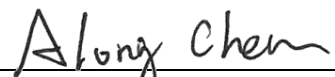


FCC Test Report

FCC ID : SQG-60SIPT
Equipment : 802.11 ac/a/b/g/n + Bluetooth 4.2 module
(please refer to section 1.1.1 for more details.)
Model No. : ST60-SIPT
(please refer to section 1.1.1 for more details.)
Brand Name : Laird Technologies
Applicant : Laird Technologies
Address : W66N220 Commerce Court, Cedarburg,
Wisconsin 53012, USA
Standard : 47 CFR FCC Part 15.407
Received Date : Apr. 07, 2017
Tested Date : Apr. 12 ~ May 10, 2017

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

Reviewed by:


Along Chen / Assistant Manager

Approved by:

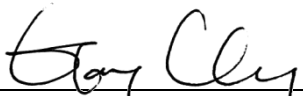

Gary Chang / Manager



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Release Record

Report No.	Version	Description	Issued Date
FR740701AN	Rev. 01	Initial issue	Jul. 13, 2017
FR740701AN	Rev. 02	Revised model name	Jul. 21, 2017

Summary of Test Results

FCC Rules	Test Items	Measured	Result
15.207	Conducted Emissions	[dBuV]: 4.494MHz 50.88(Margin -5.12dB) - QP	Pass
15.407(b) 15.209	Radiated Emissions	[dBuV/m at 3m]: 3883.33MHz 53.86 (Margin -0.14dB) - 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]: 5150~5250MHz: 21.60 5250~5350MHz: 18.92 5470~5725MHz: 21.01 5725~5850MHz: 21.28	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 Product Details

The following models are provided to this EUT.

Brand Name	Model Name	Product Name	Description	
Laird Technologies	ST60-SIPT	802.11 ac/a/b/g/n + Bluetooth 4.2 module	SIPT only	For marketing purpose
	SU60-SIPT			
	ST60-2230C	802.11 ac/a/b/g/n M.2 2230 + Bluetooth 4.2 module	with carrier board	
	SU60-2230C			
✦ The above models, model ST60-2230C was selected as a representative one for the final test and only its data was recorded in this report.				

1.1.2 Specification of the Equipment under Test (EUT)

RF General Information					
Frequency Range (MHz)	IEEE Std. 802.11	Ch. Freq. (MHz)	Channel Number	Transmit Chains (N _{TX})	Data Rate / MCS
5150-5250 5250-5350 5470-5725 5725-5850	a	5180-5240	36-48 [4]	1	6-54 Mbps
		5260-5320	52-64 [4]	2	6-54 Mbps
		5500-5720	100-144 [12]		
		5745-5825	149-165 [5]		
5150-5250 5250-5350 5470-5725 5725-5850	n (HT20)	5180-5240	36-48 [4]	1	MCS 0-7
		5260-5320	52-64 [4]	2	MCS 0-7
		5500-5720	100-144 [12]	2	MCS 8-15
		5745-5825	149-165 [5]		
5150-5250 5250-5350 5470-5725 5725-5850	n (HT40)	5190-5230	38-46 [2]	1	MCS 0-7
		5270-5310	54-62 [2]	2	MCS 0-7
		5510-5710	102-142 [6]	2	MCS 8-15
		5755-5795	151-159 [2]		
5150-5250 5250-5350 5470-5725 5725-5850	ac (VHT20)	5180-5240	36-48 [4]	1	MCS 0-9
		5260-5320	52-64 [4]	2	
5150-5250 5250-5350 5470-5725 5725-5850	ac (VHT40)	5190-5230	38-46 [2]	1	MCS 0-9
		5270-5310	54-62 [2]	2	
		5510-5710	102-142 [6]		
		5755-5795	151-159 [2]		
5150-5250 5250-5350 5470-5725 5725-5850	ac (VHT80)	5210	42 [1]	1	MCS 0-9
		5290	58 [1]	2	
		5530~5690	106-138 [3]		
		5775	155 [1]		
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: The device supports TX antenna diversity function. The conducted power of single chain is same for 1TX and 2TX operating mode. Therefore, Ant1 + Ant 2 configuration is chosen for final testing.					

1.1.3 Antenna Details

Ant. No.	Model	Type	Connector	Operating Frequencies (MHz) / Antenna Gain (dBi)				
				2400~2483.5	5150~5250	5250~5350	5470~5725	5725~5850
1	LSR/001-0009	Dipole	IPEX U.FL	2	2	2	2	2
2	Laird NanoBlade-IP04	PCB Dipole	IPEX U.FL	2	3.9	3.9	4	4
3	Laird MAF95310 Mini NanoBlade Flex	PCB Dipole	IPEX U.FL	2.79	3.38	3.38	3.38	3.38
4	LSR/FlexPIFA 001-0016	PIFA	IPEX U.FL	2.5	3	3	3	3
5	Ethertronics WLAN_1000146	Isolated Magnetic Dipole	IPEX U.FL	2.5	3.5	3.5	3.5	3.5

1.1.4 Power Supply Type of Equipment under Test (EUT)

Power Supply Type	DC 3.3V from host
-------------------	-------------------

1.1.5 Accessories

N/A

1.1.6 Channel List

802.11 a / HT20 / VHT20		HT40 / VHT40	
Channel	Frequency(MHz)	Channel	Frequency(MHz)
36	5180	38	5190
40	5200	46	5230
44	5220	54	5270
48	5240	62	5310
52	5260	102	5510
56	5280	110	5550
60	5300	118	5590
64	5320	126	5630
100	5500	134	5670
104	5520	142	5710
108	5540	151	5755
112	5560	159	5795
116	5580	VHT80	
120	5600	42	5210
124	5620	58	5290
128	5640	106	5530
132	5660	122	5610
136	5680	138	5690
140	5700	155	5775
144	5720	---	---
149	5745	---	---
153	5765	---	---
157	5785	---	---
161	5805	---	---
165	5825	---	---

1.1.7 Test Tool and Duty Cycle

Test Tool	DutApiMimoBT, Version: 1.0.0.133		
Duty Cycle and Duty Factor	Mode	Duty cycle (%)	Duty factor (dB)
	11a	100.00%	0.00
	VHT20	100.00%	0.00
	VHT40	100.00%	0.00
	VHT80	100.00%	0.00

1.1.8 Power Setting

For Frequency band 5150-5250 MHz		
Modulation Mode	Test Frequency (MHz)	Power Set
11a	5180	17
11a	5200	19
11a	5240	19
HT20	5180	17
HT20	5200	19
HT20	5240	19
HT40	5190	15
HT40	5230	17
VHT20	5180	17
VHT20	5200	19
VHT20	5240	19
VHT40	5190	15
VHT40	5230	17
VHT80	5210	12

For Frequency band 5250~5350 MHz		
Modulation Mode	Test Frequency (MHz)	Power Set
11a	5260	16
11a	5300	16
11a	5320	15
HT20	5260	16
HT20	5300	16
HT20	5320	16
HT40	5270	16
HT40	5310	14
VHT20	5260	16
VHT20	5300	16
VHT20	5320	16
VHT40	5270	16
VHT40	5310	14
VHT80	5290	12

For Frequency band 5470~5725 MHz		
Modulation Mode	Test Frequency (MHz)	Power Set
11a	5500	17
11a	5580	19
11a	5700	15
HT20	5500	17
HT20	5580	19
HT20	5700	16
HT40	5510	14
HT40	5550	17
HT40	5670	17
VHT20	5500	17
VHT20	5580	19
VHT20	5700	16
VHT40	5510	14
VHT40	5590	17
VHT40	5670	17
VHT80	5530	12
VHT80	5610	15

Channel that extends across the 5.725 GHz boundary

For Frequency band 5470~5725 MHz		
Modulation Mode	Test Frequency (MHz)	Power Set
11a	5720	19
HT20	5720	19
HT40	5710	18
VHT20	5720	19
VHT40	5710	18
VHT80	5690	15

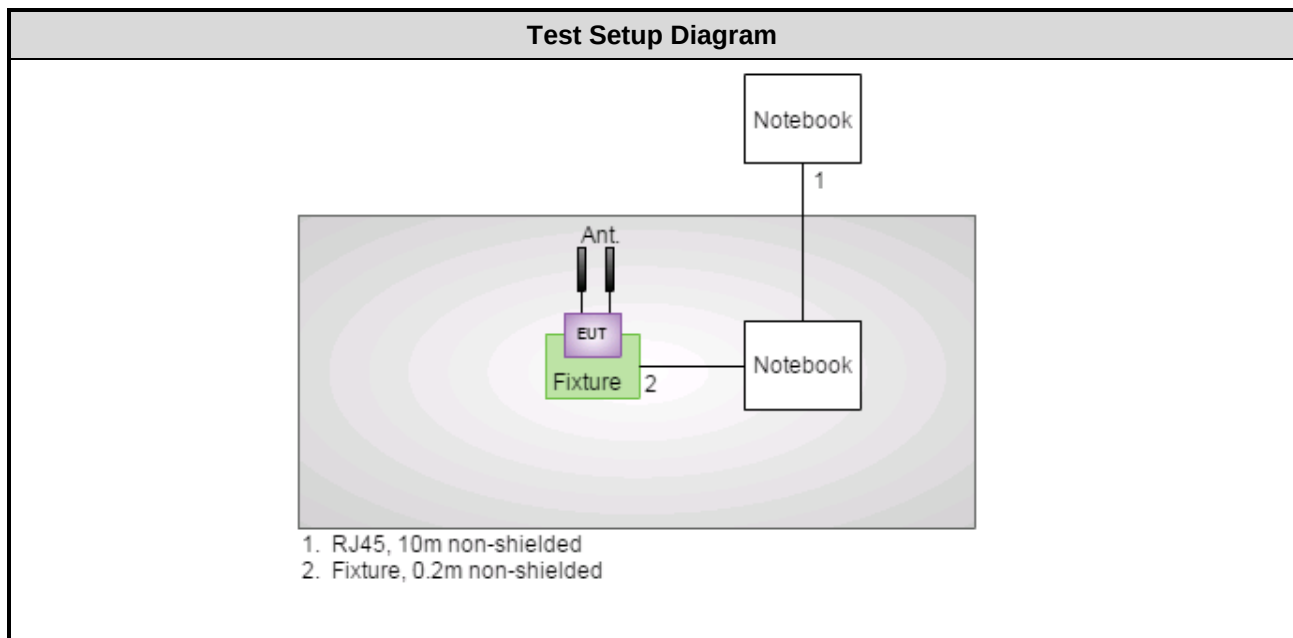
For Frequency band 5725~5850 MHz		
Modulation Mode	Test Frequency (MHz)	Power Set
11a	5745	19
11a	5785	19
11a	5825	20
HT20	5745	19
HT20	5785	19
HT20	5825	20
HT40	5755	18
HT40	5795	18
VHT20	5745	19
VHT20	5785	19
VHT20	5825	20
VHT40	5755	18
VHT40	5795	18
VHT80	5775	15

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, 10m non-shielded
2	Notebook	Lenovo	T430	DoC	---
3	50 Ω terminator	---	---	---	---
4	Fixture	---	---	---	Fixture, 0.2m non-shielded

Note: No2. & No. 4 were 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
Receiver	R&S	ESR3	101657	Dec. 21, 2016	Dec. 20, 2017
LISN	SCHWARZBECK	Schwarzbeck 8127	8127-667	Nov. 08, 2016	Nov. 07, 2017
RF Cable-CON	EMC	EMCCFD300-BM-BM-6000	50821	Dec. 20, 2016	Dec. 19, 2017
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. 09, 2016	Sep. 08, 2017
Receiver	Agilent	N9038A	MY53290044	Oct. 06, 2016	Oct. 05, 2017
Bilog Antenna	SCHWARZBECK	VULB9168	VULB9168-522	Aug. 04, 2016	Aug. 03, 2017
Horn Antenna 1G-18G	SCHWARZBECK	BBHA 9120 D	BBHA 9120 D 1206	Feb. 09, 2017	Feb. 08, 2018
Horn Antenna 18G-40G	SCHWARZBECK	BBHA 9170	BBHA 9170517	Oct. 25, 2016	Oct. 24, 2017
Loop Antenna	R&S	HFH2-Z2	100330	Nov. 10, 2016	Nov. 09, 2017
Loop Antenna Cable	KOAX KABEL	101354-BW	101354-BW	Dec. 09, 2016	Dec. 08, 2017
Preamplifier	EMC	EMC02325	980187	Sep. 08, 2016	Sep. 07, 2017
Preamplifier	Agilent	83017A	MY53270014	Aug. 22, 2016	Aug. 21, 2017
Preamplifier	EMC	EMC184045B	980192	Aug. 24, 2016	Aug. 23, 2017
RF cable-3M	HUBER+SUHNER	SUCOFLEX104	MY22620/4	Feb. 04, 2017	Feb. 03, 2018
RF cable-8M	HUBER+SUHNER	SUCOFLEX104	MY22600/4	Feb. 04, 2017	Feb. 03, 2018
RF cable-1M	HUBER+SUHNER	SUCOFLEX104	MY22624/4	Feb. 04, 2017	Feb. 03, 2018
LF cable-0.8M	EMC	EMC8D-NM-NM-800	EMC8D-NM-NM-800-001	Feb. 04, 2017	Feb. 03, 2018
LF cable-3M	EMC	EMC8D-NM-NM-3000	131103	Feb. 04, 2017	Feb. 03, 2018
LF cable-13M	EMC	EMC8D-NM-NM-13000	131104	Feb. 04, 2017	Feb. 03, 2018
Measurement Software	AUDIX	e3	6.120210g	NA	NA
Note: Calibration Interval of instruments listed above is one year.					

Test Item	RF Conducted				
Test Site	(TH01-WS)				
Instrument	Manufacturer	Model No.	Serial No.	Calibration Date	Calibration Until
Spectrum Analyzer	R&S	FSV40	101063	Mar. 15, 2017	Mar. 14, 2018
Power Meter	Anritsu	ML2495A	1241002	Oct. 06, 2016	Oct. 05, 2017
Power Sensor	Anritsu	MA2411B	1207366	Oct. 06, 2016	Oct. 05, 2017
DC POWER SOURCE	GW INSTEK	GPC-6030D	EM892433	Oct. 20, 2016	Oct. 19, 2017
Measurement Software	Sporton	Sporton_1	1.3.30	NA	NA
Note: Calibration Interval of instruments listed above is one year.					

1.5 Testing Applied Standards

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

47 CFR FCC Part 15.407

ANSI C63.10-2013

FCC KDB 789033 D02 General UNII Test Procedures New Rules v01r04

FCC KDB 644545 D03 Guidance for IEEE 802.11ac New Rules v01

FCC KDB 662911 D01 Multiple Transmitter Output v02r01

FCC KDB 412172 D01 Determining ERP and EIRP v01r01

1.6 Measurement Uncertainty

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

Measurement Uncertainty	
Parameters	Uncertainty
Bandwidth	± 34.134 Hz
Conducted power	± 0.808 dB
Frequency error	± 34.134 Hz
Power density	± 0.463 dB
Conducted emission	± 2.670 dB
AC conducted emission	± 2.90 dB
Radiated emission ≤ 1 GHz	± 3.66 dB
Radiated emission > 1 GHz	± 5.37 dB
Time	$\pm 0.1\%$
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 / 57%	Alex Tsai
Radiated Emissions	03CH03-WS	22-24°C / 66-67%	Aska Huang
RF Conducted	TH01-WS	22°C / 64%	Brad Wu

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

2.2 The Worst Test Modes and Channel Details

Frequency band 5150~5250 MHz / 5250~5350 MHz / 5470~5725 MHz				
Test item	Modulation Mode	Test Frequency (MHz)	Data Rate (Mbps) / MCS	Test Configuration
Conducted Emissions	VHT20	5240	MCS 0	2
Radiated Emissions ≤1GHz	VHT20	5240	MCS 0	1, 2, 3, 4
RF Output Power	11a	5180 / 5200 / 5240 / 5260 / 5300 5320 / 5500 / 5580 / 5700 / 5720	6 Mbps	2
	HT20	5180 / 5200 / 5240 / 5260 / 5300 5320 / 5500 / 5580 / 5700 / 5720	MCS 0	
	HT40	5190 / 5230 / 5270 / 5310 / 5510 5590 / 5670 / 5710	MCS 0	
	VHT20	5180 / 5200 / 5240 / 5260 / 5300 5320 / 5500 / 5580 / 5700 / 5720	MCS 0	
	VHT40	5190 / 5230 / 5270 / 5310 / 5510 5590 / 5670 / 5710	MCS 0	
	VHT80	5210 / 5290 / 5530 / 5610 / 5690	MCS 0	
Emission Bandwidth Peak Power Spectral Density	11a	5180 / 5200 / 5240 / 5260 / 5300 5320 / 5500 / 5580 / 5700 / 5720	6 Mbps	2
	VHT20	5180 / 5200 / 5240 / 5260 / 5300 5320 / 5500 / 5580 / 5700 / 5720	MCS 0	
	VHT40	5190 / 5230 / 5270 / 5310 / 5510 5590 / 5670 / 5710	MCS 0	
	VHT80	5210 / 5290 / 5530 / 5610 / 5690	MCS 0	
Radiated Emissions >1GHz	11a	5180 / 5200 / 5240 / 5260 / 5300 5320 / 5500 / 5580 / 5700 / 5720	6 Mbps	1, 2, 3, 4
	VHT20	5180 / 5200 / 5240 / 5260 / 5300 5320 / 5500 / 5580 / 5700 / 5720	MCS 0	
	VHT40	5190 / 5230 / 5270 / 5310 / 5510 5590 / 5670 / 5710	MCS 0	
	VHT80	5210 / 5290 / 5530 / 5610 / 5690	MCS 0	
Frequency Stability	Un-modulation	5320	---	2
NOTE: 1. The EUT was pretested with 3 orientations placed on the table for the radiated emission measurement – X, Y, and Z-plane. The Y-plane results were found as the worst case and were shown in this report. 2. The test configurations are listed as follows: Configuration 1 : Dipole Antenna Configuration 2 : PCB Dipole Antenna Configuration 3 : PIFA Antenna Configuration 4 : Isolated Magnetic Dipole Antenna				

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

3 Transmitter Test Results

3.1 Conducted Emissions

3.1.1 Limit of Conducted Emissions

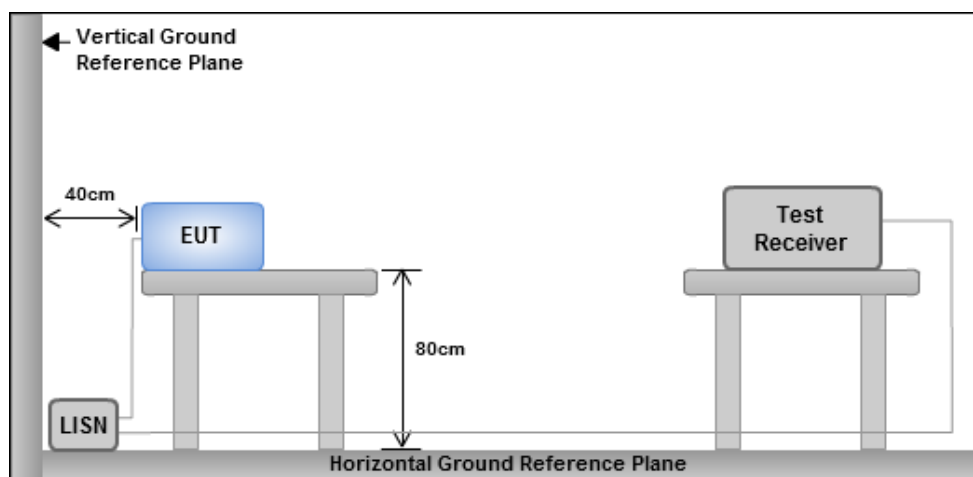
Conducted Emissions Limit		
Frequency Emission (MHz)	Quasi-Peak	Average
0.15-0.5	66 - 56 *	56 - 46 *
0.5-5	56	46
5-30	60	50

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

3.1.2 Test Procedures

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

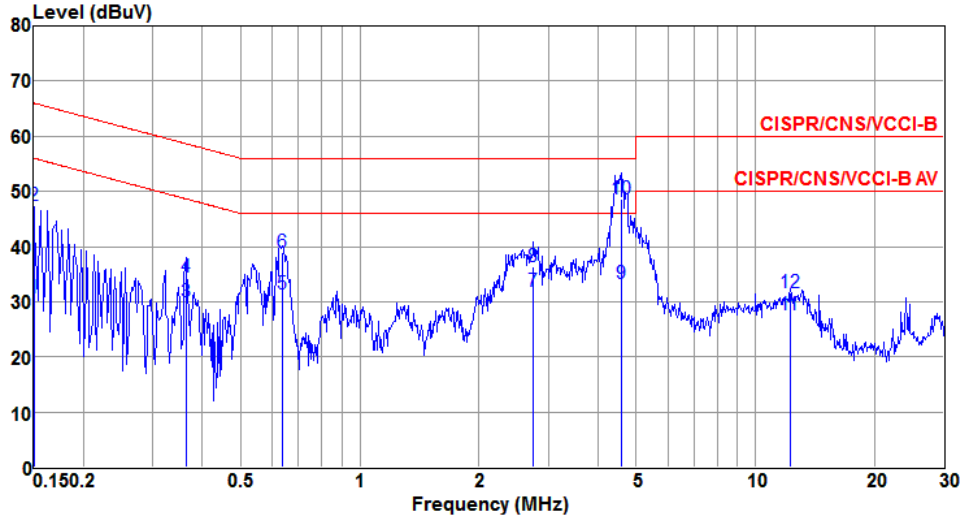
3.1.3 Test Setup



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

3.1.4 Test Result of Conducted Emissions

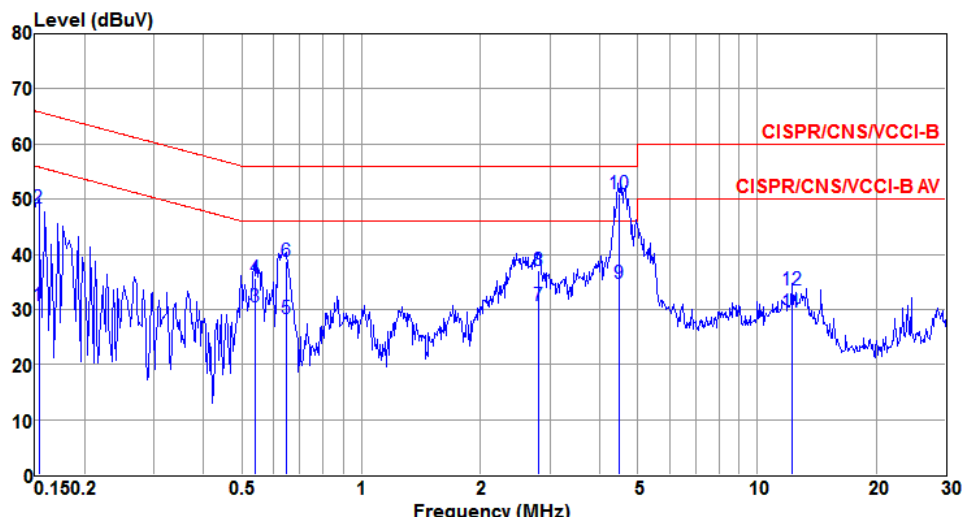
Modulation	VHT20	Test Freq. (MHz)	5240
Power Phase	Line		



	Freq MHz	Level dBUV	Limit Line dBUV	Over Limit dB	Read Level dBUV	LISN factor dB	cable loss dB	Remark
1	0.150	30.71	56.00	-25.29	30.60	0.07	0.04	Average
2	0.150	47.41	66.00	-18.59	47.30	0.07	0.04	QP
3	0.363	29.97	48.65	-18.68	29.86	0.07	0.04	Average
4	0.363	34.55	58.65	-24.10	34.44	0.07	0.04	QP
5	0.637	31.38	46.00	-14.62	31.27	0.07	0.04	Average
6	0.637	38.89	56.00	-17.11	38.78	0.07	0.04	QP
7	2.750	31.95	46.00	-14.05	31.71	0.15	0.09	Average
8	2.750	36.43	56.00	-19.57	36.19	0.15	0.09	QP
9	4.574	33.21	46.00	-12.79	32.87	0.17	0.17	Average
10	4.574	48.70	56.00	-7.30	48.36	0.17	0.17	QP
11	12.253	27.72	50.00	-22.28	27.24	0.26	0.22	Average
12	12.253	31.63	60.00	-28.37	31.15	0.26	0.22	QP

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

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

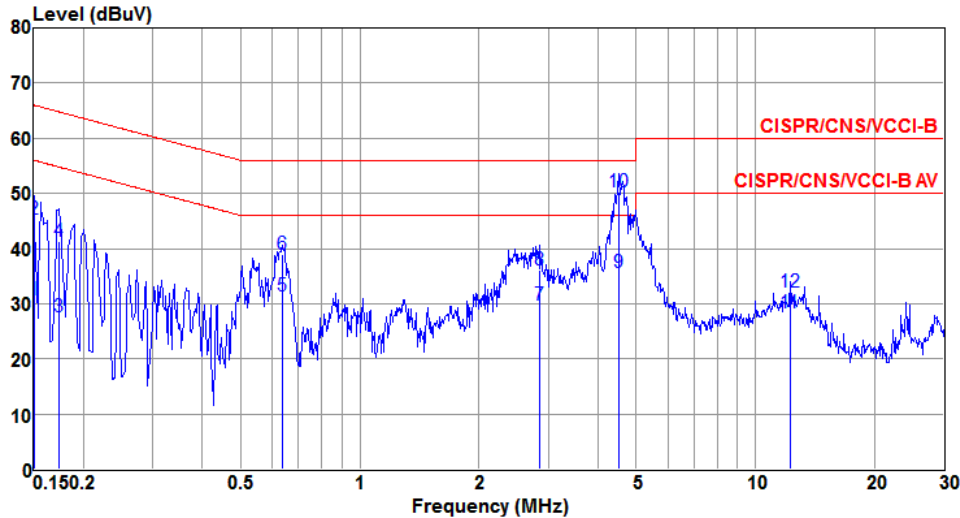


	Freq MHz	Level dBuV	Limit Line dBuV	Over Limit dB	Read Level dBuV	LISN factor dB	cable loss dB	Remark
1	0.153	30.78	55.82	-25.04	30.64	0.10	0.04	Average
2	0.153	48.28	65.82	-17.54	48.14	0.10	0.04	QP
3	0.541	30.49	46.00	-15.51	30.33	0.12	0.04	Average
4	0.541	35.61	56.00	-20.39	35.45	0.12	0.04	QP
5	0.647	28.23	46.00	-17.77	28.08	0.11	0.04	Average
6	0.647	38.65	56.00	-17.35	38.50	0.11	0.04	QP
7	2.809	30.73	46.00	-15.27	30.48	0.15	0.10	Average
8	2.809	36.96	56.00	-19.04	36.71	0.15	0.10	QP
9	4.494	34.72	46.00	-11.28	34.39	0.16	0.17	Average
10	4.494	50.88	56.00	-5.12	50.55	0.16	0.17	QP
11	12.253	29.62	50.00	-20.38	29.06	0.34	0.22	Average
12	12.253	33.46	60.00	-26.54	32.90	0.34	0.22	QP

Note 1: Level (dBuV) = Read Level (dBuV) + LISN Factor (dB) + Cable Loss (dB).

2: Over Limit (dB) = Level (dBuV) – Limit Line (dBuV).

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

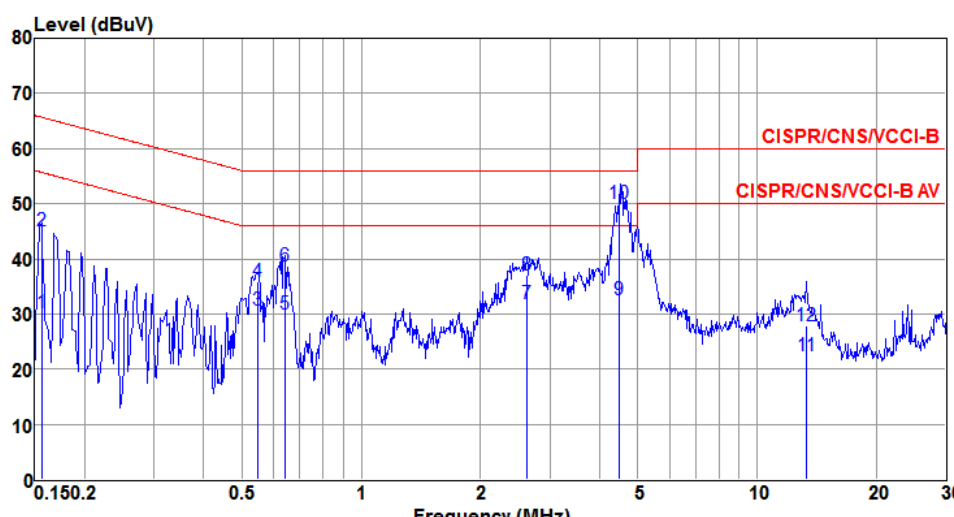


	Freq MHz	Level dBuV	Limit Line dBuV	Over Limit dB	Read Level dBuV	LISN factor dB	cable loss dB	Remark
1	0.150	30.61	56.00	-25.39	30.50	0.07	0.04	Average
2	0.150	45.35	66.00	-20.65	45.24	0.07	0.04	QP
3	0.174	27.65	54.77	-27.12	27.52	0.09	0.04	Average
4	0.174	41.35	64.77	-23.42	41.22	0.09	0.04	QP
5	0.637	31.35	46.00	-14.65	31.24	0.07	0.04	Average
6	0.637	38.96	56.00	-17.04	38.85	0.07	0.04	QP
7	2.839	29.86	46.00	-16.14	29.61	0.15	0.10	Average
8	2.839	36.08	56.00	-19.92	35.83	0.15	0.10	QP
9	4.509	35.69	46.00	-10.31	35.35	0.17	0.17	Average
10	4.509	50.33	56.00	-5.67	49.99	0.17	0.17	QP
11	12.253	28.27	50.00	-21.73	27.79	0.26	0.22	Average
12	12.253	32.16	60.00	-27.84	31.68	0.26	0.22	QP

Note 1: Level (dBuV) = Read Level (dBuV) + LISN Factor (dB) + Cable Loss (dB).

Note 2: Over Limit (dB) = Level (dBuV) – Limit Line (dBuV).

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



	Freq MHz	Level dBuV	Limit Line dBuV	Over Limit dB	Read Level dBuV	LISN factor dB	cable loss dB	Remark
1	0.156	30.26	55.69	-25.43	30.12	0.10	0.04	Average
2	0.156	44.97	65.69	-20.72	44.83	0.10	0.04	QP
3	0.546	30.62	46.00	-15.38	30.46	0.12	0.04	Average
4	0.546	35.96	56.00	-20.04	35.80	0.12	0.04	QP
5	0.644	30.08	46.00	-15.92	29.93	0.11	0.04	Average
6	0.644	38.75	56.00	-17.25	38.60	0.11	0.04	QP
7	2.622	31.76	46.00	-14.24	31.52	0.15	0.09	Average
8	2.622	36.96	56.00	-19.04	36.72	0.15	0.09	QP
9	4.477	32.47	46.00	-13.53	32.14	0.16	0.17	Average
10@	4.477	50.14	56.00	-5.86	49.81	0.16	0.17	QP
11	13.337	22.44	50.00	-27.56	21.86	0.35	0.23	Average
12	13.337	27.79	60.00	-32.21	27.21	0.35	0.23	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.

