FCC Test Report

FCC ID	:	**2ACKD-WIM1200-20**
Equipment	:	**Wireless access point module**
Model No.	:	**WIM1200-20**
Brand Name	:	**SKSPRUCE**
Applicant	:	**SKSpruce Technologies Inc.**
Address	:	**1885 Lundy Ave. Suite 270, San Jose, CA, United States, 95131**
Standard	:	**47 CFR FCC Part 15.407**
Received Date	:	**Nov. 07, 2016**
Tested Date	:	**Nov. 07 ~ Dec. 05, 2016**

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

Reviewed by: **Approved by:**

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

Testing Laboratory 2732

Table of Contents

Release Record

Report No.	Version	Description	Issued Date
FR6N2101AN	Rev. 01	Initial issue	Dec. 13, 2016

Summary of Test Results

FCC Rules	Test Items	Measured	Result
15.207	Conducted Emissions	[dBuV]: 0.393MHz 37.28(Margin -10.71dB) - AV	Pass
15.407(b) 15.209	Radiated Emissions	[dBuV/m at 3m]: 15720.000MHz 52.98 (Margin -1.02dB) – AV [dBuV/m at 3m]: 11570.000MHz 52.98 (Margin -1.02dB) - AV	Pass
15.407(a)	Emission Bandwidth	Meet the requirement of limit	Pass
15.407(e)	6dB bandwidth	Meet the requirement of limit	Pass
15.407(a)	RF Output Power	Max Power [dBm]: 5150-5250MHz: 19.68 5725-5850MHz: 18.13	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

5GHz Power amplifier component has 2 sources as below

Component	Brand	Model
5GHz Power amplifier	SKYWORKS	SK85726-11
5GHz Power amplifier	SKYWORKS	SK85712-11

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]	1	6-54 Mbps
5150-5250	n (HT20)	5180-5240	36-48 [4]	1	MCS 0-7
5150-5250	n (HT40)	5190-5230	38-46 [2]	1	MCS 0-7
5150-5250	ac (VHT20)	5180-5240	36-48 [4]	1	MCS 0-7
5150-5250	ac (VHT40)	5190-5230	38-46 [2]	1	MCS 0-7
5150-5250	ac (VHT80)	5210	42 [1]	1	MCS 0-7
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.					

RF General Information					
Frequency Range (MHz)	**IEEE Std. 802.11**	**Ch. Freq. (MHz)**	**Channel Number**	**Transmit Chains (N_{TX})**	**Data Rate / MCS**
5725-5850	a	5745-5825	149-165 [5]	1	6-54 Mbps
5725-5850	n (HT20)	5745-5825	149-165 [5]	1	MCS 0-7
5725-5850	n (HT40)	5755-5795	151-159 [2]	1	MCS 0-7
5725-5850	ac (VHT20)	5745-5825	149-165 [5]	1	MCS 0-7
5725-5850	ac (VHT40)	5755-5795	151-159 [2]	1	MCS 0-7
5725-5850	ac (VHT80)	5775	155 [1]	1	MCS 0-7
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.					

1.1.2 Antenna Details

Ant. No.	Brand	Model	Type	Gain (dBi)	Connector	Remark
1	ALPHA	AW3509-11	Dipole	2	UFL	---

1.1.3 Power Supply Type of Equipment under Test (EUT)

Power Supply Type	3.3 Vdc from host

1.1.4 Accessories

N/A

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	VHT 80	
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	MT76xxE QA, Version: V2.0.10.0		
Duty Cycle and Duty Factor	**Mode**	**Duty cycle (%)**	**Duty factor (dB)**
	11a	99.50%	0.02
	HT20	99.16%	0.04
	HT40	97.93%	0.09
	VHT20	99.16%	0.04
	VHT40	97.93%	0.09
	VHT80	95.12%	0.22

1.1.7 Power Setting

Configuration 1: Power amplifier / SK85726-11

For Frequency band 5150-5250 MHz		
Modulation Mode	**Test Frequency (MHz)**	**Power Set**
11a	5180	0C
11a	5200	10
11a	5240	0F
HT20	5180	0B
HT20	5200	10
HT20	5240	0F
HT40	5190	04
HT40	5230	12
VHT20	5180	0B
VHT20	5200	10
VHT20	5240	0F
VHT40	5190	04
VHT40	5230	12
VHT80	5210	01

For Frequency band 5725~5850 MHz		
Modulation Mode	**Test Frequency (MHz)**	**Power Set**
11a	5745	09
11a	5785	09
11a	5825	08
HT20	5745	09
HT20	5785	09
HT20	5825	09
HT40	5755	0C
HT40	5795	0E
VHT20	5745	09
VHT20	5785	09
VHT20	5825	09
VHT40	5755	0C
VHT40	5795	0E
VHT80	5775	0C

Configuration 2: Power amplifier / SK85712-11

For Frequency band 5150-5250 MHz		
Modulation Mode	**Test Frequency (MHz)**	**Power Set**
11a	5180	1E
11a	5200	23
11a	5240	23
HT20	5180	1E
HT20	5200	23
HT20	5240	23
HT40	5190	17
HT40	5230	24
VHT20	5180	1E
VHT20	5200	23
VHT20	5240	23
VHT40	5190	17
VHT40	5230	24
VHT80	5210	13

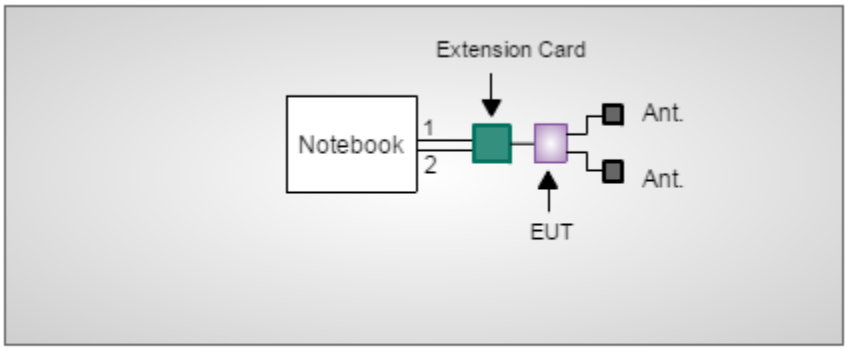
For Frequency band 5725~5850 MHz		
Modulation Mode	**Test Frequency (MHz)**	**Power Set**
11a	5745	16
11a	5785	14
11a	5825	13
HT20	5745	16
HT20	5785	14
HT20	5825	14
HT40	5755	19
HT40	5795	16
VHT20	5745	16
VHT20	5785	14
VHT20	5825	14
VHT40	5755	19
VHT40	5795	16
VHT80	5775	16

1.2 Local Support Equipment List

Support Equipment List					
No.	**Equipment**	**Brand**	**Model**	**FCC ID**	**Signal cable / Length (m)**
1	Notebook	DELL	Latitude E6430	Doc	RJ45, 1m non-shielded. USB, 1m shielded.
2	Extension Card	---	---	---	---

1.3 Test Setup Chart

Test Setup Diagram



1. RJ45, 1m non-shielded
2. USB, 1m shielded

1.4 The Equipment List

Test Item	Conducted Emission				
Test Site	Conduction room 1 / (CO01-WS)				
Tested date	Dec. 05, 2016				
Instrument	**Manufacturer**	**Model No.**	**Serial No.**	**Calibration Date**	**Calibration Until**
Receiver	R&S	ESR3	101657	Jan. 12, 2016	Jan. 11, 2017
LISN	SCHWARZBECK	Schwarzbeck 8127	8127-667	Nov. 08, 2016	Nov. 07, 2017
RF Cable-CON	EMC	EMCCFD300-BM-BM-6000	50821	Dec. 21, 2015	Dec. 20, 2016
Measurement Software	AUDIX	e3	6.120210k	NA	NA
Note: Calibration Interval of instruments listed above is one year.					

Test Item	Radiated Emission				
Test Site	966 chamber1 / (03CH01-WS)				
Tested date	Nov. 07 ~ Nov. 24, 2016				
Instrument	**Manufacturer**	**Model No.**	**Serial No.**	**Calibration Date**	**Calibration Until**
Spectrum Analyzer	R&S	FSV40	101498	Dec. 13, 2015	Dec. 12, 2016
Receiver	R&S	ESR3	101657	Jan. 12, 2016	Jan. 11, 2017
Bilog Antenna	SCHWARZBECK	VULB9168	VULB9168-522	Aug. 04, 2016	Aug. 03, 2017
Horn Antenna 1G-18G	SCHWARZBECK	BBHA 9120 D	BBHA 9120 D 1096	Dec. 16, 2015	Dec. 15, 2016
Horn Antenna 18G-40G	SCHWARZBECK	BBHA 9170	BBHA 9170517	Oct. 25, 2016	Oct. 24, 2017
Preamplifier	EMC	EMC02325	980225	Aug. 05, 2016	Aug. 04, 2017
Preamplifier	Agilent	83017A	MY39501308	Oct. 06, 2016	Oct. 05, 2017
Preamplifier	EMC	EMC184045B	980192	Aug. 24, 2016	Aug. 23, 2017
RF Cable	HUBER+SUHNER	SUCOFLEX104	MY16014/4	Dec. 10, 2015	Dec. 09, 2016
RF Cable	HUBER+SUHNER	SUCOFLEX104	MY16019/4	Dec. 10, 2015	Dec. 09, 2016
RF Cable	HUBER+SUHNER	SUCOFLEX104	MY16139/4	Dec. 10, 2015	Dec. 09, 2016
LF cable 1M	EMC	EMCCFD400-NM-NM-1000	16052	Dec. 10, 2015	Dec. 09, 2016
LF cable 3M	Woken	CFD400NL-LW	CFD400NL-001	Dec. 10, 2015	Dec. 09, 2016
LF cable 10M	Woken	CFD400NL-LW	CFD400NL-002	Dec. 10, 2015	Dec. 09, 2016
Measurement Software	AUDIX	e3	6.120210g	NA	NA
Note: Calibration Interval of instruments listed above is one year.					

Test Item	Radiated Emission				
Test Site	966 chamber1 / (03CH01-WS)				
Tested date	Nov. 24, 2016				
Instrument	**Manufacturer**	**Model No.**	**Serial No.**	**Calibration Date**	**Calibration Until**
Spectrum Analyzer	R&S	FSV40	101498	Dec. 13, 2015	Dec. 12, 2016
Receiver	R&S	ESR3	101657	Jan. 12, 2016	Jan. 11, 2017
Bilog Antenna	SCHWARZBECK	VULB9168	VULB9168-522	Aug. 04, 2016	Aug. 03, 2017
Horn Antenna 1G-18G	SCHWARZBECK	BBHA 9120 D	BBHA 9120 D 1096	Dec. 16, 2015	Dec. 15, 2016
Horn Antenna 18G-40G	SCHWARZBECK	BBHA 9170	BBHA 9170517	Oct. 25, 2016	Oct. 24, 2017
Loop Antenna	R&S	HFH2-Z2	100330	Nov. 10, 2016	Nov. 09, 2017
Loop Antenna Cable	KOAX KABEL	101354-BW	101354-BW	Dec. 10, 2015	Dec. 09, 2016
Preamplifier	EMC	EMC02325	980225	Aug. 05, 2016	Aug. 04, 2017
Preamplifier	Agilent	83017A	MY39501308	Oct. 06, 2016	Oct. 05, 2017
Preamplifier	EMC	EMC184045B	980192	Aug. 24, 2016	Aug. 23, 2017
RF Cable	HUBER+SUHNER	SUCOFLEX104	MY16014/4	Dec. 10, 2015	Dec. 09, 2016
RF Cable	HUBER+SUHNER	SUCOFLEX104	MY16019/4	Dec. 10, 2015	Dec. 09, 2016
RF Cable	HUBER+SUHNER	SUCOFLEX104	MY16139/4	Dec. 10, 2015	Dec. 09, 2016
LF cable 1M	EMC	EMCCFD400-NM-NM-1000	16052	Dec. 10, 2015	Dec. 09, 2016
LF cable 3M	Woken	CFD400NL-LW	CFD400NL-001	Dec. 10, 2015	Dec. 09, 2016
LF cable 10M	Woken	CFD400NL-LW	CFD400NL-002	Dec. 10, 2015	Dec. 09, 2016
Measurement Software	AUDIX	e3	6.120210g	NA	NA
Note: Calibration Interval of instruments listed above is one year.					

Test Item	RF Conducted				
Test Site	(TH01-WS)				
Tested date	Nov. 30 ~ Dec. 02, 2016				
Instrument	**Manufacturer**	**Model No.**	**Serial No.**	**Calibration Date**	**Calibration Until**
Spectrum Analyzer	R&S	FSV40	101063	Feb. 17, 2016	Feb. 16, 2017
Spectrum Analyzer	Agilent	N9010A	MY53400091	Sep. 09, 2016	Sep. 08, 2017
Power Meter	Anritsu	ML2495A	1241002	Oct. 06, 2016	Oct. 05, 2017
Power Sensor	Anritsu	MA2411B	1207366	Oct. 06, 2016	Oct. 05, 2017
AC POWER SOURCE	APC	AFC-500W	F312060012	Oct. 28, 2016	Oct. 27, 2017
Measurement Software	Sporton	Sporton_1	1.3.30	NA	NA
Note: Calibration Interval of instruments listed above is one year.					

1.5 Testing Applied Standards

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

47 CFR FCC Part 15.407
ANSI C63.10-2013
FCC KDB 789033 D02 General UNII Test Procedures New Rules v01r03
FCC KDB 644545 D03 Guidance for IEEE 802 11ac New Rules v01
FCC KDB 412172 D01 Determining ERP and EIRP v01r01

1.6 Measurement Uncertainty

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

Measurement Uncertainty	
Parameters	**Uncertainty**
Bandwidth	±34.134 Hz
Conducted power	±0.808 dB
Frequency error	±34.134 Hz
Power density	±0.463 dB
Conducted emission	±2.670 dB
AC conducted emission	±2.90 dB
Radiated emission ≤ 1GHz	±3.66 dB
Radiated emission > 1GHz	±5.63 dB
Time	±0.1%
Temperature	±0.6 ^{o}C

2 Test Configuration

2.1 Testing Condition

Test Item	Test Site	Ambient Condition	Tested By
AC Conduction	CO01-WS	21°C / 52%	Howard Huang
Radiated Emissions	03CH01-WS	22-23°C / 62-63%	Vincent Yeh Kevin Lee
RF Conducted	TH01-WS	22°C / 61-64%	Alex Huang

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

2.2 The Worst Test Modes and Channel Details

For Frequency band 5150-5250 MHz				
Test item	**Modulation Mode**	**Test Frequency (MHz)**	**Data Rate (Mbps) / MCS**	**Test Configuration**
Conducted Emissions	VHT20	5200	MCS 0	1, 2
Radiated Emissions ≤1GHz	VHT20	5200	MCS 0	1, 2
RF Output Power	11a	5180 / 5200 / 5240	6 Mbps	1, 2
	HT20	5180 / 5200 / 5240	MCS 0	
	HT40	5190 / 5230	MCS 0	
	VHT20	5180 / 5200 / 5240	MCS 0	
	VHT40	5190 / 5230	MCS 0	
	VHT80	5210	MCS 0	
Radiated Emissions >1GHz Emission Bandwidth Peak Power Spectral Density	11a	5180 / 5200 / 5240	6 Mbps	1, 2
	VHT20	5180 / 5200 / 5240	MCS 0	
	VHT40	5190 / 5230	MCS 0	
	VHT80	5210	MCS 0	
Frequency Stability	Un-modulation	5200	---	1, 2

NOTE:

1. The EUT was pretested with 3 orientations placed on the table for the radiated emission measurement – X, Y, and Z-plane. The **Z-plane** results were found as the worst case and were shown in this report.
2. The test configurations are listed as follows:

   Configuration 1: Power amplifier / SK85726-11
   Configuration 2: Power amplifier / SK85712-11

For Frequency band 5725-5850 MHz				
Test item	**Modulation Mode**	**Test Frequency (MHz)**	**Data Rate (Mbps) / MCS**	**Test Configuration**
Conducted Emissions	VHT20	5825	MCS 0	1, 2
Radiated Emissions ≤1GHz	VHT20	5825	MCS 0	1, 2
RF Output Power	11a	5745 / 5785 / 5825	6 Mbps	1, 2
	HT20	5745 / 5785 / 5825	MCS 0	
	HT40	5755 / 5795	MCS 0	
	VHT20	5745 / 5785 / 5825	MCS 0	
	VHT40	5755 / 5795	MCS 0	
	VHT80	5775	MCS 0	
Radiated Emissions >1GHz Emission Bandwidth 6dB bandwidth Peak Power Spectral Density	11a	5745 / 5785 / 5825	6 Mbps	1, 2
	VHT20	5745 / 5785 / 5825	MCS 0	
	VHT40	5755 / 5795	MCS 0	
	VHT80	5775	MCS 0	
Frequency Stability	Un-modulation	5785	---	1, 2

NOTE:

1. The EUT was pretested with 3 orientations placed on the table for the radiated emission measurement – X, Y, and Z-plane. The **Z-plane** results were found as the worst case and were shown in this report.
2. The test configurations are listed as follows:
   Configuration 1: Power amplifier / SK85726-11
   Configuration 2: Power amplifier / SK85712-11

3 Transmitter Test Results

3.1 Conducted Emissions

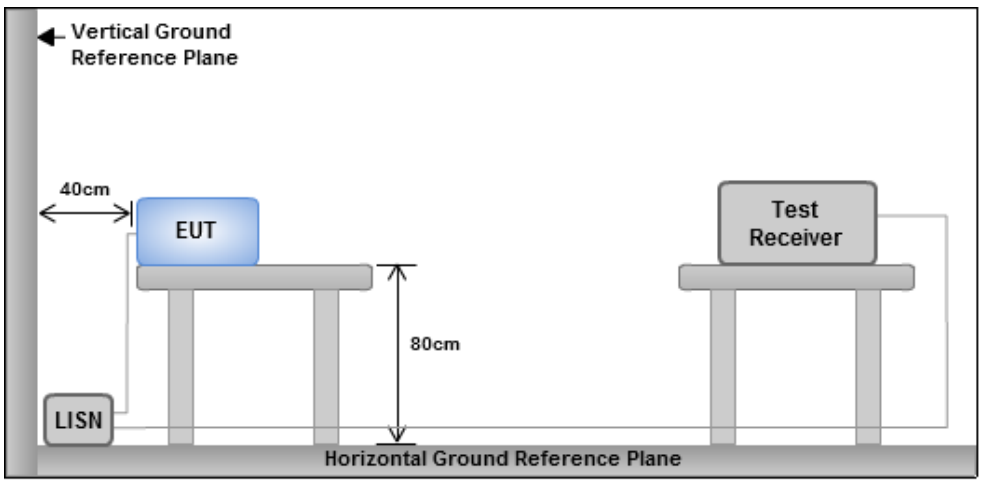
3.1.1 Limit of Conducted Emissions

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



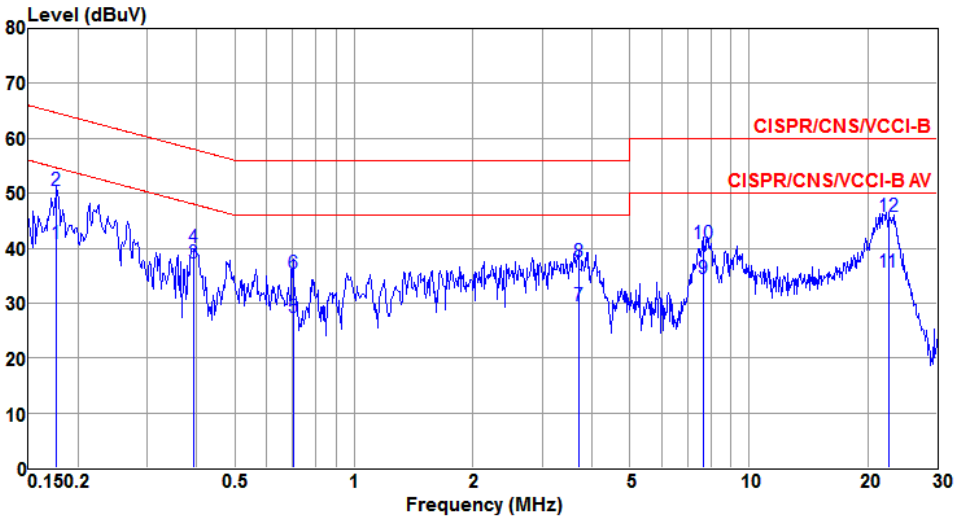
Note: 1. Support units were connected to second LISN.

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

Configuration 1: Power amplifier / SK85726-11

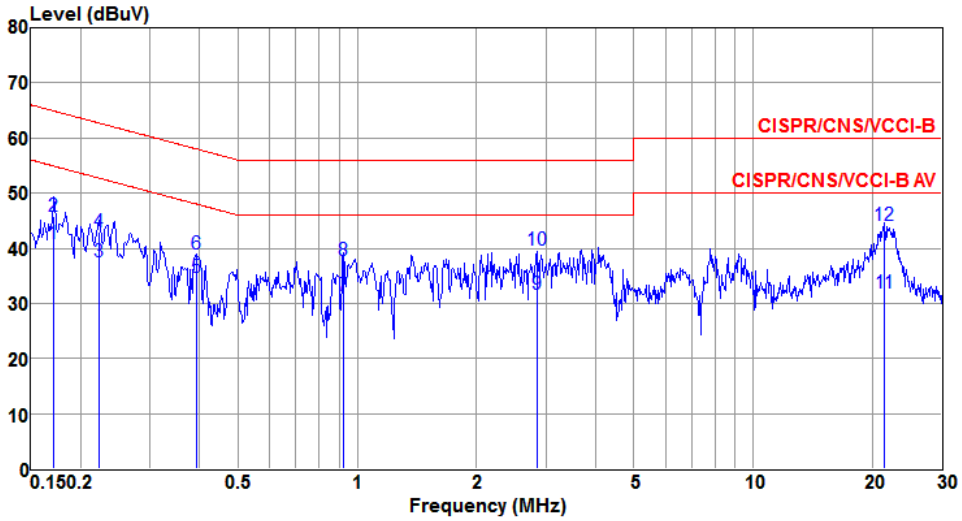
Modulation	VHT20	Test Freq. (MHz)	5200
Power Phase	Line		



	Freq	Level	Limit Line	Over Limit	Read Level	LISN factor	cable loss	Remark
	MHz	dBuV	dBuV	dB	dBuV	dB	dB	
1	0.177	40.74	54.64	-13.90	40.63	0.09	0.02	Average
2	0.177	50.58	64.64	-14.06	50.47	0.09	0.02	QP
3@	0.393	37.28	47.99	-10.71	37.19	0.06	0.03	Average
4	0.393	40.15	57.99	-17.84	40.06	0.06	0.03	QP
5	0.701	27.34	46.00	-18.66	27.22	0.07	0.05	Average
6	0.701	35.48	56.00	-20.52	35.36	0.07	0.05	QP
7	3.700	29.62	46.00	-16.38	29.33	0.17	0.12	Average
8	3.700	37.53	56.00	-18.47	37.24	0.17	0.12	QP
9	7.646	34.35	50.00	-15.65	34.01	0.19	0.15	Average
10	7.646	40.83	60.00	-19.17	40.49	0.19	0.15	QP
11	22.535	35.62	50.00	-14.38	35.00	0.41	0.21	Average
12	22.535	45.86	60.00	-14.14	45.24	0.41	0.21	QP

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

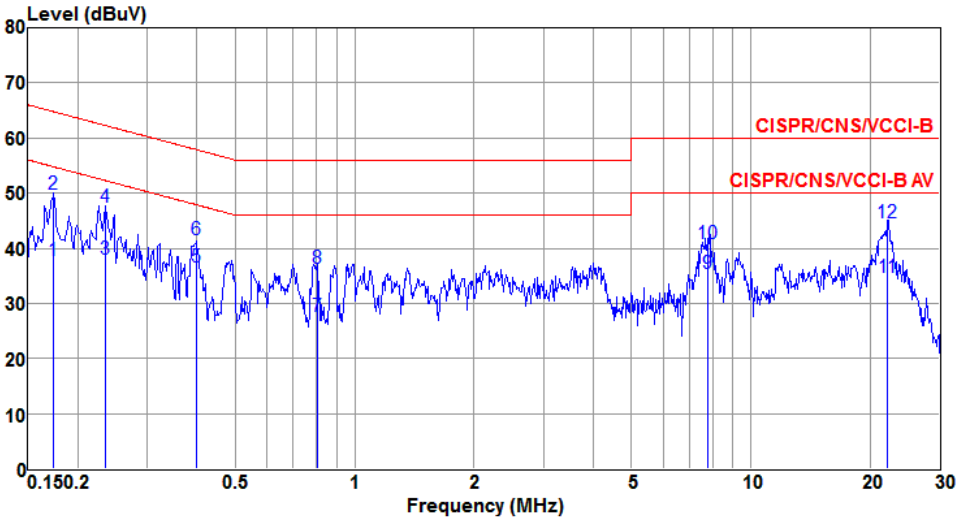
Modulation	VHT20	Test Freq. (MHz)	5200
Power Phase	Neutral		



	Freq	Level	Limit Line	Over Limit	Read Level	LISN factor	cable loss	Remark
	MHz	dBuV	dBuV	dB	dBuV	dB	dB	
1	0.171	40.89	54.90	-14.01	40.77	0.10	0.02	Average
2	0.171	45.80	64.90	-19.10	45.68	0.10	0.02	QP
3	0.222	37.55	52.74	-15.19	37.43	0.10	0.02	Average
4	0.222	43.04	62.74	-19.70	42.92	0.10	0.02	QP
5@	0.391	34.80	48.03	-13.23	34.64	0.13	0.03	Average
6	0.391	38.98	58.03	-19.05	38.82	0.13	0.03	QP
7	0.923	31.32	46.00	-14.68	31.17	0.09	0.06	Average
8	0.923	37.87	56.00	-18.13	37.72	0.09	0.06	QP
9	2.839	31.57	46.00	-14.43	31.32	0.15	0.10	Average
10	2.839	39.67	56.00	-16.33	39.42	0.15	0.10	QP
11	21.486	31.95	50.00	-18.05	31.33	0.42	0.20	Average
12	21.486	44.09	60.00	-15.91	43.47	0.42	0.20	QP

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

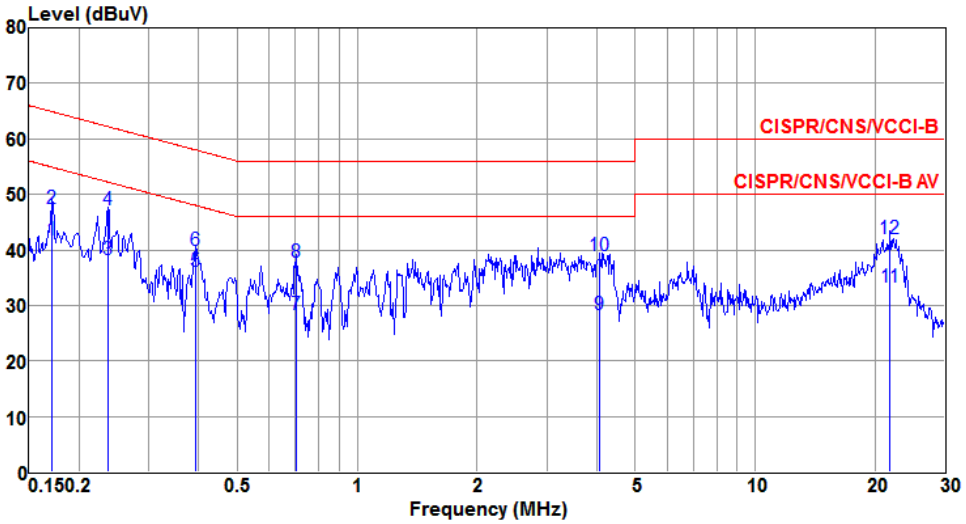
Modulation	VHT20	Test Freq. (MHz)	5825
Power Phase	Line		



	Freq	Level	Limit Line	Over Limit	Read Level	LISN factor	cable loss	Remark
	MHz	dBuV	dBuV	dB	dBuV	dB	dB	
1	0.174	37.72	54.77	-17.05	37.61	0.09	0.02	Average
2	0.174	49.82	64.77	-14.95	49.71	0.09	0.02	QP
3	0.234	38.06	52.30	-14.24	37.95	0.09	0.02	Average
4	0.234	47.54	62.30	-14.76	47.43	0.09	0.02	QP
5@	0.398	36.66	47.90	-11.24	36.57	0.06	0.03	Average
6	0.398	41.49	57.90	-16.41	41.40	0.06	0.03	QP
7	0.804	27.54	46.00	-18.46	27.42	0.07	0.05	Average
8	0.804	36.28	56.00	-19.72	36.16	0.07	0.05	QP
9	7.769	35.45	50.00	-14.55	35.11	0.19	0.15	Average
10	7.769	40.89	60.00	-19.11	40.55	0.19	0.15	QP
11	22.180	34.68	50.00	-15.32	34.06	0.41	0.21	Average
12	22.180	44.69	60.00	-15.31	44.07	0.41	0.21	QP

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

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

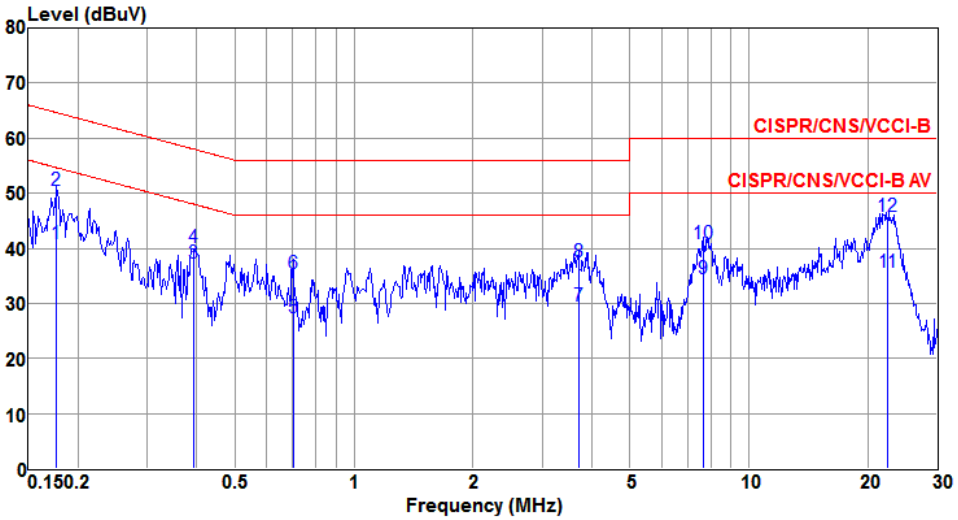


	Freq	Level	Limit Line	Over Limit	Read Level	LISN factor	cable loss	Remark
	MHz	dBuV	dBuV	dB	dBuV	dB	dB	
1	0.171	41.85	54.90	-13.05	41.73	0.10	0.02	Average
2	0.171	47.44	64.90	-17.46	47.32	0.10	0.02	QP
3	0.237	38.23	52.22	-13.99	38.11	0.10	0.02	Average
4	0.237	47.28	62.22	-14.94	47.16	0.10	0.02	QP
5@	0.393	36.02	47.99	-11.97	35.86	0.13	0.03	Average
6	0.393	39.93	57.99	-18.06	39.77	0.13	0.03	QP
7	0.705	28.34	46.00	-17.66	28.18	0.11	0.05	Average
8	0.705	37.74	56.00	-18.26	37.58	0.11	0.05	QP
9	4.070	28.33	46.00	-17.67	28.07	0.14	0.12	Average
10	4.070	38.86	56.00	-17.14	38.60	0.14	0.12	QP
11	21.830	33.24	50.00	-16.76	32.61	0.43	0.20	Average
12	21.830	41.97	60.00	-18.03	41.34	0.43	0.20	QP

