FCC Test Report

FCC ID	:	**2AQYEFMP169**
Equipment	:	**Mobile Phone**
Model No.	:	**F-02L**
Brand Name	:	**FUJITSU**
Applicant	:	**FUJITSU CONNECTED TECHNOLOGIES Ltd.**
Address	:	**1-1, Kamikodanaka 4-chome, Nakahara-ku, Kawasaki 211-8588, Japan**
Standard	:	**47 CFR FCC Part 15.407**
Received Date	:	**Feb. 12, 2019**
Tested Date	:	**Feb. 16 ~ Mar. 05, 2019**

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

Reviewed by: **Approved by:**

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

Testing Laboratory 2732

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Release Record

Report No.	Version	Description	Issued Date
FR8D1403AN	Rev. 01	Initial issue	Mar. 22, 2019

Summary of Test Results

FCC Rules	Test Items	Measured	Result
15.207	Conducted Emissions	[dBuV]: 2.309MHz 30.78 (Margin -15.22dB) - AV	Pass
15.407(b) 15.209	Radiated Emissions	[dBuV/m at 3m]: 5150.00MHz 46.31 (Margin -7.69dB) - 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: 11.25 5250~5350MHz: 11.26 5470~5725MHz: 11.33	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

Declaration of Conformity:
The test results with all measurement uncertainty excluded are presented in accordance with the regulation limits or requirements declared by manufacturers.
Comments and Explanations:
The declared values of gain for EUT presented in the report are provided by the manufacturer, and the manufacturer takes all the responsibilities for the accuracy of the gain.

1 General Description

1.1 Information

1.1.1 Product Details

Product Name	Mobile Phone
Brand Name	FUJITSU
Model Name	F-02L
IMEI Code	353323100015576 / 353323100017150
H/W Version	v2.1.0
S/W Version	R022.1e

1.1.2 Specification of the Equipment under Test (EUT)

RF General Information					
Frequency Range (MHz)	**IEEE Std. 802.11**	**Ch. Freq. (MHz)**	**Channel Number**	**Transmit Chains (N_{TX})**	**Data Rate / MCS**
5150-5250 5250-5350 5470-5725	a	5180-5240 5260-5320 5500-5700	36-48 [4] 52-64 [4] 100-140 [11]	1	6-54 Mbps
5150-5250 5250-5350 5470-5725	n (HT20)	5180-5240 5260-5320 5500-5700	36-48 [4] 52-64 [4] 100-140 [11]]	1	MCS 0-7
5150-5250 5250-5350 5470-5725	n (HT40)	5190-5230 5270-5310 5510-5670	38-46 [2] 54-62 [2] 102-134 [5]	1	MCS 0-7
5150-5250 5250-5350 5470-5725	ac (VHT20)	5180-5240 5260-5320 5500-5700	36-48 [4] 52-64 [4] 100-140 [11]	1	MCS 0-9
5150-5250 5250-5350 5470-5725	ac (VHT40)	5190-5230 5270-5310 5510-5670	38-46 [2] 54-62 [2] 102-134 [5]	1	MCS 0-9
5150-5250 5250-5350 5470-5725	ac (VHT80)	5210 5290 5530-5610	42 [1] 58 [1] 106-122 [2]	1	MCS 0-9
Note 1: RF output power specifies that Maximum Conducted Output Power. Note 2: 802.11a/n/ac uses a combination of OFDM-BPSK, QPSK, 16QAM, 64QAM, 256QAM modulation.					

1.1.3 Antenna Details

Ant. No.	**Type**	**Connector**	**Operating Frequencies (MHz) / Antenna Gain (dBi)**			
			2400~2483.5	**5150~5250**	**5250~5350**	**5470~5725**
1	Monopole	No	-5	-3.4	-3.4	-3.4

1.1.4 Power Supply Type of Equipment under Test (EUT)

Power Supply Type	3.8Vdc from battery: 9Vdc,1.5A from adapter (No bundle, support unit only)

1.1.5 Accessories

Accessories		
No.	**Equipment**	**Description**
1	Battery	Brand: FUJITSU CONNECTED TECHNOLOGIES LIMITED Model Name: CA54310-0074 Power Rating: 3.8Vdc, 2,780mAh, 10.6Wh

1.1.6 Channel List

802.11 a / HT20 / VHT20		HT40 / VHT40	
Channel	**Frequency(MHz)**	**Channel**	**Frequency(MHz)**
36	5180	38	5190
40	5200	46	5230
44	5220	54	5270
48	5240	62	5310
52	5260	102	5510
56	5280	110	5550
60	5300	118	5590
64	5320	126	5630
100	5500	134	5670
104	5520	**VHT80**	
108	5540	42	5210
112	5560	58	5290
116	5580	106	5530
120	5600	122	5610
124	5620	---	---
128	5640	---	---
132	5660	---	---
136	5680	---	---
140	5700	---	---

1.1.7 Test Tool and Duty Cycle

Test Tool	QRCT, v 3.0.54.0		
Duty Cycle and Duty Factor	**Mode**	**Duty Cycle (%)**	**Duty Factor (dB)**
	11a	100.00%	0.00
	VHT20	99.90%	0.00
	VHT40	99.14%	0.04
	VHT80	98.19%	0.08

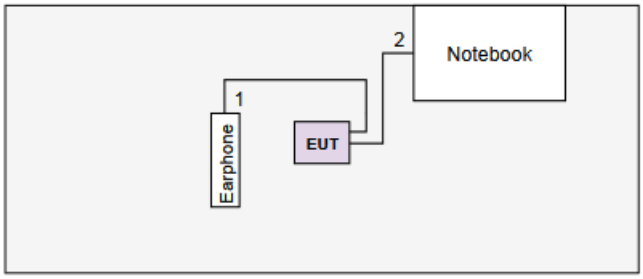
1.1.8 Power Index of Test Tool

Modulation Mode	Test Frequency (MHz)	Power Index
11a	5180	11
11a	5200	11
11a	5240	11
11a	5260	11
11a	5300	11
11a	5320	11
11a	5500	11
11a	5580	11
11a	5700	11
VHT20	5180	11
VHT20	5200	11
VHT20	5240	11
VHT20	5260	11
VHT20	5300	11
VHT20	5320	11
VHT20	5500	11
VHT20	5580	11
VHT20	5700	11
VHT40	5190	9.5
VHT40	5230	9.5
VHT40	5270	9.5
VHT40	5310	9.5
VHT40	5510	9
VHT40	5590	9
VHT40	5670	9
VHT80	5210	10
VHT80	5290	10
VHT80	5530	9.5
VHT80	5610	9.5

1.2 Local Support Equipment List

Support Equipment List					
No.	**Equipment**	**Brand**	**Model**	**S/N**	**Remarks**
1	Earphone	APPLE	MD827FE/A	6	---
2	Notebook	DELL	Latitude E6440	---	---

1.3 Test Setup Chart

Test Setup Diagram	
	
No.	**Signal cable / Length (m)**
1	Audio, 1.2m non-shielded.
2	USB Type-C, 1m shielded.

1.4 The Equipment List

Test Item	Conducted Emission				
Test Site	Conduction room 1 / (CO01-WS)				
Instrument	**Manufacturer**	**Model No.**	**Serial No.**	**Calibration Date**	**Calibration Until**
Receiver	R&S	ESR3	101657	Jan. 08, 2019	Jan. 07, 2020
LISN	SCHWARZBECK	Schwarzbeck 8127	8127-667	Nov. 05, 2018	Nov. 04, 2019
RF Cable-CON	Woken	CFD200-NL	CFD200-NL-001	Oct. 23, 2018	Oct. 23, 2019
Measurement Software	AUDIX	e3	6.120210k	NA	NA
Note: Calibration Interval of instruments listed above is one year.					

Test Item	Radiated Emission				
Test Site	966 chamber1 / (03CH01-WS)				
Instrument	**Manufacturer**	**Model No.**	**Serial No.**	**Calibration Date**	**Calibration Until**
Spectrum Analyzer	R&S	FSV40	101498	Dec. 27, 2018	Dec. 26, 2019
Receiver	R&S	ESR3	101658	Dec. 11, 2018	Dec. 10, 2019
Bilog Antenna	SCHWARZBECK	VULB9168	VULB9168-522	Jul. 18, 2018	Jul. 17, 2019
Horn Antenna 1G-18G	SCHWARZBECK	BBHA 9120 D	BBHA 9120 D 1096	Dec. 18, 2018	Dec. 17, 2019
Horn Antenna 18G-40G	SCHWARZBECK	BBHA 9170	BBHA 9170517	Nov. 15, 2018	Nov. 14, 2019
Loop Antenna	R&S	HFH2-Z2	100330	Nov. 09, 2018	Nov. 08, 2019
Loop Antenna Cable	KOAX KABEL	101354-BW	101354-BW	Oct. 08, 2018	Oct. 07, 2019
Preamplifier	EMC	EMC02325	980225	Jul. 20, 2018	Jul. 19, 2019
Preamplifier	Agilent	83017A	MY39501308	Oct. 04, 2018	Oct. 03, 2019
Preamplifier	EMC	EMC184045B	980192	Aug. 09, 2018	Aug. 08, 2019
RF Cable	EMC	EMC104-SM-SM-8000	181106	Oct. 08, 2018	Oct. 07, 2019
RF Cable	HUBER+SUHNER	SUCOFLEX104	MY16019/4	Oct. 08, 2018	Oct. 07, 2019
RF Cable	HUBER+SUHNER	SUCOFLEX104	MY16014/4	Oct. 08, 2018	Oct. 07, 2019
LF cable 1M	EMC	EMCCFD400-NM-NM-1000	160502	Oct. 08, 2018	Oct. 07, 2019
LF cable 3M	Woken	CFD400NL-LW	CFD400NL-001	Oct. 08, 2018	Oct. 07, 2019
LF cable 10M	Woken	CFD400NL-LW	CFD400NL-002	Oct. 08, 2018	Oct. 07, 2019
Measurement Software	AUDIX	e3	6.120210g	NA	NA
Note: Calibration Interval of instruments listed above is one year.					

Test Item	RF Conducted				
Test Site	(TH01-WS)				
Instrument	Manufacturer	Model No.	Serial No.	Calibration Date	Calibration Until
Spectrum Analyzer	R&S	FSV40	101063	Apr. 16, 2018	Apr. 15, 2019
TEMP&HUMIDITY CHAMBER	GIANT FORCE	GCT-225-40-SP-SD	MAF1212-002	Dec. 05, 2018	Dec. 04, 2019
Power Meter	Anritsu	ML2495A	1241002	Oct. 09, 2018	Oct. 08, 2019
Power Sensor	Anritsu	MA2411B	1207366	Oct. 09, 2018	Oct. 08, 2019
DC POWER SOURCE	GW INSTEK	GPC-6030D	EM892433	Oct. 25, 2018	Oct. 24, 2019
Measurement Software	Sporton	SENSE-15407_NII	V5.9	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 v02r01
FCC KDB 412172 D01 Determining ERP and EIRP v01r01

1.6 Deviation from Test Standard and Measurement Procedure

None

1.7 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	±34.130 Hz
Conducted power	±0.808 dB
Frequency error	$\pm 1 \times 10^{-9}$
Power density	±0.583 dB
Conducted emission	±2.715 dB
AC conducted emission	±2.92 dB
Radiated emission ≤ 1GHz	±3.41 dB
Radiated emission > 1GHz	±4.59 dB
Time	±0.1%
Temperature	±0.4 ^{o}C

2 Test Configuration

2.1 Testing Condition

Test Item	Test Site	Ambient Condition	Tested By
AC Conduction	CO01-WS	21°C / 56%	Akun Chung
Radiated Emissions	03CH01-WS	22-24°C / 60-65%	Roger Lu Akun Chung
RF Conducted	TH01-WS	20°C / 65%	Roger Lu

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

2.2 The Worst Test Modes and Channel Details

Frequency band 5150~5350 MHz / 5470~5725 MHz				
Test item	**Modulation Mode**	**Test Frequency (MHz)**	**Data Rate (Mbps) / MCS**	**Test Configuration**
Conducted Emissions	VHT20	5580	MCS 0	---
Radiated Emissions ≤1GHz	VHT20	5580	MCS 0	---
RF Output Power	11a	5180 / 5200 / 5240 / 5260 / 5300 5320 / 5500 / 5580 / 5700	6 Mbps	---
	VHT20	5180 / 5200 / 5240 / 5260 / 5300 5320 / 5500 / 5580 / 5700	MCS 0	
	VHT40	5190 / 5230/ 5270 / 5310 / 5510 5590 / 5670	MCS 0	
	VHT80	5210 / 5290 / 5530 / 5610	MCS 0	
Radiated Emissions >1GHz Emission Bandwidth Peak Power Spectral Density	11a	5180 / 5200 / 5240 / 5260 / 5300 5320 / 5500 / 5580 / 5700	6 Mbps	---
	VHT20	5180 / 5200 / 5240 / 5260 / 5300 5320 / 5500 / 5580 / 5700	MCS 0	
	VHT40	5190 / 5230/ 5270 / 5310 / 5510 5590 / 5670	MCS 0	
	VHT80	5210 / 5290 / 5530 / 5610	MCS 0	
Frequency Stability	Un-modulation	5300	---	---

NOTE:

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

3 Transmitter Test Results

3.1 Conducted Emissions

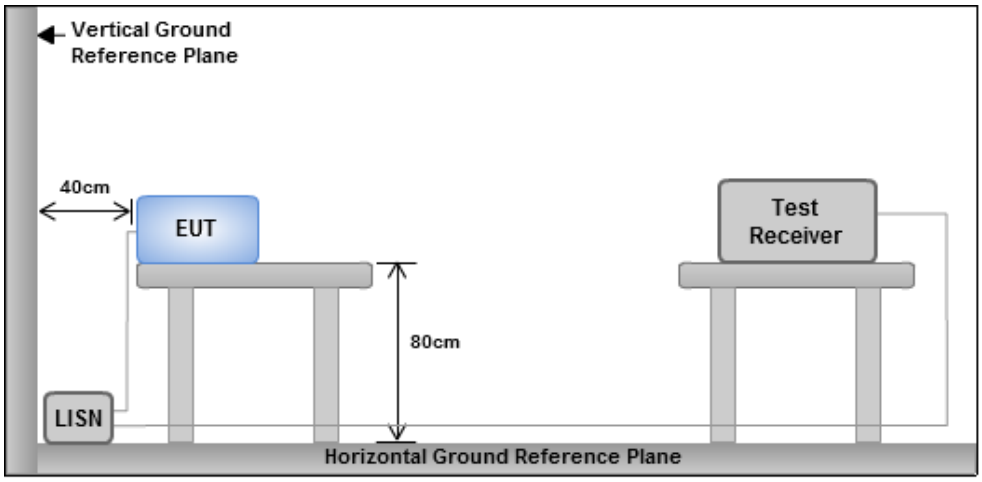
3.1.1 Limit of Conducted Emissions

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

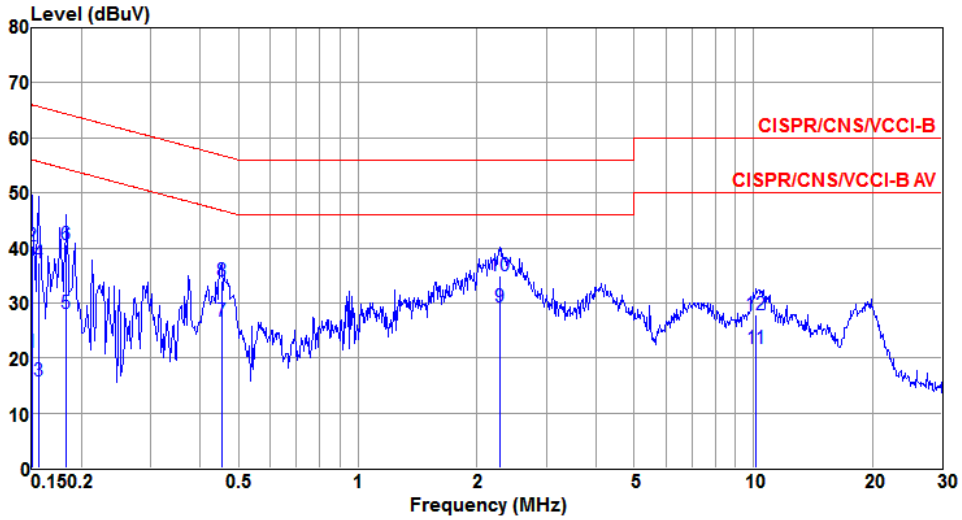
3.1.3 Test Setup



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

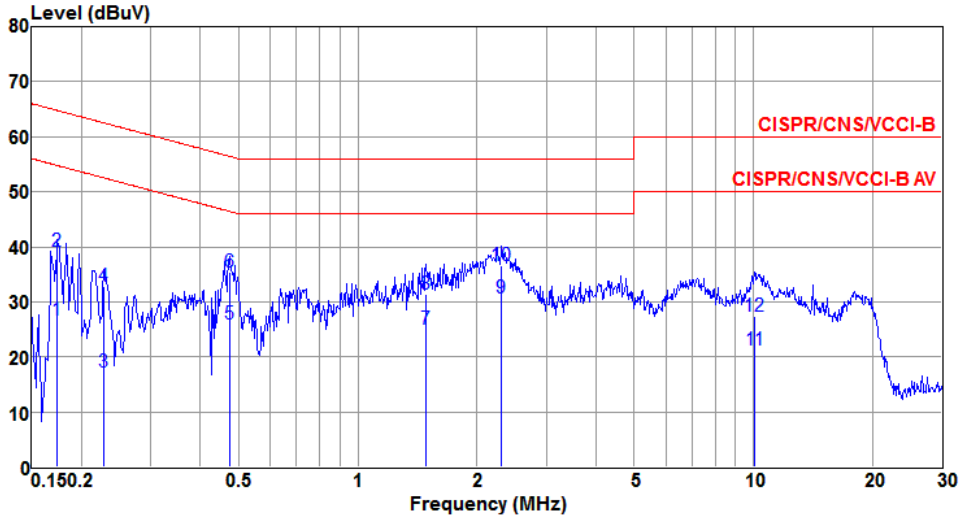
Modulation	VHT20	Test Freq. (MHz)	5580
Power Phase	Line		



	Freq MHz	Level dBuV	Limit Line dBuV	Over Limit dB	Read Level dBuV	LISN factor dB	cable loss dB	Remark
1	0.150	20.96	56.00	-35.04	20.72	0.07	0.05	Average
2	0.150	40.26	66.00	-25.74	40.02	0.07	0.05	QP
3	0.156	15.85	55.69	-39.84	15.60	0.07	0.05	Average
4	0.156	37.35	65.69	-28.34	37.10	0.07	0.05	QP
5	0.183	28.18	54.33	-26.15	27.89	0.06	0.06	Average
6	0.183	40.61	64.33	-23.72	40.32	0.06	0.06	QP
7	0.454	26.57	46.80	-20.23	26.16	0.06	0.08	Average
8	0.454	33.92	56.80	-22.88	33.51	0.06	0.08	QP
9*	2.285	29.23	46.00	-16.77	28.60	0.09	0.18	Average
10	2.285	34.92	56.00	-21.08	34.29	0.09	0.18	QP
11	10.179	21.67	50.00	-28.33	20.65	0.18	0.44	Average
12	10.179	27.86	60.00	-32.14	26.84	0.18	0.44	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)	5580
Power Phase	Neutral		



	Freq MHz	Level dBuV	Limit Line dBuV	Over Limit dB	Read Level dBuV	LISN factor dB	cable loss dB	Remark
1	0.174	26.74	54.77	-28.03	26.51	0.04	0.06	Average
2	0.174	39.27	64.77	-25.50	39.04	0.04	0.06	QP
3	0.228	17.34	52.52	-35.18	17.09	0.04	0.07	Average
4	0.228	32.70	62.52	-29.82	32.45	0.04	0.07	QP
5	0.474	25.88	46.45	-20.57	25.61	0.05	0.08	Average
6	0.474	35.31	56.45	-21.14	35.04	0.05	0.08	QP
7	1.487	25.03	46.00	-20.97	24.59	0.07	0.13	Average
8	1.487	31.32	56.00	-24.68	30.88	0.07	0.13	QP
9*	2.309	30.78	46.00	-15.22	30.27	0.07	0.19	Average
10	2.309	36.51	56.00	-19.49	36.00	0.07	0.19	QP
11	10.072	21.34	50.00	-28.66	20.42	0.18	0.44	Average
12	10.072	27.31	60.00	-32.69	26.39	0.18	0.44	QP

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

3.2 Emission Bandwidth

3.2.1 Test Procedures

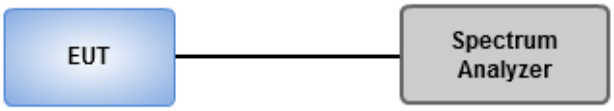
26dB Bandwidth

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

Occupied Bandwidth

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

3.2.2 Test Setup



3.2.3 Test Result of Emission Bandwidth

Summary

Mode	Max-N dB (Hz)	Max-OBW (Hz)	ITU-Code	Min-N dB (Hz)	Min-OBW (Hz)
5.15-5.25GHz	-	-	-	-	-
802.11a_Nss1,(6Mbps)_1TX	22.319M	16.787M	16M8D1D	22.101M	16.787M
802.11ac VHT20_Nss1,(MCS0)_1TX	22.609M	17.873M	17M9D1D	22.246M	17.8M
802.11ac VHT40_Nss1,(MCS0)_1TX	42.754M	36.324M	36M3D1D	42.609M	36.324M
802.11ac VHT80_Nss1,(MCS0)_1TX	84.638M	74.964M	75M0D1D	84.638M	74.964M
5.25-5.35GHz	-	-	-	-	-
802.11a_Nss1,(6Mbps)_1TX	22.246M	16.787M	16M8D1D	21.957M	16.787M
802.11ac VHT20_Nss1,(MCS0)_1TX	22.536M	17.873M	17M9D1D	22.174M	17.8M
802.11ac VHT40_Nss1,(MCS0)_1TX	43.188M	36.324M	36M3D1D	42.754M	36.324M
802.11ac VHT80_Nss1,(MCS0)_1TX	84.348M	74.674M	74M7D1D	84.348M	74.674M
5.47-5.725GHz	-	-	-	-	-
802.11a_Nss1,(6Mbps)_1TX	22.174M	16.787M	16M8D1D	21.957M	16.787M
802.11ac VHT20_Nss1,(MCS0)_1TX	22.609M	17.873M	17M9D1D	22.246M	17.873M
802.11ac VHT40_Nss1,(MCS0)_1TX	43.623M	36.324M	36M3D1D	42.609M	36.179M
802.11ac VHT80_Nss1,(MCS0)_1TX	85.217M	74.964M	75M0D1D	83.768M	74.964M

Max-N dB = Maximum6dB down bandwidth for 5.725-5.85GHz band / Maximum26dB down bandwidth for other band;
Max-OBW = Maximum99% occupied bandwidth;
Min-N dB = Minimum6dB down bandwidth for 5.725-5.85GHz band / Maximum26dB down bandwidth for other band;
Min-OBW = Minimum99% occupied bandwidth;

Result

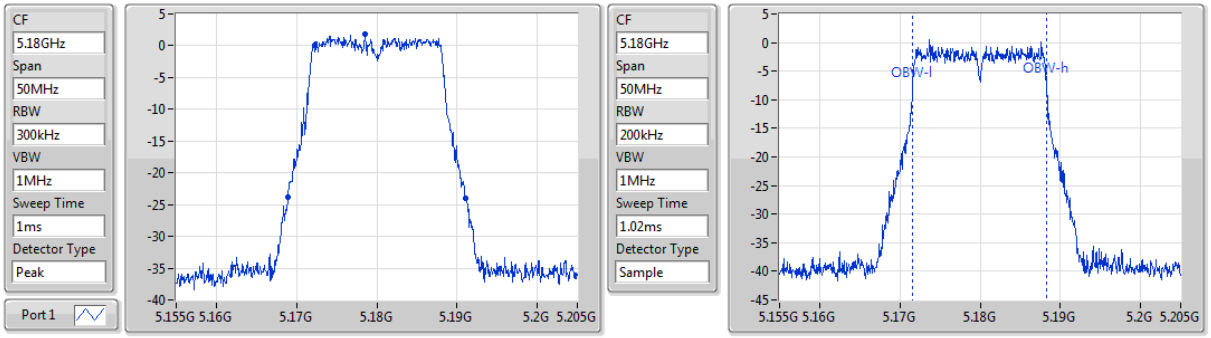
Mode	Result	Limit (Hz)	Port 1-N dB (Hz)	Port 1-OBW (Hz)
802.11a_Nss1,(6Mbps)_1TX	-	-	-	-
5180MHz	Pass	Inf	22.101M	16.787M
5200MHz	Pass	Inf	22.319M	16.787M
5240MHz	Pass	Inf	22.319M	16.787M
5260MHz	Pass	Inf	21.957M	16.787M
5300MHz	Pass	Inf	22.174M	16.787M
5320MHz	Pass	Inf	22.246M	16.787M
5500MHz	Pass	Inf	22.101M	16.787M
5580MHz	Pass	Inf	22.174M	16.787M
5700MHz	Pass	Inf	21.957M	16.787M
5720MHz Straddle 5.47-5.725GHz				
802.11ac VHT20_Nss1,(MCS0)_1TX	-	-	-	-
5180MHz	Pass	Inf	22.246M	17.8M
5200MHz	Pass	Inf	22.464M	17.8M
5240MHz	Pass	Inf	22.609M	17.873M
5260MHz	Pass	Inf	22.174M	17.873M
5300MHz	Pass	Inf	22.536M	17.873M
5320MHz	Pass	Inf	22.536M	17.8M
5500MHz	Pass	Inf	22.391M	17.873M
5580MHz	Pass	Inf	22.609M	17.873M
5700MHz	Pass	Inf	22.246M	17.873M
5720MHz Straddle 5.47-5.725GHz				
802.11ac VHT40_Nss1,(MCS0)_1TX	-	-	-	-
5190MHz	Pass	Inf	42.609M	36.324M
5230MHz	Pass	Inf	42.754M	36.324M
5270MHz	Pass	Inf	42.754M	36.324M
5310MHz	Pass	Inf	43.188M	36.324M
5510MHz	Pass	Inf	42.609M	36.324M
5590MHz	Pass	Inf	43.623M	36.324M
5670MHz	Pass	Inf	43.333M	36.179M
5710MHz Straddle 5.47-5.725GHz				
802.11ac VHT80_Nss1,(MCS0)_1TX	-	-	-	-
5210MHz	Pass	Inf	84.638M	74.964M
5290MHz	Pass	Inf	84.348M	74.674M

Mode	Result	Limit (Hz)	Port 1-N dB (Hz)	Port 1-OBW (Hz)
5530MHz	Pass	Inf	83.768M	74.964M
5610MHz	Pass	Inf	85.217M	74.964M
5690MHz Straddle 5.47-5.725GHz				

Port X-N dB = Port **X**6dB down bandwidth for 5.725-5.85GHz band / 26dB down bandwidth for other band
Port X-OBW = Port **X**99% occupied bandwidth;

802.11a_Nss1,(6Mbps)_1TX EBW

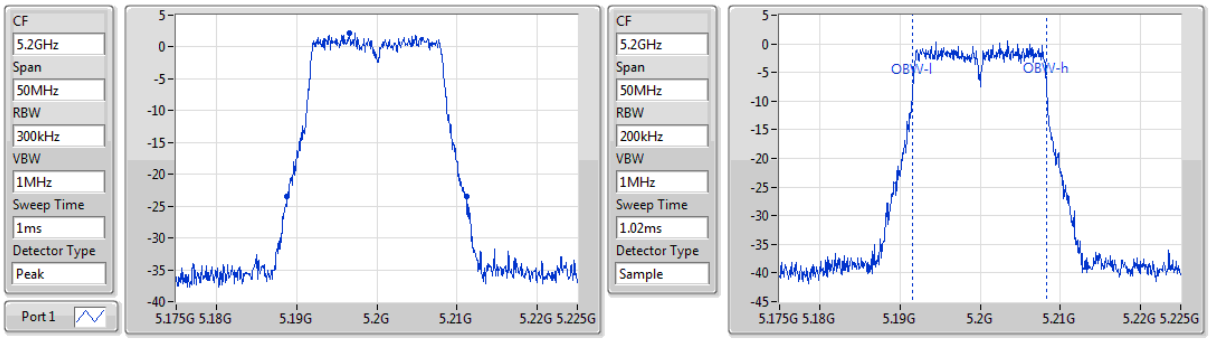
5180MHz



26dB(Hz)	Fl-26dB(Hz)	Fh-26dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
22.101M	5.168986G	5.191087G	16.787M	5.171534G	5.188321G	Inf	1

802.11a_Nss1,(6Mbps)_1TX EBW

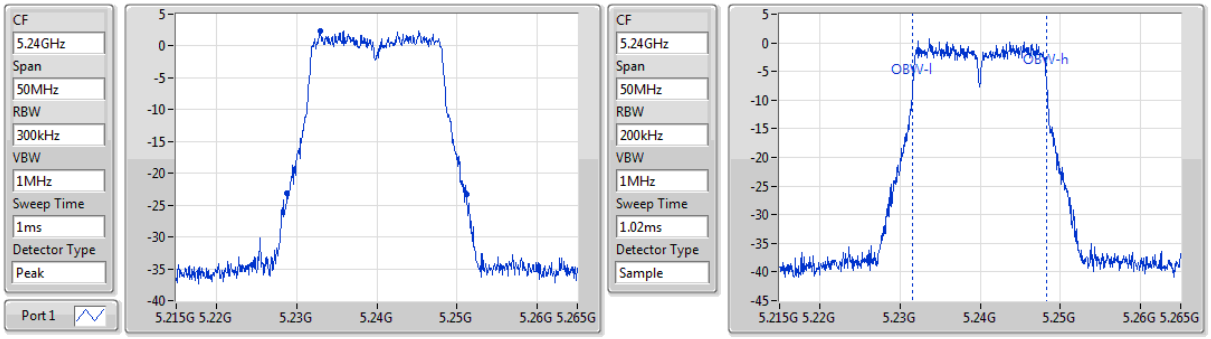
5200MHz



26dB(Hz)	Fl-26dB(Hz)	Fh-26dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
22.319M	5.188841G	5.211159G	16.787M	5.191534G	5.208321G	Inf	1

802.11a_Nss1,(6Mbps)_1TX EBW

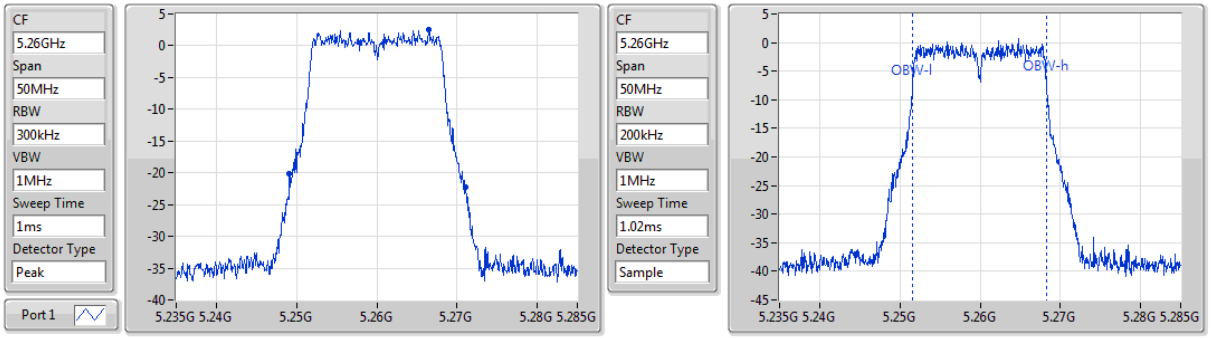
5240MHz



26dB(Hz)	Fl-26dB(Hz)	Fh-26dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
22.319M	5.228841G	5.251159G	16.787M	5.231534G	5.248321G	Inf	1

802.11a_Nss1,(6Mbps)_1TX EBW

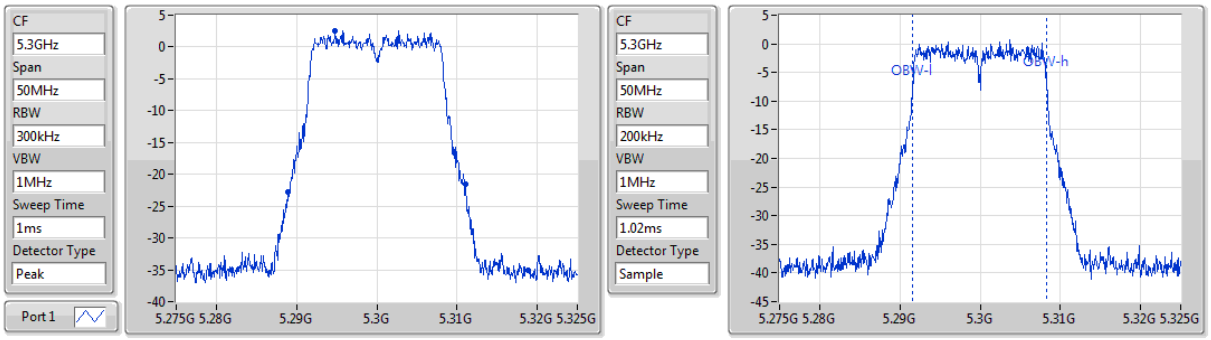
5260MHz



26dB(Hz)	Fl-26dB(Hz)	Fh-26dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
21.957M	5.24913G	5.271087G	16.787M	5.251534G	5.268321G	Inf	1