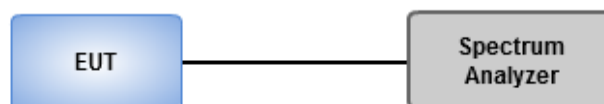
Occupied Bandwidth

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

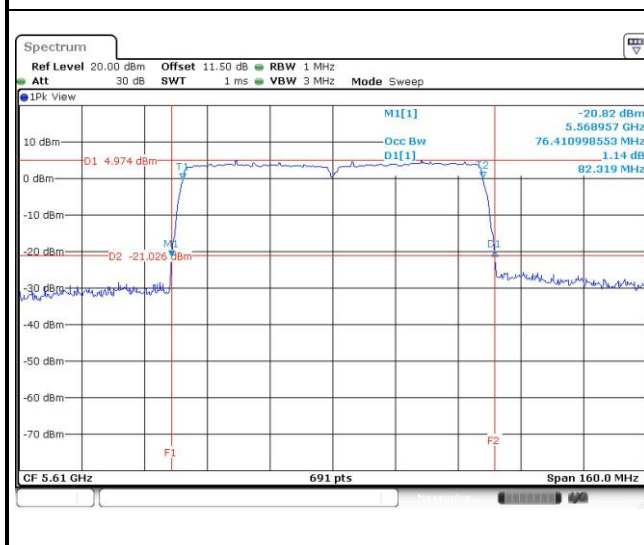
For Frequency band 5150~5250 MHz										
Emission Bandwidth										
Mode	N _{TX}	Freq. (MHz)	26dB Bandwidth (MHz)				99% Bandwidth (MHz)			
			Chain 0	Chain 1	Chain 2	Chain 3	Chain 0	Chain 1	Chain 2	Chain 3
11a	2	5180	19.88	20.00	---	---	16.83	16.76	---	---
11a	2	5200	28.12	26.78	---	---	17.01	16.90	---	---
11a	2	5240	28.70	27.42	---	---	17.01	16.90	---	---
VHT20	2	5180	20.29	20.12	---	---	17.69	17.66	---	---
VHT20	2	5200	21.39	20.12	---	---	17.75	17.69	---	---
VHT20	2	5240	20.75	20.12	---	---	17.75	17.69	---	---
VHT40	2	5190	41.62	41.51	---	---	36.44	36.40	---	---
VHT40	2	5230	41.74	41.39	---	---	36.46	36.40	---	---
VHT80	2	5210	81.86	81.62	---	---	76.48	76.40	---	---

For Frequency band 5250~5350 MHz											
Mode	N _{TX}	Freq. (MHz)	26dB Bandwidth (MHz)				99% Bandwidth (MHz)				Power Limit (dBm)
			Chain 0	Chain 1	Chain 2	Chain 3	Chain 0	Chain 1	Chain 2	Chain 3	
11a	2	5260	20.00	19.88	---	---	16.81	16.73	---	---	24.00
11a	2	5300	19.94	19.88	---	---	16.81	16.71	---	---	24.00
11a	2	5320	20.00	19.88	---	---	16.80	16.74	---	---	24.00
VHT20	2	5260	20.29	20.06	---	---	17.69	17.66	---	---	24.00
VHT20	2	5300	20.29	20.12	---	---	17.69	17.66	---	---	24.00
VHT20	2	5320	20.23	20.06	---	---	17.69	17.65	---	---	24.00
VHT40	2	5270	41.62	41.51	---	---	36.48	36.38	---	---	24.00
VHT40	2	5310	41.62	41.39	---	---	36.48	36.40	---	---	24.00
VHT80	2	5290	82.09	81.62	---	---	76.48	76.40	---	---	24.00

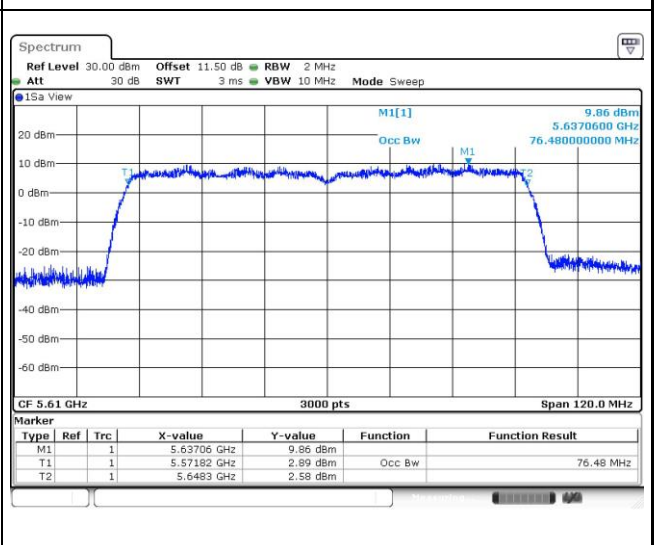
For Frequency band 5470~5725 MHz

Mode	N _{TX}	Freq. (MHz)	26dB Bandwidth (MHz)				99% Bandwidth (MHz)				Power Limit (dBm)
			Chain 0	Chain 1	Chain 2	Chain 3	Chain 0	Chain 1	Chain 2	Chain 3	
11a	2	5500	20.06	20.00	---	---	16.84	16.74	---	---	24.00
11a	2	5580	28.58	25.04	---	---	17.01	16.88	---	---	24.00
11a	2	5700	20.00	19.88	---	---	16.80	16.71	---	---	24.00
VHT20	2	5500	20.29	20.12	---	---	17.69	17.66	---	---	24.00
VHT20	2	5580	20.41	20.17	---	---	17.74	17.68	---	---	24.00
VHT20	2	5700	20.29	20.17	---	---	17.68	17.66	---	---	24.00
VHT40	2	5510	41.62	41.39	---	---	36.46	36.36	---	---	24.00
VHT40	2	5590	41.86	41.51	---	---	36.50	36.38	---	---	24.00
VHT40	2	5670	41.86	41.39	---	---	36.48	36.38	---	---	24.00
VHT80	2	5530	82.09	81.39	---	---	76.48	76.36	---	---	24.00
VHT80	2	5610	82.32	81.39	---	---	76.48	76.40	---	---	24.00

Worst Plot of 26dB Bandwidth



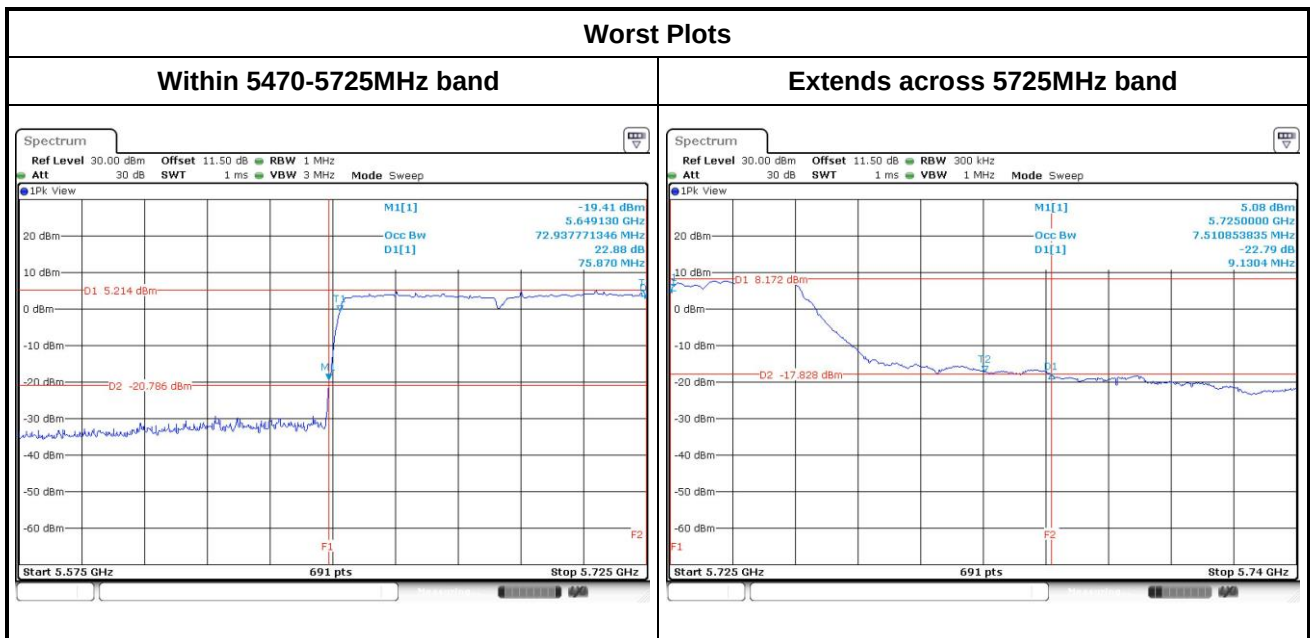
Worst Plot of 99% Bandwidth



Channel that extends across the 5.725 GHz boundary

Frequency band			UNII Emission Bandwidth Result (Within 5470-5725MHz band)								
Mode	N _{TX}	Freq. (MHz)	26dB Bandwidth (MHz)				99% Bandwidth (MHz)				Power Limit (dBm)
			Chain 0	Chain 1	Chain 2	Chain 3	Chain 0	Chain 1	Chain 2	Chain 3	
11a	2	5720	19.89	19.77	---	---	13.57	13.46	---	---	23.96
VHT20	2	5720	15.09	15.09	---	---	13.89	13.89	---	---	22.79
VHT40	2	5710	36.01	35.71	---	---	33.25	33.19	---	---	24.00
VHT80	2	5690	75.87	75.65	---	---	73.22	73.18	---	---	24.00

Frequency band			UNII Emission Bandwidth Result (Extends across 5725MHz band)								
Mode	N _{TX}	Freq. (MHz)	26dB Bandwidth (MHz)				99% Bandwidth (MHz)				Power Limit (dBm)
			Chain 0	Chain 1	Chain 2	Chain 3	Chain 0	Chain 1	Chain 2	Chain 3	
11a	2	5720	9.13	7.20	---	---	3.46	3.42	---	---	30.00
VHT20	2	5720	5.39	5.04	---	---	3.85	3.80	---	---	30.00
VHT40	2	5710	5.97	5.80	---	---	3.25	3.21	---	---	30.00
VHT80	2	5690	6.17	5.91	---	---	3.26	3.14	---	---	30.00

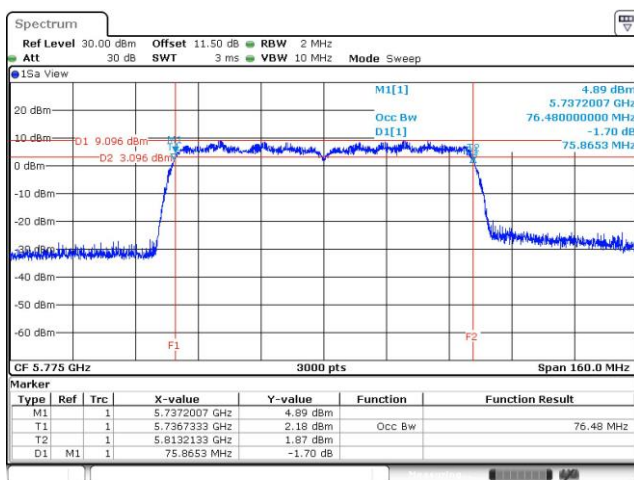


For Frequency band 5725-5850 MHz

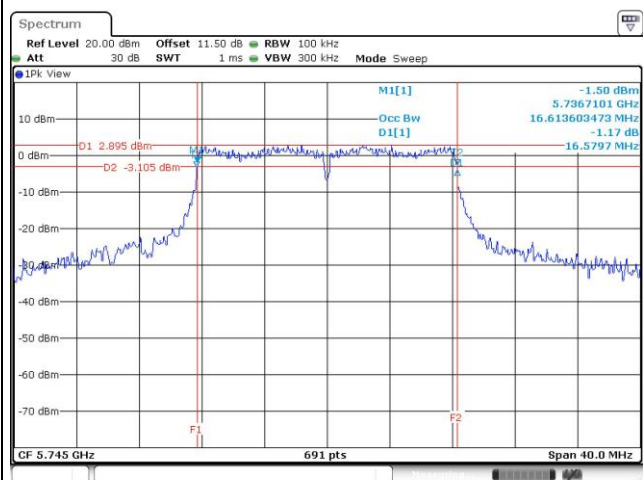
Emission Bandwidth

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	
11a	2	5745	17.01	16.99	---	---	16.58	16.58	---	---	0.5
11a	2	5785	17.01	16.96	---	---	16.64	16.58	---	---	0.5
11a	2	5825	17.20	17.17	---	---	16.64	16.58	---	---	0.5
VHT20	2	5745	17.73	17.71	---	---	17.68	17.68	---	---	0.5
VHT20	2	5785	17.75	17.71	---	---	17.74	17.68	---	---	0.5
VHT20	2	5825	17.83	17.76	---	---	17.68	17.68	---	---	0.5
VHT40	2	5755	36.56	36.45	---	---	36.41	36.41	---	---	0.5
VHT40	2	5795	36.53	36.45	---	---	36.41	36.41	---	---	0.5
VHT80	2	5775	76.48	76.43	---	---	76.52	76.52	---	---	0.5

Worst Plot of 99% Bandwidth



Worst Plot of 6dB Bandwidth



3.3 RF Output Power

3.3.1 Limit of RF Output Power

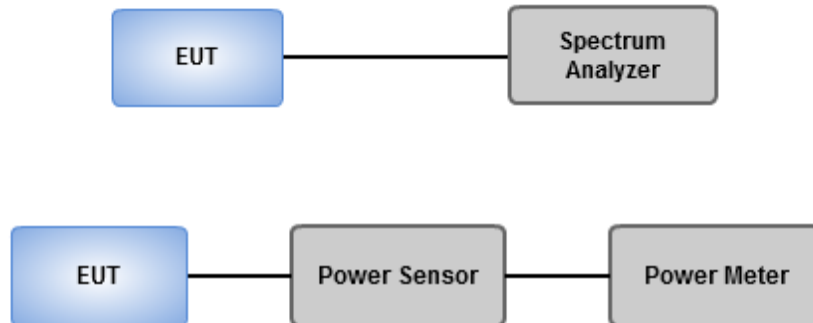
Frequency band 5150-5250 MHz		
Operating Mode		Limit
☐	Outdoor access point	Conducted Power: 1 W The maximum e.i.r.p. at any elevation angle above 30 degrees as measured from the horizon must not exceed 125 mW (21 dBm)
☐	Indoor access point	Conducted Power: 1 W
☐	Fixed point-to-point access points	Conducted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

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

3.3.2 Test Procedures

- ☒ Power meter (For channel that does not extends across the 5.725 GHz boundary)
 - ☒ Measurements is performed using a wideband gated RF power meter provided that the gate parameters are adjusted such that the power is measured only when the EUT is transmitting at its maximum power control level. Since the measurement is made only during the ON time of the transmitter, no duty cycle correction factor is required
- ☒ Spectrum analyzer (For channel that extends across the 5.725 GHz boundary)
 1. Set RBW=1MHz, VBW=3MHz , Sweep time= Auto, Detector = RMS
 2. Trace average at least 100 traces in power averaging mode
 3. Compute power by integrating the spectrum across the 26 dB EBW

3.3.3 Test Setup



3.3.4 Test Result of Maximum Conducted Output Power

For Frequency band 5150~5250 MHz									
Mode	N _{TX}	Freq. (MHz)	Conducted Power (dBm)				Total Power (mW)	Total Power (dBm)	Limit (dBm)
			Chain 0	Chain 1	Chain 2	Chain 3			
11a	2	5180	16.61	16.5	---	---	90.483	19.57	24.00
11a	2	5200	18.56	18.12	---	---	136.643	21.36	24.00
11a	2	5240	18.65	18.41	---	---	142.625	21.54	24.00
HT20	2	5180	16.52	16.41	---	---	88.627	19.48	24.00
HT20	2	5200	18.45	18.02	---	---	133.371	21.25	24.00
HT20	2	5240	18.53	18.39	---	---	140.309	21.47	24.00
HT40	2	5190	14.71	14.35	---	---	56.807	17.54	24.00
HT40	2	5230	16.91	16.18	---	---	90.586	19.57	24.00
VHT20	2	5180	16.65	16.52	---	---	91.113	19.60	24.00
VHT20	2	5200	18.58	18.14	---	---	137.274	21.38	24.00
VHT20	2	5240	18.66	18.52	---	---	144.573	21.60	24.00
VHT40	2	5190	14.82	14.48	---	---	58.393	17.66	24.00
VHT40	2	5230	17.02	16.31	---	---	93.106	19.69	24.00
VHT80	2	5210	12.15	11.88	---	---	31.823	15.03	24.00

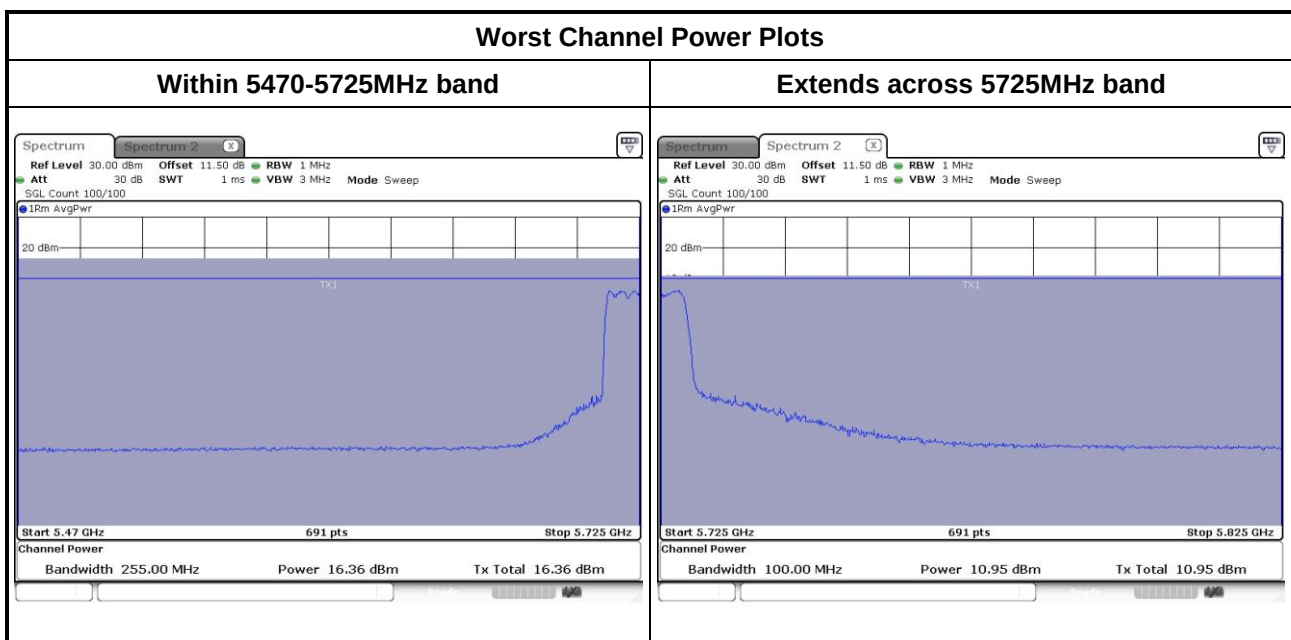
For Frequency band 5250~5350 MHz									
Mode	N _{TX}	Freq. (MHz)	Conducted Power (dBm)				Total Power (mW)	Total Power (dBm)	Limit (dBm)
			Chain 0	Chain 1	Chain 2	Chain 3			
11a	2	5260	15.94	15.59	---	---	75.489	18.78	23.99
11a	2	5300	15.81	15.52	---	---	73.752	18.68	23.99
11a	2	5320	14.56	14.38	---	---	55.992	17.48	23.99
HT20	2	5260	15.89	15.63	---	---	75.375	18.77	24.00
HT20	2	5300	15.71	15.54	---	---	73.049	18.64	24.00
HT20	2	5320	15.95	15.41	---	---	74.109	18.70	24.00
HT40	2	5270	15.82	15.31	---	---	72.157	18.58	24.00
HT40	2	5310	13.52	13.24	---	---	43.577	16.39	24.00
VHT20	2	5260	16.06	15.76	---	---	78.035	18.92	24.00
VHT20	2	5300	15.84	15.68	---	---	75.354	18.77	24.00
VHT20	2	5320	16.1	15.52	---	---	76.383	18.83	24.00
VHT40	2	5270	15.98	15.42	---	---	74.462	18.72	24.00
VHT40	2	5310	13.64	13.38	---	---	44.898	16.52	24.00
VHT80	2	5290	12.21	12.05	---	---	32.667	15.14	24.00

For Frequency band 5470~5725 MHz									
Mode	N _{TX}	Freq. (MHz)	Conducted Power (dBm)				Total Power (mW)	Total Power (dBm)	Limit (dBm)
			Chain 0	Chain 1	Chain 2	Chain 3			
11a	2	5500	16.15	15.76	---	---	78.880	18.97	24.00
11a	2	5580	18.04	17.72	---	---	122.836	20.89	24.00
11a	2	5700	13.86	13.35	---	---	45.949	16.62	23.99
HT20	2	5500	16.12	15.74	---	---	78.423	18.94	24.00
HT20	2	5580	18.03	17.72	---	---	122.689	20.89	24.00
HT20	2	5700	14.85	14.26	---	---	57.218	17.58	24.00
HT40	2	5510	13.38	12.81	---	---	40.876	16.11	24.00
HT40	2	5590	16.14	15.63	---	---	77.674	18.90	24.00
HT40	2	5670	15.55	14.86	---	---	66.512	18.23	24.00
VHT20	2	5500	16.24	15.86	---	---	80.620	19.06	24.00
VHT20	2	5580	18.16	17.84	---	---	126.277	21.01	24.00
VHT20	2	5700	14.98	14.39	---	---	58.956	17.71	24.00
VHT40	2	5510	13.49	12.96	---	---	42.105	16.24	24.00
VHT40	2	5590	16.28	15.74	---	---	79.959	19.03	24.00
VHT40	2	5670	15.68	15.05	---	---	68.972	18.39	24.00
VHT80	2	5530	11.42	11.62	---	---	28.389	14.53	24.00
VHT80	2	5610	14.92	14.21	---	---	57.409	17.59	24.00

Channel that extends across the 5.725 GHz boundary

Maximum Conducted Output Power (Within 5470-5725MHz band)									
RF Output Power (dBm)									
Mode	N _{TX}	Freq. (MHz)	Chain 0	Chain 1	Chain 2	Chain 3	Total Power (mW)	Total Power (dBm)	Limit
11a	2	5720	16.20	16.08	---	---	82.238	19.15	23.96
HT20	2	5720	15.86	15.94	---	---	77.812	18.91	22.79
HT40	2	5710	16.00	15.44	---	---	74.805	18.74	24.00
VHT20	2	5720	16.36	15.81	---	---	81.358	19.10	22.79
VHT40	2	5710	16.00	15.45	---	---	74.886	18.74	24.00
VHT80	2	5690	13.83	13.39	---	---	45.982	16.63	24.00

Maximum Conducted Output Power (Extends across 5725MHz band)									
RF Output Power (dBm)									
Mode	N _{TX}	Freq. (MHz)	Chain 0	Chain 1	Chain 2	Chain 3	Total Power (mW)	Total Power (dBm)	Limit
11a	2	5720	10.22	9.90	---	---	20.292	13.07	30.00
HT20	2	5720	10.40	10.37	---	---	21.854	13.40	30.00
HT40	2	5710	6.42	5.65	---	---	8.0580	9.06	30.00
VHT20	2	5720	10.91	10.95	---	---	24.776	13.94	30.00
VHT40	2	5710	6.43	5.93	---	---	8.3130	9.20	30.00
VHT80	2	5690	0.34	-0.13	---	---	2.0520	3.12	30.00



Note: Above plots are without duty factor.

For Frequency band 5725-5850 MHz									
Mode	N _{TX}	Freq. (MHz)	Conducted Power (dBm)				Total Power (mW)	Total Power (dBm)	Limit (dBm)
			Chain 0	Chain 1	Chain 2	Chain 3			
11a	2	5745	17.18	17.06	---	---	103.056	20.13	30.00
11a	2	5785	17.02	17.11	---	---	101.754	20.08	30.00
11a	2	5825	18.06	18.32	---	---	131.894	21.20	30.00
HT20	2	5745	17.12	17.04	---	---	102.105	20.09	30.00
HT20	2	5785	17.06	16.85	---	---	99.233	19.97	30.00
HT20	2	5825	18.06	18.21	---	---	130.195	21.15	30.00
HT40	2	5755	16.13	15.89	---	---	79.835	19.02	30.00
HT40	2	5795	16.08	16.31	---	---	83.307	19.21	30.00
VHT20	2	5745	17.24	17.15	---	---	104.846	20.21	30.00
VHT20	2	5785	17.12	17.03	---	---	101.989	20.09	30.00
VHT20	2	5825	18.19	18.34	---	---	134.151	21.28	30.00
VHT40	2	5755	16.25	16.03	---	---	82.256	19.15	30.00
VHT40	2	5795	16.22	16.45	---	---	86.036	19.35	30.00
VHT80	2	5775	14.25	14.43	---	---	54.340	17.35	30.00

3.4 Peak Power Spectral Density

3.4.1 Limit of Peak Power Spectral Density

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

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

3.4.2 Test Procedures

For 5150~5250 MHz, 5250~5350 MHz, 5470~5725 MHz

☒ Method SA-1

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

☐ Method SA-2 Alternative

1. Set RBW = 1 MHz, VBW = 3 MHz, Detector = RMS.
2. Set sweep time $\geq 10 * (\text{number of points in sweep}) * (\text{total on/off period of the transmitted signal})$.
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

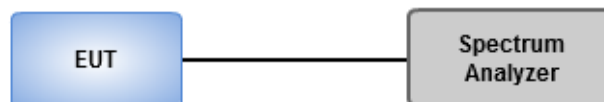
☒ Method SA-1

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

☐ Method SA-2 Alternative

1. Set RBW = 500 kHz, VBW = 2 MHz, Detector = RMS.
2. Set sweep time $\geq 10 * (\text{number of points in sweep}) * (\text{total on/off period of the transmitted signal})$.
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

Frequency band			5150~5250 MHz / 5250~5350 MHz			
Condition			Peak Power Spectral Density (dBm/MHz)			
Mode	N _{TX}	Freq. (MHz)	PPSD w/o D.F (dBm/MHz)	Duty Factor (dB)	PPSD with D.F (dBm/MHz)	PPSD Limit (dBm/MHz)
11a	2	5180	6.83	0.00	6.83	10.09
11a	2	5200	8.76	0.00	8.76	10.09
11a	2	5240	8.78	0.00	8.78	10.09
VHT20	2	5180	8.75	0.00	8.75	10.09
VHT20	2	5200	8.78	0.00	8.78	10.09
VHT20	2	5240	8.83	0.00	8.83	10.09
VHT40	2	5190	2.42	0.00	2.42	10.09
VHT40	2	5230	3.73	0.00	3.73	10.09
VHT80	2	5210	-4.51	0.00	-4.51	10.09
11a	2	5260	6.10	0.00	6.10	10.09
11a	2	5300	5.94	0.00	5.94	10.09
11a	2	5320	4.99	0.00	4.99	10.09
VHT20	2	5260	5.99	0.00	5.99	10.09
VHT20	2	5300	5.95	0.00	5.95	10.09
VHT20	2	5320	5.85	0.00	5.85	10.09
VHT40	2	5270	3.10	0.00	3.10	10.09
VHT40	2	5310	0.97	0.00	0.97	10.09
VHT80	2	5290	-4.29	0.00	-4.29	10.09

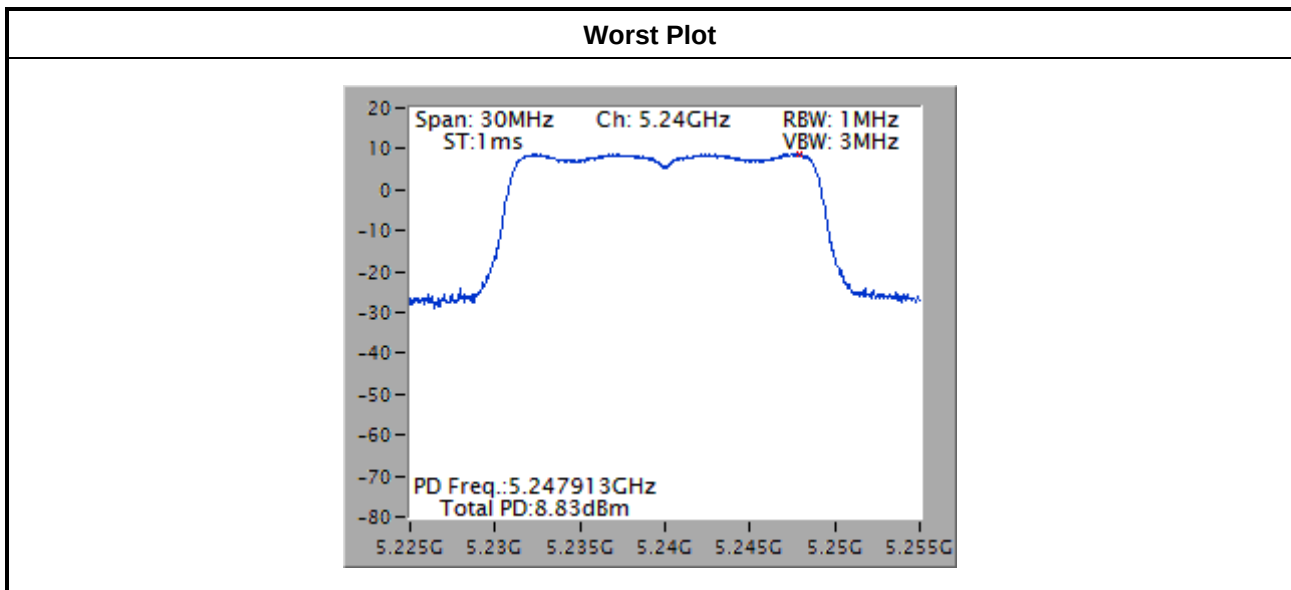
Note:

1. Test result is bin-by-bin summing measured value of each TX port.
2. D.F is duty factor.
3. Directional gain = $3.9 \text{ dBi} + 10 * \log(2/1) = 6.91 \text{ dBi} > 6 \text{ dBi}$
Limit shall be reduced to $11 \text{ dBm} - (6.91 \text{ dBi} - 6 \text{ dBi}) = 10.09 \text{ dBm}$

Frequency band			5470~5725 MHz			
Condition			Peak Power Spectral Density (dBm/MHz)			
Mode	N _{TX}	Freq. (MHz)	PPSD w/o D.F (dBm/MHz)	Duty Factor (dB)	PPSD with D.F (dBm/MHz)	PPSD Limit (dBm/MHz)
11a	2	5500	6.03	0.00	6.03	9.99
11a	2	5580	8.29	0.00	8.29	9.99
11a	2	5700	4.03	0.00	4.03	9.99
11a	2	5720	7.84	0.00	7.84	9.99
VHT20	2	5500	5.94	0.00	5.94	9.99
VHT20	2	5580	7.71	0.00	7.71	9.99
VHT20	2	5700	5.04	0.00	5.04	9.99
VHT20	2	5720	8.05	0.00	8.05	9.99
VHT40	2	5510	-0.02	0.00	-0.02	9.99
VHT40	2	5590	2.92	0.00	2.92	9.99
VHT40	2	5670	2.65	0.00	2.65	9.99
VHT40	2	5710	4.05	0.00	4.05	9.99
VHT80	2	5530	-5.22	0.00	-5.22	9.99
VHT80	2	5610	-2.51	0.00	-2.51	9.99
VHT80	2	5690	-2.34	0.00	-2.34	9.99

Note:

