FCC Test Report

FCC ID	:	**SWX-AF60**
Equipment	:	**airFiber 60**
Model No.	:	**AF60**
Brand Name	:	**UBIQUITI**
Applicant	:	**Ubiquiti Inc.**
Address	:	**685 Third Avenue, 27th Floor New York, New York 10017 USA**
Standard	:	**47 CFR FCC Part 15.407**
Received Date	:	**Aug. 01, 2019**
Tested Date	:	**Aug. 01 ~ Aug. 15, 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
FR981302AN	Rev. 01	Initial issue	Aug. 20, 2019
FR981302AN	Rev. 02	Revised applicant name	Sep. 05, 2019

Summary of Test Results

FCC Rules	Test Items	Measured	Result
15.207	Conducted Emissions	[dBuV]: 0.183MHz 58.14 (Margin -6.19dB) - QP	Pass
15.407(b) 15.209	Radiated Emissions	[dBuV/m at 3m]: 5150.00MHz 53.80 (Margin -0.20dB) - 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: 25.45 5725-5850MHz: 25.48	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 of product specification for EUT presented in the report are provided by the manufacturer, and the manufacturer takes all the responsibilities for the accuracy of product specification.

1 General Description

1.1 Information

1.1.1 Specification of the Equipment under Test (EUT)

RF General Information					
Frequency Range (MHz)	**Proprietary protocol (BW: MHz)**	**Ch. Freq. (MHz)**	**Channel Number**	**Transmit Chains (N_{TX})**	**Data Rate / MCS**
5150-5250	20	5160-5240	32-48 [17]	2	MCS 0-9
5150-5250	40	5170-5230	34-46 [13]	2	MCS 0-9
5150-5250	80	5190-5210	38-42 [5]	2	MCS 0-9
Note 1: RF output power specifies that . Note 2: Modulation uses a combination of OFDM-BPSK, QPSK, 16QAM, 64QAM, 256QAM modulation.					

RF General Information					
Frequency Range (MHz)	**Proprietary protocol (BW: MHz)**	**Ch. Freq. (MHz)**	**Channel Number**	**Transmit Chains (N_{TX})**	**Data Rate / MCS**
5725-5850	20	5735-5840	147-168 [22]	2	MCS 0-9
5725-5850	40	5745-5830	149-166 [18]	2	MCS 0-9
5725-5850	80	5765-5810	153-162 [10]	2	MCS 0-9
Note 1: RF output power specifies that . Note 2: Modulation uses a combination of OFDM-BPSK, QPSK, 16QAM, 64QAM, 256QAM modulation.					

1.1.2 Antenna Details

Ant. No.	**Type**	**Connector**	**Operating Frequencies (MHz) / Antenna Gain (dBi)**	
			5150~5250	**5725~5850**
1	internal antenna	N/A	11	11

Note: The antenna is Cross Polarized Antenna

1.1.3 Power Supply Type of Equipment under Test (EUT)

Power Supply Type	24Vdc from POE

1.1.4 Accessories

Accessories		
No.	**Equipment**	**Description**
1	Adapter	Brand: UBIQUITI Model: GP-A240-050G Power Rating: I/P: 100-240Vac, 50/60Hz, 0.3A O/P: 24Vdc, 0.5A Power Line: 0.6m non-shielded without core

1.1.5 Channel List

For Frequency band 5150-5250 MHz			
Proprietary protocol (BW: 20 MHz)		**Proprietary protocol (BW: 40 MHz)**	
Channel	**Frequency(MHz)**	**Channel**	**Frequency(MHz)**
32	5160	34	5170
33	5165	35	5175
34	5170	36	5180
35	5175	37	5185
36	5180	38	5190
37	5185	39	5195
38	5190	40	5200
39	5195	41	5205
40	5200	42	5210
41	5205	43	5215
42	5210	44	5220
43	5215	45	5225
44	5220	46	5230
45	5225	**Proprietary protocol (BW: 80 MHz)**	
46	5230	38	5190
47	5235	39	5195
48	5240	40	5200
---	---	41	5205
---	---	42	5210

For Frequency band 5725~5850 MHz			
Proprietary protocol (BW: 20 MHz)		**Proprietary protocol (BW: 40 MHz)**	
Channel	**Frequency(MHz)**	**Channel**	**Frequency(MHz)**
147	5735	149	5745
148	5740	150	5750
149	5745	151	5755
150	5750	152	5760
151	5755	153	5765
152	5760	154	5770
153	5765	155	5775
154	5770	156	5780
155	5775	157	5785
156	5780	158	5790
157	5785	159	5795
158	5790	160	5800
159	5795	161	5805
160	5800	162	5810
161	5805	163	5815
162	5810	164	5820
163	5815	165	5825
164	5820	166	5830
165	5825	**Proprietary protocol (BW: 80 MHz)**	
166	5830	153	5765
167	5835	154	5770
168	5840	155	5775
---	---	156	5780
---	---	157	5785
---	---	158	5790
---	---	159	5795
---	---	160	5800
---	---	161	5805
---	---	162	5810

1.1.6 Test Tool and Duty Cycle

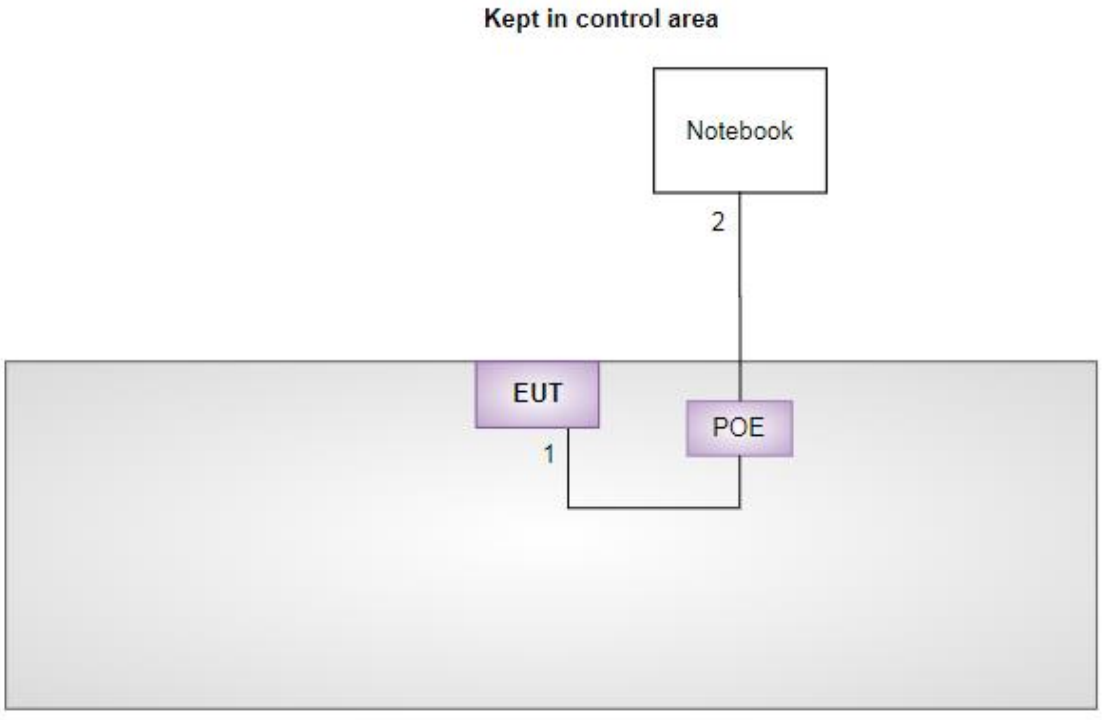
Test Tool	Putty, version: 0.60.0.0		
Duty Cycle and Duty Factor	**Proprietary protocol (BW: MHz)**	**Duty Cycle (%)**	**Duty Factor (dB)**
	20	89.34%	0.49
	40	80.93%	0.92
	80	85.09%	0.70

1.2 Local Support Equipment List

Support Equipment List					
No.	**Equipment**	**Brand**	**Model**	**FCC ID**	**Remarks**
1	Notebook	DELL	Latitude E6440	DoC	---

1.3 Test Setup Chart

Test Setup Diagram



No.	Signal cable / Length (m)
1	RJ45, 1m non-shielded.
2	RJ45, 10m non-shielded.

1.4 The Equipment List

Test Item	Conducted Emission				
Test Site	Conduction room 1 / (CO01-WS)				
Instrument	**Manufacturer**	**Model No.**	**Serial No.**	**Calibration Date**	**Calibration Until**
Receiver	R&S	ESR3	101657	Jan. 08, 2019	Jan. 07, 2020
LISN	R&S	ENV216	101579	Mar. 08, 2019	Mar. 07, 2020
RF Cable-CON	Woken	CFD200-NL	CFD200-NL-001	Oct. 23, 2018	Oct. 22, 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 chamber 3 / (03CH03-WS)				
Instrument	**Manufacturer**	**Model No.**	**Serial No.**	**Calibration Date**	**Calibration Until**
Spectrum Analyzer	R&S	FSV40	101499	Jan. 07, 2019	Jan. 06, 2020
Receiver	R&S	ESR3	101658	Dec. 11, 2018	Dec. 10, 2019
Bilog Antenna	SCHWARZBECK	VULB9168	VULB9168-685	Apr. 17, 2019	Apr. 16, 2020
Horn Antenna 1G-18G	SCHWARZBECK	BBHA 9120 D	BBHA 9120 D 1206	Jan. 07, 2019	Jan. 06, 2020
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	980187	Aug. 24, 2018	Aug. 23, 2019
Preamplifier	Agilent	83017A	MY53270013	Dec. 27, 2018	Dec. 26, 2019
Preamplifier	EMC	EMC184045B	980192	Aug. 01, 2019	Jul. 31, 2020
RF cable-3M	HUBER+SUHNER	SUCOFLEX104	MY22620/**4**	Oct. 01, 2018	Sep. 30, 2019
RF cable-8M	EMC	EMC104-SM-SM-8000	181107	Oct. 01, 2018	Sep. 30, 2019
RF cable-1M	HUBER+SUHNER	SUCOFLEX104	MY22624/4	Oct. 01, 2018	Sep. 30, 2019
LF cable-0.8M	EMC	EMC8D-NM-NM-800	EMC8D-NM-NM-800-001	Oct. 01, 2018	Sep. 30, 2019
LF cable-3M	EMC	EMC8D-NM-NM-3000	131103	Oct. 01, 2018	Sep. 30, 2019
LF cable-13M	EMC	EMC8D-NM-NM-13000	131104	Oct. 01, 2018	Sep. 30, 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. 17, 2019	Apr. 16, 2020
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	V5.10	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 662911 D01 Multiple Transmitter Output 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	±1x10^{-9}
Power density	±0.583 dB
Conducted emission	±2.715 dB
AC conducted emission	±2.92 dB
Radiated emission ≤ 1GHz	±3.96 dB
Radiated emission > 1GHz	±4.51 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	24°C / 64%	Alex Tsai
Radiated Emissions	03CH03-WS	23-24°C / 62-65%	Roger lu Akun Chung
RF Conducted	TH01-WS	24°C / 68%	Akun Chung

- FCC Designation No.: TW0009
- FCC site registration No.: 207696
- ISED#: 10807A
- CAB identifier: TW2732

2.2 The Worst Test Modes and Channel Details

For Frequency band 5150-5250 MHz				
Test item	**Proprietary protocol (BW: MHz)**	**Test Frequency (MHz)**	**Data Rate**	**Test Configuration**
Conducted Emissions	20	5240	MCS 0	---
Radiated Emissions ≤1GHz	20	5240	MCS 0	---
RF Output Power Radiated Emissions >1GHz Emission Bandwidth Peak Power Spectral Density	20 40 80	5160 / 5165 / 5200 / 5240 5170 / 5175 / 5200 / 5230 5190 / 5195 / 5200 / 5210	MCS 0 MCS 0 MCS 0	---
Frequency Stability	Un-modulation	5200	---	---

For Frequency band 5725-5850 MHz				
Test item	**Proprietary protocol (BW: MHz)**	**Test Frequency (MHz)**	**Data Rate**	**Test Configuration**
Conducted Emissions	20	5790	MCS 0	---
Radiated Emissions ≤1GHz	20	5790	MCS 0	---
Radiated Emissions >1GHz Emission Bandwidth 6dB bandwidth Peak Power Spectral Density	20 40 80	5735 / 5790 / 5840 5745 / 5790 / 5830 5765 / 5790 / 5810	MCS 0 MCS 0 MCS 0	---
Frequency Stability	Un-modulation	5790	---	---

3 Transmitter Test Results

3.1 Conducted Emissions

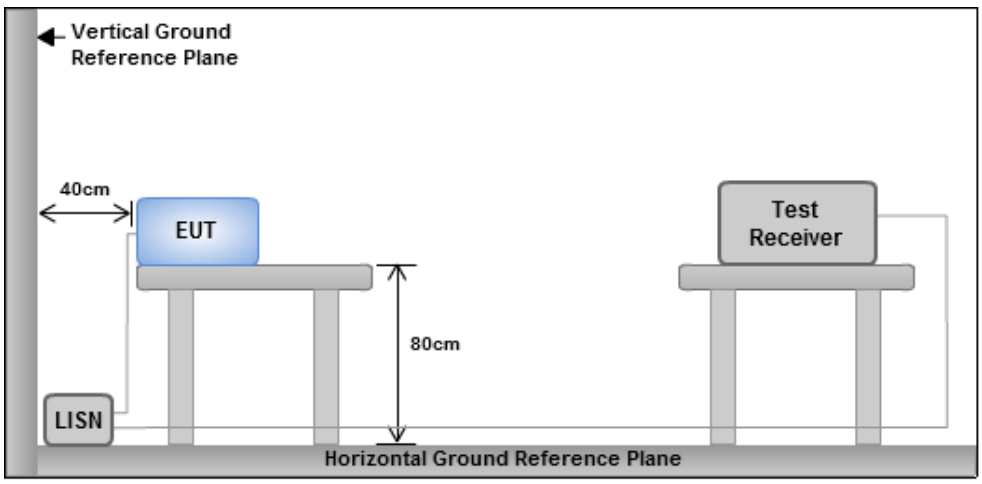
3.1.1 Limit of Conducted Emissions

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

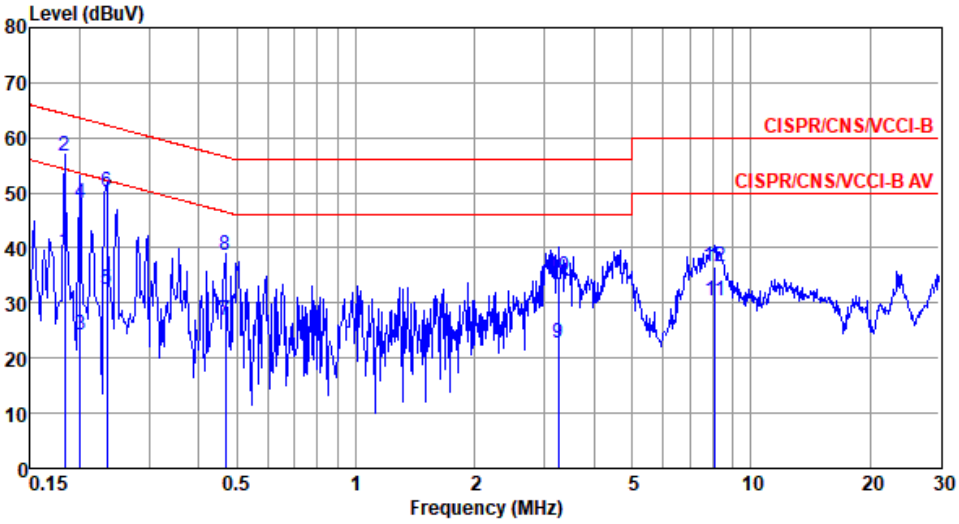


Note: 1. Support units were connected to second LISN.

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

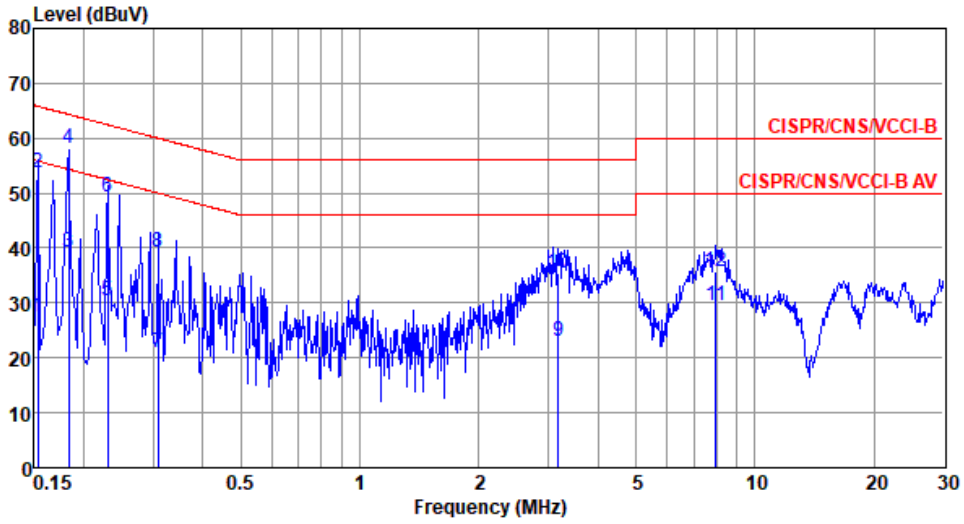
Proprietary protocol (BW)	20MHz	Test Freq. (MHz)	5240
Power Phase	Line		



	Freq	Level	Limit Line	Over Limit	Read Level	LISN factor	cable loss	Remark
	MHz	dBuV	dBuV	dB	dBuV	dB	dB	
1	0.183	39.13	54.33	-15.20	29.53	9.54	0.06	Average
2*	0.183	56.78	64.33	-7.55	47.18	9.54	0.06	QP
3	0.201	24.18	53.58	-29.40	14.57	9.54	0.07	Average
4	0.201	48.19	63.58	-15.39	38.58	9.54	0.07	QP
5	0.234	32.51	52.30	-19.79	22.89	9.55	0.07	Average
6	0.234	50.10	62.30	-12.20	40.48	9.55	0.07	QP
7	0.469	26.82	46.54	-19.72	17.16	9.58	0.08	Average
8	0.469	38.56	56.54	-17.98	28.90	9.58	0.08	QP
9	3.258	22.77	46.00	-23.23	12.92	9.61	0.24	Average
10	3.258	34.95	56.00	-21.05	25.10	9.61	0.24	QP
11	8.105	30.55	50.00	-19.45	20.51	9.64	0.40	Average
12	8.105	36.59	60.00	-23.41	26.55	9.64	0.40	QP

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

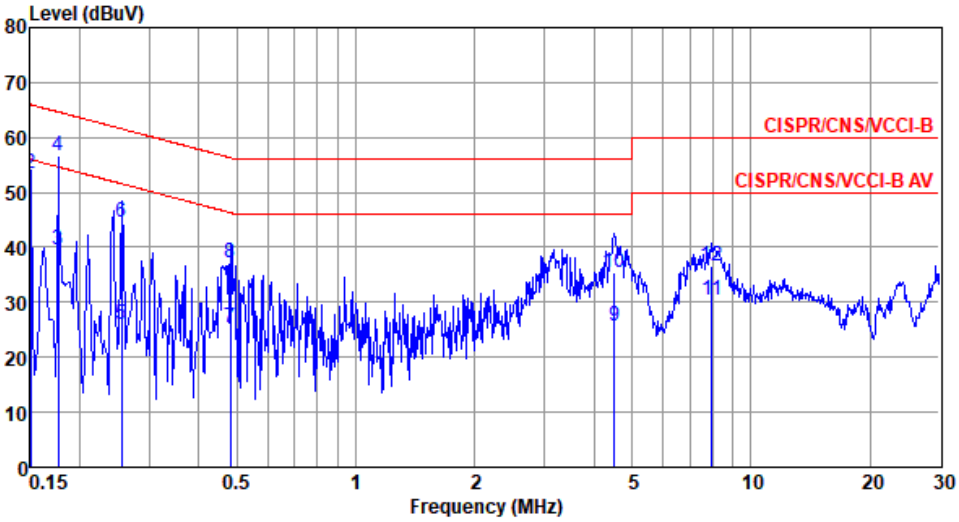
Proprietary protocol (BW)	20MHz	Test Freq. (MHz)	5240
Power Phase	Neutral		



	Freq	Level	Limit Line	Over Limit	Read Level	LISN factor	cable loss	Remark
	MHz	dBuV	dBuV	dB	dBuV	dB	dB	
1	0.153	27.32	55.82	-28.50	17.70	9.57	0.05	Average
2	0.153	53.87	65.82	-11.95	44.25	9.57	0.05	QP
3	0.183	39.32	54.33	-15.01	29.68	9.58	0.06	Average
4*	0.183	58.14	64.33	-6.19	48.50	9.58	0.06	QP
5	0.230	30.34	52.44	-22.10	20.68	9.59	0.07	Average
6	0.230	49.34	62.44	-13.10	39.68	9.59	0.07	QP
7	0.308	20.89	50.02	-29.13	11.21	9.60	0.08	Average
8	0.308	39.29	60.02	-20.73	29.61	9.60	0.08	QP
9	3.173	23.06	46.00	-22.94	13.16	9.66	0.24	Average
10	3.173	35.35	56.00	-20.65	25.45	9.66	0.24	QP
11	7.977	29.62	50.00	-20.38	19.52	9.70	0.40	Average
12	7.977	35.77	60.00	-24.23	25.67	9.70	0.40	QP

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

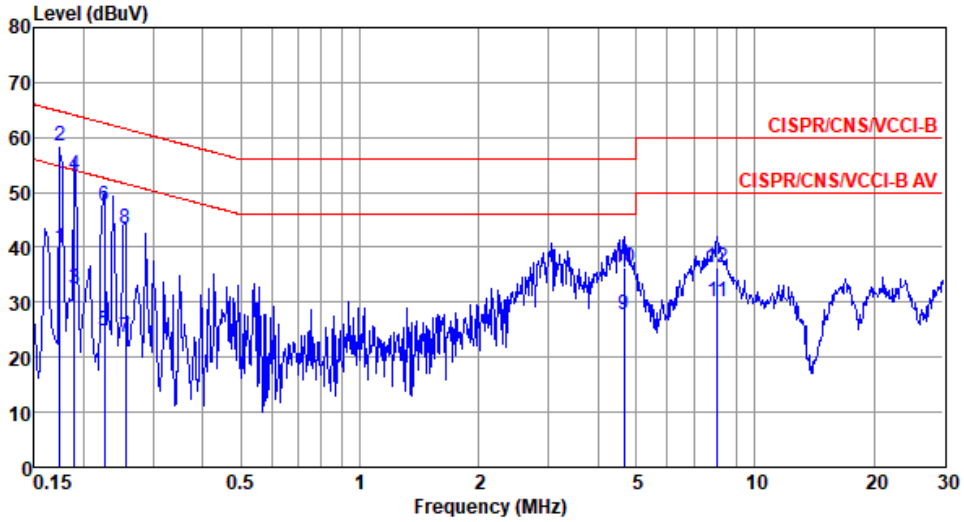
Proprietary protocol (BW)	20MHz	Test Freq. (MHz)	5790
Power Phase	Line		



	Freq	Level	Limit Line	Over Limit	Read Level	LISN factor	cable loss	Remark
	MHz	dBuV	dBuV	dB	dBuV	dB	dB	
1	0.150	31.28	56.00	-24.72	21.70	9.53	0.05	Average
2	0.150	53.55	66.00	-12.45	43.97	9.53	0.05	QP
3	0.177	39.47	54.64	-15.17	29.87	9.54	0.06	Average
4*	0.177	56.65	64.64	-7.99	47.05	9.54	0.06	QP
5	0.255	25.87	51.60	-25.73	16.25	9.55	0.07	Average
6	0.255	44.52	61.60	-17.08	34.90	9.55	0.07	QP
7	0.481	25.42	46.32	-20.90	15.76	9.58	0.08	Average
8	0.481	37.21	56.32	-19.11	27.55	9.58	0.08	QP
9	4.501	25.62	46.00	-20.38	15.71	9.61	0.30	Average
10	4.501	35.54	56.00	-20.46	25.63	9.61	0.30	QP
11	7.977	30.47	50.00	-19.53	20.43	9.64	0.40	Average
12	7.977	36.58	60.00	-23.42	26.54	9.64	0.40	QP

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

Proprietary protocol (BW)	20MHz	Test Freq. (MHz)	5790
Power Phase	Neutral		



	Freq	Level	Limit Line	Over Limit	Read Level	LISN factor	cable loss	Remark
	MHz	dBuV	dBuV	dB	dBuV	dB	dB	
1	0.174	39.87	54.77	-14.90	30.23	9.58	0.06	Average
2*	0.174	58.44	64.77	-6.33	48.80	9.58	0.06	QP
3	0.189	32.60	54.06	-21.46	22.95	9.58	0.07	Average
4	0.189	53.16	64.06	-10.90	43.51	9.58	0.07	QP
5	0.226	24.82	52.61	-27.79	15.16	9.59	0.07	Average
6	0.226	47.45	62.61	-15.16	37.79	9.59	0.07	QP
7	0.255	23.55	51.60	-28.05	13.89	9.59	0.07	Average
8	0.255	43.30	61.60	-18.30	33.64	9.59	0.07	QP
9	4.672	27.70	46.00	-18.30	17.72	9.67	0.31	Average
10	4.672	36.22	56.00	-19.78	26.24	9.67	0.31	QP
11	8.020	30.05	50.00	-19.95	19.95	9.70	0.40	Average
12	8.020	36.42	60.00	-23.58	26.32	9.70	0.40	QP

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

3.2 Emission Bandwidth

3.2.1 Limit of Emission bandwidth

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

3.2.2 Test Procedures

26dB Bandwidth

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

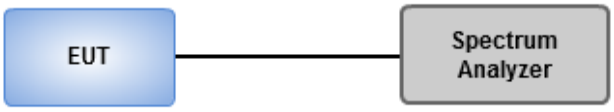
Occupied Bandwidth

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

6dB Bandwidth

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

3.2.3 Test Setup



3.2.4 Test Result of Emission Bandwidth

Summary

Proprietary protocol (BW: MHz)	Max-N dB (Hz)	Max-OBW (Hz)	ITU-Code	Min-N dB (Hz)	Min-OBW (Hz)
5.15-5.25GHz	-	-	-	-	-
20_Nss1,(MCS0)_2TX	34.928M	17.873M	17M9D1D	19.493M	17.583M
40_Nss1,(MCS0)_2TX	51.304M	36.035M	36M0D1D	39.275M	35.745M
80_Nss1,(MCS0)_2TX	84.638M	76.122M	76M1D1D	83.188M	75.543M
5.725-5.85GHz	-	-	-	-	-
20_Nss1,(MCS0)_2TX	17.609M	18.017M	18M0D1D	17.536M	17.656M
40_Nss1,(MCS0)_2TX	35.072M	36.324M	36M3D1D	32.319M	36.035M
80_Nss1,(MCS0)_2TX	76.522M	75.832M	75M8D1D	69.855M	75.543M