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

Configuration 2: Power amplifier / SK85712-11

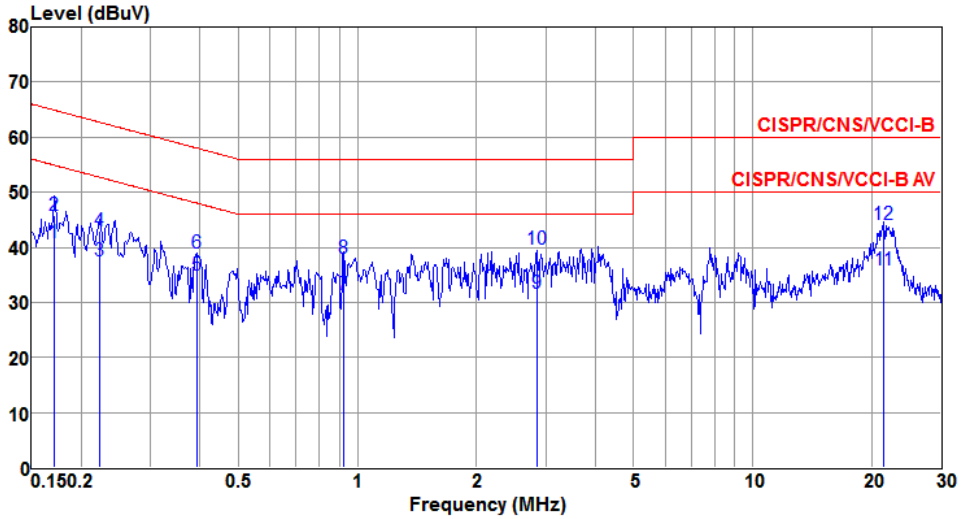
Modulation	VHT20	**Test Freq. (MHz)**	5200
Power Phase	Line		



	Freq	Level	Limit Line	Over Limit	Read Level	LISN factor	cable loss	Remark
	MHz	dBuV	dBuV	dB	dBuV	dB	dB	
1	0.177	40.74	54.64	-13.90	40.63	0.09	0.02	Average
2	0.177	50.58	64.64	-14.06	50.47	0.09	0.02	QP
3@	0.393	37.28	47.99	-10.71	37.19	0.06	0.03	Average
4	0.393	40.15	57.99	-17.84	40.06	0.06	0.03	QP
5	0.701	27.34	46.00	-18.66	27.22	0.07	0.05	Average
6	0.701	35.48	56.00	-20.52	35.36	0.07	0.05	QP
7	3.700	29.62	46.00	-16.38	29.33	0.17	0.12	Average
8	3.700	37.53	56.00	-18.47	37.24	0.17	0.12	QP
9	7.648	34.35	50.00	-15.65	34.01	0.19	0.15	Average
10	7.648	40.85	60.00	-19.15	40.51	0.19	0.15	QP
11	22.533	35.59	50.00	-14.41	34.97	0.41	0.21	Average
12	22.533	45.86	60.00	-14.14	45.24	0.41	0.21	QP

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

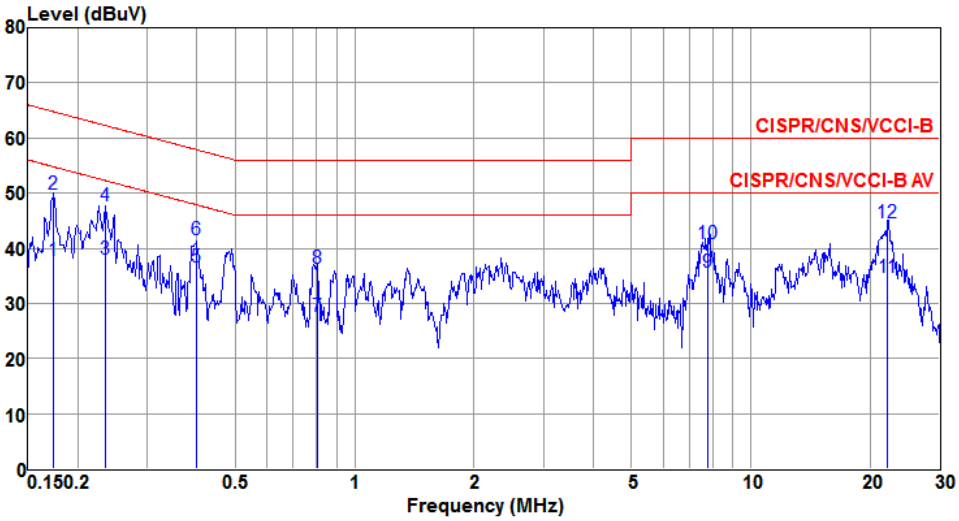
Modulation	VHT20	Test Freq. (MHz)	5200
Power Phase	Neutral		



	Freq	Level	Limit Line	Over Limit	Read Level	LISN factor	cable loss	Remark
	MHz	dBuV	dBuV	dB	dBuV	dB	dB	
1	0.171	40.78	54.90	-14.12	40.66	0.10	0.02	Average
2	0.171	45.73	64.90	-19.17	45.61	0.10	0.02	QP
3	0.222	37.61	52.73	-15.12	37.49	0.10	0.02	Average
4	0.222	43.00	62.73	-19.73	42.88	0.10	0.02	QP
5@	0.393	34.82	48.00	-13.18	34.66	0.13	0.03	Average
6	0.393	39.05	58.00	-18.95	38.89	0.13	0.03	QP
7	0.923	31.36	46.00	-14.64	31.21	0.09	0.06	Average
8	0.923	37.94	56.00	-18.06	37.79	0.09	0.06	QP
9	2.839	31.57	46.00	-14.43	31.32	0.15	0.10	Average
10	2.839	39.67	56.00	-16.33	39.42	0.15	0.10	QP
11	21.482	35.95	50.00	-14.05	35.33	0.42	0.20	Average
12	21.482	44.05	60.00	-15.95	43.43	0.42	0.20	QP

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

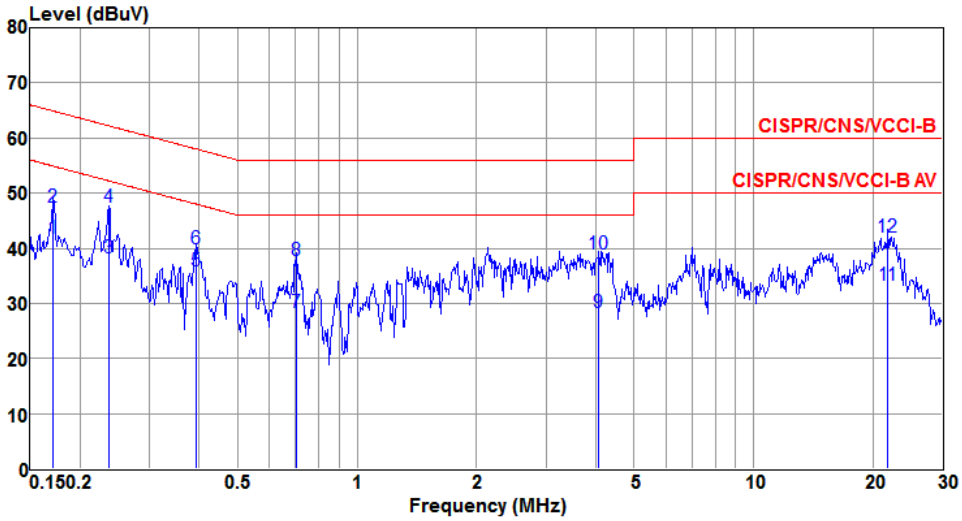
Modulation	VHT20	Test Freq. (MHz)	5825
Power Phase	Line		



	Freq	Level	Limit Line	Over Limit	Read Level	LISN factor	cable loss	Remark
	MHz	dBuV	dBuV	dB	dBuV	dB	dB	
1	0.174	37.80	54.76	-16.96	37.69	0.09	0.02	Average
2	0.174	49.87	64.76	-14.89	49.76	0.09	0.02	QP
3	0.234	38.03	52.30	-14.27	37.92	0.09	0.02	Average
4	0.234	47.60	62.30	-14.70	47.49	0.09	0.02	QP
5@	0.398	36.68	47.89	-11.21	36.59	0.06	0.03	Average
6	0.398	41.55	57.89	-16.34	41.46	0.06	0.03	QP
7	0.805	27.58	46.00	-18.42	27.46	0.07	0.05	Average
8	0.805	36.28	56.00	-19.72	36.16	0.07	0.05	QP
9	7.763	35.53	50.00	-14.47	35.19	0.19	0.15	Average
10	7.763	40.89	60.00	-19.11	40.55	0.19	0.15	QP
11	22.180	34.68	50.00	-15.32	34.06	0.41	0.21	Average
12	22.180	44.69	60.00	-15.31	44.07	0.41	0.21	QP

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

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



	Freq	Level	Limit Line	Over Limit	Read Level	LISN factor	cable loss	Remark
	MHz	dBuV	dBuV	dB	dBuV	dB	dB	
1	0.171	41.85	54.90	-13.05	41.73	0.10	0.02	Average
2	0.171	47.51	64.89	-17.38	47.39	0.10	0.02	QP
3	0.237	38.31	52.21	-13.90	38.19	0.10	0.02	Average
4	0.237	47.35	62.21	-14.86	47.23	0.10	0.02	QP
5@	0.393	35.97	47.99	-12.02	35.81	0.13	0.03	Average
6	0.393	39.95	57.99	-18.04	39.79	0.13	0.03	QP
7	0.705	28.35	46.00	-17.65	28.19	0.11	0.05	Average
8	0.705	37.75	56.00	-18.25	37.59	0.11	0.05	QP
9	4.071	28.37	46.00	-17.63	28.11	0.14	0.12	Average
10	4.071	38.89	56.00	-17.11	38.63	0.14	0.12	QP
11	21.832	33.24	50.00	-16.76	32.61	0.43	0.20	Average
12	21.832	41.97	60.00	-18.03	41.34	0.43	0.20	QP

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

3.2 Emission Bandwidth

3.2.1 Limit of Emission bandwidth

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

3.2.2 Test Procedures

26dB Bandwidth

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

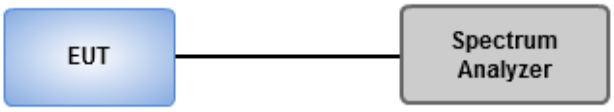
Occupied Bandwidth

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

6dB Bandwidth

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

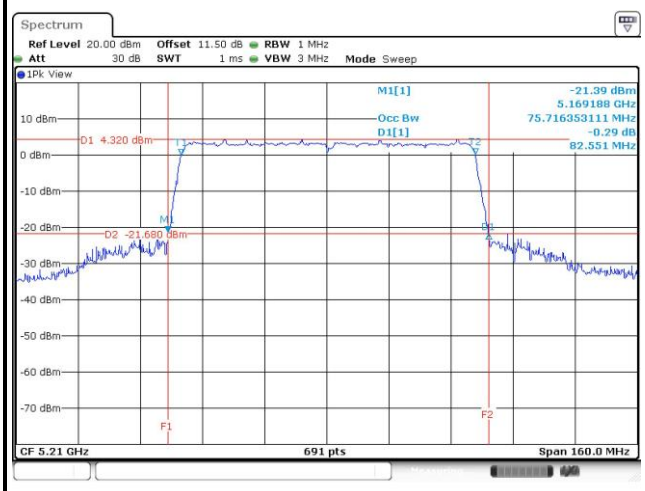
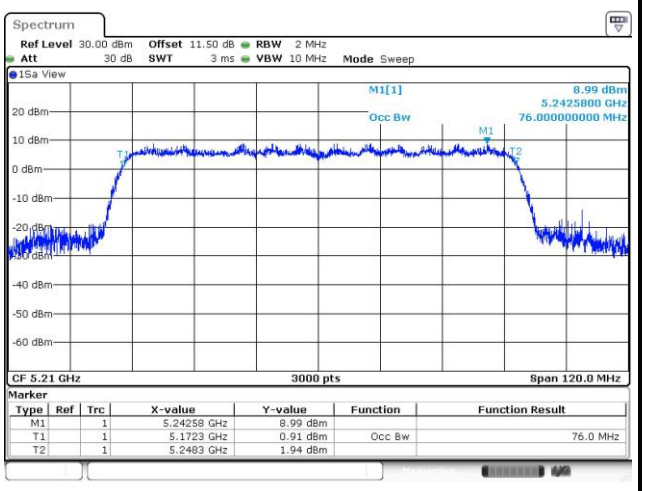
3.2.3 Test Setup



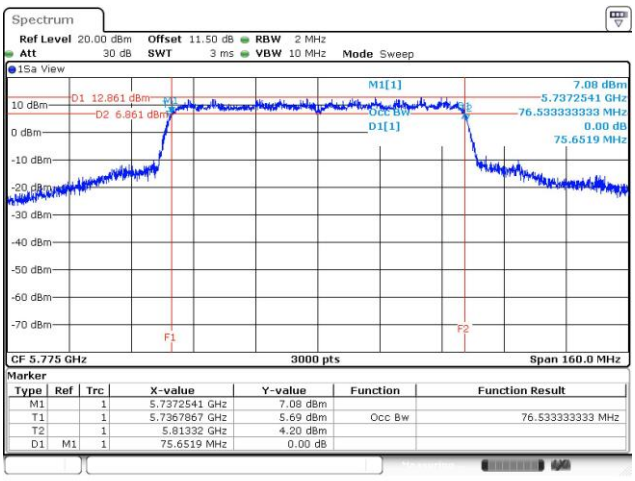
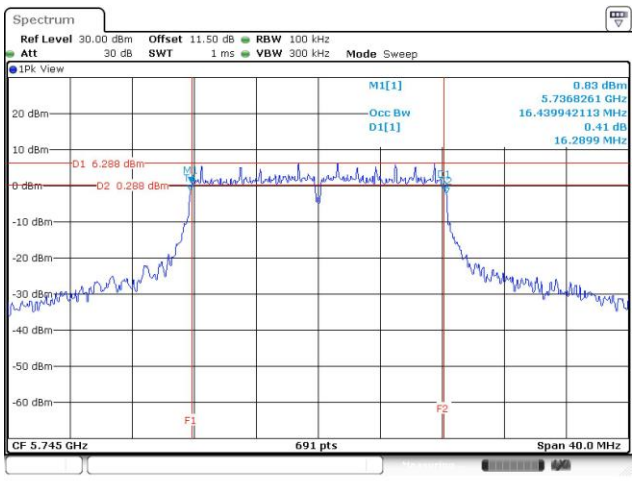
3.2.4 Test Result of Emission Bandwidth

Configuration 1: Power amplifier / SK85726-11

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	1	5180	28.12	---	---	---	16.83	---	---	---
11a	1	5200	35.88	---	---	---	18.02	---	---	---
11a	1	5240	35.65	---	---	---	17.90	---	---	---
VHT20	1	5180	27.30	---	---	---	17.64	---	---	---
VHT20	1	5200	40.72	---	---	---	17.97	---	---	---
VHT20	1	5240	40.65	---	---	---	17.87	---	---	---
VHT40	1	5190	41.86	---	---	---	36.34	---	---	---
VHT40	1	5230	74.64	---	---	---	37.00	---	---	---
VHT80	1	5210	82.55	---	---	---	76.00	---	---	---

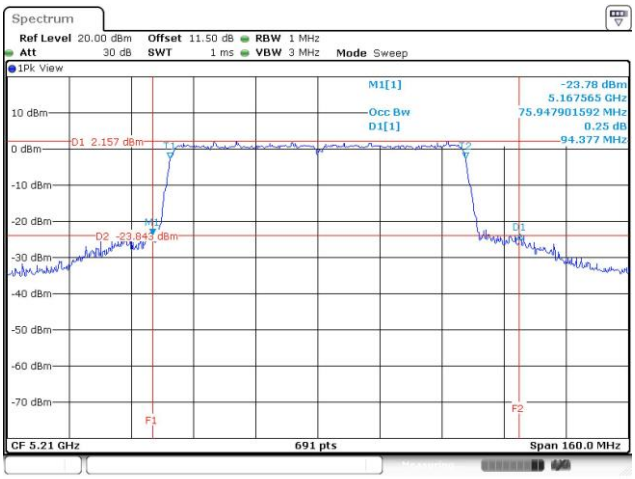
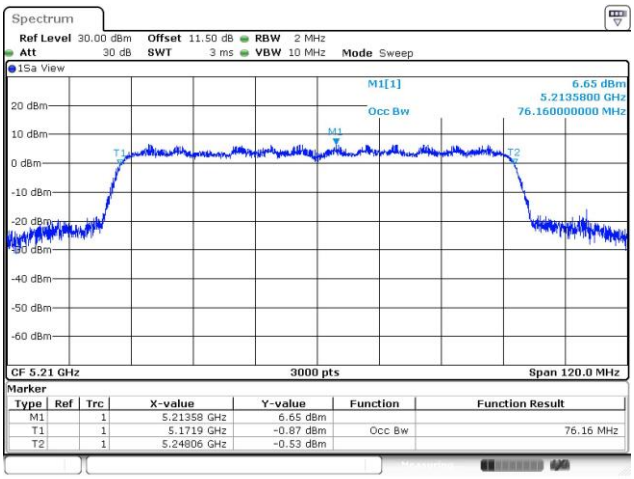
Worst Plot of 26dB Bandwidth	Worst Plot of 99% Bandwidth
	

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	1	5745	16.88	---	---	---	16.29	---	---	---	0.5
11a	1	5785	16.96	---	---	---	16.35	---	---	---	0.5
11a	1	5825	16.99	---	---	---	16.35	---	---	---	0.5
VHT20	1	5745	17.68	---	---	---	16.99	---	---	---	0.5
VHT20	1	5785	17.77	---	---	---	16.58	---	---	---	0.5
VHT20	1	5825	17.84	---	---	---	16.81	---	---	---	0.5
VHT40	1	5755	36.61	---	---	---	35.83	---	---	---	0.5
VHT40	1	5795	36.67	---	---	---	35.59	---	---	---	0.5
VHT80	1	5775	75.65	---	---	---	75.13	---	---	---	0.5

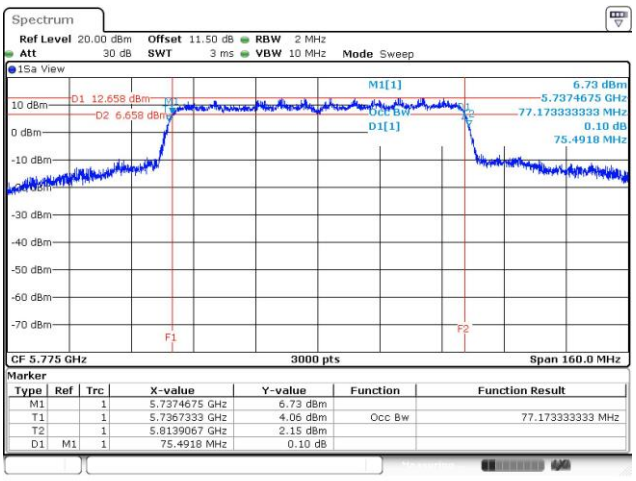
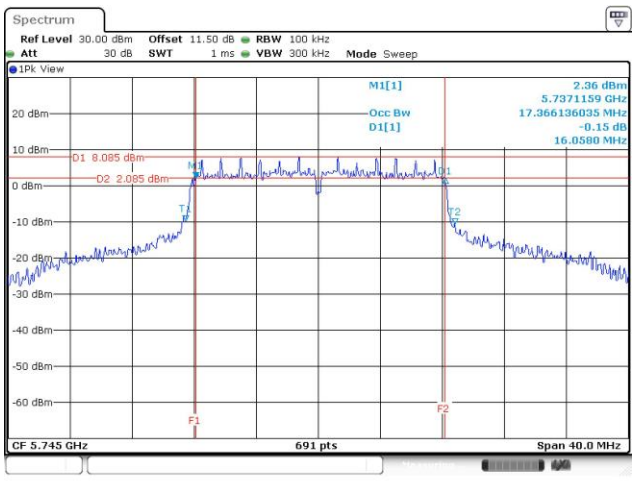
Worst Plot of 99% Bandwidth	Worst Plot of 6dB Bandwidth
	

Configuration 2: Power amplifier / SK85712-11

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	1	5180	33.86	---	---	---	16.97	---	---	---
11a	1	5200	38.84	---	---	---	18.34	---	---	---
11a	1	5240	42.32	---	---	---	18.46	---	---	---
VHT20	1	5180	40.14	---	---	---	17.80	---	---	---
VHT20	1	5200	46.38	---	---	---	18.97	---	---	---
VHT20	1	5240	46.30	---	---	---	19.16	---	---	---
VHT40	1	5190	41.86	---	---	---	36.36	---	---	---
VHT40	1	5230	86.23	---	---	---	37.50	---	---	---
VHT80	1	5210	94.38	---	---	---	76.16	---	---	---

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	1	5745	17.99	---	---	---	16.06	---	---	---	0.5
11a	1	5785	17.92	---	---	---	16.29	---	---	---	0.5
11a	1	5825	18.60	---	---	---	16.35	---	---	---	0.5
VHT20	1	5745	19.71	---	---	---	16.52	---	---	---	0.5
VHT20	1	5785	19.48	---	---	---	16.58	---	---	---	0.5
VHT20	1	5825	21.92	---	---	---	16.58	---	---	---	0.5
VHT40	1	5755	41.15	---	---	---	35.36	---	---	---	0.5
VHT40	1	5795	38.45	---	---	---	35.48	---	---	---	0.5
VHT80	1	5775	77.17	---	---	---	75.13	---	---	---	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 may 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

Configuration 1: Power amplifier / SK85726-11

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	1	5180	18.11	---	---	---	64.714	18.11	30.00
11a	1	5200	19.67	---	---	---	92.683	19.67	30.00
11a	1	5240	19.18	---	---	---	82.794	19.18	30.00
HT20	1	5180	17.69	---	---	---	58.749	17.69	30.00
HT20	1	5200	19.64	---	---	---	92.045	19.64	30.00
HT20	1	5240	19.01	---	---	---	79.616	19.01	30.00
HT40	1	5190	13.59	---	---	---	22.856	13.59	30.00
HT40	1	5230	19.39	---	---	---	86.896	19.39	30.00
VHT20	1	5180	17.72	---	---	---	59.156	17.72	30.00
VHT20	1	5200	19.68	---	---	---	92.897	**19.68**	30.00
VHT20	1	5240	19.05	---	---	---	80.353	19.05	30.00
VHT40	1	5190	13.64	---	---	---	23.121	13.64	30.00
VHT40	1	5230	19.43	---	---	---	87.700	19.43	30.00
VHT80	1	5210	10.91	---	---	---	12.331	10.91	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	1	5745	17.61	---	---	---	57.677	17.61	30.00
11a	1	5785	17.96	---	---	---	62.517	17.96	30.00
11a	1	5825	17.93	---	---	---	62.087	17.93	30.00
HT20	1	5745	17.21	---	---	---	52.602	17.21	30.00
HT20	1	5785	17.77	---	---	---	59.841	17.77	30.00
HT20	1	5825	18.09	---	---	---	64.417	18.09	30.00
HT40	1	5755	17.80	---	---	---	60.256	17.80	30.00
HT40	1	5795	17.61	---	---	---	57.677	17.61	30.00
VHT20	1	5745	17.27	---	---	---	53.333	17.27	30.00
VHT20	1	5785	17.81	---	---	---	60.395	17.81	30.00
VHT20	1	5825	18.13	---	---	---	65.013	**18.13**	30.00
VHT40	1	5755	17.85	---	---	---	60.954	17.85	30.00
VHT40	1	5795	17.68	---	---	---	58.614	17.68	30.00
VHT80	1	5775	16.69	---	---	---	46.666	16.69	30.00

Configuration 2: Power amplifier / SK85712-11

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	1	5180	17.82	---	---	---	60.534	17.82	30.00
11a	1	5200	19.46	---	---	---	88.308	19.46	30.00
11a	1	5240	19.47	---	---	---	88.512	**19.47**	30.00
HT20	1	5180	17.47	---	---	---	55.847	17.47	30.00
HT20	1	5200	19.22	---	---	---	83.560	19.22	30.00
HT20	1	5240	19.25	---	---	---	84.140	19.25	30.00
HT40	1	5190	13.50	---	---	---	22.387	13.50	30.00
HT40	1	5230	18.99	---	---	---	79.250	18.99	30.00
VHT20	1	5180	17.51	---	---	---	56.364	17.51	30.00
VHT20	1	5200	19.27	---	---	---	84.528	19.27	30.00
VHT20	1	5240	19.31	---	---	---	85.310	19.31	30.00
VHT40	1	5190	13.54	---	---	---	22.594	13.54	30.00
VHT40	1	5230	19.03	---	---	---	79.983	19.03	30.00
VHT80	1	5210	10.45	---	---	---	11.092	10.45	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	1	5745	17.52	---	---	---	56.494	17.52	30.00
11a	1	5785	17.56	---	---	---	57.016	17.56	30.00
11a	1	5825	17.51	---	---	---	56.364	17.51	30.00
HT20	1	5745	17.88	---	---	---	61.376	17.88	30.00
HT20	1	5785	17.41	---	---	---	55.081	17.41	30.00
HT20	1	5825	17.79	---	---	---	60.117	17.79	30.00
HT40	1	5755	18.07	---	---	---	64.121	18.07	30.00
HT40	1	5795	17.33	---	---	---	54.075	17.33	30.00
VHT20	1	5745	17.92	---	---	---	61.944	17.92	30.00
VHT20	1	5785	17.45	---	---	---	55.590	17.45	30.00
VHT20	1	5825	17.82	---	---	---	60.534	17.82	30.00
VHT40	1	5755	18.13	---	---	---	65.013	**18.13**	30.00
VHT40	1	5795	17.40	---	---	---	54.954	17.40	30.00
VHT80	1	5775	16.30	---	---	---	42.658	16.30	30.00

3.4 Peak Power Spectral Density

3.4.1 Limit of Peak Power Spectral Density

Frequency band 5150-5250 MHz		
Operating Mode		**Limit**
☐	Outdoor access point	17 dBm / MHz
☒	Indoor access point	17 dBm / MHz
☐	Fixed point-to-point access points	17 dBm / MHz
☐	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 (For 11a / 11ac VHT20)

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 (For 11ac VHT40 / VHT80)

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

For 5725 ~ 5850 MHz

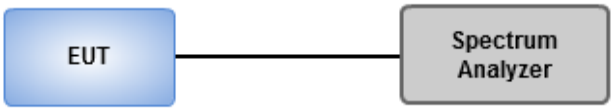
☒ Method SA-1 (For 11a / 11ac VHT20)

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 (For 11ac VHT40 / VHT80)

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



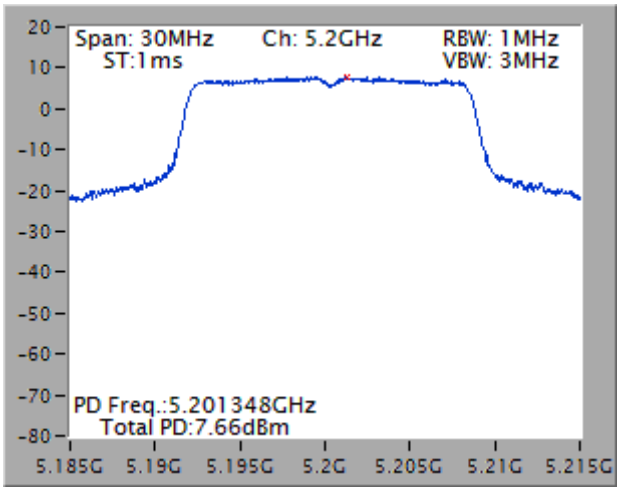
3.4.4 Test Result of Peak Power Spectral Density

Configuration 1: Power amplifier / SK85726-11

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	1	5180	6.24	0.00	6.24	17
11a	1	5200	7.66	0.00	7.66	17
11a	1	5240	7.30	0.00	7.30	17
VHT20	1	5180	5.59	0.00	5.59	17
VHT20	1	5200	7.57	0.00	7.57	17
VHT20	1	5240	6.88	0.00	6.88	17
VHT40	1	5190	-2.35	0.09	-2.26	17
VHT40	1	5230	3.69	0.09	3.78	17
VHT80	1	5210	-6.23	0.22	-6.01	17

Note:
1. D.F is duty factor.

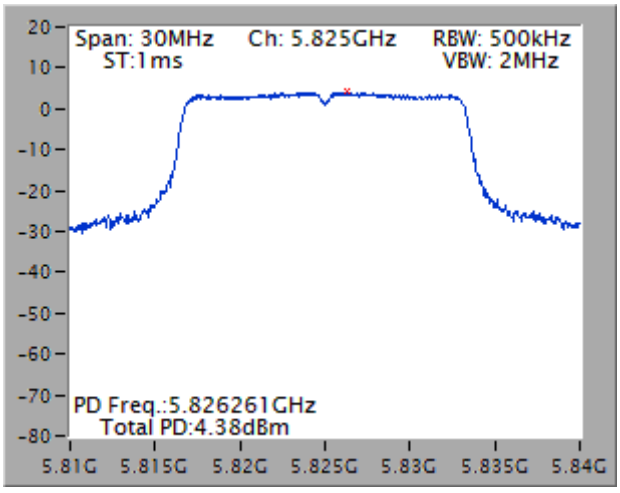
Worst Plot



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	1	5745	3.83	0.00	3.83	30.00
11a	1	5785	4.21	0.00	4.21	30.00
11a	1	5825	4.38	0.00	4.38	30.00
VHT20	1	5745	3.29	0.00	3.29	30.00
VHT20	1	5785	3.85	0.00	3.85	30.00
VHT20	1	5825	4.26	0.00	4.26	30.00
VHT40	1	5755	0.15	0.09	0.24	30.00
VHT40	1	5795	0.16	0.09	0.25	30.00
VHT80	1	5775	-3.62	0.22	-3.40	30.00

Note:
1. D.F is duty factor.