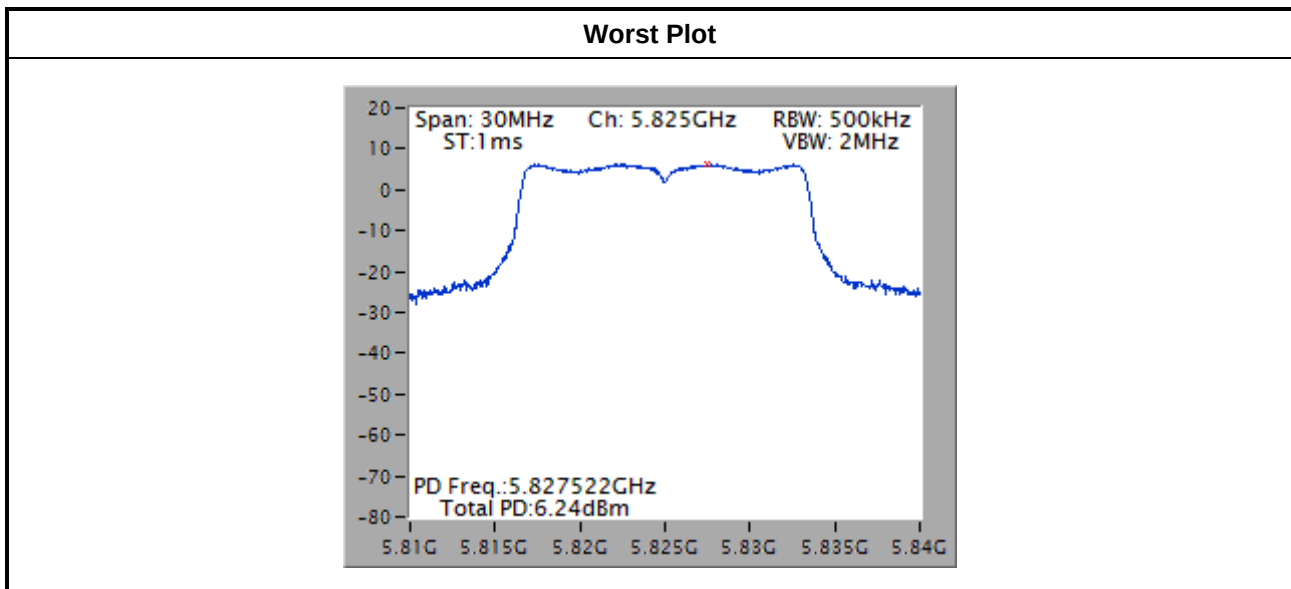
1. Test result is bin-by-bin summing measured value of each TX port.
2. D.F is duty factor.
3. Directional gain = 4 dBi + 10 * log(2/1) = 7.01 dBi > 6dBi
Limit shall be reduced to 11 dBm – (7.01 dBi – 6 dBi)= 9.99 dBm



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	2	5745	5.48	0.00	5.48	28.99
11a	2	5785	5.57	0.00	5.57	28.99
11a	2	5825	6.24	0.00	6.24	28.99
VHT20	2	5745	5.85	0.00	5.85	28.99
VHT20	2	5785	5.65	0.00	5.65	28.99
VHT20	2	5825	6.23	0.00	6.23	28.99
VHT40	2	5755	1.58	0.00	1.58	28.99
VHT40	2	5795	1.71	0.00	1.71	28.99
VHT80	2	5775	-4.60	0.00	-4.60	28.99

Note:

1. Test result is bin-by-bin summing measured value of each TX port.
2. D.F is duty factor.
3. Directional gain = $4 \text{ dBi} + 10 * \log(2/1) = 7.01 \text{ dBi} > 6 \text{ dBi}$
Limit shall be reduced to $30 \text{ dBm} - (7.01 \text{ dBi} - 6 \text{ dBi}) = 28.99 \text{ dBm}$



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	☒ 15.407(b)(4)(i) All emissions shall be limited to a level of -27 dBm/MHz at 75 MHz or more above or below the band edge increasing linearly to 10 dBm/MHz at 25 MHz above or below the band edge, and from 25 MHz above or below the band edge increasing linearly to a level of 15.6 dBm/MHz at 5 MHz above or below the band edge, and from 5 MHz above or below the band edge increasing linearly to a level of 27 dBm/MHz at the band edge.
	☐ 15.407(b)(4)(ii), compliance with the emission limits in § 15.247(d) Shall be at least 30dB below that in the 100 kHz bandwidth within the band that contains the highest level of the desired power,. Attenuation below the general limits specified in §15.209(a) is not required. In addition, radiated emissions which fall in the restricted bands, as defined in §15.205(a), must also comply with the radiated emission limits specified in §15.209(a) (see § 15.205(c))

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

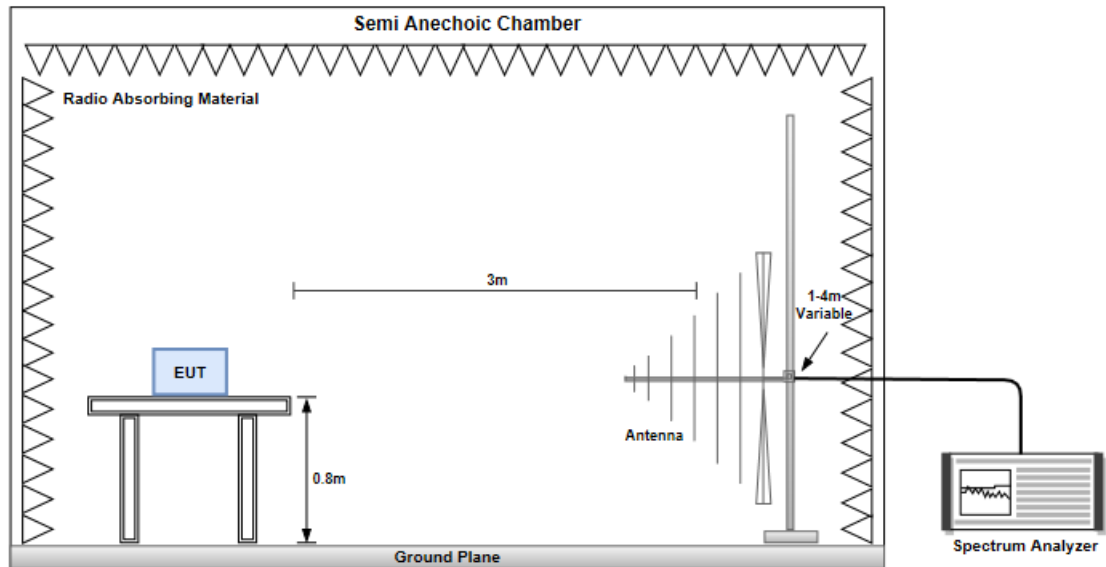
1. Measurement is made at a semi-anechoic chamber that incorporates a turntable allowing a EUT rotation of 360° . A continuously-rotating, remotely-controlled turntable is installed at the test site to support the EUT and facilitate determination of the direction of maximum radiation for each EUT emission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

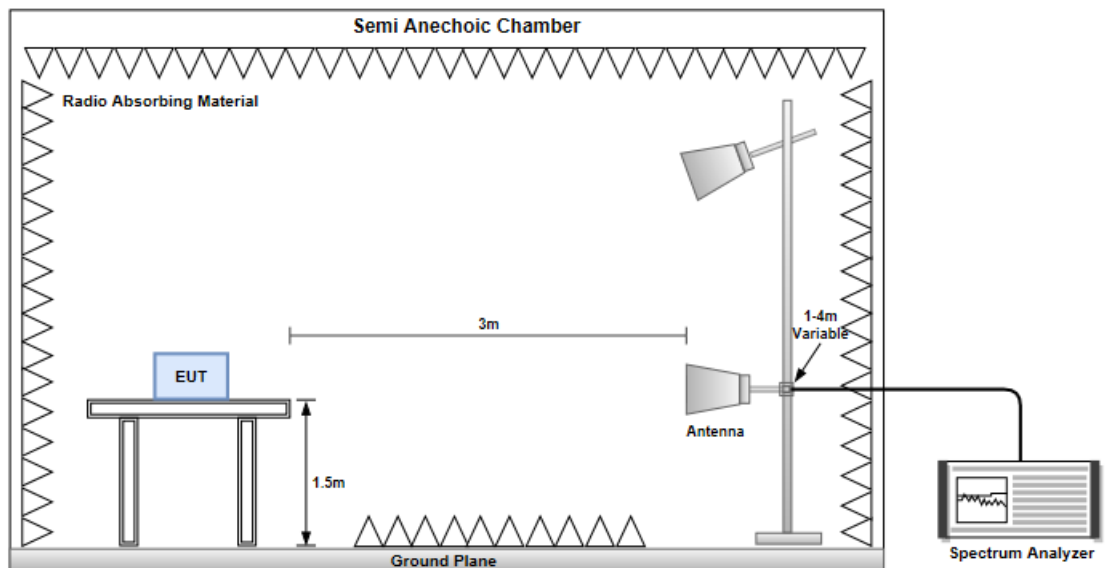
1. 120kHz measurement bandwidth of test receiver and Quasi-peak detector is for radiated emission below 1GHz.
2. RBW=1MHz, VBW=3MHz and Peak detector is for peak measured value of radiated emission above 1GHz.
3. RBW=1MHz, VBW=1/T and Peak detector is for average measured value of radiated emission above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

3.5.3 Test Setup

Radiated Emissions below 1 GHz



Radiated Emissions above 1 GHz

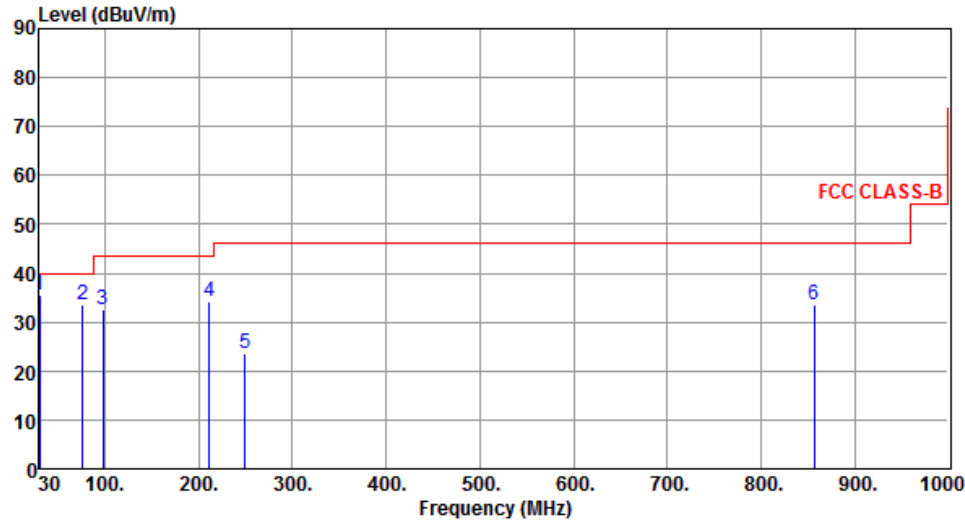


Configuration 1 : Dipole Antenna

3.5.4 Transmitter Radiated Unwanted Emissions (Below 1GHz)

Modulation	VHT20	Test Freq. (MHz)	5240
Polarization	Horizontal		
Level (dBuV/m) </			

Modulation	VHT20	Test Freq. (MHz)	5240
Polarization	Vertical		



	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	30.57	35.44	40.00	-4.56	44.80	-9.36	Peak	---	---
2	76.42	33.52	40.00	-6.48	45.93	-12.41	Peak	---	---
3	97.82	32.43	43.50	-11.07	46.21	-13.78	Peak	---	---
4	211.42	34.32	43.50	-9.18	45.59	-11.27	Peak	---	---
5	249.30	23.56	46.00	-22.44	33.18	-9.62	Peak	---	---
6	856.47	33.48	46.00	-12.52	29.96	3.52	Peak	---	---

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

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

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

Modulation	VHT20	Test Freq. (MHz)	5825
Polarization	Horizontal		
Level (dBuV/m) </			

Modulation	VHT20	Test Freq. (MHz)	5825
Polarization	Vertical		
Level (dBuV/m) </			

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

Modulation	11a	Test Freq. (MHz)	5180
Polarization	Horizontal		
Level (dBuV/m) </			

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

Modulation	11a	Test Freq. (MHz)	5200
Polarization	Horizontal		
Level (dBuV/m) </			

Modulation	11a	Test Freq. (MHz)	5200
Polarization	Vertical		
Level (dBuV/m)			

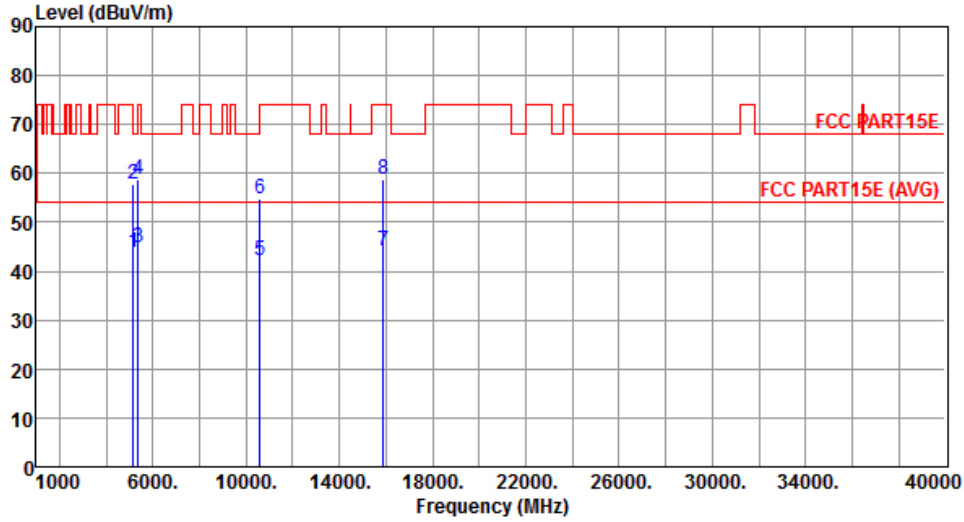
Modulation	11a	Test Freq. (MHz)	5240
Polarization	Horizontal		
Level (dBuV/m) </			

Modulation	11a	Test Freq. (MHz)	5240
Polarization	Vertical		
Level (dBuV/m)			

Modulation	11a	Test Freq. (MHz)	5260
Polarization	Horizontal		
Level (dBuV/m) </			

Modulation	11a	Test Freq. (MHz)	5260
Polarization	Vertical		
Level (dBuV/m)			

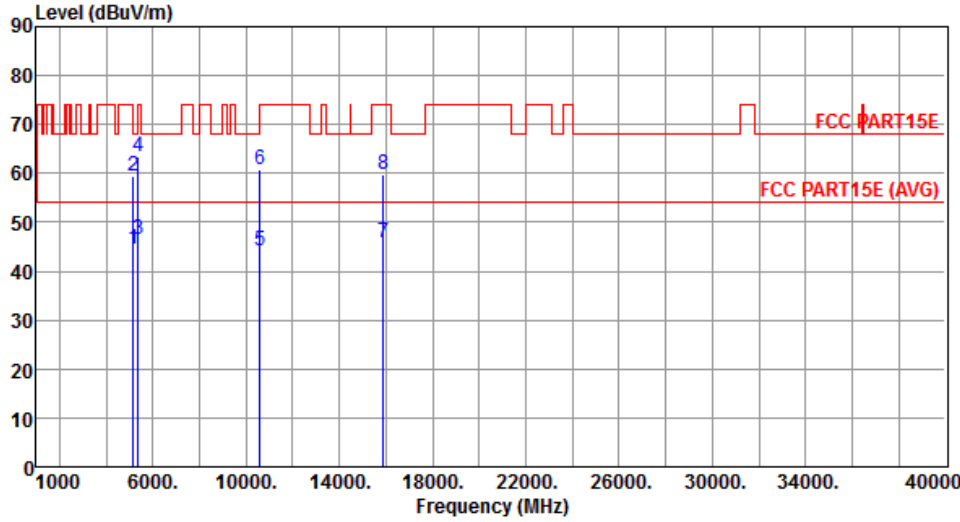
Modulation	11a	Test Freq. (MHz)	5300
Polarization	Horizontal		



	Freq. MHz	Emission level dBUV/m	Limit dBUV/m	Margin dB	SA reading dBUV	Factor dB	Remark	ANT High cm	Turn Table deg
1	5150.00	43.91	54.00	-10.09	38.89	5.02	Average	177	135
2	5150.00	57.86	74.00	-16.14	52.84	5.02	Peak	177	135
3	5350.00	44.67	54.00	-9.33	39.36	5.31	Average	177	135
4	5350.00	58.65	74.00	-15.35	53.34	5.31	Peak	177	135
5	10600.00	42.14	54.00	-11.86	28.22	13.92	Average	100	143
6	10600.00	54.69	74.00	-19.31	40.77	13.92	Peak	100	143
7	15900.00	44.02	54.00	-9.98	29.18	14.84	Average	147	317
8	15900.00	58.64	74.00	-15.36	43.80	14.84	Peak	147	317

Note 1: Emission Level (dBUV/m) = SA Reading (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)	5300
Polarization	Vertical		



	Freq. MHz	Emission level dBUV/m	Limit dBUV/m	Margin dB	SA reading dBUV	Factor dB	Remark	ANT High cm	Turn Table deg
1	5150.00	44.54	54.00	-9.46	39.52	5.02	Average	200	141
2	5150.00	59.54	74.00	-14.46	54.52	5.02	Peak	200	141
3	5350.00	46.58	54.00	-7.42	41.27	5.31	Average	200	141
4	5350.00	63.31	74.00	-10.69	58.00	5.31	Peak	200	141
5	10600.00	44.27	54.00	-9.73	30.35	13.92	Average	348	101
6	10600.00	60.62	74.00	-13.38	46.70	13.92	Peak	348	101
7	15900.00	45.78	54.00	-8.22	30.94	14.84	Average	139	339
8	15900.00	59.74	74.00	-14.26	44.90	14.84	Peak	139	339

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

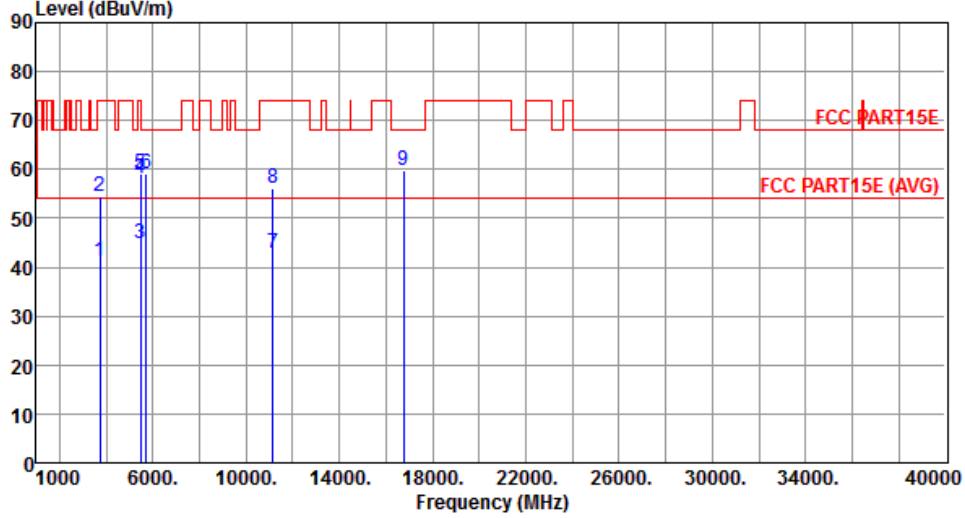
Modulation	11a	Test Freq. (MHz)	5320
Polarization	Horizontal		
Level (dBuV/m) </			

Modulation	11a	Test Freq. (MHz)	5320
Polarization	Vertical		
Level (dBuV/m)			

Modulation	11a	Test Freq. (MHz)	5500
Polarization	Horizontal		
Level (dBuV/m)			

Modulation	11a	Test Freq. (MHz)	5500
Polarization	Vertical		
Level (dBuV/m) <			

Modulation	11a	Test Freq. (MHz)	5580
Polarization	Horizontal		



	Freq. MHz	Emission level dBUV/m	Limit dBUV/m	Margin dB	SA reading dBUV	Factor dB	Remark	ANT High cm	Turn Table deg
1	3720.00	41.11	54.00	-12.89	39.51	1.60	Average	100	337
2	3720.00	54.45	74.00	-19.55	52.85	1.60	Peak	100	337
3	5460.00	44.90	54.00	-9.10	39.44	5.46	Average	121	298
4	5460.00	58.15	74.00	-15.85	52.69	5.46	Peak	121	298
5	5470.00	58.96	68.20	-9.24	53.49	5.47	Peak	121	298
6	5725.00	59.15	68.20	-9.05	53.34	5.81	Peak	121	298
7	11160.00	43.00	54.00	-11.00	28.56	14.44	Average	100	30
8	11160.00	56.18	74.00	-17.82	41.74	14.44	Peak	100	30
9	16740.00	59.87	68.20	-8.33	43.90	15.97	Peak	121	298

Note 1: Emission Level (dBUV/m) = SA Reading (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)	5580
Polarization	Vertical		
Level (dBuV/m)			

Modulation	11a	Test Freq. (MHz)	5700
Polarization	Horizontal		
Level (dBuV/m) </			

Modulation	11a	Test Freq. (MHz)	5700
Polarization	Vertical		
Level (dBuV/m) </			

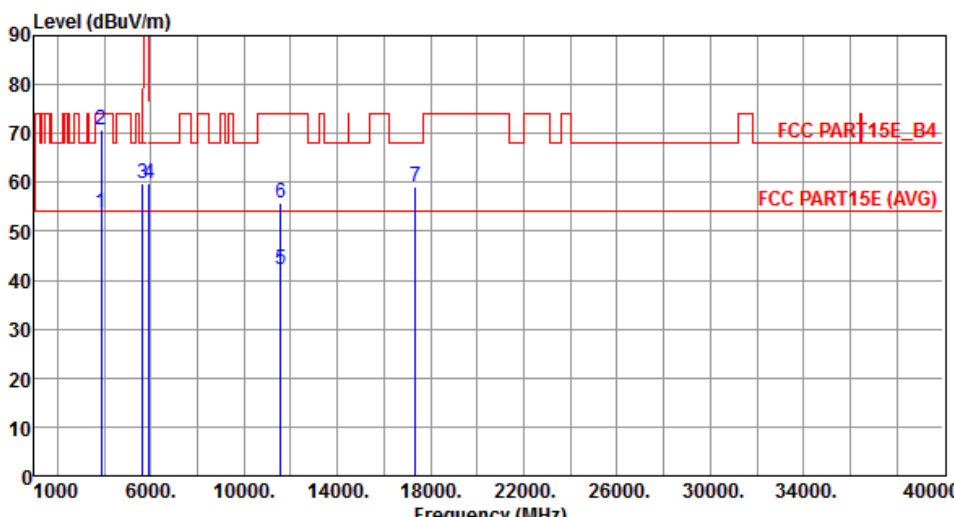
Modulation	11a	Test Freq. (MHz)	5720
Polarization	Horizontal		
Level (dBuV/m) </			

Modulation	11a	Test Freq. (MHz)	5720
Polarization	Vertical		
Level (dBuV/m)			

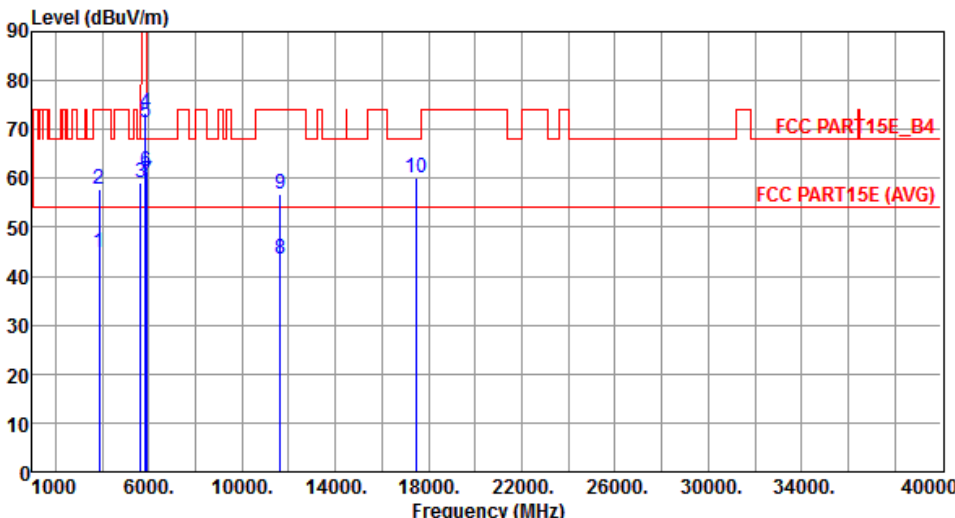
Modulation	11a	Test Freq. (MHz)	5745
Polarization	Horizontal		
 </			

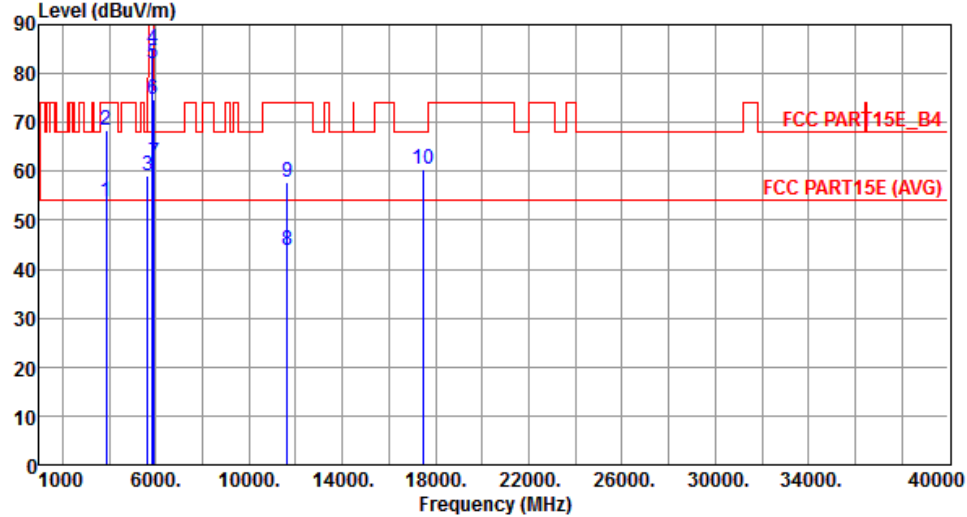
Modulation	11a	Test Freq. (MHz)	5745
Polarization	Vertical		
 </			

Modulation	11a	Test Freq. (MHz)	5785
Polarization	Horizontal		
Level (dBuV/m) </			

Modulation	11a	Test Freq. (MHz)	5785						
Polarization	Vertical								
									
	Freq. MHz	Emission level dBUV/m	Limit dBUV/m	Margin dB	SA reading dBUV	Factor dB	Remark	ANT High cm	Turn Table deg
1	3856.66	53.82	54.00	-0.18	51.77	2.05	Average	262	99
2	3856.66	70.59	74.00	-3.41	68.54	2.05	Peak	262	99
3	5650.00	59.76	68.20	-8.44	54.07	5.69	Peak	197	125
4	5925.00	59.77	68.20	-8.43	53.68	6.09	Peak	197	125
5	11570.00	42.22	54.00	-11.78	27.62	14.60	Average	100	213
6	11570.00	55.65	74.00	-18.35	41.05	14.60	Peak	100	213
7	17355.00	59.26	68.20	-8.94	41.71	17.55	Peak	100	177

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

Modulation	11a	Test Freq. (MHz)	5825						
Polarization	Horizontal								
									
	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	3883.33	44.97	54.00	-9.03	42.83	2.14	Average	100	347
2	3883.33	57.64	74.00	-16.36	55.50	2.14	Peak	100	347
3	5650.00	59.00	68.20	-9.20	53.31	5.69	Peak	201	62
4	5850.00	73.41	122.20	-48.79	67.42	5.99	Peak	201	62
5	5855.00	71.35	110.80	-39.45	65.35	6.00	Peak	201	62
6	5875.00	61.58	105.20	-43.62	55.56	6.02	Peak	201	62
7	5925.00	59.39	68.20	-8.81	53.30	6.09	Peak	201	62
8	11650.00	43.48	54.00	-10.52	29.04	14.44	Average	165	147
9	11650.00	56.69	74.00	-17.31	42.25	14.44	Peak	165	147
10	17475.00	60.25	68.20	-7.95	42.21	18.04	Peak	100	166
Note 1: Emission Level (dBUV/m) = SA Reading (dBUV/m) + Factor* (dB) *Factor includes antenna factor , cable loss and amplifier gain Note 2: Margin (dB) = Emission level (dBUV/m) – Limit (dBUV/m).									

