FCC RADIO TEST REPORT

FCC ID	:	VGYAP903
Equipment	:	Dual Band Security Firewall
Brand Name	:	DrayTek Corp.
Model Name	:	VigorAP 903, Vigor2122ac
Applicant	:	DrayTek Corp. No.26 Fu Shing Rd., HuKou County,Hsin-Chu Industrial Park,Hsin-Chu,Taiwan 303 R.O.C
Manufacturer	:	DrayTek Corp. No.26 Fu Shing Rd., HuKou County,Hsin-Chu Industrial Park,Hsin-Chu,Taiwan 303 R.O.C
Standard	:	47 CFR FCC Part 15.247

The product was received on Jan. 12, 2018, and testing was started from Jan. 12, 2018 and completed on Apr. 30, 2018. We, SPORTON INTERTIONAL INC. EMC & Wireless Communications Laboratory, would like to declare that the tested sample has been evaluated in accordance with the procedures given in 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 INTERTIONAL INC. EMC & Wireless Communications Laboratory, the test report shall not be reproduced except in full.

Approved by: Sam Chen

SPORTON INTERTIONAL INC. EMC & Wireless Communications Laboratory
No. 52, Huaya 1st Rd., Guishan Dist., Taoyuan City, Taiwan (R.O.C.)

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Appendix H. Test Photos

Photographs of EUT v01

History of this test report

Report No.	Version	Description	Issued Date
FR7D2222AA	01	Initial issue of report	Jun. 22, 2018

Summary of Test Result

Report Clause	Ref Std. Clause	Test Items	Result (PASS/FAIL)	Remark
1.1.2	15.203	Antenna Requirement	PASS	Note
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	-
Note: For PoE Mode, the EUT was powered by PoE, and the PoE was for measurement only, would not be marketed. it's not necessary to apply to AC Power Port Conducted Emission.				

Reviewed by: Sam Chen
Report Producer: Sandy Chuang

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:
- 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	Part Number	Antenna Type	Connector	Gain (dBi)	
						2.4GHz	5GHz
1	1	MAG. LAYERS	EDA-1313-25GR2-A10-E	Dipole Antenna	Reversed-SMA	1.81	3.88
2	2	MAG. LAYERS	EDA-1313-25GR2-A10-E	Dipole Antenna	Reversed-SMA	1.81	3.88

Note: The EUT has two antennas.

<For 2.4GHz Band>

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

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

Port 1 and Port 2 could transmit/receive simultaneously.

<For 5GHz Band>

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

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

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	0.968	0.141	8.418m	300
802.11g	0.81	0.915	1.4m	1k
802.11n HT20	0.804	0.947	1.313m	1k
802.11n HT40	0.668	1.752	652.5u	3k

1.1.4 EUT Operational Condition

EUT Power Type	For EUT 1: From power adapter or PoE For EUT 2: From power adapter			
Beamforming Function	☒	With beamforming	☐	Without beamforming
	Note: The product has beamforming function for 802.11n/ac in 5GHz			
Function	☒	Point-to-multipoint	☐	Point-to-point
Test Software Version	QATool_Dbg.exe Version 0.0.1.71			

1.2 Testing Applied Standards

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

- 47 CFR FCC Part 15
- ANSI C63.10-2013
- FCC KDB 558074 D01 v04
- FCC KDB 662911 D01 v02r01
- FCC KDB 412172 D01 v01r01

1.3 Testing Location Information

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

Test Condition	Test Site No.	Test Engineer	Test Environment	Test Date
RF Conducted	TH01-CB	Gino Huang / Paul Chen	22°C / 54%	Jan. 15, 2018~ Apr. 25, 2018
Radiated	03CH01-CB	Lance Wu / Cola Fan	22°C / 54%	Jan. 12, 2018~ Apr. 30, 2018
AC Conduction	CO01-CB	Wei Li / GN Hou	22°C / 59%	Mar. 30, 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)	3.2 dB	Confidence levels of 95%
Radiated Emission (30MHz ~ 1,000MHz)	3.6 dB	Confidence levels of 95%
Radiated Emission (1GHz ~ 18GHz)	3.7 dB	Confidence levels of 95%
Radiated Emission (18GHz ~ 40GHz)	3.5 dB	Confidence levels of 95%
Conducted Emission	1.7 dB	Confidence levels of 95%
Output Power Measurement	1.33 dB	Confidence levels of 95%
Power Density Measurement	1.27 dB	Confidence levels of 95%
Bandwidth Measurement	9.74×10^{-8}	Confidence levels of 95%

2 Test Configuration of EUT

2.1 Test Channel Mode

Mode	Power Setting
802.11b_Nss1,(1Mbps)_2TX	-
2412MHz	25 ↑ 1 fail
2417MHz	29
2422MHz	29
2427MHz	2B
2432MHz	
2437MHz	2B
2442MHz	
2447MHz	2B
2452MHz	29
2457MHz	26
2462MHz	26
802.11g_Nss1,(6Mbps)_2TX	-
2412MHz	1E
2417MHz	26
2422MHz	2A
2427MHz	2F
2432MHz	
2437MHz	2F
2442MHz	
2447MHz	2F
2452MHz	2A
2457MHz	26
2462MHz	20
802.11n HT20_Nss1,(MCS0)_2TX	-
2412MHz	1E
2417MHz	27
2422MHz	2A
2427MHz	2F
2432MHz	
2437MHz	2F
2442MHz	
2447MHz	2F
2452MHz	29
2457MHz	27

Mode	Power Setting
2462MHz	1E
802.11n HT40_Nss1,(MCS0)_2TX	-
2422MHz	18
2427MHz	1A
2432MHz	1D
2437MHz	20
2442MHz	1E
2447MHz	1C
2452MHz	1C

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 1 + Adapter

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
1	EUT 1 + Adapter

The Worst Case Mode for Following Conformance Tests	
Tests Item	Emissions in Restricted Frequency Bands
Test Condition	Radiated measurement If EUT consist of multiple antenna assembly (multiple antenna are used in EUT regardless of spatial multiplexing MIMO configuration), the radiated test should be performed with highest antenna gain of each antenna type.
Operating Mode < 1GHz	Normal Link
1	EUT 1 + Adapter
2	EUT 1 + PoE
For operating mode 1 is the worst case and it was record in this test report.	
Operating Mode > 1GHz	CTX
1	EUT 1

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
1	EUT 1: 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	EUT 1: WLAN 2.4GHz + WLAN 5GHz
Refer to Sporton Test Report No.: FA7D2222 for Co-location RF Exposure Evaluation.	

Note 1: The EUT can only be used at Y axis position

Note 2: The PoE below is for measurement only, would not be marketed.

The PoE information as below:

Support Unit	Brand	Model Number
PoE	CRIO	POE-G30

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

No.	Equipment Name	Brand Name	Model Name	Rating	Remark
1	Adapter	DVE	DSA-18PFR-12 FUS 120150	Input: 100-240V~50/60Hz, 0.6A Output: +12V, 1.5A	For EUT 1 and EUT 2 use

2.5 Table for Multiple Listing

The EUT has two model names which are identical to each other in all aspects except for the following table:

Model Name	WIFI	Ethernet Port	USB Port	PoE Function	Adapter DC Voltage	EUT
VigorAP 903	V	5	V	V	+12V, 1.5A	EUT 1
Vigor2122ac	V	5	V	X	+12V, 1.5A	EUT 2

Note 1: From the above models, model: VigorAP 903 (EUT 1) were selected as representative model for the test and its data was recorded in this report.

Note 2: V : With X :Without

2.6 Support Equipment

For Test Site No: CO01-CB

Support Equipment				
No.	**Equipment**	**Brand Name**	**Model Name**	**FCC ID**
1	NB*4	DELL	E6430	DoC
2	Flash disk3.0	Transcend	JetFlash-700	DoC

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

Support Equipment				
No.	**Equipment**	**Brand Name**	**Model Name**	**FCC ID**
1	NB*2	DELL	E4300	DoC
2	NB*2	Apple	Mac Book	DoC
3	Flash disk	Silicon Power	I-Series	DoC

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

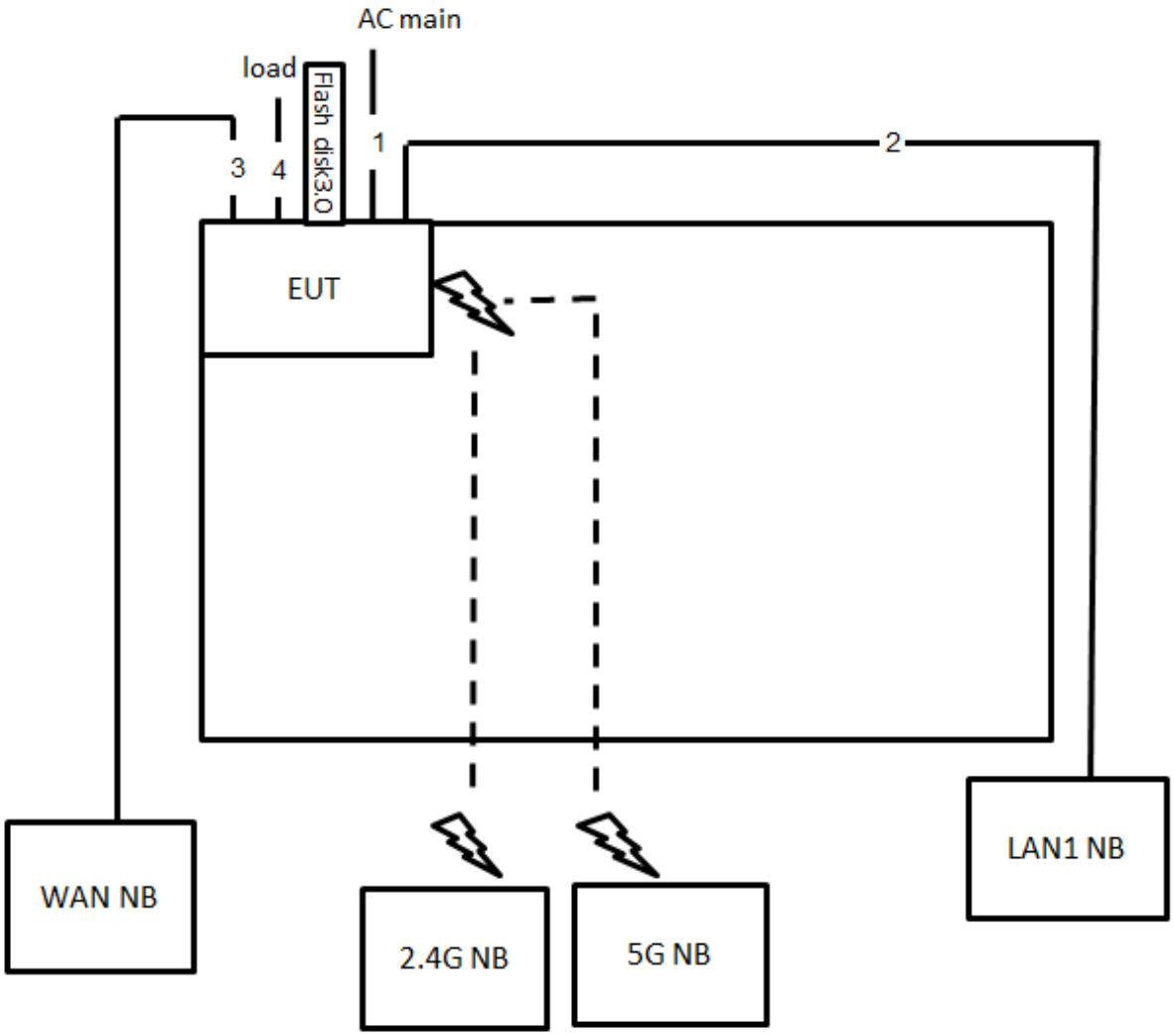
Support Equipment				
No.	**Equipment**	**Brand Name**	**Model Name**	**FCC ID**
1	NB	DELL	E4300	DoC

For Test Site No: TH01-CB

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

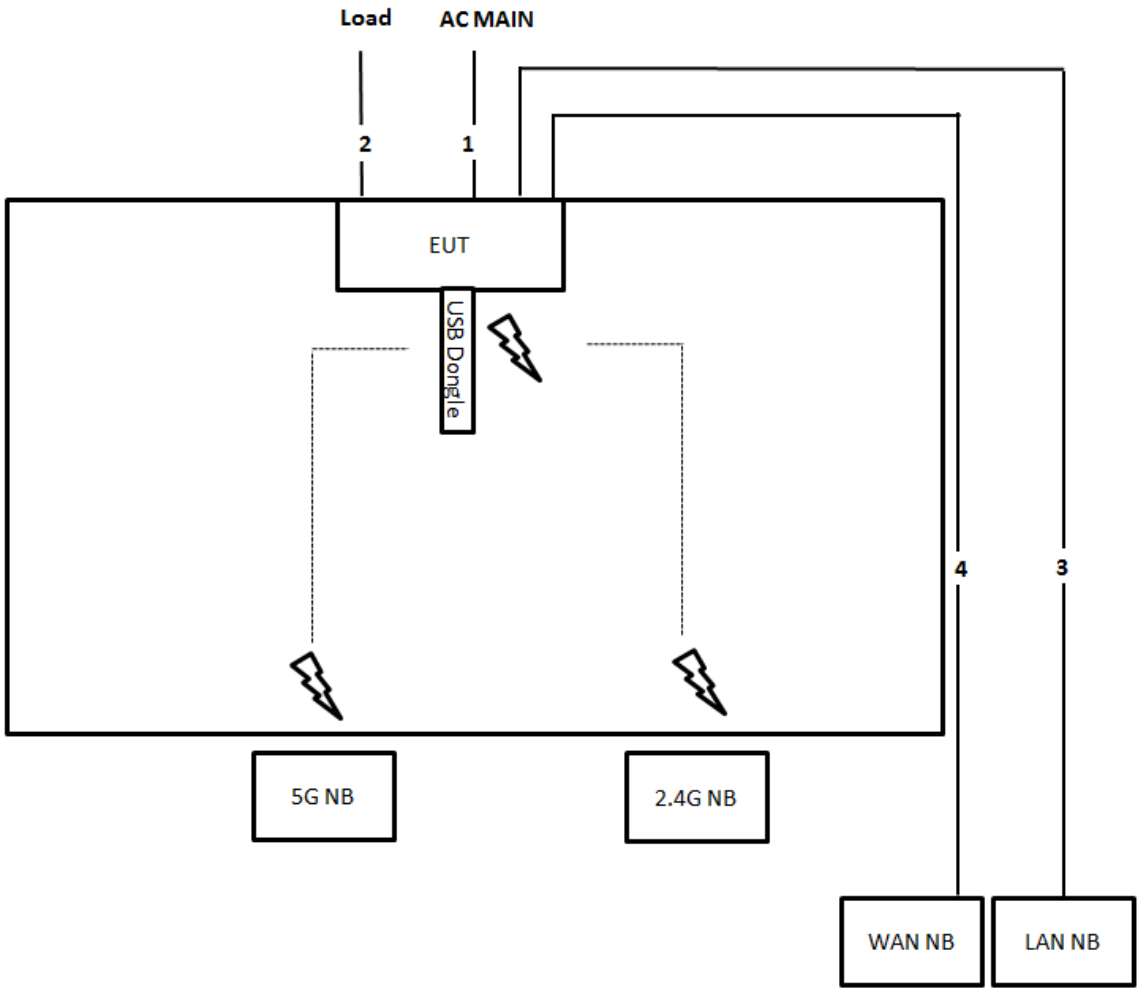
2.7 Test Setup Diagram

Test Setup Diagram – AC Line Conducted Emission Test



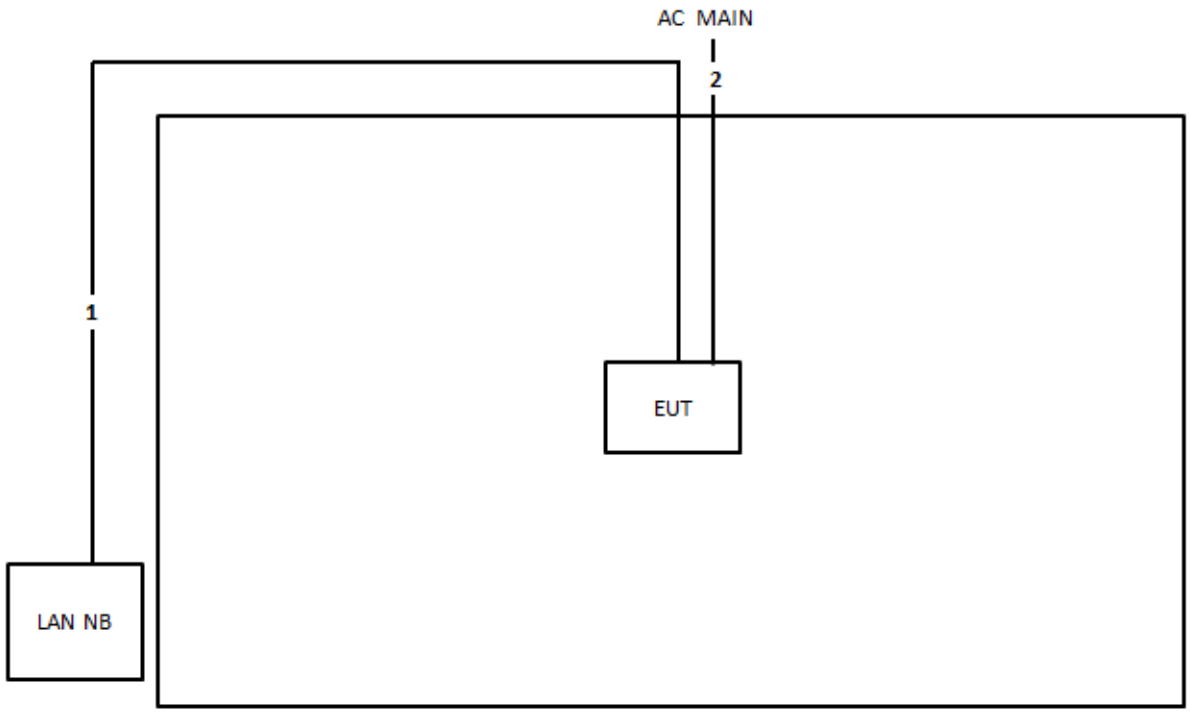
Item	Connection	Shielded	Length
1	Power cable	No	1.5m
2	RJ-45 cable	No	10m
3	RJ-45 cable	No	10m
4	RJ-45 cable*3	No	1.5m

Test Setup Diagram - Radiated Test < 1GHz



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

Test Setup Diagram - Radiated Test > 1GHz



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

3 Transmitter Test Result

3.1 AC Power-line Conducted Emissions

3.1.1 AC Power-line Conducted Emissions Limit

AC Power-line Conducted Emissions Limit		
Frequency Emission (MHz)	**Quasi-Peak**	**Average**
0.15-0.5	66 - 56 *	56 - 46 *
0.5-5	56	46
5-30	60	50
Note 1: * Decreases with the logarithm of the frequency.		

3.1.2 Measuring Instruments

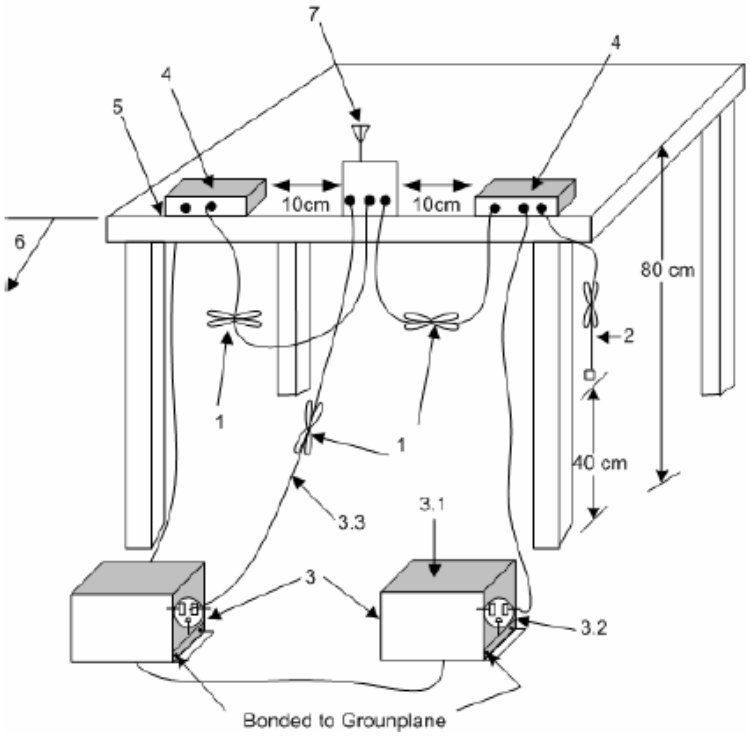
Refer a test equipment and calibration data table in this test report.

3.1.3 Test Procedures

Test Method
☒ Refer as ANSI C63.10-2013, clause 6.2 for AC power-line conducted emissions.

3.1.4 Test Setup

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

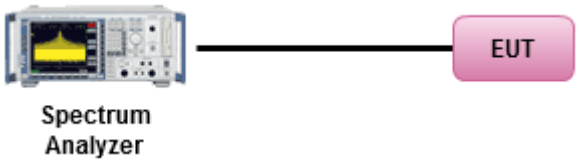
Refer a test equipment and calibration data table in this test report.

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 8.1 Option 1 for 6 dB bandwidth measurement.
	☐ Refer as FCC KDB 558074, clause 8.2 Option 2 for 6 dB bandwidth measurement.
	☐ Refer as ANSI C63.10, clause 6.9.1 for occupied bandwidth testing.

3.2.4 Test Setup

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 9.1.1 Option 1 (RBW ≥ EBW method).
	☐ Refer as FCC KDB 558074, clause 9.1.3 (peak power meter for VBW ≥ DTS BW)
▪ Maximum Conducted Output Power	
	[duty cycle ≥ 98% or external video / power trigger]
	☐ Refer as FCC KDB 558074, clause 9.2.2.2 Method AVGSA-1 (spectral trace averaging).
	☐ Refer as FCC KDB 558074, clause 9.2.2.3 Method AVGSA-1 Alt. (slow sweep speed)
	duty cycle < 98% and average over on/off periods with duty factor
	☐ Refer as FCC KDB 558074, clause 9.2.2.4 Method AVGSA-2 (spectral trace averaging).
	☐ Refer as FCC KDB 558074, clause 9.2.2.5 Method AVGSA-2 Alt. (slow sweep speed)
	Measurement using a power meter (PM)
	☒ Refer as FCC KDB 558074, clause 9.2.3 Method AVGPM (using an RF average power meter).
	☐ Refer as FCC KDB 558074, clause 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

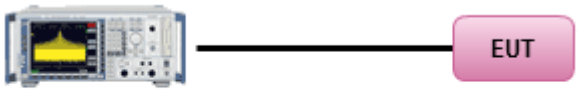
3.4.2 Measuring Instruments

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 10.2 Method PKPSD (RBW=3-100kHz; Detector=peak).	
	[duty cycle ≥ 98% or external video / power trigger]	
	☐ Refer as FCC KDB 558074, clause 10.3 Method AVGPSD-1 (spectral trace averaging).	
	☐ Refer as FCC KDB 558074, clause 10.4 Method AVGPSD-2 (slow sweep speed)	
	duty cycle < 98% and average over on/off periods with duty factor	
	☐ Refer as FCC KDB 558074, clause 10.5 Method AVGPSD-1 Alt (spectral trace averaging).	
	☐ Refer as FCC KDB 558074, clause 10.6 Method AVGPSD-2 Alt. (slow sweep speed)	
▪ For conducted measurement.		
	▪ If The EUT supports multiple transmit chains using options given below:	
		☒ Option 1: Measure and sum the spectra across the outputs. Refer as FCC KDB 662911, In-band power spectral density (PSD). Sample all transmit ports simultaneously using a spectrum analyzer for each transmit port. Where the trace bin-by-bin of each transmit port summing can be performed. (i.e., in the first spectral bin of output 1 is summed with that in the first spectral bin of output 2 and that from the first spectral bin of output 3, and so on up to the NTX output to obtain the value for the first frequency bin of the summed spectrum.). Add up the amplitude (power) values for the different transmit chains and use this as the new data trace.
		☐ Option 2: Measure and sum spectral maxima across the outputs. With this technique, spectra are measured at each output of the device at the required resolution bandwidth. The maximum value (peak) of each spectrum is determined. These maximum values are then summed mathematically in linear power units across the outputs. These operations shall be performed separately over frequency spans that have different out-of-band or spurious emission limits,
		☐ Option 3: Measure and add 10 log(N) dB, where N is the number of transmit chains. Refer as FCC KDB 662911, In-band power spectral density (PSD). Performed at each transmit chains and each transmit chains shall be compared with the limit have been reduced with 10 log(N). Or each transmit chains shall be add 10 log(N) to compared with the limit.

3.4.4 Test Setup

Power Spectral Density
 Spectrum Analyzer

3.4.5 Test Result of Power Spectral Density

Refer as Appendix D

3.5 Emissions in Non-restricted Frequency Bands

3.5.1 Emissions in Non-restricted Frequency Bands Limit

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

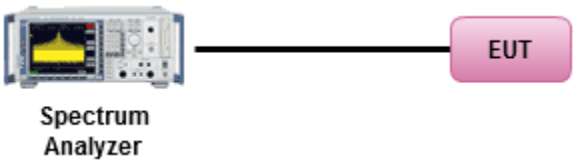
3.5.2 Measuring Instruments

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

3.5.3 Test Procedures

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

3.5.4 Test Setup

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.

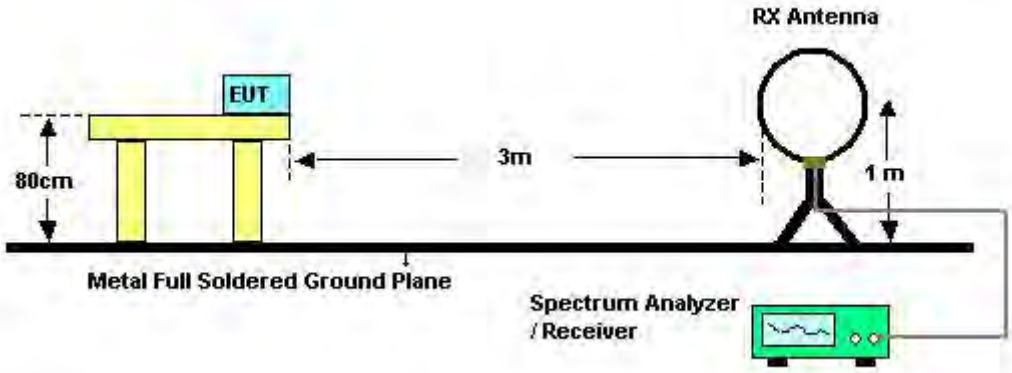
3.6.3 Test Procedures

Test Method		
▪ The average emission levels shall be measured in [duty cycle ≥ 98 or duty factor].		
▪ Refer as ANSI C63.10, clause 6.9.2.2 band-edge testing shall be performed at the lowest frequency channel and highest frequency channel within the allowed operating band.		
▪ For the transmitter unwanted emissions shall be measured using following options below:		
	▪ Refer as FCC KDB 558074, clause 12 for unwanted emissions into restricted bands.	
		☐ Refer as FCC KDB 558074, clause 12.2.5.1 Option 1 (trace averaging for duty cycle ≥98%)
		☐ Refer as FCC KDB 558074, clause 12.2.5.2 Option 2 (trace averaging + duty factor).
		☒ Refer as FCC KDB 558074, clause 12.2.5.3 Option 3 (Reduced VBW≥1/T).
		☐ Refer as ANSI C63.10, clause 4.2.3.2.3 (Reduced VBW). VBW ≥ 1/T, where T is pulse time.
		☐ Refer as ANSI C63.10, clause 4.2.3.2.4 average value of pulsed emissions.
		☒ Refer as FCC KDB 558074, clause 12.2.4 measurement procedure peak limit.
▪ For the transmitter band-edge emissions shall be measured using following options below:		
	▪ Refer as FCC KDB 558074 clause 13.1, When the performing peak or average radiated measurements, emissions within 2 MHz of the authorized band edge may be measured using the marker-delta method described below.	
	▪ Refer as FCC KDB 558074, clause 13.2 (ANSI C63.10, clause 6.9.3) for marker-delta method for band-edge measurements.	
	▪ Refer as FCC KDB 558074, clause 13.3 for narrower resolution bandwidth (100kHz) using the band power and summing the spectral levels (i.e., 1 MHz).	
▪ For conducted and cabinet radiation measurement, refer as FCC KDB 558074, clause 12.2.2.		
	▪ For conducted unwanted emissions into restricted bands (absolute emission limits). Devices with multiple transmit chains using options given below: (1) Measure and sum the spectra across the outputs or (2) Measure and add 10 log(N) dB	
	▪ For FCC KDB 662911 The methodology described here may overestimate array gain, thereby resulting in apparent failures to satisfy the out-of-band limits even if the device is actually compliant. In such cases, compliance may be demonstrated by performing radiated tests around the frequencies at which the apparent failures occurred.	

