FCC RADIO TEST REPORT

FCC ID	:	S9GR320
Equipment	:	R320 Access Point
Brand Name	:	Ruckus
Model Name	:	R320
Applicant	:	Ruckus Wireless, Inc. 350 W. Java Dr., Sunnyvale, CA 94089 USA
Manufacturer	:	Lite-On Network Communication (Dongguan) Limited 30#Keji Rd., Yin Hu Industrial Area, Qingxi Town, DongGuan City, Guangdong, China
Standard	:	47 CFR FCC Part 15.247

The product was received on Oct. 09, 2018, and testing was started from Oct. 11, 2018 and completed on Jan. 14, 2019. We, SPORTON INTERNATIONAL INC. EMC & Wireless Communications Laboratory, 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 report must not be used by the client to claim product certification, approval, or endorsement by TAF or any agency of government.

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

Approved by: Sam Chen

SPORTON INTERNATIONAL INC. EMC & Wireless Communications Laboratory

No. 52, Huaya 1st Rd., Guishan Dist., Taoyuan City, Taiwan (R.O.C.)

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History of this test report

Report No.	Version	Description	Issued Date
FR8O0618AA	01	Initial issue of report	Feb. 01, 2019

Summary of Test Result

Report Clause	Ref Std. Clause	Test Items	Result (PASS/FAIL)	Remark
1.1.2	15.203	Antenna Requirement	PASS	-
3.1	15.207	AC Power-line Conducted Emissions	PASS	-
3.2	15.247(a)	DTS Bandwidth	PASS	-
3.3	15.247(b)	Maximum Conducted Output Power	PASS	-
3.4	15.247(e)	Power Spectral Density	PASS	-
3.5	15.247(d)	Emissions in Non-restricted Frequency Bands	PASS	-
3.6	15.247(d)	Emissions in Restricted Frequency Bands	PASS	-

Declaration of Conformity:
The test results with all measurement uncertainty excluded are presented in accordance with the regulation limits or requirements declared by manufacturers.
Comments and Explanations:
The declared of product specification for EUT presented in the report are provided by the manufacturer, and the manufacturer takes all the responsibilities for the accuracy of product specification.

Reviewed by: Sam Chen
Report Producer: Cindy Peng

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	2TX
2.4-2.4835GHz	802.11g	20	2TX
2.4-2.4835GHz	802.11n HT20	20	2TX
2.4-2.4835GHz	802.11n HT40	40	2TX

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.
- 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.	Port		Brand	Model Name	Antenna Type	Connector	Gain (dBi)	
	2.4GHz	5GHz					2.4GHz	5GHz
1	1	2	Ruckus	R310	PCB Antenna	I-PEX	0	3
2	2	1	Ruckus	R310	PCB Antenna	I-PEX	0	3

Note 1: The above information was declared by manufacturer.

Note 2: The EUT has two antennas (2TX/2RX).

Port 1 and Port 2 could transmit/receive simultaneously.

1.1.3 Mode Test Duty Cycle

Mode	DC	DCF(dB)	T(s)	VBW(Hz) ≥ 1/T
802.11b	0.994	0.026	n/a (DC>=0.98)	n/a (DC>=0.98)
802.11g	0.959	0.182	2.068m	1k
802.11n HT20	0.986	0.061	n/a (DC>=0.98)	n/a (DC>=0.98)
802.11n HT40	0.969	0.137	2.45m	1k

Note:
- DC is Duty Cycle.
- DCF is Duty Cycle Factor.

1.1.4 EUT Operational Condition

EUT Power Type	From power adapter or PoE			
Beamforming Function	☒	With beamforming	☐	Without beamforming
	The product has beam-forming function for 802.11ac in 5GHz.			
Function	☒	Point-to-multipoint	☐	Point-to-point
Test Software Version	QRCT V3.0.210.0			

Note: The above information was declared by manufacturer.

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 v05
- FCC KDB 662911 D01 v02r01

1.3 Testing Location Information

Testing Location			
☐	HWA YA	ADD :	No. 52, Huaya 1st Rd., Guishan Dist., Taoyuan City, Taiwan (R.O.C.)
		TEL :	886-3-327-3456 FAX : 886-3-327-0973
☒	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	Owen Hsu	22°C / 51%	Oct. 11, 2018~Jan. 07, 2019
Radiated Below 1GHz	03CH01-CB	Stim Sung	22°C / 54%	Jan. 11, 2019
Radiated Above 1GHz	03CH01-CB	Paul Chen	22°C / 54%	Dec. 28, 2018~Jan. 14, 2019
AC Conduction	CO01-CB	GN Hou	23°C / 60%	Oct. 18, 2018

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)	2.0 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_Nss1,(1Mbps)_2TX	-
2412MHz	19.5
2437MHz	20
2462MHz	18.5
802.11g_Nss1,(6Mbps)_2TX	-
2412MHz	18
2417MHz	20
2437MHz	20
2457MHz	20
2462MHz	17
802.11n HT20_Nss1,(MCS0)_2TX	-
2412MHz	19
2417MHz	20
2437MHz	20
2457MHz	20
2462MHz	17
802.11n HT40_Nss1,(MCS0)_2TX	-
2422MHz	16
2427MHz	18
2432MHz	18.5
2437MHz	18.5
2442MHz	17.5
2447MHz	15.5
2452MHz	14.5

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
2	EUT + PoE
For operating mode 2 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
The EUT was performed at Y axis and Z axis position. The worst case was found at Z axis, so it was selected to perform test and its test result was written in the report.	
1	EUT Z axis + Adapter
2	EUT Z axis + PoE
For operating mode 2 is the worst case and it was record in this test report.	
Operating Mode > 1GHz	CTX
The EUT was performed at Y axis and Z axis position. The worst case was found at Z axis for bandedge, Y axis for harmonic, so it was selected to perform test and its test result was written in the report.	

The Worst Case Mode for Following Conformance Tests	
Tests Item	Simultaneous Transmission Analysis - Radiated Emission Co-location
Test Condition	Radiated measurement
Operating Mode	Normal Link
The EUT was performed at Y axis and Z axis position. The worst case was found at Y axis for Emissions in Restricted Frequency Bands Above 1GHz harmonic, so the measurement will follow this same test configuration.	
1	EUT Y axis: WLAN 2.4GHz + WLAN 5GHz
Refer to Appendix G for Radiated Emission Co-location.	

The Worst Case Mode for Following Conformance Tests	
Tests Item	Simultaneous Transmission Analysis - Co-location RF Exposure Evaluation
Operating Mode	
1	WLAN 2.4GHz + WLAN 5GHz
Refer to Sporton Test Report No.: FA8O0618 for Co-location RF Exposure Evaluation.	

Note: The adapter and PoE were for measurement only, it would not be marketed.

Equipment	Brand Name	Model Name	FCC ID
Adapter	Ruckus	HK-AR-120A100-US	N/A
PoE	GOSPELL	G0720-480-050	N/A

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	T-bar bracket*1 and Locking tab*1

2.5 Support Equipment

For Test Site No: CO01-CB

Support Equipment				
No.	**Equipment**	**Brand Name**	**Model Name**	**FCC ID**
A	NB	DELL	E6430	N/A
B	NB	DELL	E6430	N/A
C	NB	DELL	E6430	N/A
D	PoE	GOSPELL	G0720-480-050	N/A

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

Support Equipment				
No.	**Equipment**	**Brand Name**	**Model Name**	**FCC ID**
A	PoE	GOSPELL	G0720-480-050	N/A
B	NB	DELL	E4300	N/A
C	NB	DELL	E4300	N/A
D	NB	DELL	E4300	N/A

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

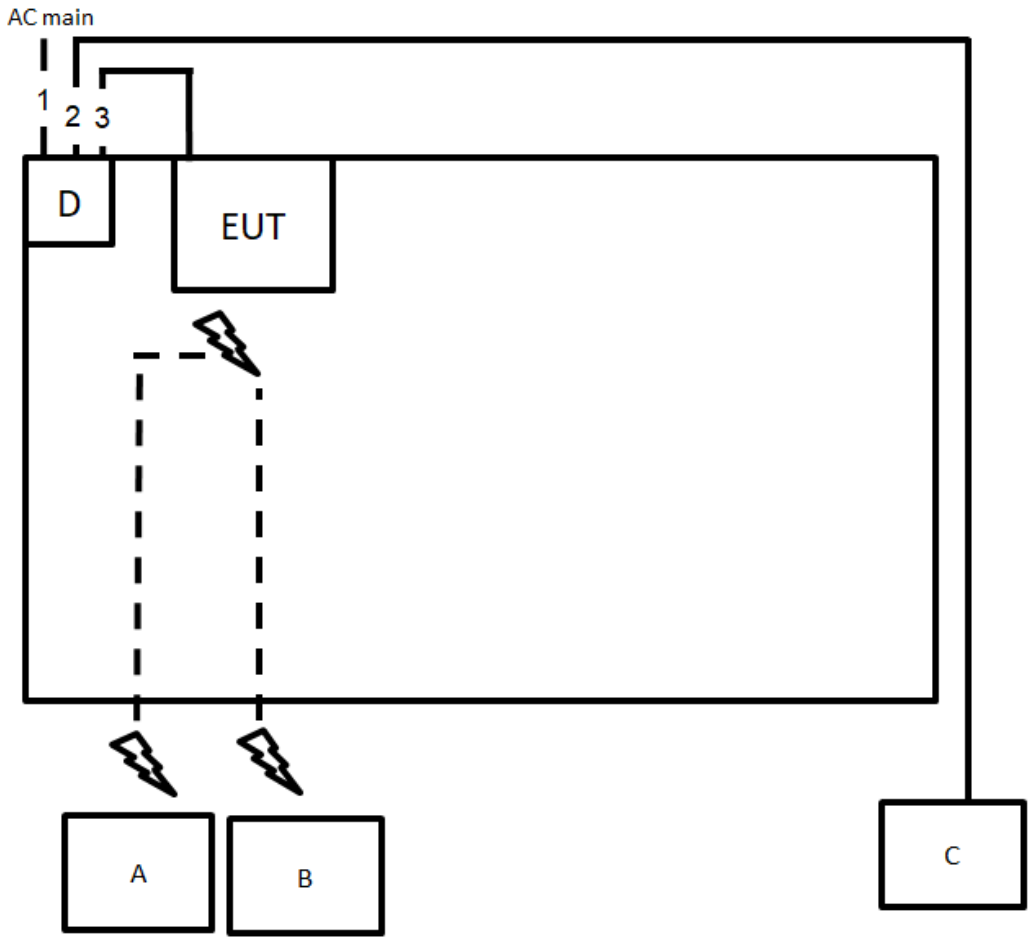
Support Equipment				
No.	**Equipment**	**Brand Name**	**Model Name**	**FCC ID**
A	Notebook	DELL	E4300	N/A
B	PoE	GOSPELL	G0720-480-050	N/A

For Test Site No: TH01-CB

Support Equipment				
No.	**Equipment**	**Brand Name**	**Model Name**	**FCC ID**
A	NB	DELL	E4300	N/A
B	Adapter	Ruckus	HK-AR-120A100-US	N/A

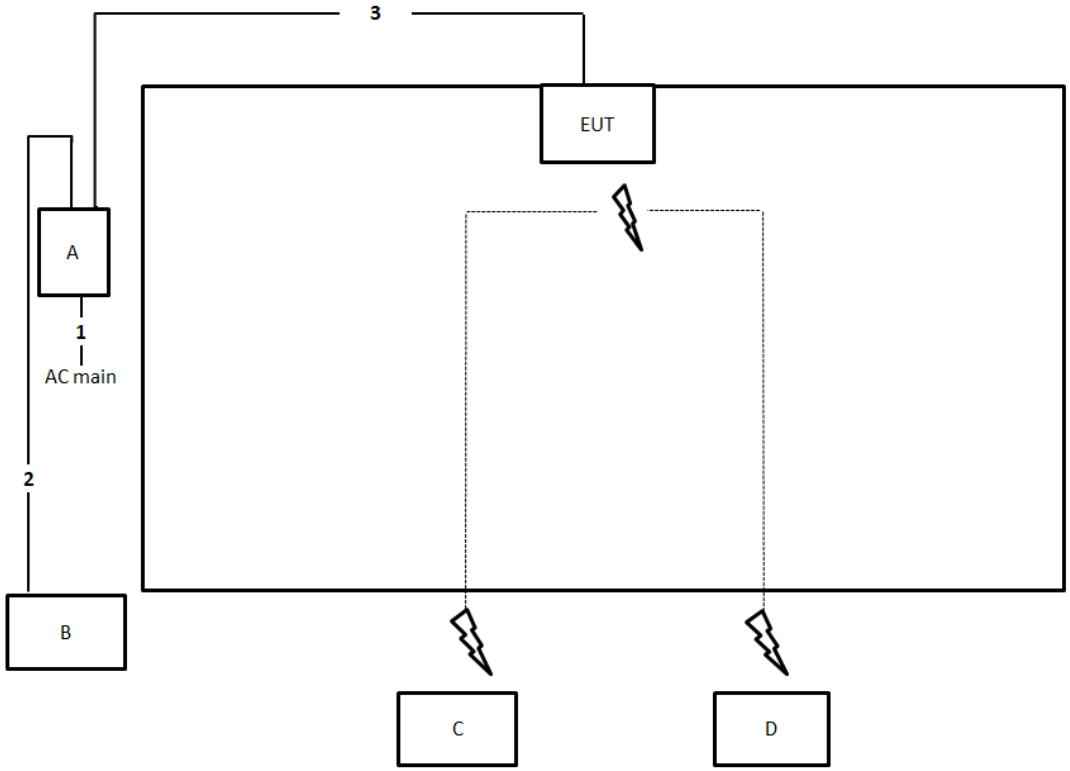
2.6 Test Setup Diagram

Test Setup Diagram – AC Line Conducted Emission Test



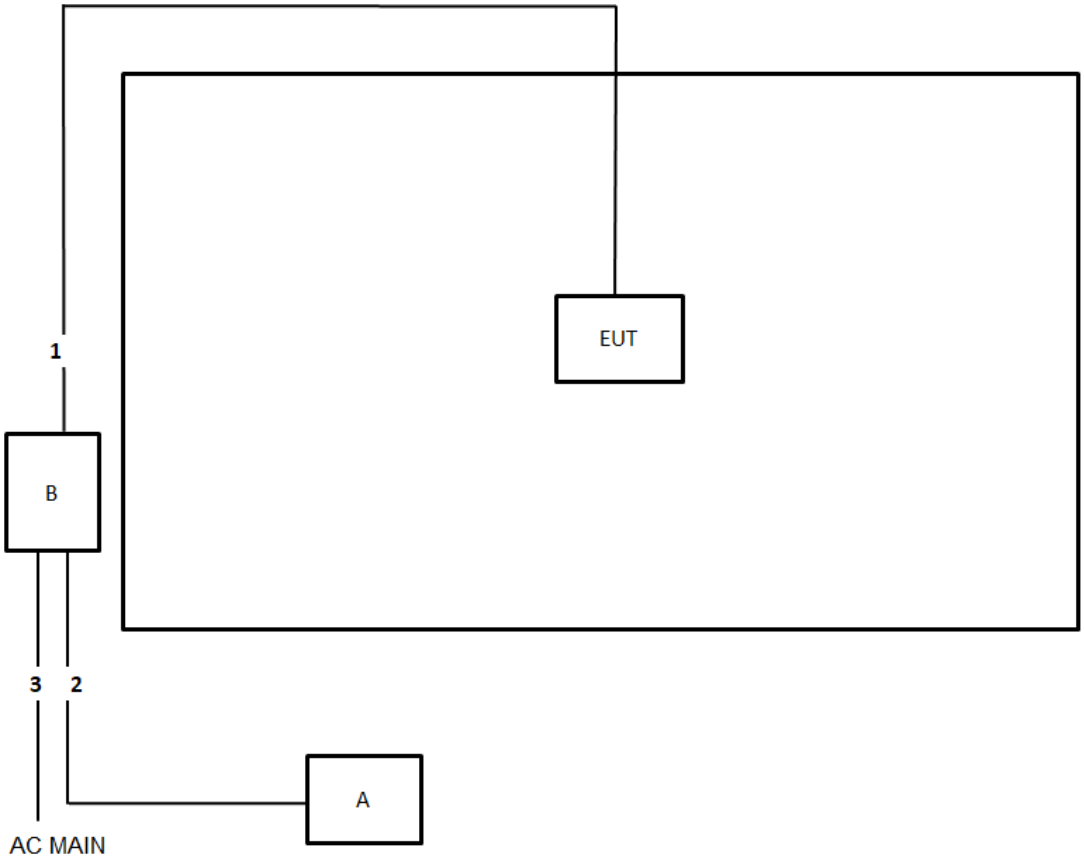
Item	Connection	Shielded	Length
1	Power cable	No	1.8m
2	RJ-45 cable	No	10m
3	RJ-45 cable	No	1.5m

Test Setup Diagram - Radiated Test < 1GHz



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

Test Setup Diagram - Radiated Test > 1GHz



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

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

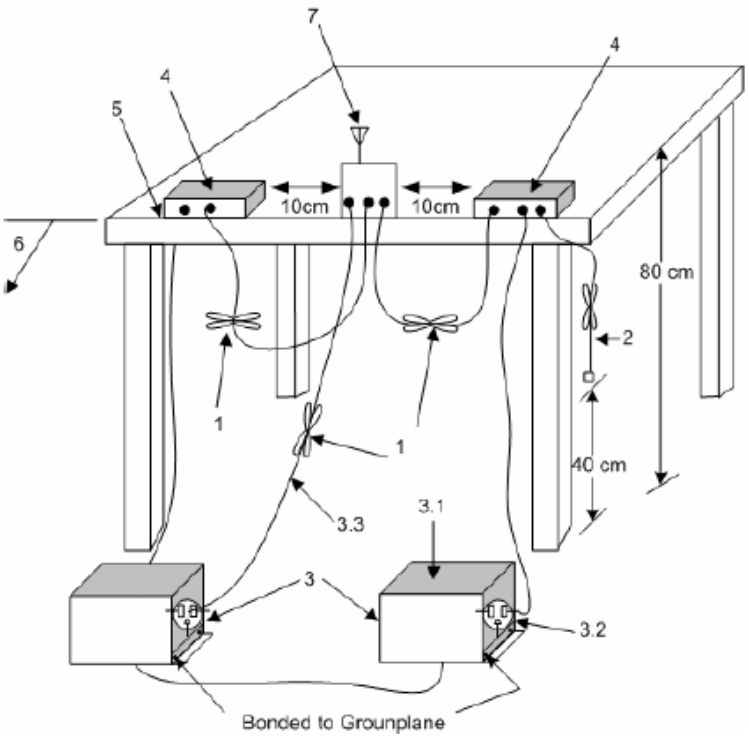
Refer a test equipment and calibration data table in this test report.

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

AC Power-line Conducted Emissions



1—Interconnecting cables that hang closer than 40 cm to the ground plane shall be folded back and forth in the center forming a bundle 30 cm to 40 cm long.
2—The I/O cables that are not connected to an accessory shall be bundled in the center. The end of the cable may be terminated, if required, using the correct terminating impedance. The overall length shall not exceed 1 m.
3—EUT connected to one LISN. Unused LISN measuring port connectors shall be terminated in 50 Ω loads. LISN may be placed on top of, or immediately beneath, reference ground plane.
3.1—All other equipment powered from additional LISN(s).
3.2—A multiple-outlet strip may be used for multiple power cords of non-EUT equipment.
3.3—LISN at least 80 cm from nearest part of EUT chassis.
4—Non-EUT components of EUT system being tested.
5—Rear of EUT, including peripherals, shall all be aligned and flush with edge of tabletop.
6—Edge of tabletop shall be 40 cm removed from a vertical conducting plane that is bonded to the ground plane.
7—Antenna can be integral or detachable. If detachable, then the antenna shall be attached for this test.

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 ≥ 500 kHz.

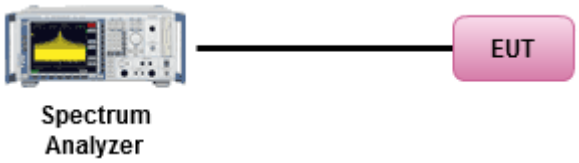
3.2.2 Measuring Instruments

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 8.2 & C63.10 clause 11.8.1 Option 1 for 6 dB bandwidth measurement.
	☐ Refer as FCC KDB 558074, clause 8.2 & C63.10 clause 11.8.2 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

Emission Bandwidth


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

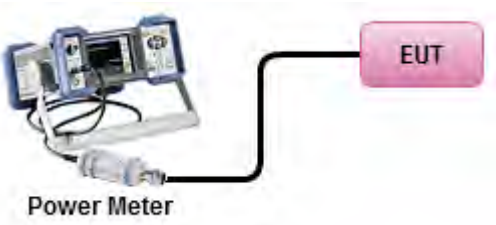
Refer a test equipment and calibration data table in this test report.

3.3.3 Test Procedures

Test Method	
▪ Maximum Peak Conducted Output Power	
☐	Refer as FCC KDB 558074, clause 8.3.1.1 & C63.10 clause 11.9.1.1 (RBW ≥ EBW method).
☐	Refer as FCC KDB 558074, clause 8.3.1.3 & C63.10 clause 11.9.1.3 (peak power meter).
▪ Maximum Conducted Output Power	
[duty cycle ≥ 98% or external video / power trigger]	
☐	Refer as FCC KDB 558074, clause 8.3.2.2 & C63.10 clause 11.9.2.2.2 Method AVGSA-1.
☐	Refer as FCC KDB 558074, clause 8.3.2.2 & C63.10 clause 11.9.2.2.3 Method AVGSA-1A. (alternative)
duty cycle < 98% and average over on/off periods with duty factor	
☐	Refer as FCC KDB 558074, clause 8.3.2.2 & C63.10 clause 11.9.2.2.4 Method AVGSA-2.
☐	Refer as FCC KDB 558074, clause 8.3.2.2 & C63.10 clause 11.9.2.2.5 Method AVGSA-2A (alternative)
☐	Refer as FCC KDB 558074, clause 8.3.2.2 & C63.10 clause 11.9.2.2.6 Method AVGSA-3
☐	Refer as FCC KDB 558074, clause 8.3.2.2 & C63.10 clause 11.9.2.2.7 Method AVGSA-3A (alternative)
Measurement using a power meter (PM)	
☒	Refer as FCC KDB 558074, clause 8.3.2.3 & C63.10 clause 11.9.2.3.1 Method AVGPM (using an RF average power meter).
☐	Refer as FCC KDB 558074, clause 8.3.2.3 & C63.10 clause 11.9.2.3.2 Method AVGPM-G (using an gate 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: $P_{total} = P_1 + P_2 + \ldots + P_n$ (calculated in linear unit [mW] and transfer to log unit [dBm]) $EIRP_{total} = P_{total} + DG$

3.3.4 Test Setup

Maximum Conducted Output Power (Power Meter)


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.

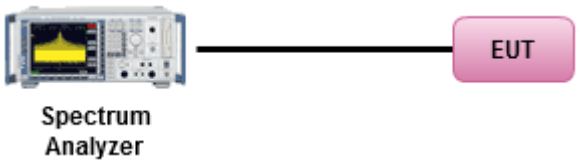
3.4.3 Test Procedures

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 8.4 & C63.10 clause 11.10.2 Method PKPSD.
	[duty cycle ≥ 98% or external video / power trigger]
	☐ Refer as FCC KDB 558074, clause 8.4 & C63.10 clause 11.10.3 Method AVGPSD-1.
	☐ Refer as FCC KDB 558074, clause 8.4 & C63.10 clause 11.10.5 Method AVGPSD-2.
	☐ Refer as FCC KDB 558074, clause 8.4 & C63.10 clause 11.10.7 Method AVGPSD-3.
	duty cycle < 98% and average over on/off periods with duty factor
	☐ Refer as FCC KDB 558074, clause 8.4 & C63.10 clause 11.10.4 Method AVGPSD-1A. (alternative).
	☐ Refer as FCC KDB 558074, clause 8.4 & C63.10 clause 11.10.6 Method AVGPSD-2A. (alternative)
	☐ Refer as FCC KDB 558074, clause 8.4 & C63.10 clause 11.10.8 Method AVGPSD-3A. (alternative)
▪ 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

Power Spectral Density



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 (dBc)**
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.	

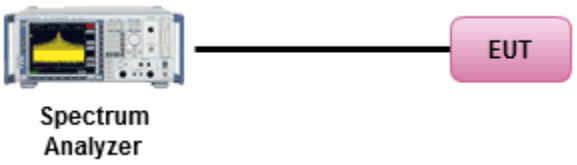
3.5.2 Measuring Instruments

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 8.5 for unwanted emissions into non-restricted bands.

3.5.4 Test Setup

Emissions in Non-restricted Frequency Bands


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.

Note 3: Using the distance of 1m during the test for above 18 GHz, and the test value to correct for the distance factor at 3m.

3.6.2 Measuring Instruments

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

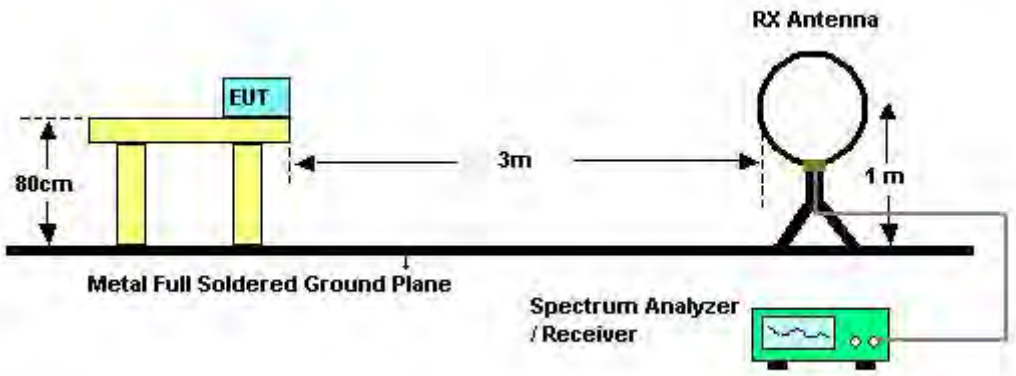
3.6.3 Test Procedures

Test Method			
▪ The average emission levels shall be measured in [duty cycle ≥ 98 or duty factor].			
▪ Refer as ANSI C63.10, clause 6.10.3 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 8.6 for unwanted emissions into restricted bands.		
		☐	Refer as FCC KDB 558074, clause 8.6 & C63.10 clause 11.12.2.5.1(trace averaging for duty cycle ≥98%).
		☐	Refer as FCC KDB 558074, clause 8.6 & C63.10 clause 11.12.2.5.2(trace averaging + duty factor).
		☒	Refer as FCC KDB 558074, clause 8.6 & C63.10 clause 11.12.2.5.3(Reduced VBW≥1/T).
		☐	Refer as ANSI C63.10, clause 11.12.2.5.3 (Reduced VBW). VBW ≥ 1/T, where T is pulse time.
		☐	Refer as ANSI C63.10, clause 7.5 average value of pulsed emissions.
		☒	Refer as FCC KDB 558074, clause 8.6 & C63.10 clause 11.12.2.4 measurement procedure peak limit.
▪ For the transmitter band-edge emissions shall be measured using following options below:			
	▪ Refer as FCC KDB 558074 clause 8.7 & C63.10 clause 11.13.1, 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 8.7 (ANSI C63.10, clause 6.10.6) for marker-delta method for band-edge measurements.		
	▪ Refer as FCC KDB 558074, clause 8.7 for narrower resolution bandwidth (100kHz) using the band power and summing the spectral levels (i.e., 1 MHz).		
	▪ 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.		

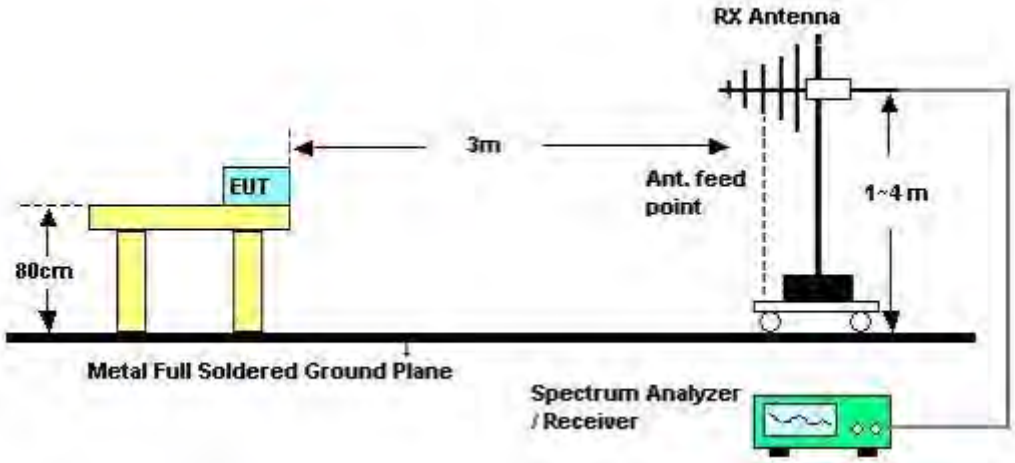
3.6.4 Test Setup

Radiated - Emissions in Restricted Frequency Bands

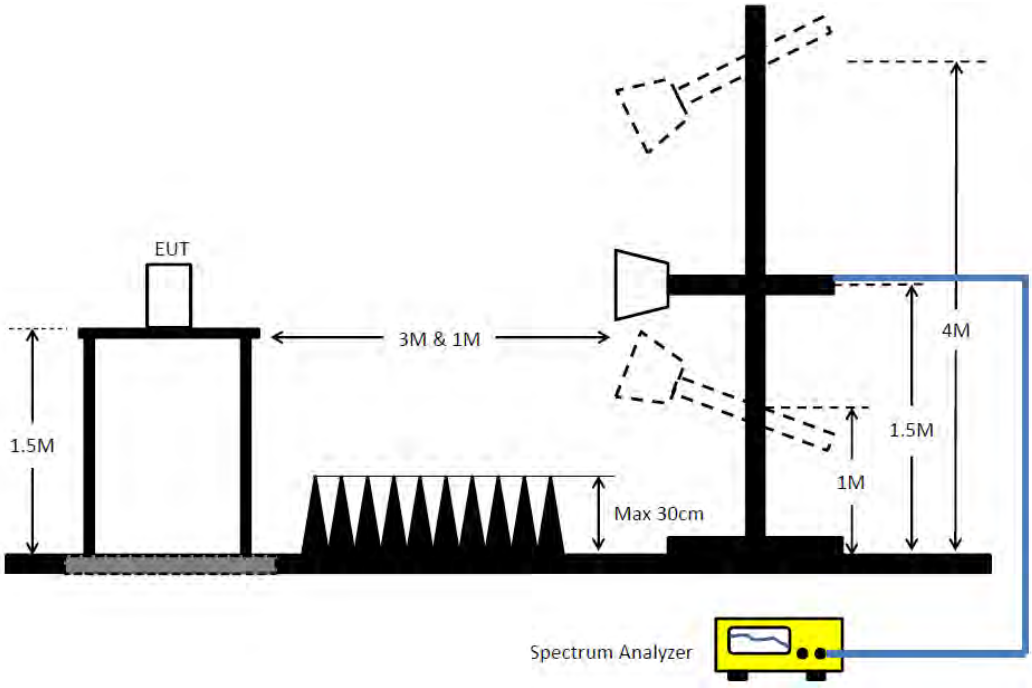
9kHz ~30MHz



30MHz~1GHz



Above 1GHz



3.6.5 Emissions in Restricted Frequency Bands (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.
The radiated emissions were investigated from 9 kHz or the lowest frequency generated within the device, up to the 10 harmonic or 40 GHz, whichever is appropriate.