Max-N dB = Maximum 6dB down bandwidth for 5.725-5.85GHz band / Maximum 26dB down bandwidth for other band;
Max-OBW = Maximum 99% occupied bandwidth;
Min-N dB = Minimum 6dB down bandwidth for 5.725-5.85GHz band / Maximum 26dB down bandwidth for other band;
Min-OBW = Minimum 99% occupied bandwidth;

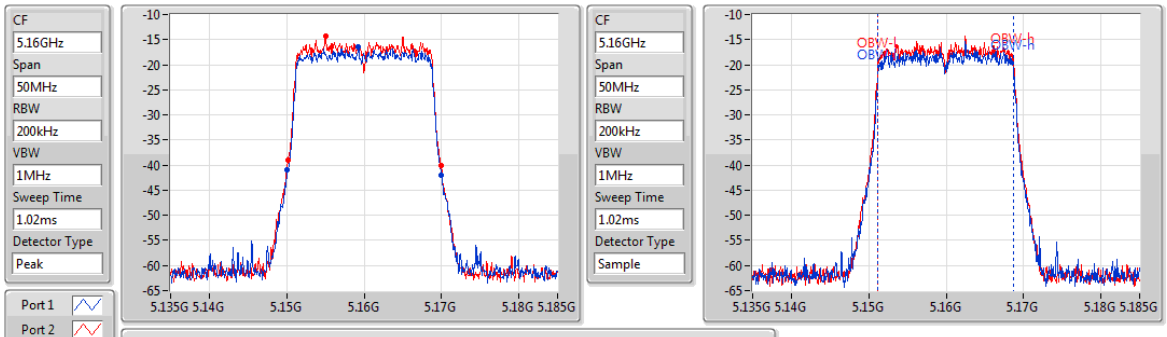
Result

Proprietary protocol (BW: MHz)	Result	Limit (Hz)	Port 1-N dB (Hz)	Port 1-OBW (Hz)	Port 2-N dB (Hz)	Port 2-OBW (Hz)
20_Nss1,(MCS0)_2TX	-	-	-	-	-	-
5160MHz	Pass	Inf	19.928M	17.583M	19.855M	17.583M
5165MHz	Pass	Inf	19.493M	17.583M	19.71M	17.583M
5200MHz	Pass	Inf	23.261M	17.656M	34.638M	17.8M
5240MHz	Pass	Inf	30.145M	17.728M	34.928M	17.873M
5735MHz	Pass	500k	17.609M	17.656M	17.609M	17.656M
5790MHz	Pass	500k	17.536M	17.8M	17.609M	17.8M
5840MHz	Pass	500k	17.609M	17.8M	17.609M	18.017M
40_Nss1,(MCS0)_2TX	-	-	-	-	-	-
5170MHz	Pass	Inf	39.565M	36.035M	39.71M	36.035M
5175MHz	Pass	Inf	39.275M	35.745M	39.275M	35.89M
5200MHz	Pass	Inf	39.275M	35.89M	39.42M	35.89M
5230MHz	Pass	Inf	40M	36.035M	51.304M	36.035M
5745MHz	Pass	500k	32.319M	36.035M	34.493M	36.179M
5790MHz	Pass	500k	35.072M	36.179M	34.493M	36.179M
5830MHz	Pass	500k	35.072M	36.035M	35.072M	36.324M
80_Nss1,(MCS0)_2TX	-	-	-	-	-	-
5190MHz	Pass	Inf	83.478M	75.832M	84.638M	75.832M
5195MHz	Pass	Inf	83.188M	75.832M	83.768M	75.832M
5200MHz	Pass	Inf	84.058M	76.122M	83.478M	75.543M
5210MHz	Pass	Inf	83.768M	75.832M	84.348M	75.543M
5765MHz	Pass	500k	69.855M	75.832M	76.522M	75.832M
5790MHz	Pass	500k	75.652M	75.543M	75.362M	75.832M
5810MHz	Pass	500k	73.913M	75.543M	72.464M	75.832M

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;

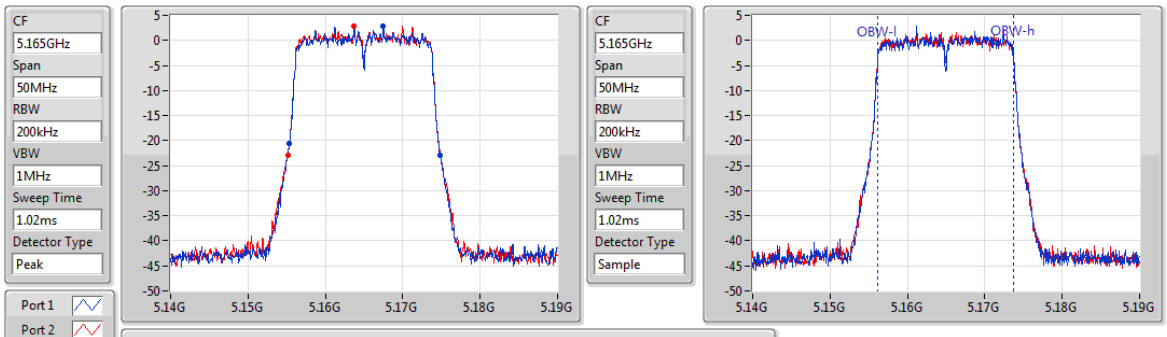
Proprietary protocol (BW: 20MHz)

5160MHz



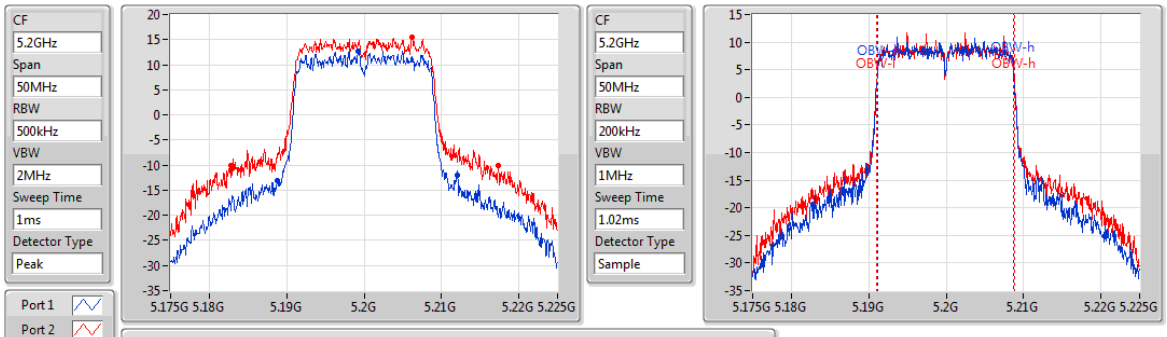
26dB(Hz)	Fl-26dB(Hz)	Fh-26dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
19.928M	5.150072G	5.17G	17.583M	5.151172G	5.168755G	Inf	1
19.855M	5.150145G	5.17G	17.583M	5.151172G	5.168755G	Inf	2

5165MHz



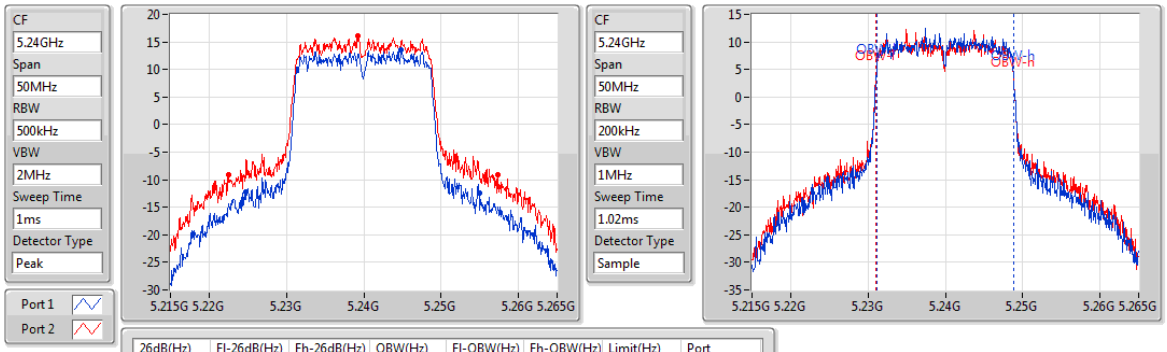
26dB(Hz)	Fl-26dB(Hz)	Fh-26dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
19.493M	5.15529G	5.174783G	17.583M	5.156172G	5.173755G	Inf	1
19.71M	5.155145G	5.174855G	17.583M	5.156172G	5.173755G	Inf	2

5200MHz



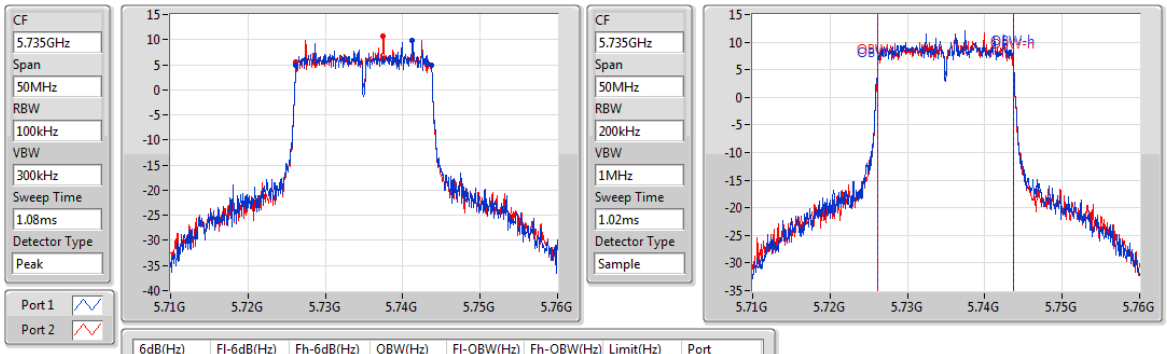
26dB(Hz)	Fl-26dB(Hz)	Fh-26dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
23.261M	5.188841G	5.212101G	17.656M	5.1911G	5.208755G	Inf	1
34.638M	5.182754G	5.217391G	17.8M	5.191027G	5.208828G	Inf	2

5240MHz



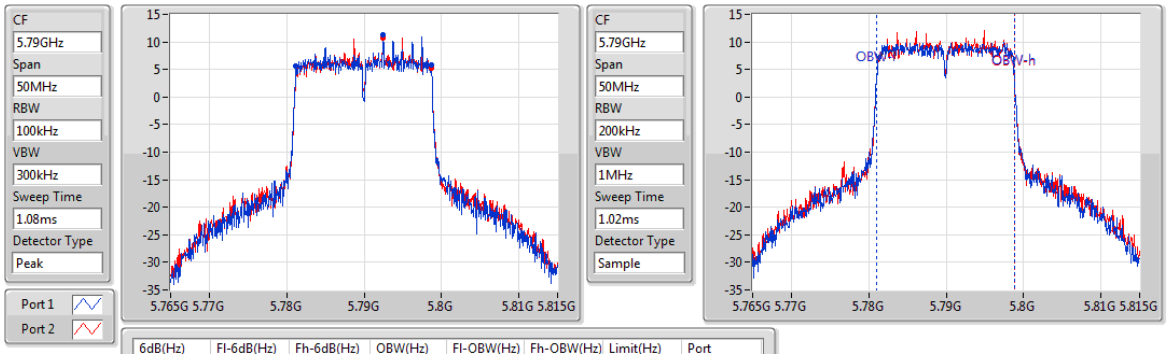
26dB(Hz)	Fl-26dB(Hz)	Fh-26dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
30.145M	5.224783G	5.254928G	17.728M	5.2311G	5.248828G	Inf	1
34.928M	5.222464G	5.257391G	17.873M	5.231027G	5.2489G	Inf	2

5735MHz



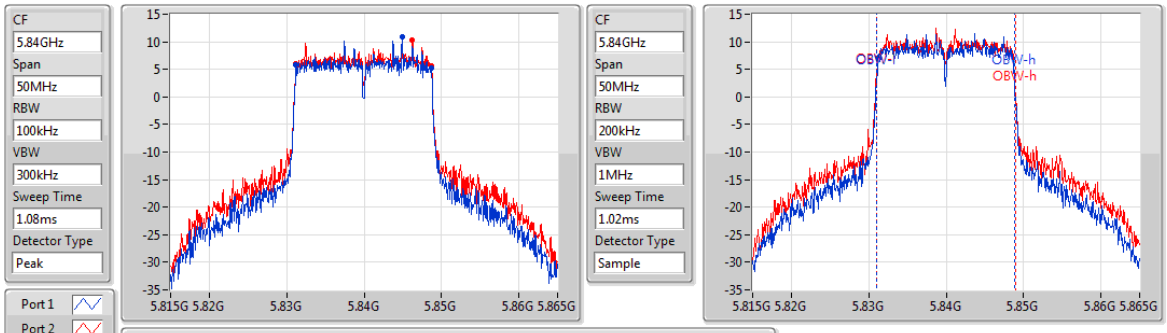
6dB(Hz)	Fl-6dB(Hz)	Fh-6dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
17.609M	5.726159G	5.743768G	17.656M	5.7261G	5.743755G	500k	1
17.609M	5.726159G	5.743768G	17.656M	5.7261G	5.743755G	500k	2

5790MHz



6dB(Hz)	Fl-6dB(Hz)	Fh-6dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
17.536M	5.781159G	5.798696G	17.8M	5.781027G	5.798828G	500k	1
17.609M	5.781159G	5.798768G	17.8M	5.781027G	5.798828G	500k	2

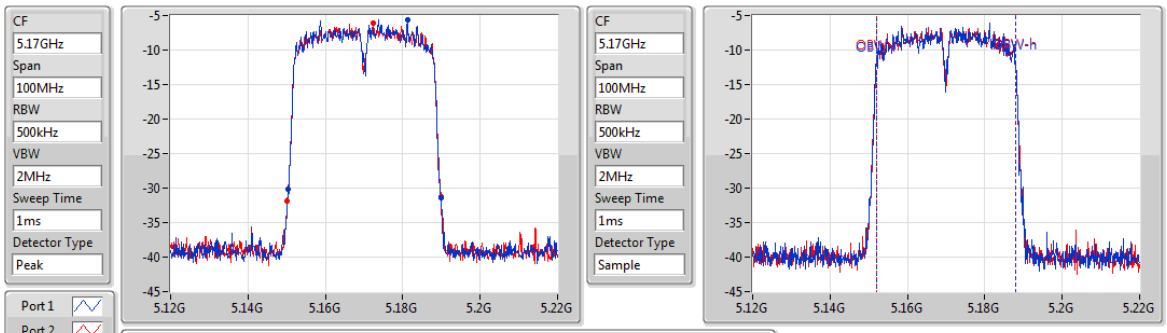
5840MHz



6dB(Hz)	Fl-6dB(Hz)	Fh-6dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
17.609M	5.831159G	5.848768G	17.8M	5.831027G	5.848828G	500k	1
17.609M	5.831159G	5.848768G	18.017M	5.830955G	5.848973G	500k	2

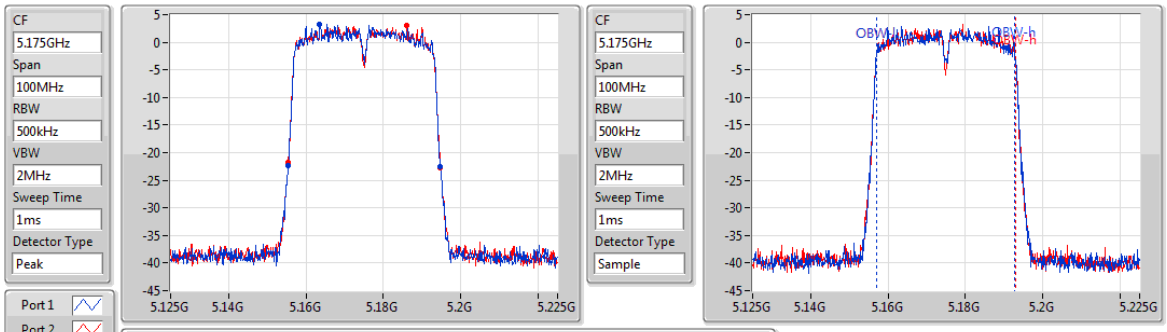
Proprietary protocol (BW: 40MHz)

5170MHz



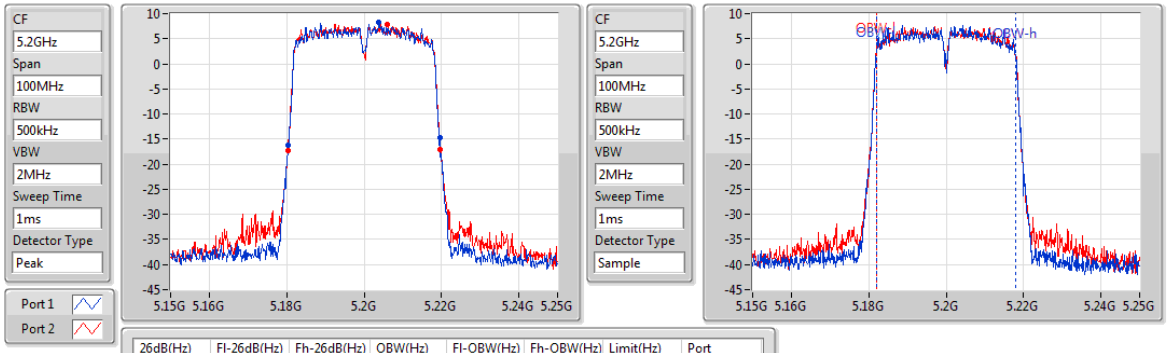
26dB(Hz)	Fl-26dB(Hz)	Fh-26dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
39.565M	5.150435G	5.19G	36.035M	5.15191G	5.187945G	Inf	1
39.71M	5.150145G	5.189855G	36.035M	5.15191G	5.187945G	Inf	2

5175MHz



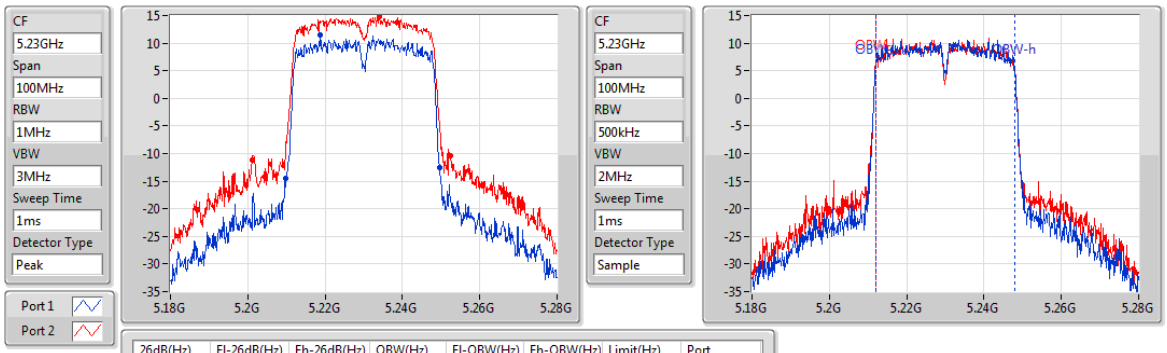
26dB(Hz)	Fl-26dB(Hz)	Fh-26dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
39.275M	5.155435G	5.19471G	35.745M	5.157055G	5.1928G	Inf	1
39.275M	5.155435G	5.19471G	35.89M	5.157055G	5.192945G	Inf	2

5200MHz



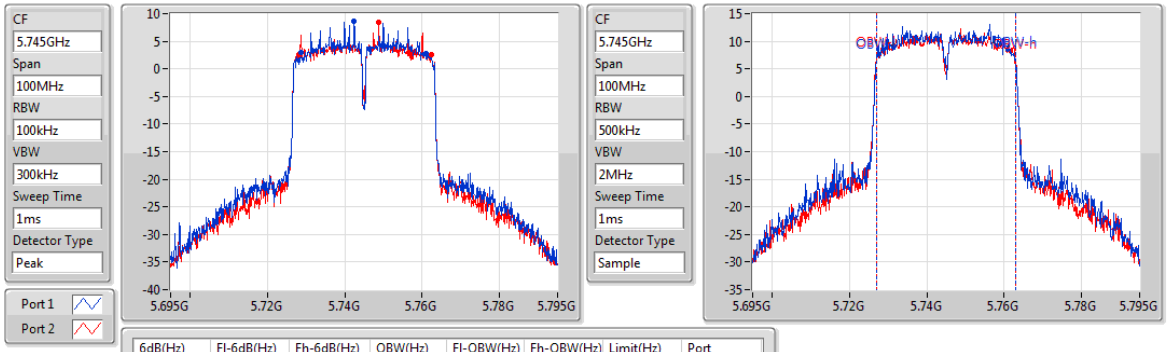
26dB(Hz)	Fl-26dB(Hz)	Fh-26dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
39.275M	5.18029G	5.219565G	35.89M	5.182055G	5.217945G	Inf	1
39.42M	5.18029G	5.21971G	35.89M	5.182055G	5.217945G	Inf	2

5230MHz



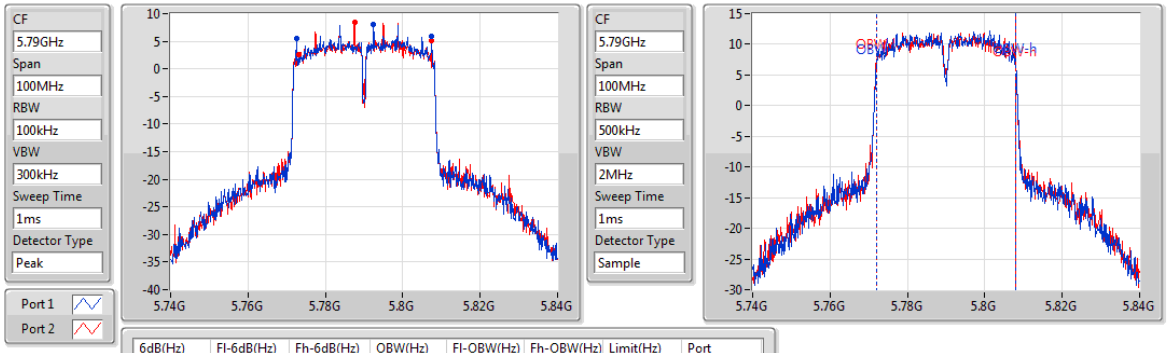
26dB(Hz)	Fl-26dB(Hz)	Fh-26dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
40M	5.20971G	5.24971G	36.035M	5.21191G	5.247945G	Inf	1
51.304M	5.201159G	5.252464G	36.035M	5.21191G	5.247945G	Inf	2

5745MHz



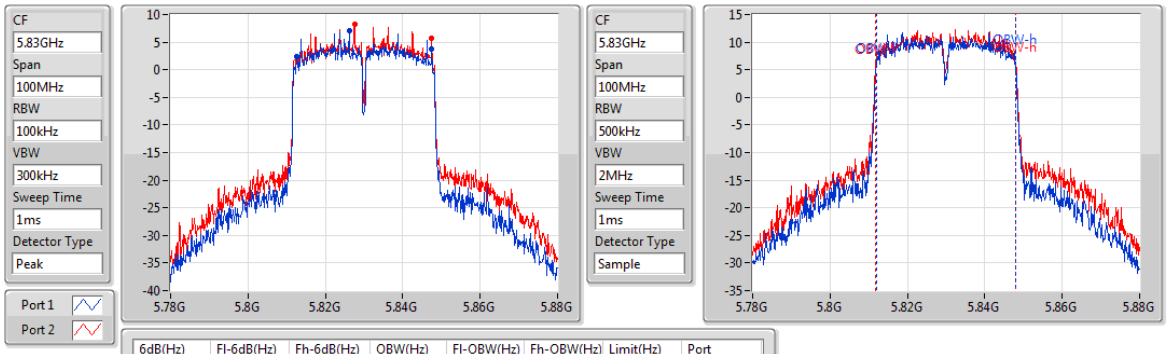
6dB(Hz)	Fl-6dB(Hz)	Fh-6dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
32.319M	5.728623G	5.760942G	36.035M	5.72691G	5.762945G	500k	1
34.493M	5.728043G	5.762536G	36.179M	5.72691G	5.76309G	500k	2

5790MHz



6dB(Hz)	Fl-6dB(Hz)	Fh-6dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
35.072M	5.772464G	5.807536G	36.179M	5.77191G	5.80809G	500k	1
34.493M	5.773043G	5.807536G	36.179M	5.77191G	5.80809G	500k	2

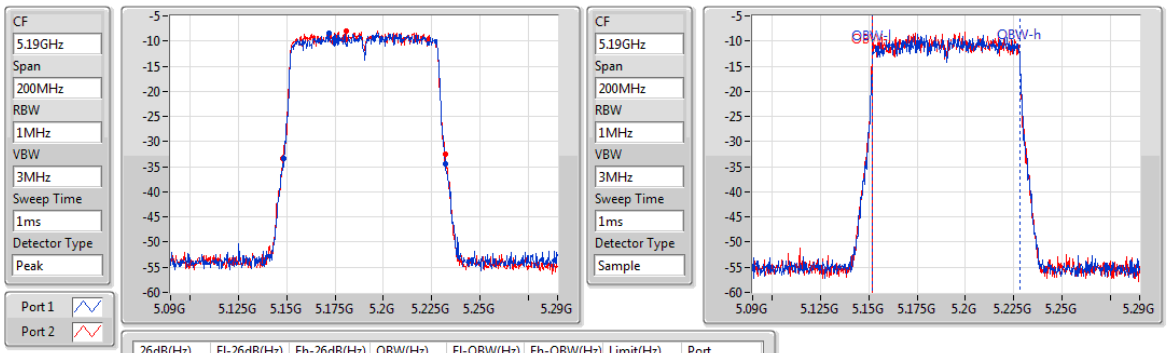
5830MHz



6dB(Hz)	Fl-6dB(Hz)	Fh-6dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
35.072M	5.812464G	5.847536G	36.035M	5.81191G	5.847945G	500k	1
35.072M	5.812464G	5.847536G	36.324M	5.811766G	5.84809G	500k	2

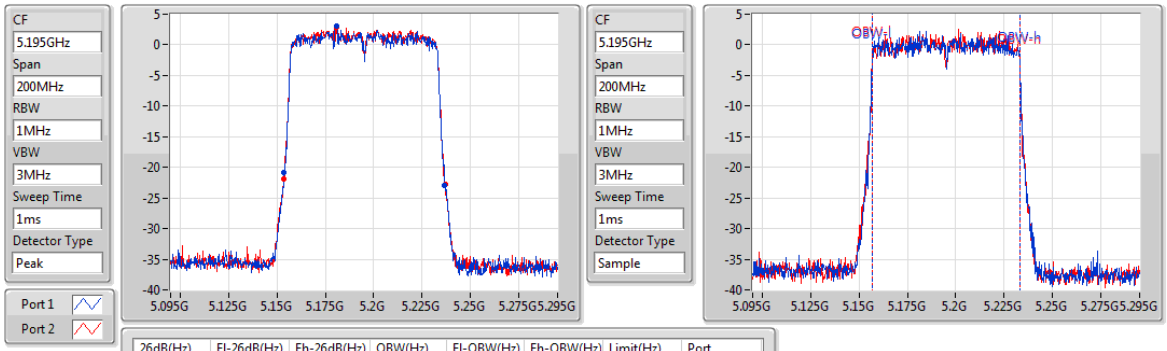
Proprietary protocol (BW: 80MHz)