Modulation	11a	Test Freq. (MHz)	5825						
Polarization	Vertical								
									
	Freq. MHz	Emission level dBUV/m	Limit dBUV/m	Margin dB	SA reading dBUV	Factor dB	Remark	ANT High cm	Turn Table deg
1	3883.33	53.78	54.00	-0.22	51.64	2.14	Average	259	96
2	3883.33	68.49	74.00	-5.51	66.35	2.14	Peak	259	96
3	5650.00	59.14	68.20	-9.06	53.45	5.69	Peak	192	136
4	5850.00	85.12	122.20	-37.08	79.13	5.99	Peak	192	136
5	5855.00	82.12	110.80	-28.68	76.12	6.00	Peak	192	136
6	5875.00	74.63	105.20	-30.57	68.61	6.02	Peak	192	136
7	5925.00	61.90	68.20	-6.30	55.81	6.09	Peak	192	136
8	11650.00	44.00	54.00	-10.00	29.56	14.44	Average	172	144
9	11650.00	57.69	74.00	-16.31	43.25	14.44	Peak	172	144
10	17475.00	60.34	68.20	-7.86	42.30	18.04	Peak	100	156

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

*Factor includes antenna factor , cable loss and amplifier gain

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

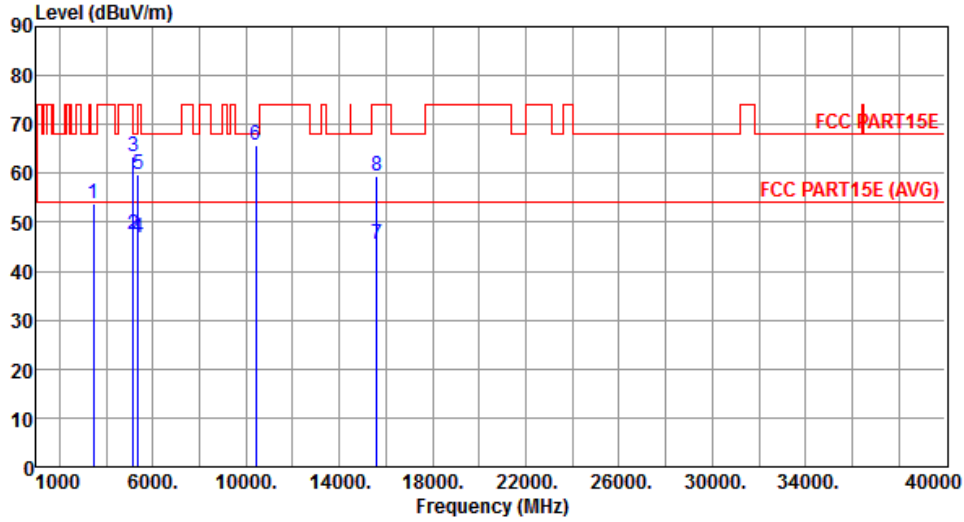
3.5.6 Transmitter Radiated Unwanted Emissions (Above 1GHz) for VHT20

Modulation	VHT20	Test Freq. (MHz)	5180
Polarization	Horizontal		
Level (dBuV/m) </			

Modulation	VHT20	Test Freq. (MHz)	5180
Polarization	Vertical		
Level (dBuV/m) </			

Modulation	VHT20	Test Freq. (MHz)	5200
Polarization	Horizontal		
Level (dBuV/m)			

Modulation	VHT20	Test Freq. (MHz)	5200
Polarization	Vertical		



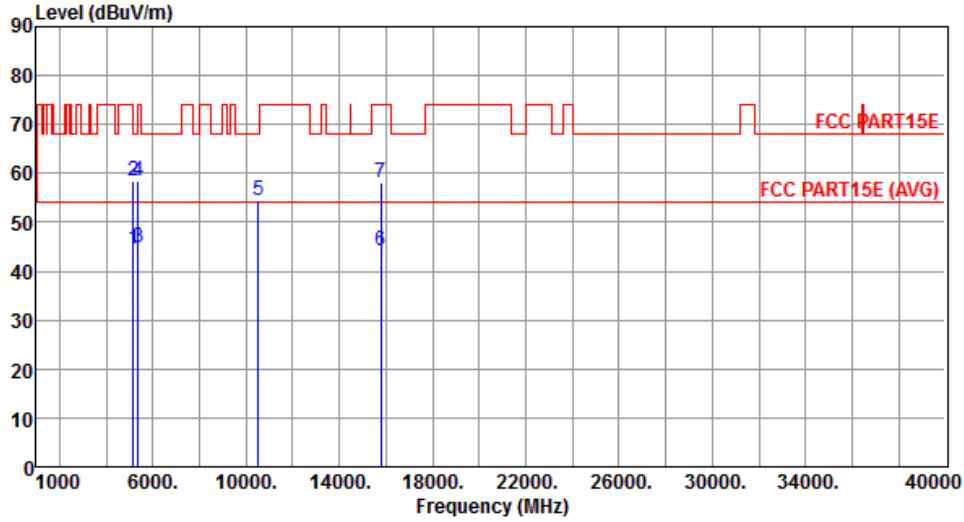
	Freq. MHz	Emission level dBUV/m	Limit dBUV/m	Margin dB	SA reading dBUV	Factor dB	Remark	ANT High cm	Turn Table deg
1	3466.00	53.97	68.20	-14.23	53.11	0.86	Peak	100	348
2	5150.00	47.48	54.00	-6.52	42.46	5.02	Average	162	110
3	5150.00	63.55	74.00	-10.45	58.53	5.02	Peak	162	110
4	5350.00	46.73	54.00	-7.27	41.42	5.31	Average	162	110
5	5350.00	59.79	74.00	-14.21	54.48	5.31	Peak	162	110
6	10400.00	65.92	68.20	-2.28	52.15	13.77	Peak	340	100
7	15600.00	45.56	54.00	-8.44	30.62	14.94	Average	138	342
8	15600.00	59.35	74.00	-14.65	44.41	14.94	Peak	138	342

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

Modulation	VHT20	Test Freq. (MHz)	5240
Polarization	Horizontal		
Level (dBuV/m) </			

Modulation	VHT20	Test Freq. (MHz)	5240
Polarization	Vertical		
Level (dBuV/m)			

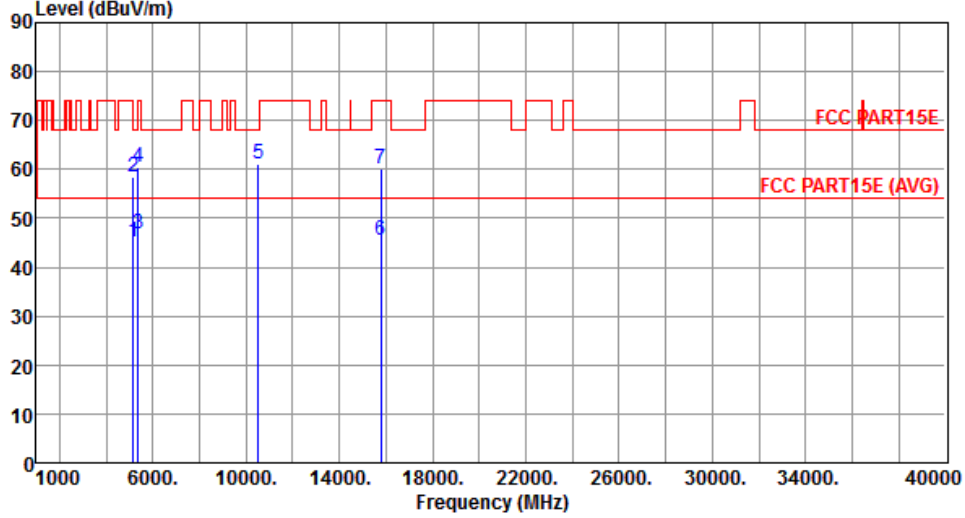
Modulation	VHT20	Test Freq. (MHz)	5260
Polarization	Horizontal		



	Freq. MHz	Emission level dBUV/m	Limit dBUV/m	Margin dB	SA reading dBUV	Factor dB	Remark	ANT High cm	Turn Table deg
1	5150.00	44.58	54.00	-9.42	39.56	5.02	Average	200	72
2	5150.00	58.29	74.00	-15.71	53.27	5.02	Peak	200	72
3	5350.00	44.99	54.00	-9.01	39.68	5.31	Average	200	72
4	5350.00	58.58	74.00	-15.42	53.27	5.31	Peak	200	72
5	10520.00	54.61	68.20	-13.59	40.77	13.84	Peak	100	135
6	15780.00	44.31	54.00	-9.69	29.44	14.87	Average	148	310
7	15780.00	58.15	74.00	-15.85	43.28	14.87	Peak	148	310

Note 1: Emission Level (dBUV/m) = SA Reading (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)	5260
Polarization	Vertical		



	Freq. MHz	Emission level dBUV/m	Limit dBUV/m	Margin dB	SA reading dBUV	Factor dB	Remark	ANT High cm	Turn Table deg
1	5150.00	45.29	54.00	-8.71	40.27	5.02	Average	231	91
2	5150.00	58.55	74.00	-15.45	53.53	5.02	Peak	231	91
3	5350.00	46.79	54.00	-7.21	41.48	5.31	Average	231	91
4	5350.00	60.55	74.00	-13.45	55.24	5.31	Peak	231	91
5	10520.00	61.27	68.20	-6.93	47.43	13.84	Peak	340	100
6	15780.00	45.63	54.00	-8.37	30.76	14.87	Average	135	342
7	15780.00	60.00	74.00	-14.00	45.13	14.87	Peak	135	342

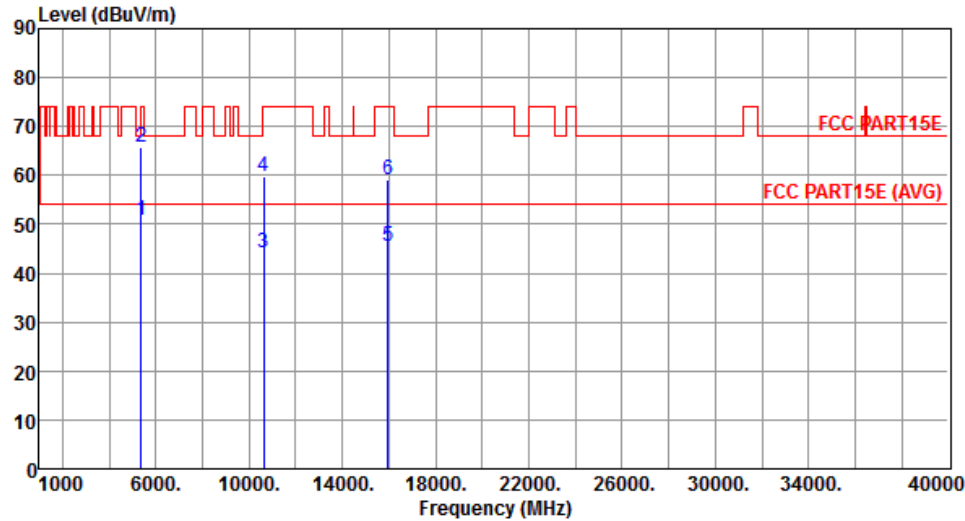
Note 1: Emission Level (dBUV/m) = SA Reading (dBUV/m) + Factor* (dB)
*Factor includes antenna factor , cable loss and amplifier gain
Note 2: Margin (dB) = Emission level (dBUV/m) – Limit (dBUV/m).

Modulation	VHT20	Test Freq. (MHz)	5300
Polarization	Horizontal		
Level (dBuV/m) </			

Modulation	VHT20	Test Freq. (MHz)	5300
Polarization	Vertical		
Level (dBuV/m)			

Modulation	VHT20	Test Freq. (MHz)	5320
Polarization	Horizontal		
 			

Modulation	VHT20	Test Freq. (MHz)	5320
Polarization	Vertical		



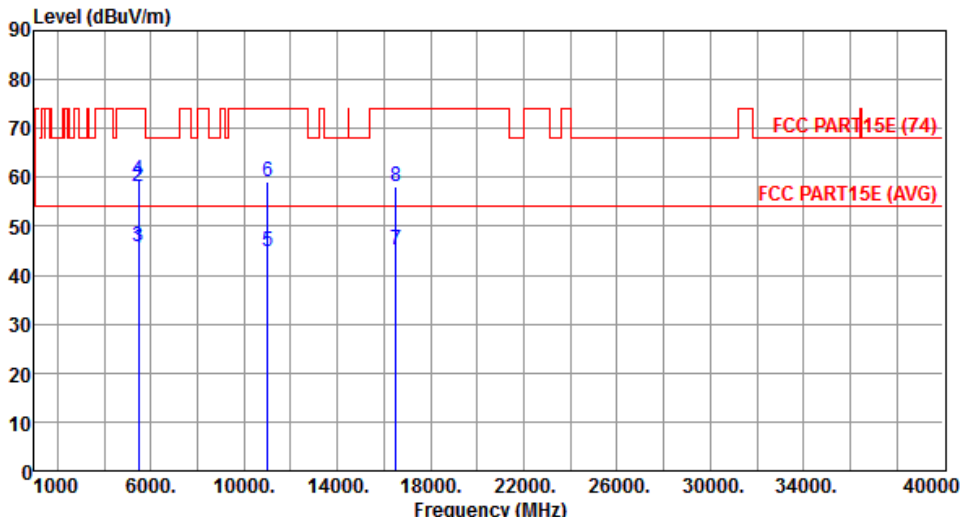
	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	5350.00	50.79	54.00	-3.21	45.48	5.31	Average	209	121
2	5350.00	65.66	74.00	-8.34	60.35	5.31	Peak	209	121
3	10640.00	44.26	54.00	-9.74	30.30	13.96	Average	341	105
4	10640.00	59.88	74.00	-14.12	45.92	13.96	Peak	341	105
5	15960.00	45.42	54.00	-8.58	30.61	14.81	Average	135	322
6	15960.00	59.06	74.00	-14.94	44.25	14.81	Peak	135	322

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

*Factor includes antenna factor , cable loss and amplifier gain

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

Modulation	VHT20	Test Freq. (MHz)	5500
Polarization	Horizontal		



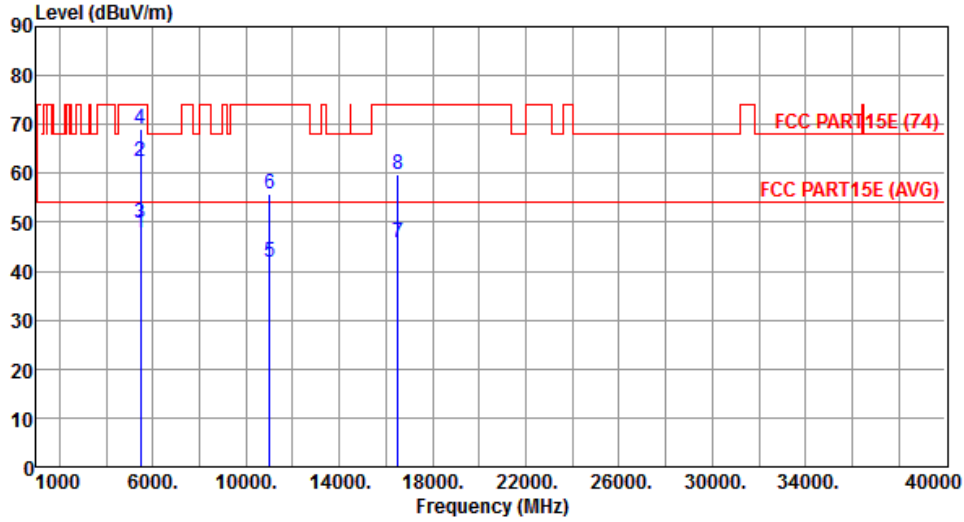
Freq.	Emission	Limit	Margin	SA	Factor	Remark	ANT	Turn	
MHz	level			reading			High	Table	
							cm	deg	
1	5460.00	45.50	54.00	-8.50	40.04	5.46	Average	191	80
2	5460.00	58.08	74.00	-15.92	52.62	5.46	Peak	191	80
3	5470.00	45.71	54.00	-8.29	40.24	5.47	Average	191	80
4	5470.00	59.38	74.00	-14.62	53.91	5.47	Peak	191	80
5	11000.00	44.71	54.00	-9.29	30.41	14.30	Average	212	40
6	11000.00	59.08	74.00	-14.92	44.78	14.30	Peak	212	40
7	16500.00	45.28	54.00	-8.72	29.44	15.84	Average	100	331
8	16500.00	58.15	74.00	-15.85	42.31	15.84	Peak	100	331

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

*Factor includes antenna factor , cable loss and amplifier gain

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

Modulation	VHT20	Test Freq. (MHz)	5500
Polarization	Vertical		

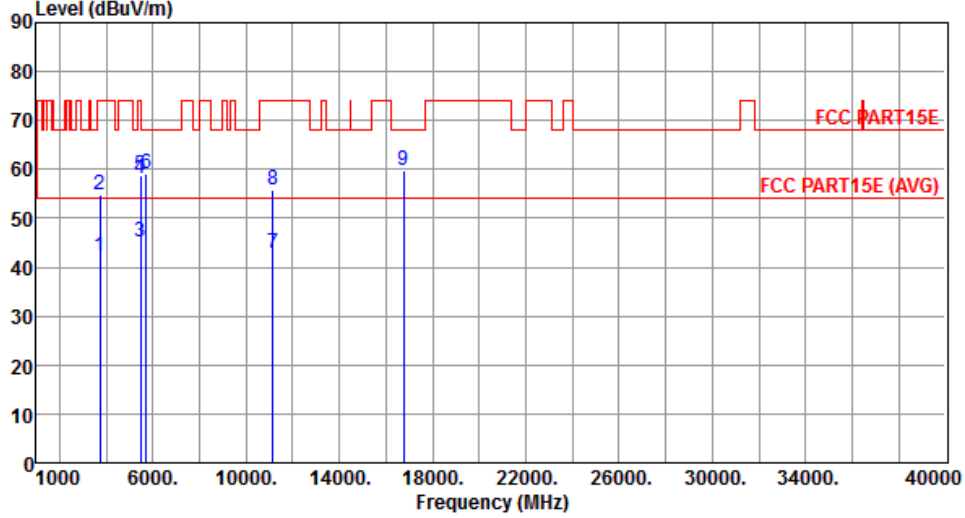


The graph displays the emission level in dBuV/m against frequency in MHz. The y-axis ranges from 0 to 90 dBuV/m, and the x-axis ranges from 1000 to 40000 MHz. A red line represents the FCC Part 15E (74) limit, which is 74 dBuV/m. A horizontal red line represents the FCC Part 15E (AVG) limit, which is 55 dBuV/m. Blue vertical lines indicate the test results for various frequencies, with labels 1 through 8 corresponding to the data 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	5460.00	47.67	54.00	-6.33	42.21	5.46	Average	199	142
2	5460.00	62.58	74.00	-11.42	57.12	5.46	Peak	199	142
3	5470.00	49.91	54.00	-4.09	44.44	5.47	Average	199	142
4	5470.00	69.12	74.00	-4.88	63.65	5.47	Peak	199	142
5	11000.00	41.83	54.00	-12.17	27.53	14.30	Average	145	290
6	11000.00	55.76	74.00	-18.24	41.46	14.30	Peak	145	290
7	16500.00	45.77	54.00	-8.23	29.93	15.84	Average	100	325
8	16500.00	59.62	74.00	-14.38	43.78	15.84	Peak	100	325

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

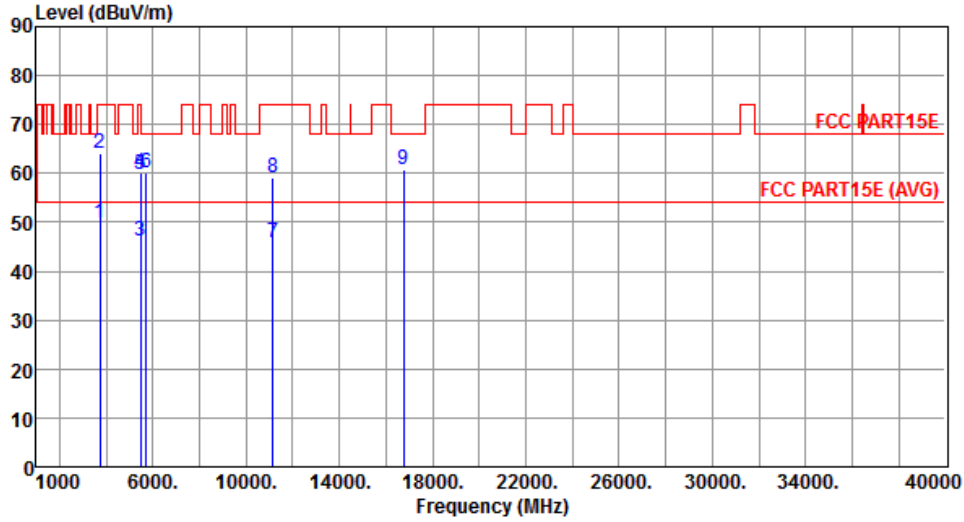
Modulation	VHT20	Test Freq. (MHz)	5580
Polarization	Horizontal		



	Freq. MHz	Emission level dBUV/m	Limit dBUV/m	Margin dB	SA reading dBUV	Factor dB	Remark	ANT High cm	Turn Table deg
1	3720.00	42.03	54.00	-11.97	40.43	1.60	Average	100	332
2	3720.00	54.79	74.00	-19.21	53.19	1.60	Peak	100	332
3	5460.00	45.02	54.00	-8.98	39.56	5.46	Average	118	295
4	5460.00	58.22	74.00	-15.78	52.76	5.46	Peak	118	295
5	5470.00	58.93	68.20	-9.27	53.46	5.47	Peak	118	295
6	5725.00	59.23	68.20	-8.97	53.42	5.81	Peak	118	295
7	11160.00	42.71	54.00	-11.29	28.27	14.44	Average	100	33
8	11160.00	55.88	74.00	-18.12	41.44	14.44	Peak	100	33
9	16740.00	59.69	68.20	-8.51	43.72	15.97	Peak	120	196

Note 1: Emission Level (dBUV/m) = SA Reading (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)	5580
Polarization	Vertical		

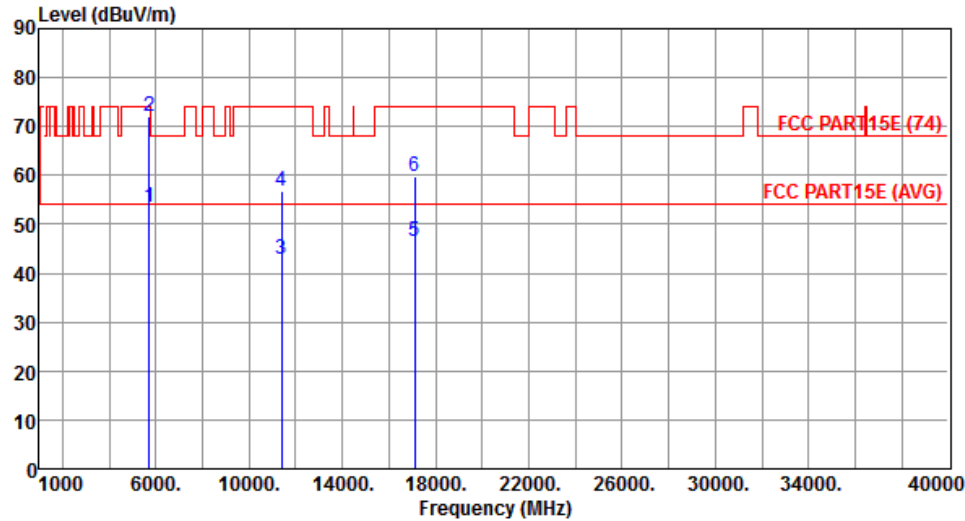


	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	3720.00	49.85	54.00	-4.15	48.25	1.60	Average	265	90
2	3720.00	64.02	74.00	-9.98	62.42	1.60	Peak	265	90
3	5460.00	46.17	54.00	-7.83	40.71	5.46	Average	213	135
4	5460.00	59.97	74.00	-14.03	54.51	5.46	Peak	213	135
5	5470.00	59.78	68.20	-8.42	54.31	5.47	Peak	213	135
6	5725.00	60.09	68.20	-8.11	54.28	5.81	Peak	213	135
7	11160.00	45.92	54.00	-8.08	31.48	14.44	Average	385	16
8	11160.00	59.17	74.00	-14.83	44.73	14.44	Peak	385	16
9	16740.00	60.69	68.20	-7.51	44.72	15.97	Peak	125	331

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

Modulation	VHT20	Test Freq. (MHz)	5700
Polarization	Horizontal		
Level (dBuV/m)			

Modulation	VHT20	Test Freq. (MHz)	5700
Polarization	Vertical		



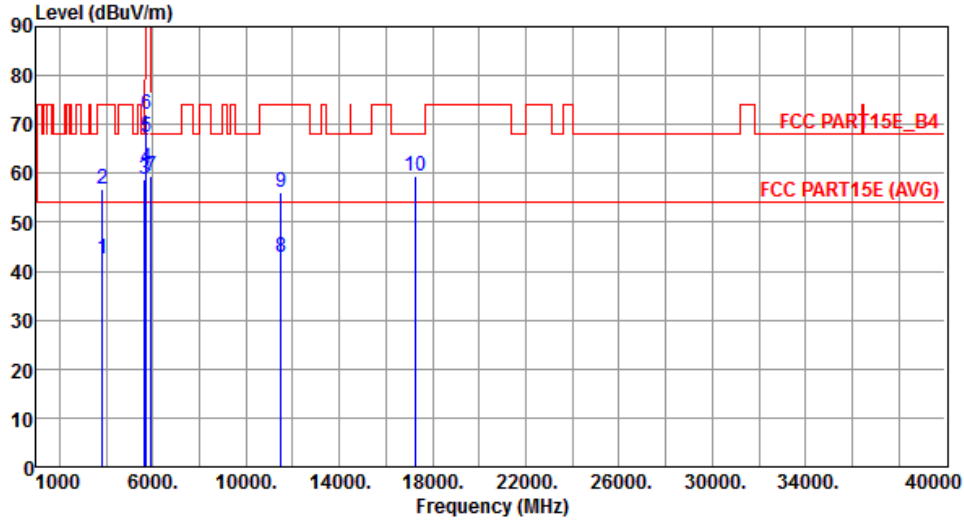
	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	5725.00	53.50	54.00	-0.50	47.69	5.81	Average	266	97
2	5725.00	72.10	74.00	-1.90	66.29	5.81	Peak	266	97
3	11400.00	42.86	54.00	-11.14	28.21	14.65	Average	150	285
4	11400.00	56.89	74.00	-17.11	42.24	14.65	Peak	150	285
5	17100.00	46.33	54.00	-7.67	29.82	16.51	Average	100	315
6	17100.00	59.82	74.00	-14.18	43.31	16.51	Peak	100	315

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

Modulation	VHT20	Test Freq. (MHz)	5720
Polarization	Horizontal		
Level (dBuV/m) <			

Modulation	VHT20	Test Freq. (MHz)	5720
Polarization	Vertical		
Level (dBuV/m) <			

Modulation	VHT20	Test Freq. (MHz)	5745
Polarization	Horizontal		



	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	3830.00	42.49	54.00	-11.51	40.53	1.96	Average	100	331
2	3830.00	56.68	74.00	-17.32	54.72	1.96	Peak	100	331
3	5650.00	58.81	68.20	-9.39	53.12	5.69	Peak	212	60
4	5700.00	61.04	105.20	-44.16	55.27	5.77	Peak	212	60
5	5720.00	67.52	110.80	-43.28	61.73	5.79	Peak	212	60
6	5725.00	72.09	122.20	-50.11	66.28	5.81	Peak	212	60
7	5925.00	59.46	68.20	-8.74	53.37	6.09	Peak	212	60
8	11490.00	42.89	54.00	-11.11	28.16	14.73	Average	100	131
9	11490.00	56.21	74.00	-17.79	41.48	14.73	Peak	100	131
10	17235.00	59.54	68.20	-8.66	42.47	17.07	Peak	100	162

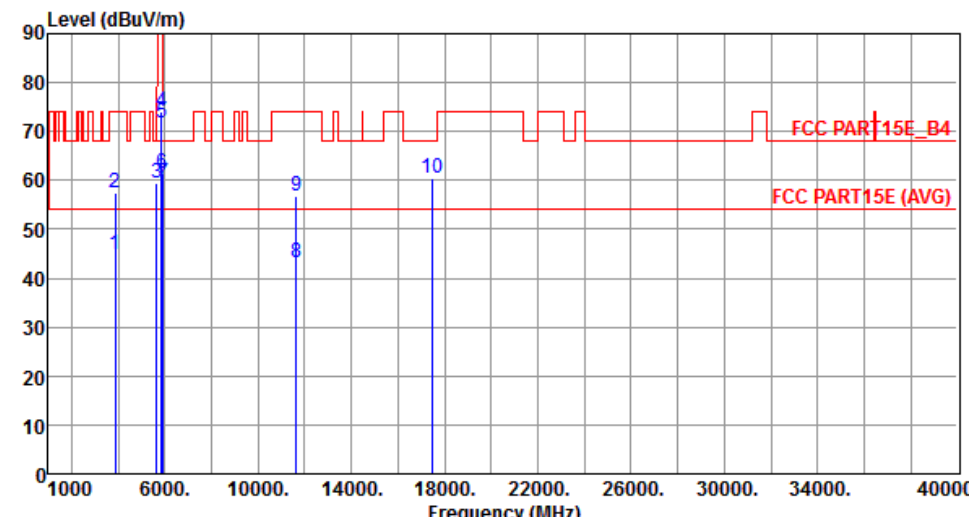
Note 1: Emission Level (dBuV/m) = SA Reading (dBuV/m) + Factor* (dB)
*Factor includes antenna factor , cable loss and amplifier gain
Note 2: Margin (dB) = Emission level (dBuV/m) – Limit (dBuV/m).

Modulation	VHT20	Test Freq. (MHz)	5745
Polarization	Vertical		
Level (dBuV/m) <			

Modulation	VHT20	Test Freq. (MHz)	5785
Polarization	Horizontal		
 			

Modulation	VHT20	Test Freq. (MHz)	5785
Polarization	Vertical		
Level (dBuV/m)			

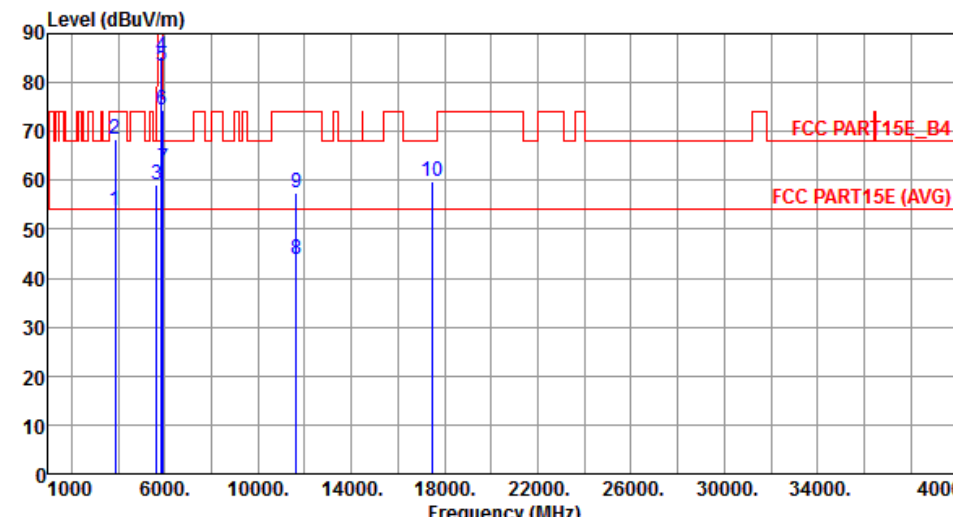
Modulation	VHT20	Test Freq. (MHz)	5825
Polarization	Horizontal		



	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	3883.33	44.87	54.00	-9.13	42.73	2.14	Average	100	345
2	3883.33	57.41	74.00	-16.59	55.27	2.14	Peak	100	345
3	5650.00	59.31	68.20	-8.89	53.62	5.69	Peak	200	60
4	5850.00	74.20	122.20	-48.00	68.21	5.99	Peak	200	60
5	5855.00	71.72	110.80	-39.08	65.72	6.00	Peak	200	60
6	5875.00	61.33	105.20	-43.87	55.31	6.02	Peak	200	60
7	5925.00	59.60	68.20	-8.60	53.51	6.09	Peak	200	60
8	11650.00	43.16	54.00	-10.84	28.72	14.44	Average	163	145
9	11650.00	56.85	74.00	-17.15	42.41	14.44	Peak	163	145
10	17475.00	60.46	68.20	-7.74	42.42	18.04	Peak	100	163

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

Modulation	VHT20	Test Freq. (MHz)	5825
Polarization	Vertical		

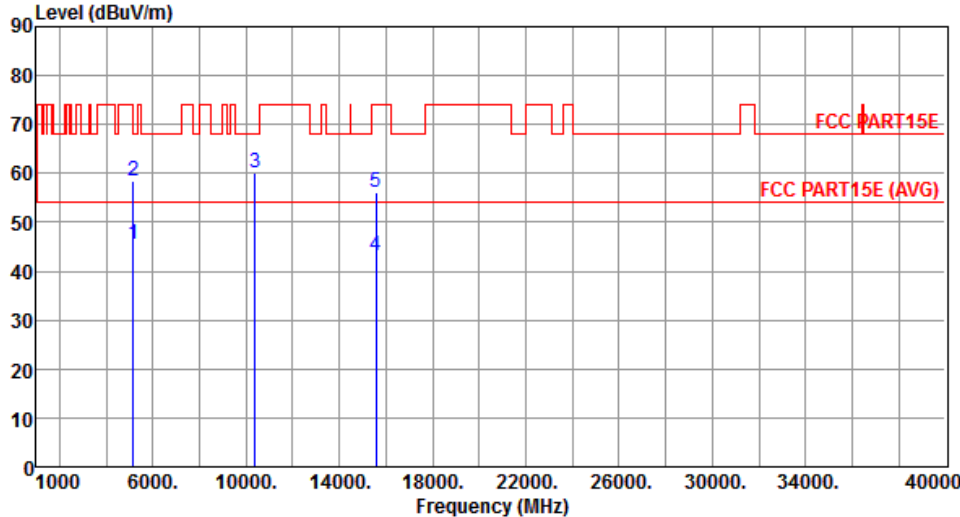


	Freq. MHz	Emission level dBUV/m	Limit dBUV/m	Margin dB	SA reading dBUV	Factor dB	Remark	ANT High cm	Turn Table deg
1	3883.33	53.86	54.00	-0.14	51.72	2.14	Average	255	91
2	3883.33	68.41	74.00	-5.59	66.27	2.14	Peak	255	91
3	5650.00	59.22	68.20	-8.98	53.53	5.69	Peak	191	135
4	5850.00	85.26	122.20	-36.94	79.27	5.99	Peak	191	135
5	5855.00	83.24	110.80	-27.56	77.24	6.00	Peak	191	135
6	5875.00	74.54	105.20	-30.66	68.52	6.02	Peak	191	135
7	5925.00	62.32	68.20	-5.88	56.23	6.09	Peak	191	135
8	11650.00	43.67	54.00	-10.33	29.23	14.44	Average	170	142
9	11650.00	57.29	74.00	-16.71	42.85	14.44	Peak	170	142
10	17475.00	59.81	68.20	-8.39	41.77	18.04	Peak	100	138

