



FCC Test Report

Equipment : DBDC ROUTER
Brand Name : Charter
Model No. : RAC2V1K
FCC ID : H8NRAC2V1K
Standard : 47 CFR FCC Part 15.247
Operating Band : 2400 MHz – 2483.5 MHz
Function : ☒ Point-to-multipoint; ☐ Point-to-point
Applicant : Askey Computer Corp.
10F, NO.119, JIANKANG RD., ZHONGHE DIST., NEW
TAIPEI CITY 23585, TAIWAN
Manufacturer : Askey Computer Corp.
10F, NO.119, JIANKANG RD., ZHONGHE DIST., NEW
TAIPEI CITY 23585, TAIWAN

The product sample received on Feb. 15, 2017 and completely tested on Feb. 24, 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.



Table of Contents

1	GENERAL DESCRIPTION	5
1.1	Information.....	5
1.2	Testing Applied Standards	7
1.3	Testing Location Information	7
1.4	Measurement Uncertainty	8
2	TEST CONFIGURATION OF EUT.....	9
2.1	Test Channel Mode	9
2.2	The Worst Case Measurement Configuration.....	10
2.3	EUT Operation during Test	11
2.4	Accessories	11
2.5	Support Equipment.....	11
2.6	Test Setup Diagram	12
3	TRANSMITTER TEST RESULT	15
3.1	AC Power-line Conducted Emissions	15
3.2	DTS Bandwidth.....	17
3.3	Maximum Conducted Output Power	18
3.4	Power Spectral Density	20
3.5	Emissions in Non-restricted Frequency Bands	22
3.6	Emissions in Restricted Frequency Bands.....	23
4	TEST EQUIPMENT AND CALIBRATION DATA	27
APPENDIX A. TEST RESULTS OF AC POWER-LINE CONDUCTED EMISSIONS		
APPENDIX B. TEST RESULTS OF DTS BANDWIDTH		
APPENDIX C. TEST RESULTS OF MAXIMUM CONDUCTED OUTPUT POWER		
APPENDIX D. TEST RESULTS OF POWER SPECTRAL DENSITY		
APPENDIX E. TEST RESULTS OF EMISSIONS IN NON-RESTRICTED FREQUENCY BANDS		
APPENDIX F. TEST RESULTS OF EMISSIONS IN RESTRICTED FREQUENCY BANDS		
APPENDIX G. TEST RESULTS OF RADIATED EMISSION CO-LOCATION		
APPENDIX H. TEST PHOTOS		
PHOTOGRAPHS OF EUT V01		

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)	Maximum Conducted 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

Revision History

[illegible]

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)	2412-2462	1-11 [11]
2400-2483.5	n (HT40)	2422-2452	3-9 [7]

Band	Mode	BWch (MHz)	Nant
2.4-2.4835GHz	802.11b	20	4TX
2.4-2.4835GHz	802.11g	20	4TX
2.4-2.4835GHz	802.11n HT20	20	4TX
2.4-2.4835GHz	802.11n HT40	40	4TX

Note:

- 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.
- 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.	Brand	Part Number	Antenna Type	Connector	Gain (dBi)	Remark
1	Airgain	N2420GS	PCB Antenna	I-PEX	4.30	2.4GHz TX/RX
2	Airgain	N2420GS	PCB Antenna	I-PEX	3.40	2.4GHz TX/RX
3	Airgain	N2420GS	PCB Antenna	I-PEX	3.50	2.4GHz TX/RX
4	Airgain	N2420GS	PCB Antenna	I-PEX	4.20	2.4GHz TX/RX
5	Airgain	M5x05C (Longer)	PCB Antenna	I-PEX	5.00	5GHz TX/RX
6	Airgain	M5x05C	PCB Antenna	I-PEX	5.60	5GHz TX/RX
7	Airgain	M5x05C	PCB Antenna	I-PEX	4.50	5GHz TX/RX
8	Airgain	M5x05C (Longer)	PCB Antenna	I-PEX	4.10	5GHz TX/RX

Note: The EUT has eight antennas.

For 2.4GHz function (4TX/4RX):

Ant. 1 (P1), Ant. 2 (P2), Ant. 3 (P3) and Ant. 4 (P4) could transmit/receive simultaneously.

For 5GHz function (4TX/4RX):

Ant. 5 (P1), Ant. 6 (P2), Ant. 7 (P3) and Ant. 8 (P4) could transmit/receive simultaneously.

1.1.3 Mode Test Duty Cycle

Mode	DC	DCF(dB)
802.11b	0.994	0.026
802.11g	0.972	0.123
802.11n HT20	0.987	0.057
802.11n HT40	0.973	0.119

1.1.4 EUT Operational Condition

EUT Power Type	From power adapter		
Beamforming Function	☒	With beamforming	☐ Without beamforming
	The product has beamforming function for 802.11n/ac.		

Note: There are two functions of EUT, one is beamforming function, and the other is non-beamforming function for 802.11n/ac. The non-beamforming function was tested and recorded in this report, and the beamforming function was tested and recorded in Report No. : FR711935-01AC.

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 v03r05
- ◆ FCC KDB 662911 D01 v02r01
- ◆ FCC KDB 412172 D01 v01r01

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	Serway Li	22°C / 55%	Feb. 20, 2017~Feb. 24, 2017
Radiated	03CH01-CB	Jay Luo	22°C / 54%	Feb. 15, 2017 ~Feb. 24, 2017
AC Conduction	CO01-CB	Deven Huang	23°C / 66%	Feb. 17, 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%
Output Power Measurement	1.33 dB	Confidence levels of 95%
Power Density Measurement	1.27 dB	Confidence levels of 95%
Bandwidth Measurement	9.74×10^{-8}	Confidence levels of 95%

2 Test Configuration of EUT

2.1 Test Channel Mode

Mode	Power Setting
802.11b_(1Mbps)_4TX	-
2412MHz	23
2437MHz	23
2462MHz	23.5
802.11g_(6Mbps)_4TX	-
2412MHz	17
2437MHz	23.5
2462MHz	17
802.11n HT20_Nss1,(MCS0)_4TX	-
2412MHz	16.5
2437MHz	23.5
2462MHz	17
802.11n HT40_Nss1,(MCS0)_4TX	-
2422MHz	14
2437MHz	18
2452MHz	15.5

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	EUT + Adapter 1
2	EUT + Adapter 2
For operating mode 1 is the worst case and it was record in this test report.	

The Worst Case Mode for Following Conformance Tests	
Tests Item	DTS Bandwidth Maximum Conducted Output Power Power Spectral Density Emissions in Non-restricted Frequency Bands
Test Condition	Conducted measurement at transmit chains

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	EUT + Adapter 1
2	EUT + Adapter 2
For operating mode 1 is the worst case and it was record in this test report.	
Operating Mode > 1GHz	CTX

The Worst Case Mode for Following Conformance Tests	
Tests Item	Simultaneous Transmission Analysis
Test Condition	Radiated measurement
Operating Mode	Normal Link
1	WLAN 2.4GHz+WLAN 5GHz
Refer to Sporton Test Report No.: FA711935-01 for Co-location RF Exposure Evaluation and Appendix G for Radiated Emission Co-location.	

Note: The EUT can only be used at Y axis position.

2.3 EUT Operation during Test

For CTX Mode:

The EUT was programmed to be in continuously transmitting mode.

For Normal Link:

During the test, the EUT operation to normal function.

2.4 Accessories

Accessories				
No.	Equipment Name	Brand Name	Model No.	Rating
1	Adapter 1	Sunny	SYS1564-3012-W2	INPUT: 100-240Vac, 50-60Hz, 1.0A MAX. OUTPUT: 12Vdc, 2.5A
2	Adapter 2	Ktec	KSA-36W-120250HU	INPUT: 100-240Vac, 50/60Hz, 1.0A OUTPUT: 12Vdc, 2.5A

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	Flash disk3.0	Transcend	639205 7755	DoC

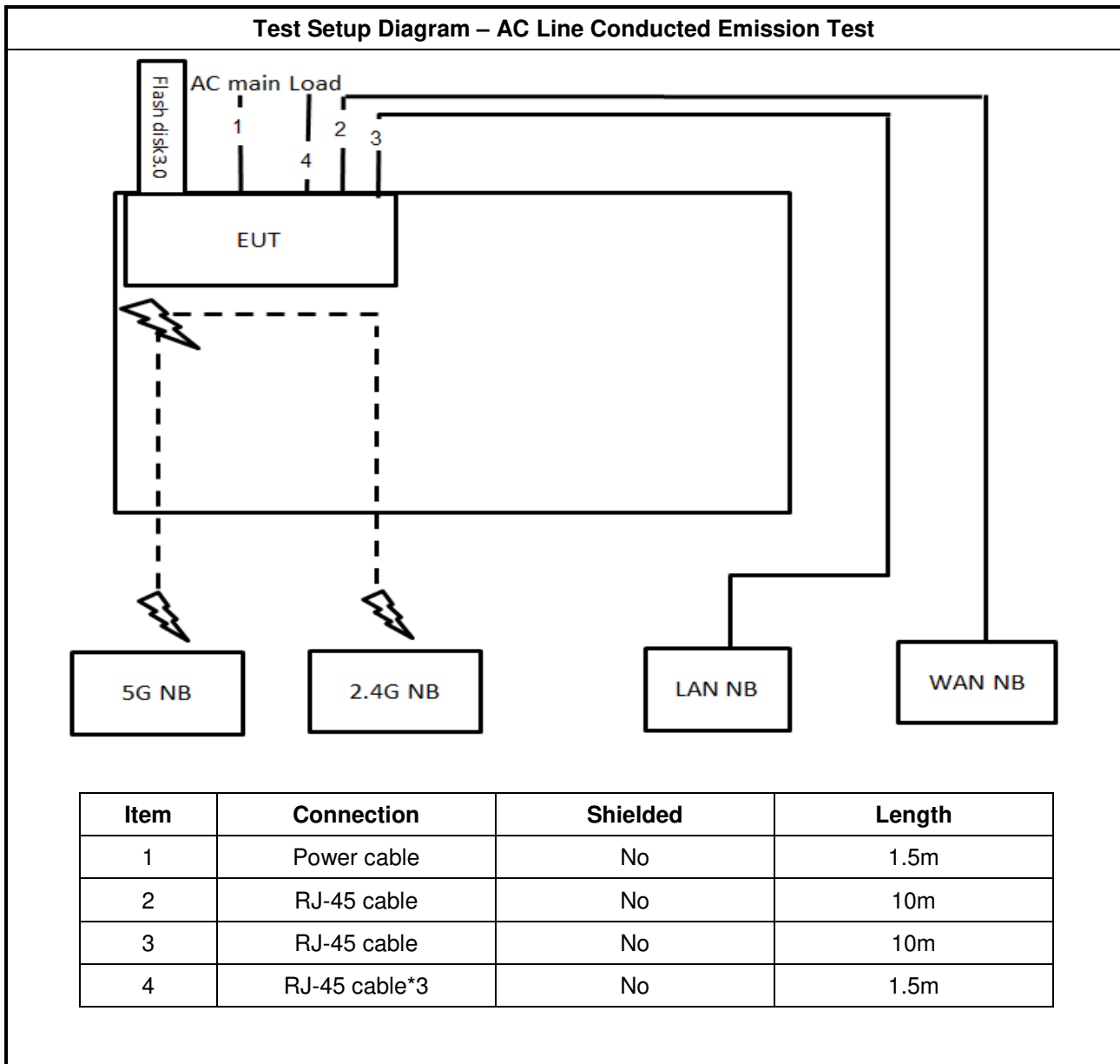
For Test Site No: 03CH01-CB (below 1GHz)

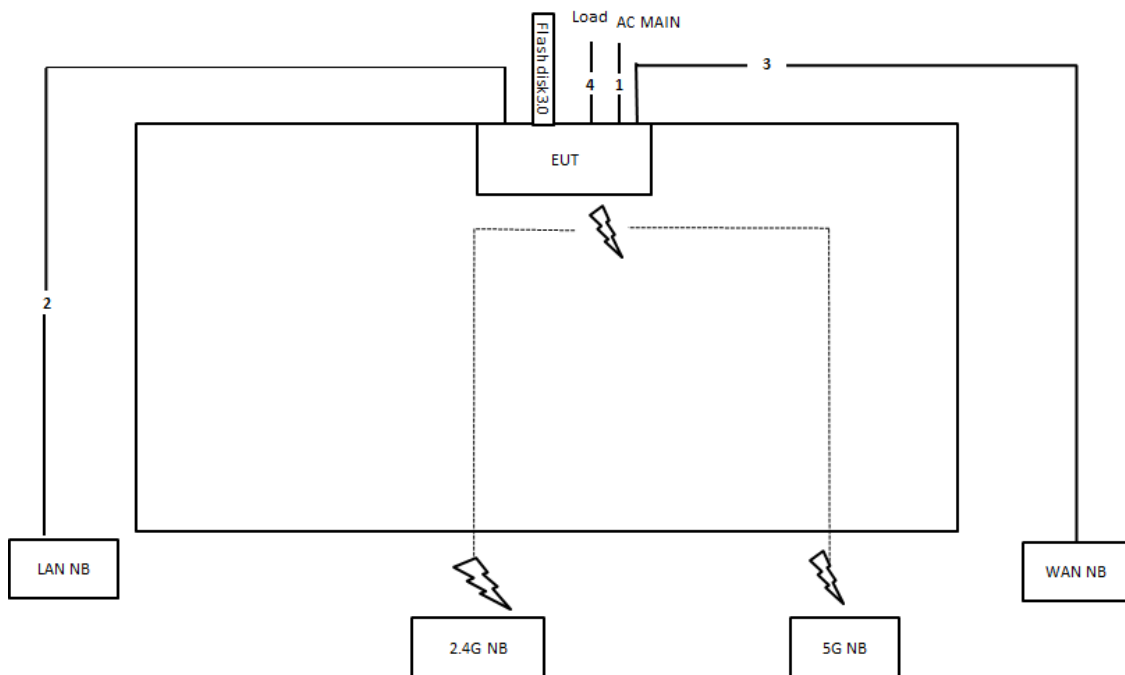
Support Equipment				
No.	Equipment	Brand Name	Model Name	FCC ID
1	NB*4	DELL	E4300	DoC
2	Flash disk3.0	Transcend	JetFlash-700	DoC

For Test Site No: 03CH01-CB (above 1GHz) and TH01-CB

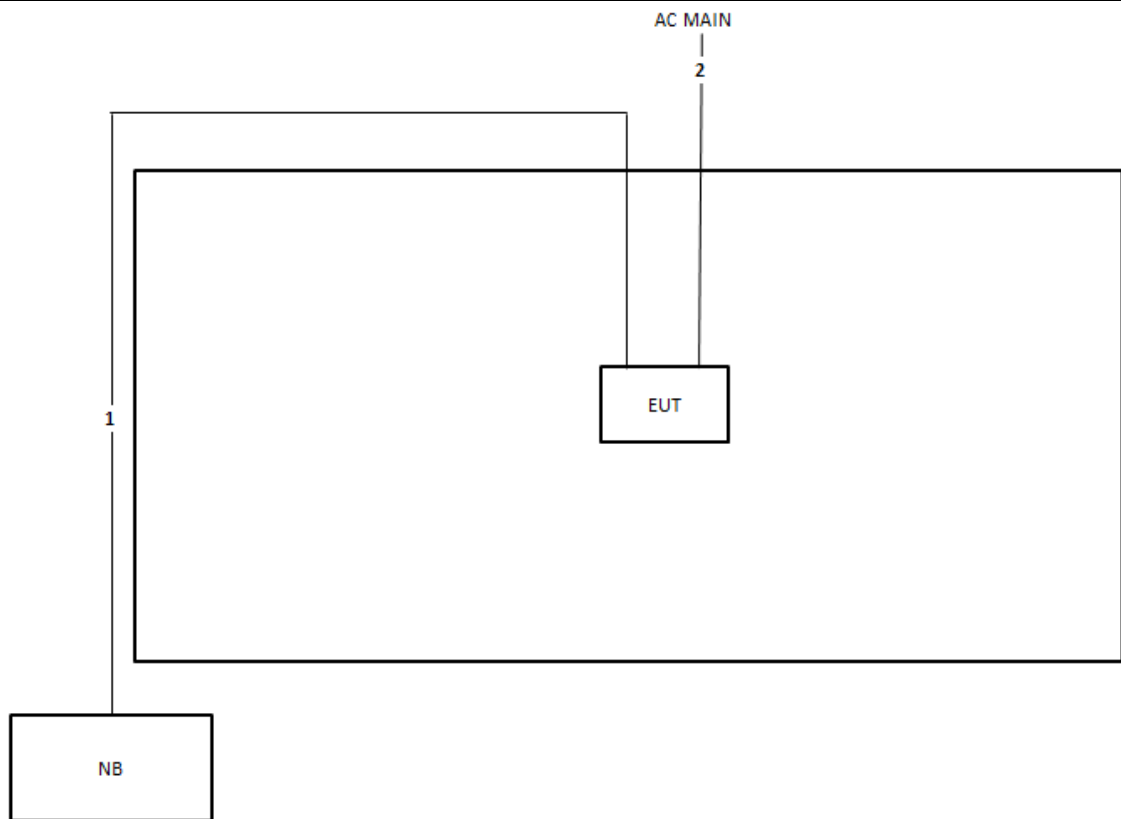
Support Equipment				
No.	Equipment	Brand Name	Model Name	FCC ID
1	NB	DELL	E4300	DoC

2.6 Test Setup Diagram



Test Setup Diagram - Radiated Test < 1GHz


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

Test Setup Diagram - Radiated Test > 1GHz


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

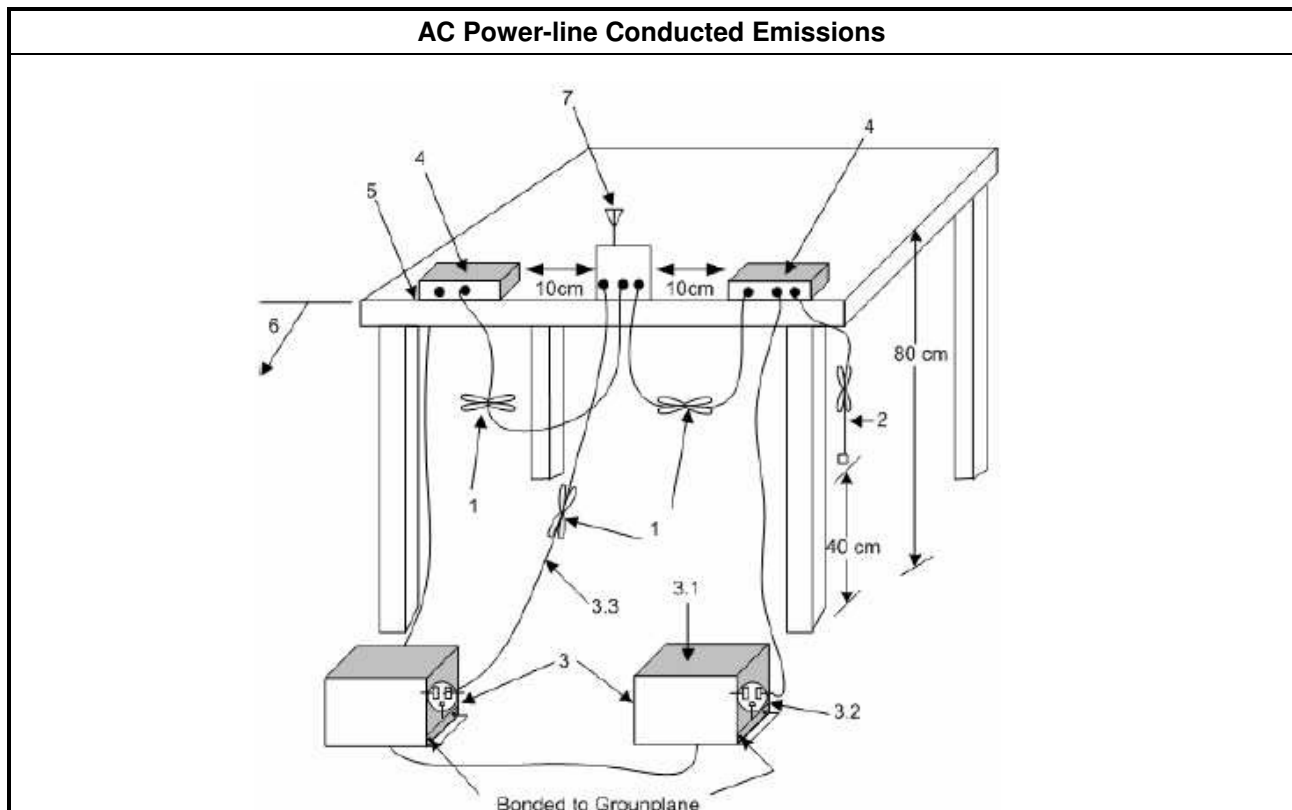
3.1.2 Measuring Instruments

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.

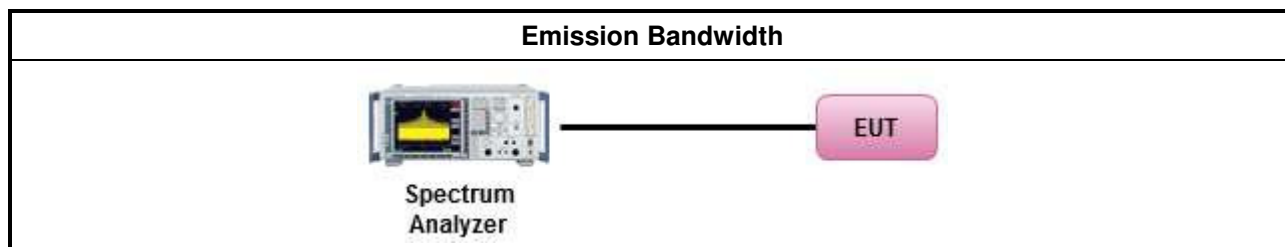
3.2.2 Measuring Instruments

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 Maximum Conducted Output Power

3.3.1 Maximum Conducted 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.	

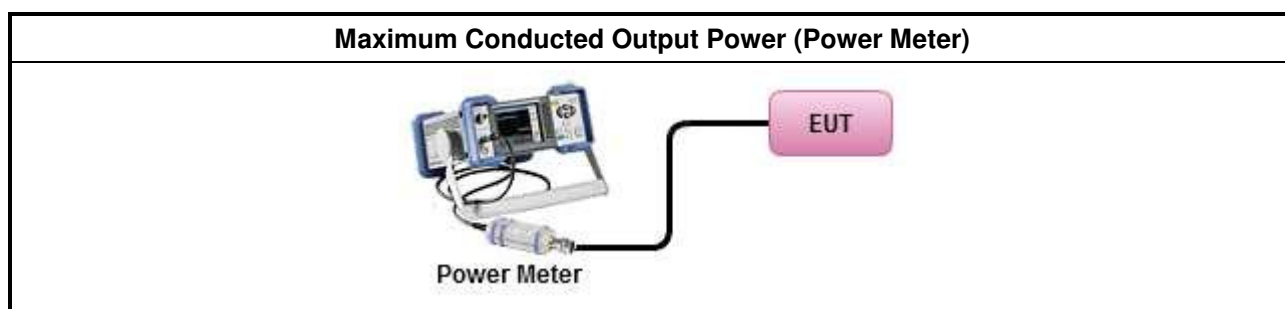
3.3.2 Measuring Instruments

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).
☐	Refer as FCC KDB 558074, clause 9.1.2 PKPM1 Peak power meter method.
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: $P_{\text{total}} = P_1 + P_2 + \dots + P_n$ (calculated in linear unit [mW] and transfer to log unit [dBm]) $\text{EIRP}_{\text{total}} = P_{\text{total}} + \text{DG}$	

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) $\leq$ 8 dBm/3kHz

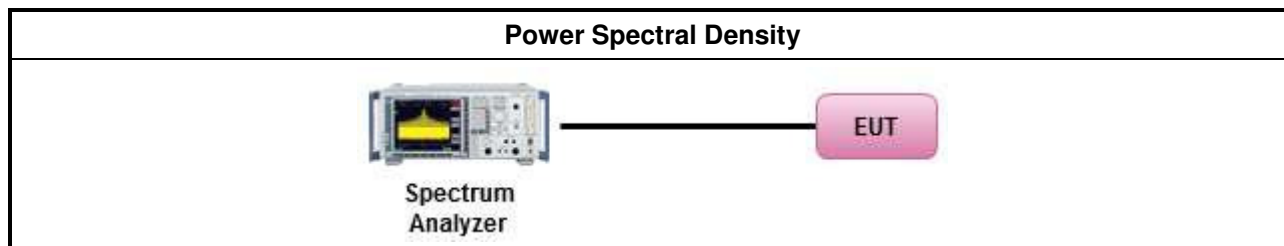
3.4.2 Measuring Instruments

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 AVGPSD-1 (spectral trace averaging).
☐ Refer as FCC KDB 558074, clause 10.4 Method AVGPSD-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 AVGPSD-1 Alt (spectral trace averaging).
☐ Refer as FCC KDB 558074, clause 10.6 Method AVGPSD-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.	

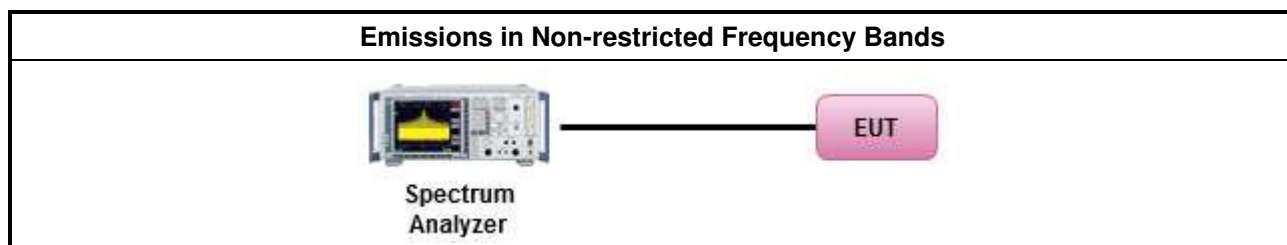
3.5.2 Measuring Instruments

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.