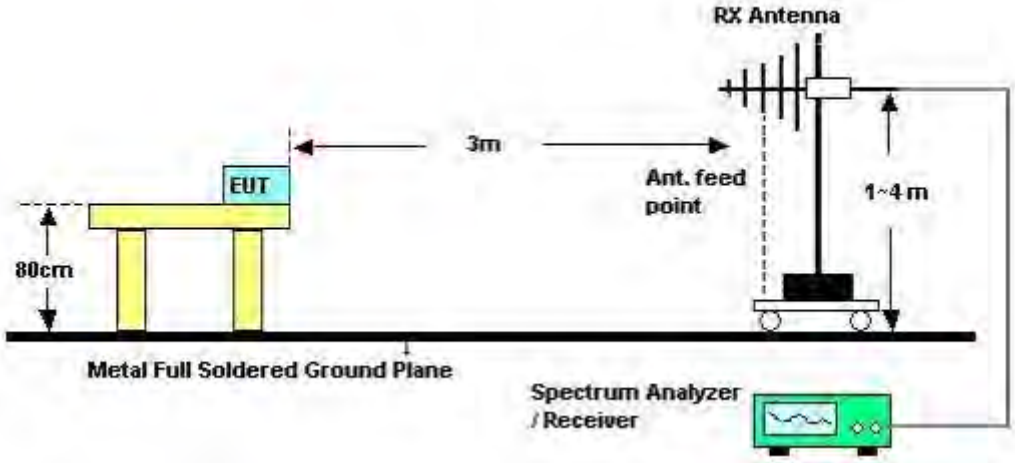
3.6.4 Test Setup

Transmitter Radiated Emissions

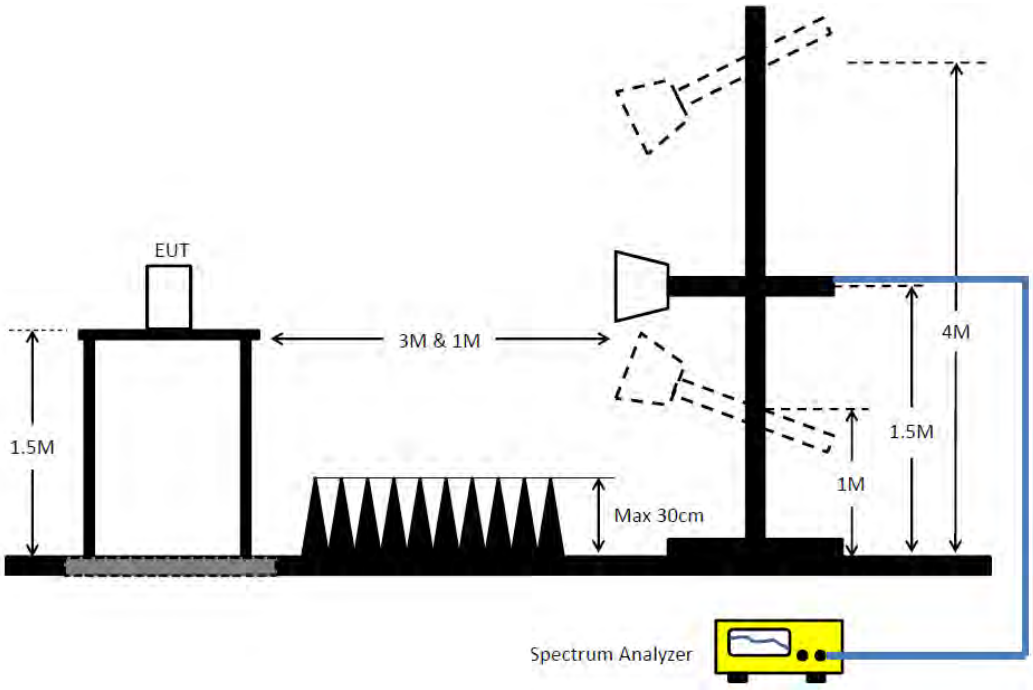
9kHz ~30MHz



30MHz~1GHz



Above 1GHz



3.6.5 Transmitter Radiated Unwanted Emissions (Below 30MHz)

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

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	Schwarzbeck	NSLK 8127	8127650	9kHz ~ 30MHz	Nov. 24, 2017	Nov. 23, 2018	Conduction (CO01-CB)
LISN	Schwarzbeck	NSLK 8127	8127478	9kHz ~ 30MHz	Nov. 13, 2017	Nov. 12, 2018	Conduction (CO01-CB)
COND Cable	Woken	Cable	01	150kHz ~ 30MHz	May 23, 2017	May 22, 2018	Conduction (CO01-CB)
Software	Audix	E3	6.120210n	-	N.C.R.	N.C.R.	Conduction (CO01-CB)
BILOG ANTENNA with 6dB Attenuator	TESEQ & EMCI	CBL6112D & N-6-06	37880 & AT-N0609	20MHz ~ 2GHz	Aug. 30, 2017	Aug. 29, 2018	Radiation (03CH01-CB)
Loop Antenna	Teseq	HLA 6120	24155	9kHz - 30 MHz	Mar. 16, 2016*	Mar. 15, 2018*	Radiation (03CH01-CB)
Loop Antenna	Teseq	HLA 6120	24155	9kHz - 30 MHz	Mar. 16, 2018	Mar. 15, 2019	Radiation (03CH01-CB)
Horn Antenna	EMCO	3115	00075790	750MHz ~ 18GHz	Nov. 20, 2017	Nov. 19, 2018	Radiation (03CH01-CB)
Horn Antenna	Schwarzbeck	BBHA 9170	BBHA9170252	15GHz ~ 40GHz	Jul. 05, 2017	Jul. 04, 2018	Radiation (03CH01-CB)
Pre-Amplifier	EMCI	EMC330N	980332	20MHz ~ 3GHz	May 02, 2017	May 01, 2018	Radiation (03CH01-CB)
Pre-Amplifier	Agilent	8449B	3008A02310	1GHz ~ 26.5GHz	Jan. 09, 2018	Jan. 08, 2019	Radiation (03CH01-CB)
Pre-Amplifier	MITEQ	TTA1840-35-H G	1864479	18GHz ~ 40GHz	Jul. 10, 2017	Jul. 09, 2018	Radiation (03CH01-CB)
Spectrum Analyzer	R&S	FSP40	100056	9kHz ~ 40GHz	Nov. 23, 2017	Nov. 22, 2018	Radiation (03CH01-CB)
EMI Test	R&S	ESCS	100355	9kHz ~ 2.75GHz	May 06, 2017	May 05, 2018	Radiation (03CH01-CB)
RF Cable-low	Woken	Low Cable-16+17	N/A	30 MHz ~ 1 GHz	Oct. 11, 2017	Oct. 10, 2018	Radiation (03CH01-CB)
RF Cable-high	Woken	High Cable-16	N/A	1 GHz ~ 18 GHz	Oct. 11, 2017	Oct. 10, 2018	Radiation (03CH01-CB)
RF Cable-high	Woken	High Cable-16+17	N/A	1 GHz ~ 18 GHz	Oct. 11, 2017	Oct. 10, 2018	Radiation (03CH01-CB)
RF Cable-high	Woken	High Cable-40G#1	N/A	18GHz ~ 40 GHz	Oct. 11, 2017	Oct. 10, 2018	Radiation (03CH01-CB)
RF Cable-high	Woken	High Cable-40G#2	N/A	18GHz ~ 40 GHz	Oct. 11, 2017	Oct. 10, 2018	Radiation (03CH01-CB)
Spectrum analyzer	R&S	FSV40	100979	9kHz~40GHz	Dec. 21, 2017	Dec. 20, 2018	Conducted (TH01-CB)
RF Cable-high	Woken	RG402	High Cable-06	1 GHz – 26.5 GHz	Oct. 11, 2017	Oct. 10, 2018	Conducted (TH01-CB)

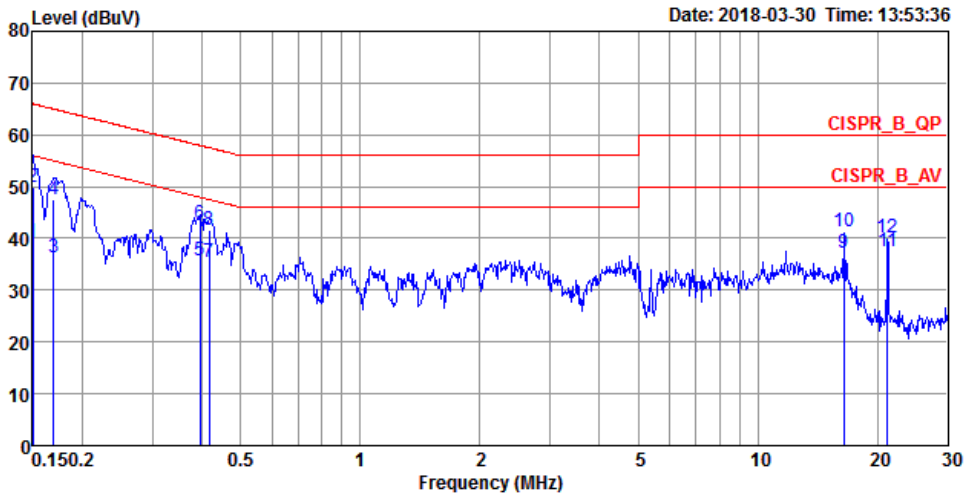
Instrument	Manufacturer	Model No.	Serial No.	Characteristics	Calibration Date	Calibration Due Date	Remark
RF Cable-high	Woken	RG402	High Cable-07	1 GHz –26.5 GHz	Oct. 11, 2017	Oct. 10, 2018	Conducted (TH01-CB)
RF Cable-high	Woken	RG402	High Cable-08	1 GHz –26.5 GHz	Oct. 11, 2017	Oct. 10, 2018	Conducted (TH01-CB)
RF Cable-high	Woken	RG402	High Cable-09	1 GHz –26.5 GHz	Oct. 11, 2017	Oct. 10, 2018	Conducted (TH01-CB)
RF Cable-high	Woken	RG402	High Cable-10	1 GHz –26.5 GHz	Oct. 11, 2017	Oct. 10, 2018	Conducted (TH01-CB)
Power Sensor	Agilent	U2021XA	MY53410001	50MHz~18GHz	Nov. 20, 2017	Nov. 19, 2018	Conducted (TH01-CB)

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

"*" Calibration Interval of instruments listed above is two years.

NCR means Non-Calibration required.

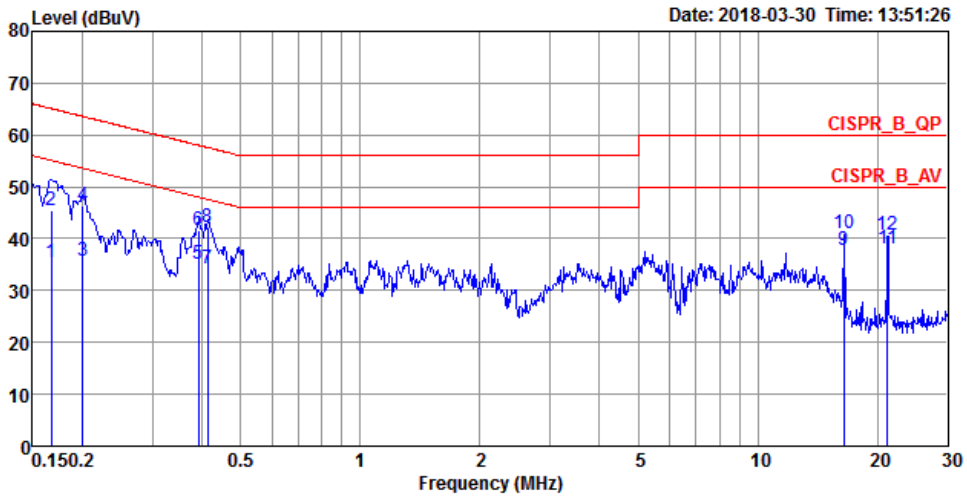
AC Power-line Conducted Emissions Result			
Operating Mode	1	**Power Phase**	Neutral
Operating Function	Normal Link		



	Freq	Level	Over Limit	Limit Line	Read Level	LISN Factor	Cable Loss	Remark	Pol/Phase
	MHz	dBuV	dB	dBuV	dBuV	dB	dB		
1	0.1500	39.20	-16.80	56.00	29.12	9.92	0.16	Average	NEUTRAL
2	0.1500	49.96	-16.04	66.00	39.88	9.92	0.16	QP	NEUTRAL
3	0.1694	36.20	-18.79	54.99	26.13	9.92	0.15	Average	NEUTRAL
4	0.1694	47.39	-17.60	64.99	37.32	9.92	0.15	QP	NEUTRAL
5	0.3955	35.72	-12.23	47.95	25.79	9.92	0.01	Average	NEUTRAL
6	0.3955	42.69	-15.26	57.95	32.76	9.92	0.01	QP	NEUTRAL
7	0.4171	35.48	-12.03	47.51	25.54	9.92	0.02	Average	NEUTRAL
8	0.4171	41.65	-15.86	57.51	31.71	9.92	0.02	QP	NEUTRAL
9	16.4648	37.31	-12.69	50.00	26.92	10.20	0.19	Average	NEUTRAL
10	16.4648	41.46	-18.54	60.00	31.07	10.20	0.19	QP	NEUTRAL
11	21.1672	37.59	-12.41	50.00	27.11	10.27	0.21	Average	NEUTRAL
12	21.1672	40.10	-19.90	60.00	29.62	10.27	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.)

AC Power-line Conducted Emissions Result			
Operating Mode	1	**Power Phase**	Line
Operating Function	Normal Link		



	Freq	Level	Over Limit	Limit Line	Read Level	LISN Factor	Cable Loss	Remark	Pol/Phase
	MHz	dBuV	dB	dBuV	dBuV	dB	dB		
1	0.1668	35.52	-19.60	55.12	25.46	9.91	0.15	Average	LINE
2	0.1668	45.50	-19.62	65.12	35.44	9.91	0.15	QP	LINE
3	0.2007	35.86	-17.72	53.58	25.82	9.91	0.13	Average	LINE
4	0.2007	46.44	-17.14	63.58	36.40	9.91	0.13	QP	LINE
5	0.3914	35.25	-12.78	48.03	25.33	9.91	0.01	Average	LINE
6	0.3914	41.54	-16.49	58.03	31.62	9.91	0.01	QP	LINE
7	0.4127	34.21	-13.38	47.59	24.28	9.91	0.02	Average	LINE
8	0.4127	42.20	-15.39	57.59	32.27	9.91	0.02	QP	LINE
9	16.4642	37.72	-12.28	50.00	27.22	10.31	0.19	Average	LINE
10	16.4642	41.11	-18.89	60.00	30.61	10.31	0.19	QP	LINE
11	21.1676	38.16	-11.84	50.00	27.54	10.41	0.21	Average	LINE
12	21.1676	40.79	-19.21	60.00	30.17	10.41	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.)

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	10.05M	16.392M	16M4G1D	9.05M	13.993M
802.11g_Nss1,(6Mbps)_2TX	16.275M	18.991M	19M0D1D	15M	16.342M
802.11n HT20_Nss1,(MCS0)_2TX	15.1M	20.265M	20M3D1D	13.9M	17.516M
802.11n HT40_Nss1,(MCS0)_2TX	35.05M	36.032M	36M0D1D	33.8M	35.782M

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	9.525M	14.568M	9.05M	13.993M
2437MHz	Pass	500k	10.025M	16.392M	10.05M	15.617M
2462MHz	Pass	500k	9.075M	14.468M	9.05M	14.118M
802.11g_Nss1,(6Mbps)_2TX	-	-	-	-	-	-
2412MHz	Pass	500k	15.05M	16.367M	15M	16.342M
2437MHz	Pass	500k	15.05M	18.341M	15.05M	18.991M
2462MHz	Pass	500k	15.1M	16.392M	16.275M	16.342M
802.11n HT20_Nss1,(MCS0)_2TX	-	-	-	-	-	-
2412MHz	Pass	500k	13.9M	17.541M	15.075M	17.541M
2437MHz	Pass	500k	15.025M	18.916M	15.1M	20.265M
2462MHz	Pass	500k	15.1M	17.566M	15.075M	17.516M
802.11n HT40_Nss1,(MCS0)_2TX	-	-	-	-	-	-
2422MHz	Pass	500k	33.8M	35.832M	35.05M	35.782M
2437MHz	Pass	500k	35M	35.932M	35.05M	35.932M
2452MHz	Pass	500k	34.95M	35.932M	33.8M	36.032M

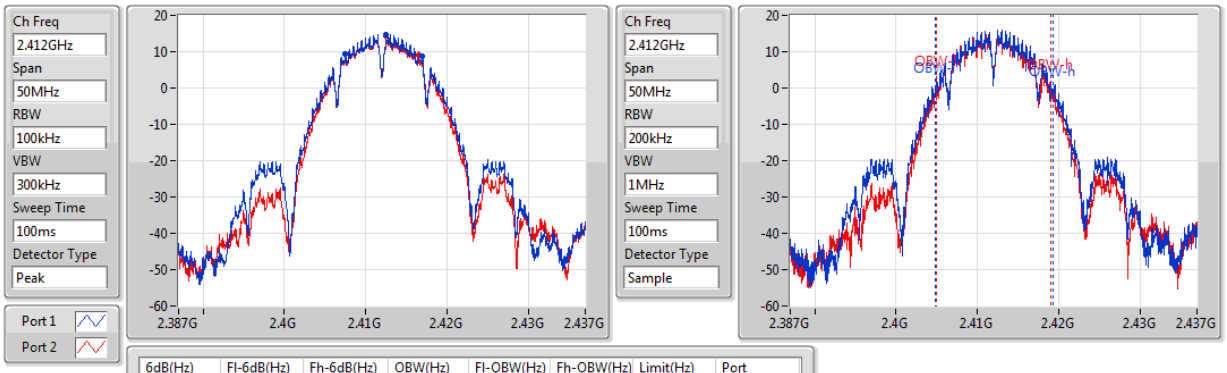
Port X-N dB = Port **X** 6dB down bandwidth; **Port X-OBW** = Port **X** 99% occupied bandwidth;

802.11b_Nss1,(1Mbps)_2TX

EBW

2412MHz

03/04/2018



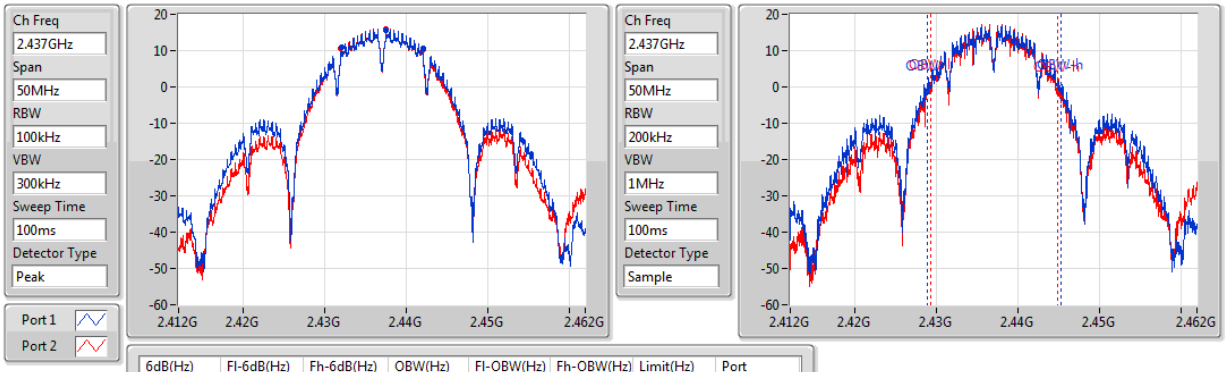
6dB(Hz)	Fl-6dB(Hz)	Fh-6dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
9.525M	2.407475G	2.417G	14.568M	2.404804G	2.419371G	500k	1
9.05M	2.407475G	2.416525G	13.993M	2.405028G	2.419021G	500k	2

802.11b_Nss1,(1Mbps)_2TX

EBW

2437MHz

03/04/2018



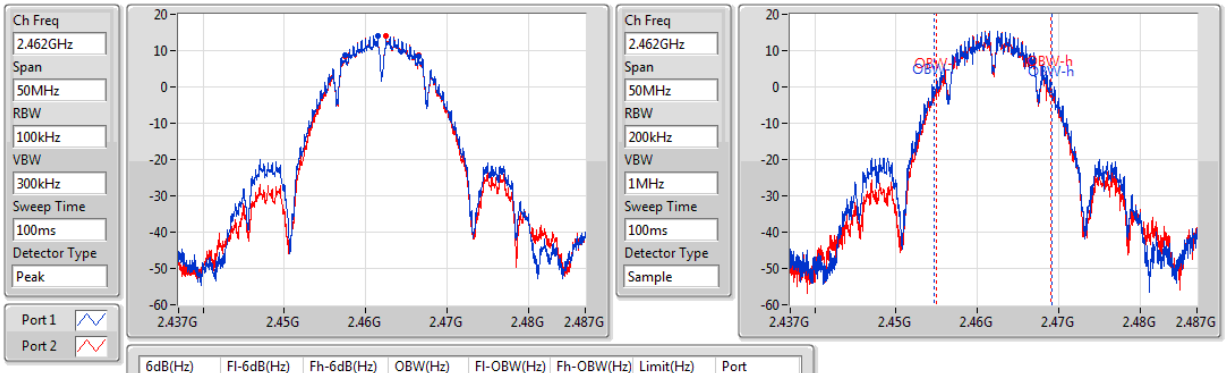
6dB(Hz)	Fl-6dB(Hz)	Fh-6dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
10.025M	2.432G	2.442025G	16.392M	2.428854G	2.445246G	500k	1
10.05M	2.431975G	2.442025G	15.617M	2.429229G	2.444846G	500k	2

802.11b_Nss1,(1Mbps)_2TX

EBW

2462MHz

03/04/2018



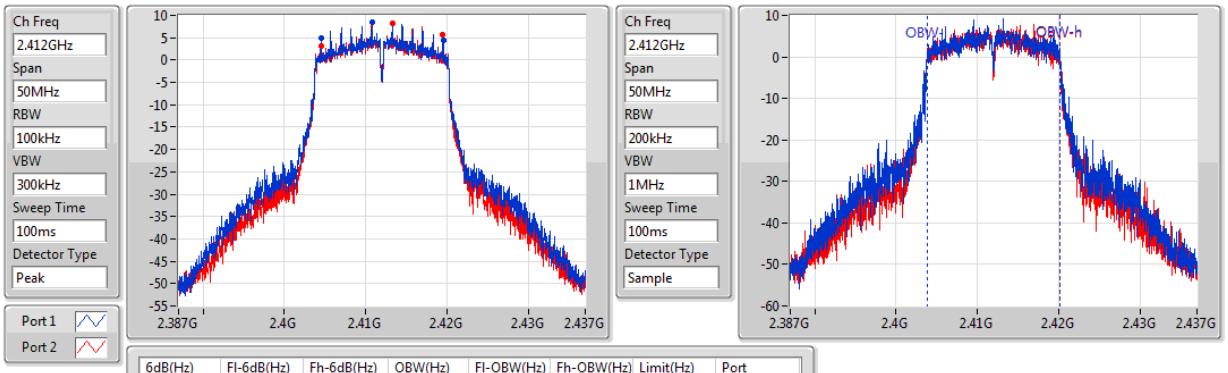
6dB(Hz)	Fl-6dB(Hz)	Fh-6dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
9.075M	2.457475G	2.46655G	14.468M	2.454704G	2.469171G	500k	1
9.05M	2.457475G	2.466525G	14.118M	2.454929G	2.469046G	500k	2

802.11g_Nss1,(6Mbps)_2TX

EBW

2412MHz

03/04/2018



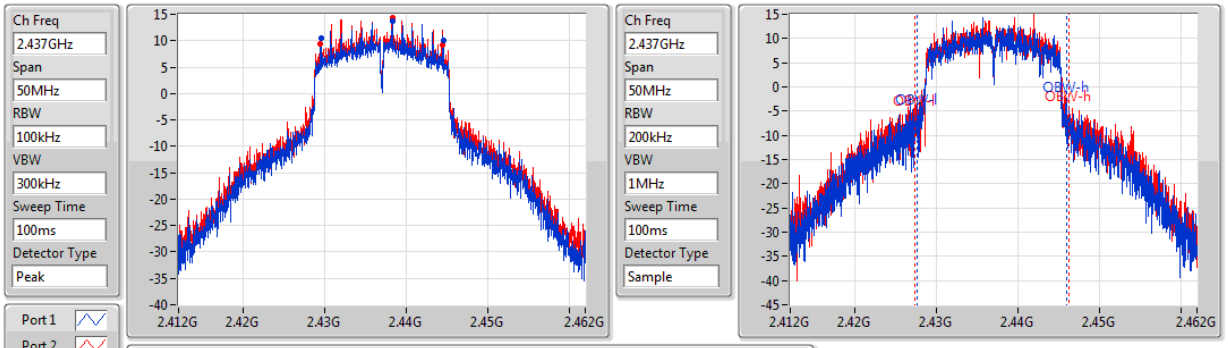
6dB(Hz)	Fl-6dB(Hz)	Fh-6dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
15.05M	2.4045G	2.41955G	16.367M	2.403804G	2.420171G	500k	1
15M	2.4045G	2.4195G	16.342M	2.403804G	2.420146G	500k	2

802.11g_Nss1,(6Mbps)_2TX

EBW

2437MHz

03/04/2018



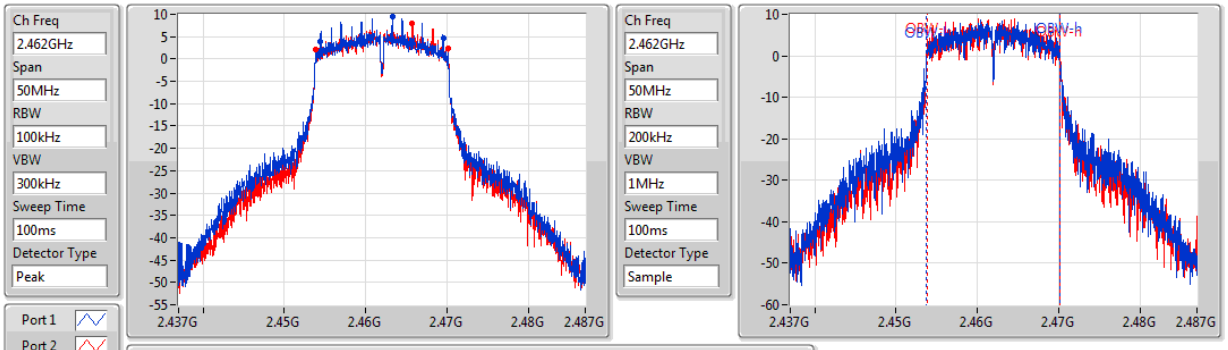
6dB(Hz)	Fl-6dB(Hz)	Fh-6dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
15.05M	2.4295G	2.44455G	18.341M	2.427655G	2.445996G	500k	1
15.05M	2.42945G	2.4445G	18.991M	2.42733G	2.44632G	500k	2

802.11g_Nss1,(6Mbps)_2TX

EBW

2462MHz

03/04/2018



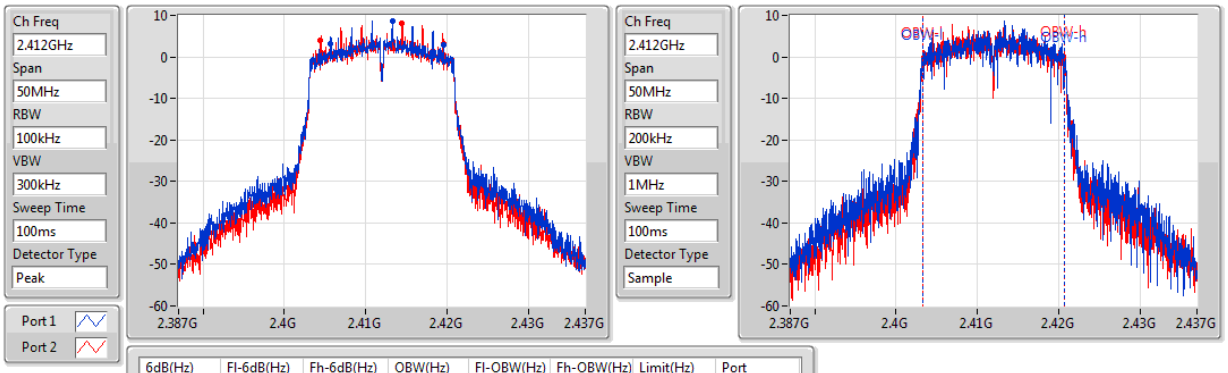
6dB(Hz)	Fl-6dB(Hz)	Fh-6dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
15.1M	2.45445G	2.46955G	16.392M	2.453779G	2.470171G	500k	1
16.275M	2.45385G	2.470125G	16.342M	2.453804G	2.470146G	500k	2

802.11n HT20_Nss1,(MCS0)_2TX

EBW

2412MHz

03/04/2018



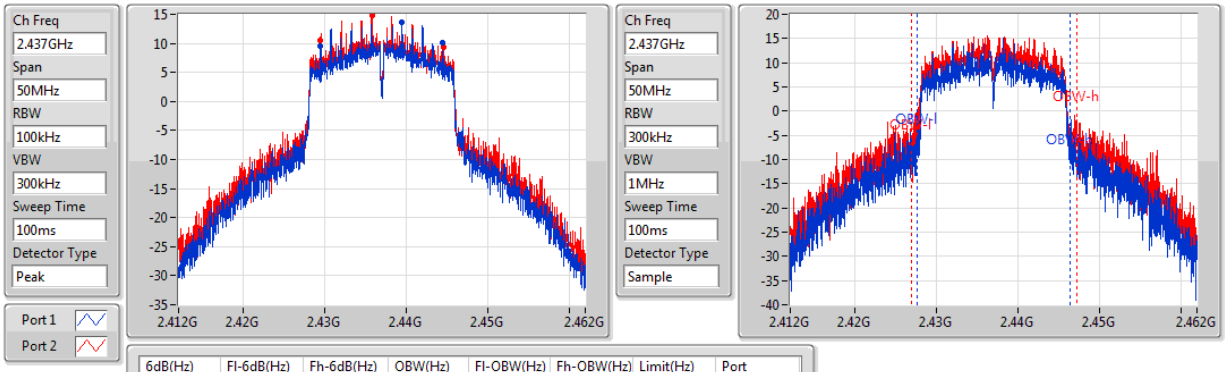
6dB(Hz)	Fl-6dB(Hz)	Fh-6dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
13.9M	2.405675G	2.419575G	17.541M	2.403229G	2.420771G	500k	1
15.075M	2.40445G	2.419525G	17.541M	2.403229G	2.420771G	500k	2

802.11n HT20_Nss1,(MCS0)_2TX

EBW

2437MHz

03/04/2018



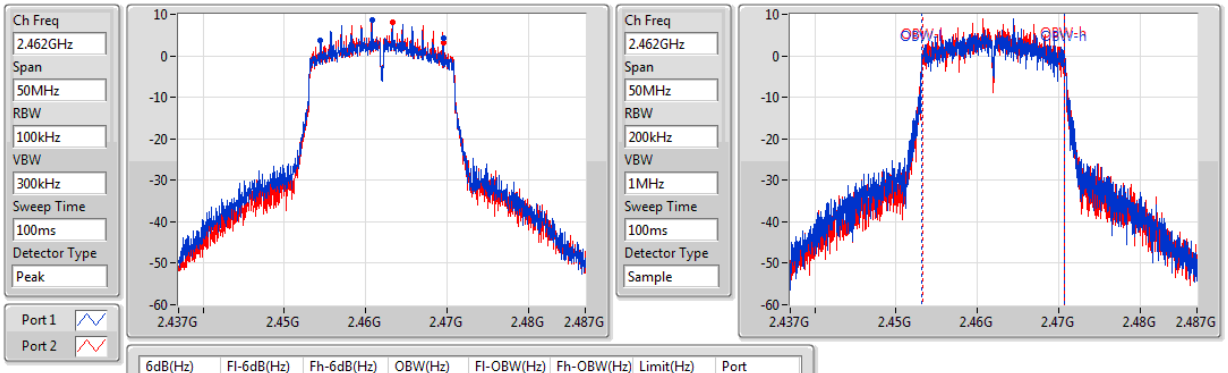
6dB(Hz)	Fl-6dB(Hz)	Fh-6dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
15.025M	2.42945G	2.444475G	18.916M	2.42753G	2.446445G	500k	1
15.1M	2.42945G	2.44455G	20.265M	2.426955G	2.44722G	500k	2

802.11n HT20_Nss1,(MCS0)_2TX

EBW

2462MHz

03/04/2018



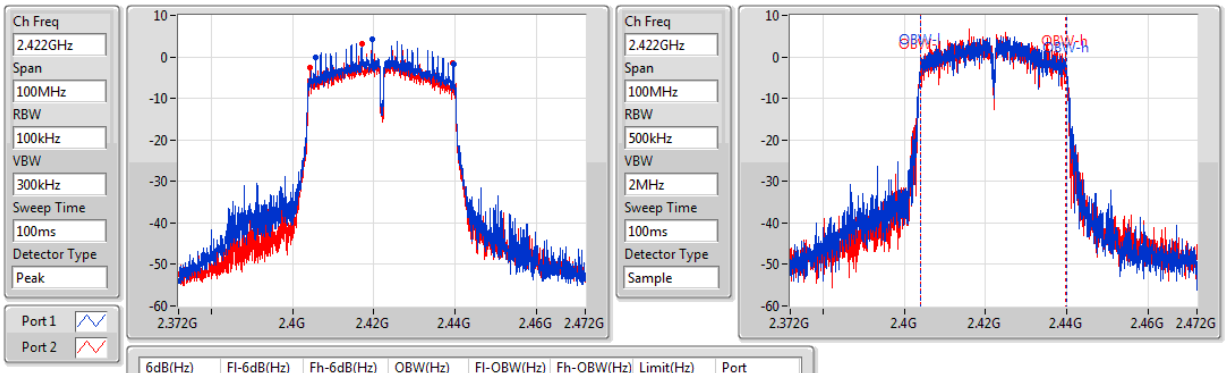
6dB(Hz)	Fl-6dB(Hz)	Fh-6dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
15.1M	2.45445G	2.46955G	17.566M	2.453204G	2.470771G	500k	1
15.075M	2.45445G	2.469525G	17.516M	2.453229G	2.470746G	500k	2

802.11n HT40_Nss1,(MCS0)_2TX

EBW

2422MHz

03/04/2018



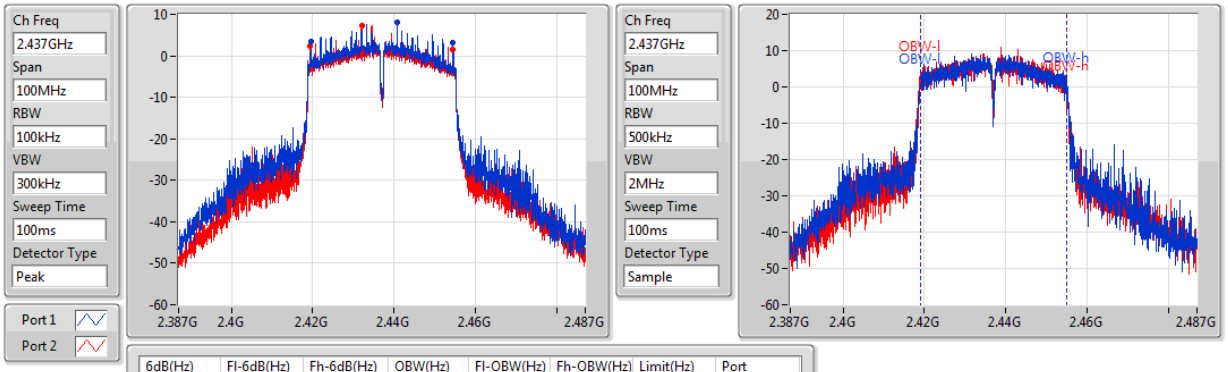
6dB(Hz)	Fl-6dB(Hz)	Fh-6dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
33.8M	2.40575G	2.43955G	35.832M	2.404009G	2.439841G	500k	1
35.05M	2.40445G	2.4395G	35.782M	2.404009G	2.439791G	500k	2

