FCC Test Report

FCC ID	:	**UIDTR4400**
Equipment	:	**802.11ac Wireless Router**
Model No.	:	**TR4400-AC, RAC2V1A** **(Two models are for marketing difference)**
Brand Name	:	**ARRIS**
Applicant	:	**Arris**
Address	:	**3871 LAKEFIELD DRIVE SUITE 300 SUWANEE GA USA**
Standard	:	**47 CFR FCC Part 15.407**
Received Date	:	**Feb. 10, 2017**
Tested Date	:	**Mar. 03 ~ Jun. 27, 2017**

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

Reviewed by: **Approved by:**

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

Testing Laboratory
2732

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Release Record

Report No.	Version	Description	Issued Date
FR721001AN	Rev. 01	Initial issue	Aug. 07, 2017

Summary of Test Results

FCC Rules	Test Items	Measured	Result
15.207	Conducted Emissions	[dBuV]: 0.201MHz 51.99 (Margin -11.59dB) - QP	Pass
15.407(b) 15.209	Radiated Emissions	[dBuV/m at 3m]: 5150.00MHz 53.85 (Margin -0.15dB) - AV	Pass
15.407(a)	Emission Bandwidth	Meet the requirement of limit	Pass
15.407(e)	6dB bandwidth	Meet the requirement of limit	Pass
15.407(a)	RF Output Power	Max Power [dBm]: ***Non-beamforming mode*** 5150-5250MHz: 28.81 5725-5850MHz: 29.62 ***Beamforming mode*** 5150-5250MHz: 26.89 5725-5850MHz: 26.95	Pass
15.407(a)	Peak Power Spectral Density	Meet the requirement of limit	Pass
15.407(g)	Frequency Stability	Meet the requirement of limit	Pass
15.203	Antenna Requirement	Meet the requirement of limit	Pass

1 General Description

1.1 Information

1.1.1 Specification of the Equipment under Test (EUT)

RF General Information					
Frequency Range (MHz)	**IEEE Std. 802.11**	**Ch. Freq. (MHz)**	**Channel Number**	**Transmit Chains (N_{TX})**	**Data Rate / MCS**
5150-5250	a	5180-5240	36-48 [4]	4	6-54 Mbps
5150-5250	n (HT20)	5180-5240	36-48 [4]	4	MCS 0-31
5150-5250	n (HT40)	5190-5230	38-46 [2]	4	MCS 0-31
5150-5250	ac (VHT20)	5180-5240	36-48 [4]	4	MCS 0-9
5150-5250	ac (VHT40)	5190-5230	38-46 [2]	4	MCS 0-9
5150-5250	ac (VHT80)	5210	42 [1]	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 function.					

RF General Information					
Frequency Range (MHz)	**IEEE Std. 802.11**	**Ch. Freq. (MHz)**	**Channel Number**	**Transmit Chains (N_{TX})**	**Data Rate / MCS**
5725-5850	a	5745-5825	149-165 [5]	4	6-54 Mbps
5725-5850	n (HT20)	5745-5825	149-165 [5]	4	MCS 0-31
5725-5850	n (HT40)	5755-5795	151-159 [2]	4	MCS 0-31
5725-5850	ac (VHT20)	5745-5825	149-165 [5]	4	MCS 0-9
5725-5850	ac (VHT40)	5755-5795	151-159 [2]	4	MCS 0-9
5725-5850	ac (VHT80)	5775	155 [1]	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 function.					

1.1.2 Antenna Details

Model	Type	Connector	Gain (dBi)
5.0G ANT 1	Dipole	I-PEX	2.8
5.0G ANT 2	Dipole	I-PEX	2.5
5.0G ANT 3	Dipole	I-PEX	2.4
5.0G ANT 4	Dipole	I-PEX	3.9

1.1.3 Power Supply Type of Equipment under Test (EUT)

Power Supply Type	12Vdc from AC adapter

1.1.4 Accessories

Accessories		
No.	**Equipment**	**Description**
1	AC adapter	Brand: SERCOMM Model: PU30W120ULB18-CAU-00 Power Rating: I/P: 100-240Vac, 50-60Hz, 1.0A O/P: 12Vdc, 2.5A Power Line: 1.75m non-shielded without core
2	AC adapter	Brand: ARRIS Model: NBS36E120250VU Power Rating: I/P: 100-240Vac, 50/60Hz, 0.8A O/P: 12Vdc, 2.5A Power Line: 1.8m non-shielded without core
3	RJ45 cable	1.16m shielded without core

1.1.5 Channel List

For Frequency band 5150-5250 MHz			
802.11 a / HT20 / VHT20		**HT40 / VHT40**	
Channel	**Frequency(MHz)**	**Channel**	**Frequency(MHz)**
36	5180	38	5190
40	5200	46	5230
44	5220	**VHT80**	
48	5240	42	5210

For Frequency band 5725~5850 MHz			
802.11 a / HT20 / VHT20		**HT40 / VHT40**	
Channel	**Frequency(MHz)**	**Channel**	**Frequency(MHz)**
149	5745	151	5755
153	5765	159	5795
157	5785	**VHT80**	
161	5805	155	5775
165	5825	---	---

1.1.6 Test Tool and Duty Cycle

Test Tool	Non-beamforming: QCART, V3.0.144.0 Beamforming: LanTest20, V2.0.0.2				
Duty Cycle and Duty Factor	Mode	Non-beamforming		Beamforming	
		Duty cycle (%)	Duty factor (dB)	Duty cycle (%)	Duty factor (dB)
	11a	98.29%	0.07	---	---
	VHT20	99.29%	0.03	93.24%	0.30
	VHT40	98.37%	0.07	93.02%	0.31
	VHT80	95.71%	0.19	91.88%	0.37

1.1.7 Power Setting

For Frequency band 5150-5250 MHz			
Modulation Mode	Test Frequency (MHz)	Power Set	
		Non-Beamforming	Beamforming
11a	5180	19.5	---
11a	5200	20	---
11a	5240	20	---
HT20	5180	19.5	25
HT20	5200	20.5	27
HT20	5240	20.5	27
HT40	5190	16.5	22
HT40	5230	22.5	27
VHT20	5180	19.5	25
VHT20	5200	20.5	27
VHT20	5240	20.5	27
VHT40	5190	16.5	22
VHT40	5230	22.5	27
VHT80	5210	15.5	22

For Frequency band 5725~5850 MHz			
Modulation Mode	Test Frequency (MHz)	Power Set	
		Non-Beamforming	Beamforming
11a	5745	23	---
11a	5785	23	---
11a	5825	23	---
HT20	5745	23	27
HT20	5785	23	27
HT20	5825	23	27
HT40	5755	23	27
HT40	5795	23	27
VHT20	5745	23	27
VHT20	5785	23	27
VHT20	5825	23	27
VHT40	5755	23	27
VHT40	5795	23	27
VHT80	5775	20	26

1.2 Local Support Equipment List

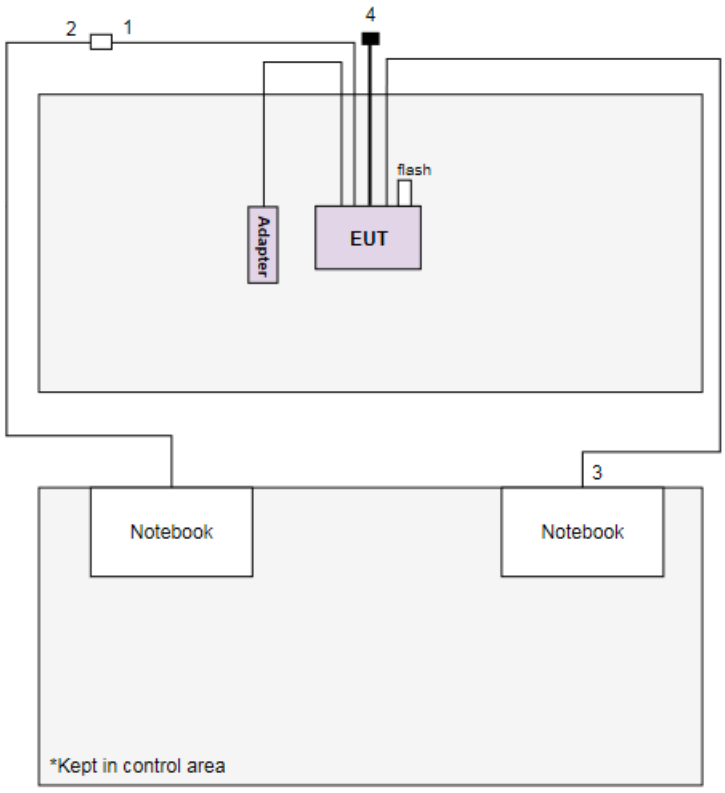
Support Equipment List					
No.	Equipment	Brand	Model	FCC ID	Signal cable / Length (m)
1	Notebook	DELL	Latitude E6430	DoC	RJ45, 10m non-shielded.
2	Notebook	DELL	Latitude E5420	DoC	RJ45, 10m non-shielded.
3	USB 3.0 flash	SONY	USM16GU	---	---
4	BF Client device	ARRIS	TR4400-AC	---	---

Note: No. 4 is provided by applicant.

1.3 Test Setup Chart

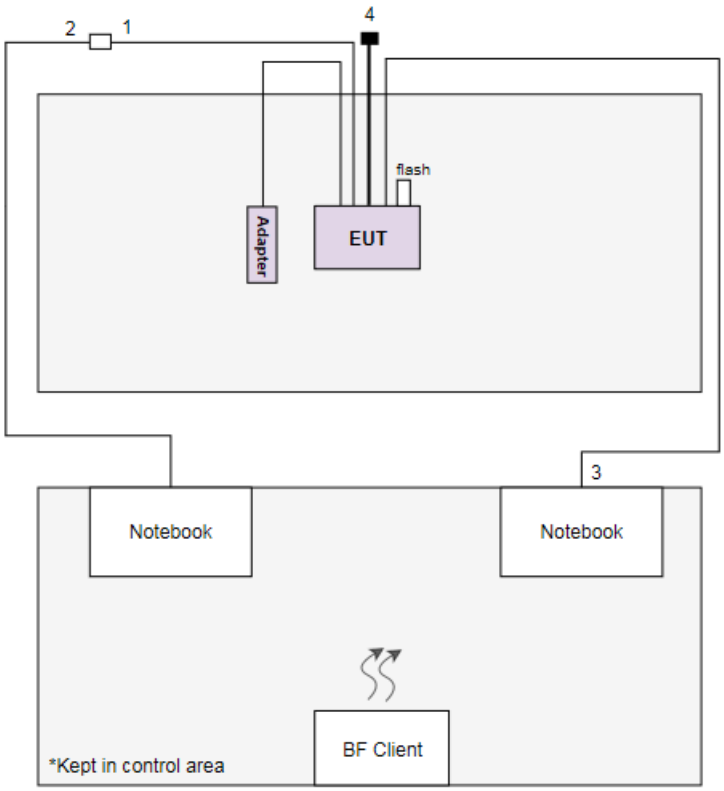
Non-beamforming mode

Test Setup Diagram



1. RJ45, 1.16m shielded.
2-3. RJ45, 10m non-shielded
4. RJ45, 1m (x3) non-shielded with load

Beamforming mode

Test Setup Diagram
 1. RJ45, 1.16m shielded. 2-3. RJ45, 10m non-shielded 4. RJ45, 1m (x3) non-shielded with load

1.4 The Equipment List

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

Test Item	Radiated Emission				
Test Site	966 chamber 3 / (03CH03-WS)				
Tested Date	Mar. 03, 2017				
Instrument	**Manufacturer**	**Model No.**	**Serial No.**	**Calibration Date**	**Calibration Until**
Receiver	Agilent	N9038A	MY53290044	Oct. 06, 2016	Oct. 05, 2017
Bilog Antenna	SCHWARZBECK	VULB9168	VULB9168-685	Apr. 26, 2016	Apr. 25, 2017
Loop Antenna	R&S	HFH2-Z2	100330	Nov. 10, 2016	Nov. 09, 2017
Loop Antenna Cable	KOAX KABEL	101354-BW	101354-BW	Dec. 09, 2016	Dec. 08, 2017
Preamplifier	EMC	EMC02325	980187	Sep. 08, 2016	Sep. 07, 2017
LF cable-0.8M	EMC	EMC8D-NM-NM-800	EMC8D-NM-NM-800-001	Feb. 04, 2017	Feb. 03, 2018
LF cable-3M	EMC	EMC8D-NM-NM-3000	131103	Feb. 04, 2017	Feb. 03, 2018
LF cable-13M	EMC	EMC8D-NM-NM-13000	131104	Feb. 04, 2017	Feb. 03, 2018
Measurement Software	AUDIX	e3	6.120210g	NA	NA
Note: Calibration Interval of instruments listed above is one year.					

Test Item	Radiated Emission				
Test Site	966 chamber 3 / (03CH03-WS)				
Tested Date	Jun. 05 ~ Jun. 14, 2017				
Instrument	**Manufacturer**	**Model No.**	**Serial No.**	**Calibration Date**	**Calibration Until**
Spectrum Analyzer	Agilent	N9010A	MY53400091	Sep. 09, 2016	Sep. 08, 2017
Receiver	Agilent	N9038A	MY53290044	Oct. 06, 2016	Oct. 05, 2017
Horn Antenna 1G-18G	SCHWARZBECK	BBHA 9120 D	BBHA 9120 D 1206	Feb. 09, 2017	Feb. 08, 2018
Horn Antenna 18G-40G	SCHWARZBECK	BBHA 9170	BBHA 9170517	Oct. 25, 2016	Oct. 24, 2017
Preamplifier	Agilent	83017A	MY53270014	Aug. 22, 2016	Aug. 21, 2017
Preamplifier	EMC	EMC184045B	980192	Aug. 24, 2016	Aug. 23, 2017
RF cable-3M	HUBER+SUHNER	SUCOFLEX104	MY22620/4	Feb. 04, 2017	Feb. 03, 2018
RF cable-8M	HUBER+SUHNER	SUCOFLEX104	MY22600/4	Feb. 04, 2017	Feb. 03, 2018
RF cable-1M	HUBER+SUHNER	SUCOFLEX104	MY22624/4	Feb. 04, 2017	Feb. 03, 2018
Measurement Software	AUDIX	e3	6.120210g	NA	NA
Note: Calibration Interval of instruments listed above is one year.					

Test Item	RF Conducted				
Test Site	(TH01-WS)				
Tested Date	Jun. 10 ~ Jun. 27, 2017				
Instrument	**Manufacturer**	**Model No.**	**Serial No.**	**Calibration Date**	**Calibration Until**
Spectrum Analyzer	R&S	FSV40	101063	Mar. 15, 2017	Mar. 14, 2018
TEMP&HUMIDITY CHAMBER	GIANT FORCE	GCT-225-40-SP-SD	MAF1212-002	Nov. 21, 2016	Nov. 20, 2017
Power Meter	Anritsu	ML2495A	1241002	Oct. 06, 2016	Oct. 05, 2017
Power Sensor	Anritsu	MA2411B	1207366	Oct. 06, 2016	Oct. 05, 2017
AC POWER SOURCE	APC	AFC-500W	F312060012	Oct. 28, 2016	Oct. 27, 2017
Measurement Software	Sporton	Sporton_1	1.3.30	NA	NA
Note: Calibration Interval of instruments listed above is one year.					

1.5 Testing Applied Standards

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

47 CFR FCC Part 15.407
ANSI C63.10-2013
FCC KDB 789033 D02 General UNII Test Procedures New Rules v01r04
FCC KDB 644545 D03 Guidance for IEEE 802 11ac New Rules v01
FCC KDB 662911 D01 Multiple Transmitter Output v02r01
FCC KDB 412172 D01 Determining ERP and EIRP v01r01

1.6 Measurement Uncertainty

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

Measurement Uncertainty	
Parameters	**Uncertainty**
Bandwidth	±34.134 Hz
Conducted power	±0.808 dB
Frequency error	±34.134 Hz
Power density	±0.463 dB
Conducted emission	±2.670 dB
AC conducted emission	±2.90 dB
Radiated emission ≤ 1GHz	±3.66 dB
Radiated emission > 1GHz	±5.37 dB
Time	±0.1%
Temperature	±0.6 °C

2 Test Configuration

2.1 Testing Condition

Test Item	Test Site	Ambient Condition	Tested By
AC Conduction	CO01-WS	22°C / 57%	Howard Huang
Radiated Emissions	03CH03-WS	23-24°C / 62-67%	Aska Huang
RF Conducted	TH01-WS	22°C / 60%	Brad Wu

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

2.2 The Worst Test Modes and Channel Details

Non-beamforming mode

For Frequency band 5150-5250 MHz				
Test item	**Modulation Mode**	**Test Frequency (MHz)**	**Data Rate**	**Test Configuration**
Conducted Emissions	VHT40	5230	MCS 0	---
Radiated Emissions ≤1GHz	VHT40	5230	MCS 0	---
RF Output Power	11a HT20 HT40 VHT20 VHT40 VHT80	5180 / 5200 / 5240 5180 / 5200 / 5240 5190 / 5230 5180 / 5200 / 5240 5190 / 5230 5210	6 Mbps MCS 0 MCS 0 MCS 0 MCS 0 MCS 0	---
Radiated Emissions >1GHz Emission Bandwidth Peak Power Spectral Density	11a VHT20 VHT40 VHT80	5180 / 5200 / 5240 5180 / 5200 / 5240 5190 / 5230 5210	6 Mbps MCS 0 MCS 0 MCS 0	---
Frequency Stability	Un-modulation	5200	---	---
NOTE: 1) Two adapters had been covered during the pretest and found that **Adapter 2** was the worst case and was selected for final testing. (Adapter 1: SERCOMM; Adapter 2: ARRIS)				

For Frequency band 5725-5850 MHz				
Test item	**Modulation Mode**	**Test Frequency (MHz)**	**Data Rate**	**Test Configuration**
Conducted Emissions	VHT40	5755	6 Mbps	---
Radiated Emissions ≤1GHz	VHT40	5755	6 Mbps	---
RF Output Power	11a HT20 HT40 VHT20 VHT40 VHT80	5745 / 5785 / 5825 5745 / 5785 / 5825 5755 / 5795 5745 / 5785 / 5825 5755 / 5795 5775	6 Mbps MCS 0 MCS 0 MCS 0 MCS 0 MCS 0	---
Radiated Emissions >1GHz Emission Bandwidth 6dB bandwidth Peak Power Spectral Density	11a VHT20 VHT40 VHT80	5745 / 5785 / 5825 5745 / 5785 / 5825 5755 / 5795 5775	6 Mbps MCS 0 MCS 0 MCS 0	---
Frequency Stability	Un-modulation	5785	---	---
NOTE: 1) Two adapters had been covered during the pretest and found that **Adapter 2** was the worst case and was selected for final testing. (Adapter 1: SERCOMM; Adapter 2: ARRIS)				

Beamforming mode

For Frequency band 5150-5250 MHz				
Test item	**Modulation Mode**	**Test Frequency (MHz)**	**Data Rate**	**Test Configuration**
Conducted Emissions	VHT20	5240	MCS 0	---
Radiated Emissions ≤1GHz	VHT20	5240	MCS 0	---
RF Output Power	HT20 HT40 VHT20 VHT40 VHT80	5180 / 5200 / 5240 5190 / 5230 5180 / 5200 / 5240 5190 / 5230 5210	MCS 0 MCS 0 MCS 0 MCS 0 MCS 0	---
Radiated Emissions >1GHz Emission Bandwidth Peak Power Spectral Density	VHT20 VHT40 VHT80	5180 / 5200 / 5240 5190 / 5230 5210	MCS 0 MCS 0 MCS 0	---
NOTE: 1) Two adapters had been covered during the pretest and found that **Adapter 2** was the worst case and was selected for final testing. (Adapter 1: SERCOMM; Adapter 2: ARRIS)				

For Frequency band 5725-5850 MHz				
Test item	**Modulation Mode**	**Test Frequency (MHz)**	**Data Rate**	**Test Configuration**
Conducted Emissions	VHT20	5825	MCS 0	---
Radiated Emissions ≤1GHz	VHT20	5825	MCS 0	---
RF Output Power	HT20 HT40 VHT20 VHT40 VHT80	5745 / 5785 / 5825 5755 / 5795 5745 / 5785 / 5825 5755 / 5795 5775	MCS 0 MCS 0 MCS 0 MCS 0 MCS 0	---
Radiated Emissions >1GHz Emission Bandwidth 6dB bandwidth Peak Power Spectral Density	VHT20 VHT40 VHT80	5745 / 5785 / 5825 5755 / 5795 5775	MCS 0 MCS 0 MCS 0	---
NOTE: 1) Two adapters had been covered during the pretest and found that **Adapter 2** was the worst case and was selected for final testing. (Adapter 1: SERCOMM; Adapter 2: ARRIS)				

3 Transmitter Test Results

3.1 Conducted Emissions

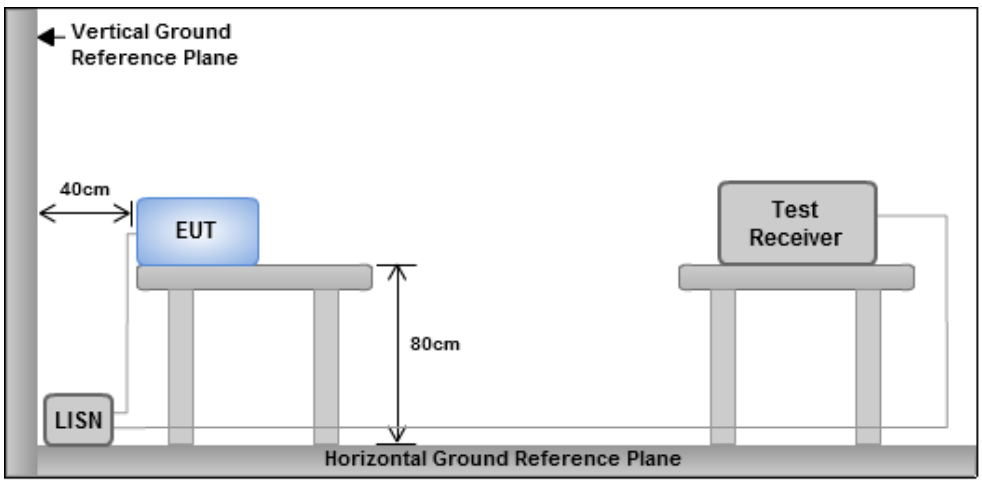
3.1.1 Limit of Conducted Emissions

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

3.1.2 Test Procedures

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

3.1.3 Test Setup



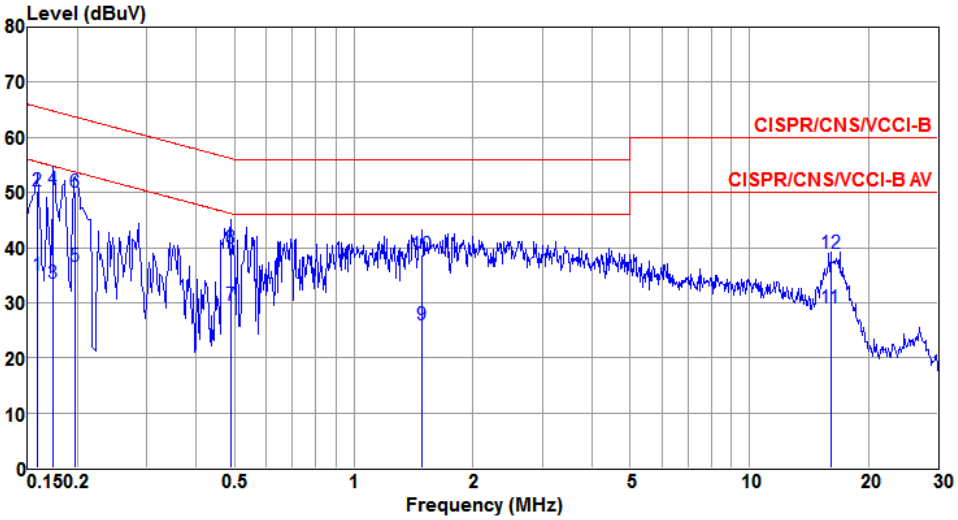
Note: 1. Support units were connected to second LISN.

2. Both of LISNs (AMN) are 80 cm from EUT and at least 80 cm from other units and other metal planes

3.1.4 Test Result of Conducted Emissions

Non-beamforming mode

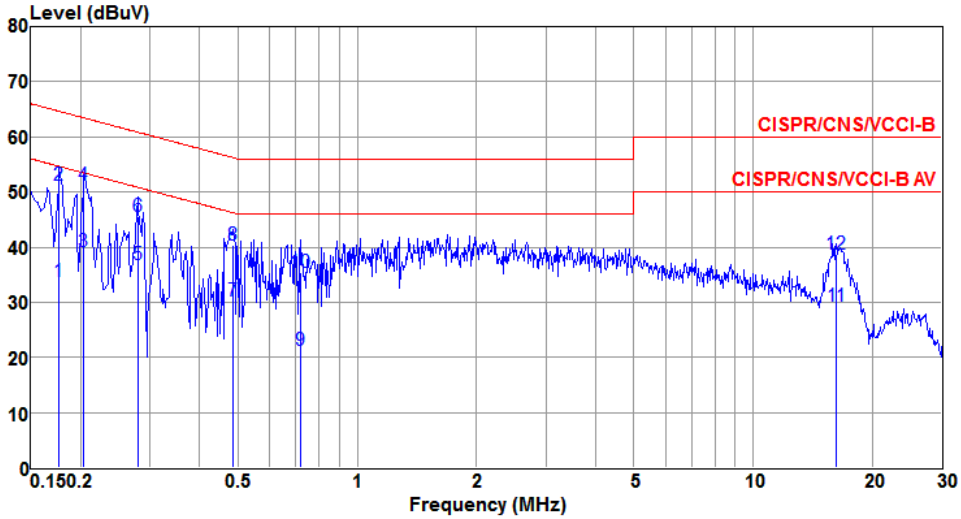
Modulation	VHT40	Test Freq. (MHz)	5230
Power Phase	Line		



	Freq	Level	Limit Line	Over Limit	Read Level	LISN factor	cable loss	Remark
	MHz	dBuV	dBuV	dB	dBuV	dB	dB	
1	0.159	34.93	55.52	-20.59	34.83	0.08	0.02	Average
2	0.159	50.24	65.52	-15.28	50.14	0.08	0.02	QP
3	0.174	33.52	54.77	-21.25	33.41	0.09	0.02	Average
4	0.174	50.39	64.77	-14.38	50.28	0.09	0.02	QP
5	0.198	36.47	53.71	-17.24	36.35	0.10	0.02	Average
6@	0.198	49.99	63.71	-13.72	49.87	0.10	0.02	QP
7	0.489	29.46	46.19	-16.73	29.36	0.06	0.04	Average
8	0.489	39.89	56.19	-16.30	39.79	0.06	0.04	QP
9	1.487	25.90	46.00	-20.10	25.73	0.10	0.07	Average
10	1.487	38.68	56.00	-17.32	38.51	0.10	0.07	QP
11	16.055	29.14	50.00	-20.86	28.60	0.34	0.20	Average
12	16.055	38.96	60.00	-21.04	38.42	0.34	0.20	QP

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

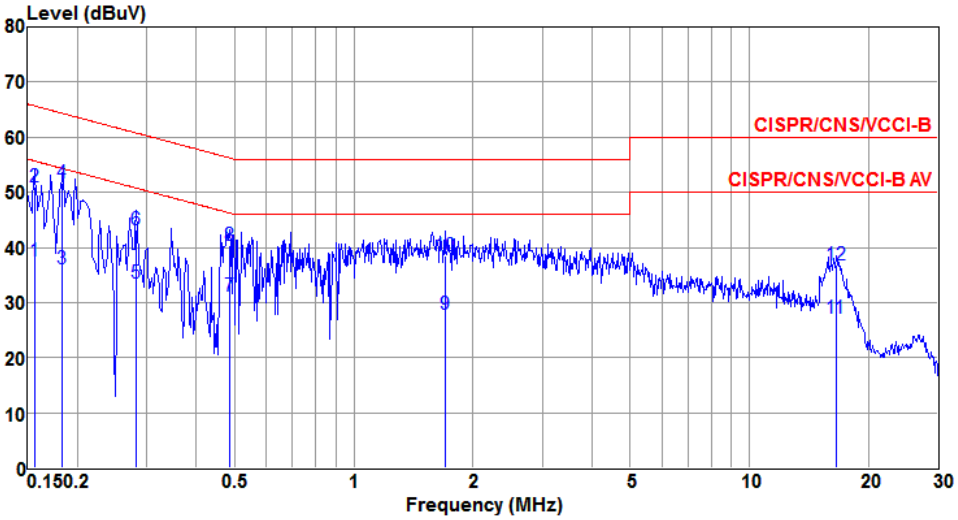
Modulation	VHT40	Test Freq. (MHz)	5230
Power Phase	Neutral		



	Freq	Level	Limit Line	Over Limit	Read Level	LISN factor	cable loss	Remark
	MHz	dBuV	dBuV	dB	dBuV	dB	dB	
1	0.177	33.70	54.64	-20.94	33.59	0.09	0.02	Average
2	0.177	51.33	64.64	-13.31	51.22	0.09	0.02	QP
3	0.204	39.07	53.45	-14.38	38.96	0.09	0.02	Average
4@	0.204	51.14	63.45	-12.31	51.03	0.09	0.02	QP
5	0.279	36.79	50.85	-14.06	36.66	0.11	0.02	Average
6	0.279	45.49	60.85	-15.36	45.36	0.11	0.02	QP
7	0.484	30.26	46.27	-16.01	30.10	0.12	0.04	Average
8	0.484	40.35	56.27	-15.92	40.19	0.12	0.04	QP
9	0.720	21.21	46.00	-24.79	21.06	0.10	0.05	Average
10	0.720	35.39	56.00	-20.61	35.24	0.10	0.05	QP
11	16.226	29.38	50.00	-20.62	28.80	0.38	0.20	Average
12	16.226	38.82	60.00	-21.18	38.24	0.38	0.20	QP