802.11a_Nss1,(6Mbps)_1TX EBW

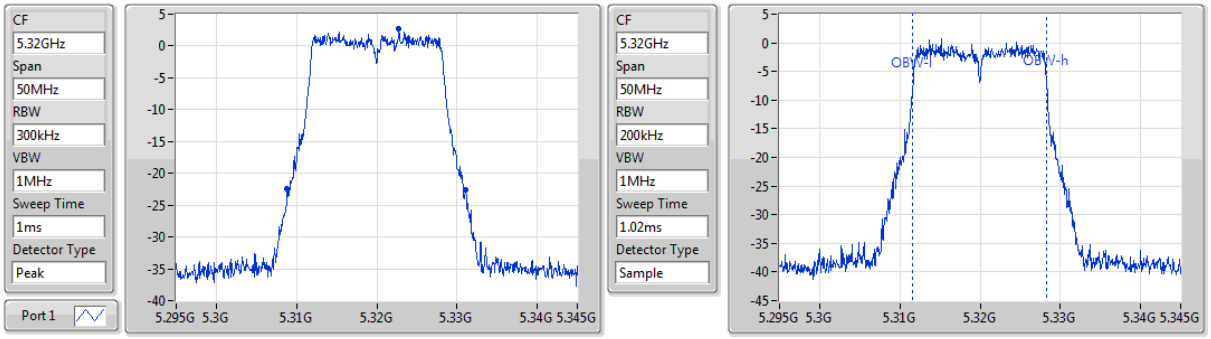
5300MHz



26dB(Hz)	Fl-26dB(Hz)	Fh-26dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
22.174M	5.288913G	5.311087G	16.787M	5.291534G	5.308321G	Inf	1

802.11a_Nss1,(6Mbps)_1TX EBW

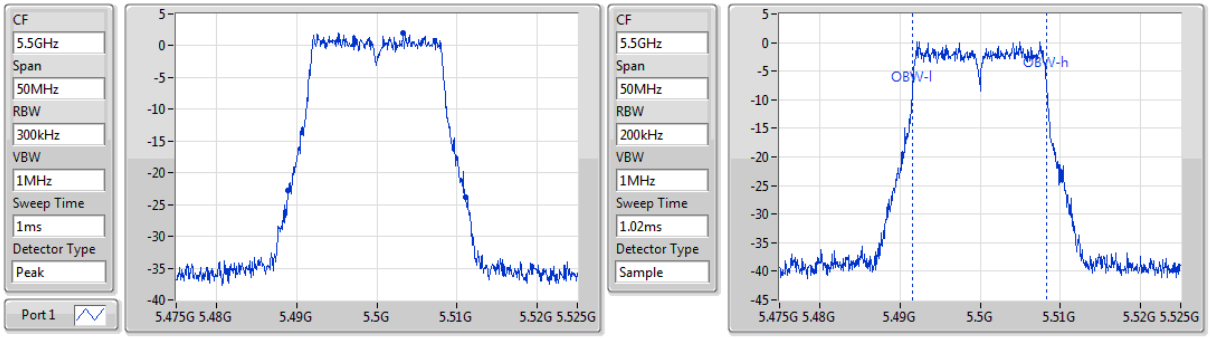
5320MHz



26dB(Hz)	Fl-26dB(Hz)	Fh-26dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
22.246M	5.308841G	5.331087G	16.787M	5.311534G	5.328321G	Inf	1

802.11a_Nss1,(6Mbps)_1TX EBW

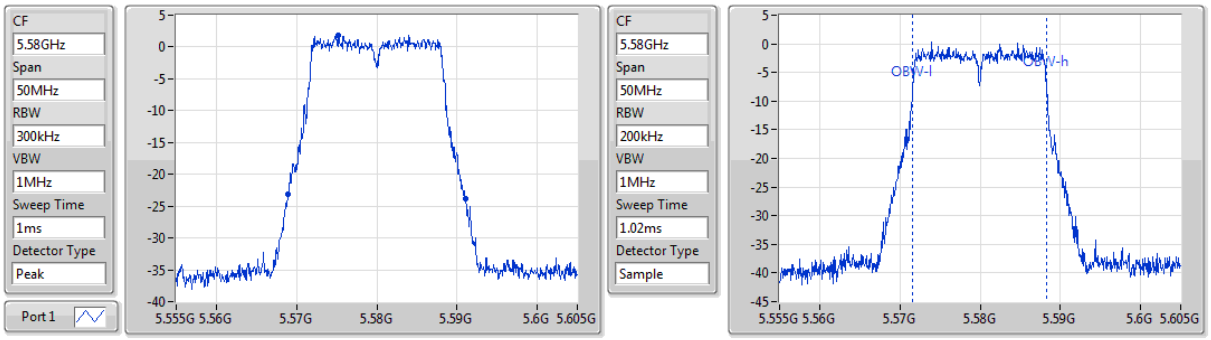
5500MHz



26dB(Hz)	Fl-26dB(Hz)	Fh-26dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
22.101M	5.488986G	5.511087G	16.787M	5.491534G	5.508321G	Inf	1

802.11a_Nss1,(6Mbps)_1TX EBW

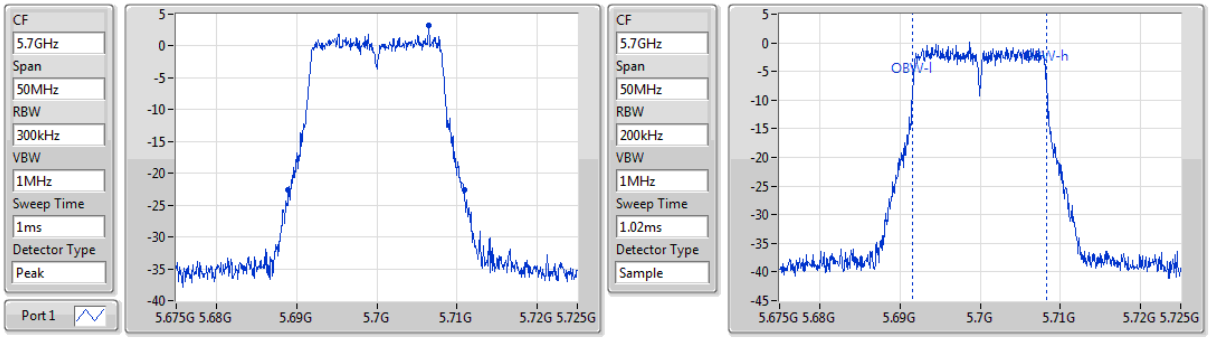
5580MHz



26dB(Hz)	Fl-26dB(Hz)	Fh-26dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
22.174M	5.568913G	5.591087G	16.787M	5.571534G	5.588321G	Inf	1

802.11a_Nss1,(6Mbps)_1TX EBW

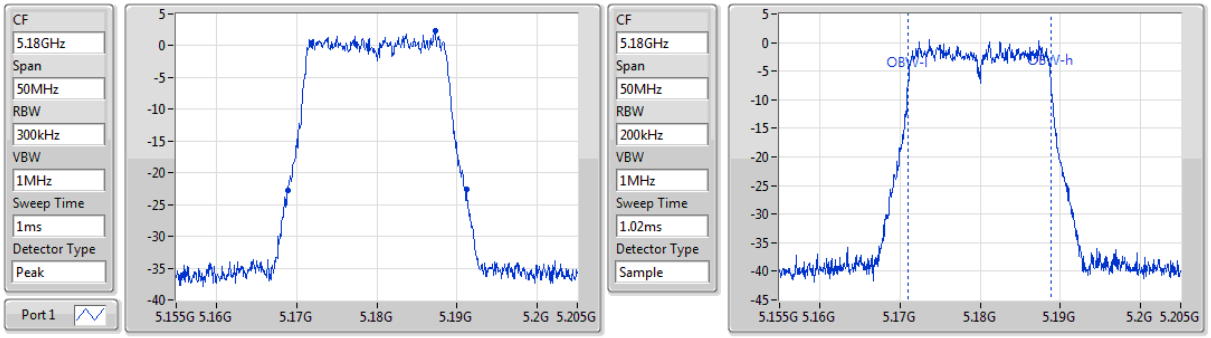
5700MHz



26dB(Hz)	Fl-26dB(Hz)	Fh-26dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
21.957M	5.688986G	5.710942G	16.787M	5.691534G	5.708321G	Inf	1

802.11ac VHT20_Nss1,(MCS0)_1TX EBW

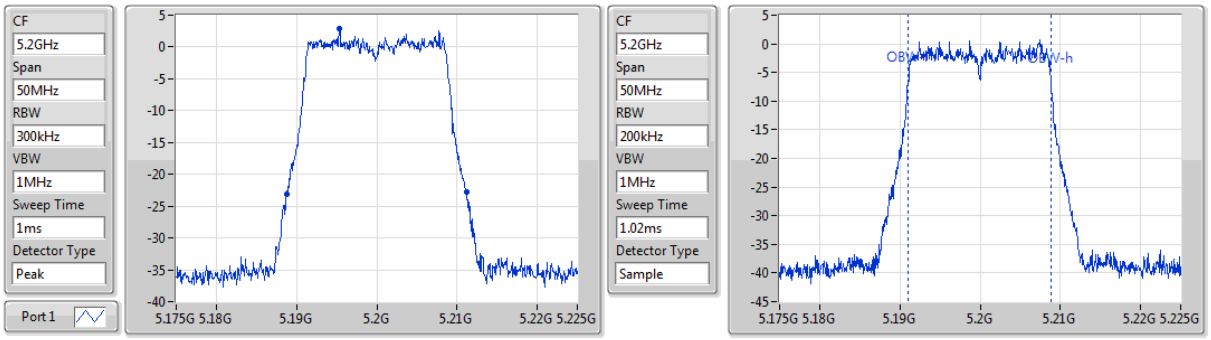
5180MHz



26dB(Hz)	Fl-26dB(Hz)	Fh-26dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
22.246M	5.168913G	5.191159G	17.8M	5.171027G	5.188828G	Inf	1

802.11ac VHT20_Nss1,(MCS0)_1TX EBW

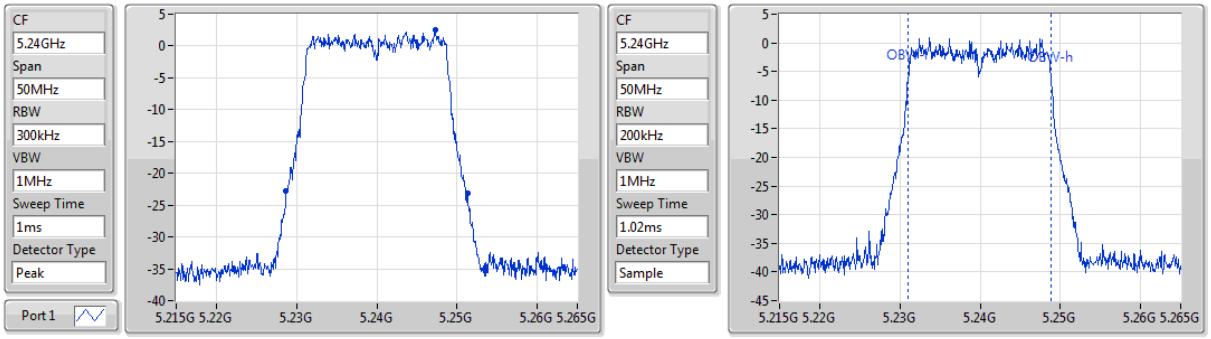
5200MHz



26dB(Hz)	Fl-26dB(Hz)	Fh-26dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
22.464M	5.188768G	5.211232G	17.8M	5.191027G	5.208828G	Inf	1

802.11ac VHT20_Nss1,(MCS0)_1TX EBW

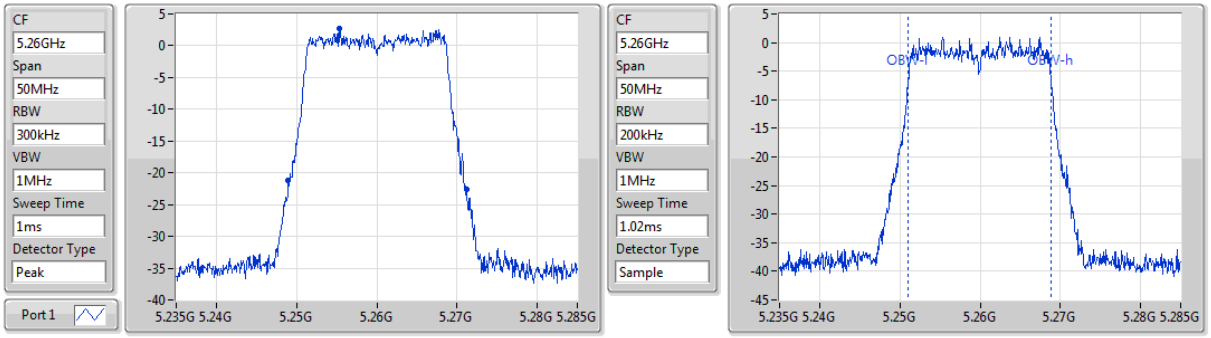
5240MHz



26dB(Hz)	Fl-26dB(Hz)	Fh-26dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
22.609M	5.228696G	5.251304G	17.873M	5.231027G	5.2489G	Inf	1

802.11ac VHT20_Nss1,(MCS0)_1TX EBW

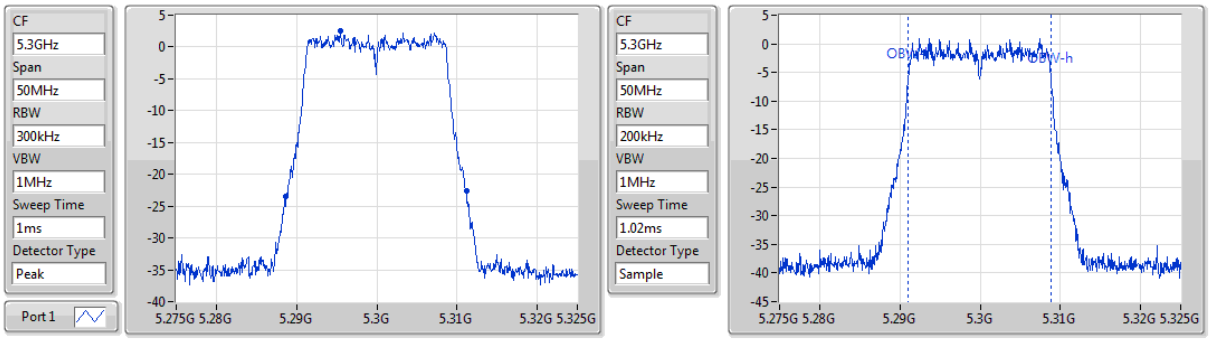
5260MHz



26dB(Hz)	Fl-26dB(Hz)	Fh-26dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
22.174M	5.248986G	5.271159G	17.873M	5.251027G	5.2689G	Inf	1

802.11ac VHT20_Nss1,(MCS0)_1TX EBW

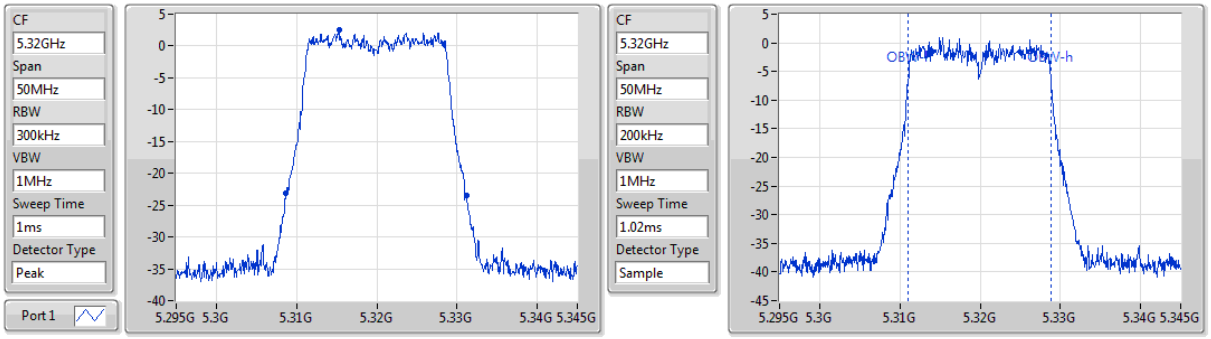
5300MHz



26dB(Hz)	Fl-26dB(Hz)	Fh-26dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
22.536M	5.288623G	5.311159G	17.873M	5.291027G	5.3089G	Inf	1

802.11ac VHT20_Nss1,(MCS0)_1TX EBW

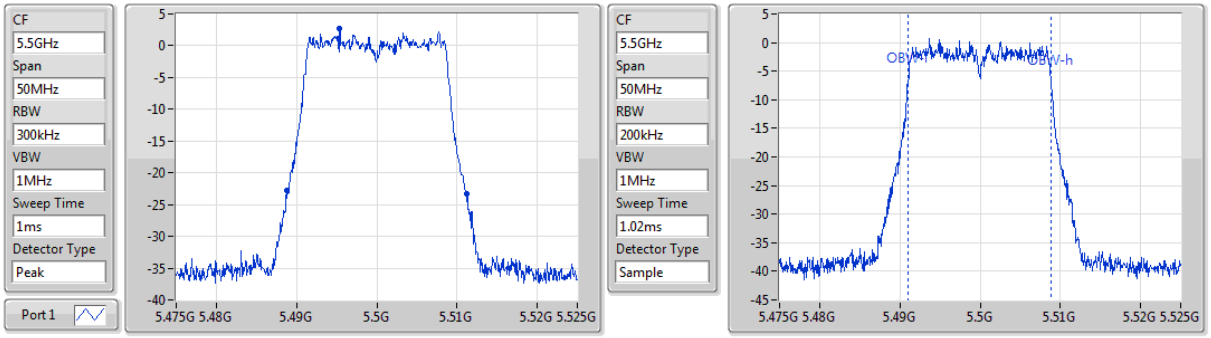
5320MHz



26dB(Hz)	Fl-26dB(Hz)	Fh-26dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
22.536M	5.308696G	5.331232G	17.8M	5.311027G	5.328828G	Inf	1

802.11ac VHT20_Nss1,(MCS0)_1TX EBW

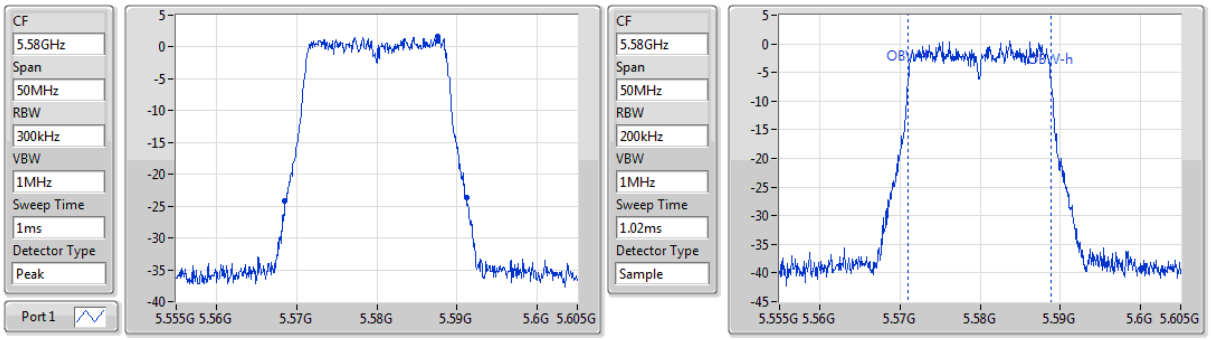
5500MHz



26dB(Hz)	Fl-26dB(Hz)	Fh-26dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
22.391M	5.488768G	5.511159G	17.873M	5.491027G	5.5089G	Inf	1

802.11ac VHT20_Nss1,(MCS0)_1TX EBW

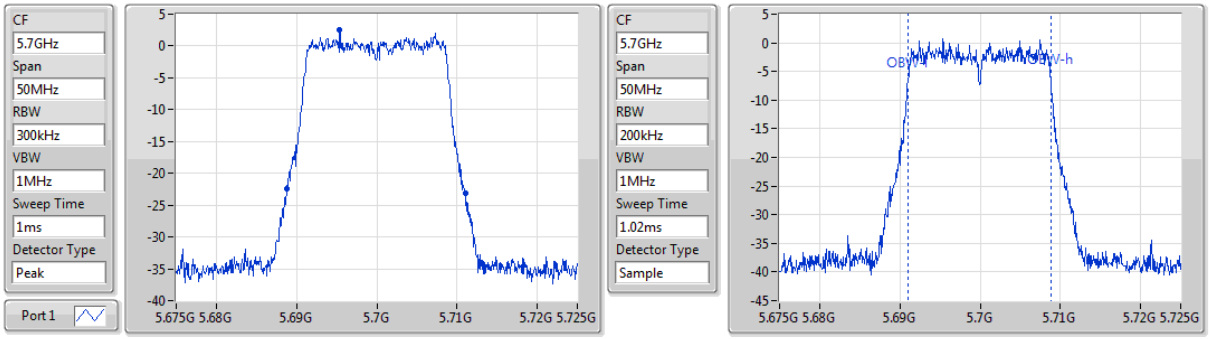
5580MHz



26dB(Hz)	Fl-26dB(Hz)	Fh-26dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
22.609M	5.568551G	5.591159G	17.873M	5.571027G	5.5889G	Inf	1

802.11ac VHT20_Nss1,(MCS0)_1TX EBW

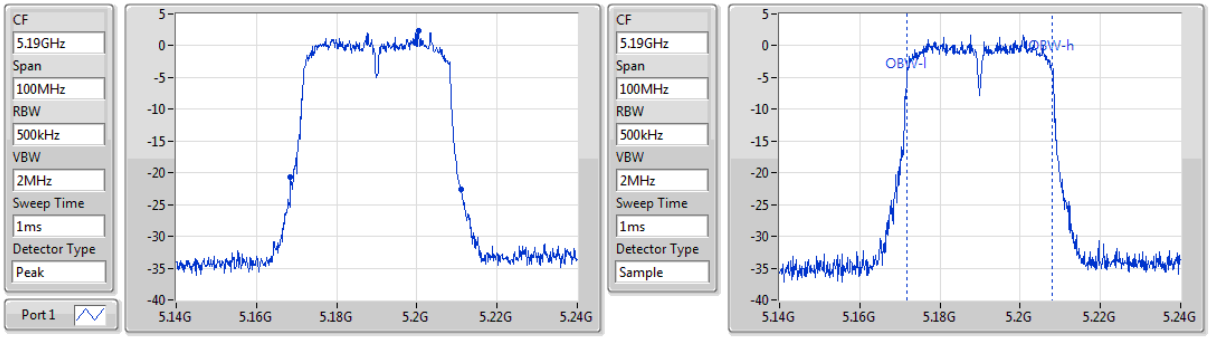
5700MHz



26dB(Hz)	Fl-26dB(Hz)	Fh-26dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
22.246M	5.688768G	5.711014G	17.873M	5.690955G	5.708828G	Inf	1

802.11ac VHT40_Nss1,(MCS0)_1TX EBW

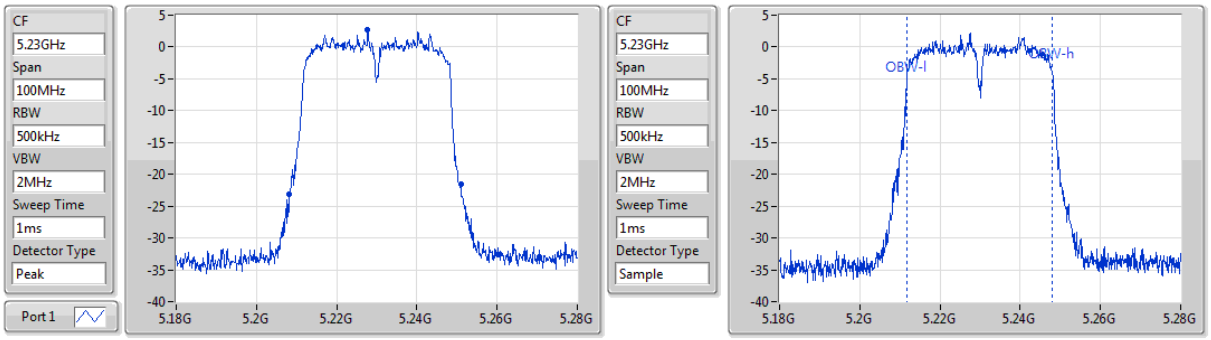
5190MHz



26dB(Hz)	Fl-26dB(Hz)	Fh-26dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
42.609M	5.168551G	5.211159G	36.324M	5.171766G	5.20809G	Inf	1

802.11ac VHT40_Nss1,(MCS0)_1TX EBW

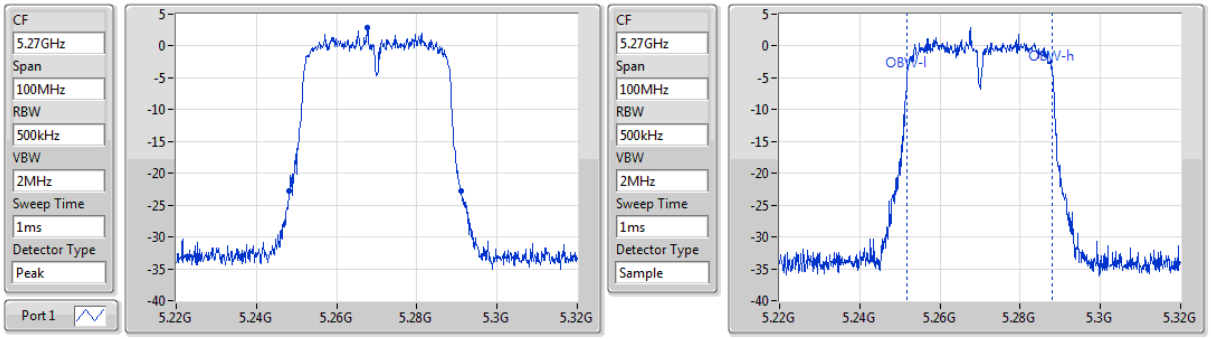
5230MHz



26dB(Hz)	Fl-26dB(Hz)	Fh-26dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
42.754M	5.208261G	5.251014G	36.324M	5.211766G	5.24809G	Inf	1

802.11ac VHT40_Nss1,(MCS0)_1TX EBW

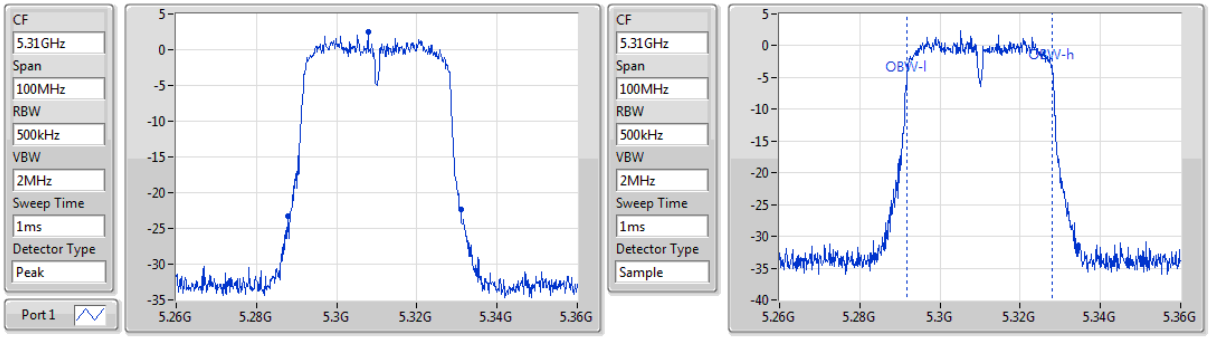
5270MHz



26dB(Hz)	Fl-26dB(Hz)	Fh-26dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
42.754M	5.248261G	5.291014G	36.324M	5.251766G	5.28809G	Inf	1

802.11ac VHT40_Nss1,(MCS0)_1TX EBW

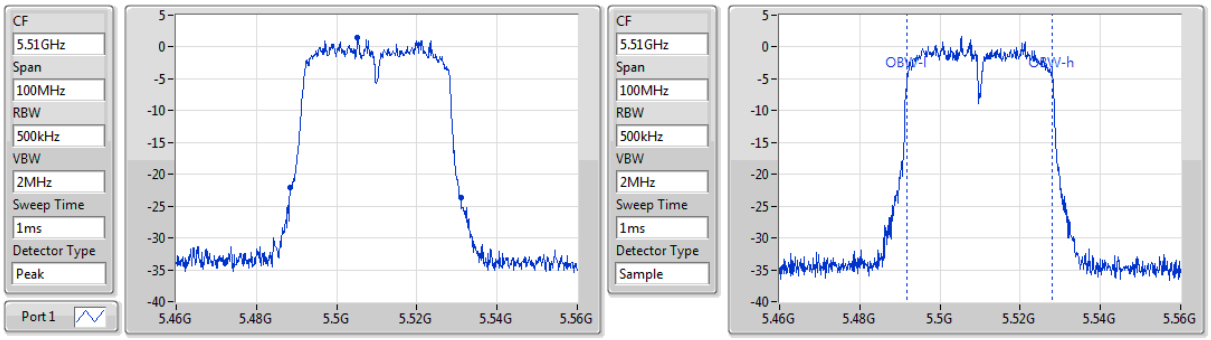
5310MHz



26dB(Hz)	Fl-26dB(Hz)	Fh-26dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
43.188M	5.287826G	5.331014G	36.324M	5.291766G	5.32809G	Inf	1

802.11ac VHT40_Nss1,(MCS0)_1TX EBW

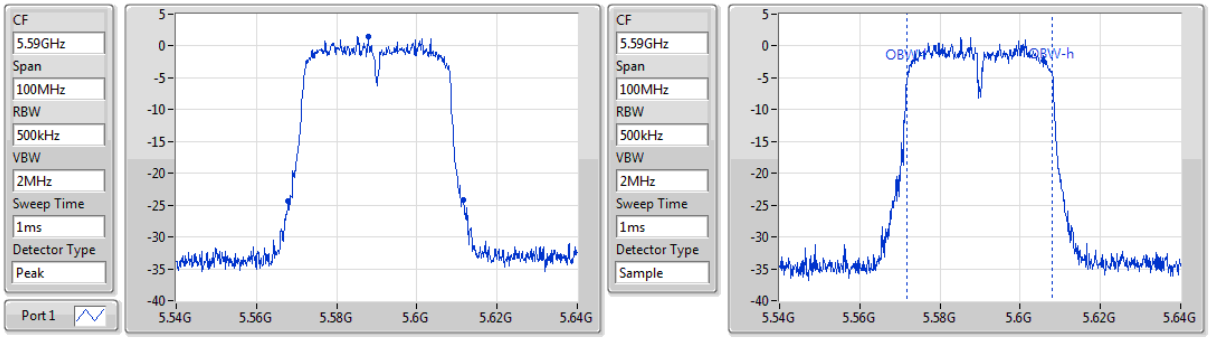
5510MHz



26dB(Hz)	Fl-26dB(Hz)	Fh-26dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
42.609M	5.488406G	5.531014G	36.324M	5.491766G	5.52809G	Inf	1

802.11ac VHT40_Nss1,(MCS0)_1TX EBW

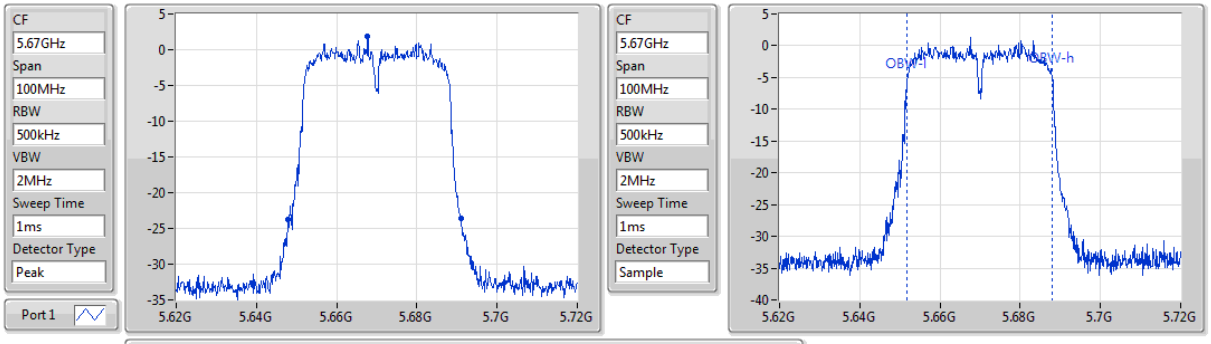
5590MHz



26dB(Hz)	Fl-26dB(Hz)	Fh-26dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
43.623M	5.567971G	5.611594G	36.324M	5.571766G	5.60809G	Inf	1

