NCC RADIO TEST REPORT

Equipment	:	**Active Loud Speaker**
Brand Name	:	**Marshall**
Model Name	:	**ACTON MULTI-ROOM**
Applicant	:	百滋國際股份有限公司 台北市松山區寶清街 **17** 號 **5** 樓之 **1**
Manufacturer	:	**Zound Industries International AB** **Room 411-412, 4th Floor, Main Building,** **No. 99 Qiao Cheng East Road, Nanshan** **District, Shenzhen City, China**
Standard	:	**NCC LP0002 (2018-01-10)**

The product was received on May. 09, 2018, and testing was started from Jun. 28, 2018 and completed on Jul. 05, 2018. We, SPORTON INTERTIONAL INC. EMC & Wireless Communications Laboratory, would like to declare that the tested sample has been evaluated in accordance with the procedures given in NCC LP0002 (2018-01-10) and shown compliance with the applicable technical standards.

The report must not be used by the client to claim product certification, approval, or endorsement by TAF or any agency of government.

The test results in this report apply exclusively to the tested model / sample. Without written approval of SPORTON INTERTIONAL INC. EMC & Wireless Communications Laboratory, the test report shall not be reproduced except in full.

Approved by: James Fan

SPORTON INTERTIONAL INC. EMC & Wireless Communications Laboratory

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History of this test report

Report No.	Version	Description	Issue Date
TR850940E	01	Initial issue of report	Jul. 13, 2018

Summary of Test Result

Report Clause	Ref Std. Clause	Test Items	Result (PASS/FAIL)	Remark
3.1	LP0002 4.7.3 4.7.5	26dB & 99% Bandwidth	Pass	-
3.2	LP0002 4.7.3	Maximum Conducted Output Power	Pass	-
3.3	LP0002 4.7.3	Power Spectral Density	Pass	-
3.4	LP0002 4.7.4	Unwanted Emissions	Pass	Under limit -0.36 dB at 5470.00 MHz
3.5	LP0002 2.11	Receiver Radiated Emission	Pass	Under limit -5.60 dB at 934.12 MHz
3.6	LP0002 2.3	AC Conducted Emission	Pass	Under limit -12.69 dB at 0.273 MHz
3.7	LP0002 4.7.6	Automatically Discontinue Transmission	Pass	-
3.8	LP0002 2.2 4.7.8	Antenna Requirement	Pass	-
3.9	LP0002 2.2 5.20.2	Maximum Power Density	Pass	-

Reviewed by: Along Chen
Report Producer: Jing Chen

1 General Description

1.1 Product Feature of Equipment Under Test

Bluetooth, Wi-Fi 2.4GHz 802.11b/g/n, Wi-Fi 5GHz 802.11a/n/ac.

Product Specification subjective to this standard	
Antenna Type	WLAN: FPCB Antenna Bluetooth: FPCB Antenna

1.2 Modification of EUT

No modifications are made to the EUT during all test items.

1.3 Testing Location

Sporton Lab is accredited to ISO 17025 by Taiwan Accreditation Foundation (TAF code : 1190) and the FCC designation No. TW1190 and TW0007 under the FCC 2.948(e) by Mutual Recognition Agreement (MRA) in FCC Test.

Test Site No.	Sporton Site No.		
	TH05-HY	CO05-HY	03CH15-HY

Note: The test site complies with ANSI C63.4 2014 requirement.

1.4 Applicable Standards

According to the specifications of the manufacturer, the EUT must comply with the requirements of the following standards:

- NCC LP0002 (2018-01-10)
- FCC KDB 789033 D02 General UNII Test Procedures New Rules v02r01.
- ANSI C63.10-2013

Remark: All test items were verified and recorded according to the standards and without any deviation during the test.

2 Test Configuration of Equipment Under Test

a. The EUT has been associated with peripherals and configuration operated in a manner tended to maximize its emission characteristics in a typical application. Frequency range investigated: conduction emission (150 kHz to 30 MHz), radiation emission (9 kHz to the 10th harmonic of the highest fundamental frequency or to 40 GHz, whichever is lower).

b. AC power line Conducted Emission was tested under maximum output power.

2.1 Carrier Frequency and Channel

Frequency Band	Channel	Freq. (MHz)	Channel	Freq. (MHz)
5150-5250 MHz Band 1 (U-NII-1)	36	5180	44	5220
	38*	5190	46*	5230
	40	5200	48	5240
	42#	5210		

Frequency Band	Channel	Freq. (MHz)	Channel	Freq. (MHz)
5250-5350 MHz Band 2 (U-NII-2A)	52	5260	60	5300
	54*	5270	62*	5310
	56	5280	64	5320
	58#	5290		

Frequency Band	Channel	Freq. (MHz)	Channel	Freq. (MHz)
5470-5725 MHz Band 3 (U-NII-2C)	100	5500	112	5560
	102*	5510	116	5580
	104	5520	132	5660
	106#	5530	134*	5670
	108	5540	136	5680
	110*	5550	140	5700

Note:

1. The above Frequency and Channel in "*" were 802.11n HT40 and 802.11ac VHT40.
2. The above Frequency and Channel in "#" were 802.11ac VHT80.

2.2 Test Mode

Final test modes are considering the modulation and worse data rates as below table.

Modulation	Data Rate
802.11a	6 Mbps
802.11n HT20	MCS0
802.11n HT40	MCS0
802.11ac VHT80	MCS0

Test Cases	
AC Conducted Emission	Mode 1: 802.11a Tx CH52_5260 MHz_6 Mbps Mode 2: 802.11a Rx CH52_5260 MHz_6 Mbps
Receiver Radiated Emission	Mode 1: 802.11a Rx CH52_5260 MHz_6 Mbps

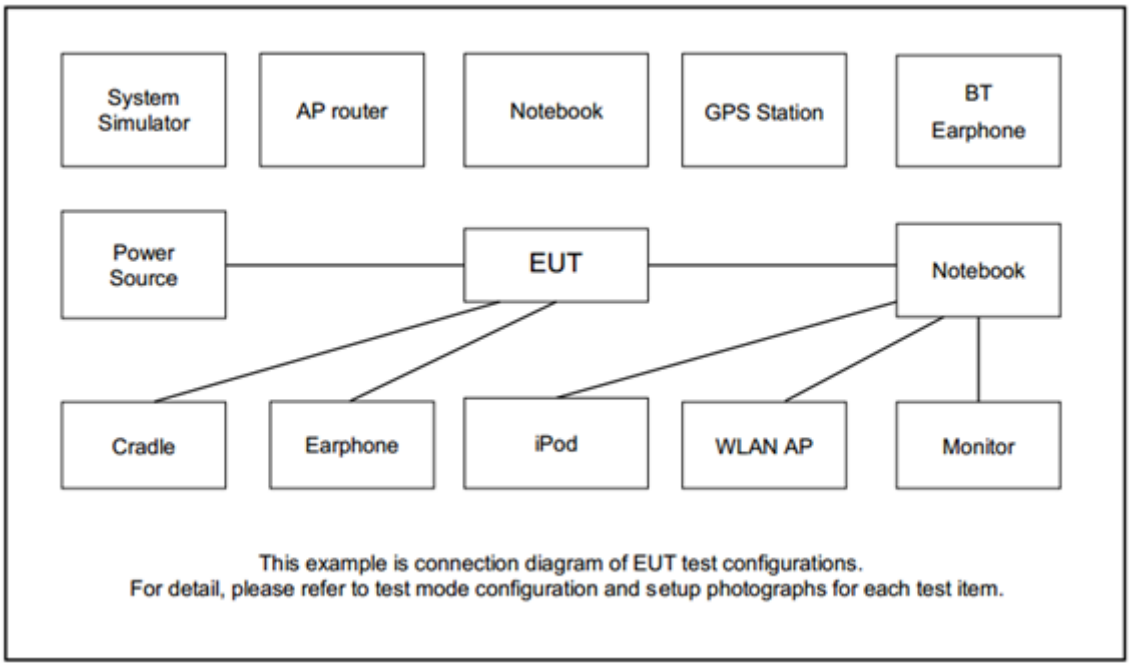
Ch. #		Band I：5150-5250 MHz	Band II：5250-5350 MHz	Band III：5470-5725MHz
		802.11a	802.11a	802.11a
L	Low	36	52	100
M	Middle	40	60	116
H	High	48	64	140

Ch. #		Band I：5150-5250 MHz	Band II：5250-5350 MHz	Band III：5470-5725MHz
		802.11n HT20	802.11n HT20	802.11n HT20
L	Low	36	52	100
M	Middle	40	60	116
H	High	48	64	140

Ch. #		Band I：5150-5250 MHz	Band II：5250-5350 MHz	Band III：5470-5725MHz
		802.11n HT40	802.11n HT40	802.11n HT40
L	Low	38	54	102
M	Middle	-	-	110
H	High	46	62	134

Ch. #		Band I：5150-5250 MHz	Band II：5250-5350 MHz	Band III：5470-5725MHz
		802.11ac VHT80	802.11ac VHT80	802.11ac VHT80
L	Low	-	-	106
M	Middle	42	58	-
H	High	-	-	-

2.3 Connection Diagram of Test System



2.4 Support Unit used in test configuration and system

Item	Equipment	Trade Name	Model Name	FCC ID	Data Cable	Power Cord
1.	Notebook	DELL	Latitude E6430	FCC DoC	N/A	N/A
2.	iPod Nano	Apple	A1446	FCC DoC	Shielded, 1.5 m	N/A

Note: The support notebook is disconnected from EUT and removed from test table when EUT is set to transmit continuously.

2.5 EUT Operation Test Setup

The RF test items, utility “PuTTY” was installed in Notebook which was programmed in order to make the EUT get into the engineering modes to provide channel selection, power level, data rate and the application type and for continuous transmitting signals.

2.6 Duty cycle

Mode	Duty Cycle (%)	Duty Cycle On (ms)	Duty Factor (dB)	VBW
802.11a	99.01%	1.44	0.04	1 kHz
802.11n HT20	99.47%	1.36	0.02	1 kHz
802.11n HT40	97.88%	0.67	0.09	3 kHz
802.11ac VHT80	95.89%	0.34	0.18	3 kHz

2.7 Measurement Results Explanation Example

For all conducted test items:

The offset level is set in the spectrum analyzer to compensate the RF cable loss and attenuator factor between EUT conducted output port and spectrum analyzer. With the offset compensation, the spectrum analyzer reading level is exactly the EUT RF output level.

Example :

The spectrum analyzer offset is derived from RF cable loss and attenuator factor.

Offset = RF cable loss + attenuator factor.

Following shows an offset computation example with cable loss 4.2 dB and 10dB attenuator.

Offset(dB) = RF cable loss(dB) + attenuator factor(dB).

= 4.2 + 10 = 14.2 (dB)

3 Test Result

3.1 26dB & 99% Occupied Bandwidth Measurement

3.1.1 Description of 26dB & 99% Occupied Bandwidth

This section is for reporting purpose only.

There is no restriction limits for bandwidth.

3.1.2 Measuring Instruments

The measuring equipment is listed in the section 4 of this test report.

3.1.3 Test Procedures

1. The testing follows FCC KDB 789033 D02 General UNII Test Procedures New Rules v02r01.
2. Section C) Emission bandwidth
3. Set RBW = approximately 1% of the emission bandwidth.
4. Set the VBW > RBW.
5. Detector = Peak.
6. Trace mode = max hold
7. Measure the maximum width of the emission that is 26 dB down from the peak of the emission. Compare this with the RBW setting of the analyzer. Readjust RBW and repeat measurement as needed until the RBW/EBW ratio is approximately 1%.
8. For 99% Bandwidth Measurement, the spectrum analyzer's resolution bandwidth (RBW) is set 1MHz and set the Video bandwidth (VBW) ≥ 3 * RBW.
9. Measure and record the results in the test report.

3.1.4 Test Setup

3.1.5 Test Result of 26dB and 99% Occupied Bandwidth

Summary

Mode	Max-N dB (Hz)	Max-OBW (Hz)	ITU-Code	Min-N dB (Hz)	Min-OBW (Hz)
5.15-5.25GHz	-	-	-	-	-
802.11a_Nss1,(6Mbps)_1TX	40.435M	17.8M	17M8D1D	34.275M	16.787M
802.11n HT20_Nss1,(MCS0)_1TX	44.71M	19.247M	19M2D1D	36.087M	17.8M
802.11n HT40_Nss1,(MCS0)_1TX	87.681M	37.048M	37M0D1D	74.783M	36.324M
802.11ac VHT80_Nss1,(MCS0)_1TX	82.609M	76.411M	76M4D1D	82.609M	76.411M
5.25-5.35GHz	-	-	-	-	-
802.11a_Nss1,(6Mbps)_1TX	40.29M	17.873M	17M9D1D	24.348M	16.643M
802.11n HT20_Nss1,(MCS0)_1TX	44.275M	18.234M	18M2D1D	24.638M	17.656M
802.11n HT40_Nss1,(MCS0)_1TX	82.029M	36.903M	36M9D1D	74.348M	36.324M
802.11ac VHT80_Nss1,(MCS0)_1TX	157.681M	76.122M	76M1D1D	157.681M	76.122M
5.47-5.725GHz	-	-	-	-	-
802.11a_Nss1,(6Mbps)_1TX	41.667M	17.583M	17M6D1D	37.536M	16.86M
802.11n HT20_Nss1,(MCS0)_1TX	42.609M	18.017M	18M0D1D	31.232M	17.728M
802.11n HT40_Nss1,(MCS0)_1TX	97.681M	40.232M	40M2D1D	74.638M	36.179M
802.11ac VHT80_Nss1,(MCS0)_1TX	168.406M	76.7M	76M7D1D	168.406M	76.7M

Max-N dB = Maximum 26dB down bandwidth;

Max-OBW = Maximum 99% occupied bandwidth;

Min-N dB = Minimum 26dB down bandwidth ;

Min-OBW = Minimum 99% occupied bandwidth;

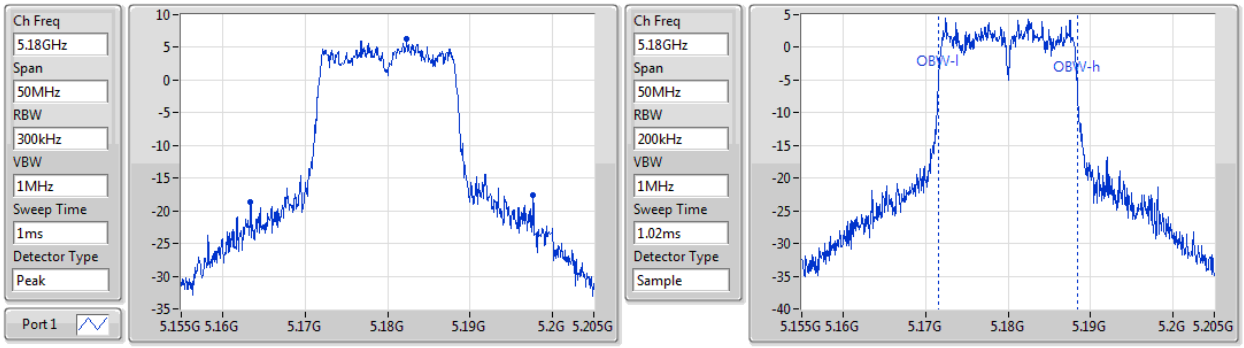
Result

Mode	Result	Limit (Hz)	Port 1-N dB (Hz)	Port 1-OBW (Hz)
802.11a_Nss1,(6Mbps)_1TX	-	-	-	-
5180MHz	Pass	Inf	34.275M	16.86M
5200MHz	Pass	Inf	40.435M	17.8M
5240MHz	Pass	Inf	34.71M	16.787M
5260MHz	Pass	Inf	40.29M	17.873M
5300MHz	Pass	Inf	38.551M	17.004M
5320MHz	Pass	Inf	24.348M	16.643M
5500MHz	Pass	Inf	38.623M	17.221M
5580MHz	Pass	Inf	41.667M	17.583M
5700MHz	Pass	Inf	37.536M	16.86M
802.11n HT20_Nss1,(MCS0)_1TX	-	-	-	-
5180MHz	Pass	Inf	38.841M	17.8M
5200MHz	Pass	Inf	44.71M	19.247M
5240MHz	Pass	Inf	36.087M	17.8M
5260MHz	Pass	Inf	44.275M	18.234M
5300MHz	Pass	Inf	42.319M	17.945M
5320MHz	Pass	Inf	24.638M	17.656M
5500MHz	Pass	Inf	42.609M	17.945M
5580MHz	Pass	Inf	41.812M	18.017M
5700MHz	Pass	Inf	31.232M	17.728M

802.11n HT40_Nss1,(MCS0)_1TX	-	-	-	-
5190MHz	Pass	Inf	74.783M	36.324M
5230MHz	Pass	Inf	87.681M	37.048M
5270MHz	Pass	Inf	82.029M	36.903M
5310MHz	Pass	Inf	74.348M	36.324M
5510MHz	Pass	Inf	74.638M	36.179M
5550MHz	Pass	Inf	97.681M	40.232M
5670MHz	Pass	Inf	79.42M	36.614M
802.11ac VHT80_Nss1,(MCS0)_1TX	-	-	-	-
5775MHz	Pass	500k	76.522M	76.7M

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

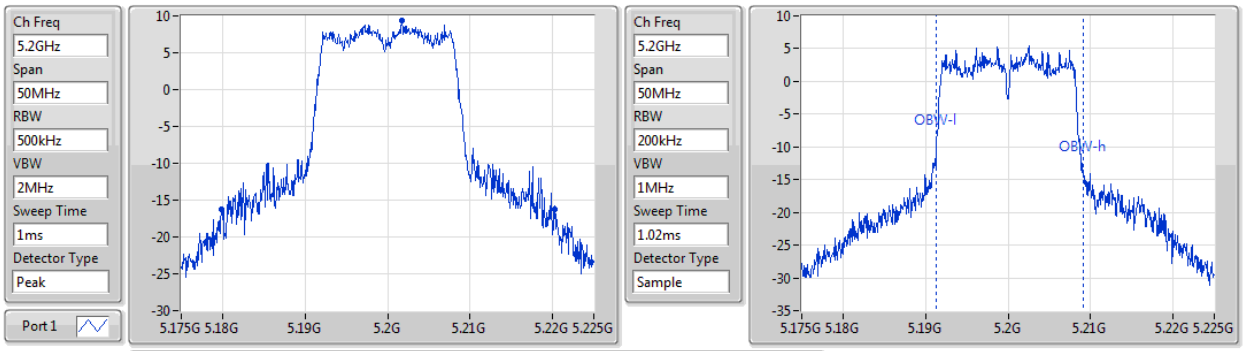
5180MHz



26dB(Hz)	Fl-26dB(Hz)	Fh-26dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
34.275M	5.163406G	5.197681G	16.86M	5.171534G	5.188394G	Inf	1

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

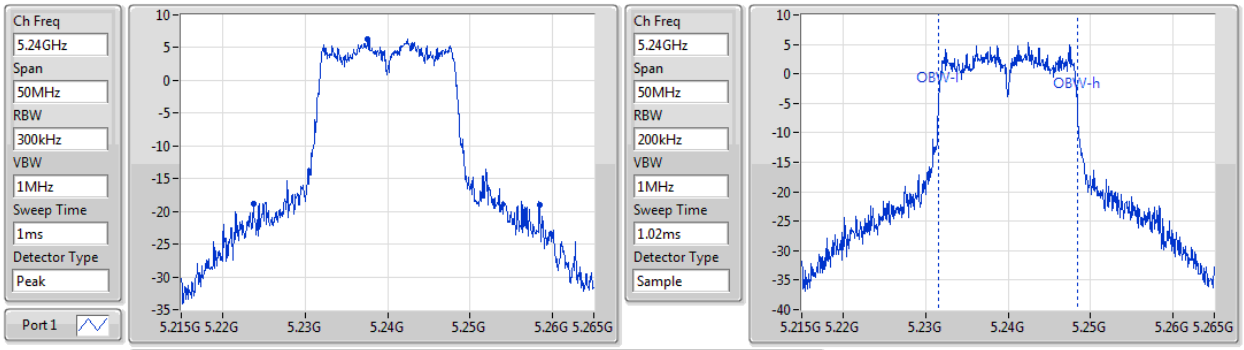
5200MHz



26dB(Hz)	Fl-26dB(Hz)	Fh-26dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
40.435M	5.179855G	5.22029G	17.8M	5.191317G	5.209117G	Inf	1

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

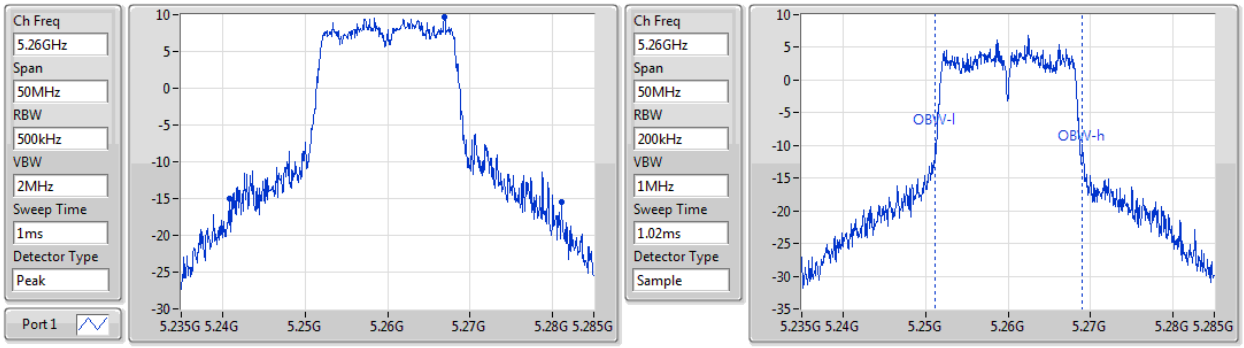
5240MHz



26dB(Hz)	Fl-26dB(Hz)	Fh-26dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
34.71M	5.223768G	5.258478G	16.787M	5.231606G	5.248394G	Inf	1

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

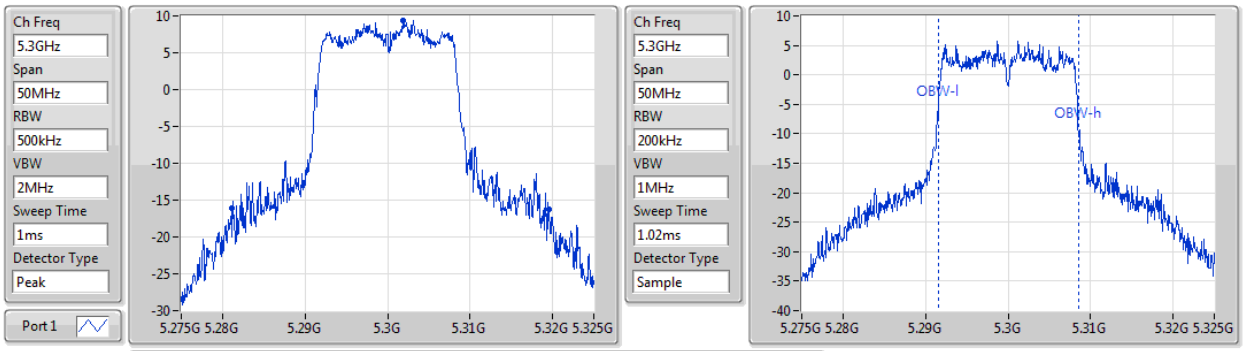
5260MHz



26dB(Hz)	Fl-26dB(Hz)	Fh-26dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
40.29M	5.240797G	5.281087G	17.873M	5.251172G	5.269045G	Inf	1

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

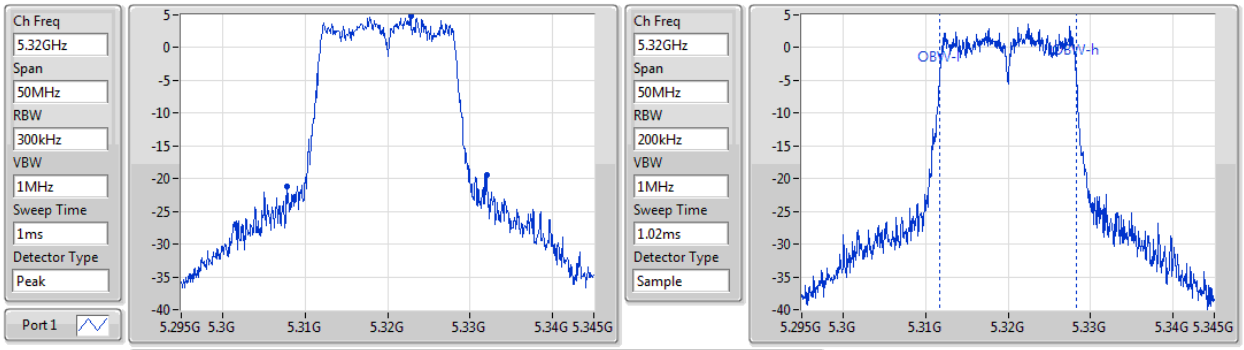
5300MHz



26dB(Hz)	Fl-26dB(Hz)	Fh-26dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
38.551M	5.281087G	5.319638G	17.004M	5.291534G	5.308538G	Inf	1

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

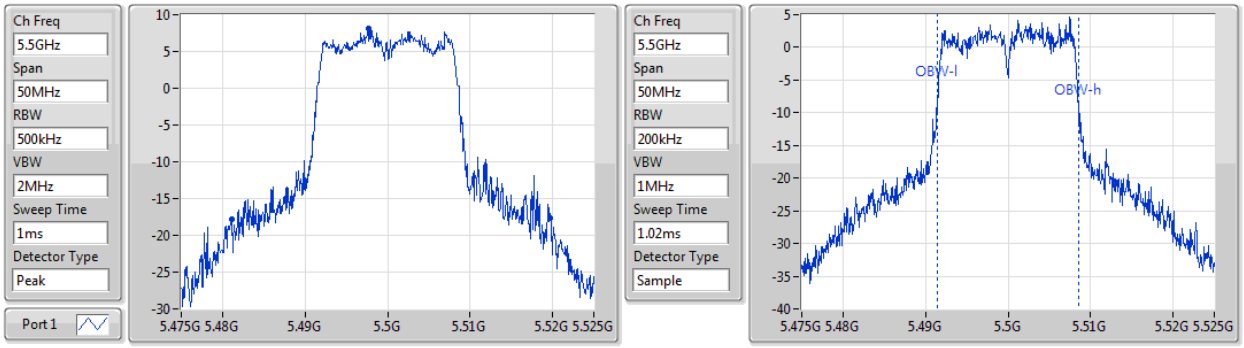
5320MHz



26dB(Hz)	Fl-26dB(Hz)	Fh-26dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
24.348M	5.307754G	5.332101G	16.643M	5.311679G	5.328321G	Inf	1

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

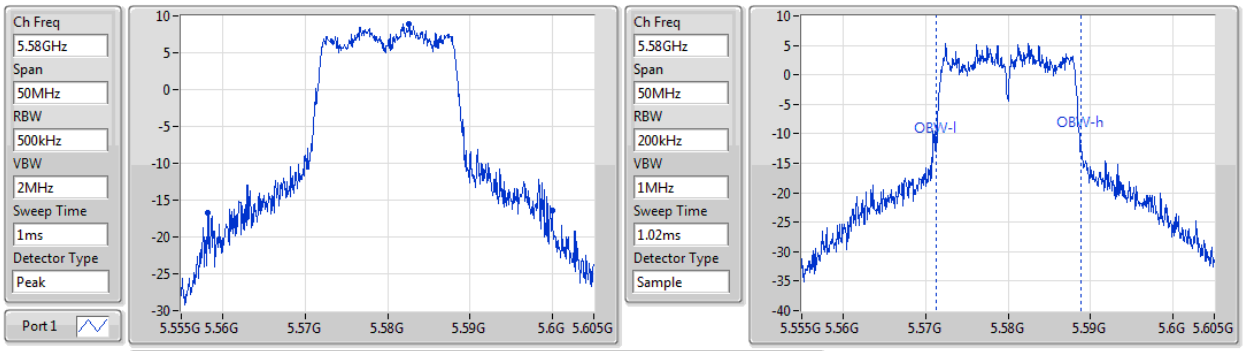
5500MHz



26dB(Hz)	Fl-26dB(Hz)	Fh-26dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
38.623M	5.481087G	5.51971G	17.221M	5.491389G	5.508611G	Inf	1

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

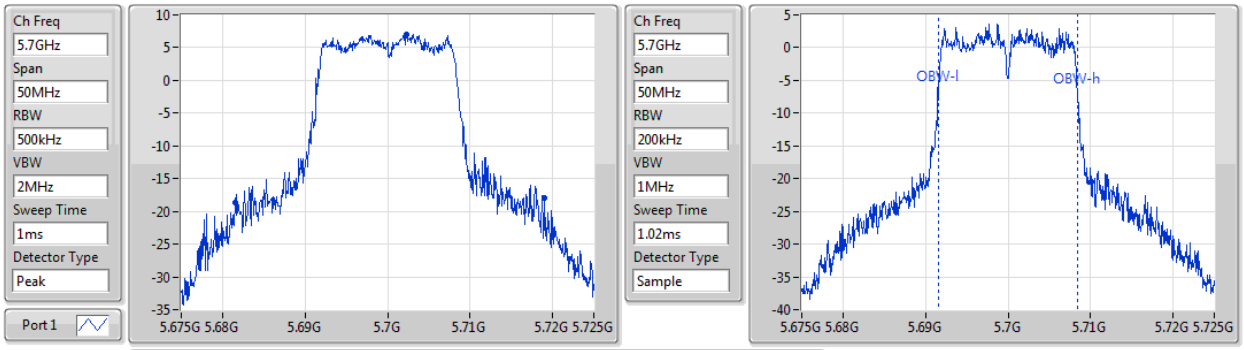
5580MHz



26dB(Hz)	Fl-26dB(Hz)	Fh-26dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
41.667M	5.558261G	5.599928G	17.583M	5.571317G	5.5889G	Inf	1

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

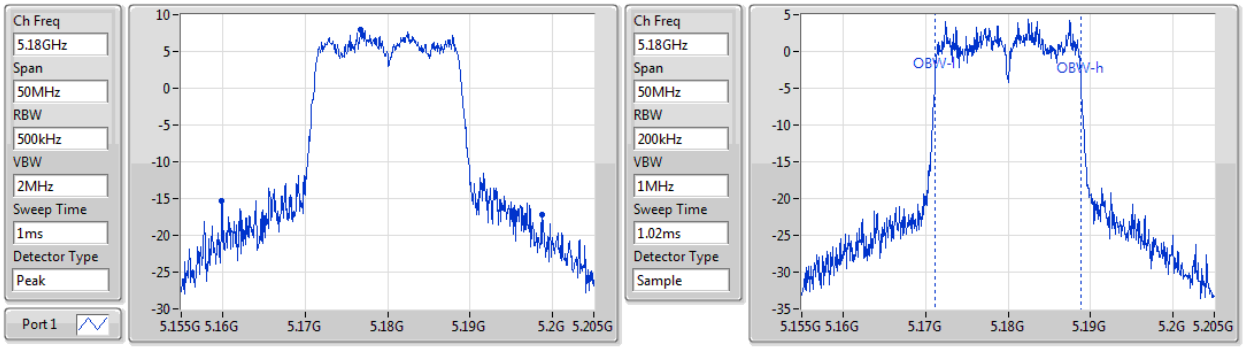
5700MHz



26dB(Hz)	Fl-26dB(Hz)	Fh-26dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
37.536M	5.681522G	5.719058G	16.86M	5.691534G	5.708394G	Inf	1

802.11n HT20_Nss1,(MCS0)_1TX **EBW**

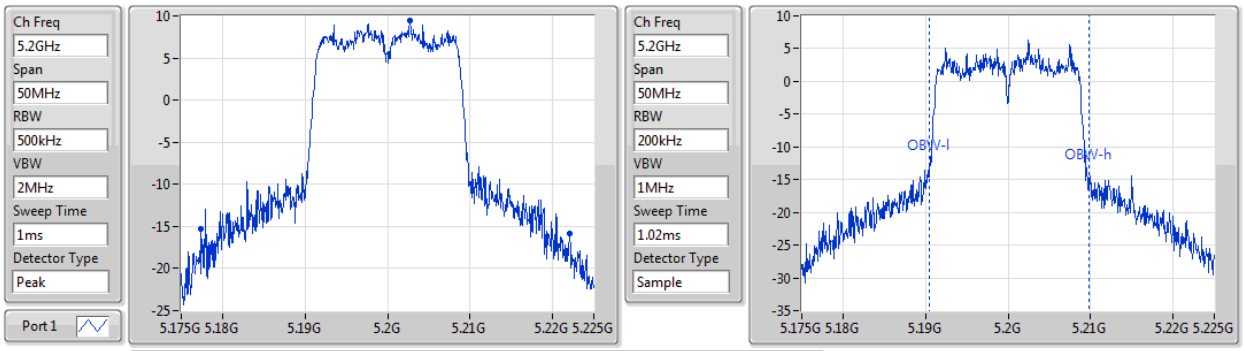
5180MHz



26dB(Hz)	Fl-26dB(Hz)	Fh-26dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
38.841M	5.159928G	5.198768G	17.8M	5.1711G	5.1889G	Inf	1

802.11n HT20_Nss1,(MCS0)_1TX **EBW**

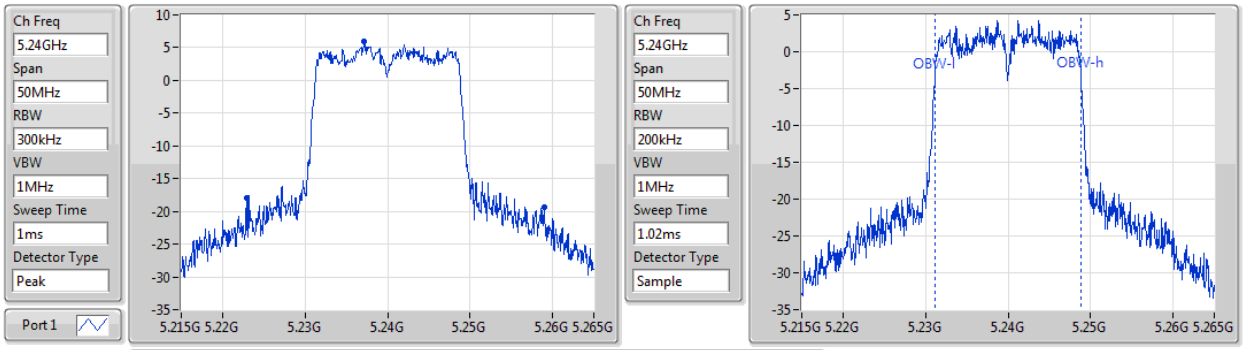
5200MHz



26dB(Hz)	Fl-26dB(Hz)	Fh-26dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
44.71M	5.177391G	5.222101G	19.247M	5.190521G	5.209768G	Inf	1

802.11n HT20_Nss1,(MCS0)_1TX **EBW**

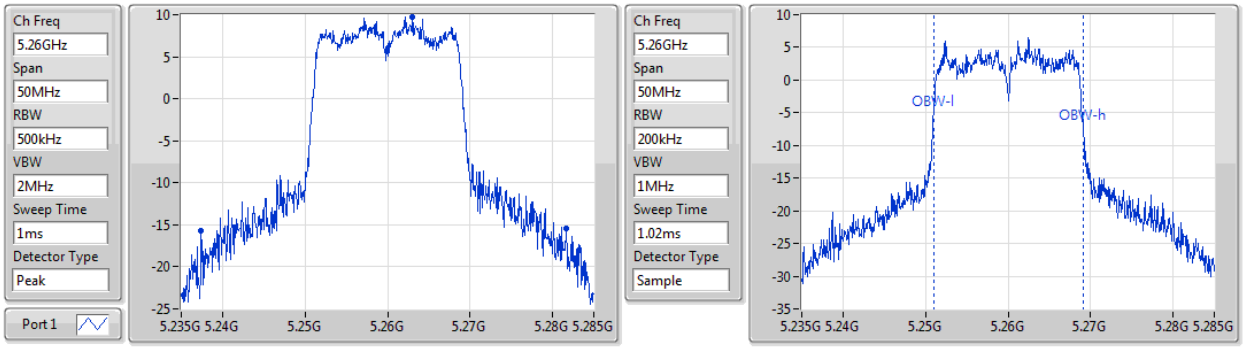
5240MHz



26dB(Hz)	Fl-26dB(Hz)	Fh-26dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
36.087M	5.222899G	5.258986G	17.8M	5.2311G	5.2489G	Inf	1

802.11n HT20_Nss1,(MCS0)_1TX EBW

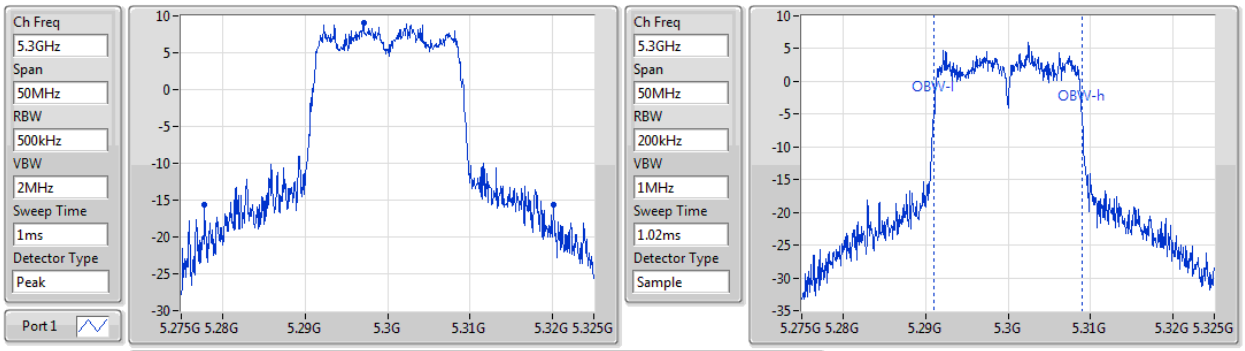
5260MHz



26dB(Hz)	Fl-26dB(Hz)	Fh-26dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
44.275M	5.237391G	5.281667G	18.234M	5.250955G	5.26919G	Inf	1

802.11n HT20_Nss1,(MCS0)_1TX EBW

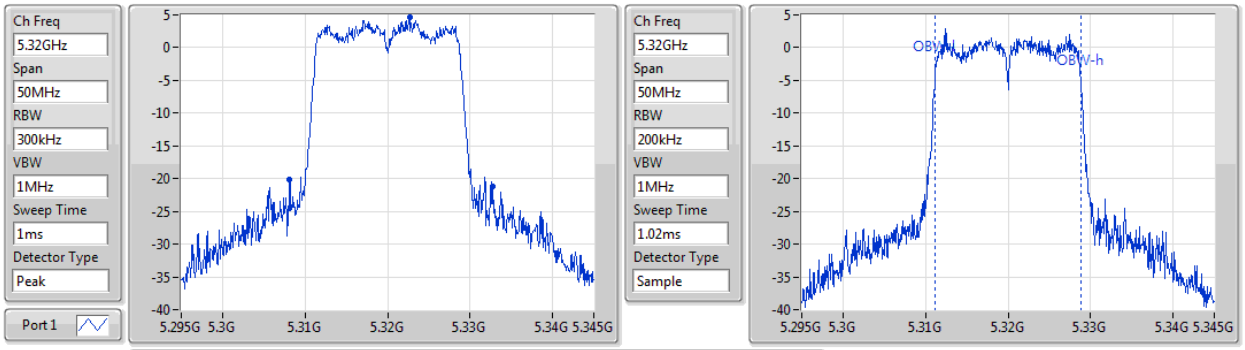
5300MHz



26dB(Hz)	Fl-26dB(Hz)	Fh-26dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
42.319M	5.277826G	5.320145G	17.945M	5.291027G	5.308973G	Inf	1

