FCC C2PC Test Report

FCC ID	:	**I88NWA5123-ACHD**
Equipment	:	**802.11ac Wave2 Dual-Radio Unified Access Point**
Model No.	:	**NWA5123-AC HD**
Multiple Listing	:	**Refer to item 1.1.1 for more details**
Brand Name	:	**ZYXEL**
Applicant	:	**Zyxel Communications Corporation**
Address	:	**No.2 Industry East RD. IX, Hsinchu Science Park, Hsinchu 30075, Taiwan, R.O.C.**
Standard	:	**47 CFR FCC Part 15.407**
Received Date	:	**Jun. 22, 2017**
Tested Date	:	**Jul. 18 ~ Sep. 08, 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: **Approved by:**

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

Testing Laboratory 2732

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Release Record

Report No.	Version	Description	Issued Date
FR762202-03	Rev. 01	Initial issue	Oct. 17, 2017

Summary of Test Results

FCC Rules	Test Items	Measured	Result
15.207	Conducted Emissions	[dBuV]: 0.561MHz 39.96 (Margin -6.04dB) - AV	Pass
15.407(b) 15.209	Radiated Emissions	[dBuV/m at 3m]: 5430.00MHz 53.87 (Margin -0.13dB) - AV	Pass
15.407(a)	Emission Bandwidth	Meet the requirement of limit	Pass
15.407(a)	RF Output Power	Max Power [dBm]: ***Non-beamforming mode*** 5250~5350MHz: 22.45 5470~5725MHz: 23.31 ***Beamforming mode*** 5250~5350MHz: 21.08 5470~5725MHz: 21.12	Pass
15.407(a)	Peak Power Spectral Density	Meet the requirement of limit	Pass
15.407(g)	Frequency Stability	Meet the requirement of limit	Pass
15.203	Antenna Requirement	Meet the requirement of limit	Pass

1 General Description

1.1 Information

This report is issued as a FCC Class II Permissive Change. The modification is only concerned with adding 5250~5350MHz and 5470~5725 MHz band by software setting.

1.1.1 Product Details

The following models are provided to this EUT.

Brand Name	Model Name	Product Name
ZYXEL	NWA5123-AC HD	802.11ac Wave2 Dual-Radio Unified Access Point
	NWA1123-AC HD	802.11ac Wave2 Dual-Radio Access Point
	NAP113	802.11ac Wave2 Dual-Radio Nebula Cloud Managed Access Point
✦ All models are electrically identical, different model names are for marketing purpose. ✦ The above models, model **NWA5123-AC HD** 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**
5250-5350 5470-5725	a	5260-5320 5500-5720	52-64 [4] 100-144 [12]	3	6-54 Mbps
5250-5350 5470-5725	n (HT20)	5260-5320 5500-5720	52-64 [4] 100-144 [12]	3	MCS 0-23
5250-5350 5470-5725	n (HT40)	5270-5310 5510-5710	54-62 [2] 102-142 [6]	3	MCS 0-23
5250-5350 5470-5725	ac (VHT20)	5260-5320 5500-5720	52-64 [4] 100-144 [12]	3	MCS 0-9
5250-5350 5470-5725	ac (VHT40)	5270-5310 5510-5710	54-62 [2] 102-142 [6]	3	MCS 0-9
5250-5350 5470-5725	ac (VHT80)	5290 5530-5690	58 [1] 106-138 [3]	3	MCS 0-9
Note 1: RF output power specifies that Maximum Conducted Output Power. Note 2: 802.11a/n/ac uses a combination of OFDM-BPSK, QPSK, 16QAM, 64QAM, 256QAM modulation. Note 3: 802.11n/ac supports beamforming mode.					

1.1.3 Antenna Details

Type	Connector	Gain (dBi)	Remarks
Monopole	I-PEX	4	---
Monopole	I-PEX	4	---
Monopole	I-PEX	4	---

1.1.4 Power Supply Type of Equipment under Test (EUT)

Power Supply Type	From AC adapter: 12Vdc From PoE: 54Vdc

1.1.5 Accessories

Accessories		
No.	**Equipment**	**Description**
1	AC adapter	Brand: APD Model: WA-24Q12R Power Rating: I/P: 100-240Vac, 50-60Hz, 0.7A Max. O/P: 12Vdc, 2A Power Line: 1.4m non-shielded without core

1.1.6 Channel List

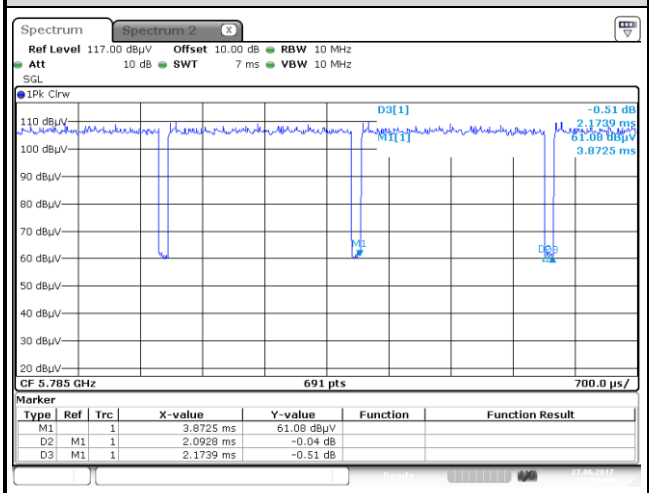
802.11 a / HT20 / VHT20		HT40 / VHT40	
Channel	**Frequency(MHz)**	**Channel**	**Frequency(MHz)**
52	5260	54	5270
56	5280	62	5310
60	5300	102	5510
64	5320	110	5550
100	5500	118	5590
104	5520	126	5630
108	5540	134	5670
112	5560	142	5710
116	5580	**VHT80**	
120	5600	58	5290
124	5620	106	5530
128	5640	122	5610
132	5660	138	5690
136	5680	---	---
140	5700	---	---
144	5720	---	---

1.1.7 Test Tool and Duty Cycle

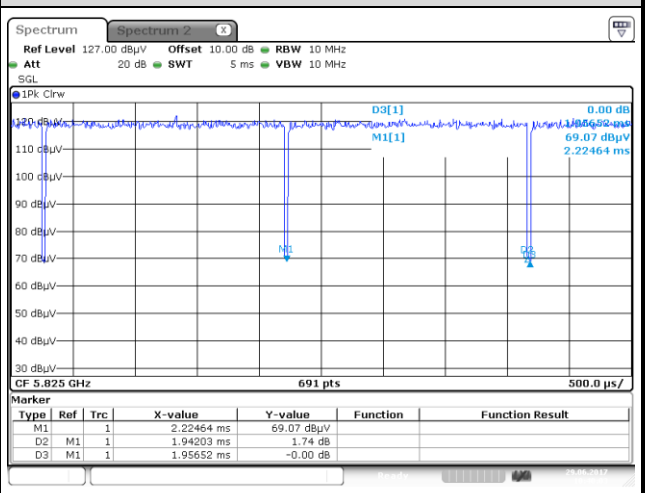
Test Tool	putty, V0.6				
Duty Cycle and Duty Factor	Mode	Non-beamforming		Beamforming	
		Duty cycle (%)	Duty factor (dB)	Duty cycle (%)	Duty factor (dB)
	11a	96.27%	0.17	---	---
	VHT20	99.26%	0.03	99.27%	0.03
	VHT40	98.22%	0.08	98.67%	0.06
	VHT80	95.97%	0.18	95.10%	0.22

Non-beamforming mode

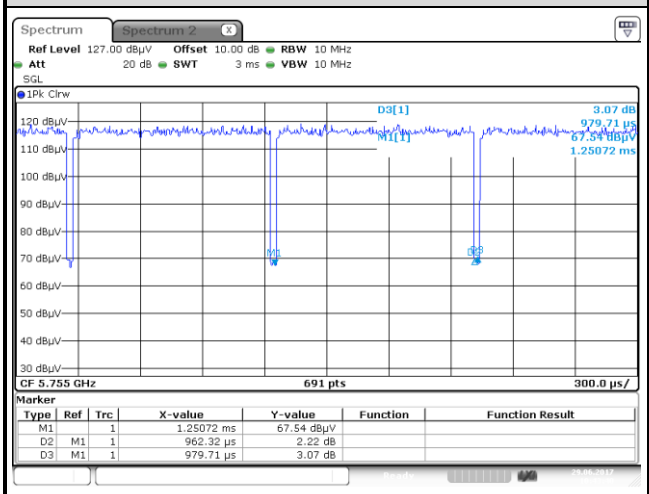
11a



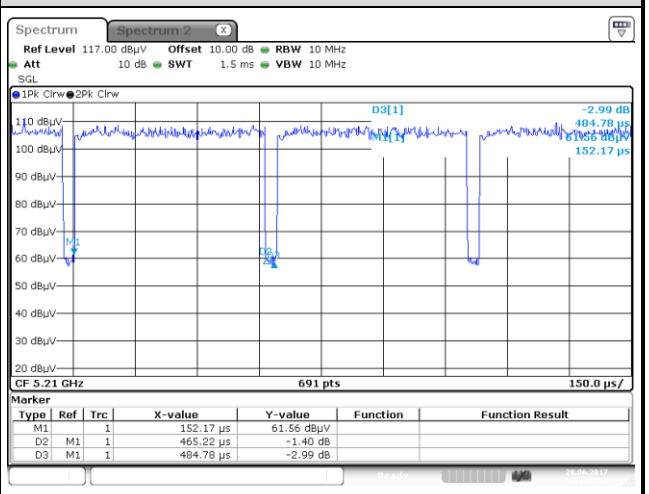
VHT20



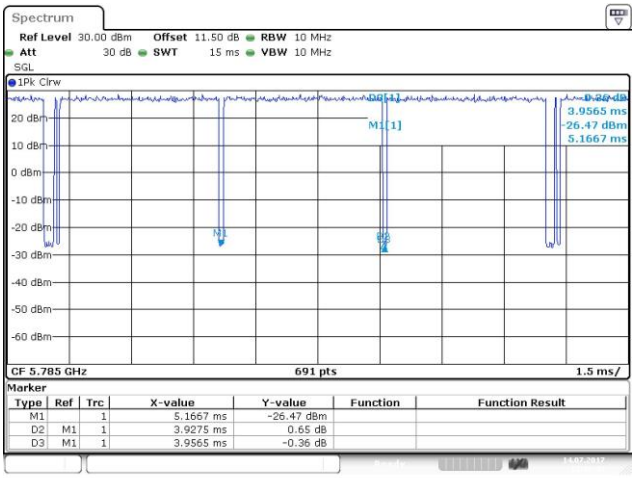
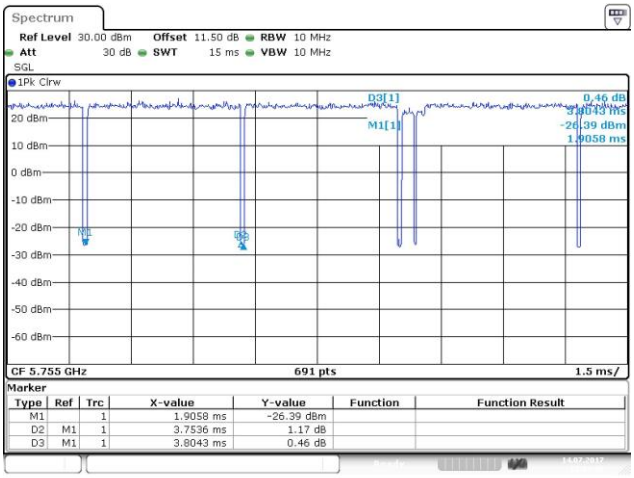
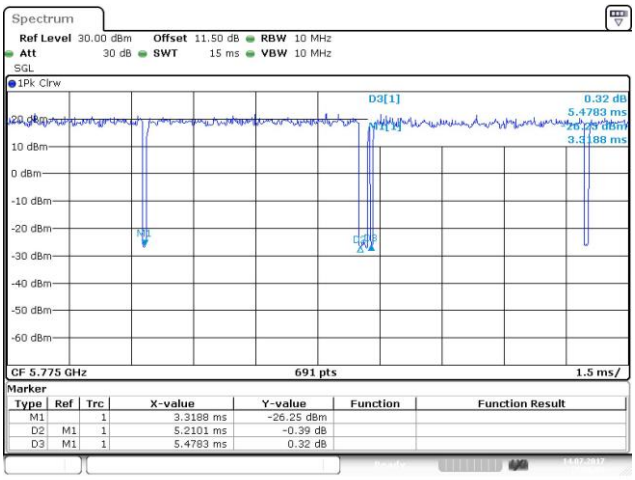
VHT40



VHT80



Beamforming mode

VHT20	VHT40
	
VHT80	**--**
	--

1.1.8 Power Setting

For Frequency band 5250~5350 MHz			
Modulation Mode	Test Frequency (MHz)	Power Set	
		Non-Beamforming	Beamforming
11a	5260	64	---
11a	5300	64	---
11a	5320	64	---
HT20	5260	64	62
HT20	5300	64	62
HT20	5320	64	62
HT40	5270	70	62
HT40	5310	67	56
VHT20	5260	64	62
VHT20	5300	64	62
VHT20	5320	64	62
VHT40	5270	70	62
VHT40	5310	67	56
VHT80	5290	56	50

For Frequency band 5470~5725 MHz			
Modulation Mode	Test Frequency (MHz)	Power Set	
		Non-Beamforming	Beamforming
11a	5500	68	---
11a	5580	64	---
11a	5700	68	---
HT20	5500	68	64
HT20	5580	64	60
HT20	5700	64	62
HT40	5510	70	64
HT40	5590	76	66
HT40	5670	72	66
VHT20	5500	68	64
VHT20	5580	64	60
VHT20	5700	64	62
VHT40	5510	70	64
VHT40	5590	76	66
VHT40	5670	72	66
VHT80	5530	58	54
VHT80	5610	70	66

Channel that extends across the 5.725 GHz boundary

For Frequency band 5470~5725 MHz			
Modulation Mode	Test Frequency (MHz)	Power Set	
		Non-Beamforming	Beamforming
11a	5720	68	---
HT20	5720	68	62
HT40	5710	74	66
VHT20	5720	68	62
VHT40	5710	74	66
VHT80	5690	80	66

1.2 Local Support Equipment List

Non-beamforming mode

Support Equipment List					
No.	**Equipment**	**Brand**	**Model**	**S/N**	**Signal cable / Length (m)**
1	Notebook	DELL	Latitude E6430	9ZFB4X1	RJ45, 10m non-shielded.
2	POE	ZYXEL	GS1900-8HP	---	---

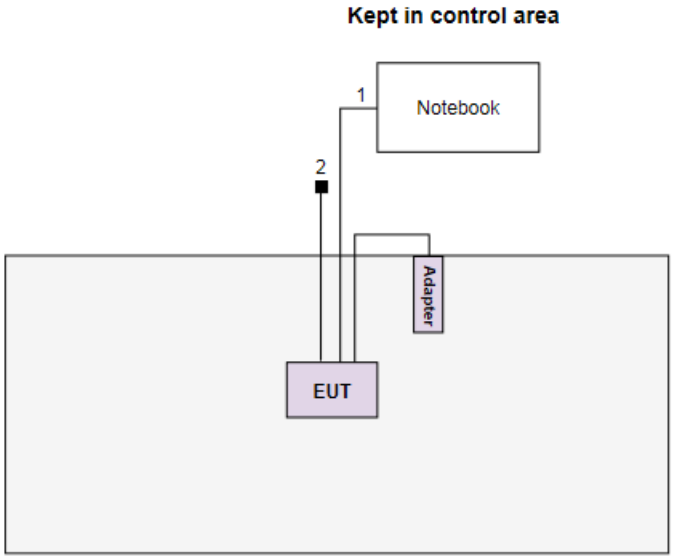
Beamforming mode

Support Equipment List					
No.	**Equipment**	**Brand**	**Model**	**S/N**	**Signal cable / Length (m)**
1	Notebook	DELL	Latitude E6430	9ZFB4X1	RJ45, 10m non-shielded.
2	Client	ASUS	PCE-AC68	---	---
3	POE	ZYXEL	GS1900-8HP	---	---

1.3 Test Setup Chart

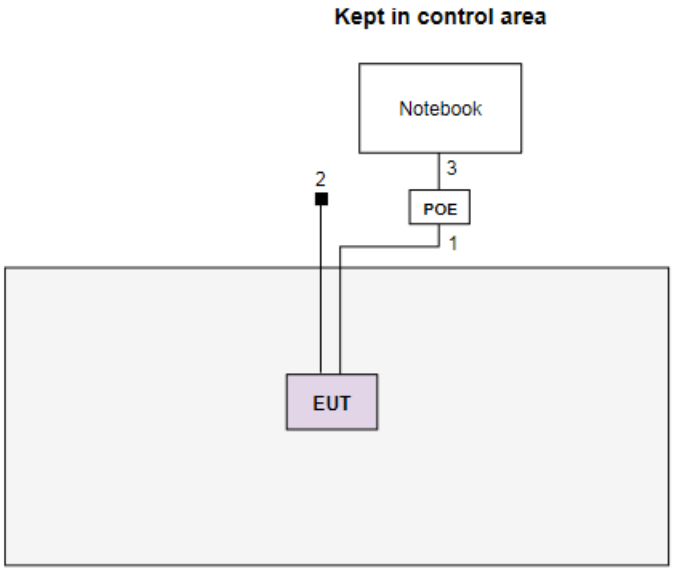
Non-beamforming mode

Test Setup Diagram (Adapter mode)



1. RJ45, 10m non-shielded
2. RJ45, 1m non-shielded with load

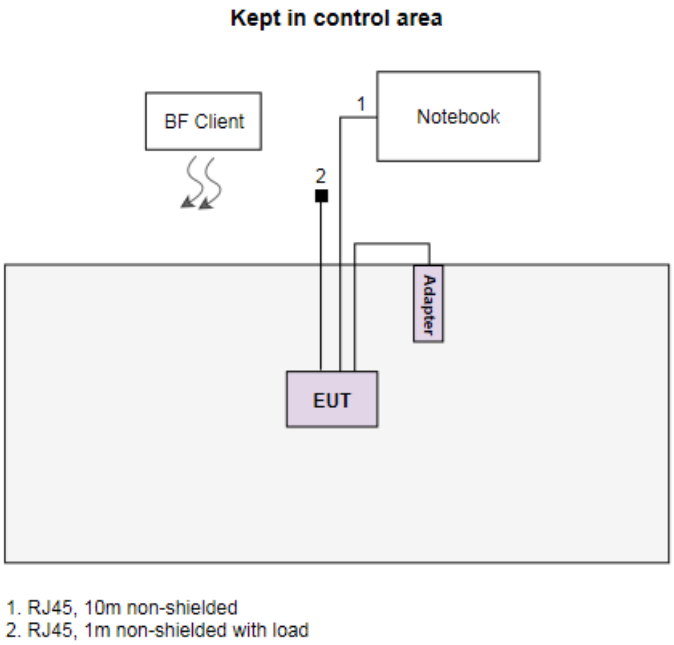
Test Setup Diagram (PoE mode)



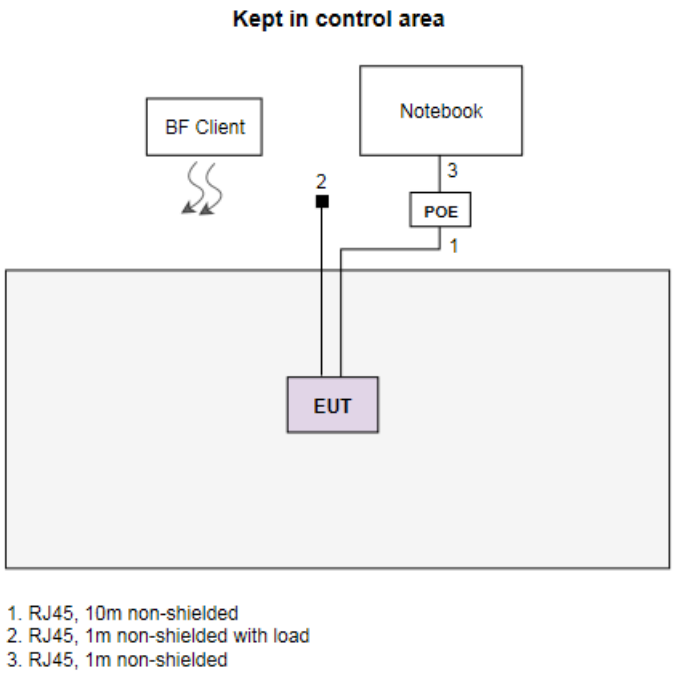
1. RJ45, 10m non-shielded
2. RJ45, 1m non-shielded with load
3. RJ45, 1m non-shielded

Beamforming mode

Test Setup Diagram (Adapter mode)



Test Setup Diagram (PoE mode)



1.4 The Equipment List

Test Item	Conducted Emission				
Test Site	Conduction room 1 / (CO01-WS)				
Tested Date	Jul. 18, 2017				
Instrument	**Manufacturer**	**Model No.**	**Serial No.**	**Calibration Date**	**Calibration Until**
Receiver	R&S	ESR3	101657	Dec. 21, 2016	Dec. 20, 2017
LISN	R&S	ENV216	101579	Jan. 19, 2017	Jan. 18, 2018
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)				
Tested Date	Aug. 22, 2017				
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	VULB9168-685	Apr. 28, 2017	Apr. 27, 2018
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. 21, 2017	Aug. 20, 2018
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	Radiated Emission				
Test Site	966 chamber 3 / (03CH03-WS)				
Tested Date	Aug. 31, 2017				
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	VULB9168-685	Apr. 28, 2017	Apr. 27, 2018
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. 21, 2017	Aug. 20, 2018
Preamplifier	EMC	EMC184045B	980192	Aug. 22, 2017	Aug. 21, 2018
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)				
Tested Date	Sep. 05 ~ Sep. 08, 2017				
Instrument	**Manufacturer**	**Model No.**	**Serial No.**	**Calibration Date**	**Calibration Until**
Spectrum Analyzer	R&S	FSV40	101063	Mar. 15, 2017	Mar. 14, 2018
TEMP&HUMIDITY CHAMBER	GIANT FORCE	GCT-225-40-SP-SD	MAF1212-002	Nov. 21, 2016	Nov. 20, 2017
Power Meter	Anritsu	ML2495A	1241002	Oct. 06, 2016	Oct. 05, 2017
Power Sensor	Anritsu	MA2411B	1207366	Oct. 06, 2016	Oct. 05, 2017
AC POWER SOURCE	APC	AFC-500W	F312060012	Oct. 28, 2016	Oct. 27, 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 ≤ 1GHz	±3.66 dB
Radiated emission > 1GHz	±5.37 dB
Time	±0.1%
Temperature	±0.6 ^{o}C

2 Test Configuration

2.1 Testing Condition

Test Item	Test Site	Ambient Condition	Tested By
AC Conduction	CO01-WS	24°C / 57%	Alex Tsai
Radiated Emissions	03CH03-WS	24°C / 66%	Brad Wu
RF Conducted	TH01-WS	22°C / 63%	Felix Sung

- FCC Designation No.: TW0009
- FCC site registration No.: 207696
- IC site registration No.: 10807C-2

2.2 The Worst Test Modes and Channel Details

Non-beamforming mode

For Frequency band 5250-5350 MHz, 5470-5725 MHz				
Test item	**Modulation Mode**	**Test Frequency (MHz)**	**Data Rate**	**Test Configuration**
Conducted Emissions	VHT80	5690	MCS 0	1, 2
Radiated Emissions ≤1GHz	VHT80	5690	MCS 0	1, 2
RF Output Power	11a	5260 / 5300 / 5320 5500 / 5580 / 5700 / 5720	6 Mbps	1
	HT20 / VHT20	5260 / 5300 / 5320 5500 / 5580 / 5700 / 5720	MCS 0	
	HT40 / VHT40	5270 / 5310 5510 / 5590 / 5670 / 5710	MCS 0	
	VHT80	5290 / 5530 / 5610 / 5690	MCS 0	
Radiated Emissions >1GHz Emission Bandwidth Peak Power Spectral Density	11a	5260 / 5300 / 5320 5500 / 5580 / 5700 / 5720	6 Mbps	1
	VHT20	5260 / 5300 / 5320 5500 / 5580 / 5700 / 5720	MCS 0	
	VHT40	5270 / 5310 5510 / 5590 / 5670 / 5710	MCS 0	
	VHT80	5290 / 5530 / 5610 / 5690	MCS 0	
Frequency Stability	Un-modulation	5580	---	1

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. This device can be powered by AC adapter or POE. Each power supply was selected for final testing as below configuration.
   1) Test configuration 1: POE mode
   2) Test configuration 2: Adapter mode

Beamforming mode

For Frequency band 5250-5350 MHz, 5470-5725 MHz				
Test item	**Modulation Mode**	**Test Frequency (MHz)**	**Data Rate**	**Test Configuration**
Conducted Emissions	VHT40	5670	MCS 0	1, 2
Radiated Emissions ≤1GHz	VHT40	5670	MCS 0	1, 2
RF Output Power	HT20 / VHT20	5260 / 5300 / 5320 5500 / 5580 / 5700 / 5720	MCS 0	1
	HT40 / VHT40	5270 / 5310 5510 / 5590 / 5670 / 5710	MCS 0	
	VHT80	5290 / 5530 / 5610 / 5690	MCS 0	
Radiated Emissions >1GHz Emission Bandwidth Peak Power Spectral Density	VHT20	5260 / 5300 / 5320 5500 / 5580 / 5700 / 5720	MCS 0	1
	VHT40	5270 / 5310 5510 / 5590 / 5670 / 5710	MCS 0	
	VHT80	5290 / 5530 / 5610 / 5690	MCS 0	

NOTE:

1. The EUT was pretested with 3 orientations placed on the table for the radiated emission measurement – X, Y, and Z-plane. The **Y-plane** results were found as the worst case and were shown in this report.
2. This device can be powered by AC adapter or POE. Each power supply was selected for final testing as below configuration.
   1) Test configuration 1: POE mode
   2) Test configuration 2: Adapter mode

3 Transmitter Test Results

3.1 Conducted Emissions

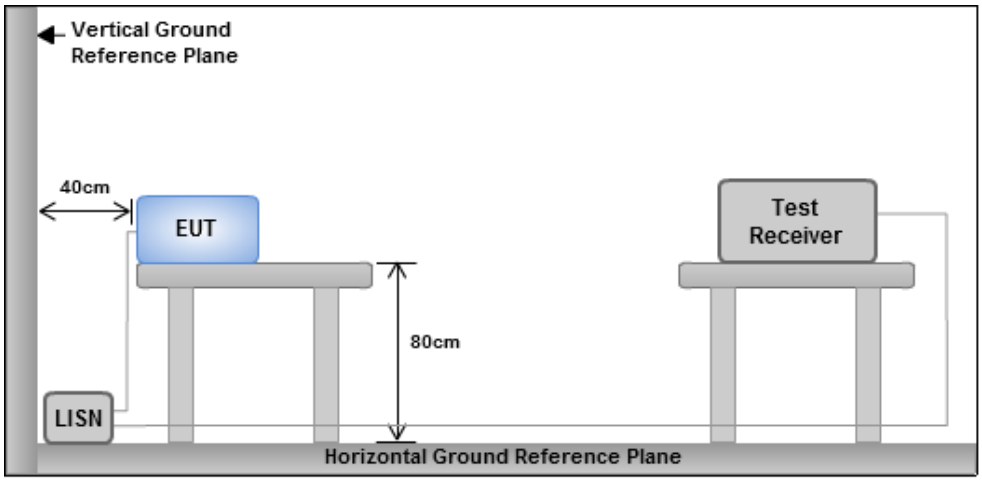
3.1.1 Limit of Conducted Emissions

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

3.1.2 Test Procedures

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

3.1.3 Test Setup

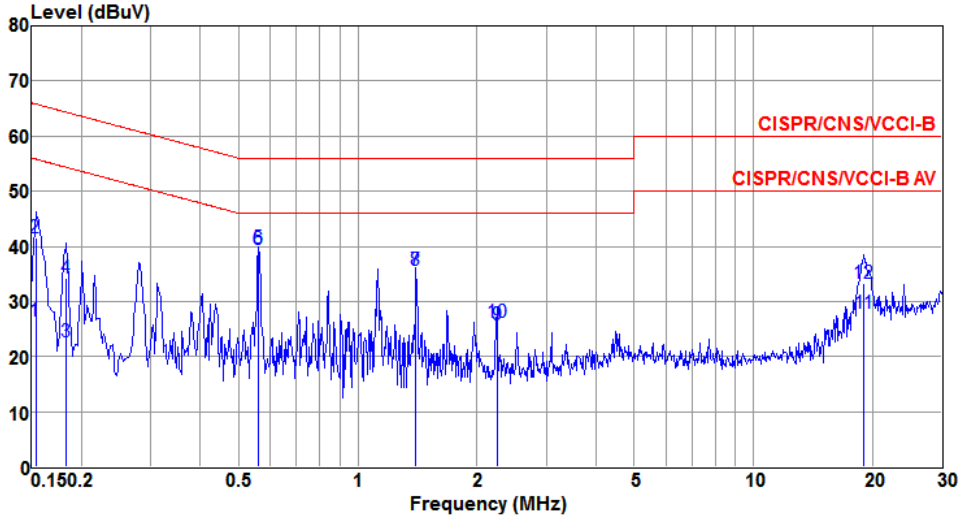


Note: 1. Support units were connected to second LISN.
2. Both of LISNs (AMN) are 80 cm from EUT and at least 80 cm from other units and other metal planes

3.1.4 Test Result of Conducted Emissions

Non- beamforming mode

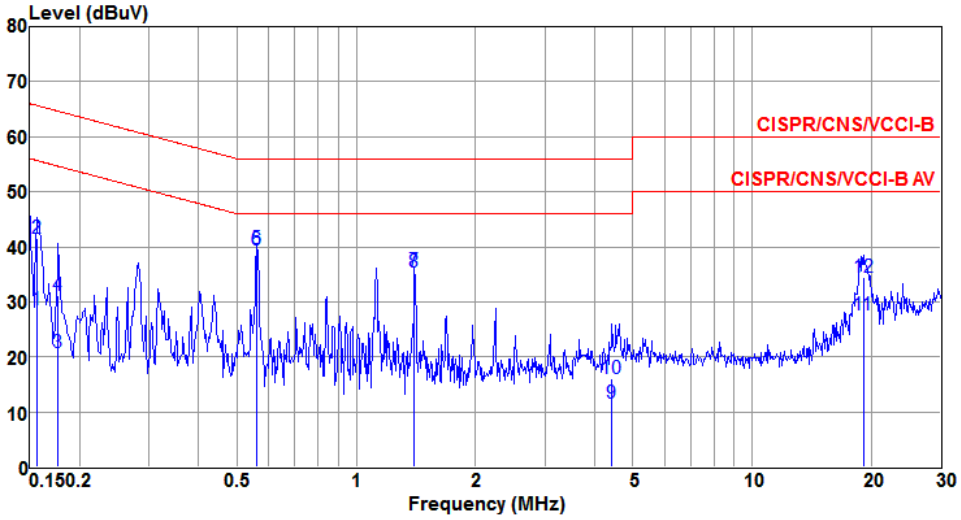
Modulation	VHT80	**Test Freq. (MHz)**	5690
Power Phase	Line	**Test configuration**	1



	Freq MHz	Level dBuV	Limit Line dBuV	Over Limit dB	Read Level dBuV	LISN factor dB	cable loss dB	Remark
1	0.153	26.55	55.82	-29.27	17.01	9.50	0.04	Average
2	0.153	41.48	65.82	-24.34	31.94	9.50	0.04	QP
3	0.183	22.78	54.33	-31.55	13.24	9.50	0.04	Average
4	0.183	34.31	64.33	-30.02	24.77	9.50	0.04	QP
5@	0.561	39.59	46.00	-6.41	30.00	9.55	0.04	Average
6	0.561	39.32	56.00	-16.68	29.73	9.55	0.04	QP
7	1.403	35.59	46.00	-10.41	26.00	9.55	0.04	Average
8	1.403	35.57	56.00	-20.43	25.98	9.55	0.04	QP
9	2.249	25.69	46.00	-20.31	16.02	9.61	0.06	Average
10	2.249	26.17	56.00	-29.83	16.50	9.61	0.06	QP
11	19.021	27.90	50.00	-22.10	17.94	9.71	0.25	Average
12	19.021	33.24	60.00	-26.76	23.28	9.71	0.25	QP

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

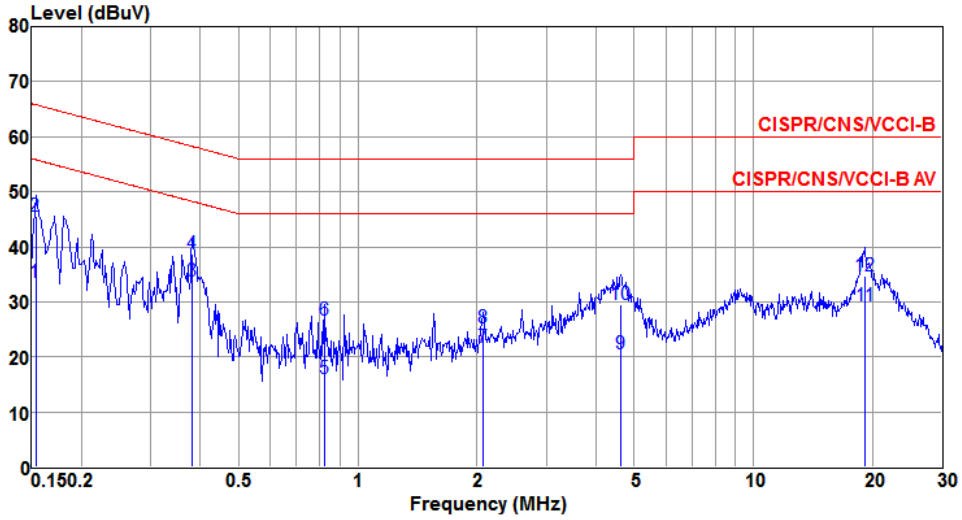
Modulation	VHT80	Test Freq. (MHz)	5690
Power Phase	Neutral	Test configuration	1



	Freq MHz	Level dBuV	Limit Line dBuV	Over Limit dB	Read Level dBuV	LISN factor dB	cable loss dB	Remark
1	0.156	28.46	55.69	-27.23	18.84	9.58	0.04	Average
2	0.156	41.54	65.69	-24.15	31.92	9.58	0.04	QP
3	0.177	20.69	54.64	-33.95	11.06	9.59	0.04	Average
4	0.177	31.12	64.64	-33.52	21.49	9.59	0.04	QP
5@	0.561	39.61	46.00	-6.39	29.98	9.59	0.04	Average
6	0.561	39.37	56.00	-16.63	29.74	9.59	0.04	QP
7	1.403	35.56	46.00	-10.44	25.92	9.60	0.04	Average
8	1.403	35.50	56.00	-20.50	25.86	9.60	0.04	QP
9	4.430	11.66	46.00	-34.34	1.78	9.71	0.17	Average
10	4.430	16.11	56.00	-39.89	6.23	9.71	0.17	QP
11	19.122	27.74	50.00	-22.26	17.77	9.72	0.25	Average
12	19.122	34.36	60.00	-25.64	24.39	9.72	0.25	QP

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

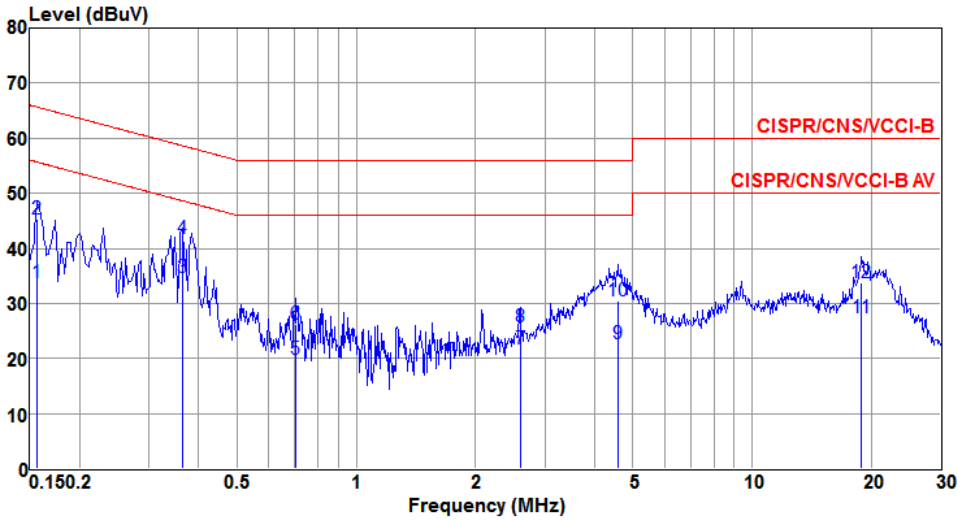
Modulation	VHT80	Test Freq. (MHz)	5690
Power Phase	Line	Test configuration	2



	Freq MHz	Level dBuV	Limit Line dBuV	Over Limit dB	Read Level dBuV	LISN factor dB	cable loss dB	Remark
1	0.153	33.57	55.82	-22.25	24.03	9.50	0.04	Average
2	0.153	45.51	65.82	-20.31	35.97	9.50	0.04	QP
3@	0.381	33.75	48.25	-14.50	24.12	9.59	0.04	Average
4	0.381	38.65	58.25	-19.60	29.02	9.59	0.04	QP
5	0.822	16.03	46.00	-29.97	6.50	9.49	0.04	Average
6	0.822	26.74	56.00	-29.26	17.21	9.49	0.04	QP
7	2.077	21.72	46.00	-24.28	12.04	9.63	0.05	Average
8	2.077	25.37	56.00	-30.63	15.69	9.63	0.05	QP
9	4.622	20.47	46.00	-25.53	10.79	9.51	0.17	Average
10	4.622	29.48	56.00	-26.52	19.80	9.51	0.17	QP
11	19.224	29.32	50.00	-20.68	19.35	9.71	0.26	Average
12	19.224	34.60	60.00	-25.40	24.63	9.71	0.26	QP

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

Modulation	VHT80	Test Freq. (MHz)	5690
Power Phase	Neutral	Test configuration	2

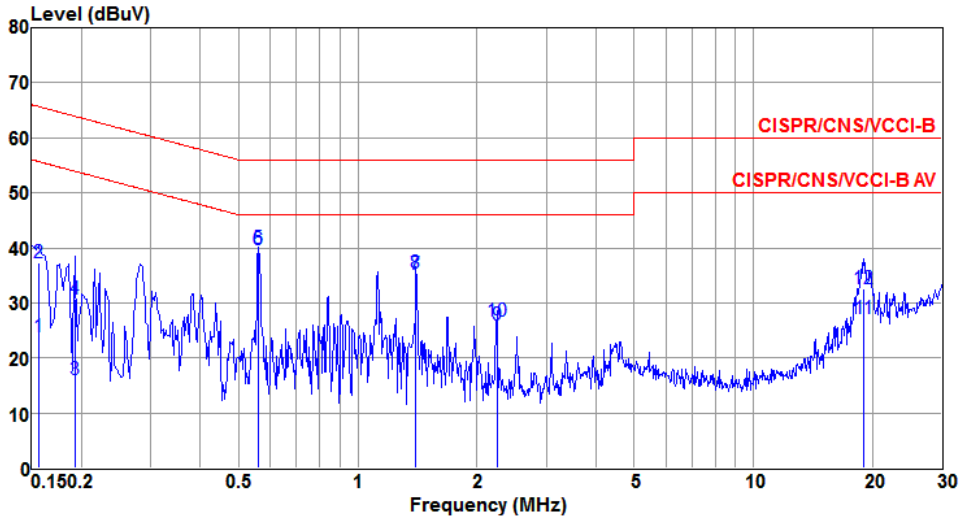


	Freq MHz	Level dBuV	Limit Line dBuV	Over Limit dB	Read Level dBuV	LISN factor dB	cable loss dB	Remark
1	0.156	33.78	55.69	-21.91	24.16	9.58	0.04	Average
2	0.156	45.32	65.69	-20.37	35.70	9.58	0.04	QP
3@	0.363	34.63	48.65	-14.02	25.04	9.55	0.04	Average
4	0.363	41.77	58.65	-16.88	32.18	9.55	0.04	QP
5	0.705	19.91	46.00	-26.09	10.25	9.62	0.04	Average
6	0.705	26.12	56.00	-29.88	16.46	9.62	0.04	QP
7	2.594	21.69	46.00	-24.31	12.02	9.59	0.08	Average
8	2.594	25.76	56.00	-30.24	16.09	9.59	0.08	QP
9	4.574	22.61	46.00	-23.39	12.73	9.71	0.17	Average
10	4.574	30.47	56.00	-25.53	20.59	9.71	0.17	QP
11	18.920	27.36	50.00	-22.64	17.40	9.71	0.25	Average
12	18.920	33.82	60.00	-26.18	23.86	9.71	0.25	QP

