FCC C2PC Test Report

FCC ID	:	**2ABLK-844FX-X**
Equipment	:	**GigaCenter**
Model No.	:	**844FB-1 ; 844F-1 ; 844FB-2 ; 844F-2** **(refer to item 1.1.1 for more details)**
Brand Name	:	**Calix Inc**
Applicant	:	**Calix Inc**
Address	:	**1035 N. McDowell Blvd. Petaluma, CA 94954**
Standard	:	**47 CFR FCC Part 15.407**
Received Date	:	**Jan. 10, 2017**
Tested Date	:	**Feb. 08 ~ Mar. 07, 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

Table of Contents

1 GENERAL DESCRIPTION 5

1.1 Information 5
1.2 Local Support Equipment List 10
1.3 Test Setup Chart 10
1.4 The Equipment List 12
1.5 Testing Applied Standards 13
1.6 Measurement Uncertainty 13

2 TEST CONFIGURATION 14

2.1 Testing Condition 14
2.2 The Worst Test Modes and Channel Details 15

3 TRANSMITTER TEST RESULTS 17

3.1 Conducted Emissions 17
3.2 Emission Bandwidth 22
3.3 RF Output Power 28
3.4 Peak Power Spectral Density 33
3.5 Transmitter Radiated and Band Edge Emissions 37
3.6 Frequency Stability 126

4 TEST LABORATORY INFORMATION 128

Release Record

Report No.	Version	Description	Issued Date
FR712305-01AN	Rev. 01	Initial issue	Apr. 17, 2017

Summary of Test Results

FCC Rules	Test Items	Measured	Result
15.207	Conducted Emissions	[dBuV]: 0.538MHz 40.96 (Margin -5.04dB) - AV	Pass
15.407(b) 15.209	Radiated Emissions	[dBuV/m at 3m]: 5660.00MHz 52.99 (Margin -1.01dB) – AV [dBuV/m at 3m]: 5725.00MHz 72.99 (Margin -1.01dB) – 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: 23.80 5470~5725MHz: 23.89 ***Beamforming mode*** 5250~5350MHz: 23.50 5470~5725MHz: 23.69	Pass
15.407(a)	Peak Power Spectral Density	Meet the requirement of limit	Pass
15.407(g)	Frequency Stability	Meet the requirement of limit	Pass
15.203	Antenna Requirement	Meet the requirement of limit	Pass

1 General Description

1.1 Information

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.

The device has 4 configurations as below table.
RF function is identical to each configuration. Differences between 4 configurations are only non-RF function by depopulation of components without PCB Modifications.

Model Name	844FB-1	844FB-2	844F-1	844F-2
LAN / WAN function	4 LAN ports	4 LAN ports 1WAN port	4 LAN ports	4 LAN ports 1WAN port
G.fast function	bonding G.fast	bonding G.fast	Single G.fast	Single G.fast
Power Supply	1. Adapter 2. UPS	Adapter (DC jack)	1. Adapter 2. UPS	Adapter (DC jack)
Housing Type	Housing 1	Housing 2	Housing 1	Housing 2
Frequency band (GHz)	2.412 ~ 2.462 / 5.18 ~ 5.24 / 5.26 ~ 5.32 / 5.5 ~ 5.72 / 5.745 ~ 5.825			
Bean forming mode	Supported			
Master or Client	Master			
USB function	USB3.0			
VOIP function	VOIP (FXS)			

Note: Four models (844FB-1, 844FB-2, 844F-1 and 844F-2) had been covered during the pretest, and found that 844F-1 was the worst case and was selected for final test.

1.1.1 Specification of the Equipment under Test (EUT)

RF General Information					
Frequency Range (MHz)	**IEEE Std. 802.11**	**Ch. Freq. (MHz)**	**Channel Number**	**Transmit Chains (N_{TX})**	**Data Rate / MCS**
5250-5350 5470-5725	a	5260-5320 5500-5720	52-64 [4] 100-144 [12]	4	6-54 Mbps
5250-5350 5470-5725	n (HT20)	5260-5320 5500-5720	52-64 [4] 100-144 [12]	4	MCS 0-31
5250-5350 5470-5725	n (HT40)	5270-5310 5510-5710	54-62 [2] 102-142 [6]	4	MCS 0-31
5250-5350 5470-5725	ac (VHT20)	5260-5320 5500-5720	52-64 [4] 100-144 [12]	4	MCS 0-9
5250-5350 5470-5725	ac (VHT40)	5270-5310 5510-5710	54-62 [2] 102-142 [6]	4	MCS 0-9
5250-5350 5470-5725	ac (VHT80)	5290 5530-5690	58 [1] 106-138 [3]	4	MCS 0-9
Note 1: RF output power specifies that Maximum Conducted Output Power. Note 2: 802.11a/n/ac uses a combination of OFDM-BPSK, QPSK, 16QAM, 64QAM, 256QAM modulation. Note 3: 802.11n/ac supports beamforming mode.					

1.1.2 Antenna Details

Ant. No.	Model	Type	Connector	Operating Frequencies (MHz) / Antenna Gain (dBi)	
				5250~5350	5470~5725
1	PCB antenna	Dipole	IPEX	-0.8	-0.5
2	PCB antenna	Dipole	IPEX	-0.8	-0.5
3	PCB antenna	Dipole	IPEX	-0.8	-0.5
4	PCB antenna	Dipole	IPEX	-0.8	-0.5

1.1.3 Power Supply Type of Equipment under Test (EUT)

Power Supply Type	12Vdc from AC adapter 12Vdc from UPS

1.1.4 Accessories

Accessories		
No.	**Equipment**	**Description**
1	AC adapter	Brand: MASS POWER Model: NBS65A120410M2 Power Rating: I/P: 100-240Vac, 50/60Hz, 1.5A O/P: 12Vdc, 4.1A Power Line: DC 1.2m non-shielded without core AC 1.5m non-shielded without core
2	UPS	Brand: Cyber Power Model: DTC50U12V3-G Power Rating: I/P: 100-240Vac, 50-60Hz, 1.5A O/P: 12Vdc, 50W Power Line: DC 1.2m non-shielded without core AC 2.45m non-shielded without core

1.1.5 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	118	5590
100	5500	134	5670
104	5520	142	5710
108	5540	**VHT80**	
112	5560	58	5290
116	5580	106	5530
120	5600	122	5610
124	5620	138	5690
128	5640	---	---
132	5660	---	---
136	5680	---	---
140	5700	---	---
144	5720	---	---

1.1.6 Test Tool and Duty Cycle

Test Tool	Non-beamforming: MTool, Version: 3.0.0.1 Beamforming: LanTest20, Version: 2.0.0.2				
Duty Cycle and Duty Factor	**Mode**	**Non-Beamforming**		**Beamforming**	
		Duty cycle (%)	**Duty factor (dB)**	**Duty cycle (%)**	**Duty factor (dB)**
	11a	99.31%	0.03	---	---
	HT20	99.26%	0.03	---	---
	HT40	98.24%	0.08	---	---
	VHT20	99.26%	0.03	99.57%	0.02
	VHT40	98.24%	0.08	98.25%	0.08
	VHT80	99.24%	0.03	96.82%	0.14

1.1.7 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	64
HT20	5300	64	64
HT20	5320	64	64
HT40	5270	68	68
HT40	5310	68	68
VHT20	5260	64	64
VHT20	5300	64	64
VHT20	5320	64	64
VHT40	5270	68	68
VHT40	5310	68	68
VHT80	5290	68	64

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

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	64	---
HT20	5720	64	64
HT40	5710	68	68
VHT20	5720	64	64
VHT40	5710	68	68
VHT80	5690	68	68

1.2 Local Support Equipment List

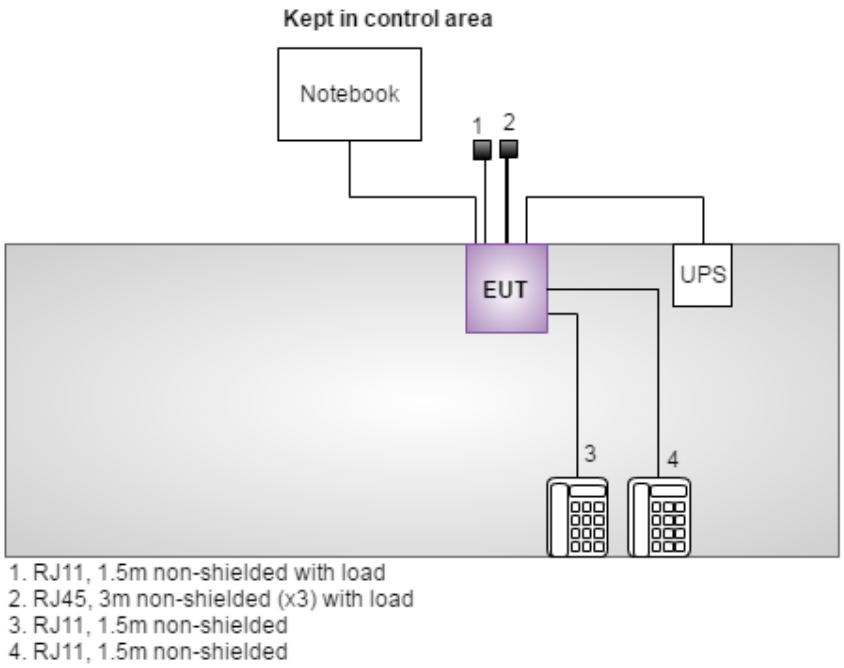
Support Equipment List					
No.	**Equipment**	**Brand**	**Model**	**FCC ID**	**Signal cable / Length (m)**
1	Notebook	DELL	Latitude E6430	DoC	RJ45, 10m non-shielded.
2	Telephone	HTT	HTT-806	---	RJ11, 1.5m non-shielded
3	Telephone	HTT	HTT-806	---	RJ11, 1.5m non-shielded
4	Load	ICC	---	---	RJ45, 1m(x3) non-shielded.
5	Load	ICC	---	---	RJ11, 1.5m non-shielded.
6	Client	ASUS	PCE-AC88	MSQ-PCIE 0U00	---

Note: No. 6 was supplied by applicant.

1.3 Test Setup Chart

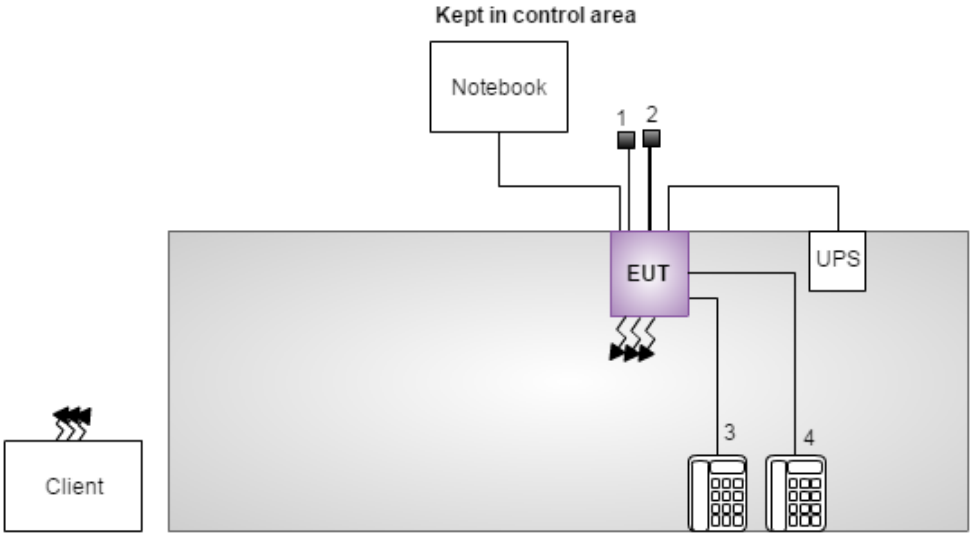
Non-beamforming mode

Test Setup Diagram



Beamforming mode

Test Setup Diagram



1. RJ11, 1.5m non-shielded with load
2. RJ45, 3m non-shielded (x3) with load
3. RJ11, 1.5m non-shielded
4. RJ11, 1.5m non-shielded

1.4 The Equipment List

Test Item	Conducted Emission				
Test Site	Conduction room 1 / (CO01-WS)				
Instrument	**Manufacturer**	**Model No.**	**Serial No.**	**Calibration Date**	**Calibration Until**
Receiver	R&S	ESR3	101657	Dec. 21, 2016	Dec. 20, 2017
LISN	SCHWARZBECK	Schwarzbeck 8127	8127-667	Nov. 08, 2016	Nov. 07, 2017
RF Cable-CON	EMC	EMCCFD300-BM-BM-6000	50821	Dec. 20, 2016	Dec. 19, 2017
Measurement Software	AUDIX	e3	6.120210k	NA	NA
Note: Calibration Interval of instruments listed above is one year.					

Test Item	Radiated Emission				
Test Site	966 chamber1 / (03CH01-WS)				
Instrument	**Manufacturer**	**Model No.**	**Serial No.**	**Calibration Date**	**Calibration Until**
Spectrum Analyzer	R&S	FSV40	101498	Nov. 25, 2016	Nov. 24, 2017
Receiver	R&S	ESR3	101658	Nov. 24, 2016	Nov. 23, 2017
Bilog Antenna	SCHWARZBECK	VULB9168	VULB9168-522	Aug. 04, 2016	Aug. 03, 2017
Horn Antenna 1G-18G	SCHWARZBECK	BBHA 9120 D	BBHA 9120 D 1096	Dec. 21, 2016	Dec. 20, 2017
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	980225	Aug. 05, 2016	Aug. 04, 2017
Preamplifier	Agilent	83017A	MY39501308	Oct. 06, 2016	Oct. 05, 2017
Preamplifier	EMC	EMC184045B	980192	Aug. 24, 2016	Aug. 23, 2017
RF Cable	HUBER+SUHNER	SUCOFLEX104	MY16014/4	Dec. 09, 2016	Dec. 08, 2017
RF Cable	HUBER+SUHNER	SUCOFLEX104	MY16019/4	Dec. 09, 2016	Dec. 08, 2017
RF Cable	HUBER+SUHNER	SUCOFLEX104	MY16139/4	Dec. 09, 2016	Dec. 08, 2017
LF cable 1M	EMC	EMCCFD400-NM-NM-1000	16052	Dec. 09, 2016	Dec. 08, 2017
LF cable 3M	Woken	CFD400NL-LW	CFD400NL-001	Dec. 09, 2016	Dec. 08, 2017
LF cable 10M	Woken	CFD400NL-LW	CFD400NL-002	Dec. 09, 2016	Dec. 08, 2017
Measurement Software	AUDIX	e3	6.120210g	NA	NA
Note: Calibration Interval of instruments listed above is one year.					

Test Item	RF Conducted				
Test Site	(TH01-WS)				
Instrument	Manufacturer	Model No.	Serial No.	Calibration Date	Calibration Until
Spectrum Analyzer	ROHDE&SCHWARZ	FSV40	101486	Nov. 15, 2016	Nov. 14, 2017
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 v01r03
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	±5.63 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	17°C / 59%	David Chiu
Radiated Emissions	03CH01-WS	22°C / 62-64%	Vincent Yeh Kevin Lee
RF Conducted	TH01-WS	22°C / 64%	Brad Wu

- FCC Designation.: TW2732
- FCC site registration No.: 181692
- IC site registration No.: 10807A-1

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	VHT40	5310	MCS 0	---
Radiated Emissions ≤1GHz	VHT40	5310	MCS 0	---
RF Output Power	11a	5260 / 5300 / 5320 5500 / 5580 / 5700 / 5720	6 Mbps	---
	HT20	5260 / 5300 / 5320 5500 / 5580 / 5700 / 5720	MCS 0	
	HT40	5270 / 5310 5510 / 5590 / 5670 / 5710	MCS 0	
	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	
Radiated Emissions >1GHz Emission Bandwidth Peak Power Spectral Density	11a	5260 / 5300 / 5320 5500 / 5580 / 5700 / 5720	6 Mbps	---
	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	5300	---	---

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. Two power supply (Adapter and UPS) had been covered during the pretest, and found that conducted emissions with adapter and radiated Emissions with UPS were the worst case for final test.

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	5310	MCS 0	---
Radiated Emissions ≤1GHz	VHT40	5310	MCS 0	---
RF Output Power	HT20	5260 / 5300 / 5320 5500 / 5580 / 5700 / 5720	MCS 0	---
	HT40	5270 / 5310 5510 / 5590 / 5670 / 5710	MCS 0	
	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	
Radiated Emissions >1GHz Emission Bandwidth Peak Power Spectral Density	VHT20	5260 / 5300 / 5320 5500 / 5580 / 5700 / 5720	MCS 0	---
	VHT40	5270 / 5310 5510 / 5590 / 5670 / 5710	MCS 0	
	VHT80	5290 / 5530 / 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. Two power supply (Adapter and UPS) had been covered during the pretest, and found that conducted emissions with adapter and radiated Emissions with UPS were the worst case for final test.

3 Transmitter Test Results

3.1 Conducted Emissions

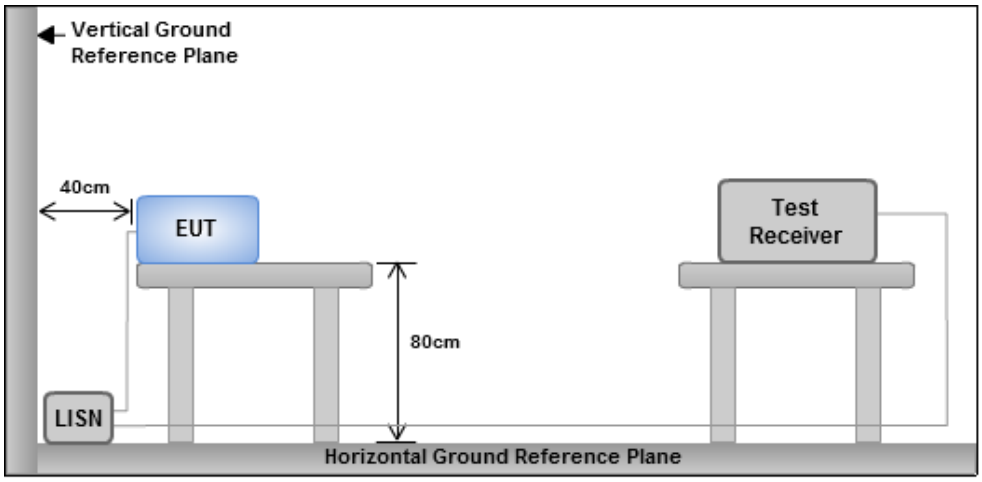
3.1.1 Limit of Conducted Emissions

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

3.1.2 Test Procedures

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

3.1.3 Test Setup

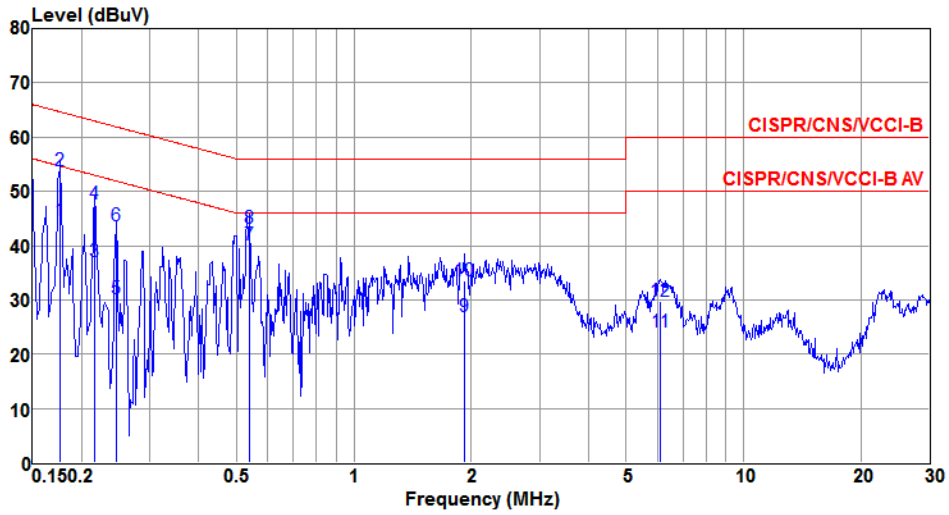


Note: 1. Support units were connected to second LISN.
2. Both of LISNs (AMN) are 80 cm from EUT and at least 80 cm from other units and other metal planes

3.1.4 Test Result of Conducted Emissions

Non- beamforming mode

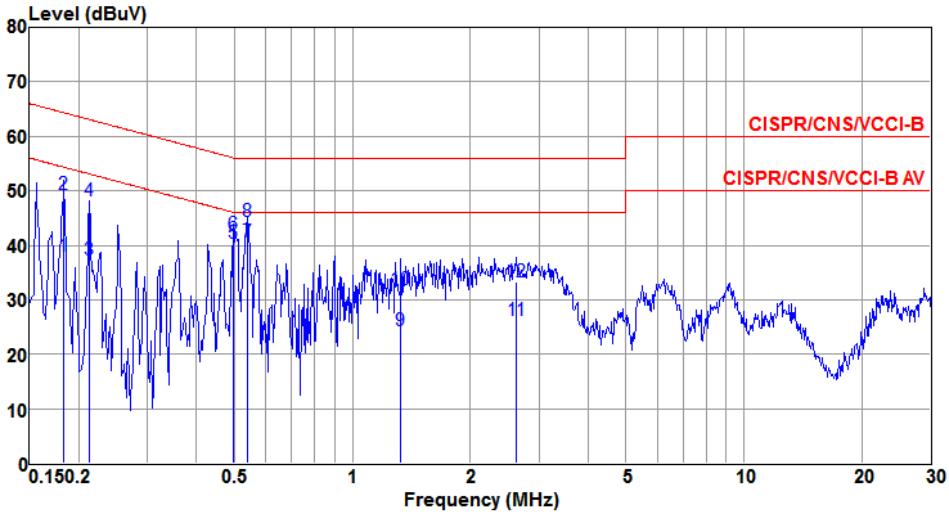
Modulation	VHT40	**Test Freq. (MHz)**	5310
Power Phase	Line		



	Freq MHz	Level dBuV	Limit Line dBuV	Over Limit dB	Read Level dBuV	LISN factor dB	cable loss dB	Remark
1	0.177	44.53	54.64	-10.11	44.42	0.09	0.02	Average
2	0.177	53.93	64.64	-10.71	53.82	0.09	0.02	QP
3	0.216	37.02	52.96	-15.94	36.90	0.10	0.02	Average
4	0.216	47.60	62.96	-15.36	47.48	0.10	0.02	QP
5	0.246	30.29	51.91	-21.62	30.18	0.09	0.02	Average
6	0.246	43.63	61.91	-18.28	43.52	0.09	0.02	QP
7@	0.541	40.13	46.00	-5.87	40.03	0.06	0.04	Average
8	0.541	43.12	56.00	-12.88	43.02	0.06	0.04	QP
9	1.918	26.83	46.00	-19.17	26.62	0.13	0.08	Average
10	1.918	33.60	56.00	-22.40	33.39	0.13	0.08	QP
11	6.121	24.14	50.00	-25.86	23.82	0.18	0.14	Average
12	6.121	29.74	60.00	-30.26	29.42	0.18	0.14	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)	5310
Power Phase	Neutral		

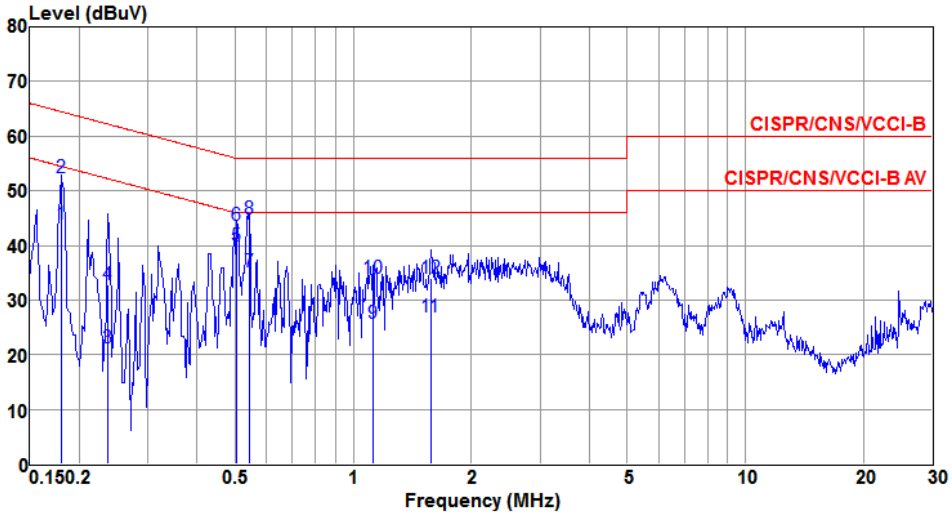


	Freq MHz	Level dBuV	Limit Line dBuV	Over Limit dB	Read Level dBuV	LISN factor dB	cable loss dB	Remark
1	0.183	38.10	54.33	-16.23	37.99	0.09	0.02	Average
2	0.183	49.27	64.33	-15.06	49.16	0.09	0.02	QP
3	0.213	37.38	53.10	-15.72	37.27	0.09	0.02	Average
4	0.213	48.23	63.10	-14.87	48.12	0.09	0.02	QP
5	0.497	40.25	46.05	-5.80	40.09	0.12	0.04	Average
6	0.497	42.04	56.05	-14.01	41.88	0.12	0.04	QP
7@	0.538	40.60	46.00	-5.40	40.44	0.12	0.04	Average
8	0.538	44.28	56.00	-11.72	44.12	0.12	0.04	QP
9	1.331	24.25	46.00	-21.75	24.06	0.12	0.07	Average
10	1.331	31.78	56.00	-24.22	31.59	0.12	0.07	QP
11	2.622	26.28	46.00	-19.72	26.03	0.15	0.10	Average
12	2.622	33.35	56.00	-22.65	33.10	0.15	0.10	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

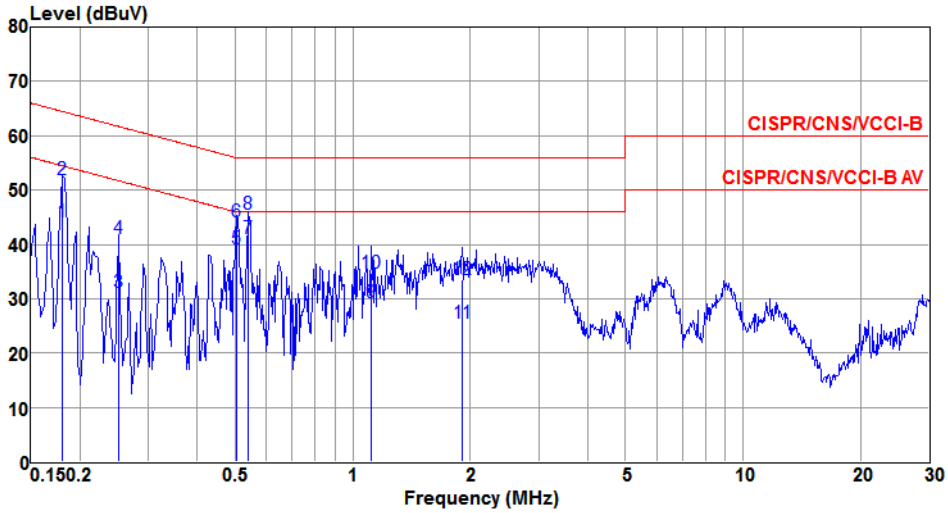
Modulation	VHT40	Test Freq. (MHz)	5310
Power Phase	Line		



	Freq MHz	Level dBuV	Limit Line dBuV	Over Limit dB	Read Level dBuV	LISN factor dB	cable loss dB	Remark
1	0.180	43.91	54.50	-10.59	43.80	0.09	0.02	Average
2	0.180	52.38	64.50	-12.12	52.27	0.09	0.02	QP
3	0.237	21.24	52.22	-30.98	21.13	0.09	0.02	Average
4	0.237	32.85	62.22	-29.37	32.74	0.09	0.02	QP
5@	0.505	40.01	46.00	-5.99	39.91	0.06	0.04	Average
6	0.505	43.57	56.00	-12.43	43.47	0.06	0.04	QP
7	0.544	35.11	46.00	-10.89	35.01	0.06	0.04	Average
8	0.544	44.83	56.00	-11.17	44.73	0.06	0.04	QP
9	1.123	25.76	46.00	-20.24	25.62	0.08	0.06	Average
10	1.123	33.89	56.00	-22.11	33.75	0.08	0.06	QP
11	1.577	26.94	46.00	-19.06	26.76	0.11	0.07	Average
12	1.577	34.04	56.00	-21.96	33.86	0.11	0.07	QP

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

Modulation	VHT40	Test Freq. (MHz)	5310
Power Phase	Neutral		



	Freq MHz	Level dBuV	Limit Line dBuV	Over Limit dB	Read Level dBuV	LISN factor dB	cable loss dB	Remark
1	0.180	44.10	54.50	-10.40	43.99	0.09	0.02	Average
2	0.180	51.90	64.50	-12.60	51.79	0.09	0.02	QP
3	0.252	31.16	51.69	-20.53	31.04	0.10	0.02	Average
4	0.252	40.98	61.69	-20.71	40.86	0.10	0.02	QP
5	0.505	39.28	46.00	-6.72	39.12	0.12	0.04	Average
6	0.505	44.21	56.00	-11.79	44.05	0.12	0.04	QP
7@	0.538	40.96	46.00	-5.04	40.80	0.12	0.04	Average
8	0.538	45.44	56.00	-10.56	45.28	0.12	0.04	QP
9	1.111	29.26	46.00	-16.74	29.10	0.10	0.06	Average
10	1.111	34.75	56.00	-21.25	34.59	0.10	0.06	QP
11	1.908	25.41	46.00	-20.59	25.17	0.16	0.08	Average
12	1.908	33.64	56.00	-22.36	33.40	0.16	0.08	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

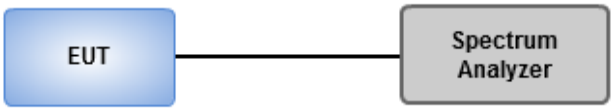
26dB Bandwidth

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

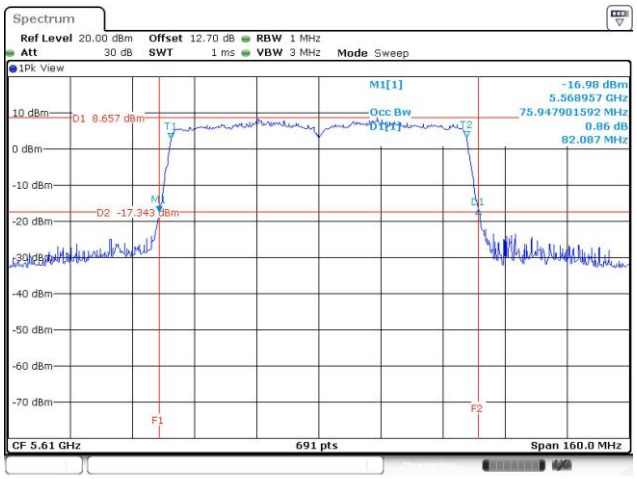
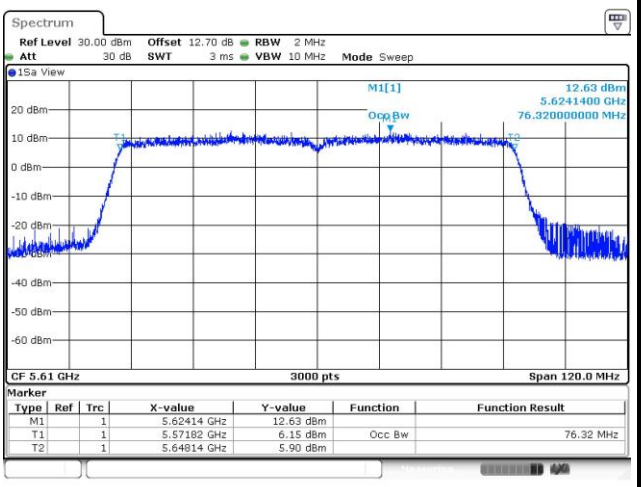
3.2.2 Test Setup



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	4	5260	21.74	21.51	21.68	21.51	17.04	16.99	16.96	16.85	24.00
11a	4	5300	21.74	21.39	21.62	21.51	17.03	17.01	16.97	16.91	24.00
11a	4	5320	21.68	21.45	21.62	21.39	17.01	16.98	16.90	16.84	24.00
VHT20	4	5260	22.14	21.62	21.57	21.62	18.11	17.93	18.00	17.97	24.00
VHT20	4	5300	21.62	21.68	21.74	21.80	18.12	17.95	18.02	17.97	24.00
VHT20	4	5320	21.91	21.68	21.80	21.68	18.10	17.94	17.97	17.93	24.00
VHT40	4	5270	41.04	40.58	40.70	40.58	36.62	36.68	36.56	36.64	24.00
VHT40	4	5310	40.81	40.70	40.81	40.46	36.60	36.68	36.48	36.60	24.00
VHT80	4	5290	81.86	81.39	81.62	81.62	76.16	76.28	76.04	76.16	24.00
11a	4	5500	21.62	21.45	21.57	21.45	17.01	16.95	16.90	16.83	24.00
11a	4	5580	21.62	21.39	21.45	21.39	17.02	16.96	16.89	16.85	24.00
11a	4	5700	21.57	21.33	21.51	21.39	17.04	16.90	16.79	16.89	24.00
VHT20	4	5500	21.86	21.45	21.68	21.68	18.05	17.91	17.96	17.91	24.00
VHT20	4	5580	21.80	21.62	21.68	21.57	18.06	17.89	17.94	17.91	24.00
VHT20	4	5700	21.91	21.74	21.51	21.74	18.05	17.87	17.91	17.94	24.00
VHT40	4	5510	40.93	40.81	40.70	40.70	36.60	36.58	36.58	36.60	24.00
VHT40	4	5590	41.04	40.70	52.52	49.51	36.60	36.54	36.58	36.62	24.00
VHT40	4	5670	40.93	40.58	41.16	40.81	36.56	36.50	36.60	36.64	24.00
VHT80	4	5530	82.09	81.39	81.86	81.62	76.20	76.12	76.16	76.20	24.00
VHT80	4	5610	82.09	81.86	81.86	81.86	76.16	75.96	76.20	76.32	24.00

