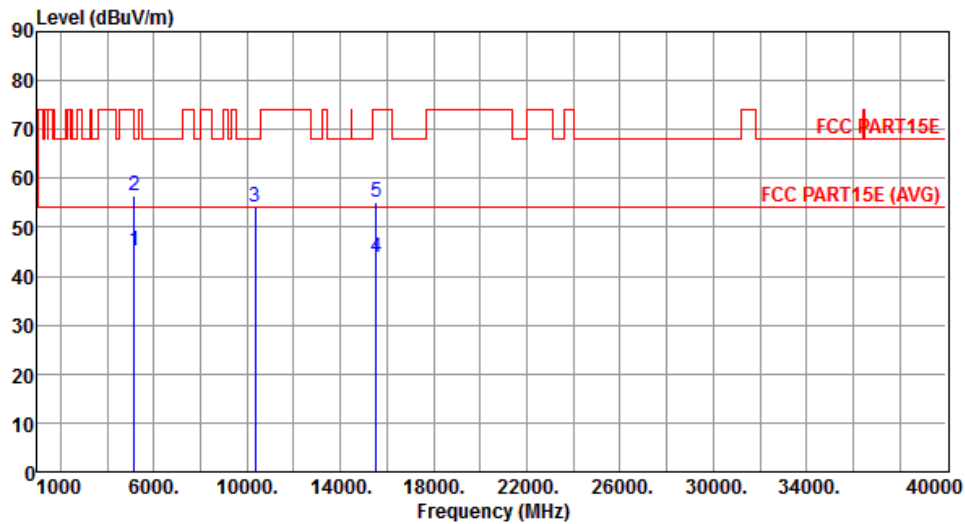
Modulation	VHT20	Test Freq. (MHz)	5180
Polarization	Horizontal	Test Configuration	3



	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	45.15	54.00	-8.85	38.57	6.58	Average	---	---
2	5150.00	56.99	74.00	-17.01	50.41	6.58	Peak	---	---
3	10360.00	54.90	68.20	-13.30	38.49	16.41	Peak	---	---
4	15540.00	43.27	54.00	-10.73	25.35	17.92	Average	---	---
5	15540.00	54.39	74.00	-19.61	36.47	17.92	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).

Modulation	VHT20	Test Freq. (MHz)	5180
Polarization	Vertical	Test Configuration	3



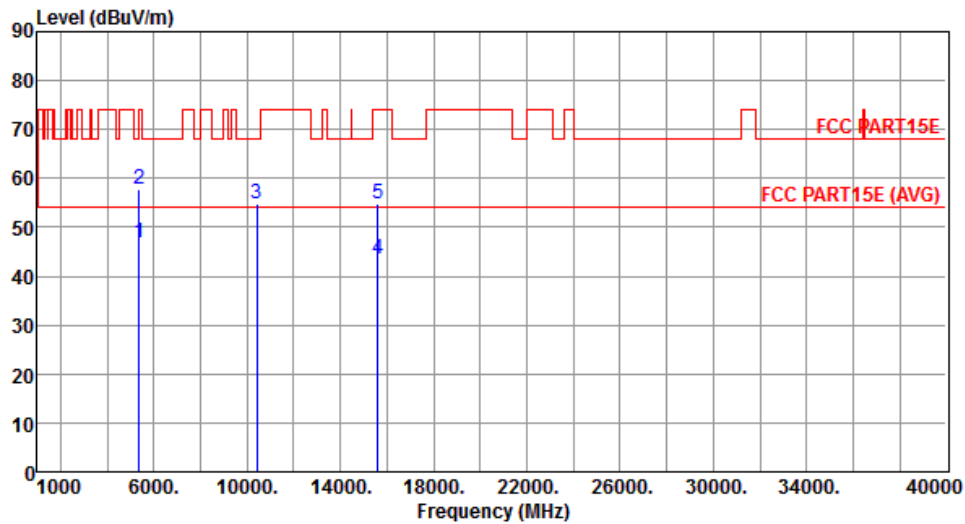
	Freq. MHz	Emission level dBUV/m	Limit dBUV/m	Margin dB	SA reading dBUV	Factor dB	Remark	ANT High cm	Turn Table deg
1	5150.00	45.16	54.00	-8.84	38.58	6.58	Average	---	---
2	5150.00	56.46	74.00	-17.54	49.88	6.58	Peak	---	---
3	10360.00	54.06	68.20	-14.14	37.65	16.41	Peak	---	---
4	15540.00	43.70	54.00	-10.30	25.78	17.92	Average	---	---
5	15540.00	54.98	74.00	-19.02	37.06	17.92	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).

Modulation	VHT20	Test Freq. (MHz)	5200
Polarization	Horizontal	Test Configuration	3



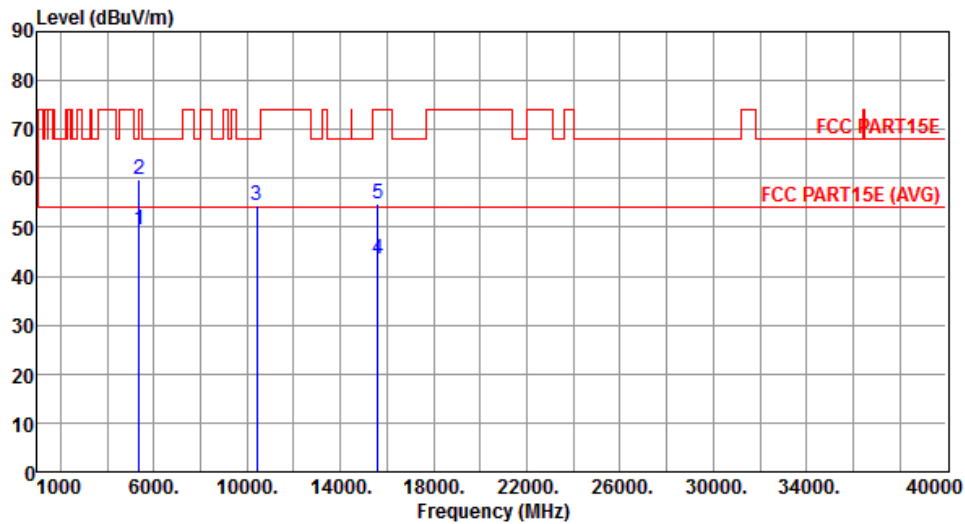
	Freq. MHz	Emission level dBUV/m	Limit dBUV/m	Margin dB	SA reading dBUV	Factor dB	Remark	ANT High cm	Turn Table deg
1	5362.00	46.75	54.00	-7.25	39.69	7.06	Average	---	---
2	5362.00	57.81	74.00	-16.19	50.75	7.06	Peak	---	---
3	10400.00	54.76	68.20	-13.44	38.27	16.49	Peak	---	---
4	15600.00	43.67	54.00	-10.33	25.94	17.73	Average	---	---
5	15600.00	54.81	74.00	-19.19	37.08	17.73	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).