3.6.6 Test Result of Emissions in Restricted Frequency Bands

Refer as Appendix F

4 Test Equipment and Calibration Data

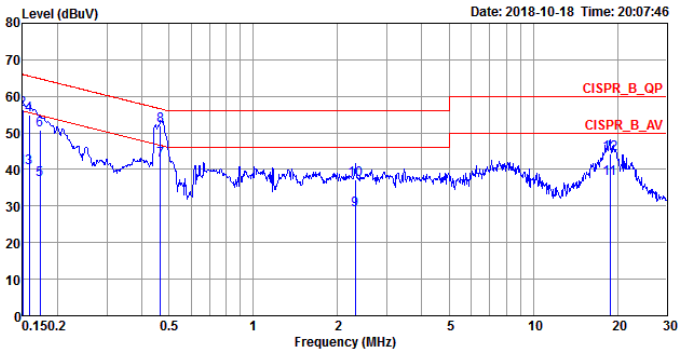
Instrument	Manufacturer	Model No.	Serial No.	Characteristics	Calibration Date	Calibration Due Date	Remark
EMI Receiver	Agilent	N9038A	My52260123	9kHz ~ 8.45GHz	Jan. 31, 2018	Jan. 30, 2019	Conduction (CO01-CB)
LISN	F.C.C.	FCC-LISN-50 -16-2	04083	150kHz ~ 100MHz	Dec. 20, 2017	Dec. 19, 2018	Conduction (CO01-CB)
LISN	Schwarzbeck	NSLK 8127	8127647	9kHz ~ 30MHz	Dec. 29, 2017	Dec. 28, 2018	Conduction (CO01-CB)
COND Cable	Woken	Cable	Low cable-CO01	150kHz ~ 30MHz	May 22, 2018	May 21, 2019	Conduction (CO01-CB)
Software	Audix	E3	6.120210n	-	N.C.R.	N.C.R.	Conduction (CO01-CB)
Loop Antenna	Teseq	HLA 6120	24155	9kHz - 30 MHz	Mar. 16, 2018	Mar. 15, 2019	Radiation (03CH01-CB)
BILOG ANTENNA with 6dB Attenuator	TESEQ & EMCI	CBL6112D & N-6-06	37880 & AT-N0609	20MHz ~ 2GHz	Aug. 27, 2018	Aug. 26, 2019	Radiation (03CH01-CB)
Horn Antenna	EMCO	3115	00075790	750MHz ~ 18GHz	Nov. 13, 2018	Nov. 12, 2019	Radiation (03CH01-CB)
Horn Antenna	Schwarzbeck	BBHA 9170	BBHA9170252	15GHz ~ 40GHz	Jun. 28, 2018	Jun. 27, 2019	Radiation (03CH01-CB)
Pre-Amplifier	EMCI	EMC330N	980332	20MHz ~ 3GHz	May 02, 2018	May 01, 2019	Radiation (03CH01-CB)
Pre-Amplifier	EMCI	EMC12630S E	980383	1GHz ~ 26.5GHz	Aug. 09, 2018	Aug. 08, 2019	Radiation (03CH01-CB)
Pre-Amplifier	MITEQ	TTA1840-35-HG	1864479	18GHz ~ 40GHz	Jul. 04, 2018	Jul. 03, 2019	Radiation (03CH01-CB)
Spectrum analyzer	R&S	FSP40	100080	9kHz~40GHz	Oct. 03, 2018	Oct. 02, 2019	Radiation (03CH01-CB)
EMI Test Receiver	R&S	ESCS	100359	9kHz ~ 2.75GHz	Jul. 03, 2018	Jul. 02, 2019	Radiation (03CH01-CB)
RF Cable-low	Woken	Low Cable-16+17	N/A	30 MHz ~ 1 GHz	Oct. 08, 2018	Oct. 07, 2019	Radiation (03CH01-CB)
RF Cable-high	Woken	High Cable-16	N/A	1 GHz ~ 18 GHz	Oct. 08, 2018	Oct. 07, 2019	Radiation (03CH01-CB)
RF Cable-high	Woken	High Cable-16+17	N/A	1 GHz ~ 18 GHz	Oct. 08, 2018	Oct. 07, 2019	Radiation (03CH01-CB)
RF Cable-high	Woken	High Cable-40G#1	N/A	18GHz ~ 40 GHz	Jul. 27, 2018	Jul. 26, 2019	Radiation (03CH01-CB)
RF Cable-high	Woken	High Cable-40G#2	N/A	18GHz ~ 40 GHz	Jul. 27, 2018	Jul. 26, 2019	Radiation (03CH01-CB)
Spectrum analyzer	R&S	FSV40	101027	9kHz~40GHz	Jun. 22, 2018	Jun. 21, 2019	Conducted (TH01-CB)
RF Cable-high	Woken	RG402	High Cable-06	1 GHz – 26.5 GHz	Oct. 08, 2018	Oct. 07, 2019	Conducted (TH01-CB)
RF Cable-high	Woken	RG402	High Cable-07	1 GHz –26.5 GHz	Oct. 08, 2018	Oct. 07, 2019	Conducted (TH01-CB)
RF Cable-high	Woken	RG402	High Cable-08	1 GHz –26.5 GHz	Oct. 08, 2018	Oct. 07, 2019	Conducted (TH01-CB)

Instrument	Manufacturer	Model No.	Serial No.	Characteristics	Calibration Date	Calibration Due Date	Remark
RF Cable-high	Woken	RG402	High Cable-09	1 GHz –26.5 GHz	Oct. 08, 2018	Oct. 07, 2019	Conducted (TH01-CB)
RF Cable-high	Woken	RG402	High Cable-10	1 GHz –26.5 GHz	Oct. 08, 2018	Oct. 07, 2019	Conducted (TH01-CB)
Power Sensor	Agilent	U2021XA	MY53410001	50MHz~18GHz	Nov. 20, 2017	Nov. 19, 2018	Conducted (TH01-CB)
Power Sensor	Agilent	U2021XA	MY53410001	50MHz~18GHz	Nov. 05, 2018	Nov. 04, 2019	Conducted (TH01-CB)

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

N.C.R. means Non-Calibration required.

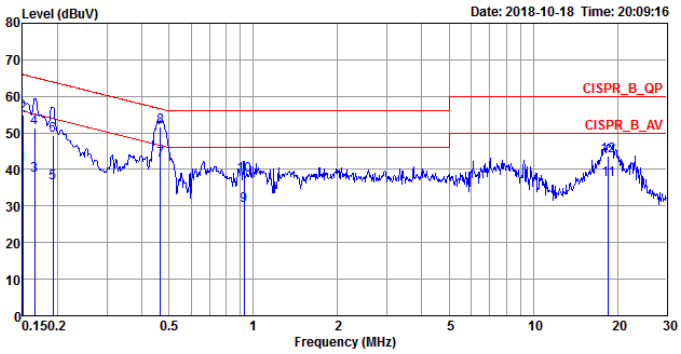
AC Power-line Conducted Emissions Result			
Operating Mode	2	**Power Phase**	Line
Operating Function	Normal Link		



	Freq	Level	Over Limit	Limit Line	Read Level	LISN Factor	Cable Loss	Remark	Pol/Phase
	MHz	dBuV	dB	dBuV	dBuV	dB	dB		
1	0.1500	40.30	-15.70	56.00	30.23	9.91	0.16	Average	LINE
2	0.1500	56.52	-9.48	66.00	46.45	9.91	0.16	QP	LINE
3	0.1582	40.48	-15.08	55.56	30.41	9.91	0.16	Average	LINE
4	0.1582	54.99	-10.57	65.56	44.92	9.91	0.16	QP	LINE
5	0.1731	37.29	-17.52	54.81	27.23	9.91	0.15	Average	LINE
6	0.1731	50.88	-13.93	64.81	40.82	9.91	0.15	QP	LINE
7	0.4661	42.60	-3.98	46.58	32.56	9.91	0.13	Average	LINE
8	0.4661	52.02	-4.56	56.58	41.98	9.91	0.13	QP	LINE
9	2.3090	28.99	-17.01	46.00	18.82	9.96	0.21	Average	LINE
10	2.3090	37.19	-18.81	56.00	27.02	9.96	0.21	QP	LINE
11	18.8205	37.42	-12.58	50.00	26.86	10.35	0.21	Average	LINE
12	18.8205	44.14	-15.86	60.00	33.58	10.35	0.21	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	0.1500	41.28	-14.72	56.00	31.20	9.92	0.16	Average	NEUTRAL
2	0.1500	54.94	-11.06	66.00	44.86	9.92	0.16	QP	NEUTRAL
3	0.1659	38.32	-16.84	55.16	28.24	9.92	0.16	Average	NEUTRAL
4	0.1659	51.29	-13.87	65.16	41.21	9.92	0.16	QP	NEUTRAL
5	0.1924	36.26	-17.67	53.93	26.20	9.92	0.14	Average	NEUTRAL
6	0.1924	49.16	-14.77	63.93	39.10	9.92	0.14	QP	NEUTRAL
7	0.4661	42.51	-4.07	46.58	32.46	9.92	0.13	Average	NEUTRAL
8	0.4661	51.76	-4.82	56.58	41.71	9.92	0.13	QP	NEUTRAL
9	0.9282	30.24	-15.76	46.00	20.12	9.93	0.19	Average	NEUTRAL
10	0.9282	38.42	-17.58	56.00	28.30	9.93	0.19	QP	NEUTRAL
11	18.5237	37.19	-12.81	50.00	26.75	10.23	0.21	Average	NEUTRAL
12	18.5237	43.66	-16.34	60.00	33.22	10.23	0.21	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)
2.4-2.4835GHz	-	-	-	-	-
802.11b_Nss1,(1Mbps)_2TX	8.525M	13.193M	13M2G1D	8M	12.719M
802.11g_Nss1,(6Mbps)_2TX	16.325M	16.692M	16M7D1D	16.3M	16.417M
802.11n HT20_Nss1,(MCS0)_2TX	17.575M	17.841M	17M8D1D	17.175M	17.616M
802.11n HT40_Nss1,(MCS0)_2TX	35.3M	36.082M	36M1D1D	31.35M	35.832M

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

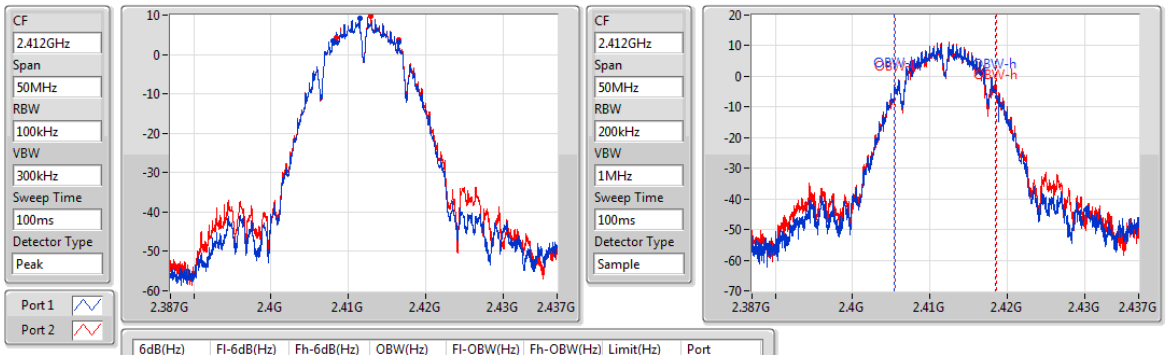
Mode	Result	Limit (Hz)	Port 1-N dB (Hz)	Port 1-OBW (Hz)	Port 2-N dB (Hz)	Port 2-OBW (Hz)
802.11b_Nss1,(1Mbps)_2TX	-	-	-	-	-	-
2412MHz	Pass	500k	8.5M	13.068M	8.075M	13.193M
2437MHz	Pass	500k	8.5M	13.143M	8.525M	13.193M
2462MHz	Pass	500k	8M	12.719M	8.075M	12.994M
802.11g_Nss1,(6Mbps)_2TX	-	-	-	-	-	-
2412MHz	Pass	500k	16.325M	16.467M	16.3M	16.492M
2437MHz	Pass	500k	16.3M	16.692M	16.325M	16.642M
2462MHz	Pass	500k	16.325M	16.417M	16.325M	16.467M
802.11n HT20_Nss1,(MCS0)_2TX	-	-	-	-	-	-
2412MHz	Pass	500k	17.575M	17.716M	17.575M	17.766M
2437MHz	Pass	500k	17.175M	17.841M	17.5M	17.816M
2462MHz	Pass	500k	17.575M	17.616M	17.525M	17.641M
802.11n HT40_Nss1,(MCS0)_2TX	-	-	-	-	-	-
2422MHz	Pass	500k	35.05M	35.882M	35.05M	35.932M
2437MHz	Pass	500k	35.15M	36.082M	35.3M	36.032M
2452MHz	Pass	500k	35.3M	36.032M	31.35M	35.832M

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

802.11b_Nss1,(1Mbps)_2TX **EBW**

2412MHz

02/01/2019

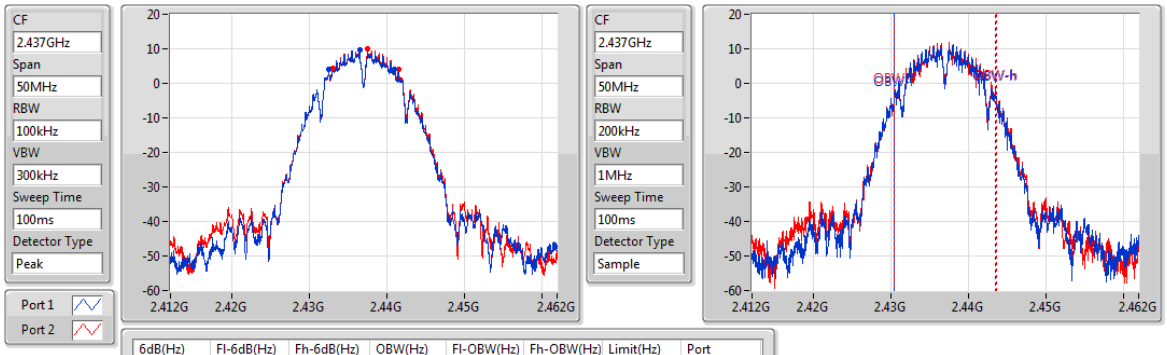


6dB(Hz)	Fl-6dB(Hz)	Fh-6dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
8.5M	2.407975G	2.416475G	13.068M	2.405453G	2.418522G	500k	1
8.075M	2.408425G	2.4165G	13.193M	2.405478G	2.418672G	500k	2

802.11b_Nss1,(1Mbps)_2TX **EBW**

2437MHz

02/01/2019

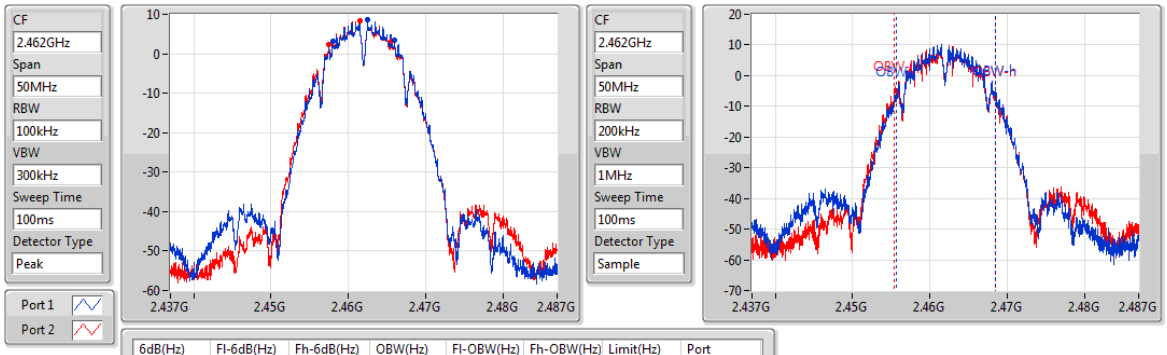


6dB(Hz)	Fl-6dB(Hz)	Fh-6dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
8.5M	2.43245G	2.44095G	13.143M	2.430353G	2.443497G	500k	1
8.525M	2.432975G	2.4415G	13.193M	2.430378G	2.443572G	500k	2

802.11b_Nss1,(1Mbps)_2TX **EBW**

2462MHz

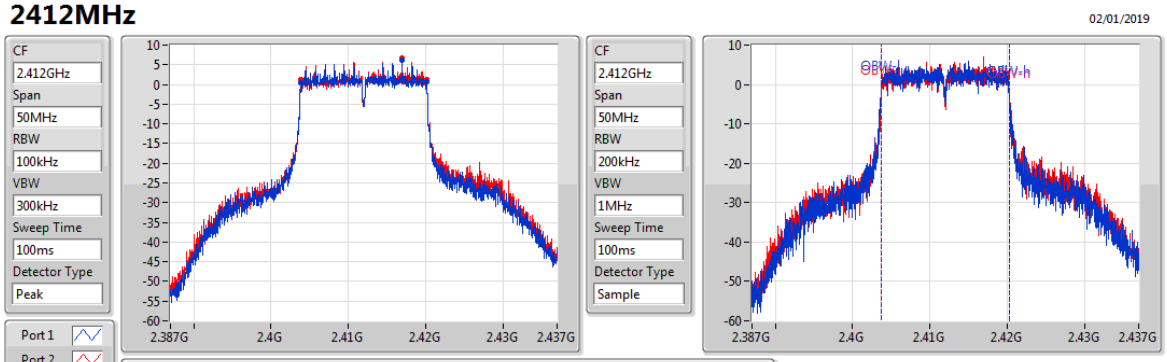
02/01/2019



6dB(Hz)	Fl-6dB(Hz)	Fh-6dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
8M	2.458G	2.466G	12.719M	2.455703G	2.468422G	500k	1
8.075M	2.457475G	2.46555G	12.994M	2.455428G	2.468422G	500k	2

802.11g_Nss1,(6Mbps)_2TX EBW

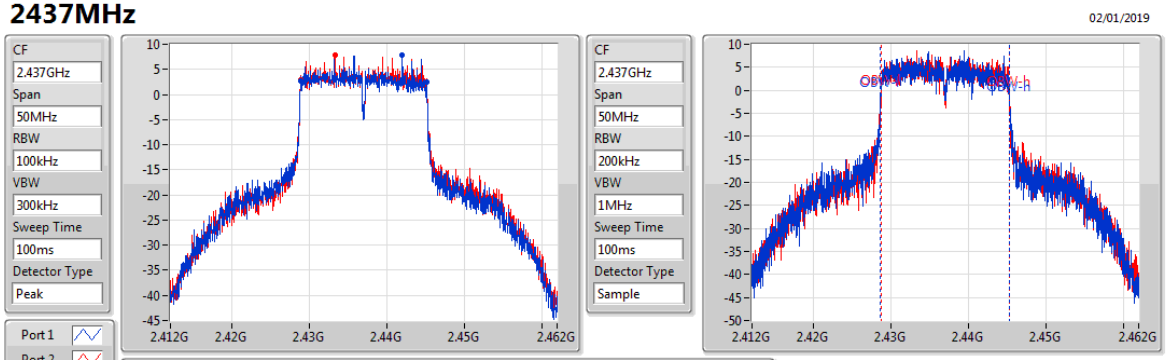
2412MHz



6dB(Hz)	Fl-6dB(Hz)	Fh-6dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
16.325M	2.403825G	2.42015G	16.467M	2.403754G	2.420221G	500k	1
16.3M	2.40385G	2.42015G	16.492M	2.403754G	2.420246G	500k	2

802.11g_Nss1,(6Mbps)_2TX EBW

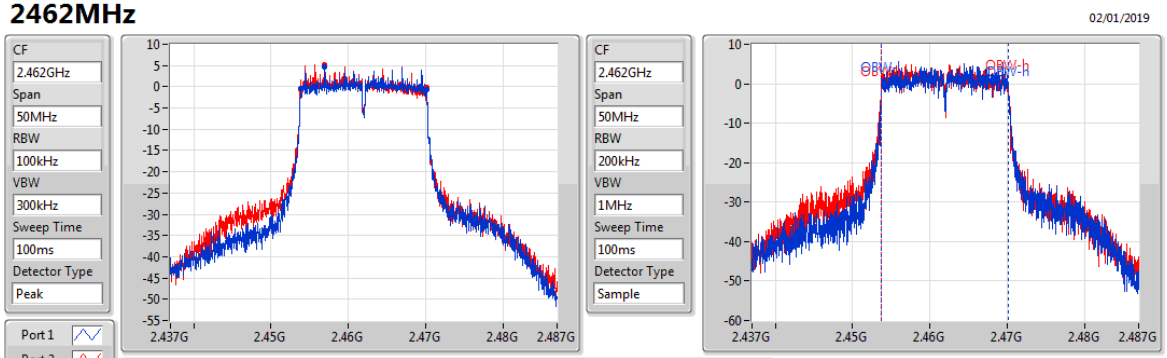
2437MHz



6dB(Hz)	Fl-6dB(Hz)	Fh-6dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
16.3M	2.428825G	2.445125G	16.692M	2.428604G	2.445296G	500k	1
16.325M	2.428825G	2.44515G	16.642M	2.428679G	2.445321G	500k	2

802.11g_Nss1,(6Mbps)_2TX EBW

2462MHz

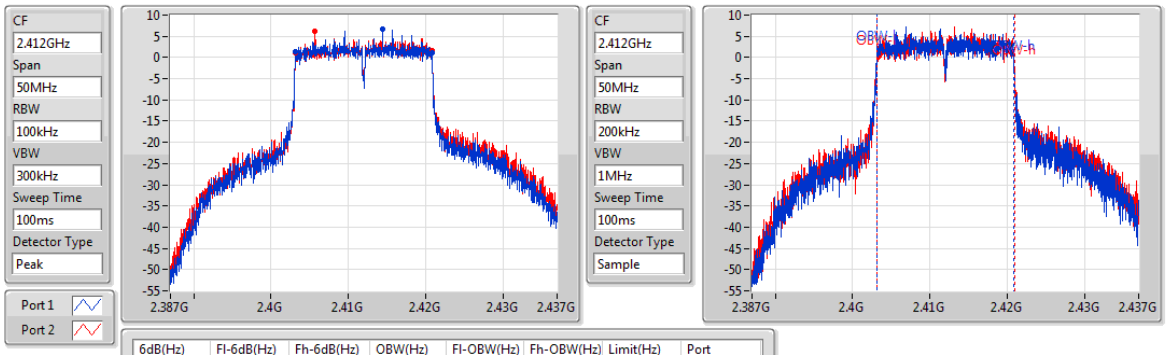


6dB(Hz)	Fl-6dB(Hz)	Fh-6dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
16.325M	2.453825G	2.47015G	16.417M	2.453779G	2.470196G	500k	1
16.325M	2.4538G	2.470125G	16.467M	2.453704G	2.470171G	500k	2

802.11n HT20_Nss1,(MCS0)_2TX **EBW**

2412MHz

02/01/2019

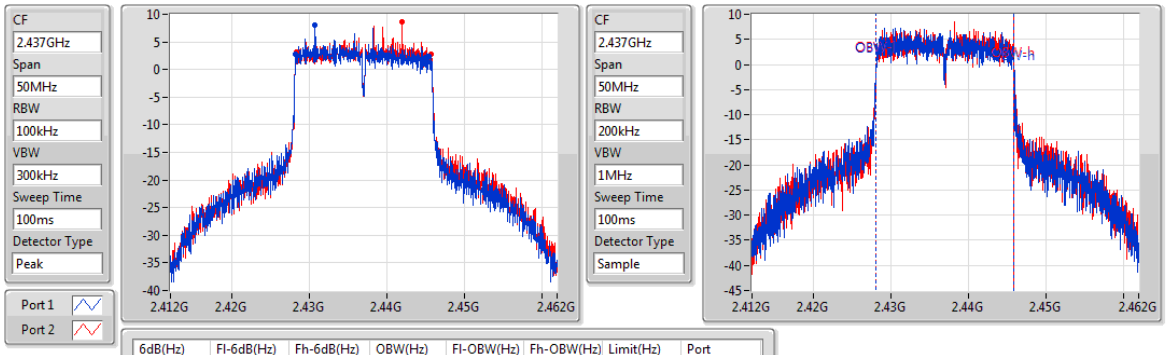


6dB(Hz)	Fl-6dB(Hz)	Fh-6dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
17.575M	2.4032G	2.420775G	17.716M	2.403154G	2.420871G	500k	1
17.575M	2.4032G	2.420775G	17.766M	2.403154G	2.420921G	500k	2

802.11n HT20_Nss1,(MCS0)_2TX **EBW**

2437MHz

02/01/2019

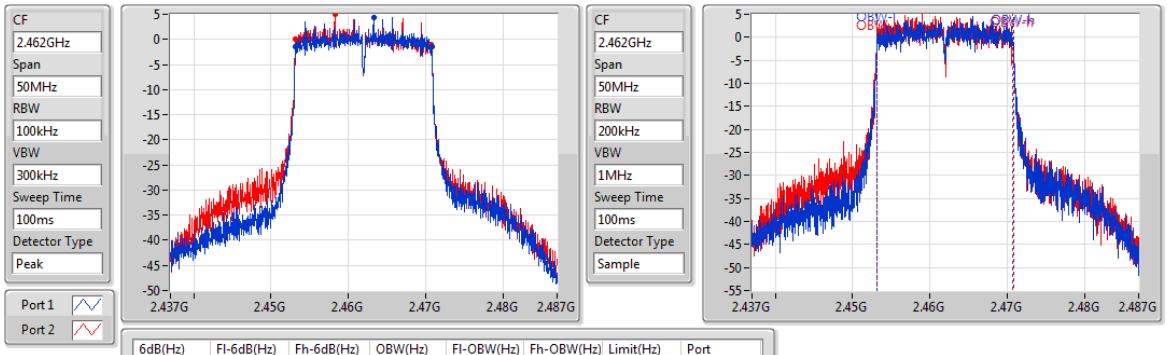


6dB(Hz)	Fl-6dB(Hz)	Fh-6dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
17.175M	2.4282G	2.445375G	17.841M	2.428029G	2.445871G	500k	1
17.5M	2.42825G	2.44575G	17.816M	2.428079G	2.445896G	500k	2

802.11n HT20_Nss1,(MCS0)_2TX **EBW**

2462MHz

02/01/2019

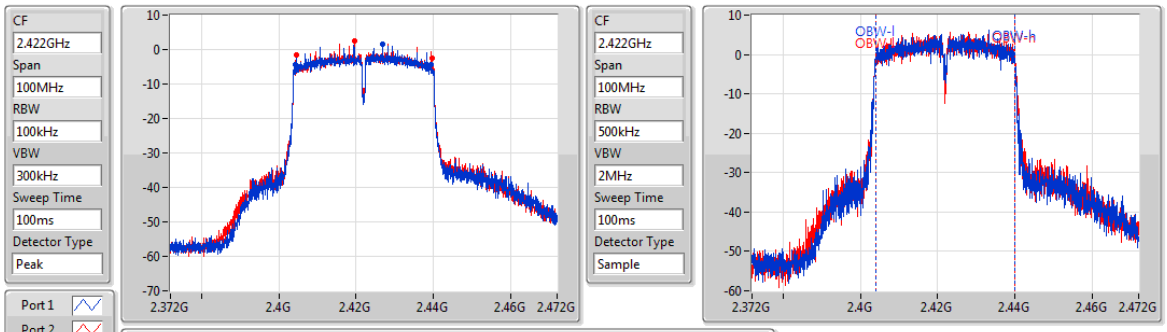


6dB(Hz)	Fl-6dB(Hz)	Fh-6dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
17.575M	2.4532G	2.470775G	17.616M	2.453179G	2.470796G	500k	1
17.525M	2.4532G	2.470725G	17.641M	2.453129G	2.470771G	500k	2

802.11n HT40_Nss1,(MCS0)_2TX EBW

2422MHz

02/01/2019

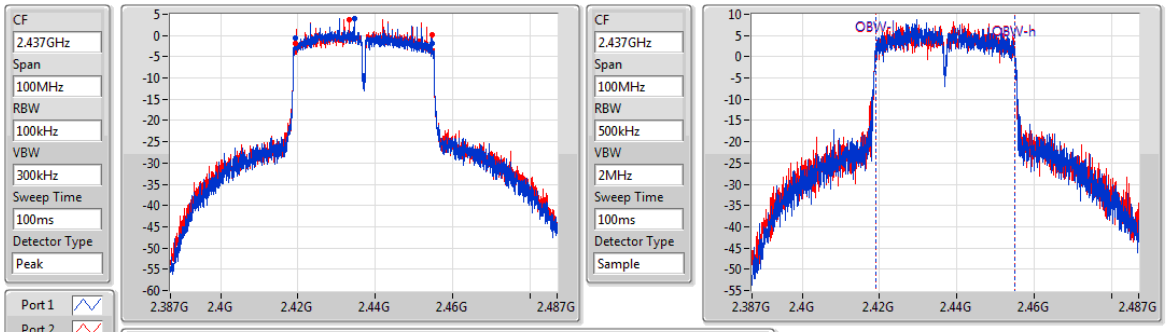


6dB(Hz)	Fl-6dB(Hz)	Fh-6dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
35.05M	2.40445G	2.4395G	35.882M	2.404009G	2.439891G	500k	1
35.05M	2.4045G	2.43955G	35.932M	2.404009G	2.439941G	500k	2

802.11n HT40_Nss1,(MCS0)_2TX EBW

2437MHz

02/01/2019

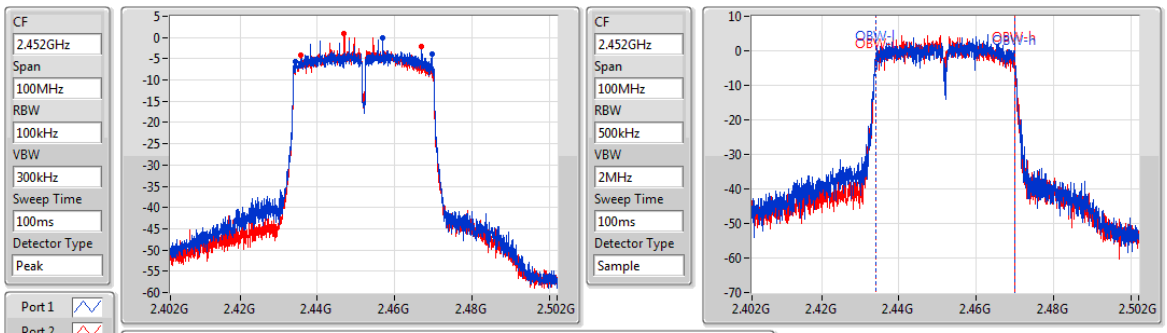


6dB(Hz)	Fl-6dB(Hz)	Fh-6dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
35.15M	2.4194G	2.45455G	36.082M	2.418909G	2.454991G	500k	1
35.3M	2.41925G	2.45455G	36.032M	2.418959G	2.454991G	500k	2

802.11n HT40_Nss1,(MCS0)_2TX EBW

2452MHz

02/01/2019



6dB(Hz)	Fl-6dB(Hz)	Fh-6dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
35.3M	2.43425G	2.46955G	36.032M	2.433909G	2.469941G	500k	1
31.35M	2.43565G	2.467G	35.832M	2.434009G	2.469841G	500k	2

Summary

Mode	Total Power (dBm)	Total Power (W)
2.4-2.4835GHz	-	-
802.11b_Nss1,(1Mbps)_2TX	23.15	0.20654
802.11g_Nss1,(6Mbps)_2TX	22.72	0.18707
802.11n HT20_Nss1,(MCS0)_2TX	22.79	0.19011
802.11n HT40_Nss1,(MCS0)_2TX	21.81	0.15171

Result

Mode	Result	DG (dBi)	Port 1 (dBm)	Port 2 (dBm)	Total Power (dBm)	Power Limit (dBm)
802.11b_Nss1,(1Mbps)_2TX	-	-	-	-	-	-
2412MHz	Pass	0.00	19.66	19.93	22.81	30.00
2437MHz	Pass	0.00	20.01	20.27	23.15	30.00
2462MHz	Pass	0.00	18.61	18.81	21.72	30.00
802.11g_Nss1,(6Mbps)_2TX	-	-	-	-	-	-
2412MHz	Pass	0.00	17.83	17.96	20.91	30.00
2417MHz	Pass	0.00	19.57	19.82	22.71	30.00
2437MHz	Pass	0.00	19.59	19.83	22.72	30.00
2457MHz	Pass	0.00	19.41	19.52	22.48	30.00
2462MHz	Pass	0.00	16.84	16.99	19.93	30.00
802.11n HT20_Nss1,(MCS0)_2TX	-	-	-	-	-	-
2412MHz	Pass	0.00	18.82	18.96	21.90	30.00
2417MHz	Pass	0.00	19.59	19.89	22.75	30.00
2437MHz	Pass	0.00	19.58	19.97	22.79	30.00
2457MHz	Pass	0.00	19.39	19.52	22.47	30.00
2462MHz	Pass	0.00	16.79	17.12	19.97	30.00
802.11n HT40_Nss1,(MCS0)_2TX	-	-	-	-	-	-
2422MHz	Pass	0.00	16.53	16.76	19.66	30.00
2427MHz	Pass	0.00	18.31	18.49	21.41	30.00
2432MHz	Pass	0.00	18.65	18.86	21.77	30.00
2437MHz	Pass	0.00	18.76	18.83	21.81	30.00
2442MHz	Pass	0.00	17.34	17.73	20.55	30.00
2447MHz	Pass	0.00	15.43	15.76	18.61	30.00
2452MHz	Pass	0.00	14.71	14.82	17.78	30.00

DG = Directional Gain; **Port X** = Port X output power
Note : Conducted average output power is for reference only

Summary

Mode	PD (dBm/RBW)
2.4-2.4835GHz	-
802.11b_Nss1,(1Mbps)_2TX	-4.16
802.11g_Nss1,(6Mbps)_2TX	-6.02
802.11n HT20_Nss1,(MCS0)_2TX	-5.95
802.11n HT40_Nss1,(MCS0)_2TX	-8.72

RBW=3kHz.