802.11ac VHT40_Nss1,(MCS0)_1TX EBW

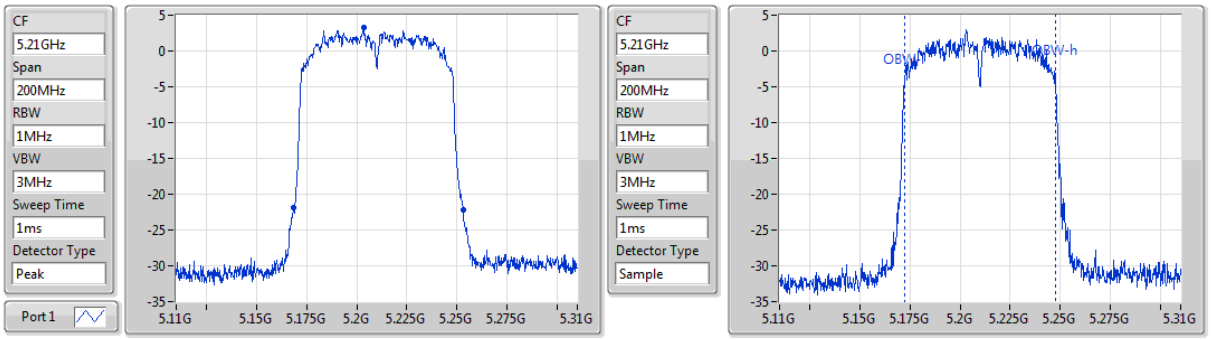
5670MHz



26dB(Hz)	Fl-26dB(Hz)	Fh-26dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
43.333M	5.647826G	5.691159G	36.179M	5.651766G	5.687945G	Inf	1

802.11ac VHT80_Nss1,(MCS0)_1TX EBW

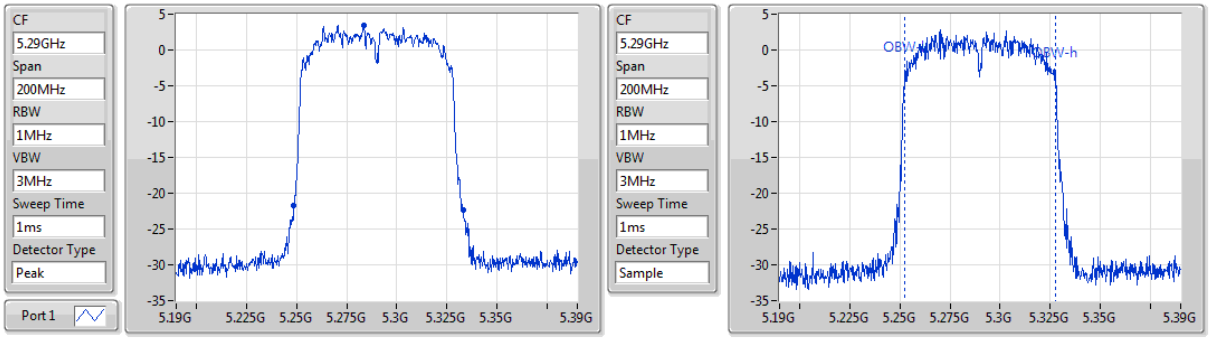
5210MHz



26dB(Hz)	Fl-26dB(Hz)	Fh-26dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
84.638M	5.168261G	5.252899G	74.964M	5.172373G	5.247337G	Inf	1

802.11ac VHT80_Nss1,(MCS0)_1TX EBW

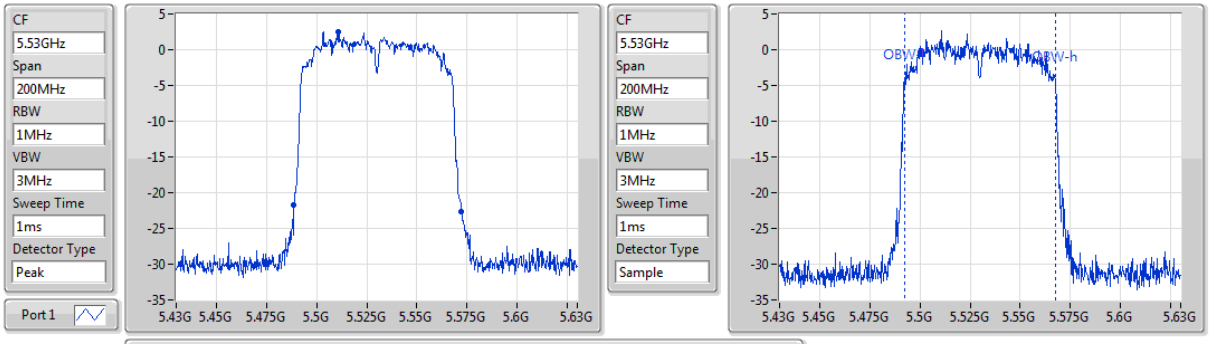
5290MHz



26dB(Hz)	Fl-26dB(Hz)	Fh-26dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
84.348M	5.248551G	5.332899G	74.674M	5.252663G	5.327337G	Inf	1

802.11ac VHT80_Nss1,(MCS0)_1TX **EBW**

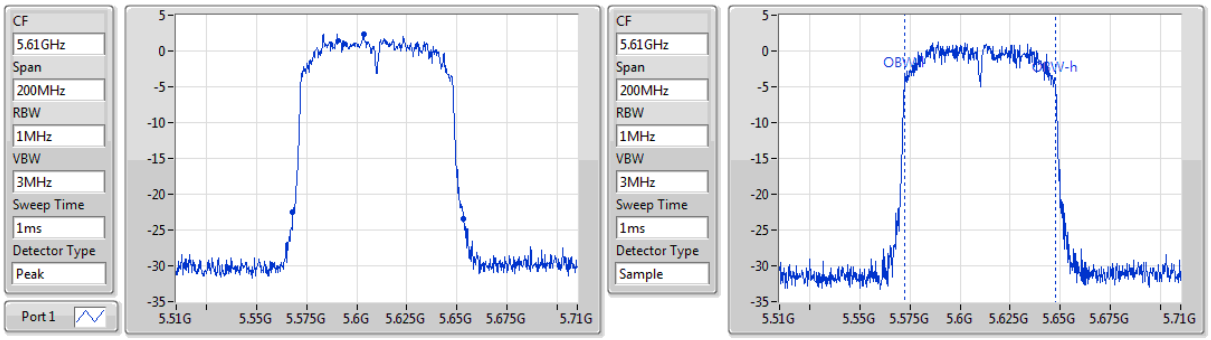
5530MHz



26dB(Hz)	Fl-26dB(Hz)	Fh-26dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
83.768M	5.488551G	5.572319G	74.964M	5.492373G	5.567337G	Inf	1

802.11ac VHT80_Nss1,(MCS0)_1TX **EBW**

5610MHz



26dB(Hz)	Fl-26dB(Hz)	Fh-26dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
85.217M	5.567971G	5.653188G	74.964M	5.572373G	5.647337G	Inf	1

3.3 RF Output Power

3.3.1 Limit of RF Output Power

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

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

3.3.2 Test Procedures

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

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

3.3.3 Test Setup

3.3.4 Test Result of Maximum Conducted Output Power

Summary

Mode	Total Power (dBm)	Total Power (W)	EIRP (dBm)	EIRP (W)
5.15-5.25GHz	-	-	-	-
802.11a_Nss1,(6Mbps)_1TX	11.09	0.01285	7.69	0.00587
802.11ac VHT20_Nss1,(MCS0)_1TX	11.20	0.01318	7.80	0.00603
802.11ac VHT40_Nss1,(MCS0)_1TX	11.19	0.01315	7.79	0.00601
802.11ac VHT80_Nss1,(MCS0)_1TX	11.25	0.01334	7.85	0.00610
5.25-5.35GHz	-	-	-	-
802.11a_Nss1,(6Mbps)_1TX	11.22	0.01324	7.82	0.00605
802.11ac VHT20_Nss1,(MCS0)_1TX	11.26	0.01337	7.86	0.00611
802.11ac VHT40_Nss1,(MCS0)_1TX	11.22	0.01324	7.82	0.00605
802.11ac VHT80_Nss1,(MCS0)_1TX	11.24	0.01330	7.84	0.00608
5.47-5.725GHz	-	-	-	-
802.11a_Nss1,(6Mbps)_1TX	11.26	0.01337	7.86	0.00611
802.11ac VHT20_Nss1,(MCS0)_1TX	11.33	0.01358	7.93	0.00621
802.11ac VHT40_Nss1,(MCS0)_1TX	10.86	0.01219	7.46	0.00557
802.11ac VHT80_Nss1,(MCS0)_1TX	10.92	0.01236	7.52	0.00565

Result

Mode	Result	DG (dBi)	Port 1 (dBm)	Total Power (dBm)	Power Limit (dBm)	EIRP (dBm)	EIRP Limit (dBm)
802.11a_Nss1,(6Mbps)_1TX	-	-	-	-	-	-	-
5180MHz	Pass	-3.40	11.05	11.05	30.00	7.65	36.00
5200MHz	Pass	-3.40	11.09	11.09	30.00	7.69	36.00
5240MHz	Pass	-3.40	11.06	11.06	30.00	7.66	36.00
5260MHz	Pass	-3.40	11.13	11.13	24.00	7.73	30.00
5300MHz	Pass	-3.40	11.22	11.22	24.00	7.82	30.00
5320MHz	Pass	-3.40	11.10	11.10	24.00	7.70	30.00
5500MHz	Pass	-3.40	11.24	11.24	24.00	7.84	30.00
5580MHz	Pass	-3.40	11.26	11.26	24.00	7.86	30.00
5700MHz	Pass	-3.40	11.13	11.13	24.00	7.73	30.00
802.11ac VHT20_Nss1,(MCS0)_1TX	-	-	-	-	-	-	-
5180MHz	Pass	-3.40	11.17	11.17	30.00	7.77	36.00
5200MHz	Pass	-3.40	11.20	11.20	30.00	7.80	36.00
5240MHz	Pass	-3.40	11.16	11.16	30.00	7.76	36.00
5260MHz	Pass	-3.40	11.19	11.19	24.00	7.79	30.00
5300MHz	Pass	-3.40	11.26	11.26	24.00	7.86	30.00
5320MHz	Pass	-3.40	11.17	11.17	24.00	7.77	30.00
5500MHz	Pass	-3.40	11.22	11.22	24.00	7.82	30.00
5580MHz	Pass	-3.40	11.33	11.33	24.00	7.93	30.00
5700MHz	Pass	-3.40	11.21	11.21	24.00	7.81	30.00
802.11ac VHT40_Nss1,(MCS0)_1TX	-	-	-	-	-	-	-
5190MHz	Pass	-3.40	11.17	11.17	30.00	7.77	36.00
5230MHz	Pass	-3.40	11.19	11.19	30.00	7.79	36.00
5270MHz	Pass	-3.40	11.22	11.22	24.00	7.82	30.00
5310MHz	Pass	-3.40	11.19	11.19	24.00	7.79	30.00
5510MHz	Pass	-3.40	10.84	10.84	24.00	7.44	30.00
5590MHz	Pass	-3.40	10.86	10.86	24.00	7.46	30.00
5670MHz	Pass	-3.40	10.73	10.73	24.00	7.33	30.00
802.11ac VHT80_Nss1,(MCS0)_1TX	-	-	-	-	-	-	-
5210MHz	Pass	-3.40	11.25	11.25	30.00	7.85	36.00
5290MHz	Pass	-3.40	11.24	11.24	24.00	7.84	30.00
5530MHz	Pass	-3.40	10.89	10.89	24.00	7.49	30.00
5610MHz	Pass	-3.40	10.92	10.92	24.00	7.52	30.00

DG = Directional Gain; **Port X** = Port X output power

3.4 Peak Power Spectral Density

3.4.1 Limit of Peak Power Spectral Density

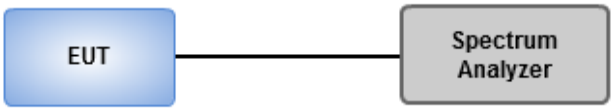
Frequency band 5150-5250 MHz		
Operating Mode		**Limit**
☐	Outdoor access point	17 dBm / MHz
☐	Indoor access point	17 dBm / MHz
☐	Fixed point-to-point access points	17 dBm / MHz
☒	Client devices	11 dBm / MHz

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

3.4.2 Test Procedures

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.

3.4.3 Test Setup



3.4.4 Test Result of Peak Power Spectral Density

Summary

Mode	PD (dBm/RBW)	EIRP PD (dBm/RBW)
5.15-5.25GHz	-	-
802.11a_Nss1,(6Mbps)_1TX	-1.10	-4.50
802.11ac VHT20_Nss1,(MCS0)_1TX	-1.24	-4.64
802.11ac VHT40_Nss1,(MCS0)_1TX	-3.89	-7.29
802.11ac VHT80_Nss1,(MCS0)_1TX	-6.50	-9.90
5.25-5.35GHz	-	-
802.11a_Nss1,(6Mbps)_1TX	-0.95	-4.35
802.11ac VHT20_Nss1,(MCS0)_1TX	-1.22	-4.62
802.11ac VHT40_Nss1,(MCS0)_1TX	-3.76	-7.16
802.11ac VHT80_Nss1,(MCS0)_1TX	-6.52	-9.92
5.47-5.725GHz	-	-
802.11a_Nss1,(6Mbps)_1TX	-1.49	-4.89
802.11ac VHT20_Nss1,(MCS0)_1TX	-1.46	-4.86
802.11ac VHT40_Nss1,(MCS0)_1TX	-4.64	-8.04
802.11ac VHT80_Nss1,(MCS0)_1TX	-7.26	-10.66

RBW = 500kHz for 5.725-5.85GHz band / 1MHz for other band;

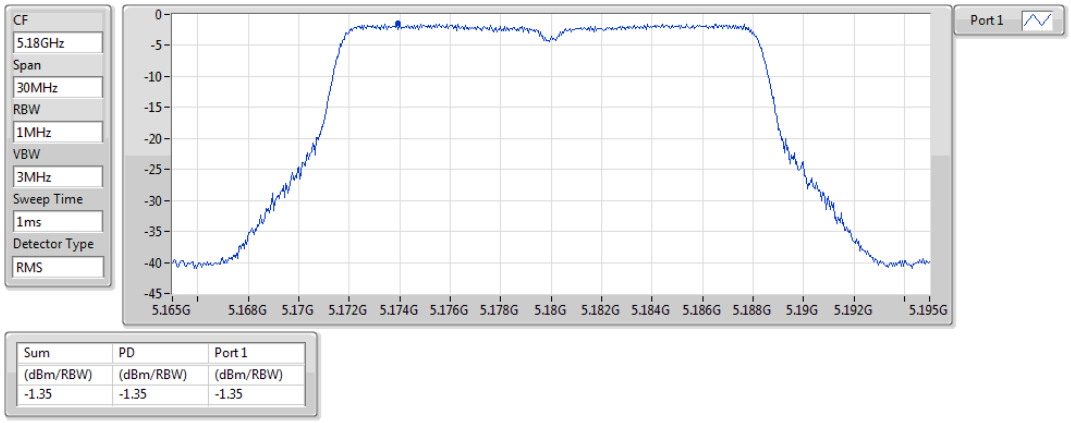
Result

Mode	Result	DG (dBi)	Port 1 (dBm/RBW)	PD (dBm/RBW)	PD Limit (dBm/RBW)	EIRP PD (dBm/RBW)	EIRP PD Limit (dBm/RBW)
802.11a_Nss1,(6Mbps)_1TX	-	-	-	-	-	-	-
5180MHz	Pass	-3.40	-1.35	-1.35	17.00	-4.75	23.00
5200MHz	Pass	-3.40	-1.21	-1.21	17.00	-4.61	23.00
5240MHz	Pass	-3.40	-1.10	-1.10	17.00	-4.50	23.00
5260MHz	Pass	-3.40	-0.95	-0.95	11.00	-4.35	17.00
5300MHz	Pass	-3.40	-0.96	-0.96	11.00	-4.36	17.00
5320MHz	Pass	-3.40	-1.14	-1.14	11.00	-4.54	17.00
5500MHz	Pass	-3.40	-1.49	-1.49	11.00	-4.89	17.00
5580MHz	Pass	-3.40	-1.58	-1.58	11.00	-4.98	17.00
5700MHz	Pass	-3.40	-1.50	-1.50	11.00	-4.90	17.00
802.11ac VHT20_Nss1,(MCS0)_1TX	-	-	-	-	-	-	-
5180MHz	Pass	-3.40	-1.53	-1.53	17.00	-4.93	23.00
5200MHz	Pass	-3.40	-1.42	-1.42	17.00	-4.82	23.00
5240MHz	Pass	-3.40	-1.24	-1.24	17.00	-4.64	23.00
5260MHz	Pass	-3.40	-1.23	-1.23	11.00	-4.63	17.00
5300MHz	Pass	-3.40	-1.26	-1.26	11.00	-4.66	17.00
5320MHz	Pass	-3.40	-1.22	-1.22	11.00	-4.62	17.00
5500MHz	Pass	-3.40	-1.51	-1.51	11.00	-4.91	17.00
5580MHz	Pass	-3.40	-1.46	-1.46	11.00	-4.86	17.00
5700MHz	Pass	-3.40	-1.59	-1.59	11.00	-4.99	17.00
802.11ac VHT40_Nss1,(MCS0)_1TX	-	-	-	-	-	-	-
5190MHz	Pass	-3.40	-4.11	-4.11	17.00	-7.51	23.00
5230MHz	Pass	-3.40	-3.89	-3.89	17.00	-7.29	23.00
5270MHz	Pass	-3.40	-3.76	-3.76	11.00	-7.16	17.00
5310MHz	Pass	-3.40	-3.76	-3.76	11.00	-7.16	17.00
5510MHz	Pass	-3.40	-4.64	-4.64	11.00	-8.04	17.00
5590MHz	Pass	-3.40	-4.89	-4.89	11.00	-8.29	17.00
5670MHz	Pass	-3.40	-4.81	-4.81	11.00	-8.21	17.00
802.11ac VHT80_Nss1,(MCS0)_1TX	-	-	-	-	-	-	-
5210MHz	Pass	-3.40	-6.50	-6.50	17.00	-9.90	23.00
5290MHz	Pass	-3.40	-6.52	-6.52	11.00	-9.92	17.00
5530MHz	Pass	-3.40	-7.78	-7.78	11.00	-11.18	17.00
5610MHz	Pass	-3.40	-7.26	-7.26	11.00	-10.66	17.00

DG = Directional Gain;
PD = Power density; **Port X** = Port X power density;

802.11a_Nss1,(6Mbps)_1TX **PSD**

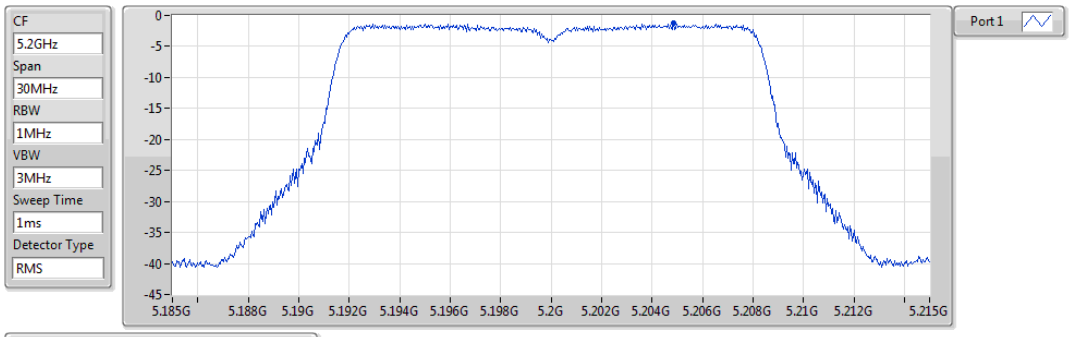
5180MHz



Sum	PD	Port 1
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
-1.35	-1.35	-1.35

802.11a_Nss1,(6Mbps)_1TX **PSD**

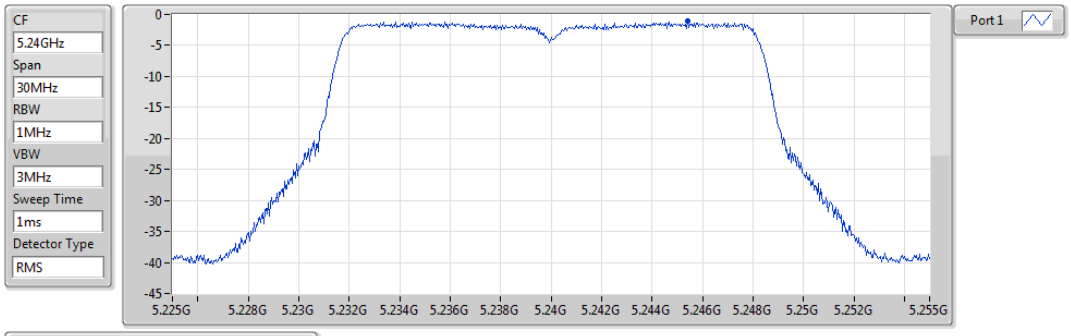
5200MHz



Sum	PD	Port 1
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
-1.21	-1.21	-1.21

802.11a_Nss1,(6Mbps)_1TX **PSD**

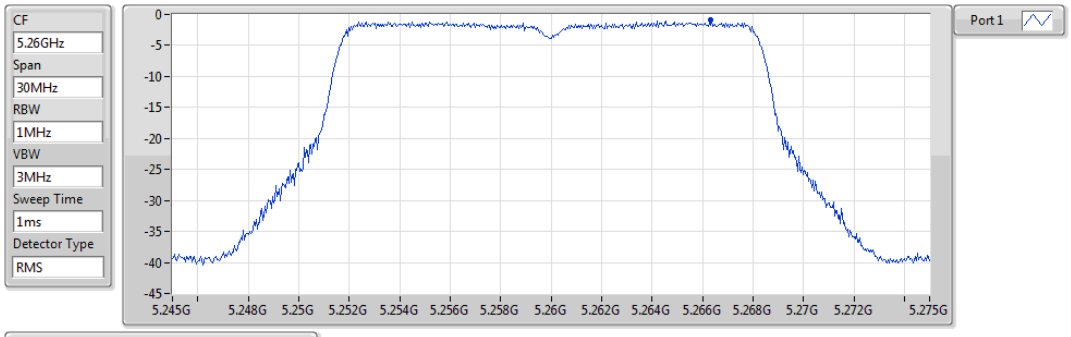
5240MHz



Sum	PD	Port 1
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
-1.10	-1.10	-1.10

802.11a_Nss1,(6Mbps)_1TX **PSD**

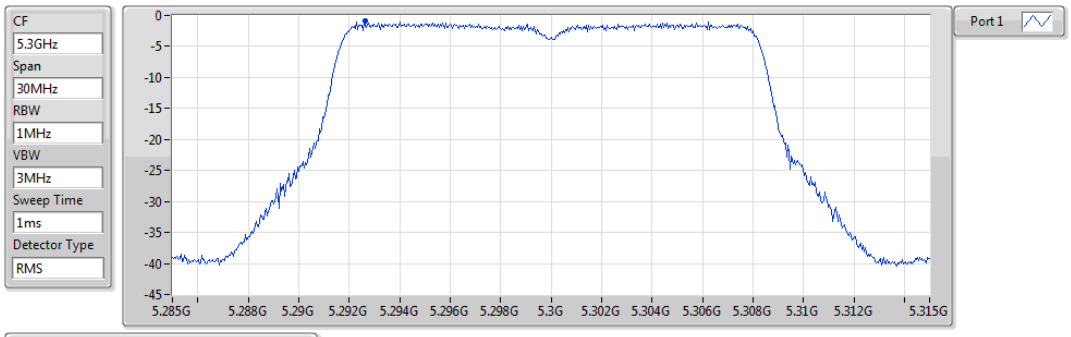
5260MHz



Sum	PD	Port 1
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
-0.95	-0.95	-0.95

802.11a_Nss1,(6Mbps)_1TX **PSD**

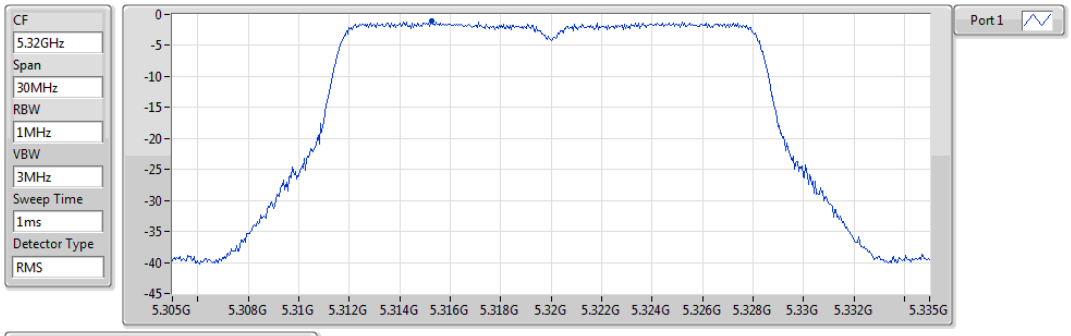
5300MHz



Sum	PD	Port 1
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
-0.96	-0.96	-0.96

802.11a_Nss1,(6Mbps)_1TX **PSD**

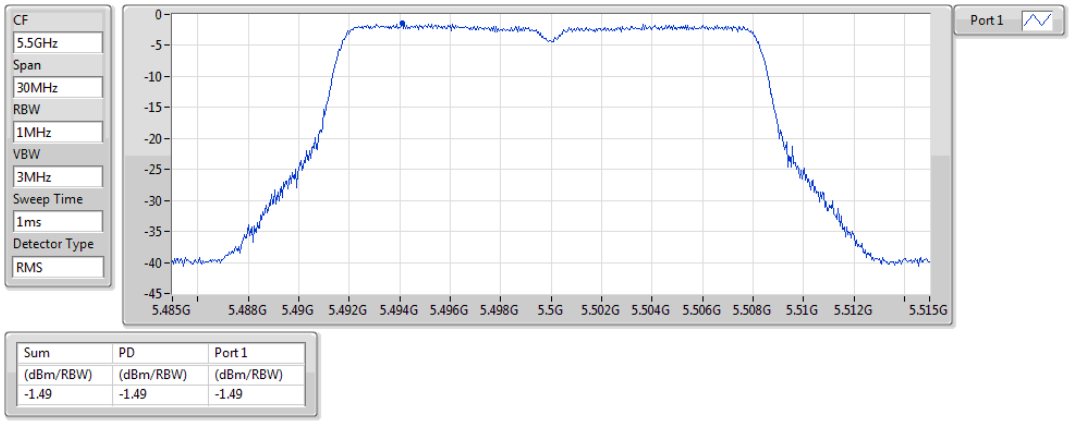
5320MHz



Sum	PD	Port 1
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
-1.14	-1.14	-1.14

802.11a_Nss1,(6Mbps)_1TX **PSD**

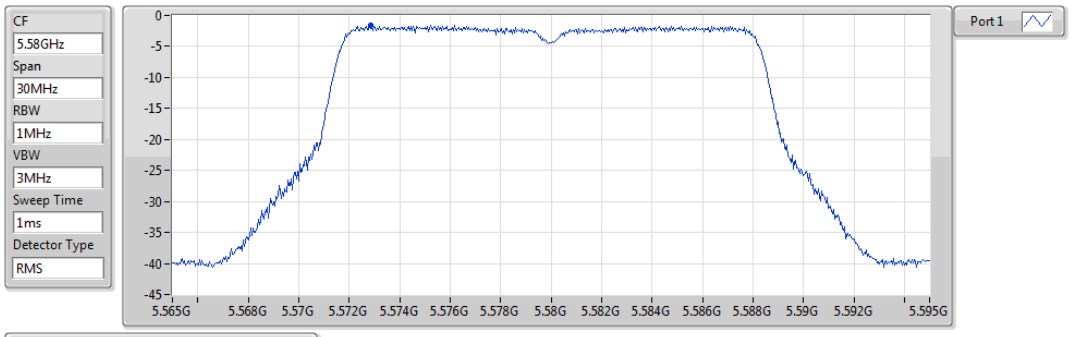
5500MHz



Sum	PD	Port 1
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
-1.49	-1.49	-1.49

802.11a_Nss1,(6Mbps)_1TX **PSD**

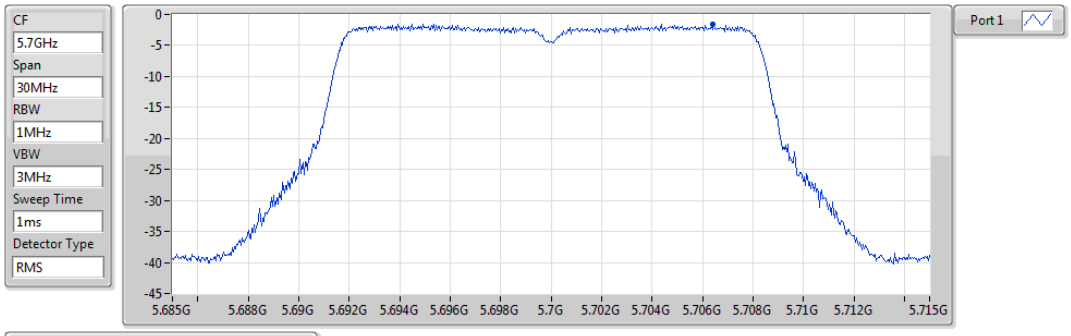
5580MHz



Sum	PD	Port 1
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
-1.58	-1.58	-1.58

802.11a_Nss1,(6Mbps)_1TX **PSD**

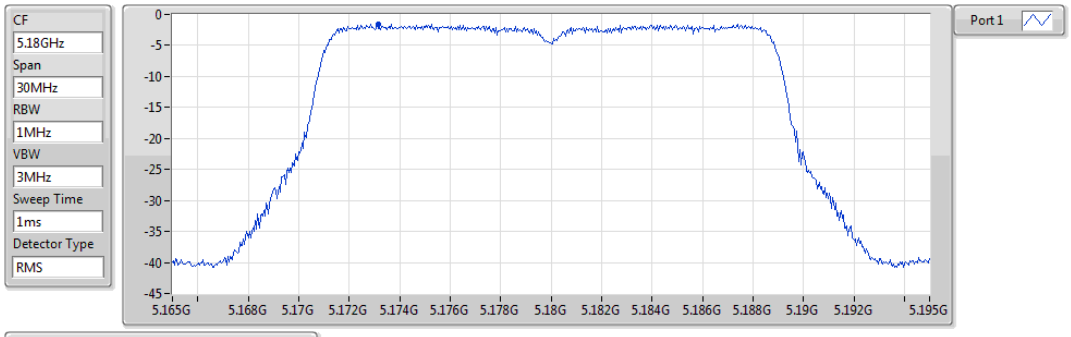
5700MHz



Sum	PD	Port 1
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
-1.50	-1.50	-1.50

802.11ac VHT20_Nss1,(MCS0)_1TX **PSD**

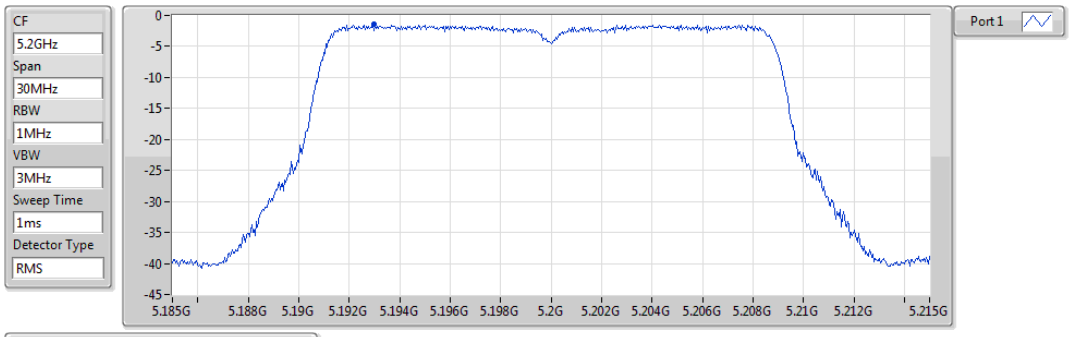
5180MHz



Sum	PD	Port 1
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
-1.53	-1.53	-1.53