5190MHz



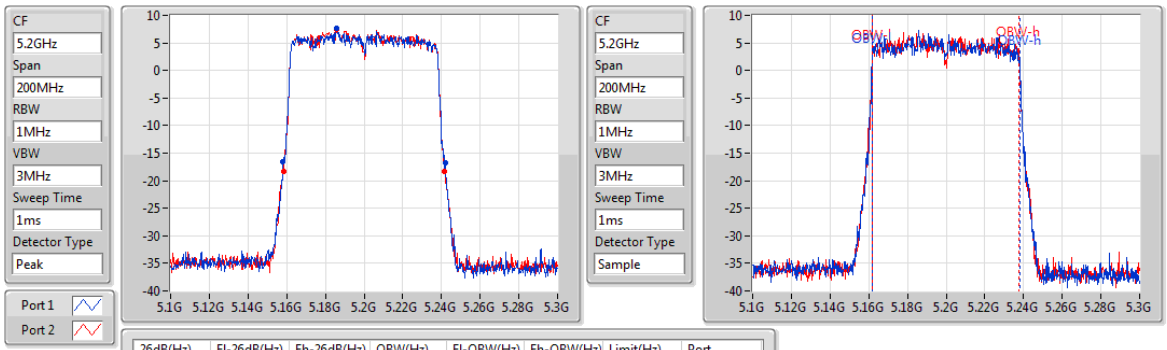
26dB(Hz)	Fl-26dB(Hz)	Fh-26dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
83.478M	5.148551G	5.232029G	75.832M	5.152084G	5.227916G	Inf	1
84.638M	5.147681G	5.232319G	75.832M	5.152084G	5.227916G	Inf	2

5195MHz



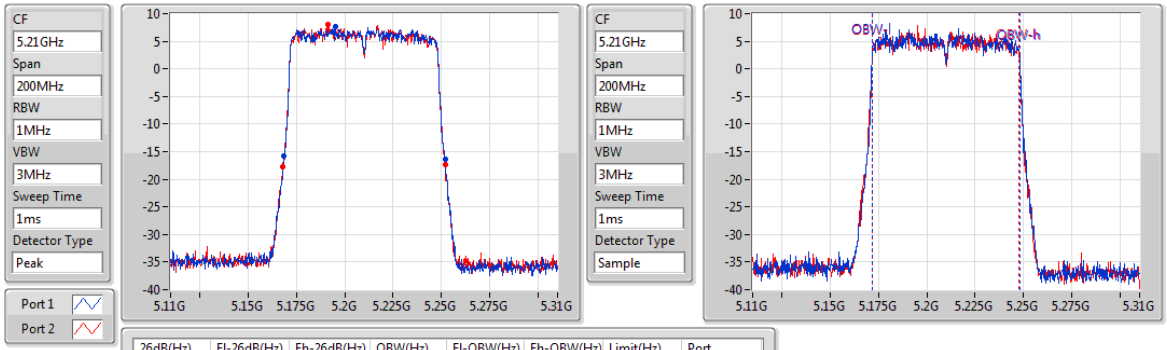
26dB(Hz)	Fl-26dB(Hz)	Fh-26dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
83.188M	5.153551G	5.236739G	75.832M	5.157084G	5.232916G	Inf	1
83.768M	5.153261G	5.237029G	75.832M	5.157084G	5.232916G	Inf	2

5200MHz



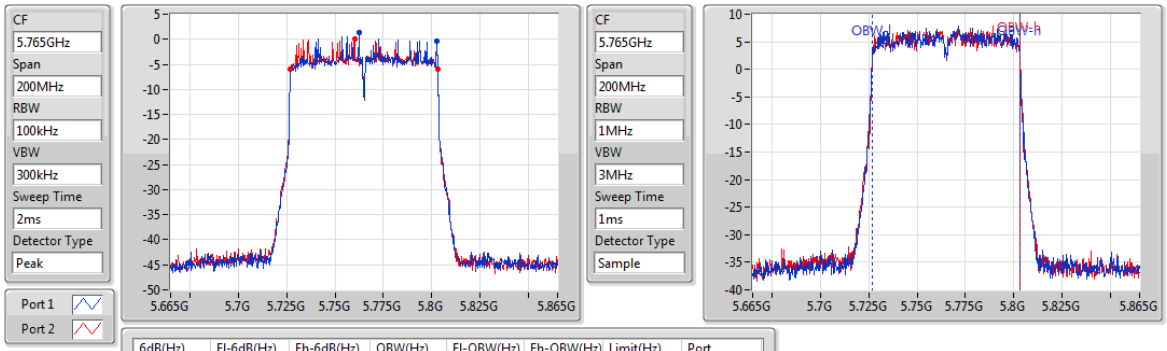
26dB(Hz)	Fl-26dB(Hz)	Fh-26dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
84.058M	5.157971G	5.242029G	76.122M	5.161795G	5.237916G	Inf	1
83.478M	5.158261G	5.241739G	75.543M	5.162084G	5.237627G	Inf	2

5210MHz



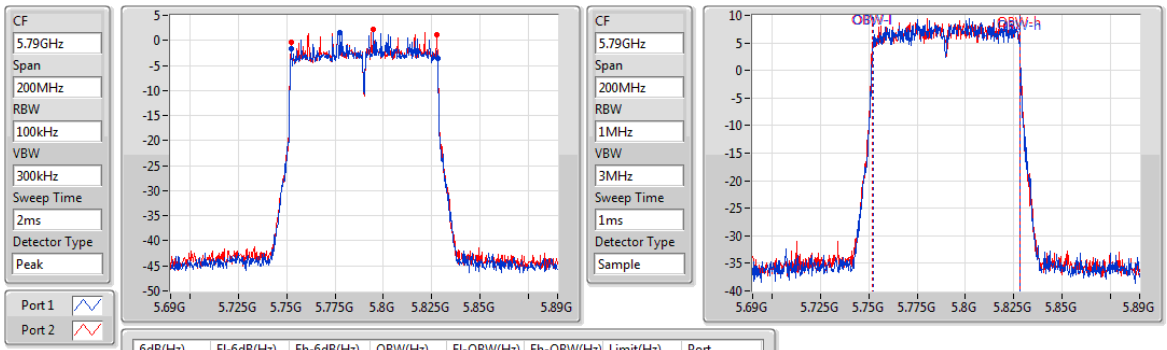
26dB(Hz)	Fl-26dB(Hz)	Fh-26dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
83.768M	5.168261G	5.252029G	75.832M	5.172084G	5.247916G	Inf	1
84.348M	5.167681G	5.252029G	75.543M	5.172084G	5.247627G	Inf	2

5765MHz



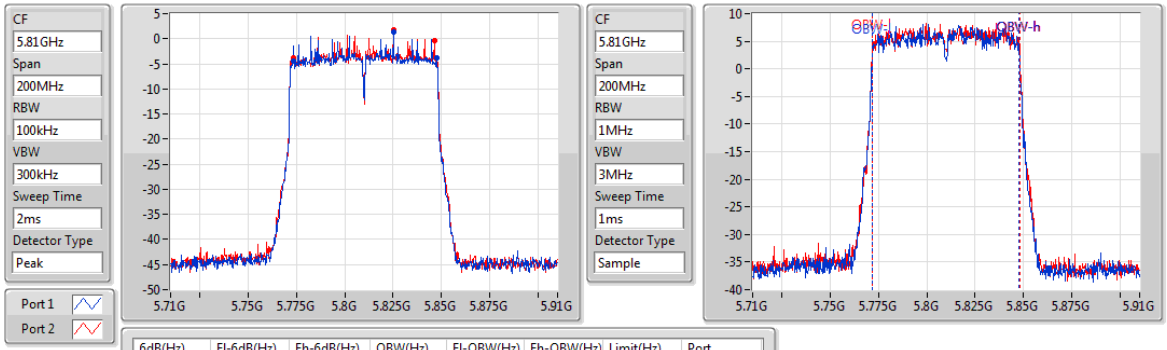
6dB(Hz)	Fl-6dB(Hz)	Fh-6dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
69.855M	5.732826G	5.802681G	75.832M	5.727084G	5.802916G	500k	1
76.522M	5.726739G	5.803261G	75.832M	5.727084G	5.802916G	500k	2

5790MHz



6dB(Hz)	Fl-6dB(Hz)	Fh-6dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
75.652M	5.752319G	5.827971G	75.543M	5.752373G	5.827916G	500k	1
75.362M	5.752319G	5.827681G	75.832M	5.752084G	5.827916G	500k	2

5810MHz



6dB(Hz)	Fl-6dB(Hz)	Fh-6dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
73.913M	5.773478G	5.847391G	75.543M	5.772084G	5.847627G	500k	1
72.464M	5.773768G	5.846232G	75.832M	5.772084G	5.847916G	500k	2

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 Fixed point-to-point U-NII devices may employ antennas with directional gain up to 23 dBi without any corresponding reduction in the maximum conducted output power.
☐	Client devices	Conducted Power: 250 mW

Frequency Band (MHz)		**Limit**
☒	5725 ~ 5850	Conducted Power: 1 W Fixed point-to-point U-NII devices operating in this band may employ transmitting antennas with directional gain greater than 6 dBi without any corresponding reduction in transmitter conducted power

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

Proprietary protocol (BW: MHz)	Total Power (dBm)	Total Power (W)	EIRP (dBm)	EIRP (W)
5.15-5.25GHz	-	-	-	-
20_Nss1,(MCS0)_2TX	**25.45**	0.35075	36.45	4.41570
40_Nss1,(MCS0)_2TX	23.72	0.23550	34.72	2.96483
80_Nss1,(MCS0)_2TX	19.97	0.09931	30.97	1.25026
5.725-5.85GHz	-	-	-	-
20_Nss1,(MCS0)_2TX	**25.48**	0.35318	36.48	4.44631
40_Nss1,(MCS0)_2TX	25.23	0.33343	36.23	4.19759
80_Nss1,(MCS0)_2TX	21.47	0.14028	32.47	1.76604

Result

Proprietary protocol (BW: MHz)	Result	DG (dBi)	Port 1 (dBm)	Port 2 (dBm)	Total Power (dBm)	Power Limit (dBm)	EIRP (dBm)	EIRP Limit (dBm)
20_Nss1,(MCS0)_2TX	-	-	-	-	-	-	-	-
5160MHz	Pass	11.00	-5.23	-4.07	-1.60	30.00	9.40	53.00
5165MHz	Pass	11.00	13.49	13.62	16.57	30.00	27.57	53.00
5200MHz	Pass	11.00	22.23	22.38	25.32	30.00	36.32	53.00
5240MHz	Pass	11.00	22.51	22.37	**25.45**	30.00	36.45	53.00
5735MHz	Pass	11.00	22.34	22.37	25.37	30.00	36.37	Inf
5790MHz	Pass	11.00	22.39	22.54	**25.48**	30.00	36.48	Inf
5840MHz	Pass	11.00	22.12	22.63	25.39	30.00	36.39	Inf
40_Nss1,(MCS0)_2TX	-	-	-	-	-	-	-	-
5170MHz	Pass	11.00	3.56	3.77	6.68	30.00	17.68	53.00
5175MHz	Pass	11.00	12.66	12.94	15.81	30.00	26.81	53.00
5200MHz	Pass	11.00	17.35	17.92	20.65	30.00	31.65	53.00
5230MHz	Pass	11.00	20.66	20.75	23.72	30.00	34.72	53.00
5745MHz	Pass	11.00	22.26	21.91	25.10	30.00	36.10	Inf
5790MHz	Pass	11.00	22.14	22.30	25.23	30.00	36.23	Inf
5830MHz	Pass	11.00	21.35	22.31	24.87	30.00	35.87	Inf
80_Nss1,(MCS0)_2TX	-	-	-	-	-	-	-	-
5190MHz	Pass	11.00	1.17	1.24	4.22	30.00	15.22	53.00
5195MHz	Pass	11.00	11.90	12.24	15.08	30.00	26.08	53.00
5200MHz	Pass	11.00	16.12	16.54	19.35	30.00	30.35	53.00
5210MHz	Pass	11.00	16.94	16.97	19.97	30.00	30.97	53.00
5765MHz	Pass	11.00	17.58	17.67	20.64	30.00	31.64	Inf
5790MHz	Pass	11.00	18.37	18.55	21.47	30.00	32.47	Inf
5810MHz	Pass	11.00	17.64	17.95	20.81	30.00	31.81	Inf

DG = Directional Gain;

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 Fixed point-to-point U-NII devices may employ antennas with directional gain up to 23 dBi without any corresponding reduction in the maximum power spectral density.
☐	Client devices	11 dBm / MHz

Frequency Band (MHz)		**Limit**
☒	5725 ~ 5850	30 dBm /500 kHz

3.4.2 Test Procedures

For 5150 ~ 5250 MHz

Duty cycle < 98 %

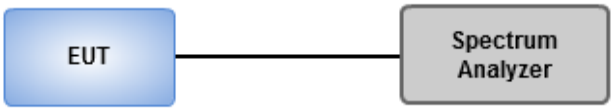
1. Set RBW = 1 MHz, VBW = 3 MHz, Detector = RMS.
2. Set sweep time ≥ 10 * (number of points in sweep) * (total on/off period of the transmitted signal).
3. Perform a single sweep.
4. Use the peak marker function to determine the maximum amplitude level.
5. Add 10 log(1/x), where x is the duty cycle.

For 5725 ~ 5850 MHz

Duty cycle < 98 %

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

3.4.3 Test Setup



3.4.4 Test Result of Peak Power Spectral Density

Summary

Proprietary protocol (BW: MHz)	PD (dBm/RBW)	EIRP PD (dBm/RBW)
5.15-5.25GHz	-	-
20_Nss1,(MCS0)_2TX	12.28	23.28
40_Nss1,(MCS0)_2TX	7.85	18.85
80_Nss1,(MCS0)_2TX	0.37	11.37
5.725-5.85GHz	-	-
20_Nss1,(MCS0)_2TX	10.42	21.42
40_Nss1,(MCS0)_2TX	7.73	18.73
80_Nss1,(MCS0)_2TX	0.92	11.92

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

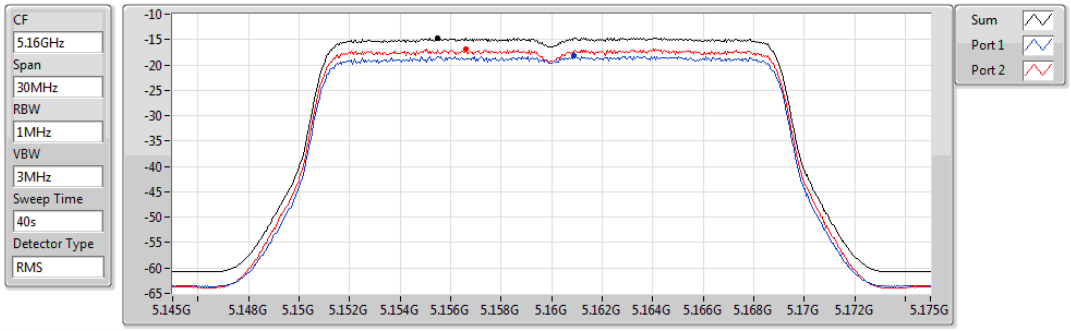
Result

Proprietary protocol (BW: MHz)	Result	DG (dBi)	Port 1 (dBm/RBW)	Port 2 (dBm/RBW)	PD (dBm/RBW)	PD Limit (dBm/RBW)	EIRP PD (dBm/RBW)	EIRP PD Limit (dBm/RBW)
20_Nss1,(MCS0)_2TX	-	-	-	-	-	-	-	-
5160MHz	Pass	11.00	-18.16	-16.85	-14.64	17.00	-3.64	40.00
5165MHz	Pass	11.00	-0.38	-0.14	2.71	17.00	13.71	40.00
5200MHz	Pass	11.00	8.64	8.60	11.61	17.00	22.61	40.00
5240MHz	Pass	11.00	9.56	8.98	12.28	17.00	23.28	40.00
5735MHz	Pass	11.00	7.19	7.25	10.11	30.00	21.11	Inf
5790MHz	Pass	11.00	7.23	7.49	10.33	30.00	21.33	Inf
5840MHz	Pass	11.00	7.11	7.78	10.42	30.00	21.42	Inf
40_Nss1,(MCS0)_2TX	-	-	-	-	-	-	-	-
5170MHz	Pass	11.00	-12.40	-12.31	-9.36	17.00	1.64	40.00
5175MHz	Pass	11.00	-3.19	-3.14	-0.17	17.00	10.83	40.00
5200MHz	Pass	11.00	1.69	1.85	4.77	17.00	15.77	40.00
5230MHz	Pass	11.00	4.91	4.78	7.85	17.00	18.85	40.00
5745MHz	Pass	11.00	4.69	4.41	7.52	30.00	18.52	Inf
5790MHz	Pass	11.00	4.80	4.70	7.73	30.00	18.73	Inf
5830MHz	Pass	11.00	3.87	4.55	7.21	30.00	18.21	Inf
80_Nss1,(MCS0)_2TX	-	-	-	-	-	-	-	-
5190MHz	Pass	11.00	-18.48	-18.20	-15.35	17.00	-4.35	40.00
5195MHz	Pass	11.00	-7.65	-7.53	-4.59	17.00	6.41	40.00
5200MHz	Pass	11.00	-3.23	-2.93	-0.14	17.00	10.86	40.00
5210MHz	Pass	11.00	-2.63	-2.53	0.37	17.00	11.37	40.00
5765MHz	Pass	11.00	-3.54	-3.47	-0.50	30.00	10.50	Inf
5790MHz	Pass	11.00	-2.15	-2.03	0.92	30.00	11.92	Inf
5810MHz	Pass	11.00	-3.29	-2.96	-0.11	30.00	10.89	Inf

DG = Directional Gain; **RBW** = 500kHz for 5.725-5.85GHz band / 1MHz for other band;
PD = trace bin-by-bin of each transmits port summing can be performed maximum power density; **Port X** = Port Xpower density;

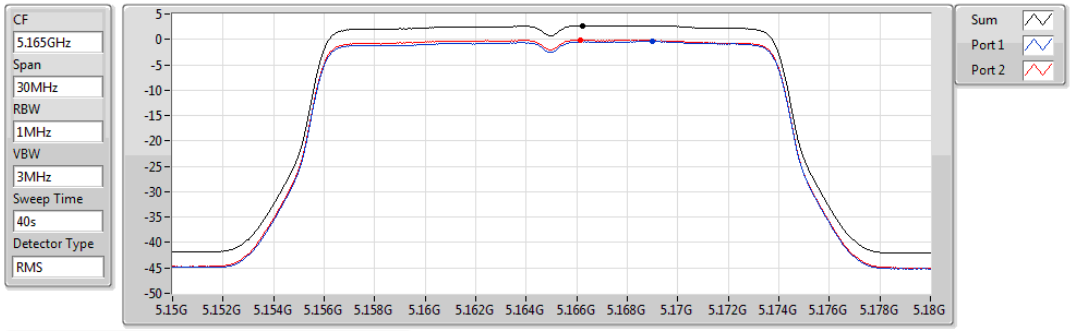
Proprietary protocol (BW: 20MHz)

5160MHz



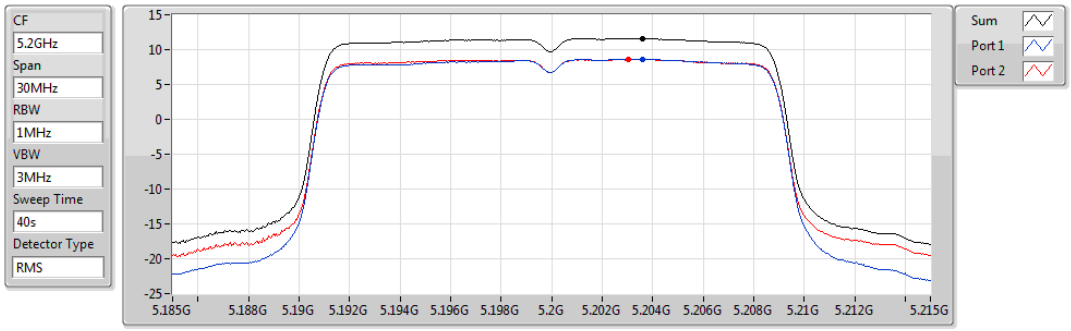
Sum	PD	Port 1	Port 2
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
-14.64	-14.64	-18.16	-16.85

5165MHz



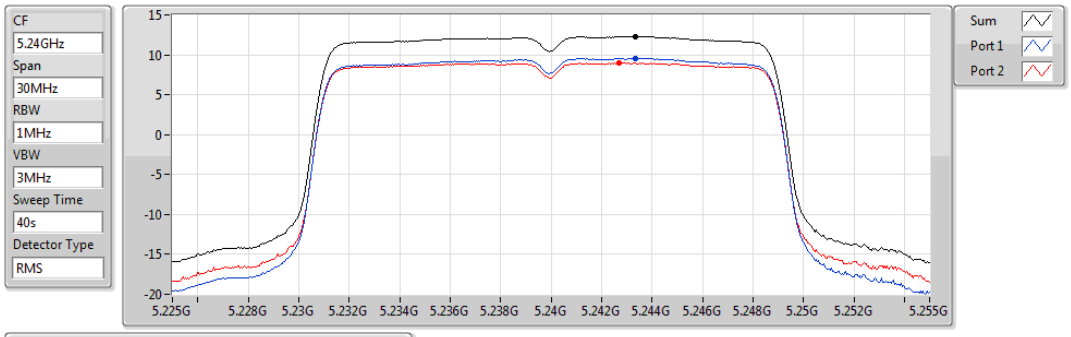
Sum	PD	Port 1	Port 2
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
2.71	2.71	-0.38	-0.14

5200MHz



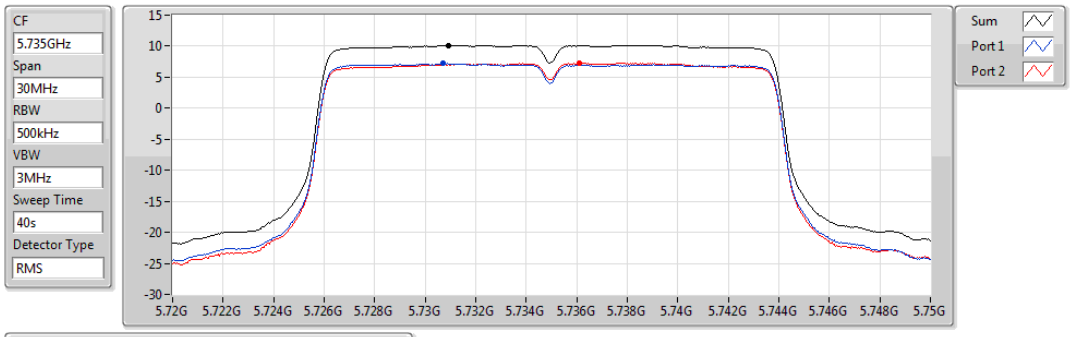
Sum	PD	Port 1	Port 2
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
11.61	11.61	8.64	8.60

5240MHz



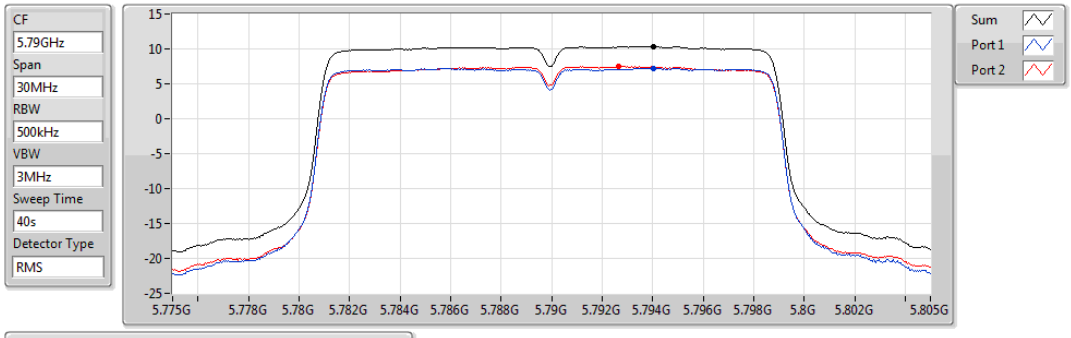
Sum	PD	Port 1	Port 2
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
12.28	12.28	9.56	8.98

5735MHz



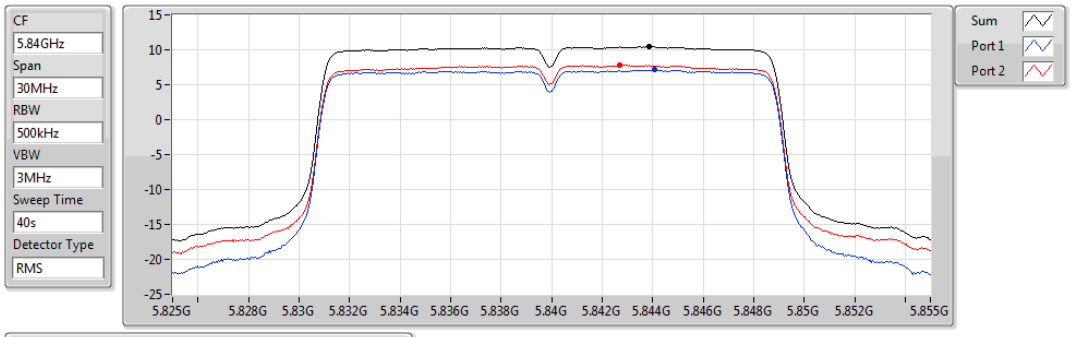
Sum	PD	Port 1	Port 2
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
10.11	10.11	7.19	7.25

5790MHz



Sum	PD	Port 1	Port 2
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
10.33	10.33	7.23	7.49

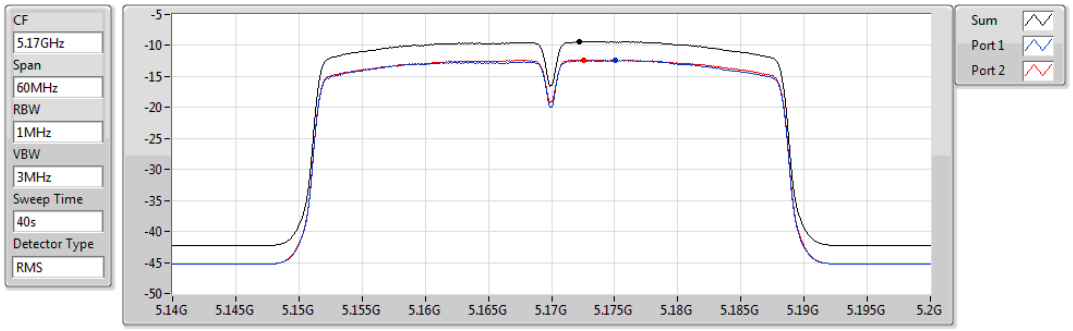
5840MHz



Sum	PD	Port 1	Port 2
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
10.42	10.42	7.11	7.78

