FCC Test Report

FCC ID	:	**UIDSBR-AC3200P**
Equipment	:	**AC3200 Wi-Fi Router with RipCurrent™ Technology**
Model No.	:	**SBR-AC3200P**
Brand Name	:	**ARRIS**
Applicant	:	**ARRIS Group, Inc.**
Address	:	**3871 Lakefield Drive, Suite 300, Suwanee, Georgia 30024, United States**
Standard	:	**47 CFR FCC Part 15.407**
Received Date	:	**Aug. 06, 2015**
Tested Date	:	**Aug. 21 ~ Sep. 22, 2015**

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

Approved & Reviewed by:

Gary Chang / Manager

Testing Laboratory 2732

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Release Record

Report No.	Version	Description	Issued Date
FR580604AN	Rev. 01	Initial issue	Oct. 13, 2015

Summary of Test Results

FCC Rules	Test Items	Measured	Result
15.207	Conducted Emissions	[dBuV]: 0.473MHz 32.39 (Margin -14.06dB) - AV	Pass
15.407(b) 15.209	Radiated Emissions	[dBuV/m at 3m]: 5360.00MHz 53.25 (Margin -0.75dB) - 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: 27.51 5725-5850MHz: 24.24 ***Beamforming mode*** 5150-5250MHz: 25.66 5725-5850MHz: 21.56	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]	3	6-54 Mbps
5150-5250	n (HT20)	5180-5240	36-48 [4]	3	MCS 0-23
5150-5250	n (HT40)	5190-5230	38-46 [2]	3	MCS 0-23
5150-5250	ac (VHT20)	5180-5240	36-48 [4]	3	MCS 0-9
5150-5250	ac (VHT40)	5190-5230	38-46 [2]	3	MCS 0-9
5150-5250	ac (VHT80)	5210	42 [1]	3	MCS 0-9
5725-5850	a	5745-5825	149-165 [5]	3	6-54 Mbps
5725-5850	n (HT20)	5745-5825	149-165 [5]	3	MCS 0-23
5725-5850	n (HT40)	5755-5795	151-159 [2]	3	MCS 0-23
5725-5850	ac (VHT20)	5745-5825	149-165 [5]	3	MCS 0-9
5725-5850	ac (VHT40)	5755-5795	151-159 [2]	3	MCS 0-9
5725-5850	ac (VHT80)	5775	155 [1]	3	MCS 0-9
Note 1: RF output power specifies that Maximum Conducted Output Power. Note 2: 802.11a/n/ac uses a combination of OFDM-BPSK, QPSK, 16QAM, 64QAM, 256QAM modulation. Note 3: 802.11n/ac supports beamforming function.					

1.1.2 Antenna Details

Ant. No.	Type	Connector	Operating Frequency (MHz) / Gain (dBi)		
			2400~2483.5	**5150~5250**	**5725~5850**
1	Dipole	I-pex	4	4	-
2	Dipole	I-pex	3.5	3.3	-
3	Dipole	I-pex	3.3	2.9	-
4	Dipole	I-pex	-	-	3.7
5	Dipole	I-pex	-	-	3.4
6	Dipole	I-pex	-	-	2.8

1.1.3 Power Supply Type of Equipment under Test (EUT)

Power Supply Type	100-240Vac, 50-60Hz Power line: 1.5m non-shielded without core

1.1.4 Accessories

Accessories		
No.	**Equipment**	**Description**
1	RJ45 cable	1m non-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	MTool, version 2.0.2.1				
Duty Cycle and Duty Factor	**Mode**	**Non-beamforming**		**Beamforming**	
		Duty cycle (%)	**Duty factor (dB)**	**Duty cycle (%)**	**Duty factor (dB)**
	11a	99.31%	0.03	---	---
	VHT20	99.26%	0.03	96.91%	0.14
	VHT40	98.24%	0.08	97.39%	0.11
	VHT80	99.68%	0.01	96.80%	0.14

1.1.7 Power Setting

For Frequency band 5150-5250 MHz			
Modulation Mode	Test Frequency (MHz)	Power Set	
		Non-Beamforming	Beamforming
11a	5180	86	---
11a	5200	76	---
11a	5240	78	---
HT20	5180	82	78
HT20	5200	76	72
HT20	5240	78	72
HT40	5190	66	52
HT40	5230	88	80
VHT20	5180	82	78
VHT20	5200	76	72
VHT20	5240	78	72
VHT40	5190	66	52
VHT40	5230	88	80
VHT80	5210	58	60

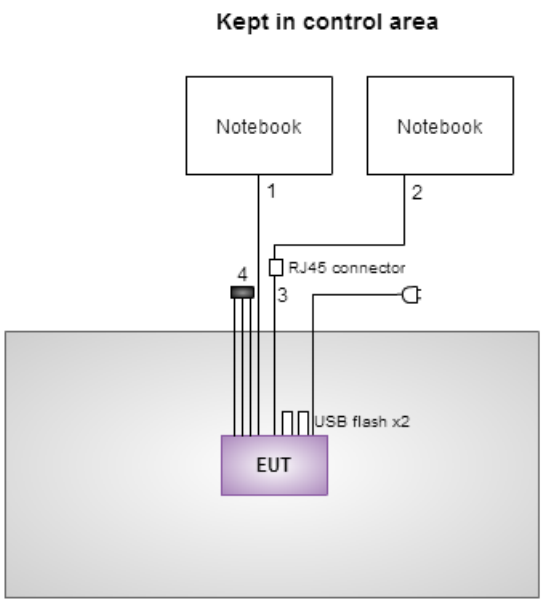
For Frequency band 5725~5850 MHz			
Modulation Mode	Test Frequency (MHz)	Power Set	
		Non-Beamforming	Beamforming
11a	5745	74	---
11a	5785	60	---
11a	5825	60	---
HT20	5745	70	64
HT20	5785	60	54
HT20	5825	62	54
HT40	5755	54	52
HT40	5795	64	58
VHT20	5745	70	64
VHT20	5785	60	54
VHT20	5825	62	54
VHT40	5755	54	52
VHT40	5795	64	58
VHT80	5775	52	52

1.2 Local Support Equipment List

Support Equipment List					
No.	**Equipment**	**Brand**	**Model**	**FCC ID**	**Signal cable / Length (m)**
1	Notebook	DELL	Latitude E6440	DoC	RJ45, 10m non-shielded.
2	Notebook	DELL	Latitude E6440	DoC	RJ45, 10m non-shielded.
3	USB 2.0 flash	Kingston	DTSE9	---	---
4	USB 2.0 flash	Kingston	DTSE9	---	---
5	Load	ICC	---	---	RJ45, 5m non-shielded x3.

1.3 Test Setup Chart

Test Setup Diagram



1. RJ45, 10m non-shielded
2. RJ45, 10m non-shielded
3. RJ45, 1m non-shielded
4. RJ45, 5m (x3) non-shielded with load

1.4 The Equipment List

Test Item	Conducted Emission				
Test Site	Conduction room 1 / (CO01-WS)				
Instrument	**Manufacturer**	**Model No.**	**Serial No.**	**Calibration Date**	**Calibration Until**
EMC Receiver	R&S	ESCS 30	100169	Oct. 17, 2014	Oct. 16, 2015
LISN	SCHWARZBECK	Schwarzbeck 8127	8127-667	Nov. 17, 2014	Nov. 16, 2015
RF Cable-CON	Woken	CFD200-NL	CFD200-NL-001	Dec. 31, 2014	Dec. 30, 2015
Measurement Software	AUDIX	e3	6.120210k	NA	NA
Note: Calibration Interval of instruments listed above is one year.					

Test Item	Radiated Emission				
Test Site	966 chamber 2 / (03CH02-WS)				
Instrument	**Manufacturer**	**Model No.**	**Serial No.**	**Calibration Date**	**Calibration Until**
Spectrum Analyzer	R&S	FSV40	101499	Dec. 31, 2014	Dec. 30, 2015
Receiver	R&S	ESR3	101657	Jan. 15, 2015	Jan. 14, 2016
Bilog Antenna	SCHWARZBECK	VULB9168	VULB9168-524	Oct. 16, 2014	Oct. 15, 2015
Horn Antenna 1G-18G	SCHWARZBECK	BBHA 9120 D	BBHA 9120 D 1095	Oct. 14, 2014	Oct. 13, 2015
Horn Antenna 18G-40G	SCHWARZBECK	BBHA 9170	BBHA 9170517	Nov. 10, 2014	Nov. 09, 2015
Loop Antenna	R&S	HFH2-Z2	11900	Nov. 10, 2014	Nov. 09, 2015
Preamplifier	Burgeon	BPA-530	100218	Nov. 10, 2014	Nov. 09, 2015
Preamplifier	Agilent	83017A	MY39501309	Sep. 29, 2014	Sep. 28, 2015
Pre-Amplifier	WM	TF-130N-R1	923365	Feb. 10, 2015	Feb. 09, 2016
RF Cable	HUBER+SUHNER	SUCOFLEX104	MY16140/4	Dec. 16, 2014	Dec. 15, 2015
RF Cable	HUBER+SUHNER	SUCOFLEX104	MY16018/4	Dec. 16, 2014	Dec. 15, 2015
RF Cable	HUBER+SUHNER	SUCOFLEX104	MY16015/4	Dec. 16, 2014	Dec. 15, 2015
LF cable 3M	Woken	CFD400NL-LW	CFD400NL-003	Dec. 16, 2014	Dec. 15, 2015
LF cable 10M	Woken	CFD400NL-LW	CFD400NL-004	Dec. 16, 2014	Dec. 15, 2015
Measurement Software	AUDIX	e3	6.120210g	NA	NA
Note: Calibration Interval of instruments listed above is one year.					

Test Item	RF Conducted				
Test Site	(TH01-WS)				
Instrument	**Manufacturer**	**Model No.**	**Serial No.**	**Calibration Date**	**Calibration Until**
Spectrum Analyzer	R&S	FSV40	101063	Feb. 03, 2015	Feb. 02, 2016
TEMP&HUMIDITY CHAMBER	GIANT FORCE	GCT-225-40-SP-SD	MAF1212-002	Dec. 03, 2014	Dec. 02, 2015
Power Meter	Anritsu	ML2495A	1241002	Sep. 29, 2014	Sep. 28, 2015
Power Sensor	Anritsu	MA2411B	1207366	Sep. 29, 2014	Sep. 28, 2015
Measurement Software	Sporton	Sporton_1	1.3.30	NA	NA
Note: Calibration Interval of instruments listed above is one year.					

1.5 Testing Applied Standards

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

47 CFR FCC Part 15.407
ANSI C63.10-2013
FCC KDB 789033 D02 General UNII Test Procedures New Rules v01
FCC KDB 644545 D03 Guidance for IEEE 802 11ac New Rules v01
FCC KDB 662911 D01 Multiple Transmitter Output v02r01
FCC KDB 412172 D01 Determining ERP and EIRP 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	±2.92 dB
Radiated emission ≤ 1GHz	±3.62 dB
Radiated emission > 1GHz	±5.60 dB
Time	±0.1%
Temperature	±0.6 ^{o}C

2 Test Configuration

2.1 Testing Condition

Test Item	Test Site	Ambient Condition	Tested By
AC Conduction	CO01-WS	22°C / 58%	Kevin Ma
Radiated Emissions	03CH02-WS	21-25°C / 62-69%	Warren Lee Felix Sung
RF Conducted	TH01-WS	21°C / 64%	Felix Sung

- FCC site registration No.: 657002
- IC site registration No.: 10807A-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	11a	5180	6 Mbps	---
Radiated Emissions ≤1GHz	11a	5180	6 Mbps	---
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	---	---

For Frequency band 5725-5850 MHz				
Test item	**Modulation Mode**	**Test Frequency (MHz)**	**Data Rate**	**Test Configuration**
Conducted Emissions	11a	5745	6 Mbps	---
Radiated Emissions ≤1GHz	11a	5745	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	---	---

Beamforming mode

For Frequency band 5150-5250 MHz				
Test item	**Modulation Mode**	**Test Frequency (MHz)**	**Data Rate**	**Test Configuration**
Conducted Emissions	VHT20	5180	MCS 0	---
Radiated Emissions ≤1GHz	VHT20	5180	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	---

For Frequency band 5725-5850 MHz				
Test item	**Modulation Mode**	**Test Frequency (MHz)**	**Data Rate**	**Test Configuration**
Conducted Emissions	VHT20	5745	MCS 0	---
Radiated Emissions ≤1GHz	VHT20	5745	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	---

3 Transmitter Test Results

3.1 Conducted Emissions

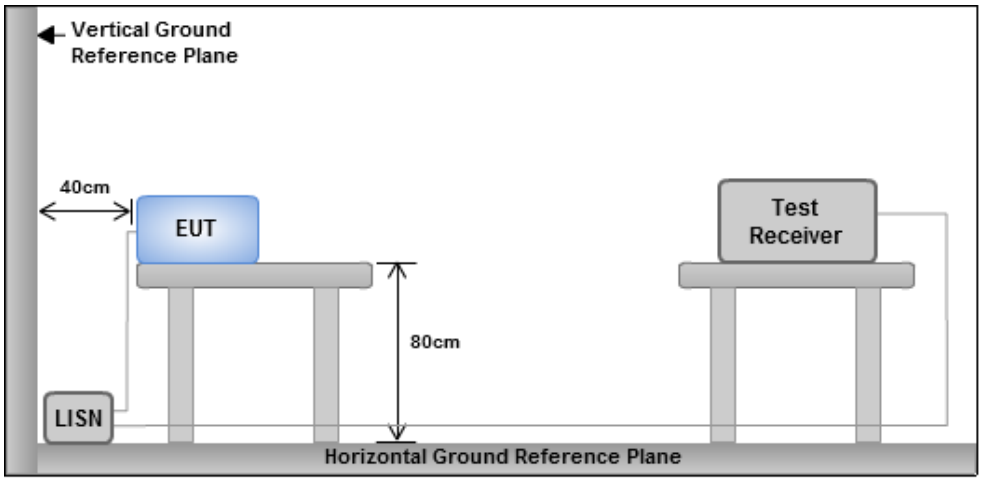
3.1.1 Limit of Conducted Emissions

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

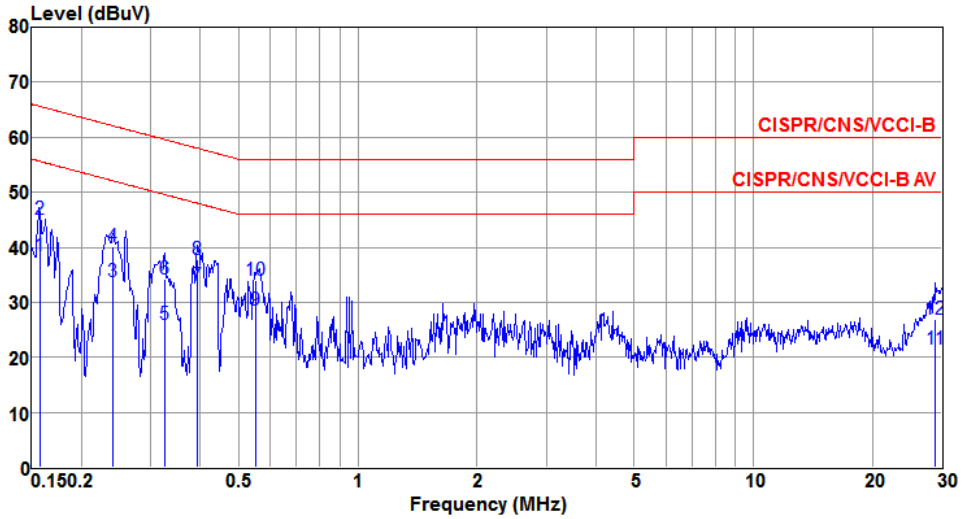


Note: 1. Support units were connected to second LISN.
2. Both of LISNs (AMN) are 80 cm from EUT and at least 80 cm from other units and other metal planes

3.1.4 Test Result of Conducted Emissions

Non-beamforming mode

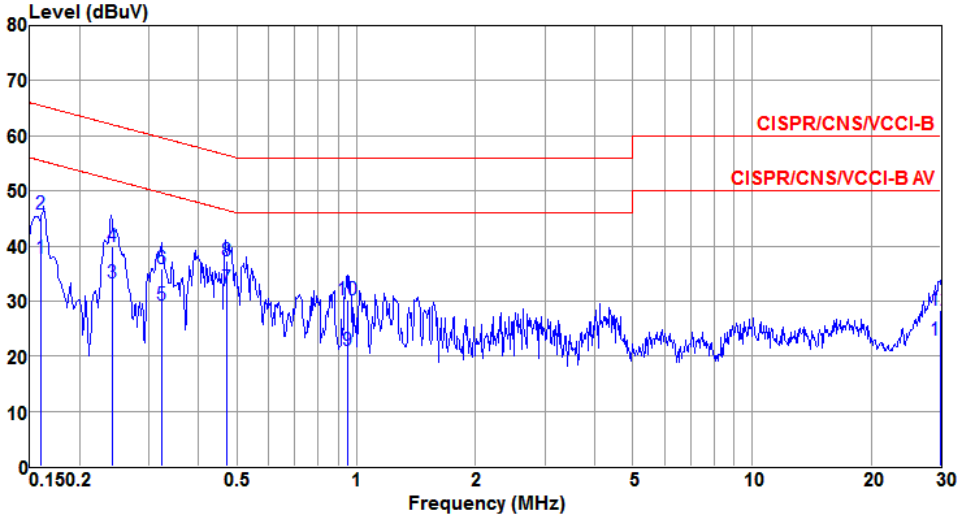
Modulation	11a	**Test Freq. (MHz)**	5180
Power Phase	Line		



	Freq MHz	Level dBuV	Limit Line dBuV	Over Limit dB	Read Level dBuV	LISN factor dB	cable loss dB	Remark
1	0.158	38.41	55.58	-17.17	38.26	0.07	0.08	Average
2	0.158	45.02	65.58	-20.56	44.87	0.07	0.08	QP
3	0.240	33.84	52.08	-18.24	33.67	0.07	0.10	Average
4	0.240	40.06	62.08	-22.02	39.89	0.07	0.10	QP
5	0.325	25.94	49.57	-23.63	25.77	0.07	0.10	Average
6	0.325	34.29	59.57	-25.28	34.12	0.07	0.10	QP
7@	0.393	32.97	47.99	-15.02	32.79	0.07	0.11	Average
8	0.393	37.68	57.99	-20.31	37.50	0.07	0.11	QP
9	0.553	28.52	46.00	-17.48	28.32	0.07	0.13	Average
10	0.553	33.97	56.00	-22.03	33.77	0.07	0.13	QP
11	28.908	21.56	50.00	-28.44	21.08	0.37	0.11	Average
12	28.908	26.82	60.00	-33.18	26.34	0.37	0.11	QP

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

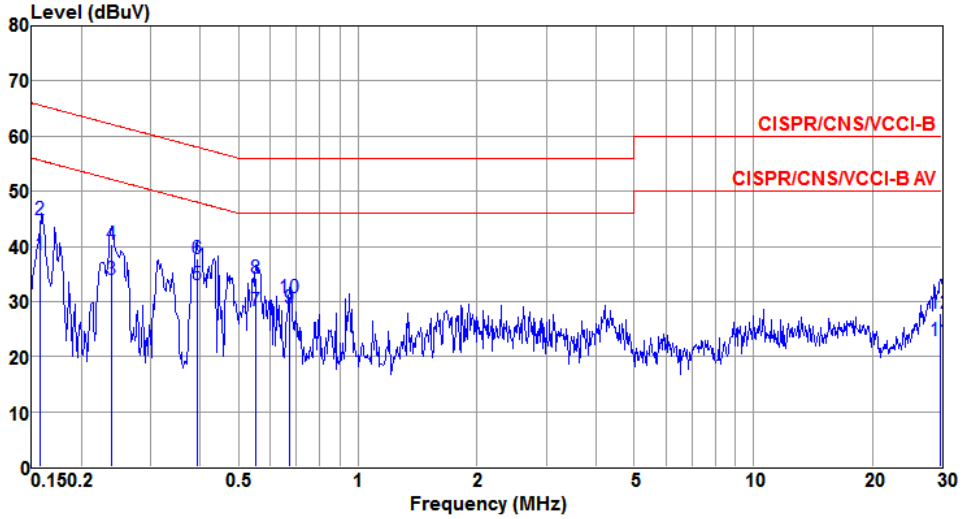
Modulation	11a	Test Freq. (MHz)	5180
Power Phase	Neutral		



	Freq MHz	Level dBuV	Limit Line dBuV	Over Limit dB	Read Level dBuV	LISN factor dB	cable loss dB	Remark
1	0.159	37.83	55.50	-17.67	37.68	0.07	0.08	Average
2	0.159	45.68	65.50	-19.82	45.53	0.07	0.08	QP
3	0.243	33.22	52.00	-18.78	33.05	0.07	0.10	Average
4	0.243	40.00	62.00	-22.00	39.83	0.07	0.10	QP
5	0.322	29.34	49.66	-20.32	29.17	0.07	0.10	Average
6	0.322	35.82	59.66	-23.84	35.65	0.07	0.10	QP
7@	0.473	32.40	46.47	-14.07	32.21	0.07	0.12	Average
8	0.473	37.33	56.47	-19.14	37.14	0.07	0.12	QP
9	0.948	21.06	46.00	-24.94	20.82	0.08	0.16	Average
10	0.948	30.27	56.00	-25.73	30.03	0.08	0.16	QP
11	29.841	22.98	50.00	-27.02	22.44	0.43	0.11	Average
12	29.841	28.35	60.00	-31.65	27.81	0.43	0.11	QP

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

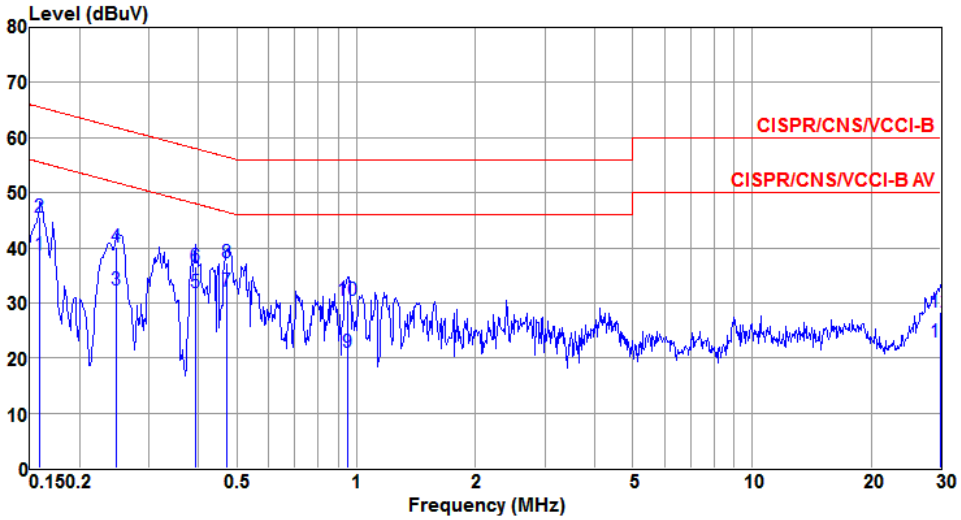
Modulation	11a	Test Freq. (MHz)	5745
Power Phase	Line		



	Freq MHz	Level dBuV	Limit Line dBuV	Over Limit dB	Read Level dBuV	LISN factor dB	cable loss dB	Remark
1	0.158	38.41	55.58	-17.17	38.26	0.07	0.08	Average
2	0.158	44.80	65.58	-20.78	44.65	0.07	0.08	QP
3	0.239	34.06	52.13	-18.07	33.89	0.07	0.10	Average
4	0.239	40.26	62.13	-21.87	40.09	0.07	0.10	QP
5@	0.394	33.08	47.98	-14.90	32.90	0.07	0.11	Average
6	0.394	37.69	57.98	-20.29	37.51	0.07	0.11	QP
7	0.551	28.36	46.00	-17.64	28.16	0.07	0.13	Average
8	0.551	34.11	56.00	-21.89	33.91	0.07	0.13	QP
9	0.674	28.80	46.00	-17.20	28.58	0.08	0.14	Average
10	0.674	30.71	56.00	-25.29	30.49	0.08	0.14	QP
11	29.684	22.81	50.00	-27.19	22.32	0.38	0.11	Average
12	29.684	27.96	60.00	-32.04	27.47	0.38	0.11	QP

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

Modulation	11a	Test Freq. (MHz)	5745
Power Phase	Neutral		

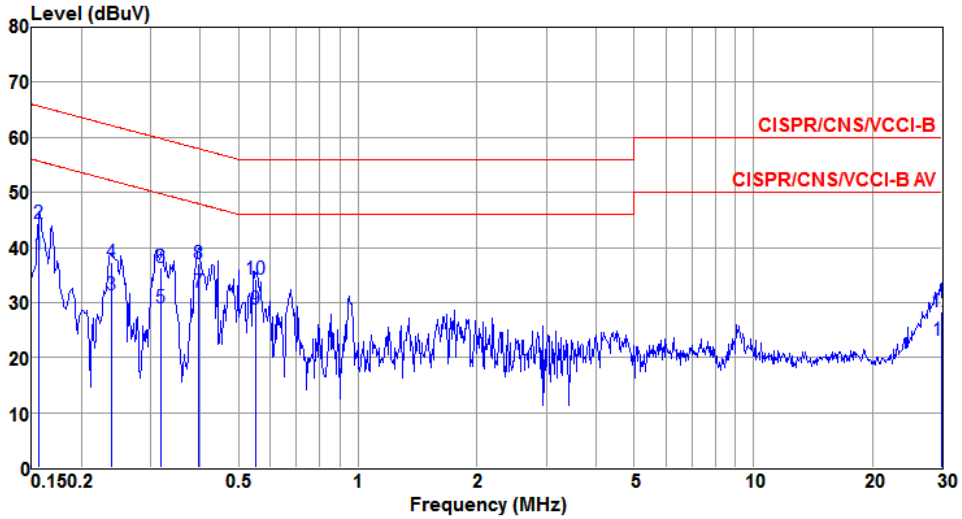


	Freq MHz	Level dBuV	Limit Line dBuV	Over Limit dB	Read Level dBuV	LISN factor dB	cable loss dB	Remark
1	0.158	38.61	55.54	-16.93	38.46	0.07	0.08	Average
2	0.158	45.60	65.54	-19.94	45.45	0.07	0.08	QP
3	0.247	32.31	51.87	-19.56	32.14	0.07	0.10	Average
4	0.247	40.18	61.87	-21.69	40.01	0.07	0.10	QP
5	0.393	31.81	48.01	-16.20	31.63	0.07	0.11	Average
6	0.393	36.67	58.01	-21.34	36.49	0.07	0.11	QP
7@	0.472	32.20	46.47	-14.27	32.01	0.07	0.12	Average
8	0.472	37.21	56.47	-19.26	37.02	0.07	0.12	QP
9	0.948	20.93	46.00	-25.07	20.69	0.08	0.16	Average
10	0.948	30.51	56.00	-25.49	30.27	0.08	0.16	QP
11	29.841	22.98	50.00	-27.02	22.44	0.43	0.11	Average
12	29.841	28.33	60.00	-31.67	27.79	0.43	0.11	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