Worst Plot

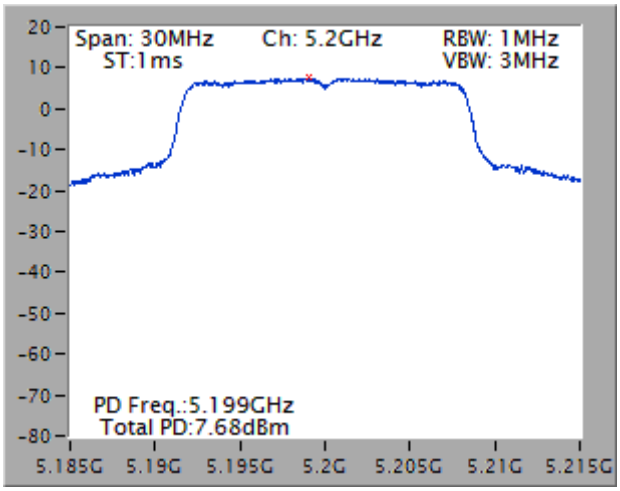


Configuration 2: Power amplifier / SK85712-11

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	1	5180	5.55	0.00	5.55	17
11a	1	5200	7.68	0.00	7.68	17
11a	1	5240	7.28	0.00	7.28	17
VHT20	1	5180	5.52	0.00	5.52	17
VHT20	1	5200	7.12	0.00	7.12	17
VHT20	1	5240	7.27	0.00	7.27	17
VHT40	1	5190	-2.42	0.09	-2.33	17
VHT40	1	5230	3.02	0.09	3.11	17
VHT80	1	5210	-8.31	0.22	-8.09	17

Note:
1. D.F is duty factor.

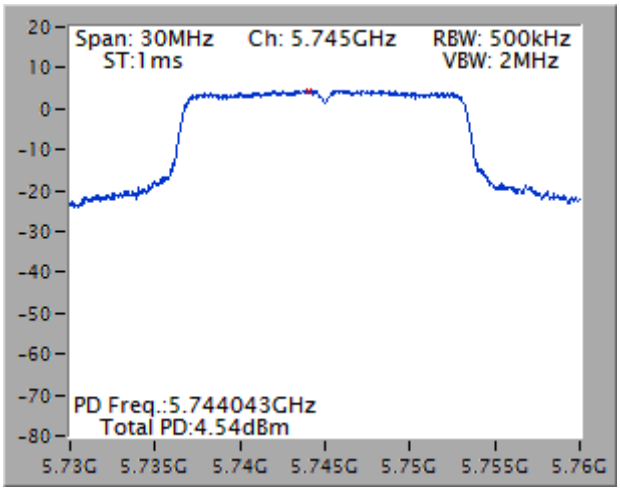
Worst Plot



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	1	5745	4.54	0.00	4.54	30.00
11a	1	5785	4.42	0.00	4.42	30.00
11a	1	5825	4.43	0.00	4.43	30.00
VHT20	1	5745	4.36	0.00	4.36	30.00
VHT20	1	5785	3.85	0.00	3.85	30.00
VHT20	1	5825	4.44	0.00	4.44	30.00
VHT40	1	5755	1.25	0.09	1.34	30.00
VHT40	1	5795	0.40	0.09	0.49	30.00
VHT80	1	5775	-3.42	0.22	-3.20	30.00

Note:
1. D.F is duty factor.

Worst Plot



3.5 Transmitter Radiated and Band Edge Emissions

3.5.1 Limit of Transmitter Radiated and Band Edge Emissions

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

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

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

3.5.2 Test Procedures

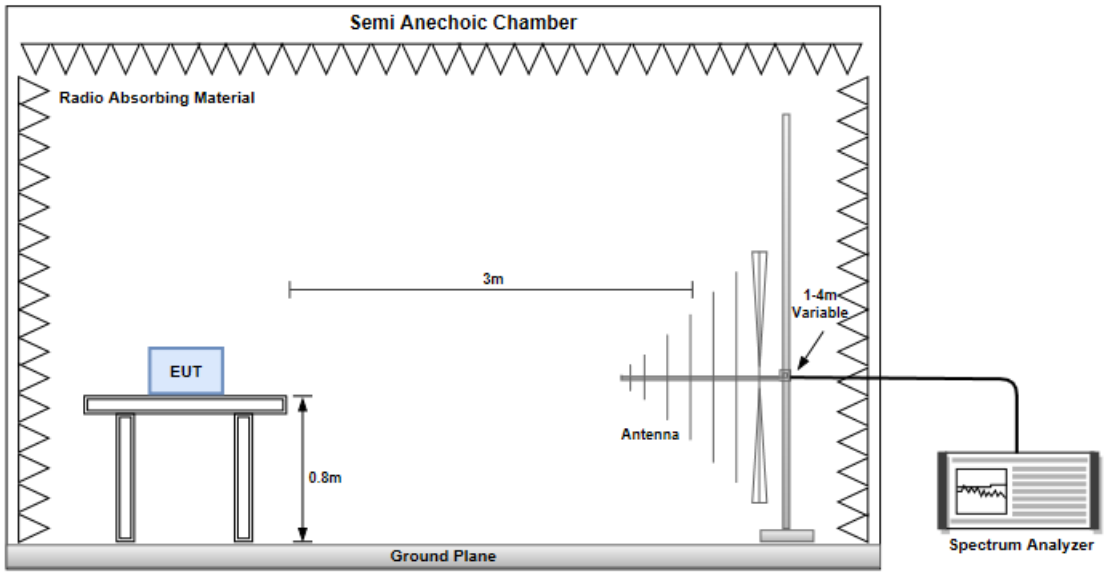
1. Measurement is made at a semi-anechoic chamber that incorporates a turntable allowing a EUT rotation of 360°. A continuously-rotating, remotely-controlled turntable is installed at the test site to support the EUT and facilitate determination of the direction of maximum radiation for each EUT emission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

Note:

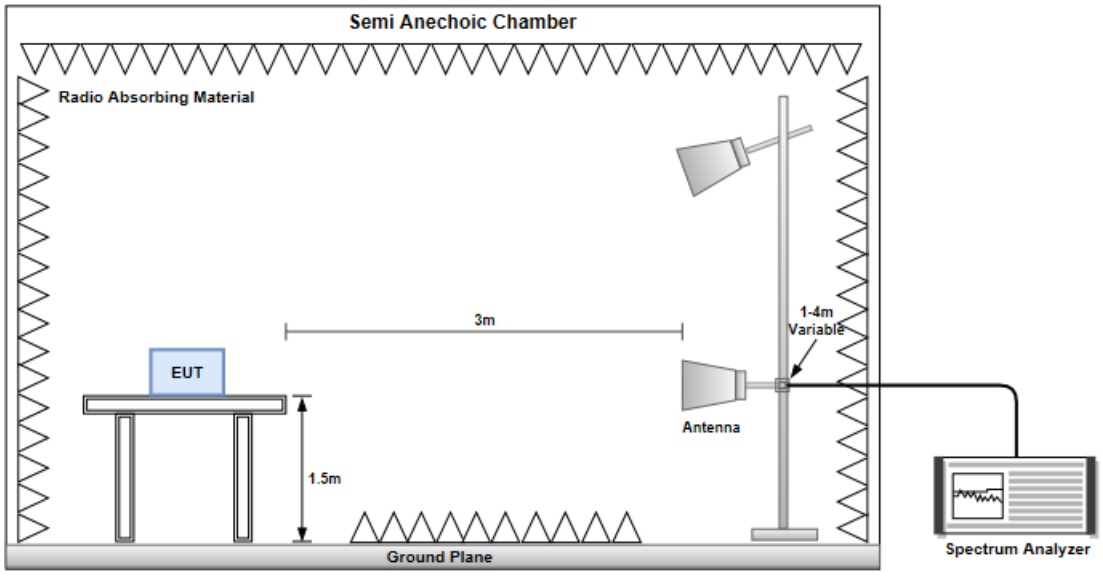
1. 120kHz measurement bandwidth of test receiver and Quasi-peak detector is for radiated emission below 1GHz.
2. RBW=1MHz, VBW=3MHz and Peak detector is for peak measured value of radiated emission above 1GHz.
3. RBW=1MHz, VBW=1/T and Peak detector is for average measured value of radiated emission above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

3.5.3 Test Setup

Radiated Emissions below 1 GHz



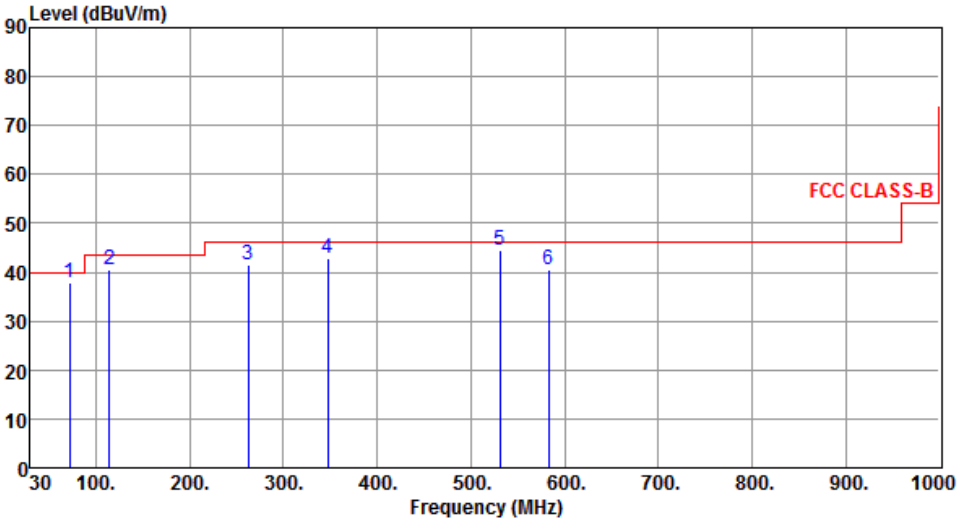
Radiated Emissions above 1 GHz



3.5.4 Transmitter Radiated Unwanted Emissions (Below 1GHz)

Configuration 1: Power amplifier / SK85726-11

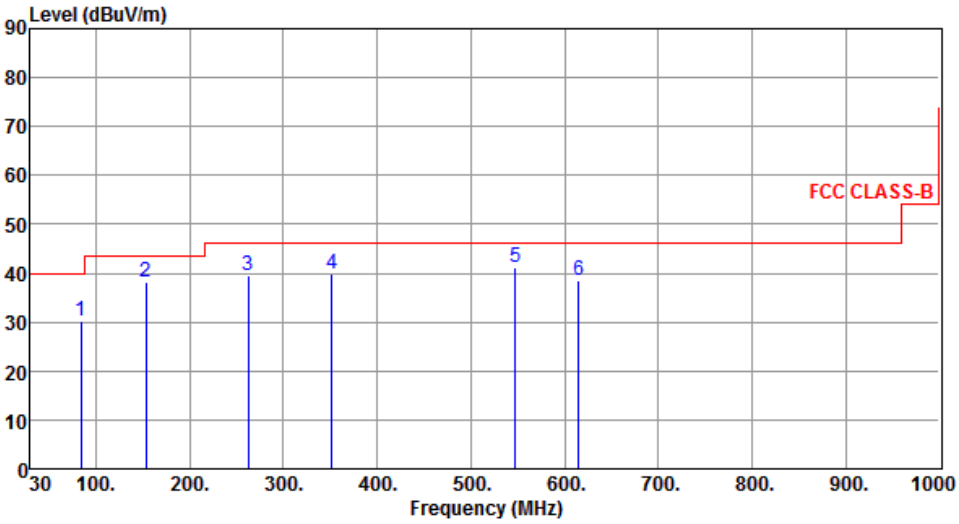
Modulation	VHT20	Test Freq. (MHz)	5200
Polarization	Horizontal		



	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	72.20	37.79	40.00	-2.21	48.84	-11.05	QP	167	289
2	114.28	40.59	43.50	-2.91	51.33	-10.74	Peak	---	---
3	262.18	41.51	46.00	-4.49	50.36	-8.85	Peak	---	---
4	347.16	42.95	46.00	-3.05	49.29	-6.34	Peak	---	---
5	531.21	44.50	46.00	-1.50	46.75	-2.25	QP	100	84
6	583.26	40.64	46.00	-5.36	41.75	-1.11	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.

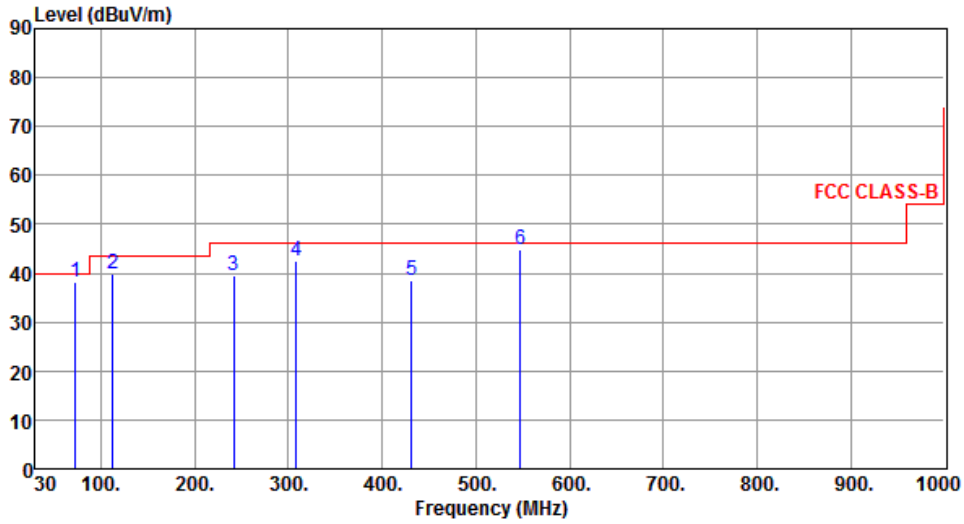
Modulation	VHT20	Test Freq. (MHz)	5200
Polarization	Vertical		



	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	84.21	30.28	40.00	-9.72	43.58	-13.30	Peak	---	---
2	153.29	38.34	43.50	-5.16	46.57	-8.23	Peak	---	---
3	262.43	39.50	46.00	-6.50	48.33	-8.83	Peak	---	---
4	351.72	39.93	46.00	-6.07	46.15	-6.22	Peak	---	---
5	547.29	41.34	46.00	-4.66	43.27	-1.93	Peak	---	---
6	615.30	38.42	46.00	-7.58	38.97	-0.55	Peak	---	---

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

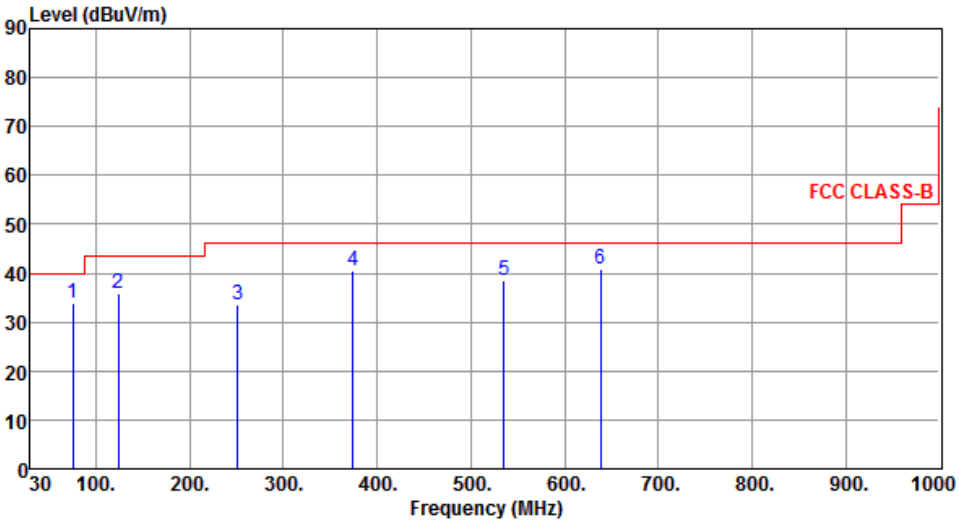
Modulation	VHT20	Test Freq. (MHz)	5825
Polarization	Horizontal		



	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	72.37	38.30	40.00	-1.70	49.38	-11.08	QP	150	286
2	112.43	39.90	43.50	-3.60	50.83	-10.93	Peak	---	---
3	241.62	39.59	46.00	-6.41	48.97	-9.38	Peak	---	---
4	308.70	42.39	46.00	-3.61	49.68	-7.29	Peak	---	---
5	431.36	38.60	46.00	-7.40	42.83	-4.23	Peak	---	---
6	547.55	44.96	46.00	-1.04	46.88	-1.92	QP	150	184

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

Modulation	VHT20	Test Freq. (MHz)	5825
Polarization	Vertical		

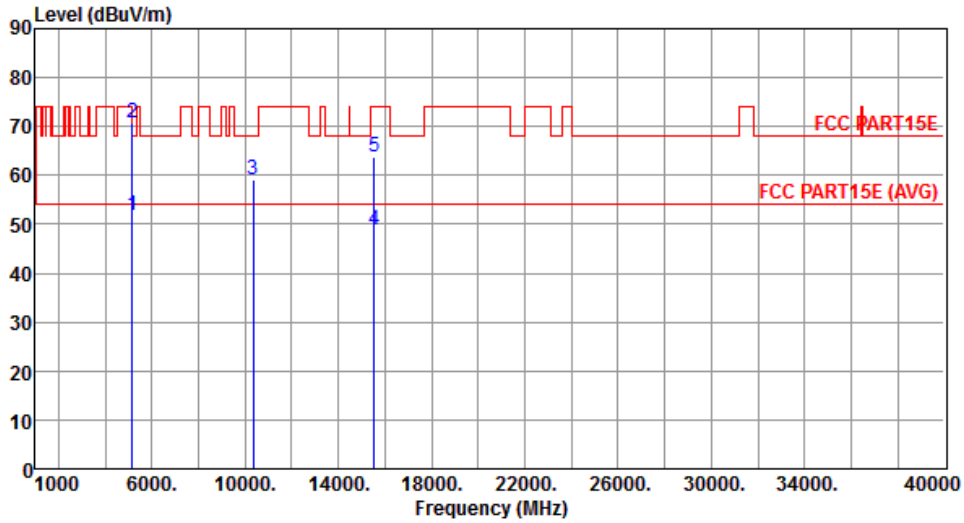


	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	75.47	33.95	40.00	-6.05	45.62	-11.67	Peak	---	---
2	124.26	35.87	43.50	-7.63	45.56	-9.69	Peak	---	---
3	251.33	33.69	46.00	-12.31	42.86	-9.17	Peak	---	---
4	374.48	40.39	46.00	-5.61	46.03	-5.64	Peak	---	---
5	535.29	38.51	46.00	-7.49	40.67	-2.16	Peak	---	---
6	638.50	40.97	46.00	-5.03	41.24	-0.27	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

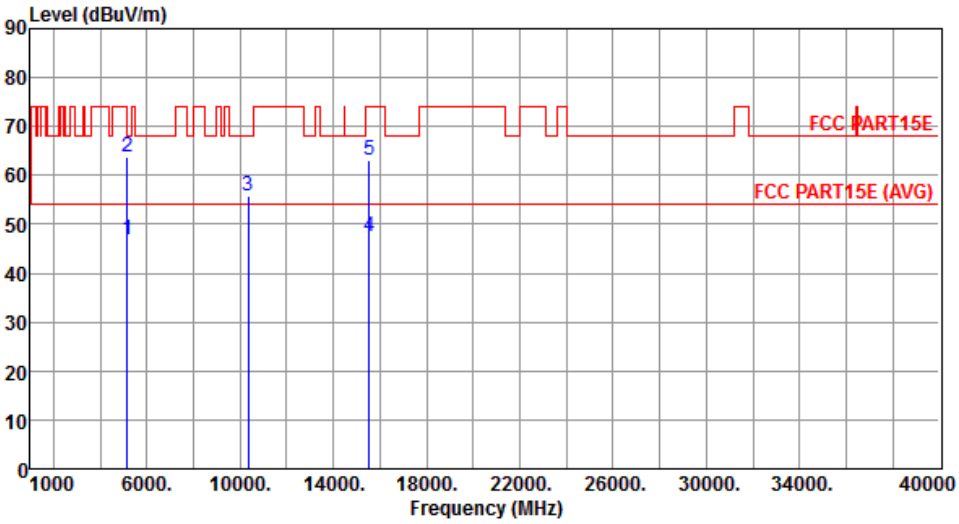
Modulation	11a	Test Freq. (MHz)	5180
Polarization	Horizontal		



	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	5150.00	51.89	54.00	-2.11	47.57	4.32	Average	202	180
2	5150.00	70.60	74.00	-3.40	66.28	4.32	Peak	202	180
3	10360.00	59.06	68.20	-9.14	44.73	14.33	Peak	173	295
4	15540.00	48.98	54.00	-5.02	33.69	15.29	Average	134	240
5	15540.00	63.82	74.00	-10.18	48.53	15.29	Peak	134	240

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

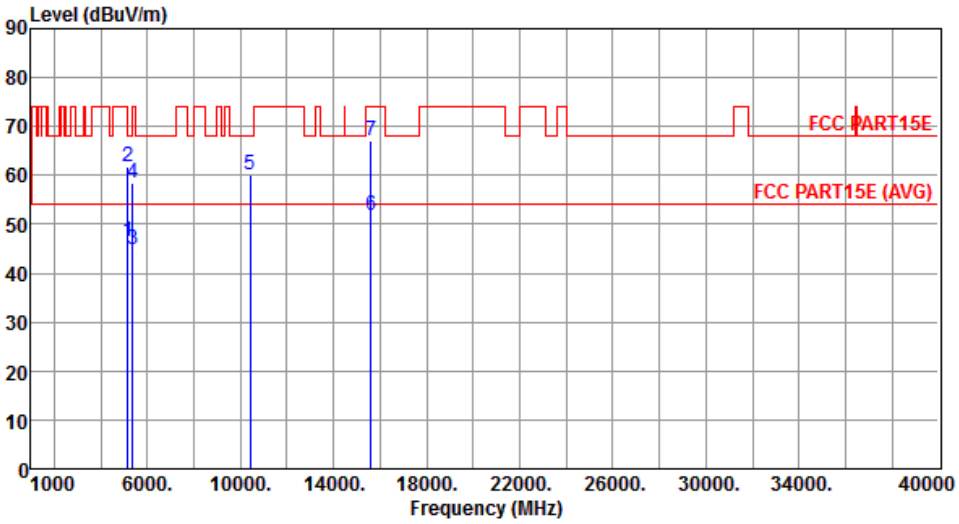
Modulation	11a	Test Freq. (MHz)	5180
Polarization	Vertical		



	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	5150.00	46.91	54.00	-7.09	42.59	4.32	Average	332	256
2	5150.00	63.79	74.00	-10.21	59.47	4.32	Peak	332	256
3	10360.00	55.77	68.20	-12.43	41.44	14.33	Peak	396	332
4	15540.00	47.58	54.00	-6.42	32.29	15.29	Average	165	188
5	15540.00	62.97	74.00	-11.03	47.68	15.29	Peak	165	188

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

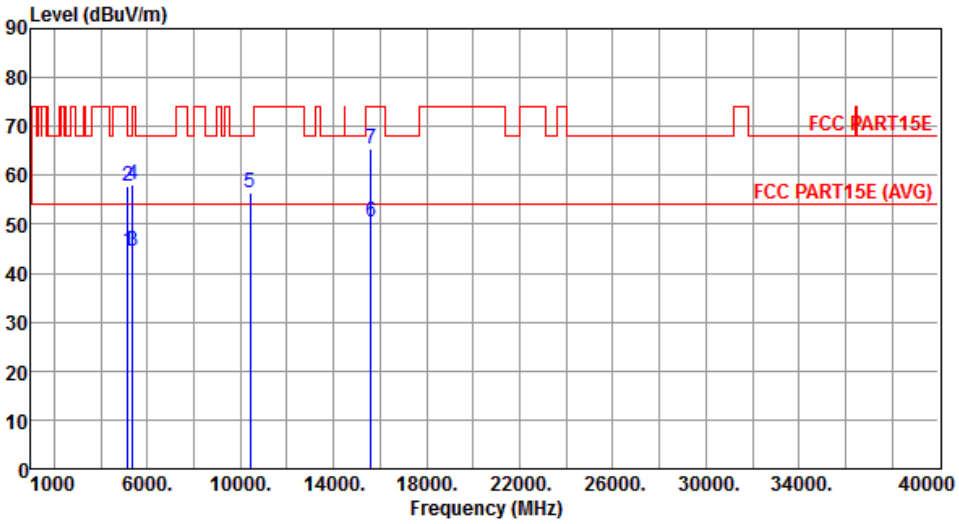
Modulation	11a	Test Freq. (MHz)	5200
Polarization	Horizontal		



	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	5150.00	46.48	54.00	-7.52	42.16	4.32	Average	165	184
2	5150.00	61.91	74.00	-12.09	57.59	4.32	Peak	165	184
3	5350.00	45.00	54.00	-9.00	40.47	4.53	Average	165	184
4	5350.00	58.48	74.00	-15.52	53.95	4.53	Peak	165	184
5	10400.00	59.96	68.20	-8.24	45.55	14.41	Peak	156	297
6	15600.00	51.92	54.00	-2.08	36.71	15.21	Average	129	239
7	15600.00	66.99	74.00	-7.01	51.78	15.21	Peak	129	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).

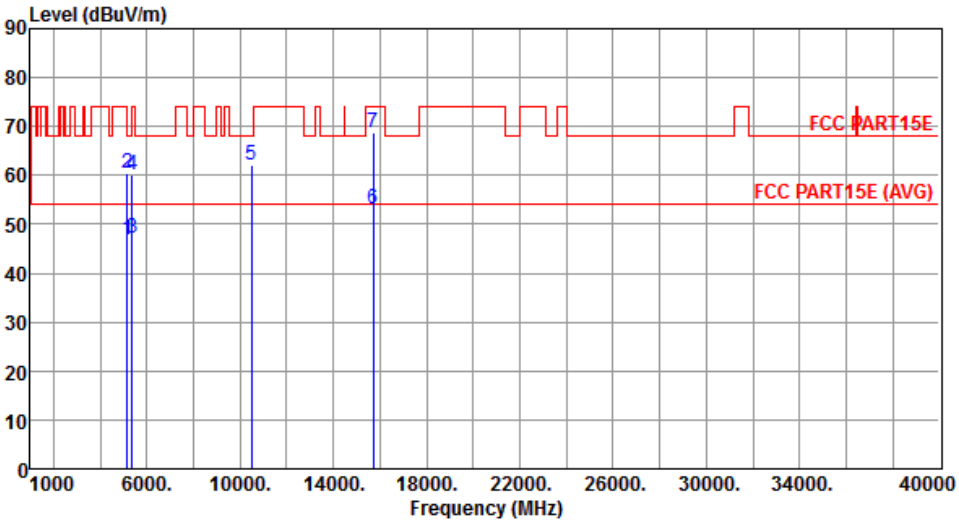
Modulation	11a	Test Freq. (MHz)	5200
Polarization	Vertical		



	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	5150.00	44.43	54.00	-9.57	40.11	4.32	Average	365	262
2	5150.00	57.87	74.00	-16.13	53.55	4.32	Peak	365	262
3	5350.00	44.41	54.00	-9.59	39.88	4.53	Average	365	262
4	5350.00	58.03	74.00	-15.97	53.50	4.53	Peak	365	262
5	10400.00	56.48	68.20	-11.72	42.07	14.41	Peak	400	330
6	15600.00	50.32	54.00	-3.68	35.11	15.21	Average	162	188
7	15600.00	65.31	74.00	-8.69	50.10	15.21	Peak	162	188

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

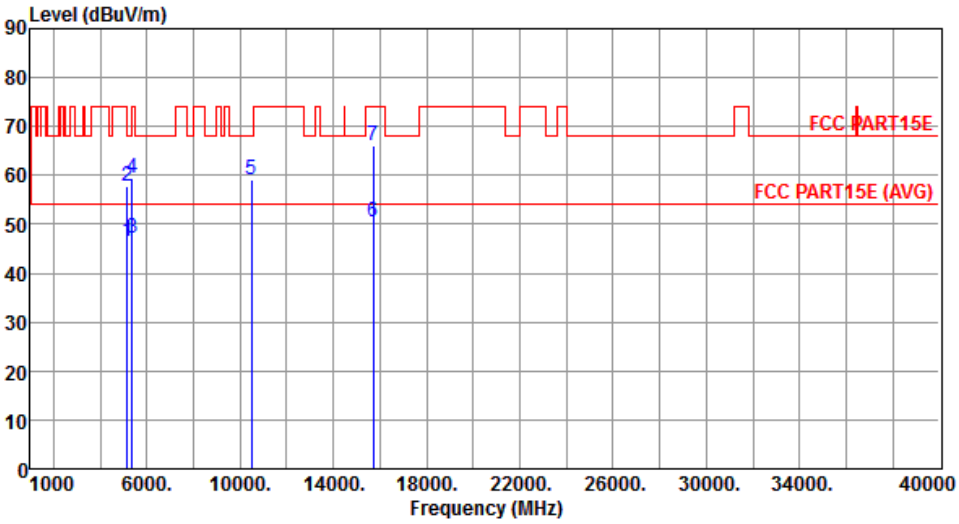
Modulation	11a	Test Freq. (MHz)	5240
Polarization	Horizontal		



	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	5150.00	46.73	54.00	-7.27	42.41	4.32	Average	131	174
2	5150.00	60.61	74.00	-13.39	56.29	4.32	Peak	131	174
3	5350.00	47.18	54.00	-6.82	42.65	4.53	Average	131	174
4	5350.00	60.04	74.00	-13.96	55.51	4.53	Peak	131	174
5	10480.00	62.04	68.20	-6.16	47.47	14.57	Peak	157	297
6	15720.00	52.98	54.00	-1.02	37.92	15.06	Average	133	239
7	15720.00	68.65	74.00	-5.35	53.59	15.06	Peak	133	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).