802.11ac VHT20_Nss1,(MCS0)_1TX **PSD**

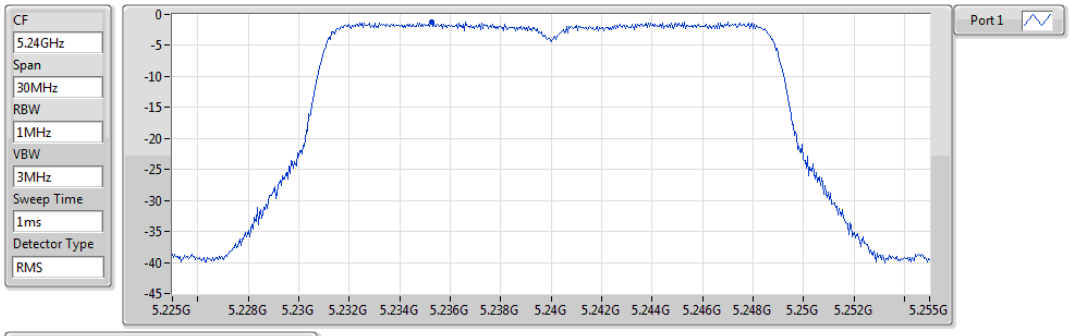
5200MHz



Sum	PD	Port 1
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
-1.42	-1.42	-1.42

802.11ac VHT20_Nss1,(MCS0)_1TX **PSD**

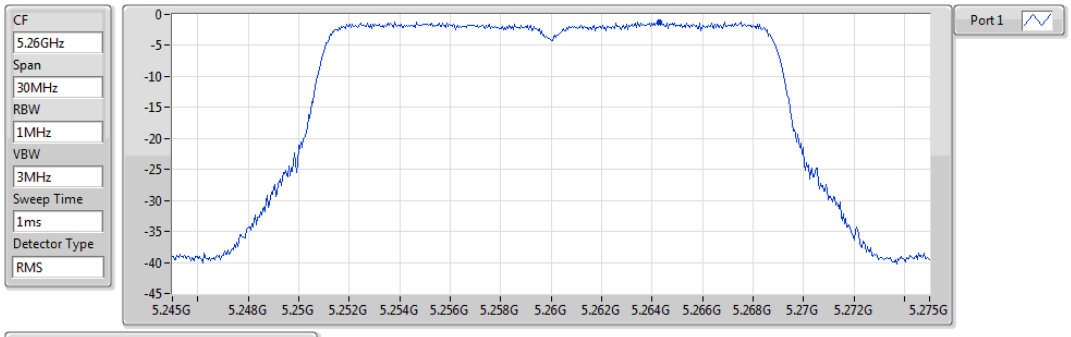
5240MHz



Sum	PD	Port 1
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
-1.24	-1.24	-1.24

802.11ac VHT20_Nss1,(MCS0)_1TX **PSD**

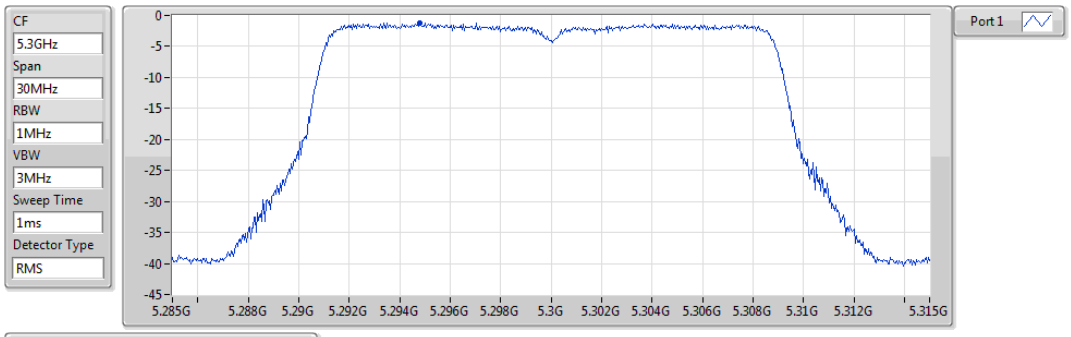
5260MHz



Sum	PD	Port 1
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
-1.23	-1.23	-1.23

802.11ac VHT20_Nss1,(MCS0)_1TX **PSD**

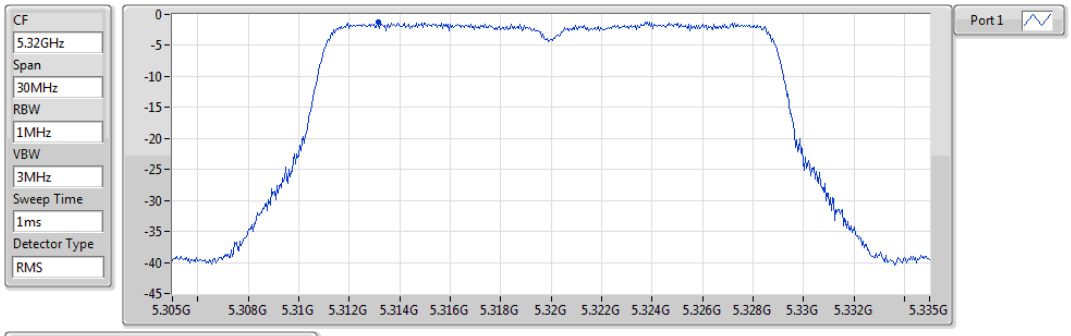
5300MHz



Sum	PD	Port 1
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
-1.26	-1.26	-1.26

802.11ac VHT20_Nss1,(MCS0)_1TX **PSD**

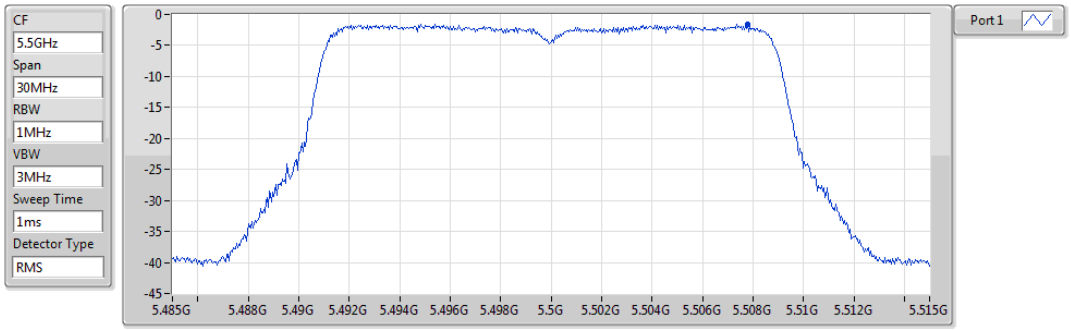
5320MHz



Sum	PD	Port 1
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
-1.22	-1.22	-1.22

802.11ac VHT20_Nss1,(MCS0)_1TX **PSD**

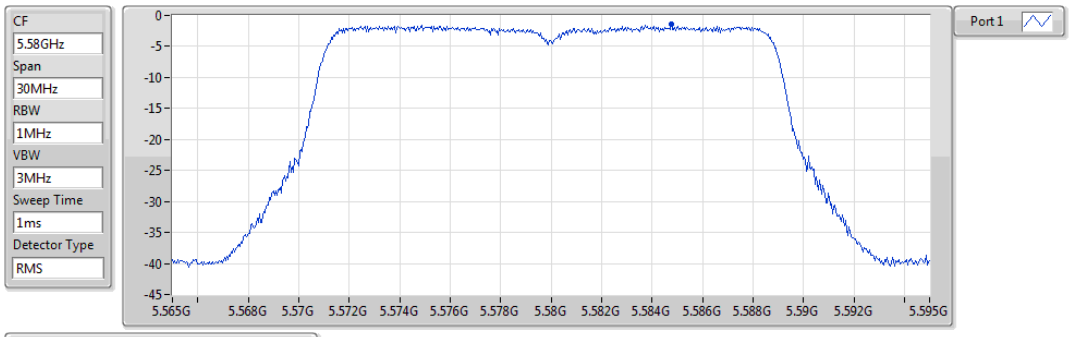
5500MHz



Sum	PD	Port 1
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
-1.51	-1.51	-1.51

802.11ac VHT20_Nss1,(MCS0)_1TX **PSD**

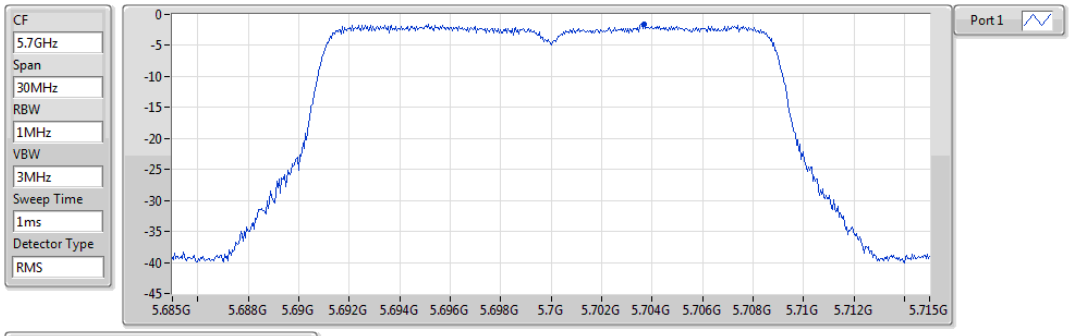
5580MHz



Sum	PD	Port 1
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
-1.46	-1.46	-1.46

802.11ac VHT20_Nss1,(MCS0)_1TX **PSD**

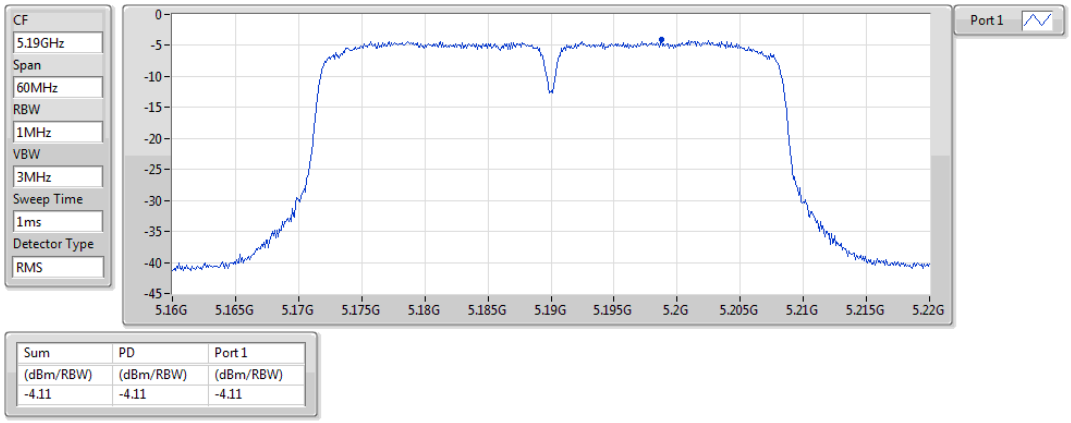
5700MHz



Sum	PD	Port 1
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
-1.59	-1.59	-1.59

802.11ac VHT40_Nss1,(MCS0)_1TX **PSD**

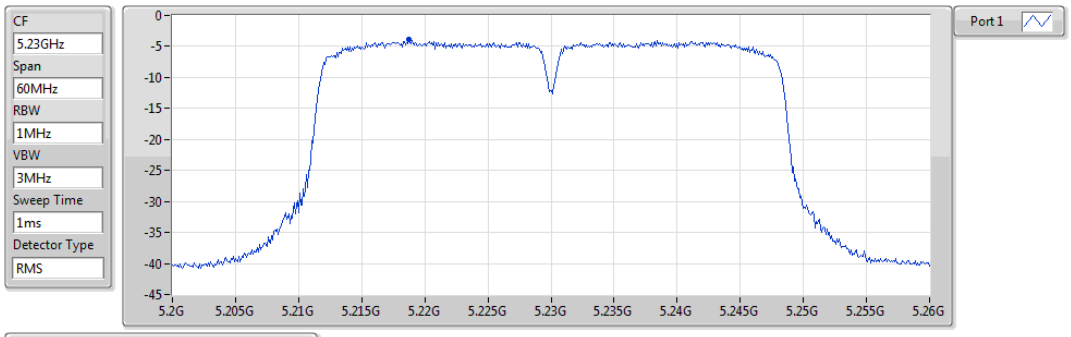
5190MHz



Sum	PD	Port 1
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
-4.11	-4.11	-4.11

802.11ac VHT40_Nss1,(MCS0)_1TX **PSD**

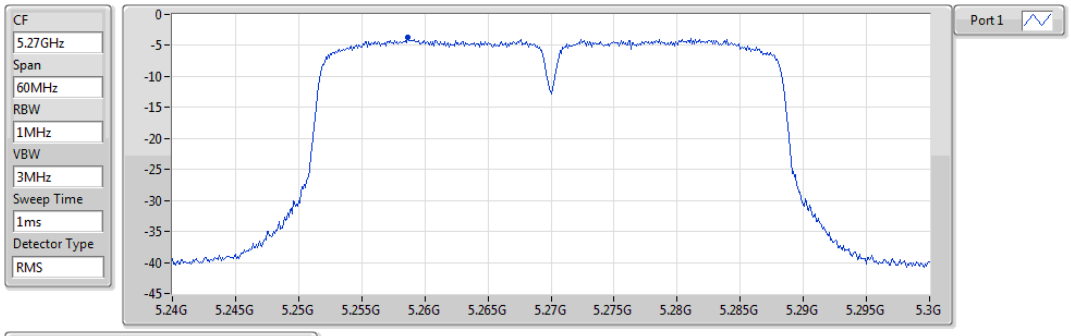
5230MHz



Sum	PD	Port 1
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
-3.89	-3.89	-3.89

802.11ac VHT40_Nss1,(MCS0)_1TX **PSD**

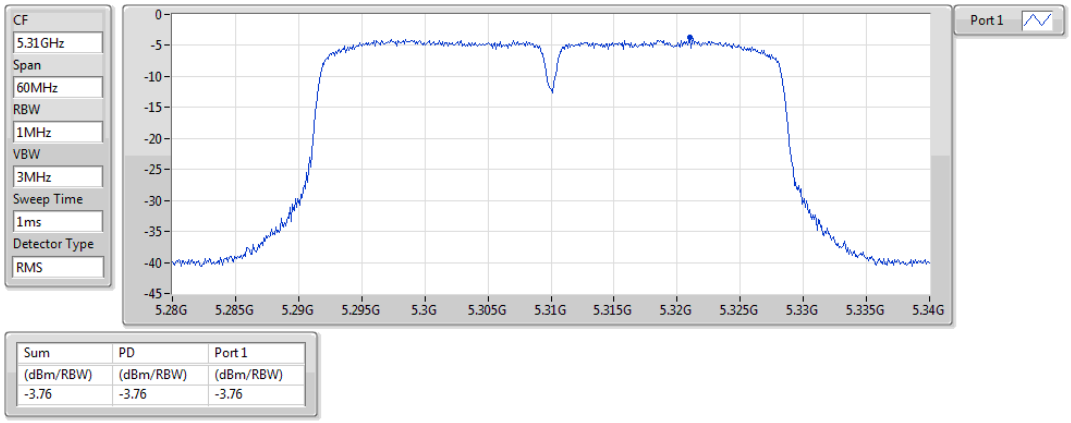
5270MHz



Sum	PD	Port 1
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
-3.76	-3.76	-3.76

802.11ac VHT40_Nss1,(MCS0)_1TX **PSD**

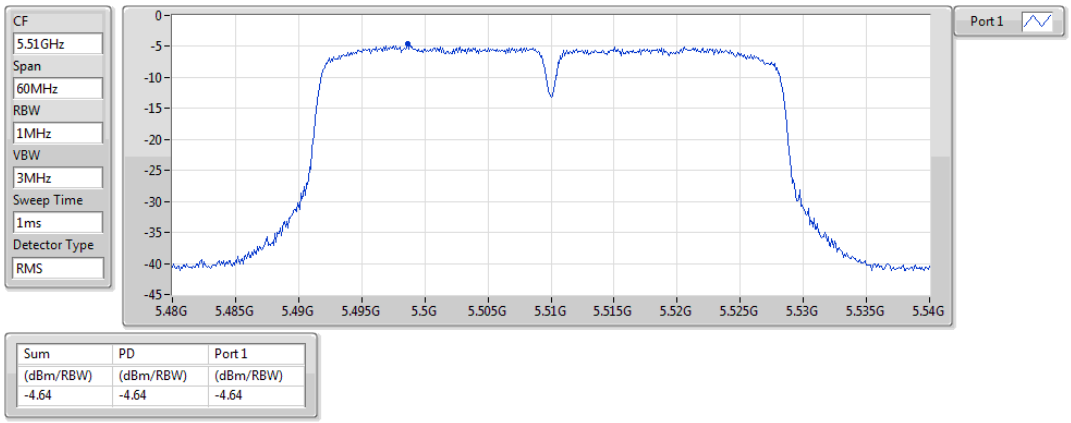
5310MHz



Sum	PD	Port 1
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
-3.76	-3.76	-3.76

802.11ac VHT40_Nss1,(MCS0)_1TX **PSD**

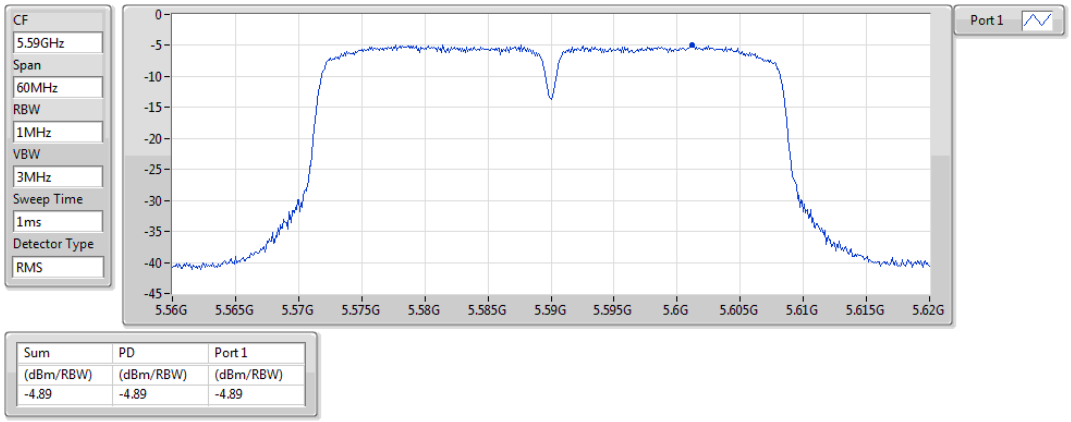
5510MHz



Sum	PD	Port 1
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
-4.64	-4.64	-4.64

802.11ac VHT40_Nss1,(MCS0)_1TX **PSD**

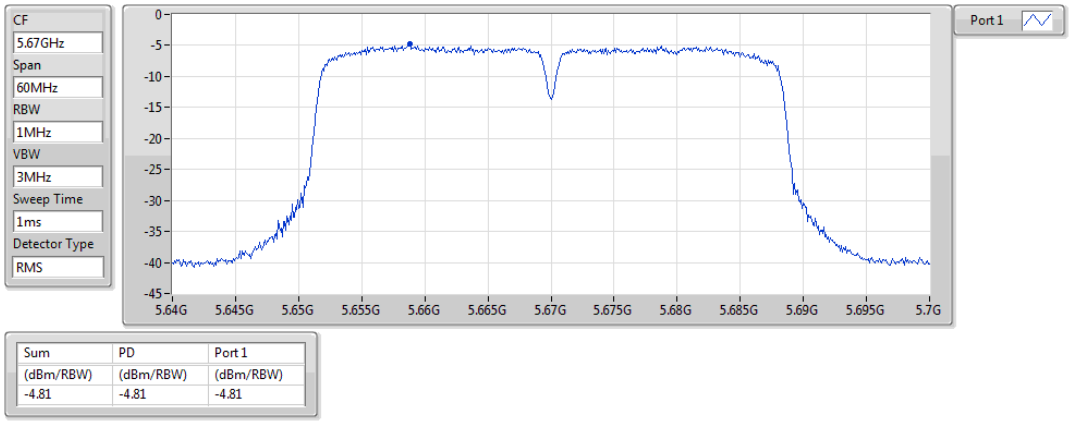
5590MHz



Sum	PD	Port 1
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
-4.89	-4.89	-4.89

802.11ac VHT40_Nss1,(MCS0)_1TX **PSD**

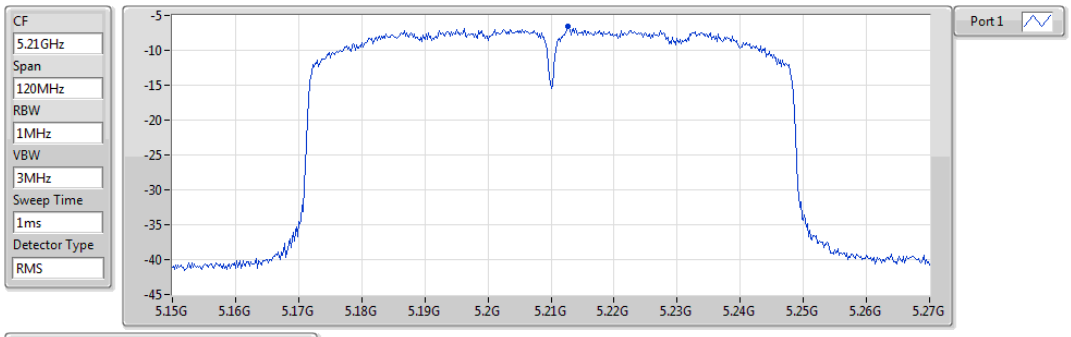
5670MHz



Sum	PD	Port 1
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
-4.81	-4.81	-4.81

802.11ac VHT80_Nss1,(MCS0)_1TX **PSD**

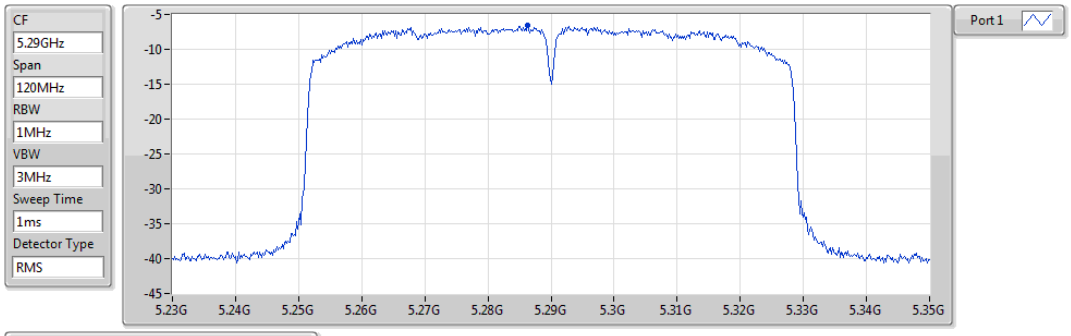
5210MHz



Sum	PD	Port 1
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
-6.50	-6.50	-6.50

802.11ac VHT80_Nss1,(MCS0)_1TX **PSD**

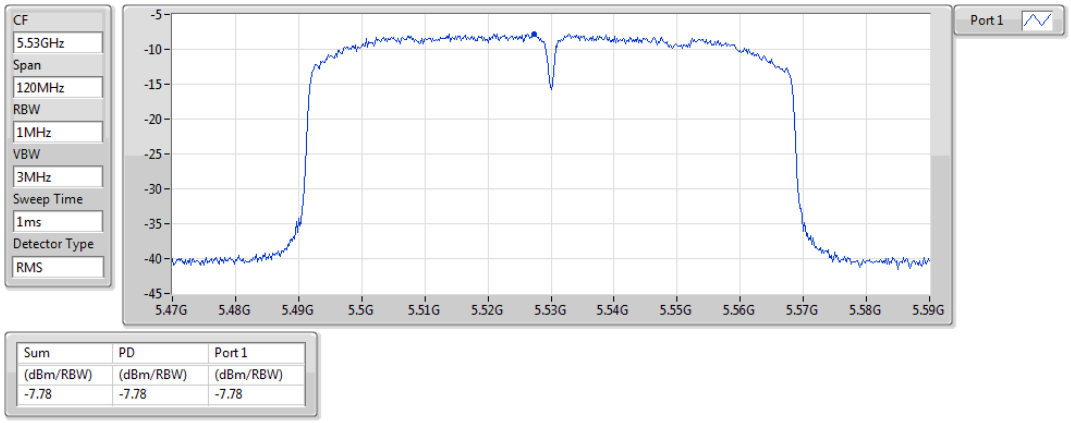
5290MHz



Sum	PD	Port 1
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
-6.52	-6.52	-6.52

802.11ac VHT80_Nss1,(MCS0)_1TX **PSD**

5530MHz



Sum	PD	Port 1
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
-7.78	-7.78	-7.78

802.11ac VHT80_Nss1,(MCS0)_1TX **PSD**

5610MHz

Sum	PD	Port 1
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
-7.26	-7.26	-7.26

3.5 Transmitter Radiated and Band Edge Emissions

3.5.1 Limit of Transmitter Radiated and Band Edge Emissions

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

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

Un-restricted band emissions above 1GHz Limit	
Operating Band	**Limit**
5.15 - 5.25 GHz	e.i.r.p. -27 dBm [68.2 dBuV/m@3m]
5.25 - 5.35 GHz	e.i.r.p. -27 dBm [68.2 dBuV/m@3m]
5.47 - 5.725 GHz	e.i.r.p. -27 dBm [68.2 dBuV/m@3m]

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

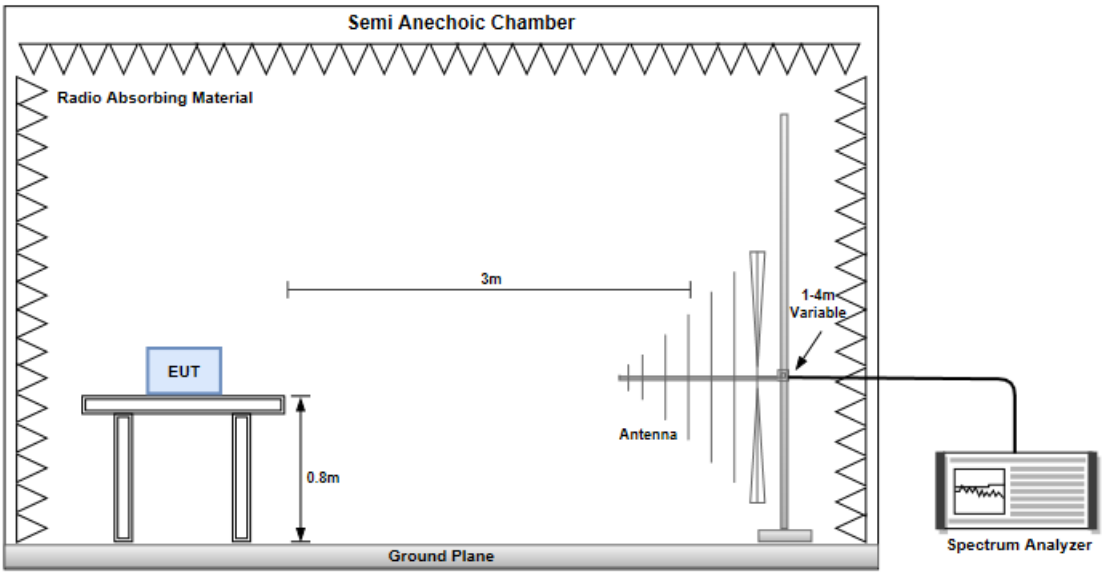
1. Measurement is made at a semi-anechoic chamber that incorporates a turntable allowing a EUT rotation of 360°. A continuously-rotating, remotely-controlled turntable is installed at the test site to support the EUT and facilitate determination of the direction of maximum radiation for each EUT emission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

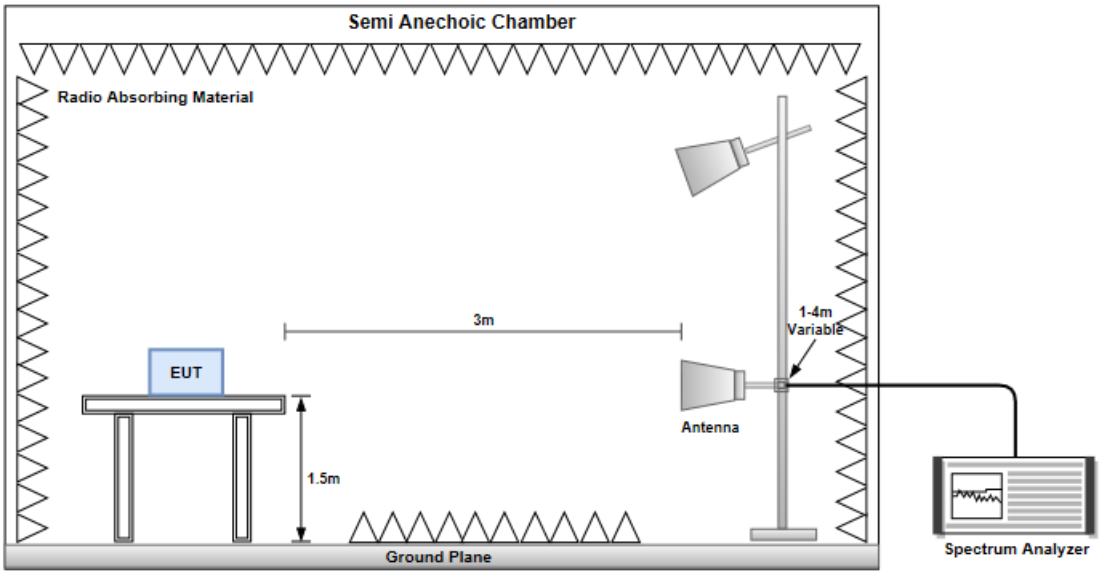
1. 120kHz measurement bandwidth of test receiver and Quasi-peak detector is for radiated emission below 1GHz.
2. RBW=1MHz, VBW=3MHz and Peak detector is for peak measured value of radiated emission above 1GHz.
3. RBW=1MHz, VBW=1/T and Peak detector is for average measured value of radiated emission above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

3.5.3 Test Setup

Radiated Emissions below 1 GHz

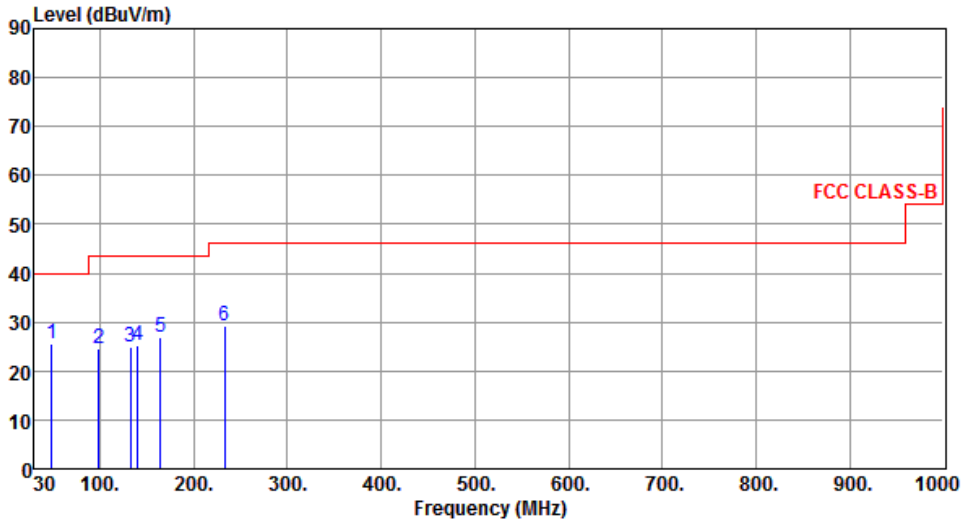


Radiated Emissions above 1 GHz



3.5.4 Transmitter Radiated Unwanted Emissions (Below 1GHz)

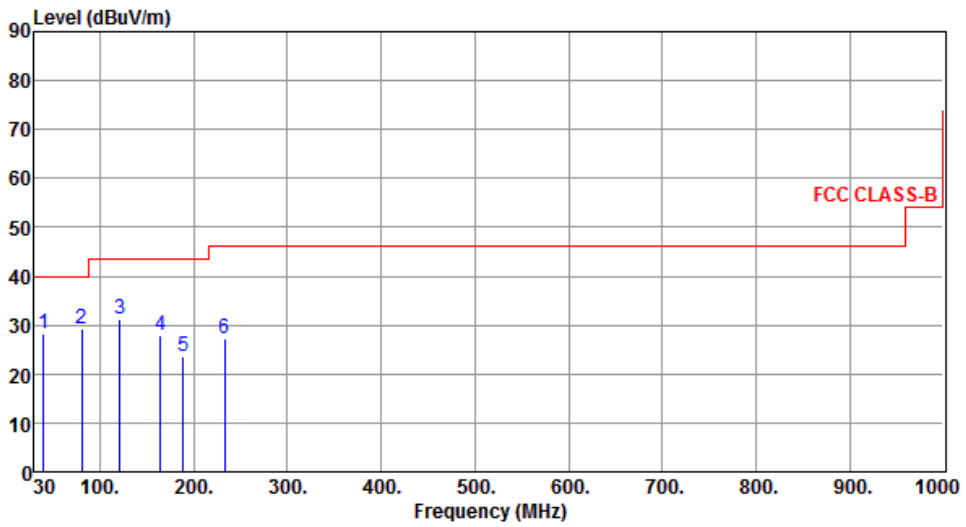
Modulation	VHT20	**Test Freq. (MHz)**	5580
Polarization	Horizontal		