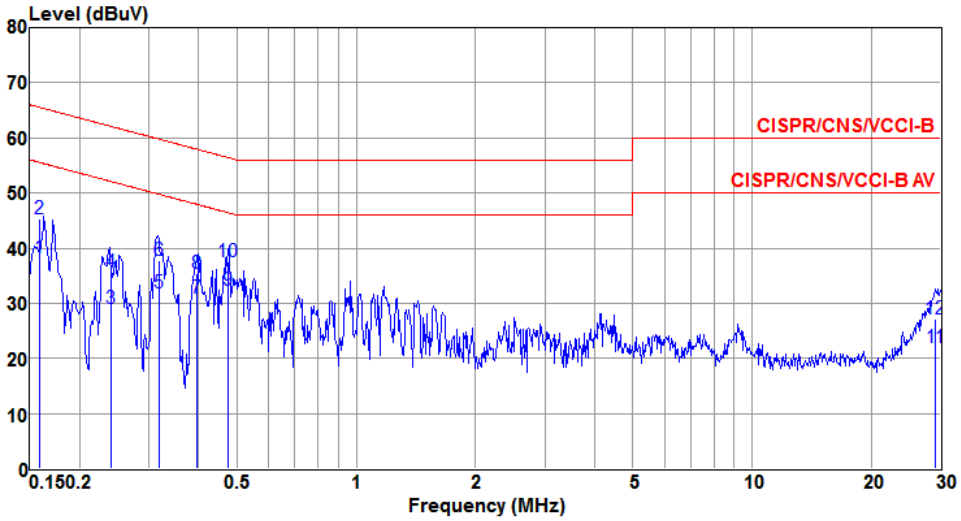
Modulation	VHT20	**Test Freq. (MHz)**	5180
Power Phase	Line		



	Freq MHz	Level dBuV	Limit Line dBuV	Over Limit dB	Read Level dBuV	LISN factor dB	cable loss dB	Remark
1	0.157	38.63	55.65	-17.02	38.48	0.07	0.08	Average
2	0.157	44.41	65.65	-21.24	44.26	0.07	0.08	QP
3	0.239	31.37	52.13	-20.76	31.20	0.07	0.10	Average
4	0.239	37.41	62.13	-24.72	37.24	0.07	0.10	QP
5	0.319	28.94	49.74	-20.80	28.77	0.07	0.10	Average
6	0.319	36.30	59.74	-23.44	36.13	0.07	0.10	QP
7@	0.396	31.76	47.93	-16.17	31.58	0.07	0.11	Average
8	0.396	37.04	57.93	-20.89	36.86	0.07	0.11	QP
9	0.552	28.77	46.00	-17.23	28.57	0.07	0.13	Average
10	0.552	34.21	56.00	-21.79	34.01	0.07	0.13	QP
11	30.000	23.25	50.00	-26.75	22.76	0.38	0.11	Average
12	30.000	28.43	60.00	-31.57	27.94	0.38	0.11	QP

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

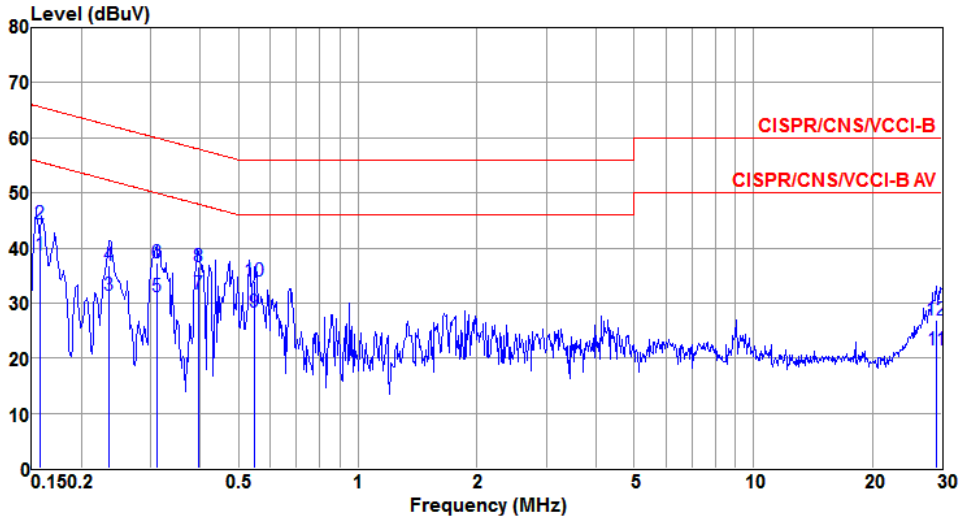
Modulation	VHT20	Test Freq. (MHz)	5180
Power Phase	Neutral		



	Freq MHz	Level dBuV	Limit Line dBuV	Over Limit dB	Read Level dBuV	LISN factor dB	cable loss dB	Remark
1	0.158	38.34	55.56	-17.22	38.19	0.07	0.08	Average
2	0.158	45.39	65.56	-20.17	45.24	0.07	0.08	QP
3	0.240	29.07	52.08	-23.01	28.90	0.07	0.10	Average
4	0.240	35.64	62.08	-26.44	35.47	0.07	0.10	QP
5	0.317	31.88	49.77	-17.89	31.71	0.07	0.10	Average
6	0.317	37.79	59.77	-21.98	37.62	0.07	0.10	QP
7	0.395	30.88	47.96	-17.08	30.70	0.07	0.11	Average
8	0.395	35.44	57.96	-22.52	35.26	0.07	0.11	QP
9@	0.473	32.39	46.45	-14.06	32.20	0.07	0.12	Average
10	0.473	37.46	56.45	-18.99	37.27	0.07	0.12	QP
11	29.061	21.95	50.00	-28.05	21.42	0.42	0.11	Average
12	29.061	27.23	60.00	-32.77	26.70	0.42	0.11	QP

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

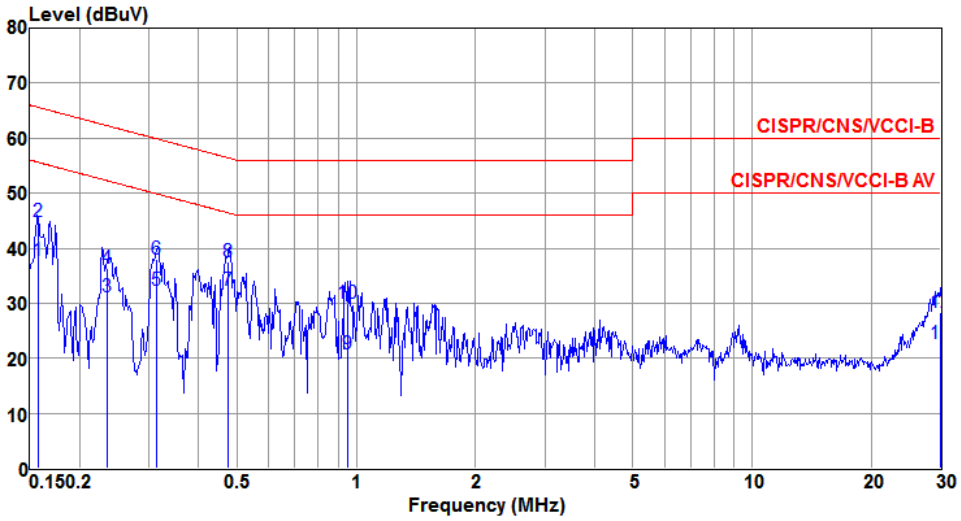
Modulation	VHT20	Test Freq. (MHz)	5745
Power Phase	Line		



	Freq MHz	Level dBuV	Limit Line dBuV	Over Limit dB	Read Level dBuV	LISN factor dB	cable loss dB	Remark
1	0.158	38.68	55.59	-16.91	38.53	0.07	0.08	Average
2	0.158	44.32	65.59	-21.27	44.17	0.07	0.08	QP
3	0.234	31.43	52.30	-20.87	31.27	0.07	0.09	Average
4	0.234	36.82	62.30	-25.48	36.66	0.07	0.09	QP
5	0.311	31.27	49.94	-18.67	31.10	0.07	0.10	Average
6	0.311	37.28	59.94	-22.66	37.11	0.07	0.10	QP
7@	0.396	31.54	47.93	-16.39	31.36	0.07	0.11	Average
8	0.396	36.60	57.93	-21.33	36.42	0.07	0.11	QP
9	0.549	28.24	46.00	-17.76	28.04	0.07	0.13	Average
10	0.549	34.03	56.00	-21.97	33.83	0.07	0.13	QP
11	29.061	21.59	50.00	-28.41	21.10	0.38	0.11	Average
12	29.061	26.95	60.00	-33.05	26.46	0.38	0.11	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)	5745
Power Phase	Neutral		



	Freq MHz	Level dBuV	Limit Line dBuV	Over Limit dB	Read Level dBuV	LISN factor dB	cable loss dB	Remark
1	0.158	37.77	55.58	-17.81	37.62	0.07	0.08	Average
2	0.158	44.92	65.58	-20.66	44.77	0.07	0.08	QP
3	0.234	31.11	52.29	-21.18	30.95	0.07	0.09	Average
4	0.234	36.27	62.29	-26.02	36.11	0.07	0.09	QP
5	0.314	32.39	49.87	-17.48	32.22	0.07	0.10	Average
6	0.314	37.99	59.87	-21.88	37.82	0.07	0.10	QP
7@	0.475	32.31	46.43	-14.12	32.12	0.07	0.12	Average
8	0.475	37.55	56.43	-18.88	37.36	0.07	0.12	QP
9	0.948	20.80	46.00	-25.20	20.56	0.08	0.16	Average
10	0.948	29.96	56.00	-26.04	29.72	0.08	0.16	QP
11	29.841	22.77	50.00	-27.23	22.23	0.43	0.11	Average
12	29.841	28.31	60.00	-31.69	27.77	0.43	0.11	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.

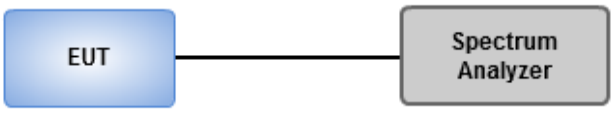
Occupied Bandwidth

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

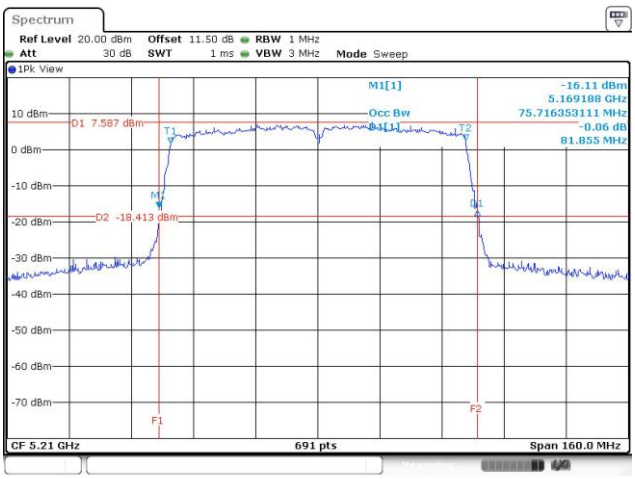
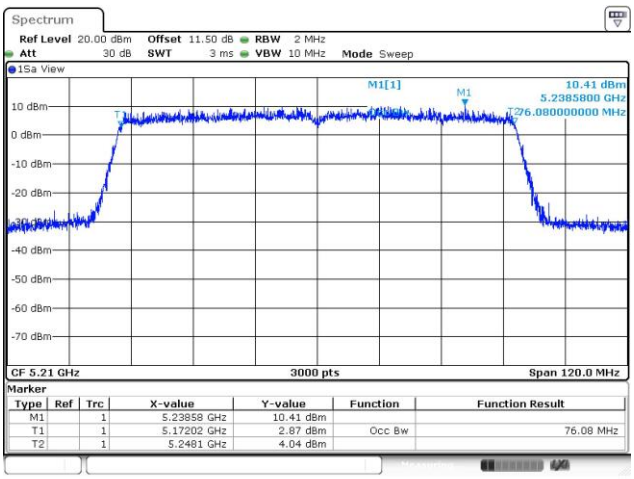
3.2.3 Test Setup



3.2.4 Test Result of Emission Bandwidth

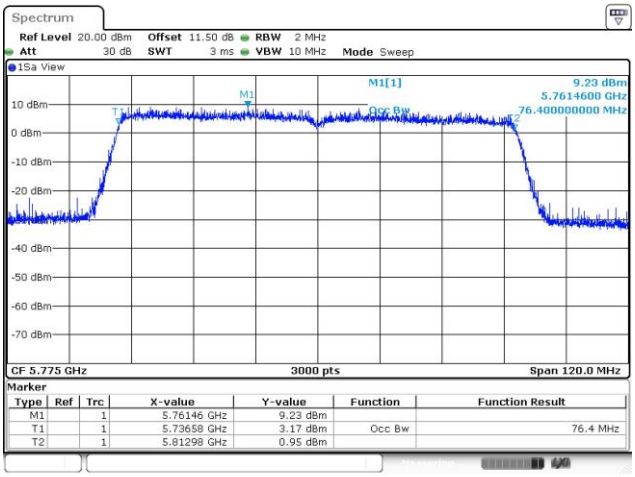
Non-beamforming mode

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	3	5180	21.51	21.57	21.68	---	16.82	16.82	16.98	---
11a	3	5200	20.99	21.22	21.33	---	16.81	16.81	16.87	---
11a	3	5240	21.33	21.16	21.16	---	16.77	16.84	16.91	---
VHT20	3	5180	21.33	21.39	22.26	---	17.84	17.87	17.97	---
VHT20	3	5200	21.28	21.22	21.45	---	17.84	17.82	17.95	---
VHT20	3	5240	21.28	21.39	21.62	---	17.85	17.85	17.99	---
VHT40	3	5190	40.58	40.81	41.04	---	36.42	36.62	36.44	---
VHT40	3	5230	47.19	43.25	61.45	---	36.58	36.68	36.72	---
VHT80	3	5210	80.93	81.39	81.86	---	75.88	76.08	75.88	---

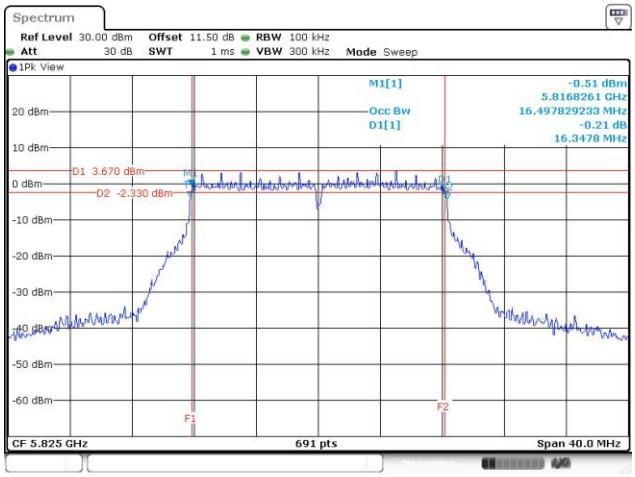
Worst Plot of 26dB Bandwidth	Worst Plot of 99% Bandwidth
	

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	3	5745	16.95	16.83	16.83	---	16.41	16.35	16.52	---	0.5
11a	3	5785	16.91	16.85	16.80	---	16.35	16.41	16.35	---	0.5
11a	3	5825	16.90	16.83	16.79	---	16.35	16.35	16.35	---	0.5
VHT20	3	5745	17.99	17.85	17.89	---	17.62	17.62	17.62	---	0.5
VHT20	3	5785	18.00	17.88	17.92	---	17.62	17.62	17.62	---	0.5
VHT20	3	5825	17.99	17.92	17.72	---	17.57	17.62	17.57	---	0.5
VHT40	3	5755	36.70	36.54	36.62	---	36.41	36.41	36.41	---	0.5
VHT40	3	5795	36.68	36.60	36.64	---	36.41	36.41	36.41	---	0.5
VHT80	3	5775	76.40	76.16	76.32	---	75.83	75.83	76.29	---	0.5

Worst Plot of 99% Bandwidth

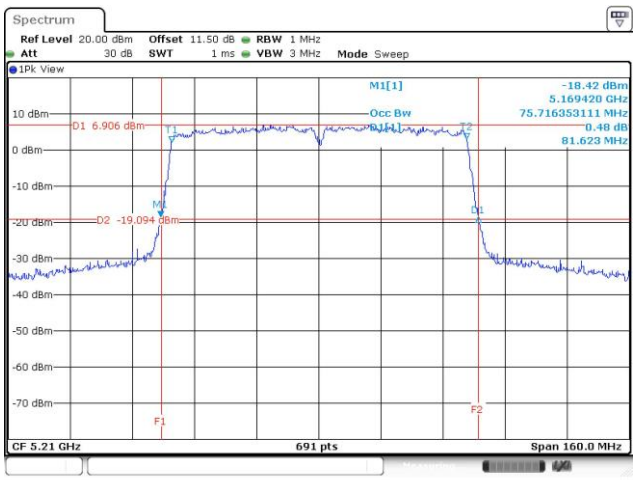
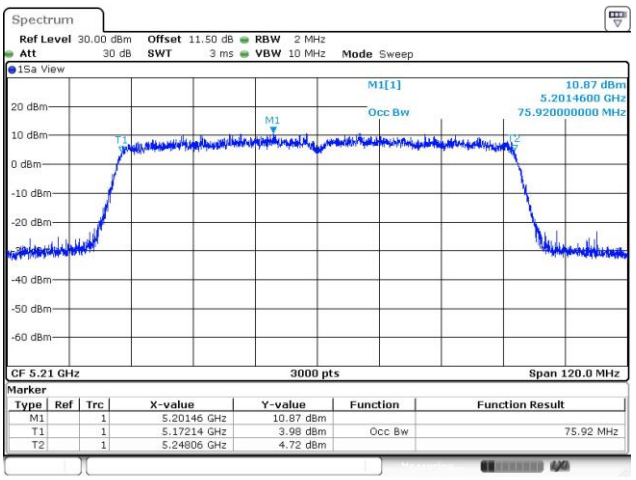


Worst Plot of 6dB Bandwidth

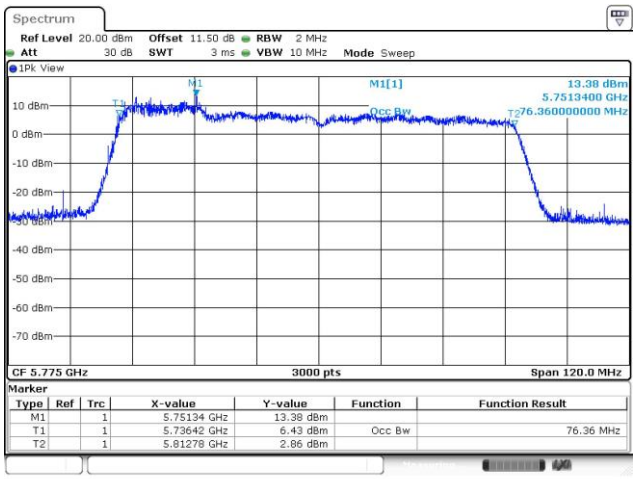
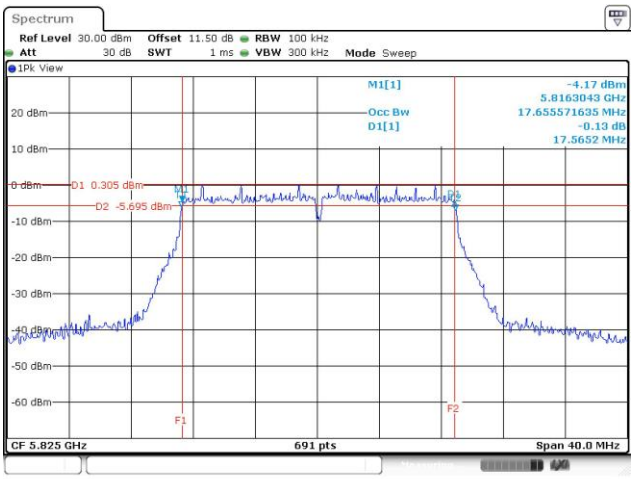


Beamforming mode

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	3	5180	21.51	21.22	21.33	---	17.80	17.78	17.82	---
VHT20	3	5200	21.39	21.16	21.22	---	17.95	17.95	17.82	---
VHT20	3	5240	21.28	21.28	21.57	---	17.96	17.77	17.84	---
VHT40	3	5190	41.16	40.93	40.46	---	36.44	36.56	36.50	---
VHT40	3	5230	41.28	40.81	40.46	---	36.60	36.64	36.52	---
VHT80	3	5210	80.23	81.62	81.39	---	75.76	75.92	75.80	---

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	3	5745	17.98	17.81	17.86	---	17.62	17.62	17.62	---	0.5
VHT20	3	5785	17.99	17.81	17.86	---	17.62	17.62	17.62	---	0.5
VHT20	3	5825	18.01	17.81	17.86	---	17.57	17.62	17.57	---	0.5
VHT40	3	5755	36.86	36.60	36.66	---	35.71	35.71	35.71	---	0.5
VHT40	3	5795	36.90	36.66	36.64	---	35.83	35.71	35.71	---	0.5
VHT80	3	5775	76.36	75.72	76.36	---	76.06	75.59	63.30	---	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
☐	Mobile and portable 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	3	5180	23.44	22.46	22.22	---	563.723	**27.51**	30.00
11a	3	5200	20.55	19.63	19.88	---	302.609	24.81	30.00
11a	3	5240	20.73	19.77	19.99	---	312.916	24.95	30.00
HT20	3	5180	21.86	21.15	21.27	---	417.746	26.21	30.00
HT20	3	5200	20.45	19.58	19.51	---	291.030	24.64	30.00
HT20	3	5240	20.56	19.51	19.78	---	298.154	24.74	30.00
HT40	3	5190	17.85	16.79	17.15	---	160.587	22.06	30.00
HT40	3	5230	23.01	21.75	21.35	---	486.068	26.87	30.00
VHT20	3	5180	21.92	21.22	21.35	---	424.489	26.28	30.00
VHT20	3	5200	20.52	19.66	19.55	---	295.347	24.70	30.00
VHT20	3	5240	20.62	19.59	19.85	---	302.942	24.81	30.00
VHT40	3	5190	17.91	16.85	17.22	---	162.942	22.12	30.00
VHT40	3	5230	23.09	21.83	21.46	---	496.068	26.96	30.00
VHT80	3	5210	16.33	15.12	15.32	---	109.503	20.39	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	3	5745	18.89	20.08	19.36	---	265.603	**24.24**	30.00
11a	3	5785	15.89	16.33	15.79	---	119.700	20.78	30.00
11a	3	5825	15.97	16.39	15.98	---	122.716	20.89	30.00
HT20	3	5745	17.36	18.27	17.65	---	179.803	22.55	30.00
HT20	3	5785	14.49	15.62	15.28	---	98.323	19.93	30.00
HT20	3	5825	14.36	16.03	15.61	---	103.768	20.16	30.00
HT40	3	5755	13.59	14.12	13.49	---	71.014	18.51	30.00
HT40	3	5795	14.95	16.41	15.89	---	113.828	20.56	30.00
VHT20	3	5745	17.43	18.34	17.72	---	182.725	22.62	30.00
VHT20	3	5785	14.55	15.73	15.35	---	100.198	20.01	30.00
VHT20	3	5825	14.45	16.15	15.68	---	106.054	20.26	30.00
VHT40	3	5755	13.65	14.17	13.55	---	71.942	18.57	30.00
VHT40	3	5795	15.02	16.46	15.96	---	115.473	20.62	30.00
VHT80	3	5775	12.95	13.68	12.93	---	62.692	17.97	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	3	5180	20.99	21.16	20.16	---	359.973	25.56	27.82
HT20	3	5200	19.76	18.55	18.71	---	240.540	23.81	27.82
HT20	3	5240	19.68	18.36	18.55	---	233.060	23.67	27.82
HT40	3	5190	14.16	14.39	13.72	---	77.091	18.87	27.82
HT40	3	5230	20.76	19.99	20.06	---	320.285	25.06	27.82
VHT20	3	5180	21.06	21.22	20.33	---	367.973	**25.66**	27.82
VHT20	3	5200	19.88	18.59	18.76	---	244.714	23.89	27.82
VHT20	3	5240	19.78	18.41	18.68	---	238.193	23.77	27.82
VHT40	3	5190	14.21	14.46	13.77	---	78.112	18.93	27.82
VHT40	3	5230	20.82	20.01	20.11	---	323.577	25.10	27.82
VHT80	3	5210	16.11	15.02	15.21	---	105.790	20.24	27.82

Note:

1. Directional gain = $10 * \log((10^{4/20}+10^{3.3/20}+10^{2.9/20})^2/3)$ = 8.18 dBi > 6 dBi
   Limit shall be reduced to 30 dBm – (8.18 dBi – 6 dBi) = 27.82 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	3	5745	16.48	17.14	16.36	---	139.475	21.44	27.92
HT20	3	5785	13.82	13.76	14.15	---	73.869	18.68	27.92
HT20	3	5825	13.91	13.88	14.02	---	74.273	18.71	27.92
HT40	3	5755	13.15	13.32	13.21	---	63.073	18.00	27.92
HT40	3	5795	14.72	15.03	14.72	---	91.139	19.60	27.92
VHT20	3	5745	16.55	17.29	16.49	---	143.331	**21.56**	27.92
VHT20	3	5785	13.99	13.83	14.21	---	75.579	18.78	27.92
VHT20	3	5825	14.03	13.94	14.19	---	76.309	18.83	27.92
VHT40	3	5755	13.25	13.43	13.36	---	64.841	18.12	27.92
VHT40	3	5795	14.83	15.11	14.88	---	93.604	19.71	27.92
VHT80	3	5775	13.36	13.29	13.33	---	64.535	18.10	27.92

Note:

1. Directional gain = $10 * \log((10^{3.7/20}+10^{3.4/20}+10^{2.8/20})^2/3)$ = 8.08 dBi > 6 dBi
   Limit shall be reduced to 30 dBm – (8.08 dBi – 6 dBi) = 27.92 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
☐	Mobile and portable 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)

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

☒ Method SA-2 Alternative (Beamforming)

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

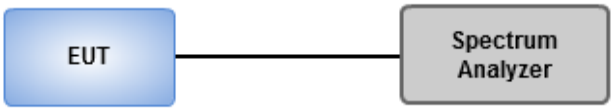
☒ Method SA-1 (Non - Beamforming)

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 (Beamforming)

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



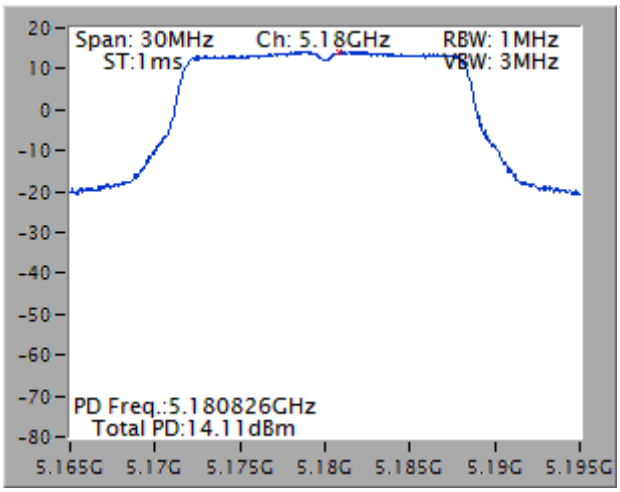
3.4.4 Test Result of Peak Power Spectral Density

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	3	5180	14.11	0.00	14.11	14.82
11a	3	5200	12.10	0.00	12.10	14.82
11a	3	5240	12.65	0.00	12.65	14.82
VHT20	3	5180	13.24	0.00	13.24	14.82
VHT20	3	5200	11.74	0.00	11.74	14.82
VHT20	3	5240	12.09	0.00	12.09	14.82
VHT40	3	5190	5.86	0.00	5.86	14.82
VHT40	3	5230	10.70	0.00	10.70	14.82
VHT80	3	5210	0.88	0.00	0.88	14.82

Note:
1. D.F is duty factor.
2. Test result is bin-by-bin summing measured value of each TX port.
3. Directional gain = $10 * \log((10^{4/20}+10^{3.3/20}+10^{2.9/20})^2/3)$ = 8.18 dBi > 6 dBi
   Limit shall be reduced to 17 dBm – (8.18 dBi – 6 dBi) = 14.82 dBm.