802.11n HT40_Nss1,(MCS0)_2TX

EBW

2437MHz

03/04/2018



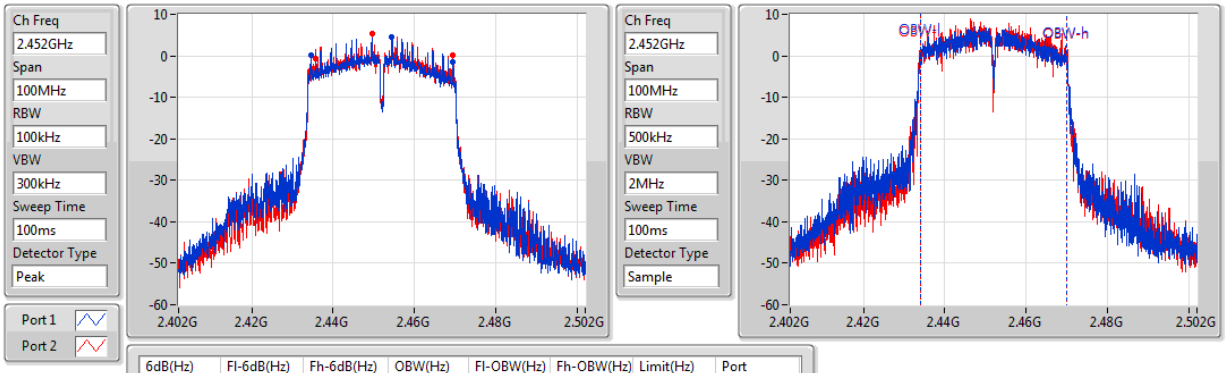
6dB(Hz)	Fl-6dB(Hz)	Fh-6dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
35M	2.4195G	2.4545G	35.932M	2.419009G	2.454941G	500k	1
35.05M	2.41945G	2.4545G	35.932M	2.418909G	2.454841G	500k	2

802.11n HT40_Nss1,(MCS0)_2TX

EBW

2452MHz

03/04/2018



6dB(Hz)	Fl-6dB(Hz)	Fh-6dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
34.95M	2.43455G	2.4695G	35.932M	2.433909G	2.469841G	500k	1
33.8M	2.4357G	2.4695G	36.032M	2.433959G	2.469991G	500k	2

Summary

Mode	Total Power (dBm)	Total Power (W)
2.4-2.4835GHz	-	-
802.11b_Nss1,(1Mbps)_2TX	26.13	0.41020
802.11g_Nss1,(6Mbps)_2TX	24.67	0.29309
802.11n HT20_Nss1,(MCS0)_2TX	24.31	0.26977
802.11n HT40_Nss1,(MCS0)_2TX	19.81	0.09572

Result

Mode	Result	DG (dBi)	Port 1 (dBm)	Port 2 (dBm)	Total Power (dBm)	Power Limit (dBm)
802.11b_Nss1,(1Mbps)_2TX	-	-	-	-	-	-
2412MHz	Pass	1.81	20.63	20.26	23.46	30.00
2417MHz	Pass	1.81	22.31	22.15	25.24	30.00
2422MHz	Pass	1.81	23.03	22.18	25.64	30.00
2427MHz	Pass	1.81	22.66	22.66	25.67	30.00
2437MHz	Pass	1.81	23.16	23.08	26.13	30.00
2447MHz	Pass	1.81	22.39	22.88	25.65	30.00
2452MHz	Pass	1.81	21.58	22.00	24.81	30.00
2457MHz	Pass	1.81	20.43	20.67	23.56	30.00
2462MHz	Pass	1.81	20.86	20.76	23.82	30.00
802.11g_Nss1,(6Mbps)_2TX	-	-	-	-	-	-
2412MHz	Pass	1.81	16.84	16.57	19.72	30.00
2417MHz	Pass	1.81	20.56	20.20	23.39	30.00
2422MHz	Pass	1.81	21.21	21.18	24.21	30.00
2427MHz	Pass	1.81	21.10	22.13	24.66	30.00
2437MHz	Pass	1.81	20.87	21.74	24.34	30.00
2447MHz	Pass	1.81	21.07	22.17	24.67	30.00
2452MHz	Pass	1.81	20.83	21.28	24.07	30.00
2457MHz	Pass	1.81	20.02	20.41	23.23	30.00
2462MHz	Pass	1.81	16.24	16.52	19.39	30.00
802.11n HT20_Nss1,(MCS0)_2TX	-	-	-	-	-	-
2412MHz	Pass	1.81	15.35	15.25	18.31	30.00
2417MHz	Pass	1.81	19.53	19.39	22.47	30.00
2422MHz	Pass	1.81	20.83	20.70	23.78	30.00
2427MHz	Pass	1.81	20.76	21.78	24.31	30.00
2437MHz	Pass	1.81	20.49	21.66	24.12	30.00
2447MHz	Pass	1.81	20.63	21.72	24.22	30.00
2452MHz	Pass	1.81	20.32	20.51	23.43	30.00
2457MHz	Pass	1.81	19.23	19.70	22.48	30.00
2462MHz	Pass	1.81	15.38	15.60	18.50	30.00
802.11n HT40_Nss1,(MCS0)_2TX	-	-	-	-	-	-
2422MHz	Pass	1.81	13.10	12.90	16.01	30.00
2427MHz	Pass	1.81	14.20	13.27	16.77	30.00
2432MHz	Pass	1.81	15.51	15.21	18.37	30.00
2437MHz	Pass	1.81	16.97	16.63	19.81	30.00
2442MHz	Pass	1.81	15.44	15.81	18.64	30.00

Mode	Result	DG (dBi)	Port 1 (dBm)	Port 2 (dBm)	Total Power (dBm)	Power Limit (dBm)
2447MHz	Pass	1.81	14.50	14.72	17.62	30.00
2452MHz	Pass	1.81	14.81	14.91	17.87	30.00

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

Summary

Mode	PD (dBm/RBW)
2.4-2.4835GHz	-
802.11b_Nss1,(1Mbps)_2TX	-7.73
802.11g_Nss1,(6Mbps)_2TX	-3.66
802.11n HT20_Nss1,(MCS0)_2TX	-4.41
802.11n HT40_Nss1,(MCS0)_2TX	-10.77

RBW=3kHz.

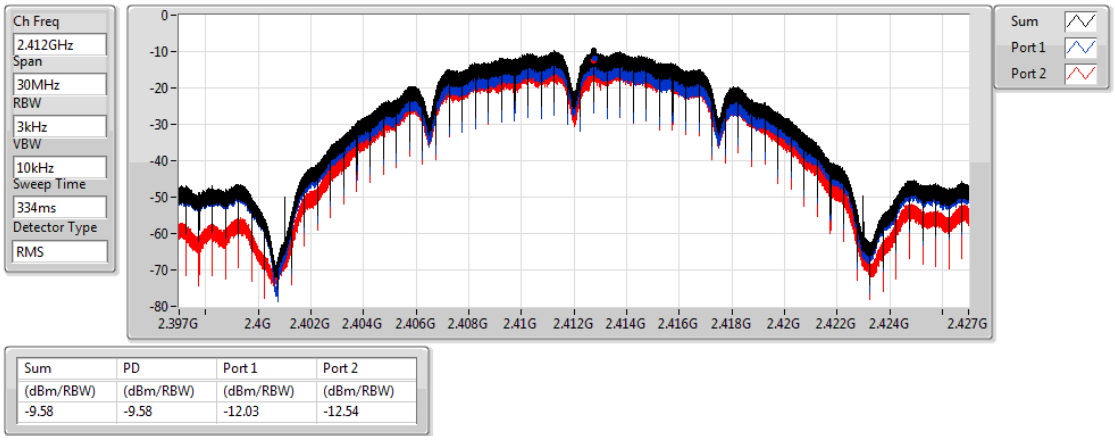
Result

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	4.82	-12.03	-12.54	-9.58	8.00
2437MHz	Pass	4.82	-10.65	-10.83	-7.73	8.00
2462MHz	Pass	4.82	-12.74	-12.93	-9.93	8.00
802.11g_Nss1,(6Mbps)_2TX	-	-	-	-	-	-
2412MHz	Pass	4.82	-10.47	-11.19	-8.70	8.00
2437MHz	Pass	4.82	-6.98	-6.38	-3.66	8.00
2462MHz	Pass	4.82	-10.74	-11.71	-9.14	8.00
802.11n HT20_Nss1,(MCS0)_2TX	-	-	-	-	-	-
2412MHz	Pass	4.82	-12.18	-12.46	-10.00	8.00
2437MHz	Pass	4.82	-7.13	-6.40	-4.41	8.00
2462MHz	Pass	4.82	-12.55	-12.22	-10.22	8.00
802.11n HT40_Nss1,(MCS0)_2TX	-	-	-	-	-	-
2422MHz	Pass	4.82	-16.84	-17.25	-14.66	8.00
2437MHz	Pass	4.82	-12.96	-13.39	-10.77	8.00
2452MHz	Pass	4.82	-15.23	-15.59	-13.01	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 X power density;

802.11b_Nss1,(1Mbps)_2TX PSD

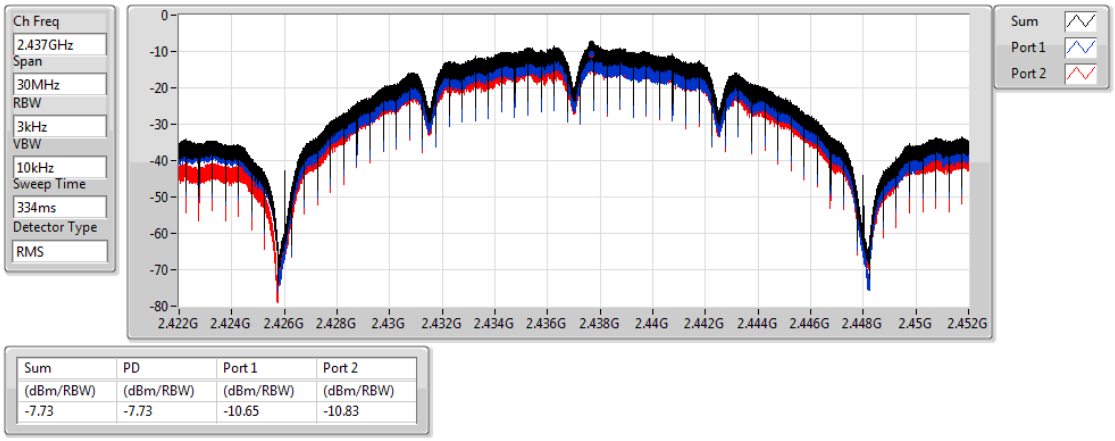
2412MHz



Sum	PD	Port 1	Port 2
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
-9.58	-9.58	-12.03	-12.54

802.11b_Nss1,(1Mbps)_2TX PSD

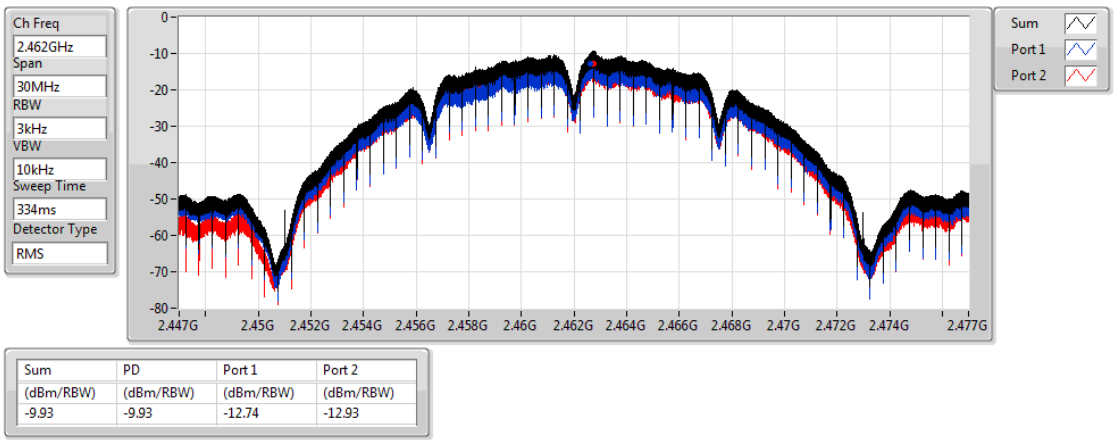
2437MHz



Sum	PD	Port 1	Port 2
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
-7.73	-7.73	-10.65	-10.83

802.11b_Nss1,(1Mbps)_2TX PSD

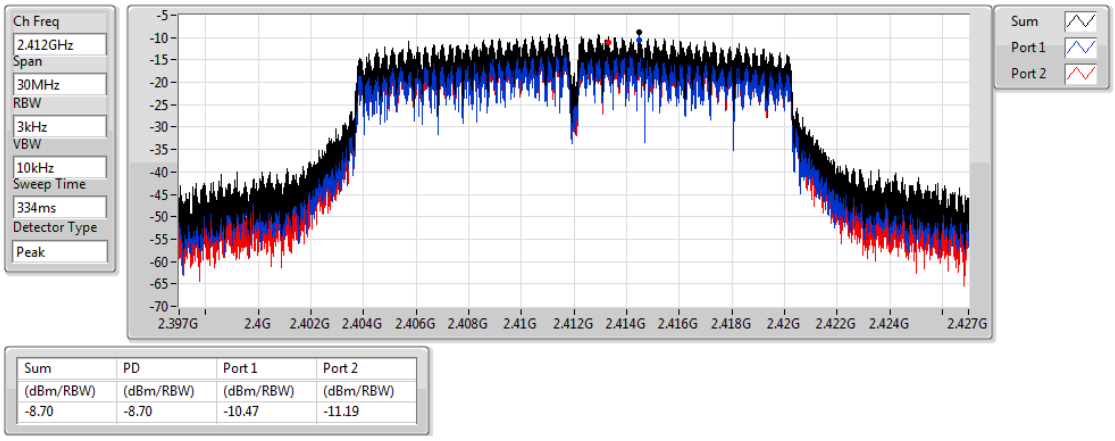
2462MHz



Sum	PD	Port 1	Port 2
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
-9.93	-9.93	-12.74	-12.93

802.11g_Nss1,(6Mbps)_2TX PSD

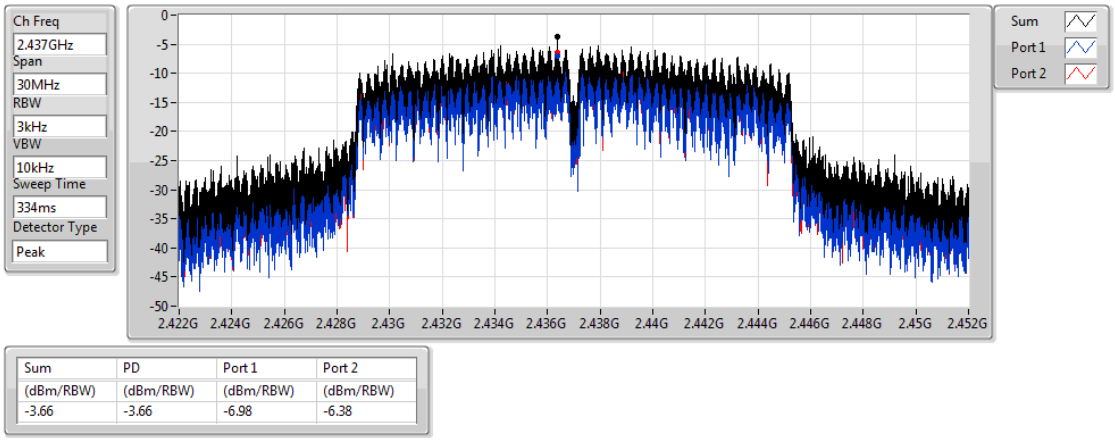
2412MHz



Sum	PD	Port 1	Port 2
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
-8.70	-8.70	-10.47	-11.19

802.11g_Nss1,(6Mbps)_2TX PSD

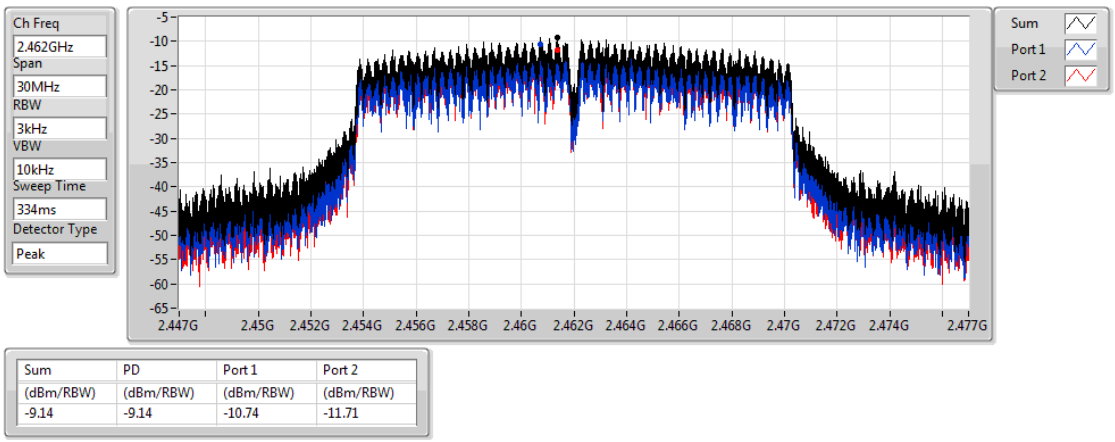
2437MHz



Sum	PD	Port 1	Port 2
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
-3.66	-3.66	-6.98	-6.38

802.11g_Nss1,(6Mbps)_2TX PSD

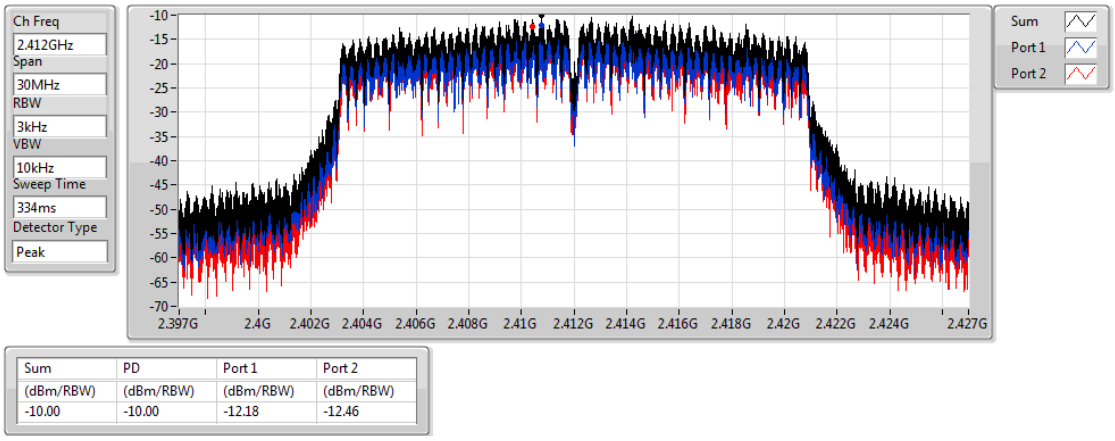
2462MHz



Sum	PD	Port 1	Port 2
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
-9.14	-9.14	-10.74	-11.71

802.11n HT20_Nss1,(MCS0)_2TX PSD

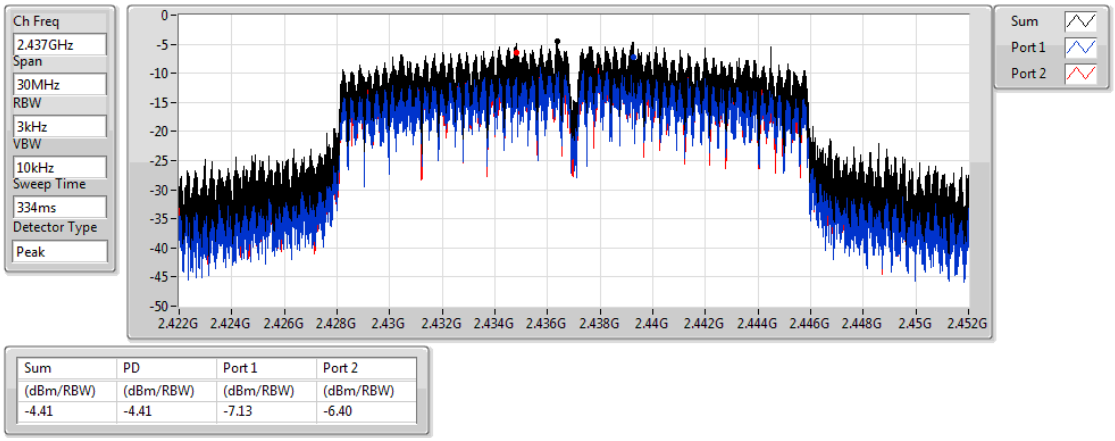
2412MHz



Sum	PD	Port 1	Port 2
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
-10.00	-10.00	-12.18	-12.46

802.11n HT20_Nss1,(MCS0)_2TX PSD

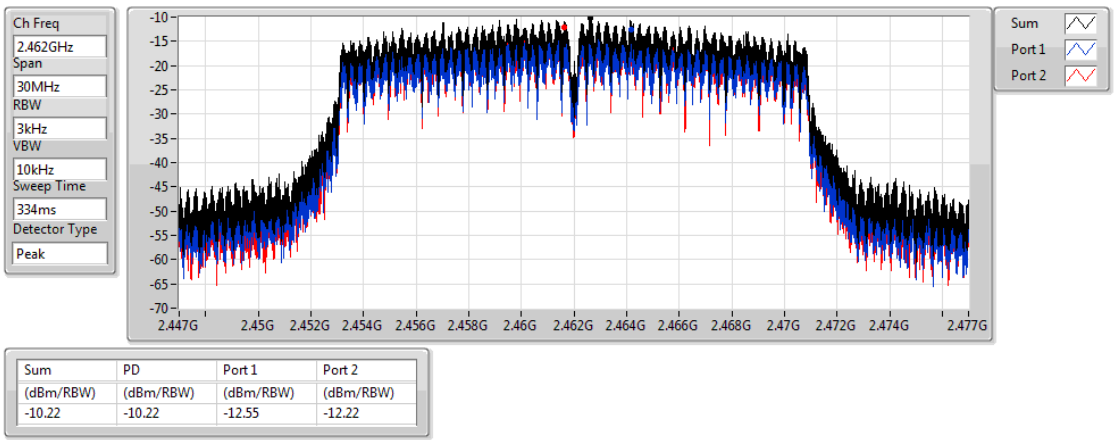
2437MHz



Sum	PD	Port 1	Port 2
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
-4.41	-4.41	-7.13	-6.40

802.11n HT20_Nss1,(MCS0)_2TX PSD

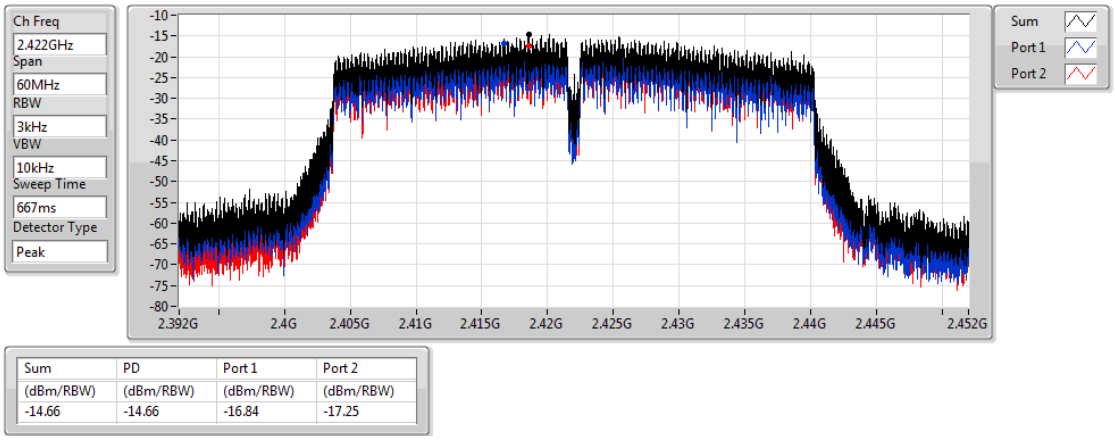
2462MHz



Sum	PD	Port 1	Port 2
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
-10.22	-10.22	-12.55	-12.22

802.11n HT40_Nss1,(MCS0)_2TX PSD

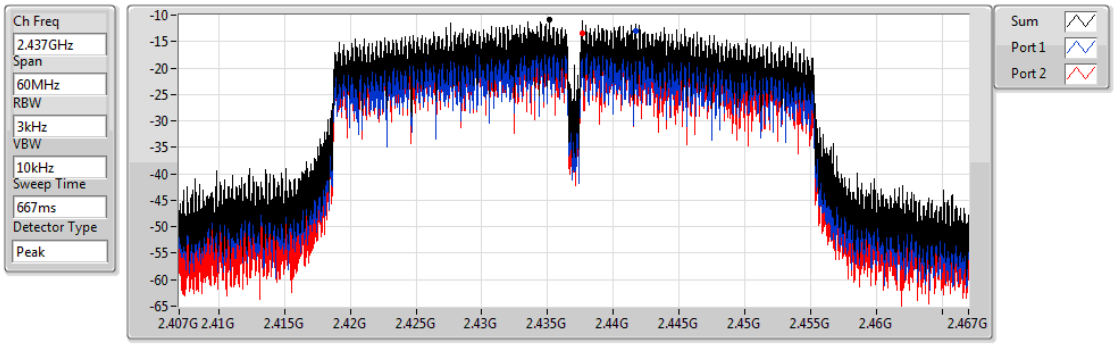
2422MHz



Sum	PD	Port 1	Port 2
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
-14.66	-14.66	-16.84	-17.25

802.11n HT40_Nss1,(MCS0)_2TX PSD

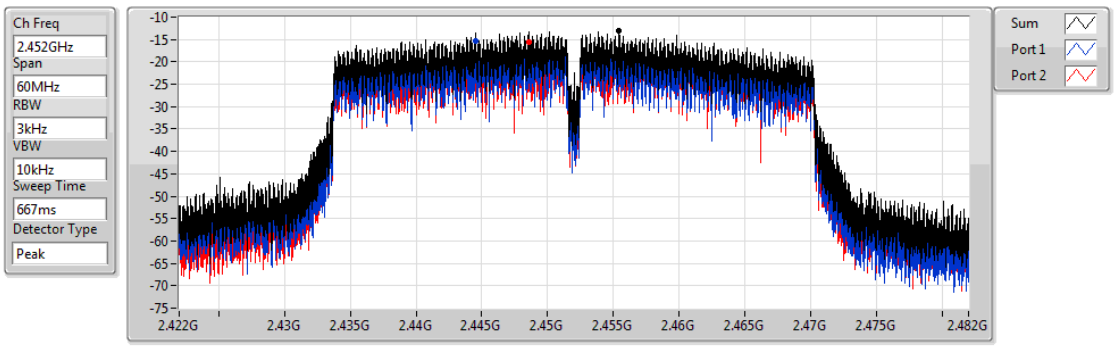
2437MHz



Sum	PD	Port 1	Port 2
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
-10.77	-10.77	-12.96	-13.39

802.11n HT40_Nss1,(MCS0)_2TX PSD

2452MHz



Sum	PD	Port 1	Port 2
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
-13.01	-13.01	-15.23	-15.59

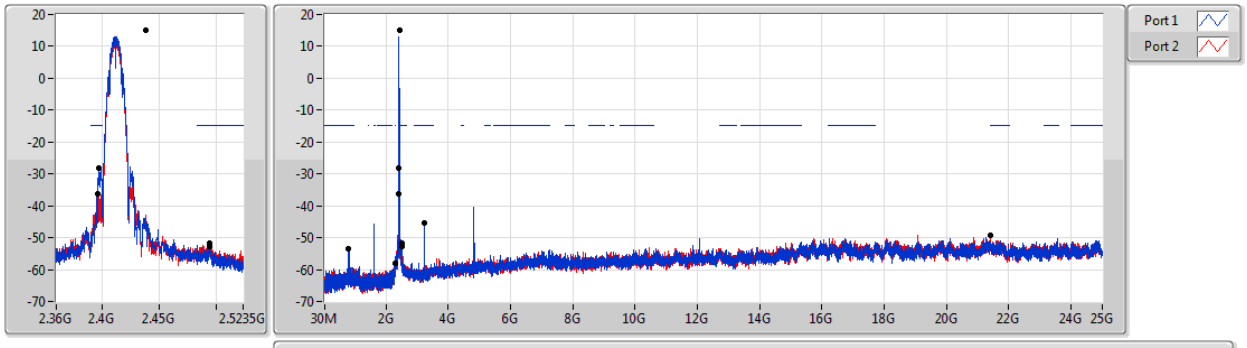
Summary

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	2.437909G	15.08	-14.92	798.9M	-53.51	2.39704G	-28.10	2.49406G	-52.68	3.214652G	-45.48	1
802.11g_Nss1,(6Mbps)_2TX	Pass	2.435738G	14.06	-15.94	2.309905G	-56.78	2.39984G	-24.33	2.50326G	-50.52	21.72405G	-50.04	2
802.11n HT20_Nss1,(MCS0)_2TX	Pass	2.434569G	13.47	-16.53	798.9M	-55.91	2.39952G	-27.72	2.48446G	-49.05	3.214652G	-42.88	1
802.11n HT40_Nss1,(MCS0)_2TX	Pass	2.431897G	7.09	-22.91	821.195M	-54.64	2.39936G	-29.39	2.48574G	-38.93	3.247813G	-44.83	1

Result

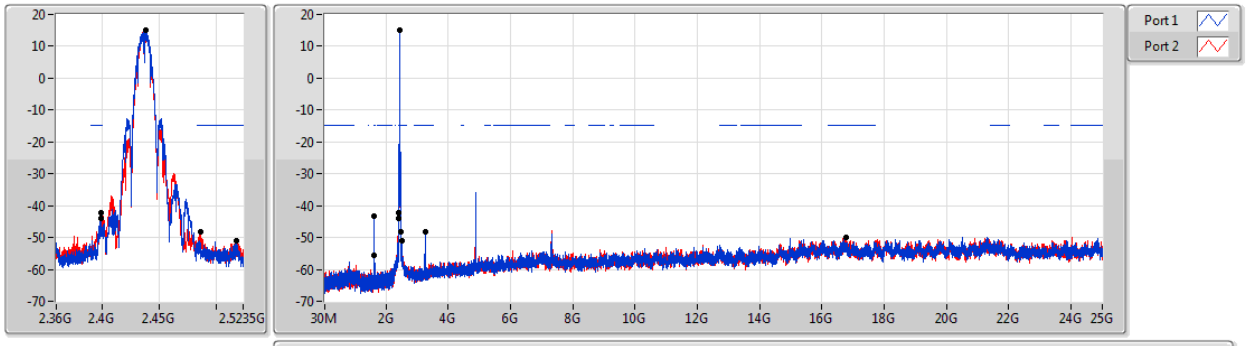
Mode	Result	Ref (Hz)	Ref (dBm)	Limit (dBm)	Freq (Hz)	Level (dBm)	Freq (Hz)	Level (dBm)	Freq (Hz)	Level (dBm)	Freq (Hz)	Level (dBm)	Port
802.11b_Nss1,(1Mbps)_2TX	-	-	-	-	-	-	-	-	-	-	-	-	-
2412MHz	Pass	2.437909G	15.08	-14.92	798.9M	-53.51	2.39704G	-28.10	2.49406G	-52.68	3.214652G	-45.48	1
2412MHz	Pass	2.437909G	15.08	-14.92	2.309905G	-57.94	2.39656G	-36.24	2.49398G	-51.64	21.409379G	-49.16	2
2437MHz	Pass	2.437909G	15.08	-14.92	1.624885G	-43.16	2.39904G	-44.03	2.51806G	-50.89	3.248367G	-48.32	1
2437MHz	Pass	2.437909G	15.08	-14.92	1.624885G	-55.45	2.39904G	-42.09	2.48598G	-48.37	16.773601G	-49.80	2
2462MHz	Pass	2.437909G	15.08	-14.92	1.641195G	-44.83	2.396G	-53.11	2.48798G	-42.42	3.282082G	-47.43	1
2462MHz	Pass	2.437909G	15.08	-14.92	2.30175G	-57.20	2.396G	-53.24	2.48798G	-42.33	16.77922G	-49.89	2
802.11g_Nss1,(6Mbps)_2TX	-	-	-	-	-	-	-	-	-	-	-	-	-
2412MHz	Pass	2.435738G	14.06	-15.94	801.23M	-54.84	2.39864G	-24.56	2.48694G	-49.08	3.214652G	-42.91	1
2412MHz	Pass	2.435738G	14.06	-15.94	2.309905G	-56.78	2.39984G	-24.33	2.50326G	-50.52	21.72405G	-50.04	2
2437MHz	Pass	2.435738G	14.06	-15.94	807.055M	-55.40	2.39792G	-46.06	2.48414G	-46.20	3.248367G	-46.09	1
2437MHz	Pass	2.435738G	14.06	-15.94	2.30641G	-57.48	2.39952G	-41.60	2.48414G	-43.19	16.71741G	-50.24	2
2462MHz	Pass	2.435738G	14.06	-15.94	821.035M	-54.08	2.39784G	-51.68	2.48382G	-40.28	3.282082G	-45.86	1
2462MHz	Pass	2.435738G	14.06	-15.94	2.305245G	-58.15	2.3924G	-49.42	2.48414G	-42.31	24.87357G	-50.27	2
802.11n HT20_Nss1,(MCS0)_2TX	-	-	-	-	-	-	-	-	-	-	-	-	-
2412MHz	Pass	2.434569G	13.47	-16.53	798.9M	-55.91	2.39952G	-27.72	2.48446G	-49.05	3.214652G	-42.88	1
2412MHz	Pass	2.434569G	13.47	-16.53	2.302915G	-54.72	2.39744G	-30.95	2.48942G	-49.51	16.734267G	-49.63	2
2437MHz	Pass	2.434569G	13.47	-16.53	1.622555G	-55.35	2.39992G	-41.75	2.48886G	-43.98	3.248367G	-47.76	1
2437MHz	Pass	2.434569G	13.47	-16.53	2.309905G	-56.52	2.39992G	-37.46	2.48798G	-42.22	16.762363G	-49.30	2
2462MHz	Pass	2.434569G	13.47	-16.53	818.705M	-54.89	2.39488G	-51.62	2.48446G	-42.79	3.282082G	-44.96	1
2462MHz	Pass	2.434569G	13.47	-16.53	958.505M	-58.07	2.39352G	-51.16	2.48358G	-44.25	16.739886G	-50.00	2
802.11n HT40_Nss1,(MCS0)_2TX	-	-	-	-	-	-	-	-	-	-	-	-	-
2422MHz	Pass	2.431897G	7.09	-22.91	802.875M	-58.23	2.39504G	-33.02	2.4987G	-54.18	3.228181G	-42.58	1
2422MHz	Pass	2.431897G	7.09	-22.91	2.302825G	-56.84	2.3984G	-35.17	2.50446G	-50.50	21.544779G	-50.60	2
2437MHz	Pass	2.431897G	7.09	-22.91	821.195M	-54.64	2.39936G	-29.39	2.48574G	-38.93	3.247813G	-44.83	1
2437MHz	Pass	2.431897G	7.09	-22.91	2.300535G	-57.52	2.3992G	-30.36	2.48638G	-42.64	21.401746G	-48.31	2
2452MHz	Pass	2.431897G	7.09	-22.91	2.30397G	-55.41	2.3968G	-51.37	2.48414G	-34.71	3.267445G	-44.44	1
2452MHz	Pass	2.431897G	7.09	-22.91	2.302825G	-58.10	2.39936G	-50.80	2.48718G	-36.93	16.356338G	-49.99	2

