



FCC Test Report

Equipment : Dual band WiFi Router
Brand Name : Google
Model No. : AC-1304
FCC ID : A4RAC-1304
Standard : 47 CFR FCC Part 15.247
Operating Band : 2400 MHz – 2483.5 MHz
Function : ☒ Point-to-multipoint; ☐ Point-to-point
Applicant : Google Inc.
1600 Amphitheater Parkway, Mountain View, CA
94043
Manufacturer : Wistron NeWeb Corporation
20 Park Ave. II, Hsinchu Science Park, Hsinchu 308,
Taiwan

The product sample received on Sep. 14, 2016 and completely tested on Mar. 22, 2017. 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.

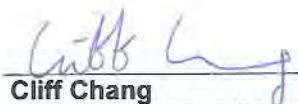

Cliff Chang
SPORTON INTERNATIONAL INC.





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Summary of Test Result

Conformance Test Specifications				
Report Clause	Ref. Std. Clause	Description	Limit	Result
1.1.2	15.203	Antenna Requirement	FCC 15.203	Complied
3.1	15.207	AC Power-line Conducted Emissions	FCC 15.207	Complied
3.2	15.247(a)	DTS Bandwidth	≥500kHz	Complied
3.3	15.247(b)	Fundamental Emission Output Power	Power [dBm]:30	Complied
3.4	15.247(e)	Power Spectral Density	PSD [dBm/3kHz]:8	Complied
3.5	15.247(d)	Emissions in Non-restricted Frequency Bands	Non-Restricted Bands: > 30 dBc	Complied
3.6	15.247(d)	Emissions in Restricted Frequency Bands	Restricted Bands: FCC 15.209	Complied

Note: This application is for a new FCC ID by removing the Zigbee module from original case, FCC ID: A4RNLS-1304-25. Based on the validation results on the new case, there is no significant difference between original case and the new case. So, no tests performed above 1GHz RSE for the new case.



SPORTON INTERNATIONAL INC.
TEL : 886-3-3273456
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FCC ID: A4RAC-1304

1 General Description

1.1 Information

1.1.1 RF General Information

Frequency Range (MHz)	IEEE Std. 802.11	Ch. Frequency (MHz)	Channel Number
2400-2483.5	b, g, n (HT20), ac (VHT20)	2412-2462	1-11 [11]
2400-2483.5	n (HT40), ac (VHT40)	2422-2452	3-9 [7]

Band	Mode	BWch (MHz)	Nant
2.4G	11b	20	2
2.4G	11g	20	2
2.4G	HT20	20	2
2.4G	HT20,BF	20	2
2.4G	VHT20	20	2
2.4G	VHT20,BF	20	2
2.4G	HT40	40	2
2.4G	HT40,BF	40	2
2.4G	VHT40	40	2
2.4G	VHT40,BF	40	2

Note:

- 2.4G is the 2.4GHz Band (2.4-2.4835GHz).
- 11b mode uses a combination of DSSS-DBPSK, DQPSK, CCK modulation.
- 11g, HT20 and HT40 use a combination of OFDM-BPSK, QPSK, 16QAM, 64QAM modulation.
- VHT20, VHT40 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.

1.1.2 Antenna Information

Ant.	Chain		Brand	Model No.	Antenna Type	Connector	Gain (dBi)		
	2.4 GHz	5 GHz					2.4 GHz	5 GHz	BT
1	1	2	WNC	N/A	LG material	I-PEX	3.53	4.56	-
2	2	-	WNC	N/A	LG material	I-PEX	3.53	-	-
3	-	1	WNC	N/A	LG material	I-PEX	-	4.56	-
4	3	-	WNC	N/A	LG material	I-PEX	-	-	5.46

Note: The EUT has four antennas.

For 2.4GHz function:

For IEEE 802.11b/g/n/ac mode (2TX/2RX):

Chain 1 and Chain 2 can be used as transmitting/receiving antenna.

Chain 1 and Chain 2 could transmit/receive simultaneously.

For 5GHz function:

For IEEE 802.11a/n/ac mode (2TX/2RX):

Chain 1 and Chain 2 can be use as transmitting antenna.

Chain 1 and Chain 2 could transmit/receive simultaneously.

For Bluetooth function:

Only Chain 3 can be used as transmitting/receiving antenna.

1.1.3 Mode Test Duty Cycle

Mode	DC	DCF (dB)
11b	0.996	0.017
11g	0.964	0.159
VHT20	0.984	0.07
VHT20,BF	1	0
VHT40	0.969	0.137
VHT40,BF	1	0

1.1.4 EUT Operational Condition

EUT Power Type	From Power Adapter		
Beamforming Function	☒	With beamforming for 802.11n/ac in 2.4GHz and 5GHz.	☐ Without beamforming

1.1.5 Table for Multiple source Listing

The EUT has three types, which are identical to each other in all aspects except for the following table:

EUT	PHY	U2
EUT 1	Main source	Second source (samsung)
EUT 2	Second source	Second source (samsung)
EUT 3	Main source	Main source (toshiba)

The PHY and U2 detail information as below:

Source	Model Name
PHY Main source	QCA8072
PHY Second source	QCA8075
U2 main source	Toshiba EMMC, THGBMDG5D1LBAIT
U2 second source	Samsung EMMC, KLM4G1FEPD-B031

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
- ♦ FCC KDB 558074 D01 v04
- ♦ FCC KDB 662911 D01 v02r01
- ♦ FCC KDB 644545 D01 v01r02

1.3 Testing Location Information

Testing Location				
☐	HWA YA	ADD : No. 52, Hwa Ya 1st Rd., Kwei-Shan Hsiang, Tao Yuan Hsien, Taiwan, R.O.C.	TEL : 886-3-327-3456	FAX : 886-3-318-0055
☒	JHUBEI	ADD : No.8, Lane 724, Bo-ai St., Jhubei City, HsinChu County 302, Taiwan, R.O.C.	TEL : 886-3-656-9065	FAX : 886-3-656-9085

Test Condition	Test Site No.	Test Engineer	Test Environment	Test Date
RF Conducted	TH01-CB	Ron Huang	22.2°C / 47%	Feb. 24, 2017
Radiated	03CH01-CB (Below 1GHz)	Joy Luo	22°C / 54%	Mar. 16, 2017
Radiated	03CH01-CB (Above 1GHz)	Stim Sung / Jay Lo	22°C / 54%	Sep. 19, 2016 Oct. 09, 2016
Radiated	03CH01-CB (Radiated Emission Co-location)	Joy Luo	22°C / 54%	Mar. 16, 2017
AC Conduction	CO01-CB	Deven Huang	22°C / 57%	Mar. 22, 2017

Test site Designation No. TW0006 with FCC.

Test site registered number IC 4086D with Industry Canada.

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))

Test Items	Uncertainty	Remark
Conducted Emission (150kHz ~ 30MHz)	3.2 dB	Confidence levels of 95%
Radiated Emission (30MHz ~ 1,000MHz)	3.6 dB	Confidence levels of 95%
Radiated Emission (1GHz ~ 18GHz)	3.7 dB	Confidence levels of 95%
Radiated Emission (18GHz ~ 40GHz)	3.5 dB	Confidence levels of 95%
Conducted Emission	1.7 dB	Confidence levels of 95%

2 Test Configuration of EUT

2.1 Test Channel Mode

Mode	Power Setting
802.11b_Nss1_2TX	-
2412MHz	20
2437MHz	23
2462MHz	19.5
802.11g_Nss1_2TX	-
2412MHz	16.5
2437MHz	23
2462MHz	17
802.11ac VHT20_Nss1,(MCS0)_2TX	-
2412MHz	17.5
2437MHz	23.5
2462MHz	17
802.11ac VHT40_Nss1,(MCS0)_2TX	-
2422MHz	15.5
2437MHz	17.5
2452MHz	16.5
802.11ac VHT20-BF_Nss1,(MCS0)_2TX	-
2412MHz	1900
2437MHz	2500
2462MHz	2000
802.11ac VHT40-BF_Nss1,(MCS0)_2TX	-
2422MHz	1900
2437MHz	2100
2452MHz	1900

Note:

- ♦ VHT20/VHT40 covers HT20/HT40, due to same modulation. The power setting for 802.11n HT20 and HT40 are the same or lower than 802.11ac VHT20 and VHT40.
- ♦ There are two modes of EUT, one is beamforming mode, and the other is non-beamforming mode for 802.11n/ac. All test results were recorded in the report.

2.2 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
Operating Mode	Normal Link
1	PHY Main source + U2 second source (samsung)
2	PHY Second source + U2 second source (samsung)
3	PHY Main source + U2 main source (toshiba)

The Worst Case Mode for Following Conformance Tests	
Tests Item	DTS Bandwidth Fundamental Emission Output Power Power Spectral Density Emissions in Non-restricted Frequency Bands
Test Condition	Conducted measurement at transmit chains
There are three source for the EUT. It has no influence for RF results. And the EUT1 with main source was selected to test and record in the report.	

The Worst Case Mode for Following Conformance Tests	
Tests Item	Emissions in Restricted Frequency Bands
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.
Operating Mode < 1GHz	Normal Link
1	PHY Main source + U2 second source (samsung)
2	PHY Second source + U2 second source (samsung)
3	PHY Main source + U2 main source (toshiba)
Operating Mode > 1GHz	CTX - PHY Main source + U2 second source (samsung)
There are three source for the EUT. It has no influence for RF results. And the EUT1 with main source was selected to test and record in the report.	

The Worst Case Mode for Following Conformance Tests	
Tests Item	Simultaneous Transmission Analysis
Test Condition	Radiated measurement
Operating Mode	Normal Link
For Co-location RF Exposure Evaluation	
1	WLAN 2.4GHz + WLAN 5GHz + Bluetooth - PHY Main source + U2 second source (samsung)
For Radiated Emission Co-location.	
1	WLAN 2.4GHz + WLAN 5GHz (Common antenna) - PHY Main source + U2 second source (samsung)
Refer to Sporton Test Report No.: FA690910-03 for Co-location RF Exposure Evaluation and Appendix G for Radiated Emission Co-location.	

Note: The EUT can be used at Z-axis only.

2.3 EUT Operation during Test

For CTX

For non-beamforming mode:

The EUT was programmed to be in continuously transmitting mode.

For beamforming mode:

For Conducted Mode:

The EUT was programmed to be in continuously transmitting mode.

For Radiated Mode:

During the test, the following programs under WIN 7 were executed.

The program was executed as follows:

1. During the test, the EUT operation to normal function.
2. Executed command fixed test channel under putty.
3. Executed "Lantest.exe " to link with the remote workstation to receive and transmit packet by RX Device and transmit duty cycle no less than.

For Normal Link:

During the test, the EUT operation to normal function.

2.4 Accessories

Accessories				
No.	Equipment Name	Brand Name	Model Name	Rating
1	Adapter	Salcomp	GL0102	Input: 100-240V~50/60Hz, 0.4A Output: 5V, 3A
Other				
RJ-45 cable*1, Non-shielded, 2m				

2.5 Support Equipment

For Test Site No: CO01-CB

Support Equipment				
No.	Equipment	Brand Name	Model Name	FCC ID
1	NB*4	DELL	E6430	DoC
2	iPad	Apple	A1430	DoC

For Test Site No: 03CH01-CB (below 1GHz)

Support Equipment				
No.	Equipment	Brand Name	Model Name	FCC ID
1	NB*2	DELL	E4300	DoC
2	NB*2	Apple	Mac Book	DoC
3	iPad	Apple	A1430	DoC

For Test Site No: 03CH01-CB (above 1GHz) / <For Non-Beamforming Mode>

Support Equipment				
No.	Equipment	Brand Name	Model Name	FCC ID
1	NB	DELL	E4300	DoC

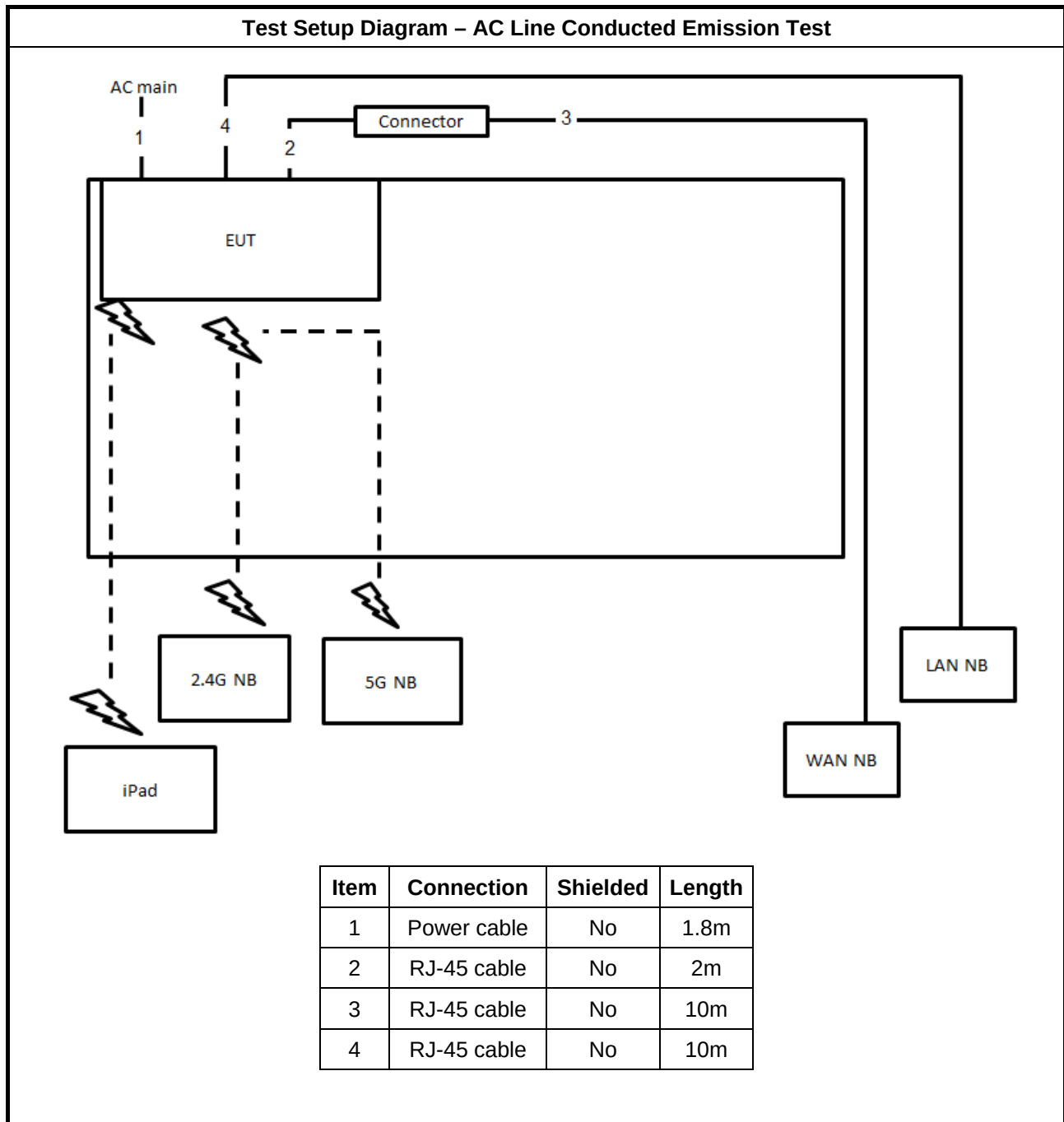
For Test Site No: 03CH01-CB (above 1GHz) / <For Beamforming Mode>

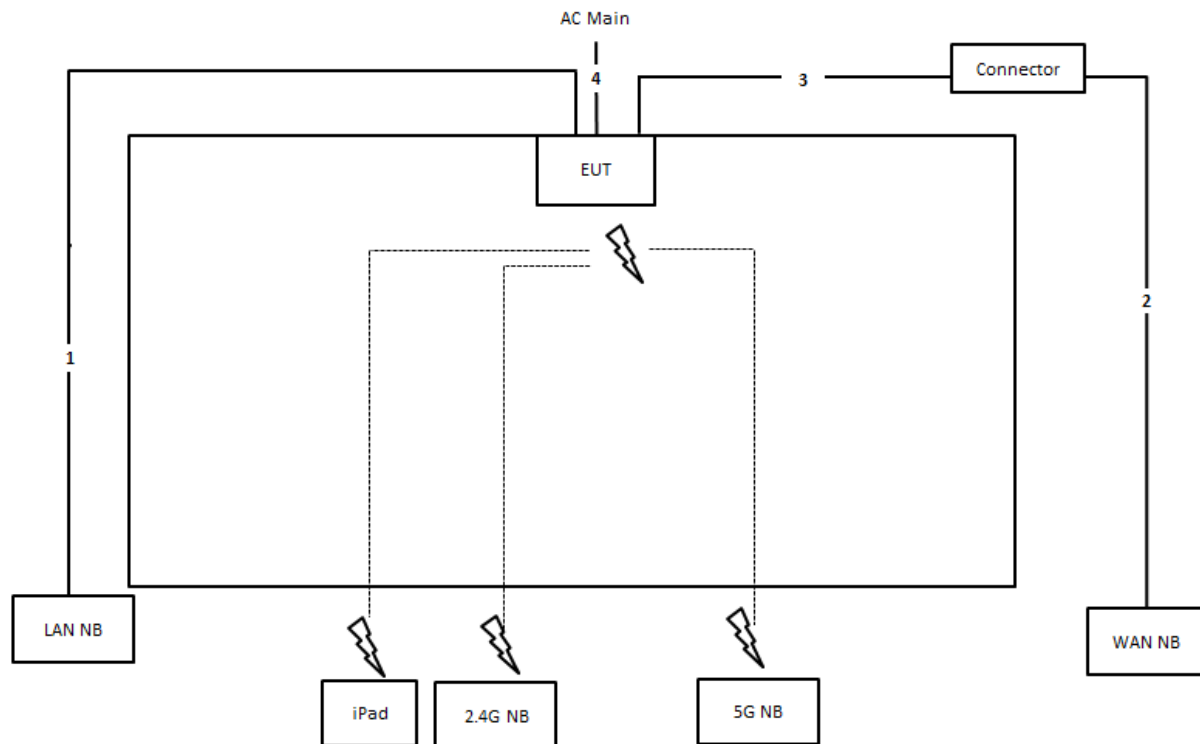
Support Equipment				
No.	Equipment	Brand Name	Model Name	FCC ID
1	NB*2	DELL	E4300	DoC
2	RX Device	LINKSYS	WUSB6100M	3839A-WUSB6100M

For Test Site No: TH01-CB

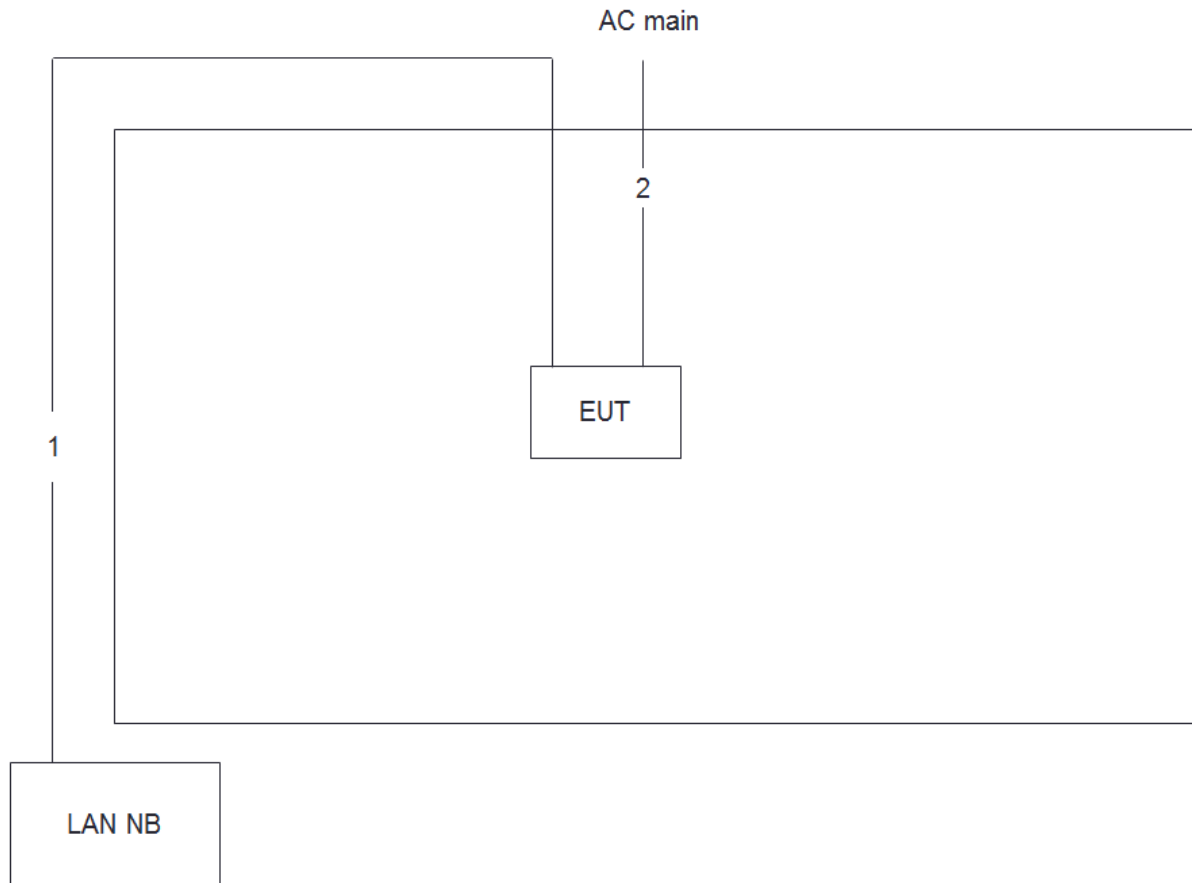
Support Equipment				
No.	Equipment	Brand Name	Model Name	FCC ID
1	NB	DELL	E4300	DoC

2.6 Test Setup Diagram

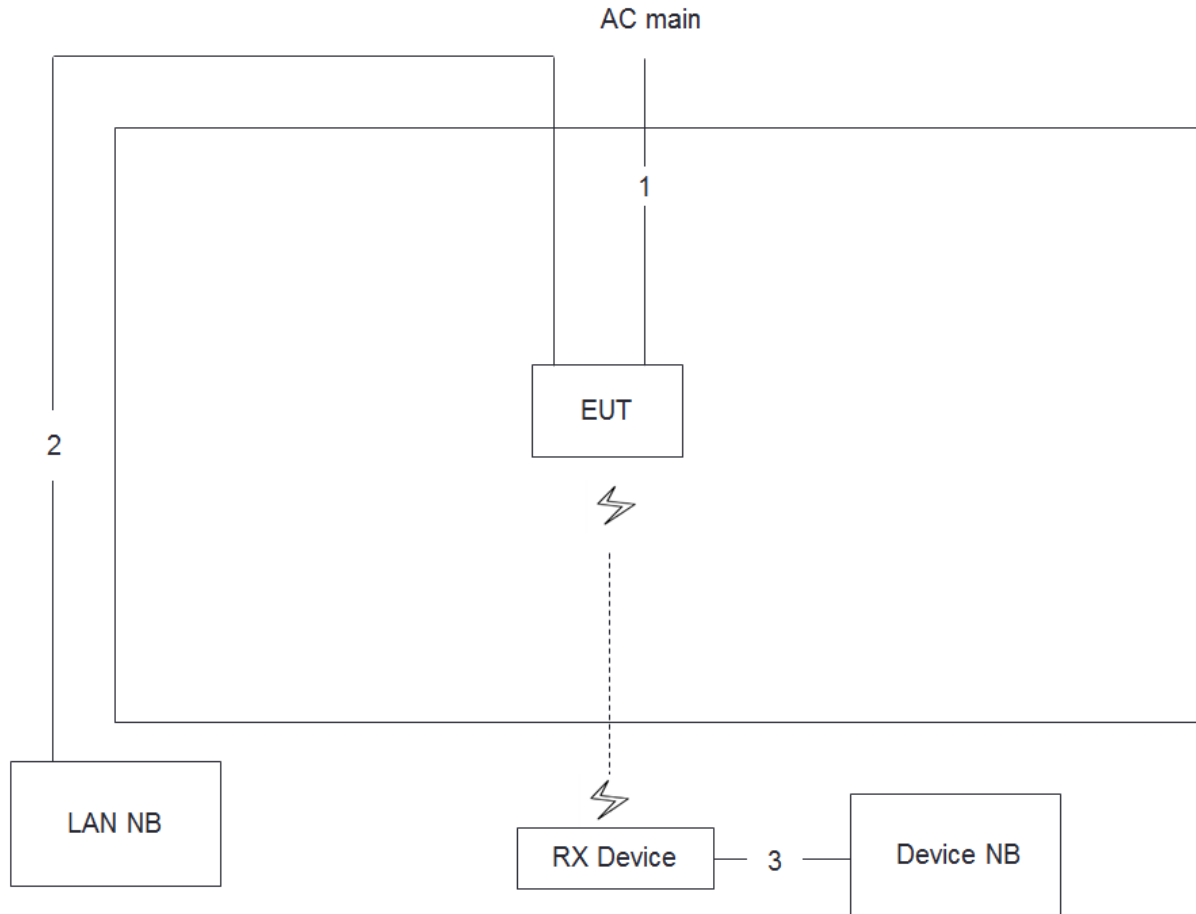


Test Setup Diagram - Radiated Test < 1GHz


Item	Connection	Shielded	Length
1	RJ-45 cable	No	10m
2	RJ-45 cable	No	10m
3	RJ-45 cable	No	2m
4	Power cable	No	1.8m

Test Setup Diagram - Radiated Test > 1GHz / <For Non-Beamforming Mode>


Item	Connection	Shielded	Length
1	RJ-45 cable	No	10m
2	Power cable	No	1.8m

Test Setup Diagram - Radiated Test > 1GHz / <For Beamforming Mode>


Item	Connection	Shielded	Length
1	Power cable	No	1.8m
2	RJ-45 cable	No	10m
3	RJ-45 cable	No	1.5m

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.