	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	48.43	25.49	40.00	-14.51	33.26	-7.77	Peak	---	---
2	98.87	24.45	43.50	-19.05	37.65	-13.20	Peak	---	---
3	132.82	24.89	43.50	-18.61	34.19	-9.30	Peak	---	---
4	140.58	25.26	43.50	-18.24	33.86	-8.60	Peak	---	---
5	164.83	26.98	43.50	-16.52	35.31	-8.33	Peak	---	---
6	232.73	29.36	46.00	-16.64	39.46	-10.10	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)	5580
Polarization	Vertical		

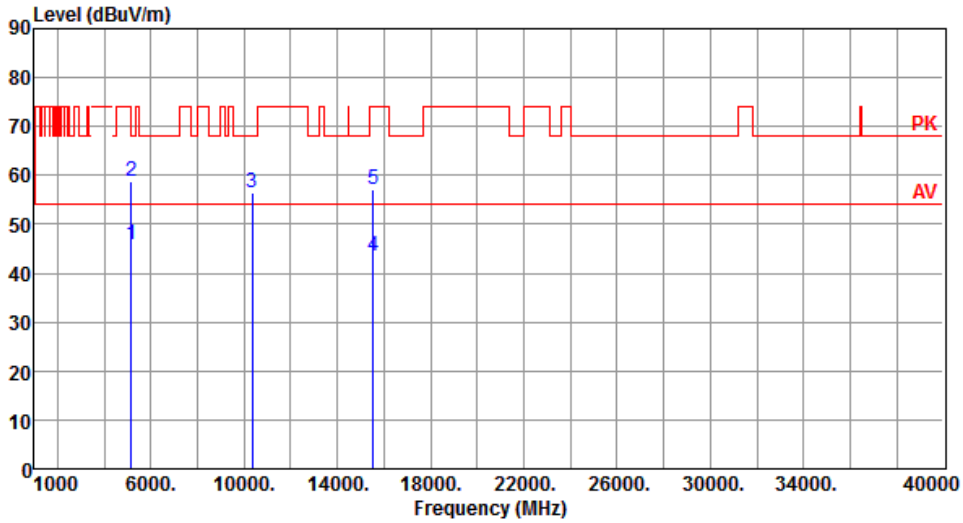


	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	39.70	28.24	40.00	-11.76	36.39	-8.15	Peak	---	---
2	80.44	29.34	40.00	-10.66	42.36	-13.02	Peak	---	---
3	121.18	31.05	43.50	-12.45	41.55	-10.50	Peak	---	---
4	164.83	27.79	43.50	-15.71	36.12	-8.33	Peak	---	---
5	189.08	23.46	43.50	-20.04	33.79	-10.33	Peak	---	---
6	232.73	27.19	46.00	-18.81	37.29	-10.10	Peak	---	---

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

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

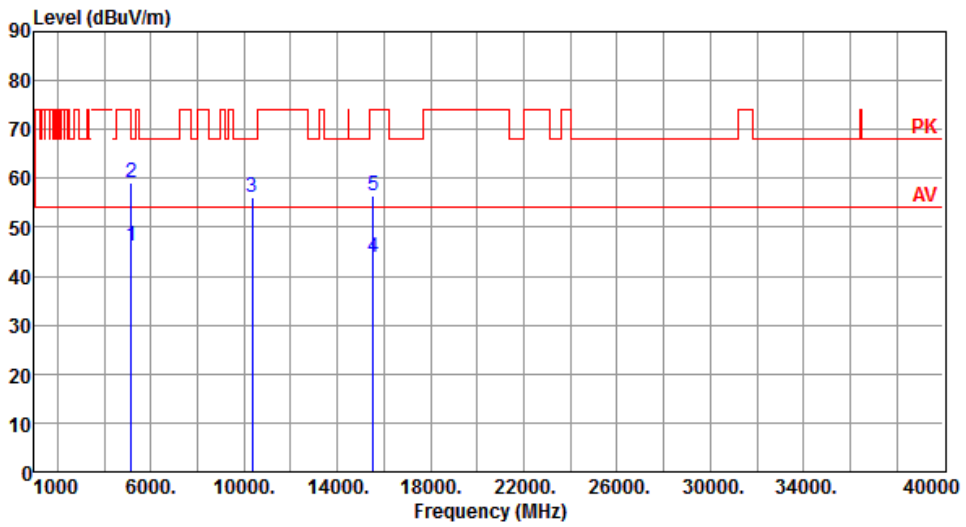
Modulation	11a	Test Freq. (MHz)	5180
Polarization	Horizontal		



	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	5150.00	45.80	54.00	-8.20	41.26	4.54	Average	149	100
2	5150.00	58.79	74.00	-15.21	54.25	4.54	Peak	149	100
3	10360.00	56.43	68.20	-11.77	42.65	13.78	Peak	100	35
4	15540.00	43.52	54.00	-10.48	29.24	14.28	Average	100	30
5	15540.00	56.97	74.00	-17.03	42.69	14.28	Peak	100	30

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

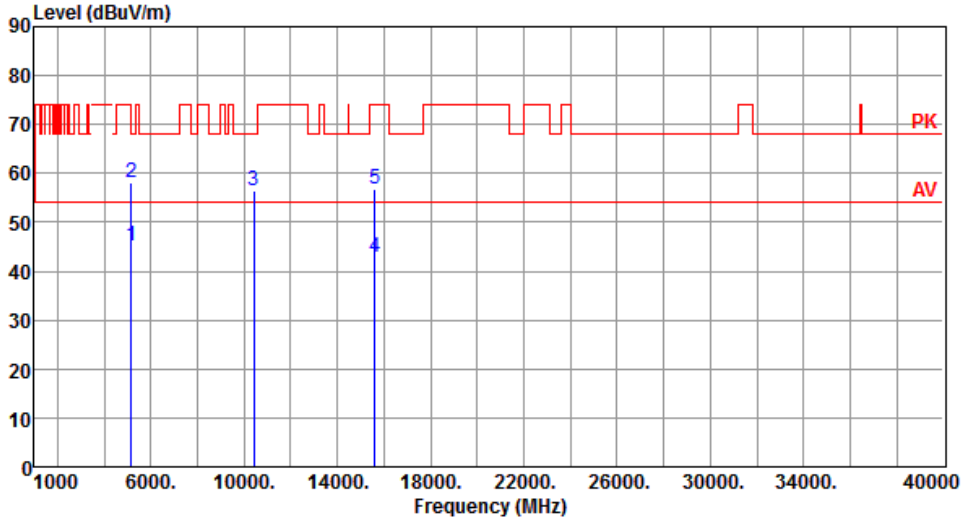
Modulation	11a	Test Freq. (MHz)	5180
Polarization	Vertical		



	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	46.14	54.00	-7.86	41.60	4.54	Average	205	169
2	5150.00	59.01	74.00	-14.99	54.47	4.54	Peak	205	169
3	10360.00	56.23	68.20	-11.97	42.45	13.78	Peak	100	25
4	15540.00	43.69	54.00	-10.31	29.41	14.28	Average	100	30
5	15540.00	56.43	74.00	-17.57	42.15	14.28	Peak	100	30

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

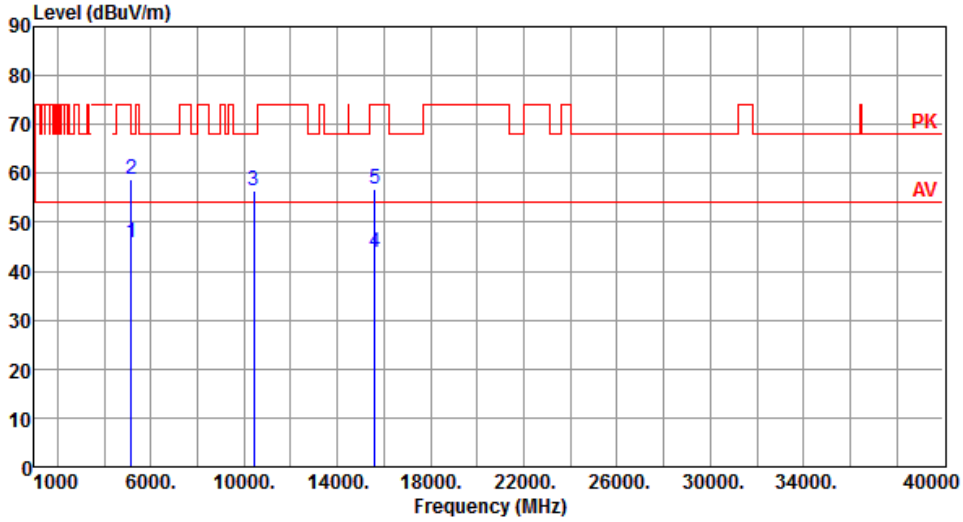
Modulation	11a	Test Freq. (MHz)	5200
Polarization	Horizontal		



	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	45.31	54.00	-8.69	40.77	4.54	Average	150	105
2	5150.00	58.20	74.00	-15.80	53.66	4.54	Peak	150	105
3	10400.00	56.36	68.20	-11.84	42.47	13.89	Peak	100	60
4	15600.00	42.94	54.00	-11.06	28.84	14.10	Average	100	20
5	15600.00	56.69	74.00	-17.31	42.59	14.10	Peak	100	20

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

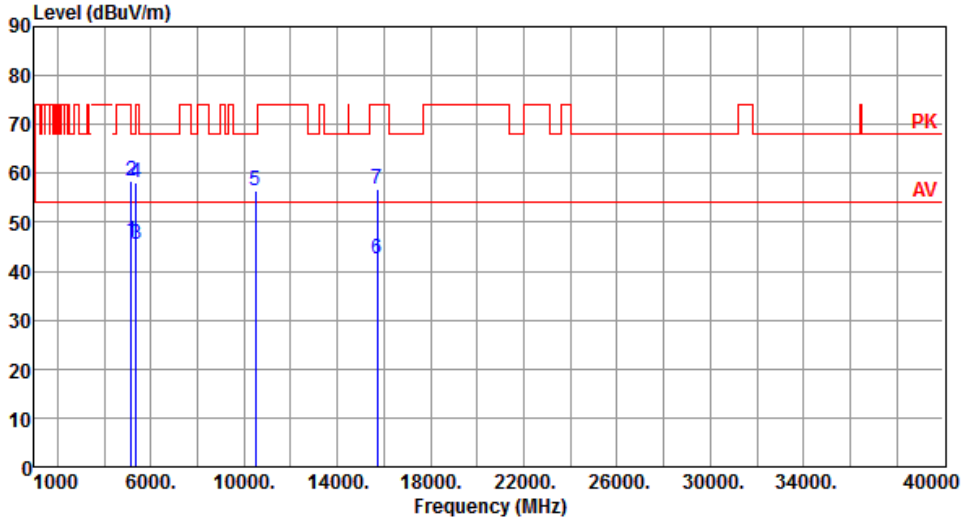
Modulation	11a	Test Freq. (MHz)	5200
Polarization	Vertical		



	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	5150.00	45.89	54.00	-8.11	41.35	4.54	Average	205	179
2	5150.00	58.90	74.00	-15.10	54.36	4.54	Peak	205	179
3	10400.00	56.55	68.20	-11.65	42.66	13.89	Peak	100	80
4	15600.00	43.67	54.00	-10.33	29.57	14.10	Average	100	30
5	15600.00	56.78	74.00	-17.22	42.68	14.10	Peak	100	30

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

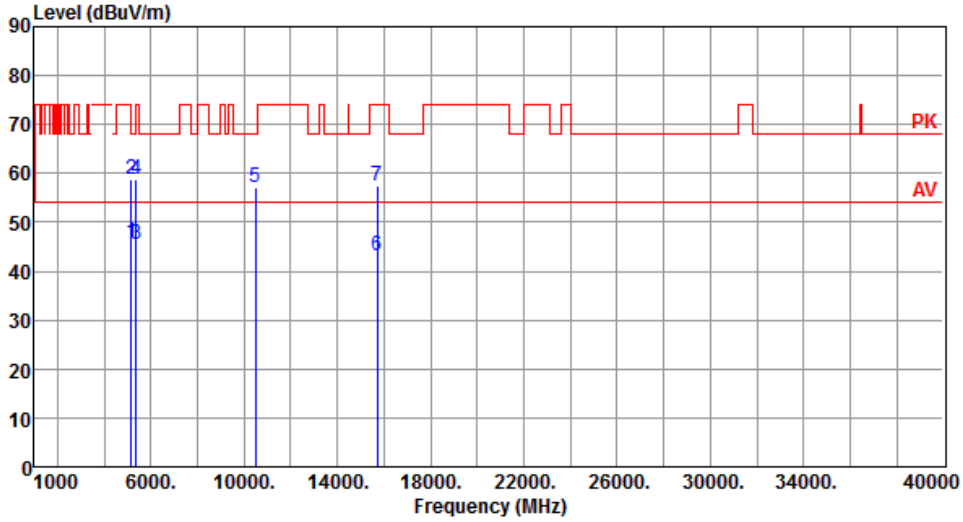
Modulation	11a	Test Freq. (MHz)	5240
Polarization	Horizontal		



	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	46.08	54.00	-7.92	41.54	4.54	Average	147	102
2	5150.00	58.30	74.00	-15.70	53.76	4.54	Peak	147	102
3	5350.00	45.61	54.00	-8.39	41.48	4.13	Average	147	102
4	5350.00	58.04	74.00	-15.96	53.91	4.13	Peak	147	102
5	10480.00	56.33	68.20	-11.87	42.45	13.88	Peak	100	80
6	15720.00	42.54	54.00	-11.46	28.65	13.89	Average	100	25
7	15720.00	56.80	74.00	-17.20	42.91	13.89	Peak	100	25

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

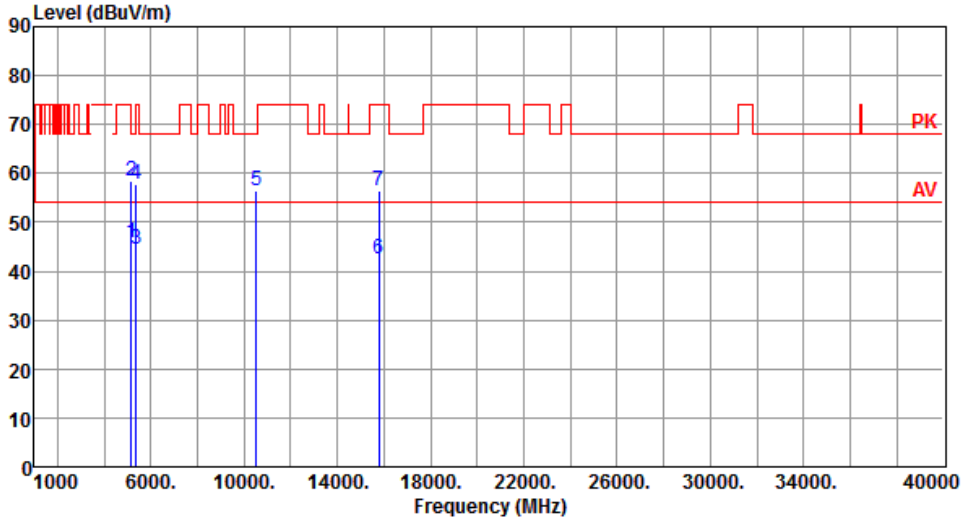
Modulation	11a	Test Freq. (MHz)	5240
Polarization	Vertical		



	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	45.80	54.00	-8.20	41.26	4.54	Average	209	175
2	5150.00	58.86	74.00	-15.14	54.32	4.54	Peak	209	175
3	5350.00	45.45	54.00	-8.55	41.32	4.13	Average	209	175
4	5350.00	58.77	74.00	-15.23	54.64	4.13	Peak	209	175
5	10480.00	57.12	68.20	-11.08	43.24	13.88	Peak	100	80
6	15720.00	43.13	54.00	-10.87	29.24	13.89	Average	100	50
7	15720.00	57.51	74.00	-16.49	43.62	13.89	Peak	100	50

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

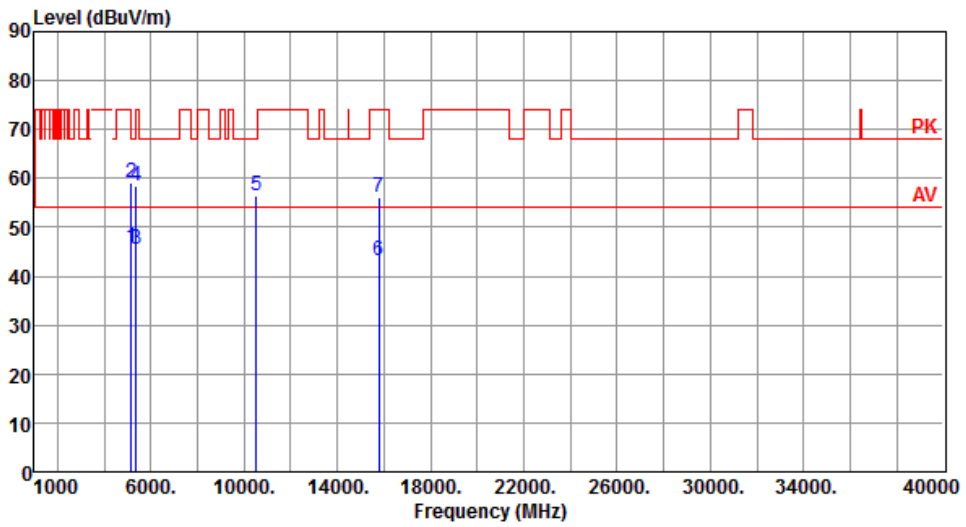
Modulation	11a	Test Freq. (MHz)	5260
Polarization	Horizontal		



	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	5150.00	45.90	54.00	-8.10	41.36	4.54	Average	160	103
2	5150.00	58.47	74.00	-15.53	53.93	4.54	Peak	160	103
3	5350.00	44.66	54.00	-9.34	40.53	4.13	Average	160	103
4	5350.00	57.82	74.00	-16.18	53.69	4.13	Peak	160	103
5	10520.00	56.54	68.20	-11.66	42.66	13.88	Peak	100	40
6	15780.00	42.52	54.00	-11.48	28.69	13.83	Average	100	20
7	15780.00	56.52	74.00	-17.48	42.69	13.83	Peak	100	20

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

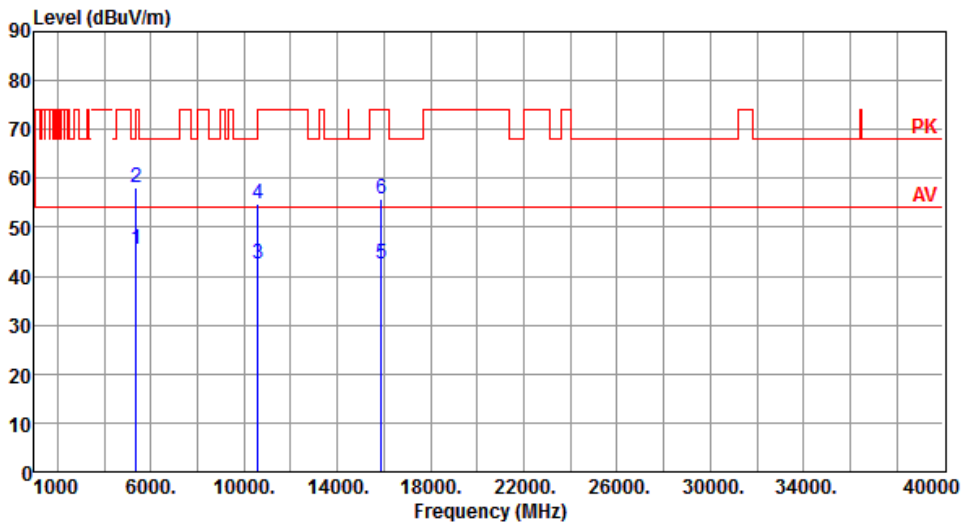
Modulation	11a	Test Freq. (MHz)	5260
Polarization	Vertical		



	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	5150.00	45.96	54.00	-8.04	41.42	4.54	Average	218	172
2	5150.00	59.17	74.00	-14.83	54.63	4.54	Peak	218	172
3	5350.00	45.44	54.00	-8.56	41.31	4.13	Average	218	172
4	5350.00	58.36	74.00	-15.64	54.23	4.13	Peak	218	172
5	10520.00	56.52	68.20	-11.68	42.64	13.88	Peak	100	70
6	15780.00	43.25	54.00	-10.75	29.42	13.83	Average	100	60
7	15780.00	56.08	74.00	-17.92	42.25	13.83	Peak	100	60

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

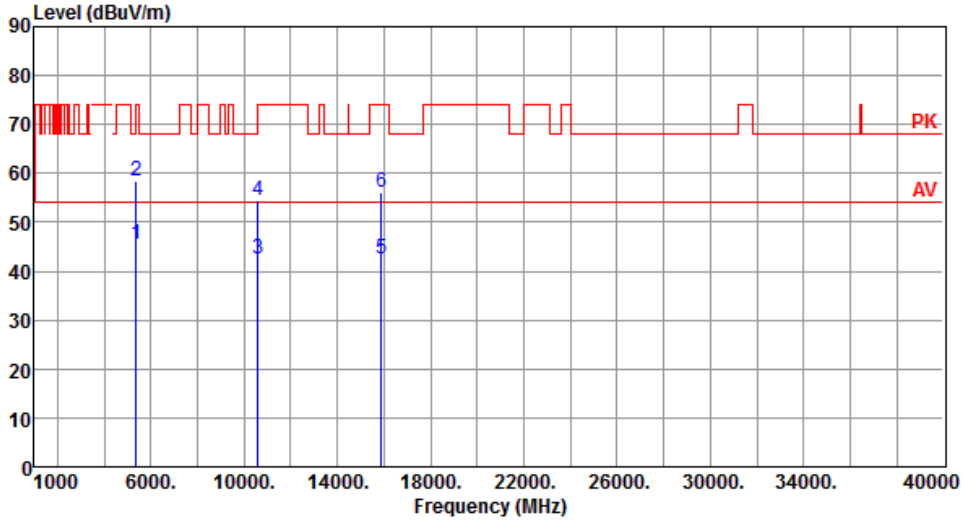
Modulation	11a	Test Freq. (MHz)	5300
Polarization	Horizontal		



	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	5350.00	45.54	54.00	-8.46	41.41	4.13	Average	149	107
2	5350.00	58.24	74.00	-15.76	54.11	4.13	Peak	149	107
3	10600.00	42.63	54.00	-11.37	28.78	13.85	Average	100	30
4	10600.00	54.76	74.00	-19.24	40.91	13.85	Peak	100	30
5	15900.00	42.39	54.00	-11.61	28.57	13.82	Average	100	60
6	15900.00	55.94	74.00	-18.06	42.12	13.82	Peak	100	60

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

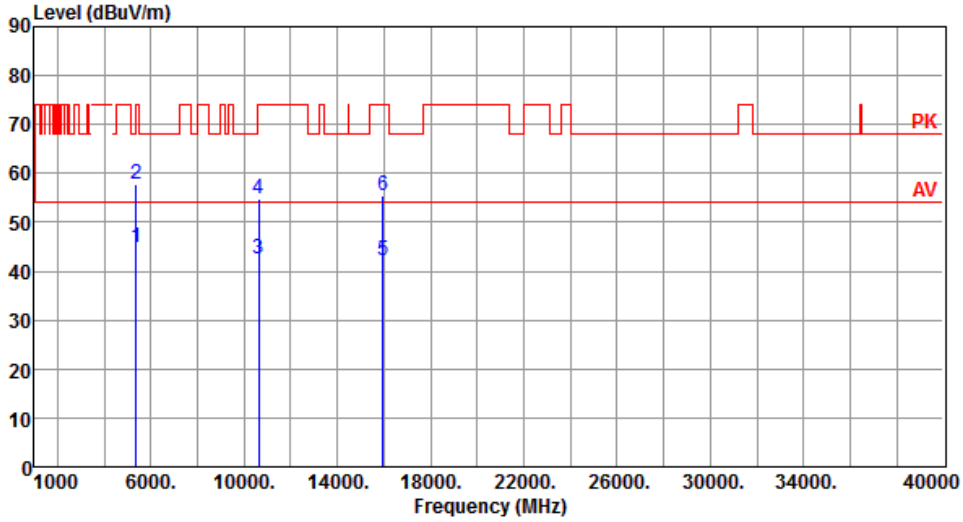
Modulation	11a	Test Freq. (MHz)	5300
Polarization	Vertical		



	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	5350.00	45.33	54.00	-8.67	41.20	4.13	Average	210	182
2	5350.00	58.43	74.00	-15.57	54.30	4.13	Peak	210	182
3	10600.00	42.54	54.00	-11.46	28.69	13.85	Average	100	50
4	10600.00	54.61	74.00	-19.39	40.76	13.85	Peak	100	50
5	15900.00	42.54	54.00	-11.46	28.72	13.82	Average	100	25
6	15900.00	56.02	74.00	-17.98	42.20	13.82	Peak	100	25

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

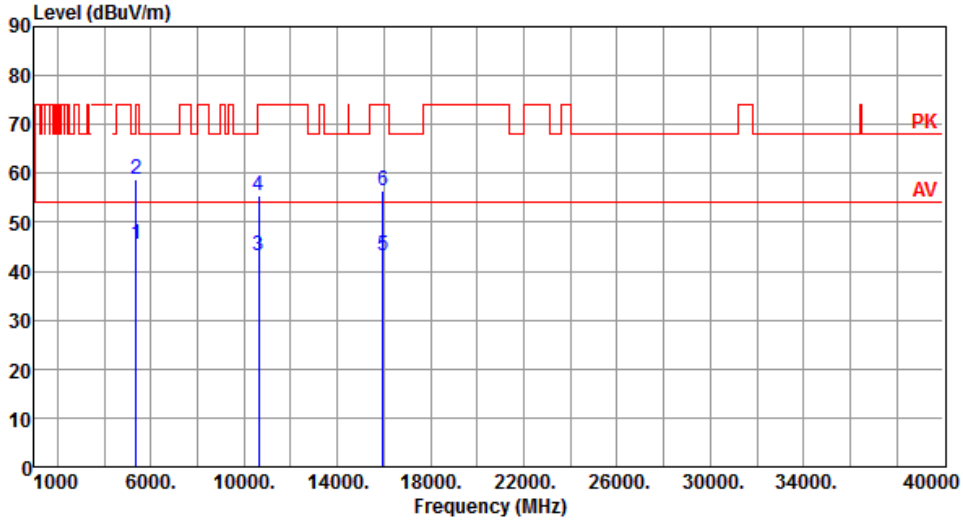
Modulation	11a	Test Freq. (MHz)	5320
Polarization	Horizontal		



	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	5350.00	44.72	54.00	-9.28	40.59	4.13	Average	146	105
2	5350.00	57.91	74.00	-16.09	53.78	4.13	Peak	146	105
3	10640.00	42.51	54.00	-11.49	28.66	13.85	Average	100	50
4	10640.00	54.66	74.00	-19.34	40.81	13.85	Peak	100	50
5	15960.00	42.17	54.00	-11.83	28.41	13.76	Average	100	70
6	15960.00	55.45	74.00	-18.55	41.69	13.76	Peak	100	70

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

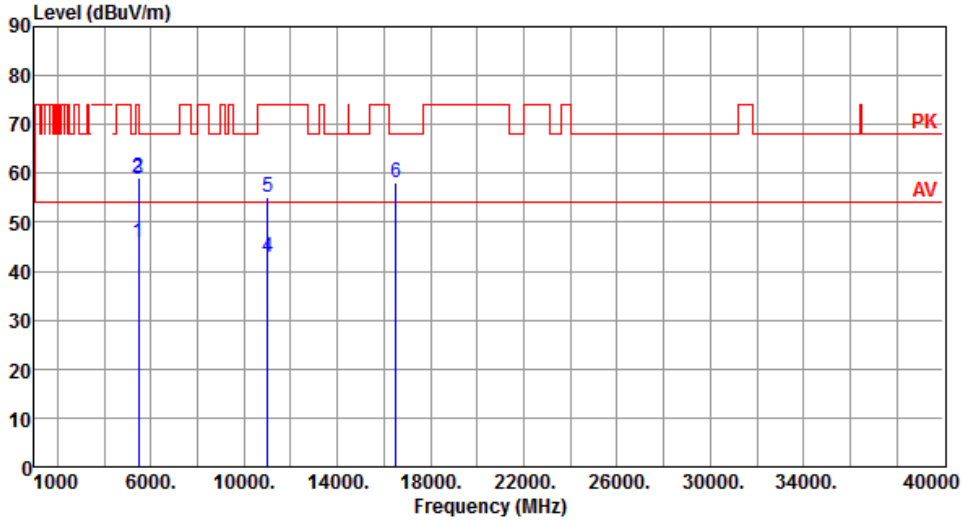
Modulation	11a	Test Freq. (MHz)	5320
Polarization	Vertical		



	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	5350.00	45.33	54.00	-8.67	41.20	4.13	Average	200	180
2	5350.00	58.64	74.00	-15.36	54.51	4.13	Peak	200	180
3	10640.00	43.08	54.00	-10.92	29.23	13.85	Average	100	90
4	10640.00	55.49	74.00	-18.51	41.64	13.85	Peak	100	90
5	15960.00	43.21	54.00	-10.79	29.45	13.76	Average	100	60
6	15960.00	56.32	74.00	-17.68	42.56	13.76	Peak	100	60

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

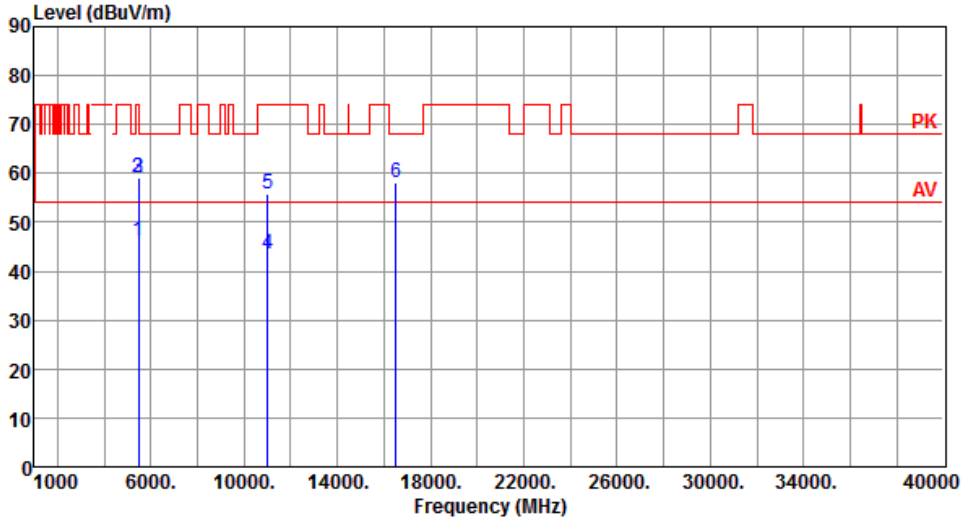
Modulation	11a	Test Freq. (MHz)	5500
Polarization	Horizontal		



	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	5460.00	45.85	54.00	-8.15	41.21	4.64	Average	141	125
2	5460.00	59.26	74.00	-14.74	54.62	4.64	Peak	141	125
3	5470.00	58.71	68.20	-9.49	54.06	4.65	Peak	141	125
4	11000.00	42.92	54.00	-11.08	28.67	14.25	Average	100	70
5	11000.00	55.03	74.00	-18.97	40.78	14.25	Peak	100	70
6	16500.00	58.22	68.20	-9.98	42.49	15.73	Peak	100	30

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

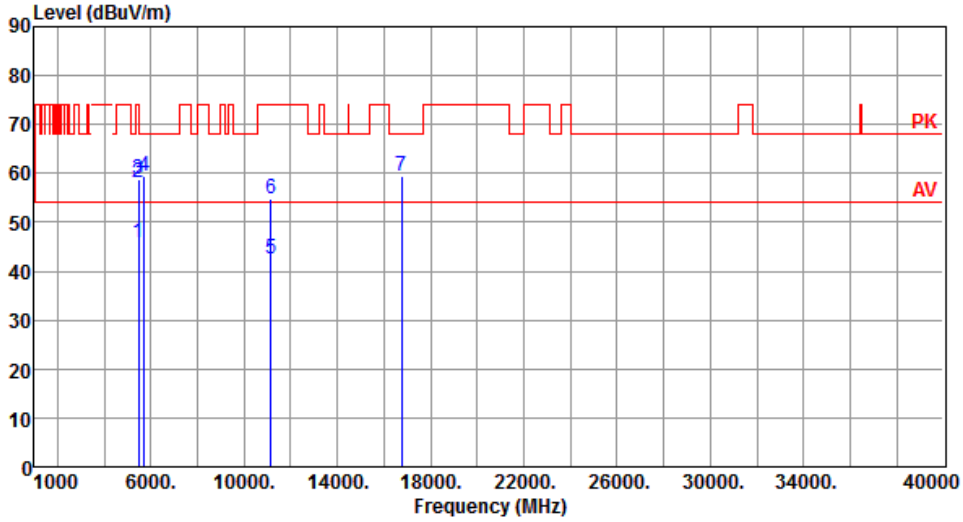
Modulation	11a	Test Freq. (MHz)	5500
Polarization	Vertical		