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

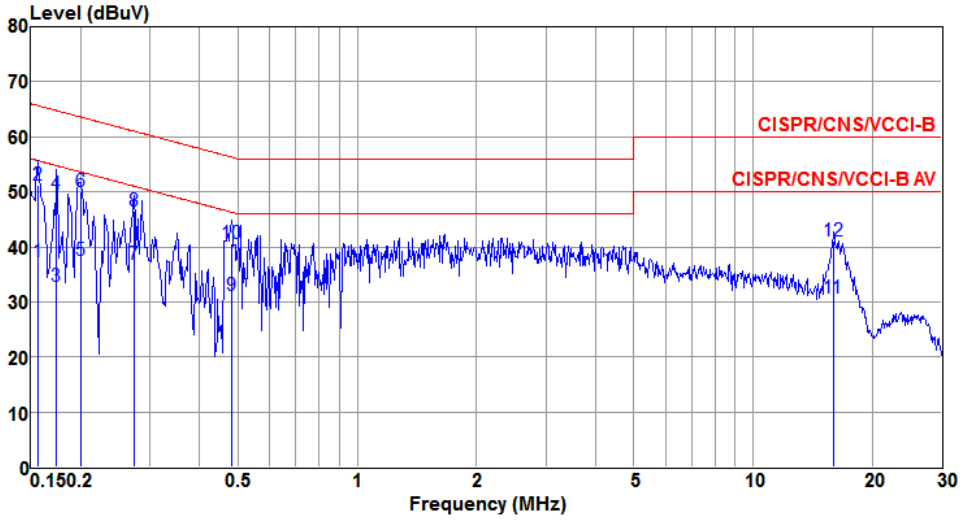
Modulation	VHT40	Test Freq. (MHz)	5755
Power Phase	Line		



	Freq	Level	Limit Line	Over Limit	Read Level	LISN factor	cable loss	Remark
	MHz	dBuV	dBuV	dB	dBuV	dB	dB	
1	0.156	37.42	55.69	-18.27	37.33	0.07	0.02	Average
2	0.156	51.04	65.69	-14.65	50.95	0.07	0.02	QP
3	0.183	36.08	54.33	-18.25	35.97	0.09	0.02	Average
4@	0.183	51.61	64.33	-12.72	51.50	0.09	0.02	QP
5	0.282	33.43	50.76	-17.33	33.33	0.08	0.02	Average
6	0.282	43.09	60.76	-17.67	42.99	0.08	0.02	QP
7	0.484	31.19	46.27	-15.08	31.09	0.06	0.04	Average
8	0.484	40.43	56.27	-15.84	40.33	0.06	0.04	QP
9	1.698	27.86	46.00	-18.14	27.66	0.12	0.08	Average
10	1.698	38.39	56.00	-17.61	38.19	0.12	0.08	QP
11	16.573	27.18	50.00	-22.82	26.63	0.35	0.20	Average
12	16.573	36.93	60.00	-23.07	36.38	0.35	0.20	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)	5755
Power Phase	Neutral		

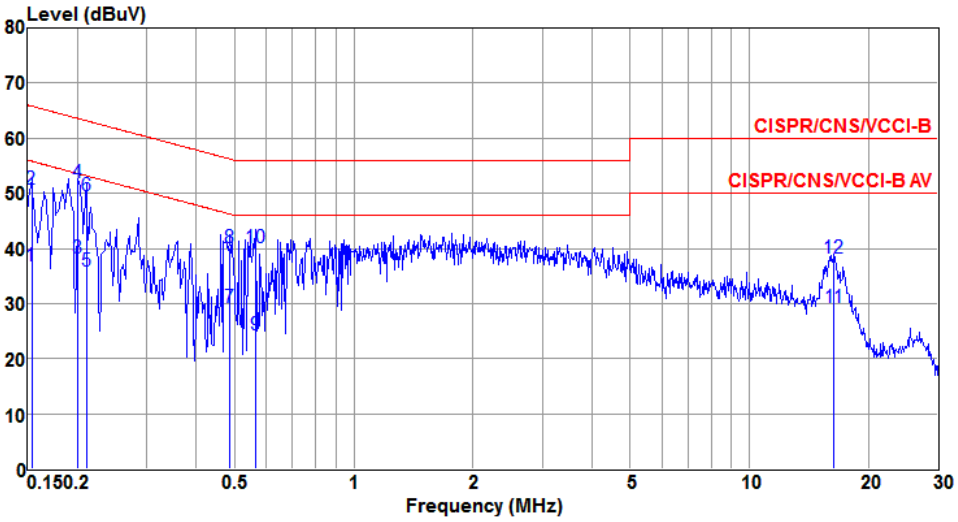


	Freq	Level	Limit Line	Over Limit	Read Level	LISN factor	cable loss	Remark
	MHz	dBuV	dBuV	dB	dBuV	dB	dB	
1	0.156	37.39	55.69	-18.30	37.27	0.10	0.02	Average
2	0.156	51.18	65.69	-14.51	51.06	0.10	0.02	QP
3	0.174	32.84	54.77	-21.93	32.73	0.09	0.02	Average
4	0.174	49.46	64.77	-15.31	49.35	0.09	0.02	QP
5	0.201	37.43	53.58	-16.15	37.32	0.09	0.02	Average
6@	0.201	49.93	63.58	-13.65	49.82	0.09	0.02	QP
7	0.273	36.82	51.03	-14.21	36.69	0.11	0.02	Average
8	0.273	46.52	61.03	-14.51	46.39	0.11	0.02	QP
9	0.481	31.12	46.32	-15.20	30.96	0.12	0.04	Average
10	0.481	40.61	56.32	-15.71	40.45	0.12	0.04	QP
11	15.970	30.75	50.00	-19.25	30.17	0.38	0.20	Average
12	15.970	41.14	60.00	-18.86	40.56	0.38	0.20	QP

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

Beamforming mode

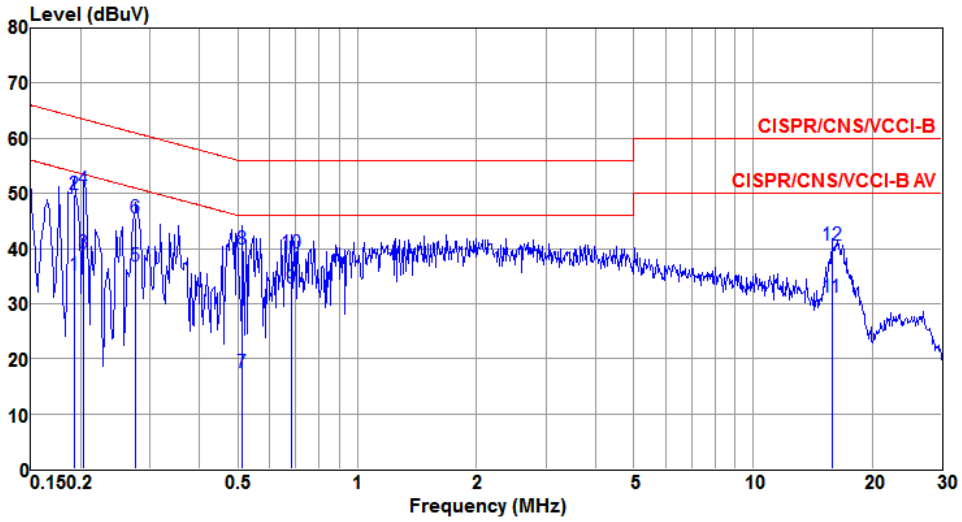
Modulation	VHT20	**Test Freq. (MHz)**	5240
Power Phase	Line		



	Freq	Level	Limit Line	Over Limit	Read Level	LISN factor	cable loss	Remark
	MHz	dBuV	dBuV	dB	dBuV	dB	dB	
1	0.153	36.72	55.82	-19.10	36.63	0.07	0.02	Average
2	0.153	50.71	65.82	-15.11	50.62	0.07	0.02	QP
3	0.201	38.13	53.58	-15.45	38.01	0.10	0.02	Average
4@	0.201	51.99	63.58	-11.59	51.87	0.10	0.02	QP
5	0.211	35.85	53.18	-17.33	35.73	0.10	0.02	Average
6	0.211	49.66	63.18	-13.52	49.54	0.10	0.02	QP
7	0.486	29.30	46.23	-16.93	29.20	0.06	0.04	Average
8	0.486	40.09	56.23	-16.14	39.99	0.06	0.04	QP
9	0.564	24.27	46.00	-21.73	24.17	0.06	0.04	Average
10	0.564	40.05	56.00	-15.95	39.95	0.06	0.04	QP
11	16.398	29.39	50.00	-20.61	28.85	0.34	0.20	Average
12	16.398	38.24	60.00	-21.76	37.70	0.34	0.20	QP

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

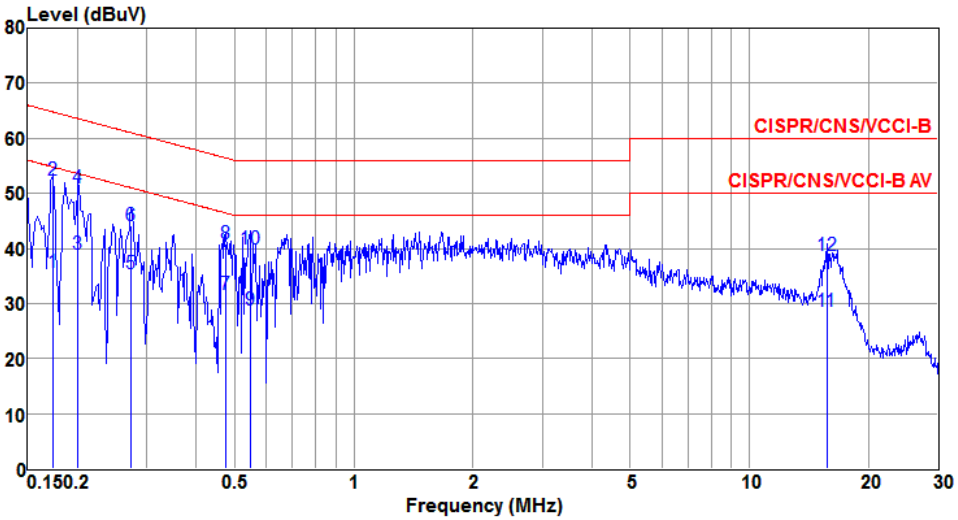
Modulation	VHT20	Test Freq. (MHz)	5240
Power Phase	Neutral		



	Freq	Level	Limit Line	Over Limit	Read Level	LISN factor	cable loss	Remark
	MHz	dBuV	dBuV	dB	dBuV	dB	dB	
1	0.192	35.28	53.93	-18.65	35.17	0.09	0.02	Average
2	0.192	49.74	63.93	-14.19	49.63	0.09	0.02	QP
3	0.204	39.20	53.45	-14.25	39.09	0.09	0.02	Average
4@	0.204	50.86	63.45	-12.59	50.75	0.09	0.02	QP
5	0.276	36.80	50.94	-14.14	36.67	0.11	0.02	Average
6	0.276	45.62	60.94	-15.32	45.49	0.11	0.02	QP
7	0.513	17.43	46.00	-28.57	17.27	0.12	0.04	Average
8	0.513	39.88	56.00	-16.12	39.72	0.12	0.04	QP
9	0.683	32.73	46.00	-13.27	32.57	0.11	0.05	Average
10	0.683	39.26	56.00	-16.74	39.10	0.11	0.05	QP
11	15.801	31.20	50.00	-18.80	30.62	0.38	0.20	Average
12	15.801	40.70	60.00	-19.30	40.12	0.38	0.20	QP

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

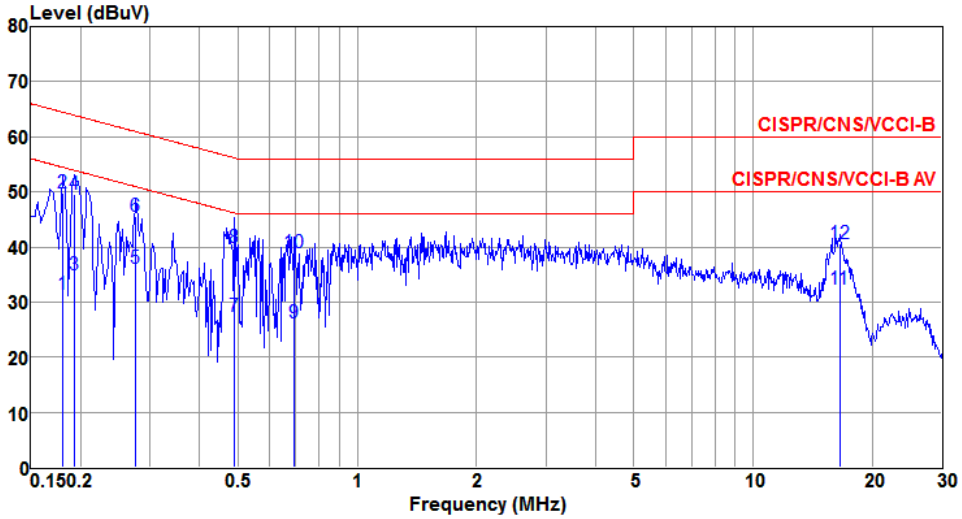
Modulation	VHT20	Test Freq. (MHz)	5825
Power Phase	Line		



	Freq	Level	Limit Line	Over Limit	Read Level	LISN factor	cable loss	Remark
	MHz	dBuV	dBuV	dB	dBuV	dB	dB	
1	0.174	35.75	54.77	-19.02	35.64	0.09	0.02	Average
2@	0.174	52.38	64.77	-12.39	52.27	0.09	0.02	QP
3	0.201	38.94	53.58	-14.64	38.82	0.10	0.02	Average
4	0.201	51.08	63.58	-12.50	50.96	0.10	0.02	QP
5	0.273	35.41	51.03	-15.62	35.31	0.08	0.02	Average
6	0.273	44.12	61.03	-16.91	44.02	0.08	0.02	QP
7	0.474	31.74	46.45	-14.71	31.64	0.06	0.04	Average
8	0.474	40.90	56.45	-15.55	40.80	0.06	0.04	QP
9	0.546	28.91	46.00	-17.09	28.81	0.06	0.04	Average
10	0.546	39.94	56.00	-16.06	39.84	0.06	0.04	QP
11	15.718	28.55	50.00	-21.45	28.02	0.33	0.20	Average
12	15.718	38.64	60.00	-21.36	38.11	0.33	0.20	QP

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

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



	Freq	Level	Limit Line	Over Limit	Read Level	LISN factor	cable loss	Remark
	MHz	dBuV	dBuV	dB	dBuV	dB	dB	
1	0.180	31.51	54.50	-22.99	31.40	0.09	0.02	Average
2	0.180	49.69	64.50	-14.81	49.58	0.09	0.02	QP
3	0.192	35.05	53.93	-18.88	34.94	0.09	0.02	Average
4@	0.192	49.56	63.93	-14.37	49.45	0.09	0.02	QP
5	0.276	36.23	50.94	-14.71	36.10	0.11	0.02	Average
6	0.276	45.55	60.94	-15.39	45.42	0.11	0.02	QP
7	0.489	27.38	46.19	-18.81	27.22	0.12	0.04	Average
8	0.489	39.90	56.19	-16.29	39.74	0.12	0.04	QP
9	0.690	26.15	46.00	-19.85	25.99	0.11	0.05	Average
10	0.690	38.95	56.00	-17.05	38.79	0.11	0.05	QP
11	16.573	32.31	50.00	-17.69	31.73	0.38	0.20	Average
12	16.573	40.57	60.00	-19.43	39.99	0.38	0.20	QP

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

3.2 Emission Bandwidth

3.2.1 Limit of Emission bandwidth

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

3.2.2 Test Procedures

26dB Bandwidth

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

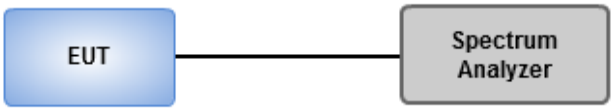
Occupied Bandwidth

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

6dB Bandwidth

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

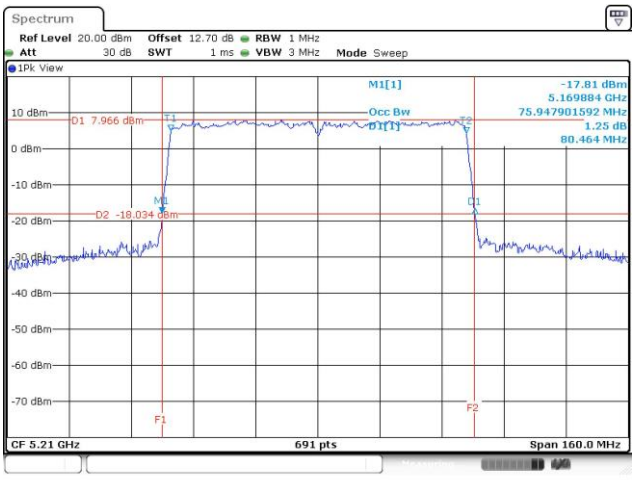
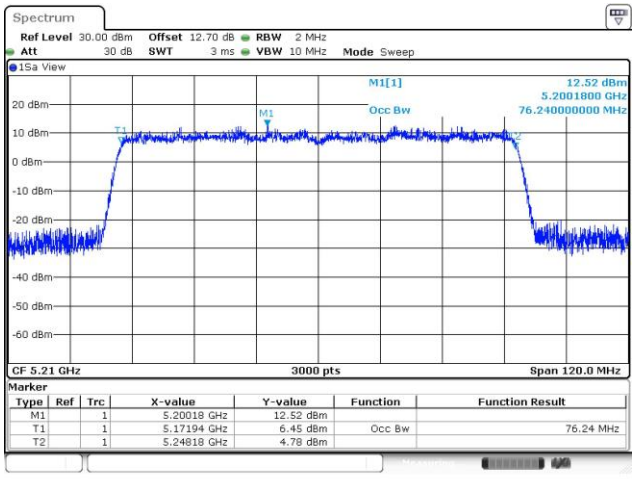
3.2.3 Test Setup



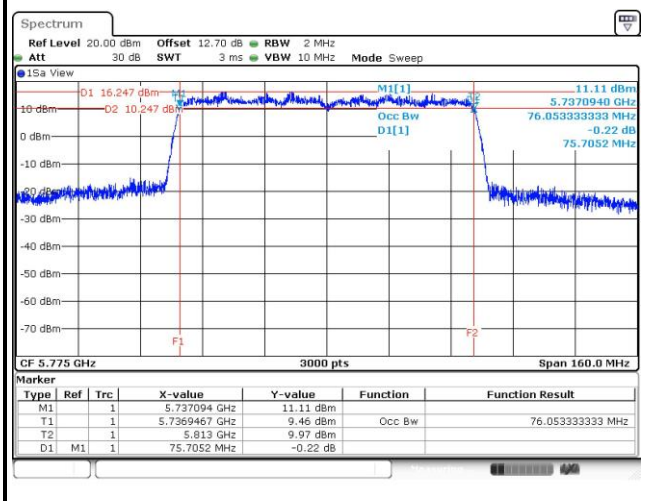
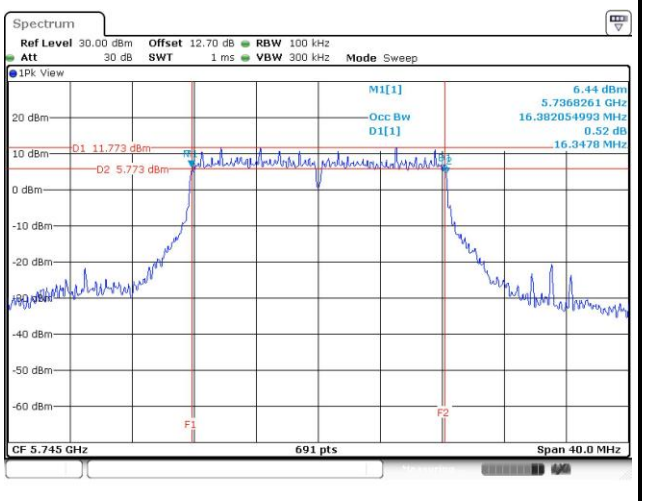
3.2.4 Test Result of Emission Bandwidth

Non-beamforming mode

For Frequency band 5150-5250 MHz										
Emission Bandwidth										
Mode	N_{TX}	Freq. (MHz)	26dB Bandwidth (MHz)				99% Bandwidth (MHz)			
			Chain 0	Chain 1	Chain 2	Chain 3	Chain 0	Chain 1	Chain 2	Chain 3
11a	4	5180	19.54	19.42	19.42	19.71	16.42	16.45	16.45	16.46
11a	4	5200	19.59	19.65	19.94	20.12	16.43	16.45	16.46	16.47
11a	4	5240	19.65	20.29	20.41	20.58	16.43	16.46	16.50	16.50
VHT20	4	5180	20.23	20.58	20.35	20.41	17.60	17.62	17.63	17.63
VHT20	4	5200	20.35	20.58	20.70	20.70	17.59	17.63	17.63	17.63
VHT20	4	5240	20.41	20.81	20.99	21.10	17.61	17.64	17.66	17.66
VHT40	4	5190	40.46	40.58	40.70	40.58	36.30	36.34	36.32	36.32
VHT40	4	5230	40.58	40.81	41.04	55.30	36.38	36.40	36.38	36.54
VHT80	4	5210	80.46	80.46	80.46	80.46	76.24	76.08	76.12	76.08

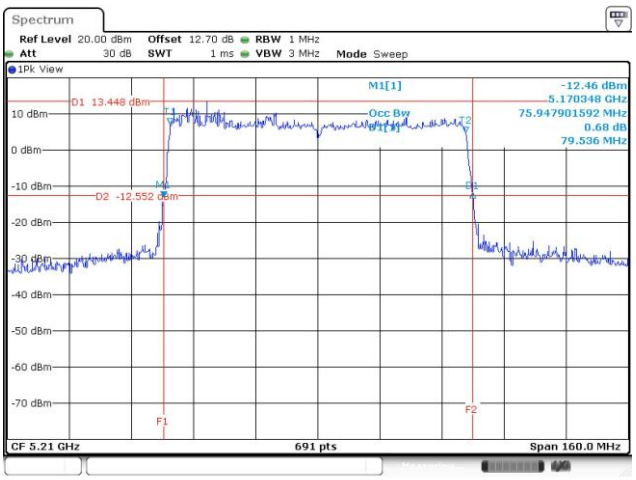
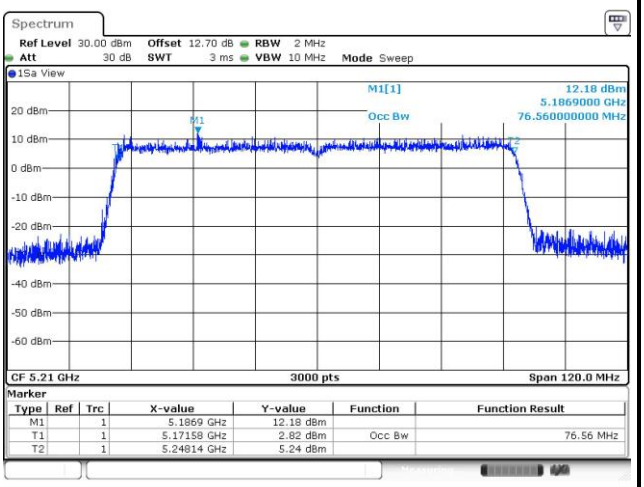
Worst Plot of 26dB Bandwidth	Worst Plot of 99% Bandwidth
	

For Frequency band 5725-5850 MHz											
Emission Bandwidth											
Mode	N_{TX}	Freq. (MHz)	OBW Bandwidth (MHz)				6dB Bandwidth (MHz)				
			Chain 0	Chain 1	Chain 2	Chain 3	Chain 0	Chain 1	Chain 2	Chain 3	6dB BW Limit (MHz)
11a	4	5745	16.47	16.45	16.53	16.49	16.35	16.35	16.35	16.35	0.5
11a	4	5785	16.47	16.45	16.53	16.51	16.35	16.35	16.35	16.35	0.5
11a	4	5825	16.48	16.45	16.53	16.55	16.35	16.35	16.35	16.35	0.5
VHT20	4	5745	17.64	17.61	17.68	17.61	17.57	16.93	17.57	17.57	0.5
VHT20	4	5785	17.64	17.61	17.68	17.63	17.62	17.57	17.62	17.62	0.5
VHT20	4	5825	17.65	17.64	17.67	17.65	17.57	17.51	17.62	17.28	0.5
VHT40	4	5755	36.27	36.32	36.24	36.32	35.25	35.36	35.94	35.94	0.5
VHT40	4	5795	36.21	36.27	36.27	36.35	35.25	35.36	35.59	36.41	0.5
VHT80	4	5775	75.95	76.05	75.84	75.89	75.83	75.83	75.83	75.83	0.5

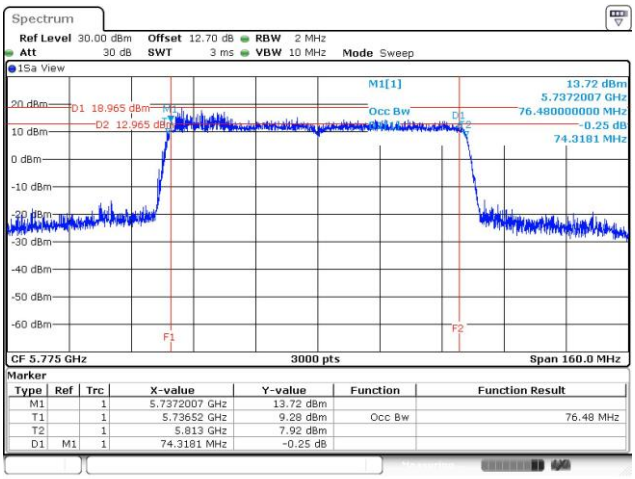
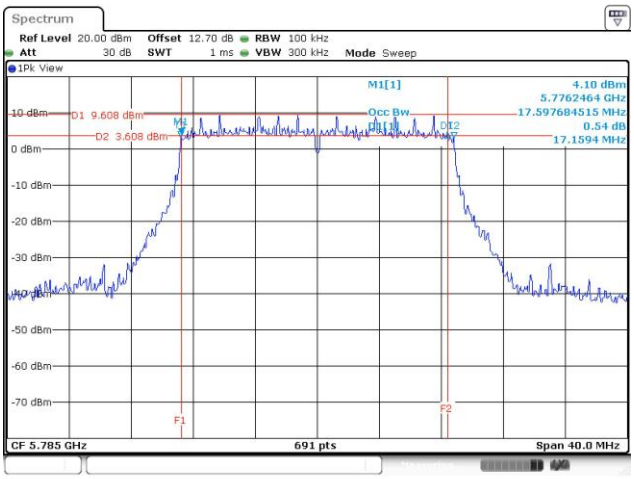
Worst Plot of 99% Bandwidth	Worst Plot of 6dB Bandwidth
	

Beamforming mode

For Frequency band 5150-5250 MHz										
Emission Bandwidth										
Mode	N_{TX}	Freq. (MHz)	26dB Bandwidth (MHz)				99% Bandwidth (MHz)			
			Chain 0	Chain 1	Chain 2	Chain 3	Chain 0	Chain 1	Chain 2	Chain 3
VHT20	4	5180	20.41	20.29	20.46	20.64	17.61	17.63	17.61	17.61
VHT20	4	5200	20.23	20.64	20.58	20.52	17.61	17.63	17.64	17.65
VHT20	4	5240	20.35	20.46	20.93	21.28	17.62	17.66	17.66	17.66
VHT40	4	5190	40.12	40.35	40.12	40.12	36.38	36.28	36.18	36.30
VHT40	4	5230	61.22	66.20	40.35	75.36	36.40	36.68	36.36	36.62
VHT80	4	5210	79.54	79.30	79.30	79.54	76.28	76.12	76.24	76.56

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

For Frequency band 5725-5850 MHz											
Emission Bandwidth											
Mode	N_{TX}	Freq. (MHz)	OBW Bandwidth (MHz)				6dB Bandwidth (MHz)				
			Chain 0	Chain 1	Chain 2	Chain 3	Chain 0	Chain 1	Chain 2	Chain 3	6dB BW Limit (MHz)
VHT20	4	5745	17.65	17.63	17.69	17.64	17.51	17.22	17.57	17.16	0.5
VHT20	4	5785	17.65	17.63	17.71	17.64	17.57	17.16	17.62	17.57	0.5
VHT20	4	5825	17.65	17.63	17.67	17.64	17.57	17.51	17.51	17.57	0.5
VHT40	4	5755	36.43	36.24	36.40	36.32	35.71	35.71	35.01	35.25	0.5
VHT40	4	5795	36.40	36.37	36.45	36.35	34.55	34.78	35.71	35.83	0.5
VHT80	4	5775	76.21	76.37	76.48	76.48	75.83	75.83	75.83	75.83	0.5

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

3.3 RF Output Power

3.3.1 Limit of RF Output Power

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

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

3.3.2 Test Procedures

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

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

3.3.3 Test Setup

3.3.4 Test Result of Maximum Conducted Output Power

Non-beamforming mode

For Frequency band 5150-5250 MHz									
Mode	N_{TX}	Freq. (MHz)	Conducted Power (dBm)				Total Power (mW)	Total Power (dBm)	Limit (dBm)
			Chain 0	Chain 1	Chain 2	Chain 3			
11a	4	5180	19.61	19.50	19.94	20.24	384.846	25.85	30.00
11a	4	5200	20.10	20.12	20.12	20.53	420.912	26.24	30.00
11a	4	5240	20.25	20.22	20.23	20.62	431.906	26.35	30.00
HT20	4	5180	19.38	19.41	19.84	20.16	374.129	25.73	30.00
HT20	4	5200	20.31	20.25	20.33	20.52	433.939	26.37	30.00
HT20	4	5240	20.61	20.35	20.64	20.53	452.330	26.55	30.00
HT40	4	5190	16.91	17.02	17.11	17.13	202.487	23.06	30.00
HT40	4	5230	22.45	22.69	22.81	22.64	736.212	28.67	30.00
VHT20	4	5180	19.49	19.50	19.92	20.3	383.372	25.84	30.00
VHT20	4	5200	20.48	20.39	20.44	20.69	448.964	26.52	30.00
VHT20	4	5240	20.77	20.49	20.78	20.68	467.967	26.70	30.00
VHT40	4	5190	17.02	17.15	17.23	17.25	208.163	23.18	30.00
VHT40	4	5230	22.61	22.83	22.93	22.79	760.700	28.81	30.00
VHT80	4	5210	16.24	16.13	16.21	16.38	168.327	22.26	30.00