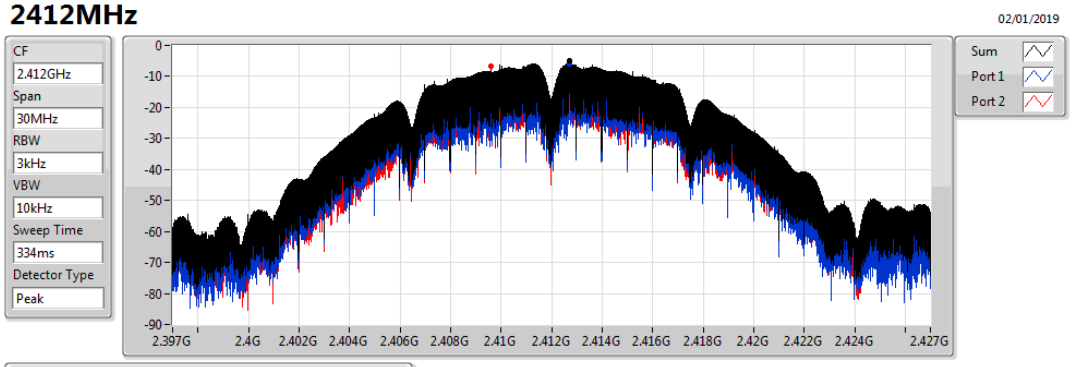
Result

Mode	Result	DG (dBi)	Port 1 (dBm/RBW)	Port 2 (dBm/RBW)	PD (dBm/RBW)	PD Limit (dBm/RBW)
802.11b_Nss1,(1Mbps)_2TX	-	-	-	-	-	-
2412MHz	Pass	3.01	-6.07	-6.85	-4.84	8.00
2437MHz	Pass	3.01	-6.12	-6.15	-4.16	8.00
2462MHz	Pass	3.01	-8.31	-9.58	-6.43	8.00
802.11g_Nss1,(6Mbps)_2TX	-	-	-	-	-	-
2412MHz	Pass	3.01	-10.62	-10.10	-8.66	8.00
2437MHz	Pass	3.01	-8.44	-8.45	-6.02	8.00
2462MHz	Pass	3.01	-12.30	-10.44	-8.81	8.00
802.11n HT20_Nss1,(MCS0)_2TX	-	-	-	-	-	-
2412MHz	Pass	3.01	-9.87	-9.93	-7.48	8.00
2437MHz	Pass	3.01	-7.60	-8.24	-5.95	8.00
2462MHz	Pass	3.01	-11.07	-10.24	-8.75	8.00
802.11n HT40_Nss1,(MCS0)_2TX	-	-	-	-	-	-
2422MHz	Pass	3.01	-12.72	-12.26	-10.20	8.00
2437MHz	Pass	3.01	-11.34	-10.13	-8.72	8.00
2452MHz	Pass	3.01	-14.58	-14.08	-12.33	8.00

DG = Directional Gain; RBW=3kHz;
PD = trace bin-by-bin of each transmits port summing can be performed maximum power density; **Port X** = Port Xpower density;

802.11b_Nss1,(1Mbps)_2TX **PSD**

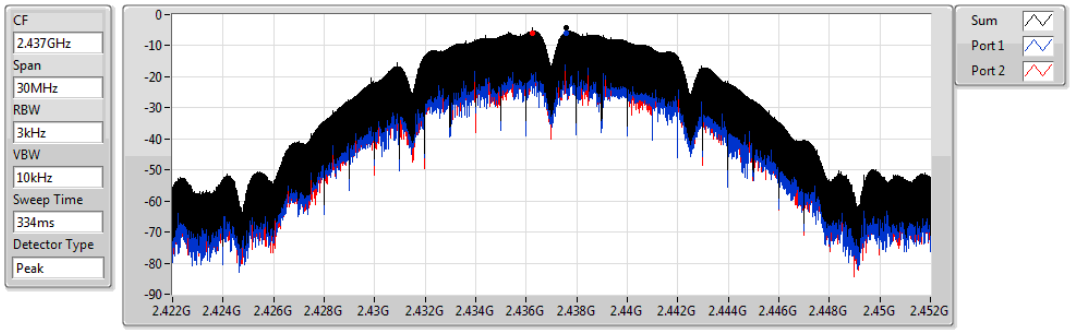
2412MHz



Sum	PD	Port 1	Port 2
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
-4.84	-4.84	-6.07	-6.85

802.11b_Nss1,(1Mbps)_2TX **PSD**

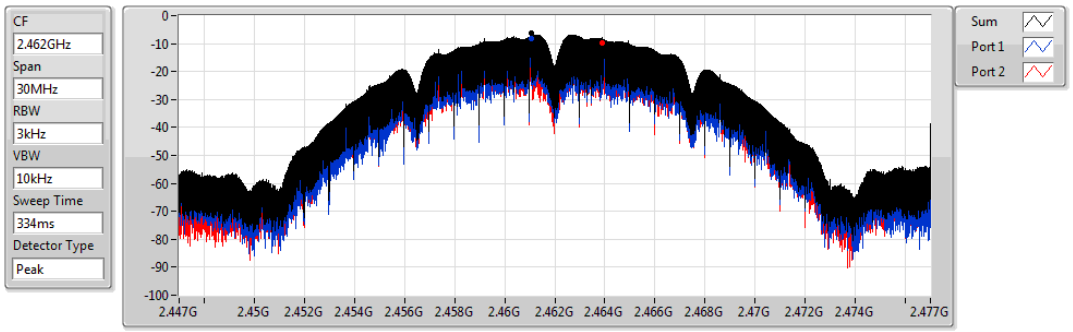
2437MHz



Sum	PD	Port 1	Port 2
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
-4.16	-4.16	-6.12	-6.15

802.11b_Nss1,(1Mbps)_2TX **PSD**

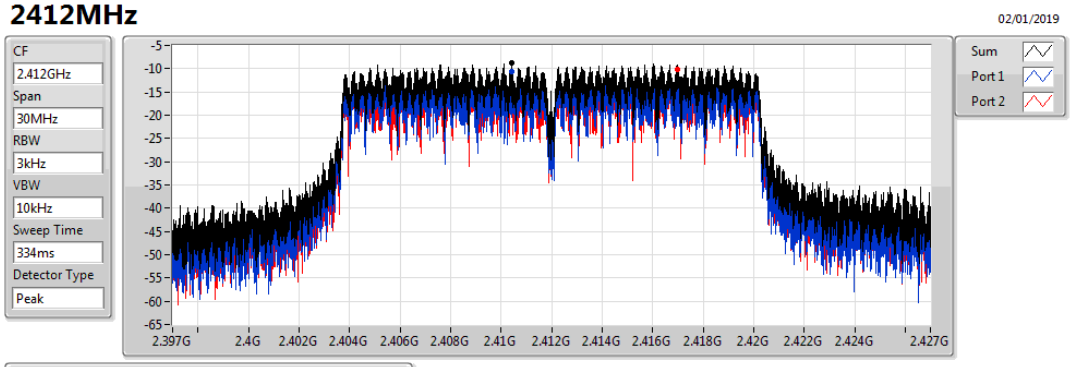
2462MHz



Sum	PD	Port 1	Port 2
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
-6.43	-6.43	-8.31	-9.58

802.11g_Nss1,(6Mbps)_2TX **PSD**

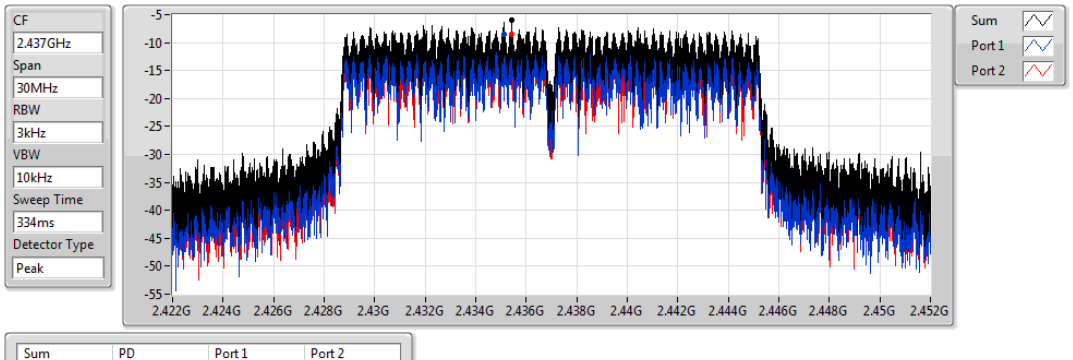
2412MHz



Sum	PD	Port 1	Port 2
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
-8.66	-8.66	-10.62	-10.10

802.11g_Nss1,(6Mbps)_2TX **PSD**

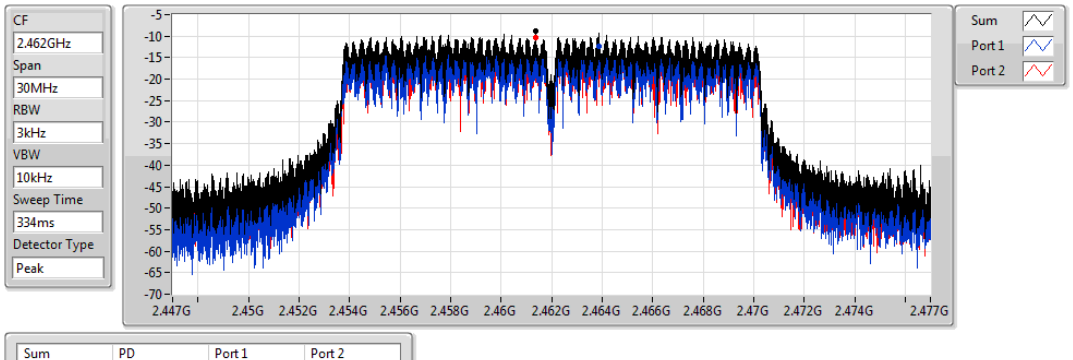
2437MHz



Sum	PD	Port 1	Port 2
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
-6.02	-6.02	-8.44	-8.45

802.11g_Nss1,(6Mbps)_2TX **PSD**

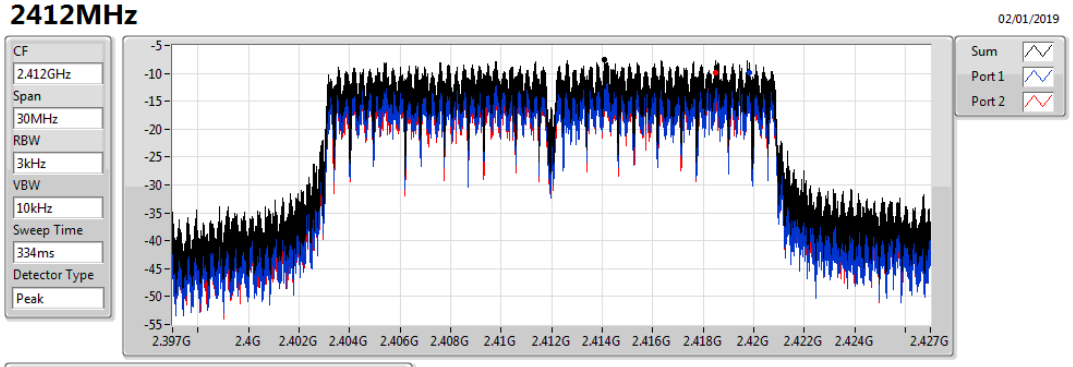
2462MHz



Sum	PD	Port 1	Port 2
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
-8.81	-8.81	-12.30	-10.44

802.11n HT20_Nss1,(MCS0)_2TX **PSD**

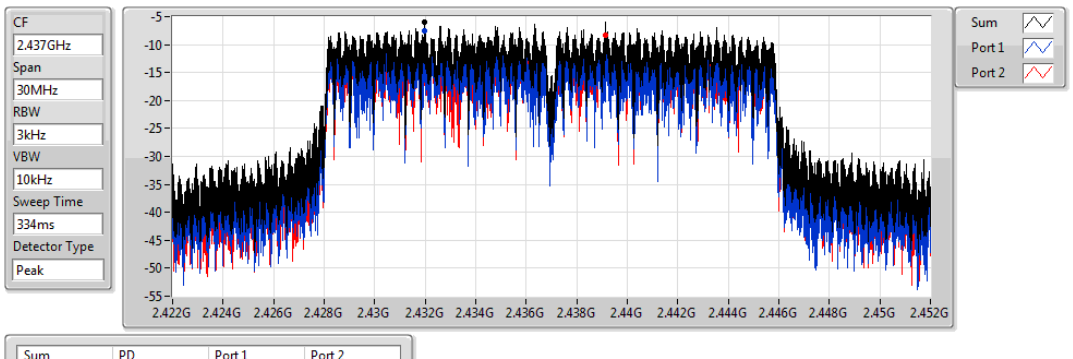
2412MHz



Sum	PD	Port 1	Port 2
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
-7.48	-7.48	-9.87	-9.93

802.11n HT20_Nss1,(MCS0)_2TX **PSD**

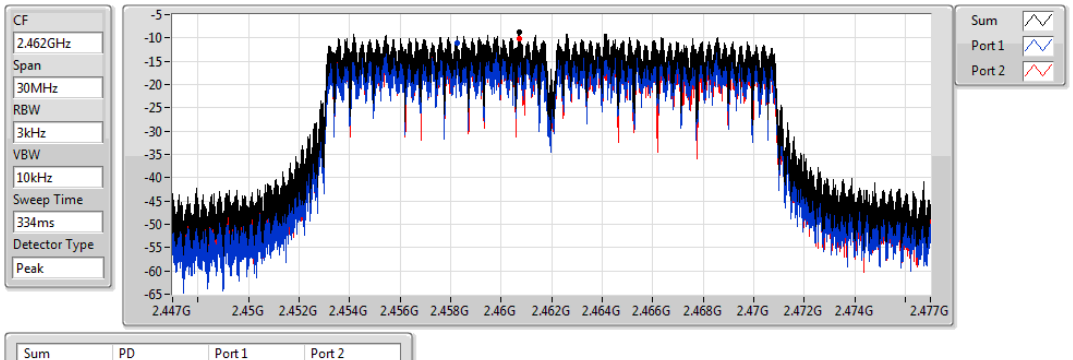
2437MHz



Sum	PD	Port 1	Port 2
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
-5.95	-5.95	-7.60	-8.24

802.11n HT20_Nss1,(MCS0)_2TX **PSD**

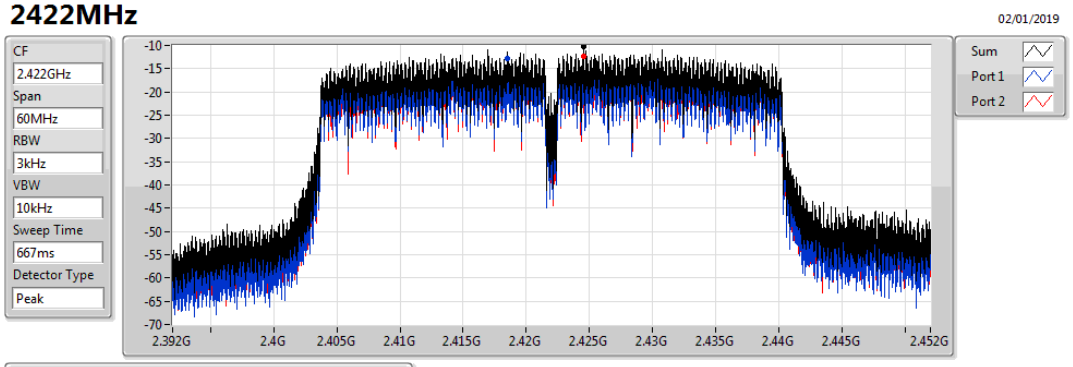
2462MHz



Sum	PD	Port 1	Port 2
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
-8.75	-8.75	-11.07	-10.24

802.11n HT40_Nss1,(MCS0)_2TX PSD

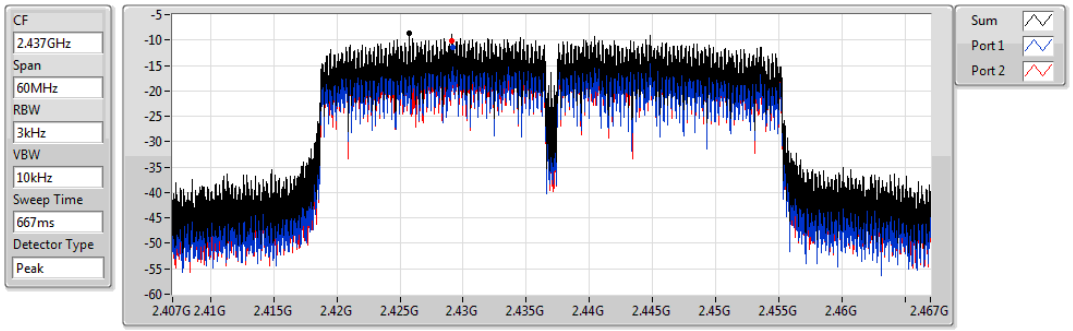
2422MHz



Sum	PD	Port 1	Port 2
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
-10.20	-10.20	-12.72	-12.26

802.11n HT40_Nss1,(MCS0)_2TX PSD

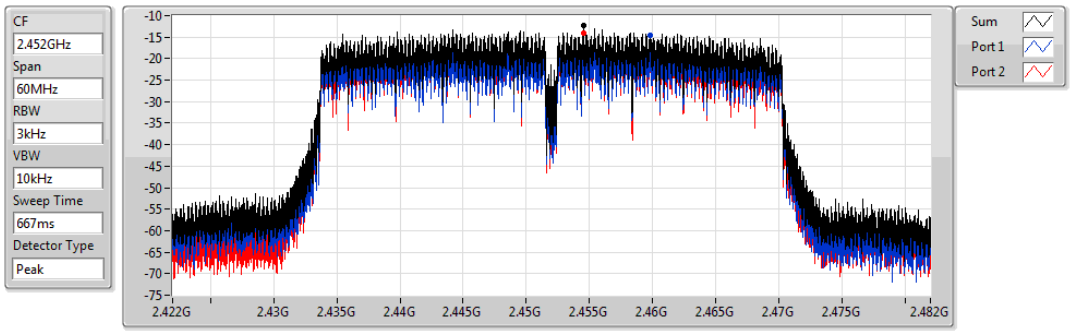
2437MHz



Sum	PD	Port 1	Port 2
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
-8.72	-8.72	-11.34	-10.13

802.11n HT40_Nss1,(MCS0)_2TX PSD

2452MHz



Sum	PD	Port 1	Port 2
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
-12.33	-12.33	-14.58	-14.08

Summary

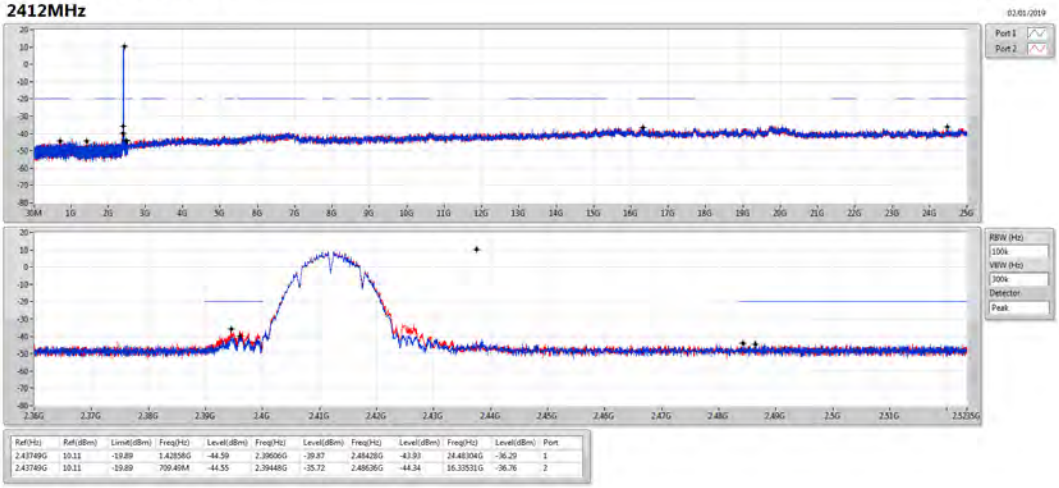
Mode	Result	Ref (Hz)	Ref (dBm)	Limit (dBm)	Freq (Hz)	Level (dBm)	Freq (Hz)	Level (dBm)	Freq (Hz)	Level (dBm)	Freq (Hz)	Level (dBm)	Port
2.4-2.4835GHz	-	-	-	-	-	-	-	-	-	-	-	-	-
802.11b_Nss1,(1Mbps)_2TX	Pass	2.43749G	10.11	-19.89	709.49M	-44.55	2.39448G	-35.72	2.48636G	-44.34	16.33531G	-36.76	2
802.11g_Nss1,(6Mbps)_2TX	Pass	2.4357G	7.86	-22.14	805.89M	-44.49	2.39696G	-25.26	2.4898G	-43.86	23.47441G	-35.88	2
802.11n HT20_Nss1,(MCS0)_2TX	Pass	2.43198G	8.48	-21.52	2.11273G	-44.70	2.39886G	-23.63	2.494G	-44.03	17.5968G	-36.06	2
802.11n HT40_Nss1,(MCS0)_2TX	Pass	2.43202G	4.29	-25.71	864.42M	-45.01	2.39884G	-29.89	2.48354G	-37.58	17.08272G	-36.26	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
802.11b_Nss1,(1Mbps)_2TX	-	-	-	-	-	-	-	-	-	-	-	-	-
2412MHz	Pass	2.43749G	10.11	-19.89	1.42858G	-44.59	2.39606G	-39.87	2.48428G	-43.93	24.48304G	-36.29	1
2412MHz	Pass	2.43749G	10.11	-19.89	709.49M	-44.55	2.39448G	-35.72	2.48636G	-44.34	16.33531G	-36.76	2
2437MHz	Pass	2.43749G	10.11	-19.89	903.75M	-44.18	2.39894G	-44.79	2.4919G	-43.37	16.27631G	-36.32	1
2437MHz	Pass	2.43749G	10.11	-19.89	1.91788G	-44.38	2.39708G	-45.03	2.50492G	-44.24	15.20867G	-35.93	2
2462MHz	Pass	2.43749G	10.11	-19.89	1.65576G	-43.60	2.39792G	-44.79	2.5226G	-44.00	24.83705G	-36.00	1
2462MHz	Pass	2.43749G	10.11	-19.89	935.79M	-43.56	2.39774G	-45.25	2.4889G	-42.81	16.42522G	-36.50	2
802.11g_Nss1,(6Mbps)_2TX	-	-	-	-	-	-	-	-	-	-	-	-	-
2412MHz	Pass	2.4357G	7.86	-22.14	1.7743G	-44.63	2.39922G	-25.57	2.51348G	-44.26	17.69514G	-37.02	1
2412MHz	Pass	2.4357G	7.86	-22.14	805.89M	-44.49	2.39696G	-25.26	2.4898G	-43.86	23.47441G	-35.88	2
2437MHz	Pass	2.4357G	7.86	-22.14	1.75711G	-44.23	2.3999G	-43.31	2.48692G	-43.54	24.51395G	-36.10	1
2437MHz	Pass	2.4357G	7.86	-22.14	871.71M	-44.57	2.39894G	-42.44	2.48866G	-43.60	17.69795G	-36.64	2
2462MHz	Pass	2.4357G	7.86	-22.14	1.76789G	-43.77	2.3963G	-45.03	2.4838G	-40.19	16.24821G	-36.08	1
2462MHz	Pass	2.4357G	7.86	-22.14	867.93M	-43.78	2.3951G	-44.21	2.48402G	-38.93	16.2145G	-36.06	2
802.11n HT20_Nss1,(MCS0)_2TX	-	-	-	-	-	-	-	-	-	-	-	-	-
2412MHz	Pass	2.43198G	8.48	-21.52	923.56M	-43.90	2.3995G	-24.18	2.48994G	-43.85	23.19345G	-36.43	1
2412MHz	Pass	2.43198G	8.48	-21.52	2.11273G	-44.70	2.39886G	-23.63	2.494G	-44.03	17.5968G	-36.06	2
2437MHz	Pass	2.43198G	8.48	-21.52	2.19399G	-44.51	2.39978G	-42.42	2.5171G	-43.82	17.68952G	-35.30	1
2437MHz	Pass	2.43198G	8.48	-21.52	936.08M	-44.20	2.39826G	-42.45	2.4894G	-43.55	17.6839G	-36.34	2
2462MHz	Pass	2.43198G	8.48	-21.52	2.16981G	-44.44	2.39856G	-44.50	2.48412G	-36.89	17.69514G	-36.71	1
2462MHz	Pass	2.43198G	8.48	-21.52	764.82M	-44.76	2.39468G	-44.52	2.48362G	-35.96	16.95622G	-36.52	2
802.11n HT40_Nss1,(MCS0)_2TX	-	-	-	-	-	-	-	-	-	-	-	-	-
2422MHz	Pass	2.43202G	4.29	-25.71	1.98766G	-44.26	2.3976G	-35.36	2.49402G	-44.31	24.12217G	-36.70	1
2422MHz	Pass	2.43202G	4.29	-25.71	1.9307G	-44.51	2.3996G	-33.28	2.49342G	-44.17	24.80649G	-36.65	2
2437MHz	Pass	2.43202G	4.29	-25.71	1.79616G	-43.79	2.3998G	-32.23	2.48378G	-39.49	24.44189G	-35.70	1
2437MHz	Pass	2.43202G	4.29	-25.71	864.42M	-45.01	2.39884G	-29.89	2.48354G	-37.58	17.08272G	-36.26	2
2452MHz	Pass	2.43202G	4.29	-25.71	2.07869G	-44.55	2.39584G	-44.61	2.48506G	-42.00	16.2722G	-35.67	1
2452MHz	Pass	2.43202G	4.29	-25.71	2.12506G	-43.77	2.3956G	-44.68	2.48446G	-41.25	17.6829G	-36.57	2