Modulation	VHT20	Test Freq. (MHz)	5200
Polarization	Vertical	Test Configuration	3



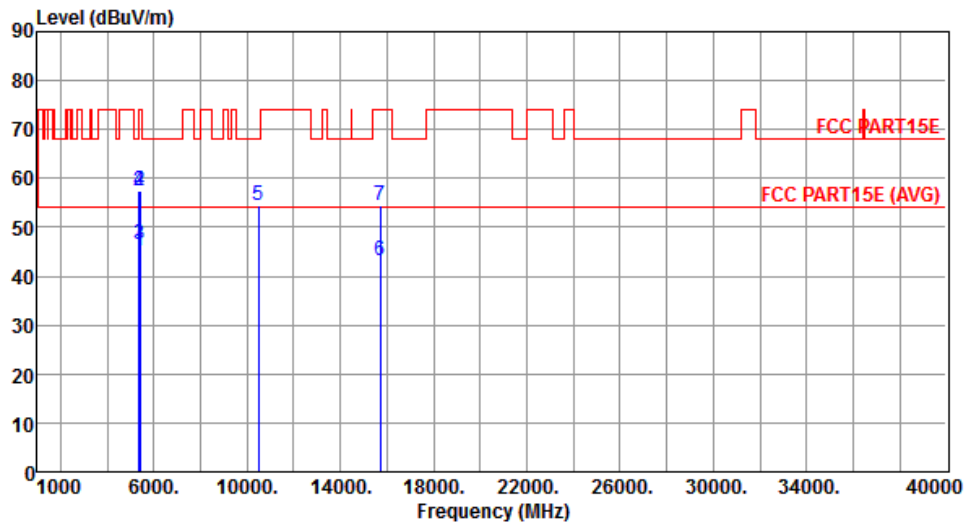
	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	5362.00	49.56	54.00	-4.44	42.50	7.06	Average	---	---
2	5362.00	59.82	74.00	-14.18	52.76	7.06	Peak	---	---
3	10400.00	54.33	68.20	-13.87	37.84	16.49	Peak	---	---
4	15600.00	43.36	54.00	-10.64	25.63	17.73	Average	---	---
5	15600.00	54.82	74.00	-19.18	37.09	17.73	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).

Modulation	VHT20	Test Freq. (MHz)	5240
Polarization	Horizontal	Test Configuration	3



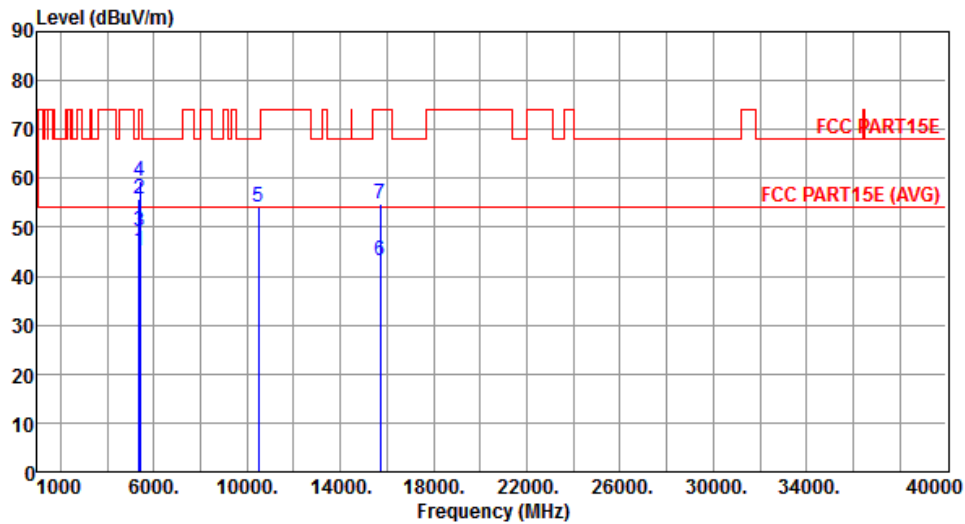
	Freq. MHz	Emission level dBUV/m	Limit dBUV/m	Margin dB	SA reading dBUV	Factor dB	Remark	ANT High cm	Turn Table deg
1	5350.00	45.01	54.00	-8.99	37.98	7.03	Average	---	---
2	5350.00	57.33	74.00	-16.67	50.30	7.03	Peak	---	---
3	5408.00	46.33	54.00	-7.67	39.19	7.14	Average	---	---
4	5408.00	57.38	74.00	-16.62	50.24	7.14	Peak	---	---
5	10480.00	54.35	68.20	-13.85	37.69	16.66	Peak	---	---
6	15720.00	43.33	54.00	-10.67	25.96	17.37	Average	---	---
7	15720.00	54.62	74.00	-19.38	37.25	17.37	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).

Modulation	VHT20	Test Freq. (MHz)	5240
Polarization	Vertical	Test Configuration	3



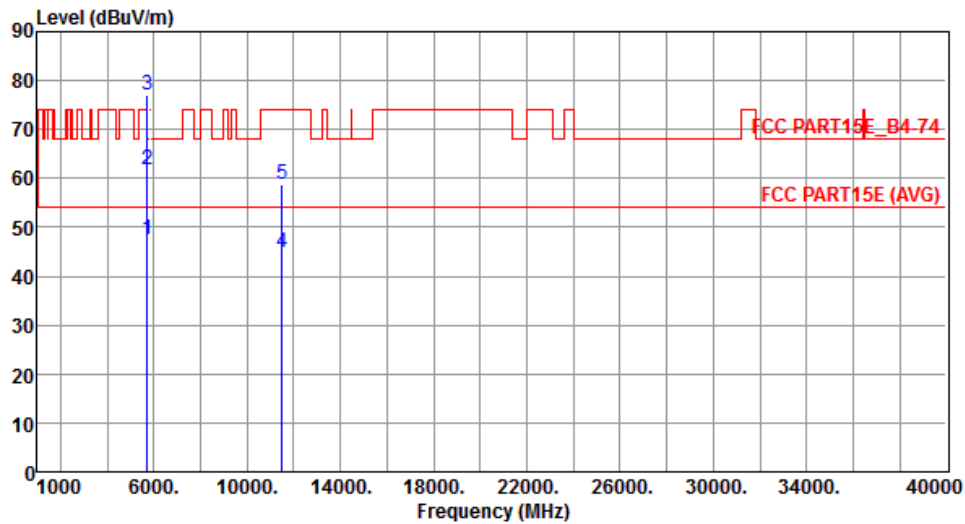
	Freq. MHz	Emission level dBUV/m	Limit dBUV/m	Margin dB	SA reading dBUV	Factor dB	Remark	ANT High cm	Turn Table deg
1	5350.00	45.25	54.00	-8.75	38.22	7.03	Average	---	---
2	5350.00	55.89	74.00	-18.11	48.86	7.03	Peak	---	---
3	5408.00	49.20	54.00	-4.80	42.06	7.14	Average	---	---
4	5408.00	59.33	74.00	-14.67	52.19	7.14	Peak	---	---
5	10480.00	54.02	68.20	-14.18	37.36	16.66	Peak	---	---
6	15720.00	43.24	54.00	-10.76	25.87	17.37	Average	---	---
7	15720.00	54.77	74.00	-19.23	37.40	17.37	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).