For Frequency band 5725-5850 MHz									
Mode	N_{TX}	Freq. (MHz)	Conducted Power (dBm)				Total Power (mW)	Total Power (dBm)	Limit (dBm)
			Chain 0	Chain 1	Chain 2	Chain 3			
11a	4	5745	23.21	23.41	23.62	23.73	894.884	29.52	30.00
11a	4	5785	23.16	23.35	23.89	23.71	903.156	29.56	30.00
11a	4	5825	23.11	23.21	23.93	23.62	891.372	29.50	30.00
HT20	4	5745	23.10	23.22	23.65	23.48	868.651	29.39	30.00
HT20	4	5785	23.14	23.19	23.62	23.45	865.966	29.38	30.00
HT20	4	5825	23.19	23.04	23.81	23.26	862.094	29.36	30.00
HT40	4	5755	23.04	23.85	23.16	23.74	887.640	29.48	30.00
HT40	4	5795	22.95	23.52	23.53	23.68	880.917	29.45	30.00
VHT20	4	5745	23.22	23.35	23.81	23.6	895.689	29.52	30.00
VHT20	4	5785	23.28	23.31	23.77	23.56	892.321	29.51	30.00
VHT20	4	5825	23.31	23.16	23.92	23.51	892.295	29.51	30.00
VHT40	4	5755	23.15	24.01	23.31	23.88	916.938	29.62	30.00
VHT40	4	5795	23.03	23.68	23.67	23.83	908.610	29.58	30.00
VHT80	4	5775	20.18	20.87	20.62	21.01	467.940	26.70	30.00

Beamforming mode

For Frequency band 5150-5250 MHz									
Mode	N_{TX}	Freq. (MHz)	Conducted Power (dBm)				Total Power (mW)	Total Power (dBm)	Limit (dBm)
			Chain 0	Chain 1	Chain 2	Chain 3			
HT20	4	5180	19.08	19.31	19.52	20.06	357.147	25.53	27.06
HT20	4	5200	20.41	20.53	20.32	21.06	458.171	26.61	27.06
HT20	4	5240	20.61	20.75	20.53	21.06	474.554	26.76	27.06
HT40	4	5190	15.53	16.35	16.41	16.35	165.783	22.20	27.06
HT40	4	5230	19.92	20.21	20.29	20.16	413.787	26.17	27.06
VHT20	4	5180	19.21	19.45	19.64	20.14	366.794	25.64	27.06
VHT20	4	5200	20.55	20.67	20.43	21.18	471.810	26.74	27.06
VHT20	4	5240	20.74	20.86	20.66	21.2	488.714	26.89	27.06
VHT40	4	5190	15.68	16.45	16.54	16.48	170.685	22.32	27.06
VHT40	4	5230	20.05	20.32	20.41	20.32	426.352	26.30	27.06
VHT80	4	5210	15.93	15.71	15.56	15.25	145.885	21.64	27.06

Note:

1. Directional gain = 10 * log((10$^{2.8/20}$+10$^{2.5/20}$+10$^{2.4/20}$+10$^{3.9/20}$)^2/4) = 8.94 dBi > 6 dBi
   Limit shall be reduced to 30 dBm – (8.94 dBi – 6 dBi) = 27.06 dBm

For Frequency band 5725-5850 MHz									
Mode	N_{TX}	Freq. (MHz)	Conducted Power (dBm)				Total Power (mW)	Total Power (dBm)	Limit (dBm)
			Chain 0	Chain 1	Chain 2	Chain 3			
HT20	4	5745	20.15	21.24	20.68	21.04	480.567	26.82	27.06
HT20	4	5785	19.95	20.83	20.81	21.32	475.938	26.78	27.06
HT20	4	5825	20.06	20.61	21.39	21.08	482.425	26.83	27.06
HT40	4	5755	19.82	20.51	19.86	20.24	410.910	26.14	27.06
HT40	4	5795	19.71	20.26	20.13	20.24	408.430	26.11	27.06
VHT20	4	5745	20.26	21.39	20.81	21.15	494.711	26.94	27.06
VHT20	4	5785	20.09	20.94	20.95	21.43	489.706	26.90	27.06
VHT20	4	5825	20.14	20.73	21.51	21.21	495.289	26.95	27.06
VHT40	4	5755	19.90	20.65	20.01	20.35	422.492	26.26	27.06
VHT40	4	5795	19.84	20.38	20.22	20.36	419.366	26.23	27.06
VHT80	4	5775	18.45	19.26	19.13	19.22	319.724	25.05	27.06

Note:

1. Directional gain = 10 * log((10$^{2.8/20}$+10$^{2.5/20}$+10$^{2.4/20}$+10$^{3.9/20}$)^2/4) = 8.94 dBi > 6 dBi
   Limit shall be reduced to 30 dBm – (8.94 dBi – 6 dBi) = 27.06 dBm

3.4 Peak Power Spectral Density

3.4.1 Limit of Peak Power Spectral Density

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

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

3.4.2 Test Procedures

For 5150 ~ 5250 MHz

☒ Method SA-1 (Non- Beamforming: 11a/VHT20/VHT40)

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

☒ Method SA-2 Alternative (Non- Beamforming: VHT80 / Beamforming: all modes)

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

For 5725 ~ 5850 MHz

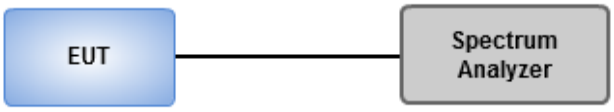
☒ Method SA-1 (Non- Beamforming: 11a/VHT20/VHT40)

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

☒ Method SA-2 Alternative (Non- Beamforming: VHT80 / Beamforming: all modes)

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

3.4.3 Test Setup



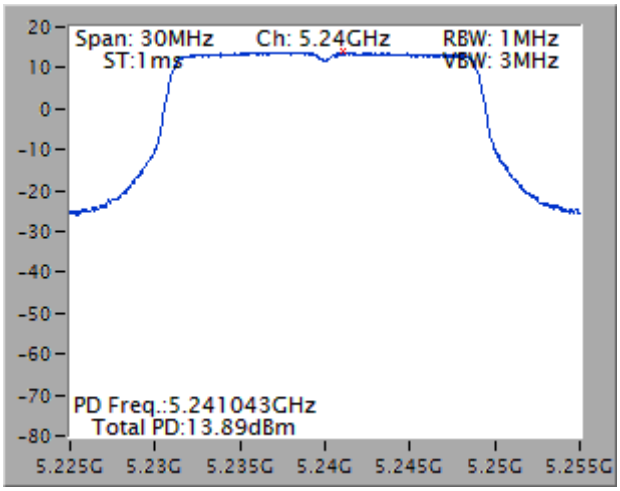
3.4.4 Test Result of Peak Power Spectral Density

Non-beamforming mode

For Frequency band 5150-5250 MHz						
Condition			Peak Power Spectral Density (dBm/MHz)			
Modulation Mode	N_{TX}	Freq. (MHz)	PPSD w/o D.F (dBm/MHz)	Duty Factor (dB)	PPSD with D.F (dBm/MHz)	PPSD Limit (dBm/MHz)
11a	4	5180	12.77	0.00	12.77	14.06
11a	4	5200	13.48	0.00	13.48	14.06
11a	4	5240	13.82	0.00	13.82	14.06
VHT20	4	5180	12.30	0.00	12.30	14.06
VHT20	4	5200	13.64	0.00	13.64	14.06
VHT20	4	5240	13.89	0.00	13.89	14.06
VHT40	4	5190	6.87	0.00	6.87	14.06
VHT40	4	5230	12.85	0.00	12.85	14.06
VHT80	4	5210	3.22	0.19	3.41	14.06

Note:
1. D.F is duty factor.
2. Test result is bin-by-bin summing measured value of each TX port.
3. Directional gain = 10 * log((10$^{2.8/20}$+10$^{2.5/20}$+10$^{2.4/20}$+10$^{3.9/20}$)^2/4) = 8.94 dBi > 6 dBi
   Limit shall be reduced to 17 dBm – (8.94 dBi – 6 dBi) = 14.06 dBm.

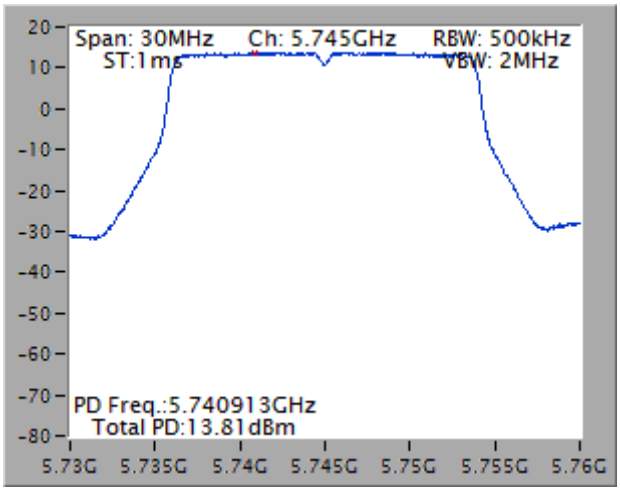
Worst Plot



For Frequency band 5725-5850 MHz						
Condition			Peak Power Spectral Density (dBm/500kHz)			
Modulation Mode	N_{TX}	Freq. (MHz)	PPSD w/o D.F (dBm/500kHz)	Duty Factor (dB)	PPSD with D.F (dBm/500kHz)	PPSD Limit (dBm/500kHz)
11a	4	5745	13.42	0.00	13.42	27.06
11a	4	5785	13.51	0.00	13.51	27.06
11a	4	5825	13.54	0.00	13.54	27.06
VHT20	4	5745	13.81	0.00	13.81	27.06
VHT20	4	5785	13.06	0.00	13.06	27.06
VHT20	4	5825	12.95	0.00	12.95	27.06
VHT40	4	5755	11.70	0.00	11.70	27.06
VHT40	4	5795	11.71	0.00	11.71	27.06
VHT80	4	5775	4.53	0.19	4.72	27.06

Note:
1. D.F is duty factor.
2. Test result is bin-by-bin summing measured value of each TX port.
3. Directional gain = 10 * log((10$^{2.8/20}$+10$^{2.5/20}$+10$^{2.4/20}$+10$^{3.9/20}$)^2/4) = 8.94 dBi > 6 dBi
   Limit shall be reduced to 30 dBm – (8.94 dBi – 6 dBi) = 27.06 dBm.

Worst Plot

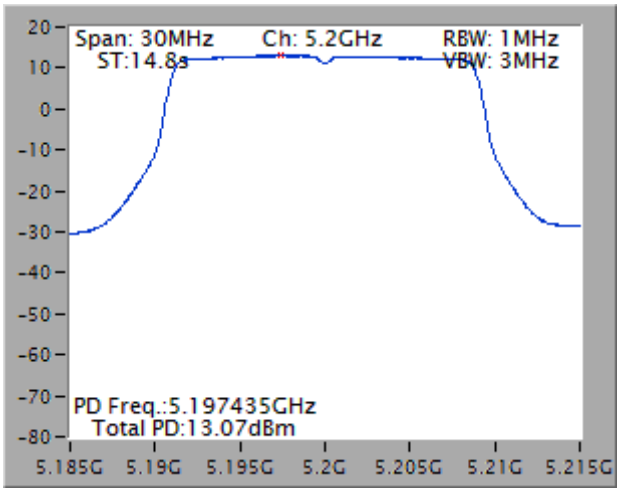


Beamforming mode

For Frequency band 5150-5250 MHz						
Condition			Peak Power Spectral Density (dBm/MHz)			
Modulation Mode	N_{TX}	Freq. (MHz)	PPSD w/o D.F (dBm/MHz)	Duty Factor (dB)	PPSD with D.F (dBm/MHz)	PPSD Limit (dBm/MHz)
VHT20	4	5180	12.13	0.30	12.43	14.06
VHT20	4	5200	13.07	0.30	13.37	14.06
VHT20	4	5240	13.05	0.30	13.35	14.06
VHT40	4	5190	4.21	0.31	4.52	14.06
VHT40	4	5230	9.90	0.31	10.21	14.06
VHT80	4	5210	1.33	0.37	1.70	14.06

Note:
1. D.F is duty factor.
2. Test result is bin-by-bin summing measured value of each TX port.
3. Directional gain = 10 * log((10$^{2.8/20}$+10$^{2.5/20}$+10$^{2.4/20}$+10$^{3.9/20}$)^2/4) = 8.94 dBi > 6 dBi
   Limit shall be reduced to 17 dBm – (8.94 dBi – 6 dBi) = 14.06 dBm.

Worst Plot

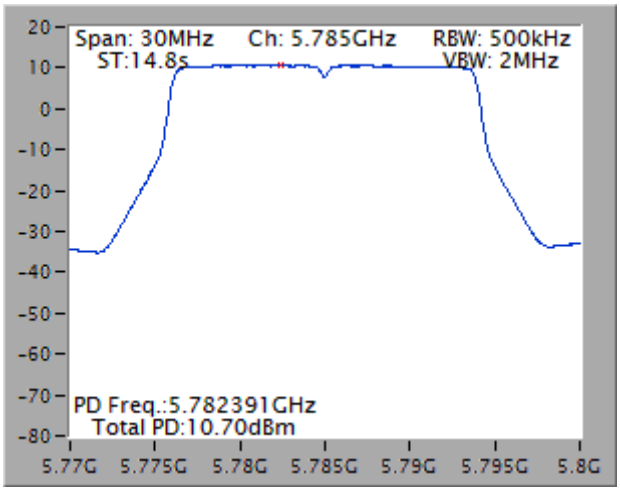


Note: The worst plot is w/o duty factor.

For Frequency band 5725-5850 MHz						
Condition			Peak Power Spectral Density (dBm/500kHz)			
Modulation Mode	N_{TX}	Freq. (MHz)	PPSD w/o D.F (dBm/500kHz)	Duty Factor (dB)	PPSD with D.F (dBm/500kHz)	PPSD Limit (dBm/500kHz)
VHT20	4	5745	10.63	0.30	10.93	27.06
VHT20	4	5785	10.70	0.30	11.00	27.06
VHT20	4	5825	10.65	0.30	10.95	27.06
VHT40	4	5755	7.22	0.31	7.53	27.06
VHT40	4	5795	7.96	0.31	8.27	27.06
VHT80	4	5775	3.29	0.37	3.66	27.06

Note:
1. D.F is duty factor.
2. Test result is bin-by-bin summing measured value of each TX port.
3. Directional gain = 10 * log((10$^{2.8/20}$+10$^{2.5/20}$+10$^{2.4/20}$+10$^{3.9/20}$)^2/4) = 8.94 dBi > 6 dBi
   Limit shall be reduced to 30 dBm – (8.94 dBi – 6 dBi) = 27.06 dBm.

Worst Plot



Note: The worst plot is w/o duty factor.

3.5 Transmitter Radiated and Band Edge Emissions

3.5.1 Limit of Transmitter Radiated and Band Edge Emissions

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

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

Un-restricted band emissions above 1GHz Limit		
Operating Band	**Limit**	
5.15 - 5.25 GHz	e.i.r.p. -27 dBm [68.2 dBuV/m@3m]	
5.725 - 5.850 GHz	☒	15.407(b)(4)(i) All emissions shall be limited to a level of −27 dBm/MHz at 75 MHz or more above or below the band edge increasing linearly to 10 dBm/MHz at 25 MHz above or below the band edge, and from 25 MHz above or below the band edge increasing linearly to a level of 15.6 dBm/MHz at 5 MHz above or below the band edge, and from 5 MHz above or below the band edge increasing linearly to a level of 27 dBm/MHz at the band edge.
	☐	15.407(b)(4)(ii) ,compliance with the emission limits in § 15.247(d) Shall be at least 30dB below that in the 100 kHz bandwidth within the band that contains the highest level of the desired power,. Attenuation below the general limits specified in §15.209(a) is not required. In addition,radiated emissions which fall in the restricted bands, as defined in §15.205(a), must also comply with the radiated emission limits specified in §15.209(a) (see § 15.205(c))
Note 1: Measurements may be performed at a distance other than the limit distance provided they are not performed in the near field and the emissions to be measured can be detected by the measurement equipment. When performing measurements at a distance other than that specified, the results shall be extrapolated to the specified distance using an extrapolation factor of 20 dB/decade (inverse of linear distance for field-strength measurements, inverse of linear distance-squared for power-density measurements).		

3.5.2 Test Procedures

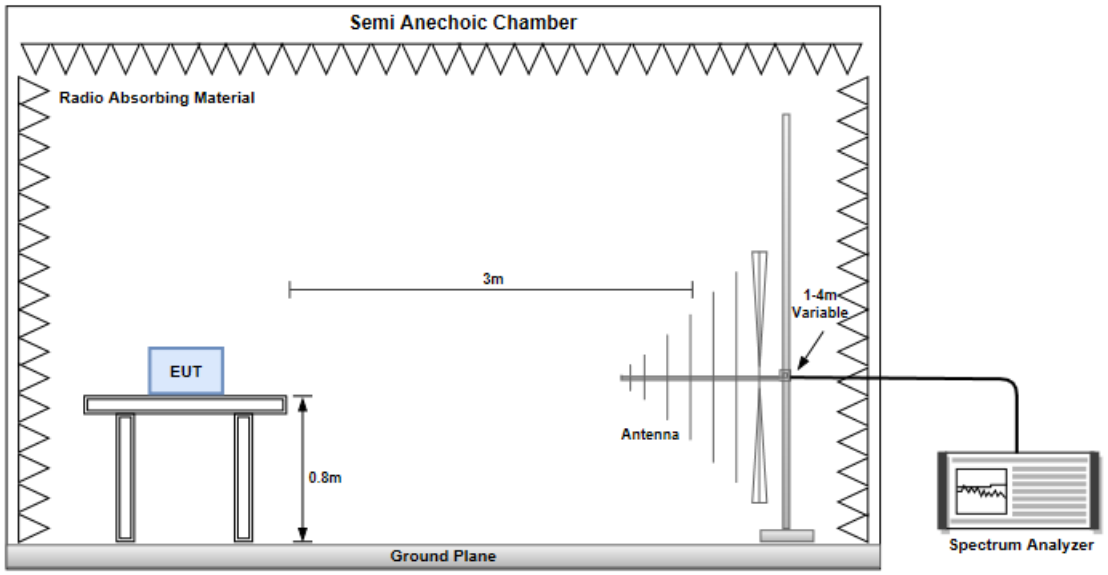
1. Measurement is made at a semi-anechoic chamber that incorporates a turntable allowing a EUT rotation of 360°. A continuously-rotating, remotely-controlled turntable is installed at the test site to support the EUT and facilitate determination of the direction of maximum radiation for each EUT emission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

Note:

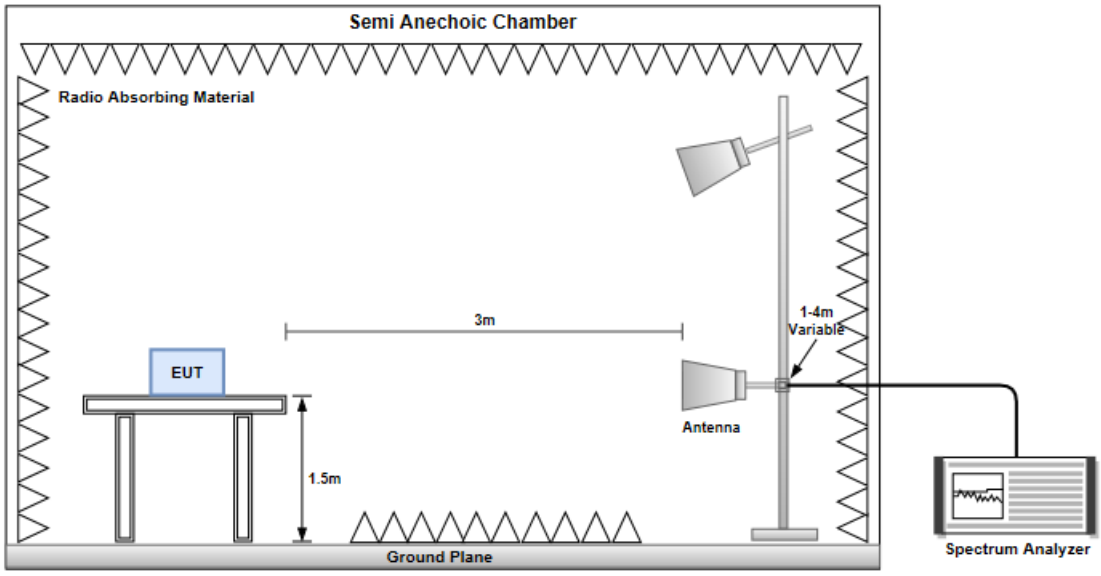
1. 120kHz measurement bandwidth of test receiver and Quasi-peak detector is for radiated emission below 1GHz.
2. RBW=1MHz, VBW=3MHz and Peak detector is for peak measured value of radiated emission above 1GHz.
3. RBW=1MHz, VBW=1/T and Peak detector is for average measured value of radiated emission above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

3.5.3 Test Setup

Radiated Emissions below 1 GHz



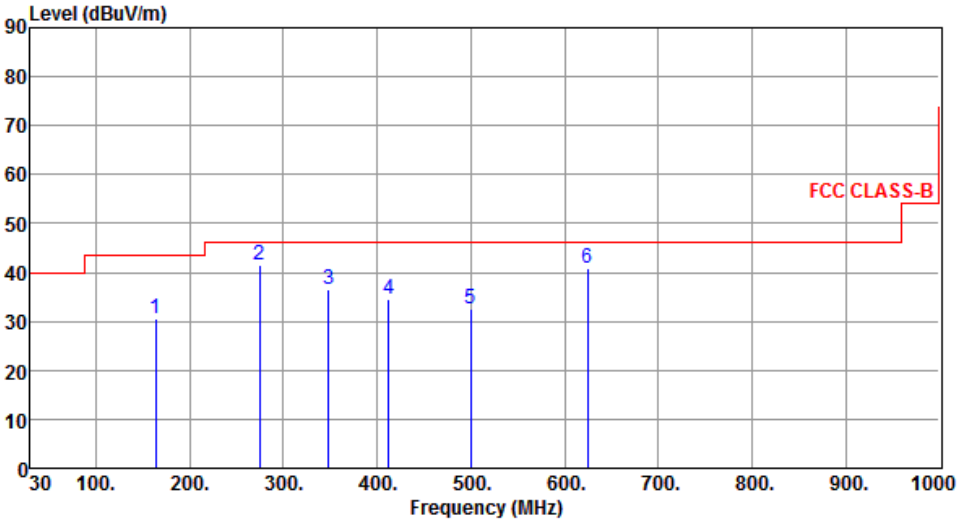
Radiated Emissions above 1 GHz



Non- beamforming mode

3.5.4 Transmitter Radiated Unwanted Emissions (Below 1GHz)

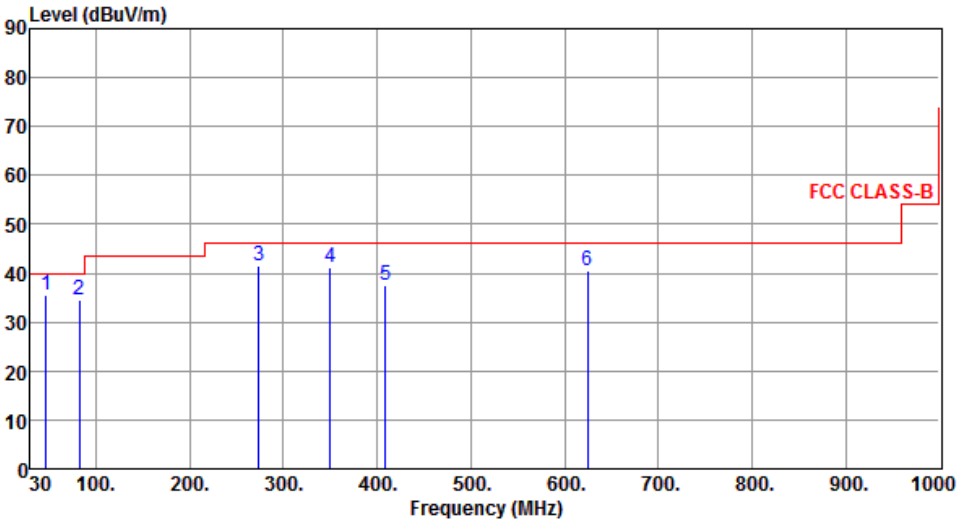
Modulation	VHT40	**Test Freq. (MHz)**	5230
Polarization	Horizontal		



	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	163.65	30.47	43.50	-13.03	38.99	-8.52	Peak	---	---
2	274.46	41.44	46.00	-4.56	50.09	-8.65	QP	100	142
3	348.41	36.67	46.00	-9.33	43.30	-6.63	Peak	---	---
4	412.42	34.65	46.00	-11.35	39.52	-4.87	Peak	---	---
5	499.96	32.57	46.00	-13.43	35.71	-3.14	Peak	---	---
6	624.96	40.70	46.00	-5.30	41.22	-0.52	Peak	---	---

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

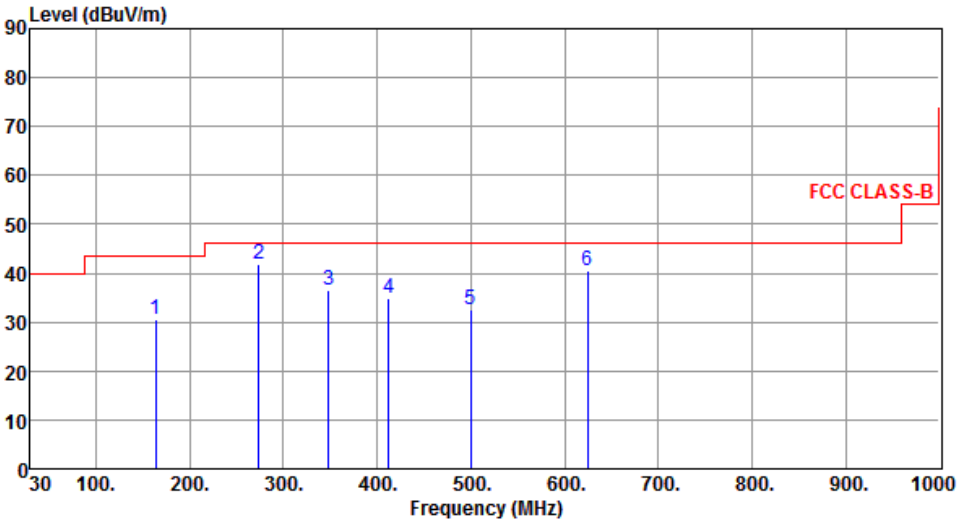
Modulation	VHT40	Test Freq. (MHz)	5230
Polarization	Vertical		



	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	46.52	35.46	40.00	-4.54	43.68	-8.22	QP	100	20
2	82.36	34.68	40.00	-5.32	48.20	-13.52	Peak	---	---
3	273.46	41.61	46.00	-4.39	50.30	-8.69	Peak	---	---
4	349.55	41.05	46.00	-4.95	47.65	-6.60	Peak	---	---
5	409.28	37.68	46.00	-8.32	42.64	-4.96	Peak	---	---
6	624.48	40.46	46.00	-5.54	40.98	-0.52	Peak	---	---

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

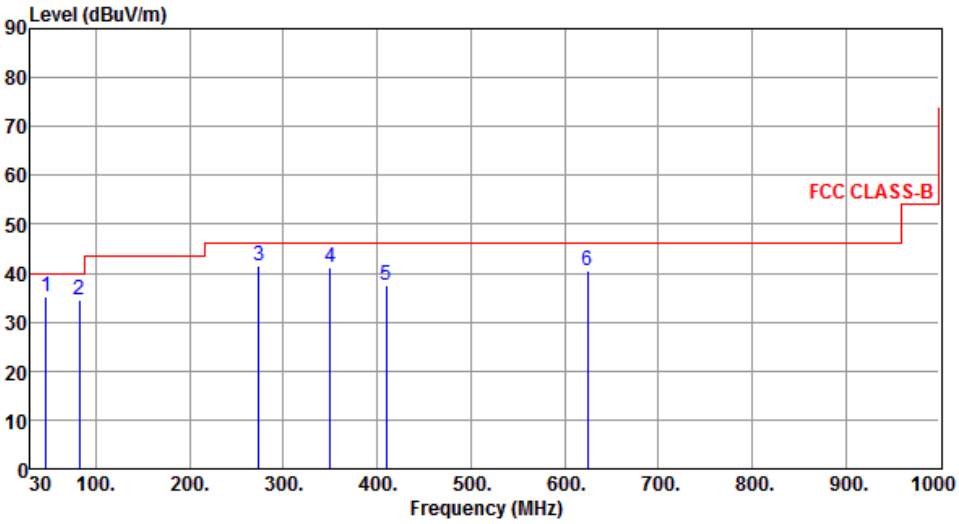
Modulation	VHT40	Test Freq. (MHz)	5755
Polarization	Horizontal		



	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	163.53	30.55	43.50	-12.95	39.06	-8.51	Peak	---	---
2	273.68	41.96	46.00	-4.04	50.64	-8.68	QP	100	140
3	348.55	36.53	46.00	-9.47	43.15	-6.62	Peak	---	---
4	412.35	34.72	46.00	-11.28	39.60	-4.88	Peak	---	---
5	499.86	32.65	46.00	-13.35	35.79	-3.14	Peak	---	---
6	624.97	40.53	46.00	-5.47	41.05	-0.52	Peak	---	---