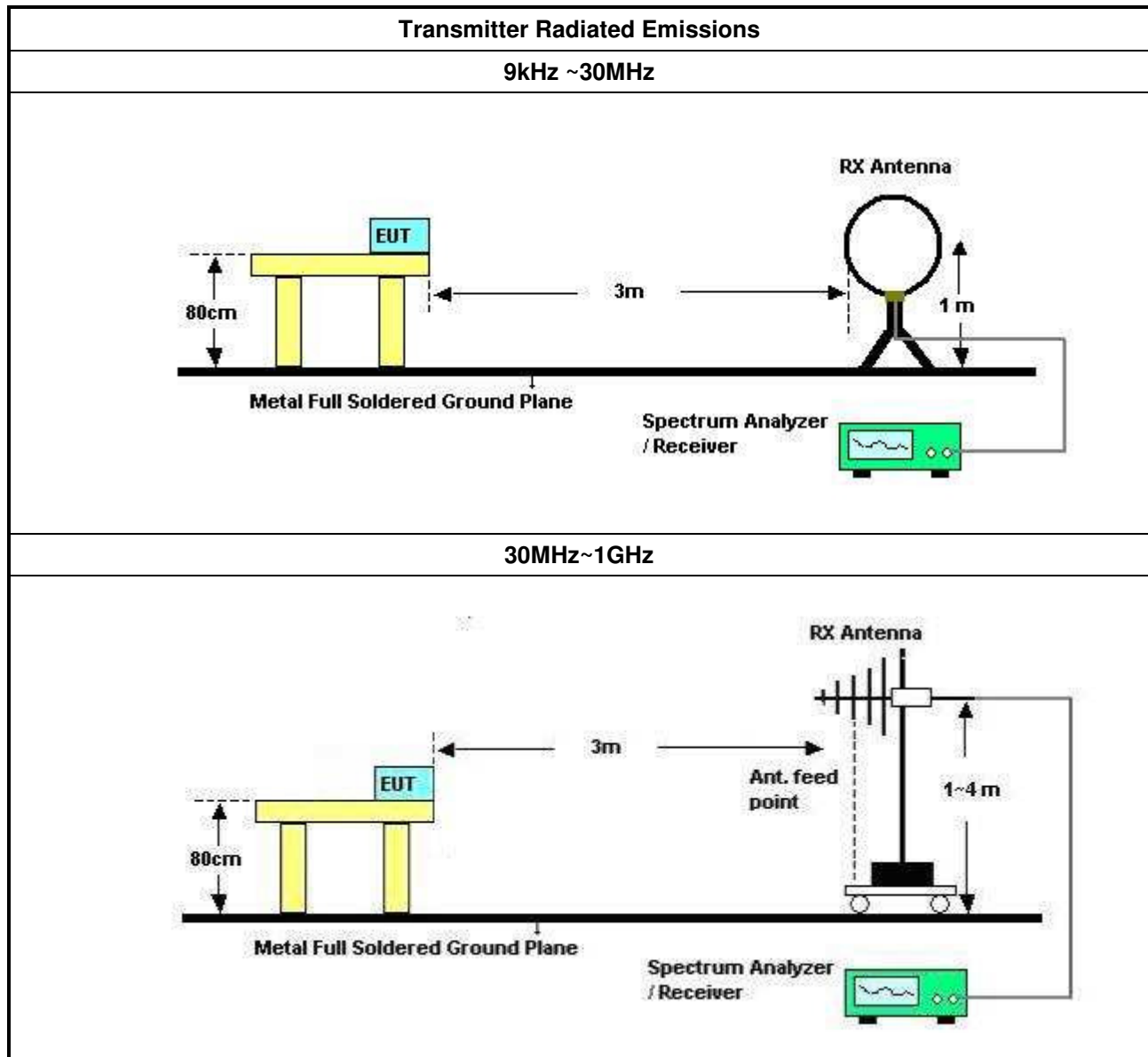
3.6.2 Measuring Instruments

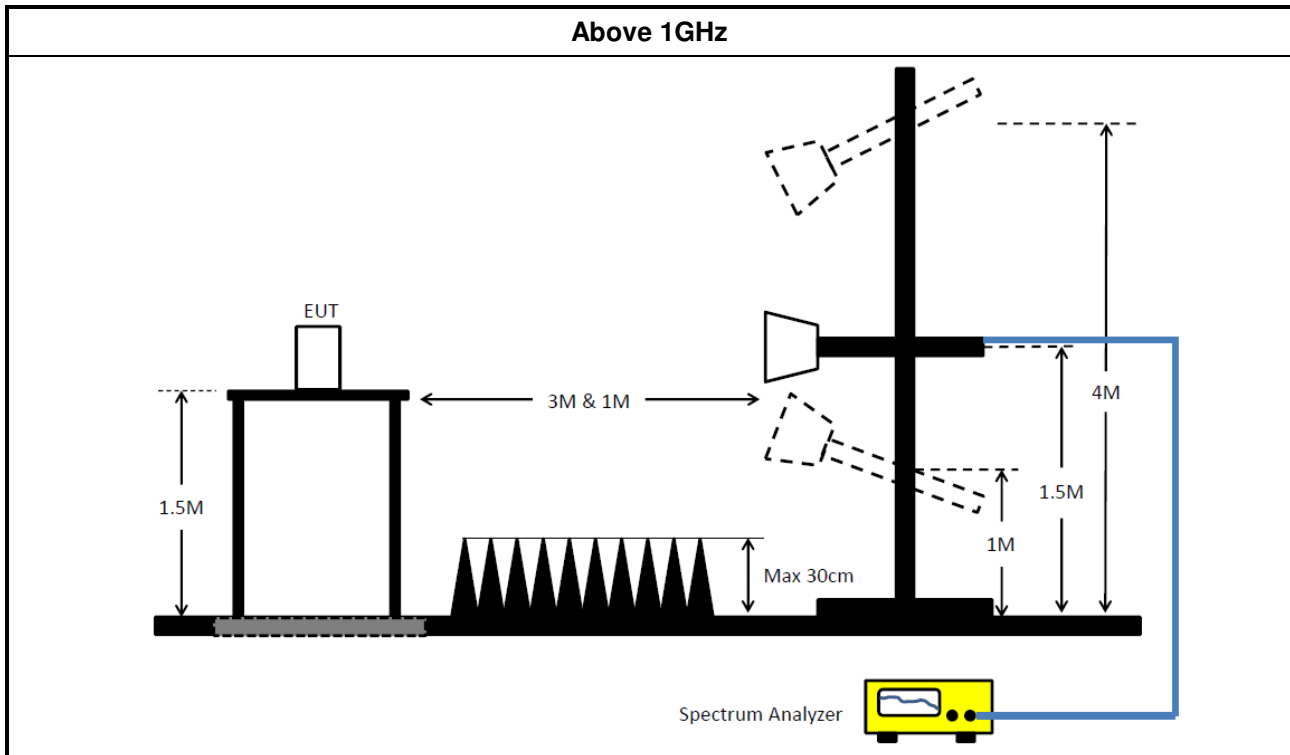
Refer a test equipment and calibration data table in this test report.

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)
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. 15, 2016	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	MITEQ	TTA1840-35-HG	1864479	18GHz ~ 40GHz	Jun. 28, 2016	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	Oct. 24, 2016	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	Oct. 24, 2016	Radiation (03CH01-CB)
RF Cable-high	Woken	High Cable-40G#2	N/A	18GHz ~ 40 GHz	Oct. 24, 2016	Radiation (03CH01-CB)
Loop Antenna	Teseq	HLA 6120	24155	9kHz - 30 MHz	Mar. 16, 2016*	Radiation (03CH01-CB)
Test Software	Audix	E3	6.2009-10-7	N/A	N/A	Radiation (03CH01-CB)
Spectrum analyzer	R&S	FSV40	100979	9kHz~40GHz	Dec. 26, 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)



FCC Test Report

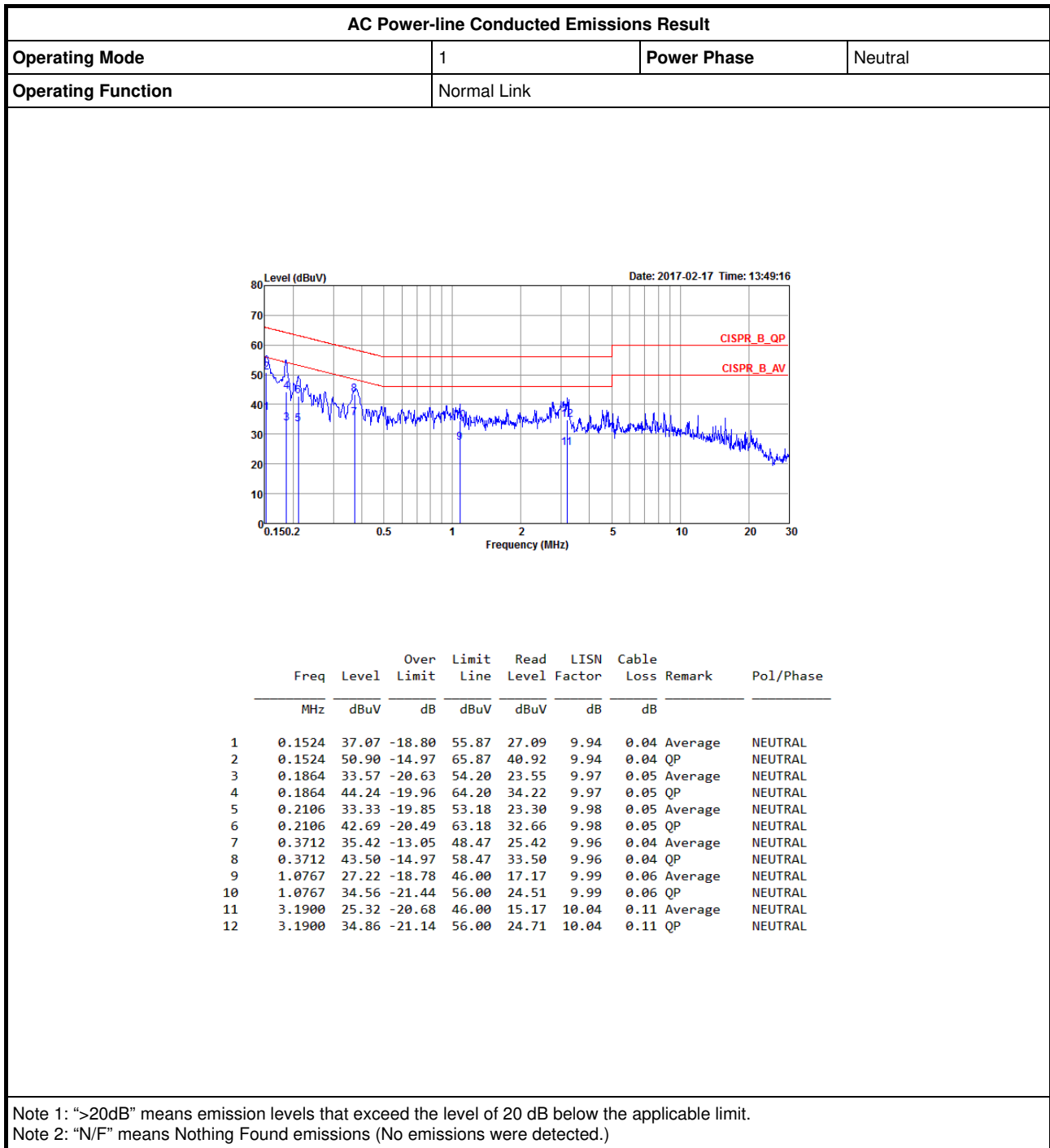
Report No. : FR711935-01AA

Instrument	Manufacturer	Model No.	Serial No.	Characteristics	Calibration Date	Remark
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.

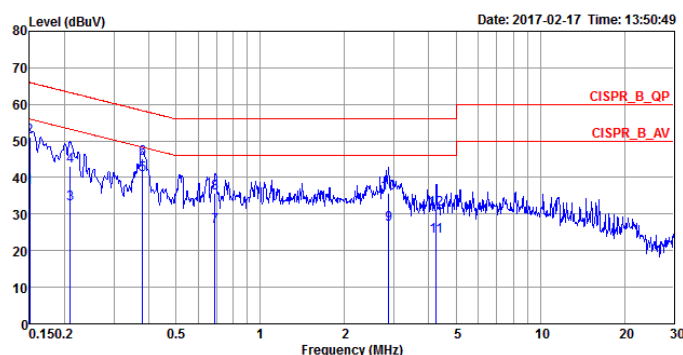
“*” Calibration Interval of instruments listed above is two years.

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	Read	LISN	Cable		
	MHz	dBuV	Limit	Line	Level	Factor	Loss	Remark	Pol/Phase
			dB	dBuV	dBuV	dB	dB		
1	0.1500	37.25	-18.75	56.00	27.26	9.95	0.04	Average	LINE
2	0.1500	50.99	-15.01	66.00	41.00	9.95	0.04	QP	LINE
3	0.2094	32.82	-20.41	53.23	22.84	9.93	0.05	Average	LINE
4	0.2094	43.01	-20.22	63.23	33.03	9.93	0.05	QP	LINE
5	0.3791	40.86	-7.44	48.30	30.93	9.89	0.04	Average	LINE
6	0.3791	45.12	-13.18	58.30	35.19	9.89	0.04	QP	LINE
7	0.6899	26.64	-19.36	46.00	16.65	9.94	0.05	Average	LINE
8	0.6899	35.74	-20.26	56.00	25.75	9.94	0.05	QP	LINE
9	2.8692	27.08	-18.92	46.00	17.00	9.98	0.10	Average	LINE
10	2.8692	35.74	-20.26	56.00	25.66	9.98	0.10	QP	LINE
11	4.2466	23.89	-22.11	46.00	13.80	9.96	0.13	Average	LINE
12	4.2466	31.18	-24.82	56.00	21.09	9.96	0.13	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.)

Summary

Mode	Max-N dB (Hz)	Max-OBW (Hz)	ITU-Code	Min-N dB (Hz)	Min-OBW (Hz)
802.11b_(1Mbps)_4TX	-	-	-	-	-
2.4-2.4835GHz	9.05M	13.068M	13M1G1D	7.125M	12.319M
802.11g_(6Mbps)_4TX	-	-	-	-	-
2.4-2.4835GHz	16.325M	16.467M	16M5D1D	15.725M	16.392M
802.11n HT20_Nss1,(MCS0)_4TX	-	-	-	-	-
2.4-2.4835GHz	17.55M	17.666M	17M7D1D	16.5M	17.591M
802.11n HT40_Nss1,(MCS0)_4TX	-	-	-	-	-
2.4-2.4835GHz	35M	35.932M	35M9D1D	26.25M	35.682M

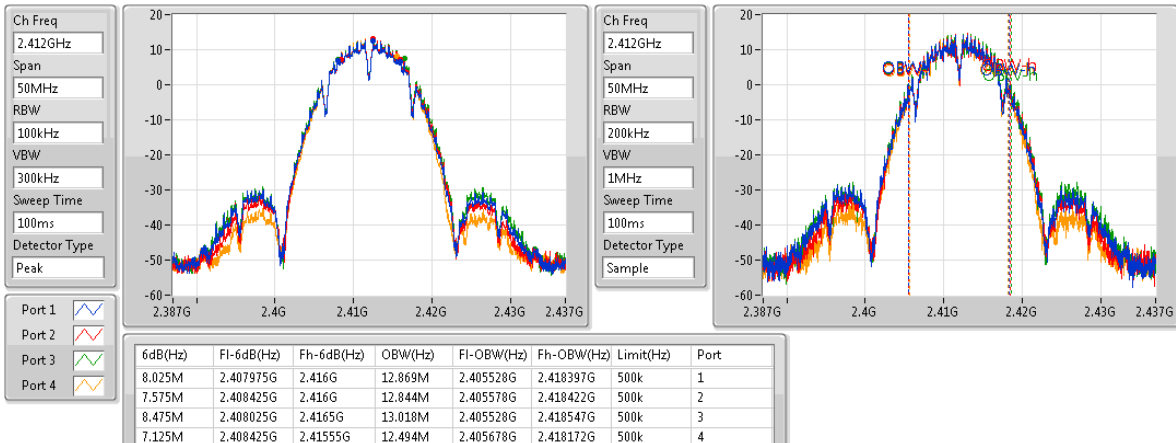
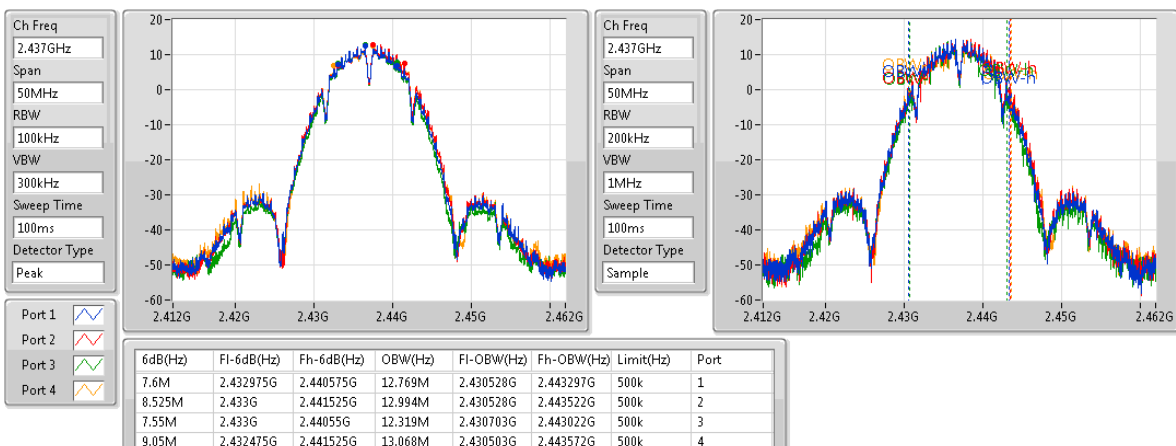
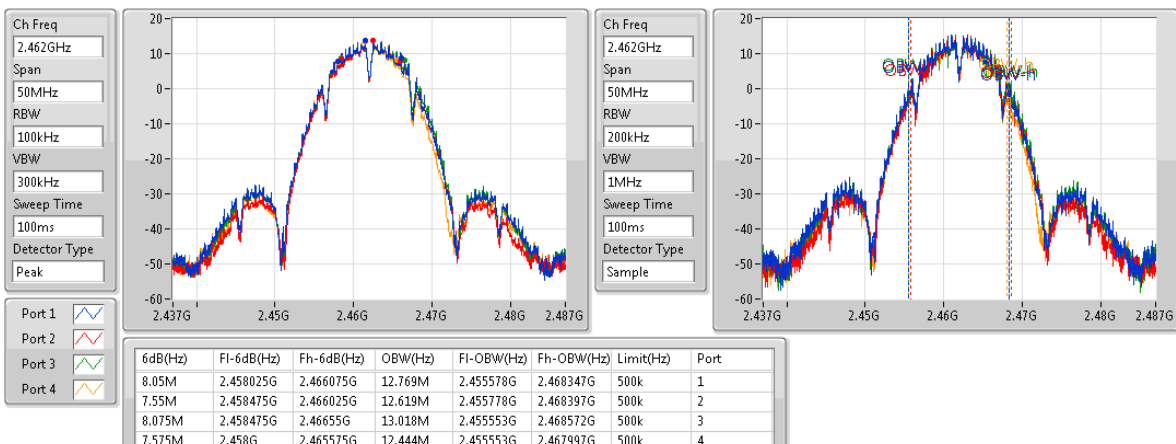
Max-N dB = Maximum 6dB down bandwidth; **Max-OBW** = Maximum 99% occupied bandwidth;

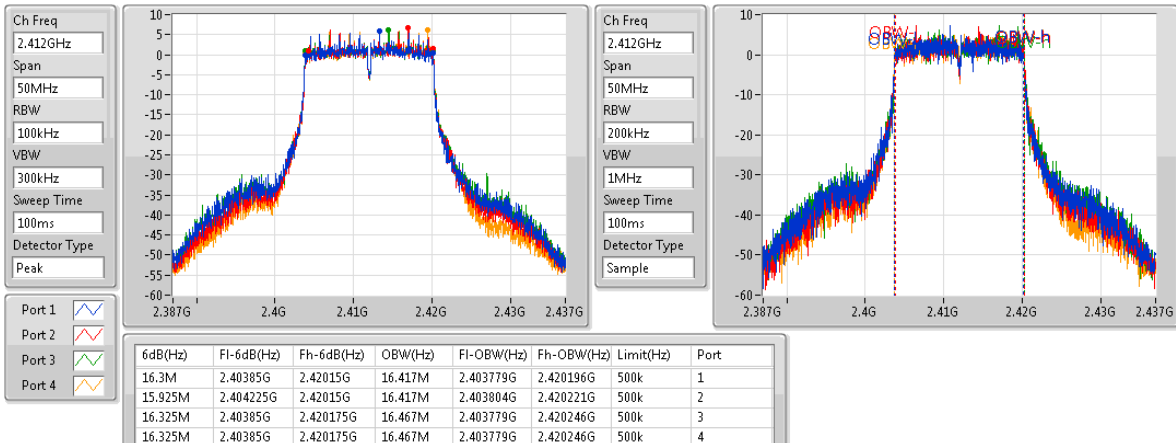
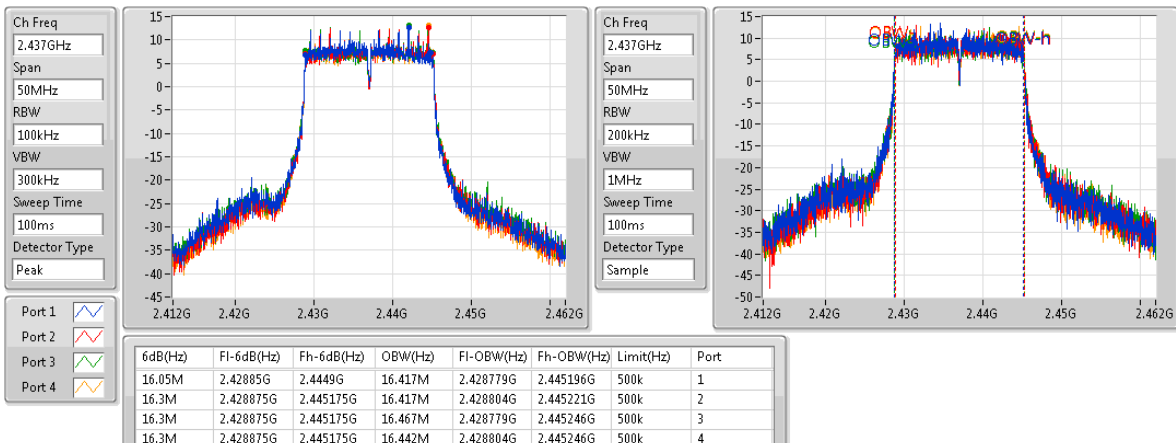
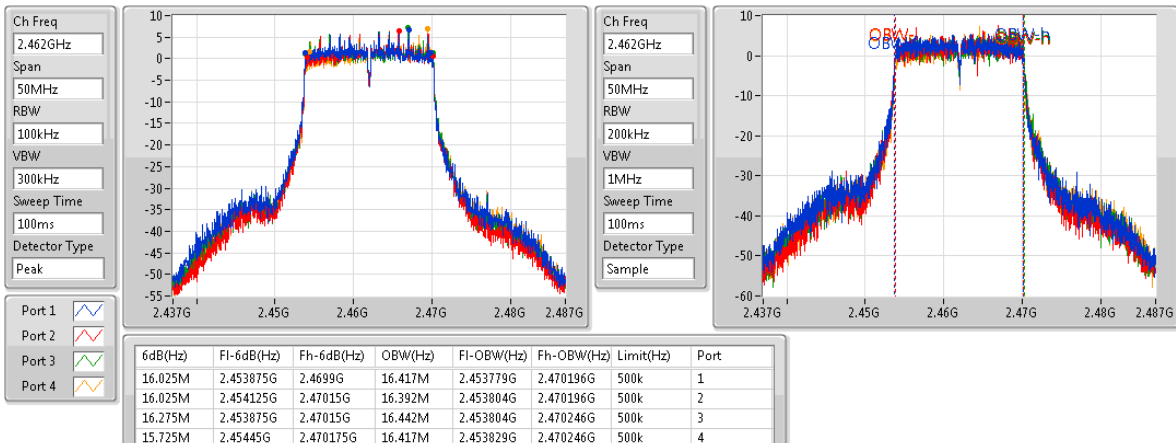
Min-N dB = Minimum 6dB down bandwidth; **Min-OBW** = Minimum 99% occupied bandwidth;

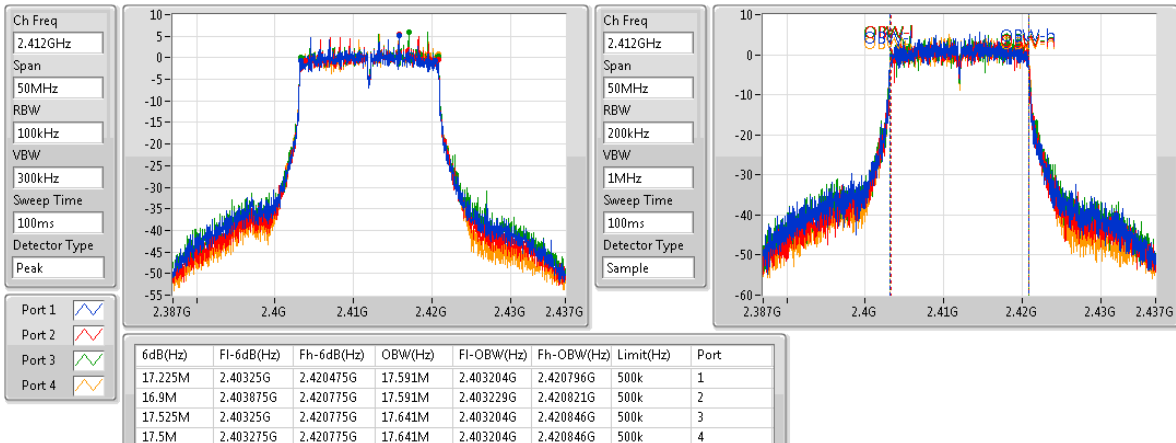
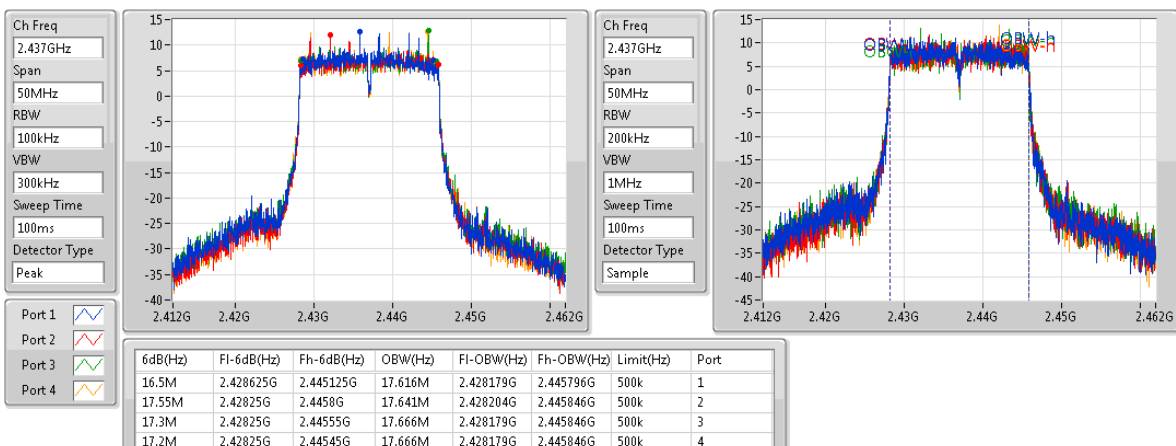
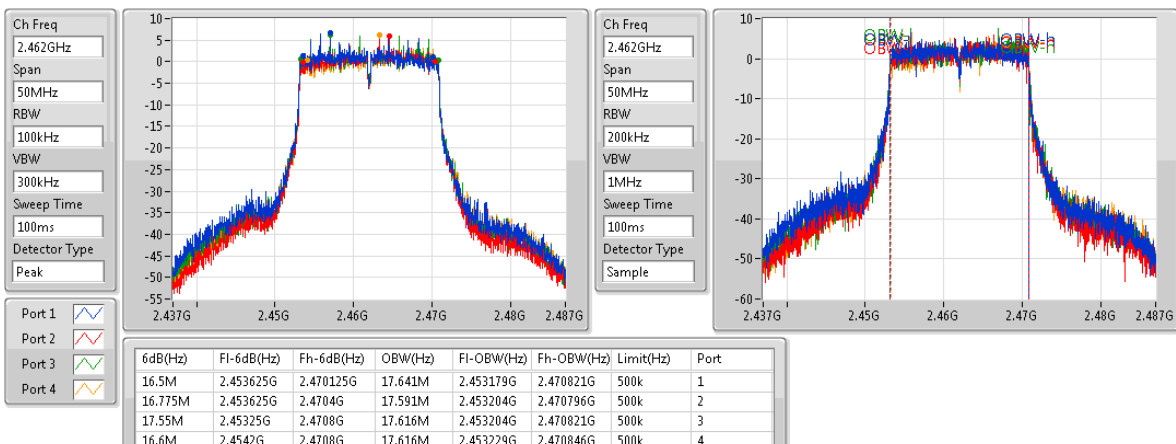
Result