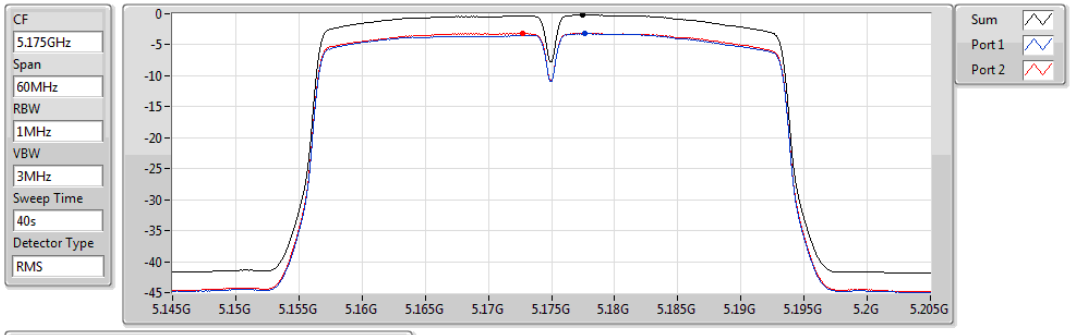
Proprietary protocol (BW: 40MHz)

5170MHz



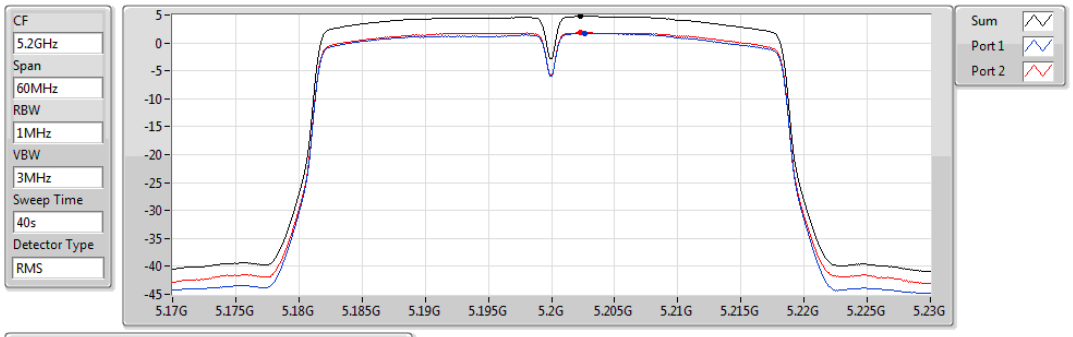
Sum	PD	Port 1	Port 2
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
-9.36	-9.36	-12.40	-12.31

5175MHz



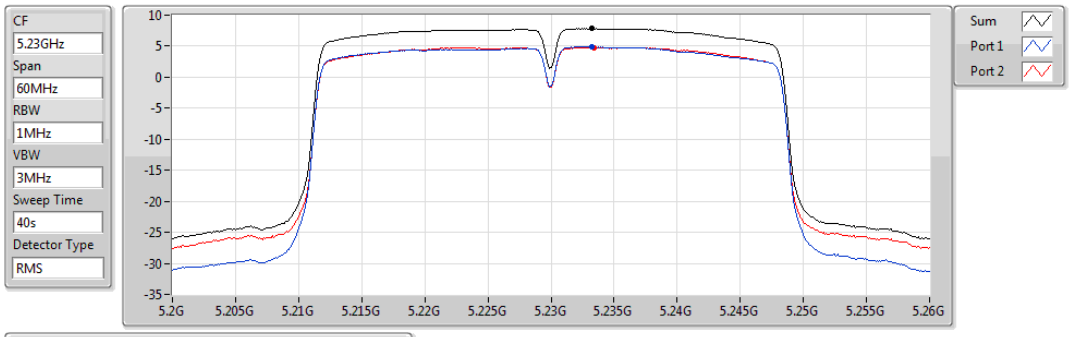
Sum	PD	Port 1	Port 2
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
-0.17	-0.17	-3.19	-3.14

5200MHz



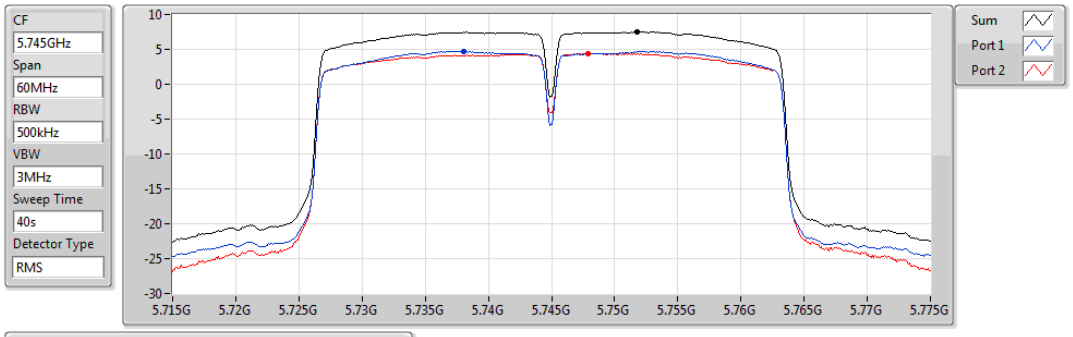
Sum	PD	Port 1	Port 2
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
4.77	4.77	1.69	1.85

5230MHz



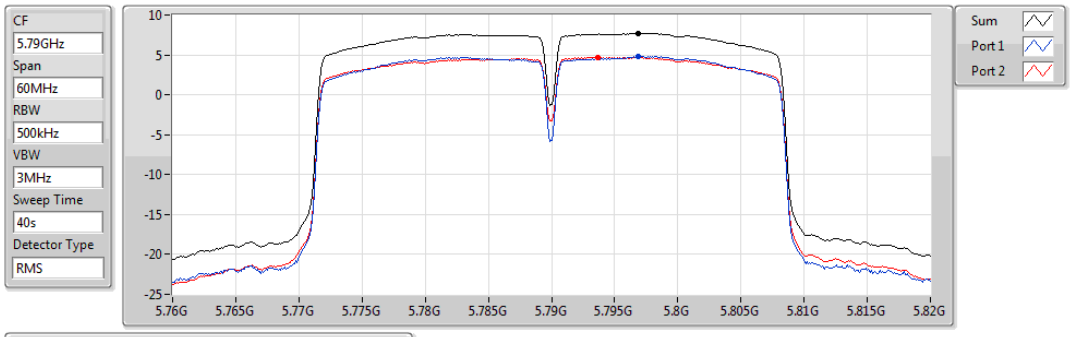
Sum	PD	Port 1	Port 2
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
7.85	7.85	4.91	4.78

5745MHz



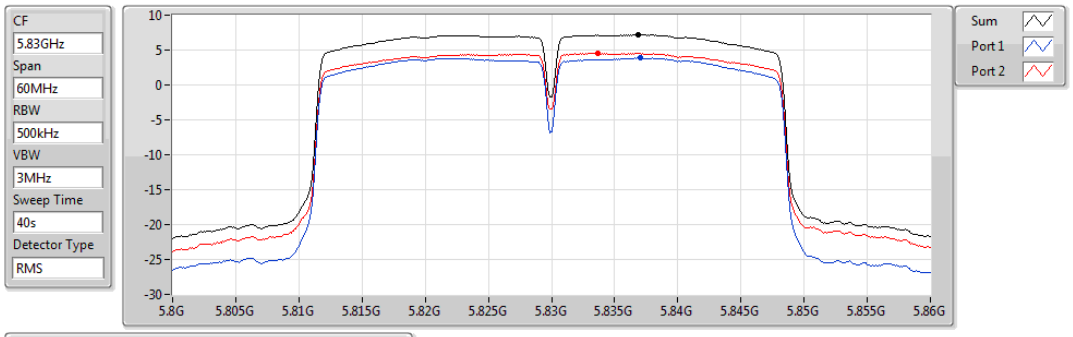
Sum	PD	Port 1	Port 2
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
7.52	7.52	4.69	4.41

5790MHz



Sum	PD	Port 1	Port 2
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
7.73	7.73	4.80	4.70

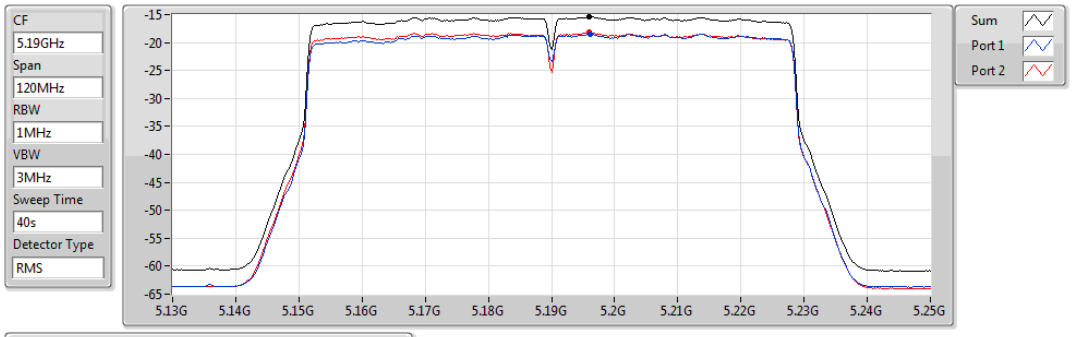
5830MHz



Sum	PD	Port 1	Port 2
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
7.21	7.21	3.87	4.55

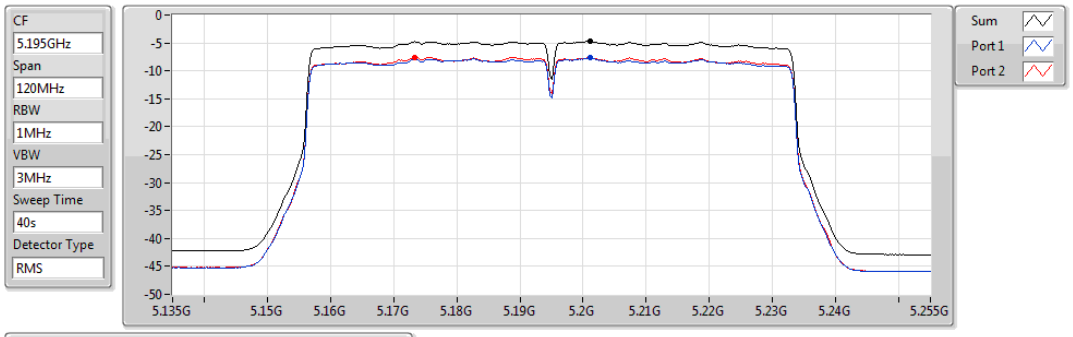
Proprietary protocol (BW: 80MHz)

5190MHz



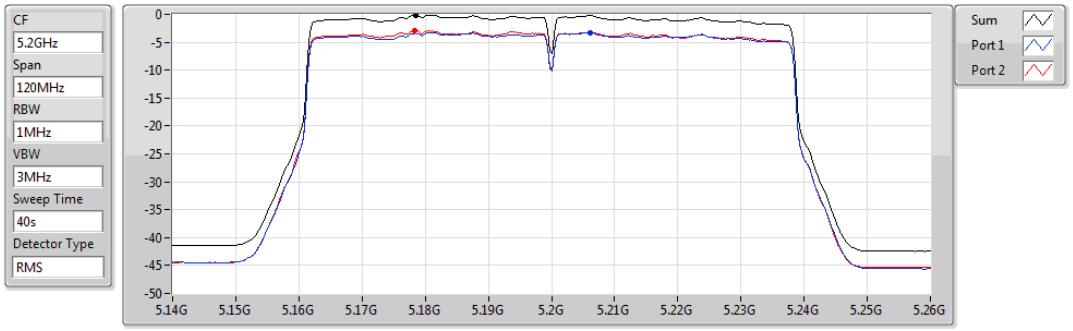
Sum	PD	Port 1	Port 2
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
-15.35	-15.35	-18.48	-18.20

5195MHz



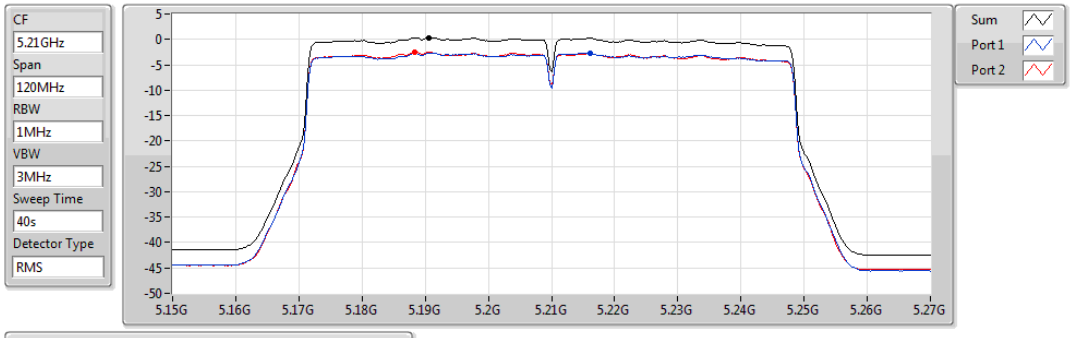
Sum	PD	Port 1	Port 2
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
-4.59	-4.59	-7.65	-7.53

5200MHz



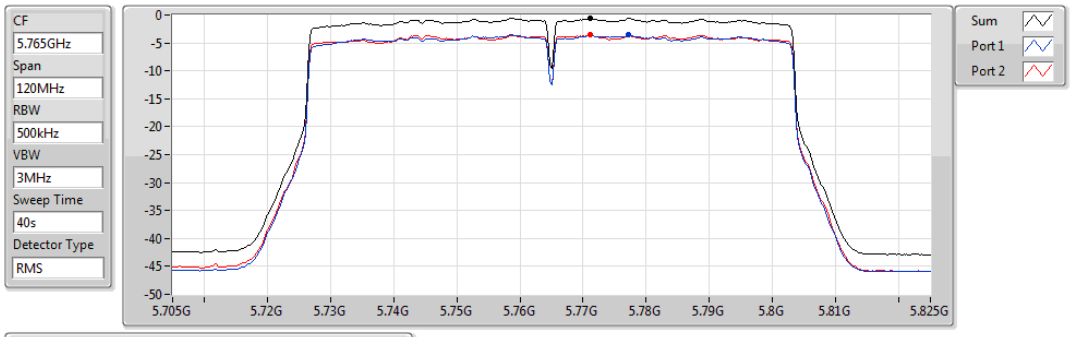
Sum	PD	Port 1	Port 2
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
-0.14	-0.14	-3.23	-2.93

5210MHz



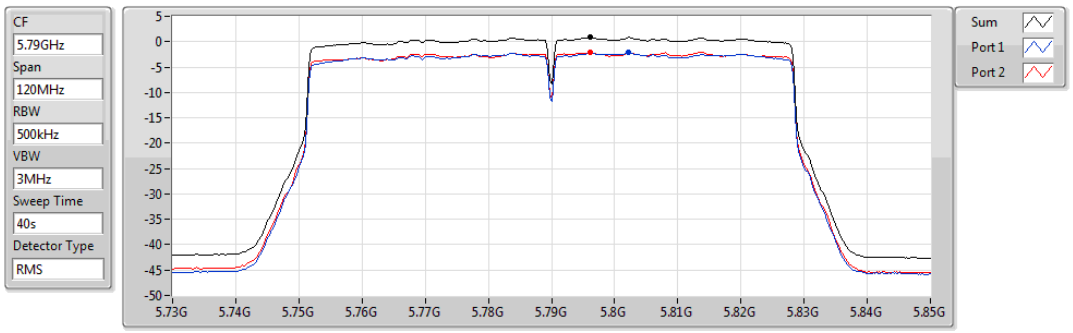
Sum	PD	Port 1	Port 2
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
0.37	0.37	-2.63	-2.53

5765MHz



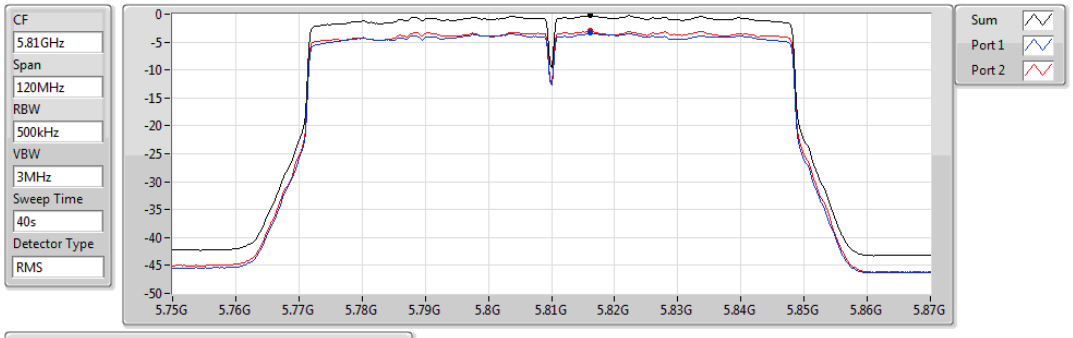
Sum	PD	Port 1	Port 2
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
-0.50	-0.50	-3.54	-3.47

5790MHz



Sum	PD	Port 1	Port 2
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
0.92	0.92	-2.15	-2.03

5810MHz



Sum	PD	Port 1	Port 2
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
-0.11	-0.11	-3.29	-2.96

3.5 Transmitter Radiated and Band Edge Emissions

3.5.1 Limit of Transmitter Radiated and Band Edge Emissions

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

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

Un-restricted band emissions above 1GHz Limit	
Operating Band	**Limit**
5.15 - 5.25 GHz	e.i.r.p. -27 dBm [68.2 dBuV/m@3m]
5.725 - 5.850 GHz	All emissions shall be limited to a level of −27 dBm/MHz at 75 MHz or more above or below the band edge increasing linearly to 10 dBm/MHz at 25 MHz above or below the band edge, and from 25 MHz above or below the band edge increasing linearly to a level of 15.6 dBm/MHz at 5 MHz above or below the band edge, and from 5 MHz above or below the band edge increasing linearly to a level of 27 dBm/MHz at the band edge.

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

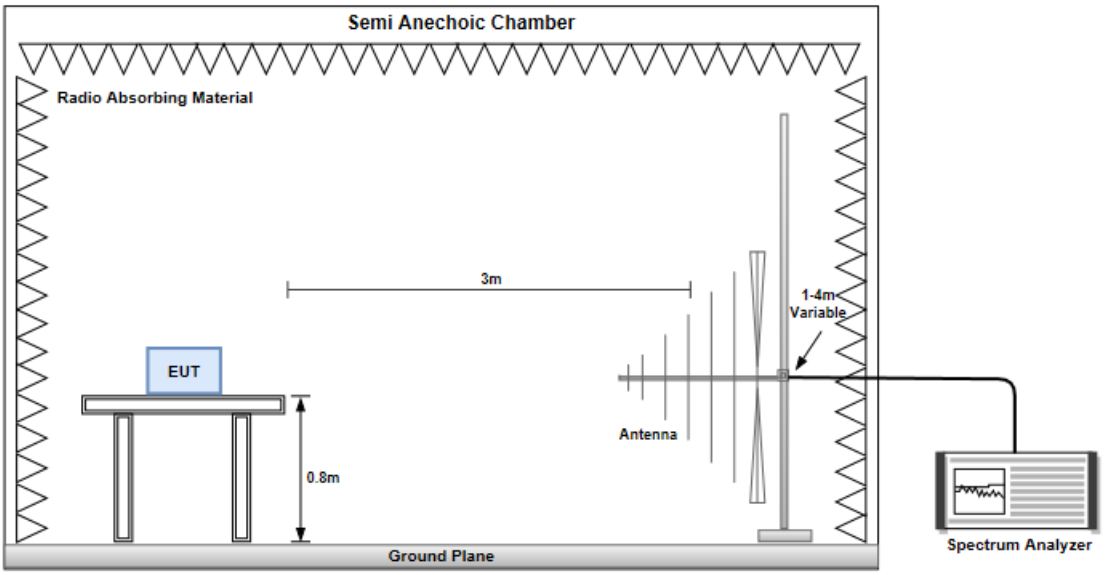
1. Measurement is made at a semi-anechoic chamber that incorporates a turntable allowing a EUT rotation of 360°. A continuously-rotating, remotely-controlled turntable is installed at the test site to support the EUT and facilitate determination of the direction of maximum radiation for each EUT emission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

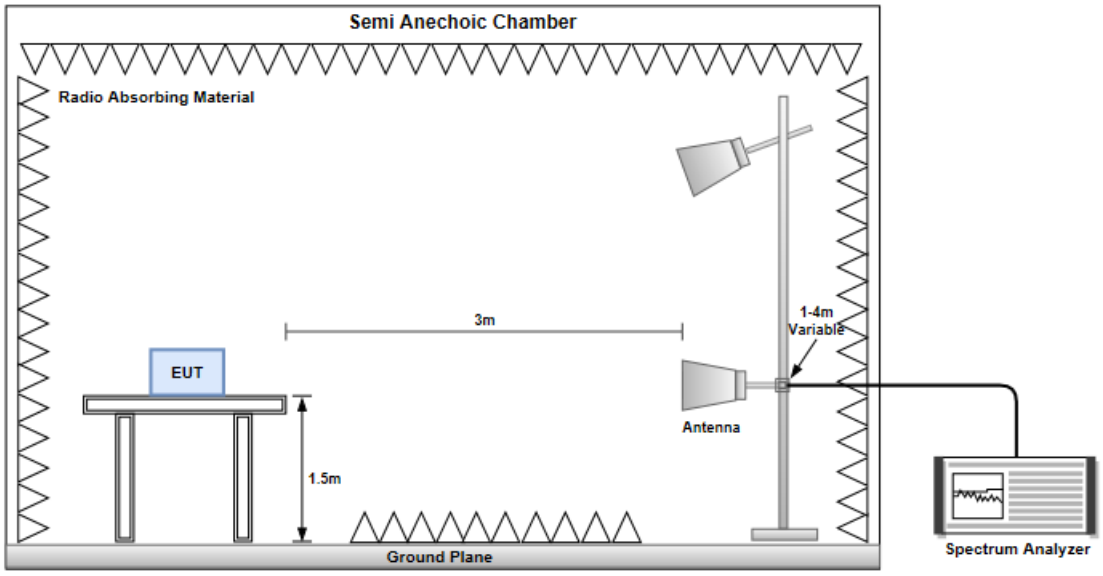
1. 120kHz measurement bandwidth of test receiver and Quasi-peak detector is for radiated emission below 1GHz.
2. RBW=1MHz, VBW=3MHz and Peak detector is for peak measured value of radiated emission above 1GHz.
3. RBW=1MHz, VBW=1/T and Peak detector is for average measured value of radiated emission above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

3.5.3 Test Setup

Radiated Emissions below 1 GHz

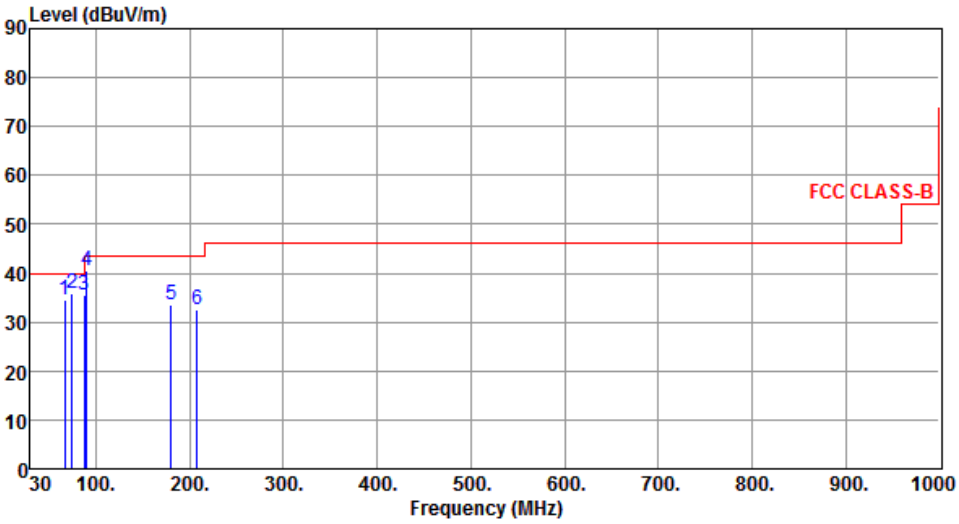


Radiated Emissions above 1 GHz



3.5.4 Transmitter Radiated Unwanted Emissions (Below 1GHz)

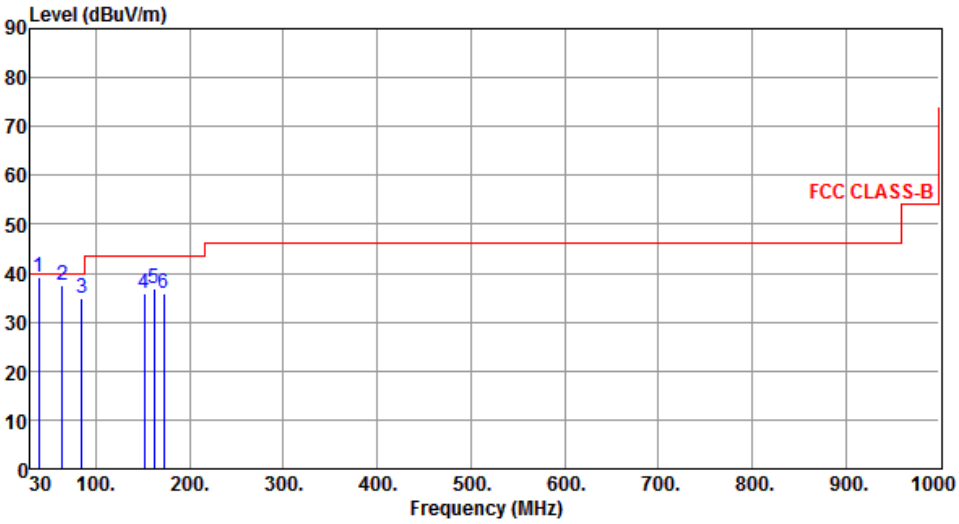
Proprietary protocol (BW)	20MHz	Test Freq. (MHz)	5240
Polarization	Horizontal		



	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	66.79	34.38	40.00	-5.62	44.62	-10.24	Peak	---	---
2	74.59	35.86	40.00	-4.14	47.65	-11.79	Peak	---	---
3	87.33	35.49	40.00	-4.51	49.97	-14.48	QP	196	74
4	90.26	40.49	43.50	-3.01	55.06	-14.57	Peak	---	---
5	180.49	33.65	43.50	-9.85	43.69	-10.04	Peak	---	---
6	207.49	32.57	43.50	-10.93	44.36	-11.79	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.