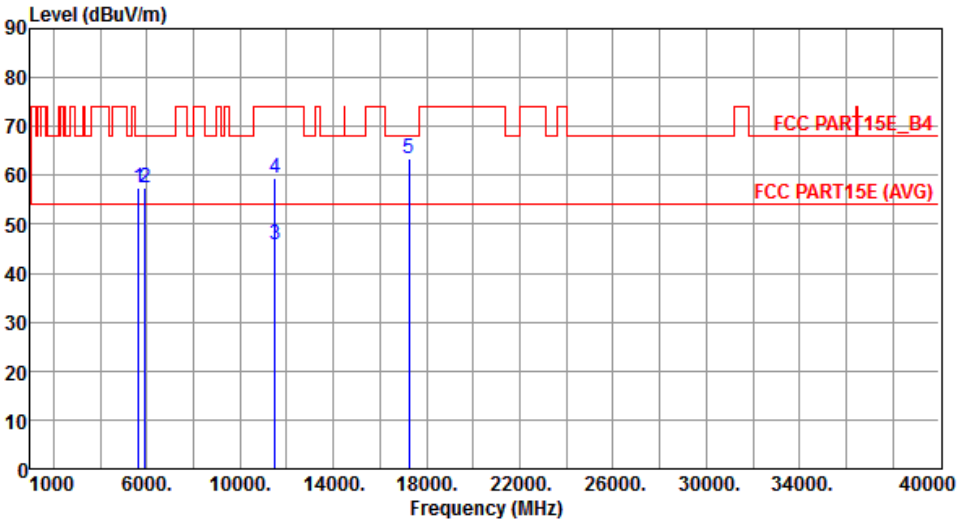
Modulation	11a	Test Freq. (MHz)	5240
Polarization	Vertical		



	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	5150.00	46.48	54.00	-7.52	42.16	4.32	Average	361	255
2	5150.00	57.87	74.00	-16.13	53.55	4.32	Peak	361	255
3	5350.00	47.13	54.00	-6.87	42.60	4.53	Average	361	255
4	5350.00	59.32	74.00	-14.68	54.79	4.53	Peak	361	255
5	10480.00	59.25	68.20	-8.95	44.68	14.57	Peak	222	165
6	15720.00	50.64	54.00	-3.36	35.58	15.06	Average	166	159
7	15720.00	65.94	74.00	-8.06	50.88	15.06	Peak	166	159

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

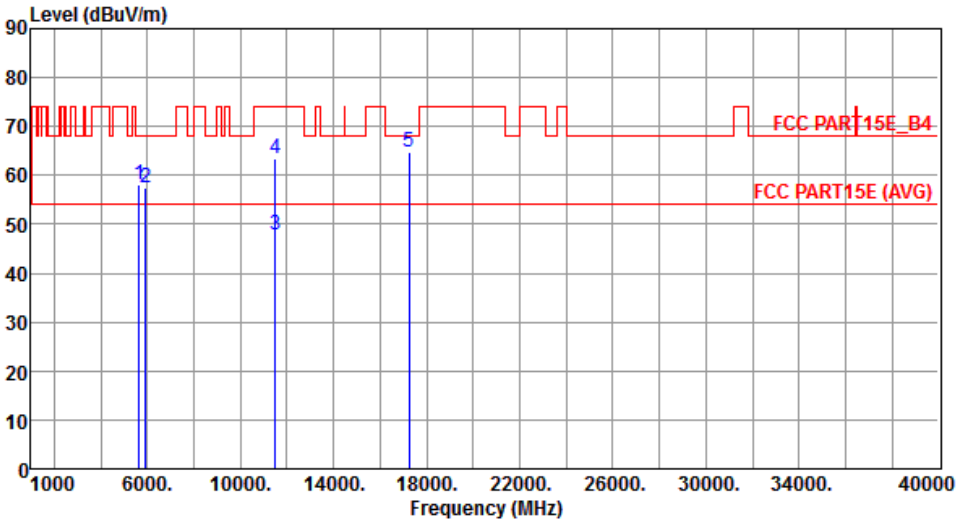
Modulation	11a	Test Freq. (MHz)	5745
Polarization	Horizontal		



	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	5650.00	57.61	68.20	-10.59	52.74	4.87	Peak	164	182
2	5925.00	57.37	68.20	-10.83	52.16	5.21	Peak	164	182
3	11490.00	45.98	54.00	-8.02	30.28	15.70	Average	165	177
4	11490.00	59.48	74.00	-14.52	43.78	15.70	Peak	165	177
5	17235.00	63.28	68.20	-4.92	44.16	19.12	Peak	130	255

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

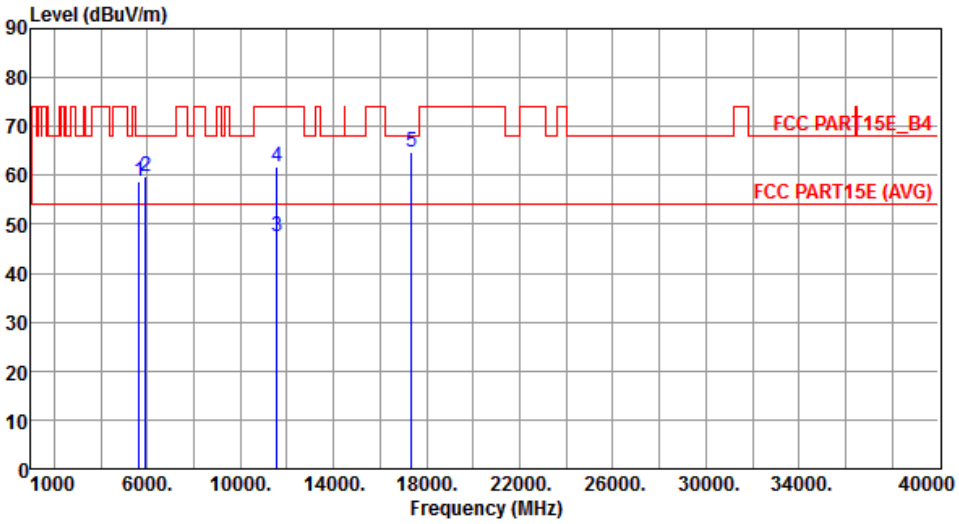
Modulation	11a	Test Freq. (MHz)	5745
Polarization	Vertical		



	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	5650.00	58.19	68.20	-10.01	53.32	4.87	Peak	277	251
2	5925.00	57.55	68.20	-10.65	52.34	5.21	Peak	277	251
3	11490.00	47.78	54.00	-6.22	32.08	15.70	Average	160	18
4	11490.00	63.40	74.00	-10.60	47.70	15.70	Peak	160	18
5	17235.00	64.75	68.20	-3.45	45.63	19.12	Peak	163	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).

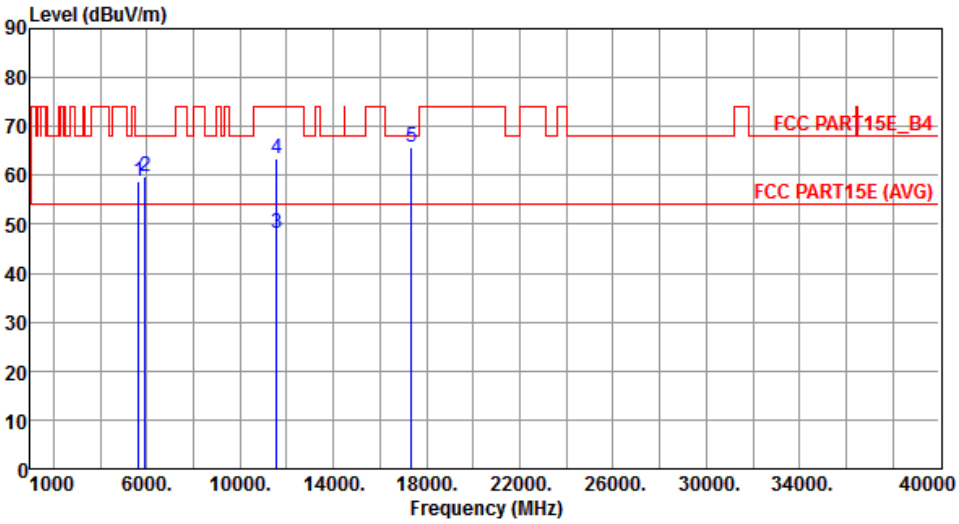
Modulation	11a	Test Freq. (MHz)	5785
Polarization	Horizontal		



	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	5650.00	58.85	68.20	-9.35	53.98	4.87	Peak	156	183
2	5925.00	59.94	68.20	-8.26	54.73	5.21	Peak	156	183
3	11570.00	47.37	54.00	-6.63	31.86	15.51	Average	153	269
4	11570.00	61.65	74.00	-12.35	46.14	15.51	Peak	153	269
5	17355.00	64.87	68.20	-3.33	45.43	19.44	Peak	129	256

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

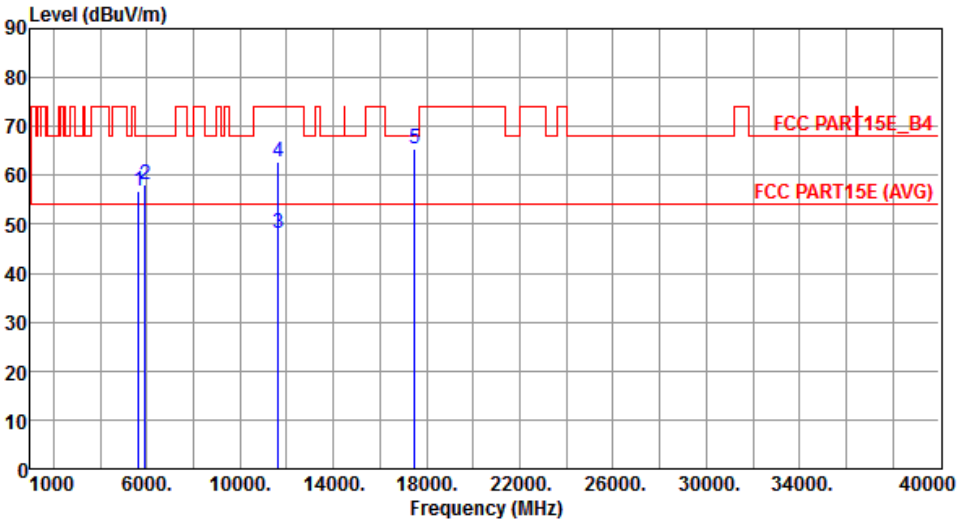
Modulation	11a	Test Freq. (MHz)	5785
Polarization	Vertical		



	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	5650.00	58.90	68.20	-9.30	54.03	4.87	Peak	279	252
2	5925.00	59.69	68.20	-8.51	54.48	5.21	Peak	279	252
3	11570.00	48.00	54.00	-6.00	32.49	15.51	Average	171	15
4	11570.00	63.42	74.00	-10.58	47.91	15.51	Peak	171	15
5	17355.00	65.90	68.20	-2.30	46.46	19.44	Peak	149	174

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

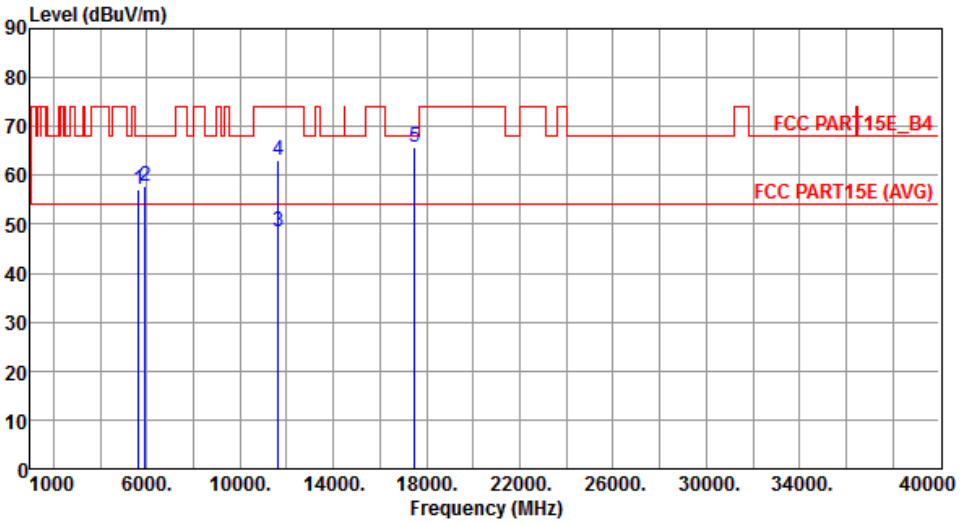
Modulation	11a	Test Freq. (MHz)	5825
Polarization	Horizontal		



	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	5650.00	56.67	68.20	-11.53	51.80	4.87	Peak	165	177
2	5925.00	58.12	68.20	-10.08	52.91	5.21	Peak	165	177
3	11650.00	48.13	54.00	-5.87	32.85	15.28	Average	160	280
4	11650.00	62.70	74.00	-11.30	47.42	15.28	Peak	160	280
5	17475.00	65.40	68.20	-2.80	45.65	19.75	Peak	133	253

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

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

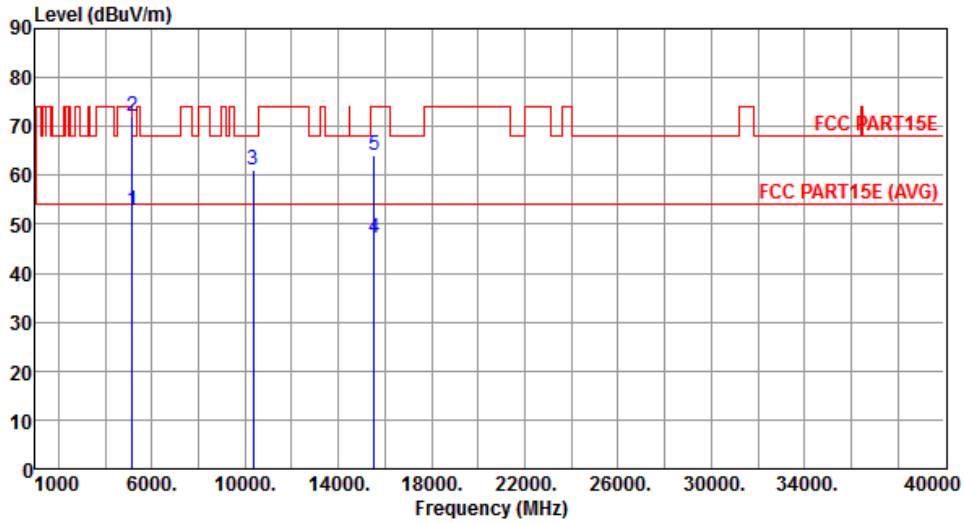


	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	5650.00	57.25	68.20	-10.95	52.38	4.87	Peak	288	255
2	5925.00	57.69	68.20	-10.51	52.48	5.21	Peak	288	255
3	11650.00	48.58	54.00	-5.42	33.30	15.28	Average	168	13
4	11650.00	63.04	74.00	-10.96	47.76	15.28	Peak	168	13
5	17475.00	65.65	68.20	-2.55	45.90	19.75	Peak	147	176

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

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

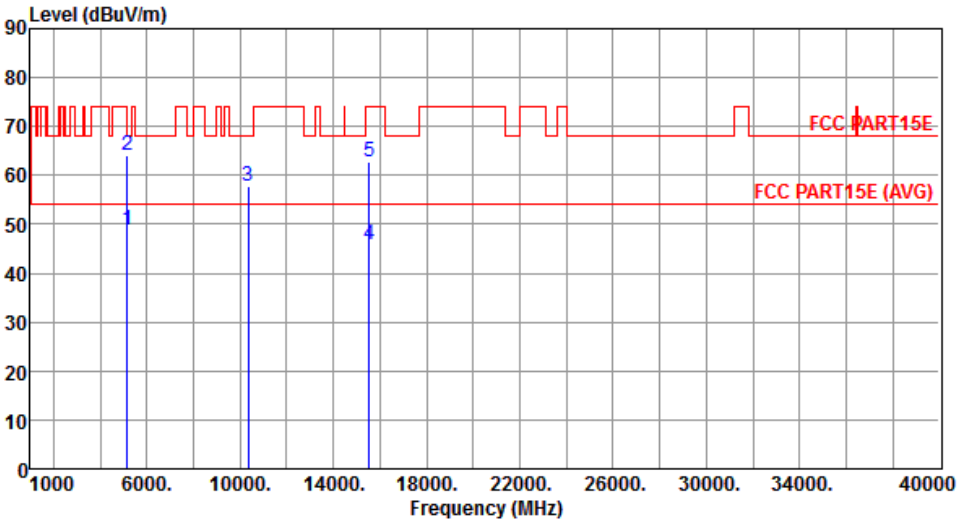
Modulation	VHT20	Test Freq. (MHz)	5180
Polarization	Horizontal		



	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	5150.00	52.67	54.00	-1.33	48.35	4.32	Average	136	170
2	5150.00	72.01	74.00	-1.99	67.69	4.32	Peak	136	170
3	10360.00	60.97	68.20	-7.23	46.64	14.33	Peak	156	294
4	15540.00	47.05	54.00	-6.95	31.76	15.29	Average	143	235
5	15540.00	64.22	74.00	-9.78	48.93	15.29	Peak	143	235

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

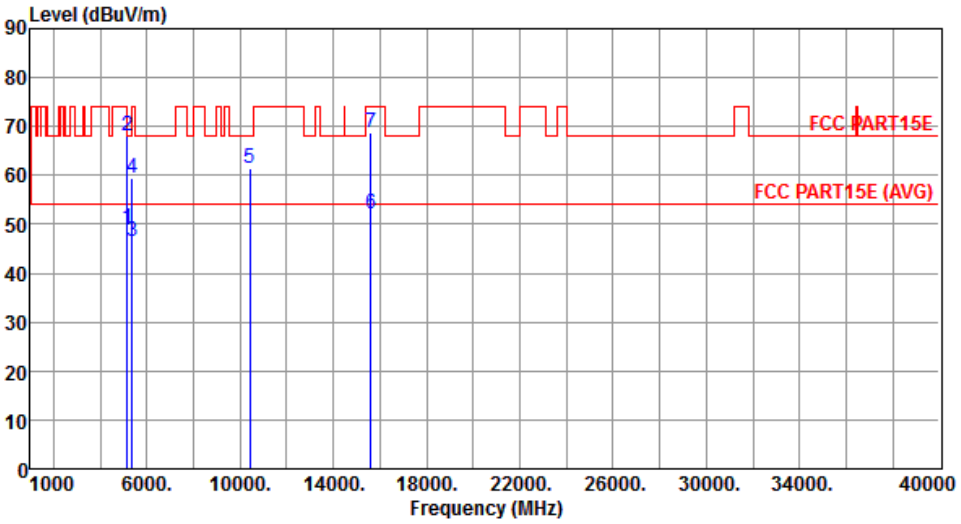
Modulation	VHT20	Test Freq. (MHz)	5180
Polarization	Vertical		



	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	5150.00	48.78	54.00	-5.22	44.46	4.32	Average	333	251
2	5150.00	64.19	74.00	-9.81	59.87	4.32	Peak	333	251
3	10360.00	57.92	68.20	-10.28	43.59	14.33	Peak	133	212
4	15540.00	45.94	54.00	-8.06	30.65	15.29	Average	166	179
5	15540.00	62.82	74.00	-11.18	47.53	15.29	Peak	166	179

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

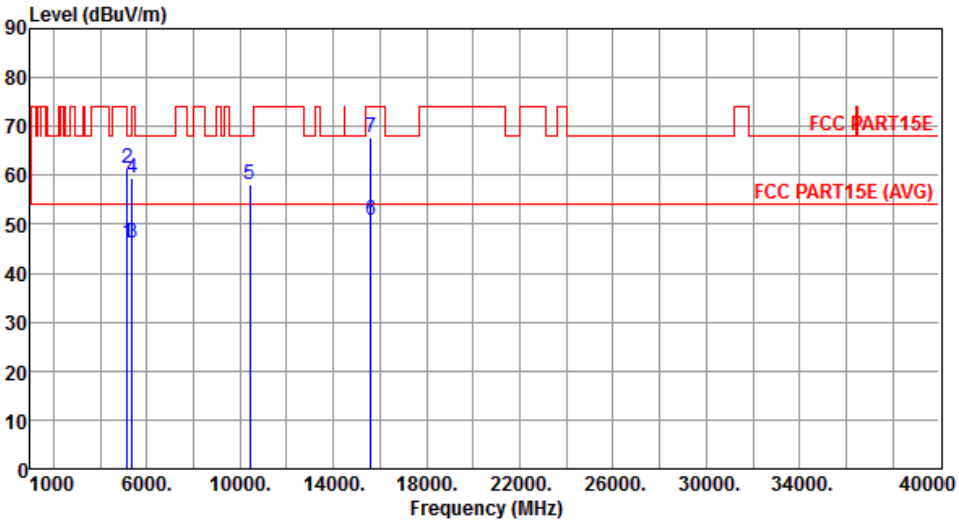
Modulation	VHT20	Test Freq. (MHz)	5200
Polarization	Horizontal		



	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	5150.00	49.23	54.00	-4.77	44.91	4.32	Average	166	180
2	5150.00	68.12	74.00	-5.88	63.80	4.32	Peak	166	180
3	5350.00	46.40	54.00	-7.60	41.87	4.53	Average	166	180
4	5350.00	59.56	74.00	-14.44	55.03	4.53	Peak	166	180
5	10400.00	61.30	68.20	-6.90	46.89	14.41	Peak	156	293
6	15600.00	52.13	54.00	-1.87	36.92	15.21	Average	142	235
7	15600.00	68.87	74.00	-5.13	53.66	15.21	Peak	142	235

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

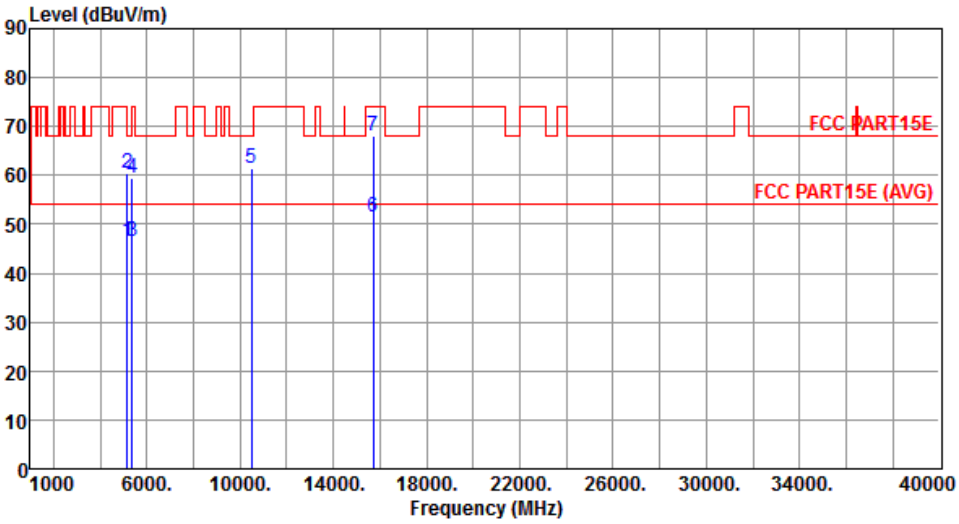
Modulation	VHT20	Test Freq. (MHz)	5200
Polarization	Vertical		



	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	5150.00	46.14	54.00	-7.86	41.82	4.32	Average	313	245
2	5150.00	61.50	74.00	-12.50	57.18	4.32	Peak	313	245
3	5350.00	46.26	54.00	-7.74	41.73	4.53	Average	313	245
4	5350.00	59.41	74.00	-14.59	54.88	4.53	Peak	313	245
5	10400.00	58.28	68.20	-9.92	43.87	14.41	Peak	151	226
6	15600.00	50.89	54.00	-3.11	35.68	15.21	Average	165	196
7	15600.00	67.69	74.00	-6.31	52.48	15.21	Peak	165	196

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

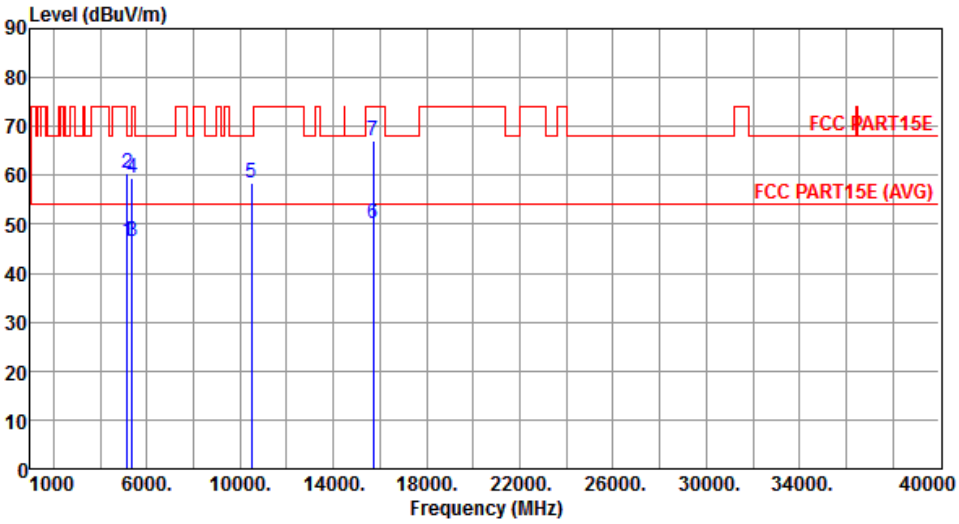
Modulation	VHT20	Test Freq. (MHz)	5240
Polarization	Horizontal		



	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	5150.00	46.60	54.00	-7.40	42.28	4.32	Average	133	174
2	5150.00	60.38	74.00	-13.62	56.06	4.32	Peak	133	174
3	5350.00	46.54	54.00	-7.46	42.01	4.53	Average	133	174
4	5350.00	59.42	74.00	-14.58	54.89	4.53	Peak	133	174
5	10480.00	61.39	68.20	-6.81	46.82	14.57	Peak	156	297
6	15720.00	51.32	54.00	-2.68	36.26	15.06	Average	108	239
7	15720.00	68.16	74.00	-5.84	53.10	15.06	Peak	108	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).

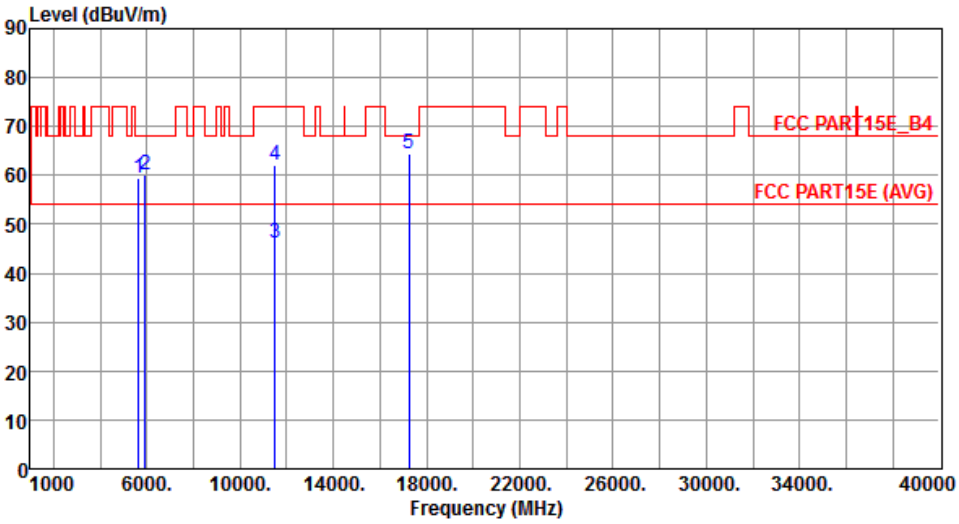
Modulation	VHT20	Test Freq. (MHz)	5240
Polarization	Vertical		



	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	5150.00	46.60	54.00	-7.40	42.28	4.32	Average	133	174
2	5150.00	60.38	74.00	-13.62	56.06	4.32	Peak	133	174
3	5350.00	46.54	54.00	-7.46	42.01	4.53	Average	133	174
4	5350.00	59.42	74.00	-14.58	54.89	4.53	Peak	133	174
5	10480.00	58.34	68.20	-9.86	43.77	14.57	Peak	159	221
6	15720.00	50.25	54.00	-3.75	35.19	15.06	Average	169	177
7	15720.00	67.04	74.00	-6.96	51.98	15.06	Peak	169	177

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

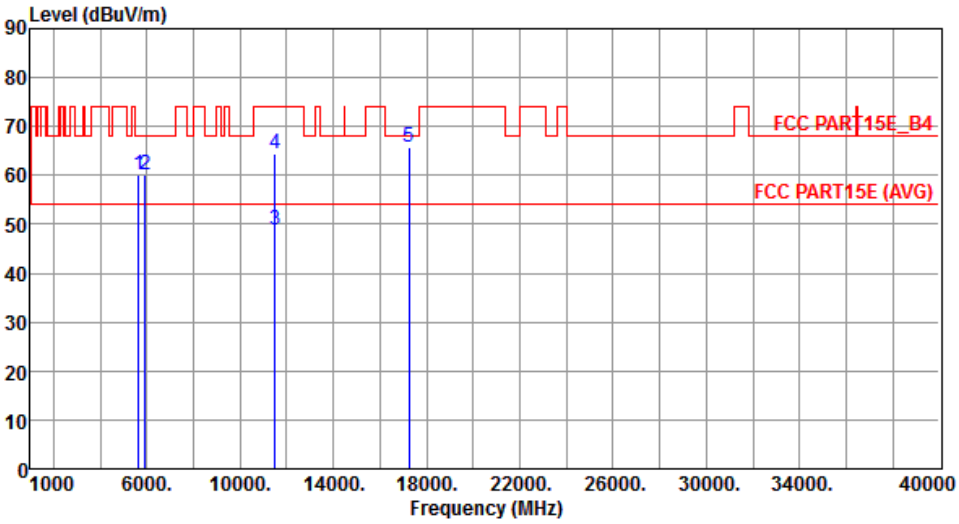
Modulation	VHT20	Test Freq. (MHz)	5745
Polarization	Horizontal		



	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	5650.00	59.55	68.20	-8.65	54.68	4.87	Peak	158	184
2	5925.00	59.98	68.20	-8.22	54.77	5.21	Peak	158	184
3	11490.00	46.26	54.00	-7.74	30.56	15.70	Average	166	169
4	11490.00	62.19	74.00	-11.81	46.49	15.70	Peak	166	169
5	17235.00	64.29	68.20	-3.91	45.17	19.12	Peak	133	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).