Worst Plot

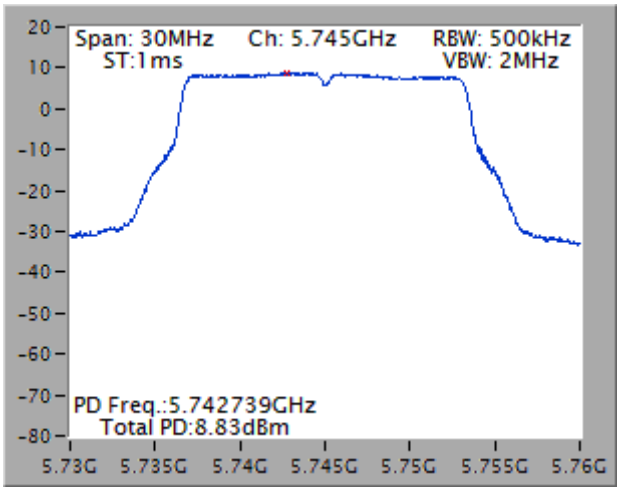


For Frequency band 5725-5850 MHz						
Condition			Peak Power Spectral Density (dBm/500kHz)			
Modulation Mode	N_{TX}	Freq. (MHz)	PPSD w/o D.F (dBm/500kHz)	Duty Factor (dB)	PPSD with D.F (dBm/500kHz)	PPSD Limit (dBm/500kHz)
11a	3	5745	8.83	0.00	8.83	27.92
11a	3	5785	5.29	0.00	5.29	27.92
11a	3	5825	5.27	0.00	5.27	27.92
VHT20	3	5745	7.75	0.00	7.75	27.92
VHT20	3	5785	4.91	0.00	4.91	27.92
VHT20	3	5825	5.25	0.00	5.25	27.92
VHT40	3	5755	0.30	0.00	0.30	27.92
VHT40	3	5795	2.49	0.00	2.49	27.92
VHT80	3	5775	-3.34	0.00	-3.34	27.92

Note:

1. D.F is duty factor.
2. Test result is bin-by-bin summing measured value of each TX port.
3. Directional gain = $10 * \log((10^{3.7/20}+10^{3.4/20}+10^{2.8/20})^2/3)$ = 8.08 dBi > 6 dBi
   Limit shall be reduced to 30 dBm – (8.08 dBi – 6 dBi) = 27.92 dBm.

Worst Plot

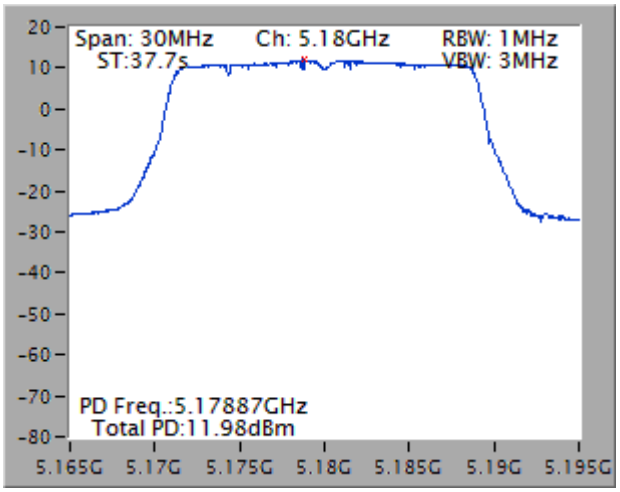


Beamforming mode

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	3	5180	11.98	0.14	12.12	14.82
VHT20	3	5200	10.00	0.14	10.14	14.82
VHT20	3	5240	9.91	0.14	10.05	14.82
VHT40	3	5190	2.85	0.11	2.96	14.82
VHT40	3	5230	8.75	0.11	8.86	14.82
VHT80	3	5210	1.12	0.14	1.26	14.82

Note:
1. D.F is duty factor.
2. Test result is bin-by-bin summing measured value of each TX port.
3. Directional gain = $10 * \log((10^{4/20}+10^{3.3/20}+10^{2.9/20})^2/3)$ = 8.18 dBi > 6 dBi
   Limit shall be reduced to 17 dBm – (8.18 dBi – 6 dBi) = 14.82 dBm.

Worst Plot

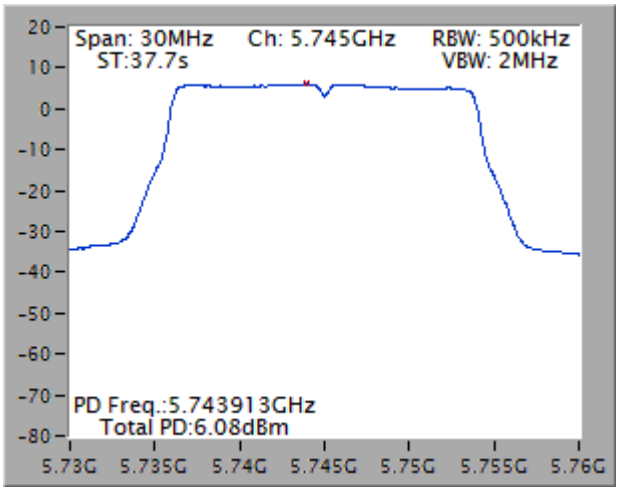


Note: The plot is without duty factor.

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	3	5745	6.08	0.14	6.22	27.92
VHT20	3	5785	3.21	0.14	3.35	27.92
VHT20	3	5825	3.44	0.14	3.58	27.92
VHT40	3	5755	-0.27	0.11	-0.16	27.92
VHT40	3	5795	1.00	0.11	1.11	27.92
VHT80	3	5775	-3.19	0.14	-3.05	27.92

Note:
1. D.F is duty factor.
2. Test result is bin-by-bin summing measured value of each TX port.
3. Directional gain = $10 * \log((10^{3.7/20}+10^{3.4/20}+10^{2.8/20})^2/3)$ = 8.08 dBi > 6 dBi
   Limit shall be reduced to 30 dBm – (8.08 dBi – 6 dBi) = 27.92 dBm.

Worst Plot



Note: The plot is without 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]
5.25 - 5.35 GHz	e.i.r.p. -27 dBm [68.2 dBuV/m@3m]
5.47 - 5.725 GHz	e.i.r.p. -27 dBm [68.2 dBuV/m@3m]
5.725 - 5.850 GHz	5.715 5.725 GHz: e.i.r.p. -17 dBm [78.2 dBuV/m@3m] 5.85 5.86 GHz: e.i.r.p. -17 dBm [78.2 dBuV/m@3m] Other un-restricted band: e.i.r.p. -27 dBm [68.2 dBuV/m@3m]

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

3.5.2 Test Procedures

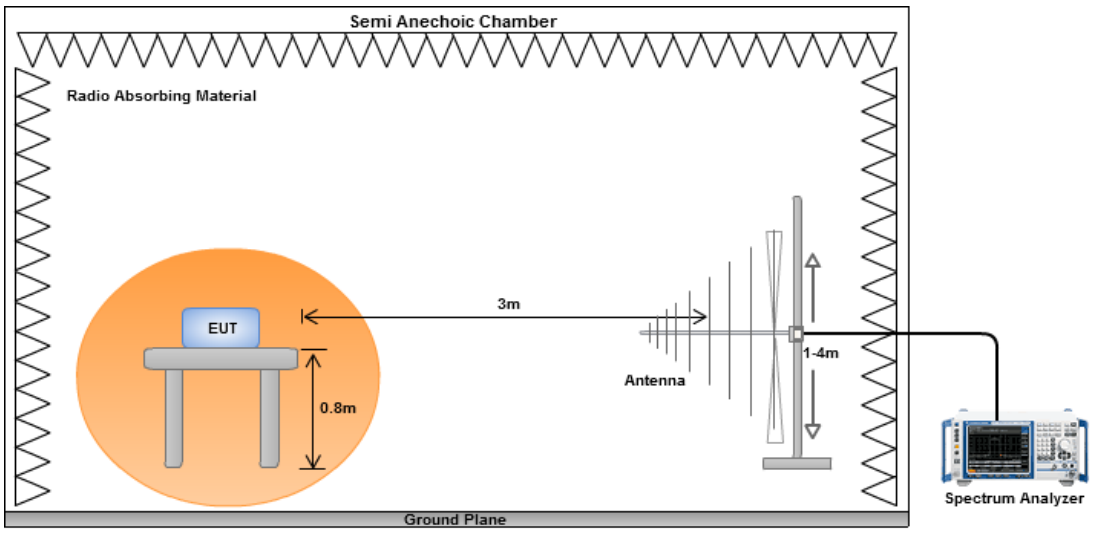
1. Measurement is made at a semi-anechoic chamber that incorporates a turntable allowing a EUT rotation of 360°. A continuously-rotating, remotely-controlled turntable is installed at the test site to support the EUT and facilitate determination of the direction of maximum radiation for each EUT emission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

Note:

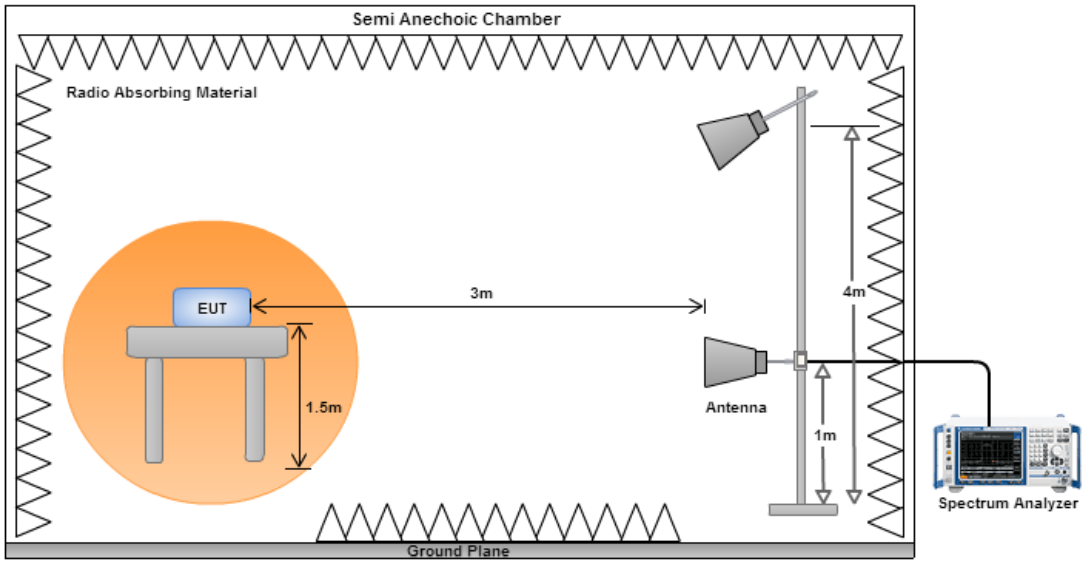
1. 120kHz measurement bandwidth of test receiver and Quasi-peak detector is for radiated emission below 1GHz.
2. RBW=1MHz, VBW=3MHz and Peak detector is for peak measured value of radiated emission above 1GHz.
3. RBW=1MHz, VBW=1/T and Peak detector is for average measured value of radiated emission above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

3.5.3 Test Setup

Radiated Emissions below 1 GHz



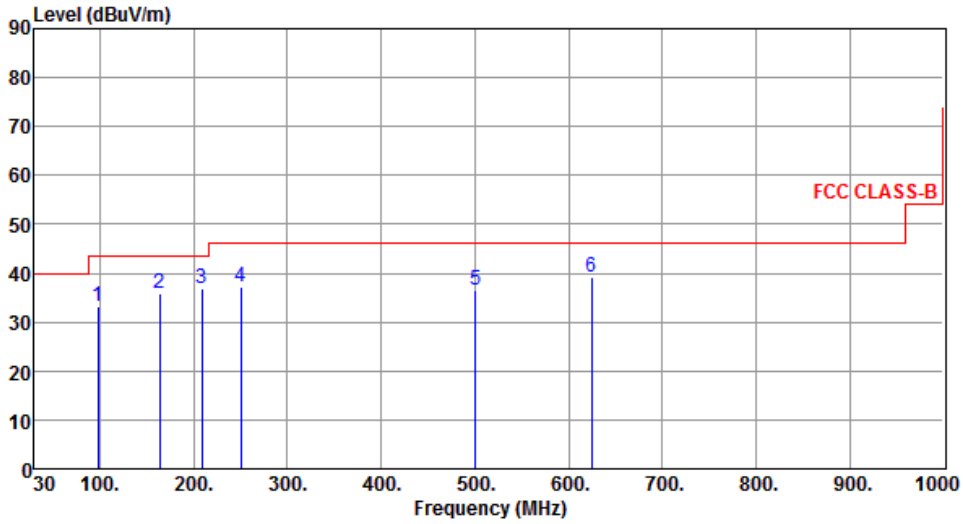
Radiated Emissions above 1 GHz



Non- beamforming mode

3.5.4 Transmitter Radiated Unwanted Emissions (Below 1GHz)

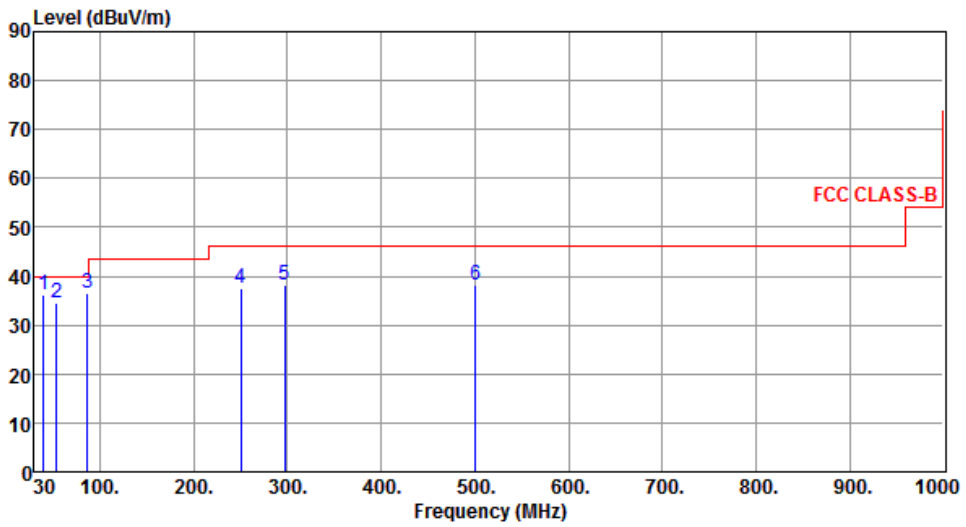
Modulation	11a	**Test Freq. (MHz)**	5180
Polarization	Horizontal		



	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	97.90	33.08	43.50	-10.42	55.29	-22.21	Peak	---	---
2	163.86	35.81	43.50	-7.69	52.97	-17.16	Peak	---	---
3	208.48	37.00	43.50	-6.50	56.45	-19.45	Peak	---	---
4	250.19	37.30	46.00	-8.70	55.16	-17.86	Peak	---	---
5	500.45	36.41	46.00	-9.59	48.12	-11.71	Peak	---	---
6	624.61	39.26	46.00	-6.74	48.53	-9.27	Peak	---	---

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

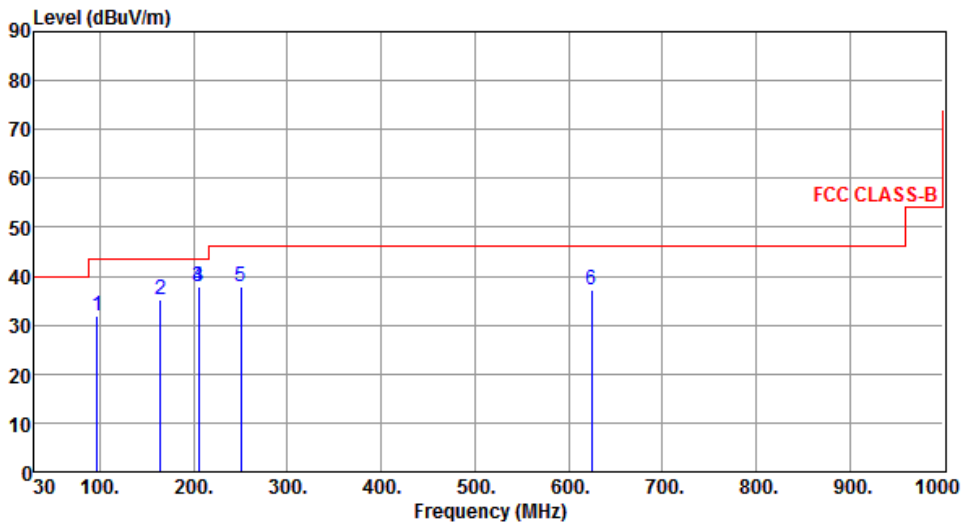
Modulation	11a	Test Freq. (MHz)	5180
Polarization	Vertical		



	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	39.70	36.12	40.00	-3.88	53.36	-17.24	QP	100	20
2	53.50	34.67	40.00	-5.33	51.30	-16.63	QP	104	304
3	86.26	36.57	40.00	-3.43	59.36	-22.79	Peak	---	---
4	250.19	37.58	46.00	-8.42	55.44	-17.86	Peak	---	---
5	296.75	38.31	46.00	-7.69	54.49	-16.18	Peak	---	---
6	500.45	38.19	46.00	-7.81	49.90	-11.71	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.

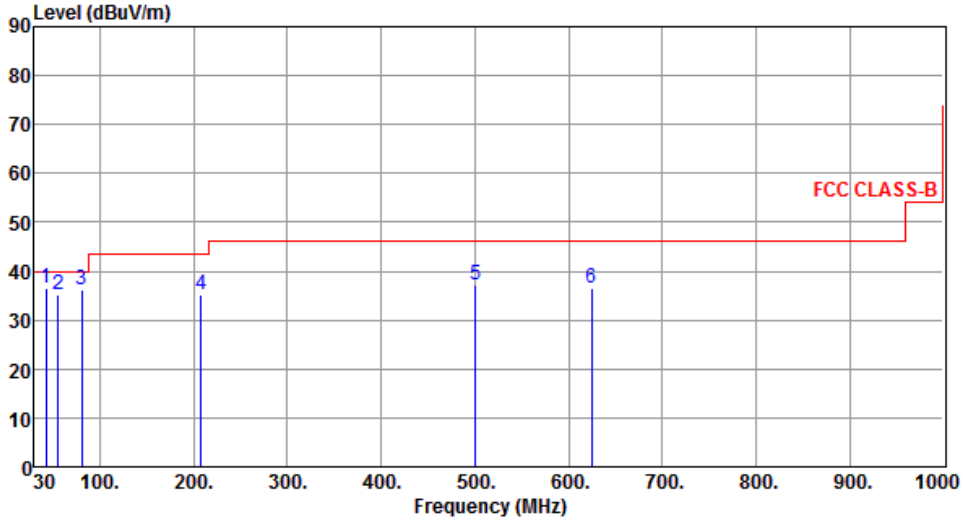
Modulation	11a	Test Freq. (MHz)	5745
Polarization	Horizontal		



	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	96.93	32.03	43.50	-11.47	54.37	-22.34	Peak	---	---
2	164.83	35.13	43.50	-8.37	52.35	-17.22	Peak	---	---
3	205.57	37.87	43.50	-5.63	57.42	-19.55	Peak	---	---
4	205.57	37.87	43.50	-5.63	57.42	-19.55	Peak	---	---
5	250.19	37.86	46.00	-8.14	55.72	-17.86	Peak	---	---
6	624.61	37.11	46.00	-8.89	46.38	-9.27	Peak	---	---

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

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

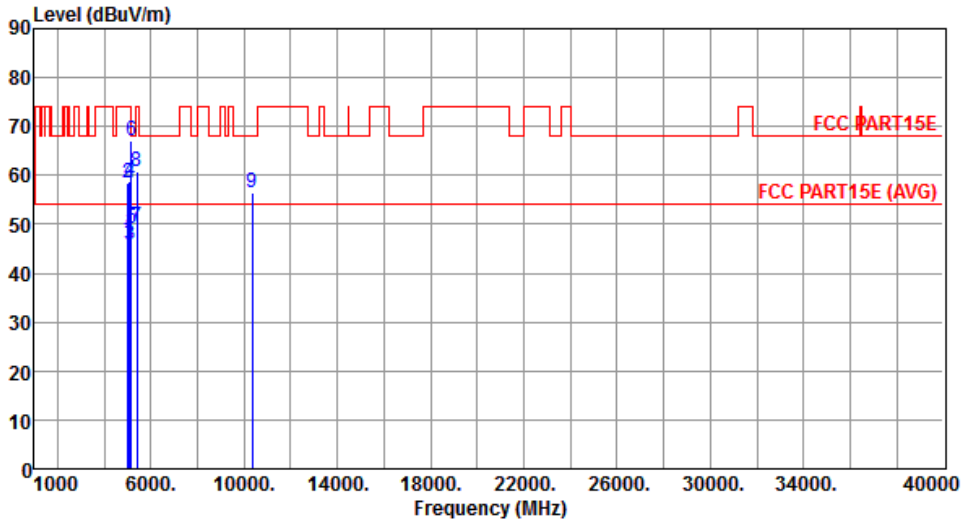


	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	42.61	36.67	40.00	-3.33	53.66	-16.99	QP	100	308
2	55.22	35.04	40.00	-4.96	51.74	-16.70	QP	100	296
3	80.44	36.06	40.00	-3.94	58.06	-22.00	Peak	---	---
4	207.51	35.06	43.50	-8.44	54.55	-19.49	Peak	---	---
5	500.45	37.33	46.00	-8.67	49.04	-11.71	Peak	---	---
6	624.61	36.40	46.00	-9.60	45.67	-9.27	Peak	---	---

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

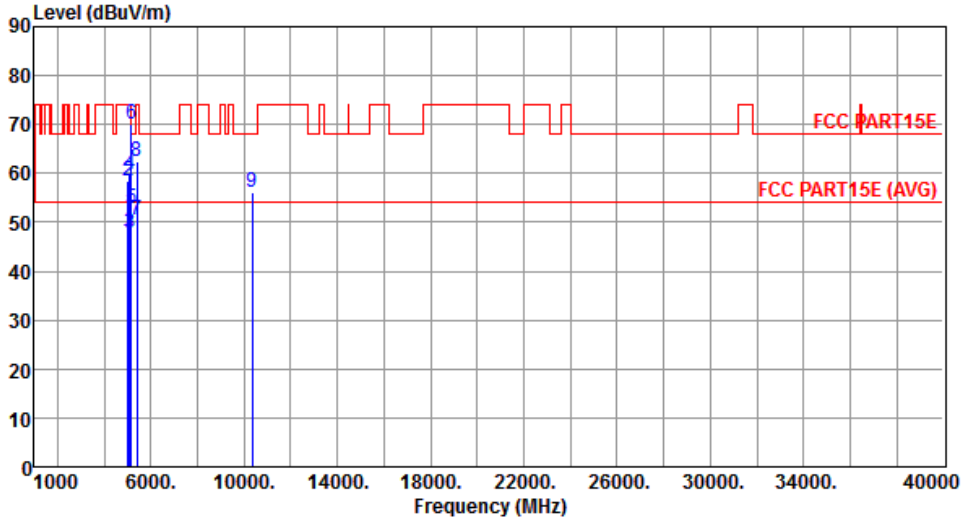
Modulation	11a	**Test Freq. (MHz)**	5180
Polarization	Horizontal		



	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	5020.00	46.78	54.00	-7.22	41.35	5.43	Average	163	33
2	5020.00	58.59	74.00	-15.41	53.16	5.43	Peak	163	33
3	5100.00	45.83	54.00	-8.17	40.20	5.63	Average	193	34
4	5100.00	58.67	74.00	-15.33	53.04	5.63	Peak	193	34
5	5150.00	49.26	54.00	-4.74	43.50	5.76	Average	194	8
6	5150.00	67.01	74.00	-6.99	61.25	5.76	Peak	194	8
7	5400.00	49.49	54.00	-4.51	43.41	6.08	Average	182	3
8	5400.00	60.94	74.00	-13.06	54.86	6.08	Peak	182	3
9	10360.00	56.47	68.20	-11.73	41.95	14.52	Peak	151	310

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

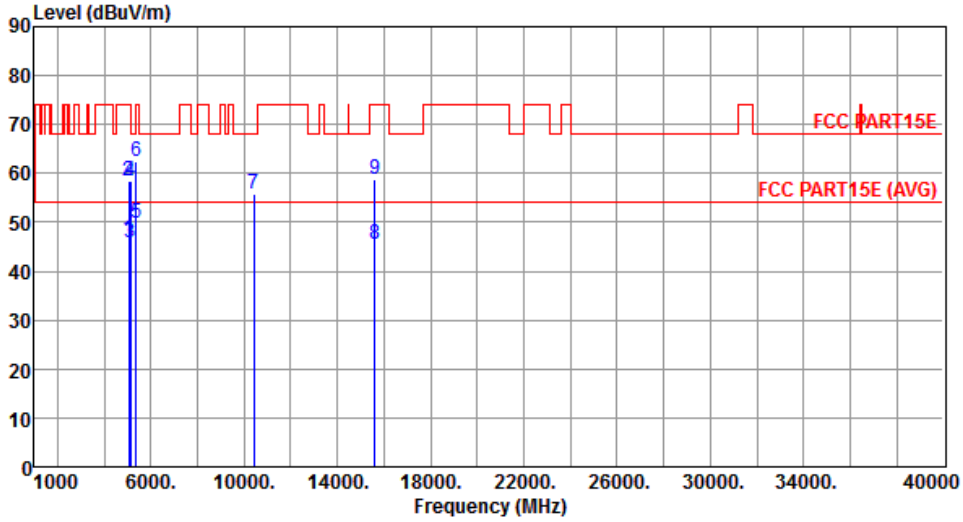
Modulation	11a	Test Freq. (MHz)	5180
Polarization	Vertical		



	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	5020.00	46.32	54.00	-7.68	40.89	5.43	Average	159	321
2	5020.00	58.43	74.00	-15.57	53.00	5.43	Peak	159	321
3	5100.00	47.79	54.00	-6.21	42.16	5.63	Average	214	332
4	5100.00	59.72	74.00	-14.28	54.09	5.63	Peak	214	332
5	5150.00	52.69	54.00	-1.31	46.93	5.76	Average	322	309
6	5150.00	70.11	74.00	-3.89	64.35	5.76	Peak	322	309
7	5400.00	50.40	54.00	-3.60	44.32	6.08	Average	237	303
8	5400.00	62.32	74.00	-11.68	56.24	6.08	Peak	237	303
9	10360.00	56.06	68.20	-12.14	41.54	14.52	Peak	198	311

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

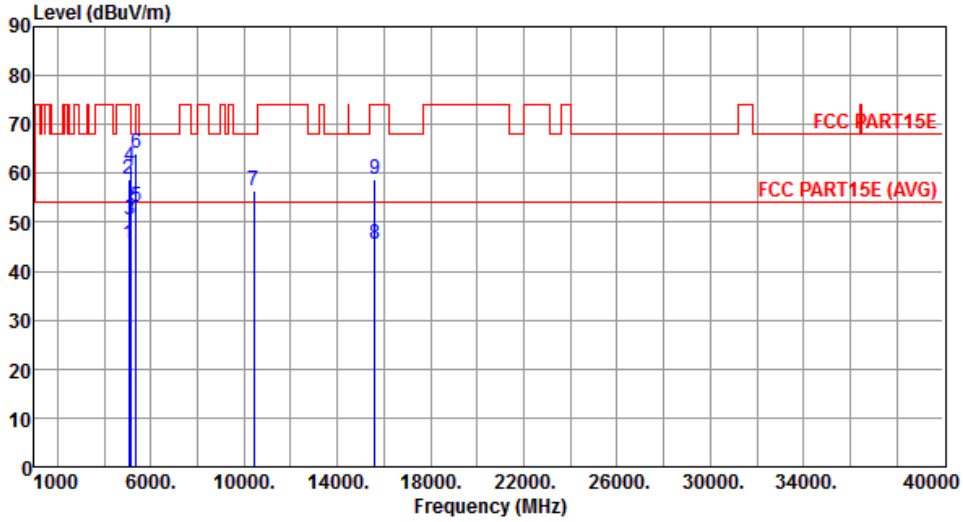
Modulation	11a	Test Freq. (MHz)	5200
Polarization	Horizontal		