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

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

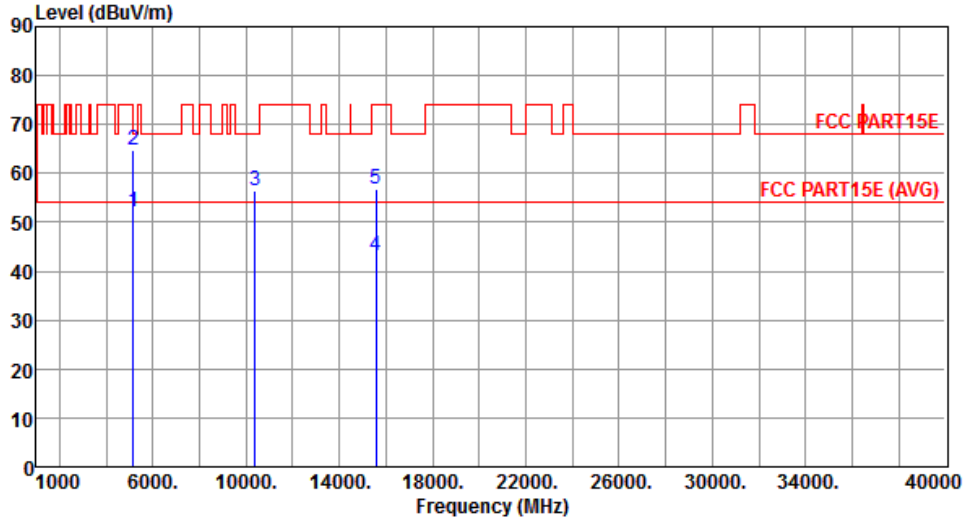
Modulation	VHT40	Test Freq. (MHz)	5190
Polarization	Horizontal		



	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	5150.00	45.41	54.00	-8.59	40.39	5.02	Average	199	62
2	5150.00	58.59	74.00	-15.41	53.57	5.02	Peak	199	62
3	10380.00	59.97	68.20	-8.23	46.22	13.75	Peak	190	50
4	15570.00	43.07	54.00	-10.93	28.11	14.96	Average	100	310
5	15570.00	56.19	74.00	-17.81	41.23	14.96	Peak	100	310

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

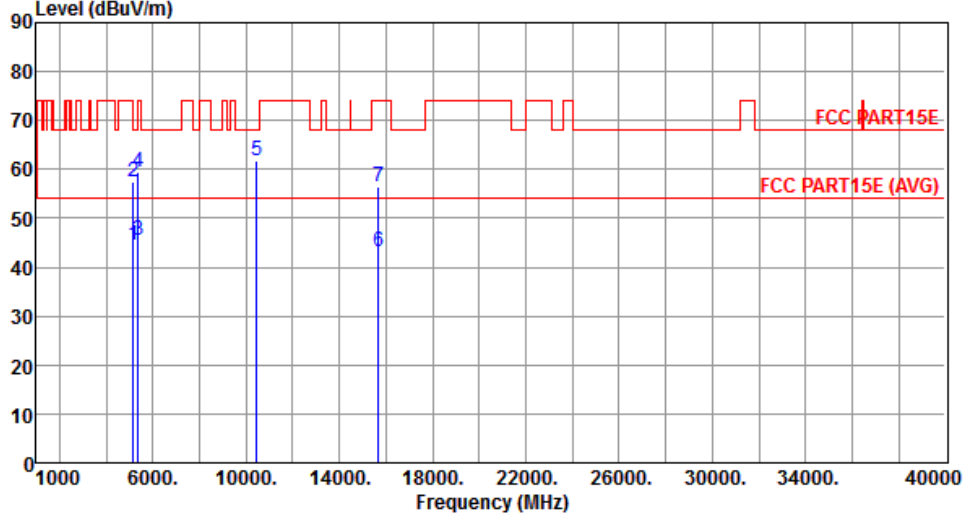
Modulation	VHT40	Test Freq. (MHz)	5190
Polarization	Vertical		



	Freq. MHz	Emission level dBUV/m	Limit dBUV/m	Margin dB	SA reading dBUV	Factor dB	Remark	ANT High cm	Turn Table deg
1	5150.00	51.99	54.00	-2.01	46.97	5.02	Average	190	135
2	5150.00	64.75	74.00	-9.25	59.73	5.02	Peak	190	135
3	10380.00	56.48	68.20	-11.72	42.73	13.75	Peak	142	295
4	15570.00	43.30	54.00	-10.70	28.34	14.96	Average	100	328
5	15570.00	56.71	74.00	-17.29	41.75	14.96	Peak	100	328

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

Modulation	VHT40	Test Freq. (MHz)	5230
Polarization	Horizontal		



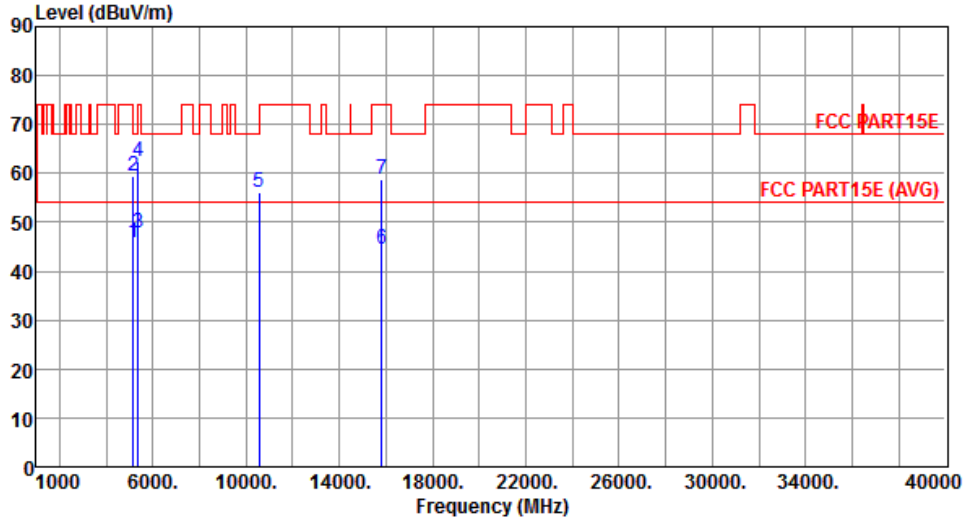
	Freq. MHz	Emission level dBUV/m	Limit dBUV/m	Margin dB	SA reading dBUV	Factor dB	Remark	ANT High cm	Turn Table deg
1	5150.00	44.59	54.00	-9.41	39.57	5.02	Average	204	58
2	5150.00	57.44	74.00	-16.56	52.42	5.02	Peak	204	58
3	5350.00	45.42	54.00	-8.58	40.11	5.31	Average	204	58
4	5350.00	59.39	74.00	-14.61	54.08	5.31	Peak	204	58
5	10460.00	61.65	68.20	-6.55	47.86	13.79	Peak	190	52
6	15690.00	43.15	54.00	-10.85	28.23	14.92	Average	100	321
7	15690.00	56.33	74.00	-17.67	41.41	14.92	Peak	100	321

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

Modulation	VHT40	Test Freq. (MHz)	5230
Polarization	Vertical		
Level (dBuV/m)			

Modulation	VHT40	Test Freq. (MHz)	5270
Polarization	Horizontal		
Level (dBuV/m)			

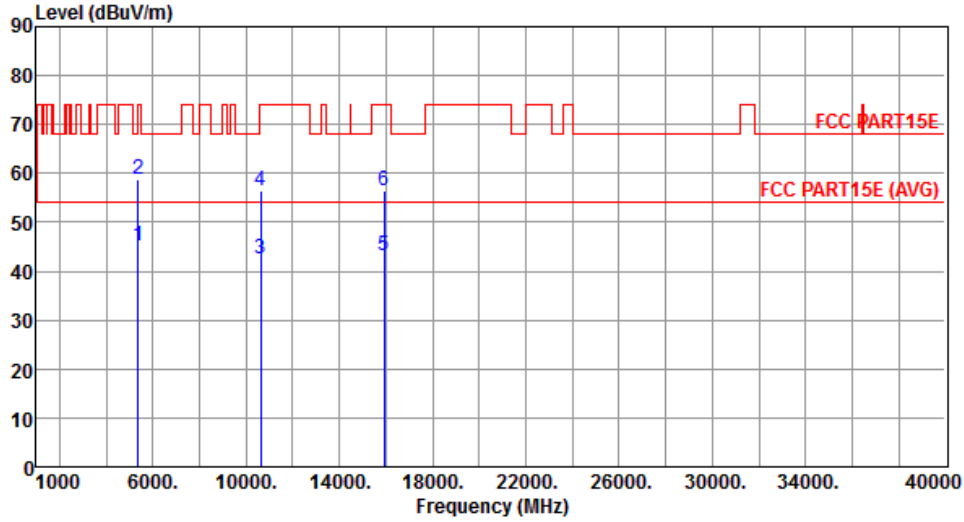
Modulation	VHT40	Test Freq. (MHz)	5270
Polarization	Vertical		



	Freq. MHz	Emission level dBUV/m	Limit dBUV/m	Margin dB	SA reading dBUV	Factor dB	Remark	ANT High cm	Turn Table deg
1	5150.00	45.91	54.00	-8.09	40.89	5.02	Average	200	133
2	5150.00	59.32	74.00	-14.68	54.30	5.02	Peak	200	133
3	5350.00	47.88	54.00	-6.12	42.57	5.31	Average	200	133
4	5350.00	62.41	74.00	-11.59	57.10	5.31	Peak	200	133
5	10540.00	56.10	68.20	-12.10	42.24	13.86	Peak	100	310
6	15810.00	44.41	54.00	-9.59	29.55	14.86	Average	100	335
7	15810.00	58.65	74.00	-15.35	43.79	14.86	Peak	100	335

Note 1: Emission Level (dBUV/m) = SA Reading (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)	5310
Polarization	Horizontal		

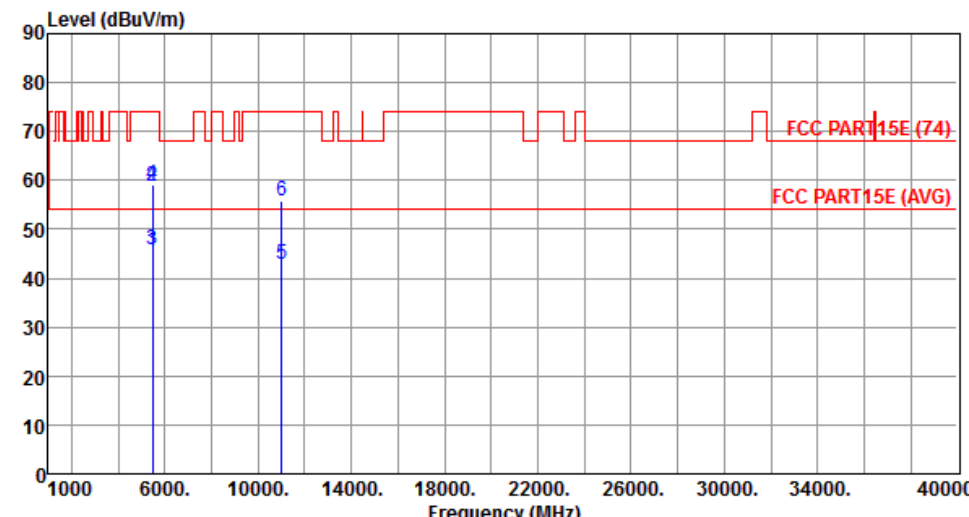


	Freq. MHz	Emission level dBUV/m	Limit dBUV/m	Margin dB	SA reading dBUV	Factor dB	Remark	ANT High cm	Turn Table deg
1	5350.00	45.12	54.00	-8.88	39.81	5.31	Average	198	78
2	5350.00	58.66	74.00	-15.34	53.35	5.31	Peak	198	78
3	10620.00	42.50	54.00	-11.50	28.57	13.93	Average	200	49
4	10620.00	56.31	74.00	-17.69	42.38	13.93	Peak	200	49
5	15930.00	43.11	54.00	-10.89	28.29	14.82	Average	100	333
6	15930.00	56.60	74.00	-17.40	41.78	14.82	Peak	100	333

Note 1: Emission Level (dBUV/m) = SA Reading (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)	5310
Polarization	Vertical		
Level (dBuV/m) </			

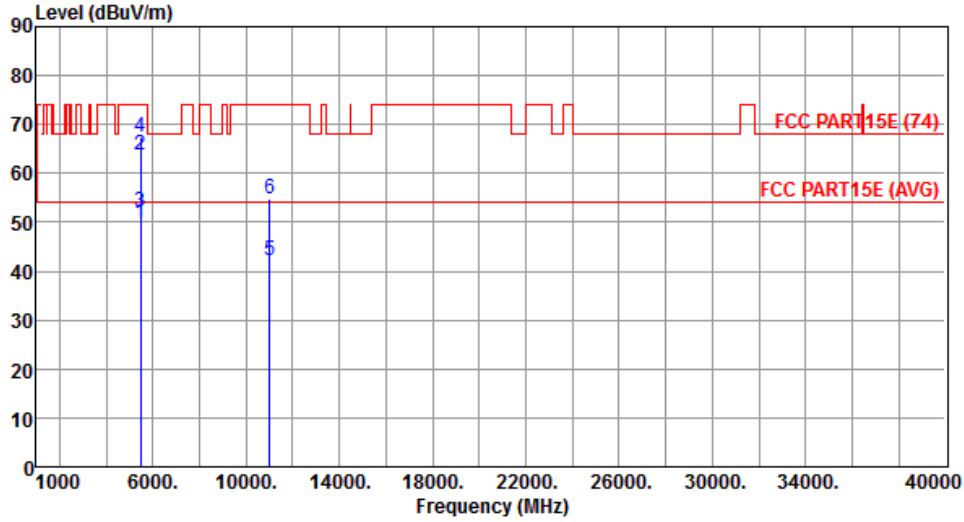
Modulation	VHT40	Test Freq. (MHz)	5510
Polarization	Horizontal		



	Freq. MHz	Emission level dBUV/m	Limit dBUV/m	Margin dB	SA reading dBUV	Factor dB	Remark	ANT High cm	Turn Table deg
1	5460.00	45.46	54.00	-8.54	40.00	5.46	Average	217	66
2	5460.00	58.77	74.00	-15.23	53.31	5.46	Peak	217	66
3	5470.00	45.76	54.00	-8.24	40.29	5.47	Average	217	66
4	5470.00	59.15	74.00	-14.85	53.68	5.47	Peak	217	66
5	11020.00	42.88	54.00	-11.12	28.56	14.32	Average	100	165
6	11020.00	55.69	74.00	-18.31	41.37	14.32	Peak	100	165

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

Modulation	VHT40	Test Freq. (MHz)	5510
Polarization	Vertical		

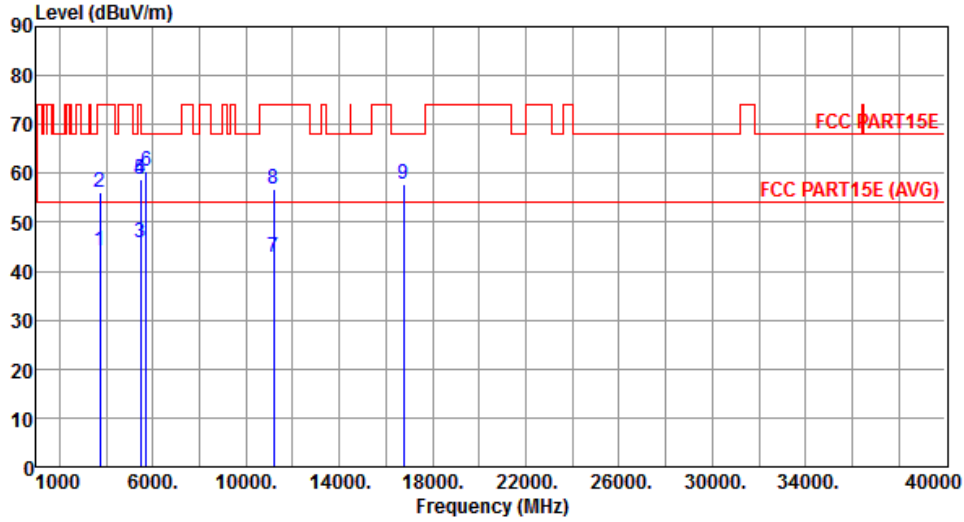


	Freq. MHz	Emission level dBUV/m	Limit dBUV/m	Margin dB	SA reading dBUV	Factor dB	Remark	ANT High cm	Turn Table deg
1	5460.00	49.88	54.00	-4.12	44.42	5.46	Average	214	123
2	5460.00	63.69	74.00	-10.31	58.23	5.46	Peak	214	123
3	5470.00	52.15	54.00	-1.85	46.68	5.47	Average	214	123
4	5470.00	67.42	74.00	-6.58	61.95	5.47	Peak	214	123
5	11020.00	42.09	54.00	-11.91	27.77	14.32	Average	100	147
6	11020.00	54.89	74.00	-19.11	40.57	14.32	Peak	100	147

Note 1: Emission Level (dBUV/m) = SA Reading (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)	5590
Polarization	Horizontal		
Level (dBuV/m) </			

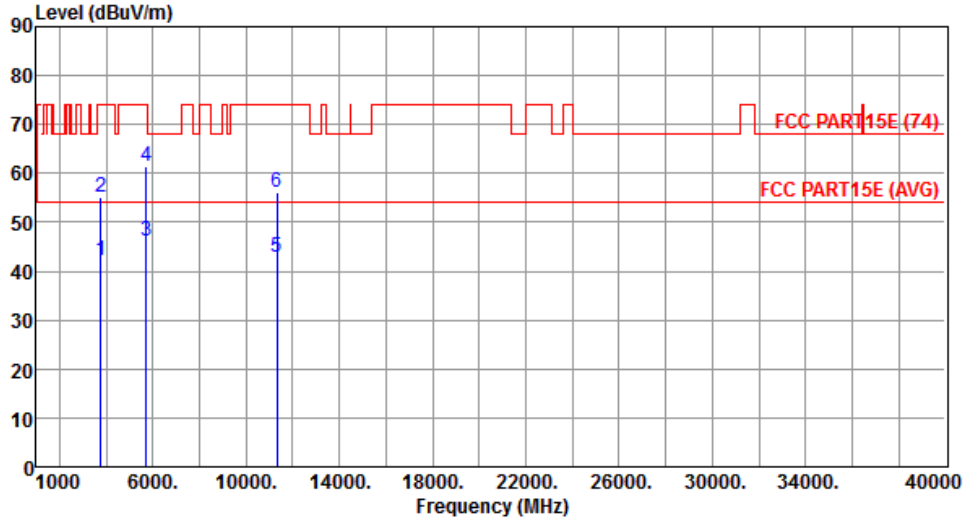
Modulation	VHT40	Test Freq. (MHz)	5590
Polarization	Vertical		



	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	3726.66	44.16	54.00	-9.84	42.52	1.64	Average	265	90
2	3726.66	56.16	74.00	-17.84	54.52	1.64	Peak	265	90
3	5460.00	45.88	54.00	-8.12	40.42	5.46	Average	145	100
4	5460.00	58.90	74.00	-15.10	53.44	5.46	Peak	145	100
5	5470.00	58.78	68.20	-9.42	53.31	5.47	Peak	145	100
6	5725.00	60.29	68.20	-7.91	54.48	5.81	Peak	145	100
7	11180.00	42.70	54.00	-11.30	28.24	14.46	Average	100	162
8	11180.00	56.89	74.00	-17.11	42.43	14.46	Peak	100	162
9	16770.00	57.92	68.20	-10.28	41.94	15.98	Peak	100	183

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

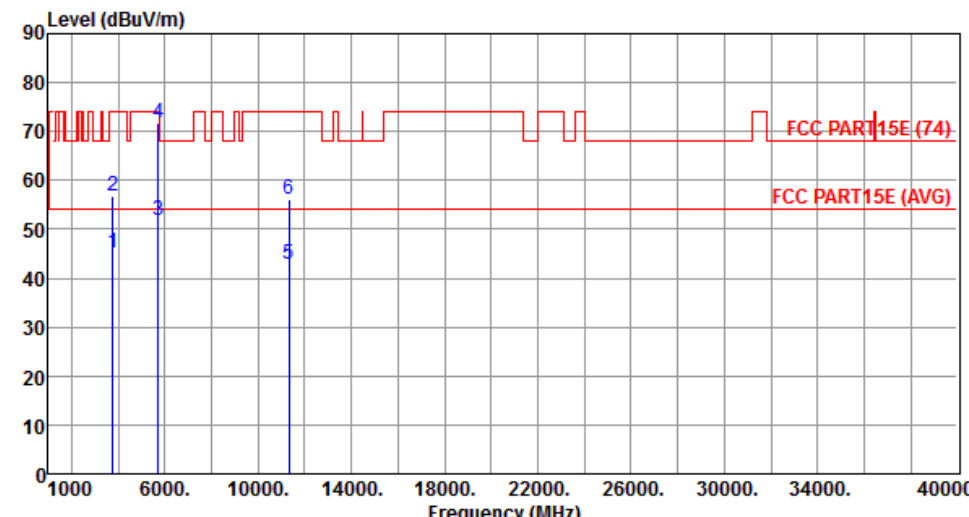
Modulation	VHT40	Test Freq. (MHz)	5670
Polarization	Horizontal		



	Freq. MHz	Emission level dBUV/m	Limit dBUV/m	Margin dB	SA reading dBUV	Factor dB	Remark	ANT High cm	Turn Table deg
1	3780.00	42.07	54.00	-11.93	40.27	1.80	Average	100	331
2	3780.00	55.07	74.00	-18.93	53.27	1.80	Peak	100	331
3	5725.00	46.30	54.00	-7.70	40.49	5.81	Average	201	59
4	5725.00	61.34	74.00	-12.66	55.53	5.81	Peak	201	59
5	11340.00	42.84	54.00	-11.16	28.24	14.60	Average	100	165
6	11340.00	55.97	74.00	-18.03	41.37	14.60	Peak	100	165

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

Modulation	VHT40	Test Freq. (MHz)	5670
Polarization	Vertical		



	Freq. MHz	Emission level dBUV/m	Limit dBUV/m	Margin dB	SA reading dBUV	Factor dB	Remark	ANT High cm	Turn Table deg
1	3780.00	45.06	54.00	-8.94	43.26	1.80	Average	256	98
2	3780.00	56.95	74.00	-17.05	55.15	1.80	Peak	256	98
3	5725.00	51.69	54.00	-2.31	45.88	5.81	Average	259	100
4	5725.00	71.57	74.00	-2.43	65.76	5.81	Peak	259	100
5	11340.00	42.84	54.00	-11.16	28.24	14.60	Average	100	182
6	11340.00	55.98	74.00	-18.02	41.38	14.60	Peak	100	182

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

Modulation	VHT40	Test Freq. (MHz)	5710
Polarization	Horizontal		
Level (dBuV/m)			

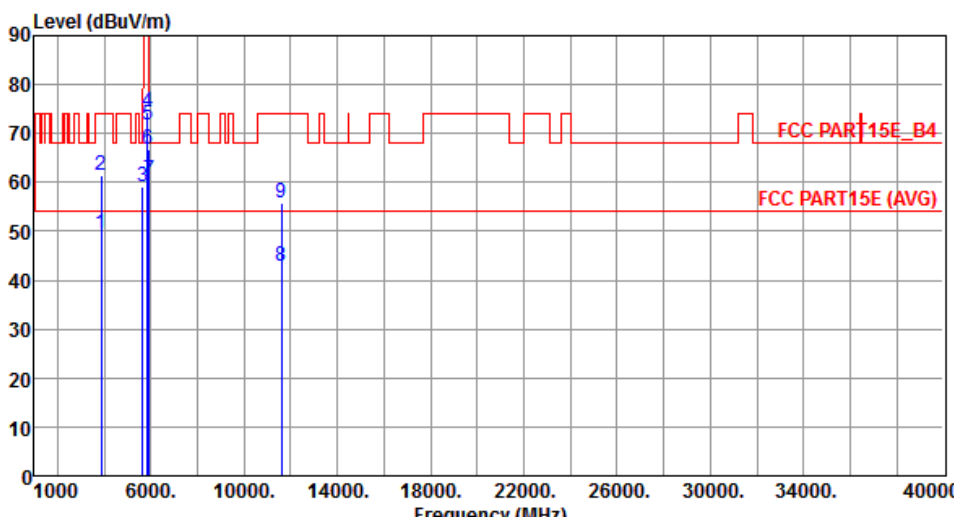
Modulation	VHT40	Test Freq. (MHz)	5710
Polarization	Vertical		
Level (dBUV/m)			

Modulation	VHT40	Test Freq. (MHz)	5755
Polarization	Horizontal		
Level (dBuV/m)			

Modulation	VHT40	Test Freq. (MHz)	5755
Polarization	Vertical		
Level (dBuV/m)			

Modulation	VHT40	Test Freq. (MHz)	5795
Polarization	Horizontal		
Level (dBuV/m) </			

Modulation	VHT40	Test Freq. (MHz)	5795
Polarization	Vertical		



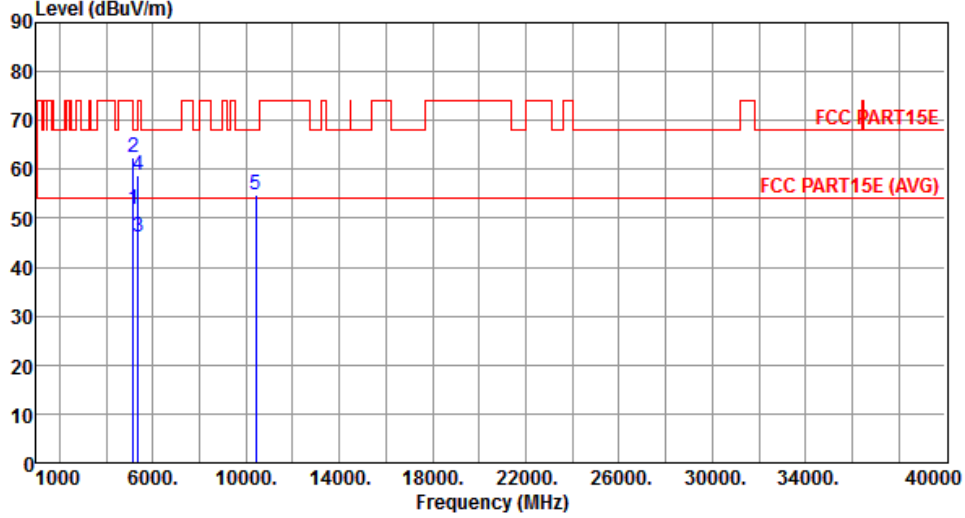
	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	3863.33	49.62	54.00	-4.38	47.55	2.07	Average	293	95
2	3863.33	61.38	74.00	-12.62	59.31	2.07	Peak	293	95
3	5650.00	59.02	68.20	-9.18	53.33	5.69	Peak	236	96
4	5850.00	74.43	122.20	-47.77	68.44	5.99	Peak	236	96
5	5855.00	71.84	110.80	-38.96	65.84	6.00	Peak	236	96
6	5875.00	66.87	105.20	-38.33	60.85	6.02	Peak	236	96
7	5925.00	60.41	68.20	-7.79	54.32	6.09	Peak	236	96
8	11590.00	42.80	54.00	-11.20	28.24	14.56	Average	100	165
9	11590.00	55.94	74.00	-18.06	41.38	14.56	Peak	100	165

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

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

Modulation	VHT80	Test Freq. (MHz)	5210
Polarization	Horizontal		
Level (dBuV/m) </			

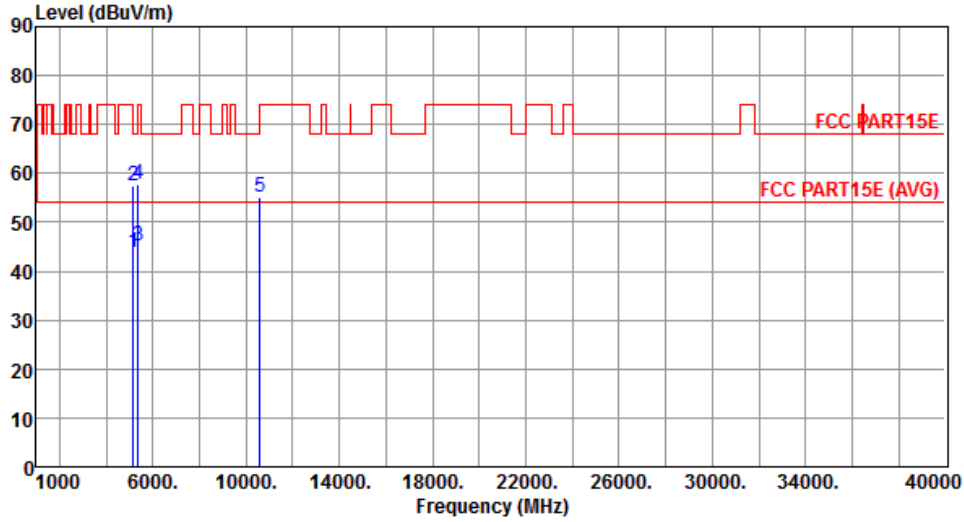
Modulation	VHT80	Test Freq. (MHz)	5210
Polarization	Vertical		



	Freq. MHz	Emission level dBUV/m	Limit dBUV/m	Margin dB	SA reading dBUV	Factor dB	Remark	ANT High cm	Turn Table deg
1	5150.00	51.76	54.00	-2.24	46.74	5.02	Average	231	97
2	5150.00	62.50	74.00	-11.50	57.48	5.02	Peak	231	97
3	5350.00	46.22	54.00	-7.78	40.91	5.31	Average	231	97
4	5350.00	58.75	74.00	-15.25	53.44	5.31	Peak	231	97
5	10420.00	54.83	68.20	-13.37	41.05	13.78	Peak	100	173

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

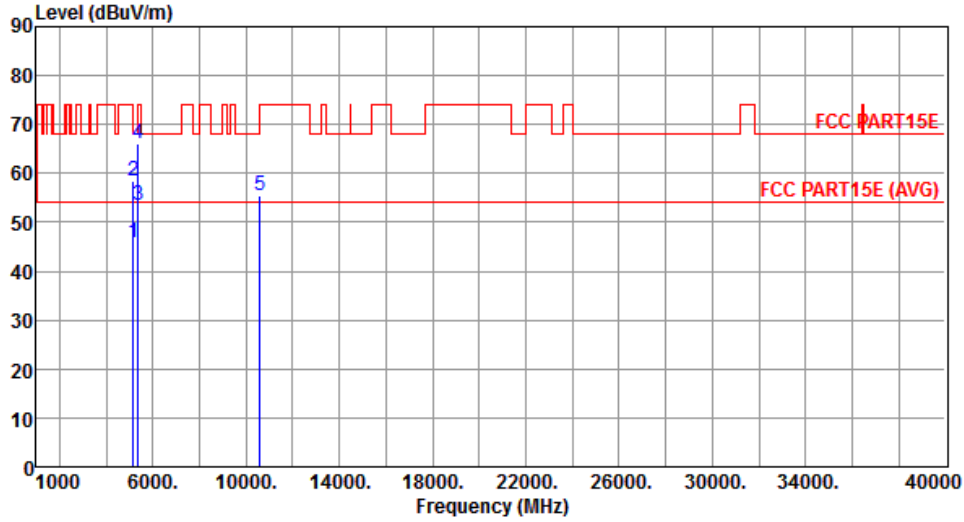
Modulation	VHT80	Test Freq. (MHz)	5290
Polarization	Horizontal		