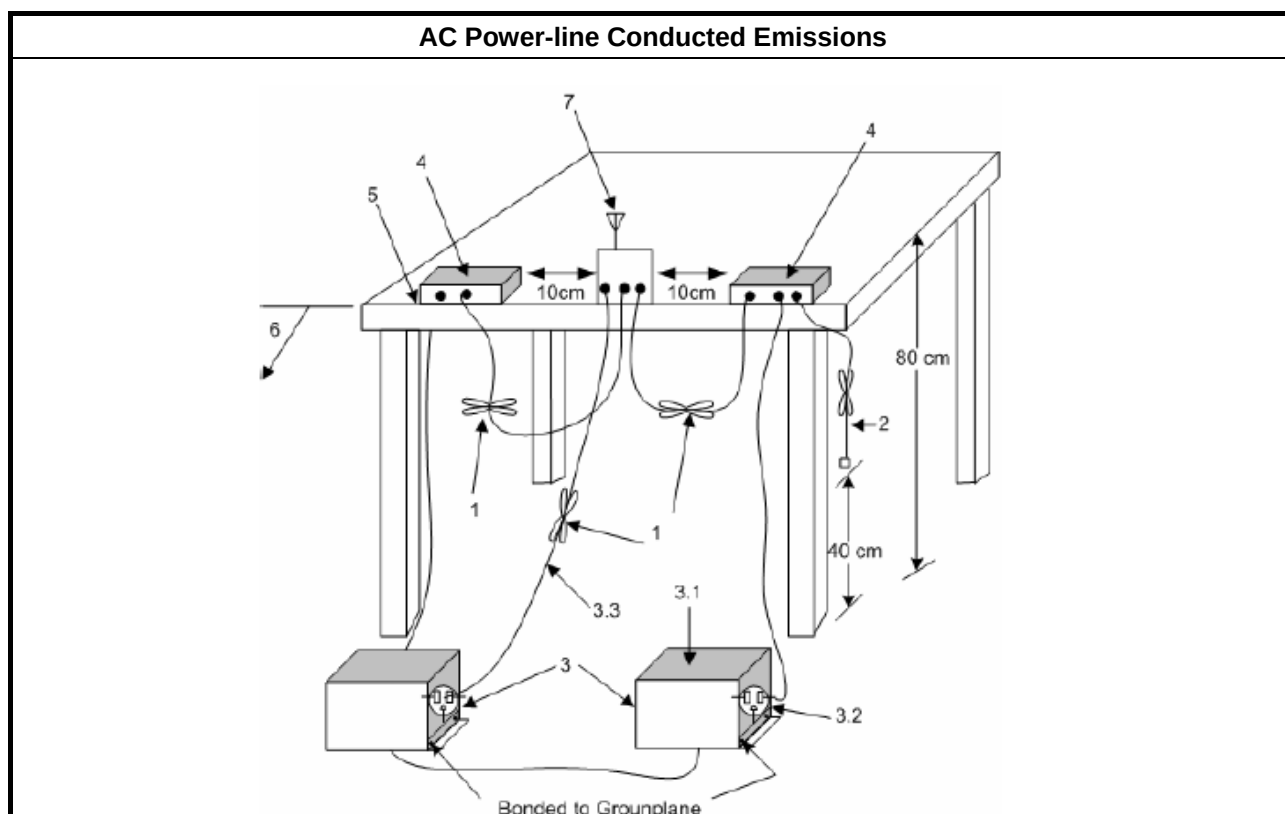
3.1.2 Measuring Instruments

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

3.1.3 Test Procedures

Test Method
☒ 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 A

3.2 DTS Bandwidth

3.2.1 6dB Bandwidth Limit

6dB Bandwidth Limit	
Systems using digital modulation techniques:	
▪	6 dB bandwidth $\geq$ 500 kHz.

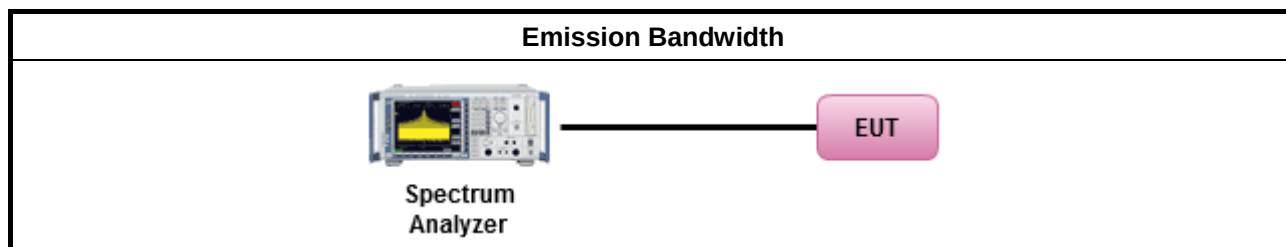
3.2.2 Measuring Instruments

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

3.2.3 Test Procedures

Test Method	
▪	For the emission bandwidth shall be measured using one of the options below:
☒	Refer as FCC KDB 558074, clause 8.1 Option 1 for 6 dB bandwidth measurement.
☐	Refer as FCC KDB 558074, clause 8.2 Option 2 for 6 dB bandwidth measurement.
☐	Refer as ANSI C63.10, clause 6.9.1 for occupied bandwidth testing.

3.2.4 Test Setup



3.2.5 Test Result of Emission Bandwidth

Refer as Appendix B

3.3 Fundamental Emission Output Power

3.3.1 Fundamental Emission Output Power Limit

Maximum Conducted Output Power Limit	
	▪ If $G_{TX} \leq 6$ dBi, then $P_{Out} \leq 30$ dBm (1 W)
	▪ Point-to-multipoint systems (P2M): If $G_{TX} > 6$ dBi, then $P_{Out} = 30 - (G_{TX} - 6)$ dBm
	▪ Point-to-point systems (P2P): If $G_{TX} > 6$ dBi, then $P_{Out} = 30 - (G_{TX} - 6)/3$ dBm
	▪ Smart antenna system (SAS):
	- Single beam: If $G_{TX} > 6$ dBi, then $P_{Out} = 30 - (G_{TX} - 6)/3$ dBm
	- Overlap beam: If $G_{TX} > 6$ dBi, then $P_{Out} = 30 - (G_{TX} - 6)/3$ dBm
	- Aggregate power on all beams: If $G_{TX} > 6$ dBi, then $P_{Out} = 30 - (G_{TX} - 6)/3 + 8$ dB dBm
P_{Out} = maximum peak conducted output power or maximum conducted output power in dBm, G_{TX} = the maximum transmitting antenna directional gain in dBi.	

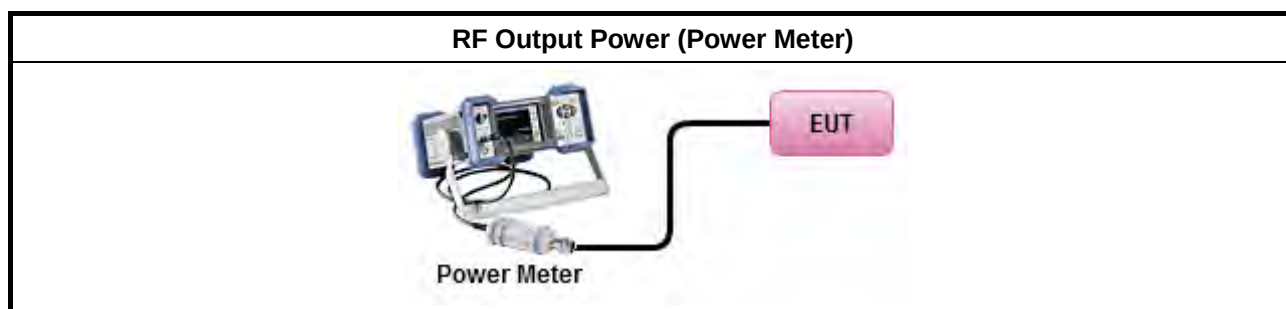
3.3.2 Measuring Instruments

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

3.3.3 Test Procedures

Test Method	
Maximum Peak Conducted Output Power	
☐	Refer as FCC KDB 558074, clause 9.1.1 Option 1 (RBW ≥ EBW method).
☐	Refer as FCC KDB 558074, clause 9.1.2 Option 2 (peak power meter for VBW ≥ DTS BW)
Maximum Conducted Output Power	
[duty cycle ≥ 98% or external video / power trigger]	
☐	Refer as FCC KDB 558074, clause 9.2.2.2 Method AVGSA-1 (spectral trace averaging).
☐	Refer as FCC KDB 558074, clause 9.2.2.3 Method AVGSA-1 Alt. (slow sweep speed)
duty cycle < 98% and average over on/off periods with duty factor	
☐	Refer as FCC KDB 558074, clause 9.2.2.4 Method AVGSA-2 (spectral trace averaging).
☐	Refer as FCC KDB 558074, clause 9.2.2.5 Method AVGSA-2 Alt. (slow sweep speed)
RF power meter and average over on/off periods with duty factor or gated trigger	
☒	Refer as FCC KDB 558074, clause 9.2.3 Method AVGPM-G (using an RF average power meter).
For conducted measurement.	
If the EUT supports multiple transmit chains using options given below: Refer as FCC 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.	
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 C

3.4 Power Spectral Density

3.4.1 Power Spectral Density Limit

Power Spectral Density Limit
Power Spectral Density (PSD) ≤ 8 dBm/3kHz

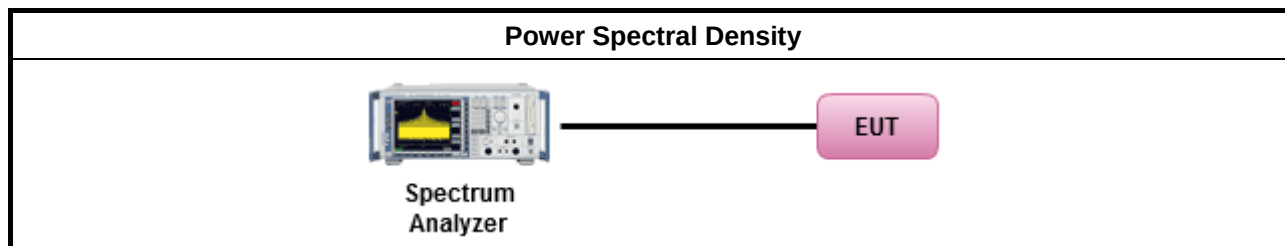
3.4.2 Measuring Instruments

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

3.4.3 Test Procedures

Test Method
Peak power spectral density procedures that the same method as used to determine the conducted output power. If maximum peak conducted output power was measured to demonstrate compliance to the output power limit, then the peak PSD procedure below (Method PKPSD) shall be used. If maximum conducted output power was measured to demonstrate compliance to the output power limit, then one of the average PSD procedures shall be used, as applicable based on the following criteria (the peak PSD procedure is also an acceptable option).
☒ Refer as FCC KDB 558074, clause 10.2 Method PKPSD (RBW=3-100kHz; Detector=peak). [duty cycle $\geq 98\%$ or external video / power trigger]
☐ Refer as FCC KDB 558074, clause 10.3 Method AVGPS-1 (spectral trace averaging).
☐ Refer as FCC KDB 558074, clause 10.4 Method AVGPS-2 (slow sweep speed)
duty cycle $< 98\%$ and average over on/off periods with duty factor
☐ Refer as FCC KDB 558074, clause 10.5 Method AVGPS-1 Alt (spectral trace averaging).
☐ Refer as FCC KDB 558074, clause 10.6 Method AVGPS-2 Alt. (slow sweep speed)
For conducted measurement.
If The EUT supports multiple transmit chains using options given below:
☒ Option 1: Measure and sum the spectra across the outputs. Refer as FCC 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 NTX 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.
☐ 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,
☐ Option 3: Measure and add 10 log(N) dB, where N is the number of transmit chains. Refer as FCC 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.

3.4.4 Test Setup



3.4.5 Test Result of Power Spectral Density

Refer as Appendix D

3.5 Emissions in Non-restricted Frequency Bands

3.5.1 Emissions in Non-restricted Frequency Bands Limit

Un-restricted Band Emissions Limit	
RF output power procedure	Limit (dB)
Peak output power procedure	20
Average output power procedure	30
Note 1: If the peak output power procedure is used to measure the fundamental emission power to demonstrate compliance to requirements, then the peak conducted output power measured within any 100 kHz outside the authorized frequency band shall be attenuated by at least 20 dB relative to the maximum measured in-band peak PSD level. Note 2: If the average output power procedure is used to measure the fundamental emission power to demonstrate compliance to requirements, then the power in any 100 kHz outside of the authorized frequency band shall be attenuated by at least 30 dB relative to the maximum measured in-band average PSD level.	

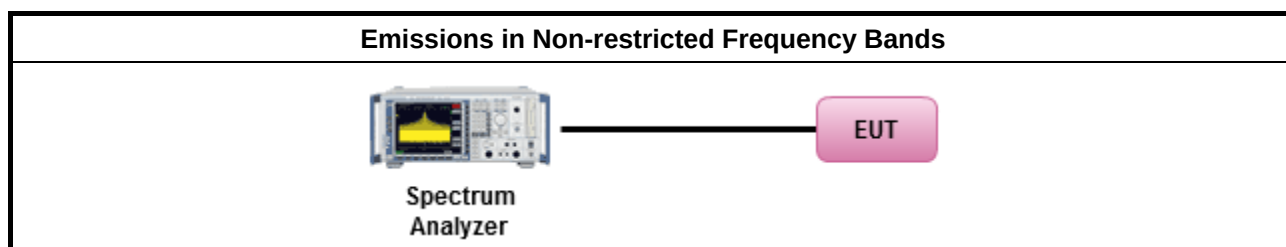
3.5.2 Measuring Instruments

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

3.5.3 Test Procedures

Test Method
Refer as FCC KDB 558074, clause 11 for unwanted emissions into non-restricted bands.

3.5.4 Test Setup



3.5.5 Test Result of Emissions in Non-restricted Frequency Bands

Refer as Appendix E

3.6 Emissions in Restricted Frequency Bands

3.6.1 Emissions in Restricted Frequency Bands Limit

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

Note 1: 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.

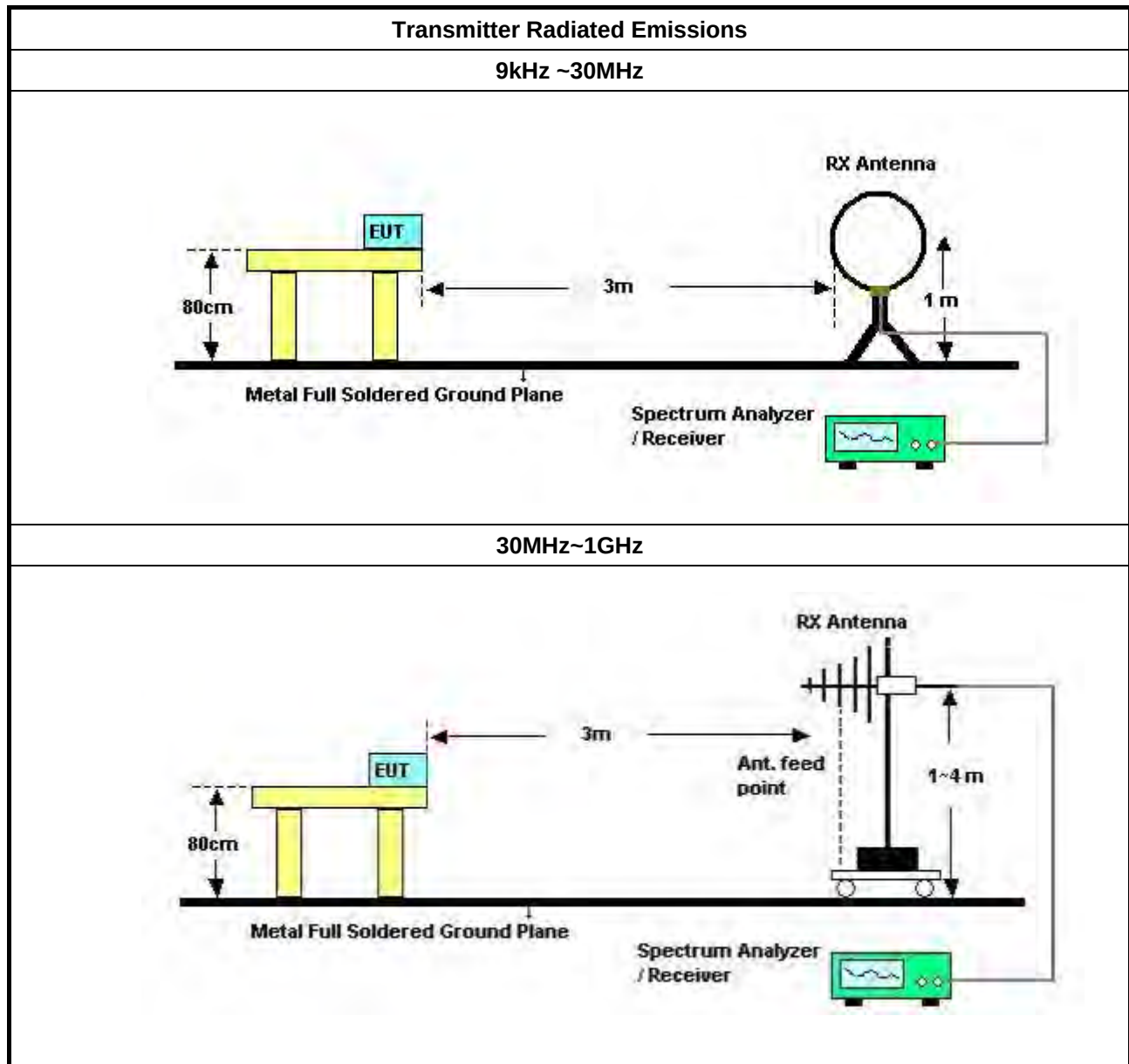
3.6.2 Measuring Instruments

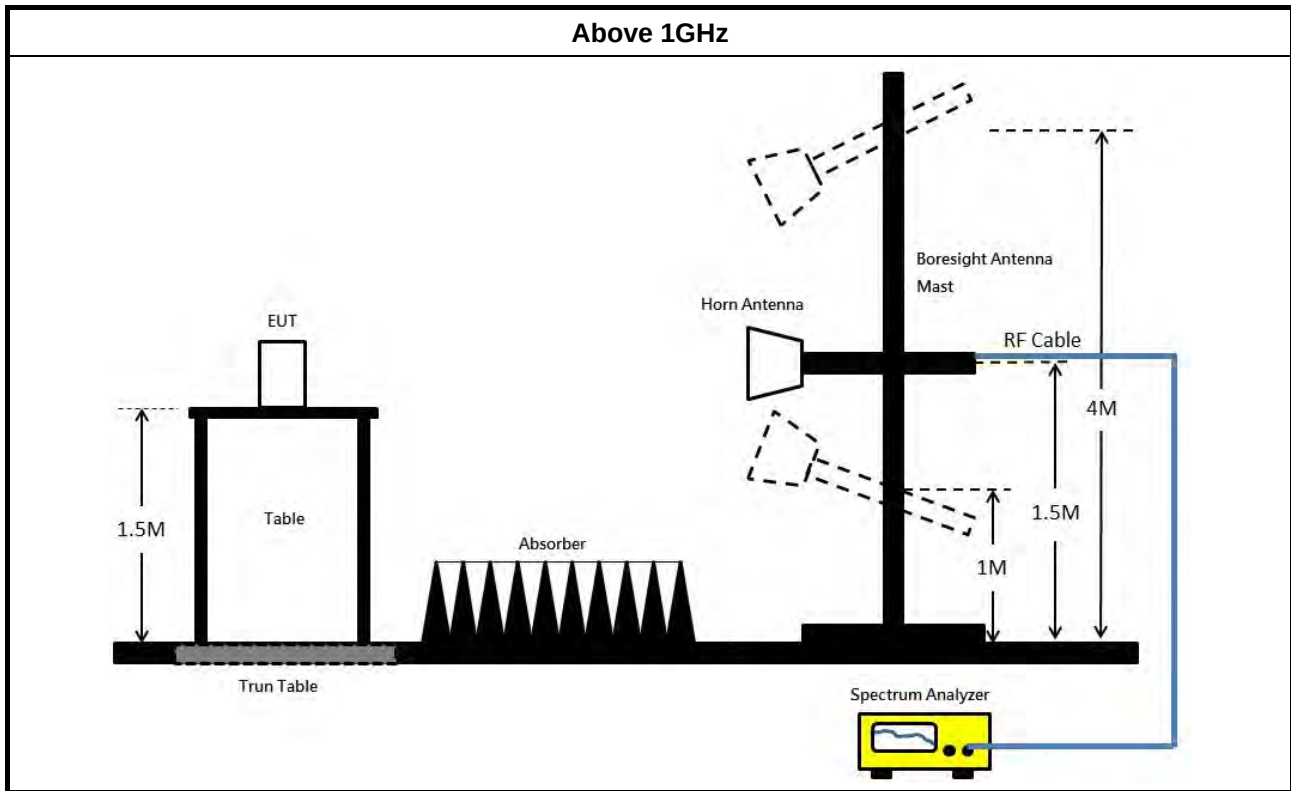
Refer a test equipment and calibration data table in this test report.

3.6.3 Test Procedures

Test Method	
The average emission levels shall be measured in [duty cycle ≥ 98 or duty factor].	
Refer as ANSI C63.10, clause 6.9.2.2 band-edge testing shall be performed at the lowest frequency channel and highest frequency channel within the allowed operating band.	
For the transmitter unwanted emissions shall be measured using following options below:	
	Refer as FCC KDB 558074, clause 12 for unwanted emissions into restricted bands.
	☐ Refer as FCC KDB 558074, clause 12.2.5.1 Option 1 (trace averaging for duty cycle $\geq 98\%$)
	☐ Refer as FCC KDB 558074, clause 12.2.5.2 Option 2 (trace averaging + duty factor).
	☒ Refer as FCC KDB 558074, clause 12.2.5.3 Option 3 (Reduced VBW $\geq 1/T$).
	☐ Refer as ANSI C63.10, clause 4.2.3.2.3 (Reduced VBW). VBW $\geq 1/T$, where T is pulse time.
	☐ Refer as ANSI C63.10, clause 4.2.3.2.4 average value of pulsed emissions.
	☒ Refer as FCC KDB 558074, clause 12.2.4 measurement procedure peak limit.
For the transmitter band-edge emissions shall be measured using following options below:	
	Refer as FCC KDB 558074 clause 13.1, When the performing peak or average radiated measurements, emissions within 2 MHz of the authorized band edge may be measured using the marker-delta method described below.
	Refer as FCC KDB 558074, clause 13.2 (ANSI C63.10, clause 6.9.3) for marker-delta method for band-edge measurements.
	Refer as FCC KDB 558074, clause 13.3 for narrower resolution bandwidth (100kHz) using the band power and summing the spectral levels (i.e., 1 MHz).
For conducted and cabinet radiation measurement, refer as FCC KDB 558074, clause 12.2.2.	
	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
	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.

3.6.4 Test Setup





3.6.5 Transmitter Radiated Unwanted Emissions (Below 30MHz)

All amplitude of spurious emissions that are attenuated by more than 20 dB below the permissible value has no need to be reported.

3.6.6 Test Result of Transmitter Radiated Unwanted Emissions

Refer as Appendix F

4 Test Equipment and Calibration Data

Instrument	Manufacturer	Model No.	Serial No.	Characteristics	Calibration Date	Remark
EMI Receiver	Agilent	N9038A	My52260123	9kHz ~ 8.45GHz	Jan. 23, 2017	Conduction (CO01-CB)
LISN	F.C.C.	FCC-LISN-50-16-2	04083	150kHz ~ 100MHz	Dec. 14, 2016	Conduction (CO01-CB)
LISN	Schwarzbeck	NSLK 8127	8127647	9kHz ~ 30MHz	Dec. 21, 2016	Conduction (CO01-CB)
COND Cable	Woken	Cable	01	150kHz ~ 30MHz	May 24, 2016	Conduction (CO01-CB)
Software	Audix	E3	6.120210n	-	N.C.R.	Conduction (CO01-CB)
BILOG ANTENNA with 6dB Attenuator	TESEQ & EMCI	CBL6112D & N-6-06	37880 & AT-N0609	20MHz ~ 2GHz	Aug. 30, 2016	Radiation (03CH01-CB)
Loop Antenna	Teseq	HLA 6120	24155	9kHz - 30 MHz	Mar. 16, 2016*	Radiation (03CH01-CB)
Horn Antenna	EMCO	3115	00075790	750MHz ~ 18GHz	Oct. 22, 2015	Radiation (03CH01-CB)
Horn Antenna	EMCO	3115	00075790	750MHz ~ 18GHz	Nov. 10, 2016	Radiation (03CH01-CB)
Horn Antenna	Schwarzbeck	BBHA 9170	BBHA9170252	15GHz ~ 40GHz	Jul. 25, 2016	Radiation (03CH01-CB)
Pre-Amplifier	Agilent	8447D	2944A10991	0.1MHz ~ 1.3GHz	Mar. 13, 2017	Radiation (03CH01-CB)
Pre-Amplifier	Agilent	8449B	3008A02310	1GHz ~ 26.5GHz	Jan. 18, 2016	Radiation (03CH01-CB)
Pre-Amplifier	Agilent	8449B	3008A02310	1GHz ~ 26.5GHz	Jan. 16, 2017	Radiation (03CH01-CB)
Pre-Amplifier	WM	TF-130N-R1	923365	26GHz ~ 40GHz	Nov. 13, 2015	Radiation (03CH01-CB)
Pre-Amplifier	MITEQ	TTA1840-35-HG	1864479	18GHz ~ 40GHz	Jun. 28, 2016	Radiation (03CH01-CB)
Spectrum Analyzer	R&S	FSP40	100056	9kHz ~ 40GHz	Oct. 27, 2015	Radiation (03CH01-CB)
Spectrum Analyzer	R&S	FSP40	100056	9kHz ~ 40GHz	Nov. 21, 2016	Radiation (03CH01-CB)
EMI Test	R&S	ESCS	100355	9kHz ~ 2.75GHz	May 16, 2016	Radiation (03CH01-CB)
RF Cable-low	Woken	Low Cable-16+17	N/A	30 MHz ~ 1 GHz	Oct. 24, 2016	Radiation (03CH01-CB)
RF Cable-high	Woken	High Cable-16	N/A	1 GHz ~ 18 GHz	Nov. 02, 2015	Radiation (03CH01-CB)
RF Cable-high	Woken	High Cable-16	N/A	1 GHz ~ 18 GHz	Oct. 24, 2016	Radiation (03CH01-CB)
RF Cable-high	Woken	High Cable-17	N/A	1 GHz ~ 18 GHz	Nov. 02, 2015	Radiation (03CH01-CB)
RF Cable-high	Woken	High Cable-16+17	N/A	1 GHz ~ 18 GHz	Oct. 24, 2016	Radiation (03CH01-CB)
RF Cable-high	Woken	High Cable-40G-1	N/A	18GHz ~ 40 GHz	Nov. 02, 2015	Radiation (03CH01-CB)



Instrument	Manufacturer	Model No.	Serial No.	Characteristics	Calibration Date	Remark
RF Cable-high	Woken	High Cable-40G#1	N/A	18GHz ~ 40 GHz	Oct. 24, 2016	Radiation (03CH01-CB)
RF Cable-high	Woken	High Cable-40G-2	N/A	18GHz ~ 40 GHz	Nov. 02, 2015	Radiation (03CH01-CB)
RF Cable-high	Woken	High Cable-40G#2	N/A	18GHz ~ 40 GHz	Oct. 24, 2016	Radiation (03CH01-CB)
Test Software	Audix	E3	6.2009-I0-7	N/A	N/A	Radiation (03CH01-CB)
Spectrum analyzer	R&S	FSV40	100979	9kHz~40GHz	Dec. 26, 2016	Conducted (TH01-CB)
Temp. and Humidity Chamber	Ten Billion	TTH-D3SP	TBN-931011	-30~100 degree	Jun. 03, 2016	Conducted (TH01-CB)
RF Cable-high	Woken	RG402	High Cable-6	1 GHz – 26.5 GHz	Oct. 24, 2016	Conducted (TH01-CB)
RF Cable-high	Woken	RG402	High Cable-7	1 GHz –26.5 GHz	Oct. 24, 2016	Conducted (TH01-CB)
RF Cable-high	Woken	RG402	High Cable-8	1 GHz –26.5 GHz	Oct. 24, 2016	Conducted (TH01-CB)
RF Cable-high	Woken	RG402	High Cable-9	1 GHz –26.5 GHz	Oct. 24, 2016	Conducted (TH01-CB)
RF Cable-high	Woken	RG402	High Cable-10	1 GHz –26.5 GHz	Oct. 24, 2016	Conducted (TH01-CB)
Power Sensor	Agilent	U2021XA	MY53410001	50MHz~18GHz	Nov. 22, 2016	Conducted (TH01-CB)

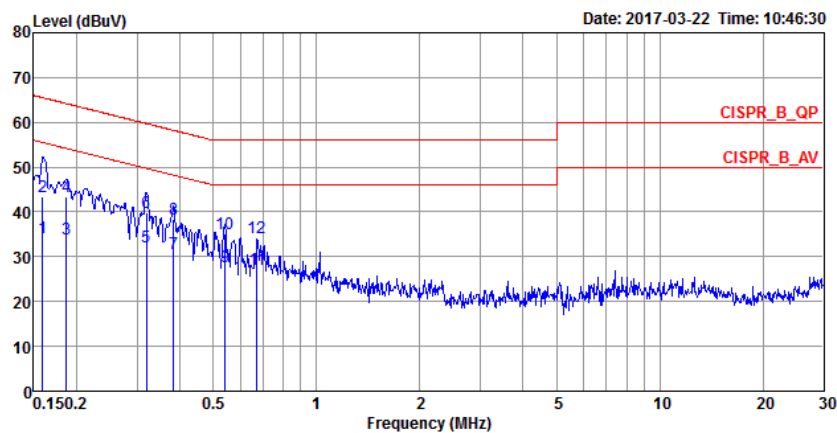
Note: Calibration Interval of instruments listed above is one year.

