

FCC Test Report

Equipment : Greenpacket Wi-Fi 11ac/b/g/n Router
Brand Name : Greenpacket
Model No. : WA-1200
FCC ID : W9V-WA1200-GP
Standard : 47 CFR FCC Part 15.407
RF Specification : Wi-Fi
Frequency : 5150 MHz – 5250 MHz
FCC Classification : NII
Applicant : Green Packet Berhad, Taiwan
6F, No.21, Lane 583, Rueiguang Rd. Neihu District,
Taipei City 11492, Taiwan
Manufacturer : Green Packet Berhad, Taiwan
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Taipei City 11492, Taiwan
2. Room A68, 3F., 151, Keyuan Road,
Zhangjiang Hi-Tech Park, Pudong New Area,
Shanghai 201203, P.R.China

The product sample received on Sep. 06, 2016 and completely tested on Nov. 24, 2016. We, SPORTON, would like to declare that the tested sample has been evaluated in accordance with the procedures given in ANSI C63.10-2013 and shown compliance with the applicable technical standards.

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

Reviewed by:

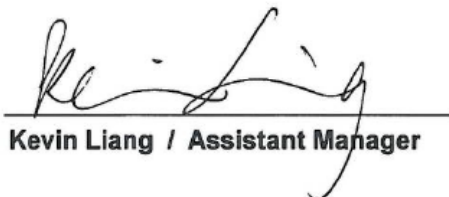

Kevin Liang / Assistant Manager

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Appendix I. Test Result of AC Power-line Conducted Emissions

Appendix A. Test Result of Emission Bandwidth

Appendix B. Test Result of Maximum Conducted Output Power

Appendix C. Test Result of Power Spectral Density

Appendix D. Test Result of Frequency Stability

Appendix E.1~E.2. Test Result of Unwanted Emissions

Appendix F. Test Photos

Appendix EP. Photographs of EUT v01

Summary of Test Result

Conformance Test Specifications			
Report Clause	Ref. Std. Clause	Description	Result
1.1.3	15.203	Antenna Requirement	Complied
3.1	15.207	AC Power-line Conducted Emissions	Complied
3.2	15.407(a)	Emission Bandwidth	Complied
3.3	15.407(a)	Maximum Conducted Output Power	Complied
3.4	15.407(a)	Peak Power Spectral Density	Complied
3.5	15.407(b)	Unwanted Emissions	Complied
3.6	15.407(g)	Frequency Stability	Complied



SPORTON INTERNATIONAL INC.
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1 General Description

1.1 Information

1.1.1 Product Details

The difference between the report no. : N/A	
The Difference	N/A

Evaluated Test Items	N/A
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1.1.2 RF General Information

Band	Mode	BWch (MHz)	Channel Number	Nss-Min	Nant
5.2G	11a	20	36-48 [4]	1	2
5.2G	HT20	20	36-48 [4]	1,(M8)	2
5.2G	HT40	40	38-46 [2]	1,(M8)	2
5.2G	VHT20	20	36-48 [4]	1,(M0)	2
5.2G	VHT40	40	38-46 [2]	1,(M0)	2
5.2G	VHT80	80	42 [1]	1,(M0)	2

Note:

- ♦ 5.2G is the 5.2GHz Band (5.15-5.25GHz).
- ♦ 11a, HT20 and HT40 use a combination of OFDM-BPSK, QPSK, 16QAM, 64QAM modulation.
- ♦ VHT20, VHT40 and VHT80 use a combination of OFDM-BPSK, QPSK, 16QAM, 64QAM, 256QAM modulation.
- ♦ BWch is the nominal channel bandwidth.
- ♦ Nss-Min is the minimum number of spatial streams.
- ♦ Nant is the number of outputs. e.g., 2(2,3) means have 2 outputs for port 2 and port 3. 2 means have 2 outputs for port 1 and port 2.

1.1.3 Antenna Information

Antenna Category	
<input type="checkbox"/>	Equipment placed on the market without antennas
<input type="checkbox"/>	Integral antenna (antenna permanently attached)
<input type="checkbox"/>	Temporary RF connector provided
<input type="checkbox"/>	No temporary RF connector provided Transmit chains bypass antenna and soldered temporary RF connector provided for connected measurement. In case of conducted measurements the transmitter shall be connected to the measuring equipment via a suitable attenuator and correct for all losses in the RF path.
<input checked="" type="checkbox"/>	External antenna (dedicated antennas)
<input checked="" type="checkbox"/>	Single power level with corresponding antenna(s).
<input type="checkbox"/>	Multiple power level and corresponding antenna(s).

Antenna General Information				
No.	Ant. Cat.	Ant. Type	Model No.	Gain (dBi)
A	External	Dipole	DIP 11a/b/g/n 5dBi/5dBi d13*198mm BLACK D1.13 150mm GRAY I-PEX	5
B	External	Dipole	DIP 11a/b/g/n 5dBi/3dBi d13*198mm BLACK D1.13 200mm GRAY I-PEX	3

1.1.4 Type of EUT

Identify EUT	
EUT Serial Number	N/A
Presentation of Equipment	<input checked="" type="checkbox"/> Production ; <input type="checkbox"/> Pre-Production ; <input type="checkbox"/> Prototype
Type of EUT	
<input checked="" type="checkbox"/>	Stand-alone
<input type="checkbox"/>	Combined (EUT where the radio part is fully integrated within another device) Combined Equipment - Brand Name / Model No.: ...
<input type="checkbox"/>	Plug-in radio (EUT intended for a variety of host systems) Host System - Brand Name / Model No.: ...
<input type="checkbox"/>	Other:

1.1.5 Mode Test Duty Cycle

Mode	DC	T(s)	VBW (Hz) ≥ 1/T
11a	0.995	n/a (DC>=0.98)	n/a (DC>=0.98)
HT20	0.995	n/a (DC>=0.98)	n/a (DC>=0.98)
HT40	0.995	n/a (DC>=0.98)	n/a (DC>=0.98)
VHT20	0.994	n/a (DC>=0.98)	n/a (DC>=0.98)
VHT40	0.994	n/a (DC>=0.98)	n/a (DC>=0.98)
VHT80	0.992	n/a (DC>=0.98)	n/a (DC>=0.98)

1.1.6 EUT Operational Condition

Supply Voltage	<input checked="" type="checkbox"/> AC mains	<input type="checkbox"/> DC	
Type of DC Source	<input type="checkbox"/> Internal DC Supply	<input checked="" type="checkbox"/> External AC Adapter	<input type="checkbox"/> Battery

1.1.7 TPC Information

Items	Description			
TPC Function	<input type="checkbox"/>	With TPC	<input checked="" type="checkbox"/>	Without TPC
TDWR Band (5600~5650MHz)	<input type="checkbox"/>	With 5600~5650MHz	<input checked="" type="checkbox"/>	Without 5600~5650MHz
Beamforming Function	<input type="checkbox"/>	With beamforming	<input checked="" type="checkbox"/>	Without beamforming
Operate Condition	<input checked="" type="checkbox"/>	Indoor	<input type="checkbox"/>	Outdoor
	<input type="checkbox"/>	Client		
Operate Mode	<input checked="" type="checkbox"/>	Master		

1.2 Testing Applied Standards

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

- ♦ 47 CFR FCC Part 15
- ♦ ANSI C63.10-2013
- ♦ KDB 789033 D02 v01r03
- ♦ 16-24-UNII
- ♦ KDB 662911 D01 v02r01
- ♦ KDB 644545 D03 v01

1.3 Testing Location Information

Testing Location				
<input checked="" type="checkbox"/>	HWA YA	ADD : No. 52, Hwa Ya 1st Rd., Hwa Ya Technology Park, Kwei-Shan District, Tao Yuan City, Taiwan, R.O.C.		
		TEL : 886-3-327-3456 FAX : 886-3-327-0973		
Test Condition	Test Site No.	Test Engineer	Test Environment	Test Date
AC Conduction	CO04-HY	Ryan	24°C / 56%	17/11/2016
RF Conducted	TH01-HY	Ryan	24.5°C / 65%	18/11/2016
Radiated	03CH09-HY	Terry	22.5°C / 59%	24/11/2016

Test site registered number [553509] with FCC.

1.4 Measurement Uncertainty

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

Measurement Uncertainty		
Test Item		Uncertainty
AC power-line conducted emissions		±2.26 dB
Emission bandwidth, 26dB bandwidth		±1.42 %
RF output power, conducted		±0.63 dB
Power density, conducted		±0.81 dB
Unwanted emissions, conducted	9 – 150 kHz	±0.38 dB
	0.15 – 30 MHz	±0.42 dB
	30 – 1000 MHz	±0.51 dB
	1 – 18 GHz	±0.67 dB
	18 – 40 GHz	±0.83 dB
	40 – 200 GHz	N/A
All emissions, radiated	9 – 150 kHz	±2.49 dB
	0.15 – 30 MHz	±2.28 dB
	30 – 1000 MHz	±2.56 dB
	1 – 18 GHz	±3.59 dB
	18 – 40 GHz	±3.82 dB
	40 – 200 GHz	N/A
Temperature		±0.8 °C
Humidity		±3 %
DC and low frequency voltages		±3 %
Time		±1.42 %
Duty Cycle		±1.42 %

2 Test Configuration of EUT

2.1 Test Condition

RF Conducted	Abbreviation	Remark
TN,VN	TN	20°C
-	VN	120V
TX-Radiated < 1G	Remark	-
AC Adapter 1	WA-24Q12R	-
AC Adapter 2	S024AMM1200200	-
TX-Radiated > 1G	Remark	-
AC Adapter 1	WA-24Q12R	-
Radiated Co-TX or Cabinet	Remark	-
AC Adapter 1	WA-24Q12R	-
AC Adapter 2	S024AMM1200200	-
Freq. Stability	Abbreviation	Remark
TN,VN	TN	20°C
TN,VL	TL	0°C
TN,VH	TH	45°C
T45,VN	VN	120V
T40,VN	VL	102V
T30,VN	VH	138V
T20,VN	T45	45°C
T10,VN	T40	40°C
T0,VN	T30	30°C
-	T20	20°C
-	T10	10°C
-	T0	0°C

2.2 Test Channel Mode

Test Software Version	MT7662 QA V1.0.3.2
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Band	Mode	BWch (MHz)	Nss-Min	Nant	Ch. (MHz)	Range	Power Setting
5.2G	11a	20	1	2	5180	L	20,20
5.2G	11a	20	1	2	5200	M	30,30
5.2G	11a	20	1	2	5240	H	26,26
5.2G	HT20	20	1,(M8)	2	5180	L	20,20
5.2G	HT20	20	1,(M8)	2	5200	M	2D,2D
5.2G	HT20	20	1,(M8)	2	5240	H	26,26
5.2G	HT40	40	1,(M8)	2	5190	L	19,19
5.2G	HT40	40	1,(M8)	2	5230	H	26,29
5.2G	VHT20	20	1,(M0)	2	5180	L	20,20
5.2G	VHT20	20	1,(M0)	2	5200	M	2D,2D
5.2G	VHT20	20	1,(M0)	2	5240	H	26,26
5.2G	VHT40	40	1,(M0)	2	5190	L	19,19
5.2G	VHT40	40	1,(M0)	2	5230	H	26,29
5.2G	VHT80	80	1,(M0)	2	5210	S	15,15

Abbreviation Explanation

Band	Mode	BWch (MHz)	Nss-Min	Nant	Ch. (MHz)	Range	Test Cond.	Abbreviation
5.2G	VHT40	40	1,(M0-9)	4	5190	L	TN,VN	5.2G;VHT40;40;1,(M0);2;5190;L;TN,VN
5.2G	VHT80	80	1,(M0-9)	4	5210	S	TN,VN	5.2G;VHT80;80;1,(M0);2;5210;S;TN,VN




Note:

Test range channel consist of L (Low Ch.), M (Middle Ch.), H (High Ch.), S (Single Ch. or Intra- band Ch.) and C (Inter-band Ch.).

2.3 The Worst Case Measurement Configuration

The Worst Case Mode for Following Conformance Tests	
Tests Item	AC power-line conducted emissions
Condition	AC power-line conducted measurement for line and neutral Test Voltage: 120Vac / 60Hz
Operating Mode	Operating Mode Description
1	Adapter 1 Mode(WA-24Q12R)
2	Adapter 2 Mode(S024AMM1200200)

The Worst Case Mode for Following Conformance Tests	
Tests Item	Emission Bandwidth, Maximum Conducted Output Power, Peak Power Spectral Density, Frequency Stability
Test Condition	Conducted measurement at transmit chains

The Worst Case Mode for Following Conformance Tests			
Tests Item	Unwanted Emissions		
Test Condition	Radiated measurement If EUT consist of multiple antenna assembly (multiple antenna are used in EUT regardless of spatial multiplexing MIMO configuration), the radiated test should be performed with highest antenna gain of each antenna type.		
User Position	<input type="checkbox"/> EUT will be placed in fixed position.		
	<input checked="" type="checkbox"/> EUT will be placed in mobile position and operating multiple positions.		
	<input type="checkbox"/> EUT will be a hand-held or body-worn battery-powered devices and operating multiple positions.		
Operating Mode	<input checked="" type="checkbox"/> 1. Adapter 1 Mode(WA-24Q12R)		
	<input checked="" type="checkbox"/> 2. Adapter 2 Mode(S024AMM1200200)		
Orthogonal Planes of EUT	X Plane	Y Plane	Z Plane
			
Worst Planes of EUT	V		
Worst Planes of Ant.			V

2.4 Accessories and Support Equipment

Accessories				
AC Adapter 1	Brand Name	Asian Power Device	Model Name	WA-24Q12R
	Power Rating	I/P: 100 - 240V ~50/60Hz, 0.7A, O/P: 12Vdc, 2A		
	Power Cord	1.14 meter, non-shielded cable, w/o ferrite core		
AC Adapter 2	Brand Name	SWITCHING POWER SUPPLY	Model Name	S024AMM1200200
	Power Rating	I/P: 100 - 240V ~50/60Hz, 600mA, O/P: 12Vdc, 2000mA		
	Power Cord	1.2 meter, non-shielded cable, w/o ferrite core		
RJ45 Cable 1	Category	5E	Model Name	E473734
	Power Cord	1.5 meter, shield or non-shielded cable		
RJ45 Cable 2	Category	5E	Model Name	E485131
	Power Cord	1.5 meter, shield or non-shielded cable		

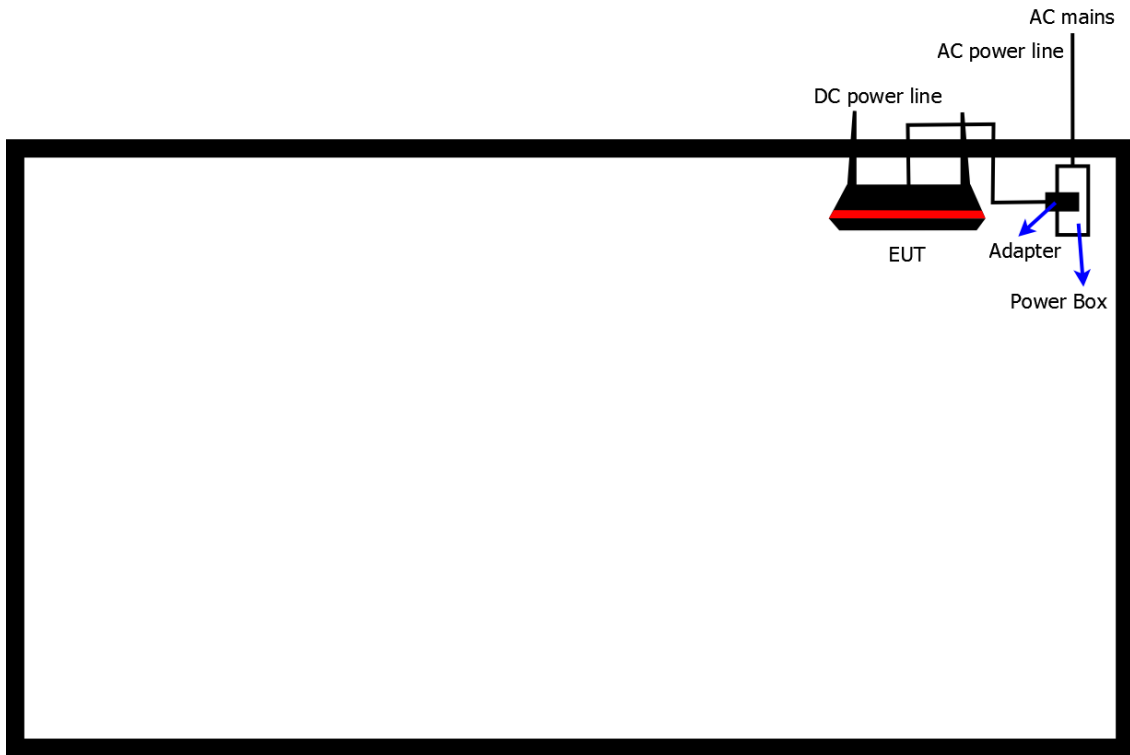
Reminder: Regarding to more detail and other information, please refer to user manual.