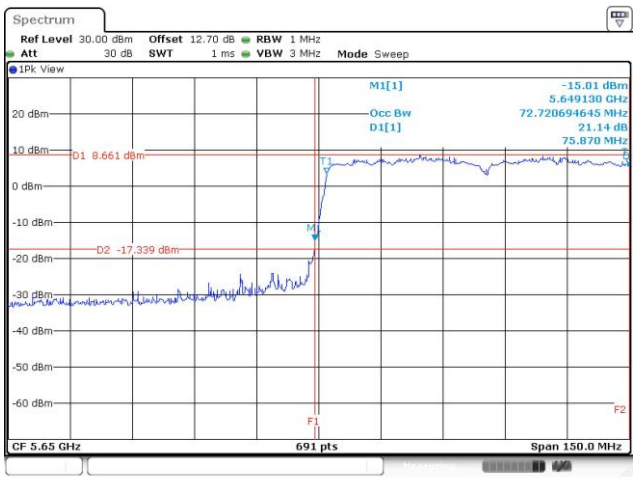
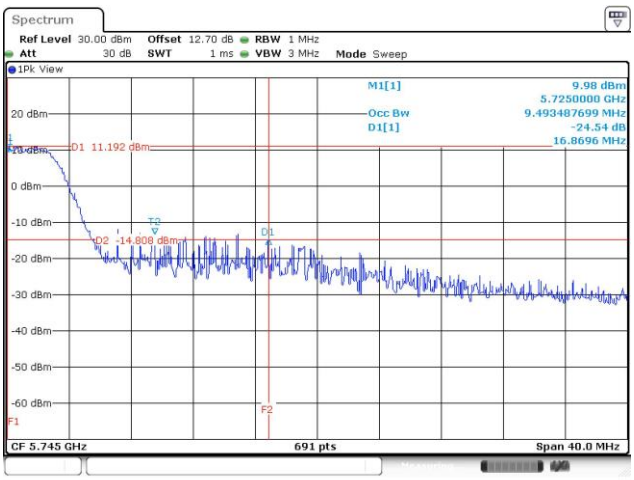
Worst Plot of 26dB Bandwidth	Worst Plot of 99% Bandwidth
	

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	4	5720	15.89	15.89	15.71	15.83	13.60	13.65	13.48	13.56	22.96
VHT20	4	5720	15.95	15.64	15.83	15.77	14.13	14.07	14.05	14.06	22.94
VHT40	4	5710	35.61	35.30	35.61	35.30	33.41	33.31	33.41	33.35	24.00
VHT80	4	5690	75.87	75.87	75.87	75.87	73.18	73.10	73.26	73.18	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	4	5720	5.91	5.80	5.74	5.61	3.45	3.30	3.31	3.36
VHT20	4	5720	5.91	5.61	5.93	5.80	3.98	3.81	3.85	3.90
VHT40	4	5710	10.90	15.54	16.87	11.25	3.17	3.13	3.23	3.21
VHT80	4	5690	6.61	7.04	7.04	6.35	2.94	2.86	3.02	3.06

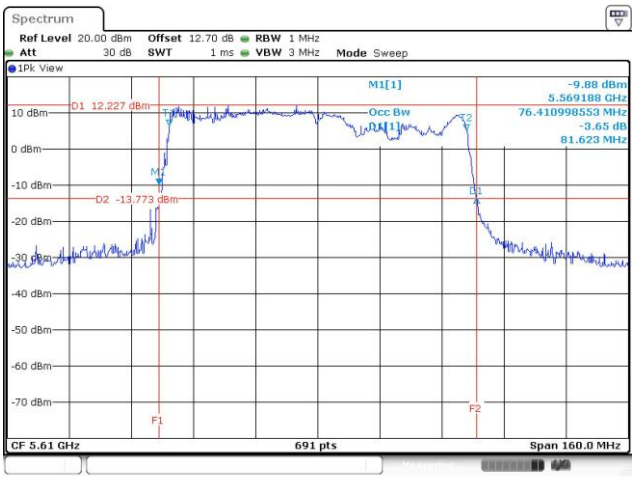
Worst Plots

Within 5470-5725MHz band	Extends across 5725MHz band
	

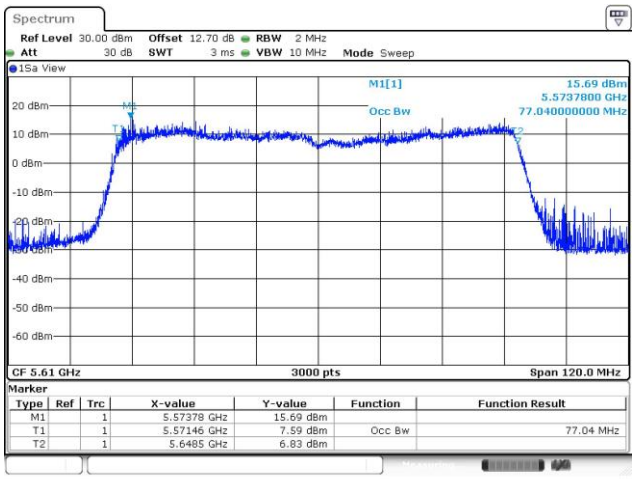
Beamforming mode

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	4	5260	21.74	21.74	21.51	21.86	18.11	18.08	18.07	18.06	24.00
VHT20	4	5300	21.91	21.97	21.86	21.80	18.12	18.16	18.10	17.87	24.00
VHT20	4	5320	21.80	21.68	21.91	21.86	18.08	18.10	18.13	18.02	24.00
VHT40	4	5270	40.93	40.93	40.93	41.16	36.62	36.48	36.82	36.52	24.00
VHT40	4	5310	40.93	41.28	40.81	40.81	36.66	36.72	36.72	36.80	24.00
VHT80	4	5290	80.70	80.93	80.70	81.16	76.12	76.72	76.48	76.04	24.00
VHT20	4	5500	21.86	21.80	21.68	21.62	17.99	18.11	17.99	17.98	24.00
VHT20	4	5580	21.74	21.74	21.68	21.45	18.05	18.07	17.97	18.01	24.00
VHT20	4	5700	21.74	21.68	21.74	21.33	18.01	18.12	18.04	17.99	24.00
VHT40	4	5510	40.23	41.16	40.93	40.35	36.36	36.58	36.90	36.38	24.00
VHT40	4	5590	41.16	41.16	43.94	40.70	36.62	36.76	36.58	36.38	24.00
VHT40	4	5670	41.39	40.93	41.04	40.93	36.84	36.84	36.32	36.24	24.00
VHT80	4	5530	81.62	80.70	81.39	80.93	76.28	76.64	76.60	76.76	24.00
VHT80	4	5610	81.62	80.93	80.93	81.16	77.04	76.12	76.96	76.68	24.00

Worst Plot of 26dB Bandwidth



Worst Plot of 99% Bandwidth

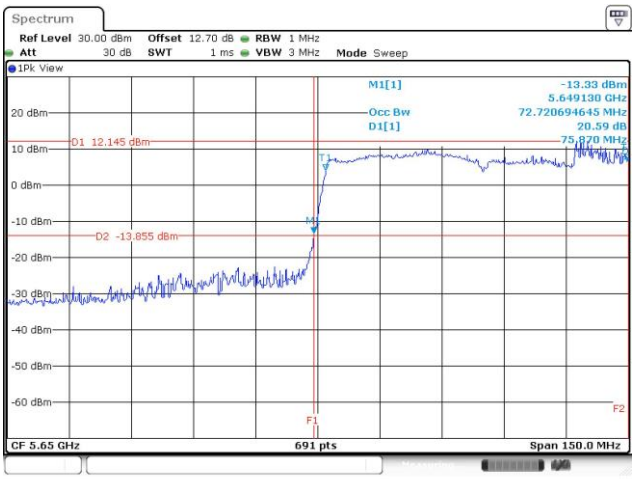
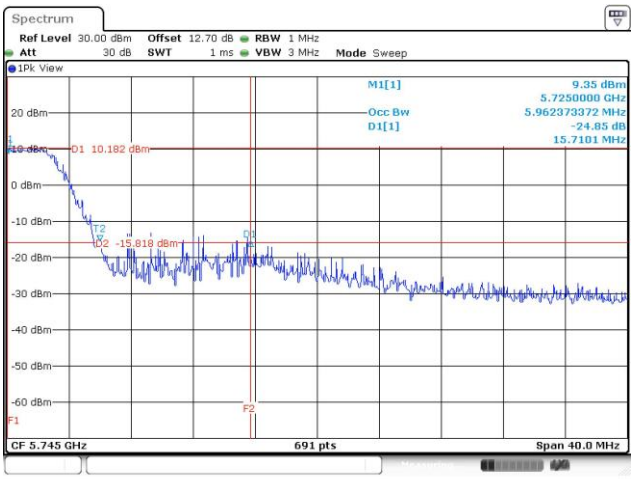


Channel that extends across the 5.725 GHz boundary

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	4	5720	15.89	16.01	15.89	15.89	14.13	14.13	14.24	13.91	23.01
VHT40	4	5710	35.30	35.41	35.51	35.41	33.29	33.49	33.71	33.07	24.00
VHT80	4	5690	75.22	75.87	75.65	75.87	73.42	73.70	73.74	73.74	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	4	5720	5.89	5.89	5.96	5.80	3.82	3.97	3.98	4.03
VHT40	4	5710	14.14	5.62	15.71	5.91	3.19	3.25	3.13	3.59
VHT80	4	5690	5.57	6.26	5.83	5.65	2.74	2.94	2.62	3.14

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

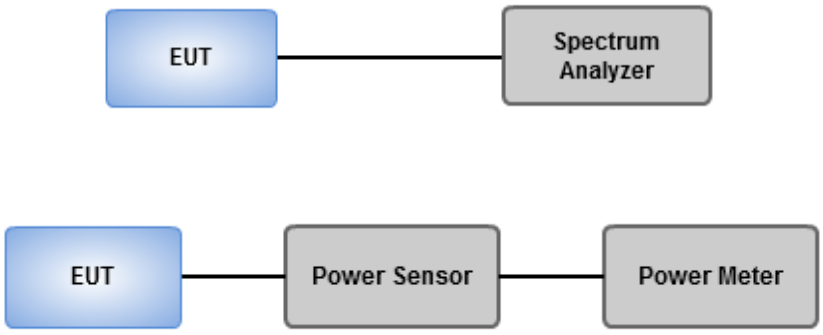
☒ Power meter (For channel that does not extends across the 5.725 GHz boundary)

☒ 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

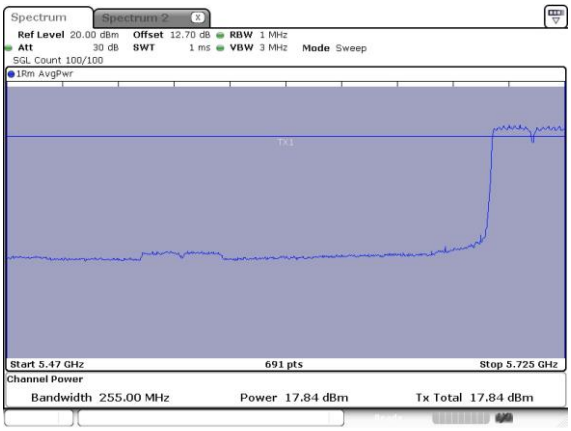
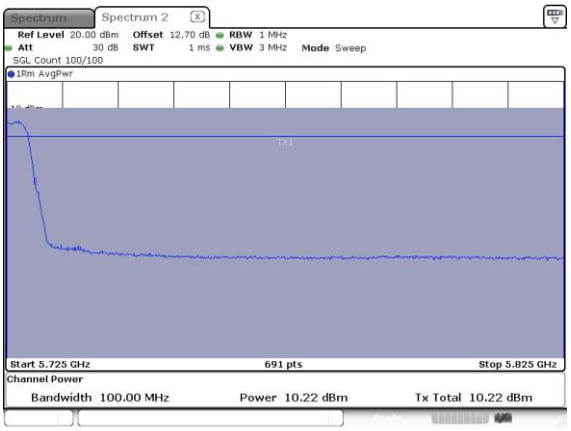
Non-beamforming mode

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	4	5260	17.24	17.05	16.62	17.02	199.935	23.01	24.00
11a	4	5300	17.42	16.83	16.56	17.01	198.927	22.99	24.00
11a	4	5320	17.5	16.92	16.64	17	201.689	23.05	24.00
HT20	4	5260	17.50	16.72	16.90	16.64	198.333	22.97	24.00
HT20	4	5300	17.21	16.83	16.64	16.87	195.569	22.91	24.00
HT20	4	5320	17.19	16.97	16.83	17.01	200.563	23.02	24.00
HT40	4	5270	17.65	17.52	17.58	17.81	232.378	23.66	24.00
HT40	4	5310	17.94	17.79	17.60	17.57	237.039	23.75	24.00
VHT20	4	5260	17.54	16.76	16.96	16.68	200.397	23.02	24.00
VHT20	4	5300	17.26	16.86	16.69	16.92	197.610	22.96	24.00
VHT20	4	5320	17.25	16.99	16.85	17.03	201.975	23.05	24.00
VHT40	4	5270	17.68	17.55	17.61	17.85	234.129	23.69	24.00
VHT40	4	5310	17.98	17.84	17.65	17.63	239.773	**23.80**	24.00
VHT80	4	5290	17.55	17.21	17.28	17.38	217.645	23.38	24.00
11a	4	5500	17.19	17.01	16.95	17.01	202.374	23.06	24.00
11a	4	5580	16.54	17.2	16.86	16.96	195.750	22.92	24.00
11a	4	5700	16.99	16.84	16.95	17.22	200.577	23.02	24.00
HT20	4	5500	16.88	17.01	16.91	17.19	200.438	23.02	24.00
HT20	4	5580	16.71	16.83	16.91	17.33	198.242	22.97	24.00
HT20	4	5700	16.72	16.79	16.78	17.01	192.620	22.85	24.00
HT40	4	5510	16.98	16.82	16.88	16.79	194.478	22.89	24.00
HT40	4	5590	16.61	17.77	17.92	18.02	230.986	23.64	24.00
HT40	4	5670	17.48	17.54	17.82	17.91	235.066	23.71	24.00
VHT20	4	5500	16.91	17.05	16.94	17.25	202.309	23.06	24.00
VHT20	4	5580	16.76	16.87	16.93	17.4	200.336	23.02	24.00
VHT20	4	5700	16.75	16.83	16.81	17.07	194.416	22.89	24.00
VHT40	4	5510	17.02	16.86	16.91	16.84	196.276	22.93	24.00
VHT40	4	5590	17.65	17.81	17.95	18.04	244.658	**23.89**	24.00
VHT40	4	5670	17.51	17.58	17.87	17.94	237.108	23.75	24.00
VHT80	4	5530	15.62	15.79	15.75	15.81	150.097	21.76	24.00
VHT80	4	5610	17.52	17.16	17.21	17.32	215.046	23.33	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	4	5720	16.05	16.40	16.12	16.19	22.21	0.00	166.440	22.21	22.96
HT20	4	5720	16.18	16.10	16.02	16.16	22.14	0.00	163.533	22.14	22.94
HT40	4	5710	17.41	17.17	17.36	17.79	23.46	0.00	221.768	23.46	24.00
VHT20	4	5720	16.29	16.13	16.14	16.26	22.23	0.00	166.962	22.23	22.94
VHT40	4	5710	17.52	17.19	17.40	17.84	23.51	0.00	224.621	23.51	24.00
VHT80	4	5690	17.23	17.28	17.36	17.40	23.34	0.00	215.705	23.34	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	4	5720	9.81	9.36	8.40	9.08	15.21	0.00	33.211	15.21	30.00
HT20	4	5720	10.08	9.80	10.02	10.11	16.02	0.00	40.039	16.02	30.00
HT40	4	5710	6.43	6.57	6.96	7.28	12.84	0.00	19.246	12.84	30.00
VHT20	4	5720	10.01	10.09	9.99	10.22	16.10	0.00	40.729	16.10	30.00
VHT40	4	5710	6.46	6.67	6.97	7.31	12.88	0.00	19.431	12.88	30.00
VHT80	4	5690	2.83	3.24	3.75	3.88	9.47	0.00	8.842	9.47	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	4	5260	16.64	16.62	17.02	17.04	192.984	22.86	24.00
HT20	4	5300	16.83	16.35	16.72	16.51	183.107	22.63	24.00
HT20	4	5320	16.49	16.03	17.15	17.04	187.115	22.72	24.00
HT40	4	5270	17.12	17.15	17.03	17.65	212.079	23.26	24.00
HT40	4	5310	17.51	17.24	17.29	17.42	218.118	23.39	24.00
VHT20	4	5260	16.78	16.73	17.11	17.15	198.025	22.97	24.00
VHT20	4	5300	16.95	16.48	16.85	16.62	188.345	22.75	24.00
VHT20	4	5320	16.62	16.16	17.21	17.12	191.349	22.82	24.00
VHT40	4	5270	17.26	17.28	17.12	17.74	217.619	23.38	24.00
VHT40	4	5310	17.62	17.35	17.44	17.51	223.961	**23.50**	24.00
VHT80	4	5290	16.15	16.29	16.01	16.49	168.238	22.26	24.00
HT20	4	5500	16.41	16.53	16.94	16.65	184.399	22.66	24.00
HT20	4	5580	16.72	16.63	16.71	16.42	183.749	22.64	24.00
HT20	4	5700	16.14	16.38	16.22	16.91	175.536	22.44	24.00
HT40	4	5510	16.49	17.03	16.61	16.75	188.161	22.75	24.00
HT40	4	5590	17.68	17.72	17.21	17.54	227.126	23.56	24.00
HT40	4	5670	17.42	17.28	17.71	17.75	227.251	23.57	24.00
VHT20	4	5500	16.52	16.61	17.02	16.78	188.682	22.76	24.00
VHT20	4	5580	16.85	16.79	16.88	16.53	189.901	22.79	24.00
VHT20	4	5700	16.25	16.49	16.35	17.02	180.237	22.56	24.00
VHT40	4	5510	16.65	17.16	16.73	16.89	194.201	22.88	24.00
VHT40	4	5590	17.81	17.86	17.34	17.65	233.899	**23.69**	24.00
VHT40	4	5670	17.55	17.39	17.86	17.84	233.621	23.69	24.00
VHT80	4	5530	15.79	15.66	15.73	15.65	148.884	21.73	24.00
VHT80	4	5610	17.44	17.02	17.11	17.21	209.819	23.22	24.00

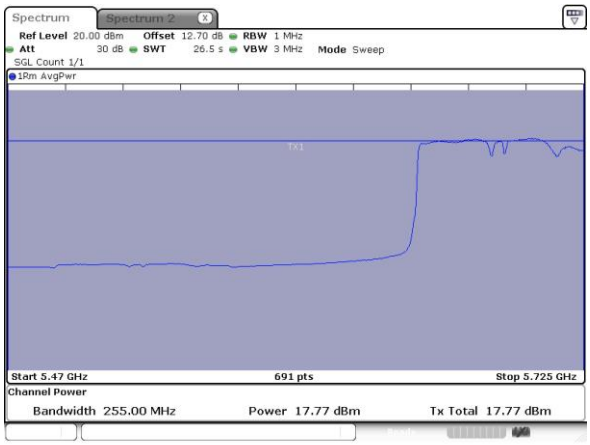
Channel that extends across the 5.725 GHz boundary

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)				
HT20	4	5720	15.75	16.03	16.38	16.36	22.16	0.00	164.373	22.16	23.01
HT40	4	5710	17.20	17.11	17.26	17.50	23.29	0.00	213.330	23.29	24.00
VHT20	4	5720	15.76	16.00	16.50	16.78	22.30	0.00	169.793	22.30	23.01
VHT40	4	5710	17.25	17.15	17.41	17.54	23.36	0.00	216.804	23.36	24.00
VHT80	4	5690	16.84	16.95	17.10	17.77	23.20	0.14	215.825	23.34	24.00

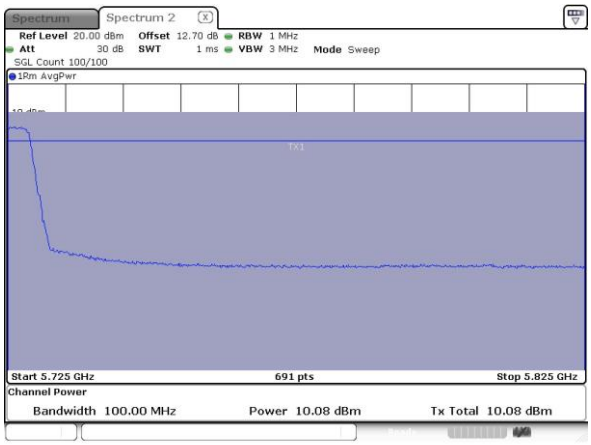
Maximum Conducted Output Power (Extends across 5725MHz band)											
Mode	N_{TX}	Freq. (MHz)	Conducted Power without duty factor					Duty factor (dB)	Total Power (mW)	Total Power (dBm)	Limit (dBm)
			Chain 0	Chain 1	Chain 2	Chain 3	Total Power (dBm)				
HT20	4	5720	10.08	8.76	9.10	8.18	15.11	0.00	32.407	15.11	30.00
HT40	4	5710	7.42	5.14	4.92	6.35	12.10	0.00	16.206	12.10	30.00
VHT20	4	5720	9.95	9.61	9.51	9.27	15.61	0.00	36.413	15.61	30.00
VHT40	4	5710	7.98	6.32	8.16	6.29	13.30	0.00	21.368	13.30	30.00
VHT80	4	5690	4.01	2.60	3.28	2.57	9.18	0.14	8.544	9.32	30.00

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

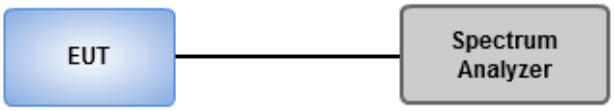
☒ Method SA-1 (Non- Beamforming: all modes / Beamforming: VHT20/VHT40)

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 (Beamforming: 11ac 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



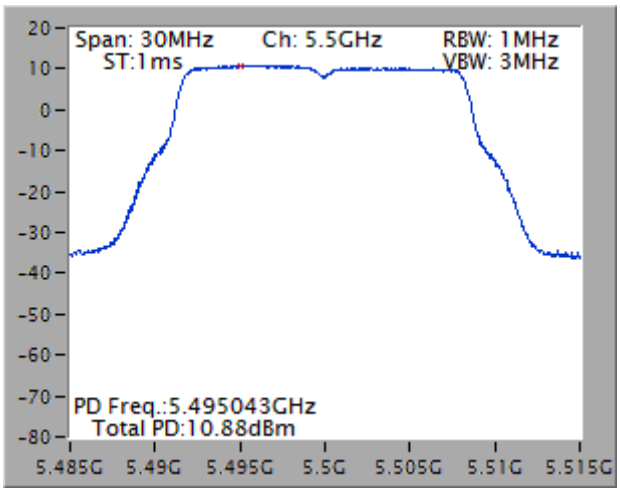
3.4.4 Test Result of Peak Power Spectral Density

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	4	5260	10.57	0.00	10.57	11
11a	4	5300	10.53	0.00	10.53	11
11a	4	5320	10.63	0.00	10.63	11
VHT20	4	5260	10.65	0.00	10.65	11
VHT20	4	5300	10.33	0.00	10.33	11
VHT20	4	5320	10.59	0.00	10.59	11
VHT40	4	5270	8.40	0.00	8.40	11
VHT40	4	5310	6.86	0.00	6.86	11
VHT80	4	5290	3.42	0.00	3.42	11
11a	4	5500	10.88	0.00	10.88	11
11a	4	5580	10.08	0.00	10.08	11
11a	4	5700	10.68	0.00	10.68	11
11a	4	5720	10.72	0.00	10.72	11
VHT20	4	5500	10.32	0.00	10.32	11
VHT20	4	5580	10.24	0.00	10.24	11
VHT20	4	5700	10.20	0.00	10.20	11
VHT20	4	5720	10.32	0.00	10.32	11
VHT40	4	5510	5.77	0.00	5.77	11
VHT40	4	5590	6.79	0.00	6.79	11
VHT40	4	5670	6.50	0.00	6.50	11
VHT40	4	5710	6.46	0.00	6.46	11
VHT80	4	5530	1.26	0.00	1.26	11
VHT80	4	5610	3.24	0.00	3.24	11
VHT80	4	5690	2.94	0.00	2.94	11

Note:

1. D.F is duty factor.
2. Test results are bin-by-bin summing measured value of each TX port.

Worst Plot


Span: 30MHz
ST:1ms
Ch: 5.5GHz
RBW: 1MHz
VBW: 3MHz
PD Freq.:5.495043GHz
Total PD:10.88dBm
20
10
0
-10
-20
-30
-40
-50
-60
-70
-80
5.485G
5.49G
5.495G
5.5G
5.505G
5.51G
5.515G

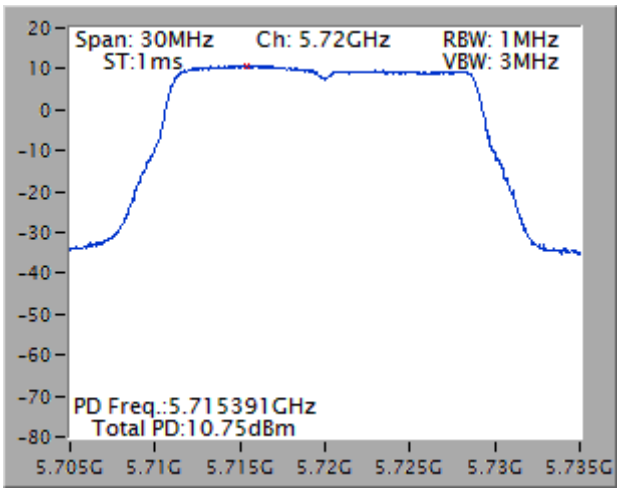
Beamforming mode

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	4	5260	10.17	0.00	10.17	11
VHT20	4	5300	10.23	0.00	10.23	11
VHT20	4	5320	10.53	0.00	10.53	11
VHT40	4	5270	8.08	0.00	8.08	11
VHT40	4	5310	6.63	0.00	6.63	11
VHT80	4	5290	2.57	0.14	2.71	11
VHT20	4	5500	10.12	0.00	10.12	11
VHT20	4	5580	10.32	0.00	10.32	11
VHT20	4	5700	10.06	0.00	10.06	11
VHT20	4	5720	10.75	0.00	10.75	11
VHT40	4	5510	6.43	0.00	6.43	11
VHT40	4	5590	6.53	0.00	6.53	11
VHT40	4	5670	5.91	0.00	5.91	11
VHT40	4	5710	8.39	0.00	8.39	11
VHT80	4	5530	2.39	0.14	2.53	11
VHT80	4	5610	3.72	0.14	3.86	11
VHT80	4	5690	4.79	0.14	4.93	11

Note:

1. D.F is duty factor.
2. Test results are bin-by-bin summing measured value of each TX port.

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

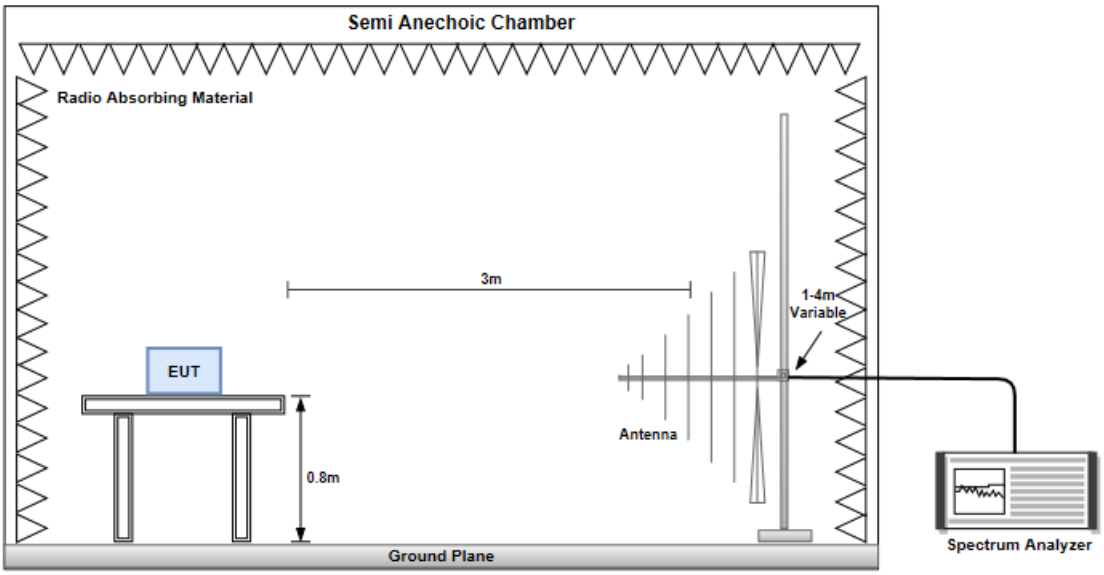
1. Measurement is made at a semi-anechoic chamber that incorporates a turntable allowing a EUT rotation of 360°. A continuously-rotating, remotely-controlled turntable is installed at the test site to support the EUT and facilitate determination of the direction of maximum radiation for each EUT emission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

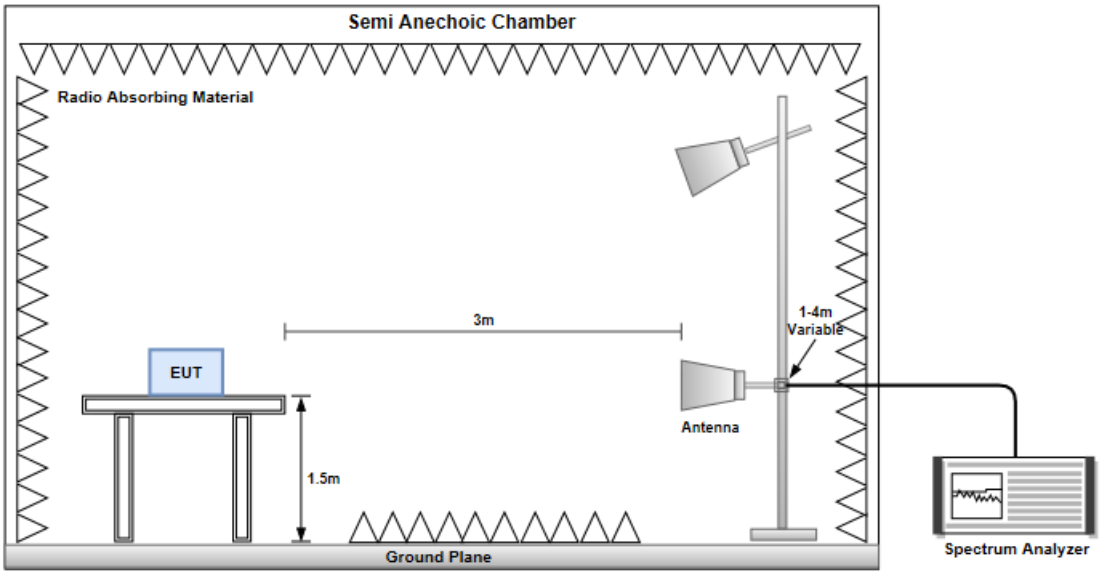
1. 120kHz measurement bandwidth of test receiver and Quasi-peak detector is for radiated emission below 1GHz.
2. RBW=1MHz, VBW=3MHz and Peak detector is for peak measured value of radiated emission above 1GHz.
3. RBW=1MHz, VBW=1/T and Peak detector is for average measured value of radiated emission above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

3.5.3 Test Setup

Radiated Emissions below 1 GHz



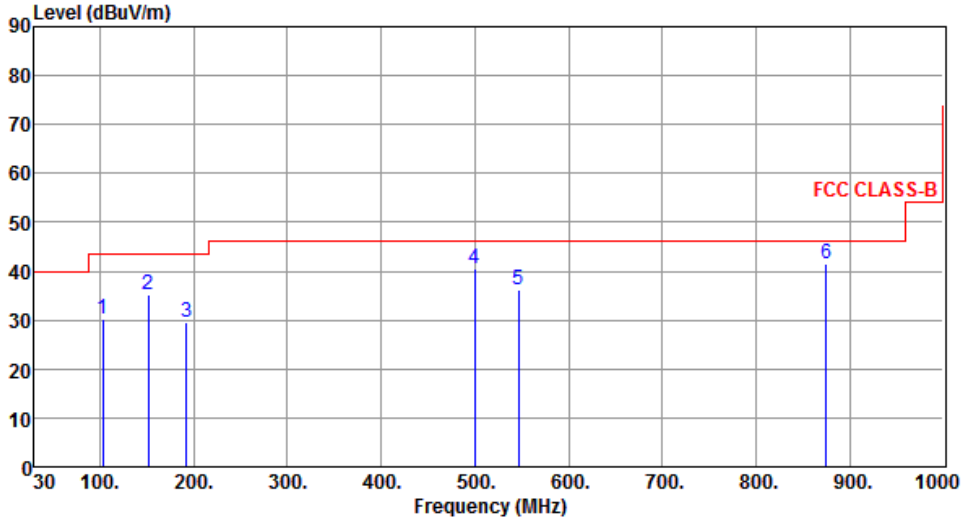
Radiated Emissions above 1 GHz



Non- beamforming mode

3.5.4 Transmitter Radiated Unwanted Emissions (Below 1GHz)

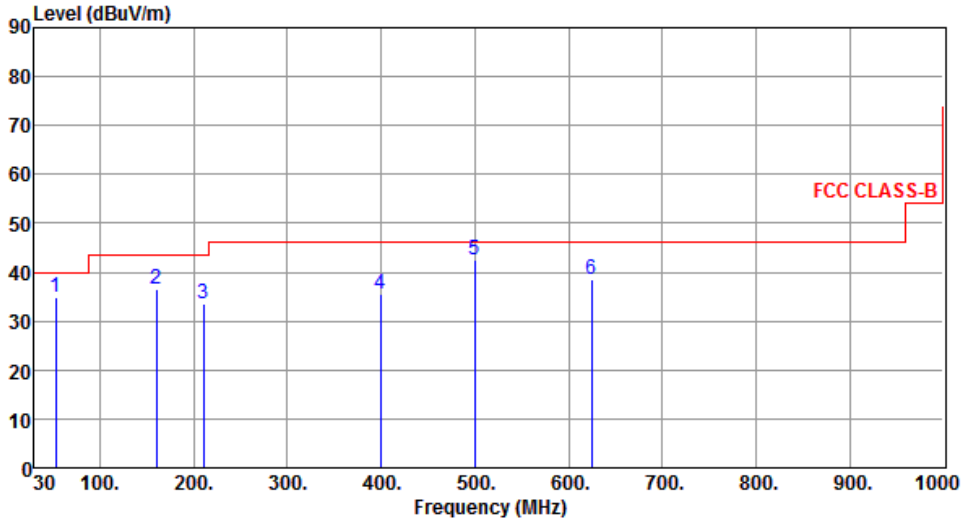
Modulation	VHT40	**Test Freq. (MHz)**	5310
Polarization	Horizontal		