802.11n HT20_Nss1,(MCS0)_1TX EBW

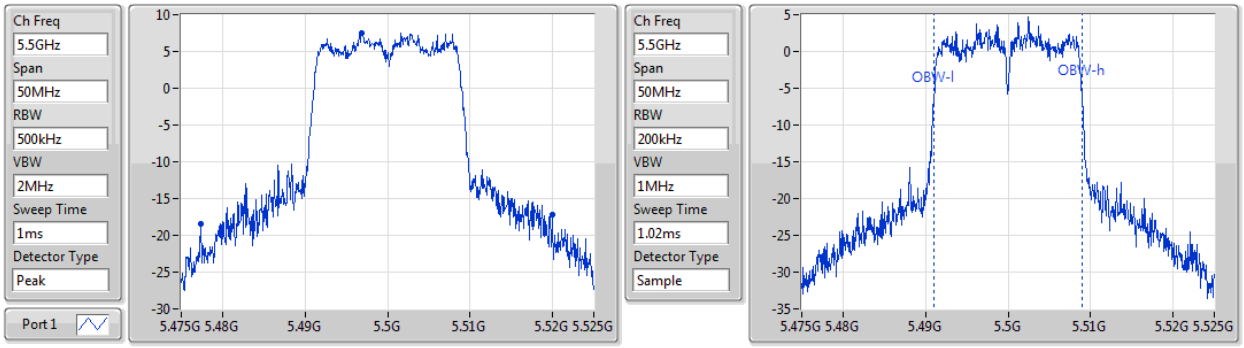
5320MHz



26dB(Hz)	Fl-26dB(Hz)	Fh-26dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
24.638M	5.308116G	5.332754G	17.656M	5.311172G	5.328828G	Inf	1

802.11n HT20_Nss1,(MCS0)_1TX EBW

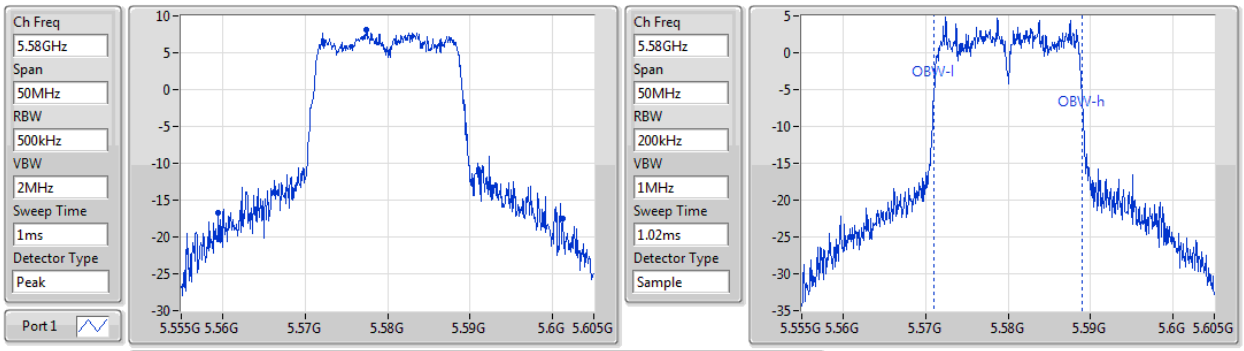
5500MHz



26dB(Hz)	Fl-26dB(Hz)	Fh-26dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
42.609M	5.477319G	5.519928G	17.945M	5.491027G	5.508973G	Inf	1

802.11n HT20_Nss1,(MCS0)_1TX EBW

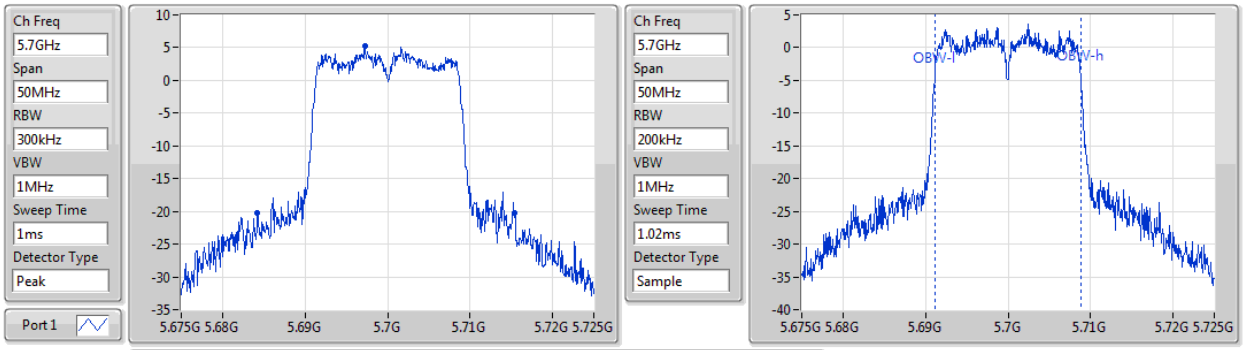
5580MHz



26dB(Hz)	Fl-26dB(Hz)	Fh-26dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
41.812M	5.559493G	5.601304G	18.017M	5.571027G	5.589045G	Inf	1

802.11n HT20_Nss1,(MCS0)_1TX EBW

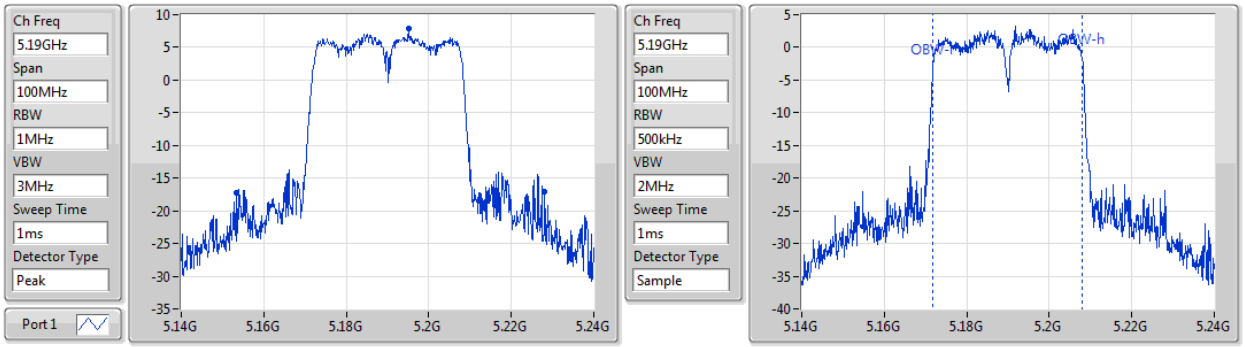
5700MHz



26dB(Hz)	Fl-26dB(Hz)	Fh-26dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
31.232M	5.684203G	5.715435G	17.728M	5.6911G	5.708828G	Inf	1

802.11n HT40_Nss1,(MCS0)_1TX **EBW**

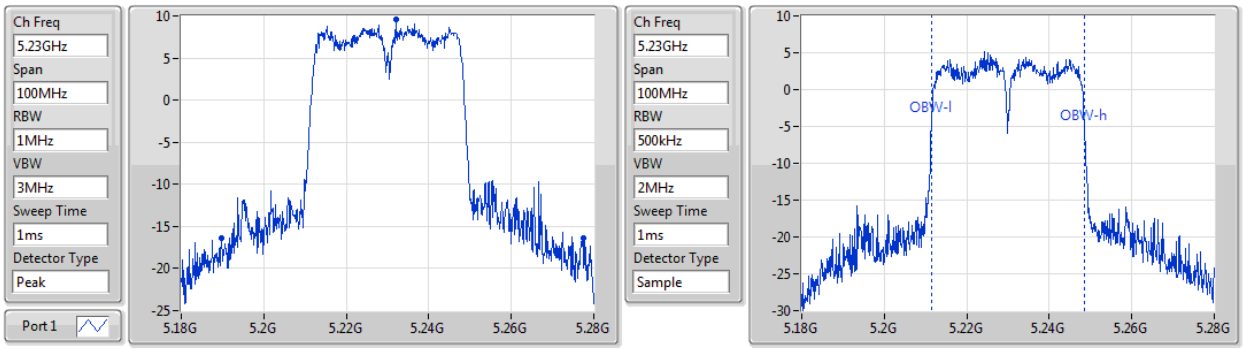
5190MHz



26dB(Hz)	Fl-26dB(Hz)	Fh-26dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
74.783M	5.153333G	5.228116G	36.324M	5.171766G	5.20809G	Inf	1

802.11n HT40_Nss1,(MCS0)_1TX **EBW**

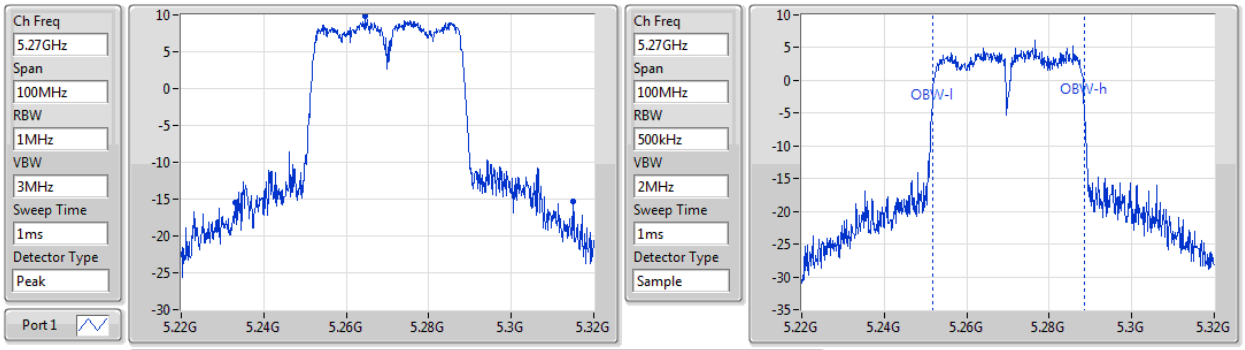
5230MHz



26dB(Hz)	Fl-26dB(Hz)	Fh-26dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
87.681M	5.18971G	5.277391G	37.048M	5.211476G	5.248524G	Inf	1

802.11n HT40_Nss1,(MCS0)_1TX **EBW**

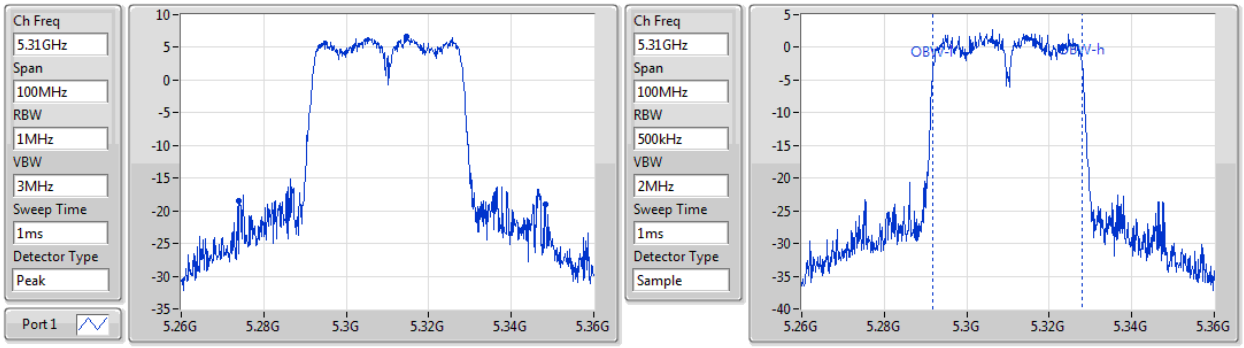
5270MHz



26dB(Hz)	Fl-26dB(Hz)	Fh-26dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
82.029M	5.233043G	5.315072G	36.903M	5.251621G	5.288524G	Inf	1

802.11n HT40_Nss1,(MCS0)_1TX EBW

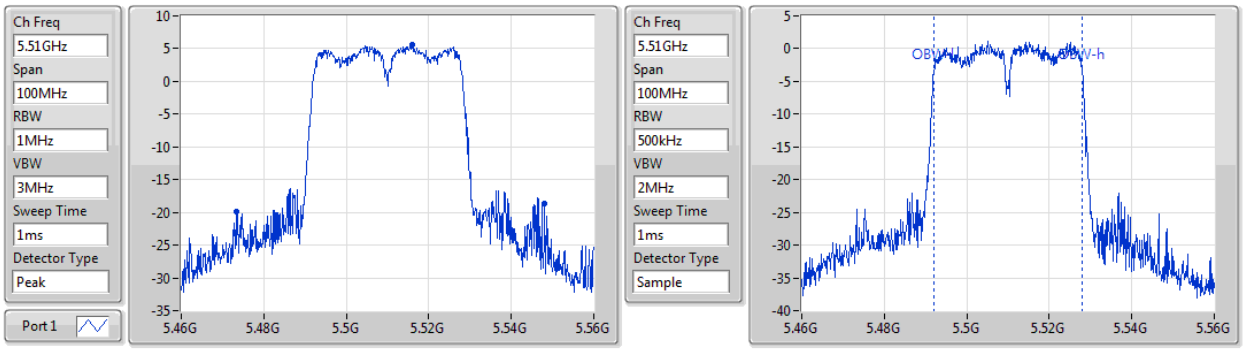
5310MHz



26dB(Hz)	Fl-26dB(Hz)	Fh-26dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
74.348M	5.274058G	5.348406G	36.324M	5.291766G	5.32809G	Inf	1

802.11n HT40_Nss1,(MCS0)_1TX EBW

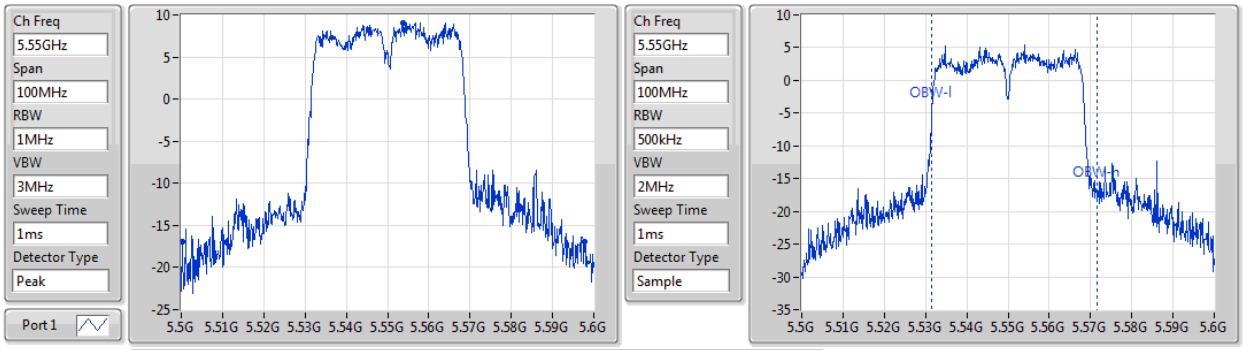
5510MHz



26dB(Hz)	Fl-26dB(Hz)	Fh-26dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
74.638M	5.473478G	5.548116G	36.179M	5.49191G	5.52809G	Inf	1

802.11n HT40_Nss1,(MCS0)_1TX EBW

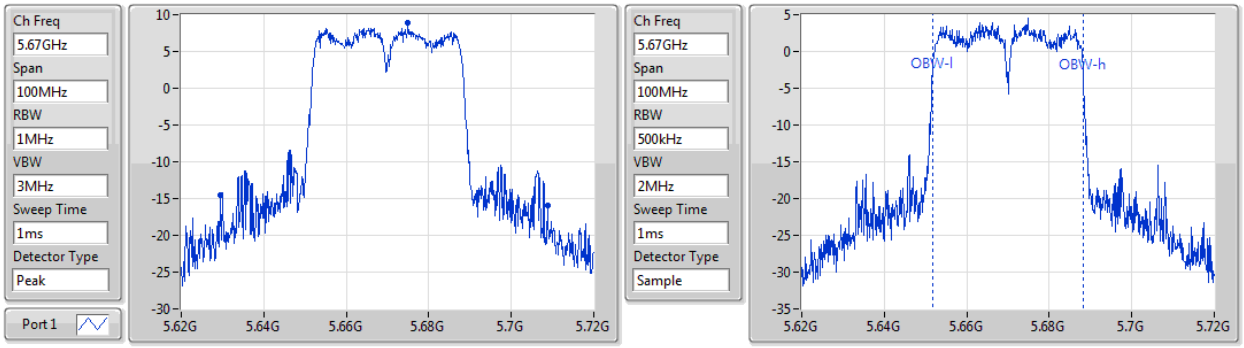
5550MHz



26dB(Hz)	Fl-26dB(Hz)	Fh-26dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
97.681M	5.500145G	5.597826G	40.232M	5.531476G	5.571708G	Inf	1

802.11n HT40_Nss1,(MCS0)_1TX EBW

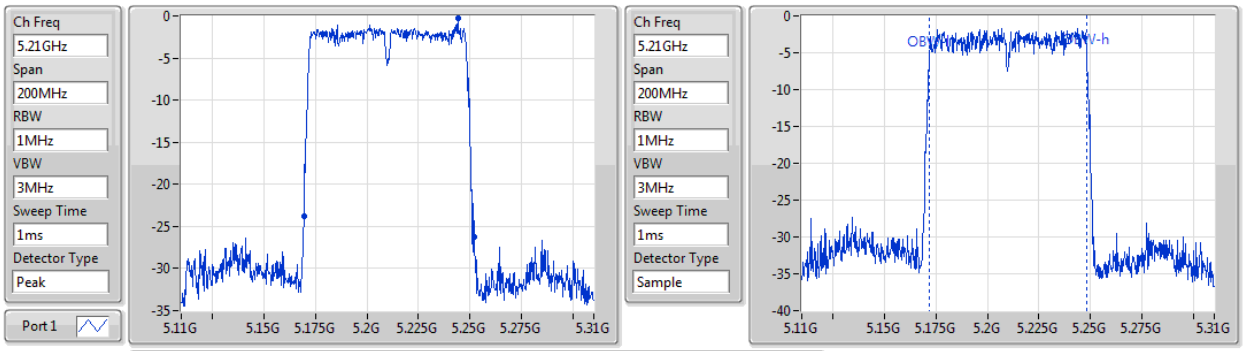
5670MHz



26dB(Hz)	Fl-26dB(Hz)	Fh-26dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
79.42M	5.62942G	5.708841G	36.614M	5.651621G	5.688234G	Inf	1

802.11ac VHT80_Nss1,(MCS0)_1TX EBW

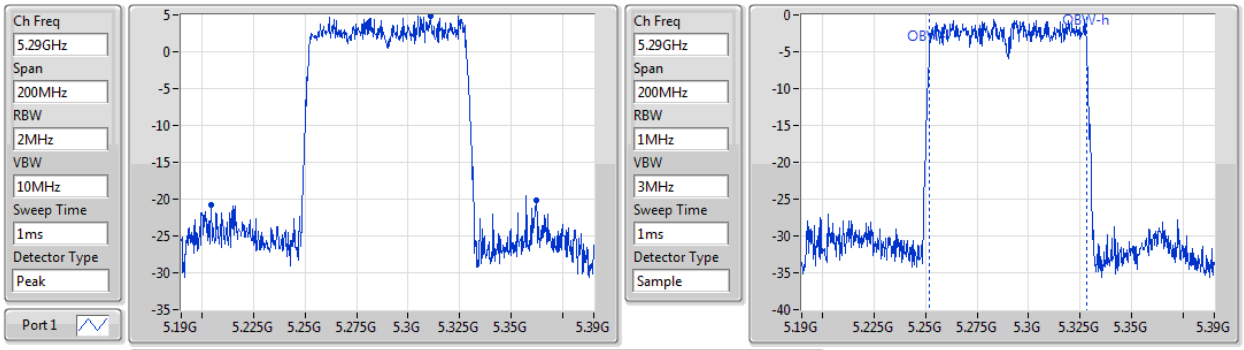
5210MHz



26dB(Hz)	Fl-26dB(Hz)	Fh-26dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
82.609M	5.16942G	5.252029G	76.411M	5.171795G	5.248205G	Inf	1

802.11ac VHT80_Nss1,(MCS0)_1TX EBW

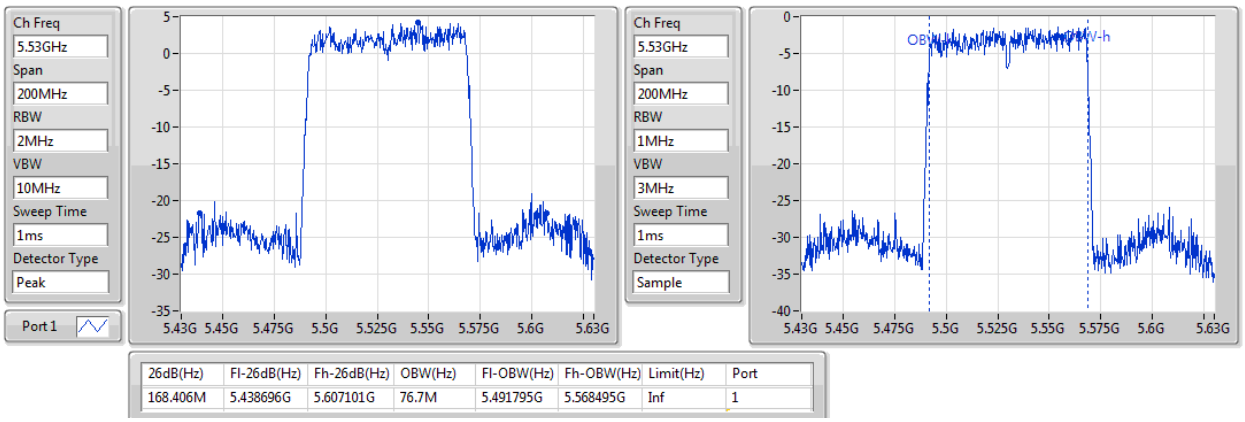
5290MHz



26dB(Hz)	Fl-26dB(Hz)	Fh-26dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
157.681M	5.204493G	5.362174G	76.122M	5.251795G	5.327916G	Inf	1

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

5530MHz



26dB(Hz)	Fl-26dB(Hz)	Fh-26dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
168.406M	5.438696G	5.607101G	76.7M	5.491795G	5.568495G	Inf	1

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3.2 Maximum Conducted Output Power Measurement

3.2.1 Limit of Maximum Conducted Output Power

For mobile and portable client devices in the 5.15–5.25 GHz band, the maximum conducted output power over the frequency band of operation shall not exceed 250 mW.

For the 5.25–5.725 GHz bands, the maximum conducted output power over the frequency bands of operation shall not exceed the lesser of 250 mW or 11 dBm 10 log B, where B is the 26 dB emission bandwidth in megahertz.

If transmitting antennas of directional gain greater than 6 dBi are used, the peak output power shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi.

For the 5.25–5.725 GHz bands, devices with a maximum e.i.r.p. greater than 500 mW shall implement TPC in order to have the capability to operate at least 6 dB below the maximum permitted e.i.r.p. of 1 W.

3.2.2 Measuring Instruments

The measuring equipment is listed in the section 4 of this test report.

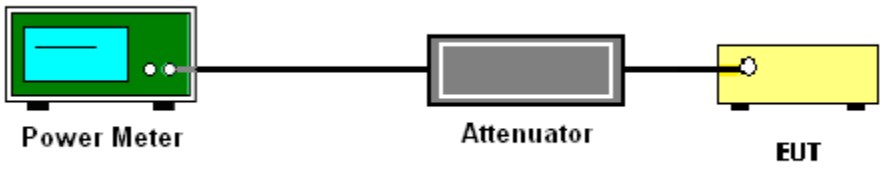
3.2.3 Test Procedures

The testing follows Method PM of FCC KDB 789033 D02 General UNII Test Procedures New Rules v02r01.

Method PM (Measurement using an RF average power meter):

1. Measurement is performed using a wideband RF power meter.
2. The EUT is configured to transmit continuously with a consistent duty cycle at its maximum power control level.
3. Measure the average power of the transmitter, and the average power is corrected with duty factor, 10 log(1/x), where x is the duty cycle.

3.2.4 Test Setup



3.2.5 Test Result of Maximum Conducted Output Power

Summary

Mode	Total Power (dBm)	Total Power (W)	EIRP (dBm)	EIRP (W)
5.15-5.25GHz	-	-	-	-
802.11a_Nss1,(6Mbps)_1TX	15.24	0.03342	19.54	0.08995
802.11n HT20_Nss1,(MCS0)_1TX	14.99	0.03155	19.29	0.08492
802.11n HT40_Nss1,(MCS0)_1TX	14.25	0.02661	18.55	0.07161
802.11ac VHT80_Nss1,(MCS0)_1TX	8.15	0.00653	12.45	0.01758
5.25-5.35GHz	-	-	-	-
802.11a_Nss1,(6Mbps)_1TX	15.64	0.03664	19.94	0.09863
802.11n HT20_Nss1,(MCS0)_1TX	15.40	0.03467	19.70	0.09333
802.11n HT40_Nss1,(MCS0)_1TX	14.66	0.02924	18.96	0.07870
802.11ac VHT80_Nss1,(MCS0)_1TX	8.62	0.00728	12.92	0.01959
5.47-5.725GHz	-	-	-	-
802.11a_Nss1,(6Mbps)_1TX	15.28	0.03373	19.58	0.09078
802.11n HT20_Nss1,(MCS0)_1TX	14.90	0.03090	19.20	0.08318
802.11n HT40_Nss1,(MCS0)_1TX	14.85	0.03055	19.15	0.08222
802.11ac VHT80_Nss1,(MCS0)_1TX	8.29	0.00675	12.59	0.01816

Result

Mode	Result	DG (dBi)	Port 1 (dBm)	Total Power (dBm)	Power Limit (dBm)	EIRP (dBm)	EIRP Limit (dBm)
802.11a_Nss1,(6Mbps)_1TX	-	-	-	-	-	-	-
5180MHz	Pass	4.30	14.39	14.39	24.00	18.69	30.00
5200MHz	Pass	4.30	15.24	15.24	24.00	19.54	30.00
5240MHz	Pass	4.30	14.42	14.42	24.00	18.72	30.00
5260MHz	Pass	4.30	15.64	15.64	24.00	19.94	26.99
5300MHz	Pass	4.30	14.87	14.87	24.00	19.17	26.99
5320MHz	Pass	4.30	13.06	13.06	24.00	17.36	26.99
5500MHz	Pass	4.30	14.39	14.39	24.00	18.69	26.99
5580MHz	Pass	4.30	15.28	15.28	24.00	19.58	26.99
5700MHz	Pass	4.30	13.59	13.59	24.00	17.89	26.99
802.11n HT20_Nss1,(MCS0)_1TX	-	-	-	-	-	-	-
5180MHz	Pass	4.30	14.35	14.35	24.00	18.65	30.00
5200MHz	Pass	4.30	14.99	14.99	24.00	19.29	30.00
5240MHz	Pass	4.30	14.41	14.41	24.00	18.71	30.00
5260MHz	Pass	4.30	15.4	15.40	24.00	19.70	26.99
5300MHz	Pass	4.30	14.86	14.86	24.00	19.16	26.99
5320MHz	Pass	4.30	12.74	12.74	24.00	17.04	26.99
5500MHz	Pass	4.30	14.37	14.37	24.00	18.67	26.99
5580MHz	Pass	4.30	14.9	14.90	24.00	19.20	26.99
5700MHz	Pass	4.30	13.52	13.52	24.00	17.82	26.99

802.11n HT40_Nss1,(MCS0)_1TX	-	-	-	-	-	-	-
5190MHz	Pass	4.30	12.41	12.41	24.00	16.71	30.00
5230MHz	Pass	4.30	14.25	14.25	24.00	18.55	30.00
5270MHz	Pass	4.30	14.66	14.66	24.00	18.96	26.99
5310MHz	Pass	4.30	11.88	11.88	24.00	16.18	26.99
5510MHz	Pass	4.30	11.52	11.52	24.00	15.82	26.99
5550MHz	Pass	4.30	14.85	14.85	24.00	19.15	26.99
5670MHz	Pass	4.30	14.1	14.10	24.00	18.40	26.99
802.11ac VHT80_Nss1,(MCS0)_1TX	-	-	-	-	-	-	-
5210MHz	Pass	4.30	8.15	8.15	24.00	12.45	30.00
5290MHz	Pass	4.30	8.62	8.62	24.00	12.92	26.99
5530MHz	Pass	4.30	8.29	8.29	24.00	12.59	26.99

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

3.3 Power Spectral Density Measurement

3.3.1 Limit of Power Spectral Density

For an indoor access point operating in the band 5.15-5.25 GHz, the maximum power spectral density shall not exceed 17 dBm in any 1 megahertz band.

For the 5.25–5.725 GHz bands, the maximum power spectral density shall not exceed 11 dBm in any 1 megahertz band.

If transmitting antennas of directional gain greater than 6 dBi are used, the peak output power shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi.

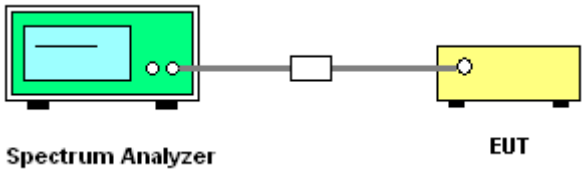
3.3.2 Measuring Instruments

The measuring equipment is listed in the section 4 of this test report.

3.3.3 Test Procedures

The testing follows FCC KDB 789033 D02 General UNII Test Procedures New Rules v02r01. Section F) Maximum power spectral density.

3.3.4 Test Setup



3.3.5 Test Result of Power Spectral Density

Summary

Mode	PD (dBm/RBW)	EIRP PD (dBm/RBW)
5.15-5.25GHz	-	-
802.11a_Nss1,(6Mbps)_1TX	3.64	7.94
802.11n HT20_Nss1,(MCS0)_1TX	3.23	7.53
802.11n HT40_Nss1,(MCS0)_1TX	-0.82	3.48
802.11ac VHT80_Nss1,(MCS0)_1TX	-10.71	-6.41
5.25-5.35GHz	-	-
802.11a_Nss1,(6Mbps)_1TX	4.08	8.38
802.11n HT20_Nss1,(MCS0)_1TX	3.72	8.02
802.11n HT40_Nss1,(MCS0)_1TX	-0.27	4.03
802.11ac VHT80_Nss1,(MCS0)_1TX	-10.07	-5.77
5.47-5.725GHz	-	-
802.11a_Nss1,(6Mbps)_1TX	2.95	7.25
802.11n HT20_Nss1,(MCS0)_1TX	2.92	7.22
802.11n HT40_Nss1,(MCS0)_1TX	-0.71	3.59
802.11ac VHT80_Nss1,(MCS0)_1TX	-10.56	-6.26

RBW = 1MHz

Result

Mode	Result	DG (dBi)	Port 1 (dBm/RBW)	PD (dBm/RBW)	PD Limit (dBm/RBW)	EIRP PD (dBm/RBW)	EIRP PD Limit (dBm/RBW)
802.11a_Nss1,(6Mbps)_1TX	-	-	-	-	-	-	-
5180MHz	Pass	4.30	2.42	2.42	11.00	6.72	17.00
5200MHz	Pass	4.30	3.64	3.64	11.00	7.94	17.00
5240MHz	Pass	4.30	3.05	3.05	11.00	7.35	17.00
5260MHz	Pass	4.30	4.08	4.08	11.00	8.38	17.00
5300MHz	Pass	4.30	3.48	3.48	11.00	7.78	17.00
5320MHz	Pass	4.30	1.56	1.56	11.00	5.86	17.00
5500MHz	Pass	4.30	2.20	2.20	11.00	6.50	17.00
5580MHz	Pass	4.30	2.95	2.95	11.00	7.25	17.00
5700MHz	Pass	4.30	1.60	1.60	11.00	5.90	17.00
802.11n HT20_Nss1,(MCS0)_1TX	-	-	-	-	-	-	-
5180MHz	Pass	4.30	2.01	2.01	11.00	6.31	17.00
5200MHz	Pass	4.30	3.23	3.23	11.00	7.53	17.00
5240MHz	Pass	4.30	2.54	2.54	11.00	6.84	17.00
5260MHz	Pass	4.30	3.72	3.72	11.00	8.02	17.00
5300MHz	Pass	4.30	3.04	3.04	11.00	7.34	17.00
5320MHz	Pass	4.30	0.91	0.91	11.00	5.21	17.00
5500MHz	Pass	4.30	2.22	2.22	11.00	6.52	17.00
5580MHz	Pass	4.30	2.92	2.92	11.00	7.22	17.00
5700MHz	Pass	4.30	1.31	1.31	11.00	5.61	17.00

802.11n HT40_Nss1,(MCS0)_1TX	-	-	-	-	-	-	-
5190MHz	Pass	4.30	-2.85	-2.85	11.00	1.45	17.00
5230MHz	Pass	4.30	-0.82	-0.82	11.00	3.48	17.00
5270MHz	Pass	4.30	-0.27	-0.27	11.00	4.03	17.00
5310MHz	Pass	4.30	-3.14	-3.14	11.00	1.16	17.00
5510MHz	Pass	4.30	-4.26	-4.26	11.00	0.04	17.00
5550MHz	Pass	4.30	-0.71	-0.71	11.00	3.59	17.00
5670MHz	Pass	4.30	-1.50	-1.50	11.00	2.80	17.00
802.11ac VHT80_Nss1,(MCS0)_1TX	-	-	-	-	-	-	-
5210MHz	Pass	4.30	-10.71	-10.71	11.00	-6.41	17.00
5290MHz	Pass	4.30	-10.07	-10.07	11.00	-5.77	17.00
5530MHz	Pass	4.30	-10.56	-10.56	11.00	-6.26	17.00

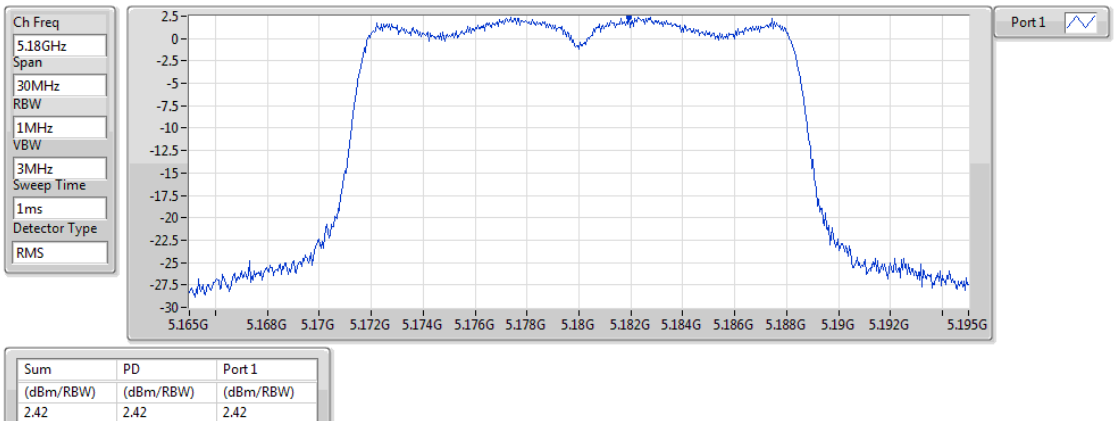
DG = Directional Gain; **RBW** = 1MHz;

PD = trace bin-by-bin of each transmits port summing can be performed maximum power density; **Port X** = Port X power density;

Test results of each port are measured value with duty factor

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

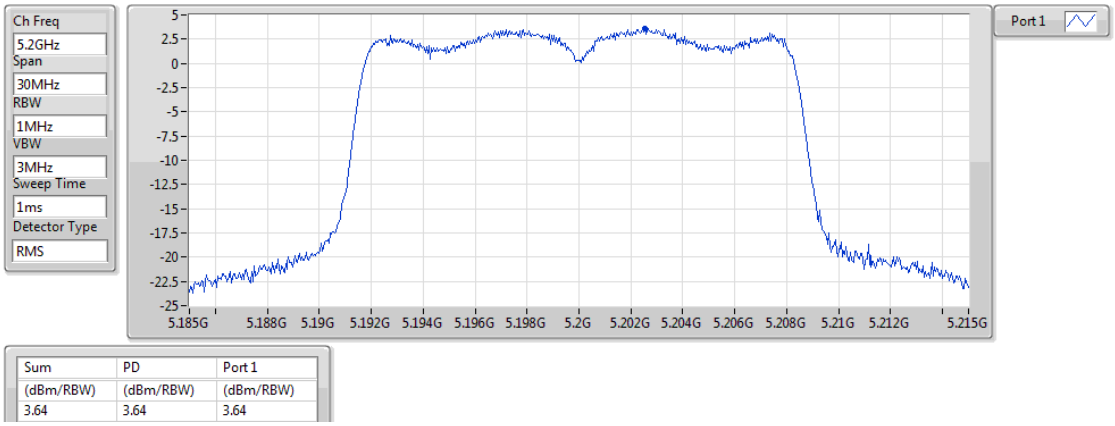
5180MHz



Sum	PD	Port 1
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
2.42	2.42	2.42

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

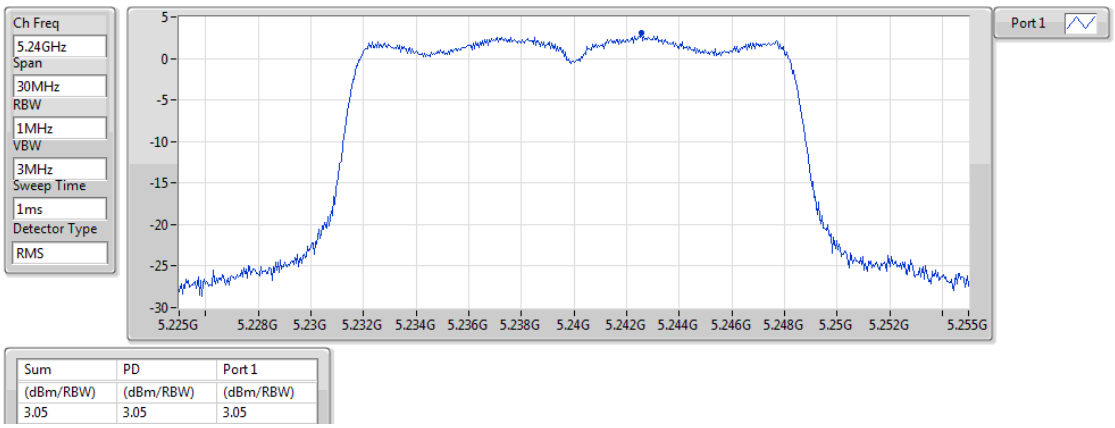
5200MHz



Sum	PD	Port 1
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
3.64	3.64	3.64