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

Beamforming mode

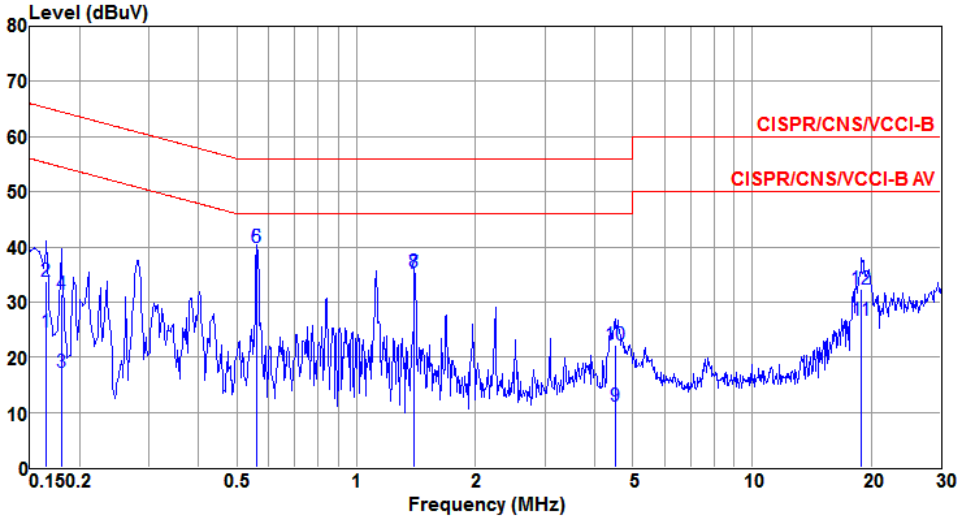
Modulation	VHT40	**Test Freq. (MHz)**	5670
Power Phase	Line	**Test configuration**	1



	Freq MHz	Level dBuV	Limit Line dBuV	Over Limit dB	Read Level dBuV	LISN factor dB	cable loss dB	Remark
1	0.156	23.86	55.69	-31.83	14.32	9.50	0.04	Average
2	0.156	37.29	65.69	-28.40	27.75	9.50	0.04	QP
3	0.192	16.07	53.93	-37.86	6.53	9.50	0.04	Average
4	0.192	30.58	63.93	-33.35	21.04	9.50	0.04	QP
5@	0.561	39.93	46.00	-6.07	30.34	9.55	0.04	Average
6	0.561	39.76	56.00	-16.24	30.17	9.55	0.04	QP
7	1.403	35.25	46.00	-10.75	25.66	9.55	0.04	Average
8	1.403	35.38	56.00	-20.62	25.79	9.55	0.04	QP
9	2.249	25.85	46.00	-20.15	16.18	9.61	0.06	Average
10	2.249	26.78	56.00	-29.22	17.11	9.61	0.06	QP
11	19.021	27.07	50.00	-22.93	17.11	9.71	0.25	Average
12	19.021	32.48	60.00	-27.52	22.52	9.71	0.25	QP

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

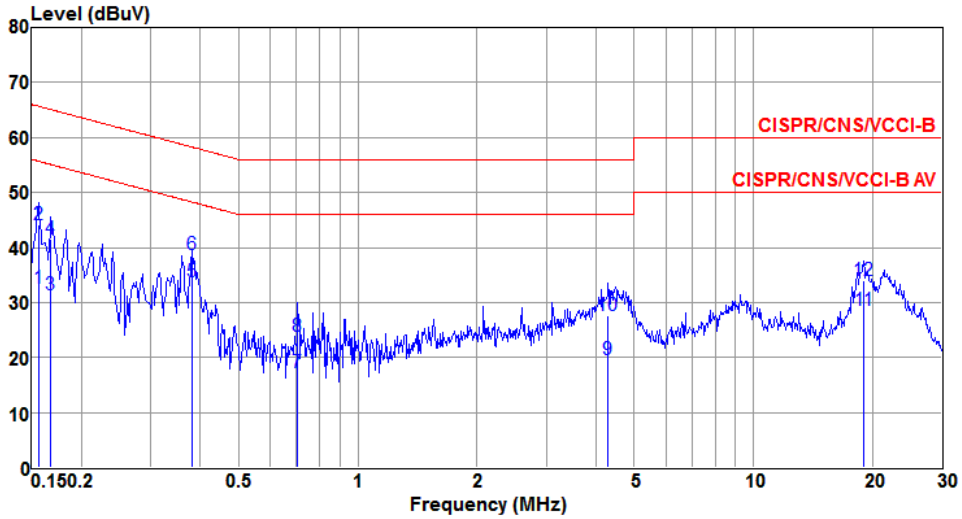
Modulation	VHT40	Test Freq. (MHz)	5670
Power Phase	Neutral	Test configuration	1



	Freq MHz	Level dBuV	Limit Line dBuV	Over Limit dB	Read Level dBuV	LISN factor dB	cable loss dB	Remark
1	0.165	24.51	55.21	-30.70	14.88	9.59	0.04	Average
2	0.165	33.81	65.21	-31.40	24.18	9.59	0.04	QP
3	0.180	17.30	54.50	-37.20	7.67	9.59	0.04	Average
4	0.180	31.33	64.50	-33.17	21.70	9.59	0.04	QP
5@	0.561	39.96	46.00	-6.04	30.33	9.59	0.04	Average
6	0.561	39.83	56.00	-16.17	30.20	9.59	0.04	QP
7	1.403	35.26	46.00	-10.74	25.62	9.60	0.04	Average
8	1.403	35.34	56.00	-20.66	25.70	9.60	0.04	QP
9	4.501	11.00	46.00	-35.00	1.12	9.71	0.17	Average
10	4.501	22.10	56.00	-33.90	12.22	9.71	0.17	QP
11	18.920	26.71	50.00	-23.29	16.75	9.71	0.25	Average
12	18.920	32.33	60.00	-27.67	22.37	9.71	0.25	QP

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

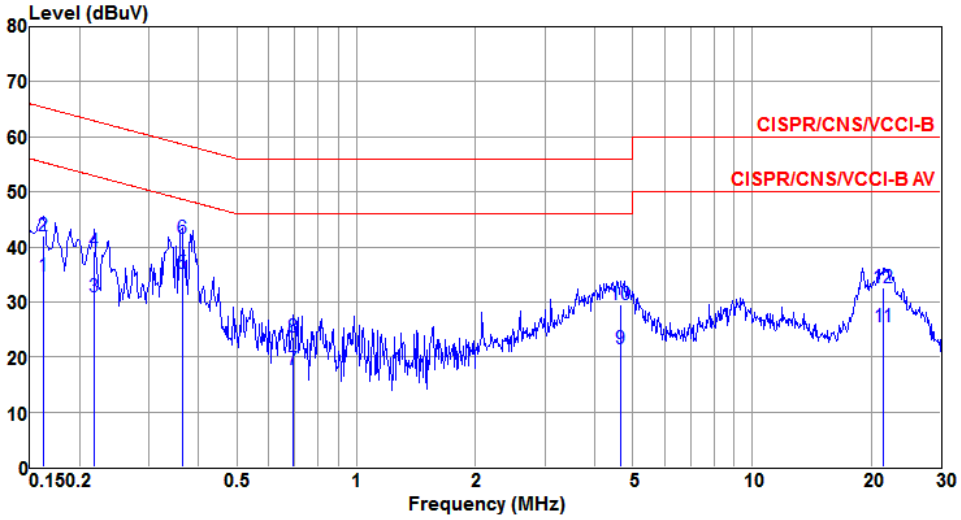
Modulation	VHT40	Test Freq. (MHz)	5670
Power Phase	Line	Test configuration	2



	Freq MHz	Level dBuV	Limit Line dBuV	Over Limit dB	Read Level dBuV	LISN factor dB	cable loss dB	Remark
1	0.156	32.53	55.69	-23.16	22.99	9.50	0.04	Average
2	0.156	44.03	65.69	-21.66	34.49	9.50	0.04	QP
3	0.168	31.50	55.08	-23.58	21.96	9.50	0.04	Average
4	0.168	41.66	65.08	-23.42	32.12	9.50	0.04	QP
5@	0.381	33.75	48.25	-14.50	24.12	9.59	0.04	Average
6	0.381	38.65	58.25	-19.60	29.02	9.59	0.04	QP
7	0.705	17.29	46.00	-28.71	7.74	9.51	0.04	Average
8	0.705	23.94	56.00	-32.06	14.39	9.51	0.04	QP
9	4.292	19.57	46.00	-26.43	9.92	9.49	0.16	Average
10	4.292	27.62	56.00	-28.38	17.97	9.49	0.16	QP
11	19.021	28.47	50.00	-21.53	18.51	9.71	0.25	Average
12	19.021	34.06	60.00	-25.94	24.10	9.71	0.25	QP

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

Modulation	VHT40	Test Freq. (MHz)	5670
Power Phase	Neutral	Test configuration	2



	Freq MHz	Level dBuV	Limit Line dBuV	Over Limit dB	Read Level dBuV	LISN factor dB	cable loss dB	Remark
1	0.162	34.73	55.34	-20.61	25.10	9.59	0.04	Average
2	0.162	42.04	65.34	-23.30	32.41	9.59	0.04	QP
3	0.219	30.89	52.88	-21.99	21.26	9.59	0.04	Average
4	0.219	39.29	62.88	-23.59	29.66	9.59	0.04	QP
5@	0.363	35.24	48.65	-13.41	25.65	9.55	0.04	Average
6	0.363	41.65	58.65	-17.00	32.06	9.55	0.04	QP
7	0.690	17.64	46.00	-28.36	7.98	9.62	0.04	Average
8	0.690	23.63	56.00	-32.37	13.97	9.62	0.04	QP
9	4.647	21.53	46.00	-24.47	11.65	9.71	0.17	Average
10	4.647	29.58	56.00	-26.42	19.70	9.71	0.17	QP
11	21.486	25.43	50.00	-24.57	15.42	9.74	0.27	Average
12	21.486	32.47	60.00	-27.53	22.46	9.74	0.27	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 Test Procedures

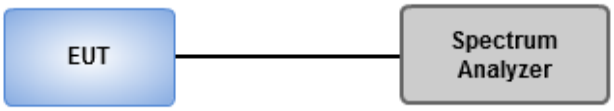
26dB Bandwidth

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

Occupied Bandwidth

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

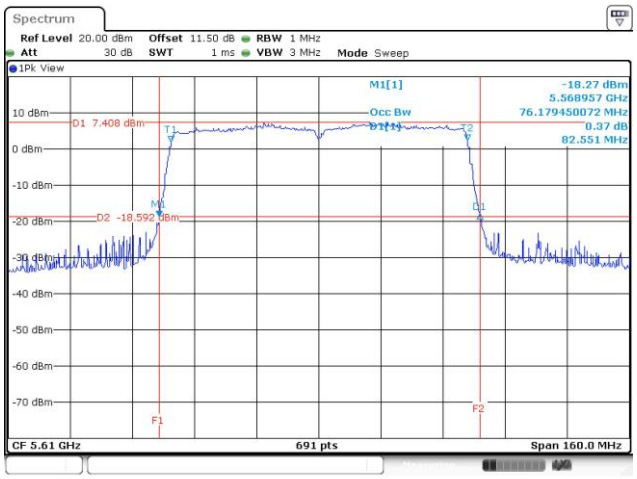
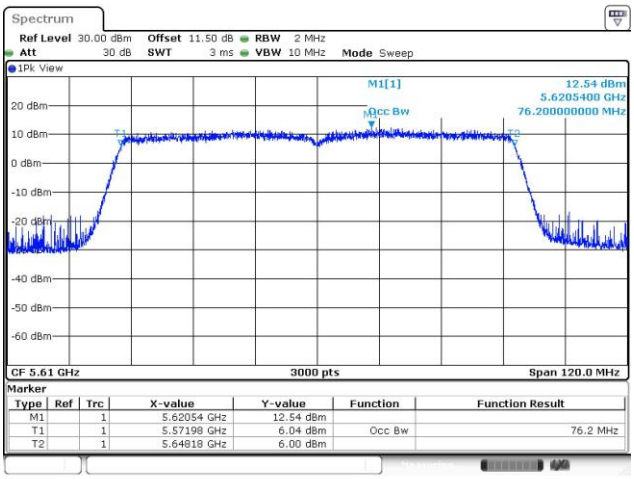
3.2.2 Test Setup



3.2.3 Test Result of Emission Bandwidth

Non-beamforming mode

Emission Bandwidth											
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	3	5260	21.57	21.57	21.51	---	17.03	16.91	16.93	---	24.00
11a	3	5300	21.62	21.51	21.51	---	16.90	16.92	17.06	---	24.00
11a	3	5320	21.57	21.51	21.51	---	17.01	16.91	16.95	---	24.00
VHT20	3	5260	21.97	21.68	21.74	---	18.12	17.93	17.98	---	24.00
VHT20	3	5300	21.86	21.45	21.62	---	18.15	17.94	17.95	---	24.00
VHT20	3	5320	21.86	21.68	21.68	---	18.14	17.92	17.98	---	24.00
VHT40	3	5270	40.93	40.70	40.58	---	36.68	36.60	36.58	---	24.00
VHT40	3	5310	40.93	40.58	40.46	---	36.68	36.60	36.64	---	24.00
VHT80	3	5290	82.32	81.86	81.62	---	76.20	76.00	76.04	---	24.00
11a	3	5500	21.57	21.45	21.45	---	17.04	16.89	16.89	---	24.00
11a	3	5580	21.57	21.57	21.51	---	17.05	16.93	16.92	---	24.00
11a	3	5700	21.57	21.39	21.45	---	17.04	16.89	16.89	---	24.00
VHT20	3	5500	21.91	21.62	21.57	---	18.14	17.92	17.96	---	24.00
VHT20	3	5580	21.97	21.68	21.68	---	18.14	17.92	17.96	---	24.00
VHT20	3	5700	22.03	21.74	21.51	---	18.14	17.93	17.99	---	24.00
VHT40	3	5510	40.93	40.81	40.58	---	36.70	36.64	36.60	---	24.00
VHT40	3	5590	55.65	60.41	41.62	---	36.80	36.66	36.62	---	24.00
VHT40	3	5670	60.64	58.20	40.70	---	36.70	36.62	36.54	---	24.00
VHT80	3	5530	82.09	82.09	81.39	---	76.12	76.00	76.08	---	24.00
VHT80	3	5610	82.55	81.86	81.62	---	76.20	76.04	76.04	---	24.00

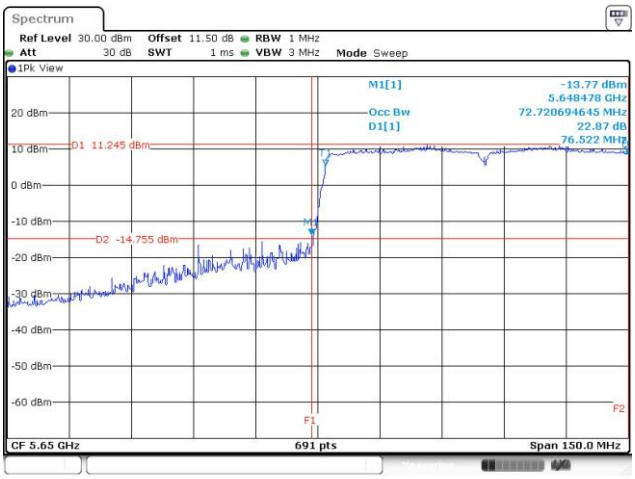
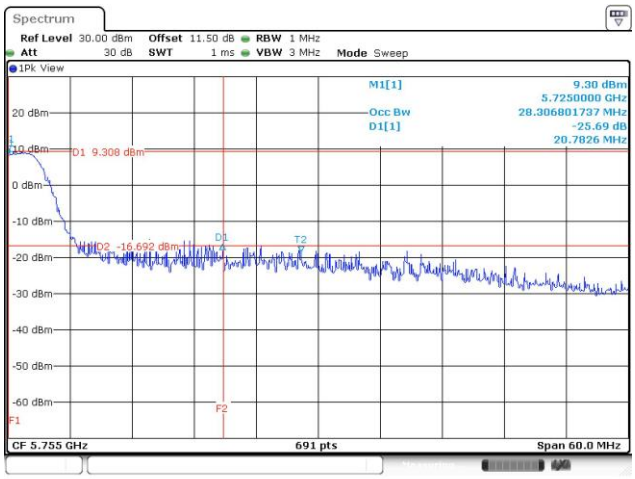
Worst Plot of 26dB Bandwidth	Worst Plot of 99% Bandwidth
	

Channel that extends across the 5.725 GHz boundary

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	3	5720	15.77	15.71	15.64	---	13.60	13.47	13.45	---	22.94
VHT20	3	5720	15.89	15.83	15.83	---	14.15	14.01	14.04	---	22.99
VHT40	3	5710	47.38	45.04	35.30	---	33.39	33.35	33.35	---	24.00
VHT80	3	5690	76.52	75.87	75.65	---	73.06	73.06	73.06	---	24.00

UNII Emission Bandwidth Result (Extends across 5725MHz band)										
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	3	5720	5.78	5.91	5.89	---	3.47	3.44	3.45	---
VHT20	3	5720	6.02	5.67	5.85	---	4.04	3.92	3.92	---
VHT40	3	5710	19.30	19.07	8.29	---	3.33	3.27	3.25	---
VHT80	3	5690	20.78	16.09	6.52	---	3.10	3.06	3.02	---

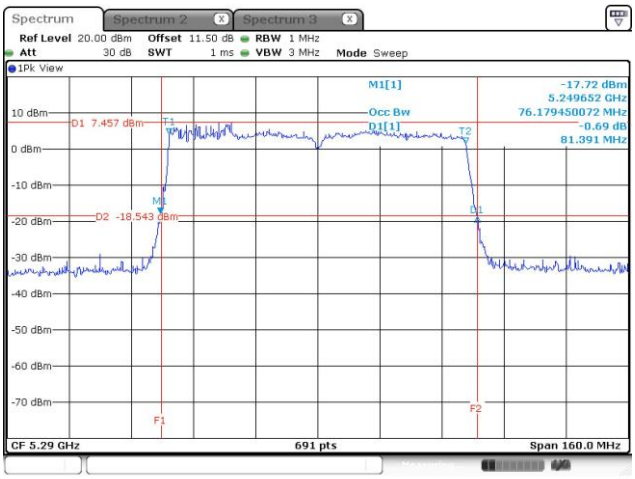
Worst Plots

Within 5470-5725MHz band	Extends across 5725MHz band
	

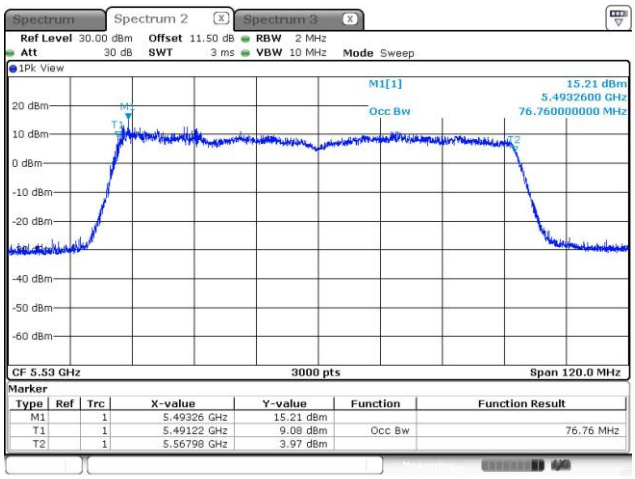
Beamforming mode

Emission Bandwidth											
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	
VHT20	3	5260	21.97	21.68	21.57	---	18.11	17.86	17.92	---	24.00
VHT20	3	5300	21.68	21.57	21.68	---	18.11	17.87	17.92	---	24.00
VHT20	3	5320	21.74	21.51	21.51	---	18.12	17.88	17.92	---	24.00
VHT40	3	5270	41.16	40.35	40.81	---	36.56	36.58	36.58	---	24.00
VHT40	3	5310	41.28	40.93	40.70	---	36.66	36.56	36.60	---	24.00
VHT80	3	5290	81.16	81.39	80.46	---	76.44	76.08	76.32	---	24.00
VHT20	3	5500	21.68	21.39	21.51	---	18.09	17.87	17.90	---	24.00
VHT20	3	5580	21.80	21.62	21.45	---	18.10	17.88	17.90	---	24.00
VHT20	3	5700	21.91	21.51	21.51	---	18.13	17.87	17.90	---	24.00
VHT40	3	5510	41.16	41.04	41.28	---	36.60	36.56	36.58	---	24.00
VHT40	3	5590	41.28	40.81	40.81	---	36.70	36.56	36.58	---	24.00
VHT40	3	5670	41.16	40.93	40.81	---	36.72	36.52	36.56	---	24.00
VHT80	3	5530	80.93	80.93	80.93	---	76.76	75.96	75.96	---	24.00
VHT80	3	5610	81.16	81.16	80.93	---	76.12	76.40	75.92	---	24.00

Worst Plot of 26dB Bandwidth



Worst Plot of 99% Bandwidth



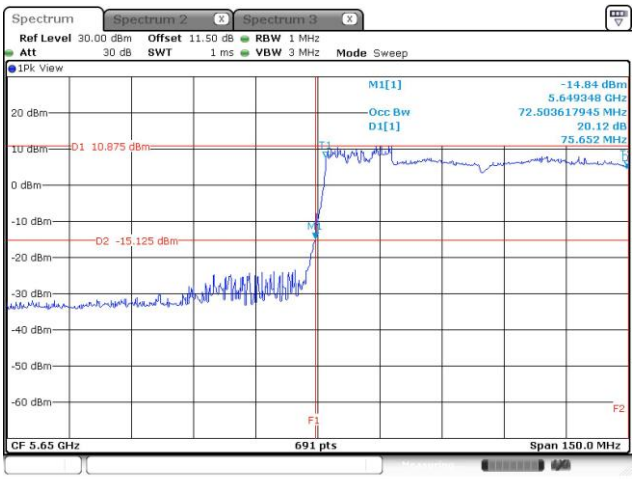
Channel that extends across the 5.725 GHz boundary

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	
VHT20	3	5720	15.89	15.83	15.34	---	14.11	14.00	14.00	---	22.86
VHT40	3	5710	36.71	35.51	35.30	---	33.37	33.33	33.29	---	24.00
VHT80	3	5690	75.65	75.44	75.22	---	73.38	72.90	73.42	---	24.00

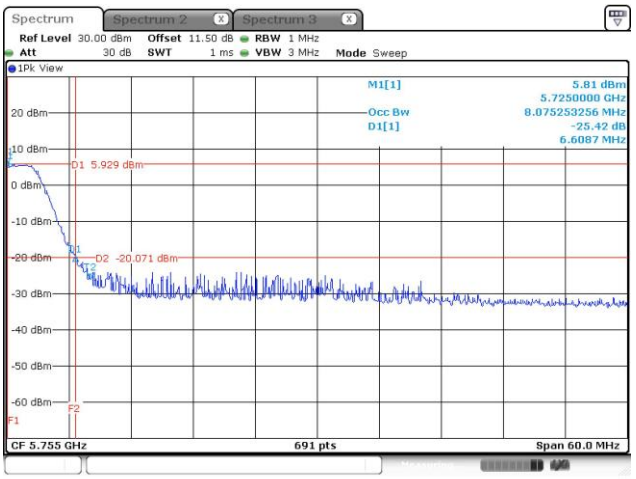
UNII Emission Bandwidth Result (Extends across 5725MHz band)										
Mode	N_{TX}	Freq. (MHz)	26dB Bandwidth (MHz)				99% Bandwidth (MHz)			
			Chain 0	Chain 1	Chain 2	Chain 3	Chain 0	Chain 1	Chain 2	Chain 3
VHT20	3	5720	6.02	6.00	5.80	---	4.01	3.89	3.92	---
VHT40	3	5710	5.68	5.57	5.51	---	3.27	3.23	3.23	---
VHT80	3	5690	6.61	6.43	6.17	---	2.94	2.86	2.86	---

Worst Plots

Within 5470-5725MHz band



Extends across 5725MHz band



3.3 RF Output Power

3.3.1 Limit of RF Output Power

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

3.3.2 Test Procedures

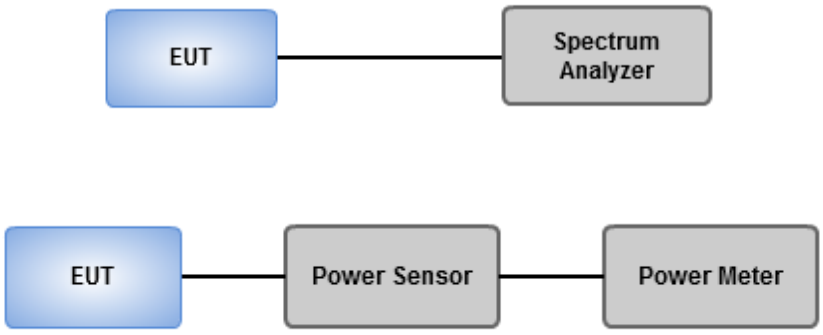
☒ Power meter (For channel that does not extends across the 5.725 GHz boundary)

☒ 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
4. Add 10 log(1/X, X:duty cycle) if duty cycle is <98%)

3.3.3 Test Setup



3.3.4 Test Result of Maximum Conducted Output Power

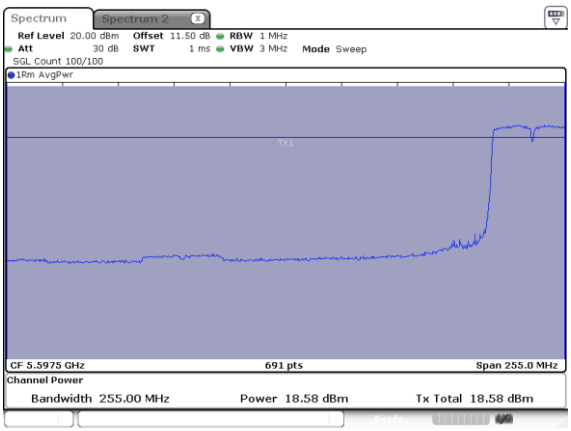
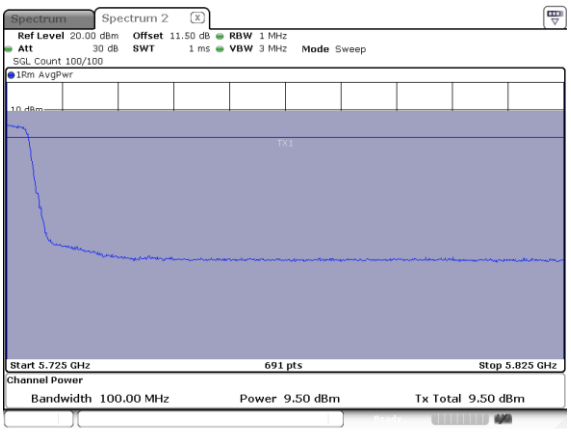
Non-beamforming mode

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	3	5260	16.24	15.89	15.55	---	116.780	20.67	24.00
11a	3	5300	16.11	15.81	15.59	---	115.163	20.61	24.00
11a	3	5320	16.22	15.92	15.62	---	117.439	20.70	24.00
HT20	3	5260	16.39	15.99	16.06	---	123.635	20.92	24.00
HT20	3	5300	16.19	15.88	15.69	---	117.385	20.70	24.00
HT20	3	5320	16.54	16.03	16.19	---	126.759	21.03	24.00
HT40	3	5270	17.59	17.35	17.72	---	170.893	22.33	24.00
HT40	3	5310	16.15	16.66	16.83	---	135.749	21.33	24.00
VHT20	3	5260	16.45	16.03	16.12	---	125.170	20.97	24.00
VHT20	3	5300	16.25	15.92	15.78	---	119.098	20.76	24.00
VHT20	3	5320	16.61	16.15	16.24	---	129.097	21.11	24.00
VHT40	3	5270	17.68	17.49	17.85	---	175.672	22.45	24.00
VHT40	3	5310	16.20	16.73	16.99	---	138.788	21.42	24.00
VHT80	3	5290	13.36	13.56	13.62	---	67.390	18.29	24.00
11a	3	5500	16.52	15.76	15.89	---	121.360	20.84	24.00
11a	3	5580	15.53	14.68	15.04	---	97.019	19.87	24.00
11a	3	5700	16.41	16.51	16.18	---	130.019	21.14	24.00
HT20	3	5500	16.35	15.87	16.03	---	121.875	20.86	24.00
HT20	3	5580	15.22	15.03	15.19	---	98.145	19.92	24.00
HT20	3	5700	15.76	15.58	15.42	---	108.645	20.36	24.00
HT40	3	5510	17.19	17.11	17.25	---	156.853	21.95	24.00
HT40	3	5590	18.54	18.26	18.06	---	202.412	23.06	24.00
HT40	3	5670	17.98	17.92	18.11	---	189.464	22.78	24.00
VHT20	3	5500	16.42	15.98	16.11	---	124.313	20.95	24.00
VHT20	3	5580	15.31	15.08	15.24	---	99.593	19.98	24.00
VHT20	3	5700	15.81	15.65	15.54	---	110.644	20.44	24.00
VHT40	3	5510	17.25	17.19	17.38	---	160.150	22.05	24.00
VHT40	3	5590	18.56	18.31	18.11	---	204.258	23.10	24.00
VHT40	3	5670	18.02	17.96	18.25	---	192.739	22.85	24.00
VHT80	3	5530	13.73	13.86	14.12	---	73.749	18.68	24.00
VHT80	3	5610	16.28	16.27	16.52	---	129.701	21.13	24.00

Channel that extends across the 5.725 GHz boundary

Maximum Conducted Output Power (Within 5470-5725MHz band)											
Mode	N_{TX}	Freq. (MHz)	Conducted Power without duty factor					Duty factor (dB)	Total Power (mW)	Total Power (dBm)	Limit (dBm)
			Chain 0	Chain 1	Chain 2	Chain 3	Total Power (dBm)				
11a	3	5720	14.66	15.23	14.62	---	19.62	0.17	95.213	19.79	22.94
HT20	3	5720	15.00	15.17	15.01	---	19.83	0.00	96.204	19.83	22.99
HT40	3	5710	17.75	17.75	17.59	---	22.47	0.00	176.544	22.47	24.00
VHT20	3	5720	15.06	15.27	15.23	---	19.96	0.00	99.056	19.96	22.99
VHT40	3	5710	17.66	18.53	18.58	---	23.05	0.00	201.741	23.05	24.00
VHT80	3	5690	18.52	18.13	18.42	---	23.13	0.18	214.339	23.31	24.00

Maximum Conducted Output Power (Extends across 5725MHz band)											
Mode	N_{TX}	Freq. (MHz)	Conducted Power without duty factor					Duty factor (dB)	Total Power (mW)	Total Power (dBm)	Limit (dBm)
			Chain 0	Chain 1	Chain 2	Chain 3	Total Power (dBm)				
11a	3	5720	8.38	8.89	8.21	---	13.27	0.17	22.102	13.44	30.00
HT20	3	5720	9.20	9.42	9.19	---	14.04	0.00	25.366	14.04	30.00
HT40	3	5710	7.39	7.39	7.95	---	12.36	0.00	17.203	12.36	30.00
VHT20	3	5720	9.45	9.50	9.31	---	14.19	0.00	26.254	14.19	30.00
VHT40	3	5710	7.02	8.03	8.03	---	12.49	0.00	17.742	12.49	30.00
VHT80	3	5690	4.44	4.13	4.47	---	9.12	0.18	8.513	9.30	30.00

Worst Channel Power Plots	
Within 5470-5725MHz band	Extends across 5725MHz band
	

Beamforming mode

Mode	N_{TX}	Freq. (MHz)	Conducted Power (dBm)				Total Power (mW)	Total Power (dBm)	Limit (dBm)
			Chain 0	Chain 1	Chain 2	Chain 3			
HT20	3	5260	16.16	16.02	16.03	---	121.386	20.84	21.23
HT20	3	5300	16.05	16.00	15.55	---	115.975	20.64	21.23
HT20	3	5320	16.24	16.29	16.01	---	124.535	20.95	21.23
HT40	3	5270	16.09	16.04	16.58	---	126.322	21.01	21.23
HT40	3	5310	14.32	14.87	15.29	---	91.536	19.62	21.23
VHT20	3	5260	16.22	16.03	16.09	---	122.610	20.89	21.23
VHT20	3	5300	16.11	16.08	15.63	---	117.942	20.72	21.23
VHT20	3	5320	16.33	16.35	16.05	---	126.377	21.02	21.23
VHT40	3	5270	16.14	16.11	16.65	---	128.185	21.08	21.23
VHT40	3	5310	14.52	14.94	15.38	---	94.017	19.73	21.23
VHT80	3	5290	12.58	12.75	12.63	---	55.273	17.43	21.23
HT20	3	5500	15.73	15.26	15.21	---	104.174	20.18	21.23
HT20	3	5580	14.88	14.65	14.59	---	88.709	19.48	21.23
HT20	3	5700	15.32	15.37	15.06	---	100.539	20.02	21.23
HT40	3	5510	16.29	15.87	15.80	---	119.215	20.76	21.23
HT40	3	5590	16.28	16.11	16.09	---	123.938	20.93	21.23
HT40	3	5670	16.43	16.27	16.18	---	127.814	21.07	21.23
VHT20	3	5500	15.76	15.35	15.29	---	105.754	20.24	21.23
VHT20	3	5580	14.93	14.72	14.65	---	89.940	19.54	21.23
VHT20	3	5700	15.4	15.49	15.15	---	102.807	20.12	21.23
VHT40	3	5510	16.38	15.95	15.89	---	121.621	20.85	21.23
VHT40	3	5590	16.31	16.25	16.19	---	126.517	21.02	21.23
VHT40	3	5670	16.51	16.32	16.22	---	129.506	21.12	21.23
VHT80	3	5530	13.14	13.35	13.55	---	64.880	18.12	21.23
VHT80	3	5610	16.03	15.98	16.32	---	122.569	20.88	21.23

Note:

1. Directional gain = 4+10* log(3/1) = 8.77 dBi > 6 dBi.
   Limit shall be reduced to 24 dBm – (8.77 dBi – 6 dBi) = 21.23 dBm

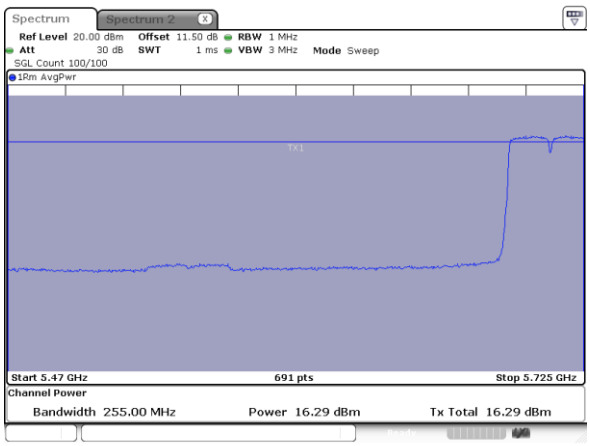
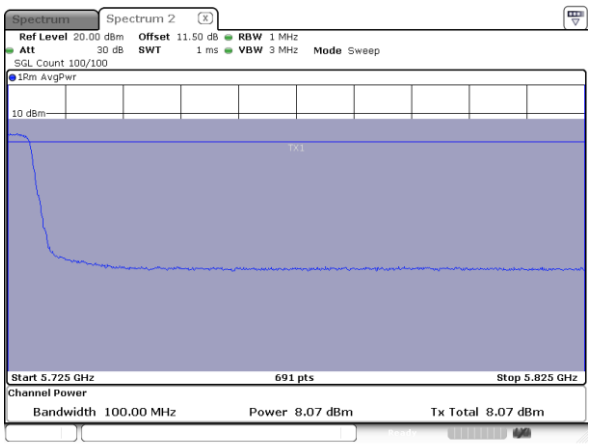
Channel that extends across the 5.725 GHz boundary

Maximum Conducted Output Power (Within 5470-5725MHz band)											
Mode	N_{TX}	Freq. (MHz)	Conducted Power without duty factor					Duty factor (dB)	Total Power (mW)	Total Power (dBm)	Limit (dBm)
			Chain 0	Chain 1	Chain 2	Chain 3	Total Power (dBm)				
HT20	3	5720	13.40	13.73	13.42	---	18.29	0.00	67.461	18.29	20.09
HT40	3	5710	15.49	15.43	15.23	---	20.16	0.00	103.656	20.16	21.23
VHT20	3	5720	13.47	13.75	13.44	---	18.33	0.00	68.027	18.33	20.09
VHT40	3	5710	16.29	16.06	15.72	---	20.80	0.00	120.249	20.80	21.23
VHT80	3	5690	15.32	14.90	15.18	---	19.91	0.22	102.992	20.13	21.23

Note: Directional gain = 4+10* log(3/1) = 8.77 dBi > 6 dBi. Limit shall be reduced 2.77 dB – (8.77 dBi – 6 dBi)

Maximum Conducted Output Power (Extends across 5725MHz band)											
Mode	N_{TX}	Freq. (MHz)	Conducted Power without duty factor					Duty factor (dB)	Total Power (mW)	Total Power (dBm)	Limit (dBm)
			Chain 0	Chain 1	Chain 2	Chain 3	Total Power (dBm)				
HT20	3	5720	7.56	7.95	7.68	---	12.50	0.00	17.800	12.50	27.23
HT40	3	5710	5.26	5.01	4.68	---	9.76	0.00	9.465	9.76	27.23
VHT20	3	5720	7.63	8.07	7.83	---	12.62	0.00	18.274	12.62	27.23
VHT40	3	5710	5.49	5.84	5.19	---	10.29	0.00	10.681	10.29	27.23
VHT80	3	5690	1.19	0.87	1.09	---	5.82	0.22	4.021	6.04	27.23

Note: Directional gain = 4+10* log(3/1) = 8.77 dBi > 6 dBi. Limit shall be reduced to 30 dBm – (8.77 dBi – 6 dBi) = 27.23 dBm.

Worst Channel Power Plots	
Within 5470-5725MHz band	**Extends across 5725MHz band**
	

3.4 Peak Power Spectral Density

3.4.1 Limit of Peak Power Spectral Density

Frequency Band (MHz)		Limit
☒	5250 ~ 5350	11 dBm / MHz
☒	5470 ~ 5725	11 dBm / MHz

3.4.2 Test Procedures

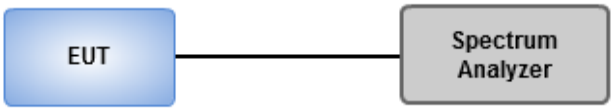
☒ Method SA-1 (Non- Beamforming: VHT20/VHT40 / Beamforming: VHT20/VHT40)

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

☒ Method SA-2 Alternative (Non- Beamforming: 11a//VHT80 / Beamforming: VHT80)

1. Set RBW = 1 MHz, VBW = 3 MHz, Detector = RMS.
2. Set sweep time ≥ 10 * (number of points in sweep) * (total on/off period of the transmitted signal).
3. Perform a single sweep.
4. Use the peak marker function to determine the maximum amplitude level.
5. Add 10 log(1/x), where x is the duty cycle if duty cycle < 98%

3.4.3 Test Setup

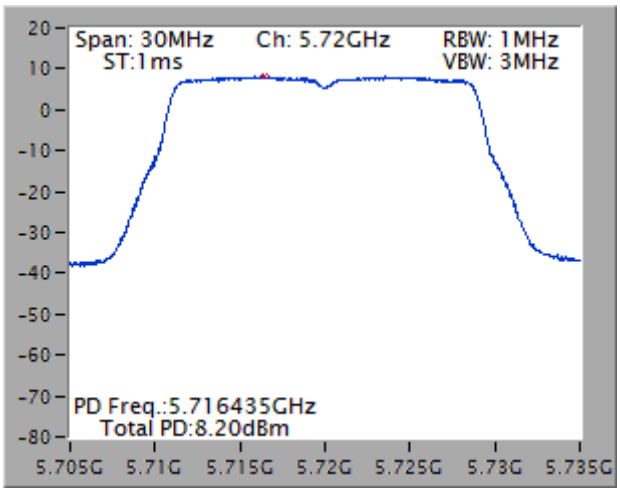


3.4.4 Test Result of Peak Power Spectral Density

Non-beamforming mode

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	3	5260	7.50	0.17	7.67	8.23
11a	3	5300	7.57	0.17	7.74	8.23
11a	3	5320	7.30	0.17	7.47	8.23
VHT20	3	5260	7.39	0.00	7.39	8.23
VHT20	3	5300	7.96	0.00	7.96	8.23
VHT20	3	5320	7.62	0.00	7.62	8.23
VHT40	3	5270	7.85	0.00	7.85	8.23
VHT40	3	5310	5.50	0.00	5.50	8.23
VHT80	3	5290	-0.56	0.18	-0.38	8.23
11a	3	5500	6.93	0.17	7.10	8.23
11a	3	5580	5.79	0.17	5.96	8.23
11a	3	5700	7.51	0.17	7.68	8.23
11a	3	5720	7.87	0.17	8.04	8.23
VHT20	3	5500	7.16	0.00	7.16	8.23
VHT20	3	5580	6.19	0.00	6.19	8.23
VHT20	3	5700	6.84	0.00	6.84	8.23
VHT20	3	5720	8.20	0.00	8.20	8.23
VHT40	3	5510	4.95	0.00	4.95	8.23
VHT40	3	5590	7.31	0.00	7.31	8.23
VHT40	3	5670	6.73	0.00	6.73	8.23
VHT40	3	5710	7.38	0.00	7.38	8.23
VHT80	3	5530	-0.85	0.18	-0.67	8.23
VHT80	3	5610	1.88	0.18	2.06	8.23
VHT80	3	5690	4.56	0.18	4.74	8.23

Note:
1. D.F is duty factor.
2. Test result is bin-by-bin summing measured value of each TX port.
3. Directional gain = 4+10* log(3/1) = 8.77 dBi > 6dBi.
   Limit shall be reduced to 11 dBm – (8.77 dBi – 6 dBi) = 8.23 dBm.