	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	102.68	30.18	43.50	-13.32	42.58	-12.40	Peak	---	---
2	151.35	35.10	43.50	-8.40	43.28	-8.18	Peak	---	---
3	192.74	29.60	43.50	-13.90	40.58	-10.98	Peak	---	---
4	500.03	40.54	46.00	-5.46	43.35	-2.81	Peak	---	---
5	546.25	36.05	46.00	-9.95	37.98	-1.93	Peak	---	---
6	874.59	41.44	46.00	-4.56	37.67	3.77	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)	5310
Polarization	Vertical		

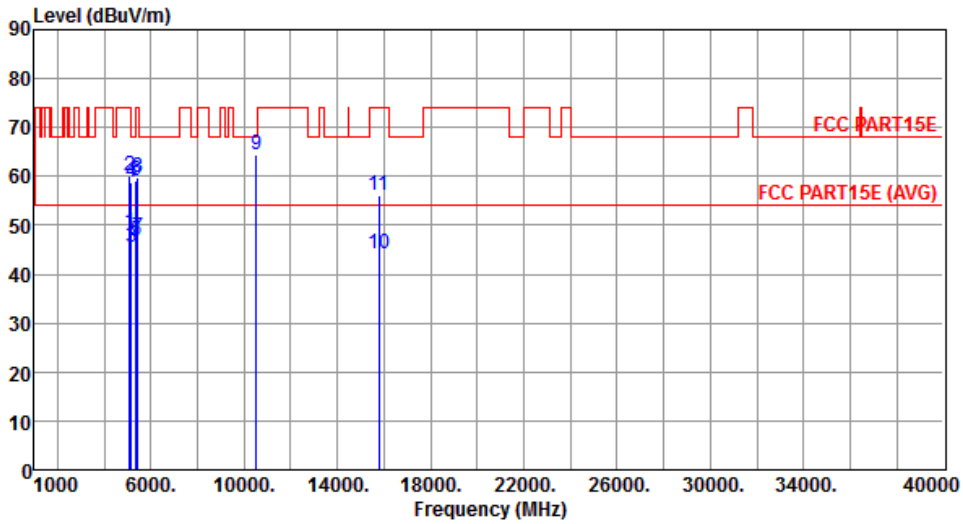


	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	52.45	34.92	40.00	-5.08	42.87	-7.95	QP	100	286
2	160.11	36.60	43.50	-6.90	44.68	-8.08	Peak	---	---
3	210.85	33.64	43.50	-9.86	44.34	-10.70	Peak	---	---
4	399.68	35.59	46.00	-10.41	40.59	-5.00	Peak	---	---
5	500.19	42.54	46.00	-3.46	45.35	-2.81	QP	103	47
6	624.54	38.52	46.00	-7.48	38.87	-0.35	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

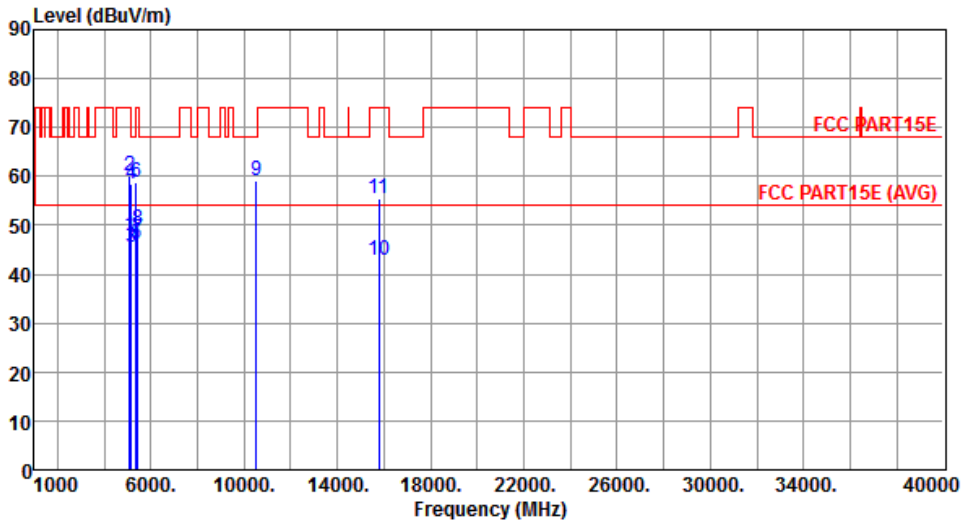
Modulation	11a	**Test Freq. (MHz)**	5260
Polarization	Horizontal		



	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	5100.00	48.64	54.00	-5.36	44.21	4.43	Average	202	292
2	5100.00	60.04	74.00	-13.96	55.61	4.43	Peak	202	292
3	5150.00	45.61	54.00	-8.39	41.13	4.48	Average	202	292
4	5150.00	58.68	74.00	-15.32	54.20	4.48	Peak	202	292
5	5350.00	46.71	54.00	-7.29	41.97	4.74	Average	202	292
6	5350.00	58.96	74.00	-15.04	54.22	4.74	Peak	202	292
7	5420.00	47.54	54.00	-6.46	42.69	4.85	Average	202	292
8	5420.00	59.86	74.00	-14.14	55.01	4.85	Peak	202	292
9	10520.00	64.56	68.20	-3.64	50.55	14.01	Peak	143	233
10	15780.00	44.21	54.00	-9.79	30.20	14.01	Average	100	275
11	15780.00	56.15	74.00	-17.85	42.14	14.01	Peak	100	275

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

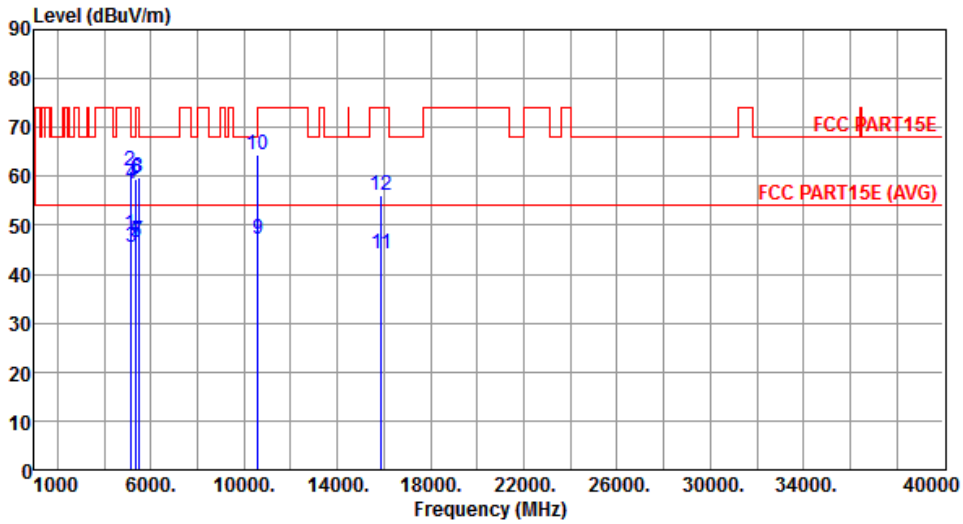
Modulation	11a	Test Freq. (MHz)	5260
Polarization	Vertical		



	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	5100.00	47.88	54.00	-6.12	43.45	4.43	Average	111	22
2	5100.00	60.18	74.00	-13.82	55.75	4.43	Peak	111	22
3	5150.00	45.59	54.00	-8.41	41.11	4.48	Average	111	22
4	5150.00	58.38	74.00	-15.62	53.90	4.48	Peak	111	22
5	5350.00	46.09	54.00	-7.91	41.35	4.74	Average	111	22
6	5350.00	58.67	74.00	-15.33	53.93	4.74	Peak	111	22
7	5420.00	47.24	54.00	-6.76	42.39	4.85	Average	111	22
8	5420.00	49.29	74.00	-24.71	44.44	4.85	Peak	111	22
9	10520.00	59.02	68.20	-9.18	45.01	14.01	Peak	188	186
10	15780.00	42.82	54.00	-11.18	28.81	14.01	Average	100	247
11	15780.00	55.50	74.00	-18.50	41.49	14.01	Peak	100	247

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

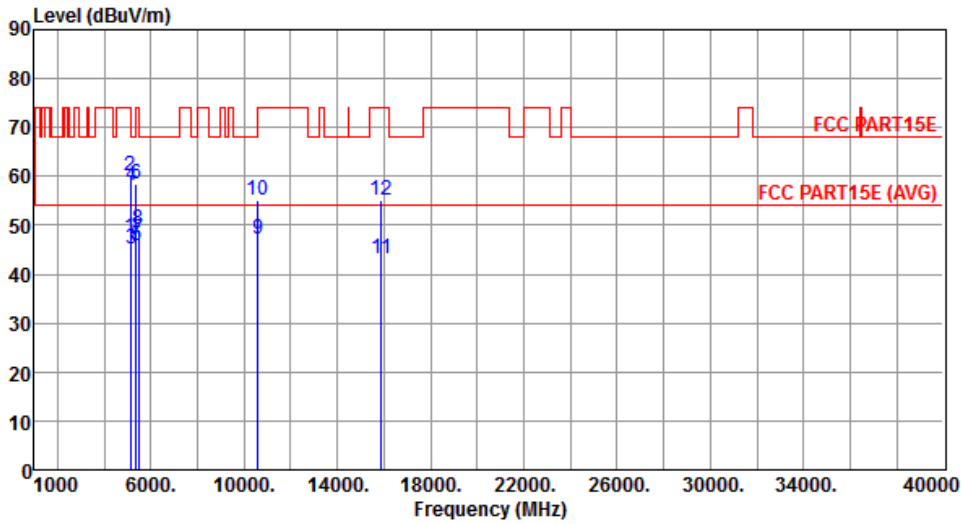
Modulation	11a	Test Freq. (MHz)	5300
Polarization	Horizontal		



	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	5140.00	48.10	54.00	-5.90	43.63	4.47	Average	201	288
2	5140.00	61.09	74.00	-12.91	56.62	4.47	Peak	201	288
3	5150.00	45.43	54.00	-8.57	40.95	4.48	Average	201	288
4	5150.00	58.46	74.00	-15.54	53.98	4.48	Peak	201	288
5	5350.00	46.44	54.00	-7.56	41.70	4.74	Average	201	288
6	5350.00	59.48	74.00	-14.52	54.74	4.74	Peak	201	288
7	5460.00	46.94	54.00	-7.06	42.05	4.89	Average	201	288
8	5460.00	59.84	74.00	-14.16	54.95	4.89	Peak	201	288
9	10600.00	47.26	54.00	-6.74	33.14	14.12	Average	145	232
10	10600.00	64.40	74.00	-9.60	50.28	14.12	Peak	145	232
11	15900.00	44.03	54.00	-9.97	30.21	13.82	Average	100	268
12	15900.00	56.20	74.00	-17.80	42.38	13.82	Peak	100	268

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

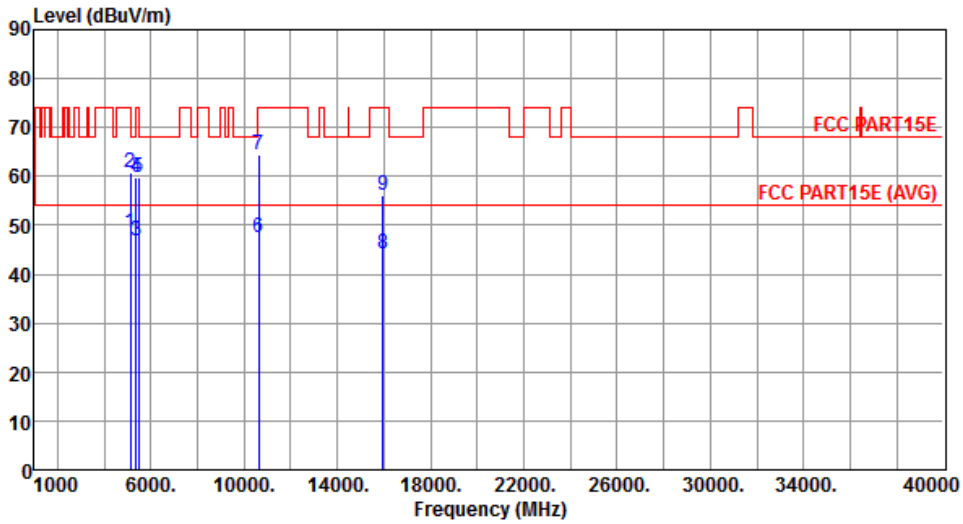
Modulation	11a	Test Freq. (MHz)	5300
Polarization	Vertical		



	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	5140.00	47.63	54.00	-6.37	43.16	4.47	Average	114	24
2	5140.00	59.96	74.00	-14.04	55.49	4.47	Peak	114	24
3	5150.00	45.32	54.00	-8.68	40.84	4.48	Average	114	24
4	5150.00	58.10	74.00	-15.90	53.62	4.48	Peak	114	24
5	5350.00	45.81	54.00	-8.19	41.07	4.74	Average	114	24
6	5350.00	58.44	74.00	-15.56	53.70	4.74	Peak	114	24
7	5460.00	47.05	54.00	-6.95	42.16	4.89	Average	114	24
8	5460.00	49.09	74.00	-24.91	44.20	4.89	Peak	114	24
9	10600.00	47.06	54.00	-6.94	32.94	14.12	Average	190	184
10	10600.00	55.26	74.00	-18.74	41.14	14.12	Peak	190	184
11	15900.00	43.27	54.00	-10.73	29.45	13.82	Average	100	253
12	15900.00	55.29	74.00	-18.71	41.47	13.82	Peak	100	253

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

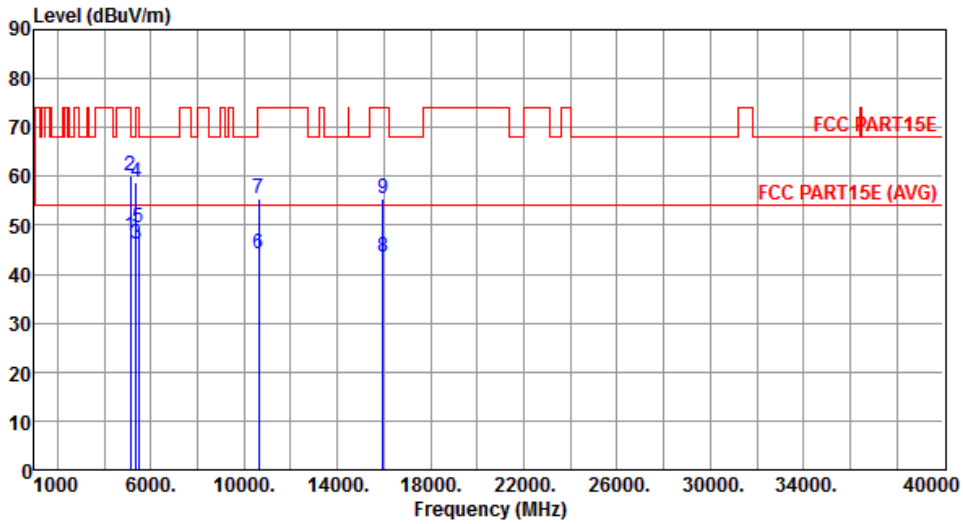
Modulation	11a	Test Freq. (MHz)	5320
Polarization	Horizontal		



	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	5120.00	48.51	54.00	-5.49	44.06	4.45	Average	185	290
2	5120.00	60.80	74.00	-13.20	56.35	4.45	Peak	185	290
3	5350.00	46.77	54.00	-7.23	42.03	4.74	Average	185	290
4	5350.00	59.69	74.00	-14.31	54.95	4.74	Peak	185	290
5	5480.00	59.90	68.20	-8.30	54.99	4.91	Peak	185	290
6	10640.00	47.39	54.00	-6.61	33.21	14.18	Average	142	297
7	10640.00	64.55	74.00	-9.45	50.37	14.18	Peak	142	297
8	15960.00	44.17	54.00	-9.83	30.44	13.73	Average	100	256
9	15960.00	56.26	74.00	-17.74	42.53	13.73	Peak	100	256

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

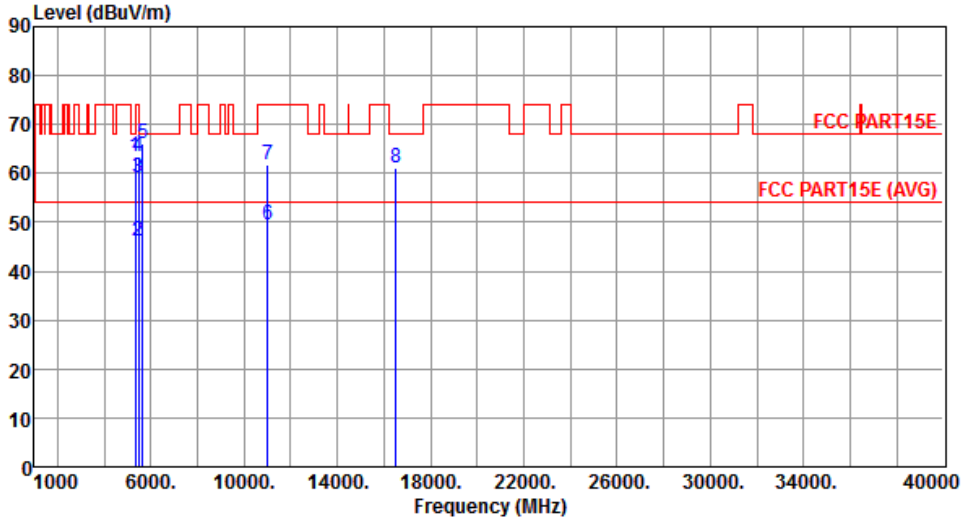
Modulation	11a	Test Freq. (MHz)	5320
Polarization	Vertical		



	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	5120.00	47.78	54.00	-6.22	43.33	4.45	Average	118	26
2	5120.00	60.16	74.00	-13.84	55.71	4.45	Peak	118	26
3	5350.00	46.05	54.00	-7.95	41.31	4.74	Average	118	26
4	5350.00	58.65	74.00	-15.35	53.91	4.74	Peak	118	26
5	5480.00	49.32	68.20	-18.88	44.41	4.91	Peak	118	26
6	10640.00	44.10	54.00	-9.90	29.92	14.18	Average	186	182
7	10640.00	55.42	74.00	-18.58	41.24	14.18	Peak	186	182
8	15960.00	43.41	54.00	-10.59	29.68	13.73	Average	100	261
9	15960.00	55.42	74.00	-18.58	41.69	13.73	Peak	100	261

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

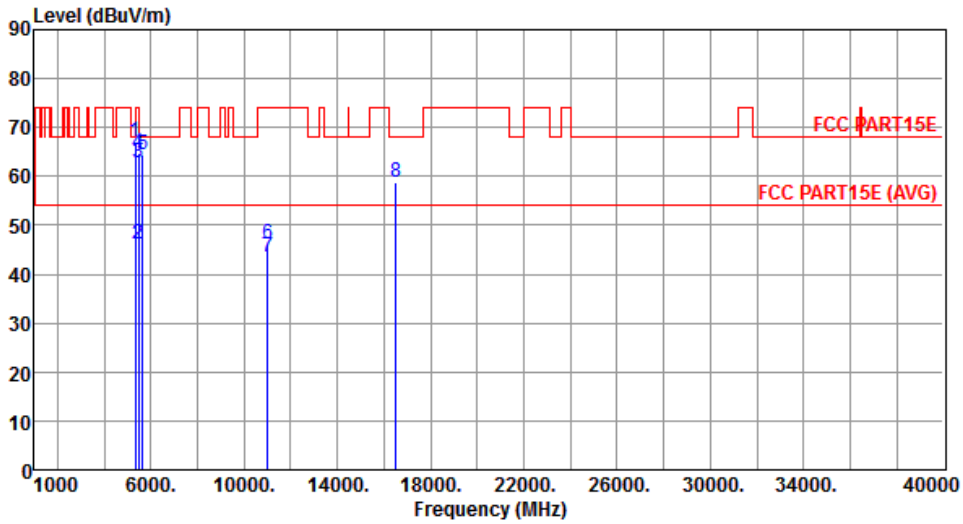
Modulation	11a	Test Freq. (MHz)	5500
Polarization	Horizontal		



	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	63.54	68.20	-4.66	58.82	4.72	Peak	303	268
2	5460.00	46.18	54.00	-7.82	41.29	4.89	Average	303	268
3	5460.00	59.17	74.00	-14.83	54.28	4.89	Peak	303	268
4	5470.00	63.51	68.20	-4.69	58.60	4.91	Peak	303	268
5	5660.00	65.95	68.20	-2.25	60.73	5.22	Peak	303	268
6	11000.00	49.44	54.00	-4.56	34.76	14.68	Average	138	237
7	11000.00	61.89	74.00	-12.11	47.21	14.68	Peak	138	237
8	16500.00	61.04	68.20	-7.16	45.18	15.86	Peak	141	259

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

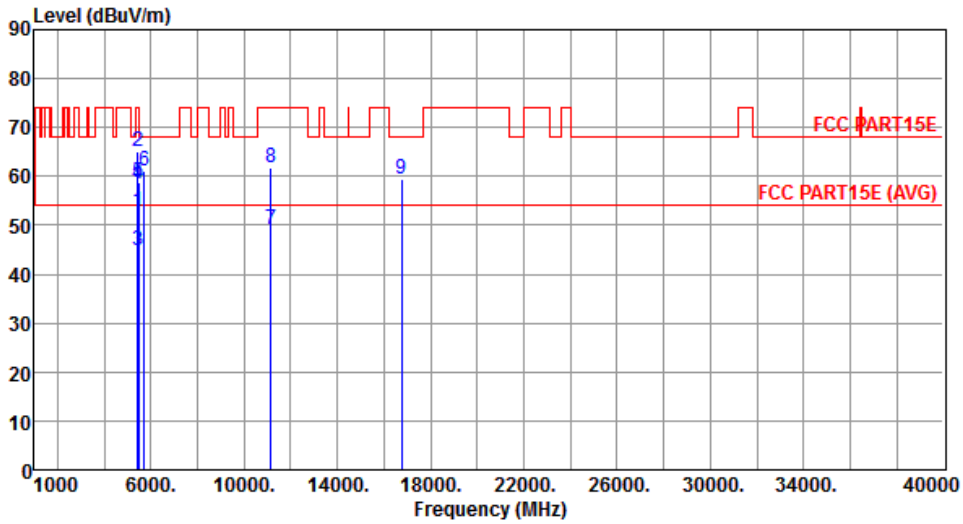
Modulation	11a	Test Freq. (MHz)	5500
Polarization	Vertical		



	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	67.12	68.20	-1.08	62.40	4.72	Peak	172	98
2	5460.00	46.17	54.00	-7.83	41.28	4.89	Average	172	98
3	5460.00	62.61	74.00	-11.39	57.72	4.89	Peak	172	98
4	5470.00	64.88	68.20	-3.32	59.97	4.91	Peak	172	98
5	5660.00	64.54	68.20	-3.66	59.32	5.22	Peak	172	98
6	11000.00	46.25	54.00	-7.75	31.57	14.68	Average	131	195
7	11000.00	43.53	74.00	-30.47	28.85	14.68	Peak	131	195
8	16500.00	58.69	68.20	-9.51	42.83	15.86	Peak	185	306

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

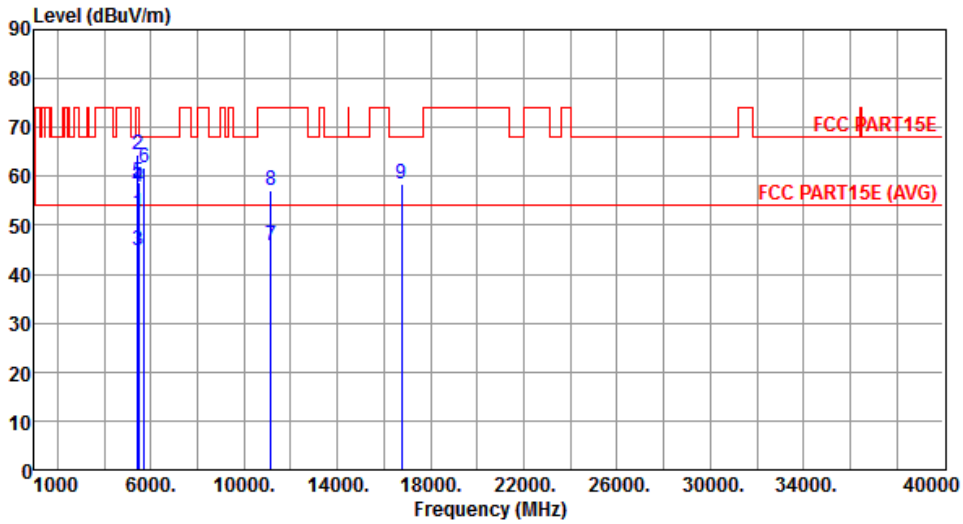
Modulation	11a	Test Freq. (MHz)	5580
Polarization	Horizontal		



	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	52.86	54.00	-1.14	48.01	4.85	Average	151	305
2	5420.00	65.04	74.00	-8.96	60.19	4.85	Peak	151	305
3	5460.00	44.80	54.00	-9.20	39.91	4.89	Average	151	305
4	5460.00	58.46	74.00	-15.54	53.57	4.89	Peak	151	305
5	5470.00	58.81	68.20	-9.39	53.90	4.91	Peak	151	305
6	5725.00	61.03	68.20	-7.17	55.71	5.32	Peak	151	305
7	11160.00	49.29	54.00	-4.71	34.57	14.72	Average	112	239
8	11160.00	61.79	74.00	-12.21	47.07	14.72	Peak	112	239
9	16740.00	59.43	68.20	-8.77	42.95	16.48	Peak	100	269

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

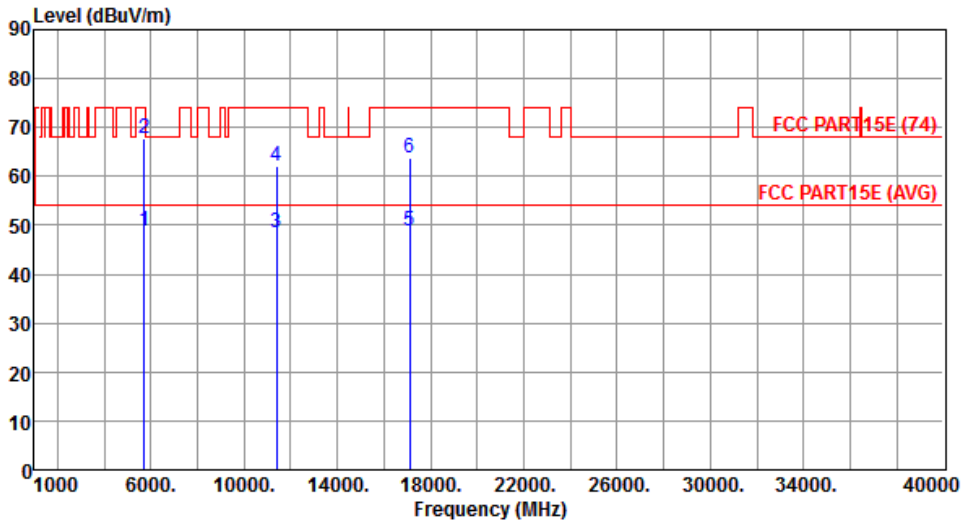
Modulation	11a	Test Freq. (MHz)	5580
Polarization	Vertical		



	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	52.50	54.00	-1.50	47.65	4.85	Average	205	98
2	5420.00	64.45	74.00	-9.55	59.60	4.85	Peak	205	98
3	5460.00	44.73	54.00	-9.27	39.84	4.89	Average	205	98
4	5460.00	57.64	74.00	-16.36	52.75	4.89	Peak	205	98
5	5470.00	58.74	68.20	-9.46	53.83	4.91	Peak	205	98
6	5725.00	61.82	68.20	-6.38	56.50	5.32	Peak	205	98
7	11160.00	45.72	54.00	-8.28	31.00	14.72	Average	143	294
8	11160.00	57.27	74.00	-16.73	42.55	14.72	Peak	143	294
9	16740.00	58.57	68.20	-9.63	42.09	16.48	Peak	137	312

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

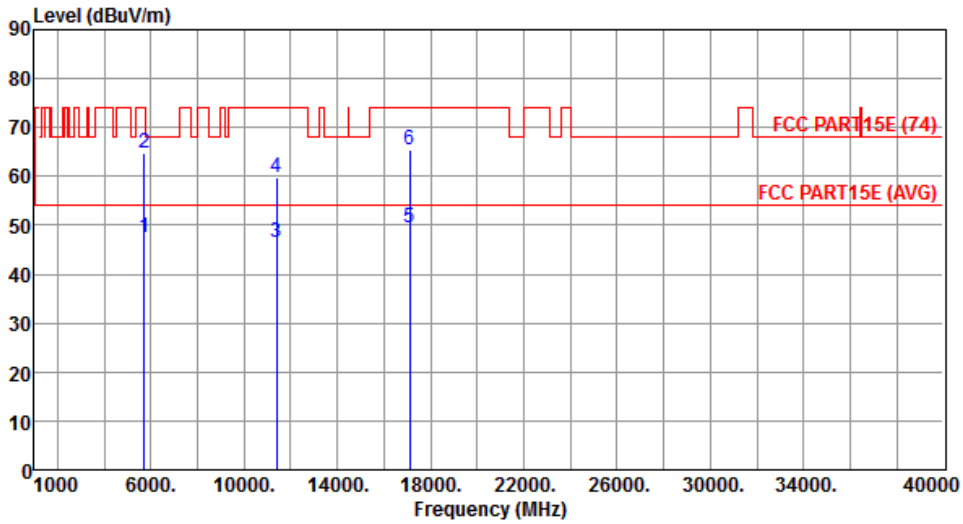
Modulation	11a	Test Freq. (MHz)	5700
Polarization	Horizontal		



	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	5725.00	48.73	54.00	-5.27	43.41	5.32	Average	251	299
2	5725.00	67.86	74.00	-6.14	62.54	5.32	Peak	251	299
3	11400.00	48.49	54.00	-5.51	33.70	14.79	Average	182	249
4	11400.00	62.02	74.00	-11.98	47.23	14.79	Peak	182	249
5	17100.00	48.93	54.00	-5.07	31.56	17.37	Average	100	304
6	17100.00	63.84	74.00	-10.16	46.47	17.37	Peak	100	304

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

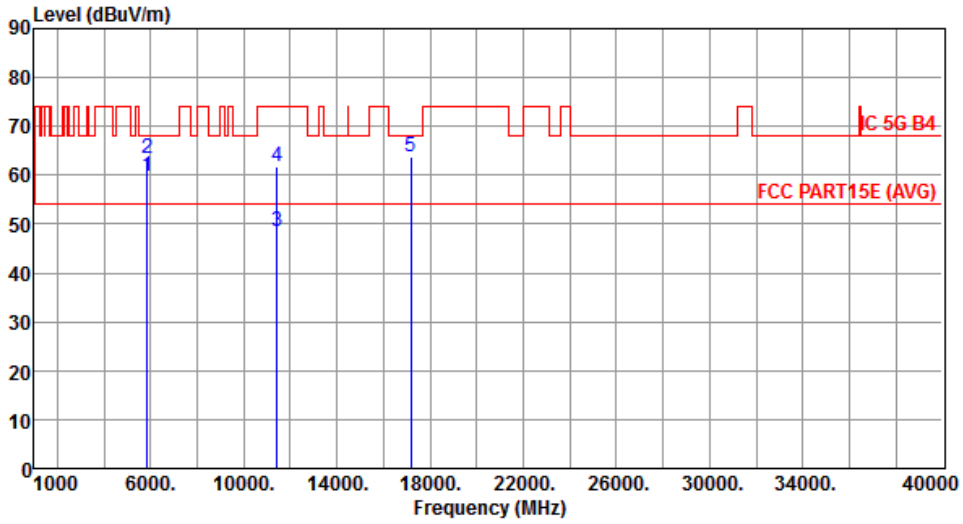
Modulation	11a	Test Freq. (MHz)	5700
Polarization	Vertical		



	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	5725.00	47.47	54.00	-6.53	42.15	5.32	Average	179	68
2	5725.00	64.92	74.00	-9.08	59.60	5.32	Peak	179	68
3	11400.00	46.46	54.00	-7.54	31.67	14.79	Average	237	145
4	11400.00	59.83	74.00	-14.17	45.04	14.79	Peak	237	145
5	17100.00	49.50	54.00	-4.50	32.13	17.37	Average	189	236
6	17100.00	65.38	74.00	-8.62	48.01	17.37	Peak	189	236

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

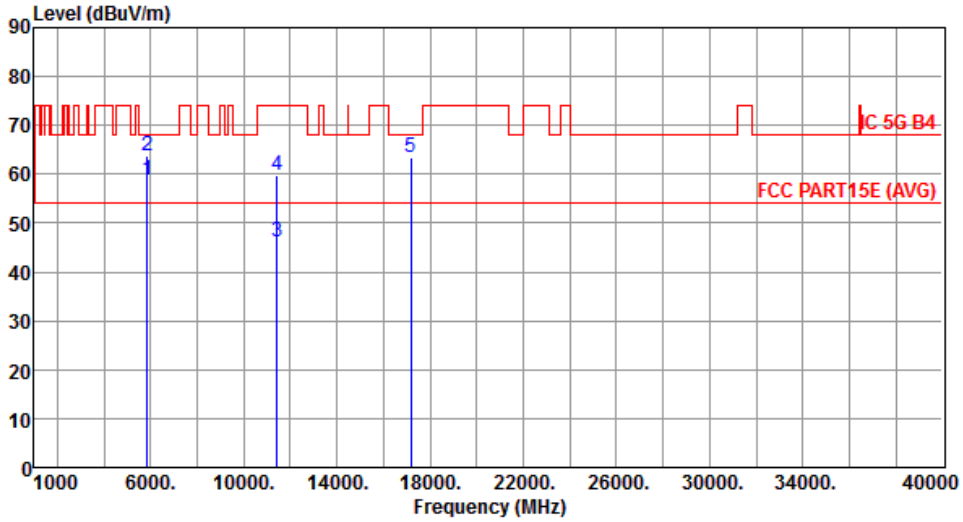
Modulation	11a	Test Freq. (MHz)	5720
Polarization	Horizontal		