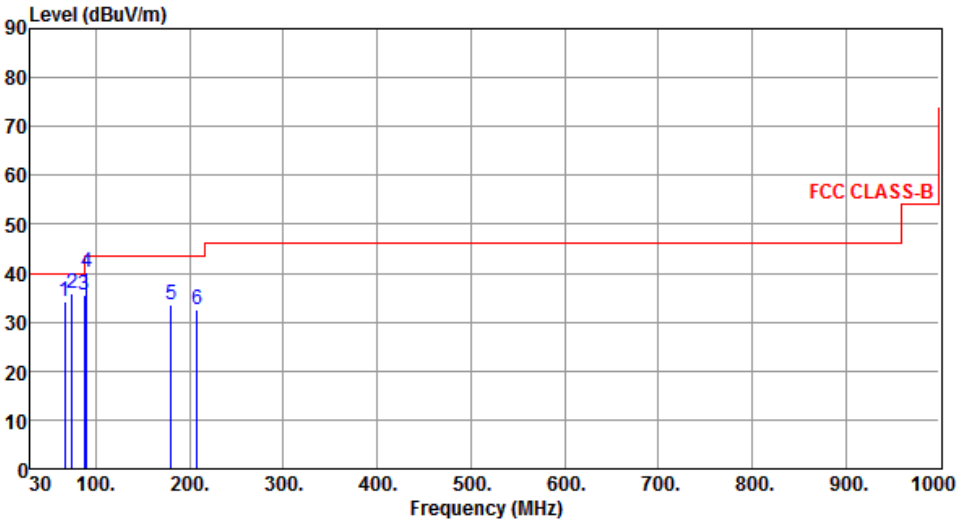
Proprietary protocol (BW)	20MHz	Test Freq. (MHz)	5240
Polarization	Vertical		



	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	38.69	39.12	40.00	-0.88	48.44	-9.32	QP	100	67
2	63.88	37.56	40.00	-2.44	47.19	-9.63	QP	100	180
3	85.33	34.74	40.00	-5.26	49.01	-14.27	QP	100	104
4	151.33	35.74	43.50	-7.76	44.09	-8.35	Peak	---	---
5	161.86	36.88	43.50	-6.62	45.32	-8.44	Peak	---	---
6	172.62	35.74	43.50	-7.76	44.80	-9.06	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.

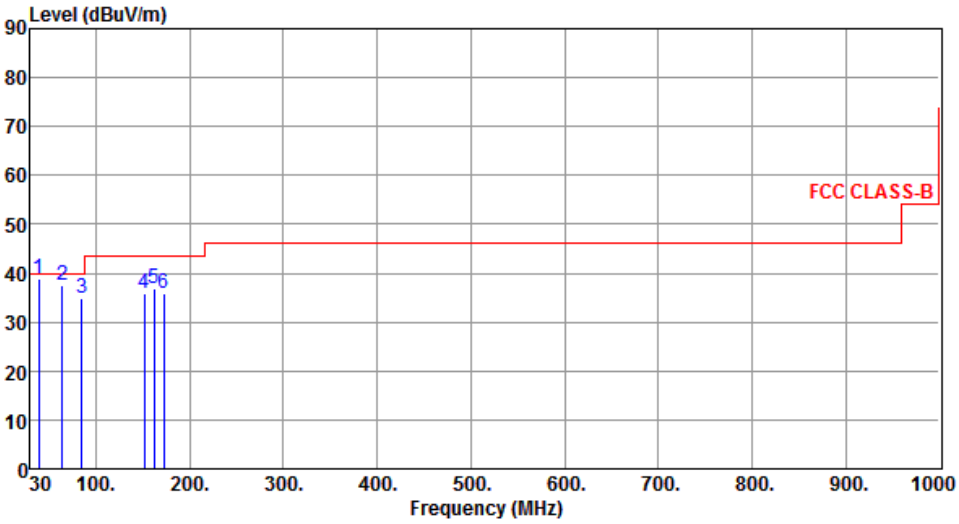
Proprietary protocol (BW)	20MHz	Test Freq. (MHz)	5790
Polarization	Horizontal		



	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	66.75	34.35	40.00	-5.65	44.59	-10.24	Peak	---	---
2	74.59	35.85	40.00	-4.15	47.64	-11.79	Peak	---	---
3	87.35	35.48	40.00	-4.52	49.96	-14.48	QP	196	77
4	90.28	40.34	43.50	-3.16	54.91	-14.57	Peak	---	---
5	180.42	33.65	43.50	-9.85	43.68	-10.03	Peak	---	---
6	207.49	32.65	43.50	-10.85	44.44	-11.79	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.

Proprietary protocol (BW)	20MHz	**Test Freq. (MHz)**	5790
Polarization	Vertical		

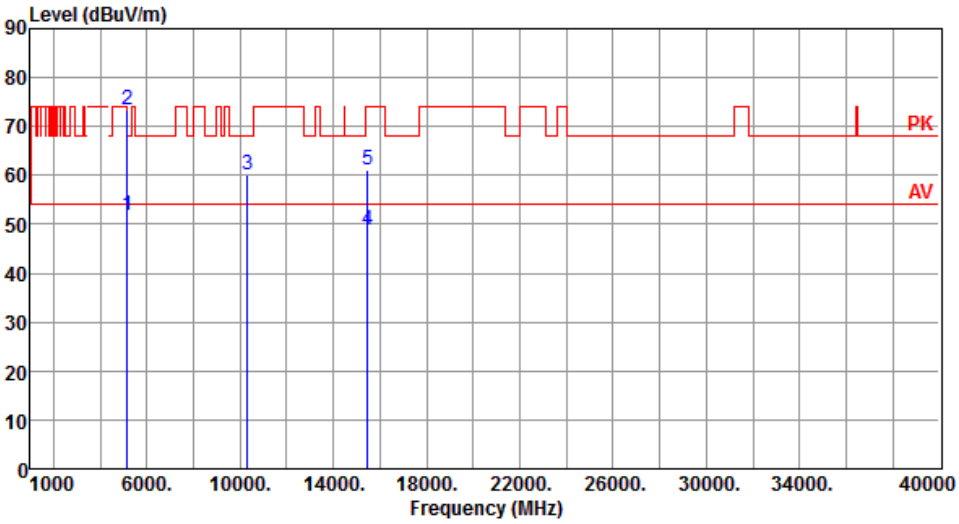


	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	38.65	39.01	40.00	-0.99	48.32	-9.31	QP	100	68
2	63.95	37.54	40.00	-2.46	47.17	-9.63	QP	100	182
3	85.31	34.75	40.00	-5.25	49.02	-14.27	QP	100	105
4	151.25	35.74	43.50	-7.76	44.09	-8.35	Peak	---	---
5	161.82	36.89	43.50	-6.61	45.33	-8.44	Peak	---	---
6	172.59	35.74	43.50	-7.76	44.80	-9.06	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 20

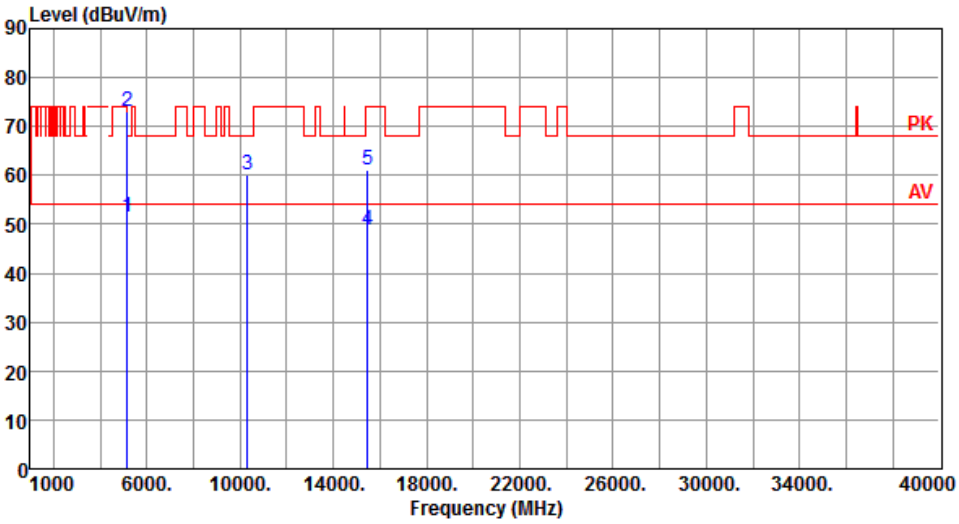
Proprietary protocol (BW)	20MHz	Test Freq. (MHz)	5160
Polarization	Horizontal		



	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	5150.00	51.90	54.00	-2.10	44.65	7.25	Average	159	181
2	5150.00	73.55	74.00	-0.45	66.30	7.25	Peak	159	181
3	10320.00	60.01	68.20	-8.19	42.76	17.25	Peak	100	30
4	15480.00	48.72	54.00	-5.28	29.93	18.79	Average	100	50
5	15480.00	61.12	74.00	-12.88	42.33	18.79	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).

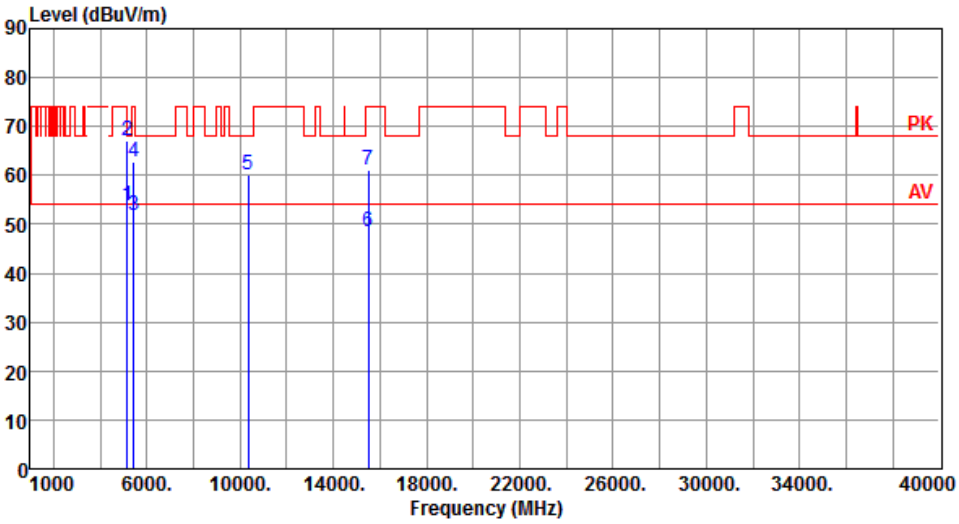
Proprietary protocol (BW)	20MHz	Test Freq. (MHz)	5160
Polarization	Vertical		



	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	5150.00	51.56	54.00	-2.44	44.31	7.25	Average	113	182
2	5150.00	73.07	74.00	-0.93	65.82	7.25	Peak	113	182
3	10320.00	60.11	68.20	-8.09	42.86	17.25	Peak	100	60
4	15480.00	48.79	54.00	-5.21	30.00	18.79	Average	100	60
5	15480.00	61.14	74.00	-12.86	42.35	18.79	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).

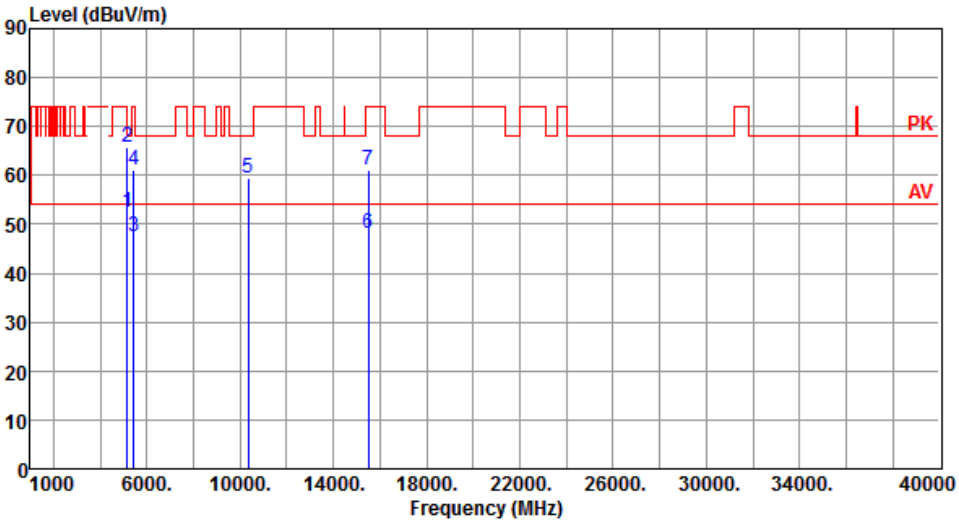
Proprietary protocol (BW)	20MHz	Test Freq. (MHz)	5165
Polarization	Horizontal		



	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	53.80	54.00	-0.20	46.55	7.25	Average	187	179
2	5150.00	67.07	74.00	-6.93	59.82	7.25	Peak	187	179
3	5424.00	51.75	54.00	-2.25	44.61	7.14	Average	187	179
4	5424.00	62.90	74.00	-11.10	55.76	7.14	Peak	187	179
5	10330.00	59.96	68.20	-8.24	42.64	17.32	Peak	100	50
6	15495.00	48.35	54.00	-5.65	29.65	18.70	Average	100	20
7	15495.00	61.26	74.00	-12.74	42.56	18.70	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).

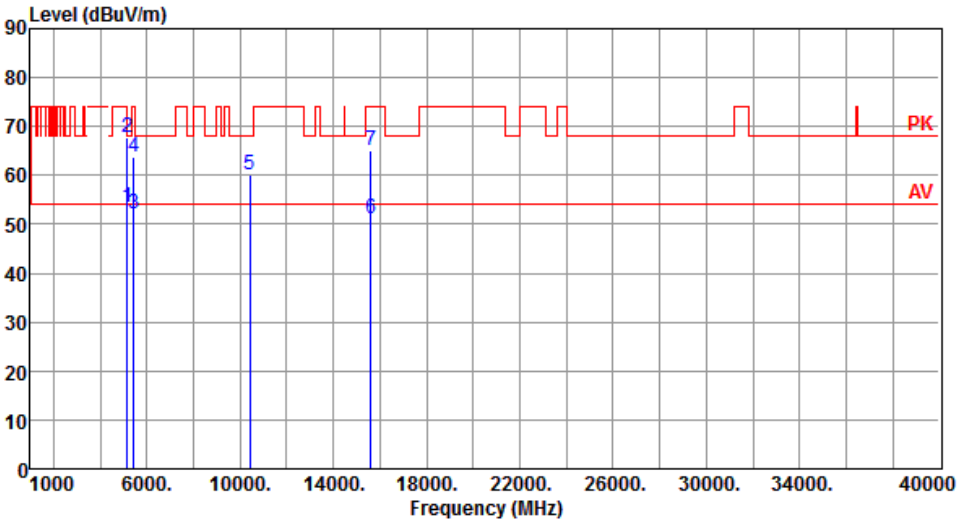
Proprietary protocol (BW)	20MHz	Test Freq. (MHz)	5165
Polarization	Vertical		



	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	5150.00	52.46	54.00	-1.54	45.21	7.25	Average	145	176
2	5150.00	65.89	74.00	-8.11	58.64	7.25	Peak	145	176
3	5424.00	47.50	54.00	-6.50	40.36	7.14	Average	145	176
4	5424.00	61.17	74.00	-12.83	54.03	7.14	Peak	145	176
5	10330.00	59.47	68.20	-8.73	42.15	17.32	Peak	100	90
6	15495.00	48.05	54.00	-5.95	29.35	18.70	Average	100	50
7	15495.00	61.06	74.00	-12.94	42.36	18.70	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).

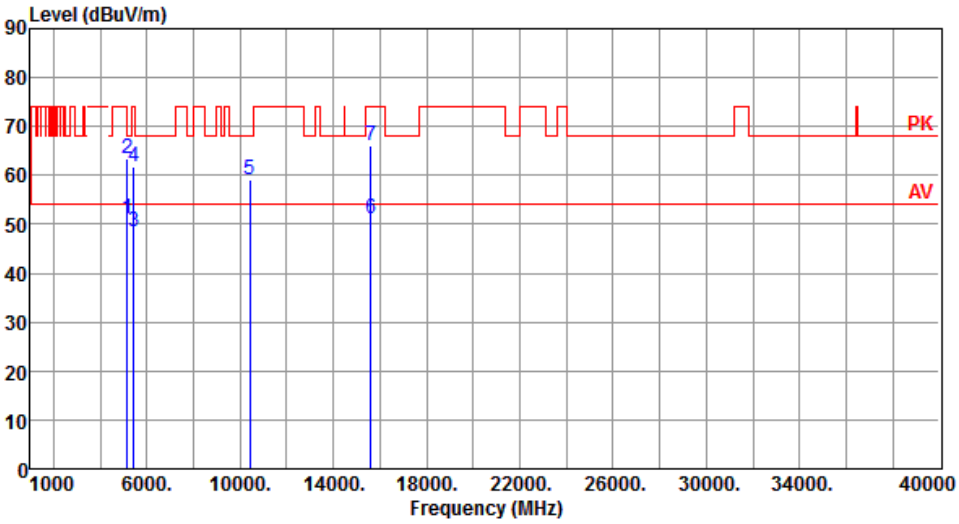
Proprietary protocol (BW)	20MHz	Test Freq. (MHz)	5200
Polarization	Horizontal		



	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	53.60	54.00	-0.40	46.35	7.25	Average	168	170
2	5150.00	67.64	74.00	-6.36	60.39	7.25	Peak	168	170
3	5424.00	52.18	54.00	-1.82	45.04	7.14	Average	168	170
4	5424.00	63.71	74.00	-10.29	56.57	7.14	Peak	168	170
5	10400.00	59.96	68.20	-8.24	42.24	17.72	Peak	100	150
6	15600.00	51.11	54.00	-2.89	32.70	18.41	Average	106	175
7	15600.00	65.06	74.00	-8.94	46.65	18.41	Peak	106	175

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

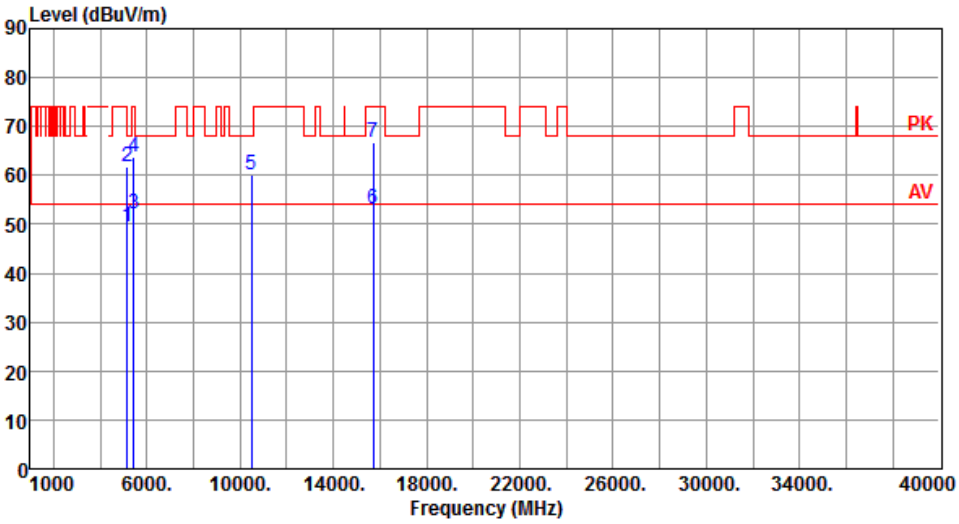
Proprietary protocol (BW)	20MHz	Test Freq. (MHz)	5200
Polarization	Vertical		



	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	51.25	54.00	-2.75	44.00	7.25	Average	145	179
2	5150.00	63.46	74.00	-10.54	56.21	7.25	Peak	145	179
3	5424.00	48.59	54.00	-5.41	41.45	7.14	Average	145	179
4	5424.00	61.72	74.00	-12.28	54.58	7.14	Peak	145	179
5	10400.00	59.23	68.20	-8.97	41.51	17.72	Peak	100	60
6	15600.00	51.01	54.00	-2.99	32.60	18.41	Average	128	174
7	15600.00	65.99	74.00	-8.01	47.58	18.41	Peak	128	174

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

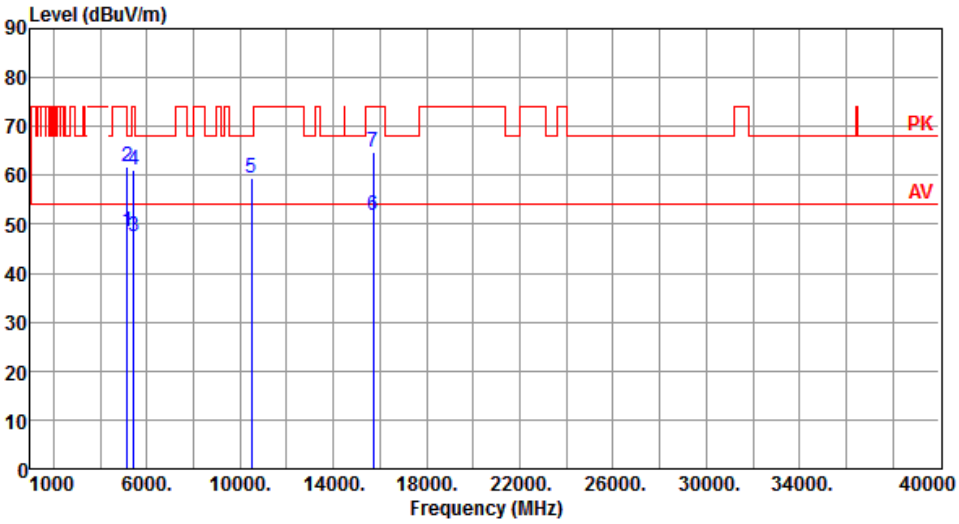
Proprietary protocol (BW)	20MHz	Test Freq. (MHz)	5240
Polarization	Horizontal		



	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	49.59	54.00	-4.41	42.34	7.25	Average	154	176
2	5150.00	61.64	74.00	-12.36	54.39	7.25	Peak	154	176
3	5424.00	52.16	54.00	-1.84	45.02	7.14	Average	154	176
4	5424.00	63.75	74.00	-10.25	56.61	7.14	Peak	154	176
5	10480.00	59.94	68.20	-8.26	42.25	17.69	Peak	100	20
6	15720.00	53.13	54.00	-0.87	34.98	18.15	Average	184	171
7	15720.00	66.65	74.00	-7.35	48.50	18.15	Peak	184	171

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

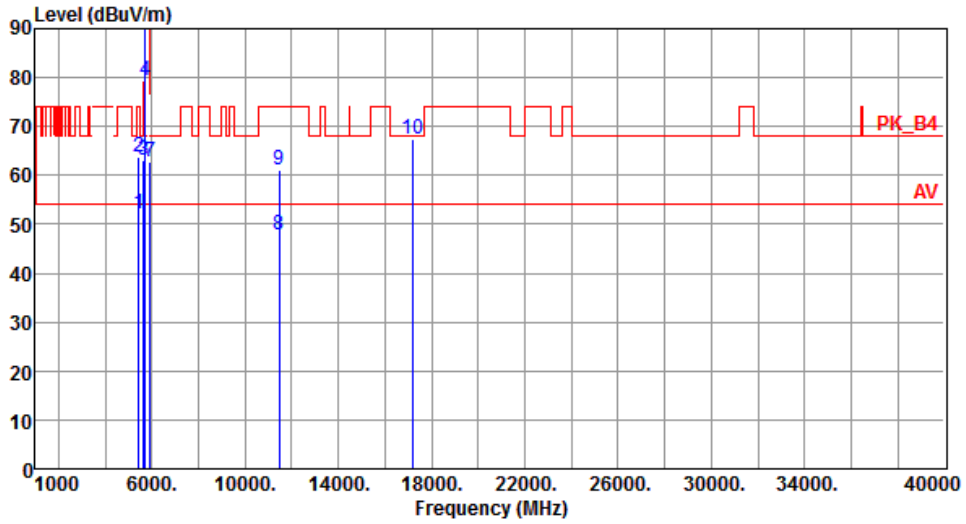
Proprietary protocol (BW)	20MHz	Test Freq. (MHz)	5240
Polarization	Vertical		



	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	48.48	54.00	-5.52	41.23	7.25	Average	162	178
2	5150.00	61.69	74.00	-12.31	54.44	7.25	Peak	162	178
3	5424.00	47.49	54.00	-6.51	40.35	7.14	Average	162	178
4	5424.00	61.20	74.00	-12.80	54.06	7.14	Peak	162	178
5	10480.00	59.38	68.20	-8.82	41.69	17.69	Peak	100	30
6	15720.00	51.81	54.00	-2.19	33.66	18.15	Average	149	171
7	15720.00	64.62	74.00	-9.38	46.47	18.15	Peak	149	171

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

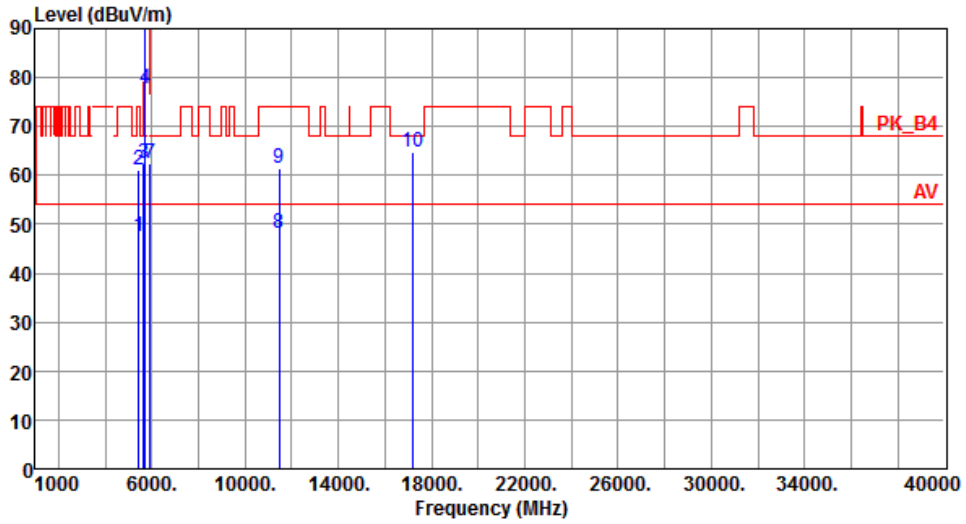
Proprietary protocol (BW)	20MHz	Test Freq. (MHz)	5735
Polarization	Horizontal		



	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	5424.00	52.19	54.00	-1.81	45.05	7.14	Average	154	176
2	5424.00	63.69	74.00	-10.31	56.55	7.14	Peak	154	176
3	5650.00	63.19	68.20	-5.01	55.81	7.38	Peak	154	176
4	5700.00	79.41	105.20	-25.79	71.69	7.72	Peak	154	176
5	5720.00	101.27	110.80	-9.53	93.49	7.78	Peak	154	176
6	5725.00	106.50	122.20	-15.70	98.71	7.79	Peak	154	176
7	5925.00	62.89	68.20	-5.31	54.48	8.41	Peak	154	176
8	11470.00	47.78	54.00	-6.22	30.11	17.67	Average	100	170
9	11470.00	61.13	74.00	-12.87	43.46	17.67	Peak	100	170
10	17205.00	67.56	68.20	-0.64	47.82	19.74	Peak	135	171