Modulation	VHT20	Test Freq. (MHz)	5745
Polarization	Horizontal	Test Configuration	3



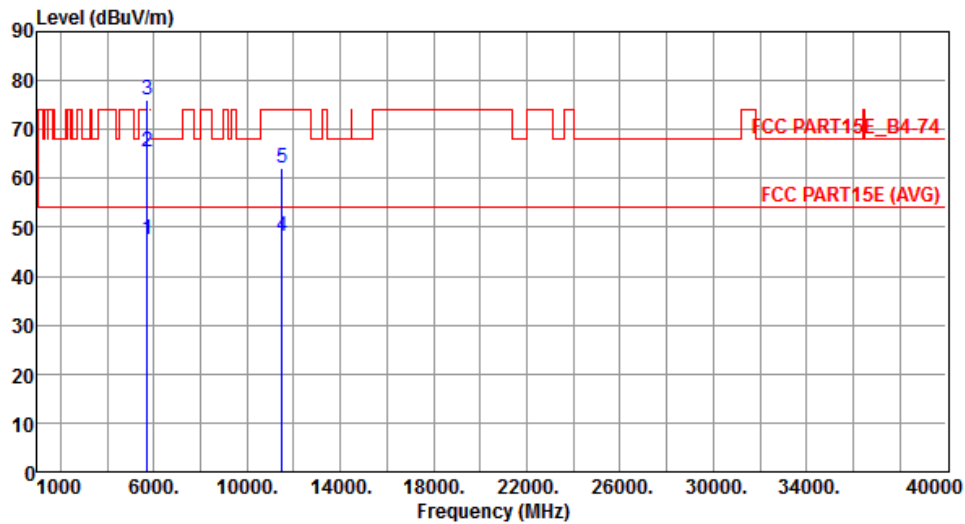
	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	5715.00	47.37	54.00	-6.63	39.84	7.53	Average	---	---
2	5715.00	61.78	74.00	-12.22	54.25	7.53	Peak	---	---
3	5725.00	77.16	78.20	-1.04	69.59	7.57	Peak	---	---
4	11490.00	44.83	54.00	-9.17	27.56	17.27	Average	---	---
5	11490.00	58.67	74.00	-15.33	41.40	17.27	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).

Modulation	VHT20	Test Freq. (MHz)	5745
Polarization	Vertical	Test Configuration	3



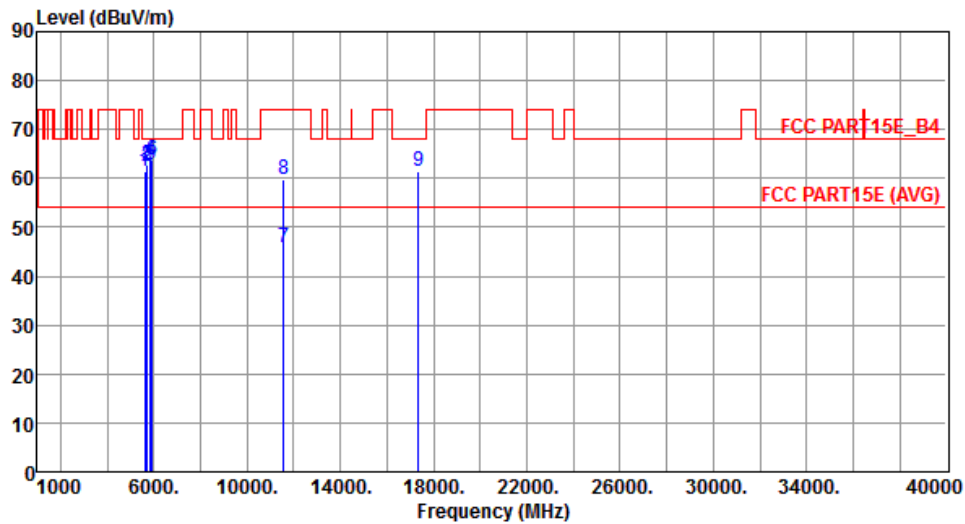
	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	5715.00	47.45	54.00	-6.55	39.92	7.53	Average	---	---
2	5715.00	65.39	74.00	-8.61	57.86	7.53	Peak	---	---
3	5725.00	76.10	78.20	-2.10	68.53	7.57	Peak	---	---
4	11490.00	48.26	54.00	-5.74	30.99	17.27	Average	---	---
5	11490.00	62.05	74.00	-11.95	44.78	17.27	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).

Modulation	VHT20	Test Freq. (MHz)	5785
Polarization	Horizontal	Test Configuration	3



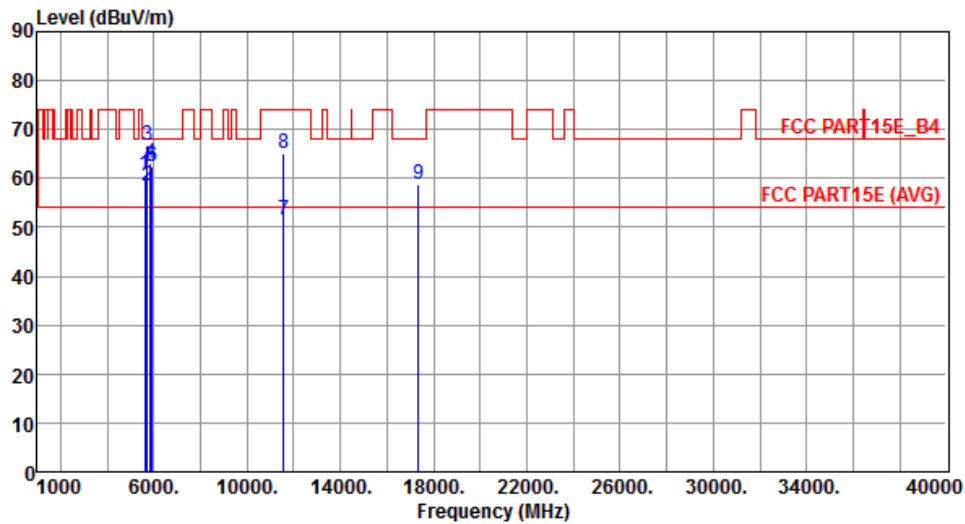
	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	5626.00	61.44	68.20	-6.76	54.18	7.26	Peak	---	---
2	5715.00	62.29	68.20	-5.91	54.76	7.53	Peak	---	---
3	5725.00	62.67	78.20	-15.53	55.10	7.57	Peak	---	---
4	5850.00	63.60	78.20	-14.60	55.71	7.89	Peak	---	---
5	5860.00	62.84	68.20	-5.36	54.93	7.91	Peak	---	---
6	5925.00	63.84	68.20	-4.36	55.81	8.03	Peak	---	---
7	11570.00	45.96	54.00	-8.04	28.78	17.18	Average	---	---
8	11570.00	59.71	74.00	-14.29	42.53	17.18	Peak	---	---
9	17355.00	61.43	68.20	-6.77	42.21	19.22	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).

Modulation	VHT20	Test Freq. (MHz)	5785
Polarization	Vertical	Test Configuration	3



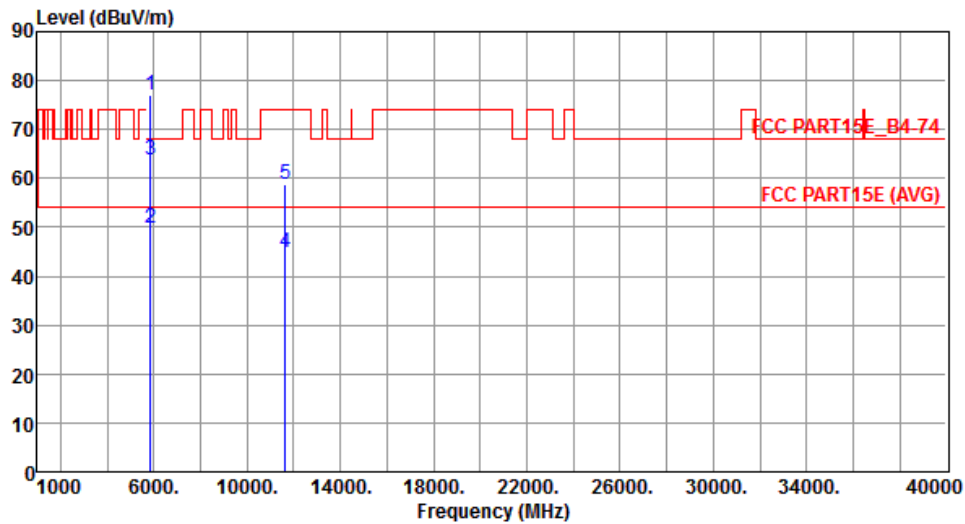
	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	5626.00	60.76	68.20	-7.44	53.50	7.26	Peak	---	---
2	5715.00	58.30	68.20	-9.90	50.77	7.53	Peak	---	---
3	5725.00	66.73	78.20	-11.47	59.16	7.57	Peak	---	---
4	5850.00	63.03	78.20	-15.17	55.14	7.89	Peak	---	---
5	5860.00	62.30	68.20	-5.90	54.39	7.91	Peak	---	---
6	5925.00	62.57	68.20	-5.63	54.54	8.03	Peak	---	---
7	11570.00	51.33	54.00	-2.67	34.15	17.18	Average	---	---
8	11570.00	65.18	74.00	-8.82	48.00	17.18	Peak	---	---
9	17355.00	58.87	68.20	-9.33	39.65	19.22	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).