Support Equipment - RF Conducted				
No.	Equipment	Brand Name	Model Name	FCC ID
1	Notebook	DELL	5540-05	DOC
2	AC Adapter for Notebook	DELL	HA65NM130	DOC

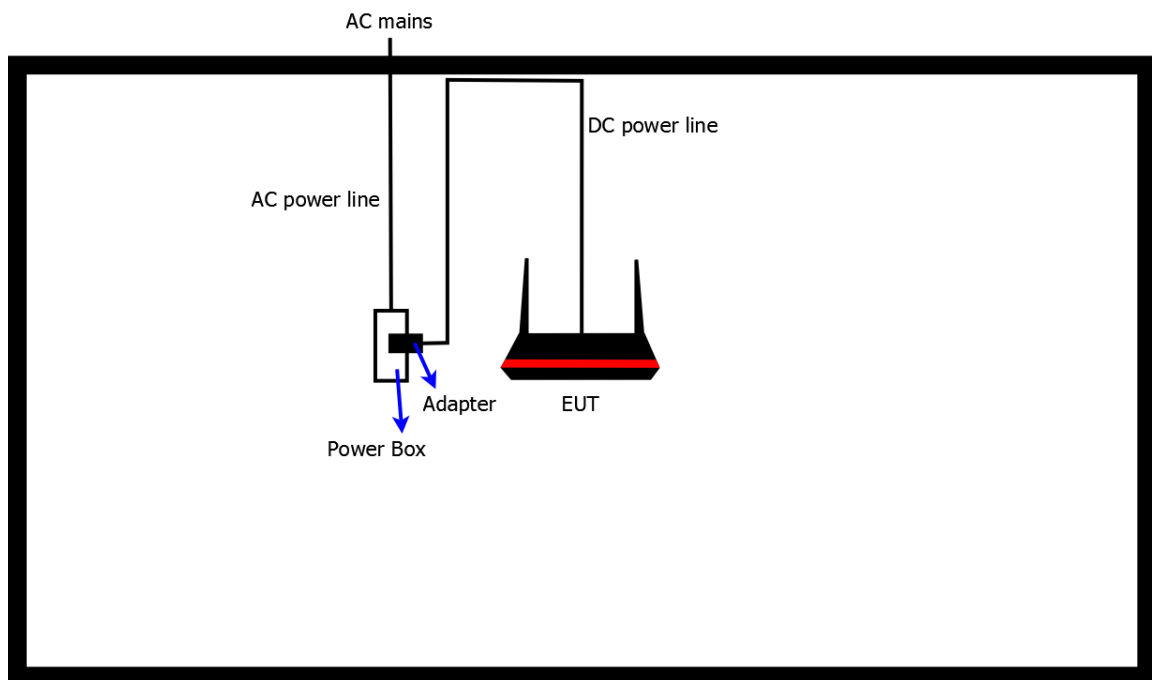
Support Equipment - AC Conduction and Radiated Emission				
No.	Equipment	Brand Name	Model Name	FCC ID
	-	-	-	-

2.5 Test Setup Diagram

Test Setup Diagram – AC Line Conducted Emission Test (Mode 1,2)



Test Setup Diagram - Radiated Test (Mode 1,2)



3 Transmitter Test Result

3.1 AC Power-line Conducted Emissions

3.1.1 AC Power-line Conducted Emissions Limit

AC Power-line Conducted Emissions Limit		
Frequency Emission (MHz)	Quasi-Peak	Average
0.15-0.5	66 - 56 *	56 - 46 *
0.5-5	56	46
5-30	60	50

Note 1: * Decreases with the logarithm of the frequency.

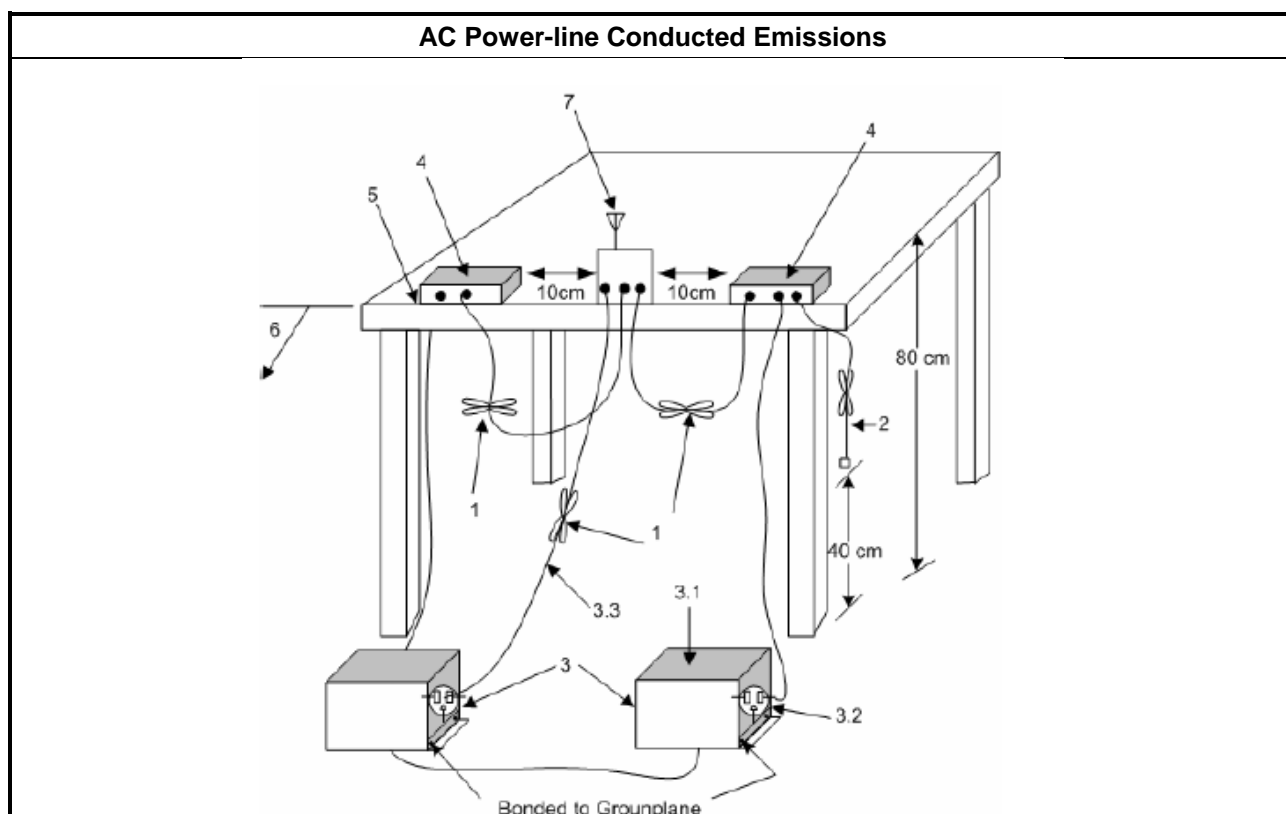
3.1.2 Measuring Instruments

Refer a test equipment and calibration data table in this test report.

3.1.3 Test Procedures

Test Method
<input checked="" type="checkbox"/> Refer as ANSI C63.10-2013, clause 6.2 for AC power-line conducted emissions.

3.1.4 Test Setup



3.1.5 Test Result of AC Power-line Conducted Emissions

Refer as Appendix I

3.2 Emission Bandwidth

3.2.1 Emission Bandwidth Limit

Emission Bandwidth Limit	
UNII Devices	
<input checked="" type="checkbox"/>	For the 5.15-5.25 GHz band, N/A
<input type="checkbox"/>	For the 5.25-5.35 GHz band, the maximum conducted output power shall not exceed the lesser of 250 mW or 11 dBm + 10 log B, where B is the 26 dB emission bandwidth in MHz.
<input type="checkbox"/>	For the 5.47-5.725 GHz band, the maximum conducted output power shall not exceed the lesser of 250 mW or 11 dBm + 10 log B, where B is the 26 dB emission bandwidth in MHz.
<input type="checkbox"/>	For the 5.725-5.85 GHz band, 6 dB emission bandwidth \geq 500kHz.

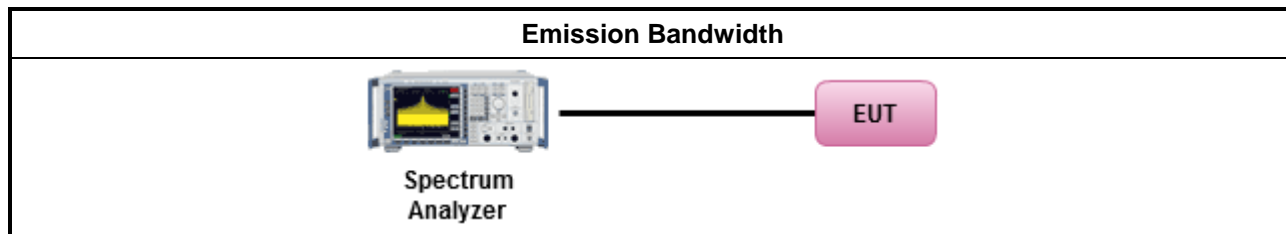
3.2.2 Measuring Instruments

Refer a test equipment and calibration data table in this test report.

3.2.3 Test Procedures

Test Method	
<ul style="list-style-type: none"> For the emission bandwidth shall be measured using one of the options below: 	
<input checked="" type="checkbox"/>	Refer as KDB 789033, clause C for EBW and clause D for OBW measurement.
<input type="checkbox"/>	Refer as ANSI C63.10, clause 6.9.3 for occupied bandwidth testing.
<input type="checkbox"/>	Refer as IC RSS-Gen, clause 6.6 for bandwidth testing.

3.2.4 Test Setup



3.2.5 Test Result of Emission Bandwidth

Refer as Appendix A

3.3 Maximum Conducted Output Power

3.3.1 Maximum Conducted Output Power Limit

Maximum Conducted Output Power Limit	
UNII Devices	
<ul style="list-style-type: none"> For the 5.15-5.25 GHz band: 	
	<ul style="list-style-type: none"> Outdoor AP: the maximum conducted output power (P_{Out}) shall not exceed the lesser of 1 W. If $G_{TX} > 6$ dBi, then $P_{Out} = 30 - (G_{TX} - 6)$. e.i.r.p. at any elevation angle above 30 degrees ≤ 125mW [21dBm]
	<ul style="list-style-type: none"> Indoor AP: the maximum conducted output power (P_{Out}) shall not exceed the lesser of 1 W. If $G_{TX} > 6$ dBi, then $P_{Out} = 30 - (G_{TX} - 6)$
	<ul style="list-style-type: none"> Point-to-point AP: the maximum conducted output power (P_{Out}) shall not exceed the lesser of 1 W. If $G_{TX} > 23$ dBi, then $P_{Out} = 30 - (G_{TX} - 23)$.
	<ul style="list-style-type: none"> Mobile or Portable Client: the maximum conducted output power (P_{Out}) shall not exceed the lesser of 250 mW. If $G_{TX} > 6$ dBi, then $P_{Out} = 24 - (G_{TX} - 6)$.
<ul style="list-style-type: none"> For the 5.25-5.35 GHz band, the maximum conducted output power (P_{Out}) shall not exceed the lesser of 250 mW or 11 dBm + 10 log B, where B is the 26 dB emission bandwidth in MHz. If $G_{TX} > 6$ dBi, then $P_{Out} = 24 - (G_{TX} - 6)$. 	
<ul style="list-style-type: none"> For the 5.47-5.725 GHz band, the maximum conducted output power (P_{Out}) shall not exceed the lesser of 250 mW or 11 dBm + 10 log B, where B is the 26 dB emission bandwidth in MHz. If $G_{TX} > 6$ dBi, then $P_{Out} = 24 - (G_{TX} - 6)$. 	
<ul style="list-style-type: none"> For the 5.725-5.85 GHz band: 	
	<ul style="list-style-type: none"> Point-to-multipoint systems (P2M): the maximum conducted output power (P_{Out}) shall not exceed the lesser of 1 W. If $G_{TX} > 6$ dBi, then $P_{Out} = 30 - (G_{TX} - 6)$.
	<ul style="list-style-type: none"> Point-to-point systems (P2P): the maximum conducted output power (P_{Out}) shall not exceed the lesser of 1 W.
P_{Out} = maximum conducted output power in dBm, G_{TX} = the maximum transmitting antenna directional gain in dBi.	

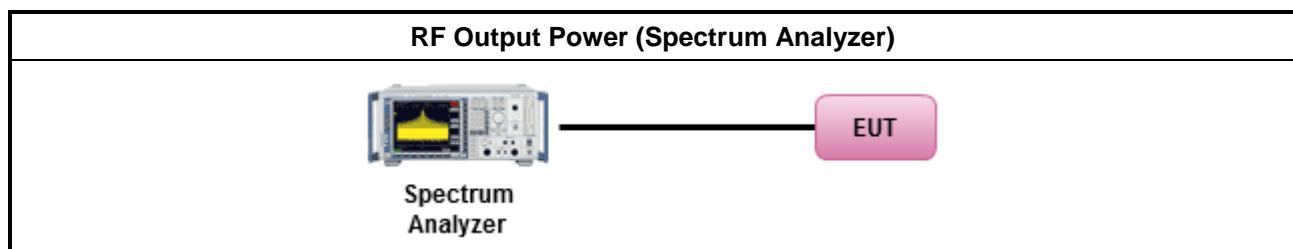
3.3.2 Measuring Instruments

Refer a test equipment and calibration data table in this test report.

3.3.3 Test Procedures

Test Method	
<ul style="list-style-type: none"> Maximum Conducted Output Power 	
	Duty cycle $\geq 98\%$
<input checked="" type="checkbox"/>	Refer as KDB 789033, clause E Method SA-2 (spectral trace averaging).
	Duty cycle $< 98\%$
<input type="checkbox"/>	Refer as KDB 789033, clause E Method SA-2 Alt. (RMS detection with slow sweep speed)
	Wideband RF power meter and average over on/off periods with duty factor
<input type="checkbox"/>	Refer as KDB 789033, clause E Method PM (using an RF average power meter).
<ul style="list-style-type: none"> For conducted measurement. 	
	<ul style="list-style-type: none"> If the EUT supports multiple transmit chains using options given below: Refer as KDB 662911, In-band power measurements. Using the measure-and-sum approach, measured all transmit ports individually. Sum the power (in linear power units e.g., mW) of all ports for each individual sample and save them.
	<ul style="list-style-type: none"> If multiple transmit chains, EIRP calculation could be following as methods: $P_{total} = P_1 + P_2 + \dots + P_n$ (calculated in linear unit [mW] and transfer to log unit [dBm]) $EIRP_{total} = P_{total} + DG$

3.3.4 Test Setup



3.3.5 Test Result of Maximum Conducted Output Power

Refer as Appendix B

3.4 Peak Power Spectral Density

3.4.1 Peak Power Spectral Density Limit

Peak Power Spectral Density Limit	
UNII Devices	
<ul style="list-style-type: none"> For the 5.15-5.25 GHz band: 	
	<ul style="list-style-type: none"> Outdoor AP: the peak power spectral density (PPSD) shall not exceed the lesser of 17dBm/MHz. If $G_{TX} > 6$ dBi, then $P_{Out} = 17 - (G_{TX} - 6)$.
	<ul style="list-style-type: none"> Indoor AP: the peak power spectral density (PPSD) shall not exceed the lesser of 17dBm/MHz. If $G_{TX} > 6$ dBi, then $P_{Out} = 17 - (G_{TX} - 6)$.
	<ul style="list-style-type: none"> Point-to-point AP: the peak power spectral density (PPSD) shall not exceed the lesser of 17dBm/MHz. If $G_{TX} > 23$ dBi, then $P_{Out} = 17 - (G_{TX} - 23)$.
	<ul style="list-style-type: none"> Mobile or Portable Client: the peak power spectral density (PPSD) ≤ 11 dBm/MHz. If $G_{TX} > 6$ dBi, then $PPSD = 11 - (G_{TX} - 6)$.
<ul style="list-style-type: none"> For the 5.25-5.35 GHz band, the peak power spectral density (PPSD) ≤ 11 dBm/MHz. If $G_{TX} > 6$ dBi, then $PPSD = 11 - (G_{TX} - 6)$. 	
<ul style="list-style-type: none"> For the 5.47-5.725 GHz band, the peak power spectral density (PPSD) ≤ 11 dBm/MHz. If $G_{TX} > 6$ dBi, then $PPSD = 11 - (G_{TX} - 6)$. 	
<ul style="list-style-type: none"> For the 5.725-5.85 GHz band: 	
	<ul style="list-style-type: none"> Point-to-multipoint systems (P2M): the peak power spectral density (PPSD) ≤ 30 dBm/500kHz. If $G_{TX} > 6$ dBi, then $PPSD = 30 - (G_{TX} - 6)$.
	<ul style="list-style-type: none"> Point-to-point systems (P2P): the peak power spectral density (PPSD) ≤ 30 dBm/500kHz.
<p>PPSD = peak power spectral density that he same method as used to determine the conducted output power shall be used to determine the power spectral density. And power spectral density in dBm/MHz G_{TX} = the maximum transmitting antenna directional gain in dBi.</p>	

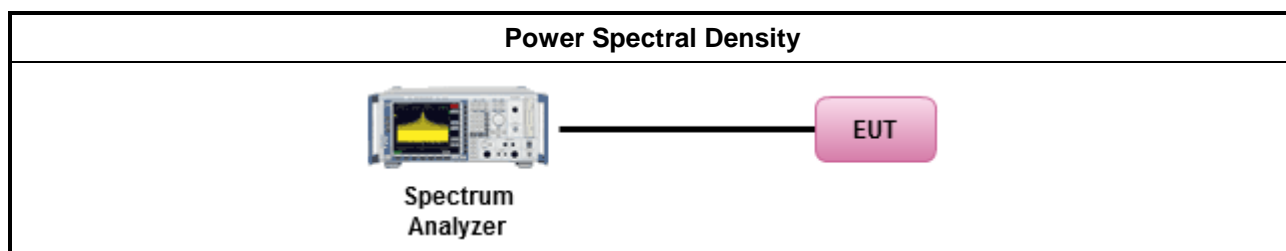
3.4.2 Measuring Instruments

Refer a test equipment and calibration data table in this test report.