	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	5460.00	46.30	54.00	-7.70	41.66	4.64	Average	170	188
2	5460.00	59.20	74.00	-14.80	54.56	4.64	Peak	170	188
3	5470.00	59.01	68.20	-9.19	54.36	4.65	Peak	170	188
4	11000.00	43.37	54.00	-10.63	29.12	14.25	Average	100	85
5	11000.00	55.87	74.00	-18.13	41.62	14.25	Peak	100	85
6	16500.00	58.27	68.20	-9.93	42.54	15.73	Peak	100	20

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

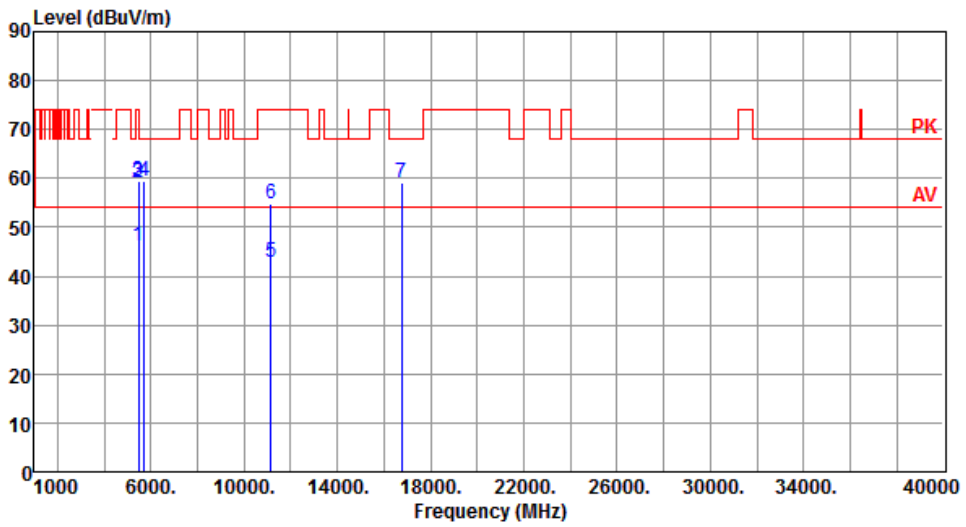
Modulation	11a	Test Freq. (MHz)	5580
Polarization	Horizontal		



	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	5460.00	45.86	54.00	-8.14	41.22	4.64	Average	137	120
2	5460.00	58.26	74.00	-15.74	53.62	4.64	Peak	137	120
3	5470.00	58.64	68.20	-9.56	53.99	4.65	Peak	137	120
4	5725.00	59.56	68.20	-8.64	54.31	5.25	Peak	137	120
5	11160.00	42.46	54.00	-11.54	28.57	13.89	Average	100	60
6	11160.00	54.74	74.00	-19.26	40.85	13.89	Peak	100	60
7	16740.00	59.40	68.20	-8.80	42.32	17.08	Peak	100	70

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

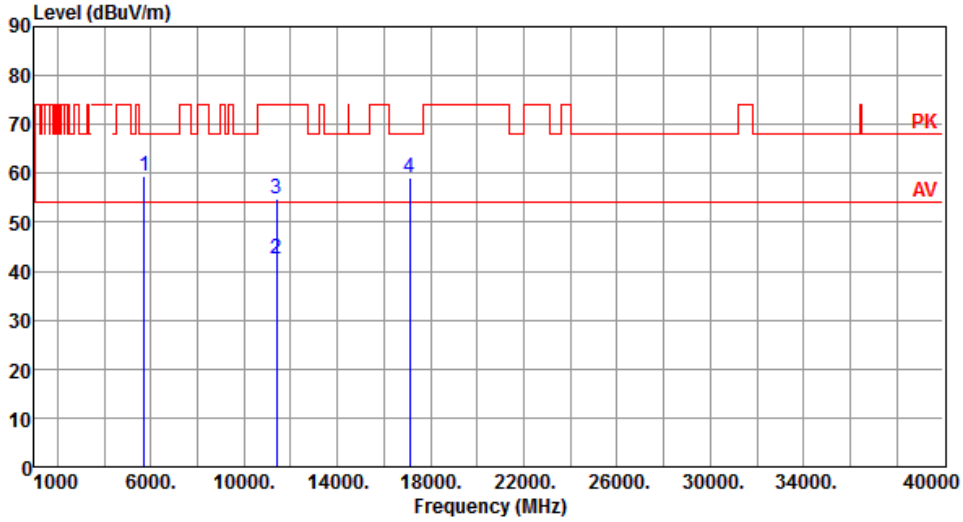
Modulation	11a	Test Freq. (MHz)	5580
Polarization	Vertical		



	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	5460.00	46.00	54.00	-8.00	41.36	4.64	Average	160	192
2	5460.00	59.10	74.00	-14.90	54.46	4.64	Peak	160	192
3	5470.00	59.40	68.20	-8.80	54.75	4.65	Peak	160	192
4	5725.00	59.50	68.20	-8.70	54.25	5.25	Peak	160	192
5	11160.00	42.75	54.00	-11.25	28.86	13.89	Average	100	55
6	11160.00	54.84	74.00	-19.16	40.95	13.89	Peak	100	55
7	16740.00	59.23	68.20	-8.97	42.15	17.08	Peak	100	40

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

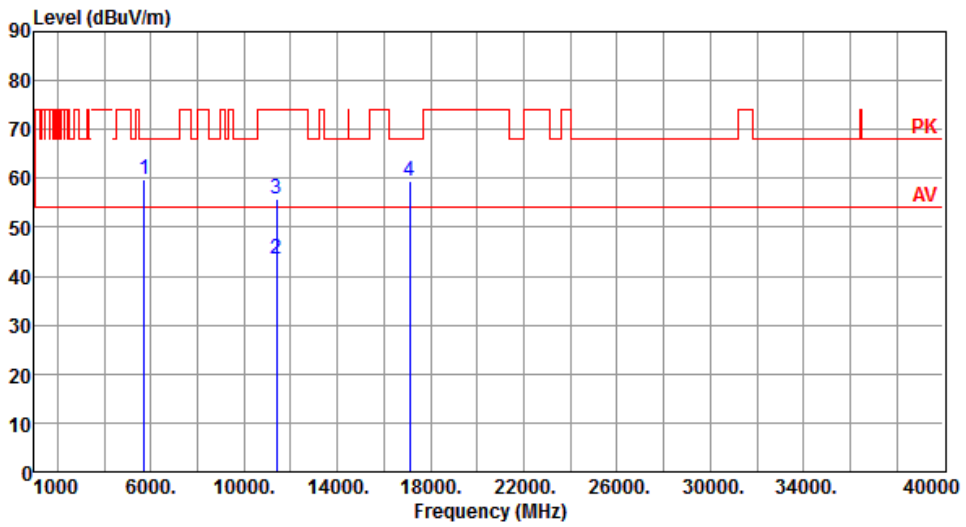
Modulation	11a	Test Freq. (MHz)	5700
Polarization	Horizontal		



	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	5725.00	59.37	68.20	-8.83	54.12	5.25	Peak	136	119
2	11400.00	42.65	54.00	-11.35	28.65	14.00	Average	100	20
3	11400.00	54.95	74.00	-19.05	40.95	14.00	Peak	100	20
4	17100.00	59.28	68.20	-8.92	42.35	16.93	Peak	100	25

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

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

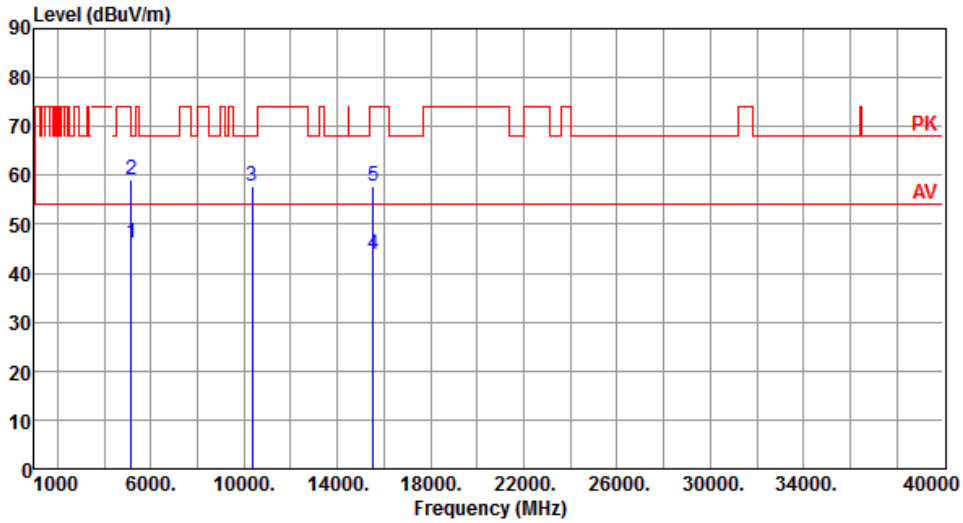


	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	5725.00	59.64	68.20	-8.56	54.39	5.25	Peak	159	188
2	11400.00	43.45	54.00	-10.55	29.45	14.00	Average	100	35
3	11400.00	55.75	74.00	-18.25	41.75	14.00	Peak	100	35
4	17100.00	59.35	68.20	-8.85	42.42	16.93	Peak	100	50

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

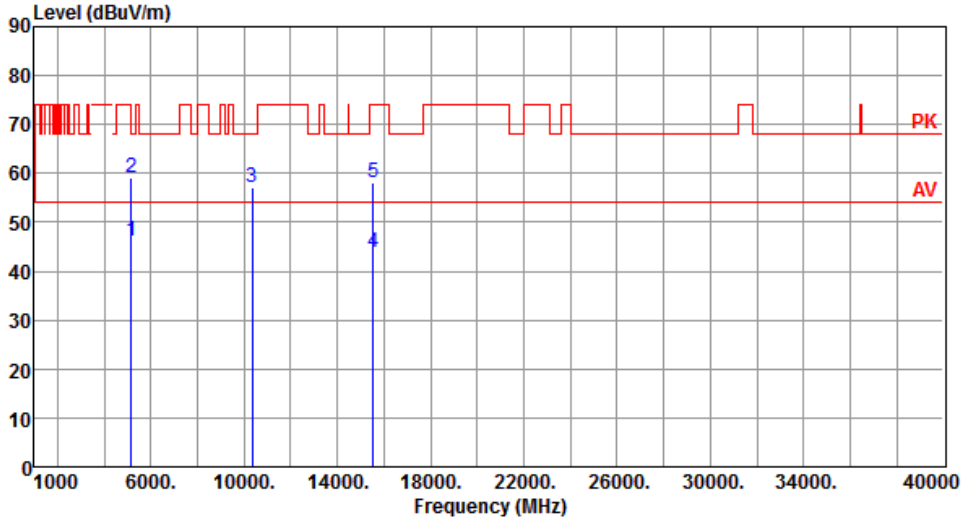
Modulation	VHT20	**Test Freq. (MHz)**	5180
Polarization	Horizontal		



	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	46.26	54.00	-7.74	41.72	4.54	Average	148	100
2	5150.00	59.16	74.00	-14.84	54.62	4.54	Peak	148	100
3	10360.00	57.68	68.20	-10.52	43.90	13.78	Peak	100	30
4	15540.00	43.89	54.00	-10.11	29.61	14.28	Average	100	50
5	15540.00	57.82	74.00	-16.18	43.54	14.28	Peak	100	50

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

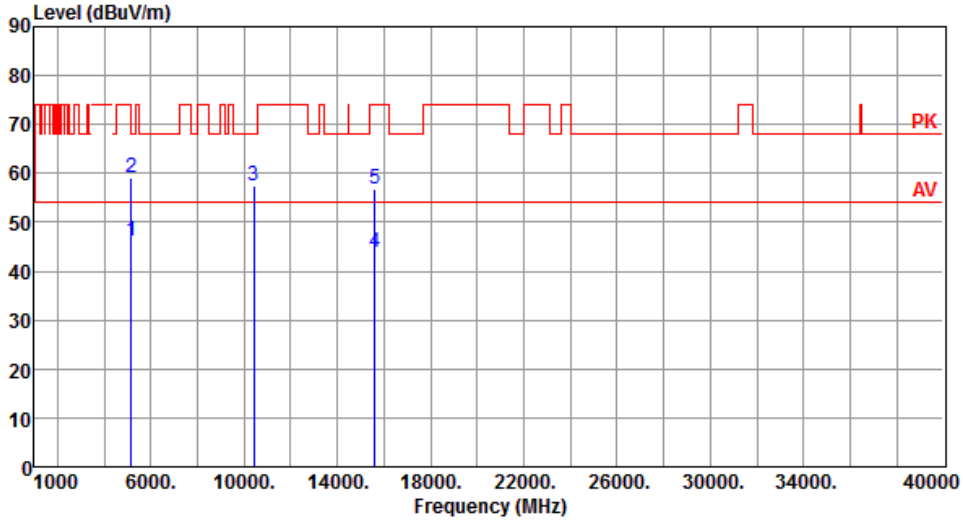
Modulation	VHT20	Test Freq. (MHz)	5180
Polarization	Vertical		



	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	46.21	54.00	-7.79	41.67	4.54	Average	207	173
2	5150.00	59.09	74.00	-14.91	54.55	4.54	Peak	207	173
3	10360.00	57.25	68.20	-10.95	43.47	13.78	Peak	100	20
4	15540.00	43.96	54.00	-10.04	29.68	14.28	Average	100	30
5	15540.00	58.20	74.00	-15.80	43.92	14.28	Peak	100	30

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

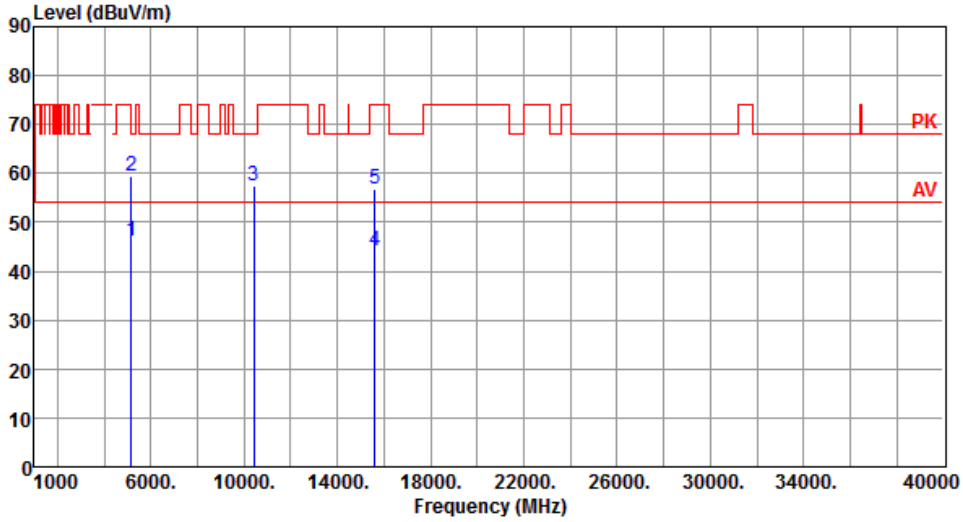
Modulation	VHT20	Test Freq. (MHz)	5200
Polarization	Horizontal		



	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	46.31	54.00	-7.69	41.77	4.54	Average	152	105
2	5150.00	59.20	74.00	-14.80	54.66	4.54	Peak	152	105
3	10400.00	57.36	68.20	-10.84	43.47	13.89	Peak	100	60
4	15600.00	43.94	54.00	-10.06	29.84	14.10	Average	100	20
5	15600.00	56.70	74.00	-17.30	42.60	14.10	Peak	100	20

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

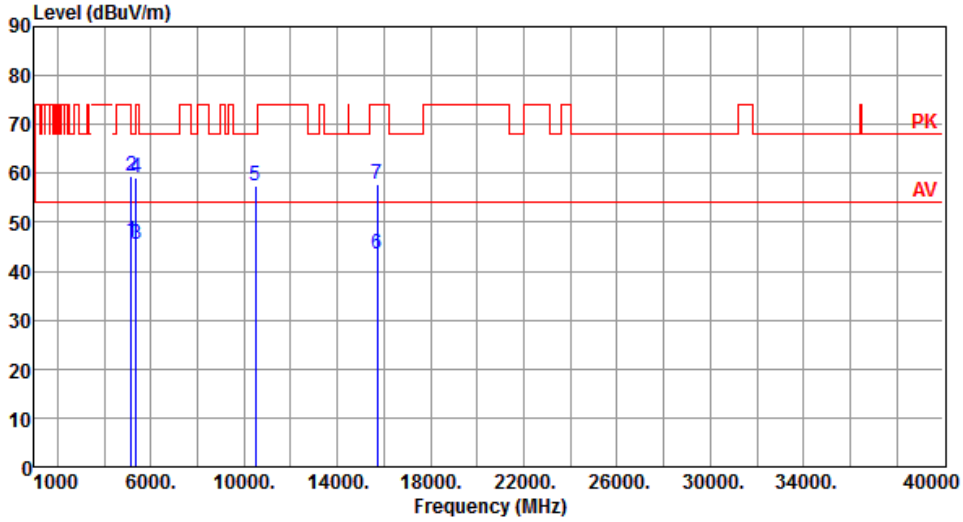
Modulation	VHT20	Test Freq. (MHz)	5200
Polarization	Vertical		



	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	46.16	54.00	-7.84	41.62	4.54	Average	206	182
2	5150.00	59.42	74.00	-14.58	54.88	4.54	Peak	206	182
3	10400.00	57.49	68.20	-10.71	43.60	13.89	Peak	100	90
4	15600.00	44.06	54.00	-9.94	29.96	14.10	Average	100	20
5	15600.00	56.87	74.00	-17.13	42.77	14.10	Peak	100	20

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

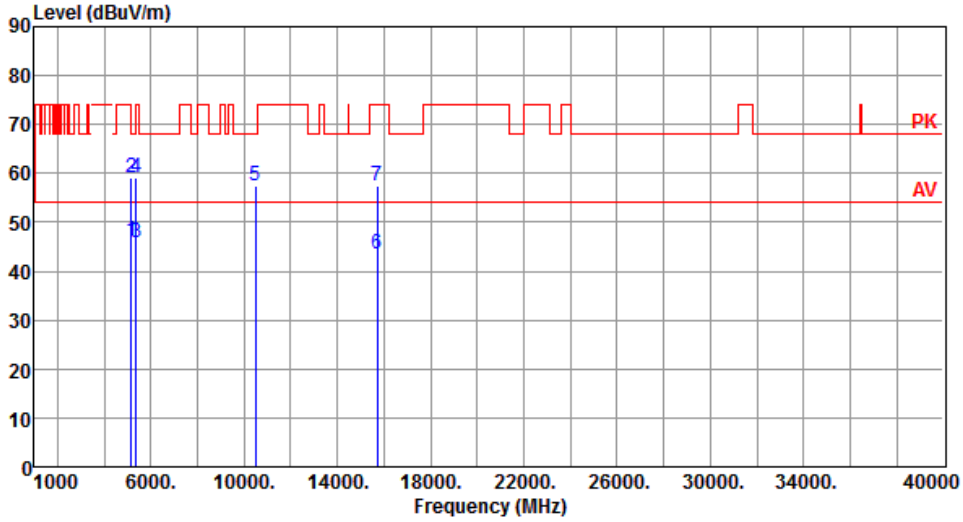
Modulation	VHT20	Test Freq. (MHz)	5240
Polarization	Horizontal		



	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	46.16	54.00	-7.84	41.62	4.54	Average	148	102
2	5150.00	59.30	74.00	-14.70	54.76	4.54	Peak	148	102
3	5350.00	45.61	54.00	-8.39	41.48	4.13	Average	148	102
4	5350.00	59.04	74.00	-14.96	54.91	4.13	Peak	148	102
5	10480.00	57.33	68.20	-10.87	43.45	13.88	Peak	100	80
6	15720.00	43.54	54.00	-10.46	29.65	13.89	Average	100	25
7	15720.00	57.80	74.00	-16.20	43.91	13.89	Peak	100	25

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

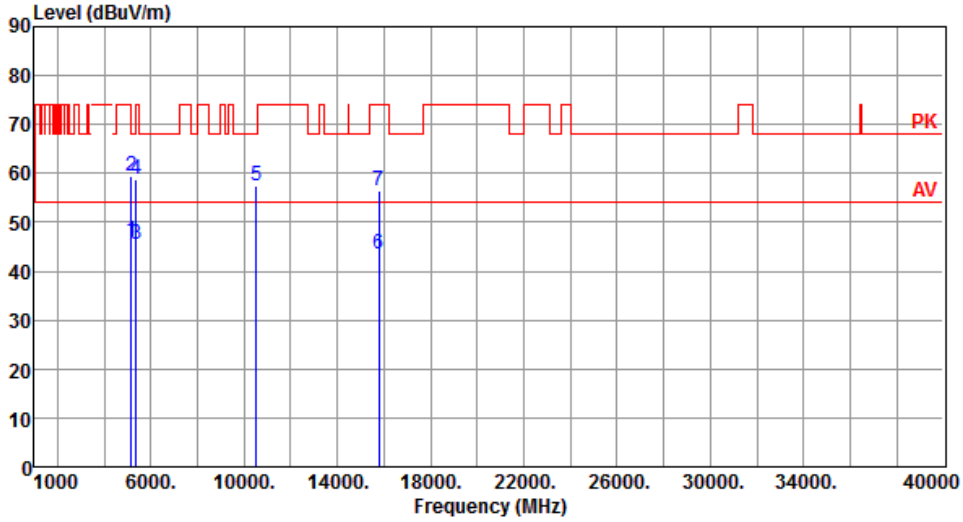
Modulation	VHT20	Test Freq. (MHz)	5240
Polarization	Vertical		



	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	46.28	54.00	-7.72	41.74	4.54	Average	211	173
2	5150.00	59.19	74.00	-14.81	54.65	4.54	Peak	211	173
3	5350.00	45.85	54.00	-8.15	41.72	4.13	Average	211	173
4	5350.00	59.22	74.00	-14.78	55.09	4.13	Peak	211	173
5	10480.00	57.48	68.20	-10.72	43.60	13.88	Peak	100	90
6	15720.00	43.48	54.00	-10.52	29.59	13.89	Average	100	30
7	15720.00	57.59	74.00	-16.41	43.70	13.89	Peak	100	30

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

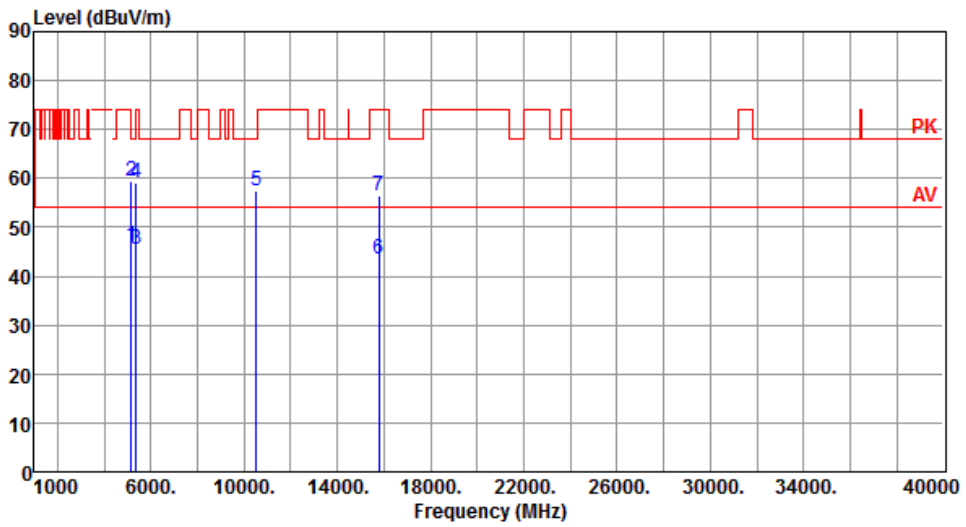
Modulation	VHT20	Test Freq. (MHz)	5260
Polarization	Horizontal		



	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	46.31	54.00	-7.69	41.77	4.54	Average	155	103
2	5150.00	59.47	74.00	-14.53	54.93	4.54	Peak	155	103
3	5350.00	45.66	54.00	-8.34	41.53	4.13	Average	155	103
4	5350.00	58.82	74.00	-15.18	54.69	4.13	Peak	155	103
5	10520.00	57.54	68.20	-10.66	43.66	13.88	Peak	100	50
6	15780.00	43.52	54.00	-10.48	29.69	13.83	Average	100	20
7	15780.00	56.57	74.00	-17.43	42.74	13.83	Peak	100	20

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

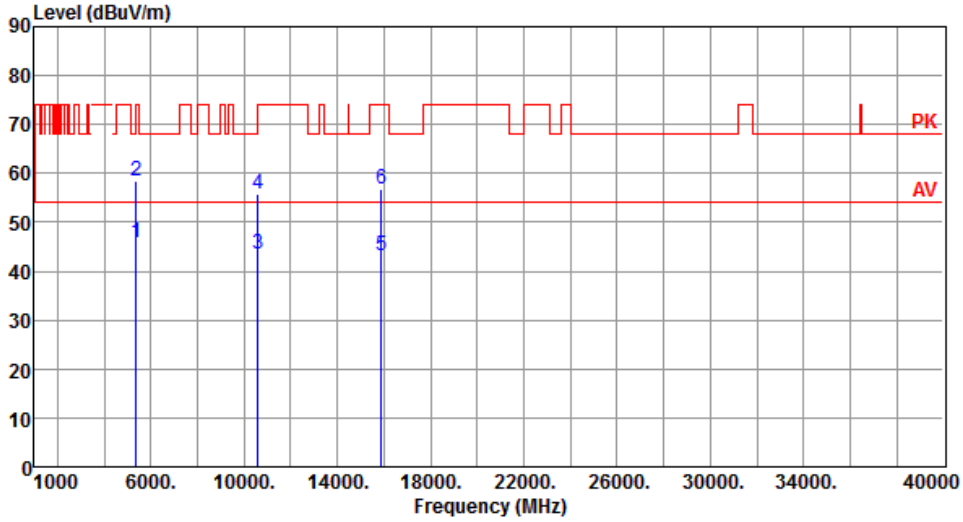
Modulation	VHT20	Test Freq. (MHz)	5260
Polarization	Vertical		



	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	5150.00	46.17	54.00	-7.83	41.63	4.54	Average	220	174
2	5150.00	59.40	74.00	-14.60	54.86	4.54	Peak	220	174
3	5350.00	45.57	54.00	-8.43	41.44	4.13	Average	220	174
4	5350.00	59.03	74.00	-14.97	54.90	4.13	Peak	220	174
5	10520.00	57.49	68.20	-10.71	43.61	13.88	Peak	100	90
6	15780.00	43.40	54.00	-10.60	29.57	13.83	Average	100	100
7	15780.00	56.52	74.00	-17.48	42.69	13.83	Peak	100	100

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

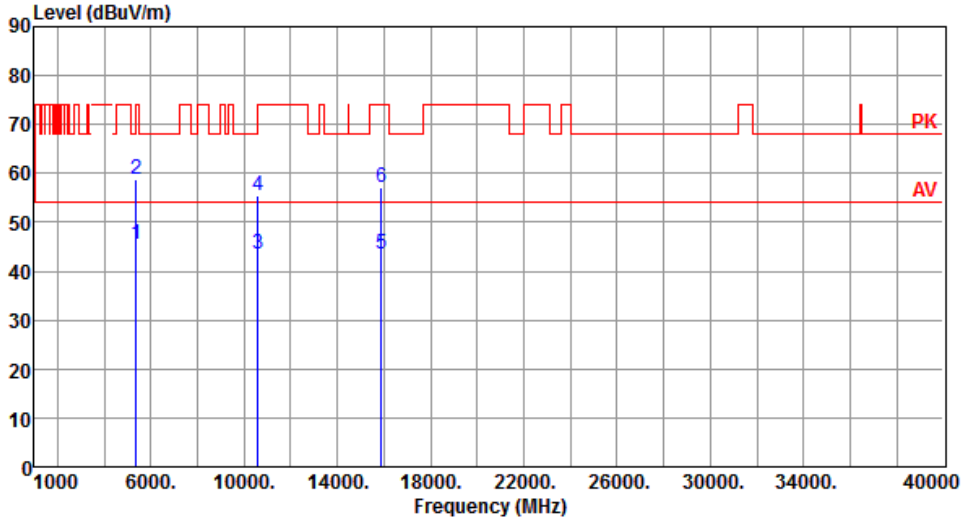
Modulation	VHT20	Test Freq. (MHz)	5300
Polarization	Horizontal		



	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	5350.00	45.71	54.00	-8.29	41.58	4.13	Average	144	106
2	5350.00	58.61	74.00	-15.39	54.48	4.13	Peak	144	106
3	10600.00	43.61	54.00	-10.39	29.76	13.85	Average	100	25
4	10600.00	55.76	74.00	-18.24	41.91	13.85	Peak	100	25
5	15900.00	43.34	54.00	-10.66	29.52	13.82	Average	100	60
6	15900.00	56.94	74.00	-17.06	43.12	13.82	Peak	100	60

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

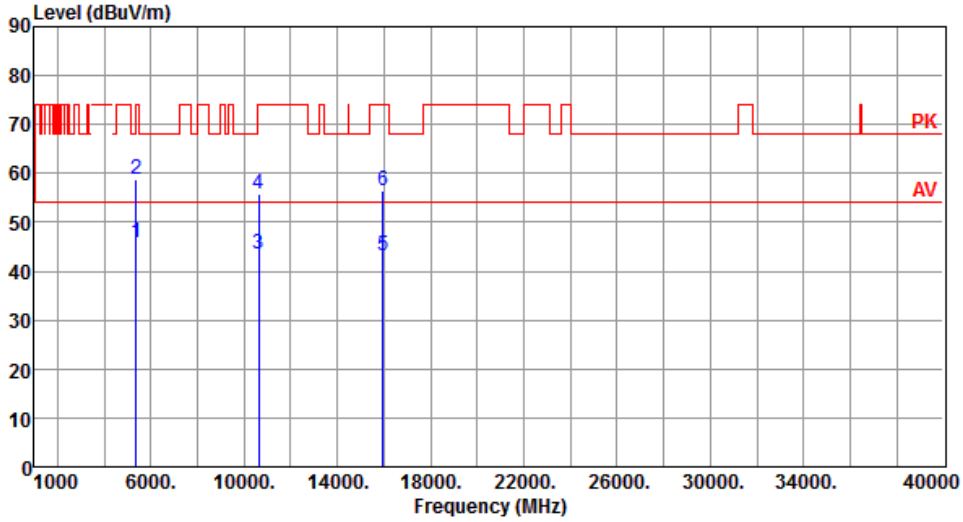
Modulation	VHT20	Test Freq. (MHz)	5300
Polarization	Vertical		



	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	5350.00	45.66	54.00	-8.34	41.53	4.13	Average	208	182
2	5350.00	58.85	74.00	-15.15	54.72	4.13	Peak	208	182
3	10600.00	43.54	54.00	-10.46	29.69	13.85	Average	100	30
4	10600.00	55.61	74.00	-18.39	41.76	13.85	Peak	100	30
5	15900.00	43.54	54.00	-10.46	29.72	13.82	Average	100	25
6	15900.00	57.02	74.00	-16.98	43.20	13.82	Peak	100	25

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

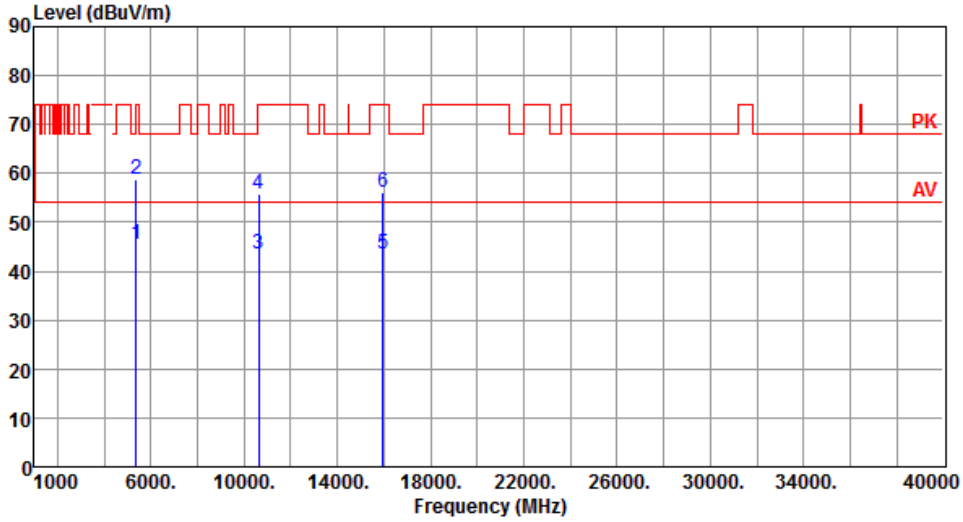
Modulation	VHT20	Test Freq. (MHz)	5320
Polarization	Horizontal		