	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	5850.00	59.80	78.20	-18.40	54.28	5.52	Peak	252	112
2	5860.00	63.54	68.20	-4.66	58.00	5.54	Peak	252	112
3	11440.00	48.41	54.00	-5.59	33.61	14.80	Average	169	242
4	11440.00	61.78	74.00	-12.22	46.98	14.80	Peak	169	242
5	17160.00	63.86	68.20	-4.34	46.34	17.52	Peak	120	289

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

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

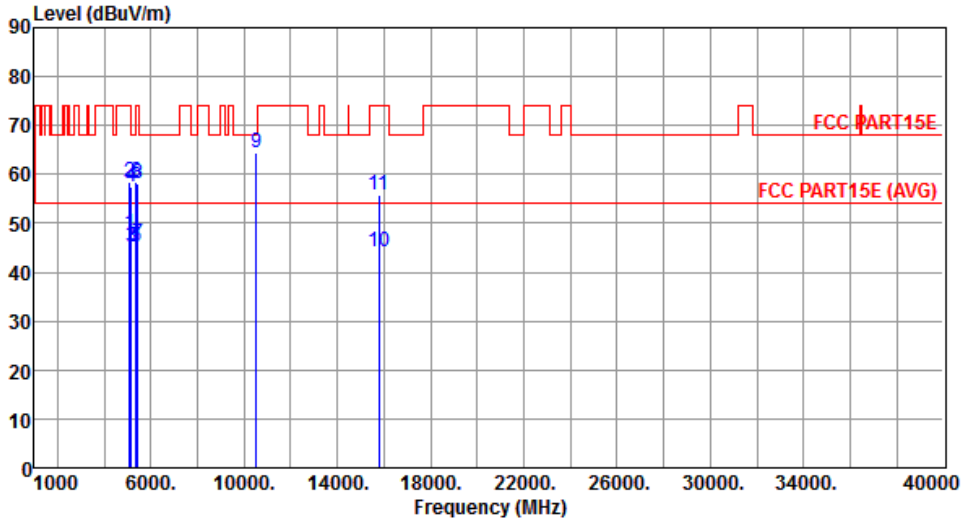


	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	5850.00	58.78	78.20	-19.42	53.26	5.52	Peak	166	68
2	5860.00	63.60	68.20	-4.60	58.06	5.54	Peak	166	68
3	11440.00	46.17	54.00	-7.83	31.37	14.80	Average	115	86
4	11440.00	59.61	74.00	-14.39	44.81	14.80	Peak	115	86
5	17160.00	63.55	68.20	-4.65	46.03	17.52	Peak	154	242

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

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

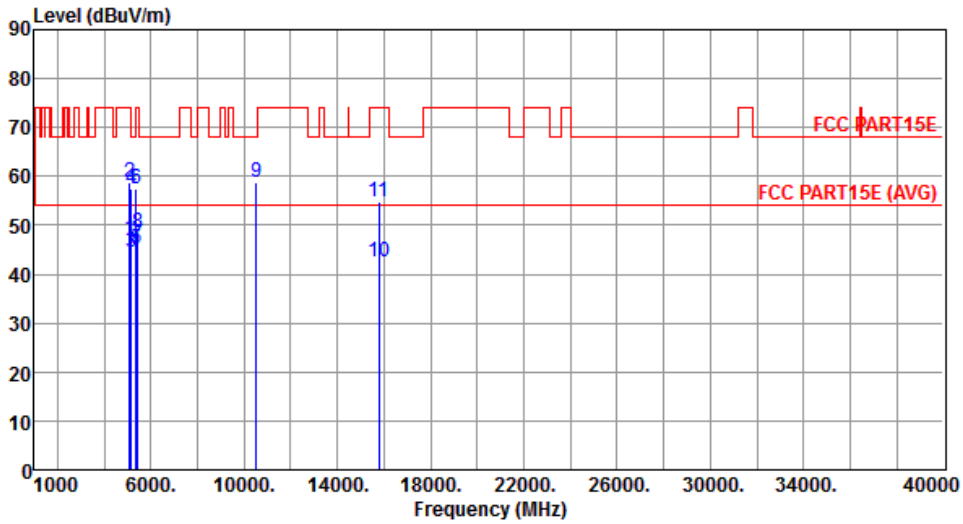
Modulation	VHT20	**Test Freq. (MHz)**	5260
Polarization	Horizontal		



	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	5100.00	47.91	54.00	-6.09	43.48	4.43	Average	198	297
2	5100.00	58.44	74.00	-15.56	54.01	4.43	Peak	198	297
3	5150.00	45.02	54.00	-8.98	40.54	4.48	Average	198	297
4	5150.00	57.33	74.00	-16.67	52.85	4.48	Peak	198	297
5	5350.00	45.32	54.00	-8.68	40.58	4.74	Average	198	297
6	5350.00	58.43	74.00	-15.57	53.69	4.74	Peak	198	297
7	5420.00	45.82	54.00	-8.18	40.97	4.85	Average	198	297
8	5420.00	57.99	74.00	-16.01	53.14	4.85	Peak	198	297
9	10520.00	64.58	68.20	-3.62	50.57	14.01	Peak	138	282
10	15780.00	44.03	54.00	-9.97	30.02	14.01	Average	100	279
11	15780.00	55.68	74.00	-18.32	41.67	14.01	Peak	100	279

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

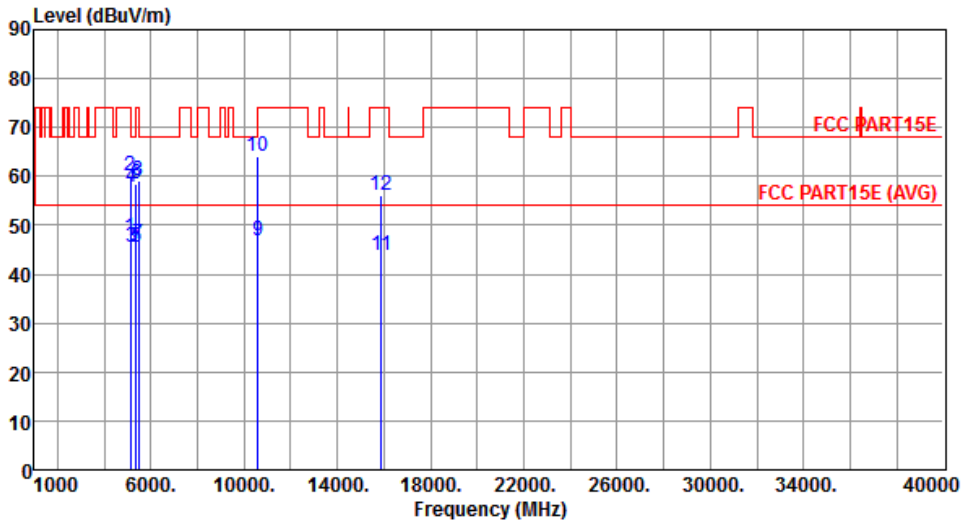
Modulation	VHT20	Test Freq. (MHz)	5260
Polarization	Vertical		



	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	5100.00	47.22	54.00	-6.78	42.79	4.43	Average	126	27
2	5100.00	58.86	74.00	-15.14	54.43	4.43	Peak	126	27
3	5150.00	44.66	54.00	-9.34	40.18	4.48	Average	126	27
4	5150.00	57.44	74.00	-16.56	52.96	4.48	Peak	126	27
5	5350.00	45.11	54.00	-8.89	40.37	4.74	Average	126	27
6	5350.00	57.51	74.00	-16.49	52.77	4.74	Peak	126	27
7	5420.00	46.18	54.00	-7.82	41.33	4.85	Average	126	27
8	5420.00	48.33	74.00	-25.67	43.48	4.85	Peak	126	27
9	10520.00	58.74	68.20	-9.46	44.73	14.01	Peak	182	188
10	15780.00	42.63	54.00	-11.37	28.62	14.01	Average	100	253
11	15780.00	54.89	74.00	-19.11	40.88	14.01	Peak	100	253

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

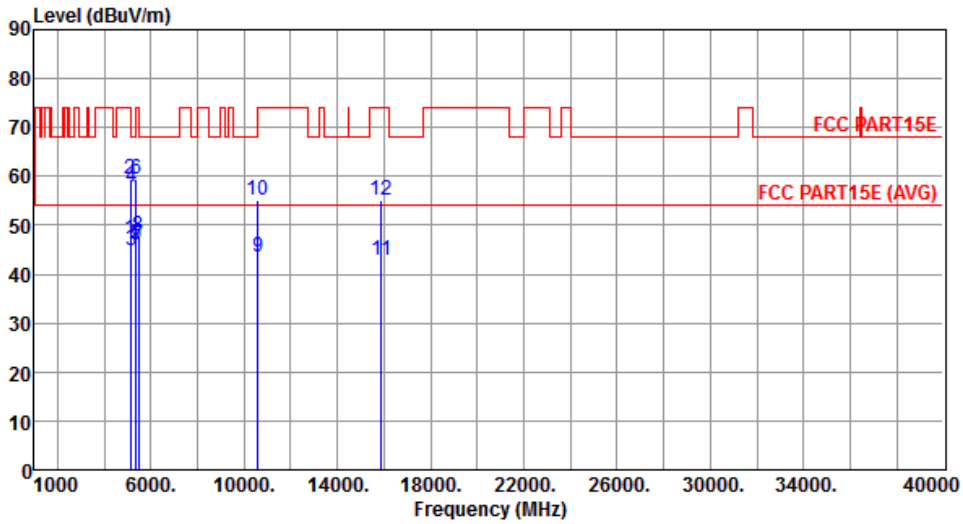
Modulation	VHT20	Test Freq. (MHz)	5300
Polarization	Horizontal		



	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	5140.00	47.33	54.00	-6.67	42.86	4.47	Average	186	302
2	5140.00	59.96	74.00	-14.04	55.49	4.47	Peak	186	302
3	5150.00	45.41	54.00	-8.59	40.93	4.48	Average	186	302
4	5150.00	57.75	74.00	-16.25	53.27	4.48	Peak	186	302
5	5350.00	45.34	54.00	-8.66	40.60	4.74	Average	186	302
6	5350.00	58.30	74.00	-15.70	53.56	4.74	Peak	186	302
7	5460.00	46.01	54.00	-7.99	41.12	4.89	Average	186	302
8	5460.00	59.19	74.00	-14.81	54.30	4.89	Peak	186	302
9	10600.00	46.92	54.00	-7.08	32.80	14.12	Average	152	243
10	10600.00	64.20	74.00	-9.80	50.08	14.12	Peak	152	243
11	15900.00	43.77	54.00	-10.23	29.95	13.82	Average	100	259
12	15900.00	55.96	74.00	-18.04	42.14	13.82	Peak	100	259

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

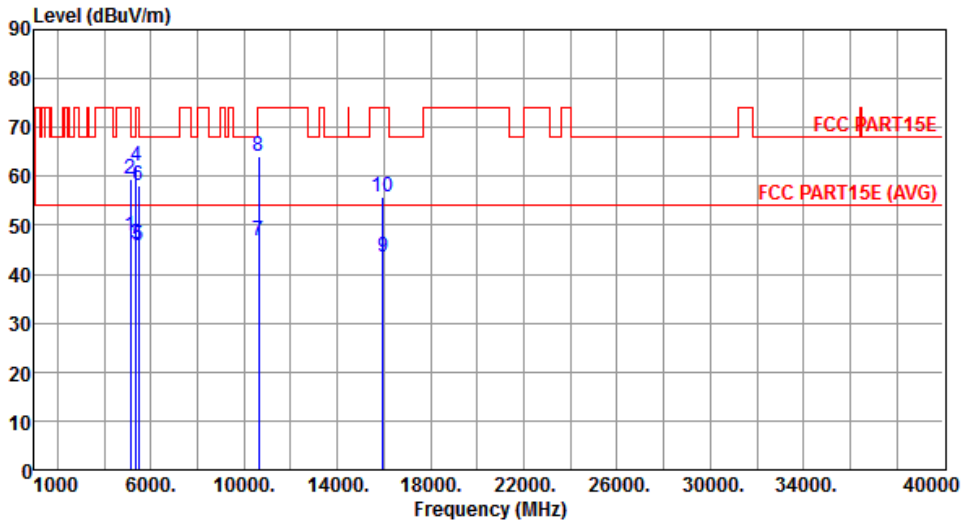
Modulation	VHT20	Test Freq. (MHz)	5300
Polarization	Vertical		



	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	5140.00	47.13	54.00	-6.87	42.66	4.47	Average	118	26
2	5140.00	59.53	74.00	-14.47	55.06	4.47	Peak	118	26
3	5150.00	44.79	54.00	-9.21	40.31	4.48	Average	118	26
4	5150.00	57.63	74.00	-16.37	53.15	4.48	Peak	118	26
5	5350.00	46.32	54.00	-7.68	41.58	4.74	Average	118	26
6	5350.00	59.49	74.00	-14.51	54.75	4.74	Peak	118	26
7	5460.00	45.72	54.00	-8.28	40.83	4.89	Average	118	26
8	5460.00	47.72	74.00	-26.28	42.83	4.89	Peak	118	26
9	10600.00	43.41	54.00	-10.59	29.29	14.12	Average	186	193
10	10600.00	55.21	74.00	-18.79	41.09	14.12	Peak	186	193
11	15900.00	42.93	54.00	-11.07	29.11	13.82	Average	100	248
12	15900.00	55.16	74.00	-18.84	41.34	13.82	Peak	100	248

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

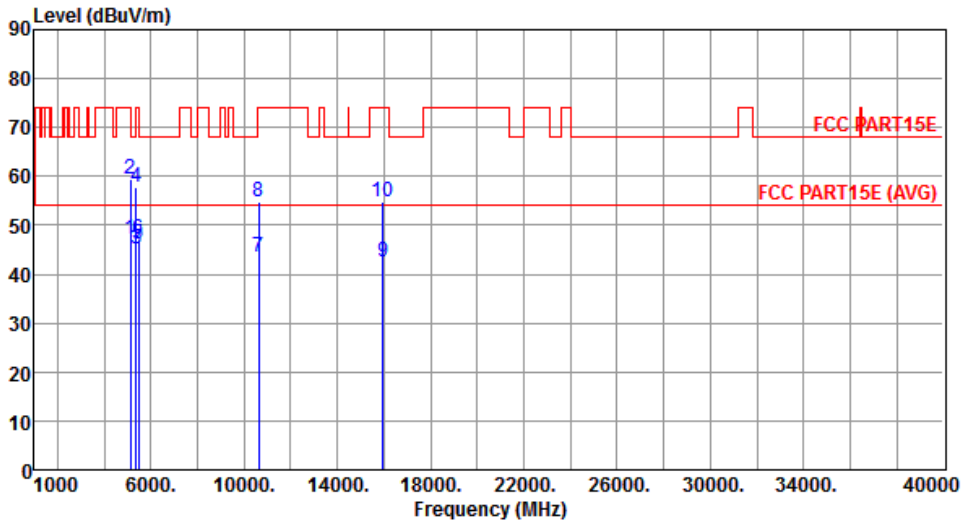
Modulation	VHT20	Test Freq. (MHz)	5320
Polarization	Horizontal		



	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	5120.00	47.70	54.00	-6.30	43.25	4.45	Average	199	300
2	5120.00	59.35	74.00	-14.65	54.90	4.45	Peak	199	300
3	5350.00	46.30	54.00	-7.70	41.56	4.74	Average	199	300
4	5350.00	62.13	74.00	-11.87	57.39	4.74	Peak	199	300
5	5480.00	45.82	54.00	-8.18	40.91	4.91	Average	199	300
6	5480.00	58.28	68.20	-9.92	53.37	4.91	Peak	199	300
7	10640.00	46.81	54.00	-7.19	32.63	14.18	Average	138	321
8	10640.00	64.03	74.00	-9.97	49.85	14.18	Peak	138	321
9	15960.00	43.65	54.00	-10.35	29.92	13.73	Average	100	262
10	15960.00	55.78	74.00	-18.22	42.05	13.73	Peak	100	262

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

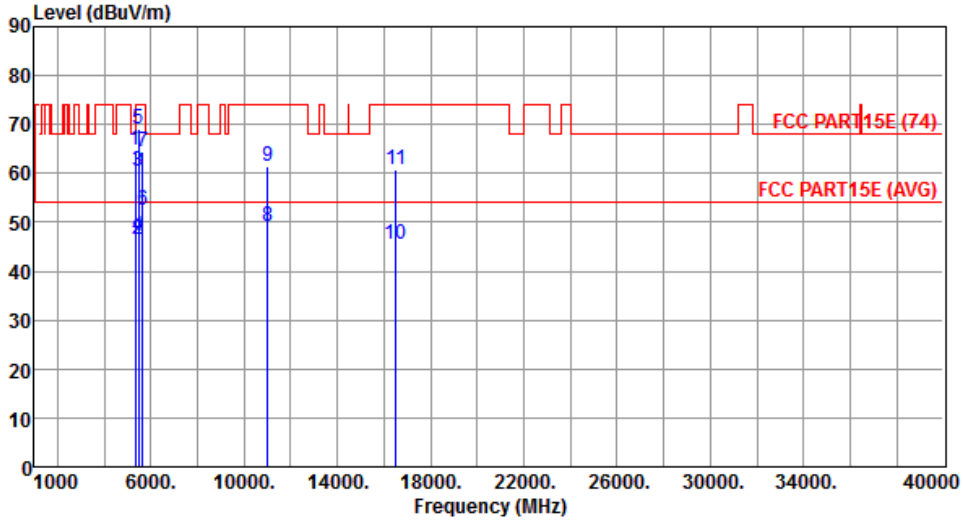
Modulation	VHT20	Test Freq. (MHz)	5320
Polarization	Vertical		



	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	5120.00	47.03	54.00	-6.97	42.58	4.45	Average	119	28
2	5120.00	59.33	74.00	-14.67	54.88	4.45	Peak	119	28
3	5350.00	45.19	54.00	-8.81	40.45	4.74	Average	119	28
4	5350.00	57.82	74.00	-16.18	53.08	4.74	Peak	119	28
5	5480.00	46.23	54.00	-7.77	41.32	4.91	Average	119	28
6	5480.00	47.16	68.20	-21.04	42.25	4.91	Peak	119	28
7	10640.00	43.41	54.00	-10.59	29.23	14.18	Average	191	178
8	10640.00	54.72	74.00	-19.28	40.54	14.18	Peak	191	178
9	15960.00	42.66	54.00	-11.34	28.93	13.73	Average	100	264
10	15960.00	54.74	74.00	-19.26	41.01	13.73	Peak	100	264

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

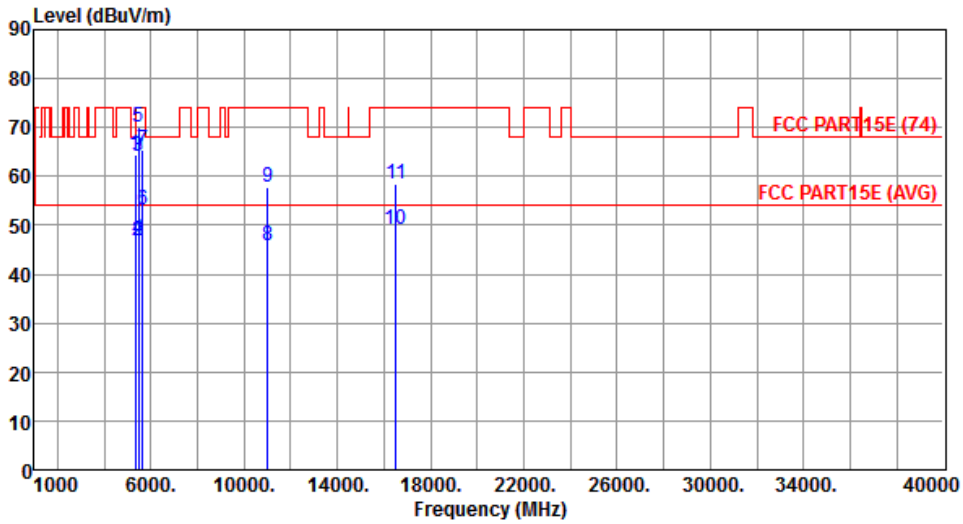
Modulation	VHT20	Test Freq. (MHz)	5500
Polarization	Horizontal		



	Freq. 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	64.60	68.20	-3.60	59.88	4.72	Peak	181	304
2	5460.00	46.36	54.00	-7.64	41.47	4.89	Average	181	304
3	5460.00	60.38	74.00	-13.62	55.49	4.89	Peak	181	304
4	5470.00	47.00	54.00	-7.00	42.09	4.91	Average	181	304
5	5470.00	68.93	74.00	-5.07	64.02	4.91	Peak	181	304
6	5660.00	52.41	54.00	-1.59	47.19	5.22	Average	181	304
7	5660.00	64.33	74.00	-9.67	59.11	5.22	Peak	181	304
8	11000.00	49.03	54.00	-4.97	34.35	14.68	Average	141	245
9	11000.00	61.56	74.00	-12.44	46.88	14.68	Peak	141	245
10	16500.00	45.51	54.00	-8.49	29.65	15.86	Average	136	255
11	16500.00	60.82	74.00	-13.18	44.96	15.86	Peak	136	255

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

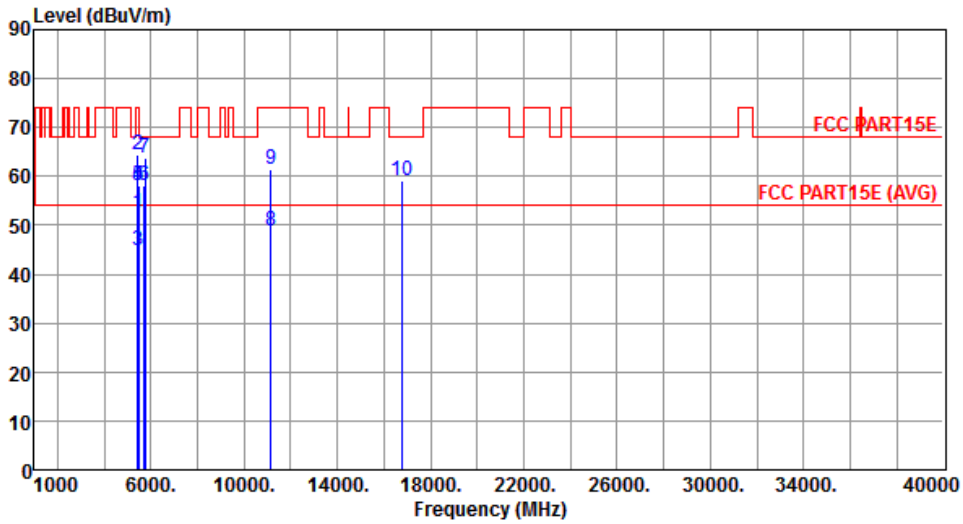
Modulation	VHT20	Test Freq. (MHz)	5500
Polarization	Vertical		



	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	64.43	68.20	-3.77	59.71	4.72	Peak	188	20
2	5460.00	46.68	54.00	-7.32	41.79	4.89	Average	188	20
3	5460.00	64.09	74.00	-9.91	59.20	4.89	Peak	188	20
4	5470.00	47.19	54.00	-6.81	42.28	4.91	Average	188	20
5	5470.00	70.03	74.00	-3.97	65.12	4.91	Peak	188	20
6	5660.00	52.99	54.00	-1.01	47.77	5.22	Average	188	20
7	5660.00	65.45	74.00	-8.55	60.23	5.22	Peak	188	20
8	11000.00	45.92	54.00	-8.08	31.24	14.68	Average	128	190
9	11000.00	57.94	74.00	-16.06	43.26	14.68	Peak	128	190
10	16500.00	49.02	54.00	-4.98	33.16	15.86	Average	175	288
11	16500.00	58.49	74.00	-15.51	42.63	15.86	Peak	175	288

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

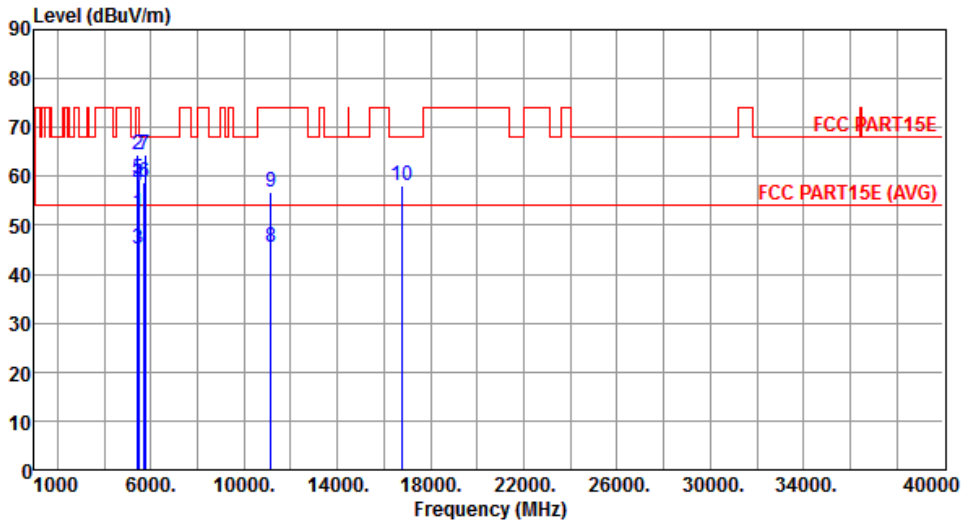
Modulation	VHT20	Test Freq. (MHz)	5580
Polarization	Horizontal		



	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	52.59	54.00	-1.41	47.74	4.85	Average	175	302
2	5420.00	64.46	74.00	-9.54	59.61	4.85	Peak	175	302
3	5460.00	44.96	54.00	-9.04	40.07	4.89	Average	175	302
4	5460.00	57.96	74.00	-16.04	53.07	4.89	Peak	175	302
5	5470.00	58.12	68.20	-10.08	53.21	4.91	Peak	175	302
6	5725.00	58.08	68.20	-10.12	52.76	5.32	Peak	215	267
7	5740.00	63.82	68.20	-4.38	58.48	5.34	Peak	215	267
8	11160.00	48.93	54.00	-5.07	34.21	14.72	Average	136	242
9	11160.00	61.48	74.00	-12.52	46.76	14.72	Peak	136	242
10	16740.00	59.09	68.20	-9.11	42.61	16.48	Peak	100	275

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

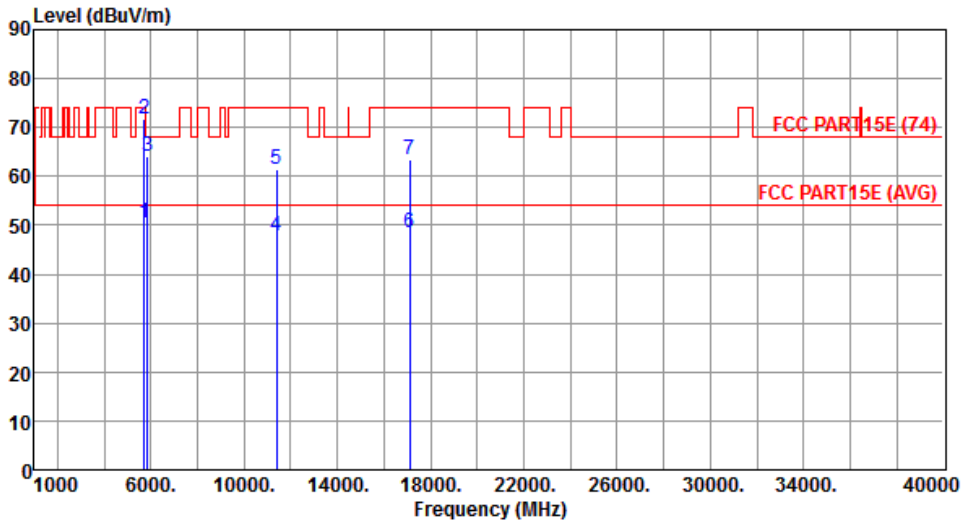
Modulation	VHT20	Test Freq. (MHz)	5580
Polarization	Vertical		



	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	5420.00	52.41	54.00	-1.59	47.56	4.85	Average	178	15
2	5420.00	64.31	74.00	-9.69	59.46	4.85	Peak	178	15
3	5460.00	45.12	54.00	-8.88	40.23	4.89	Average	178	15
4	5460.00	58.15	74.00	-15.85	53.26	4.89	Peak	178	15
5	5470.00	59.33	68.20	-8.87	54.42	4.91	Peak	178	15
6	5725.00	58.62	68.20	-9.58	53.30	5.32	Peak	178	15
7	5740.00	64.54	68.20	-3.66	59.20	5.34	Peak	178	15
8	11160.00	45.47	54.00	-8.53	30.75	14.72	Average	141	302
9	11160.00	56.86	74.00	-17.14	42.14	14.72	Peak	141	302
10	16740.00	58.13	68.20	-10.07	41.65	16.48	Peak	146	310

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

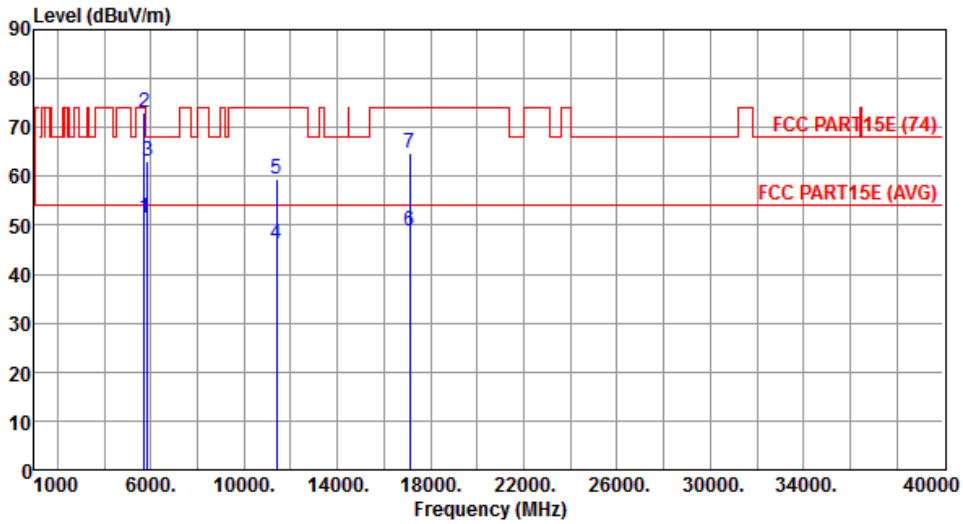
Modulation	VHT20	Test Freq. (MHz)	5700
Polarization	Horizontal		



	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	5725.00	50.53	54.00	-3.47	45.21	5.32	Average	217	265
2	5725.00	71.57	74.00	-2.43	66.25	5.32	Peak	217	265
3	5860.00	64.12	68.20	-4.08	58.58	5.54	Peak	217	265
4	11400.00	47.93	54.00	-6.07	33.14	14.79	Average	172	253
5	11400.00	61.52	74.00	-12.48	46.73	14.79	Peak	172	253
6	17100.00	48.38	54.00	-5.62	31.01	17.37	Average	100	323
7	17100.00	63.30	74.00	-10.70	45.93	17.37	Peak	100	323

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

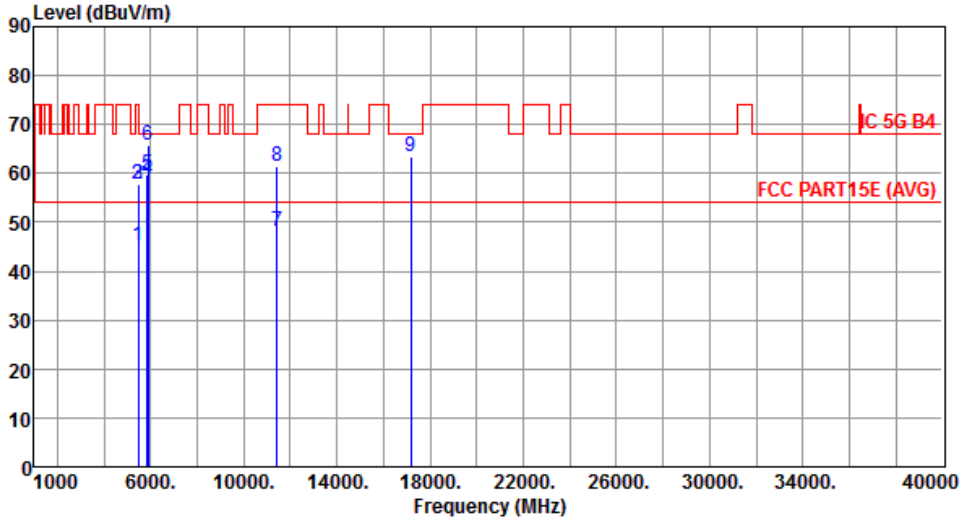
Modulation	VHT20	Test Freq. (MHz)	5700
Polarization	Vertical		



	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	5725.00	51.60	54.00	-2.40	46.28	5.32	Average	177	18
2	5725.00	72.99	74.00	-1.01	67.67	5.32	Peak	177	18
3	5860.00	62.97	68.20	-5.23	57.43	5.54	Peak	177	18
4	11400.00	46.02	54.00	-7.98	31.23	14.79	Average	249	241
5	11400.00	59.40	74.00	-14.60	44.61	14.79	Peak	249	241
6	17100.00	48.92	54.00	-5.08	31.55	17.37	Average	172	234
7	17100.00	64.85	74.00	-9.15	47.48	17.37	Peak	172	234