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

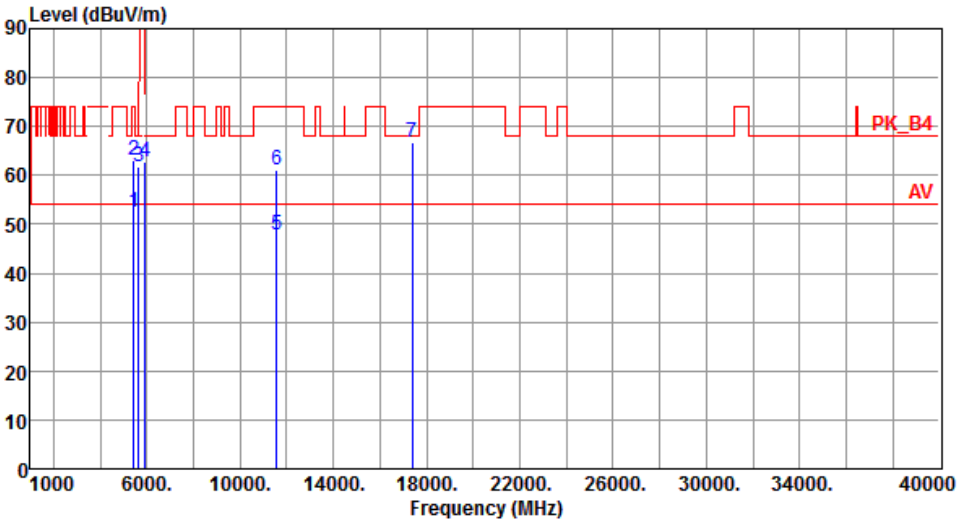
Proprietary protocol (BW)	20MHz	Test Freq. (MHz)	5735
Polarization	Vertical		



	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	5424.00	47.60	54.00	-6.40	40.46	7.14	Average	149	177
2	5424.00	61.20	74.00	-12.80	54.06	7.14	Peak	149	177
3	5650.00	62.47	68.20	-5.73	55.09	7.38	Peak	149	177
4	5700.00	77.73	105.20	-27.47	70.01	7.72	Peak	149	177
5	5720.00	98.12	110.80	-12.68	90.34	7.78	Peak	149	177
6	5725.00	103.65	122.20	-18.55	95.86	7.79	Peak	149	177
7	5925.00	62.45	68.20	-5.75	54.04	8.41	Peak	149	177
8	11470.00	48.23	54.00	-5.77	30.56	17.67	Average	100	175
9	11470.00	61.53	74.00	-12.47	43.86	17.67	Peak	100	175
10	17205.00	64.61	68.20	-3.59	44.87	19.74	Peak	105	176

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

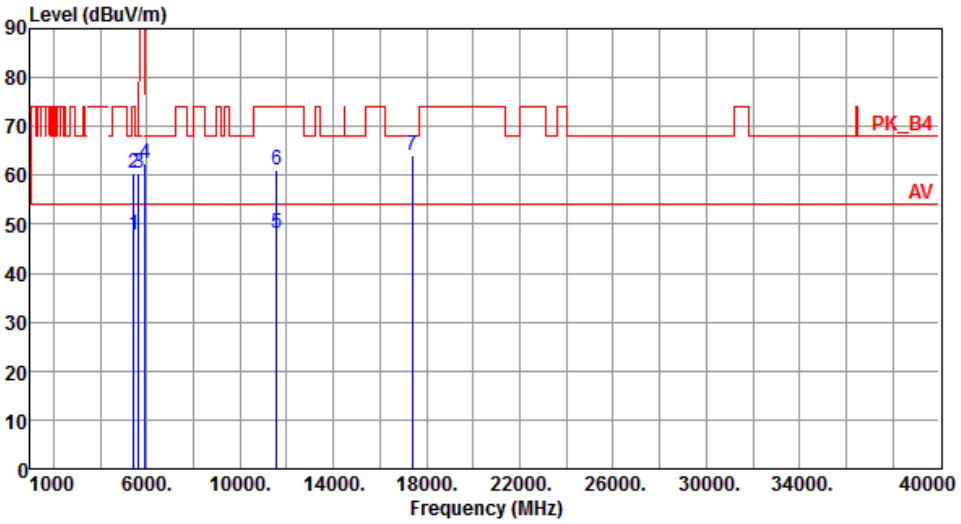
Proprietary protocol (BW)	20MHz	Test Freq. (MHz)	5790
Polarization	Horizontal		



	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	5424.00	52.41	54.00	-1.59	45.27	7.14	Average	180	179
2	5424.00	63.22	74.00	-10.78	56.08	7.14	Peak	180	179
3	5650.00	61.64	68.20	-6.56	54.26	7.38	Peak	180	179
4	5925.00	62.84	68.20	-5.36	54.43	8.41	Peak	180	179
5	11580.00	47.74	54.00	-6.26	30.22	17.52	Average	100	170
6	11580.00	61.04	74.00	-12.96	43.52	17.52	Peak	100	170
7	17370.00	66.76	68.20	-1.44	46.17	20.59	Peak	104	175

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

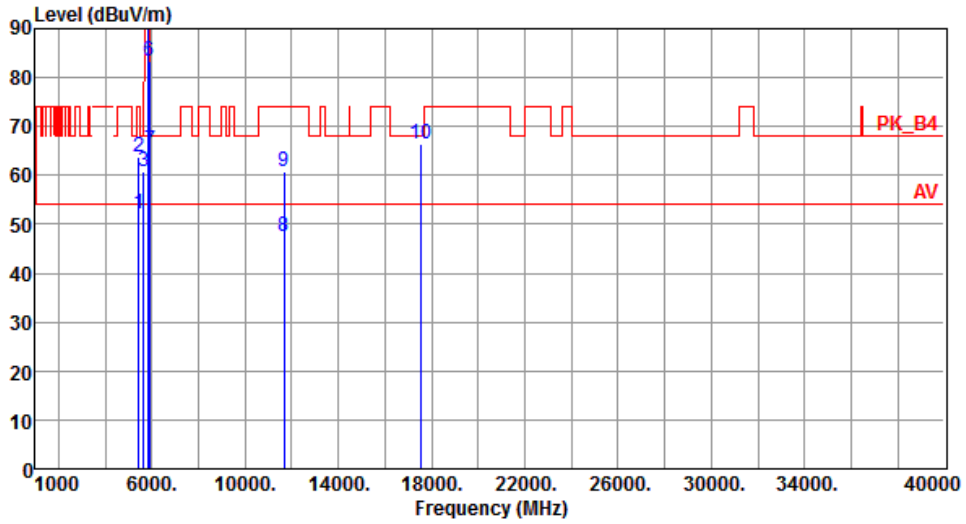
Proprietary protocol (BW)	20MHz	Test Freq. (MHz)	5790
Polarization	Vertical		



	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	5424.00	47.70	54.00	-6.30	40.56	7.14	Average	152	171
2	5424.00	60.60	74.00	-13.40	53.46	7.14	Peak	152	171
3	5650.00	60.43	68.20	-7.77	53.05	7.38	Peak	152	171
4	5925.00	62.44	68.20	-5.76	54.03	8.41	Peak	152	171
5	11580.00	48.09	54.00	-5.91	30.57	17.52	Average	100	176
6	11580.00	61.04	74.00	-12.96	43.52	17.52	Peak	100	176
7	17370.00	64.11	68.20	-4.09	43.52	20.59	Peak	100	175

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

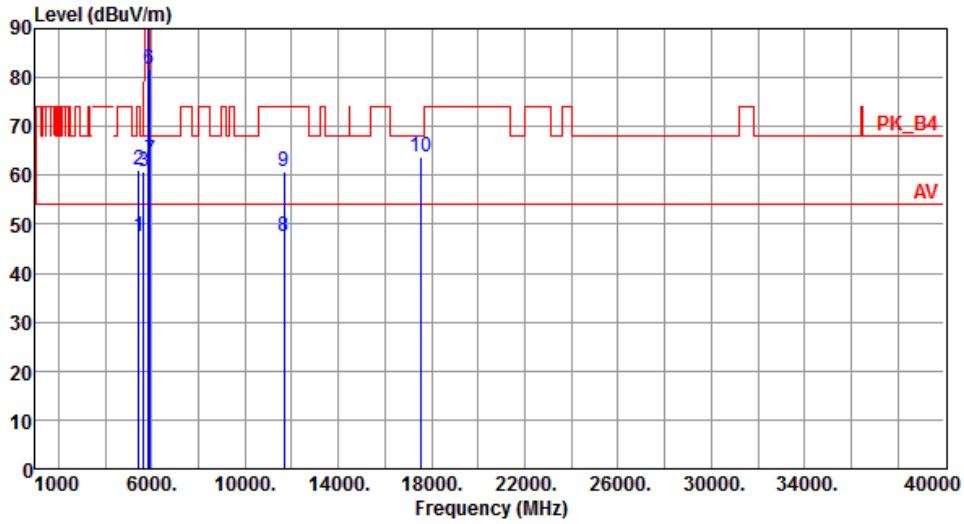
Proprietary protocol (BW)	20MHz	Test Freq. (MHz)	5840
Polarization	Horizontal		



	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	5424.00	52.19	54.00	-1.81	45.05	7.14	Average	153	178
2	5424.00	63.60	74.00	-10.40	56.46	7.14	Peak	153	178
3	5650.00	60.83	68.20	-7.37	53.45	7.38	Peak	153	178
4	5850.00	109.22	122.20	-12.98	100.99	8.23	Peak	153	178
5	5855.00	106.35	110.80	-4.45	98.11	8.24	Peak	153	178
6	5875.00	83.48	105.20	-21.72	75.19	8.29	Peak	153	178
7	5925.00	64.96	68.20	-3.24	56.55	8.41	Peak	153	178
8	11680.00	47.53	54.00	-6.47	30.31	17.22	Average	100	173
9	11680.00	60.64	74.00	-13.36	43.42	17.22	Peak	100	173
10	17520.00	66.48	68.20	-1.72	45.10	21.38	Peak	129	177

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

Proprietary protocol (BW)	20MHz	Test Freq. (MHz)	5840
Polarization	Vertical		

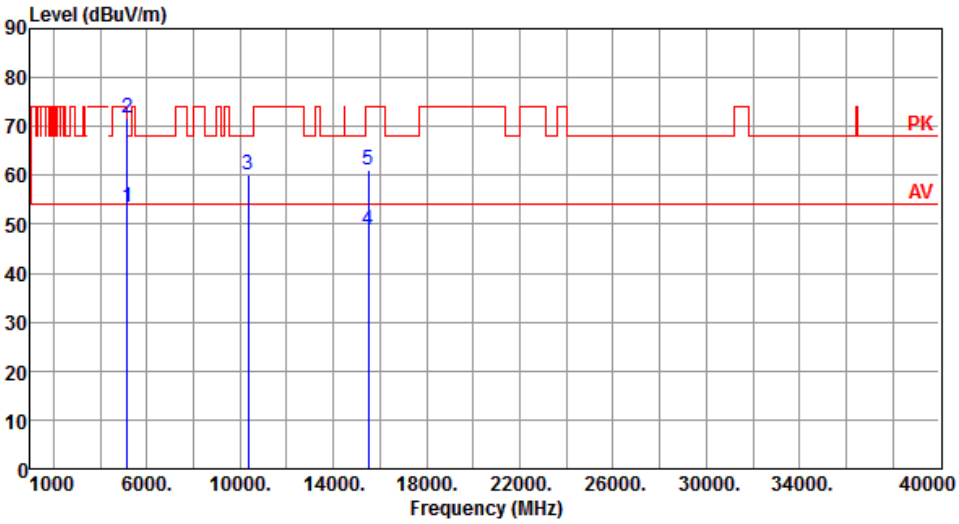


	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	5424.00	47.56	54.00	-6.44	40.42	7.14	Average	142	177
2	5424.00	61.26	74.00	-12.74	54.12	7.14	Peak	142	177
3	5650.00	60.93	68.20	-7.27	53.55	7.38	Peak	142	177
4	5850.00	105.23	122.20	-16.97	97.00	8.23	Peak	142	177
5	5855.00	102.66	110.80	-8.14	94.42	8.24	Peak	142	177
6	5875.00	81.85	105.20	-23.35	73.56	8.29	Peak	142	177
7	5925.00	63.10	68.20	-5.10	54.69	8.41	Peak	142	177
8	11680.00	47.55	54.00	-6.45	30.33	17.22	Average	100	176
9	11680.00	60.78	74.00	-13.22	43.56	17.22	Peak	100	176
10	17520.00	63.93	68.20	-4.27	42.55	21.38	Peak	102	175

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

3.5.6 Transmitter Radiated Unwanted Emissions (Above 1GHz) for 40

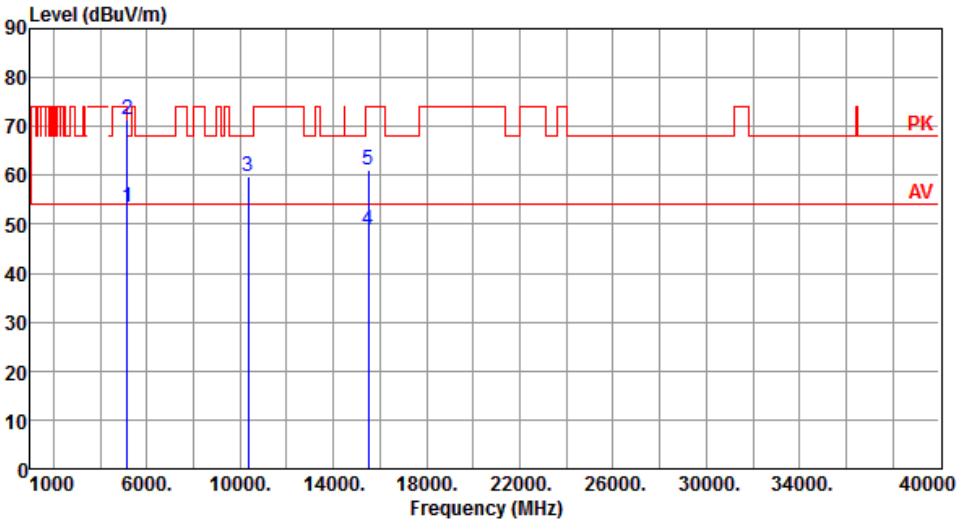
Proprietary protocol (BW)	40MHz	Test Freq. (MHz)	5170
Polarization	Horizontal		



	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	53.55	54.00	-0.45	46.30	7.25	Average	157	172
2	5150.00	71.86	74.00	-2.14	64.61	7.25	Peak	157	172
3	10340.00	60.02	68.20	-8.18	42.65	17.37	Peak	100	40
4	15510.00	48.89	54.00	-5.11	30.25	18.64	Average	100	50
5	15510.00	61.19	74.00	-12.81	42.55	18.64	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).

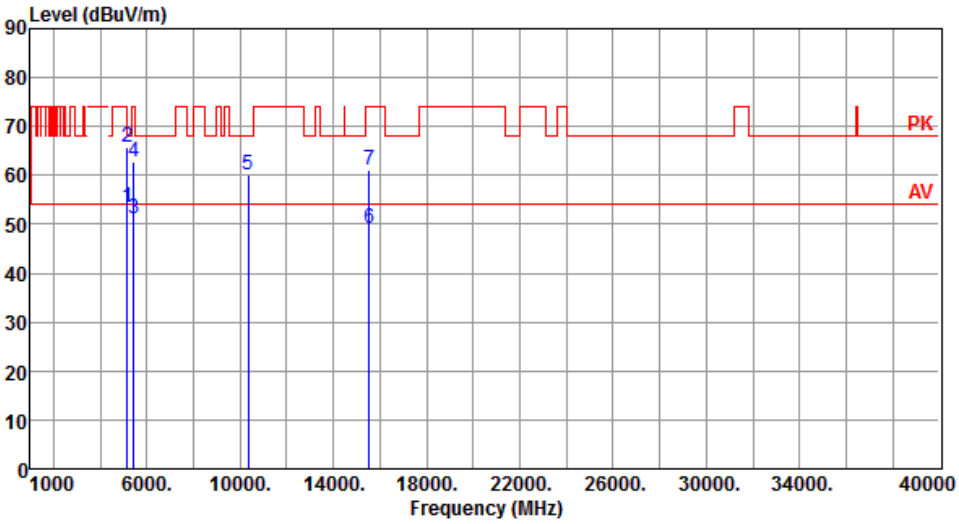
Proprietary protocol (BW)	40MHz	Test Freq. (MHz)	5170
Polarization	Vertical		



	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	5150.00	53.46	54.00	-0.54	46.21	7.25	Average	161	175
2	5150.00	71.50	74.00	-2.50	64.25	7.25	Peak	161	175
3	10340.00	59.91	68.20	-8.29	42.54	17.37	Peak	100	90
4	15510.00	48.87	54.00	-5.13	30.23	18.64	Average	100	20
5	15510.00	61.18	74.00	-12.82	42.54	18.64	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).

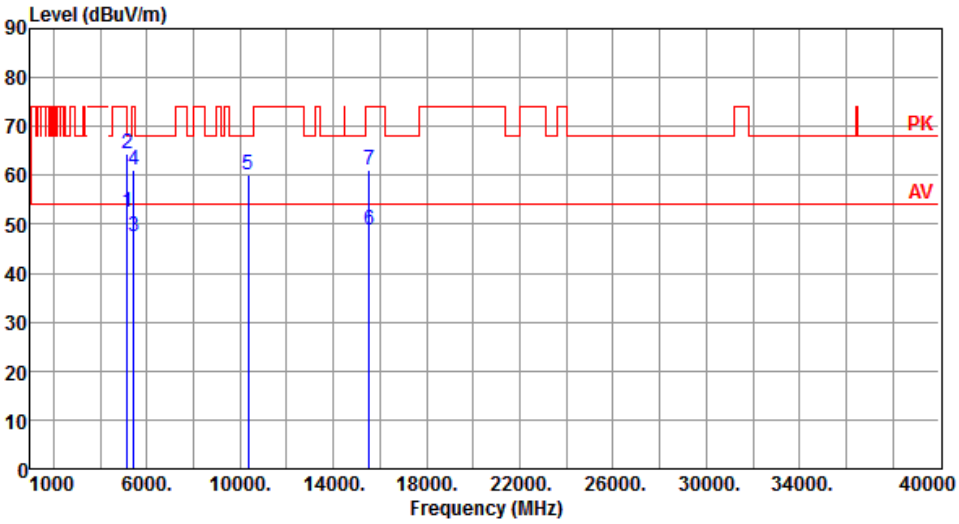
Proprietary protocol (BW)	40MHz	Test Freq. (MHz)	5175
Polarization	Horizontal		



	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	53.50	54.00	-0.50	46.25	7.25	Average	171	169
2	5150.00	65.76	74.00	-8.24	58.51	7.25	Peak	171	169
3	5424.00	51.16	54.00	-2.84	44.02	7.14	Average	171	169
4	5424.00	62.63	74.00	-11.37	55.49	7.14	Peak	171	169
5	10350.00	60.06	68.20	-8.14	42.64	17.42	Peak	100	50
6	15525.00	49.15	54.00	-4.85	30.54	18.61	Average	100	60
7	15525.00	61.11	74.00	-12.89	42.50	18.61	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).

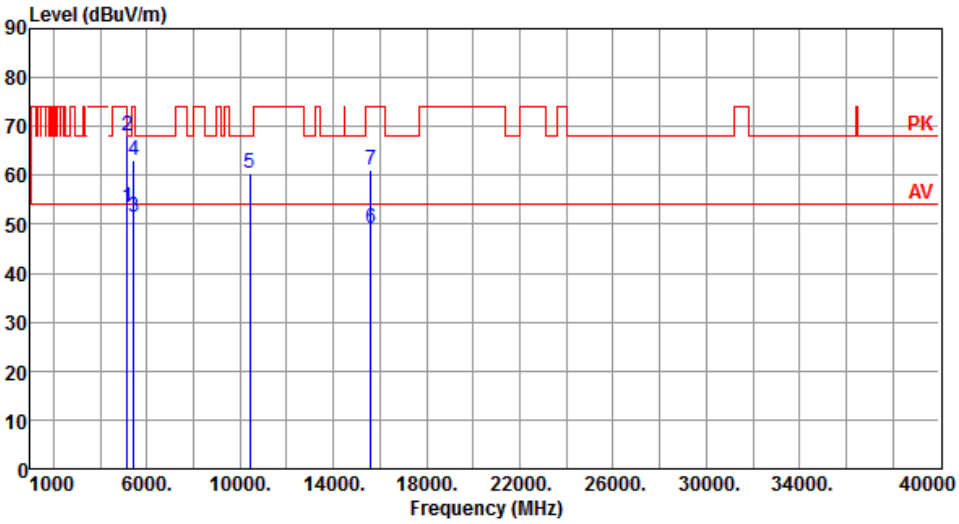
Proprietary protocol (BW)	40MHz	Test Freq. (MHz)	5175
Polarization	Vertical		



	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	5150.00	52.60	54.00	-1.40	45.35	7.25	Average	146	172
2	5150.00	64.52	74.00	-9.48	57.27	7.25	Peak	146	172
3	5424.00	47.43	54.00	-6.57	40.29	7.14	Average	146	172
4	5424.00	61.00	74.00	-13.00	53.86	7.14	Peak	146	172
5	10350.00	59.97	68.20	-8.23	42.55	17.42	Peak	100	80
6	15525.00	48.84	54.00	-5.16	30.23	18.61	Average	100	60
7	15525.00	60.95	74.00	-13.05	42.34	18.61	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).

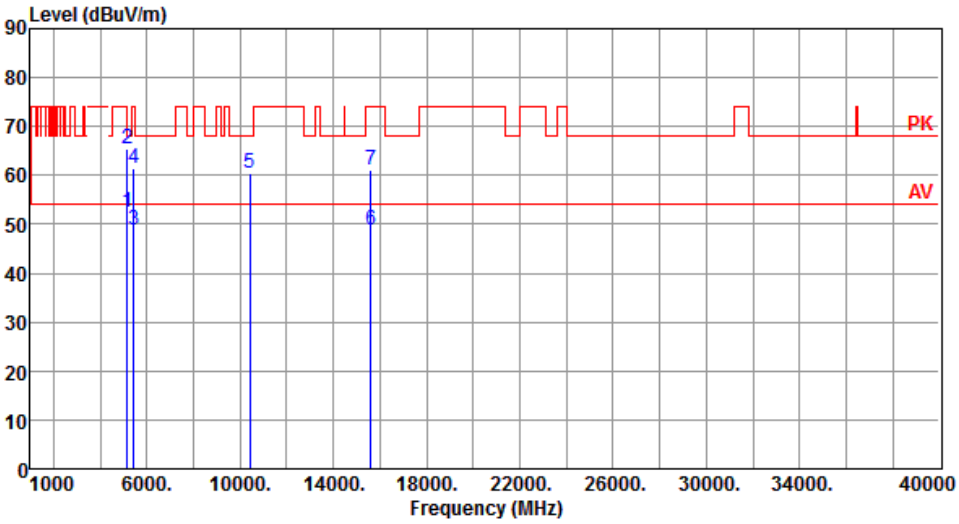
Proprietary protocol (BW)	40MHz	Test Freq. (MHz)	5200
Polarization	Horizontal		



	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	53.54	54.00	-0.46	46.29	7.25	Average	155	170
2	5150.00	68.09	74.00	-5.91	60.84	7.25	Peak	155	170
3	5424.00	51.52	54.00	-2.48	44.38	7.14	Average	155	170
4	5424.00	62.95	74.00	-11.05	55.81	7.14	Peak	155	170
5	10400.00	60.42	68.20	-7.78	42.70	17.72	Peak	100	40
6	15600.00	49.14	54.00	-4.86	30.73	18.41	Average	100	60
7	15600.00	61.09	74.00	-12.91	42.68	18.41	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).

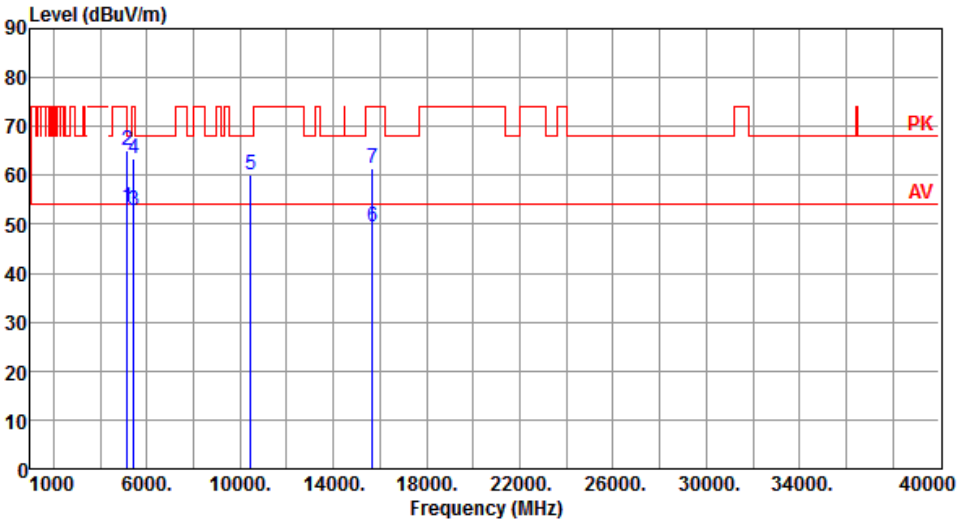
Proprietary protocol (BW)	40MHz	Test Freq. (MHz)	5200
Polarization	Vertical		



	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	52.55	54.00	-1.45	45.30	7.25	Average	156	182
2	5150.00	65.59	74.00	-8.41	58.34	7.25	Peak	156	182
3	5424.00	48.82	54.00	-5.18	41.68	7.14	Average	156	182
4	5424.00	61.40	74.00	-12.60	54.26	7.14	Peak	156	182
5	10400.00	60.36	68.20	-7.84	42.64	17.72	Peak	100	30
6	15600.00	48.92	54.00	-5.08	30.51	18.41	Average	100	25
7	15600.00	61.10	74.00	-12.90	42.69	18.41	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).