“*” Calibration Interval of instruments listed above is two years.

N.C.R means Non-Calibration required.

AC Power-line Conducted Emissions Result

Operating Mode	1	Power Phase	Line
Operating Function	Normal Link		

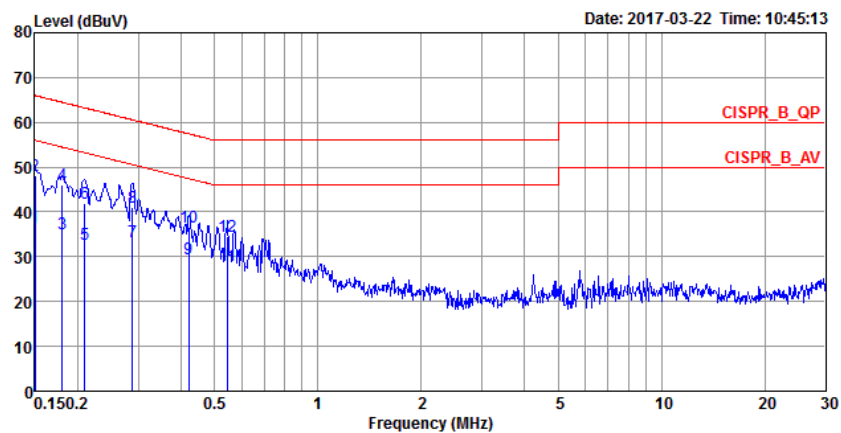


	Freq	Level	Over Limit	Limit Line	Read Level	LISN Factor	Cable Loss	Remark	Pol/Phase
	MHz	dBuV	dB	dBuV	dBuV	dB	dB		
1	0.1590	34.24	-21.28	55.52	24.07	10.00	0.17	Average	LINE
2	0.1590	43.50	-22.02	65.52	33.33	10.00	0.17	QP	LINE
3	0.1864	33.94	-20.26	54.20	23.85	9.91	0.18	Average	LINE
4	0.1864	43.27	-20.93	64.20	33.18	9.91	0.18	QP	LINE
5	0.3200	32.10	-17.61	49.71	22.10	9.93	0.07	Average	LINE
6	0.3200	39.91	-19.80	59.71	29.91	9.93	0.07	QP	LINE
7	0.3832	30.62	-17.59	48.21	20.66	9.94	0.02	Average	LINE
8	0.3832	38.27	-19.94	58.21	28.31	9.94	0.02	QP	LINE
9	0.5407	27.81	-18.19	46.00	17.61	9.95	0.25	Average	LINE
10	0.5407	35.27	-20.73	56.00	25.07	9.95	0.25	QP	LINE
11	0.6719	27.15	-18.85	46.00	16.78	9.95	0.42	Average	LINE
12	0.6719	34.16	-21.84	56.00	23.79	9.95	0.42	QP	LINE

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	Neutral
Operating Function	Normal Link		

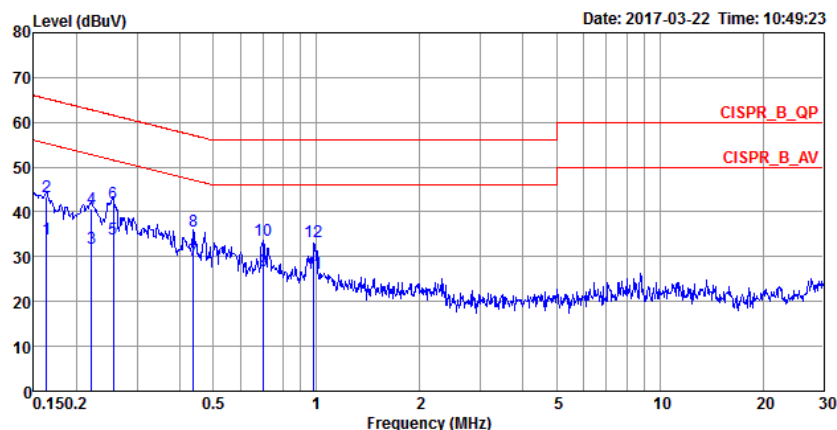


	Freq	Level	Over Limit	Limit Line	Read Level	LISN Factor	Cable Loss	Remark	Pol/Phase
	MHz	dBuV	dB	dBuV	dBuV	dB	dB		
1	0.1500	36.63	-19.37	56.00	26.37	10.10	0.16	Average	NEUTRAL
2	0.1500	48.25	-17.75	66.00	37.99	10.10	0.16	QP	NEUTRAL
3	0.1806	35.17	-19.29	54.46	24.98	10.01	0.18	Average	NEUTRAL
4	0.1806	46.20	-18.26	64.46	36.01	10.01	0.18	QP	NEUTRAL
5	0.2094	32.70	-20.53	53.23	22.47	10.05	0.18	Average	NEUTRAL
6	0.2094	41.83	-21.40	63.23	31.60	10.05	0.18	QP	NEUTRAL
7	0.2878	33.26	-17.33	50.59	23.04	10.12	0.10	Average	NEUTRAL
8	0.2878	41.02	-19.57	60.59	30.80	10.12	0.10	QP	NEUTRAL
9	0.4215	29.53	-17.89	47.42	19.23	10.25	0.05	Average	NEUTRAL
10	0.4215	36.56	-20.86	57.42	26.26	10.25	0.05	QP	NEUTRAL
11	0.5464	27.95	-18.05	46.00	17.48	10.21	0.26	Average	NEUTRAL
12	0.5464	34.54	-21.46	56.00	24.07	10.21	0.26	QP	NEUTRAL

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	Normal Link		

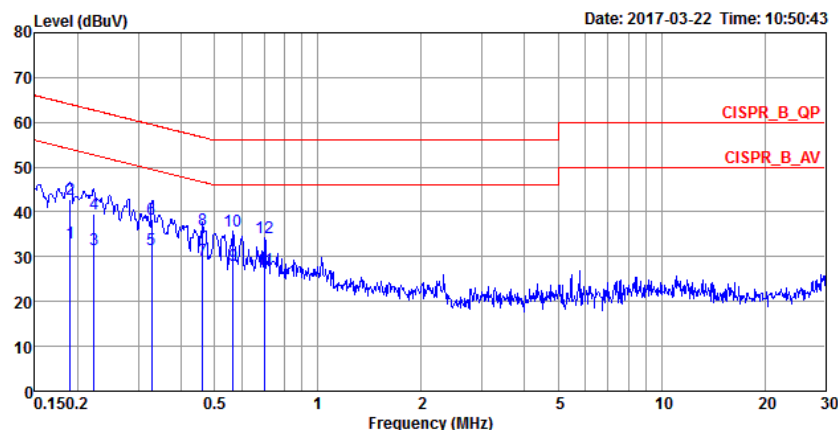


	Freq	Level	Over Limit	Limit Line	Read Level	LISN Factor	Cable Loss	Remark	Pol/Phase
	MHz	dBuV	dB	dBuV	dBuV	dB	dB		
1	0.1633	34.04	-21.26	55.30	23.87	10.00	0.17	Average	LINE
2	0.1633	43.25	-22.05	65.30	33.08	10.00	0.17	QP	LINE
3	0.2208	31.78	-21.01	52.79	21.70	9.92	0.16	Average	LINE
4	0.2208	40.71	-22.08	62.79	30.63	9.92	0.16	QP	LINE
5	0.2562	33.97	-17.59	51.56	23.92	9.92	0.13	Average	LINE
6	0.2562	42.06	-19.50	61.56	32.01	9.92	0.13	QP	LINE
7	0.4374	29.25	-17.86	47.11	19.22	9.95	0.08	Average	LINE
8	0.4374	35.75	-21.36	57.11	25.72	9.95	0.08	QP	LINE
9	0.7010	26.85	-19.15	46.00	16.44	9.95	0.46	Average	LINE
10	0.7010	33.78	-22.22	56.00	23.37	9.95	0.46	QP	LINE
11	0.9839	26.40	-19.60	46.00	15.71	9.96	0.73	Average	LINE
12	0.9839	33.28	-22.72	56.00	22.59	9.96	0.73	QP	LINE

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	Normal Link		

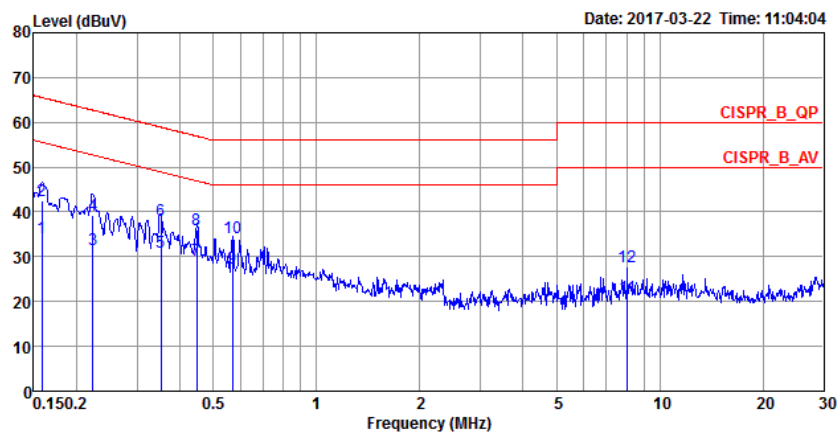


	Freq	Level	Over Limit	Limit Line	Read Level	LISN Factor	Cable Loss	Remark	Pol/Phase
	MHz	dBuV	dB	dBuV	dBuV	dB	dB		
1	0.1904	33.01	-21.01	54.02	22.81	10.01	0.19	Average	NEUTRAL
2	0.1904	42.86	-21.16	64.02	32.66	10.01	0.19	QP	NEUTRAL
3	0.2232	31.71	-20.99	52.70	21.50	10.05	0.16	Average	NEUTRAL
4	0.2232	39.52	-23.18	62.70	29.31	10.05	0.16	QP	NEUTRAL
5	0.3286	31.70	-17.79	49.49	21.45	10.19	0.06	Average	NEUTRAL
6	0.3286	38.50	-20.99	59.49	28.25	10.19	0.06	QP	NEUTRAL
7	0.4612	29.19	-17.48	46.67	18.83	10.24	0.12	Average	NEUTRAL
8	0.4612	35.91	-20.76	56.67	25.55	10.24	0.12	QP	NEUTRAL
9	0.5671	28.02	-17.98	46.00	17.53	10.20	0.29	Average	NEUTRAL
10	0.5671	35.57	-20.43	56.00	25.08	10.20	0.29	QP	NEUTRAL
11	0.7010	27.05	-18.95	46.00	16.43	10.16	0.46	Average	NEUTRAL
12	0.7010	34.29	-21.71	56.00	23.67	10.16	0.46	QP	NEUTRAL

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	3	Power Phase	Line
Operating Function	Normal Link		

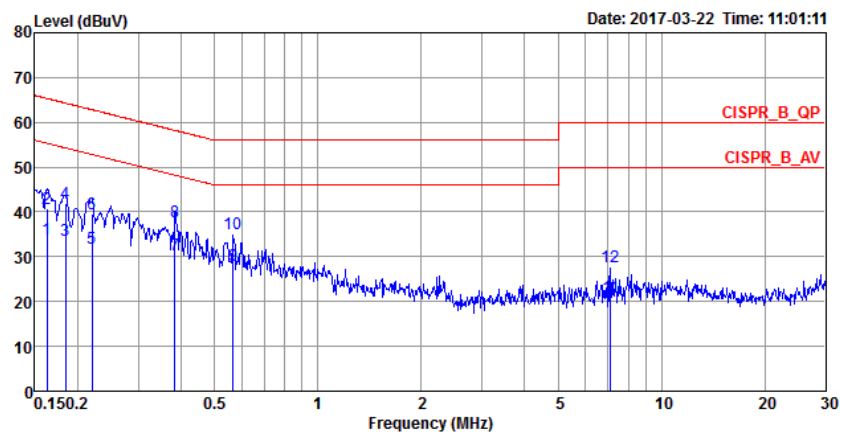


	Freq	Level	Over Limit	Limit Line	Read Level	LISN Factor	Cable Loss	Remark	Pol/Phase
	MHz	dBuV	dB	dBuV	dBuV	dB	dB		
1	0.1582	34.22	-21.34	55.56	24.05	10.00	0.17	Average	LINE
2	0.1582	42.47	-23.09	65.56	32.30	10.00	0.17	QP	LINE
3	0.2232	31.69	-21.01	52.70	21.61	9.92	0.16	Average	LINE
4	0.2232	39.31	-23.39	62.70	29.23	9.92	0.16	QP	LINE
5	0.3520	31.03	-17.88	48.91	21.05	9.94	0.04	Average	LINE
6	0.3520	38.19	-20.72	58.91	28.21	9.94	0.04	QP	LINE
7	0.4468	29.18	-17.75	46.93	19.14	9.95	0.09	Average	LINE
8	0.4468	35.91	-21.02	56.93	25.87	9.95	0.09	QP	LINE
9	0.5701	27.56	-18.44	46.00	17.32	9.95	0.29	Average	LINE
10	0.5701	34.30	-21.70	56.00	24.06	9.95	0.29	QP	LINE
11	8.0624	20.97	-29.03	50.00	10.75	10.08	0.14	Average	LINE
12	8.0624	27.77	-32.23	60.00	17.55	10.08	0.14	QP	LINE

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	3	Power Phase	Neutral
Operating Function	Normal Link		



	Freq	Level	Over Limit	Limit Line	Read Level	LISN Factor	Cable Loss	Remark	Pol/Phase
	MHz	dBuV	dB	dBuV	dBuV	dB	dB		
1	0.1624	33.90	-21.44	55.34	23.63	10.10	0.17	Average	NEUTRAL
2	0.1624	40.67	-24.67	65.34	30.40	10.10	0.17	QP	NEUTRAL
3	0.1844	33.51	-20.77	54.28	23.32	10.01	0.18	Average	NEUTRAL
4	0.1844	41.91	-22.37	64.28	31.72	10.01	0.18	QP	NEUTRAL
5	0.2197	31.90	-20.93	52.83	21.69	10.05	0.16	Average	NEUTRAL
6	0.2197	39.58	-23.25	62.83	29.37	10.05	0.16	QP	NEUTRAL
7	0.3832	30.52	-17.69	48.21	20.28	10.22	0.02	Average	NEUTRAL
8	0.3832	37.72	-20.49	58.21	27.48	10.22	0.02	QP	NEUTRAL
9	0.5671	28.04	-17.96	46.00	17.55	10.20	0.29	Average	NEUTRAL
10	0.5671	35.07	-20.93	56.00	24.58	10.20	0.29	QP	NEUTRAL
11	7.0997	20.93	-29.07	50.00	10.72	10.08	0.13	Average	NEUTRAL
12	7.0997	27.64	-32.36	60.00	17.43	10.08	0.13	QP	NEUTRAL

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.)



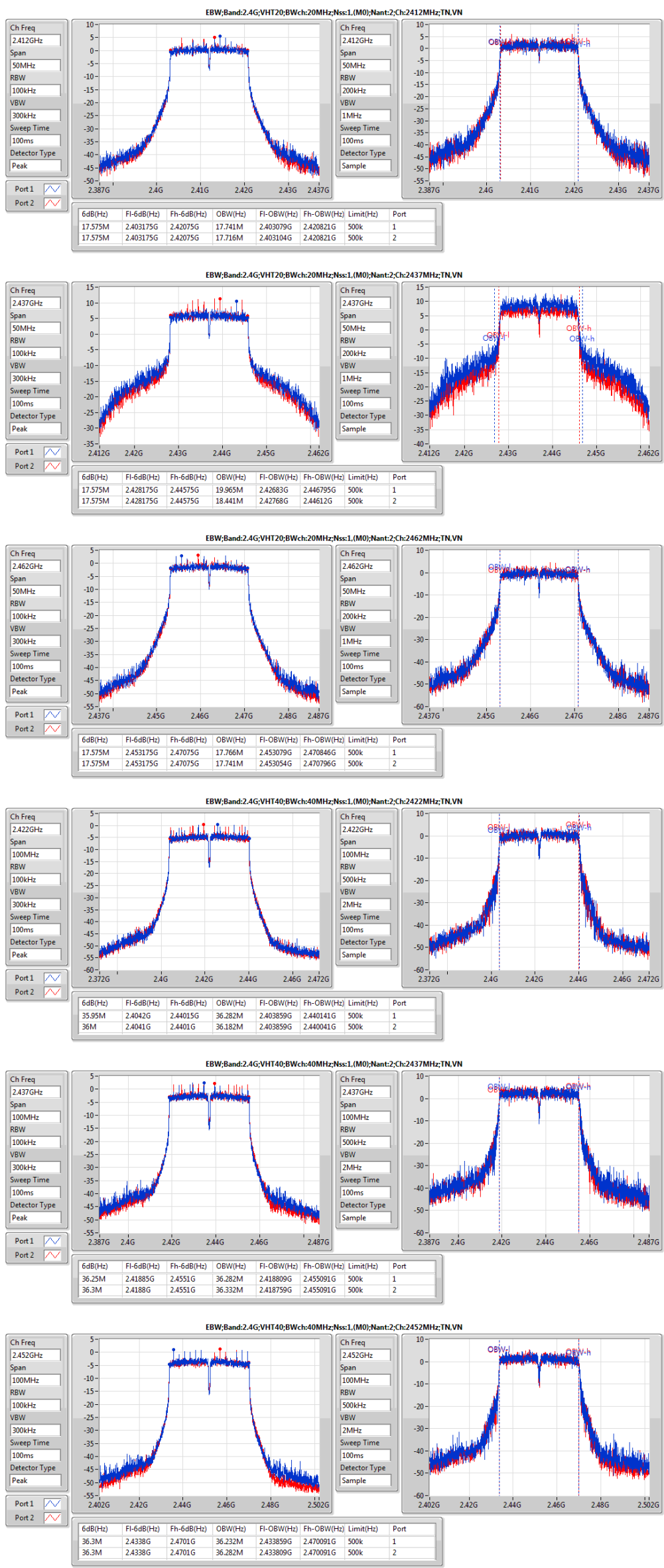
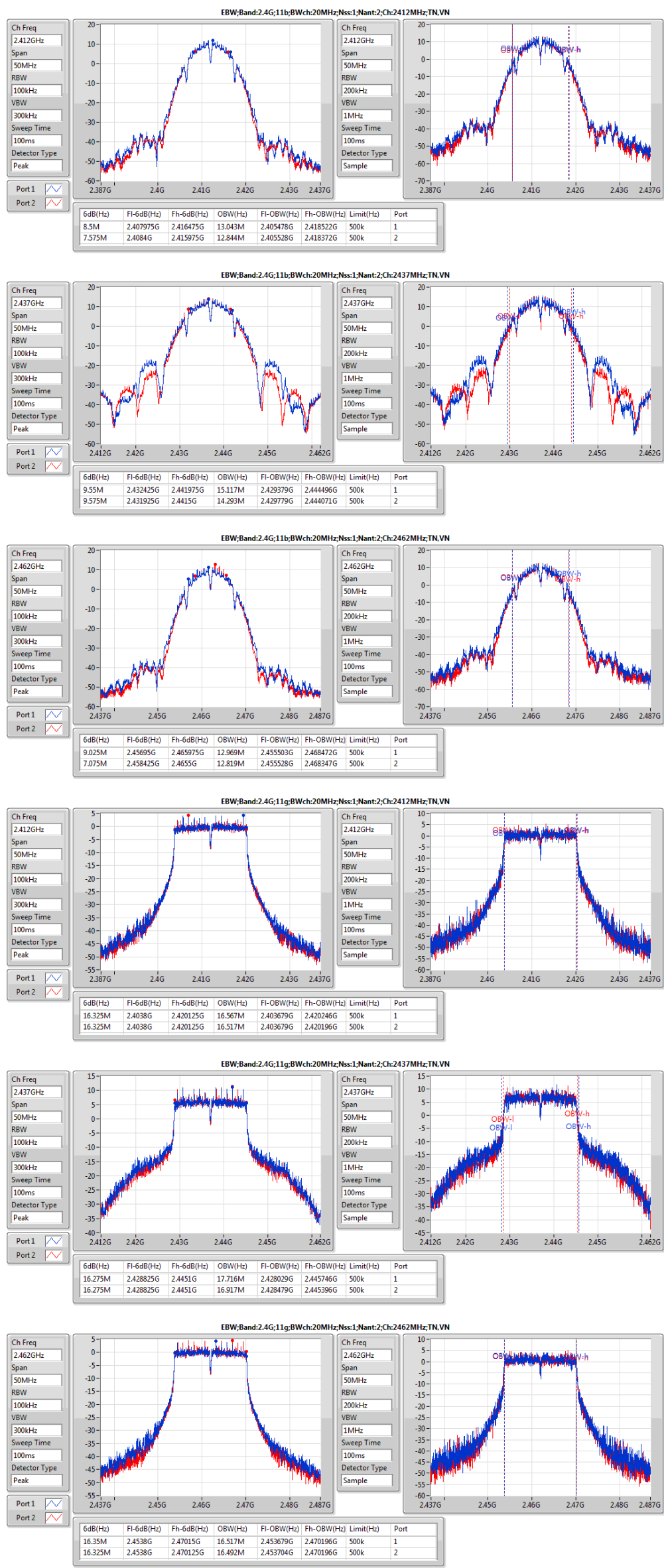
Summary

Mode	Max-N dB (Hz)	Max-OBW (Hz)	ITU-Code	Min-N dB (Hz)	Min-OBW (Hz)
2.4G;11b;Nss1;Ntx2	9.575M	15.117M	15M1G1D	7.075M	12.819M
2.4G;11g;Nss1;Ntx2	16.35M	17.716M	17M7D1D	16.275M	16.492M
2.4G;VHT20;Nss1,(M0);Ntx2	17.575M	19.965M	20M0D1D	17.575M	17.716M
2.4G;VHT40;Nss1,(M0);Ntx2	36.3M	36.332M	36M3D1D	35.95M	36.182M
2.4G;VHT20,BF;Nss1,(M0);Ntx2	17.6M	17.991M	18M0D1D	17.55M	17.741M
2.4G;VHT40,BF;Nss1,(M0);Ntx2	36.3M	36.382M	36M4D1D	35.9M	36.232M