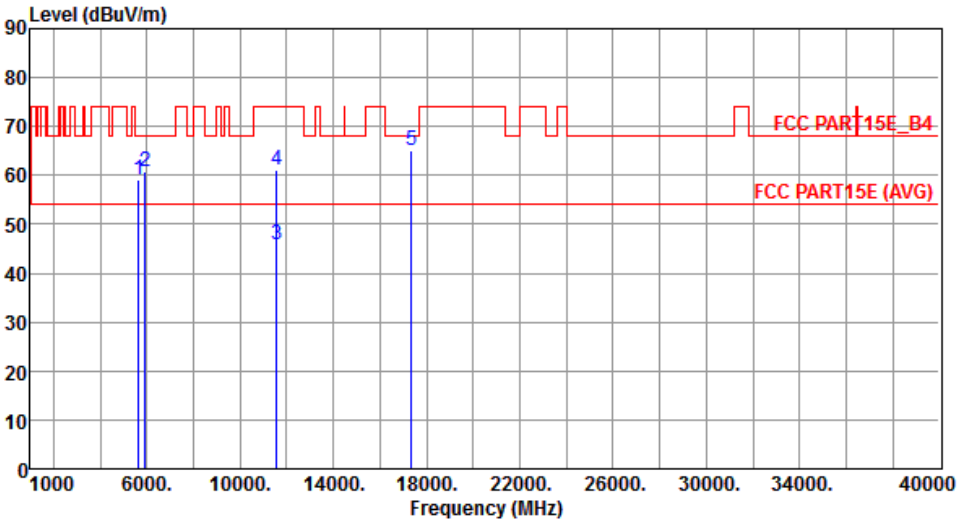
Modulation	VHT20	Test Freq. (MHz)	5745
Polarization	Vertical		



	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	5650.00	60.06	68.20	-8.14	55.19	4.87	Peak	286	255
2	5925.00	60.17	68.20	-8.03	54.96	5.21	Peak	286	255
3	11490.00	48.68	54.00	-5.32	32.98	15.70	Average	191	321
4	11490.00	64.50	74.00	-9.50	48.80	15.70	Peak	191	321
5	17235.00	65.74	68.20	-2.46	46.62	19.12	Peak	192	170

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

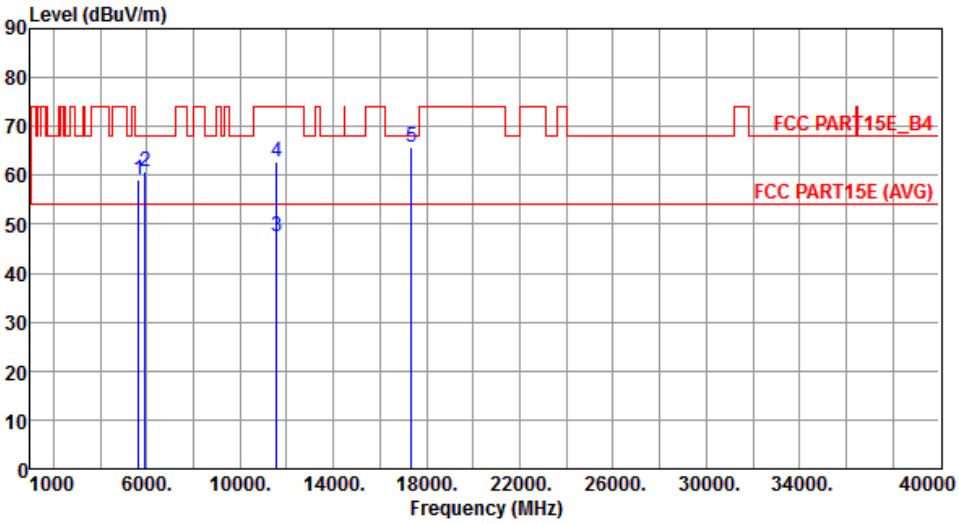
Modulation	VHT20	Test Freq. (MHz)	5785
Polarization	Horizontal		



	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	5650.00	59.17	68.20	-9.03	54.30	4.87	Peak	175	176
2	5925.00	60.80	68.20	-7.40	55.59	5.21	Peak	175	176
3	11570.00	45.80	54.00	-8.20	30.29	15.51	Average	173	169
4	11570.00	61.18	74.00	-12.82	45.67	15.51	Peak	173	169
5	17355.00	65.15	68.20	-3.05	45.71	19.44	Peak	143	217

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

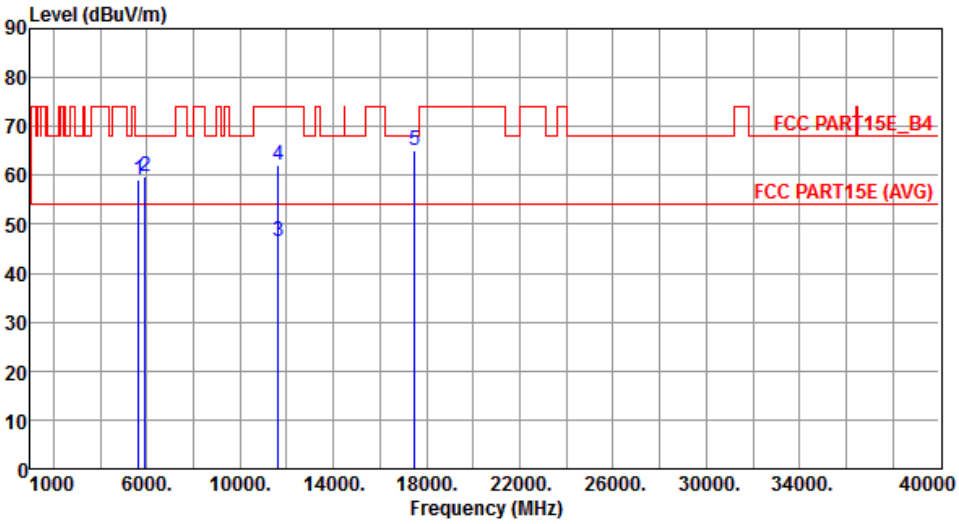
Modulation	VHT20	**Test Freq. (MHz)**	5785
Polarization	Vertical		



	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	5650.00	59.24	68.20	-8.96	54.37	4.87	Peak	279	268
2	5925.00	60.69	68.20	-7.51	55.48	5.21	Peak	279	268
3	11570.00	47.55	54.00	-6.45	32.04	15.51	Average	176	322
4	11570.00	62.89	74.00	-11.11	47.38	15.51	Peak	176	322
5	17355.00	65.85	68.20	-2.35	46.41	19.44	Peak	162	170

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

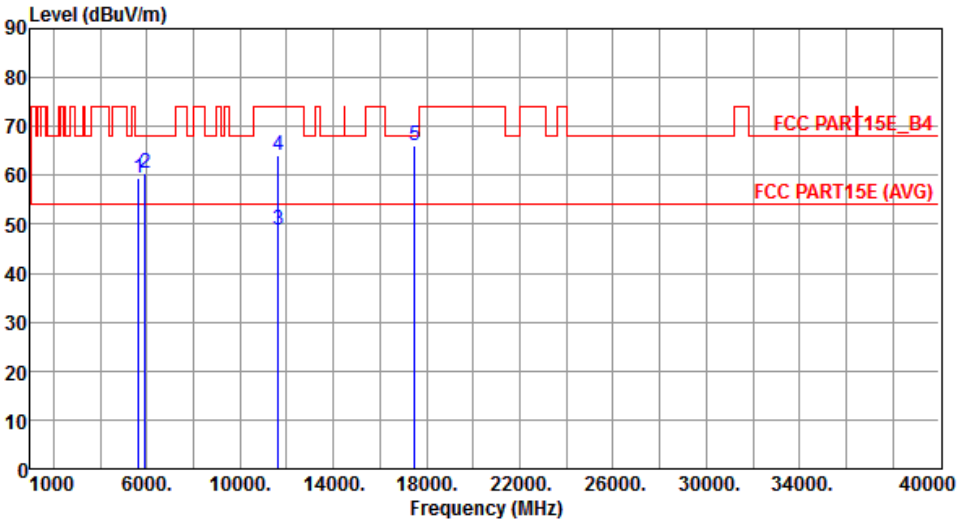
Modulation	VHT20	Test Freq. (MHz)	5825
Polarization	Horizontal		



	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	5650.00	59.27	68.20	-8.93	54.40	4.87	Peak	165	181
2	5925.00	59.89	68.20	-8.31	54.68	5.21	Peak	165	181
3	11650.00	46.42	54.00	-7.58	31.14	15.28	Average	177	169
4	11650.00	61.96	74.00	-12.04	46.68	15.28	Peak	177	169
5	17475.00	64.96	68.20	-3.24	45.21	19.75	Peak	139	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	VHT20	Test Freq. (MHz)	5825
Polarization	Vertical		

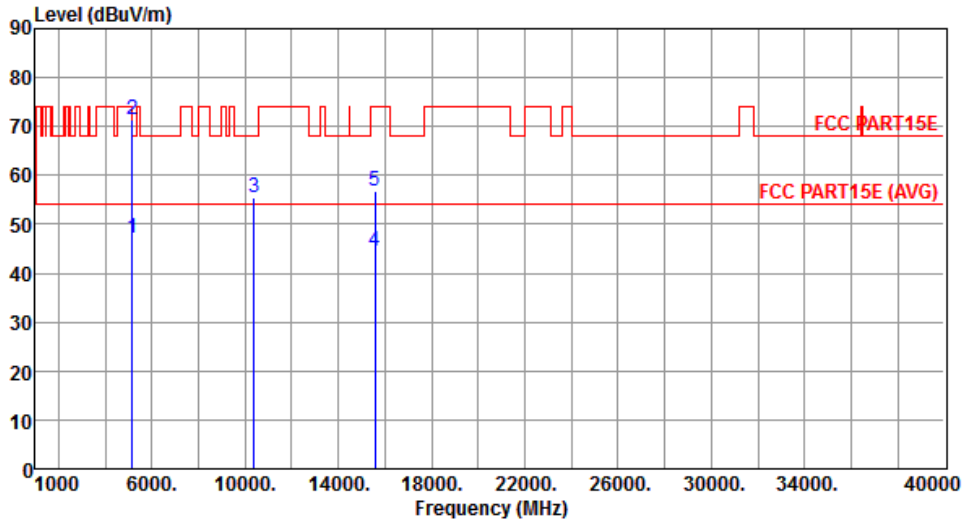


	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	5650.00	59.42	68.20	-8.78	54.55	4.87	Peak	278	222
2	5925.00	60.37	68.20	-7.83	55.16	5.21	Peak	278	222
3	11650.00	48.88	54.00	-5.12	33.60	15.28	Average	176	328
4	11650.00	64.20	74.00	-9.80	48.92	15.28	Peak	176	328
5	17475.00	66.18	68.20	-2.02	46.43	19.75	Peak	184	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).

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

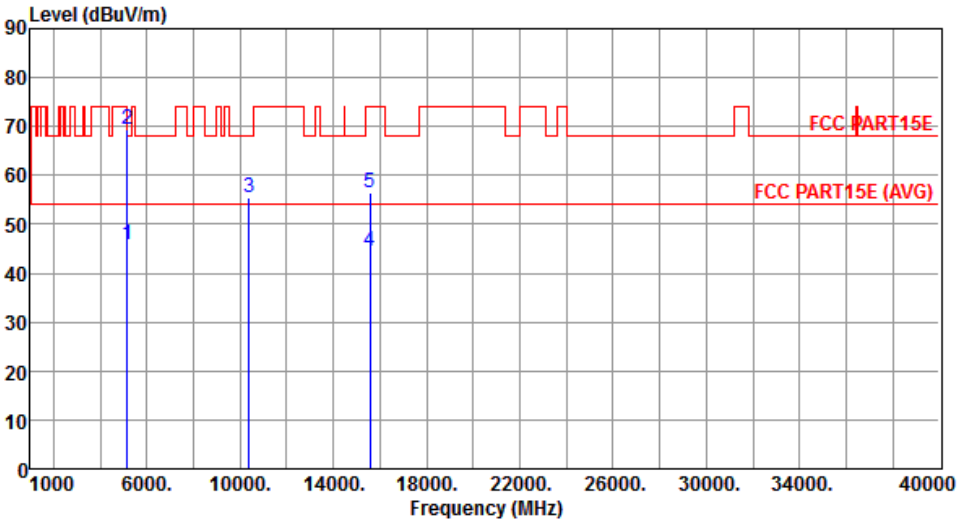
Modulation	VHT40	Test Freq. (MHz)	5190
Polarization	Horizontal		



	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	5150.00	47.27	54.00	-6.73	42.95	4.32	Average	161	178
2	5150.00	71.35	74.00	-2.65	67.03	4.32	Peak	161	178
3	10380.00	55.56	68.20	-12.64	41.18	14.38	Peak	150	297
4	15570.00	44.61	54.00	-9.39	29.36	15.25	Average	153	262
5	15570.00	56.79	74.00	-17.21	41.54	15.25	Peak	153	262

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

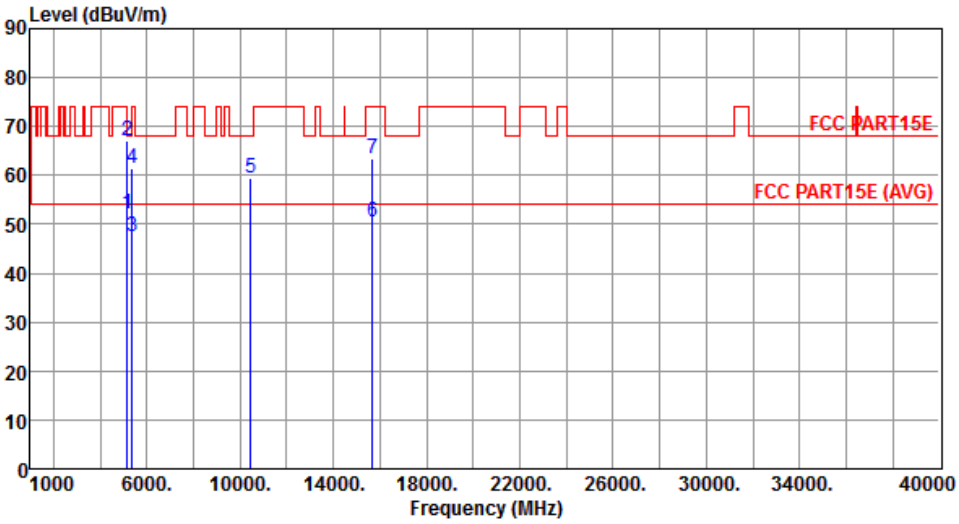
Modulation	VHT40	Test Freq. (MHz)	5190
Polarization	Vertical		



	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	45.71	54.00	-8.29	41.39	4.32	Average	255	197
2	5150.00	69.29	74.00	-4.71	64.97	4.32	Peak	255	197
3	10380.00	55.48	68.20	-12.72	41.10	14.38	Peak	188	192
4	15570.00	44.42	54.00	-9.58	29.17	15.25	Average	165	11
5	15570.00	56.58	74.00	-17.42	41.33	15.25	Peak	165	11

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

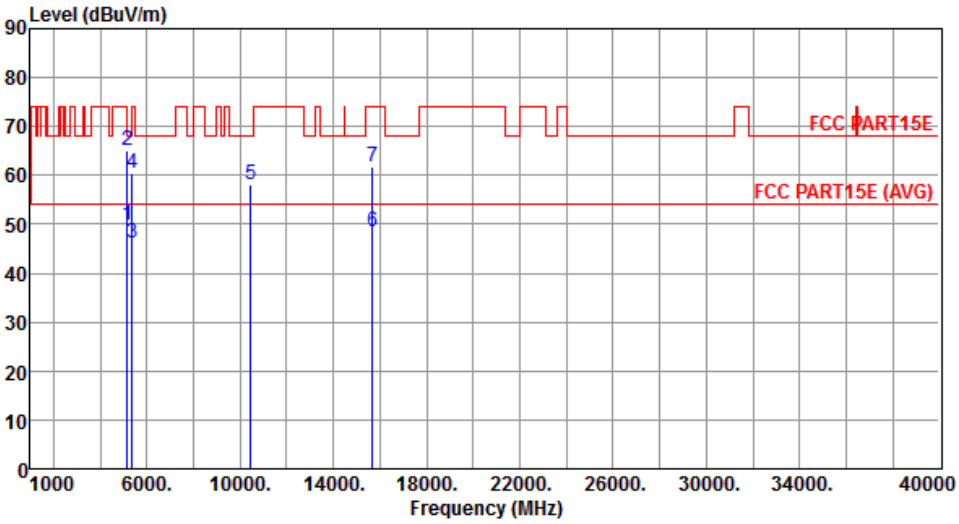
Modulation	VHT40	Test Freq. (MHz)	5230
Polarization	Horizontal		



	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	52.11	54.00	-1.89	47.79	4.32	Average	164	173
2	5150.00	67.21	74.00	-6.79	62.89	4.32	Peak	164	173
3	5350.00	47.44	54.00	-6.56	42.91	4.53	Average	164	173
4	5350.00	61.56	74.00	-12.44	57.03	4.53	Peak	164	173
5	10460.00	59.55	68.20	-8.65	45.01	14.54	Peak	172	296
6	15690.00	50.40	54.00	-3.60	35.30	15.10	Average	143	236
7	15690.00	63.47	74.00	-10.53	48.37	15.10	Peak	143	236

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

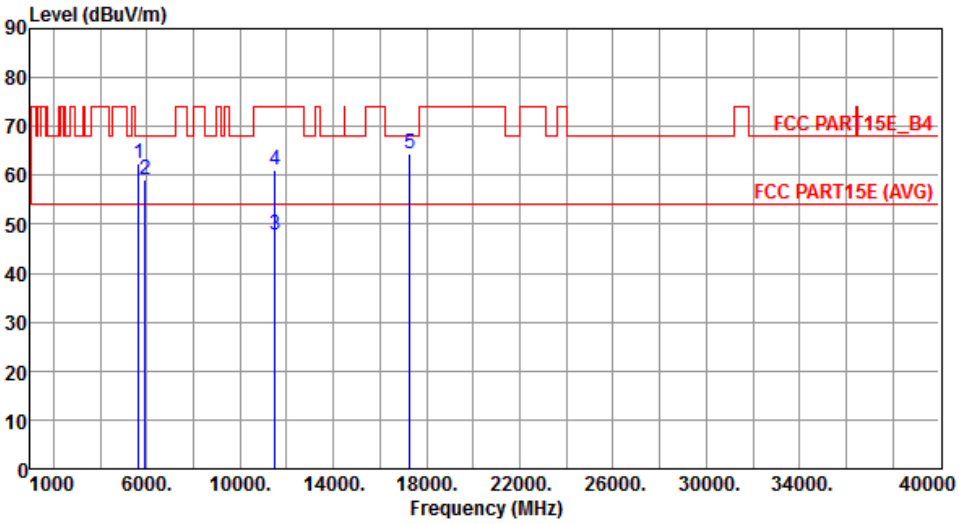
Modulation	VHT40	Test Freq. (MHz)	5230
Polarization	Vertical		



	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	49.93	54.00	-4.07	45.61	4.32	Average	255	298
2	5150.00	64.97	74.00	-9.03	60.65	4.32	Peak	255	298
3	5350.00	46.11	54.00	-7.89	41.58	4.53	Average	255	298
4	5350.00	60.41	74.00	-13.59	55.88	4.53	Peak	255	298
5	10460.00	58.10	68.20	-10.10	43.56	14.54	Peak	171	102
6	15690.00	48.52	54.00	-5.48	33.42	15.10	Average	178	111
7	15690.00	61.69	74.00	-12.31	46.59	15.10	Peak	178	111

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

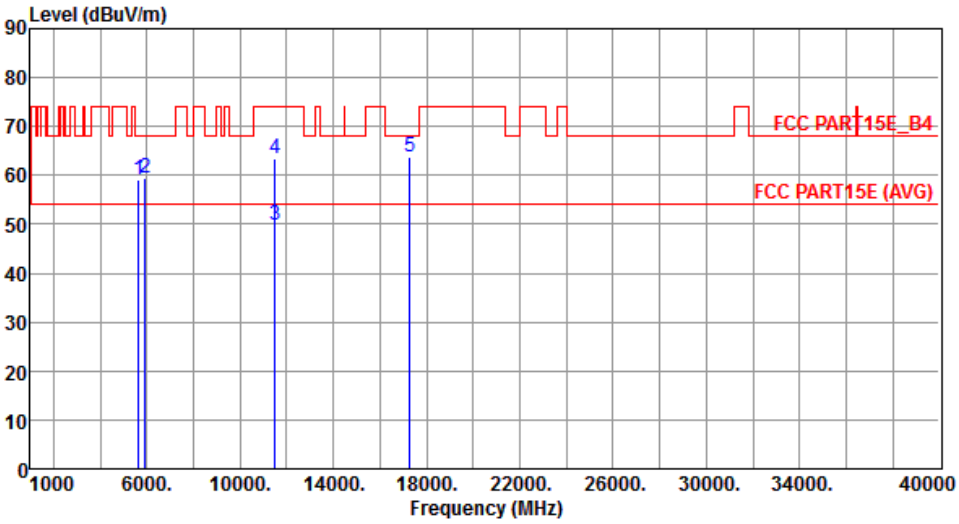
Modulation	VHT40	Test Freq. (MHz)	5755
Polarization	Horizontal		



	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	5650.00	62.30	68.20	-5.90	57.43	4.87	Peak	167	183
2	5925.00	59.19	68.20	-9.01	53.98	5.21	Peak	167	177
3	11510.00	47.94	54.00	-6.06	32.26	15.68	Average	178	165
4	11510.00	60.95	74.00	-13.05	45.27	15.68	Peak	178	165
5	17265.00	64.42	68.20	-3.78	45.22	19.20	Peak	139	267

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

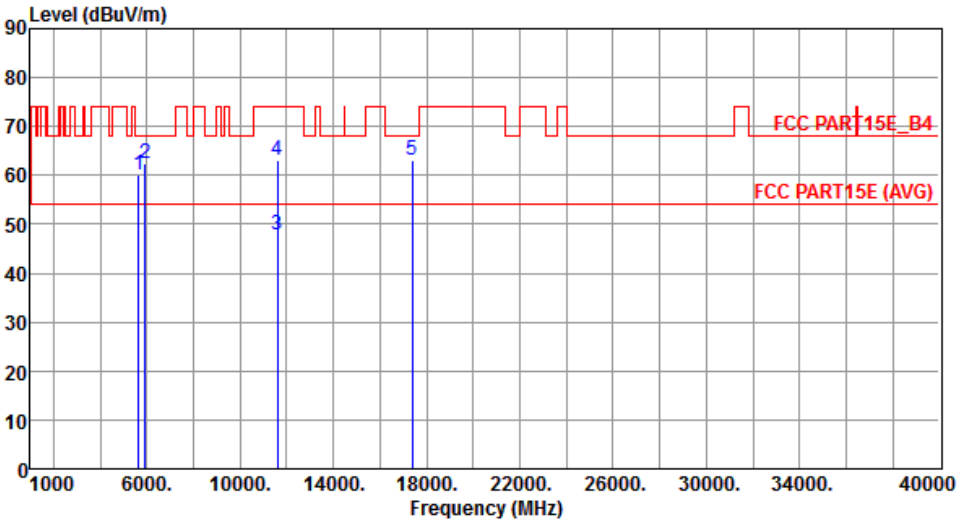
Modulation	VHT40	Test Freq. (MHz)	5755
Polarization	Vertical		



	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	5650.00	59.10	68.20	-9.10	54.23	4.87	Peak	283	244
2	5925.00	59.57	68.20	-8.63	54.36	5.21	Peak	283	244
3	11510.00	49.79	54.00	-4.21	34.11	15.68	Average	185	328
4	11510.00	63.36	74.00	-10.64	47.68	15.68	Peak	185	328
5	17265.00	63.82	68.20	-4.38	44.62	19.20	Peak	186	170

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

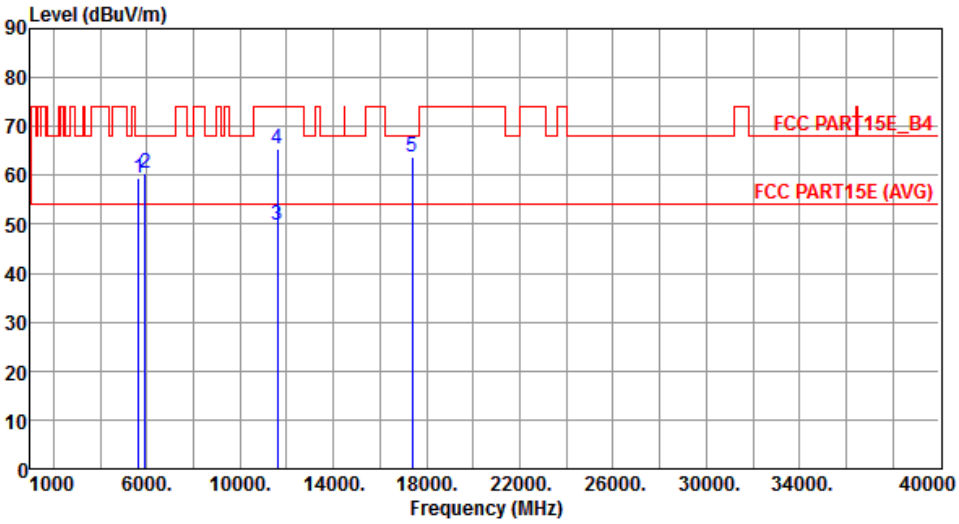
Modulation	VHT40	Test Freq. (MHz)	5795
Polarization	Horizontal		



	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	5650.00	60.03	68.20	-8.17	55.16	4.87	Peak	174	186
2	5925.00	62.50	68.20	-5.70	57.29	5.21	Peak	174	180
3	11590.00	47.78	54.00	-6.22	32.33	15.45	Average	178	198
4	11590.00	63.12	74.00	-10.88	47.67	15.45	Peak	178	198
5	17385.00	63.14	68.20	-5.06	43.63	19.51	Peak	157	117

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

Modulation	VHT40	Test Freq. (MHz)	5795
Polarization	Vertical		

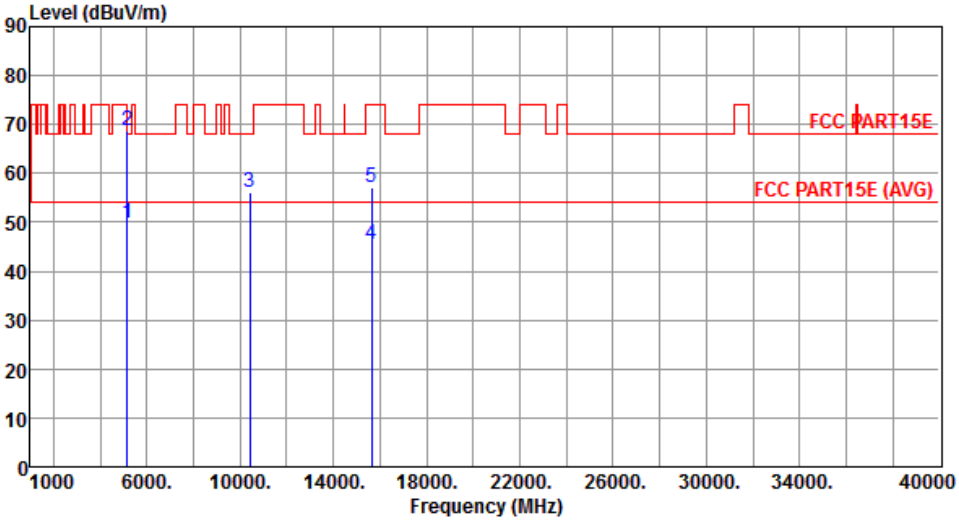


	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	5650.00	59.31	68.20	-8.89	54.44	4.87	Peak	289	222
2	5925.00	60.38	68.20	-7.82	55.17	5.21	Peak	289	222
3	11590.00	49.74	54.00	-4.26	34.29	15.45	Average	158	13
4	11590.00	65.43	74.00	-8.57	49.98	15.45	Peak	158	13
5	17385.00	63.74	68.20	-4.46	44.23	19.51	Peak	167	168

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

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

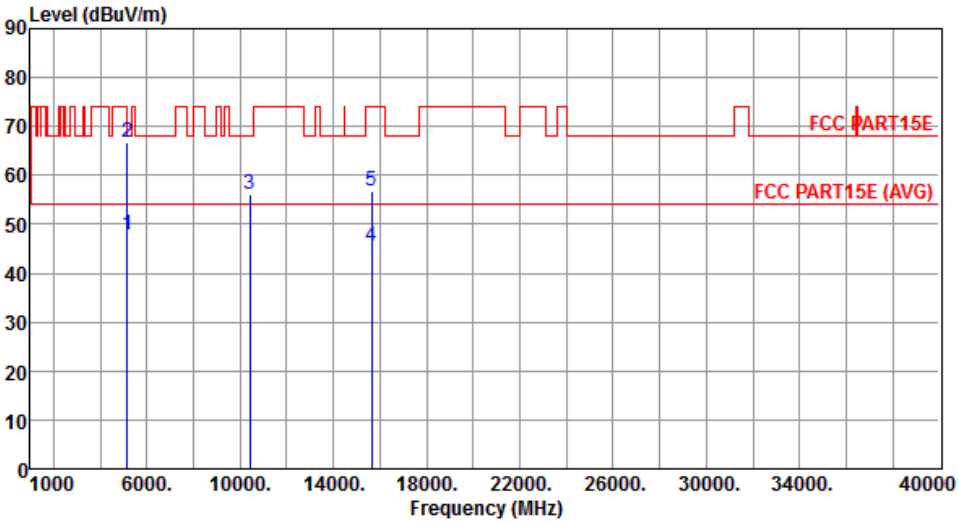
Modulation	VHT80	Test Freq. (MHz)	5210
Polarization	Horizontal		



	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	5150.00	49.79	54.00	-4.21	45.47	4.32	Average	169	168
2	5150.00	68.62	74.00	-5.38	64.30	4.32	Peak	169	168
3	10420.00	56.19	68.20	-12.01	41.74	14.45	Peak	152	307
4	15630.00	45.44	54.00	-8.56	30.26	15.18	Average	159	213
5	15630.00	57.28	74.00	-16.72	42.10	15.18	Peak	159	213

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

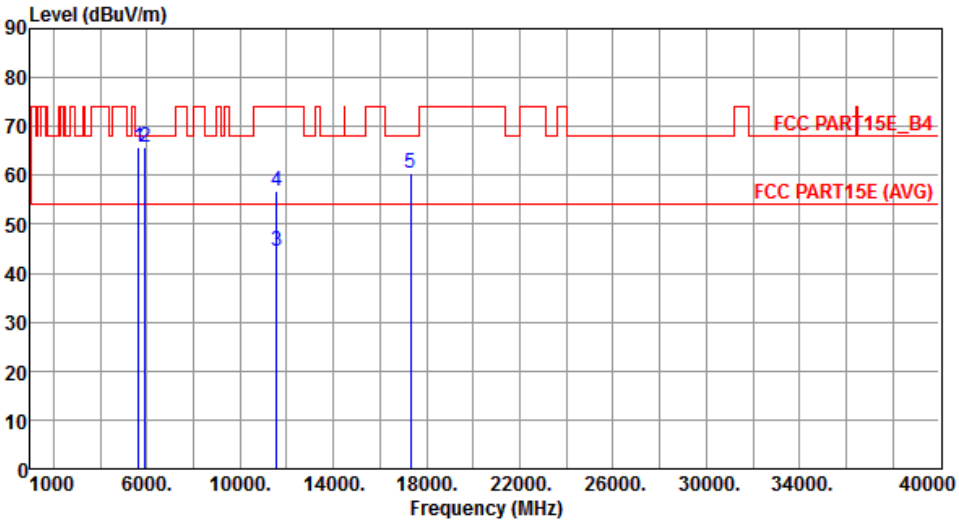
Modulation	VHT80	Test Freq. (MHz)	5210
Polarization	Vertical		



	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	47.89	54.00	-6.11	43.57	4.32	Average	199	212
2	5150.00	66.90	74.00	-7.10	62.58	4.32	Peak	199	212
3	10420.00	56.13	68.20	-12.07	41.68	14.45	Peak	177	192
4	15630.00	45.33	54.00	-8.67	30.15	15.18	Average	198	166
5	15630.00	56.79	74.00	-17.21	41.61	15.18	Peak	198	166