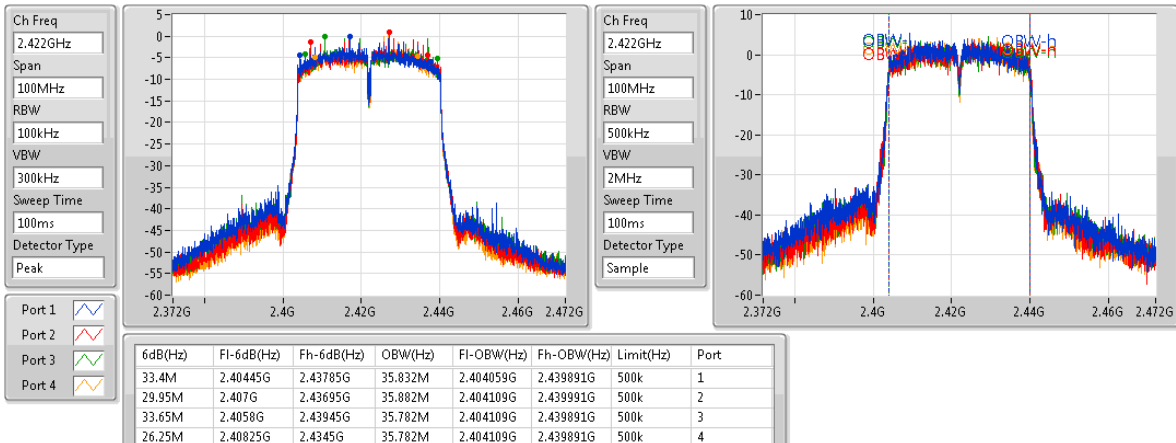
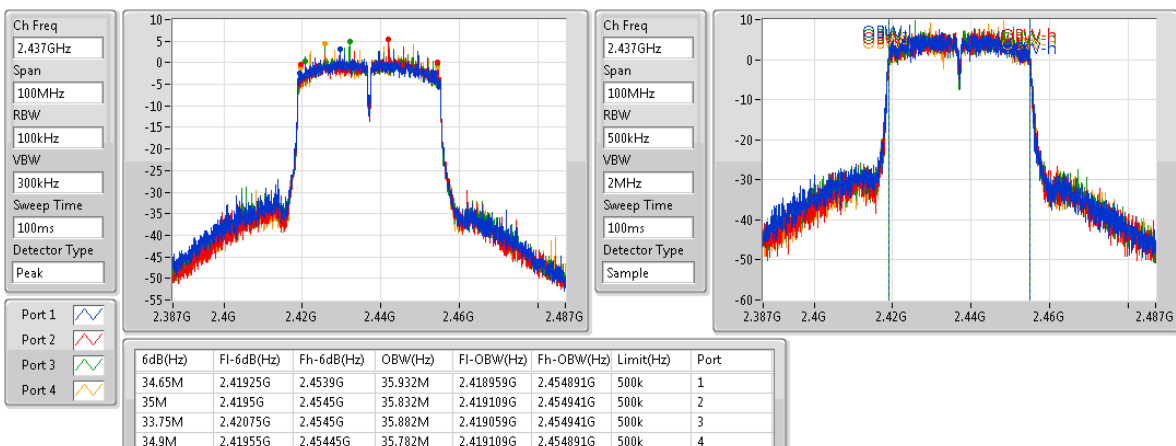
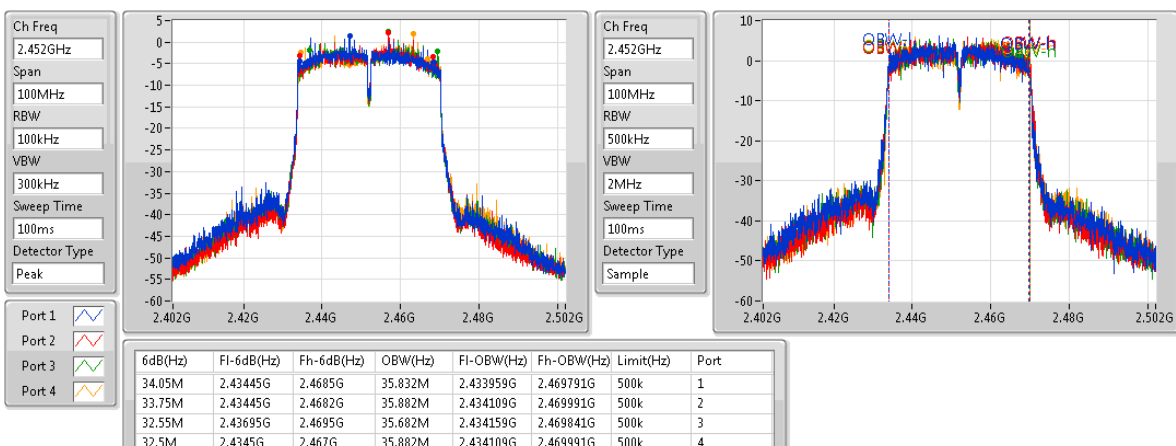
Mode	Result	Limit (Hz)	Port 1-N dB (Hz)	Port 1-OBW (Hz)	Port 2-N dB (Hz)	Port 2-OBW (Hz)	Port 3-N dB (Hz)	Port 3-OBW (Hz)	Port 4-N dB (Hz)	Port 4-OBW (Hz)
802.11b_(1Mbps)_4TX	-	-	-	-	-	-	-	-	-	-
2412MHz	Pass	500k	8.025M	12.869M	7.575M	12.844M	8.475M	13.018M	7.125M	12.494M
2437MHz	Pass	500k	7.6M	12.769M	8.525M	12.994M	7.55M	12.319M	9.05M	13.068M
2462MHz	Pass	500k	8.05M	12.769M	7.55M	12.619M	8.075M	13.018M	7.575M	12.444M
802.11g_(6Mbps)_4TX	-	-	-	-	-	-	-	-	-	-
2412MHz	Pass	500k	16.3M	16.417M	15.925M	16.417M	16.325M	16.467M	16.325M	16.467M
2437MHz	Pass	500k	16.05M	16.417M	16.3M	16.417M	16.3M	16.467M	16.3M	16.442M
2462MHz	Pass	500k	16.025M	16.417M	16.025M	16.392M	16.275M	16.442M	15.725M	16.417M
802.11n HT20_Nss1,(MCS0)_4TX	-	-	-	-	-	-	-	-	-	-
2412MHz	Pass	500k	17.225M	17.591M	16.9M	17.591M	17.525M	17.641M	17.5M	17.641M
2437MHz	Pass	500k	16.5M	17.616M	17.55M	17.641M	17.3M	17.666M	17.2M	17.666M
2462MHz	Pass	500k	16.5M	17.641M	16.775M	17.591M	17.55M	17.616M	16.6M	17.616M
802.11n HT40_Nss1,(MCS0)_4TX	-	-	-	-	-	-	-	-	-	-
2422MHz	Pass	500k	33.4M	35.832M	29.95M	35.882M	33.65M	35.782M	26.25M	35.782M
2437MHz	Pass	500k	34.65M	35.932M	35M	35.832M	33.75M	35.882M	34.9M	35.782M
2452MHz	Pass	500k	34.05M	35.832M	33.75M	35.882M	32.55M	35.682M	32.5M	35.882M

Port X-N dB = Port X 6dB down bandwidth; **Port X-OBW** = Port X 99% occupied bandwidth;

802.11b_(1Mbps)_4TX
EBW
2412MHz

802.11b_(1Mbps)_4TX
EBW
2437MHz

802.11b_(1Mbps)_4TX
EBW
2462MHz


802.11g_(6Mbps)_4TX
EBW
2412MHz

802.11g_(6Mbps)_4TX
EBW
2437MHz

802.11g_(6Mbps)_4TX
EBW
2462MHz


802.11n HT20_Nss1,(MCS0)_4TX
EBW
2412MHz

802.11n HT20_Nss1,(MCS0)_4TX
EBW
2437MHz

802.11n HT20_Nss1,(MCS0)_4TX
EBW
2462MHz


802.11n HT40_Nss1,(MCS0)_4TX
EBW
2422MHz

802.11n HT40_Nss1,(MCS0)_4TX
EBW
2437MHz

802.11n HT40_Nss1,(MCS0)_4TX
EBW
2452MHz


Summary

Mode	Total Power (dBm)	Total Power (W)
802.11b_(1Mbps)_4TX	-	-
2.4-2.4835GHz	29.98	0.99541
802.11g_(6Mbps)_4TX	-	-
2.4-2.4835GHz	29.98	0.99541
802.11n HT20_Nss1,(MCS0)_4TX	-	-
2.4-2.4835GHz	29.79	0.95280
802.11n HT40_Nss1,(MCS0)_4TX	-	-
2.4-2.4835GHz	24.55	0.28510

Result

Mode	Result	DG (dBi)	Port 1 (dBm)	Port 2 (dBm)	Port 3 (dBm)	Port 4 (dBm)	Total Power (dBm)	Power Limit (dBm)
802.11b_(1Mbps)_4TX	-	-	-	-	-	-	-	-
2412MHz	Pass	4.30	23.07	23.52	23.49	23.31	29.37	30.00
2437MHz	Pass	4.30	23.05	23.36	23.02	23.17	29.17	30.00
2462MHz	Pass	4.30	24.03	23.92	24.12	23.75	29.98	30.00
802.11g_(6Mbps)_4TX	-	-	-	-	-	-	-	-
2412MHz	Pass	4.30	17.62	17.71	17.84	17.73	23.75	30.00
2437MHz	Pass	4.30	24.02	23.98	23.95	23.89	29.98	30.00
2462MHz	Pass	4.30	17.96	17.83	17.92	17.74	23.88	30.00
802.11n HT20_Nss1,(MCS0)_4TX	-	-	-	-	-	-	-	-
2412MHz	Pass	4.30	16.85	16.97	17.18	17.05	23.03	30.00
2437MHz	Pass	4.30	23.79	23.68	23.83	23.77	29.79	30.00
2462MHz	Pass	4.30	17.78	17.64	17.81	17.52	23.71	30.00
802.11n HT40_Nss1,(MCS0)_4TX	-	-	-	-	-	-	-	-
2422MHz	Pass	4.30	14.87	14.67	14.71	14.49	20.71	30.00
2437MHz	Pass	4.30	18.55	18.52	18.61	18.45	24.55	30.00
2452MHz	Pass	4.30	16.37	16.33	16.27	16.31	22.34	30.00

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

Summary

Mode	PD (dBm/RBW)
802.11b_(1Mbps)_4TX	-
2.4-2.4835GHz	1.88
802.11g_(6Mbps)_4TX	-
2.4-2.4835GHz	-0.57
802.11n HT20_Nss1,(MCS0)_4TX	-
2.4-2.4835GHz	-0.12
802.11n HT40_Nss1,(MCS0)_4TX	-
2.4-2.4835GHz	-7.42

RBW=3kHz.

Result

Mode	Result	DG (dBi)	Port 1 (dBm/RBW)	Port 2 (dBm/RBW)	Port 3 (dBm/RBW)	Port 4 (dBm/RBW)	PD (dBm/RBW)	PD Limit (dBm/RBW)
802.11b_(1Mbps)_4TX	-	-	-	-	-	-	-	-
2412MHz	Pass	9.88	-3.80	-3.72	-4.21	-4.07	0.69	4.12
2437MHz	Pass	9.88	-2.00	-4.44	-4.96	-3.63	0.75	4.12
2462MHz	Pass	9.88	-3.29	-3.05	-3.13	-1.11	1.88	4.12
802.11g_(6Mbps)_4TX	-	-	-	-	-	-	-	-
2412MHz	Pass	9.88	-11.15	-10.56	-10.12	-11.01	-6.16	4.12
2437MHz	Pass	9.88	-5.10	-4.75	-4.64	-5.44	-0.57	4.12
2462MHz	Pass	9.88	-9.94	-10.45	-11.37	-10.94	-5.97	4.12
802.11n HT20_Nss1,(MCS0)_4TX	-	-	-	-	-	-	-	-
2412MHz	Pass	9.88	-11.05	-11.77	-11.50	-11.62	-7.05	4.12
2437MHz	Pass	9.88	-5.28	-4.96	-4.53	-5.15	-0.12	4.12
2462MHz	Pass	9.88	-10.74	-8.30	-11.08	-11.03	-6.00	4.12
802.11n HT40_Nss1,(MCS0)_4TX	-	-	-	-	-	-	-	-
2422MHz	Pass	9.88	-14.42	-16.29	-16.34	-16.42	-11.09	4.12
2437MHz	Pass	9.88	-11.86	-11.37	-11.37	-11.24	-7.42	4.12
2452MHz	Pass	9.88	-14.47	-14.75	-13.12	-14.38	-9.76	4.12

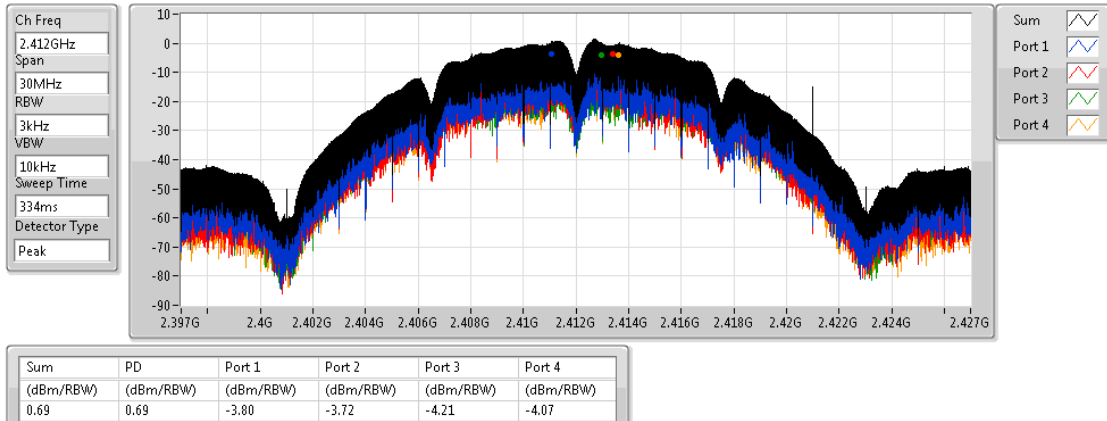
DG = Directional Gain; RBW=3kHz;

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

802.11b_(1Mbps)_4TX

PSD

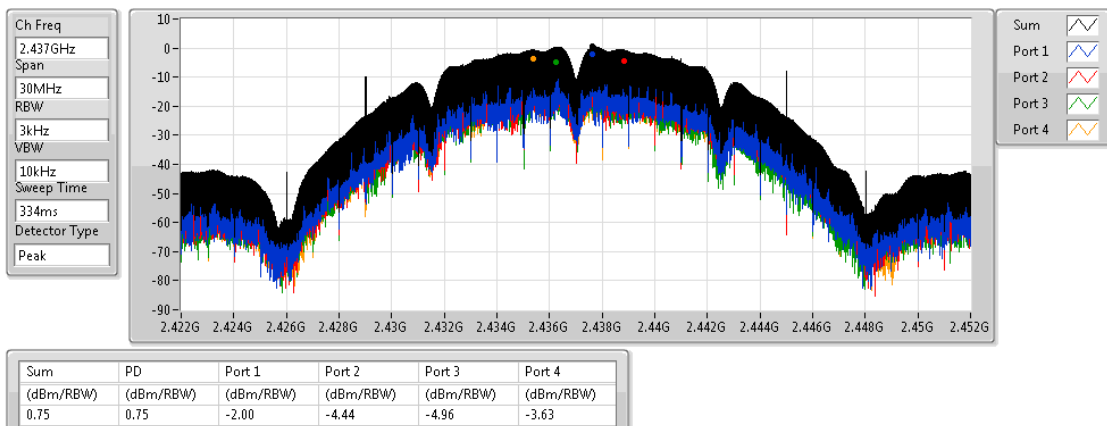
2412MHz



802.11b_(1Mbps)_4TX

PSD

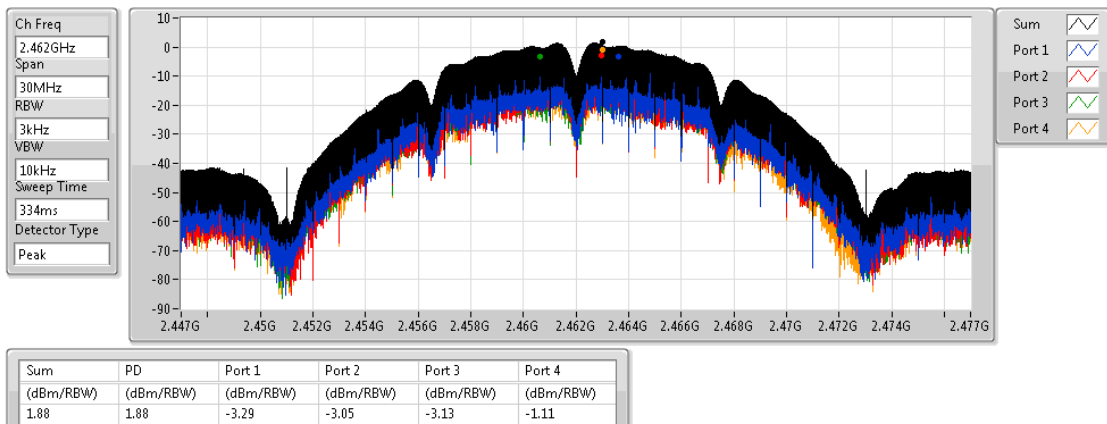
2437MHz



802.11b_(1Mbps)_4TX

PSD

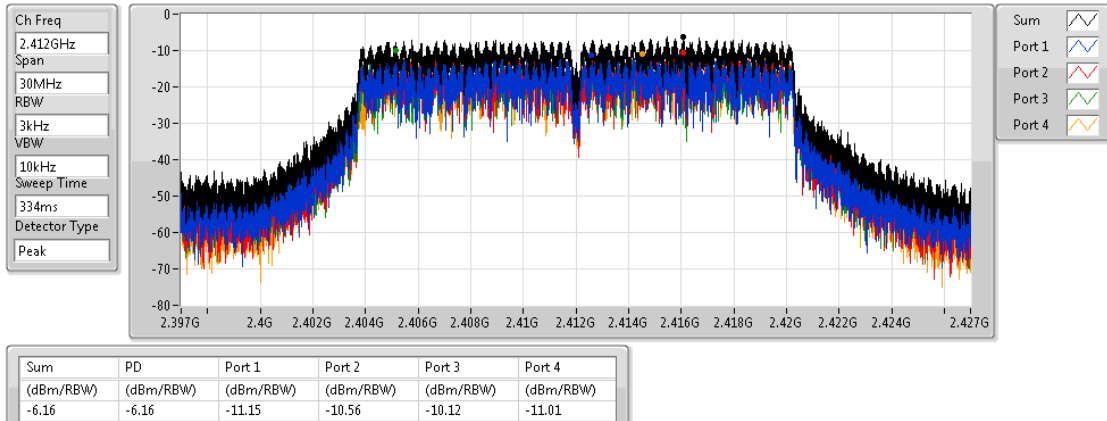
2462MHz



802.11g_(6Mbps)_4TX

PSD

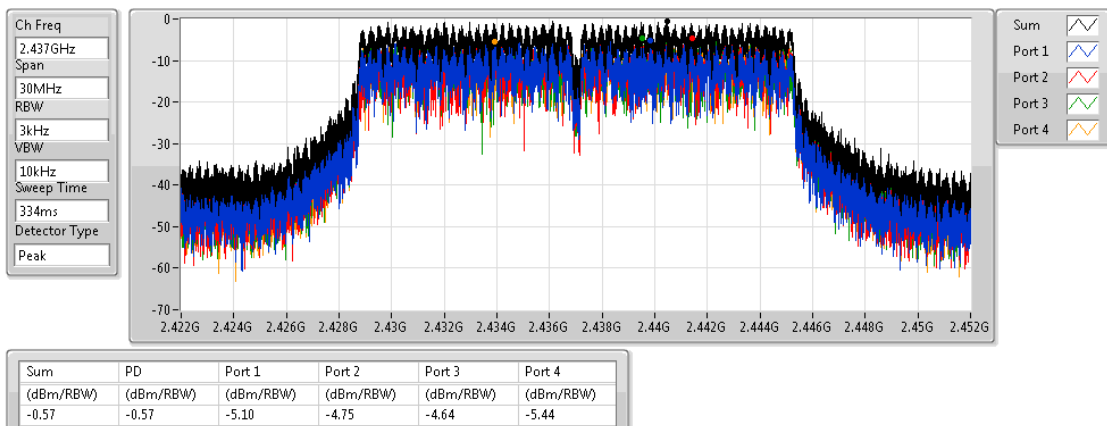
2412MHz



802.11g_(6Mbps)_4TX

PSD

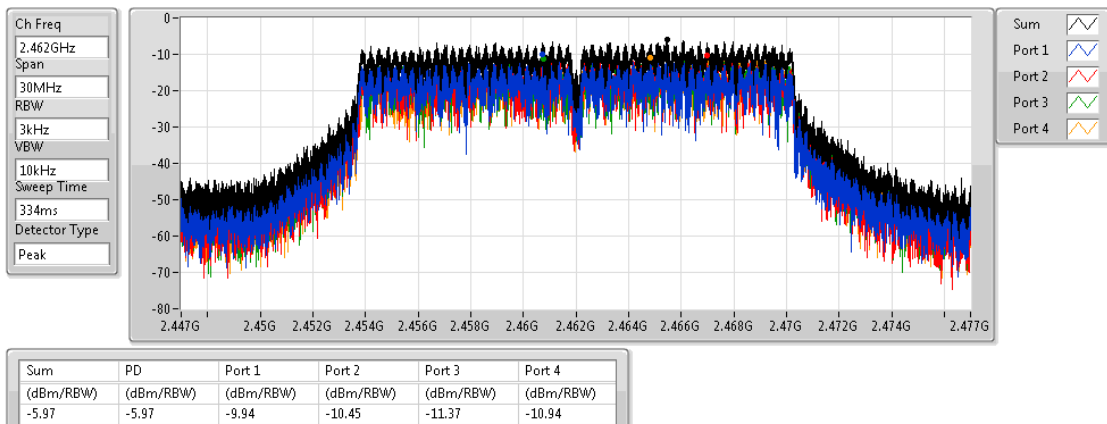
2437MHz



802.11g_(6Mbps)_4TX

PSD

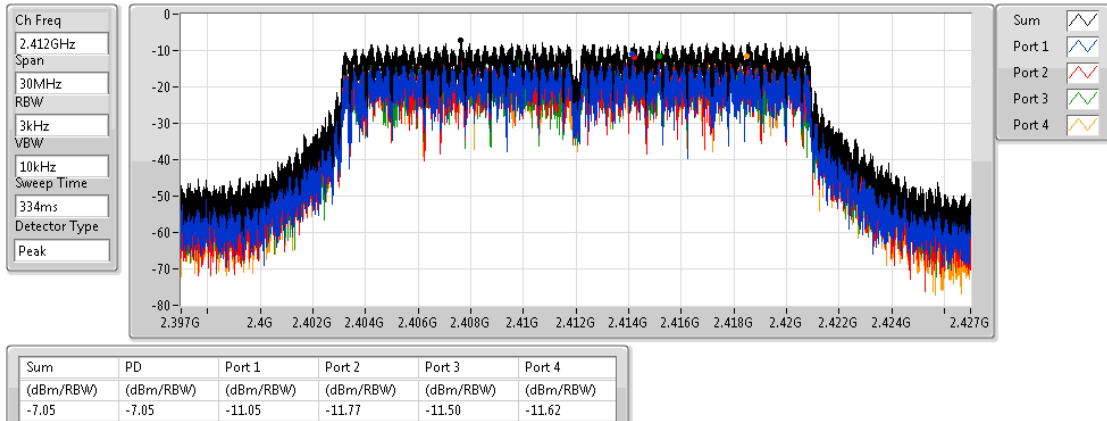
2462MHz



802.11n HT20_Nss1,(MCS0)_4TX

PSD

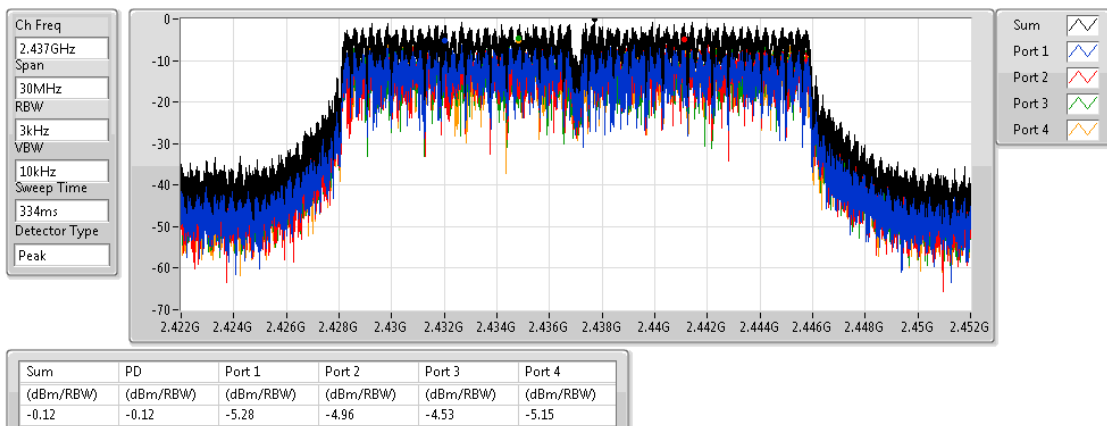
2412MHz



802.11n HT20_Nss1,(MCS0)_4TX

PSD

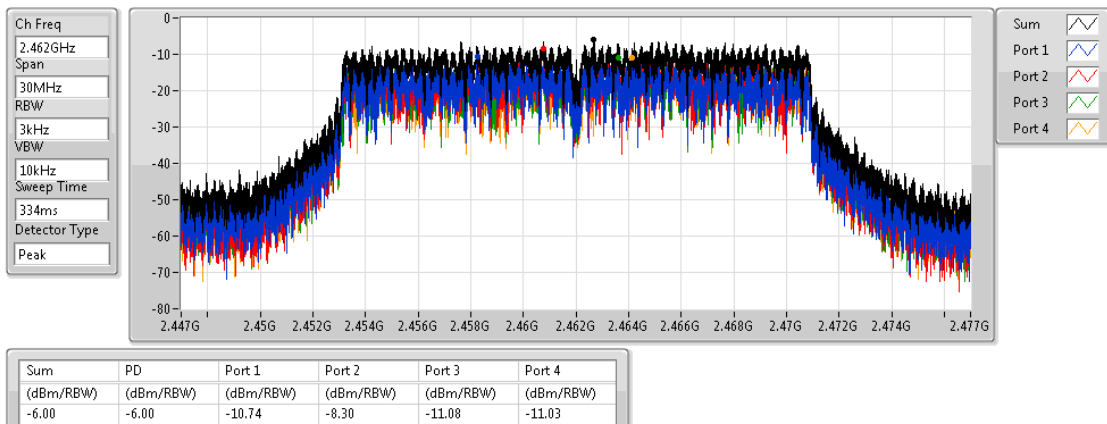
2437MHz



802.11n HT20_Nss1,(MCS0)_4TX

PSD

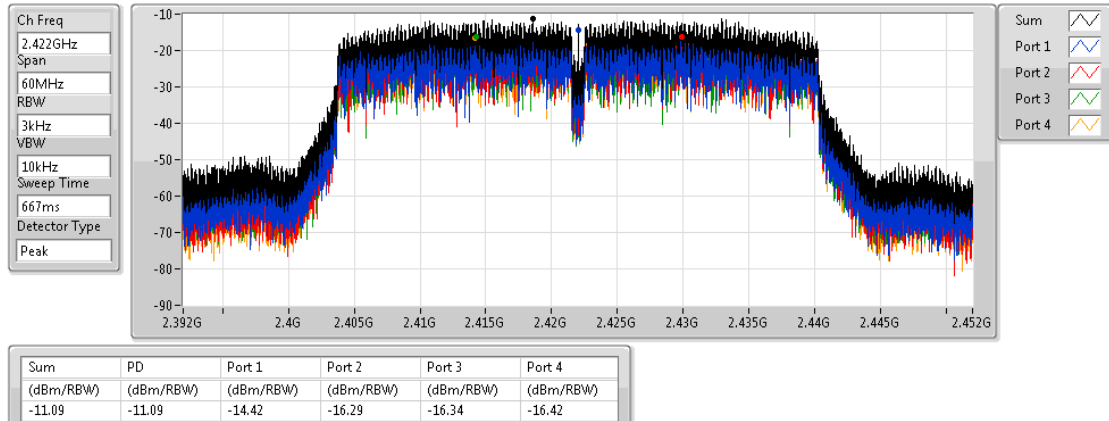
2462MHz



802.11n HT40_Nss1,(MCS0)_4TX

PSD

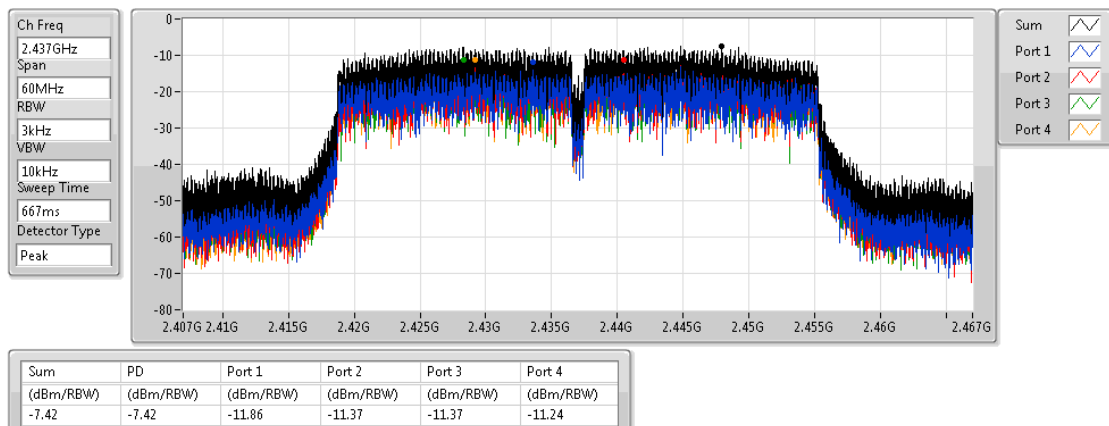
2422MHz



802.11n HT40_Nss1,(MCS0)_4TX

PSD

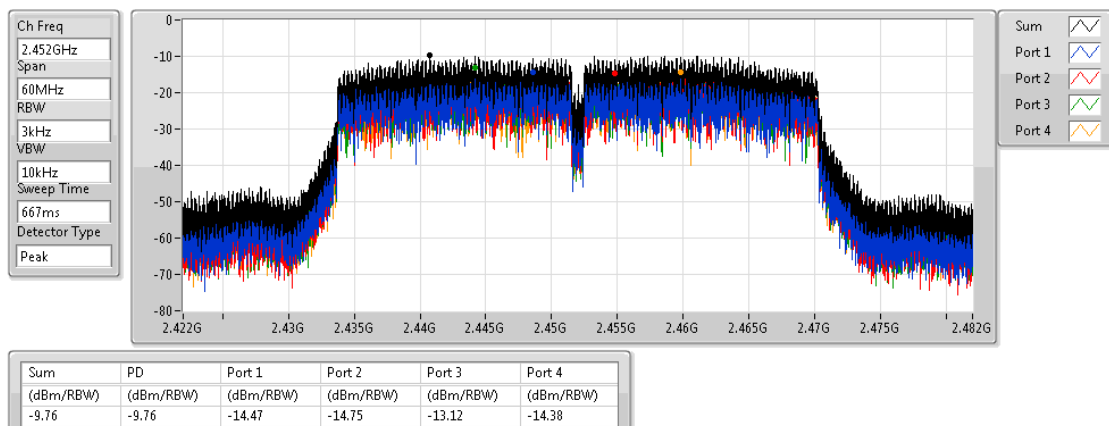
2437MHz



802.11n HT40_Nss1,(MCS0)_4TX

PSD

2452MHz





CSE 20dB/30dB Down Result

Appendix E

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
802.11n HT40_Nss1,(MCS0)_4TX	-	-	-	-	-	-	-	-	-	-	-	-	-
2.4-2.4835GHz	Pass	2.440748G	3.07	-26.93	49.465M	-30.32	2.39936G	-38.13	2.48574G	-44.47	16.289029G	-53.20	4