Modulation	VHT20	Test Freq. (MHz)	5825
Polarization	Horizontal	Test Configuration	3



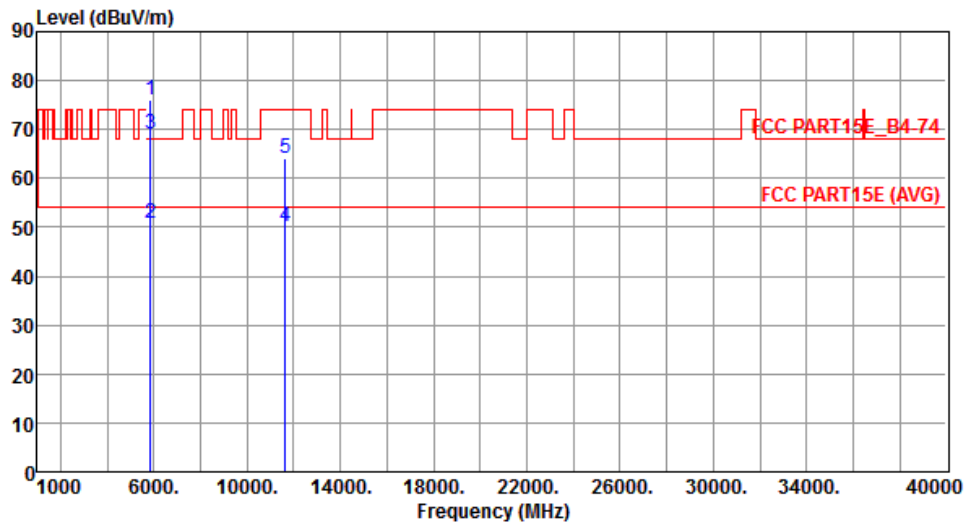
	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	5850.00	77.17	78.20	-1.03	69.28	7.89	Peak	---	---
2	5860.00	49.70	54.00	-4.30	41.79	7.91	Average	---	---
3	5860.00	63.63	74.00	-10.37	55.72	7.91	Peak	---	---
4	11650.00	44.93	54.00	-9.07	27.86	17.07	Average	---	---
5	11650.00	58.87	74.00	-15.13	41.80	17.07	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).

Modulation	VHT20	Test Freq. (MHz)	5825
Polarization	Vertical	Test Configuration	3



	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	76.06	78.20	-2.14	68.17	7.89	Peak	---	---
2	5860.00	50.80	54.00	-3.20	42.89	7.91	Average	---	---
3	5860.00	69.13	74.00	-4.87	61.22	7.91	Peak	---	---
4	11650.00	50.06	54.00	-3.94	32.99	17.07	Average	---	---
5	11650.00	64.12	74.00	-9.88	47.05	17.07	Peak	---	---

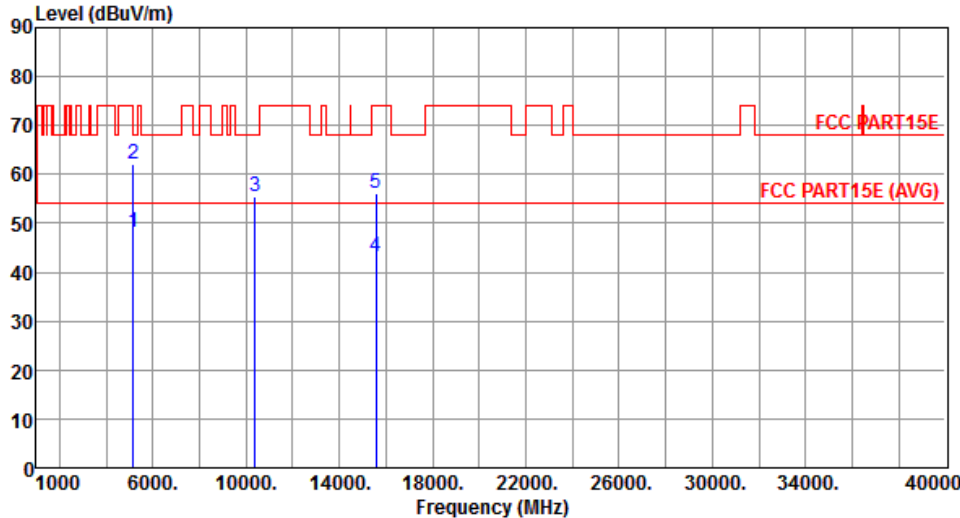
Note 1: Emission Level (dBuV/m) = SA Reading (dBuV/m) + Factor* (dB)

*Factor includes antenna factor , cable loss and amplifier gain

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

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

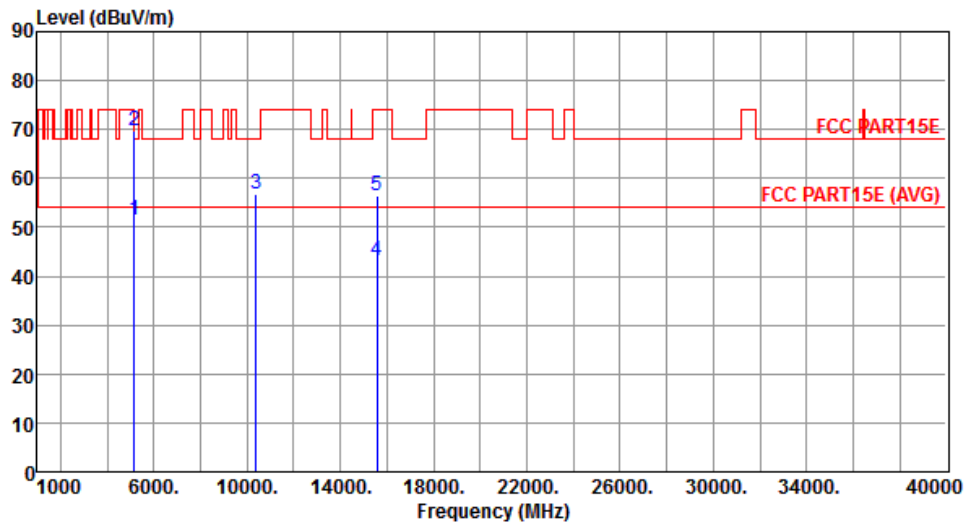
Modulation	VHT40	Test Freq. (MHz)	5190
Polarization	Horizontal	Test Configuration	3