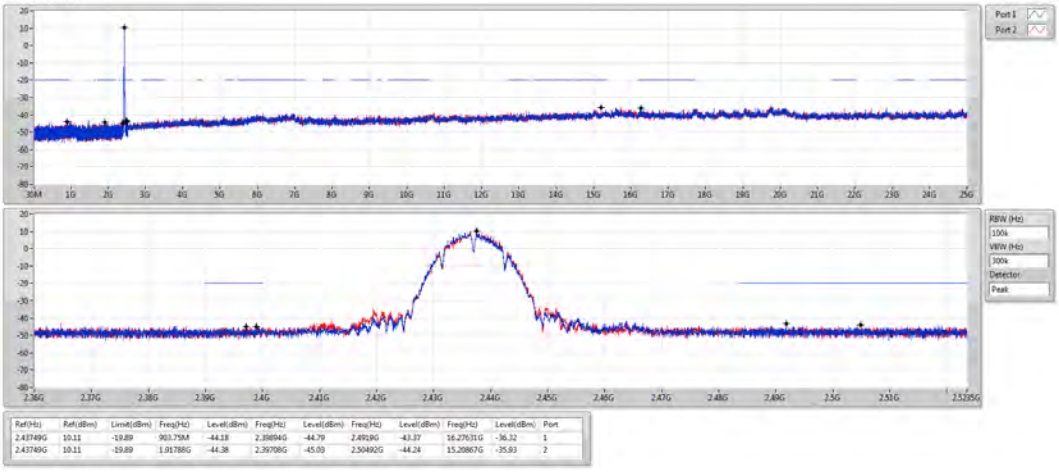
802.11b_Nss1,(1Mbps)_2TX CSE NdB

2412MHz



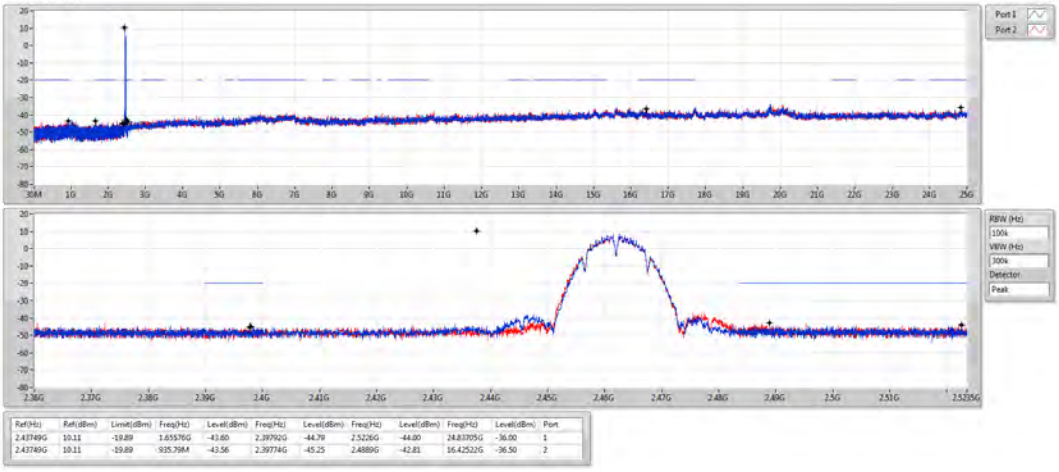
802.11b_Nss1,(1Mbps)_2TX CSE NdB

2437MHz



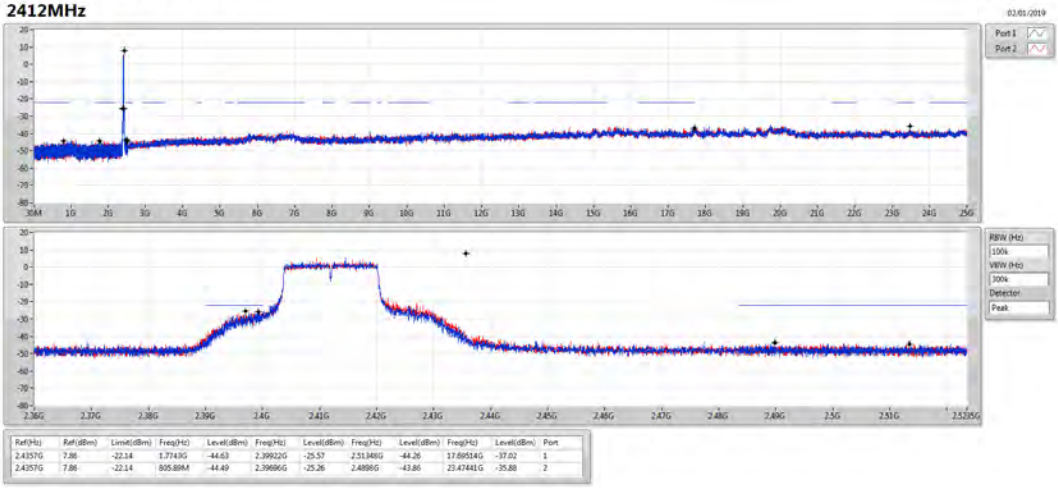
802.11b_Nss1,(1Mbps)_2TX CSE NdB

2462MHz



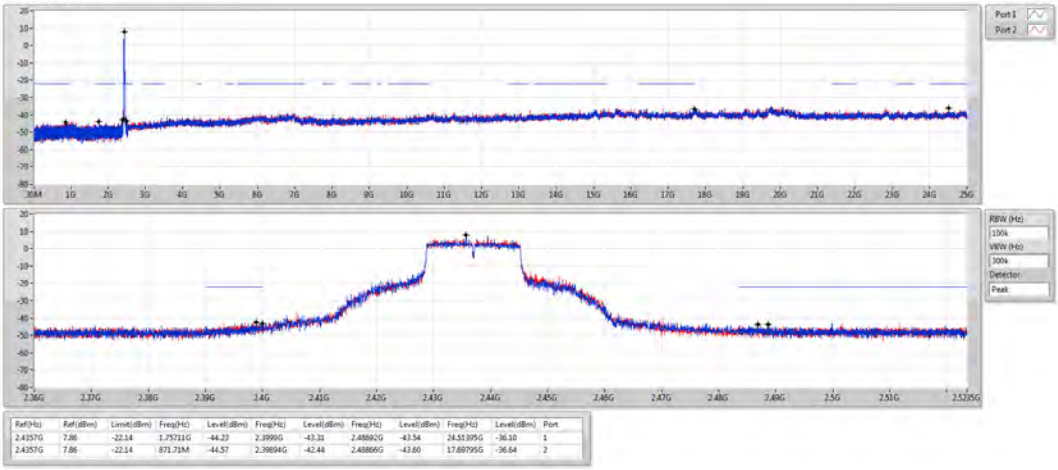
802.11g_Nss1,(6Mbps)_2TX CSE NdB

2412MHz



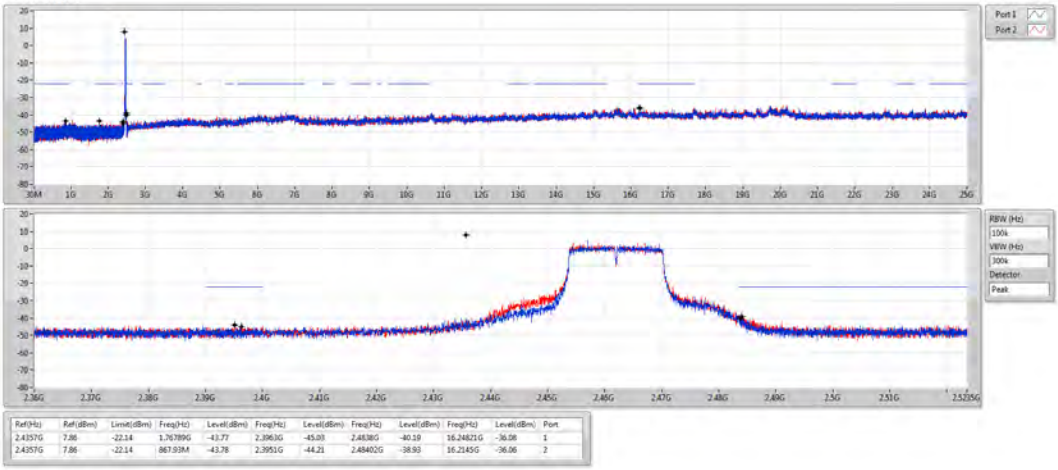
802.11g_Nss1,(6Mbps)_2TX CSE NdB

2437MHz



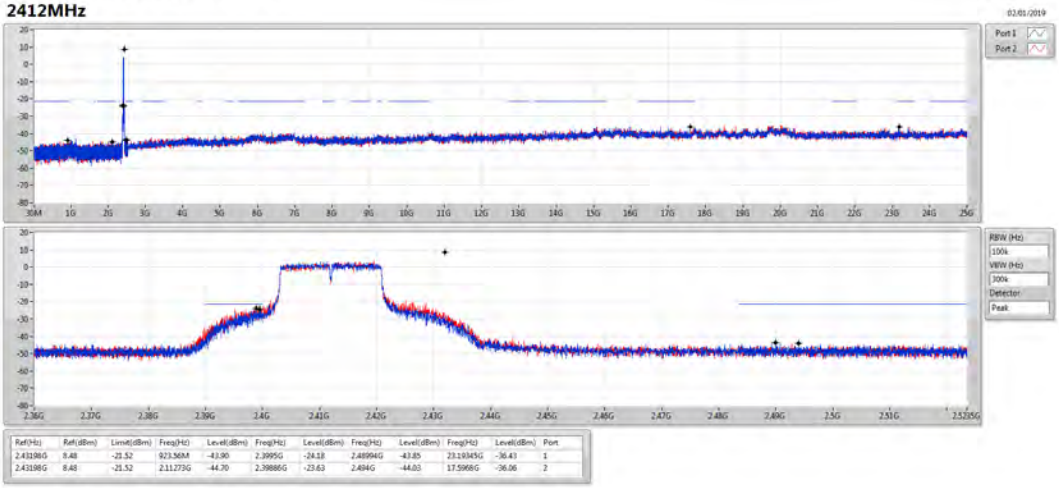
802.11g_Nss1,(6Mbps)_2TX CSE NdB

2462MHz



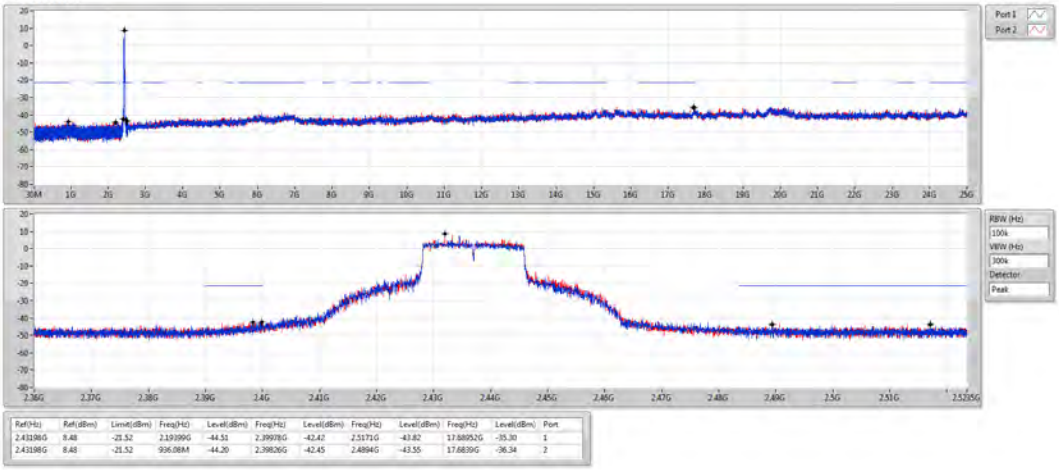
802.11n HT20_Nss1,(MCS0)_2TX CSE NdB

2412MHz



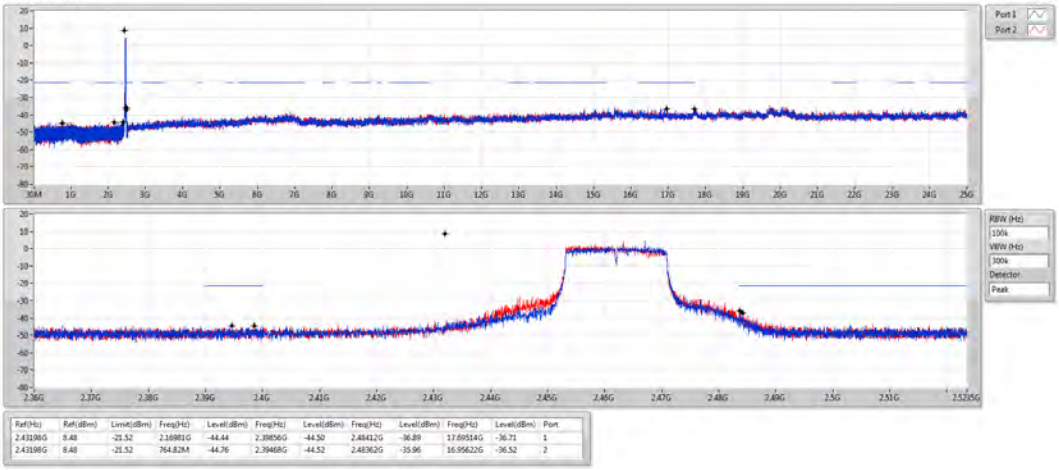
802.11n HT20_Nss1,(MCS0)_2TX CSE NdB

2437MHz



802.11n HT20_Nss1,(MCS0)_2TX CSE NdB

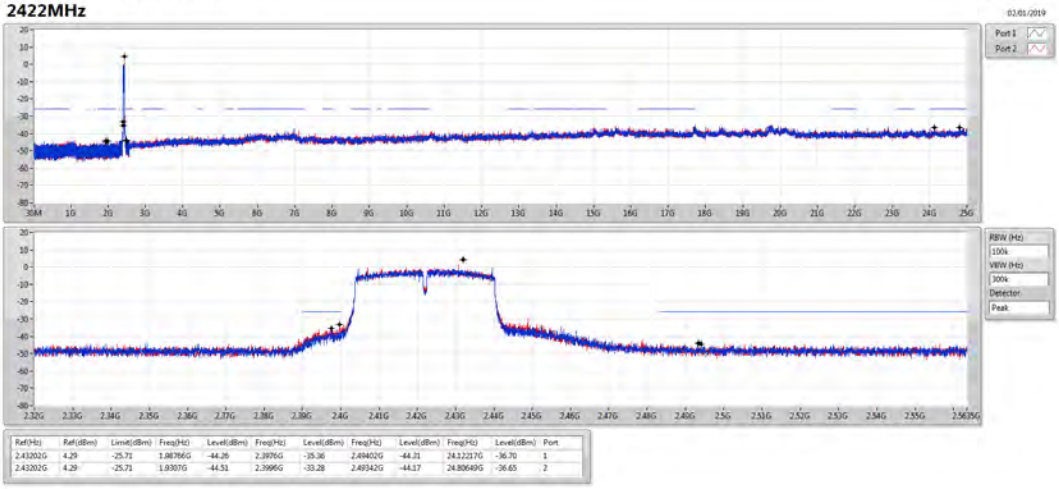
2462MHz



802.11n HT40_Nss1,(MCS0)_2TX

2422MHz

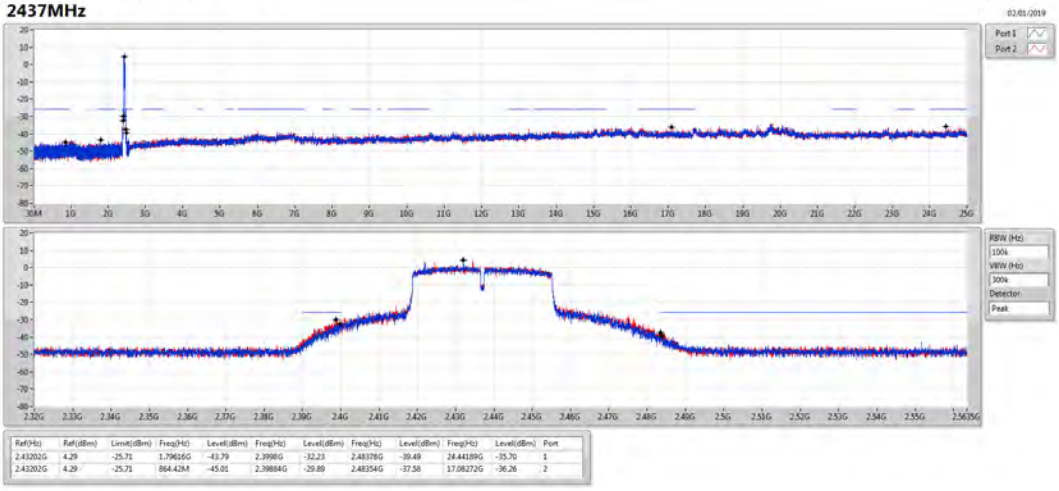
CSE NdB



802.11n HT40_Nss1,(MCS0)_2TX

2437MHz

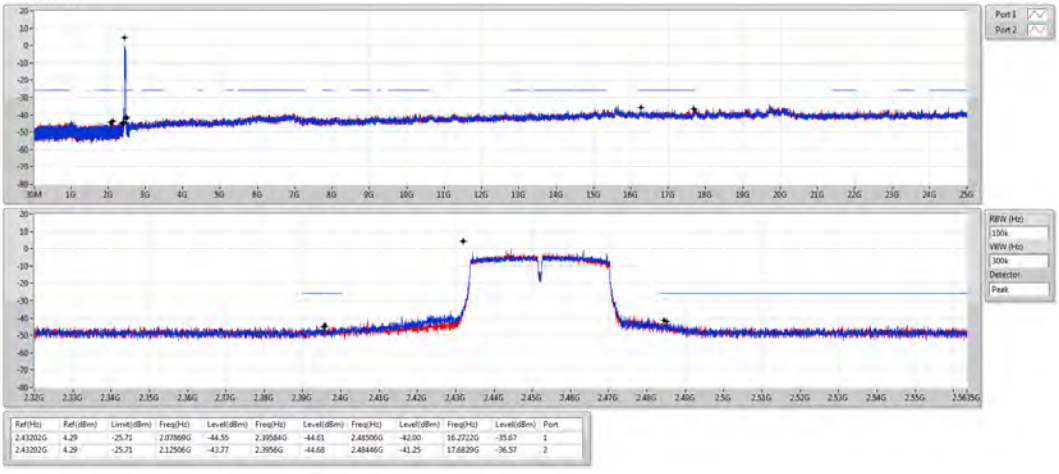
CSE NdB



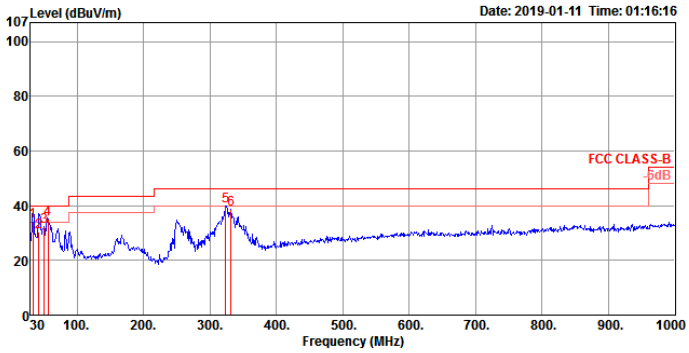
802.11n HT40_Nss1,(MCS0)_2TX

2452MHz

CSE NdB



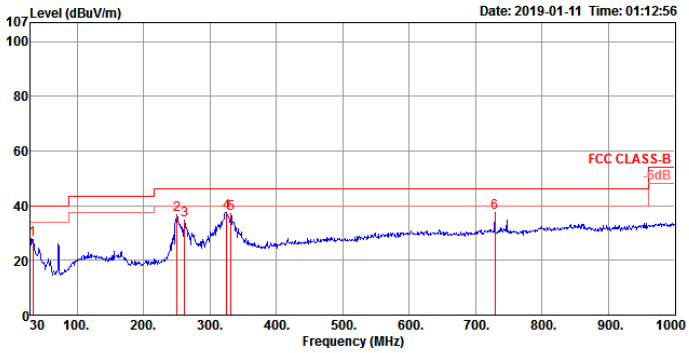
RSE below 1GHz Result			
Operating Mode	2	**Polarization**	Vertical
Operating Function	Normal Link		



	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	A/Pos	T/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	cm	deg		
1	33.88	34.45	40.00	-5.55	44.50	0.55	21.82	32.42	102	126	QP	VERTICAL
2	42.61	30.40	40.00	-9.60	45.20	0.64	16.98	32.42	100	222	QP	VERTICAL
3	50.37	32.55	40.00	-7.45	50.74	0.73	13.50	32.42	100	360	Peak	VERTICAL
4	56.19	35.32	40.00	-4.68	54.45	0.77	12.51	32.41	100	360	Peak	VERTICAL
5	323.91	40.00	46.00	-6.00	50.77	1.94	19.56	32.27	100	360	Peak	VERTICAL
6	331.67	38.89	46.00	-7.11	49.52	1.97	19.67	32.27	100	360	Peak	VERTICAL

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		



	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	A/Pos	T/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	cm	deg		
1	33.88	27.78	40.00	-12.22	37.83	0.55	21.82	32.42	100	0	Peak	HORIZONTAL
2	250.19	36.61	46.00	-9.39	49.17	1.62	18.10	32.28	100	0	Peak	HORIZONTAL
3	261.83	34.86	46.00	-11.14	46.55	1.67	18.91	32.27	100	0	Peak	HORIZONTAL
4	324.88	37.66	46.00	-8.34	48.43	1.94	19.56	32.27	100	0	Peak	HORIZONTAL
5	331.67	37.26	46.00	-8.74	47.89	1.97	19.67	32.27	100	0	Peak	HORIZONTAL
6	729.37	37.33	46.00	-8.67	41.18	2.89	25.53	32.27	100	0	Peak	HORIZONTAL

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.)

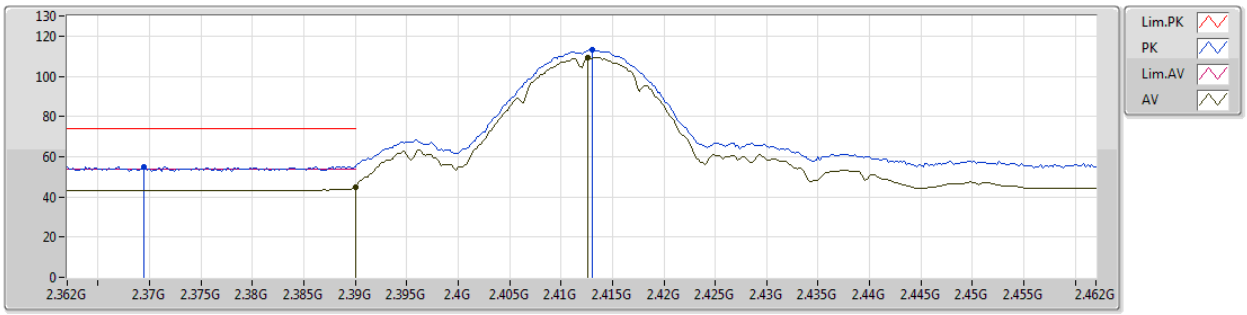
Summary

Mode	Result	Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comments
2.4-2.4835GHz	-	-	-	-	-	-	-	-	-	-	-	-
802.11n HT40_Nss1,(MCS0)_2TX	Pass	AV	2.4835G	53.80	54.00	-0.20	31.59	3	Horizontal	247	2.97	-

802.11b_Nss1,(1Mbps)_2TX

2412MHz_TX

28/12/2018



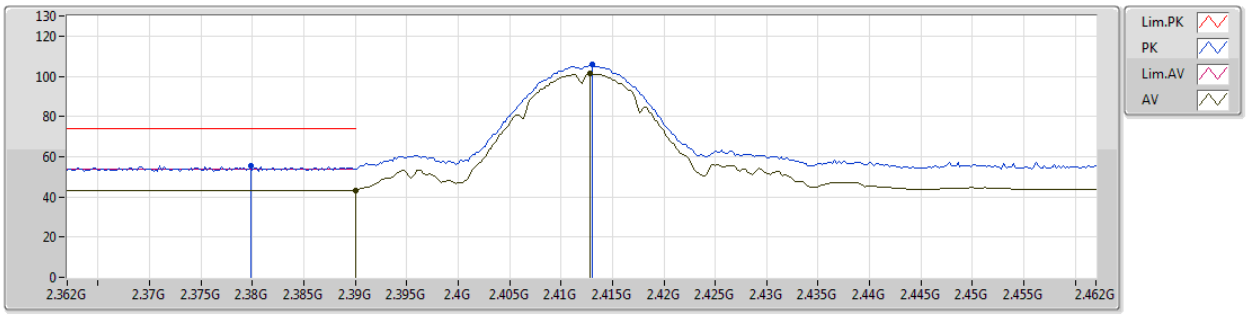
EUT Z_2TX
Setting 19.5
03-P-2
FSP(100019)

Type	Freq	Level	Limit	Margin	Factor	Dist	Condition	Azimuth	Height	Comments
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB)	(m)		(°)	(m)	
PK	2.3694G	55.12	74.00	-18.88	31.89	3	Vertical	114	1.05	-
AV	2.39G	44.81	54.00	-9.19	31.95	3	Vertical	114	1.05	-
PK	2.413G	113.42	Inf	-Inf	32.02	3	Vertical	114	1.05	-
AV	2.4126G	109.26	Inf	-Inf	32.02	3	Vertical	114	1.05	-

802.11b_Nss1,(1Mbps)_2TX

2412MHz_TX

28/12/2018



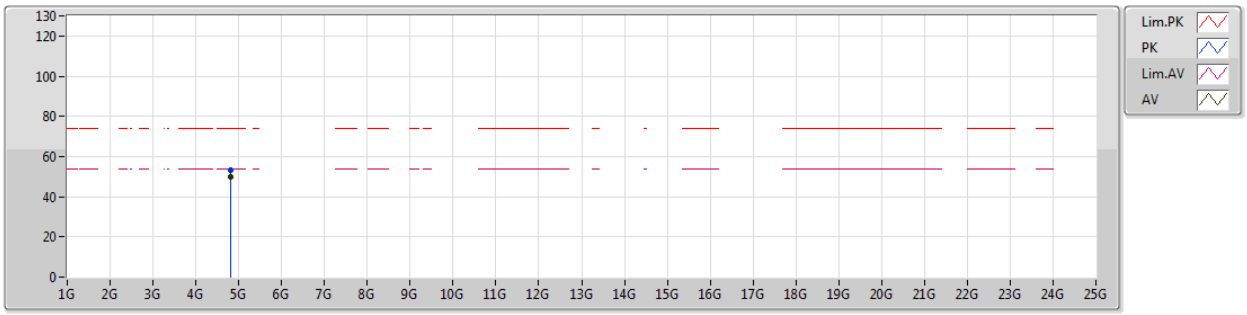
EUT Z_2TX
Setting 19.5
03-P-2
FSP(100019)

Type	Freq	Level	Limit	Margin	Factor	Dist	Condition	Azimuth	Height	Comments
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB)	(m)		(°)	(m)	
PK	2.3798G	55.44	74.00	-18.56	31.92	3	Horizontal	99	1.33	-
AV	2.39G	43.42	54.00	-10.58	31.95	3	Horizontal	99	1.33	-
PK	2.413G	105.64	Inf	-Inf	32.02	3	Horizontal	99	1.33	-
AV	2.4128G	101.60	Inf	-Inf	32.02	3	Horizontal	99	1.33	-

802.11b_Nss1,(1Mbps)_2TX

2412MHz_TX

27/12/2018



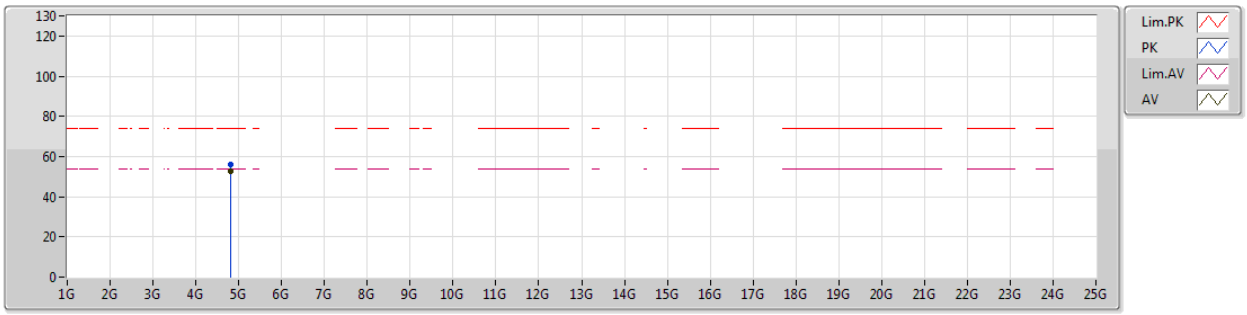
EUT Y_2TX
Setting 19.5
03-S-5
FSP(100019)

Type	Freq	Level	Limit	Margin	Factor	Dist	Condition	Azimuth	Height	Comments
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB)	(m)		(°)	(m)	
PK	4.82394G	53.17	74.00	-20.83	4.95	3	Vertical	16	2.02	-
AV	4.82396G	49.84	54.00	-4.16	4.95	3	Vertical	16	2.02	-

802.11b_Nss1,(1Mbps)_2TX

2412MHz_TX

27/12/2018



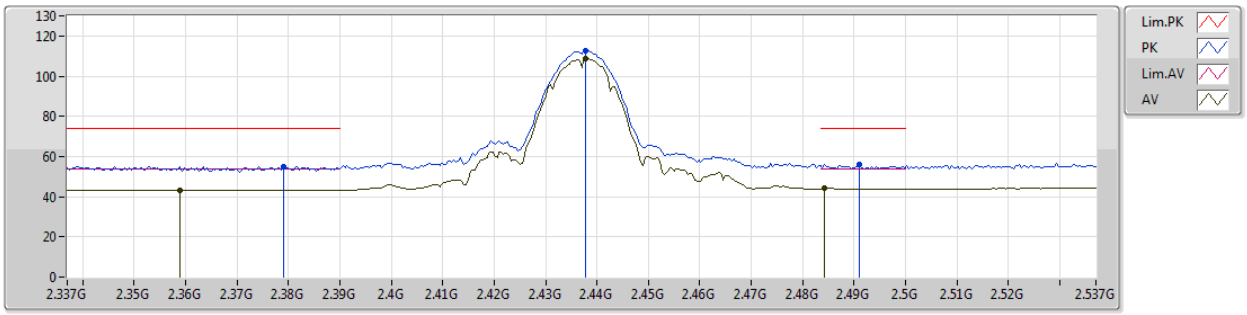
EUT Y_2TX
Setting 19.5
03-S-5
FSP(100019)

Type	Freq	Level	Limit	Margin	Factor	Dist	Condition	Azimuth	Height	Comments
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB)	(m)		(°)	(m)	
AV	4.82396G	52.72	54.00	-1.28	4.95	3	Horizontal	281	1.48	-
PK	4.82398G	56.17	74.00	-17.83	4.95	3	Horizontal	281	1.48	-