Result

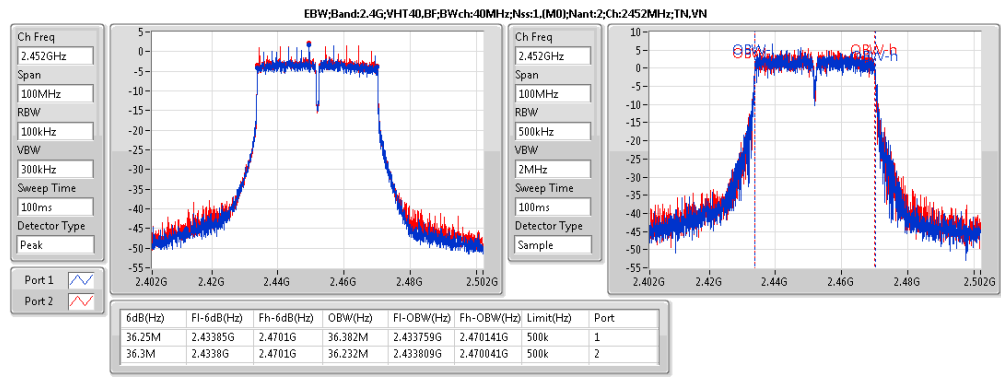
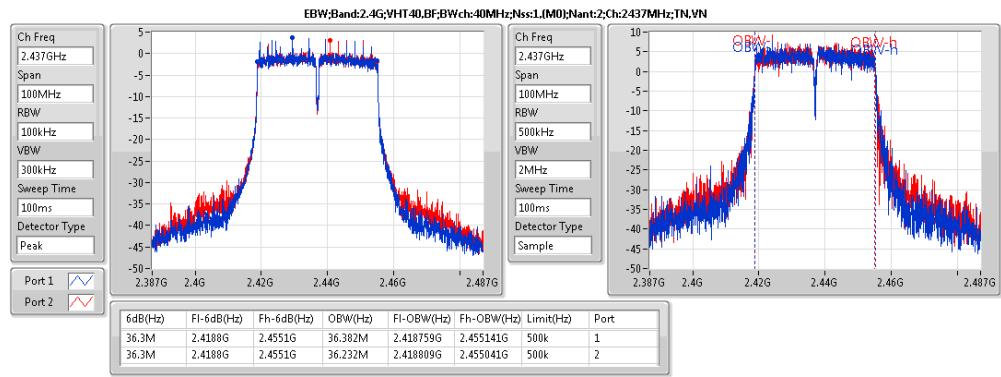
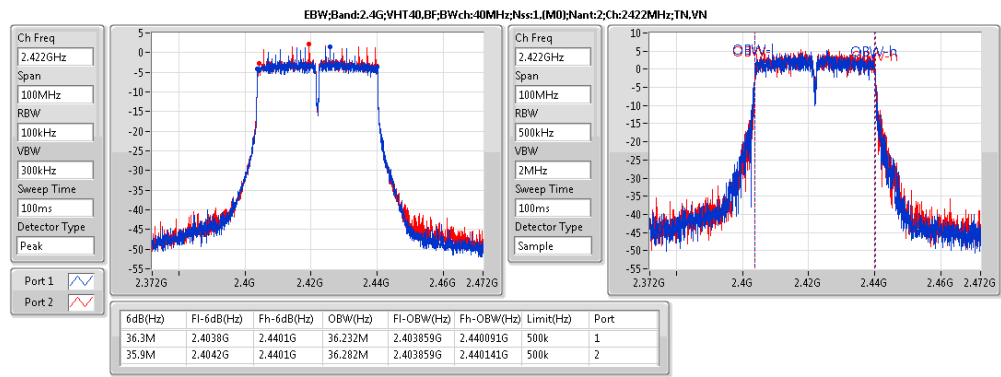
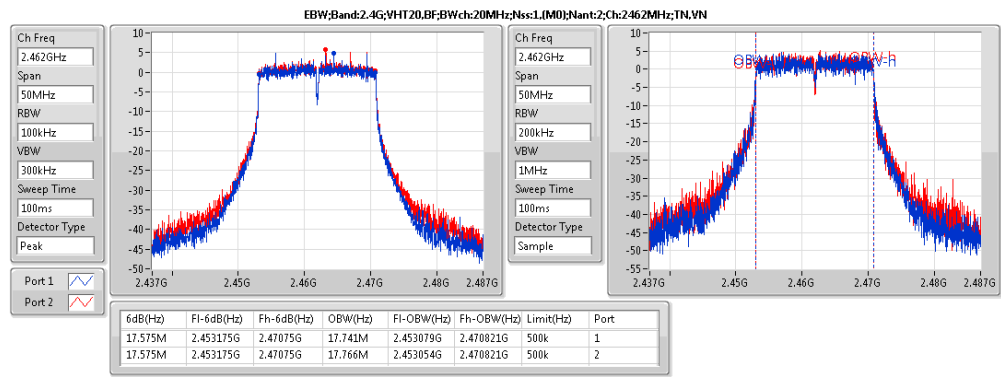
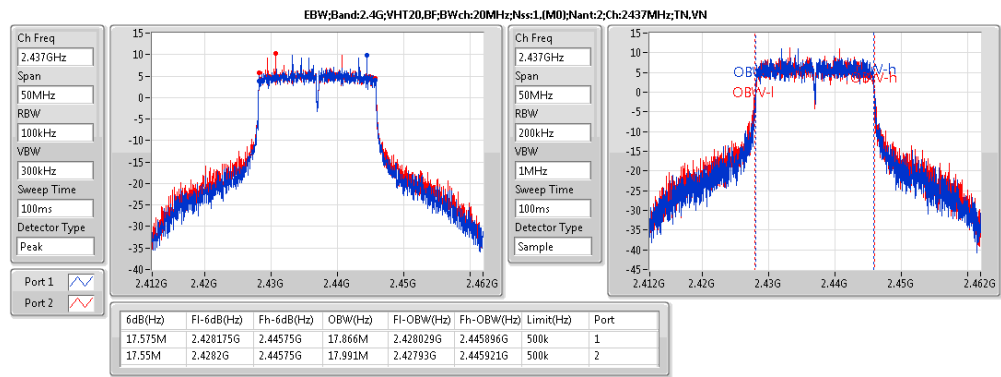
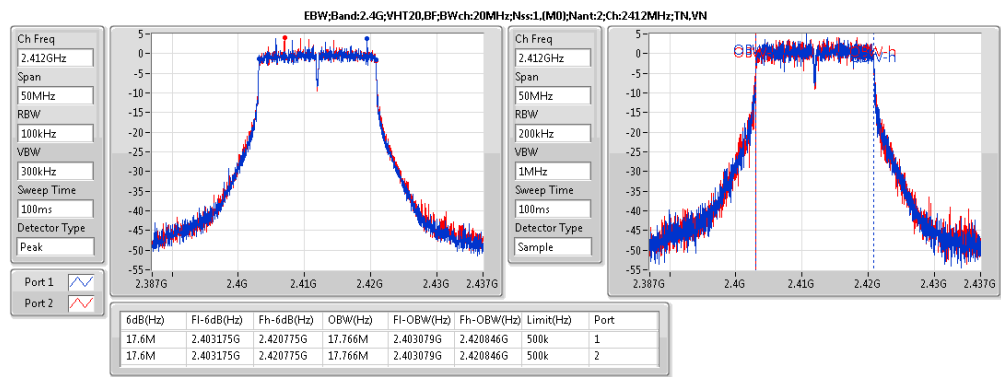
Mode	Result	Limit	P1-N dB (Hz)	P1-OBW (Hz)	P2-N dB (Hz)	P2-OBW (Hz)
2.4G;11b;Nss1;Ntx2;2412	Pass	500k	8.5M	13.043M	7.575M	12.844M
2.4G;11b;Nss1;Ntx2;2437	Pass	500k	9.55M	15.117M	9.575M	14.293M
2.4G;11b;Nss1;Ntx2;2462	Pass	500k	9.025M	12.969M	7.075M	12.819M
2.4G;11g;Nss1;Ntx2;2412	Pass	500k	16.325M	16.567M	16.325M	16.517M
2.4G;11g;Nss1;Ntx2;2437	Pass	500k	16.275M	17.716M	16.275M	16.917M
2.4G;11g;Nss1;Ntx2;2462	Pass	500k	16.35M	16.517M	16.325M	16.492M
2.4G;VHT20;Nss1,(M0);Ntx2;2412	Pass	500k	17.575M	17.741M	17.575M	17.716M
2.4G;VHT20;Nss1,(M0);Ntx2;2437	Pass	500k	17.575M	19.965M	17.575M	18.441M
2.4G;VHT20;Nss1,(M0);Ntx2;2462	Pass	500k	17.575M	17.766M	17.575M	17.741M
2.4G;VHT40;Nss1,(M0);Ntx2;2422	Pass	500k	35.95M	36.282M	36M	36.182M
2.4G;VHT40;Nss1,(M0);Ntx2;2437	Pass	500k	36.25M	36.282M	36.3M	36.332M
2.4G;VHT40;Nss1,(M0);Ntx2;2452	Pass	500k	36.3M	36.232M	36.3M	36.282M
2.4G;VHT20,BF;Nss1,(M0);Ntx2;2412	Pass	500k	17.6M	17.766M	17.6M	17.766M
2.4G;VHT20,BF;Nss1,(M0);Ntx2;2437	Pass	500k	17.575M	17.866M	17.55M	17.991M
2.4G;VHT20,BF;Nss1,(M0);Ntx2;2462	Pass	500k	17.575M	17.741M	17.575M	17.766M
2.4G;VHT40,BF;Nss1,(M0);Ntx2;2422	Pass	500k	36.3M	36.232M	35.9M	36.282M
2.4G;VHT40,BF;Nss1,(M0);Ntx2;2437	Pass	500k	36.3M	36.382M	36.3M	36.232M
2.4G;VHT40,BF;Nss1,(M0);Ntx2;2452	Pass	500k	36.25M	36.382M	36.3M	36.232M





EBW Result

Appendix B



Summary

Mode	Sum (dBm)	Total Power (W)
802.11b_Nss1_2TX	-	-
2.4-2.4835GHz	28.17	0.65615
802.11g_Nss1_2TX	-	-
2.4-2.4835GHz	25.88	0.38726
802.11ac VHT20_Nss1,(MCS0)_2TX	-	-
2.4-2.4835GHz	26.31	0.42756
802.11ac VHT40_Nss1,(MCS0)_2TX	-	-
2.4-2.4835GHz	20.55	0.11350
802.11ac VHT20-BF_Nss1,(MCS0)_2TX	-	-
2.4-2.4835GHz	25.00	0.31623
802.11ac VHT40-BF_Nss1,(MCS0)_2TX	-	-
2.4-2.4835GHz	21.49	0.14093

Result

Mode	Result	DG (dBi)	Sum (dBm)	Sum Lim. (dBm)	P1 (dBm)	P2 (dBm)
802.11b_Nss1_2TX	-	-	-	-	-	-
2412MHz	Pass	3.53	25.34	30.00	22.30	22.35
2437MHz	Pass	3.53	28.17	30.00	25.28	25.04
2462MHz	Pass	3.53	24.90	30.00	21.94	21.84
802.11g_Nss1_2TX	-	-	-	-	-	-
2412MHz	Pass	3.53	19.66	30.00	16.66	16.64
2437MHz	Pass	3.53	25.88	30.00	22.93	22.81
2462MHz	Pass	3.53	20.28	30.00	17.25	17.28
802.11ac VHT20_Nss1,(MCS0)_2TX	-	-	-	-	-	-
2412MHz	Pass	3.53	20.75	30.00	17.65	17.83
2437MHz	Pass	3.53	26.31	30.00	23.26	23.33
2462MHz	Pass	3.53	20.39	30.00	17.36	17.39
802.11ac VHT40_Nss1,(MCS0)_2TX	-	-	-	-	-	-
2422MHz	Pass	3.53	18.53	30.00	15.43	15.60
2437MHz	Pass	3.53	20.55	30.00	17.53	17.54
2452MHz	Pass	3.53	19.70	30.00	16.67	16.70
802.11ac VHT20-BF_Nss1,(MCS0)_2TX	-	-	-	-	-	-
2412MHz	Pass	6.54	19.47	29.46	16.23	16.67
2437MHz	Pass	6.54	25.00	29.46	21.93	22.04
2462MHz	Pass	6.54	20.44	29.46	17.56	17.30
802.11ac VHT40-BF_Nss1,(MCS0)_2TX	-	-	-	-	-	-
2422MHz	Pass	6.54	19.41	29.46	16.22	16.57
2437MHz	Pass	6.54	21.49	29.46	18.32	18.64
2452MHz	Pass	6.54	19.49	29.46	16.37	16.58

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

Summary

Mode	PD (dBm/RBW)
802.11b_Nss1_2TX	-
2.4-2.4835GHz	-1.06
802.11g_Nss1_2TX	-
2.4-2.4835GHz	-4.07
802.11ac VHT20_Nss1,(MCS0)_2TX	-
2.4-2.4835GHz	-3.94
802.11ac VHT40_Nss1,(MCS0)_2TX	-
2.4-2.4835GHz	-11.42
802.11ac VHT20-BF_Nss1,(MCS0)_2TX	-
2.4-2.4835GHz	-4.15
802.11ac VHT40-BF_Nss1,(MCS0)_2TX	-
2.4-2.4835GHz	-9.42

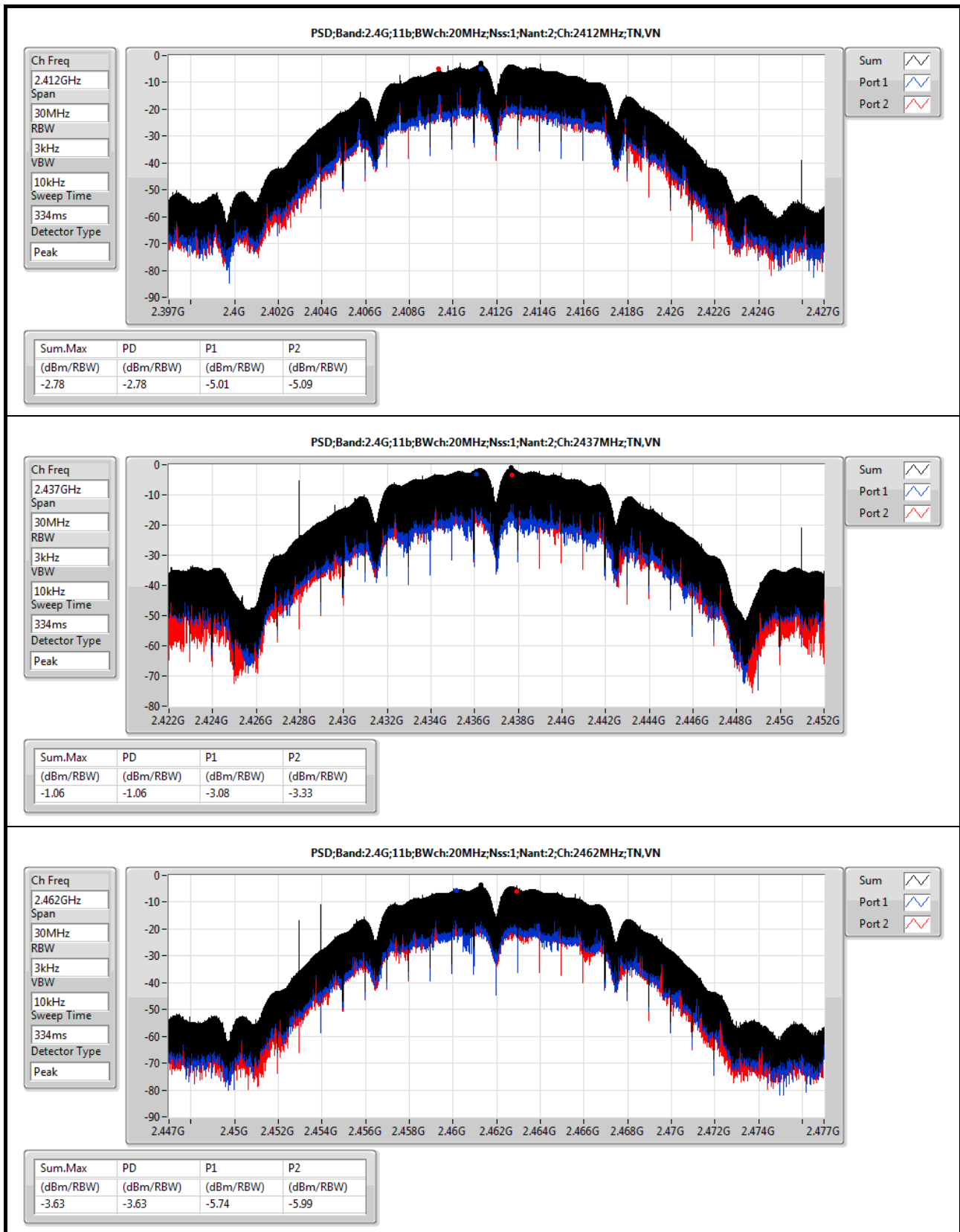
RBW=3kHz.

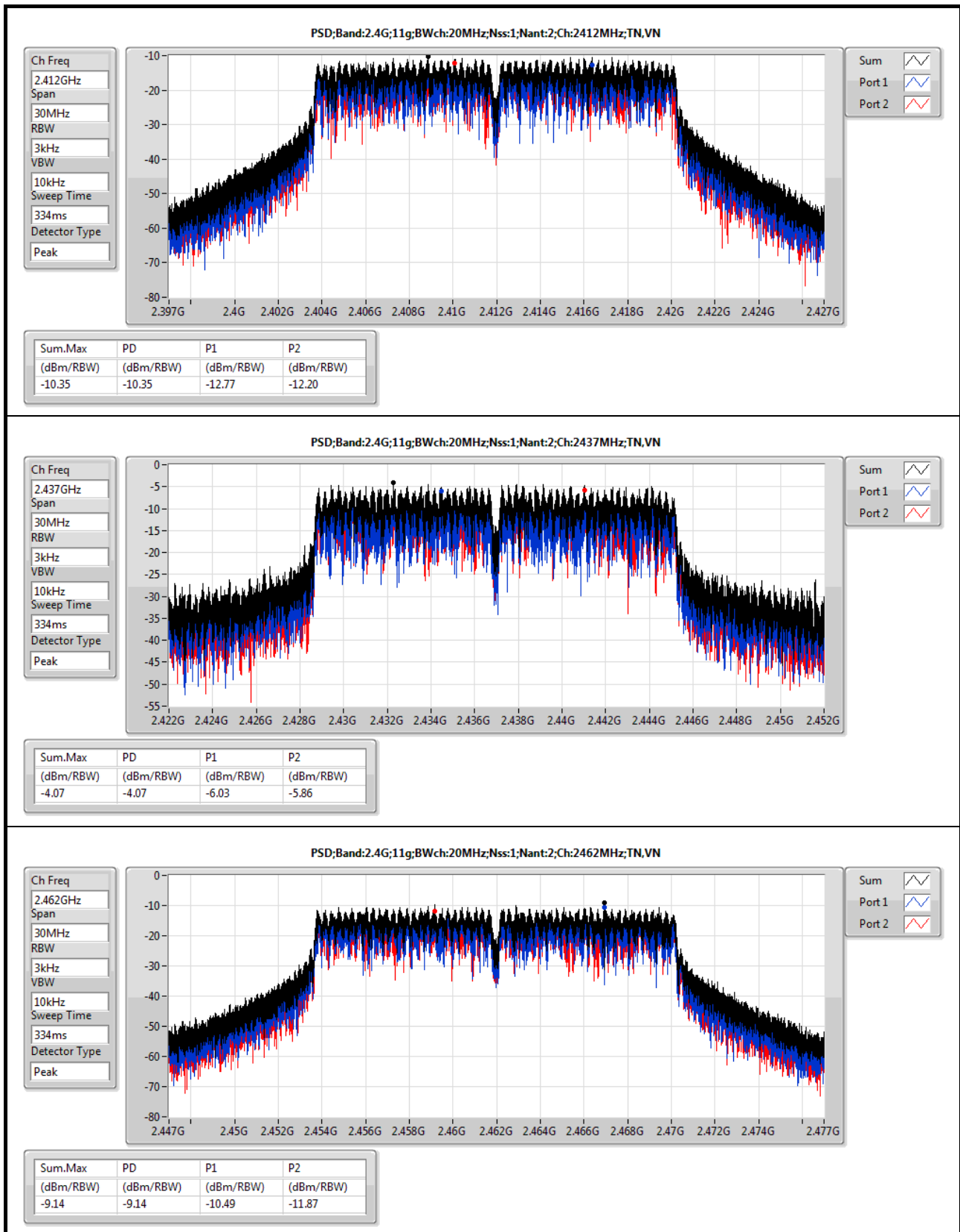
Result

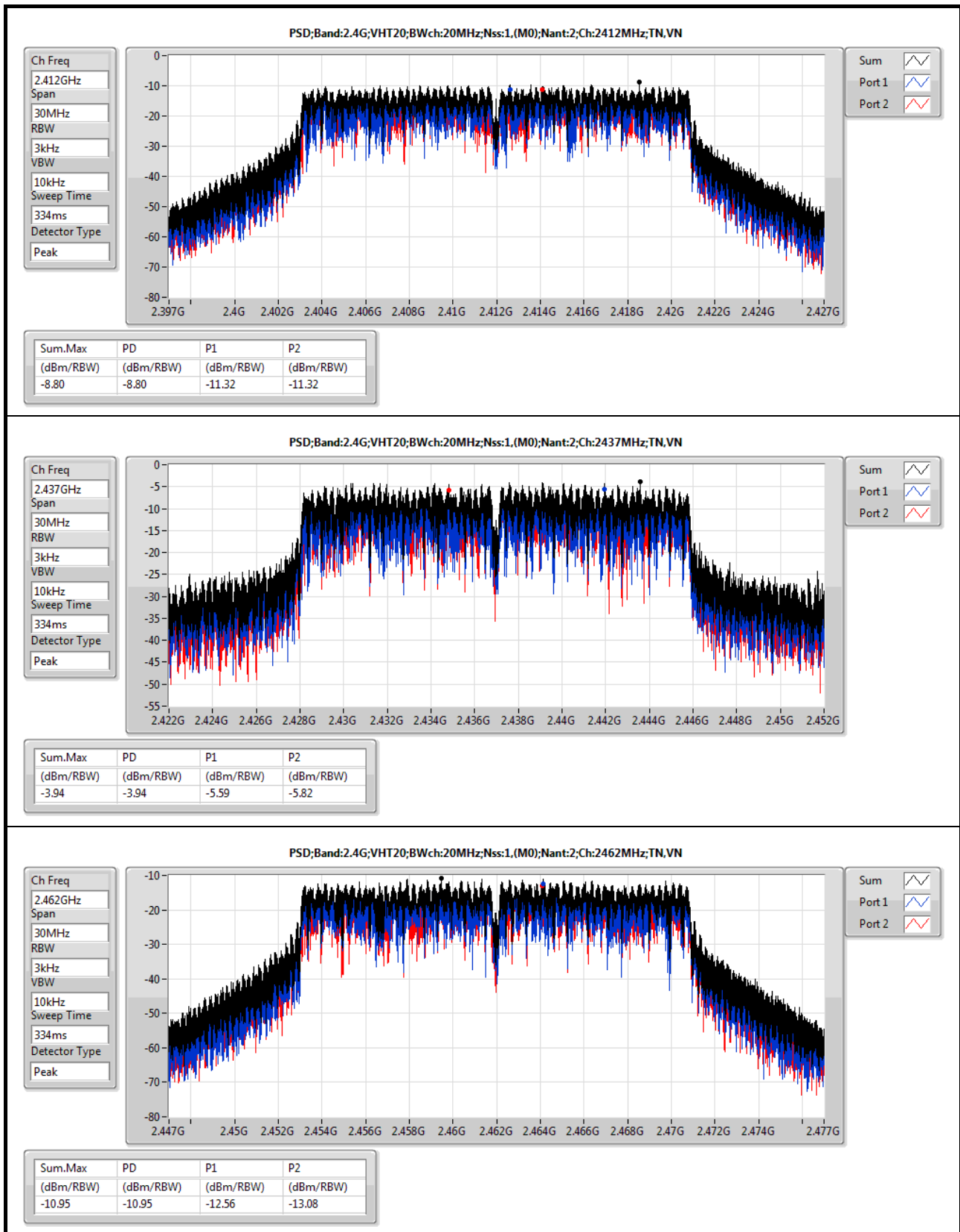
Mode	Result	DG (dBi)	PD (dBm/RBW)	PD.Limit (dBm/RBW)	P1 (dBm/RBW)	P2 (dBm/RBW)
802.11b_Nss1_2TX	-	-	-	-	-	-
2412MHz	Pass	6.54	-2.78	7.46	-5.01	-5.09
2437MHz	Pass	6.54	-1.06	7.46	-3.08	-3.33
2462MHz	Pass	6.54	-3.63	7.46	-5.74	-5.99
802.11g_Nss1_2TX	-	-	-	-	-	-
2412MHz	Pass	6.54	-10.35	7.46	-12.77	-12.20
2437MHz	Pass	6.54	-4.07	7.46	-6.03	-5.86
2462MHz	Pass	6.54	-9.14	7.46	-10.49	-11.87
802.11ac VHT20_Nss1,(MCS0)_2TX	-	-	-	-	-	-
2412MHz	Pass	6.54	-8.80	7.46	-11.32	-11.32
2437MHz	Pass	6.54	-3.94	7.46	-5.59	-5.82
2462MHz	Pass	6.54	-10.95	7.46	-12.56	-13.08
802.11ac VHT40_Nss1,(MCS0)_2TX	-	-	-	-	-	-
2422MHz	Pass	6.54	-13.88	7.46	-15.25	-16.67
2437MHz	Pass	6.54	-11.42	7.46	-14.03	-13.39
2452MHz	Pass	6.54	-12.72	7.46	-15.72	-15.58
802.11ac VHT20-BF_Nss1,(MCS0)_2TX	-	-	-	-	-	-
2412MHz	Pass	6.54	-10.13	7.46	-11.69	-12.70
2437MHz	Pass	6.54	-4.15	7.46	-5.64	-7.23
2462MHz	Pass	6.54	-8.65	7.46	-11.17	-10.84
802.11ac VHT40-BF_Nss1,(MCS0)_2TX	-	-	-	-	-	-
2422MHz	Pass	6.54	-11.56	7.46	-13.06	-14.77
2437MHz	Pass	6.54	-9.42	7.46	-12.06	-11.40
2452MHz	Pass	6.54	-12.00	7.46	-15.10	-12.95

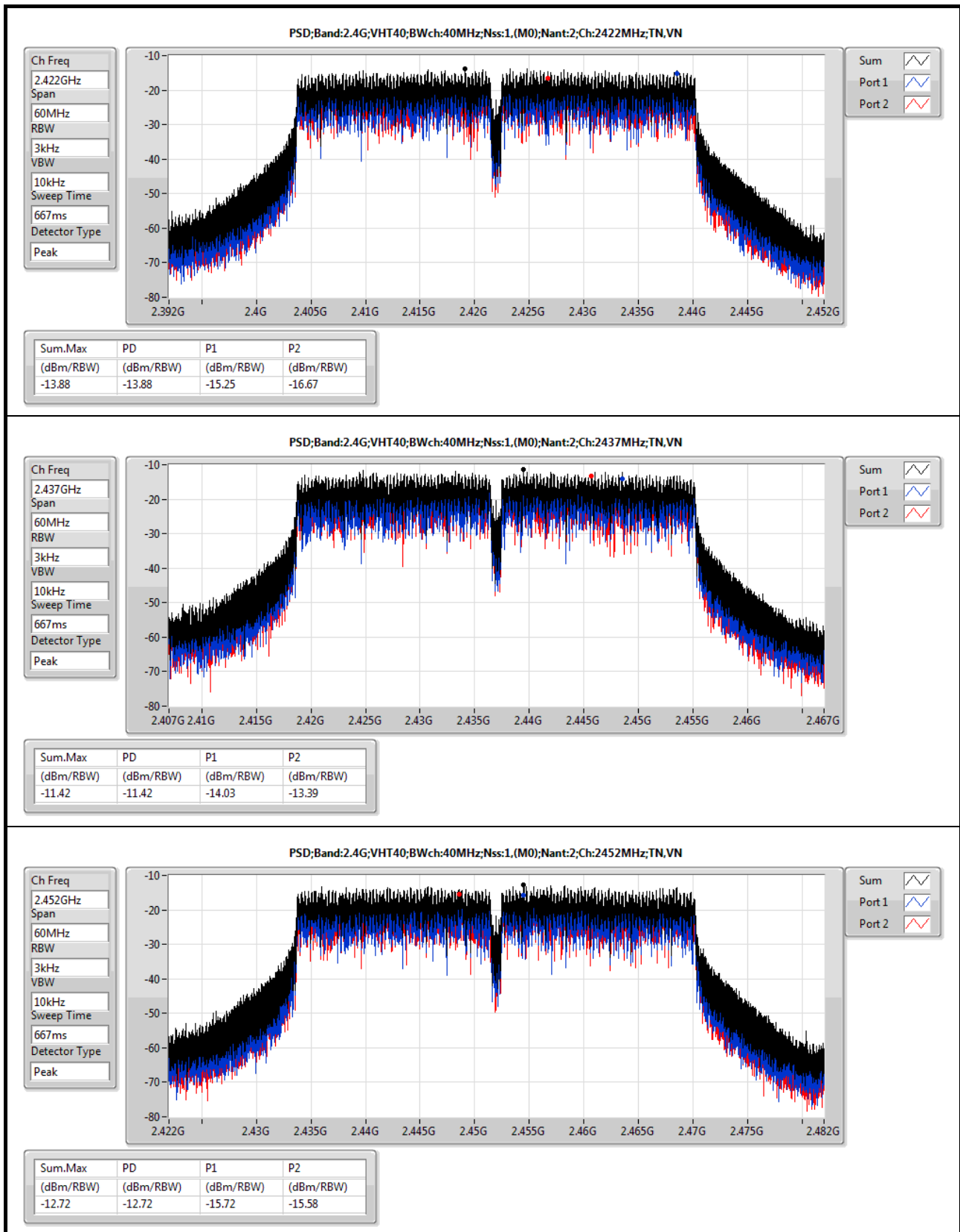
DG = Directional Gain; RBW=3kHz;