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

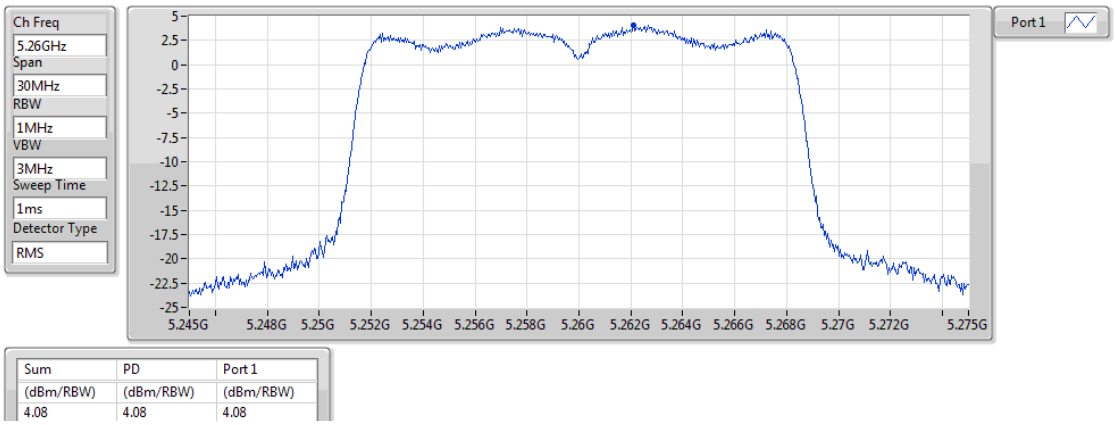
5240MHz



Sum	PD	Port 1
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
3.05	3.05	3.05

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

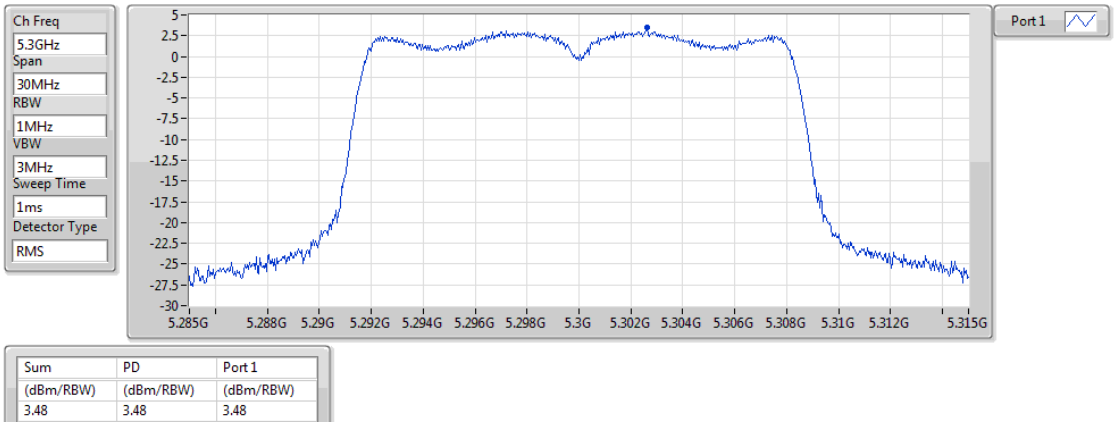
5260MHz



Sum	PD	Port 1
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
4.08	4.08	4.08

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

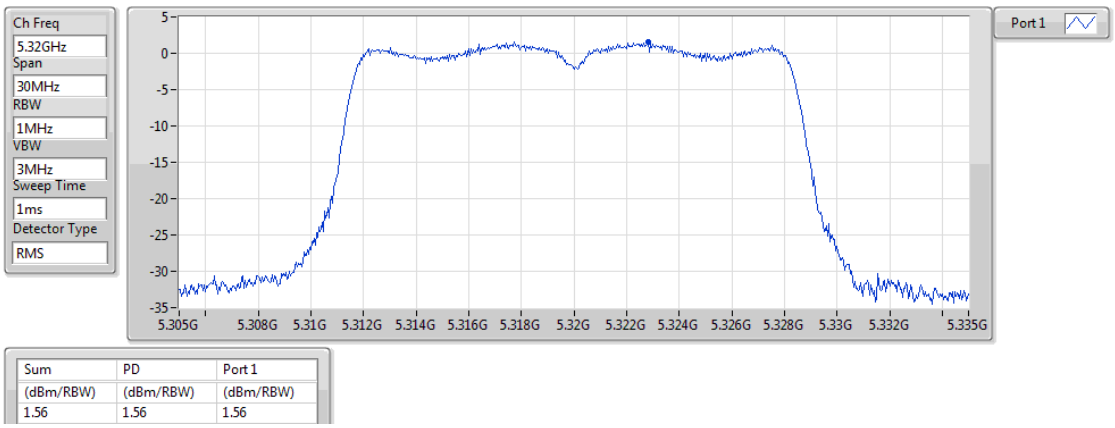
5300MHz



Sum	PD	Port 1
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
3.48	3.48	3.48

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

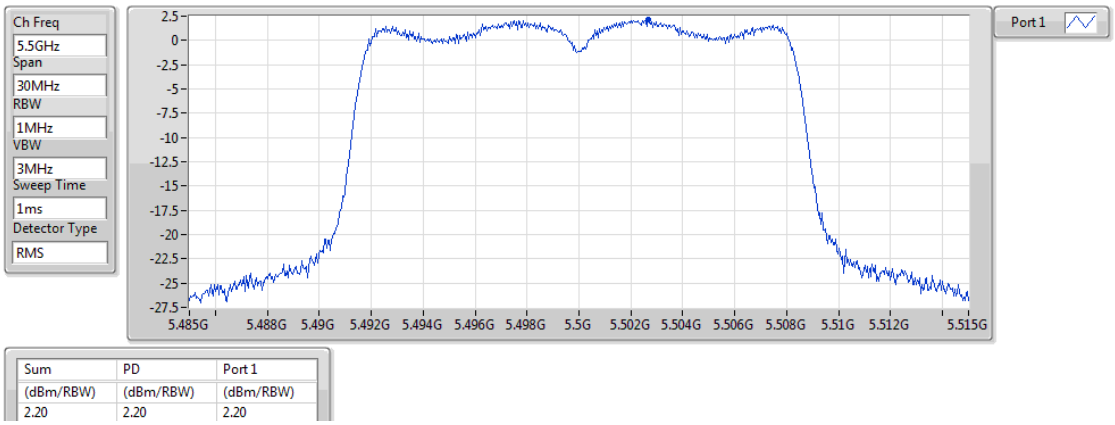
5320MHz



Sum	PD	Port 1
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
1.56	1.56	1.56

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

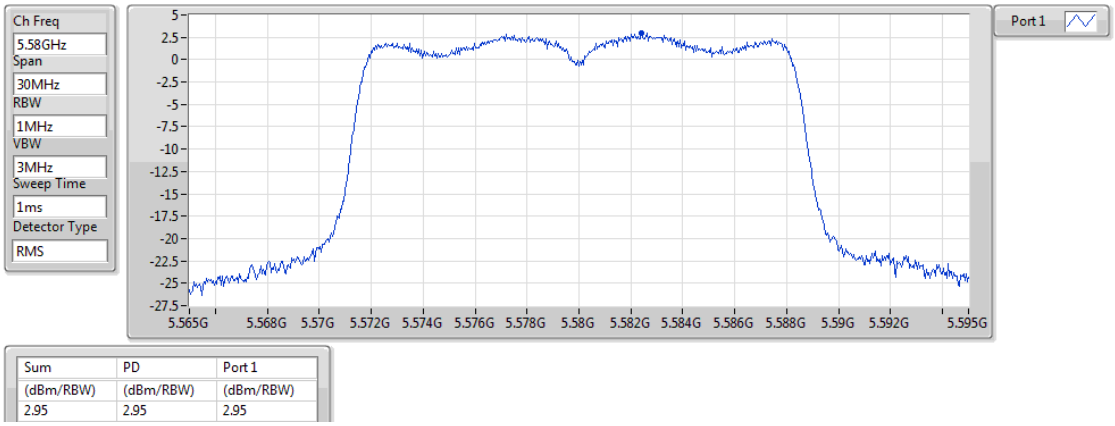
5500MHz



Sum	PD	Port 1
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
2.20	2.20	2.20

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

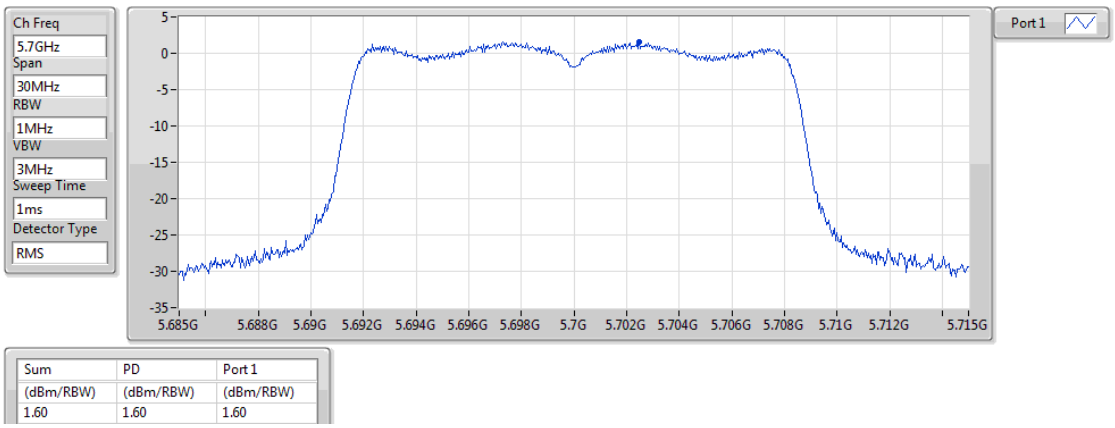
5580MHz



Sum	PD	Port 1
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
2.95	2.95	2.95

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

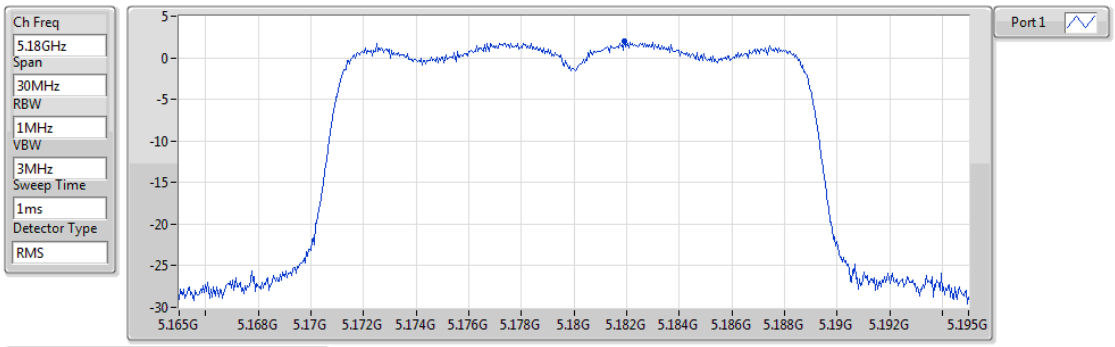
5700MHz



Sum	PD	Port 1
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
1.60	1.60	1.60

802.11n HT20_Nss1,(MCS0)_1TX **PSD**

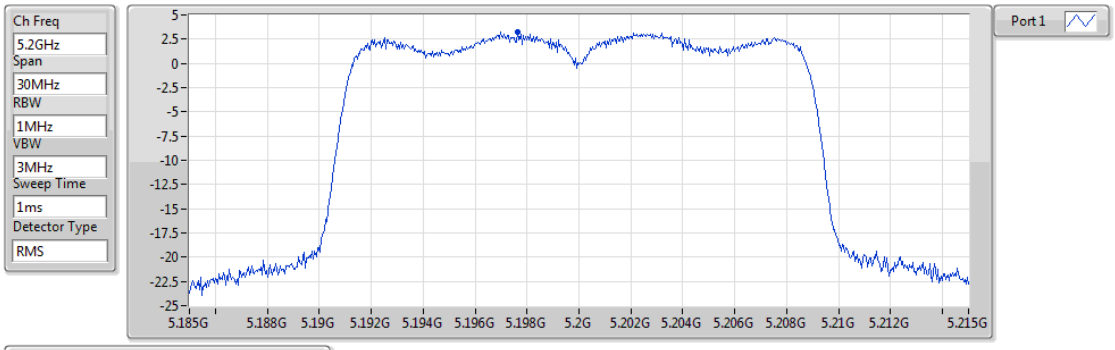
5180MHz



Sum	PD	Port 1
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
2.01	2.01	2.01

802.11n HT20_Nss1,(MCS0)_1TX **PSD**

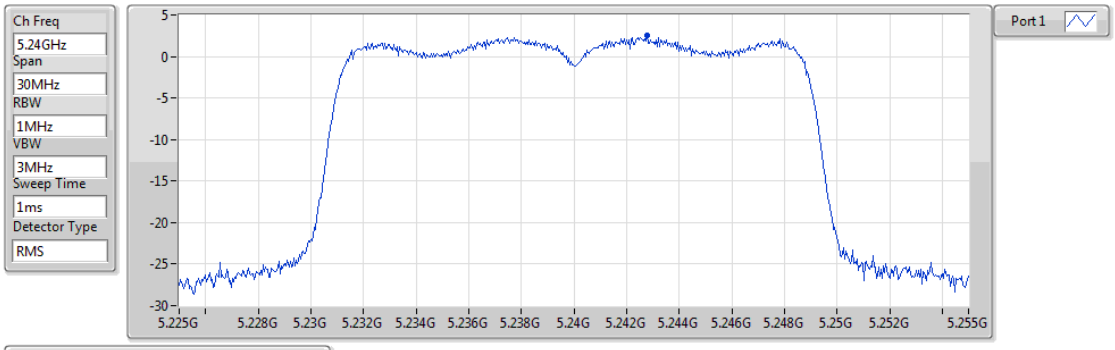
5200MHz



Sum	PD	Port 1
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
3.23	3.23	3.23

802.11n HT20_Nss1,(MCS0)_1TX **PSD**

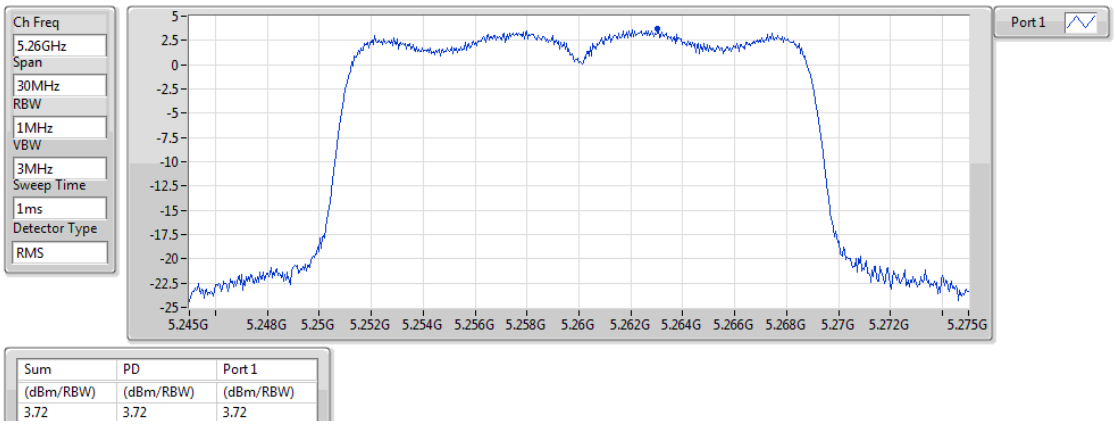
5240MHz



Sum	PD	Port 1
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
2.54	2.54	2.54

802.11n HT20_Nss1,(MCS0)_1TX **PSD**

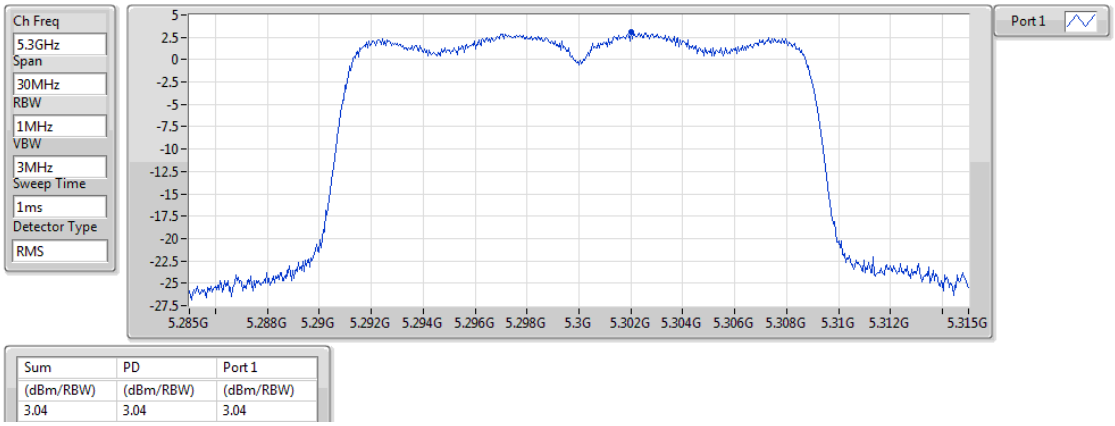
5260MHz



Sum	PD	Port 1
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
3.72	3.72	3.72

802.11n HT20_Nss1,(MCS0)_1TX **PSD**

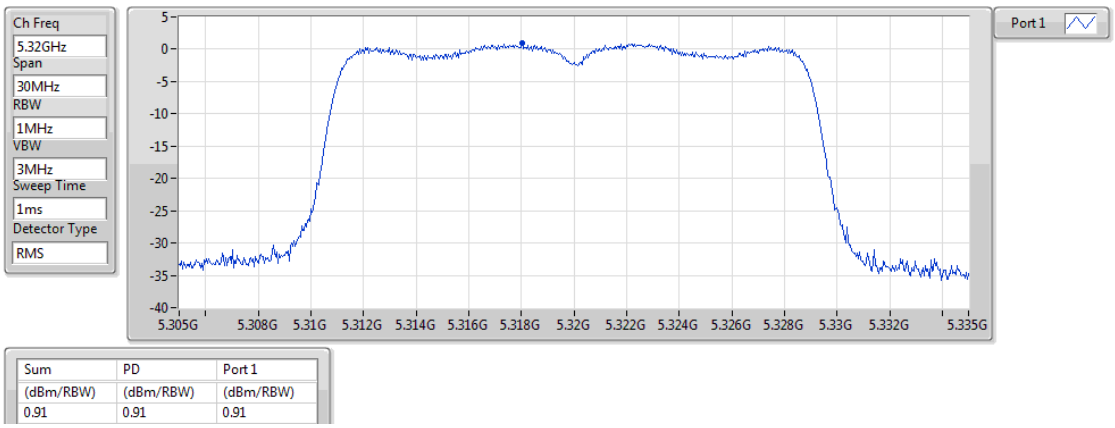
5300MHz



Sum	PD	Port 1
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
3.04	3.04	3.04

802.11n HT20_Nss1,(MCS0)_1TX **PSD**

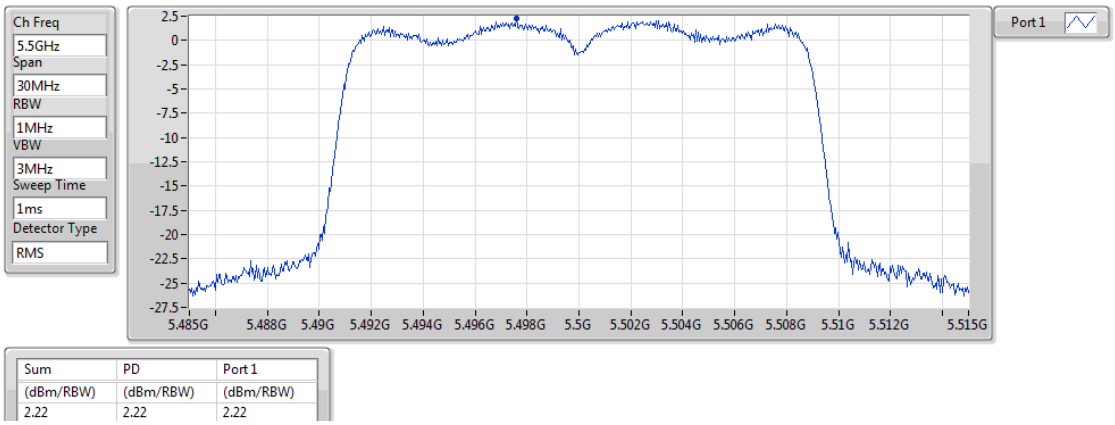
5320MHz



Sum	PD	Port 1
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
0.91	0.91	0.91

802.11n HT20_Nss1,(MCS0)_1TX **PSD**

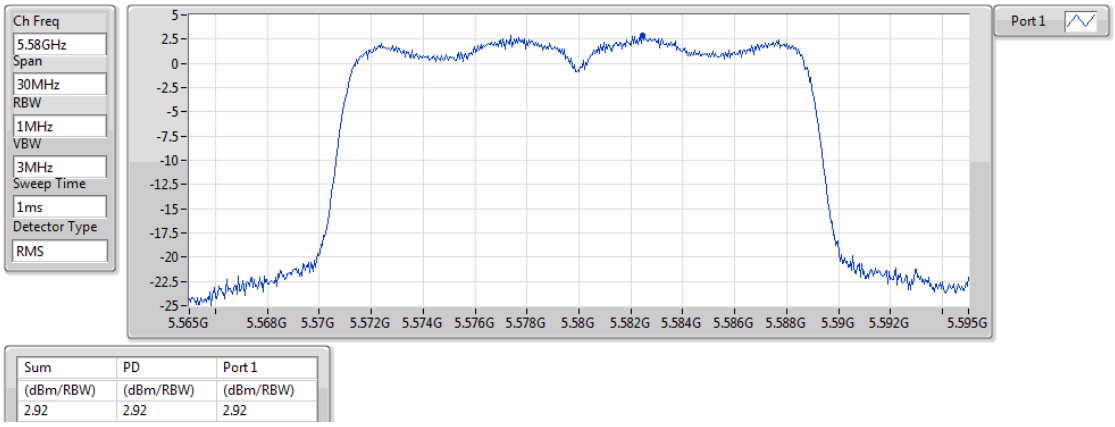
5500MHz



Sum	PD	Port 1
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
2.22	2.22	2.22

802.11n HT20_Nss1,(MCS0)_1TX **PSD**

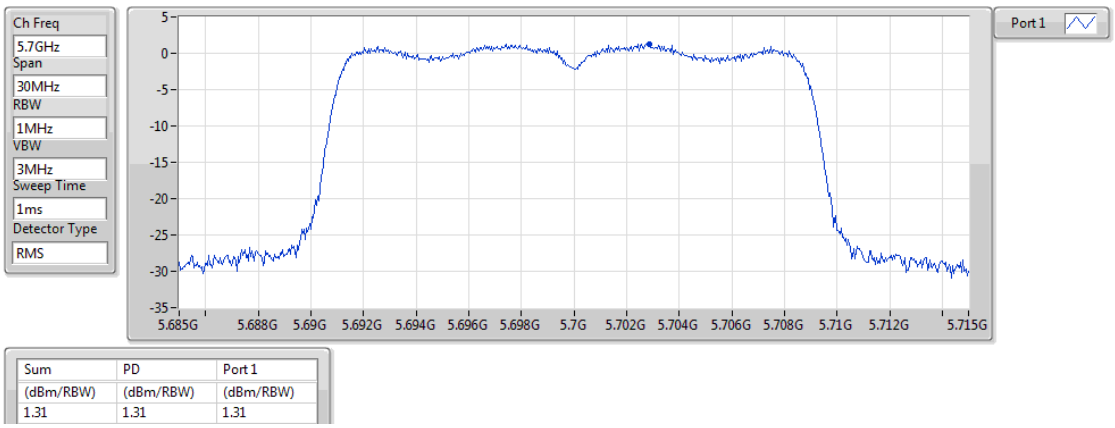
5580MHz



Sum	PD	Port 1
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
2.92	2.92	2.92

802.11n HT20_Nss1,(MCS0)_1TX **PSD**

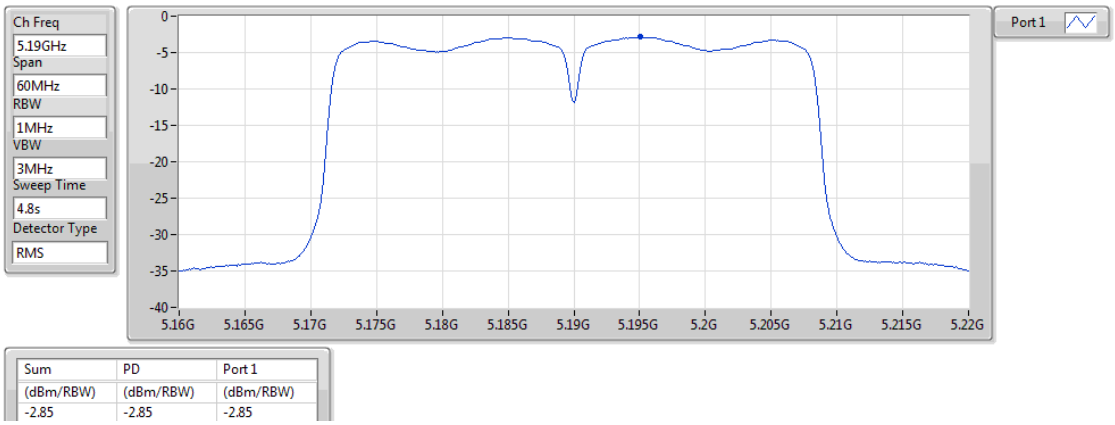
5700MHz



Sum	PD	Port 1
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
1.31	1.31	1.31

802.11n HT40_Nss1,(MCS0)_1TX **PSD**

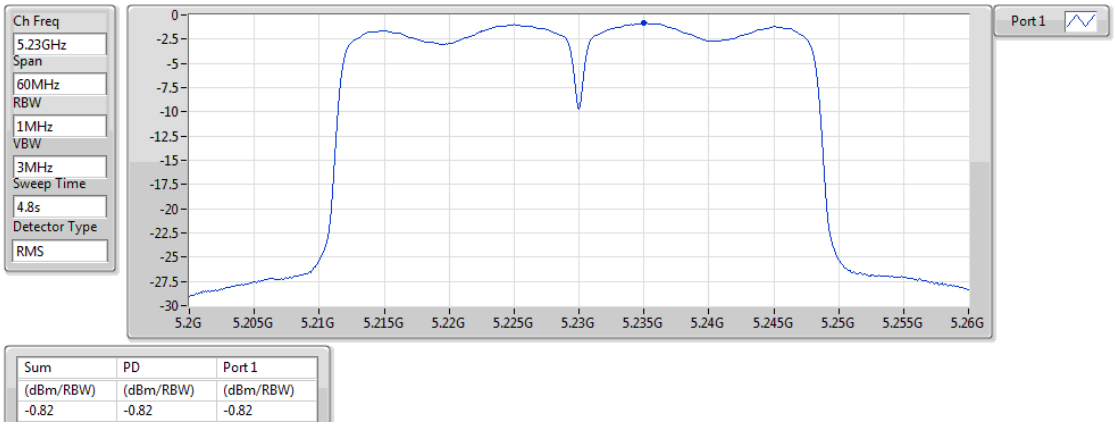
5190MHz



Sum	PD	Port 1
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
-2.85	-2.85	-2.85

802.11n HT40_Nss1,(MCS0)_1TX **PSD**

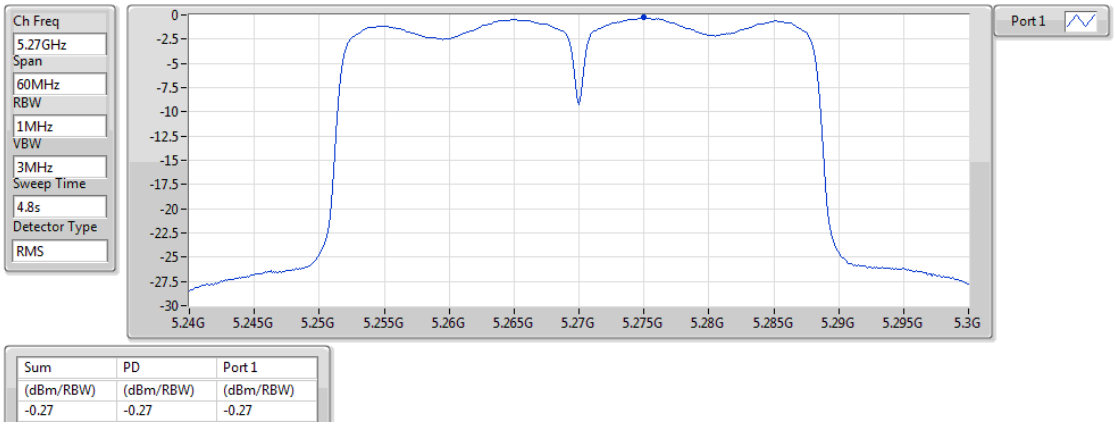
5230MHz



Sum	PD	Port 1
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
-0.82	-0.82	-0.82

802.11n HT40_Nss1,(MCS0)_1TX **PSD**

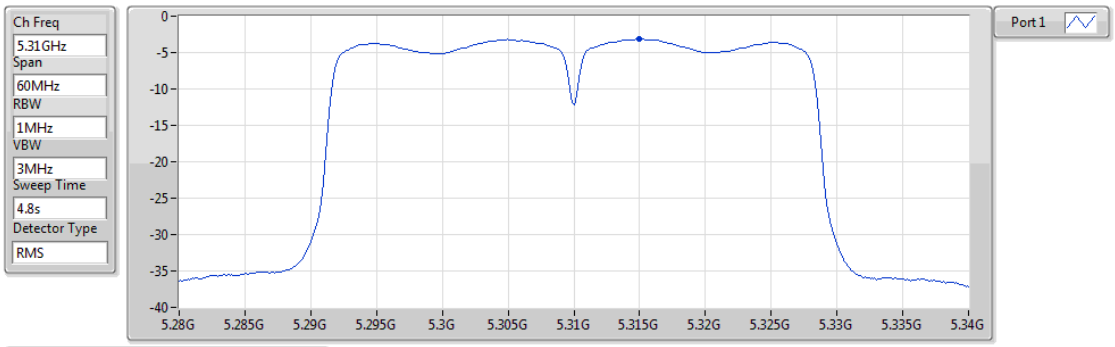
5270MHz



Sum	PD	Port 1
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
-0.27	-0.27	-0.27

802.11n HT40_Nss1,(MCS0)_1TX **PSD**

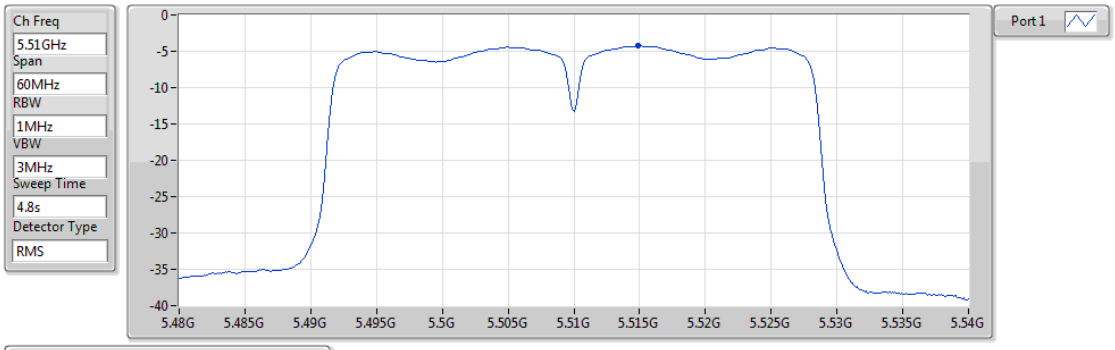
5310MHz



Sum	PD	Port 1
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
-3.14	-3.14	-3.14

802.11n HT40_Nss1,(MCS0)_1TX **PSD**

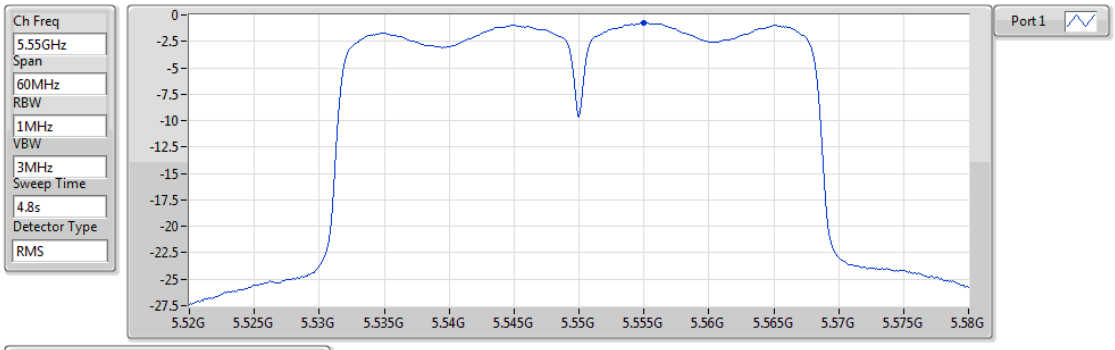
5510MHz



Sum	PD	Port 1
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
-4.26	-4.26	-4.26

802.11n HT40_Nss1,(MCS0)_1TX **PSD**

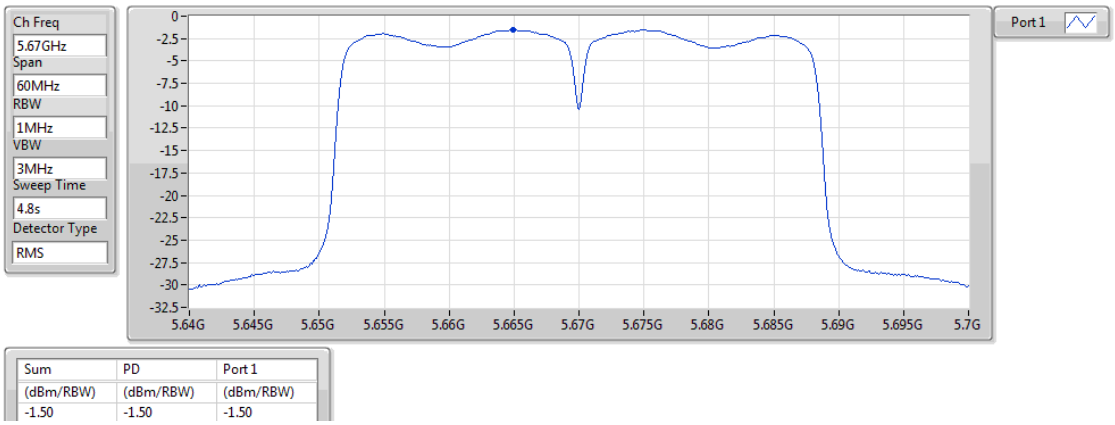
5550MHz



Sum	PD	Port 1
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
-0.71	-0.71	-0.71

802.11n HT40_Nss1,(MCS0)_1TX **PSD**

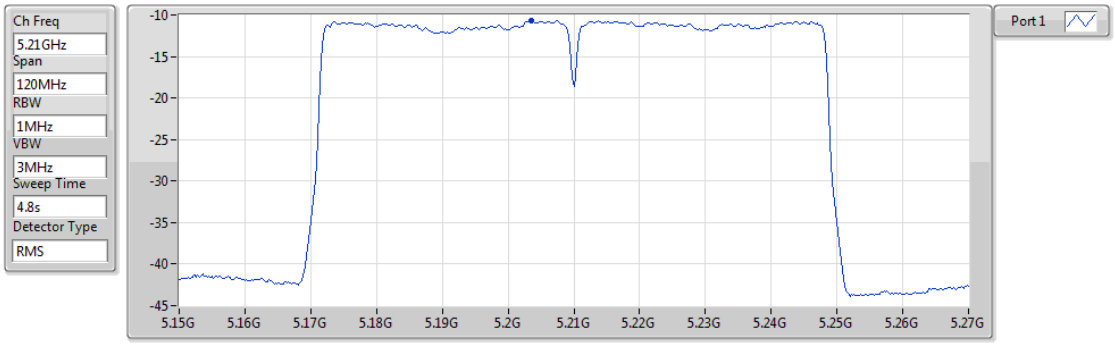
5670MHz



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

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

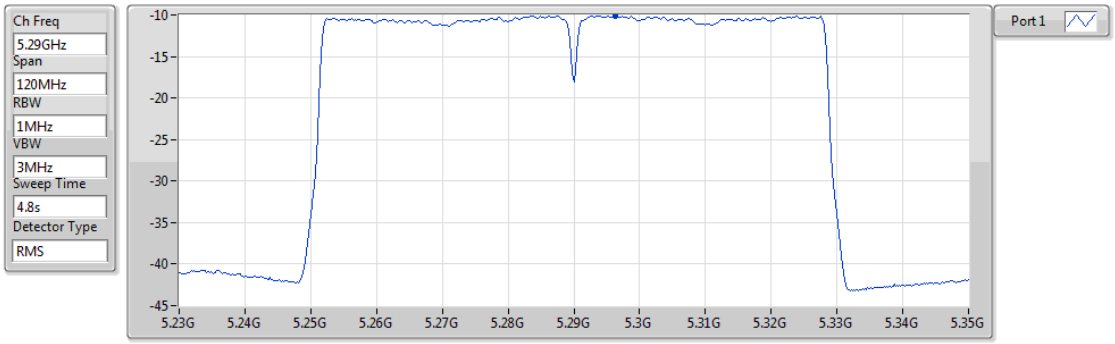
5210MHz



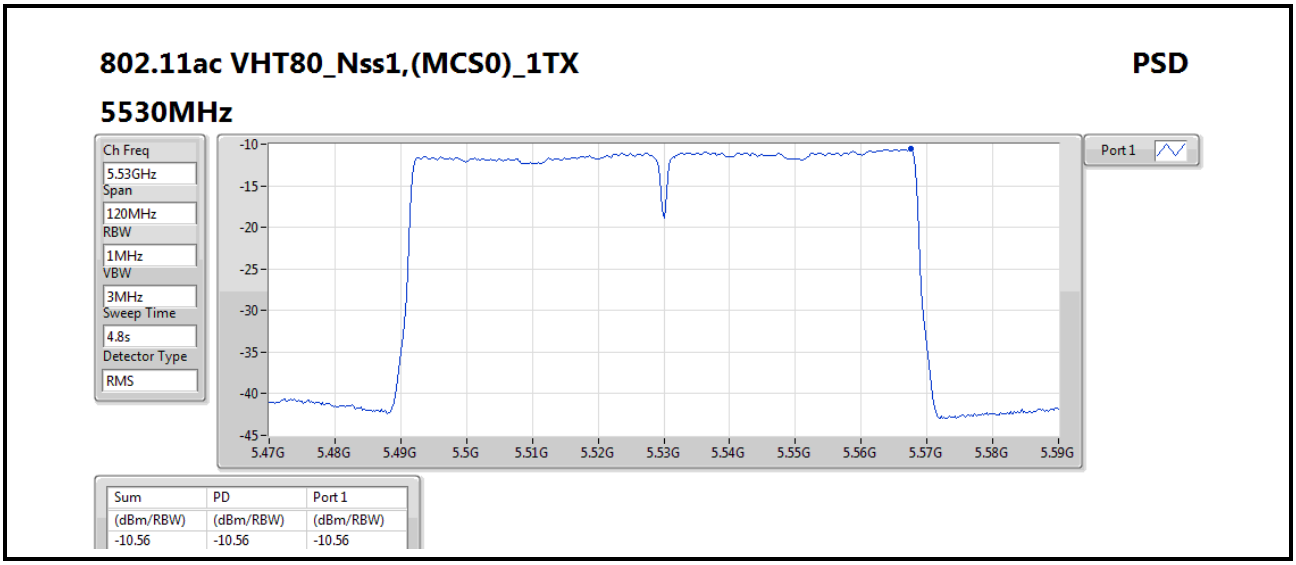
Sum	PD	Port 1
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
-10.71	-10.71	-10.71

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

5290MHz



Sum	PD	Port 1
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
-10.07	-10.07	-10.07


802.11ac VHT80_Nss1,(MCS0)_1TX
PSD
5530MHz
Ch Freq
5.53GHz
Span
120MHz
RBW
1MHz
VBW
3MHz
Sweep Time
4.8s
Detector Type
RMS
-10
-15
-20
-25
-30
-35
-40
-45
5.47G
5.48G
5.49G
5.5G
5.51G
5.52G
5.53G
5.54G
5.55G
5.56G
5.57G
5.58G
5.59G
Port 1
Sum
PD
Port 1
(dBm/RBW)
(dBm/RBW)
(dBm/RBW)
-10.56
-10.56
-10.56

3.4 Unwanted Emissions Measurement

3.4.1 Limit of Unwanted Emissions

(1) For transmitters operating in the 5.15–5.725 GHz band: all emissions outside of the band shall not exceed an EIRP of –27dBm/MHz.