Result

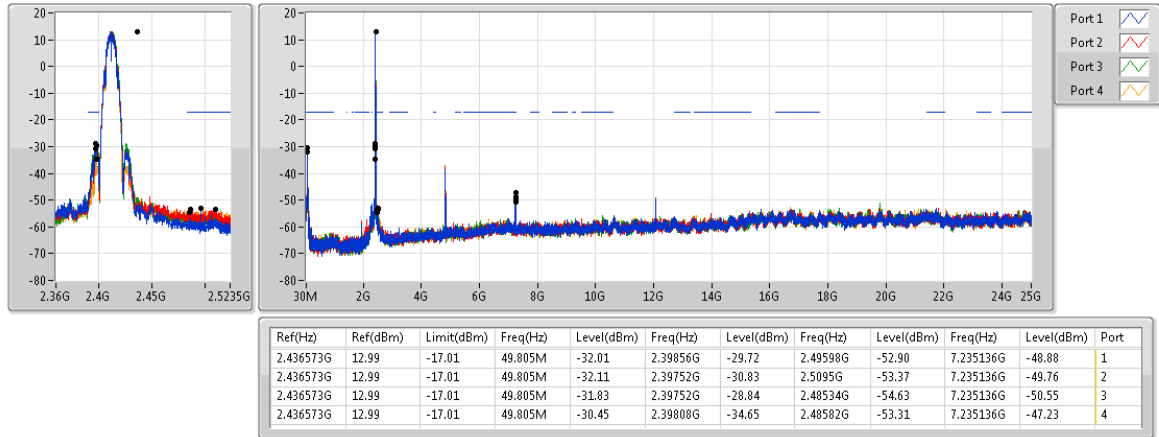
Mode	Result	Ref (Hz)	Ref (dBm)	Limit (dBm)	Freq (Hz)	Level (dBm)	Freq (Hz)	Level (dBm)	Freq (Hz)	Level (dBm)	Freq (Hz)	Level (dBm)	Port
802.11b_(1Mbps)_4TX	-	-	-	-	-	-	-	-	-	-	-	-	-
2412MHz	Pass	2.436573G	12.99	-17.01	49.805M	-32.01	2.39856G	-29.72	2.49598G	-52.90	7.235136G	-48.88	1
2412MHz	Pass	2.436573G	12.99	-17.01	49.805M	-32.11	2.39752G	-30.83	2.5095G	-53.37	7.235136G	-49.76	2
2412MHz	Pass	2.436573G	12.99	-17.01	49.805M	-31.83	2.39752G	-28.84	2.48534G	-54.63	7.235136G	-50.55	3
2412MHz	Pass	2.436573G	12.99	-17.01	49.805M	-30.45	2.39808G	-34.65	2.48582G	-53.31	7.235136G	-47.23	4
2437MHz	Pass	2.436573G	12.99	-17.01	49.805M	-32.45	2.3976G	-49.56	2.49598G	-52.78	24.758378G	-52.49	1
2437MHz	Pass	2.436573G	12.99	-17.01	49.805M	-32.07	2.39904G	-49.84	2.48566G	-52.71	16.796078G	-53.57	2
2437MHz	Pass	2.436573G	12.99	-17.01	49.805M	-32.17	2.39752G	-48.97	2.48726G	-54.07	16.745505G	-53.28	3
2437MHz	Pass	2.436573G	12.99	-17.01	49.805M	-30.61	2.39952G	-49.79	2.49814G	-52.83	16.3325G	-53.58	4
2462MHz	Pass	2.436573G	12.99	-17.01	49.805M	-32.50	2.39032G	-52.57	2.48694G	-48.82	16.711791G	-53.20	1
2462MHz	Pass	2.436573G	12.99	-17.01	49.805M	-31.84	2.3956G	-53.11	2.4875G	-48.99	16.745505G	-53.30	2
2462MHz	Pass	2.436573G	12.99	-17.01	49.805M	-31.83	2.398G	-54.40	2.4875G	-48.47	21.78867G	-53.11	3
2462MHz	Pass	2.436573G	12.99	-17.01	49.805M	-30.55	2.39016G	-53.86	2.48446G	-47.20	16.77922G	-52.76	4
802.11g_(6Mbps)_4TX	-	-	-	-	-	-	-	-	-	-	-	-	-
2412MHz	Pass	2.442084G	12.97	-17.03	49.805M	-32.59	2.39832G	-29.42	2.49598G	-54.68	16.711791G	-53.31	1
2412MHz	Pass	2.442084G	12.97	-17.03	49.805M	-32.21	2.39824G	-32.84	2.4871G	-55.33	16.697743G	-52.86	2
2412MHz	Pass	2.442084G	12.97	-17.03	49.805M	-32.15	2.39704G	-30.37	2.4891G	-55.51	24.834236G	-52.53	3
2412MHz	Pass	2.442084G	12.97	-17.03	49.805M	-30.85	2.3992G	-34.39	2.50614G	-54.66	16.419596G	-53.42	4
2437MHz	Pass	2.442084G	12.97	-17.03	49.805M	-32.24	2.39992G	-41.51	2.48414G	-51.62	21.628525G	-52.80	1
2437MHz	Pass	2.442084G	12.97	-17.03	49.805M	-32.27	2.3996G	-45.10	2.48382G	-50.37	16.349357G	-52.67	2
2437MHz	Pass	2.442084G	12.97	-17.03	49.805M	-32.07	2.39736G	-43.66	2.4847G	-50.03	24.766806G	-53.44	3
2437MHz	Pass	2.442084G	12.97	-17.03	49.805M	-30.20	2.39704G	-42.14	2.48702G	-47.73	16.753934G	-53.01	4
2462MHz	Pass	2.442084G	12.97	-17.03	49.805M	-32.05	2.39568G	-54.40	2.48358G	-44.78	21.414998G	-52.88	1
2462MHz	Pass	2.442084G	12.97	-17.03	49.805M	-32.31	2.39552G	-57.73	2.4839G	-46.64	24.154322G	-52.24	2
2462MHz	Pass	2.442084G	12.97	-17.03	49.805M	-31.99	2.39496G	-56.25	2.48382G	-44.84	16.703362G	-53.26	3
2462MHz	Pass	2.442084G	12.97	-17.03	49.805M	-30.44	2.39736G	-56.79	2.48382G	-43.29	16.759553G	-53.22	4
802.11n HT20_Nss1,(MCS0)_4TX	-	-	-	-	-	-	-	-	-	-	-	-	-
2412MHz	Pass	2.435738G	12.27	-17.73	49.805M	-32.36	2.39888G	-31.21	2.49598G	-55.15	16.762363G	-53.45	1
2412MHz	Pass	2.435738G	12.27	-17.73	49.805M	-31.64	2.39808G	-34.67	2.4879G	-55.15	21.426237G	-52.79	2
2412MHz	Pass	2.435738G	12.27	-17.73	49.805M	-32.03	2.39704G	-32.38	2.48734G	-55.47	16.357786G	-53.41	3
2412MHz	Pass	2.435738G	12.27	-17.73	49.805M	-30.04	2.39992G	-36.61	2.49622G	-54.90	16.720219G	-53.43	4
2437MHz	Pass	2.435738G	12.27	-17.73	49.805M	-32.39	2.39992G	-40.92	2.48358G	-51.48	21.482428G	-53.62	1
2437MHz	Pass	2.435738G	12.27	-17.73	49.805M	-32.19	2.39896G	-42.97	2.4851G	-50.99	16.703362G	-53.39	2
2437MHz	Pass	2.435738G	12.27	-17.73	49.805M	-32.01	2.39992G	-41.88	2.48382G	-49.84	16.756744G	-52.60	3
2437MHz	Pass	2.435738G	12.27	-17.73	49.805M	-30.59	2.39832G	-40.86	2.48414G	-49.01	17.4198G	-53.96	4
2462MHz	Pass	2.435738G	12.27	-17.73	49.805M	-32.45	2.39048G	-54.15	2.48414G	-42.76	17.439467G	-52.52	1
2462MHz	Pass	2.435738G	12.27	-17.73	49.805M	-32.12	2.3908G	-57.47	2.48358G	-45.10	16.734267G	-53.11	2
2462MHz	Pass	2.435738G	12.27	-17.73	49.805M	-32.19	2.39928G	-56.03	2.48382G	-41.86	16.981509G	-53.21	3
2462MHz	Pass	2.435738G	12.27	-17.73	49.805M	-30.87	2.39576G	-56.49	2.48358G	-41.47	16.326881G	-52.85	4
802.11n HT40_Nss1,(MCS0)_4TX	-	-	-	-	-	-	-	-	-	-	-	-	-
2422MHz	Pass	2.440748G	3.07	-26.93	49.465M	-32.35	2.39648G	-37.21	2.49598G	-58.00	21.752317G	-53.57	1
2422MHz	Pass	2.440748G	3.07	-26.93	49.465M	-31.91	2.3984G	-39.99	2.5051G	-56.23	16.765805G	-53.47	2

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
2422MHz	Pass	2.440748G	3.07	-26.93	49.465M	-32.37	2.39584G	-36.75	2.56014G	-55.35	16.381579G	-53.71	3
2422MHz	Pass	2.440748G	3.07	-26.93	49.465M	-30.61	2.39824G	-40.36	2.4859G	-57.33	16.751782G	-53.10	4
2437MHz	Pass	2.440748G	3.07	-26.93	49.465M	-32.14	2.39888G	-36.56	2.48382G	-47.92	23.148989G	-53.10	1
2437MHz	Pass	2.440748G	3.07	-26.93	49.465M	-32.06	2.39952G	-35.45	2.48398G	-47.83	17.696919G	-52.47	2
2437MHz	Pass	2.440748G	3.07	-26.93	49.465M	-32.02	2.39856G	-39.15	2.4859G	-47.74	21.412965G	-53.01	3
2437MHz	Pass	2.440748G	3.07	-26.93	49.465M	-30.32	2.39936G	-38.13	2.48574G	-44.47	16.289029G	-53.20	4
2452MHz	Pass	2.440748G	3.07	-26.93	49.465M	-32.21	2.3952G	-54.20	2.48574G	-41.94	24.450306G	-53.41	1
2452MHz	Pass	2.440748G	3.07	-26.93	49.465M	-32.24	2.39696G	-56.14	2.4851G	-43.64	16.381579G	-53.86	2
2452MHz	Pass	2.440748G	3.07	-26.93	49.465M	-32.08	2.39968G	-55.65	2.48574G	-41.31	21.555997G	-52.68	3
2452MHz	Pass	2.440748G	3.07	-26.93	49.465M	-30.76	2.39728G	-56.23	2.48446G	-41.44	24.806485G	-53.21	4

802.11b_(1Mbps)_4TX

CSE NdB

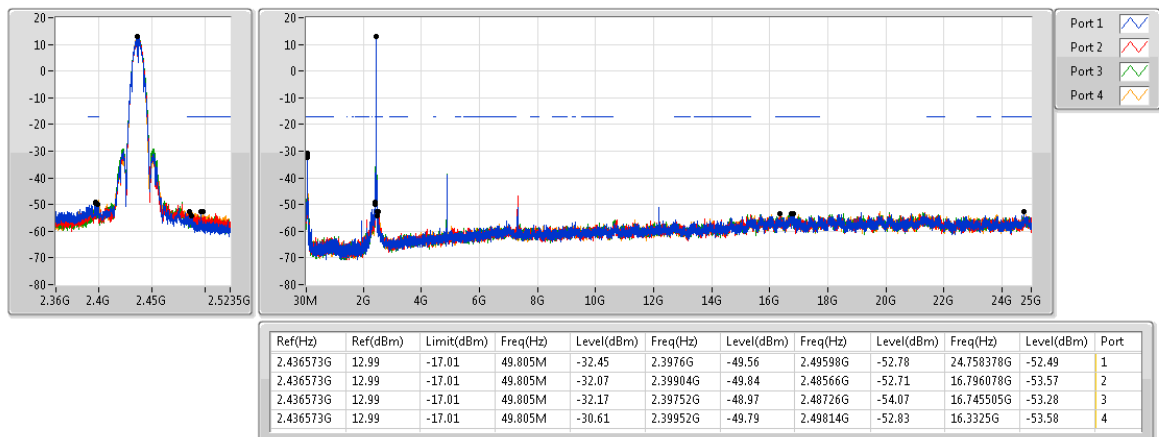
2412MHz



802.11b_(1Mbps)_4TX

CSE NdB

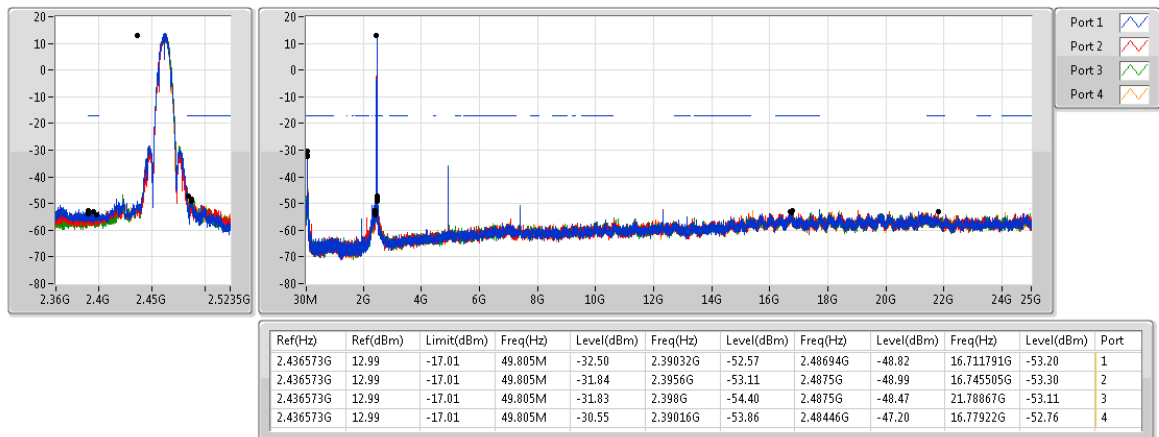
2437MHz



802.11b_(1Mbps)_4TX

CSE NdB

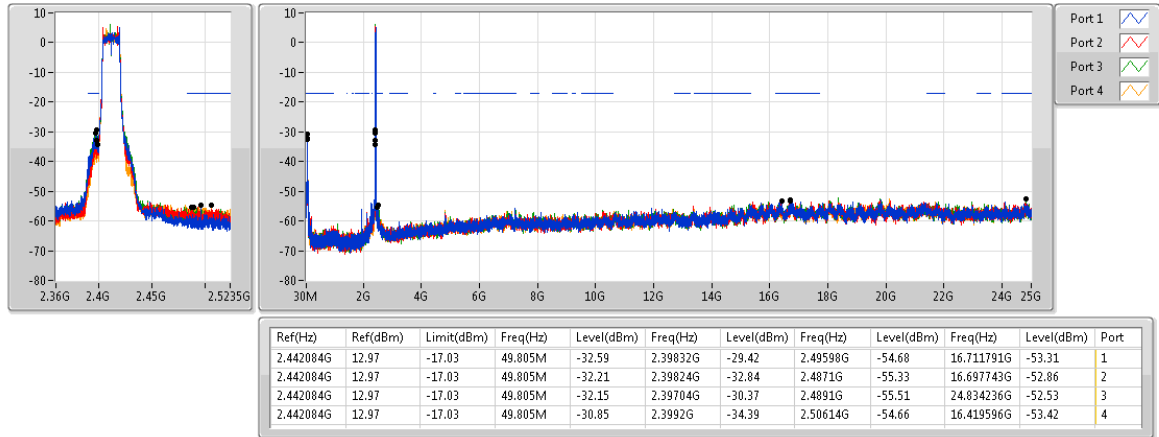
2462MHz



802.11g_(6Mbps)_4TX

CSE NdB

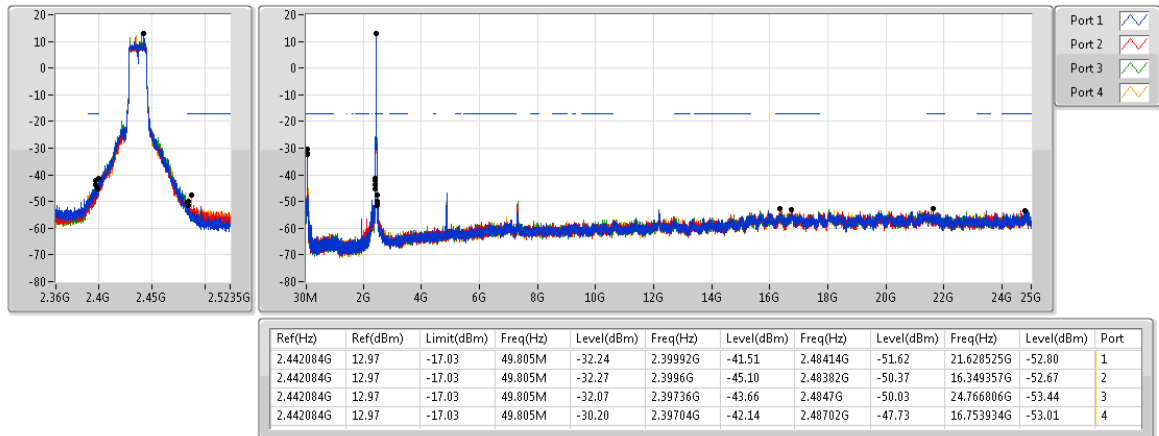
2412MHz



802.11g_(6Mbps)_4TX

CSE NdB

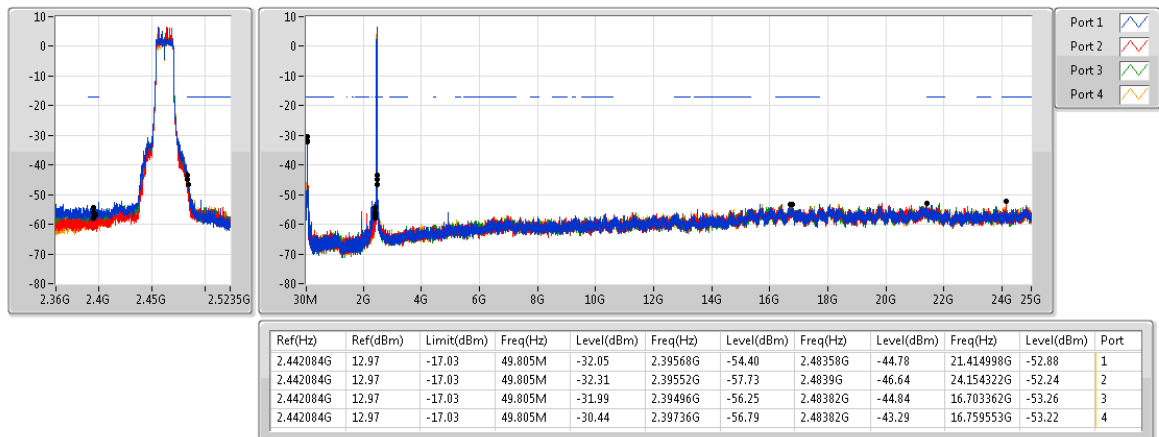
2437MHz



802.11g_(6Mbps)_4TX

CSE NdB

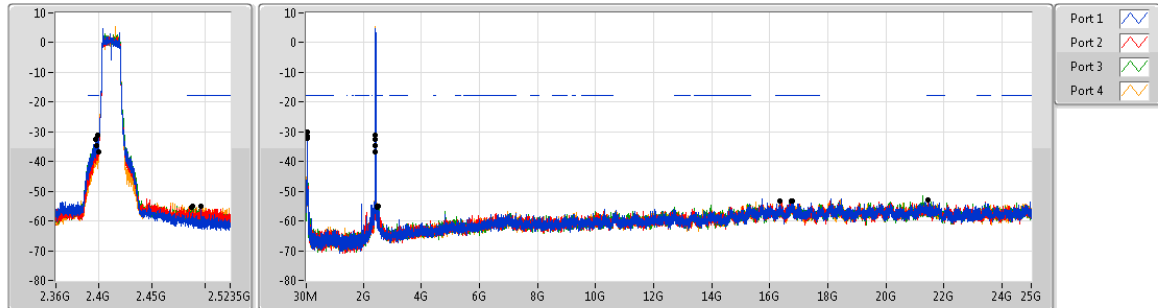
2462MHz



802.11n HT20_Nss1,(MCS0)_4TX

CSE NdB

2412MHz

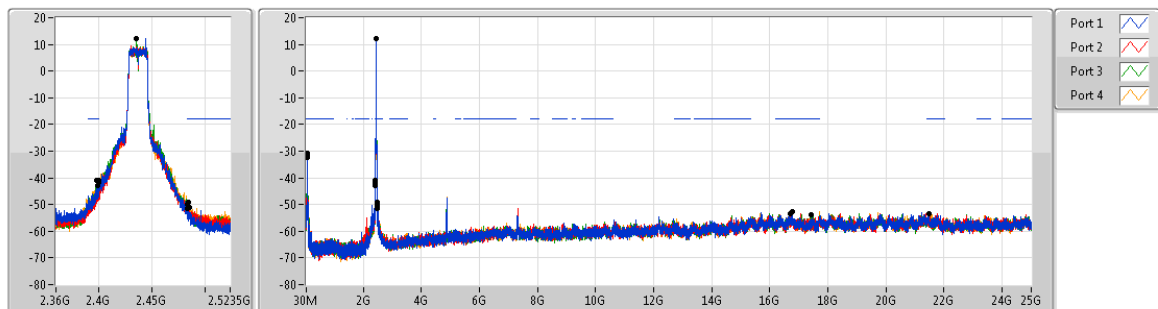


Ref(Hz)	Ref(dBm)	Limit(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Port
2.435738G	12.27	-17.73	49.805M	-32.36	2.39888G	-31.21	2.49598G	-55.15	16.762363G	-53.45	1
2.435738G	12.27	-17.73	49.805M	-31.64	2.39888G	-34.67	2.4879G	-55.15	21.426237G	-52.79	2
2.435738G	12.27	-17.73	49.805M	-32.03	2.39704G	-32.38	2.48734G	-55.47	16.357786G	-53.41	3
2.435738G	12.27	-17.73	49.805M	-30.04	2.39992G	-36.61	2.49622G	-54.90	16.720219G	-53.43	4

802.11n HT20_Nss1,(MCS0)_4TX

CSE NdB

2437MHz

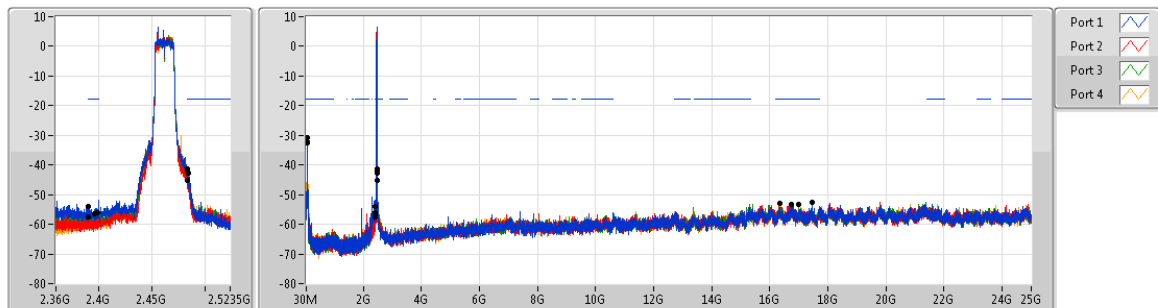


Ref(Hz)	Ref(dBm)	Limit(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Port
2.435738G	12.27	-17.73	49.805M	-32.39	2.39992G	-40.92	2.48358G	-51.48	21.482428G	-53.62	1
2.435738G	12.27	-17.73	49.805M	-32.19	2.39896G	-42.97	2.4851G	-50.99	16.703362G	-53.39	2
2.435738G	12.27	-17.73	49.805M	-32.01	2.39992G	-41.88	2.48382G	-49.84	16.756744G	-52.60	3
2.435738G	12.27	-17.73	49.805M	-30.59	2.39832G	-40.86	2.48414G	-49.01	17.4198G	-53.96	4

802.11n HT20_Nss1,(MCS0)_4TX

CSE NdB

2462MHz

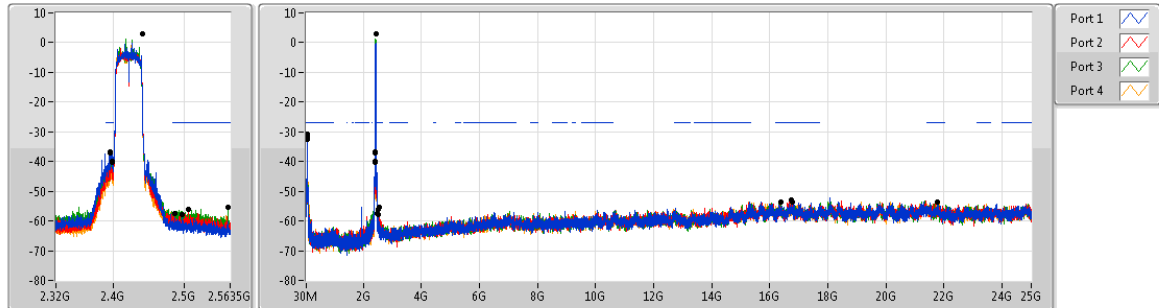


Ref(Hz)	Ref(dBm)	Limit(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Port
2.435738G	12.27	-17.73	49.805M	-32.45	2.39040G	-54.15	2.48414G	-42.76	17.439467G	-52.52	1
2.435738G	12.27	-17.73	49.805M	-32.12	2.3908G	-57.47	2.48358G	-45.10	16.734267G	-53.11	2
2.435738G	12.27	-17.73	49.805M	-32.19	2.39928G	-56.03	2.48382G	-41.86	16.981509G	-53.21	3
2.435738G	12.27	-17.73	49.805M	-30.87	2.39576G	-56.49	2.48358G	-41.47	16.326881G	-52.85	4

802.11n HT40_Nss1,(MCS0)_4TX

CSE NdB

2422MHz

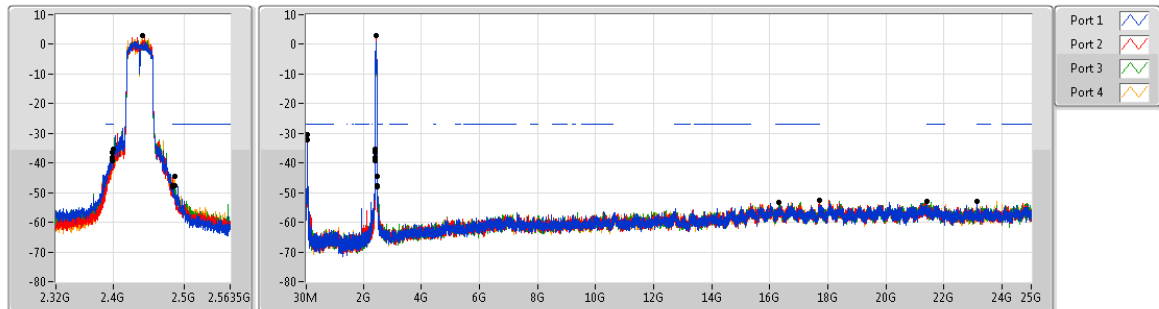


Ref(Hz)	Ref(dBm)	Limit(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Port
2.440748G	3.07	-26.93	49.465M	-32.35	2.39648G	-37.21	2.49598G	-58.00	21.752317G	-53.57	1
2.440748G	3.07	-26.93	49.465M	-31.91	2.3984G	-39.99	2.5051G	-56.23	16.765805G	-53.47	2
2.440748G	3.07	-26.93	49.465M	-32.37	2.39584G	-36.75	2.56014G	-55.35	16.381579G	-53.71	3
2.440748G	3.07	-26.93	49.465M	-30.61	2.39824G	-40.36	2.4959G	-57.33	16.751782G	-53.10	4