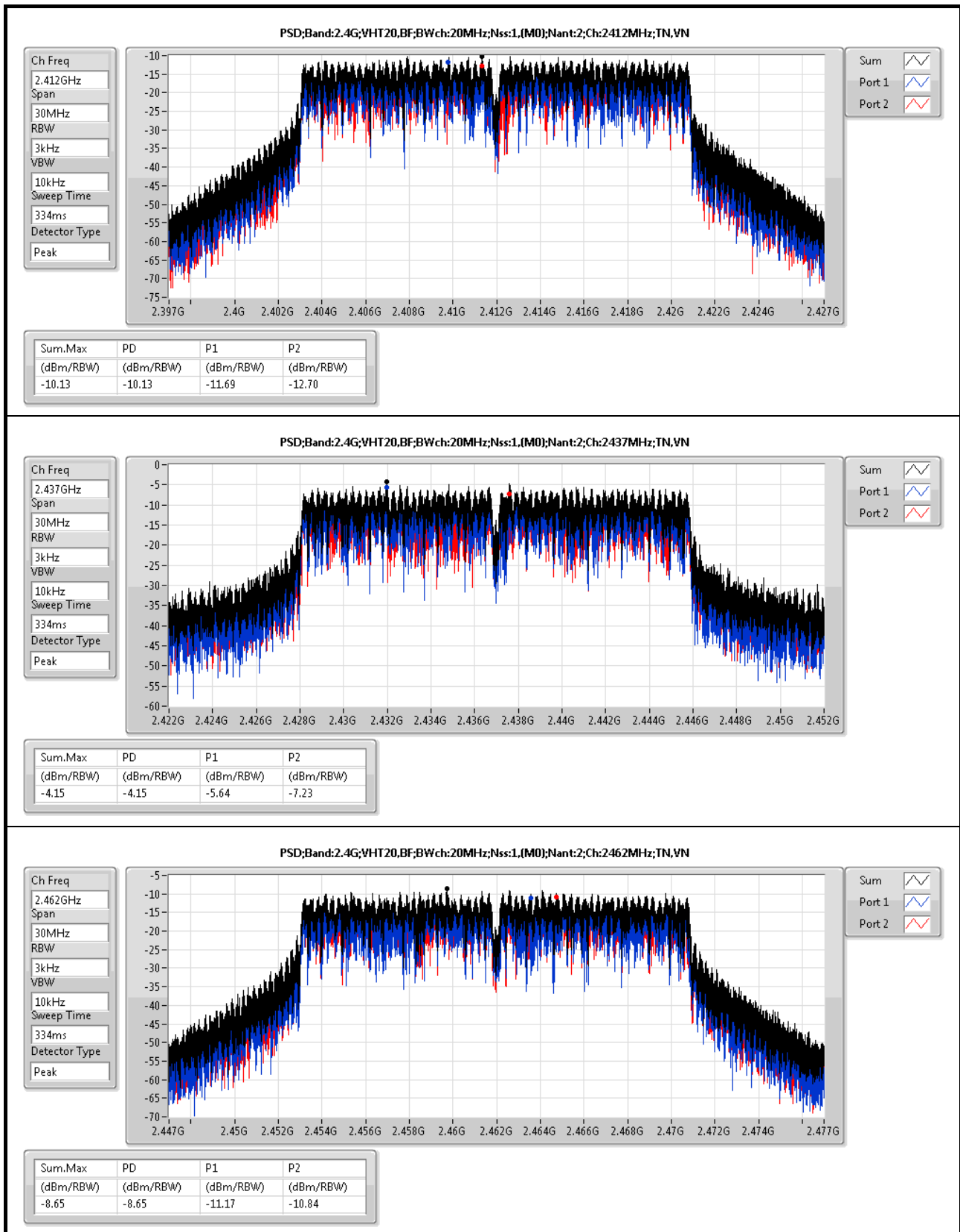
PD = trace bin-by-bin of each transmits port summing can be performed maximum power density; **Port X** = Port X power density;

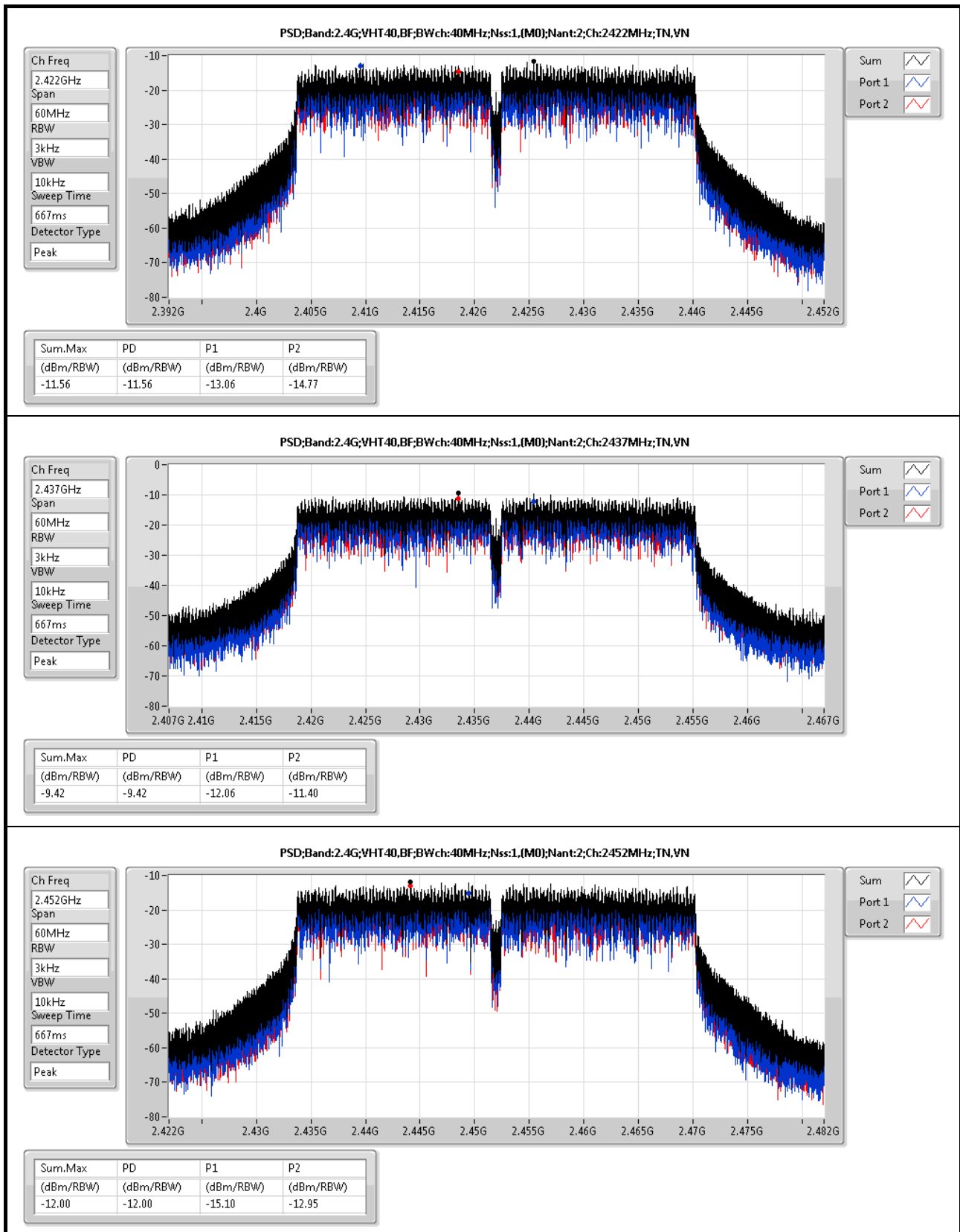














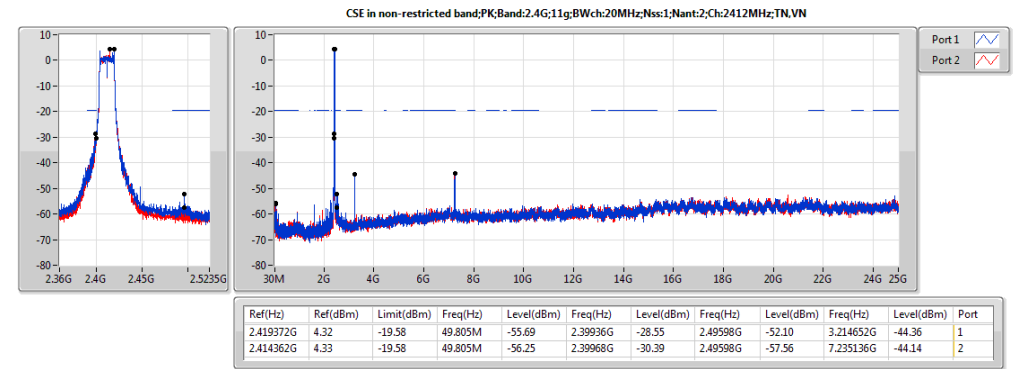
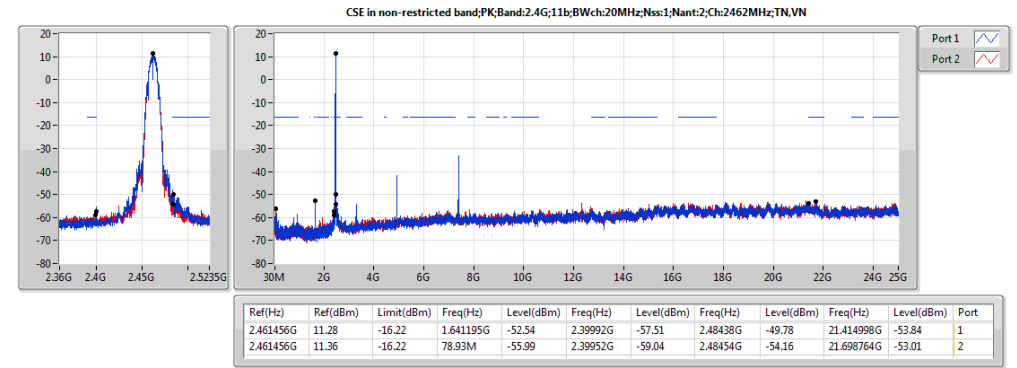
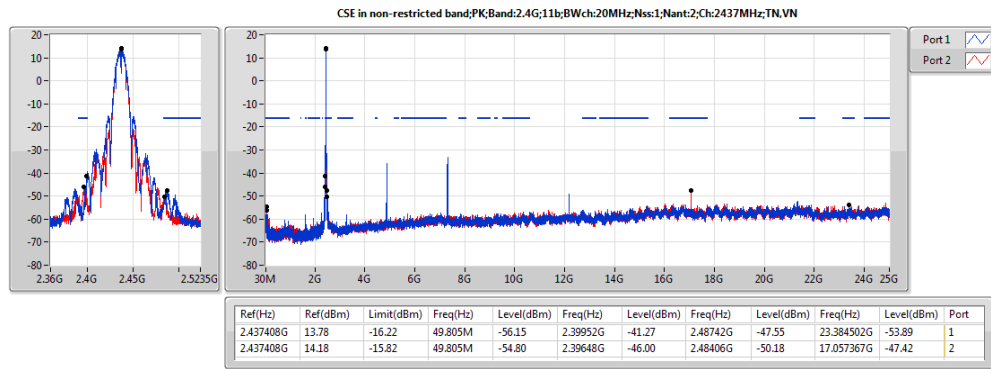
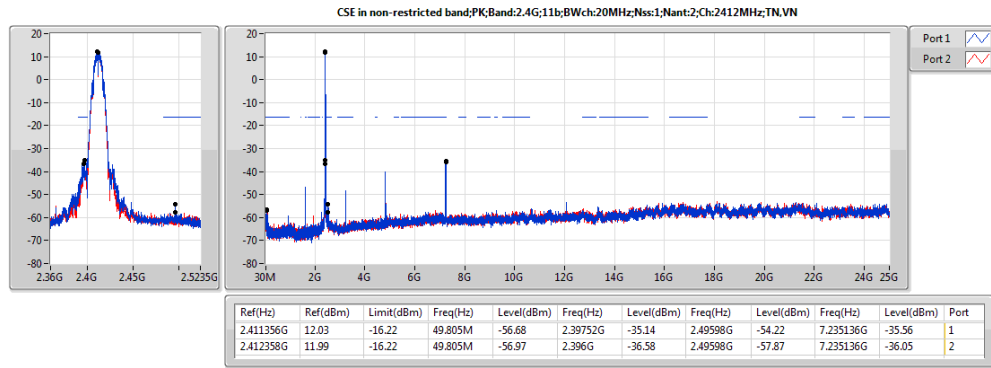
Summary

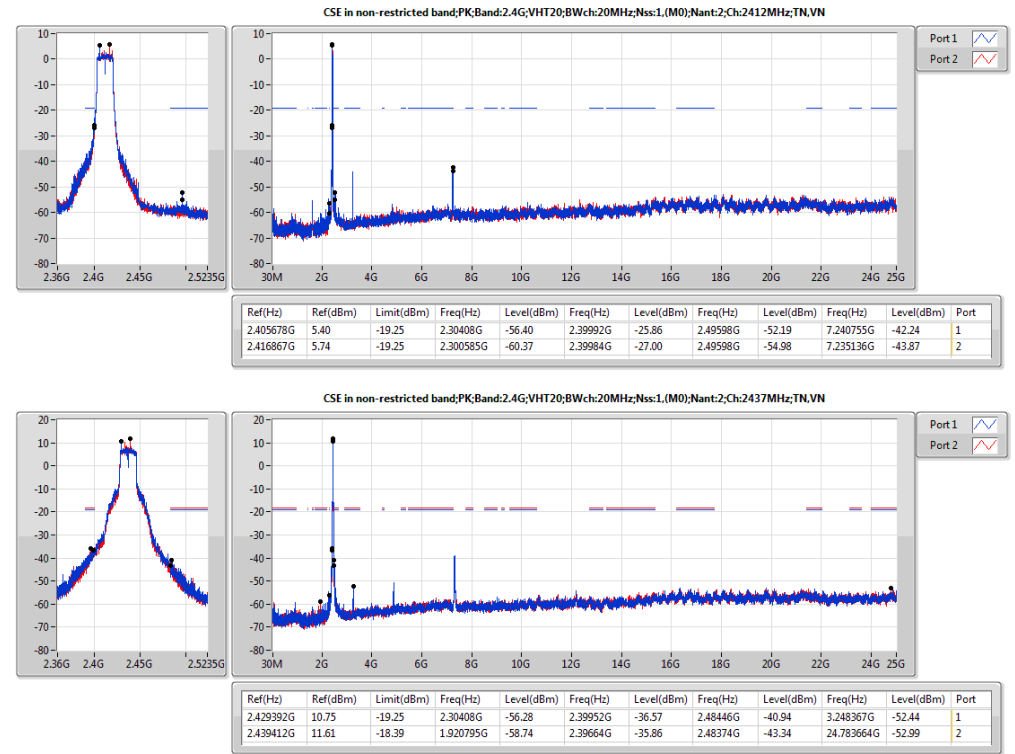
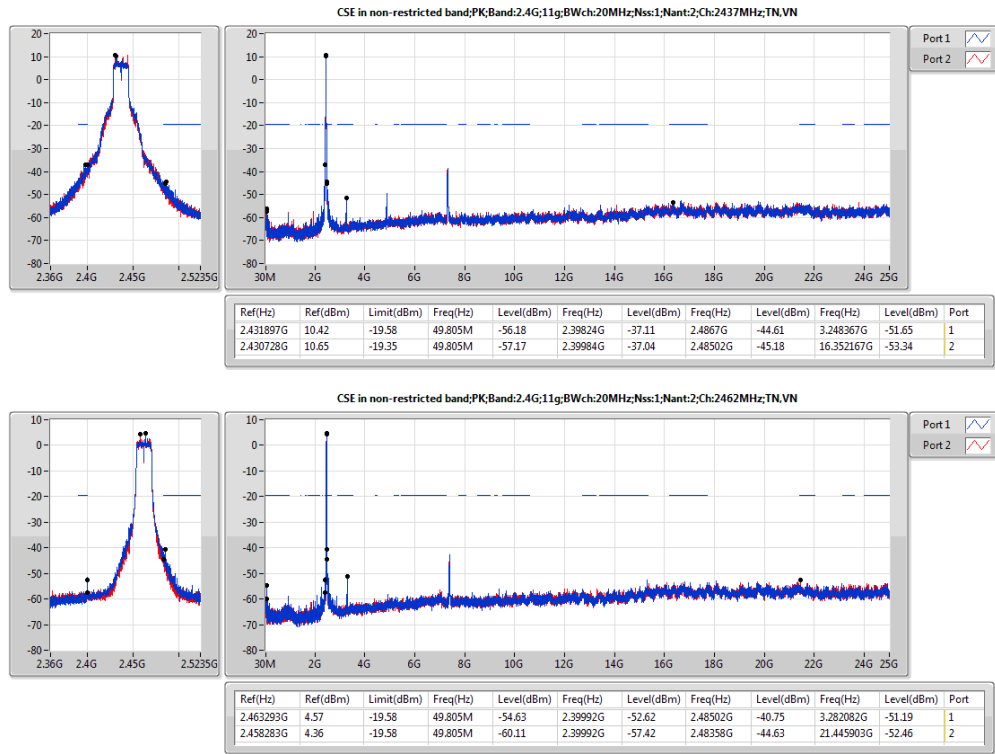
Mode	Result	Ref (Hz)	Ref (dBm)	Limit (dBm)	Freq (Hz)	Level (dBm)	Freq (Hz)	Level (dBm)	Freq (Hz)	Level (dBm)	Freq (Hz)	Level (dBm)	Port
2.4G;VHT40,BF;Nss1,(M0);Nbx2;2437	Pass	2.441917G	3.94	-26.06	2.305115G	-54.69	2.39952G	-29.60	2.48494G	-40.93	3.247813G	-49.77	2

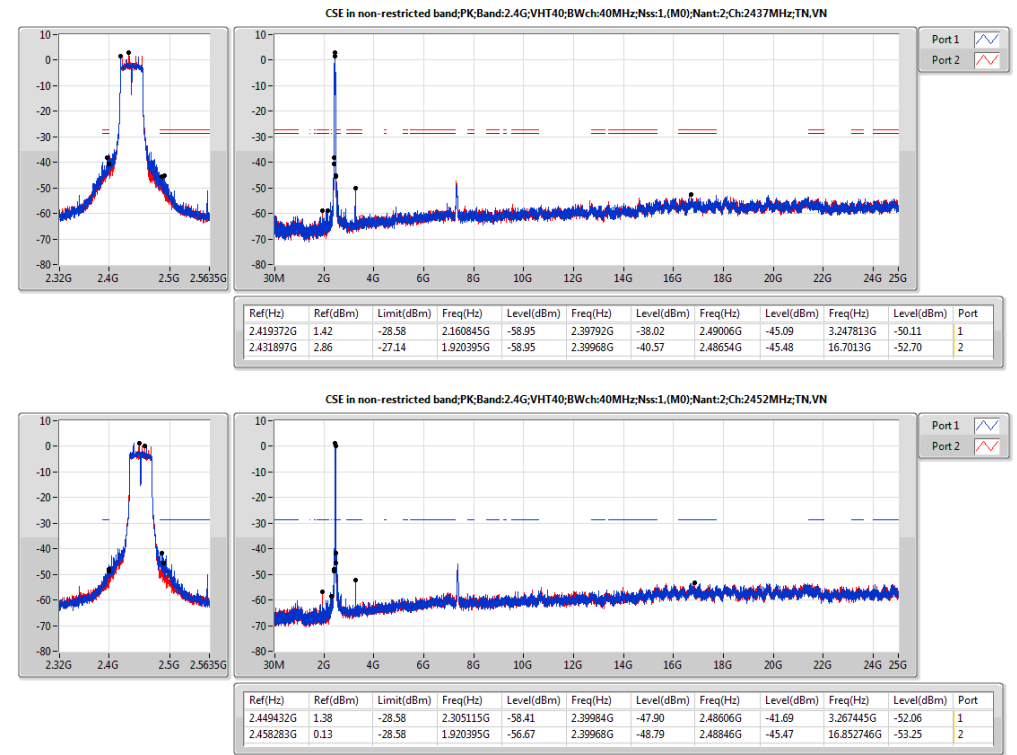
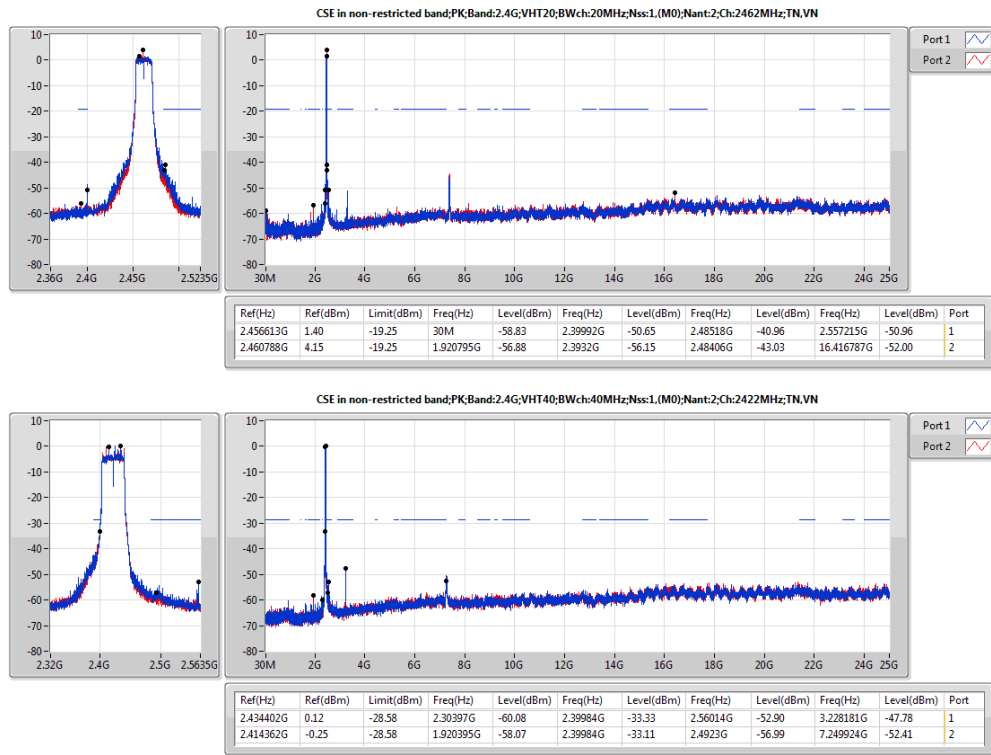


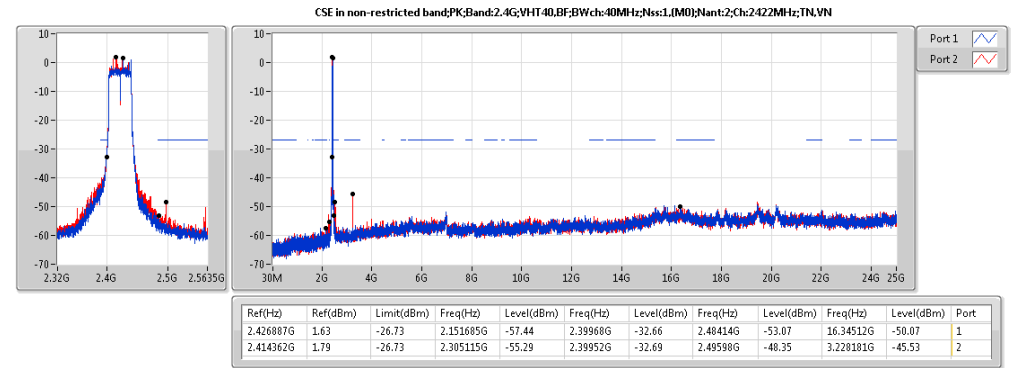
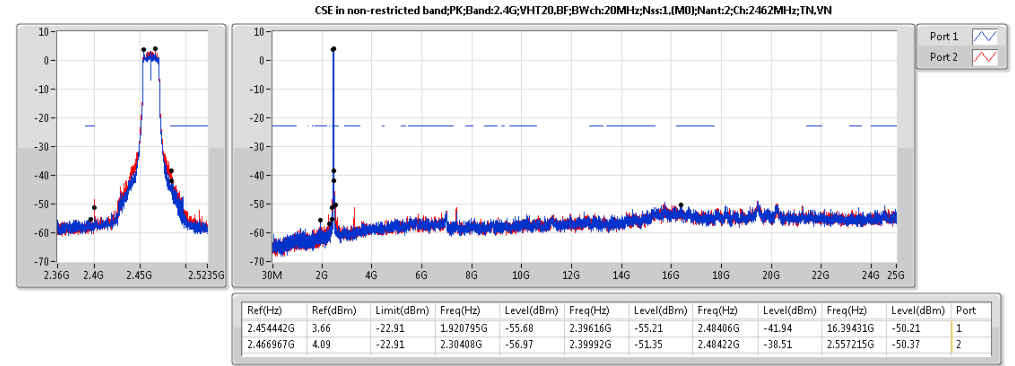
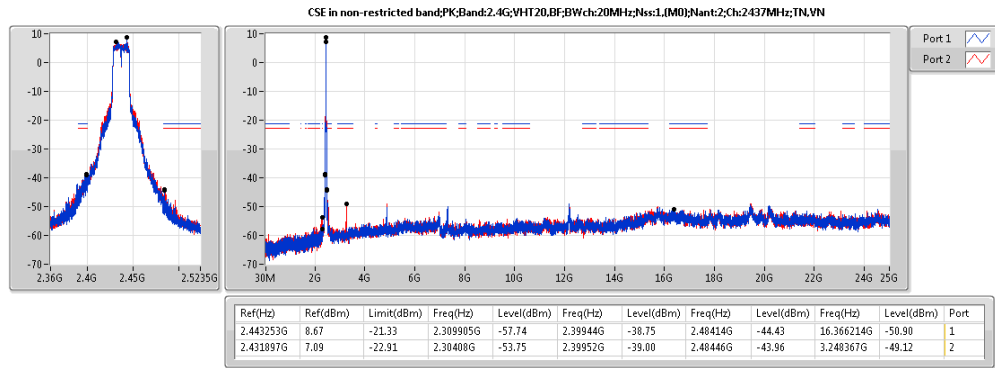
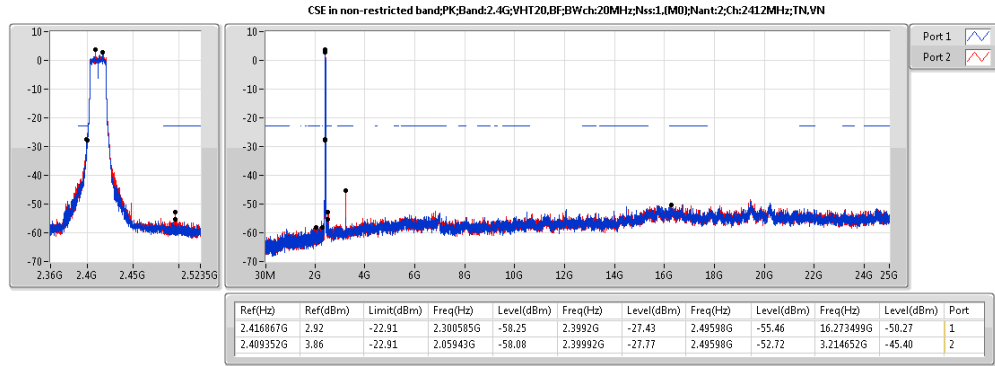
Result