	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	48.27	54.00	-5.73	41.69	6.58	Average	---	---
2	5150.00	62.17	74.00	-11.83	55.59	6.58	Peak	---	---
3	10380.00	55.39	68.20	-12.81	38.95	16.44	Peak	---	---
4	15570.00	43.25	54.00	-10.75	25.43	17.82	Average	---	---
5	15570.00	56.28	74.00	-17.72	38.46	17.82	Peak	---	---

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

Modulation	VHT40	Test Freq. (MHz)	5190
Polarization	Vertical	Test Configuration	3



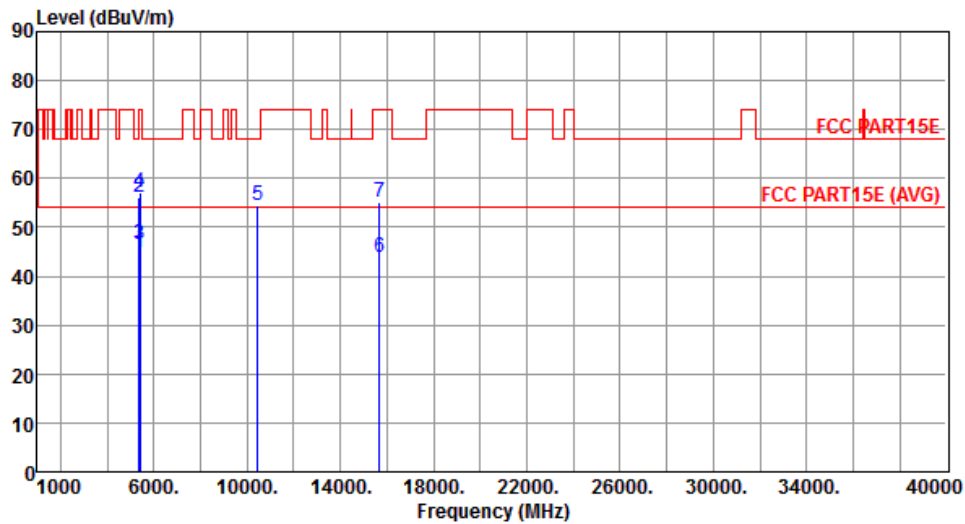
	Freq. MHz	Emission level dBUV/m	Limit dBUV/m	Margin dB	SA reading dBUV	Factor dB	Remark	ANT High cm	Turn Table deg
1	5150.00	51.46	54.00	-2.54	44.88	6.58	Average	---	---
2	5150.00	69.83	74.00	-4.17	63.25	6.58	Peak	---	---
3	10380.00	56.88	68.20	-11.32	40.44	16.44	Peak	---	---
4	15570.00	43.24	54.00	-10.76	25.42	17.82	Average	---	---
5	15570.00	56.35	74.00	-17.65	38.53	17.82	Peak	---	---

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

*Factor includes antenna factor , cable loss and amplifier gain

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

Modulation	VHT40	Test Freq. (MHz)	5230
Polarization	Horizontal	Test Configuration	3



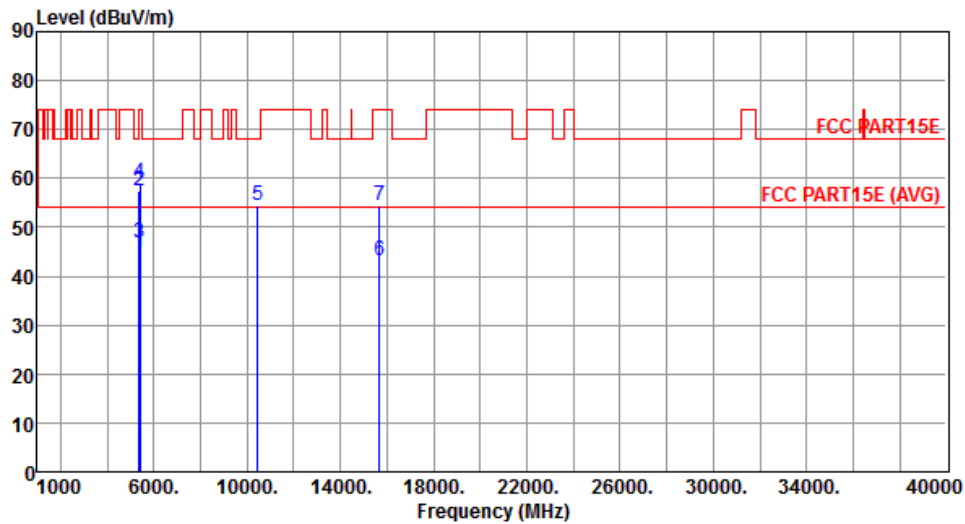
	Freq. MHz	Emission level dBUV/m	Limit dBUV/m	Margin dB	SA reading dBUV	Factor dB	Remark	ANT High cm	Turn Table deg
1	5350.00	44.78	54.00	-9.22	37.75	7.03	Average	---	---
2	5350.00	56.03	74.00	-17.97	49.00	7.03	Peak	---	---
3	5393.00	46.34	54.00	-7.66	39.22	7.12	Average	---	---
4	5393.00	57.26	74.00	-16.74	50.14	7.12	Peak	---	---
5	10460.00	54.33	68.20	-13.87	37.70	16.63	Peak	---	---
6	15690.00	43.69	54.00	-10.31	26.22	17.47	Average	---	---
7	15690.00	55.23	74.00	-18.77	37.76	17.47	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).

Modulation	VHT40	Test Freq. (MHz)	5230
Polarization	Vertical	Test Configuration	3



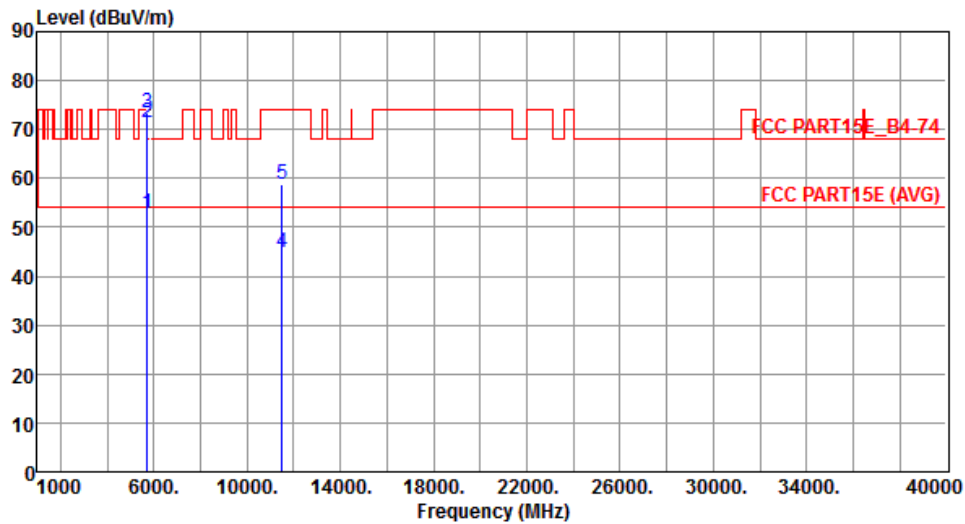
	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	5350.00	44.93	54.00	-9.07	37.90	7.03	Average	---	---
2	5350.00	57.59	74.00	-16.41	50.56	7.03	Peak	---	---
3	5393.00	46.81	54.00	-7.19	39.69	7.12	Average	---	---
4	5393.00	59.08	74.00	-14.92	51.96	7.12	Peak	---	---
5	10460.00	54.38	68.20	-13.82	37.75	16.63	Peak	---	---
6	15690.00	43.21	54.00	-10.79	25.74	17.47	Average	---	---
7	15690.00	54.61	74.00	-19.39	37.14	17.47	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).