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

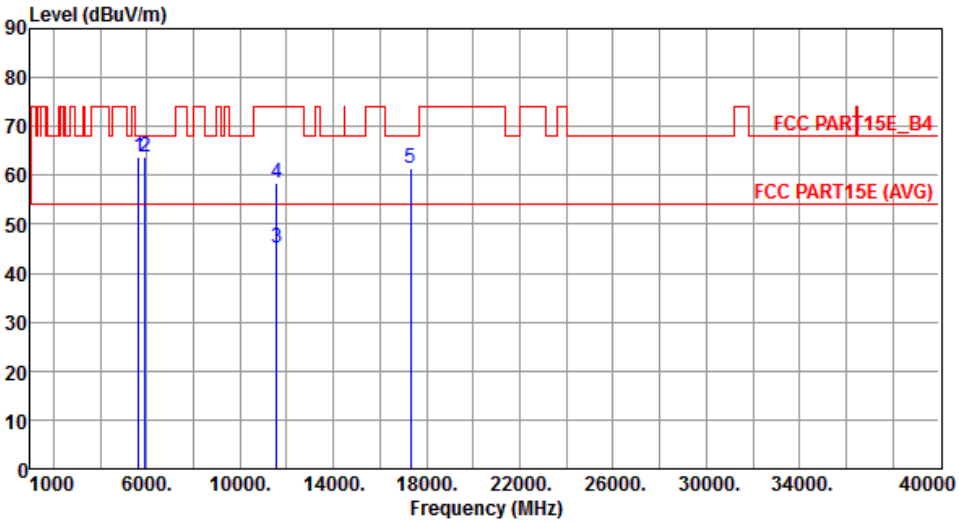
Modulation	VHT80	Test Freq. (MHz)	5775
Polarization	Horizontal		



	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	5650.00	65.69	68.20	-2.51	60.82	4.87	Peak	172	186
2	5925.00	65.67	68.20	-2.53	60.46	5.21	Peak	172	174
3	11550.00	44.55	54.00	-9.45	28.98	15.57	Average	222	179
4	11550.00	56.84	74.00	-17.16	41.27	15.57	Peak	222	179
5	17325.00	60.57	68.20	-7.63	41.21	19.36	Peak	166	197

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

Modulation	VHT80	Test Freq. (MHz)	5775
Polarization	Vertical		



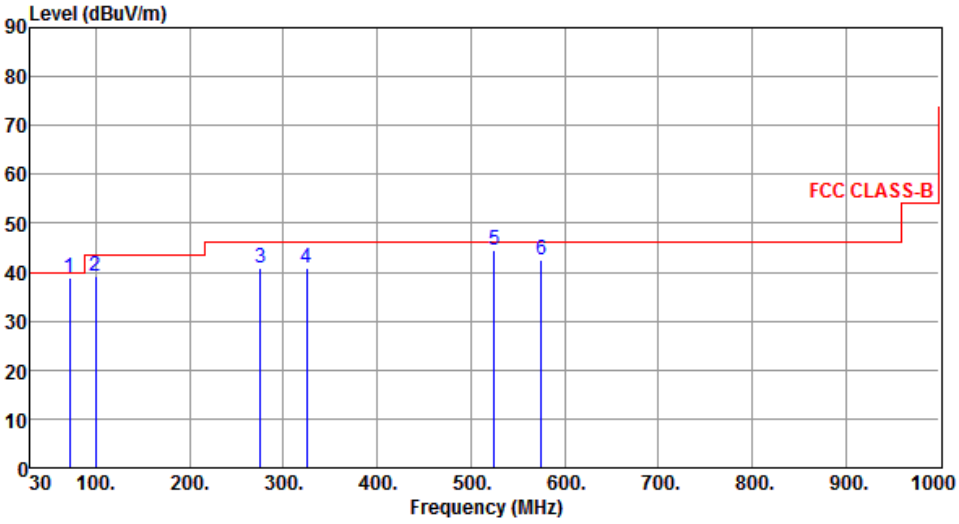
	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	5650.00	63.64	68.20	-4.56	58.77	4.87	Peak	169	192
2	5925.00	63.82	68.20	-4.38	58.61	5.21	Peak	169	192
3	11550.00	45.03	54.00	-8.97	29.46	15.57	Average	227	330
4	11550.00	58.42	74.00	-15.58	42.85	15.57	Peak	227	330
5	17325.00	61.32	68.20	-6.88	41.96	19.36	Peak	165	173

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

3.5.9 Transmitter Radiated Unwanted Emissions (Below 1GHz)

Configuration 2: Power amplifier / SK85712-11

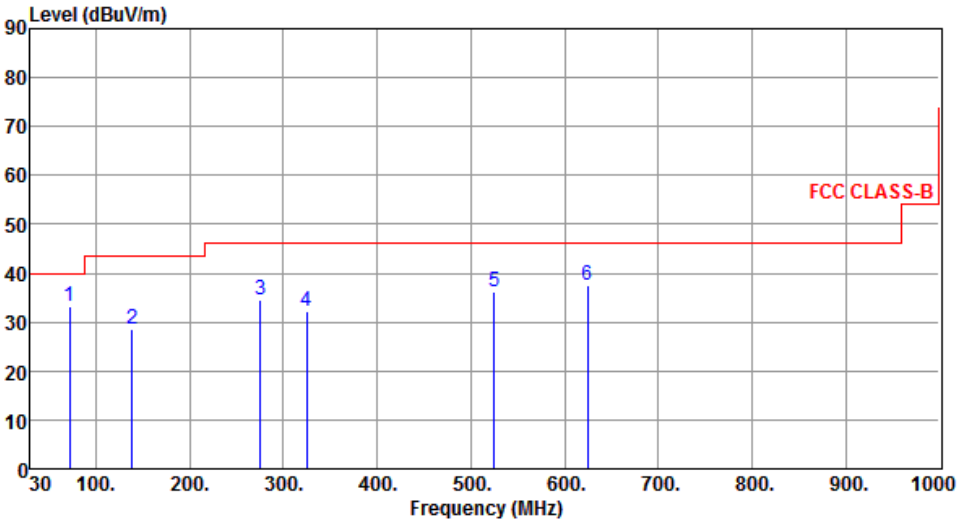
Modulation	VHT20	**Test Freq. (MHz)**	5200
Polarization	Horizontal		



	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	71.71	38.97	40.00	-1.03	49.92	-10.95	QP	143	302
2	99.84	39.25	43.50	-4.25	52.13	-12.88	Peak	---	---
3	275.41	40.96	46.00	-5.04	49.09	-8.13	Peak	---	---
4	324.88	40.81	46.00	-5.19	47.70	-6.89	Peak	---	---
5	524.70	44.58	46.00	-1.42	46.96	-2.38	QP	116	250
6	575.14	42.51	46.00	-3.49	43.81	-1.30	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.

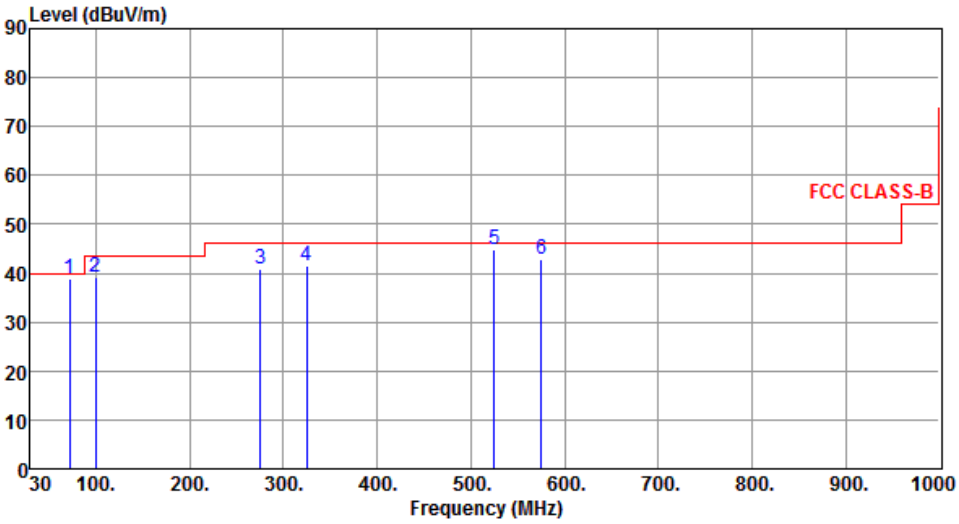
Modulation	VHT20	Test Freq. (MHz)	5200
Polarization	Vertical		



	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	71.71	33.37	40.00	-6.63	44.32	-10.95	Peak	---	---
2	138.64	28.56	43.50	-14.94	36.98	-8.42	Peak	---	---
3	275.41	34.69	46.00	-11.31	42.82	-8.13	Peak	---	---
4	324.88	32.33	46.00	-13.67	39.22	-6.89	Peak	---	---
5	524.70	36.12	46.00	-9.88	38.50	-2.38	Peak	---	---
6	624.61	37.61	46.00	-8.39	38.04	-0.43	Peak	---	---

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

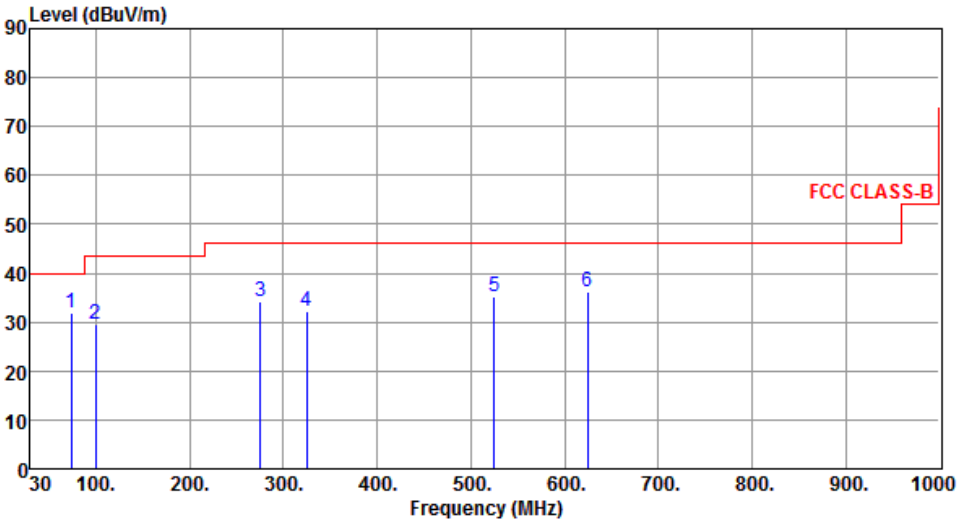
Modulation	VHT20	Test Freq. (MHz)	5825
Polarization	Horizontal		



	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	71.65	38.98	40.00	-1.02	49.92	-10.94	QP	146	297
2	99.84	39.20	43.50	-4.30	52.08	-12.88	Peak	---	---
3	275.41	40.93	46.00	-5.07	49.06	-8.13	Peak	---	---
4	324.88	41.43	46.00	-4.57	48.32	-6.89	Peak	---	---
5	524.70	44.68	46.00	-1.32	47.06	-2.38	QP	116	237
6	575.14	42.78	46.00	-3.22	44.08	-1.30	Peak	---	---

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

Modulation	VHT20	Test Freq. (MHz)	5825
Polarization	Vertical		

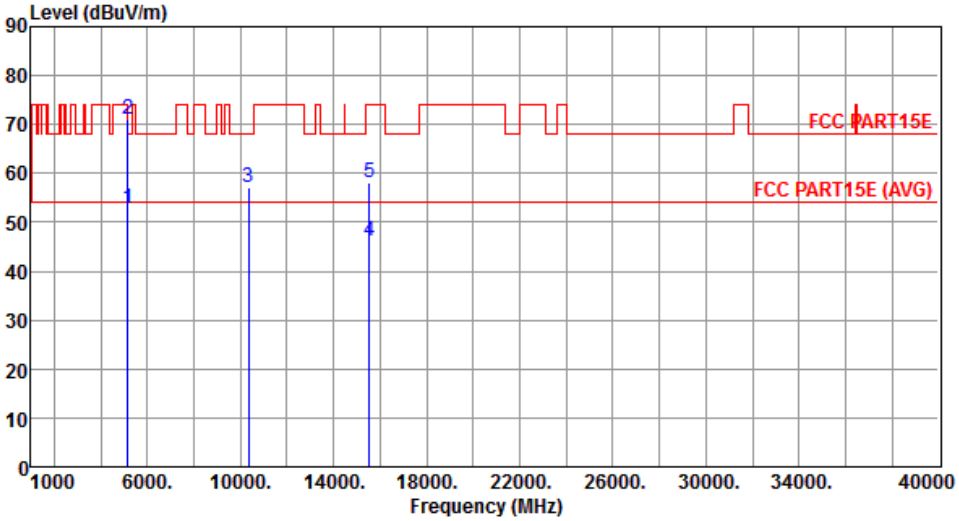


	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	73.65	31.82	40.00	-8.18	43.15	-11.33	Peak	---	---
2	99.84	29.46	43.50	-14.04	42.34	-12.88	Peak	---	---
3	275.41	34.14	46.00	-11.86	42.27	-8.13	Peak	---	---
4	324.88	32.29	46.00	-13.71	39.18	-6.89	Peak	---	---
5	524.70	35.30	46.00	-10.70	37.68	-2.38	Peak	---	---
6	624.61	36.31	46.00	-9.69	36.74	-0.43	Peak	---	---

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

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

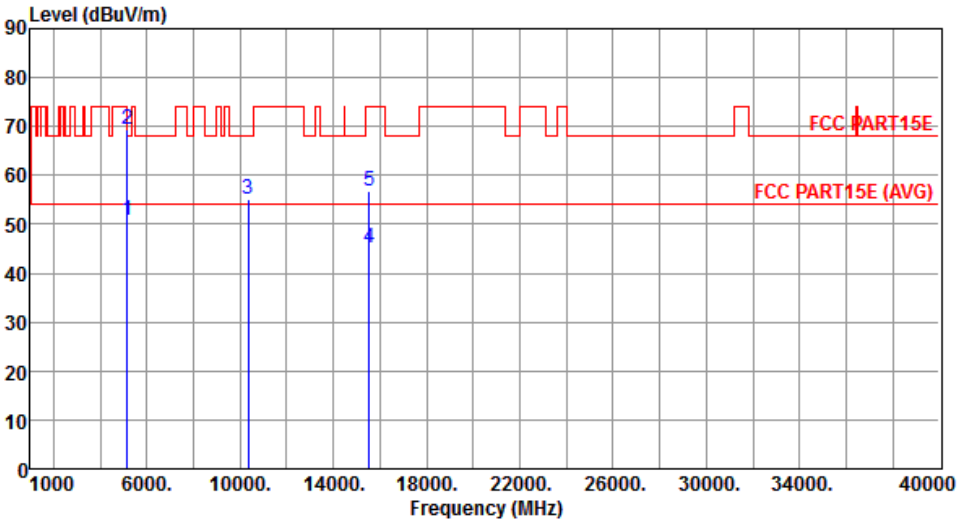
Modulation	11a	Test Freq. (MHz)	5180
Polarization	Horizontal		



	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	5150.00	52.68	54.00	-1.32	48.36	4.32	Average	148	11
2	5150.00	71.02	74.00	-2.98	66.70	4.32	Peak	148	11
3	10360.00	57.09	68.20	-11.11	42.76	14.33	Peak	192	167
4	15540.00	46.12	54.00	-7.88	30.83	15.29	Average	237	162
5	15540.00	58.15	74.00	-15.85	42.86	15.29	Peak	237	162

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

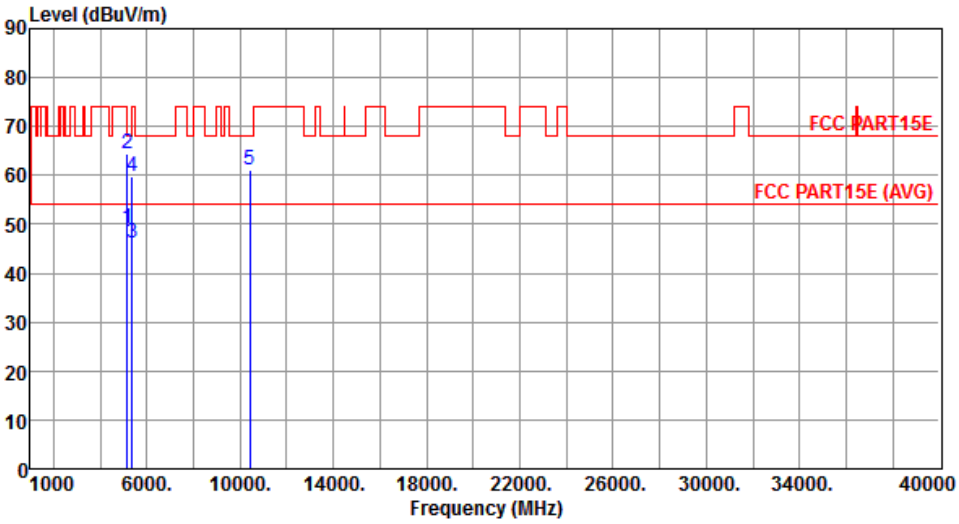
Modulation	11a	Test Freq. (MHz)	5180
Polarization	Vertical		



	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	5150.00	50.91	54.00	-3.09	46.59	4.32	Average	153	16
2	5150.00	69.48	74.00	-4.52	65.16	4.32	Peak	153	16
3	10360.00	55.11	68.20	-13.09	40.78	14.33	Peak	147	310
4	15540.00	45.15	54.00	-8.85	29.86	15.29	Average	193	242
5	15540.00	56.76	74.00	-17.24	41.47	15.29	Peak	193	242

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

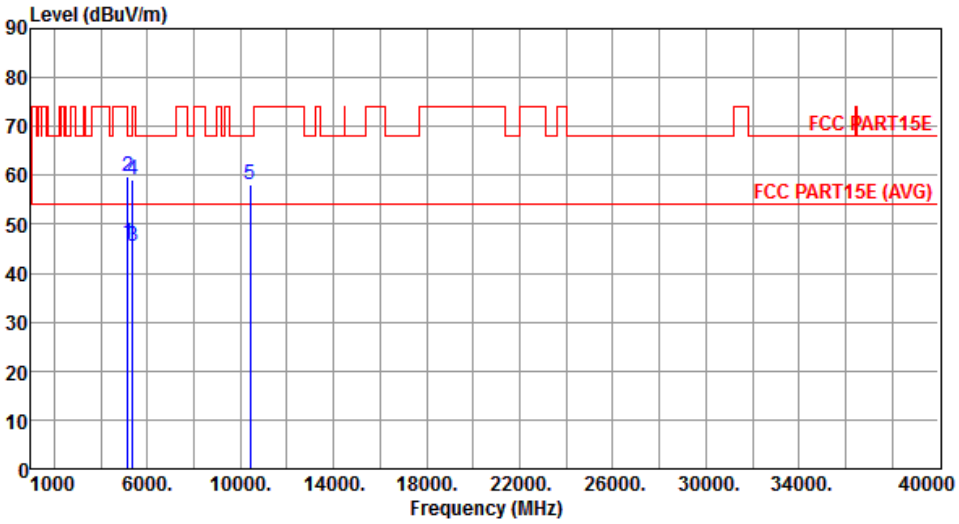
Modulation	11a	Test Freq. (MHz)	5200
Polarization	Horizontal		



	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	5150.00	49.13	54.00	-4.87	44.81	4.32	Average	147	9
2	5150.00	64.54	74.00	-9.46	60.22	4.32	Peak	147	9
3	5350.00	46.30	54.00	-7.70	41.77	4.53	Average	147	9
4	5350.00	59.94	74.00	-14.06	55.41	4.53	Peak	147	9
5	10400.00	61.27	68.20	-6.93	46.86	14.41	Peak	184	57

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

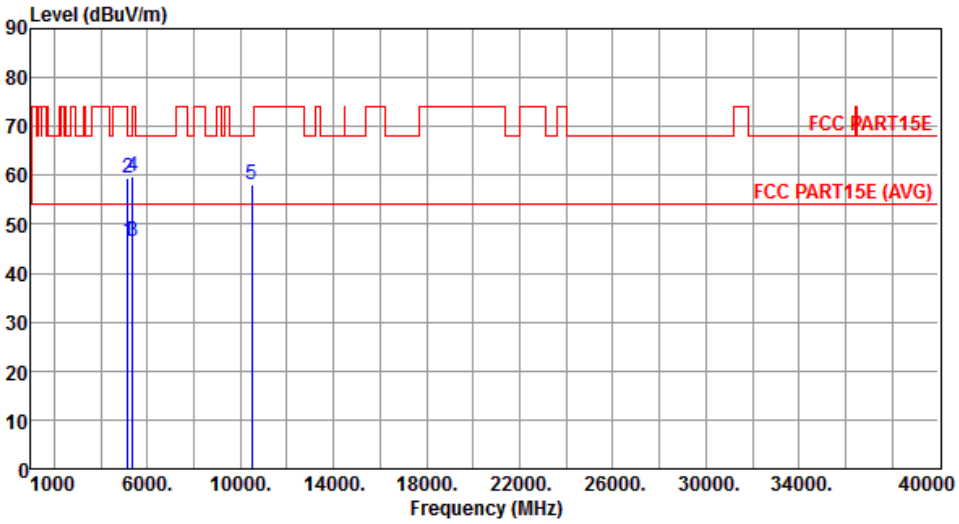
Modulation	11a	Test Freq. (MHz)	5200
Polarization	Vertical		



	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	5150.00	46.19	54.00	-7.81	41.87	4.32	Average	369	264
2	5150.00	59.84	74.00	-14.16	55.52	4.32	Peak	369	264
3	5350.00	45.57	54.00	-8.43	41.04	4.53	Average	369	264
4	5350.00	59.02	74.00	-14.98	54.49	4.53	Peak	369	264
5	10400.00	57.97	68.20	-10.23	43.56	14.41	Peak	134	215

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

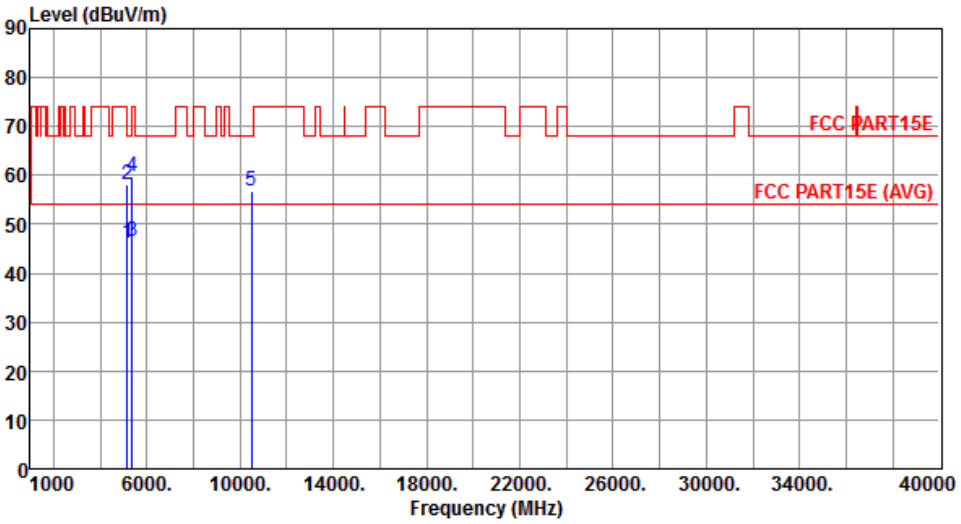
Modulation	11a	Test Freq. (MHz)	5240
Polarization	Horizontal		



	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	5150.00	46.37	54.00	-7.63	42.05	4.32	Average	138	9
2	5150.00	59.43	74.00	-14.57	55.11	4.32	Peak	138	9
3	5350.00	46.55	54.00	-7.45	42.02	4.53	Average	138	9
4	5350.00	59.78	74.00	-14.22	55.25	4.53	Peak	138	9
5	10480.00	58.15	68.20	-10.05	43.58	14.57	Peak	175	68

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

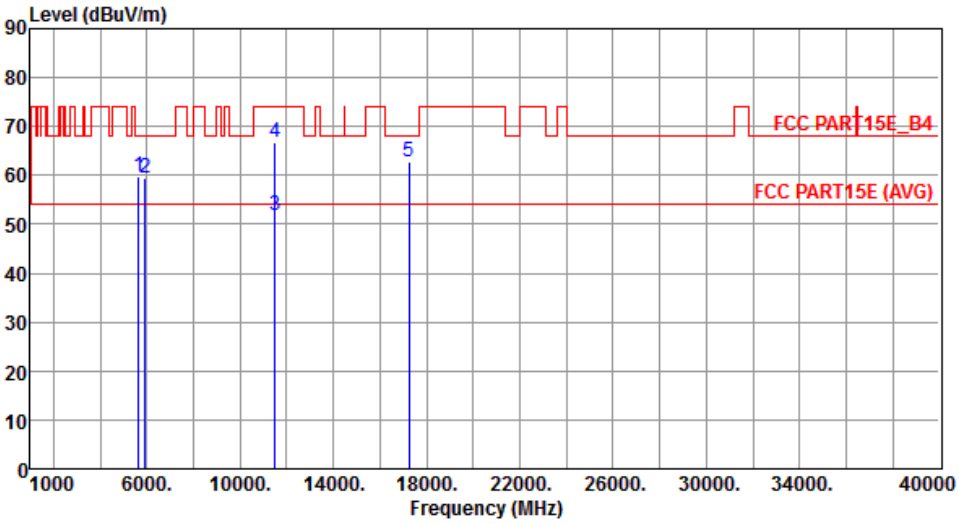
Modulation	11a	Test Freq. (MHz)	5240
Polarization	Vertical		



	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	5150.00	46.06	54.00	-7.94	41.74	4.32	Average	152	239
2	5150.00	57.99	74.00	-16.01	53.67	4.32	Peak	152	239
3	5350.00	46.37	54.00	-7.63	41.84	4.53	Average	152	239
4	5350.00	59.90	74.00	-14.10	55.37	4.53	Peak	152	239
5	10480.00	56.84	68.20	-11.36	42.27	14.57	Peak	196	227

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

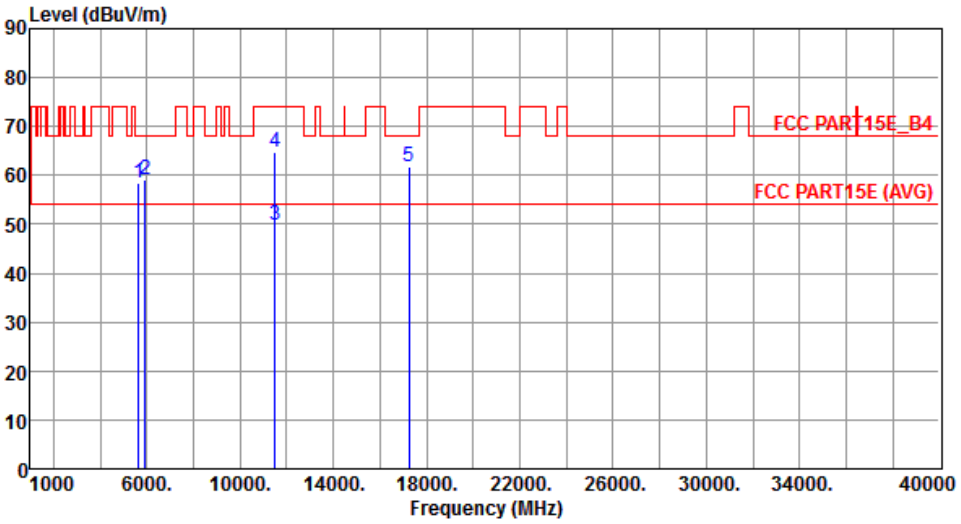
Modulation	11a	Test Freq. (MHz)	5745
Polarization	Horizontal		



	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	5650.00	59.87	68.20	-8.33	55.00	4.87	Peak	152	1
2	5925.00	59.55	68.20	-8.65	54.34	5.21	Peak	152	1
3	11490.00	51.84	54.00	-2.16	36.14	15.70	Average	231	356
4	11490.00	66.64	74.00	-7.36	50.94	15.70	Peak	231	356
5	17235.00	62.65	68.20	-5.55	43.53	19.12	Peak	206	175

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

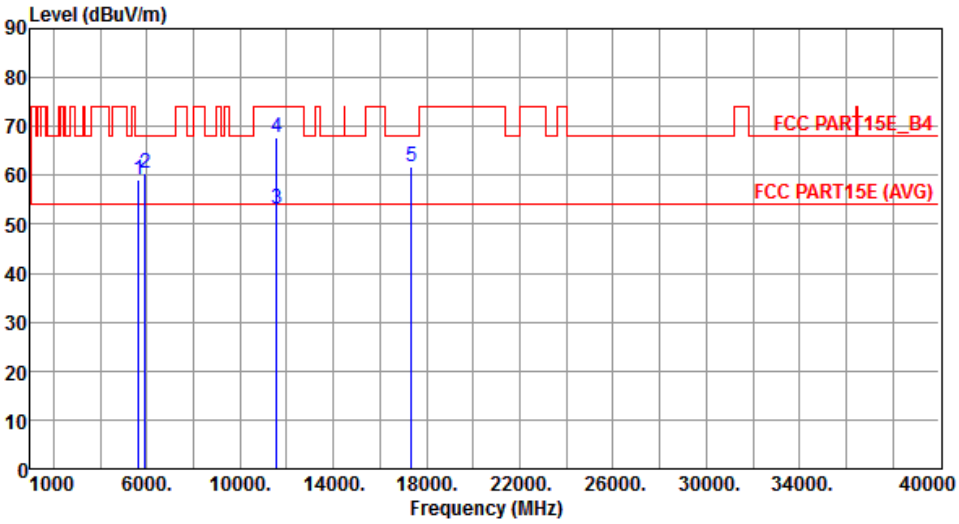
Modulation	11a	Test Freq. (MHz)	5745
Polarization	Vertical		



	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	5650.00	58.30	68.20	-9.90	53.43	4.87	Peak	216	183
2	5925.00	59.06	68.20	-9.14	53.85	5.21	Peak	216	183
3	11490.00	49.96	54.00	-4.04	34.26	15.70	Average	231	356
4	11490.00	64.70	74.00	-9.30	49.00	15.70	Peak	231	356
5	17235.00	61.83	68.20	-6.37	42.71	19.12	Peak	206	175

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

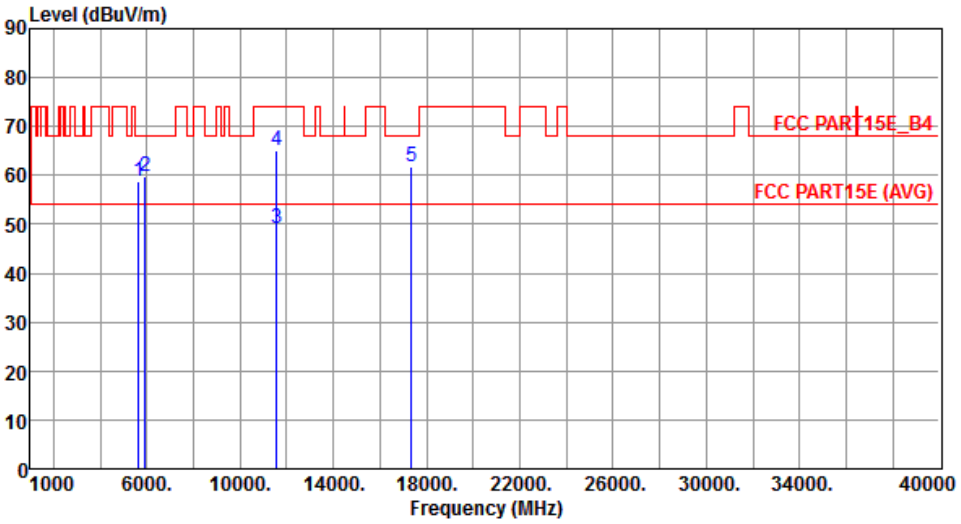
Modulation	11a	Test Freq. (MHz)	5785
Polarization	Horizontal		