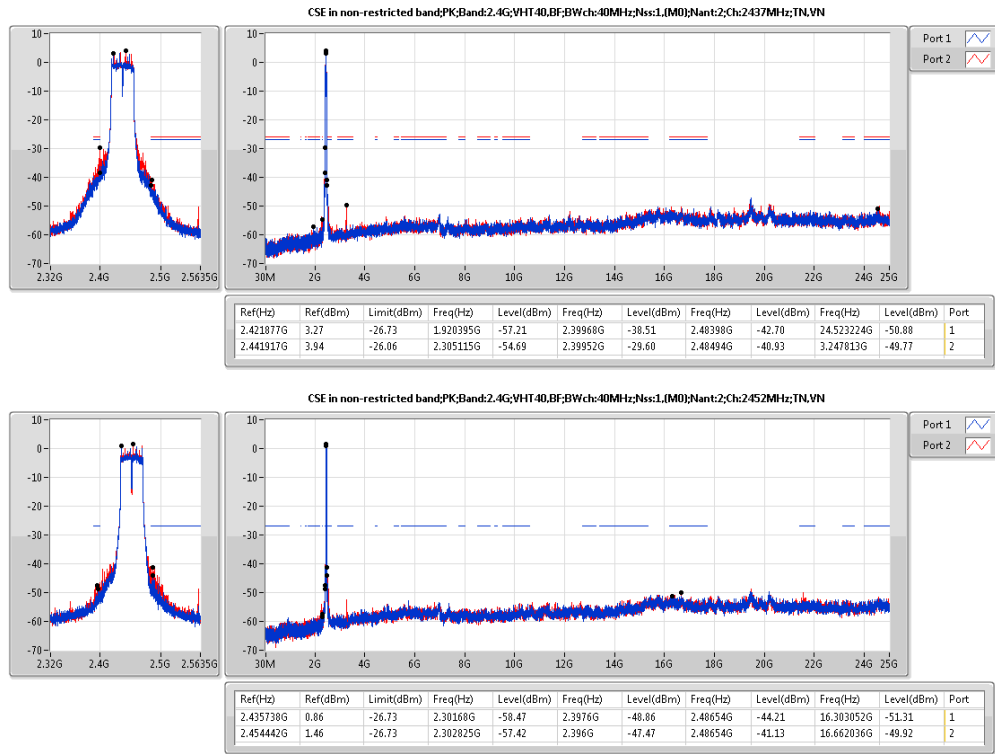
Mode	Result	Ref (Hz)	Ref (dBm)	Limit (dBm)	Freq (Hz)	Level (dBm)	Freq (Hz)	Level (dBm)	Freq (Hz)	Level (dBm)	Freq (Hz)	Level (dBm)	Port
2.4G;11b;Nss1;Ntx2;2412	Pass	2.411356G	12.03	-16.22	49.805M	-56.68	2.39752G	-35.14	2.49598G	-54.22	7.235136G	-35.56	1
2.4G;11b;Nss1;Ntx2;2412	Pass	2.412358G	11.99	-16.22	49.805M	-56.97	2.396G	-36.58	2.49598G	-57.87	7.235136G	-36.05	2
2.4G;11b;Nss1;Ntx2;2437	Pass	2.437408G	13.78	-16.22	49.805M	-56.15	2.39952G	-41.27	2.48742G	-47.55	23.384502G	-53.89	1
2.4G;11b;Nss1;Ntx2;2437	Pass	2.437408G	14.18	-15.82	49.805M	-54.80	2.39648G	-46.00	2.48406G	-50.18	17.057367G	-47.42	2
2.4G;11b;Nss1;Ntx2;2462	Pass	2.461456G	11.28	-16.22	1.641195G	-52.54	2.39992G	-57.51	2.48438G	-49.78	21.414998G	-53.84	1
2.4G;11b;Nss1;Ntx2;2462	Pass	2.461456G	11.36	-16.22	78.93M	-55.99	2.39952G	-59.04	2.48454G	-54.16	21.698764G	-53.01	2
2.4G;11g;Nss1;Ntx2;2412	Pass	2.419372G	4.32	-19.58	49.805M	-55.69	2.39936G	-28.55	2.49598G	-52.10	3.214652G	-44.36	1
2.4G;11g;Nss1;Ntx2;2412	Pass	2.414362G	4.33	-19.58	49.805M	-56.25	2.39968G	-30.39	2.49598G	-57.56	7.235136G	-44.14	2
2.4G;11g;Nss1;Ntx2;2437	Pass	2.431897G	10.42	-19.58	49.805M	-56.18	2.39824G	-37.11	2.4867G	-44.61	3.248367G	-51.65	1
2.4G;11g;Nss1;Ntx2;2437	Pass	2.430728G	10.65	-19.35	49.805M	-57.17	2.39984G	-37.04	2.48502G	-45.18	16.352167G	-53.34	2
2.4G;11g;Nss1;Ntx2;2462	Pass	2.463293G	4.57	-19.58	49.805M	-54.63	2.39992G	-52.62	2.48502G	-40.75	3.282082G	-51.19	1
2.4G;11g;Nss1;Ntx2;2462	Pass	2.458283G	4.36	-19.58	49.805M	-60.11	2.39992G	-57.42	2.48358G	-44.63	21.445903G	-52.46	2
2.4G;VHT20;Nss1,(M0);Ntx2;2412	Pass	2.405678G	5.40	-19.25	2.30408G	-56.40	2.39992G	-25.86	2.49598G	-52.19	7.240755G	-42.24	1
2.4G;VHT20;Nss1,(M0);Ntx2;2412	Pass	2.416867G	5.74	-19.25	2.300585G	-60.37	2.39984G	-27.00	2.49598G	-54.98	7.235136G	-43.87	2
2.4G;VHT20;Nss1,(M0);Ntx2;2437	Pass	2.429392G	10.75	-19.25	2.30408G	-56.28	2.39952G	-36.57	2.48446G	-40.94	3.248367G	-52.44	1
2.4G;VHT20;Nss1,(M0);Ntx2;2437	Pass	2.439412G	11.61	-18.39	1.920795G	-58.74	2.39664G	-35.86	2.48374G	-43.34	24.783664G	-52.99	2
2.4G;VHT20;Nss1,(M0);Ntx2;2462	Pass	2.456613G	1.40	-19.25	30M	-58.83	2.39992G	-50.65	2.48518G	-40.96	2.557215G	-50.96	1
2.4G;VHT20;Nss1,(M0);Ntx2;2462	Pass	2.460788G	4.15	-19.25	1.920795G	-56.88	2.3932G	-56.15	2.48406G	-43.03	16.416787G	-52.00	2
2.4G;VHT40;Nss1,(M0);Ntx2;2422	Pass	2.434402G	0.12	-28.58	2.30397G	-60.08	2.39984G	-33.33	2.56014G	-52.90	3.228181G	-47.78	1
2.4G;VHT40;Nss1,(M0);Ntx2;2422	Pass	2.414362G	-0.25	-28.58	1.920395G	-58.07	2.39984G	-33.11	2.4923G	-56.99	7.249924G	-52.41	2
2.4G;VHT40;Nss1,(M0);Ntx2;2437	Pass	2.419372G	1.42	-28.58	2.160845G	-58.95	2.39792G	-38.02	2.49006G	-45.09	3.247813G	-50.11	1
2.4G;VHT40;Nss1,(M0);Ntx2;2437	Pass	2.431897G	2.86	-27.14	1.920395G	-58.95	2.39968G	-40.57	2.48654G	-45.48	16.7013G	-52.70	2
2.4G;VHT40;Nss1,(M0);Ntx2;2452	Pass	2.449432G	1.38	-28.58	2.305115G	-58.41	2.39984G	-47.90	2.48606G	-41.69	3.267445G	-52.06	1
2.4G;VHT40;Nss1,(M0);Ntx2;2452	Pass	2.458283G	0.13	-28.58	1.920395G	-56.67	2.39968G	-48.79	2.48846G	-45.47	16.852746G	-53.25	2
2.4G;VHT20,BF;Nss1,(M0);Ntx2;2412	Pass	2.416867G	2.92	-22.91	2.300585G	-58.25	2.3992G	-27.43	2.49598G	-55.46	16.273499G	-50.27	1
2.4G;VHT20,BF;Nss1,(M0);Ntx2;2412	Pass	2.409352G	3.86	-22.91	2.05943G	-58.08	2.39992G	-27.77	2.49598G	-52.72	3.214652G	-45.40	2
2.4G;VHT20,BF;Nss1,(M0);Ntx2;2437	Pass	2.443253G	8.67	-21.33	2.309905G	-57.74	2.39944G	-38.75	2.48414G	-44.43	16.366214G	-50.90	1
2.4G;VHT20,BF;Nss1,(M0);Ntx2;2437	Pass	2.431897G	7.09	-22.91	2.30408G	-53.75	2.39952G	-39.00	2.48446G	-43.96	3.248367G	-49.12	2
2.4G;VHT20,BF;Nss1,(M0);Ntx2;2462	Pass	2.454442G	3.66	-22.91	1.920795G	-55.68	2.39616G	-55.21	2.48406G	-41.94	16.39431G	-50.21	1
2.4G;VHT20,BF;Nss1,(M0);Ntx2;2462	Pass	2.466967G	4.09	-22.91	2.30408G	-56.97	2.39992G	-51.35	2.48422G	-38.51	2.557215G	-50.37	2
2.4G;VHT40,BF;Nss1,(M0);Ntx2;2422	Pass	2.426887G	1.63	-26.73	2.151685G	-57.44	2.39968G	-32.66	2.48414G	-53.07	16.34512G	-50.07	1
2.4G;VHT40,BF;Nss1,(M0);Ntx2;2422	Pass	2.414362G	1.79	-26.73	2.305115G	-55.29	2.39952G	-32.69	2.49598G	-48.35	3.228181G	-45.53	2
2.4G;VHT40,BF;Nss1,(M0);Ntx2;2437	Pass	2.421877G	3.27	-26.73	1.920395G	-57.21	2.39968G	-38.51	2.48398G	-42.70	24.523224G	-50.88	1
2.4G;VHT40,BF;Nss1,(M0);Ntx2;2437	Pass	2.441917G	3.94	-26.06	2.305115G	-54.69	2.39952G	-29.60	2.48494G	-40.93	3.247813G	-49.77	2
2.4G;VHT40,BF;Nss1,(M0);Ntx2;2452	Pass	2.435738G	0.86	-26.73	2.30168G	-58.47	2.3976G	-48.86	2.48654G	-44.21	16.303052G	-51.31	1
2.4G;VHT40,BF;Nss1,(M0);Ntx2;2452	Pass	2.454442G	1.46	-26.73	2.302825G	-57.42	2.396G	-47.47	2.48654G	-41.13	16.662036G	-49.92	2

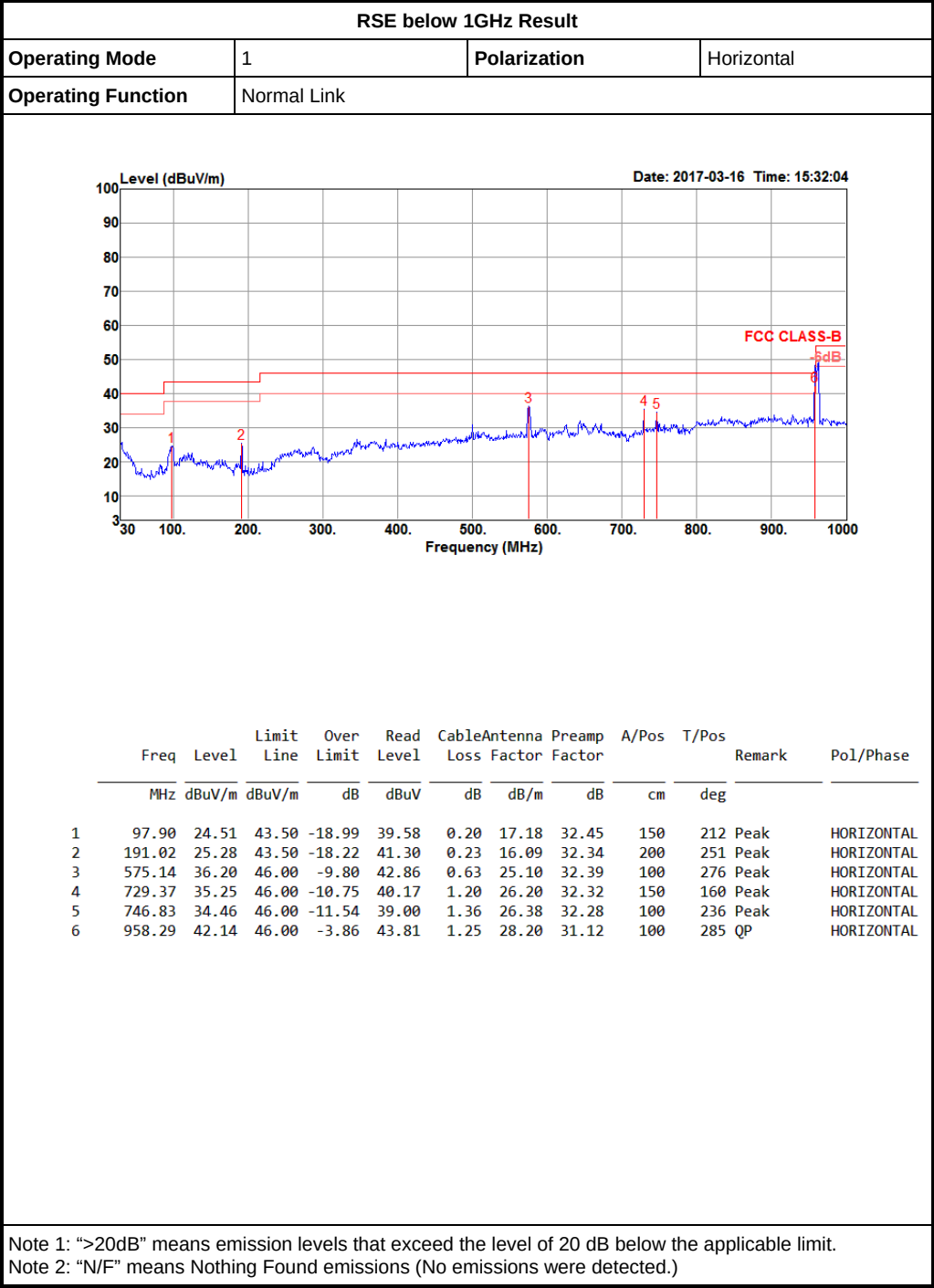












Level (dBuV/m)

Date: 2017-03-16 Time: 15:45:47

	Freq	Level	Limit	Over	Read	CableAntenna	Preamp	A/Pos	T/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	cm	deg	
1	30.00	25.49	40.00	-14.51	32.66	0.25	25.60	33.02	200	42	Peak
2	575.14	37.61	46.00	-8.39	44.54	0.36	25.10	32.39	150	34	Peak
3	601.33	34.78	46.00	-11.22	41.20	0.56	25.43	32.41	150	2	Peak
4	630.43	33.81	46.00	-12.19	39.69	0.69	25.83	32.40	150	262	Peak
5	729.37	36.46	46.00	-9.54	41.33	1.25	26.20	32.32	200	203	Peak
6	959.26	42.72	46.00	-3.28	44.01	1.63	28.20	31.12	100	281	QP

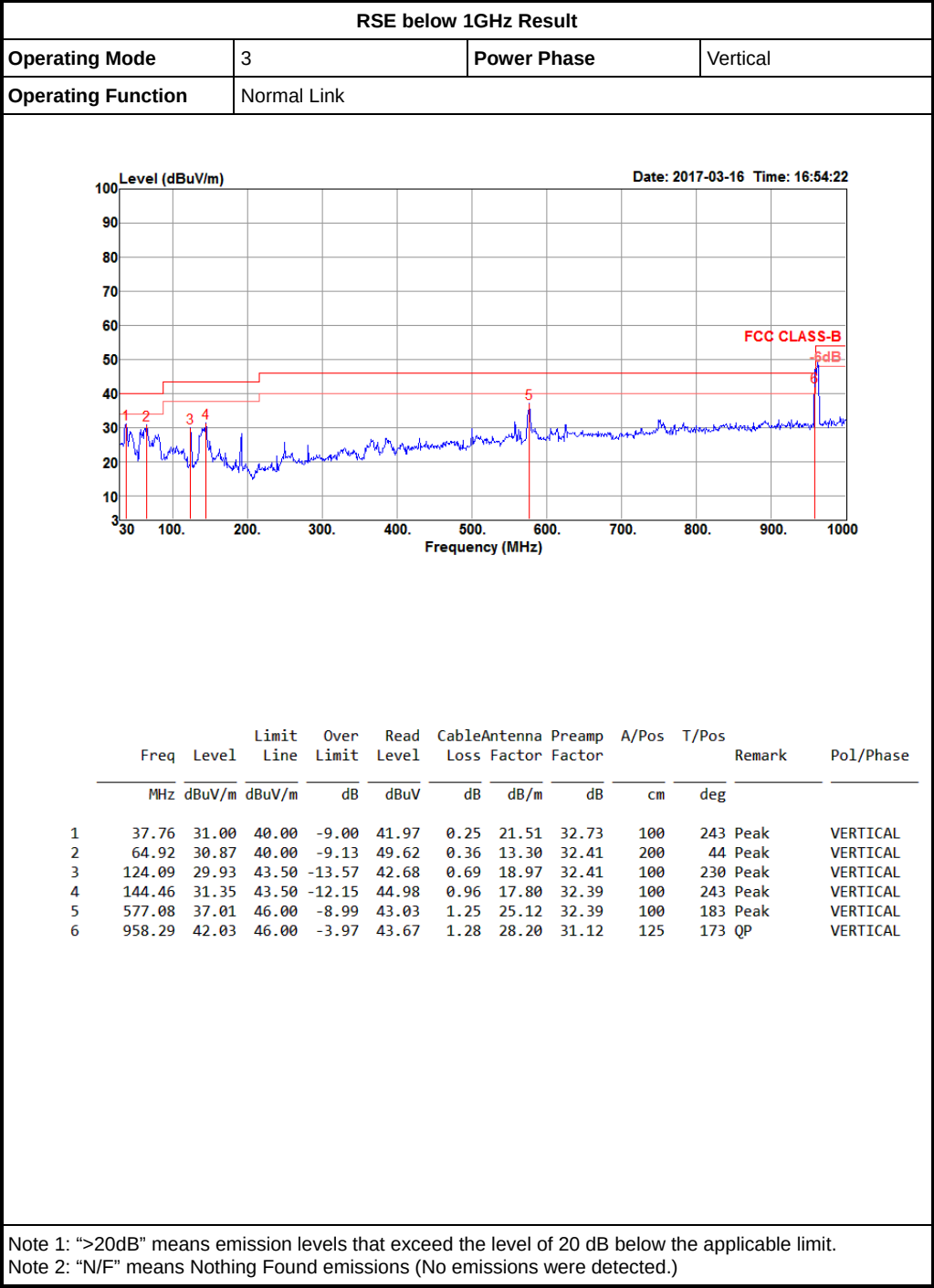
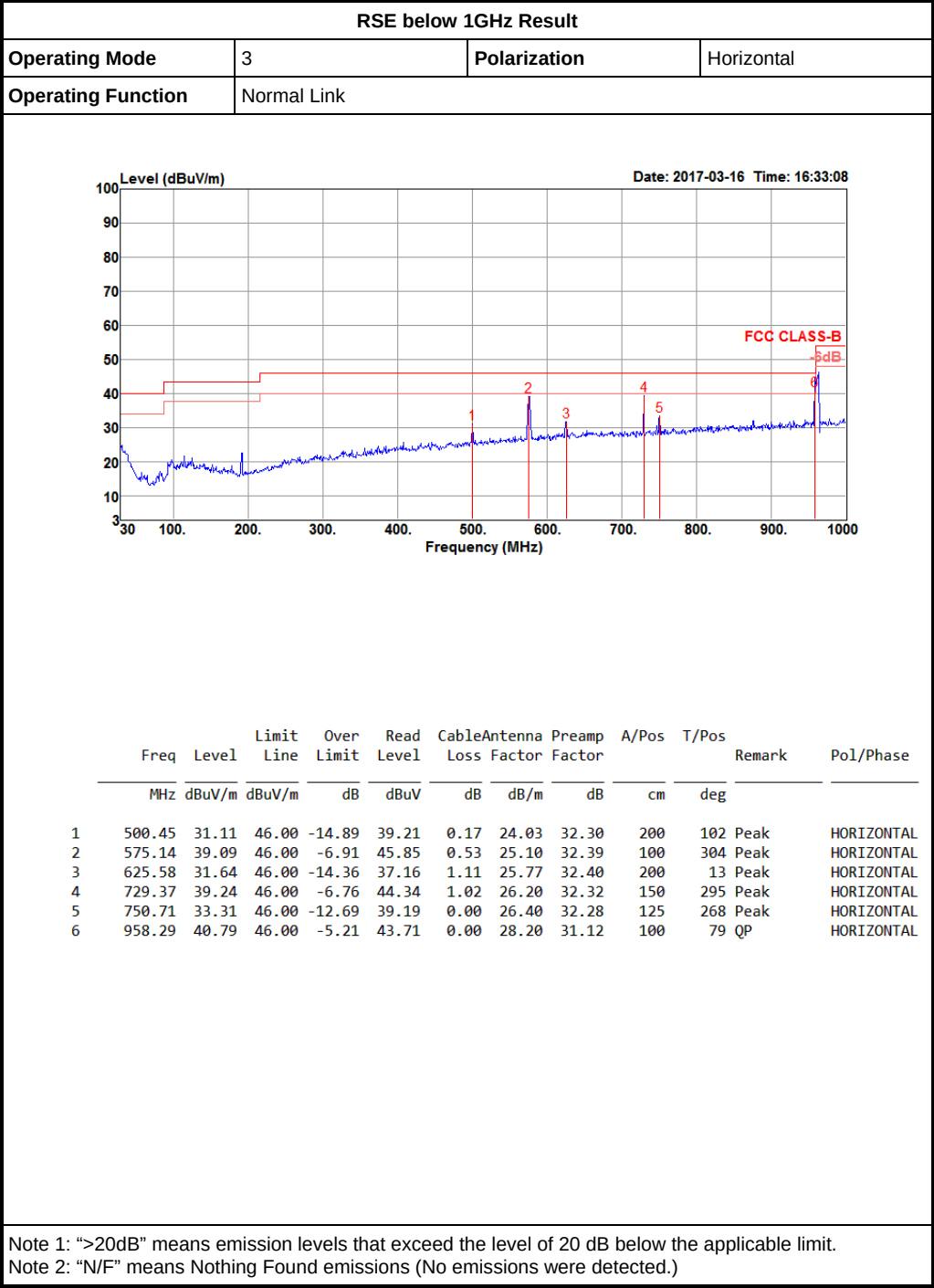
Note 1: ">20dB" means emission levels that exceed the level of 20 dB below the applicable limit.