802.11b_Nss1,(1Mbps)_2TX

2437MHz_TX

29/12/2018



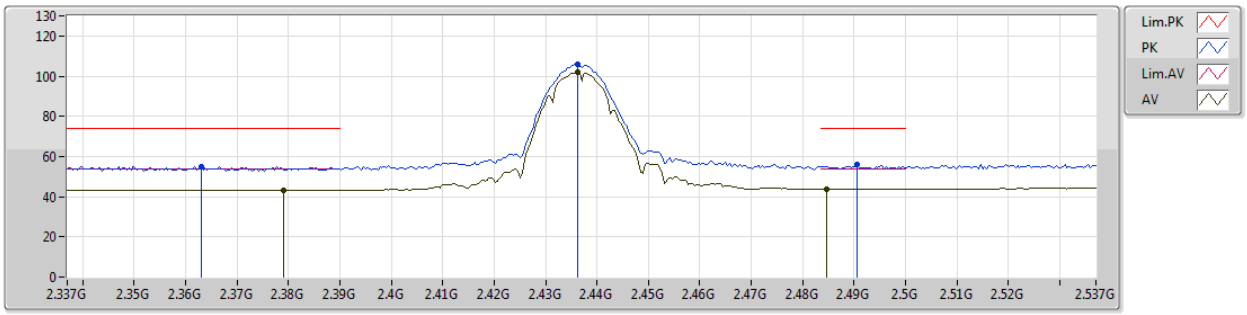
EUT Z_2TX
Setting 20
03-P-2
FSP(100019)

Type	Freq	Level	Limit	Margin	Factor	Dist	Condition	Azimuth	Height	Comments
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB)	(m)		(°)	(m)	
PK	2.379G	55.05	74.00	-18.95	31.92	3	Vertical	126	2.47	-
AV	2.359G	43.03	54.00	-10.97	31.86	3	Vertical	126	2.47	-
PK	2.4378G	112.83	Inf	-Inf	32.09	3	Vertical	126	2.47	-
AV	2.4378G	108.73	Inf	-Inf	32.09	3	Vertical	126	2.47	-
PK	2.491G	55.95	74.00	-18.05	32.24	3	Vertical	126	2.47	-
AV	2.4842G	44.13	54.00	-9.87	32.23	3	Vertical	126	2.47	-

802.11b_Nss1,(1Mbps)_2TX

2437MHz_TX

28/12/2018



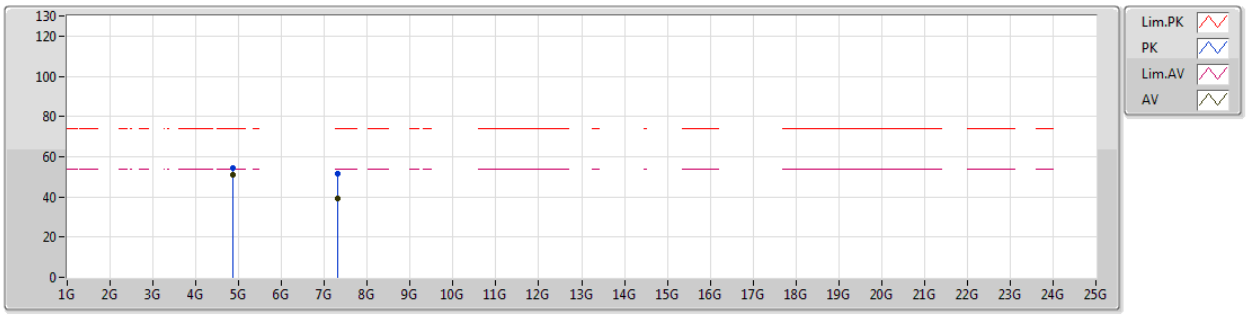
EUT Z_2TX
Setting 20
03-P-2
FSP(100019)

Type	Freq	Level	Limit	Margin	Factor	Dist	Condition	Azimuth	Height	Comments
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB)	(m)		(°)	(m)	
PK	2.363G	55.04	74.00	-18.96	31.88	3	Horizontal	240	1.50	-
AV	2.379G	43.05	54.00	-10.95	31.92	3	Horizontal	240	1.50	-
PK	2.4362G	105.87	Inf	-Inf	32.09	3	Horizontal	240	1.50	-
AV	2.4362G	102.00	Inf	-Inf	32.09	3	Horizontal	240	1.50	-
PK	2.4906G	56.08	74.00	-17.92	32.24	3	Horizontal	240	1.50	-
AV	2.4846G	43.71	54.00	-10.29	32.23	3	Horizontal	240	1.50	-

802.11b_Nss1,(1Mbps)_2TX

2437MHz_TX

27/12/2018



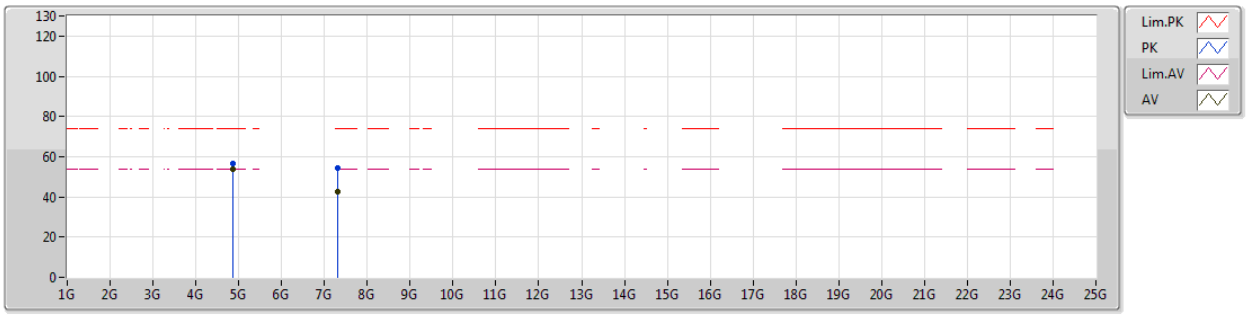
EUT Y_2TX
Setting 20
03-S-5
FSP(100019)

Type	Freq	Level	Limit	Margin	Factor	Dist	Condition	Azimuth	Height	Comments
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB)	(m)		(°)	(m)	
PK	4.874G	54.61	74.00	-19.39	5.09	3	Vertical	16	1.98	-
AV	4.87398G	50.85	54.00	-3.15	5.09	3	Vertical	16	1.98	-
PK	7.31016G	51.77	74.00	-22.23	9.76	3	Vertical	65	2.43	-
AV	7.31164G	39.09	54.00	-14.91	9.75	3	Vertical	65	2.43	-

802.11b_Nss1,(1Mbps)_2TX

2437MHz_TX

27/12/2018



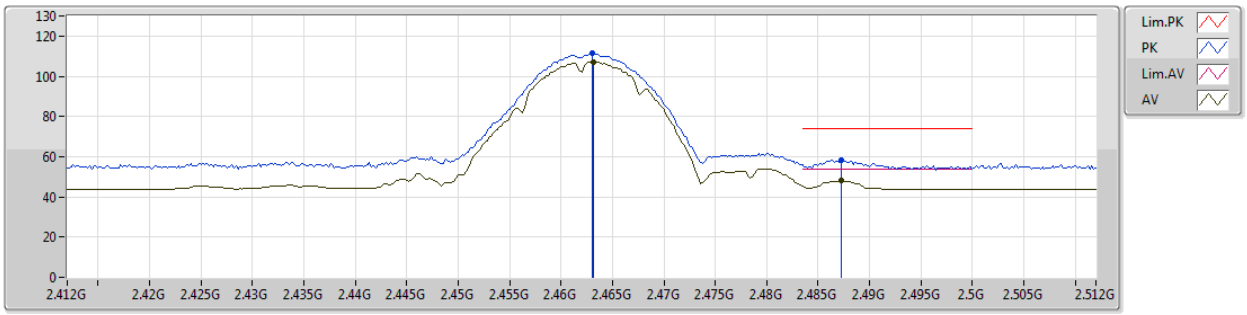
EUT Y_2TX
Setting 20
03-S-5
FSP(100019)

Type	Freq	Level	Limit	Margin	Factor	Dist	Condition	Azimuth	Height	Comments
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB)	(m)		(°)	(m)	
PK	4.87392G	56.87	74.00	-17.13	5.09	3	Horizontal	287	1.06	-
AV	4.874G	53.78	54.00	-0.22	5.09	3	Horizontal	287	1.06	-
PK	7.31098G	54.11	74.00	-19.89	9.76	3	Horizontal	306	2.99	-
AV	7.31172G	42.40	54.00	-11.60	9.75	3	Horizontal	306	2.99	-

802.11b_Nss1,(1Mbps)_2TX

2462MHz_TX

28/12/2018



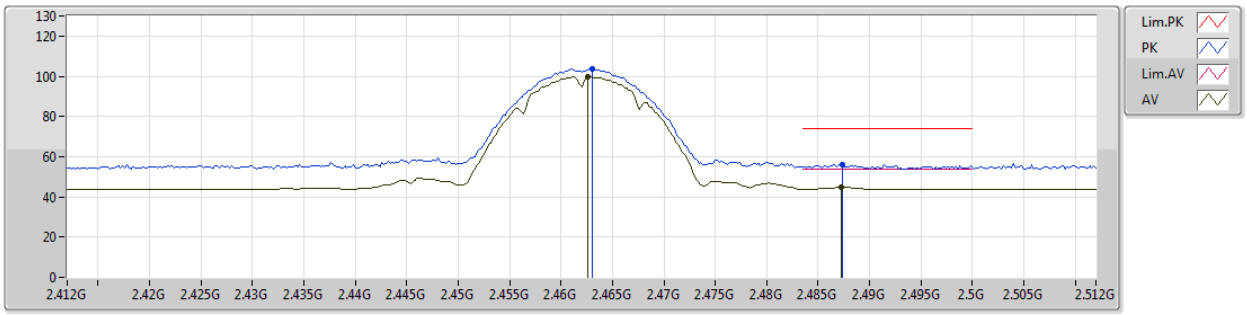
EUT Z_2TX
Setting 18.5
03-P-2
FSP(100019)

Type	Freq	Level	Limit	Margin	Factor	Dist	Condition	Azimuth	Height	Comments
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB)	(m)		(°)	(m)	
PK	2.463G	111.30	Inf	-Inf	32.16	3	Vertical	83	2.28	-
AV	2.4632G	107.10	Inf	-Inf	32.16	3	Vertical	83	2.28	-
PK	2.4872G	58.12	74.00	-15.88	32.23	3	Vertical	83	2.28	-
AV	2.4872G	47.92	54.00	-6.08	32.23	3	Vertical	83	2.28	-

802.11b_Nss1,(1Mbps)_2TX

2462MHz_TX

28/12/2018



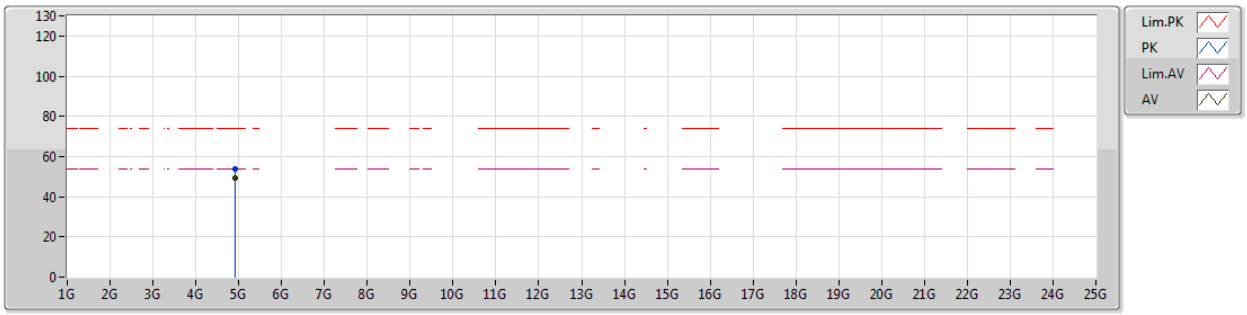
EUT Z_2TX
Setting 18.5
03-P-2
FSP(100019)

Type	Freq	Level	Limit	Margin	Factor	Dist	Condition	Azimuth	Height	Comments
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB)	(m)		(°)	(m)	
PK	2.463G	103.86	Inf	-Inf	32.16	3	Horizontal	253	2.95	-
AV	2.4626G	99.74	Inf	-Inf	32.16	3	Horizontal	253	2.95	-
PK	2.4874G	56.24	74.00	-17.76	32.23	3	Horizontal	253	2.95	-
AV	2.4872G	44.69	54.00	-9.31	32.23	3	Horizontal	253	2.95	-

802.11b_Nss1,(1Mbps)_2TX

2462MHz_TX

27/12/2018



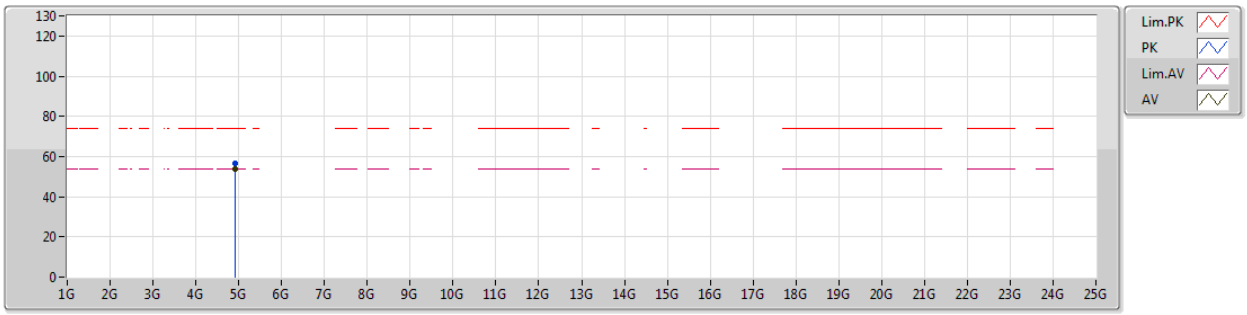
EUT Y_2TX
Setting 18.5
03-S-5
FSP(100019)

Type	Freq	Level	Limit	Margin	Factor	Dist	Condition	Azimuth	Height	Comments
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB)	(m)		(°)	(m)	
PK	4.92402G	53.97	74.00	-20.03	5.22	3	Vertical	21	1.79	-
AV	4.92396G	49.51	54.00	-4.49	5.22	3	Vertical	21	1.79	-

802.11b_Nss1,(1Mbps)_2TX

2462MHz_TX

27/12/2018



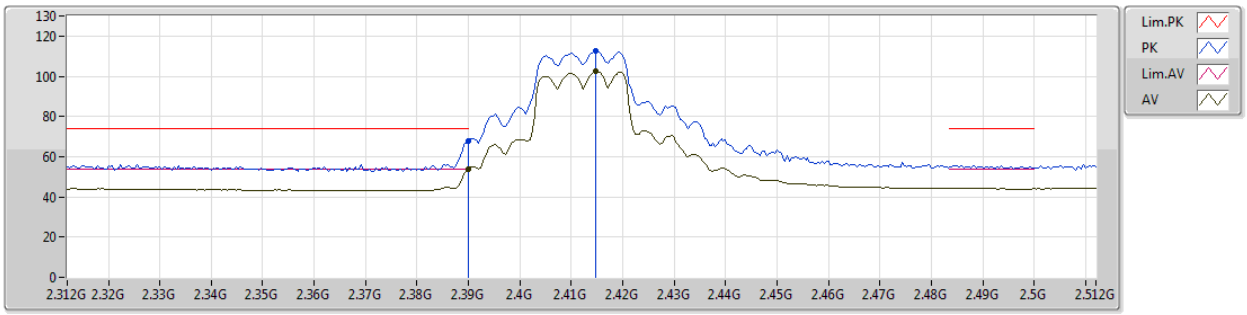
EUT Y_2TX
Setting 18.5
03-S-5
FSP(100019)

Type	Freq	Level	Limit	Margin	Factor	Dist	Condition	Azimuth	Height	Comments
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB)	(m)		(°)	(m)	
PK	4.924G	56.63	74.00	-17.37	5.22	3	Horizontal	285	1.54	-
AV	4.924G	53.74	54.00	-0.26	5.22	3	Horizontal	285	1.54	-

802.11g_Nss1,(6Mbps)_2TX

2412MHz_TX

28/12/2018



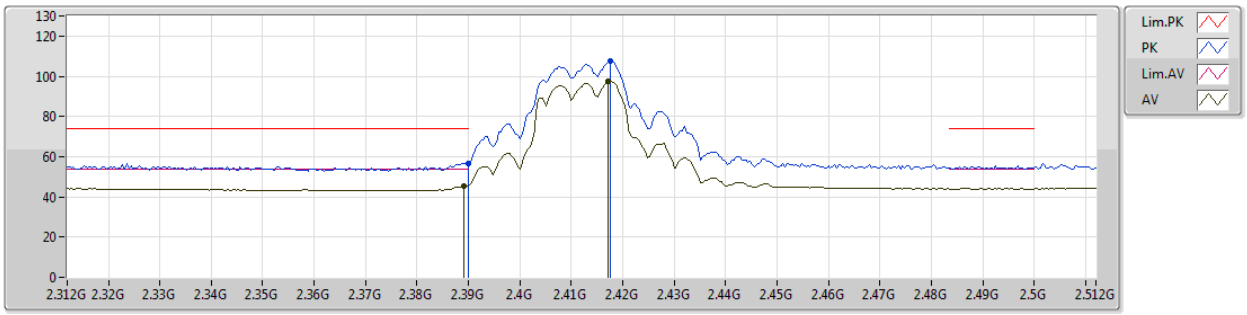
EUT Z_2TX
Setting 18
03-P-2
FSP(100019)

Type	Freq	Level	Limit	Margin	Factor	Dist	Condition	Azimuth	Height	Comments
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB)	(m)		(°)	(m)	
PK	2.39G	67.71	74.00	-6.29	31.95	3	Vertical	126	1.06	-
AV	2.39G	53.66	54.00	-0.34	31.95	3	Vertical	126	1.06	-
PK	2.4148G	112.64	Inf	-Inf	32.02	3	Vertical	126	1.06	-
AV	2.4148G	102.42	Inf	-Inf	32.02	3	Vertical	126	1.06	-

802.11g_Nss1,(6Mbps)_2TX

2412MHz_TX

28/12/2018



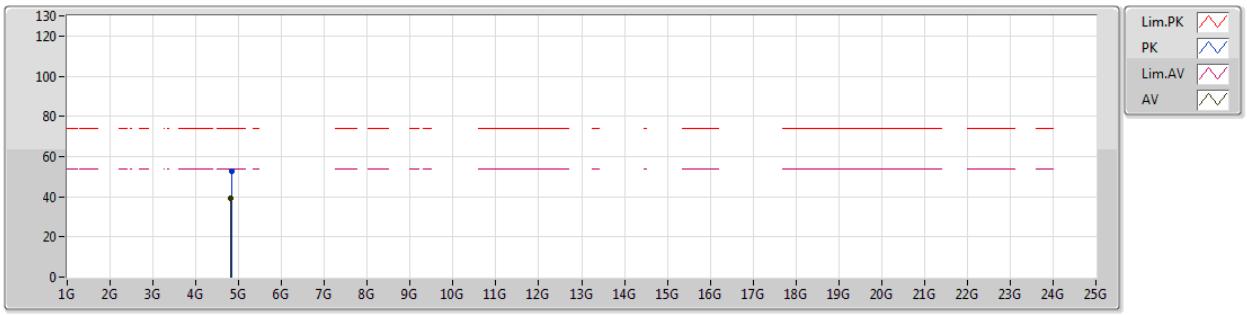
EUT Z_2TX
Setting 18
03-P-2
FSP(100019)

Type	Freq	Level	Limit	Margin	Factor	Dist	Condition	Azimuth	Height	Comments
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB)	(m)		(°)	(m)	
PK	2.39G	56.81	74.00	-17.19	31.95	3	Horizontal	233	2.56	-
AV	2.3892G	45.32	54.00	-8.68	31.95	3	Horizontal	233	2.56	-
PK	2.4176G	107.62	Inf	-Inf	32.03	3	Horizontal	233	2.56	-
AV	2.4172G	97.26	Inf	-Inf	32.03	3	Horizontal	233	2.56	-

802.11g_Nss1,(6Mbps)_2TX

2412MHz_TX

02/01/2019



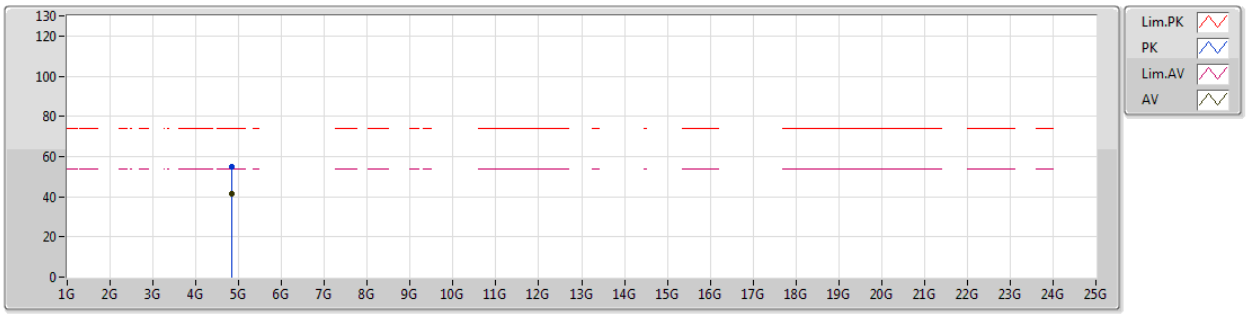
EUT Y_2TX
Setting 18
02-B-2
FSP(100019)

Type	Freq	Level	Limit	Margin	Factor	Dist	Condition	Azimuth	Height	Comments
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB)	(m)		(°)	(m)	
PK	4.82636G	52.94	74.00	-21.06	7.31	3	Vertical	1	2.42	-
AV	4.82408G	39.03	54.00	-14.97	7.30	3	Vertical	1	2.42	-

802.11g_Nss1,(6Mbps)_2TX

2412MHz_TX

02/01/2019



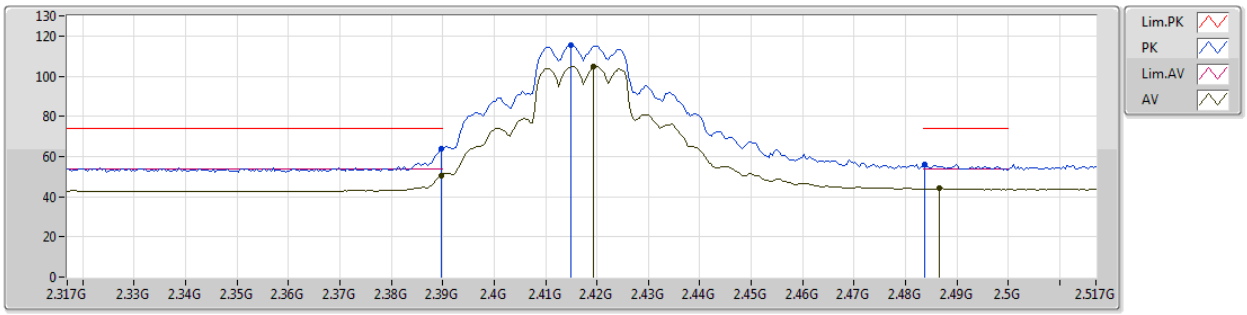
EUT Y_2TX
Setting 18
02-B-2
FSP(100019)

Type	Freq	Level	Limit	Margin	Factor	Dist	Condition	Azimuth	Height	Comments
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB)	(m)		(°)	(m)	
PK	4.82632G	54.90	74.00	-19.10	7.31	3	Horizontal	270	2.42	-
AV	4.82604G	41.74	54.00	-12.26	7.31	3	Horizontal	270	2.42	-

802.11g_Nss1,(6Mbps)_2TX

2417MHz_TX

03/01/2019



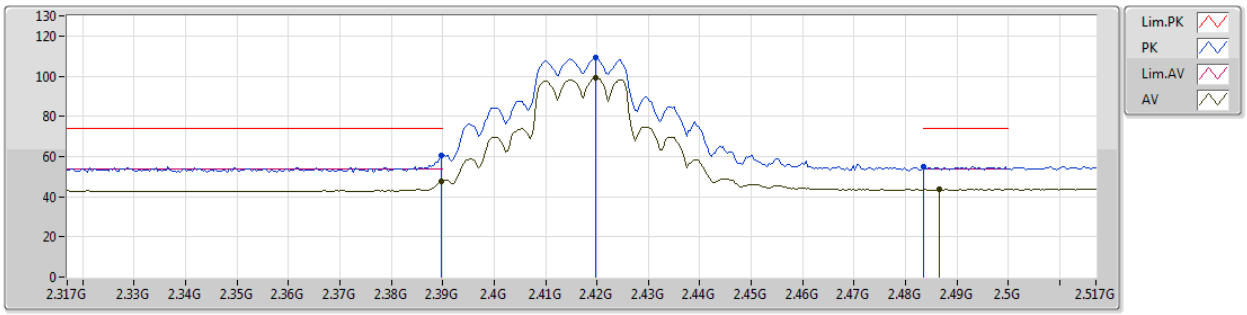
EUT Z_2TX
Setting 20
02-B-2
FSP(100019)

Type	Freq	Level	Limit	Margin	Factor	Dist	Condition	Azimuth	Height	Comments
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB)	(m)		(°)	(m)	
PK	2.3898G	63.87	74.00	-10.13	31.38	3	Vertical	314	1.28	-
AV	2.3898G	50.49	54.00	-3.51	31.38	3	Vertical	314	1.28	-
PK	2.415G	115.32	Inf	-Inf	31.45	3	Vertical	314	1.28	-
AV	2.4194G	105.04	Inf	-Inf	31.45	3	Vertical	314	1.28	-
PK	2.4838G	56.26	74.00	-17.74	31.59	3	Vertical	314	1.28	-
AV	2.4866G	44.04	54.00	-9.96	31.60	3	Vertical	314	1.28	-

802.11g_Nss1,(6Mbps)_2TX

2417MHz_TX

03/01/2019



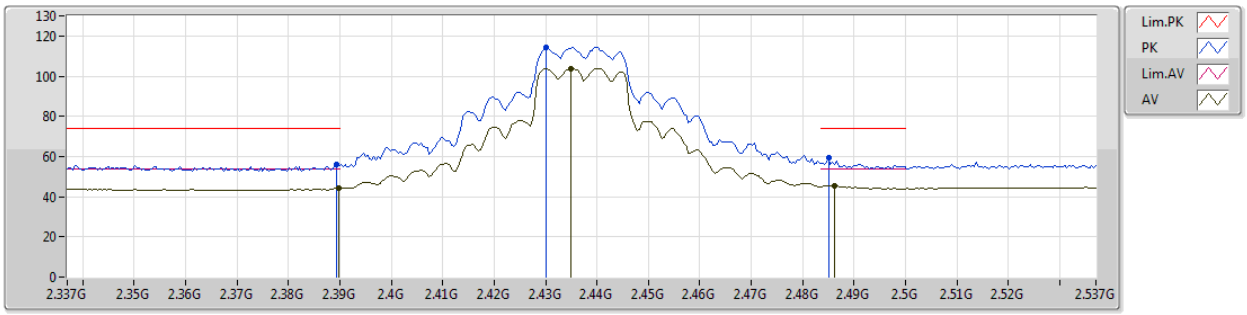
EUT Z_2TX
Setting 20
02-B-2
FSP(100019)

Type	Freq	Level	Limit	Margin	Factor	Dist	Condition	Azimuth	Height	Comments
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB)	(m)		(°)	(m)	
PK	2.3898G	60.30	74.00	-13.70	31.38	3	Horizontal	279	2.99	-
AV	2.3898G	47.52	54.00	-6.48	31.38	3	Horizontal	279	2.99	-
PK	2.4198G	108.99	Inf	-Inf	31.46	3	Horizontal	279	2.99	-
AV	2.4198G	99.22	Inf	-Inf	31.46	3	Horizontal	279	2.99	-
PK	2.4835G	54.77	74.00	-19.23	31.59	3	Horizontal	279	2.99	-
AV	2.4866G	43.61	54.00	-10.39	31.60	3	Horizontal	279	2.99	-

802.11g_Nss1,(6Mbps)_2TX

2437MHz_TX

28/12/2018



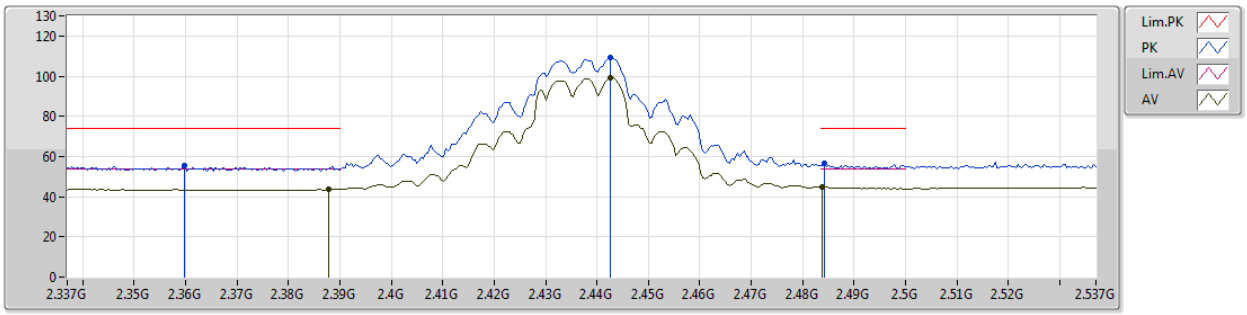
EUT Z_2TX
Setting 20
03-P-2
FSP(100019)

Type	Freq	Level	Limit	Margin	Factor	Dist	Condition	Azimuth	Height	Comments
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB)	(m)		(°)	(m)	
PK	2.3894G	56.12	74.00	-17.88	31.95	3	Vertical	114	1.01	-
AV	2.3898G	44.25	54.00	-9.75	31.95	3	Vertical	114	1.01	-
PK	2.4302G	114.46	Inf	-Inf	32.06	3	Vertical	114	1.01	-
AV	2.435G	103.93	Inf	-Inf	32.08	3	Vertical	114	1.01	-
PK	2.485G	59.67	74.00	-14.33	32.23	3	Vertical	114	1.01	-
AV	2.4862G	45.55	54.00	-8.45	32.23	3	Vertical	114	1.01	-