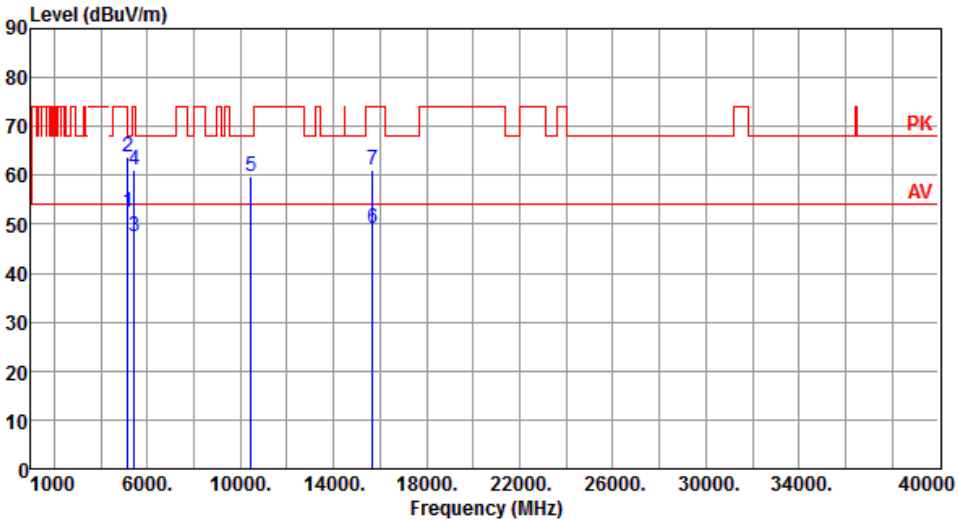
Proprietary protocol (BW)	40MHz	Test Freq. (MHz)	5230
Polarization	Horizontal		



	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	53.50	54.00	-0.50	46.25	7.25	Average	170	170
2	5150.00	65.12	74.00	-8.88	57.87	7.25	Peak	170	170
3	5424.00	52.65	54.00	-1.35	45.51	7.14	Average	170	170
4	5424.00	63.51	74.00	-10.49	56.37	7.14	Peak	170	170
5	10460.00	60.08	68.20	-8.12	42.38	17.70	Peak	100	60
6	15690.00	49.38	54.00	-4.62	31.11	18.27	Average	100	170
7	15690.00	61.59	74.00	-12.41	43.32	18.27	Peak	100	170

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

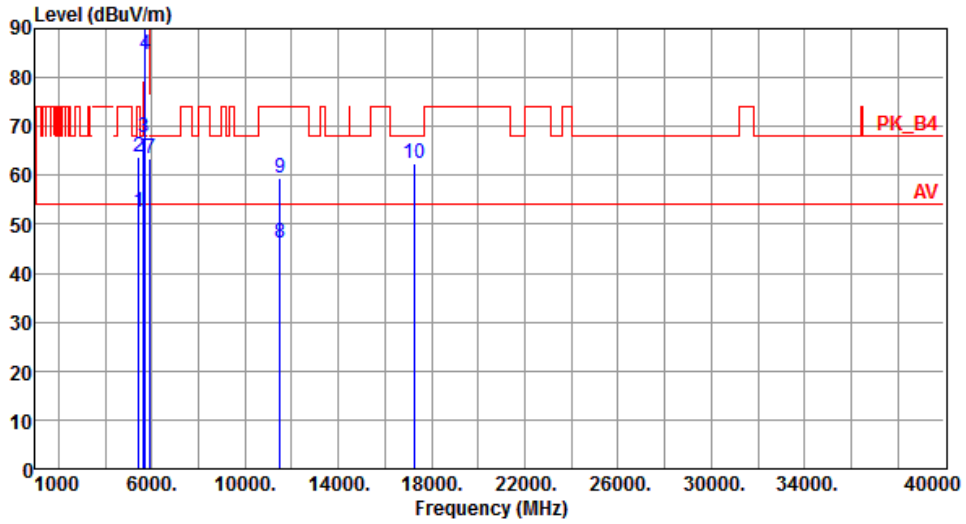
Proprietary protocol (BW)	40MHz	Test Freq. (MHz)	5230
Polarization	Vertical		



	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	52.53	54.00	-1.47	45.28	7.25	Average	148	172
2	5150.00	63.71	74.00	-10.29	56.46	7.25	Peak	148	172
3	5424.00	47.59	54.00	-6.41	40.45	7.14	Average	148	172
4	5424.00	61.26	74.00	-12.74	54.12	7.14	Peak	148	172
5	10460.00	59.92	68.20	-8.28	42.22	17.70	Peak	100	50
6	15690.00	49.15	54.00	-4.85	30.88	18.27	Average	100	60
7	15690.00	61.12	74.00	-12.88	42.85	18.27	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).

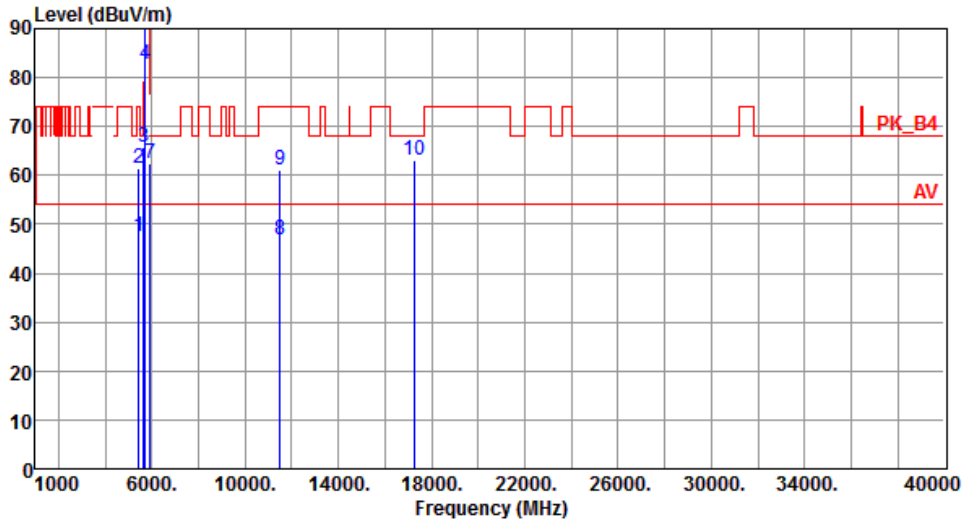
Proprietary protocol (BW)	40MHz	Test Freq. (MHz)	5745
Polarization	Horizontal		



	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	5424.00	52.42	54.00	-1.58	45.28	7.14	Average	143	178
2	5424.00	63.62	74.00	-10.38	56.48	7.14	Peak	143	178
3	5650.00	67.83	68.20	-0.37	60.45	7.38	Peak	143	178
4	5700.00	84.68	105.20	-20.52	76.96	7.72	Peak	143	178
5	5720.00	93.42	110.80	-17.38	85.64	7.78	Peak	143	178
6	5725.00	96.62	122.20	-25.58	88.83	7.79	Peak	143	178
7	5925.00	63.28	68.20	-4.92	54.87	8.41	Peak	143	178
8	11490.00	46.29	54.00	-7.71	28.60	17.69	Average	100	150
9	11490.00	59.32	74.00	-14.68	41.63	17.69	Peak	100	150
10	17235.00	62.56	68.20	-5.64	42.68	19.88	Peak	100	170

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

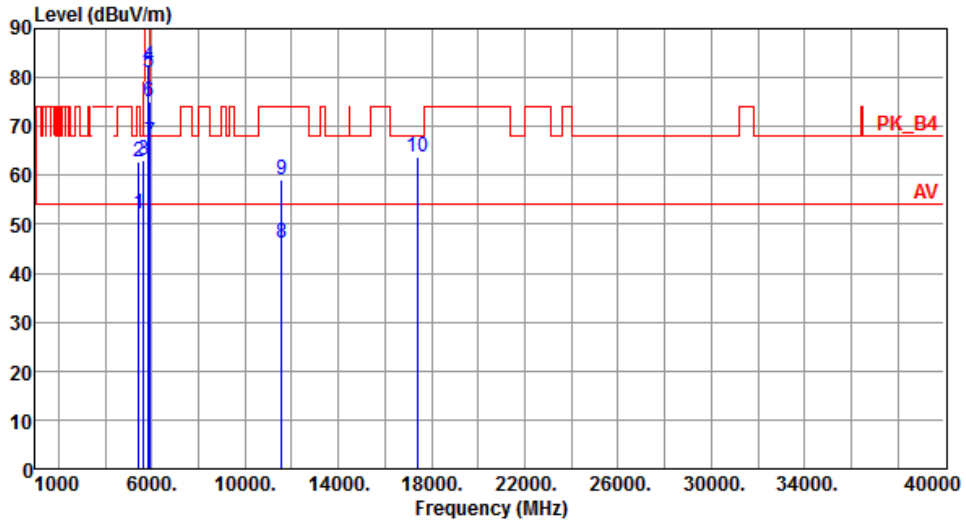
Proprietary protocol (BW)	40MHz	Test Freq. (MHz)	5745
Polarization	Vertical		



	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	5424.00	47.50	54.00	-6.50	40.36	7.14	Average	156	175
2	5424.00	61.43	74.00	-12.57	54.29	7.14	Peak	156	175
3	5650.00	65.59	68.20	-2.61	58.21	7.38	Peak	156	175
4	5700.00	82.57	105.20	-22.63	74.85	7.72	Peak	156	175
5	5720.00	90.34	110.80	-20.46	82.56	7.78	Peak	156	175
6	5725.00	93.25	122.20	-28.95	85.46	7.79	Peak	156	175
7	5925.00	62.43	68.20	-5.77	54.02	8.41	Peak	156	175
8	11490.00	46.81	54.00	-7.19	29.12	17.69	Average	100	175
9	11490.00	61.25	74.00	-12.75	43.56	17.69	Peak	100	175
10	17235.00	63.13	68.20	-5.07	43.25	19.88	Peak	100	173

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

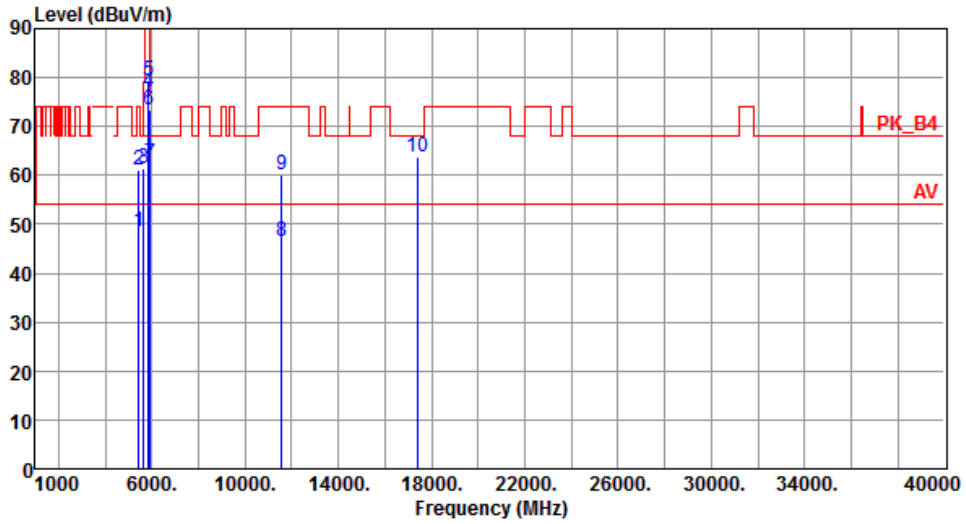
Proprietary protocol (BW)	40MHz	Test Freq. (MHz)	5790
Polarization	Horizontal		



	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	5424.00	52.10	54.00	-1.90	44.96	7.14	Average	169	180
2	5424.00	62.75	74.00	-11.25	55.61	7.14	Peak	169	180
3	5650.00	62.95	68.20	-5.25	55.57	7.38	Peak	169	180
4	5850.00	82.51	122.20	-39.69	74.28	8.23	Peak	169	180
5	5855.00	80.94	110.80	-29.86	72.70	8.24	Peak	169	180
6	5875.00	74.98	105.20	-30.22	66.69	8.29	Peak	169	180
7	5925.00	66.72	68.20	-1.48	58.31	8.41	Peak	169	180
8	11580.00	46.14	54.00	-7.86	28.62	17.52	Average	100	214
9	11580.00	59.20	74.00	-14.80	41.68	17.52	Peak	100	214
10	17370.00	63.86	68.20	-4.34	43.27	20.59	Peak	100	180

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

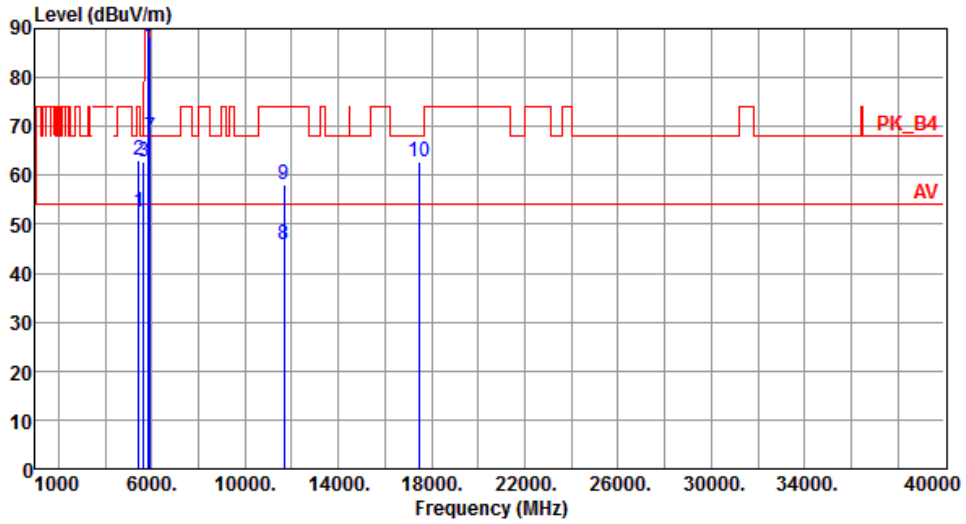
Proprietary protocol (BW)	40MHz	Test Freq. (MHz)	5790
Polarization	Vertical		



	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	5424.00	48.65	54.00	-5.35	41.51	7.14	Average	145	180
2	5424.00	61.16	74.00	-12.84	54.02	7.14	Peak	145	180
3	5650.00	61.59	68.20	-6.61	54.21	7.38	Peak	145	180
4	5850.00	77.11	122.20	-45.09	68.88	8.23	Peak	145	180
5	5855.00	79.43	110.80	-31.37	71.19	8.24	Peak	145	180
6	5875.00	73.24	105.20	-31.96	64.95	8.29	Peak	145	180
7	5925.00	62.57	68.20	-5.63	54.16	8.41	Peak	145	180
8	11580.00	46.64	54.00	-7.36	29.12	17.52	Average	100	177
9	11580.00	60.22	74.00	-13.78	42.70	17.52	Peak	100	177
10	17370.00	63.66	68.20	-4.54	43.07	20.59	Peak	100	172

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

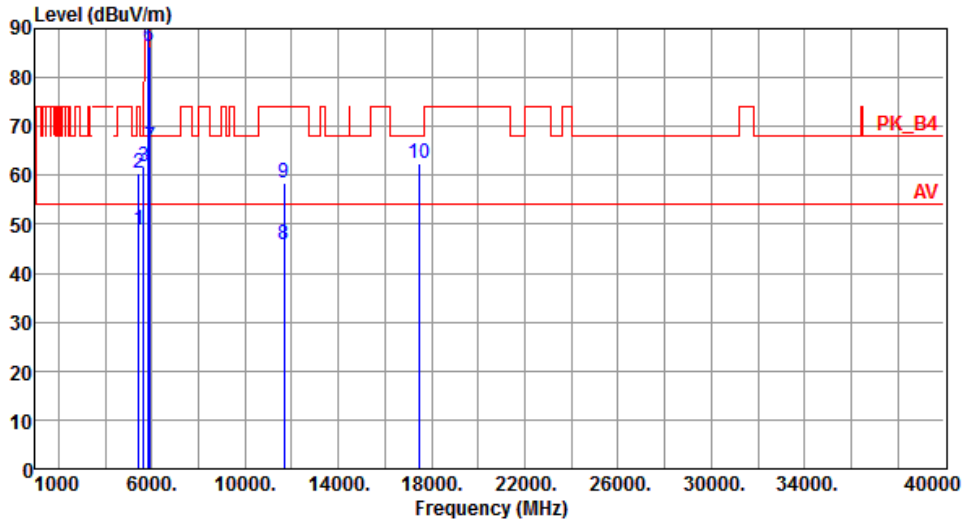
Proprietary protocol (BW)	40MHz	Test Freq. (MHz)	5830
Polarization	Horizontal		



	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	5424.00	52.36	54.00	-1.64	45.22	7.14	Average	166	180
2	5424.00	63.18	74.00	-10.82	56.04	7.14	Peak	166	180
3	5650.00	62.88	68.20	-5.32	55.50	7.38	Peak	166	180
4	5850.00	99.56	122.20	-22.64	91.33	8.23	Peak	166	180
5	5855.00	95.83	110.80	-14.97	87.59	8.24	Peak	166	180
6	5875.00	88.36	105.20	-16.84	80.07	8.29	Peak	166	180
7	5925.00	67.76	68.20	-0.44	59.35	8.41	Peak	166	180
8	11660.00	45.76	54.00	-8.24	28.47	17.29	Average	100	20
9	11660.00	58.25	74.00	-15.75	40.96	17.29	Peak	100	20
10	17490.00	62.64	68.20	-5.56	41.46	21.18	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).

Proprietary protocol (BW)	40MHz	Test Freq. (MHz)	5830
Polarization	Vertical		

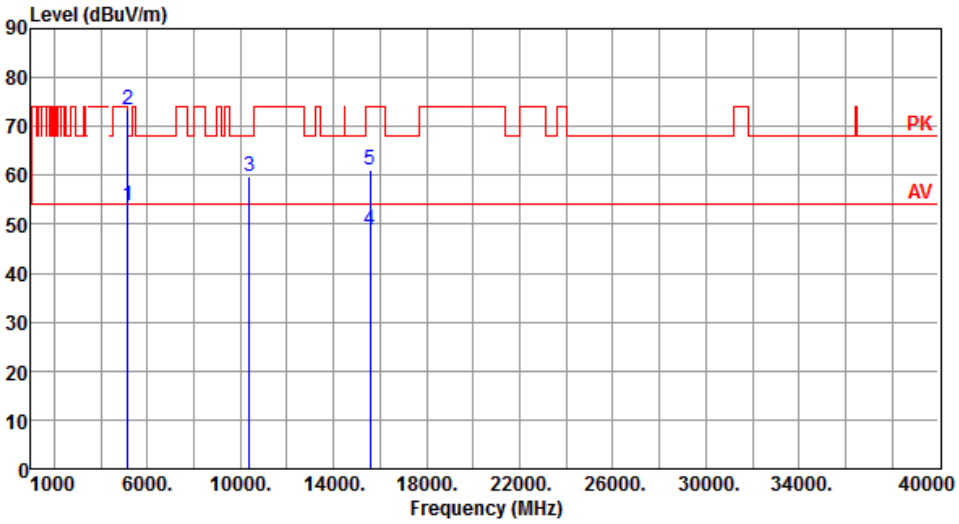


	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	5424.00	48.82	54.00	-5.18	41.68	7.14	Average	145	177
2	5424.00	60.49	74.00	-13.51	53.35	7.14	Peak	145	177
3	5650.00	61.65	68.20	-6.55	54.27	7.38	Peak	145	177
4	5850.00	97.54	122.20	-24.66	89.31	8.23	Peak	145	177
5	5855.00	93.72	110.80	-17.08	85.48	8.24	Peak	145	177
6	5875.00	86.49	105.20	-18.71	78.20	8.29	Peak	145	177
7	5925.00	65.63	68.20	-2.57	57.22	8.41	Peak	145	177
8	11660.00	45.68	54.00	-8.32	28.39	17.29	Average	100	50
9	11660.00	58.35	74.00	-15.65	41.06	17.29	Peak	100	50
10	17490.00	62.49	68.20	-5.71	41.31	21.18	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).

3.5.7 Transmitter Radiated Unwanted Emissions (Above 1GHz) for 80

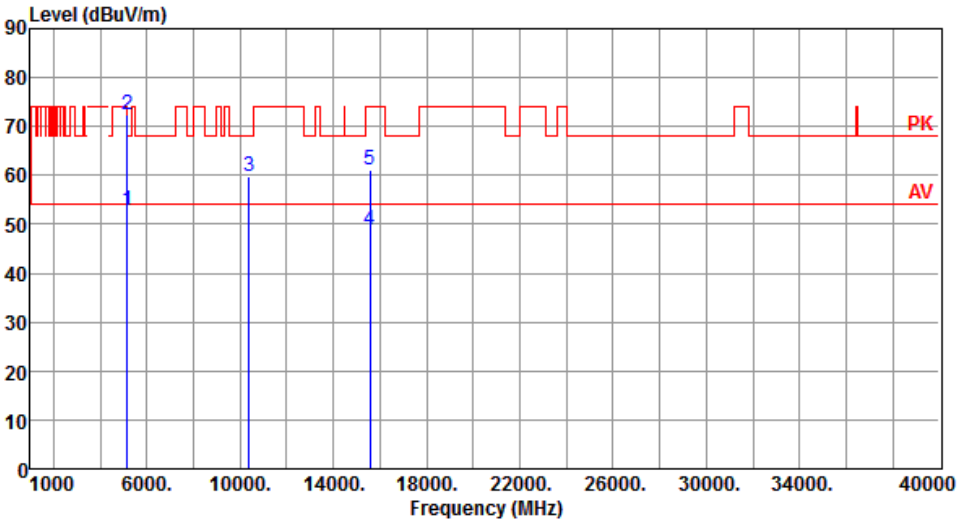
Proprietary protocol (BW)	80MHz	**Test Freq. (MHz)**	5190
Polarization	Horizontal		



	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	53.64	54.00	-0.36	46.39	7.25	Average	172	182
2	5150.00	73.27	74.00	-0.73	66.02	7.25	Peak	172	182
3	10380.00	59.86	68.20	-8.34	42.26	17.60	Peak	100	90
4	15570.00	48.76	54.00	-5.24	30.28	18.48	Average	100	70
5	15570.00	61.06	74.00	-12.94	42.58	18.48	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).

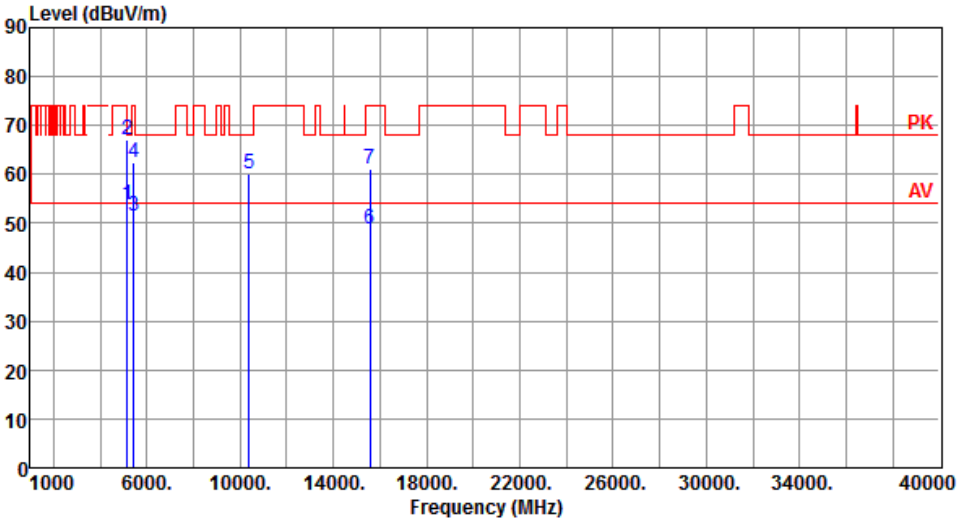
Proprietary protocol (BW)	80MHz	Test Freq. (MHz)	5190
Polarization	Vertical		



	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	5150.00	52.95	54.00	-1.05	45.70	7.25	Average	169	179
2	5150.00	72.37	74.00	-1.63	65.12	7.25	Peak	169	179
3	10380.00	59.91	68.20	-8.29	42.31	17.60	Peak	100	40
4	15570.00	48.86	54.00	-5.14	30.38	18.48	Average	100	40
5	15570.00	61.14	74.00	-12.86	42.66	18.48	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).

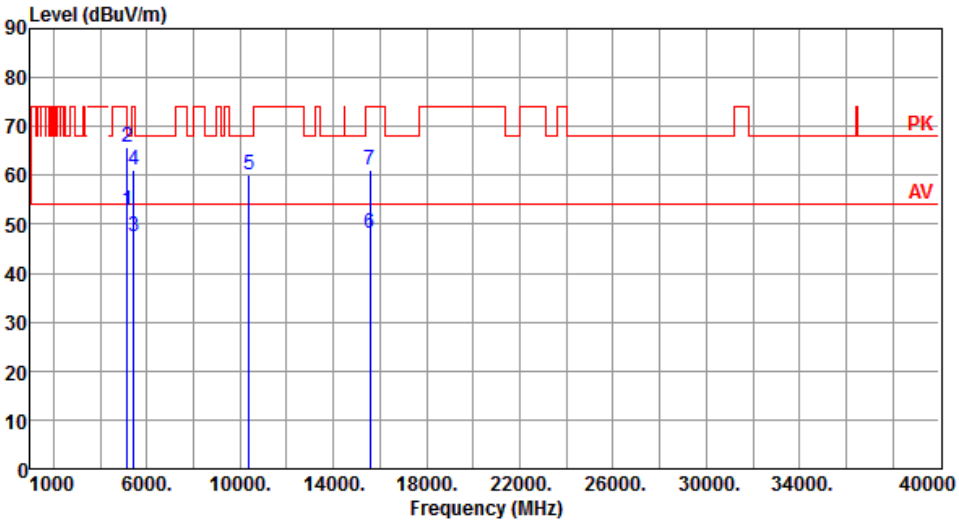
Proprietary protocol (BW)	80MHz	Test Freq. (MHz)	5195
Polarization	Horizontal		



	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	53.68	54.00	-0.32	46.43	7.25	Average	164	168
2	5150.00	67.12	74.00	-6.88	59.87	7.25	Peak	164	168
3	5424.00	51.55	54.00	-2.45	44.41	7.14	Average	164	168
4	5424.00	62.51	74.00	-11.49	55.37	7.14	Peak	164	168
5	10390.00	60.22	68.20	-7.98	42.57	17.65	Peak	100	30
6	15585.00	48.89	54.00	-5.11	30.44	18.45	Average	100	50
7	15585.00	60.96	74.00	-13.04	42.51	18.45	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).

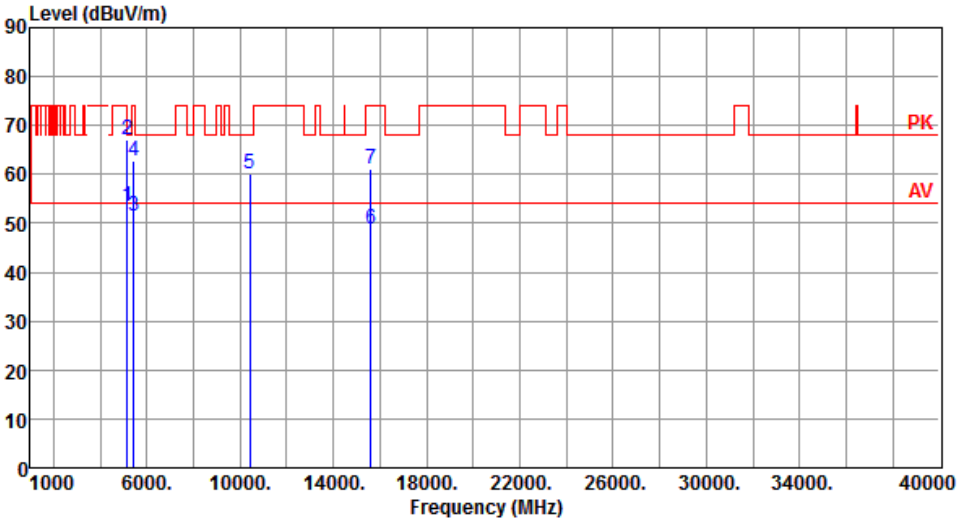
Proprietary protocol (BW)	80MHz	Test Freq. (MHz)	5195
Polarization	Vertical		



	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	5150.00	52.90	54.00	-1.10	45.65	7.25	Average	172	175
2	5150.00	65.60	74.00	-8.40	58.35	7.25	Peak	172	175
3	5424.00	47.42	54.00	-6.58	40.28	7.14	Average	172	175
4	5424.00	61.17	74.00	-12.83	54.03	7.14	Peak	172	175
5	10390.00	60.01	68.20	-8.19	42.36	17.65	Peak	100	60
6	15585.00	48.31	54.00	-5.69	29.86	18.45	Average	100	20
7	15585.00	61.06	74.00	-12.94	42.61	18.45	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).