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



RSE below 1GHz Result																																																																																																											
Operating Mode	2				Polarization				Horizontal																																																																																																		
Operating Function	Normal Link																																																																																																										
Level (dBuV/m) Date: 2017-03-16 Time: 16:10:16 FCC CLASS-B 5dB Frequency (MHz) <table><tr><th></th><th>Freq</th><th>Level</th><th>Limit</th><th>Over</th><th>Read</th><th>CableAntenna</th><th>Preamp</th><th>A/Pos</th><th>T/Pos</th><th>Remark</th><th>Pol/Phase</th></tr><tr><th></th><th>MHz</th><th>dBuV/m</th><th>dBuV/m</th><th>dB</th><th>dBuV</th><th>dB</th><th>dB/m</th><th>dB</th><th>cm</th><th>deg</th><th></th></tr><tr><td>1</td><td>35.82</td><td>25.89</td><td>40.00</td><td>-14.11</td><td>35.71</td><td>0.25</td><td>22.73</td><td>32.80</td><td>100</td><td>205 Peak</td><td>HORIZONTAL</td></tr><tr><td>2</td><td>500.45</td><td>31.75</td><td>46.00</td><td>-14.25</td><td>39.77</td><td>0.25</td><td>24.03</td><td>32.30</td><td>100</td><td>265 Peak</td><td>HORIZONTAL</td></tr><tr><td>3</td><td>575.14</td><td>38.58</td><td>46.00</td><td>-7.42</td><td>45.48</td><td>0.39</td><td>25.10</td><td>32.39</td><td>200</td><td>140 Peak</td><td>HORIZONTAL</td></tr><tr><td>4</td><td>620.73</td><td>34.36</td><td>46.00</td><td>-11.64</td><td>40.58</td><td>0.48</td><td>25.70</td><td>32.40</td><td>150</td><td>316 Peak</td><td>HORIZONTAL</td></tr><tr><td>5</td><td>729.37</td><td>39.04</td><td>46.00</td><td>-6.96</td><td>43.77</td><td>1.39</td><td>26.20</td><td>32.32</td><td>200</td><td>334 Peak</td><td>HORIZONTAL</td></tr><tr><td>6</td><td>958.29</td><td>42.64</td><td>46.00</td><td>-3.36</td><td>44.00</td><td>1.56</td><td>28.20</td><td>31.12</td><td>100</td><td>80 QP</td><td>HORIZONTAL</td></tr></table>													Freq	Level	Limit	Over	Read	CableAntenna	Preamp	A/Pos	T/Pos	Remark	Pol/Phase		MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	cm	deg		1	35.82	25.89	40.00	-14.11	35.71	0.25	22.73	32.80	100	205 Peak	HORIZONTAL	2	500.45	31.75	46.00	-14.25	39.77	0.25	24.03	32.30	100	265 Peak	HORIZONTAL	3	575.14	38.58	46.00	-7.42	45.48	0.39	25.10	32.39	200	140 Peak	HORIZONTAL	4	620.73	34.36	46.00	-11.64	40.58	0.48	25.70	32.40	150	316 Peak	HORIZONTAL	5	729.37	39.04	46.00	-6.96	43.77	1.39	26.20	32.32	200	334 Peak	HORIZONTAL	6	958.29	42.64	46.00	-3.36	44.00	1.56	28.20	31.12	100	80 QP	HORIZONTAL
	Freq	Level	Limit	Over	Read	CableAntenna	Preamp	A/Pos	T/Pos	Remark	Pol/Phase																																																																																																
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	cm	deg																																																																																																	
1	35.82	25.89	40.00	-14.11	35.71	0.25	22.73	32.80	100	205 Peak	HORIZONTAL																																																																																																
2	500.45	31.75	46.00	-14.25	39.77	0.25	24.03	32.30	100	265 Peak	HORIZONTAL																																																																																																
3	575.14	38.58	46.00	-7.42	45.48	0.39	25.10	32.39	200	140 Peak	HORIZONTAL																																																																																																
4	620.73	34.36	46.00	-11.64	40.58	0.48	25.70	32.40	150	316 Peak	HORIZONTAL																																																																																																
5	729.37	39.04	46.00	-6.96	43.77	1.39	26.20	32.32	200	334 Peak	HORIZONTAL																																																																																																
6	958.29	42.64	46.00	-3.36	44.00	1.56	28.20	31.12	100	80 QP	HORIZONTAL																																																																																																
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RSE below 1GHz Result																																																																																																											
Operating Mode	2				Power Phase				Vertical																																																																																																		
Operating Function	Normal Link																																																																																																										
Level (dBuV/m) Date: 2017-03-16 Time: 16:25:51 FCC CLASS-B 5dB Frequency (MHz) <table><tr><th></th><th>Freq</th><th>Level</th><th>Limit</th><th>Over</th><th>Read</th><th>CableAntenna</th><th>Preamp</th><th>A/Pos</th><th>T/Pos</th><th>Remark</th><th>Pol/Phase</th></tr><tr><th></th><th>MHz</th><th>dBuV/m</th><th>dBuV/m</th><th>dB</th><th>dBuV</th><th>dB</th><th>dB/m</th><th>dB</th><th>cm</th><th>deg</th><th></th></tr><tr><td>1</td><td>37.76</td><td>30.48</td><td>40.00</td><td>-9.52</td><td>41.28</td><td>0.42</td><td>21.51</td><td>32.73</td><td>100</td><td>280 Peak</td><td>VERTICAL</td></tr><tr><td>2</td><td>59.10</td><td>30.74</td><td>40.00</td><td>-9.26</td><td>48.80</td><td>0.52</td><td>13.82</td><td>32.40</td><td>100</td><td>4 Peak</td><td>VERTICAL</td></tr><tr><td>3</td><td>576.11</td><td>37.79</td><td>46.00</td><td>-8.21</td><td>44.40</td><td>0.66</td><td>25.12</td><td>32.39</td><td>100</td><td>180 Peak</td><td>VERTICAL</td></tr><tr><td>4</td><td>595.51</td><td>36.52</td><td>46.00</td><td>-9.48</td><td>42.68</td><td>0.89</td><td>25.35</td><td>32.40</td><td>200</td><td>0 Peak</td><td>VERTICAL</td></tr><tr><td>5</td><td>746.83</td><td>36.12</td><td>46.00</td><td>-9.88</td><td>40.66</td><td>1.36</td><td>26.38</td><td>32.28</td><td>125</td><td>7 Peak</td><td>VERTICAL</td></tr><tr><td>6</td><td>958.29</td><td>42.56</td><td>46.00</td><td>-3.44</td><td>43.79</td><td>1.69</td><td>28.20</td><td>31.12</td><td>125</td><td>182 QP</td><td>VERTICAL</td></tr></table>													Freq	Level	Limit	Over	Read	CableAntenna	Preamp	A/Pos	T/Pos	Remark	Pol/Phase		MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	cm	deg		1	37.76	30.48	40.00	-9.52	41.28	0.42	21.51	32.73	100	280 Peak	VERTICAL	2	59.10	30.74	40.00	-9.26	48.80	0.52	13.82	32.40	100	4 Peak	VERTICAL	3	576.11	37.79	46.00	-8.21	44.40	0.66	25.12	32.39	100	180 Peak	VERTICAL	4	595.51	36.52	46.00	-9.48	42.68	0.89	25.35	32.40	200	0 Peak	VERTICAL	5	746.83	36.12	46.00	-9.88	40.66	1.36	26.38	32.28	125	7 Peak	VERTICAL	6	958.29	42.56	46.00	-3.44	43.79	1.69	28.20	31.12	125	182 QP	VERTICAL
	Freq	Level	Limit	Over	Read	CableAntenna	Preamp	A/Pos	T/Pos	Remark	Pol/Phase																																																																																																
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	cm	deg																																																																																																	
1	37.76	30.48	40.00	-9.52	41.28	0.42	21.51	32.73	100	280 Peak	VERTICAL																																																																																																
2	59.10	30.74	40.00	-9.26	48.80	0.52	13.82	32.40	100	4 Peak	VERTICAL																																																																																																
3	576.11	37.79	46.00	-8.21	44.40	0.66	25.12	32.39	100	180 Peak	VERTICAL																																																																																																
4	595.51	36.52	46.00	-9.48	42.68	0.89	25.35	32.40	200	0 Peak	VERTICAL																																																																																																
5	746.83	36.12	46.00	-9.88	40.66	1.36	26.38	32.28	125	7 Peak	VERTICAL																																																																																																
6	958.29	42.56	46.00	-3.44	43.79	1.69	28.20	31.12	125	182 QP	VERTICAL																																																																																																
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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
2.4G;VHT40,BF;Nss1,(M0);Ntx2;2422;TX	Pass	AV	2.39G	53.95	54.00	-0.05	30.89	3	V	167	1.50	-



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
2.4G;11b;Nss1;Ntx2;2412;TX	Pass	AV	2.3816G	44.11	54.00	-9.89	30.89	3	H	259	1.38	-
2.4G;11b;Nss1;Ntx2;2412;TX	Pass	AV	2.44G	95.92	Inf	-Inf	30.86	3	H	259	1.38	-
2.4G;11b;Nss1;Ntx2;2412;TX	Pass	AV	2.4836G	49.02	54.00	-4.98	30.85	3	H	259	1.38	-
2.4G;11b;Nss1;Ntx2;2412;TX	Pass	AV	4.90008G	31.64	54.00	-22.36	3.39	3	H	69	1.35	-
2.4G;11b;Nss1;Ntx2;2412;TX	Pass	PK	2.3888G	57.74	74.00	-16.26	30.89	3	H	259	1.38	-
2.4G;11b;Nss1;Ntx2;2412;TX	Pass	PK	2.4404G	106.67	Inf	-Inf	30.86	3	H	259	1.38	-
2.4G;11b;Nss1;Ntx2;2412;TX	Pass	PK	2.484G	65.52	74.00	-8.48	30.85	3	H	259	1.38	-
2.4G;11b;Nss1;Ntx2;2412;TX	Pass	PK	4.90318G	45.40	74.00	-28.60	3.40	3	H	69	1.35	-
2.4G;11b;Nss1;Ntx2;2412;TX	Pass	AV	2.3844G	45.68	54.00	-8.32	30.89	3	V	48	1.08	-
2.4G;11b;Nss1;Ntx2;2412;TX	Pass	AV	2.4416G	97.96	Inf	-Inf	30.86	3	V	48	1.08	-
2.4G;11b;Nss1;Ntx2;2412;TX	Pass	AV	2.4836G	52.52	54.00	-1.48	30.85	3	V	48	1.08	-
2.4G;11b;Nss1;Ntx2;2412;TX	Pass	AV	4.90032G	31.60	54.00	-22.40	3.39	3	V	11	1.31	-
2.4G;11b;Nss1;Ntx2;2412;TX	Pass	PK	2.39G	61.00	74.00	-13.00	30.89	3	V	48	1.08	-
2.4G;11b;Nss1;Ntx2;2412;TX	Pass	PK	2.442G	109.87	Inf	-Inf	30.86	3	V	48	1.08	-
2.4G;11b;Nss1;Ntx2;2412;TX	Pass	PK	2.484G	71.81	74.00	-2.19	30.85	3	V	48	1.08	-
2.4G;11b;Nss1;Ntx2;2412;TX	Pass	PK	4.90376G	45.00	74.00	-29.00	3.40	3	V	11	1.31	-
2.4G;11b;Nss1;Ntx2;2437;TX	Pass	AV	2.3882G	50.14	54.00	-3.86	30.89	3	H	257	1.39	-
2.4G;11b;Nss1;Ntx2;2437;TX	Pass	AV	2.4362G	113.12	Inf	-Inf	30.87	3	H	257	1.39	-
2.4G;11b;Nss1;Ntx2;2437;TX	Pass	AV	2.4858G	49.87	54.00	-4.13	30.85	3	H	257	1.39	-
2.4G;11b;Nss1;Ntx2;2437;TX	Pass	AV	4.873948G	40.25	54.00	-13.75	3.34	3	H	146	2.76	-
2.4G;11b;Nss1;Ntx2;2437;TX	Pass	PK	2.3886G	58.24	74.00	-15.76	30.89	3	H	257	1.39	-
2.4G;11b;Nss1;Ntx2;2437;TX	Pass	PK	2.4362G	116.95	Inf	-Inf	30.87	3	H	257	1.39	-
2.4G;11b;Nss1;Ntx2;2437;TX	Pass	PK	2.485G	58.34	74.00	-15.66	30.85	3	H	257	1.39	-
2.4G;11b;Nss1;Ntx2;2437;TX	Pass	PK	4.874024G	47.81	74.00	-26.19	3.34	3	H	146	2.76	-
2.4G;11b;Nss1;Ntx2;2437;TX	Pass	AV	2.3882G	50.88	54.00	-3.12	30.89	3	V	176	1.02	-
2.4G;11b;Nss1;Ntx2;2437;TX	Pass	AV	2.4362G	115.28	Inf	-Inf	30.87	3	V	176	1.02	-
2.4G;11b;Nss1;Ntx2;2437;TX	Pass	AV	2.4858G	51.32	54.00	-2.68	30.85	3	V	176	1.02	-
2.4G;11b;Nss1;Ntx2;2437;TX	Pass	AV	4.873948G	46.85	54.00	-7.15	3.34	3	V	224	1.03	-
2.4G;11b;Nss1;Ntx2;2437;TX	Pass	PK	2.3882G	58.98	74.00	-15.02	30.89	3	V	176	1.02	-
2.4G;11b;Nss1;Ntx2;2437;TX	Pass	PK	2.4362G	119.07	Inf	-Inf	30.87	3	V	176	1.02	-
2.4G;11b;Nss1;Ntx2;2437;TX	Pass	PK	2.4862G	58.96	74.00	-15.04	30.85	3	V	176	1.02	-
2.4G;11b;Nss1;Ntx2;2437;TX	Pass	PK	4.873924G	50.97	74.00	-23.03	3.34	3	V	224	1.03	-
2.4G;11b;Nss1;Ntx2;2462;TX	Pass	AV	2.4612G	109.24	Inf	-Inf	30.86	3	H	260	1.76	-
2.4G;11b;Nss1;Ntx2;2462;TX	Pass	AV	2.4836G	48.97	54.00	-5.03	30.85	3	H	260	1.76	-
2.4G;11b;Nss1;Ntx2;2462;TX	Pass	AV	4.923916G	35.40	54.00	-18.60	3.43	3	H	146	1.29	-
2.4G;11b;Nss1;Ntx2;2462;TX	Pass	PK	2.461G	113.45	Inf	-Inf	30.86	3	H	260	1.76	-
2.4G;11b;Nss1;Ntx2;2462;TX	Pass	PK	2.4836G	58.17	74.00	-15.83	30.85	3	H	260	1.76	-
2.4G;11b;Nss1;Ntx2;2462;TX	Pass	PK	4.92374G	46.44	74.00	-27.56	3.43	3	H	146	1.29	-
2.4G;11b;Nss1;Ntx2;2462;TX	Pass	AV	2.4612G	113.20	Inf	-Inf	30.86	3	V	50	2.53	-
2.4G;11b;Nss1;Ntx2;2462;TX	Pass	AV	2.4836G	53.44	54.00	-0.56	30.85	3	V	50	2.53	-
2.4G;11b;Nss1;Ntx2;2462;TX	Pass	AV	4.923932G	43.18	54.00	-10.82	3.43	3	V	227	1.16	-
2.4G;11b;Nss1;Ntx2;2462;TX	Pass	PK	2.461G	117.00	Inf	-Inf	30.86	3	V	50	2.53	-
2.4G;11b;Nss1;Ntx2;2462;TX	Pass	PK	2.4836G	60.69	74.00	-13.31	30.85	3	V	50	2.53	-
2.4G;11b;Nss1;Ntx2;2462;TX	Pass	PK	4.924004G	49.27	74.00	-24.73	3.43	3	V	227	1.16	-
2.4G;11g;Nss1;Ntx2;2412;TX	Pass	AV	2.3894G	47.94	54.00	-6.06	30.89	3	H	259	1.37	-
2.4G;11g;Nss1;Ntx2;2412;TX	Pass	AV	2.4088G	97.12	Inf	-Inf	30.88	3	H	259	1.37	-
2.4G;11g;Nss1;Ntx2;2412;TX	Pass	AV	4.82256G	32.14	54.00	-21.86	3.25	3	H	243	2.06	-
2.4G;11g;Nss1;Ntx2;2412;TX	Pass	PK	2.389G	69.60	74.00	-4.40	30.89	3	H	259	1.37	-
2.4G;11g;Nss1;Ntx2;2412;TX	Pass	PK	2.4088G	109.88	Inf	-Inf	30.88	3	H	259	1.37	-
2.4G;11g;Nss1;Ntx2;2412;TX	Pass	PK	4.82076G	46.13	74.00	-27.87	3.25	3	H	243	2.06	-
2.4G;11g;Nss1;Ntx2;2412;TX	Pass	AV	2.39G	51.37	54.00	-2.63	30.89	3	V	49	1.50	-
2.4G;11g;Nss1;Ntx2;2412;TX	Pass	AV	2.4146G	100.47	Inf	-Inf	30.87	3	V	49	1.50	-
2.4G;11g;Nss1;Ntx2;2412;TX	Pass	AV	4.82006G	32.08	54.00	-21.92	3.25	3	V	325	1.77	-
2.4G;11g;Nss1;Ntx2;2412;TX	Pass	PK	2.39G	72.52	74.00	-1.48	30.89	3	V	49	1.50	-
2.4G;11g;Nss1;Ntx2;2412;TX	Pass	PK	2.4146G	113.88	Inf	-Inf	30.87	3	V	49	1.50	-
2.4G;11g;Nss1;Ntx2;2412;TX	Pass	PK	4.8211G	46.88	74.00	-27.12	3.25	3	V	325	1.77	-
2.4G;11g;Nss1;Ntx2;2437;TX	Pass	AV	2.3894G	49.50	54.00	-4.50	30.89	3	H	259	1.36	-
2.4G;11g;Nss1;Ntx2;2437;TX	Pass	AV	2.4342G	103.84	Inf	-Inf	30.87	3	H	259	1.36	-
2.4G;11g;Nss1;Ntx2;2437;TX	Pass	AV	2.4842G	48.49	54.00	-5.51	30.85	3	H	259	1.36	-
2.4G;11g;Nss1;Ntx2;2437;TX	Pass	AV	4.87778G	31.90	54.00	-22.10	3.35	3	H	198	1.30	-
2.4G;11g;Nss1;Ntx2;2437;TX	Pass	PK	2.3894G	65.51	74.00	-8.49	30.89	3	H	259	1.36	-



Mode	Result	Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Pol. (H/V)	Azimuth (°)	Height (m)	Comments
2.4G;11g;Nss1;Ntx2;2437;TX	Pass	PK	2.4338G	116.91	Inf	-Inf	30.87	3	H	259	1.36	-
2.4G;11g;Nss1;Ntx2;2437;TX	Pass	PK	2.4842G	64.04	74.00	-9.96	30.85	3	H	259	1.36	-
2.4G;11g;Nss1;Ntx2;2437;TX	Pass	PK	4.87302G	45.92	74.00	-28.08	3.34	3	H	198	1.30	-
2.4G;11g;Nss1;Ntx2;2437;TX	Pass	AV	2.3898G	52.56	54.00	-1.44	30.89	3	V	48	1.11	-
2.4G;11g;Nss1;Ntx2;2437;TX	Pass	AV	2.4346G	107.41	Inf	-Inf	30.87	3	V	48	1.11	-
2.4G;11g;Nss1;Ntx2;2437;TX	Pass	AV	2.4846G	50.69	54.00	-3.31	30.85	3	V	48	1.11	-
2.4G;11g;Nss1;Ntx2;2437;TX	Pass	AV	4.87506G	32.09	54.00	-21.91	3.35	3	V	270	1.51	-
2.4G;11g;Nss1;Ntx2;2437;TX	Pass	PK	2.3898G	69.30	74.00	-4.70	30.89	3	V	48	1.11	-
2.4G;11g;Nss1;Ntx2;2437;TX	Pass	PK	2.4346G	120.35	Inf	-Inf	30.87	3	V	48	1.11	-
2.4G;11g;Nss1;Ntx2;2437;TX	Pass	PK	2.485G	68.29	74.00	-5.71	30.85	3	V	48	1.11	-
2.4G;11g;Nss1;Ntx2;2437;TX	Pass	PK	4.8753G	45.81	74.00	-28.19	3.35	3	V	270	1.51	-
2.4G;11g;Nss1;Ntx2;2462;TX	Pass	AV	2.4638G	97.11	Inf	-Inf	30.85	3	H	259	1.75	-
2.4G;11g;Nss1;Ntx2;2462;TX	Pass	AV	2.4836G	49.61	54.00	-4.39	30.85	3	H	259	1.75	-
2.4G;11g;Nss1;Ntx2;2462;TX	Pass	AV	4.92046G	31.32	54.00	-22.68	3.43	3	H	298	1.71	-
2.4G;11g;Nss1;Ntx2;2462;TX	Pass	PK	2.4638G	109.58	Inf	-Inf	30.85	3	H	259	1.75	-
2.4G;11g;Nss1;Ntx2;2462;TX	Pass	PK	2.4836G	68.78	74.00	-5.22	30.85	3	H	259	1.75	-
2.4G;11g;Nss1;Ntx2;2462;TX	Pass	PK	4.92058G	45.84	74.00	-28.16	3.43	3	H	298	1.71	-
2.4G;11g;Nss1;Ntx2;2462;TX	Pass	AV	2.4608G	101.05	Inf	-Inf	30.86	3	V	139	1.32	-
2.4G;11g;Nss1;Ntx2;2462;TX	Pass	AV	2.485G	51.21	54.00	-2.79	30.85	3	V	139	1.32	-
2.4G;11g;Nss1;Ntx2;2462;TX	Pass	AV	4.92068G	31.39	54.00	-22.61	3.43	3	V	163	2.39	-
2.4G;11g;Nss1;Ntx2;2462;TX	Pass	PK	2.4602G	113.32	Inf	-Inf	30.86	3	V	139	1.32	-
2.4G;11g;Nss1;Ntx2;2462;TX	Pass	PK	2.485G	73.69	74.00	-0.31	30.85	3	V	139	1.32	-
2.4G;11g;Nss1;Ntx2;2462;TX	Pass	PK	4.9234G	45.52	74.00	-28.48	3.43	3	V	163	2.39	-
2.4G;VHT20;Nss1,(M0);Ntx2;2412;TX	Pass	AV	2.39G	46.84	54.00	-7.16	30.89	3	H	269	1.42	-
2.4G;VHT20;Nss1,(M0);Ntx2;2412;TX	Pass	AV	2.419G	99.15	Inf	-Inf	30.87	3	H	269	1.42	-
2.4G;VHT20;Nss1,(M0);Ntx2;2412;TX	Pass	AV	4.82512G	31.79	54.00	-22.21	3.26	3	H	78	1.90	-
2.4G;VHT20;Nss1,(M0);Ntx2;2412;TX	Pass	PK	2.389G	67.24	74.00	-6.76	30.89	3	H	269	1.42	-
2.4G;VHT20;Nss1,(M0);Ntx2;2412;TX	Pass	PK	2.4194G	110.19	Inf	-Inf	30.87	3	H	269	1.42	-
2.4G;VHT20;Nss1,(M0);Ntx2;2412;TX	Pass	PK	4.82264G	46.53	74.00	-27.47	3.25	3	H	78	1.90	-
2.4G;VHT20;Nss1,(M0);Ntx2;2412;TX	Pass	AV	2.3898G	52.74	54.00	-1.26	30.89	3	V	40	1.25	-
2.4G;VHT20;Nss1,(M0);Ntx2;2412;TX	Pass	AV	2.405G	102.46	Inf	-Inf	30.88	3	V	40	1.25	-
2.4G;VHT20;Nss1,(M0);Ntx2;2412;TX	Pass	AV	4.8203G	31.82	54.00	-22.18	3.25	3	V	114	1.30	-
2.4G;VHT20;Nss1,(M0);Ntx2;2412;TX	Pass	PK	2.3878G	73.83	74.00	-0.17	30.89	3	V	40	1.25	-
2.4G;VHT20;Nss1,(M0);Ntx2;2412;TX	Pass	PK	2.4048G	113.85	Inf	-Inf	30.88	3	V	40	1.25	-
2.4G;VHT20;Nss1,(M0);Ntx2;2412;TX	Pass	PK	4.82548G	45.32	74.00	-28.68	3.26	3	V	114	1.30	-
2.4G;VHT20;Nss1,(M0);Ntx2;2437;TX	Pass	AV	2.3886G	50.27	54.00	-3.73	30.89	3	H	259	1.38	-
2.4G;VHT20;Nss1,(M0);Ntx2;2437;TX	Pass	AV	2.4438G	104.29	Inf	-Inf	30.86	3	H	259	1.38	-
2.4G;VHT20;Nss1,(M0);Ntx2;2437;TX	Pass	AV	2.4838G	50.52	54.00	-3.48	30.85	3	H	259	1.38	-
2.4G;VHT20;Nss1,(M0);Ntx2;2437;TX	Pass	AV	4.82014G	31.79	54.00	-22.21	3.25	3	H	82	1.68	-
2.4G;VHT20;Nss1,(M0);Ntx2;2437;TX	Pass	PK	2.3858G	69.31	74.00	-4.69	30.89	3	H	259	1.38	-
2.4G;VHT20;Nss1,(M0);Ntx2;2437;TX	Pass	PK	2.4446G	115.79	Inf	-Inf	30.86	3	H	259	1.38	-
2.4G;VHT20;Nss1,(M0);Ntx2;2437;TX	Pass	PK	2.4854G	68.12	74.00	-5.88	30.85	3	H	259	1.38	-
2.4G;VHT20;Nss1,(M0);Ntx2;2437;TX	Pass	PK	4.82068G	45.44	74.00	-28.56	3.25	3	H	82	1.68	-
2.4G;VHT20;Nss1,(M0);Ntx2;2437;TX	Pass	AV	2.3898G	53.89	54.00	-0.11	30.89	3	V	43	1.20	-
2.4G;VHT20;Nss1,(M0);Ntx2;2437;TX	Pass	AV	2.4298G	108.54	Inf	-Inf	30.87	3	V	43	1.20	-
2.4G;VHT20;Nss1,(M0);Ntx2;2437;TX	Pass	AV	2.4854G	50.98	54.00	-3.02	30.85	3	V	43	1.20	-
2.4G;VHT20;Nss1,(M0);Ntx2;2437;TX	Pass	AV	4.82016G	31.80	54.00	-22.20	3.25	3	V	203	1.00	-
2.4G;VHT20;Nss1,(M0);Ntx2;2437;TX	Pass	PK	2.3874G	72.65	74.00	-1.35	30.89	3	V	43	1.20	-
2.4G;VHT20;Nss1,(M0);Ntx2;2437;TX	Pass	PK	2.4294G	119.79	Inf	-Inf	30.87	3	V	43	1.20	-
2.4G;VHT20;Nss1,(M0);Ntx2;2437;TX	Pass	PK	2.4878G	69.59	74.00	-4.41	30.84	3	V	43	1.20	-
2.4G;VHT20;Nss1,(M0);Ntx2;2437;TX	Pass	PK	4.82362G	45.84	74.00	-28.16	3.25	3	V	203	1.00	-
2.4G;VHT20;Nss1,(M0);Ntx2;2462;TX	Pass	AV	2.4674G	98.17	Inf	-Inf	30.85	3	H	259	1.34	-
2.4G;VHT20;Nss1,(M0);Ntx2;2462;TX	Pass	AV	2.4838G	48.91	54.00	-5.09	30.85	3	H	259	1.34	-
2.4G;VHT20;Nss1,(M0);Ntx2;2462;TX	Pass	AV	4.92042G	31.31	54.00	-22.69	3.43	3	H	21	2.12	-
2.4G;VHT20;Nss1,(M0);Ntx2;2462;TX	Pass	PK	2.4692G	109.20	Inf	-Inf	30.85	3	H	259	1.34	-
2.4G;VHT20;Nss1,(M0);Ntx2;2462;TX	Pass	PK	2.4854G	70.55	74.00	-3.45	30.85	3	H	259	1.34	-
2.4G;VHT20;Nss1,(M0);Ntx2;2462;TX	Pass	PK	4.92742G	45.25	74.00	-28.75	3.44	3	H	21	2.12	-
2.4G;VHT20;Nss1,(M0);Ntx2;2462;TX	Pass	AV	2.4606G	101.42	Inf	-Inf	30.86	3	V	360	2.50	-
2.4G;VHT20;Nss1,(M0);Ntx2;2462;TX	Pass	AV	2.4838G	53.74	54.00	-0.26	30.85	3	V	360	2.50	-
2.4G;VHT20;Nss1,(M0);Ntx2;2462;TX	Pass	AV	4.92072G	31.36	54.00	-22.64	3.43	3	V	125	1.95	-
2.4G;VHT20;Nss1,(M0);Ntx2;2462;TX	Pass	PK	2.4636G	111.58	Inf	-Inf	30.85	3	V	360	2.50	-
2.4G;VHT20;Nss1,(M0);Ntx2;2462;TX	Pass	PK	2.485G	72.78	74.00	-1.22	30.85	3	V	360	2.50	-