(2) Unwanted spurious emissions fallen in restricted bands shall comply with the general field strength limits as below table,

Frequency (MHz)	Field Strength (microvolts/meter)	Measurement Distance (meters)
0.009 – 0.490	2400/F(kHz)	300
0.490 – 1.705	24000/F(kHz)	30
1.705 – 30.0	30	30
30 – 88	100	3
88 – 216	150	3
216 - 960	200	3
Above 960	500	3

Note: The following formula is used to convert the EIRP to field strength.

$$E=\frac{1000000\sqrt{30P}}{3}$$ μV/m, where P is the eirp (Watts)

EIRP (dBm)	Field Strength at 3m (dBμV/m)
-27	68.3

(3) ANSI C63.10-2013 clause 12.7.3 note 97

As specified by regulatory requirements, emissions above 1000 MHz that are outside of the restricted bands are subject to a peak emission limit. However, an out-of-band emission that complies with both the average and peak general regulatory limits is not required to satisfy the peak emission limit.

3.4.2 Measuring Instruments

The measuring equipment is listed in the section 4 of this test report.

3.4.3 Test Procedures

1. The testing follows FCC KDB 789033 D02 General UNII Test Procedures New Rules v02r01. Section G) Unwanted emissions measurement.

   (1) Procedure for Unwanted Emissions Measurements Below 1000MHz

   - RBW = 120 kHz
   - VBW = 300 kHz
   - Detector = Peak
   - Trace mode = max hold

   (2) Procedure for Peak Unwanted Emissions Measurements Above 1000 MHz

   - RBW = 1 MHz
   - VBW ≥ 3 MHz
   - Detector = Peak
   - Sweep time = auto
   - Trace mode = max hold

   (3) Procedures for Average Unwanted Emissions Measurements Above 1000MHz

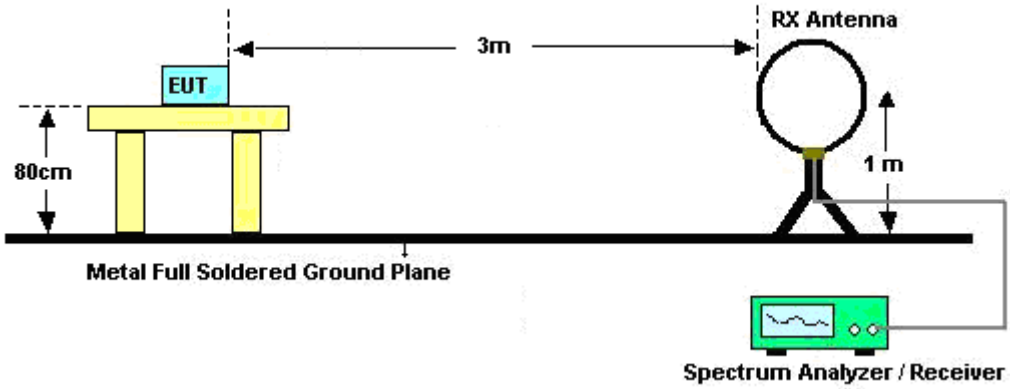
   - RBW = 1 MHz
   - VBW = 10 Hz, when duty cycle is no less than 98 percent.
   - VBW ≥ 1/T, when duty cycle is less than 98 percent where T is the minimum transmission duration over which the transmitter is on and is transmitting at its maximum power control level for the tested mode of operation.

2. The EUT was placed on a turntable with 0.8 meter for frequency below 1GHz and 1.5 meter for frequency above 1GHz respectively above ground.
3. The EUT was set 3 meters from the interference receiving antenna which was mounted on the top of a variable height antenna tower.
4. The antenna is a broadband antenna and its height is adjusted between one meter and four meters above ground to find the maximum value of the field strength for both horizontal polarization and vertical polarization of the antenna.
5. For each suspected emission, the EUT was arranged to its worst case and then adjust the antenna tower (from 1 m to 4 m) and turntable (from 0 degree to 360 degrees) to find the maximum reading.
6. For testing below 1GHz, if the emission level of the EUT in peak mode was 3 dB lower than the limit specified, then peak values of EUT will be reported, otherwise, the emissions will be repeated one by one using the CISPR quasi-peak method and reported.

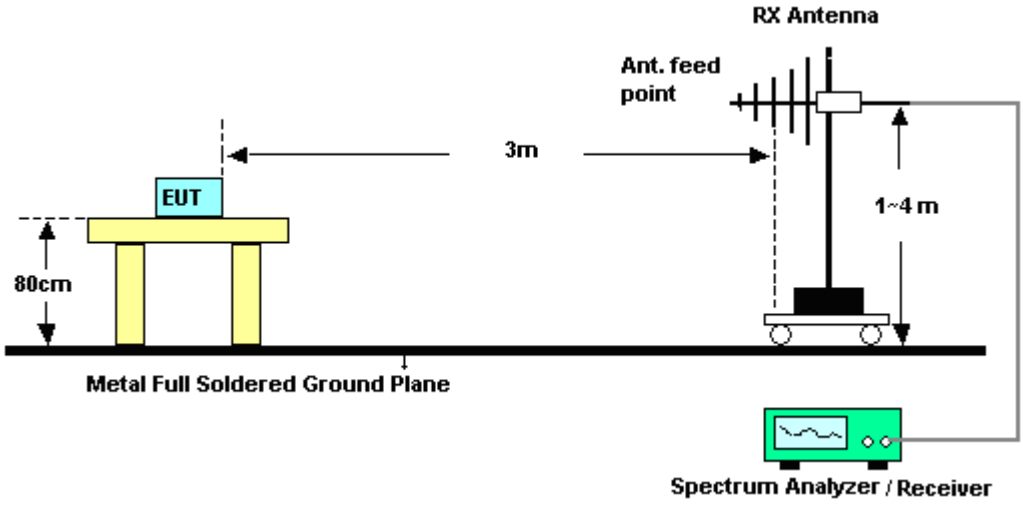
7. For testing above 1GHz, the emission level of the EUT in peak mode was 20dB lower than average limit (that means the emission level in average mode also complies with the limit in average mode), then peak values of EUT will be reported, otherwise, the emissions will be measured in average mode again and reported.

3.4.4 Test Setup

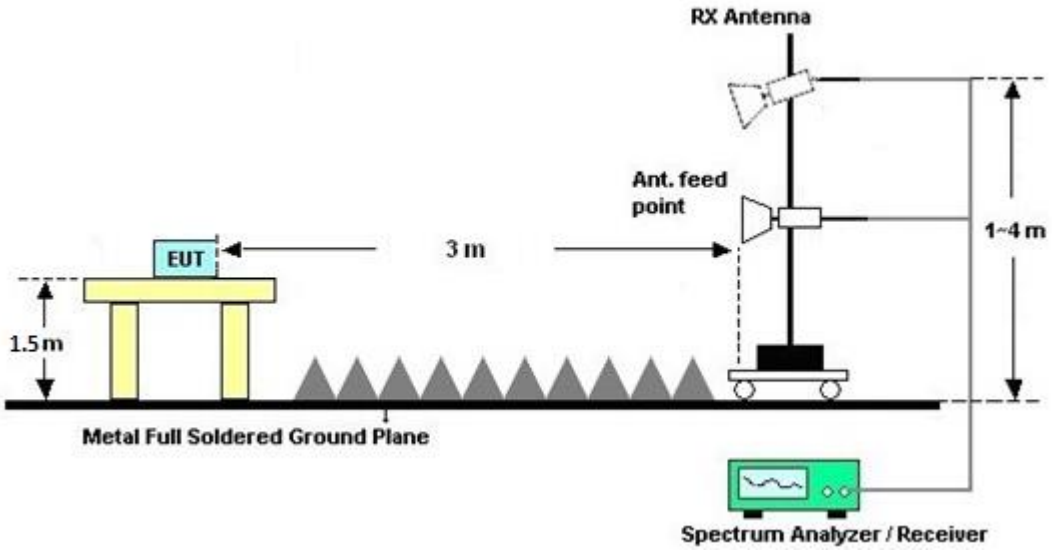
For radiated emissions below 30MHz



For radiated emissions from 30MHz to 1GHz



For radiated emissions above 1GHz



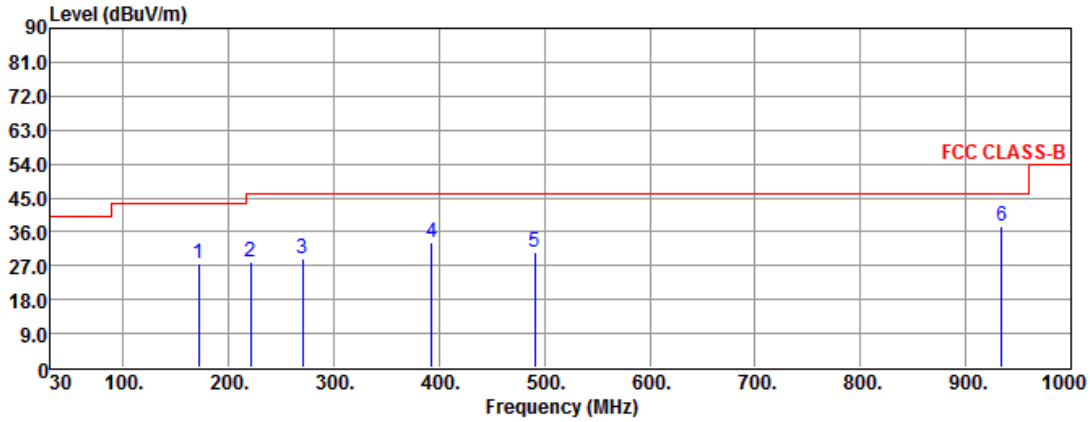
3.4.5 Test Results of Radiated Spurious Emissions (9 kHz ~ 30 MHz)

The low frequency, which started from 9 kHz to 30MHz, was pre-scanned and the result which was 20dB lower than the limit line per NCC LP0002 section 5.13 was not reported.

There is a comparison data of both open-field test site and semi-Anechoic chamber, and the result came out very similar.

3.4.6 Test Result of Transmitter Radiated Unwanted Emissions (Below 1GHz)

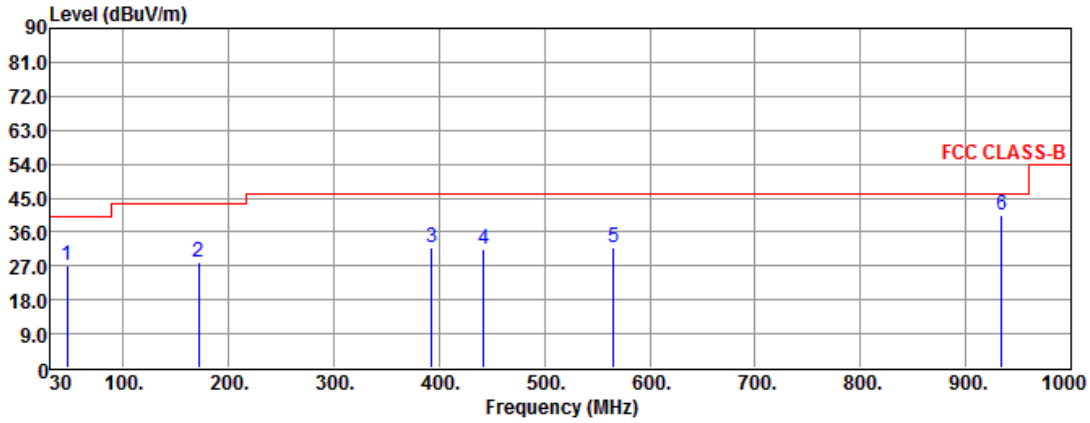
Transmitter Radiated Unwanted Emissions (Below 1GHz)			
Modulation Mode	11a	**Test Freq. (MHz)**	5260
Polarization	H		



	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	171.62	27.40	43.50	-16.10	42.74	-15.34	Peak	---	---
2	221.09	28.11	46.00	-17.89	42.44	-14.33	Peak	---	---
3	270.56	29.06	46.00	-16.94	40.44	-11.38	Peak	---	---
4	392.78	33.31	46.00	-12.69	41.32	-8.01	Peak	---	---
5	490.75	30.44	46.00	-15.56	36.33	-5.89	Peak	---	---
6	934.04	37.35	46.00	-8.65	34.62	2.73	Peak	---	---

Note 1: Emission Level (dBuV/m) = SA Reading (dBuV/m) + Factor (dB)
2: Margin (dB) = Emission level (dBuV/m) – Limit (dBuV/m).
3: All spurious emissions below 30MHz are more than 20 dB below the limit.

Transmitter Radiated Unwanted Emissions (Below 1GHz)			
Modulation Mode	11a	**Test Freq. (MHz)**	5260
Polarization	V		

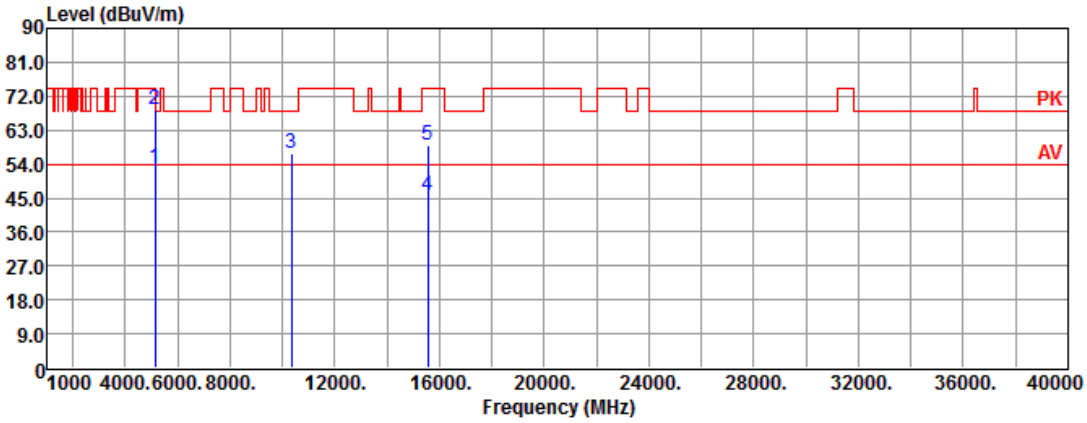


	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	46.49	26.98	40.00	-13.02	42.80	-15.82	Peak	---	---
2	171.62	28.17	43.50	-15.33	43.51	-15.34	Peak	---	---
3	392.78	31.82	46.00	-14.18	39.83	-8.01	Peak	---	---
4	442.25	31.61	46.00	-14.39	38.58	-6.97	Peak	---	---
5	565.44	32.07	46.00	-13.93	35.59	-3.52	Peak	---	---
6	934.04	40.49	46.00	-5.51	37.76	2.73	Peak	---	---

Note 1: Emission Level (dBuV/m) = SA Reading (dBuV/m) + Factor (dB)
2: Margin (dB) = Emission level (dBuV/m) – Limit (dBuV/m).
3: All spurious emissions below 30MHz are more than 20 dB below the limit.

3.4.7 Test Result of Transmitter Radiated Unwanted Emissions (Above 1GHz) for 11a

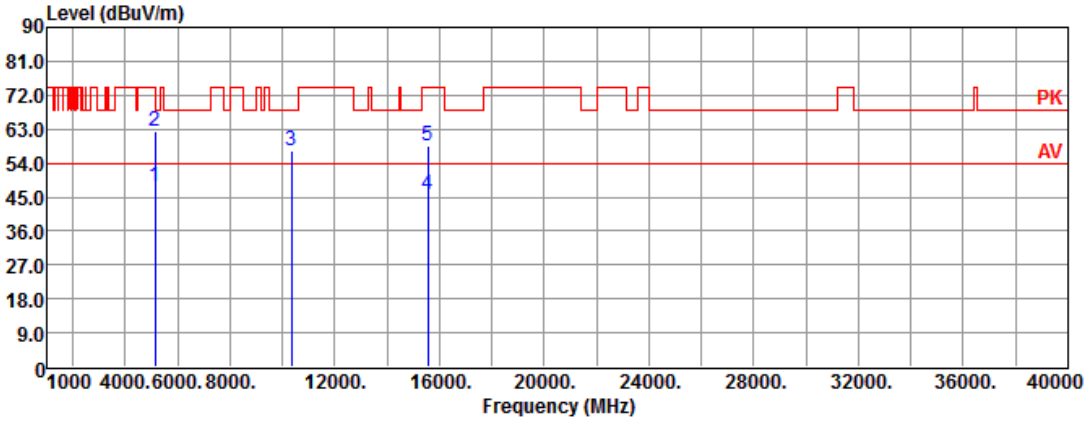
Transmitter Radiated Unwanted Emissions (Above 1GHz)			
Modulation Mode	11a	**Test Freq. (MHz)**	5180
N_{TX}	1	**Polarization**	H



	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	52.86	54.00	-1.14	42.53	10.33	Average	240	92
2	5150.00	68.49	74.00	-5.51	58.16	10.33	Peak	240	92
3	10360.00	57.01	68.20	-11.19	35.80	21.21	Peak	100	20
4	15540.00	45.65	54.00	-8.35	23.09	22.56	Average	100	90
5	15540.00	58.97	74.00	-15.03	36.41	22.56	Peak	100	90

Note 1: Emission level (dBuV/m) = SA reading (dBuV) + Factor (dB).
2: Margin (dB) = Emission level (dBuV/m) – Limit (dBuV/m).

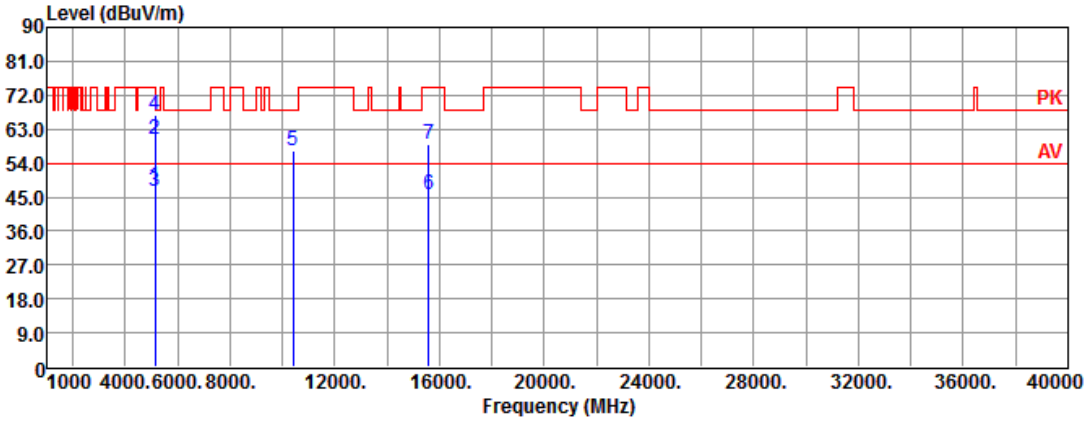
Transmitter Radiated Unwanted Emissions (Above 1GHz)			
Modulation Mode	11a	**Test Freq. (MHz)**	5180
N_{TX}	1	**Polarization**	V



	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	5150.00	47.66	54.00	-6.34	37.33	10.33	Average	114	307
2	5150.00	62.26	74.00	-11.74	51.93	10.33	Peak	114	307
3	10360.00	57.43	68.20	-10.77	36.22	21.21	Peak	100	200
4	15540.00	45.64	54.00	-8.36	23.08	22.56	Average	100	50
5	15540.00	58.55	74.00	-15.45	35.99	22.56	Peak	100	50

Note 1: Emission level (dBuV/m) = SA reading (dBuV) + Factor (dB).
2: Margin (dB) = Emission level (dBuV/m) – Limit (dBuV/m).

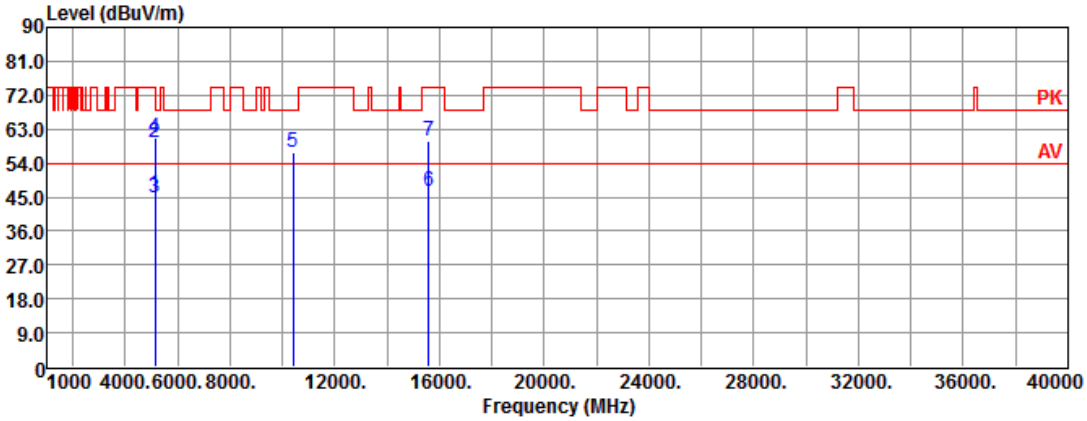
Transmitter Radiated Unwanted Emissions (Above 1GHz)			
Modulation Mode	11a	**Test Freq. (MHz)**	5200
N_{TX}	1	**Polarization**	H



	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	5125.00	47.78	54.00	-6.22	37.48	10.30	Average	235	83
2	5125.00	60.44	74.00	-13.56	50.14	10.30	Peak	235	83
3	5150.00	46.36	54.00	-7.64	36.03	10.33	Average	235	83
4	5150.00	66.84	74.00	-7.16	56.51	10.33	Peak	235	83
5	10400.00	57.34	68.20	-10.86	36.08	21.26	Peak	100	90
6	15600.00	45.61	54.00	-8.39	23.15	22.46	Average	100	50
7	15600.00	58.78	74.00	-15.22	36.32	22.46	Peak	100	50

Note 1: Emission level (dBuV/m) = SA reading (dBuV) + Factor (dB).
2: Margin (dB) = Emission level (dBuV/m) – Limit (dBuV/m).

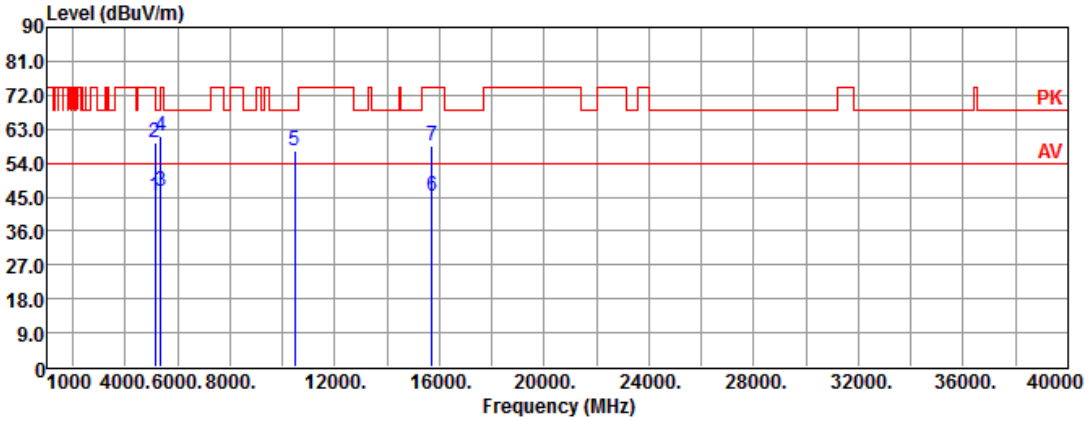
Transmitter Radiated Unwanted Emissions (Above 1GHz)			
Modulation Mode	11a	**Test Freq. (MHz)**	5200
N_{TX}	1	**Polarization**	V



	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	5125.00	45.70	54.00	-8.30	35.40	10.30	Average	113	306
2	5125.00	59.39	74.00	-14.61	49.09	10.30	Peak	113	306
3	5150.00	44.99	54.00	-9.01	34.66	10.33	Average	113	306
4	5150.00	60.54	74.00	-13.46	50.21	10.33	Peak	113	306
5	10400.00	57.04	68.20	-11.16	35.78	21.26	Peak	100	20
6	15600.00	46.68	54.00	-7.32	24.22	22.46	Average	100	50
7	15600.00	59.82	74.00	-14.18	37.36	22.46	Peak	100	50

Note 1: Emission level (dBuV/m) = SA reading (dBuV) + Factor (dB).
2: Margin (dB) = Emission level (dBuV/m) – Limit (dBuV/m).

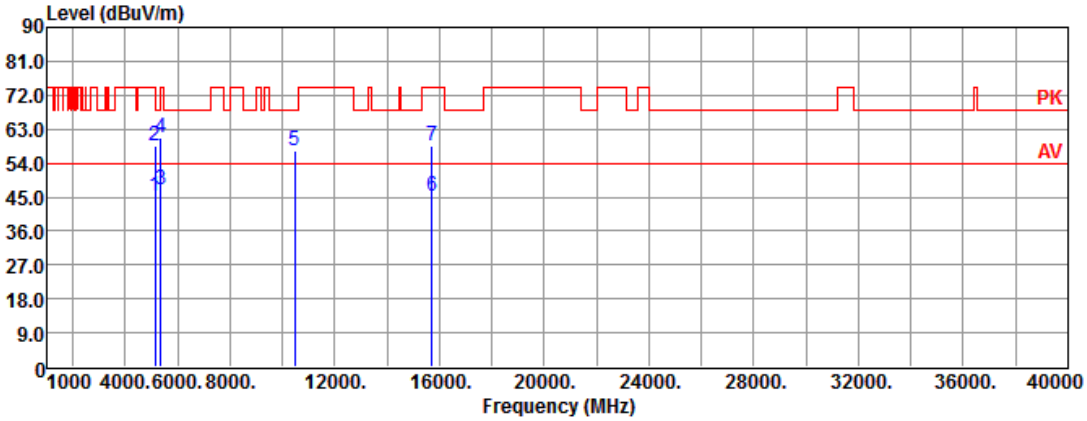
Transmitter Radiated Unwanted Emissions (Above 1GHz)			
Modulation Mode	11a	**Test Freq. (MHz)**	5240
N_{TX}	1	**Polarization**	H



	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	5150.00	45.10	54.00	-8.90	34.77	10.33	Average	236	87
2	5150.00	59.53	74.00	-14.47	49.20	10.33	Peak	236	87
3	5350.00	46.68	54.00	-7.32	35.89	10.79	Average	236	87
4	5350.00	61.02	74.00	-12.98	50.23	10.79	Peak	236	87
5	10480.00	57.23	68.20	-10.97	35.83	21.40	Peak	100	50
6	15720.00	45.29	54.00	-8.71	22.98	22.31	Average	100	60
7	15720.00	58.48	74.00	-15.52	36.17	22.31	Peak	100	60

Note 1: Emission level (dBuV/m) = SA reading (dBuV) + Factor (dB).
2: Margin (dB) = Emission level (dBuV/m) – Limit (dBuV/m).

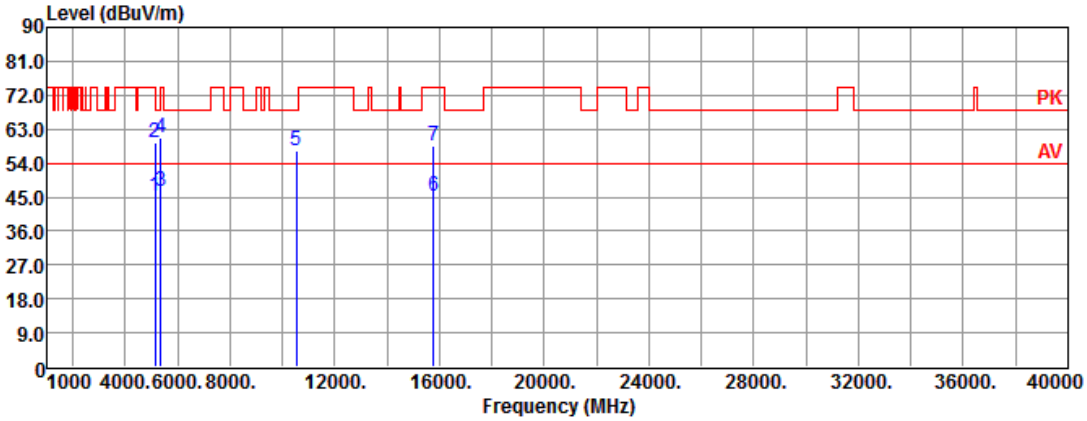
Transmitter Radiated Unwanted Emissions (Above 1GHz)			
Modulation Mode	11a	**Test Freq. (MHz)**	5240
N_{TX}	1	**Polarization**	V



	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	5150.00	45.06	54.00	-8.94	34.73	10.33	Average	111	306
2	5150.00	58.45	74.00	-15.55	48.12	10.33	Peak	111	306
3	5350.00	46.91	54.00	-7.09	36.12	10.79	Average	111	306
4	5350.00	60.89	74.00	-13.11	50.10	10.79	Peak	111	306
5	10480.00	57.17	68.20	-11.03	35.77	21.40	Peak	100	20
6	15720.00	45.29	54.00	-8.71	22.98	22.31	Average	100	50
7	15720.00	58.40	74.00	-15.60	36.09	22.31	Peak	100	50

Note 1: Emission level (dBuV/m) = SA reading (dBuV) + Factor (dB).
2: Margin (dB) = Emission level (dBuV/m) – Limit (dBuV/m).

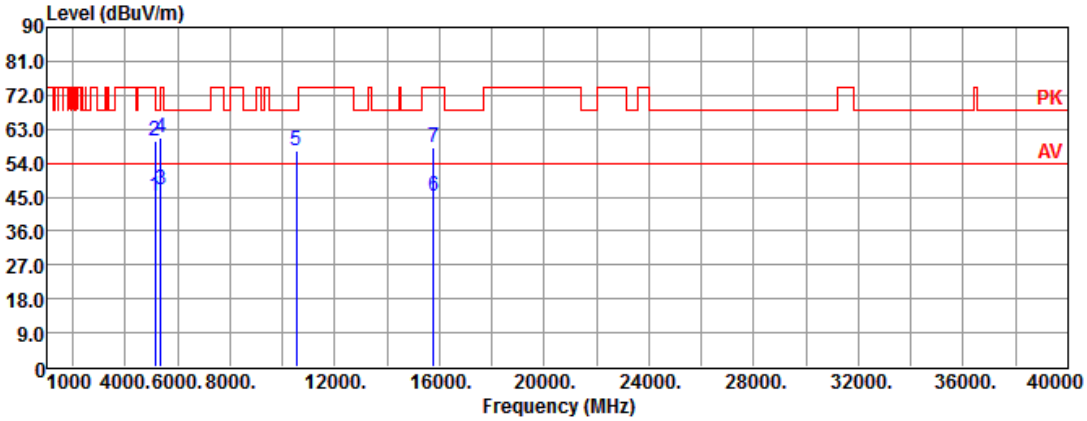
Transmitter Radiated Unwanted Emissions (Above 1GHz)			
Modulation Mode	11a	**Test Freq. (MHz)**	5260
N_{TX}	1	**Polarization**	H



	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	5150.00	45.10	54.00	-8.90	34.77	10.33	Average	234	95
2	5150.00	59.47	74.00	-14.53	49.14	10.33	Peak	234	95
3	5350.00	46.68	54.00	-7.32	35.89	10.79	Average	234	95
4	5350.00	60.71	74.00	-13.29	49.92	10.79	Peak	234	95
5	10520.00	57.47	68.20	-10.73	36.02	21.45	Peak	100	80
6	15780.00	45.24	54.00	-8.76	22.99	22.25	Average	100	75
7	15780.00	58.36	74.00	-15.64	36.11	22.25	Peak	100	75

Note 1: Emission level (dBuV/m) = SA reading (dBuV) + Factor (dB).
2: Margin (dB) = Emission level (dBuV/m) – Limit (dBuV/m).

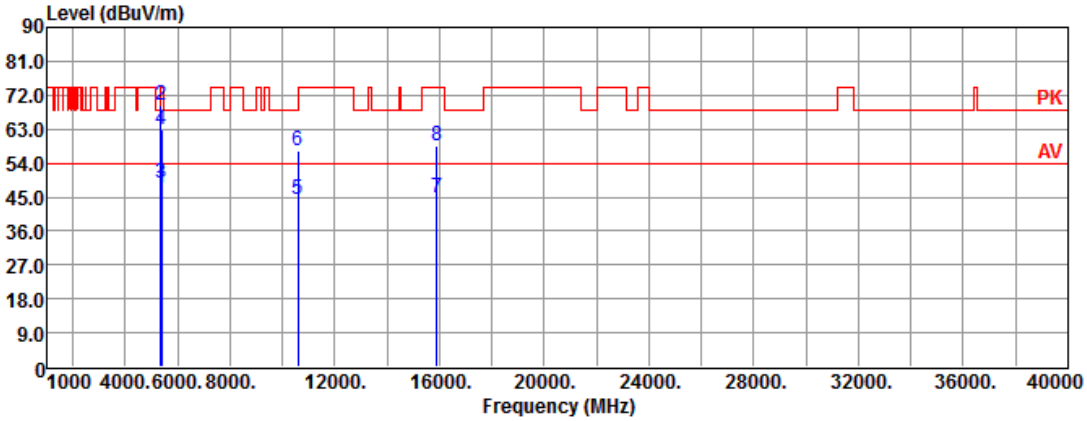
Transmitter Radiated Unwanted Emissions (Above 1GHz)			
Modulation Mode	11a	**Test Freq. (MHz)**	5260
N_{TX}	1	**Polarization**	V



	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	5150.00	45.08	54.00	-8.92	34.75	10.33	Average	101	305
2	5150.00	59.66	74.00	-14.34	49.33	10.33	Peak	101	305
3	5350.00	46.80	54.00	-7.20	36.01	10.79	Average	101	305
4	5350.00	60.61	74.00	-13.39	49.82	10.79	Peak	101	305
5	10520.00	57.21	68.20	-10.99	35.76	21.45	Peak	100	60
6	15780.00	45.12	54.00	-8.88	22.87	22.25	Average	100	70
7	15780.00	58.32	74.00	-15.68	36.07	22.25	Peak	100	70

Note 1: Emission level (dBuV/m) = SA reading (dBuV) + Factor (dB).
2: Margin (dB) = Emission level (dBuV/m) – Limit (dBuV/m).

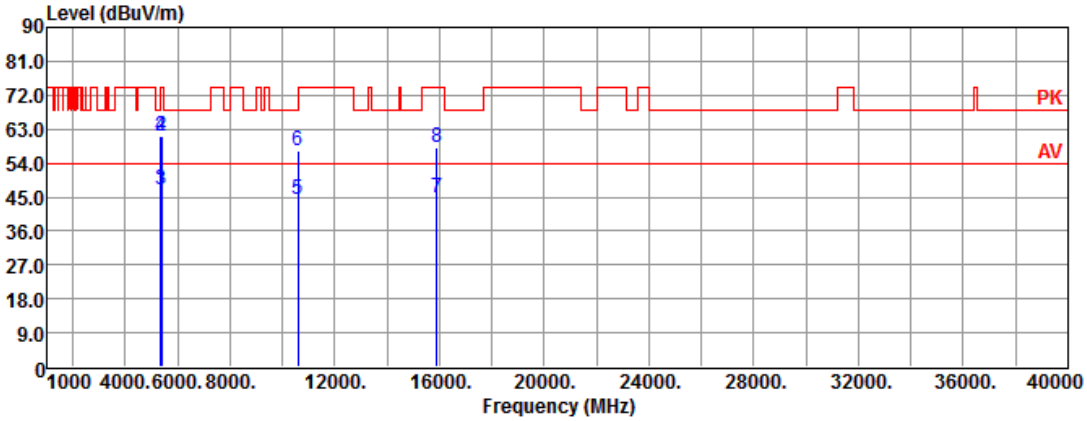
Transmitter Radiated Unwanted Emissions (Above 1GHz)			
Modulation Mode	11a	**Test Freq. (MHz)**	5300
N_{TX}	1	**Polarization**	H



	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	5350.00	47.46	54.00	-6.54	36.67	10.79	Average	230	85
2	5350.00	69.42	74.00	-4.58	58.63	10.79	Peak	230	85
3	5375.00	48.58	54.00	-5.42	37.74	10.84	Average	230	85
4	5375.00	62.83	74.00	-11.17	51.99	10.84	Peak	230	85
5	10600.00	44.16	54.00	-9.84	22.62	21.54	Average	100	60
6	10600.00	57.26	74.00	-16.74	35.72	21.54	Peak	100	60
7	15900.00	44.83	54.00	-9.17	22.73	22.10	Average	100	80
8	15900.00	58.35	74.00	-15.65	36.25	22.10	Peak	100	80

Note 1: Emission level (dBuV/m) = SA reading (dBuV) + Factor (dB).
2: Margin (dB) = Emission level (dBuV/m) – Limit (dBuV/m).