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

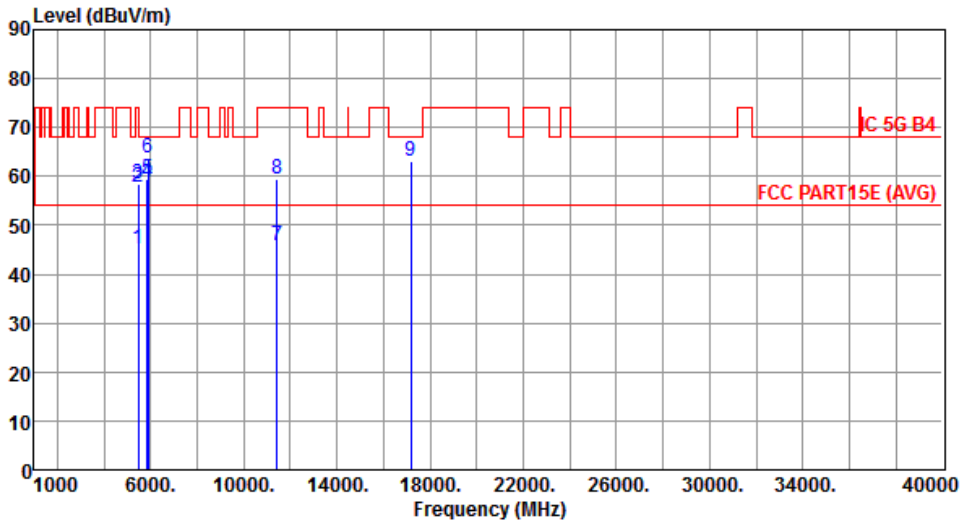
Modulation	VHT20	Test Freq. (MHz)	5720
Polarization	Horizontal		



	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	5460.00	45.23	54.00	-8.77	40.34	4.89	Average	216	271
2	5460.00	57.65	74.00	-16.35	52.76	4.89	Peak	216	271
3	5470.00	57.79	68.20	-10.41	52.88	4.91	Peak	216	264
4	5850.00	58.82	78.20	-19.38	53.30	5.52	Peak	216	264
5	5860.00	59.64	68.20	-8.56	54.10	5.54	Peak	216	264
6	5880.00	65.91	68.20	-2.29	60.34	5.57	Peak	216	264
7	11440.00	48.26	54.00	-5.74	33.46	14.80	Average	175	234
8	11440.00	61.54	74.00	-12.46	46.74	14.80	Peak	175	234
9	17160.00	63.59	68.20	-4.61	46.07	17.52	Peak	116	265

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

Modulation	VHT20	Test Freq. (MHz)	5720
Polarization	Vertical		

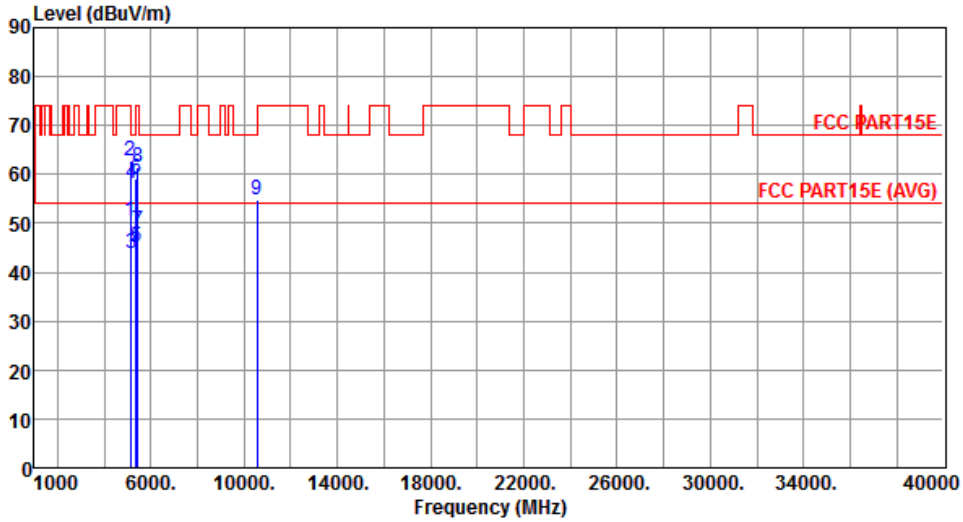


	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	5460.00	45.24	54.00	-8.76	40.35	4.89	Average	177	19
2	5460.00	57.71	74.00	-16.29	52.82	4.89	Peak	177	19
3	5470.00	58.31	68.20	-9.89	53.40	4.91	Peak	177	19
4	5850.00	58.82	78.20	-19.38	53.30	5.52	Peak	177	19
5	5860.00	59.46	68.20	-8.74	53.92	5.54	Peak	177	19
6	5880.00	63.80	68.20	-4.40	58.23	5.57	Peak	177	19
7	11440.00	45.96	54.00	-8.04	31.16	14.80	Average	108	88
8	11440.00	59.45	74.00	-14.55	44.65	14.80	Peak	108	88
9	17160.00	63.26	68.20	-4.94	45.74	17.52	Peak	148	244

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

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

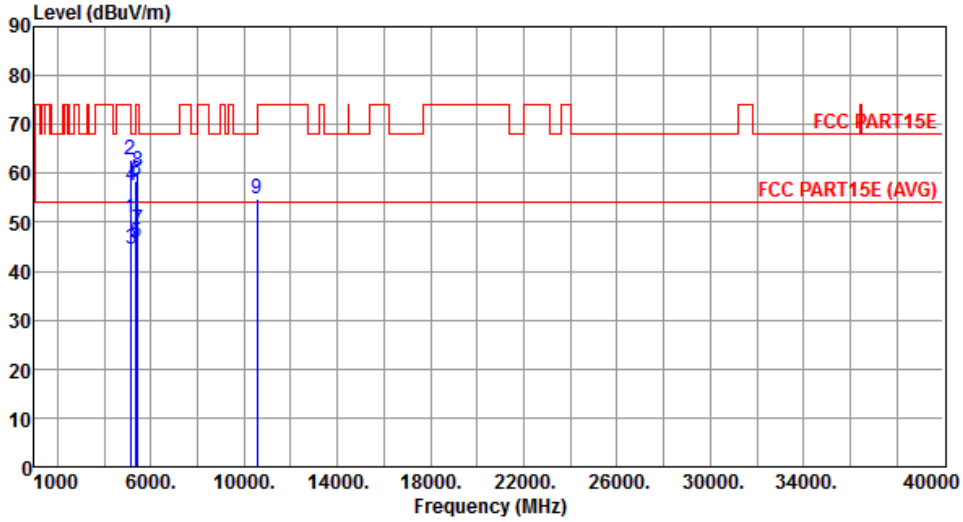
Modulation	VHT40	**Test Freq. (MHz)**	5270
Polarization	Horizontal		



	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	50.63	54.00	-3.37	46.19	4.44	Average	196	298
2	5110.00	62.63	74.00	-11.37	58.19	4.44	Peak	196	298
3	5150.00	43.94	54.00	-10.06	39.46	4.48	Average	145	297
4	5150.00	58.08	74.00	-15.92	53.60	4.48	Peak	145	297
5	5350.00	45.15	54.00	-8.85	40.41	4.74	Average	145	297
6	5350.00	59.27	74.00	-14.73	54.53	4.74	Peak	145	297
7	5430.00	48.53	54.00	-5.47	43.68	4.85	Average	145	297
8	5430.00	61.43	74.00	-12.57	56.58	4.85	Peak	145	297
9	10540.00	54.72	68.20	-13.48	40.68	14.04	Peak	218	339

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

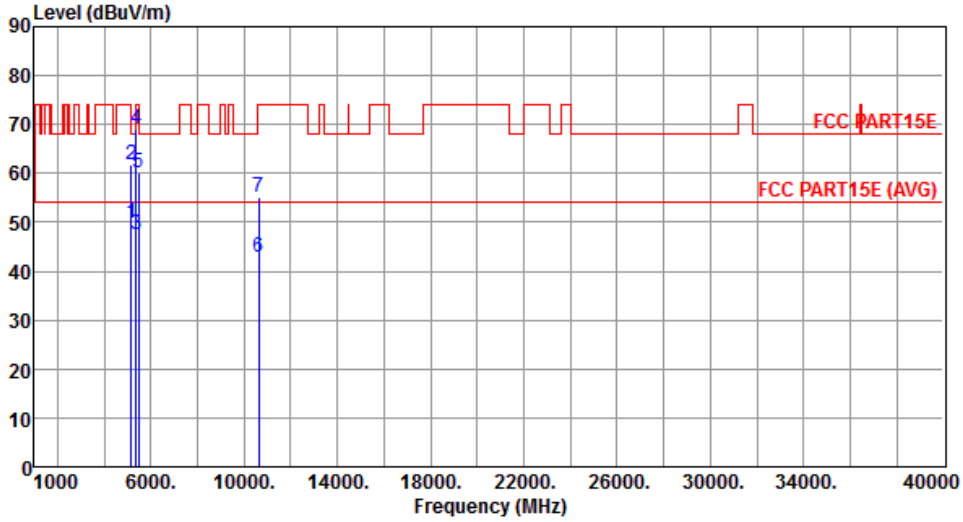
Modulation	VHT40	Test Freq. (MHz)	5270
Polarization	Vertical		



	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	50.77	54.00	-3.23	46.33	4.44	Average	198	165
2	5110.00	62.79	74.00	-11.21	58.35	4.44	Peak	198	165
3	5150.00	44.45	54.00	-9.55	39.97	4.48	Average	188	100
4	5150.00	57.43	74.00	-16.57	52.95	4.48	Peak	188	100
5	5350.00	45.94	54.00	-8.06	41.20	4.74	Average	188	100
6	5350.00	58.44	74.00	-15.56	53.70	4.74	Peak	188	100
7	5430.00	48.54	54.00	-5.46	43.69	4.85	Average	188	100
8	5430.00	60.50	74.00	-13.50	55.65	4.85	Peak	188	100
9	10540.00	54.68	68.20	-13.52	40.64	14.04	Peak	186	205

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

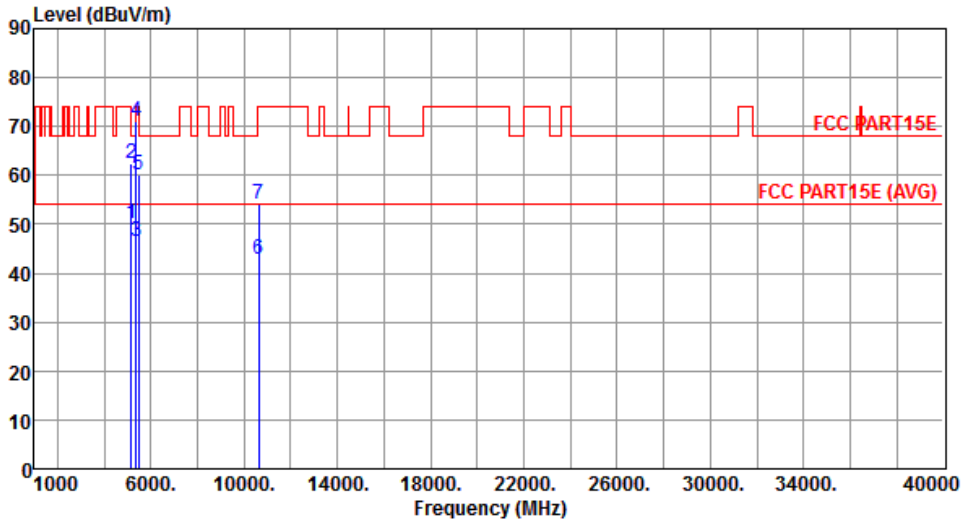
Modulation	VHT40	Test Freq. (MHz)	5310
Polarization	Horizontal		



	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	49.93	54.00	-4.07	45.45	4.48	Average	163	290
2	5150.00	61.92	74.00	-12.08	57.44	4.48	Peak	163	290
3	5350.00	47.47	54.00	-6.53	42.73	4.74	Average	163	290
4	5350.00	69.13	74.00	-4.87	64.39	4.74	Peak	163	290
5	5470.00	60.00	68.20	-8.20	55.09	4.91	Peak	163	290
6	10620.00	42.79	54.00	-11.21	28.65	14.14	Average	318	214
7	10620.00	54.97	74.00	-19.03	40.83	14.14	Peak	318	214

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

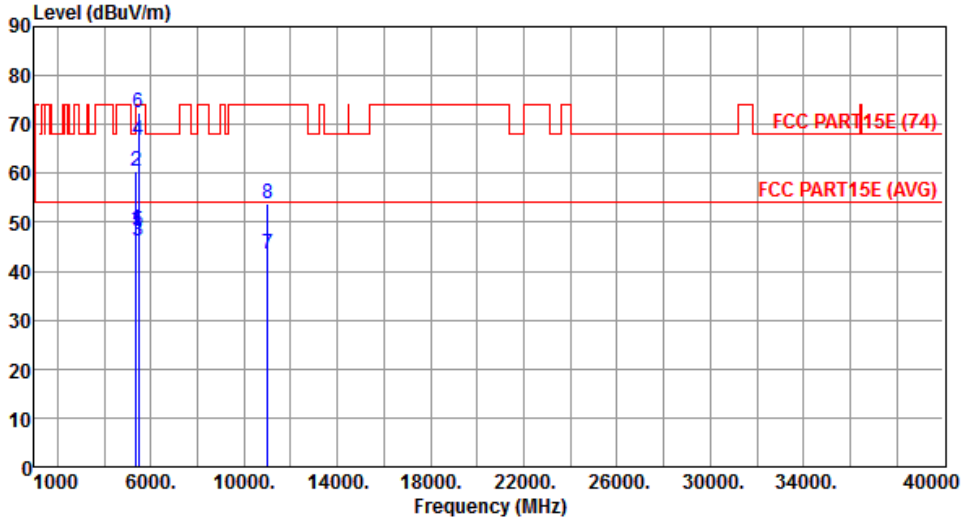
Modulation	VHT40	Test Freq. (MHz)	5310
Polarization	Vertical		



	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	50.24	54.00	-3.76	45.76	4.48	Average	165	93
2	5150.00	62.33	74.00	-11.67	57.85	4.48	Peak	165	93
3	5350.00	46.40	54.00	-7.60	41.66	4.74	Average	165	93
4	5350.00	71.01	74.00	-2.99	66.27	4.74	Peak	165	93
5	5470.00	60.17	68.20	-8.03	55.26	4.91	Peak	133	108
6	10620.00	42.68	54.00	-11.32	28.54	14.14	Average	215	120
7	10620.00	54.11	74.00	-19.89	39.97	14.14	Peak	215	120

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

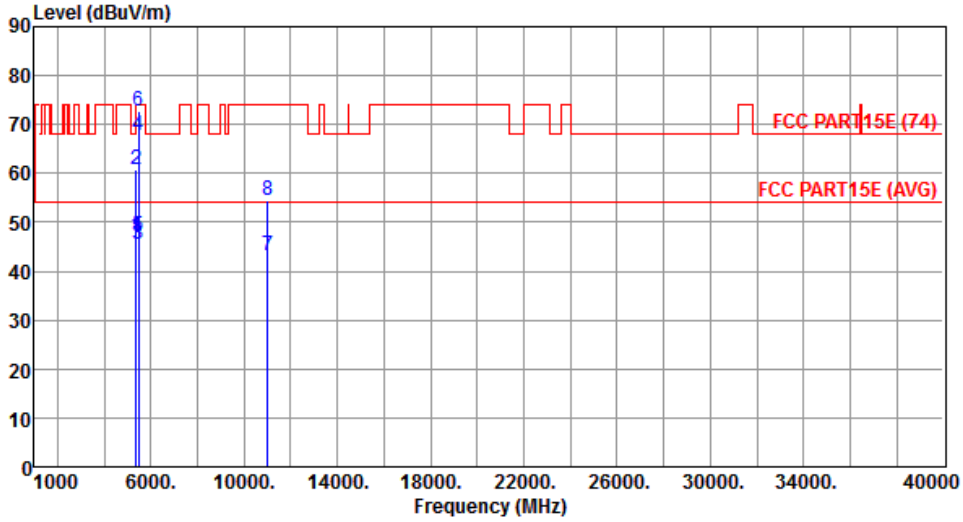
Modulation	VHT40	Test Freq. (MHz)	5510
Polarization	Horizontal		



	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	5350.00	48.55	54.00	-5.45	43.81	4.74	Average	132	293
2	5350.00	60.44	74.00	-13.56	55.70	4.74	Peak	132	293
3	5460.00	46.30	54.00	-7.70	41.41	4.89	Average	132	293
4	5460.00	66.79	74.00	-7.21	61.90	4.89	Peak	132	293
5	5470.00	48.10	54.00	-5.90	43.19	4.91	Average	132	293
6	5470.00	72.37	74.00	-1.63	67.46	4.91	Peak	132	293
7	11020.00	43.62	54.00	-10.38	28.93	14.69	Average	215	128
8	11020.00	53.82	74.00	-20.18	39.13	14.69	Peak	215	128

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

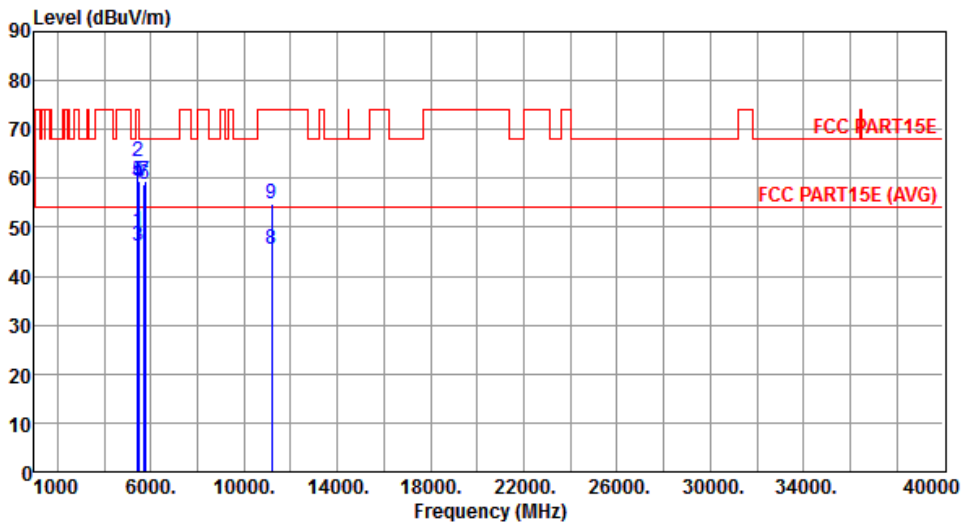
Modulation	VHT40	Test Freq. (MHz)	5510
Polarization	Vertical		



	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	5350.00	47.14	54.00	-6.86	42.40	4.74	Average	145	110
2	5350.00	60.67	74.00	-13.33	55.93	4.74	Peak	145	110
3	5460.00	45.64	54.00	-8.36	40.75	4.89	Average	145	110
4	5460.00	67.89	74.00	-6.11	63.00	4.89	Peak	145	110
5	5470.00	47.13	54.00	-6.87	42.22	4.91	Average	145	110
6	5470.00	72.79	74.00	-1.21	67.88	4.91	Peak	145	110
7	11020.00	43.33	54.00	-10.67	28.64	14.69	Average	215	137
8	11020.00	54.63	74.00	-19.37	39.94	14.69	Peak	215	137

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

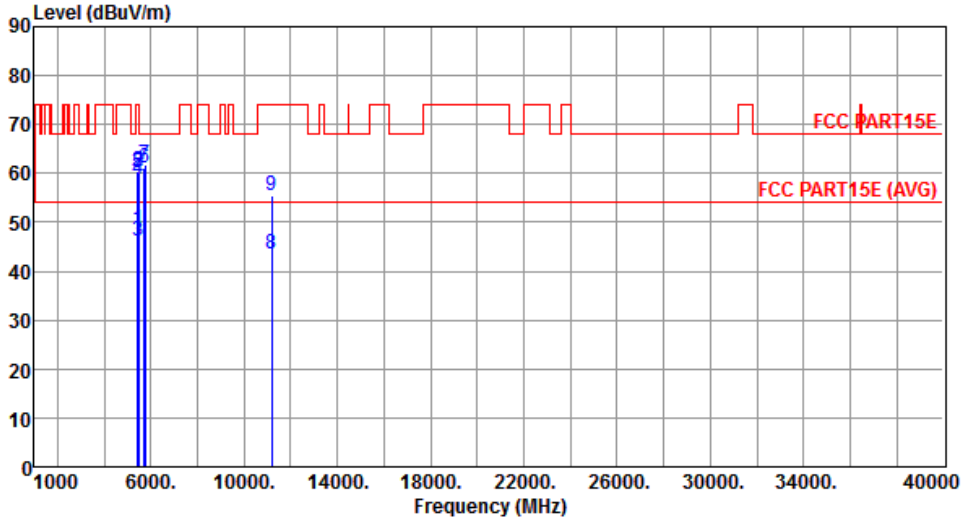
Modulation	VHT40	Test Freq. (MHz)	5590
Polarization	Horizontal		



	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	5430.00	49.05	54.00	-4.95	44.20	4.85	Average	165	289
2	5430.00	63.32	74.00	-10.68	58.47	4.85	Peak	165	289
3	5460.00	46.02	54.00	-7.98	41.13	4.89	Average	165	289
4	5460.00	59.10	74.00	-14.90	54.21	4.89	Peak	165	289
5	5470.00	59.58	68.20	-8.62	54.67	4.91	Peak	165	289
6	5725.00	58.84	68.20	-9.36	53.52	5.32	Peak	165	289
7	5750.00	59.56	68.20	-8.64	54.19	5.37	Peak	165	289
8	11180.00	45.45	54.00	-8.55	30.72	14.73	Average	120	101
9	11180.00	54.74	74.00	-19.26	40.01	14.73	Peak	120	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).

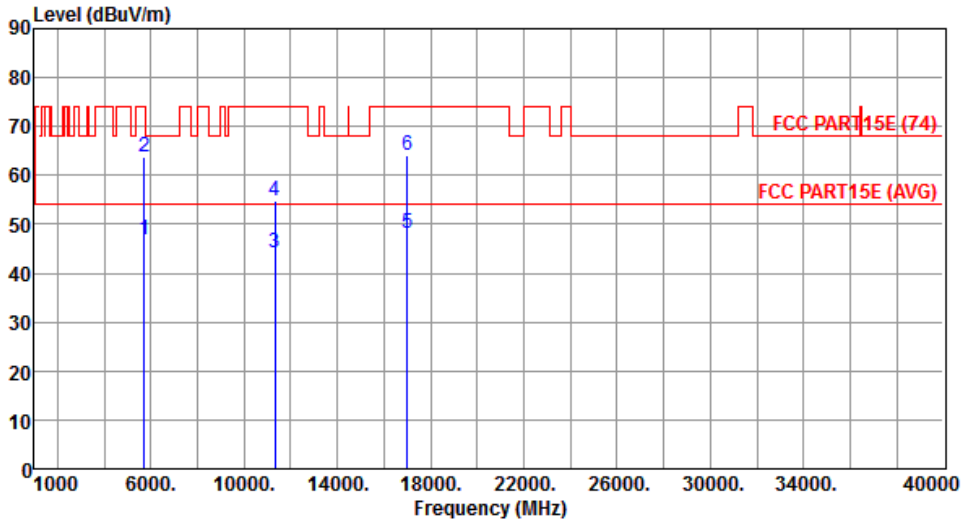
Modulation	VHT40	Test Freq. (MHz)	5590
Polarization	Vertical		



	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	48.63	54.00	-5.37	43.78	4.85	Average	204	2
2	5430.00	60.49	74.00	-13.51	55.64	4.85	Peak	204	2
3	5460.00	46.30	54.00	-7.70	41.41	4.89	Average	204	2
4	5460.00	58.78	74.00	-15.22	53.89	4.89	Peak	204	2
5	5470.00	60.19	68.20	-8.01	55.28	4.91	Peak	204	2
6	5725.00	61.18	68.20	-7.02	55.86	5.32	Peak	204	2
7	5750.00	61.93	68.20	-6.27	56.56	5.37	Peak	204	2
8	11180.00	43.55	54.00	-10.45	28.82	14.73	Average	190	286
9	11180.00	55.48	74.00	-18.52	40.75	14.73	Peak	190	286

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

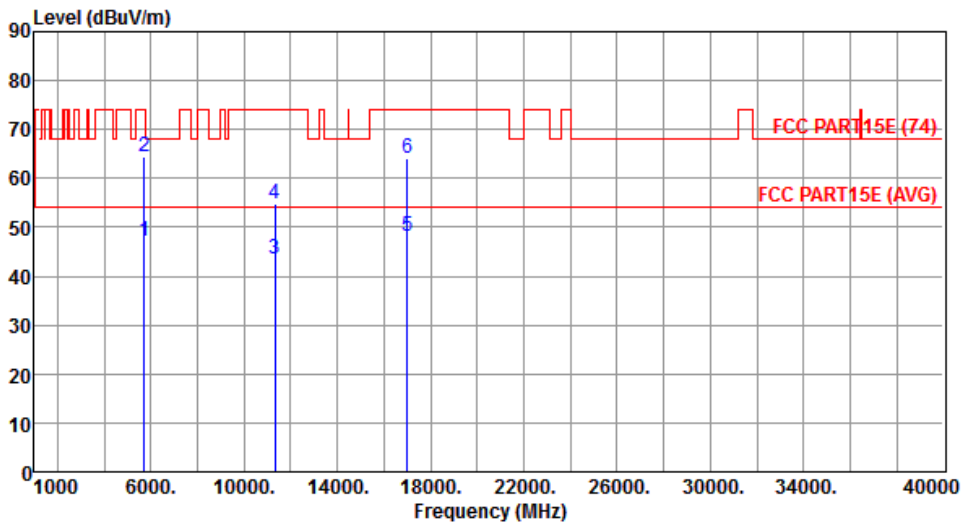
Modulation	VHT40	Test Freq. (MHz)	5670
Polarization	Horizontal		



	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	5725.00	46.71	54.00	-7.29	41.39	5.32	Average	137	294
2	5725.00	63.91	74.00	-10.09	58.59	5.32	Peak	137	294
3	11340.00	44.09	54.00	-9.91	29.31	14.78	Average	120	115
4	11340.00	54.85	74.00	-19.15	40.07	14.78	Peak	120	115
5	17010.00	48.11	54.00	-5.89	30.96	17.15	Average	100	319
6	17010.00	64.05	74.00	-9.95	46.90	17.15	Peak	100	319

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

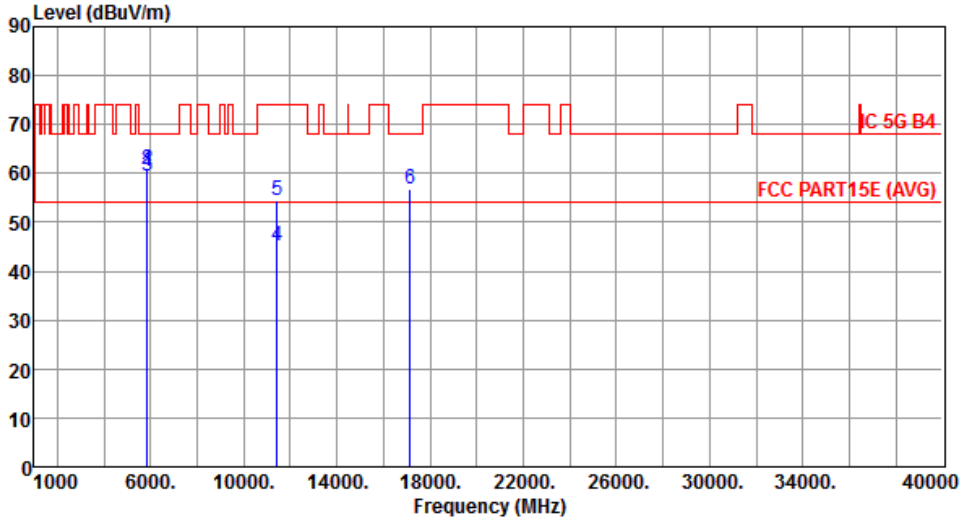
Modulation	VHT40	Test Freq. (MHz)	5670
Polarization	Vertical		



	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	5725.00	47.32	54.00	-6.68	42.00	5.32	Average	236	3
2	5725.00	64.29	74.00	-9.71	58.97	5.32	Peak	236	3
3	11340.00	43.59	54.00	-10.41	28.81	14.78	Average	179	68
4	11340.00	54.74	74.00	-19.26	39.96	14.78	Peak	179	68
5	17010.00	48.24	54.00	-5.76	31.09	17.15	Average	169	236
6	17010.00	64.13	74.00	-9.87	46.98	17.15	Peak	169	236

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

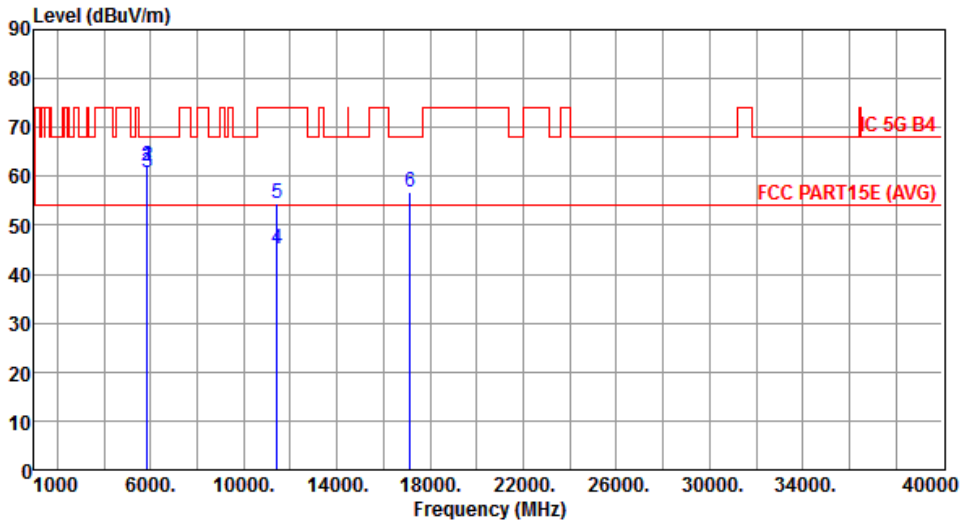
Modulation	VHT40	Test Freq. (MHz)	5710
Polarization	Horizontal		



	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	5850.00	60.30	78.20	-17.90	54.78	5.52	Peak	141	298
2	5860.00	60.67	68.20	-7.53	55.13	5.54	Peak	141	298
3	5870.00	59.50	68.20	-8.70	53.95	5.55	Peak	141	298
4	11420.00	45.16	54.00	-8.84	30.36	14.80	Average	150	94
5	11420.00	54.59	74.00	-19.41	39.79	14.80	Peak	150	94
6	17130.00	56.93	68.20	-11.27	39.48	17.45	Peak	100	267

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

Modulation	VHT40	Test Freq. (MHz)	5710
Polarization	Vertical		

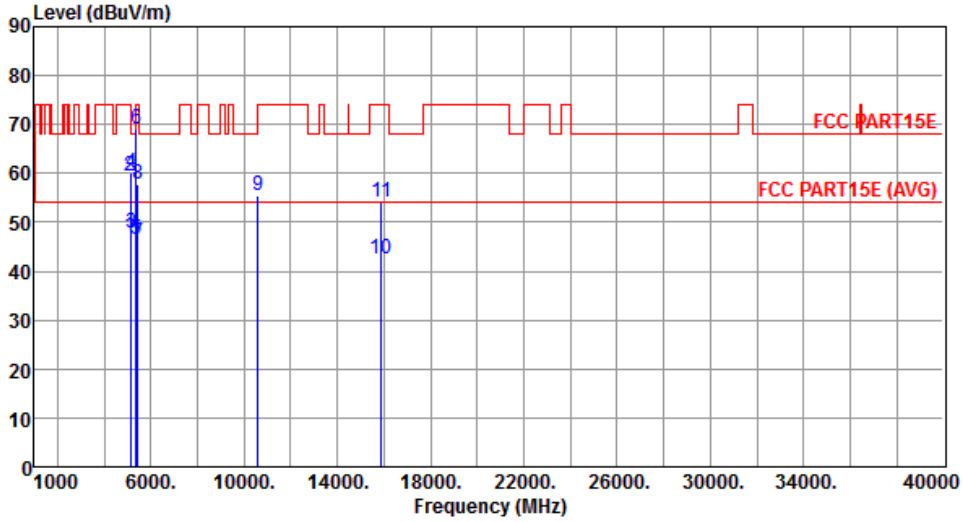


	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	5850.00	62.01	78.20	-16.19	56.49	5.52	Peak	188	7
2	5860.00	61.99	68.20	-6.21	56.45	5.54	Peak	188	7
3	5870.00	60.62	68.20	-7.58	55.07	5.55	Peak	188	7
4	11420.00	45.23	54.00	-8.77	30.43	14.80	Average	144	97
5	11420.00	54.63	74.00	-19.37	39.83	14.80	Peak	144	97
6	17130.00	56.84	68.20	-11.36	39.39	17.45	Peak	128	256

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

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

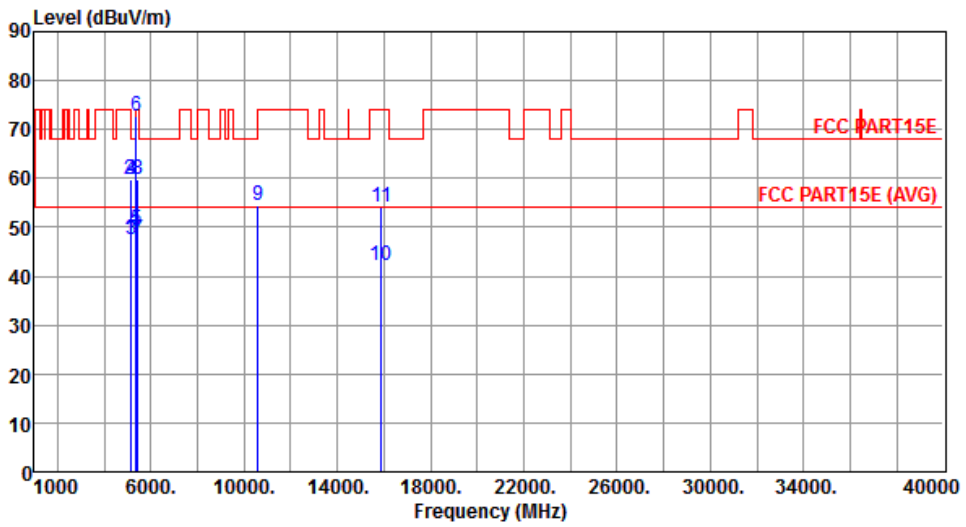
Modulation	VHT80	**Test Freq. (MHz)**	5290
Polarization	Horizontal		