	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	5650.00	59.07	68.20	-9.13	54.20	4.87	Peak	122	5
2	5925.00	60.41	68.20	-7.79	55.20	5.21	Peak	122	5
3	11570.00	52.98	54.00	-1.02	37.47	15.51	Average	234	357
4	11570.00	67.64	74.00	-6.36	52.13	15.51	Peak	234	357
5	17355.00	61.80	68.20	-6.40	42.36	19.44	Peak	155	347

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

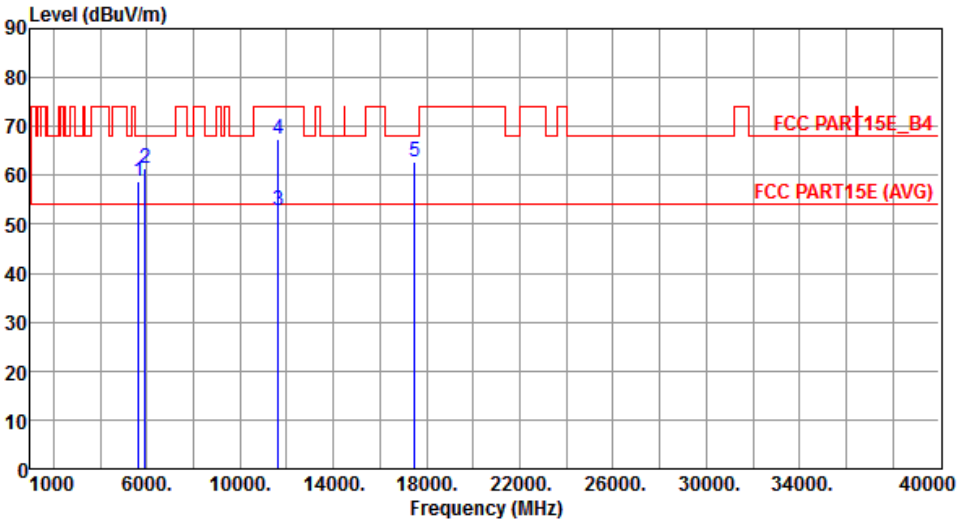
Modulation	11a	Test Freq. (MHz)	5785
Polarization	Vertical		



	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	5650.00	58.65	68.20	-9.55	53.78	4.87	Peak	367	251
2	5925.00	59.76	68.20	-8.44	54.55	5.21	Peak	367	251
3	11570.00	49.13	54.00	-4.87	33.62	15.51	Average	326	334
4	11570.00	64.97	74.00	-9.03	49.46	15.51	Peak	326	334
5	17355.00	61.81	68.20	-6.39	42.37	19.44	Peak	231	315

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

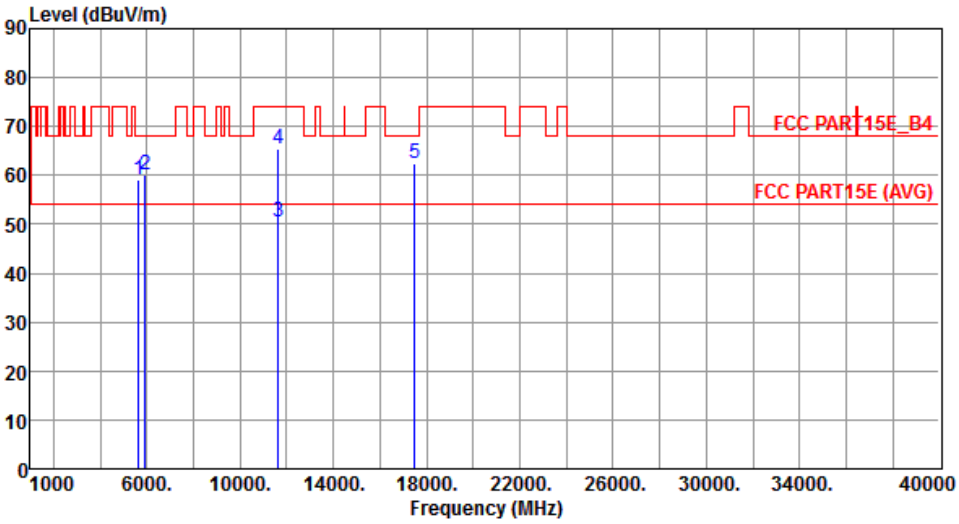
Modulation	11a	Test Freq. (MHz)	5825
Polarization	Horizontal		



	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	5650.00	58.89	68.20	-9.31	54.02	4.87	Peak	120	10
2	5925.00	61.37	68.20	-6.83	56.16	5.21	Peak	120	10
3	11650.00	52.75	54.00	-1.25	37.47	15.28	Average	229	356
4	11650.00	67.28	74.00	-6.72	52.00	15.28	Peak	229	356
5	17475.00	62.61	68.20	-5.59	42.86	19.75	Peak	210	196

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

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

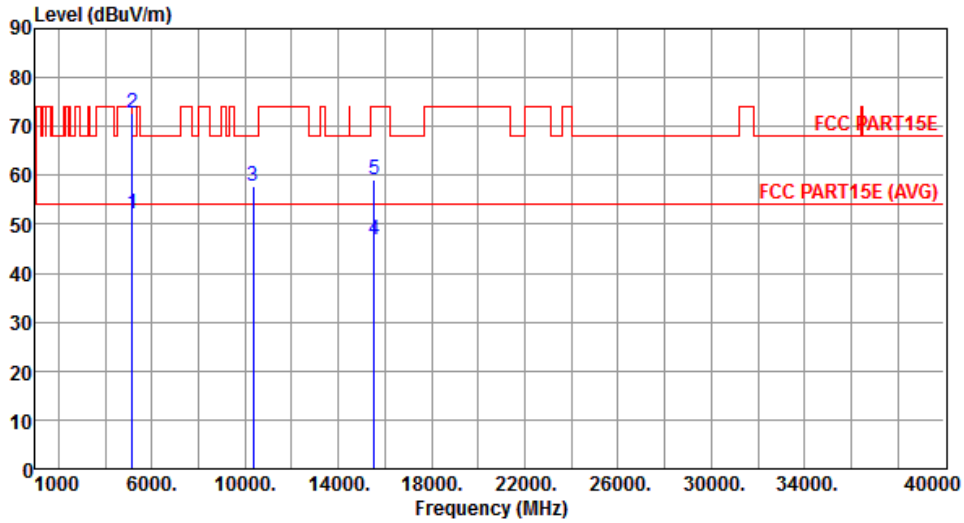


	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	5650.00	59.00	68.20	-9.20	54.13	4.87	Peak	143	124
2	5925.00	60.05	68.20	-8.15	54.84	5.21	Peak	143	124
3	11650.00	50.51	54.00	-3.49	35.23	15.28	Average	186	347
4	11650.00	65.50	74.00	-8.50	50.22	15.28	Peak	186	347
5	17475.00	62.28	68.20	-5.92	42.53	19.75	Peak	227	205

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

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

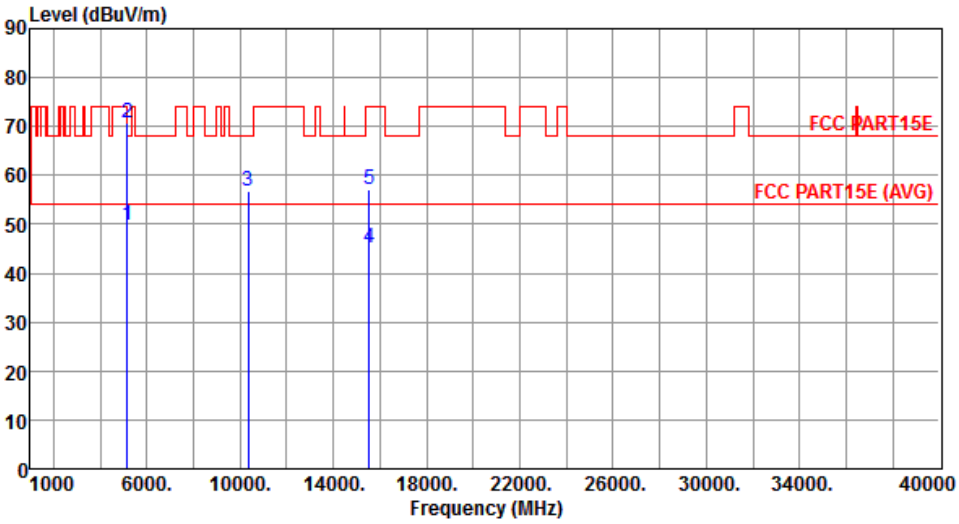
Modulation	VHT20	Test Freq. (MHz)	5180
Polarization	Horizontal		



	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	5150.00	52.18	54.00	-1.82	47.86	4.32	Average	147	347
2	5150.00	72.76	74.00	-1.24	68.44	4.32	Peak	147	347
3	10360.00	57.80	68.20	-10.40	43.47	14.33	Peak	155	314
4	15540.00	46.86	54.00	-7.14	31.57	15.29	Average	128	165
5	15540.00	58.96	74.00	-15.04	43.67	15.29	Peak	128	165

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

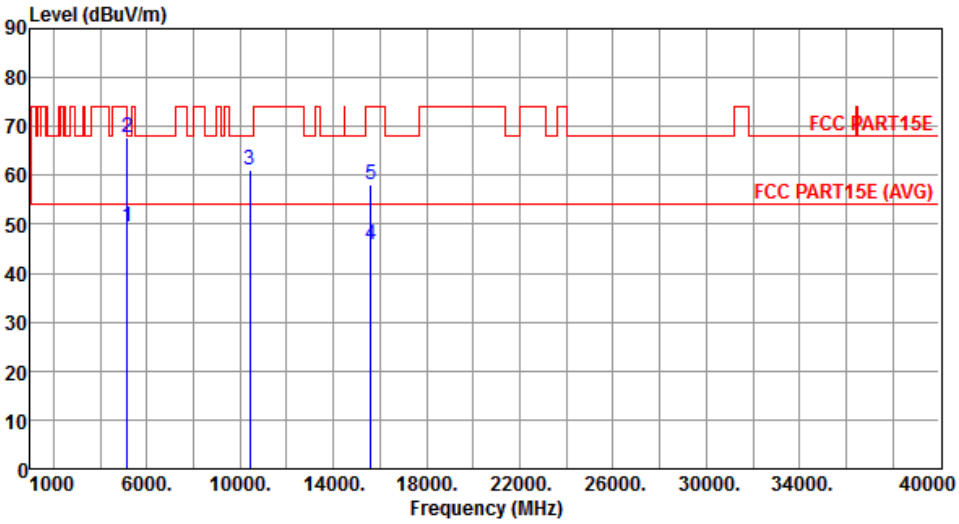
Modulation	VHT20	Test Freq. (MHz)	5180
Polarization	Vertical		



	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	5150.00	49.84	54.00	-4.16	45.52	4.32	Average	147	347
2	5150.00	70.62	74.00	-3.38	66.30	4.32	Peak	147	347
3	10360.00	56.74	68.20	-11.46	42.41	14.33	Peak	191	336
4	15540.00	45.30	54.00	-8.70	30.01	15.29	Average	115	142
5	15540.00	57.22	74.00	-16.78	41.93	15.29	Peak	115	142

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

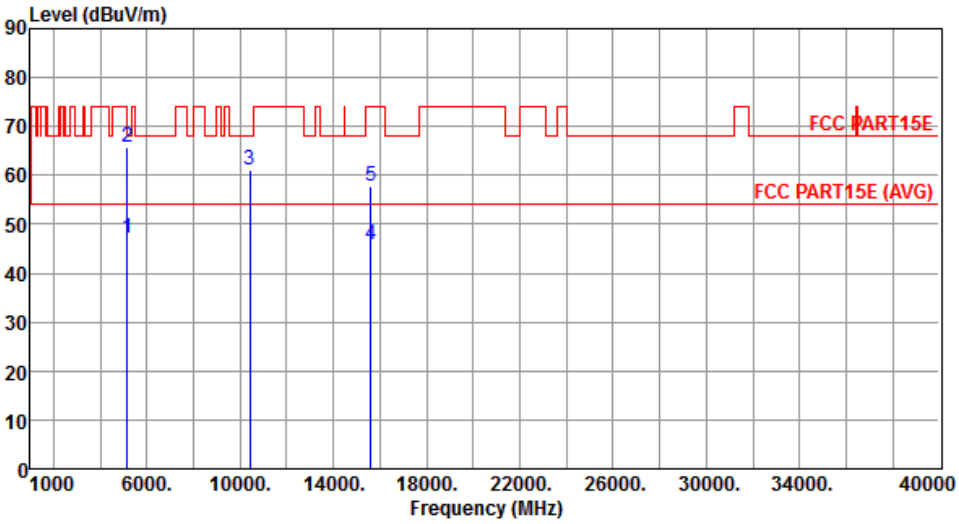
Modulation	VHT20	Test Freq. (MHz)	5200
Polarization	Horizontal		



	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	5150.00	49.34	54.00	-4.66	45.02	4.32	Average	144	7
2	5150.00	67.75	74.00	-6.25	63.43	4.32	Peak	144	7
3	10400.00	61.15	68.20	-7.05	46.74	14.41	Peak	184	56
4	15600.00	45.95	54.00	-8.05	30.74	15.21	Average	149	62
5	15600.00	57.96	74.00	-16.04	42.75	15.21	Peak	149	62

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

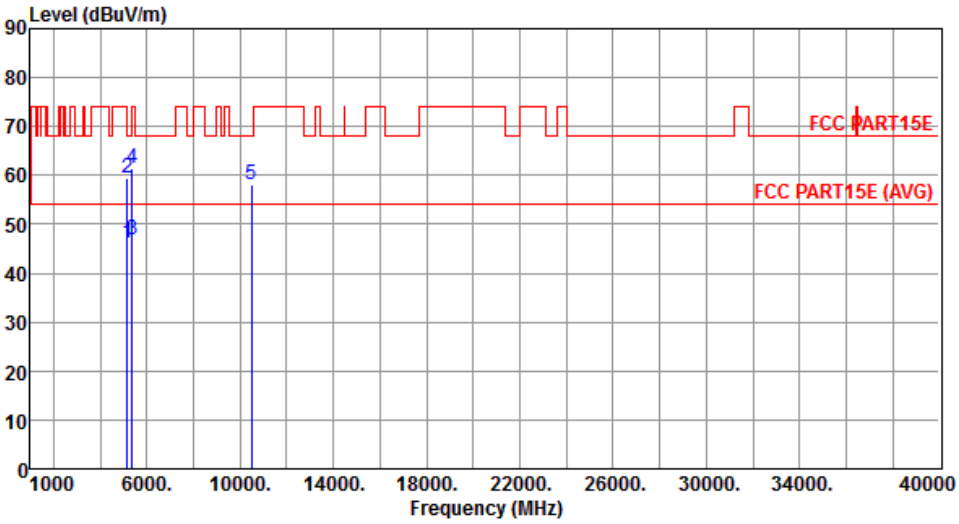
Modulation	VHT20	Test Freq. (MHz)	5200
Polarization	Vertical		



	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	5150.00	47.15	54.00	-6.85	42.83	4.32	Average	151	24
2	5150.00	65.90	74.00	-8.10	61.58	4.32	Peak	151	24
3	10400.00	61.26	68.20	-6.94	46.85	14.41	Peak	183	62
4	15600.00	45.87	54.00	-8.13	30.66	15.21	Average	174	138
5	15600.00	57.89	74.00	-16.11	42.68	15.21	Peak	174	138

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

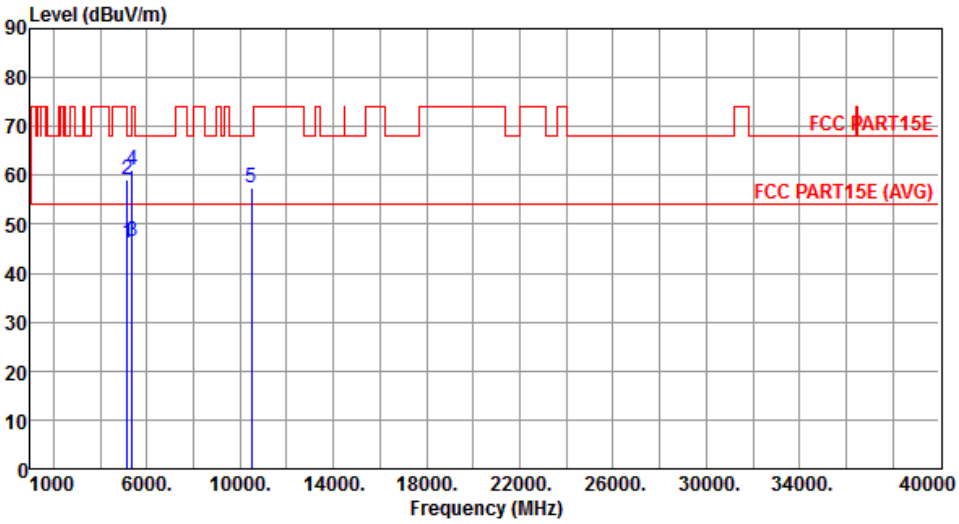
Modulation	VHT20	Test Freq. (MHz)	5240
Polarization	Horizontal		



	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	5150.00	46.12	54.00	-7.88	41.80	4.32	Average	131	350
2	5150.00	59.52	74.00	-14.48	55.20	4.32	Peak	131	350
3	5350.00	46.69	54.00	-7.31	42.16	4.53	Average	131	350
4	5350.00	61.56	74.00	-12.44	57.03	4.53	Peak	131	350
5	10480.00	58.18	68.20	-10.02	43.61	14.57	Peak	173	72

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

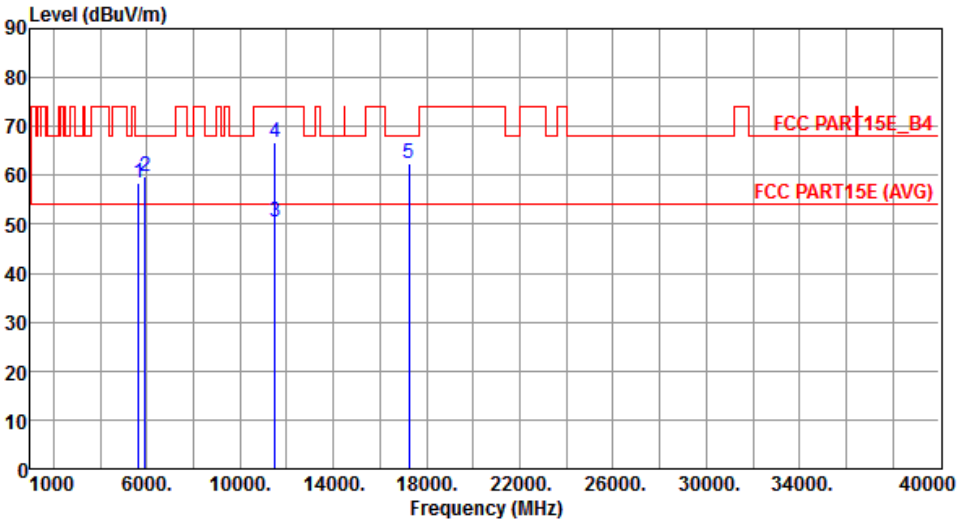
Modulation	VHT20	Test Freq. (MHz)	5240
Polarization	Vertical		



	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	5150.00	46.00	54.00	-8.00	41.68	4.32	Average	183	279
2	5150.00	59.14	74.00	-14.86	54.82	4.32	Peak	183	279
3	5350.00	46.59	54.00	-7.41	42.06	4.53	Average	183	279
4	5350.00	61.22	74.00	-12.78	56.69	4.53	Peak	183	279
5	10480.00	57.35	68.20	-10.85	42.78	14.57	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).

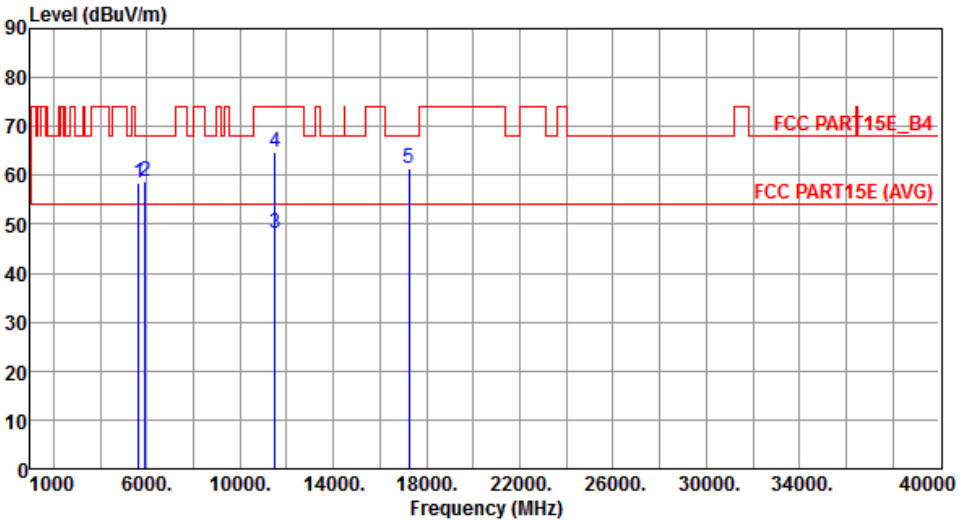
Modulation	VHT20	Test Freq. (MHz)	5745
Polarization	Horizontal		



	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	5650.00	58.56	68.20	-9.64	53.69	4.87	Peak	150	1
2	5925.00	59.62	68.20	-8.58	54.41	5.21	Peak	150	1
3	11490.00	50.59	54.00	-3.41	34.89	15.70	Average	231	357
4	11490.00	66.91	74.00	-7.09	51.21	15.70	Peak	231	357
5	17235.00	62.46	68.20	-5.74	43.34	19.12	Peak	216	159

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

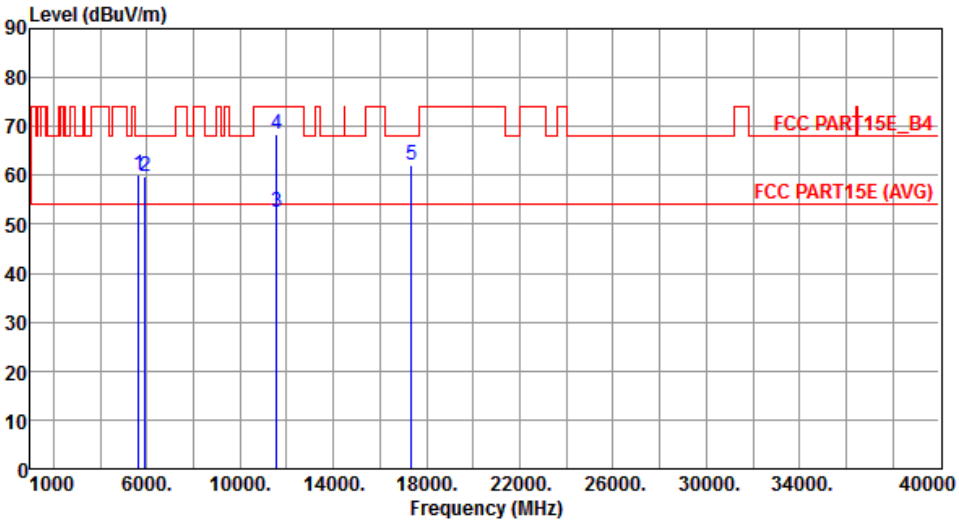
Modulation	VHT20	Test Freq. (MHz)	5745
Polarization	Vertical		



	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	5650.00	58.45	68.20	-9.75	53.58	4.87	Peak	261	14
2	5925.00	58.65	68.20	-9.55	53.44	5.21	Peak	261	14
3	11490.00	48.28	54.00	-5.72	32.58	15.70	Average	275	308
4	11490.00	64.63	74.00	-9.37	48.93	15.70	Peak	275	308
5	17235.00	61.48	68.20	-6.72	42.36	19.12	Peak	155	103

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

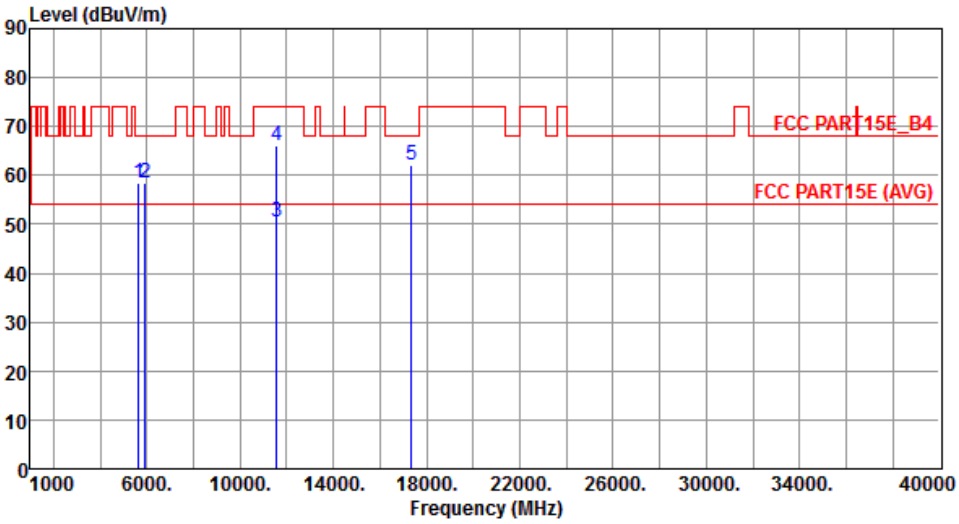
Modulation	VHT20	Test Freq. (MHz)	5785
Polarization	Horizontal		



	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	5650.00	59.98	68.20	-8.22	55.11	4.87	Peak	121	6
2	5925.00	59.77	68.20	-8.43	54.56	5.21	Peak	121	6
3	11570.00	52.62	54.00	-1.38	37.11	15.51	Average	165	56
4	11570.00	68.27	74.00	-5.73	52.76	15.51	Peak	165	56
5	17355.00	62.03	68.20	-6.17	42.59	19.44	Peak	152	75

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

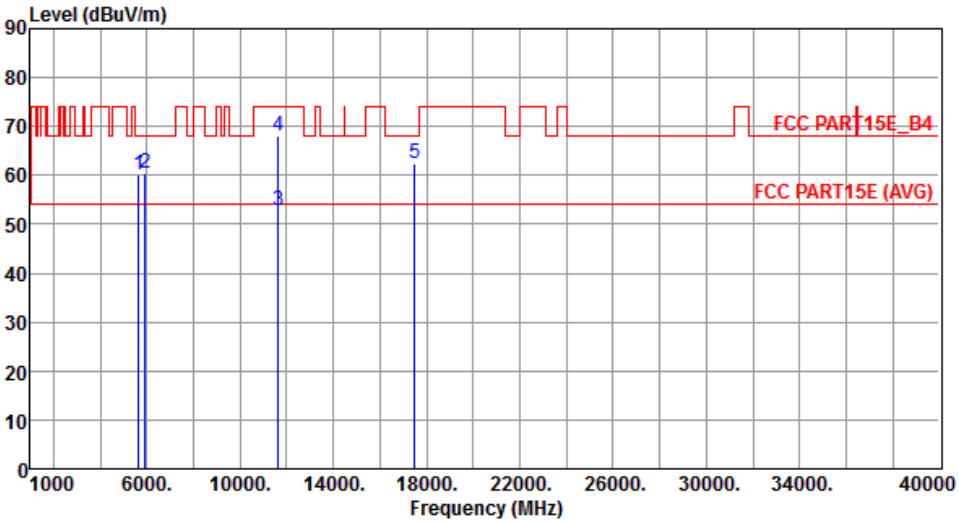
Modulation	VHT20	Test Freq. (MHz)	5785
Polarization	Vertical		



	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	5650.00	58.58	68.20	-9.62	53.71	4.87	Peak	145	38
2	5925.00	58.35	68.20	-9.85	53.14	5.21	Peak	145	38
3	11570.00	50.37	54.00	-3.63	34.86	15.51	Average	193	119
4	11570.00	66.11	74.00	-7.89	50.60	15.51	Peak	193	219
5	17355.00	62.19	68.20	-6.01	42.75	19.44	Peak	241	177

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

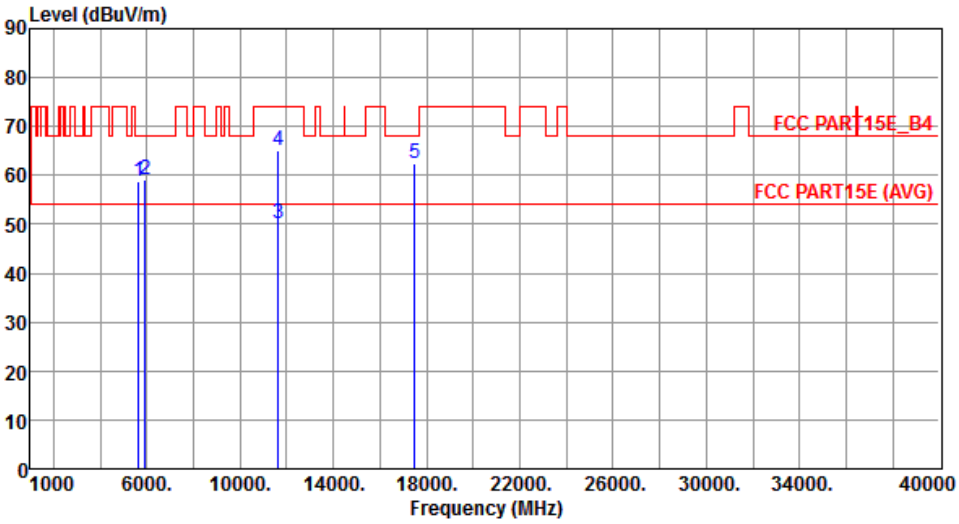
Modulation	VHT20	Test Freq. (MHz)	5825
Polarization	Horizontal		



	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	5650.00	60.02	68.20	-8.18	55.15	4.87	Peak	126	4
2	5925.00	60.56	68.20	-7.64	55.35	5.21	Peak	126	4
3	11650.00	52.69	54.00	-1.31	37.41	15.28	Average	230	355
4	11650.00	67.97	74.00	-6.03	52.69	15.28	Peak	230	355
5	17475.00	62.51	68.20	-5.69	42.76	19.75	Peak	212	347

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

Modulation	VHT20	Test Freq. (MHz)	5825
Polarization	Vertical		

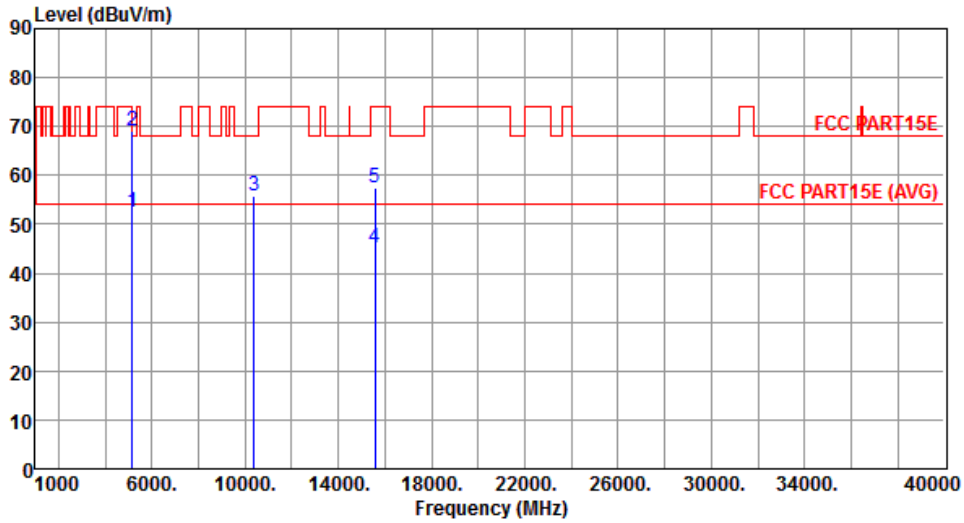


	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	5650.00	58.73	68.20	-9.47	53.86	4.87	Peak	306	195
2	5925.00	59.22	68.20	-8.98	54.01	5.21	Peak	306	195
3	11650.00	50.01	54.00	-3.99	34.73	15.28	Average	204	351
4	11650.00	65.02	74.00	-8.98	49.74	15.28	Peak	204	351
5	17475.00	62.53	68.20	-5.67	42.78	19.75	Peak	189	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).