802.11g_Nss1,(6Mbps)_2TX

2437MHz_TX

28/12/2018



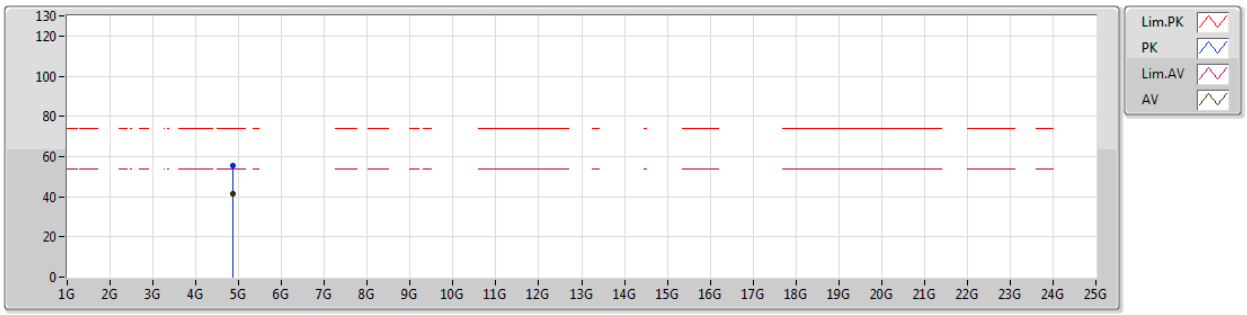
EUT Z_2TX
Setting 20
03-P-2
FSP(100019)

Type	Freq	Level	Limit	Margin	Factor	Dist	Condition	Azimuth	Height	Comments
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB)	(m)		(°)	(m)	
PK	2.3598G	55.71	74.00	-18.29	31.86	3	Horizontal	233	2.52	-
AV	2.3878G	43.74	54.00	-10.26	31.95	3	Horizontal	233	2.52	-
PK	2.4426G	109.50	Inf	-Inf	32.10	3	Horizontal	233	2.52	-
AV	2.4426G	99.02	Inf	-Inf	32.10	3	Horizontal	233	2.52	-
PK	2.4842G	56.64	74.00	-17.36	32.23	3	Horizontal	233	2.52	-
AV	2.4838G	44.86	54.00	-9.14	32.23	3	Horizontal	233	2.52	-

802.11g_Nss1,(6Mbps)_2TX

2437MHz_TX

02/01/2019



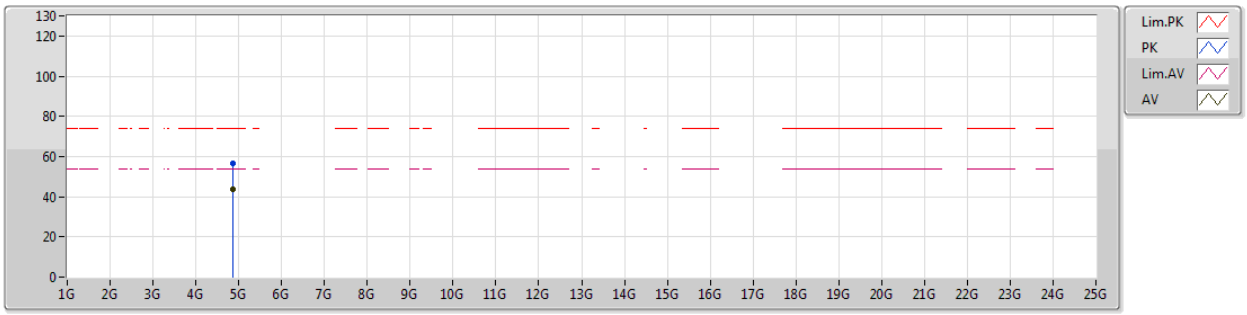
EUT Y_2TX
Setting 20
02-B-2
FSP(100019)

Type	Freq	Level	Limit	Margin	Factor	Dist	Condition	Azimuth	Height	Comments
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB)	(m)		(°)	(m)	
PK	4.87478G	55.28	74.00	-18.72	7.41	3	Vertical	334	2.16	-
AV	4.87412G	41.59	54.00	-12.41	7.41	3	Vertical	334	2.16	-

802.11g_Nss1,(6Mbps)_2TX

2437MHz_TX

02/01/2019



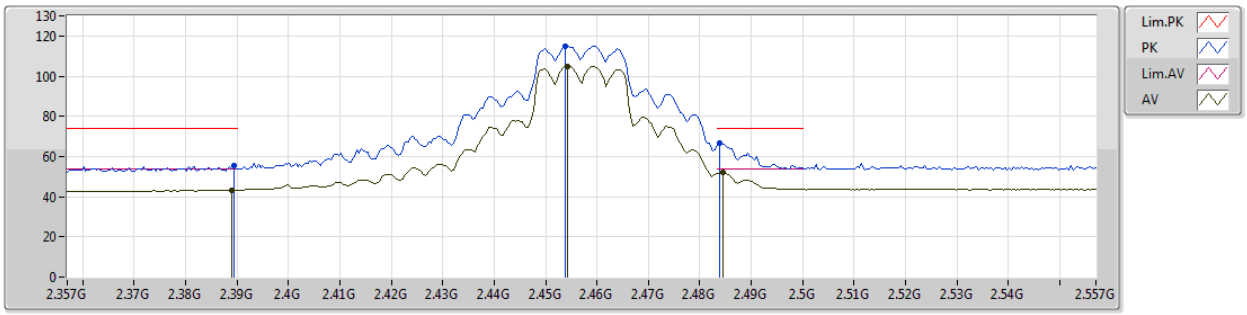
EUT Y_2TX
Setting 20
02-B-2
FSP(100019)

Type	Freq	Level	Limit	Margin	Factor	Dist	Condition	Azimuth	Height	Comments
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB)	(m)		(°)	(m)	
PK	4.87472G	56.78	74.00	-17.22	7.41	3	Horizontal	240	1.59	-
AV	4.87412G	43.50	54.00	-10.50	7.41	3	Horizontal	240	1.59	-

802.11g_Nss1,(6Mbps)_2TX

2457MHz_TX

03/01/2019



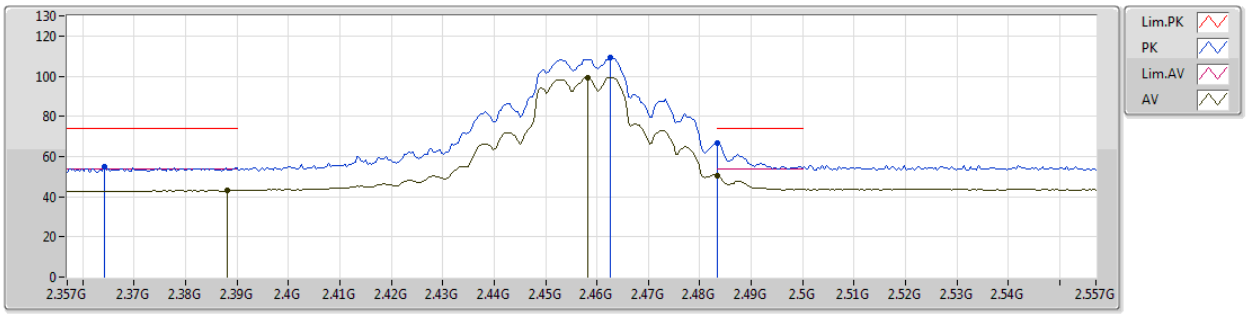
EUT Z_2TX
Setting 20
02-B-2
FSP(100019)

Type	Freq	Level	Limit	Margin	Factor	Dist	Condition	Azimuth	Height	Comments
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB)	(m)		(°)	(m)	
PK	2.3894G	55.71	74.00	-18.29	31.38	3	Vertical	323	1.17	-
AV	2.389G	43.31	54.00	-10.69	31.38	3	Vertical	323	1.17	-
PK	2.4538G	114.97	Inf	-Inf	31.53	3	Vertical	323	1.17	-
AV	2.4542G	104.87	Inf	-Inf	31.53	3	Vertical	323	1.17	-
PK	2.4838G	66.63	74.00	-7.37	31.59	3	Vertical	323	1.17	-
AV	2.4846G	51.90	54.00	-2.10	31.59	3	Vertical	323	1.17	-

802.11g_Nss1,(6Mbps)_2TX

2457MHz_TX

03/01/2019



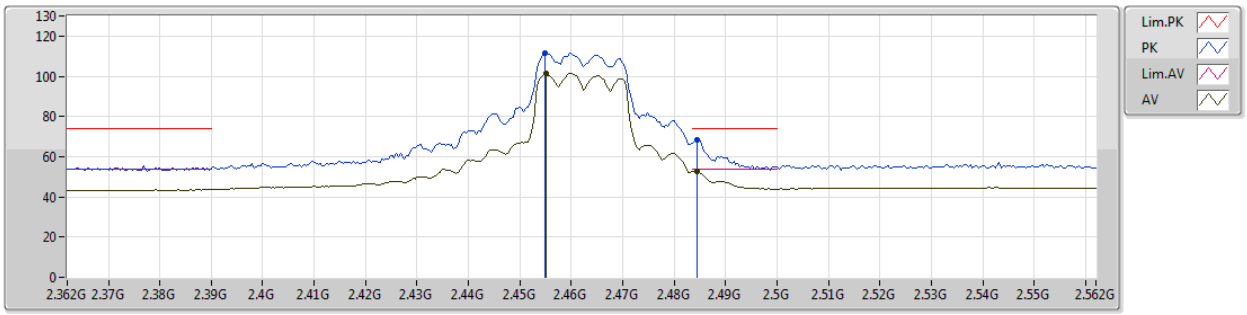
EUT Z_2TX
Setting 20
02-B-2
FSP(100019)

Type	Freq	Level	Limit	Margin	Factor	Dist	Condition	Azimuth	Height	Comments
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB)	(m)		(°)	(m)	
PK	2.3642G	55.08	74.00	-18.92	31.31	3	Horizontal	45	2.87	-
AV	2.3882G	43.17	54.00	-10.83	31.38	3	Horizontal	45	2.87	-
PK	2.4626G	109.54	Inf	-Inf	31.55	3	Horizontal	45	2.87	-
AV	2.4582G	99.18	Inf	-Inf	31.53	3	Horizontal	45	2.87	-
PK	2.4835G	66.52	74.00	-7.48	31.59	3	Horizontal	45	2.87	-
AV	2.4835G	50.35	54.00	-3.65	31.59	3	Horizontal	45	2.87	-

802.11g_Nss1,(6Mbps)_2TX

2462MHz_TX

28/12/2018



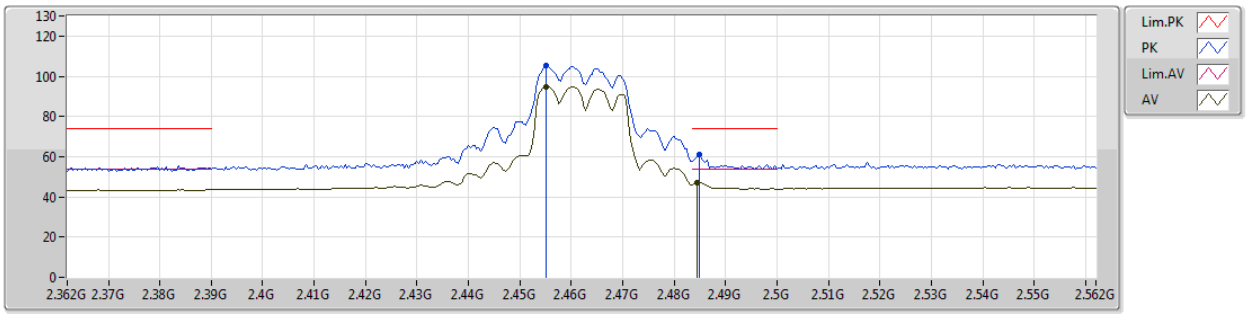
EUT Z_2TX
Setting 17
03-P-2
FSP(100019)

Type	Freq	Level	Limit	Margin	Factor	Dist	Condition	Azimuth	Height	Comments
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB)	(m)		(°)	(m)	
PK	2.4548G	111.78	Inf	-Inf	32.14	3	Vertical	128	1.01	-
AV	2.4552G	101.19	Inf	-Inf	32.14	3	Vertical	128	1.01	-
PK	2.4844G	68.41	74.00	-5.59	32.23	3	Vertical	128	1.01	-
AV	2.4844G	52.91	54.00	-1.09	32.23	3	Vertical	128	1.01	-

802.11g_Nss1,(6Mbps)_2TX

2462MHz_TX

28/12/2018



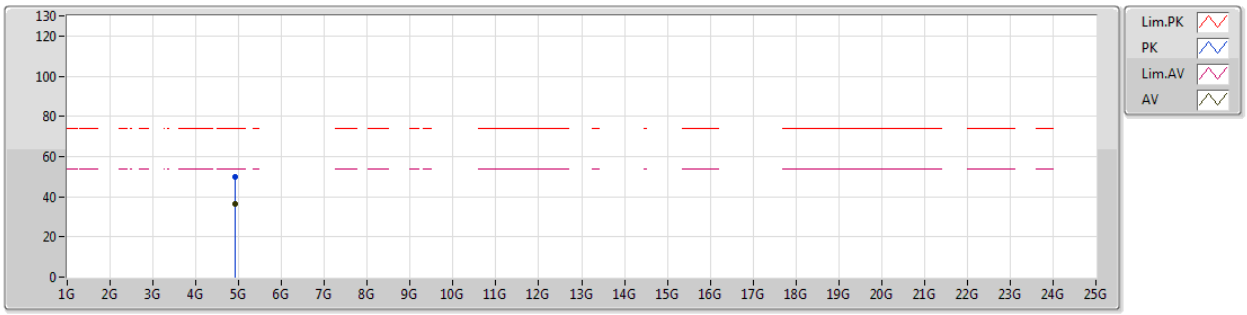
EUT Z_2TX
Setting 17
03-P-2
FSP(100019)

Type	Freq	Level	Limit	Margin	Factor	Dist	Condition	Azimuth	Height	Comments
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB)	(m)		(°)	(m)	
PK	2.4552G	105.39	Inf	-Inf	32.14	3	Horizontal	91	2.49	-
AV	2.4552G	94.73	Inf	-Inf	32.14	3	Horizontal	91	2.49	-
PK	2.4848G	61.01	74.00	-12.99	32.23	3	Horizontal	91	2.49	-
AV	2.4844G	47.24	54.00	-6.76	32.23	3	Horizontal	91	2.49	-

802.11g_Nss1,(6Mbps)_2TX

2462MHz_TX

02/01/2019



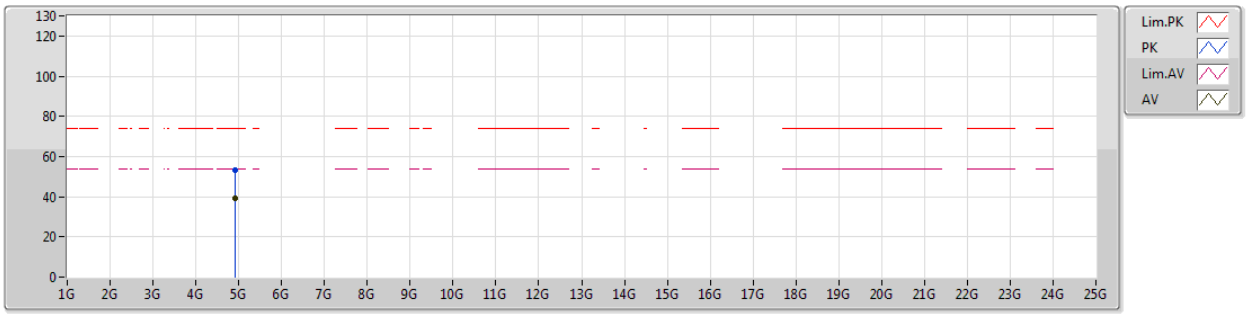
EUT Y_2TX
Setting 17
02-B-2
FSP(100019)

Type	Freq	Level	Limit	Margin	Factor	Dist	Condition	Azimuth	Height	Comments
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB)	(m)		(°)	(m)	
PK	4.92022G	49.85	74.00	-24.15	7.50	3	Vertical	295	2.23	-
AV	4.91992G	36.45	54.00	-17.55	7.50	3	Vertical	295	2.23	-

802.11g_Nss1,(6Mbps)_2TX

2462MHz_TX

02/01/2019



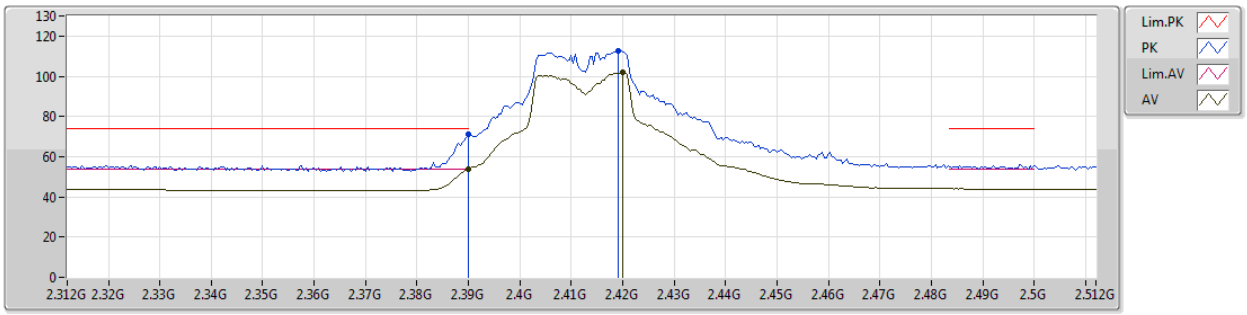
EUT Y_2TX
Setting 17
02-B-2
FSP(100019)

Type	Freq	Level	Limit	Margin	Factor	Dist	Condition	Azimuth	Height	Comments
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB)	(m)		(°)	(m)	
PK	4.92454G	53.10	74.00	-20.90	7.51	3	Horizontal	239	2.44	-
AV	4.92442G	39.19	54.00	-14.81	7.51	3	Horizontal	239	2.44	-

802.11n HT20_Nss1,(MCS0)_2TX

2412MHz_TX

28/12/2018



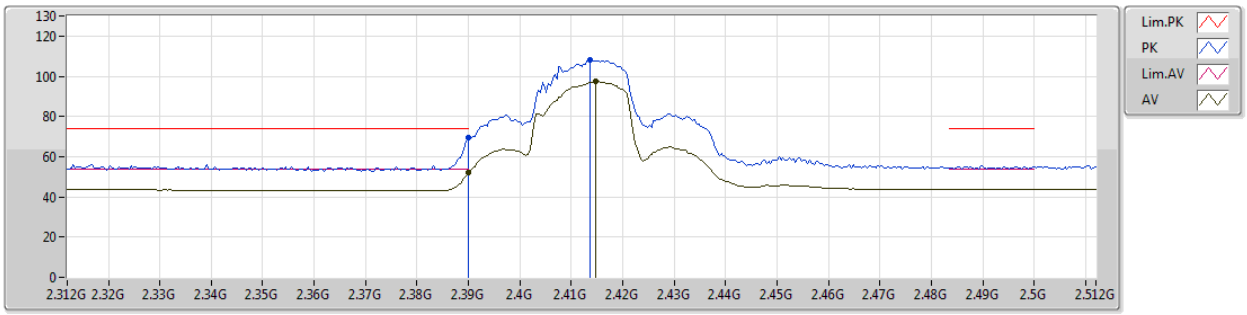
EUT Z_2TX
Setting 19
03-P-2
FSP(100019)

Type	Freq	Level	Limit	Margin	Factor	Dist	Condition	Azimuth	Height	Comments
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB)	(m)		(°)	(m)	
PK	2.39G	71.39	74.00	-2.61	31.95	3	Vertical	127	1.04	-
AV	2.39G	53.76	54.00	-0.24	31.95	3	Vertical	127	1.04	-
PK	2.4192G	112.79	Inf	-Inf	32.04	3	Vertical	127	1.04	-
AV	2.42G	102.02	Inf	-Inf	32.04	3	Vertical	127	1.04	-

802.11n HT20_Nss1,(MCS0)_2TX

28/12/2018

2412MHz_TX



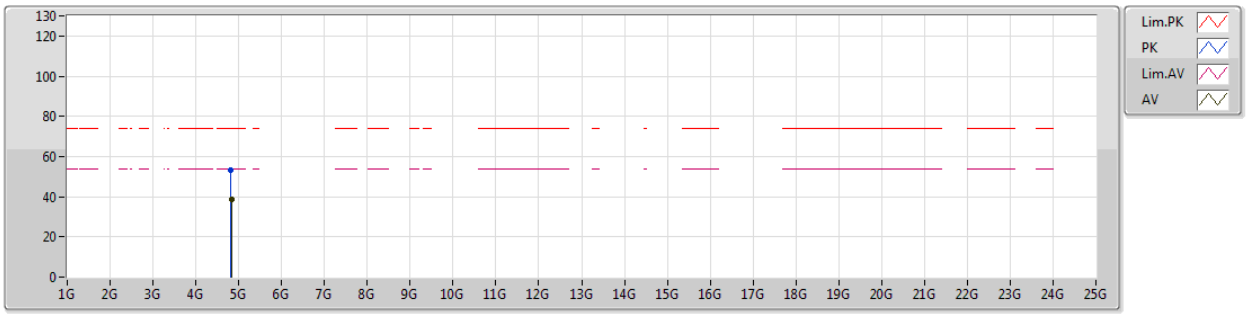
EUT Z_2TX
Setting 19
03-P-2
FSP(100019)

Type	Freq	Level	Limit	Margin	Factor	Dist	Condition	Azimuth	Height	Comments
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB)	(m)		(°)	(m)	
PK	2.39G	69.47	74.00	-4.53	31.95	3	Horizontal	233	2.55	-
AV	2.39G	51.94	54.00	-2.06	31.95	3	Horizontal	233	2.55	-
PK	2.4136G	108.13	Inf	-Inf	32.02	3	Horizontal	233	2.55	-
AV	2.4148G	97.30	Inf	-Inf	32.02	3	Horizontal	233	2.55	-

802.11n HT20_Nss1,(MCS0)_2TX

2412MHz_TX

02/01/2019



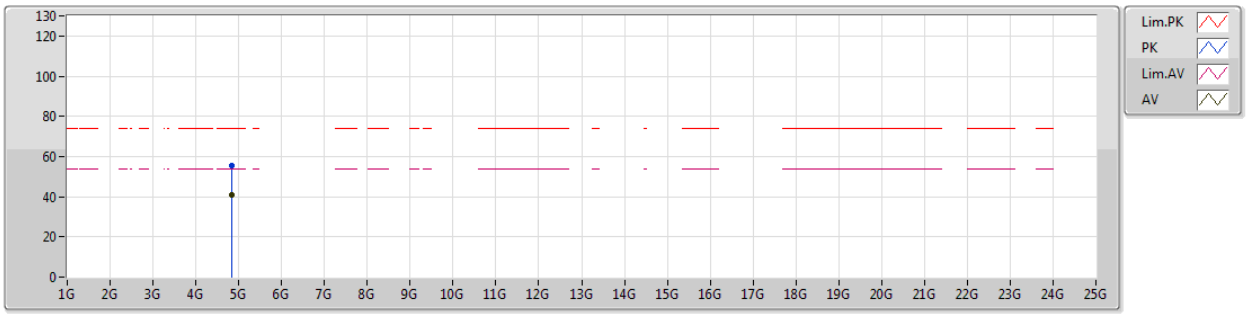
EUT Y_2TX
Setting 19
02-B-2
FSP(100019)

Type	Freq	Level	Limit	Margin	Factor	Dist	Condition	Azimuth	Height	Comments
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB)	(m)		(°)	(m)	
PK	4.8222G	53.42	74.00	-20.58	7.30	3	Vertical	315	2.55	-
AV	4.8276G	38.53	54.00	-15.47	7.32	3	Vertical	315	2.55	-

802.11n HT20_Nss1,(MCS0)_2TX

02/01/2019

2412MHz_TX



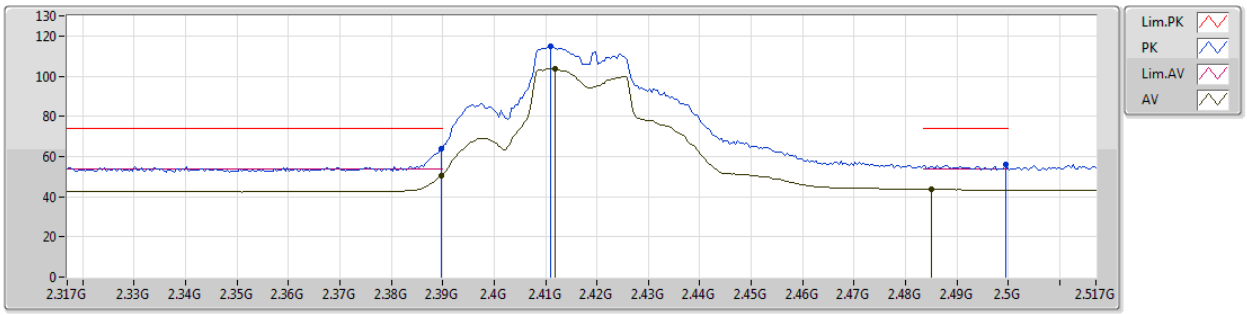
EUT Y_2TX
Setting 19
02-B-2
FSP(100019)

Type	Freq	Level	Limit	Margin	Factor	Dist	Condition	Azimuth	Height	Comments
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB)	(m)		(°)	(m)	
PK	4.82668G	55.61	74.00	-18.39	7.32	3	Horizontal	226	2.20	-
AV	4.82796G	40.71	54.00	-13.29	7.32	3	Horizontal	226	2.20	-

802.11n HT20_Nss1,(MCS0)_2TX

2417MHz_TX

03/01/2019



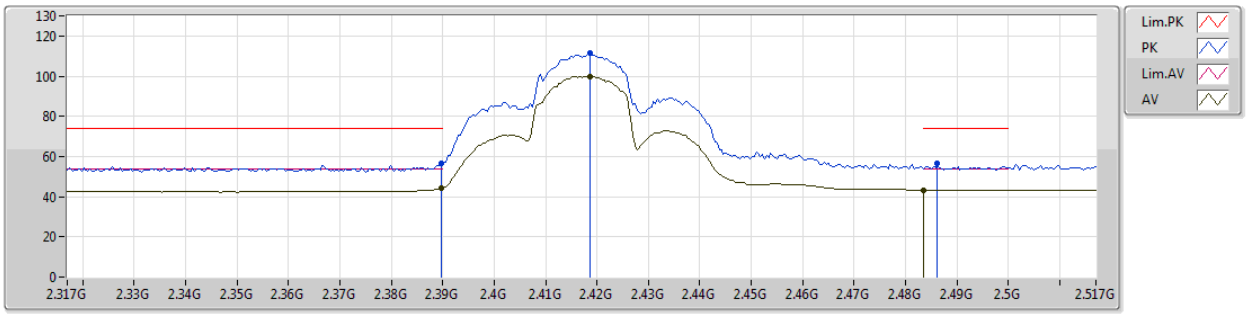
EUT Z_2TX
Setting 20
02-B-2
FSP(100019)

Type	Freq	Level	Limit	Margin	Factor	Dist	Condition	Azimuth	Height	Comments
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB)	(m)		(°)	(m)	
PK	2.3898G	63.65	74.00	-10.35	31.38	3	Vertical	259	1.27	-
AV	2.3898G	50.60	54.00	-3.40	31.38	3	Vertical	259	1.27	-
PK	2.411G	114.79	Inf	-Inf	31.43	3	Vertical	259	1.27	-
AV	2.4118G	103.81	Inf	-Inf	31.43	3	Vertical	259	1.27	-
PK	2.4994G	55.82	74.00	-18.18	31.63	3	Vertical	259	1.27	-
AV	2.485G	43.69	54.00	-10.31	31.59	3	Vertical	259	1.27	-

802.11n HT20_Nss1,(MCS0)_2TX

2417MHz_TX

03/01/2019



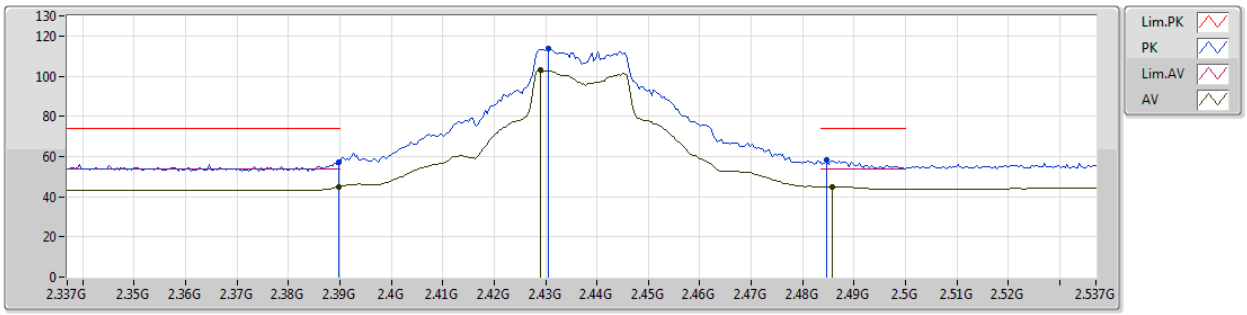
EUT Z_2TX
Setting 20
02-B-2
FSP(100019)

Type	Freq	Level	Limit	Margin	Factor	Dist	Condition	Azimuth	Height	Comments
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB)	(m)		(°)	(m)	
PK	2.3898G	56.55	74.00	-17.45	31.38	3	Horizontal	346	2.96	-
AV	2.3898G	44.15	54.00	-9.85	31.38	3	Horizontal	346	2.96	-
PK	2.4186G	111.36	Inf	-Inf	31.45	3	Horizontal	346	2.96	-
AV	2.4186G	99.99	Inf	-Inf	31.45	3	Horizontal	346	2.96	-
PK	2.4862G	56.45	74.00	-17.55	31.60	3	Horizontal	346	2.96	-
AV	2.4835G	43.33	54.00	-10.67	31.59	3	Horizontal	346	2.96	-

802.11n HT20_Nss1,(MCS0)_2TX

2437MHz_TX

28/12/2018



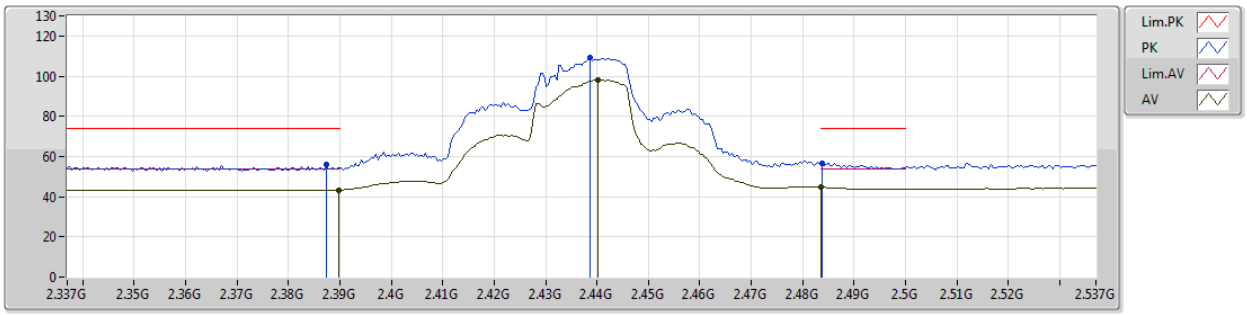
EUT Z_2TX
Setting 20
03-P-2
FSP(100019)