802.11b_Nss1,(1Mbps)_2TX
2412MHz
CSE NdB
03/04/2018



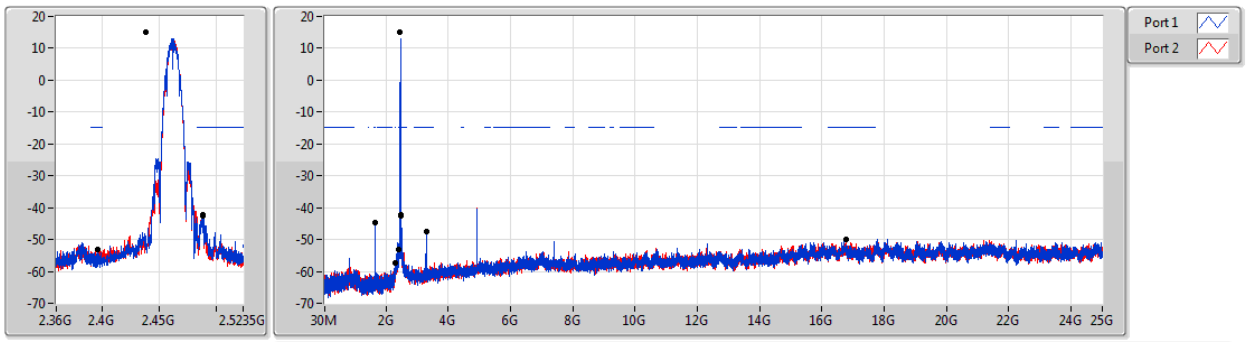
Ref(Hz)	Ref(dBm)	Limit(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Port
2.437909G	15.08	-14.92	798.9M	-53.51	2.39704G	-28.10	2.49406G	-52.68	3.214652G	-45.48	1
2.437909G	15.08	-14.92	2.309905G	-57.94	2.39656G	-36.24	2.49398G	-51.64	21.409379G	-49.16	2

802.11b_Nss1,(1Mbps)_2TX
2437MHz
CSE NdB
03/04/2018



Ref(Hz)	Ref(dBm)	Limit(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Port
2.437909G	15.08	-14.92	1.624885G	-43.16	2.39904G	-44.03	2.51806G	-50.89	3.248367G	-48.32	1
2.437909G	15.08	-14.92	1.624885G	-55.45	2.39904G	-42.09	2.48598G	-48.37	16.773601G	-49.80	2

802.11b_Nss1,(1Mbps)_2TX
2462MHz
CSE NdB
03/04/2018

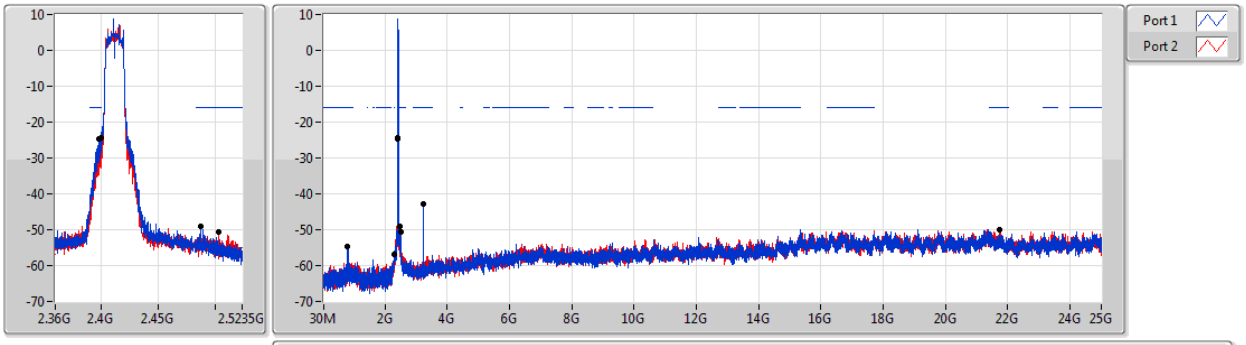


Ref(Hz)	Ref(dBm)	Limit(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Port
2.437909G	15.08	-14.92	1.641195G	-44.83	2.396G	-53.11	2.48798G	-42.42	3.282082G	-47.43	1
2.437909G	15.08	-14.92	2.30175G	-57.20	2.396G	-53.24	2.48798G	-42.33	16.77922G	-49.89	2

802.11g_Nss1,(6Mbps)_2TX **CSE NdB**

2412MHz

03/04/2018

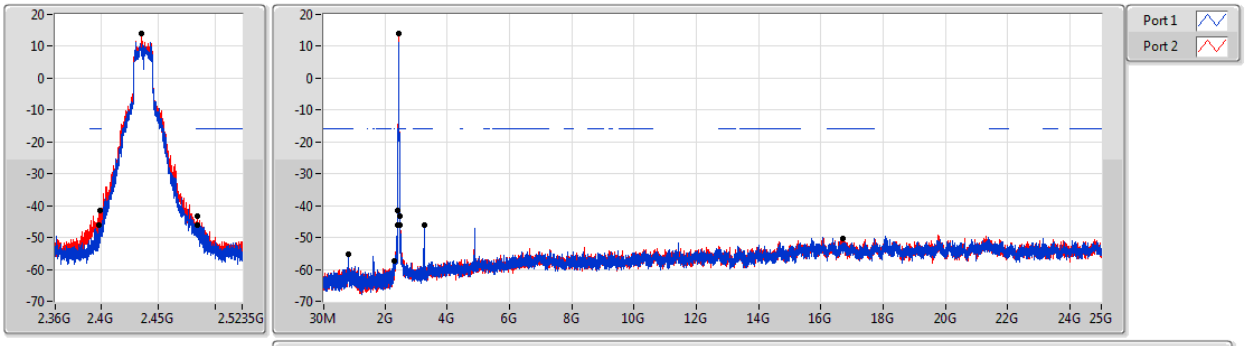


Ref(Hz)	Ref(dBm)	Limit(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Port
2.435738G	14.06	-15.94	801.23M	-54.84	2.39864G	-24.56	2.48694G	-49.08	3.214652G	-42.91	1
2.435738G	14.06	-15.94	2.309905G	-56.78	2.39984G	-24.33	2.50326G	-50.52	21.72405G	-50.04	2

802.11g_Nss1,(6Mbps)_2TX **CSE NdB**

2437MHz

03/04/2018

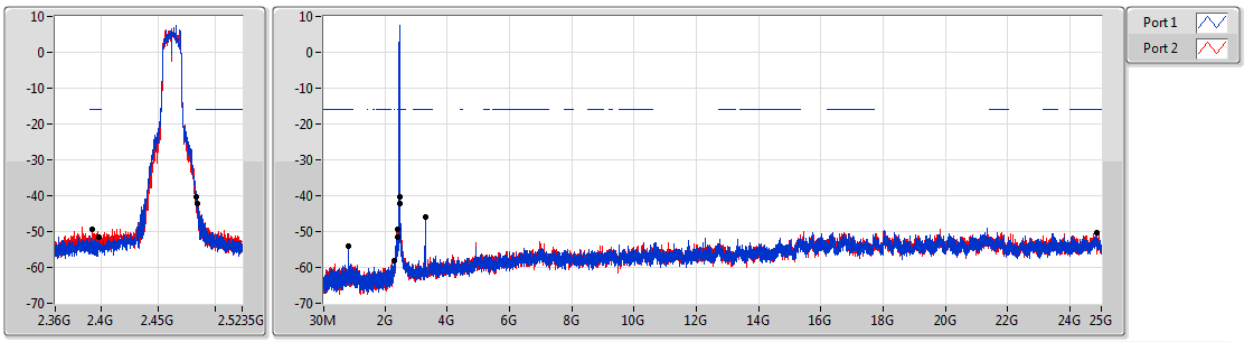


Ref(Hz)	Ref(dBm)	Limit(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Port
2.435738G	14.06	-15.94	807.055M	-55.40	2.39792G	-46.06	2.48414G	-46.20	3.248367G	-46.09	1
2.435738G	14.06	-15.94	2.30641G	-57.48	2.39952G	-41.60	2.48414G	-43.19	16.71741G	-50.24	2

802.11g_Nss1,(6Mbps)_2TX **CSE NdB**

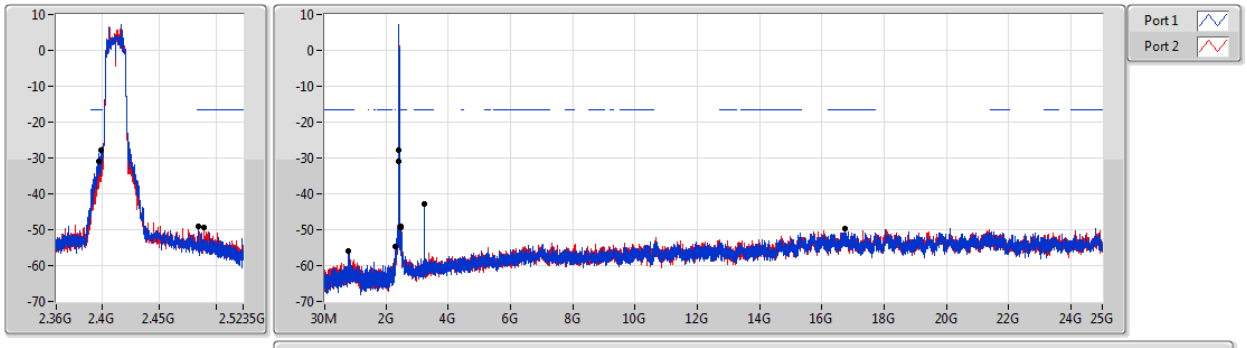
2462MHz

03/04/2018



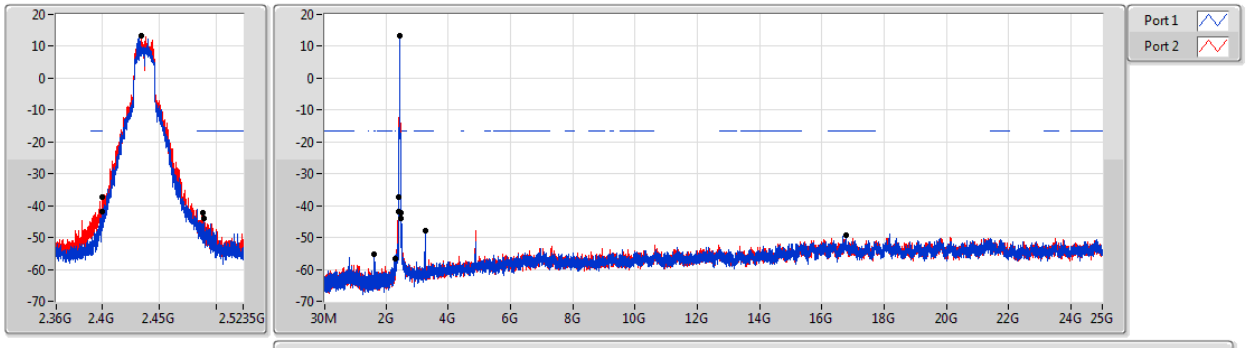
Ref(Hz)	Ref(dBm)	Limit(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Port
2.435738G	14.06	-15.94	821.035M	-54.08	2.39784G	-51.68	2.48382G	-40.28	3.282082G	-45.86	1
2.435738G	14.06	-15.94	2.305245G	-58.15	2.3924G	-49.42	2.48414G	-42.31	24.87357G	-50.27	2

802.11n HT20_Nss1,(MCS0)_2TX
CSE NdB
2412MHz
03/04/2018



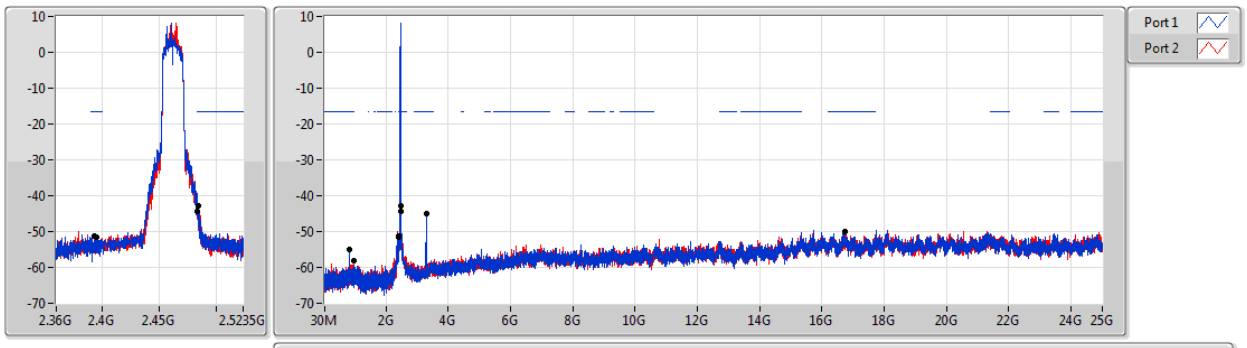
Ref(Hz)	Ref(dBm)	Limit(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Port
2.434569G	13.47	-16.53	798.9M	-55.91	2.39952G	-27.72	2.48446G	-49.05	3.214652G	-42.88	1
2.434569G	13.47	-16.53	2.302915G	-54.72	2.39744G	-30.95	2.48942G	-49.51	16.734267G	-49.63	2

802.11n HT20_Nss1,(MCS0)_2TX
CSE NdB
2437MHz
03/04/2018



Ref(Hz)	Ref(dBm)	Limit(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Port
2.434569G	13.47	-16.53	1.622555G	-55.35	2.39992G	-41.75	2.48886G	-43.98	3.248367G	-47.76	1
2.434569G	13.47	-16.53	2.309905G	-56.52	2.39992G	-37.46	2.48798G	-42.22	16.762363G	-49.30	2

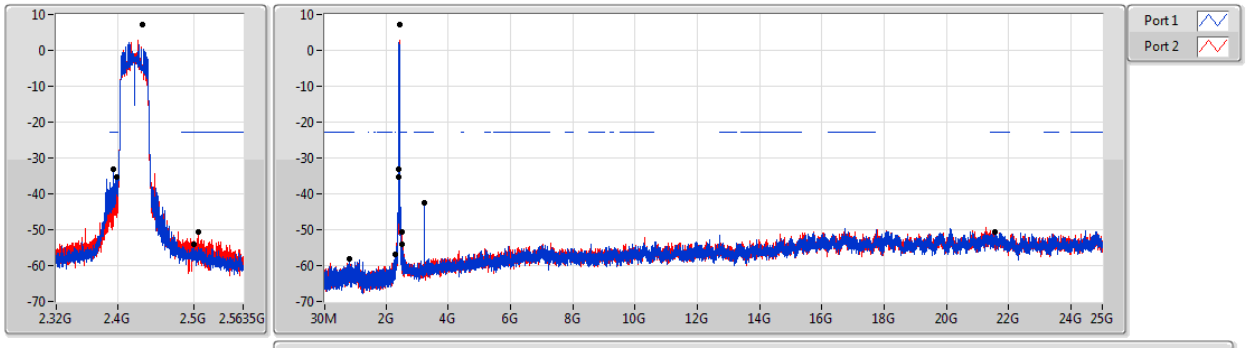
802.11n HT20_Nss1,(MCS0)_2TX
CSE NdB
2462MHz
03/04/2018



Ref(Hz)	Ref(dBm)	Limit(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Port
2.434569G	13.47	-16.53	818.705M	-54.89	2.39488G	-51.62	2.48446G	-42.79	3.282082G	-44.96	1
2.434569G	13.47	-16.53	958.505M	-58.07	2.39352G	-51.16	2.48358G	-44.25	16.739886G	-50.00	2

802.11n HT40_Nss1,(MCS0)_2TX **CSE NdB**

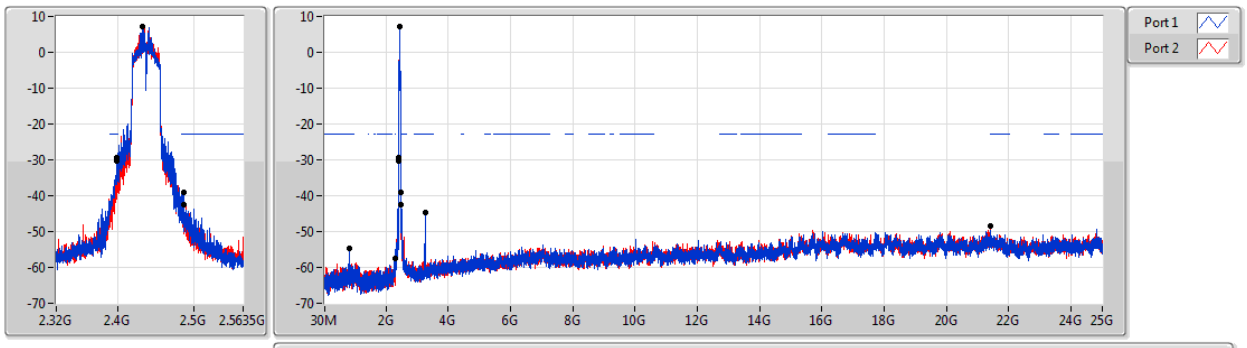
2422MHz



Ref(Hz)	Ref(dBm)	Limit(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Port
2.431897G	7.09	-22.91	802.875M	-58.23	2.39504G	-33.02	2.4987G	-54.18	3.228181G	-42.58	1
2.431897G	7.09	-22.91	2.302825G	-56.84	2.3984G	-35.17	2.50446G	-50.50	21.544779G	-50.60	2

802.11n HT40_Nss1,(MCS0)_2TX **CSE NdB**

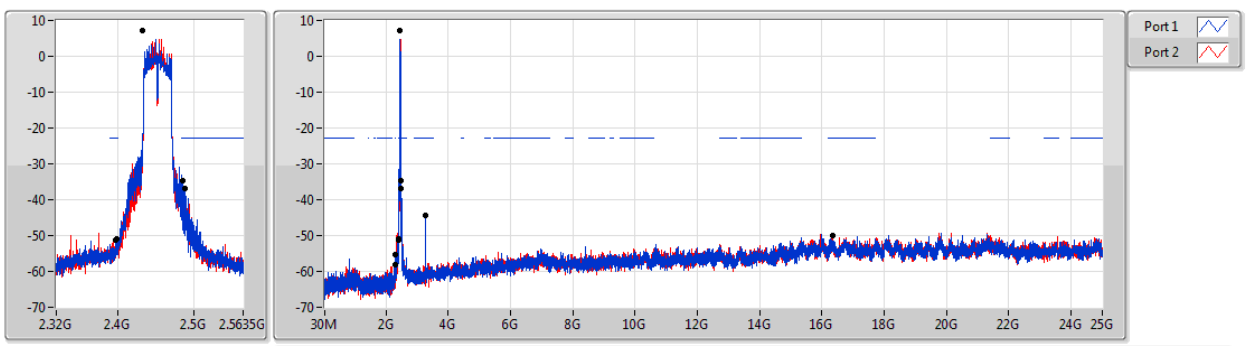
2437MHz



Ref(Hz)	Ref(dBm)	Limit(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Port
2.431897G	7.09	-22.91	821.195M	-54.64	2.39936G	-29.39	2.48574G	-38.93	3.247813G	-44.83	1
2.431897G	7.09	-22.91	2.300535G	-57.52	2.3992G	-30.36	2.48638G	-42.64	21.401746G	-48.31	2

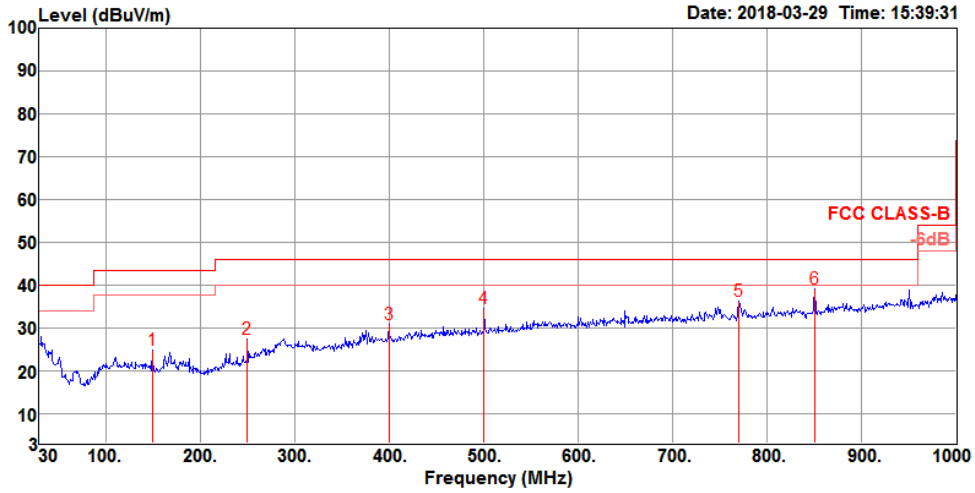
802.11n HT40_Nss1,(MCS0)_2TX **CSE NdB**

2452MHz



Ref(Hz)	Ref(dBm)	Limit(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Port
2.431897G	7.09	-22.91	2.30397G	-55.41	2.3968G	-51.37	2.48414G	-34.71	3.267445G	-44.44	1
2.431897G	7.09	-22.91	2.302825G	-58.10	2.39936G	-50.80	2.48718G	-36.93	16.356338G	-49.99	2

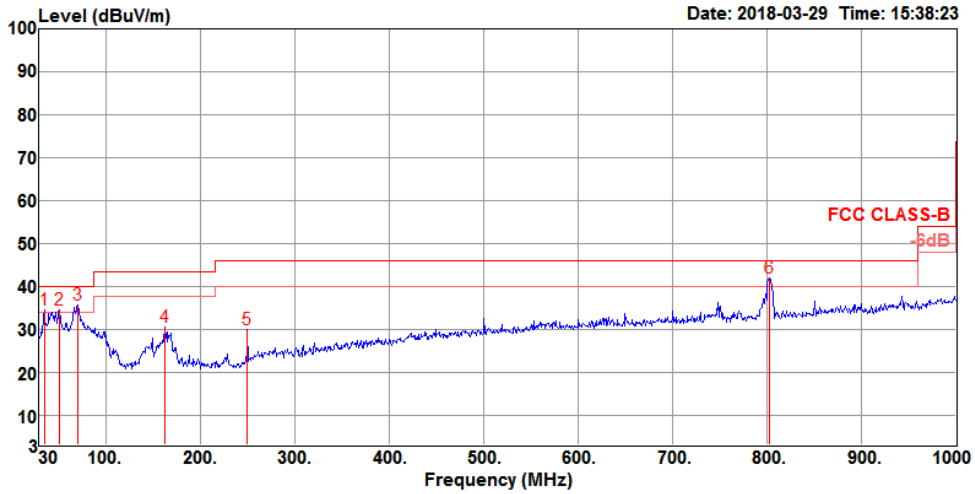
RSE below 1GHz Result			
Operating Mode	1	**Polarization**	Horizontal
Operating Function	Normal Link		



	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	149.31	24.79	43.50	-18.71	38.97	1.88	16.46	32.52	200	284	Peak	HORIZONTAL
2	250.19	27.26	46.00	-18.74	38.55	2.63	18.54	32.46	100	237	Peak	HORIZONTAL
3	399.57	30.63	46.00	-15.37	37.96	3.54	21.58	32.45	100	248	Peak	HORIZONTAL
4	500.45	34.62	46.00	-11.38	39.71	4.12	23.28	32.49	150	201	Peak	HORIZONTAL
5	770.11	36.21	46.00	-9.79	37.41	5.46	25.72	32.38	150	5	Peak	HORIZONTAL
6	850.62	39.05	46.00	-6.95	39.00	5.87	26.24	32.06	100	243	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.)

RSE below 1GHz 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	34.85	34.42	40.00	-5.58	44.51	0.66	21.77	32.52	100	113	Peak	VERTICAL
2	51.34	34.49	40.00	-5.51	52.38	1.01	13.60	32.50	100	105	Peak	VERTICAL
3	70.74	35.60	40.00	-4.40	54.69	1.17	12.27	32.53	100	338	Peak	VERTICAL
4	162.89	30.51	43.50	-12.99	45.24	1.90	15.88	32.51	100	359	Peak	VERTICAL
5	250.19	30.03	46.00	-15.97	41.32	2.63	18.54	32.46	100	0	Peak	VERTICAL
6	802.12	41.86	46.00	-4.14	42.69	5.64	25.85	32.32	150	360	Peak	VERTICAL

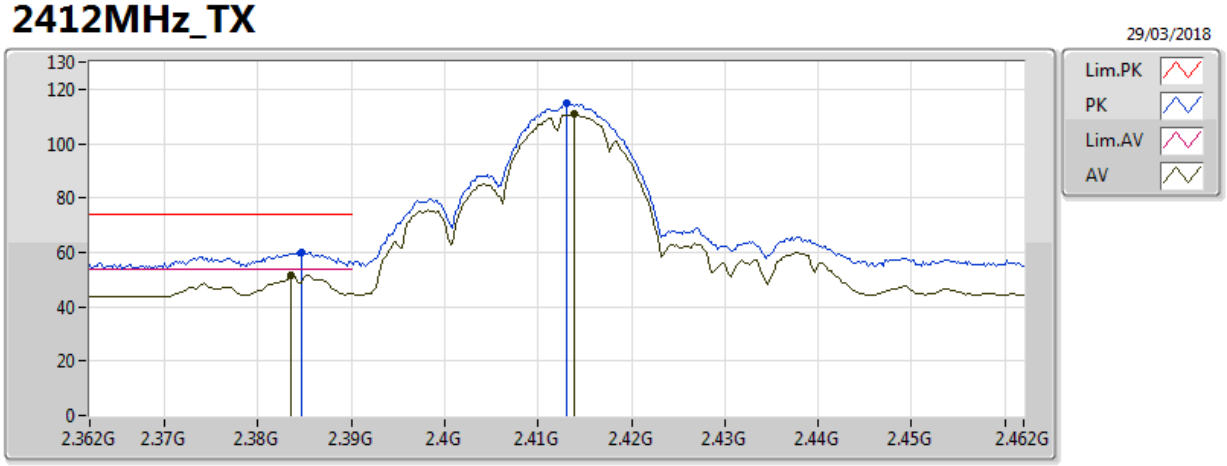
Note 1: “>20dB” means emission levels that exceed the level of 20 dB below the applicable limit.
Note 2: “N/F” means Nothing Found emissions (No emissions were detected.)