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

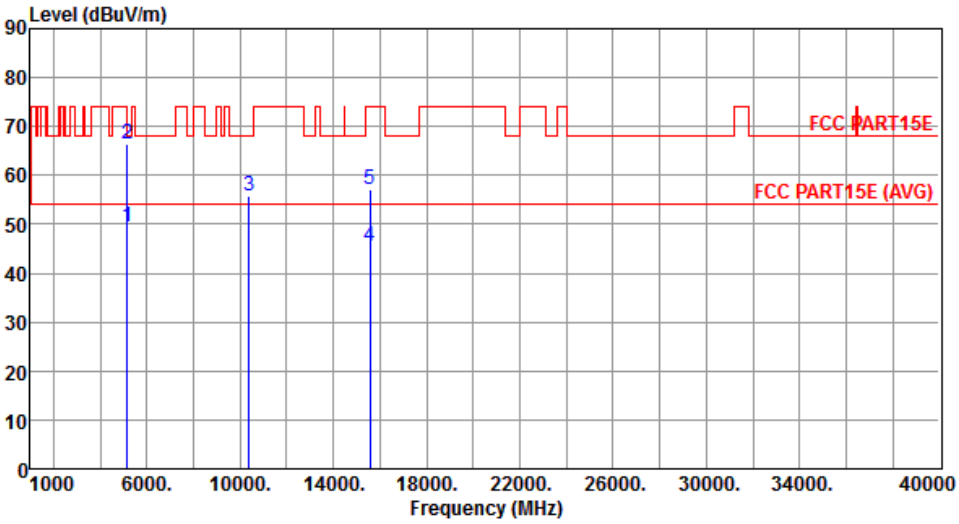
Modulation	VHT40	Test Freq. (MHz)	5190
Polarization	Horizontal		



	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	5150.00	52.46	54.00	-1.54	48.14	4.32	Average	113	346
2	5150.00	69.24	74.00	-4.76	64.92	4.32	Peak	113	346
3	10380.00	55.71	68.20	-12.49	41.33	14.38	Peak	124	73
4	15570.00	45.19	54.00	-8.81	29.94	15.25	Average	109	15
5	15570.00	57.31	74.00	-16.69	42.06	15.25	Peak	109	15

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

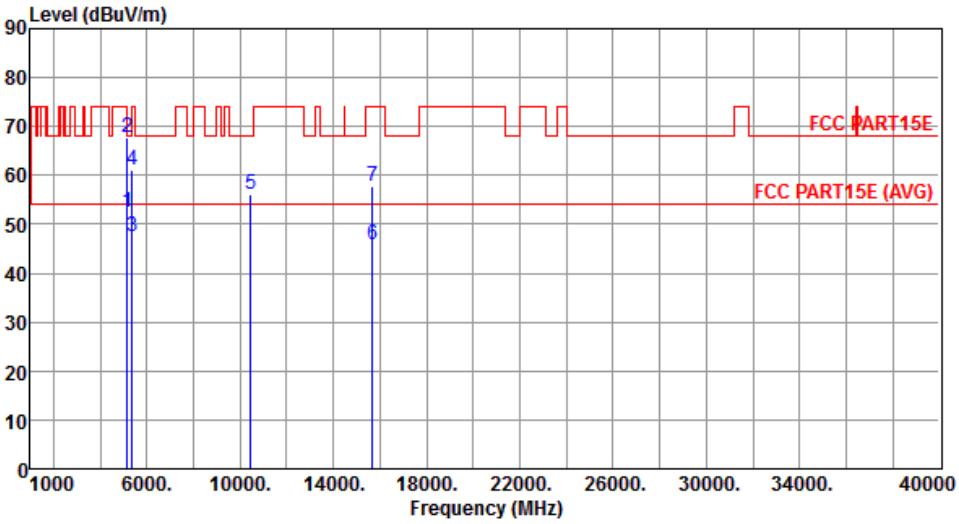
Modulation	VHT40	Test Freq. (MHz)	5190
Polarization	Vertical		



	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	49.35	54.00	-4.65	45.03	4.32	Average	162	355
2	5150.00	66.43	74.00	-7.57	62.11	4.32	Peak	162	355
3	10380.00	55.66	68.20	-12.54	41.28	14.38	Peak	110	103
4	15570.00	45.37	54.00	-8.63	30.12	15.25	Average	194	63
5	15570.00	57.26	74.00	-16.74	42.01	15.25	Peak	194	63

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

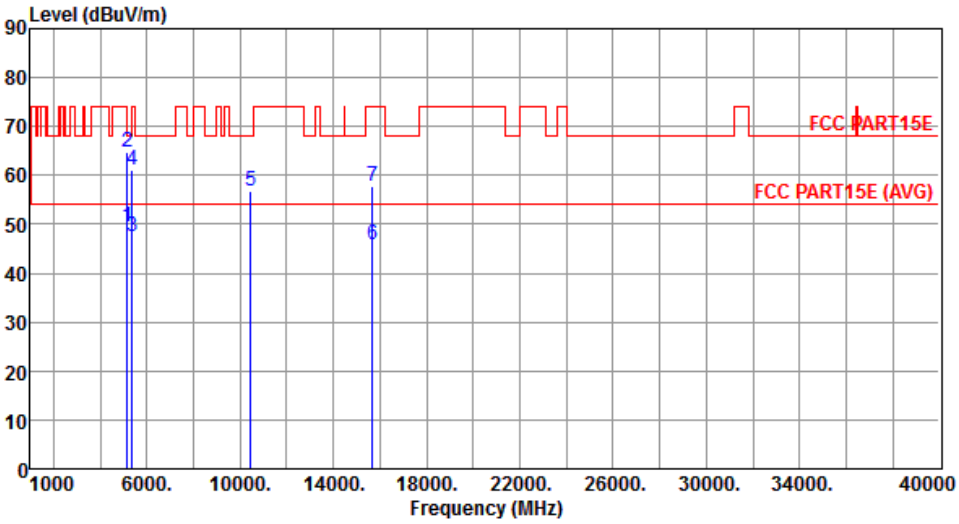
Modulation	VHT40	Test Freq. (MHz)	5230
Polarization	Horizontal		



	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	52.38	54.00	-1.62	48.06	4.32	Average	113	345
2	5150.00	67.71	74.00	-6.29	63.39	4.32	Peak	113	345
3	5350.00	47.64	54.00	-6.36	43.11	4.53	Average	133	348
4	5350.00	61.26	74.00	-12.74	56.73	4.53	Peak	133	348
5	10460.00	56.27	68.20	-11.93	41.73	14.54	Peak	100	130
6	15690.00	45.84	54.00	-8.16	30.74	15.10	Average	214	348
7	15690.00	57.90	74.00	-16.10	42.80	15.10	Peak	214	348

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

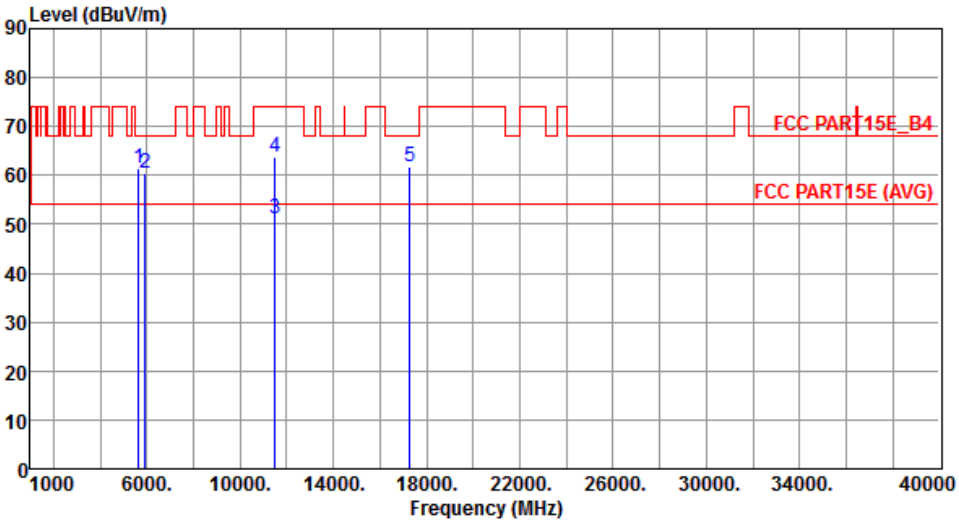
Modulation	VHT40	Test Freq. (MHz)	5230
Polarization	Vertical		



	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	49.57	54.00	-4.43	45.25	4.32	Average	145	327
2	5150.00	64.90	74.00	-9.10	60.58	4.32	Peak	145	327
3	5350.00	47.36	54.00	-6.64	42.83	4.53	Average	145	327
4	5350.00	61.13	74.00	-12.87	56.60	4.53	Peak	145	327
5	10460.00	56.69	68.20	-11.51	42.15	14.54	Peak	114	121
6	15690.00	45.96	54.00	-8.04	30.86	15.10	Average	209	336
7	15690.00	57.81	74.00	-16.19	42.71	15.10	Peak	209	336

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

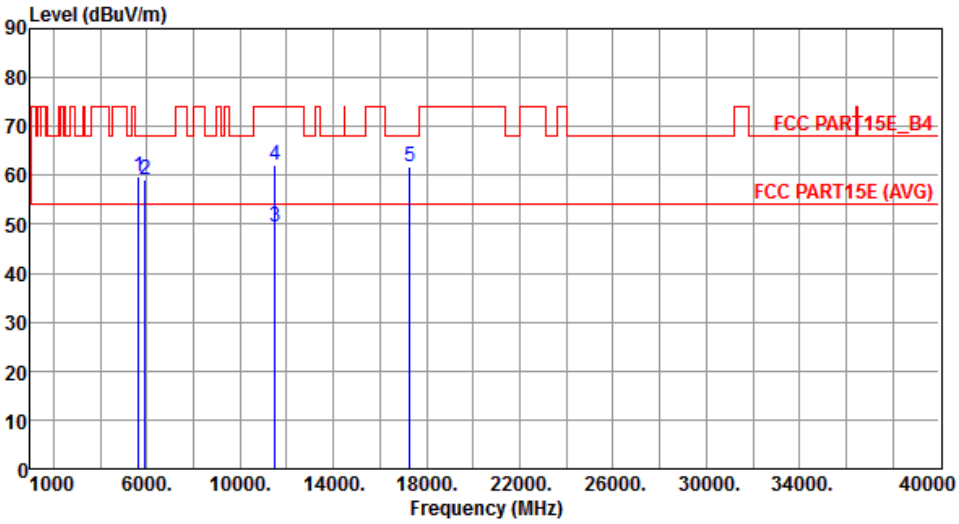
Modulation	VHT40	Test Freq. (MHz)	5755
Polarization	Horizontal		



	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	5650.00	61.50	68.20	-6.70	56.63	4.87	Peak	109	351
2	5925.00	60.57	68.20	-7.63	55.36	5.21	Peak	109	351
3	11510.00	51.07	54.00	-2.93	35.39	15.68	Average	166	67
4	11510.00	63.61	74.00	-10.39	47.93	15.68	Peak	166	67
5	17265.00	61.79	68.20	-6.41	42.59	19.20	Peak	151	104

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

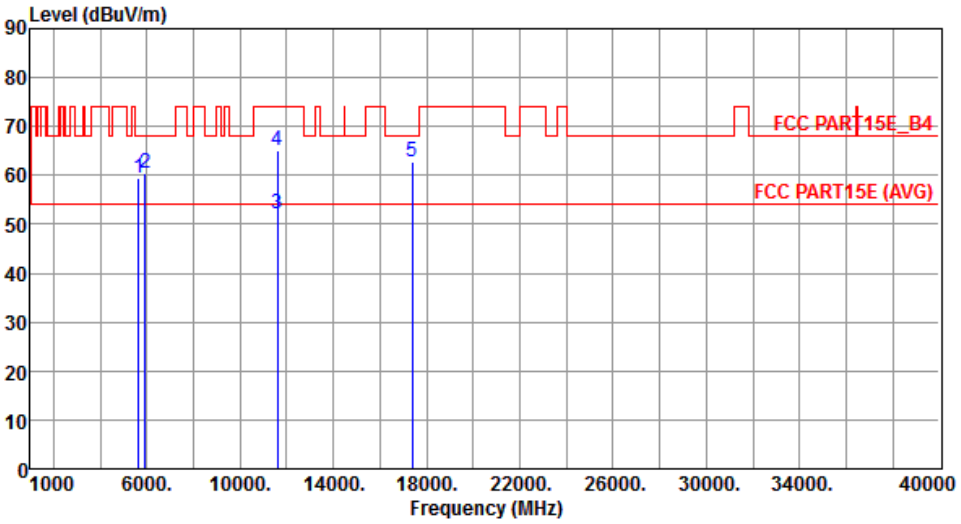
Modulation	VHT40	Test Freq. (MHz)	5755
Polarization	Vertical		



	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	5650.00	59.83	68.20	-8.37	54.96	4.87	Peak	124	237
2	5925.00	59.09	68.20	-9.11	53.88	5.21	Peak	124	237
3	11510.00	49.42	54.00	-4.58	33.74	15.68	Average	191	102
4	11510.00	62.21	74.00	-11.79	46.53	15.68	Peak	191	102
5	17265.00	61.83	68.20	-6.37	42.63	19.20	Peak	139	91

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

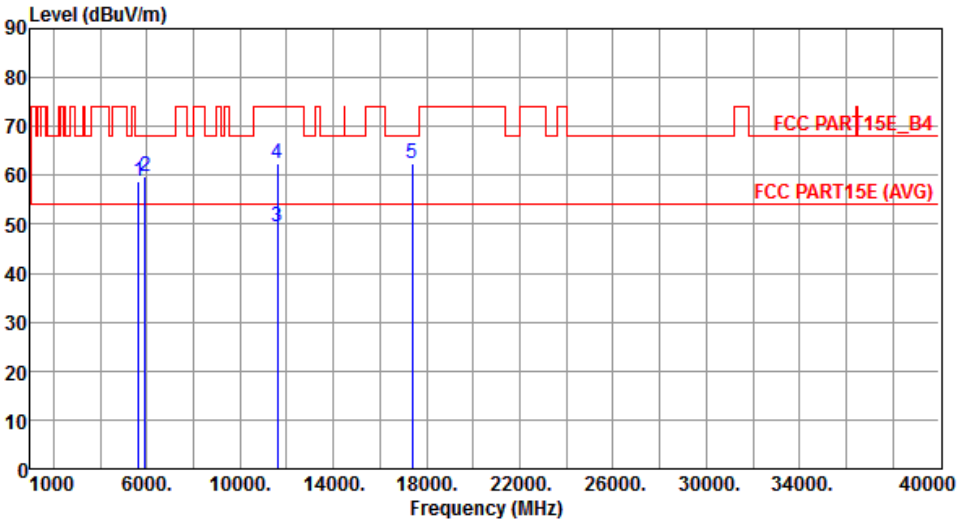
Modulation	VHT40	Test Freq. (MHz)	5795
Polarization	Horizontal		



	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	5650.00	59.60	68.20	-8.60	54.73	4.87	Peak	111	4
2	5925.00	60.56	68.20	-7.64	55.35	5.21	Peak	111	4
3	11590.00	52.29	54.00	-1.71	36.84	15.45	Average	180	56
4	11590.00	65.03	74.00	-8.97	49.58	15.45	Peak	180	56
5	17385.00	62.69	68.20	-5.51	43.18	19.51	Peak	241	196

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

Modulation	VHT40	Test Freq. (MHz)	5795
Polarization	Vertical		

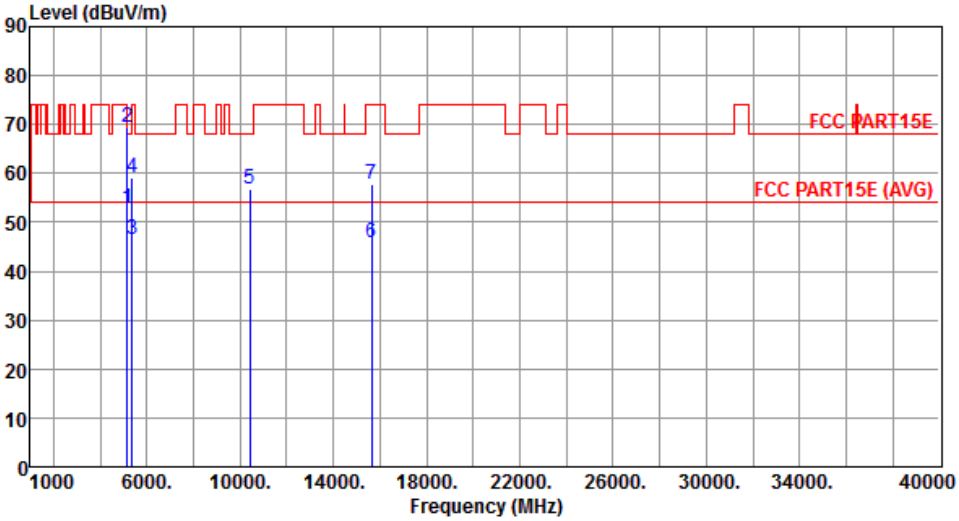


	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	5650.00	58.85	68.20	-9.35	53.98	4.87	Peak	168	142
2	5925.00	59.94	68.20	-8.26	54.73	5.21	Peak	168	142
3	11590.00	49.56	54.00	-4.44	34.11	15.45	Average	197	90
4	11590.00	62.57	74.00	-11.43	47.12	15.45	Peak	197	90
5	17385.00	62.31	68.20	-5.89	42.80	19.51	Peak	215	177

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

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

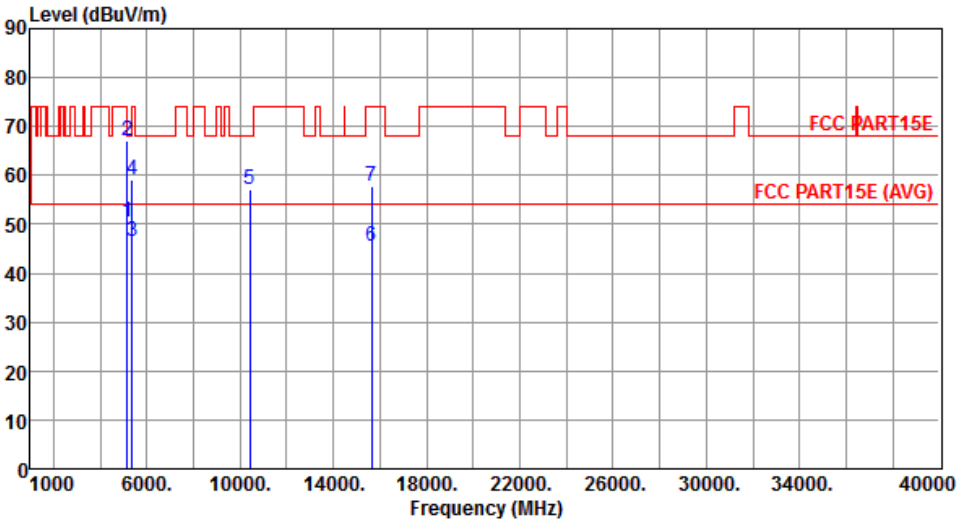
Modulation	VHT80	Test Freq. (MHz)	5210
Polarization	Horizontal		



	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	52.68	54.00	-1.32	48.36	4.32	Average	126	345
2	5150.00	69.30	74.00	-4.70	64.98	4.32	Peak	126	345
3	5350.00	46.57	54.00	-7.43	42.04	4.53	Average	126	345
4	5350.00	59.14	74.00	-14.86	54.61	4.53	Peak	126	345
5	10420.00	56.84	68.20	-11.36	42.39	14.45	Peak	112	208
6	15630.00	45.67	54.00	-8.33	30.49	15.18	Average	159	273
7	15630.00	57.90	74.00	-16.10	42.72	15.18	Peak	159	273

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

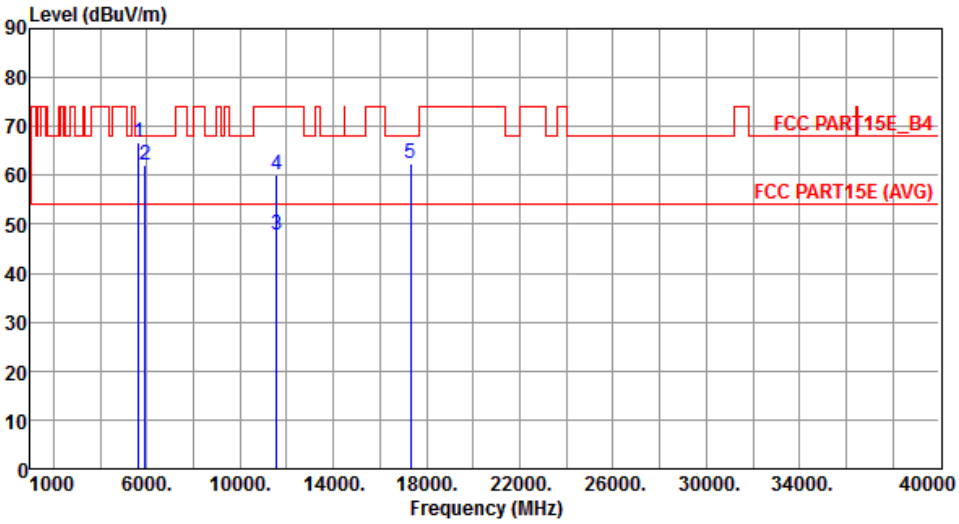
Modulation	VHT80	Test Freq. (MHz)	5210
Polarization	Vertical		



	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	50.44	54.00	-3.56	46.12	4.32	Average	139	304
2	5150.00	67.07	74.00	-6.93	62.75	4.32	Peak	139	304
3	5350.00	46.43	54.00	-7.57	41.90	4.53	Average	139	304
4	5350.00	59.10	74.00	-14.90	54.57	4.53	Peak	139	304
5	10420.00	57.19	68.20	-11.01	42.74	14.45	Peak	123	189
6	15630.00	45.33	54.00	-8.67	30.15	15.18	Average	167	281
7	15630.00	57.85	74.00	-16.15	42.67	15.18	Peak	167	281

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

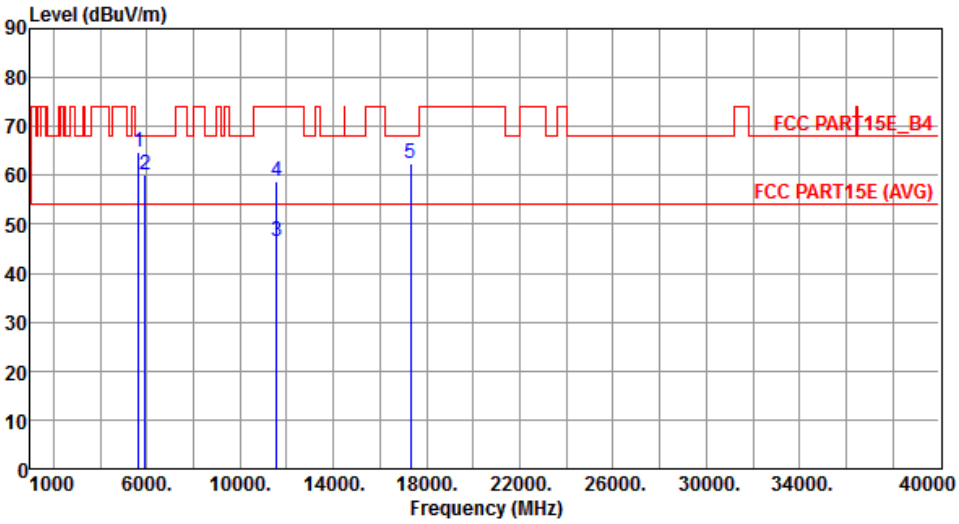
Modulation	VHT80	Test Freq. (MHz)	5775
Polarization	Horizontal		



	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	5650.00	66.85	68.20	-1.35	61.98	4.87	Peak	142	348
2	5925.00	62.05	68.20	-6.15	56.84	5.21	Peak	142	348
3	11550.00	47.91	54.00	-6.09	32.34	15.57	Average	176	59
4	11550.00	60.07	74.00	-13.93	44.50	15.57	Peak	176	59
5	17325.00	62.50	68.20	-5.70	43.14	19.36	Peak	129	173

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

Modulation	VHT80	Test Freq. (MHz)	5775
Polarization	Vertical		



	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	5650.00	64.63	68.20	-3.57	59.76	4.87	Peak	149	326
2	5925.00	60.11	68.20	-8.09	54.90	5.21	Peak	149	326
3	11550.00	46.40	54.00	-7.60	30.83	15.57	Average	155	84
4	11550.00	58.82	74.00	-15.18	43.25	15.57	Peak	155	84
5	17325.00	62.32	68.20	-5.88	42.96	19.36	Peak	142	175

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

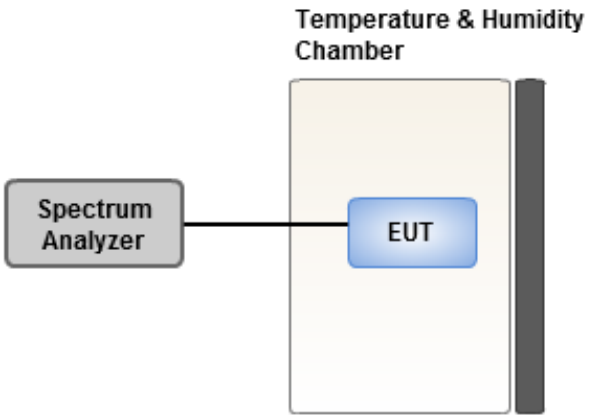
3.6.1 Limit of Frequency Stability

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

Configuration 1: Power amplifier / SK85726-11

Frequency: 5200 MHz	Frequency Drift (ppm)			
Temperature (°C)	0 minute	2 minutes	5 minutes	10 minutes
T20°CVmax	1.26	1.93	1.87	2.06
T20°CVmin	0.19	-0.25	0.60	0.75
T50°CVnom	3.16	3.81	3.45	3.10
T40°CVnom	1.09	1.61	1.38	1.09
T30°CVnom	1.79	2.70	1.78	2.42
T20°CVnom	3.41	3.39	4.09	3.20
T10°CVnom	2.49	2.82	2.20	2.66
T0°CVnom	4.32	4.98	4.29	4.86
T-10°CVnom	2.75	2.63	2.80	2.68
T-20°CVnom	2.73	2.48	3.05	2.86
T-30°CVnom	1.26	1.69	1.66	1.79
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	-0.10	0.35	0.25	-0.04
T20°CVmin	0.42	0.79	0.41	0.23
T50°CVnom	0.14	0.35	0.94	0.30
T40°CVnom	-0.01	-0.03	0.32	0.42
T30°CVnom	-0.40	-0.59	0.19	0.22
T20°CVnom	-0.28	-0.24	-0.57	0.13
T10°CVnom	-0.13	0.28	-0.26	0.38
T0°CVnom	-0.22	-0.26	-0.25	0.40
T-10°CVnom	0.10	0.01	0.06	0.40
T-20°CVnom	0.72	0.58	1.02	1.31
T-30°CVnom	-0.22	-0.38	0.20	0.07
Vnom [Vac]: 120		Vmax [Vac]: 138		Vmin [Vac]: 102
Tnom [°C]: 20		Tmax [°C]: 50		Tmin [°C]: -30

Configuration 2: Power amplifier / SK85712-11

Frequency: 5200 MHz	Frequency Drift (ppm)			
Temperature (°C)	**0 minute**	**2 minutes**	**5 minutes**	**10 minutes**
T20°CVmax	0.62	1.31	0.71	1.28
T20°CVmin	0.46	1.08	0.77	1.16
T50°CVnom	0.67	0.83	1.34	0.72
T40°CVnom	0.02	0.56	0.58	-0.27
T30°CVnom	-0.34	-0.12	0.35	-0.07
T20°CVnom	0.19	1.08	0.68	0.19
T10°CVnom	0.05	0.08	0.49	0.59
T0°CVnom	0.12	0.08	0.53	0.04
T-10°CVnom	0.51	0.28	1.08	0.50
T-20°CVnom	0.19	0.42	0.22	0.01
T-30°CVnom	-0.06	0.41	-0.13	-0.49
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	0.20	0.52	0.70	0.44
T20°CVmin	0.20	0.43	-0.16	0.55
T50°CVnom	0.44	0.30	0.31	0.19
T40°CVnom	0.41	0.21	0.57	0.49
T30°CVnom	-0.41	-0.22	0.04	0.46
T20°CVnom	0.27	0.29	0.35	0.30
T10°CVnom	-0.26	0.69	0.24	0.00
T0°CVnom	0.21	-0.04	0.27	-0.10
T-10°CVnom	-0.12	-0.18	0.77	0.17
T-20°CVnom	0.47	0.31	-0.37	-0.31
T-30°CVnom	0.07	0.23	0.15	0.05
Vnom [Vac]: 120		Vmax [Vac]: 138		Vmin [Vac]: 102
Tnom [°C]: 20		Tmax [°C]: 50		Tmin [°C]: -30

4 Test laboratory information

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

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

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

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

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

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

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