3.4.3 Test Procedures

Test Method	
<ul style="list-style-type: none"> Peak power spectral density procedures that the same method as used to determine the conducted output power shall be used to determine the peak power spectral density and use the peak search function on the spectrum analyzer to find the peak of the spectrum. For the peak power spectral density shall be measured using below options: 	
<input type="checkbox"/> Refer as KDB 789033, F)5) power spectral density can be measured using resolution bandwidths < 1 MHz provided that the results are integrated over 1 MHz bandwidth	Duty cycle ≥ 98%
<input checked="" type="checkbox"/> Refer as KDB 789033, clause E Method SA-2 (spectral trace averaging).	Duty cycle < 98%
<input type="checkbox"/> Refer as KDB 789033, clause E Method SA-2 Alt. (RMS detection with slow sweep speed)	
<ul style="list-style-type: none"> For conducted measurement. 	
<ul style="list-style-type: none"> If the EUT supports multiple transmit chains using options given below: 	
<input checked="" type="checkbox"/> Option 1: Measure and sum the spectra across the outputs. Refer as KDB 662911, In-band power spectral density (PSD). Sample all transmit ports simultaneously using a spectrum analyzer for each transmit port. Where the trace bin-by-bin of each transmit port summing can be performed. (i.e., in the first spectral bin of output 1 is summed with that in the first spectral bin of output 2 and that from the first spectral bin of output 3, and so on up to the N _{TX} output to obtain the value for the first frequency bin of the summed spectrum.). Add up the amplitude (power) values for the different transmit chains and use this as the new data trace.	
<input type="checkbox"/> Option 2: Measure and sum spectral maxima across the outputs. With this technique, spectra are measured at each output of the device at the required resolution bandwidth. The maximum value (peak) of each spectrum is determined. These maximum values are then summed mathematically in linear power units across the outputs. These operations shall be performed separately over frequency spans that have different out-of-band or spurious emission limits,	
<input type="checkbox"/> Option 3: Measure and add 10 log(N) dB, where N is the number of transmit chains. Refer as KDB 662911, In-band power spectral density (PSD). Performed at each transmit chains and each transmit chains shall be compared with the limit have been reduced with 10 log(N). Or each transmit chains shall be add 10 log(N) to compared with the limit.	
<ul style="list-style-type: none"> If multiple transmit chains, EIRP PPSD calculation could be following as methods: $PPSD_{total} = PPSD_1 + PPSD_2 + \dots + PPSD_n$ (calculated in linear unit [mW] and transfer to log unit [dBm]) $EIRP_{total} = PPSD_{total} + DG$ 	

3.4.4 Test Setup



3.4.5 Test Result of Peak Power Spectral Density

Refer as Appendix C

3.5 Unwanted Emissions

3.5.1 Transmitter Radiated Unwanted Emissions Limit

Unwanted emissions below 1 GHz and restricted band emissions above 1GHz limit			
Frequency Range (MHz)	Field Strength (uV/m)	Field Strength (dBuV/m)	Measure Distance (m)
0.009~0.490	2400/F(kHz)	48.5 - 13.8	300
0.490~1.705	24000/F(kHz)	33.8 - 23	30
1.705~30.0	30	29	30
30~88	100	40	3
88~216	150	43.5	3
216~960	200	46	3
Above 960	500	54	3

Note 1: Test distance for frequencies at or above 30 MHz, measurements may be performed at a distance other than the limit distance provided they are not performed in the near field and the emissions to be measured can be detected by the measurement equipment. When performing measurements at a distance other than that specified, the results shall be extrapolated to the specified distance using an extrapolation factor of 20 dB/decade (inverse of linear distance for field-strength measurements, inverse of linear distance-squared for power-density measurements).

Note 2: Test distance for frequencies at below 30 MHz, measurements may be performed at a distance closer than the EUT limit distance; however, an attempt should be made to avoid making measurements in the near field. When performing measurements below 30 MHz at a closer distance than the limit distance, the results shall be extrapolated to the specified distance by either making measurements at a minimum of two or more distances on at least one radial to determine the proper extrapolation factor or by using the square of an inverse linear distance extrapolation factor (40 dB/decade). The test report shall specify the extrapolation method used to determine compliance of the EUT.

Un-restricted band emissions above 1GHz Limit	
Operating Band	Limit
5.15 - 5.25 GHz	e.i.r.p. -27 dBm [68.2 dBuV/m@3m]
5.25 - 5.35 GHz	e.i.r.p. -27 dBm [68.2 dBuV/m@3m]
5.47 - 5.725 GHz	e.i.r.p. -27 dBm [68.2 dBuV/m@3m]
5.725 - 5.85 GHz	5.650-5700 GHz: e.i.r.p. -27 ~ 10 dBm [68.2 ~ 105.2 dBuV/m@3m] 5.700-5720 GHz: e.i.r.p. 10 ~ 15.6 dBm [105.2 ~ 110.8 dBuV/m@3m] 5.720-5725 GHz: e.i.r.p. 15.6 ~ 27 dBm [110.8 ~ 122.2 dBuV/m@3m] 5.850-5.855 GHz: e.i.r.p. 27 ~ 15.6 dBm [122.2 ~ 110.8 dBuV/m@3m] 5.855-5.875 GHz: e.i.r.p. 15.6 ~ 10 dBm [110.8 ~ 105.2 dBuV/m@3m] 5.875-5.925 GHz: e.i.r.p. 10 ~ -27 dBm [105.2 ~ 68.2dBuV/m@3m] Other un-restricted band: e.i.r.p. -27 dBm [68.2 dBuV/m@3m]

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

3.5.2 Measuring Instruments

Refer a test equipment and calibration data table in this test report.

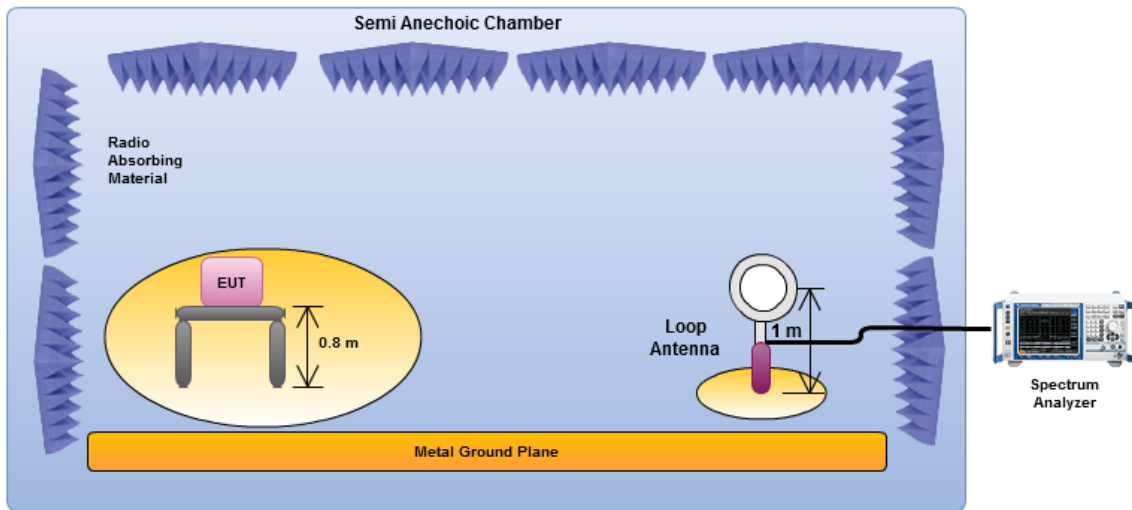
3.5.3 Test Procedures

Test Method	
<ul style="list-style-type: none"> Measurements may be performed at a distance other than the limit distance provided they are not performed in the near field and the emissions to be measured can be detected by the measurement equipment. Measurements shall not be performed at a distance greater than 30 m for frequencies above 30 MHz, unless it can be further demonstrated that measurements at a distance of 30 m or less are impractical. When performing measurements at a distance other than that specified, the results shall be extrapolated to the specified distance using an extrapolation factor of 20 dB/decade (inverse of linear distance for field-strength measurements, inverse of linear distance-squared for power-density measurements). 	
<ul style="list-style-type: none"> The average emission levels shall be measured in [duty cycle ≥ 98 or duty factor]. 	
<ul style="list-style-type: none"> For the transmitter unwanted emissions shall be measured using following options below: 	
	<ul style="list-style-type: none"> Refer as KDB 789033, clause G)2) for unwanted emissions into non-restricted bands.
	<ul style="list-style-type: none"> Refer as KDB 789033, clause G)1) for unwanted emissions into restricted bands.
	<input type="checkbox"/> Refer as KDB 789033, G)6) Method AD (Trace Averaging).
	<input type="checkbox"/> Refer as KDB 789033, G)6) Method VB (Reduced VBW).
	<input checked="" type="checkbox"/> Refer as ANSI C63.10, clause 4.1.4.2.3 (Reduced VBW). VBW $\geq 1/T$, where T is pulse time.
	<input type="checkbox"/> Refer as ANSI C63.10, clause 4.1.4.2.4 average value of pulsed emissions.
	<input checked="" type="checkbox"/> Refer as KDB 789033, clause G)5) measurement procedure peak limit.
	<input type="checkbox"/> Refer as ANSI C63.10, clause 4.1.4.2.2 measurement procedure peak limit.
	<ul style="list-style-type: none"> For radiated measurement.
	<ul style="list-style-type: none"> Refer as ANSI C63.10, clause 6.4 for radiated emissions below 30 MHz and test distance is 3m.
	<ul style="list-style-type: none"> Refer as ANSI C63.10, clause 6.5 for radiated emissions 30 MHz to 1 GHz and test distance is 3m.
	<ul style="list-style-type: none"> Refer as ANSI C63.10, clause 6.6 for radiated emissions above 1GHz. For 1 GHz to 5 GHz, test distance is 3m; For 5 GHz to 40 GHz, test distance is 3m.
	<ul style="list-style-type: none"> The any unwanted emissions level shall not exceed the fundamental emission level.
<ul style="list-style-type: none"> All amplitude of spurious emissions that are attenuated by more than 20 dB below the permissible value has no need to be reported. 	

Test Method	
<ul style="list-style-type: none"> For conducted and cabinet radiation measurement, refer as KDB 789033, clause G)3). 	
	<ul style="list-style-type: none"> For conducted unwanted emissions into non-restricted bands (relative emission limits). Devices with multiple transmit chains: Refer as FCC KDB 662911, when testing out-of-band and spurious emissions against relative emission limits, tests may be performed on each output individually without summing or adding 10 log(N) if the measurements are made relative to the in-band emissions on the individual outputs.
	<ul style="list-style-type: none"> For conducted unwanted emissions into restricted bands (absolute emission limits). Devices with multiple transmit chains using options given below: (1) Measure and sum the spectra across the outputs or (2) Measure and add 10 log(N) dB
	<ul style="list-style-type: none"> For FCC KDB 662911 The methodology described here may overestimate array gain, thereby resulting in apparent failures to satisfy the out-of-band limits even if the device is actually compliant. In such cases, compliance may be demonstrated by performing radiated tests around the frequencies at which the apparent failures occurred.

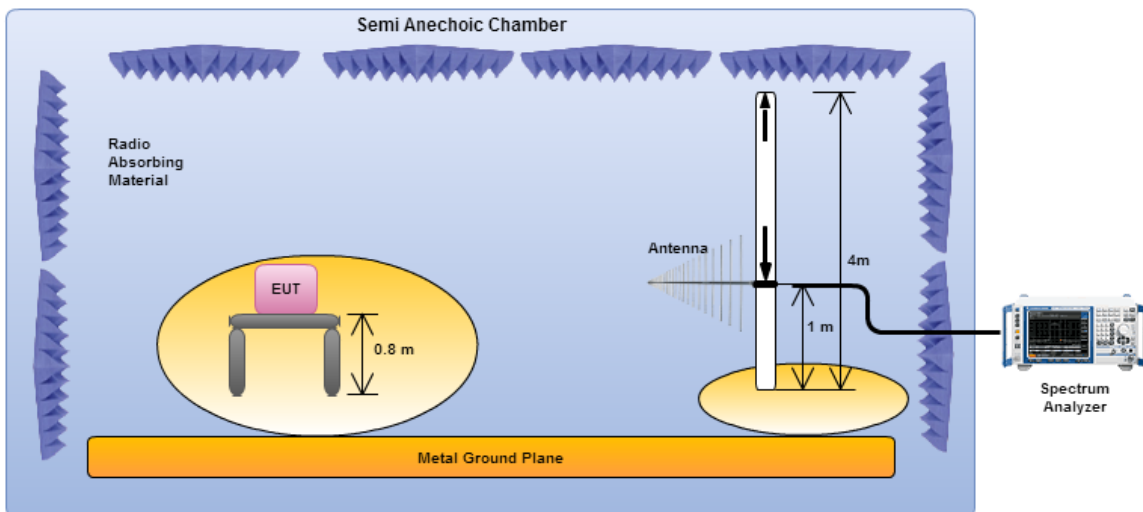
3.5.4 Test Setup

Transmitter Spurious and Out of Band Emissions (9 kHz - 30 MHz)

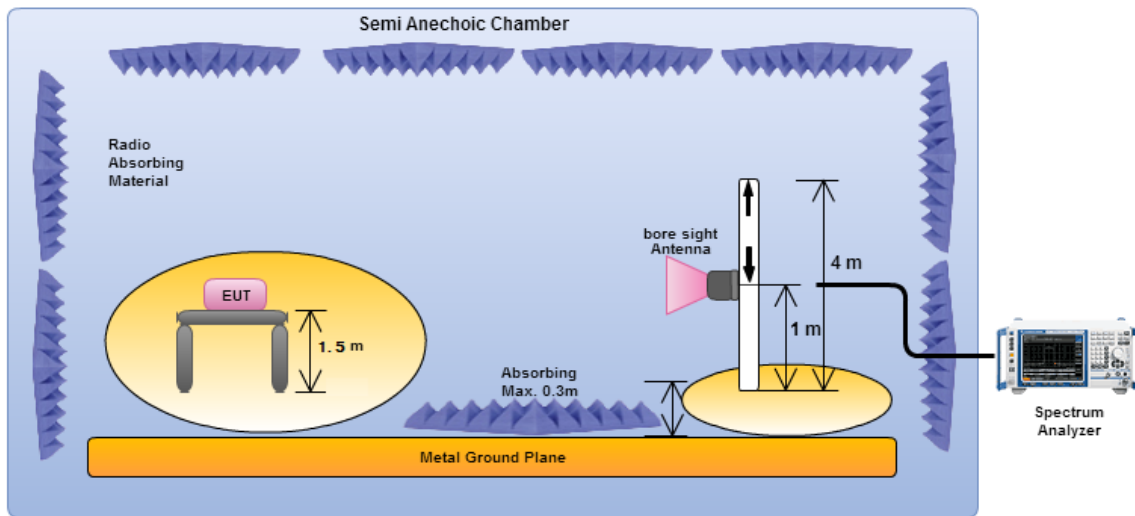


Magnetic field tests shall be performed in the frequency range of 9 kHz to 30 MHz using a calibrated loop antenna.

Transmitter Radiated Unwanted Emissions (below 1GHz)



Electric field tests shall be performed in the frequency range of 30 MHz to 1000 MHz using a calibrated bi-log antenna.

Transmitter Radiated Unwanted Emissions (above 1GHz)


Electric field tests shall be performed in the frequency range of 1 GHz to 10th harmonic of highest fundamental frequency or 40 GHz using a calibrated horn antenna.

3.5.5 Transmitter Unwanted Emissions (Below 30MHz)

The amplitude of spurious emissions which are attenuated by more than 20dB below the permissible value has no need to be reported. Any spurious which has more than 20 dB of margin compared to the applicable limit is not necessarily reported.

3.5.6 Transmitter Unwanted Emissions

Refer as Appendix E.1~E.2

3.6 Frequency Stability

3.6.1 Frequency Stability Limit

Frequency Stability Limit	
UNII Devices	
<ul style="list-style-type: none"> In-band emission is maintained within the band of operation under all conditions of normal operation as specified in the user's manual. 	
IEEE Std. 802.11	
<ul style="list-style-type: none"> The transmitter center frequency tolerance shall be ± 20 ppm maximum for the 5 GHz band. 	

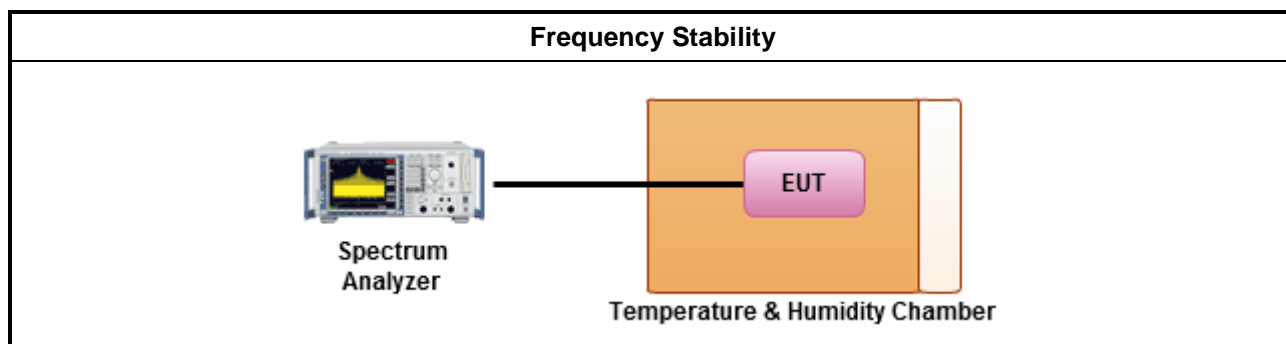
3.6.2 Measuring Instruments

Refer a test equipment and calibration data table in this test report.