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	2.389998G	53.98	54.00	-0.02	32.13	3	Vertical	0	1.48	-

802.11b_Nss1,(1Mbps)_2TX

2412MHz_TX

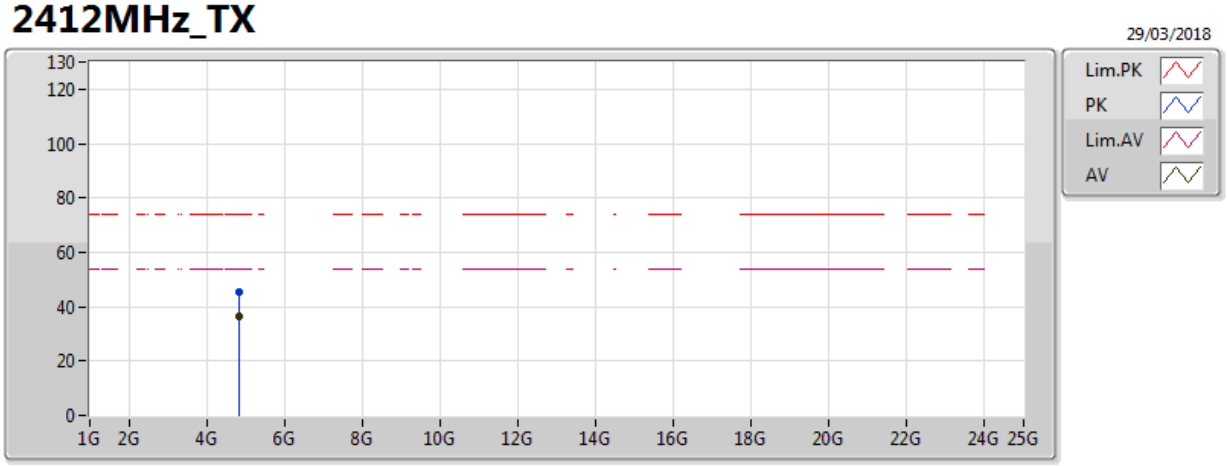


20180112
EUT Y_2TX Dipole
Setting 25
03-J-1
FSP

Type	Freq	Level	Limit	Margin	Factor	Dist	Condition	Azimuth	Height
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB)	(m)		(°)	(m)
AV	2.3836G	51.57	54.00	-2.43	31.60	3	Vertical	311	2.96
AV	2.4138G	110.98	Inf	-Inf	31.56	3	Vertical	311	2.96
PK	2.3846G	60.04	74.00	-13.96	31.60	3	Vertical	311	2.96
PK	2.413G	114.64	Inf	-Inf	31.56	3	Vertical	311	2.96

802.11b_Nss1,(1Mbps)_2TX

2412MHz_TX

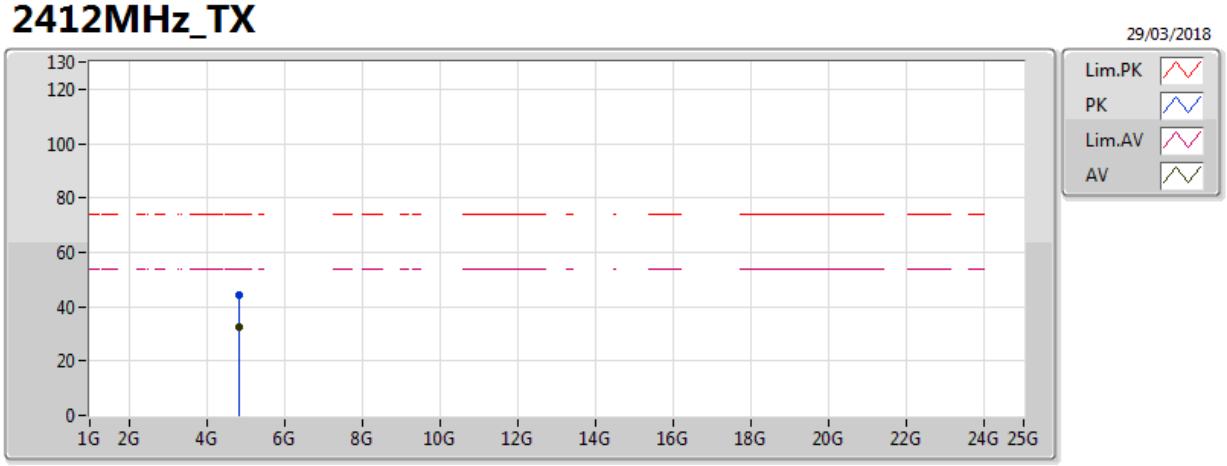


20180112
EUT Y_2TX Dipole
Setting 25
03-J-1
FSP

Type	Freq	Level	Limit	Margin	Factor	Dist	Condition	Azimuth	Height
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB)	(m)		(°)	(m)
AV	4.82403G	36.47	54.00	-17.53	3.01	3	Vertical	90	2.52
PK	4.82409G	45.47	74.00	-28.53	3.01	3	Vertical	90	2.52

802.11b_Nss1,(1Mbps)_2TX

2412MHz_TX

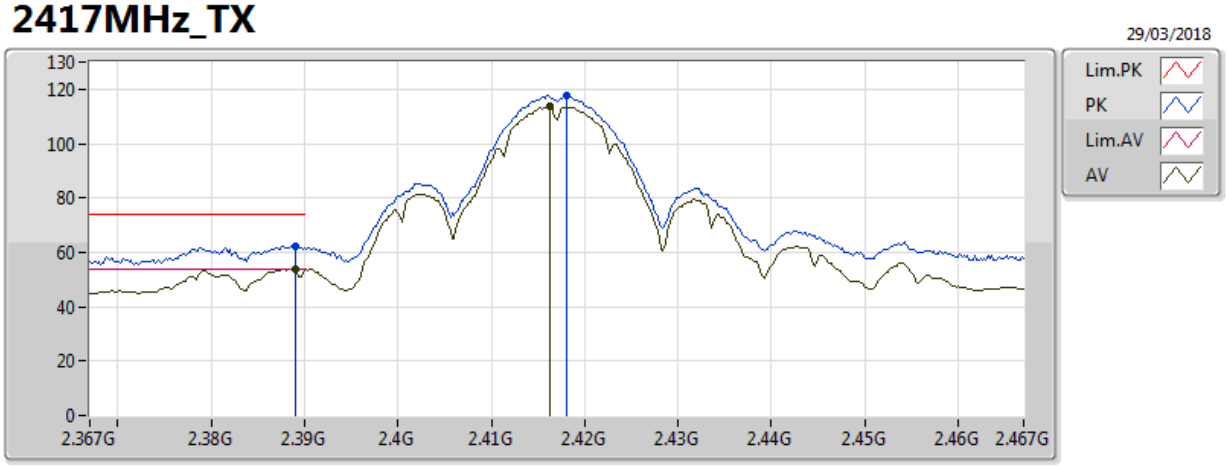


20180112
EUT Y_2TX Dipole
Setting 25
03-J-1
FSP

Type	Freq	Level	Limit	Margin	Factor	Dist	Condition	Azimuth	Height
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB)	(m)		(°)	(m)
AV	4.824G	32.67	54.00	-21.33	3.01	3	Horizontal	60	2.26
PK	4.82167G	44.12	74.00	-29.88	3.02	3	Horizontal	60	2.26

802.11b_Nss1,(1Mbps)_2TX

2417MHz_TX

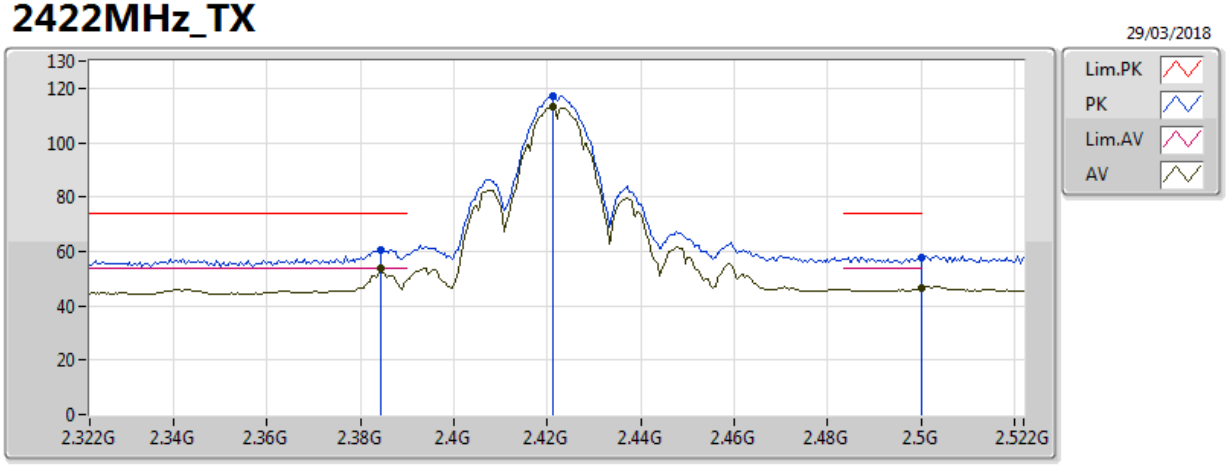


20180329
EUT Y_2TX_Dipole
Setting 29
03-J-4
FSP

Type	Freq	Level	Limit	Margin	Factor	Dist	Condition	Azimuth	Height
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB)	(m)		(°)	(m)
PK	2.389G	62.35	74.00	-11.65	32.13	3	Vertical	284	1.84
AV	2.389G	53.91	54.00	-0.09	32.13	3	Vertical	284	1.84
PK	2.418G	117.54	Inf	-Inf	32.21	3	Vertical	284	1.84
AV	2.4162G	113.80	Inf	-Inf	32.21	3	Vertical	284	1.84

802.11b_Nss1,(1Mbps)_2TX

2422MHz_TX

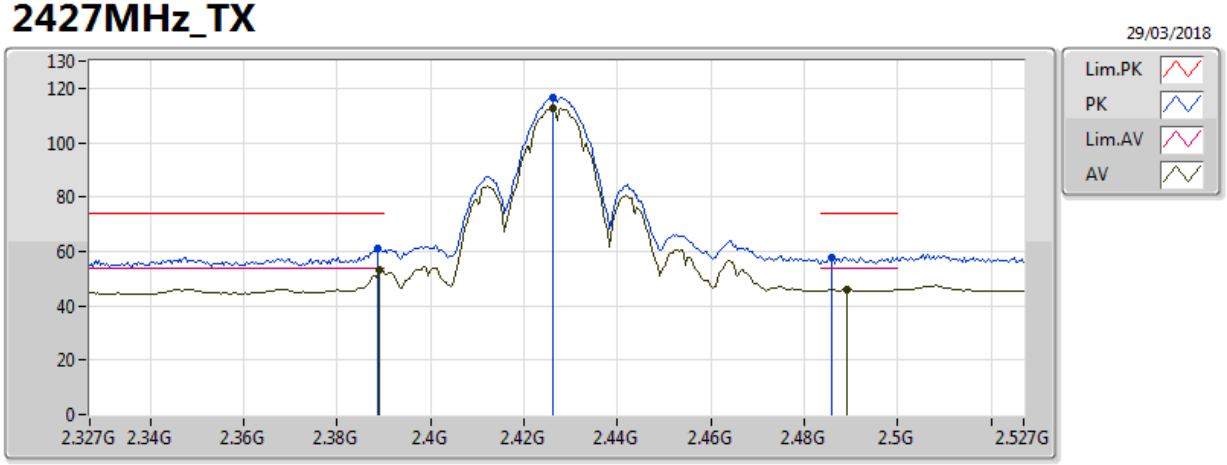


20180329
EUT Y_2TX_Dipole
Setting 29
03-J-4
FSP

Type	Freq	Level	Limit	Margin	Factor	Dist	Condition	Azimuth	Height
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB)	(m)		(°)	(m)
PK	2.3844G	60.74	74.00	-13.26	32.11	3	Vertical	286	1.84
AV	2.3844G	53.78	54.00	-0.22	32.11	3	Vertical	286	1.84
PK	2.4212G	116.98	Inf	-Inf	32.22	3	Vertical	286	1.84
AV	2.4212G	113.14	Inf	-Inf	32.22	3	Vertical	286	1.84
PK	2.499998G	57.79	74.00	-16.21	32.46	3	Vertical	286	1.84
AV	2.499998G	46.55	54.00	-7.45	32.46	3	Vertical	286	1.84

802.11b_Nss1,(1Mbps)_2TX

2427MHz_TX

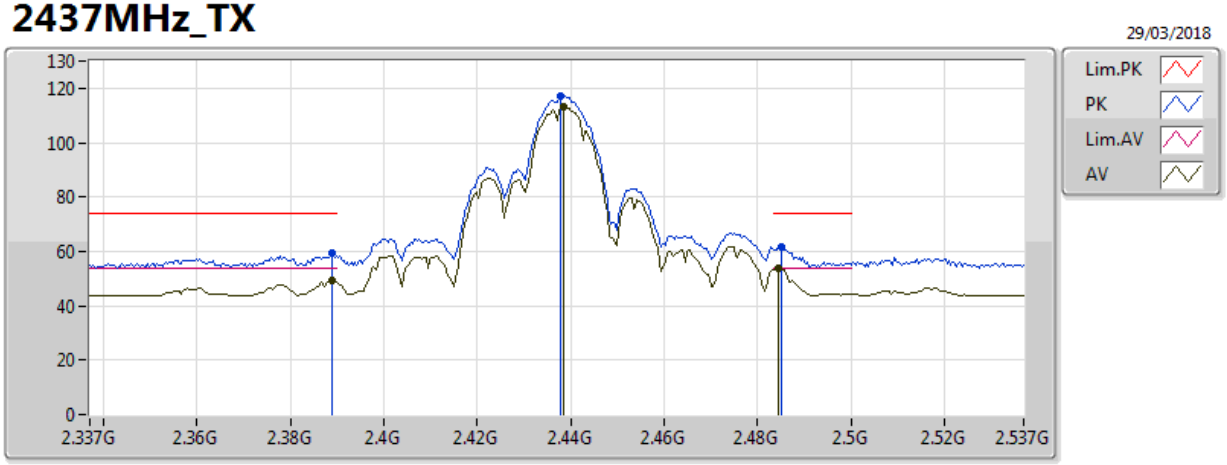


20180329
EUT Y_2TX_Dipole
Setting 2B
03-J-4
FSP

Type	Freq	Level	Limit	Margin	Factor	Dist	Condition	Azimuth	Height
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB)	(m)		(°)	(m)
PK	2.3886G	61.03	74.00	-12.97	32.13	3	Vertical	291	1.87
AV	2.389G	53.02	54.00	-0.98	32.13	3	Vertical	291	1.87
PK	2.4262G	116.65	Inf	-Inf	32.24	3	Vertical	291	1.87
AV	2.4262G	112.72	Inf	-Inf	32.24	3	Vertical	291	1.87
PK	2.4858G	57.89	74.00	-16.11	32.42	3	Vertical	291	1.87
AV	2.489G	45.94	54.00	-8.06	32.43	3	Vertical	291	1.87

802.11b_Nss1,(1Mbps)_2TX

2437MHz_TX

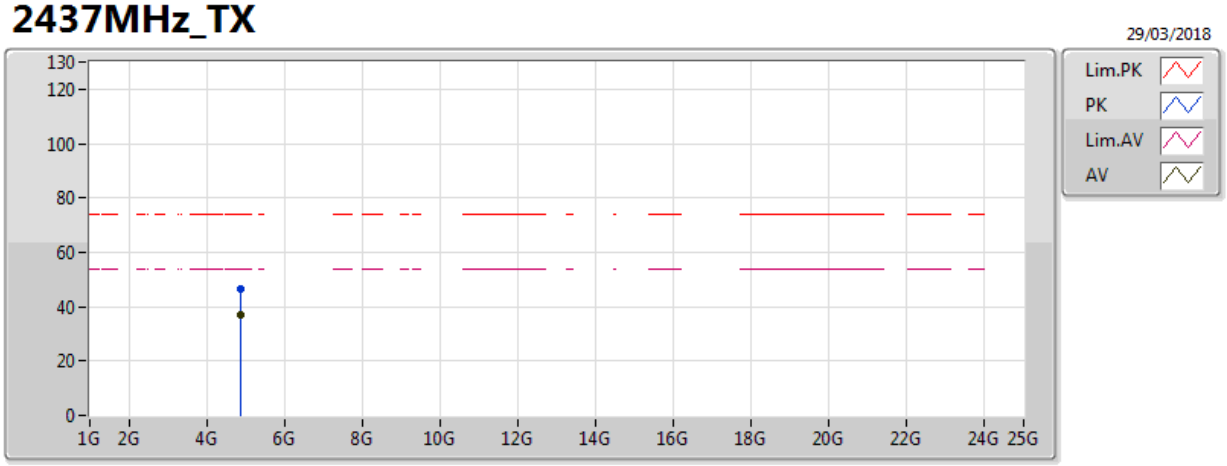


20180112
EUT Y_2TX Dipole
Setting 2B
03-J-1
FSP

Type	Freq	Level	Limit	Margin	Factor	Dist	Condition	Azimuth	Height
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB)	(m)		(°)	(m)
PK	2.389G	59.26	74.00	-14.74	31.59	3	Vertical	43	2.41
AV	2.389G	49.54	54.00	-4.46	31.59	3	Vertical	43	2.41
PK	2.4378G	117.11	Inf	-Inf	31.57	3	Vertical	43	2.41
AV	2.4386G	113.25	Inf	-Inf	31.57	3	Vertical	43	2.41
PK	2.485G	61.66	74.00	-12.34	31.60	3	Vertical	43	2.41
AV	2.4846G	53.84	54.00	-0.16	31.60	3	Vertical	43	2.41

802.11b_Nss1,(1Mbps)_2TX

2437MHz_TX

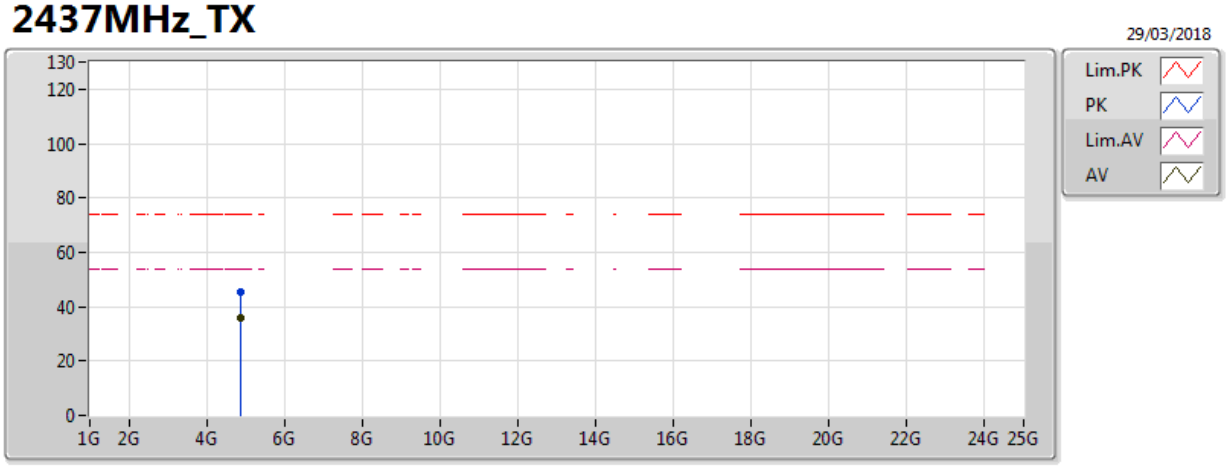


20180112
EUT Y_2TX Dipole
Setting 2B
03-J-1
FSP

Type	Freq	Level	Limit	Margin	Factor	Dist	Condition	Azimuth	Height
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB)	(m)		(°)	(m)
AV	4.87404G	36.88	54.00	-17.12	2.99	3	Vertical	76	1.64
PK	4.8742G	46.28	74.00	-27.72	2.99	3	Vertical	76	1.64

802.11b_Nss1,(1Mbps)_2TX

2437MHz_TX

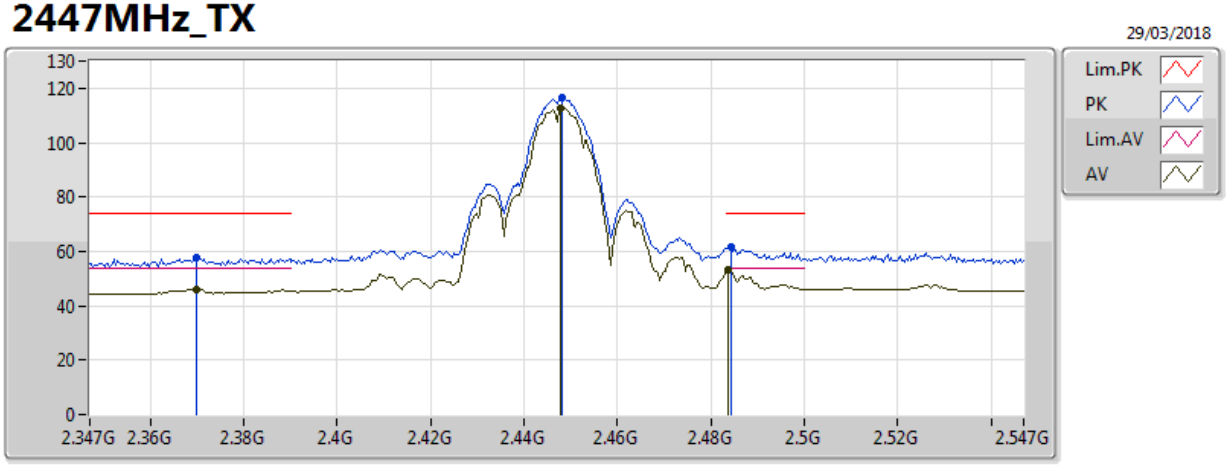


20180112
EUT Y_2TX Dipole
Setting 2B
03-J-1
FSP

Type	Freq	Level	Limit	Margin	Factor	Dist	Condition	Azimuth	Height
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB)	(m)		(°)	(m)
AV	4.87399G	35.77	54.00	-18.23	2.99	3	Horizontal	63	2.17
PK	4.87417G	45.37	74.00	-28.63	2.99	3	Horizontal	63	2.17

802.11b_Nss1,(1Mbps)_2TX

2447MHz_TX

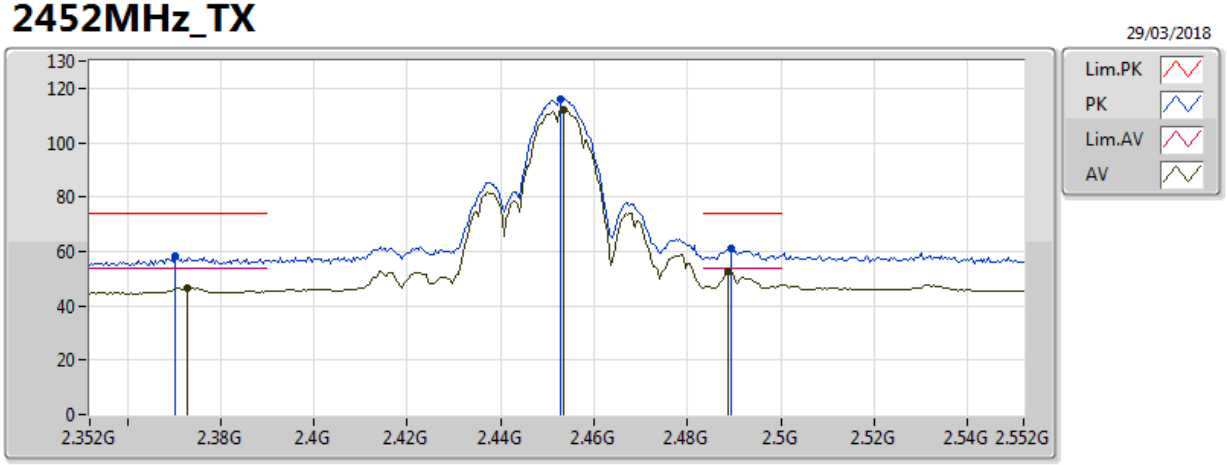


20180329
EUT Y_2TX_Dipole
Setting 2B
03-J-4
FSP

Type	Freq	Level	Limit	Margin	Factor	Dist	Condition	Azimuth	Height
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB)	(m)		(°)	(m)
PK	2.3698G	57.63	74.00	-16.37	32.07	3	Vertical	52	1.54
AV	2.3698G	46.01	54.00	-7.99	32.07	3	Vertical	52	1.54
PK	2.4482G	116.71	Inf	-Inf	32.30	3	Vertical	52	1.54
AV	2.4478G	112.51	Inf	-Inf	32.30	3	Vertical	52	1.54
PK	2.4842G	61.79	74.00	-12.21	32.42	3	Vertical	52	1.54
AV	2.4838G	53.24	54.00	-0.76	32.42	3	Vertical	52	1.54

802.11b_Nss1,(1Mbps)_2TX

2452MHz_TX

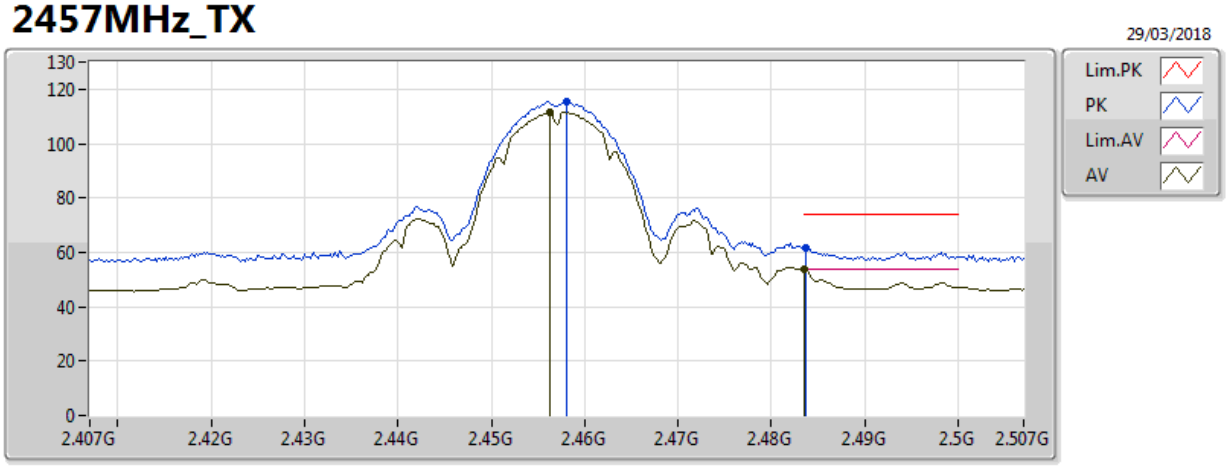


20180329
EUT Y_2TX_Dipole
Setting 29
03-J-4
FSP

Type	Freq	Level	Limit	Margin	Factor	Dist	Condition	Azimuth	Height
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB)	(m)		(°)	(m)
PK	2.3704G	58.11	74.00	-15.89	32.07	3	Vertical	52	1.76
AV	2.3728G	46.69	54.00	-7.31	32.08	3	Vertical	52	1.76
PK	2.4528G	116.20	Inf	-Inf	32.32	3	Vertical	52	1.76
AV	2.4536G	112.19	Inf	-Inf	32.32	3	Vertical	52	1.76
PK	2.4892G	60.82	74.00	-13.18	32.43	3	Vertical	52	1.76
AV	2.4888G	52.78	54.00	-1.22	32.43	3	Vertical	52	1.76

802.11b_Nss1,(1Mbps)_2TX

2457MHz_TX

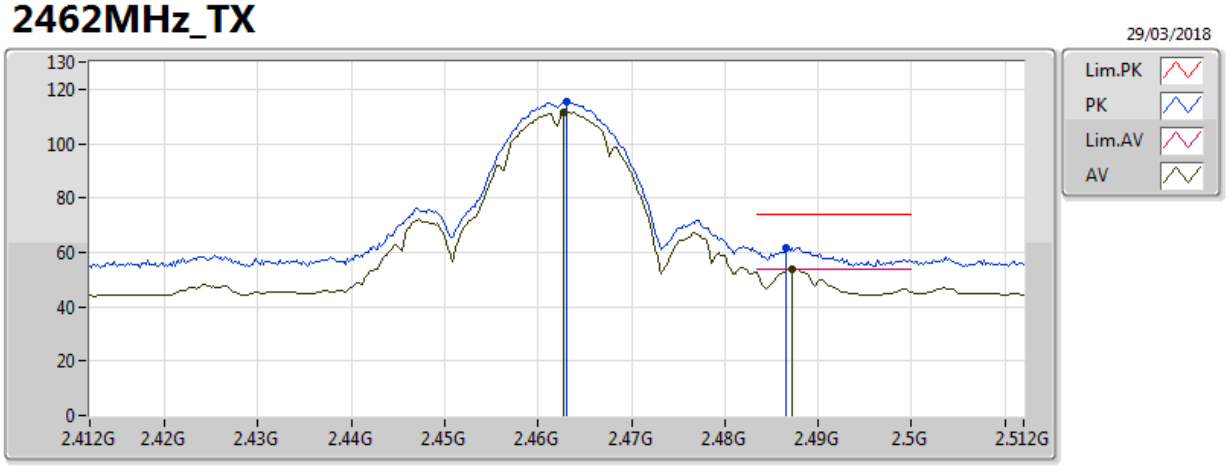


20180329
EUT Y_2TX_Dipole
Setting 26
03-J-4
FSP

Type	Freq	Level	Limit	Margin	Factor	Dist	Condition	Azimuth	Height
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB)	(m)		(°)	(m)
PK	2.458G	115.62	Inf	-Inf	32.33	3	Vertical	256	2.95
AV	2.4562G	111.52	Inf	-Inf	32.33	3	Vertical	256	2.95
PK	2.4836G	61.48	74.00	-12.52	32.41	3	Vertical	256	2.95
AV	2.483502G	53.54	54.00	-0.46	32.41	3	Vertical	256	2.95

802.11b_Nss1,(1Mbps)_2TX

2462MHz_TX

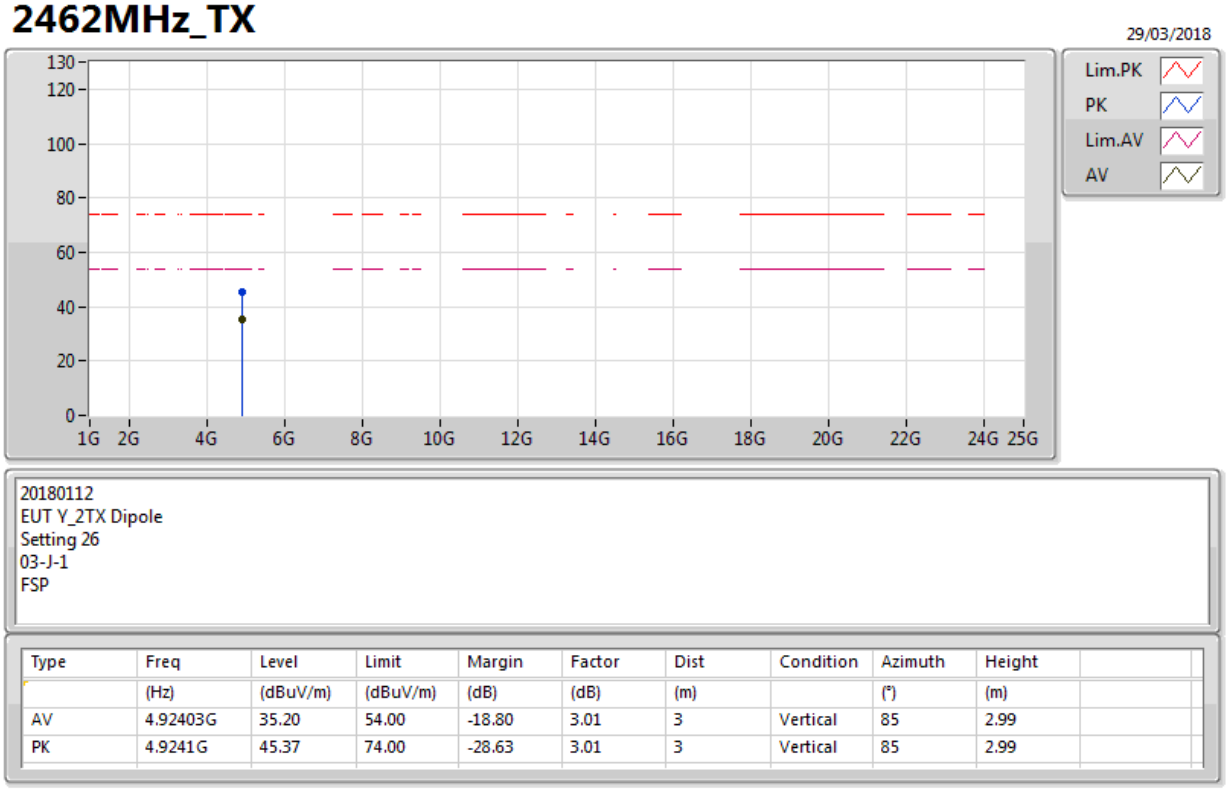


20180112
EUT Y_2TX Dipole
Setting 26
03-J-1
FSP

Type	Freq	Level	Limit	Margin	Factor	Dist	Condition	Azimuth	Height
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB)	(m)		(°)	(m)
PK	2.463G	115.53	Inf	-Inf	31.59	3	Vertical	323	1.92
AV	2.4628G	111.47	Inf	-Inf	31.59	3	Vertical	323	1.92
PK	2.4866G	61.77	74.00	-12.23	31.60	3	Vertical	323	1.92
AV	2.4872G	53.94	54.00	-0.06	31.60	3	Vertical	323	1.92

802.11b_Nss1,(1Mbps)_2TX

2462MHz_TX

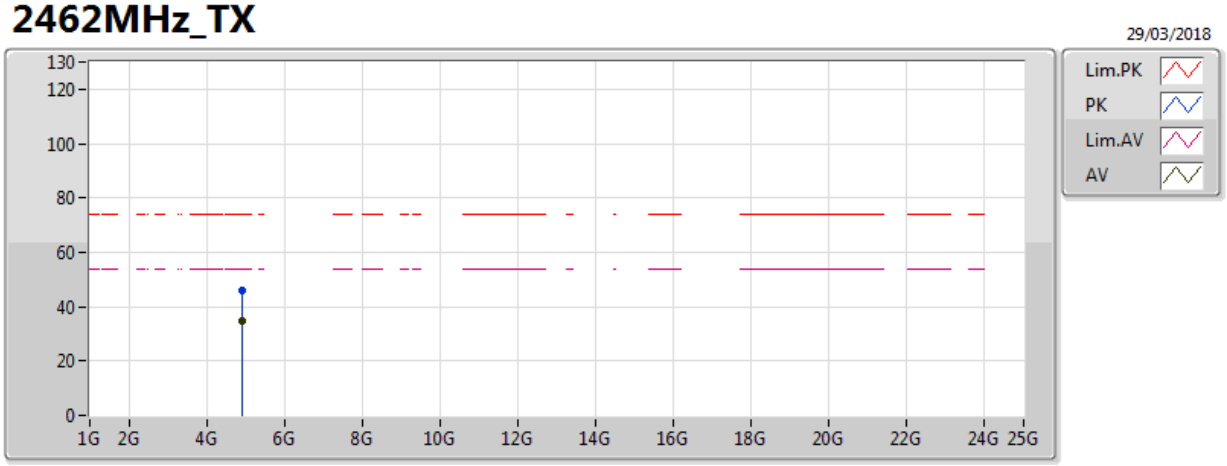


20180112
EUT Y_2TX Dipole
Setting 26
03-J-1
FSP

Type	Freq	Level	Limit	Margin	Factor	Dist	Condition	Azimuth	Height
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB)	(m)		(°)	(m)
AV	4.92403G	35.20	54.00	-18.80	3.01	3	Vertical	85	2.99
PK	4.9241G	45.37	74.00	-28.63	3.01	3	Vertical	85	2.99