Mode	Result	Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Pol. (H/V)	Azimuth (°)	Height (m)	Comments
2.4G;VHT20;Nss1,(M0);Ntx2;2462;TX	Pass	PK	4.92844G	44.96	74.00	-29.04	3.44	3	V	125	1.95	-
2.4G;VHT40;Nss1,(M0);Ntx2;2422;TX	Pass	AV	2.39G	52.06	54.00	-1.94	30.89	3	H	261	1.35	-
2.4G;VHT40;Nss1,(M0);Ntx2;2422;TX	Pass	AV	2.4312G	95.93	Inf	-Inf	30.87	3	H	261	1.35	-
2.4G;VHT40;Nss1,(M0);Ntx2;2422;TX	Pass	AV	2.4964G	43.88	54.00	-10.12	30.84	3	H	261	1.35	-
2.4G;VHT40;Nss1,(M0);Ntx2;2422;TX	Pass	AV	4.92058G	31.32	54.00	-22.68	3.43	3	H	55	2.31	-
2.4G;VHT40;Nss1,(M0);Ntx2;2422;TX	Pass	PK	2.3892G	63.85	74.00	-10.15	30.89	3	H	261	1.35	-
2.4G;VHT40;Nss1,(M0);Ntx2;2422;TX	Pass	PK	2.4308G	105.24	Inf	-Inf	30.87	3	H	261	1.35	-
2.4G;VHT40;Nss1,(M0);Ntx2;2422;TX	Pass	PK	2.4852G	54.85	74.00	-19.15	30.85	3	H	261	1.35	-
2.4G;VHT40;Nss1,(M0);Ntx2;2422;TX	Pass	PK	4.92318G	45.42	74.00	-28.58	3.43	3	H	55	2.31	-
2.4G;VHT40;Nss1,(M0);Ntx2;2422;TX	Pass	AV	2.39G	53.86	54.00	-0.14	30.89	3	V	47	1.14	-
2.4G;VHT40;Nss1,(M0);Ntx2;2422;TX	Pass	AV	2.4312G	97.47	Inf	-Inf	30.87	3	V	47	1.14	-
2.4G;VHT40;Nss1,(M0);Ntx2;2422;TX	Pass	AV	2.496G	44.99	54.00	-9.01	30.84	3	V	47	1.14	-
2.4G;VHT40;Nss1,(M0);Ntx2;2422;TX	Pass	AV	4.92058G	31.37	54.00	-22.63	3.43	3	V	230	1.42	-
2.4G;VHT40;Nss1,(M0);Ntx2;2422;TX	Pass	PK	2.3892G	65.82	74.00	-8.18	30.89	3	V	47	1.14	-
2.4G;VHT40;Nss1,(M0);Ntx2;2422;TX	Pass	PK	2.432G	108.81	Inf	-Inf	30.87	3	V	47	1.14	-
2.4G;VHT40;Nss1,(M0);Ntx2;2422;TX	Pass	PK	2.486G	56.73	74.00	-17.27	30.85	3	V	47	1.14	-
2.4G;VHT40;Nss1,(M0);Ntx2;2422;TX	Pass	PK	4.9232G	45.30	74.00	-28.70	3.43	3	V	230	1.42	-
2.4G;VHT40;Nss1,(M0);Ntx2;2437;TX	Pass	AV	2.3878G	50.27	54.00	-3.73	30.89	3	H	261	1.46	-
2.4G;VHT40;Nss1,(M0);Ntx2;2437;TX	Pass	AV	2.425G	96.12	Inf	-Inf	30.87	3	H	261	1.46	-
2.4G;VHT40;Nss1,(M0);Ntx2;2437;TX	Pass	AV	2.4838G	47.63	54.00	-6.37	30.85	3	H	261	1.46	-
2.4G;VHT40;Nss1,(M0);Ntx2;2437;TX	Pass	AV	4.87804G	31.67	54.00	-22.33	3.35	3	H	104	1.32	-
2.4G;VHT40;Nss1,(M0);Ntx2;2437;TX	Pass	PK	2.3886G	68.08	74.00	-5.92	30.89	3	H	261	1.46	-
2.4G;VHT40;Nss1,(M0);Ntx2;2437;TX	Pass	PK	2.4254G	106.85	Inf	-Inf	30.87	3	H	261	1.46	-
2.4G;VHT40;Nss1,(M0);Ntx2;2437;TX	Pass	PK	2.4854G	65.79	74.00	-8.21	30.85	3	H	261	1.46	-
2.4G;VHT40;Nss1,(M0);Ntx2;2437;TX	Pass	PK	4.87432G	46.34	74.00	-27.66	3.34	3	H	104	1.32	-
2.4G;VHT40;Nss1,(M0);Ntx2;2437;TX	Pass	AV	2.3896G	53.59	54.00	-0.41	30.89	3	V	50	1.09	-
2.4G;VHT40;Nss1,(M0);Ntx2;2437;TX	Pass	AV	2.4274G	100.22	Inf	-Inf	30.87	3	V	50	1.09	-
2.4G;VHT40;Nss1,(M0);Ntx2;2437;TX	Pass	AV	2.4838G	50.72	54.00	-3.28	30.85	3	V	50	1.09	-
2.4G;VHT40;Nss1,(M0);Ntx2;2437;TX	Pass	AV	4.8785G	31.66	54.00	-22.34	3.35	3	V	60	1.30	-
2.4G;VHT40;Nss1,(M0);Ntx2;2437;TX	Pass	PK	2.389G	72.84	74.00	-1.16	30.89	3	V	50	1.09	-
2.4G;VHT40;Nss1,(M0);Ntx2;2437;TX	Pass	PK	2.4268G	110.90	Inf	-Inf	30.87	3	V	50	1.09	-
2.4G;VHT40;Nss1,(M0);Ntx2;2437;TX	Pass	PK	2.4856G	68.30	74.00	-5.70	30.85	3	V	50	1.09	-
2.4G;VHT40;Nss1,(M0);Ntx2;2437;TX	Pass	PK	4.8781G	45.90	74.00	-28.10	3.35	3	V	60	1.30	-
2.4G;VHT40;Nss1,(M0);Ntx2;2452;TX	Pass	AV	2.3816G	44.11	54.00	-9.89	30.89	3	H	259	1.38	-
2.4G;VHT40;Nss1,(M0);Ntx2;2452;TX	Pass	AV	2.44G	95.92	Inf	-Inf	30.86	3	H	259	1.38	-
2.4G;VHT40;Nss1,(M0);Ntx2;2452;TX	Pass	AV	2.4836G	49.02	54.00	-4.98	30.85	3	H	259	1.38	-
2.4G;VHT40;Nss1,(M0);Ntx2;2452;TX	Pass	AV	4.90008G	31.64	54.00	-22.36	3.39	3	H	69	1.35	-
2.4G;VHT40;Nss1,(M0);Ntx2;2452;TX	Pass	PK	2.3888G	57.74	74.00	-16.26	30.89	3	H	259	1.38	-
2.4G;VHT40;Nss1,(M0);Ntx2;2452;TX	Pass	PK	2.4404G	106.67	Inf	-Inf	30.86	3	H	259	1.38	-
2.4G;VHT40;Nss1,(M0);Ntx2;2452;TX	Pass	PK	2.484G	65.52	74.00	-8.48	30.85	3	H	259	1.38	-
2.4G;VHT40;Nss1,(M0);Ntx2;2452;TX	Pass	PK	4.90318G	45.40	74.00	-28.60	3.40	3	H	69	1.35	-
2.4G;VHT40;Nss1,(M0);Ntx2;2452;TX	Pass	AV	2.3844G	45.68	54.00	-8.32	30.89	3	V	48	1.08	-
2.4G;VHT40;Nss1,(M0);Ntx2;2452;TX	Pass	AV	2.4416G	97.96	Inf	-Inf	30.86	3	V	48	1.08	-
2.4G;VHT40;Nss1,(M0);Ntx2;2452;TX	Pass	AV	2.4836G	52.52	54.00	-1.48	30.85	3	V	48	1.08	-
2.4G;VHT40;Nss1,(M0);Ntx2;2452;TX	Pass	AV	4.90032G	31.60	54.00	-22.40	3.39	3	V	11	1.31	-
2.4G;VHT40;Nss1,(M0);Ntx2;2452;TX	Pass	PK	2.39G	61.00	74.00	-13.00	30.89	3	V	48	1.08	-
2.4G;VHT40;Nss1,(M0);Ntx2;2452;TX	Pass	PK	2.442G	109.87	Inf	-Inf	30.86	3	V	48	1.08	-
2.4G;VHT40;Nss1,(M0);Ntx2;2452;TX	Pass	PK	2.484G	71.81	74.00	-2.19	30.85	3	V	48	1.08	-
2.4G;VHT40;Nss1,(M0);Ntx2;2452;TX	Pass	PK	4.90376G	45.00	74.00	-29.00	3.40	3	V	11	1.31	-
2.4G;VHT20,BF;Nss1,(M0);Ntx2;2412;TX	Pass	AV	2.39G	49.12	54.00	-4.88	30.89	3	H	257	2.83	-
2.4G;VHT20,BF;Nss1,(M0);Ntx2;2412;TX	Pass	AV	2.409G	97.61	Inf	-Inf	30.88	3	H	257	2.83	-
2.4G;VHT20,BF;Nss1,(M0);Ntx2;2412;TX	Pass	AV	4.82292G	31.86	54.00	-22.14	3.25	3	H	288	2.34	-
2.4G;VHT20,BF;Nss1,(M0);Ntx2;2412;TX	Pass	PK	2.3886G	70.84	74.00	-3.16	30.89	3	H	257	2.83	-
2.4G;VHT20,BF;Nss1,(M0);Ntx2;2412;TX	Pass	PK	2.4086G	108.04	Inf	-Inf	30.88	3	H	257	2.83	-
2.4G;VHT20,BF;Nss1,(M0);Ntx2;2412;TX	Pass	PK	4.82324G	44.76	74.00	-29.24	3.25	3	H	288	2.34	-
2.4G;VHT20,BF;Nss1,(M0);Ntx2;2412;TX	Pass	AV	2.39G	52.17	54.00	-1.83	30.89	3	V	171	1.50	-
2.4G;VHT20,BF;Nss1,(M0);Ntx2;2412;TX	Pass	AV	2.4142G	105.03	Inf	-Inf	30.87	3	V	171	1.50	-
2.4G;VHT20,BF;Nss1,(M0);Ntx2;2412;TX	Pass	AV	4.82436G	31.77	54.00	-22.23	3.25	3	V	285	1.57	-
2.4G;VHT20,BF;Nss1,(M0);Ntx2;2412;TX	Pass	PK	2.3896G	73.47	74.00	-0.53	30.89	3	V	171	1.50	-
2.4G;VHT20,BF;Nss1,(M0);Ntx2;2412;TX	Pass	PK	2.4094G	112.81	Inf	-Inf	30.88	3	V	171	1.50	-
2.4G;VHT20,BF;Nss1,(M0);Ntx2;2412;TX	Pass	PK	4.83284G	44.88	74.00	-29.12	3.27	3	V	285	1.57	-
2.4G;VHT20,BF;Nss1,(M0);Ntx2;2437;TX	Pass	AV	2.389G	47.06	54.00	-6.94	30.89	3	H	265	1.60	-



Mode	Result	Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Pol. (H/V)	Azimuth (°)	Height (m)	Comments
2.4G;VHT20,BF;Nss1,(M0);Ntx2;2437;TX	Pass	AV	2.435G	110.32	Inf	-Inf	30.87	3	H	265	1.60	-
2.4G;VHT20,BF;Nss1,(M0);Ntx2;2437;TX	Pass	AV	2.4862G	46.87	54.00	-7.13	30.85	3	H	265	1.60	-
2.4G;VHT20,BF;Nss1,(M0);Ntx2;2437;TX	Pass	AV	4.87944G	31.44	54.00	-22.56	3.35	3	H	162	1.85	-
2.4G;VHT20,BF;Nss1,(M0);Ntx2;2437;TX	Pass	AV	7.31204G	36.79	54.00	-17.21	8.31	3	H	175	1.17	-
2.4G;VHT20,BF;Nss1,(M0);Ntx2;2437;TX	Pass	PK	2.3866G	63.57	74.00	-10.43	30.89	3	H	265	1.60	-
2.4G;VHT20,BF;Nss1,(M0);Ntx2;2437;TX	Pass	PK	2.4422G	112.85	Inf	-Inf	30.86	3	H	265	1.60	-
2.4G;VHT20,BF;Nss1,(M0);Ntx2;2437;TX	Pass	PK	2.4854G	59.84	74.00	-14.16	30.85	3	H	265	1.60	-
2.4G;VHT20,BF;Nss1,(M0);Ntx2;2437;TX	Pass	PK	4.8652G	44.55	74.00	-29.45	3.33	3	H	162	1.85	-
2.4G;VHT20,BF;Nss1,(M0);Ntx2;2437;TX	Pass	PK	7.30964G	50.20	74.00	-23.80	8.30	3	H	175	1.17	-
2.4G;VHT20,BF;Nss1,(M0);Ntx2;2437;TX	Pass	AV	2.3898G	49.95	54.00	-4.05	30.89	3	V	53	1.01	-
2.4G;VHT20,BF;Nss1,(M0);Ntx2;2437;TX	Pass	AV	2.4346G	106.10	Inf	-Inf	30.87	3	V	53	1.01	-
2.4G;VHT20,BF;Nss1,(M0);Ntx2;2437;TX	Pass	AV	2.4962G	47.92	54.00	-6.08	30.84	3	V	53	1.01	-
2.4G;VHT20,BF;Nss1,(M0);Ntx2;2437;TX	Pass	AV	4.8656G	31.47	54.00	-22.53	3.33	3	V	107	1.65	-
2.4G;VHT20,BF;Nss1,(M0);Ntx2;2437;TX	Pass	AV	7.31892G	36.85	54.00	-17.15	8.33	3	V	110	1.63	-
2.4G;VHT20,BF;Nss1,(M0);Ntx2;2437;TX	Pass	PK	2.385G	66.07	74.00	-7.93	30.89	3	V	53	1.01	-
2.4G;VHT20,BF;Nss1,(M0);Ntx2;2437;TX	Pass	PK	2.4346G	116.36	Inf	-Inf	30.87	3	V	53	1.01	-
2.4G;VHT20,BF;Nss1,(M0);Ntx2;2437;TX	Pass	PK	2.485G	63.02	74.00	-10.98	30.85	3	V	53	1.01	-
2.4G;VHT20,BF;Nss1,(M0);Ntx2;2437;TX	Pass	PK	4.88272G	44.81	74.00	-29.19	3.36	3	V	107	1.65	-
2.4G;VHT20,BF;Nss1,(M0);Ntx2;2437;TX	Pass	PK	7.31996G	50.71	74.00	-23.29	8.33	3	V	110	1.63	-
2.4G;VHT20,BF;Nss1,(M0);Ntx2;2462;TX	Pass	AV	2.4544G	95.01	Inf	-Inf	30.86	3	H	266	1.07	-
2.4G;VHT20,BF;Nss1,(M0);Ntx2;2462;TX	Pass	AV	2.4836G	49.40	54.00	-4.60	30.85	3	H	266	1.07	-
2.4G;VHT20,BF;Nss1,(M0);Ntx2;2462;TX	Pass	AV	4.93432G	31.89	54.00	-22.11	3.45	3	H	215	2.00	-
2.4G;VHT20,BF;Nss1,(M0);Ntx2;2462;TX	Pass	AV	7.40192G	37.37	54.00	-16.63	8.59	3	H	264	2.26	-
2.4G;VHT20,BF;Nss1,(M0);Ntx2;2462;TX	Pass	PK	2.4588G	108.70	Inf	-Inf	30.86	3	H	266	1.07	-
2.4G;VHT20,BF;Nss1,(M0);Ntx2;2462;TX	Pass	PK	2.484G	70.33	74.00	-3.67	30.85	3	H	266	1.07	-
2.4G;VHT20,BF;Nss1,(M0);Ntx2;2462;TX	Pass	PK	4.93768G	45.85	74.00	-28.15	3.46	3	H	215	2.00	-
2.4G;VHT20,BF;Nss1,(M0);Ntx2;2462;TX	Pass	PK	7.38816G	50.59	74.00	-23.41	8.55	3	H	264	2.26	-
2.4G;VHT20,BF;Nss1,(M0);Ntx2;2462;TX	Pass	AV	2.4644G	108.83	Inf	-Inf	30.85	3	V	46	1.30	-
2.4G;VHT20,BF;Nss1,(M0);Ntx2;2462;TX	Pass	AV	2.4836G	51.65	54.00	-2.35	30.85	3	V	46	1.30	-
2.4G;VHT20,BF;Nss1,(M0);Ntx2;2462;TX	Pass	AV	4.92184G	31.04	54.00	-22.96	3.43	3	V	146	2.24	-
2.4G;VHT20,BF;Nss1,(M0);Ntx2;2462;TX	Pass	AV	7.38928G	37.30	54.00	-16.70	8.56	3	V	236	1.40	-
2.4G;VHT20,BF;Nss1,(M0);Ntx2;2462;TX	Pass	PK	2.46G	112.78	Inf	-Inf	30.86	3	V	46	1.30	-
2.4G;VHT20,BF;Nss1,(M0);Ntx2;2462;TX	Pass	PK	2.4836G	73.94	74.00	-0.06	30.85	3	V	46	1.30	-
2.4G;VHT20,BF;Nss1,(M0);Ntx2;2462;TX	Pass	PK	4.91248G	45.06	74.00	-28.94	3.41	3	V	146	2.24	-
2.4G;VHT20,BF;Nss1,(M0);Ntx2;2462;TX	Pass	PK	7.39736G	50.79	74.00	-23.21	8.58	3	V	236	1.40	-
2.4G;VHT40,BF;Nss1,(M0);Ntx2;2422;TX	Pass	AV	2.388G	47.72	54.00	-6.28	30.89	3	H	77	2.88	-
2.4G;VHT40,BF;Nss1,(M0);Ntx2;2422;TX	Pass	AV	2.4352G	87.10	Inf	-Inf	30.87	3	H	77	2.88	-
2.4G;VHT40,BF;Nss1,(M0);Ntx2;2422;TX	Pass	AV	2.4872G	46.43	54.00	-7.57	30.85	3	H	77	2.88	-
2.4G;VHT40,BF;Nss1,(M0);Ntx2;2422;TX	Pass	AV	4.84032G	32.24	54.00	-21.76	3.28	3	H	322	1.55	-
2.4G;VHT40,BF;Nss1,(M0);Ntx2;2422;TX	Pass	PK	2.3812G	61.79	74.00	-12.21	30.89	3	H	77	2.88	-
2.4G;VHT40,BF;Nss1,(M0);Ntx2;2422;TX	Pass	PK	2.4168G	97.92	Inf	-Inf	30.87	3	H	77	2.88	-
2.4G;VHT40,BF;Nss1,(M0);Ntx2;2422;TX	Pass	PK	2.4904G	58.31	74.00	-15.69	30.84	3	H	77	2.88	-
2.4G;VHT40,BF;Nss1,(M0);Ntx2;2422;TX	Pass	PK	4.82856G	45.60	74.00	-28.40	3.26	3	H	322	1.55	-
2.4G;VHT40,BF;Nss1,(M0);Ntx2;2422;TX	Pass	AV	2.39G	53.95	54.00	-0.05	30.89	3	V	167	1.50	-
2.4G;VHT40,BF;Nss1,(M0);Ntx2;2422;TX	Pass	AV	2.4108G	97.19	Inf	-Inf	30.88	3	V	167	1.50	-
2.4G;VHT40,BF;Nss1,(M0);Ntx2;2422;TX	Pass	AV	2.496G	46.64	54.00	-7.36	30.84	3	V	167	1.50	-
2.4G;VHT40,BF;Nss1,(M0);Ntx2;2422;TX	Pass	AV	4.8504G	32.14	54.00	-21.86	3.30	3	V	319	1.69	-
2.4G;VHT40,BF;Nss1,(M0);Ntx2;2422;TX	Pass	PK	2.39G	70.88	74.00	-3.12	30.89	3	V	167	1.50	-
2.4G;VHT40,BF;Nss1,(M0);Ntx2;2422;TX	Pass	PK	2.414G	111.54	Inf	-Inf	30.87	3	V	167	1.50	-
2.4G;VHT40,BF;Nss1,(M0);Ntx2;2422;TX	Pass	PK	2.4856G	60.99	74.00	-13.01	30.85	3	V	167	1.50	-
2.4G;VHT40,BF;Nss1,(M0);Ntx2;2422;TX	Pass	PK	4.8612G	45.37	74.00	-28.63	3.32	3	V	319	1.69	-
2.4G;VHT40,BF;Nss1,(M0);Ntx2;2437;TX	Pass	AV	2.3898G	50.02	54.00	-3.98	30.89	3	H	260	1.19	-
2.4G;VHT40,BF;Nss1,(M0);Ntx2;2437;TX	Pass	AV	2.425G	106.90	Inf	-Inf	30.87	3	H	260	1.19	-
2.4G;VHT40,BF;Nss1,(M0);Ntx2;2437;TX	Pass	AV	2.485G	48.99	54.00	-5.01	30.85	3	H	260	1.19	-
2.4G;VHT40,BF;Nss1,(M0);Ntx2;2437;TX	Pass	AV	4.854G	33.59	54.00	-20.41	3.31	3	H	136	2.25	-
2.4G;VHT40,BF;Nss1,(M0);Ntx2;2437;TX	Pass	AV	7.32684G	37.27	54.00	-16.73	8.36	3	H	169	1.34	-
2.4G;VHT40,BF;Nss1,(M0);Ntx2;2437;TX	Pass	PK	2.389G	68.56	74.00	-5.44	30.89	3	H	260	1.19	-
2.4G;VHT40,BF;Nss1,(M0);Ntx2;2437;TX	Pass	PK	2.4418G	106.66	Inf	-Inf	30.86	3	H	260	1.19	-
2.4G;VHT40,BF;Nss1,(M0);Ntx2;2437;TX	Pass	PK	2.485G	69.11	74.00	-4.89	30.85	3	H	260	1.19	-
2.4G;VHT40,BF;Nss1,(M0);Ntx2;2437;TX	Pass	PK	4.86464G	45.08	74.00	-28.92	3.33	3	H	136	2.25	-
2.4G;VHT40,BF;Nss1,(M0);Ntx2;2437;TX	Pass	PK	7.30412G	50.50	74.00	-23.50	8.28	3	H	169	1.34	-
2.4G;VHT40,BF;Nss1,(M0);Ntx2;2437;TX	Pass	AV	2.3898G	53.88	54.00	-0.12	30.89	3	V	48	1.49	-



Mode	Result	Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Pol. (H/V)	Azimuth (°)	Height (m)	Comments
2.4G;VHT40,BF;Nss1,(M0);Ntx2;2437;TX	Pass	AV	2.4306G	98.16	Inf	-Inf	30.87	3	V	48	1.49	-
2.4G;VHT40,BF;Nss1,(M0);Ntx2;2437;TX	Pass	AV	2.4842G	50.05	54.00	-3.95	30.85	3	V	48	1.49	-
2.4G;VHT40,BF;Nss1,(M0);Ntx2;2437;TX	Pass	AV	4.854G	33.47	54.00	-20.53	3.31	3	V	98	2.40	-
2.4G;VHT40,BF;Nss1,(M0);Ntx2;2437;TX	Pass	AV	7.3294G	37.19	54.00	-16.81	8.36	3	V	196	1.17	-
2.4G;VHT40,BF;Nss1,(M0);Ntx2;2437;TX	Pass	PK	2.3898G	72.54	74.00	-1.46	30.89	3	V	48	1.49	-
2.4G;VHT40,BF;Nss1,(M0);Ntx2;2437;TX	Pass	PK	2.4322G	112.66	Inf	-Inf	30.87	3	V	48	1.49	-
2.4G;VHT40,BF;Nss1,(M0);Ntx2;2437;TX	Pass	PK	2.4858G	67.47	74.00	-6.53	30.85	3	V	48	1.49	-
2.4G;VHT40,BF;Nss1,(M0);Ntx2;2437;TX	Pass	PK	4.8588G	45.45	74.00	-28.55	3.32	3	V	98	2.40	-
2.4G;VHT40,BF;Nss1,(M0);Ntx2;2437;TX	Pass	PK	7.32196G	51.38	74.00	-22.62	8.34	3	V	196	1.17	-
2.4G;VHT40,BF;Nss1,(M0);Ntx2;2452;TX	Pass	AV	2.3816G	44.11	54.00	-9.89	30.89	3	H	259	1.38	-
2.4G;VHT40,BF;Nss1,(M0);Ntx2;2452;TX	Pass	AV	2.44G	95.92	Inf	-Inf	30.86	3	H	259	1.38	-
2.4G;VHT40,BF;Nss1,(M0);Ntx2;2452;TX	Pass	AV	2.4836G	49.02	54.00	-4.98	30.85	3	H	259	1.38	-
2.4G;VHT40,BF;Nss1,(M0);Ntx2;2452;TX	Pass	AV	4.90008G	31.64	54.00	-22.36	3.39	3	H	69	1.35	-
2.4G;VHT40,BF;Nss1,(M0);Ntx2;2452;TX	Pass	PK	2.3888G	57.74	74.00	-16.26	30.89	3	H	259	1.38	-
2.4G;VHT40,BF;Nss1,(M0);Ntx2;2452;TX	Pass	PK	2.4404G	106.67	Inf	-Inf	30.86	3	H	259	1.38	-
2.4G;VHT40,BF;Nss1,(M0);Ntx2;2452;TX	Pass	PK	2.484G	65.52	74.00	-8.48	30.85	3	H	259	1.38	-
2.4G;VHT40,BF;Nss1,(M0);Ntx2;2452;TX	Pass	PK	4.90318G	45.40	74.00	-28.60	3.40	3	H	69	1.35	-
2.4G;VHT40,BF;Nss1,(M0);Ntx2;2452;TX	Pass	AV	2.3844G	45.68	54.00	-8.32	30.89	3	V	48	1.08	-
2.4G;VHT40,BF;Nss1,(M0);Ntx2;2452;TX	Pass	AV	2.4416G	97.96	Inf	-Inf	30.86	3	V	48	1.08	-
2.4G;VHT40,BF;Nss1,(M0);Ntx2;2452;TX	Pass	AV	2.4836G	52.52	54.00	-1.48	30.85	3	V	48	1.08	-
2.4G;VHT40,BF;Nss1,(M0);Ntx2;2452;TX	Pass	AV	4.90032G	31.60	54.00	-22.40	3.39	3	V	11	1.31	-
2.4G;VHT40,BF;Nss1,(M0);Ntx2;2452;TX	Pass	PK	2.39G	61.00	74.00	-13.00	30.89	3	V	48	1.08	-
2.4G;VHT40,BF;Nss1,(M0);Ntx2;2452;TX	Pass	PK	2.442G	109.87	Inf	-Inf	30.86	3	V	48	1.08	-
2.4G;VHT40,BF;Nss1,(M0);Ntx2;2452;TX	Pass	PK	2.484G	71.81	74.00	-2.19	30.85	3	V	48	1.08	-
2.4G;VHT40,BF;Nss1,(M0);Ntx2;2452;TX	Pass	PK	4.90376G	45.00	74.00	-29.00	3.40	3	V	11	1.31	-