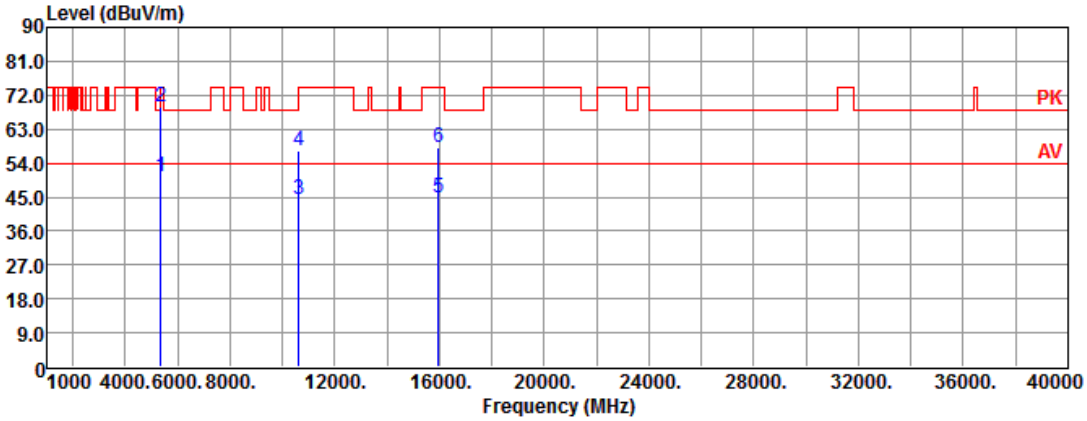
Transmitter Radiated Unwanted Emissions (Above 1GHz)			
Modulation Mode	11a	**Test Freq. (MHz)**	5300
N_{TX}	1	**Polarization**	V



	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	5350.00	46.93	54.00	-7.07	36.14	10.79	Average	107	305
2	5350.00	61.15	74.00	-12.85	50.36	10.79	Peak	107	305
3	5375.00	46.83	54.00	-7.17	35.99	10.84	Average	107	305
4	5375.00	61.32	74.00	-12.68	50.48	10.84	Peak	107	305
5	10600.00	44.26	54.00	-9.74	22.72	21.54	Average	100	300
6	10600.00	57.38	74.00	-16.62	35.84	21.54	Peak	100	300
7	15900.00	44.99	54.00	-9.01	22.89	22.10	Average	100	20
8	15900.00	58.04	74.00	-15.96	35.94	22.10	Peak	100	20

Note 1: Emission level (dBuV/m) = SA reading (dBuV) + Factor (dB).
2: Margin (dB) = Emission level (dBuV/m) – Limit (dBuV/m).

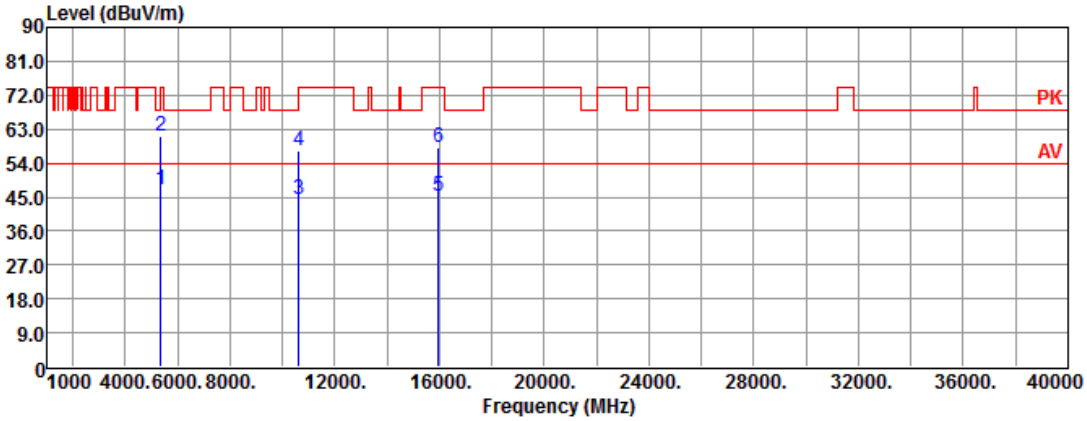
Transmitter Radiated Unwanted Emissions (Above 1GHz)			
Modulation Mode	11a	**Test Freq. (MHz)**	5320
N_{TX}	1	**Polarization**	H



	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	5350.00	50.20	54.00	-3.80	39.41	10.79	Average	229	85
2	5350.00	69.00	74.00	-5.00	58.21	10.79	Peak	229	85
3	10640.00	44.41	54.00	-9.59	22.84	21.57	Average	100	70
4	10640.00	57.38	74.00	-16.62	35.81	21.57	Peak	100	70
5	15960.00	44.88	54.00	-9.12	22.88	22.00	Average	100	50
6	15960.00	58.23	74.00	-15.77	36.23	22.00	Peak	100	50

Note 1: Emission level (dBuV/m) = SA reading (dBuV) + Factor (dB).
2: Margin (dB) = Emission level (dBuV/m) – Limit (dBuV/m).

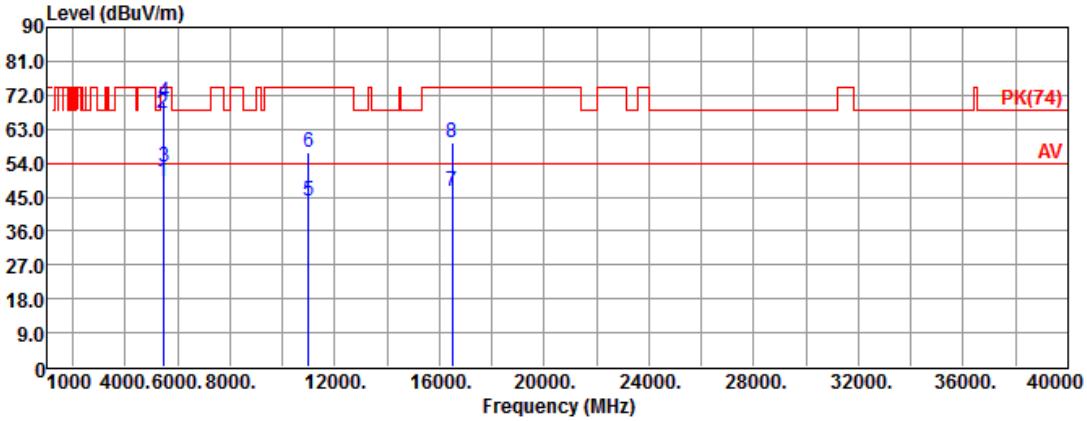
Transmitter Radiated Unwanted Emissions (Above 1GHz)			
Modulation Mode	11a	**Test Freq. (MHz)**	5320
N_{TX}	1	**Polarization**	V



	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	5350.00	46.97	54.00	-7.03	36.18	10.79	Average	100	305
2	5350.00	61.30	74.00	-12.70	50.51	10.79	Peak	100	305
3	10640.00	44.30	54.00	-9.70	22.73	21.57	Average	100	250
4	10640.00	57.37	74.00	-16.63	35.80	21.57	Peak	100	250
5	15960.00	45.00	54.00	-9.00	23.00	22.00	Average	100	200
6	15960.00	58.11	74.00	-15.89	36.11	22.00	Peak	100	200

Note 1: Emission level (dBuV/m) = SA reading (dBuV) + Factor (dB).
2: Margin (dB) = Emission level (dBuV/m) – Limit (dBuV/m).

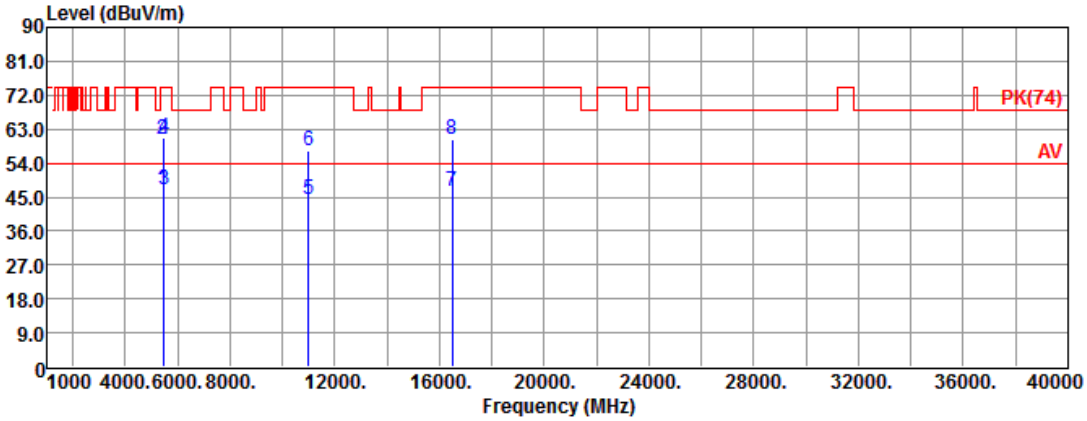
Transmitter Radiated Unwanted Emissions (Above 1GHz)			
Modulation Mode	11a	**Test Freq. (MHz)**	5500
N_{TX}	1	**Polarization**	H



	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	5460.00	48.97	54.00	-5.03	38.02	10.95	Average	328	101
2	5460.00	67.08	74.00	-6.92	56.13	10.95	Peak	328	101
3	5470.00	52.75	54.00	-1.25	41.79	10.96	Average	328	101
4	5470.00	70.24	74.00	-3.76	59.28	10.96	Peak	328	101
5	11000.00	44.04	54.00	-9.96	22.10	21.94	Average	100	100
6	11000.00	56.94	74.00	-17.06	35.00	21.94	Peak	100	100
7	16500.00	46.69	54.00	-7.31	22.68	24.01	Average	100	50
8	16500.00	59.40	74.00	-14.60	35.39	24.01	Peak	100	50

Note 1: Emission level (dBuV/m) = SA reading (dBuV) + Factor (dB).
2: Margin (dB) = Emission level (dBuV/m) – Limit (dBuV/m).

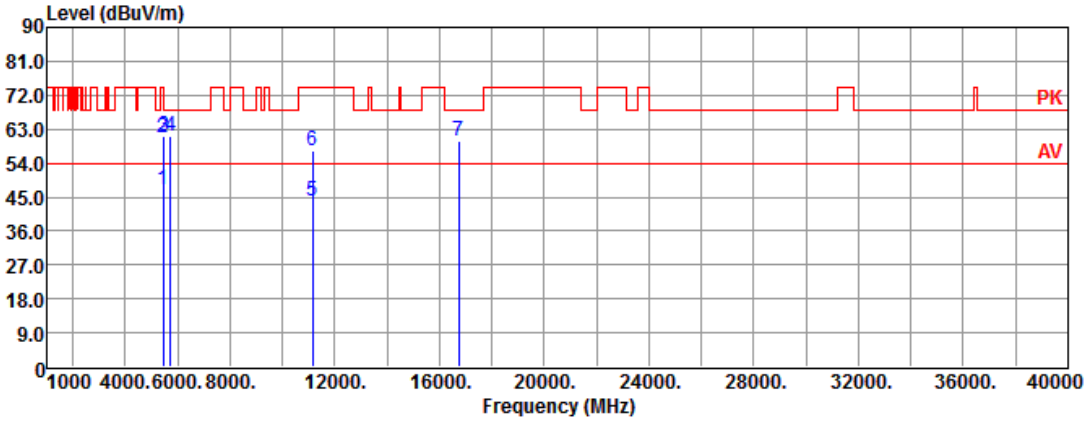
Transmitter Radiated Unwanted Emissions (Above 1GHz)			
Modulation Mode	11a	**Test Freq. (MHz)**	5500
N_{TX}	1	**Polarization**	V



	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	5460.00	46.82	54.00	-7.18	35.87	10.95	Average	120	326
2	5460.00	60.19	74.00	-13.81	49.24	10.95	Peak	120	326
3	5470.00	47.14	54.00	-6.86	36.18	10.96	Average	120	326
4	5470.00	60.91	74.00	-13.09	49.95	10.96	Peak	120	326
5	11000.00	44.14	54.00	-9.86	22.20	21.94	Average	100	120
6	11000.00	57.15	74.00	-16.85	35.21	21.94	Peak	100	120
7	16500.00	46.60	54.00	-7.40	22.59	24.01	Average	100	50
8	16500.00	60.12	74.00	-13.88	36.11	24.01	Peak	100	50

Note 1: Emission level (dBuV/m) = SA reading (dBuV) + Factor (dB).
2: Margin (dB) = Emission level (dBuV/m) – Limit (dBuV/m).

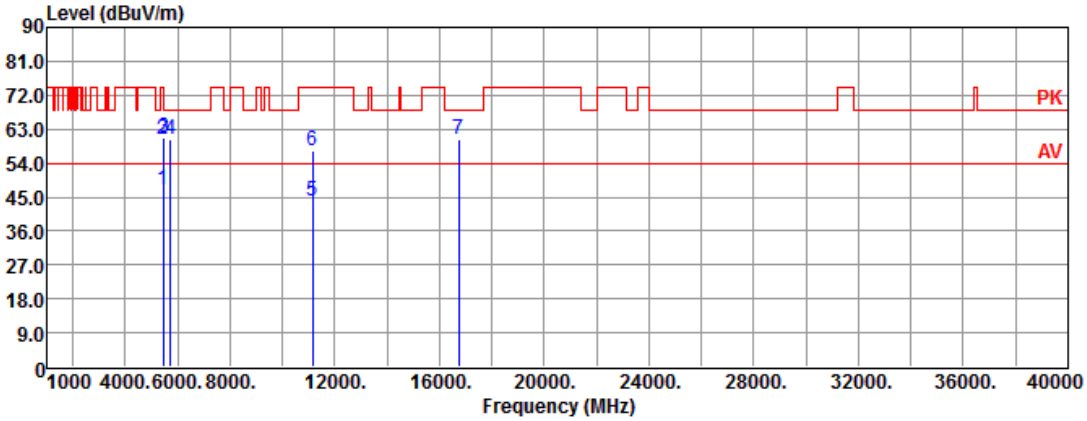
Transmitter Radiated Unwanted Emissions (Above 1GHz)			
Modulation Mode	11a	**Test Freq. (MHz)**	5580
N_{TX}	1	**Polarization**	H



	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	5460.00	46.76	54.00	-7.24	35.81	10.95	Average	186	137
2	5460.00	60.80	74.00	-13.20	49.85	10.95	Peak	186	137
3	5470.00	61.03	68.20	-7.17	50.07	10.96	Peak	186	137
4	5725.00	61.01	68.20	-7.19	49.62	11.39	Peak	186	137
5	11160.00	43.96	54.00	-10.04	22.01	21.95	Average	100	180
6	11160.00	57.20	74.00	-16.80	35.25	21.95	Peak	100	180
7	16740.00	60.02	68.20	-8.18	34.95	25.07	Peak	100	60

Note 1: Emission level (dBuV/m) = SA reading (dBuV) + Factor (dB).
2: Margin (dB) = Emission level (dBuV/m) – Limit (dBuV/m).

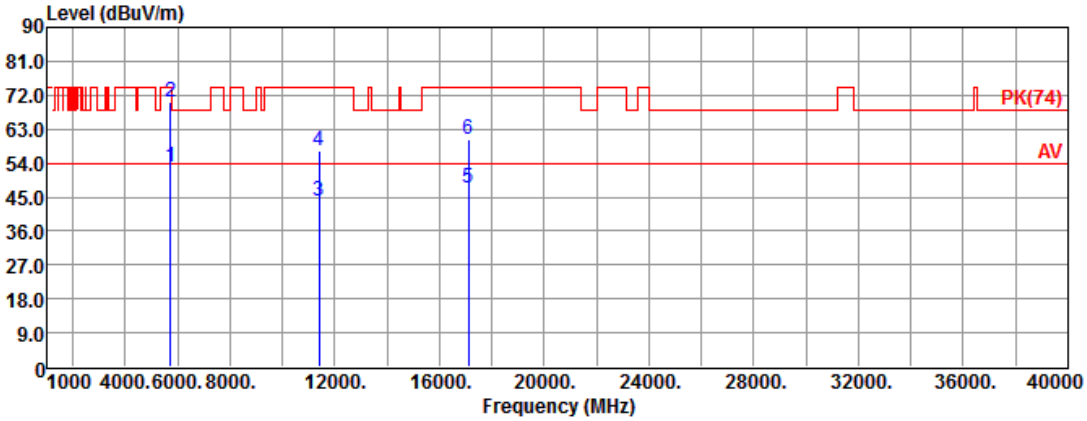
Transmitter Radiated Unwanted Emissions (Above 1GHz)			
Modulation Mode	11a	**Test Freq. (MHz)**	5580
N_{TX}	1	**Polarization**	V



	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	5460.00	46.73	54.00	-7.27	35.78	10.95	Average	119	20
2	5460.00	60.38	74.00	-13.62	49.43	10.95	Peak	119	20
3	5470.00	60.79	68.20	-7.41	49.83	10.96	Peak	119	20
4	5725.00	60.27	68.20	-7.93	48.88	11.39	Peak	119	20
5	11160.00	44.11	54.00	-9.89	22.16	21.95	Average	100	30
6	11160.00	57.13	74.00	-16.87	35.18	21.95	Peak	100	30
7	16740.00	60.12	68.20	-8.08	35.05	25.07	Peak	100	50

Note 1: Emission level (dBuV/m) = SA reading (dBuV) + Factor (dB).
2: Margin (dB) = Emission level (dBuV/m) – Limit (dBuV/m).

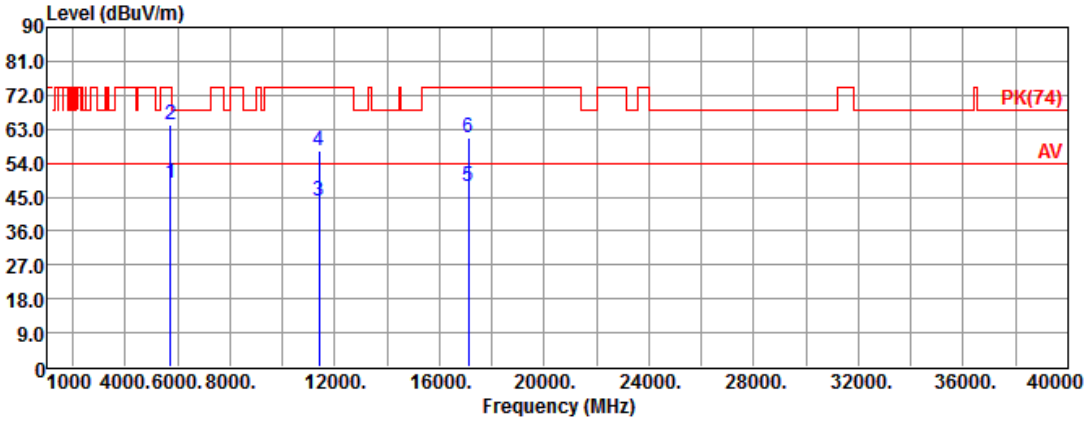
Transmitter Radiated Unwanted Emissions (Above 1GHz)			
Modulation Mode	11a	**Test Freq. (MHz)**	5700
N_{TX}	1	**Polarization**	H



	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	5725.00	53.08	54.00	-0.92	41.69	11.39	Average	182	143
2	5725.00	70.16	74.00	-3.84	58.77	11.39	Peak	182	143
3	11400.00	44.06	54.00	-9.94	22.08	21.98	Average	100	80
4	11400.00	57.10	74.00	-16.90	35.12	21.98	Peak	100	80
5	17100.00	47.20	54.00	-6.80	20.31	26.89	Average	100	60
6	17100.00	60.42	74.00	-13.58	33.53	26.89	Peak	100	60

Note 1: Emission level (dBuV/m) = SA reading (dBuV) + Factor (dB).
2: Margin (dB) = Emission level (dBuV/m) – Limit (dBuV/m).

Transmitter Radiated Unwanted Emissions (Above 1GHz)			
Modulation Mode	11a	**Test Freq. (MHz)**	5700
N_{TX}	1	**Polarization**	V

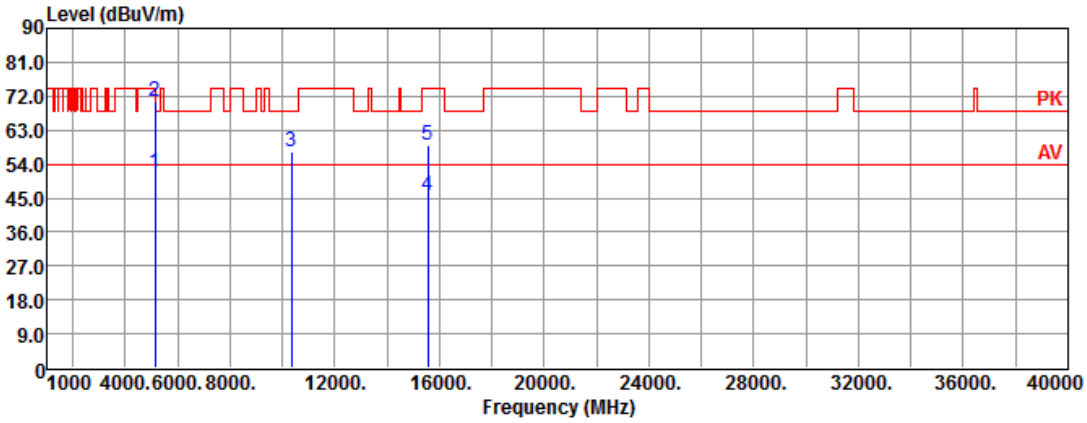


	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	5725.00	48.84	54.00	-5.16	37.45	11.39	Average	100	18
2	5725.00	64.25	74.00	-9.75	52.86	11.39	Peak	100	18
3	11400.00	44.01	54.00	-9.99	22.03	21.98	Average	100	30
4	11400.00	57.06	74.00	-16.94	35.08	21.98	Peak	100	30
5	17100.00	47.71	54.00	-6.29	20.82	26.89	Average	100	50
6	17100.00	60.53	74.00	-13.47	33.64	26.89	Peak	100	50

Note 1: Emission level (dBuV/m) = SA reading (dBuV) + Factor (dB).
2: Margin (dB) = Emission level (dBuV/m) – Limit (dBuV/m).

3.4.8 Test Result of Transmitter Radiated Unwanted Emissions (Above 1GHz) for HT20

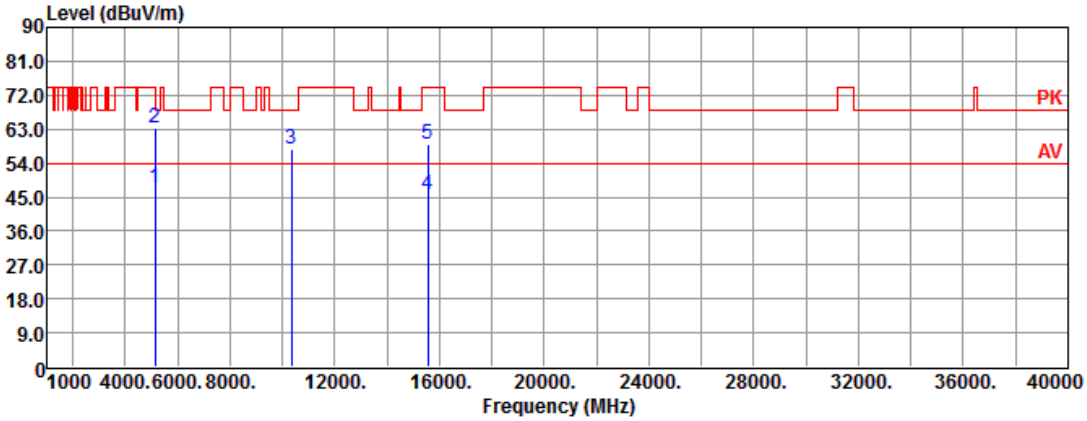
Transmitter Radiated Unwanted Emissions (Above 1GHz)			
Modulation Mode	HT20	**Test Freq. (MHz)**	5180
N_{TX}	1	**Polarization**	H



	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	51.49	54.00	-2.51	41.16	10.33	Average	246	80
2	5150.00	70.79	74.00	-3.21	60.46	10.33	Peak	246	80
3	10360.00	57.14	68.20	-11.06	35.93	21.21	Peak	100	32
4	15540.00	45.52	54.00	-8.48	22.96	22.56	Average	100	105
5	15540.00	59.07	74.00	-14.93	36.51	22.56	Peak	100	105

Note 1: Emission level (dBuV/m) = SA reading (dBuV) + Factor (dB).
2: Margin (dB) = Emission level (dBuV/m) – Limit (dBuV/m).

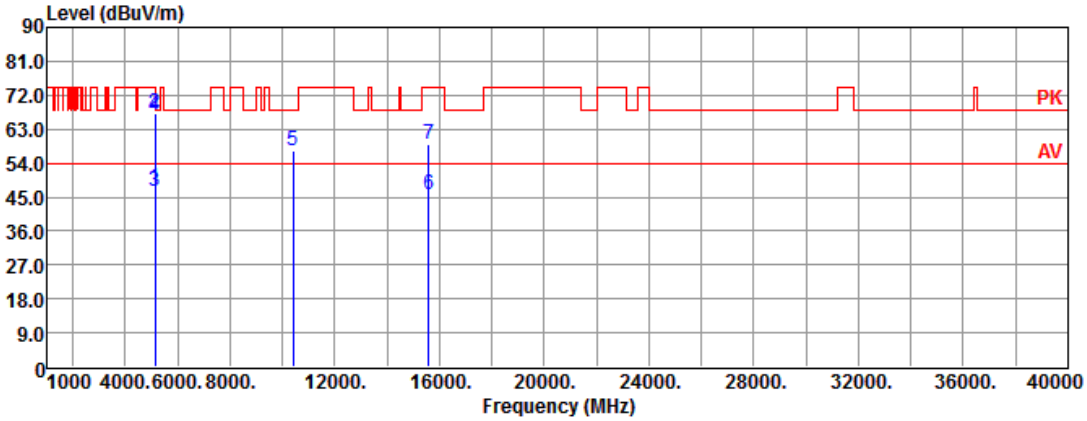
Transmitter Radiated Unwanted Emissions (Above 1GHz)			
Modulation Mode	HT20	**Test Freq. (MHz)**	5180
N_{TX}	1	**Polarization**	V



	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	5150.00	47.20	54.00	-6.80	36.87	10.33	Average	115	306
2	5150.00	63.10	74.00	-10.90	52.77	10.33	Peak	115	306
3	10360.00	57.56	68.20	-10.64	36.35	21.21	Peak	100	192
4	15540.00	45.50	54.00	-8.50	22.94	22.56	Average	100	78
5	15540.00	58.79	74.00	-15.21	36.23	22.56	Peak	100	78

Note 1: Emission level (dBuV/m) = SA reading (dBuV) + Factor (dB).
2: Margin (dB) = Emission level (dBuV/m) – Limit (dBuV/m).

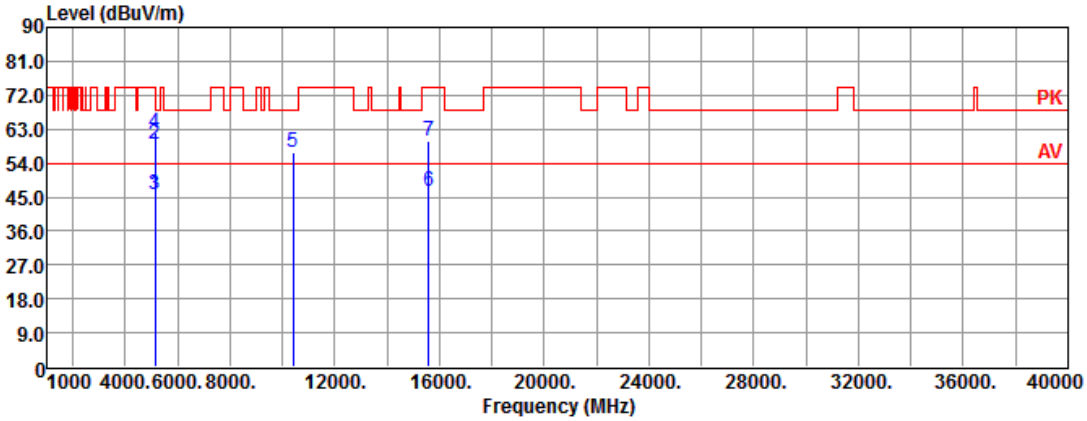
Transmitter Radiated Unwanted Emissions (Above 1GHz)			
Modulation Mode	HT20	**Test Freq. (MHz)**	5200
N_{TX}	1	**Polarization**	H



	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	5125.00	47.21	54.00	-6.79	36.91	10.30	Average	267	86
2	5125.00	66.99	74.00	-7.01	56.69	10.30	Peak	267	86
3	5150.00	46.70	54.00	-7.30	36.37	10.33	Average	267	86
4	5150.00	66.66	74.00	-7.34	56.33	10.33	Peak	267	86
5	10400.00	57.21	68.20	-10.99	35.95	21.26	Peak	100	97
6	15600.00	45.73	54.00	-8.27	23.27	22.46	Average	100	63
7	15600.00	58.97	74.00	-15.03	36.51	22.46	Peak	100	63

Note 1: Emission level (dBuV/m) = SA reading (dBuV) + Factor (dB).
2: Margin (dB) = Emission level (dBuV/m) – Limit (dBuV/m).

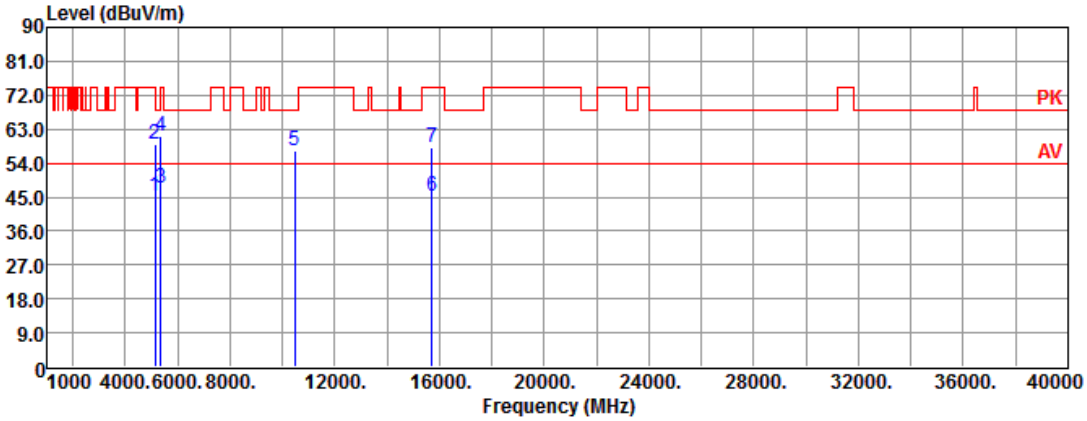
Transmitter Radiated Unwanted Emissions (Above 1GHz)			
Modulation Mode	HT20	**Test Freq. (MHz)**	5200
N_{TX}	1	**Polarization**	V



	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	5125.00	45.75	54.00	-8.25	35.45	10.30	Average	106	307
2	5125.00	59.00	74.00	-15.00	48.70	10.30	Peak	106	307
3	5150.00	45.66	54.00	-8.34	35.33	10.33	Average	106	307
4	5150.00	61.91	74.00	-12.09	51.58	10.33	Peak	106	307
5	10400.00	56.97	68.20	-11.23	35.71	21.26	Peak	100	34
6	15600.00	46.56	54.00	-7.44	24.10	22.46	Average	100	63
7	15600.00	59.99	74.00	-14.01	37.53	22.46	Peak	100	63

Note 1: Emission level (dBuV/m) = SA reading (dBuV) + Factor (dB).
2: Margin (dB) = Emission level (dBuV/m) – Limit (dBuV/m).

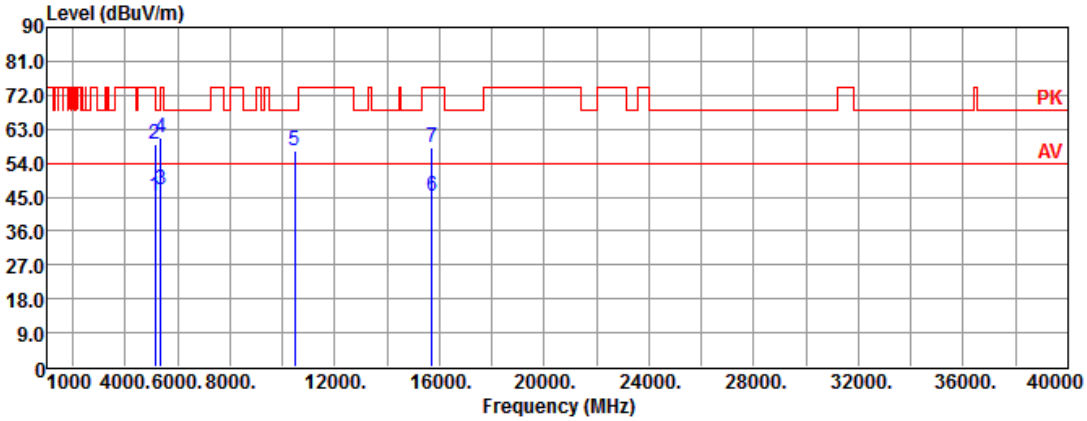
Transmitter Radiated Unwanted Emissions (Above 1GHz)			
Modulation Mode	HT20	**Test Freq. (MHz)**	5240
N_{TX}	1	**Polarization**	H



	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	5150.00	45.33	54.00	-8.67	35.00	10.33	Average	260	78
2	5150.00	59.07	74.00	-14.93	48.74	10.33	Peak	260	78
3	5350.00	47.48	54.00	-6.52	36.69	10.79	Average	260	78
4	5350.00	61.01	74.00	-12.99	50.22	10.79	Peak	260	78
5	10480.00	57.13	68.20	-11.07	35.73	21.40	Peak	100	46
6	15720.00	45.16	54.00	-8.84	22.85	22.31	Average	100	73
7	15720.00	58.31	74.00	-15.69	36.00	22.31	Peak	100	73

Note 1: Emission level (dBuV/m) = SA reading (dBuV) + Factor (dB).
2: Margin (dB) = Emission level (dBuV/m) – Limit (dBuV/m).

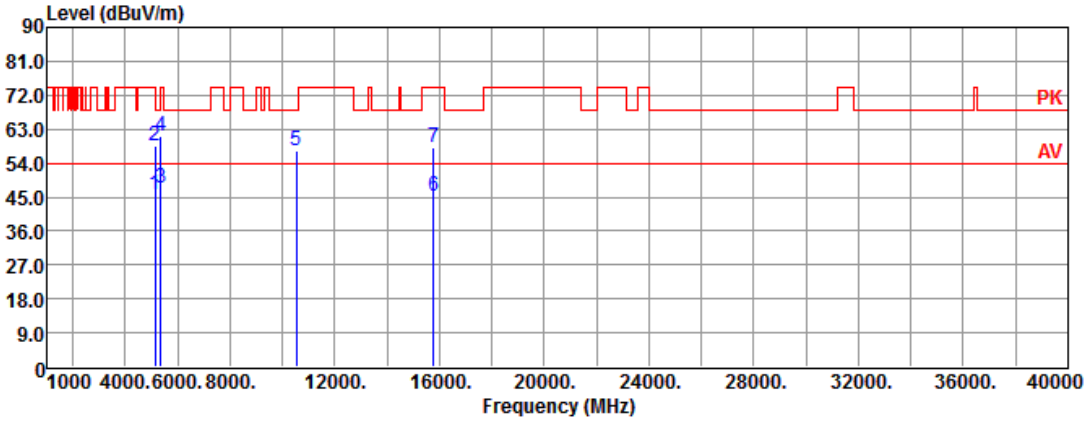
Transmitter Radiated Unwanted Emissions (Above 1GHz)			
Modulation Mode	HT20	**Test Freq. (MHz)**	5240
N_{TX}	1	**Polarization**	V



	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	5150.00	45.27	54.00	-8.73	34.94	10.33	Average	114	307
2	5150.00	59.01	74.00	-14.99	48.68	10.33	Peak	114	307
3	5350.00	47.00	54.00	-7.00	36.21	10.79	Average	114	307
4	5350.00	60.66	74.00	-13.34	49.87	10.79	Peak	114	307
5	10480.00	57.13	68.20	-11.07	35.73	21.40	Peak	100	46
6	15720.00	45.14	54.00	-8.86	22.83	22.31	Average	100	57
7	15720.00	58.22	74.00	-15.78	35.91	22.31	Peak	100	57

Note 1: Emission level (dBuV/m) = SA reading (dBuV) + Factor (dB).
2: Margin (dB) = Emission level (dBuV/m) – Limit (dBuV/m).

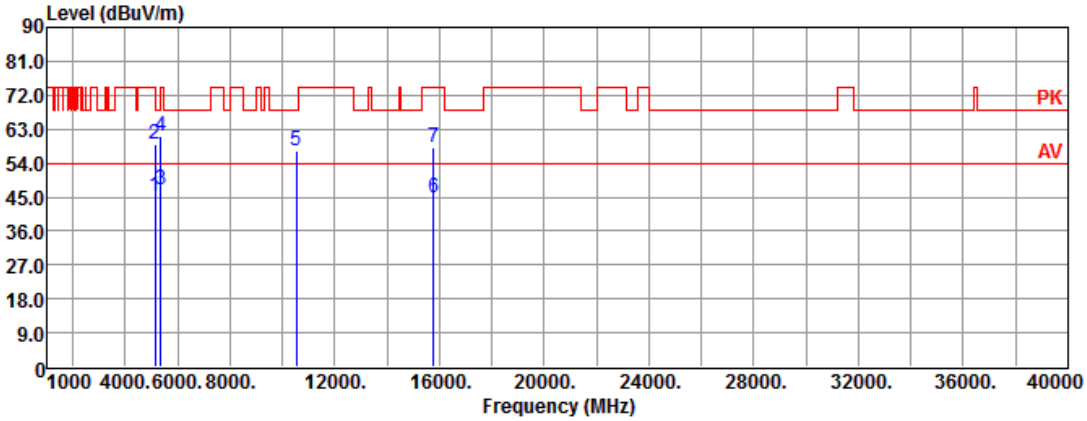
Transmitter Radiated Unwanted Emissions (Above 1GHz)			
Modulation Mode	HT20	**Test Freq. (MHz)**	5260
N_{TX}	1	**Polarization**	H



	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	5150.00	45.59	54.00	-8.41	35.26	10.33	Average	220	87
2	5150.00	58.51	74.00	-15.49	48.18	10.33	Peak	220	87
3	5350.00	47.28	54.00	-6.72	36.49	10.79	Average	220	87
4	5350.00	61.25	74.00	-12.75	50.46	10.79	Peak	220	87
5	10520.00	57.27	68.20	-10.93	35.82	21.45	Peak	100	95
6	15780.00	45.08	54.00	-8.92	22.83	22.25	Average	100	62
7	15780.00	58.21	74.00	-15.79	35.96	22.25	Peak	100	62

Note 1: Emission level (dBuV/m) = SA reading (dBuV) + Factor (dB).
2: Margin (dB) = Emission level (dBuV/m) – Limit (dBuV/m).