Worst Plot


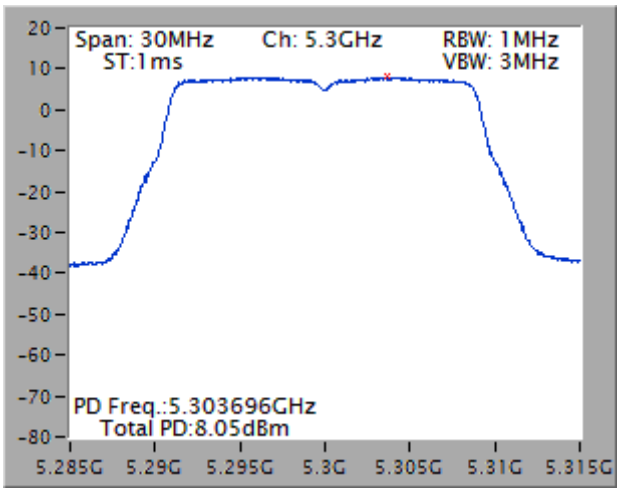
Span: 30MHz
ST:1ms
Ch: 5.72GHz
RBW: 1MHz
VBW: 3MHz
PD Freq.:5.716435GHz
Total PD:8.20dBm
20
10
0
-10
-20
-30
-40
-50
-60
-70
-80
5.705G
5.71G
5.715G
5.72G
5.725G
5.73G
5.735G

Beamforming mode

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)
VHT20	3	5260	7.83	0.00	7.83	8.23
VHT20	3	5300	8.05	0.00	8.05	8.23
VHT20	3	5320	7.79	0.00	7.79	8.23
VHT40	3	5270	4.78	0.00	4.78	8.23
VHT40	3	5310	3.39	0.00	3.39	8.23
VHT80	3	5290	-1.76	0.22	-1.54	8.23
VHT20	3	5500	6.87	0.00	6.87	8.23
VHT20	3	5580	5.90	0.00	5.90	8.23
VHT20	3	5700	7.05	0.00	7.05	8.23
VHT20	3	5720	7.20	0.00	7.20	8.23
VHT40	3	5510	4.01	0.00	4.01	8.23
VHT40	3	5590	4.62	0.00	4.62	8.23
VHT40	3	5670	5.75	0.00	5.75	8.23
VHT40	3	5710	5.77	0.00	5.77	8.23
VHT80	3	5530	-1.49	0.22	-1.27	8.23
VHT80	3	5610	1.08	0.22	1.30	8.23
VHT80	3	5690	1.21	0.22	1.43	8.23

Note:
1. D.F is duty factor.
2. Test result is bin-by-bin summing measured value of each TX port.
3. Directional gain = 4+10* log(3/1) = 8.77 dBi > 6dBi.
   Limit shall be reduced to 11 dBm – (8.77 dBi – 6 dBi) = 8.23 dBm.

Worst Plot



3.5 Transmitter Radiated and Band Edge Emissions

3.5.1 Limit of Transmitter Radiated and Band Edge Emissions

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

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

Un-restricted band emissions above 1GHz Limit	
Operating Band	**Limit**
5.25 - 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]

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

3.5.2 Test Procedures

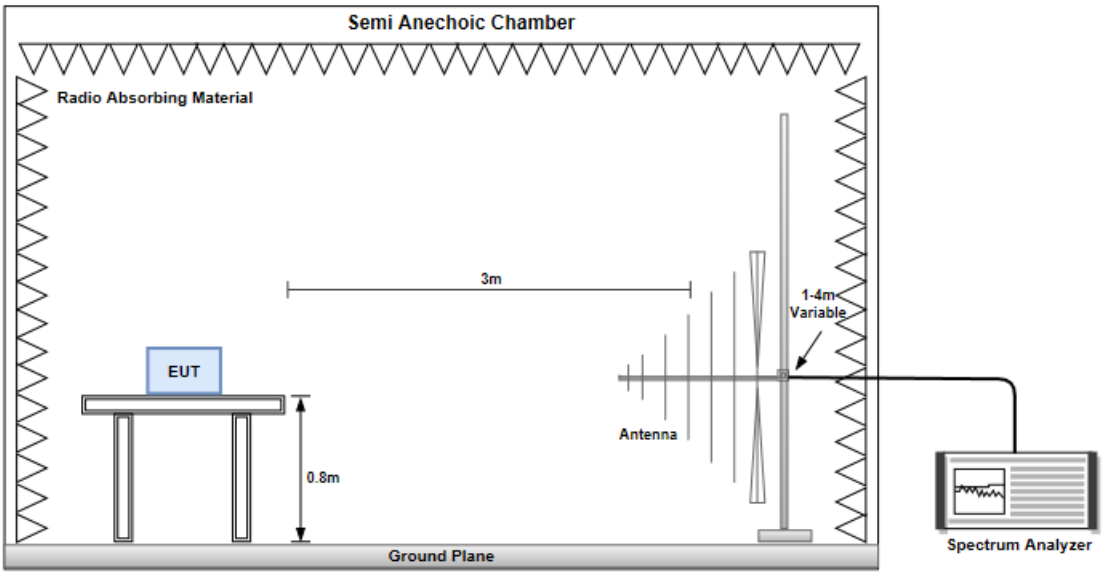
1. Measurement is made at a semi-anechoic chamber that incorporates a turntable allowing a EUT rotation of 360°. A continuously-rotating, remotely-controlled turntable is installed at the test site to support the EUT and facilitate determination of the direction of maximum radiation for each EUT emission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

Note:

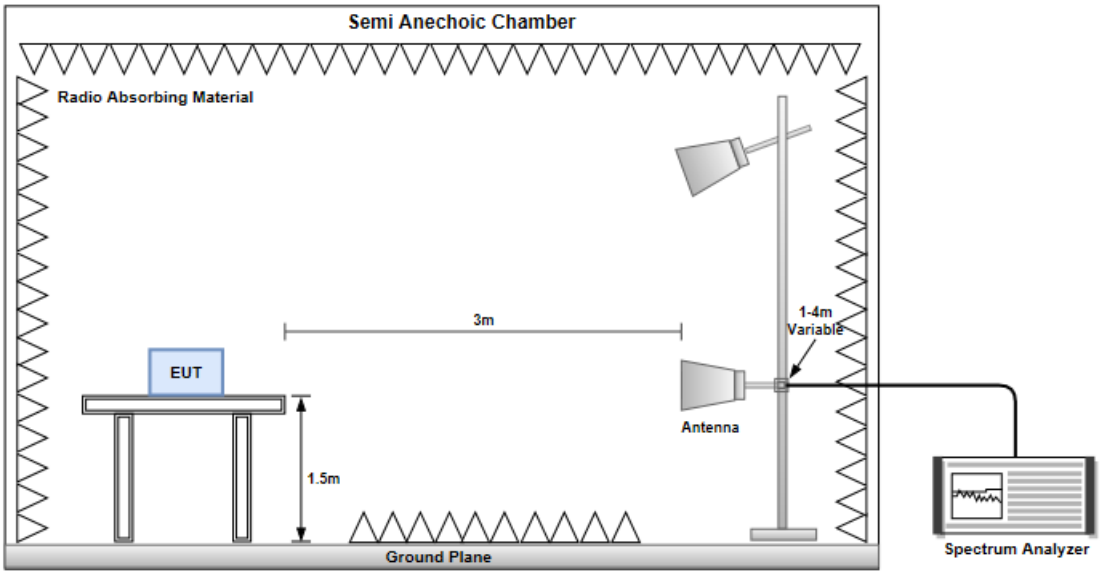
1. 120kHz measurement bandwidth of test receiver and Quasi-peak detector is for radiated emission below 1GHz.
2. RBW=1MHz, VBW=3MHz and Peak detector is for peak measured value of radiated emission above 1GHz.
3. RBW=1MHz, VBW=1/T and Peak detector is for average measured value of radiated emission above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

3.5.3 Test Setup

Radiated Emissions below 1 GHz



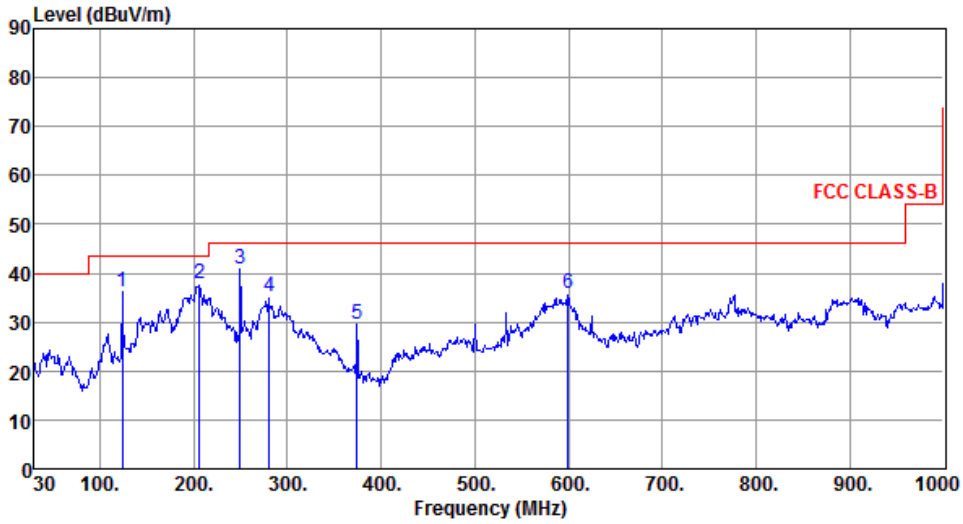
Radiated Emissions above 1 GHz



Non- beamforming mode

3.5.4 Transmitter Radiated Unwanted Emissions (Below 1GHz)

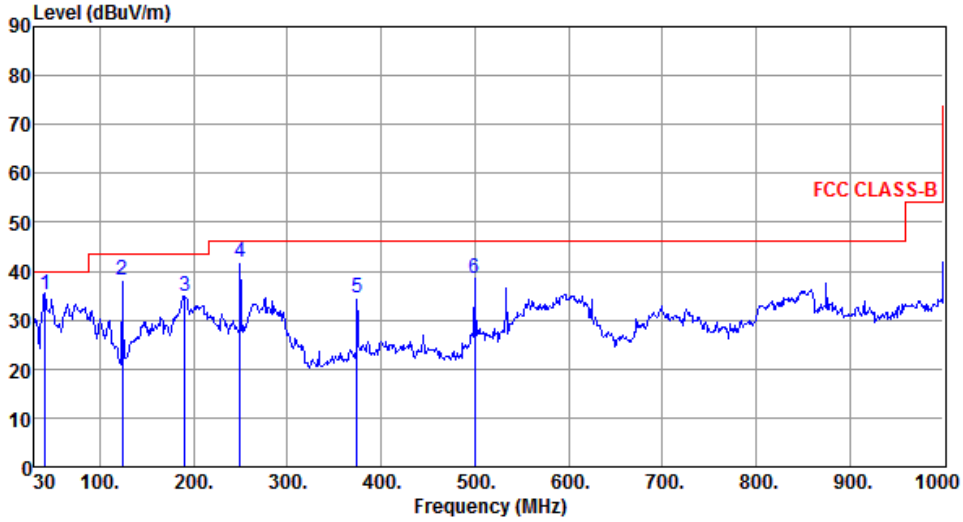
Modulation	VHT80	**Test Freq. (MHz)**	5690
Polarization	Horizontal	**Test Configuration**	1



	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	124.11	36.28	43.50	-7.22	46.89	-10.61	Peak	---	---
2	206.55	37.99	43.50	-5.51	49.12	-11.13	Peak	---	---
3	249.35	40.78	46.00	-5.22	50.20	-9.42	Peak	---	---
4	280.31	35.35	46.00	-10.65	43.65	-8.30	Peak	---	---
5	374.52	29.71	46.00	-16.29	35.68	-5.97	Peak	---	---
6	599.52	35.74	46.00	-10.26	36.67	-0.93	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.

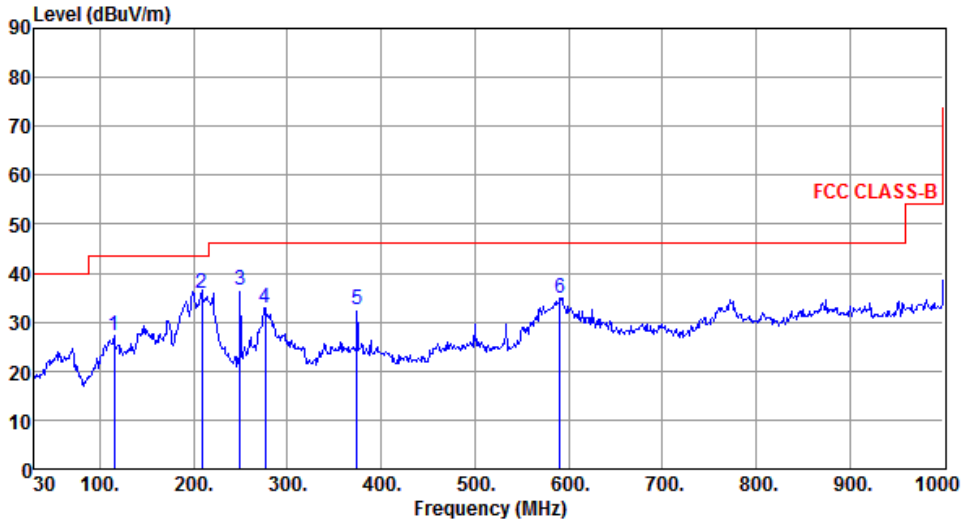
Modulation	VHT80	Test Freq. (MHz)	5690
Polarization	Vertical	Test Configuration	1



	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	41.79	35.16	40.00	-4.84	43.74	-8.58	Peak	---	---
2	124.16	38.04	43.50	-5.46	48.65	-10.61	Peak	---	---
3	190.17	35.03	43.50	-8.47	45.87	-10.84	Peak	---	---
4	249.33	41.92	46.00	-4.08	51.34	-9.42	Peak	---	---
5	374.56	34.61	46.00	-11.39	40.58	-5.97	Peak	---	---
6	499.62	38.67	46.00	-7.33	41.91	-3.24	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.

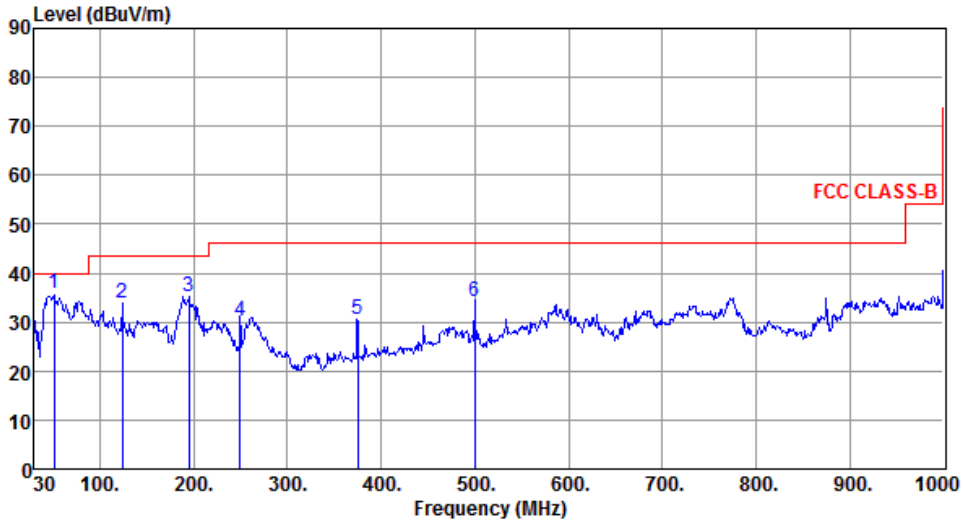
Modulation	VHT80	Test Freq. (MHz)	5690
Polarization	Horizontal	Test Configuration	2



	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	114.96	27.35	43.50	-16.15	38.76	-11.41	Peak	---	---
2	208.95	35.82	43.50	-7.68	46.92	-11.10	Peak	---	---
3	249.65	36.56	46.00	-9.44	45.98	-9.42	Peak	---	---
4	276.53	32.77	46.00	-13.23	41.23	-8.46	Peak	---	---
5	374.52	32.47	46.00	-13.53	38.44	-5.97	Peak	---	---
6	590.54	35.02	46.00	-10.98	36.19	-1.17	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	VHT80	Test Freq. (MHz)	5690
Polarization	Vertical	Test Configuration	2

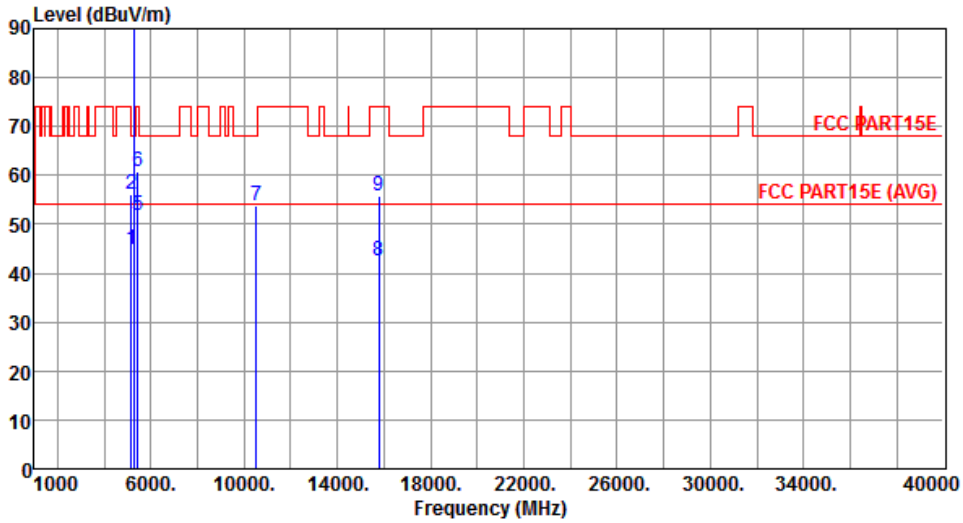


	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	51.33	35.74	40.00	-4.26	43.98	-8.24	Peak	---	---
2	124.11	33.82	43.50	-9.68	44.43	-10.61	Peak	---	---
3	194.90	35.20	43.50	-8.30	46.24	-11.04	Peak	---	---
4	249.35	30.25	46.00	-15.75	39.67	-9.42	Peak	---	---
5	374.87	30.64	46.00	-15.36	36.60	-5.96	Peak	---	---
6	499.58	34.33	46.00	-11.67	37.57	-3.24	Peak	---	---

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

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

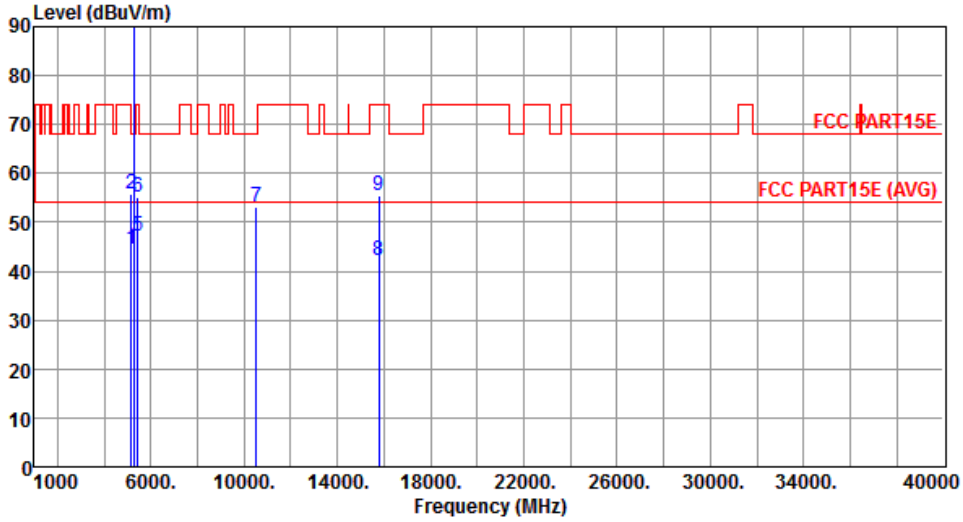
Modulation	11a	Test Freq. (MHz)	5260
Polarization	Horizontal		



		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	44.91	54.00	-9.09	43.56	1.35	Average	212	291
2		5150.00	56.17	74.00	-17.83	54.82	1.35	Peak	212	291
3	*	5260.00	106.21			104.67	1.54	Average	212	291
4	*	5260.00	115.51			113.97	1.54	Peak	212	291
5		5420.00	51.85	54.00	-2.15	50.03	1.82	Average	212	291
6		5420.00	60.75	74.00	-13.25	58.93	1.82	Peak	212	291
7		10520.00	53.85	68.20	-14.35	41.10	12.75	Peak	118	109
8		15780.00	42.59	54.00	-11.41	28.20	14.39	Average	108	101
9		15780.00	55.65	74.00	-18.35	41.26	14.39	Peak	108	101

Note 1: Emission Level (dBuV/m) = SA Reading (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:"*" is Peak / Average value of fundamental frequency

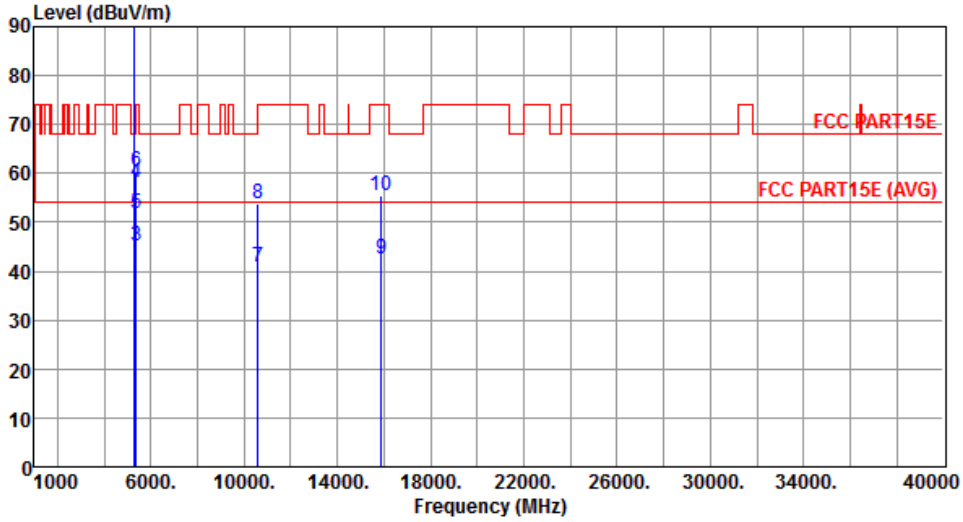
Modulation	11a	Test Freq. (MHz)	5260
Polarization	Vertical		



		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	44.62	54.00	-9.38	43.27	1.35	Average	201	5
2		5150.00	55.93	74.00	-18.07	54.58	1.35	Peak	201	5
3	*	5260.00	100.62			99.08	1.54	Average	201	5
4	*	5260.00	109.83			108.29	1.54	Peak	201	5
5		5420.00	47.12	54.00	-6.88	45.30	1.82	Average	201	5
6		5420.00	55.06	74.00	-18.94	53.24	1.82	Peak	201	5
7		10520.00	53.11	68.20	-15.09	40.36	12.75	Peak	128	16
8		15780.00	42.31	54.00	-11.69	27.92	14.39	Average	135	22
9		15780.00	55.44	74.00	-18.56	41.05	14.39	Peak	135	22

Note 1: Emission Level (dBuV/m) = SA Reading (dBuV/m) + Factor* (dB)
*Factor includes antenna factor , cable loss and amplifier gain
Note 2: Margin (dB) = Emission level (dBuV/m) – Limit (dBuV/m).
Note 3:"*" is Peak / Average value of fundamental frequency

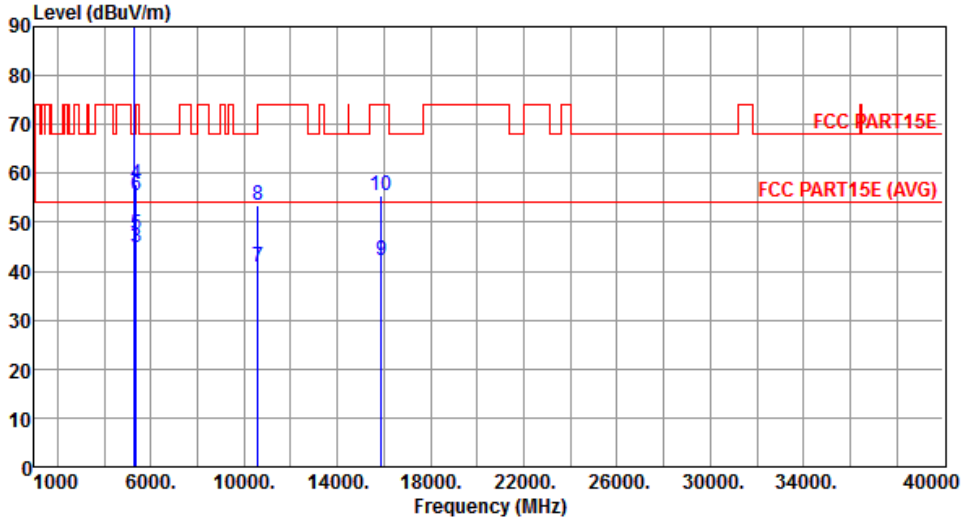
Modulation	11a	Test Freq. (MHz)	5300
Polarization	Horizontal		



		Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	*	5300.00	106.18			104.58	1.60	Average	208	289
2	*	5300.00	115.42			113.82	1.60	Peak	208	289
3		5350.00	45.20	54.00	-8.80	43.51	1.69	Average	208	289
4		5350.00	58.11	74.00	-15.89	56.42	1.69	Peak	208	289
5		5380.00	51.96	54.00	-2.04	50.21	1.75	Average	114	103
6		5380.00	60.48	74.00	-13.52	58.73	1.75	Peak	114	103
7		10600.00	40.96	54.00	-13.04	28.03	12.93	Average	118	131
8		10600.00	53.69	74.00	-20.31	40.76	12.93	Peak	118	131
9		15900.00	42.59	54.00	-11.41	28.29	14.30	Average	114	103
10		15900.00	55.61	74.00	-18.39	41.31	14.30	Peak	114	103

Note 1: Emission Level (dBuV/m) = SA Reading (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:"*" is Peak / Average value of fundamental frequency

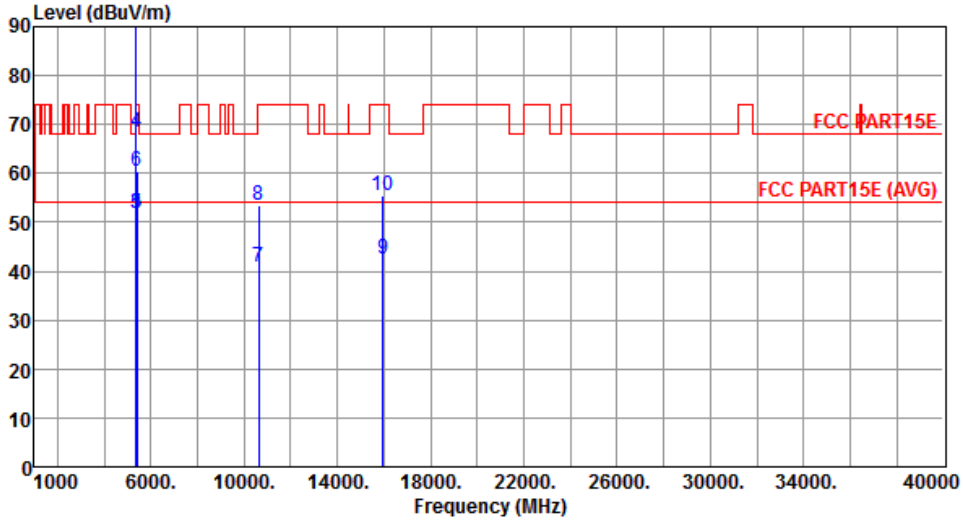
Modulation	11a	Test Freq. (MHz)	5300
Polarization	Vertical		



		Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	*	5300.00	100.42			98.82	1.60	Average	209	15
2	*	5300.00	109.61			108.01	1.60	Peak	209	15
3		5350.00	44.98	54.00	-9.02	43.29	1.69	Average	209	15
4		5350.00	57.86	74.00	-16.14	56.17	1.69	Peak	209	15
5		5380.00	47.41	54.00	-6.59	45.66	1.75	Average	129	19
6		5380.00	55.53	74.00	-18.47	53.78	1.75	Peak	129	19
7		10600.00	40.82	54.00	-13.18	27.89	12.93	Average	129	19
8		10600.00	53.45	74.00	-20.55	40.52	12.93	Peak	129	19
9		15900.00	42.34	54.00	-11.66	28.04	14.30	Average	125	26
10		15900.00	55.41	74.00	-18.59	41.11	14.30	Peak	125	26

Note 1: Emission Level (dBuV/m) = SA Reading (dBuV/m) + Factor* (dB)
*Factor includes antenna factor , cable loss and amplifier gain
Note 2: Margin (dB) = Emission level (dBuV/m) – Limit (dBuV/m).
Note 3:"*" is Peak / Average value of fundamental frequency

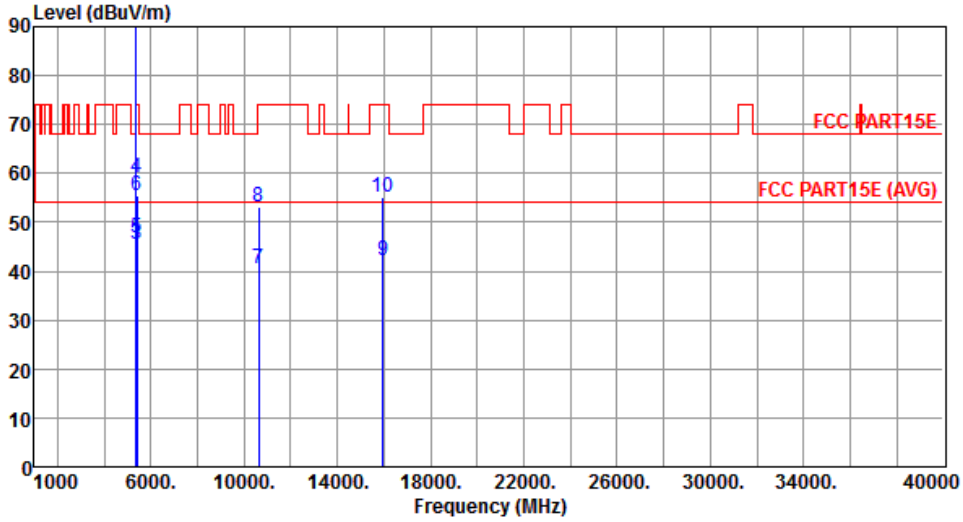
Modulation	11a	Test Freq. (MHz)	5320
Polarization	Horizontal		



		Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	*	5320.00	106.44			104.80	1.64	Average	211	291
2	*	5320.00	115.74			114.10	1.64	Peak	211	291
3		5350.00	51.90	54.00	-2.10	50.21	1.69	Average	211	291
4		5350.00	68.31	74.00	-5.69	66.62	1.69	Peak	211	291
5		5400.00	51.82	54.00	-2.18	50.04	1.78	Average	211	291
6		5400.00	60.51	74.00	-13.49	58.73	1.78	Peak	211	291
7		10640.00	40.83	54.00	-13.17	27.81	13.02	Average	120	134
8		10640.00	53.53	74.00	-20.47	40.51	13.02	Peak	120	134
9		15960.00	42.40	54.00	-11.60	28.15	14.25	Average	110	95
10		15960.00	55.46	74.00	-18.54	41.21	14.25	Peak	110	95

Note 1: Emission Level (dBuV/m) = SA Reading (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:"*" is Peak / Average value of fundamental frequency

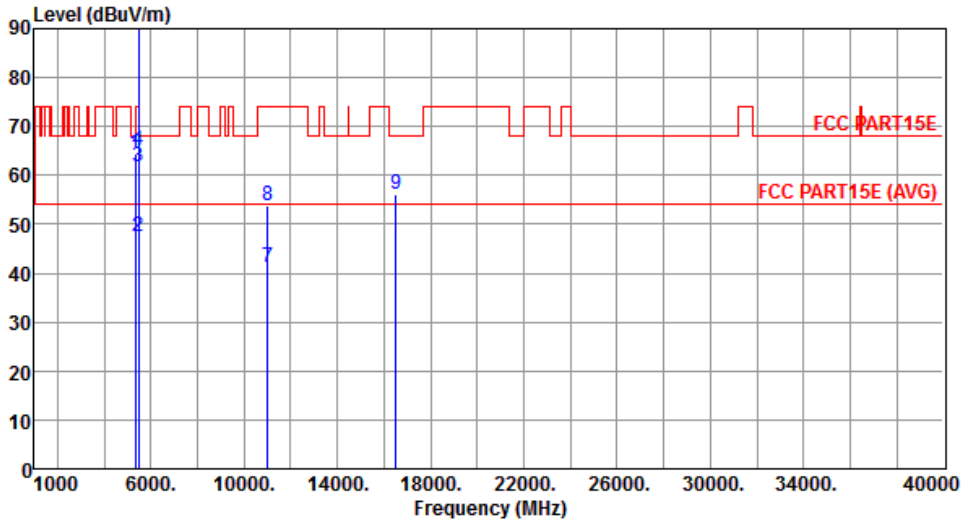
Modulation	11a	Test Freq. (MHz)	5320
Polarization	Vertical		



		Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	*	5320.00	100.89			99.25	1.64	Average	203	2
2	*	5320.00	110.09			108.45	1.64	Peak	203	2
3		5350.00	45.50	54.00	-8.50	43.81	1.69	Average	203	2
4		5350.00	58.95	74.00	-15.05	57.26	1.69	Peak	203	2
5		5400.00	46.94	54.00	-7.06	45.16	1.78	Average	203	2
6		5400.00	55.55	74.00	-18.45	53.77	1.78	Peak	203	2
7		10640.00	40.65	54.00	-13.35	27.63	13.02	Average	125	14
8		10640.00	53.22	74.00	-20.78	40.20	13.02	Peak	125	14
9		15960.00	42.15	54.00	-11.85	27.90	14.25	Average	131	19
10		15960.00	55.28	74.00	-18.72	41.03	14.25	Peak	131	19

Note 1: Emission Level (dBuV/m) = SA Reading (dBuV/m) + Factor* (dB)
*Factor includes antenna factor , cable loss and amplifier gain
Note 2: Margin (dB) = Emission level (dBuV/m) – Limit (dBuV/m).
Note 3:"*" is Peak / Average value of fundamental frequency

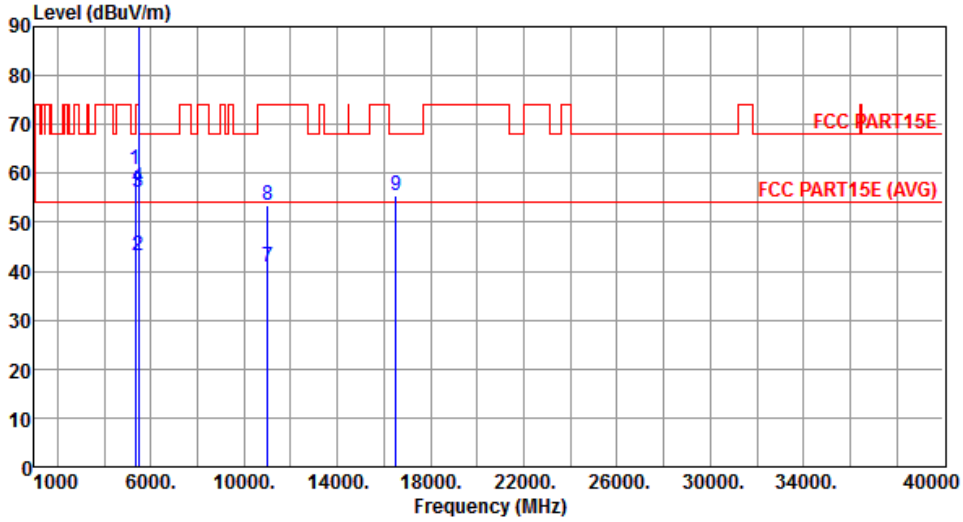
Modulation	11a	Test Freq. (MHz)	5500
Polarization	Horizontal		



		Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1		5340.00	64.33	68.20	-3.87	62.66	1.67	Peak	189	294
2		5460.00	47.49	54.00	-6.51	45.62	1.87	Average	189	294
3		5460.00	61.83	74.00	-12.17	59.96	1.87	Peak	189	294
4		5470.00	65.12	68.20	-3.08	63.24	1.88	Peak	189	294
5	*	5500.00	106.25			104.32	1.93	Average	189	294
6	*	5500.00	115.44			113.51	1.93	Peak	189	294
7		11000.00	41.25	54.00	-12.75	27.44	13.81	Average	125	108
8		11000.00	53.94	74.00	-20.06	40.13	13.81	Peak	125	108
9		16500.00	56.01	68.20	-12.19	40.35	15.66	Peak	116	91

Note 1: Emission Level (dBuV/m) = SA Reading (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:"*" is Peak / Average value of fundamental frequency

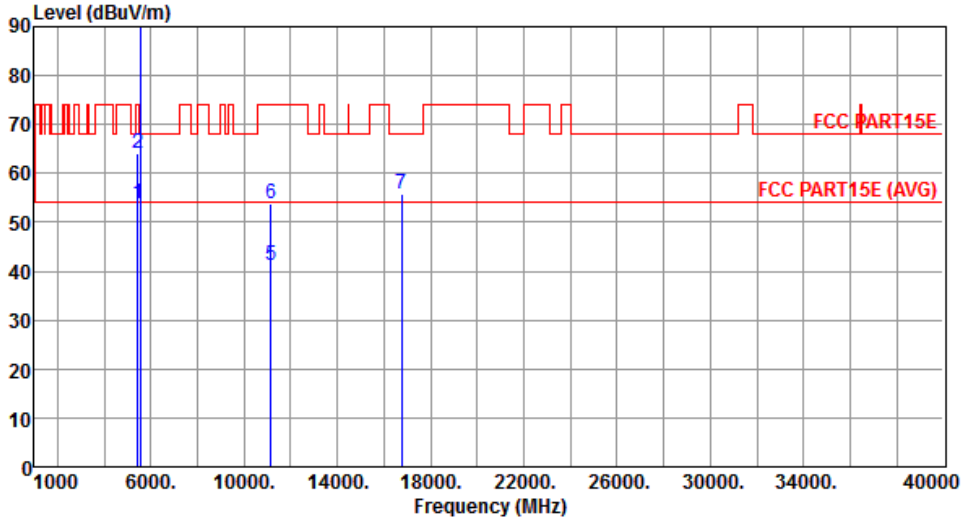
Modulation	11a	Test Freq. (MHz)	5500
Polarization	Vertical		



		Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1		5340.00	60.64	68.20	-7.56	58.97	1.67	Peak	206	8
2		5460.00	43.03	54.00	-10.97	41.16	1.87	Average	206	8
3		5460.00	56.08	74.00	-17.92	54.21	1.87	Peak	206	8
4		5470.00	57.01	68.20	-11.19	55.13	1.88	Peak	206	8
5	*	5500.00	100.41			98.48	1.93	Average	206	8
6	*	5500.00	109.65			107.72	1.93	Peak	206	8
7		11000.00	40.93	54.00	-13.07	27.12	13.81	Average	123	25
8		11000.00	53.45	74.00	-20.55	39.64	13.81	Peak	123	25
9		16500.00	55.61	68.20	-12.59	39.95	15.66	Peak	129	24

Note 1: Emission Level (dBuV/m) = SA Reading (dBuV/m) + Factor* (dB)
*Factor includes antenna factor , cable loss and amplifier gain
Note 2: Margin (dB) = Emission level (dBuV/m) – Limit (dBuV/m).
Note 3:"*" is Peak / Average value of fundamental frequency

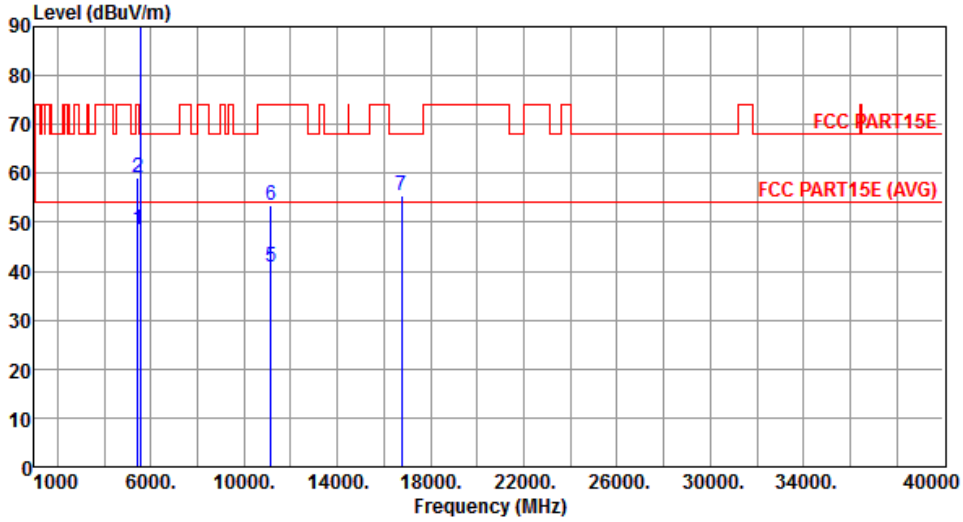
Modulation	11a	Test Freq. (MHz)	5580
Polarization	Horizontal		



		Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1		5420.00	53.65	54.00	-0.35	51.83	1.82	Average	190	293
2		5420.00	63.97	74.00	-10.03	62.15	1.82	Peak	190	293
3	*	5580.00	106.01			103.94	2.07	Average	190	293
4	*	5580.00	115.30			113.23	2.07	Peak	190	293
5		11160.00	41.02	54.00	-12.98	27.03	13.99	Average	129	113
6		11160.00	53.68	74.00	-20.32	39.69	13.99	Peak	129	113
7		16740.00	55.89	68.20	-12.31	40.14	15.75	Peak	113	98

Note 1: Emission Level (dBuV/m) = SA Reading (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:"*" is Peak / Average value of fundamental frequency

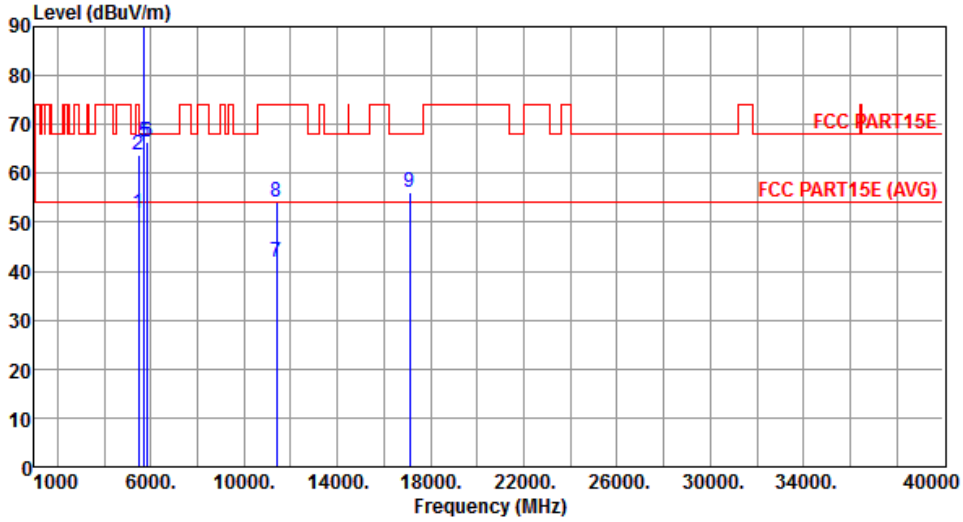
Modulation	11a	Test Freq. (MHz)	5580
Polarization	Vertical		



		Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1		5420.00	48.36	54.00	-5.64	46.54	1.82	Average	202	13
2		5420.00	59.25	74.00	-14.75	57.43	1.82	Peak	202	13
3	*	5580.00	99.35			97.28	2.07	Average	202	13
4	*	5580.00	108.52			106.45	2.07	Peak	202	13
5		11160.00	40.81	54.00	-13.19	26.82	13.99	Average	121	29
6		11160.00	53.35	74.00	-20.65	39.36	13.99	Peak	121	29
7		16740.00	55.36	68.20	-12.84	39.61	15.75	Peak	122	24

Note 1: Emission Level (dBuV/m) = SA Reading (dBuV/m) + Factor* (dB)
*Factor includes antenna factor , cable loss and amplifier gain
Note 2: Margin (dB) = Emission level (dBuV/m) – Limit (dBuV/m).
Note 3:"*" is Peak / Average value of fundamental frequency

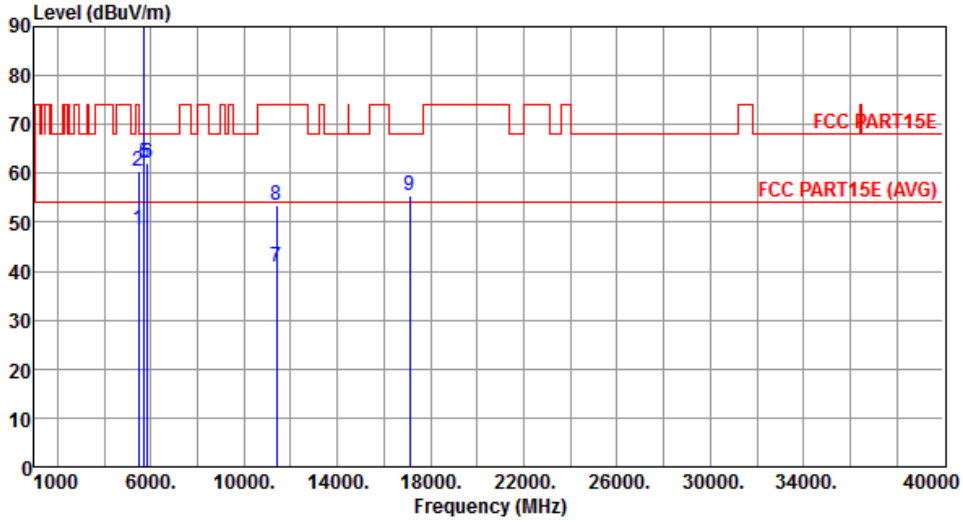
Modulation	11a	Test Freq. (MHz)	5700
Polarization	Horizontal		



		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	51.95	54.00	-2.05	50.08	1.87	Average	194	290
2		5460.00	63.85	74.00	-10.15	61.98	1.87	Peak	194	290
3	*	5700.00	106.54			104.17	2.37	Average	191	299
4	*	5700.00	115.74			113.37	2.37	Peak	191	299
5		5725.00	66.46	68.20	-1.74	64.03	2.43	Peak	191	299
6		5860.00	66.40	68.20	-1.80	63.66	2.74	Peak	191	299
7		11400.00	41.68	54.00	-12.32	27.43	14.25	Average	121	116
8		11400.00	54.19	74.00	-19.81	39.94	14.25	Peak	121	116
9		17100.00	56.21	68.20	-11.99	40.02	16.19	Peak	115	103

Note 1: Emission Level (dBuV/m) = SA Reading (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:"*" is Peak / Average value of fundamental frequency

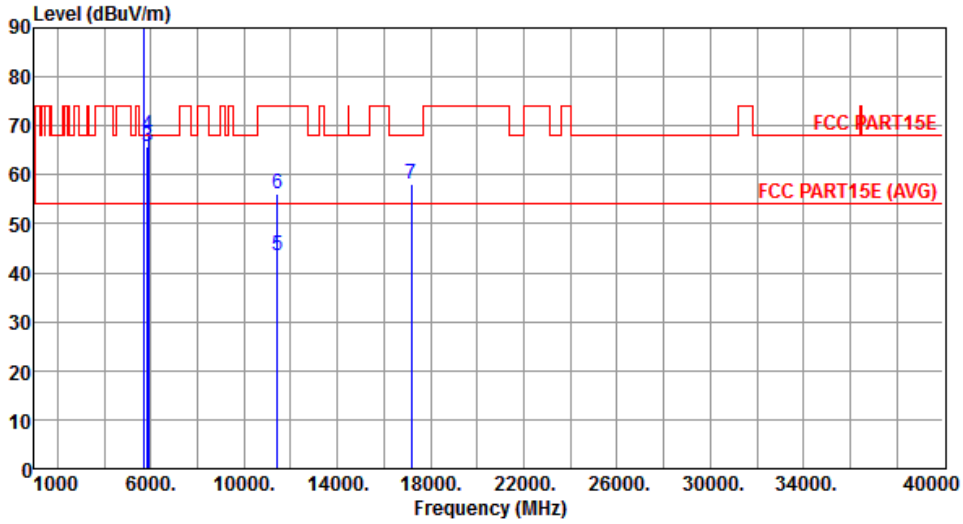
Modulation	11a	Test Freq. (MHz)	5700
Polarization	Vertical		



		Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1		5460.00	48.62	54.00	-5.38	46.75	1.87	Average	203	15
2		5460.00	60.59	74.00	-13.41	58.72	1.87	Peak	203	15
3	*	5700.00	99.84			97.47	2.37	Average	203	15
4	*	5700.00	109.12			106.75	2.37	Peak	203	15
5		5725.00	62.21	68.20	-5.99	59.78	2.43	Peak	203	15
6		5860.00	62.08	68.20	-6.12	59.34	2.74	Peak	203	15
7		11400.00	40.95	54.00	-13.05	26.70	14.25	Average	123	44
8		11400.00	53.46	74.00	-20.54	39.21	14.25	Peak	123	44
9		17100.00	55.48	68.20	-12.72	39.29	16.19	Peak	125	31

Note 1: Emission Level (dBuV/m) = SA Reading (dBuV/m) + Factor* (dB)
*Factor includes antenna factor , cable loss and amplifier gain
Note 2: Margin (dB) = Emission level (dBuV/m) – Limit (dBuV/m).
Note 3:"*" is Peak / Average value of fundamental frequency

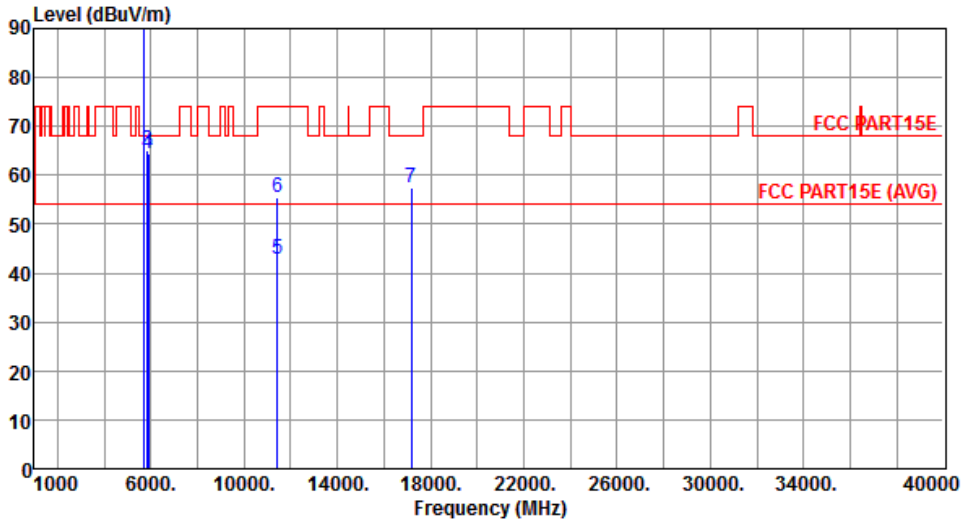
Modulation	11a	Test Freq. (MHz)	5720
Polarization	Horizontal		



		Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	*	5720.00	106.66			104.26	2.40	Average	196	47
2	*	5720.00	116.40			114.00	2.40	Peak	196	47
3		5850.00	65.80	68.20	-2.40	63.09	2.71	Peak	196	47
4		5880.00	67.92	68.20	-0.28	65.14	2.78	Peak	199	50
5		11440.00	43.52	54.00	-10.48	29.23	14.29	Average	124	119
6		11440.00	56.08	74.00	-17.92	41.79	14.29	Peak	124	119
7		17160.00	58.14	68.20	-10.06	41.74	16.40	Peak	116	108

Note 1: Emission Level (dBuV/m) = SA Reading (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:"*" is Peak / Average value of fundamental frequency

Modulation	11a	Test Freq. (MHz)	5720
Polarization	Vertical		

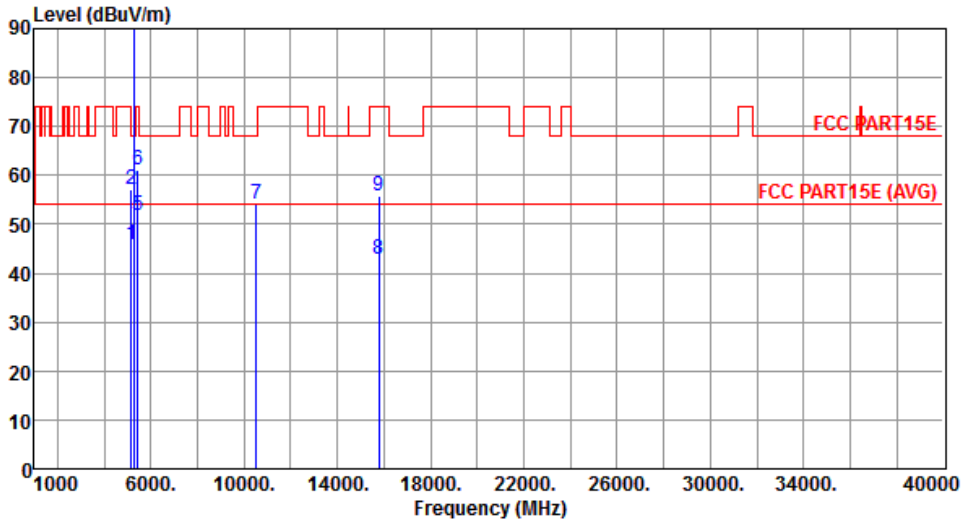


		Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	*	5720.00	99.85			97.45	2.40	Average	201	16
2	*	5720.00	109.46			107.06	2.40	Peak	201	16
3		5850.00	65.25	68.20	-2.95	62.54	2.71	Peak	201	16
4		5880.00	64.28	68.20	-3.92	61.50	2.78	Peak	201	16
5		11440.00	42.82	54.00	-11.18	28.53	14.29	Average	125	31
6		11440.00	55.36	74.00	-18.64	41.07	14.29	Peak	125	31
7		17160.00	57.41	68.20	-10.79	41.01	16.40	Peak	126	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).
Note 3:"*" is Peak / Average value of fundamental frequency

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

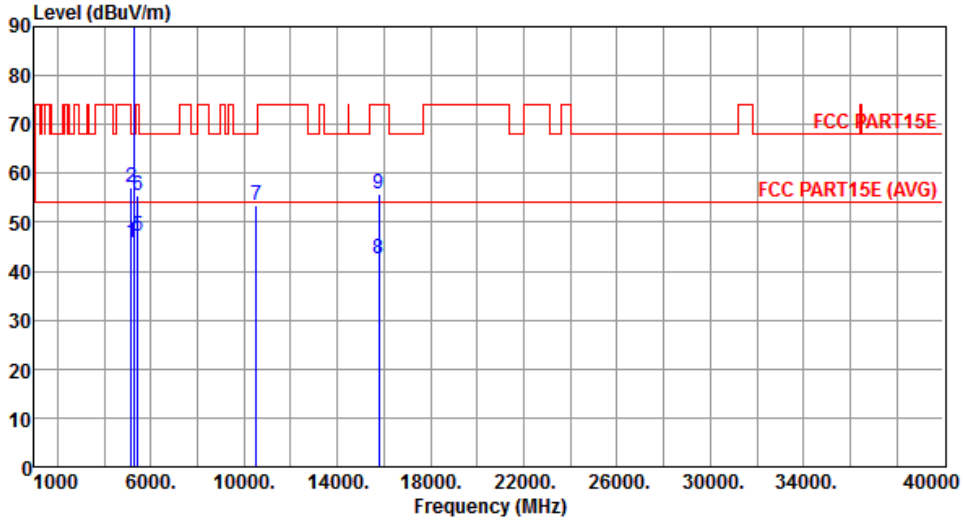
Modulation	VHT20	**Test Freq. (MHz)**	5260
Polarization	Horizontal		



		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	45.96	54.00	-8.04	44.61	1.35	Average	213	292
2		5150.00	57.24	74.00	-16.76	55.89	1.35	Peak	213	292
3	*	5260.00	106.32			104.78	1.54	Average	213	292
4	*	5260.00	117.64			116.10	1.54	Peak	213	292
5		5420.00	51.93	54.00	-2.07	50.11	1.82	Average	213	292
6		5420.00	61.06	74.00	-12.94	59.24	1.82	Peak	213	292
7		10520.00	53.98	68.20	-14.22	41.23	12.75	Peak	119	109
8		15780.00	42.74	54.00	-11.26	28.35	14.39	Average	109	101
9		15780.00	55.81	74.00	-18.19	41.42	14.39	Peak	109	101

Note 1: Emission Level (dBuV/m) = SA Reading (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:"*" is Peak / Average value of fundamental frequency

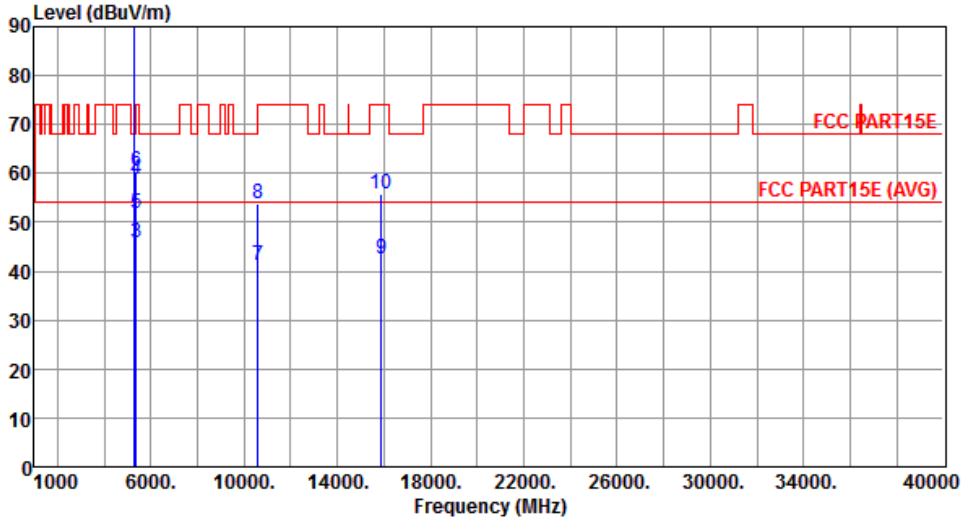
Modulation	VHT20	Test Freq. (MHz)	5260
Polarization	Vertical		



		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	45.81	54.00	-8.19	44.46	1.35	Average	201	9
2		5150.00	57.08	74.00	-16.92	55.73	1.35	Peak	201	9
3	*	5260.00	100.78			99.24	1.54	Average	201	9
4	*	5260.00	111.96			110.42	1.54	Peak	201	9
5		5420.00	47.25	54.00	-6.75	45.43	1.82	Average	201	9
6		5420.00	55.49	74.00	-18.51	53.67	1.82	Peak	201	9
7		10520.00	53.42	68.20	-14.78	40.67	12.75	Peak	129	18
8		15780.00	42.56	54.00	-11.44	28.17	14.39	Average	132	25
9		15780.00	55.63	74.00	-18.37	41.24	14.39	Peak	132	25

Note 1: Emission Level (dBuV/m) = SA Reading (dBuV/m) + Factor* (dB)
*Factor includes antenna factor , cable loss and amplifier gain
Note 2: Margin (dB) = Emission level (dBuV/m) – Limit (dBuV/m).
Note 3:"*" is Peak / Average value of fundamental frequency

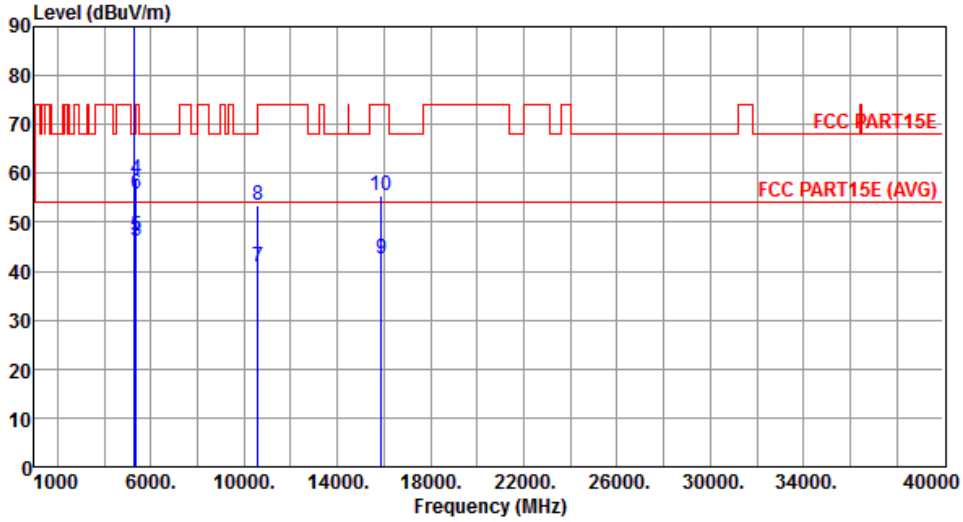
Modulation	VHT20	Test Freq. (MHz)	5300
Polarization	Horizontal		



		Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	*	5300.00	106.21			104.61	1.60	Average	210	288
2	*	5300.00	117.64			116.04	1.60	Peak	210	288
3		5350.00	45.86	54.00	-8.14	44.17	1.69	Average	210	288
4		5350.00	58.65	74.00	-15.35	56.96	1.69	Peak	210	288
5		5380.00	51.86	54.00	-2.14	50.11	1.75	Average	210	288
6		5380.00	60.31	74.00	-13.69	58.56	1.75	Peak	210	288
7		10600.00	41.21	54.00	-12.79	28.28	12.93	Average	119	134
8		10600.00	53.84	74.00	-20.16	40.91	12.93	Peak	119	134
9		15900.00	42.65	54.00	-11.35	28.35	14.30	Average	110	99
10		15900.00	55.73	74.00	-18.27	41.43	14.30	Peak	110	99

Note 1: Emission Level (dBuV/m) = SA Reading (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:"*" is Peak / Average value of fundamental frequency

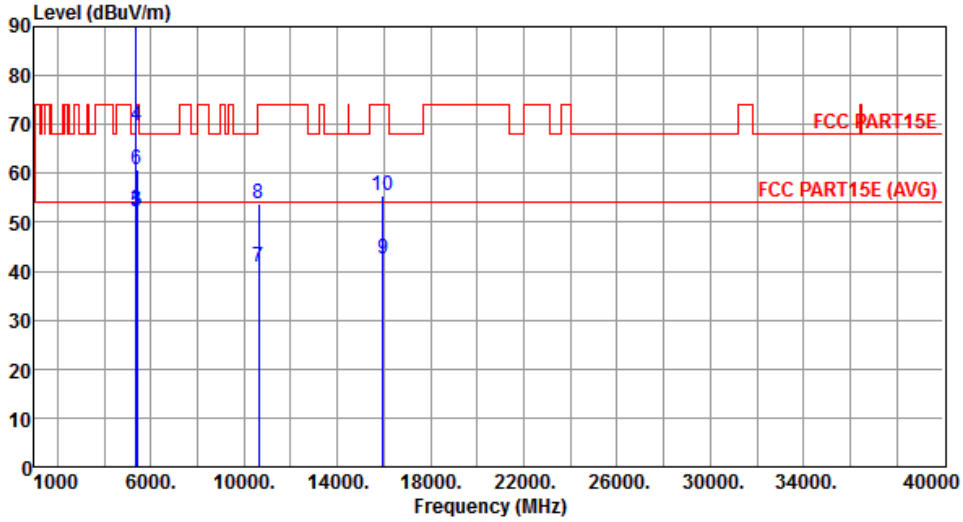
Modulation	VHT20	Test Freq. (MHz)	5300
Polarization	Vertical		



		Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	*	5300.00	100.53			98.93	1.60	Average	209	18
2	*	5300.00	111.79			110.19	1.60	Peak	209	18
3		5350.00	46.13	54.00	-7.87	44.44	1.69	Average	209	18
4		5350.00	58.94	74.00	-15.06	57.25	1.69	Peak	209	18
5		5380.00	47.26	54.00	-6.74	45.51	1.75	Average	209	18
6		5380.00	55.74	74.00	-18.26	53.99	1.75	Peak	209	18
7		10600.00	40.95	54.00	-13.05	28.02	12.93	Average	128	23
8		10600.00	53.62	74.00	-20.38	40.69	12.93	Peak	128	23
9		15900.00	42.45	54.00	-11.55	28.15	14.30	Average	121	20
10		15900.00	55.58	74.00	-18.42	41.28	14.30	Peak	121	20

Note 1: Emission Level (dBuV/m) = SA Reading (dBuV/m) + Factor* (dB)
*Factor includes antenna factor , cable loss and amplifier gain
Note 2: Margin (dB) = Emission level (dBuV/m) – Limit (dBuV/m).
Note 3:"*" is Peak / Average value of fundamental frequency

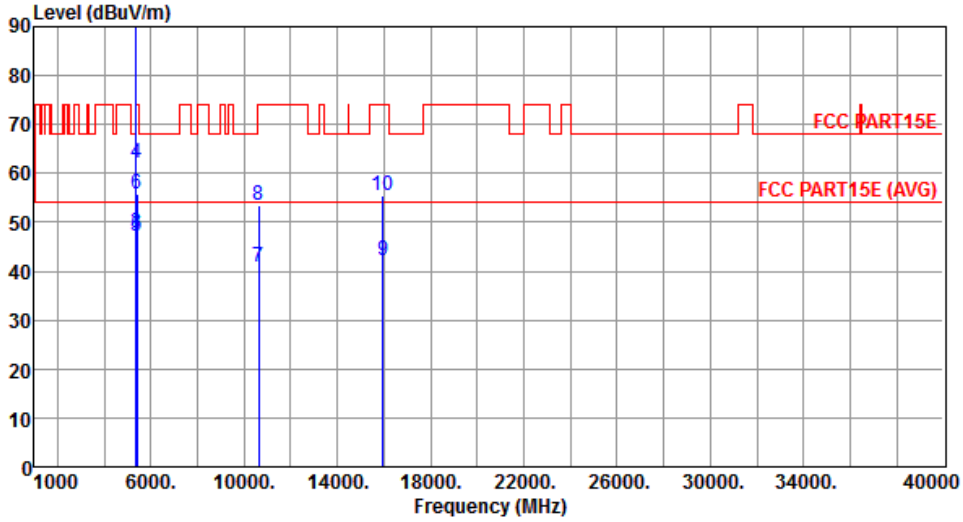
Modulation	VHT20	Test Freq. (MHz)	5320
Polarization	Horizontal		



		Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	*	5320.00	106.05			104.41	1.64	Average	208	286
2	*	5320.00	118.08			116.44	1.64	Peak	208	286
3		5350.00	52.58	54.00	-1.42	50.89	1.69	Average	208	286
4		5350.00	69.84	74.00	-4.16	68.15	1.69	Peak	208	286
5		5400.00	51.99	54.00	-2.01	50.21	1.78	Average	208	286
6		5400.00	60.91	74.00	-13.09	59.13	1.78	Peak	208	286
7		10640.00	40.95	54.00	-13.05	27.93	13.02	Average	121	134
8		10640.00	53.64	74.00	-20.36	40.62	13.02	Peak	121	134
9		15960.00	42.58	54.00	-11.42	28.33	14.25	Average	103	99
10		15960.00	55.62	74.00	-18.38	41.37	14.25	Peak	103	99

Note 1: Emission Level (dBuV/m) = SA Reading (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:"*" is Peak / Average value of fundamental frequency

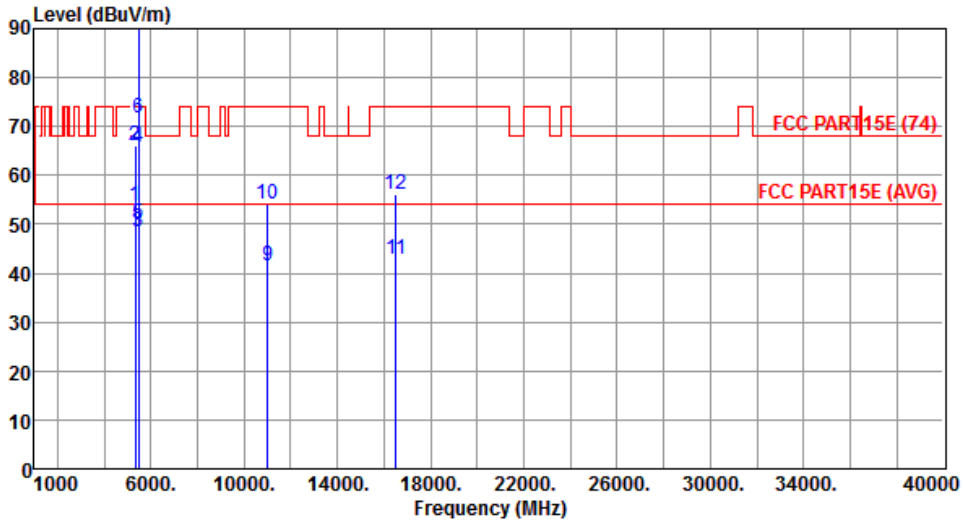
Modulation	VHT20	Test Freq. (MHz)	5320
Polarization	Vertical		



		Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	*	5320.00	100.91			99.27	1.64	Average	205	6
2	*	5320.00	112.14			110.50	1.64	Peak	205	6
3		5350.00	47.96	54.00	-6.04	46.27	1.69	Average	205	6
4		5350.00	62.24	74.00	-11.76	60.55	1.69	Peak	205	6
5		5400.00	47.13	54.00	-6.87	45.35	1.78	Average	205	6
6		5400.00	55.93	74.00	-18.07	54.15	1.78	Peak	205	6
7		10640.00	40.84	54.00	-13.16	27.82	13.02	Average	129	15
8		10640.00	53.47	74.00	-20.53	40.45	13.02	Peak	129	15
9		15960.00	42.33	54.00	-11.67	28.08	14.25	Average	135	26
10		15960.00	55.49	74.00	-18.51	41.24	14.25	Peak	135	26

Note 1: Emission Level (dBuV/m) = SA Reading (dBuV/m) + Factor* (dB)
*Factor includes antenna factor , cable loss and amplifier gain
Note 2: Margin (dB) = Emission level (dBuV/m) – Limit (dBuV/m).
Note 3:"*" is Peak / Average value of fundamental frequency

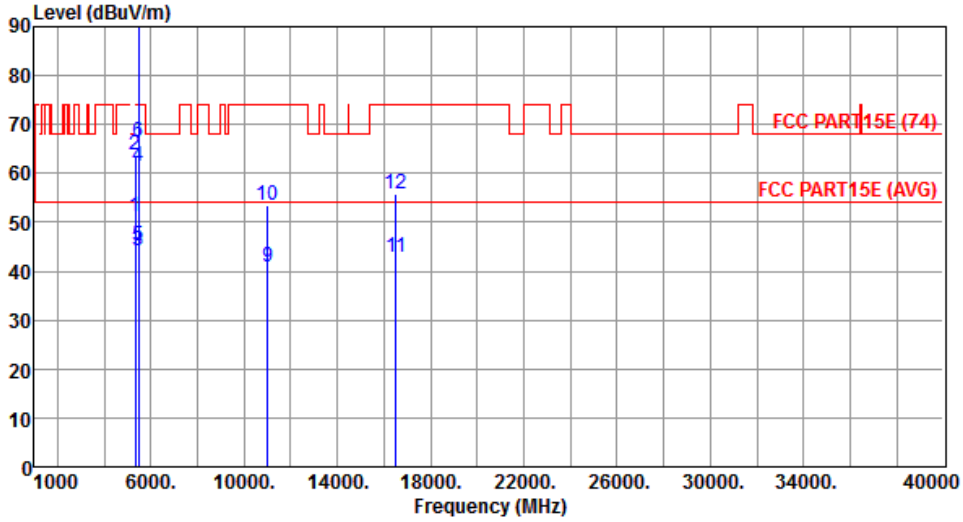
Modulation	VHT20	Test Freq. (MHz)	5500
Polarization	Horizontal		



		Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1		5340.00	53.72	54.00	-0.28	52.05	1.67	Average	207	285
2		5340.00	66.13	74.00	-7.87	64.46	1.67	Peak	207	285
3		5460.00	48.40	54.00	-5.60	46.53	1.87	Average	206	285
4		5460.00	65.76	74.00	-8.24	63.89	1.87	Peak	206	285
5		5470.00	50.09	54.00	-3.91	48.21	1.88	Average	206	285
6		5470.00	71.57	74.00	-2.43	69.69	1.88	Peak	206	285
7	*	5500.00	105.72			103.79	1.93	Average	206	285
8	*	5500.00	117.25			115.32	1.93	Peak	206	285
9		11000.00	41.46	54.00	-12.54	27.65	13.81	Average	128	113
10		11000.00	54.15	74.00	-19.85	40.34	13.81	Peak	128	113
11		16500.00	42.93	54.00	-11.07	27.27	15.66	Average	115	94
12		16500.00	56.14	74.00	-17.86	40.48	15.66	Peak	115	94

Note 1: Emission Level (dBuV/m) = SA Reading (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:"*" is Peak / Average value of fundamental frequency

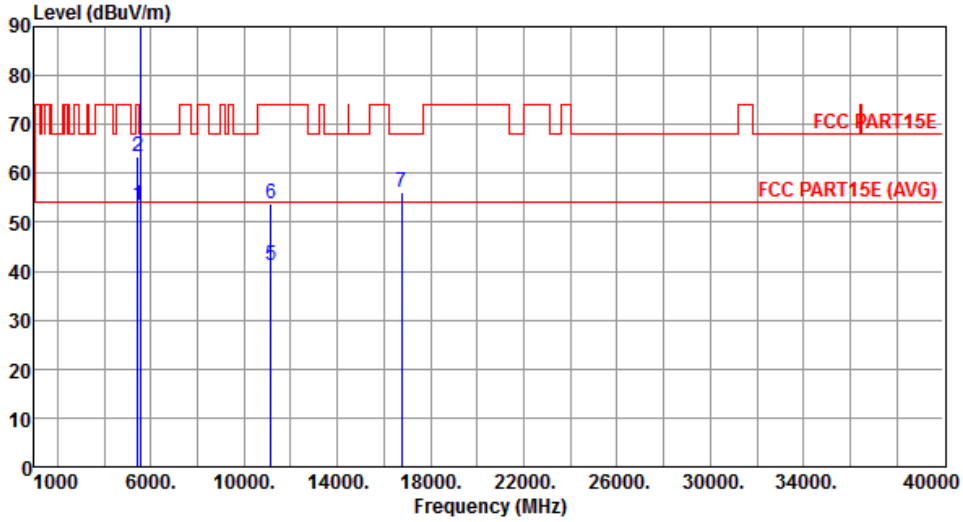
Modulation	VHT20	Test Freq. (MHz)	5500
Polarization	Vertical		



		Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1		5340.00	51.26	54.00	-2.74	49.59	1.67	Average	209	8
2		5340.00	63.82	74.00	-10.18	62.15	1.67	Peak	209	8
3		5460.00	44.25	54.00	-9.75	42.38	1.87	Average	209	8
4		5460.00	61.39	74.00	-12.61	59.52	1.87	Peak	209	8
5		5470.00	45.24	54.00	-8.76	43.36	1.88	Average	209	8
6		5470.00	66.31	74.00	-7.69	64.43	1.88	Peak	209	8
7	*	5500.00	100.08			98.15	1.93	Average	209	8
8	*	5500.00	111.72			109.79	1.93	Peak	209	8
9		11000.00	40.98	54.00	-13.02	27.17	13.81	Average	121	25
10		11000.00	53.56	74.00	-20.44	39.75	13.81	Peak	121	25
11		16500.00	42.69	54.00	-11.31	27.03	15.66	Average	128	29
12		16500.00	55.74	74.00	-18.26	40.08	15.66	Peak	128	29

Note 1: Emission Level (dBuV/m) = SA Reading (dBuV/m) + Factor* (dB)
*Factor includes antenna factor , cable loss and amplifier gain
Note 2: Margin (dB) = Emission level (dBuV/m) – Limit (dBuV/m).
Note 3:"*" is Peak / Average value of fundamental frequency

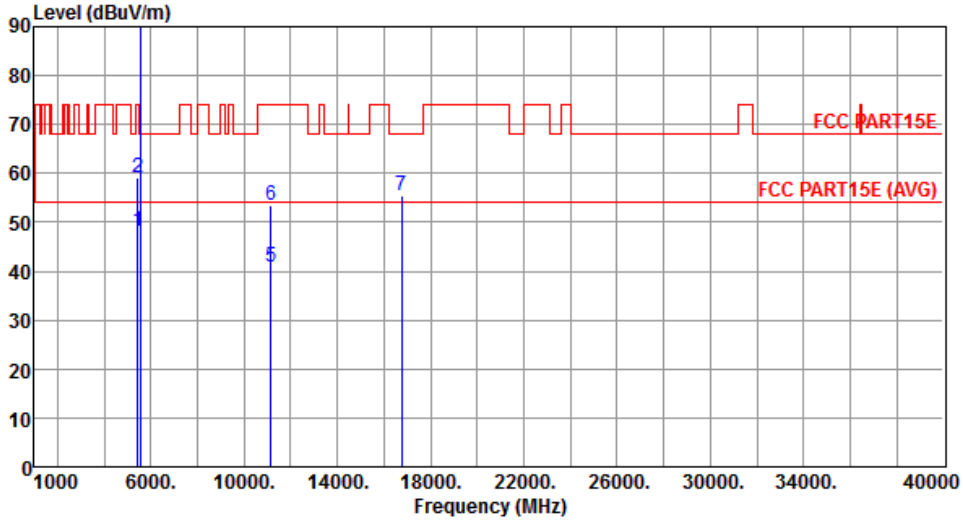
Modulation	VHT20	Test Freq. (MHz)	5580
Polarization	Horizontal		



		Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1		5420.00	53.34	54.00	-0.66	51.52	1.82	Average	191	293
2		5420.00	63.58	74.00	-10.42	61.76	1.82	Peak	191	293
3	*	5580.00	105.84			103.77	2.07	Average	191	293
4	*	5580.00	117.16			115.09	2.07	Peak	191	293
5		11160.00	41.19	54.00	-12.81	27.20	13.99	Average	122	119
6		11160.00	53.76	74.00	-20.24	39.77	13.99	Peak	122	119
7		16740.00	55.96	68.20	-12.24	40.21	15.75	Peak	115	102

Note 1: Emission Level (dBuV/m) = SA Reading (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:"*" is Peak / Average value of fundamental frequency

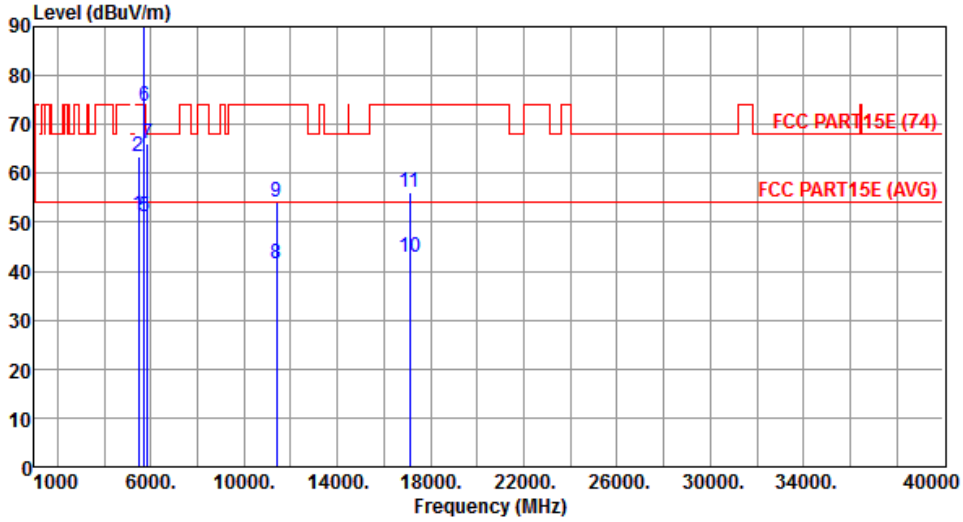
Modulation	VHT20	Test Freq. (MHz)	5580
Polarization	Vertical		



		Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1		5420.00	48.21	54.00	-5.79	46.39	1.82	Average	201	15
2		5420.00	59.06	74.00	-14.94	57.24	1.82	Peak	201	15
3	*	5580.00	99.06			96.99	2.07	Average	201	15
4	*	5580.00	110.29			108.22	2.07	Peak	201	15
5		11160.00	40.93	54.00	-13.07	26.94	13.99	Average	123	34
6		11160.00	53.46	74.00	-20.54	39.47	13.99	Peak	123	34
7		16740.00	55.49	68.20	-12.71	39.74	15.75	Peak	119	28

Note 1: Emission Level (dBuV/m) = SA Reading (dBuV/m) + Factor* (dB)
*Factor includes antenna factor , cable loss and amplifier gain
Note 2: Margin (dB) = Emission level (dBuV/m) – Limit (dBuV/m).
Note 3:"*" is Peak / Average value of fundamental frequency

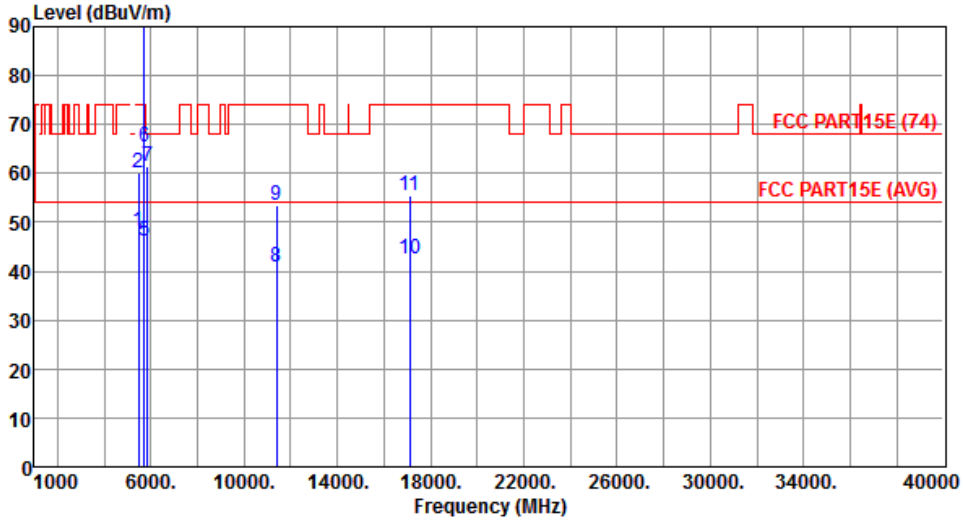
Modulation	VHT20	Test Freq. (MHz)	5700
Polarization	Horizontal		