802.11b_Nss1,(1Mbps)_2TX

2462MHz_TX

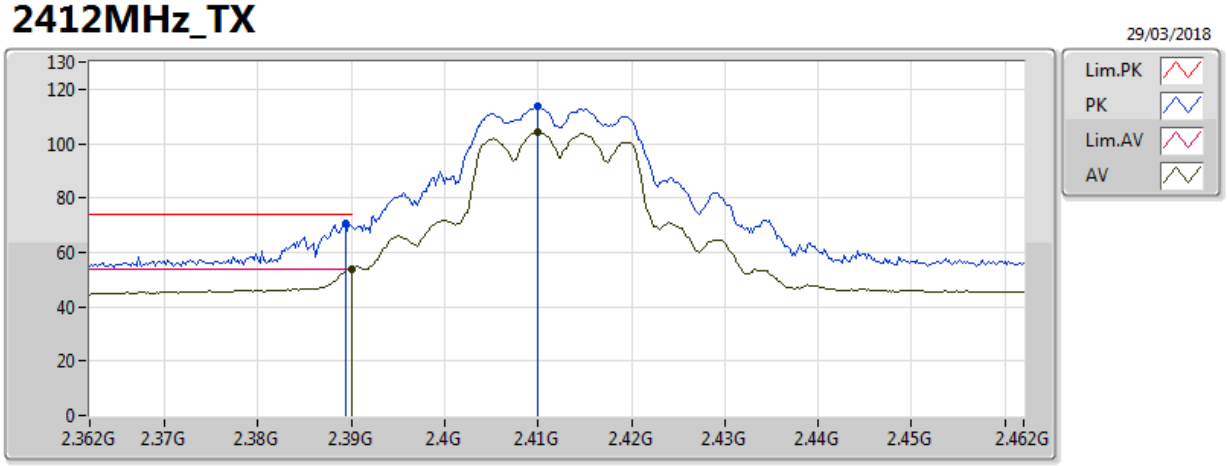


20180112
EUT Y_2TX Dipole
Setting 26
03-J-1
FSP

Type	Freq	Level	Limit	Margin	Factor	Dist	Condition	Azimuth	Height
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB)	(m)		(°)	(m)
AV	4.92396G	34.47	54.00	-19.53	3.01	3	Horizontal	63	2.14
PK	4.92394G	45.98	74.00	-28.02	3.01	3	Horizontal	63	2.14

802.11g_Nss1,(6Mbps)_2TX

2412MHz_TX

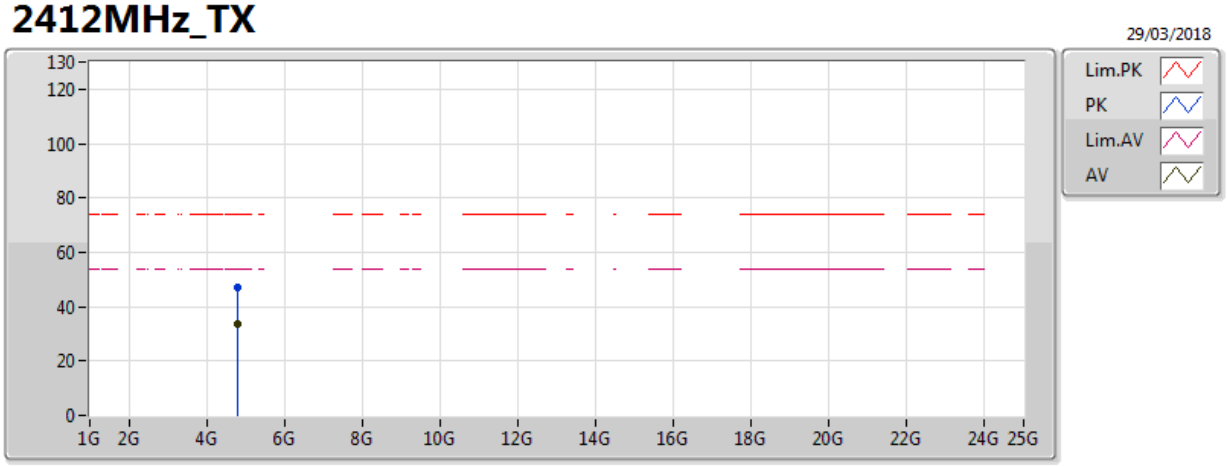


20180125
EUT Y_2TX_Dipole
Setting 1E
03-C-5
FSP

Type	Freq	Level	Limit	Margin	Factor	Dist	Condition	Azimuth	Height
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB)	(m)		(°)	(m)
PK	2.3894G	70.75	74.00	-3.25	32.18	3	Vertical	285	1.98
AV	2.39G	53.97	54.00	-0.03	32.18	3	Vertical	285	1.98
PK	2.41G	113.67	Inf	-Inf	32.24	3	Vertical	285	1.98
AV	2.41G	104.35	Inf	-Inf	32.24	3	Vertical	285	1.98

802.11g_Nss1,(6Mbps)_2TX

2412MHz_TX

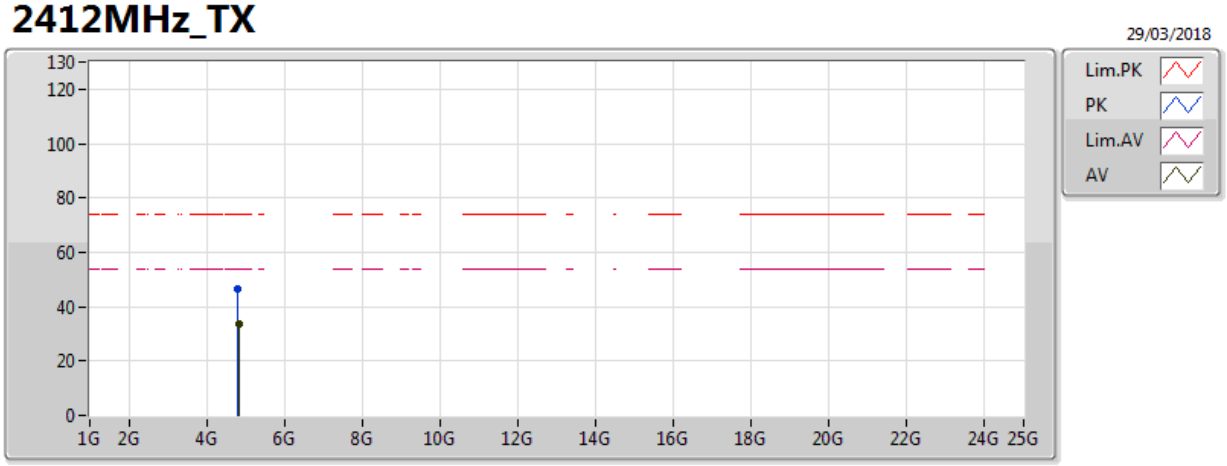


20180329
EUT Y_2TX_Dipole
Setting 1E
03-J-4
FSP

Type	Freq	Level	Limit	Margin	Factor	Dist	Condition	Azimuth	Height
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB)	(m)		(°)	(m)
PK	4.81728G	46.87	74.00	-27.13	4.85	3	Vertical	325	1.28
AV	4.80912G	33.69	54.00	-20.31	4.84	3	Vertical	325	1.28

802.11g_Nss1,(6Mbps)_2TX

2412MHz_TX

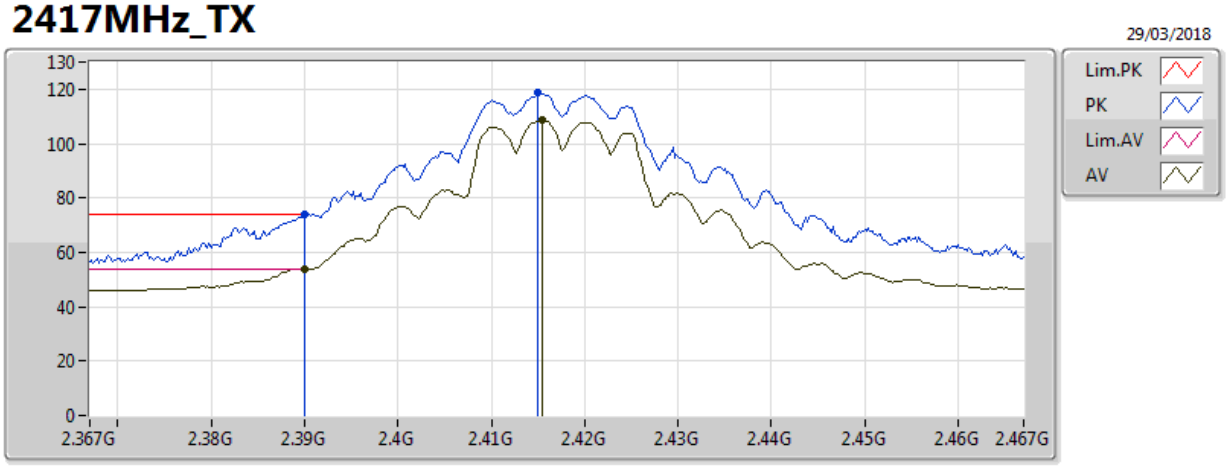


20180329
EUT Y_2TX_Dipole
Setting 1E
03-J-4
FSP

Type	Freq	Level	Limit	Margin	Factor	Dist	Condition	Azimuth	Height
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB)	(m)		(°)	(m)
PK	4.81152G	46.69	74.00	-27.31	4.84	3	Horizontal	246	1.56
AV	4.81914G	33.60	54.00	-20.40	4.85	3	Horizontal	246	1.56

802.11g_Nss1,(6Mbps)_2TX

2417MHz_TX

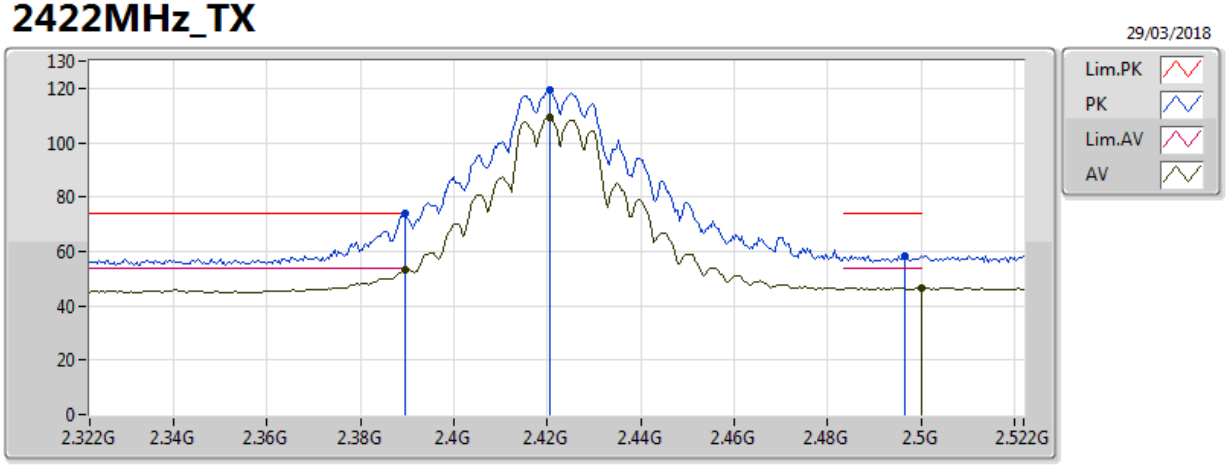


20180329
EUT Y_2TX_Dipole
Setting 26
03-J-4
FSP

Type	Freq	Level	Limit	Margin	Factor	Dist	Condition	Azimuth	Height
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB)	(m)		(°)	(m)
PK	2.389998G	73.79	74.00	-0.21	32.13	3	Vertical	20	1.84
AV	2.389998G	53.97	54.00	-0.03	32.13	3	Vertical	20	1.84
PK	2.415G	118.52	Inf	-Inf	32.20	3	Vertical	20	1.84
AV	2.4154G	108.52	Inf	-Inf	32.21	3	Vertical	20	1.84

802.11g_Nss1,(6Mbps)_2TX

2422MHz_TX

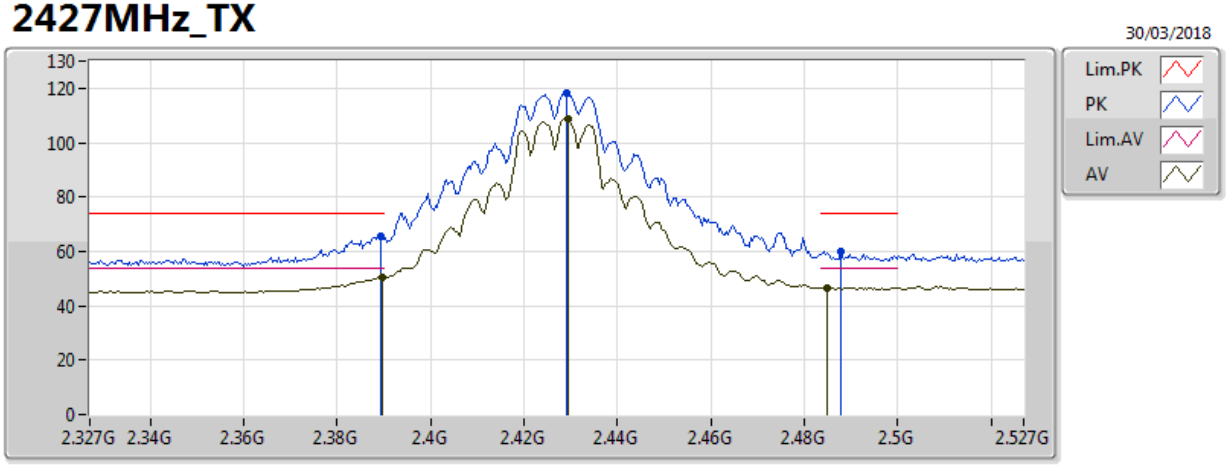


20180329
EUT Y_2TX_Dipole
Setting 2A
03-J-4
FSP

Type	Freq	Level	Limit	Margin	Factor	Dist	Condition	Azimuth	Height
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB)	(m)		(°)	(m)
PK	2.3896G	73.88	74.00	-0.12	32.13	3	Vertical	19	1.83
AV	2.3896G	53.29	54.00	-0.71	32.13	3	Vertical	19	1.83
PK	2.4204G	119.14	Inf	-Inf	32.22	3	Vertical	19	1.83
AV	2.4204G	109.15	Inf	-Inf	32.22	3	Vertical	19	1.83
PK	2.4964G	58.52	74.00	-15.48	32.45	3	Vertical	19	1.83
AV	2.499998G	46.57	54.00	-7.43	32.46	3	Vertical	19	1.83

802.11g_Nss1,(6Mbps)_2TX

2427MHz_TX

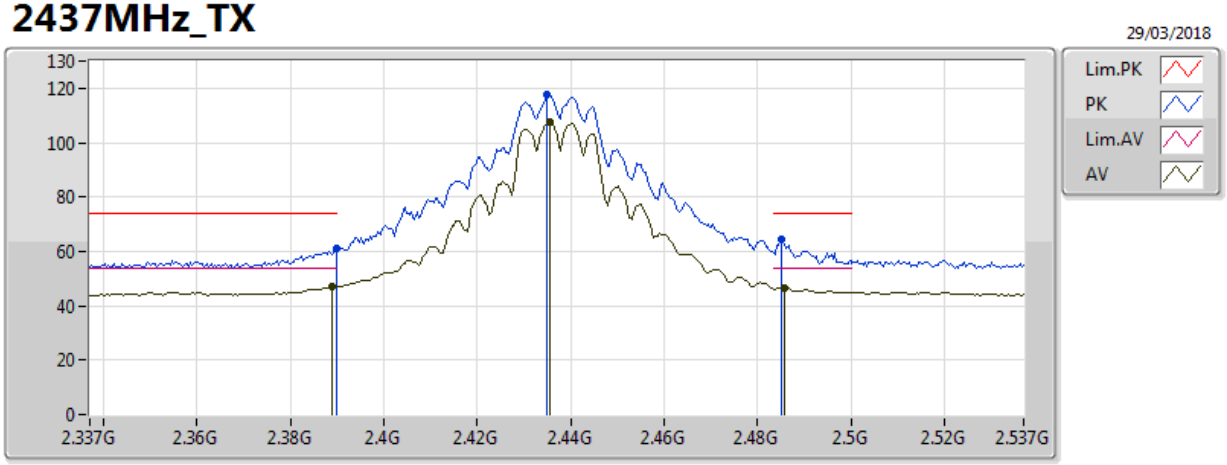


20180329
EUT Y_2TX_Dipole
Setting 2F
03-J-4
FSP

Type	Freq	Level	Limit	Margin	Factor	Dist	Condition	Azimuth	Height
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB)	(m)		(°)	(m)
PK	2.3894G	65.78	74.00	-8.22	32.13	3	Vertical	348	2.96
AV	2.3898G	50.61	54.00	-3.39	32.13	3	Vertical	348	2.96
PK	2.429G	118.21	Inf	-Inf	32.25	3	Vertical	348	2.96
AV	2.4294G	108.63	Inf	-Inf	32.25	3	Vertical	348	2.96
PK	2.4878G	59.79	74.00	-14.21	32.42	3	Vertical	348	2.96
AV	2.485G	46.74	54.00	-7.26	32.42	3	Vertical	348	2.96

802.11g_Nss1,(6Mbps)_2TX

2437MHz_TX

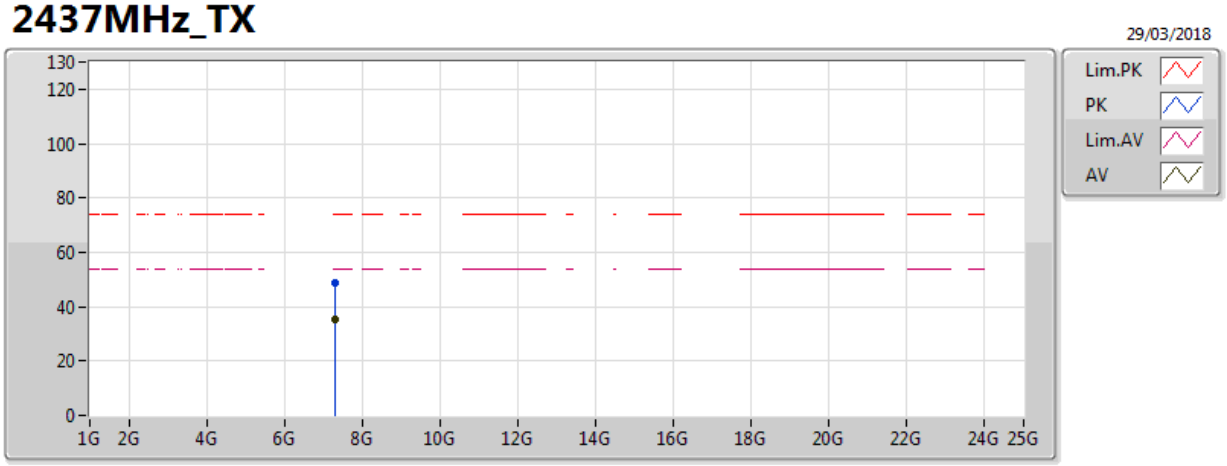


20180112
EUT Y_2TX Dipole
Setting 2F
03-J-1
FSP

Type	Freq	Level	Limit	Margin	Factor	Dist	Condition	Azimuth	Height
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB)	(m)		(°)	(m)
PK	2.3898G	61.01	74.00	-12.99	31.58	3	Vertical	283	1.35
AV	2.389G	47.04	54.00	-6.96	31.59	3	Vertical	283	1.35
PK	2.435G	117.72	Inf	-Inf	31.57	3	Vertical	283	1.35
AV	2.4354G	107.31	Inf	-Inf	31.57	3	Vertical	283	1.35
PK	2.485G	64.44	74.00	-9.56	31.60	3	Vertical	283	1.35
AV	2.4858G	46.70	54.00	-7.30	31.60	3	Vertical	283	1.35

802.11g_Nss1,(6Mbps)_2TX

2437MHz_TX

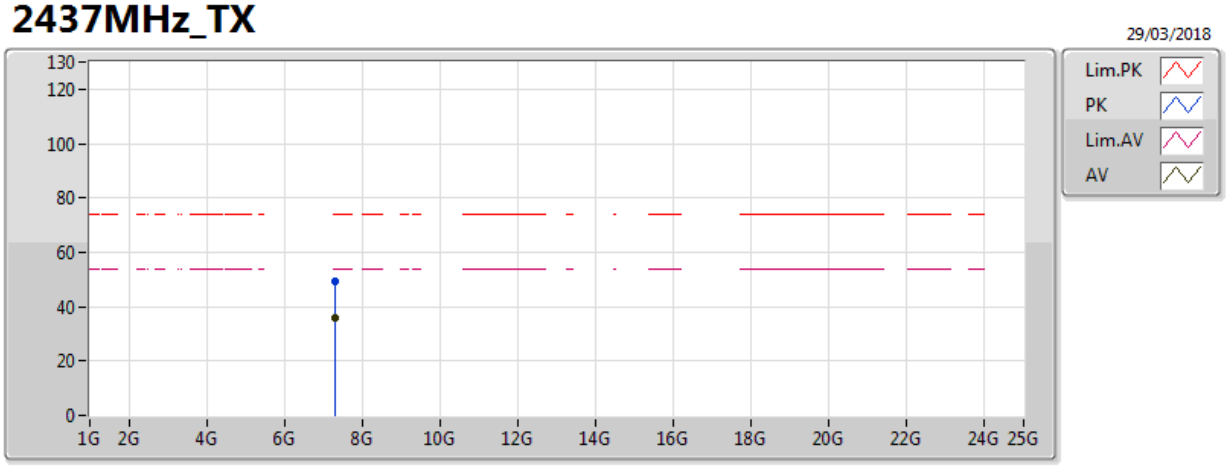


20180112
EUT Y_2TX Dipole
Setting 2F
03-J-1
FSP

Type	Freq	Level	Limit	Margin	Factor	Dist	Condition	Azimuth	Height
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB)	(m)		(°)	(m)
AV	7.31112G	35.42	54.00	-18.58	9.37	3	Vertical	296	2.41
PK	7.3105G	49.01	74.00	-24.99	9.37	3	Vertical	296	2.41

802.11g_Nss1,(6Mbps)_2TX

2437MHz_TX

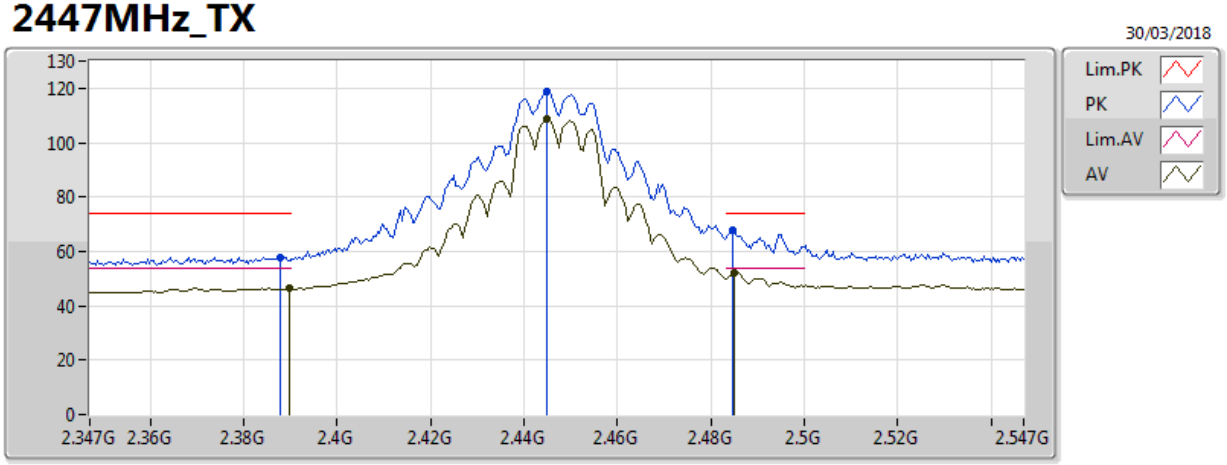


20180112
EUT Y_2TX Dipole
Setting 2F
03-J-1
FSP

Type	Freq	Level	Limit	Margin	Factor	Dist	Condition	Azimuth	Height
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB)	(m)		(°)	(m)
AV	7.31176G	35.62	54.00	-18.38	9.37	3	Horizontal	352	1.79
PK	7.30904G	49.30	74.00	-24.70	9.36	3	Horizontal	352	1.79

802.11g_Nss1,(6Mbps)_2TX

2447MHz_TX

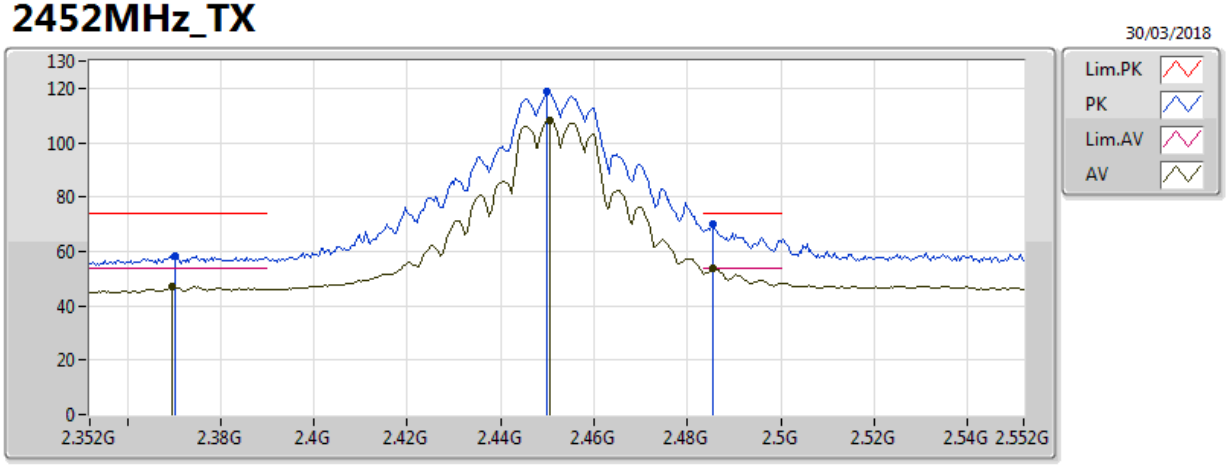


20180329
EUT Y_2TX_Dipole
Setting 2F
03-J-4
FSP

Type	Freq	Level	Limit	Margin	Factor	Dist	Condition	Azimuth	Height
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB)	(m)		(°)	(m)
PK	2.3878G	57.99	74.00	-16.01	32.13	3	Vertical	4	1.79
AV	2.3898G	46.36	54.00	-7.64	32.13	3	Vertical	4	1.79
PK	2.445G	118.60	Inf	-Inf	32.30	3	Vertical	4	1.79
AV	2.445G	108.49	Inf	-Inf	32.30	3	Vertical	4	1.79
PK	2.4846G	67.79	74.00	-6.21	32.42	3	Vertical	4	1.79
AV	2.485G	51.99	54.00	-2.01	32.42	3	Vertical	4	1.79

802.11g_Nss1,(6Mbps)_2TX

2452MHz_TX

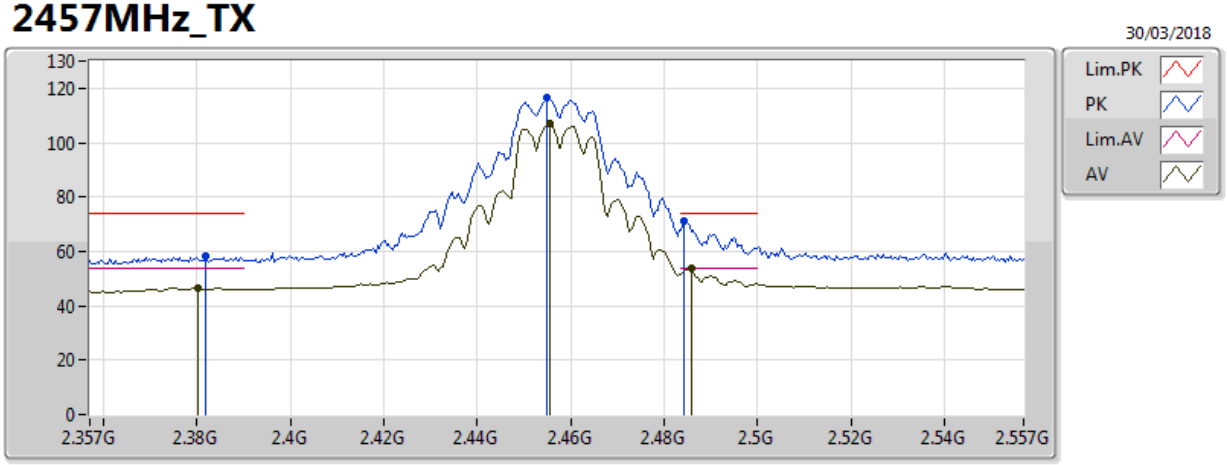


20180329
EUT Y_2TX_Dipole
Setting 2A
03-J-4
FSP

Type	Freq	Level	Limit	Margin	Factor	Dist	Condition	Azimuth	Height
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB)	(m)		(°)	(m)
PK	2.3704G	58.16	74.00	-15.84	32.07	3	Vertical	16	1.69
AV	2.3696G	46.84	54.00	-7.16	32.07	3	Vertical	16	1.69
PK	2.45G	118.54	Inf	-Inf	32.31	3	Vertical	16	1.69
AV	2.4504G	108.30	Inf	-Inf	32.31	3	Vertical	16	1.69
PK	2.4856G	70.06	74.00	-3.94	32.42	3	Vertical	16	1.69
AV	2.4856G	53.56	54.00	-0.44	32.42	3	Vertical	16	1.69

802.11g_Nss1,(6Mbps)_2TX

2457MHz_TX

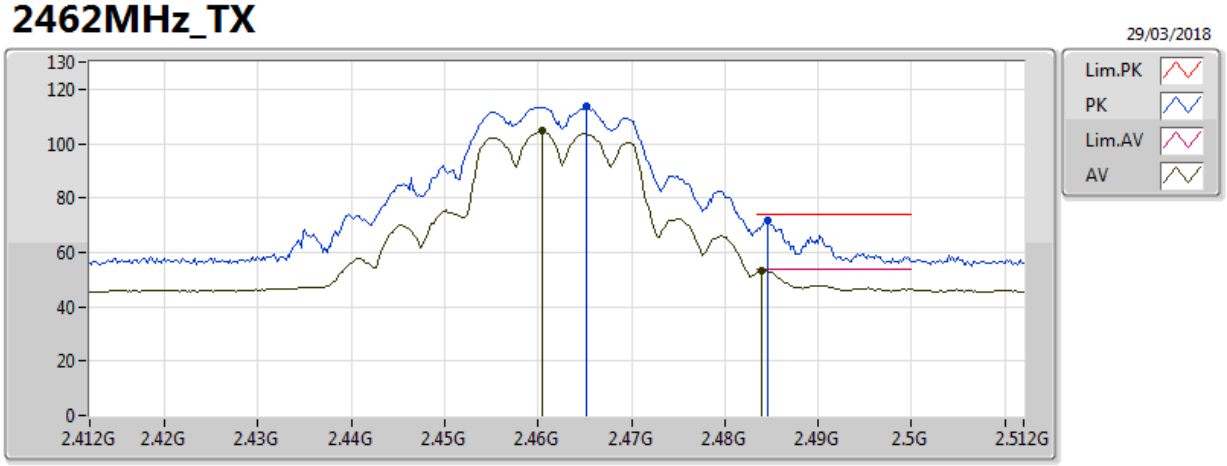


20180329
EUT Y_2TX_Dipole
Setting 26
03-J-4
FSP

Type	Freq	Level	Limit	Margin	Factor	Dist	Condition	Azimuth	Height
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB)	(m)		(°)	(m)
PK	2.3818G	58.07	74.00	-15.93	32.10	3	Vertical	12	1.70
AV	2.3802G	46.69	54.00	-7.31	32.10	3	Vertical	12	1.70
PK	2.455G	116.76	Inf	-Inf	32.32	3	Vertical	12	1.70
AV	2.4554G	106.79	Inf	-Inf	32.33	3	Vertical	12	1.70
PK	2.4842G	71.25	74.00	-2.75	32.41	3	Vertical	12	1.70
AV	2.4858G	53.52	54.00	-0.48	32.42	3	Vertical	12	1.70