802.11n HT40_Nss1,(MCS0)_4TX

CSE NdB

2437MHz

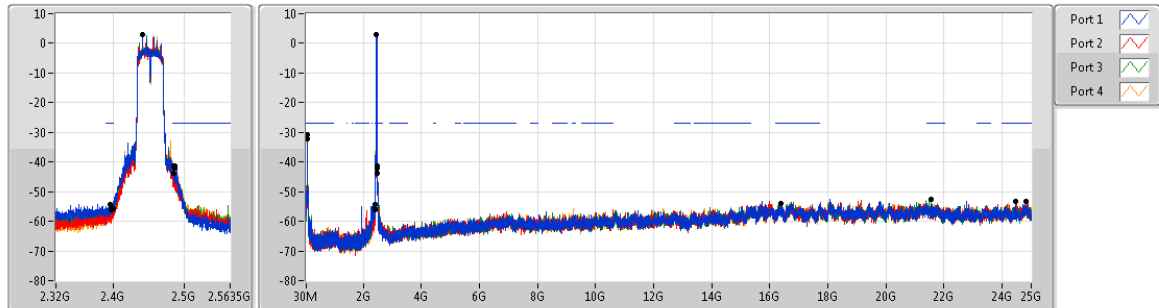


Ref(Hz)	Ref(dBm)	Limit(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Port
2.440748G	3.07	-26.93	49.465M	-32.14	2.39888G	-36.56	2.48382G	-47.92	23.148989G	-53.10	1
2.440748G	3.07	-26.93	49.465M	-32.06	2.39952G	-35.45	2.48398G	-47.83	17.696919G	-52.47	2
2.440748G	3.07	-26.93	49.465M	-32.02	2.39856G	-39.15	2.4859G	-47.74	21.412965G	-53.01	3
2.440748G	3.07	-26.93	49.465M	-30.32	2.39936G	-38.13	2.48574G	-44.47	16.289029G	-53.20	4

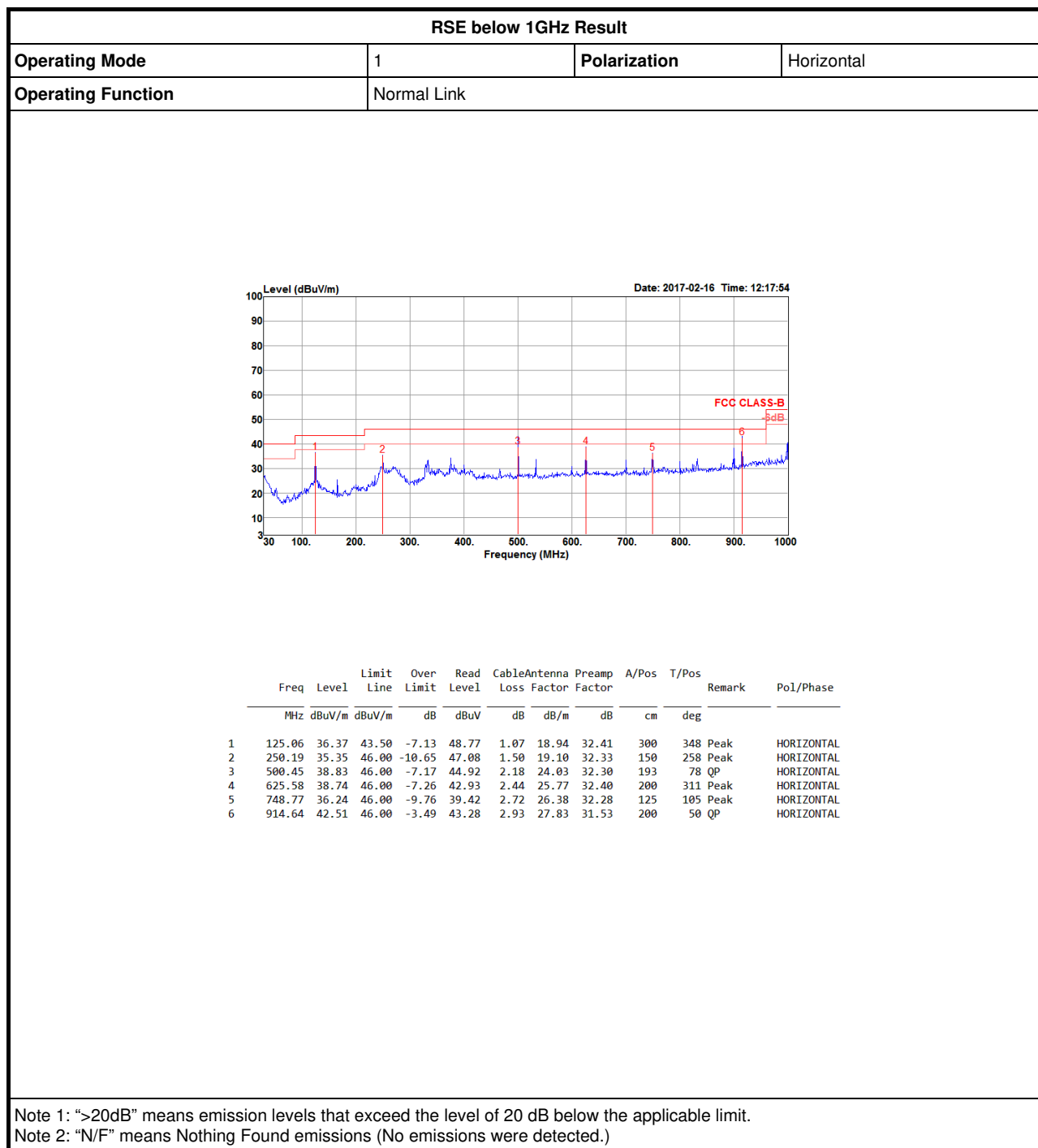
802.11n HT40_Nss1,(MCS0)_4TX

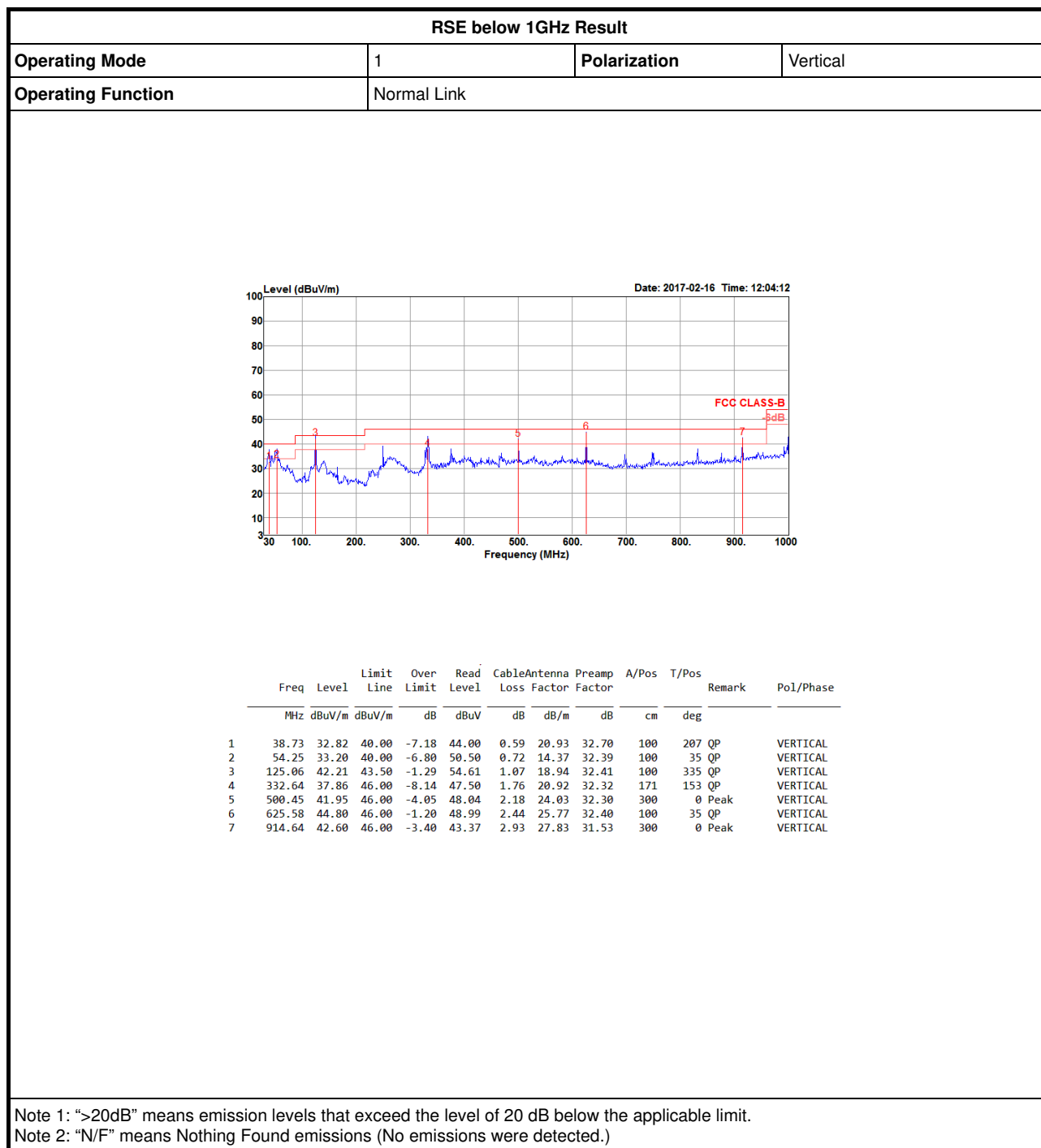
CSE NdB

2452MHz



Ref(Hz)	Ref(dBm)	Limit(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Port
2.440748G	3.07	-26.93	49.465M	-32.21	2.3952G	-54.20	2.48574G	-41.94	24.450306G	-53.41	1
2.440748G	3.07	-26.93	49.465M	-32.24	2.39696G	-56.14	2.4851G	-43.64	16.381579G	-53.86	2
2.440748G	3.07	-26.93	49.465M	-32.08	2.39968G	-55.65	2.48574G	-41.31	21.55597G	-52.68	3
2.440748G	3.07	-26.93	49.465M	-30.76	2.39728G	-56.23	2.48446G	-41.44	24.806485G	-53.21	4



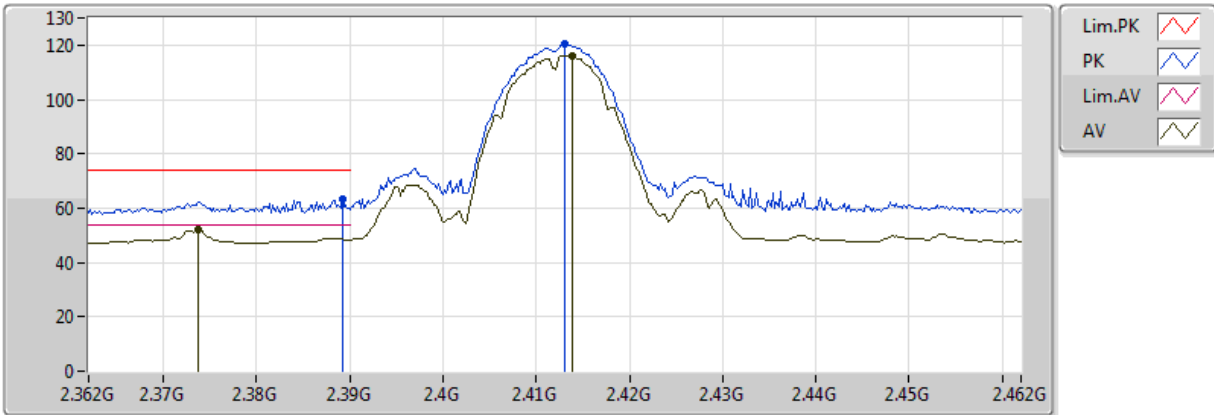


Summary

Mode	Result	Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Pol. (H/V)	Azimuth (°)	Height (m)	Comments
802.11n HT20_Nss1,(MCS0)_4TX	-	-	-	-	-	-	-	-	-	-	-	-
2.4-2.4835GHz	Pass	AV	2.389998G	53.92	54.00	-0.08	32.27	3	V	281	1.07	-

802.11b_(1Mbps)_4TX

2412MHz_TX

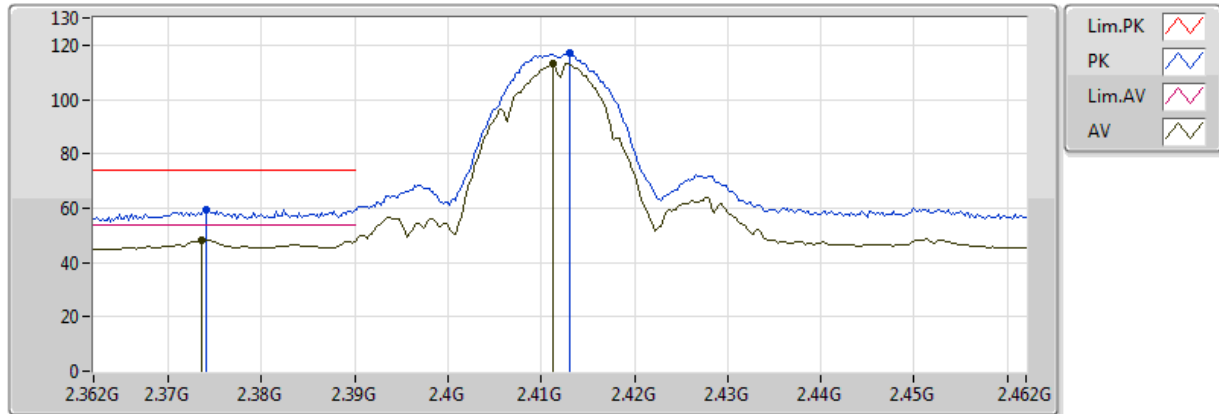


20170216
EUT Y_4TX
Setting 23
03-W-3
FSP(100019)

Type	Freq(Hz)	Level(dBuV/m)	Limit(dBuV/m)	Margin(dB)	Factor(dB)	Dist(m)	Pol.(H/V)	Azimuth(°)	Height(m)	Comments
AV	2.3738G	52.00	54.00	-2.00	32.22	3	V	133	1.71	-
AV	2.4138G	116.24	Inf	-Inf	32.34	3	V	133	1.71	-
PK	2.3892G	63.21	74.00	-10.79	32.27	3	V	133	1.71	-
PK	2.413G	120.30	Inf	-Inf	32.34	3	V	133	1.71	-

802.11b_(1Mbps)_4TX

2412MHz_TX

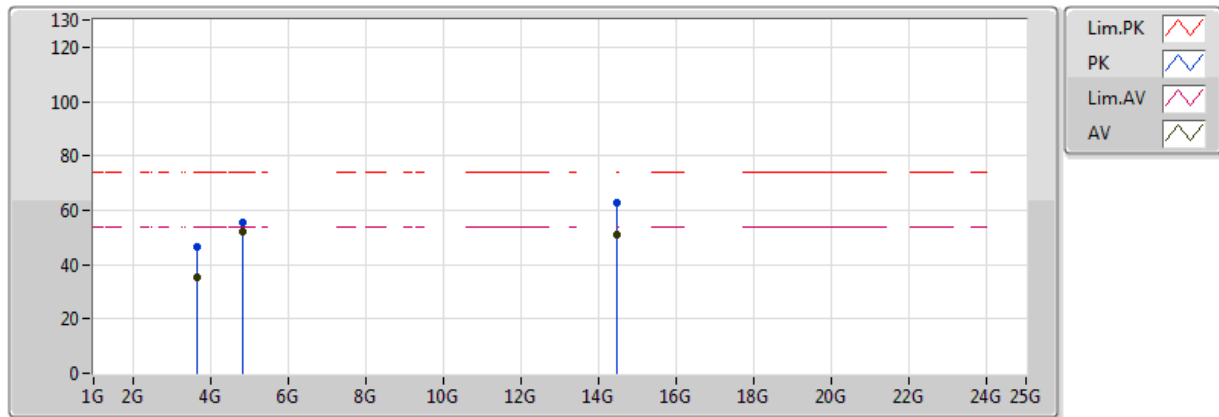


20170216
EUT_Y_4TX
Setting 23
03-W-3
FSP(100019)

Type	Freq(Hz)	Level(dBuV/m)	Limit(dBuV/m)	Margin(dB)	Factor(dB)	Dist(m)	Pol.(H/V)	Azimuth(°)	Height(m)	Comments
AV	2.3736G	48.33	54.00	-5.67	32.22	3	H	232	2.93	-
AV	2.4112G	113.09	Inf	-Inf	32.33	3	H	232	2.93	-
PK	2.374G	59.67	74.00	-14.33	32.22	3	H	232	2.93	-
PK	2.413G	116.98	Inf	-Inf	32.34	3	H	232	2.93	-

802.11b_(1Mbps)_4TX

2412MHz_TX

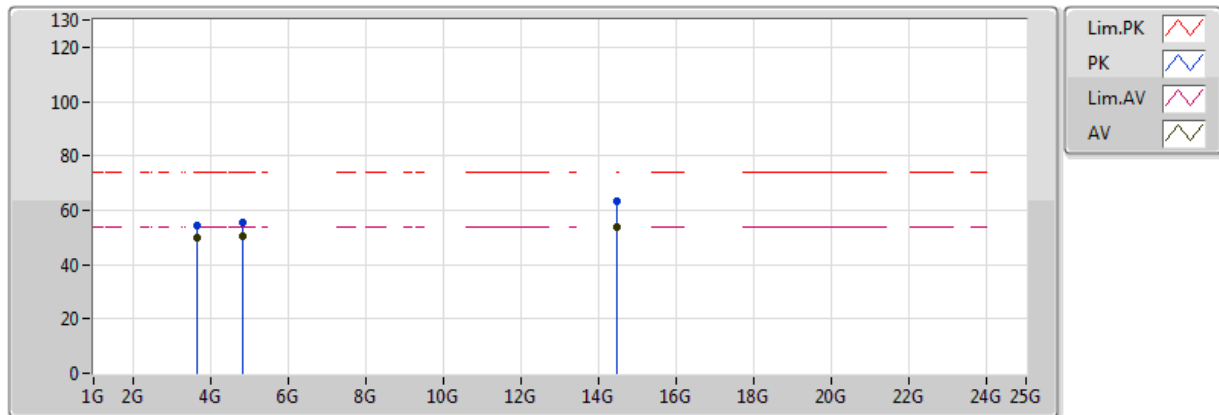


20170216
EUT_Y_4TX
Setting 23
03-W-3
FSP(100019)

Type	Freq(Hz)	Level(dBuV/m)	Limit(dBuV/m)	Margin(dB)	Factor(dB)	Dist(m)	Pol.(H/V)	Azimuth(°)	Height(m)	Comments
AV	3.66172G	35.46	54.00	-18.54	2.75	3	V	321	1.75	-
AV	4.82398G	51.85	54.00	-2.15	5.55	3	V	312	1.02	-
AV	14.47198G	50.72	54.00	-3.28	18.37	3	V	24	1.42	-
PK	3.66208G	46.35	74.00	-27.65	2.76	3	V	321	1.75	-
PK	4.82408G	55.60	74.00	-18.40	5.55	3	V	312	1.02	-
PK	14.4717G	62.61	74.00	-11.39	18.37	3	V	24	1.42	-

802.11b_(1Mbps)_4TX

2412MHz_TX

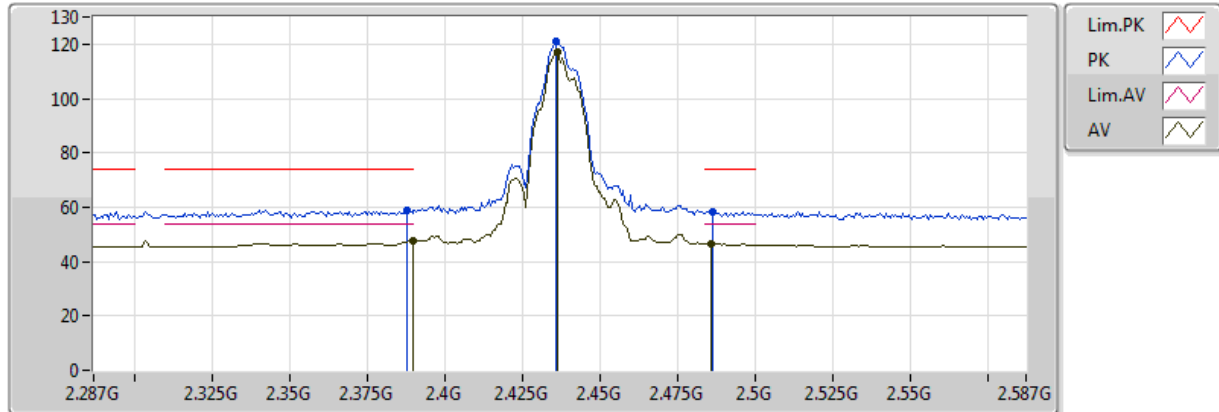


20170216
EUT_Y_4TX
Setting 23
03-W-3
FSP(100019)

Type	Freq(Hz)	Level(dBuV/m)	Limit(dBuV/m)	Margin(dB)	Factor(dB)	Dist(m)	Pol.(H/V)	Azimuth(°)	Height(m)	Comments
AV	3.66208G	49.98	54.00	-4.02	2.76	3	H	246	1.89	-
AV	4.82396G	50.50	54.00	-3.50	5.55	3	H	312	2.07	-
AV	14.4719G	53.73	54.00	-0.27	18.37	3	H	137	1.47	-
PK	3.66216G	54.29	74.00	-19.71	2.76	3	H	246	1.89	-
PK	4.82398G	55.22	74.00	-18.78	5.55	3	H	312	2.07	-
PK	14.4719G	63.14	74.00	-10.86	18.37	3	H	137	1.47	-

802.11b_(1Mbps)_4TX

2437MHz_TX

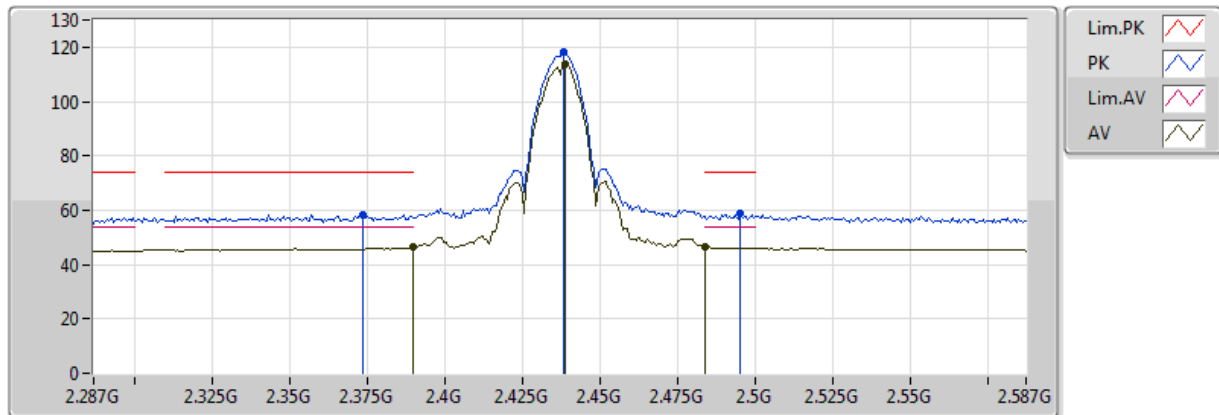


20170216
EUT_Y_4TX
Setting 23
03-W-3
FSP(100019)

Type	Freq(Hz)	Level(dBuV/m)	Limit(dBuV/m)	Margin(dB)	Factor(dB)	Dist(m)	Pol.(H/V)	Azimuth(°)	Height(m)	Comments
AV	2.389998G	47.68	54.00	-6.32	32.27	3	V	276	1.05	-
AV	2.4364G	117.13	Inf	-Inf	32.40	3	V	276	1.05	-
AV	2.4856G	46.71	54.00	-7.29	32.54	3	V	276	1.05	-
PK	2.3878G	59.02	74.00	-14.98	32.26	3	V	276	1.05	-
PK	2.4358G	120.97	Inf	-Inf	32.40	3	V	276	1.05	-
PK	2.4862G	58.14	74.00	-15.86	32.54	3	V	276	1.05	-

802.11b_(1Mbps)_4TX

2437MHz_TX



20170216
EUT_Y_4TX
Setting 23
03-W-3
FSP(100019)

Type	Freq(Hz)	Level(dBuV/m)	Limit(dBuV/m)	Margin(dB)	Factor(dB)	Dist(m)	Pol.(H/V)	Azimuth(°)	Height(m)	Comments
AV	2.389998G	46.30	54.00	-7.70	32.27	3	H	145	1.05	-
AV	2.4388G	113.86	Inf	-Inf	32.41	3	H	145	1.05	-
AV	2.483502G	46.30	54.00	-7.70	32.53	3	H	145	1.05	-
PK	2.3734G	58.53	74.00	-15.47	32.22	3	H	145	1.05	-
PK	2.4382G	118.06	Inf	-Inf	32.41	3	H	145	1.05	-
PK	2.4952G	58.74	74.00	-15.26	32.57	3	H	145	1.05	-

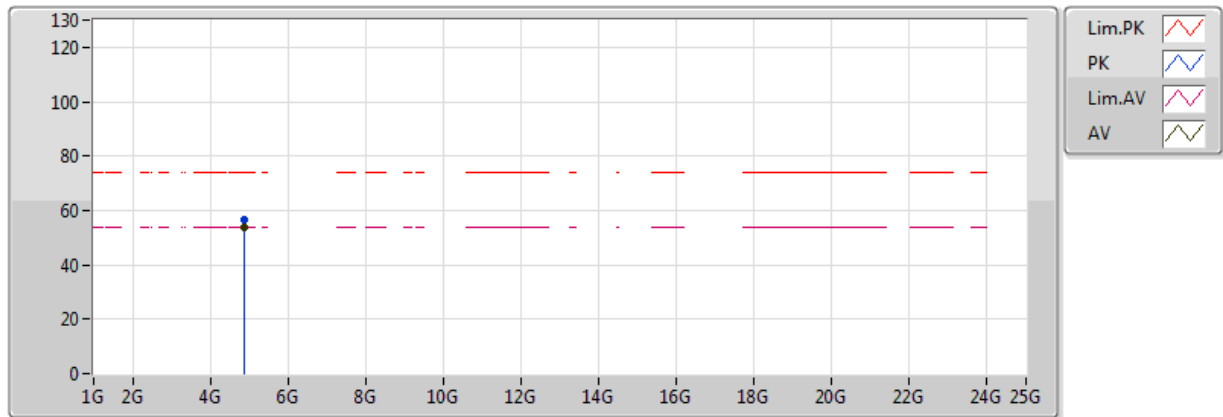
802.11b_(1Mbps)_4TX

2437MHz_TX



802.11b_(1Mbps)_4TX

2437MHz_TX

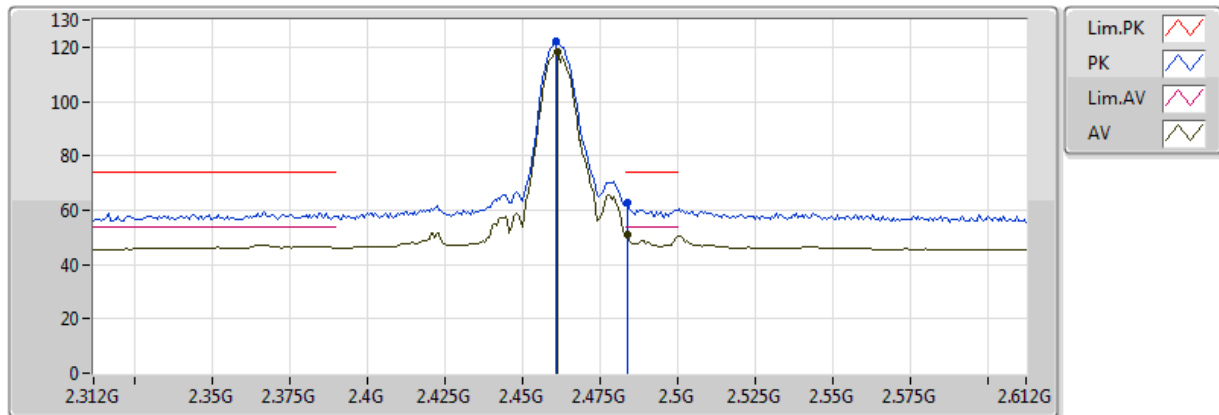


20170216
EUT_Y_4TX
Setting 23
03-W-3
FSP(100019)

Type	Freq(Hz)	Level(dBuV/m)	Limit(dBuV/m)	Margin(dB)	Factor(dB)	Dist(m)	Pol.(H/V)	Azimuth(°)	Height(m)	Comments
AV	4.87398G	53.62	54.00	-0.38	5.68	3	H	233	2.10	-
PK	4.87388G	56.78	74.00	-17.22	5.68	3	H	233	2.10	-