		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	51.41	54.00	-2.59	49.54	1.87	Average	193	289
2		5460.00	63.33	74.00	-10.67	61.46	1.87	Peak	193	289
3	*	5700.00	105.42			103.05	2.37	Average	193	289
4	*	5700.00	116.65			114.28	2.37	Peak	193	289
5		5725.00	51.10	54.00	-2.90	48.67	2.43	Average	193	289
6		5725.00	73.60	74.00	-0.40	71.17	2.43	Peak	193	289
7		5860.00	65.96	68.20	-2.24	63.22	2.74	Peak	191	289
8		11400.00	41.52	54.00	-12.48	27.27	14.25	Average	122	114
9		11400.00	54.06	74.00	-19.94	39.81	14.25	Peak	122	114
10		17100.00	42.84	54.00	-11.16	26.65	16.19	Average	113	98
11		17100.00	56.09	74.00	-17.91	39.90	16.19	Peak	113	98

Note 1: Emission Level (dBuV/m) = SA Reading (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:"*" is Peak / Average value of fundamental frequency

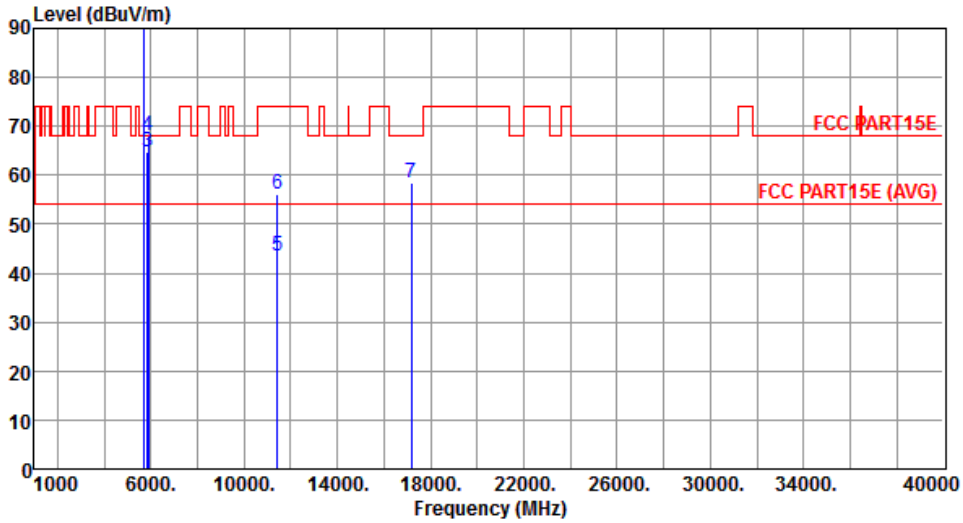
Modulation	VHT20	Test Freq. (MHz)	5700
Polarization	Vertical		



		Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1		5460.00	48.24	54.00	-5.76	46.37	1.87	Average	201	19
2		5460.00	60.21	74.00	-13.79	58.34	1.87	Peak	201	19
3	*	5700.00	98.72			96.35	2.37	Average	201	19
4	*	5700.00	111.03			108.66	2.37	Peak	201	19
5		5725.00	46.29	54.00	-7.71	43.86	2.43	Average	201	19
6		5725.00	65.45	74.00	-8.55	63.02	2.43	Peak	201	19
7		5860.00	61.53	68.20	-6.67	58.79	2.74	Peak	201	19
8		11400.00	40.82	54.00	-13.18	26.57	14.25	Average	121	49
9		11400.00	53.36	74.00	-20.64	39.11	14.25	Peak	121	49
10		17100.00	42.39	54.00	-11.61	26.20	16.19	Average	123	36
11		17100.00	55.31	74.00	-18.69	39.12	16.19	Peak	123	36

Note 1: Emission Level (dBuV/m) = SA Reading (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:"*" is Peak / Average value of fundamental frequency

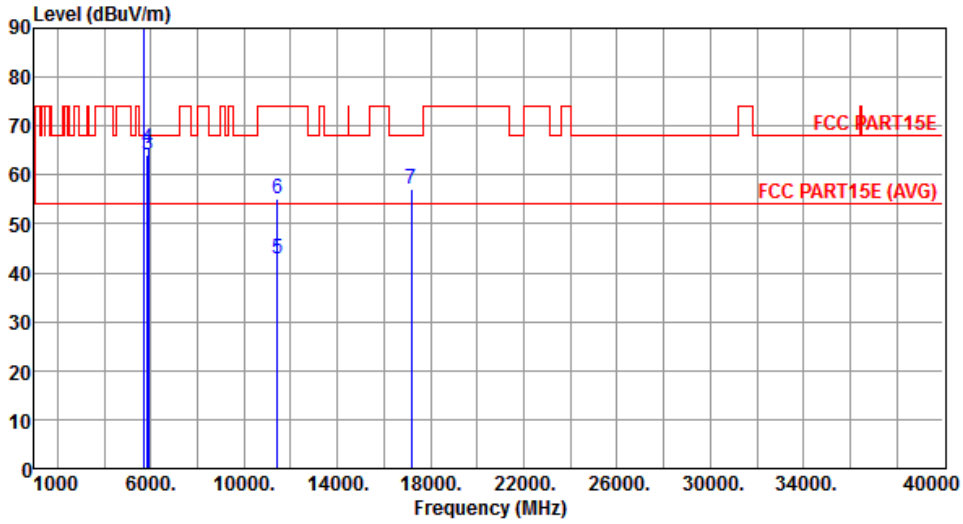
Modulation	VHT20	Test Freq. (MHz)	5720
Polarization	Horizontal		



		Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	*	5720.00	105.86			103.46	2.40	Average	206	58
2	*	5720.00	116.18			113.78	2.40	Peak	206	58
3		5850.00	64.82	68.20	-3.38	62.11	2.71	Peak	206	58
4		5880.00	68.06	68.20	-0.14	65.28	2.78	Peak	206	58
5		11440.00	43.39	54.00	-10.61	29.10	14.29	Average	100	122
6		11440.00	56.14	74.00	-17.86	41.85	14.29	Peak	100	122
7		17160.00	58.29	68.20	-9.91	41.89	16.40	Peak	100	117

Note 1: Emission Level (dBuV/m) = SA Reading (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:"*" is Peak / Average value of fundamental frequency

Modulation	VHT20	Test Freq. (MHz)	5720
Polarization	Vertical		

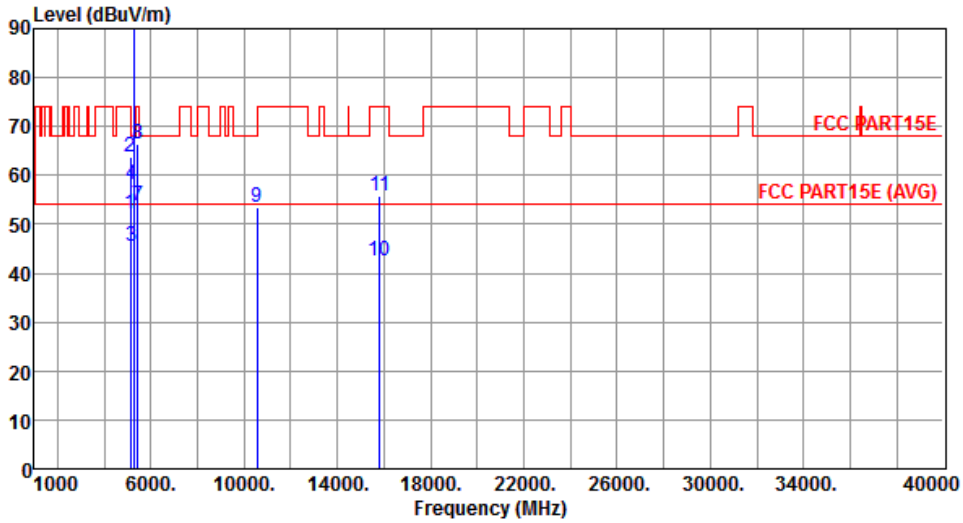


		Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	*	5720.00	99.33			96.93	2.40	Average	226	349
2	*	5720.00	109.73			107.33	2.40	Peak	226	349
3		5850.00	63.99	68.20	-4.21	61.28	2.71	Peak	226	349
4		5880.00	65.37	68.20	-2.83	62.59	2.78	Peak	226	349
5		11440.00	42.70	54.00	-11.30	28.41	14.29	Average	100	46
6		11440.00	55.15	74.00	-18.85	40.86	14.29	Peak	100	46
7		17160.00	57.28	68.20	-10.92	40.88	16.40	Peak	100	75

Note 1: Emission Level (dBuV/m) = SA Reading (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:"*" is Peak / Average value of fundamental frequency

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

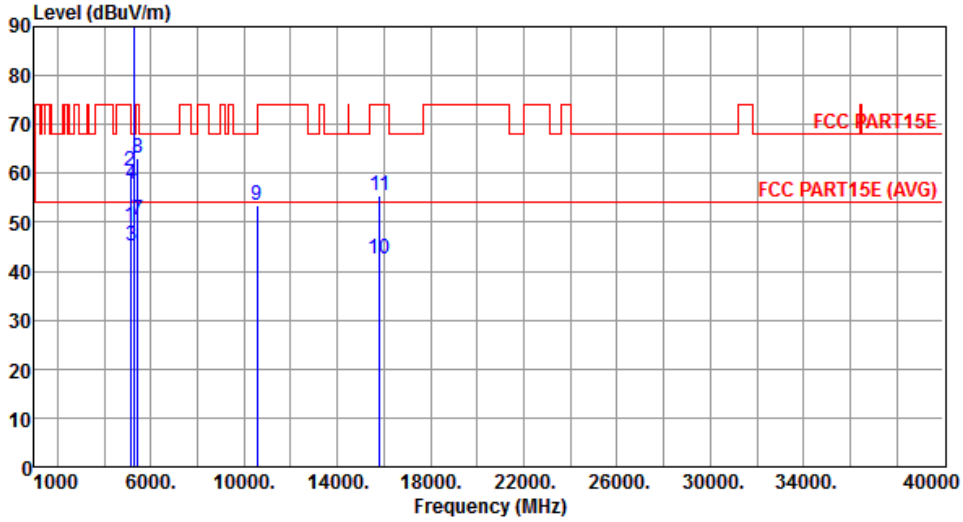
Modulation	VHT40	**Test Freq. (MHz)**	5270
Polarization	Horizontal		



		Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1		5110.00	52.30	54.00	-1.70	51.02	1.28	Average	198	285
2		5110.00	63.81	74.00	-10.19	62.53	1.28	Peak	198	285
3		5150.00	45.41	54.00	-8.59	44.06	1.35	Average	198	285
4		5150.00	58.03	74.00	-15.97	56.68	1.35	Peak	198	285
5	*	5270.00	105.09			103.54	1.55	Average	216	286
6	*	5270.00	117.21			115.66	1.55	Peak	216	286
7		5430.00	53.87	54.00	-0.13	52.04	1.83	Average	207	288
8		5430.00	66.35	74.00	-7.65	64.52	1.83	Peak	207	288
9		10540.00	53.62	68.20	-14.58	40.82	12.80	Peak	121	103
10		15810.00	42.59	54.00	-11.41	28.22	14.37	Average	111	96
11		15810.00	55.63	74.00	-18.37	41.26	14.37	Peak	111	96

Note 1: Emission Level (dBuV/m) = SA Reading (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:"*" is Peak / Average value of fundamental frequency

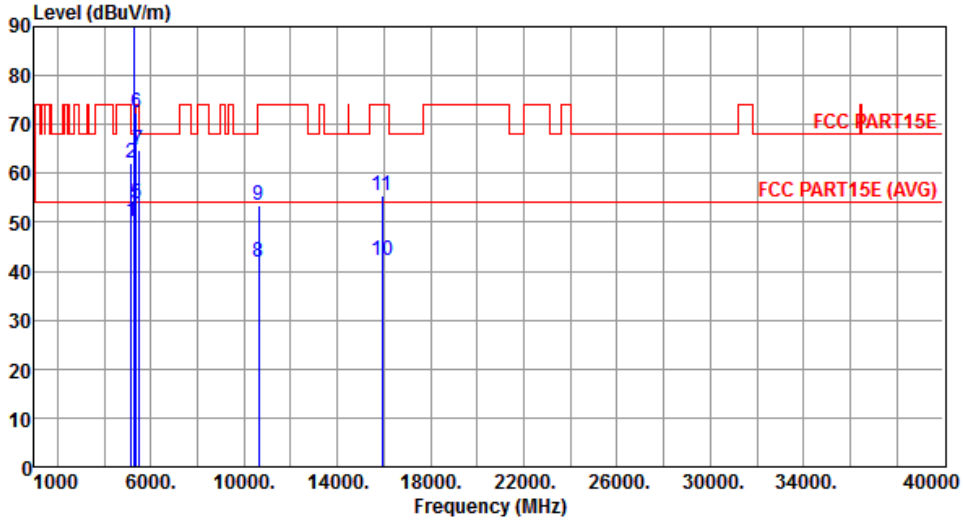
Modulation	VHT40	Test Freq. (MHz)	5270
Polarization	Vertical		



		Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1		5110.00	49.26	54.00	-4.74	47.98	1.28	Average	203	11
2		5110.00	60.53	74.00	-13.47	59.25	1.28	Peak	203	11
3		5150.00	45.26	54.00	-8.74	43.91	1.35	Average	203	11
4		5150.00	57.94	74.00	-16.06	56.59	1.35	Peak	203	11
5	*	5270.00	99.25			97.70	1.55	Average	203	11
6	*	5270.00	111.49			109.94	1.55	Peak	203	11
7		5430.00	50.62	54.00	-3.38	48.79	1.83	Average	203	11
8		5430.00	63.25	74.00	-10.75	61.42	1.83	Peak	203	11
9		10540.00	53.36	68.20	-14.84	40.56	12.80	Peak	133	15
10		15810.00	42.43	54.00	-11.57	28.06	14.37	Average	129	28
11		15810.00	55.49	74.00	-18.51	41.12	14.37	Peak	129	28

Note 1: Emission Level (dBuV/m) = SA Reading (dBuV/m) + Factor* (dB)
*Factor includes antenna factor , cable loss and amplifier gain
Note 2: Margin (dB) = Emission level (dBuV/m) – Limit (dBuV/m).
Note 3:"*" is Peak / Average value of fundamental frequency

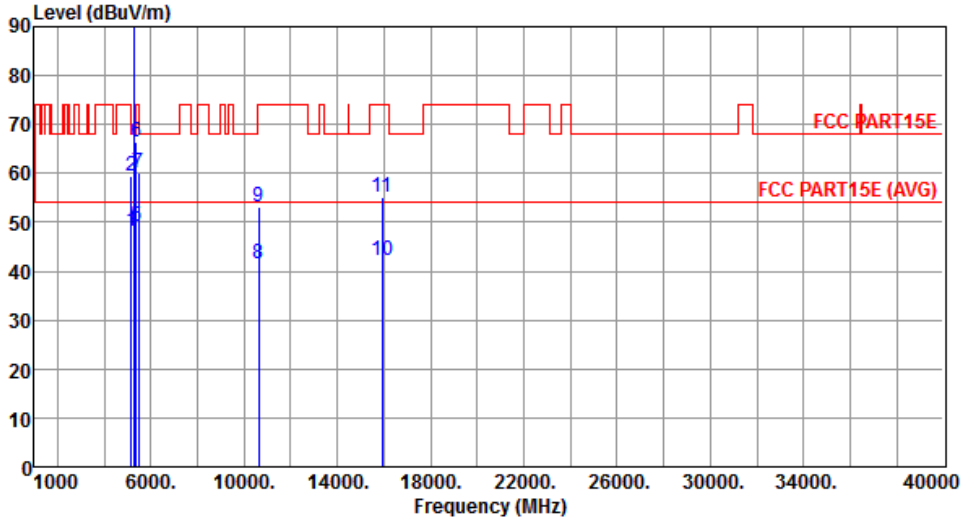
Modulation	VHT40	Test Freq. (MHz)	5310
Polarization	Horizontal		



		Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1		5150.00	50.16	54.00	-3.84	48.81	1.35	Average	203	285
2		5150.00	62.09	74.00	-11.91	60.74	1.35	Peak	203	285
3	*	5310.00	104.14			102.51	1.63	Average	203	285
4	*	5310.00	115.35			113.72	1.63	Peak	203	285
5		5350.00	53.64	54.00	-0.36	51.95	1.69	Average	201	287
6		5350.00	72.55	74.00	-1.45	70.86	1.69	Peak	201	287
7		5470.00	64.74	68.20	-3.46	62.86	1.88	Peak	203	285
8		10620.00	41.68	54.00	-12.32	28.71	12.97	Average	112	91
9		10620.00	53.32	74.00	-20.68	40.35	12.97	Peak	112	91
10		15930.00	42.31	54.00	-11.69	28.03	14.28	Average	113	106
11		15930.00	55.48	74.00	-18.52	41.20	14.28	Peak	113	106

Note 1: Emission Level (dBuV/m) = SA Reading (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:"*" is Peak / Average value of fundamental frequency

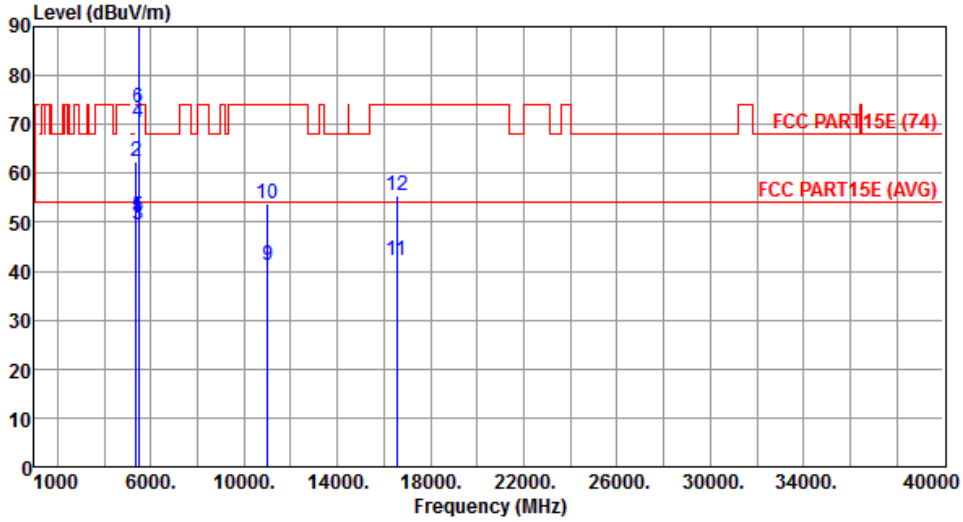
Modulation	VHT40	Test Freq. (MHz)	5310
Polarization	Vertical		



		Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1		5150.00	48.06	54.00	-5.94	46.71	1.35	Average	205	11
2		5150.00	59.35	74.00	-14.65	58.00	1.35	Peak	205	11
3	*	5310.00	98.02			96.39	1.63	Average	205	11
4	*	5310.00	109.76			108.13	1.63	Peak	205	11
5		5350.00	49.25	54.00	-4.75	47.56	1.69	Average	205	11
6		5350.00	66.58	74.00	-7.42	64.89	1.69	Peak	205	11
7		5470.00	60.14	68.20	-8.06	58.26	1.88	Peak	205	11
8		10620.00	41.35	54.00	-12.65	28.38	12.97	Average	135	19
9		10620.00	53.25	74.00	-20.75	40.28	12.97	Peak	135	19
10		15930.00	42.25	54.00	-11.75	27.97	14.28	Average	133	41
11		15930.00	55.23	74.00	-18.77	40.95	14.28	Peak	133	41

Note 1: Emission Level (dBuV/m) = SA Reading (dBuV/m) + Factor* (dB)
*Factor includes antenna factor , cable loss and amplifier gain
Note 2: Margin (dB) = Emission level (dBuV/m) – Limit (dBuV/m).
Note 3:"*" is Peak / Average value of fundamental frequency

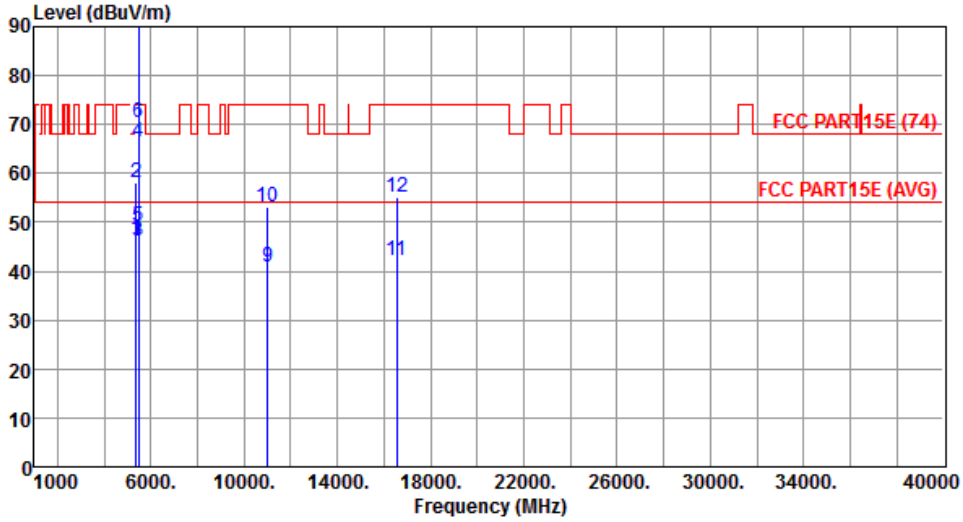
Modulation	VHT40	Test Freq. (MHz)	5510
Polarization	Horizontal		



		Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1		5350.00	50.76	54.00	-3.24	49.07	1.69	Average	199	286
2		5350.00	62.39	74.00	-11.61	60.70	1.69	Peak	199	286
3		5460.00	49.45	54.00	-4.55	47.58	1.87	Average	199	286
4		5460.00	70.53	74.00	-3.47	68.66	1.87	Peak	199	286
5		5470.00	51.23	54.00	-2.77	49.35	1.88	Average	199	286
6		5470.00	73.54	74.00	-0.46	71.66	1.88	Peak	199	286
7	*	5510.00	103.99			102.05	1.94	Average	203	285
8	*	5510.00	115.98			114.04	1.94	Peak	203	285
9		11020.00	41.32	54.00	-12.68	27.49	13.83	Average	106	98
10		11020.00	53.95	74.00	-20.05	40.12	13.83	Peak	106	98
11		16530.00	42.13	54.00	-11.87	26.46	15.67	Average	115	123
12		16530.00	55.36	74.00	-18.64	39.69	15.67	Peak	115	123

Note 1: Emission Level (dBuV/m) = SA Reading (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:"*" is Peak / Average value of fundamental frequency

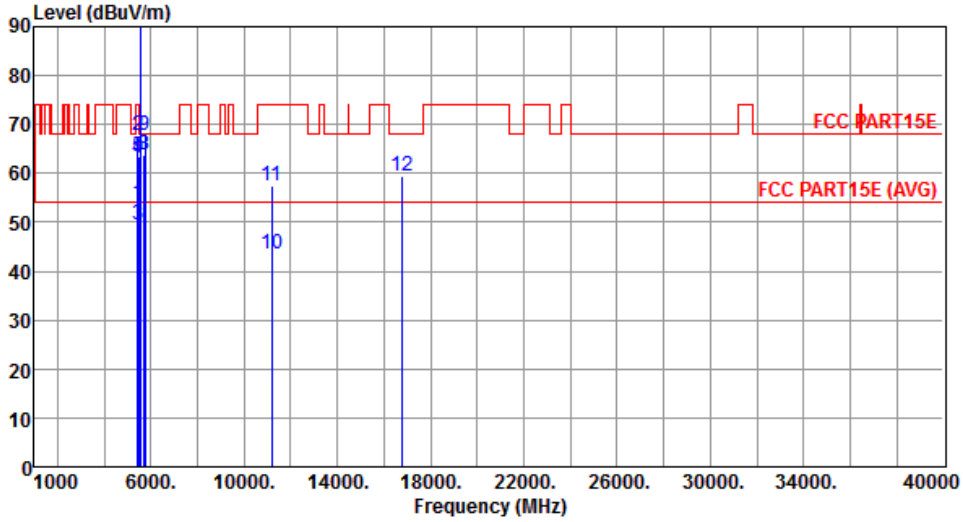
Modulation	VHT40	Test Freq. (MHz)	5510
Polarization	Vertical		



		Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1		5350.00	46.59	54.00	-7.41	44.90	1.69	Average	209	14
2		5350.00	58.21	74.00	-15.79	56.52	1.69	Peak	209	14
3		5460.00	46.25	54.00	-7.75	44.38	1.87	Average	209	14
4		5460.00	66.31	74.00	-7.69	64.44	1.87	Peak	209	14
5		5470.00	49.13	54.00	-4.87	47.25	1.88	Average	209	14
6		5470.00	70.24	74.00	-3.76	68.36	1.88	Peak	209	14
7	*	5510.00	98.52			96.58	1.94	Average	209	14
8	*	5510.00	110.76			108.82	1.94	Peak	209	14
9		11020.00	40.96	54.00	-13.04	27.13	13.83	Average	125	26
10		11020.00	53.12	74.00	-20.88	39.29	13.83	Peak	125	26
11		16530.00	42.08	54.00	-11.92	26.41	15.67	Average	129	28
12		16530.00	55.13	74.00	-18.87	39.46	15.67	Peak	129	28

Note 1: Emission Level (dBuV/m) = SA Reading (dBuV/m) + Factor* (dB)
*Factor includes antenna factor , cable loss and amplifier gain
Note 2: Margin (dB) = Emission level (dBuV/m) – Limit (dBuV/m).
Note 3:"*" is Peak / Average value of fundamental frequency

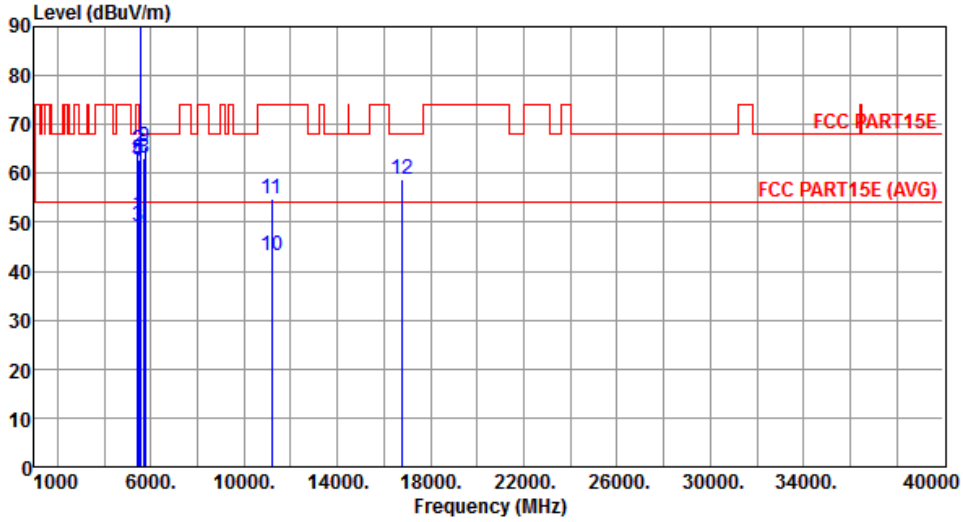
Modulation	VHT40	Test Freq. (MHz)	5590
Polarization	Horizontal		



		Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1		5430.00	53.82	54.00	-0.18	51.99	1.83	Average	189	57
2		5430.00	67.61	74.00	-6.39	65.78	1.83	Peak	189	57
3		5460.00	49.50	54.00	-4.50	47.63	1.87	Average	189	57
4		5460.00	63.23	74.00	-10.77	61.36	1.87	Peak	189	57
5		5470.00	63.56	68.20	-4.64	61.68	1.88	Peak	189	57
6	*	5590.00	104.70			102.61	2.09	Average	189	57
7	*	5590.00	116.81			114.72	2.09	Peak	189	57
8		5725.00	63.78	68.20	-4.42	61.35	2.43	Peak	189	57
9		5750.00	67.63	68.20	-0.57	65.15	2.48	Peak	189	57
10		11180.00	43.45	54.00	-10.55	29.44	14.01	Average	100	122
11		11180.00	57.54	74.00	-16.46	43.53	14.01	Peak	100	122
12		16770.00	59.52	68.20	-8.68	43.76	15.76	Peak	100	131

Note 1: Emission Level (dBuV/m) = SA Reading (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:"*" is Peak / Average value of fundamental frequency

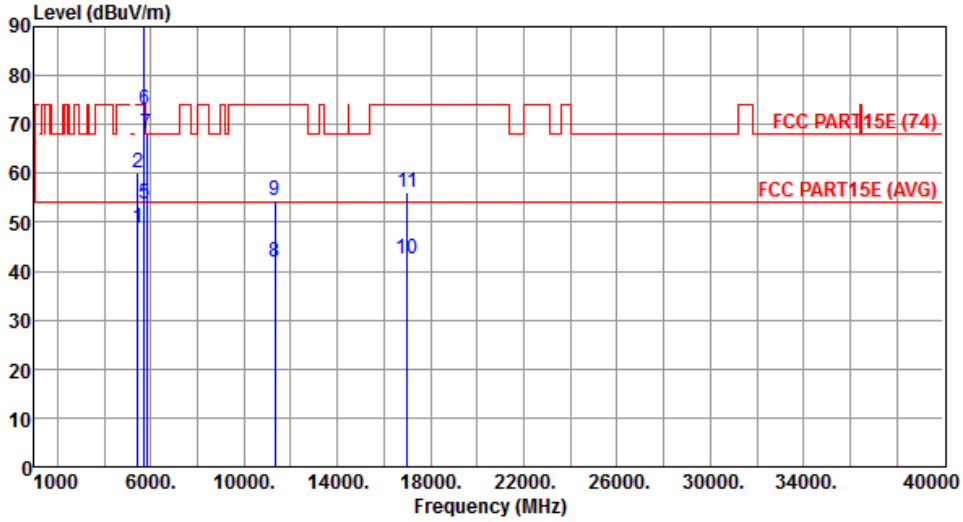
Modulation	VHT40	Test Freq. (MHz)	5590
Polarization	Vertical		



		Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1		5430.00	51.43	54.00	-2.57	49.60	1.83	Average	242	348
2		5430.00	64.84	74.00	-9.16	63.01	1.83	Peak	242	348
3		5460.00	49.20	54.00	-4.80	47.33	1.87	Average	242	348
4		5460.00	62.43	74.00	-11.57	60.56	1.87	Peak	242	348
5		5470.00	62.88	68.20	-5.32	61.00	1.88	Peak	242	348
6	*	5590.00	99.90			97.81	2.09	Average	242	348
7	*	5590.00	111.89			109.80	2.09	Peak	242	348
8		5725.00	63.21	68.20	-4.99	60.78	2.43	Peak	242	348
9		5750.00	65.27	68.20	-2.93	62.79	2.48	Peak	242	348
10		11180.00	43.09	54.00	-10.91	29.08	14.01	Average	100	77
11		11180.00	54.96	74.00	-19.04	40.95	14.01	Peak	100	77
12		16770.00	58.86	68.20	-9.34	43.10	15.76	Peak	100	54

Note 1: Emission Level (dBuV/m) = SA Reading (dBuV/m) + Factor* (dB)
*Factor includes antenna factor , cable loss and amplifier gain
Note 2: Margin (dB) = Emission level (dBuV/m) – Limit (dBuV/m).
Note 3:"*" is Peak / Average value of fundamental frequency

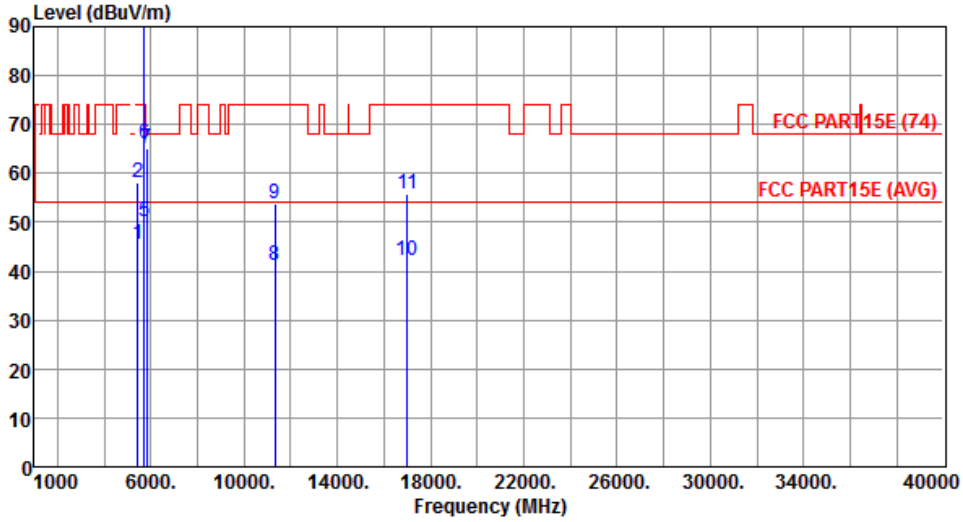
Modulation	VHT40	Test Freq. (MHz)	5670
Polarization	Horizontal		



		Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1		5430.00	48.65	54.00	-5.35	46.82	1.83	Average	198	306
2		5430.00	60.01	74.00	-13.99	58.18	1.83	Peak	198	306
3	*	5670.00	106.36			104.08	2.28	Average	198	306
4	*	5670.00	118.15			115.87	2.28	Peak	198	306
5		5725.00	53.85	54.00	-0.15	51.42	2.43	Average	198	306
6		5725.00	72.95	74.00	-1.05	70.52	2.43	Peak	198	306
7		5830.00	68.00	68.20	-0.20	65.32	2.68	Peak	198	306
8		11340.00	41.82	54.00	-12.18	27.64	14.18	Average	106	113
9		11340.00	54.39	74.00	-19.61	40.21	14.18	Peak	106	113
10		17010.00	42.56	54.00	-11.44	26.67	15.89	Average	121	126
11		17010.00	56.24	74.00	-17.76	40.35	15.89	Peak	121	126

Note 1: Emission Level (dBuV/m) = SA Reading (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:"*" is Peak / Average value of fundamental frequency

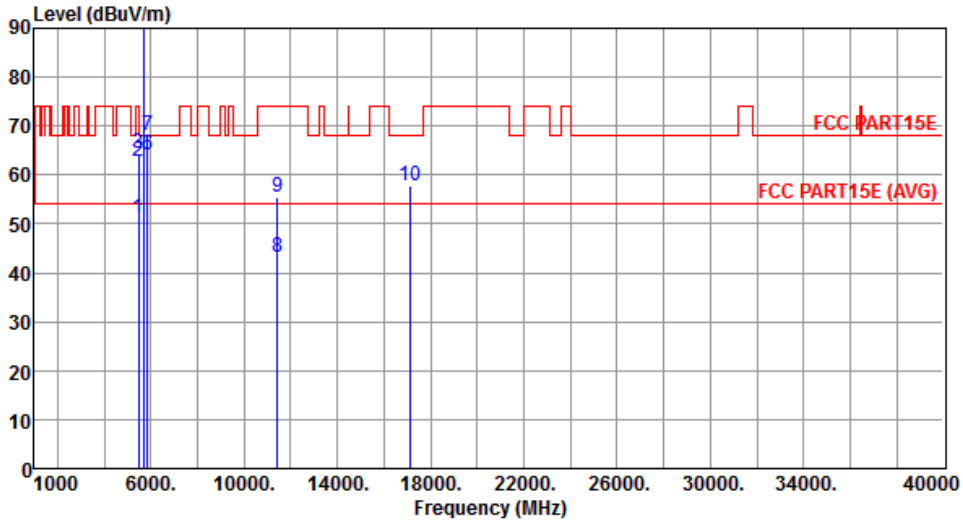
Modulation	VHT40	Test Freq. (MHz)	5670
Polarization	Vertical		



		Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1		5430.00	45.46	54.00	-8.54	43.63	1.83	Average	209	19
2		5430.00	58.11	74.00	-15.89	56.28	1.83	Peak	209	19
3	*	5670.00	101.06			98.78	2.28	Average	209	19
4	*	5670.00	113.15			110.87	2.28	Peak	209	19
5		5725.00	50.14	54.00	-3.86	47.71	2.43	Average	209	19
6		5725.00	66.18	74.00	-7.82	63.75	2.43	Peak	209	19
7		5830.00	65.11	68.20	-3.09	62.43	2.68	Peak	208	15
8		11340.00	41.33	54.00	-12.67	27.15	14.18	Average	131	15
9		11340.00	53.84	74.00	-20.16	39.66	14.18	Peak	131	15
10		17010.00	42.31	54.00	-11.69	26.42	15.89	Average	133	21
11		17010.00	55.89	74.00	-18.11	40.00	15.89	Peak	133	21

Note 1: Emission Level (dBuV/m) = SA Reading (dBuV/m) + Factor* (dB)
*Factor includes antenna factor , cable loss and amplifier gain
Note 2: Margin (dB) = Emission level (dBuV/m) – Limit (dBuV/m).
Note 3:"*" is Peak / Average value of fundamental frequency

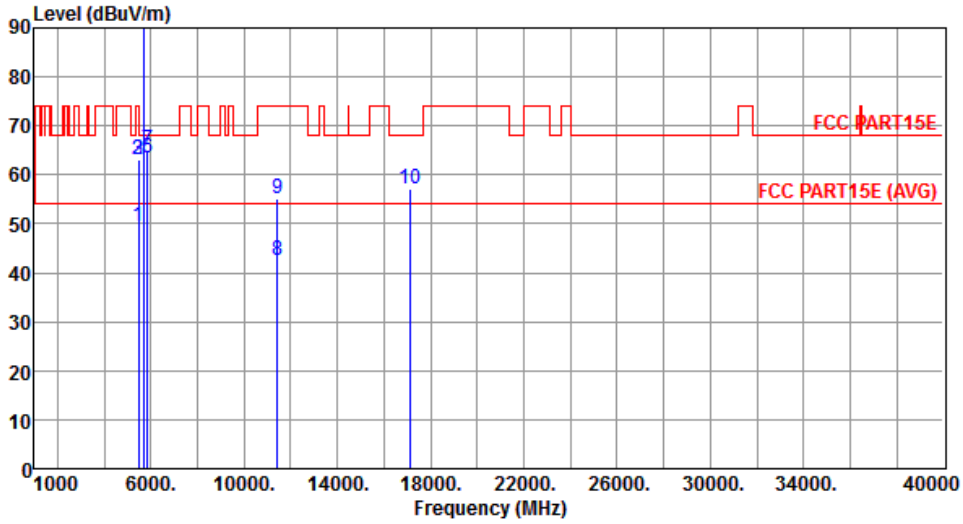
Modulation	VHT40	Test Freq. (MHz)	5710
Polarization	Horizontal		



		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	51.09	54.00	-2.91	49.22	1.87	Average	196	47
2		5460.00	62.73	74.00	-11.27	60.86	1.87	Peak	196	47
3		5470.00	64.40	68.20	-3.80	62.52	1.88	Peak	196	47
4	*	5710.00	104.98			102.60	2.38	Average	196	47
5	*	5710.00	117.42			115.04	2.38	Peak	196	47
6		5850.00	64.26	68.20	-3.94	61.55	2.71	Peak	196	47
7		5870.00	68.04	68.20	-0.16	65.29	2.75	Peak	196	47
8		11420.00	43.32	54.00	-10.68	29.05	14.27	Average	100	141
9		11420.00	55.51	74.00	-18.49	41.24	14.27	Peak	100	141
10		17130.00	57.65	68.20	-10.55	41.36	16.29	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).
Note 3:"*" is Peak / Average value of fundamental frequency