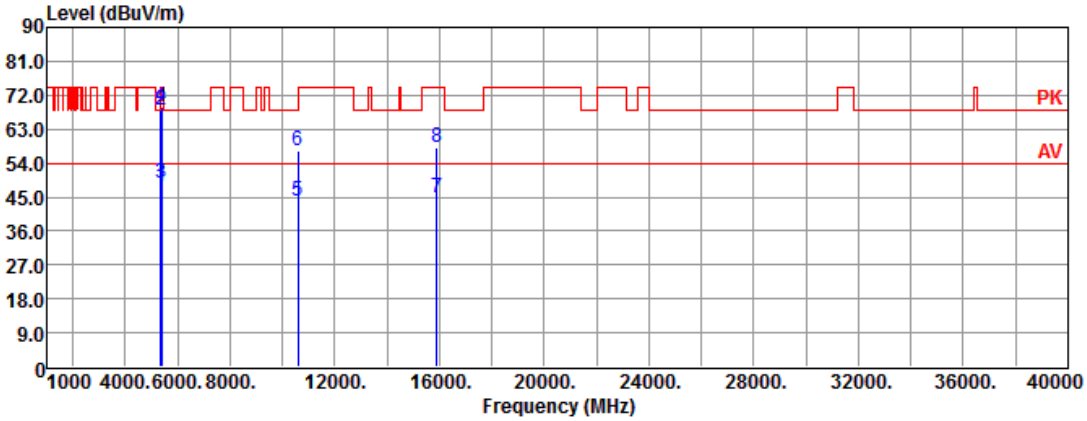
Transmitter Radiated Unwanted Emissions (Above 1GHz)			
Modulation Mode	HT20	**Test Freq. (MHz)**	5260
N_{TX}	1	**Polarization**	V



	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	5150.00	45.31	54.00	-8.69	34.98	10.33	Average	100	306
2	5150.00	58.99	74.00	-15.01	48.66	10.33	Peak	100	306
3	5350.00	46.78	54.00	-7.22	35.99	10.79	Average	100	306
4	5350.00	61.20	74.00	-12.80	50.41	10.79	Peak	100	306
5	10520.00	57.07	68.20	-11.13	35.62	21.45	Peak	100	67
6	15780.00	44.99	54.00	-9.01	22.74	22.25	Average	100	61
7	15780.00	58.09	74.00	-15.91	35.84	22.25	Peak	100	61

Note 1: Emission level (dBuV/m) = SA reading (dBuV) + Factor (dB).
2: Margin (dB) = Emission level (dBuV/m) – Limit (dBuV/m).

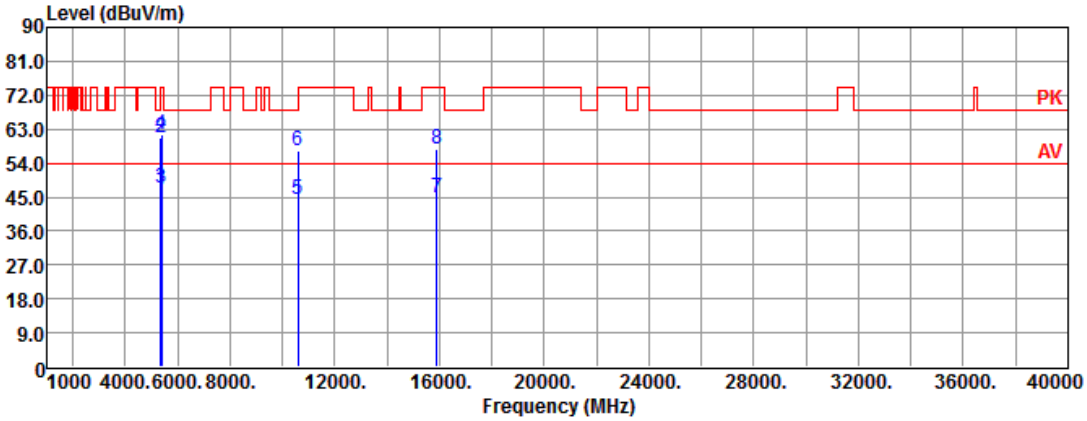
Transmitter Radiated Unwanted Emissions (Above 1GHz)			
Modulation Mode	HT20	**Test Freq. (MHz)**	5300
N_{TX}	1	**Polarization**	H



	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	5350.00	48.01	54.00	-5.99	37.22	10.79	Average	245	83
2	5350.00	68.15	74.00	-5.85	57.36	10.79	Peak	245	83
3	5375.00	48.45	54.00	-5.55	37.61	10.84	Average	245	83
4	5375.00	68.96	74.00	-5.04	58.12	10.84	Peak	245	83
5	10600.00	44.03	54.00	-9.97	22.49	21.54	Average	100	74
6	10600.00	57.09	74.00	-16.91	35.55	21.54	Peak	100	74
7	15900.00	44.60	54.00	-9.40	22.50	22.10	Average	100	94
8	15900.00	58.13	74.00	-15.87	36.03	22.10	Peak	100	94

Note 1: Emission level (dBuV/m) = SA reading (dBuV) + Factor (dB).
2: Margin (dB) = Emission level (dBuV/m) – Limit (dBuV/m).

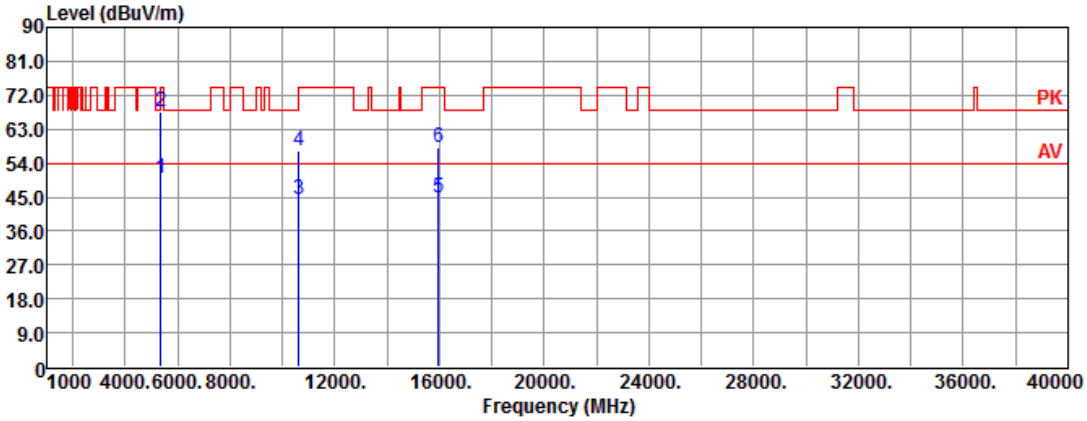
Transmitter Radiated Unwanted Emissions (Above 1GHz)			
Modulation Mode	HT20	**Test Freq. (MHz)**	5300
N_{TX}	1	**Polarization**	V



	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	5350.00	47.09	54.00	-6.91	36.30	10.79	Average	100	305
2	5350.00	60.51	74.00	-13.49	49.72	10.79	Peak	100	305
3	5375.00	47.17	54.00	-6.83	36.33	10.84	Average	100	305
4	5375.00	61.39	74.00	-12.61	50.55	10.84	Peak	100	305
5	10600.00	44.16	54.00	-9.84	22.62	21.54	Average	100	291
6	10600.00	57.22	74.00	-16.78	35.68	21.54	Peak	100	291
7	15900.00	44.88	54.00	-9.12	22.78	22.10	Average	100	34
8	15900.00	57.84	74.00	-16.16	35.74	22.10	Peak	100	34

Note 1: Emission level (dBuV/m) = SA reading (dBuV) + Factor (dB).
2: Margin (dB) = Emission level (dBuV/m) – Limit (dBuV/m).

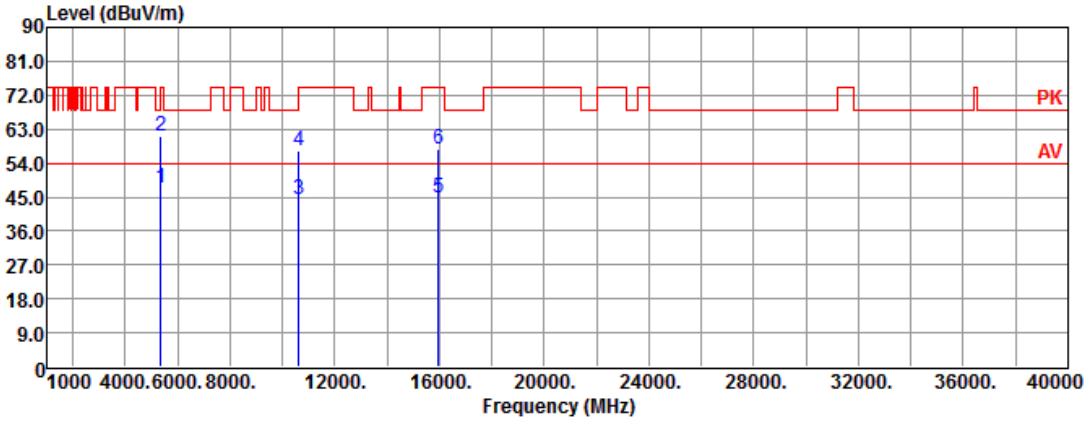
Transmitter Radiated Unwanted Emissions (Above 1GHz)			
Modulation Mode	HT20	**Test Freq. (MHz)**	5320
N_{TX}	1	**Polarization**	H



	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	5350.00	50.13	54.00	-3.87	39.34	10.79	Average	215	82
2	5350.00	67.75	74.00	-6.25	56.96	10.79	Peak	215	82
3	10640.00	44.24	54.00	-9.76	22.67	21.57	Average	100	77
4	10640.00	57.21	74.00	-16.79	35.64	21.57	Peak	100	77
5	15960.00	44.75	54.00	-9.25	22.75	22.00	Average	100	63
6	15960.00	58.03	74.00	-15.97	36.03	22.00	Peak	100	63

Note 1: Emission level (dBuV/m) = SA reading (dBuV) + Factor (dB).
2: Margin (dB) = Emission level (dBuV/m) – Limit (dBuV/m).

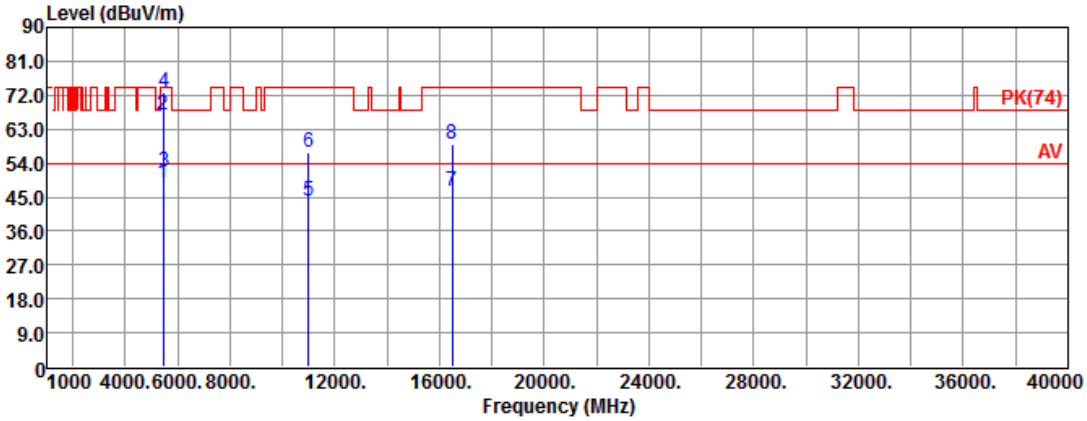
Transmitter Radiated Unwanted Emissions (Above 1GHz)			
Modulation Mode	HT20	**Test Freq. (MHz)**	5320
N_{TX}	1	**Polarization**	V



	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	5350.00	47.27	54.00	-6.73	36.48	10.79	Average	100	308
2	5350.00	61.16	74.00	-12.84	50.37	10.79	Peak	100	308
3	10640.00	44.14	54.00	-9.86	22.57	21.57	Average	100	238
4	10640.00	57.23	74.00	-16.77	35.66	21.57	Peak	100	238
5	15960.00	44.89	54.00	-9.11	22.89	22.00	Average	100	185
6	15960.00	57.88	74.00	-16.12	35.88	22.00	Peak	100	185

Note 1: Emission level (dBuV/m) = SA reading (dBuV) + Factor (dB).
2: Margin (dB) = Emission level (dBuV/m) – Limit (dBuV/m).

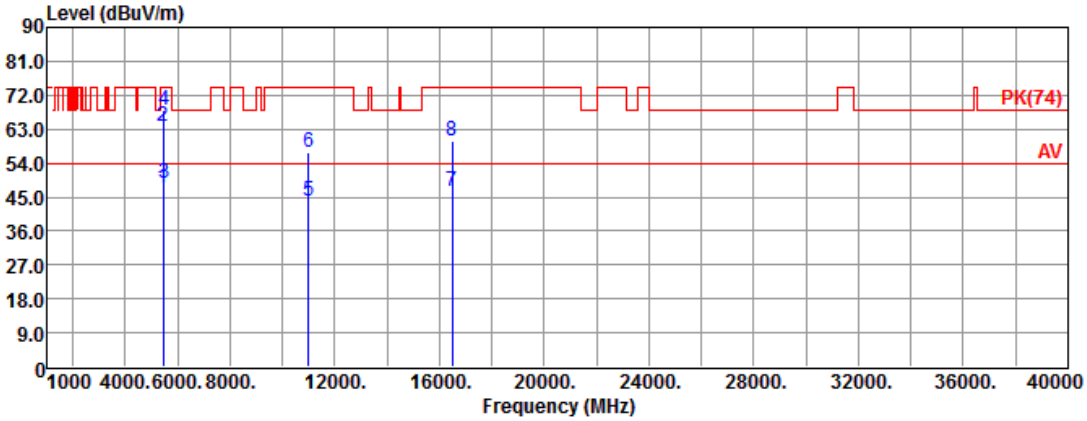
Transmitter Radiated Unwanted Emissions (Above 1GHz)			
Modulation Mode	HT20	**Test Freq. (MHz)**	5500
N_{TX}	1	**Polarization**	H



	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	5460.00	48.81	54.00	-5.19	37.86	10.95	Average	260	104
2	5460.00	66.93	74.00	-7.07	55.98	10.95	Peak	260	104
3	5470.00	51.74	54.00	-2.26	40.78	10.96	Average	260	104
4	5470.00	72.88	74.00	-1.12	61.92	10.96	Peak	260	104
5	11000.00	43.81	54.00	-10.19	21.87	21.94	Average	100	126
6	11000.00	56.81	74.00	-17.19	34.87	21.94	Peak	100	126
7	16500.00	46.52	54.00	-7.48	22.51	24.01	Average	100	67
8	16500.00	58.96	74.00	-15.04	34.95	24.01	Peak	100	67

Note 1: Emission level (dBuV/m) = SA reading (dBuV) + Factor (dB).
2: Margin (dB) = Emission level (dBuV/m) – Limit (dBuV/m).

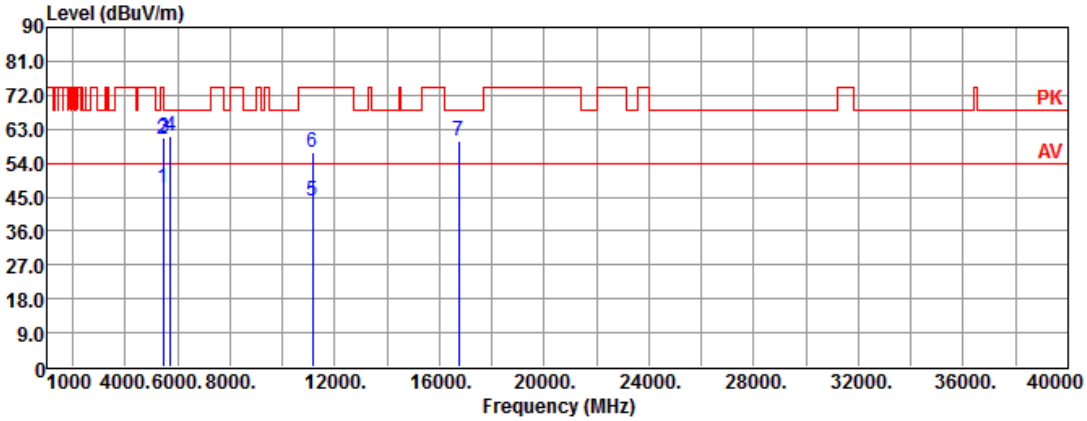
Transmitter Radiated Unwanted Emissions (Above 1GHz)			
Modulation Mode	HT20	**Test Freq. (MHz)**	5500
N_{TX}	1	**Polarization**	V



	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	5460.00	47.36	54.00	-6.64	36.41	10.95	Average	290	9
2	5460.00	63.67	74.00	-10.33	52.72	10.95	Peak	290	9
3	5470.00	48.72	54.00	-5.28	37.76	10.96	Average	290	9
4	5470.00	67.88	74.00	-6.12	56.92	10.96	Peak	290	9
5	11000.00	43.96	54.00	-10.04	22.02	21.94	Average	100	112
6	11000.00	56.90	74.00	-17.10	34.96	21.94	Peak	100	112
7	16500.00	46.45	54.00	-7.55	22.44	24.01	Average	100	62
8	16500.00	59.76	74.00	-14.24	35.75	24.01	Peak	100	62

Note 1: Emission level (dBuV/m) = SA reading (dBuV) + Factor (dB).
2: Margin (dB) = Emission level (dBuV/m) – Limit (dBuV/m).

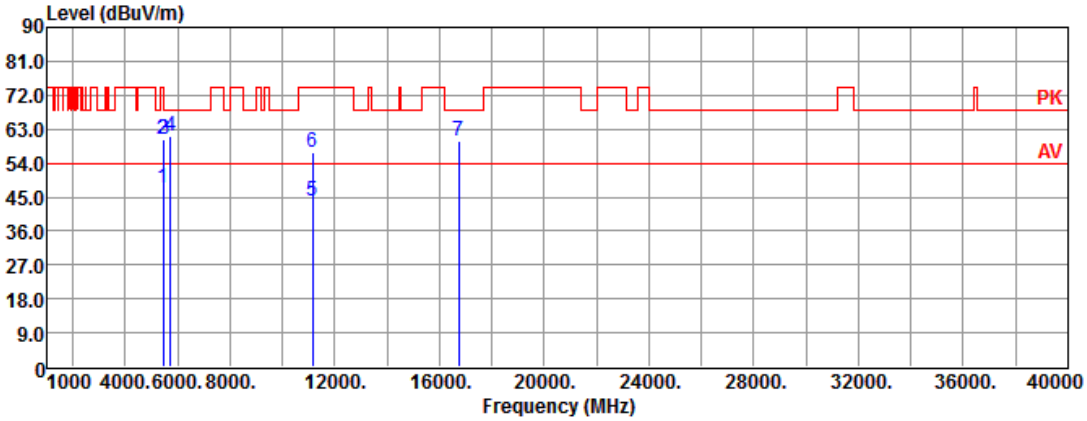
Transmitter Radiated Unwanted Emissions (Above 1GHz)			
Modulation Mode	HT20	**Test Freq. (MHz)**	5580
N_{TX}	1	**Polarization**	H



	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	5460.00	47.15	54.00	-6.85	36.20	10.95	Average	250	105
2	5460.00	60.10	74.00	-13.90	49.15	10.95	Peak	250	105
3	5470.00	60.54	68.20	-7.66	49.58	10.96	Peak	250	105
4	5725.00	61.01	68.20	-7.19	49.62	11.39	Peak	250	105
5	11160.00	43.91	54.00	-10.09	21.96	21.95	Average	100	167
6	11160.00	57.01	74.00	-16.99	35.06	21.95	Peak	100	167
7	16740.00	59.76	68.20	-8.44	34.69	25.07	Peak	100	74

Note 1: Emission level (dBuV/m) = SA reading (dBuV) + Factor (dB).
2: Margin (dB) = Emission level (dBuV/m) – Limit (dBuV/m).

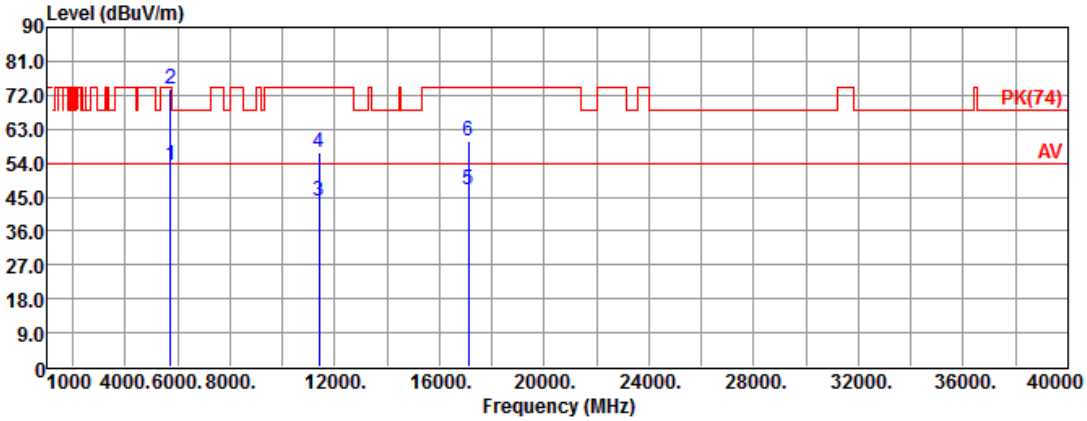
Transmitter Radiated Unwanted Emissions (Above 1GHz)			
Modulation Mode	HT20	**Test Freq. (MHz)**	5580
N_{TX}	1	**Polarization**	V



	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	5460.00	47.15	54.00	-6.85	36.20	10.95	Average	283	13
2	5460.00	60.37	74.00	-13.63	49.42	10.95	Peak	283	13
3	5470.00	60.12	68.20	-8.08	49.16	10.96	Peak	283	13
4	5725.00	60.97	68.20	-7.23	49.58	11.39	Peak	283	13
5	11160.00	43.94	54.00	-10.06	21.99	21.95	Average	100	42
6	11160.00	56.96	74.00	-17.04	35.01	21.95	Peak	100	42
7	16740.00	59.82	68.20	-8.38	34.75	25.07	Peak	100	44

Note 1: Emission level (dBuV/m) = SA reading (dBuV) + Factor (dB).
2: Margin (dB) = Emission level (dBuV/m) – Limit (dBuV/m).

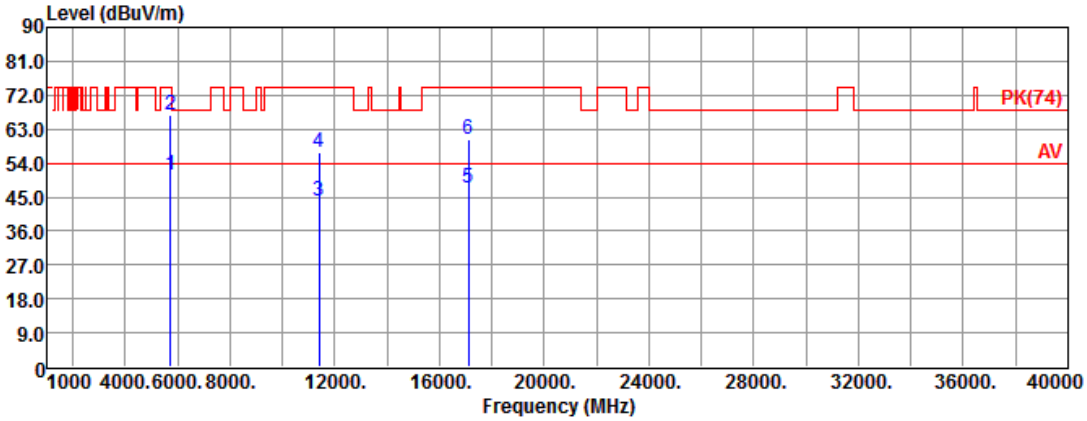
Transmitter Radiated Unwanted Emissions (Above 1GHz)			
Modulation Mode	HT20	**Test Freq. (MHz)**	5700
N_{TX}	1	**Polarization**	H



	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	5725.00	53.55	54.00	-0.45	42.16	11.39	Average	251	113
2	5725.00	73.61	74.00	-0.39	62.22	11.39	Peak	251	113
3	11400.00	43.89	54.00	-10.11	21.91	21.98	Average	100	92
4	11400.00	56.91	74.00	-17.09	34.93	21.98	Peak	100	92
5	17100.00	47.13	54.00	-6.87	20.24	26.89	Average	100	74
6	17100.00	59.93	74.00	-14.07	33.04	26.89	Peak	100	74

Note 1: Emission level (dBuV/m) = SA reading (dBuV) + Factor (dB).
2: Margin (dB) = Emission level (dBuV/m) – Limit (dBuV/m).

Transmitter Radiated Unwanted Emissions (Above 1GHz)			
Modulation Mode	HT20	**Test Freq. (MHz)**	5700
N_{TX}	1	**Polarization**	V

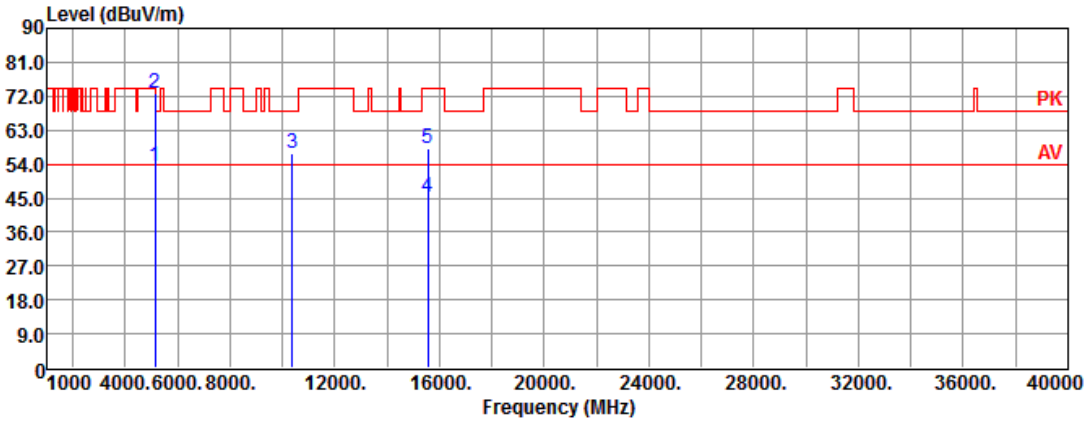


	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	5725.00	50.79	54.00	-3.21	39.40	11.39	Average	200	40
2	5725.00	66.71	74.00	-7.29	55.32	11.39	Peak	200	40
3	11400.00	43.94	54.00	-10.06	21.96	21.98	Average	100	38
4	11400.00	56.95	74.00	-17.05	34.97	21.98	Peak	100	38
5	17100.00	47.53	54.00	-6.47	20.64	26.89	Average	100	63
6	17100.00	60.41	74.00	-13.59	33.52	26.89	Peak	100	63

Note 1: Emission level (dBuV/m) = SA reading (dBuV) + Factor (dB).
2: Margin (dB) = Emission level (dBuV/m) – Limit (dBuV/m).

3.4.9 Test Result of Transmitter Radiated Unwanted Emissions (Above 1GHz) for HT40

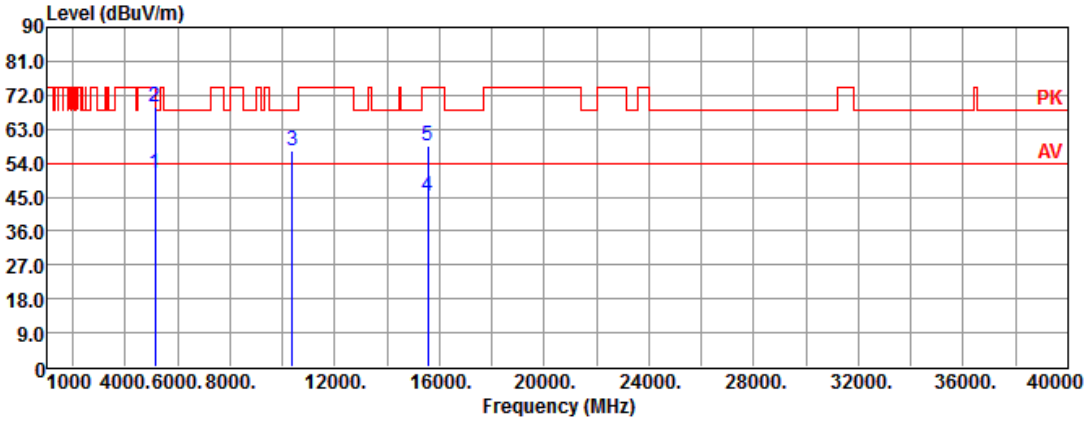
Transmitter Radiated Unwanted Emissions (Above 1GHz)			
Modulation Mode	HT40	**Test Freq. (MHz)**	5190
N_{TX}	1	**Polarization**	H



	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	43.22	10.33	Average	245	85
2	5150.00	72.79	74.00	-1.21	62.46	10.33	Peak	245	85
3	10380.00	56.83	68.20	-11.37	35.59	21.24	Peak	100	48
4	15570.00	45.28	54.00	-8.72	22.77	22.51	Average	100	111
5	15570.00	58.31	74.00	-15.69	35.80	22.51	Peak	100	111

Note 1: Emission level (dBuV/m) = SA reading (dBuV) + Factor (dB).
2: Margin (dB) = Emission level (dBuV/m) – Limit (dBuV/m).

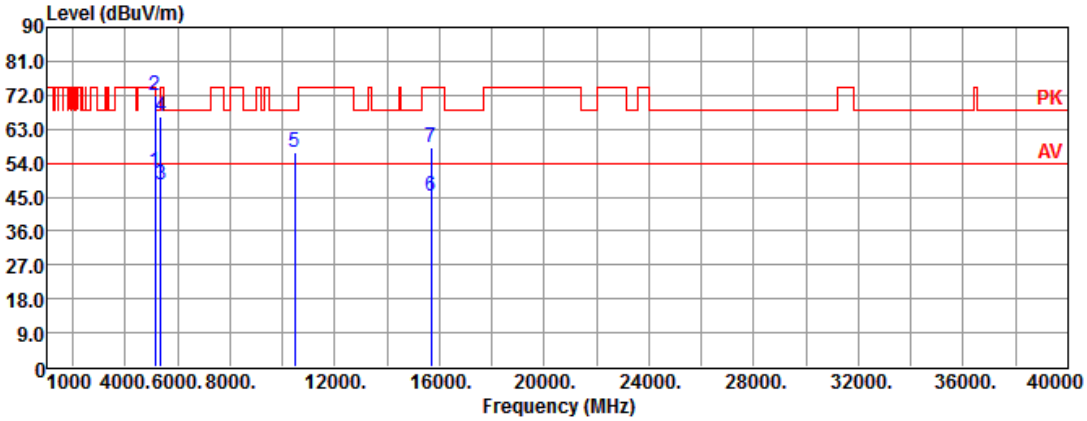
Transmitter Radiated Unwanted Emissions (Above 1GHz)			
Modulation Mode	HT40	**Test Freq. (MHz)**	5190
N_{TX}	1	**Polarization**	V



	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	51.23	54.00	-2.77	40.90	10.33	Average	282	22
2	5150.00	68.82	74.00	-5.18	58.49	10.33	Peak	282	22
3	10380.00	57.20	68.20	-11.00	35.96	21.24	Peak	100	201
4	15570.00	45.05	54.00	-8.95	22.54	22.51	Average	100	85
5	15570.00	58.39	74.00	-15.61	35.88	22.51	Peak	100	85

Note 1: Emission level (dBuV/m) = SA reading (dBuV) + Factor (dB).
2: Margin (dB) = Emission level (dBuV/m) – Limit (dBuV/m).

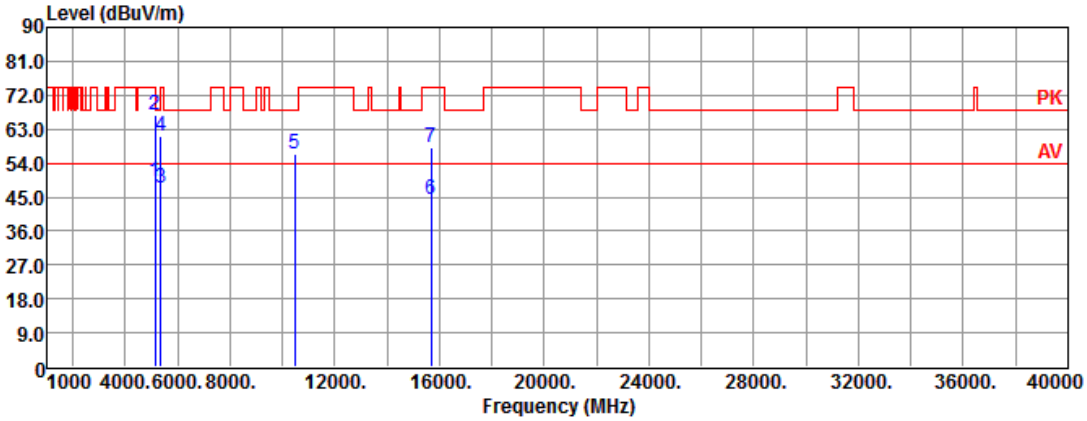
Transmitter Radiated Unwanted Emissions (Above 1GHz)			
Modulation Mode	HT40	**Test Freq. (MHz)**	5230
N_{TX}	1	**Polarization**	H



	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	51.73	54.00	-2.27	41.40	10.33	Average	266	91
2	5150.00	71.71	74.00	-2.29	61.38	10.33	Peak	266	91
3	5350.00	48.05	54.00	-5.95	37.26	10.79	Average	266	91
4	5350.00	66.34	74.00	-7.66	55.55	10.79	Peak	266	91
5	10460.00	56.70	68.20	-11.50	35.35	21.35	Peak	100	113
6	15690.00	45.00	54.00	-9.00	22.64	22.36	Average	100	74
7	15690.00	58.20	74.00	-15.80	35.84	22.36	Peak	100	74

Note 1: Emission level (dBuV/m) = SA reading (dBuV) + Factor (dB).
2: Margin (dB) = Emission level (dBuV/m) – Limit (dBuV/m).

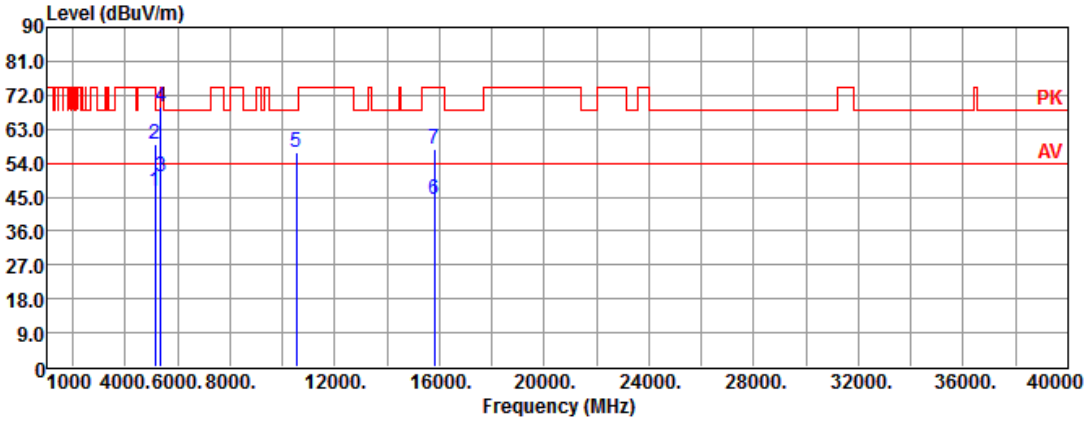
Transmitter Radiated Unwanted Emissions (Above 1GHz)			
Modulation Mode	HT40	**Test Freq. (MHz)**	5230
N_{TX}	1	**Polarization**	V



	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	49.06	54.00	-4.94	38.73	10.33	Average	275	23
2	5150.00	66.91	74.00	-7.09	56.58	10.33	Peak	275	23
3	5350.00	47.35	54.00	-6.65	36.56	10.79	Average	275	23
4	5350.00	61.35	74.00	-12.65	50.56	10.79	Peak	275	23
5	10460.00	56.60	68.20	-11.60	35.25	21.35	Peak	100	54
6	15690.00	44.50	54.00	-9.50	22.14	22.36	Average	100	68
7	15690.00	58.00	74.00	-16.00	35.64	22.36	Peak	100	68

Note 1: Emission level (dBuV/m) = SA reading (dBuV) + Factor (dB).
2: Margin (dB) = Emission level (dBuV/m) – Limit (dBuV/m).

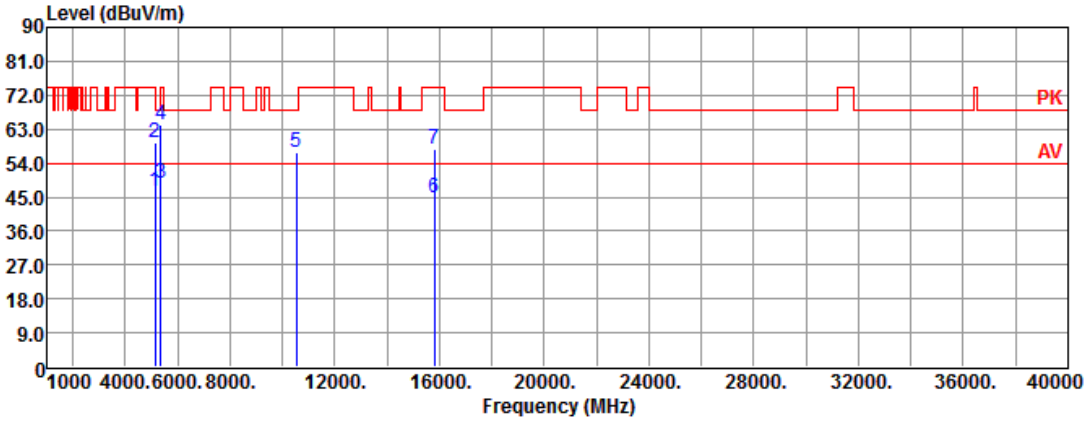
Transmitter Radiated Unwanted Emissions (Above 1GHz)			
Modulation Mode	HT40	**Test Freq. (MHz)**	5270
N_{TX}	1	**Polarization**	H



	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	5150.00	46.44	54.00	-7.56	36.11	10.33	Average	262	95
2	5150.00	59.11	74.00	-14.89	48.78	10.33	Peak	262	95
3	5350.00	50.30	54.00	-3.70	39.51	10.79	Average	262	95
4	5350.00	68.83	74.00	-5.17	58.04	10.79	Peak	262	95
5	10540.00	56.83	68.20	-11.37	35.36	21.47	Peak	100	125
6	15810.00	44.49	54.00	-9.51	22.28	22.21	Average	100	76
7	15810.00	57.67	74.00	-16.33	35.46	22.21	Peak	100	76

Note 1: Emission level (dBuV/m) = SA reading (dBuV) + Factor (dB).
2: Margin (dB) = Emission level (dBuV/m) – Limit (dBuV/m).