	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	5040.00	46.53	54.00	-7.47	41.05	5.48	Average	155	29
2	5040.00	58.29	74.00	-15.71	52.81	5.48	Peak	155	29
3	5120.00	45.67	54.00	-8.33	39.98	5.69	Average	188	45
4	5120.00	58.33	74.00	-15.67	52.64	5.69	Peak	188	45
5	5360.00	49.78	54.00	-4.22	43.73	6.05	Average	158	6
6	5360.00	62.28	74.00	-11.72	56.23	6.05	Peak	158	6
7	10400.00	55.63	68.20	-12.57	41.01	14.62	Peak	156	312
8	15600.00	45.42	54.00	-8.58	28.95	16.47	Average	190	267
9	15600.00	58.83	74.00	-15.17	42.36	16.47	Peak	190	267

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

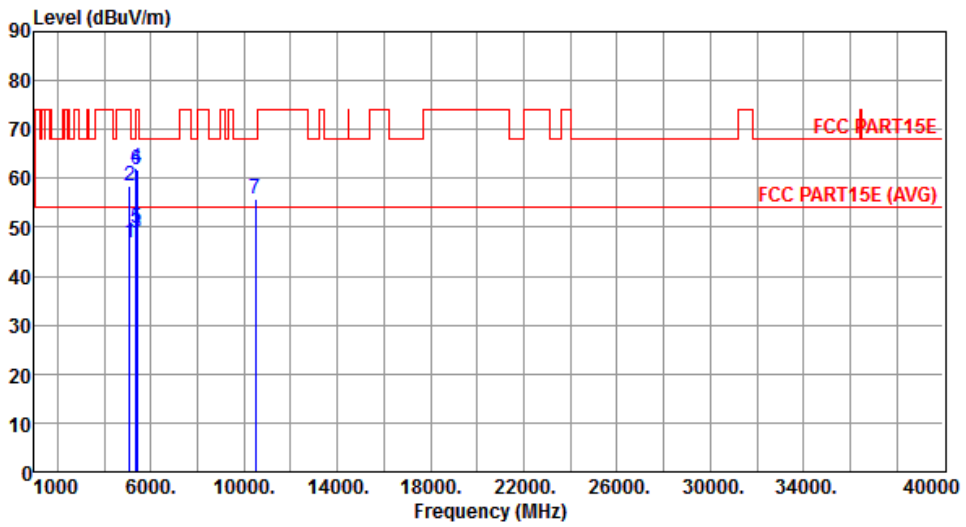
Modulation	11a	Test Freq. (MHz)	5200
Polarization	Vertical		



	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	5040.00	45.61	54.00	-8.39	40.13	5.48	Average	156	314
2	5040.00	58.67	74.00	-15.33	53.19	5.48	Peak	156	314
3	5120.00	50.32	54.00	-3.68	44.63	5.69	Average	214	298
4	5120.00	61.35	74.00	-12.65	55.66	5.69	Peak	214	298
5	5360.00	52.98	54.00	-1.02	46.93	6.05	Average	176	337
6	5360.00	64.25	74.00	-9.75	58.20	6.05	Peak	176	337
7	10400.00	56.44	68.20	-11.76	41.82	14.62	Peak	196	322
8	15600.00	45.38	54.00	-8.62	28.91	16.47	Average	171	85
9	15600.00	58.64	74.00	-15.36	42.17	16.47	Peak	171	85

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

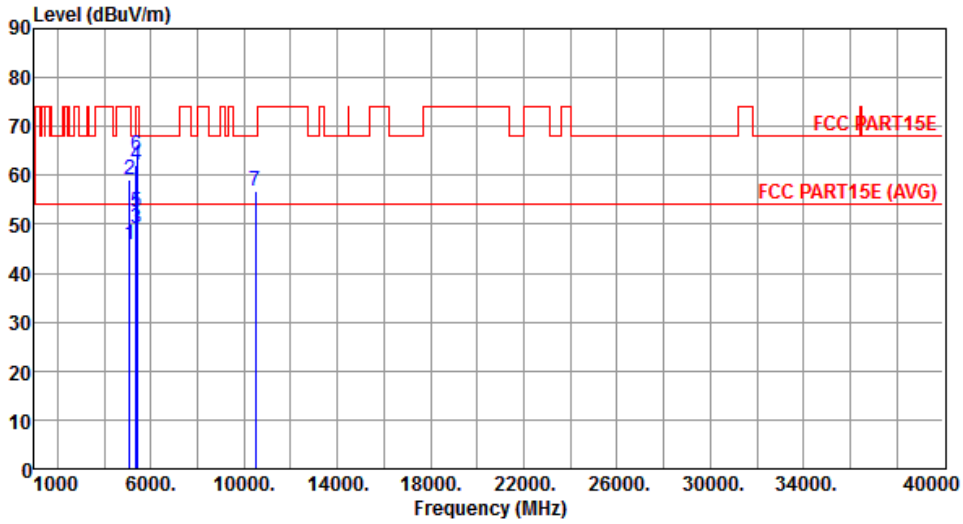
Modulation	11a	Test Freq. (MHz)	5240
Polarization	Horizontal		



	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	5080.00	46.97	54.00	-7.03	41.39	5.58	Average	149	43
2	5080.00	58.55	74.00	-15.45	52.97	5.58	Peak	149	43
3	5350.00	48.81	54.00	-5.19	42.77	6.04	Average	182	330
4	5350.00	62.08	74.00	-11.92	56.04	6.04	Peak	182	330
5	5400.00	49.69	54.00	-4.31	43.61	6.08	Average	152	11
6	5400.00	61.93	74.00	-12.07	55.85	6.08	Peak	152	11
7	10480.00	55.78	68.20	-12.42	40.95	14.83	Peak	154	298

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

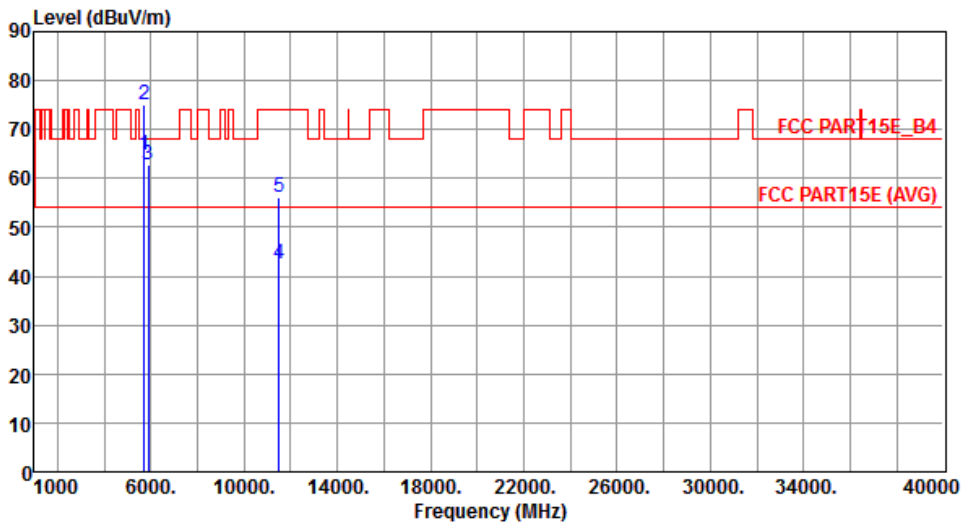
Modulation	11a	Test Freq. (MHz)	5240
Polarization	Vertical		



	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	5080.00	45.96	54.00	-8.04	40.38	5.58	Average	150	329
2	5080.00	59.26	74.00	-14.74	53.68	5.58	Peak	150	329
3	5350.00	49.26	54.00	-4.74	43.22	6.04	Average	154	333
4	5350.00	62.22	74.00	-11.78	56.18	6.04	Peak	154	333
5	5400.00	52.52	54.00	-1.48	46.44	6.08	Average	189	334
6	5400.00	64.14	74.00	-9.86	58.06	6.08	Peak	189	334
7	10480.00	56.78	68.20	-11.42	41.95	14.83	Peak	193	325

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

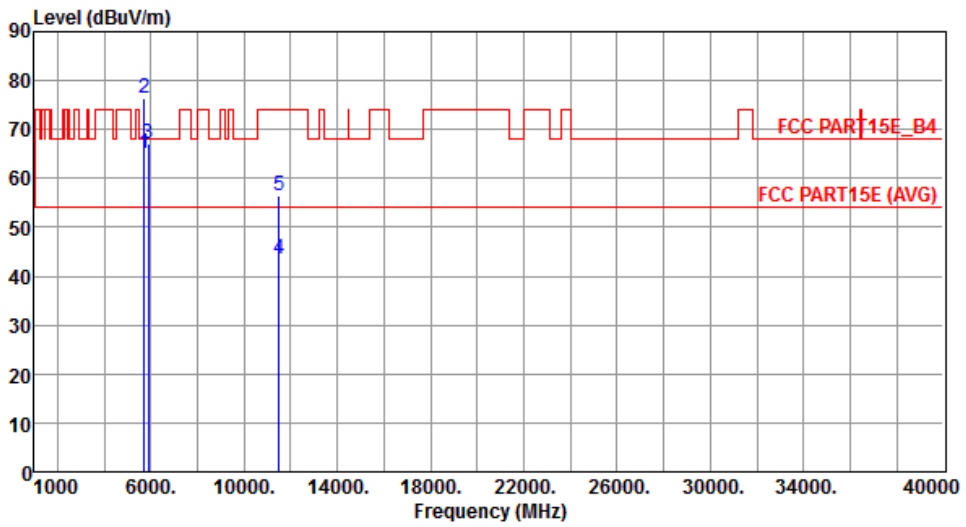
Modulation	11a	Test Freq. (MHz)	5745
Polarization	Horizontal		



	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	5715.00	64.73	68.20	-3.47	58.03	6.70	Peak	110	180
2	5725.00	75.01	78.20	-3.19	68.30	6.71	Peak	110	180
3	5904.00	62.68	68.20	-5.52	55.64	7.04	Peak	110	186
4	11490.00	42.38	54.00	-11.62	26.16	16.22	Average	106	231
5	11490.00	56.01	74.00	-17.99	39.79	16.22	Peak	106	231

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

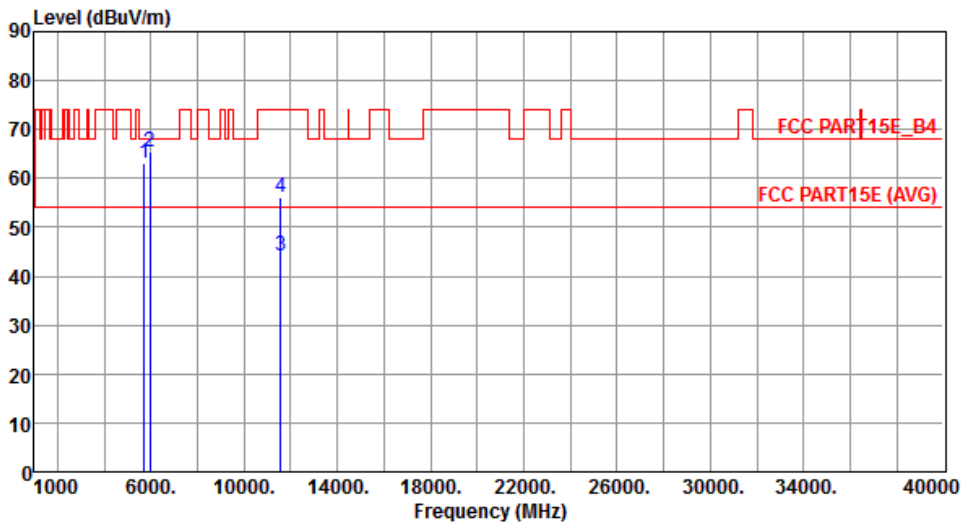
Modulation	11a	Test Freq. (MHz)	5745
Polarization	Vertical		



	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	5715.00	65.00	68.20	-3.20	58.30	6.70	Peak	100	219
2	5725.00	76.30	78.20	-1.90	69.59	6.71	Peak	100	219
3	5904.00	67.18	68.20	-1.02	60.14	7.04	Peak	105	245
4	11490.00	43.47	54.00	-10.53	27.25	16.22	Average	105	231
5	11490.00	56.37	74.00	-17.63	40.15	16.22	Peak	105	231

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

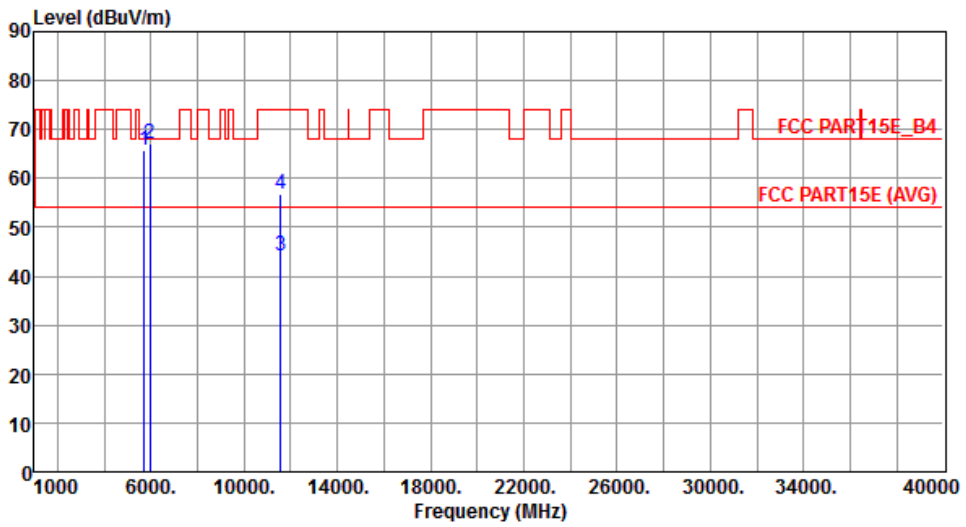
Modulation	11a	Test Freq. (MHz)	5785
Polarization	Horizontal		



	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	5705.00	63.24	68.20	-4.96	56.56	6.68	Peak	112	169
2	5943.00	65.44	68.20	-2.76	58.35	7.09	Peak	112	169
3	11570.00	44.02	54.00	-9.98	27.90	16.12	Average	124	233
4	11570.00	56.21	74.00	-17.79	40.09	16.12	Peak	124	233

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

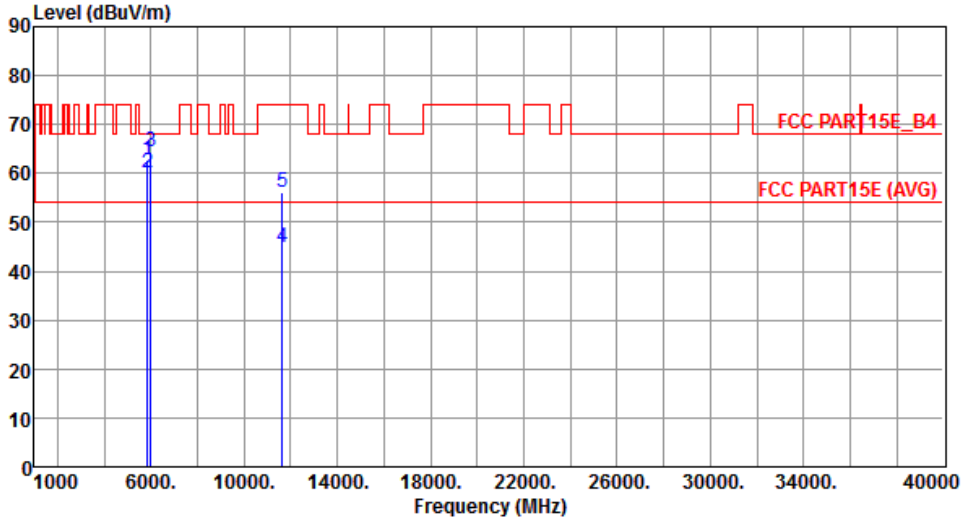
Modulation	11a	Test Freq. (MHz)	5785
Polarization	Vertical		



	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	5705.00	65.68	68.20	-2.52	59.00	6.68	Peak	145	238
2	5943.00	67.15	68.20	-1.05	60.06	7.09	Peak	104	234
3	11570.00	44.15	54.00	-9.85	28.03	16.12	Average	123	21
4	11570.00	56.84	74.00	-17.16	40.72	16.12	Peak	123	21

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

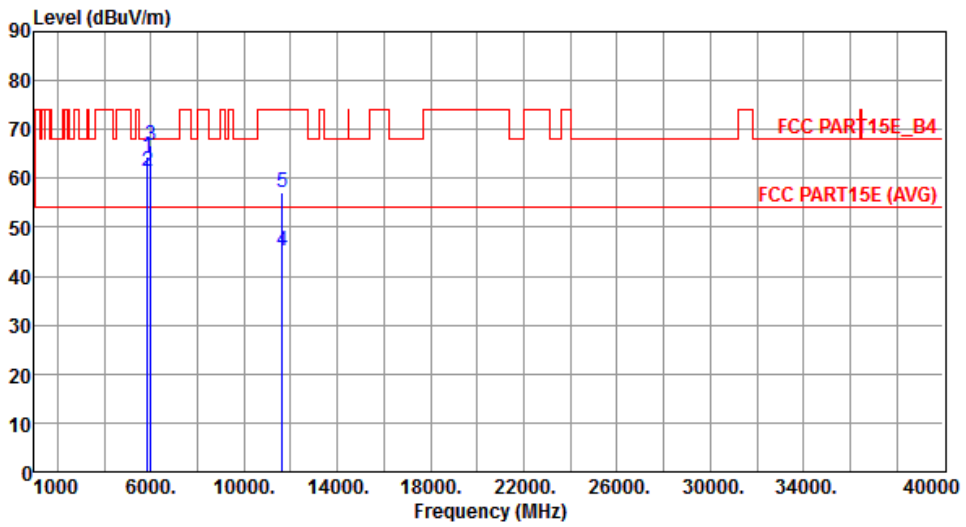
Modulation	11a	Test Freq. (MHz)	5825
Polarization	Horizontal		



	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	5850.00	62.65	78.20	-15.55	55.70	6.95	Peak	124	65
2	5860.00	60.11	68.20	-8.09	53.16	6.95	Peak	124	65
3	5984.00	64.59	68.20	-3.61	57.43	7.16	Peak	124	65
4	11650.00	44.85	54.00	-9.15	28.83	16.02	Average	165	239
5	11650.00	56.29	74.00	-17.71	40.27	16.02	Peak	165	239

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

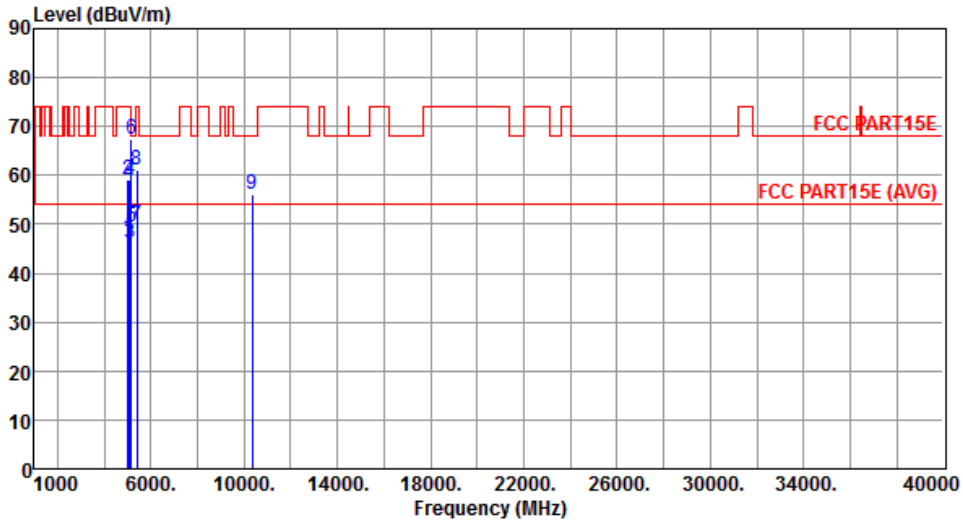


	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	5850.00	64.55	78.20	-13.65	57.60	6.95	Peak	108	218
2	5860.00	61.32	68.20	-6.88	54.37	6.95	Peak	108	218
3	5984.00	66.78	68.20	-1.42	59.62	7.16	Peak	128	231
4	11650.00	45.12	54.00	-8.88	29.10	16.02	Average	124	55
5	11650.00	56.98	74.00	-17.02	40.96	16.02	Peak	124	55

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

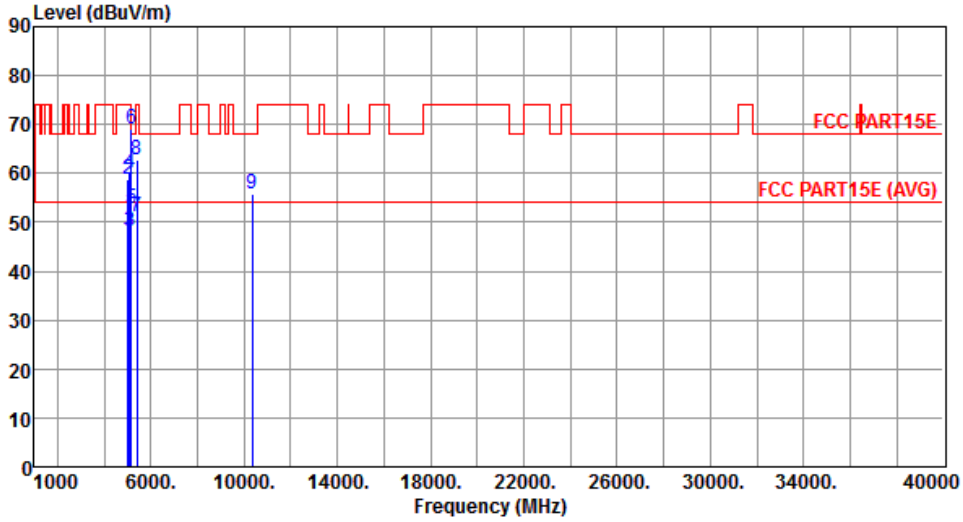
Modulation	VHT20	**Test Freq. (MHz)**	5180
Polarization	Horizontal		



	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	5020.00	47.12	54.00	-6.88	41.69	5.43	Average	166	37
2	5020.00	58.96	74.00	-15.04	53.53	5.43	Peak	166	37
3	5100.00	46.12	54.00	-7.88	40.49	5.63	Average	198	39
4	5100.00	59.27	74.00	-14.73	53.64	5.63	Peak	198	39
5	5150.00	49.63	54.00	-4.37	43.87	5.76	Average	188	11
6	5150.00	67.43	74.00	-6.57	61.67	5.76	Peak	188	11
7	5400.00	49.78	54.00	-4.22	43.70	6.08	Average	186	5
8	5400.00	61.23	74.00	-12.77	55.15	6.08	Peak	186	5
9	10360.00	56.22	68.20	-11.98	41.70	14.52	Peak	156	313

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

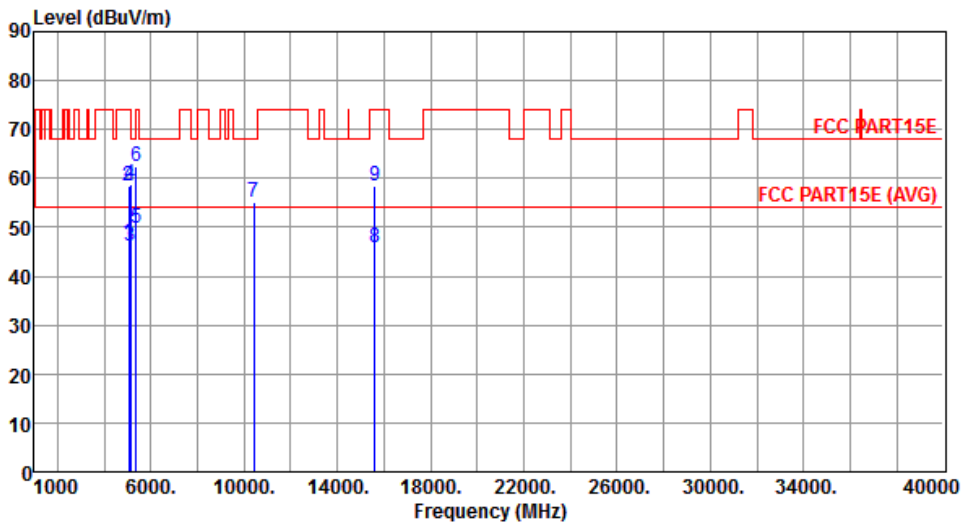
Modulation	VHT20	Test Freq. (MHz)	5180
Polarization	Vertical		



	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	5020.00	46.65	54.00	-7.35	41.22	5.43	Average	155	323
2	5020.00	58.78	74.00	-15.22	53.35	5.43	Peak	155	323
3	5100.00	48.12	54.00	-5.88	42.49	5.63	Average	219	330
4	5100.00	59.97	74.00	-14.03	54.34	5.63	Peak	219	330
5	5150.00	52.73	54.00	-1.27	46.97	5.76	Average	242	297
6	5150.00	69.20	74.00	-4.80	63.44	5.76	Peak	242	297
7	5400.00	50.98	54.00	-3.02	44.90	6.08	Average	233	296
8	5400.00	62.67	74.00	-11.33	56.59	6.08	Peak	233	296
9	10360.00	55.87	68.20	-12.33	41.35	14.52	Peak	193	300

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

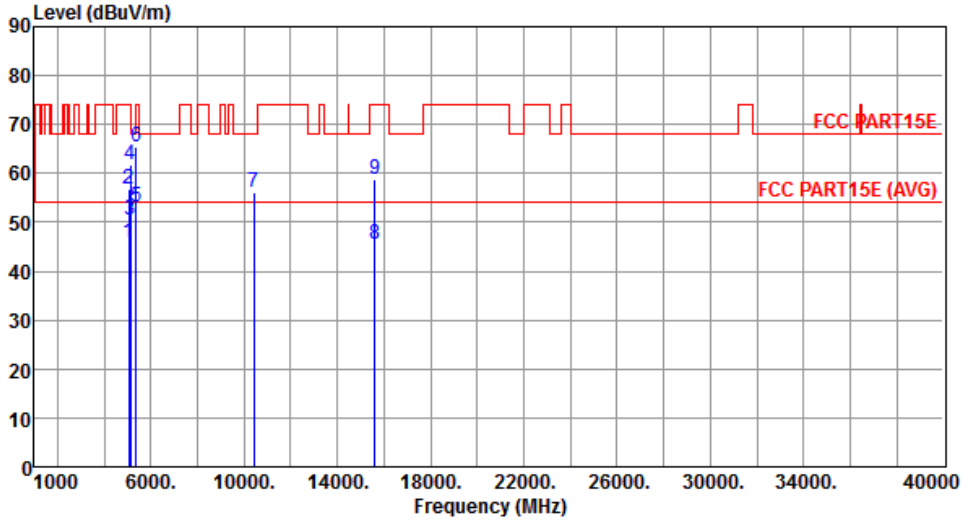
Modulation	VHT20	Test Freq. (MHz)	5200
Polarization	Horizontal		



	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	5040.00	46.78	54.00	-7.22	41.30	5.48	Average	159	33
2	5040.00	58.52	74.00	-15.48	53.04	5.48	Peak	159	33
3	5120.00	46.00	54.00	-8.00	40.31	5.69	Average	175	55
4	5120.00	58.76	74.00	-15.24	53.07	5.69	Peak	175	55
5	5360.00	49.96	54.00	-4.04	43.91	6.05	Average	153	11
6	5360.00	62.50	74.00	-11.50	56.45	6.05	Peak	153	11
7	10400.00	55.26	68.20	-12.94	40.64	14.62	Peak	155	313
8	15600.00	45.72	54.00	-8.28	29.25	16.47	Average	187	264
9	15600.00	58.43	74.00	-15.57	41.96	16.47	Peak	187	264