Modulation	VHT40	Test Freq. (MHz)	5710
Polarization	Vertical		

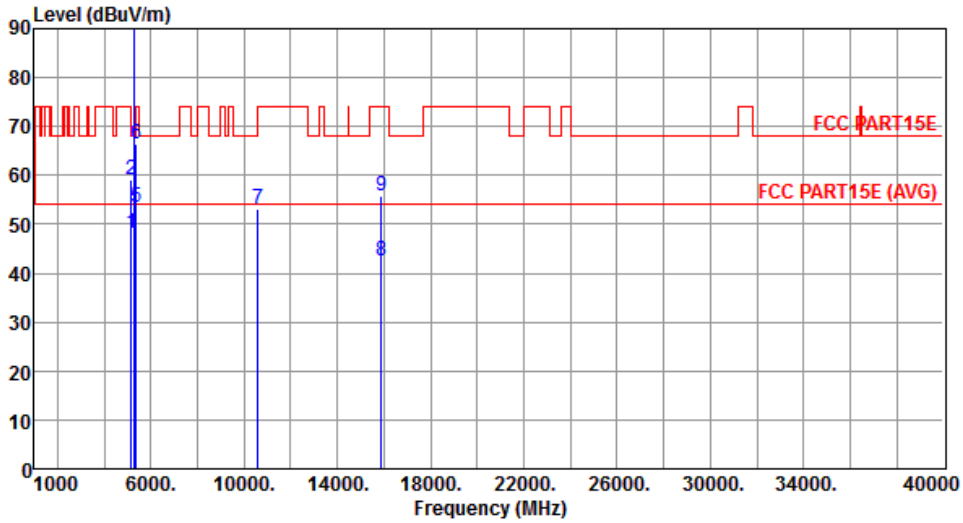


		Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1		5460.00	49.37	54.00	-4.63	47.50	1.87	Average	217	344
2		5460.00	63.21	74.00	-10.79	61.34	1.87	Peak	217	344
3		5470.00	63.07	68.20	-5.13	61.19	1.88	Peak	217	344
4	*	5710.00	98.12			95.74	2.38	Average	217	344
5	*	5710.00	111.80			109.42	2.38	Peak	217	344
6		5850.00	63.29	68.20	-4.91	60.58	2.71	Peak	217	344
7		5870.00	65.00	68.20	-3.20	62.25	2.75	Peak	217	344
8		11420.00	42.46	54.00	-11.54	28.19	14.27	Average	100	58
9		11420.00	55.01	74.00	-18.99	40.74	14.27	Peak	100	58
10		17130.00	57.08	68.20	-11.12	40.79	16.29	Peak	100	78

Note 1: Emission Level (dBuV/m) = SA Reading (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:"*" is Peak / Average value of fundamental frequency

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

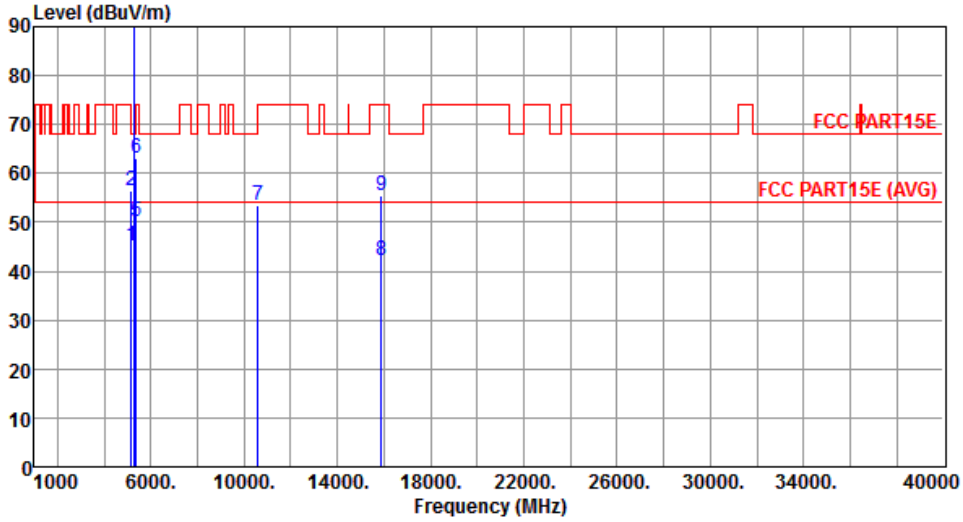
Modulation	VHT80	**Test Freq. (MHz)**	5290
Polarization	Horizontal		



		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	48.03	54.00	-5.97	46.68	1.35	Average	199	303
2		5150.00	59.09	74.00	-14.91	57.74	1.35	Peak	199	303
3	*	5290.00	99.17			97.59	1.58	Average	199	303
4	*	5290.00	108.25			106.67	1.58	Peak	199	303
5		5350.00	53.50	54.00	-0.50	51.81	1.69	Average	199	303
6		5350.00	66.34	74.00	-7.66	64.65	1.69	Peak	199	303
7		10580.00	53.14	68.20	-15.06	40.25	12.89	Peak	115	93
8		15870.00	42.45	54.00	-11.55	28.12	14.33	Average	115	129
9		15870.00	55.69	74.00	-18.31	41.36	14.33	Peak	115	129

Note 1: Emission Level (dBuV/m) = SA Reading (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:"*" is Peak / Average value of fundamental frequency

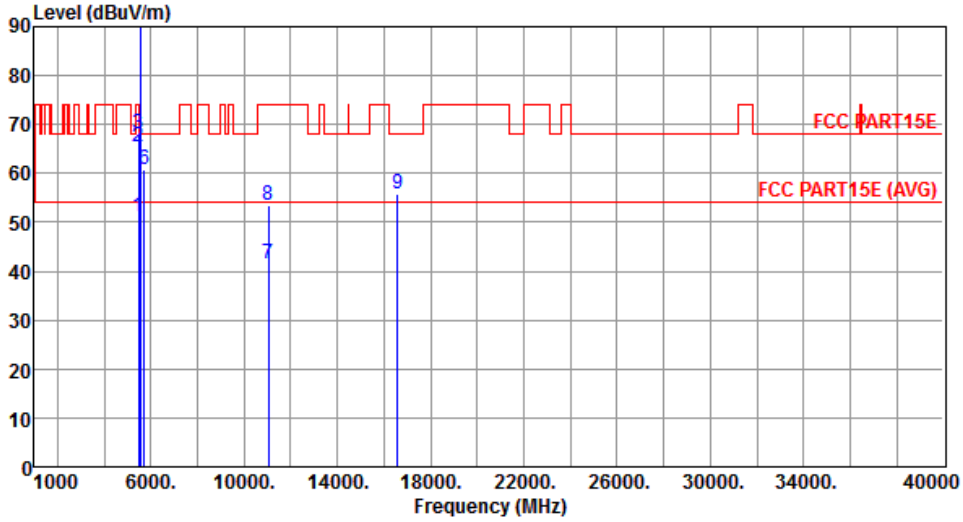
Modulation	VHT80	Test Freq. (MHz)	5290
Polarization	Vertical		



		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	45.21	54.00	-8.79	43.86	1.35	Average	206	14
2		5150.00	56.36	74.00	-17.64	55.01	1.35	Peak	206	14
3	*	5290.00	94.25			92.67	1.58	Average	206	14
4	*	5290.00	103.38			101.80	1.58	Peak	206	14
5		5350.00	50.25	54.00	-3.75	48.56	1.69	Average	206	14
6		5350.00	63.18	74.00	-10.82	61.49	1.69	Peak	206	14
7		10580.00	53.45	68.20	-14.75	40.56	12.89	Peak	146	24
8		15870.00	42.33	54.00	-11.67	28.00	14.33	Average	146	15
9		15870.00	55.46	74.00	-18.54	41.13	14.33	Peak	146	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).
Note 3:"*" is Peak / Average value of fundamental frequency

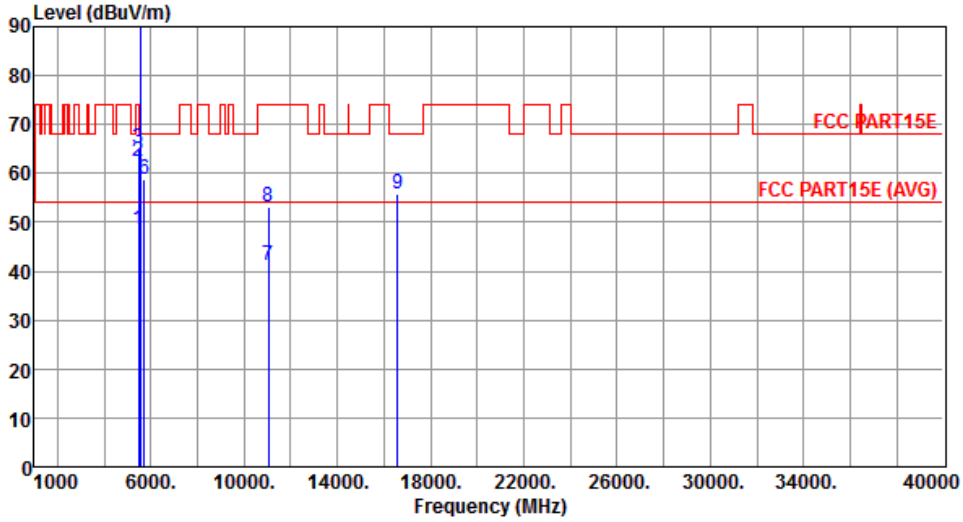
Modulation	VHT80	Test Freq. (MHz)	5530
Polarization	Horizontal		



		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	51.12	54.00	-2.88	49.25	1.87	Average	195	304
2		5460.00	65.43	74.00	-8.57	63.56	1.87	Peak	195	304
3		5470.00	67.98	68.20	-0.22	66.10	1.88	Peak	195	304
4	*	5530.00	99.90			97.92	1.98	Average	199	303
5	*	5530.00	108.56			106.58	1.98	Peak	199	303
6		5725.00	60.90	68.20	-7.30	58.47	2.43	Peak	199	303
7		11060.00	41.35	54.00	-12.65	27.47	13.88	Average	121	93
8		11060.00	53.42	74.00	-20.58	39.54	13.88	Peak	121	93
9		16590.00	55.84	68.20	-12.36	40.15	15.69	Peak	113	104

Note 1: Emission Level (dBuV/m) = SA Reading (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:"*" is Peak / Average value of fundamental frequency

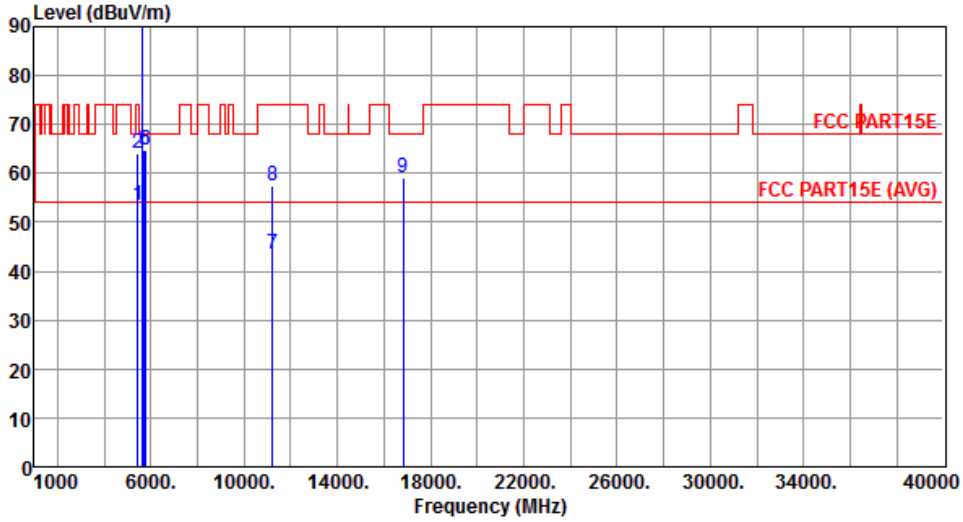
Modulation	VHT80	Test Freq. (MHz)	5530
Polarization	Vertical		



		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	48.36	54.00	-5.64	46.49	1.87	Average	205	15
2		5460.00	62.59	74.00	-11.41	60.72	1.87	Peak	205	15
3		5470.00	65.11	68.20	-3.09	63.23	1.88	Peak	205	15
4	*	5530.00	94.83			92.85	1.98	Average	205	15
5	*	5530.00	103.65			101.67	1.98	Peak	205	15
6		5725.00	58.94	68.20	-9.26	56.51	2.43	Peak	205	15
7		11060.00	41.22	54.00	-12.78	27.34	13.88	Average	139	55
8		11060.00	53.29	74.00	-20.71	39.41	13.88	Peak	139	55
9		16590.00	55.69	68.20	-12.51	40.00	15.69	Peak	141	12

Note 1: Emission Level (dBuV/m) = SA Reading (dBuV/m) + Factor* (dB)
*Factor includes antenna factor , cable loss and amplifier gain
Note 2: Margin (dB) = Emission level (dBuV/m) – Limit (dBuV/m).
Note 3:"*" is Peak / Average value of fundamental frequency

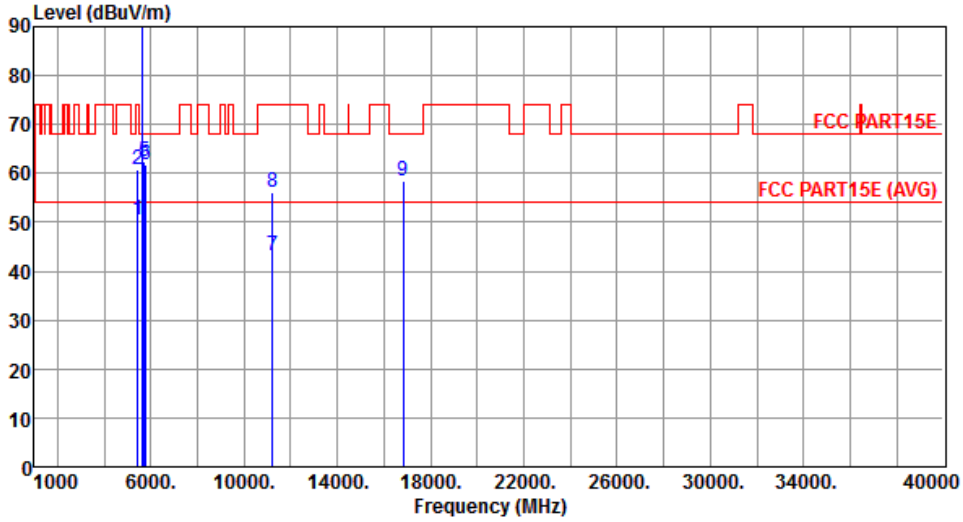
Modulation	VHT80	Test Freq. (MHz)	5610
Polarization	Horizontal		



		Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1		5450.00	53.55	54.00	-0.45	51.70	1.85	Average	194	53
2		5450.00	64.09	74.00	-9.91	62.24	1.85	Peak	194	53
3	*	5610.00	103.38			101.25	2.13	Average	194	53
4	*	5610.00	113.82			111.69	2.13	Peak	194	53
5		5725.00	64.69	68.20	-3.51	62.26	2.43	Peak	194	53
6		5770.00	64.93	68.20	-3.27	62.40	2.53	Peak	194	53
7		11220.00	43.42	54.00	-10.58	29.37	14.05	Average	100	122
8		11220.00	57.38	74.00	-16.62	43.33	14.05	Peak	100	122
9		16830.00	58.98	68.20	-9.22	43.19	15.79	Peak	100	136

Note 1: Emission Level (dBuV/m) = SA Reading (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:"*" is Peak / Average value of fundamental frequency

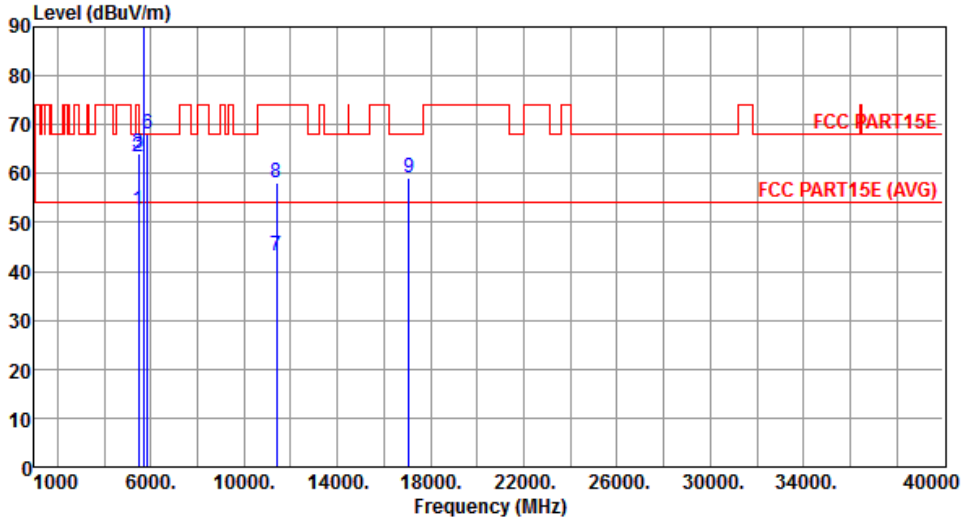
Modulation	VHT80	Test Freq. (MHz)	5610
Polarization	Vertical		



		Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1		5450.00	50.32	54.00	-3.68	48.47	1.85	Average	242	348
2		5450.00	60.79	74.00	-13.21	58.94	1.85	Peak	242	348
3	*	5610.00	97.27			95.14	2.13	Average	242	348
4	*	5610.00	108.13			106.00	2.13	Peak	242	348
5		5725.00	62.39	68.20	-5.81	59.96	2.43	Peak	242	348
6		5770.00	61.63	68.20	-6.57	59.10	2.53	Peak	242	348
7		11220.00	43.02	54.00	-10.98	28.97	14.05	Average	100	84
8		11220.00	56.15	74.00	-17.85	42.10	14.05	Peak	100	84
9		16830.00	58.60	68.20	-9.60	42.81	15.79	Peak	100	62

Note 1: Emission Level (dBuV/m) = SA Reading (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:"*" is Peak / Average value of fundamental frequency

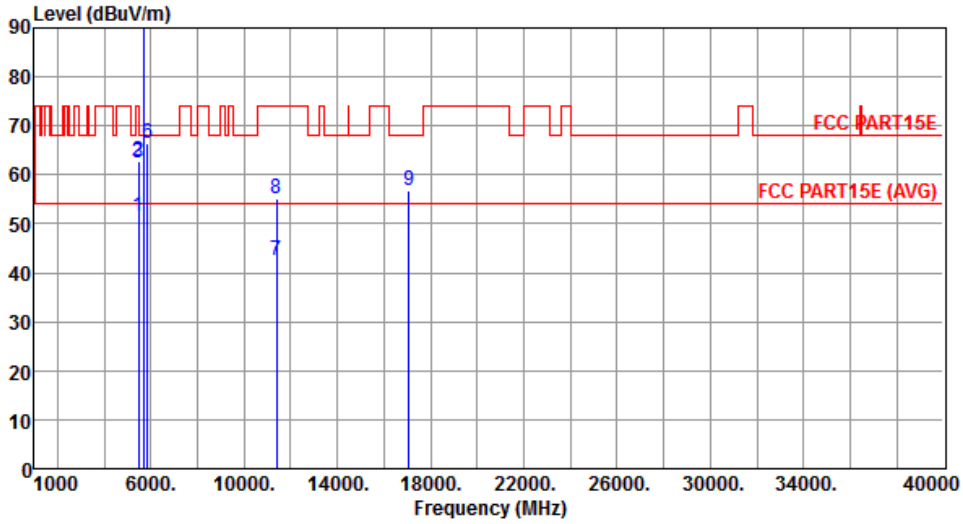
Modulation	VHT80	Test Freq. (MHz)	5690
Polarization	Horizontal		



		Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1		5460.00	52.45	54.00	-1.55	50.58	1.87	Average	195	52
2		5460.00	63.45	74.00	-10.55	61.58	1.87	Peak	195	52
3		5470.00	63.95	68.20	-4.25	62.07	1.88	Peak	195	52
4	*	5690.00	106.53			104.19	2.34	Average	195	52
5	*	5690.00	116.72			114.38	2.34	Peak	195	52
6		5850.00	68.05	68.20	-0.15	65.34	2.71	Peak	195	52
7		11380.00	43.26	54.00	-10.74	29.03	14.23	Average	100	113
8		11380.00	58.18	74.00	-15.82	43.95	14.23	Peak	100	113
9		17070.00	59.19	68.20	-9.01	43.10	16.09	Peak	100	148

Note 1: Emission Level (dBuV/m) = SA Reading (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:"*" is Peak / Average value of fundamental frequency

Modulation	VHT80	Test Freq. (MHz)	5690
Polarization	Vertical		



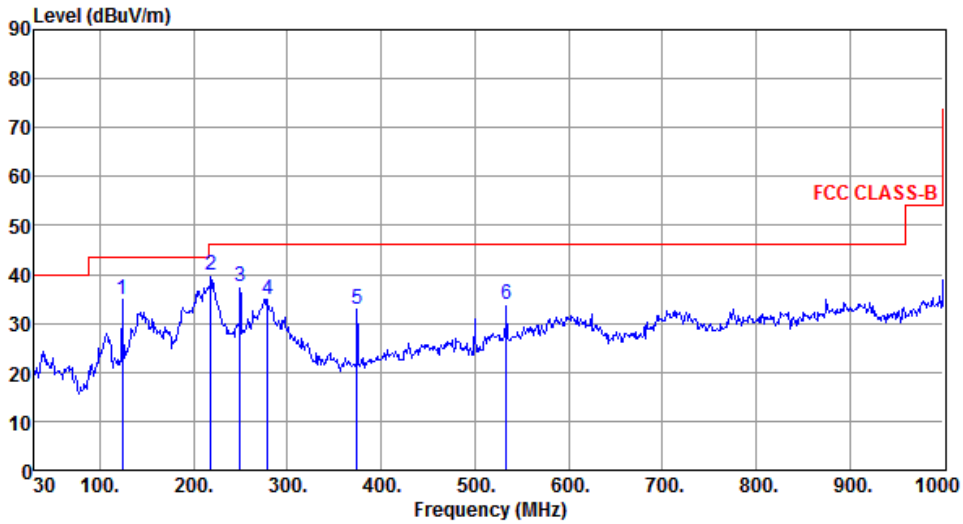
		Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1		5460.00	51.36	54.00	-2.64	49.49	1.87	Average	209	345
2		5460.00	62.80	74.00	-11.20	60.93	1.87	Peak	209	345
3		5470.00	62.60	68.20	-5.60	60.72	1.88	Peak	209	345
4	*	5690.00	99.75			97.41	2.34	Average	209	345
5	*	5690.00	110.09			107.75	2.34	Peak	209	345
6		5850.00	66.27	68.20	-1.93	63.56	2.71	Peak	209	345
7		11380.00	42.35	54.00	-11.65	28.12	14.23	Average	100	61
8		11380.00	55.05	74.00	-18.95	40.82	14.23	Peak	100	61
9		17070.00	56.84	68.20	-11.36	40.75	16.09	Peak	100	82

Note 1: Emission Level (dBuV/m) = SA Reading (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:"*" is Peak / Average value of fundamental frequency

Beamforming mode

3.5.9 Transmitter Radiated Unwanted Emissions (Below 1GHz)

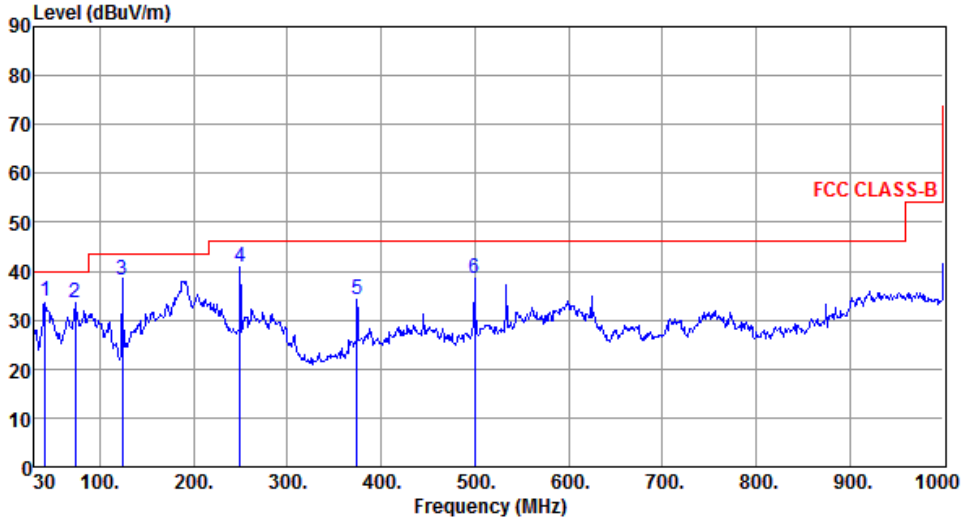
Modulation	VHT40	**Test Freq. (MHz)**	5670
Polarization	Horizontal	**Test Configuration**	1



	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	124.21	34.97	43.50	-8.53	45.57	-10.60	Peak	---	---
2	218.22	39.78	46.00	-6.22	50.83	-11.05	Peak	---	---
3	249.32	37.41	46.00	-8.59	46.83	-9.42	Peak	---	---
4	279.22	34.93	46.00	-11.07	43.27	-8.34	Peak	---	---
5	374.51	32.89	46.00	-13.11	38.86	-5.97	Peak	---	---
6	533.59	33.96	46.00	-12.04	36.52	-2.56	Peak	---	---

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

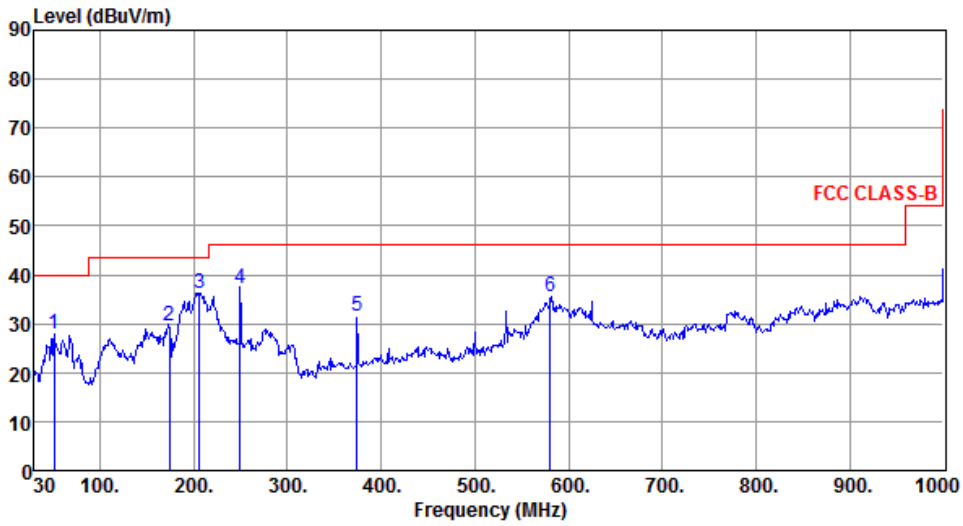
Modulation	VHT40	Test Freq. (MHz)	5670
Polarization	Vertical	Test Configuration	1



	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	41.73	33.76	40.00	-6.24	42.35	-8.59	Peak	---	---
2	73.59	33.64	40.00	-6.36	45.28	-11.64	Peak	---	---
3	124.16	38.33	43.50	-5.17	48.94	-10.61	Peak	---	---
4	249.22	40.92	46.00	-5.08	50.35	-9.43	Peak	---	---
5	374.52	34.30	46.00	-11.70	40.27	-5.97	Peak	---	---
6	499.59	38.58	46.00	-7.42	41.82	-3.24	Peak	---	---

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

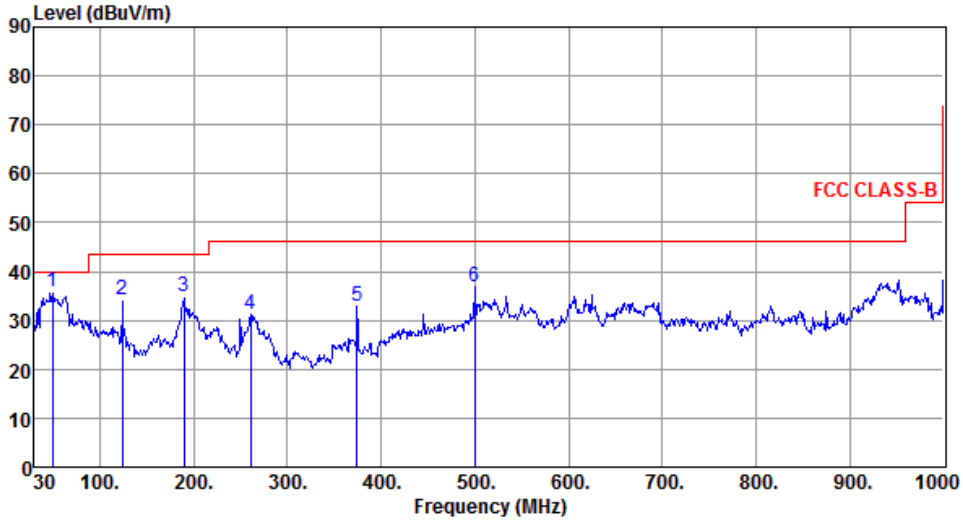
Modulation	VHT40	Test Freq. (MHz)	5670
Polarization	Horizontal	Test Configuration	2



	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	51.35	27.94	40.00	-12.06	36.18	-8.24	Peak	---	---
2	174.11	29.58	43.50	-13.92	38.76	-9.18	Peak	---	---
3	206.54	36.11	43.50	-7.39	47.24	-11.13	Peak	---	---
4	249.38	37.34	46.00	-8.66	46.76	-9.42	Peak	---	---
5	374.56	31.39	46.00	-14.61	37.36	-5.97	Peak	---	---
6	580.67	35.47	46.00	-10.53	36.90	-1.43	Peak	---	---

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

Modulation	VHT40	Test Freq. (MHz)	5670
Polarization	Vertical	Test Configuration	2

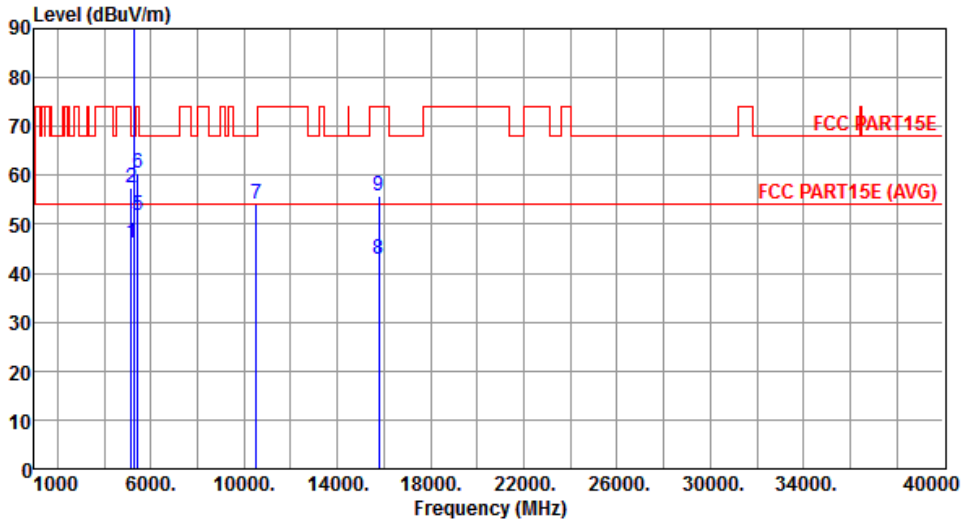


	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	49.56	35.71	40.00	-4.29	43.87	-8.16	Peak	---	---
2	124.11	34.25	43.50	-9.25	44.86	-10.61	Peak	---	---
3	190.11	34.84	43.50	-8.66	45.67	-10.83	Peak	---	---
4	260.86	31.26	46.00	-14.74	40.40	-9.14	Peak	---	---
5	374.56	32.92	46.00	-13.08	38.89	-5.97	Peak	---	---
6	499.65	36.94	46.00	-9.06	40.18	-3.24	Peak	---	---

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

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

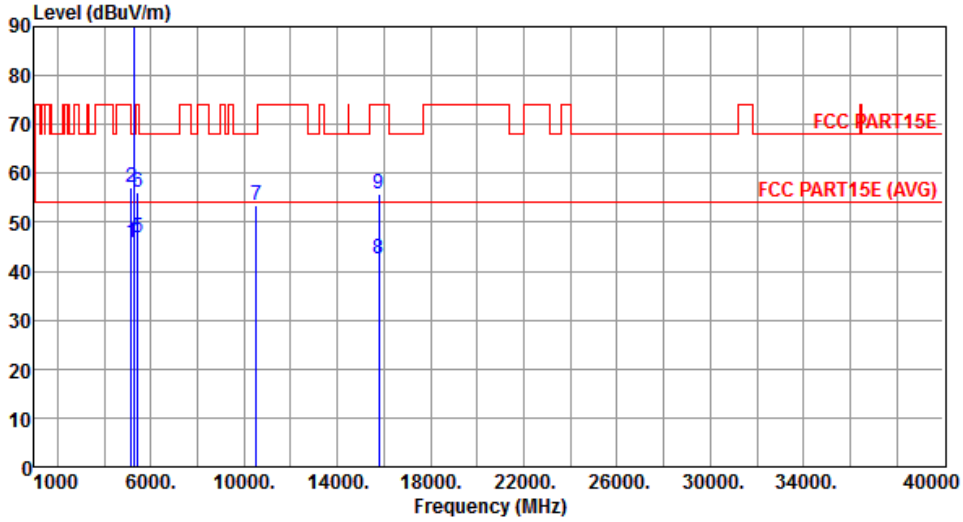
Modulation	VHT20	**Test Freq. (MHz)**	5260
Polarization	Horizontal		



		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	46.14	54.00	-7.86	44.79	1.35	Average	193	299
2		5150.00	57.42	74.00	-16.58	56.07	1.35	Peak	193	299
3	*	5260.00	107.32			105.78	1.54	Average	193	299
4	*	5260.00	117.84			116.30	1.54	Peak	193	299
5		5420.00	51.86	54.00	-2.14	50.04	1.82	Average	193	299
6		5420.00	60.36	74.00	-13.64	58.54	1.82	Peak	193	299
7		10520.00	54.14	68.20	-14.06	41.39	12.75	Peak	118	102
8		15780.00	42.85	54.00	-11.15	28.46	14.39	Average	105	103
9		15780.00	55.93	74.00	-18.07	41.54	14.39	Peak	105	103

Note 1: Emission Level (dBuV/m) = SA Reading (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:"*" is Peak / Average value of fundamental frequency

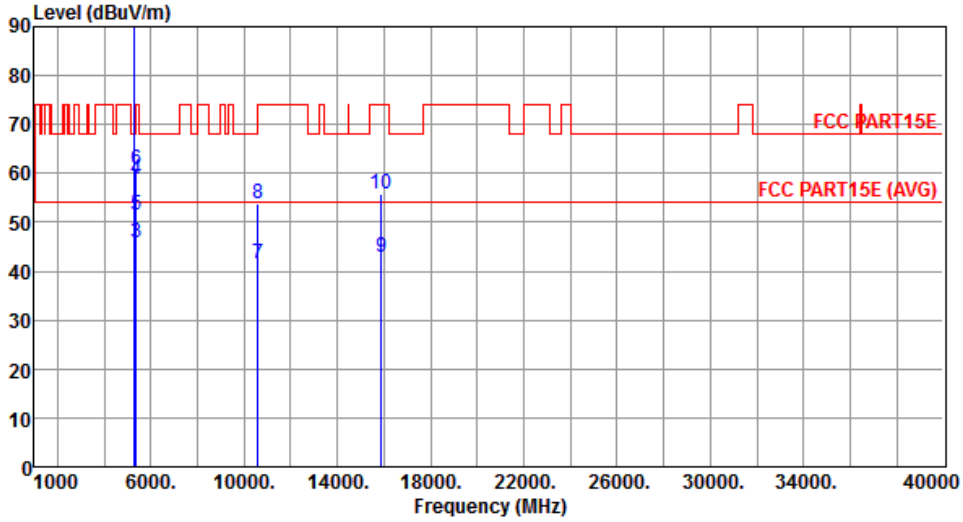
Modulation	VHT20	Test Freq. (MHz)	5260
Polarization	Vertical		



		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	45.96	54.00	-8.04	44.61	1.35	Average	202	11
2		5150.00	57.19	74.00	-16.81	55.84	1.35	Peak	202	11
3	*	5260.00	100.95			99.41	1.54	Average	202	11
4	*	5260.00	112.35			110.81	1.54	Peak	202	11
5		5420.00	46.94	54.00	-7.06	45.12	1.82	Average	202	11
6		5420.00	56.06	74.00	-17.94	54.24	1.82	Peak	202	11
7		10520.00	53.58	68.20	-14.62	40.83	12.75	Peak	121	19
8		15780.00	42.65	54.00	-11.35	28.26	14.39	Average	133	21
9		15780.00	55.81	74.00	-18.19	41.42	14.39	Peak	133	21

Note 1: Emission Level (dBuV/m) = SA Reading (dBuV/m) + Factor* (dB)
*Factor includes antenna factor , cable loss and amplifier gain
Note 2: Margin (dB) = Emission level (dBuV/m) – Limit (dBuV/m).
Note 3:"*" is Peak / Average value of fundamental frequency

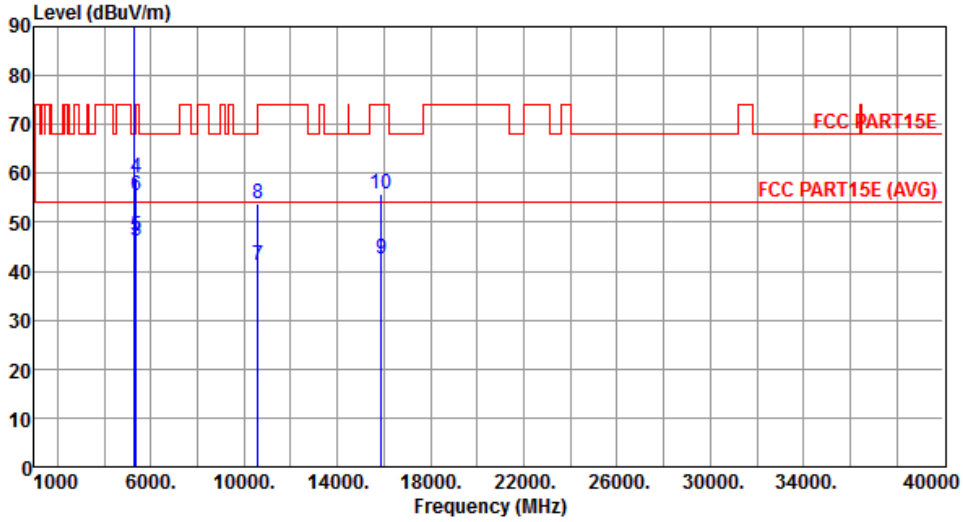
Modulation	VHT20	Test Freq. (MHz)	5300
Polarization	Horizontal		



		Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	*	5300.00	106.58			104.98	1.60	Average	193	298
2	*	5300.00	117.95			116.35	1.60	Peak	193	298
3		5350.00	45.98	54.00	-8.02	44.29	1.69	Average	193	298
4		5350.00	58.74	74.00	-15.26	57.05	1.69	Peak	193	298
5		5380.00	51.61	54.00	-2.39	49.86	1.75	Average	193	298
6		5380.00	60.86	74.00	-13.14	59.11	1.75	Peak	193	298
7		10600.00	41.35	54.00	-12.65	28.42	12.93	Average	117	129
8		10600.00	53.96	74.00	-20.04	41.03	12.93	Peak	117	129
9		15900.00	42.84	54.00	-11.16	28.54	14.30	Average	105	101
10		15900.00	55.91	74.00	-18.09	41.61	14.30	Peak	105	101

Note 1: Emission Level (dBuV/m) = SA Reading (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:"*" is Peak / Average value of fundamental frequency

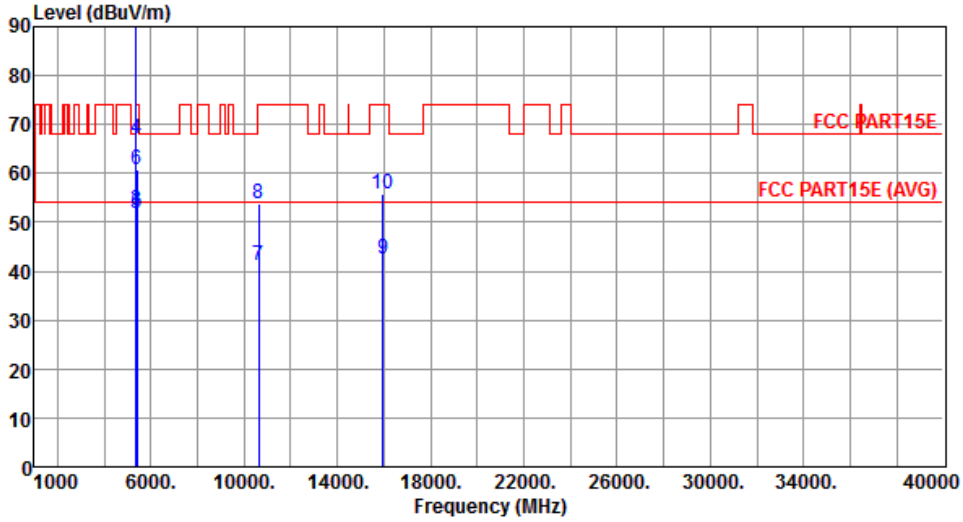
Modulation	VHT20	Test Freq. (MHz)	5300
Polarization	Vertical		



		Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	*	5300.00	100.84			99.24	1.60	Average	205	16
2	*	5300.00	112.03			110.43	1.60	Peak	205	16
3		5350.00	46.25	54.00	-7.75	44.56	1.69	Average	205	16
4		5350.00	59.14	74.00	-14.86	57.45	1.69	Peak	205	16
5		5380.00	47.28	54.00	-6.72	45.53	1.75	Average	205	16
6		5380.00	55.51	74.00	-18.49	53.76	1.75	Peak	205	16
7		10600.00	41.05	54.00	-12.95	28.12	12.93	Average	129	23
8		10600.00	53.76	74.00	-20.24	40.83	12.93	Peak	129	23
9		15900.00	42.61	54.00	-11.39	28.31	14.30	Average	124	26
10		15900.00	55.72	74.00	-18.28	41.42	14.30	Peak	124	26