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

Modulation	VHT40	Test Freq. (MHz)	5755
Polarization	Vertical		

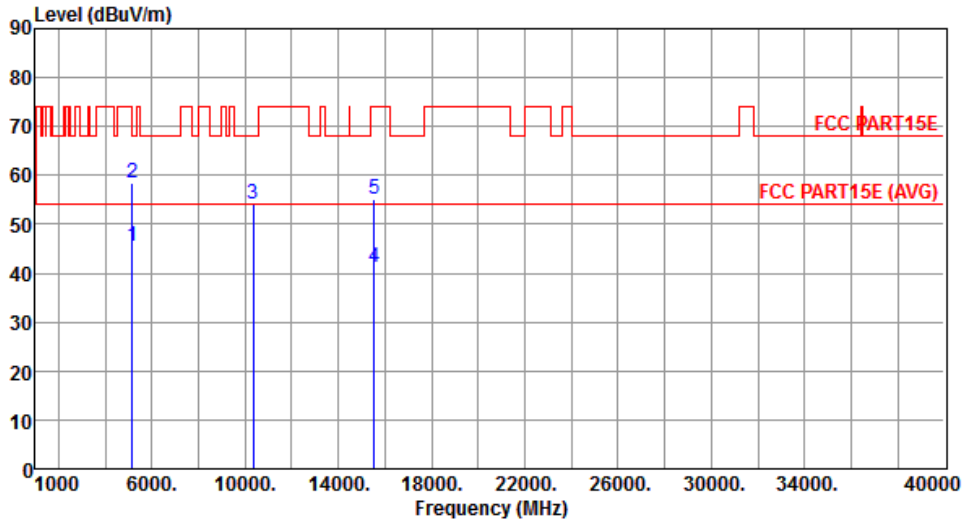


	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	46.62	35.36	40.00	-4.64	43.58	-8.22	QP	100	20
2	82.41	34.53	40.00	-5.47	48.06	-13.53	Peak	---	---
3	273.62	41.45	46.00	-4.55	50.14	-8.69	Peak	---	---
4	349.62	41.21	46.00	-4.79	47.81	-6.60	Peak	---	---
5	409.48	37.55	46.00	-8.45	42.50	-4.95	Peak	---	---
6	624.67	40.47	46.00	-5.53	40.99	-0.52	Peak	---	---

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

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

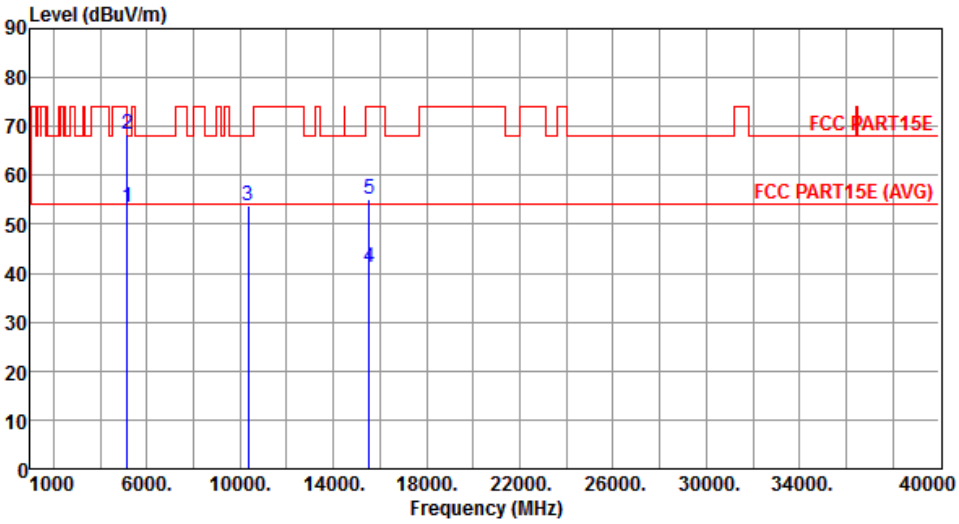
Modulation	11a	Test Freq. (MHz)	5180
Polarization	Horizontal		



	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	5150.00	45.49	54.00	-8.51	40.47	5.02	Average	120	250
2	5150.00	58.43	74.00	-15.57	53.41	5.02	Peak	120	250
3	10360.00	54.10	68.20	-14.10	40.36	13.74	Peak	100	125
4	15540.00	41.18	54.00	-12.82	26.21	14.97	Average	100	145
5	15540.00	55.22	74.00	-18.78	40.25	14.97	Peak	100	145

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

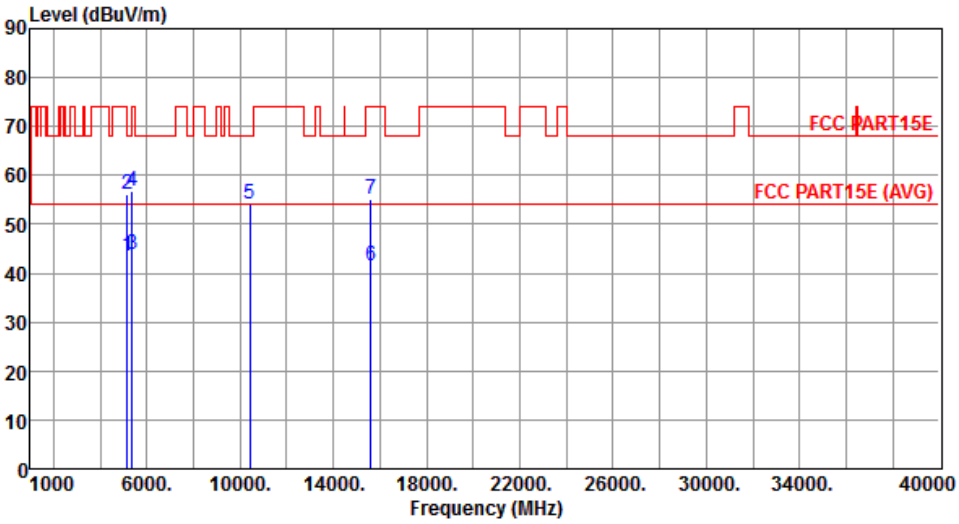
Modulation	11a	Test Freq. (MHz)	5180
Polarization	Vertical		



	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	5150.00	53.49	54.00	-0.51	48.47	5.02	Average	140	167
2	5150.00	68.31	74.00	-5.69	63.29	5.02	Peak	140	167
3	10360.00	53.87	68.20	-14.33	40.13	13.74	Peak	100	151
4	15540.00	41.28	54.00	-12.72	26.31	14.97	Average	100	176
5	15540.00	55.28	74.00	-18.72	40.31	14.97	Peak	100	176

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

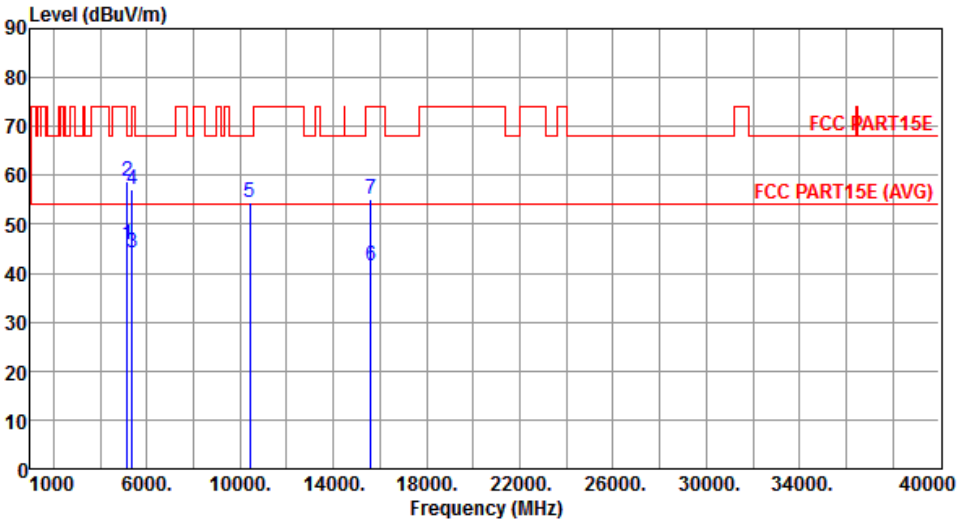
Modulation	11a	Test Freq. (MHz)	5200
Polarization	Horizontal		



	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	5150.00	43.60	54.00	-10.40	38.58	5.02	Average	121	251
2	5150.00	56.06	74.00	-17.94	51.04	5.02	Peak	121	251
3	5350.00	43.76	54.00	-10.24	38.45	5.31	Average	121	251
4	5350.00	56.68	74.00	-17.32	51.37	5.31	Peak	121	251
5	10400.00	54.20	68.20	-14.00	40.43	13.77	Peak	100	145
6	15600.00	41.47	54.00	-12.53	26.53	14.94	Average	100	135
7	15600.00	55.25	74.00	-18.75	40.31	14.94	Peak	100	135

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

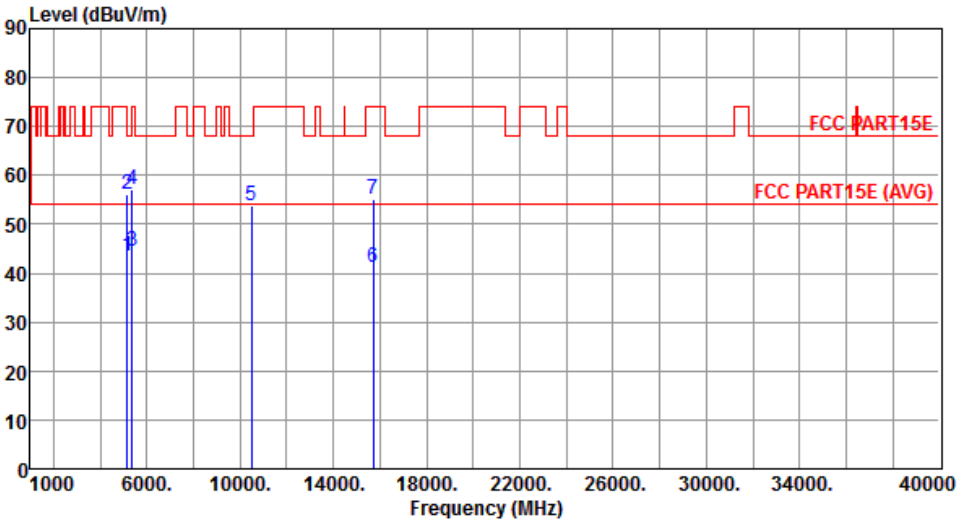
Modulation	11a	**Test Freq. (MHz)**	5200
Polarization	Vertical		



	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	5150.00	45.93	54.00	-8.07	40.91	5.02	Average	153	182
2	5150.00	58.63	74.00	-15.37	53.61	5.02	Peak	153	182
3	5350.00	44.27	54.00	-9.73	38.96	5.31	Average	153	182
4	5350.00	57.21	74.00	-16.79	51.90	5.31	Peak	153	182
5	10400.00	54.39	68.20	-13.81	40.62	13.77	Peak	100	132
6	15600.00	41.37	54.00	-12.63	26.43	14.94	Average	100	153
7	15600.00	55.12	74.00	-18.88	40.18	14.94	Peak	100	153

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

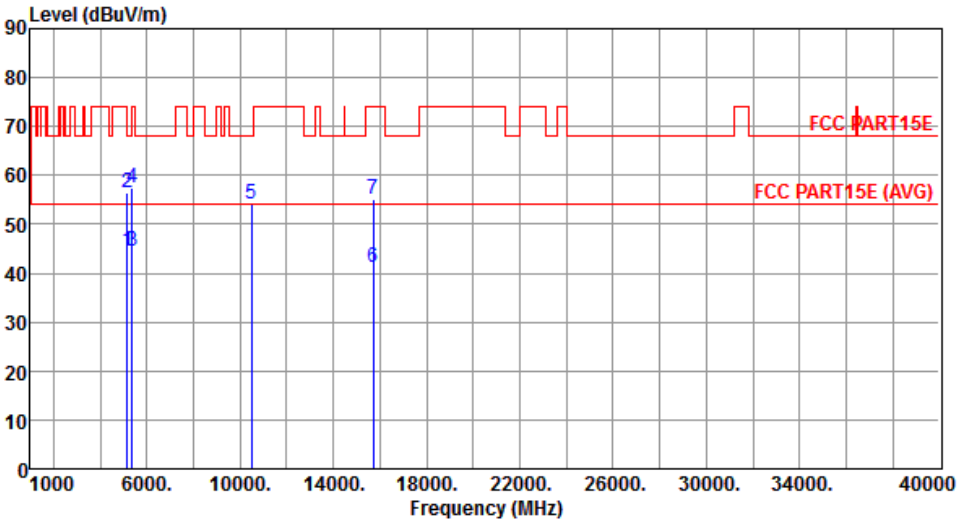
Modulation	11a	Test Freq. (MHz)	5240
Polarization	Horizontal		



	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	5150.00	43.67	54.00	-10.33	38.65	5.02	Average	148	178
2	5150.00	56.24	74.00	-17.76	51.22	5.02	Peak	148	178
3	5350.00	44.46	54.00	-9.54	39.15	5.31	Average	149	178
4	5350.00	56.99	74.00	-17.01	51.68	5.31	Peak	149	178
5	10480.00	53.96	68.20	-14.24	40.15	13.81	Peak	100	145
6	15720.00	41.05	54.00	-12.95	26.14	14.91	Average	100	135
7	15720.00	55.25	74.00	-18.75	40.34	14.91	Peak	100	135

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

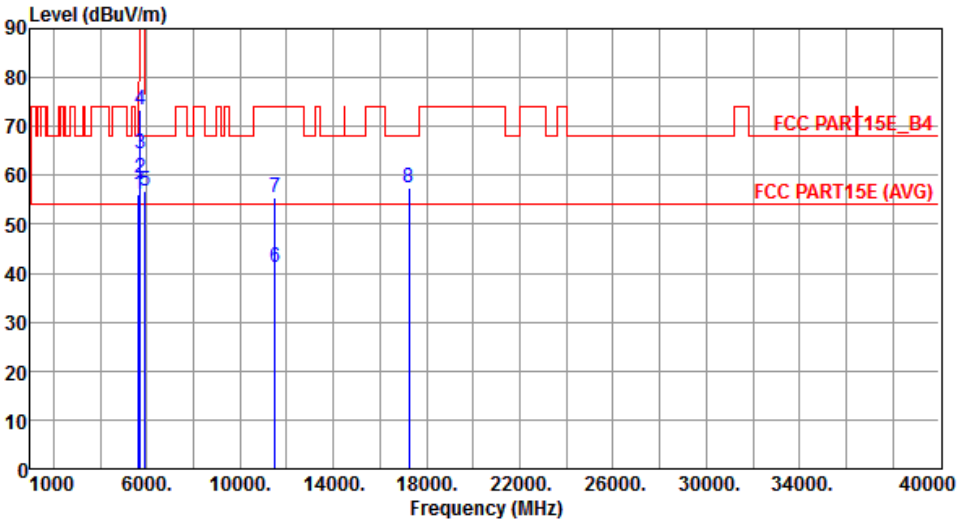
Modulation	11a	Test Freq. (MHz)	5240
Polarization	Vertical		



	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	5150.00	44.58	54.00	-9.42	39.56	5.02	Average	151	181
2	5150.00	56.47	74.00	-17.53	51.45	5.02	Peak	151	181
3	5350.00	44.62	54.00	-9.38	39.31	5.31	Average	151	181
4	5350.00	57.56	74.00	-16.44	52.25	5.31	Peak	151	181
5	10480.00	54.03	68.20	-14.17	40.22	13.81	Peak	100	138
6	15720.00	41.25	54.00	-12.75	26.34	14.91	Average	100	144
7	15720.00	55.06	74.00	-18.94	40.15	14.91	Peak	100	144

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

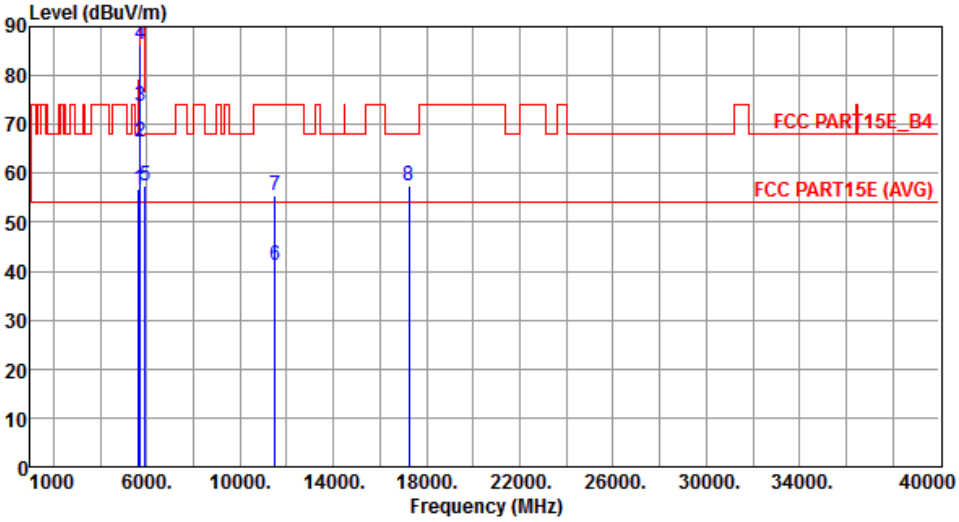
Modulation	11a	Test Freq. (MHz)	5745
Polarization	Horizontal		



	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	5650.00	56.22	68.20	-11.98	50.53	5.69	Peak	140	185
2	5700.00	59.52	105.20	-45.68	53.75	5.77	Peak	140	185
3	5720.00	64.53	110.80	-46.27	58.74	5.79	Peak	140	185
4	5725.00	73.36	122.20	-48.84	67.55	5.81	Peak	140	185
5	5925.00	56.70	68.20	-11.50	50.61	6.09	Peak	140	185
6	11490.00	41.07	54.00	-12.93	26.34	14.73	Average	100	150
7	11490.00	55.44	74.00	-18.56	40.71	14.73	Peak	100	150
8	17235.00	57.34	68.20	-10.86	40.27	17.07	Peak	100	144

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

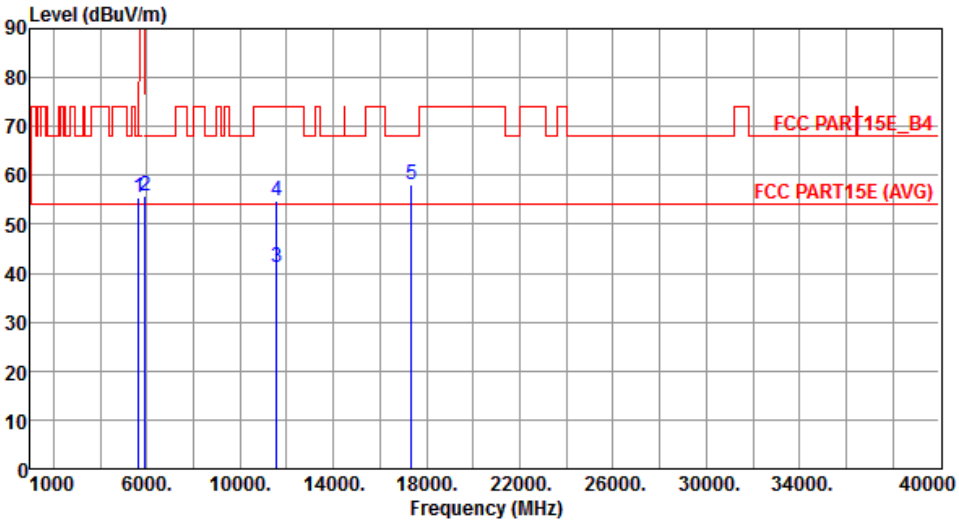
Modulation	11a	Test Freq. (MHz)	5745
Polarization	Vertical		



	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	5650.00	56.75	68.20	-11.45	51.06	5.69	Peak	138	177
2	5700.00	66.30	105.20	-38.90	60.53	5.77	Peak	138	177
3	5720.00	73.63	110.80	-37.17	67.84	5.79	Peak	138	177
4	5725.00	86.50	122.20	-35.70	80.69	5.81	Peak	138	177
5	5925.00	57.39	68.20	-10.81	51.30	6.09	Peak	138	177
6	11490.00	41.27	54.00	-12.73	26.54	14.73	Average	100	152
7	11490.00	55.35	74.00	-18.65	40.62	14.73	Peak	100	152
8	17235.00	57.50	68.20	-10.70	40.43	17.07	Peak	100	168

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

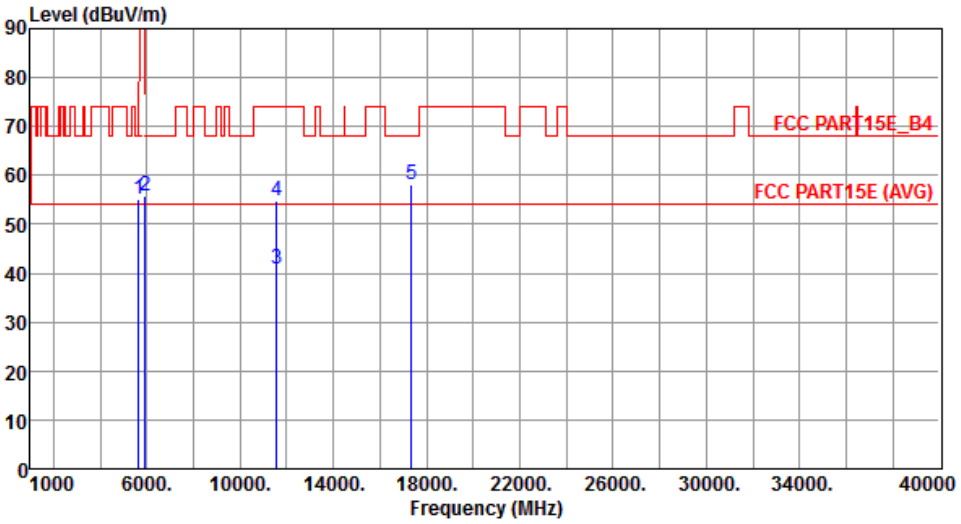
Modulation	11a	Test Freq. (MHz)	5785
Polarization	Horizontal		



	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	5650.00	55.45	68.20	-12.75	49.76	5.69	Peak	211	276
2	5925.00	55.76	68.20	-12.44	49.67	6.09	Peak	211	276
3	11570.00	41.21	54.00	-12.79	26.61	14.60	Average	100	177
4	11570.00	54.72	74.00	-19.28	40.12	14.60	Peak	100	177
5	17355.00	58.12	68.20	-10.08	40.57	17.55	Peak	100	162

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

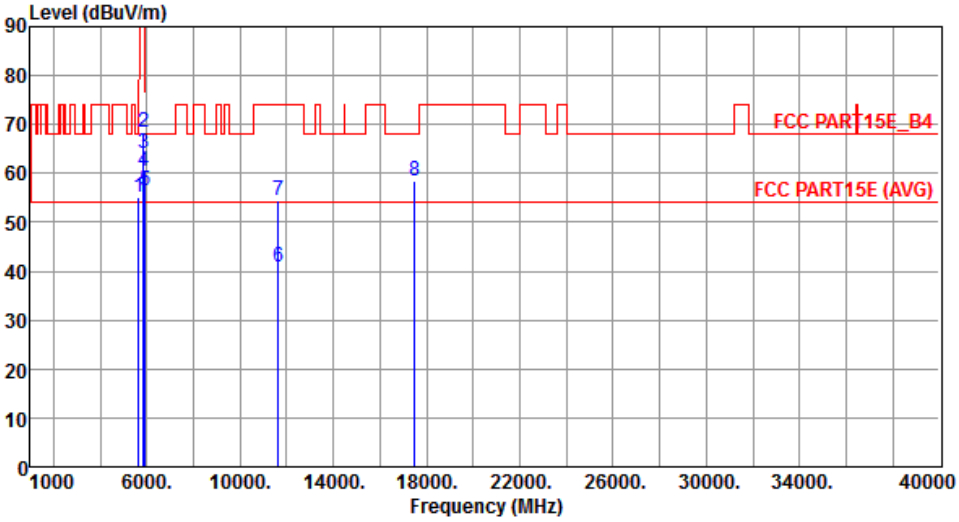
Modulation	11a	Test Freq. (MHz)	5785
Polarization	Vertical		



	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	5650.00	55.24	68.20	-12.96	49.55	5.69	Peak	143	177
2	5925.00	55.91	68.20	-12.29	49.82	6.09	Peak	143	177
3	11570.00	40.82	54.00	-13.18	26.22	14.60	Average	100	143
4	11570.00	54.96	74.00	-19.04	40.36	14.60	Peak	100	143
5	17355.00	58.05	68.20	-10.15	40.50	17.55	Peak	100	162

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

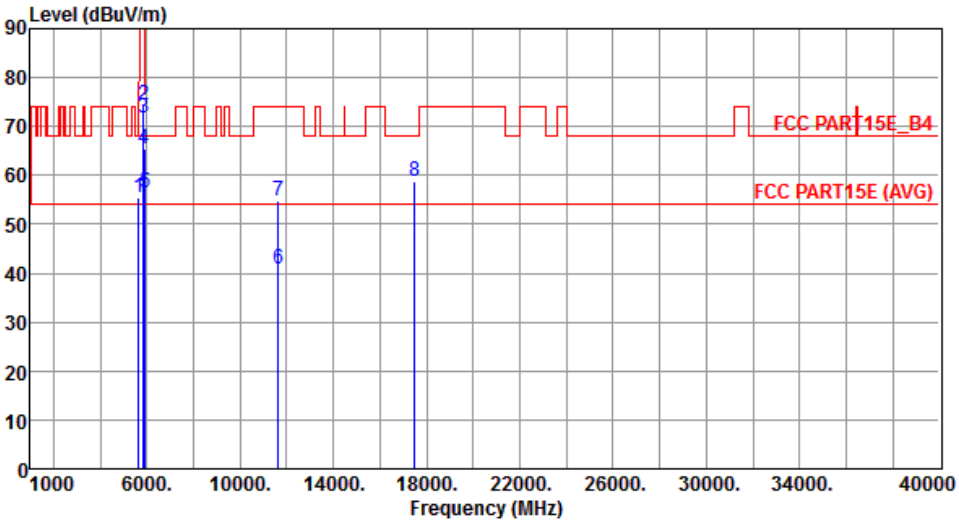
Modulation	11a	Test Freq. (MHz)	5825
Polarization	Horizontal		



	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	5650.00	55.24	68.20	-12.96	49.55	5.69	Peak	140	196
2	5850.00	68.30	122.20	-53.90	62.31	5.99	Peak	140	196
3	5855.00	64.21	110.80	-46.59	58.21	6.00	Peak	140	196
4	5875.00	60.28	105.20	-44.92	54.26	6.02	Peak	140	196
5	5925.00	56.35	68.20	-11.85	50.26	6.09	Peak	162	188
6	11650.00	40.79	54.00	-13.21	26.35	14.44	Average	100	171
7	11650.00	54.57	74.00	-19.43	40.13	14.44	Peak	100	172
8	17475.00	58.36	68.20	-9.84	40.32	18.04	Peak	100	212

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

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

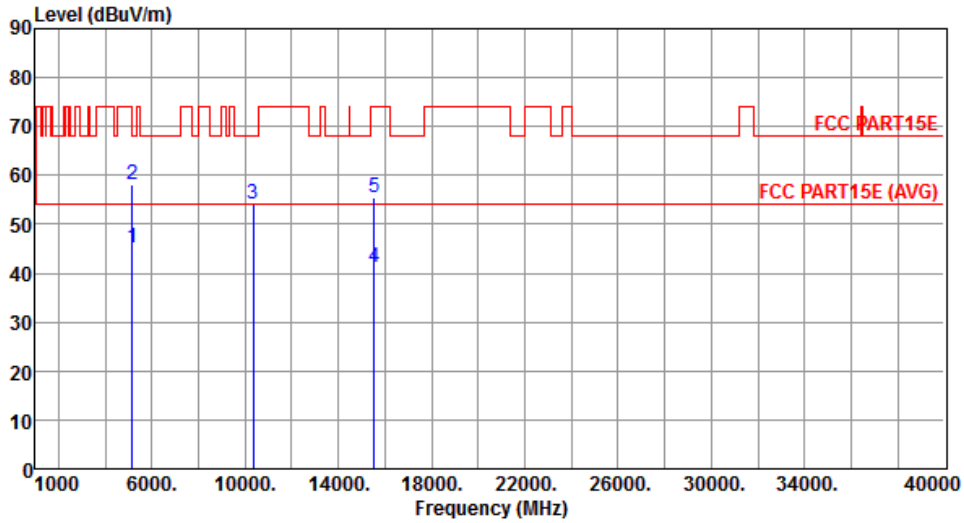


	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	5650.00	55.41	68.20	-12.79	49.72	5.69	Peak	164	181
2	5850.00	74.52	122.20	-47.68	68.53	5.99	Peak	164	181
3	5855.00	71.61	110.80	-39.19	65.61	6.00	Peak	164	181
4	5875.00	65.50	105.20	-39.70	59.48	6.02	Peak	164	181
5	5925.00	56.43	68.20	-11.77	50.34	6.09	Peak	164	181
6	11650.00	40.86	54.00	-13.14	26.42	14.44	Average	100	173
7	11650.00	54.69	74.00	-19.31	40.25	14.44	Peak	100	173
8	17475.00	58.74	68.20	-9.46	40.70	18.04	Peak	100	193

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

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

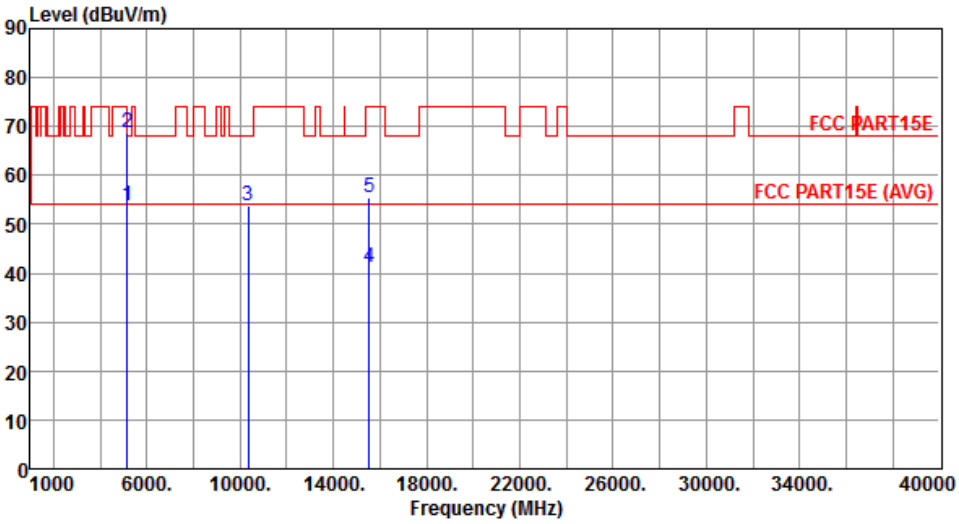
Modulation	VHT20	Test Freq. (MHz)	5180
Polarization	Horizontal		