Modulation	VHT40	Test Freq. (MHz)	5755
Polarization	Horizontal	Test Configuration	3



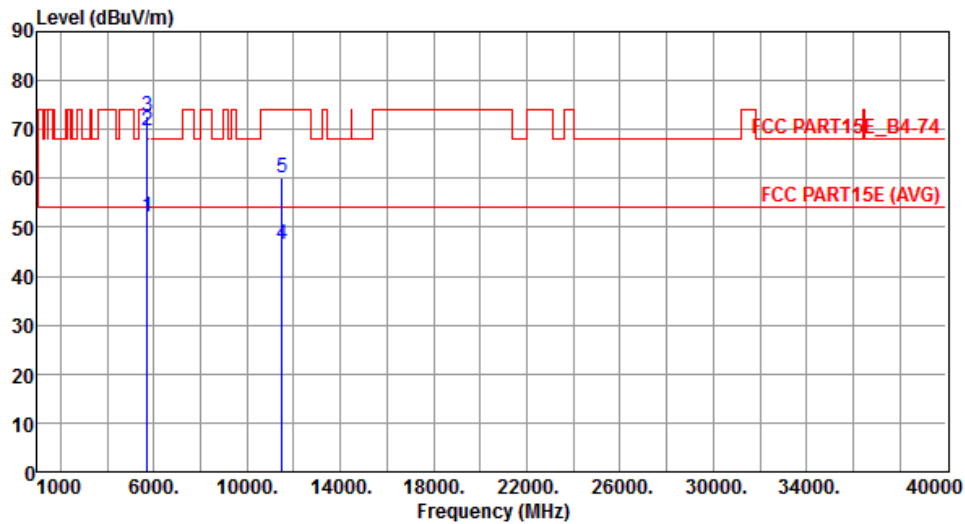
	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	5715.00	52.84	54.00	-1.16	45.31	7.53	Average	---	---
2	5715.00	71.46	74.00	-2.54	63.93	7.53	Peak	---	---
3	5725.00	73.49	78.20	-4.71	65.92	7.57	Peak	---	---
4	11510.00	44.83	54.00	-9.17	27.56	17.27	Average	---	---
5	11510.00	58.70	74.00	-15.30	41.43	17.27	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).

Modulation	VHT40	Test Freq. (MHz)	5755
Polarization	Vertical	Test Configuration	3



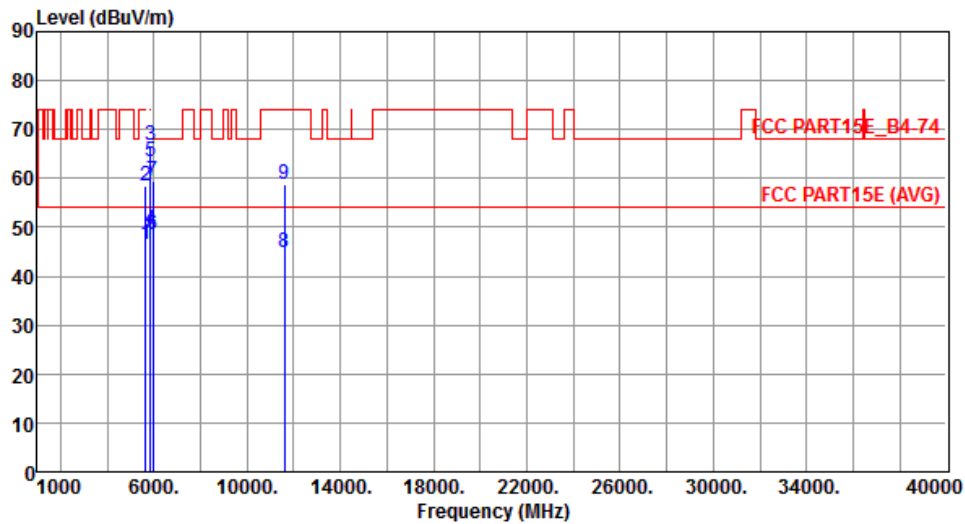
	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	5715.00	52.09	54.00	-1.91	44.56	7.53	Average	---	---
2	5715.00	69.88	74.00	-4.12	62.35	7.53	Peak	---	---
3	5725.00	72.89	78.20	-5.31	65.32	7.57	Peak	---	---
4	11510.00	46.35	54.00	-7.65	29.08	17.27	Average	---	---
5	11510.00	60.27	74.00	-13.73	43.00	17.27	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).

Modulation	VHT40	Test Freq. (MHz)	5795
Polarization	Horizontal	Test Configuration	3



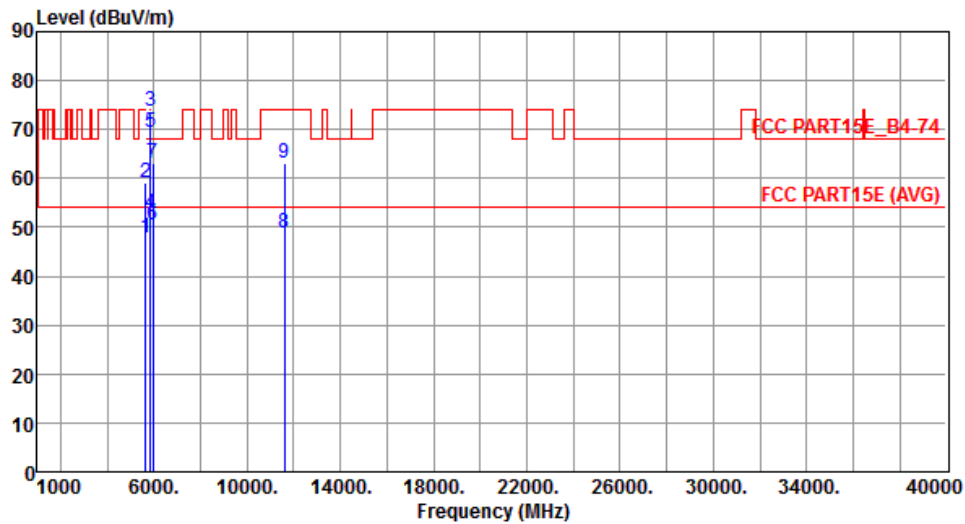
	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	5647.00	46.53	54.00	-7.47	39.20	7.33	Average	---	---
2	5647.00	58.50	74.00	-15.50	51.17	7.33	Peak	---	---
3	5850.00	66.88	78.20	-11.32	58.99	7.89	Peak	---	---
4	5860.00	49.34	54.00	-4.66	41.43	7.91	Average	---	---
5	5860.00	63.27	74.00	-10.73	55.36	7.91	Peak	---	---
6	5957.00	48.51	54.00	-5.49	40.41	8.10	Average	---	---
7	5957.00	59.56	68.20	-8.64	51.46	8.10	Peak	---	---
8	11590.00	44.75	54.00	-9.25	27.60	17.15	Average	---	---
9	11590.00	58.69	74.00	-15.31	41.54	17.15	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).