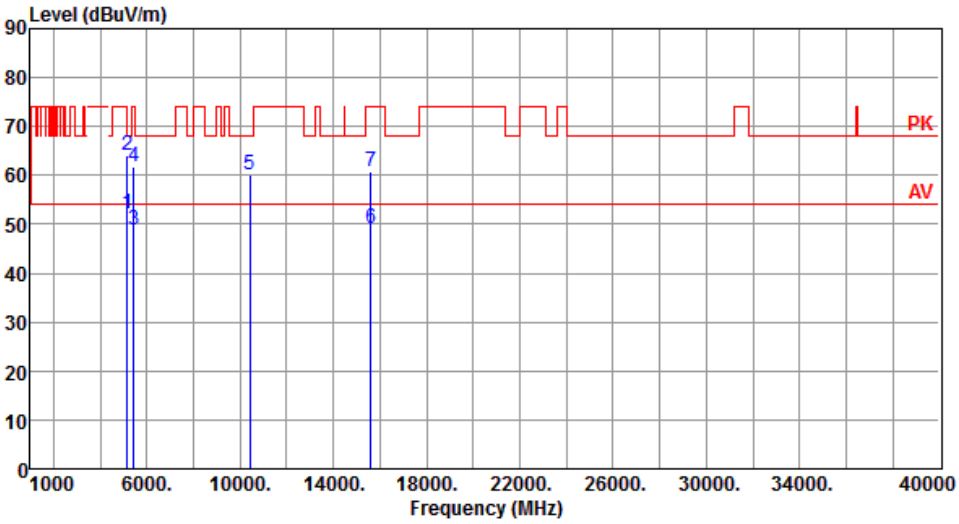
Proprietary protocol (BW)	80MHz	**Test Freq. (MHz)**	5200
Polarization	Horizontal		



	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	53.56	54.00	-0.44	46.31	7.25	Average	172	192
2	5150.00	67.01	74.00	-6.99	59.76	7.25	Peak	172	192
3	5424.00	51.53	54.00	-2.47	44.39	7.14	Average	172	192
4	5424.00	62.62	74.00	-11.38	55.48	7.14	Peak	172	192
5	10400.00	60.21	68.20	-7.99	42.49	17.72	Peak	100	20
6	15600.00	48.93	54.00	-5.07	30.52	18.41	Average	100	40
7	15600.00	61.04	74.00	-12.96	42.63	18.41	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).

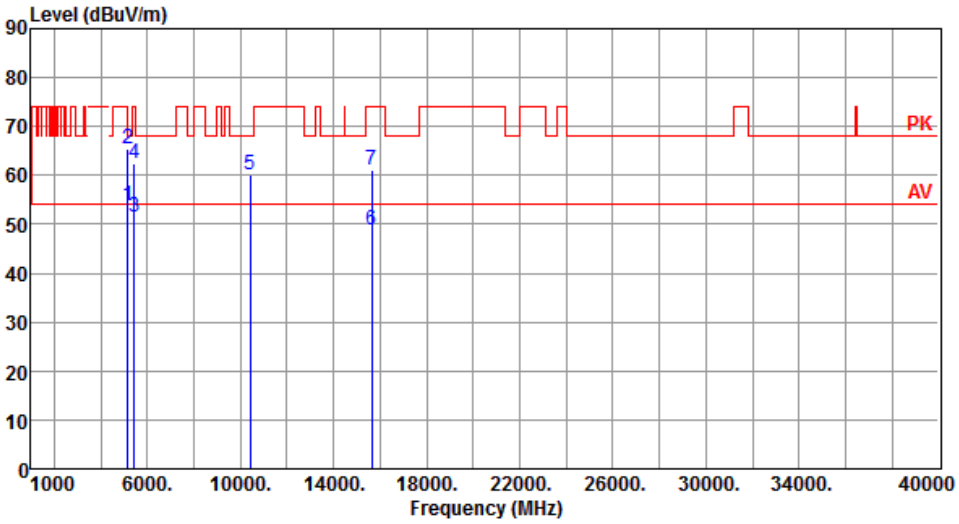
Proprietary protocol (BW)	80MHz	Test Freq. (MHz)	5200
Polarization	Vertical		



	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	52.21	54.00	-1.79	44.96	7.25	Average	153	180
2	5150.00	64.15	74.00	-9.85	56.90	7.25	Peak	153	180
3	5424.00	48.91	54.00	-5.09	41.77	7.14	Average	153	180
4	5424.00	61.85	74.00	-12.15	54.71	7.14	Peak	153	180
5	10400.00	60.09	68.20	-8.11	42.37	17.72	Peak	100	60
6	15600.00	49.00	54.00	-5.00	30.59	18.41	Average	100	40
7	15600.00	60.94	74.00	-13.06	42.53	18.41	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).

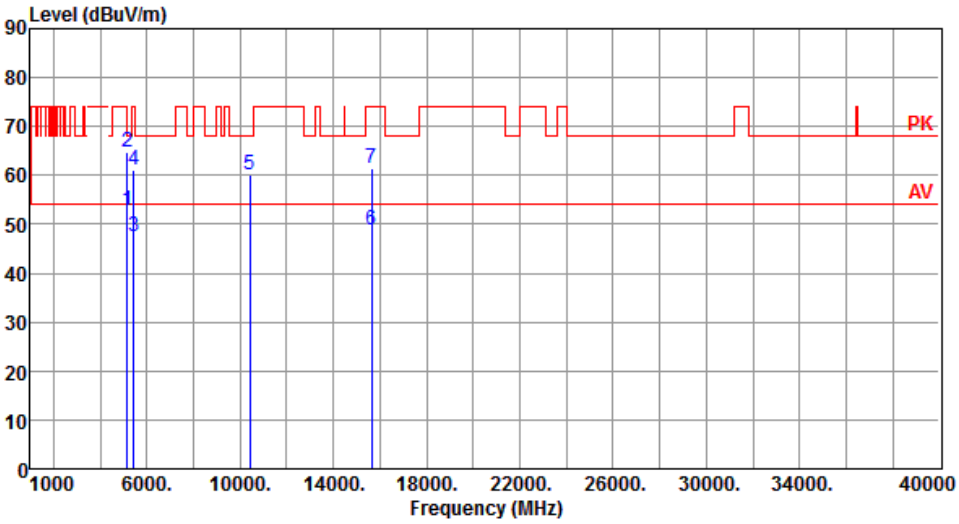
Proprietary protocol (BW)	80MHz	Test Freq. (MHz)	5210
Polarization	Horizontal		



	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	53.65	54.00	-0.35	46.40	7.25	Average	165	173
2	5150.00	65.47	74.00	-8.53	58.22	7.25	Peak	165	173
3	5424.00	51.37	54.00	-2.63	44.23	7.14	Average	165	173
4	5424.00	62.50	74.00	-11.50	55.36	7.14	Peak	165	173
5	10420.00	60.07	68.20	-8.13	42.37	17.70	Peak	100	80
6	15630.00	48.92	54.00	-5.08	30.57	18.35	Average	100	60
7	15630.00	61.21	74.00	-12.79	42.86	18.35	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).

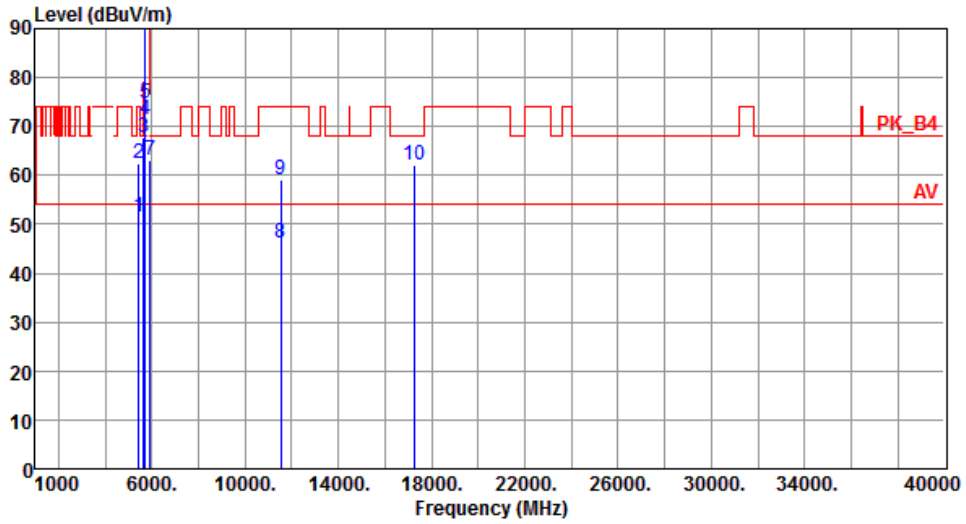
Proprietary protocol (BW)	80MHz	Test Freq. (MHz)	5210
Polarization	Vertical		



	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	5150.00	52.83	54.00	-1.17	45.58	7.25	Average	172	175
2	5150.00	64.60	74.00	-9.40	57.35	7.25	Peak	172	175
3	5424.00	47.49	54.00	-6.51	40.35	7.14	Average	172	175
4	5424.00	61.26	74.00	-12.74	54.12	7.14	Peak	172	175
5	10420.00	60.05	68.20	-8.15	42.35	17.70	Peak	100	50
6	15630.00	48.97	54.00	-5.03	30.62	18.35	Average	100	80
7	15630.00	61.48	74.00	-12.52	43.13	18.35	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).

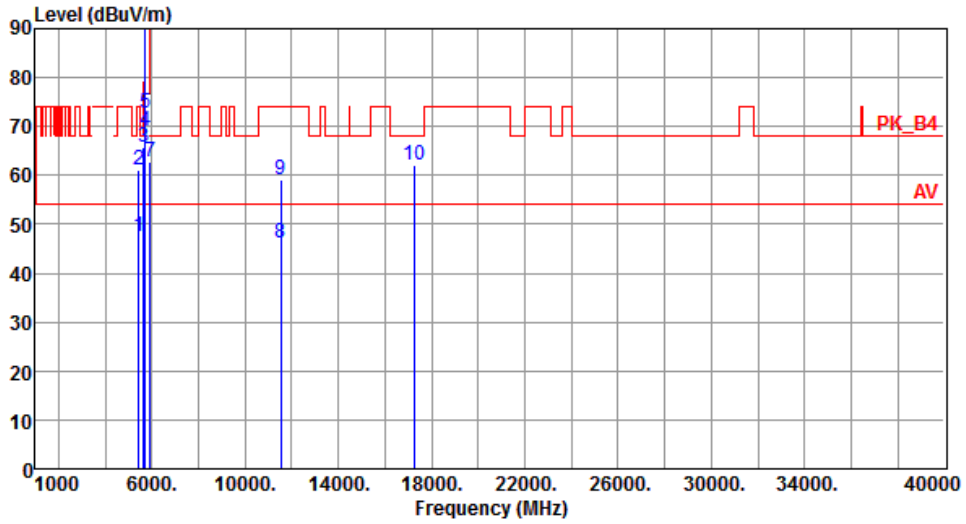
Proprietary protocol (BW)	80MHz	Test Freq. (MHz)	5765
Polarization	Horizontal		



	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	5424.00	51.39	54.00	-2.61	44.25	7.14	Average	160	178
2	5424.00	62.53	74.00	-11.47	55.39	7.14	Peak	160	178
3	5650.00	67.80	68.20	-0.40	60.42	7.38	Peak	160	178
4	5700.00	71.25	105.20	-33.95	63.53	7.72	Peak	160	178
5	5720.00	74.77	110.80	-36.03	66.99	7.78	Peak	160	178
6	5725.00	93.23	122.20	-28.97	85.44	7.79	Peak	160	178
7	5925.00	63.09	68.20	-5.11	54.68	8.41	Peak	160	178
8	11530.00	46.17	54.00	-7.83	28.53	17.64	Average	100	50
9	11530.00	59.18	74.00	-14.82	41.54	17.64	Peak	100	50
10	17295.00	62.11	68.20	-6.09	41.97	20.14	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).

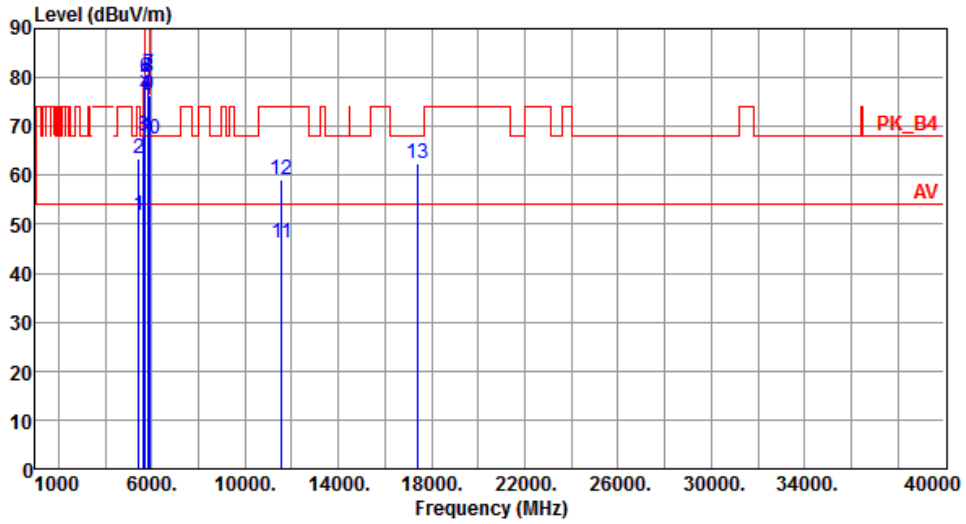
Proprietary protocol (BW)	80MHz	Test Freq. (MHz)	5765
Polarization	Vertical		



	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	5424.00	47.49	54.00	-6.51	40.35	7.14	Average	172	174
2	5424.00	61.17	74.00	-12.83	54.03	7.14	Peak	172	174
3	5650.00	65.59	68.20	-2.61	58.21	7.38	Peak	172	174
4	5700.00	69.21	105.20	-35.99	61.49	7.72	Peak	172	174
5	5720.00	72.63	110.80	-38.17	64.85	7.78	Peak	172	174
6	5725.00	90.25	122.20	-31.95	82.46	7.79	Peak	172	174
7	5925.00	62.66	68.20	-5.54	54.25	8.41	Peak	100	20
8	11530.00	46.13	54.00	-7.87	28.49	17.64	Average	100	20
9	11530.00	59.20	74.00	-14.80	41.56	17.64	Peak	100	20
10	17295.00	62.01	68.20	-6.19	41.87	20.14	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).

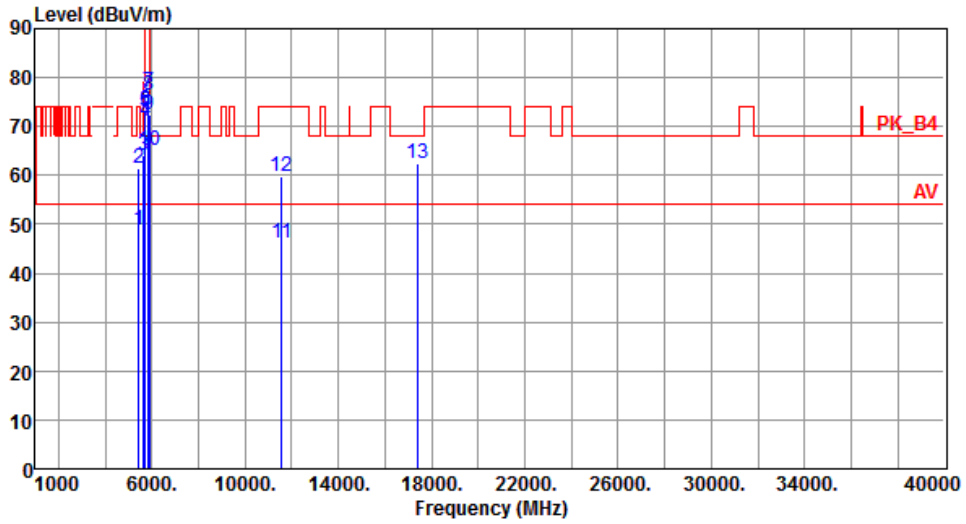
Proprietary protocol (BW)	80MHz	Test Freq. (MHz)	5790
Polarization	Horizontal		



	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	5424.00	51.89	54.00	-2.11	44.75	7.14	Average	172	180
2	5424.00	63.47	74.00	-10.53	56.33	7.14	Peak	172	180
3	5650.00	67.96	68.20	-0.24	60.58	7.38	Peak	172	180
4	5700.00	76.36	105.20	-28.84	68.64	7.72	Peak	172	180
5	5720.00	78.59	110.80	-32.21	70.81	7.78	Peak	172	180
6	5725.00	80.03	122.20	-42.17	72.24	7.79	Peak	172	180
7	5850.00	80.81	122.20	-41.39	72.58	8.23	Peak	172	180
8	5855.00	79.98	110.80	-30.82	71.74	8.24	Peak	172	180
9	5875.00	76.45	105.20	-28.75	68.16	8.29	Peak	172	180
10	5925.00	67.41	68.20	-0.79	59.00	8.41	Peak	172	180
11	11580.00	46.12	54.00	-7.88	28.60	17.52	Average	100	20
12	11580.00	59.19	74.00	-14.81	41.67	17.52	Peak	100	20
13	17370.00	62.42	68.20	-5.78	41.83	20.59	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).

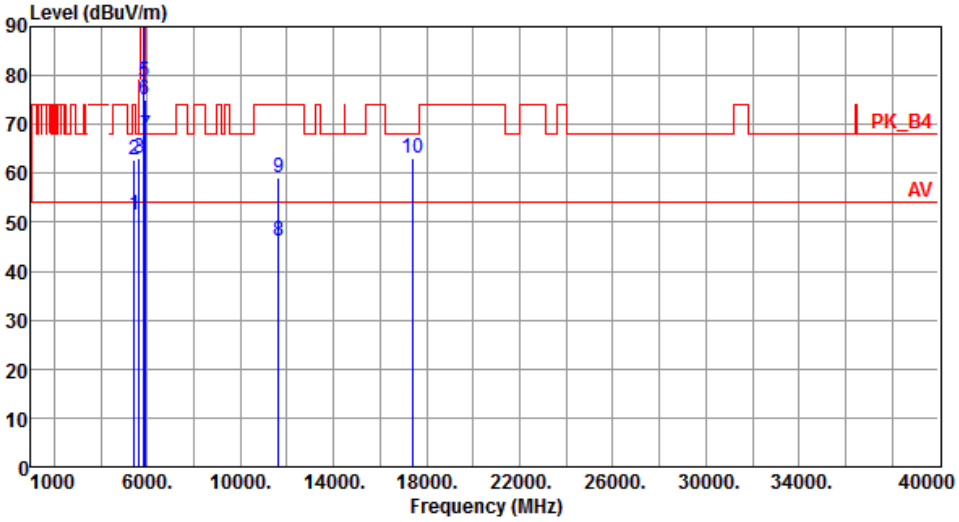
Proprietary protocol (BW)	80MHz	Test Freq. (MHz)	5790
Polarization	Vertical		



	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	5424.00	48.70	54.00	-5.30	41.56	7.14	Average	143	180
2	5424.00	61.53	74.00	-12.47	54.39	7.14	Peak	143	180
3	5650.00	64.16	68.20	-4.04	56.78	7.38	Peak	143	180
4	5700.00	71.23	105.20	-33.97	63.51	7.72	Peak	143	180
5	5720.00	73.23	110.80	-37.57	65.45	7.78	Peak	143	180
6	5725.00	73.54	122.20	-48.66	65.75	7.79	Peak	143	180
7	5850.00	76.92	122.20	-45.28	68.69	8.23	Peak	143	180
8	5855.00	76.25	110.80	-34.55	68.01	8.24	Peak	143	180
9	5875.00	72.43	105.20	-32.77	64.14	8.29	Peak	143	180
10	5925.00	65.06	68.20	-3.14	56.65	8.41	Peak	143	180
11	11580.00	46.18	54.00	-7.82	28.66	17.52	Average	100	60
12	11580.00	59.92	74.00	-14.08	42.40	17.52	Peak	100	60
13	17370.00	62.49	68.20	-5.71	41.90	20.59	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).

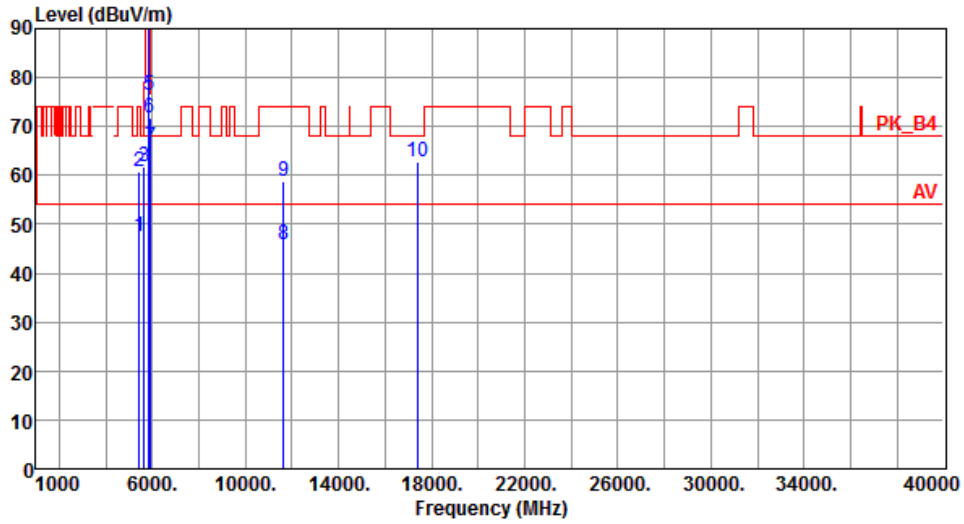
Proprietary protocol (BW)	80MHz	Test Freq. (MHz)	5810
Polarization	Horizontal		



	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	5424.00	51.40	54.00	-2.60	44.26	7.14	Average	172	178
2	5424.00	62.62	74.00	-11.38	55.48	7.14	Peak	172	178
3	5650.00	62.93	68.20	-5.27	55.55	7.38	Peak	172	178
4	5850.00	96.31	122.20	-25.89	88.08	8.23	Peak	172	178
5	5855.00	78.85	110.80	-31.95	70.61	8.24	Peak	172	178
6	5875.00	74.94	105.20	-30.26	66.65	8.29	Peak	172	178
7	5925.00	67.72	68.20	-0.48	59.31	8.41	Peak	172	178
8	11620.00	46.09	54.00	-7.91	28.67	17.42	Average	100	30
9	11620.00	59.01	74.00	-14.99	41.59	17.42	Peak	100	30
10	17430.00	62.94	68.20	-5.26	42.02	20.92	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).

Proprietary protocol (BW)	80MHz	Test Freq. (MHz)	5810
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	5424.00	47.37	54.00	-6.63	40.23	7.14	Average	149	172
2	5424.00	60.83	74.00	-13.17	53.69	7.14	Peak	149	172
3	5650.00	61.64	68.20	-6.56	54.26	7.38	Peak	149	172
4	5850.00	93.43	122.20	-28.77	85.20	8.23	Peak	149	172
5	5855.00	76.50	110.80	-34.30	68.26	8.24	Peak	149	172
6	5875.00	71.78	105.20	-33.42	63.49	8.29	Peak	149	172
7	5925.00	65.83	68.20	-2.37	57.42	8.41	Peak	149	172
8	11620.00	45.99	54.00	-8.01	28.57	17.42	Average	100	50
9	11620.00	58.88	74.00	-15.12	41.46	17.42	Peak	100	50
10	17430.00	62.78	68.20	-5.42	41.86	20.92	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).

3.6 Frequency Stability

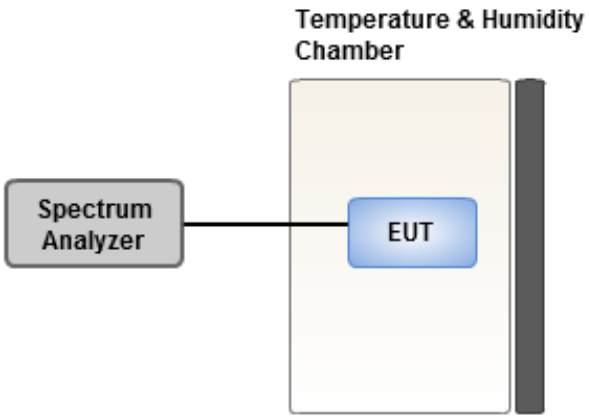
3.6.1 Limit of Frequency Stability

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: 5200 MHz	Frequency Drift (ppm)			
Temperature (°C)	0 minute	2 minutes	5 minutes	10 minutes
T20°CVmax	-2.51	-1.97	-2.34	-2.79
T20°CVmin	-3.39	-2.67	-2.84	-3.76
T70°CVnom	-7.28	-6.14	-6.64	-6.88
T60°CVnom	-7.23	-6.72	-6.73	-6.96
T50°CVnom	-4.22	-4.21	-4.32	-4.40
T40°CVnom	-4.53	-3.90	-4.18	-3.58
T30°CVnom	-3.51	-2.91	-2.69	-2.93
T20°CVnom	-1.64	-1.86	-2.24	-1.94
T10°CVnom	-1.50	-0.81	-1.29	-1.84
T0°CVnom	1.02	1.12	1.07	0.59
T-10°CVnom	3.12	2.62	2.84	2.57
T-20°CVnom	6.03	5.53	5.84	5.36
T-30°CVnom	8.02	7.25	7.59	7.47
Vnom [Vac]: 120		Vmax [Vac]: 138		Vmin [Vac]: 102
Tnom [°C]: 20		Tmax [°C]: 70		Tmin [°C]: -40

Frequency: 5790 MHz	Frequency Drift (ppm)			
Temperature (°C)	0 minute	2 minutes	5 minutes	10 minutes
T20°CVmax	-2.75	-2.45	-2.28	-2.77
T20°CVmin	-2.74	-2.49	-2.43	-2.40
T70°CVnom	-6.68	-6.21	-6.48	-6.18
T60°CVnom	-6.44	-6.38	-6.32	-5.98
T50°CVnom	-4.55	-4.82	-3.87	-4.55
T40°CVnom	-4.16	-3.59	-4.31	-4.20
T30°CVnom	-3.08	-2.78	-3.03	-2.31
T20°CVnom	-2.41	-1.96	-2.44	-2.65
T10°CVnom	-1.89	-1.64	-1.88	-1.84
T0°CVnom	0.33	0.27	0.68	0.35
T-10°CVnom	2.15	2.92	2.20	2.72
T-20°CVnom	4.81	4.47	5.16	5.29
T-30°CVnom	6.43	7.22	6.61	6.90
Vnom [Vac]: 120		Vmax [Vac]: 138		Vmin [Vac]: 102
Tnom [°C]: 20		Tmax [°C]: 70		Tmin [°C]: -40

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.

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