	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	5150.00	45.26	54.00	-8.74	40.24	5.02	Average	138	155
2	5150.00	58.23	74.00	-15.77	53.21	5.02	Peak	138	155
3	10360.00	53.99	68.20	-14.21	40.25	13.74	Peak	100	168
4	15540.00	41.10	54.00	-12.90	26.13	14.97	Average	100	193
5	15540.00	55.42	74.00	-18.58	40.45	14.97	Peak	100	193

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

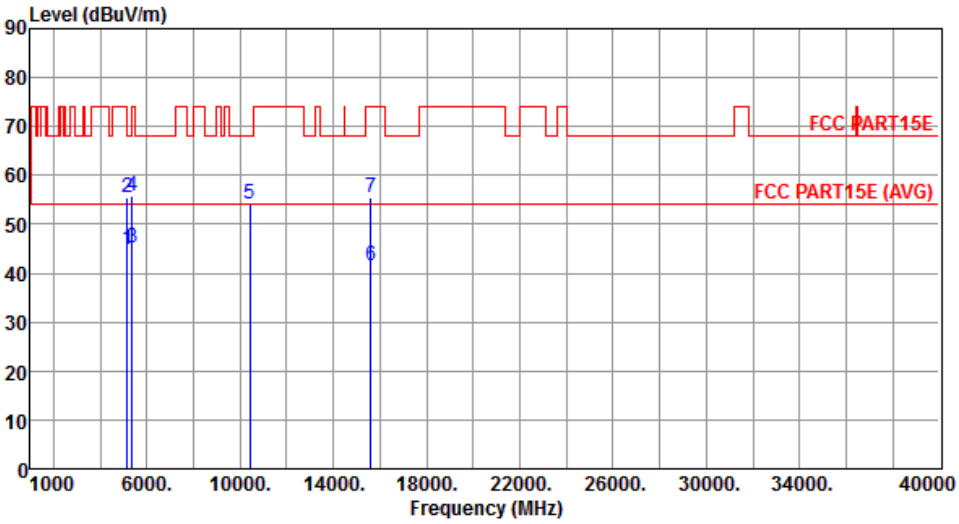
Modulation	VHT20	Test Freq. (MHz)	5180
Polarization	Vertical		



	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	5150.00	53.80	54.00	-0.20	48.78	5.02	Average	141	167
2	5150.00	68.68	74.00	-5.32	63.66	5.02	Peak	141	167
3	10360.00	53.83	68.20	-14.37	40.09	13.74	Peak	100	157
4	15540.00	41.25	54.00	-12.75	26.28	14.97	Average	100	174
5	15540.00	55.32	74.00	-18.68	40.35	14.97	Peak	100	174

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

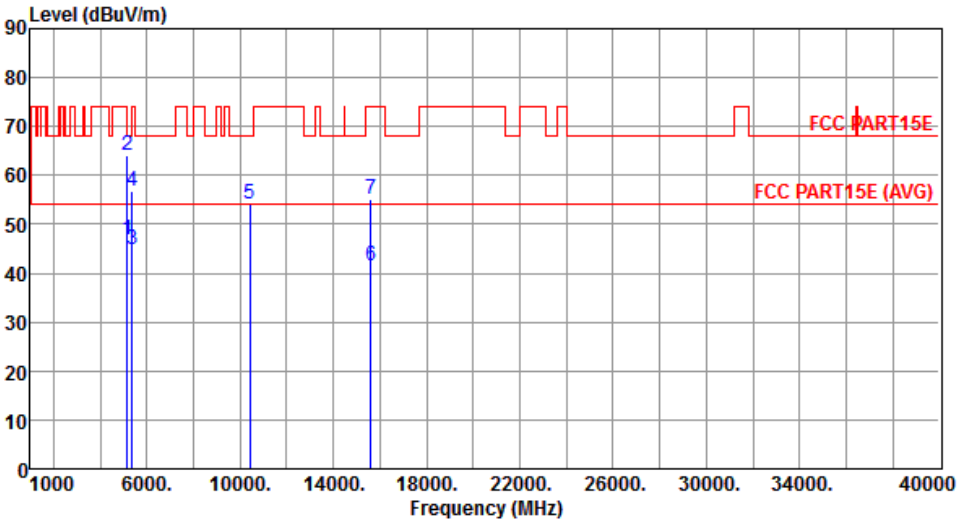
Modulation	VHT20	Test Freq. (MHz)	5200
Polarization	Horizontal		



	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	5150.00	44.91	54.00	-9.09	39.89	5.02	Average	122	251
2	5150.00	55.61	74.00	-18.39	50.59	5.02	Peak	122	251
3	5350.00	45.15	54.00	-8.85	39.84	5.31	Average	122	251
4	5350.00	55.92	74.00	-18.08	50.61	5.31	Peak	122	251
5	10400.00	54.05	68.20	-14.15	40.28	13.77	Peak	100	150
6	15600.00	41.59	54.00	-12.41	26.65	14.94	Average	100	132
7	15600.00	55.30	74.00	-18.70	40.36	14.94	Peak	100	132

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

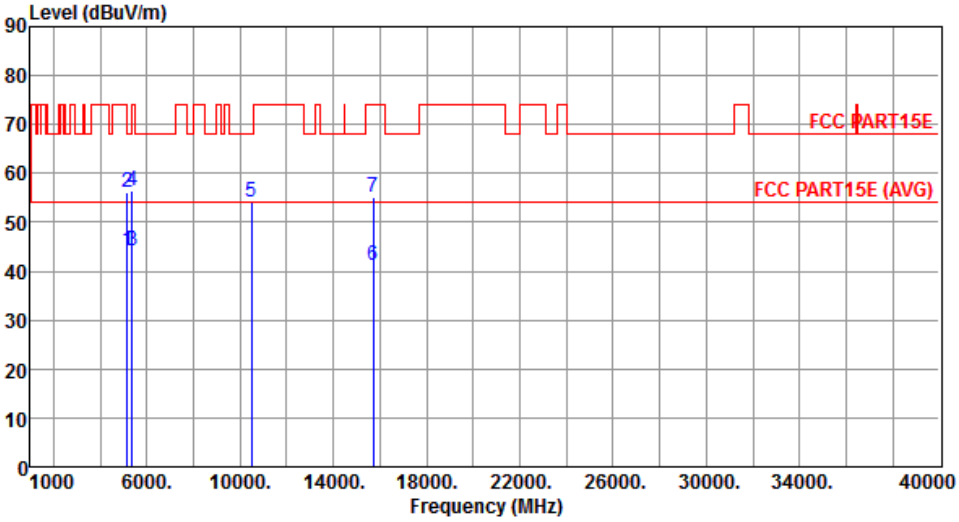
Modulation	VHT20	Test Freq. (MHz)	5200
Polarization	Vertical		



	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	5150.00	46.94	54.00	-7.06	41.92	5.02	Average	167	172
2	5150.00	64.11	74.00	-9.89	59.09	5.02	Peak	167	172
3	5350.00	44.98	54.00	-9.02	39.67	5.31	Average	167	172
4	5350.00	56.89	74.00	-17.11	51.58	5.31	Peak	167	172
5	10400.00	54.13	68.20	-14.07	40.36	13.77	Peak	100	137
6	15600.00	41.66	54.00	-12.34	26.72	14.94	Average	100	155
7	15600.00	55.19	74.00	-18.81	40.25	14.94	Peak	100	155

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

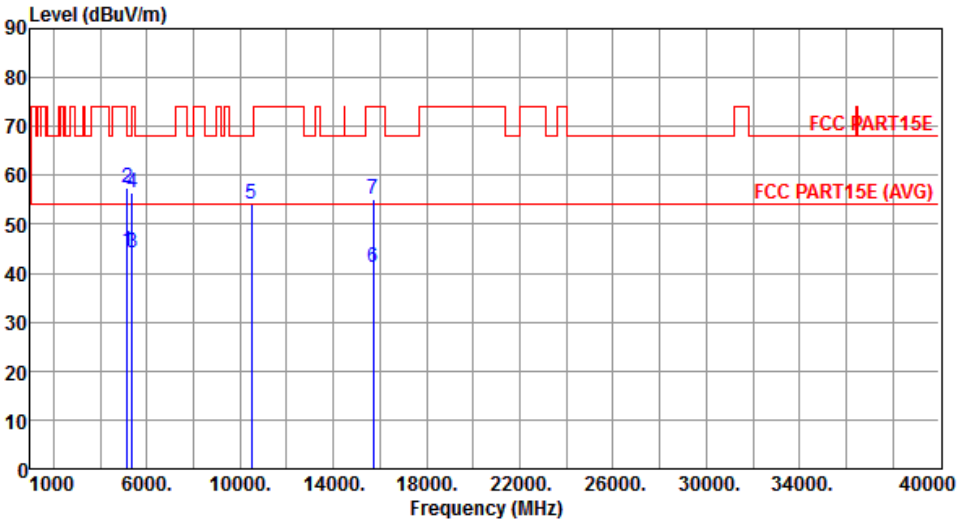
Modulation	VHT20	Test Freq. (MHz)	5240
Polarization	Horizontal		



	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	5150.00	44.14	54.00	-9.86	39.12	5.02	Average	135	166
2	5150.00	56.20	74.00	-17.80	51.18	5.02	Peak	135	166
3	5350.00	44.07	54.00	-9.93	38.76	5.31	Average	135	166
4	5350.00	56.58	74.00	-17.42	51.27	5.31	Peak	135	166
5	10480.00	54.05	68.20	-14.15	40.24	13.81	Peak	100	152
6	15720.00	41.14	54.00	-12.86	26.23	14.91	Average	100	171
7	15720.00	55.18	74.00	-18.82	40.27	14.91	Peak	100	171

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

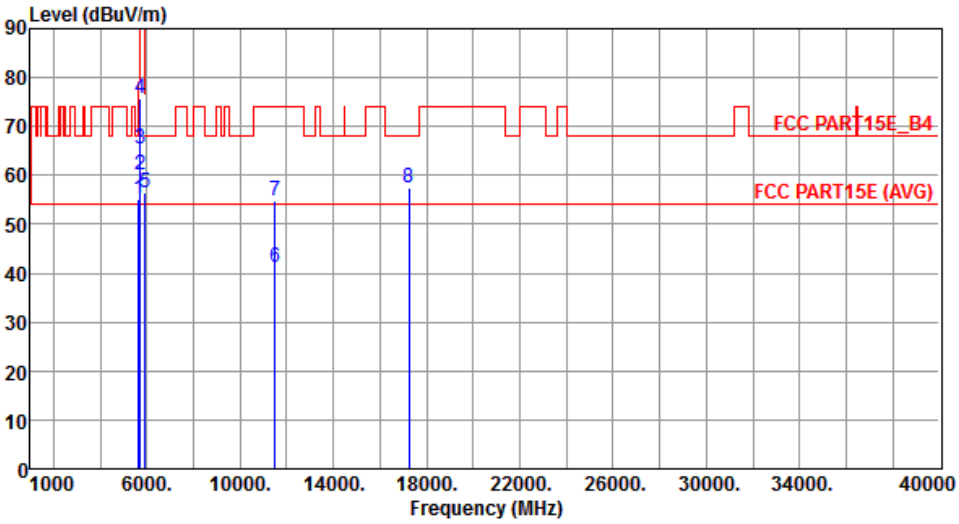
Modulation	VHT20	Test Freq. (MHz)	5240
Polarization	Vertical		



	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	5150.00	44.50	54.00	-9.50	39.48	5.02	Average	100	232
2	5150.00	57.60	74.00	-16.40	52.58	5.02	Peak	100	232
3	5350.00	44.31	54.00	-9.69	39.00	5.31	Average	100	232
4	5350.00	56.32	74.00	-17.68	51.01	5.31	Peak	100	232
5	10480.00	54.18	68.20	-14.02	40.37	13.81	Peak	120	243
6	15720.00	41.29	54.00	-12.71	26.38	14.91	Average	100	182
7	15720.00	54.98	74.00	-19.02	40.07	14.91	Peak	100	182

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

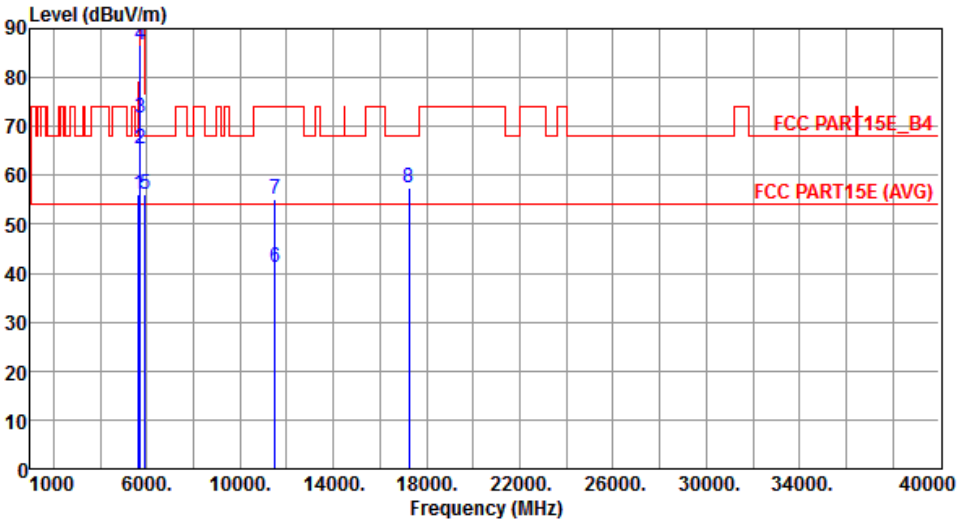
Modulation	VHT20	Test Freq. (MHz)	5745
Polarization	Horizontal		



	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	5650.00	55.24	68.20	-12.96	49.55	5.69	Peak	132	195
2	5700.00	60.05	105.20	-45.15	54.28	5.77	Peak	132	195
3	5720.00	65.55	110.80	-45.25	59.76	5.79	Peak	132	195
4	5725.00	75.63	122.20	-46.57	69.82	5.81	Peak	132	195
5	5925.00	56.32	68.20	-11.88	50.23	6.09	Peak	132	195
6	11490.00	41.04	54.00	-12.96	26.31	14.73	Average	100	172
7	11490.00	54.91	74.00	-19.09	40.18	14.73	Peak	100	172
8	17235.00	57.40	68.20	-10.80	40.33	17.07	Peak	100	148

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

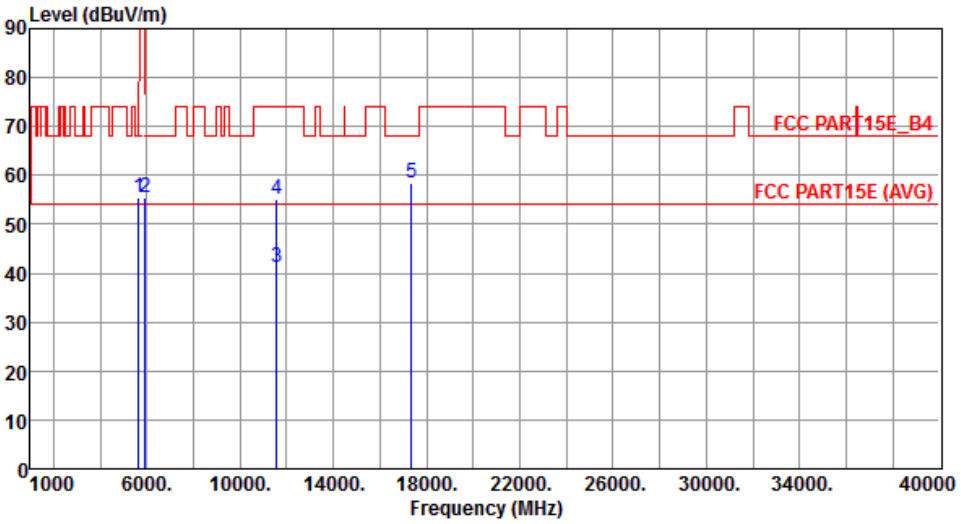
Modulation	VHT20	Test Freq. (MHz)	5745
Polarization	Vertical		



	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	5650.00	56.17	68.20	-12.03	50.48	5.69	Peak	147	343
2	5700.00	65.29	105.20	-39.91	59.52	5.77	Peak	147	343
3	5720.00	71.74	110.80	-39.06	65.95	5.79	Peak	147	343
4	5725.00	86.52	122.20	-35.68	80.71	5.81	Peak	147	343
5	5925.00	56.17	68.20	-12.03	50.08	6.09	Peak	147	343
6	11490.00	41.30	54.00	-12.70	26.57	14.73	Average	100	158
7	11490.00	55.26	74.00	-18.74	40.53	14.73	Peak	100	158
8	17235.00	57.34	68.20	-10.86	40.27	17.07	Peak	100	171

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

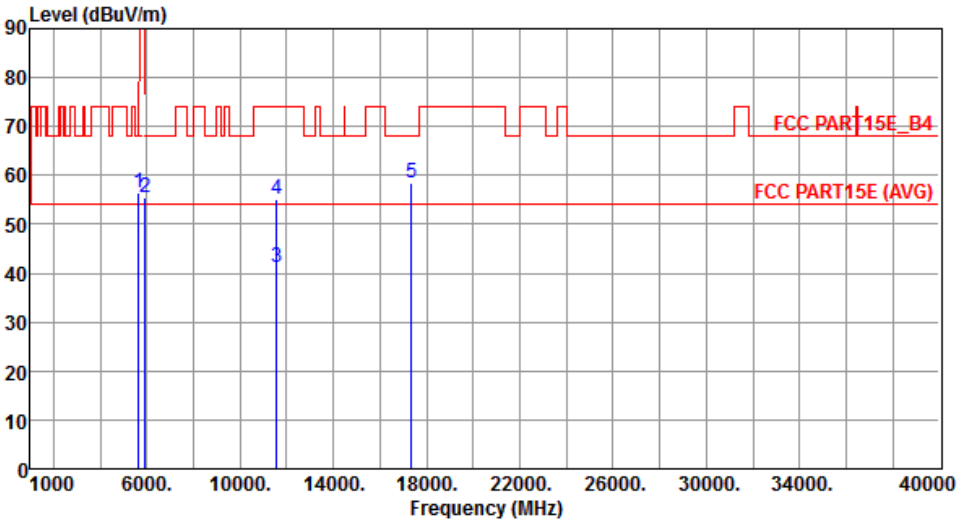
Modulation	VHT20	Test Freq. (MHz)	5785
Polarization	Horizontal		



	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	5650.00	55.58	68.20	-12.62	49.89	5.69	Peak	215	274
2	5925.00	55.61	68.20	-12.59	49.52	6.09	Peak	215	274
3	11570.00	41.28	54.00	-12.72	26.68	14.60	Average	100	162
4	11570.00	54.99	74.00	-19.01	40.39	14.60	Peak	100	162
5	17355.00	58.38	68.20	-9.82	40.83	17.55	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).

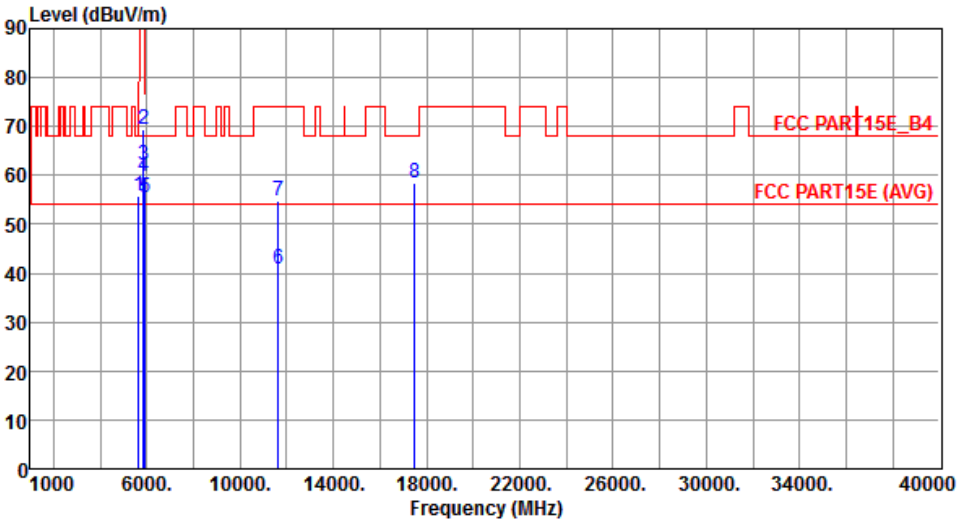
Modulation	VHT20	Test Freq. (MHz)	5785
Polarization	Vertical		



	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	5650.00	56.47	68.20	-11.73	50.78	5.69	Peak	153	343
2	5925.00	55.48	68.20	-12.72	49.39	6.09	Peak	153	343
3	11570.00	41.34	54.00	-12.66	26.74	14.60	Average	100	140
4	11570.00	55.05	74.00	-18.95	40.45	14.60	Peak	100	140
5	17355.00	58.45	68.20	-9.75	40.90	17.55	Peak	100	157

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

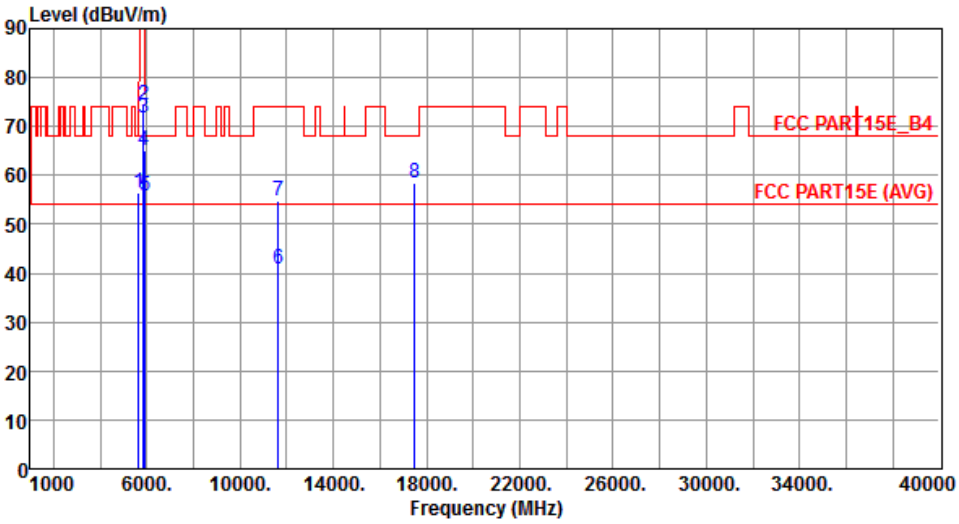
Modulation	VHT20	Test Freq. (MHz)	5825
Polarization	Horizontal		



	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	5650.00	55.90	68.20	-12.30	50.21	5.69	Peak	133	175
2	5850.00	69.51	122.20	-52.69	63.52	5.99	Peak	133	175
3	5855.00	62.24	110.80	-48.56	56.24	6.00	Peak	133	175
4	5875.00	59.87	105.20	-45.33	53.85	6.02	Peak	133	175
5	5925.00	55.35	68.20	-12.85	49.26	6.09	Peak	133	175
6	11650.00	40.68	54.00	-13.32	26.24	14.44	Average	100	188
7	11650.00	54.81	74.00	-19.19	40.37	14.44	Peak	100	188
8	17475.00	58.30	68.20	-9.90	40.26	18.04	Peak	100	132

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

Modulation	VHT20	Test Freq. (MHz)	5825
Polarization	Vertical		

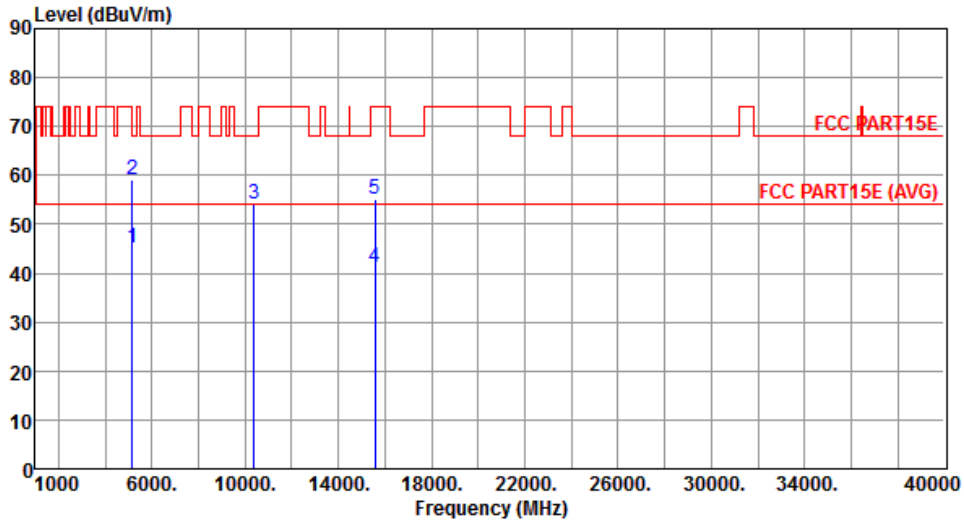


	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	5650.00	56.35	68.20	-11.85	50.66	5.69	Peak	142	348
2	5850.00	74.46	122.20	-47.74	68.47	5.99	Peak	142	348
3	5855.00	71.63	110.80	-39.17	65.63	6.00	Peak	142	348
4	5875.00	65.07	105.20	-40.13	59.05	6.02	Peak	142	348
5	5925.00	55.89	68.20	-12.31	49.80	6.09	Peak	142	348
6	11650.00	40.97	54.00	-13.03	26.53	14.44	Average	100	152
7	11650.00	54.72	74.00	-19.28	40.28	14.44	Peak	100	152
8	17475.00	58.48	68.20	-9.72	40.44	18.04	Peak	100	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).

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

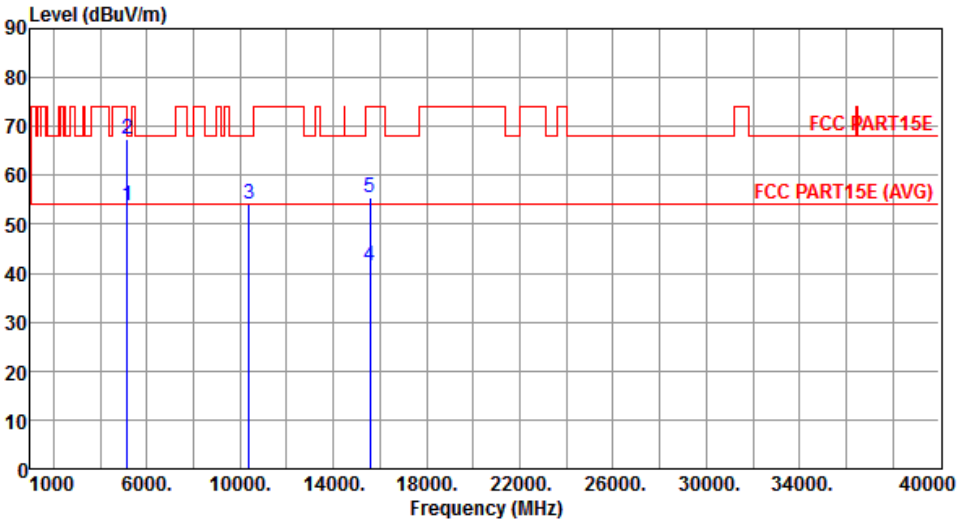
Modulation	VHT40	Test Freq. (MHz)	5190
Polarization	Horizontal		



	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	5150.00	45.26	54.00	-8.74	40.24	5.02	Average	185	171
2	5150.00	59.26	74.00	-14.74	54.24	5.02	Peak	185	171
3	10380.00	53.97	68.20	-14.23	40.22	13.75	Peak	100	144
4	15570.00	41.29	54.00	-12.71	26.33	14.96	Average	100	135
5	15570.00	55.22	74.00	-18.78	40.26	14.96	Peak	100	135

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

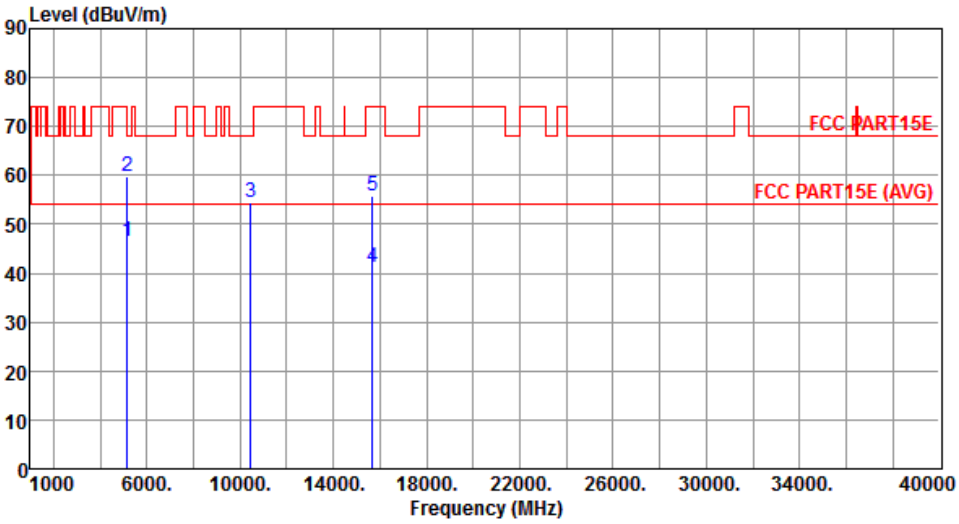
Modulation	VHT40	Test Freq. (MHz)	5190
Polarization	Vertical		



	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	5150.00	53.75	54.00	-0.25	48.73	5.02	Average	223	197
2	5150.00	67.58	74.00	-6.42	62.56	5.02	Peak	223	197
3	10380.00	54.18	68.20	-14.02	40.43	13.75	Peak	100	129
4	15570.00	41.58	54.00	-12.42	26.62	14.96	Average	141	132
5	15570.00	55.42	74.00	-18.58	40.46	14.96	Peak	141	132

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

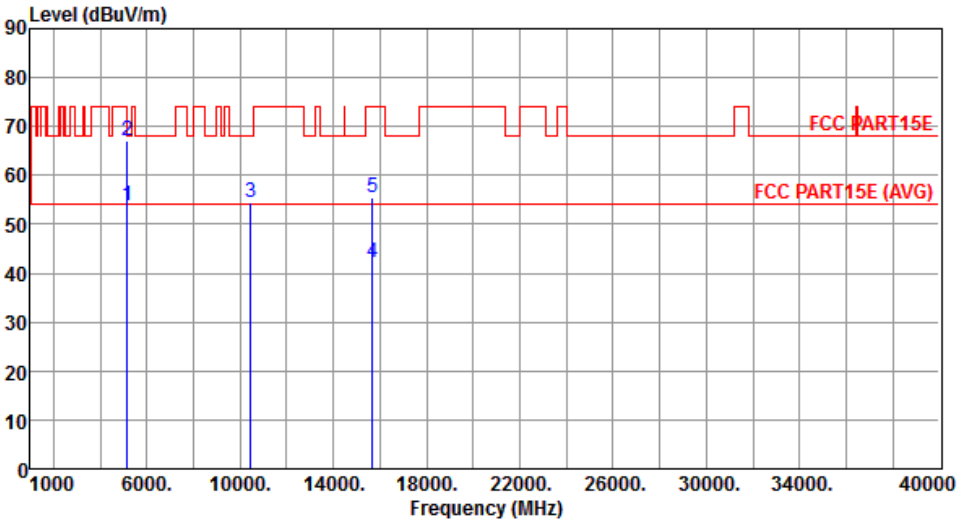
Modulation	VHT40	Test Freq. (MHz)	5230
Polarization	Horizontal		



	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	5150.00	46.53	54.00	-7.47	41.51	5.02	Average	100	250
2	5150.00	59.85	74.00	-14.15	54.83	5.02	Peak	100	250
3	10460.00	54.52	68.20	-13.68	40.73	13.79	Peak	100	154
4	15690.00	41.34	54.00	-12.66	26.42	14.92	Average	192	205
5	15690.00	55.74	74.00	-18.26	40.82	14.92	Peak	192	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).