802.11b_(1Mbps)_4TX

2462MHz_TX

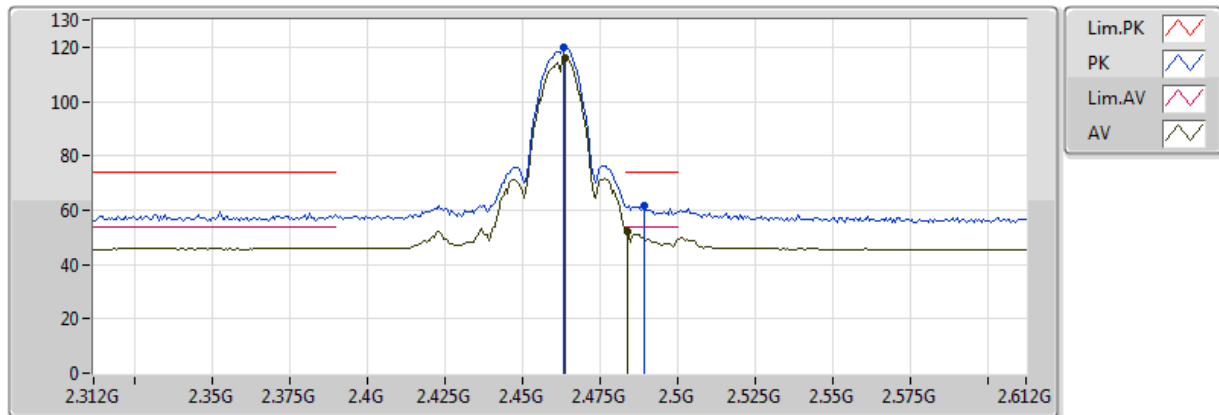


20170216
EUT_Y_4TX
Setting 23.5
03-W-3
FSP(100019)

Type	Freq(Hz)	Level(dBuV/m)	Limit(dBuV/m)	Margin(dB)	Factor(dB)	Dist(m)	Pol.(H/V)	Azimuth(°)	Height(m)	Comments
AV	2.4614G	118.20	Inf	-Inf	32.47	3	V	148	1.68	-
AV	2.4836G	51.17	54.00	-2.83	32.53	3	V	148	1.68	-
PK	2.4608G	122.08	Inf	-Inf	32.47	3	V	148	1.68	-
PK	2.4836G	62.82	74.00	-11.18	32.53	3	V	148	1.68	-

802.11b_(1Mbps)_4TX

2462MHz_TX

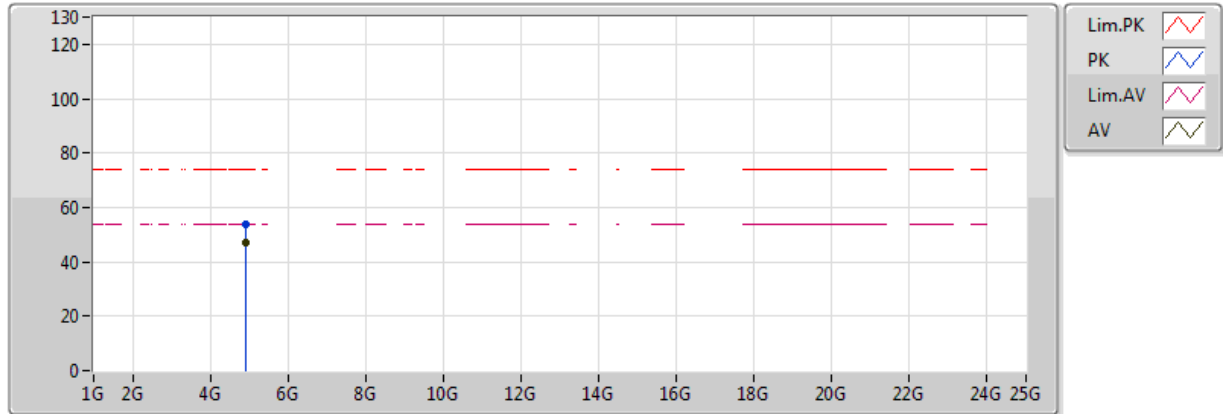


20170216
EUT_Y_4TX
Setting 23.5
03-W-3
FSP(100019)

Type	Freq(Hz)	Level(dBuV/m)	Limit(dBuV/m)	Margin(dB)	Factor(dB)	Dist(m)	Pol.(H/V)	Azimuth(°)	Height(m)	Comments
AV	2.4638G	115.88	Inf	-Inf	32.48	3	H	137	1.02	-
AV	2.4836G	51.99	54.00	-2.01	32.53	3	H	137	1.02	-
PK	2.4632G	119.77	Inf	-Inf	32.48	3	H	137	1.02	-
PK	2.489G	61.65	74.00	-12.35	32.55	3	H	137	1.02	-

802.11b_(1Mbps)_4TX

2462MHz_TX

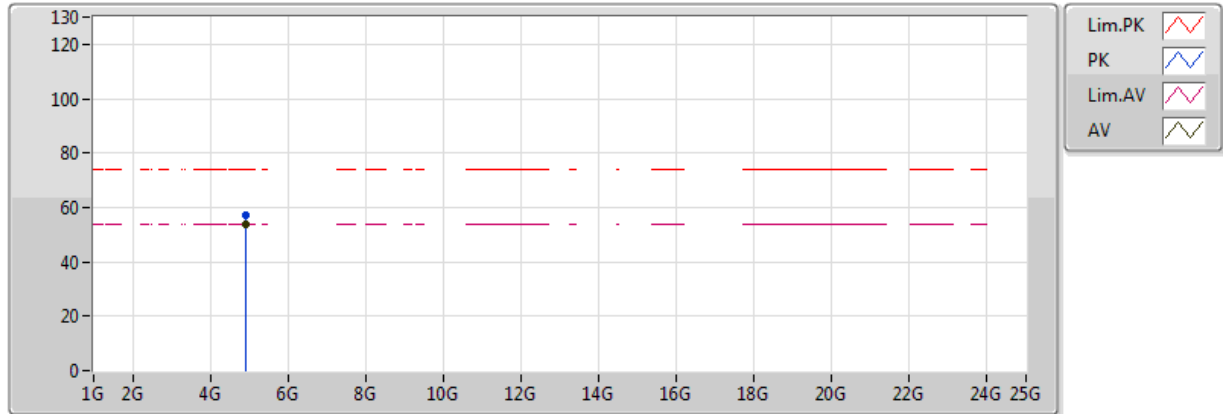


20170216
EUT_Y_4TX
Setting 23.5
03-W-3
FSP(100019)

Type	Freq(Hz)	Level(dBuV/m)	Limit(dBuV/m)	Margin(dB)	Factor(dB)	Dist(m)	Pol.(H/V)	Azimuth(°)	Height(m)	Comments
AV	4.924G	47.31	54.00	-6.69	5.81	3	V	43	1.04	-
PK	4.924064G	53.71	74.00	-20.29	5.81	3	V	43	1.04	-

802.11b_(1Mbps)_4TX

2462MHz_TX

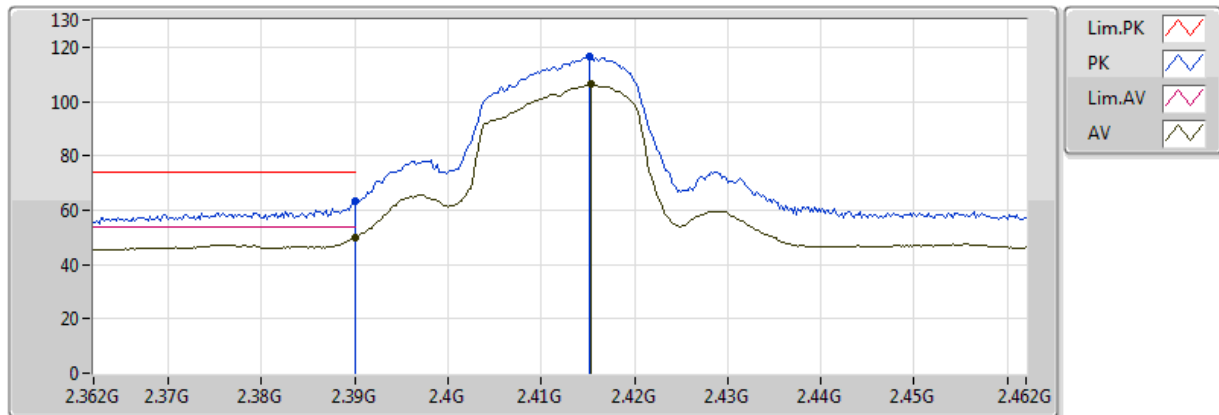


20170216
EUT_Y_4TX
Setting 23.5
03-W-3
FSP(100019)

Type	Freq(Hz)	Level(dBuV/m)	Limit(dBuV/m)	Margin(dB)	Factor(dB)	Dist(m)	Pol.(H/V)	Azimuth(°)	Height(m)	Comments
AV	4.92398G	53.77	54.00	-0.23	5.81	3	H	230	1.01	-
PK	4.92392G	57.26	74.00	-16.74	5.81	3	H	230	1.01	-

802.11g_(6Mbps)_4TX

2412MHz_TX

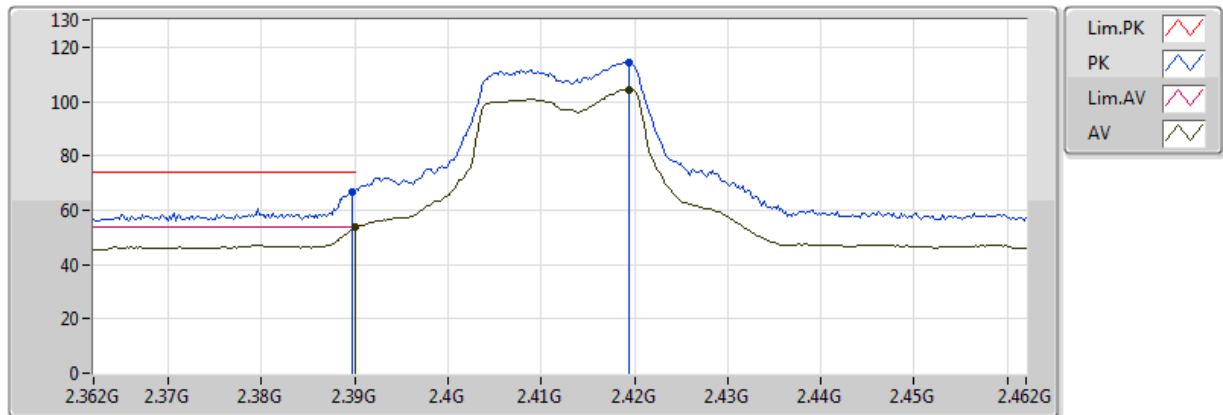


20170216
EUT_Y_4TX
Setting 17
03-M-1
FSP(100019)

Type	Freq(Hz)	Level(dBuV/m)	Limit(dBuV/m)	Margin(dB)	Factor(dB)	Dist(m)	Pol.(H/V)	Azimuth(°)	Height(m)	Comments
AV	2.39G	49.91	54.00	-4.09	32.27	3	V	113	1.50	-
AV	2.4154G	106.27	Inf	-Inf	32.34	3	V	113	1.50	-
PK	2.39G	63.06	74.00	-10.94	32.27	3	V	113	1.50	-
PK	2.4152G	116.40	Inf	-Inf	32.34	3	V	113	1.50	-

802.11g_(6Mbps)_4TX

2412MHz_TX

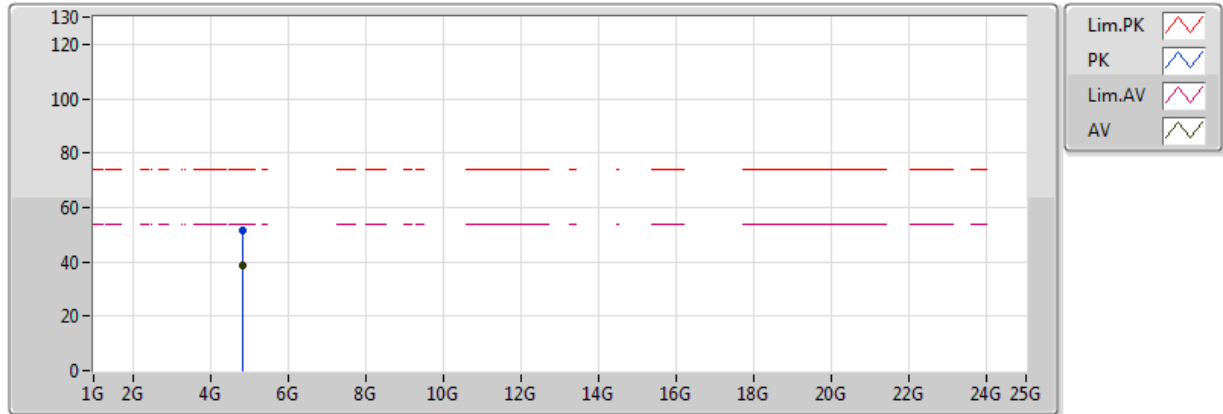


20170216
EUT_Y_4TX
Setting 17
03-M-1
FSP(100019)

Type	Freq(Hz)	Level(dBuV/m)	Limit(dBuV/m)	Margin(dB)	Factor(dB)	Dist(m)	Pol.(H/V)	Azimuth(°)	Height(m)	Comments
AV	2.39G	53.60	54.00	-0.40	32.27	3	H	129	1.11	-
AV	2.4194G	104.36	Inf	-Inf	32.35	3	H	129	1.11	-
PK	2.3898G	66.64	74.00	-7.36	32.27	3	H	129	1.11	-
PK	2.4194G	114.51	Inf	-Inf	32.35	3	H	129	1.11	-

802.11g_(6Mbps)_4TX

2412MHz_TX

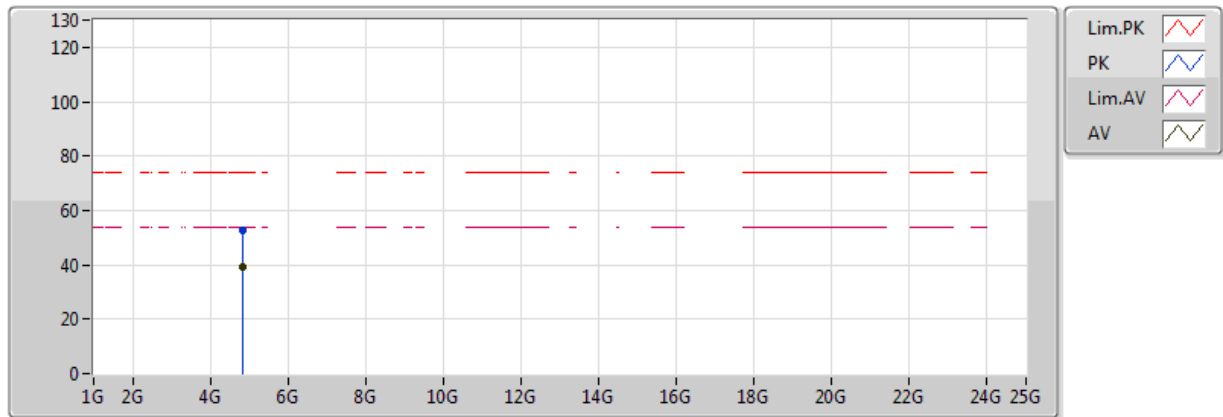


20170216
EUT_Y_4TX
Setting 17
03-M-1
FSP(100019)

Type	Freq(Hz)	Level(dBuV/m)	Limit(dBuV/m)	Margin(dB)	Factor(dB)	Dist(m)	Pol.(H/V)	Azimuth(°)	Height(m)	Comments
AV	4.823204G	38.63	54.00	-15.37	5.55	3	V	98	2.23	-
PK	4.82316G	51.78	74.00	-22.22	5.55	3	V	98	2.23	-

802.11g_(6Mbps)_4TX

2412MHz_TX

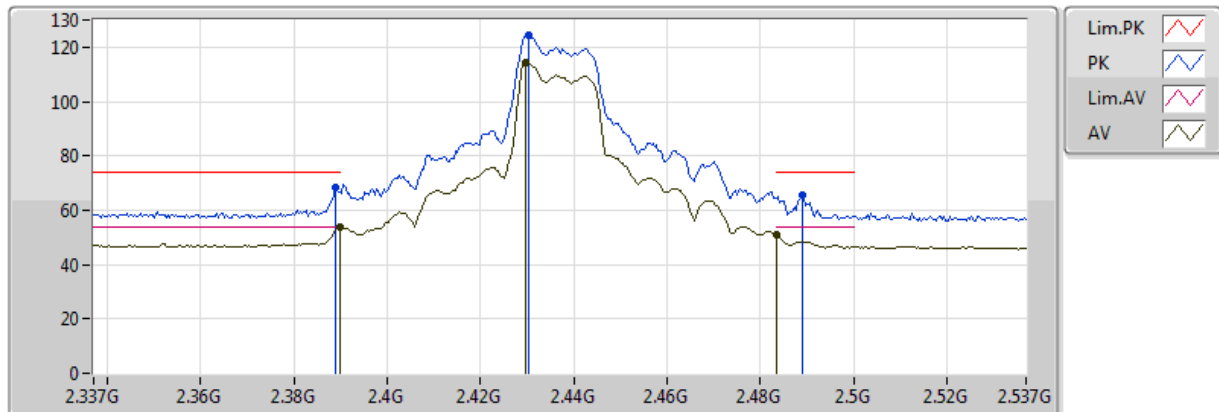


20170216
EUT_Y_4TX
Setting 17
03-M-1
FSP(100019)

Type	Freq(Hz)	Level(dBuV/m)	Limit(dBuV/m)	Margin(dB)	Factor(dB)	Dist(m)	Pol.(H/V)	Azimuth(°)	Height(m)	Comments
AV	4.823936G	39.06	54.00	-14.94	5.55	3	H	34	2.47	-
PK	4.82326G	52.75	74.00	-21.25	5.55	3	H	34	2.47	-

802.11g_(6Mbps)_4TX

2437MHz_TX

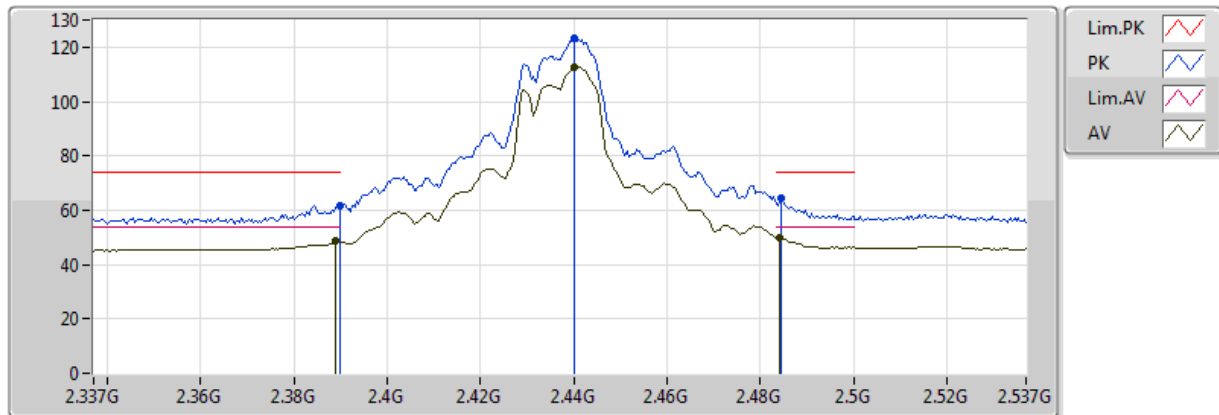


20170216
EUT_Y_4TX
Setting 25
03-M-1
FSP(100019)

Type	Freq(Hz)	Level(dBuV/m)	Limit(dBuV/m)	Margin(dB)	Factor(dB)	Dist(m)	Pol.(H/V)	Azimuth(°)	Height(m)	Comments
AV	2.389998G	53.54	54.00	-0.46	32.27	3	V	284	1.08	-
AV	2.4298G	114.26	Inf	-Inf	32.38	3	V	284	1.08	-
AV	2.483502G	51.04	54.00	-2.96	32.53	3	V	284	1.08	-
PK	2.389G	68.31	74.00	-5.69	32.27	3	V	284	1.08	-
PK	2.4302G	124.36	Inf	-Inf	32.38	3	V	284	1.08	-
PK	2.489G	65.38	74.00	-8.62	32.55	3	V	284	1.08	-

802.11g_(6Mbps)_4TX

2437MHz_TX

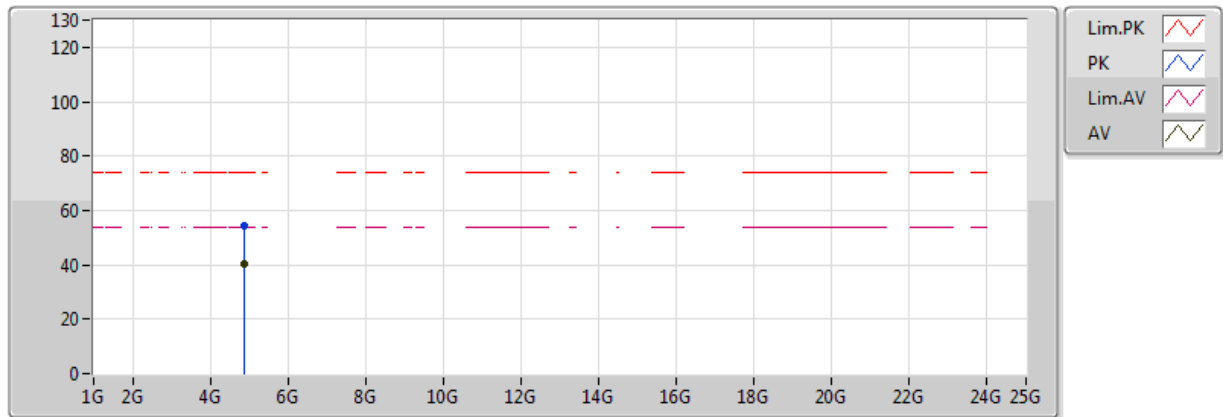


20170216
EUT_Y_4TX
Setting 25
03-M-1
FSP(100019)

Type	Freq(Hz)	Level(dBuV/m)	Limit(dBuV/m)	Margin(dB)	Factor(dB)	Dist(m)	Pol.(H/V)	Azimuth(°)	Height(m)	Comments
AV	2.389G	48.82	54.00	-5.18	32.27	3	H	244	1.39	-
AV	2.4402G	112.78	Inf	-Inf	32.41	3	H	244	1.39	-
AV	2.4842G	49.61	54.00	-4.39	32.54	3	H	244	1.39	-
PK	2.389998G	61.67	74.00	-12.33	32.27	3	H	244	1.39	-
PK	2.4402G	123.22	Inf	-Inf	32.41	3	H	244	1.39	-
PK	2.4846G	64.35	74.00	-9.65	32.54	3	H	244	1.39	-

802.11g_(6Mbps)_4TX

2437MHz_TX

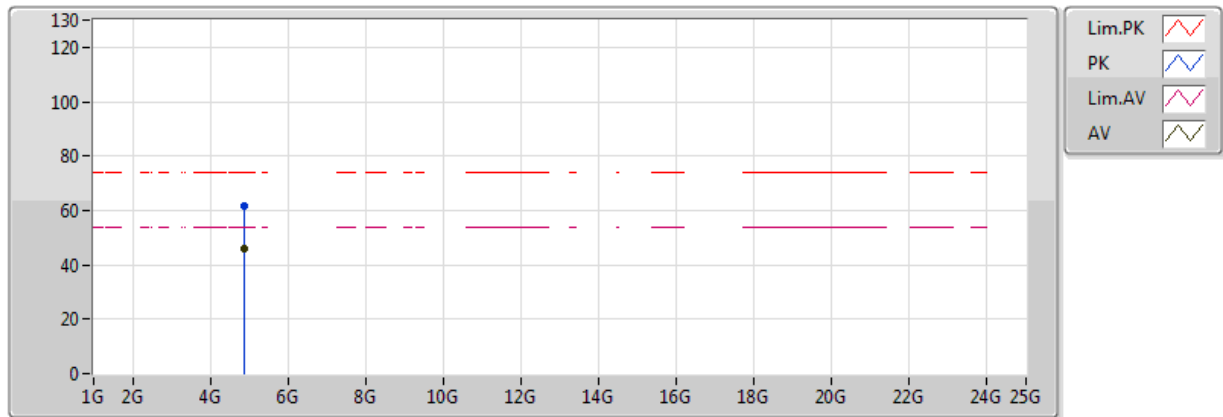


20170216
EUT_Y_4TX
Setting 25
03-M-1
FSP(100019)

Type	Freq(Hz)	Level(dBuV/m)	Limit(dBuV/m)	Margin(dB)	Factor(dB)	Dist(m)	Pol.(H/V)	Azimuth(°)	Height(m)	Comments
AV	4.874056G	40.31	54.00	-13.69	5.68	3	V	188	1.47	-
PK	4.873484G	54.45	74.00	-19.55	5.68	3	V	188	1.47	-

802.11g_(6Mbps)_4TX

2437MHz_TX

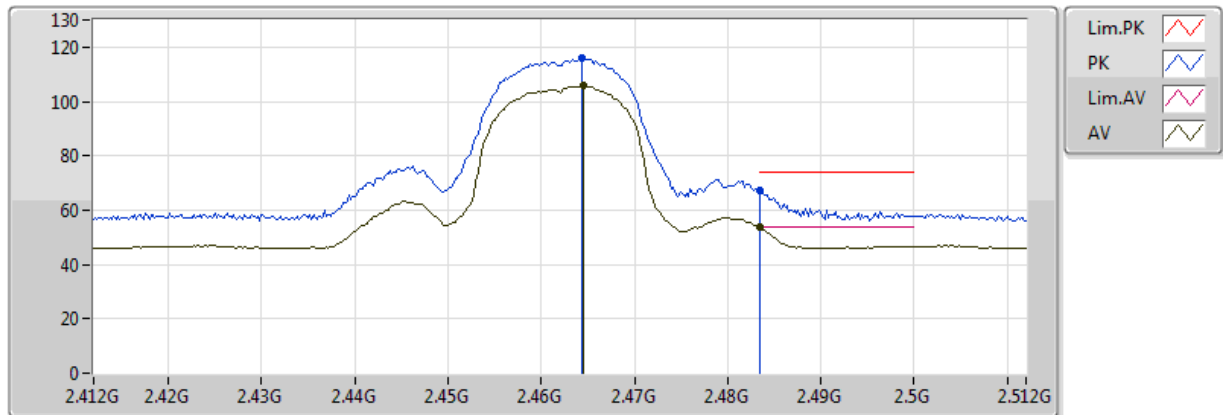


20170216
EUT_Y_4TX
Setting 25
03-M-1
FSP(100019)

Type	Freq(Hz)	Level(dBuV/m)	Limit(dBuV/m)	Margin(dB)	Factor(dB)	Dist(m)	Pol.(H/V)	Azimuth(°)	Height(m)	Comments
AV	4.873868G	46.20	54.00	-7.80	5.68	3	H	311	2.11	-
PK	4.874324G	61.71	74.00	-12.29	5.68	3	H	311	2.11	-

802.11g_(6Mbps)_4TX

2462MHz_TX

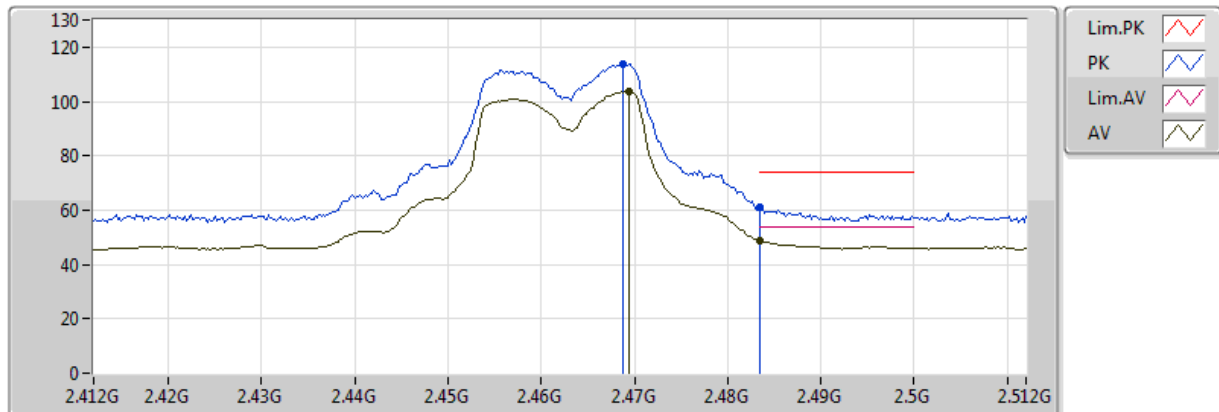


20170216
EUT_Y_4TX
Setting 17
03-M-1
FSP(100019)

Type	Freq(Hz)	Level(dBuV/m)	Limit(dBuV/m)	Margin(dB)	Factor(dB)	Dist(m)	Pol.(H/V)	Azimuth(°)	Height(m)	Comments
AV	2.464G	105.67	Inf	-Inf	32.48	3	V	115	1.49	-
AV	2.483502G	53.61	54.00	-0.39	32.53	3	V	115	1.49	-
PK	2.4644G	116.18	Inf	-Inf	32.48	3	V	115	1.49	-
PK	2.483502G	67.08	74.00	-6.92	32.53	3	V	115	1.49	-