3.6.3 Test Procedures

Test Method	
<ul style="list-style-type: none"> Refer as ANSI C63.10, clause 6.8 for frequency stability tests 	
	<ul style="list-style-type: none"> Frequency stability with respect to ambient temperature
	<ul style="list-style-type: none"> Frequency stability when varying supply voltage

3.6.4 Test Setup



3.6.5 Test Result of Frequency Stability

Refer as Appendix D

4 Test Equipment and Calibration Data

AC Conduction

Instrument	Manufacturer	Model No.	Serial No.	Spec.	Calibration Date	Calibration Due Date
EMC Receiver	R&S	ESR-3	102051	9kHz ~ 3.6GHz	19/04/2016	18/04/2017
LISN	SCHWARZBECK MESS-ELEKTRONIK	NSLK 8127	8127-477	9kHz ~ 30MHz	26/01/2016	25/01/2017
LISN (Support Unit)	R&S	ENV216	101295	9kHz ~ 30MHz	NCR	NCR
RF Cable-CON	HUBER+SUHNER	RG213/U	07611832020001	9kHz ~ 30MHz	24/10/2016	23/10/2017
EMI Filter	LINDGREN	LRE-2030	2651	< 450 Hz	NCR	NCR

NCR : Non-Calibration Require

Conducted

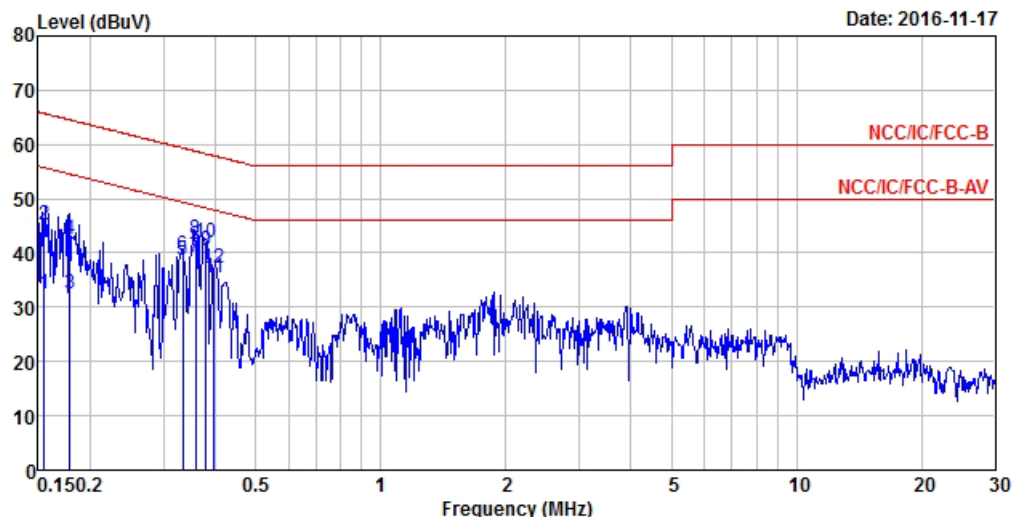
Instrument	Manufacturer	Model No.	Serial No.	Spec.	Calibration Date	Calibration Due Date
Spectrum Analyzer	R&S	FSV 40	101013	9kHz~40GHz	16/02/2016	15/02/ 2017
Power Sensor	Anritsu	MA2411B	0917017	300MHz ~ 40GHz	04/02/2016	03/02/2017
Power Meter	Anritsu	ML2495A	0949003	300MHz ~ 40GHz	04/02/2016	03/02/2017
Signal Generator	R&S	SMR40	100116	10MHz ~ 40GHz	21/07/2016	20/07/2017
Temp. and Humidity Chamber	Giant Force	GTH-225-20-SP -SD	MAA1112-007	-20 ~ 100℃	25/04/2016	24/04/2017
AC Power Source	G.W	APS-9102	EL920581	AC 0V ~ 300V	04/06/2016	03/06/2017

Radiated

Instrument	Manufacturer	Model No.	Serial No.	Spec.	Calibration Date	Calibration Due Date
3m Semi Anechoic Chamber	TDK	SAC-3M	03CH09-HY	30MHz ~ 1GHz	25/04/2016	24/04/2017
3m Semi Anechoic Chamber	TDK	SAC-3M	03CH09-HY	1GHz ~ 18GHz	21/06/2016	20/06/2017
Amplifier	Agilent	8449B	3008A02096	1GHz ~ 26.5GHz	11/04/2016	10/04/2017
Amplifier	EMC	EMC9135	980232	9KHz~1GHz	29/01/2016	28/01/2017
Spectrum Analyzer	KEYSIGHT	N9010A	MY54200885	10Hz ~ 44GHz	04/07/2016	03/07/2017
Bilog Antenna	TESEQ	CBL 6111D	35418	30MHz~1GHz	01/10/2016	30/09/2017
Horn Antenna	SCHWARZBECK	BBHA 9120D	BBHA9120D 1534	1GHz~18GHz	22/04/2016	21/04/2017
Horn Antenna	SCHWARZBECK	BBHA9170	BBHA9170154	18GHz ~ 40GHz	04/01/2016	03/01/2017
Amplifier	MITEQ	JS44-18004000 -33-8P	1840917	18GHz ~ 40GHz	02/06/2015	01/06/2017
Loop Antenna	R&S	HFH2-Z2	100330	9 kHz~30 MHz	10/11/2016	09/11/2017

AC Power-line Conducted Emissions Result

Operating Mode	1	Power Phase	Neutral
Operating Function	Adapter 1 Mode		



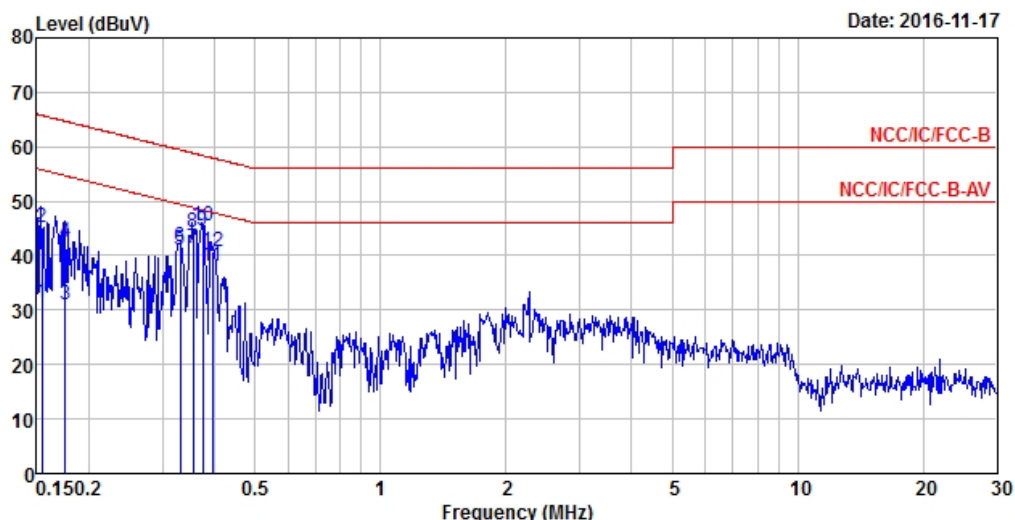
	Freq	Level	Over Limit	Limit Line	Read Level	LISN Factor	Cable Loss	Aux Factor	Remark
	MHz	dBuV	dB	dBuV	dBuV	dB	dB	dB	
1	0.15	32.36	-23.37	55.73	32.03	0.10	0.23	0.00	Average
2	0.15	45.24	-20.49	65.73	44.91	0.10	0.23	0.00	QP
3	0.18	32.39	-22.16	54.55	32.01	0.11	0.27	0.00	Average
4	0.18	42.56	-21.99	64.55	42.18	0.11	0.27	0.00	QP
5	0.33	38.79	-10.56	49.35	38.52	0.12	0.15	0.00	Average
6	0.33	39.50	-19.85	59.35	39.23	0.12	0.15	0.00	QP
7	0.36	39.38	-9.39	48.77	39.13	0.12	0.13	0.00	Average
8	0.36	42.53	-16.24	58.77	42.28	0.12	0.13	0.00	QP
9 MAX	0.38	40.55	-7.75	48.30	40.31	0.12	0.12	0.00	Average
10	0.38	41.93	-16.37	58.30	41.69	0.12	0.12	0.00	QP
11	0.40	35.29	-12.61	47.90	35.07	0.12	0.10	0.00	Average
12	0.40	37.33	-20.57	57.90	37.11	0.12	0.10	0.00	QP

Note 1: ">20dB" means emission levels that exceed the level of 20 dB below the applicable limit.

Note 2: "N/F" means Nothing Found emissions (No emissions were detected.)

AC Power-line Conducted Emissions Result

Operating Mode	1	Power Phase	Line
Operating Function	Adapter 1 Mode		



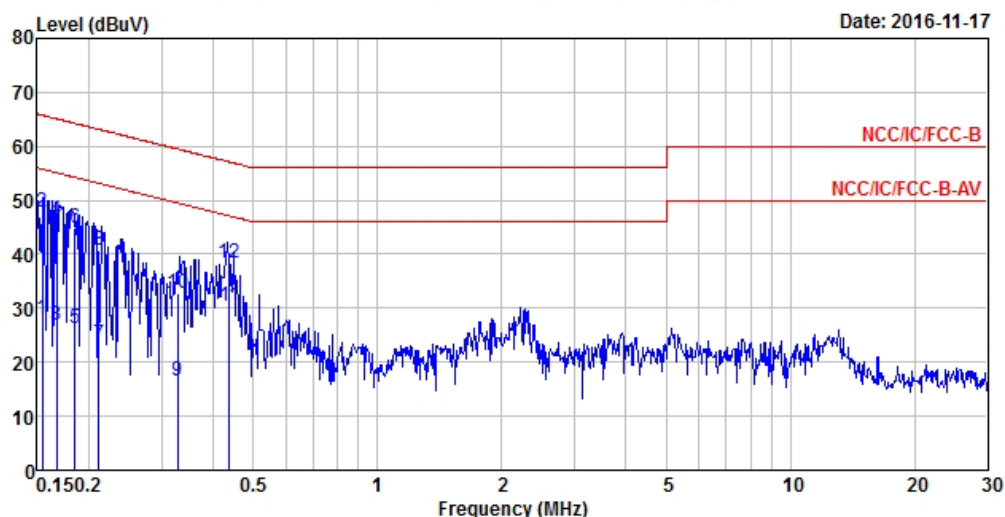
	Freq	Level	Over	Limit	Read	LISN	Cable	Aux	
	MHz	dBuV	Limit	Line	Level	Factor	Loss	Factor	Remark
			dB	dBuV	dBuV	dB	dB	dB	
1	0.15	31.34	-24.42	55.76	31.01	0.11	0.22	0.00	Average
2	0.15	45.20	-20.56	65.76	44.87	0.11	0.22	0.00	QP
3	0.18	30.92	-23.77	54.69	30.55	0.11	0.26	0.00	Average
4	0.18	42.50	-22.19	64.69	42.13	0.11	0.26	0.00	QP
5	0.33	41.02	-8.42	49.44	40.74	0.12	0.16	0.00	Average
6	0.33	41.63	-17.81	59.44	41.35	0.12	0.16	0.00	QP
7	0.35	41.24	-7.61	48.85	40.99	0.12	0.13	0.00	Average
8	0.35	44.28	-14.57	58.85	44.03	0.12	0.13	0.00	QP
9 MAX	0.37	44.53	-3.88	48.41	44.29	0.12	0.12	0.00	Average
10	0.37	45.38	-13.03	58.41	45.14	0.12	0.12	0.00	QP
11	0.39	38.06	-9.91	47.97	37.84	0.12	0.10	0.00	Average
12	0.39	40.85	-17.12	57.97	40.63	0.12	0.10	0.00	QP

Note 1: ">20dB" means emission levels that exceed the level of 20 dB below the applicable limit.

Note 2: "N/F" means Nothing Found emissions (No emissions were detected.)

AC Power-line Conducted Emissions Result

Operating Mode	2	Power Phase	Neutral
Operating Function	Adapter 2 Mode		

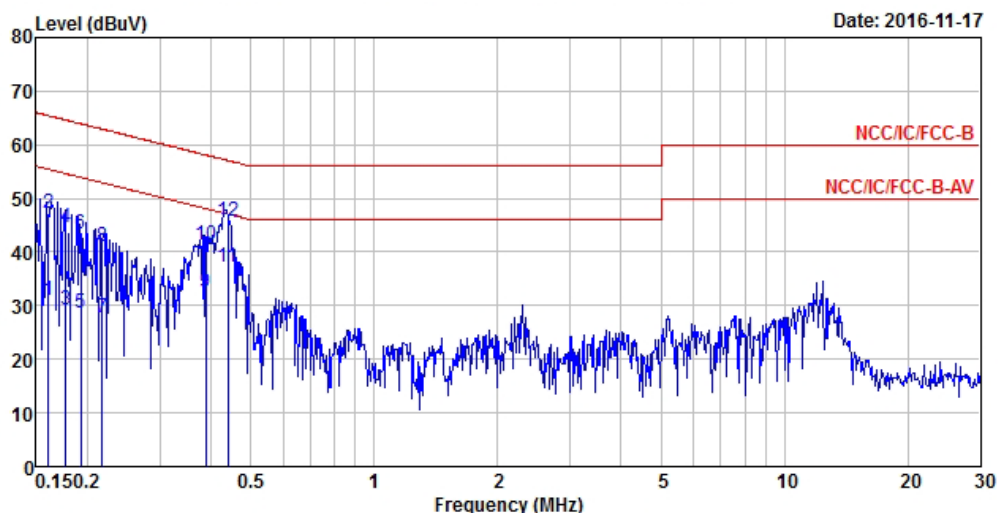


	Freq	Level	Over Limit	Limit Line	Read Level	LISN Factor	Cable Loss	Aux Factor	Remark
	MHz	dBuV	dB	dBuV	dBuV	dB	dB	dB	
1	0.15	28.14	-27.64	55.78	27.82	0.10	0.22	0.00	Average
2	0.15	47.78	-18.00	65.78	47.46	0.10	0.22	0.00	QP
3	0.17	26.76	-28.36	55.12	26.41	0.10	0.25	0.00	Average
4	0.17	46.47	-18.65	65.12	46.12	0.10	0.25	0.00	QP
5	0.18	26.42	-27.85	54.27	26.03	0.11	0.28	0.00	Average
6	0.18	44.83	-19.44	64.27	44.44	0.11	0.28	0.00	QP
7	0.21	23.34	-29.81	53.15	22.95	0.11	0.28	0.00	Average
8	0.21	40.59	-22.56	63.15	40.20	0.11	0.28	0.00	QP
9	0.33	16.43	-33.05	49.48	16.15	0.12	0.16	0.00	Average
10	0.33	32.86	-26.62	59.48	32.58	0.12	0.16	0.00	QP
11 MAX	0.44	30.35	-16.76	47.11	30.13	0.12	0.10	0.00	Average
12	0.44	38.49	-18.62	57.11	38.27	0.12	0.10	0.00	QP

Note 1: ">20dB" means emission levels that exceed the level of 20 dB below the applicable limit.
 Note 2: "N/F" means Nothing Found emissions (No emissions were detected.)

AC Power-line Conducted Emissions Result

Operating Mode	2	Power Phase	Line
Operating Function	Adapter 2 Mode		



	Freq	Level	Over Limit	Limit Line	Read Level	LISN Factor	Cable Loss	Aux Factor	Remark
	MHz	dBuV	dB	dBuV	dBuV	dB	dB	dB	
1	0.16	30.91	-24.51	55.42	30.56	0.11	0.24	0.00	Average
2	0.16	47.38	-18.04	65.42	47.03	0.11	0.24	0.00	QP
3	0.18	29.30	-25.33	54.63	28.93	0.11	0.26	0.00	Average
4	0.18	44.65	-19.98	64.63	44.28	0.11	0.26	0.00	QP
5	0.19	28.66	-25.25	53.91	28.26	0.11	0.29	0.00	Average
6	0.19	43.38	-20.53	63.91	42.98	0.11	0.29	0.00	QP
7	0.22	27.86	-25.06	52.92	27.48	0.11	0.27	0.00	Average
8	0.22	40.96	-21.96	62.92	40.58	0.11	0.27	0.00	QP
9	0.39	32.52	-15.60	48.12	32.29	0.12	0.11	0.00	Average
10	0.39	41.26	-16.86	58.12	41.03	0.12	0.11	0.00	QP
11 MAX	0.44	37.13	-9.94	47.07	36.91	0.12	0.10	0.00	Average
12	0.44	45.76	-11.31	57.07	45.54	0.12	0.10	0.00	QP

Note 1: ">20dB" means emission levels that exceed the level of 20 dB below the applicable limit.
 Note 2: "N/F" means Nothing Found emissions (No emissions were detected.)