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

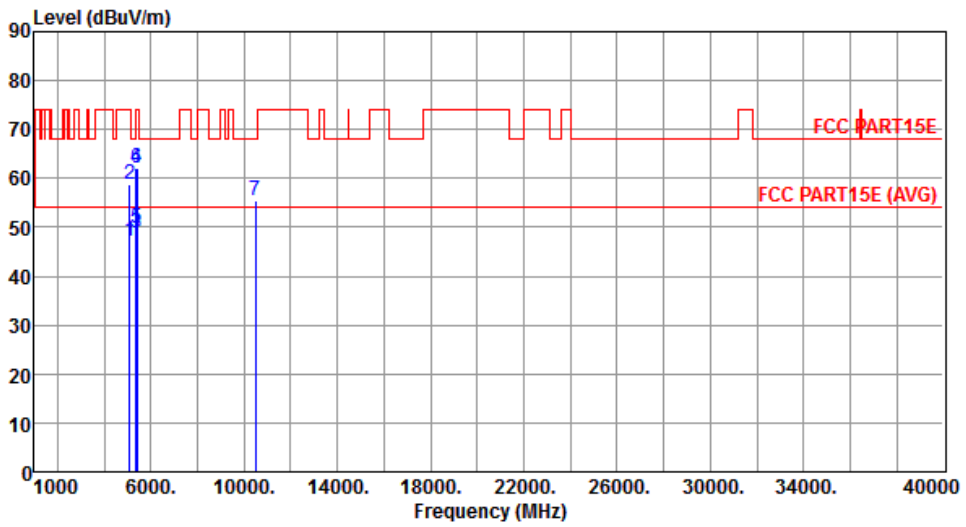
Modulation	VHT20	Test Freq. (MHz)	5200
Polarization	Vertical		



	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	5040.00	45.89	54.00	-8.11	40.41	5.48	Average	153	308
2	5040.00	56.72	74.00	-17.28	51.24	5.48	Peak	153	308
3	5120.00	50.46	54.00	-3.54	44.77	5.69	Average	219	302
4	5120.00	61.63	74.00	-12.37	55.94	5.69	Peak	219	302
5	5360.00	53.25	54.00	-0.75	47.20	6.05	Average	199	332
6	5360.00	65.34	74.00	-8.66	59.29	6.05	Peak	199	332
7	10400.00	56.16	68.20	-12.04	41.54	14.62	Peak	189	321
8	15600.00	45.43	54.00	-8.57	28.96	16.47	Average	173	94
9	15600.00	58.86	74.00	-15.14	42.39	16.47	Peak	173	94

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

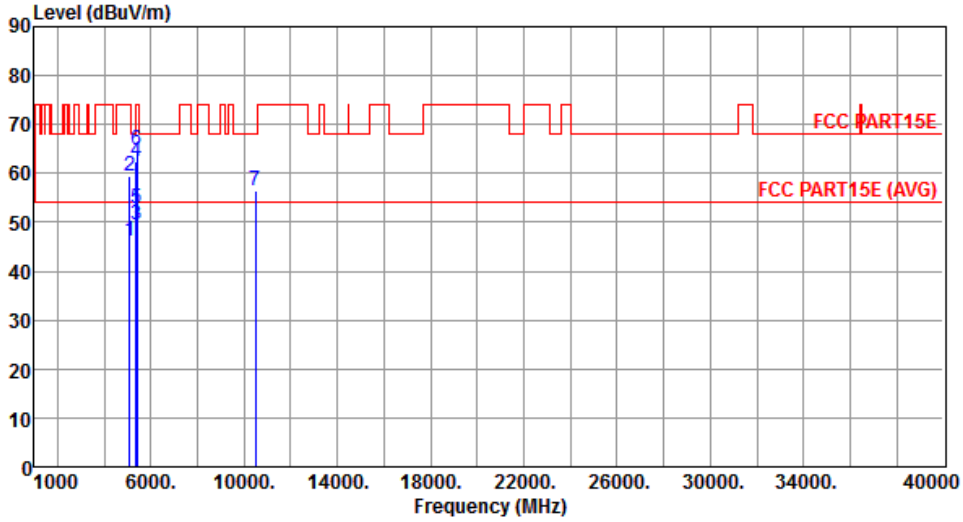
Modulation	VHT20	Test Freq. (MHz)	5240
Polarization	Horizontal		



	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	5080.00	47.19	54.00	-6.81	41.61	5.58	Average	153	37
2	5080.00	58.83	74.00	-15.17	53.25	5.58	Peak	153	37
3	5350.00	48.68	54.00	-5.32	42.64	6.04	Average	178	333
4	5350.00	61.96	74.00	-12.04	55.92	6.04	Peak	178	333
5	5400.00	49.79	54.00	-4.21	43.71	6.08	Average	159	16
6	5400.00	62.09	74.00	-11.91	56.01	6.08	Peak	159	16
7	10480.00	55.34	68.20	-12.86	40.51	14.83	Peak	150	305

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

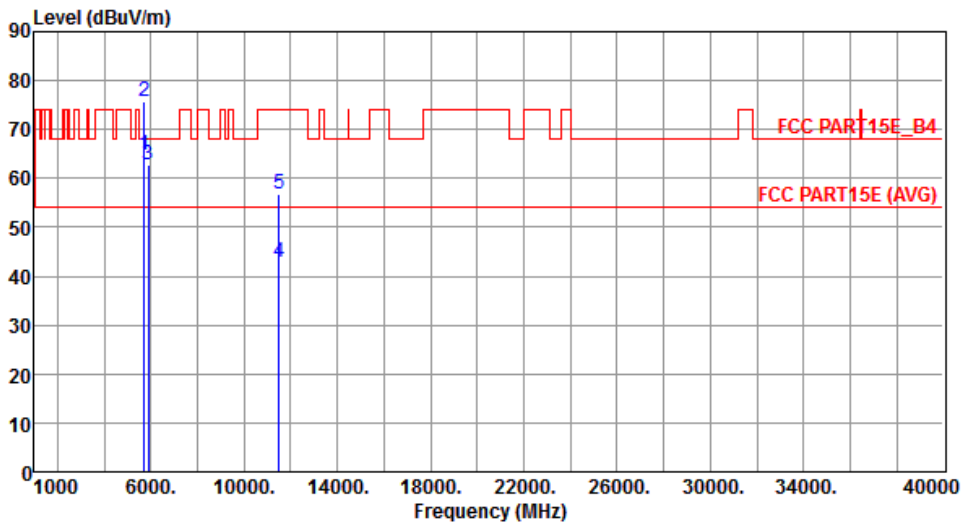
Modulation	VHT20	Test Freq. (MHz)	5240
Polarization	Vertical		



	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	5080.00	46.12	54.00	-7.88	40.54	5.58	Average	156	322
2	5080.00	59.57	74.00	-14.43	53.99	5.58	Peak	156	322
3	5350.00	49.39	54.00	-4.61	43.35	6.04	Average	153	340
4	5350.00	62.54	74.00	-11.46	56.50	6.04	Peak	153	340
5	5400.00	52.67	54.00	-1.33	46.59	6.08	Average	212	333
6	5400.00	64.70	74.00	-9.30	58.62	6.08	Peak	212	333
7	10480.00	56.53	68.20	-11.67	41.70	14.83	Peak	188	333

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

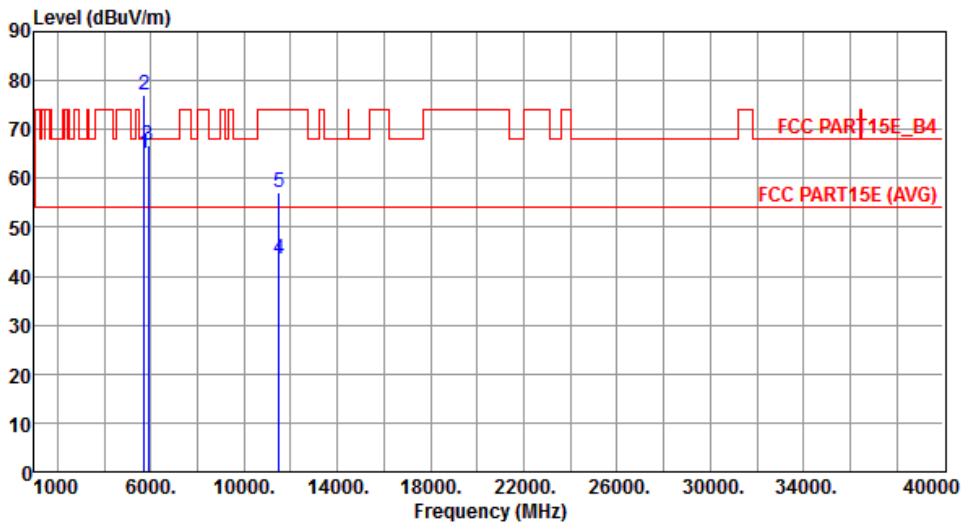
Modulation	VHT20	Test Freq. (MHz)	5745
Polarization	Horizontal		



	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	5715.00	64.85	68.20	-3.35	58.15	6.70	Peak	160	276
2	5725.00	75.56	78.20	-2.64	68.85	6.71	Peak	152	321
3	5904.00	62.75	68.20	-5.45	55.71	7.04	Peak	152	321
4	11490.00	42.69	54.00	-11.31	26.47	16.22	Average	135	324
5	11490.00	56.77	74.00	-17.23	40.55	16.22	Peak	135	324

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

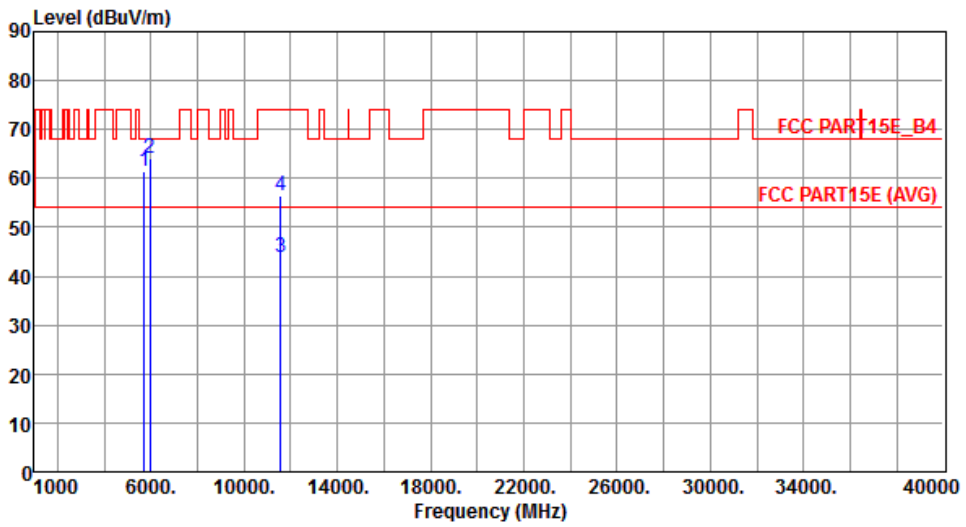
Modulation	VHT20	Test Freq. (MHz)	5745
Polarization	Vertical		



	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	5715.00	64.95	68.20	-3.25	58.25	6.70	Peak	156	202
2	5725.00	77.16	78.20	-1.04	70.45	6.71	Peak	156	202
3	5904.00	66.80	68.20	-1.40	59.76	7.04	Peak	134	279
4	11490.00	43.35	54.00	-10.65	27.13	16.22	Average	155	258
5	11490.00	57.12	74.00	-16.88	40.90	16.22	Peak	155	258

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

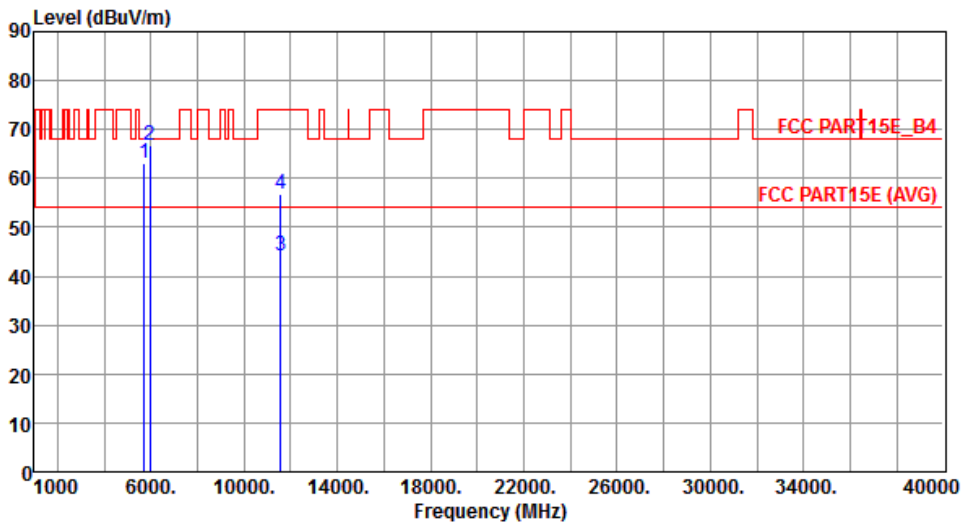
Modulation	VHT20	Test Freq. (MHz)	5785
Polarization	Horizontal		



	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	5705.00	61.40	68.20	-6.80	54.72	6.68	Peak	135	350
2	5943.00	64.08	68.20	-4.12	56.99	7.09	Peak	134	356
3	11570.00	43.99	54.00	-10.01	27.87	16.12	Average	125	244
4	11570.00	56.37	74.00	-17.63	40.25	16.12	Peak	125	244

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

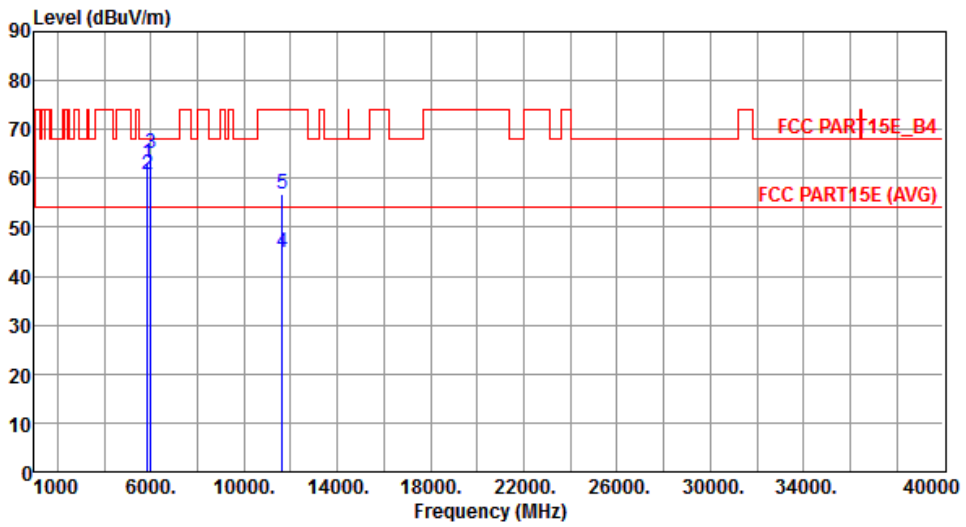
Modulation	VHT20	Test Freq. (MHz)	5785
Polarization	Vertical		



	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	5705.00	63.26	68.20	-4.94	56.58	6.68	Peak	149	279
2	5943.00	66.90	68.20	-1.30	59.81	7.09	Peak	135	279
3	11570.00	44.13	54.00	-9.87	28.01	16.12	Average	140	233
4	11570.00	56.93	74.00	-17.07	40.81	16.12	Peak	140	233

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

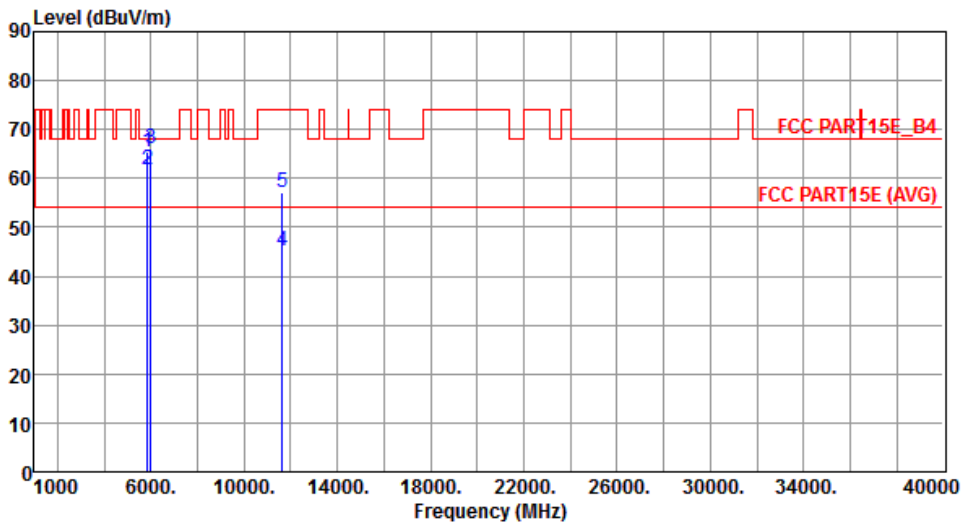
Modulation	VHT20	Test Freq. (MHz)	5825
Polarization	Horizontal		



	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	5850.00	62.98	78.20	-15.22	56.03	6.95	Peak	145	263
2	5860.00	60.71	68.20	-7.49	53.76	6.95	Peak	145	263
3	5984.00	64.99	68.20	-3.21	57.83	7.16	Peak	145	263
4	11650.00	44.91	54.00	-9.09	28.89	16.02	Average	165	316
5	11650.00	56.78	74.00	-17.22	40.76	16.02	Peak	165	316

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

Modulation	VHT20	Test Freq. (MHz)	5825
Polarization	Vertical		

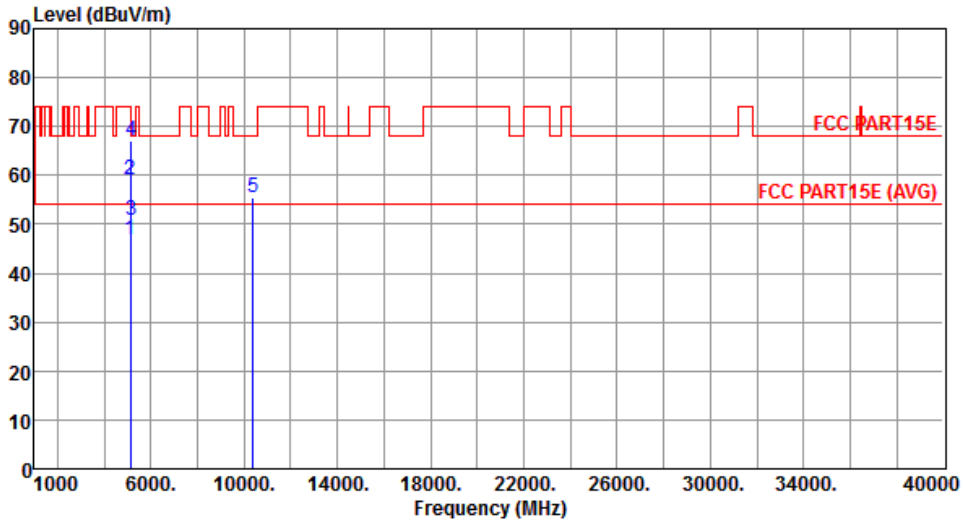


	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	5850.00	65.40	78.20	-12.80	58.45	6.95	Peak	185	198
2	5860.00	61.76	68.20	-6.44	54.81	6.95	Peak	185	198
3	5984.00	65.95	68.20	-2.25	58.79	7.16	Peak	113	278
4	11650.00	45.05	54.00	-8.95	29.03	16.02	Average	163	243
5	11650.00	57.18	74.00	-16.82	41.16	16.02	Peak	163	243

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

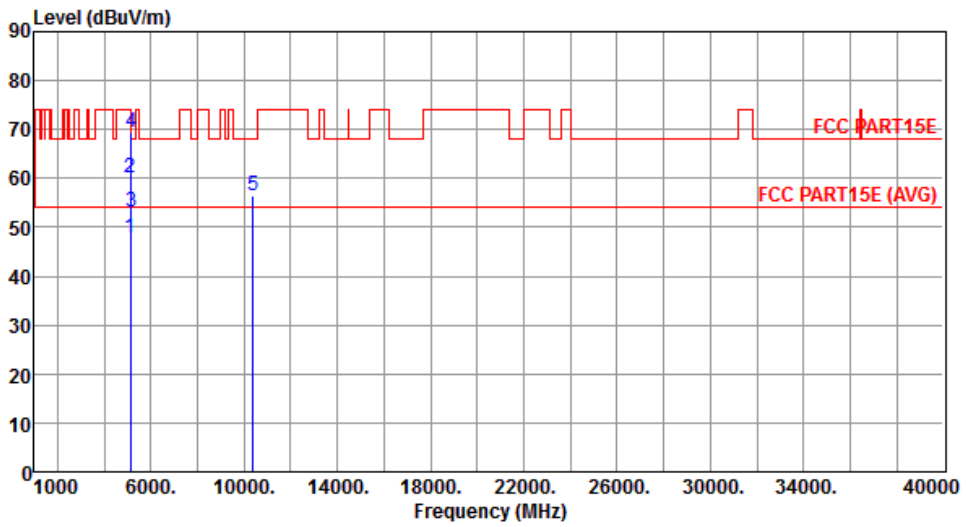
Modulation	VHT40	**Test Freq. (MHz)**	5190
Polarization	Horizontal		



	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	5110.00	46.84	54.00	-7.16	41.18	5.66	Average	265	4
2	5110.00	59.22	74.00	-14.78	53.56	5.66	Peak	265	4
3	5150.00	50.68	54.00	-3.32	44.92	5.76	Average	204	321
4	5150.00	67.12	74.00	-6.88	61.36	5.76	Peak	204	321
5	10380.00	55.46	68.20	-12.74	40.90	14.56	Peak	163	320

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

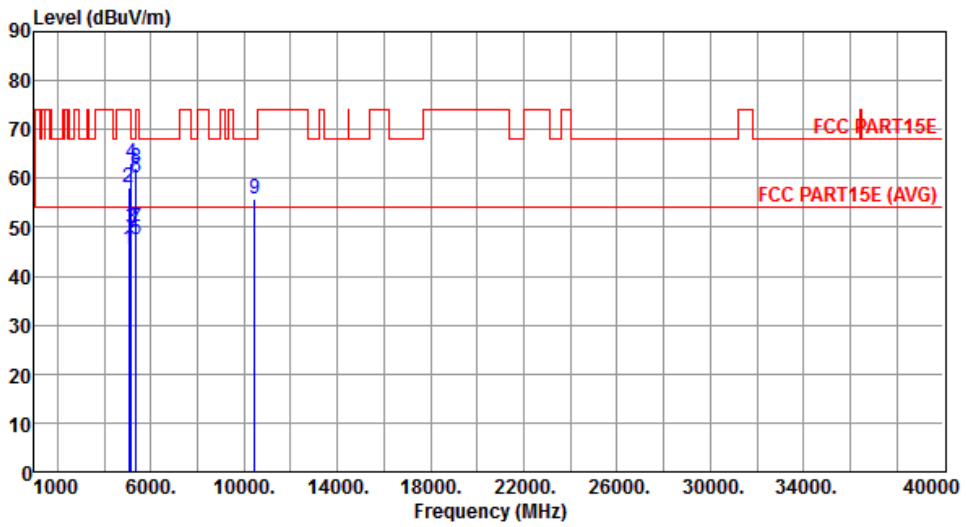
Modulation	VHT40	Test Freq. (MHz)	5190
Polarization	Vertical		



	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	5110.00	47.77	54.00	-6.23	42.11	5.66	Average	205	300
2	5110.00	59.98	74.00	-14.02	54.32	5.66	Peak	205	300
3	5150.00	52.98	54.00	-1.02	47.22	5.76	Average	234	323
4	5150.00	69.33	74.00	-4.67	63.57	5.76	Peak	234	323
5	10380.00	56.46	68.20	-11.74	41.90	14.56	Peak	173	338

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

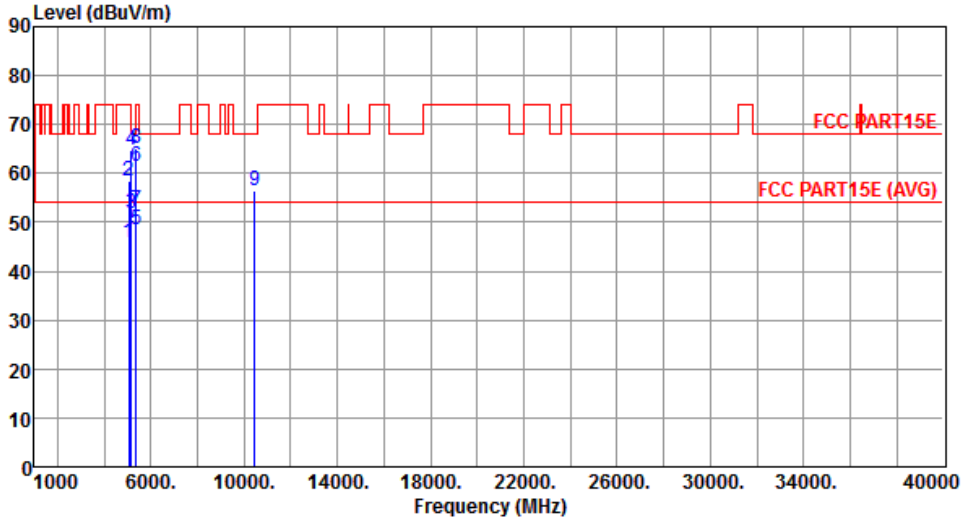
Modulation	VHT40	Test Freq. (MHz)	5230
Polarization	Horizontal		



	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	5070.00	45.49	54.00	-8.51	39.92	5.57	Average	227	303
2	5070.00	58.26	74.00	-15.74	52.69	5.57	Peak	227	303
3	5150.00	49.83	54.00	-4.17	44.07	5.76	Average	206	335
4	5150.00	63.23	74.00	-10.77	57.47	5.76	Peak	206	335
5	5350.00	47.55	54.00	-6.45	41.51	6.04	Average	278	302
6	5350.00	60.25	74.00	-13.75	54.21	6.04	Peak	278	302
7	5370.00	49.67	54.00	-4.33	43.61	6.06	Average	174	3
8	5370.00	62.04	74.00	-11.96	55.98	6.06	Peak	174	3
9	10460.00	55.78	68.20	-12.42	41.00	14.78	Peak	160	316

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

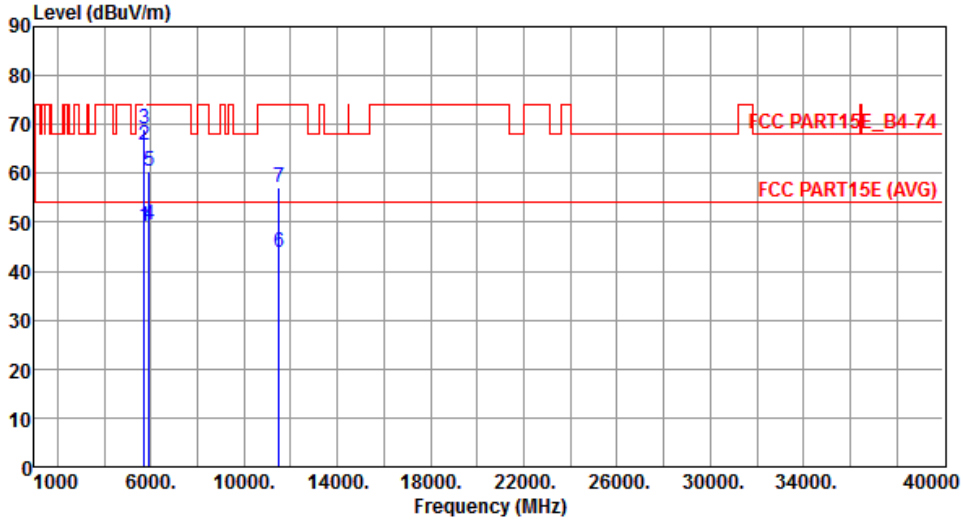
Modulation	VHT40	Test Freq. (MHz)	5230
Polarization	Vertical		