	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	5130.00	47.30	54.00	-6.70	42.84	4.46	Average	215	286
2	5130.00	59.30	74.00	-14.70	54.84	4.46	Peak	215	286
3	5150.00	47.70	54.00	-6.30	43.22	4.48	Average	215	286
4	5150.00	60.05	74.00	-13.95	55.57	4.48	Peak	215	286
5	5350.00	46.63	54.00	-7.37	41.89	4.74	Average	215	286
6	5350.00	69.01	74.00	-4.99	64.27	4.74	Peak	215	286
7	5450.00	45.88	54.00	-8.12	41.00	4.88	Average	215	286
8	5450.00	57.92	74.00	-16.08	53.04	4.88	Peak	215	286
9	10580.00	55.35	68.20	-12.85	41.25	14.10	Peak	142	228
10	15870.00	42.67	54.00	-11.33	28.80	13.87	Average	172	245
11	15870.00	54.27	74.00	-19.73	40.40	13.87	Peak	172	245

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

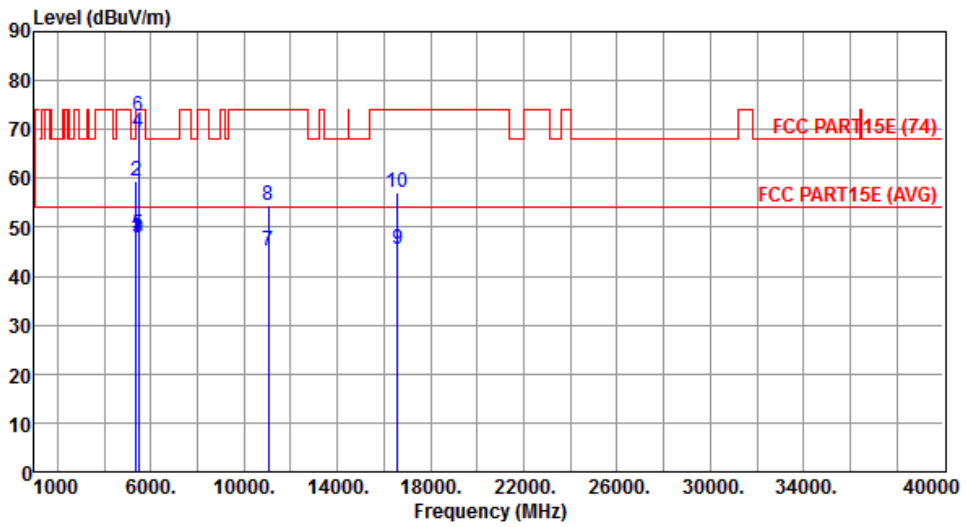
Modulation	VHT80	Test Freq. (MHz)	5290
Polarization	Vertical		



	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	5130.00	47.36	54.00	-6.64	42.90	4.46	Average	216	12
2	5130.00	59.74	74.00	-14.26	55.28	4.46	Peak	216	12
3	5150.00	47.54	54.00	-6.46	43.06	4.48	Average	216	12
4	5150.00	59.72	74.00	-14.28	55.24	4.48	Peak	216	12
5	5350.00	49.44	54.00	-4.56	44.70	4.74	Average	216	12
6	5350.00	72.76	74.00	-1.24	68.02	4.74	Peak	216	12
7	5450.00	47.48	54.00	-6.52	42.60	4.88	Average	216	12
8	5450.00	59.78	74.00	-14.22	54.90	4.88	Peak	216	12
9	10580.00	54.49	68.20	-13.71	40.39	14.10	Peak	129	85
10	15870.00	42.02	54.00	-11.98	28.15	13.87	Average	175	244
11	15870.00	54.25	74.00	-19.75	40.38	13.87	Peak	175	244

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

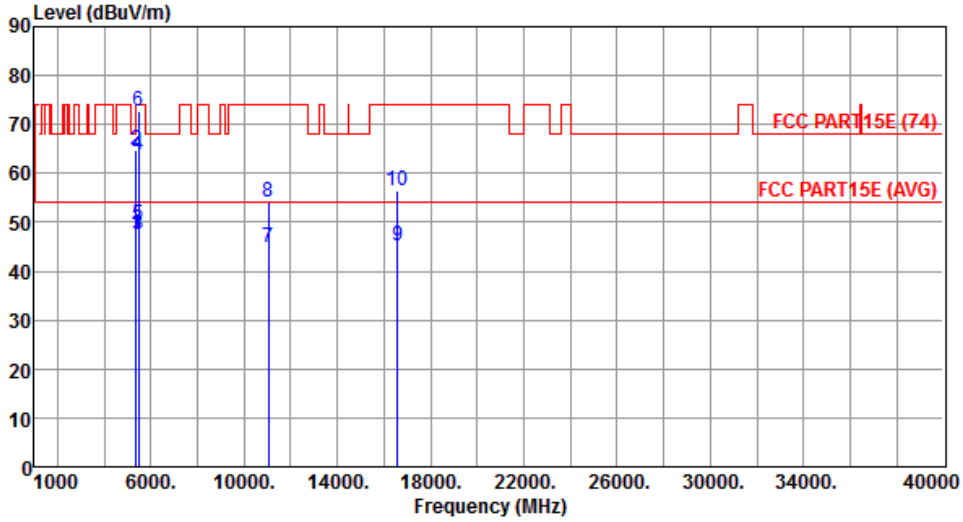
Modulation	VHT80	Test Freq. (MHz)	5530
Polarization	Horizontal		



	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	5370.00	47.90	54.00	-6.10	43.13	4.77	Average	168	296
2	5370.00	59.53	74.00	-14.47	54.76	4.77	Peak	168	296
3	5460.00	47.78	54.00	-6.22	42.89	4.89	Average	168	296
4	5460.00	69.35	74.00	-4.65	64.46	4.89	Peak	168	296
5	5470.00	48.36	54.00	-5.64	43.45	4.91	Average	168	296
6	5470.00	72.66	74.00	-1.34	67.75	4.91	Peak	168	296
7	11060.00	45.06	54.00	-8.94	30.36	14.70	Average	132	89
8	11060.00	54.42	74.00	-19.58	39.72	14.70	Peak	132	89
9	16590.00	45.48	54.00	-8.52	29.39	16.09	Average	100	268
10	16590.00	56.98	74.00	-17.02	40.89	16.09	Peak	100	268

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

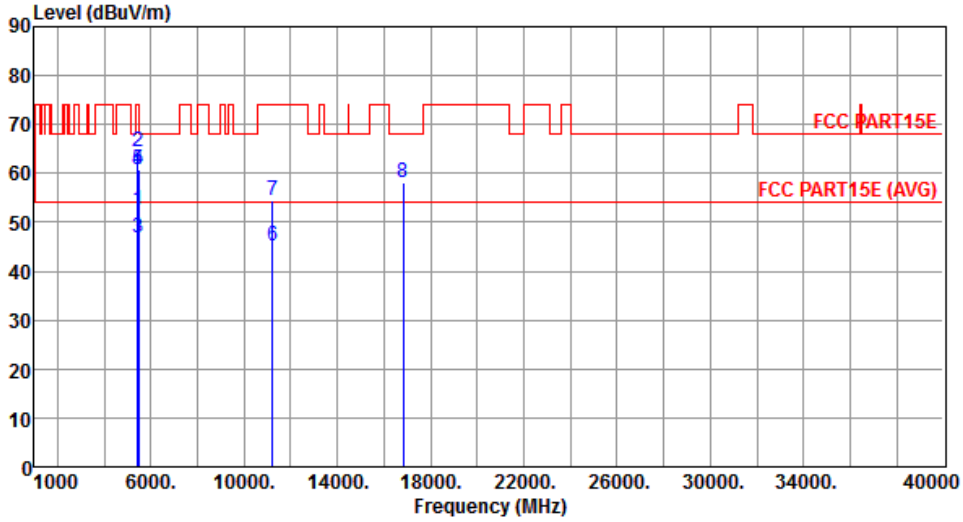
Modulation	VHT80	Test Freq. (MHz)	5530
Polarization	Vertical		



	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	5370.00	47.54	54.00	-6.46	42.77	4.77	Average	202	7
2	5370.00	64.83	74.00	-9.17	60.06	4.77	Peak	202	7
3	5460.00	47.44	54.00	-6.56	42.55	4.89	Average	202	7
4	5460.00	63.81	74.00	-10.19	58.92	4.89	Peak	202	7
5	5470.00	49.58	54.00	-4.42	44.67	4.91	Average	202	7
6	5470.00	72.73	74.00	-1.27	67.82	4.91	Peak	202	7
7	11060.00	44.78	54.00	-9.22	30.08	14.70	Average	134	94
8	11060.00	54.13	74.00	-19.87	39.43	14.70	Peak	134	94
9	16590.00	45.26	54.00	-8.74	29.17	16.09	Average	162	264
10	16590.00	56.61	74.00	-17.39	40.52	16.09	Peak	162	264

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

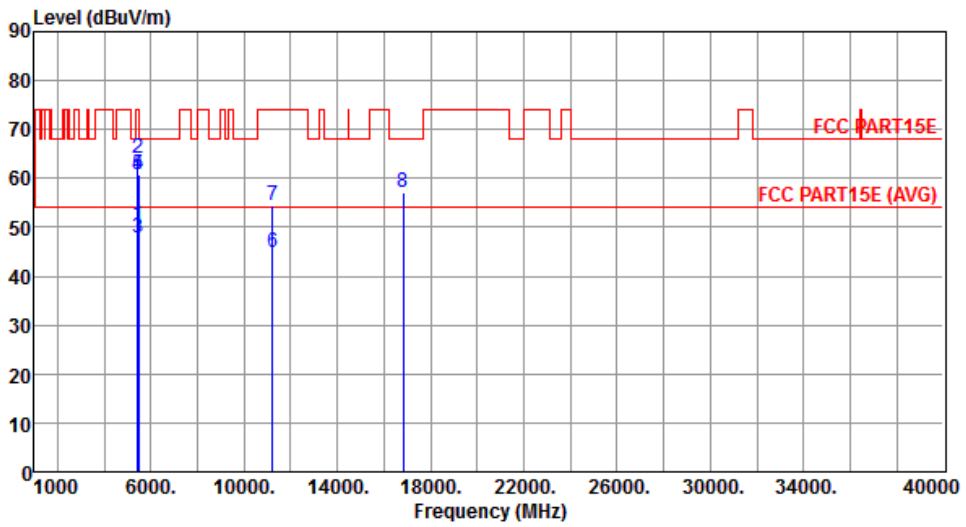
Modulation	VHT80	Test Freq. (MHz)	5610
Polarization	Horizontal		



	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	5450.00	52.35	54.00	-1.65	47.47	4.88	Average	171	304
2	5450.00	64.56	74.00	-9.44	59.68	4.88	Peak	171	304
3	5460.00	46.82	54.00	-7.18	41.93	4.89	Average	171	304
4	5460.00	60.76	74.00	-13.24	55.87	4.89	Peak	171	304
5	5470.00	60.83	68.20	-7.37	55.92	4.91	Peak	171	304
6	11220.00	45.17	54.00	-8.83	30.43	14.74	Average	143	105
7	11220.00	54.56	74.00	-19.44	39.82	14.74	Peak	143	105
8	16830.00	58.04	68.20	-10.16	41.35	16.69	Peak	109	261

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

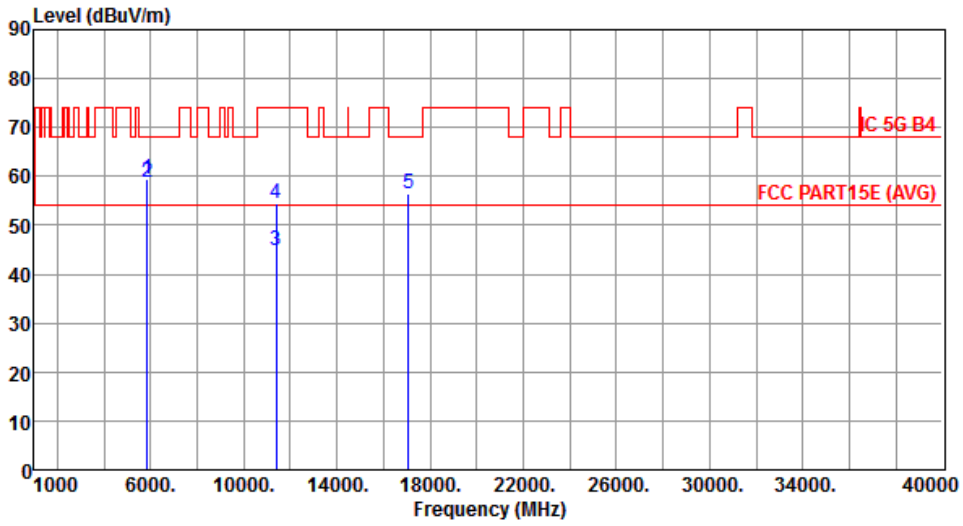
Modulation	VHT80	Test Freq. (MHz)	5610
Polarization	Vertical		



	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	50.38	54.00	-3.62	45.50	4.88	Average	205	3
2	5450.00	63.97	74.00	-10.03	59.09	4.88	Peak	205	3
3	5460.00	47.75	54.00	-6.25	42.86	4.89	Average	205	3
4	5460.00	60.70	74.00	-13.30	55.81	4.89	Peak	205	3
5	5470.00	60.83	68.20	-7.37	55.92	4.91	Peak	205	3
6	11220.00	44.86	54.00	-9.14	30.12	14.74	Average	142	101
7	11220.00	54.41	74.00	-19.59	39.67	14.74	Peak	142	101
8	16830.00	56.98	68.20	-11.22	40.29	16.69	Peak	171	275

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

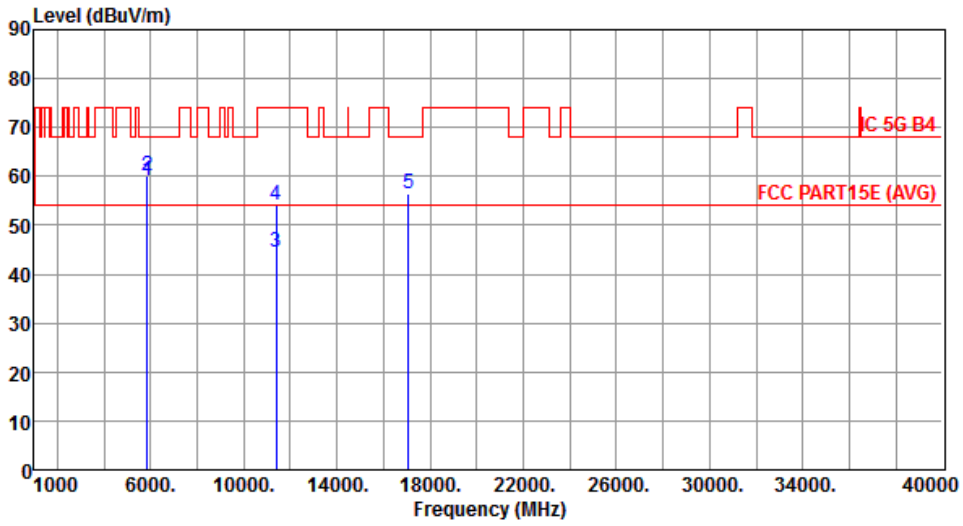
Modulation	VHT80	Test Freq. (MHz)	5690
Polarization	Horizontal		



	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	5850.00	59.34	78.20	-18.86	53.82	5.52	Peak	145	295
2	5860.00	58.63	68.20	-9.57	53.09	5.54	Peak	145	295
3	11380.00	44.86	54.00	-9.14	30.07	14.79	Average	148	96
4	11380.00	54.31	74.00	-19.69	39.52	14.79	Peak	148	96
5	17070.00	56.62	68.20	-11.58	39.31	17.31	Peak	100	261

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

Modulation	VHT80	Test Freq. (MHz)	5690
Polarization	Vertical		



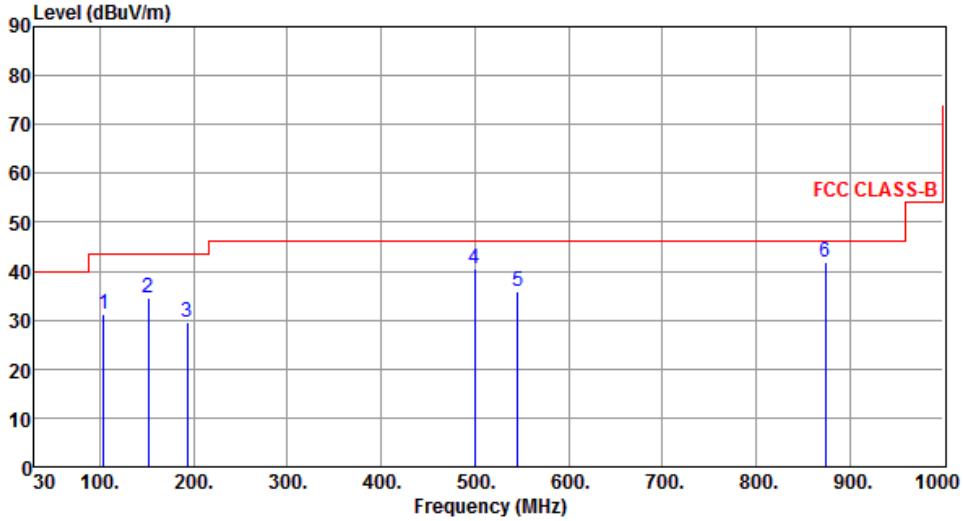
	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	5850.00	59.22	78.20	-18.98	53.70	5.52	Peak	222	10
2	5860.00	60.14	68.20	-8.06	54.60	5.54	Peak	222	10
3	11380.00	44.63	54.00	-9.37	29.84	14.79	Average	141	102
4	11380.00	54.02	74.00	-19.98	39.23	14.79	Peak	141	102
5	17070.00	56.38	68.20	-11.82	39.07	17.31	Peak	133	260

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

Beamforming mode

3.5.9 Transmitter Radiated Unwanted Emissions (Below 1GHz)

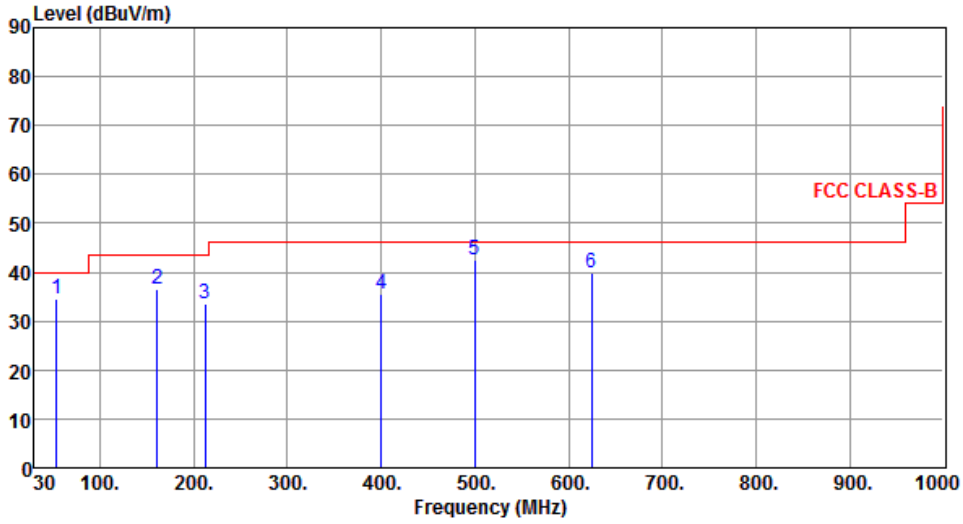
Modulation	VHT40	**Test Freq. (MHz)**	5310
Polarization	Horizontal		



	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	104.32	31.16	43.50	-12.34	43.29	-12.13	Peak	---	---
2	151.65	34.70	43.50	-8.80	42.87	-8.17	Peak	---	---
3	193.43	29.66	43.50	-13.84	40.66	-11.00	Peak	---	---
4	500.11	40.58	46.00	-5.42	43.39	-2.81	Peak	---	---
5	545.65	35.83	46.00	-10.17	37.77	-1.94	Peak	---	---
6	874.35	41.75	46.00	-4.25	37.98	3.77	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)	5310
Polarization	Vertical		

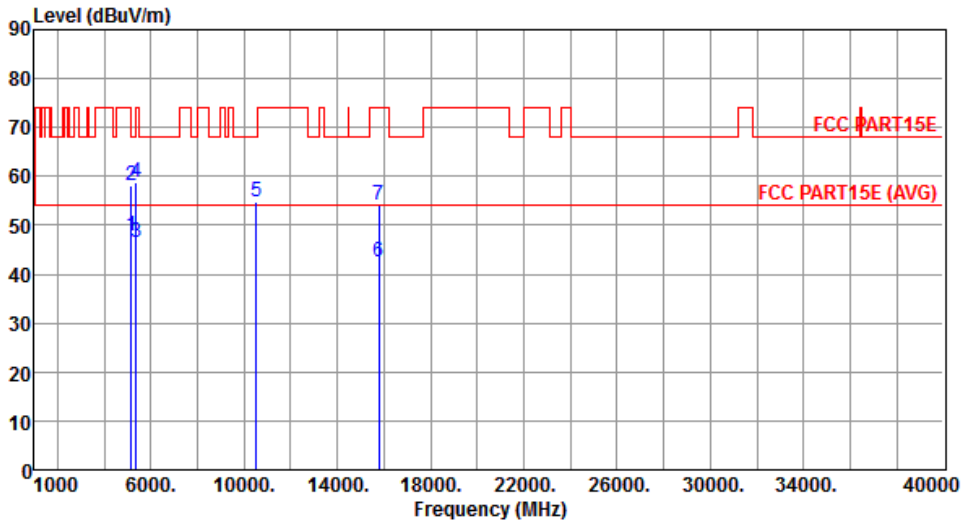


	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	53.33	34.61	40.00	-5.39	42.68	-8.07	QP	100	333
2	160.82	36.68	43.50	-6.82	44.79	-8.11	Peak	---	---
3	211.86	33.42	43.50	-10.08	44.12	-10.70	Peak	---	---
4	399.99	35.66	46.00	-10.34	40.65	-4.99	Peak	---	---
5	500.00	42.65	46.00	-3.35	45.46	-2.81	QP	100	59
6	624.98	39.97	46.00	-6.03	40.32	-0.35	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

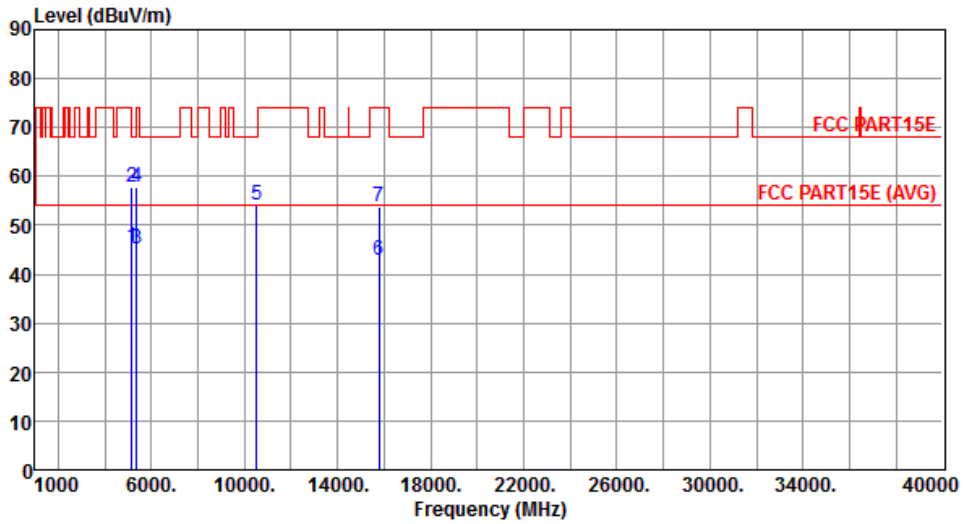
Modulation	VHT20	**Test Freq. (MHz)**	5260
Polarization	Horizontal		



	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	47.96	54.00	-6.04	43.48	4.48	Average	100	17
2	5150.00	58.02	74.00	-15.98	53.54	4.48	Peak	100	17
3	5350.00	46.58	54.00	-7.42	41.84	4.74	Average	100	17
4	5350.00	58.66	74.00	-15.34	53.92	4.74	Peak	100	17
5	10520.00	54.86	68.20	-13.34	40.85	14.01	Peak	100	297
6	15780.00	42.65	54.00	-11.35	28.64	14.01	Average	135	208
7	15780.00	54.29	74.00	-19.71	40.28	14.01	Peak	135	208

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

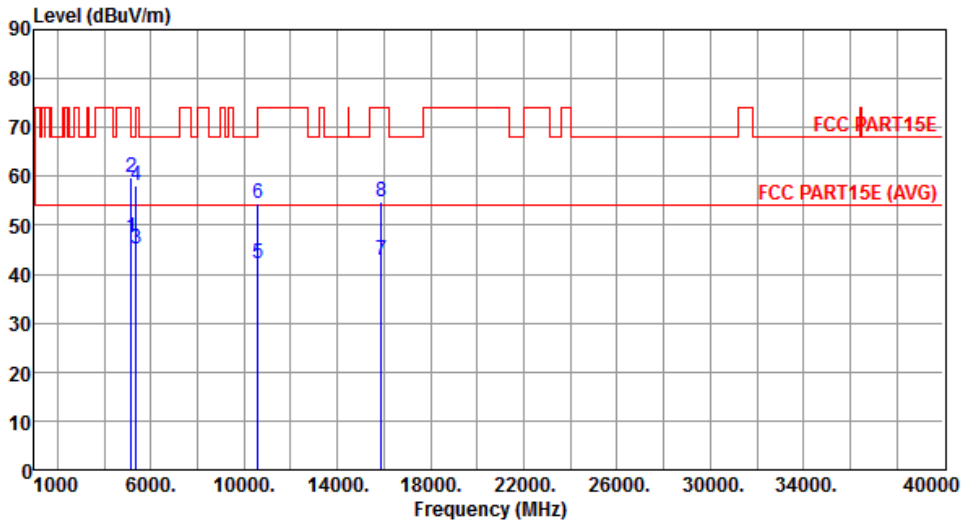
Modulation	VHT20	Test Freq. (MHz)	5260
Polarization	Vertical		



	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	5150.00	45.39	54.00	-8.61	40.91	4.48	Average	105	19
2	5150.00	57.66	74.00	-16.34	53.18	4.48	Peak	105	19
3	5350.00	45.31	54.00	-8.69	40.57	4.74	Average	105	19
4	5350.00	57.76	74.00	-16.24	53.02	4.74	Peak	105	19
5	10520.00	54.15	68.20	-14.05	40.14	14.01	Peak	135	18
6	15780.00	42.76	54.00	-11.24	28.75	14.01	Average	121	143
7	15780.00	53.87	74.00	-20.13	39.86	14.01	Peak	121	143

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

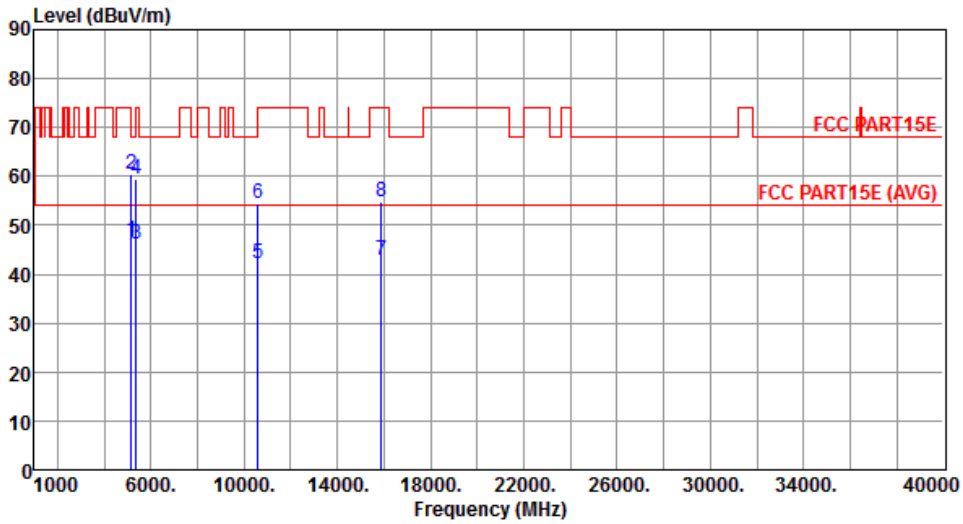
Modulation	VHT20	Test Freq. (MHz)	5300
Polarization	Horizontal		



	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	5150.00	47.59	54.00	-6.41	43.11	4.48	Average	106	294
2	5150.00	59.83	74.00	-14.17	55.35	4.48	Peak	106	294
3	5350.00	45.22	54.00	-8.78	40.48	4.74	Average	106	294
4	5350.00	58.23	74.00	-15.77	53.49	4.74	Peak	106	294
5	10600.00	42.28	54.00	-11.72	28.16	14.12	Average	191	194
6	10600.00	54.48	74.00	-19.52	40.36	14.12	Peak	191	194
7	15900.00	42.84	54.00	-11.16	29.02	13.82	Average	120	241
8	15900.00	54.85	74.00	-19.15	41.03	13.82	Peak	120	241

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

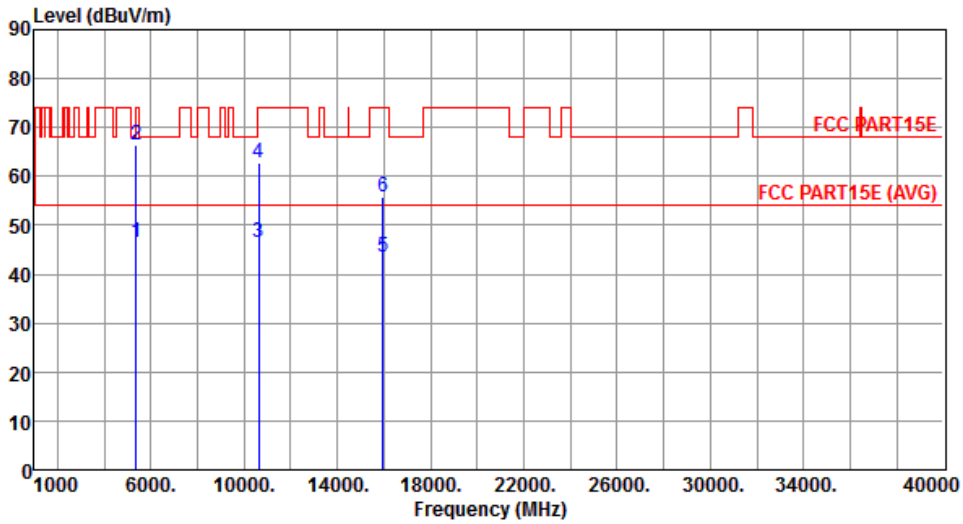
Modulation	VHT20	Test Freq. (MHz)	5300
Polarization	Vertical		



	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	5150.00	46.87	54.00	-7.13	42.39	4.48	Average	103	285
2	5150.00	60.36	74.00	-13.64	55.88	4.48	Peak	103	285
3	5350.00	46.16	54.00	-7.84	41.42	4.74	Average	103	285
4	5350.00	59.32	74.00	-14.68	54.58	4.74	Peak	103	285
5	10600.00	42.23	54.00	-11.77	28.11	14.12	Average	189	178
6	10600.00	54.40	74.00	-19.60	40.28	14.12	Peak	189	178
7	15900.00	42.82	54.00	-11.18	29.00	13.82	Average	100	242
8	15900.00	54.74	74.00	-19.26	40.92	13.82	Peak	100	242

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

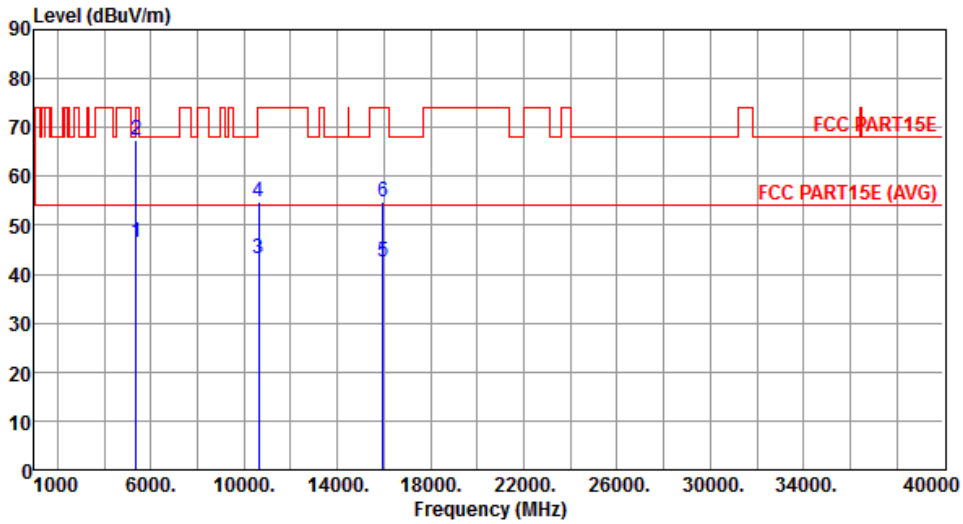
Modulation	VHT20	Test Freq. (MHz)	5320
Polarization	Horizontal		



	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	5350.00	46.41	54.00	-7.59	41.67	4.74	Average	100	297
2	5350.00	66.53	74.00	-7.47	61.79	4.74	Peak	100	297
3	10640.00	46.55	54.00	-7.45	32.37	14.18	Average	215	143
4	10640.00	62.93	74.00	-11.07	48.75	14.18	Peak	215	143
5	15960.00	43.58	54.00	-10.42	29.85	13.73	Average	100	248
6	15960.00	55.69	74.00	-18.31	41.96	13.73	Peak	100	248

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

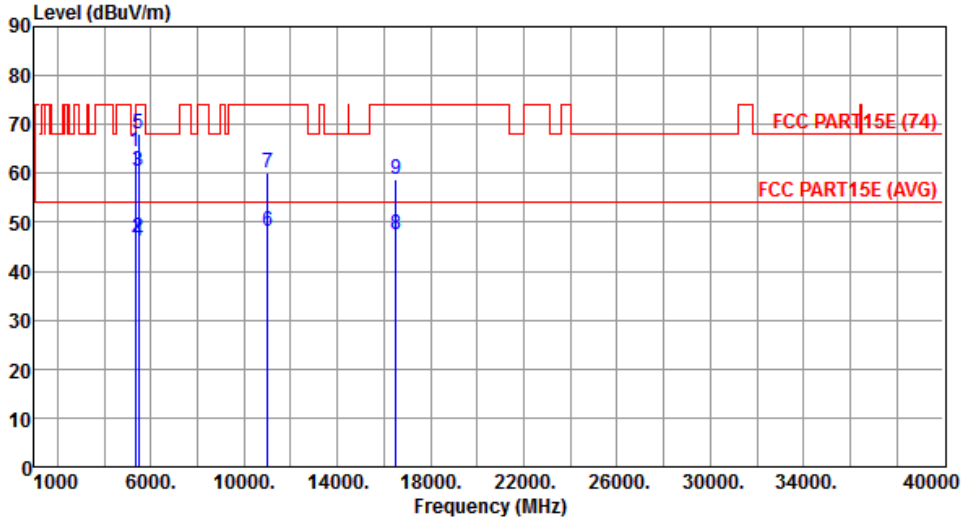
Modulation	VHT20	Test Freq. (MHz)	5320
Polarization	Vertical		