Summary

Mode	Max-N dB (Hz)	Max-OBW (Hz)	ITU-Code	Min-N dB (Hz)	Min-OBW (Hz)
5.2G;11a;20;1;2	46.375M	29.535M	29M5D1D	27.625M	17.041M
5.2G;VHT20;20;1,(M0);2	50M	30.41M	30M4D1D	42.275M	18.066M
5.2G;VHT40;40;1,(M0);2	95.2M	48.276M	48M3D1D	84.65M	38.331M
5.2G;VHT80;80;1,(M0);2	106.6M	75.362M	75M4D1D	99.4M	75.262M

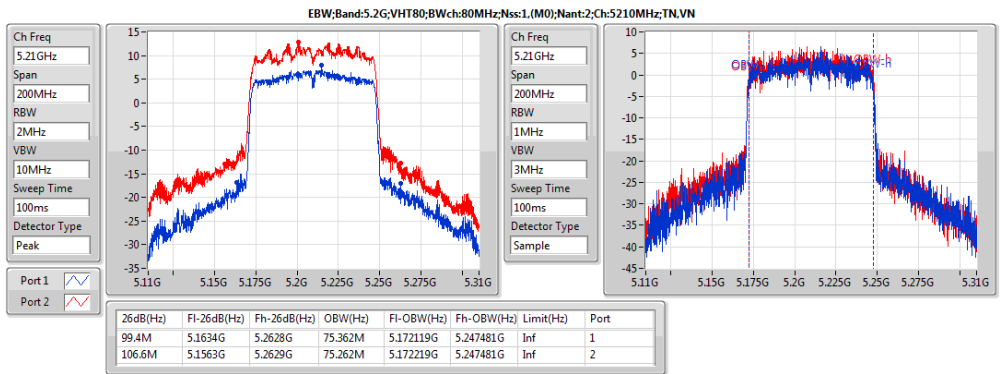
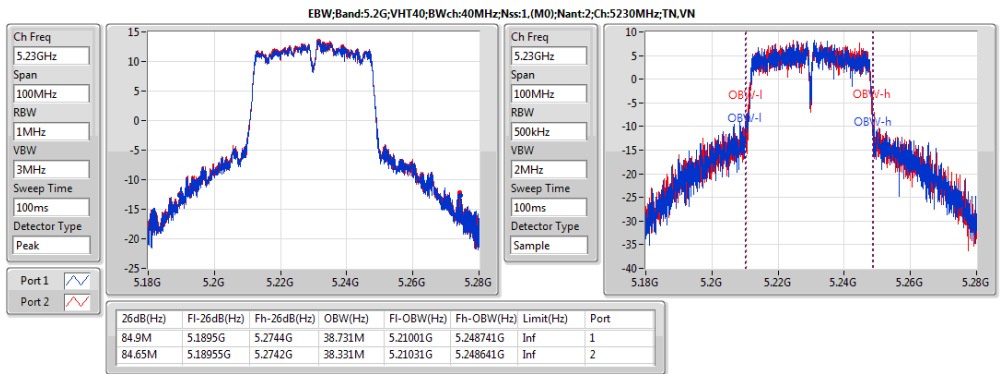
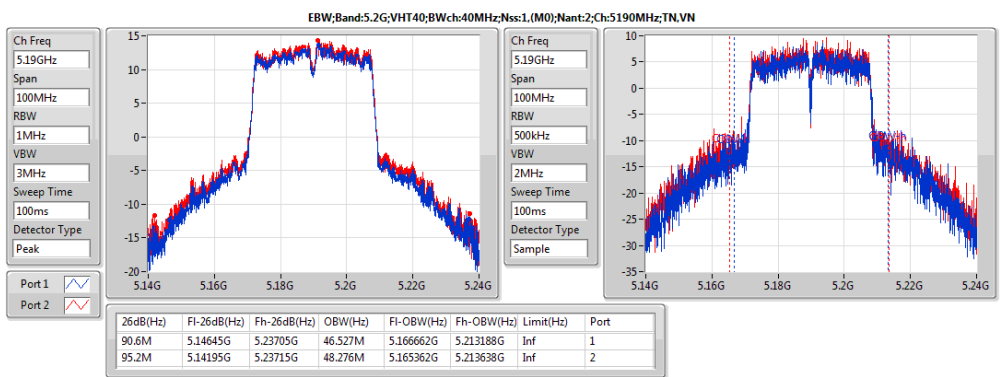
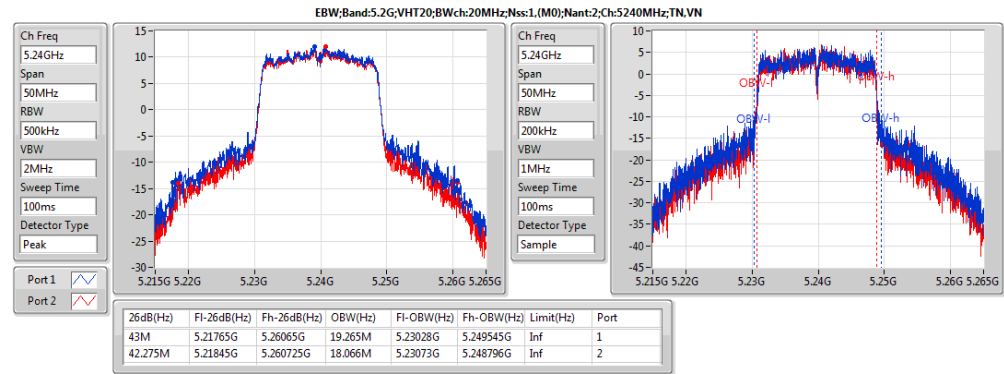
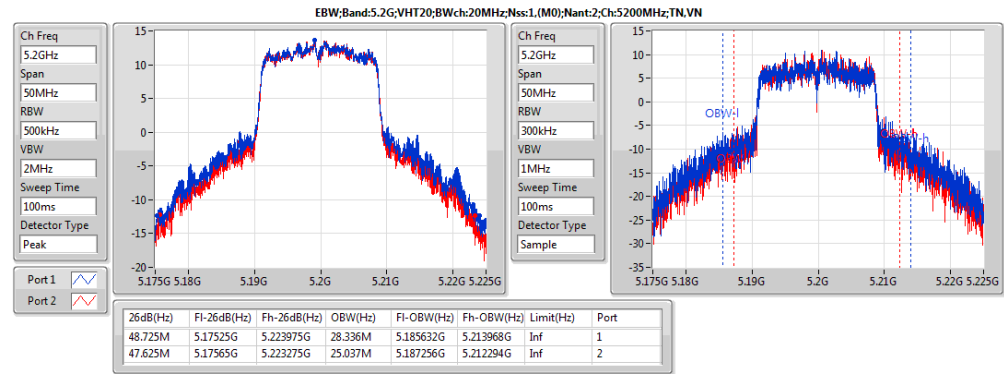
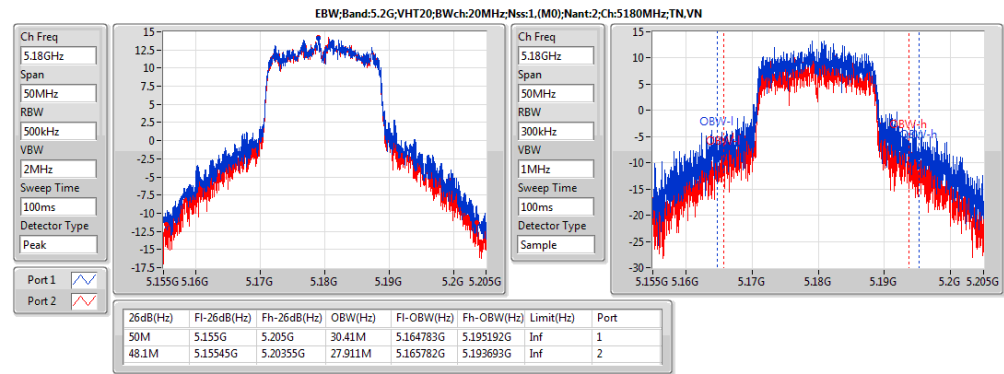
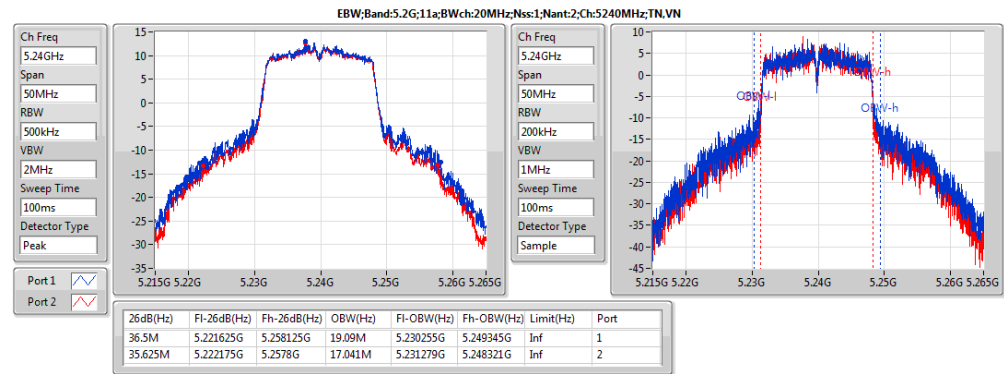
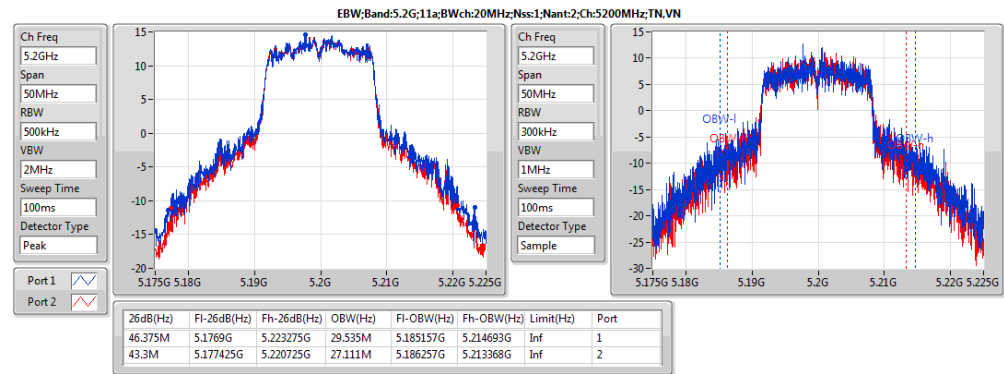
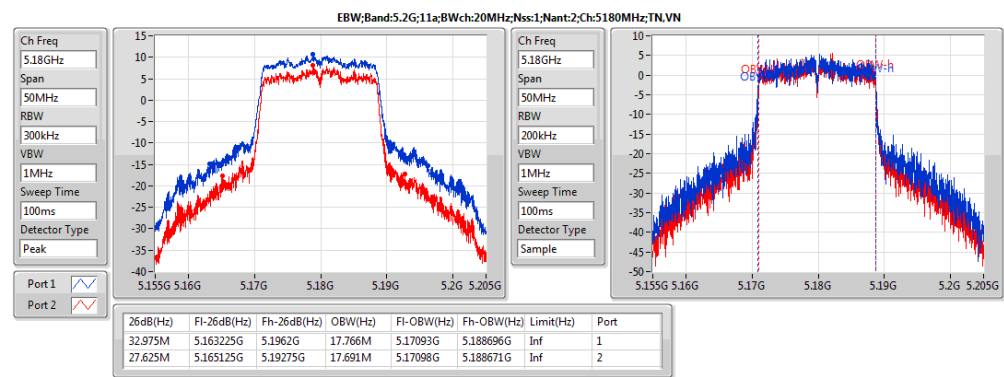
Max-N dB = Maximum 6dB down bandwidth for 5.8GHz band / Maximum 26dB down bandwidth for other band; **Max-OBW** = Maximum 99% occupied bandwidth;
Min-N dB = Minimum 6dB down bandwidth for 5.8GHz band / Maximum 26dB down bandwidth for other band; **Min-OBW** = Minimum 99% occupied bandwidth;



Result

Mode	Result	Limit (Hz)	P1-N dB (Hz)	P1-OBW (Hz)	P2-N dB (Hz)	P2-OBW (Hz)
5.2G;11a;20;1;2;5180;L;TN,VN	Pass	Inf	32.975M	17.766M	27.625M	17.691M
5.2G;11a;20;1;2;5200;M;TN,VN	Pass	Inf	46.375M	29.535M	43.3M	27.111M
5.2G;11a;20;1;2;5240;H;TN,VN	Pass	Inf	36.5M	19.09M	35.625M	17.041M
5.2G;VHT20;20;1,(M0);2;5180;L;TN,VN	Pass	Inf	50M	30.41M	48.1M	27.911M
5.2G;VHT20;20;1,(M0);2;5200;M;TN,VN	Pass	Inf	48.725M	28.336M	47.625M	25.037M
5.2G;VHT20;20;1,(M0);2;5240;H;TN,VN	Pass	Inf	43M	19.265M	42.275M	18.066M
5.2G;VHT40;40;1,(M0);2;5190;L;TN,VN	Pass	Inf	90.6M	46.527M	95.2M	48.276M
5.2G;VHT40;40;1,(M0);2;5230;H;TN,VN	Pass	Inf	84.9M	38.731M	84.65M	38.331M
5.2G;VHT80;80;1,(M0);2;5210;S;TN,VN	Pass	Inf	99.4M	75.362M	106.6M	75.262M

P1-N dB = Port 1 6dB down bandwidth for 5.8GHz band / 26dB down bandwidth for other band; **P1-OBW** = Port 1 99% occupied bandwidth;
P2-N dB = Port 2 6dB down bandwidth for 5.8GHz band / 26dB down bandwidth for other band; **P2-OBW** = Port 2 99% occupied bandwidth;
P3-N dB = Port 3 6dB down bandwidth for 5.8GHz band / 26dB down bandwidth for other band; **P3-OBW** = Port 3 99% occupied bandwidth;
P4-N dB = Port 4 6dB down bandwidth for 5.8GHz band / 26dB down bandwidth for other band; **P4-OBW** = Port 4 99% occupied bandwidth;





Summary

Mode	Sum (dBm)	Sum (W)	EIRP (dBm)	EIRP (W)
5.2G:11a;20;1;2	24.31	0.26977	31.43	1.38995
5.2G:HT20;20;2,(M8);2	24.21	0.26363	31.33	1.35831
5.2G:HT40;40;2,(M8);2	22.29	0.16943	29.41	0.87297
5.2G:VHT20;20;1,(M0);2	24.23	0.26485	31.35	1.36458
5.2G:VHT40;40;1,(M0);2	22.31	0.17022	29.43	0.877
5.2G:VHT80;80;1,(M0);2	19.93	0.0984	27.05	0.50699

DG = Directional Gain;
P1 = Port 1 output power; **P2** = Port 2 output power; **P3** = Port 3 output power; **P4** = Port 4 output power;
Sum = Total power sum by **P1~PN**;
Sum Lim. = Total power limit;



Result

Mode	Result	DG (dBi)	Sum (dBm)	Sum Lim. (dBm)	EIRP (dBm)	EIRP Lim. (dBm)	P1 (dBm)	P2 (dBm)
5.2G;11a;20;1;2:5180;L;TN,VN	Pass	7.12	20.64	28.88	27.76	36.00	17.92	17.31
5.2G;11a;20;1;2:5200;M;TN,VN	Pass	7.12	24.31	28.88	31.43	36.00	21.30	21.30
5.2G;11a;20;1;2:5240;H;TN,VN	Pass	7.12	22.48	28.88	29.60	36.00	19.52	19.42
5.2G;HT20;20;2;(M8);2:5180;L;TN,VN	Pass	7.12	24.11	28.88	31.23	36.00	21.05	21.15
5.2G;HT20;20;2;(M8);2:5200;M;TN,VN	Pass	7.12	24.21	28.88	31.33	36.00	21.19	21.22
5.2G;HT20;20;2;(M8);2:5240;H;TN,VN	Pass	7.12	22.45	28.88	29.57	36.00	19.52	19.37
5.2G;HT40;40;2;(M8);2:5190;L;TN,VN	Pass	7.12	22.18	28.88	29.30	36.00	18.64	19.64
5.2G;HT40;40;2;(M8);2:5230;H;TN,VN	Pass	7.12	22.29	28.88	29.41	36.00	19.17	19.39
5.2G;VHT20;20;1;(M0);2:5180;L;TN,VN	Pass	7.12	24.12	28.88	31.24	36.00	21.06	21.16
5.2G;VHT20;20;1;(M0);2:5200;M;TN,VN	Pass	7.12	24.23	28.88	31.35	36.00	21.20	21.23
5.2G;VHT20;20;1;(M0);2:5240;H;TN,VN	Pass	7.12	22.47	28.88	29.59	36.00	19.53	19.39
5.2G;VHT40;40;1;(M0);2:5190;L;TN,VN	Pass	7.12	22.25	28.88	29.37	36.00	18.76	19.66
5.2G;VHT40;40;1;(M0);2:5230;H;TN,VN	Pass	7.12	22.31	28.88	29.43	36.00	19.19	19.41
5.2G;VHT80;80;1;(M0);2:5210;S;TN,VN	Pass	7.12	19.93	28.88	27.05	36.00	16.54	17.27

DG = Directional Gain;
P1 = Port 1 output power; **P2** = Port 2 output power; **P3** = Port 3 output power; **P4** = Port 4 output power;
Sum = Total power sum by **P1~PN**;
Sum Lim. = Total power limit;



Summary

Mode	PD (dBm/RBW)	EIRP.PD (dBm/RBW)
5.2G;11a;20;1;2	11.68	18.80
5.2G;VHT20;20;1;(M0);2	10.84	17.96
5.2G;VHT40;40;1;(M0);2	6.61	13.73
5.2G;VHT80;80;1;(M0);2	0.98	8.10