Note 1: Emission Level (dBuV/m) = SA Reading (dBuV/m) + Factor* (dB)
*Factor includes antenna factor , cable loss and amplifier gain
Note 2: Margin (dB) = Emission level (dBuV/m) – Limit (dBuV/m).
Note 3:"*" is Peak / Average value of fundamental frequency

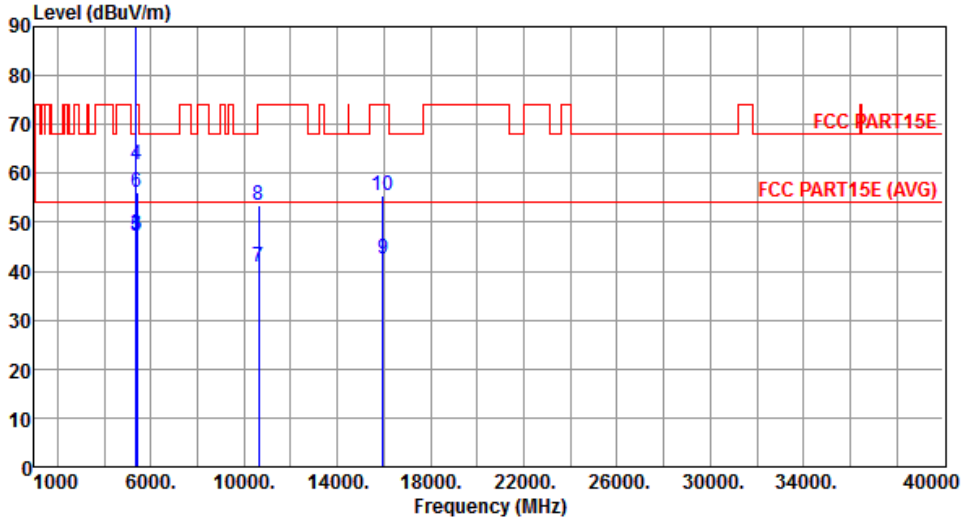
Modulation	VHT20	Test Freq. (MHz)	5320
Polarization	Horizontal		



		Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	*	5320.00	107.46			105.82	1.64	Average	209	55
2	*	5320.00	118.22			116.58	1.64	Peak	209	55
3		5350.00	52.51	54.00	-1.49	50.82	1.69	Average	209	55
4		5350.00	67.14	74.00	-6.86	65.45	1.69	Peak	209	55
5		5400.00	51.88	54.00	-2.12	50.10	1.78	Average	209	55
6		5400.00	60.74	74.00	-13.26	58.96	1.78	Peak	209	55
7		10640.00	41.22	54.00	-12.78	28.20	13.02	Average	123	136
8		10640.00	53.82	74.00	-20.18	40.80	13.02	Peak	123	136
9		15960.00	42.65	54.00	-11.35	28.40	14.25	Average	105	101
10		15960.00	55.78	74.00	-18.22	41.53	14.25	Peak	105	101

Note 1: Emission Level (dBuV/m) = SA Reading (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:"*" is Peak / Average value of fundamental frequency

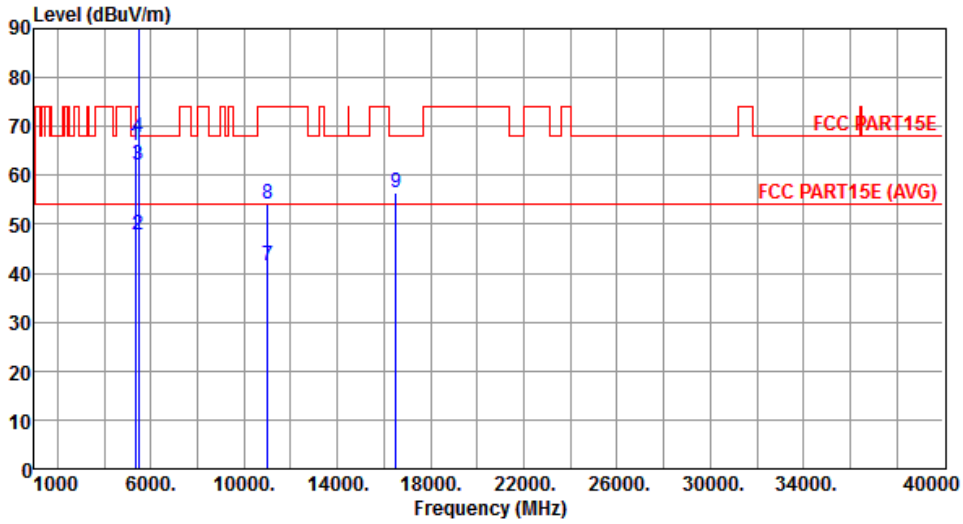
Modulation	VHT20	Test Freq. (MHz)	5320
Polarization	Vertical		



		Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	*	5320.00	101.65			100.01	1.64	Average	208	9
2	*	5320.00	112.52			110.88	1.64	Peak	208	9
3		5350.00	47.62	54.00	-6.38	45.93	1.69	Average	208	9
4		5350.00	61.88	74.00	-12.12	60.19	1.69	Peak	208	9
5		5400.00	47.13	54.00	-6.87	45.35	1.78	Average	208	9
6		5400.00	56.27	74.00	-17.73	54.49	1.78	Peak	208	9
7		10640.00	40.95	54.00	-13.05	27.93	13.02	Average	135	19
8		10640.00	53.61	74.00	-20.39	40.59	13.02	Peak	135	19
9		15960.00	42.45	54.00	-11.55	28.20	14.25	Average	129	28
10		15960.00	55.61	74.00	-18.39	41.36	14.25	Peak	129	28

Note 1: Emission Level (dBuV/m) = SA Reading (dBuV/m) + Factor* (dB)
*Factor includes antenna factor , cable loss and amplifier gain
Note 2: Margin (dB) = Emission level (dBuV/m) – Limit (dBuV/m).
Note 3:"*" is Peak / Average value of fundamental frequency

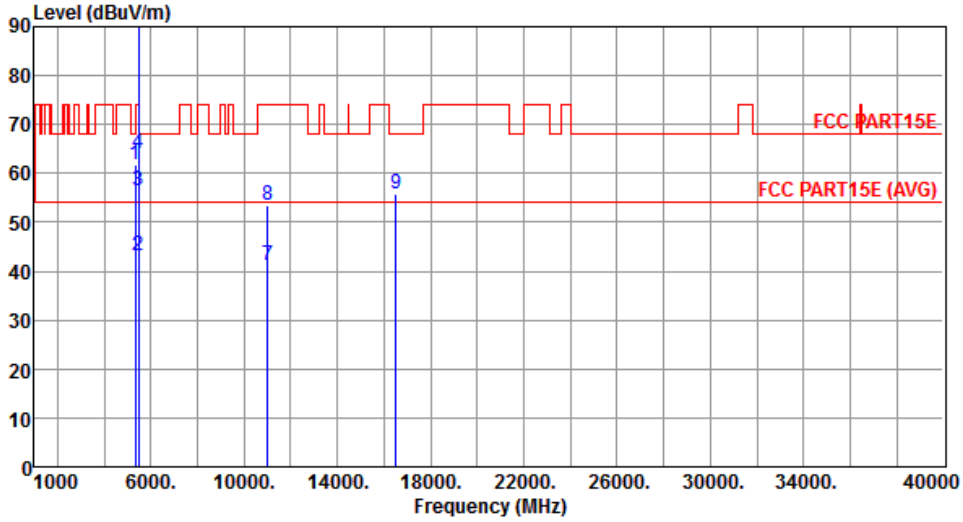
Modulation	VHT20	Test Freq. (MHz)	5500
Polarization	Horizontal		



		Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1		5340.00	66.20	68.20	-2.00	64.53	1.67	Peak	209	46
2		5460.00	47.72	54.00	-6.28	45.85	1.87	Average	209	46
3		5460.00	62.12	74.00	-11.88	60.25	1.87	Peak	209	46
4		5470.00	67.71	68.20	-0.49	65.83	1.88	Peak	209	46
5	*	5500.00	106.94			105.02	1.92	Average	209	46
6	*	5500.00	117.88			115.96	1.92	Peak	209	46
7		11000.00	41.58	54.00	-12.42	27.77	13.81	Average	123	116
8		11000.00	54.26	74.00	-19.74	40.45	13.81	Peak	123	116
9		16500.00	56.35	68.20	-11.85	40.69	15.66	Peak	114	91

Note 1: Emission Level (dBuV/m) = SA Reading (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:"*" is Peak / Average value of fundamental frequency

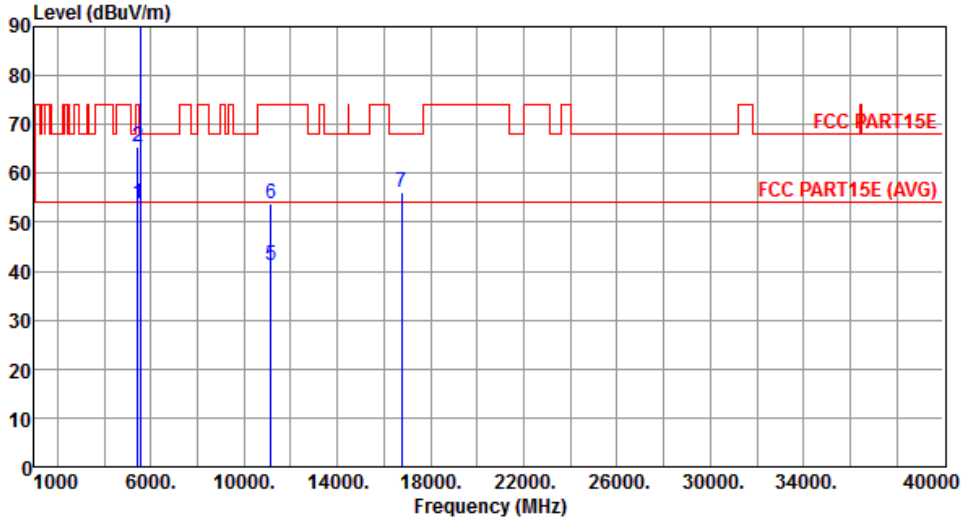
Modulation	VHT20	Test Freq. (MHz)	5500
Polarization	Vertical		



		Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1		5340.00	61.88	68.20	-6.32	60.21	1.67	Peak	210	13
2		5460.00	43.29	54.00	-10.71	41.42	1.87	Average	210	13
3		5460.00	56.56	74.00	-17.44	54.69	1.87	Peak	210	13
4		5470.00	64.25	68.20	-3.95	62.37	1.88	Peak	210	13
5	*	5500.00	100.66			98.74	1.92	Average	210	13
6	*	5500.00	111.34			109.42	1.92	Peak	210	13
7		11000.00	41.16	54.00	-12.84	27.35	13.81	Average	119	21
8		11000.00	53.62	74.00	-20.38	39.81	13.81	Peak	119	21
9		16500.00	55.91	68.20	-12.29	40.25	15.66	Peak	122	34

Note 1: Emission Level (dBuV/m) = SA Reading (dBuV/m) + Factor* (dB)
*Factor includes antenna factor , cable loss and amplifier gain
Note 2: Margin (dB) = Emission level (dBuV/m) – Limit (dBuV/m).
Note 3:"*" is Peak / Average value of fundamental frequency

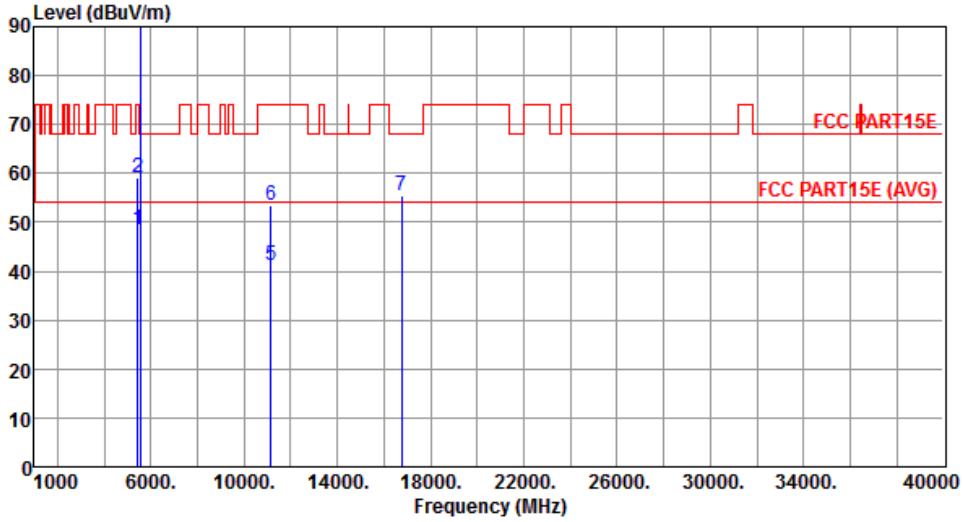
Modulation	VHT20	Test Freq. (MHz)	5580
Polarization	Horizontal		



		Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1		5420.00	53.84	54.00	-0.16	52.02	1.82	Average	208	61
2		5420.00	65.36	74.00	-8.64	63.54	1.82	Peak	208	61
3	*	5580.00	106.49			104.42	2.07	Average	204	56
4	*	5580.00	116.66			114.59	2.07	Peak	204	56
5		11160.00	41.24	54.00	-12.76	27.25	13.99	Average	116	124
6		11160.00	53.89	74.00	-20.11	39.90	13.99	Peak	116	124
7		16740.00	56.10	68.20	-12.10	40.35	15.75	Peak	106	102

Note 1: Emission Level (dBuV/m) = SA Reading (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:"*" is Peak / Average value of fundamental frequency

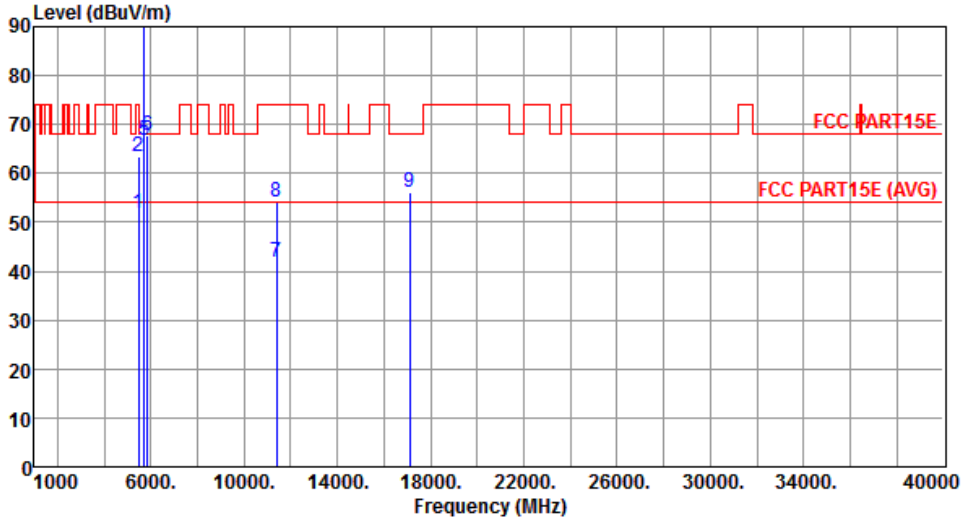
Modulation	VHT20	Test Freq. (MHz)	5580
Polarization	Vertical		



		Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1		5420.00	48.36	54.00	-5.64	46.54	1.82	Average	205	13
2		5420.00	59.22	74.00	-14.78	57.40	1.82	Peak	205	13
3	*	5580.00	99.52			97.45	2.07	Average	205	13
4	*	5580.00	110.14			108.07	2.07	Peak	205	13
5		11160.00	41.14	54.00	-12.86	27.15	13.99	Average	129	38
6		11160.00	53.62	74.00	-20.38	39.63	13.99	Peak	129	38
7		16740.00	55.62	68.20	-12.58	39.87	15.75	Peak	129	31

Note 1: Emission Level (dBuV/m) = SA Reading (dBuV/m) + Factor* (dB)
*Factor includes antenna factor , cable loss and amplifier gain
Note 2: Margin (dB) = Emission level (dBuV/m) – Limit (dBuV/m).
Note 3:"*" is Peak / Average value of fundamental frequency

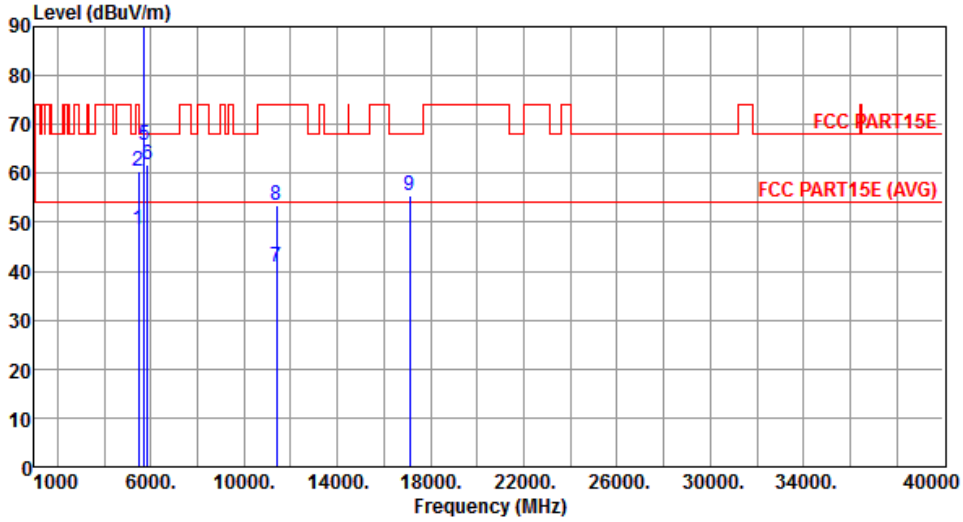
Modulation	VHT20	Test Freq. (MHz)	5700
Polarization	Horizontal		



		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	51.69	54.00	-2.31	49.82	1.87	Average	193	45
2		5460.00	63.48	74.00	-10.52	61.61	1.87	Peak	193	45
3	*	5700.00	106.77			104.40	2.37	Average	193	45
4	*	5700.00	117.32			114.95	2.37	Peak	193	45
5		5725.00	66.71	68.20	-1.49	64.28	2.43	Peak	193	45
6		5860.00	67.85	68.20	-0.35	65.11	2.74	Peak	193	45
7		11400.00	41.68	54.00	-12.32	27.43	14.25	Average	129	131
8		11400.00	54.29	74.00	-19.71	40.04	14.25	Peak	129	131
9		17100.00	56.15	68.20	-12.05	39.96	16.19	Peak	108	91

Note 1: Emission Level (dBuV/m) = SA Reading (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:"*" is Peak / Average value of fundamental frequency

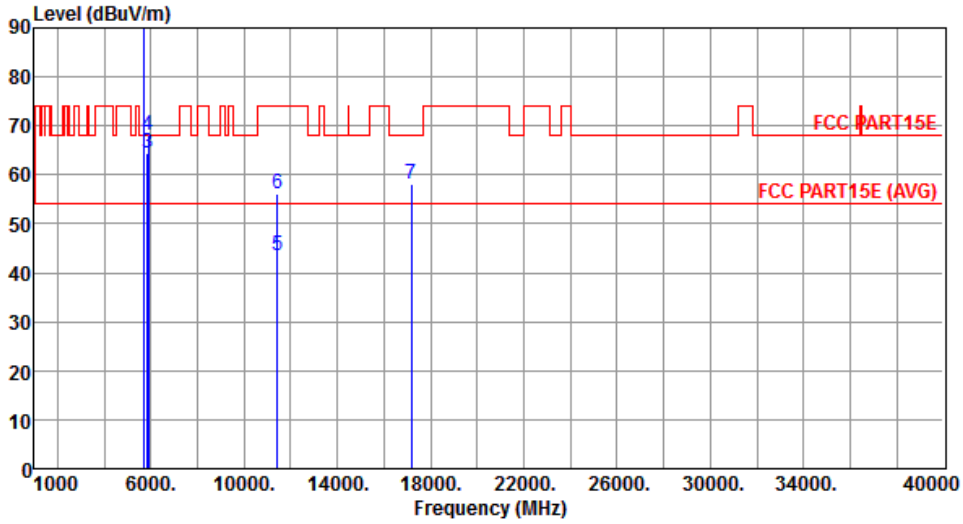
Modulation	VHT20	Test Freq. (MHz)	5700
Polarization	Vertical		



		Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1		5460.00	48.39	54.00	-5.61	46.52	1.87	Average	203	16
2		5460.00	60.44	74.00	-13.56	58.57	1.87	Peak	203	16
3	*	5700.00	98.96			96.59	2.37	Average	203	16
4	*	5700.00	111.26			108.89	2.37	Peak	203	16
5		5725.00	65.62	68.20	-2.58	63.19	2.43	Peak	203	16
6		5860.00	61.89	68.20	-6.31	59.15	2.74	Peak	203	16
7		11400.00	40.95	54.00	-13.05	26.70	14.25	Average	119	23
8		11400.00	53.48	74.00	-20.52	39.23	14.25	Peak	119	23
9		17100.00	55.56	68.20	-12.64	39.37	16.19	Peak	128	27

Note 1: Emission Level (dBuV/m) = SA Reading (dBuV/m) + Factor* (dB)
*Factor includes antenna factor , cable loss and amplifier gain
Note 2: Margin (dB) = Emission level (dBuV/m) – Limit (dBuV/m).
Note 3:"*" is Peak / Average value of fundamental frequency

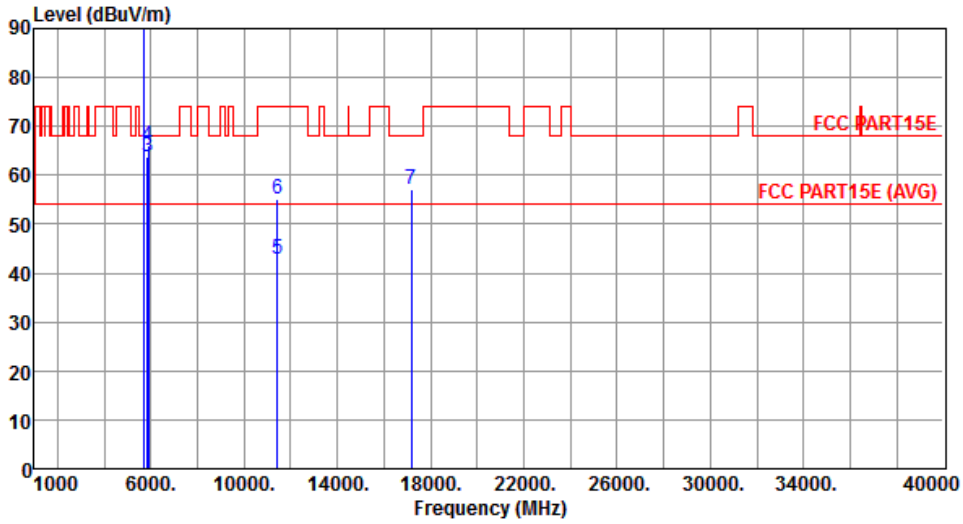
Modulation	VHT20	Test Freq. (MHz)	5720
Polarization	Horizontal		



		Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	*	5720.00	106.69			104.29	2.40	Average	192	50
2	*	5720.00	118.48			116.08	2.40	Peak	192	50
3		5850.00	64.27	68.20	-3.93	61.56	2.71	Peak	192	50
4		5880.00	68.06	68.20	-0.14	65.28	2.78	Peak	192	50
5		11440.00	43.45	54.00	-10.55	29.16	14.29	Average	100	126
6		11440.00	56.05	74.00	-17.95	41.76	14.29	Peak	100	126
7		17160.00	58.22	68.20	-9.98	41.82	16.40	Peak	100	96

Note 1: Emission Level (dBuV/m) = SA Reading (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:"*" is Peak / Average value of fundamental frequency

Modulation	VHT20	Test Freq. (MHz)	5720
Polarization	Vertical		

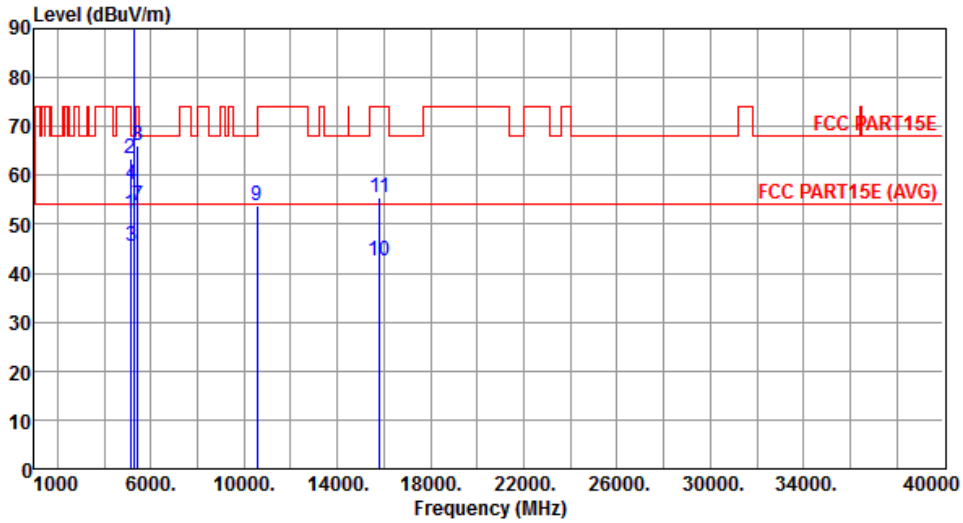


		Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	*	5720.00	99.74			97.34	2.40	Average	217	345
2	*	5720.00	112.83			110.43	2.40	Peak	217	345
3		5850.00	63.90	68.20	-4.30	61.19	2.71	Peak	217	345
4		5880.00	66.16	68.20	-2.04	63.38	2.78	Peak	217	345
5		11440.00	42.68	54.00	-11.32	28.39	14.29	Average	100	49
6		11440.00	55.19	74.00	-18.81	40.90	14.29	Peak	100	49
7		17160.00	57.24	68.20	-10.96	40.84	16.40	Peak	100	66

Note 1: Emission Level (dBuV/m) = SA Reading (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:"*" is Peak / Average value of fundamental frequency

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

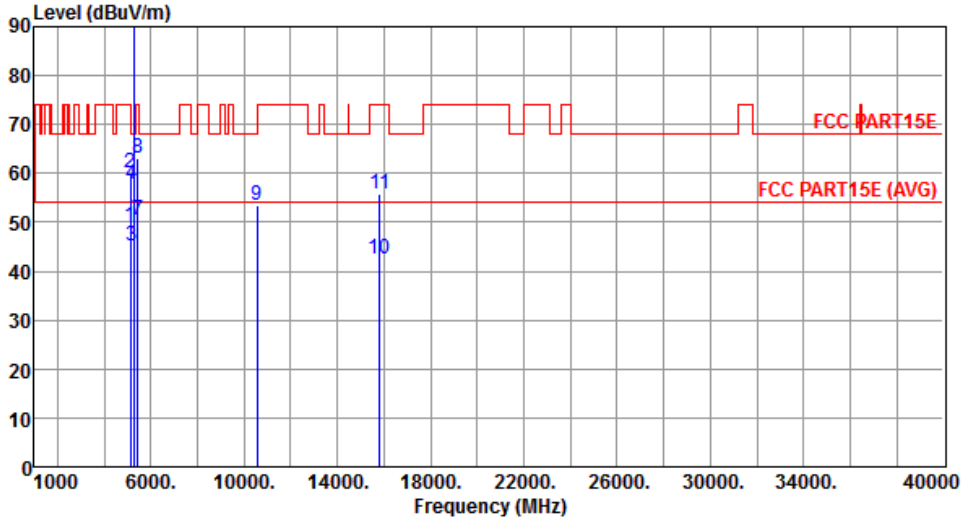
Modulation	VHT40	**Test Freq. (MHz)**	5270
Polarization	Horizontal		



		Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1		5110.00	52.03	54.00	-1.97	50.75	1.28	Average	213	60
2		5110.00	63.36	74.00	-10.64	62.08	1.28	Peak	213	60
3		5150.00	45.61	54.00	-8.39	44.26	1.35	Average	213	60
4		5150.00	58.16	74.00	-15.84	56.81	1.35	Peak	213	60
5	*	5270.00	104.90			103.35	1.55	Average	213	60
6	*	5270.00	115.18			113.63	1.55	Peak	213	60
7		5430.00	53.82	54.00	-0.18	51.99	1.83	Average	231	62
8		5430.00	65.98	74.00	-8.02	64.15	1.83	Peak	231	62
9		10540.00	53.65	68.20	-14.55	40.85	12.80	Peak	108	103
10		15810.00	42.43	54.00	-11.57	28.06	14.37	Average	103	84
11		15810.00	55.49	74.00	-18.51	41.12	14.37	Peak	103	84

Note 1: Emission Level (dBuV/m) = SA Reading (dBuV/m) + Factor* (dB)
*Factor includes antenna factor , cable loss and amplifier gain
Note 2: Margin (dB) = Emission level (dBuV/m) – Limit (dBuV/m).
Note 3:"*" is Peak / Average value of fundamental frequency

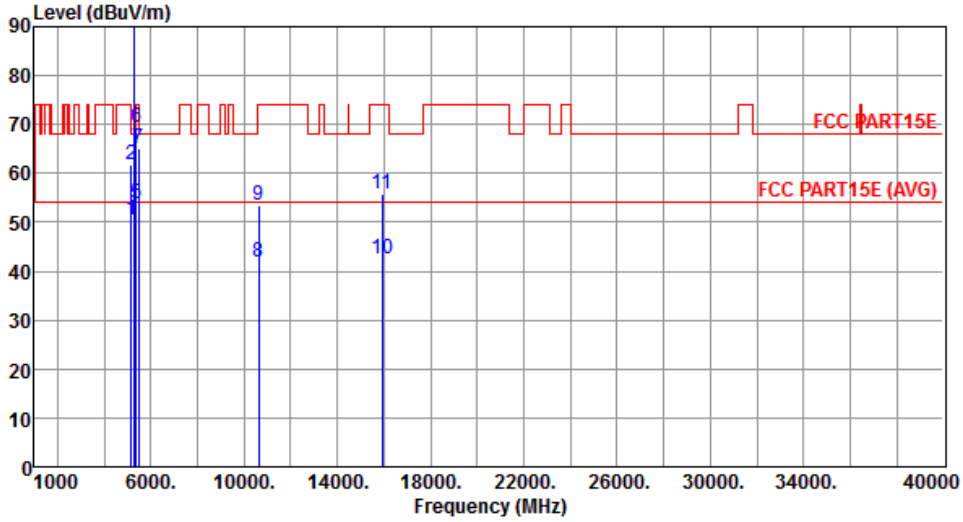
Modulation	VHT40	Test Freq. (MHz)	5270
Polarization	Vertical		



		Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1		5110.00	49.03	54.00	-4.97	47.75	1.28	Average	209	16
2		5110.00	60.21	74.00	-13.79	58.93	1.28	Peak	209	16
3		5150.00	45.14	54.00	-8.86	43.79	1.35	Average	209	16
4		5150.00	57.86	74.00	-16.14	56.51	1.35	Peak	209	16
5	*	5270.00	98.46			96.91	1.55	Average	209	16
6	*	5270.00	110.92			109.37	1.55	Peak	209	16
7		5430.00	50.45	54.00	-3.55	48.62	1.83	Average	209	16
8		5430.00	63.11	74.00	-10.89	61.28	1.83	Peak	209	16
9		10540.00	53.46	68.20	-14.74	40.66	12.80	Peak	131	22
10		15810.00	42.51	54.00	-11.49	28.14	14.37	Average	131	27
11		15810.00	55.63	74.00	-18.37	41.26	14.37	Peak	131	27

Note 1: Emission Level (dBuV/m) = SA Reading (dBuV/m) + Factor* (dB)
*Factor includes antenna factor , cable loss and amplifier gain
Note 2: Margin (dB) = Emission level (dBuV/m) – Limit (dBuV/m).
Note 3:"*" is Peak / Average value of fundamental frequency

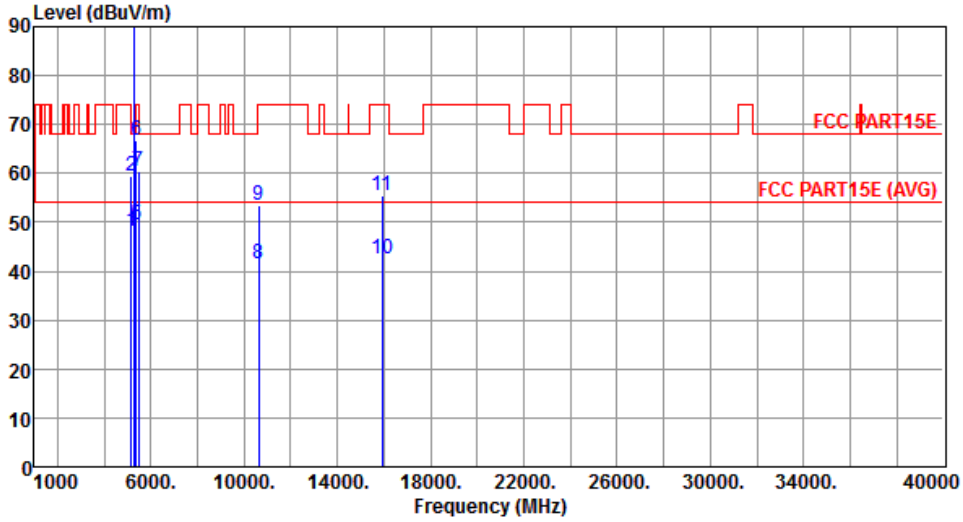
Modulation	VHT40	Test Freq. (MHz)	5310
Polarization	Horizontal		



		Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1		5150.00	50.47	54.00	-3.53	49.12	1.35	Average	200	58
2		5150.00	61.63	74.00	-12.37	60.28	1.35	Peak	200	58
3	*	5310.00	103.06			101.43	1.63	Average	200	58
4	*	5310.00	113.11			111.48	1.63	Peak	200	58
5		5350.00	53.74	54.00	-0.26	52.05	1.69	Average	200	58
6		5350.00	69.28	74.00	-4.72	67.59	1.69	Peak	200	58
7		5470.00	65.07	68.20	-3.13	63.19	1.88	Peak	200	58
8		10620.00	41.95	54.00	-12.05	28.98	12.97	Average	108	79
9		10620.00	53.47	74.00	-20.53	40.50	12.97	Peak	108	79
10		15930.00	42.44	54.00	-11.56	28.16	14.28	Average	107	125
11		15930.00	55.69	74.00	-18.31	41.41	14.28	Peak	107	125

Note 1: Emission Level (dBuV/m) = SA Reading (dBuV/m) + Factor* (dB)
*Factor includes antenna factor , cable loss and amplifier gain
Note 2: Margin (dB) = Emission level (dBuV/m) – Limit (dBuV/m).
Note 3:"*" is Peak / Average value of fundamental frequency

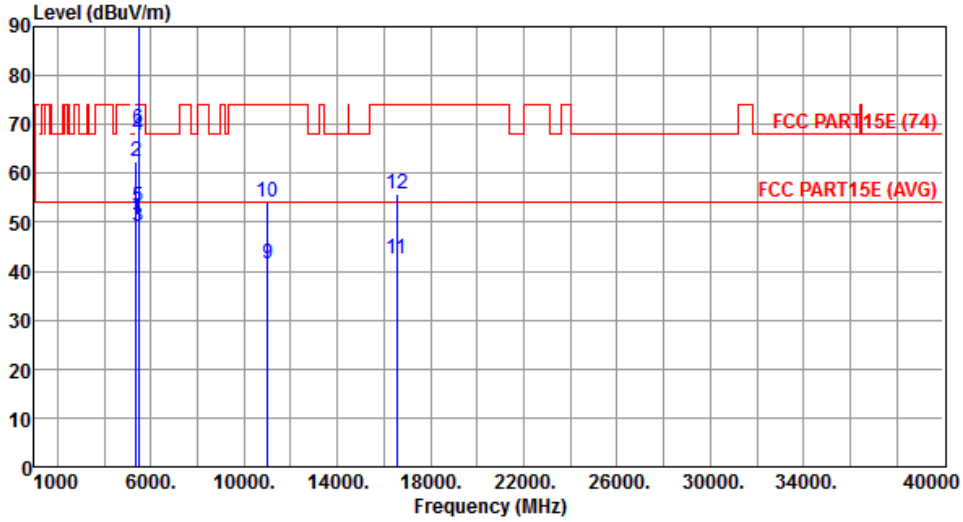
Modulation	VHT40	Test Freq. (MHz)	5310
Polarization	Vertical		



		Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1		5150.00	48.14	54.00	-5.86	46.79	1.35	Average	208	14
2		5150.00	59.46	74.00	-14.54	58.11	1.35	Peak	208	14
3	*	5310.00	97.43			95.80	1.63	Average	208	14
4	*	5310.00	108.45			106.82	1.63	Peak	208	14
5		5350.00	49.35	54.00	-4.65	47.66	1.69	Average	208	14
6		5350.00	66.72	74.00	-7.28	65.03	1.69	Peak	208	14
7		5470.00	60.36	68.20	-7.84	58.48	1.88	Peak	208	14
8		10620.00	41.56	54.00	-12.44	28.59	12.97	Average	138	22
9		10620.00	53.52	74.00	-20.48	40.55	12.97	Peak	138	22
10		15930.00	42.39	54.00	-11.61	28.11	14.28	Average	138	26
11		15930.00	55.41	74.00	-18.59	41.13	14.28	Peak	138	26

Note 1: Emission Level (dBuV/m) = SA Reading (dBuV/m) + Factor* (dB)
*Factor includes antenna factor , cable loss and amplifier gain
Note 2: Margin (dB) = Emission level (dBuV/m) – Limit (dBuV/m).
Note 3:"*" is Peak / Average value of fundamental frequency

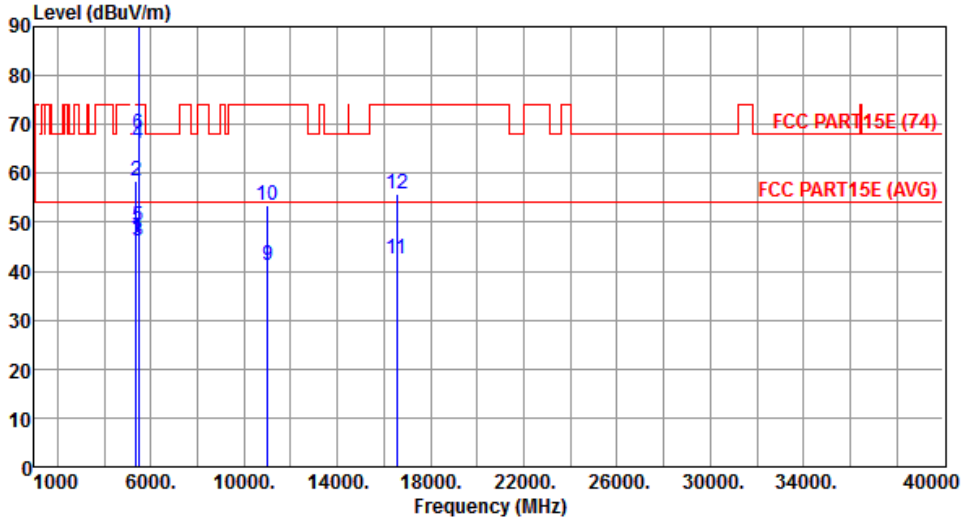
Modulation	VHT40	Test Freq. (MHz)	5510
Polarization	Horizontal		



		Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1		5350.00	50.84	54.00	-3.16	49.15	1.69	Average	200	46
2		5350.00	62.49	74.00	-11.51	60.80	1.69	Peak	200	46
3		5460.00	49.15	54.00	-4.85	47.28	1.87	Average	200	46
4		5460.00	67.69	74.00	-6.31	65.82	1.87	Peak	200	46
5		5470.00	53.20	54.00	-0.80	51.32	1.88	Average	200	46
6		5470.00	68.92	74.00	-5.08	67.04	1.88	Peak	200	46
7	*	5510.00	103.39			101.45	1.94	Average	200	46
8	*	5510.00	114.30			112.36	1.94	Peak	200	46
9		11020.00	41.56	54.00	-12.44	27.73	13.83	Average	105	101
10		11020.00	54.19	74.00	-19.81	40.36	13.83	Peak	105	101
11		16530.00	42.55	54.00	-11.45	26.88	15.67	Average	119	103
12		16530.00	55.68	74.00	-18.32	40.01	15.67	Peak	119	103

Note 1: Emission Level (dBuV/m) = SA Reading (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:"*" is Peak / Average value of fundamental frequency