Type	Freq	Level	Limit	Margin	Factor	Dist	Condition	Azimuth	Height	Comments
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB)	(m)		(°)	(m)	
PK	2.3898G	57.42	74.00	-16.58	31.95	3	Vertical	128	1.21	-
AV	2.3898G	44.79	54.00	-9.21	31.95	3	Vertical	128	1.21	-
PK	2.4306G	113.75	Inf	-Inf	32.06	3	Vertical	128	1.21	-
AV	2.429G	103.02	Inf	-Inf	32.06	3	Vertical	128	1.21	-
PK	2.4846G	58.12	74.00	-15.88	32.23	3	Vertical	128	1.21	-
AV	2.4858G	45.02	54.00	-8.98	32.23	3	Vertical	128	1.21	-

802.11n HT20_Nss1,(MCS0)_2TX

2437MHz_TX

28/12/2018



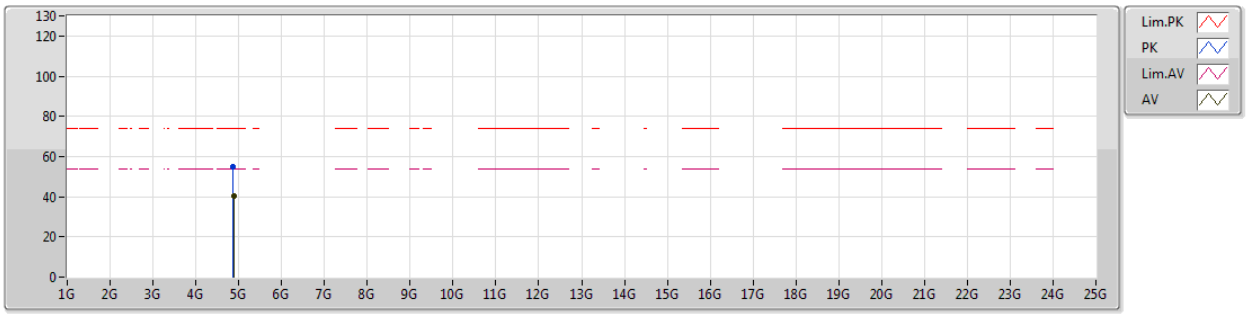
EUT Z_2TX
Setting 20
03-P-2
FSP(100019)

Type	Freq	Level	Limit	Margin	Factor	Dist	Condition	Azimuth	Height	Comments
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB)	(m)		(°)	(m)	
PK	2.3874G	55.93	74.00	-18.07	31.94	3	Horizontal	234	2.53	-
AV	2.3898G	43.35	54.00	-10.65	31.95	3	Horizontal	234	2.53	-
PK	2.4386G	109.17	Inf	-Inf	32.09	3	Horizontal	234	2.53	-
AV	2.4402G	98.13	Inf	-Inf	32.09	3	Horizontal	234	2.53	-
PK	2.4838G	56.84	74.00	-17.16	32.23	3	Horizontal	234	2.53	-
AV	2.4835G	44.74	54.00	-9.26	32.23	3	Horizontal	234	2.53	-

802.11n HT20_Nss1,(MCS0)_2TX

2437MHz_TX

02/01/2019



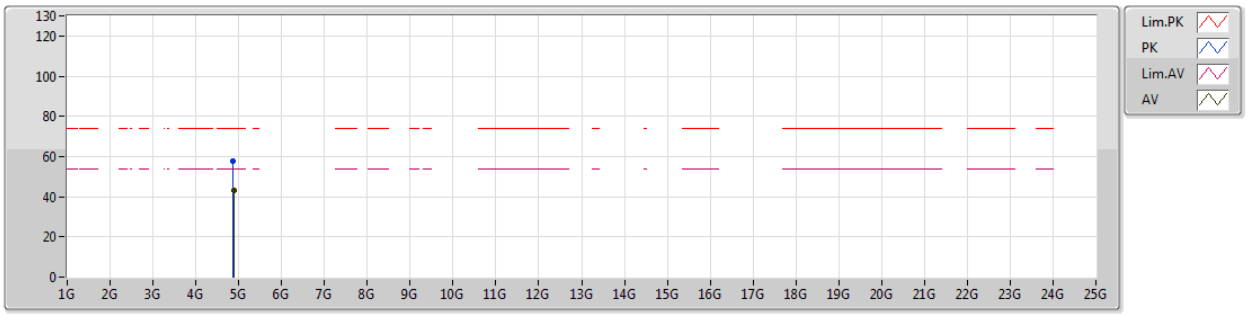
EUT Y_2TX
Setting 20
02-B-2
FSP(100019)

Type	Freq	Level	Limit	Margin	Factor	Dist	Condition	Azimuth	Height	Comments
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB)	(m)		(°)	(m)	
PK	4.87652G	55.14	74.00	-18.86	7.42	3	Vertical	283	2.94	-
AV	4.8776G	40.32	54.00	-13.68	7.42	3	Vertical	283	2.94	-

802.11n HT20_Nss1,(MCS0)_2TX

2437MHz_TX

02/01/2019



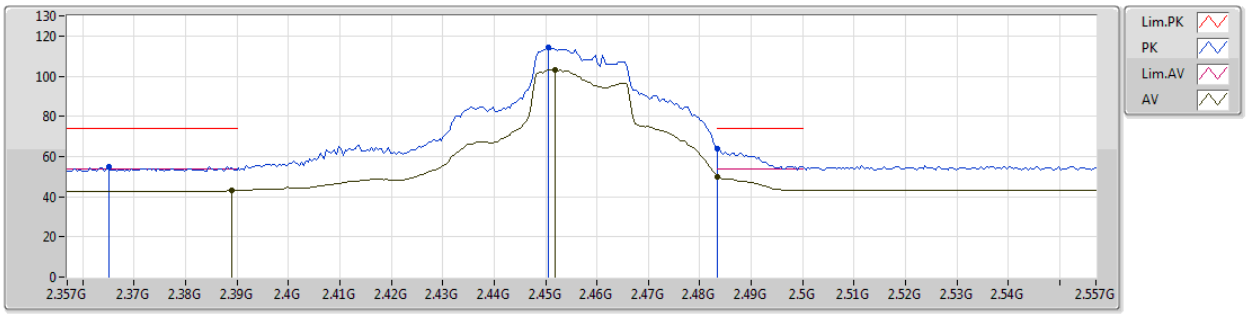
EUT Y_2TX
Setting 20
02-B-2
FSP(100019)

Type	Freq	Level	Limit	Margin	Factor	Dist	Condition	Azimuth	Height	Comments
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB)	(m)		(°)	(m)	
PK	4.87658G	57.69	74.00	-16.31	7.42	3	Horizontal	209	2.48	-
AV	4.8791G	42.89	54.00	-11.11	7.42	3	Horizontal	209	2.48	-

802.11n HT20_Nss1,(MCS0)_2TX

2457MHz_TX

03/01/2019



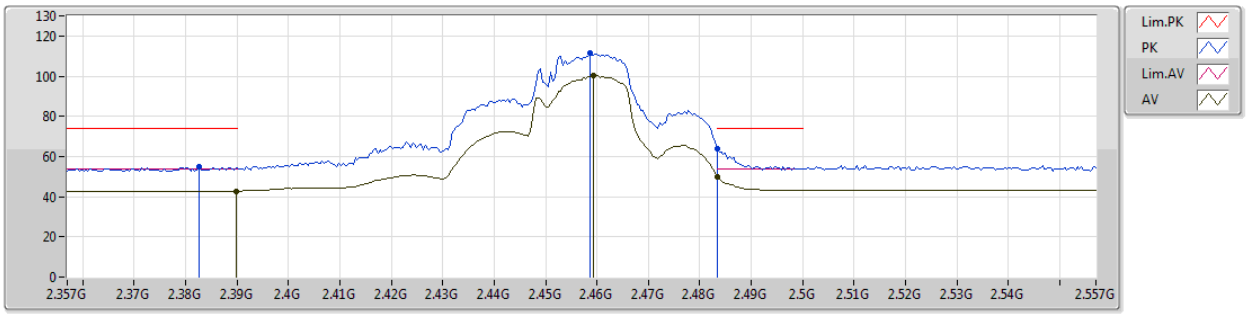
EUT Z_2TX
Setting 20
02-B-2
FSP(100019)

Type	Freq	Level	Limit	Margin	Factor	Dist	Condition	Azimuth	Height	Comments
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB)	(m)		(°)	(m)	
PK	2.365G	55.16	74.00	-18.84	31.32	3	Vertical	215	1.43	-
AV	2.389G	42.99	54.00	-11.01	31.38	3	Vertical	215	1.43	-
PK	2.4506G	114.17	Inf	-Inf	31.52	3	Vertical	215	1.43	-
AV	2.4518G	103.31	Inf	-Inf	31.52	3	Vertical	215	1.43	-
PK	2.4835G	63.89	74.00	-10.11	31.59	3	Vertical	215	1.43	-
AV	2.4835G	49.97	54.00	-4.03	31.59	3	Vertical	215	1.43	-

802.11n HT20_Nss1,(MCS0)_2TX

2457MHz_TX

03/01/2019



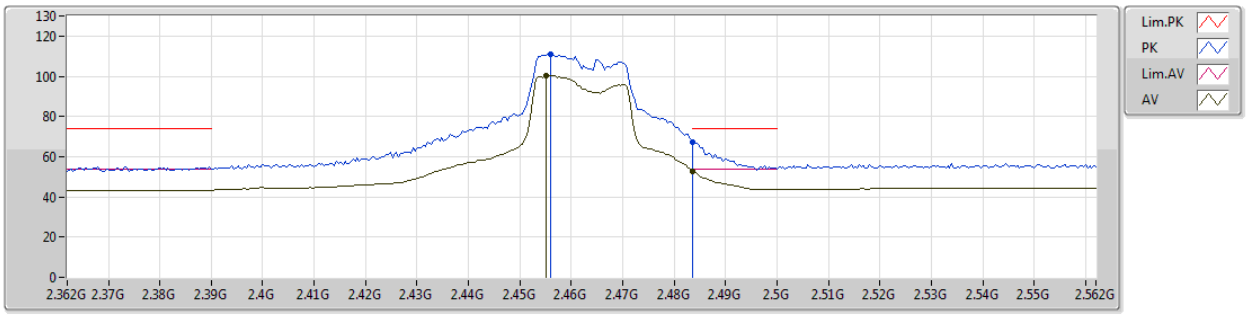
EUT Z_2TX
Setting 20
02-B-2
FSP(100019)

Type	Freq	Level	Limit	Margin	Factor	Dist	Condition	Azimuth	Height	Comments
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB)	(m)		(°)	(m)	
PK	2.3826G	55.01	74.00	-18.99	31.37	3	Horizontal	340	2.98	-
AV	2.3898G	42.79	54.00	-11.21	31.38	3	Horizontal	340	2.98	-
PK	2.4586G	111.38	Inf	-Inf	31.54	3	Horizontal	340	2.98	-
AV	2.4594G	100.27	Inf	-Inf	31.54	3	Horizontal	340	2.98	-
PK	2.4835G	64.04	74.00	-9.96	31.59	3	Horizontal	340	2.98	-
AV	2.4835G	49.89	54.00	-4.11	31.59	3	Horizontal	340	2.98	-

802.11n HT20_Nss1,(MCS0)_2TX

2462MHz_TX

28/12/2018



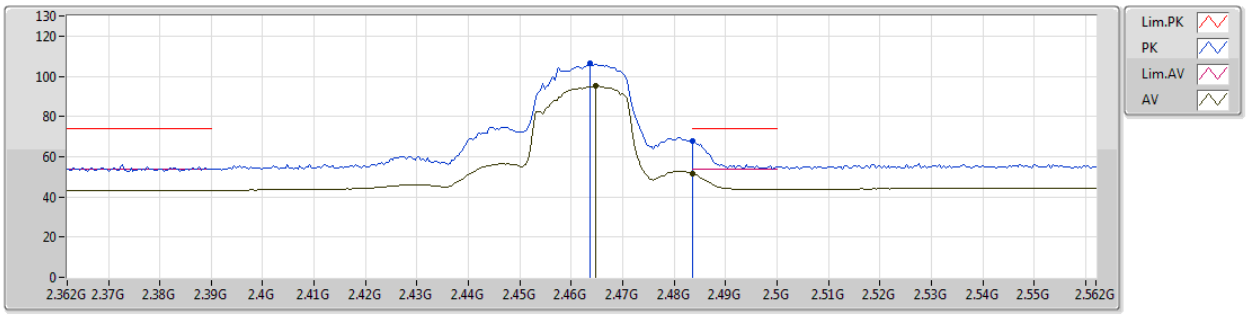
EUT Z_2TX
Setting 17
03-P-2
FSP(100019)

Type	Freq	Level	Limit	Margin	Factor	Dist	Condition	Azimuth	Height	Comments
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB)	(m)		(°)	(m)	
PK	2.456G	111.12	Inf	-Inf	32.14	3	Vertical	114	1.01	-
AV	2.4552G	100.16	Inf	-Inf	32.14	3	Vertical	114	1.01	-
PK	2.4835G	67.23	74.00	-6.77	32.23	3	Vertical	114	1.01	-
AV	2.4835G	52.83	54.00	-1.17	32.23	3	Vertical	114	1.01	-

802.11n HT20_Nss1,(MCS0)_2TX

2462MHz_TX

28/12/2018



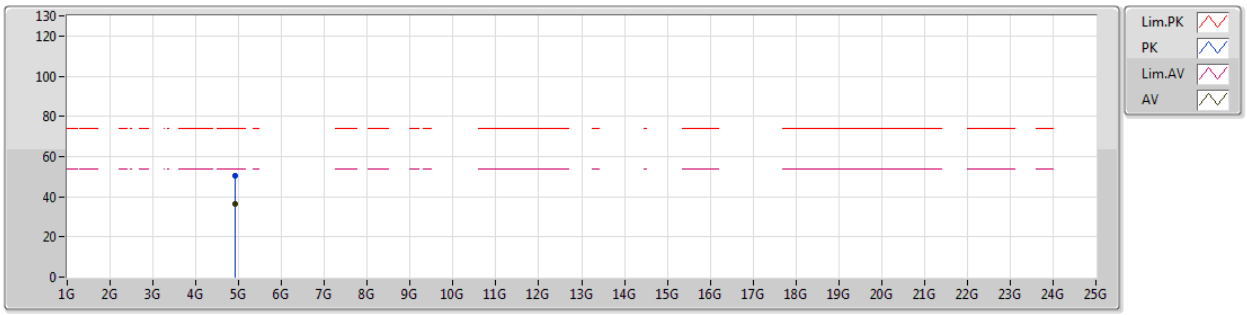
EUT Z_2TX
Setting 17
03-P-2
FSP(100019)

Type	Freq	Level	Limit	Margin	Factor	Dist	Condition	Azimuth	Height	Comments
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB)	(m)		(°)	(m)	
PK	2.4636G	106.48	Inf	-Inf	32.16	3	Horizontal	231	2.47	-
AV	2.4648G	95.00	Inf	-Inf	32.17	3	Horizontal	231	2.47	-
PK	2.4835G	67.68	74.00	-6.32	32.23	3	Horizontal	231	2.47	-
AV	2.4835G	51.79	54.00	-2.21	32.23	3	Horizontal	231	2.47	-

802.11n HT20_Nss1,(MCS0)_2TX

2462MHz_TX

02/01/2019



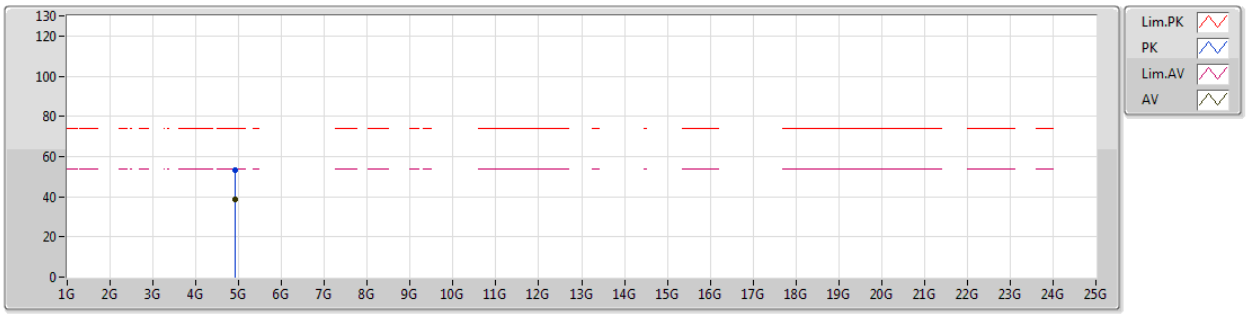
EUT Y_2TX
Setting 17
02-B-2
FSP(100019)

Type	Freq	Level	Limit	Margin	Factor	Dist	Condition	Azimuth	Height	Comments
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB)	(m)		(°)	(m)	
PK	4.92184G	50.70	74.00	-23.30	7.51	3	Vertical	280	2.12	-
AV	4.92388G	36.23	54.00	-17.77	7.51	3	Vertical	280	2.12	-

802.11n HT20_Nss1,(MCS0)_2TX

2462MHz_TX

02/01/2019



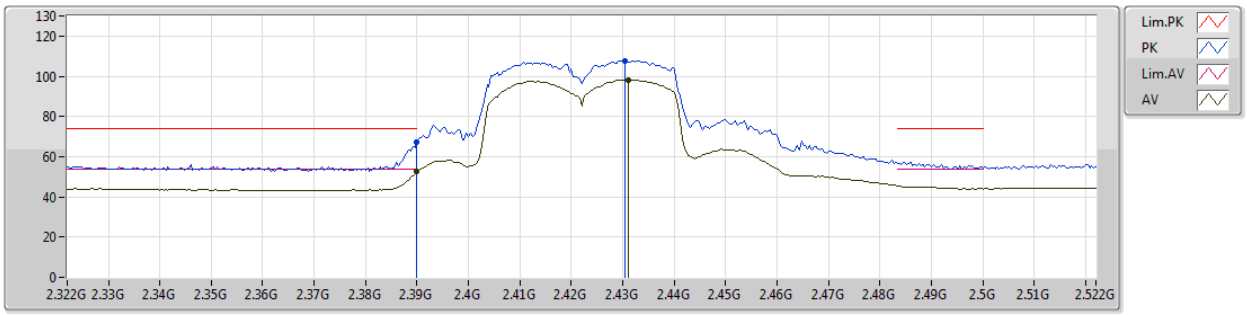
EUT Y_2TX
Setting 17
02-B-2
FSP(100019)

Type	Freq	Level	Limit	Margin	Factor	Dist	Condition	Azimuth	Height	Comments
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB)	(m)		(°)	(m)	
PK	4.92754G	53.16	74.00	-20.84	7.54	3	Horizontal	203	2.43	-
AV	4.92724G	38.67	54.00	-15.33	7.54	3	Horizontal	203	2.43	-

802.11n HT40_Nss1,(MCS0)_2TX

2422MHz_TX

28/12/2018



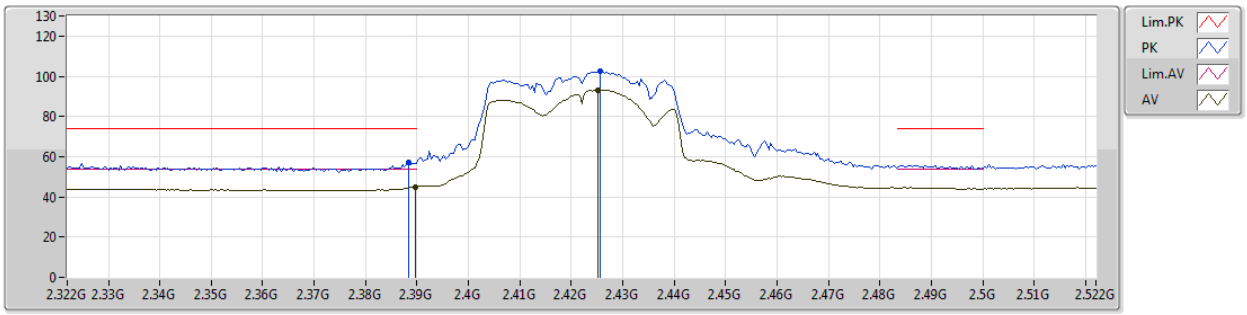
EUT Z_2TX
Setting 16
03-P-2
FSP(100019)

Type	Freq	Level	Limit	Margin	Factor	Dist	Condition	Azimuth	Height	Comments
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB)	(m)		(°)	(m)	
PK	2.39G	67.26	74.00	-6.74	31.95	3	Vertical	129	1.22	-
AV	2.39G	52.56	54.00	-1.44	31.95	3	Vertical	129	1.22	-
PK	2.4304G	107.72	Inf	-Inf	32.06	3	Vertical	129	1.22	-
AV	2.4312G	98.27	Inf	-Inf	32.07	3	Vertical	129	1.22	-

802.11n HT40_Nss1,(MCS0)_2TX

2422MHz_TX

28/12/2018



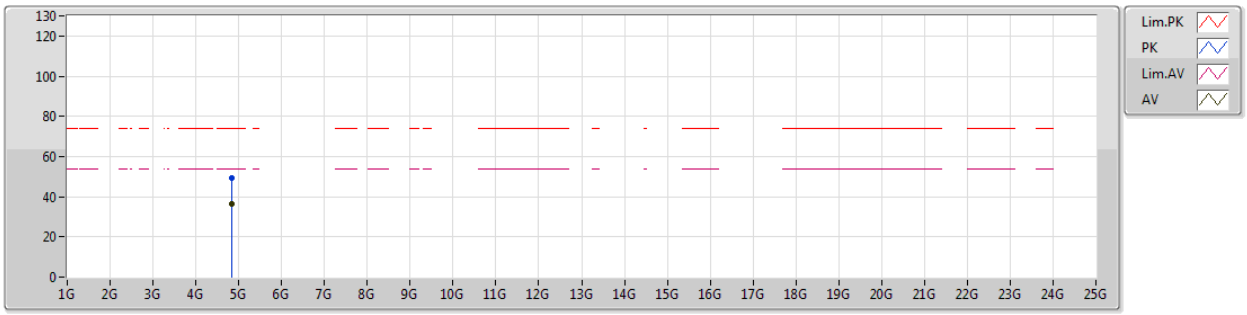
EUT Z_2TX
Setting 16
03-P-2
FSP(100019)

Type	Freq	Level	Limit	Margin	Factor	Dist	Condition	Azimuth	Height	Comments
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB)	(m)		(°)	(m)	
PK	2.3884G	57.04	74.00	-16.96	31.95	3	Horizontal	236	1.79	-
AV	2.3896G	45.10	54.00	-8.90	31.95	3	Horizontal	236	1.79	-
PK	2.4256G	102.32	Inf	-Inf	32.05	3	Horizontal	236	1.79	-
AV	2.4252G	92.94	Inf	-Inf	32.05	3	Horizontal	236	1.79	-

802.11n HT40_Nss1,(MCS0)_2TX

2422MHz_TX

02/01/2019



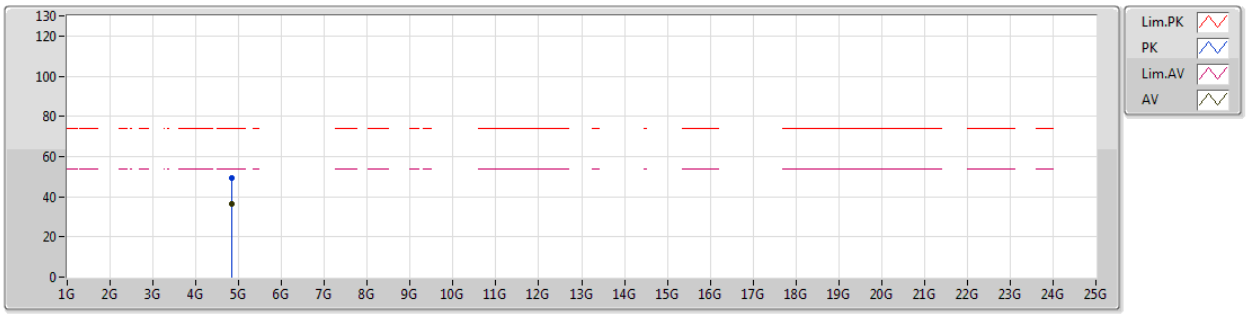
EUT Y_2TX
Setting 16
02-B-2
FSP(100019)

Type	Freq	Level	Limit	Margin	Factor	Dist	Condition	Azimuth	Height	Comments
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB)	(m)		(°)	(m)	
PK	4.84616G	49.33	74.00	-24.67	7.35	3	Vertical	254	2.66	-
AV	4.844G	36.59	54.00	-17.41	7.34	3	Vertical	254	2.66	-

802.11n HT40_Nss1,(MCS0)_2TX

2422MHz_TX

02/01/2019



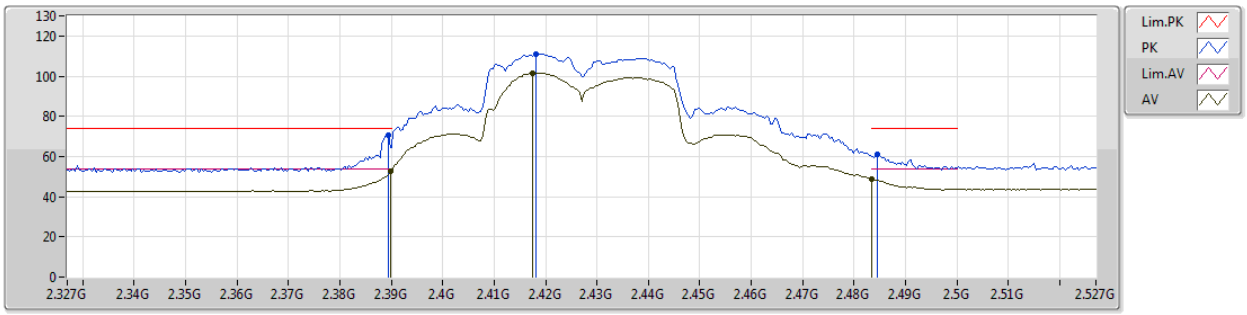
EUT Y_2TX
Setting 16
02-B-2
FSP(100019)

Type	Freq	Level	Limit	Margin	Factor	Dist	Condition	Azimuth	Height	Comments
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB)	(m)		(°)	(m)	
PK	4.83206G	49.51	74.00	-24.49	7.32	3	Horizontal	183	2.24	-
AV	4.84946G	36.36	54.00	-17.64	7.35	3	Horizontal	183	2.24	-

802.11n HT40_Nss1,(MCS0)_2TX

2427MHz_TX

03/01/2019



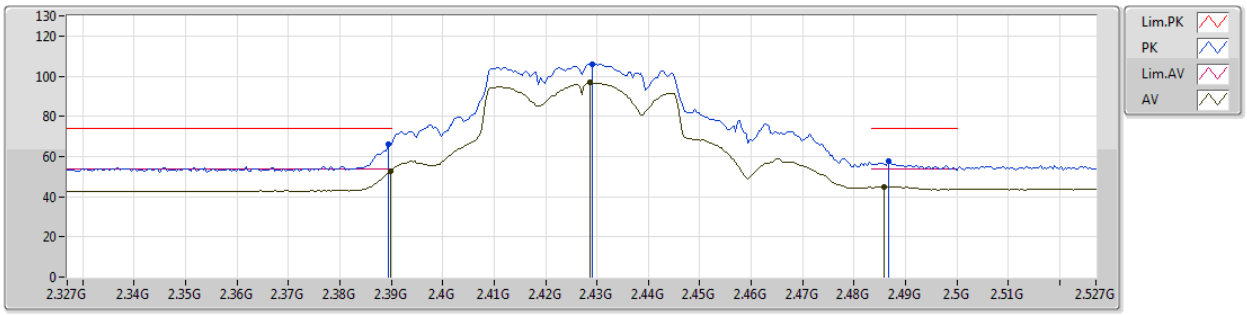
EUT Z_2TX
Setting 18
02-B-2
FSP(100019)

Type	Freq	Level	Limit	Margin	Factor	Dist	Condition	Azimuth	Height	Comments
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB)	(m)		(°)	(m)	
PK	2.3894G	70.84	74.00	-3.16	31.38	3	Vertical	218	1.28	-
AV	2.3898G	52.74	54.00	-1.26	31.38	3	Vertical	218	1.28	-
PK	2.4182G	111.19	Inf	-Inf	31.45	3	Vertical	218	1.28	-
AV	2.4174G	101.45	Inf	-Inf	31.45	3	Vertical	218	1.28	-
PK	2.4846G	61.30	74.00	-12.70	31.59	3	Vertical	218	1.28	-
AV	2.4835G	48.51	54.00	-5.49	31.59	3	Vertical	218	1.28	-

802.11n HT40_Nss1,(MCS0)_2TX

2427MHz_TX

03/01/2019



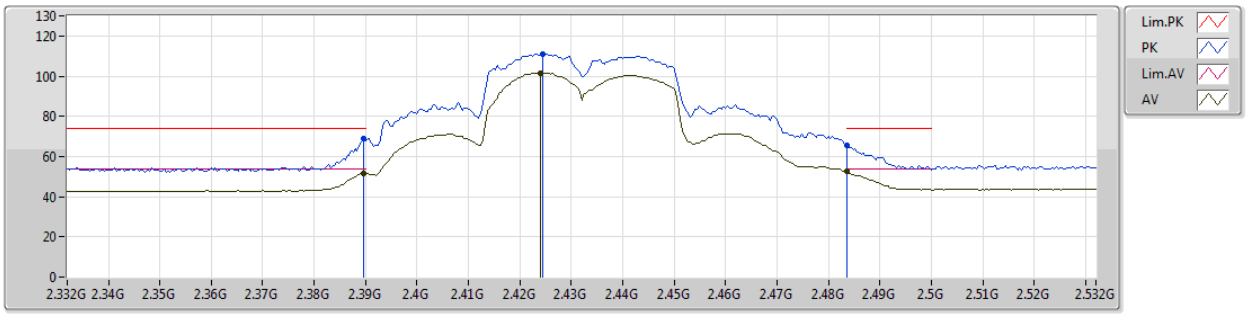
EUT Z_2TX
Setting 18
02-B-2
FSP(100019)