	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	5350.00	46.60	54.00	-7.40	41.86	4.74	Average	109	19
2	5350.00	67.38	74.00	-6.62	62.64	4.74	Peak	109	19
3	10640.00	43.03	54.00	-10.97	28.85	14.18	Average	182	191
4	10640.00	54.92	74.00	-19.08	40.74	14.18	Peak	182	191
5	15960.00	42.59	54.00	-11.41	28.86	13.73	Average	121	249
6	15960.00	54.88	74.00	-19.12	41.15	13.73	Peak	121	249

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

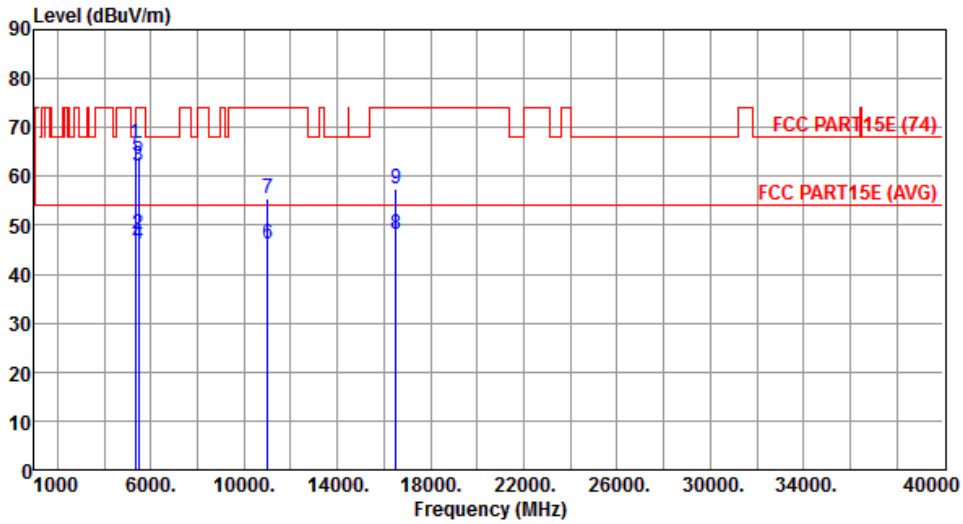
Modulation	VHT20	Test Freq. (MHz)	5500
Polarization	Horizontal		



	Freq. 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	64.41	68.20	-3.79	59.69	4.72	Peak	158	300
2	5460.00	46.88	54.00	-7.12	41.99	4.89	Average	158	300
3	5460.00	60.54	74.00	-13.46	55.65	4.89	Peak	158	300
4	5470.00	46.31	54.00	-7.69	41.40	4.91	Average	158	300
5	5470.00	68.07	74.00	-5.93	63.16	4.91	Peak	158	300
6	11000.00	48.16	54.00	-5.84	33.48	14.68	Average	140	253
7	11000.00	60.22	74.00	-13.78	45.54	14.68	Peak	140	253
8	16500.00	47.42	54.00	-6.58	31.56	15.86	Average	131	295
9	16500.00	58.63	74.00	-15.37	42.77	15.86	Peak	131	295

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

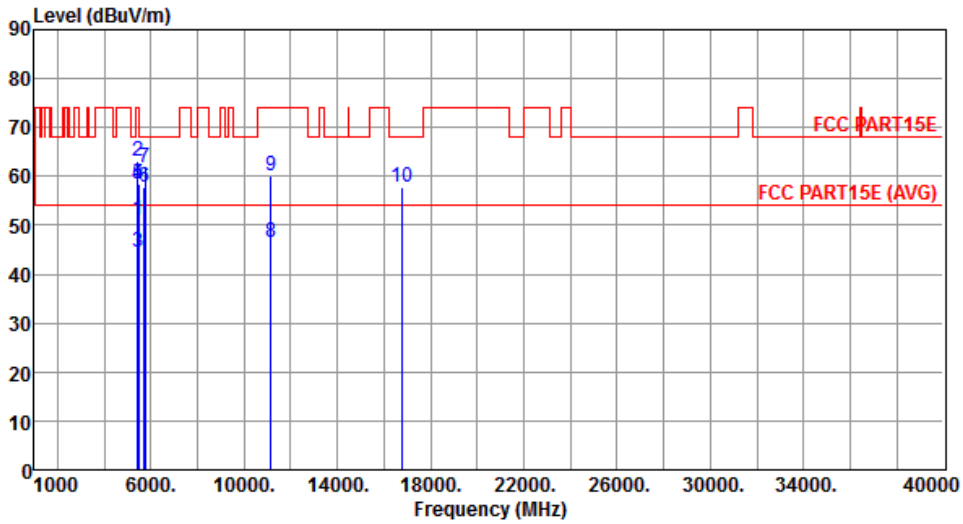
Modulation	VHT20	Test Freq. (MHz)	5500
Polarization	Vertical		



	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	66.69	68.20	-1.51	61.97	4.72	Peak	129	18
2	5460.00	48.17	54.00	-5.83	43.28	4.89	Average	129	18
3	5460.00	62.04	74.00	-11.96	57.15	4.89	Peak	139	18
4	5470.00	46.04	54.00	-7.96	41.13	4.91	Average	171	95
5	5470.00	64.16	74.00	-9.84	59.25	4.91	Peak	171	95
6	11000.00	46.11	54.00	-7.89	31.43	14.68	Average	131	194
7	11000.00	55.43	74.00	-18.57	40.75	14.68	Peak	131	194
8	16500.00	48.14	54.00	-5.86	32.28	15.86	Average	123	208
9	16500.00	57.54	74.00	-16.46	41.68	15.86	Peak	123	208

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

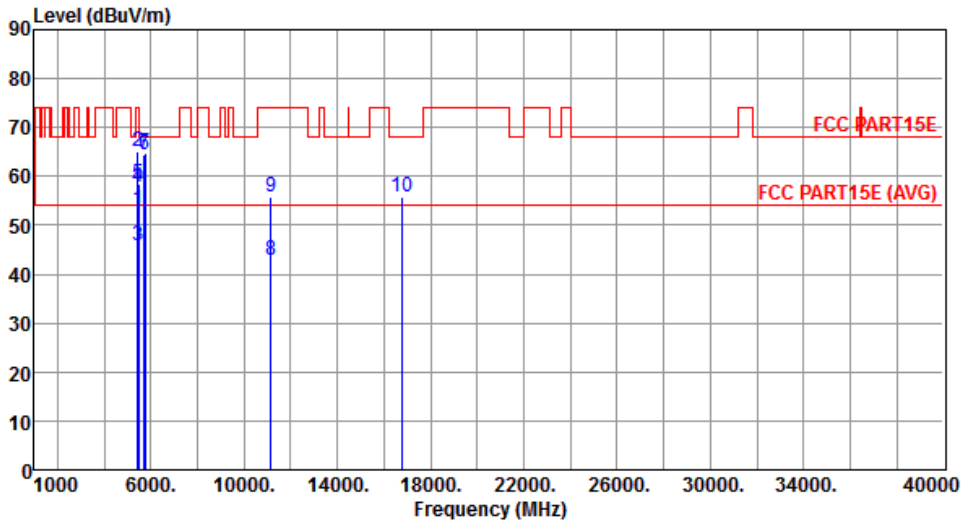
Modulation	VHT20	Test Freq. (MHz)	5580
Polarization	Horizontal		



	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	5420.00	51.14	54.00	-2.86	46.29	4.85	Average	162	300
2	5420.00	63.09	74.00	-10.91	58.24	4.85	Peak	162	300
3	5460.00	44.49	54.00	-9.51	39.60	4.89	Average	162	300
4	5460.00	58.34	74.00	-15.66	53.45	4.89	Peak	162	300
5	5470.00	58.50	68.20	-9.70	53.59	4.91	Peak	162	300
6	5725.00	57.91	68.20	-10.29	52.59	5.32	Peak	162	300
7	5740.00	61.92	68.20	-6.28	56.58	5.34	Peak	162	300
8	11160.00	46.65	54.00	-7.35	31.93	14.72	Average	118	265
9	11160.00	60.20	74.00	-13.80	45.48	14.72	Peak	118	265
10	16740.00	57.85	68.20	-10.35	41.37	16.48	Peak	100	214

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

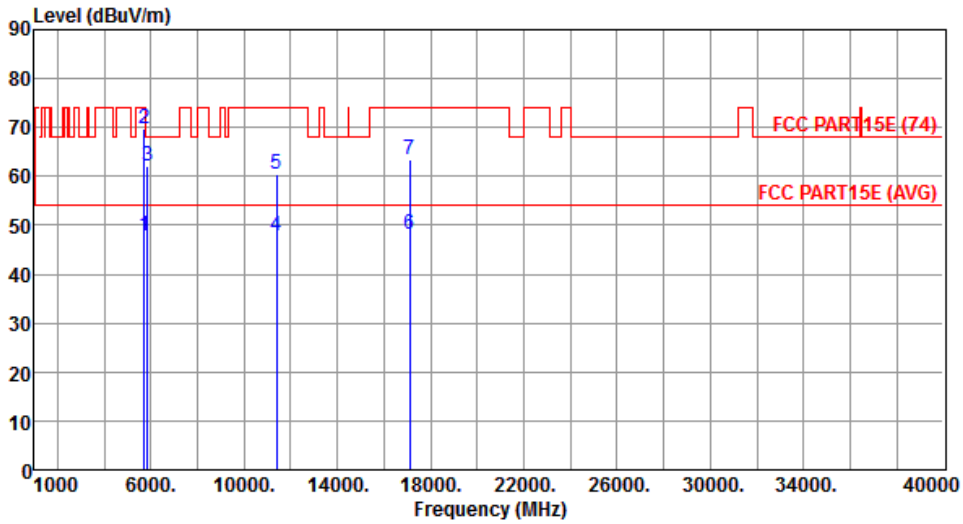
Modulation	VHT20	Test Freq. (MHz)	5580
Polarization	Vertical		



	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	52.98	54.00	-1.02	48.13	4.85	Average	124	325
2	5420.00	65.24	74.00	-8.76	60.39	4.85	Peak	124	325
3	5460.00	45.73	54.00	-8.27	40.84	4.89	Average	124	325
4	5460.00	57.89	74.00	-16.11	53.00	4.89	Peak	124	325
5	5470.00	58.53	68.20	-9.67	53.62	4.91	Peak	124	325
6	5725.00	64.55	68.20	-3.65	59.23	5.32	Peak	124	325
7	5740.00	64.78	68.20	-3.42	59.44	5.34	Peak	124	325
8	11160.00	42.84	54.00	-11.16	28.12	14.72	Average	145	66
9	11160.00	55.66	74.00	-18.34	40.94	14.72	Peak	145	66
10	16740.00	55.68	68.20	-12.52	39.20	16.48	Peak	121	275

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

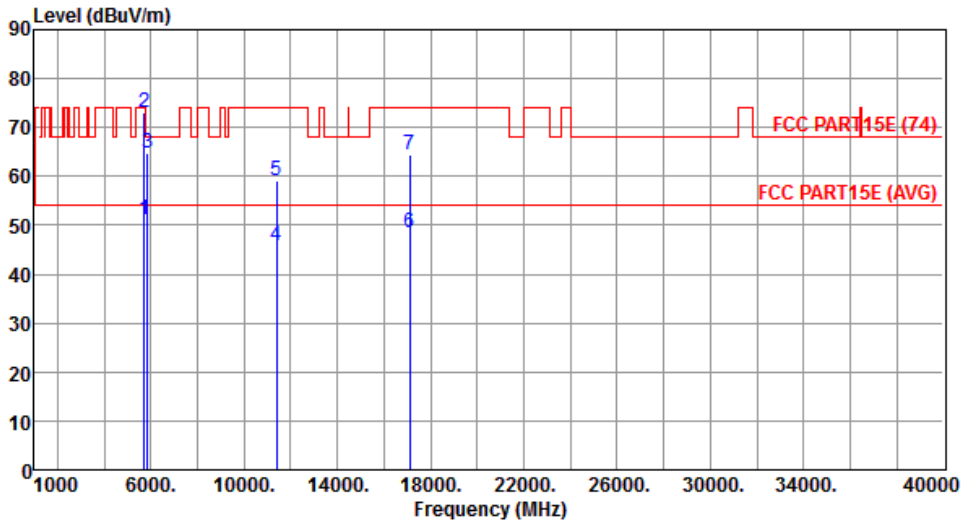
Modulation	VHT20	Test Freq. (MHz)	5700
Polarization	Horizontal		



	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	5725.00	47.88	54.00	-6.12	42.56	5.32	Average	126	306
2	5725.00	69.71	74.00	-4.29	64.39	5.32	Peak	126	306
3	5860.00	62.18	68.20	-6.02	56.64	5.54	Peak	126	306
4	11400.00	47.68	54.00	-6.32	32.89	14.79	Average	132	260
5	11400.00	60.33	74.00	-13.67	45.54	14.79	Peak	132	260
6	17100.00	48.19	54.00	-5.81	30.82	17.37	Average	100	299
7	17100.00	63.46	74.00	-10.54	46.09	17.37	Peak	100	299

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

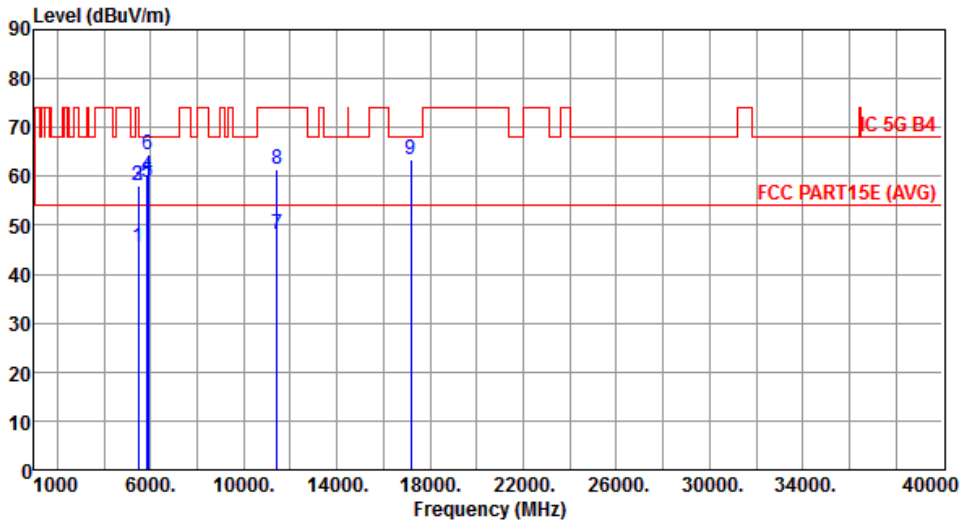
Modulation	VHT20	Test Freq. (MHz)	5700
Polarization	Vertical		



	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	5725.00	51.12	54.00	-2.88	45.80	5.32	Average	100	8
2	5725.00	72.99	74.00	-1.01	67.67	5.32	Peak	100	8
3	5860.00	64.62	68.20	-3.58	59.08	5.54	Peak	100	8
4	11400.00	45.87	54.00	-8.13	31.08	14.79	Average	142	306
5	11400.00	59.16	74.00	-14.84	44.37	14.79	Peak	142	306
6	17100.00	48.42	54.00	-5.58	31.05	17.37	Average	116	211
7	17100.00	64.36	74.00	-9.64	46.99	17.37	Peak	116	211

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

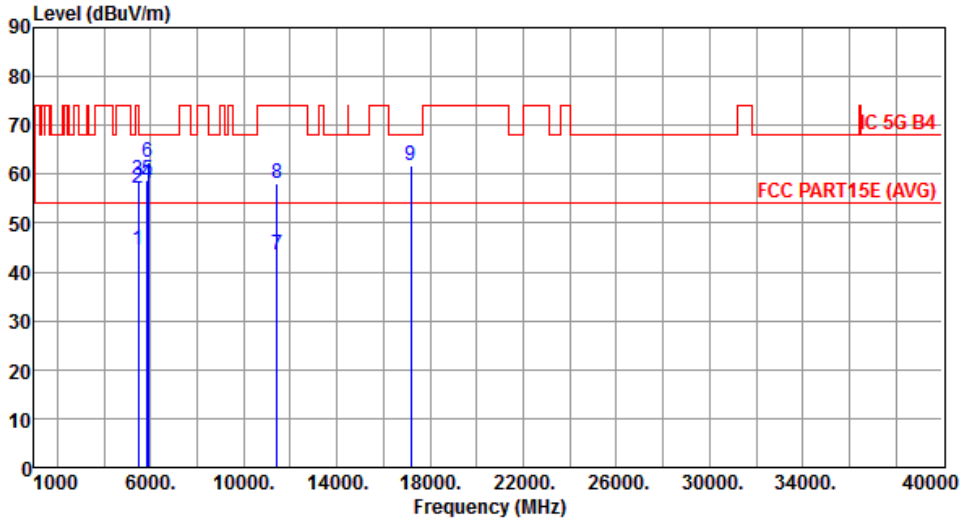
Modulation	VHT20	Test Freq. (MHz)	5720
Polarization	Horizontal		



	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	5460.00	45.35	54.00	-8.65	40.46	4.89	Average	111	10
2	5460.00	58.00	74.00	-16.00	53.11	4.89	Peak	111	10
3	5470.00	58.03	68.20	-10.17	53.12	4.91	Peak	111	10
4	5850.00	60.22	78.20	-17.98	54.70	5.52	Peak	111	10
5	5860.00	58.65	68.20	-9.55	53.11	5.54	Peak	111	10
6	5880.00	64.53	68.20	-3.67	58.96	5.57	Peak	111	10
7	11440.00	48.18	54.00	-5.82	33.38	14.80	Average	113	252
8	11440.00	61.43	74.00	-12.57	46.63	14.80	Peak	113	252
9	17160.00	63.36	68.20	-4.84	45.84	17.52	Peak	100	211

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

Modulation	VHT20	Test Freq. (MHz)	5720
Polarization	Vertical		

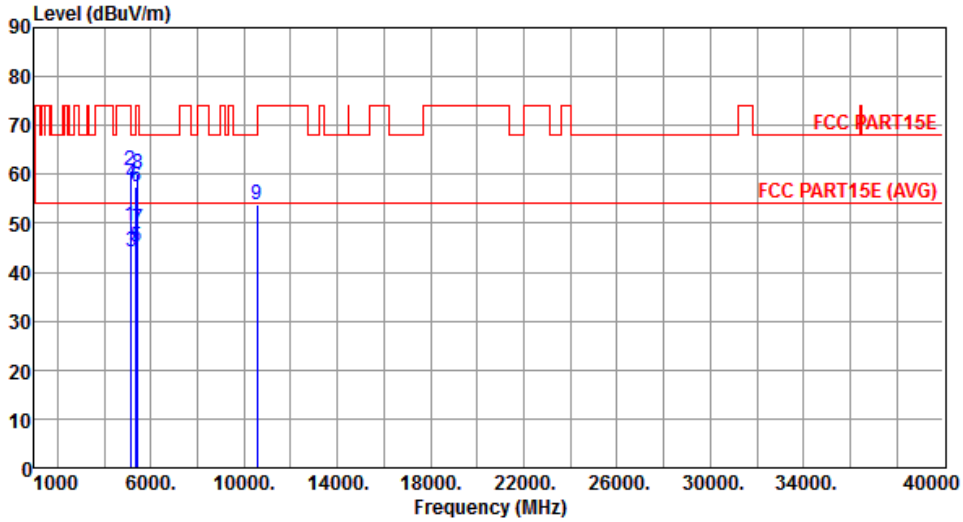


	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	5460.00	44.52	54.00	-9.48	39.63	4.89	Average	100	6
2	5460.00	57.23	74.00	-16.77	52.34	4.89	Peak	100	6
3	5470.00	58.90	68.20	-9.30	53.99	4.91	Peak	100	6
4	5850.00	57.96	78.20	-20.24	52.44	5.52	Peak	100	6
5	5860.00	58.82	68.20	-9.38	53.28	5.54	Peak	100	6
6	5880.00	62.60	68.20	-5.60	57.03	5.57	Peak	100	6
7	11440.00	43.64	54.00	-10.36	28.84	14.80	Average	132	289
8	11440.00	58.13	74.00	-15.87	43.33	14.80	Peak	132	289
9	17160.00	61.93	68.20	-6.27	44.41	17.52	Peak	114	215

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

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

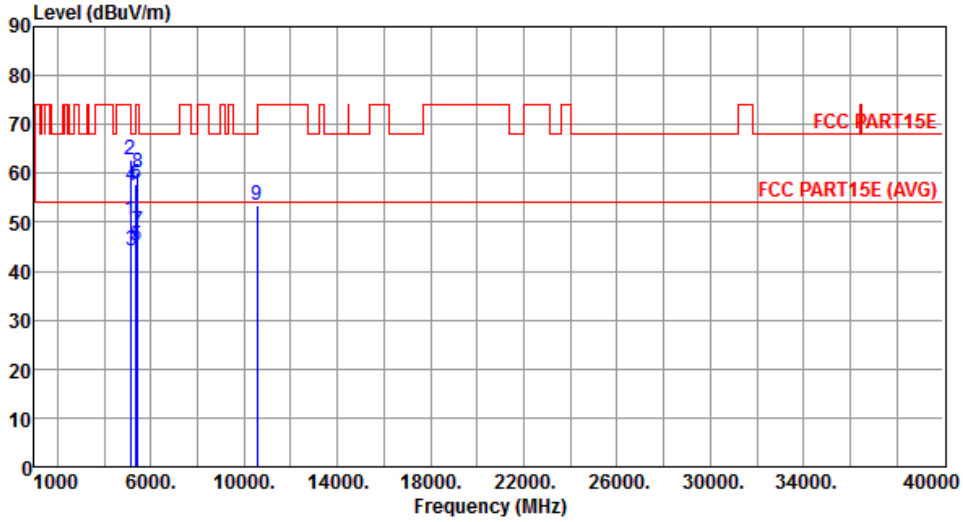
Modulation	VHT40	**Test Freq. (MHz)**	5270
Polarization	Horizontal		



	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	49.40	54.00	-4.60	44.96	4.44	Average	108	298
2	5110.00	60.83	74.00	-13.17	56.39	4.44	Peak	108	298
3	5150.00	44.29	54.00	-9.71	39.81	4.48	Average	108	298
4	5150.00	58.00	74.00	-16.00	53.52	4.48	Peak	108	298
5	5350.00	45.13	54.00	-8.87	40.39	4.74	Average	108	298
6	5350.00	57.53	74.00	-16.47	52.79	4.74	Peak	108	298
7	5430.00	48.71	54.00	-5.29	43.86	4.85	Average	108	298
8	5430.00	60.17	74.00	-13.83	55.32	4.85	Peak	108	298
9	10540.00	53.64	68.20	-14.56	39.60	14.04	Peak	115	274

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

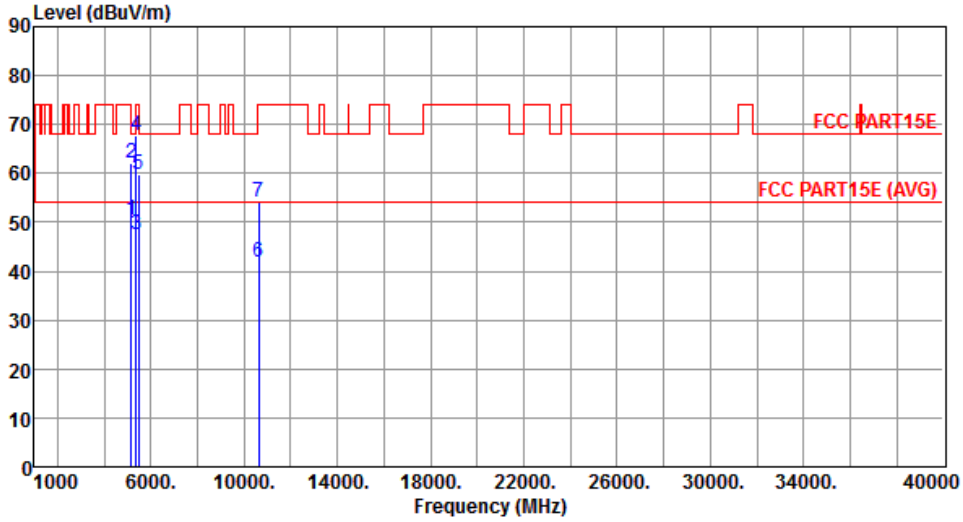
Modulation	VHT40	Test Freq. (MHz)	5270
Polarization	Vertical		



	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	50.56	54.00	-3.44	46.12	4.44	Average	100	21
2	5110.00	62.69	74.00	-11.31	58.25	4.44	Peak	100	21
3	5150.00	44.25	54.00	-9.75	39.77	4.48	Average	100	21
4	5150.00	57.33	74.00	-16.67	52.85	4.48	Peak	100	21
5	5350.00	45.01	54.00	-8.99	40.27	4.74	Average	100	21
6	5350.00	57.86	74.00	-16.14	53.12	4.74	Peak	100	21
7	5430.00	48.26	54.00	-5.74	43.41	4.85	Average	100	21
8	5430.00	60.17	74.00	-13.83	55.32	4.85	Peak	100	21
9	10540.00	53.46	68.20	-14.74	39.42	14.04	Peak	174	316

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

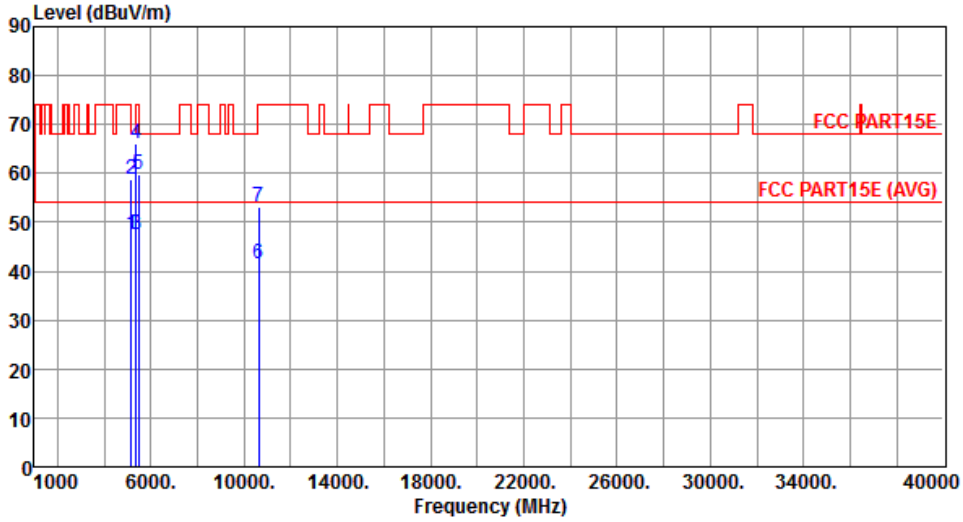
Modulation	VHT40	Test Freq. (MHz)	5310
Polarization	Horizontal		



	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	50.45	54.00	-3.55	45.97	4.48	Average	115	295
2	5150.00	62.12	74.00	-11.88	57.64	4.48	Peak	115	295
3	5350.00	47.44	54.00	-6.56	42.70	4.74	Average	115	295
4	5350.00	67.63	74.00	-6.37	62.89	4.74	Peak	115	295
5	5470.00	59.90	68.20	-8.30	54.99	4.91	Peak	115	295
6	10620.00	41.68	54.00	-12.32	27.54	14.14	Average	104	282
7	10620.00	54.16	74.00	-19.84	40.02	14.14	Peak	104	282

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

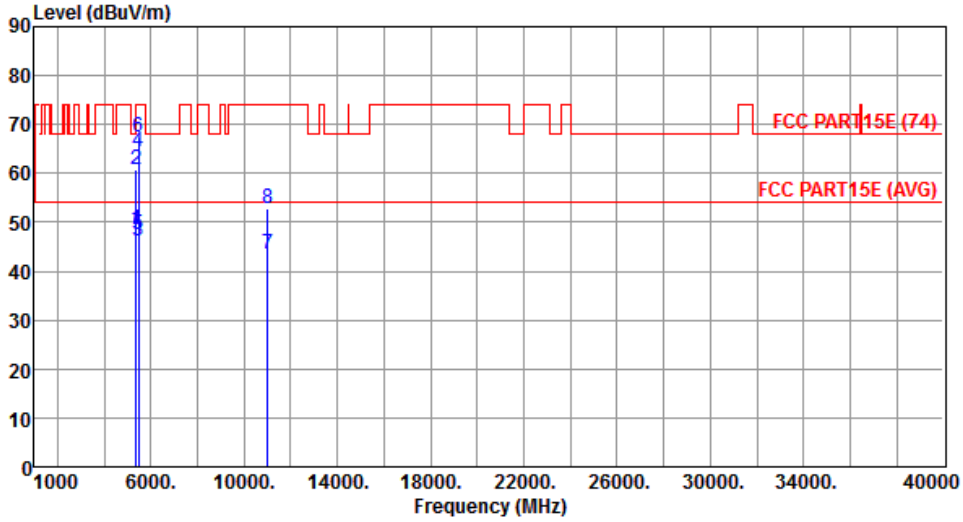
Modulation	VHT40	Test Freq. (MHz)	5310
Polarization	Vertical		



	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	5150.00	47.46	54.00	-6.54	42.98	4.48	Average	100	17
2	5150.00	58.93	74.00	-15.07	54.45	4.48	Peak	100	17
3	5350.00	47.40	54.00	-6.60	42.66	4.74	Average	100	17
4	5350.00	66.10	74.00	-7.90	61.36	4.74	Peak	100	17
5	5470.00	59.76	68.20	-8.44	54.85	4.91	Peak	100	17
6	10620.00	41.59	54.00	-12.41	27.45	14.14	Average	136	269
7	10620.00	53.16	74.00	-20.84	39.02	14.14	Peak	136	269

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

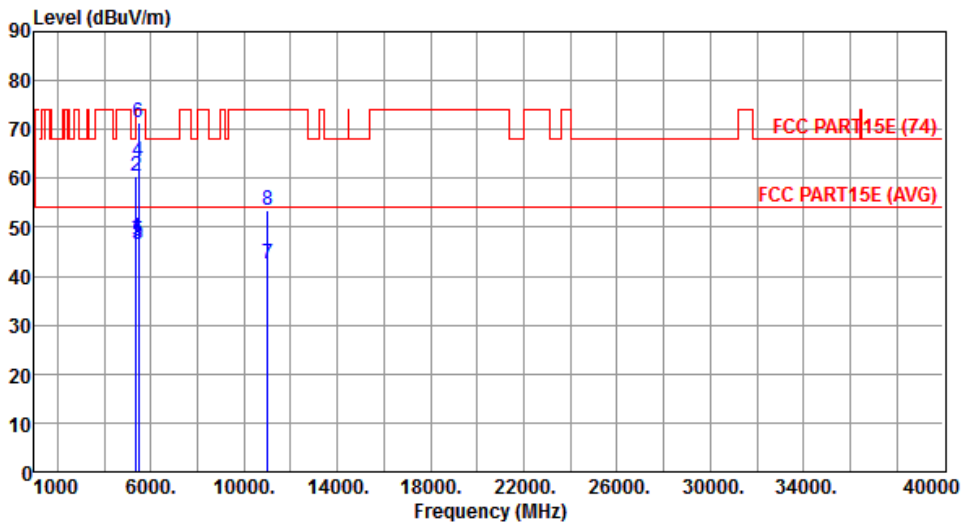
Modulation	VHT40	Test Freq. (MHz)	5510
Polarization	Horizontal		



	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	5350.00	48.57	54.00	-5.43	43.83	4.74	Average	100	299
2	5350.00	60.91	74.00	-13.09	56.17	4.74	Peak	100	299
3	5460.00	46.02	54.00	-7.98	41.13	4.89	Average	100	299
4	5460.00	64.36	74.00	-9.64	59.47	4.89	Peak	100	299
5	5470.00	47.45	54.00	-6.55	42.54	4.91	Average	100	299
6	5470.00	67.26	74.00	-6.74	62.35	4.91	Peak	100	299
7	11020.00	43.51	54.00	-10.49	28.82	14.69	Average	126	254
8	11020.00	52.73	74.00	-21.27	38.04	14.69	Peak	126	254

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

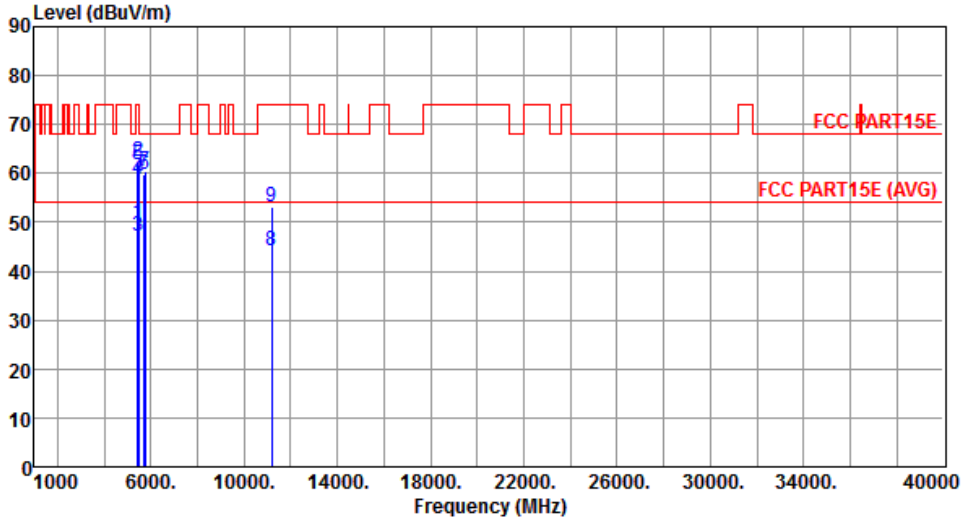
Modulation	VHT40	Test Freq. (MHz)	5510
Polarization	Vertical		