	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	5350.00	45.72	54.00	-8.28	41.59	4.13	Average	145	102
2	5350.00	58.91	74.00	-15.09	54.78	4.13	Peak	145	102
3	10640.00	43.51	54.00	-10.49	29.66	13.85	Average	100	50
4	10640.00	55.78	74.00	-18.22	41.93	13.85	Peak	100	50
5	15960.00	43.33	54.00	-10.67	29.57	13.76	Average	100	80
6	15960.00	56.30	74.00	-17.70	42.54	13.76	Peak	100	80

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

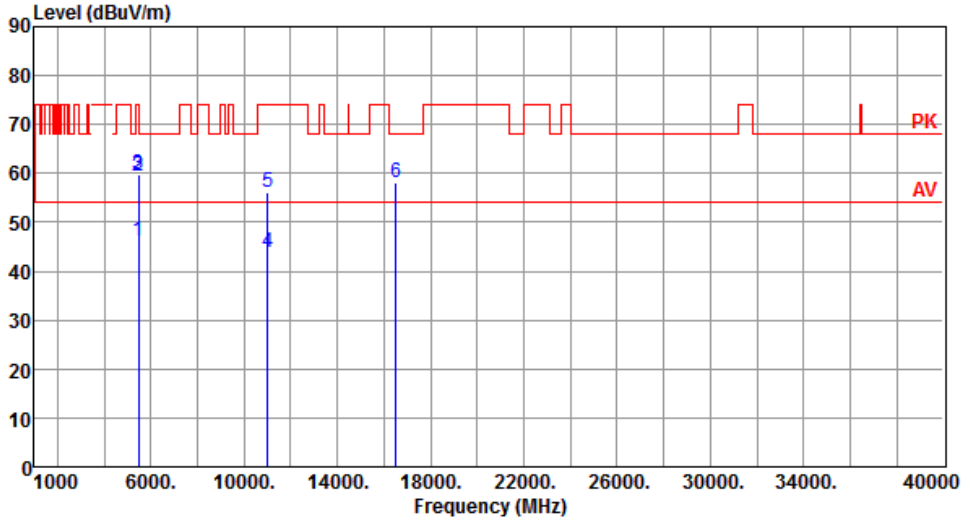
Modulation	VHT20	Test Freq. (MHz)	5320
Polarization	Vertical		



	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	5350.00	45.66	54.00	-8.34	41.53	4.13	Average	197	180
2	5350.00	58.86	74.00	-15.14	54.73	4.13	Peak	197	180
3	10640.00	43.57	54.00	-10.43	29.72	13.85	Average	100	60
4	10640.00	55.75	74.00	-18.25	41.90	13.85	Peak	100	60
5	15960.00	43.48	54.00	-10.52	29.72	13.76	Average	100	50
6	15960.00	56.19	74.00	-17.81	42.43	13.76	Peak	100	50

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

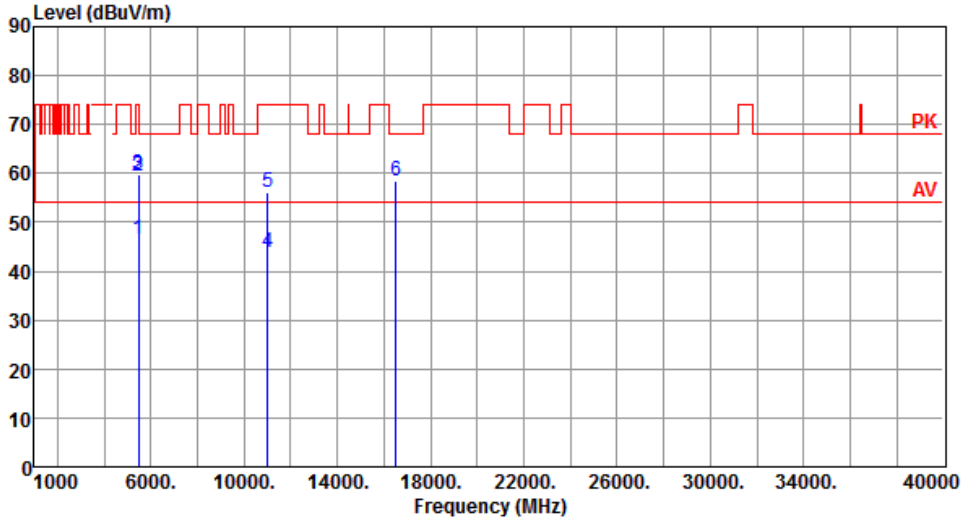
Modulation	VHT20	Test Freq. (MHz)	5500
Polarization	Horizontal		



	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	5460.00	46.23	54.00	-7.77	41.59	4.64	Average	140	125
2	5460.00	59.42	74.00	-14.58	54.78	4.64	Peak	140	125
3	5470.00	59.71	68.20	-8.49	55.06	4.65	Peak	140	125
4	11000.00	43.92	54.00	-10.08	29.67	14.25	Average	100	85
5	11000.00	56.03	74.00	-17.97	41.78	14.25	Peak	100	85
6	16500.00	58.25	68.20	-9.95	42.52	15.73	Peak	100	30

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

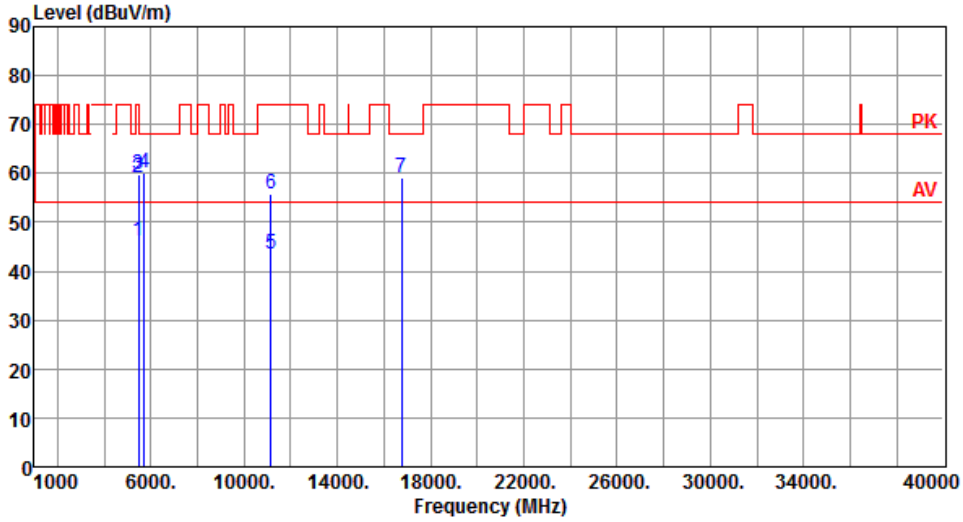
Modulation	VHT20	Test Freq. (MHz)	5500
Polarization	Vertical		



	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	5460.00	46.46	54.00	-7.54	41.82	4.64	Average	168	187
2	5460.00	59.60	74.00	-14.40	54.96	4.64	Peak	168	187
3	5470.00	59.65	68.20	-8.55	55.00	4.65	Peak	168	187
4	11000.00	44.00	54.00	-10.00	29.75	14.25	Average	100	90
5	11000.00	55.96	74.00	-18.04	41.71	14.25	Peak	100	90
6	16500.00	58.39	68.20	-9.81	42.66	15.73	Peak	100	30

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

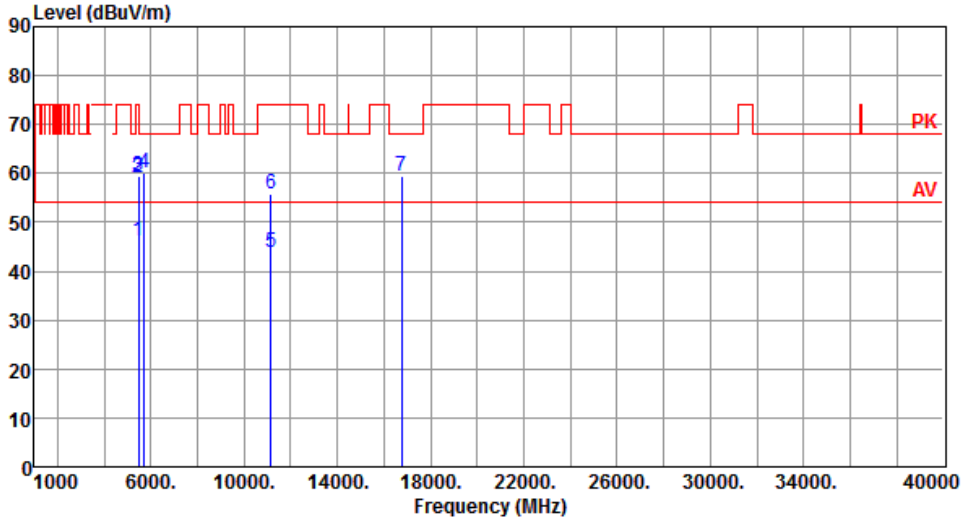
Modulation	VHT20	Test Freq. (MHz)	5580
Polarization	Horizontal		



	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	5460.00	46.22	54.00	-7.78	41.58	4.64	Average	138	119
2	5460.00	59.26	74.00	-14.74	54.62	4.64	Peak	138	119
3	5470.00	59.64	68.20	-8.56	54.99	4.65	Peak	138	119
4	5725.00	59.95	68.20	-8.25	54.70	5.25	Peak	138	119
5	11160.00	43.60	54.00	-10.40	29.71	13.89	Average	100	50
6	11160.00	55.88	74.00	-18.12	41.99	13.89	Peak	100	50
7	16740.00	59.15	68.20	-9.05	42.07	17.08	Peak	100	85

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

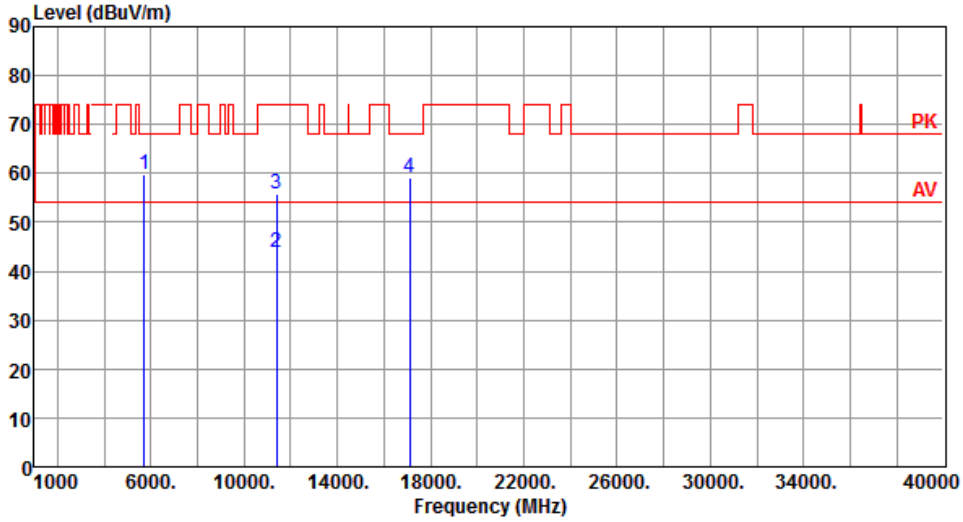
Modulation	VHT20	Test Freq. (MHz)	5580
Polarization	Vertical		



	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	5460.00	46.16	54.00	-7.84	41.52	4.64	Average	157	189
2	5460.00	59.15	74.00	-14.85	54.51	4.64	Peak	157	189
3	5470.00	59.55	68.20	-8.65	54.90	4.65	Peak	157	189
4	5725.00	60.04	68.20	-8.16	54.79	5.25	Peak	157	189
5	11160.00	43.75	54.00	-10.25	29.86	13.89	Average	100	60
6	11160.00	55.84	74.00	-18.16	41.95	13.89	Peak	100	60
7	16740.00	59.30	68.20	-8.90	42.22	17.08	Peak	100	90

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

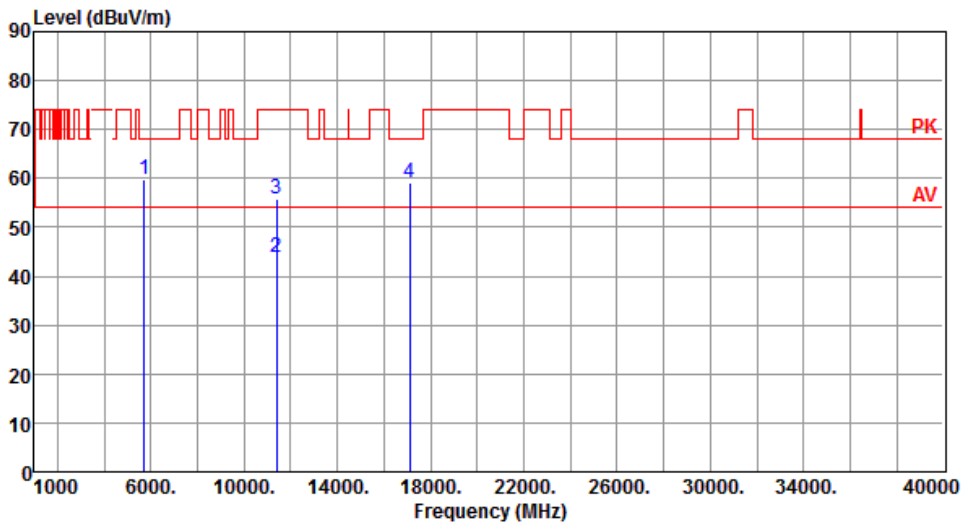
Modulation	VHT20	Test Freq. (MHz)	5700
Polarization	Horizontal		



	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	5725.00	59.81	68.20	-8.39	54.56	5.25	Peak	135	118
2	11400.00	43.90	54.00	-10.10	29.90	14.00	Average	100	30
3	11400.00	55.95	74.00	-18.05	41.95	14.00	Peak	100	30
4	17100.00	59.04	68.20	-9.16	42.11	16.93	Peak	100	25

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

Modulation	VHT20	Test Freq. (MHz)	5700
Polarization	Vertical		

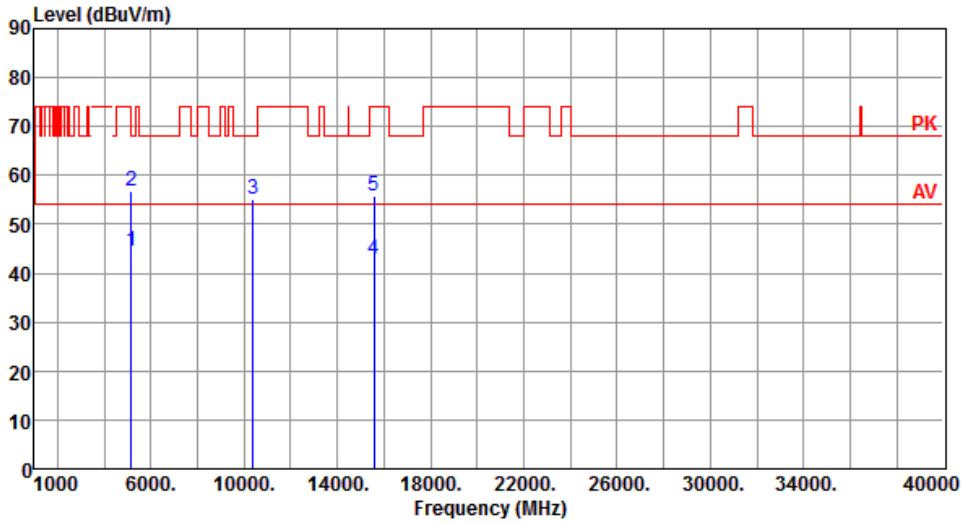


	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	5725.00	59.78	68.20	-8.42	54.53	5.25	Peak	157	187
2	11400.00	43.78	54.00	-10.22	29.78	14.00	Average	100	20
3	11400.00	55.91	74.00	-18.09	41.91	14.00	Peak	100	20
4	17100.00	59.15	68.20	-9.05	42.22	16.93	Peak	100	30

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

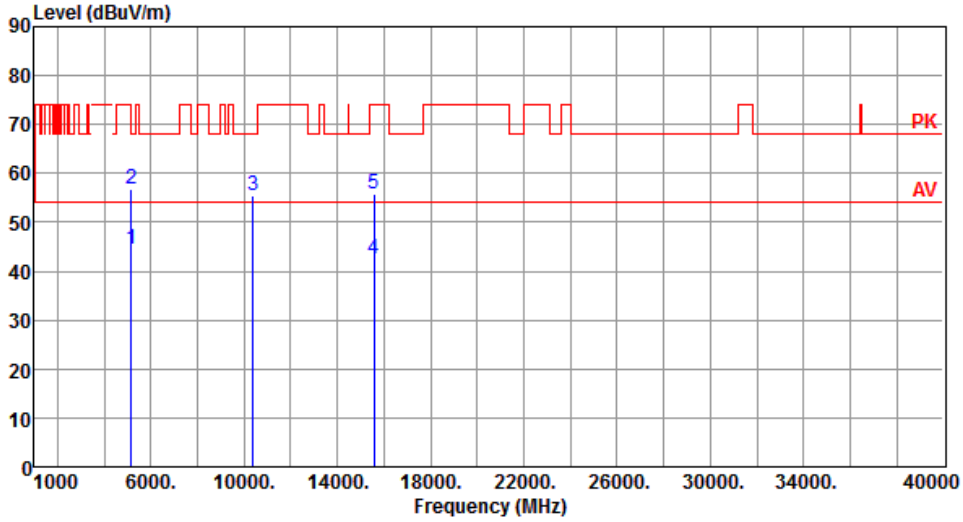
Modulation	VHT40	**Test Freq. (MHz)**	5190
Polarization	Horizontal		



	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	44.67	54.00	-9.33	40.13	4.54	Average	100	116
2	5150.00	56.79	74.00	-17.21	52.25	4.54	Peak	100	116
3	10380.00	55.26	68.20	-12.94	41.42	13.84	Peak	100	50
4	15570.00	42.71	54.00	-11.29	28.52	14.19	Average	100	30
5	15570.00	55.82	74.00	-18.18	41.63	14.19	Peak	100	30

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

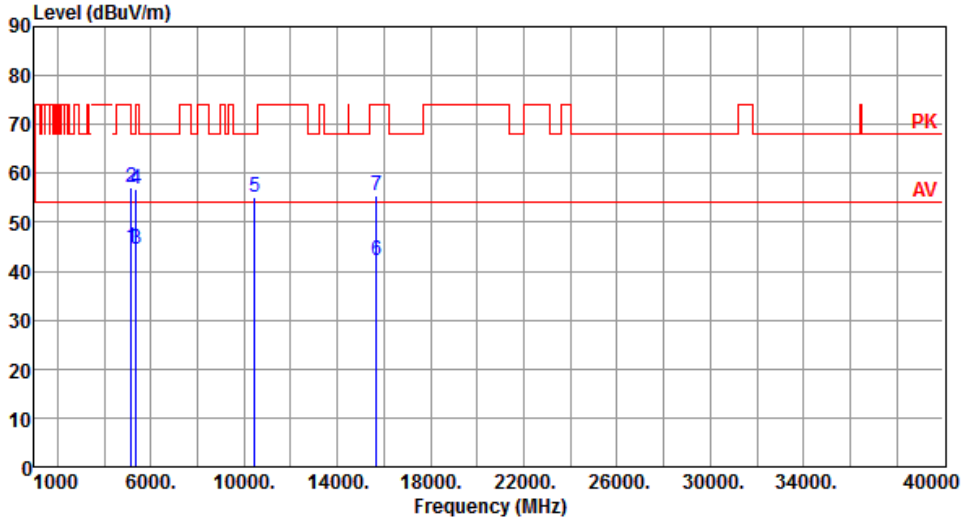
Modulation	VHT40	Test Freq. (MHz)	5190
Polarization	Vertical		



	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	44.57	54.00	-9.43	40.03	4.54	Average	271	177
2	5150.00	56.87	74.00	-17.13	52.33	4.54	Peak	271	177
3	10380.00	55.40	68.20	-12.80	41.56	13.84	Peak	100	30
4	15570.00	42.65	54.00	-11.35	28.46	14.19	Average	100	20
5	15570.00	55.71	74.00	-18.29	41.52	14.19	Peak	100	20

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

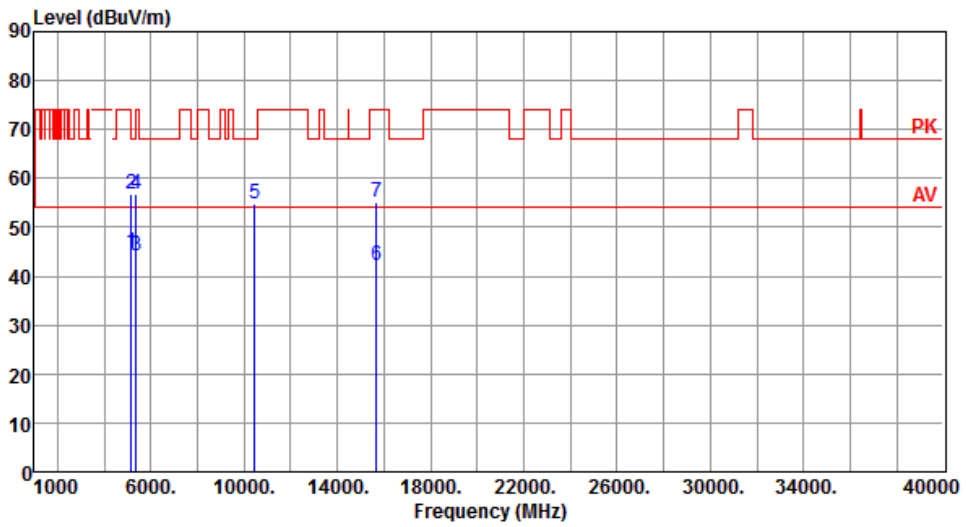
Modulation	VHT40	Test Freq. (MHz)	5230
Polarization	Horizontal		



	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	44.88	54.00	-9.12	40.34	4.54	Average	100	119
2	5150.00	56.96	74.00	-17.04	52.42	4.54	Peak	100	119
3	5350.00	44.37	54.00	-9.63	40.24	4.13	Average	100	119
4	5350.00	56.78	74.00	-17.22	52.65	4.13	Peak	100	119
5	10460.00	55.15	68.20	-13.05	41.26	13.89	Peak	100	60
6	15690.00	42.24	54.00	-11.76	28.31	13.93	Average	100	90
7	15690.00	55.49	74.00	-18.51	41.56	13.93	Peak	100	90

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

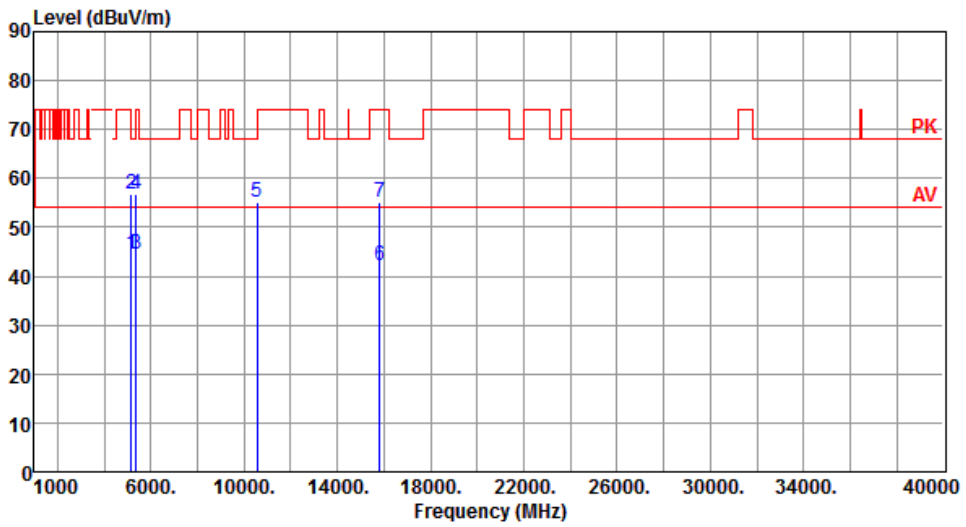
Modulation	VHT40	Test Freq. (MHz)	5230
Polarization	Vertical		



	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	44.81	54.00	-9.19	40.27	4.54	Average	258	175
2	5150.00	56.91	74.00	-17.09	52.37	4.54	Peak	258	175
3	5350.00	44.24	54.00	-9.76	40.11	4.13	Average	258	175
4	5350.00	56.81	74.00	-17.19	52.68	4.13	Peak	258	175
5	10460.00	54.91	68.20	-13.29	41.02	13.89	Peak	100	50
6	15690.00	42.17	54.00	-11.83	28.24	13.93	Average	100	60
7	15690.00	55.29	74.00	-18.71	41.36	13.93	Peak	100	60

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

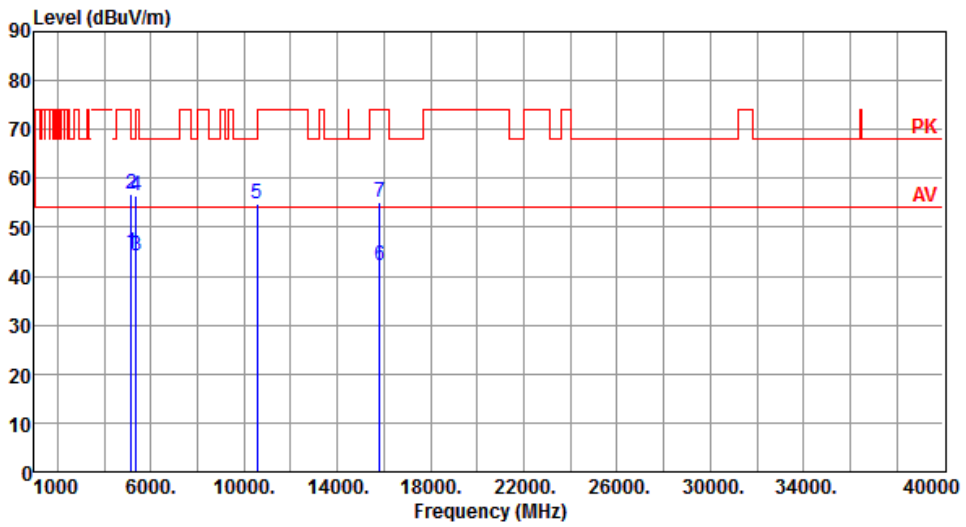
Modulation	VHT40	Test Freq. (MHz)	5270
Polarization	Horizontal		



	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	5150.00	44.67	54.00	-9.33	40.13	4.54	Average	100	125
2	5150.00	56.70	74.00	-17.30	52.16	4.54	Peak	100	125
3	5350.00	44.47	54.00	-9.53	40.34	4.13	Average	100	125
4	5350.00	56.68	74.00	-17.32	52.55	4.13	Peak	100	125
5	10540.00	55.10	68.20	-13.10	41.23	13.87	Peak	100	50
6	15810.00	42.12	54.00	-11.88	28.31	13.81	Average	100	80
7	15810.00	55.16	74.00	-18.84	41.35	13.81	Peak	100	80

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

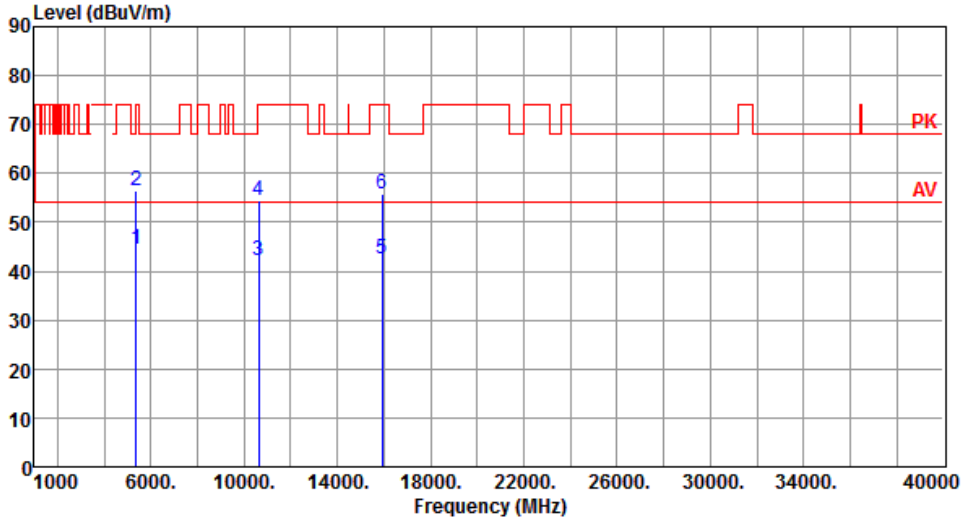
Modulation	VHT40	Test Freq. (MHz)	5270
Polarization	Vertical		



	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	5150.00	44.81	54.00	-9.19	40.27	4.54	Average	254	176
2	5150.00	56.91	74.00	-17.09	52.37	4.54	Peak	254	176
3	5350.00	44.33	54.00	-9.67	40.20	4.13	Average	254	176
4	5350.00	56.57	74.00	-17.43	52.44	4.13	Peak	254	176
5	10540.00	54.93	68.20	-13.27	41.06	13.87	Peak	100	30
6	15810.00	42.08	54.00	-11.92	28.27	13.81	Average	100	60
7	15810.00	55.02	74.00	-18.98	41.21	13.81	Peak	100	60

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

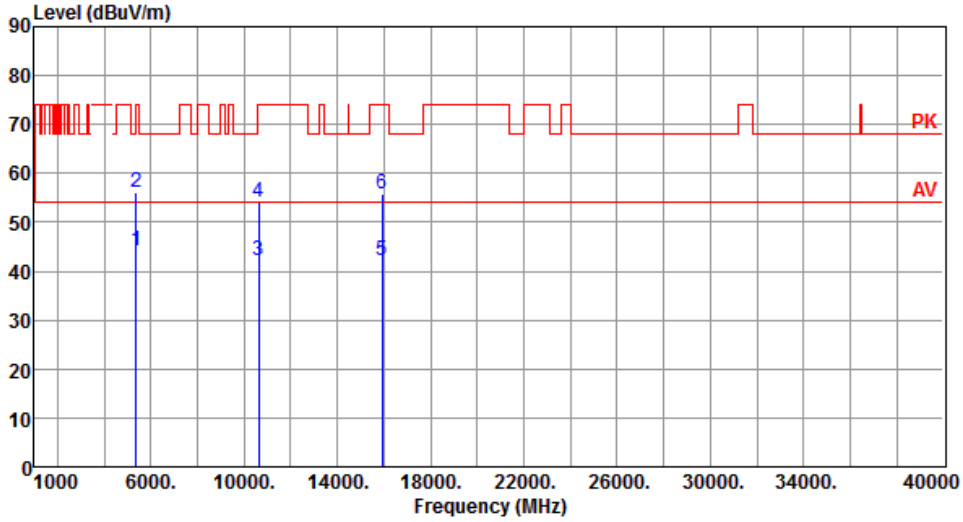
Modulation	VHT40	Test Freq. (MHz)	5310
Polarization	Horizontal		



	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	5350.00	44.35	54.00	-9.65	40.22	4.13	Average	110	124
2	5350.00	56.38	74.00	-17.62	52.25	4.13	Peak	110	124
3	10620.00	42.16	54.00	-11.84	28.31	13.85	Average	100	25
4	10620.00	54.48	74.00	-19.52	40.63	13.85	Peak	100	25
5	15930.00	42.44	54.00	-11.56	28.65	13.79	Average	100	30
6	15930.00	55.64	74.00	-18.36	41.85	13.79	Peak	100	30