Type	Freq	Level	Limit	Margin	Factor	Dist	Condition	Azimuth	Height	Comments
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB)	(m)		(°)	(m)	
PK	2.3894G	66.32	74.00	-7.68	31.38	3	Horizontal	316	2.98	-
AV	2.3898G	52.56	54.00	-1.44	31.38	3	Horizontal	316	2.98	-
PK	2.429G	106.05	Inf	-Inf	31.47	3	Horizontal	316	2.98	-
AV	2.4286G	96.89	Inf	-Inf	31.47	3	Horizontal	316	2.98	-
PK	2.4866G	57.53	74.00	-16.47	31.60	3	Horizontal	316	2.98	-
AV	2.4858G	44.92	54.00	-9.08	31.59	3	Horizontal	316	2.98	-

802.11n HT40_Nss1,(MCS0)_2TX

2432MHz_TX

03/01/2019



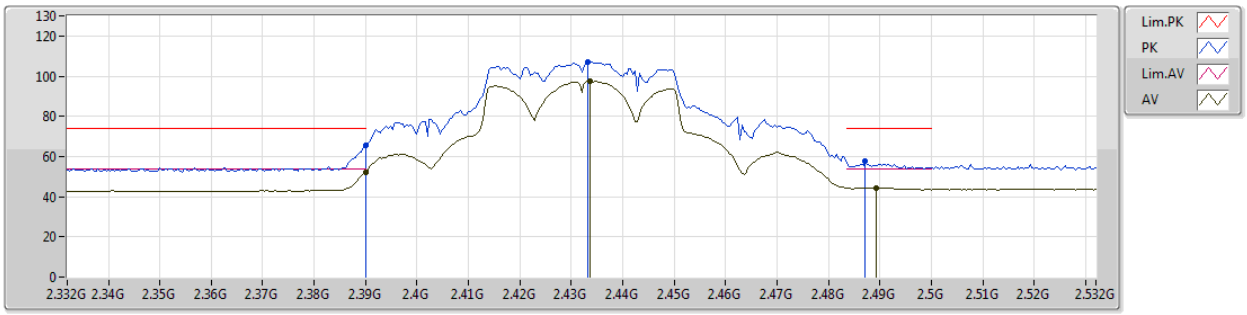
EUT Z_2TX
Setting 18.5
02-B-2
FSP(100019)

Type	Freq	Level	Limit	Margin	Factor	Dist	Condition	Azimuth	Height	Comments
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB)	(m)		(°)	(m)	
PK	2.3896G	69.14	74.00	-4.86	31.38	3	Vertical	179	1.20	-
AV	2.3896G	51.48	54.00	-2.52	31.38	3	Vertical	179	1.20	-
PK	2.4244G	111.07	Inf	-Inf	31.46	3	Vertical	179	1.20	-
AV	2.424G	101.63	Inf	-Inf	31.46	3	Vertical	179	1.20	-
PK	2.4835G	65.66	74.00	-8.34	31.59	3	Vertical	179	1.20	-
AV	2.4835G	52.45	54.00	-1.55	31.59	3	Vertical	179	1.20	-

802.11n HT40_Nss1,(MCS0)_2TX

2432MHz_TX

03/01/2019



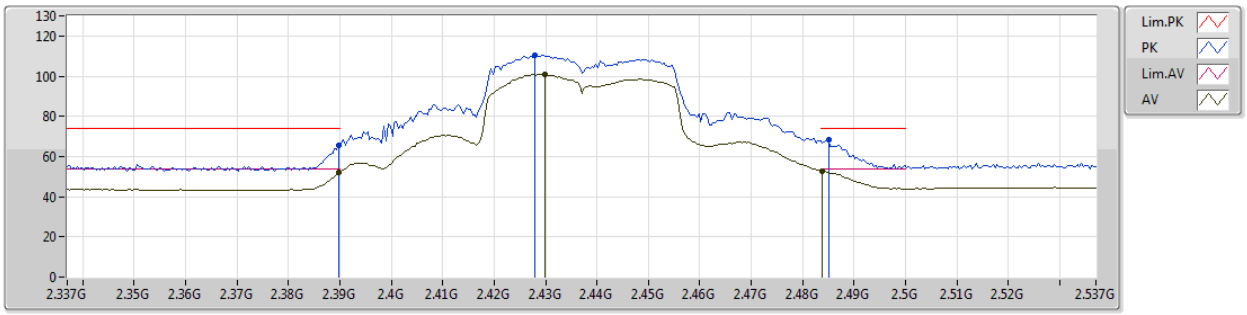
EUT Z_2TX
Setting 18.5
02-B-2
FSP(100019)

Type	Freq	Level	Limit	Margin	Factor	Dist	Condition	Azimuth	Height	Comments
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB)	(m)		(°)	(m)	
PK	2.39G	65.31	74.00	-8.69	31.38	3	Horizontal	295	2.99	-
AV	2.39G	52.36	54.00	-1.64	31.38	3	Horizontal	295	2.99	-
PK	2.4332G	107.00	Inf	-Inf	31.48	3	Horizontal	295	2.99	-
AV	2.4336G	97.72	Inf	-Inf	31.48	3	Horizontal	295	2.99	-
PK	2.4872G	57.70	74.00	-16.30	31.60	3	Horizontal	295	2.99	-
AV	2.4892G	44.50	54.00	-9.50	31.61	3	Horizontal	295	2.99	-

802.11n HT40_Nss1,(MCS0)_2TX

2437MHz_TX

28/12/2018



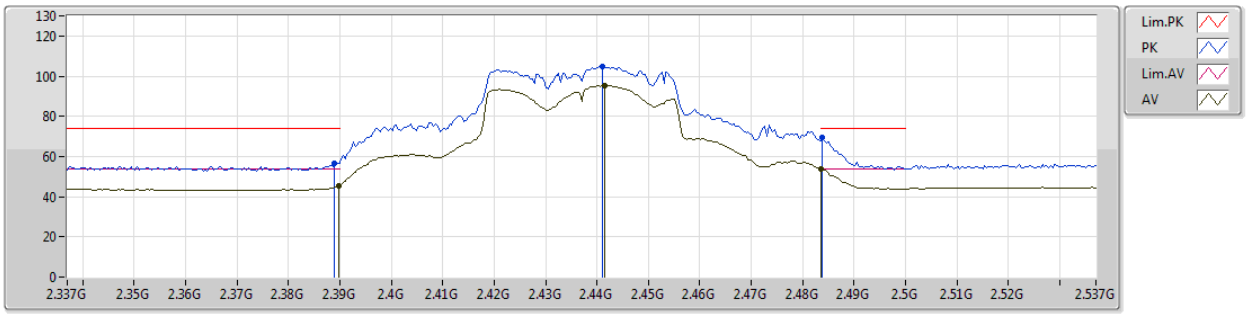
EUT Z_2TX
Setting 18.5
03-P-2
FSP(100019)

Type	Freq	Level	Limit	Margin	Factor	Dist	Condition	Azimuth	Height	Comments
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB)	(m)		(°)	(m)	
PK	2.3898G	65.68	74.00	-8.32	31.95	3	Vertical	115	2.07	-
AV	2.3898G	52.29	54.00	-1.71	31.95	3	Vertical	115	2.07	-
PK	2.4278G	110.21	Inf	-Inf	32.06	3	Vertical	115	2.07	-
AV	2.4298G	100.75	Inf	-Inf	32.06	3	Vertical	115	2.07	-
PK	2.485G	68.50	74.00	-5.50	32.23	3	Vertical	115	2.07	-
AV	2.4838G	52.85	54.00	-1.15	32.23	3	Vertical	115	2.07	-

802.11n HT40_Nss1,(MCS0)_2TX

2437MHz_TX

28/12/2018



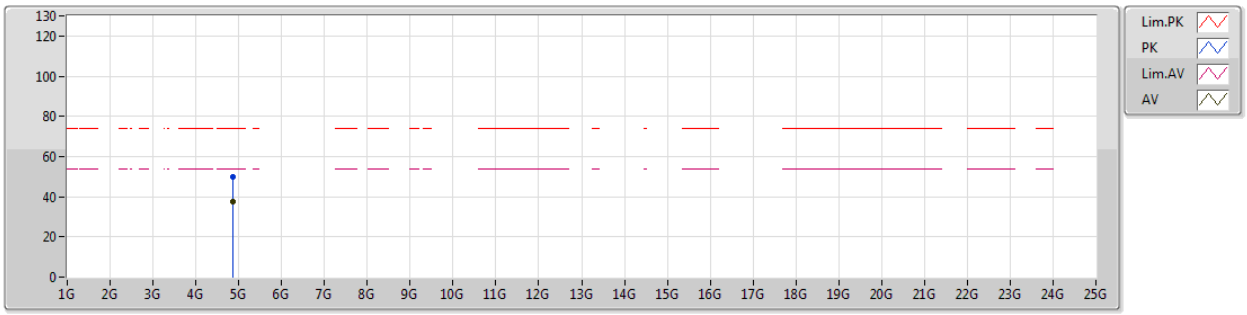
EUT Z_2TX
Setting 18.5
03-P-2
FSP(100019)

Type	Freq	Level	Limit	Margin	Factor	Dist	Condition	Azimuth	Height	Comments
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB)	(m)		(°)	(m)	
PK	2.389G	56.74	74.00	-17.26	31.95	3	Horizontal	235	2.52	-
AV	2.3898G	45.47	54.00	-8.53	31.95	3	Horizontal	235	2.52	-
PK	2.441G	104.68	Inf	-Inf	32.10	3	Horizontal	235	2.52	-
AV	2.4414G	95.28	Inf	-Inf	32.10	3	Horizontal	235	2.52	-
PK	2.4838G	69.41	74.00	-4.59	32.23	3	Horizontal	235	2.52	-
AV	2.4835G	53.69	54.00	-0.31	32.23	3	Horizontal	235	2.52	-

802.11n HT40_Nss1,(MCS0)_2TX

2437MHz_TX

02/01/2019



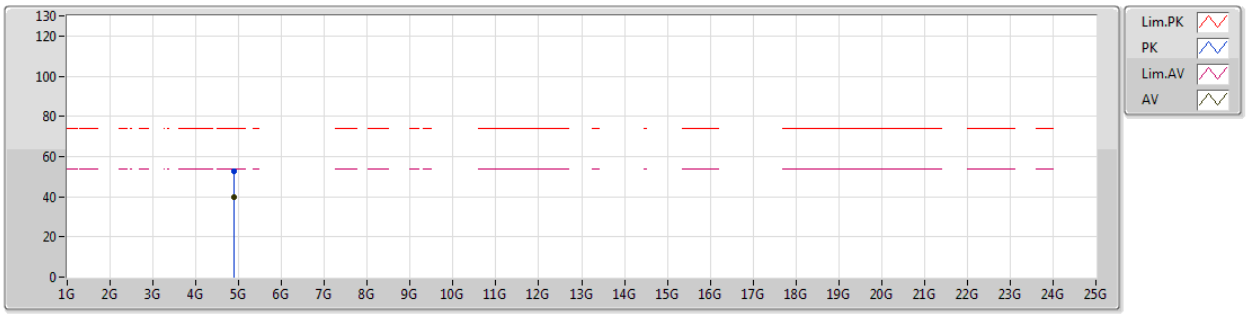
EUT Y_2TX
Setting 18.5
02-B-2
FSP(100019)

Type	Freq	Level	Limit	Margin	Factor	Dist	Condition	Azimuth	Height	Comments
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB)	(m)		(°)	(m)	
PK	4.8739G	49.95	74.00	-24.05	7.41	3	Vertical	236	2.65	-
AV	4.8739G	37.36	54.00	-16.64	7.41	3	Vertical	236	2.65	-

802.11n HT40_Nss1,(MCS0)_2TX

2437MHz_TX

02/01/2019



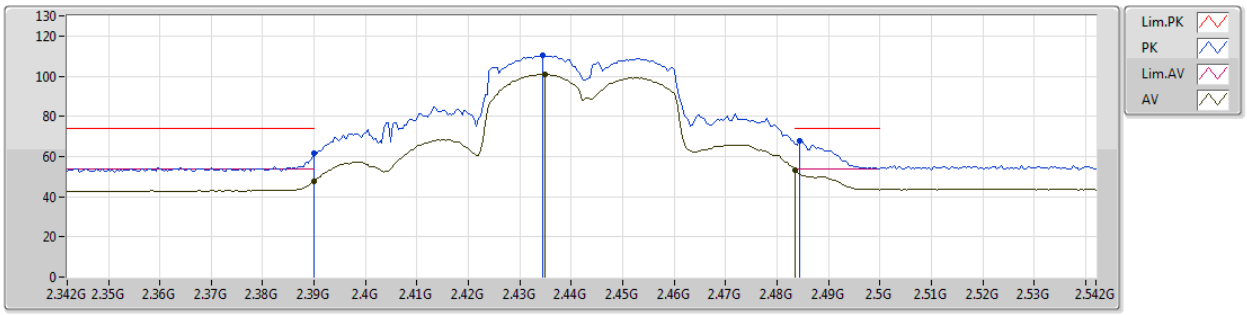
EUT Y_2TX
Setting 18.5
02-B-2
FSP(100019)

Type	Freq	Level	Limit	Margin	Factor	Dist	Condition	Azimuth	Height	Comments
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB)	(m)		(°)	(m)	
PK	4.8818G	52.55	74.00	-21.45	7.43	3	Horizontal	164	2.48	-
AV	4.88G	39.60	54.00	-14.40	7.43	3	Horizontal	164	2.48	-

802.11n HT40_Nss1,(MCS0)_2TX

2442MHz_TX

03/01/2019



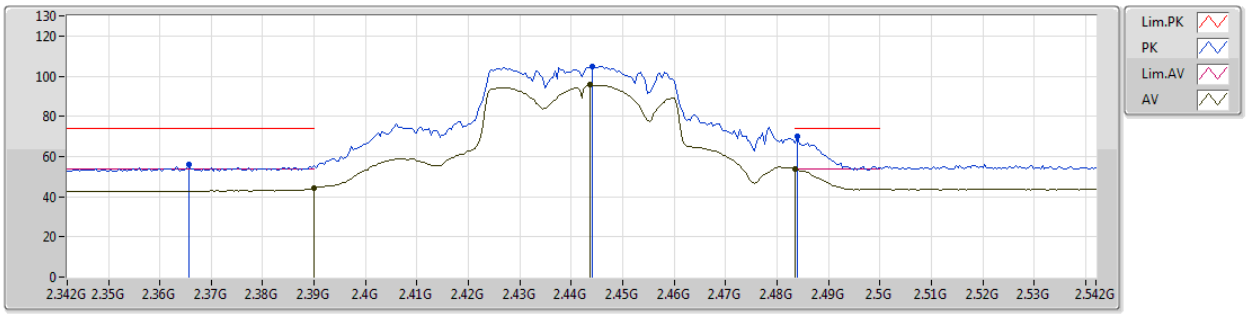
EUT Z_2TX
Setting 17.5
02-B-2
FSP(100019)

Type	Freq	Level	Limit	Margin	Factor	Dist	Condition	Azimuth	Height	Comments
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB)	(m)		(°)	(m)	
PK	2.39G	61.84	74.00	-12.16	31.38	3	Vertical	145	1.00	-
AV	2.39G	47.77	54.00	-6.23	31.38	3	Vertical	145	1.00	-
PK	2.4344G	110.43	Inf	-Inf	31.48	3	Vertical	145	1.00	-
AV	2.4348G	100.92	Inf	-Inf	31.48	3	Vertical	145	1.00	-
PK	2.4844G	67.98	74.00	-6.02	31.59	3	Vertical	145	1.00	-
AV	2.4835G	53.39	54.00	-0.61	31.59	3	Vertical	145	1.00	-

802.11n HT40_Nss1,(MCS0)_2TX

2442MHz_TX

03/01/2019



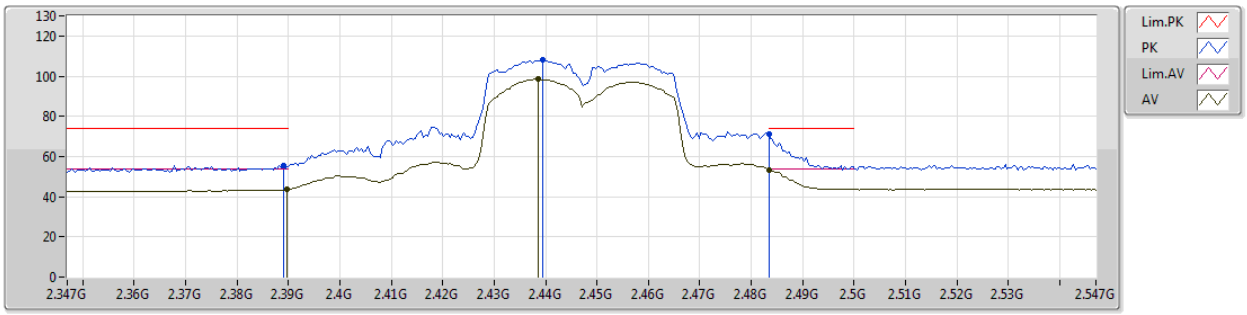
EUT Z_2TX
Setting 17.5
02-B-2
FSP(100019)

Type	Freq	Level	Limit	Margin	Factor	Dist	Condition	Azimuth	Height	Comments
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB)	(m)		(°)	(m)	
PK	2.3656G	55.81	74.00	-18.19	31.32	3	Horizontal	247	2.97	-
AV	2.39G	44.12	54.00	-9.88	31.38	3	Horizontal	247	2.97	-
PK	2.444G	104.83	Inf	-Inf	31.51	3	Horizontal	247	2.97	-
AV	2.4436G	95.64	Inf	-Inf	31.51	3	Horizontal	247	2.97	-
PK	2.484G	70.12	74.00	-3.88	31.59	3	Horizontal	247	2.97	-
AV	2.4835G	53.80	54.00	-0.20	31.59	3	Horizontal	247	2.97	-

802.11n HT40_Nss1,(MCS0)_2TX

2447MHz_TX

03/01/2019



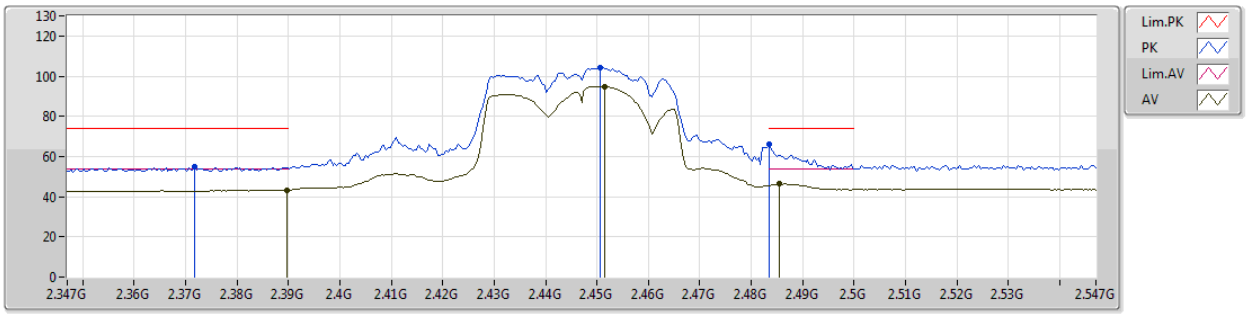
EUT Z_2TX
Setting 15.5
02-B-2
FSP(100019)

Type	Freq	Level	Limit	Margin	Factor	Dist	Condition	Azimuth	Height	Comments
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB)	(m)		(°)	(m)	
PK	2.389G	55.56	74.00	-18.44	31.38	3	Vertical	161	1.00	-
AV	2.3898G	43.57	54.00	-10.43	31.38	3	Vertical	161	1.00	-
PK	2.4394G	107.95	Inf	-Inf	31.50	3	Vertical	161	1.00	-
AV	2.4386G	98.40	Inf	-Inf	31.50	3	Vertical	161	1.00	-
PK	2.4835G	71.22	74.00	-2.78	31.59	3	Vertical	161	1.00	-
AV	2.4835G	53.50	54.00	-0.50	31.59	3	Vertical	161	1.00	-

802.11n HT40_Nss1,(MCS0)_2TX

2447MHz_TX

03/01/2019



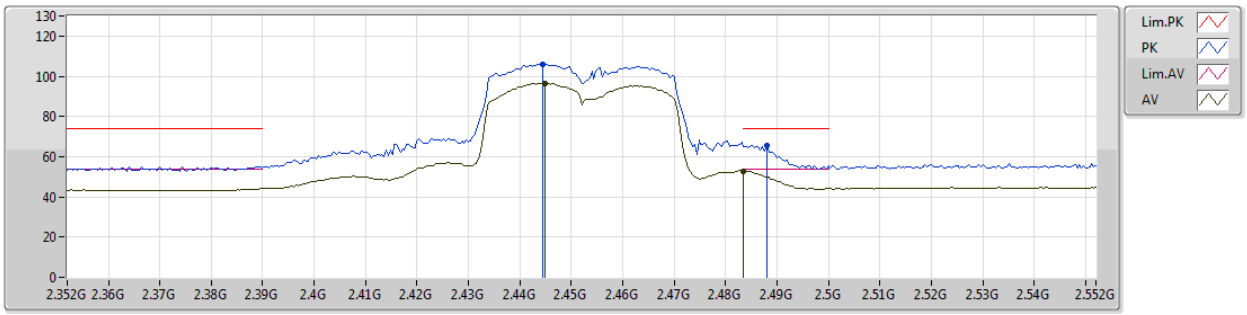
EUT Z_2TX
Setting 15.5
02-B-2
FSP(100019)

Type	Freq	Level	Limit	Margin	Factor	Dist	Condition	Azimuth	Height	Comments
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB)	(m)		(°)	(m)	
PK	2.3718G	54.87	74.00	-19.13	31.33	3	Horizontal	262	2.39	-
AV	2.3898G	43.29	54.00	-10.71	31.38	3	Horizontal	262	2.39	-
PK	2.4506G	104.27	Inf	-Inf	31.52	3	Horizontal	262	2.39	-
AV	2.4514G	94.85	Inf	-Inf	31.52	3	Horizontal	262	2.39	-
PK	2.4835G	66.24	74.00	-7.76	31.59	3	Horizontal	262	2.39	-
AV	2.4854G	46.36	54.00	-7.64	31.59	3	Horizontal	262	2.39	-

802.11n HT40_Nss1,(MCS0)_2TX

2452MHz_TX

28/12/2018



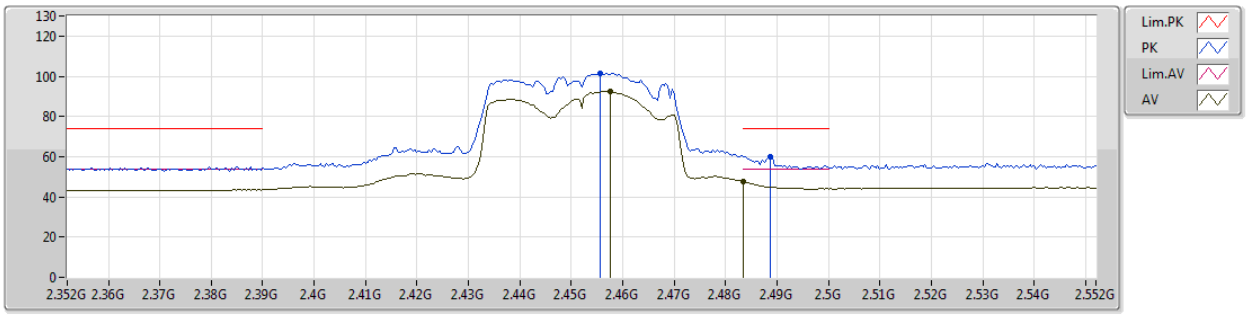
EUT Z_2TX
Setting 14.5
03-P-2
FSP(100019)

Type	Freq	Level	Limit	Margin	Factor	Dist	Condition	Azimuth	Height	Comments
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB)	(m)		(°)	(m)	
PK	2.4444G	106.03	Inf	-Inf	32.11	3	Vertical	128	1.16	-
AV	2.4448G	96.50	Inf	-Inf	32.11	3	Vertical	128	1.16	-
PK	2.488G	65.68	74.00	-8.32	32.23	3	Vertical	128	1.16	-
AV	2.4835G	52.86	54.00	-1.14	32.23	3	Vertical	128	1.16	-

802.11n HT40_Nss1,(MCS0)_2TX

2452MHz_TX

28/12/2018



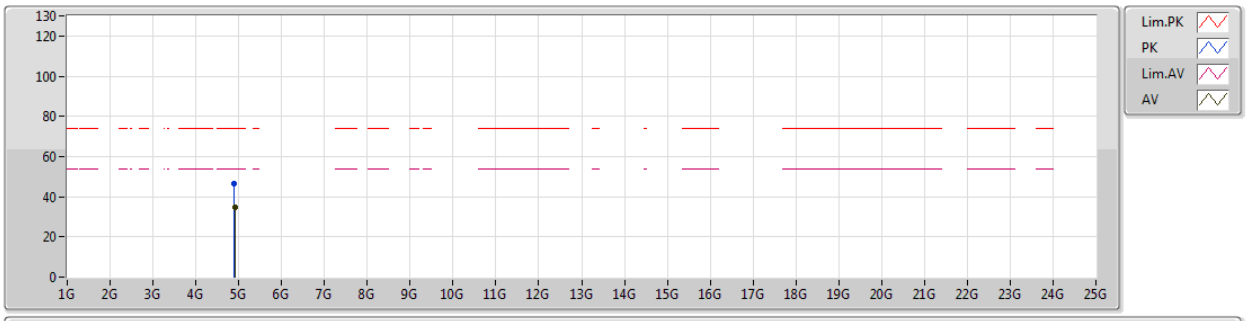
EUT Z_2TX
Setting 14.5
03-P-2
FSP(100019)

Type	Freq	Level	Limit	Margin	Factor	Dist	Condition	Azimuth	Height	Comments
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB)	(m)		(°)	(m)	
PK	2.4556G	101.58	Inf	-Inf	32.14	3	Horizontal	234	2.55	-
AV	2.4576G	92.30	Inf	-Inf	32.15	3	Horizontal	234	2.55	-
PK	2.4888G	59.97	74.00	-14.03	32.24	3	Horizontal	234	2.55	-
AV	2.4835G	47.40	54.00	-6.60	32.23	3	Horizontal	234	2.55	-

802.11n HT40_Nss1,(MCS0)_2TX

2452MHz_TX

02/01/2019



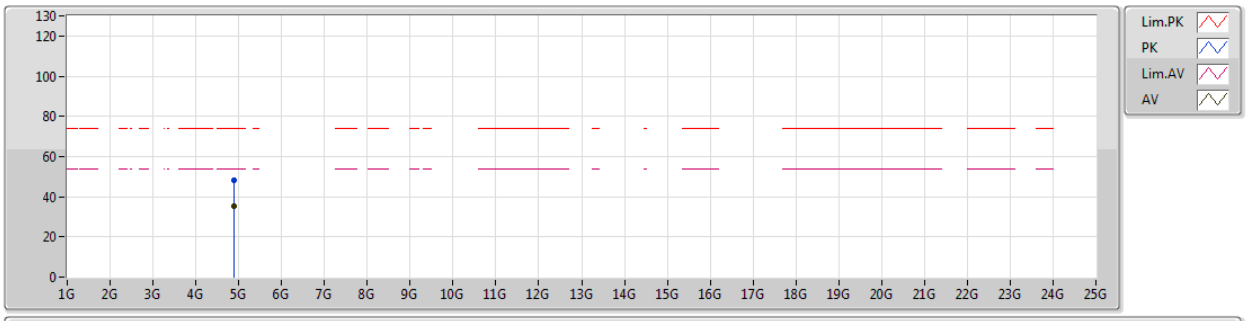
EUT Y_2TX
Setting 14.5
02-B-2
FSP(100019)

Type	Freq	Level	Limit	Margin	Factor	Dist	Condition	Azimuth	Height	Comments
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB)	(m)		(°)	(m)	
PK	4.8949G	46.67	74.00	-27.33	7.46	3	Vertical	261	2.04	-
AV	4.904G	35.00	54.00	-19.00	7.48	3	Vertical	261	2.04	-

802.11n HT40_Nss1,(MCS0)_2TX

2452MHz_TX

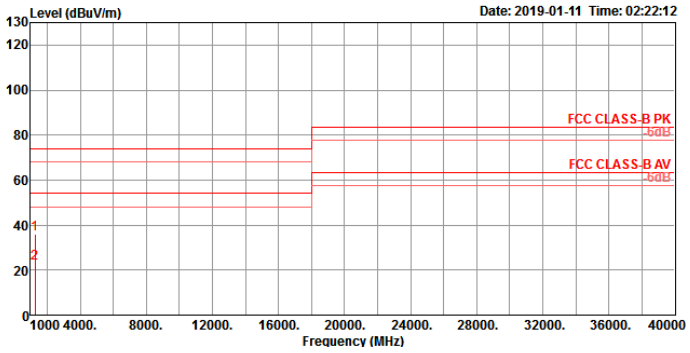
02/01/2019



EUT Y_2TX
Setting 14.5
02-B-2
FSP(100019)

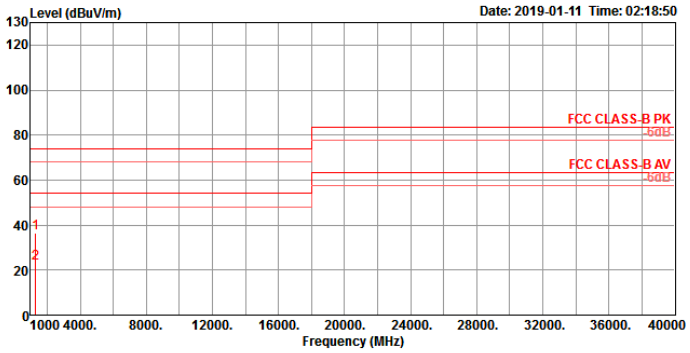
Type	Freq	Level	Limit	Margin	Factor	Dist	Condition	Azimuth	Height	Comments
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB)	(m)		(°)	(m)	
PK	4.8963G	48.06	74.00	-25.94	7.46	3	Horizontal	161	2.58	-
AV	4.8961G	35.08	54.00	-18.92	7.46	3	Horizontal	161	2.58	-

RSE Co-location Result			
Operating Mode	1	**Polarization**	Horizontal
Operating Function	Normal Link		



	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	A/Pos	T/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	cm	deg		
1	1287.12	36.21	74.00	-37.79	43.79	3.47	24.91	35.96	100	96	Peak	HORIZONTAL
2	1287.61	22.99	54.00	-31.01	30.57	3.47	24.91	35.96	100	96	Average	HORIZONTAL

RSE Co-location Result			
Operating Mode	1	**Polarization**	Vertical
Operating Function	Normal Link		



	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	A/Pos	T/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	cm	deg		
1	1288.12	36.43	74.00	-37.57	43.95	3.48	24.94	35.94	100	122	Peak	VERTICAL
2	1288.32	23.12	54.00	-30.88	30.64	3.48	24.94	35.94	100	122	Average	VERTICAL