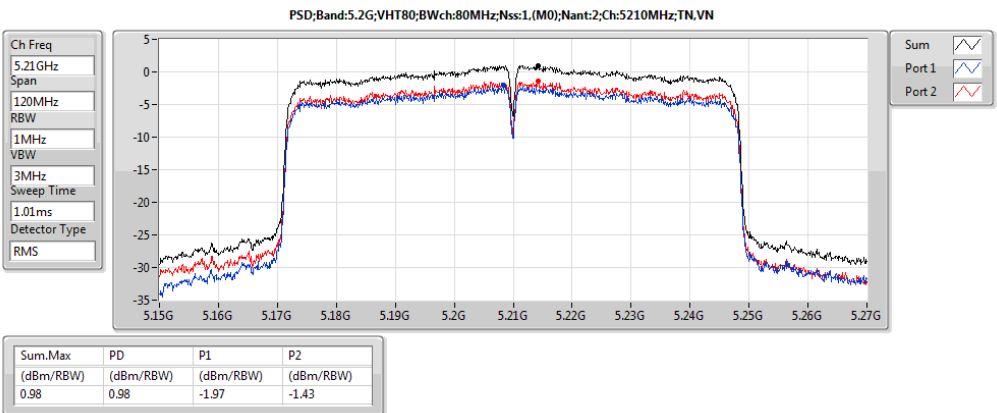
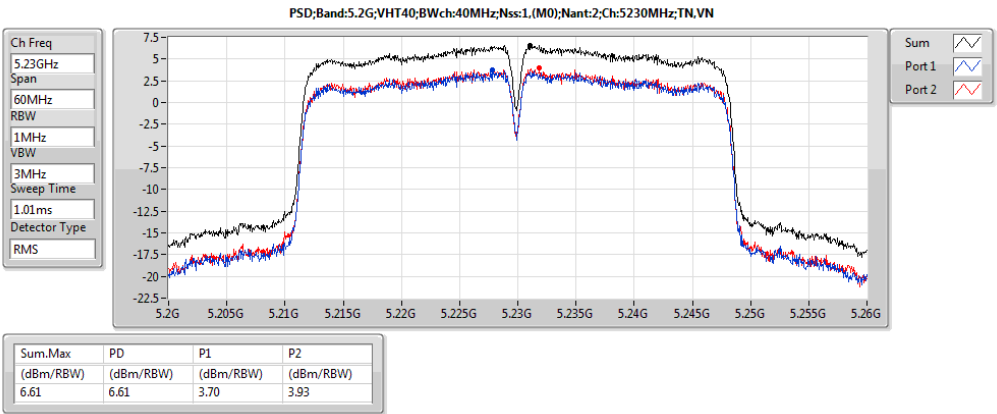
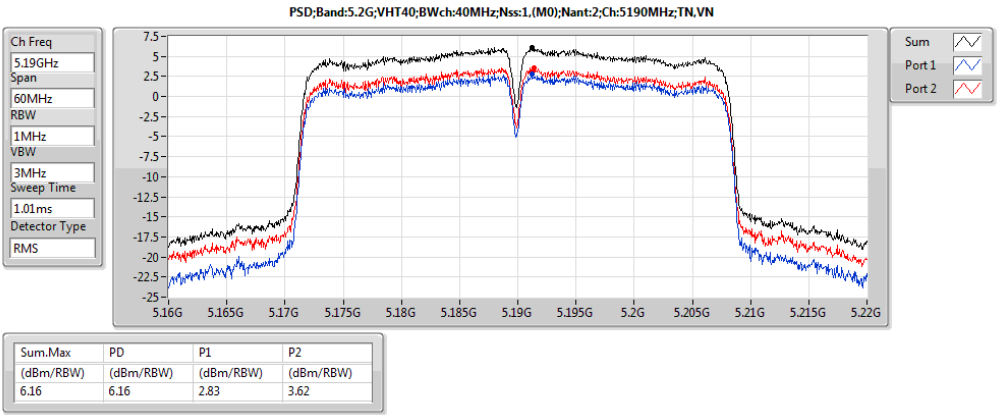
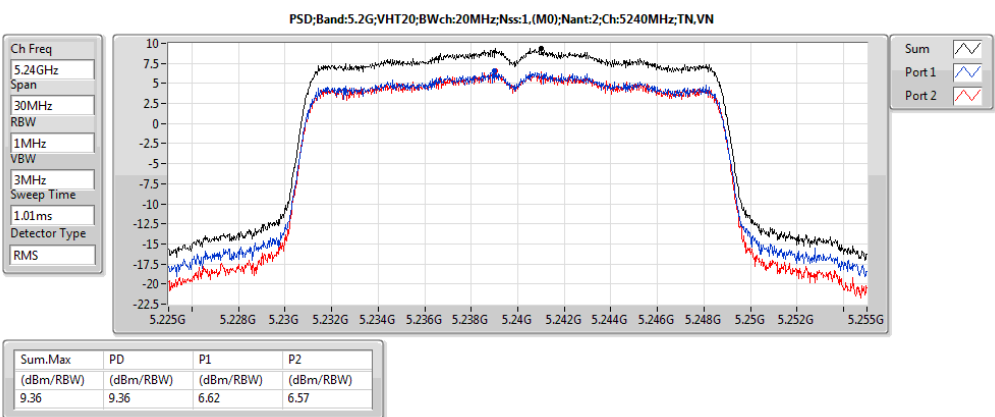
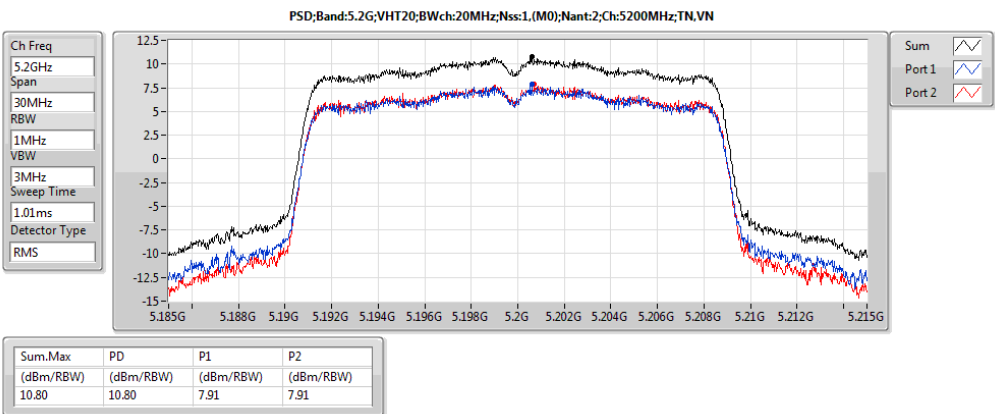
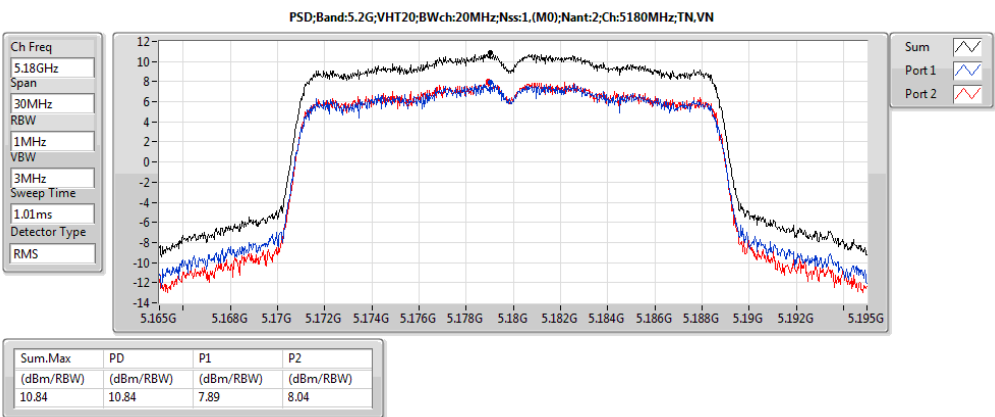
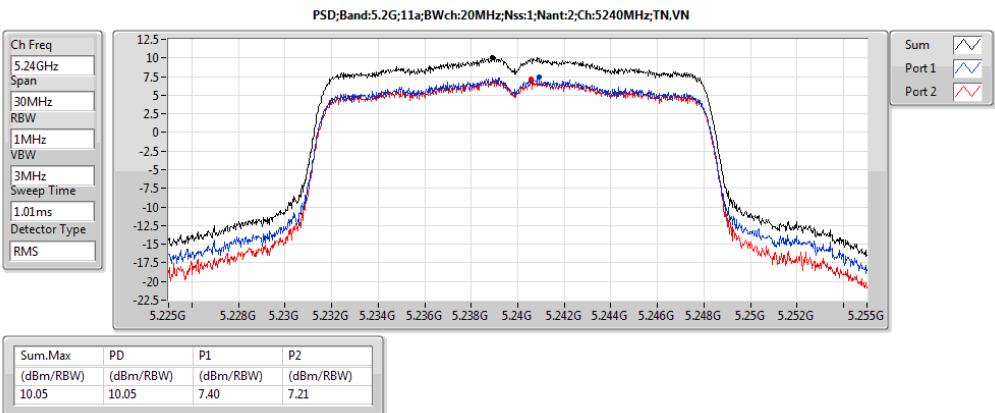
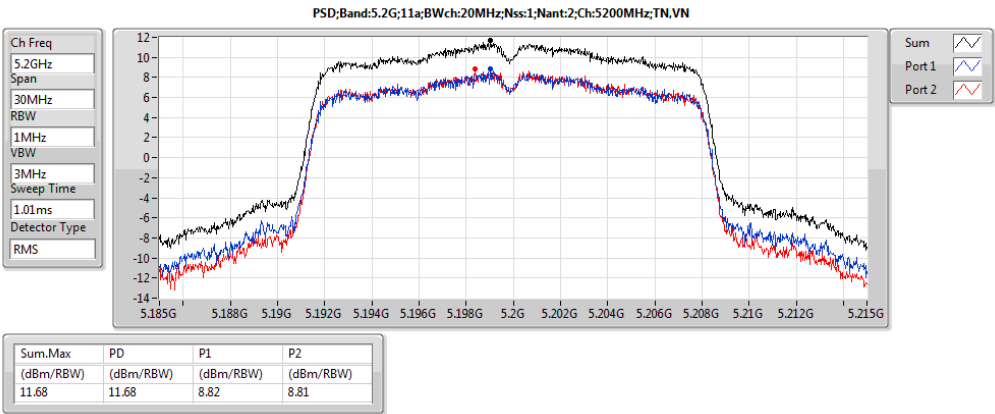
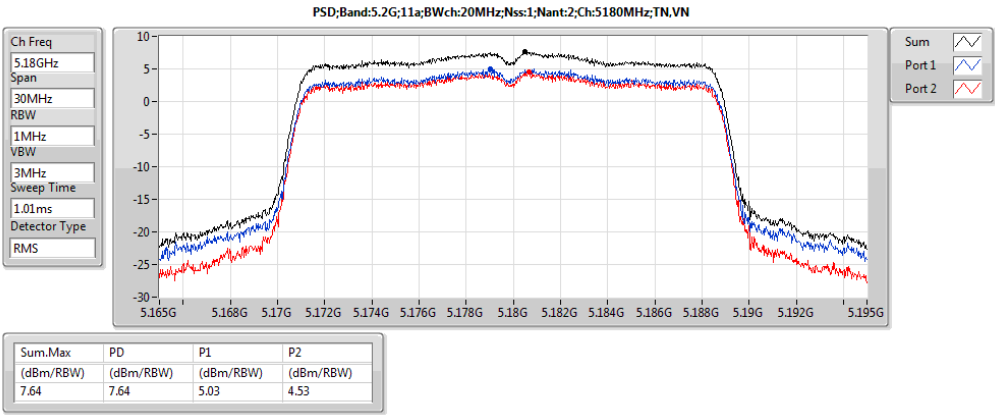
DG = Directional Gain; **PD** = Power Density
P1 = Port 1 PD; **P2** = Port 2 PD; **P3** = Port 3 PD; **P4** = Port 4 PD;



Result

Mode	Result	Meas.RBW (Hz)	Lim.RBW (Hz)	BWCF (dB)	DG (dBi)	PD (dBm/RBW)	PD.Limit (dBm/RBW)	EIRP.PD (dBm/RBW)	EIRP.PD.Li m (dBm/RBW)	P1 (dBm/RBW)	P2 (dBm/RBW)
5.2G;11a;20;1;2;5180;L;TN,VN	Pass	1M	1M	0.00	7.12	7.64	15.88	14.76	Inf	5.03	4.53
5.2G;11a;20;1;2;5200;M;TN,VN	Pass	1M	1M	0.00	7.12	11.68	15.88	18.80	Inf	8.82	8.81
5.2G;11a;20;1;2;5240;H;TN,VN	Pass	1M	1M	0.00	7.12	10.05	15.88	17.17	Inf	7.40	7.21
5.2G;VHT20;20;1;(M0);2;5180;L;TN,VN	Pass	1M	1M	0.00	7.12	10.84	15.88	17.96	Inf	7.89	8.04
5.2G;VHT20;20;1;(M0);2;5200;M;TN,VN	Pass	1M	1M	0.00	7.12	10.80	15.88	17.92	Inf	7.91	7.91
5.2G;VHT20;20;1;(M0);2;5240;H;TN,VN	Pass	1M	1M	0.00	7.12	9.36	15.88	16.48	Inf	6.62	6.57
5.2G;VHT40;40;1;(M0);2;5190;L;TN,VN	Pass	1M	1M	0.00	7.12	6.16	15.88	13.28	Inf	2.83	3.62
5.2G;VHT40;40;1;(M0);2;5230;H;TN,VN	Pass	1M	1M	0.00	7.12	6.61	15.88	13.73	Inf	3.70	3.93
5.2G;VHT80;80;1;(M0);2;5210;S;TN,VN	Pass	1M	1M	0.00	7.12	0.98	15.88	8.10	Inf	-1.97	-1.43

DG = Directional Gain; PD = Power Density
P1 = Port 1 PD; P2 = Port 2 PD; P3 = Port 3 PD; P4 = Port 4 PD;





Summary

Mode	Result	Ch (Hz)	Center (Hz)	Fl (Hz)	Fh (Hz)	ppm	Limit (ppm)	Port	Remark
5.2G;11a;20;1;2;5200;M;TN,VL	Pass	5.2G	5.19996791G	NaN	NaN	6.172	20	1	5 min



Result

Mode	Result	Ch (Hz)	Center (Hz)	FI (Hz)	Fh (Hz)	ppm	Limit (ppm)	Port	Remark
5.2G;11a;20;1;2;5200;M;TN,VN	Pass	5.2G	5.19996794G	NaN	NaN	6.166	20	1	0 min
5.2G;11a;20;1;2;5200;M;TN,VN	Pass	5.2G	5.19996793G	NaN	NaN	6.167	20	1	2 min
5.2G;11a;20;1;2;5200;M;TN,VN	Pass	5.2G	5.19996792G	NaN	NaN	6.169	20	1	5 min
5.2G;11a;20;1;2;5200;M;TN,VN	Pass	5.2G	5.19996793G	NaN	NaN	6.168	20	1	10 min
5.2G;11a;20;1;2;5200;M;TN,VL	Pass	5.2G	5.19996791G	NaN	NaN	6.17	20	1	0 min
5.2G;11a;20;1;2;5200;M;TN,VL	Pass	5.2G	5.19996792G	NaN	NaN	6.17	20	1	2 min
5.2G;11a;20;1;2;5200;M;TN,VL	Pass	5.2G	5.19996791G	NaN	NaN	6.172	20	1	5 min
5.2G;11a;20;1;2;5200;M;TN,VL	Pass	5.2G	5.19996791G	NaN	NaN	6.171	20	1	10 min
5.2G;11a;20;1;2;5200;M;TN,VH	Pass	5.2G	5.1999719G	NaN	NaN	5.403	20	1	0 min
5.2G;11a;20;1;2;5200;M;TN,VH	Pass	5.2G	5.1999719G	NaN	NaN	5.403	20	1	2 min
5.2G;11a;20;1;2;5200;M;TN,VH	Pass	5.2G	5.1999719G	NaN	NaN	5.404	20	1	5 min
5.2G;11a;20;1;2;5200;M;TN,VH	Pass	5.2G	5.1999719G	NaN	NaN	5.404	20	1	10 min
5.2G;11a;20;1;2;5200;M;T45,VN	Pass	5.2G	5.20002915G	NaN	NaN	5.605	20	1	0 min
5.2G;11a;20;1;2;5200;M;T45,VN	Pass	5.2G	5.20002914G	NaN	NaN	5.603	20	1	2 min
5.2G;11a;20;1;2;5200;M;T45,VN	Pass	5.2G	5.20002919G	NaN	NaN	5.613	20	1	5 min
5.2G;11a;20;1;2;5200;M;T45,VN	Pass	5.2G	5.20002918G	NaN	NaN	5.611	20	1	10 min
5.2G;11a;20;1;2;5200;M;T40,VN	Pass	5.2G	5.20000307G	NaN	NaN	0.59	20	1	0 min
5.2G;11a;20;1;2;5200;M;T40,VN	Pass	5.2G	5.20000313G	NaN	NaN	0.601	20	1	2 min
5.2G;11a;20;1;2;5200;M;T40,VN	Pass	5.2G	5.20000314G	NaN	NaN	0.604	20	1	5 min
5.2G;11a;20;1;2;5200;M;T40,VN	Pass	5.2G	5.20000312G	NaN	NaN	0.6	20	1	10 min
5.2G;11a;20;1;2;5200;M;T30,VN	Pass	5.2G	5.19998215G	NaN	NaN	3.432	20	1	0 min
5.2G;11a;20;1;2;5200;M;T30,VN	Pass	5.2G	5.19998217G	NaN	NaN	3.428	20	1	2 min
5.2G;11a;20;1;2;5200;M;T30,VN	Pass	5.2G	5.19998219G	NaN	NaN	3.426	20	1	5 min
5.2G;11a;20;1;2;5200;M;T30,VN	Pass	5.2G	5.19998221G	NaN	NaN	3.421	20	1	10 min
5.2G;11a;20;1;2;5200;M;T20,VN	Pass	5.2G	5.19997062G	NaN	NaN	5.65	20	1	0 min
5.2G;11a;20;1;2;5200;M;T20,VN	Pass	5.2G	5.19997064G	NaN	NaN	5.645	20	1	2 min
5.2G;11a;20;1;2;5200;M;T20,VN	Pass	5.2G	5.19997064G	NaN	NaN	5.645	20	1	5 min
5.2G;11a;20;1;2;5200;M;T20,VN	Pass	5.2G	5.19997065G	NaN	NaN	5.645	20	1	10 min
5.2G;11a;20;1;2;5200;M;T10,VN	Pass	5.2G	5.19996791G	NaN	NaN	6.171	20	1	0 min
5.2G;11a;20;1;2;5200;M;T10,VN	Pass	5.2G	5.1999679G	NaN	NaN	6.172	20	1	2 min
5.2G;11a;20;1;2;5200;M;T10,VN	Pass	5.2G	5.19996793G	NaN	NaN	6.167	20	1	5 min
5.2G;11a;20;1;2;5200;M;T10,VN	Pass	5.2G	5.19996792G	NaN	NaN	6.17	20	1	10 min
5.2G;11a;20;1;2;5200;M;T0,VN	Pass	5.2G	5.19997131G	NaN	NaN	5.517	20	1	0 min
5.2G;11a;20;1;2;5200;M;T0,VN	Pass	5.2G	5.19997131G	NaN	NaN	5.517	20	1	2 min
5.2G;11a;20;1;2;5200;M;T0,VN	Pass	5.2G	5.19997136G	NaN	NaN	5.508	20	1	5 min
5.2G;11a;20;1;2;5200;M;T0,VN	Pass	5.2G	5.19997138G	NaN	NaN	5.504	20	1	10 min