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

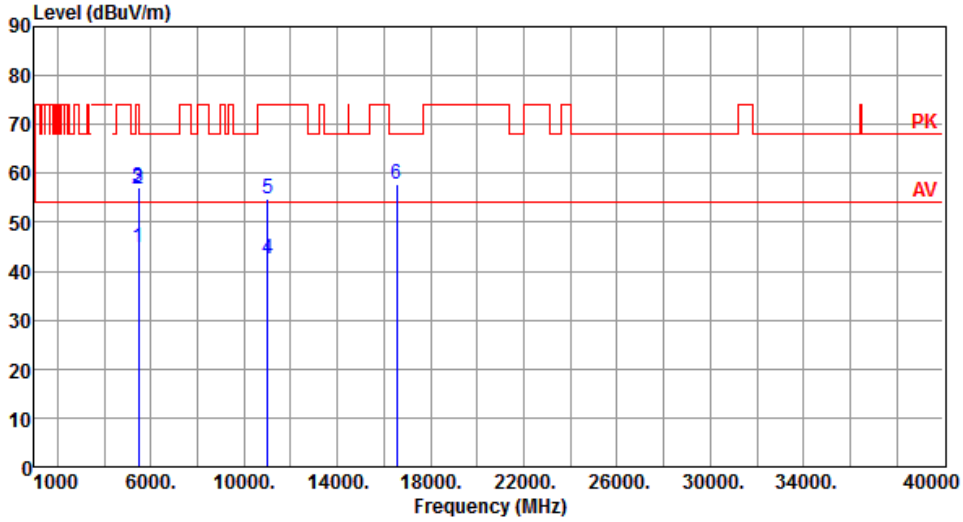
Modulation	VHT40	Test Freq. (MHz)	5310
Polarization	Vertical		



	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	5350.00	44.28	54.00	-9.72	40.15	4.13	Average	246	178
2	5350.00	56.25	74.00	-17.75	52.12	4.13	Peak	246	178
3	10620.00	42.09	54.00	-11.91	28.24	13.85	Average	100	10
4	10620.00	54.24	74.00	-19.76	40.39	13.85	Peak	100	10
5	15930.00	42.25	54.00	-11.75	28.46	13.79	Average	100	20
6	15930.00	55.75	74.00	-18.25	41.96	13.79	Peak	100	20

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

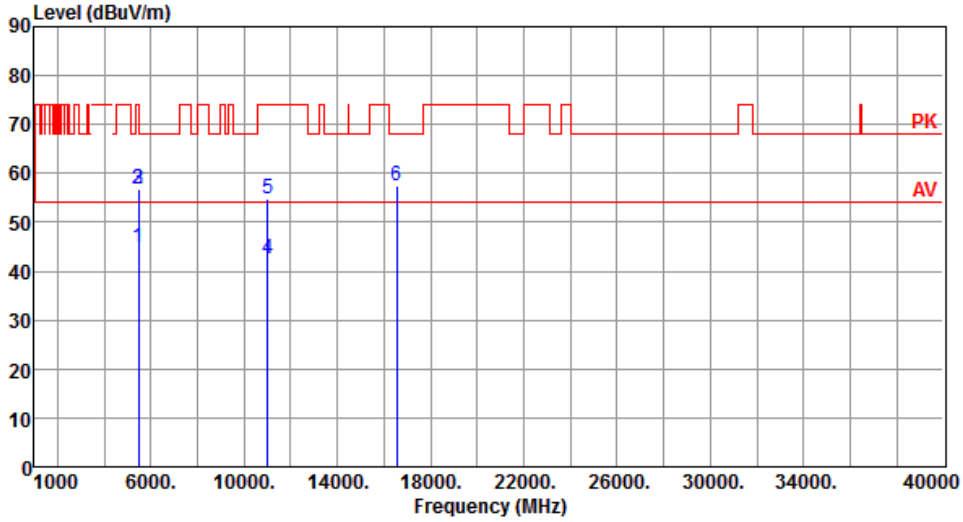
Modulation	VHT40	Test Freq. (MHz)	5510
Polarization	Horizontal		



	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	5460.00	44.89	54.00	-9.11	40.25	4.64	Average	120	144
2	5460.00	56.76	74.00	-17.24	52.12	4.64	Peak	120	144
3	5470.00	56.96	68.20	-11.24	52.31	4.65	Peak	120	144
4	11020.00	42.35	54.00	-11.65	28.15	14.20	Average	100	90
5	11020.00	54.82	74.00	-19.18	40.62	14.20	Peak	100	90
6	16530.00	57.69	68.20	-10.51	41.86	15.83	Peak	100	60

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

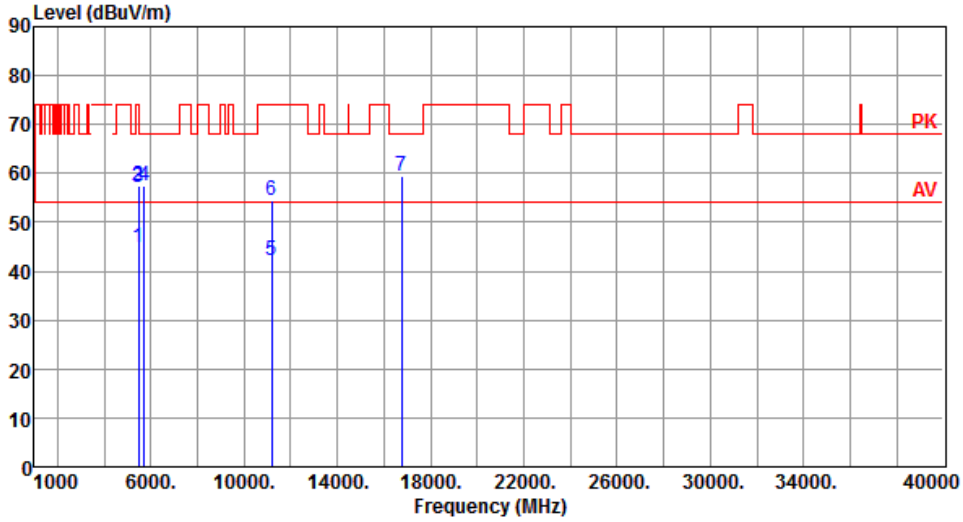
Modulation	VHT40	Test Freq. (MHz)	5510
Polarization	Vertical		



	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	5460.00	44.77	54.00	-9.23	40.13	4.64	Average	355	188
2	5460.00	56.69	74.00	-17.31	52.05	4.64	Peak	355	188
3	5470.00	56.77	68.20	-11.43	52.12	4.65	Peak	355	188
4	11020.00	42.41	54.00	-11.59	28.21	14.20	Average	100	30
5	11020.00	54.79	74.00	-19.21	40.59	14.20	Peak	100	30
6	16530.00	57.49	68.20	-10.71	41.66	15.83	Peak	100	50

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

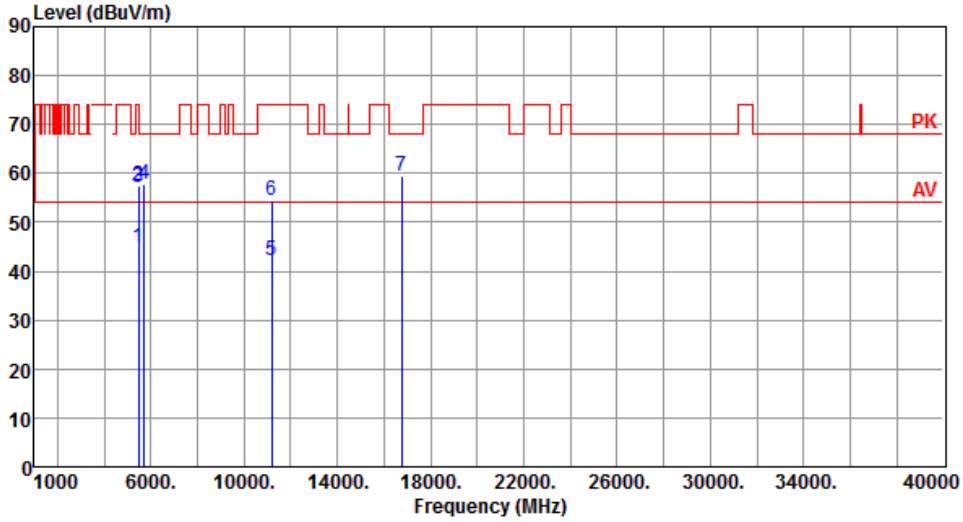
Modulation	VHT40	Test Freq. (MHz)	5590
Polarization	Horizontal		



	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	5460.00	44.70	54.00	-9.30	40.06	4.64	Average	131	146
2	5460.00	57.29	74.00	-16.71	52.65	4.64	Peak	131	146
3	5470.00	57.07	68.20	-11.13	52.42	4.65	Peak	131	146
4	5725.00	57.49	68.20	-10.71	52.24	5.25	Peak	131	146
5	11180.00	42.07	54.00	-11.93	28.21	13.86	Average	100	60
6	11180.00	54.48	74.00	-19.52	40.62	13.86	Peak	100	60
7	16770.00	59.45	68.20	-8.75	42.27	17.18	Peak	100	100

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

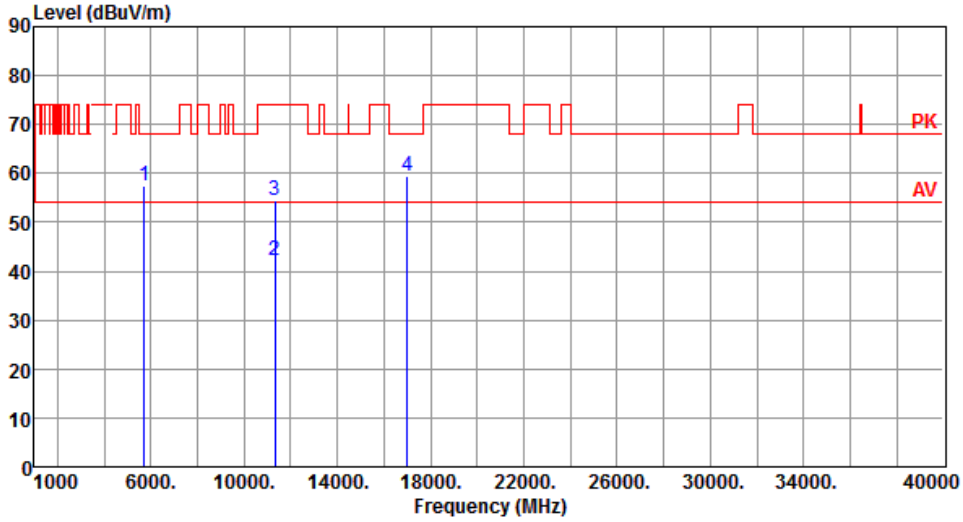
Modulation	VHT40	Test Freq. (MHz)	5590
Polarization	Vertical		



	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	5460.00	44.76	54.00	-9.24	40.12	4.64	Average	312	185
2	5460.00	57.33	74.00	-16.67	52.69	4.64	Peak	312	185
3	5470.00	57.19	68.20	-11.01	52.54	4.65	Peak	312	185
4	5725.00	57.71	68.20	-10.49	52.46	5.25	Peak	312	185
5	11180.00	42.32	54.00	-11.68	28.46	13.86	Average	100	30
6	11180.00	54.40	74.00	-19.60	40.54	13.86	Peak	100	30
7	16770.00	59.31	68.20	-8.89	42.13	17.18	Peak	100	90

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

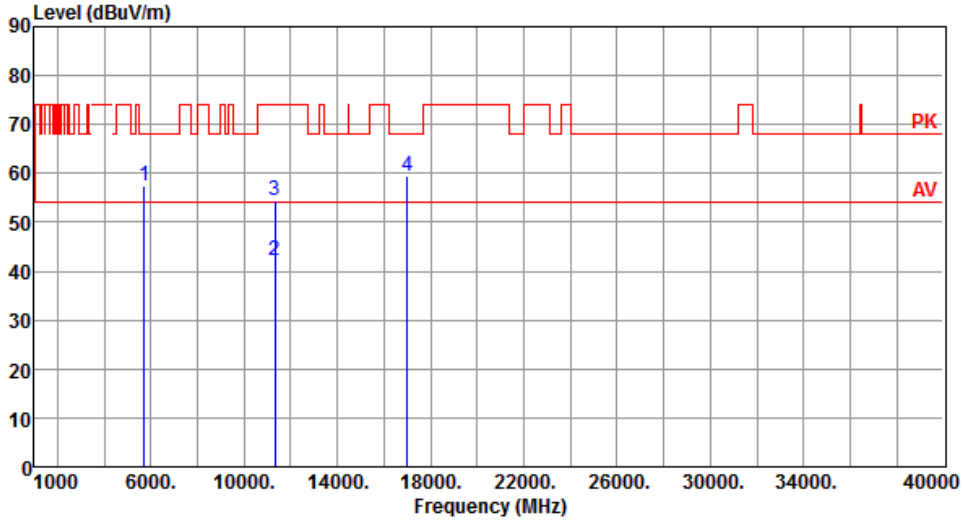
Modulation	VHT40	Test Freq. (MHz)	5670
Polarization	Horizontal		



	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	5725.00	57.46	68.20	-10.74	52.21	5.25	Peak	130	146
2	11340.00	42.04	54.00	-11.96	28.12	13.92	Average	100	50
3	11340.00	54.44	74.00	-19.56	40.52	13.92	Peak	100	50
4	17010.00	59.42	68.20	-8.78	42.16	17.26	Peak	100	55

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

Modulation	VHT40	Test Freq. (MHz)	5670
Polarization	Vertical		

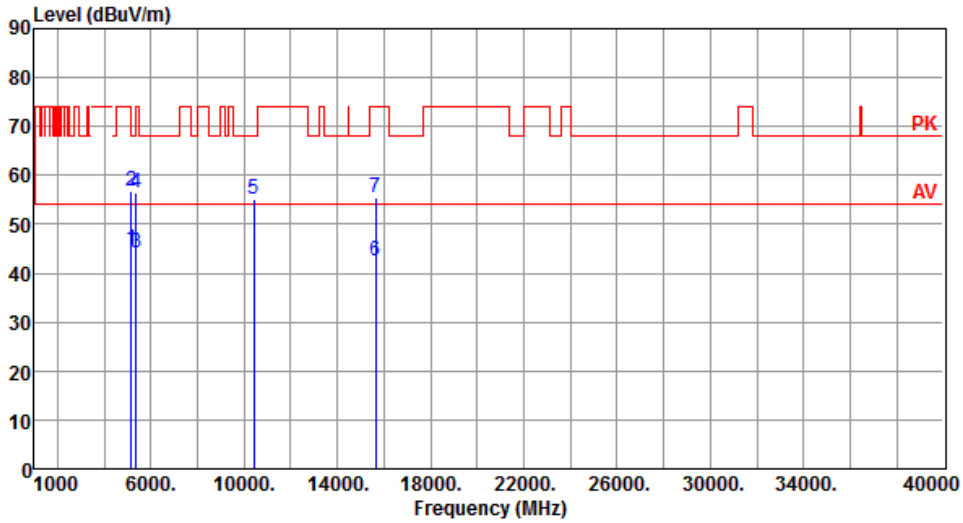


	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	5725.00	57.61	68.20	-10.59	52.36	5.25	Peak	309	194
2	11340.00	42.18	54.00	-11.82	28.26	13.92	Average	100	30
3	11340.00	54.61	74.00	-19.39	40.69	13.92	Peak	100	30
4	17010.00	59.32	68.20	-8.88	42.06	17.26	Peak	100	60

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

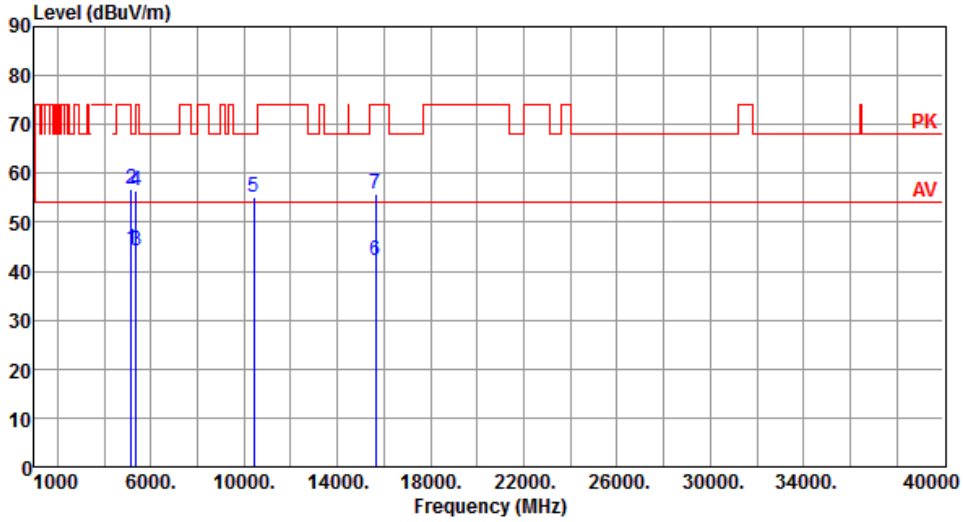
Modulation	VHT80	**Test Freq. (MHz)**	5210
Polarization	Horizontal		



	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	44.91	54.00	-9.09	40.37	4.54	Average	100	118
2	5150.00	56.91	74.00	-17.09	52.37	4.54	Peak	100	118
3	5350.00	44.27	54.00	-9.73	40.14	4.13	Average	100	118
4	5350.00	56.29	74.00	-17.71	52.16	4.13	Peak	100	118
5	10420.00	55.17	68.20	-13.03	41.28	13.89	Peak	100	90
6	15630.00	42.50	54.00	-11.50	28.46	14.04	Average	100	100
7	15630.00	55.61	74.00	-18.39	41.57	14.04	Peak	100	100

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

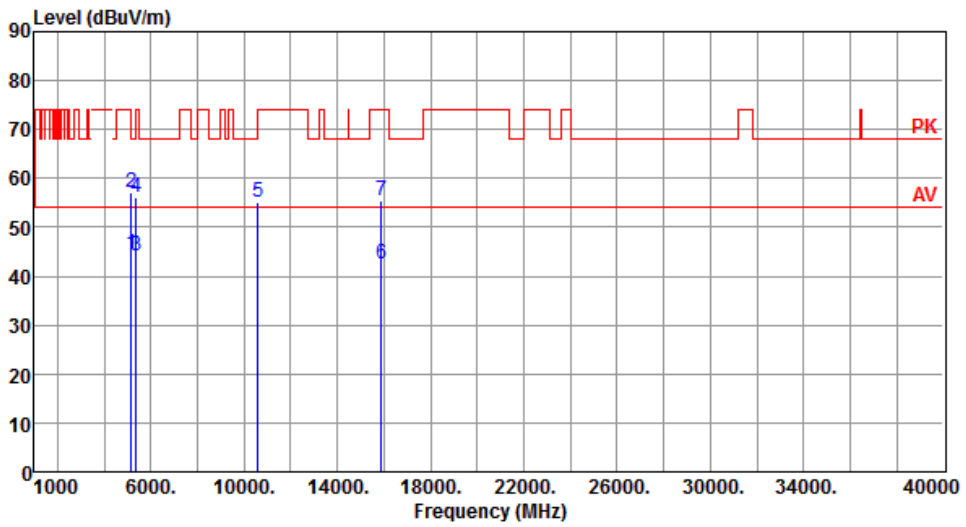
Modulation	VHT80	Test Freq. (MHz)	5210
Polarization	Vertical		



	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	44.60	54.00	-9.40	40.06	4.54	Average	284	179
2	5150.00	56.70	74.00	-17.30	52.16	4.54	Peak	284	179
3	5350.00	44.24	54.00	-9.76	40.11	4.13	Average	284	179
4	5350.00	56.38	74.00	-17.62	52.25	4.13	Peak	284	179
5	10420.00	55.15	68.20	-13.05	41.26	13.89	Peak	100	30
6	15630.00	42.26	54.00	-11.74	28.22	14.04	Average	100	40
7	15630.00	55.74	74.00	-18.26	41.70	14.04	Peak	100	40

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

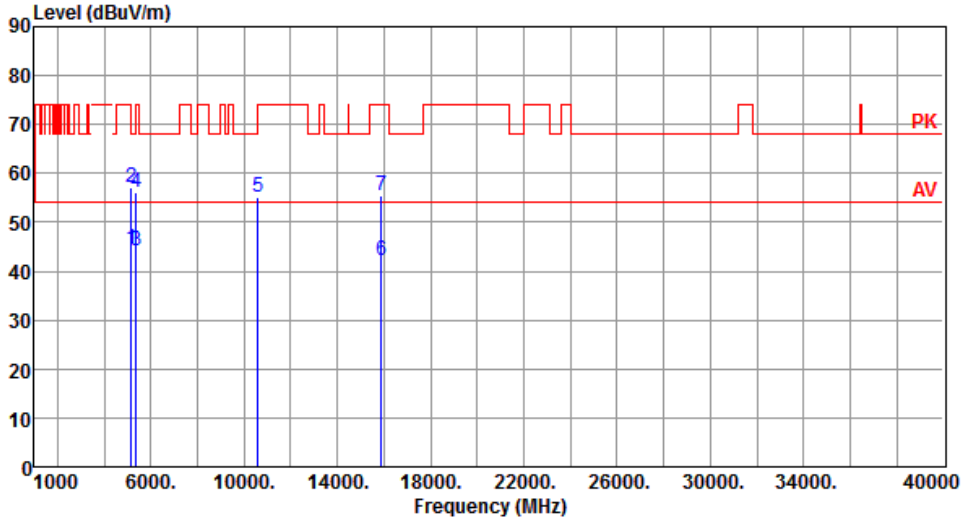
Modulation	VHT80	Test Freq. (MHz)	5290
Polarization	Horizontal		



	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	5150.00	44.60	54.00	-9.40	40.06	4.54	Average	100	120
2	5150.00	57.10	74.00	-16.90	52.56	4.54	Peak	100	120
3	5350.00	44.18	54.00	-9.82	40.05	4.13	Average	100	120
4	5350.00	56.28	74.00	-17.72	52.15	4.13	Peak	100	120
5	10580.00	55.19	68.20	-13.01	41.33	13.86	Peak	100	50
6	15870.00	42.45	54.00	-11.55	28.63	13.82	Average	100	100
7	15870.00	55.43	74.00	-18.57	41.61	13.82	Peak	100	100

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

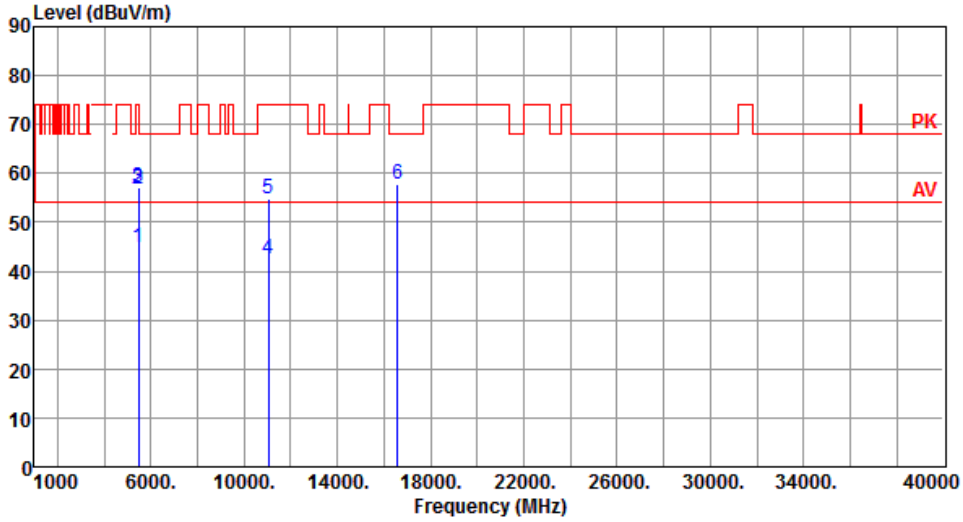
Modulation	VHT80	Test Freq. (MHz)	5290
Polarization	Vertical		



	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	5150.00	44.61	54.00	-9.39	40.07	4.54	Average	251	188
2	5150.00	57.02	74.00	-16.98	52.48	4.54	Peak	251	188
3	5350.00	44.24	54.00	-9.76	40.11	4.13	Average	251	188
4	5350.00	56.24	74.00	-17.76	52.11	4.13	Peak	251	188
5	10580.00	55.12	68.20	-13.08	41.26	13.86	Peak	100	30
6	15870.00	42.26	54.00	-11.74	28.44	13.82	Average	100	90
7	15870.00	55.38	74.00	-18.62	41.56	13.82	Peak	100	90

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

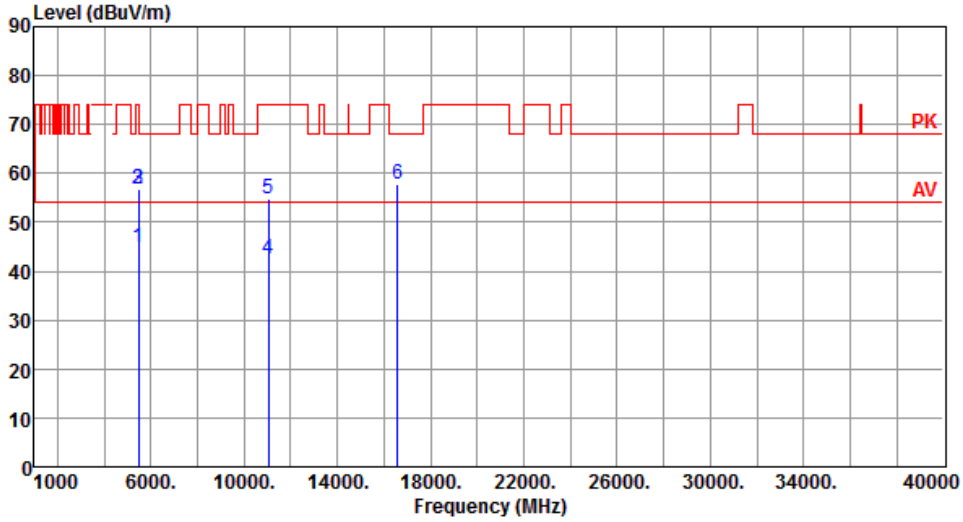
Modulation	VHT80	Test Freq. (MHz)	5530
Polarization	Horizontal		



	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	5460.00	44.85	54.00	-9.15	40.21	4.64	Average	134	147
2	5460.00	56.85	74.00	-17.15	52.21	4.64	Peak	134	147
3	5470.00	57.01	68.20	-11.19	52.36	4.65	Peak	134	147
4	11060.00	42.58	54.00	-11.42	28.49	14.09	Average	100	20
5	11060.00	54.66	74.00	-19.34	40.57	14.09	Peak	100	20
6	16590.00	57.73	68.20	-10.47	41.68	16.05	Peak	100	40

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

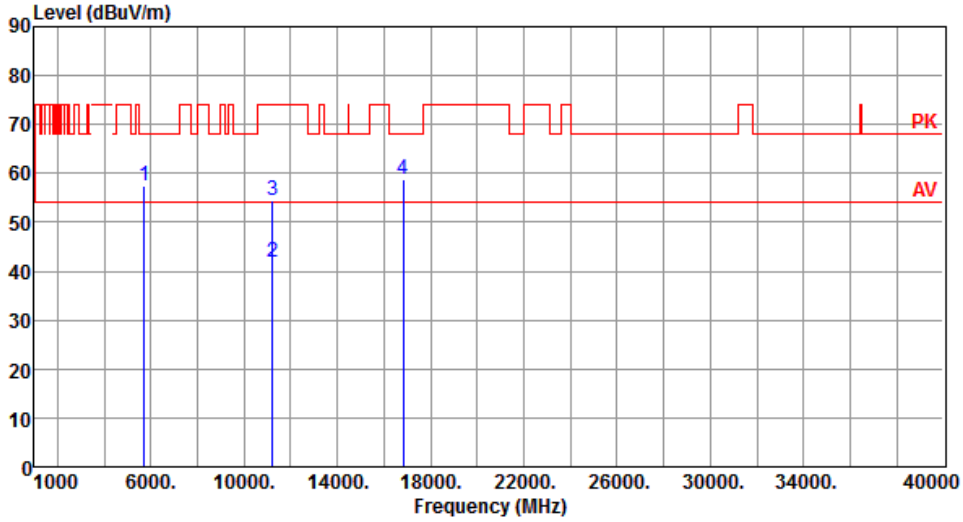
Modulation	VHT80	Test Freq. (MHz)	5530
Polarization	Vertical		



	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	5460.00	44.76	54.00	-9.24	40.12	4.64	Average	349	178
2	5460.00	56.76	74.00	-17.24	52.12	4.64	Peak	349	178
3	5470.00	56.91	68.20	-11.29	52.26	4.65	Peak	349	178
4	11060.00	42.55	54.00	-11.45	28.46	14.09	Average	100	30
5	11060.00	54.78	74.00	-19.22	40.69	14.09	Peak	100	30
6	16590.00	57.63	68.20	-10.57	41.58	16.05	Peak	100	50

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

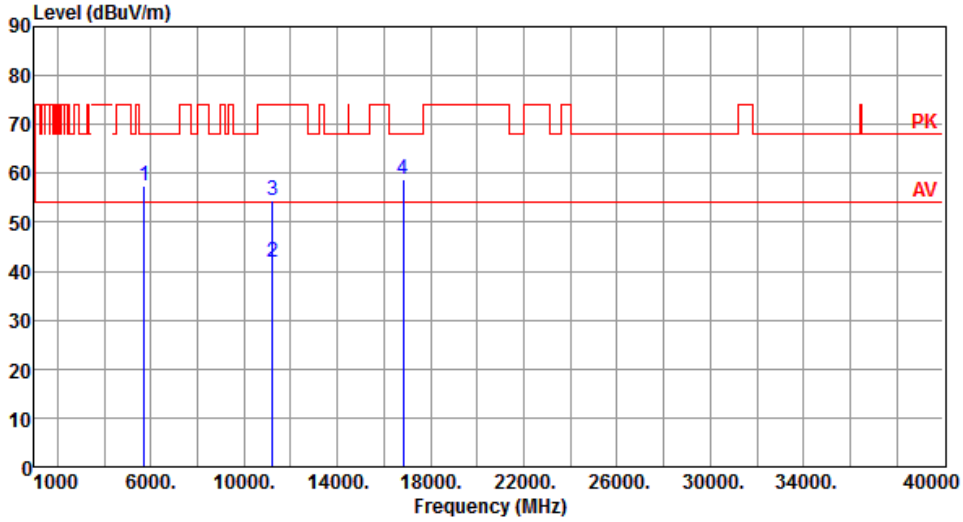
Modulation	VHT80	Test Freq. (MHz)	5610
Polarization	Horizontal		



	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	5725.00	57.40	68.20	-10.80	52.15	5.25	Peak	121	145
2	11220.00	41.98	54.00	-12.02	28.15	13.83	Average	100	50
3	11220.00	54.39	74.00	-19.61	40.56	13.83	Peak	100	50
4	16830.00	58.94	68.20	-9.26	41.69	17.25	Peak	100	60

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

Modulation	VHT80	Test Freq. (MHz)	5610
Polarization	Vertical		



	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	5725.00	57.38	68.20	-10.82	52.13	5.25	Peak	312	187
2	11220.00	41.95	54.00	-12.05	28.12	13.83	Average	100	30
3	11220.00	54.52	74.00	-19.48	40.69	13.83	Peak	100	30
4	16830.00	58.93	68.20	-9.27	41.68	17.25	Peak	100	50

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

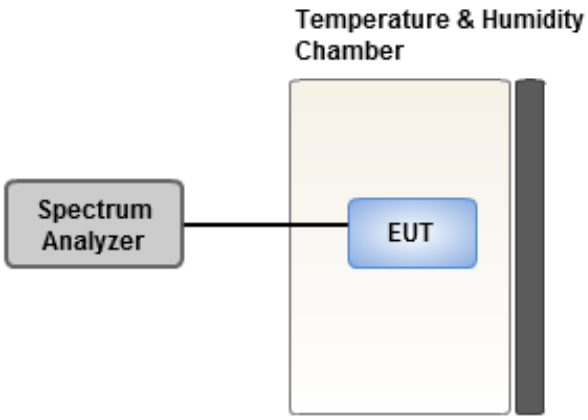
3.6.1 Limit of Frequency Stability

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 20 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 normal and extreme condition for temperature and voltage.

3.6.3 Test Setup



3.6.4 Test Result of Frequency Stability

Frequency: 5300 MHz	Frequency Drift (ppm)			
Temperature (°C)	**0 minute**	**2 minutes**	**5 minutes**	**10 minutes**
T20°CVmax	8.69	8.35	8.84	8.81
T20°CVmin	8.72	8.52	8.73	8.65
T55CVnom	8.75	8.87	8.82	8.78
T50CVnom	8.73	8.59	8.59	8.86
T40°CVnom	8.76	8.54	8.37	8.97
T30°CVnom	8.78	8.65	8.46	8.68
T20°CVnom	8.77	8.75	8.54	8.75
T10°CVnom	6.55	6.27	6.70	6.99
T0°CVnom	5.07	5.85	5.05	5.12
T-10°CVnom	2.26	2.84	2.25	2.47
T-20°CVnom	1.67	1.86	1.74	1.75
T-30°CVnom	2.57	2.39	2.69	3.03
Vnom [V]: 3.9		Vmax [V]: 4.29		Vmin [V]: 3.51
Tnom [°C]: 20		Tmax [°C]: 55		Tmin [°C]: -30

4 Test laboratory information

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

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

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

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

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

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

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