	Freq. MHz	Emission level dBUV/m	Limit dBUV/m	Margin dB	SA reading dBUV	Factor dB	Remark	ANT High cm	Turn Table deg
1	5150.00	43.88	54.00	-10.12	38.86	5.02	Average	182	333
2	5150.00	57.48	74.00	-16.52	52.46	5.02	Peak	182	333
3	5350.00	45.33	54.00	-8.67	40.02	5.31	Average	182	333
4	5350.00	57.87	74.00	-16.13	52.56	5.31	Peak	182	333
5	10580.00	55.15	68.20	-13.05	41.25	13.90	Peak	100	172

Note 1: Emission Level (dBUV/m) = SA Reading (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)	5290
Polarization	Vertical		

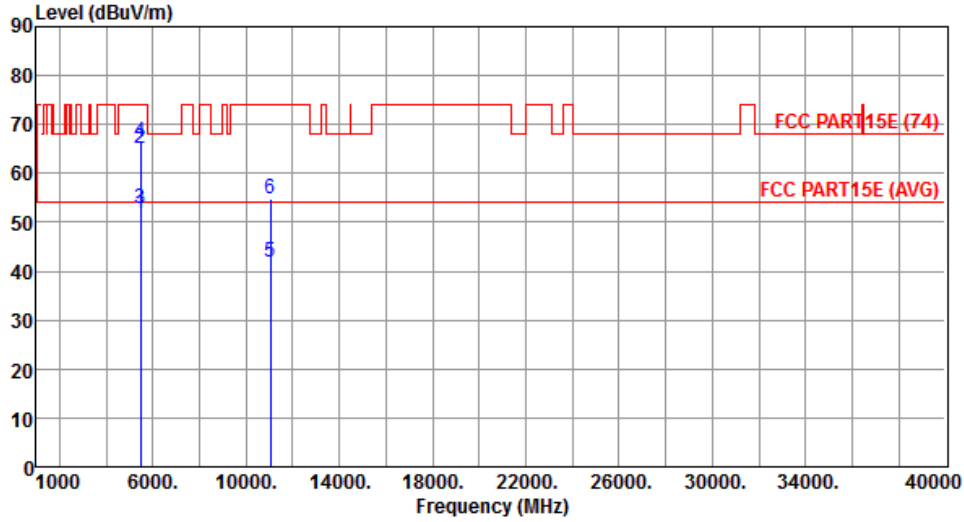


	Freq. MHz	Emission level dBUV/m	Limit dBUV/m	Margin dB	SA reading dBUV	Factor dB	Remark	ANT High cm	Turn Table deg
1	5150.00	45.75	54.00	-8.25	40.73	5.02	Average	204	134
2	5150.00	58.59	74.00	-15.41	53.57	5.02	Peak	204	134
3	5350.00	53.58	54.00	-0.42	48.27	5.31	Average	204	134
4	5350.00	66.20	74.00	-7.80	60.89	5.31	Peak	204	134
5	10580.00	55.34	68.20	-12.86	41.44	13.90	Peak	100	124

Note 1: Emission Level (dBUV/m) = SA Reading (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)	5530
Polarization	Horizontal		
Level (dBUV/m) <			

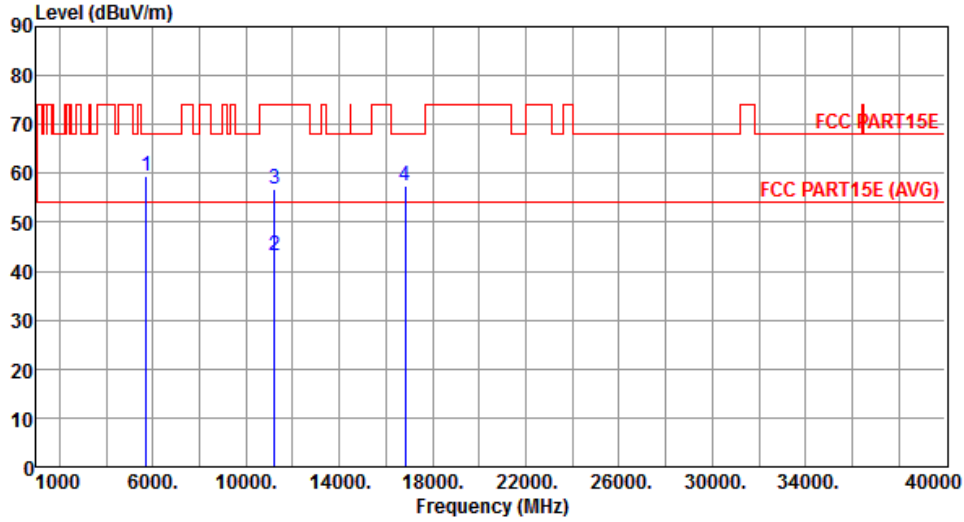
Modulation	VHT80	Test Freq. (MHz)	5530
Polarization	Vertical		



	Freq. MHz	Emission level dBUV/m	Limit dBUV/m	Margin dB	SA reading dBUV	Factor dB	Remark	ANT High cm	Turn Table deg
1	5460.00	51.75	54.00	-2.25	46.29	5.46	Average	184	139
2	5460.00	65.17	74.00	-8.83	59.71	5.46	Peak	184	139
3	5470.00	52.86	54.00	-1.14	47.39	5.47	Average	184	139
4	5470.00	66.28	74.00	-7.72	60.81	5.47	Peak	184	139
5	11060.00	42.00	54.00	-12.00	27.65	14.35	Average	100	144
6	11060.00	54.73	74.00	-19.27	40.38	14.35	Peak	100	144

Note 1: Emission Level (dBUV/m) = SA Reading (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)	5610
Polarization	Horizontal		

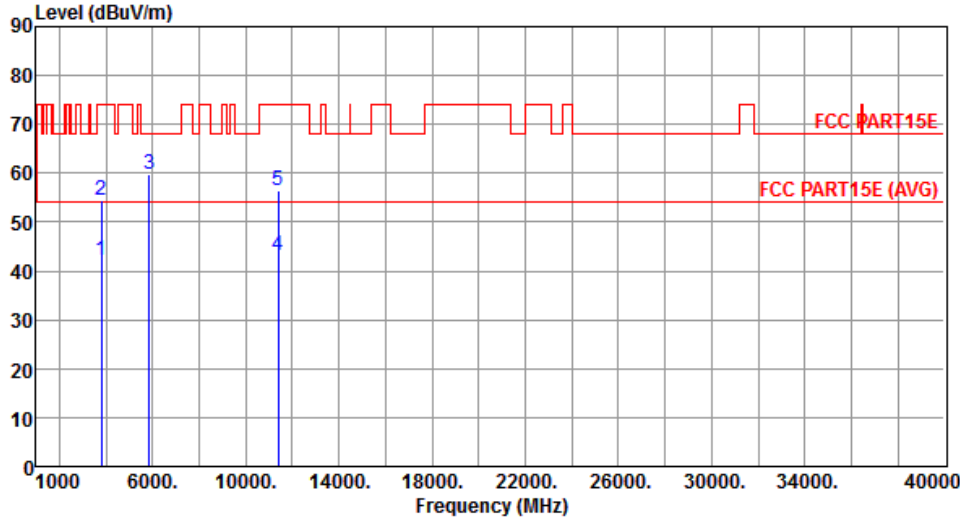


	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	5725.00	59.34	68.20	-8.86	53.53	5.81	Peak	191	327
2	11220.00	43.04	54.00	-10.96	28.55	14.49	Average	100	102
3	11220.00	56.70	74.00	-17.30	42.21	14.49	Peak	100	102
4	16830.00	57.49	68.20	-10.71	41.47	16.02	Peak	100	205

Note 1: Emission Level (dBuV/m) = SA Reading (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)	5610
Polarization	Vertical		
Level (dBuV/m) <			

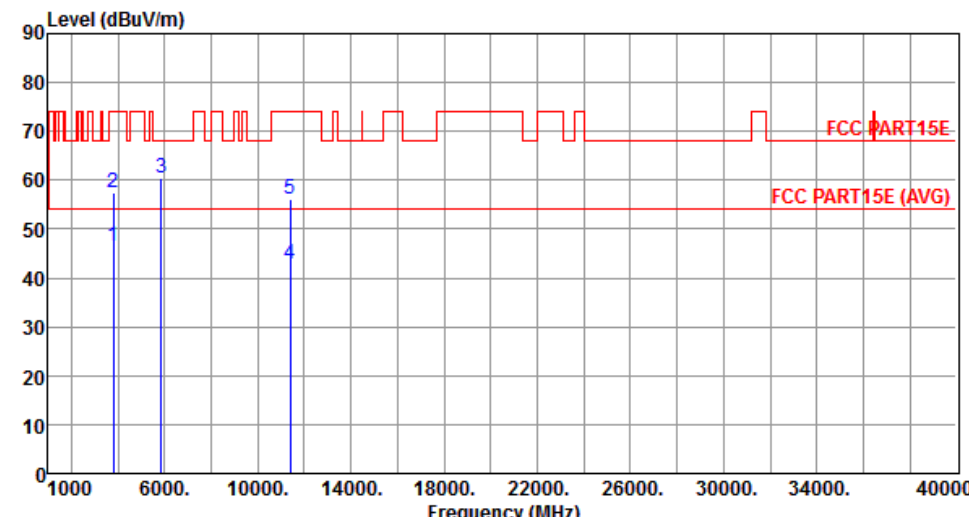
Modulation	VHT80	Test Freq. (MHz)	5690
Polarization	Horizontal		



	Freq. MHz	Emission level dBUV/m	Limit dBUV/m	Margin dB	SA reading dBUV	Factor dB	Remark	ANT High cm	Turn Table deg
1	3793.33	42.08	54.00	-11.92	40.24	1.84	Average	100	330
2	3793.33	54.61	74.00	-19.39	52.77	1.84	Peak	100	330
3	5850.00	59.64	68.20	-8.56	53.65	5.99	Peak	190	325
4	11380.00	43.07	54.00	-10.93	28.44	14.63	Average	100	110
5	11380.00	56.35	74.00	-17.65	41.72	14.63	Peak	100	110

Note 1: Emission Level (dBUV/m) = SA Reading (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)	5690
Polarization	Vertical		

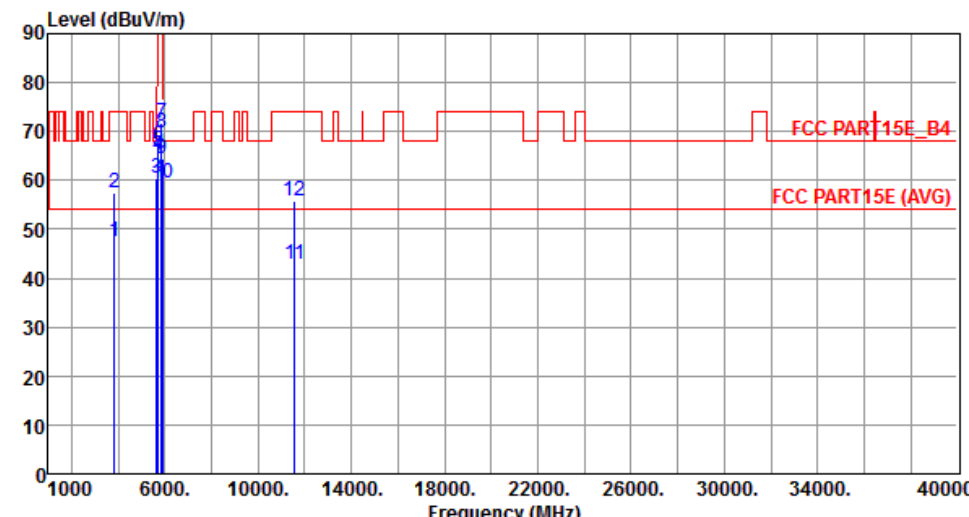


	Freq. MHz	Emission level dBUV/m	Limit dBUV/m	Margin dB	SA reading dBUV	Factor dB	Remark	ANT High cm	Turn Table deg
1	3793.33	46.64	54.00	-7.36	44.80	1.84	Average	254	99
2	3793.33	57.48	74.00	-16.52	55.64	1.84	Peak	254	99
3	5850.00	60.41	68.20	-7.79	54.42	5.99	Peak	182	131
4	11380.00	42.79	54.00	-11.21	28.16	14.63	Average	100	172
5	11380.00	56.05	74.00	-17.95	41.42	14.63	Peak	100	173

Note 1: Emission Level (dBUV/m) = SA Reading (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		
Level (dBuV/m) </			

Modulation	VHT80	Test Freq. (MHz)	5775
Polarization	Vertical		



	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	3850.00	47.51	54.00	-6.49	45.49	2.02	Average	254	99
2	3850.00	57.57	74.00	-16.43	55.55	2.02	Peak	254	99
3	5650.00	60.32	68.20	-7.88	54.63	5.69	Peak	185	131
4	5700.00	65.19	105.20	-40.01	59.42	5.77	Peak	185	131
5	5720.00	66.01	110.80	-44.79	60.22	5.79	Peak	185	131
6	5725.00	67.14	122.20	-55.06	61.33	5.81	Peak	185	131
7	5850.00	71.83	122.20	-50.37	65.84	5.99	Peak	185	131
8	5855.00	69.62	110.80	-41.18	63.62	6.00	Peak	185	131
9	5875.00	64.31	105.20	-40.89	58.29	6.02	Peak	185	131
10	5925.00	59.41	68.20	-8.79	53.32	6.09	Peak	185	131
11	11550.00	42.88	54.00	-11.12	28.24	14.64	Average	100	163
12	11550.00	55.76	74.00	-18.24	41.12	14.64	Peak	100	163

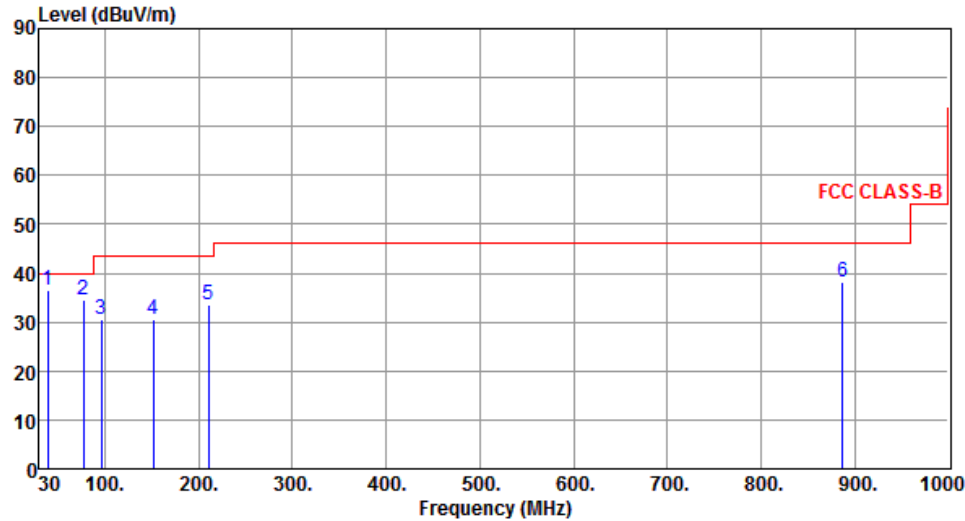
Note 1: Emission Level (dBuV/m) = SA Reading (dBuV/m) + Factor* (dB)
*Factor includes antenna factor , cable loss and amplifier gain
Note 2: Margin (dB) = Emission level (dBuV/m) – Limit (dBuV/m).

Configuration 2 : PCB Dipole Antenna

3.5.9 Transmitter Radiated Unwanted Emissions (Below 1GHz)

Modulation	VHT20	Test Freq. (MHz)	5240
Polarization	Horizontal		
Level (dBuV/m)			

Modulation	VHT20	Test Freq. (MHz)	5240
Polarization	Vertical		



	Freq. MHz	Emission level dBUV/m	Limit dBUV/m	Margin dB	SA reading dBUV	Factor dB	Remark	ANT High cm	Turn Table deg
1	38.65	36.66	40.00	-3.34	45.52	-8.86	Peak	---	---
2	77.43	34.62	40.00	-5.38	47.25	-12.63	Peak	---	---
3	95.91	30.43	43.50	-13.07	44.43	-14.00	Peak	---	---
4	151.43	30.44	43.50	-13.06	38.94	-8.50	Peak	---	---
5	210.36	33.51	43.50	-9.99	44.79	-11.28	Peak	---	---
6	886.96	38.31	46.00	-7.69	34.25	4.06	Peak	---	---

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

*Factor includes antenna factor , cable loss and amplifier gain

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

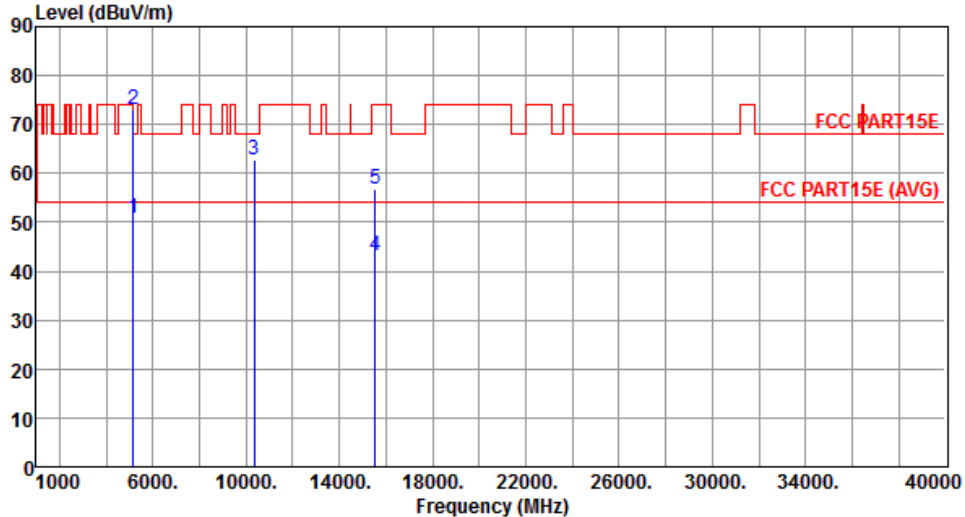
Note 3: All spurious emissions below 30MHz are more than 20 dB below the limit.

Modulation	VHT20	Test Freq. (MHz)	5825
Polarization	Horizontal		
Level (dBuV/m)			

Modulation	VHT20	Test Freq. (MHz)	5825
Polarization	Vertical		
Level (dBuV/m)			

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

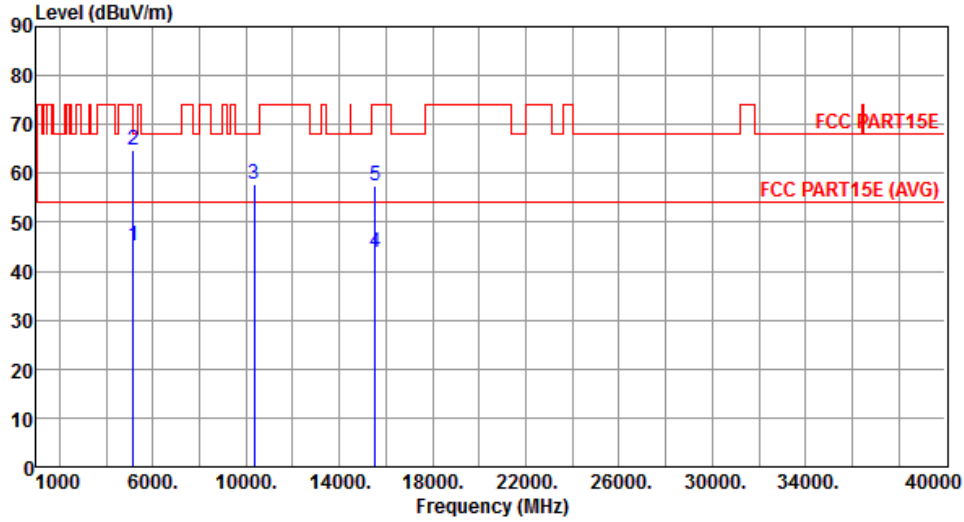
Modulation	11a	Test Freq. (MHz)	5180
Polarization	Horizontal		



	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	5150.00	50.77	54.00	-3.23	45.75	5.02	Average	155	340
2	5150.00	73.07	74.00	-0.93	68.05	5.02	Peak	155	340
3	10360.00	62.82	68.20	-5.38	49.08	13.74	Peak	193	49
4	15540.00	43.29	54.00	-10.71	28.32	14.97	Average	100	309
5	15540.00	56.78	74.00	-17.22	41.81	14.97	Peak	100	309

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

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



	Freq. MHz	Emission level dBUV/m	Limit dBUV/m	Margin dB	SA reading dBUV	Factor dB	Remark	ANT High cm	Turn Table deg
1	5150.00	45.27	54.00	-8.73	40.25	5.02	Average	131	134
2	5150.00	64.72	74.00	-9.28	59.70	5.02	Peak	131	134
3	10360.00	57.93	68.20	-10.27	44.19	13.74	Peak	144	298
4	15540.00	43.71	54.00	-10.29	28.74	14.97	Average	100	331
5	15540.00	57.43	74.00	-16.57	42.46	14.97	Peak	100	331

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

Modulation	11a	Test Freq. (MHz)	5200
Polarization	Horizontal		
Level (dBuV/m)			

Modulation	11a	Test Freq. (MHz)	5200
Polarization	Vertical		
Level (dBUV/m)			

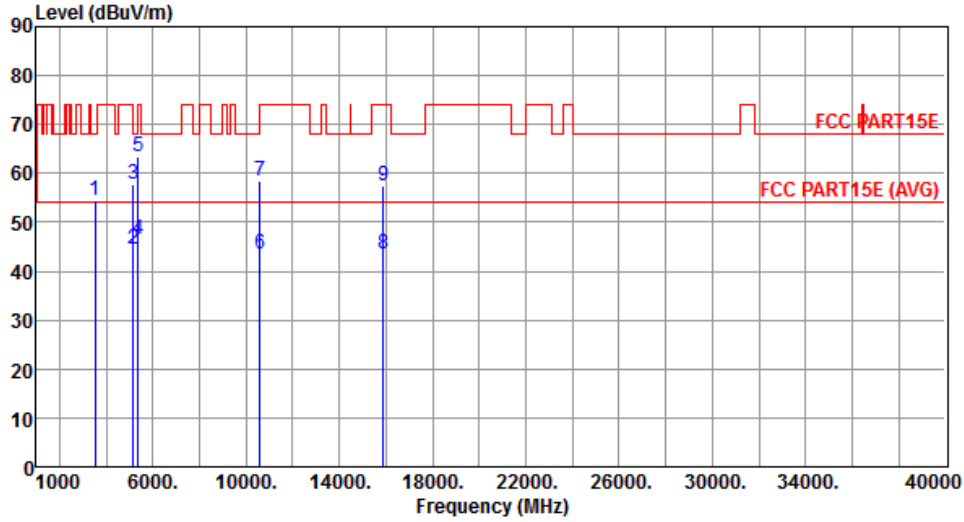
Modulation	11a	Test Freq. (MHz)	5240
Polarization	Horizontal		
Level (dBuV/m) </			

Modulation	11a	Test Freq. (MHz)	5240
Polarization	Vertical		
Level (dBuV/m) </			

Modulation	11a	Test Freq. (MHz)	5260
Polarization	Horizontal		
Level (dBuV/m) <			

Modulation	11a	Test Freq. (MHz)	5260
Polarization	Vertical		
Level (dBuV/m) </			

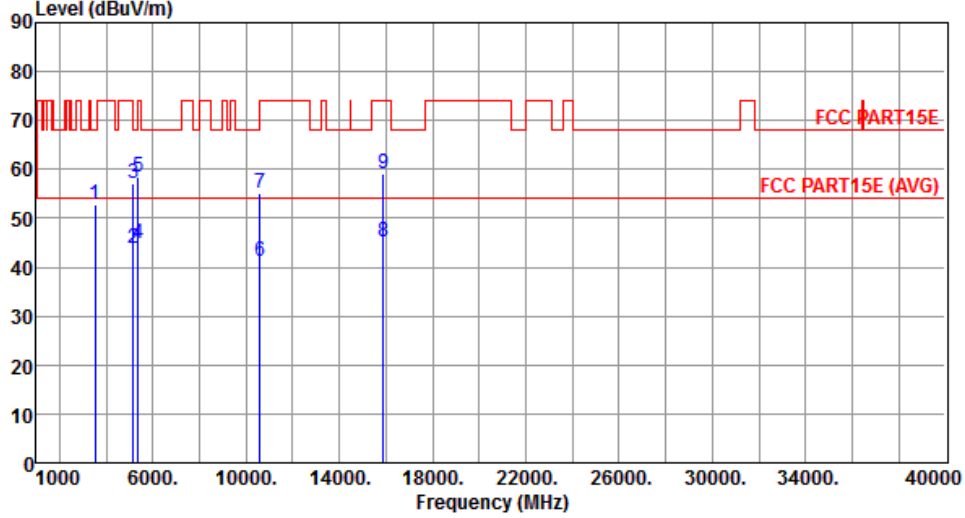
Modulation	11a	Test Freq. (MHz)	5300
Polarization	Horizontal		



	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	3533.00	54.52	68.20	-13.68	53.50	1.02	Peak	100	20
2	5150.00	44.57	54.00	-9.43	39.55	5.02	Average	140	350
3	5150.00	57.93	74.00	-16.07	52.91	5.02	Peak	140	350
4	5350.00	46.49	54.00	-7.51	41.18	5.31	Average	140	350
5	5350.00	63.59	74.00	-10.41	58.28	5.31	Peak	140	350
6	10600.00	43.45	54.00	-10.55	29.53	13.92	Average	226	52
7	10600.00	58.51	74.00	-15.49	44.59	13.92	Peak	226	52
8	15900.00	43.56	54.00	-10.44	28.72	14.84	Average	100	335
9	15900.00	57.55	74.00	-16.45	42.71	14.84	Peak	100	335

Note 1: Emission Level (dBuV/m) = SA Reading (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)	5300
Polarization	Vertical		



	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	3533.00	52.64	68.20	-15.56	51.62	1.02	Peak	100	310
2	5150.00	43.84	54.00	-10.16	38.82	5.02	Average	162	126
3	5150.00	57.21	74.00	-16.79	52.19	5.02	Peak	162	126
4	5350.00	44.73	54.00	-9.27	39.42	5.31	Average	162	126
5	5350.00	58.36	74.00	-15.64	53.05	5.31	Peak	162	126
6	10600.00	41.30	54.00	-12.70	27.38	13.92	Average	150	298
7	10600.00	55.00	74.00	-19.00	41.08	13.92	Peak	150	298
8	15900.00	45.24	54.00	-8.76	30.40	14.84	Average	100	335
9	15900.00	59.03	74.00	-14.97	44.19	14.84	Peak	100	335

Note 1: Emission Level (dBuV/m) = SA Reading (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)	5320
Polarization	Horizontal		
Level (dBuV/m) <			

Modulation	11a	Test Freq. (MHz)	5320
Polarization	Vertical		
 <			

Modulation	11a	Test Freq. (MHz)	5500
Polarization	Horizontal		
Level (dBUV/m) <			

Modulation	11a	Test Freq. (MHz)	5500
Polarization	Vertical		
Level (dBuV/m) </			

Modulation	11a	Test Freq. (MHz)	5580
Polarization	Horizontal		
Level (dBuV/m)			

Modulation	11a	Test Freq. (MHz)	5580
Polarization	Vertical		
Level (dBuV/m)			

Modulation	11a	Test Freq. (MHz)	5700
Polarization	Horizontal		
Level (dBuV/m)			

Modulation	11a	Test Freq. (MHz)	5720
Polarization	Horizontal		
Level (dBuV/m) <			

Modulation	11a	Test Freq. (MHz)	5720
Polarization	Vertical		
Level (dBuV/m) <			

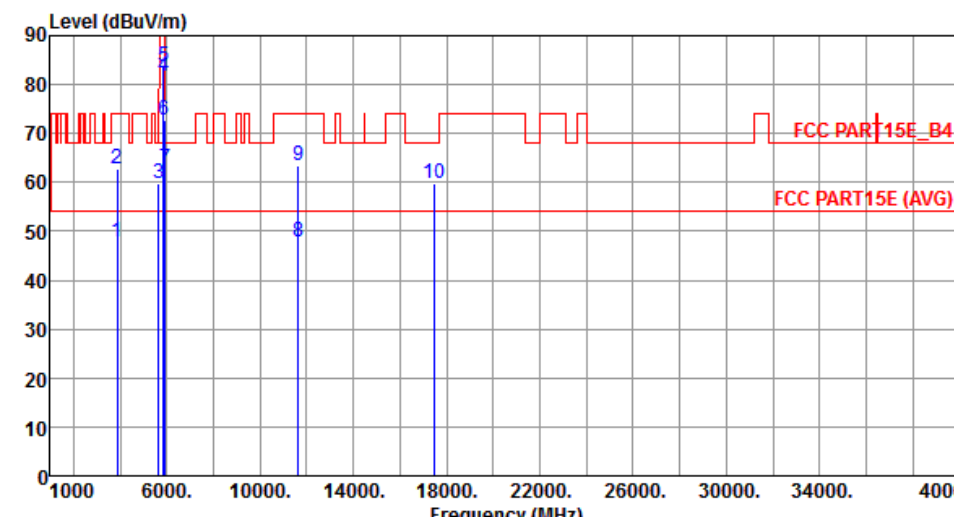
Modulation	11a	Test Freq. (MHz)	5745
Polarization	Horizontal		
Level (dBuV/m) <			

Modulation	11a	Test Freq. (MHz)	5745
Polarization	Vertical		
Level (dBuV/m)			

Modulation	11a	Test Freq. (MHz)	5785
Polarization	Horizontal		
Level (dBuV/m) </			

Modulation	11a	Test Freq. (MHz)	5785
Polarization	Vertical		
Level (dBuV/m)			

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



	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	3883.33	47.86	54.00	-6.14	45.72	2.14	Average	190	13
2	3883.33	62.75	74.00	-11.25	60.61	2.14	Peak	190	13
3	5650.00	59.92	68.20	-8.28	54.23	5.69	Peak	222	342
4	5850.00	81.69	122.20	-40.51	75.70	5.99	Peak	222	342
5	5855.00	83.59	110.80	-27.21	77.59	6.00	Peak	222	342
6	5875.00	72.68	105.20	-32.52	66.66	6.02	Peak	222	342
7	5925.00	62.89	68.20	-5.31	56.80	6.09	Peak	222	342
8	11650.00	47.93	54.00	-6.07	33.49	14.44	Average	256	341
9	11650.00	63.34	74.00	-10.66	48.90	14.44	Peak	256	341
10	17475.00	59.62	68.20	-8.58	41.58	18.04	Peak	100	42