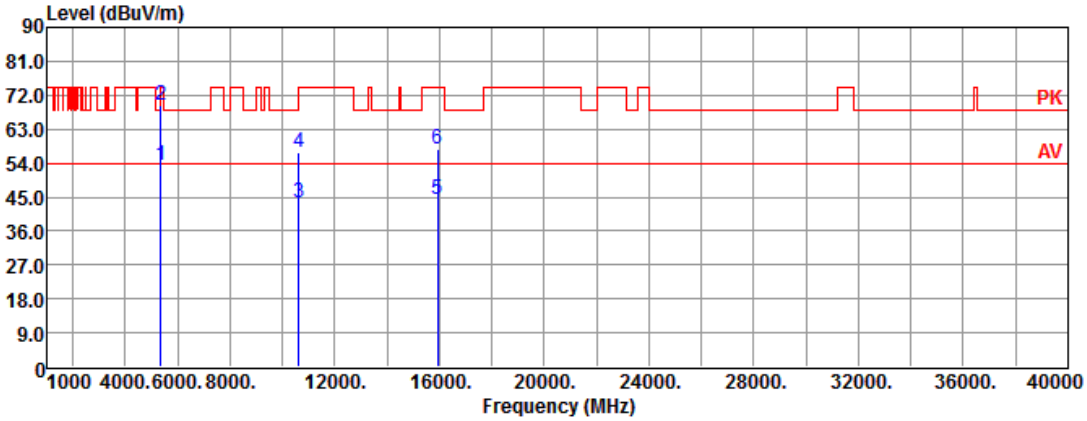
Transmitter Radiated Unwanted Emissions (Above 1GHz)			
Modulation Mode	HT40	**Test Freq. (MHz)**	5270
N_{TX}	1	**Polarization**	V



	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	5150.00	46.57	54.00	-7.43	36.24	10.33	Average	272	20
2	5150.00	59.27	74.00	-14.73	48.94	10.33	Peak	272	20
3	5350.00	48.59	54.00	-5.41	37.80	10.79	Average	272	20
4	5350.00	64.00	74.00	-10.00	53.21	10.79	Peak	272	20
5	10540.00	56.73	68.20	-11.47	35.26	21.47	Peak	100	74
6	15810.00	44.60	54.00	-9.40	22.39	22.21	Average	100	55
7	15810.00	57.57	74.00	-16.43	35.36	22.21	Peak	100	55

Note 1: Emission level (dBuV/m) = SA reading (dBuV) + Factor (dB).
2: Margin (dB) = Emission level (dBuV/m) – Limit (dBuV/m).

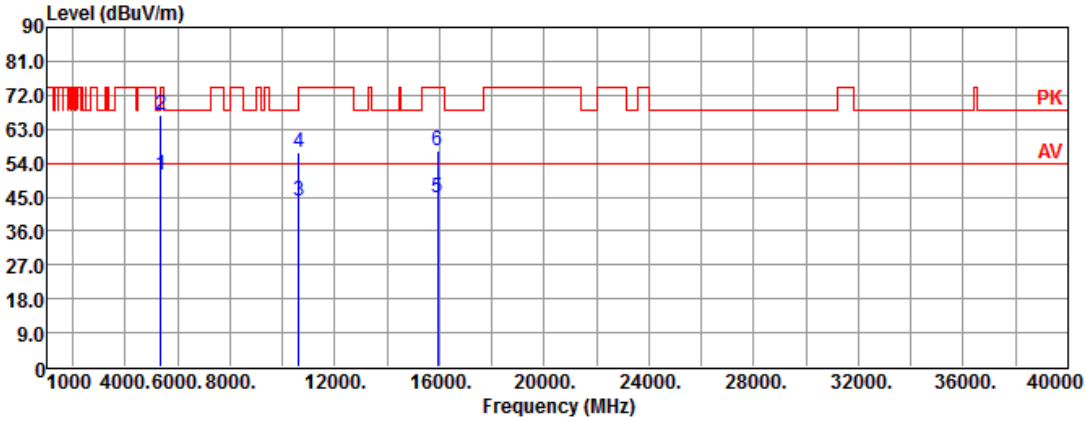
Transmitter Radiated Unwanted Emissions (Above 1GHz)			
Modulation Mode	HT40	**Test Freq. (MHz)**	5310
N_{TX}	1	**Polarization**	H



	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	5350.00	53.55	54.00	-0.45	42.76	10.79	Average	261	94
2	5350.00	69.50	74.00	-4.50	58.71	10.79	Peak	261	94
3	10620.00	43.71	54.00	-10.29	22.15	21.56	Average	100	81
4	10620.00	56.79	74.00	-17.21	35.23	21.56	Peak	100	81
5	15930.00	44.47	54.00	-9.53	22.41	22.06	Average	100	56
6	15930.00	57.57	74.00	-16.43	35.51	22.06	Peak	100	56

Note 1: Emission level (dBuV/m) = SA reading (dBuV) + Factor (dB).
2: Margin (dB) = Emission level (dBuV/m) – Limit (dBuV/m).

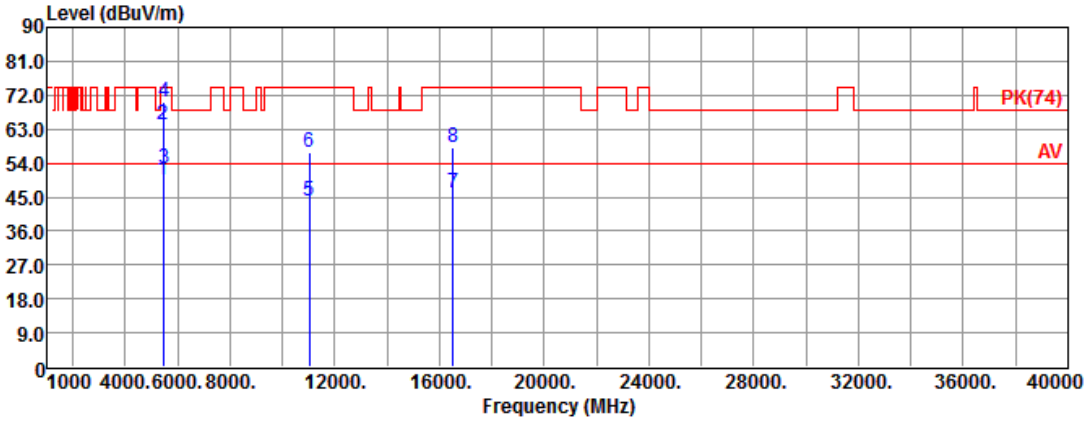
Transmitter Radiated Unwanted Emissions (Above 1GHz)			
Modulation Mode	HT40	**Test Freq. (MHz)**	5310
N_{TX}	1	**Polarization**	V



	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	5350.00	51.01	54.00	-2.99	40.22	10.79	Average	280	17
2	5350.00	66.61	74.00	-7.39	55.82	10.79	Peak	280	17
3	10620.00	43.85	54.00	-10.15	22.29	21.56	Average	100	216
4	10620.00	56.99	74.00	-17.01	35.43	21.56	Peak	100	216
5	15930.00	44.64	54.00	-9.36	22.58	22.06	Average	100	168
6	15930.00	57.34	74.00	-16.66	35.28	22.06	Peak	100	168

Note 1: Emission level (dBuV/m) = SA reading (dBuV) + Factor (dB).
2: Margin (dB) = Emission level (dBuV/m) – Limit (dBuV/m).

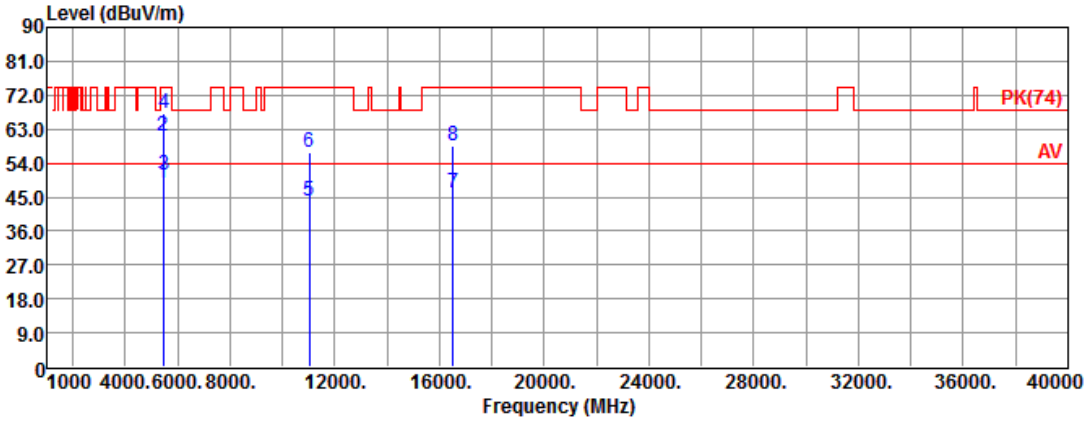
Transmitter Radiated Unwanted Emissions (Above 1GHz)			
Modulation Mode	HT40	**Test Freq. (MHz)**	5510
N_{TX}	1	**Polarization**	H



	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	5460.00	49.59	54.00	-4.41	38.64	10.95	Average	292	110
2	5460.00	64.07	74.00	-9.93	53.12	10.95	Peak	292	110
3	5470.00	52.53	54.00	-1.47	41.57	10.96	Average	292	110
4	5470.00	70.18	74.00	-3.82	59.22	10.96	Peak	292	110
5	11020.00	43.76	54.00	-10.24	21.82	21.94	Average	100	118
6	11020.00	56.96	74.00	-17.04	35.02	21.94	Peak	100	118
7	16530.00	45.89	54.00	-8.11	21.74	24.15	Average	100	77
8	16530.00	57.99	74.00	-16.01	33.84	24.15	Peak	100	77

Note 1: Emission level (dBuV/m) = SA reading (dBuV) + Factor (dB).
2: Margin (dB) = Emission level (dBuV/m) – Limit (dBuV/m).

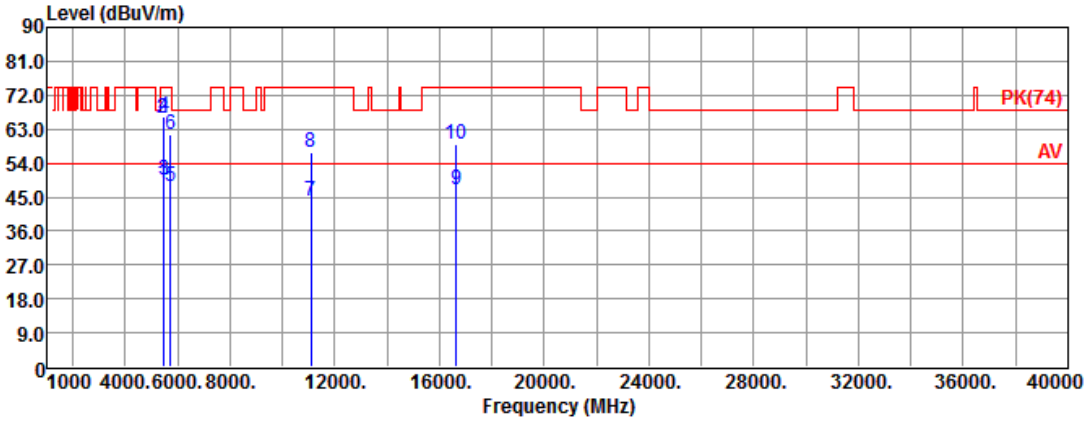
Transmitter Radiated Unwanted Emissions (Above 1GHz)			
Modulation Mode	HT40	**Test Freq. (MHz)**	5510
N_{TX}	1	**Polarization**	V



	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	5460.00	48.60	54.00	-5.40	37.65	10.95	Average	290	12
2	5460.00	61.27	74.00	-12.73	50.32	10.95	Peak	290	12
3	5470.00	50.89	54.00	-3.11	39.93	10.96	Average	290	12
4	5470.00	67.17	74.00	-6.83	56.21	10.96	Peak	290	12
5	11020.00	43.81	54.00	-10.19	21.87	21.94	Average	100	105
6	11020.00	56.87	74.00	-17.13	34.93	21.94	Peak	100	105
7	16530.00	45.88	54.00	-8.12	21.73	24.15	Average	100	75
8	16530.00	58.64	74.00	-15.36	34.49	24.15	Peak	100	75

Note 1: Emission level (dBuV/m) = SA reading (dBuV) + Factor (dB).
2: Margin (dB) = Emission level (dBuV/m) – Limit (dBuV/m).

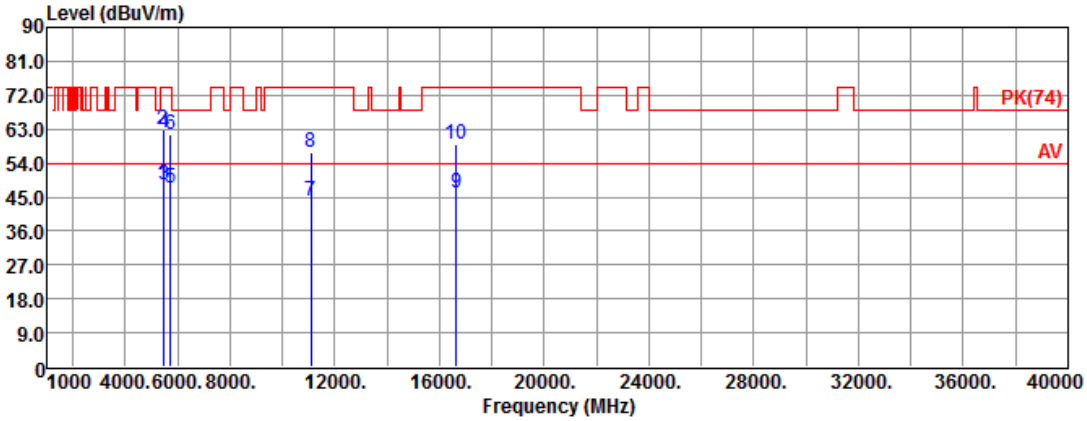
Transmitter Radiated Unwanted Emissions (Above 1GHz)			
Modulation Mode	HT40	**Test Freq. (MHz)**	5550
N_{TX}	1	**Polarization**	H



	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	5460.00	48.50	54.00	-5.50	37.55	10.95	Average	253	107
2	5460.00	66.01	74.00	-7.99	55.06	10.95	Peak	253	107
3	5470.00	49.38	54.00	-4.62	38.42	10.96	Average	253	107
4	5470.00	66.38	74.00	-7.62	55.42	10.96	Peak	253	107
5	5725.00	47.95	54.00	-6.05	36.56	11.39	Average	253	107
6	5725.00	61.78	74.00	-12.22	50.39	11.39	Peak	253	107
7	11100.00	43.89	54.00	-10.11	21.94	21.95	Average	100	133
8	11100.00	56.91	74.00	-17.09	34.96	21.95	Peak	100	133
9	16650.00	46.87	54.00	-7.13	22.18	24.69	Average	100	88
10	16650.00	58.80	74.00	-15.20	34.11	24.69	Peak	100	88

Note 1: Emission level (dBuV/m) = SA reading (dBuV) + Factor (dB).
2: Margin (dB) = Emission level (dBuV/m) – Limit (dBuV/m).

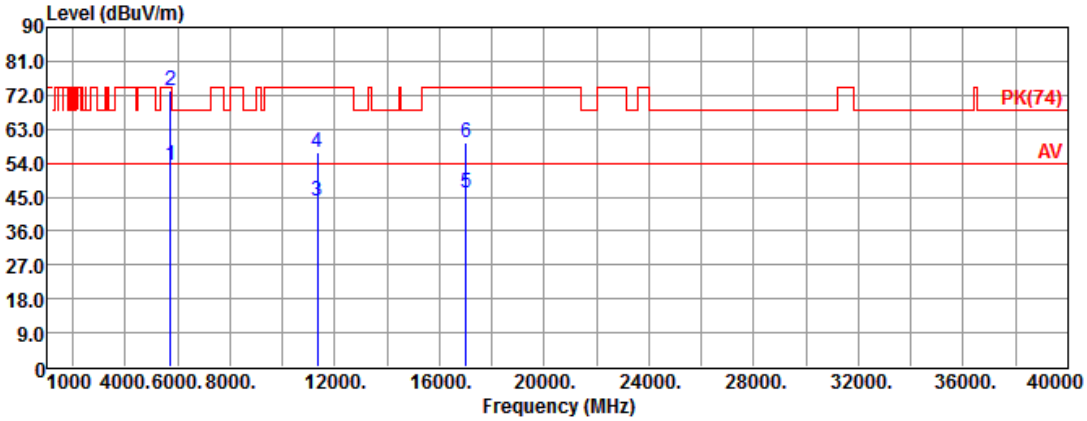
Transmitter Radiated Unwanted Emissions (Above 1GHz)			
Modulation Mode	HT40	**Test Freq. (MHz)**	5550
N_{TX}	1	**Polarization**	V



	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	5460.00	48.37	54.00	-5.63	37.42	10.95	Average	283	13
2	5460.00	62.70	74.00	-11.30	51.75	10.95	Peak	283	13
3	5470.00	48.25	54.00	-5.75	37.29	10.96	Average	283	13
4	5470.00	62.03	74.00	-11.97	51.07	10.96	Peak	283	13
5	5725.00	47.54	54.00	-6.46	36.15	11.39	Average	283	13
6	5725.00	61.65	74.00	-12.35	50.26	11.39	Peak	283	13
7	11100.00	43.82	54.00	-10.18	21.87	21.95	Average	100	104
8	11100.00	56.77	74.00	-17.23	34.82	21.95	Peak	100	104
9	16650.00	46.13	54.00	-7.87	21.44	24.69	Average	100	81
10	16650.00	58.91	74.00	-15.09	34.22	24.69	Peak	100	81

Note 1: Emission level (dBuV/m) = SA reading (dBuV) + Factor (dB).
2: Margin (dB) = Emission level (dBuV/m) – Limit (dBuV/m).

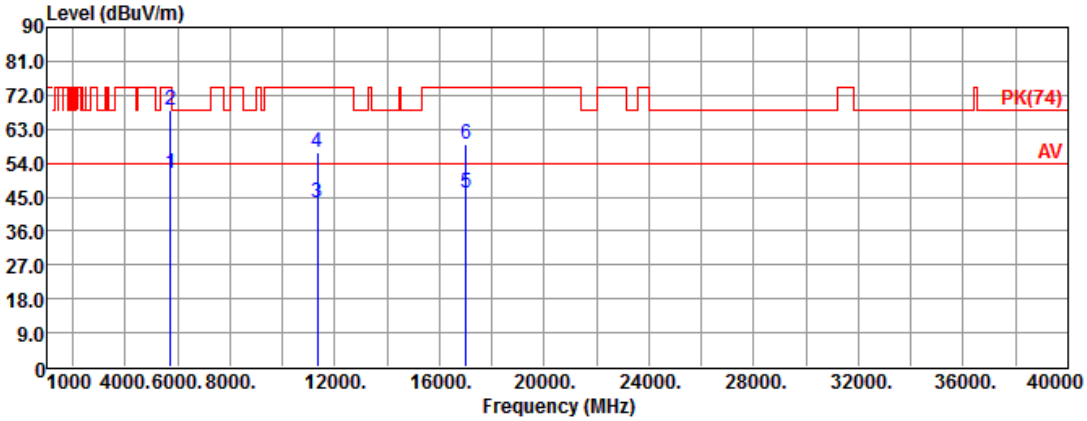
Transmitter Radiated Unwanted Emissions (Above 1GHz)			
Modulation Mode	HT40	**Test Freq. (MHz)**	5670
N_{TX}	1	**Polarization**	H



	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	5725.00	53.52	54.00	-0.48	42.13	11.39	Average	243	109
2	5725.00	73.08	74.00	-0.92	61.69	11.39	Peak	243	109
3	11340.00	43.74	54.00	-10.26	21.75	21.99	Average	100	158
4	11340.00	56.90	74.00	-17.10	34.91	21.99	Peak	100	158
5	17010.00	46.10	54.00	-7.90	19.79	26.31	Average	100	67
6	17010.00	59.33	74.00	-14.67	33.02	26.31	Peak	100	67

Note 1: Emission level (dBuV/m) = SA reading (dBuV) + Factor (dB).
2: Margin (dB) = Emission level (dBuV/m) – Limit (dBuV/m).

Transmitter Radiated Unwanted Emissions (Above 1GHz)			
Modulation Mode	HT40	**Test Freq. (MHz)**	5670
N_{TX}	1	**Polarization**	V

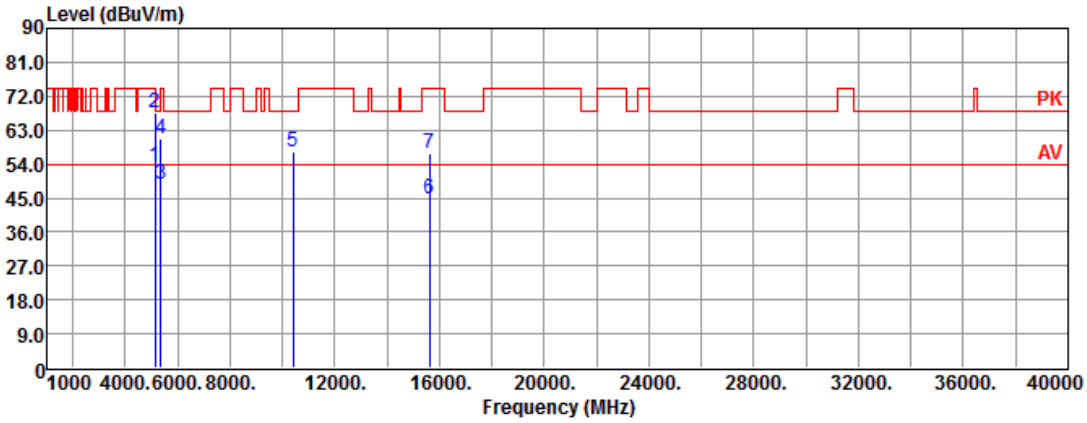


	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	5725.00	51.46	54.00	-2.54	40.07	11.39	Average	244	8
2	5725.00	68.11	74.00	-5.89	56.72	11.39	Peak	244	8
3	11340.00	43.70	54.00	-10.30	21.71	21.99	Average	100	55
4	11340.00	56.80	74.00	-17.20	34.81	21.99	Peak	100	55
5	17010.00	46.18	54.00	-7.82	19.87	26.31	Average	100	36
6	17010.00	59.09	74.00	-14.91	32.78	26.31	Peak	100	36

Note 1: Emission level (dBuV/m) = SA reading (dBuV) + Factor (dB).
2: Margin (dB) = Emission level (dBuV/m) – Limit (dBuV/m).

3.4.10 Test Result of Transmitter Radiated Unwanted Emissions (Above 1GHz) for VHT80

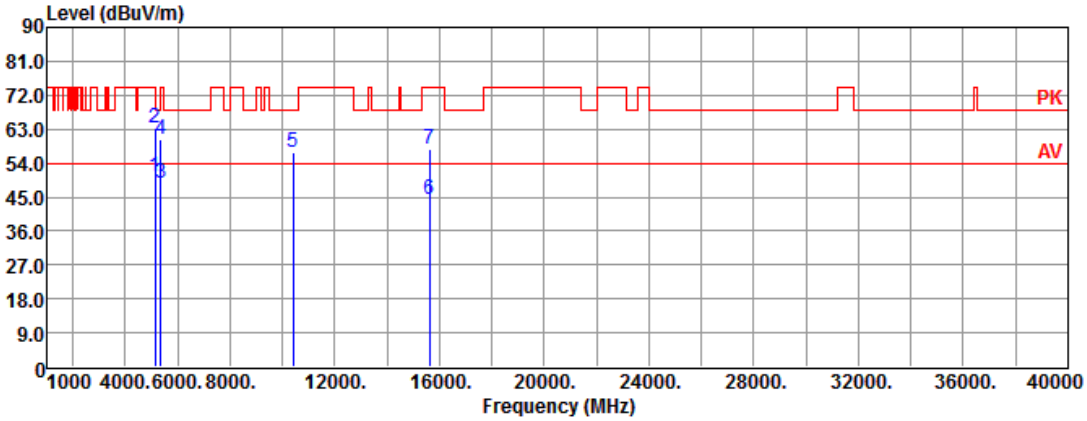
Transmitter Radiated Unwanted Emissions (Above 1GHz)			
Modulation Mode	VHT80	**Test Freq. (MHz)**	5210
N_{TX}	1	**Polarization**	H



	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	53.59	54.00	-0.41	43.26	10.33	Average	268	93
2	5150.00	67.59	74.00	-6.41	57.26	10.33	Peak	268	93
3	5350.00	48.57	54.00	-5.43	37.78	10.79	Average	268	93
4	5350.00	60.78	74.00	-13.22	49.99	10.79	Peak	268	93
5	10420.00	57.17	68.20	-11.03	35.88	21.29	Peak	100	62
6	15630.00	44.67	54.00	-9.33	22.25	22.42	Average	100	102
7	15630.00	56.87	74.00	-17.13	34.45	22.42	Peak	100	102

Note 1: Emission level (dBuV/m) = SA reading (dBuV) + Factor (dB).
2: Margin (dB) = Emission level (dBuV/m) – Limit (dBuV/m).

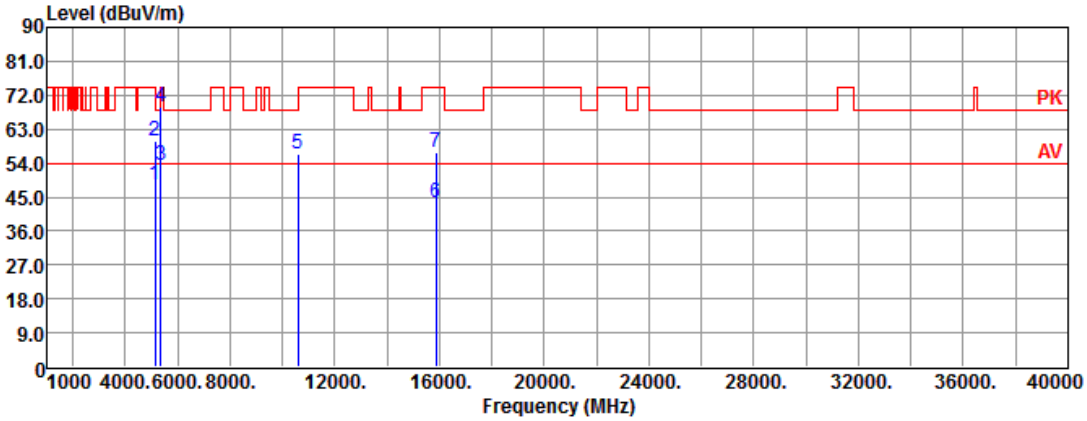
Transmitter Radiated Unwanted Emissions (Above 1GHz)			
Modulation Mode	VHT80	**Test Freq. (MHz)**	5210
N_{TX}	1	**Polarization**	V



	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	5150.00	50.43	54.00	-3.57	40.10	10.33	Average	272	21
2	5150.00	63.42	74.00	-10.58	53.09	10.33	Peak	272	21
3	5350.00	48.65	54.00	-5.35	37.86	10.79	Average	272	21
4	5350.00	60.42	74.00	-13.58	49.63	10.79	Peak	272	21
5	10420.00	56.66	68.20	-11.54	35.37	21.29	Peak	100	192
6	15630.00	44.54	54.00	-9.46	22.12	22.42	Average	100	94
7	15630.00	57.89	74.00	-16.11	35.47	22.42	Peak	100	94

Note 1: Emission level (dBuV/m) = SA reading (dBuV) + Factor (dB).
2: Margin (dB) = Emission level (dBuV/m) – Limit (dBuV/m).

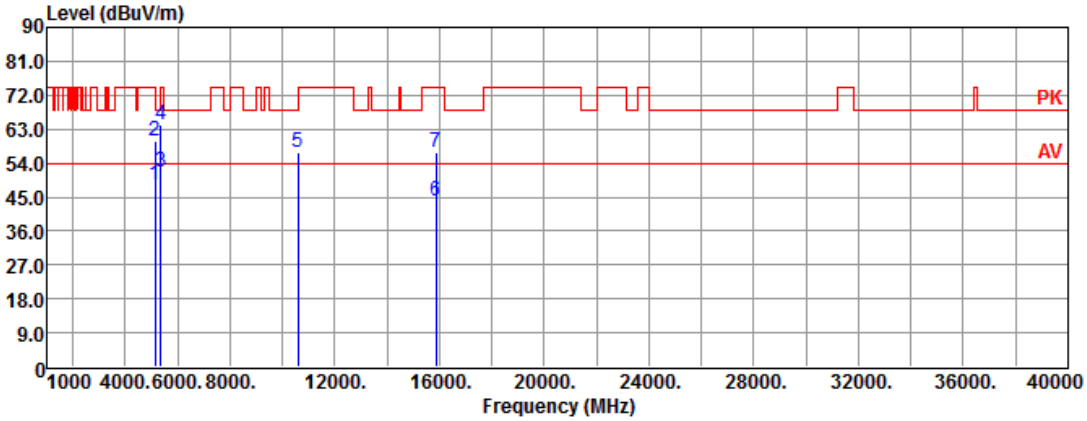
Transmitter Radiated Unwanted Emissions (Above 1GHz)			
Modulation Mode	VHT80	**Test Freq. (MHz)**	5290
N_{TX}	1	**Polarization**	H



	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	48.33	54.00	-5.67	38.00	10.33	Average	263	98
2	5150.00	59.66	74.00	-14.34	49.33	10.33	Peak	263	98
3	5350.00	53.52	54.00	-0.48	42.73	10.79	Average	263	98
4	5350.00	68.85	74.00	-5.15	58.06	10.79	Peak	263	98
5	10580.00	56.60	68.20	-11.60	35.08	21.52	Peak	100	86
6	15870.00	43.45	54.00	-10.55	21.34	22.11	Average	100	46
7	15870.00	56.68	74.00	-17.32	34.57	22.11	Peak	100	46

Note 1: Emission level (dBuV/m) = SA reading (dBuV) + Factor (dB).
2: Margin (dB) = Emission level (dBuV/m) – Limit (dBuV/m).

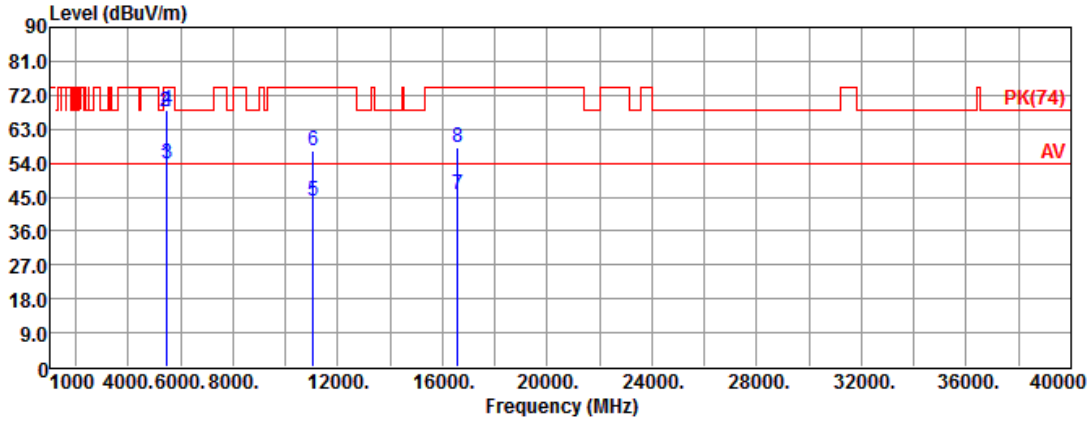
Transmitter Radiated Unwanted Emissions (Above 1GHz)			
Modulation Mode	VHT80	**Test Freq. (MHz)**	5290
N_{TX}	1	**Polarization**	V



	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	48.09	54.00	-5.91	37.76	10.33	Average	264	16
2	5150.00	59.75	74.00	-14.25	49.42	10.33	Peak	264	16
3	5350.00	51.65	54.00	-2.35	40.86	10.79	Average	264	16
4	5350.00	64.35	74.00	-9.65	53.56	10.79	Peak	264	16
5	10580.00	56.68	68.20	-11.52	35.16	21.52	Peak	100	204
6	15870.00	43.96	54.00	-10.04	21.85	22.11	Average	100	174
7	15870.00	56.80	74.00	-17.20	34.69	22.11	Peak	100	174

Note 1: Emission level (dBuV/m) = SA reading (dBuV) + Factor (dB).
2: Margin (dB) = Emission level (dBuV/m) – Limit (dBuV/m).

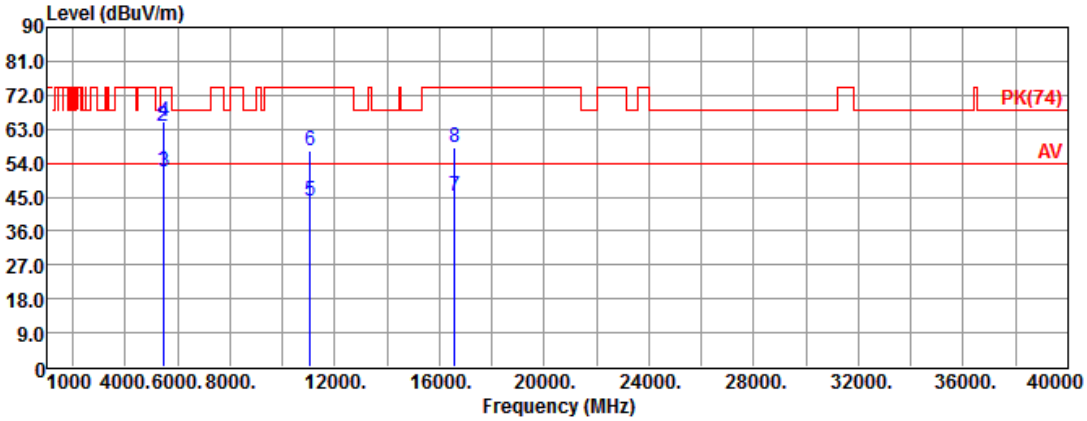
Transmitter Radiated Unwanted Emissions (Above 1GHz)			
Modulation Mode	VHT80	**Test Freq. (MHz)**	5530
N_{TX}	1	**Polarization**	H



	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	5460.00	53.54	54.00	-0.46	42.59	10.95	Average	262	103
2	5460.00	67.64	74.00	-6.36	56.69	10.95	Peak	262	103
3	5470.00	53.64	54.00	-0.36	42.68	10.96	Average	262	103
4	5470.00	68.14	74.00	-5.86	57.18	10.96	Peak	262	103
5	11060.00	43.96	54.00	-10.04	22.02	21.94	Average	100	128
6	11060.00	57.13	74.00	-16.87	35.19	21.94	Peak	100	128
7	16590.00	45.57	54.00	-8.43	21.18	24.39	Average	100	95
8	16590.00	58.11	74.00	-15.89	33.72	24.39	Peak	100	95

Note 1: Emission level (dBuV/m) = SA reading (dBuV) + Factor (dB).
2: Margin (dB) = Emission level (dBuV/m) – Limit (dBuV/m).

Transmitter Radiated Unwanted Emissions (Above 1GHz)			
Modulation Mode	VHT80	**Test Freq. (MHz)**	5530
N_{TX}	1	**Polarization**	V



	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	5460.00	52.12	54.00	-1.88	41.17	10.95	Average	267	14
2	5460.00	63.93	74.00	-10.07	52.98	10.95	Peak	267	14
3	5470.00	51.68	54.00	-2.32	40.72	10.96	Average	267	14
4	5470.00	64.98	74.00	-9.02	54.02	10.96	Peak	267	14
5	11060.00	44.03	54.00	-9.97	22.09	21.94	Average	100	118
6	11060.00	57.09	74.00	-16.91	35.15	21.94	Peak	100	118
7	16590.00	45.24	54.00	-8.76	20.85	24.39	Average	100	88
8	16590.00	58.02	74.00	-15.98	33.63	24.39	Peak	100	88

Note 1: Emission level (dBuV/m) = SA reading (dBuV) + Factor (dB).
2: Margin (dB) = Emission level (dBuV/m) – Limit (dBuV/m).

3.5 Test of Receiver Radiated Emission Measurement

3.5.1 Limit of Receiver Radiated Emission

Frequency (MHz)	Field Strength (microvolts/meter)	Measurement Distance (meters)
0.009 – 0.490	2400/F(kHz)	300
0.490 – 1.705	24000/F(kHz)	30
1.705 – 30.0	30	30
30 – 88	100	3
88 – 216	150	3
216 - 960	200	3
Above 960	500	3

3.5.2 Measuring Instruments

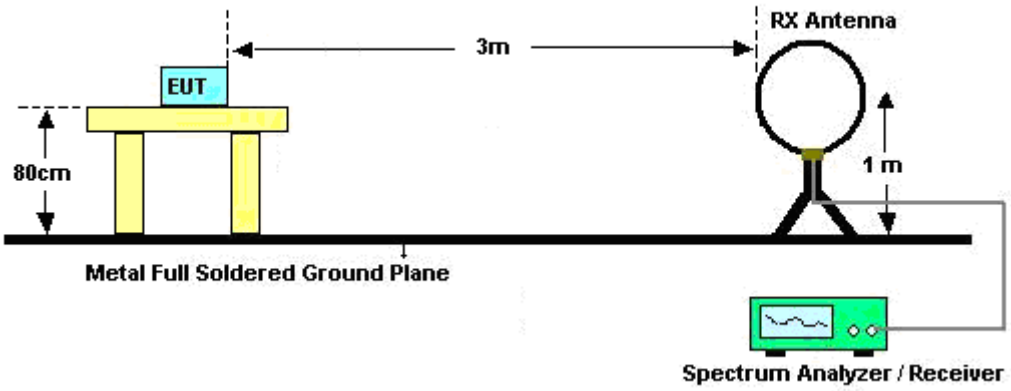
The measuring equipment is listed in the section 4 of this test report.