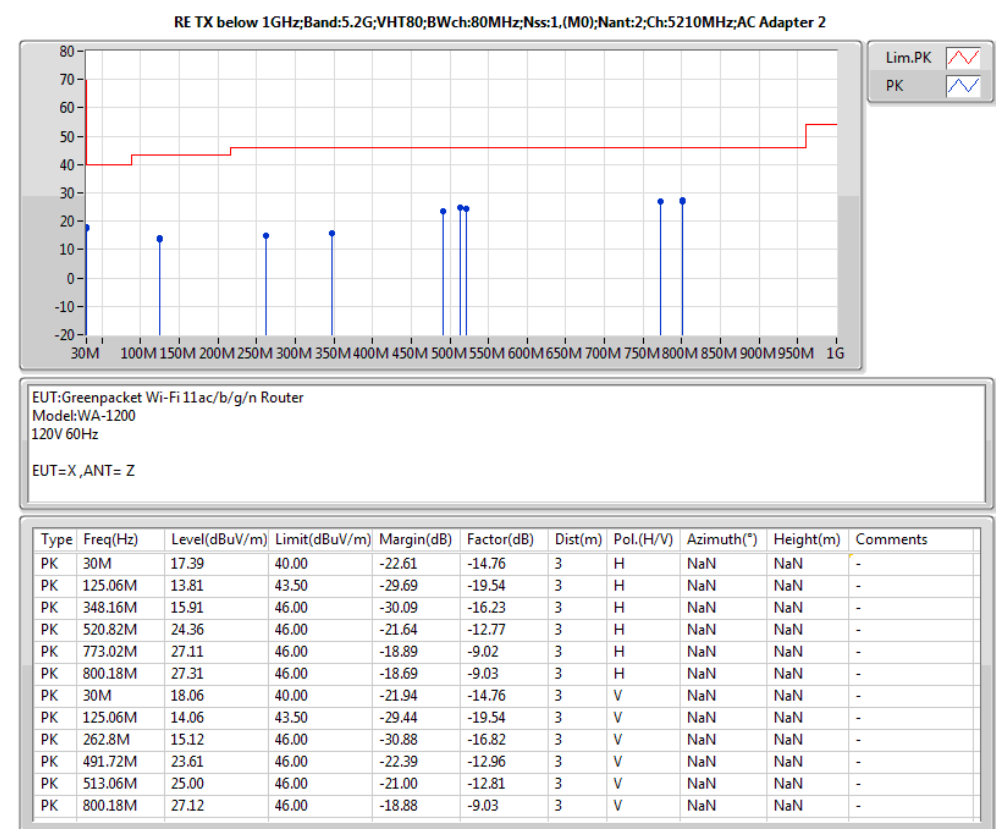
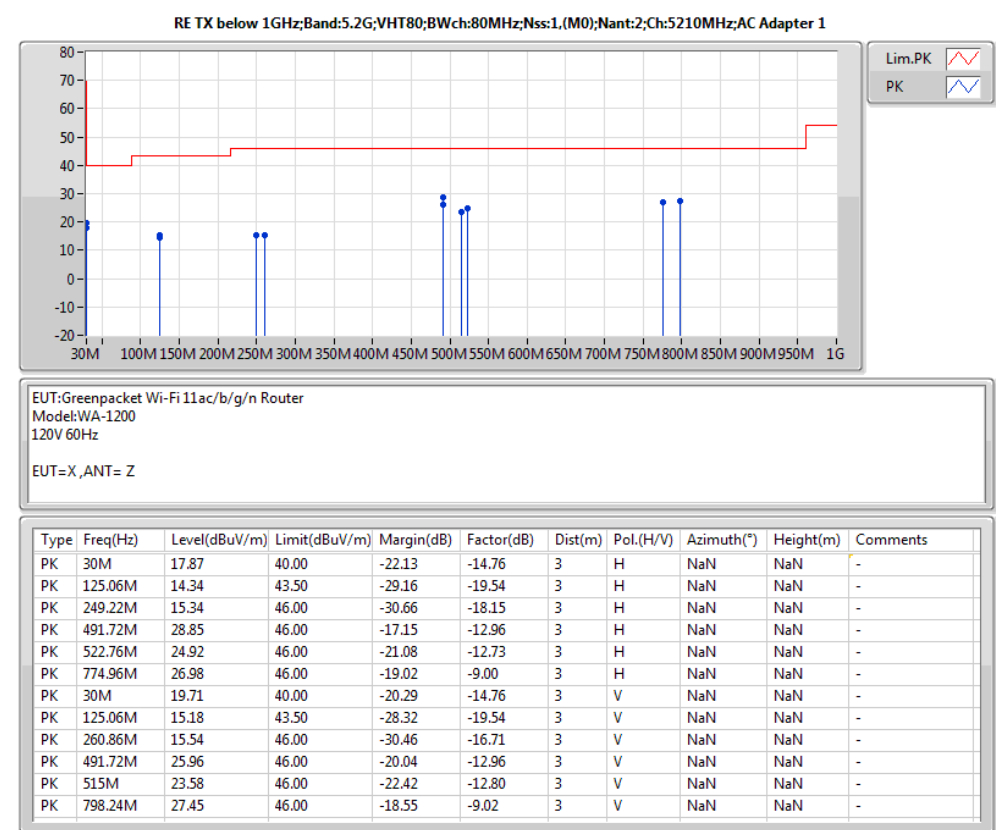
Summary

Mode	Result	Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Pol. (H/V)	Azimuth (°)	Height (m)	Comments
5.2G;VHT80:80:1,(M0);2:5210:S;AC Adapter 1	Pass	PK	491.72M	28.85	46.00	-17.15	-12.96	3	H	NaN	NaN	-



Result

Mode	Result	Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Pol. (H/V)	Azimuth (°)	Height (m)	Comments
5.2G:VHT80:80:1,(M0):2:5210:S:AC Adapter 1	Pass	PK	30M	17.87	40.00	-22.13	-14.76	3	H	NaN	NaN	-
5.2G:VHT80:80:1,(M0):2:5210:S:AC Adapter 1	Pass	PK	125.06M	14.34	43.50	-29.16	-19.54	3	H	NaN	NaN	-
5.2G:VHT80:80:1,(M0):2:5210:S:AC Adapter 1	Pass	PK	249.22M	15.34	46.00	-30.66	-18.15	3	H	NaN	NaN	-
5.2G:VHT80:80:1,(M0):2:5210:S:AC Adapter 1	Pass	PK	491.72M	28.85	46.00	-17.15	-12.96	3	H	NaN	NaN	-
5.2G:VHT80:80:1,(M0):2:5210:S:AC Adapter 1	Pass	PK	522.76M	24.92	46.00	-21.08	-12.73	3	H	NaN	NaN	-
5.2G:VHT80:80:1,(M0):2:5210:S:AC Adapter 1	Pass	PK	774.96M	26.98	46.00	-19.02	-9.00	3	H	NaN	NaN	-
5.2G:VHT80:80:1,(M0):2:5210:S:AC Adapter 1	Pass	PK	30M	19.71	40.00	-20.29	-14.76	3	V	NaN	NaN	-
5.2G:VHT80:80:1,(M0):2:5210:S:AC Adapter 1	Pass	PK	125.06M	15.18	43.50	-28.32	-19.54	3	V	NaN	NaN	-
5.2G:VHT80:80:1,(M0):2:5210:S:AC Adapter 1	Pass	PK	260.86M	15.54	46.00	-30.46	-16.71	3	V	NaN	NaN	-
5.2G:VHT80:80:1,(M0):2:5210:S:AC Adapter 1	Pass	PK	491.72M	25.96	46.00	-20.04	-12.96	3	V	NaN	NaN	-
5.2G:VHT80:80:1,(M0):2:5210:S:AC Adapter 1	Pass	PK	515M	23.58	46.00	-22.42	-12.80	3	V	NaN	NaN	-
5.2G:VHT80:80:1,(M0):2:5210:S:AC Adapter 1	Pass	PK	798.24M	27.45	46.00	-18.55	-9.02	3	V	NaN	NaN	-
5.2G:VHT80:80:1,(M0):2:5210:S:AC Adapter 2	Pass	PK	30M	17.39	40.00	-22.61	-14.76	3	H	NaN	NaN	-
5.2G:VHT80:80:1,(M0):2:5210:S:AC Adapter 2	Pass	PK	125.06M	13.81	43.50	-29.69	-19.54	3	H	NaN	NaN	-
5.2G:VHT80:80:1,(M0):2:5210:S:AC Adapter 2	Pass	PK	348.16M	15.91	46.00	-30.09	-16.23	3	H	NaN	NaN	-
5.2G:VHT80:80:1,(M0):2:5210:S:AC Adapter 2	Pass	PK	520.82M	24.36	46.00	-21.64	-12.77	3	H	NaN	NaN	-
5.2G:VHT80:80:1,(M0):2:5210:S:AC Adapter 2	Pass	PK	773.02M	27.11	46.00	-18.89	-9.02	3	H	NaN	NaN	-
5.2G:VHT80:80:1,(M0):2:5210:S:AC Adapter 2	Pass	PK	800.18M	27.31	46.00	-18.69	-9.03	3	H	NaN	NaN	-
5.2G:VHT80:80:1,(M0):2:5210:S:AC Adapter 2	Pass	PK	30M	18.06	40.00	-21.94	-14.76	3	V	NaN	NaN	-
5.2G:VHT80:80:1,(M0):2:5210:S:AC Adapter 2	Pass	PK	125.06M	14.06	43.50	-29.44	-19.54	3	V	NaN	NaN	-
5.2G:VHT80:80:1,(M0):2:5210:S:AC Adapter 2	Pass	PK	262.8M	15.12	46.00	-30.88	-16.82	3	V	NaN	NaN	-
5.2G:VHT80:80:1,(M0):2:5210:S:AC Adapter 2	Pass	PK	491.72M	23.61	46.00	-22.39	-12.96	3	V	NaN	NaN	-
5.2G:VHT80:80:1,(M0):2:5210:S:AC Adapter 2	Pass	PK	513.06M	25.00	46.00	-21.00	-12.81	3	V	NaN	NaN	-
5.2G:VHT80:80:1,(M0):2:5210:S:AC Adapter 2	Pass	PK	800.18M	27.12	46.00	-18.88	-9.03	3	V	NaN	NaN	-





Summary

Mode	Result	Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Pol. (H/V)	Azimuth (°)	Height (m)	Comments
5.2G;11a;20;1;2;5240;H;AC Adapter 1	Pass	AV	15.72G	52.90	54.00	-1.10	13.94	3	V	NaN	NaN	-