	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	5070.00	45.70	54.00	-8.30	40.13	5.57	Average	213	196
2	5070.00	58.49	74.00	-15.51	52.92	5.57	Peak	213	196
3	5150.00	51.74	54.00	-2.26	45.98	5.76	Average	209	297
4	5150.00	64.87	74.00	-9.13	59.11	5.76	Peak	209	297
5	5350.00	48.53	54.00	-5.47	42.49	6.04	Average	207	302
6	5350.00	61.56	74.00	-12.44	55.52	6.04	Peak	207	302
7	5370.00	52.50	54.00	-1.50	46.44	6.06	Average	203	333
8	5370.00	65.17	74.00	-8.83	59.11	6.06	Peak	203	333
9	10460.00	56.38	68.20	-11.82	41.60	14.78	Peak	178	340

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

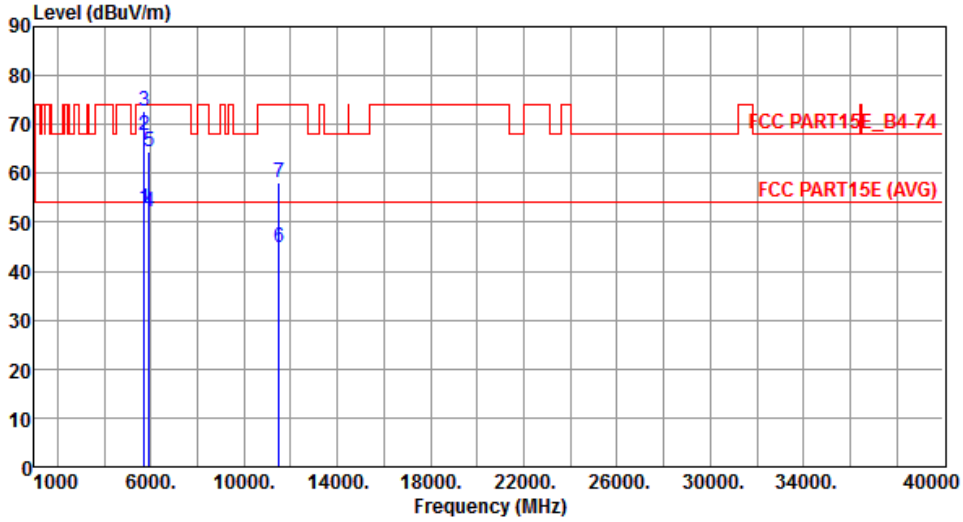
Modulation	VHT40	Test Freq. (MHz)	5755
Polarization	Horizontal		



	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	5715.00	49.25	54.00	-4.75	42.55	6.70	Average	103	179
2	5715.00	65.65	74.00	-8.35	58.95	6.70	Peak	103	179
3	5725.00	69.03	78.20	-9.17	62.32	6.71	Peak	103	179
4	5915.00	49.60	54.00	-4.40	42.56	7.04	Average	103	179
5	5915.00	60.38	74.00	-13.62	53.34	7.04	Peak	103	179
6	11510.00	43.72	54.00	-10.28	27.52	16.20	Average	125	354
7	11510.00	57.07	74.00	-16.93	40.87	16.20	Peak	125	354

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

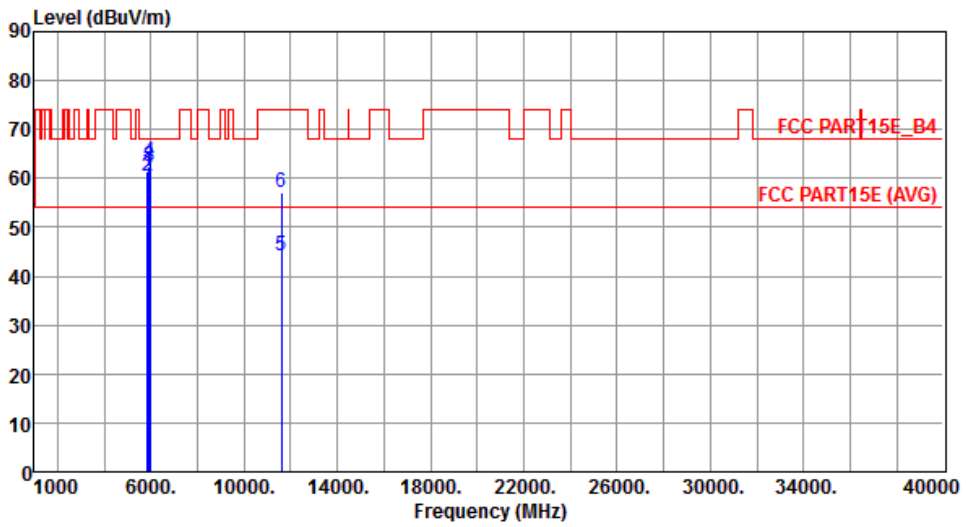
Modulation	VHT40	Test Freq. (MHz)	5755
Polarization	Vertical		



	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	5715.00	52.68	54.00	-1.32	45.98	6.70	Average	133	202
2	5715.00	67.71	74.00	-6.29	61.01	6.70	Peak	133	202
3	5725.00	72.78	78.20	-5.42	66.07	6.71	Peak	133	202
4	5915.00	52.06	54.00	-1.94	45.02	7.04	Average	125	280
5	5915.00	64.28	74.00	-9.72	57.24	7.04	Peak	125	280
6	11510.00	45.00	54.00	-9.00	28.80	16.20	Average	153	296
7	11510.00	58.17	74.00	-15.83	41.97	16.20	Peak	153	296

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

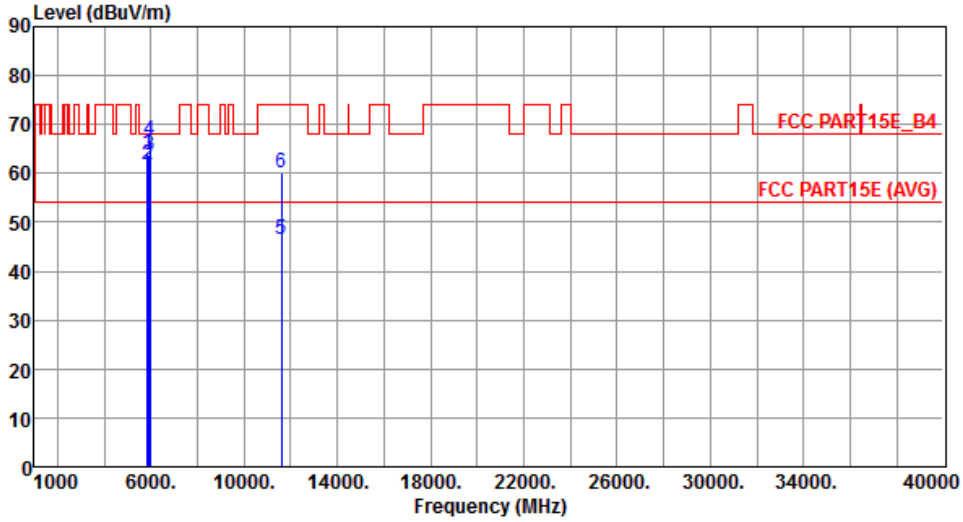
Modulation	VHT40	Test Freq. (MHz)	5795
Polarization	Horizontal		



	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	5850.00	61.44	78.20	-16.76	54.49	6.95	Peak	113	179
2	5860.00	60.51	68.20	-7.69	53.56	6.95	Peak	113	179
3	5932.00	62.59	68.20	-5.61	55.52	7.07	Peak	113	179
4	5955.00	63.47	68.20	-4.73	56.35	7.12	Peak	108	185
5	11590.00	44.32	54.00	-9.68	28.22	16.10	Average	146	268
6	11590.00	57.28	74.00	-16.72	41.18	16.10	Peak	146	268

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

Modulation	VHT40	Test Freq. (MHz)	5795
Polarization	Vertical		

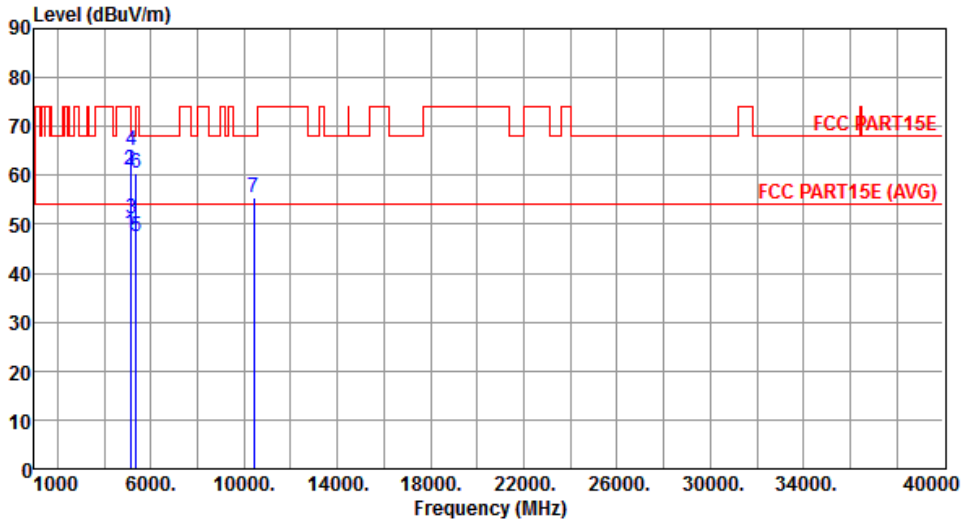


	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	5850.00	64.19	78.20	-14.01	57.24	6.95	Peak	133	272
2	5860.00	61.65	68.20	-6.55	54.70	6.95	Peak	133	272
3	5932.00	63.65	68.20	-4.55	56.58	7.07	Peak	122	277
4	5955.00	66.66	68.20	-1.54	59.54	7.12	Peak	132	279
5	11590.00	46.35	54.00	-7.65	30.25	16.10	Average	154	226
6	11590.00	60.08	74.00	-13.92	43.98	16.10	Peak	154	226

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

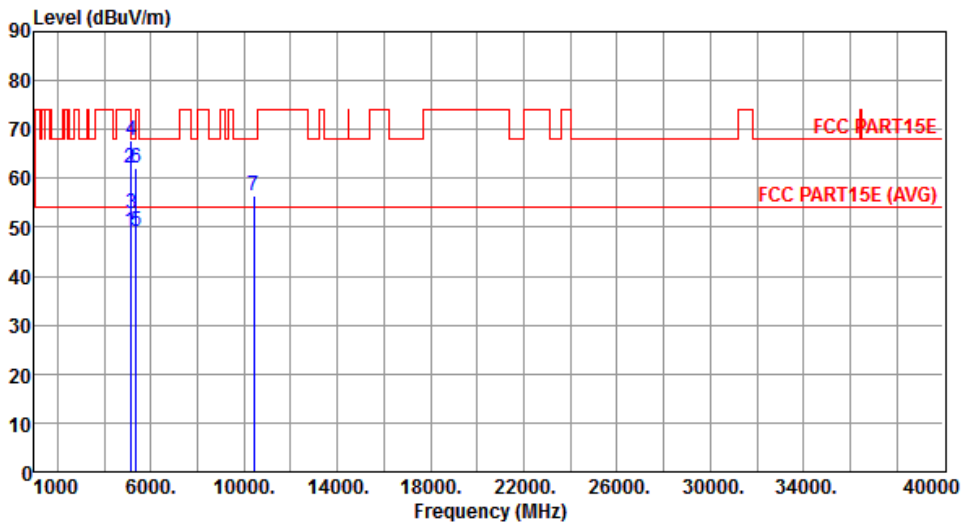
Modulation	VHT80	**Test Freq. (MHz)**	5210
Polarization	Horizontal		



	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	5130.00	48.12	54.00	-5.88	42.42	5.70	Average	176	33
2	5130.00	61.15	74.00	-12.85	55.45	5.70	Peak	176	33
3	5150.00	51.10	54.00	-2.90	45.34	5.76	Average	162	0
4	5150.00	64.94	74.00	-9.06	59.18	5.76	Peak	162	0
5	5350.00	47.61	54.00	-6.39	41.57	6.04	Average	162	0
6	5350.00	60.60	74.00	-13.40	54.56	6.04	Peak	162	0
7	10420.00	55.56	68.20	-12.64	40.89	14.67	Peak	166	323

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

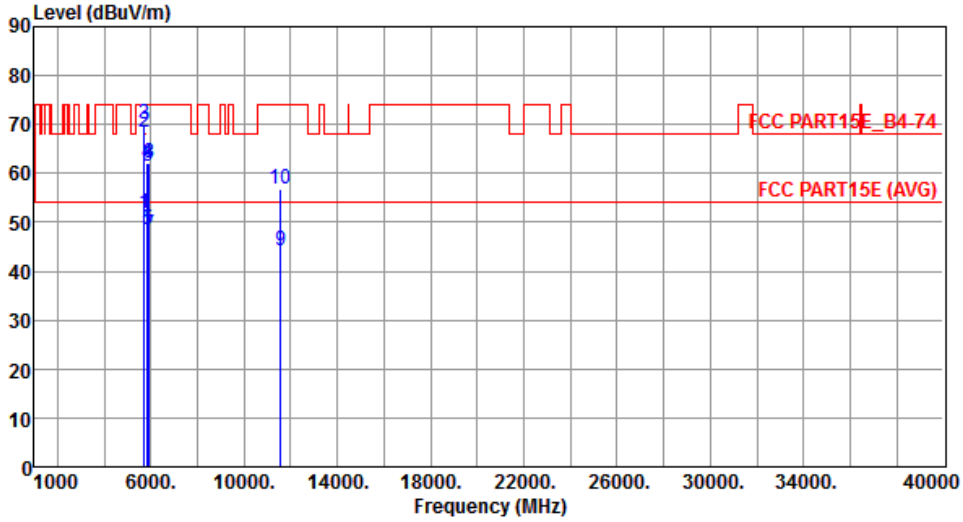
Modulation	VHT80	Test Freq. (MHz)	5210
Polarization	Vertical		



	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	5130.00	49.30	54.00	-4.70	43.60	5.70	Average	240	294
2	5130.00	62.24	74.00	-11.76	56.54	5.70	Peak	240	294
3	5150.00	52.96	54.00	-1.04	47.20	5.76	Average	235	324
4	5150.00	67.64	74.00	-6.36	61.88	5.76	Peak	235	324
5	5350.00	49.18	54.00	-4.82	43.14	6.04	Average	235	324
6	5350.00	61.94	74.00	-12.06	55.90	6.04	Peak	235	324
7	10420.00	56.34	68.20	-11.86	41.67	14.67	Peak	174	335

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

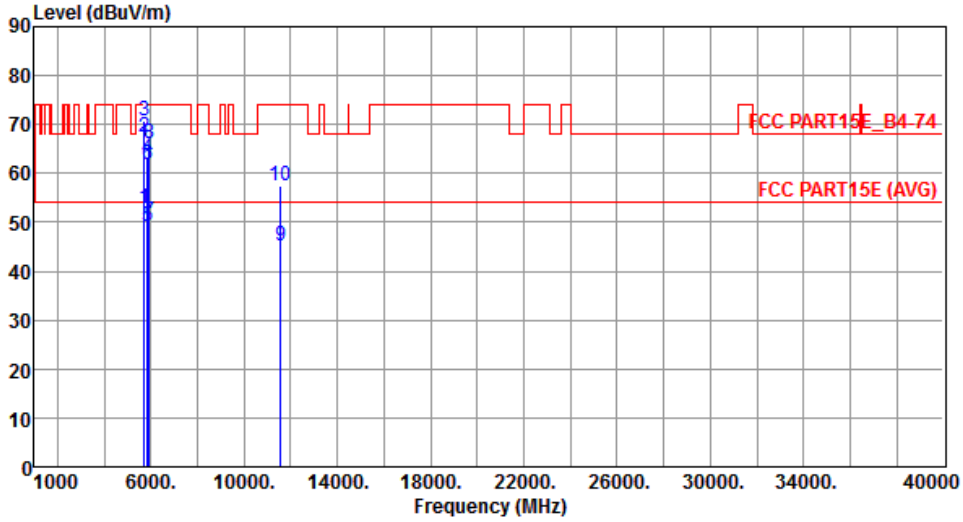
Modulation	VHT80	Test Freq. (MHz)	5775
Polarization	Horizontal		



	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	5715.00	51.77	54.00	-2.23	45.07	6.70	Average	117	353
2	5715.00	68.25	74.00	-5.75	61.55	6.70	Peak	117	353
3	5725.00	70.04	78.20	-8.16	63.33	6.71	Peak	117	353
4	5850.00	61.99	78.20	-16.21	55.04	6.95	Peak	117	353
5	5860.00	48.45	54.00	-5.55	41.50	6.95	Average	117	353
6	5860.00	61.48	74.00	-12.52	54.53	6.95	Peak	117	353
7	5932.00	47.59	54.00	-6.41	40.52	7.07	Average	115	192
8	5932.00	62.21	74.00	-11.79	55.14	7.07	Peak	115	192
9	11550.00	44.16	54.00	-9.84	28.01	16.15	Average	145	225
10	11550.00	56.78	74.00	-17.22	40.63	16.15	Peak	145	225

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



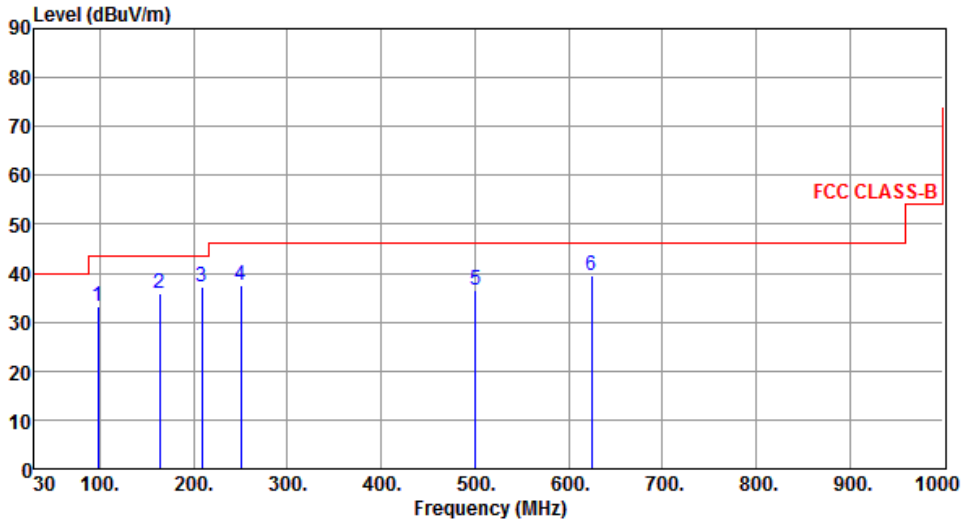
	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	5715.00	52.87	54.00	-1.13	46.17	6.70	Average	180	231
2	5715.00	67.41	74.00	-6.59	60.71	6.70	Peak	180	231
3	5725.00	70.86	78.20	-7.34	64.15	6.71	Peak	169	202
4	5850.00	63.15	78.20	-15.05	56.20	6.95	Peak	169	202
5	5860.00	49.23	54.00	-4.77	42.28	6.95	Average	169	202
6	5860.00	61.84	74.00	-12.16	54.89	6.95	Peak	169	202
7	5932.00	50.10	54.00	-3.90	43.03	7.07	Average	175	239
8	5932.00	66.08	74.00	-7.92	59.01	7.07	Peak	175	239
9	11550.00	45.17	54.00	-8.83	29.02	16.15	Average	156	333
10	11550.00	57.40	74.00	-16.60	41.25	16.15	Peak	156	333

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

Beamforming mode

3.5.9 Transmitter Radiated Unwanted Emissions (Below 1GHz)

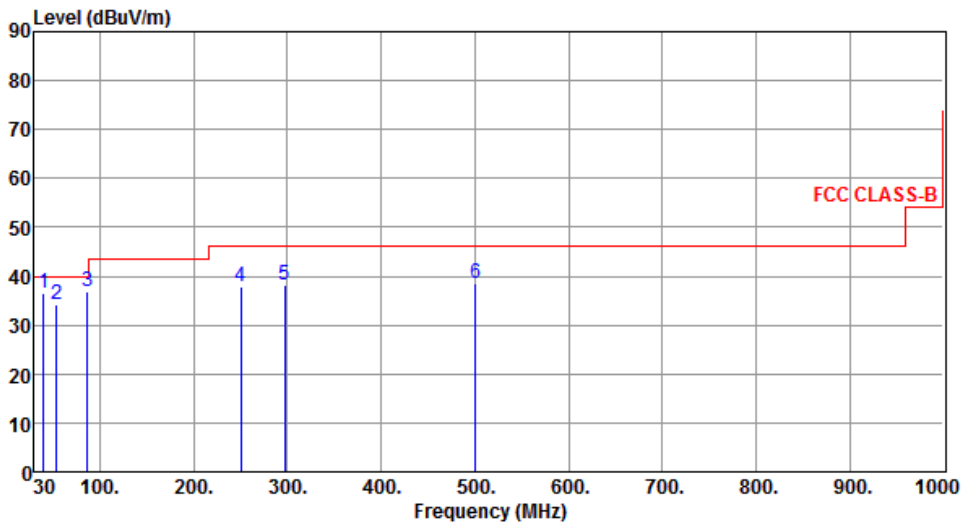
Modulation	VHT20	**Test Freq. (MHz)**	5180
Polarization	Horizontal		



	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	97.85	33.23	43.50	-10.27	55.45	-22.22	Peak	---	---
2	163.82	35.74	43.50	-7.76	52.90	-17.16	Peak	---	---
3	208.42	37.24	43.50	-6.26	56.69	-19.45	Peak	---	---
4	250.15	37.62	46.00	-8.38	55.49	-17.87	Peak	---	---
5	500.42	36.58	46.00	-9.42	48.29	-11.71	Peak	---	---
6	624.65	39.63	46.00	-6.37	48.90	-9.27	Peak	---	---

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

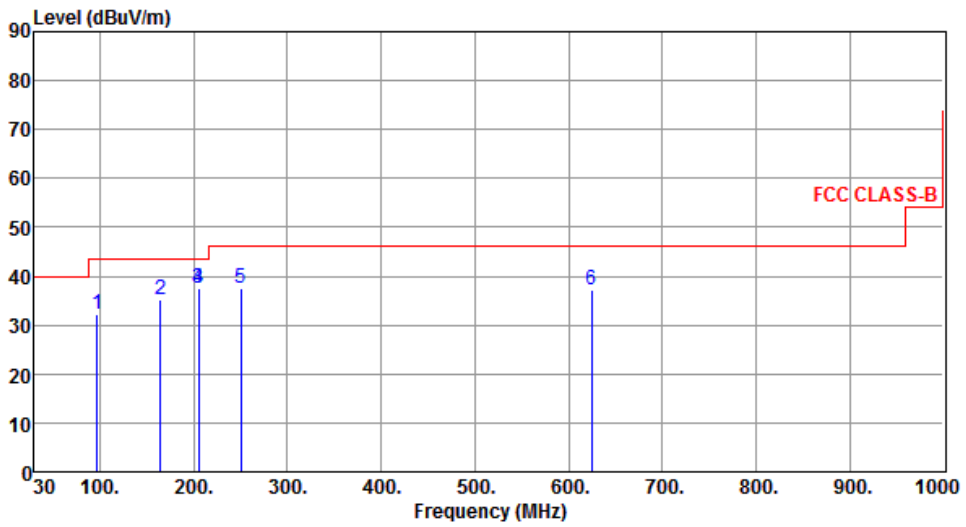
Modulation	VHT20	Test Freq. (MHz)	5180
Polarization	Vertical		



	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	39.84	36.43	40.00	-3.57	53.66	-17.23	QP	110	27
2	53.43	34.29	40.00	-5.71	50.91	-16.62	QP	100	307
3	86.22	36.78	40.00	-3.22	59.56	-22.78	Peak	---	---
4	250.12	37.84	46.00	-8.16	55.71	-17.87	Peak	---	---
5	296.76	38.24	46.00	-7.76	54.42	-16.18	Peak	---	---
6	500.42	38.43	46.00	-7.57	50.14	-11.71	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.