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

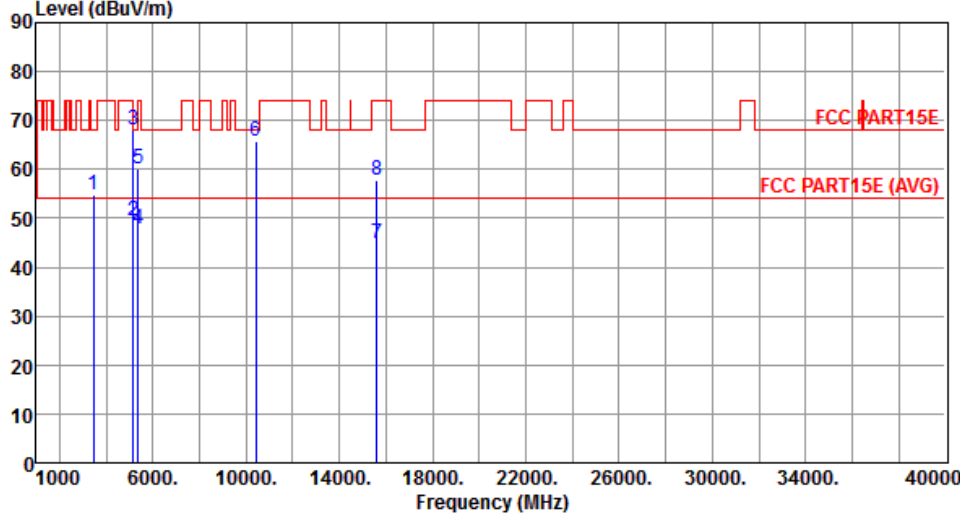
Modulation	11a	Test Freq. (MHz)	5825
Polarization	Vertical		
Level (dBuV/m)			

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

Modulation	VHT20	Test Freq. (MHz)	5180
Polarization	Horizontal		
Level (dBuV/m) </			

Modulation	VHT20	Test Freq. (MHz)	5180
Polarization	Vertical		
Level (dBuV/m)			

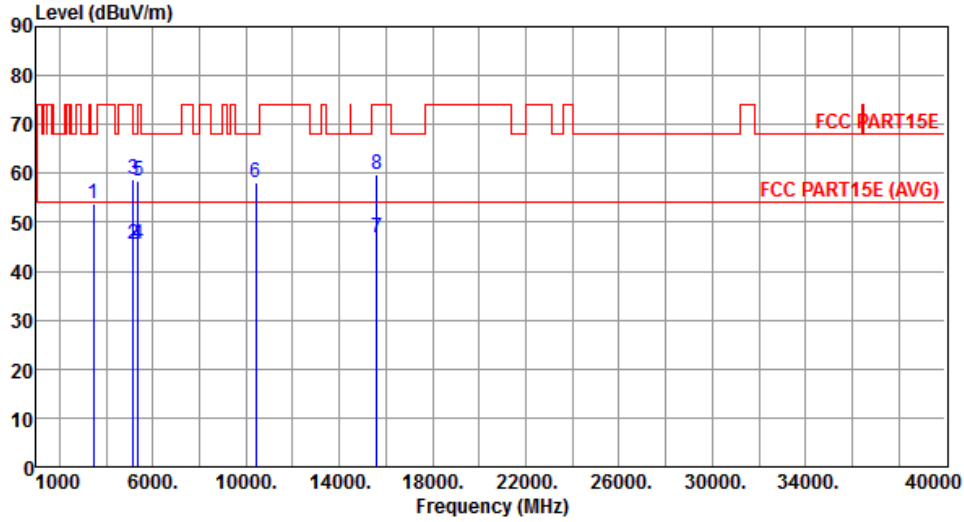
Modulation	VHT20	Test Freq. (MHz)	5200
Polarization	Horizontal		



	Freq. MHz	Emission level dBUV/m	Limit dBUV/m	Margin dB	SA reading dBUV	Factor dB	Remark	ANT High cm	Turn Table deg
1	3466.66	54.96	68.20	-13.24	54.10	0.86	Peak	100	17
2	5150.00	49.44	54.00	-4.56	44.42	5.02	Average	148	340
3	5150.00	67.92	74.00	-6.08	62.90	5.02	Peak	148	340
4	5350.00	47.96	54.00	-6.04	42.65	5.31	Average	148	340
5	5350.00	60.15	74.00	-13.85	54.84	5.31	Peak	148	340
6	10400.00	65.66	68.20	-2.54	51.89	13.77	Peak	191	44
7	15600.00	44.95	54.00	-9.05	30.01	14.94	Average	206	16
8	15600.00	57.71	74.00	-16.29	42.77	14.94	Peak	206	16

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

Modulation	VHT20	Test Freq. (MHz)	5200
Polarization	Vertical		



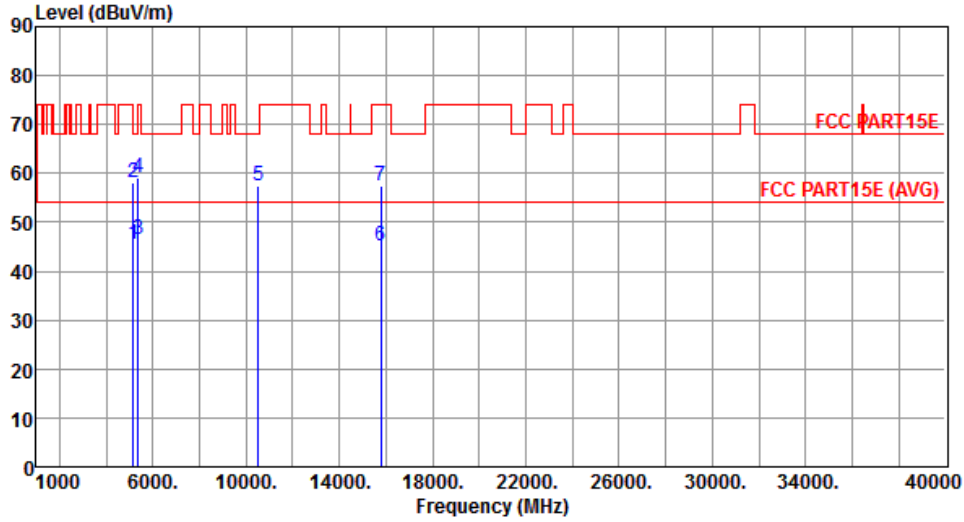
	Freq. MHz	Emission level dBUV/m	Limit dBUV/m	Margin dB	SA reading dBUV	Factor dB	Remark	ANT High cm	Turn Table deg
1	3466.66	53.96	68.20	-14.24	53.10	0.86	Peak	100	351
2	5150.00	45.41	54.00	-8.59	40.39	5.02	Average	132	136
3	5150.00	58.82	74.00	-15.18	53.80	5.02	Peak	132	136
4	5350.00	45.60	54.00	-8.40	40.29	5.31	Average	132	136
5	5350.00	58.51	74.00	-15.49	53.20	5.31	Peak	132	136
6	10400.00	58.11	68.20	-10.09	44.34	13.77	Peak	100	291
7	15600.00	46.74	54.00	-7.26	31.80	14.94	Average	100	342
8	15600.00	59.83	74.00	-14.17	44.89	14.94	Peak	100	342

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

Modulation	VHT20	Test Freq. (MHz)	5240
Polarization	Horizontal		
Level (dBuV/m)			

Modulation	VHT20	Test Freq. (MHz)	5240
Polarization	Vertical		
Level (dBuV/m)			

Modulation	VHT20	Test Freq. (MHz)	5260
Polarization	Horizontal		

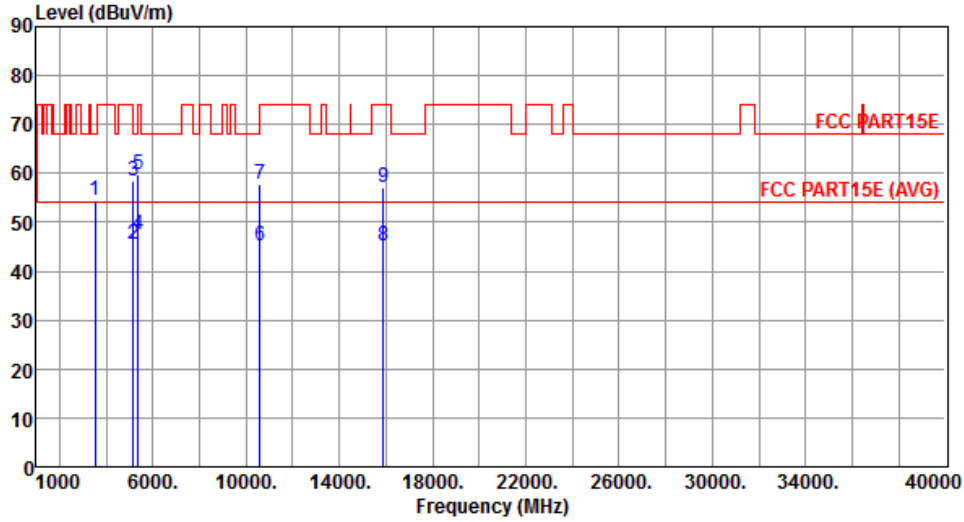


	Freq. MHz	Emission level dBUV/m	Limit dBUV/m	Margin dB	SA reading dBUV	Factor dB	Remark	ANT High cm	Turn Table deg
1	5150.00	45.40	54.00	-8.60	40.38	5.02	Average	141	345
2	5150.00	58.26	74.00	-15.74	53.24	5.02	Peak	141	345
3	5350.00	46.64	54.00	-7.36	41.33	5.31	Average	141	345
4	5350.00	59.03	74.00	-14.97	53.72	5.31	Peak	141	345
5	10520.00	57.59	68.20	-10.61	43.75	13.84	Peak	195	50
6	15780.00	45.01	54.00	-8.99	30.14	14.87	Average	100	332
7	15780.00	57.30	74.00	-16.70	42.43	14.87	Peak	100	332

Note 1: Emission Level (dBUV/m) = SA Reading (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)	5260
Polarization	Vertical		
Level (dBuV/m)			

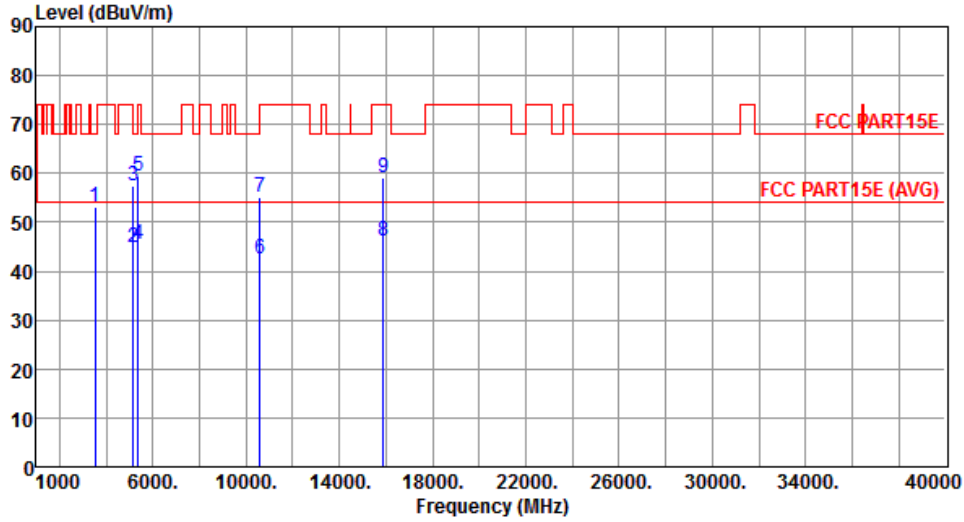
Modulation	VHT20	Test Freq. (MHz)	5300
Polarization	Horizontal		



	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	3533.00	54.46	68.20	-13.74	53.44	1.02	Peak	100	21
2	5150.00	45.56	54.00	-8.44	40.54	5.02	Average	142	347
3	5150.00	58.44	74.00	-15.56	53.42	5.02	Peak	142	347
4	5350.00	47.56	54.00	-6.44	42.25	5.31	Average	142	347
5	5350.00	59.91	74.00	-14.09	54.60	5.31	Peak	142	347
6	10600.00	45.25	54.00	-8.75	31.33	13.92	Average	196	48
7	10600.00	57.67	74.00	-16.33	43.75	13.92	Peak	196	48
8	15900.00	45.15	54.00	-8.85	30.31	14.84	Average	100	336
9	15900.00	57.09	74.00	-16.91	42.25	14.84	Peak	100	336

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

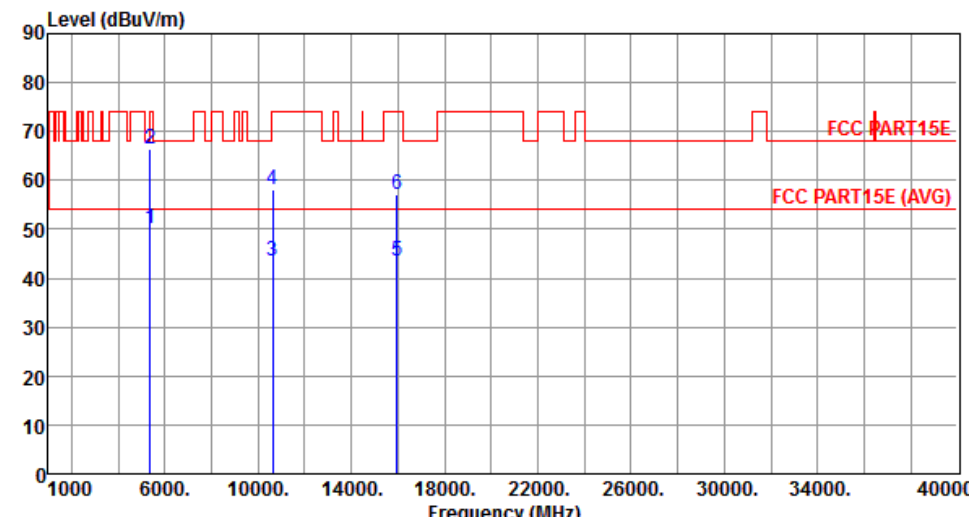
Modulation	VHT20	Test Freq. (MHz)	5300
Polarization	Vertical		



	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	3533.00	53.23	68.20	-14.97	52.21	1.02	Peak	100	308
2	5150.00	44.81	54.00	-9.19	39.79	5.02	Average	132	116
3	5150.00	57.39	74.00	-16.61	52.37	5.02	Peak	132	116
4	5350.00	45.61	54.00	-8.39	40.30	5.31	Average	132	116
5	5350.00	59.34	74.00	-14.66	54.03	5.31	Peak	132	116
6	10600.00	42.51	54.00	-11.49	28.59	13.92	Average	171	295
7	10600.00	55.23	74.00	-18.77	41.31	13.92	Peak	171	295
8	15900.00	46.22	54.00	-7.78	31.38	14.84	Average	100	337
9	15900.00	59.11	74.00	-14.89	44.27	14.84	Peak	100	337

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

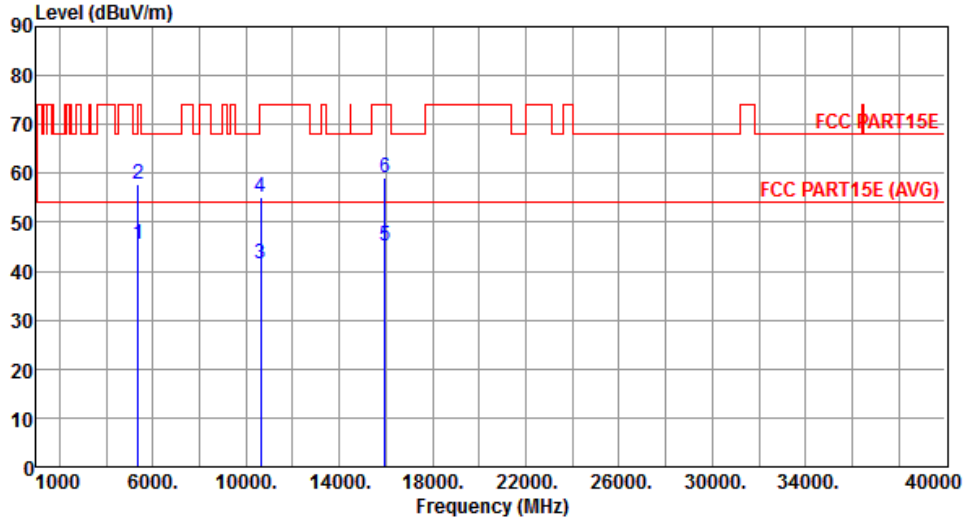
Modulation	VHT20	Test Freq. (MHz)	5320
Polarization	Horizontal		



	Freq. MHz	Emission level dBUV/m	Limit dBUV/m	Margin dB	SA reading dBUV	Factor dB	Remark	ANT High cm	Turn Table deg
1	5350.00	49.99	54.00	-4.01	44.68	5.31	Average	146	338
2	5350.00	66.59	74.00	-7.41	61.28	5.31	Peak	146	338
3	10640.00	43.51	54.00	-10.49	29.55	13.96	Average	222	50
4	10640.00	58.19	74.00	-15.81	44.23	13.96	Peak	222	50
5	15960.00	43.37	54.00	-10.63	28.56	14.81	Average	100	333
6	15960.00	57.25	74.00	-16.75	42.44	14.81	Peak	100	333

Note 1: Emission Level (dBUV/m) = SA Reading (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)	5320
Polarization	Vertical		

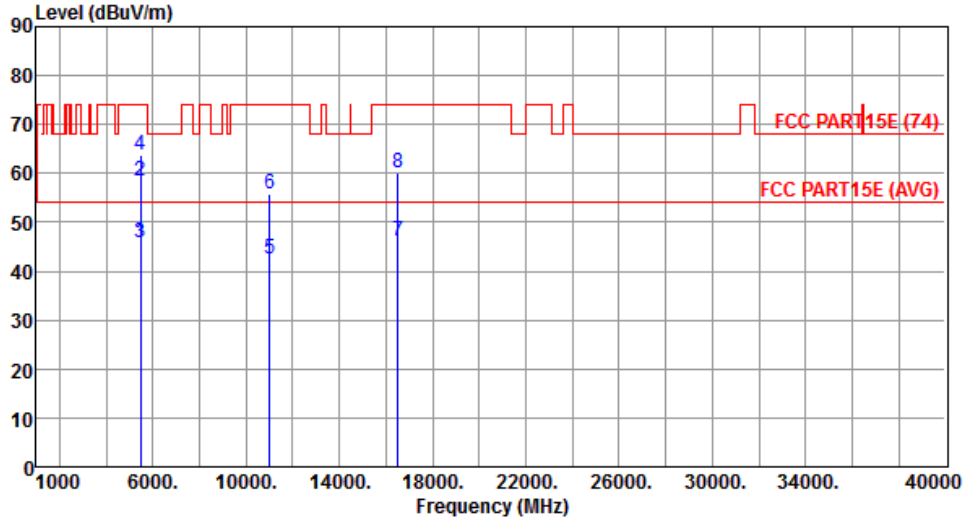


	Freq. MHz	Emission level dBUV/m	Limit dBUV/m	Margin dB	SA reading dBUV	Factor dB	Remark	ANT High cm	Turn Table deg
1	5350.00	45.63	54.00	-8.37	40.32	5.31	Average	143	67
2	5350.00	57.75	74.00	-16.25	52.44	5.31	Peak	143	67
3	10640.00	41.50	54.00	-12.50	27.54	13.96	Average	148	299
4	10640.00	55.06	74.00	-18.94	41.10	13.96	Peak	148	299
5	15960.00	45.05	54.00	-8.95	30.24	14.81	Average	100	330
6	15960.00	59.08	74.00	-14.92	44.27	14.81	Peak	100	330

Note 1: Emission Level (dBUV/m) = SA Reading (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)	5500
Polarization	Horizontal		
Level (dBuV/m)			

Modulation	VHT20	Test Freq. (MHz)	5500
Polarization	Vertical		

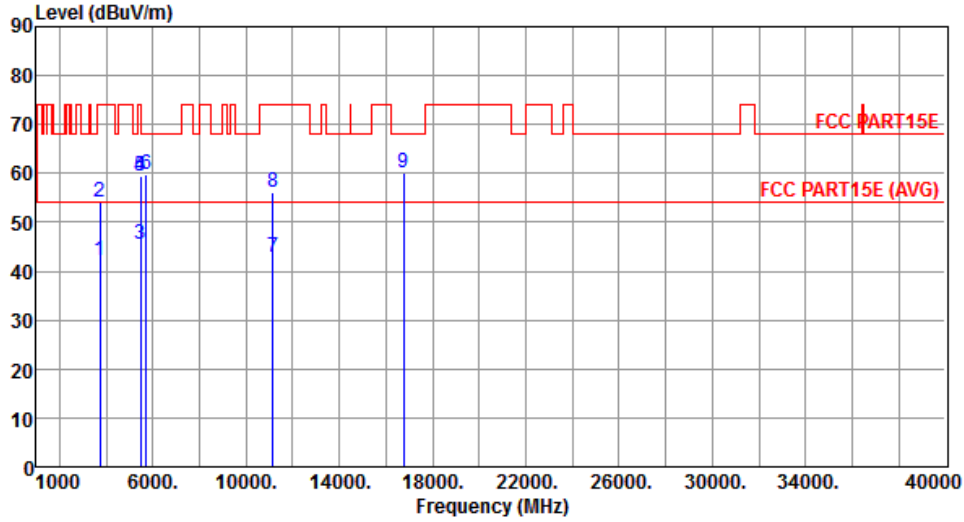


	Freq. MHz	Emission level dBUV/m	Limit dBUV/m	Margin dB	SA reading dBUV	Factor dB	Remark	ANT High cm	Turn Table deg
1	5460.00	45.68	54.00	-8.32	40.22	5.46	Average	137	78
2	5460.00	58.51	74.00	-15.49	53.05	5.46	Peak	137	78
3	5470.00	45.86	54.00	-8.14	40.39	5.47	Average	137	78
4	5470.00	63.89	74.00	-10.11	58.42	5.47	Peak	137	78
5	11000.00	42.56	54.00	-11.44	28.26	14.30	Average	100	168
6	11000.00	55.83	74.00	-18.17	41.53	14.30	Peak	100	168
7	16500.00	46.26	54.00	-7.74	30.42	15.84	Average	100	321
8	16500.00	60.07	74.00	-13.93	44.23	15.84	Peak	100	321

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

Modulation	VHT20	Test Freq. (MHz)	5580
Polarization	Horizontal		
Level (dBuV/m) </			

Modulation	VHT20	Test Freq. (MHz)	5580
Polarization	Vertical		

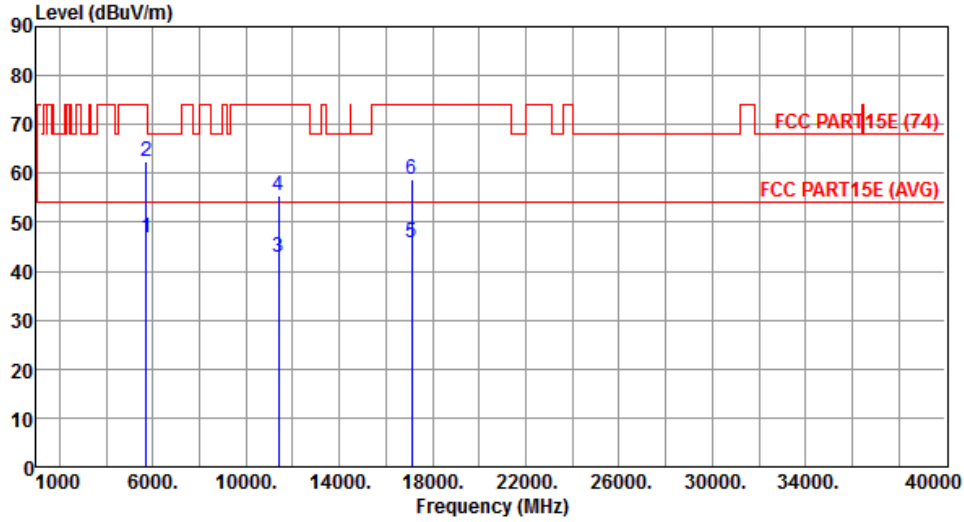


	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	3720.00	42.06	54.00	-11.94	40.46	1.60	Average	100	134
2	3720.00	54.01	74.00	-19.99	52.41	1.60	Peak	100	134
3	5460.00	45.62	54.00	-8.38	40.16	5.46	Average	139	78
4	5460.00	59.34	74.00	-14.66	53.88	5.46	Peak	139	78
5	5470.00	59.43	68.20	-8.77	53.96	5.47	Peak	139	78
6	5725.00	59.69	68.20	-8.51	53.88	5.81	Peak	139	78
7	11160.00	43.00	54.00	-11.00	28.56	14.44	Average	150	292
8	11160.00	55.99	74.00	-18.01	41.55	14.44	Peak	150	292
9	16740.00	60.11	68.20	-8.09	44.14	15.97	Peak	100	328

Note 1: Emission Level (dBuV/m) = SA Reading (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)	5700
Polarization	Horizontal		
Level (dBuV/m) </			

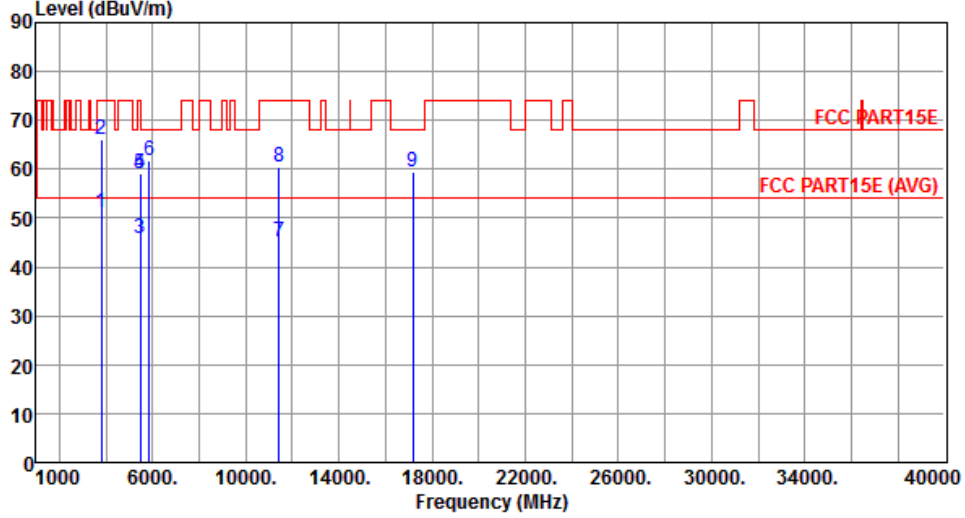
Modulation	VHT20	Test Freq. (MHz)	5700
Polarization	Vertical		



	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	5725.00	46.67	54.00	-7.33	40.86	5.81	Average	139	68
2	5725.00	62.51	74.00	-11.49	56.70	5.81	Peak	139	68
3	11400.00	42.88	54.00	-11.12	28.23	14.65	Average	100	168
4	11400.00	55.37	74.00	-18.63	40.72	14.65	Peak	100	168
5	17100.00	45.89	54.00	-8.11	29.38	16.51	Average	100	320
6	17100.00	58.67	74.00	-15.33	42.16	16.51	Peak	100	320

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

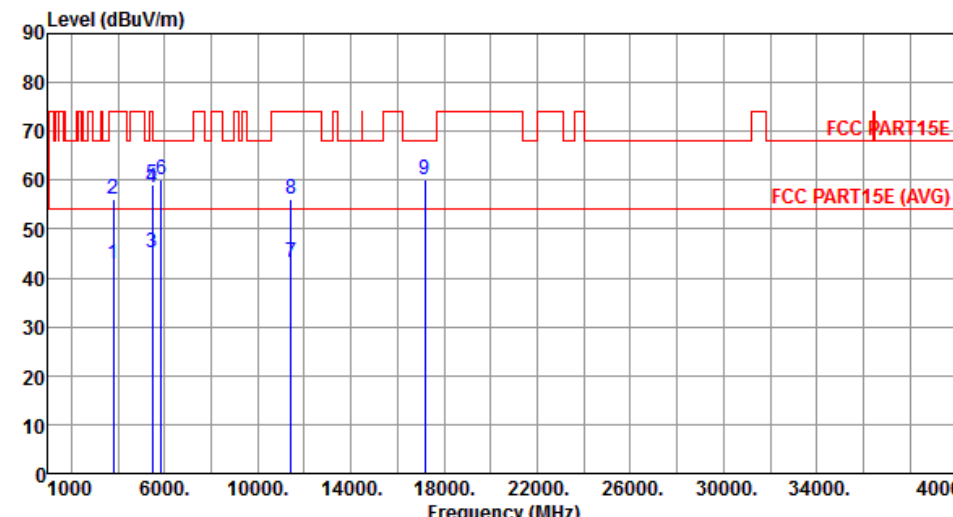
Modulation	VHT20	Test Freq. (MHz)	5720
Polarization	Horizontal		



	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	3813.33	51.07	54.00	-2.93	49.17	1.90	Average	202	200
2	3813.33	65.97	74.00	-8.03	64.07	1.90	Peak	202	200
3	5460.00	45.69	54.00	-8.31	40.23	5.46	Average	133	345
4	5460.00	59.08	74.00	-14.92	53.62	5.46	Peak	133	345
5	5470.00	59.27	68.20	-8.93	53.80	5.47	Peak	133	345
6	5850.00	61.72	68.20	-6.48	55.73	5.99	Peak	133	345
7	11440.00	45.32	54.00	-8.68	30.63	14.69	Average	190	42
8	11440.00	60.44	74.00	-13.56	45.75	14.69	Peak	190	42
9	17160.00	59.43	68.20	-8.77	42.67	16.76	Peak	100	344

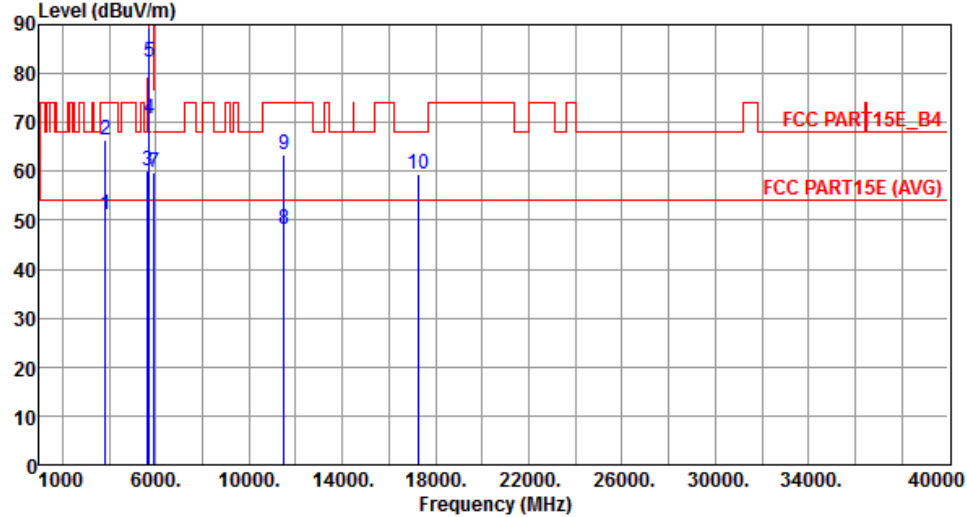
Note 1: Emission Level (dBuV/m) = SA Reading (dBuV/m) + Factor* (dB)
*Factor includes antenna factor , cable loss and amplifier gain
Note 2: Margin (dB) = Emission level (dBuV/m) – Limit (dBuV/m).