Modulation	VHT40	Test Freq. (MHz)	5795
Polarization	Vertical	Test Configuration	3



	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	5647.00	47.81	54.00	-6.19	40.48	7.33	Average	---	---
2	5647.00	59.21	74.00	-14.79	51.88	7.33	Peak	---	---
3	5850.00	73.72	78.20	-4.48	65.83	7.89	Peak	---	---
4	5860.00	52.65	54.00	-1.35	44.74	7.91	Average	---	---
5	5860.00	69.43	74.00	-4.57	61.52	7.91	Peak	---	---
6	5957.00	50.38	54.00	-3.62	42.28	8.10	Average	---	---
7	5957.00	62.98	68.20	-5.22	54.88	8.10	Peak	---	---
8	11590.00	48.87	54.00	-5.13	31.72	17.15	Average	---	---
9	11590.00	63.05	74.00	-10.95	45.90	17.15	Peak	---	---

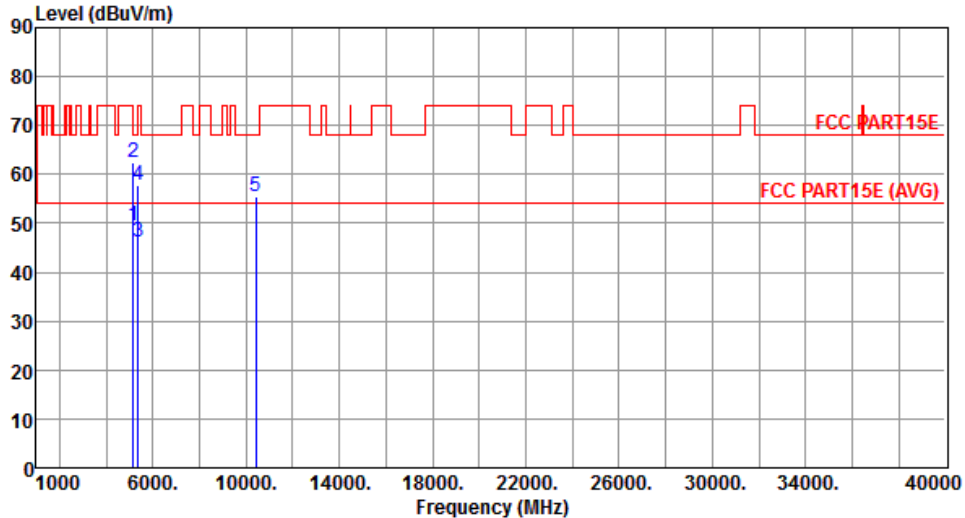
Note 1: Emission Level (dBuV/m) = SA Reading (dBuV/m) + Factor* (dB)

*Factor includes antenna factor , cable loss and amplifier gain

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

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

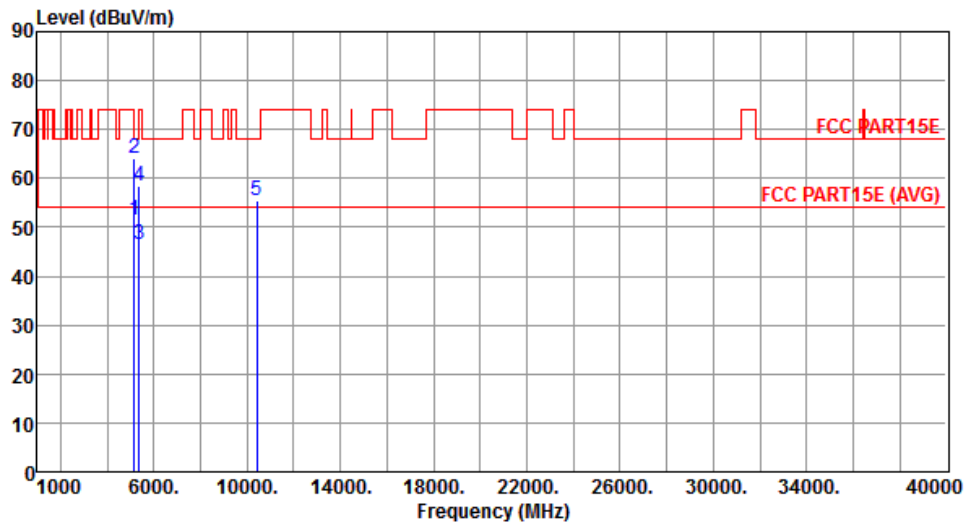
Modulation	VHT80	Test Freq. (MHz)	5210
Polarization	Horizontal	Test Configuration	3



	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	49.46	54.00	-4.54	42.88	6.58	Average	---	---
2	5150.00	62.33	74.00	-11.67	55.75	6.58	Peak	---	---
3	5350.00	46.09	54.00	-7.91	39.06	7.03	Average	---	---
4	5350.00	57.75	74.00	-16.25	50.72	7.03	Peak	---	---
5	10420.00	55.49	68.20	-12.71	38.96	16.53	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).

Modulation	VHT80	Test Freq. (MHz)	5210
Polarization	Vertical	Test Configuration	3



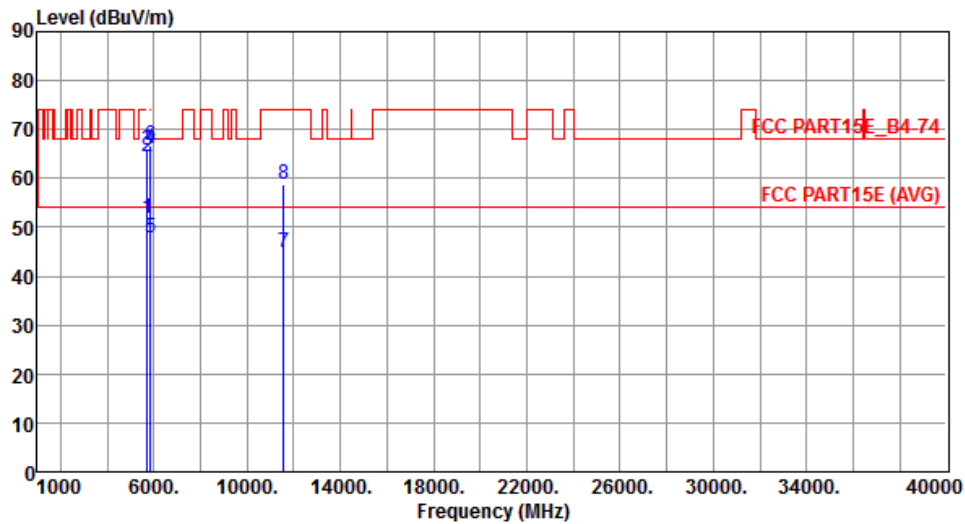
	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	5150.00	51.55	54.00	-2.45	44.97	6.58	Average	---	---
2	5150.00	64.23	74.00	-9.77	57.65	6.58	Peak	---	---
3	5350.00	46.36	54.00	-7.64	39.33	7.03	Average	---	---
4	5350.00	58.30	74.00	-15.70	51.27	7.03	Peak	---	---
5	10420.00	55.49	68.20	-12.71	38.96	16.53	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).