Result

Mode	Result	Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Pol. (H/V)	Azimuth (°)	Height (m)	Comments
5.2G;11a;20;1;2;5180:L:AC Adapter 1	Pass	AV	5.1498G	52.35	54.00	-1.65	2.71	3	V	NaN	NaN	-
5.2G;11a;20;1;2;5180:L:AC Adapter 1	Pass	AV	5.179G	101.42	Inf	-Inf	2.76	3	V	NaN	NaN	-
5.2G;11a;20;1;2;5180:L:AC Adapter 1	Pass	PK	5.1488G	64.28	74.00	-9.72	2.71	3	V	NaN	NaN	-
5.2G;11a;20;1;2;5180:L:AC Adapter 1	Pass	PK	5.1778G	108.17	Inf	-Inf	2.76	3	V	NaN	NaN	-
5.2G;11a;20;1;2;5180:L:AC Adapter 1	Pass	AV	8.052G	39.81	54.00	-14.19	9.54	3	H	NaN	NaN	-
5.2G;11a;20;1;2;5180:L:AC Adapter 1	Pass	AV	15.54G	46.76	54.00	-7.24	14.77	3	H	NaN	NaN	-
5.2G;11a;20;1;2;5180:L:AC Adapter 1	Pass	PK	8.052G	51.87	74.00	-22.13	9.54	3	H	NaN	NaN	-
5.2G;11a;20;1;2;5180:L:AC Adapter 1	Pass	PK	10.36G	56.41	68.20	-11.79	13.04	3	H	NaN	NaN	-
5.2G;11a;20;1;2;5180:L:AC Adapter 1	Pass	PK	15.54G	59.04	74.00	-14.96	14.77	3	H	NaN	NaN	-
5.2G;11a;20;1;2;5180:L:AC Adapter 1	Pass	AV	15.54G	47.54	54.00	-6.46	14.77	3	V	NaN	NaN	-
5.2G;11a;20;1;2;5180:L:AC Adapter 1	Pass	PK	8.764G	52.90	68.20	-15.30	9.69	3	V	NaN	NaN	-
5.2G;11a;20;1;2;5180:L:AC Adapter 1	Pass	PK	10.36G	56.82	68.20	-11.38	13.04	3	V	NaN	NaN	-
5.2G;11a;20;1;2;5180:L:AC Adapter 1	Pass	PK	15.54G	58.92	74.00	-15.08	14.77	3	V	NaN	NaN	-
5.2G;11a;20;1;2;5200:M:AC Adapter 1	Pass	AV	5.1498G	50.62	54.00	-3.38	2.71	3	V	NaN	NaN	-
5.2G;11a;20;1;2;5200:M:AC Adapter 1	Pass	AV	5.199G	102.52	Inf	-Inf	2.80	3	V	NaN	NaN	-
5.2G;11a;20;1;2;5200:M:AC Adapter 1	Pass	AV	5.394G	45.71	54.00	-8.29	3.12	3	V	NaN	NaN	-
5.2G;11a;20;1;2;5200:M:AC Adapter 1	Pass	PK	5.1498G	62.16	74.00	-11.84	2.71	3	V	NaN	NaN	-
5.2G;11a;20;1;2;5200:M:AC Adapter 1	Pass	PK	5.199G	109.68	Inf	-Inf	2.80	3	V	NaN	NaN	-
5.2G;11a;20;1;2;5200:M:AC Adapter 1	Pass	PK	5.3976G	56.18	74.00	-17.82	3.13	3	V	NaN	NaN	-
5.2G;11a;20;1;2;5200:M:AC Adapter 1	Pass	AV	15.6G	46.17	54.00	-7.83	14.49	3	H	NaN	NaN	-
5.2G;11a;20;1;2;5200:M:AC Adapter 1	Pass	PK	7.152G	50.68	68.20	-17.52	7.83	3	H	NaN	NaN	-
5.2G;11a;20;1;2;5200:M:AC Adapter 1	Pass	PK	10.4G	56.75	68.20	-11.45	13.14	3	H	NaN	NaN	-
5.2G;11a;20;1;2;5200:M:AC Adapter 1	Pass	PK	15.6G	57.74	74.00	-16.26	14.49	3	H	NaN	NaN	-
5.2G;11a;20;1;2;5200:M:AC Adapter 1	Pass	AV	15.6G	46.37	54.00	-7.63	14.49	3	V	NaN	NaN	-
5.2G;11a;20;1;2;5200:M:AC Adapter 1	Pass	PK	8.704G	52.38	68.20	-15.82	9.62	3	V	NaN	NaN	-
5.2G;11a;20;1;2;5200:M:AC Adapter 1	Pass	PK	10.4G	56.43	68.20	-11.77	13.04	3	V	NaN	NaN	-
5.2G;11a;20;1;2;5200:M:AC Adapter 1	Pass	PK	15.6G	57.99	74.00	-16.01	14.49	3	V	NaN	NaN	-
5.2G;11a;20;1;2;5240:H:AC Adapter 1	Pass	AV	5.1378G	46.24	54.00	-7.76	2.69	3	V	NaN	NaN	-
5.2G;11a;20;1;2;5240:H:AC Adapter 1	Pass	AV	5.2392G	106.27	Inf	-Inf	2.86	3	V	NaN	NaN	-
5.2G;11a;20;1;2;5240:H:AC Adapter 1	Pass	AV	5.3676G	46.03	54.00	-7.97	3.07	3	V	NaN	NaN	-
5.2G;11a;20;1;2;5240:H:AC Adapter 1	Pass	PK	5.1318G	56.90	74.00	-17.10	2.68	3	V	NaN	NaN	-
5.2G;11a;20;1;2;5240:H:AC Adapter 1	Pass	PK	5.241G	114.06	Inf	-Inf	2.86	3	V	NaN	NaN	-
5.2G;11a;20;1;2;5240:H:AC Adapter 1	Pass	PK	5.3586G	56.00	74.00	-18.00	3.06	3	V	NaN	NaN	-
5.2G;11a;20;1;2;5240:H:AC Adapter 1	Pass	AV	15.72G	48.16	54.00	-5.84	13.94	3	H	NaN	NaN	-
5.2G;11a;20;1;2;5240:H:AC Adapter 1	Pass	PK	8.868G	53.70	68.20	-14.50	9.80	3	H	NaN	NaN	-
5.2G;11a;20;1;2;5240:H:AC Adapter 1	Pass	PK	10.48G	56.96	68.20	-11.24	13.33	3	H	NaN	NaN	-
5.2G;11a;20;1;2;5240:H:AC Adapter 1	Pass	PK	15.72G	60.14	74.00	-13.86	13.94	3	H	NaN	NaN	-
5.2G;11a;20;1;2;5240:H:AC Adapter 1	Pass	AV	15.72G	52.90	54.00	-1.10	13.94	3	V	NaN	NaN	-
5.2G;11a;20;1;2;5240:H:AC Adapter 1	Pass	PK	7.765G	51.56	68.20	-16.64	9.21	3	V	NaN	NaN	-
5.2G;11a;20;1;2;5240:H:AC Adapter 1	Pass	PK	10.48G	56.95	68.20	-11.25	13.33	3	V	NaN	NaN	-
5.2G;11a;20;1;2;5240:H:AC Adapter 1	Pass	PK	15.72G	64.12	74.00	-9.88	13.94	3	V	NaN	NaN	-
5.2G;VHT20;20;1,(M0);2;5180:L:AC Adapter 1	Pass	AV	5.1499G	52.44	54.00	-1.56	2.71	3	V	NaN	NaN	-
5.2G;VHT20;20;1,(M0);2;5180:L:AC Adapter 1	Pass	AV	5.1791G	100.99	Inf	-Inf	2.76	3	V	NaN	NaN	-
5.2G;VHT20;20;1,(M0);2;5180:L:AC Adapter 1	Pass	PK	5.1474G	64.24	74.00	-9.76	2.71	3	V	NaN	NaN	-
5.2G;VHT20;20;1,(M0);2;5180:L:AC Adapter 1	Pass	PK	5.18G	108.25	Inf	-Inf	2.76	3	V	NaN	NaN	-
5.2G;VHT20;20;1,(M0);2;5180:L:AC Adapter 1	Pass	AV	15.54G	46.34	54.00	-7.66	14.77	3	H	NaN	NaN	-
5.2G;VHT20;20;1,(M0);2;5180:L:AC Adapter 1	Pass	PK	8.726G	52.73	68.20	-15.47	9.65	3	H	NaN	NaN	-
5.2G;VHT20;20;1,(M0);2;5180:L:AC Adapter 1	Pass	PK	10.36G	56.35	68.20	-11.85	13.04	3	H	NaN	NaN	-
5.2G;VHT20;20;1,(M0);2;5180:L:AC Adapter 1	Pass	PK	15.54G	58.17	74.00	-15.83	14.77	3	H	NaN	NaN	-
5.2G;VHT20;20;1,(M0);2;5180:L:AC Adapter 1	Pass	AV	15.54G	46.77	54.00	-7.23	14.77	3	V	NaN	NaN	-
5.2G;VHT20;20;1,(M0);2;5180:L:AC Adapter 1	Pass	PK	8.684G	52.80	68.20	-15.40	9.60	3	V	NaN	NaN	-
5.2G;VHT20;20;1,(M0);2;5180:L:AC Adapter 1	Pass	PK	10.36G	56.86	68.20	-11.34	13.04	3	V	NaN	NaN	-
5.2G;VHT20;20;1,(M0);2;5180:L:AC Adapter 1	Pass	PK	15.54G	58.38	74.00	-15.62	14.77	3	V	NaN	NaN	-
5.2G;VHT20;20;1,(M0);2;5200:M:AC Adapter 1	Pass	AV	5.1498G	50.36	54.00	-3.64	2.71	3	V	NaN	NaN	-
5.2G;VHT20;20;1,(M0);2;5200:M:AC Adapter 1	Pass	AV	5.199G	102.19	Inf	-Inf	2.80	3	V	NaN	NaN	-
5.2G;VHT20;20;1,(M0);2;5200:M:AC Adapter 1	Pass	AV	5.385G	45.68	54.00	-8.32	3.10	3	V	NaN	NaN	-
5.2G;VHT20;20;1,(M0);2;5200:M:AC Adapter 1	Pass	PK	5.1498G	62.03	74.00	-11.97	2.71	3	V	NaN	NaN	-
5.2G;VHT20;20;1,(M0);2;5200:M:AC Adapter 1	Pass	PK	5.1966G	109.80	Inf	-Inf	2.79	3	V	NaN	NaN	-
5.2G;VHT20;20;1,(M0);2;5200:M:AC Adapter 1	Pass	PK	5.3604G	56.09	74.00	-17.91	3.06	3	V	NaN	NaN	-
5.2G;VHT20;20;1,(M0);2;5200:M:AC Adapter 1	Pass	AV	15.6G	49.25	54.00	-4.75	14.49	3	H	NaN	NaN	-
5.2G;VHT20;20;1,(M0);2;5200:M:AC Adapter 1	Pass	PK	7.152G	51.19	68.20	-17.01	8.34	3	H	NaN	NaN	-



Mode	Result	Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Pol. (H/V)	Azimuth (°)	Height (m)	Comments
5.2G;VHT20;20;1,(M0);2:5200;M;AC Adapter 1	Pass	PK	10.4G	58.67	68.20	-9.53	15.06	3	H	NaN	NaN	-
5.2G;VHT20;20;1,(M0);2:5200;M;AC Adapter 1	Pass	PK	15.6G	62.69	74.00	-11.31	14.49	3	H	NaN	NaN	-
5.2G;VHT20;20;1,(M0);2:5200;M;AC Adapter 1	Pass	AV	15.6G	52.76	54.00	-1.24	14.49	3	V	NaN	NaN	-
5.2G;VHT20;20;1,(M0);2:5200;M;AC Adapter 1	Pass	PK	8.704G	52.38	68.20	-15.82	9.62	3	V	NaN	NaN	-
5.2G;VHT20;20;1,(M0);2:5200;M;AC Adapter 1	Pass	PK	10.4G	56.43	68.20	-11.77	13.04	3	V	NaN	NaN	-
5.2G;VHT20;20;1,(M0);2:5200;M;AC Adapter 1	Pass	PK	15.6G	65.34	74.00	-8.66	14.49	3	V	NaN	NaN	-
5.2G;VHT20;20;1,(M0);2:5240;H;AC Adapter 1	Pass	AV	5.1498G	46.64	54.00	-7.36	2.71	3	V	NaN	NaN	-
5.2G;VHT20;20;1,(M0);2:5240;H;AC Adapter 1	Pass	AV	5.2392G	103.73	Inf	-Inf	2.86	3	V	NaN	NaN	-
5.2G;VHT20;20;1,(M0);2:5240;H;AC Adapter 1	Pass	AV	5.3586G	45.91	54.00	-8.09	3.06	3	V	NaN	NaN	-
5.2G;VHT20;20;1,(M0);2:5240;H;AC Adapter 1	Pass	PK	5.112G	56.92	74.00	-17.08	2.64	3	V	NaN	NaN	-
5.2G;VHT20;20;1,(M0);2:5240;H;AC Adapter 1	Pass	PK	5.2368G	111.81	Inf	-Inf	2.86	3	V	NaN	NaN	-
5.2G;VHT20;20;1,(M0);2:5240;H;AC Adapter 1	Pass	PK	5.3592G	56.39	74.00	-17.61	3.06	3	V	NaN	NaN	-
5.2G;VHT20;20;1,(M0);2:5240;H;AC Adapter 1	Pass	AV	15.72G	48.02	54.00	-5.98	13.94	3	H	NaN	NaN	-
5.2G;VHT20;20;1,(M0);2:5240;H;AC Adapter 1	Pass	PK	8.792G	52.96	68.20	-15.24	9.72	3	H	NaN	NaN	-
5.2G;VHT20;20;1,(M0);2:5240;H;AC Adapter 1	Pass	PK	10.48G	56.18	68.20	-12.02	13.33	3	H	NaN	NaN	-
5.2G;VHT20;20;1,(M0);2:5240;H;AC Adapter 1	Pass	PK	15.72G	60.05	74.00	-13.95	13.94	3	H	NaN	NaN	-
5.2G;VHT20;20;1,(M0);2:5240;H;AC Adapter 1	Pass	AV	15.72G	52.60	54.00	-1.40	13.94	3	V	NaN	NaN	-
5.2G;VHT20;20;1,(M0);2:5240;H;AC Adapter 1	Pass	PK	8.828G	53.20	68.20	-15.00	9.76	3	V	NaN	NaN	-
5.2G;VHT20;20;1,(M0);2:5240;H;AC Adapter 1	Pass	PK	10.48G	56.82	68.20	-11.38	13.33	3	V	NaN	NaN	-
5.2G;VHT20;20;1,(M0);2:5240;H;AC Adapter 1	Pass	PK	15.72G	64.97	74.00	-9.03	13.94	3	V	NaN	NaN	-
5.2G;VHT40;40;1,(M0);2:5190;L;AC Adapter 1	Pass	AV	5.14994G	52.74	54.00	-1.26	2.71	3	V	NaN	NaN	-
5.2G;VHT40;40;1,(M0);2:5190;L;AC Adapter 1	Pass	AV	5.18866G	93.98	Inf	-Inf	2.78	3	V	NaN	NaN	-
5.2G;VHT40;40;1,(M0);2:5190;L;AC Adapter 1	Pass	PK	5.14686G	65.64	74.00	-8.36	2.70	3	V	NaN	NaN	-
5.2G;VHT40;40;1,(M0);2:5190;L;AC Adapter 1	Pass	PK	5.18756G	101.00	Inf	-Inf	2.78	3	V	NaN	NaN	-
5.2G;VHT40;40;1,(M0);2:5190;L;AC Adapter 1	Pass	AV	15.57G	46.26	54.00	-7.74	14.63	3	H	NaN	NaN	-
5.2G;VHT40;40;1,(M0);2:5190;L;AC Adapter 1	Pass	PK	8.708G	51.76	68.20	-16.44	9.63	3	H	NaN	NaN	-
5.2G;VHT40;40;1,(M0);2:5190;L;AC Adapter 1	Pass	PK	10.38G	56.38	68.20	-11.82	13.09	3	H	NaN	NaN	-
5.2G;VHT40;40;1,(M0);2:5190;L;AC Adapter 1	Pass	PK	15.57G	58.98	74.00	-15.02	14.63	3	H	NaN	NaN	-
5.2G;VHT40;40;1,(M0);2:5190;L;AC Adapter 1	Pass	AV	15.57G	48.92	54.00	-5.08	14.63	3	V	NaN	NaN	-
5.2G;VHT40;40;1,(M0);2:5190;L;AC Adapter 1	Pass	PK	8.804G	52.26	68.20	-15.94	9.73	3	V	NaN	NaN	-
5.2G;VHT40;40;1,(M0);2:5190;L;AC Adapter 1	Pass	PK	10.38G	56.65	68.20	-11.55	13.09	3	V	NaN	NaN	-
5.2G;VHT40;40;1,(M0);2:5190;L;AC Adapter 1	Pass	PK	15.57G	59.11	74.00	-14.89	14.63	3	V	NaN	NaN	-
5.2G;VHT40;40;1,(M0);2:5230;H;AC Adapter 1	Pass	AV	5.1498G	52.83	54.00	-1.17	2.71	3	V	NaN	NaN	-
5.2G;VHT40;40;1,(M0);2:5230;H;AC Adapter 1	Pass	AV	5.2284G	98.66	Inf	-Inf	2.84	3	V	NaN	NaN	-
5.2G;VHT40;40;1,(M0);2:5230;H;AC Adapter 1	Pass	AV	5.3508G	46.76	54.00	-7.24	3.04	3	V	NaN	NaN	-
5.2G;VHT40;40;1,(M0);2:5230;H;AC Adapter 1	Pass	PK	5.1468G	65.65	74.00	-8.35	2.70	3	V	NaN	NaN	-
5.2G;VHT40;40;1,(M0);2:5230;H;AC Adapter 1	Pass	PK	5.2266G	106.33	Inf	-Inf	2.84	3	V	NaN	NaN	-
5.2G;VHT40;40;1,(M0);2:5230;H;AC Adapter 1	Pass	PK	5.3526G	56.62	74.00	-17.38	3.04	3	V	NaN	NaN	-
5.2G;VHT40;40;1,(M0);2:5230;H;AC Adapter 1	Pass	AV	15.69G	46.54	54.00	-7.46	14.08	3	H	NaN	NaN	-
5.2G;VHT40;40;1,(M0);2:5230;H;AC Adapter 1	Pass	PK	8.8G	52.83	68.20	-15.37	9.73	3	H	NaN	NaN	-
5.2G;VHT40;40;1,(M0);2:5230;H;AC Adapter 1	Pass	PK	10.46G	56.05	68.20	-12.15	13.28	3	H	NaN	NaN	-
5.2G;VHT40;40;1,(M0);2:5230;H;AC Adapter 1	Pass	PK	15.69G	58.43	74.00	-15.57	14.08	3	H	NaN	NaN	-
5.2G;VHT40;40;1,(M0);2:5230;H;AC Adapter 1	Pass	AV	7.516G	39.37	54.00	-14.63	8.85	3	V	NaN	NaN	-
5.2G;VHT40;40;1,(M0);2:5230;H;AC Adapter 1	Pass	AV	15.69G	47.89	54.00	-6.11	14.08	3	V	NaN	NaN	-
5.2G;VHT40;40;1,(M0);2:5230;H;AC Adapter 1	Pass	PK	7.516G	50.89	74.00	-23.11	8.85	3	V	NaN	NaN	-
5.2G;VHT40;40;1,(M0);2:5230;H;AC Adapter 1	Pass	PK	10.46G	56.32	68.20	-11.88	13.28	3	V	NaN	NaN	-
5.2G;VHT40;40;1,(M0);2:5230;H;AC Adapter 1	Pass	PK	15.69G	58.64	74.00	-15.36	14.08	3	V	NaN	NaN	-
5.2G;VHT80;80;1,(M0);2:5210;S;AC Adapter 1	Pass	AV	5.1498G	52.74	54.00	-1.26	2.71	3	V	NaN	NaN	-
5.2G;VHT80;80;1,(M0);2:5210;S;AC Adapter 1	Pass	AV	5.1972G	87.52	Inf	-Inf	2.79	3	V	NaN	NaN	-
5.2G;VHT80;80;1,(M0);2:5210;S;AC Adapter 1	Pass	AV	5.3616G	45.83	54.00	-8.17	3.06	3	V	NaN	NaN	-
5.2G;VHT80;80;1,(M0);2:5210;S;AC Adapter 1	Pass	PK	5.1456G	64.72	74.00	-9.28	2.70	3	V	NaN	NaN	-
5.2G;VHT80;80;1,(M0);2:5210;S;AC Adapter 1	Pass	PK	5.196G	96.39	Inf	-Inf	2.79	3	V	NaN	NaN	-
5.2G;VHT80;80;1,(M0);2:5210;S;AC Adapter 1	Pass	PK	5.3904G	57.12	74.00	-16.88	3.11	3	V	NaN	NaN	-
5.2G;VHT80;80;1,(M0);2:5210;S;AC Adapter 1	Pass	AV	15.63G	48.65	54.00	-5.35	14.35	3	H	NaN	NaN	-
5.2G;VHT80;80;1,(M0);2:5210;S;AC Adapter 1	Pass	PK	8.016G	51.76	68.20	-16.44	9.55	3	H	NaN	NaN	-
5.2G;VHT80;80;1,(M0);2:5210;S;AC Adapter 1	Pass	PK	10.42G	56.26	68.20	-11.94	13.18	3	H	NaN	NaN	-
5.2G;VHT80;80;1,(M0);2:5210;S;AC Adapter 1	Pass	PK	15.63G	58.28	74.00	-15.72	14.35	3	H	NaN	NaN	-
5.2G;VHT80;80;1,(M0);2:5210;S;AC Adapter 1	Pass	AV	15.63G	48.27	54.00	-5.73	14.35	3	V	NaN	NaN	-
5.2G;VHT80;80;1,(M0);2:5210;S;AC Adapter 1	Pass	PK	7.972G	52.18	68.20	-16.02	9.51	3	V	NaN	NaN	-
5.2G;VHT80;80;1,(M0);2:5210;S;AC Adapter 1	Pass	PK	10.42G	56.46	68.20	-11.74	13.18	3	V	NaN	NaN	-
5.2G;VHT80;80;1,(M0);2:5210;S;AC Adapter 1	Pass	PK	15.63G	58.37	74.00	-15.63	14.35	3	V	NaN	NaN	-