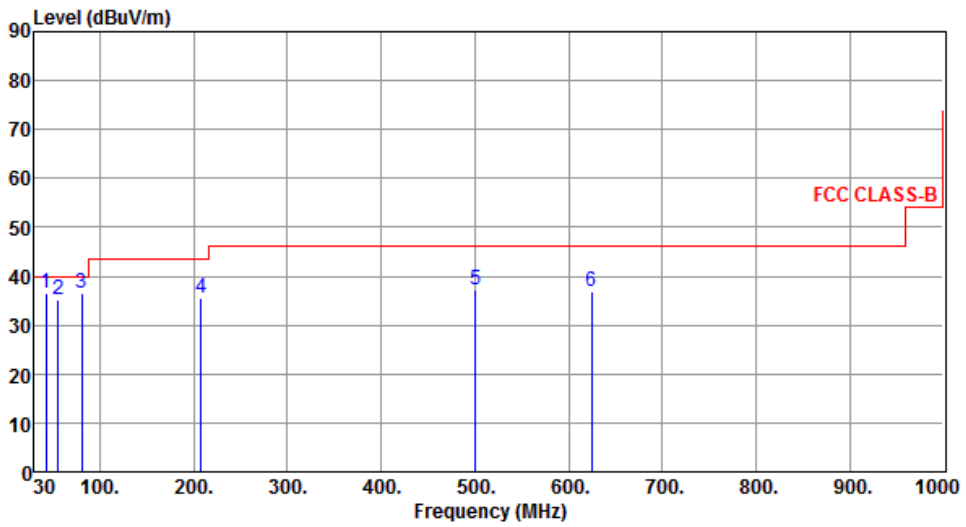
Modulation	VHT20	Test Freq. (MHz)	5745
Polarization	Horizontal		



	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	96.95	32.36	43.50	-11.14	54.70	-22.34	Peak	---	---
2	164.81	35.22	43.50	-8.28	52.44	-17.22	Peak	---	---
3	205.52	37.43	43.50	-6.07	56.98	-19.55	Peak	---	---
4	205.54	37.55	43.50	-5.95	57.10	-19.55	Peak	---	---
5	250.12	37.46	46.00	-8.54	55.33	-17.87	Peak	---	---
6	624.63	37.19	46.00	-8.81	46.46	-9.27	Peak	---	---

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

Modulation	VHT20	Test Freq. (MHz)	5745
Polarization	Vertical		

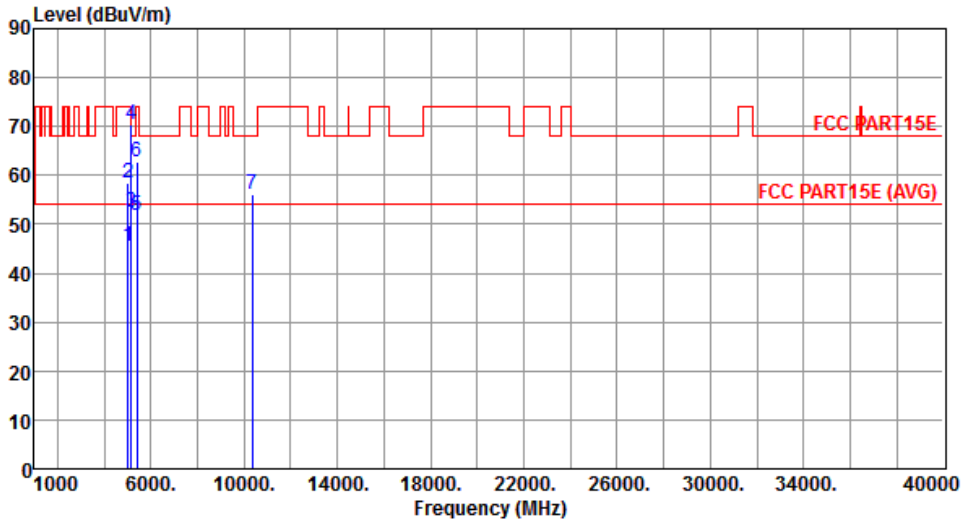


	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	42.64	36.54	40.00	-3.46	53.53	-16.99	QP	102	304
2	55.29	35.11	40.00	-4.89	51.81	-16.70	QP	102	294
3	80.43	36.63	40.00	-3.37	58.63	-22.00	Peak	---	---
4	207.58	35.42	43.50	-8.08	54.91	-19.49	Peak	---	---
5	500.43	37.19	46.00	-8.81	48.90	-11.71	Peak	---	---
6	624.66	36.78	46.00	-9.22	46.05	-9.27	Peak	---	---

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

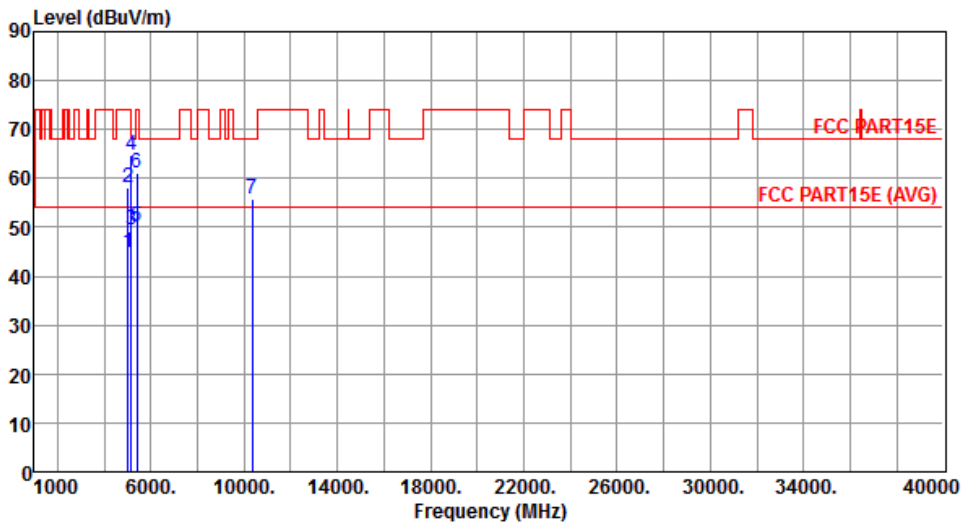
Modulation	VHT20	**Test Freq. (MHz)**	5180
Polarization	Horizontal		



	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	5020.00	45.42	54.00	-8.58	39.99	5.43	Average	178	211
2	5020.00	58.35	74.00	-15.65	52.92	5.43	Peak	178	211
3	5150.00	52.56	54.00	-1.44	46.80	5.76	Average	165	170
4	5150.00	70.39	74.00	-3.61	64.63	5.76	Peak	165	170
5	5400.00	51.84	54.00	-2.16	45.76	6.08	Average	169	2
6	5400.00	62.73	74.00	-11.27	56.65	6.08	Peak	169	2
7	10360.00	56.04	68.20	-12.16	41.52	14.52	Peak	225	333

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

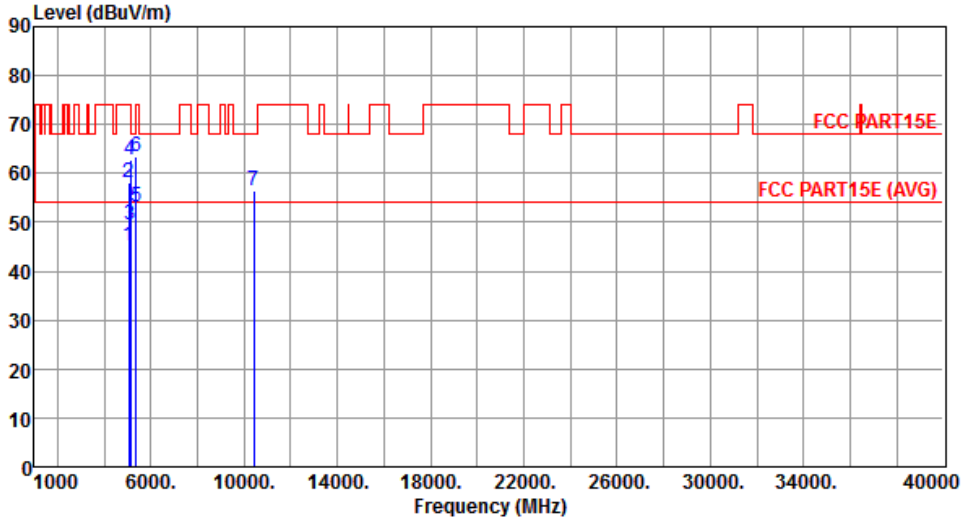
Modulation	VHT20	Test Freq. (MHz)	5180
Polarization	Vertical		



	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	5020.00	44.87	54.00	-9.13	39.44	5.43	Average	192	3
2	5020.00	58.18	74.00	-15.82	52.75	5.43	Peak	192	3
3	5150.00	49.61	54.00	-4.39	43.85	5.76	Average	204	342
4	5150.00	64.61	74.00	-9.39	58.85	5.76	Peak	204	342
5	5400.00	50.22	54.00	-3.78	44.14	6.08	Average	172	350
6	5400.00	60.98	74.00	-13.02	54.90	6.08	Peak	172	350
7	10360.00	55.75	68.20	-12.45	41.23	14.52	Peak	178	6

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

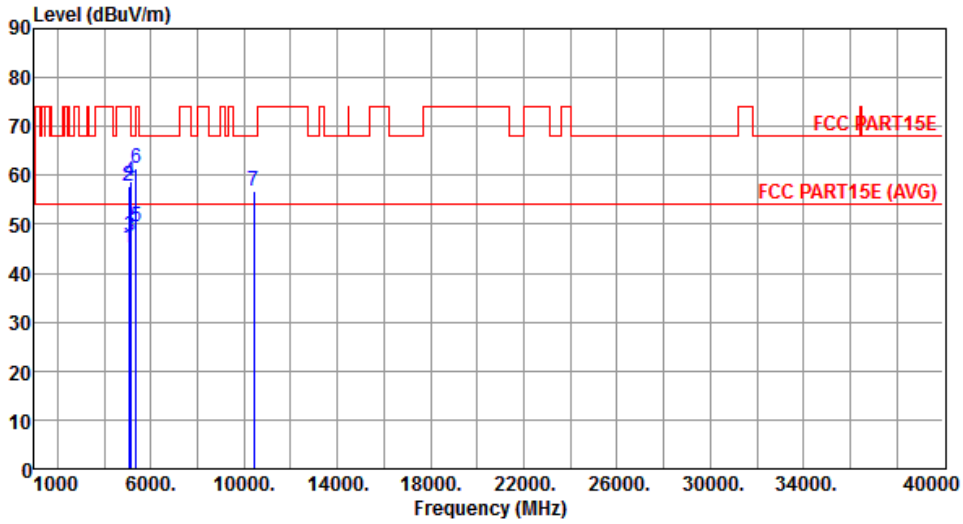
Modulation	VHT20	Test Freq. (MHz)	5200
Polarization	Horizontal		



	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	5040.00	45.12	54.00	-8.88	39.64	5.48	Average	140	325
2	5040.00	57.98	74.00	-16.02	52.50	5.48	Peak	140	325
3	5120.00	49.40	54.00	-4.60	43.71	5.69	Average	196	302
4	5120.00	62.61	74.00	-11.39	56.92	5.69	Peak	196	302
5	5360.00	52.98	54.00	-1.02	46.93	6.05	Average	136	333
6	5360.00	63.53	74.00	-10.47	57.48	6.05	Peak	136	333
7	10400.00	56.45	68.20	-11.75	41.83	14.62	Peak	221	328

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

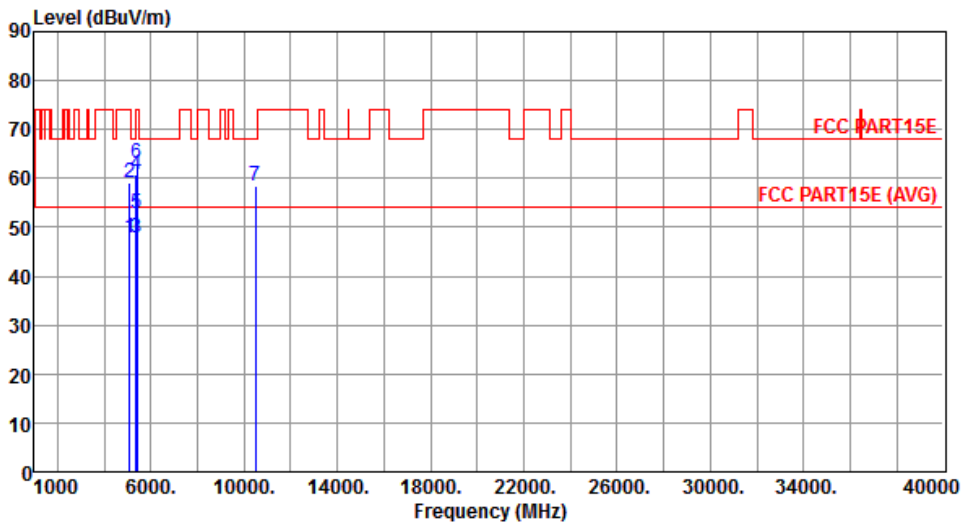
Modulation	VHT20	Test Freq. (MHz)	5200
Polarization	Vertical		



	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	5040.00	45.12	54.00	-8.88	39.64	5.48	Average	175	2
2	5040.00	57.85	74.00	-16.15	52.37	5.48	Peak	175	2
3	5120.00	47.45	54.00	-6.55	41.76	5.69	Average	175	2
4	5120.00	58.63	74.00	-15.37	52.94	5.69	Peak	175	2
5	5360.00	49.36	54.00	-4.64	43.31	6.05	Average	175	2
6	5360.00	61.28	74.00	-12.72	55.23	6.05	Peak	175	2
7	10400.00	56.85	68.20	-11.35	42.23	14.62	Peak	175	2

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

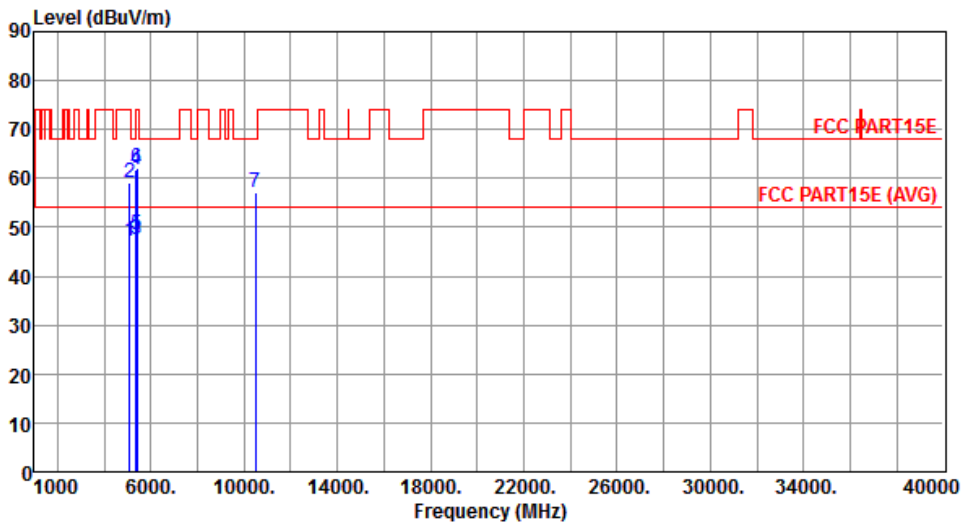
Modulation	VHT20	Test Freq. (MHz)	5240
Polarization	Horizontal		



	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	5080.00	47.83	54.00	-6.17	42.25	5.58	Average	200	301
2	5080.00	59.27	74.00	-14.73	53.69	5.58	Peak	200	301
3	5350.00	47.98	54.00	-6.02	41.94	6.04	Average	250	280
4	5350.00	60.78	74.00	-13.22	54.74	6.04	Peak	250	280
5	5400.00	52.90	54.00	-1.10	46.82	6.08	Average	250	280
6	5400.00	63.17	74.00	-10.83	57.09	6.08	Peak	250	280
7	10480.00	58.32	68.20	-9.88	43.49	14.83	Peak	250	280

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

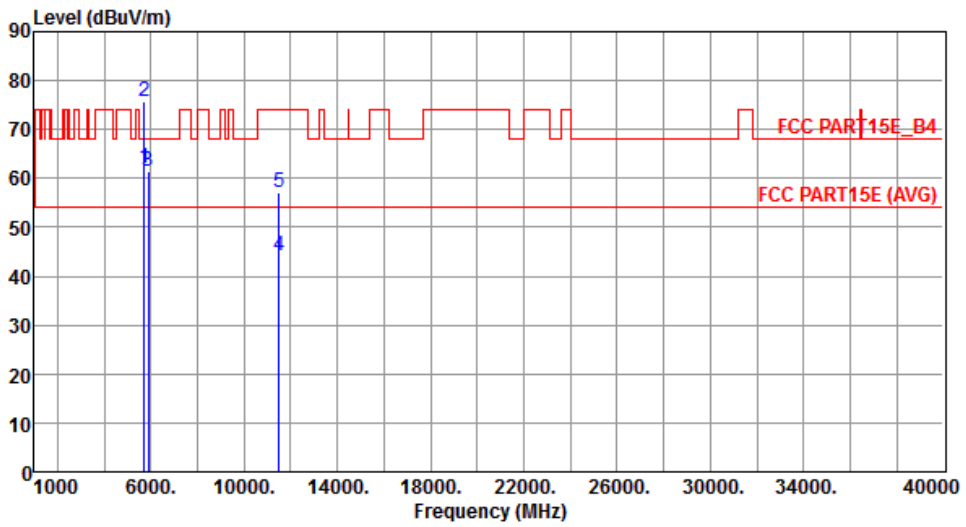
Modulation	VHT20	Test Freq. (MHz)	5240
Polarization	Vertical		



	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	5080.00	47.13	54.00	-6.87	41.55	5.58	Average	167	8
2	5080.00	59.13	74.00	-14.87	53.55	5.58	Peak	167	8
3	5350.00	47.42	54.00	-6.58	41.38	6.04	Average	201	0
4	5350.00	61.93	74.00	-12.07	55.89	6.04	Peak	201	0
5	5400.00	48.38	54.00	-5.62	42.30	6.08	Average	186	6
6	5400.00	61.97	74.00	-12.03	55.89	6.08	Peak	186	6
7	10480.00	56.98	68.20	-11.22	42.15	14.83	Peak	167	8

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

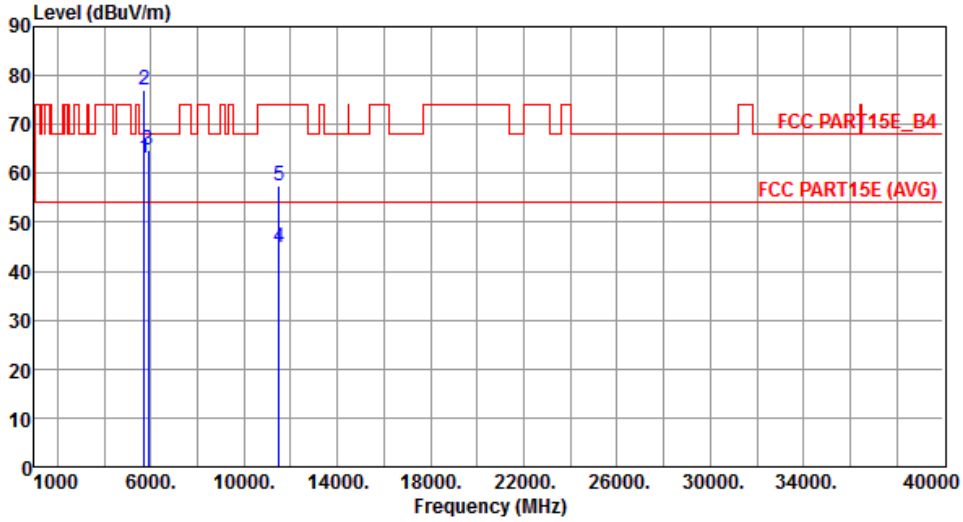
Modulation	VHT20	Test Freq. (MHz)	5745
Polarization	Horizontal		



	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	5715.00	61.98	68.20	-6.22	55.28	6.70	Peak	175	234
2	5725.00	75.78	78.20	-2.42	69.07	6.71	Peak	175	234
3	5904.00	61.58	68.20	-6.62	54.54	7.04	Peak	158	190
4	11490.00	44.24	54.00	-9.76	28.02	16.22	Average	352	24
5	11490.00	56.97	74.00	-17.03	40.75	16.22	Peak	352	24

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

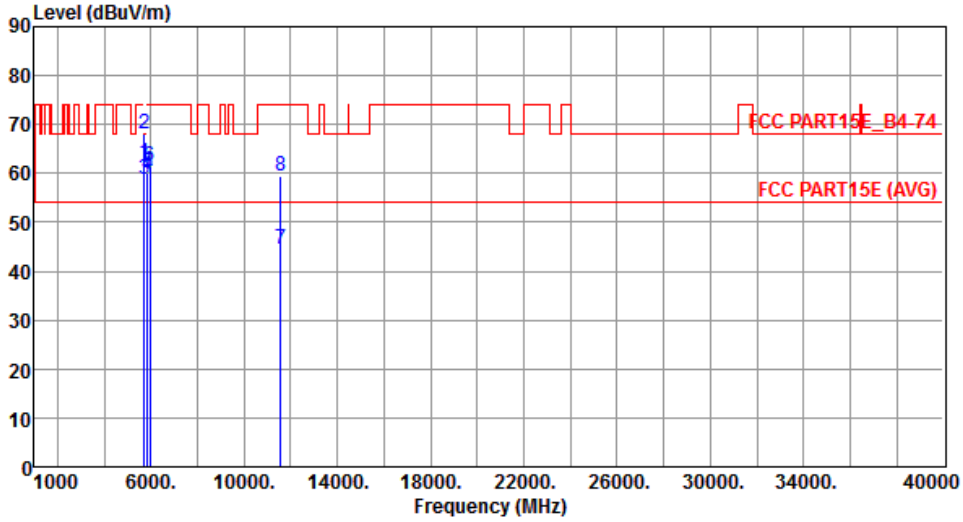
Modulation	VHT20	Test Freq. (MHz)	5745
Polarization	Vertical		



	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	5715.00	63.02	68.20	-5.18	56.32	6.70	Peak	175	234
2	5725.00	77.15	78.20	-1.05	70.44	6.71	Peak	175	234
3	5904.00	64.92	68.20	-3.28	57.88	7.04	Peak	158	190
4	11490.00	44.77	54.00	-9.23	28.55	16.22	Average	155	233
5	11490.00	57.47	74.00	-16.53	41.25	16.22	Peak	155	233

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

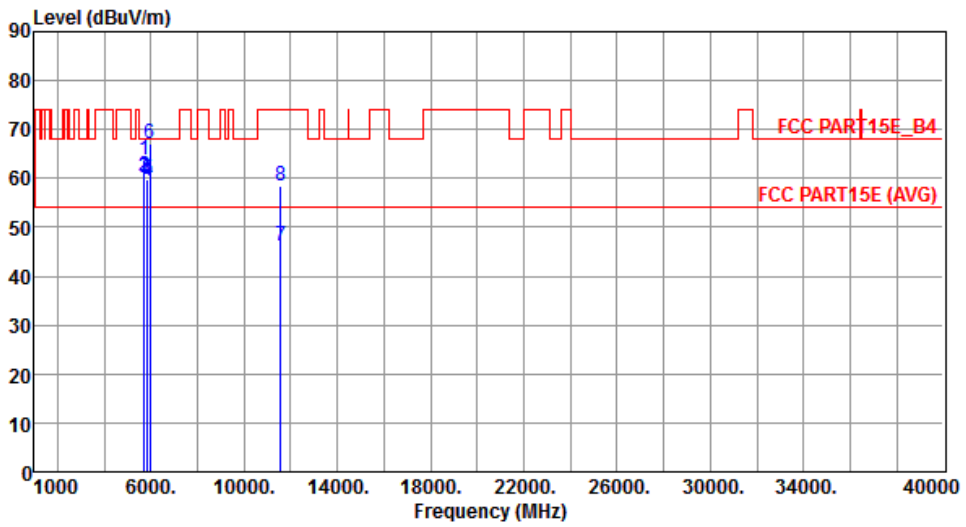
Modulation	VHT20	Test Freq. (MHz)	5785
Polarization	Horizontal		



	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	5705.00	62.16	74.00	-11.84	55.48	6.68	Peak	161	213
2	5715.00	68.13	74.00	-5.87	61.43	6.70	Peak	161	213
3	5725.00	58.81	78.20	-19.39	52.10	6.71	Peak	161	213
4	5850.00	59.75	78.20	-18.45	52.80	6.95	Peak	161	213
5	5860.00	60.04	74.00	-13.96	53.09	6.95	Peak	161	213
6	5943.00	61.44	74.00	-12.56	54.35	7.09	Peak	255	222
7	11570.00	44.47	54.00	-9.53	28.35	16.12	Average	255	222
8	11570.00	59.37	74.00	-14.63	43.25	16.12	Peak	255	222

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

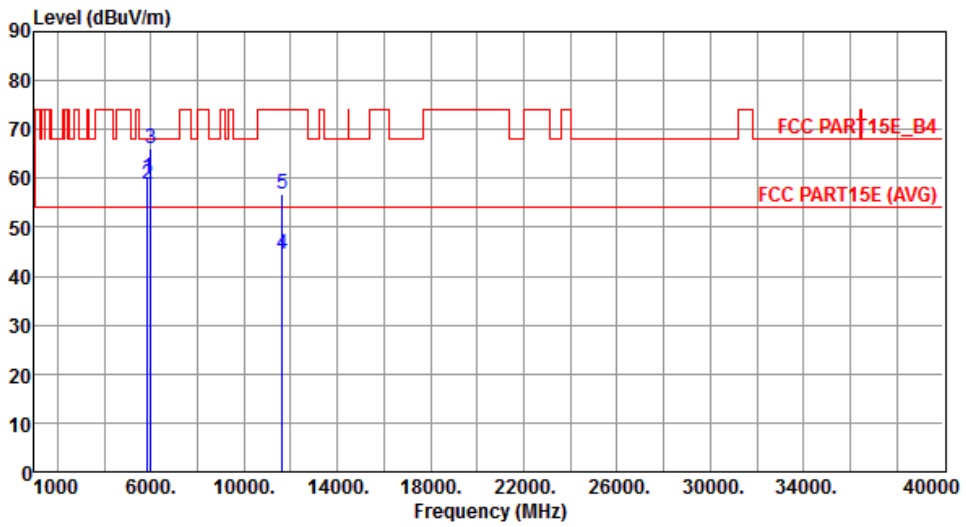
Modulation	VHT20	Test Freq. (MHz)	5785
Polarization	Vertical		



	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	5705.00	63.66	68.20	-4.54	56.98	6.68	Peak	195	239
2	5715.00	60.45	68.20	-7.75	53.75	6.70	Peak	195	192
3	5725.00	59.97	78.20	-18.23	53.26	6.71	Peak	195	192
4	5850.00	59.46	78.20	-18.74	52.51	6.95	Peak	195	192
5	5860.00	59.83	68.20	-8.37	52.88	6.95	Peak	195	192
6	5943.00	67.16	68.20	-1.04	60.07	7.09	Peak	195	192
7	11570.00	46.07	54.00	-7.93	29.95	16.12	Average	208	311
8	11570.00	58.33	74.00	-15.67	42.21	16.12	Peak	208	311

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

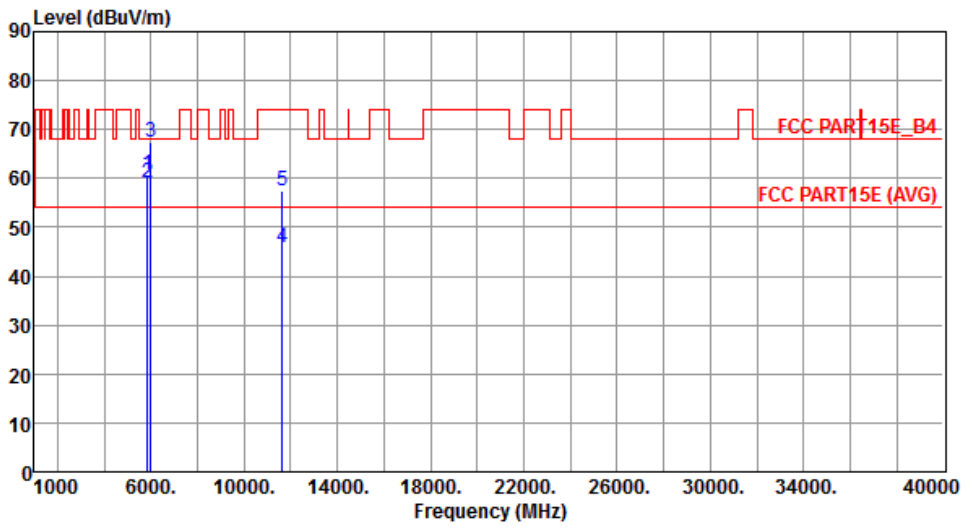
Modulation	VHT20	Test Freq. (MHz)	5825
Polarization	Horizontal		



	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	5850.00	59.95	78.20	-18.25	53.00	6.95	Peak	165	341
2	5860.00	58.66	68.20	-9.54	51.71	6.95	Peak	165	341
3	5984.00	66.25	68.20	-1.95	59.09	7.16	Peak	165	341
4	11650.00	44.37	54.00	-9.63	28.35	16.02	Average	189	222
5	11650.00	56.64	74.00	-17.36	40.62	16.02	Peak	189	222

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

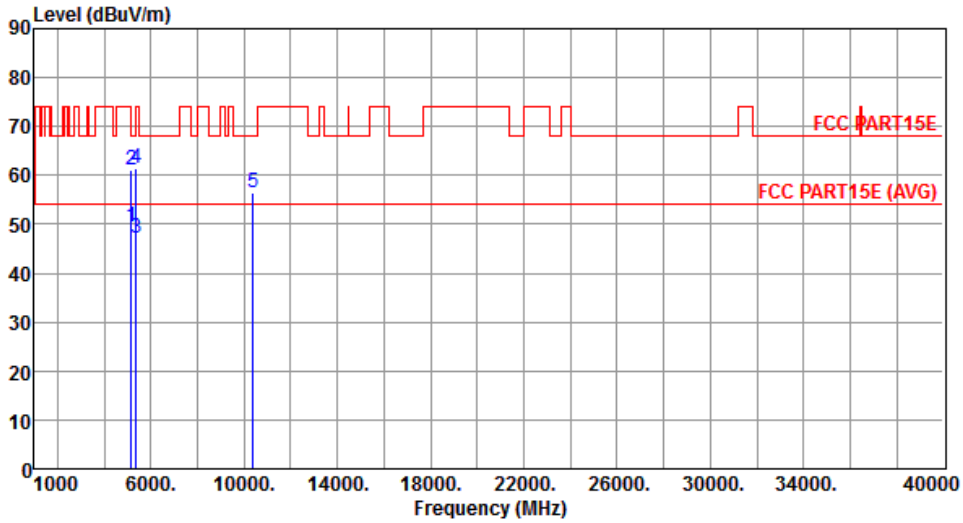


	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	5850.00	60.93	78.20	-17.27	53.98	6.95	Peak	162	246
2	5860.00	59.25	68.20	-8.95	52.30	6.95	Peak	162	246
3	5984.00	67.40	68.20	-0.80	60.24	7.16	Peak	162	269
4	11650.00	45.67	54.00	-8.33	29.65	16.02	Average	255	210
5	11650.00	57.57	74.00	-16.43	41.55	16.02	Peak	255	210