Modulation	VHT80	Test Freq. (MHz)	5775
Polarization	Horizontal	Test Configuration	3



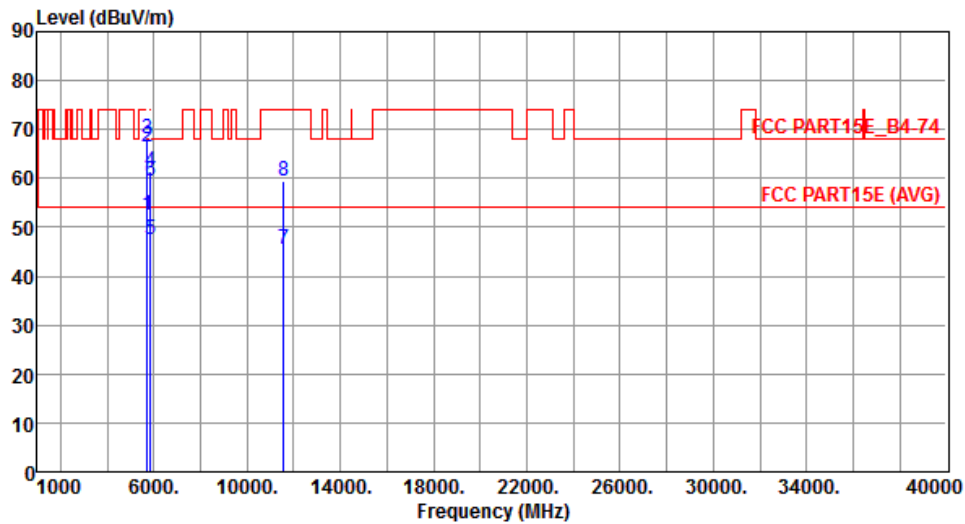
	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	5715.00	51.64	54.00	-2.36	44.11	7.53	Average	---	---
2	5715.00	64.39	74.00	-9.61	56.86	7.53	Peak	---	---
3	5725.00	65.83	78.20	-12.37	58.26	7.57	Peak	---	---
4	5850.00	66.10	78.20	-12.10	58.21	7.89	Peak	---	---
5	5860.00	47.82	54.00	-6.18	39.91	7.91	Average	---	---
6	5860.00	66.64	74.00	-7.36	58.73	7.91	Peak	---	---
7	11550.00	44.96	54.00	-9.04	27.75	17.21	Average	---	---
8	11550.00	58.86	74.00	-15.14	41.65	17.21	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).

Modulation	VHT80	Test Freq. (MHz)	5775
Polarization	Vertical	Test Configuration	3



	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	52.49	54.00	-1.51	44.96	7.53	Average	---	---
2	5715.00	66.37	74.00	-7.63	58.84	7.53	Peak	---	---
3	5725.00	68.17	78.20	-10.03	60.60	7.57	Peak	---	---
4	5850.00	61.30	78.20	-16.90	53.41	7.89	Peak	---	---
5	5860.00	47.50	54.00	-6.50	39.59	7.91	Average	---	---
6	5860.00	59.46	74.00	-14.54	51.55	7.91	Peak	---	---
7	11550.00	45.60	54.00	-8.40	28.39	17.21	Average	---	---
8	11550.00	59.53	74.00	-14.47	42.32	17.21	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).

3.6 Frequency Stability

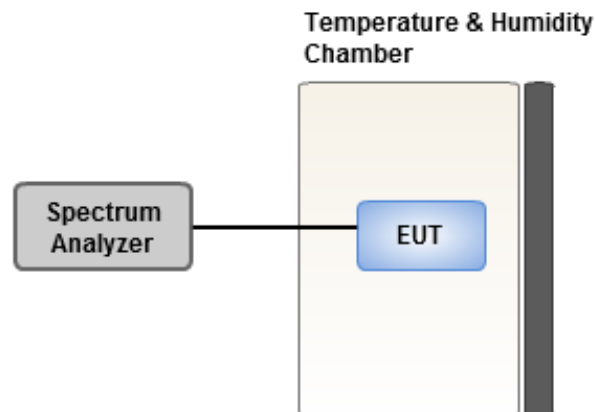
3.6.1 Limit of Frequency Stability

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

Non-beamforming mode - Test Configuration 1

Frequency: 5200 MHz	Frequency Drift (ppm)			
Temperature (°C)	0 minute	2 minutes	5 minutes	10 minutes
T20°C V _{max}	7.15	7.61	7.38	7.01
T20°C V _{min}	5.80	6.20	5.99	6.06
T50°C V _{nom}	4.93	4.93	5.11	5.32
T40°C V _{nom}	4.84	5.00	5.12	4.98
T30°C V _{nom}	5.16	5.15	4.83	5.41
T20°C V _{nom}	4.30	4.67	4.40	4.23
T10°C V _{nom}	4.06	4.19	4.42	4.38
T0°C V _{nom}	3.69	3.84	3.85	3.88
T-10°C V _{nom}	3.29	3.49	3.16	2.88
T-20°C V _{nom}	1.02	1.32	0.99	1.26
T-30°C V _{nom}	5.85	6.39	6.53	5.49
V _{nom} [Vac]: 120		V _{max} [Vac]: 138		V _{min} [Vac]: 102
T _{nom} [°C]: 20		T _{max} [°C]: 50		T _{min} [°C]: -30

Frequency: 5785 MHz	Frequency Drift (ppm)			
Temperature (°C)	0 minute	2 minutes	5 minutes	10 minutes
T20°C V _{max}	6.47	6.47	6.67	7.15
T20°C V _{min}	4.94	4.88	4.89	5.37
T50°C V _{nom}	4.47	4.81	4.86	4.31
T40°C V _{nom}	4.88	5.13	5.39	4.93
T30°C V _{nom}	5.24	5.08	5.66	5.24
T20°C V _{nom}	4.06	4.58	3.74	4.13
T10°C V _{nom}	3.06	3.59	3.08	3.15
T0°C V _{nom}	2.88	3.48	3.13	3.48
T-10°C V _{nom}	2.20	2.55	2.42	2.44
T-20°C V _{nom}	1.94	2.02	1.58	2.41
T-30°C V _{nom}	3.36	3.70	3.12	3.55
V _{nom} [Vac]: 120		V _{max} [Vac]: 138		V _{min} [Vac]: 102
T _{nom} [°C]: 20		T _{max} [°C]: 50		T _{min} [°C]: -30

Beamforming mode - Test Configuration 3

Frequency: 5200 MHz	Frequency Drift (ppm)			
Temperature (°C)	0 minute	2 minutes	5 minutes	10 minutes
T20°C Vmax	5.66	5.25	5.47	5.37
T20°C Vmin	5.08	5.06	4.84	5.22
T50°C Vnom	4.26	4.85	5.40	5.10
T40°C Vnom	4.61	4.46	4.76	4.43
T30°C Vnom	4.40	4.47	4.08	3.43
T20°C Vnom	3.99	3.95	2.98	3.68
T10°C Vnom	2.89	2.72	2.98	3.59
T0°C Vnom	3.60	3.27	2.76	3.53
T-10°C Vnom	2.63	2.15	2.63	2.40
T-20°C Vnom	1.36	1.01	1.11	1.28
T-30°C Vnom	4.94	5.20	5.08	5.36
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°C Vmax	6.58	6.27	5.92	5.93
T20°C Vmin	4.58	5.06	5.19	5.41
T50°C Vnom	4.42	5.09	4.98	5.10
T40°C Vnom	3.97	4.23	4.45	3.80
T30°C Vnom	4.44	4.44	4.51	4.33
T20°C Vnom	3.33	3.74	3.81	3.41
T10°C Vnom	3.35	3.48	4.19	4.24
T0°C Vnom	3.18	2.95	2.89	2.87
T-10°C Vnom	1.85	0.99	1.74	1.88
T-20°C Vnom	1.77	2.04	1.72	1.62
T-30°C Vnom	2.80	2.38	2.59	2.43
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

Tel: 886-2-2601-1640

No. 30-2, Ding Fwu Tsuen, Lin Kou
District, New Taipei City, Taiwan,
R.O.C.

Kwei Shan

Tel: 886-3-271-8666

No. 3-1, Lane 6, Wen San 3rd
St., Kwei Shan Hsiang, Tao Yuan
Hsien 333, Taiwan, R.O.C.

Kwei Shan Site II

Tel: 886-3-271-8640

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

Fax: 886-3-318-0155

Email: ICC_Service@icertifi.com.tw

==END==