	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	5350.00	47.96	54.00	-6.04	43.22	4.74	Average	100	14
2	5350.00	60.52	74.00	-13.48	55.78	4.74	Peak	100	14
3	5460.00	46.39	54.00	-7.61	41.50	4.89	Average	100	14
4	5460.00	63.42	74.00	-10.58	58.53	4.89	Peak	100	14
5	5470.00	47.26	54.00	-6.74	42.35	4.91	Average	100	14
6	5470.00	71.35	74.00	-2.65	66.44	4.91	Peak	100	14
7	11020.00	42.47	54.00	-11.53	27.78	14.69	Average	141	322
8	11020.00	53.38	74.00	-20.62	38.69	14.69	Peak	141	322

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

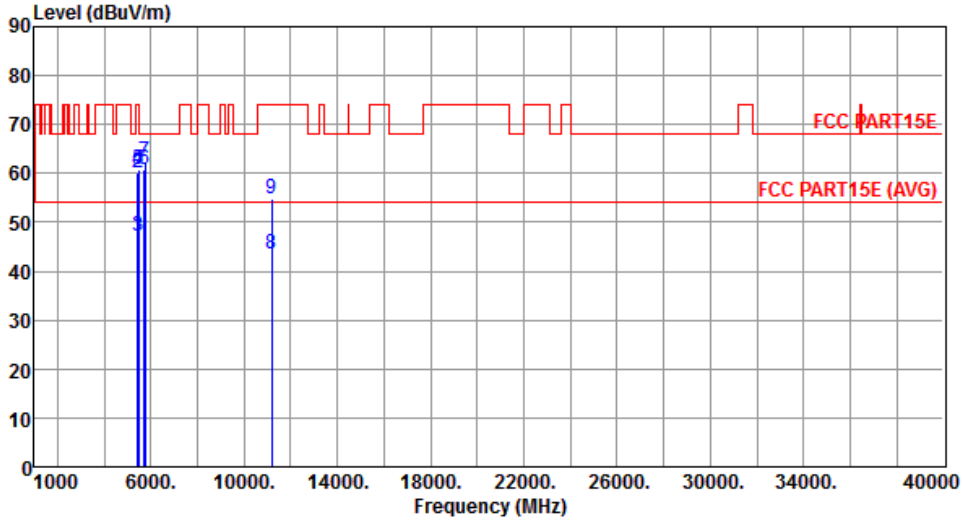
Modulation	VHT40	Test Freq. (MHz)	5590
Polarization	Horizontal		



	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	49.78	54.00	-4.22	44.93	4.85	Average	134	289
2	5430.00	62.32	74.00	-11.68	57.47	4.85	Peak	134	289
3	5460.00	47.30	54.00	-6.70	42.41	4.89	Average	134	289
4	5460.00	58.71	74.00	-15.29	53.82	4.89	Peak	134	289
5	5470.00	61.75	68.20	-6.45	56.84	4.91	Peak	134	289
6	5725.00	59.71	68.20	-8.49	54.39	5.32	Peak	134	289
7	5750.00	60.53	68.20	-7.67	55.16	5.37	Peak	134	289
8	11180.00	44.08	54.00	-9.92	29.35	14.73	Average	108	259
9	11180.00	53.01	74.00	-20.99	38.28	14.73	Peak	108	259

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

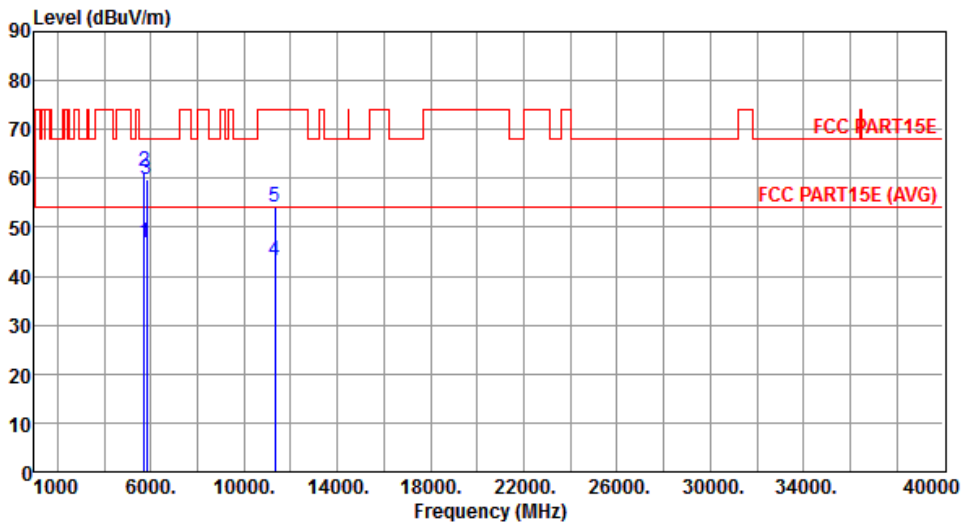
Modulation	VHT40	Test Freq. (MHz)	5590
Polarization	Vertical		



	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	5430.00	47.12	54.00	-6.88	42.27	4.85	Average	124	21
2	5430.00	60.27	74.00	-13.73	55.42	4.85	Peak	124	21
3	5460.00	47.28	54.00	-6.72	42.39	4.89	Average	124	21
4	5460.00	60.72	74.00	-13.28	55.83	4.89	Peak	124	21
5	5470.00	60.78	68.20	-7.42	55.87	4.91	Peak	124	21
6	5725.00	60.91	68.20	-7.29	55.59	5.32	Peak	124	21
7	5750.00	62.29	68.20	-5.91	56.92	5.37	Peak	124	21
8	11180.00	43.59	54.00	-10.41	28.86	14.73	Average	141	268
9	11180.00	54.94	74.00	-19.06	40.21	14.73	Peak	141	268

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

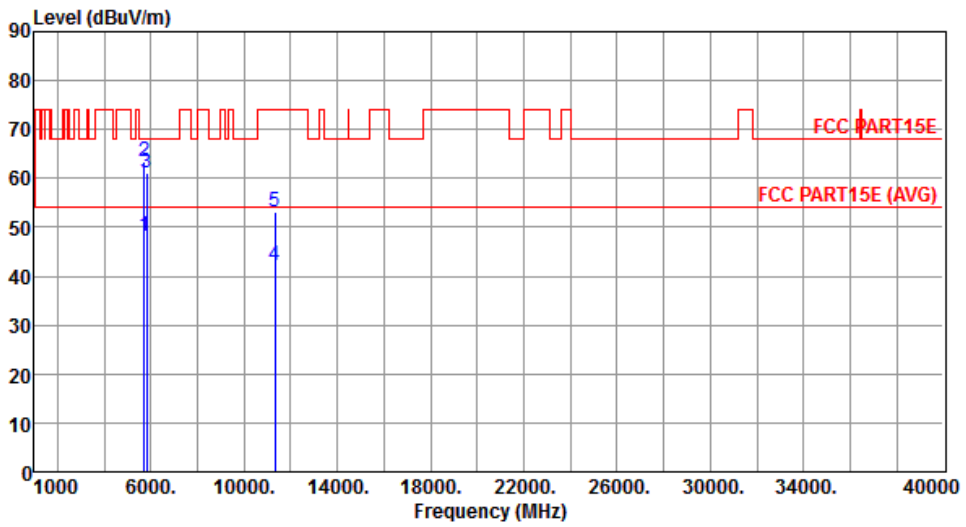
Modulation	VHT40	Test Freq. (MHz)	5670
Polarization	Horizontal		



	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	5725.00	46.92	54.00	-7.08	41.60	5.32	Average	139	301
2	5725.00	61.34	68.20	-6.86	56.02	5.32	Peak	139	301
3	5830.00	59.79	68.20	-8.41	54.29	5.50	Peak	139	301
4	11340.00	43.26	54.00	-10.74	28.48	14.78	Average	139	301
5	11340.00	54.08	74.00	-19.92	39.30	14.78	Peak	139	301

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

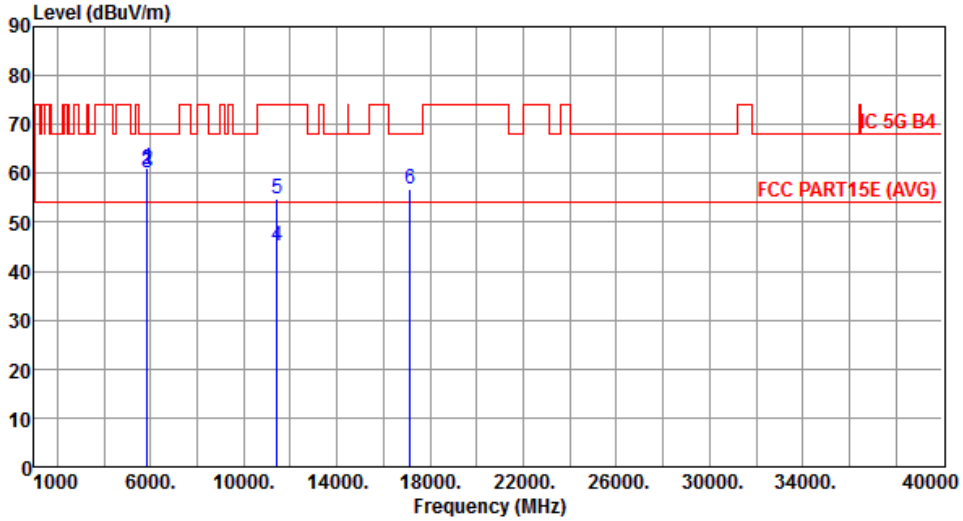
Modulation	VHT40	Test Freq. (MHz)	5670
Polarization	Vertical		



	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	5725.00	48.12	54.00	-5.88	42.80	5.32	Average	107	17
2	5725.00	63.52	68.20	-4.68	58.20	5.32	Peak	107	17
3	5830.00	61.25	68.20	-6.95	55.75	5.50	Peak	107	17
4	11340.00	42.16	54.00	-11.84	27.38	14.78	Average	139	332
5	11340.00	53.24	74.00	-20.76	38.46	14.78	Peak	139	332

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

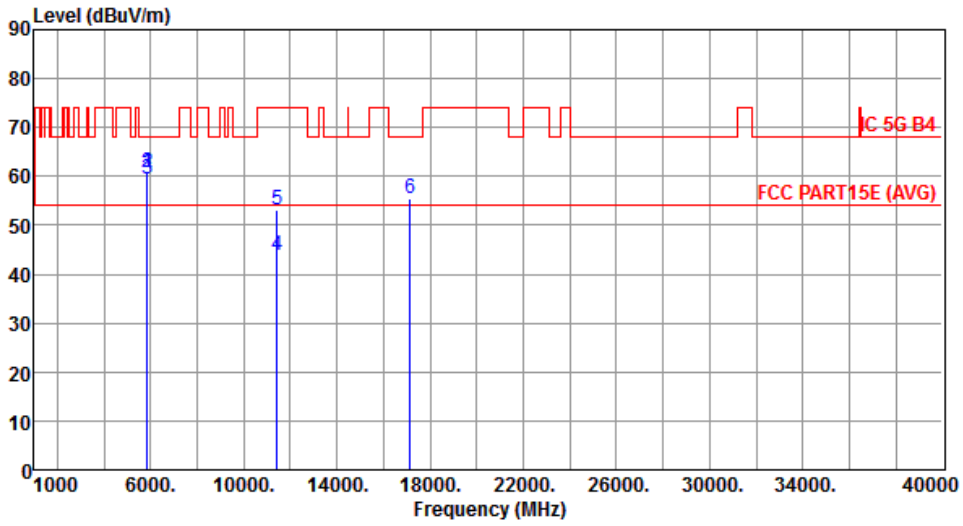
Modulation	VHT40	Test Freq. (MHz)	5710
Polarization	Horizontal		



	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	5850.00	61.24	78.20	-16.96	55.72	5.52	Peak	134	302
2	5860.00	60.86	68.20	-7.34	55.32	5.54	Peak	134	302
3	5870.00	60.18	68.20	-8.02	54.63	5.55	Peak	134	302
4	11420.00	45.09	54.00	-8.91	30.29	14.80	Average	277	302
5	11420.00	54.73	74.00	-19.27	39.93	14.80	Peak	277	302
6	17130.00	56.79	68.20	-11.41	39.34	17.45	Peak	100	257

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

Modulation	VHT40	Test Freq. (MHz)	5710
Polarization	Vertical		

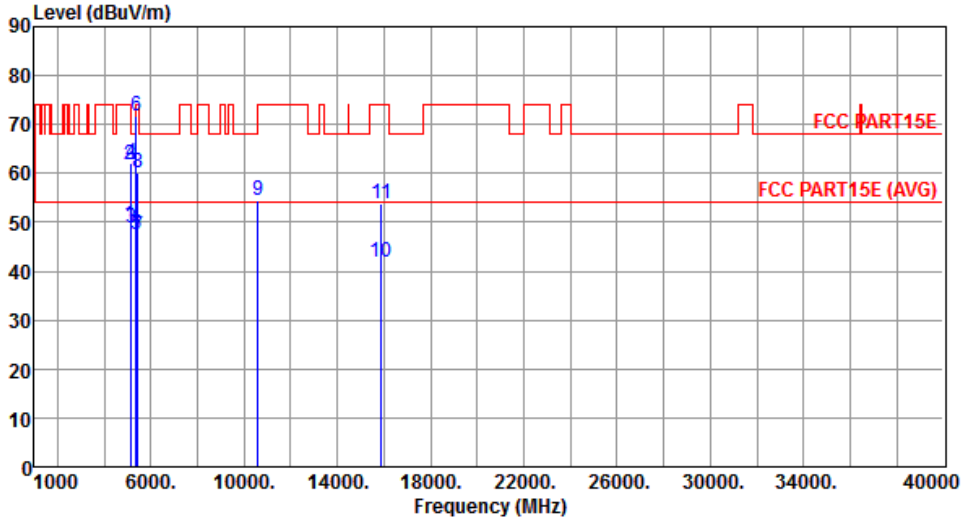


	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	5850.00	60.73	78.20	-17.47	55.21	5.52	Peak	130	9
2	5860.00	60.94	68.20	-7.26	55.40	5.54	Peak	130	9
3	5870.00	59.32	68.20	-8.88	53.77	5.55	Peak	130	9
4	11420.00	43.86	54.00	-10.14	29.06	14.80	Average	153	299
5	11420.00	53.27	74.00	-20.73	38.47	14.80	Peak	153	299
6	17130.00	55.62	68.20	-12.58	38.17	17.45	Peak	113	205

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

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

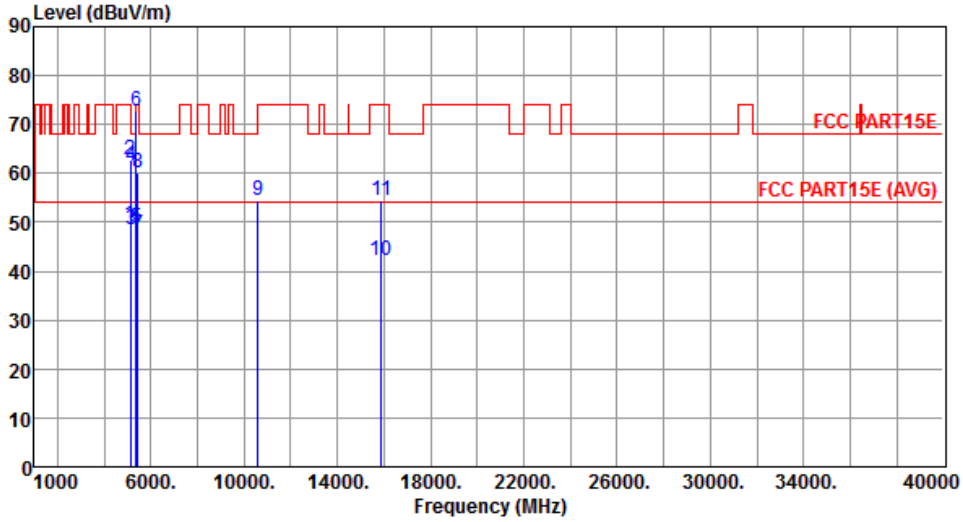
Modulation	VHT80	**Test Freq. (MHz)**	5290
Polarization	Horizontal		



	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	5130.00	49.56	54.00	-4.44	45.10	4.46	Average	161	300
2	5130.00	61.69	74.00	-12.31	57.23	4.46	Peak	161	300
3	5150.00	48.83	54.00	-5.17	44.35	4.48	Average	161	300
4	5150.00	62.08	74.00	-11.92	57.60	4.48	Peak	161	300
5	5350.00	47.63	54.00	-6.37	42.89	4.74	Average	161	300
6	5350.00	71.86	74.00	-2.14	67.12	4.74	Peak	161	300
7	5450.00	47.10	54.00	-6.90	42.22	4.88	Average	161	300
8	5450.00	60.27	74.00	-13.73	55.39	4.88	Peak	161	300
9	10580.00	54.57	68.20	-13.63	40.47	14.10	Peak	109	251
10	15870.00	41.89	54.00	-12.11	28.02	13.87	Average	100	188
11	15870.00	53.69	74.00	-20.31	39.82	13.87	Peak	100	188

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

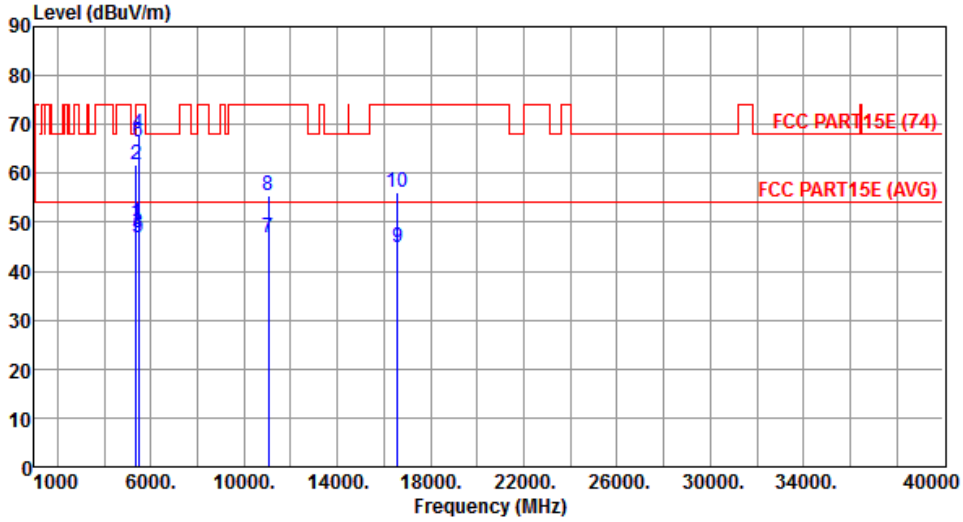
Modulation	VHT80	Test Freq. (MHz)	5290
Polarization	Vertical		



	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	5130.00	49.37	54.00	-4.63	44.91	4.46	Average	110	14
2	5130.00	62.78	74.00	-11.22	58.32	4.46	Peak	110	14
3	5150.00	48.52	54.00	-5.48	44.04	4.48	Average	110	14
4	5150.00	61.55	74.00	-12.45	57.07	4.48	Peak	110	14
5	5350.00	48.84	54.00	-5.16	44.10	4.74	Average	110	14
6	5350.00	72.64	74.00	-1.36	67.90	4.74	Peak	118	21
7	5450.00	47.60	54.00	-6.40	42.72	4.88	Average	110	14
8	5450.00	60.27	74.00	-13.73	55.39	4.88	Peak	110	14
9	10580.00	54.40	68.20	-13.80	40.30	14.10	Peak	139	311
10	15870.00	42.29	54.00	-11.71	28.42	13.87	Average	143	294
11	15870.00	54.43	74.00	-19.57	40.56	13.87	Peak	143	294

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

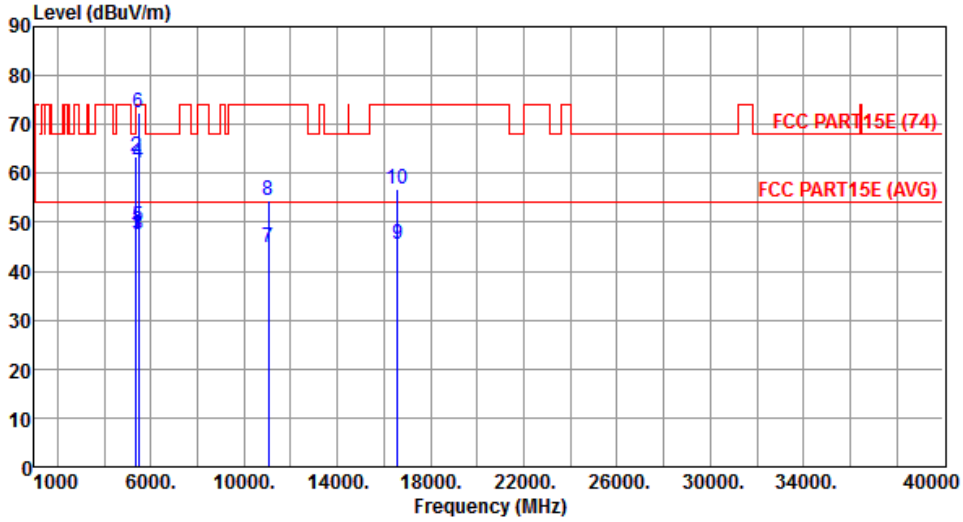
Modulation	VHT80	Test Freq. (MHz)	5530
Polarization	Horizontal		



	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	5370.00	49.86	54.00	-4.14	45.09	4.77	Average	148	307
2	5370.00	61.85	74.00	-12.15	57.08	4.77	Peak	148	307
3	5460.00	47.70	54.00	-6.30	42.81	4.89	Average	148	307
4	5460.00	68.04	74.00	-5.96	63.15	4.89	Peak	148	307
5	5470.00	46.72	54.00	-7.28	41.81	4.91	Average	148	307
6	5470.00	66.35	74.00	-7.65	61.44	4.91	Peak	148	307
7	11060.00	46.68	54.00	-7.32	31.98	14.70	Average	123	269
8	11060.00	55.62	74.00	-18.38	40.92	14.70	Peak	123	269
9	16590.00	44.93	54.00	-9.07	28.84	16.09	Average	100	196
10	16590.00	56.18	74.00	-17.82	40.09	16.09	Peak	100	196

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

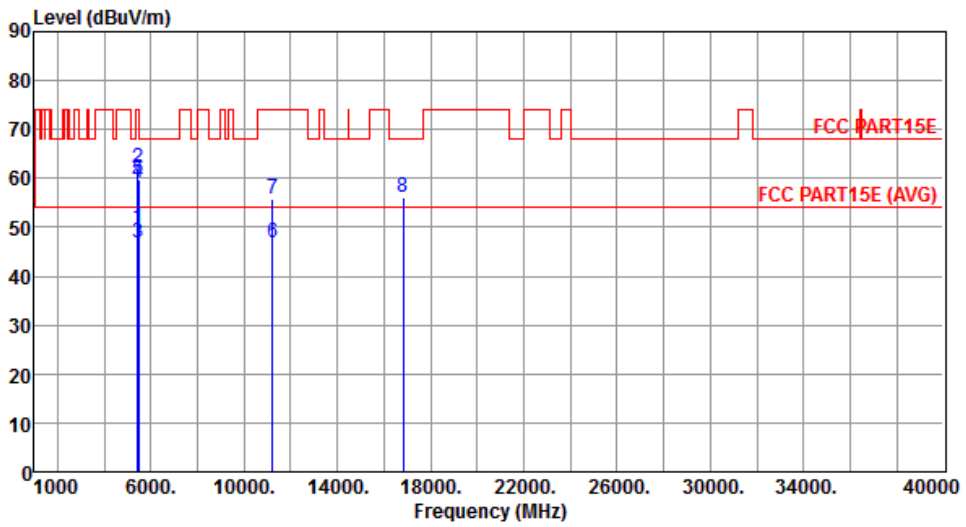
Modulation	VHT80	Test Freq. (MHz)	5530
Polarization	Vertical		



	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	5370.00	47.42	54.00	-6.58	42.65	4.77	Average	140	15
2	5370.00	63.31	74.00	-10.69	58.54	4.77	Peak	140	15
3	5460.00	47.49	54.00	-6.51	42.60	4.89	Average	140	15
4	5460.00	62.18	74.00	-11.82	57.29	4.89	Peak	140	15
5	5470.00	49.02	54.00	-4.98	44.11	4.91	Average	140	15
6	5470.00	72.53	74.00	-1.47	67.62	4.91	Peak	140	15
7	11060.00	44.80	54.00	-9.20	30.10	14.70	Average	136	296
8	11060.00	54.32	74.00	-19.68	39.62	14.70	Peak	136	296
9	16590.00	45.50	54.00	-8.50	29.41	16.09	Average	108	185
10	16590.00	56.89	74.00	-17.11	40.80	16.09	Peak	108	185

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

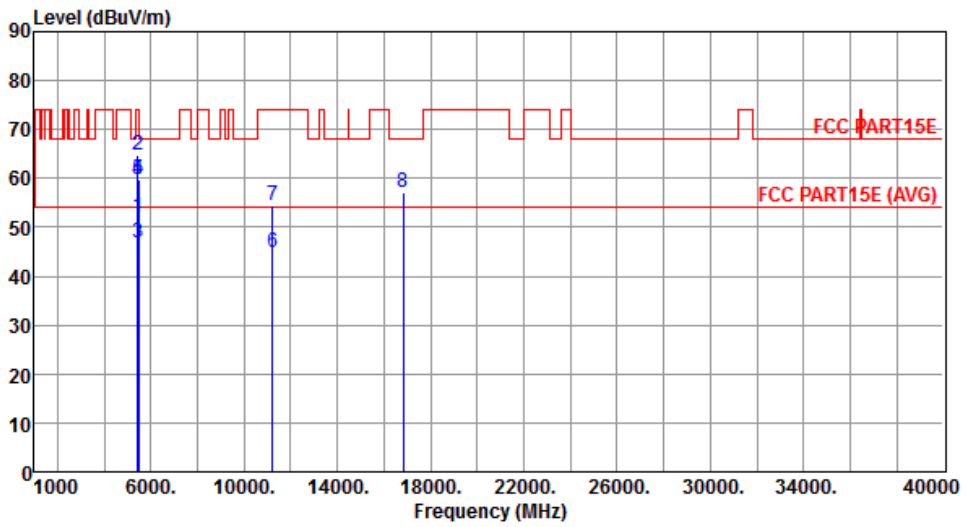
Modulation	VHT80	Test Freq. (MHz)	5610
Polarization	Horizontal		



	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	5450.00	49.82	54.00	-4.18	44.94	4.88	Average	152	319
2	5450.00	62.11	74.00	-11.89	57.23	4.88	Peak	152	319
3	5460.00	46.67	54.00	-7.33	41.78	4.89	Average	152	319
4	5460.00	59.11	74.00	-14.89	54.22	4.89	Peak	152	319
5	5470.00	59.92	68.20	-8.28	55.01	4.91	Peak	152	319
6	11220.00	46.81	54.00	-7.19	32.07	14.74	Average	118	284
7	11220.00	55.70	74.00	-18.30	40.96	14.74	Peak	118	284
8	16830.00	56.28	68.20	-11.92	39.59	16.69	Peak	120	215

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

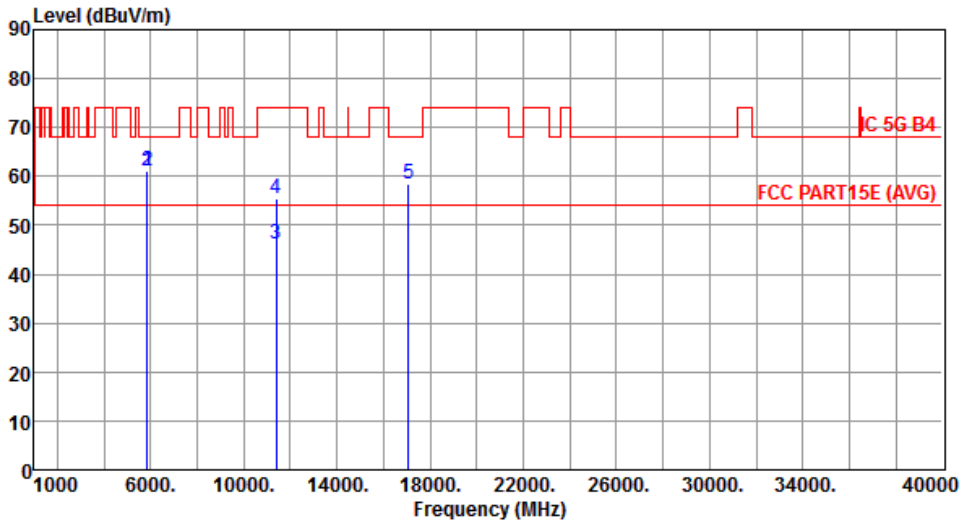
Modulation	VHT80	Test Freq. (MHz)	5610
Polarization	Vertical		



	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	52.15	54.00	-1.85	47.27	4.88	Average	152	27
2	5450.00	64.89	74.00	-9.11	60.01	4.88	Peak	152	27
3	5460.00	46.86	54.00	-7.14	41.97	4.89	Average	152	27
4	5460.00	59.62	74.00	-14.38	54.73	4.89	Peak	152	27
5	5470.00	59.66	68.20	-8.54	54.75	4.91	Peak	152	27
6	11220.00	44.86	54.00	-9.14	30.12	14.74	Average	131	284
7	11220.00	54.53	74.00	-19.47	39.79	14.74	Peak	131	284
8	16830.00	57.06	68.20	-11.14	40.37	16.69	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).

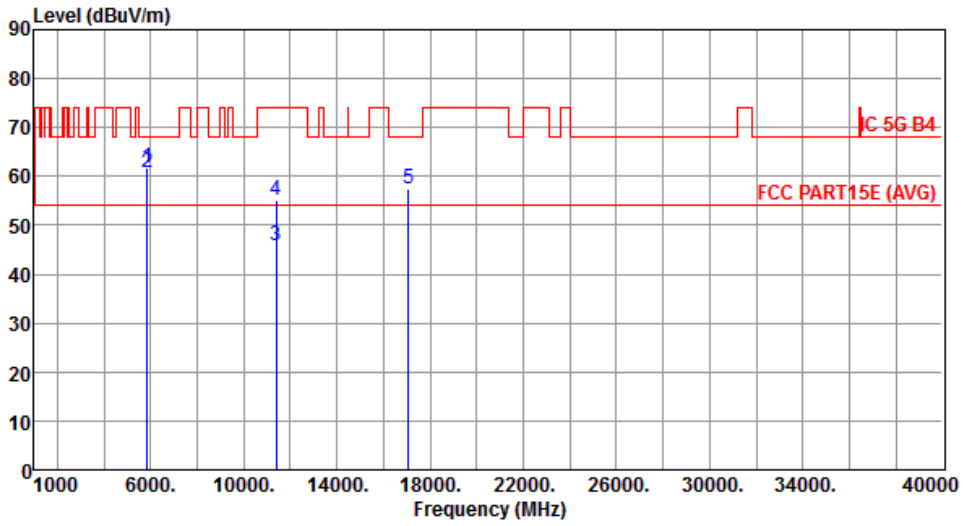
Modulation	VHT80	Test Freq. (MHz)	5690
Polarization	Horizontal		



	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	5850.00	60.97	78.20	-17.23	55.45	5.52	Peak	133	304
2	5860.00	61.09	68.20	-7.11	55.55	5.54	Peak	133	304
3	11380.00	46.16	54.00	-7.84	31.37	14.79	Average	112	242
4	11380.00	55.46	74.00	-18.54	40.67	14.79	Peak	112	242
5	17070.00	58.47	68.20	-9.73	41.16	17.31	Peak	100	228

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

Modulation	VHT80	Test Freq. (MHz)	5690
Polarization	Vertical		



	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	5850.00	61.71	78.20	-16.49	56.19	5.52	Peak	128	12
2	5860.00	60.90	68.20	-7.30	55.36	5.54	Peak	128	12
3	11380.00	45.85	54.00	-8.15	31.06	14.79	Average	154	296
4	11380.00	55.16	74.00	-18.84	40.37	14.79	Peak	154	296
5	17070.00	57.43	68.20	-10.77	40.12	17.31	Peak	100	245

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

3.6 Frequency Stability

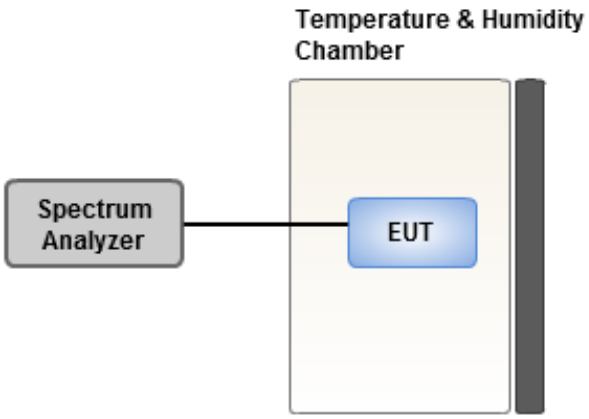
3.6.1 Limit of Frequency Stability

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

3.6.2 Test Procedures

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

3.6.3 Test Setup



3.6.4 Test Result of Frequency Stability

Frequency: 5320 MHz	Frequency Drift (ppm)			
Temperature (°C)	0 minute	2 minutes	5 minutes	10 minutes
T20°CVmax	0.20	0.88	0.00	0.54
T20°CVmin	0.21	0.73	0.25	0.24
T50°CVnom	-0.20	0.37	0.29	0.57
T40°CVnom	-0.24	0.35	-0.30	-0.05
T30°CVnom	0.62	1.04	0.54	0.65
T20°CVnom	0.26	-0.20	0.70	0.32
T10°CVnom	0.55	0.54	0.65	1.05
T0°CVnom	0.38	0.34	1.14	0.44
T-10°CVnom	0.31	0.16	0.21	0.67
T-20°CVnom	-0.49	0.01	-0.17	-0.51
T-30°CVnom	-0.39	-0.30	-0.40	-0.44
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.

Tel: 886-3-271-8666
Fax: 886-3-318-0155
Email: ICC_Service@icertifi.com.tw

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