802.11g_(6Mbps)_4TX

2462MHz_TX

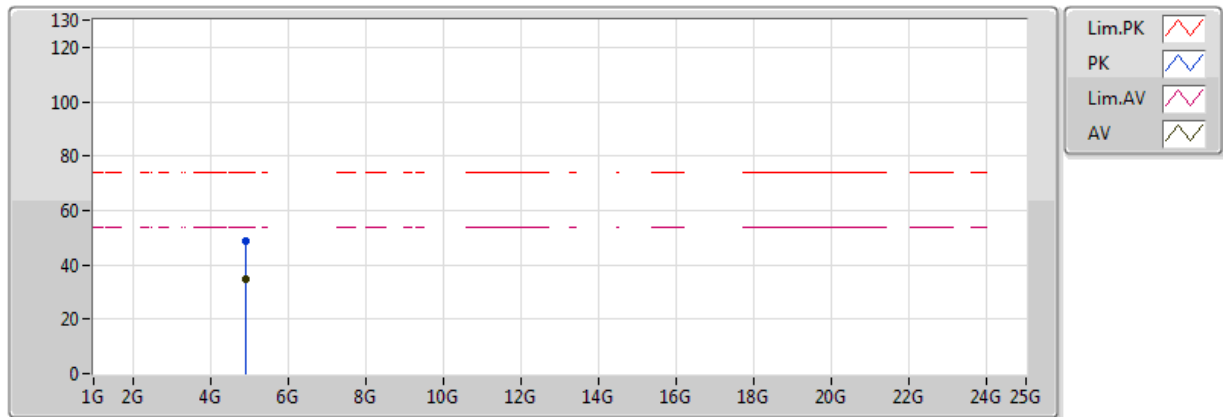


20170216
EUT_Y_4TX
Setting 17
03-M-1
FSP(100019)

Type	Freq(Hz)	Level(dBuV/m)	Limit(dBuV/m)	Margin(dB)	Factor(dB)	Dist(m)	Pol.(H/V)	Azimuth(°)	Height(m)	Comments
AV	2.4694G	103.64	Inf	-Inf	32.49	3	H	117	1.48	-
AV	2.483502G	48.69	54.00	-5.31	32.53	3	H	117	1.48	-
PK	2.4688G	113.70	Inf	-Inf	32.49	3	H	117	1.48	-
PK	2.483502G	60.95	74.00	-13.05	32.53	3	H	117	1.48	-

802.11g_(6Mbps)_4TX

2462MHz_TX



20170216
EUT_Y_4TX
Setting 17
03-M-1
FSP(100019)

Type	Freq(Hz)	Level(dBuV/m)	Limit(dBuV/m)	Margin(dB)	Factor(dB)	Dist(m)	Pol.(H/V)	Azimuth(°)	Height(m)	Comments
AV	4.924516G	34.71	54.00	-19.29	5.81	3	V	32	2.37	-
PK	4.924072G	48.87	74.00	-25.13	5.81	3	V	32	2.37	-

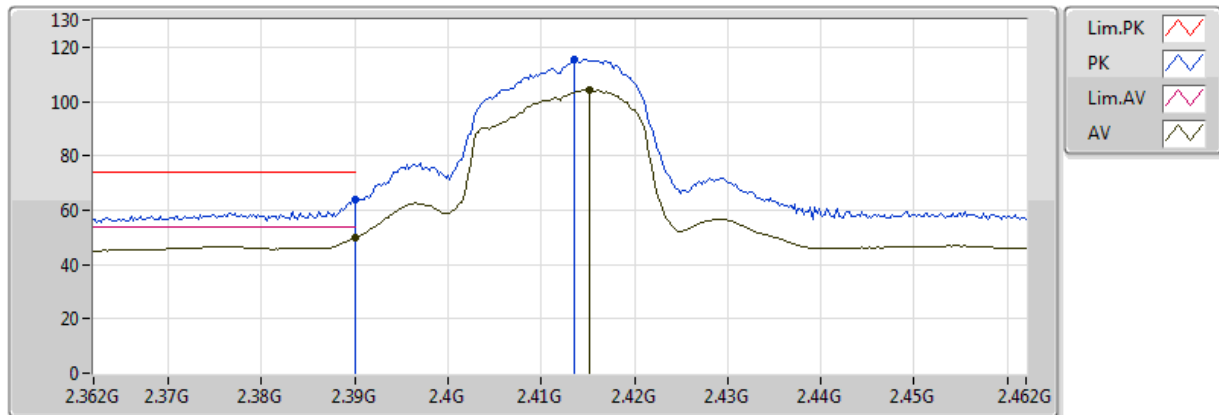
802.11g_(6Mbps)_4TX

2462MHz_TX



802.11n HT20_Nss1,(MCS0)_4TX

2412MHz_TX

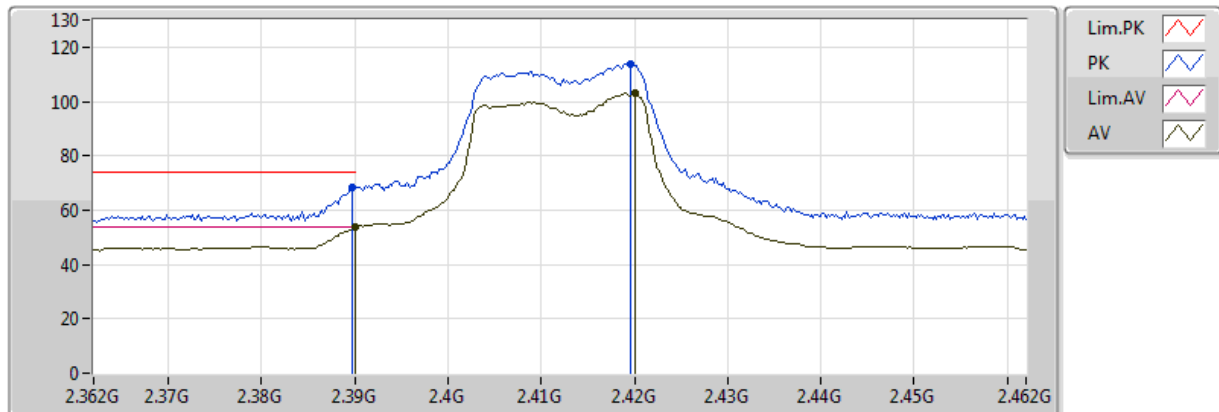


20170216
EUT_Y_4TX
Setting 16.5
03-M-1
FSP(100019)

Type	Freq(Hz)	Level(dBuV/m)	Limit(dBuV/m)	Margin(dB)	Factor(dB)	Dist(m)	Pol.(H/V)	Azimuth(°)	Height(m)	Comments
AV	2.39G	50.00	54.00	-4.00	32.27	3	V	114	1.50	-
AV	2.4152G	104.48	Inf	-Inf	32.34	3	V	114	1.50	-
PK	2.39G	63.68	74.00	-10.32	32.27	3	V	114	1.50	-
PK	2.4136G	115.51	Inf	-Inf	32.34	3	V	114	1.50	-

802.11n HT20_Nss1,(MCS0)_4TX

2412MHz_TX

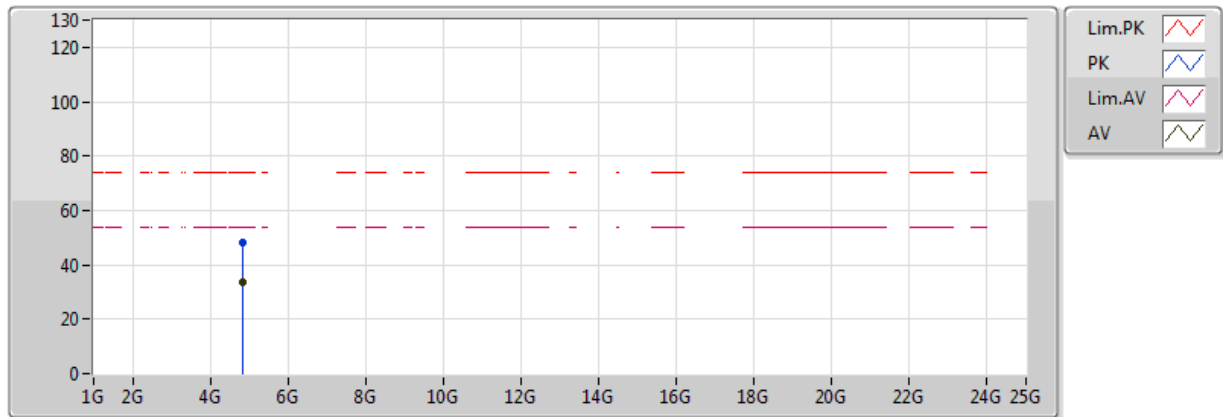


20170216
EUT_Y_4TX
Setting 16.5
03-M-1
FSP(100019)

Type	Freq(Hz)	Level(dBuV/m)	Limit(dBuV/m)	Margin(dB)	Factor(dB)	Dist(m)	Pol.(H/V)	Azimuth(°)	Height(m)	Comments
AV	2.39G	53.64	54.00	-0.36	32.27	3	H	129	1.10	-
AV	2.42G	102.88	Inf	-Inf	32.36	3	H	129	1.10	-
PK	2.3898G	68.44	74.00	-5.56	32.27	3	H	129	1.10	-
PK	2.4196G	113.83	Inf	-Inf	32.35	3	H	129	1.10	-

802.11n HT20_Nss1,(MCS0)_4TX

2412MHz_TX

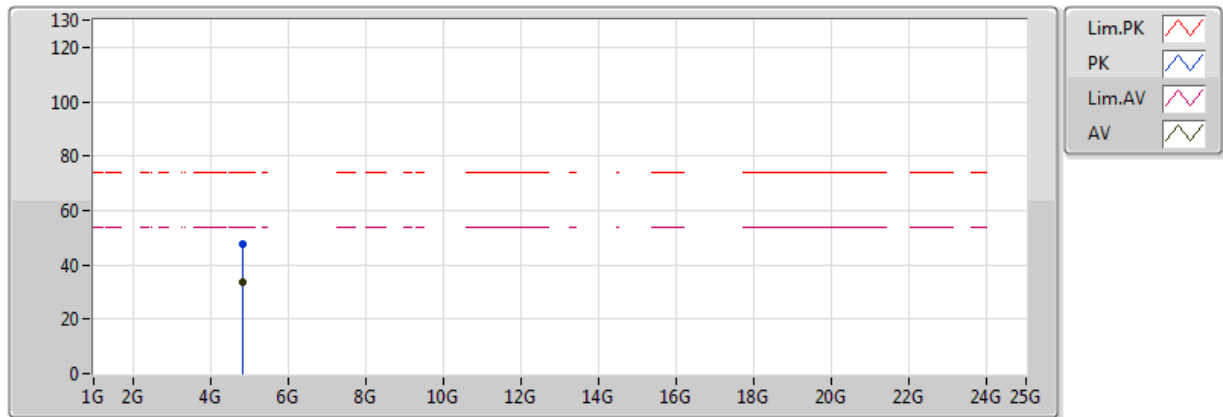


20170216
EUT_Y_4TX
Setting 16.5
03-M-1
FSP(100019)

Type	Freq(Hz)	Level(dBuV/m)	Limit(dBuV/m)	Margin(dB)	Factor(dB)	Dist(m)	Pol.(H/V)	Azimuth(°)	Height(m)	Comments
AV	4.823016G	33.88	54.00	-20.12	5.55	3	V	26	1.79	-
PK	4.824416G	48.20	74.00	-25.80	5.55	3	V	26	1.79	-

802.11n HT20_Nss1,(MCS0)_4TX

2412MHz_TX

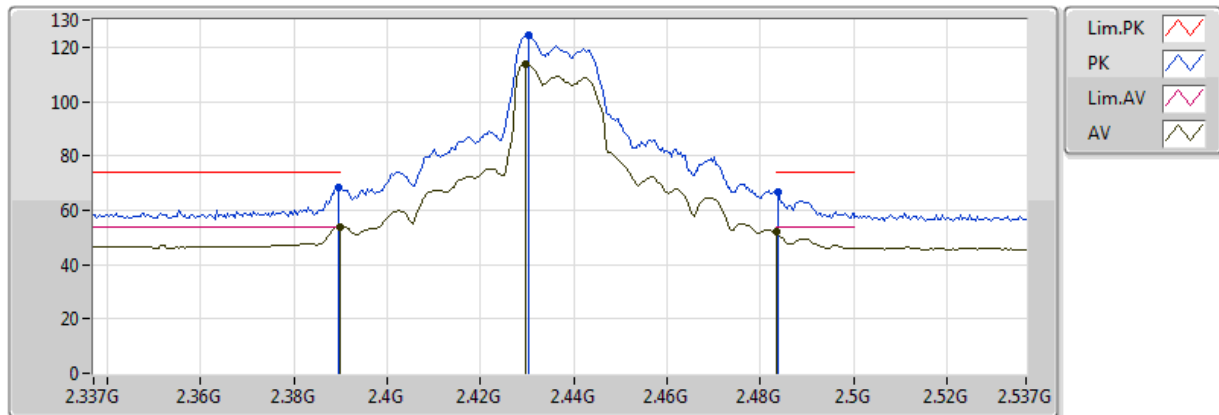


20170216
EUT_Y_4TX
Setting 16.5
03-M-1
FSP(100019)

Type	Freq(Hz)	Level(dBuV/m)	Limit(dBuV/m)	Margin(dB)	Factor(dB)	Dist(m)	Pol.(H/V)	Azimuth(°)	Height(m)	Comments
AV	4.823852G	33.80	54.00	-20.20	5.55	3	H	277	1.48	-
PK	4.823004G	47.78	74.00	-26.22	5.55	3	H	277	1.48	-

802.11n HT20_Nss1,(MCS0)_4TX

2437MHz_TX

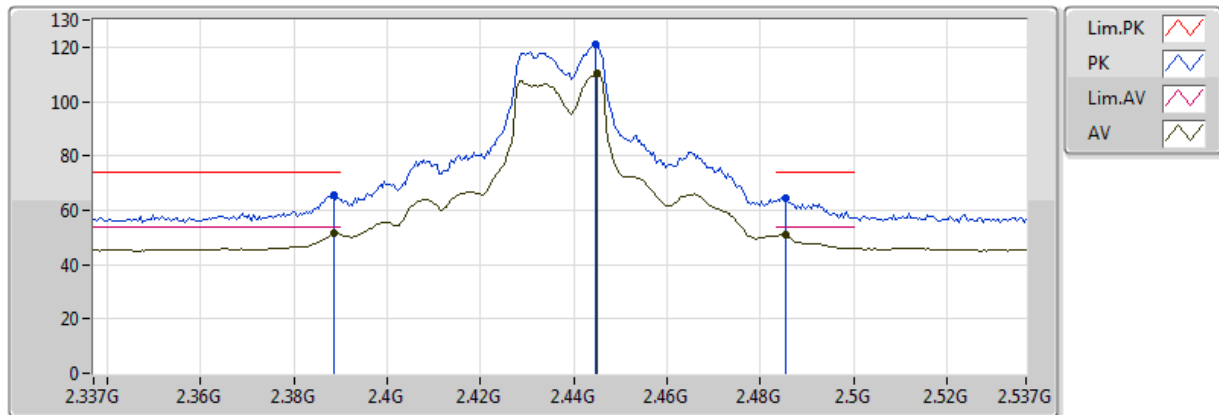


20170216
EUT_Y_4TX
Setting 25.5
03-M-1
FSP(100019)

Type	Freq(Hz)	Level(dBuV/m)	Limit(dBuV/m)	Margin(dB)	Factor(dB)	Dist(m)	Pol.(H/V)	Azimuth(°)	Height(m)	Comments
AV	2.389998G	53.92	54.00	-0.08	32.27	3	V	281	1.07	-
AV	2.4298G	113.52	Inf	-Inf	32.38	3	V	281	1.07	-
AV	2.483502G	52.01	54.00	-1.99	32.53	3	V	281	1.07	-
PK	2.3894G	68.47	74.00	-5.53	32.27	3	V	281	1.07	-
PK	2.4302G	124.42	Inf	-Inf	32.38	3	V	281	1.07	-
PK	2.4838G	66.61	74.00	-7.39	32.53	3	V	281	1.07	-

802.11n HT20_Nss1,(MCS0)_4TX

2437MHz_TX

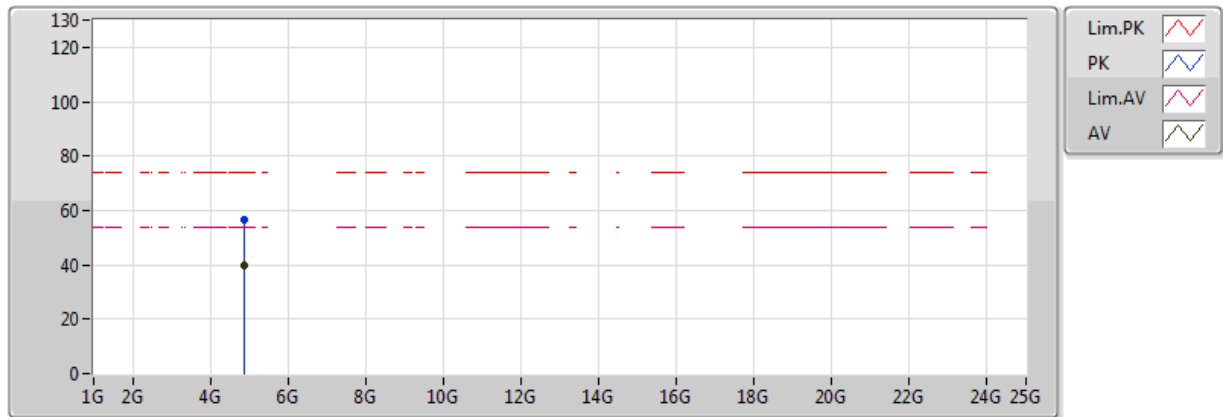


20170216
EUT Y_4TX
Setting 25.5
03-M-1
FSP(100019)

Type	Freq(Hz)	Level(dBuV/m)	Limit(dBuV/m)	Margin(dB)	Factor(dB)	Dist(m)	Pol.(H/V)	Azimuth(°)	Height(m)	Comments
AV	2.3886G	51.56	54.00	-2.44	32.27	3	H	117	1.48	-
AV	2.445G	110.25	Inf	-Inf	32.43	3	H	117	1.48	-
AV	2.4854G	50.92	54.00	-3.08	32.54	3	H	117	1.48	-
PK	2.3886G	65.46	74.00	-8.54	32.27	3	H	117	1.48	-
PK	2.4446G	120.87	Inf	-Inf	32.42	3	H	117	1.48	-
PK	2.4854G	64.63	74.00	-9.37	32.54	3	H	117	1.48	-

802.11n HT20_Nss1,(MCS0)_4TX

2437MHz_TX

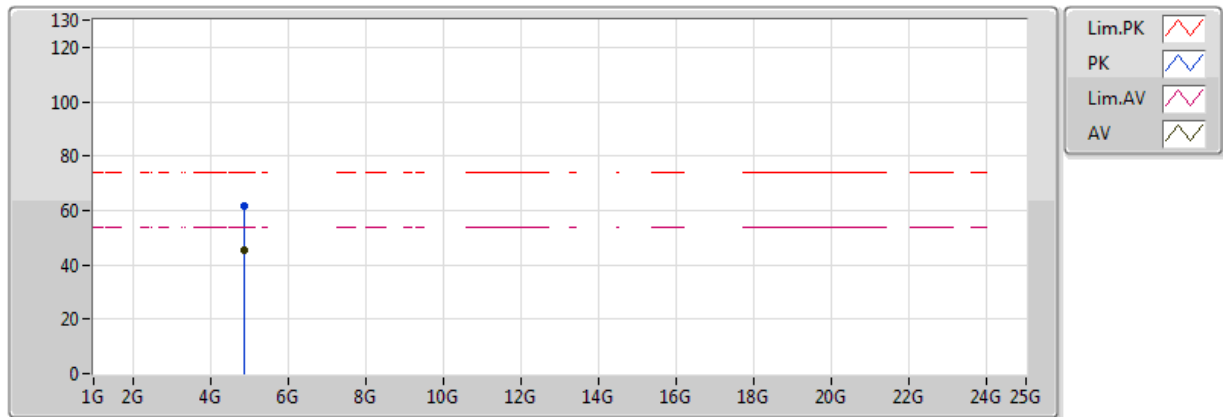


20170216
EUT_Y_4TX
Setting 25.5
03-M-1
FSP(100019)

Type	Freq(Hz)	Level(dBuV/m)	Limit(dBuV/m)	Margin(dB)	Factor(dB)	Dist(m)	Pol.(H/V)	Azimuth(°)	Height(m)	Comments
AV	4.87296G	39.85	54.00	-14.15	5.68	3	V	216	2.99	-
PK	4.87182G	56.39	74.00	-17.61	5.68	3	V	216	2.99	-

802.11n HT20_Nss1,(MCS0)_4TX

2437MHz_TX

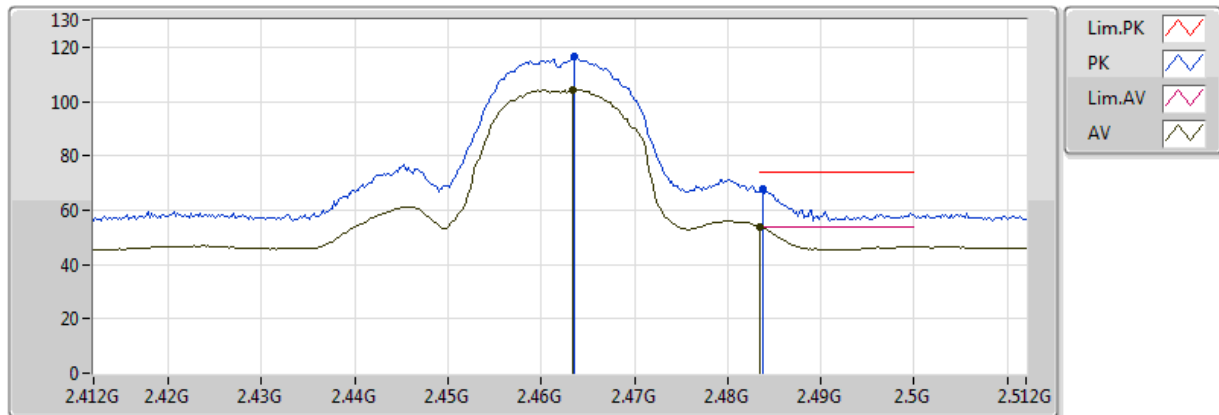


20170216
EUT_Y_4TX
Setting 25.5
03-M-1
FSP(100019)

Type	Freq(Hz)	Level(dBuV/m)	Limit(dBuV/m)	Margin(dB)	Factor(dB)	Dist(m)	Pol.(H/V)	Azimuth(°)	Height(m)	Comments
AV	4.873G	45.52	54.00	-8.48	5.68	3	H	313	2.04	-
PK	4.872G	61.47	74.00	-12.53	5.68	3	H	313	2.04	-

802.11n HT20_Nss1,(MCS0)_4TX

2462MHz_TX

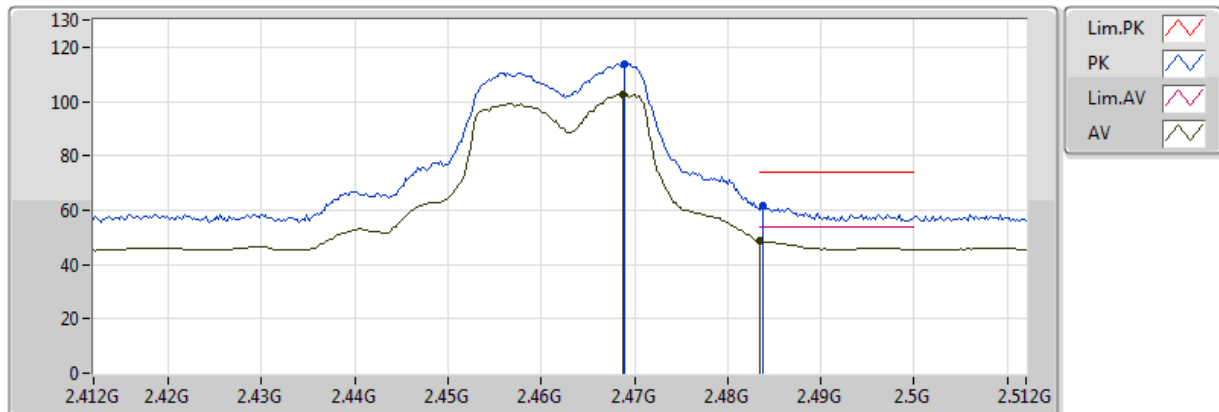


20170216
EUT_Y_4TX
Setting 17
03-M-1
FSP(100019)

Type	Freq(Hz)	Level(dBuV/m)	Limit(dBuV/m)	Margin(dB)	Factor(dB)	Dist(m)	Pol.(H/V)	Azimuth(°)	Height(m)	Comments
AV	2.4634G	104.25	Inf	-Inf	32.48	3	V	117	1.56	-
AV	2.483502G	53.65	54.00	-0.35	32.53	3	V	117	1.56	-
PK	2.4636G	116.44	Inf	-Inf	32.48	3	V	117	1.56	-
PK	2.4838G	67.53	74.00	-6.47	32.53	3	V	117	1.56	-

802.11n HT20_Nss1,(MCS0)_4TX

2462MHz_TX

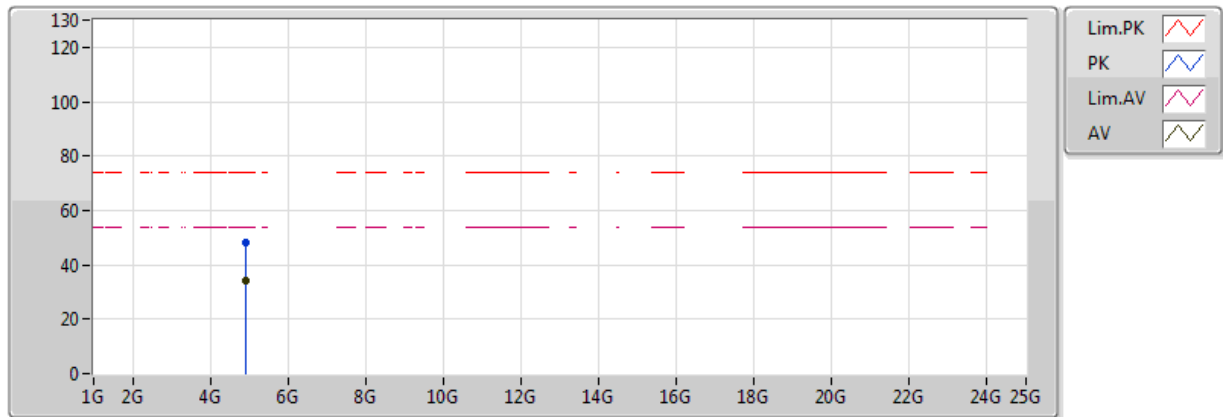


20170216
EUT_Y_4TX
Setting 17
03-M-1
FSP(100019)

Type	Freq(Hz)	Level(dBuV/m)	Limit(dBuV/m)	Margin(dB)	Factor(dB)	Dist(m)	Pol.(H/V)	Azimuth(°)	Height(m)	Comments
AV	2.4688G	102.68	Inf	-Inf	32.49	3	H	116	1.45	-
AV	2.483502G	48.53	54.00	-5.47	32.53	3	H	116	1.45	-
PK	2.469G	113.72	Inf	-Inf	32.49	3	H	116	1.45	-
PK	2.4838G	61.78	74.00	-12.22	32.53	3	H	116	1.45	-

802.11n HT20_Nss1,(MCS0)_4TX

2462MHz_TX

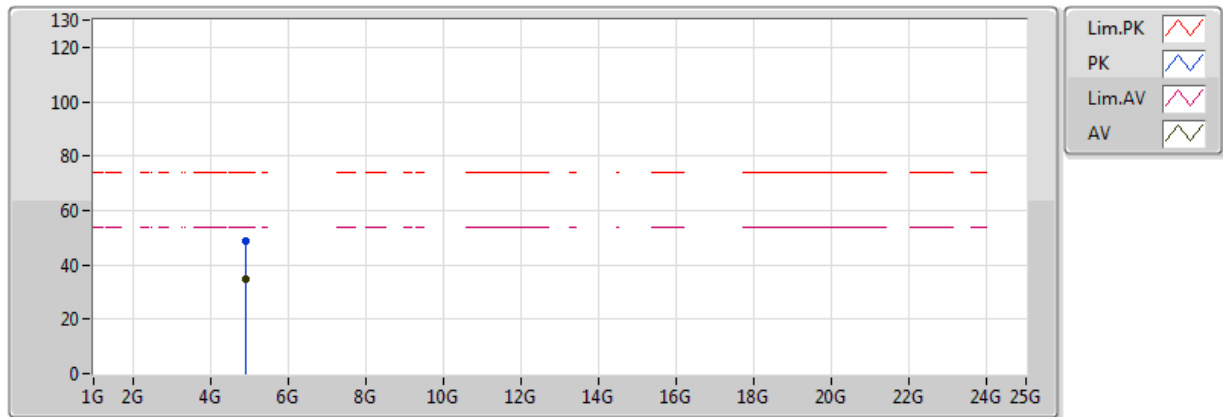


20170216
EUT_Y_4TX
Setting 17
03-M-1
FSP(100019)

Type	Freq(Hz)	Level(dBuV/m)	Limit(dBuV/m)	Margin(dB)	Factor(dB)	Dist(m)	Pol.(H/V)	Azimuth(°)	Height(m)	Comments
AV	4.923204G	33.93	54.00	-20.07	5.81	3	V	301	1.27	-
PK	4.924716G	47.96	74.00	-26.04	5.81	3	V	301	1.27	-