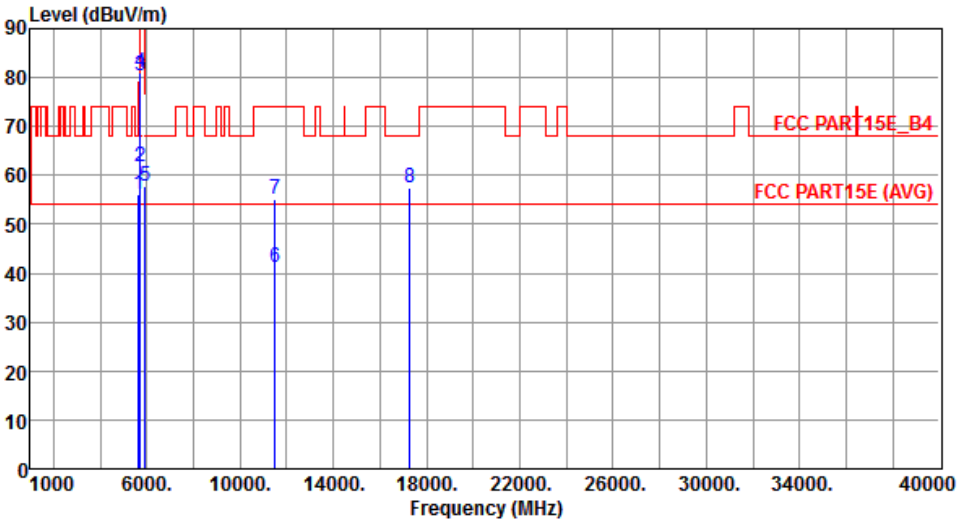
Modulation	VHT40	Test Freq. (MHz)	5230
Polarization	Vertical		



	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	5150.00	53.70	54.00	-0.30	48.68	5.02	Average	246	225
2	5150.00	67.17	74.00	-6.83	62.15	5.02	Peak	246	225
3	10460.00	54.59	68.20	-13.61	40.80	13.79	Peak	100	75
4	15690.00	42.16	54.00	-11.84	27.24	14.92	Average	100	163
5	15690.00	55.55	74.00	-18.45	40.63	14.92	Peak	100	163

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

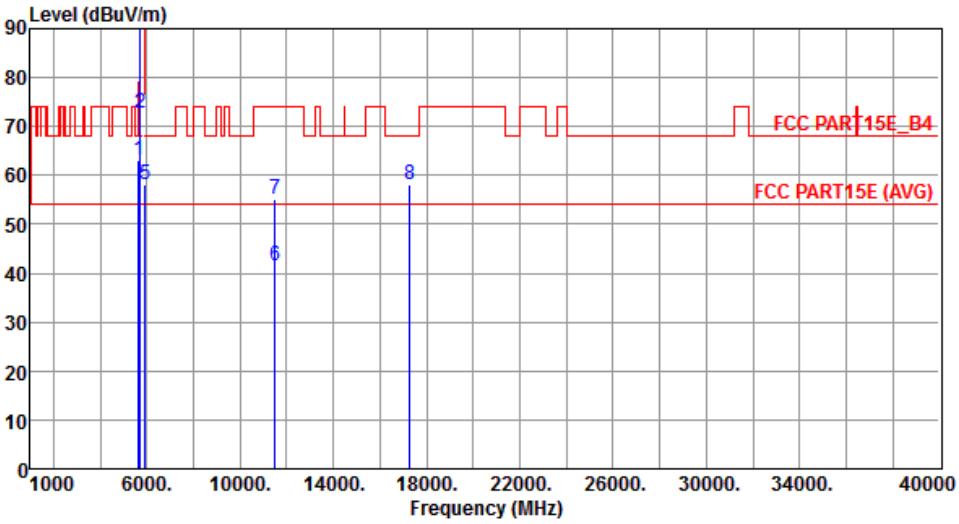
Modulation	VHT40	Test Freq. (MHz)	5755
Polarization	Horizontal		



	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	5650.00	56.09	68.20	-12.11	50.40	5.69	Peak	159	65
2	5700.00	61.70	105.20	-43.50	55.93	5.77	Peak	159	65
3	5720.00	80.28	110.80	-30.52	74.49	5.79	Peak	519	65
4	5725.00	81.00	122.20	-41.20	75.19	5.81	Peak	159	65
5	5925.00	57.68	68.20	-10.52	51.59	6.09	Peak	159	65
6	11510.00	41.29	54.00	-12.71	26.57	14.72	Average	100	158
7	11510.00	55.26	74.00	-18.74	40.54	14.72	Peak	100	158
8	17265.00	57.46	68.20	-10.74	40.29	17.17	Peak	100	172

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

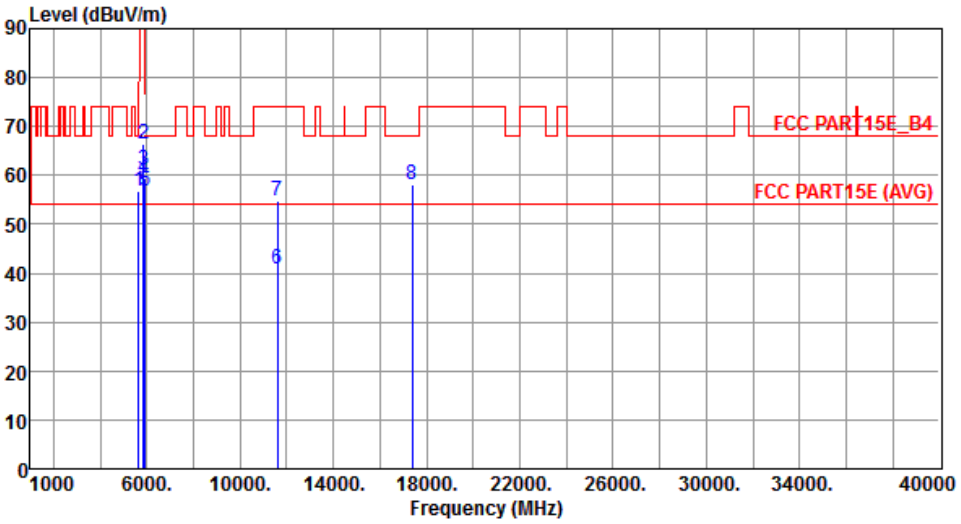
Modulation	VHT40	Test Freq. (MHz)	5755
Polarization	Vertical		



	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	5650.00	62.96	68.20	-5.24	57.27	5.69	Peak	191	176
2	5700.00	72.86	105.20	-32.34	67.09	5.77	Peak	191	176
3	5720.00	89.48	110.80	-21.32	83.69	5.79	Peak	191	176
4	5725.00	95.19	122.20	-27.01	89.38	5.81	Peak	191	176
5	5925.00	58.00	68.20	-10.20	51.91	6.09	Peak	191	176
6	11510.00	41.46	54.00	-12.54	26.74	14.72	Average	100	140
7	11510.00	55.20	74.00	-18.80	40.48	14.72	Peak	100	140
8	17265.00	58.06	68.20	-10.14	40.89	17.17	Peak	100	152

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

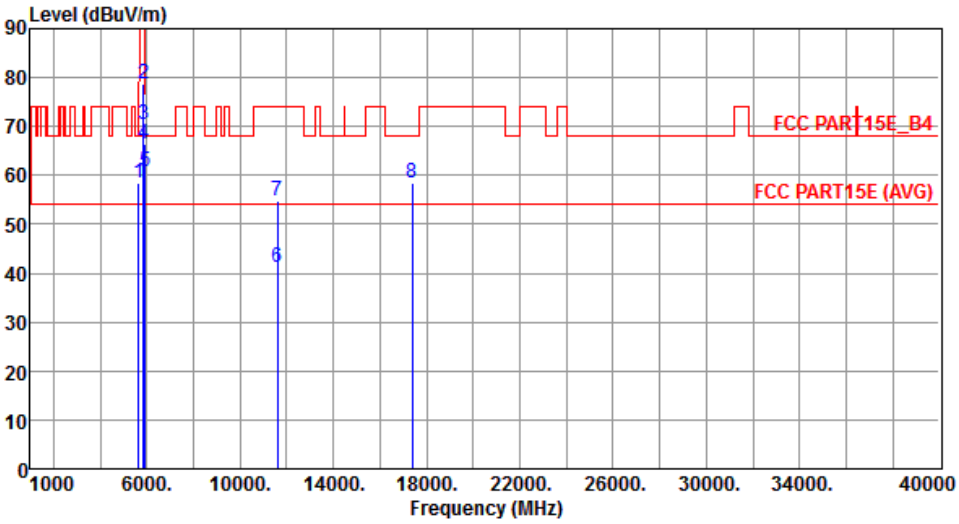
Modulation	VHT40	Test Freq. (MHz)	5795
Polarization	Horizontal		



	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	5650.00	56.84	68.20	-11.36	51.15	5.69	Peak	155	171
2	5850.00	66.30	122.20	-55.90	60.31	5.99	Peak	155	171
3	5855.00	61.24	110.80	-49.56	55.24	6.00	Peak	155	171
4	5875.00	59.29	105.20	-45.91	53.27	6.02	Peak	155	172
5	5925.00	56.79	68.20	-11.41	50.70	6.09	Peak	155	172
6	11590.00	41.01	54.00	-12.99	26.45	14.56	Average	100	106
7	11590.00	54.87	74.00	-19.13	40.31	14.56	Peak	100	106
8	17385.00	58.15	68.20	-10.05	40.48	17.67	Peak	100	193

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

Modulation	VHT40	Test Freq. (MHz)	5795
Polarization	Vertical		

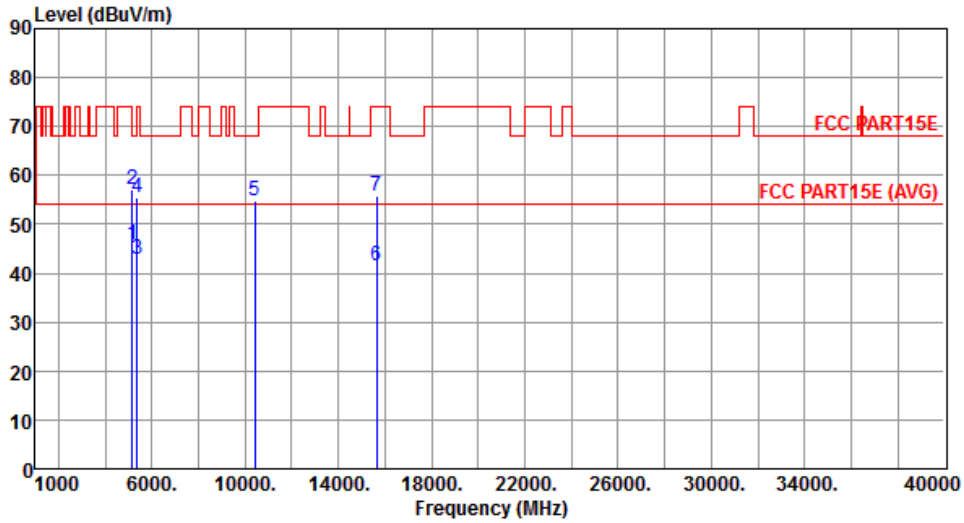


	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	5650.00	58.48	68.20	-9.72	52.79	5.69	Peak	158	177
2	5850.00	78.75	122.20	-43.45	72.76	5.99	Peak	158	177
3	5855.00	70.35	110.80	-40.45	64.35	6.00	Peak	158	177
4	5875.00	66.36	105.20	-38.84	60.34	6.02	Peak	158	177
5	5925.00	60.64	68.20	-7.56	54.55	6.09	Peak	158	177
6	11590.00	41.17	54.00	-12.83	26.61	14.56	Average	100	183
7	11590.00	54.77	74.00	-19.23	40.21	14.56	Peak	100	183
8	17385.00	58.31	68.20	-9.89	40.64	17.67	Peak	100	159

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

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

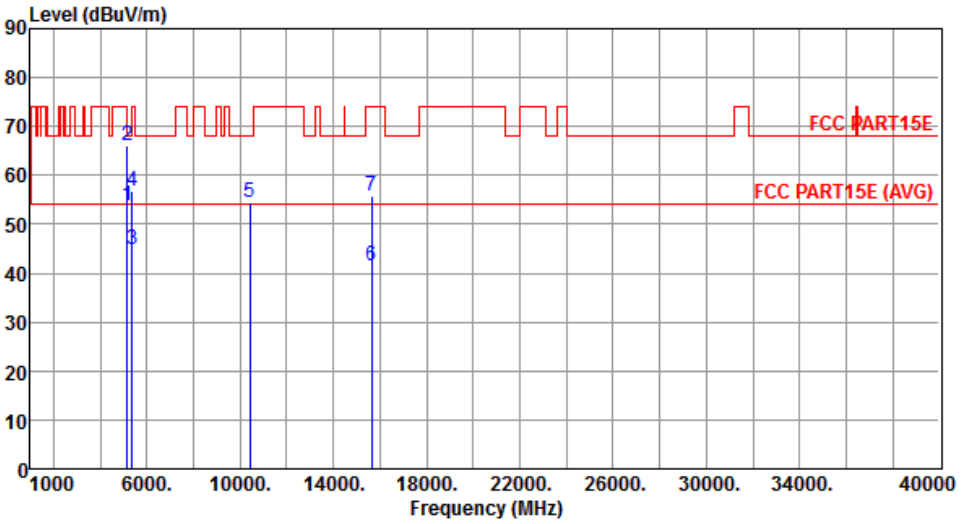
Modulation	VHT80	Test Freq. (MHz)	5210
Polarization	Horizontal		



	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	5150.00	45.80	54.00	-8.20	40.78	5.02	Average	100	251
2	5150.00	57.06	74.00	-16.94	52.04	5.02	Peak	100	251
3	5350.00	42.79	54.00	-11.21	37.48	5.31	Average	100	251
4	5350.00	55.30	74.00	-18.70	49.99	5.31	Peak	100	251
5	10420.00	54.74	68.20	-13.46	40.96	13.78	Peak	100	83
6	15630.00	41.64	54.00	-12.36	26.71	14.93	Average	100	217
7	15630.00	55.67	74.00	-18.33	40.74	14.93	Peak	100	217

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

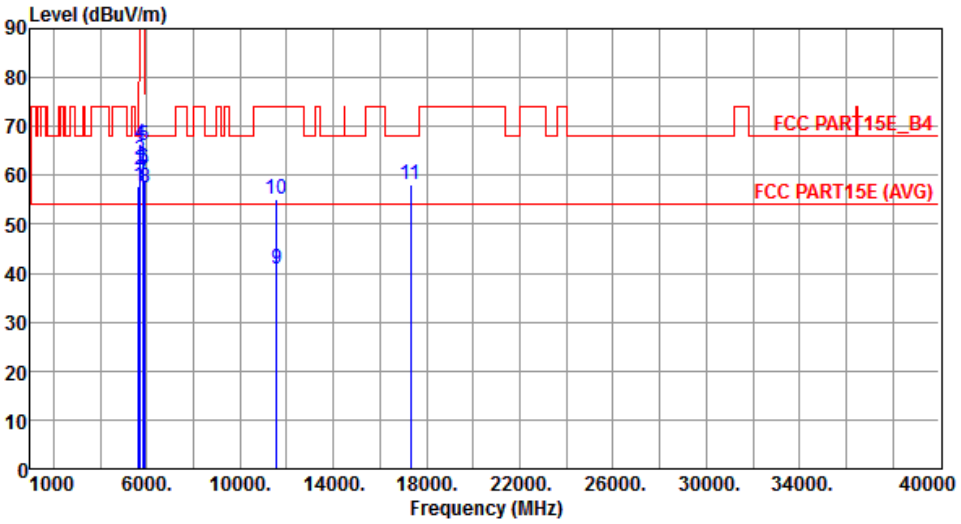
Modulation	VHT80	Test Freq. (MHz)	5210
Polarization	Vertical		



	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	5150.00	53.85	54.00	-0.15	48.83	5.02	Average	178	65
2	5150.00	66.07	74.00	-7.93	61.05	5.02	Peak	178	65
3	5350.00	44.90	54.00	-9.10	39.59	5.31	Average	214	233
4	5350.00	56.87	74.00	-17.13	51.56	5.31	Peak	214	233
5	10420.00	54.53	68.20	-13.67	40.75	13.78	Peak	100	197
6	15630.00	41.52	54.00	-12.48	26.59	14.93	Average	242	135
7	15630.00	55.64	74.00	-18.36	40.71	14.93	Peak	242	135

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

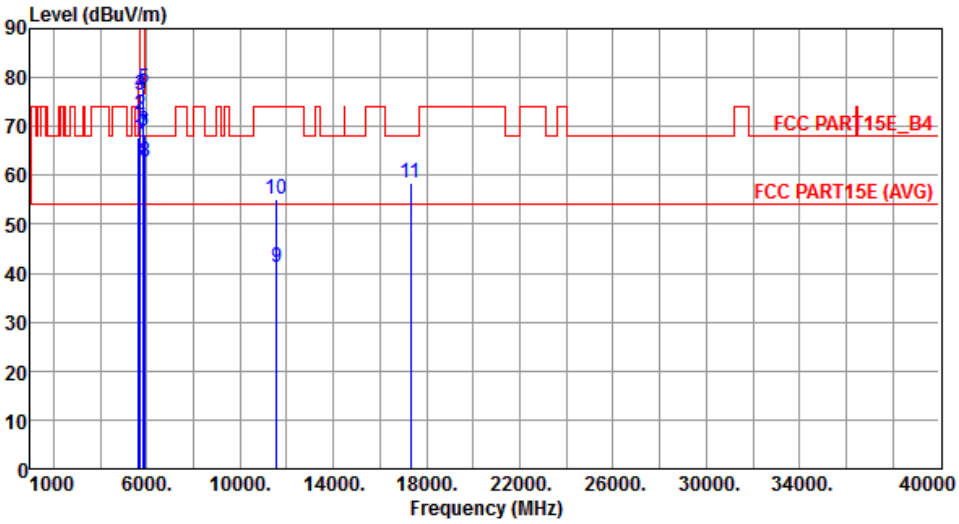
Modulation	VHT80	Test Freq. (MHz)	5775
Polarization	Horizontal		



	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	5650.00	57.85	68.20	-10.35	52.16	5.69	Peak	155	163
2	5700.00	61.18	105.20	-44.02	55.41	5.77	Peak	155	163
3	5720.00	63.11	110.80	-47.69	57.32	5.79	Peak	155	163
4	5725.00	66.53	122.20	-55.67	60.72	5.81	Peak	155	163
5	5850.00	66.11	122.20	-56.09	60.12	5.99	Peak	155	163
6	5855.00	61.35	110.80	-49.45	55.35	6.00	Peak	155	163
7	5875.00	59.26	105.20	-45.94	53.24	6.02	Peak	155	163
8	5925.00	57.32	68.20	-10.88	51.23	6.09	Peak	155	163
9	11550.00	40.98	54.00	-13.02	26.34	14.64	Average	100	134
10	11550.00	55.04	74.00	-18.96	40.40	14.64	Peak	100	134
11	17325.00	57.96	68.20	-10.24	40.53	17.43	Peak	100	193

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

Modulation	VHT80	Test Freq. (MHz)	5775
Polarization	Vertical		



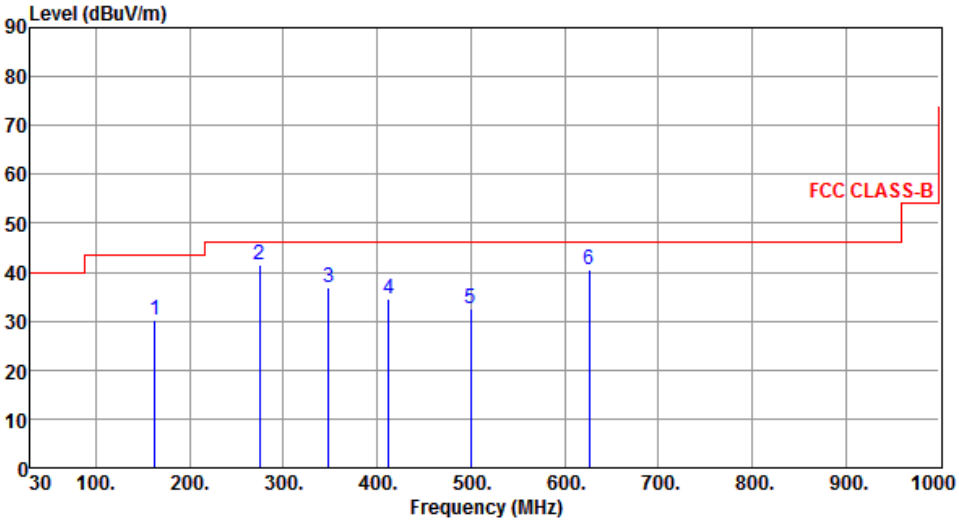
	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	5650.00	67.91	68.20	-0.29	62.22	5.69	Peak	203	175
2	5700.00	72.45	105.20	-32.75	66.68	5.77	Peak	203	175
3	5720.00	76.43	110.80	-34.37	70.64	5.79	Peak	203	175
4	5725.00	76.59	122.20	-45.61	70.78	5.81	Peak	203	175
5	5850.00	77.58	122.20	-44.62	71.59	5.99	Peak	203	175
6	5855.00	69.09	110.80	-41.71	63.09	6.00	Peak	203	175
7	5875.00	68.34	105.20	-36.86	62.32	6.02	Peak	203	175
8	5925.00	62.68	68.20	-5.52	56.59	6.09	Peak	203	175
9	11550.00	41.18	54.00	-12.82	26.54	14.64	Average	100	153
10	11550.00	55.26	74.00	-18.74	40.62	14.64	Peak	100	153
11	17325.00	58.46	68.20	-9.74	41.03	17.43	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).

Beamforming mode

3.5.9 Transmitter Radiated Unwanted Emissions (Below 1GHz)

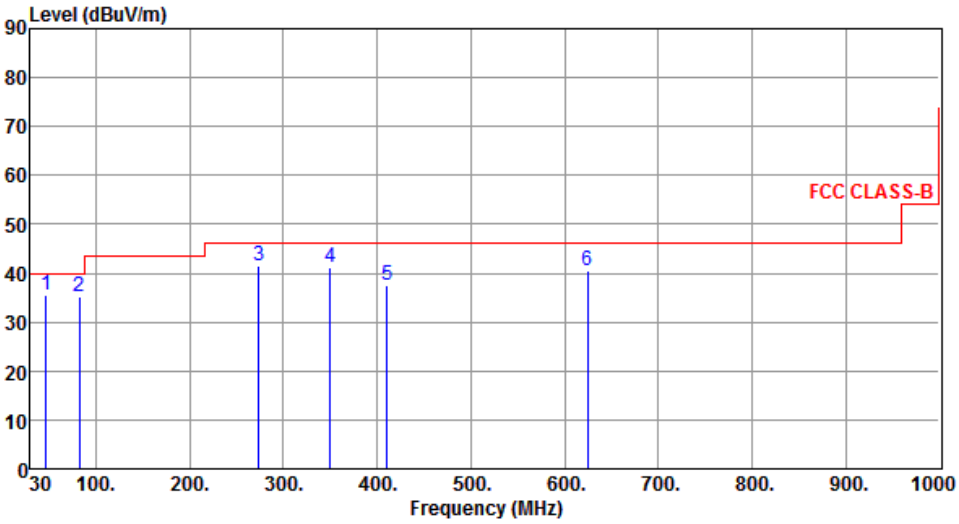
Modulation	VHT20	**Test Freq. (MHz)**	5240
Polarization	Horizontal		



	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	162.56	30.06	43.50	-13.44	38.53	-8.47	Peak	---	---
2	274.46	41.51	46.00	-4.49	50.16	-8.65	QP	100	140
3	348.51	36.72	46.00	-9.28	43.35	-6.63	Peak	---	---
4	412.38	34.53	46.00	-11.47	39.40	-4.87	Peak	---	---
5	499.93	32.68	46.00	-13.32	35.82	-3.14	Peak	---	---
6	625.98	40.64	46.00	-5.36	41.15	-0.51	Peak	---	---

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

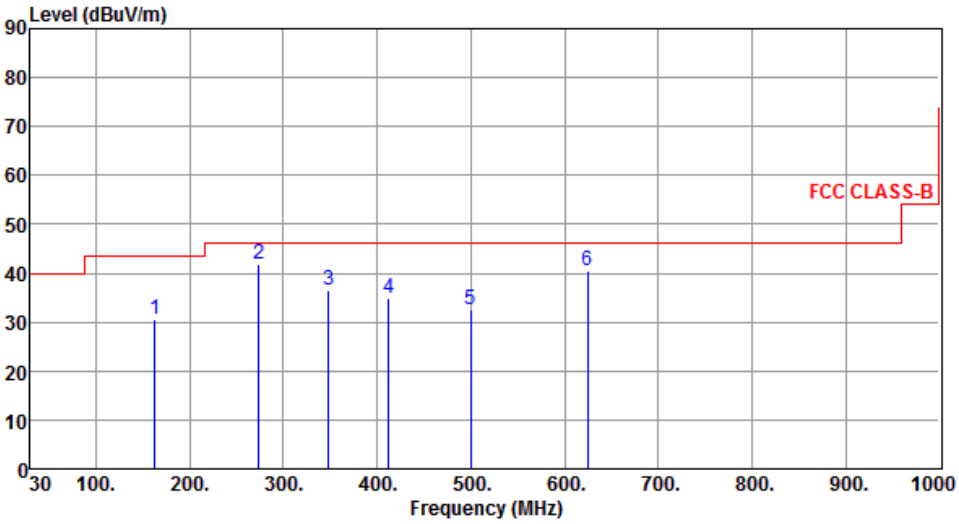
Modulation	VHT20	Test Freq. (MHz)	5240
Polarization	Vertical		



	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	46.48	35.44	40.00	-4.56	43.66	-8.22	QP	100	18
2	82.45	35.31	40.00	-4.69	48.85	-13.54	Peak	---	---
3	273.63	41.44	46.00	-4.56	50.12	-8.68	Peak	---	---
4	349.68	41.24	46.00	-4.76	47.84	-6.60	Peak	---	---
5	410.38	37.53	46.00	-8.47	42.46	-4.93	Peak	---	---
6	624.96	40.64	46.00	-5.36	41.16	-0.52	Peak	---	---

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

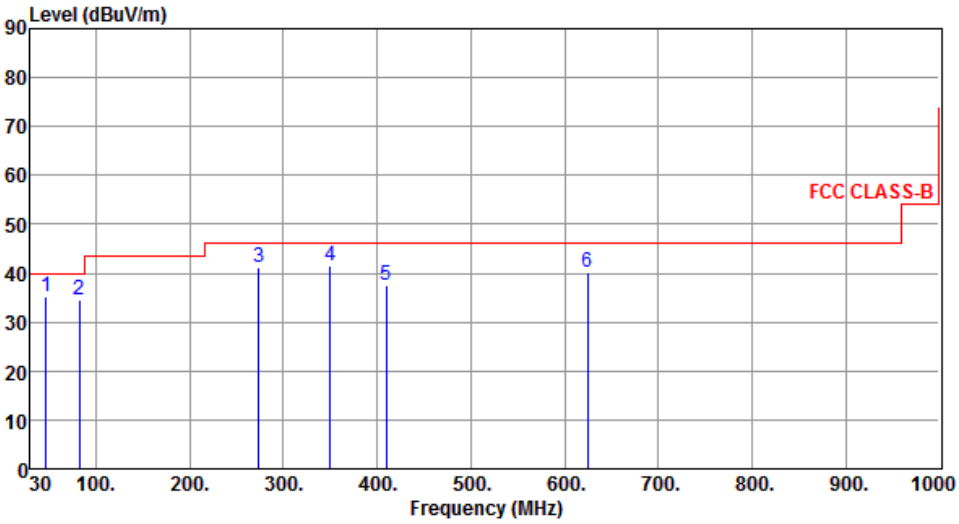
Modulation	VHT20	Test Freq. (MHz)	5825
Polarization	Horizontal		