Modulation	VHT20	Test Freq. (MHz)	5720
Polarization	Vertical		



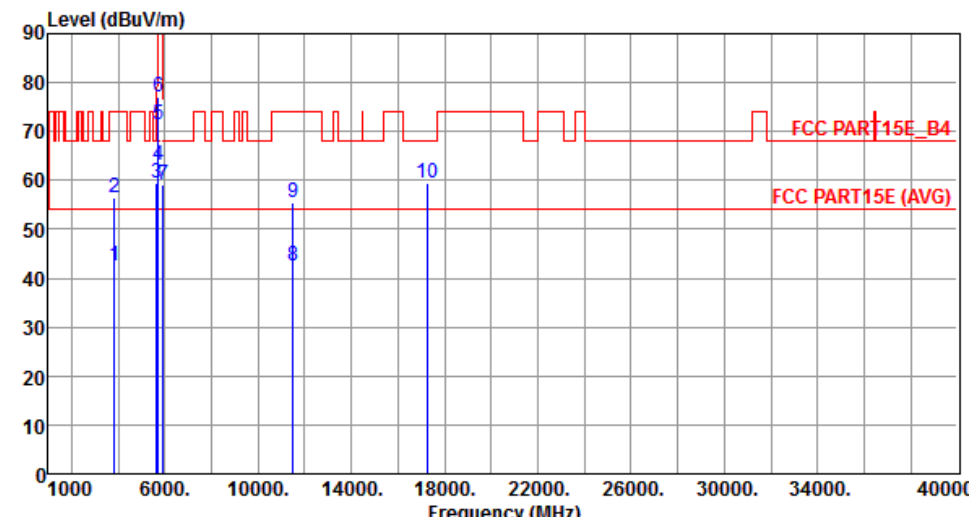
	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	3813.33	42.88	54.00	-11.12	40.98	1.90	Average	151	258
2	3813.33	56.13	74.00	-17.87	54.23	1.90	Peak	151	258
3	5460.00	45.02	54.00	-8.98	39.56	5.46	Average	192	113
4	5460.00	58.61	74.00	-15.39	53.15	5.46	Peak	192	113
5	5470.00	58.95	68.20	-9.25	53.48	5.47	Peak	192	113
6	5850.00	60.17	68.20	-8.03	54.18	5.99	Peak	192	113
7	11440.00	43.22	54.00	-10.78	28.53	14.69	Average	152	296
8	11440.00	56.16	74.00	-17.84	41.47	14.69	Peak	152	296
9	17160.00	60.20	68.20	-8.00	43.44	16.76	Peak	100	312

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

Modulation	VHT20	Test Freq. (MHz)	5745						
Polarization	Horizontal								
									
	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	3830.00	51.25	54.00	-2.75	49.29	1.96	Average	190	204
2	3830.00	66.36	74.00	-7.64	64.40	1.96	Peak	190	204
3	5650.00	60.13	68.20	-8.07	54.44	5.69	Peak	139	340
4	5700.00	70.78	105.20	-34.42	65.01	5.77	Peak	139	340
5	5720.00	82.46	110.80	-28.34	76.67	5.79	Peak	139	340
6	5725.00	89.33	122.20	-32.87	83.52	5.81	Peak	139	340
7	5925.00	59.75	68.20	-8.45	53.66	6.09	Peak	139	340
8	11490.00	48.29	54.00	-5.71	33.56	14.73	Average	251	333
9	11490.00	63.45	74.00	-10.55	48.72	14.73	Peak	251	333
10	17235.00	59.60	68.20	-8.60	42.53	17.07	Peak	100	42

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

Modulation	VHT20	Test Freq. (MHz)	5745
Polarization	Vertical		



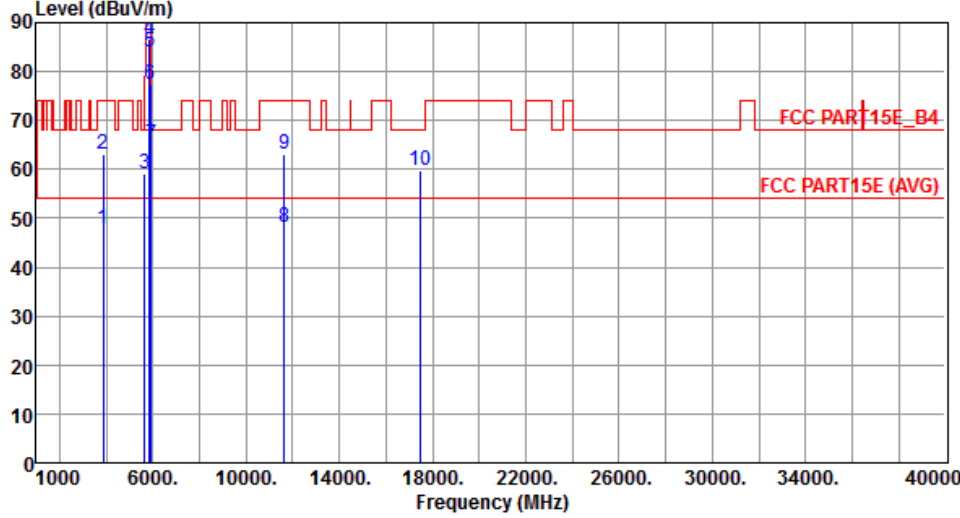
	Freq. MHz	Emission level dBUV/m	Limit dBUV/m	Margin dB	SA reading dBUV	Factor dB	Remark	ANT High cm	Turn Table deg
1	3830.00	42.52	54.00	-11.48	40.56	1.96	Average	154	273
2	3830.00	56.37	74.00	-17.63	54.41	1.96	Peak	154	273
3	5650.00	59.46	68.20	-8.74	53.77	5.69	Peak	161	112
4	5700.00	63.09	105.20	-42.11	57.32	5.77	Peak	161	112
5	5720.00	71.25	110.80	-39.55	65.46	5.79	Peak	161	112
6	5725.00	77.03	122.20	-45.17	71.22	5.81	Peak	161	112
7	5925.00	59.23	68.20	-8.97	53.14	6.09	Peak	161	112
8	11490.00	42.66	54.00	-11.34	27.93	14.73	Average	140	18
9	11490.00	55.50	74.00	-18.50	40.77	14.73	Peak	140	18
10	17235.00	59.50	68.20	-8.70	42.43	17.07	Peak	100	15

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

Modulation	VHT20	Test Freq. (MHz)	5785
Polarization	Horizontal		
Level (dBuV/m) </			

Modulation	VHT20	Test Freq. (MHz)	5785
Polarization	Vertical		
Level (dBuV/m)			

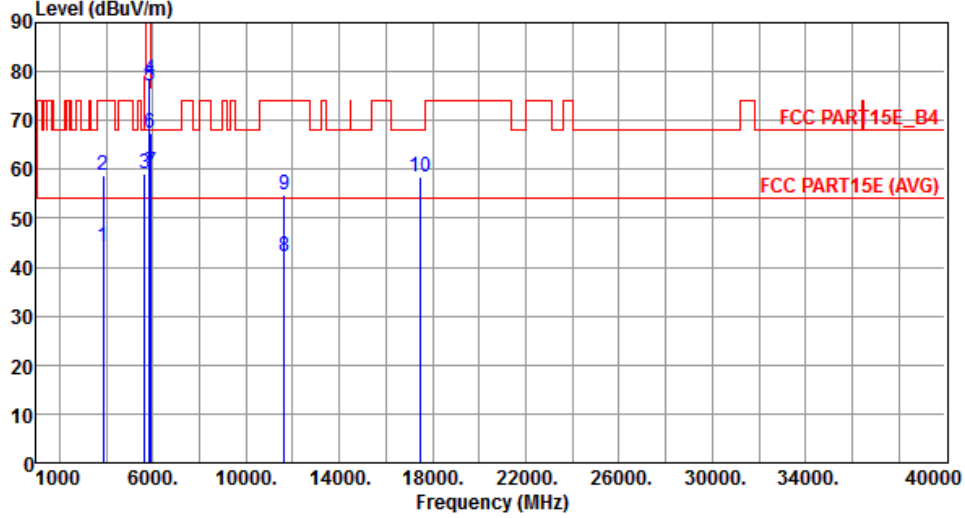
Modulation	VHT20	Test Freq. (MHz)	5825
Polarization	Horizontal		



	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	3883.33	47.83	54.00	-6.17	45.69	2.14	Average	191	16
2	3883.33	62.94	74.00	-11.06	60.80	2.14	Peak	191	16
3	5650.00	59.24	68.20	-8.96	53.55	5.69	Peak	144	343
4	5850.00	86.79	122.20	-35.41	80.80	5.99	Peak	144	343
5	5855.00	84.06	110.80	-26.74	78.06	6.00	Peak	144	343
6	5875.00	77.51	105.20	-27.69	71.49	6.02	Peak	144	343
7	5925.00	64.95	68.20	-3.25	58.86	6.09	Peak	144	343
8	11650.00	48.12	54.00	-5.88	33.68	14.44	Average	100	200
9	11650.00	63.17	74.00	-10.83	48.73	14.44	Peak	100	200
10	17475.00	59.71	68.20	-8.49	41.67	18.04	Peak	100	56

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

Modulation	VHT20	Test Freq. (MHz)	5825
Polarization	Vertical		

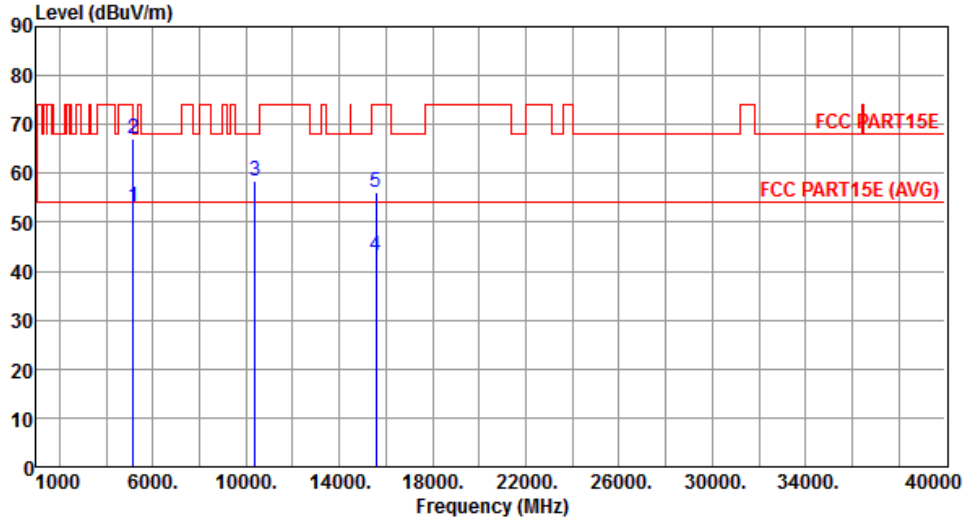


	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	3883.33	44.04	54.00	-9.96	41.90	2.14	Average	210	96
2	3883.33	58.70	74.00	-15.30	56.56	2.14	Peak	210	96
3	5650.00	59.13	68.20	-9.07	53.44	5.69	Peak	145	138
4	5850.00	78.21	122.20	-43.99	72.22	5.99	Peak	145	138
5	5855.00	77.12	110.80	-33.68	71.12	6.00	Peak	145	138
6	5875.00	67.34	105.20	-37.86	61.32	6.02	Peak	145	138
7	5925.00	59.54	68.20	-8.66	53.45	6.09	Peak	145	138
8	11650.00	42.09	54.00	-11.91	27.65	14.44	Average	155	22
9	11650.00	54.79	74.00	-19.21	40.35	14.44	Peak	155	22
10	17475.00	58.56	68.20	-9.64	40.52	18.04	Peak	100	6

Note 1: Emission Level (dBuV/m) = SA Reading (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 VHT40

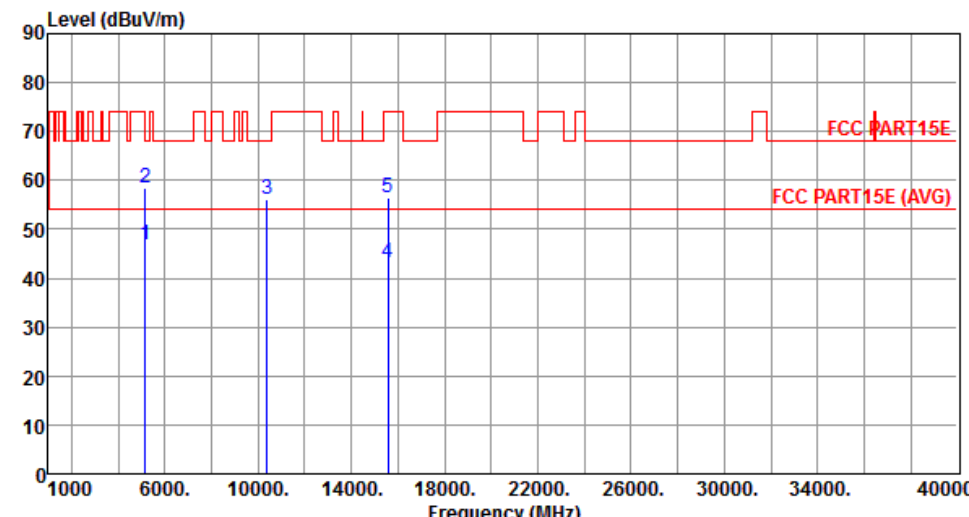
Modulation	VHT40	Test Freq. (MHz)	5190
Polarization	Horizontal		



	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	5150.00	52.99	54.00	-1.01	47.97	5.02	Average	141	355
2	5150.00	67.15	74.00	-6.85	62.13	5.02	Peak	141	355
3	10380.00	58.38	68.20	-9.82	44.63	13.75	Peak	180	48
4	15570.00	43.07	54.00	-10.93	28.11	14.96	Average	100	312
5	15570.00	56.16	74.00	-17.84	41.20	14.96	Peak	100	312

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

Modulation	VHT40	Test Freq. (MHz)	5190
Polarization	Vertical		



	Freq. MHz	Emission level dBUV/m	Limit dBUV/m	Margin dB	SA reading dBUV	Factor dB	Remark	ANT High cm	Turn Table deg
1	5150.00	46.82	54.00	-7.18	41.80	5.02	Average	146	116
2	5150.00	58.50	74.00	-15.50	53.48	5.02	Peak	146	116
3	10380.00	56.11	68.20	-12.09	42.36	13.75	Peak	140	310
4	15570.00	43.32	54.00	-10.68	28.36	14.96	Average	100	311
5	15570.00	56.51	74.00	-17.49	41.55	14.96	Peak	100	311

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

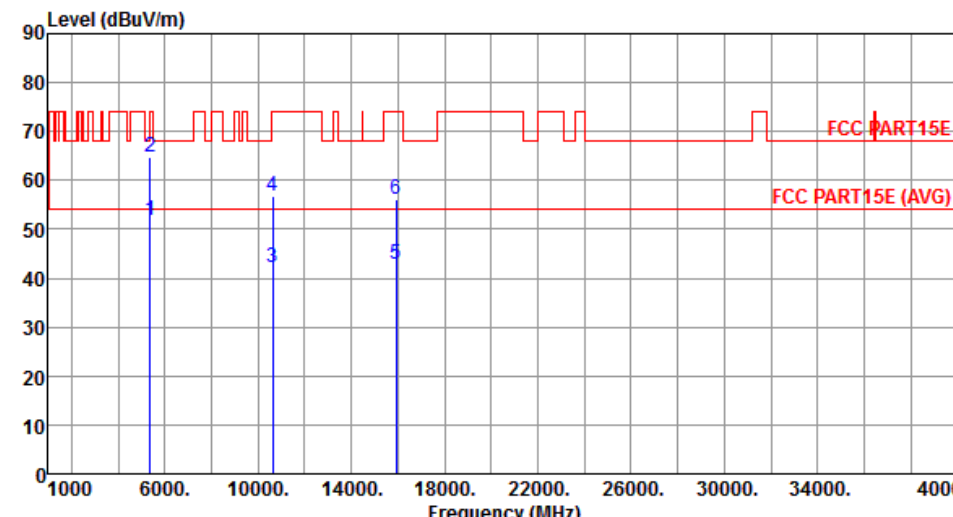
Modulation	VHT40	Test Freq. (MHz)	5230
Polarization	Horizontal		
Level (dBuV/m) <			

Modulation	VHT40	Test Freq. (MHz)	5230
Polarization	Vertical		
Level (dBuV/m)			

Modulation	VHT40	Test Freq. (MHz)	5270
Polarization	Horizontal		
Level (dBuV/m)			

Modulation	VHT40	Test Freq. (MHz)	5270
Polarization	Vertical		
Level (dBuV/m) <			

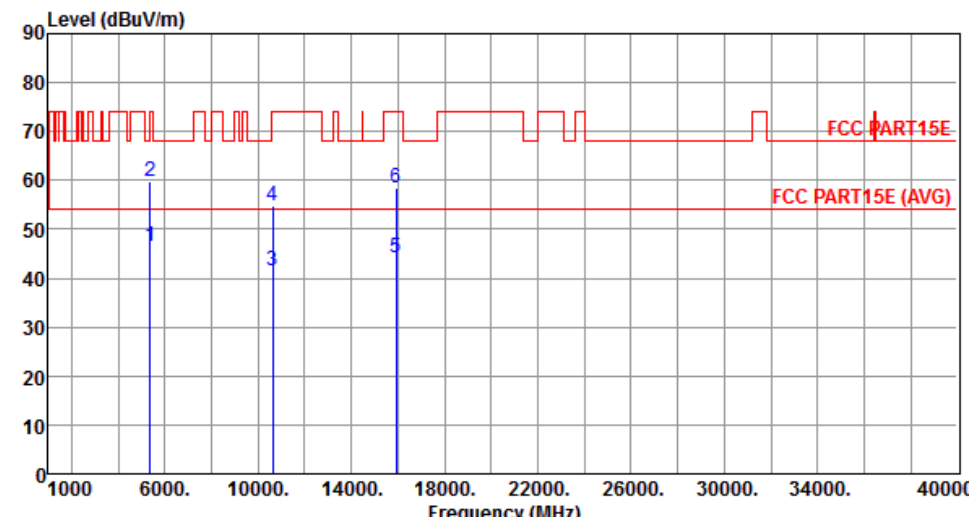
Modulation	VHT40	Test Freq. (MHz)	5310
Polarization	Horizontal		



	Freq. MHz	Emission level dBUV/m	Limit dBUV/m	Margin dB	SA reading dBUV	Factor dB	Remark	ANT High cm	Turn Table deg
1	5350.00	51.82	54.00	-2.18	46.51	5.31	Average	143	344
2	5350.00	64.83	74.00	-9.17	59.52	5.31	Peak	143	344
3	10620.00	42.10	54.00	-11.90	28.17	13.93	Average	221	48
4	10620.00	56.69	74.00	-17.31	42.76	13.93	Peak	221	48
5	15930.00	42.95	54.00	-11.05	28.13	14.82	Average	100	331
6	15930.00	56.29	74.00	-17.71	41.47	14.82	Peak	100	331

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

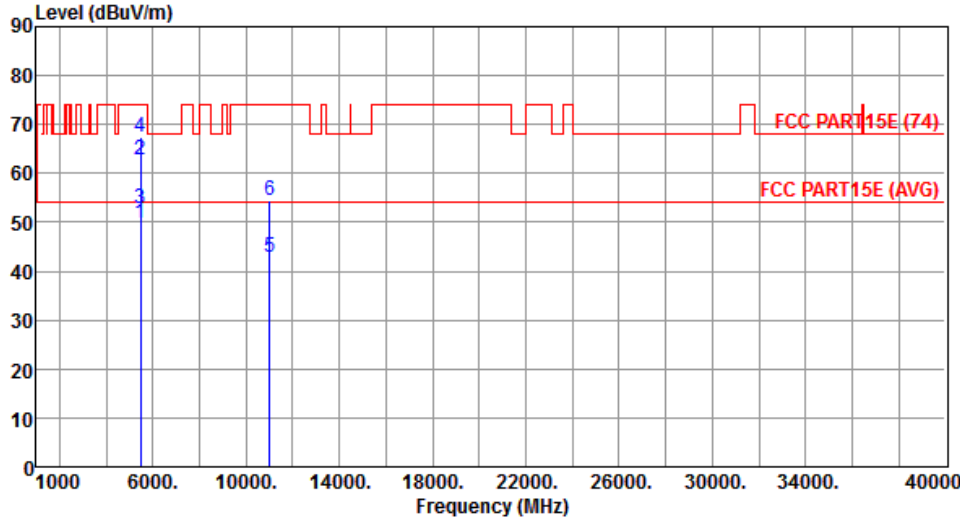
Modulation	VHT40	Test Freq. (MHz)	5310
Polarization	Vertical		



	Freq. MHz	Emission level dBUV/m	Limit dBUV/m	Margin dB	SA reading dBUV	Factor dB	Remark	ANT High cm	Turn Table deg
1	5350.00	46.55	54.00	-7.45	41.24	5.31	Average	144	133
2	5350.00	59.80	74.00	-14.20	54.49	5.31	Peak	144	133
3	10620.00	41.62	54.00	-12.38	27.69	13.93	Average	100	302
4	10620.00	54.71	74.00	-19.29	40.78	13.93	Peak	100	302
5	15930.00	44.18	54.00	-9.82	29.36	14.82	Average	100	334
6	15930.00	58.55	74.00	-15.45	43.73	14.82	Peak	100	334

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

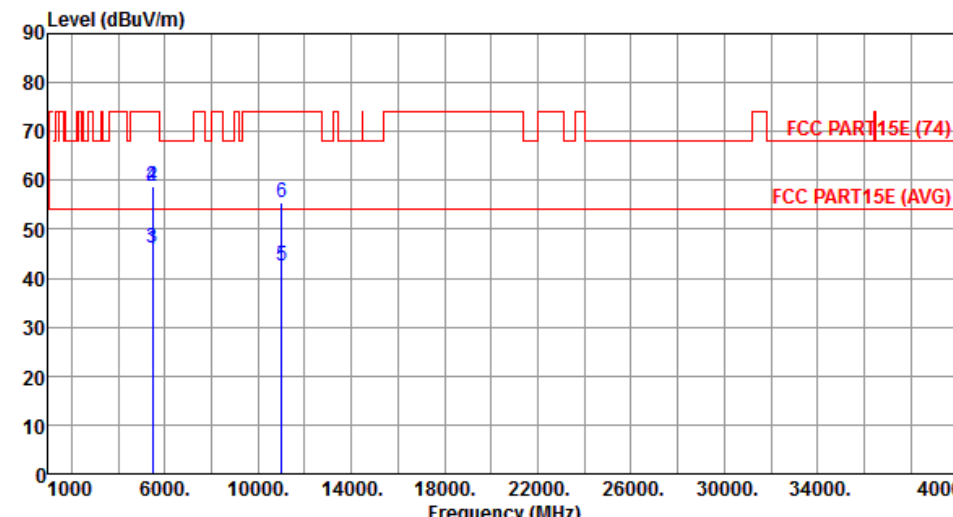
Modulation	VHT40	Test Freq. (MHz)	5510
Polarization	Horizontal		



	Freq. MHz	Emission level dBUV/m	Limit dBUV/m	Margin dB	SA reading dBUV	Factor dB	Remark	ANT High cm	Turn Table deg
1	5460.00	49.96	54.00	-4.04	44.50	5.46	Average	142	343
2	5460.00	62.68	74.00	-11.32	57.22	5.46	Peak	142	343
3	5470.00	52.84	54.00	-1.16	47.37	5.47	Average	142	343
4	5470.00	67.56	74.00	-6.44	62.09	5.47	Peak	142	343
5	11020.00	42.97	54.00	-11.03	28.65	14.32	Average	155	38
6	11020.00	54.59	74.00	-19.41	40.27	14.32	Peak	155	38

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

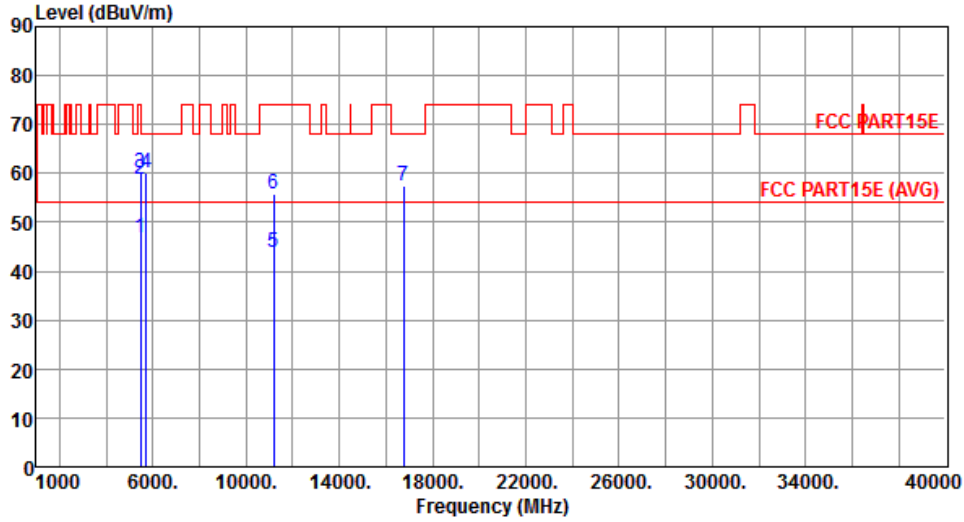
Modulation	VHT40	Test Freq. (MHz)	5510
Polarization	Vertical		



	Freq. MHz	Emission level dBUV/m	Limit dBUV/m	Margin dB	SA reading dBUV	Factor dB	Remark	ANT High cm	Turn Table deg
1	5460.00	45.67	54.00	-8.33	40.21	5.46	Average	141	132
2	5460.00	58.85	74.00	-15.15	53.39	5.46	Peak	141	132
3	5470.00	46.01	54.00	-7.99	40.54	5.47	Average	141	132
4	5470.00	58.63	74.00	-15.37	53.16	5.47	Peak	141	132
5	11020.00	42.42	54.00	-11.58	28.10	14.32	Average	100	165
6	11020.00	55.56	74.00	-18.44	41.24	14.32	Peak	100	165

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

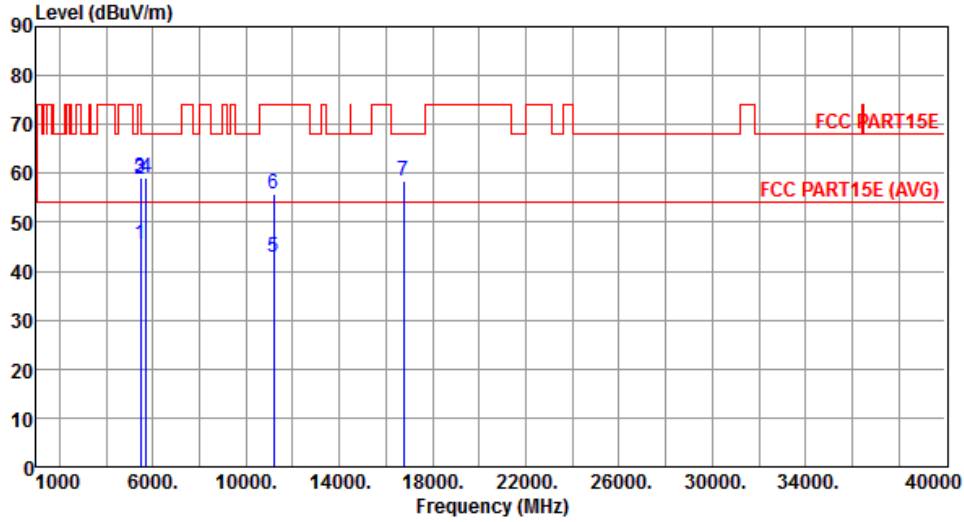
Modulation	VHT40	Test Freq. (MHz)	5590
Polarization	Horizontal		



	Freq. MHz	Emission level dBUV/m	Limit dBUV/m	Margin dB	SA reading dBUV	Factor dB	Remark	ANT High cm	Turn Table deg
1	5460.00	46.69	54.00	-7.31	41.23	5.46	Average	135	345
2	5460.00	58.92	74.00	-15.08	53.46	5.46	Peak	135	345
3	5470.00	60.20	68.20	-8.00	54.73	5.47	Peak	135	345
4	5725.00	60.17	68.20	-8.03	54.36	5.81	Peak	135	345
5	11180.00	43.68	54.00	-10.32	29.22	14.46	Average	148	338
6	11180.00	55.75	74.00	-18.25	41.29	14.46	Peak	148	338
7	16770.00	57.42	68.20	-10.78	41.44	15.98	Peak	100	343

Note 1: Emission Level (dBUV/m) = SA Reading (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)	5590
Polarization	Vertical		

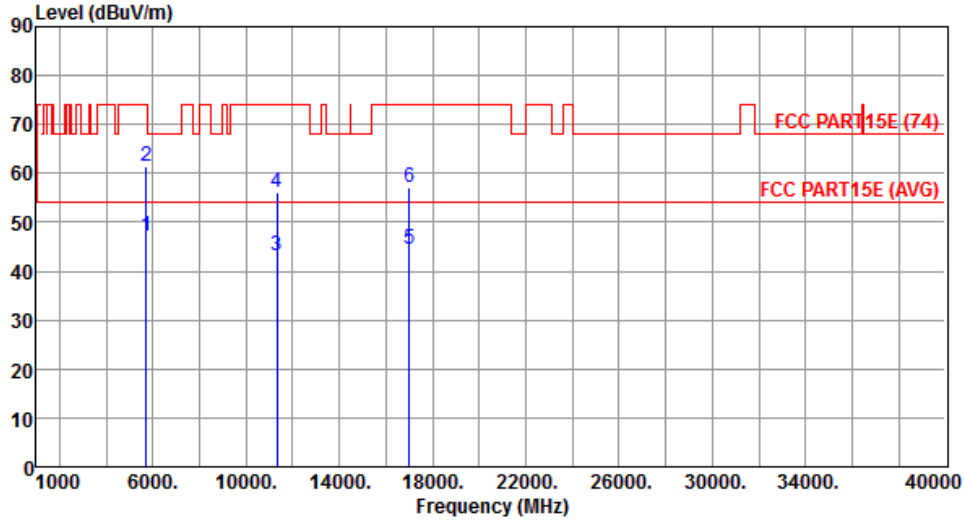


	Freq. MHz	Emission level dBUV/m	Limit dBUV/m	Margin dB	SA reading dBUV	Factor dB	Remark	ANT High cm	Turn Table deg
1	5460.00	45.58	54.00	-8.42	40.12	5.46	Average	135	138
2	5460.00	58.93	74.00	-15.07	53.47	5.46	Peak	135	138
3	5470.00	59.03	68.20	-9.17	53.56	5.47	Peak	135	138
4	5725.00	59.09	68.20	-9.11	53.28	5.81	Peak	135	138
5	11180.00	42.70	54.00	-11.30	28.24	14.46	Average	145	288
6	11180.00	55.92	74.00	-18.08	41.46	14.46	Peak	145	288
7	16770.00	58.46	68.20	-9.74	42.48	15.98	Peak	100	316

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

Modulation	VHT40	Test Freq. (MHz)	5670
Polarization	Horizontal		
Level (dBuV/m) </			

Modulation	VHT40	Test Freq. (MHz)	5670
Polarization	Vertical		



	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	5725.00	47.02	54.00	-6.98	41.21	5.81	Average	155	141
2	5725.00	61.31	74.00	-12.69	55.50	5.81	Peak	155	141
3	11340.00	43.01	54.00	-10.99	28.41	14.60	Average	100	165
4	11340.00	56.08	74.00	-17.92	41.48	14.60	Peak	100	165
5	17010.00	44.39	54.00	-9.61	28.24	16.15	Average	100	323
6	17010.00	57.20	74.00	-16.80	41.05	16.15	Peak	100	323

Note 1: Emission Level (dBuV/m) = SA Reading (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)	5710
Polarization	Horizontal		
Level (dBuV/m) </			