802.11g_Nss1,(6Mbps)_2TX

2462MHz_TX

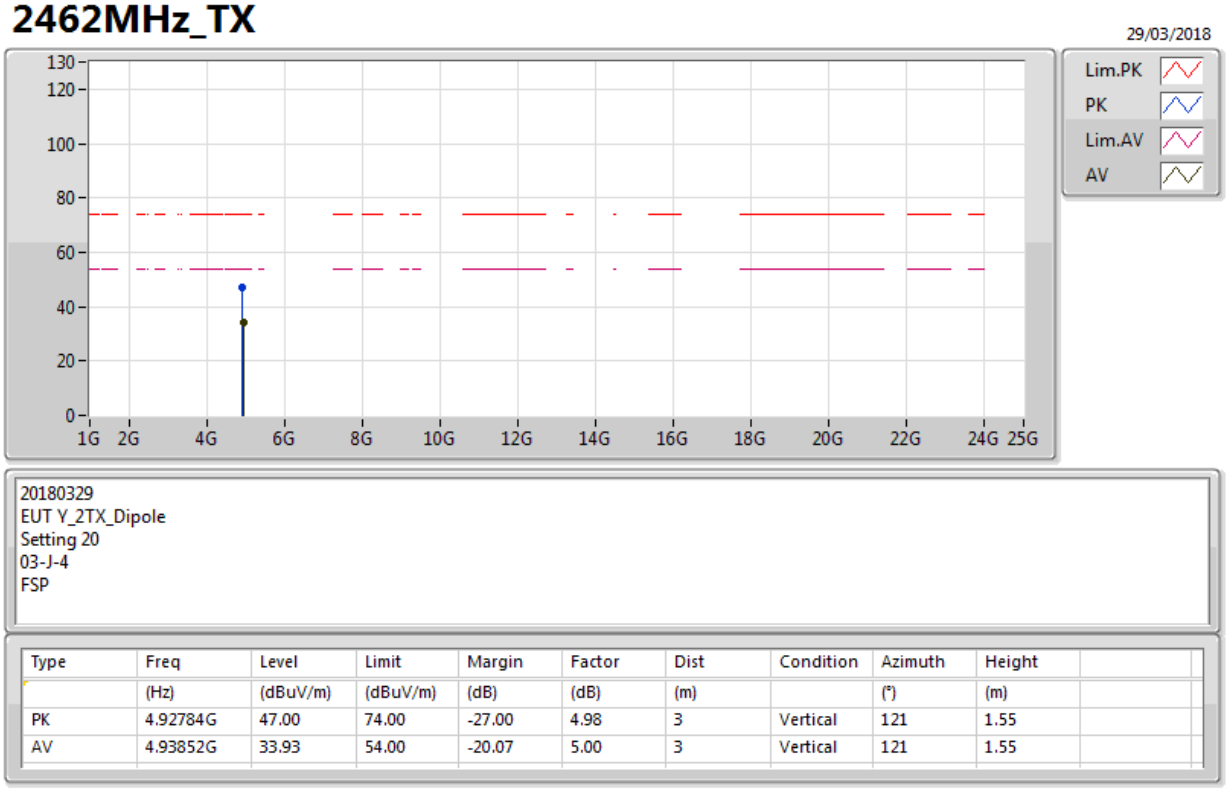


20180125
EUT Y_2TX_Dipole
Setting 20
03-C-5
FSP

Type	Freq	Level	Limit	Margin	Factor	Dist	Condition	Azimuth	Height
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB)	(m)		(°)	(m)
PK	2.4652G	113.53	Inf	-Inf	32.37	3	Vertical	283	1.50
AV	2.4604G	104.51	Inf	-Inf	32.36	3	Vertical	283	1.50
PK	2.4846G	71.80	74.00	-2.20	32.42	3	Vertical	283	1.50
AV	2.484G	53.21	54.00	-0.79	32.42	3	Vertical	283	1.50

802.11g_Nss1,(6Mbps)_2TX

2462MHz_TX

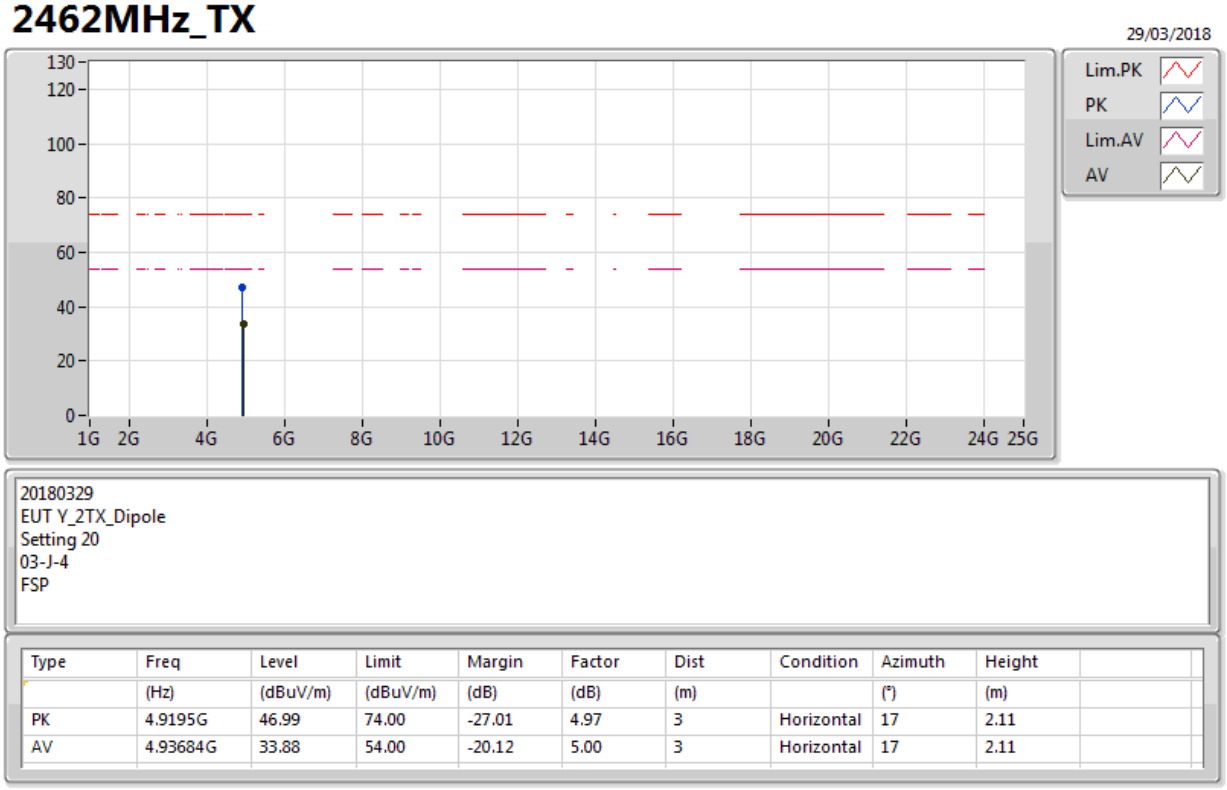


20180329
EUT Y_2TX_Dipole
Setting 20
03-J-4
FSP

Type	Freq	Level	Limit	Margin	Factor	Dist	Condition	Azimuth	Height
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB)	(m)		(°)	(m)
PK	4.92784G	47.00	74.00	-27.00	4.98	3	Vertical	121	1.55
AV	4.93852G	33.93	54.00	-20.07	5.00	3	Vertical	121	1.55

802.11g_Nss1,(6Mbps)_2TX

2462MHz_TX

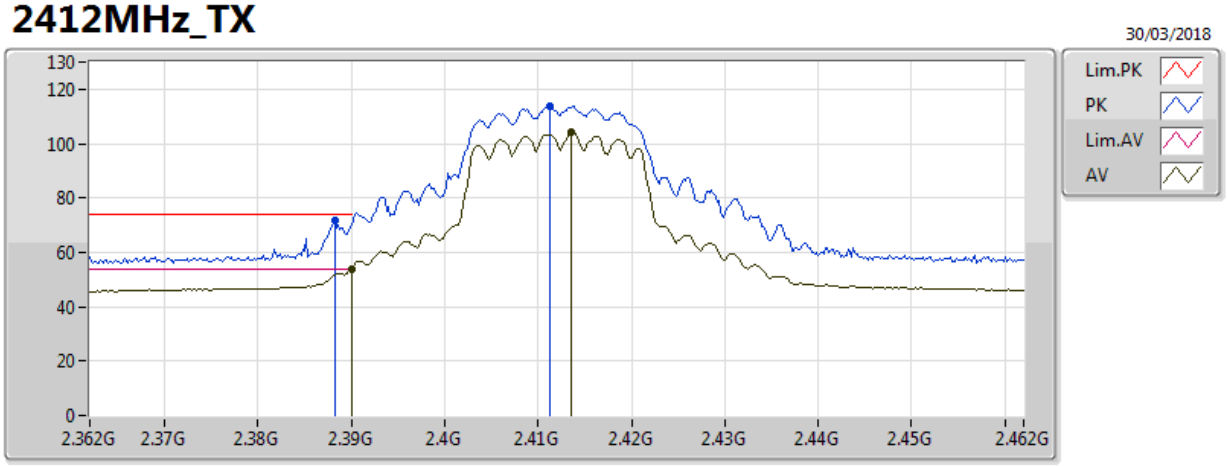


20180329
EUT Y_2TX_Dipole
Setting 20
03-J-4
FSP

Type	Freq	Level	Limit	Margin	Factor	Dist	Condition	Azimuth	Height
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB)	(m)		(°)	(m)
PK	4.9195G	46.99	74.00	-27.01	4.97	3	Horizontal	17	2.11
AV	4.93684G	33.88	54.00	-20.12	5.00	3	Horizontal	17	2.11

802.11n HT20_Nss1,(MCS0)_2TX

2412MHz_TX

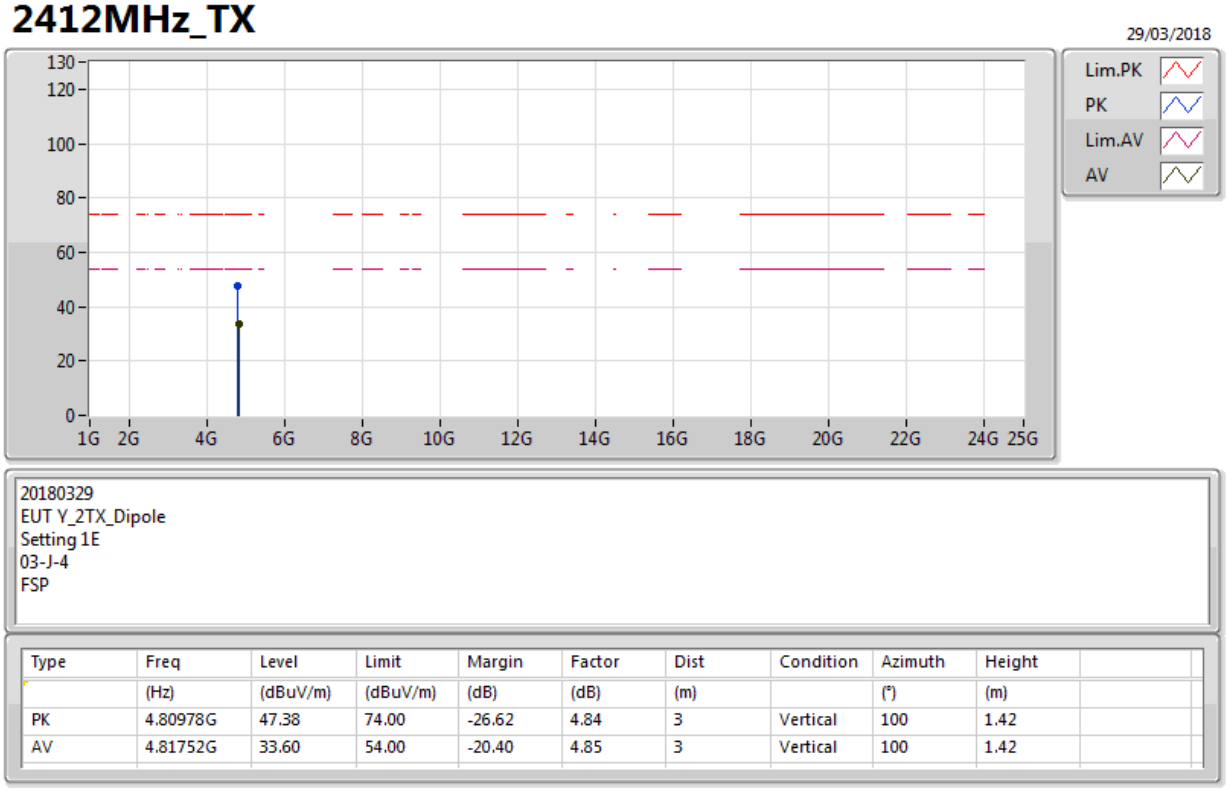


20180329
EUT Y_2TX_Dipole
Setting 1E
03-J-4
FSP

Type	Freq	Level	Limit	Margin	Factor	Dist	Condition	Azimuth	Height
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB)	(m)		(°)	(m)
PK	2.3882G	71.58	74.00	-2.42	32.18	3	Vertical	19	1.85
AV	2.389998G	53.76	54.00	-0.24	32.18	3	Vertical	19	1.85
PK	2.4112G	113.91	Inf	-Inf	32.24	3	Vertical	19	1.85
AV	2.4136G	104.04	Inf	-Inf	32.24	3	Vertical	19	1.85

802.11n HT20_Nss1,(MCS0)_2TX

2412MHz_TX

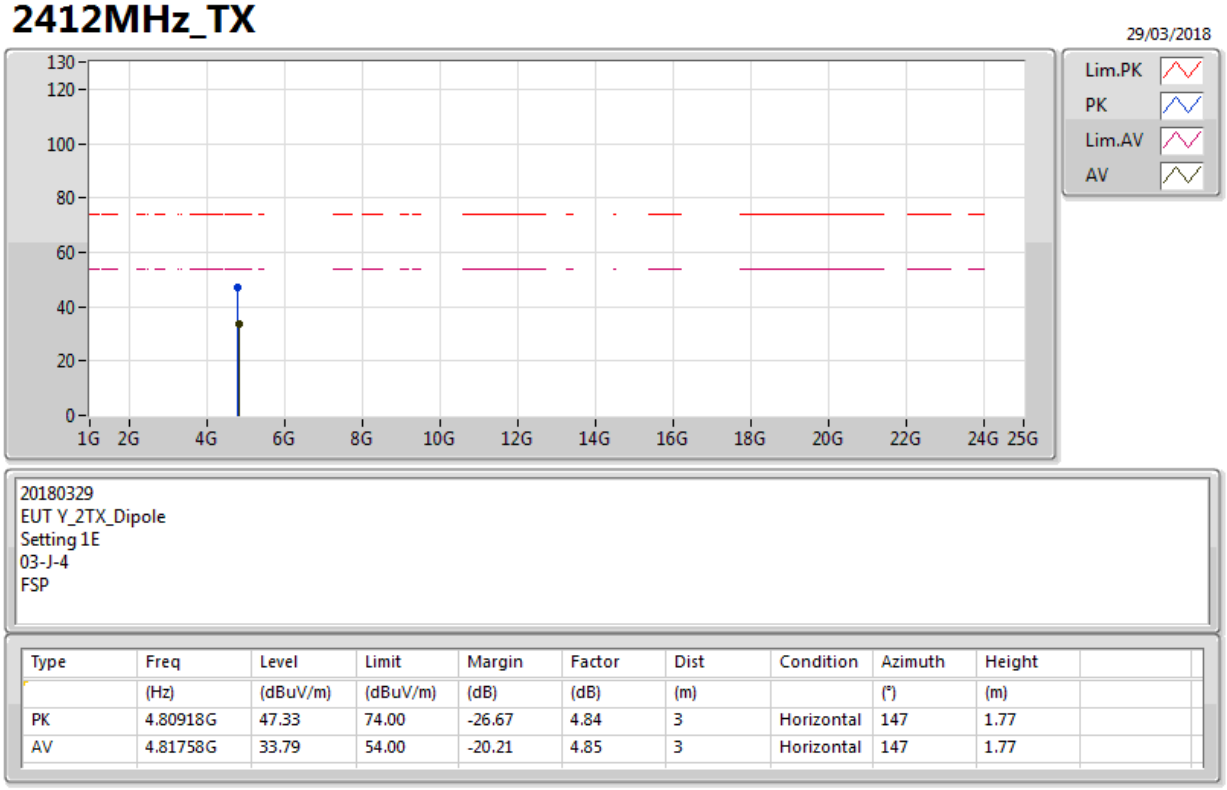


20180329
EUT Y_2TX_Dipole
Setting 1E
03-J-4
FSP

Type	Freq	Level	Limit	Margin	Factor	Dist	Condition	Azimuth	Height
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB)	(m)		(°)	(m)
PK	4.80978G	47.38	74.00	-26.62	4.84	3	Vertical	100	1.42
AV	4.81752G	33.60	54.00	-20.40	4.85	3	Vertical	100	1.42

802.11n HT20_Nss1,(MCS0)_2TX

2412MHz_TX

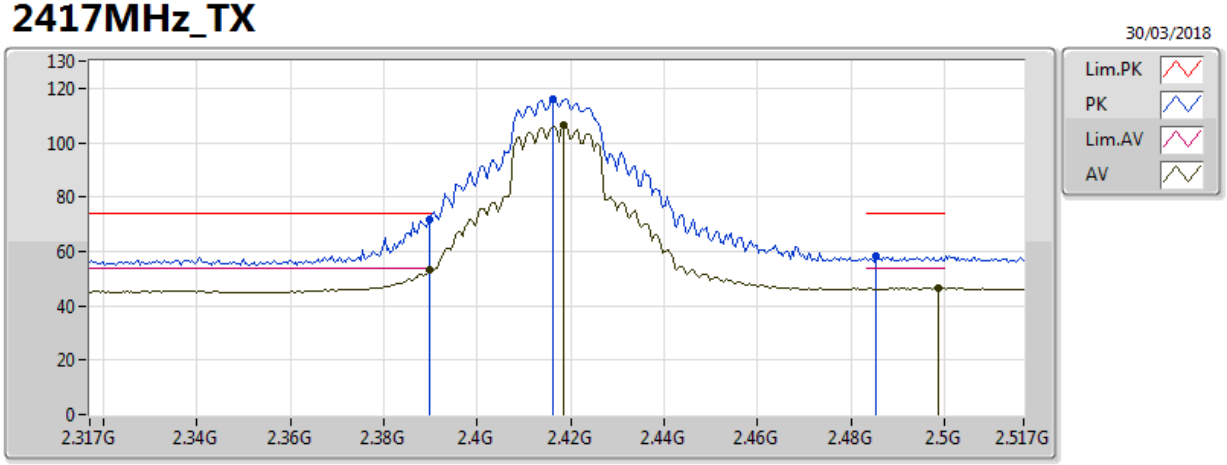


20180329
EUT Y_2TX_Dipole
Setting 1E
03-J-4
FSP

Type	Freq	Level	Limit	Margin	Factor	Dist	Condition	Azimuth	Height
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB)	(m)		(°)	(m)
PK	4.80918G	47.33	74.00	-26.67	4.84	3	Horizontal	147	1.77
AV	4.81758G	33.79	54.00	-20.21	4.85	3	Horizontal	147	1.77

802.11n HT20_Nss1,(MCS0)_2TX

2417MHz_TX

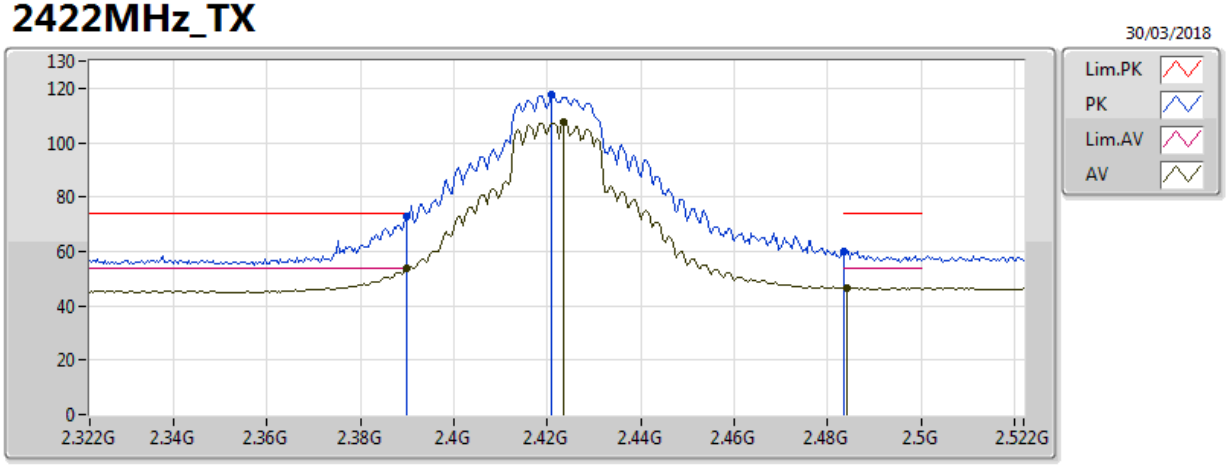


20180329
EUT Y_2TX_Dipole
Setting 27
03-J-4
FSP

Type	Freq	Level	Limit	Margin	Factor	Dist	Condition	Azimuth	Height
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB)	(m)		(°)	(m)
PK	2.3898G	71.84	74.00	-2.16	32.13	3	Vertical	17	1.50
AV	2.3898G	53.03	54.00	-0.97	32.13	3	Vertical	17	1.50
PK	2.4162G	116.19	Inf	-Inf	32.21	3	Vertical	17	1.50
AV	2.4186G	106.47	Inf	-Inf	32.22	3	Vertical	17	1.50
PK	2.4854G	58.27	74.00	-15.73	32.42	3	Vertical	17	1.50
AV	2.4986G	46.71	54.00	-7.29	32.46	3	Vertical	17	1.50

802.11n HT20_Nss1,(MCS0)_2TX

2422MHz_TX

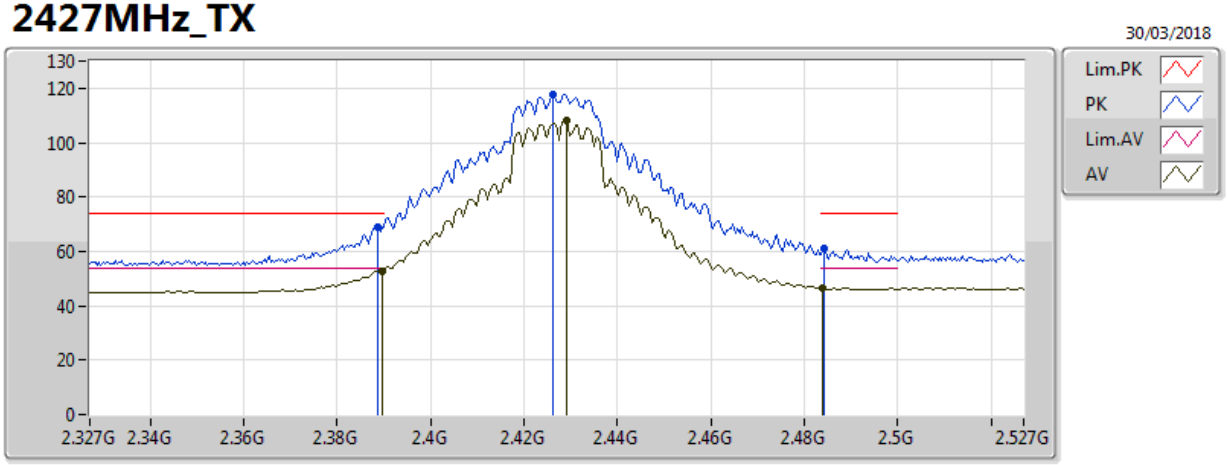


20180329
EUT Y_2TX_Dipole
Setting 2A
03-J-4
FSP

Type	Freq	Level	Limit	Margin	Factor	Dist	Condition	Azimuth	Height
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB)	(m)		(°)	(m)
PK	2.389998G	73.04	74.00	-0.96	32.13	3	Vertical	18	1.84
AV	2.389998G	53.54	54.00	-0.46	32.13	3	Vertical	18	1.84
PK	2.4208G	117.83	Inf	-Inf	32.22	3	Vertical	18	1.84
AV	2.4236G	107.66	Inf	-Inf	32.23	3	Vertical	18	1.84
PK	2.483502G	59.85	74.00	-14.15	32.42	3	Vertical	18	1.84
AV	2.484G	46.61	54.00	-7.39	32.42	3	Vertical	18	1.84

802.11n HT20_Nss1,(MCS0)_2TX

2427MHz_TX

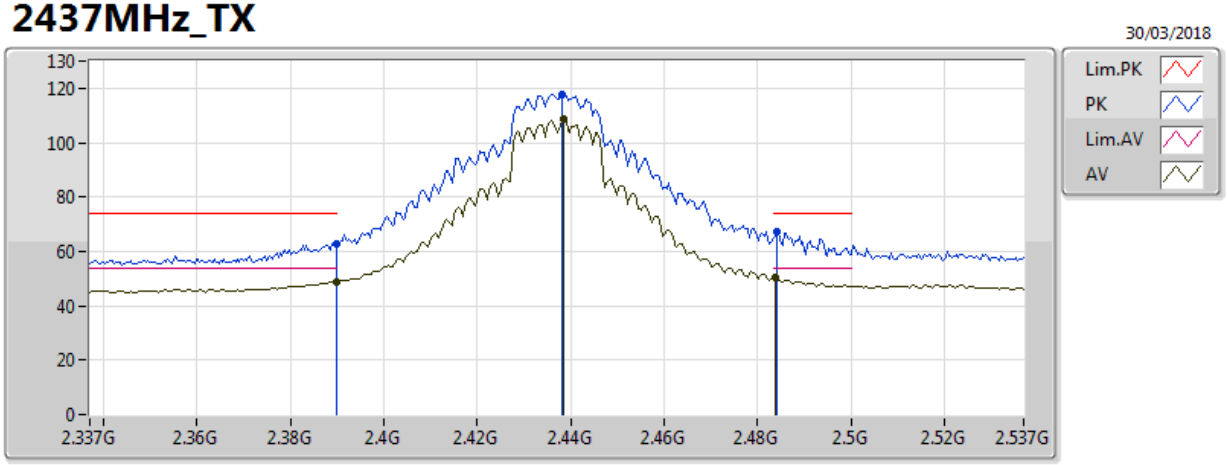


20180329
EUT Y_2TX_Dipole
Setting 2F
03-J-4
FSP

Type	Freq	Level	Limit	Margin	Factor	Dist	Condition	Azimuth	Height
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB)	(m)		(°)	(m)
PK	2.3886G	69.09	74.00	-4.91	32.13	3	Vertical	161	2.96
AV	2.3898G	52.71	54.00	-1.29	32.13	3	Vertical	161	2.96
PK	2.4262G	117.62	Inf	-Inf	32.24	3	Vertical	161	2.96
AV	2.429G	107.92	Inf	-Inf	32.25	3	Vertical	161	2.96
PK	2.4842G	61.02	74.00	-12.98	32.42	3	Vertical	161	2.96
AV	2.4838G	46.71	54.00	-7.29	32.42	3	Vertical	161	2.96

802.11n HT20_Nss1,(MCS0)_2TX

2437MHz_TX

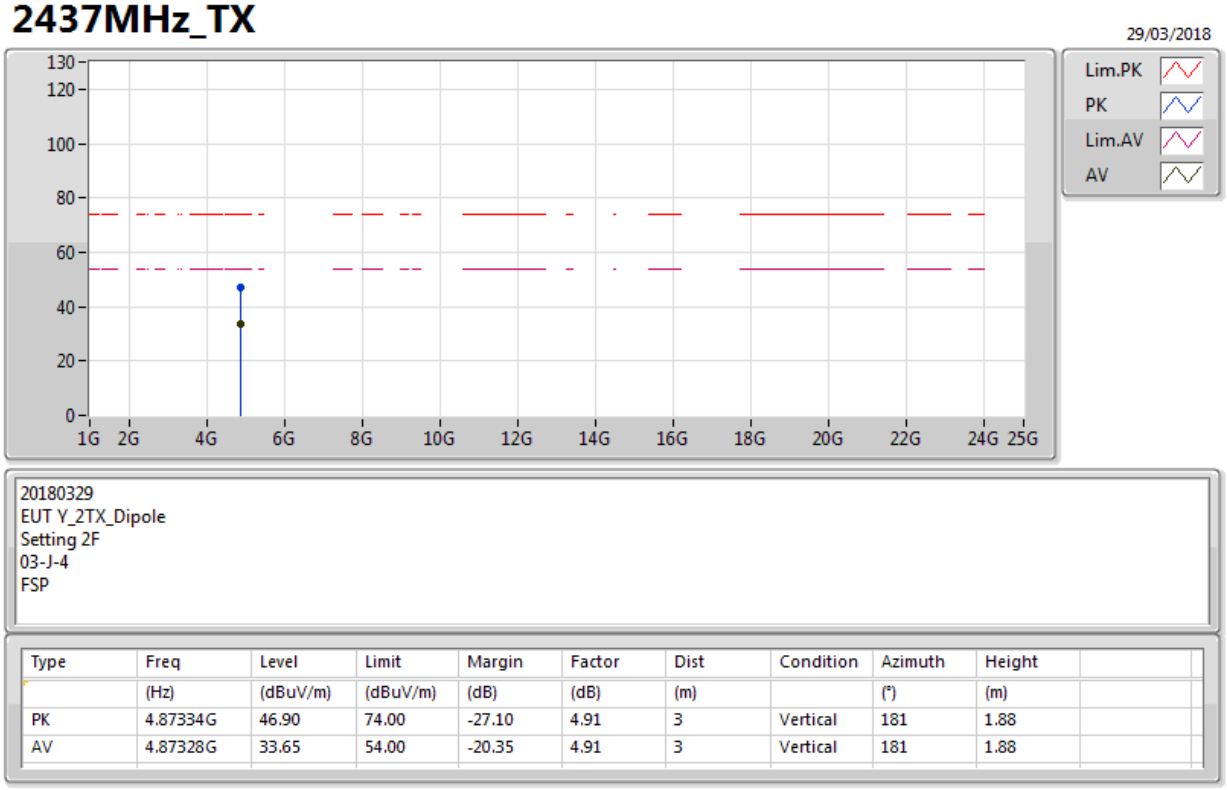


20180329
EUT Y_2TX_Dipole
Setting 2F
03-J-4
FSP

Type	Freq	Level	Limit	Margin	Factor	Dist	Condition	Azimuth	Height
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB)	(m)		(°)	(m)
PK	2.3898G	62.92	74.00	-11.08	32.13	3	Vertical	169	1.87
AV	2.3898G	48.74	54.00	-5.26	32.13	3	Vertical	169	1.87
PK	2.4382G	117.95	Inf	-Inf	32.27	3	Vertical	169	1.87
AV	2.4386G	108.57	Inf	-Inf	32.28	3	Vertical	169	1.87
PK	2.4842G	67.09	74.00	-6.91	32.42	3	Vertical	169	1.87
AV	2.4838G	50.29	54.00	-3.71	32.42	3	Vertical	169	1.87

802.11n HT20_Nss1,(MCS0)_2TX

2437MHz_TX

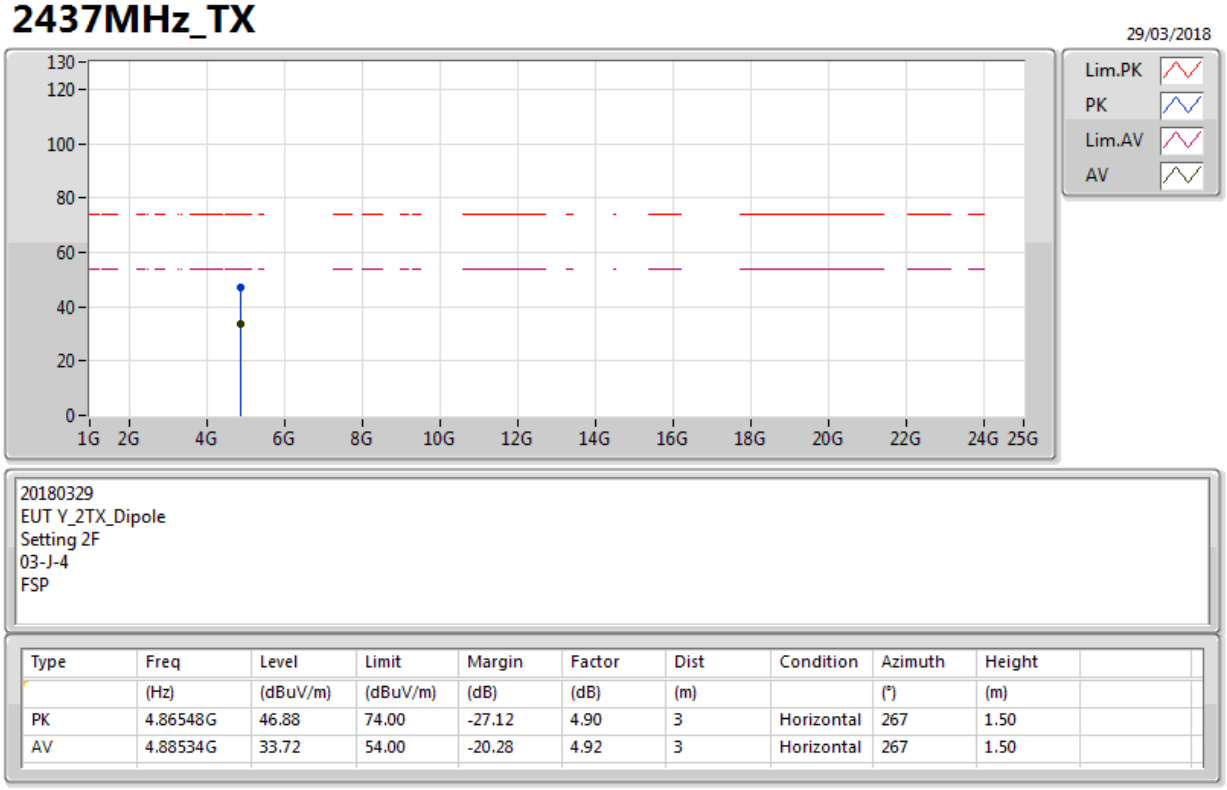


20180329
EUT Y_2TX_Dipole
Setting 2F
03-J-4
FSP

Type	Freq	Level	Limit	Margin	Factor	Dist	Condition	Azimuth	Height
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB)	(m)		(°)	(m)
PK	4.87334G	46.90	74.00	-27.10	4.91	3	Vertical	181	1.88
AV	4.87328G	33.65	54.00	-20.35	4.91	3	Vertical	181	1.88