	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	163.28	30.48	43.50	-13.02	38.98	-8.50	Peak	---	---
2	273.56	41.68	46.00	-4.32	50.37	-8.69	QP	100	138
3	348.61	36.44	46.00	-9.56	43.06	-6.62	Peak	---	---
4	412.42	34.91	46.00	-11.09	39.78	-4.87	Peak	---	---
5	499.91	32.48	46.00	-13.52	35.62	-3.14	Peak	---	---
6	624.98	40.41	46.00	-5.59	40.93	-0.52	Peak	---	---

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

Modulation	VHT20	Test Freq. (MHz)	5825
Polarization	Vertical		

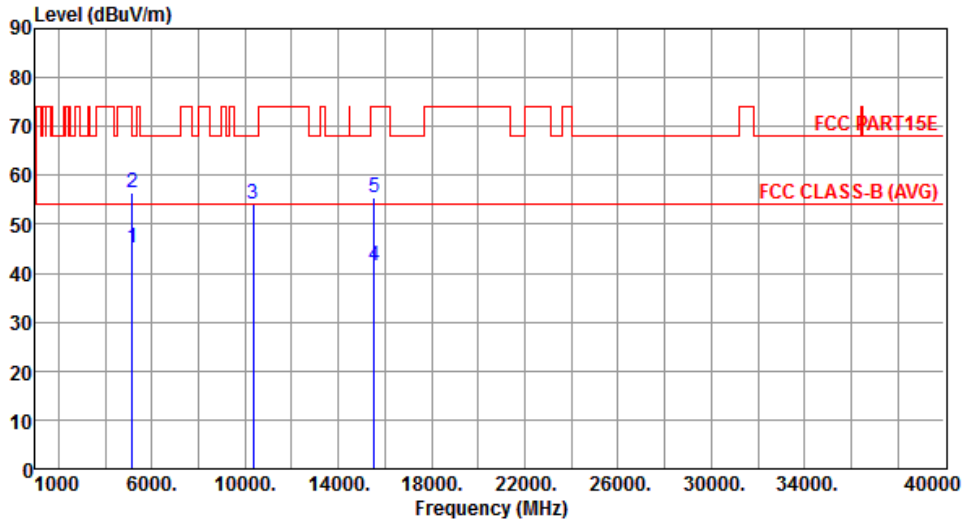


	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	46.52	35.22	40.00	-4.78	43.44	-8.22	QP	100	18
2	82.35	34.62	40.00	-5.38	48.14	-13.52	Peak	---	---
3	273.55	41.28	46.00	-4.72	49.97	-8.69	Peak	---	---
4	349.69	41.43	46.00	-4.57	48.03	-6.60	Peak	---	---
5	409.53	37.61	46.00	-8.39	42.56	-4.95	Peak	---	---
6	624.86	40.28	46.00	-5.72	40.80	-0.52	Peak	---	---

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

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

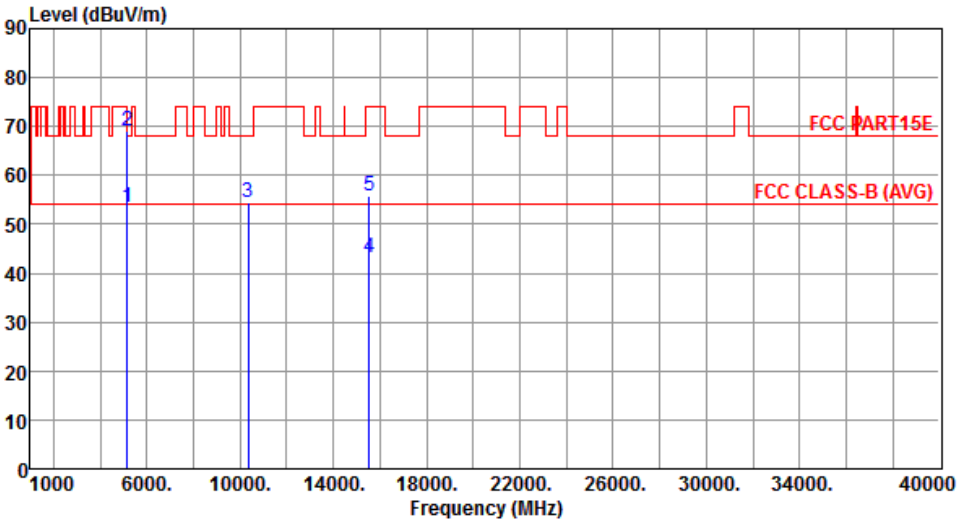
Modulation	VHT20	Test Freq. (MHz)	5180
Polarization	Horizontal		



	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	5150.00	45.13	54.00	-8.87	40.11	5.02	Average	100	252
2	5150.00	56.47	74.00	-17.53	51.45	5.02	Peak	100	252
3	10360.00	54.16	68.20	-14.04	40.42	13.74	Peak	100	316
4	15540.00	41.52	54.00	-12.48	26.55	14.97	Average	100	152
5	15540.00	55.38	74.00	-18.62	40.41	14.97	Peak	100	152

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

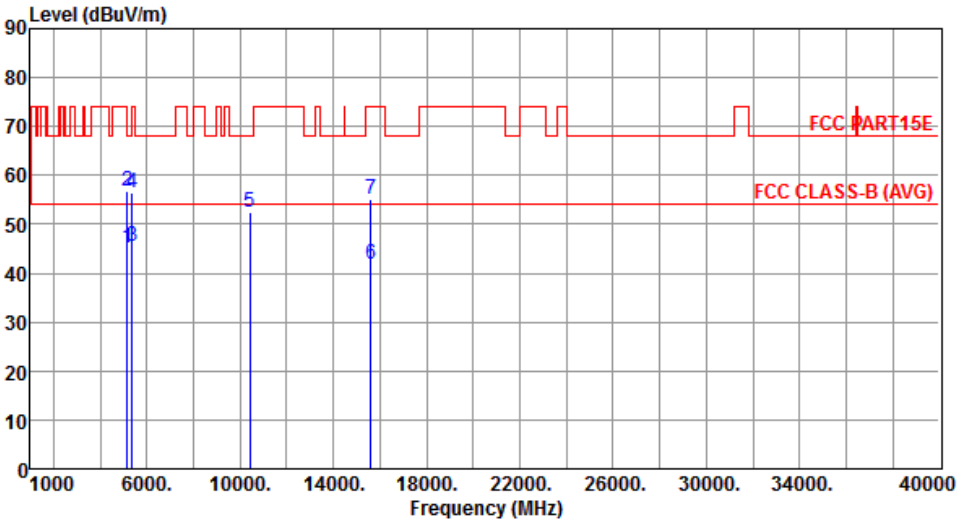
Modulation	VHT20	Test Freq. (MHz)	5180
Polarization	Vertical		



	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	5150.00	53.38	54.00	-0.62	48.36	5.02	Average	100	259
2	5150.00	68.96	74.00	-5.04	63.94	5.02	Peak	100	259
3	10360.00	54.37	68.20	-13.83	40.63	13.74	Peak	100	127
4	15540.00	43.04	54.00	-10.96	28.07	14.97	Average	131	184
5	15540.00	55.69	74.00	-18.31	40.72	14.97	Peak	131	184

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

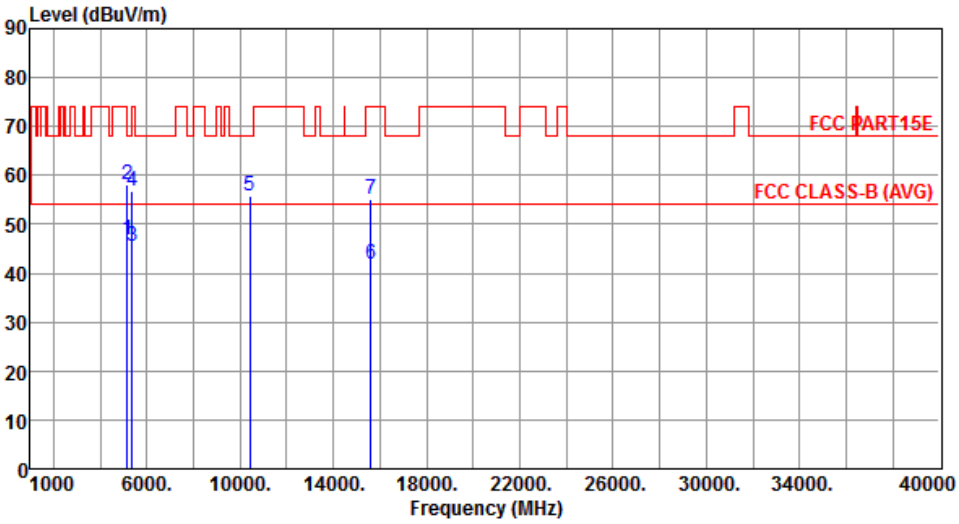
Modulation	VHT20	**Test Freq. (MHz)**	5200
Polarization	Horizontal		



	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	5150.00	45.21	54.00	-8.79	40.19	5.02	Average	100	251
2	5150.00	56.87	74.00	-17.13	51.85	5.02	Peak	100	251
3	5350.00	45.34	54.00	-8.66	40.03	5.31	Average	100	251
4	5350.00	56.32	74.00	-17.68	51.01	5.31	Peak	100	251
5	10400.00	52.60	68.20	-15.60	38.83	13.77	Peak	100	318
6	15600.00	41.84	54.00	-12.16	26.90	14.94	Average	100	125
7	15600.00	55.20	74.00	-18.80	40.26	14.94	Peak	100	125

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

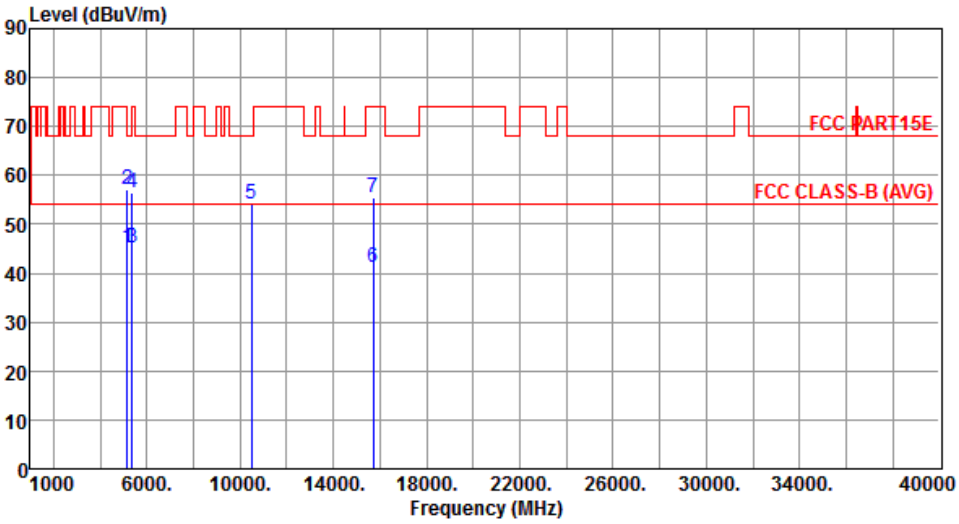
Modulation	VHT20	**Test Freq. (MHz)**	5200
Polarization	Vertical		



	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	5150.00	46.83	54.00	-7.17	41.81	5.02	Average	196	205
2	5150.00	58.18	74.00	-15.82	53.16	5.02	Peak	196	205
3	5350.00	45.38	54.00	-8.62	40.07	5.31	Average	196	205
4	5350.00	56.75	74.00	-17.25	51.44	5.31	Peak	196	205
5	10400.00	55.85	68.20	-12.35	42.08	13.77	Peak	163	214
6	15600.00	41.75	54.00	-12.25	26.81	14.94	Average	159	173
7	15600.00	55.25	74.00	-18.75	40.31	14.94	Peak	159	173

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

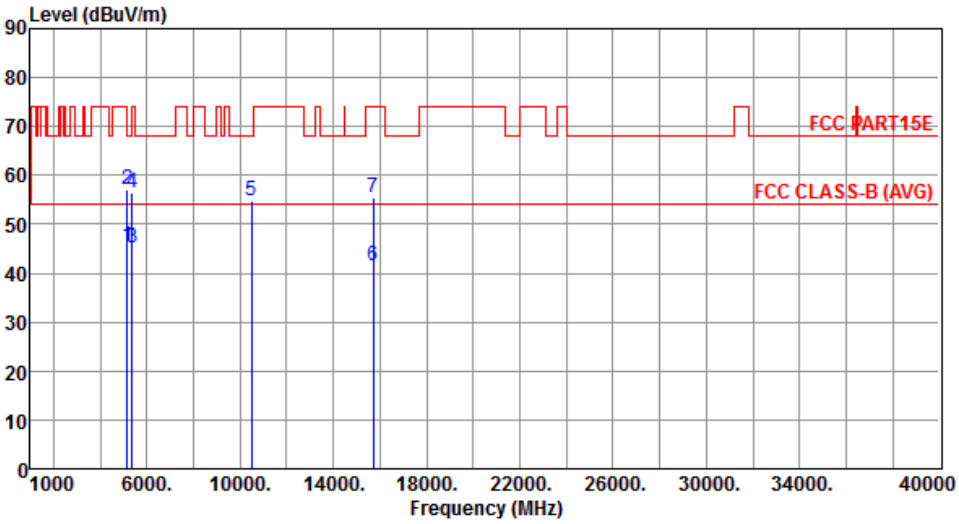
Modulation	VHT20	Test Freq. (MHz)	5240
Polarization	Horizontal		



	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	5150.00	45.24	54.00	-8.76	40.22	5.02	Average	100	250
2	5150.00	57.14	74.00	-16.86	52.12	5.02	Peak	100	250
3	5350.00	45.16	54.00	-8.84	39.85	5.31	Average	100	250
4	5350.00	56.55	74.00	-17.45	51.24	5.31	Peak	100	250
5	10480.00	54.25	68.20	-13.95	40.44	13.81	Peak	100	162
6	15720.00	41.14	54.00	-12.86	26.23	14.91	Average	100	56
7	15720.00	55.31	74.00	-18.69	40.40	14.91	Peak	100	56

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

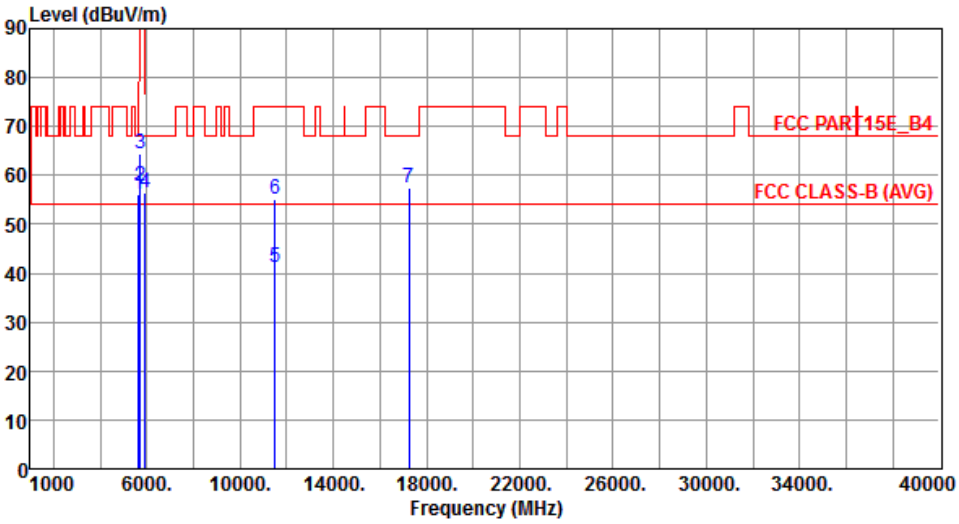
Modulation	VHT20	Test Freq. (MHz)	5240
Polarization	Vertical		



	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	5150.00	45.61	54.00	-8.39	40.59	5.02	Average	195	171
2	5150.00	57.19	74.00	-16.81	52.17	5.02	Peak	195	171
3	5350.00	45.33	54.00	-8.67	40.02	5.31	Average	195	171
4	5350.00	56.38	74.00	-17.62	51.07	5.31	Peak	195	171
5	10480.00	54.73	68.20	-13.47	40.92	13.81	Peak	100	124
6	15720.00	41.64	54.00	-12.36	26.73	14.91	Average	100	93
7	15720.00	55.44	74.00	-18.56	40.53	14.91	Peak	100	93

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

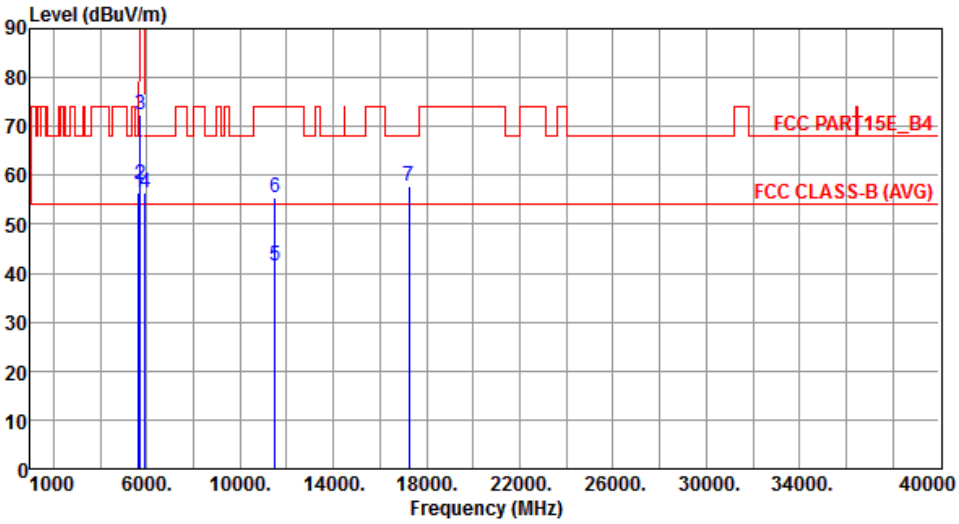
Modulation	VHT20	Test Freq. (MHz)	5745
Polarization	Horizontal		



	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	5650.00	56.13	68.20	-12.07	50.44	5.69	Peak	200	60
2	5700.00	57.90	105.20	-47.30	52.13	5.77	Peak	200	60
3	5725.00	64.34	122.20	-57.86	58.53	5.81	Peak	200	60
4	5925.00	56.50	68.20	-11.70	50.41	6.09	Peak	200	60
5	11490.00	41.15	54.00	-12.85	26.42	14.73	Average	100	138
6	11490.00	55.14	74.00	-18.86	40.41	14.73	Peak	100	138
7	17235.00	57.57	68.20	-10.63	40.50	17.07	Peak	100	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).

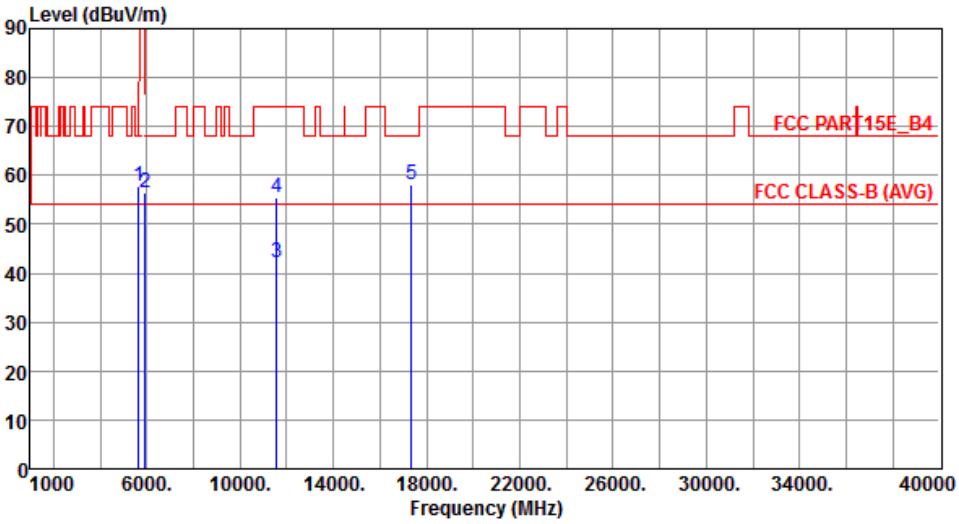
Modulation	VHT20	Test Freq. (MHz)	5745
Polarization	Vertical		



	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	5650.00	56.49	68.20	-11.71	50.80	5.69	Peak	141	357
2	5700.00	58.05	105.20	-47.15	52.28	5.77	Peak	141	357
3	5725.00	72.53	122.20	-49.67	66.72	5.81	Peak	141	357
4	5925.00	56.40	68.20	-11.80	50.31	6.09	Peak	141	357
5	11490.00	41.58	54.00	-12.42	26.85	14.73	Average	100	143
6	11490.00	55.45	74.00	-18.55	40.72	14.73	Peak	100	143
7	17235.00	57.91	68.20	-10.29	40.84	17.07	Peak	100	217

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

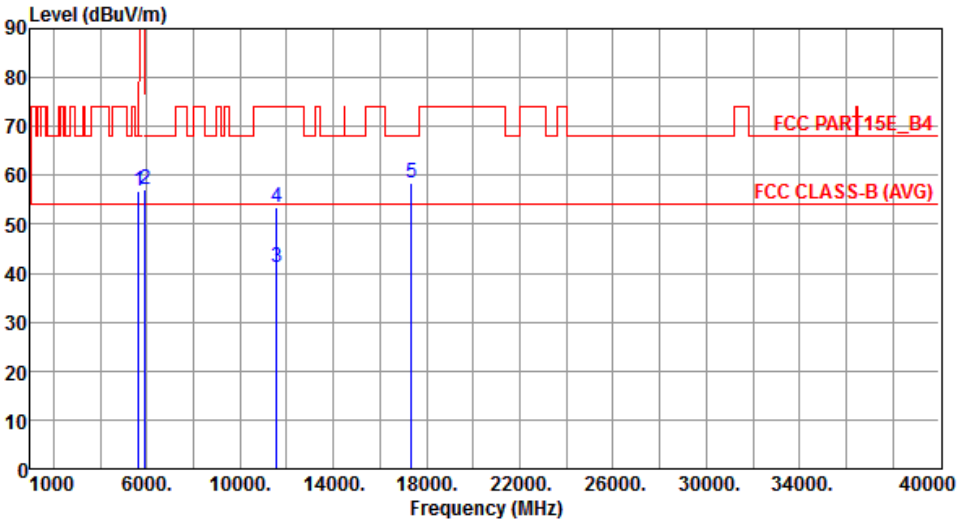
Modulation	VHT20	Test Freq. (MHz)	5785
Polarization	Horizontal		



	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	5650.00	57.66	68.20	-10.54	51.97	5.69	Peak	208	66
2	5925.00	56.55	68.20	-11.65	50.46	6.09	Peak	208	66
3	11570.00	42.01	54.00	-11.99	27.41	14.60	Average	100	208
4	11570.00	55.53	74.00	-18.47	40.93	14.60	Peak	100	208
5	17355.00	58.07	68.20	-10.13	40.52	17.55	Peak	100	213

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

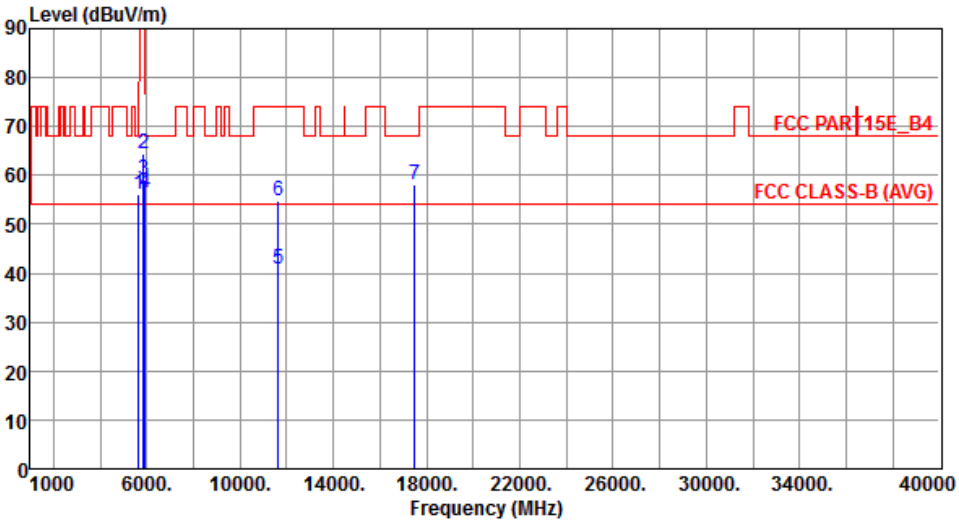
Modulation	VHT20	Test Freq. (MHz)	5785
Polarization	Vertical		



	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	5650.00	56.87	68.20	-11.33	51.18	5.69	Peak	121	214
2	5925.00	57.09	68.20	-11.11	51.00	6.09	Peak	121	214
3	11570.00	41.19	54.00	-12.81	26.59	14.60	Average	100	169
4	11570.00	53.42	74.00	-20.58	38.82	14.60	Peak	100	169
5	17355.00	58.35	68.20	-9.85	40.80	17.55	Peak	100	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).