3.5.3 Test Procedures

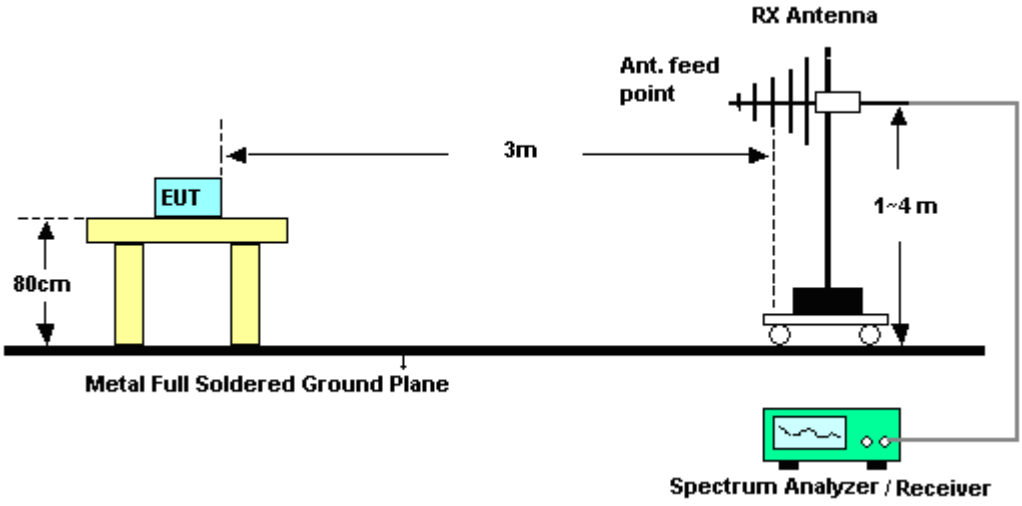
1. The EUT was placed on a turntable with 0.8 meter above ground.
2. The EUT was set 3 meters from the interference receiving antenna, which was mounted on the top of a variable height antenna tower.
3. The EUT was set 10 meters instead of 3 meters from the interference receiving antenna, which was mounted on the top of a variable height antenna tower for frequency from 30MHz to 1GHz.
4. The table was rotated 360 degrees to determine the position of the highest radiation.
5. The antenna is a Bi-Log antenna and its height is adjusted between one to four meters above ground to find the maximum value of the field strength for both horizontal polarization and vertical polarization of the antenna.
6. For each suspected emission, the EUT was arranged to its worst case and then tune the antenna tower (from 1 m to 4 m) and turntable (from 0 degree to 360 degrees) to find the maximum reading.
7. Set the test-receiver system to Peak Detect Function and specified bandwidth with Maximum Hold Mode (RBW=120kHz/VBW=300kHz for frequency below 1GHz; RBW=1MHz VBW=3MHz (Peak), RBW=1MHz/VBW=10Hz (Average) for frequency above 1GHz).
8. If the emission level of the EUT in peak mode was 3 dB lower than the limit specified, peak values of EUT will be reported. Otherwise, the emission will be repeated by using the quasi-peak method and reported.
9. Emission level (dBμV/m) = 20 log Emission level (μV/m)
10. Corrected Reading: Antenna Factor + Cable Loss + Read Level - Preamp Factor = Level

3.5.4 Test Setup

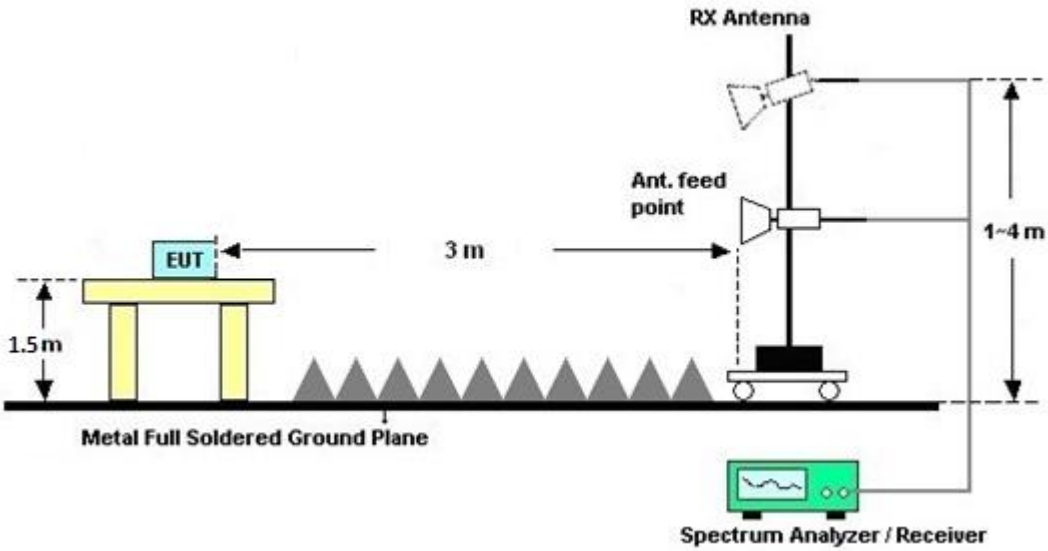
For radiated emissions below 30MHz



For radiated emissions from 30MHz to 1GHz



For radiated emissions above 1GHz



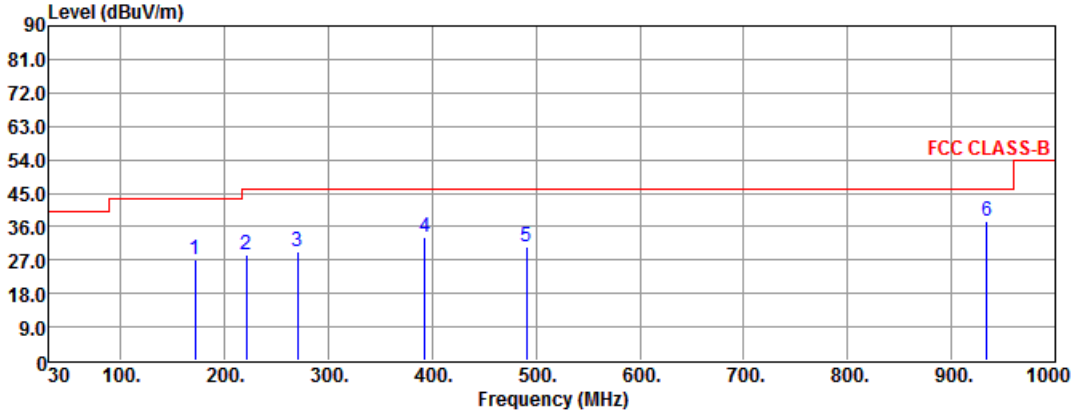
3.5.5 Test Result of Receiver Radiated Spurious Emissions (9kHz ~ 30MHz)

The low frequency, which started from 9 kHz to 30MHz, was pre-scanned and the result which was 20dB lower than the limit line per NCC LP0002 section 5.13 was not reported.

There is a comparison data of both open-field test site and semi-Anechoic chamber, and the result came out very similar.

3.5.6 Test Result of Receiver Radiated Unwanted Emissions (Below 1GHz)

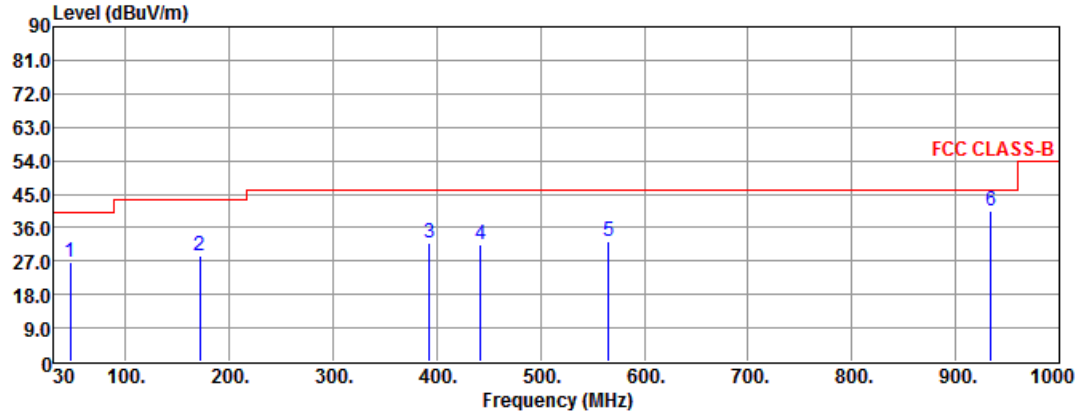
Receiver Radiated Unwanted Emissions (Below 1GHz)			
Modulation Mode	11a	**Test Freq. (MHz)**	5260
Polarization	H		



	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	171.55	27.31	43.50	-16.19	42.64	-15.33	Peak	---	---
2	221.17	28.29	46.00	-17.71	42.61	-14.32	Peak	---	---
3	270.44	29.23	46.00	-16.77	40.61	-11.38	Peak	---	---
4	392.65	33.27	46.00	-12.73	41.29	-8.02	Peak	---	---
5	490.66	30.56	46.00	-15.44	36.45	-5.89	Peak	---	---
6	934.17	37.31	46.00	-8.69	34.57	2.74	Peak	---	---

Note 1: Emission Level (dBuV/m) = SA Reading (dBuV/m) + Factor (dB)
2: Margin (dB) = Emission level (dBuV/m) – Limit (dBuV/m).
3: All spurious emissions below 30MHz are more than 20 dB below the limit.

Receiver Radiated Unwanted Emissions (Below 1GHz)			
Modulation Mode	11a	**Test Freq. (MHz)**	5260
Polarization	V		

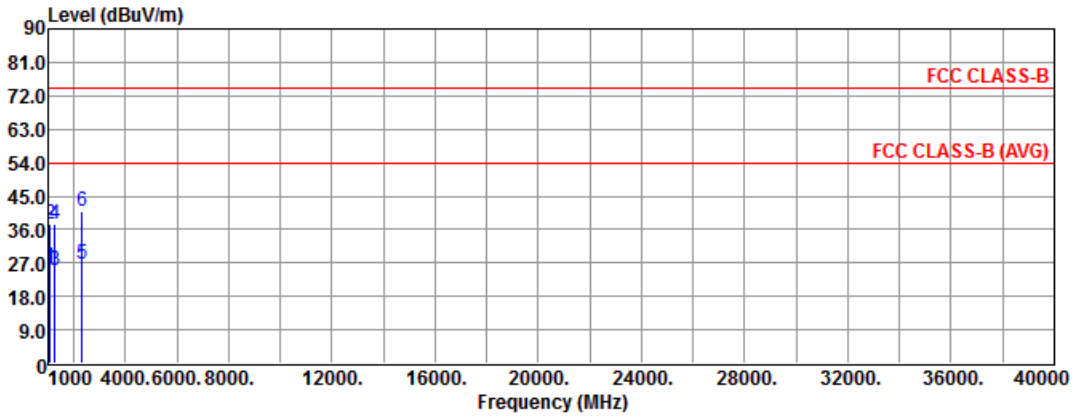


	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	46.51	26.83	40.00	-13.17	42.66	-15.83	Peak	---	---
2	171.57	28.21	43.50	-15.29	43.54	-15.33	Peak	---	---
3	392.66	31.70	46.00	-14.30	39.72	-8.02	Peak	---	---
4	442.31	31.59	46.00	-14.41	38.56	-6.97	Peak	---	---
5	565.52	32.23	46.00	-13.77	35.75	-3.52	Peak	---	---
6	934.12	40.40	46.00	-5.60	37.66	2.74	Peak	---	---

Note 1: Emission Level (dBuV/m) = SA Reading (dBuV/m) + Factor (dB)
2: Margin (dB) = Emission level (dBuV/m) – Limit (dBuV/m).
3: All spurious emissions below 30MHz are more than 20 dB below the limit.

3.5.7 Test Result of Receiver Radiated Unwanted Emissions (Above 1GHz)

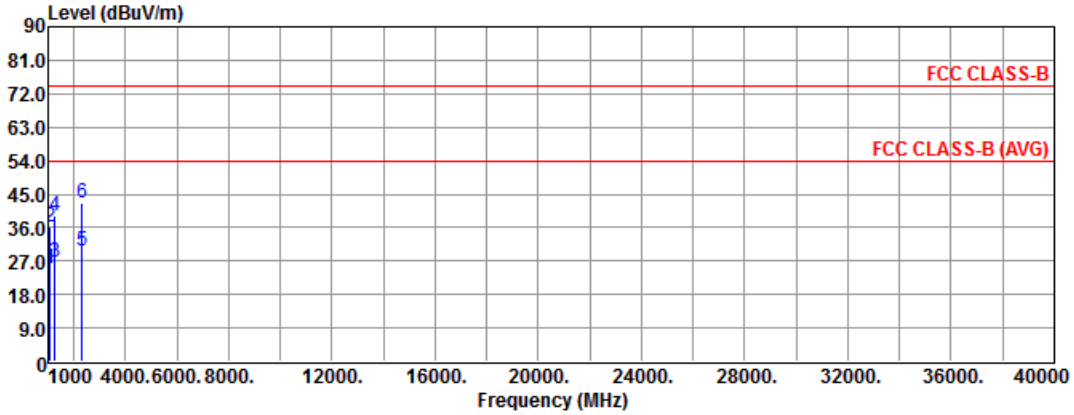
Receiver Radiated Unwanted Emissions (Above 1GHz)			
Modulation Mode	11a	**Test Freq. (MHz)**	5260
Polarization	H		



	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	1082.00	25.69	54.00	-28.31	30.82	-5.13	Average	100	205
2	1082.00	37.29	74.00	-36.71	42.42	-5.13	Peak	100	205
3	1278.00	25.07	54.00	-28.93	28.45	-3.38	Average	100	38
4	1278.00	37.25	74.00	-36.75	40.63	-3.38	Peak	100	38
5	2316.00	26.76	54.00	-27.24	24.84	1.92	Average	100	201
6	2316.00	40.73	74.00	-33.27	38.81	1.92	Peak	100	201

Note 1: Emission level (dBuV/m) = SA reading (dBuV) + Factor (dB).
2: Margin (dB) = Emission level (dBuV/m) – Limit (dBuV/m).

Receiver Radiated Unwanted Emissions (Above 1GHz)			
Modulation Mode	11a	**Test Freq. (MHz)**	5260
Polarization	V		



	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	1082.00	24.78	54.00	-29.22	29.91	-5.13	Average	100	95
2	1082.00	36.35	74.00	-37.65	41.48	-5.13	Peak	100	95
3	1278.00	26.79	54.00	-27.21	30.17	-3.38	Average	100	65
4	1278.00	39.14	74.00	-34.86	42.52	-3.38	Peak	100	65
5	2316.00	29.81	54.00	-24.19	27.89	1.92	Average	100	71
6	2316.00	42.75	74.00	-31.25	40.83	1.92	Peak	100	71

Note 1: Emission level (dBuV/m) = SA reading (dBuV) + Factor (dB).
2: Margin (dB) = Emission level (dBuV/m) – Limit (dBuV/m).

3.6 AC Conducted Emission Measurement

3.6.1 Limit of AC Conducted Emission

For equipment that is designed to be connected to the public utility (AC) power line, the radio frequency voltage that is conducted back onto the AC power line on any frequency or frequencies within the band 150 kHz to 30 MHz shall not exceed the limits in the following table.

Frequency of emission (MHz)	Conducted limit (dBμV)	
	Quasi-peak	Average
0.15-0.5	66 to 56*	56 to 46*
0.5-5	56	46
5-30	60	50

*Decreases with the logarithm of the frequency.

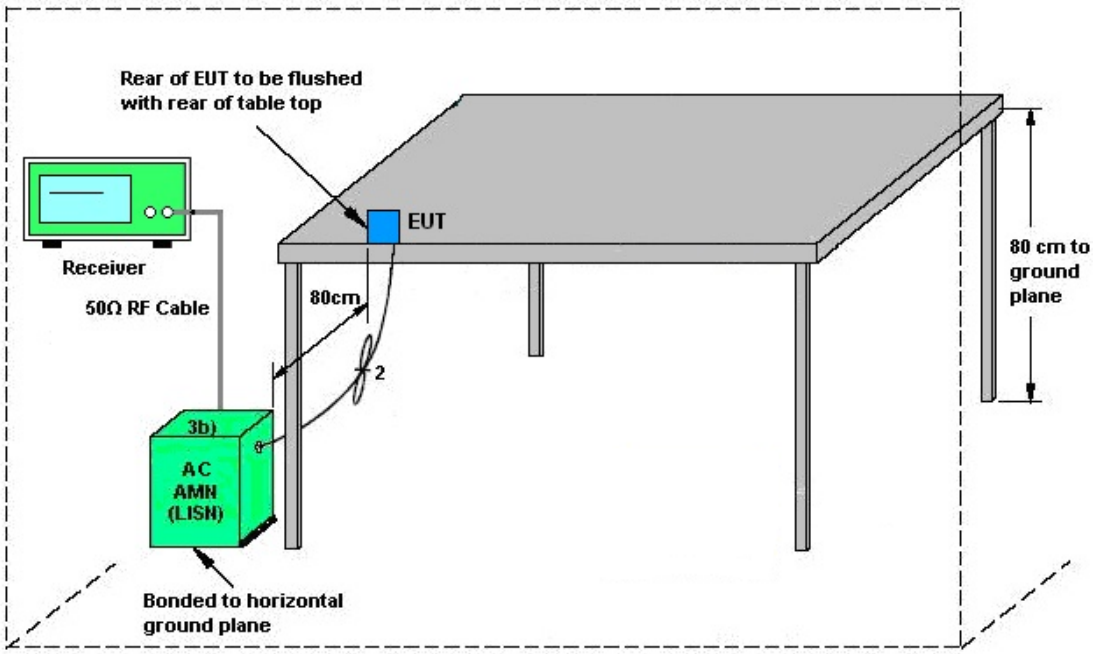
3.6.2 Measuring Instruments

The measuring equipment is listed in the section 4 of this test report.

3.6.3 Test Procedures

1. The EUT was placed 0.4 meter from the conducting wall of the shielding room was kept at least 80 centimeters from any other grounded conducting surface.
2. Connect EUT to the power mains through a line impedance stabilization network (LISN).
3. All the support units are connecting to the other LISN.
4. The LISN provides 50 ohm coupling impedance for the measuring instrument.
5. The FCC states that a 50 ohm, 50 microhenry LISN should be used.
6. Both sides of AC line were checked for maximum conducted interference.
7. The frequency range from 150 kHz to 30 MHz was searched.
8. Set the test-receiver system to Peak Detect Function and specified bandwidth (IF bandwidth = 9kHz) with Maximum Hold Mode.

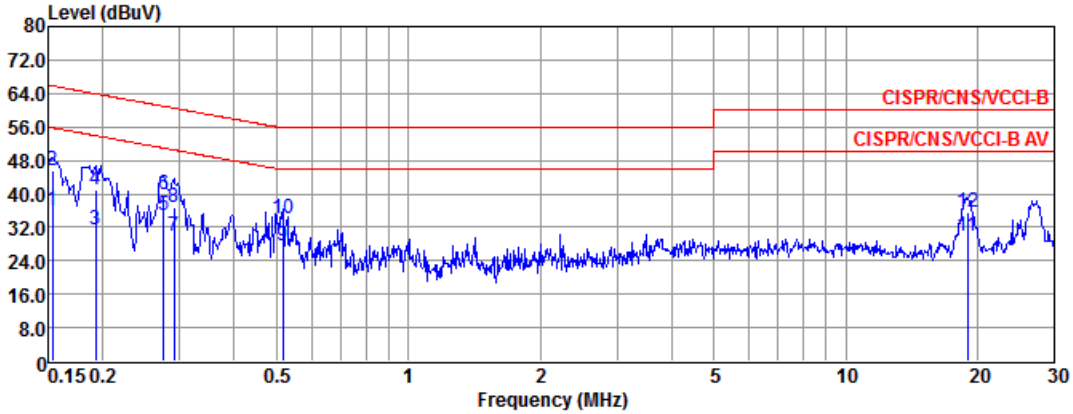
3.6.4 Test Setup



AMN = Artificial mains network (LISN)
AE = Associated equipment
EUT = Equipment under test
ISN = Impedance stabilization network

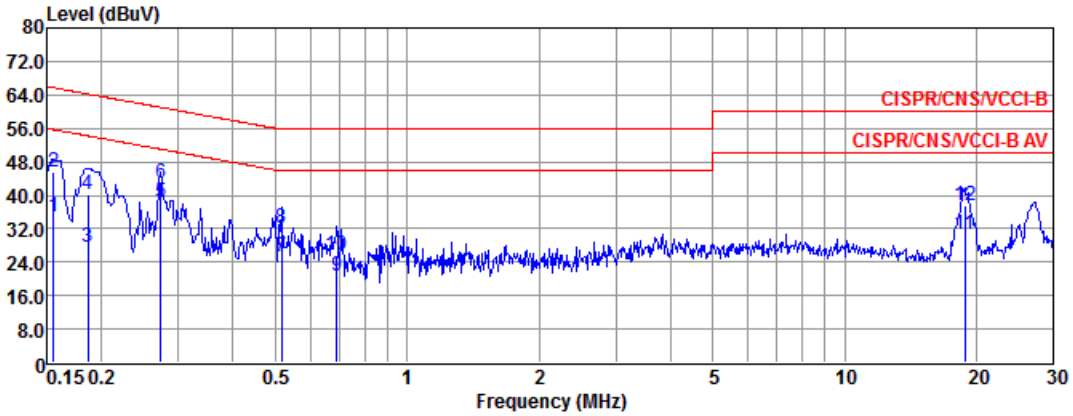
3.6.5 Test Result of AC Conducted Emission

Test Engineer :	Arthur Hsieh	Temperature :	23℃
Power Phase	Neutral	Relative Humidity :	56%
Mode	Tx		



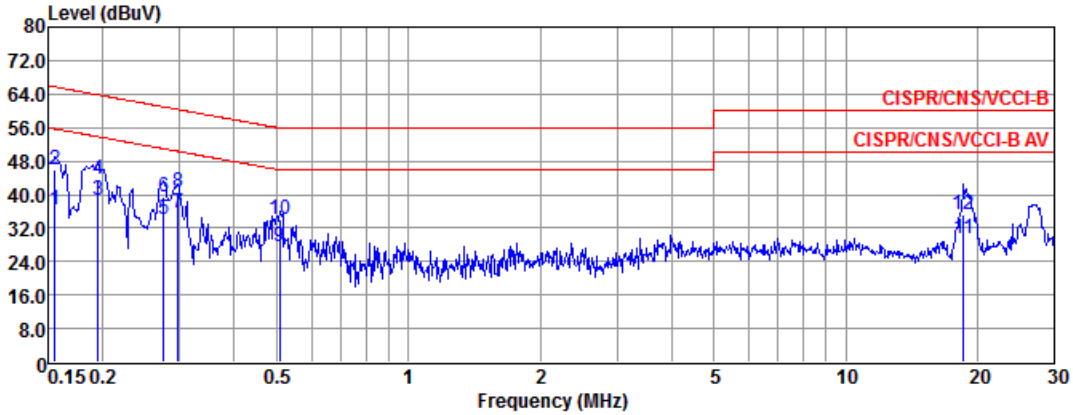
	Freq	Level	Limit Line	Over Limit	Read Level	LISN factor	cable loss	Aux Factor	Remark
	MHz	dBuV	dBuV	dB	dBuV	dB	dB	dB	
1	0.153	35.96	55.82	-19.86	26.10	0.00	0.01	9.85	Average
2	0.153	45.48	65.82	-20.34	35.62	0.00	0.01	9.85	QP
3	0.192	31.46	53.93	-22.47	21.60	0.00	0.01	9.85	Average
4	0.192	41.09	63.93	-22.84	31.23	0.00	0.01	9.85	QP
5@	0.276	34.76	50.94	-16.18	24.89	0.00	0.02	9.85	Average
6	0.276	39.67	60.94	-21.27	29.80	0.00	0.02	9.85	QP
7	0.291	29.74	50.50	-20.76	19.86	0.00	0.02	9.86	Average
8	0.291	36.78	60.50	-23.72	26.90	0.00	0.02	9.86	QP
9	0.516	27.54	46.00	-18.46	17.66	0.00	0.02	9.86	Average
10	0.516	34.02	56.00	-21.98	24.14	0.00	0.02	9.86	QP
11	19.021	29.82	50.00	-20.18	19.80	0.00	0.10	9.92	Average
12	19.021	35.68	60.00	-24.32	25.66	0.00	0.10	9.92	QP

Test Engineer :	Arthur Hsieh	Temperature :	23℃
Power Phase	Line	Relative Humidity :	56%
Mode	Tx		



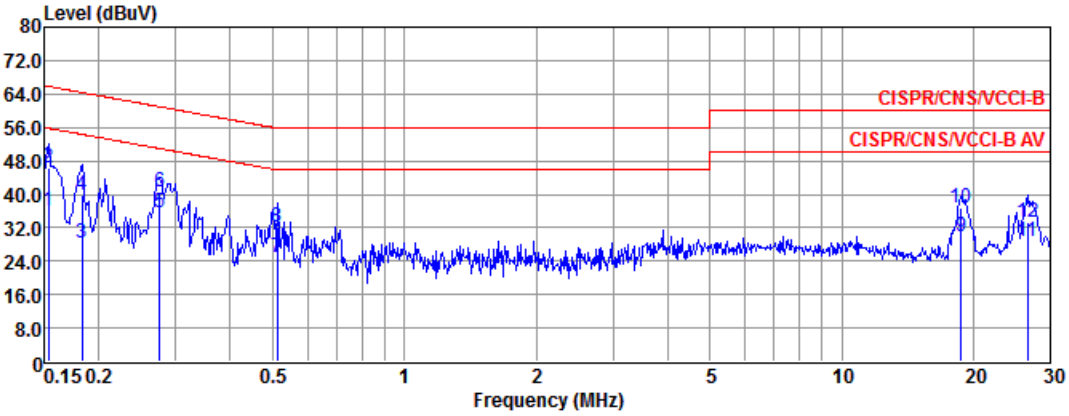
	Freq	Level	Limit Line	Over Limit	Read Level	LISN factor	cable loss	Aux Factor	Remark
	MHz	dBuV	dBuV	dB	dBuV	dB	dB	dB	
1	0.156	34.77	55.69	-20.92	15.25	9.66	0.01	9.85	Average
2	0.156	45.60	65.69	-20.09	26.08	9.66	0.01	9.85	QP
3	0.186	27.64	54.20	-26.56	8.12	9.65	0.02	9.85	Average
4	0.186	40.08	64.20	-24.12	20.56	9.65	0.02	9.85	QP
5@	0.273	38.34	51.03	-12.69	18.82	9.65	0.02	9.85	Average
6	0.273	42.84	61.03	-18.19	23.32	9.65	0.02	9.85	QP
7	0.516	25.38	46.00	-20.62	5.85	9.65	0.02	9.86	Average
8	0.516	32.34	56.00	-23.66	12.81	9.65	0.02	9.86	QP
9	0.690	20.71	46.00	-25.29	1.16	9.66	0.03	9.86	Average
10	0.690	25.51	56.00	-30.49	5.96	9.66	0.03	9.86	QP
11	18.820	30.57	50.00	-19.43	10.78	9.78	0.09	9.92	Average
12	18.820	37.35	60.00	-22.65	17.56	9.78	0.09	9.92	QP

Test Engineer :	Arthur Hsieh	Temperature :	23℃
Power Phase	Neutral	Relative Humidity :	56%
Mode	Rx		



	Freq	Level	Limit Line	Over Limit	Read Level	LISN factor	cable loss	Aux Factor	Remark
	MHz	dBuV	dBuV	dB	dBuV	dB	dB	dB	
1	0.156	36.42	55.69	-19.27	16.91	9.65	0.01	9.85	Average
2	0.156	46.09	65.69	-19.60	26.58	9.65	0.01	9.85	QP
3	0.195	38.51	53.80	-15.29	19.00	9.65	0.01	9.85	Average
4	0.195	43.82	63.80	-19.98	24.31	9.65	0.01	9.85	QP
5	0.276	34.09	50.94	-16.85	14.57	9.65	0.02	9.85	Average
6	0.276	39.34	60.94	-21.60	19.82	9.65	0.02	9.85	QP
7@	0.297	35.67	50.32	-14.65	16.15	9.64	0.02	9.86	Average
8	0.297	40.43	60.32	-19.89	20.91	9.64	0.02	9.86	QP
9	0.507	27.58	46.00	-18.42	8.06	9.64	0.02	9.86	Average
10	0.507	34.02	56.00	-21.98	14.50	9.64	0.02	9.86	QP
11	18.622	29.34	50.00	-20.66	9.47	9.86	0.09	9.92	Average
12	18.622	35.17	60.00	-24.83	15.30	9.86	0.09	9.92	QP

Test Engineer :	Arthur Hsieh	Temperature :	23℃
Power Phase	Line	Relative Humidity :	56%
Mode	Rx		



	Freq	Level	Limit Line	Over Limit	Read Level	LISN factor	cable loss	Aux Factor	Remark
	MHz	dBuV	dBuV	dB	dBuV	dB	dB	dB	
1	0.153	35.90	55.82	-19.92	16.38	9.66	0.01	9.85	Average
2	0.153	46.36	65.82	-19.46	26.84	9.66	0.01	9.85	QP
3	0.183	28.50	54.33	-25.83	8.98	9.65	0.02	9.85	Average
4	0.183	39.69	64.33	-24.64	20.17	9.65	0.02	9.85	QP
5@	0.276	35.74	50.94	-15.20	16.22	9.65	0.02	9.85	Average
6	0.276	40.46	60.94	-20.48	20.94	9.65	0.02	9.85	QP
7	0.513	24.78	46.00	-21.22	5.25	9.65	0.02	9.86	Average
8	0.513	32.13	56.00	-23.87	12.60	9.65	0.02	9.86	QP
9	18.721	29.69	50.00	-20.31	9.90	9.78	0.09	9.92	Average
10	18.721	36.73	60.00	-23.27	16.94	9.78	0.09	9.92	QP
11	26.558	28.85	50.00	-21.15	9.03	9.76	0.11	9.95	Average
12	26.558	33.39	60.00	-26.61	13.57	9.76	0.11	9.95	QP

3.7 Automatically Discontinue Transmission

3.7.1 Limit of Automatically Discontinue Transmission

The device shall automatically discontinue transmission in case of either absence of information to transmit or operational failure. These provisions are not intended to preclude the transmission of control or signaling information or the use of repetitive codes used by certain digital technologies to complete frame or burst intervals. Applicants shall include in their application for equipment authorization to describe how this requirement is met.

3.7.2 Measuring Instruments

The measuring equipment is listed in the section 4 of this test report.

3.7.3 Test Result of Automatically Discontinue Transmission

While the EUT is not transmitting any information, the EUT can automatically discontinue transmission and become standby mode for power saving. The EUT can detect the controlling signal of ACK message transmitting from remote device and verify whether it shall resend or discontinue transmission.

3.8 Antenna Requirements

3.8.1 Standard Applicable

If transmitting antenna directional gain is greater than 6 dBi, both the peak transmit power and the peak power spectral density shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi.

3.8.2 Antenna Anti-Replacement Construction

An embedded-in antenna design is used.

3.8.3 Antenna Gain

The antenna peak gain of EUT is less than 6 dBi. Therefore, it is not necessary to reduce maximum peak output power limit.

3.9 Maximum Power Density

3.9.1 RF Exposure Limit Introduction

According to NCC LP0002, the criteria listed in Table shall be used to evaluate the environmental impact of human exposure to radio frequency (RF) radiation as specified in §5.20.2.1 and §5.20.2.2.

Frequency range (MHz)	Electric field strength (V/m)	Magnetic field strength (A/m)	Power density (mW/cm^2)	Averaging time (minutes)
(A) Limits for Occupational/Controlled Exposures				
0.3-3.0	614	1.63	*(100)	6
3.0-30	1842/f	4.89/f	*(900/f2)	6
30-300	61.4	0.163	1.0	6
300-1500			f/300	6
1500-100,000			5	6
(B) Limits for General Population/Uncontrolled Exposure				
0.3-1.34	614	1.63	*(100)	30
1.34-30	824/f	2.19/f	*(180/f2)	30
30-300	27.5	0.073	0.2	30
300-1500			f/1500	30
1500-100,000			1.0	30

The MPE was calculated at 20 cm to show compliance with the power density limit.

The following formula was used to calculate the Power Density:

$$S = \frac{PG}{4\pi R^2}$$

Where:
S = Power Density
P = Output Power at Antenna Terminals
G = Gain of Transmit Antenna (linear gain)
R = Distance from Transmitting Antenna

3.9.2 Standalone Power Density Calculation

Frequency Range (MHz)	Maximum Conducted Power (dBm)	Rated Power (dBm)	Antenna Gain (dBi)	Distance (cm)	Power Density (mW/cm^2)	Limit (mW/cm^2)
5180~5240	15.24	15.50	4.3	20	0.019	1
5260~5320	15.64	16.00	4.3	20	0.021	1
5500~5700	15.28	15.50	4.3	20	0.019	1

4 List of Measuring Equipment

Instrument	Manufacturer	Model No.	Serial No.	Characteristics	Calibration Date	Test Date	Due Date	Remark
Loop Antenna	Rohde & Schwarz	HFH2-Z2	100488	9 kHz~30 MHz	Nov. 23, 2017	Jun. 28, 2018 Jul. 01, 2018	Nov. 22, 2018	Radiation (03CH15-HY)
Preamplifier	Jet-Power	JPA00101800-30-10P	1601180002	1GHz~18GHz	Jul. 31, 2017	Jun. 28, 2018 Jul. 01, 2018	Jul. 30, 2018	Radiation (03CH15-HY)
Amplifier	SONOMA	310N	363440	9kHz~1GHz	Dec. 26, 2017	Jun. 28, 2018 Jul. 01, 2018	Dec. 25, 2018	Radiation (03CH15-HY)
Bilog Antenna	TESEQ	CBL6111D&00800N1D01N-06	41912&05	30MHz to 1GHz	Jan. 10, 2018	Jun. 28, 2018 Jul. 01, 2018	Jan. 09, 2019	Radiation (03CH15-HY)
EMI Test Receiver	Keysight	N9038A(MXE)	MY54130085	20Hz ~ 8.4GHz	Oct. 31, 2017	Jun. 28, 2018 Jul. 01, 2018	Oct. 30, 2018	Radiation (03CH15-HY)
Horn Antenna	SCHWARZBECK	BBHA 9120D	9120D-1620	1G~18GHz	Oct. 03, 2017	Jun. 28, 2018 Jul. 01, 2018	Oct. 02, 2018	Radiation (03CH15-HY)
Hygrometer	TECPEL	DTM-303B	TP162976	N/A	Oct. 12, 2017	Jun. 28, 2018 Jul. 01, 2018	Oct. 11, 2018	Radiation (03CH15-HY)
Preamplifier	Keysight	83017A	MY53270195	1GHz~26.5GHz	Aug. 21, 2017	Jun. 28, 2018 Jul. 01, 2018	Aug. 20, 2018	Radiation (03CH15-HY)
Spectrum Analyzer	Agilent	E4446A	MY50180136	3Hz~44GHz	Apr. 25, 2018	Jun. 28, 2018 Jul. 01, 2018	Apr. 24, 2019	Radiation (03CH15-HY)
Controller	ChainTek	3000-1	N/A	Control Turn table & Ant Mast	N/A	Jun. 28, 2018 Jul. 01, 2018	N/A	Radiation (03CH15-HY)
Antenna Mast	ChainTek	MBS-520-1	N/A	1m~4m	N/A	Jun. 28, 2018 Jul. 01, 2018	N/A	Radiation (03CH15-HY)
Turn Table	ChainTek	T-200-S-1	N/A	0~360 Degree	N/A	Jun. 28, 2018 Jul. 01, 2018	N/A	Radiation (03CH15-HY)
SHF-EHF Horn Antenna	SCHWARZBECK	BBHA 9170	BBHA9170584	18GHz- 40GHz	Nov. 27, 2017	Jun. 28, 2018 Jul. 01, 2018	Nov. 26, 2018	Radiation (03CH15-HY)
Software	Audix	E3 6.2009-8-24	RK-001042	N/A	N/A	Jun. 28, 2018 Jul. 01, 2018	N/A	Radiation (03CH15-HY)
RF Cable	HUBER + SUHNER / MTJ Cooperation	SUCOFLEX 104 / 000000-MT18A-100	MY36980/4, MY9838/4PE, D3210	30MHz~1GHz	Mar. 15, 2018	Jun. 28, 2018 Jul. 01, 2018	Mar. 14, 2019	Radiation (03CH15-HY)
RF Cable	HUBER + SUHNER / MTJ Cooperation	SUCOFLEX 104 / 000000-MT18A-100	MY36980/4, MY9838/4PE, D3210	1GHz~18GHz	Mar. 15, 2018	Jun. 28, 2018 Jul. 01, 2018	Mar. 14, 2019	Radiation (03CH15-HY)
RF Cable	HUBER + SUHNER	SUCOFLEX 102	505134/2	30M~40GHz	Oct. 17, 2017	Jun. 28, 2018 Jul. 01, 2018	Oct. 16, 2018	Radiation (03CH15-HY)

Instrument	Manufacturer	Model No.	Serial No.	Characteristics	Calibration Date	Test Date	Due Date	Remark
AC Power Source	ChainTek	APC-1000W	N/A	N/A	N/A	Jul. 05, 2018	N/A	Conduction (CO05-HY)
EMI Test Receiver	Rohde & Schwarz	ESR3	102388	3.6GHz	Dec. 08, 2017	Jul. 05, 2018	Dec. 07, 2018	Conduction (CO05-HY)
Hygrometer	Testo	608-H1	34913912	N/A	Mar. 06, 2018	Jul. 05, 2018	Mar. 05, 2019	Conduction (CO05-HY)
LISN	Rohde & Schwarz	ENV216	100080	9kHz~30MHz	Nov. 30, 2017	Jul. 05, 2018	Nov. 29, 2018	Conduction (CO05-HY)
LISN	Rohde & Schwarz	ENV216	100081	9kHz~30MHz	Dec. 08, 2017	Jul. 05, 2018	Dec. 07, 2018	Conduction (CO05-HY)
Software	Rohde & Schwarz	EMC32 V10.30	N/A	N/A	N/A	Jul. 05, 2018	N/A	Conduction (CO05-HY)
LF Cable	HUBER + SUHNER	RG-214/U	LF01	N/A	Jan. 03, 2018	Jul. 05, 2018	Jan. 02, 2019	Conduction (CO05-HY)
Pulse Limiter	Rohde & Schwarz	ESH3-Z2	100851	N/A	Jan. 03, 2018	Jul. 05, 2018	Jan. 02, 2019	Conduction (CO05-HY)

Instrument	Manufacturer	Model No.	Serial No.	Characteristics	Calibration Date	Test Date	Due Date	Remark
Power Meter	Anritsu	ML2495A	1240001	N/A	Sep. 07, 2017	Jun. 02~Jul. 04, 2018	Sep. 06, 2018	Conducted (TH05-HY)
Power Sensor	Anritsu	MA2411B	1207349	300MHz~40GHz	Sep. 07, 2017	Jun. 02~Jul. 04, 2018	Sep. 06, 2018	Conducted (TH05-HY)
Spectrum Analyzer	Rohde & Schwarz	FSP40	100057	9kHz-40GHz	Nov. 21, 2017	Jun. 02~Jul. 04, 2018	Nov. 20, 2018	Conducted (TH05-HY)
Switch Box & RF Cable	Burgeon	ETF-058	EC1300484	N/A	Mar. 01, 2018	Jun. 02~Jul. 04, 2018	Feb. 28, 2019	Conducted (TH05-HY)

5 Uncertainty of Evaluation

Uncertainty of Conducted Emission Measurement (150 kHz ~ 30 MHz)

Measuring Uncertainty for a Level of Confidence of 95% (U = 2Uc(y))	2.70

Uncertainty of Radiated Emission Measurement (30 MHz ~ 1000 MHz)

Measuring Uncertainty for a Level of Confidence of 95% (U = 2Uc(y))	5.20

Uncertainty of Radiated Emission Measurement (1000 MHz ~ 18000 MHz)

Measuring Uncertainty for a Level of Confidence of 95% (U = 2Uc(y))	5.00

Uncertainty of Radiated Emission Measurement (18000 MHz ~ 40000 MHz)

Measuring Uncertainty for a Level of Confidence of 95% (U = 2Uc(y))	5.20