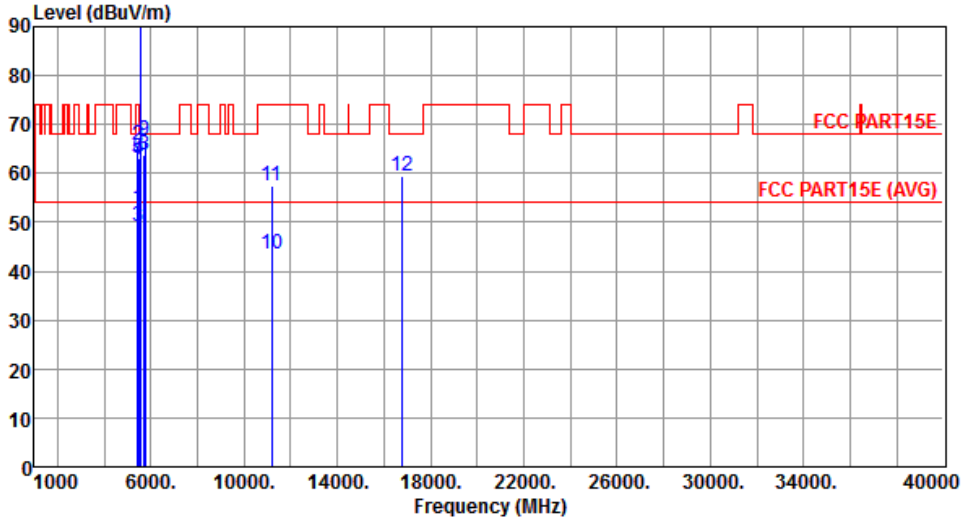
Modulation	VHT40	Test Freq. (MHz)	5510
Polarization	Vertical		



		Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1		5350.00	46.84	54.00	-7.16	45.15	1.69	Average	206	19
2		5350.00	58.49	74.00	-15.51	56.80	1.69	Peak	206	19
3		5460.00	46.18	54.00	-7.82	44.31	1.87	Average	206	19
4		5460.00	66.25	74.00	-7.75	64.38	1.87	Peak	206	19
5		5470.00	49.25	54.00	-4.75	47.37	1.88	Average	206	19
6		5470.00	68.15	74.00	-5.85	66.27	1.88	Peak	206	19
7	*	5510.00	98.02			96.08	1.94	Average	206	19
8	*	5510.00	108.42			106.48	1.94	Peak	206	19
9		11020.00	41.23	54.00	-12.77	27.40	13.83	Average	129	34
10		11020.00	53.36	74.00	-20.64	39.53	13.83	Peak	129	34
11		16530.00	42.53	54.00	-11.47	26.86	15.67	Average	139	62
12		16530.00	55.81	74.00	-18.19	40.14	15.67	Peak	139	62

Note 1: Emission Level (dBuV/m) = SA Reading (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:"*" is Peak / Average value of fundamental frequency

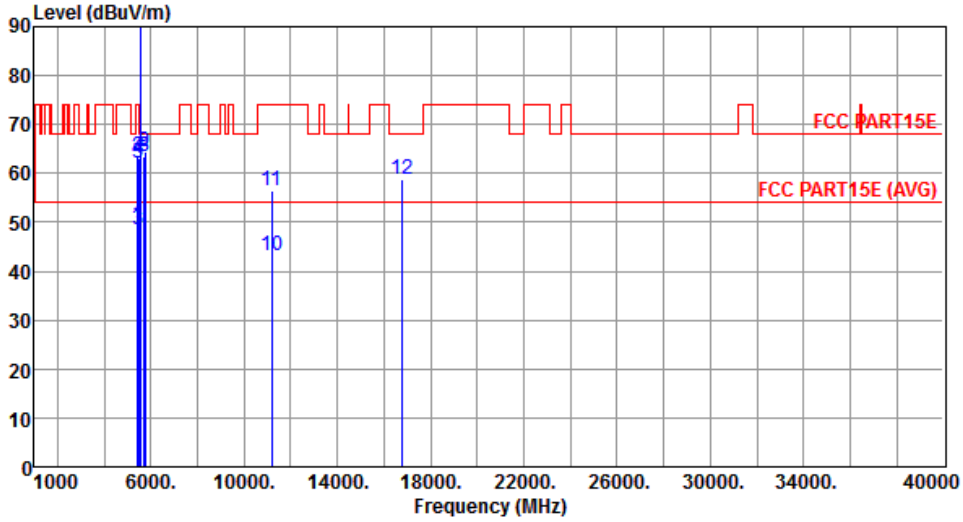
Modulation	VHT40	Test Freq. (MHz)	5590
Polarization	Horizontal		



		Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1		5430.00	52.96	54.00	-1.04	51.13	1.83	Average	188	60
2		5430.00	65.74	74.00	-8.26	63.91	1.83	Peak	188	60
3		5460.00	49.01	54.00	-4.99	47.14	1.87	Average	188	60
4		5460.00	62.69	74.00	-11.31	60.82	1.87	Peak	188	60
5		5470.00	63.02	68.20	-5.18	61.14	1.88	Peak	188	60
6	*	5590.00	103.49			101.40	2.09	Average	188	60
7	*	5590.00	115.28			113.19	2.09	Peak	188	60
8		5725.00	63.68	68.20	-4.52	61.25	2.43	Peak	188	60
9		5750.00	66.71	68.20	-1.49	64.23	2.48	Peak	188	298
10		11180.00	43.38	54.00	-10.62	29.37	14.01	Average	100	113
11		11180.00	57.32	74.00	-16.68	43.31	14.01	Peak	100	113
12		16770.00	59.33	68.20	-8.87	43.57	15.76	Peak	100	134

Note 1: Emission Level (dBuV/m) = SA Reading (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:"*" is Peak / Average value of fundamental frequency

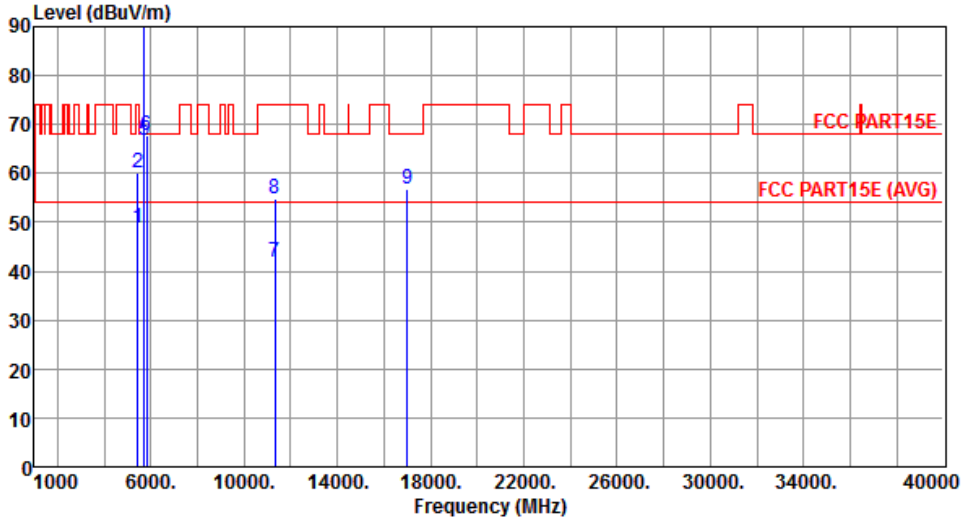
Modulation	VHT40	Test Freq. (MHz)	5590
Polarization	Vertical		



		Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1		5430.00	49.56	54.00	-4.44	47.73	1.83	Average	242	350
2		5430.00	63.44	74.00	-10.56	61.61	1.83	Peak	242	350
3		5460.00	48.61	54.00	-5.39	46.74	1.87	Average	242	350
4		5460.00	62.95	74.00	-11.05	61.08	1.87	Peak	242	350
5		5470.00	62.17	68.20	-6.03	60.29	1.88	Peak	242	350
6	*	5590.00	98.91			96.82	2.09	Average	242	350
7	*	5590.00	111.18			109.09	2.09	Peak	242	350
8		5725.00	63.27	68.20	-4.93	60.84	2.43	Peak	242	350
9		5750.00	64.50	68.20	-3.70	62.02	2.48	Peak	242	350
10		11180.00	43.22	54.00	-10.78	29.21	14.01	Average	100	85
11		11180.00	56.53	74.00	-17.47	42.52	14.01	Peak	100	85
12		16770.00	58.88	68.20	-9.32	43.12	15.76	Peak	100	48

Note 1: Emission Level (dBuV/m) = SA Reading (dBuV/m) + Factor* (dB)
*Factor includes antenna factor , cable loss and amplifier gain
Note 2: Margin (dB) = Emission level (dBuV/m) – Limit (dBuV/m).
Note 3:"*" is Peak / Average value of fundamental frequency

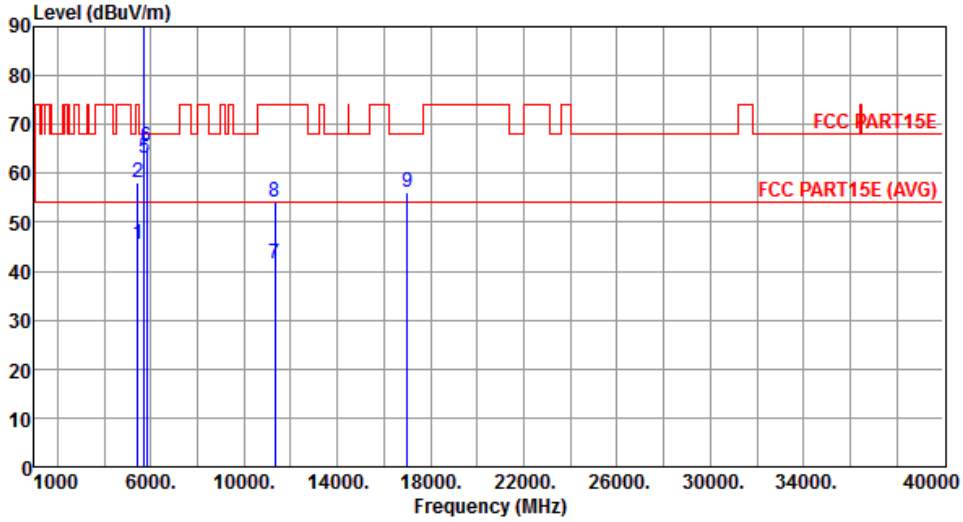
Modulation	VHT40	Test Freq. (MHz)	5670
Polarization	Horizontal		



		Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1		5430.00	48.92	54.00	-5.08	47.09	1.83	Average	219	301
2		5430.00	60.13	74.00	-13.87	58.30	1.83	Peak	219	301
3	*	5670.00	106.28			104.00	2.28	Average	219	301
4	*	5670.00	118.07			115.79	2.28	Peak	219	301
5		5725.00	66.61	68.20	-1.59	64.18	2.43	Peak	219	301
6		5830.00	67.58	68.20	-0.62	64.90	2.68	Peak	219	301
7		11340.00	41.95	54.00	-12.05	27.77	14.18	Average	109	105
8		11340.00	54.76	74.00	-19.24	40.58	14.18	Peak	109	105
9		17010.00	56.92	68.20	-11.28	41.03	15.89	Peak	118	134

Note 1: Emission Level (dBuV/m) = SA Reading (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:"*" is Peak / Average value of fundamental frequency

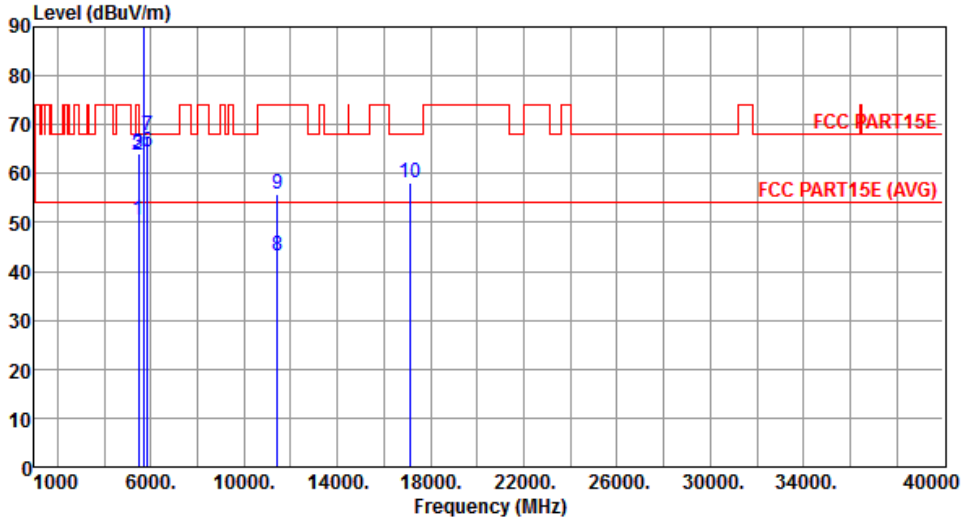
Modulation	VHT40	Test Freq. (MHz)	5670
Polarization	Vertical		



		Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1		5430.00	45.51	54.00	-8.49	43.68	1.83	Average	204	16
2		5430.00	58.26	74.00	-15.74	56.43	1.83	Peak	204	16
3	*	5670.00	100.35			98.07	2.28	Average	204	16
4	*	5670.00	112.46			110.18	2.28	Peak	204	16
5		5725.00	63.25	68.20	-4.95	60.82	2.43	Peak	204	16
6		5830.00	65.42	68.20	-2.78	62.74	2.68	Peak	204	16
7		11340.00	41.56	54.00	-12.44	27.38	14.18	Average	129	11
8		11340.00	54.27	74.00	-19.73	40.09	14.18	Peak	129	11
9		17010.00	56.16	68.20	-12.04	40.27	15.89	Peak	129	17

Note 1: Emission Level (dBuV/m) = SA Reading (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:"*" is Peak / Average value of fundamental frequency

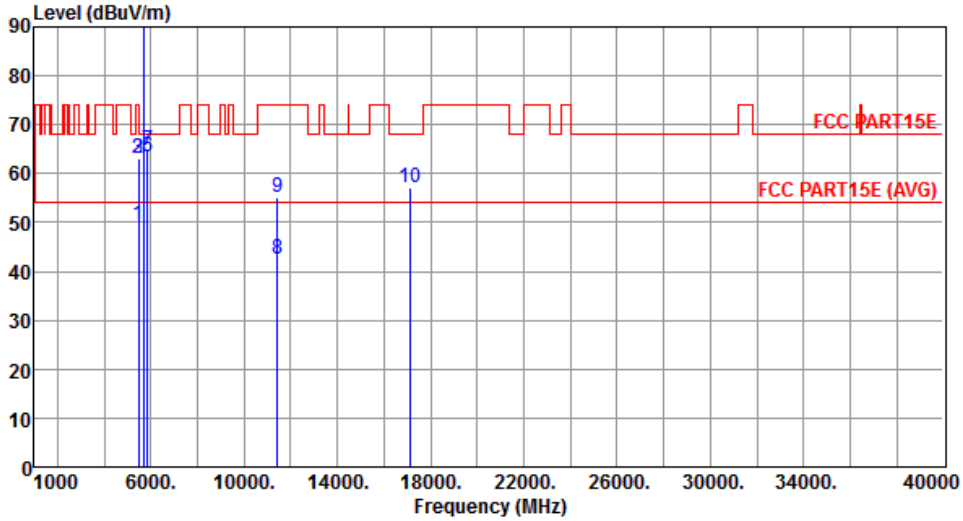
Modulation	VHT40	Test Freq. (MHz)	5710
Polarization	Horizontal		



		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	50.51	54.00	-3.49	48.64	1.87	Average	195	52
2		5460.00	63.81	74.00	-10.19	61.94	1.87	Peak	195	52
3		5470.00	64.13	68.20	-4.07	62.25	1.88	Peak	195	52
4	*	5710.00	104.11			101.73	2.38	Average	195	52
5	*	5710.00	116.39			114.01	2.38	Peak	195	52
6		5850.00	64.57	68.20	-3.63	61.86	2.71	Peak	195	52
7		5870.00	67.90	68.20	-0.30	65.15	2.75	Peak	195	52
8		11420.00	43.22	54.00	-10.78	28.95	14.27	Average	100	131
9		11420.00	55.80	74.00	-18.20	41.53	14.27	Peak	100	131
10		17130.00	57.95	68.20	-10.25	41.66	16.29	Peak	100	103

Note 1: Emission Level (dBuV/m) = SA Reading (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:"*" is Peak / Average value of fundamental frequency

Modulation	VHT40	Test Freq. (MHz)	5710
Polarization	Vertical		

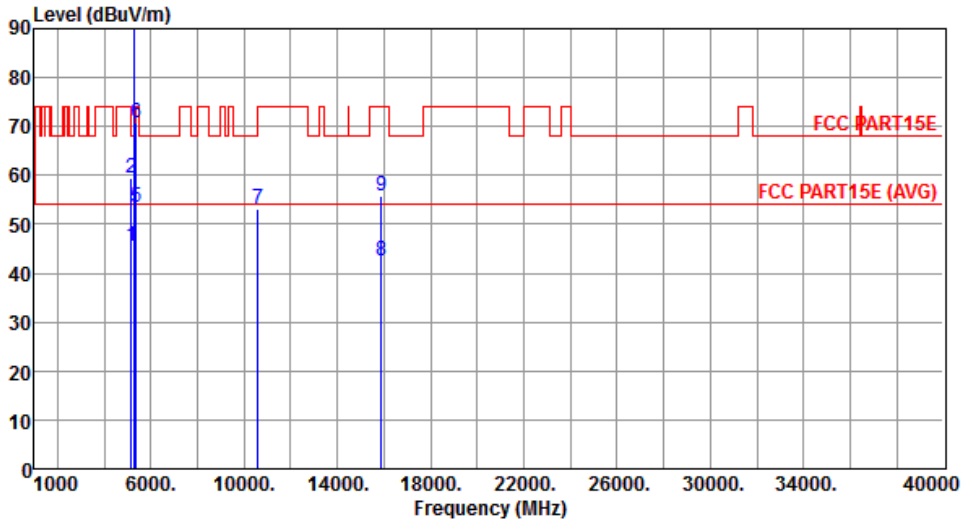


		Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1		5460.00	49.40	54.00	-4.60	47.53	1.87	Average	216	346
2		5460.00	62.94	74.00	-11.06	61.07	1.87	Peak	216	346
3		5470.00	63.15	68.20	-5.05	61.27	1.88	Peak	216	346
4	*	5710.00	98.55			96.17	2.38	Average	216	346
5	*	5710.00	111.00			108.62	2.38	Peak	216	346
6		5850.00	63.39	68.20	-4.81	60.68	2.71	Peak	216	346
7		5870.00	64.76	68.20	-3.44	62.01	2.75	Peak	216	346
8		11420.00	42.59	54.00	-11.41	28.32	14.27	Average	100	62
9		11420.00	55.06	74.00	-18.94	40.79	14.27	Peak	100	62
10		17130.00	56.97	68.20	-11.23	40.68	16.29	Peak	100	74

Note 1: Emission Level (dBuV/m) = SA Reading (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:"*" is Peak / Average value of fundamental frequency

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

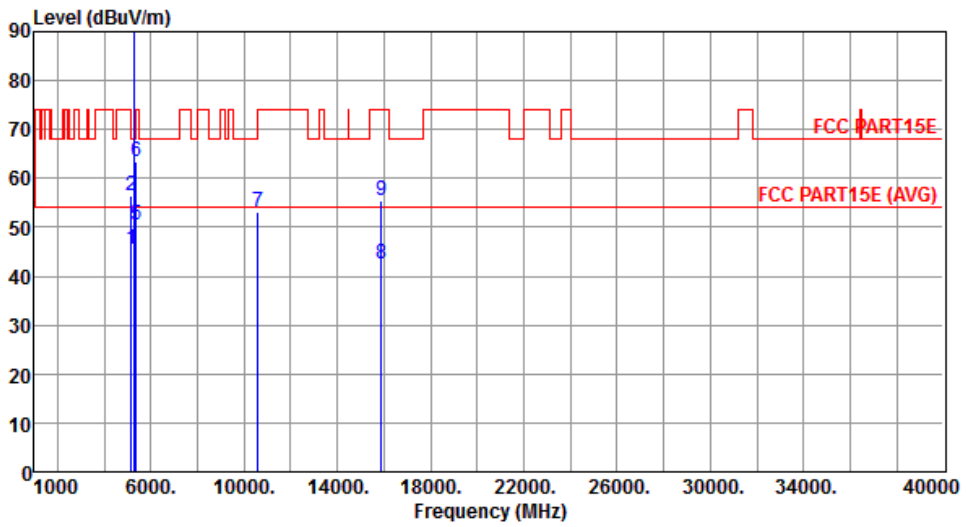
Modulation	VHT80	**Test Freq. (MHz)**	5290
Polarization	Horizontal		



		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	45.50	54.00	-8.50	44.15	1.35	Average	219	299
2		5150.00	59.47	74.00	-14.53	58.12	1.35	Peak	219	299
3	*	5290.00	98.13			96.55	1.58	Average	219	299
4	*	5290.00	108.44			106.86	1.58	Peak	219	299
5		5350.00	53.55	54.00	-0.45	51.86	1.69	Average	219	299
6		5350.00	70.57	74.00	-3.43	68.88	1.69	Peak	219	299
7		10580.00	53.26	68.20	-14.94	40.37	12.89	Peak	119	85
8		15870.00	42.63	54.00	-11.37	28.30	14.33	Average	106	121
9		15870.00	55.81	74.00	-18.19	41.48	14.33	Peak	106	121

Note 1: Emission Level (dBuV/m) = SA Reading (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:"*" is Peak / Average value of fundamental frequency

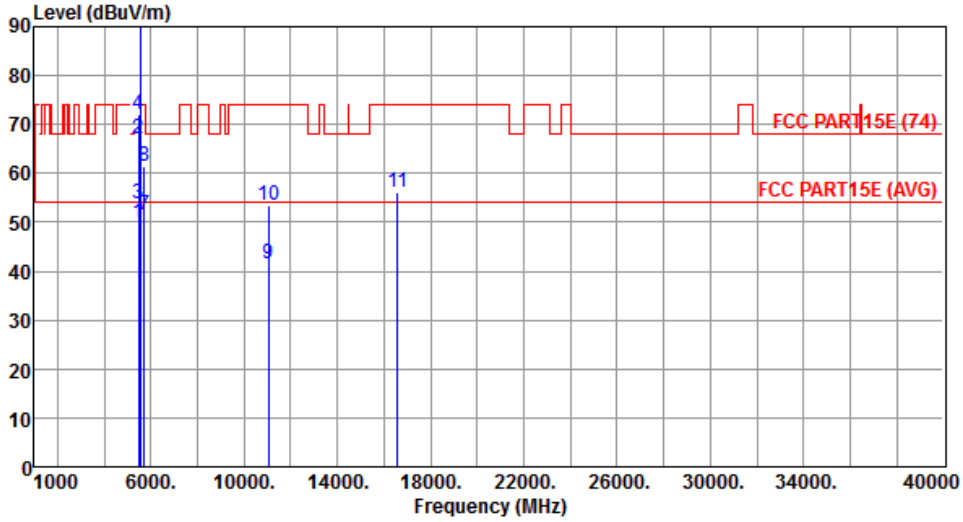
Modulation	VHT80	Test Freq. (MHz)	5290
Polarization	Vertical		



		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	45.35	54.00	-8.65	44.00	1.35	Average	208	19
2		5150.00	56.48	74.00	-17.52	55.13	1.35	Peak	208	19
3	*	5290.00	93.56			91.98	1.58	Average	208	19
4	*	5290.00	102.65			101.07	1.58	Peak	208	19
5		5350.00	50.44	54.00	-3.56	48.75	1.69	Average	208	19
6		5350.00	63.48	74.00	-10.52	61.79	1.69	Peak	208	19
7		10580.00	53.21	68.20	-14.99	40.32	12.89	Peak	131	17
8		15870.00	42.59	54.00	-11.41	28.26	14.33	Average	141	29
9		15870.00	55.61	74.00	-18.39	41.28	14.33	Peak	141	29

Note 1: Emission Level (dBuV/m) = SA Reading (dBuV/m) + Factor* (dB)
*Factor includes antenna factor , cable loss and amplifier gain
Note 2: Margin (dB) = Emission level (dBuV/m) – Limit (dBuV/m).
Note 3:"*" is Peak / Average value of fundamental frequency

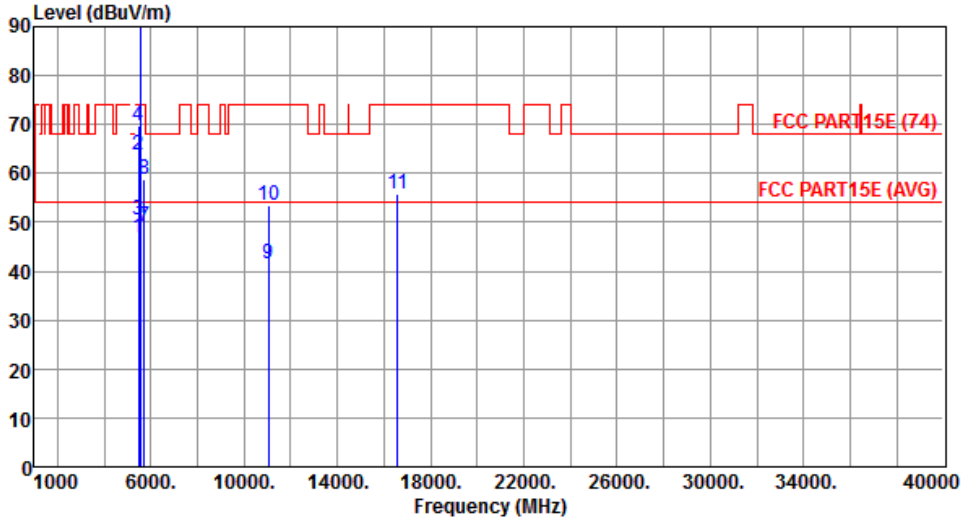
Modulation	VHT80	Test Freq. (MHz)	5530
Polarization	Horizontal		



		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	48.09	1.87	Average	216	296
2		5460.00	66.97	74.00	-7.03	65.10	1.87	Peak	216	296
3		5470.00	53.65	54.00	-0.35	51.77	1.88	Average	216	296
4		5470.00	72.13	74.00	-1.87	70.25	1.88	Peak	216	296
5	*	5530.00	98.39			96.41	1.98	Average	216	296
6	*	5530.00	108.52			106.54	1.98	Peak	216	296
7		5725.00	51.46	54.00	-2.54	49.03	2.43	Average	216	296
8		5725.00	61.43	74.00	-12.57	59.00	2.43	Peak	216	296
9		11060.00	41.46	54.00	-12.54	27.58	13.88	Average	122	54
10		11060.00	53.55	74.00	-20.45	39.67	13.88	Peak	122	54
11		16590.00	55.96	74.00	-18.04	40.27	15.69	Peak	115	109

Note 1: Emission Level (dBuV/m) = SA Reading (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:"*" is Peak / Average value of fundamental frequency

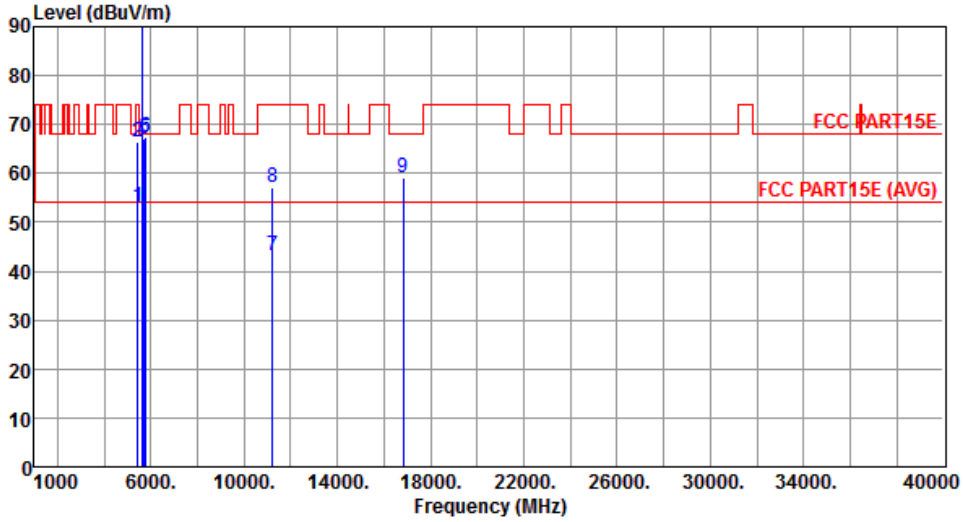
Modulation	VHT80	Test Freq. (MHz)	5530
Polarization	Vertical		



		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	46.84	54.00	-7.16	44.97	1.87	Average	203	19
2		5460.00	63.81	74.00	-10.19	61.94	1.87	Peak	203	19
3		5470.00	50.45	54.00	-3.55	48.57	1.88	Average	203	19
4		5470.00	69.78	74.00	-4.22	67.90	1.88	Peak	203	19
5	*	5530.00	93.68			91.70	1.98	Average	203	19
6	*	5530.00	102.96			100.98	1.98	Peak	203	19
7		5725.00	49.25	54.00	-4.75	46.82	2.43	Average	203	19
8		5725.00	58.66	74.00	-15.34	56.23	2.43	Peak	203	19
9		11060.00	41.53	54.00	-12.47	27.65	13.88	Average	123	44
10		11060.00	53.45	74.00	-20.55	39.57	13.88	Peak	123	44
11		16590.00	55.92	74.00	-18.08	40.23	15.69	Peak	135	28

Note 1: Emission Level (dBuV/m) = SA Reading (dBuV/m) + Factor* (dB)
*Factor includes antenna factor , cable loss and amplifier gain
Note 2: Margin (dB) = Emission level (dBuV/m) – Limit (dBuV/m).
Note 3:"*" is Peak / Average value of fundamental frequency

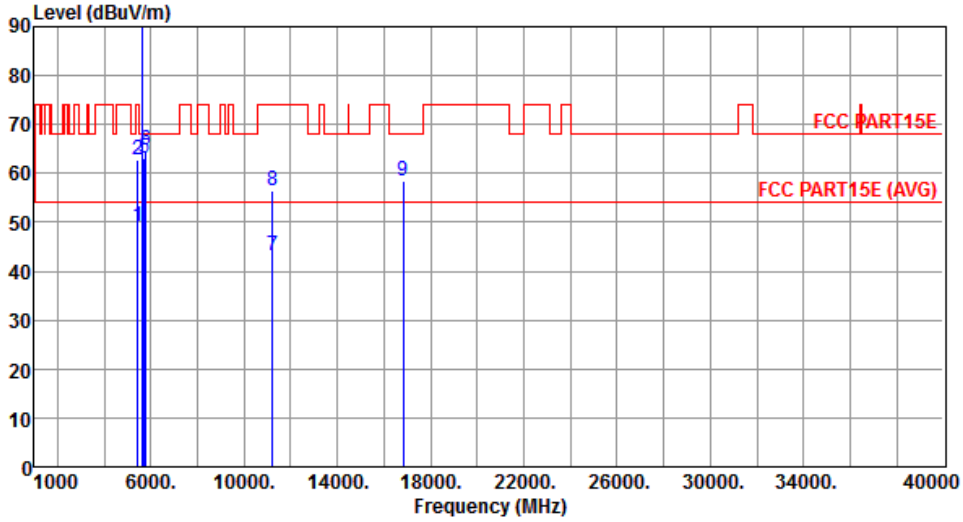
Modulation	VHT80	Test Freq. (MHz)	5610
Polarization	Horizontal		



		Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1		5450.00	53.02	54.00	-0.98	51.17	1.85	Average	200	51
2		5450.00	66.58	74.00	-7.42	64.73	1.85	Peak	200	51
3	*	5610.00	100.82			98.69	2.13	Average	200	51
4	*	5610.00	111.47			109.34	2.13	Peak	200	51
5		5725.00	67.20	68.20	-1.00	64.77	2.43	Peak	200	51
6		5770.00	67.52	68.20	-0.68	64.99	2.53	Peak	200	51
7		11220.00	43.33	54.00	-10.67	29.28	14.05	Average	100	118
8		11220.00	57.28	74.00	-16.72	43.23	14.05	Peak	100	118
9		16830.00	59.07	68.20	-9.13	43.28	15.79	Peak	100	143

Note 1: Emission Level (dBuV/m) = SA Reading (dBuV/m) + Factor* (dB)
*Factor includes antenna factor , cable loss and amplifier gain
Note 2: Margin (dB) = Emission level (dBuV/m) – Limit (dBuV/m).
Note 3:"*" is Peak / Average value of fundamental frequency

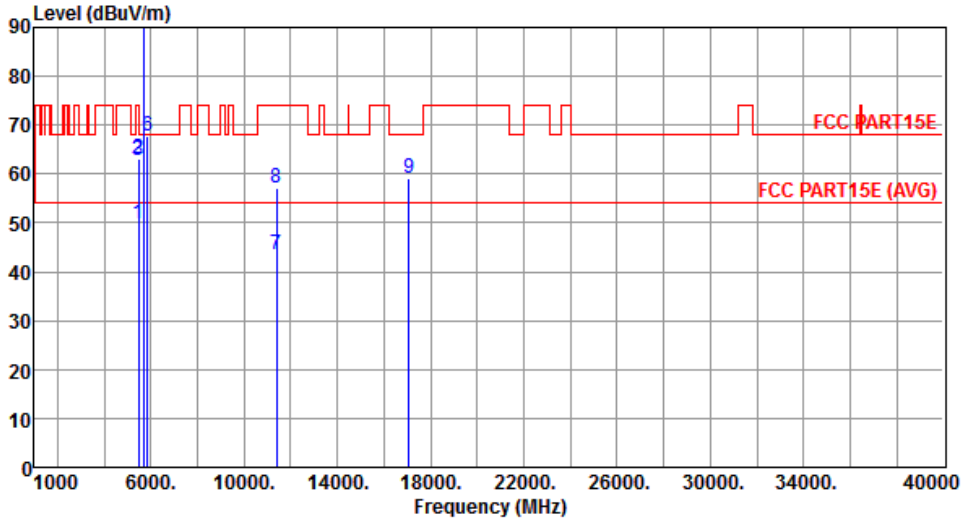
Modulation	VHT80	Test Freq. (MHz)	5610
Polarization	Vertical		



		Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1		5450.00	49.32	54.00	-4.68	47.47	1.85	Average	240	351
2		5450.00	62.86	74.00	-11.14	61.01	1.85	Peak	240	351
3	*	5610.00	98.86			96.73	2.13	Average	240	351
4	*	5610.00	108.04			105.91	2.13	Peak	240	351
5		5725.00	63.17	68.20	-5.03	60.74	2.43	Peak	240	351
6		5770.00	64.63	68.20	-3.57	62.10	2.53	Peak	240	351
7		11220.00	43.13	54.00	-10.87	29.08	14.05	Average	100	79
8		11220.00	56.34	74.00	-17.66	42.29	14.05	Peak	100	79
9		16830.00	58.47	68.20	-9.73	42.68	15.79	Peak	100	53

Note 1: Emission Level (dBuV/m) = SA Reading (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:"*" is Peak / Average value of fundamental frequency

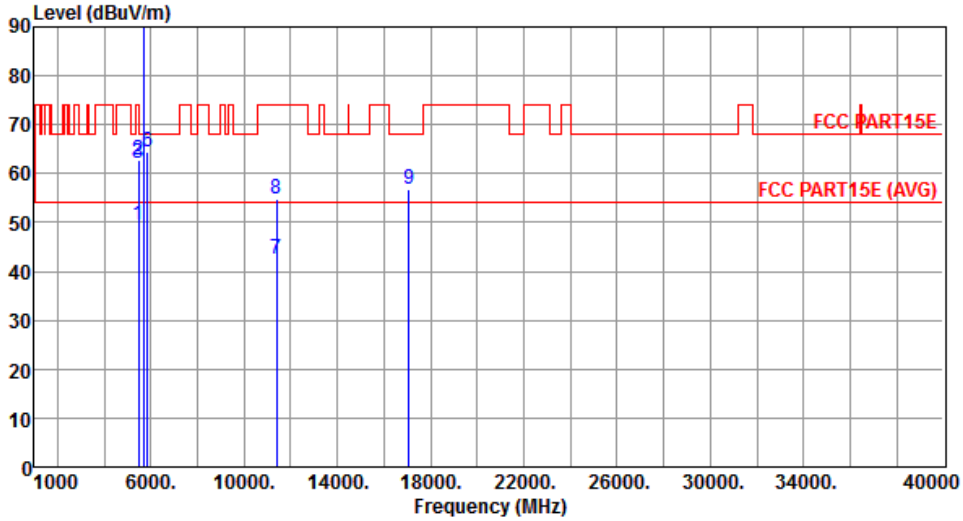
Modulation	VHT80	Test Freq. (MHz)	5690
Polarization	Horizontal		



		Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1		5460.00	49.68	54.00	-4.32	47.81	1.87	Average	179	46
2		5460.00	62.99	74.00	-11.01	61.12	1.87	Peak	179	46
3		5470.00	62.87	68.20	-5.33	60.99	1.88	Peak	179	46
4	*	5690.00	103.41			101.07	2.34	Average	179	46
5	*	5690.00	114.33			111.99	2.34	Peak	179	46
6		5850.00	67.78	68.20	-0.42	65.07	2.71	Peak	179	46
7		11380.00	43.37	54.00	-10.63	29.14	14.23	Average	100	106
8		11380.00	56.96	74.00	-17.04	42.73	14.23	Peak	100	106
9		17070.00	59.09	68.20	-9.11	43.00	16.09	Peak	100	153

Note 1: Emission Level (dBuV/m) = SA Reading (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:"*" is Peak / Average value of fundamental frequency

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		5460.00	49.39	54.00	-4.61	47.52	1.87	Average	219	347
2		5460.00	62.65	74.00	-11.35	60.78	1.87	Peak	219	347
3		5470.00	62.02	68.20	-6.18	60.14	1.88	Peak	219	347
4	*	5690.00	97.19			94.85	2.34	Average	219	347
5	*	5690.00	108.64			106.30	2.34	Peak	219	347
6		5850.00	64.56	68.20	-3.64	61.85	2.71	Peak	219	347
7		11380.00	42.48	54.00	-11.52	28.25	14.23	Average	100	54
8		11380.00	54.96	74.00	-19.04	40.73	14.23	Peak	100	54
9		17070.00	56.76	68.20	-11.44	40.67	16.09	Peak	100	74

Note 1: Emission Level (dBuV/m) = SA Reading (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:"*" is Peak / Average value of fundamental frequency

3.6 Frequency Stability

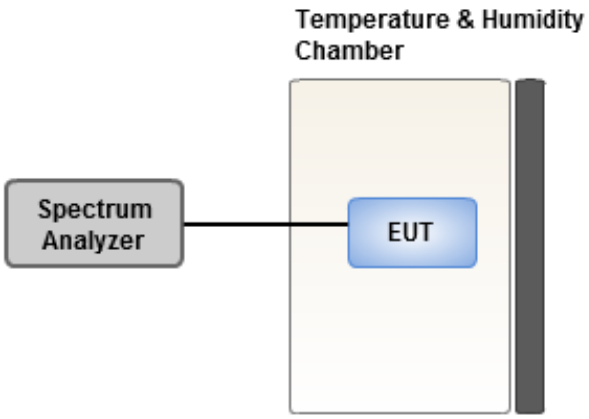
3.6.1 Limit of Frequency Stability

Manufacturers of U-NII devices are responsible for ensuring frequency stability such that an emission is maintained within the band of operation under all conditions of normal operation as specified in the user's manual.

3.6.2 Test Procedures

1. The EUT is installed in an environment test chamber with external power source.
2. Set the chamber to operate at 50 centigrade and external power source to output at nominal voltage of EUT.
3. A sufficient stabilization period at each temperature is used prior to each frequency measurement.
4. When temperature is stabled, measure the frequency stability.
5. The test shall be performed under -30 to 50 centigrade and 85 to 115 percent of the nominal voltage. Change setting of chamber and external power source to complete all conditions.

3.6.3 Test Setup



3.6.4 Test Result of Frequency Stability

Frequency: 5580 MHz	Frequency Drift (ppm)			
Temperature (°C)	**0 minute**	**2 minutes**	**5 minutes**	**10 minutes**
T20°CVmax	-0.06	-0.10	-0.35	-0.51
T20°CVmin	0.29	0.53	-0.10	0.21
T50°CVnom	1.29	1.47	1.17	1.04
T40°CVnom	0.46	0.03	0.23	-0.06
T30°CVnom	0.47	0.66	0.87	0.73
T20°CVnom	-0.36	0.61	-0.31	0.03
T10°CVnom	0.95	1.03	0.91	0.69
T0°CVnom	0.11	-0.21	0.60	-0.18
T-10°CVnom	0.39	0.58	0.46	0.39
T-20°CVnom	0.04	-0.28	0.31	-0.12
T-30°CVnom	0.68	0.88	0.71	0.73
Vnom [Vac]: 120		Vmax [Vac]: 138		Vmin [Vac]: 102
Tnom [°C]: 20		Tmax [°C]: 50		Tmin [°C]: -30

4 Test laboratory information

Established in 2012, ICC provides foremost EMC & RF Testing and advisory consultation services by our skilled engineers and technicians. Our services employ a wide variety of advanced edge test equipment and one of the widest certification extents in the business.

International Certification Corp (EMC and Wireless Communication Laboratory), it is our definitive objective is to institute long term, trust-based associations with our clients. The expectation we set up with our clients is based on outstanding service, practical expertise and devotion to a certified value structure. Our passion is to grant our clients with best EMC / RF services by oriented knowledgeable and accommodating staff.

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

Linkou	**Kwei Shan**	**Kwei Shan Site II**
Tel: 886-2-2601-1640	Tel: 886-3-271-8666	Tel: 886-3-271-8640
No. 30-2, Ding Fwu Tsuen, Lin Kou District, New Taipei City, Taiwan, R.O.C.	No. 3-1, Lane 6, Wen San 3rd St., Kwei Shan District, Tao Yuan City 333, Taiwan, R.O.C.	No. 14-1, Lane 19, Wen San 3rd St., Kwei Shan District, Tao Yuan City 333, Taiwan, R.O.C.

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

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