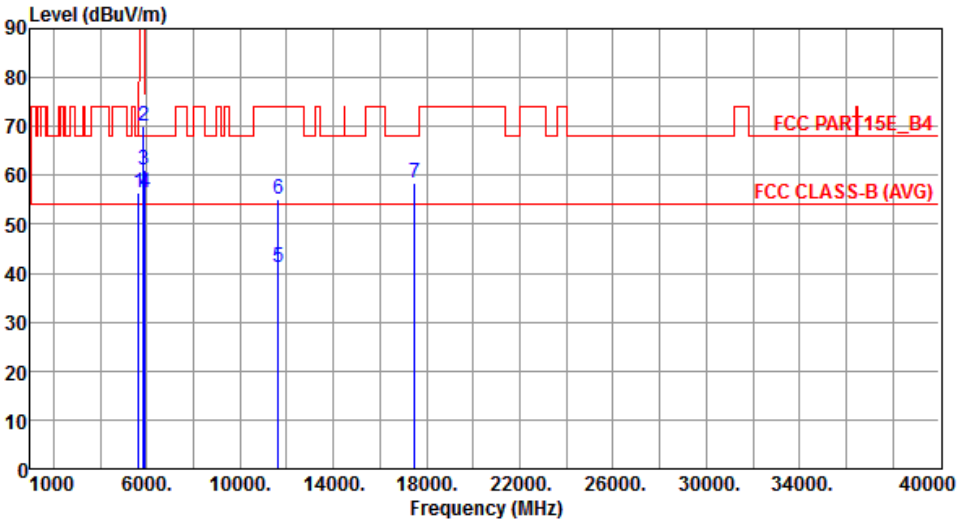
Modulation	VHT20	Test Freq. (MHz)	5825
Polarization	Horizontal		



	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	5650.00	56.11	68.20	-12.09	50.42	5.69	Peak	208	62
2	5855.00	64.51	110.80	-46.29	58.51	6.00	Peak	208	62
3	5875.00	59.13	105.20	-46.07	53.11	6.02	Peak	208	62
4	5925.00	56.32	68.20	-11.88	50.23	6.09	Peak	208	62
5	11650.00	40.95	54.00	-13.05	26.51	14.44	Average	100	135
6	11650.00	54.88	74.00	-19.12	40.44	14.44	Peak	100	135
7	17475.00	58.19	68.20	-10.01	40.15	18.04	Peak	100	171

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

Modulation	VHT20	Test Freq. (MHz)	5825
Polarization	Vertical		

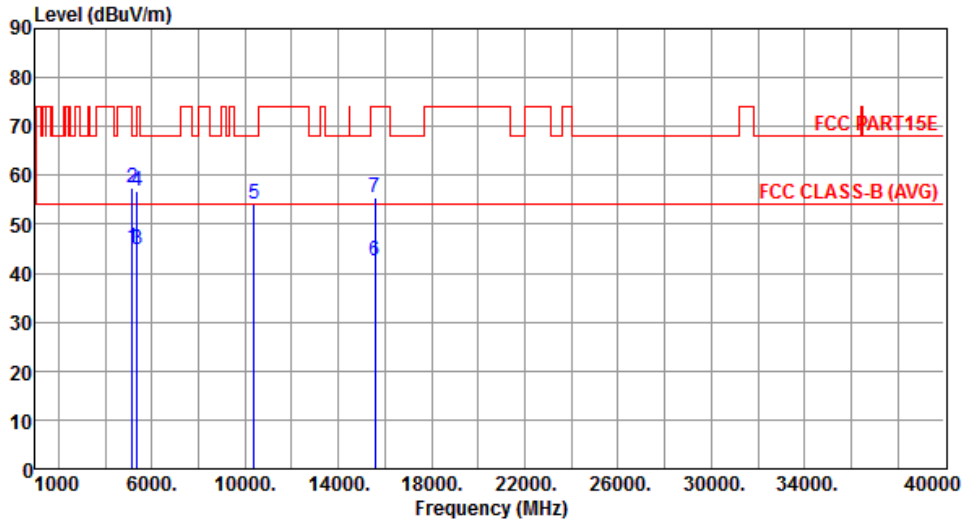


	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	5650.00	56.51	68.20	-11.69	50.82	5.69	Peak	174	209
2	5855.00	70.11	110.80	-40.69	64.11	6.00	Peak	174	209
3	5875.00	61.12	105.20	-44.08	55.10	6.02	Peak	174	209
4	5925.00	56.50	68.20	-11.70	50.41	6.09	Peak	174	209
5	11650.00	41.16	54.00	-12.84	26.72	14.44	Average	100	145
6	11650.00	55.17	74.00	-18.83	40.73	14.44	Peak	100	145
7	17475.00	58.39	68.20	-9.81	40.35	18.04	Peak	100	116

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

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

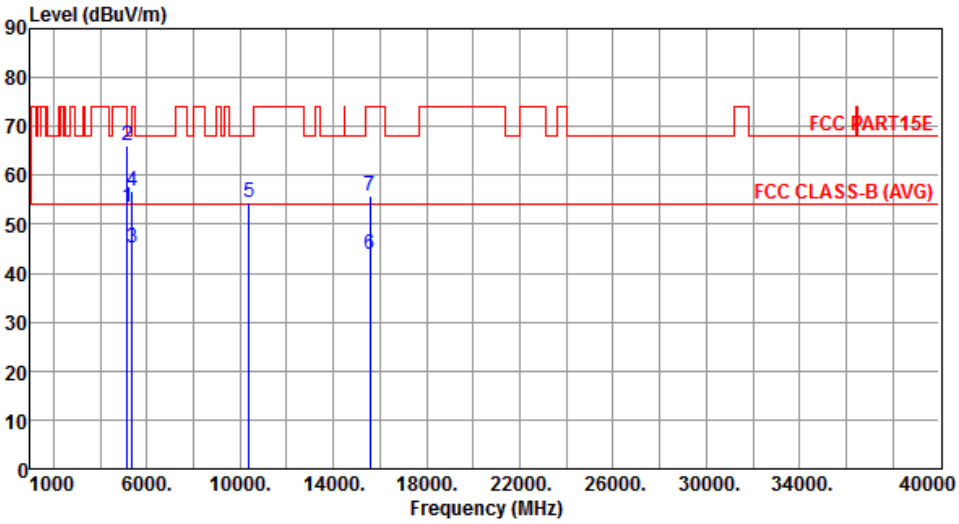
Modulation	VHT40	Test Freq. (MHz)	5190
Polarization	Horizontal		



	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	5150.00	45.14	54.00	-8.86	40.12	5.02	Average	100	255
2	5150.00	57.50	74.00	-16.50	52.48	5.02	Peak	100	255
3	5350.00	44.73	54.00	-9.27	39.42	5.31	Average	100	255
4	5350.00	56.84	74.00	-17.16	51.53	5.31	Peak	100	255
5	10380.00	54.17	68.20	-14.03	40.42	13.75	Peak	100	138
6	15570.00	42.40	54.00	-11.60	27.44	14.96	Average	100	193
7	15570.00	55.37	74.00	-18.63	40.41	14.96	Peak	100	193

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

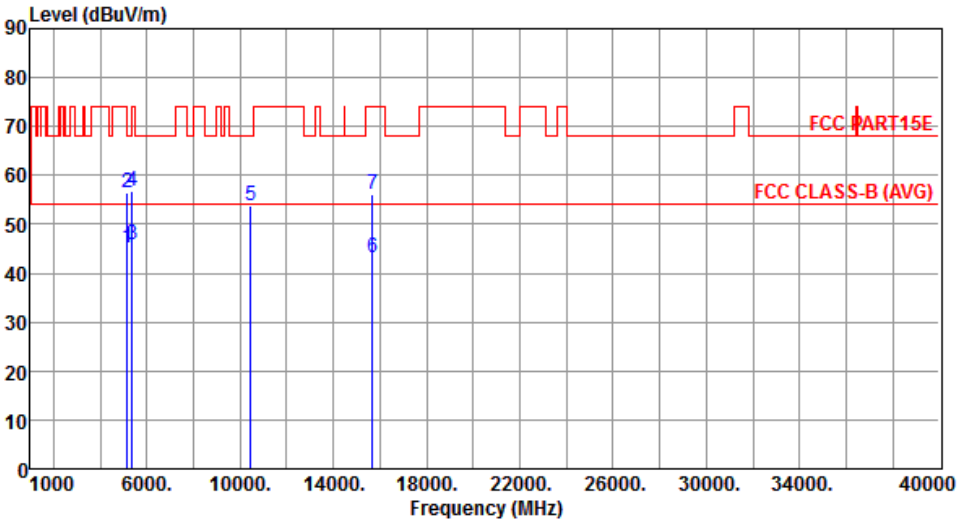
Modulation	VHT40	Test Freq. (MHz)	5190
Polarization	Vertical		



	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	5150.00	53.32	54.00	-0.68	48.30	5.02	Average	235	198
2	5150.00	66.07	74.00	-7.93	61.05	5.02	Peak	235	198
3	5350.00	45.33	54.00	-8.67	40.02	5.31	Average	131	169
4	5350.00	56.94	74.00	-17.06	51.63	5.31	Peak	131	169
5	10380.00	54.59	68.20	-13.61	40.84	13.75	Peak	100	123
6	15570.00	43.84	54.00	-10.16	28.88	14.96	Average	171	153
7	15570.00	55.64	74.00	-18.36	40.68	14.96	Peak	171	153

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

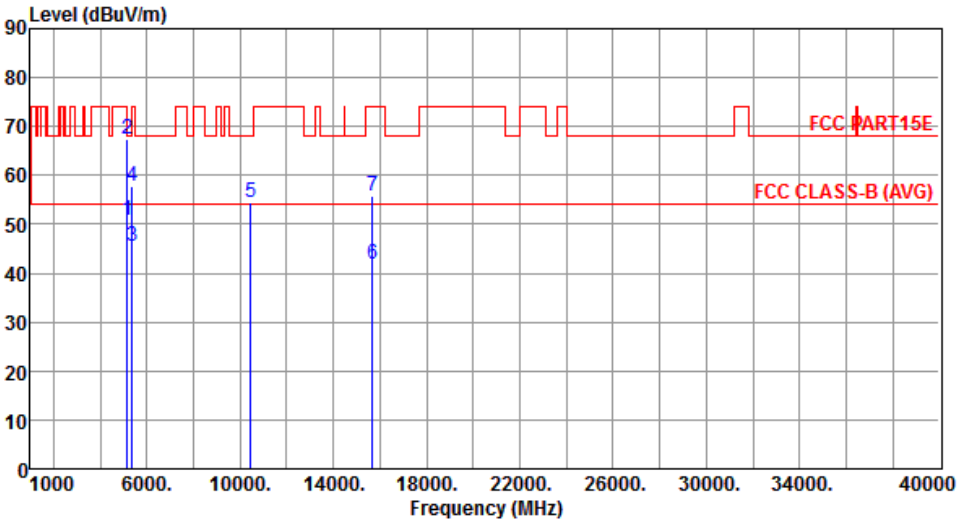
Modulation	VHT40	Test Freq. (MHz)	5230
Polarization	Horizontal		



	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	5150.00	45.29	54.00	-8.71	40.27	5.02	Average	100	256
2	5150.00	56.43	74.00	-17.57	51.41	5.02	Peak	100	256
3	5350.00	45.76	54.00	-8.24	40.45	5.31	Average	100	256
4	5350.00	56.89	74.00	-17.11	51.58	5.31	Peak	100	256
5	10460.00	53.88	68.20	-14.32	40.09	13.79	Peak	100	53
6	15690.00	43.20	54.00	-10.80	28.28	14.92	Average	100	284
7	15690.00	55.96	74.00	-18.04	41.04	14.92	Peak	100	284

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

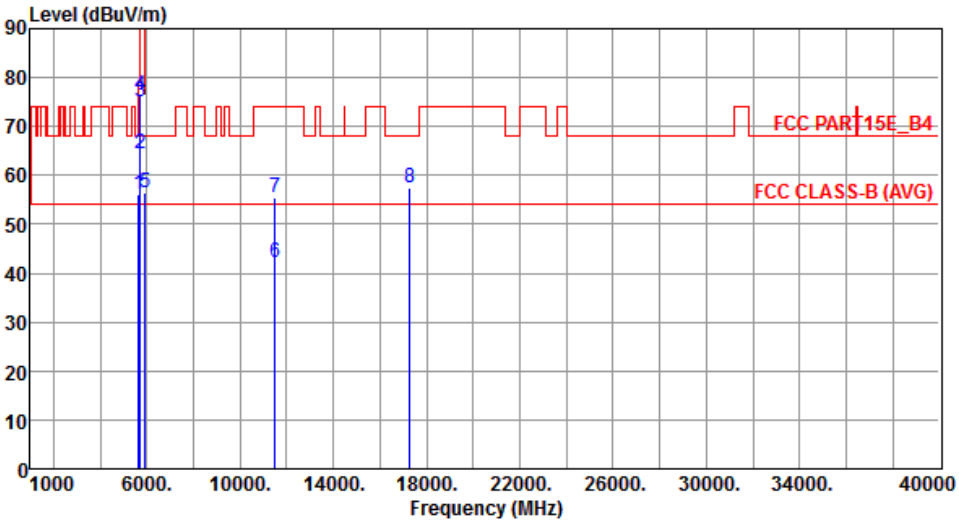
Modulation	VHT40	Test Freq. (MHz)	5230
Polarization	Vertical		



	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	5150.00	50.92	54.00	-3.08	45.90	5.02	Average	194	173
2	5150.00	67.43	74.00	-6.57	62.41	5.02	Peak	194	173
3	5350.00	45.34	54.00	-8.66	40.03	5.31	Average	194	173
4	5350.00	57.92	74.00	-16.08	52.61	5.31	Peak	194	173
5	10460.00	54.54	68.20	-13.66	40.75	13.79	Peak	100	129
6	15690.00	41.73	54.00	-12.27	26.81	14.92	Average	100	131
7	15690.00	55.88	74.00	-18.12	40.96	14.92	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).

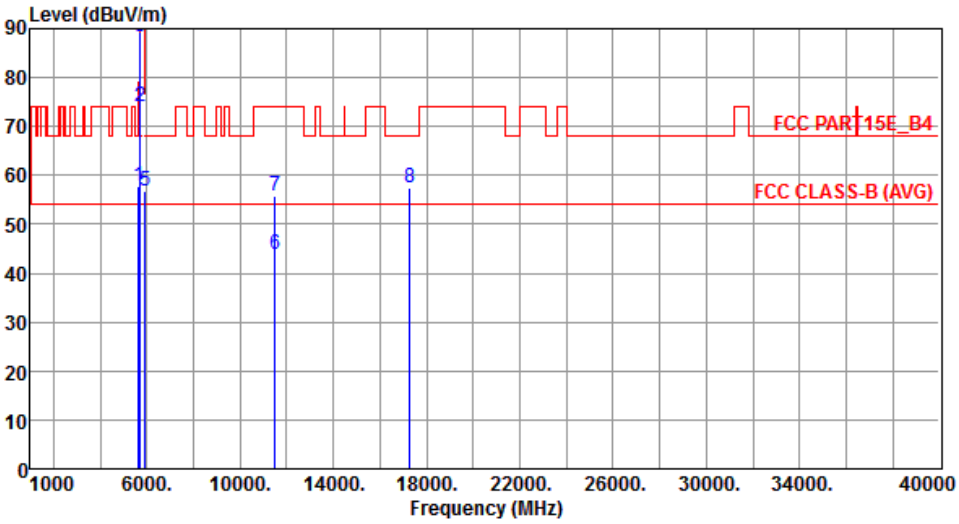
Modulation	VHT40	Test Freq. (MHz)	5755
Polarization	Horizontal		



	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	5650.00	56.24	68.20	-11.96	50.55	5.69	Peak	195	250
2	5700.00	64.30	105.20	-40.90	58.53	5.77	Peak	195	250
3	5720.00	75.02	110.80	-35.78	69.23	5.79	Peak	195	250
4	5725.00	76.34	122.20	-45.86	70.53	5.81	Peak	195	250
5	5925.00	56.61	68.20	-11.59	50.52	6.09	Peak	195	250
6	11510.00	42.17	54.00	-11.83	27.45	14.72	Average	100	155
7	11510.00	55.50	74.00	-18.50	40.78	14.72	Peak	100	155
8	17265.00	57.34	68.20	-10.86	40.17	17.17	Peak	100	164

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

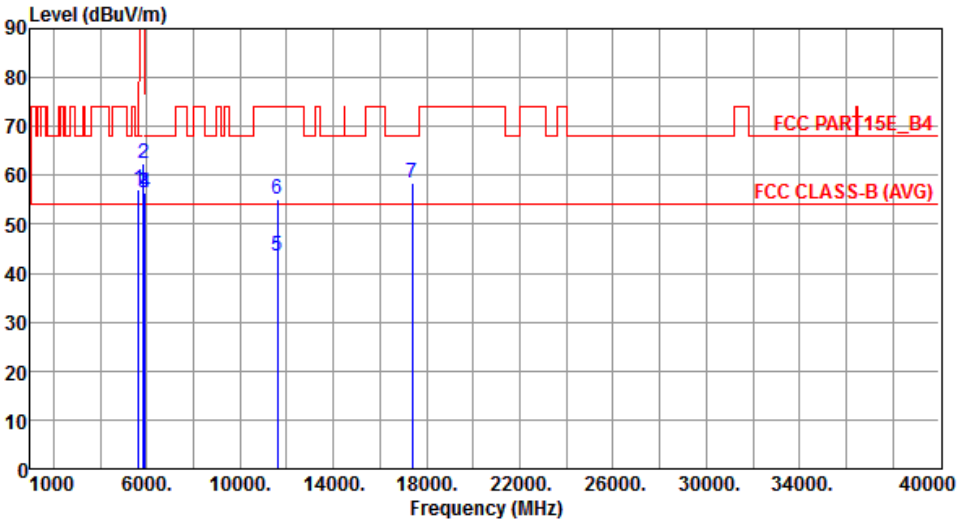
Modulation	VHT40	Test Freq. (MHz)	5755
Polarization	Vertical		



	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	5650.00	57.87	68.20	-10.33	52.18	5.69	Peak	192	179
2	5700.00	73.91	105.20	-31.29	68.14	5.77	Peak	192	179
3	5720.00	88.44	110.80	-22.36	82.65	5.79	Peak	192	179
4	5725.00	89.45	122.20	-32.75	83.64	5.81	Peak	192	179
5	5925.00	56.91	68.20	-11.29	50.82	6.09	Peak	192	179
6	11510.00	43.87	54.00	-10.13	29.15	14.72	Average	164	281
7	11510.00	55.80	74.00	-18.20	41.08	14.72	Peak	164	281
8	17265.00	57.47	68.20	-10.73	40.30	17.17	Peak	146	353

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

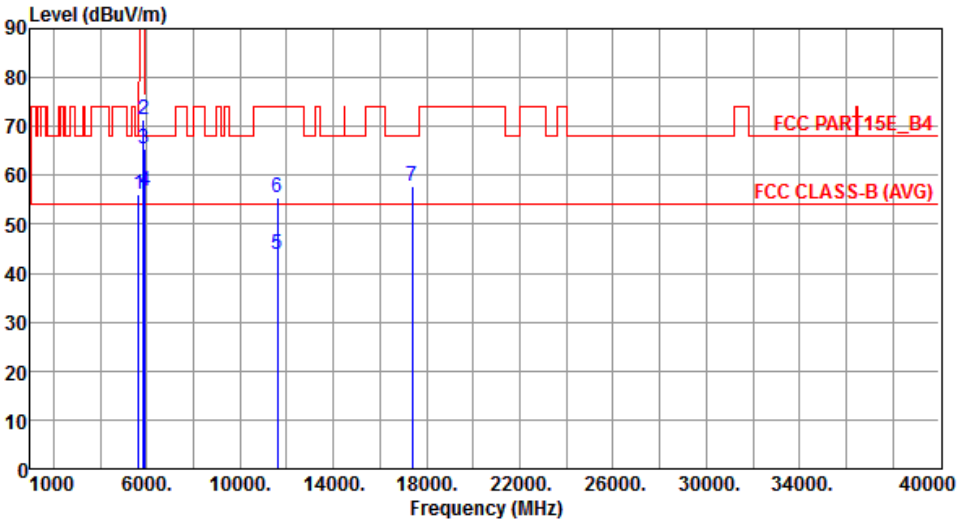
Modulation	VHT40	Test Freq. (MHz)	5795
Polarization	Horizontal		



	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	5650.00	57.15	68.20	-11.05	51.46	5.69	Peak	198	246
2	5855.00	62.49	110.80	-48.31	56.49	6.00	Peak	198	246
3	5875.00	56.34	105.20	-48.86	50.32	6.02	Peak	198	246
4	5925.00	56.56	68.20	-11.64	50.47	6.09	Peak	198	246
5	11590.00	43.39	54.00	-10.61	28.83	14.56	Average	100	131
6	11590.00	55.24	74.00	-18.76	40.68	14.56	Peak	100	131
7	17385.00	58.41	68.20	-9.79	40.74	17.67	Peak	100	118

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

Modulation	VHT40	Test Freq. (MHz)	5795
Polarization	Vertical		

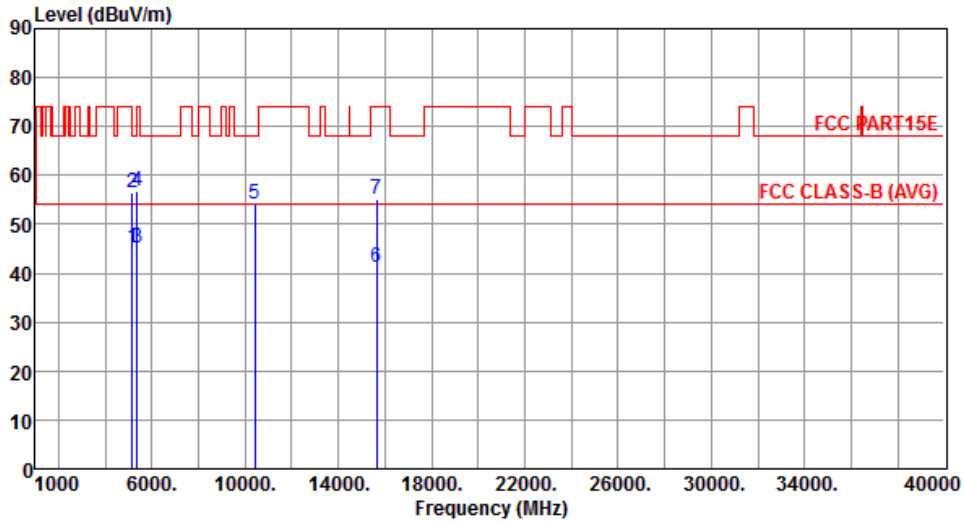


	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	5650.00	56.03	68.20	-12.17	50.34	5.69	Peak	186	232
2	5855.00	71.48	110.80	-39.32	65.48	6.00	Peak	186	232
3	5875.00	65.58	105.20	-39.62	59.56	6.02	Peak	186	232
4	5925.00	56.79	68.20	-11.41	50.70	6.09	Peak	186	232
5	11590.00	43.94	54.00	-10.06	29.38	14.56	Average	100	168
6	11590.00	55.41	74.00	-18.59	40.85	14.56	Peak	100	168
7	17385.00	57.69	68.20	-10.51	40.02	17.67	Peak	100	297

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

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

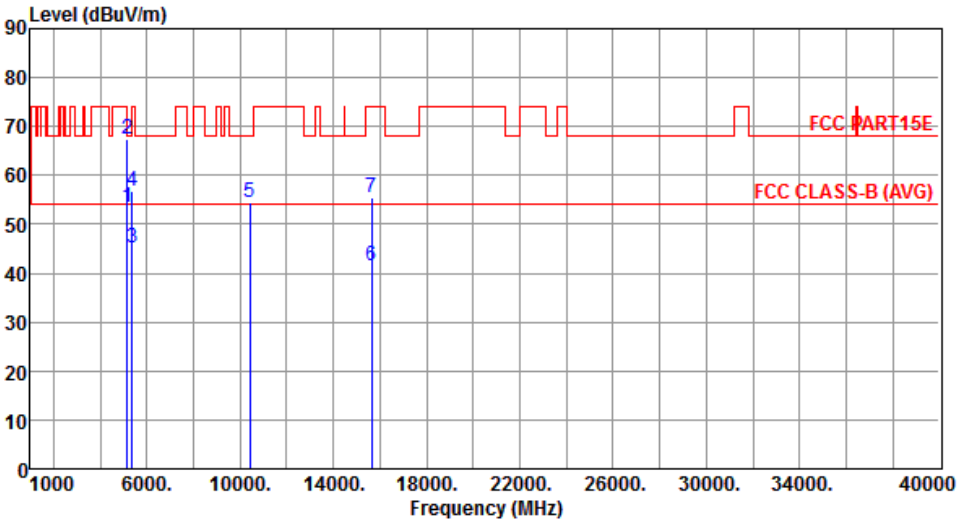
Modulation	VHT80	Test Freq. (MHz)	5210
Polarization	Horizontal		



	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	5150.00	45.14	54.00	-8.86	40.12	5.02	Average	100	263
2	5150.00	56.46	74.00	-17.54	51.44	5.02	Peak	100	263
3	5350.00	45.13	54.00	-8.87	39.82	5.31	Average	100	263
4	5350.00	56.75	74.00	-17.25	51.44	5.31	Peak	100	263
5	10420.00	54.22	68.20	-13.98	40.44	13.78	Peak	100	155
6	15630.00	41.20	54.00	-12.80	26.27	14.93	Average	100	138
7	15630.00	55.09	74.00	-18.91	40.16	14.93	Peak	100	138

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

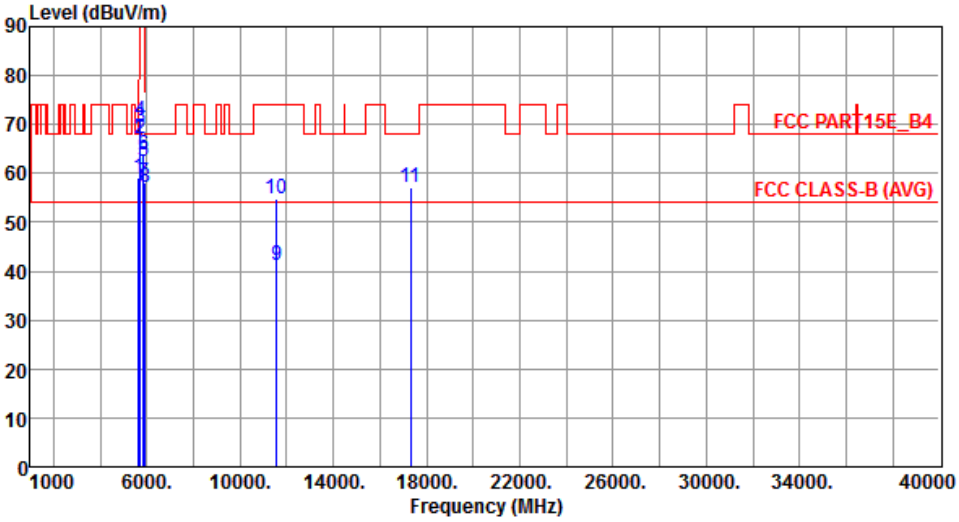
Modulation	VHT80	Test Freq. (MHz)	5210
Polarization	Vertical		



	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	5150.00	53.48	54.00	-0.52	48.46	5.02	Average	100	267
2	5150.00	67.44	74.00	-6.56	62.42	5.02	Peak	100	267
3	5350.00	45.24	54.00	-8.76	39.93	5.31	Average	100	267
4	5350.00	56.93	74.00	-17.07	51.62	5.31	Peak	100	267
5	10420.00	54.51	68.20	-13.69	40.73	13.78	Peak	115	124
6	15630.00	41.45	54.00	-12.55	26.52	14.93	Average	100	141
7	15630.00	55.51	74.00	-18.49	40.58	14.93	Peak	100	141

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

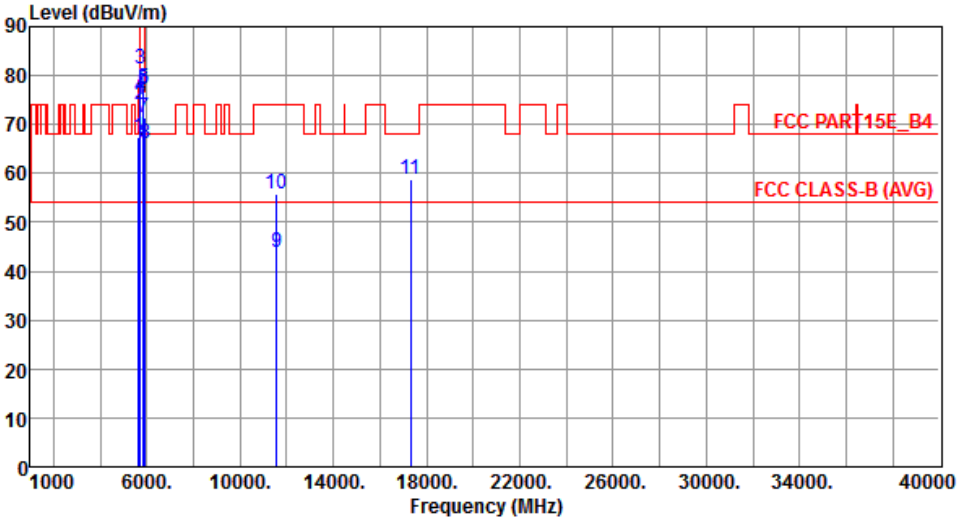
Modulation	VHT80	Test Freq. (MHz)	5775
Polarization	Horizontal		



	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	5650.00	59.20	68.20	-9.00	53.51	5.69	Peak	167	72
2	5700.00	67.15	105.20	-38.05	61.38	5.77	Peak	167	72
3	5720.00	69.33	110.80	-41.47	63.54	5.79	Peak	167	72
4	5725.00	70.83	122.20	-51.37	65.02	5.81	Peak	167	72
5	5850.00	62.49	122.20	-59.71	56.50	5.99	Peak	167	72
6	5855.00	63.81	110.80	-46.99	57.81	6.00	Peak	167	72
7	5875.00	58.10	105.20	-47.10	52.08	6.02	Peak	167	72
8	5925.00	57.23	68.20	-10.97	51.14	6.09	Peak	167	72
9	11550.00	41.23	54.00	-12.77	26.59	14.64	Average	114	168
10	11550.00	54.90	74.00	-19.10	40.26	14.64	Peak	114	168
11	17325.00	57.28	68.20	-10.92	39.85	17.43	Peak	100	251

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

Modulation	VHT80	Test Freq. (MHz)	5775
Polarization	Vertical		



	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	5650.00	67.47	68.20	-0.73	61.78	5.69	Peak	202	162
2	5700.00	74.20	105.20	-31.00	68.43	5.77	Peak	202	162
3	5720.00	81.46	110.80	-29.34	75.67	5.79	Peak	202	162
4	5725.00	75.87	122.20	-46.33	70.06	5.81	Peak	202	162
5	5850.00	77.27	122.20	-44.93	71.28	5.99	Peak	202	162
6	5855.00	77.09	110.80	-33.71	71.09	6.00	Peak	202	162
7	5875.00	71.40	105.20	-33.80	65.38	6.02	Peak	202	162
8	5925.00	66.06	68.20	-2.14	59.97	6.09	Peak	202	162
9	11550.00	43.99	54.00	-10.01	29.35	14.64	Average	207	94
10	11550.00	55.66	74.00	-18.34	41.02	14.64	Peak	207	94
11	17325.00	58.69	68.20	-9.51	41.26	17.43	Peak	133	180

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

3.6 Frequency Stability

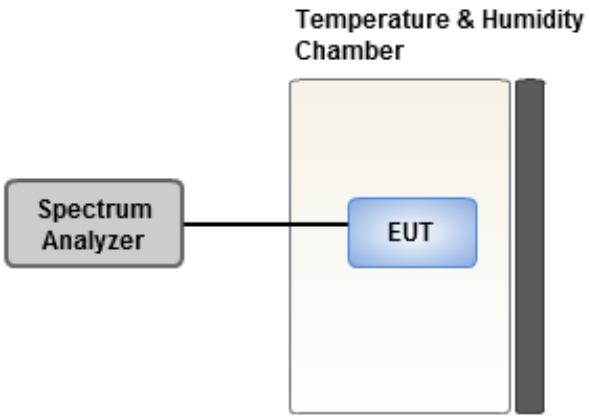
3.6.1 Limit of Frequency Stability

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

3.6.2 Test Procedures

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

3.6.3 Test Setup



3.6.4 Test Result of Frequency Stability

Frequency: 5200 MHz	Frequency Drift (ppm)			
Temperature (°C)	0 minute	2 minutes	5 minutes	10 minutes
T20°CVmax	6.59	7.08	6.90	6.24
T20°CVmin	5.14	5.05	5.38	5.13
T50°CVnom	4.42	5.03	4.48	4.66
T40°CVnom	4.56	4.69	4.09	5.26
T30°CVnom	3.27	3.54	3.03	3.23
T20°CVnom	2.91	3.22	3.15	2.81
T10°CVnom	2.60	2.69	2.29	2.47
T0°CVnom	3.61	4.13	3.52	3.77
T-10°CVnom	2.95	2.71	2.90	3.00
T-20°CVnom	0.69	0.69	1.17	0.94
T-30°CVnom	1.95	2.15	2.49	1.72
Vnom [Vac]: 120		Vmax [Vac]: 138		Vmin [Vac]: 102
Tnom [°C]: 20		Tmax [°C]: 50		Tmin [°C]: -30

Frequency: 5785 MHz	Frequency Drift (ppm)			
Temperature (°C)	0 minute	2 minutes	5 minutes	10 minutes
T20°CVmax	6.39	6.56	6.68	7.00
T20°CVmin	5.06	4.99	5.25	5.60
T50°CVnom	4.58	4.64	5.13	4.48
T40°CVnom	4.07	3.99	3.96	4.72
T30°CVnom	2.80	3.17	3.04	3.33
T20°CVnom	3.10	3.32	3.18	3.71
T10°CVnom	3.34	3.85	3.97	3.17
T0°CVnom	4.03	4.58	3.95	4.18
T-10°CVnom	3.16	2.90	3.47	2.97
T-20°CVnom	0.94	1.48	1.49	1.07
T-30°CVnom	1.70	1.52	2.04	1.92
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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