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

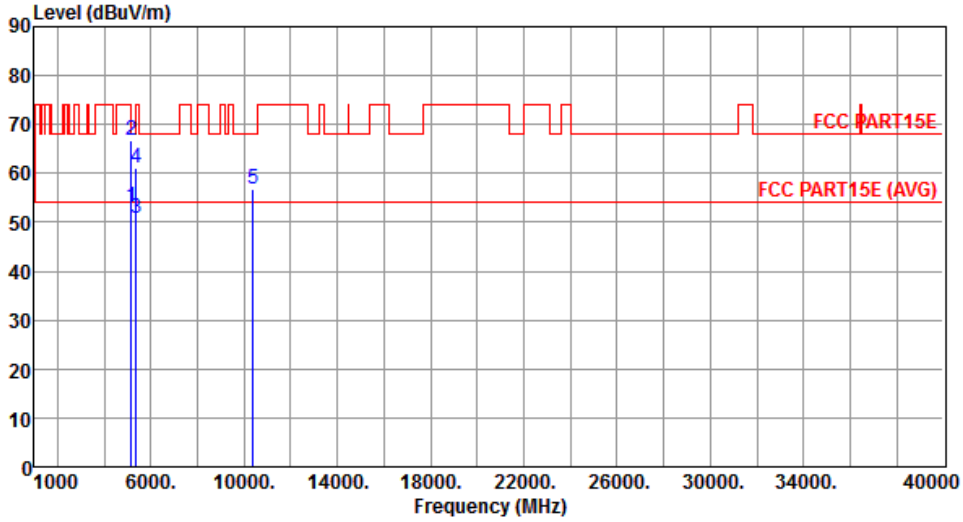
Modulation	VHT40	**Test Freq. (MHz)**	5190
Polarization	Horizontal		



	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	49.33	54.00	-4.67	43.57	5.76	Average	181	174
2	5150.00	60.99	74.00	-13.01	55.23	5.76	Peak	181	174
3	5350.00	47.15	54.00	-6.85	41.11	6.04	Average	181	174
4	5350.00	61.31	74.00	-12.69	55.27	6.04	Peak	181	174
5	10380.00	56.42	68.20	-11.78	41.86	14.56	Peak	254	195

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

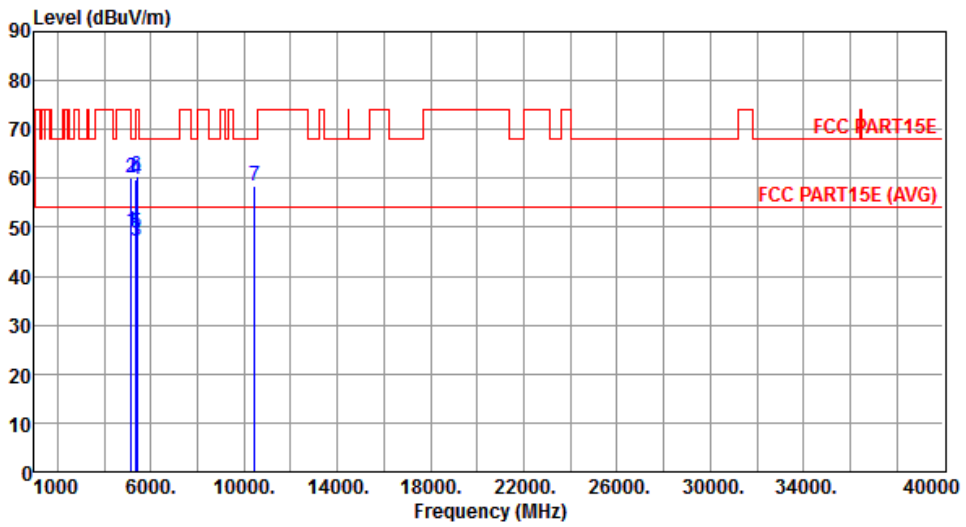
Modulation	VHT40	Test Freq. (MHz)	5190
Polarization	Vertical		



	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	52.99	54.00	-1.01	47.23	5.76	Average	227	295
2	5150.00	66.61	74.00	-7.39	60.85	5.76	Peak	227	295
3	5350.00	50.96	54.00	-3.04	44.92	6.04	Average	221	297
4	5350.00	61.15	74.00	-12.85	55.11	6.04	Peak	221	297
5	10380.00	56.69	68.20	-11.51	42.13	14.56	Peak	175	325

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

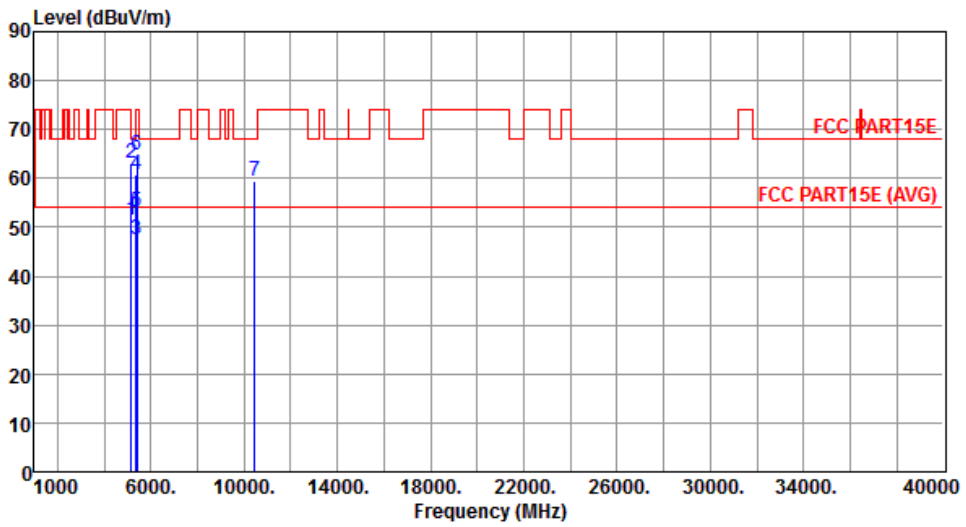
Modulation	VHT40	Test Freq. (MHz)	5230
Polarization	Horizontal		



	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	49.01	54.00	-4.99	43.25	5.76	Average	167	12
2	5150.00	60.11	74.00	-13.89	54.35	5.76	Peak	167	12
3	5350.00	47.15	54.00	-6.85	41.11	6.04	Average	167	12
4	5350.00	59.83	74.00	-14.17	53.79	6.04	Peak	167	12
5	5390.00	48.97	54.00	-5.03	42.90	6.07	Average	158	355
6	5390.00	60.35	74.00	-13.65	54.28	6.07	Peak	158	355
7	10460.00	58.45	68.20	-9.75	43.67	14.78	Peak	163	342

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

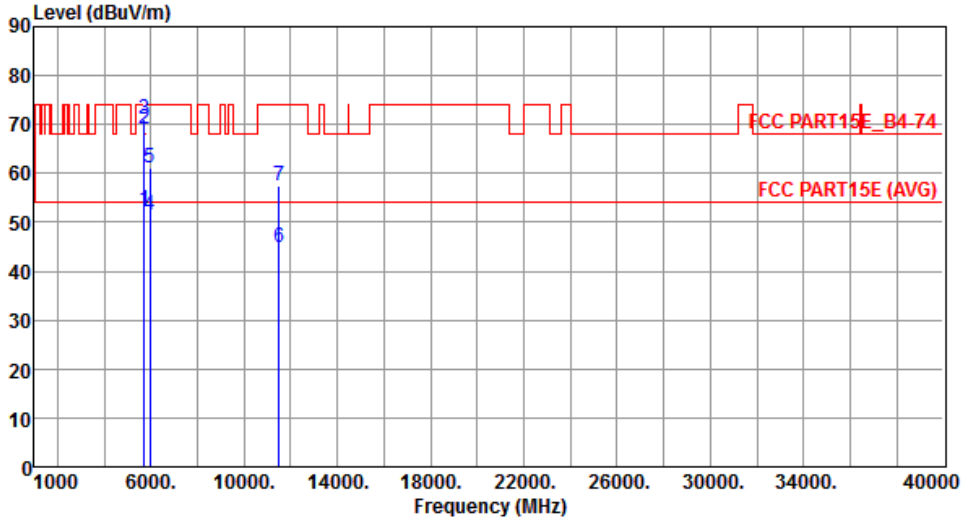
Modulation	VHT40	Test Freq. (MHz)	5230
Polarization	Vertical		



	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	51.34	54.00	-2.66	45.58	5.76	Average	241	296
2	5150.00	62.98	74.00	-11.02	57.22	5.76	Peak	241	296
3	5350.00	47.51	54.00	-6.49	41.47	6.04	Average	241	295
4	5350.00	60.78	74.00	-13.22	54.74	6.04	Peak	241	295
5	5390.00	52.98	54.00	-1.02	46.91	6.07	Average	237	278
6	5390.00	64.74	74.00	-9.26	58.67	6.07	Peak	237	278
7	10460.00	59.34	68.20	-8.86	44.56	14.78	Peak	158	327

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

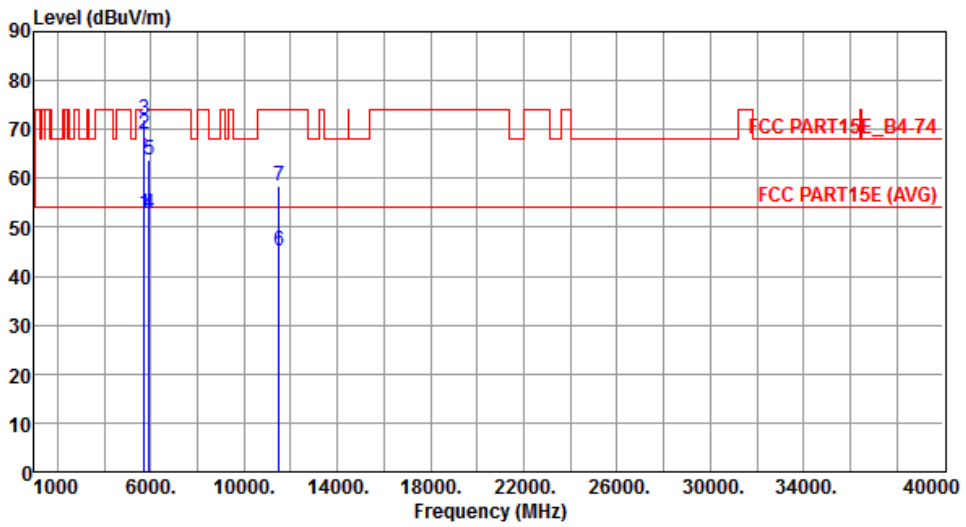
Modulation	VHT40	Test Freq. (MHz)	5755
Polarization	Horizontal		



	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	5715.00	52.44	54.00	-1.56	45.74	6.70	Average	188	200
2	5715.00	68.98	74.00	-5.02	62.28	6.70	Peak	188	200
3	5725.00	71.22	78.20	-6.98	64.51	6.71	Peak	178	235
4	5955.00	51.55	54.00	-2.45	44.43	7.12	Average	177	233
5	5955.00	61.25	74.00	-12.75	54.13	7.12	Peak	177	233
6	11510.00	44.81	54.00	-9.19	28.61	16.20	Average	190	211
7	11510.00	57.56	74.00	-16.44	41.36	16.20	Peak	190	211

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

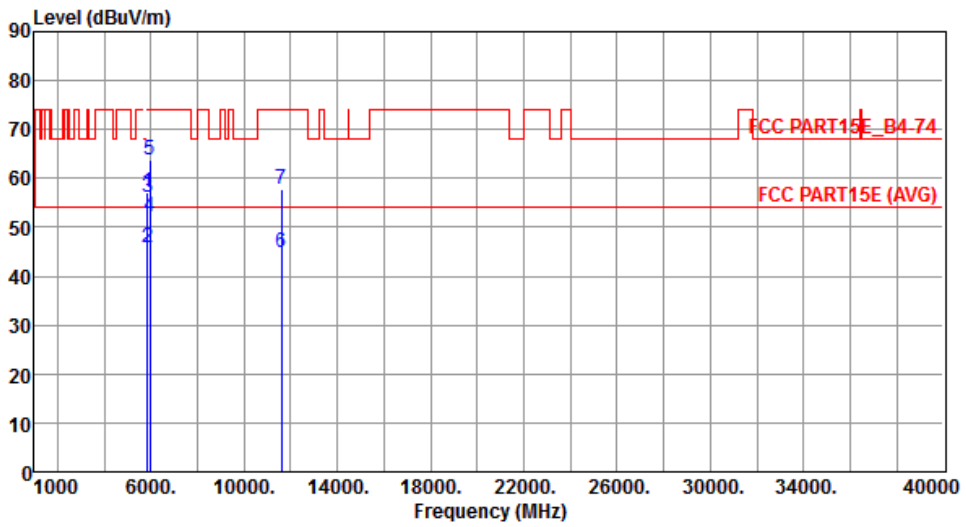
Modulation	VHT40	Test Freq. (MHz)	5755
Polarization	Vertical		



	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	5715.00	52.96	54.00	-1.04	46.26	6.70	Average	178	235
2	5715.00	69.21	74.00	-4.79	62.51	6.70	Peak	178	235
3	5725.00	72.08	78.20	-6.12	65.37	6.71	Peak	178	235
4	5915.00	52.97	54.00	-1.03	45.93	7.04	Average	177	233
5	5915.00	63.70	74.00	-10.30	56.66	7.04	Peak	177	233
6	11510.00	45.33	54.00	-8.67	29.13	16.20	Average	222	32
7	11510.00	58.56	74.00	-15.44	42.36	16.20	Peak	222	32

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

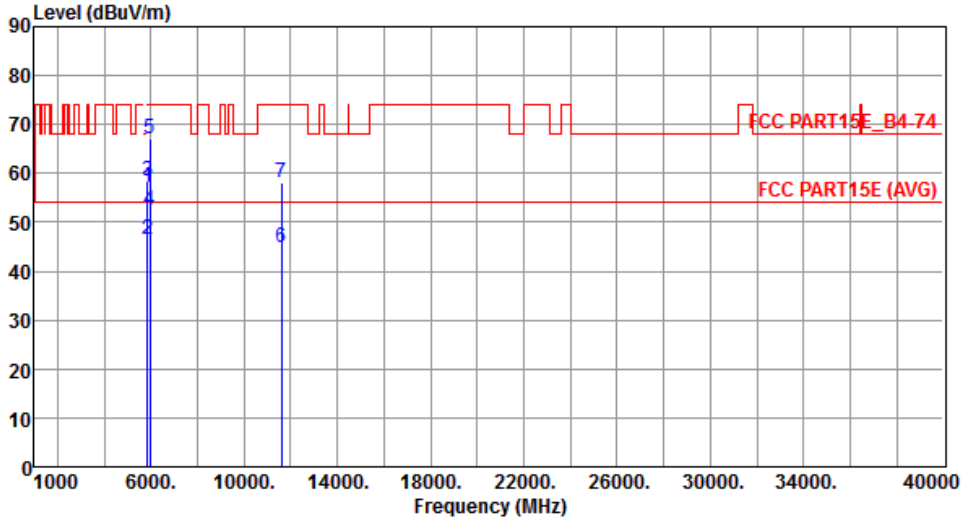
Modulation	VHT40	Test Freq. (MHz)	5795
Polarization	Horizontal		



	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	5850.00	56.96	78.20	-21.24	50.01	6.95	Peak	156	204
2	5860.00	45.95	54.00	-8.05	39.00	6.95	Average	156	204
3	5860.00	56.17	74.00	-17.83	49.22	6.95	Peak	195	246
4	5955.00	52.21	54.00	-1.79	45.09	7.12	Average	163	25
5	5955.00	63.85	74.00	-10.15	56.73	7.12	Peak	163	25
6	11590.00	44.85	54.00	-9.15	28.75	16.10	Average	198	35
7	11590.00	57.95	74.00	-16.05	41.85	16.10	Peak	198	35

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

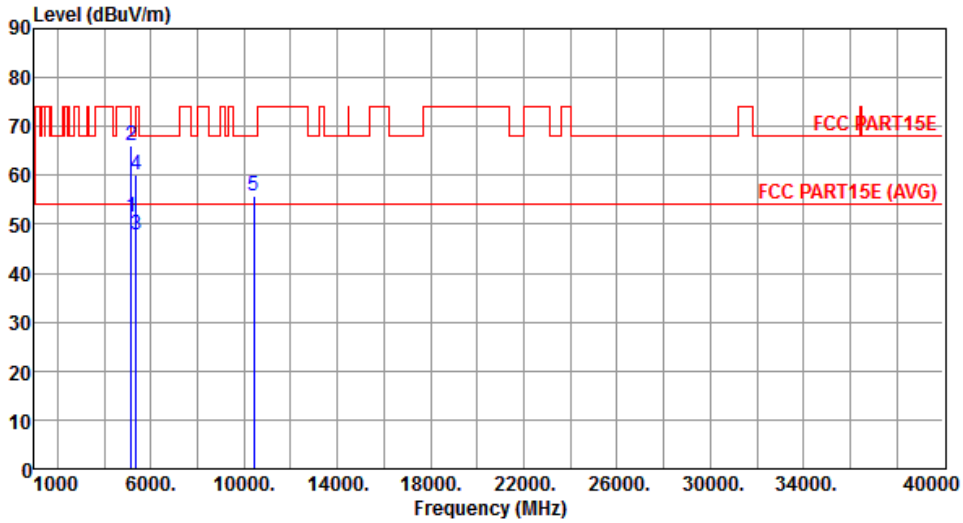


	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	5850.00	57.10	78.20	-21.10	50.15	6.95	Peak	195	246
2	5860.00	46.54	54.00	-7.46	39.59	6.95	Average	195	246
3	5860.00	58.48	74.00	-15.52	51.53	6.95	Peak	195	246
4	5955.00	52.36	54.00	-1.64	45.24	7.12	Average	281	13
5	5955.00	66.97	74.00	-7.03	59.85	7.12	Peak	281	13
6	11590.00	44.97	54.00	-9.03	28.87	16.10	Average	200	325
7	11590.00	58.12	74.00	-15.88	42.02	16.10	Peak	200	325

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

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

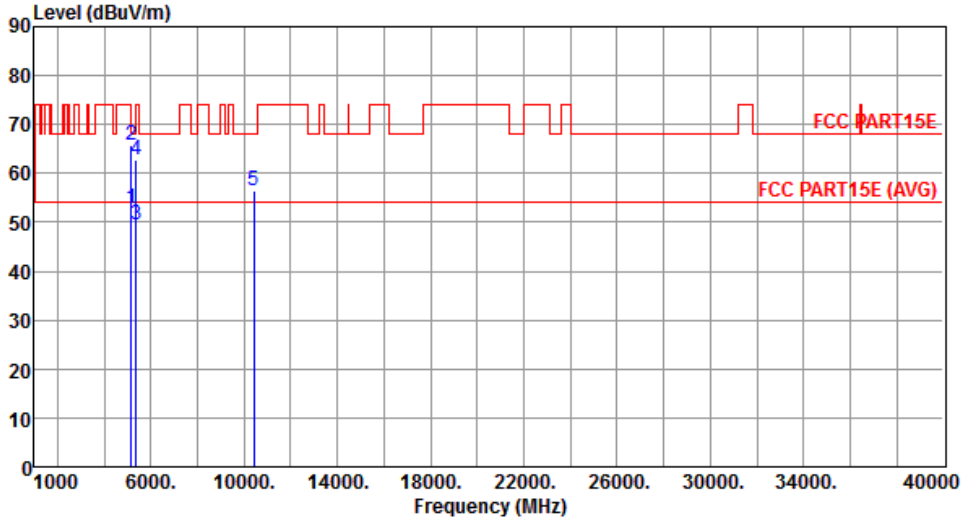
Modulation	VHT80	**Test Freq. (MHz)**	5210
Polarization	Horizontal		



	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	51.31	54.00	-2.69	45.55	5.76	Average	180	171
2	5150.00	66.25	74.00	-7.75	60.49	5.76	Peak	180	171
3	5370.00	47.68	54.00	-6.32	41.62	6.06	Average	180	171
4	5370.00	60.25	74.00	-13.75	54.19	6.06	Peak	180	171
5	10420.00	55.88	68.20	-12.32	41.21	14.67	Peak	180	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).

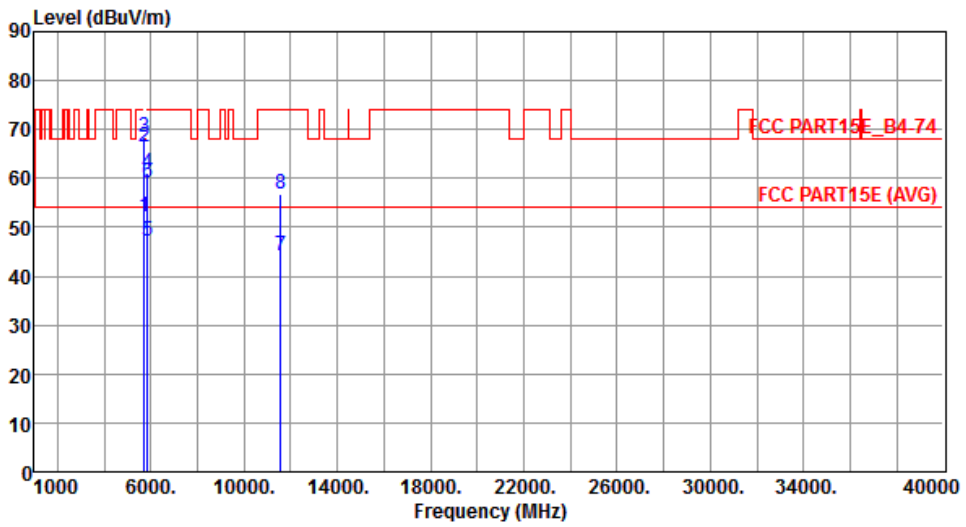
Modulation	VHT80	Test Freq. (MHz)	5210
Polarization	Vertical		



	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	52.91	54.00	-1.09	47.15	5.76	Average	206	333
2	5150.00	65.74	74.00	-8.26	59.98	5.76	Peak	206	333
3	5370.00	49.48	54.00	-4.52	43.42	6.06	Average	206	333
4	5370.00	62.61	74.00	-11.39	56.55	6.06	Peak	206	333
5	10420.00	56.58	68.20	-11.62	41.91	14.67	Peak	211	225

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

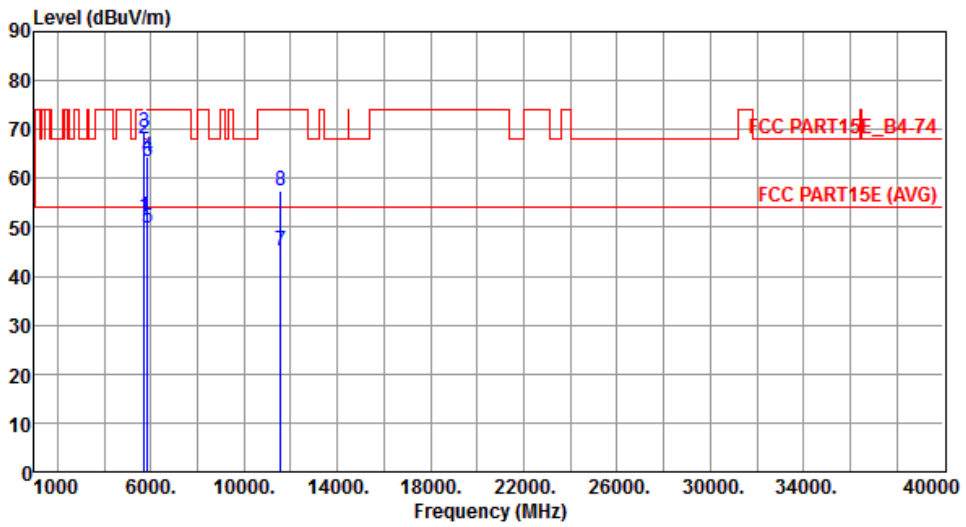
Modulation	VHT80	Test Freq. (MHz)	5775
Polarization	Horizontal		



	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	5715.00	52.14	54.00	-1.86	45.44	6.70	Average	277	198
2	5715.00	66.48	74.00	-7.52	59.78	6.70	Peak	277	198
3	5725.00	68.34	78.20	-9.86	61.63	6.71	Peak	282	206
4	5850.00	61.02	78.20	-17.18	54.07	6.95	Peak	268	355
5	5860.00	47.23	54.00	-6.77	40.28	6.95	Average	268	355
6	5860.00	59.22	74.00	-14.78	52.27	6.95	Peak	268	355
7	11550.00	44.04	54.00	-9.96	27.89	16.15	Average	258	169
8	11550.00	56.71	74.00	-17.29	40.56	16.15	Peak	258	169

Note 1: Emission Level (dBuV/m) = SA Reading (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	5715.00	52.26	54.00	-1.74	45.56	6.70	Average	206	230
2	5715.00	68.23	74.00	-5.77	61.53	6.70	Peak	206	230
3	5725.00	69.49	78.20	-8.71	62.78	6.71	Peak	206	230
4	5850.00	64.36	78.20	-13.84	57.41	6.95	Peak	191	163
5	5860.00	49.69	54.00	-4.31	42.74	6.95	Average	210	197
6	5860.00	63.29	74.00	-10.71	56.34	6.95	Peak	210	197
7	11550.00	45.03	54.00	-8.97	28.88	16.15	Average	222	186
8	11550.00	57.48	74.00	-16.52	41.33	16.15	Peak	222	186

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

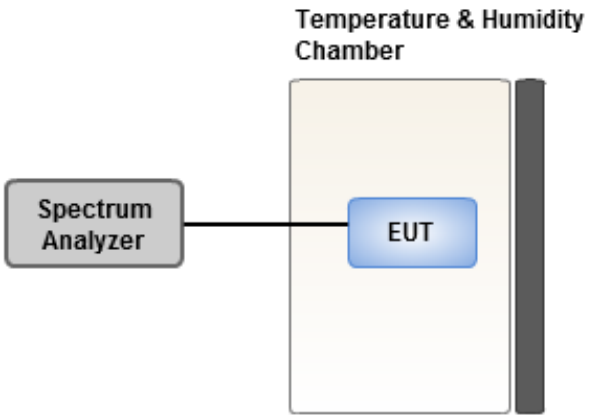
3.6.1 Limit of Frequency Stability

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	-0.12	0.55	-0.41	-0.13
T20°CVmin	-0.24	-0.10	0.48	-0.21
T50°CVnom	0.77	0.78	0.73	0.77
T40°CVnom	-0.14	-0.32	-0.21	0.31
T30°CVnom	0.19	0.46	0.90	0.91
T20°CVnom	-0.03	0.09	0.41	0.33
T10°CVnom	0.36	0.56	0.62	0.75
T0°CVnom	-0.17	-0.23	-0.23	-0.01
T-10°CVnom	-0.01	0.59	0.20	0.08
T-20°CVnom	0.24	0.48	0.62	0.52
T-30°CVnom	-0.13	0.46	0.01	0.12
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	5.12	5.57	5.36	5.23
T20°CVmin	4.15	3.88	4.11	4.22
T50°CVnom	3.64	3.91	3.51	3.87
T40°CVnom	3.51	3.45	3.91	3.89
T30°CVnom	2.41	2.74	2.76	2.48
T20°CVnom	3.01	3.59	3.05	2.91
T10°CVnom	2.47	2.51	2.55	2.96
T0°CVnom	2.33	2.56	2.71	2.40
T-10°CVnom	1.79	2.15	1.92	1.50
T-20°CVnom	0.97	0.59	0.86	1.52
T-30°CVnom	0.74	0.94	0.72	0.65
Vnom [Vac]: 120		Vmax [Vac]: 138		Vmin [Vac]: 102
Tnom [°C]: 20		Tmax [°C]: 50		Tmin [°C]: -30

4 Test laboratory information

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

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

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

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

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