802.11n HT20_Nss1,(MCS0)_4TX

2462MHz_TX

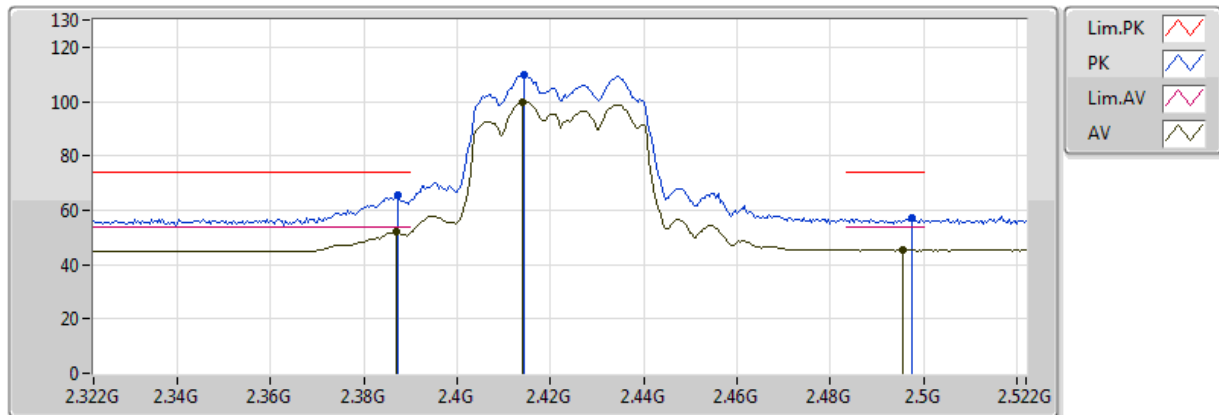


20170216
EUT_Y_4TX
Setting 17
03-M-1
FSP(100019)

Type	Freq(Hz)	Level(dBuV/m)	Limit(dBuV/m)	Margin(dB)	Factor(dB)	Dist(m)	Pol.(H/V)	Azimuth(°)	Height(m)	Comments
AV	4.923944G	34.52	54.00	-19.48	5.81	3	H	149	2.05	-
PK	4.923668G	48.62	74.00	-25.38	5.81	3	H	149	2.05	-

802.11n HT40_Nss1,(MCS0)_4TX

2422MHz_TX

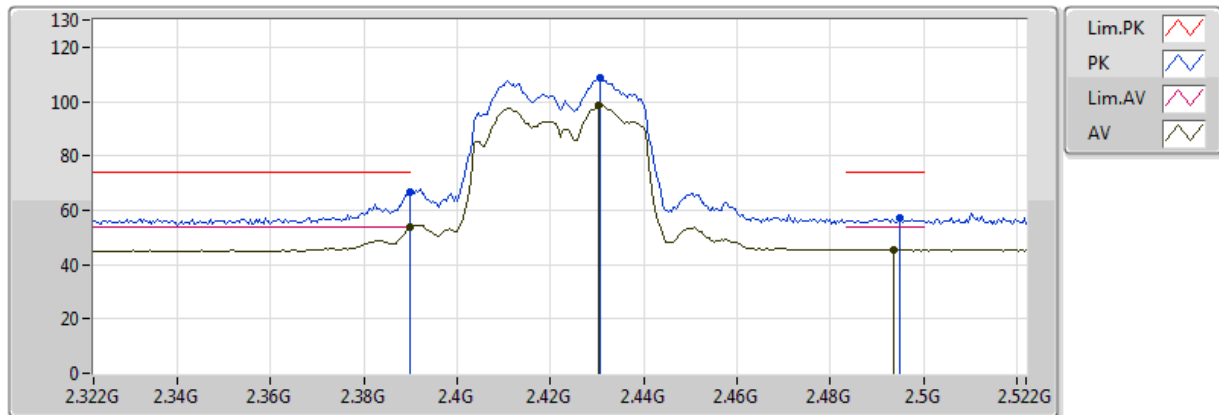


20170216
EUT_Y_4TX
Setting 14
03-M-1
FSP(100019)

Type	Freq(Hz)	Level(dBuV/m)	Limit(dBuV/m)	Margin(dB)	Factor(dB)	Dist(m)	Pol.(H/V)	Azimuth(°)	Height(m)	Comments
AV	2.3868G	51.94	54.00	-2.06	32.26	3	V	280	1.22	-
AV	2.414G	100.01	Inf	-Inf	32.34	3	V	280	1.22	-
AV	2.4956G	45.50	54.00	-8.50	32.57	3	V	280	1.22	-
PK	2.3872G	65.59	74.00	-8.41	32.26	3	V	280	1.22	-
PK	2.4144G	110.00	Inf	-Inf	32.34	3	V	280	1.22	-
PK	2.4976G	57.23	74.00	-16.77	32.57	3	V	280	1.22	-

802.11n HT40_Nss1,(MCS0)_4TX

2422MHz_TX

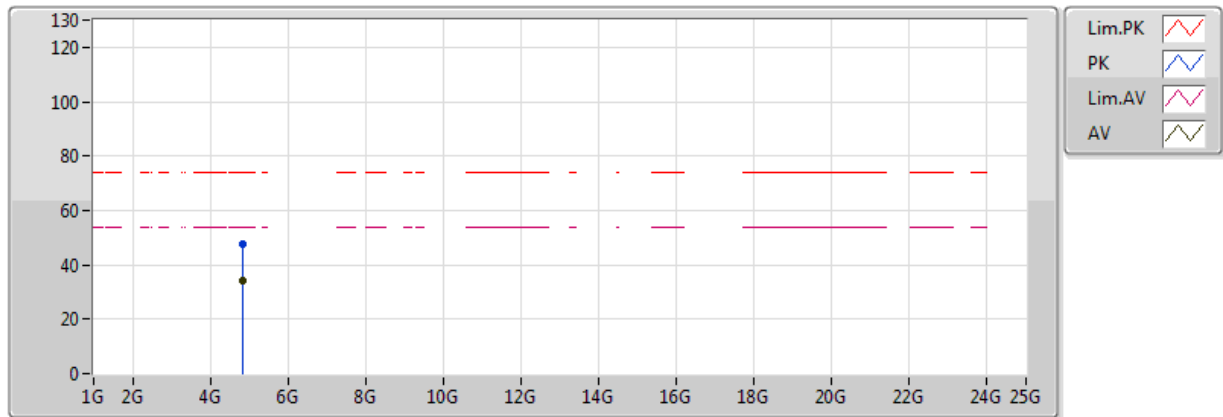


20170216
EUT_Y_4TX
Setting 14
03-M-1
FSP(100019)

Type	Freq(Hz)	Level(dBuV/m)	Limit(dBuV/m)	Margin(dB)	Factor(dB)	Dist(m)	Pol.(H/V)	Azimuth(°)	Height(m)	Comments
AV	2.39G	53.75	54.00	-0.25	32.27	3	H	115	1.58	-
AV	2.4304G	98.45	Inf	-Inf	32.39	3	H	115	1.58	-
AV	2.4936G	45.47	54.00	-8.53	32.56	3	H	115	1.58	-
PK	2.39G	66.80	74.00	-7.20	32.27	3	H	115	1.58	-
PK	2.4308G	108.76	Inf	-Inf	32.39	3	H	115	1.58	-
PK	2.4948G	57.24	74.00	-16.76	32.57	3	H	115	1.58	-

802.11n HT40_Nss1,(MCS0)_4TX

2422MHz_TX

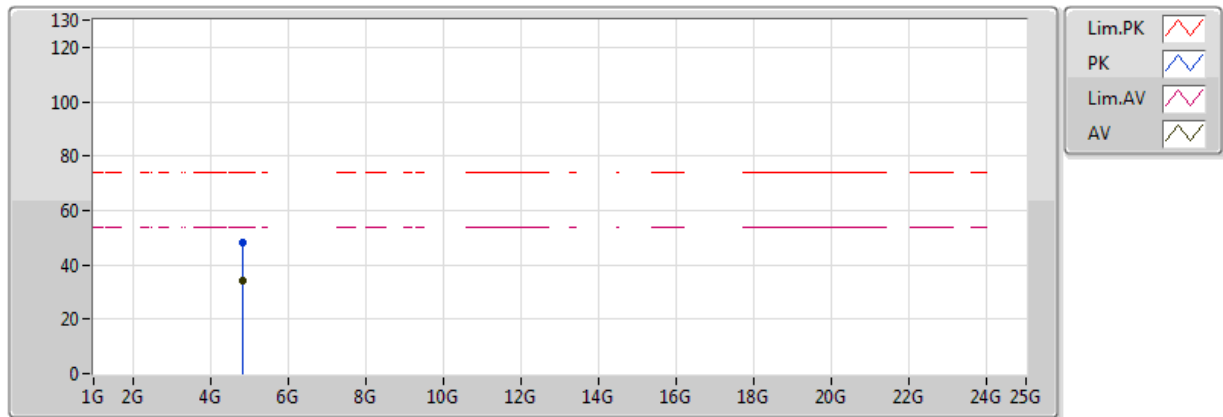


20170216
EUT_Y_4TX
Setting 14
03-M-1
FSP(100019)

Type	Freq(Hz)	Level(dBuV/m)	Limit(dBuV/m)	Margin(dB)	Factor(dB)	Dist(m)	Pol.(H/V)	Azimuth(°)	Height(m)	Comments
AV	4.84394G	34.11	54.00	-19.89	5.60	3	V	25	1.27	-
PK	4.843328G	47.57	74.00	-26.43	5.60	3	V	25	1.27	-

802.11n HT40_Nss1,(MCS0)_4TX

2422MHz_TX

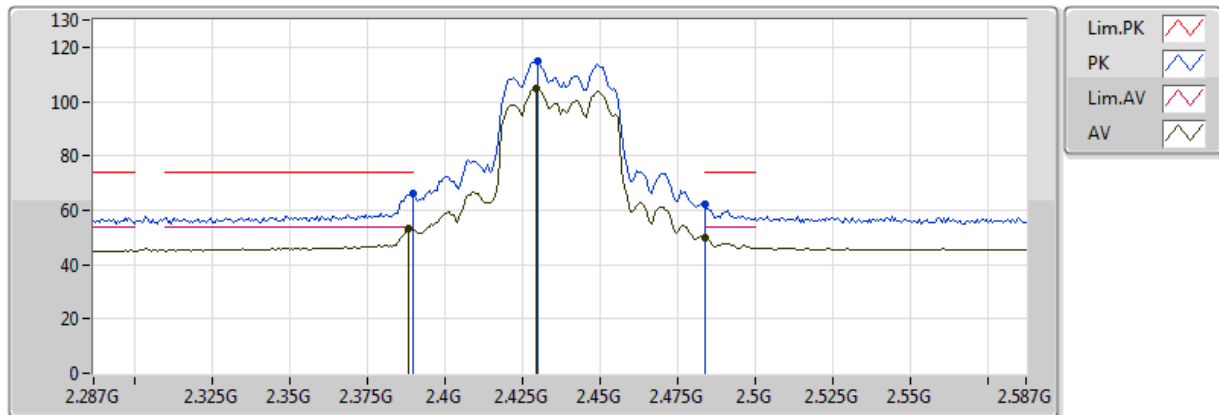


20170216
EUT_Y_4TX
Setting 14
03-M-1
FSP(100019)

Type	Freq(Hz)	Level(dBuV/m)	Limit(dBuV/m)	Margin(dB)	Factor(dB)	Dist(m)	Pol.(H/V)	Azimuth(°)	Height(m)	Comments
AV	4.844784G	34.20	54.00	-19.80	5.61	3	H	333	1.71	-
PK	4.844336G	47.94	74.00	-26.06	5.61	3	H	333	1.71	-

802.11n HT40_Nss1,(MCS0)_4TX

2437MHz_TX

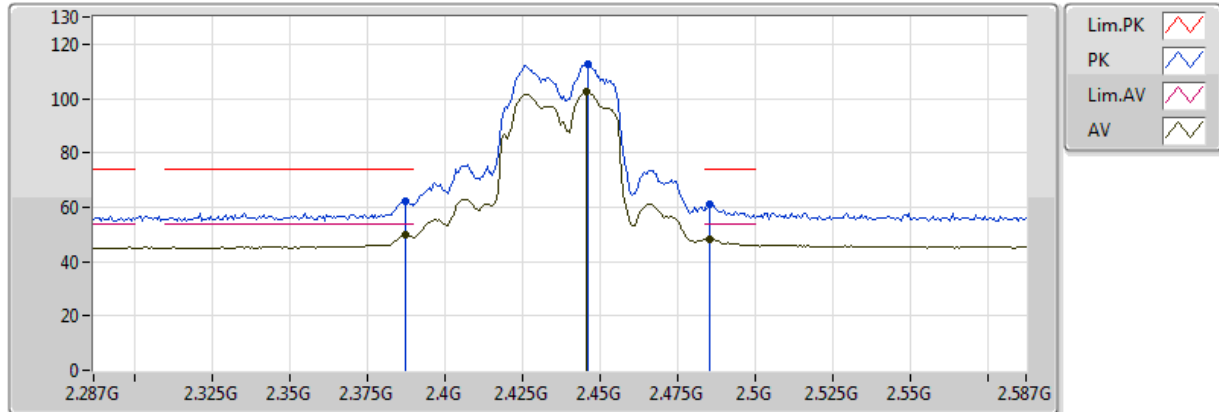


20170216
EUT_Y_4TX
Setting 18
03-M-1
FSP(100019)

Type	Freq(Hz)	Level(dBuV/m)	Limit(dBuV/m)	Margin(dB)	Factor(dB)	Dist(m)	Pol.(H/V)	Azimuth(°)	Height(m)	Comments
AV	2.3884G	53.51	54.00	-0.49	32.27	3	V	279	1.08	-
AV	2.4292G	105.02	Inf	-Inf	32.38	3	V	279	1.08	-
AV	2.483502G	50.11	54.00	-3.89	32.53	3	V	279	1.08	-
PK	2.3896G	66.38	74.00	-7.62	32.27	3	V	279	1.08	-
PK	2.4298G	114.94	Inf	-Inf	32.38	3	V	279	1.08	-
PK	2.483502G	62.16	74.00	-11.84	32.53	3	V	279	1.08	-

802.11n HT40_Nss1,(MCS0)_4TX

2437MHz_TX

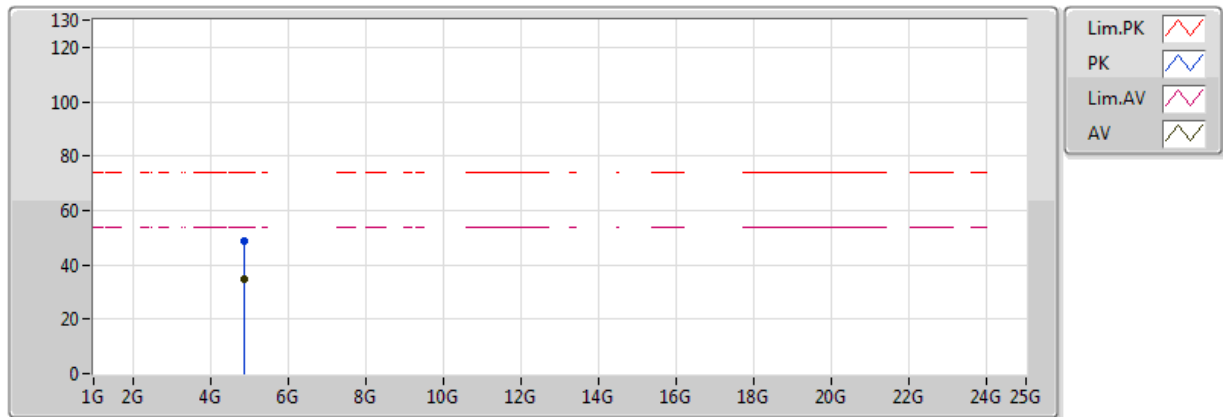


20170216
EUT Y_4TX
Setting 18
03-M-1
FSP(100019)

Type	Freq(Hz)	Level(dBuV/m)	Limit(dBuV/m)	Margin(dB)	Factor(dB)	Dist(m)	Pol.(H/V)	Azimuth(°)	Height(m)	Comments
AV	2.3872G	49.68	54.00	-4.32	32.26	3	H	116	1.48	-
AV	2.4454G	102.42	Inf	-Inf	32.43	3	H	116	1.48	-
AV	2.485G	48.44	54.00	-5.56	32.54	3	H	116	1.48	-
PK	2.3872G	62.47	74.00	-11.53	32.26	3	H	116	1.48	-
PK	2.446G	112.57	Inf	-Inf	32.43	3	H	116	1.48	-
PK	2.485G	61.30	74.00	-12.70	32.54	3	H	116	1.48	-

802.11n HT40_Nss1,(MCS0)_4TX

2437MHz_TX

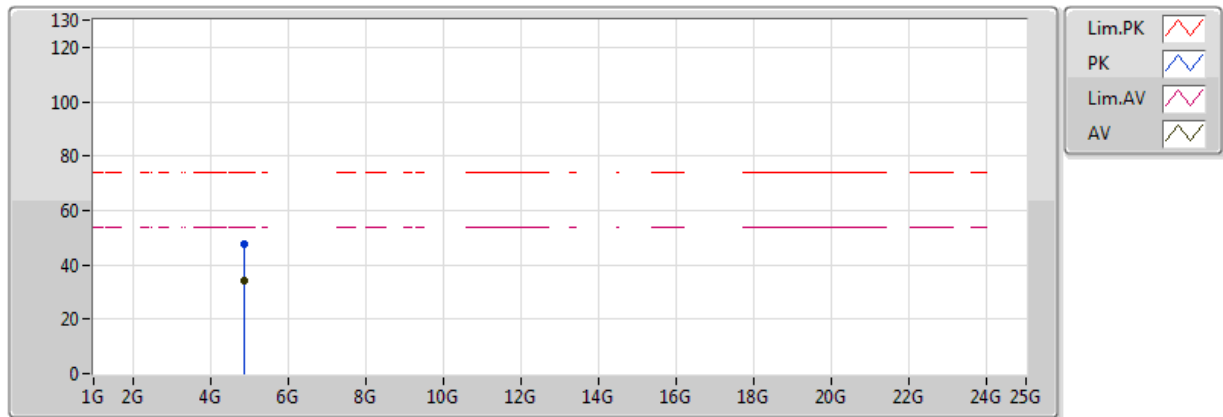


20170216
EUT_Y_4TX
Setting 18
03-M-1
FSP(100019)

Type	Freq(Hz)	Level(dBuV/m)	Limit(dBuV/m)	Margin(dB)	Factor(dB)	Dist(m)	Pol.(H/V)	Azimuth(°)	Height(m)	Comments
AV	4.87406G	34.78	54.00	-19.22	5.68	3	V	303	2.07	-
PK	4.873684G	48.63	74.00	-25.37	5.68	3	V	303	2.07	-

802.11n HT40_Nss1,(MCS0)_4TX

2437MHz_TX

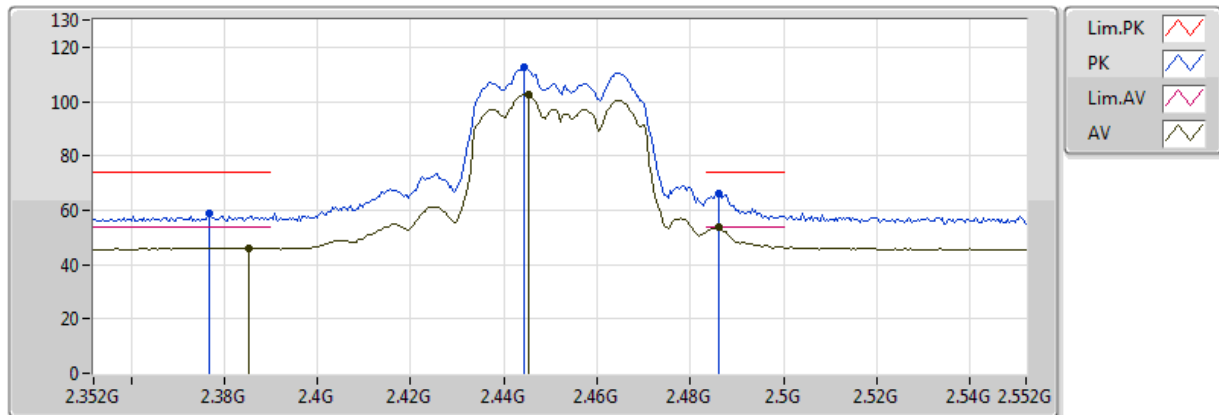


20170216
EUT_Y_4TX
Setting 18
03-M-1
FSP(100019)

Type	Freq(Hz)	Level(dBuV/m)	Limit(dBuV/m)	Margin(dB)	Factor(dB)	Dist(m)	Pol.(H/V)	Azimuth(°)	Height(m)	Comments
AV	4.873952G	34.36	54.00	-19.64	5.68	3	H	115	2.24	-
PK	4.874776G	47.76	74.00	-26.24	5.68	3	H	115	2.24	-

802.11n HT40_Nss1,(MCS0)_4TX

2452MHz_TX

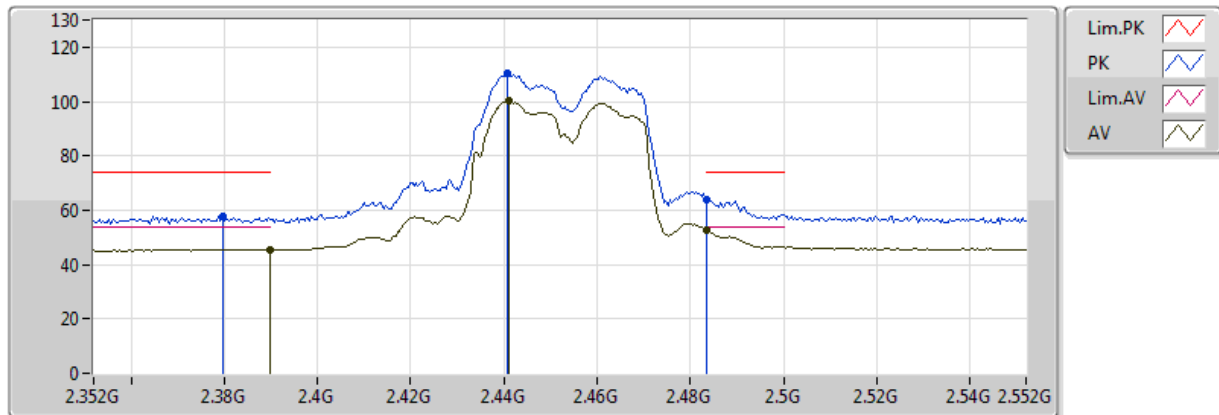


20170216
EUT_Y_4TX
Setting 15.5
03-M-1
FSP(100019)

Type	Freq(Hz)	Level(dBuV/m)	Limit(dBuV/m)	Margin(dB)	Factor(dB)	Dist(m)	Pol.(H/V)	Azimuth(°)	Height(m)	Comments
AV	2.3852G	46.19	54.00	-7.81	32.26	3	V	279	1.24	-
AV	2.4452G	102.60	Inf	-Inf	32.43	3	V	279	1.24	-
AV	2.486G	53.52	54.00	-0.48	32.54	3	V	279	1.24	-
PK	2.3768G	58.67	74.00	-15.33	32.23	3	V	279	1.24	-
PK	2.4444G	112.81	Inf	-Inf	32.42	3	V	279	1.24	-
PK	2.486G	65.96	74.00	-8.04	32.54	3	V	279	1.24	-

802.11n HT40_Nss1,(MCS0)_4TX

2452MHz_TX

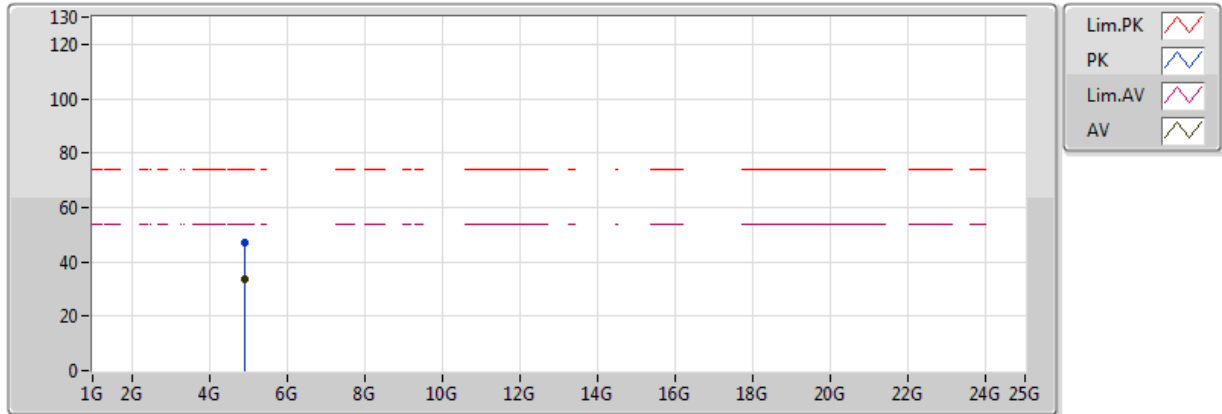


20170216
EUT_Y_4TX
Setting 15.5
03-M-1
FSP(100019)

Type	Freq(Hz)	Level(dBuV/m)	Limit(dBuV/m)	Margin(dB)	Factor(dB)	Dist(m)	Pol.(H/V)	Azimuth(°)	Height(m)	Comments
AV	2.39G	45.46	54.00	-8.54	32.27	3	H	117	1.47	-
AV	2.4412G	100.22	Inf	-Inf	32.42	3	H	117	1.47	-
AV	2.4836G	52.63	54.00	-1.37	32.53	3	H	117	1.47	-
PK	2.3796G	57.57	74.00	-16.43	32.24	3	H	117	1.47	-
PK	2.4408G	110.61	Inf	-Inf	32.41	3	H	117	1.47	-
PK	2.4836G	64.13	74.00	-9.87	32.53	3	H	117	1.47	-

802.11n HT40_Nss1,(MCS0)_4TX

2452MHz_TX

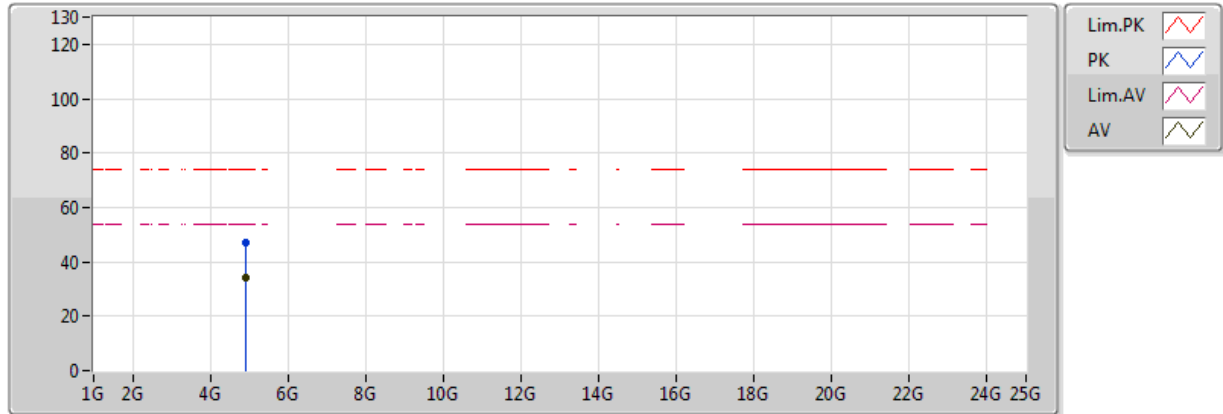


20170216
EUT_Y_4TX
Setting 15.5
03-M-1
FSP(100019)

Type	Freq(Hz)	Level(dBuV/m)	Limit(dBuV/m)	Margin(dB)	Factor(dB)	Dist(m)	Pol.(H/V)	Azimuth(°)	Height(m)	Comments
AV	4.903992G	33.84	54.00	-20.16	5.76	3	V	204	1.52	-
PK	4.904212G	47.25	74.00	-26.75	5.76	3	V	204	1.52	-

802.11n HT40_Nss1,(MCS0)_4TX

2452MHz_TX



20170216
EUT_Y_4TX
Setting 15.5
03-M-1
FSP(100019)

Type	Freq(Hz)	Level(dBuV/m)	Limit(dBuV/m)	Margin(dB)	Factor(dB)	Dist(m)	Pol.(H/V)	Azimuth(°)	Height(m)	Comments
AV	4.90494G	33.99	54.00	-20.01	5.76	3	H	136	2.27	-
PK	4.904276G	47.12	74.00	-26.88	5.76	3	H	136	2.27	-