802.11n HT20_Nss1,(MCS0)_2TX

2437MHz_TX

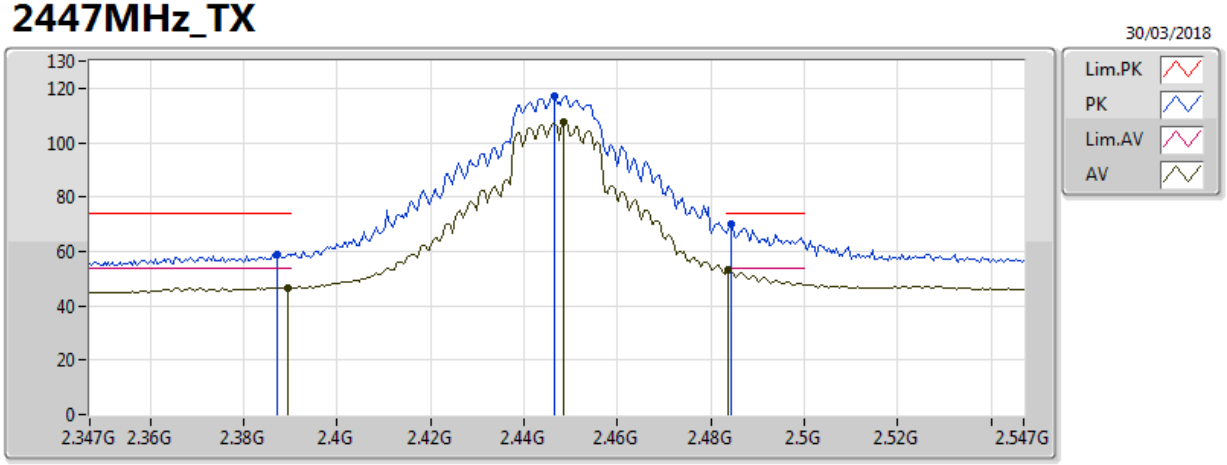


20180329
EUT Y_2TX_Dipole
Setting 2F
03-J-4
FSP

Type	Freq	Level	Limit	Margin	Factor	Dist	Condition	Azimuth	Height
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB)	(m)		(°)	(m)
PK	4.86548G	46.88	74.00	-27.12	4.90	3	Horizontal	267	1.50
AV	4.88534G	33.72	54.00	-20.28	4.92	3	Horizontal	267	1.50

802.11n HT20_Nss1,(MCS0)_2TX

2447MHz_TX

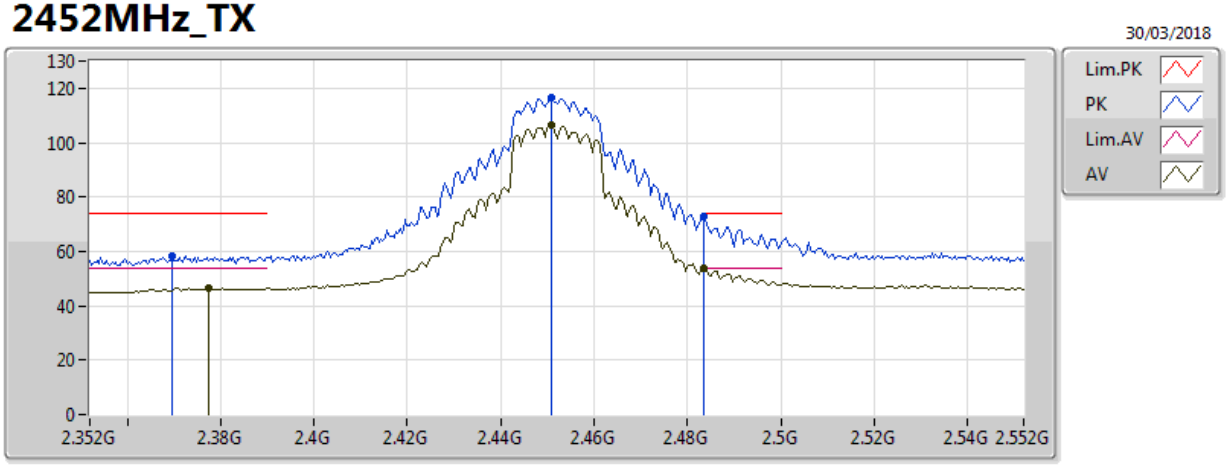


20180329
EUT Y_2TX_Dipole
Setting 2F
03-J-4
FSP

Type	Freq	Level	Limit	Margin	Factor	Dist	Condition	Azimuth	Height
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB)	(m)		(°)	(m)
PK	2.387G	59.11	74.00	-14.89	32.12	3	Vertical	15	1.64
AV	2.3894G	46.56	54.00	-7.44	32.13	3	Vertical	15	1.64
PK	2.4466G	117.35	Inf	-Inf	32.30	3	Vertical	15	1.64
AV	2.4486G	107.55	Inf	-Inf	32.31	3	Vertical	15	1.64
PK	2.4842G	69.83	74.00	-4.17	32.42	3	Vertical	15	1.64
AV	2.4838G	53.50	54.00	-0.50	32.42	3	Vertical	15	1.64

802.11n HT20_Nss1,(MCS0)_2TX

2452MHz_TX

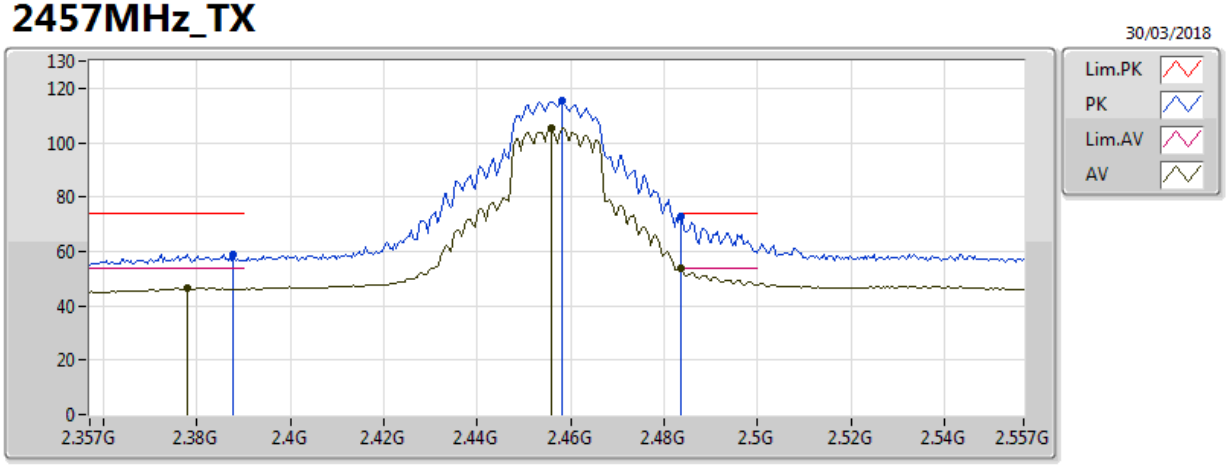


20180329
EUT Y_2TX_Dipole
Setting 29
03-J-4
FSP

Type	Freq	Level	Limit	Margin	Factor	Dist	Condition	Azimuth	Height
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB)	(m)		(°)	(m)
PK	2.3696G	58.31	74.00	-15.69	32.07	3	Vertical	176	1.83
AV	2.3776G	46.45	54.00	-7.55	32.10	3	Vertical	176	1.83
PK	2.4508G	116.55	Inf	-Inf	32.31	3	Vertical	176	1.83
AV	2.4508G	106.74	Inf	-Inf	32.31	3	Vertical	176	1.83
PK	2.483502G	72.68	74.00	-1.32	32.42	3	Vertical	176	1.83
AV	2.483502G	53.81	54.00	-0.19	32.42	3	Vertical	176	1.83

802.11n HT20_Nss1,(MCS0)_2TX

2457MHz_TX

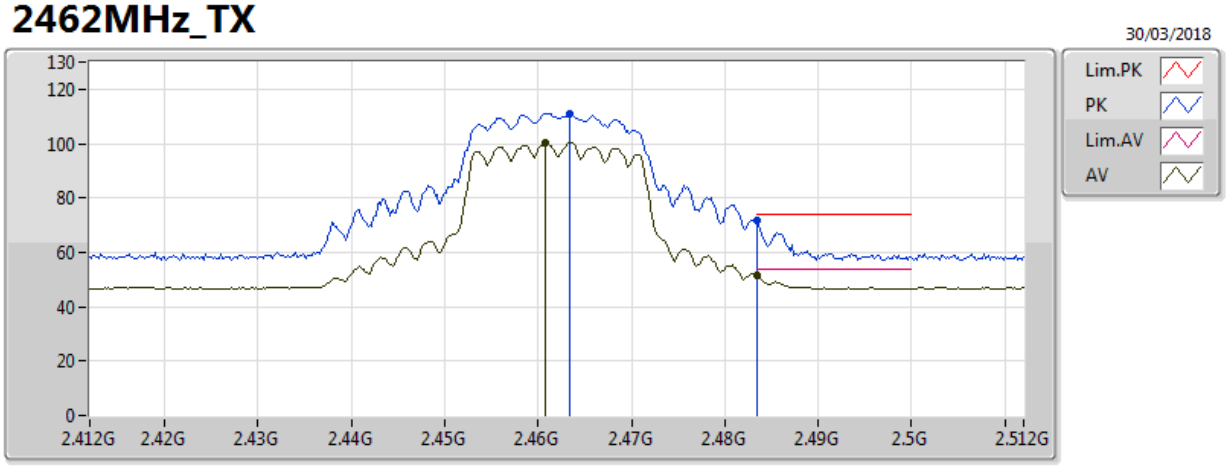


20180329
EUT Y_2TX_Dipole
Setting 27
03-J-4
FSP

Type	Freq	Level	Limit	Margin	Factor	Dist	Condition	Azimuth	Height
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB)	(m)		(°)	(m)
PK	2.3878G	58.80	74.00	-15.20	32.13	3	Vertical	176	1.78
AV	2.3778G	46.76	54.00	-7.24	32.10	3	Vertical	176	1.78
PK	2.4582G	115.26	Inf	-Inf	32.33	3	Vertical	176	1.78
AV	2.4558G	105.40	Inf	-Inf	32.33	3	Vertical	176	1.78
PK	2.483502G	72.96	74.00	-1.04	32.42	3	Vertical	176	1.78
AV	2.483502G	53.58	54.00	-0.42	32.42	3	Vertical	176	1.78

802.11n HT20_Nss1,(MCS0)_2TX

2462MHz_TX

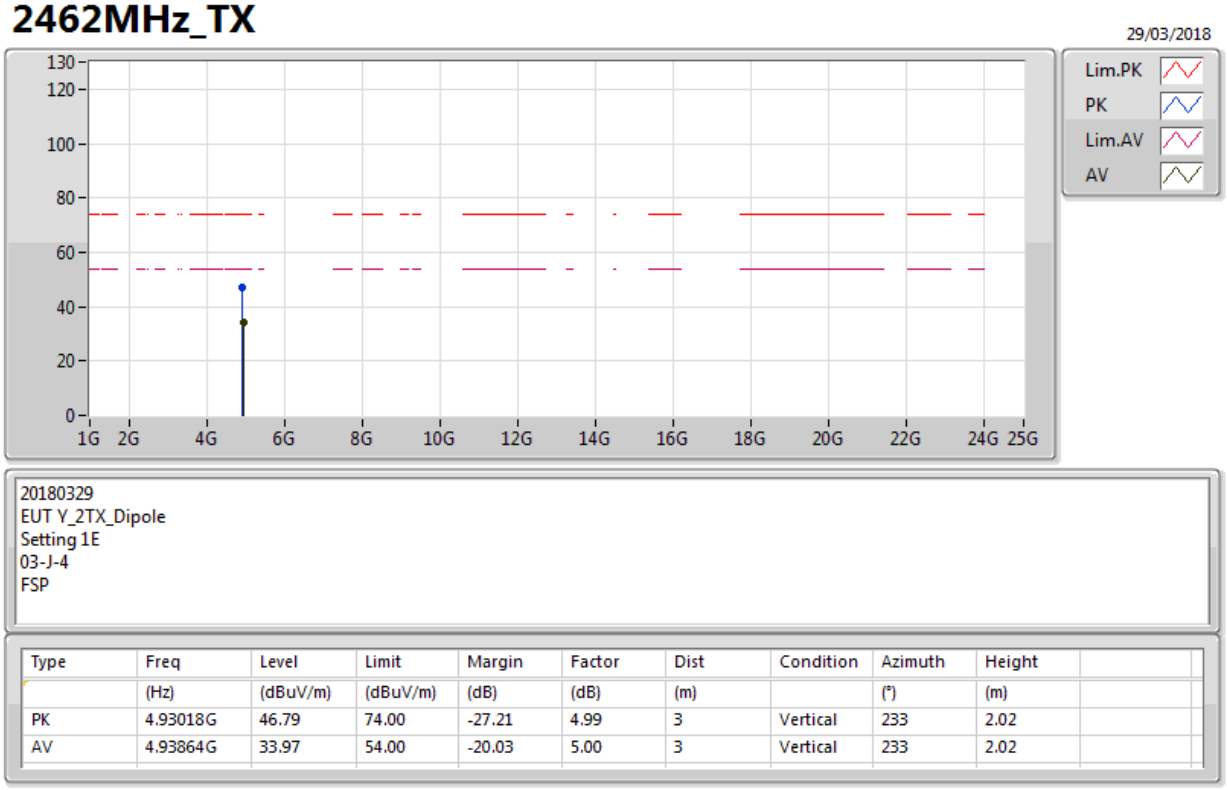


20180329
EUT Y_2TX_Dipole
Setting 1E
03-J-4
FSP

Type	Freq	Level	Limit	Margin	Factor	Dist	Condition	Azimuth	Height
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB)	(m)		(°)	(m)
PK	2.4634G	111.15	Inf	-Inf	32.35	3	Vertical	0	1.65
AV	2.4608G	100.41	Inf	-Inf	32.34	3	Vertical	0	1.65
PK	2.483502G	71.63	74.00	-2.37	32.42	3	Vertical	0	1.65
AV	2.483502G	51.57	54.00	-2.43	32.42	3	Vertical	0	1.65

802.11n HT20_Nss1,(MCS0)_2TX

2462MHz_TX

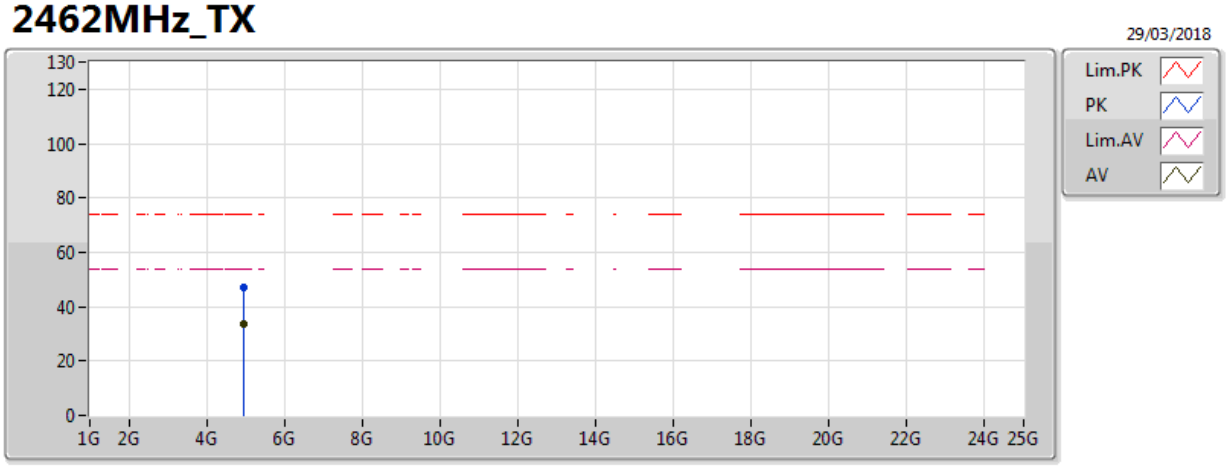


20180329
EUT Y_2TX_Dipole
Setting 1E
03-J-4
FSP

Type	Freq	Level	Limit	Margin	Factor	Dist	Condition	Azimuth	Height
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB)	(m)		(°)	(m)
PK	4.93018G	46.79	74.00	-27.21	4.99	3	Vertical	233	2.02
AV	4.93864G	33.97	54.00	-20.03	5.00	3	Vertical	233	2.02

802.11n HT20_Nss1,(MCS0)_2TX

2462MHz_TX

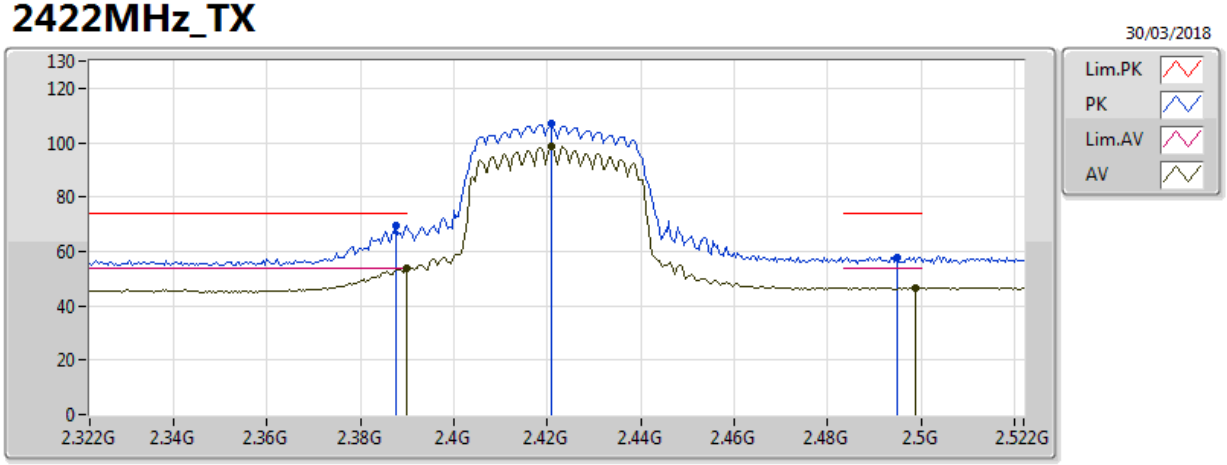


20180329
EUT Y_2TX_Dipole
Setting 1E
03-J-4
FSP

Type	Freq	Level	Limit	Margin	Factor	Dist	Condition	Azimuth	Height
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB)	(m)		(°)	(m)
PK	4.93846G	47.33	74.00	-26.67	5.00	3	Horizontal	111	1.59
AV	4.93888G	33.87	54.00	-20.13	5.00	3	Horizontal	111	1.59

802.11n HT40_Nss1,(MCS0)_2TX

2422MHz_TX

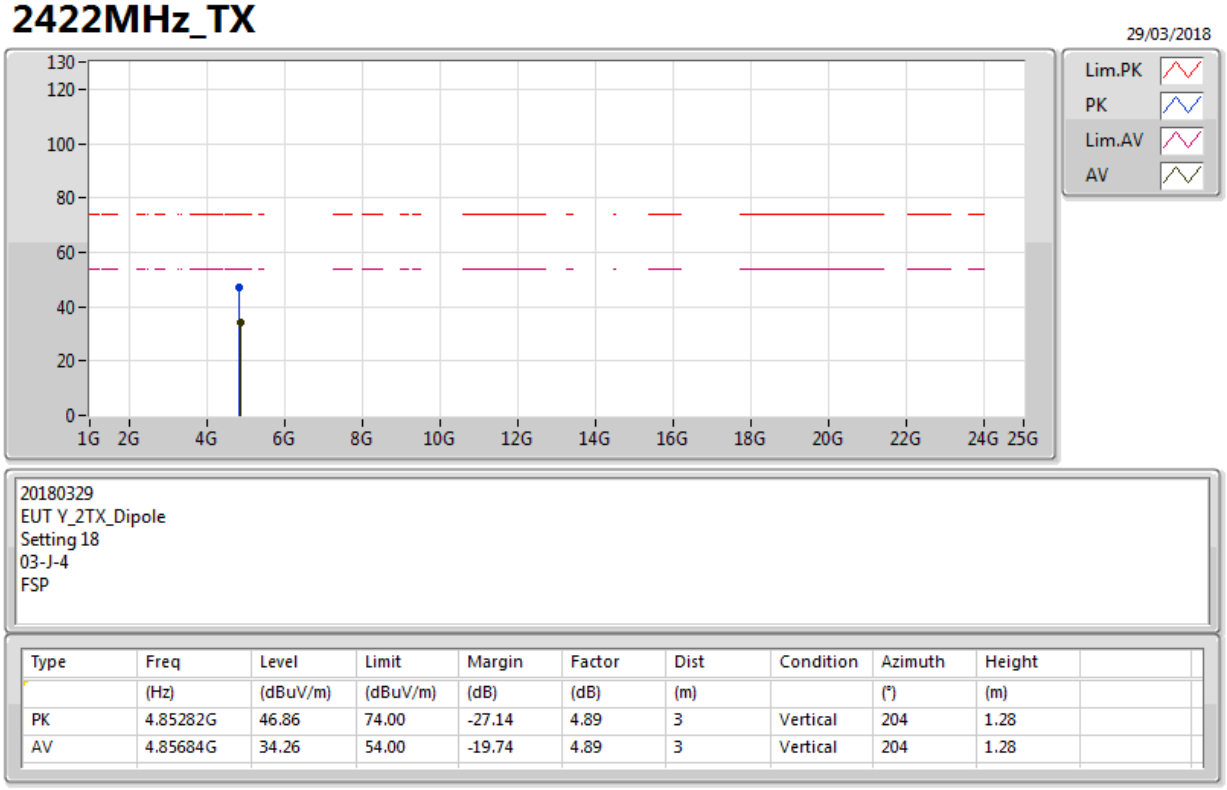


20180329
EUT Y_2TX_Dipole
Setting 18
03-J-4
FSP

Type	Freq	Level	Limit	Margin	Factor	Dist	Condition	Azimuth	Height
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB)	(m)		(°)	(m)
PK	2.3876G	69.62	74.00	-4.38	32.12	3	Vertical	0	1.48
AV	2.389998G	53.98	54.00	-0.02	32.13	3	Vertical	0	1.48
PK	2.4208G	106.87	Inf	-Inf	32.22	3	Vertical	0	1.48
AV	2.4208G	98.79	Inf	-Inf	32.22	3	Vertical	0	1.48
PK	2.4948G	57.94	74.00	-16.06	32.44	3	Vertical	0	1.48
AV	2.4988G	46.73	54.00	-7.27	32.46	3	Vertical	0	1.48

802.11n HT40_Nss1,(MCS0)_2TX

2422MHz_TX

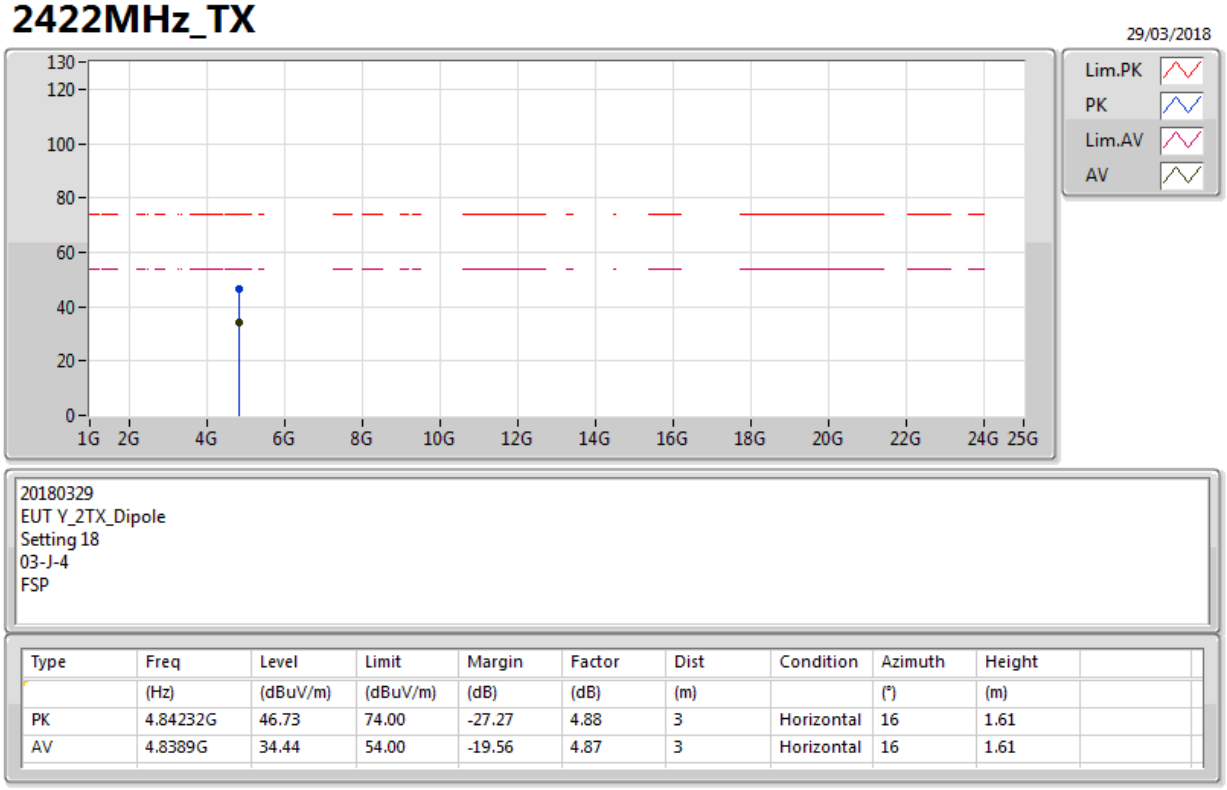


20180329
EUT Y_2TX_Dipole
Setting 18
03-J-4
FSP

Type	Freq	Level	Limit	Margin	Factor	Dist	Condition	Azimuth	Height
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB)	(m)		(°)	(m)
PK	4.85282G	46.86	74.00	-27.14	4.89	3	Vertical	204	1.28
AV	4.85684G	34.26	54.00	-19.74	4.89	3	Vertical	204	1.28

802.11n HT40_Nss1,(MCS0)_2TX

2422MHz_TX

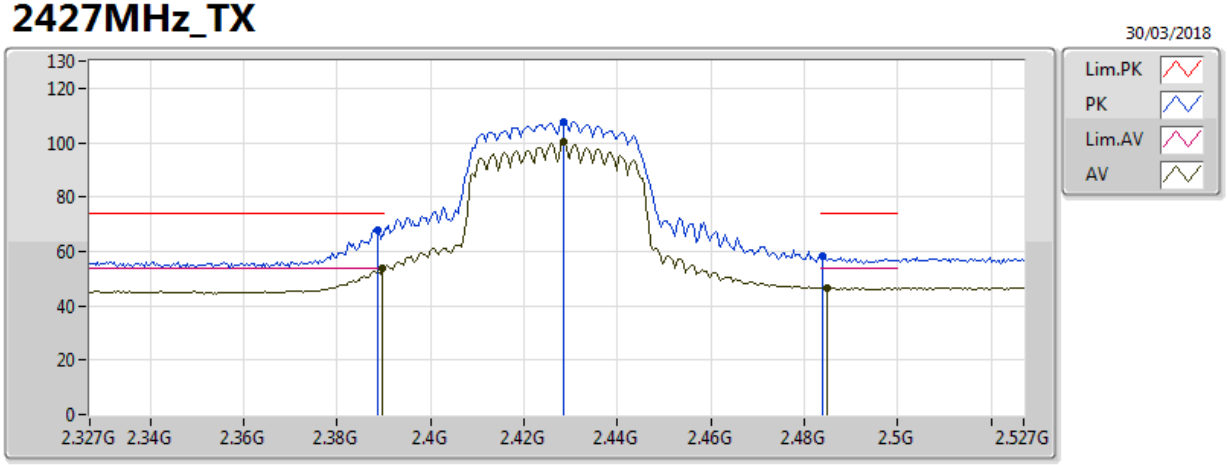


20180329
EUT Y_2TX_Dipole
Setting 18
03-J-4
FSP

Type	Freq	Level	Limit	Margin	Factor	Dist	Condition	Azimuth	Height
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB)	(m)		(°)	(m)
PK	4.84232G	46.73	74.00	-27.27	4.88	3	Horizontal	16	1.61
AV	4.8389G	34.44	54.00	-19.56	4.87	3	Horizontal	16	1.61

802.11n HT40_Nss1,(MCS0)_2TX

2427MHz_TX

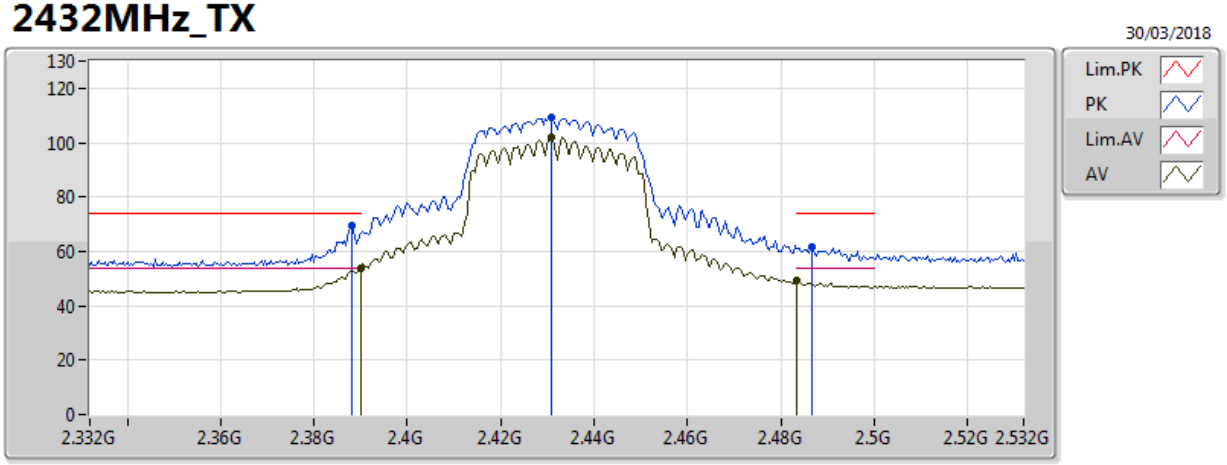


20180329
EUT Y_2TX_Dipole
Setting 1A
03-J-4
FSP

Type	Freq	Level	Limit	Margin	Factor	Dist	Condition	Azimuth	Height
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB)	(m)		(°)	(m)
PK	2.3886G	67.54	74.00	-6.46	32.13	3	Vertical	6	2.95
AV	2.3898G	53.88	54.00	-0.12	32.13	3	Vertical	6	2.95
PK	2.4286G	107.77	Inf	-Inf	32.25	3	Vertical	6	2.95
AV	2.4286G	100.09	Inf	-Inf	32.25	3	Vertical	6	2.95
PK	2.4838G	58.28	74.00	-15.72	32.42	3	Vertical	6	2.95
AV	2.485G	46.57	54.00	-7.43	32.42	3	Vertical	6	2.95

802.11n HT40_Nss1,(MCS0)_2TX

2432MHz_TX

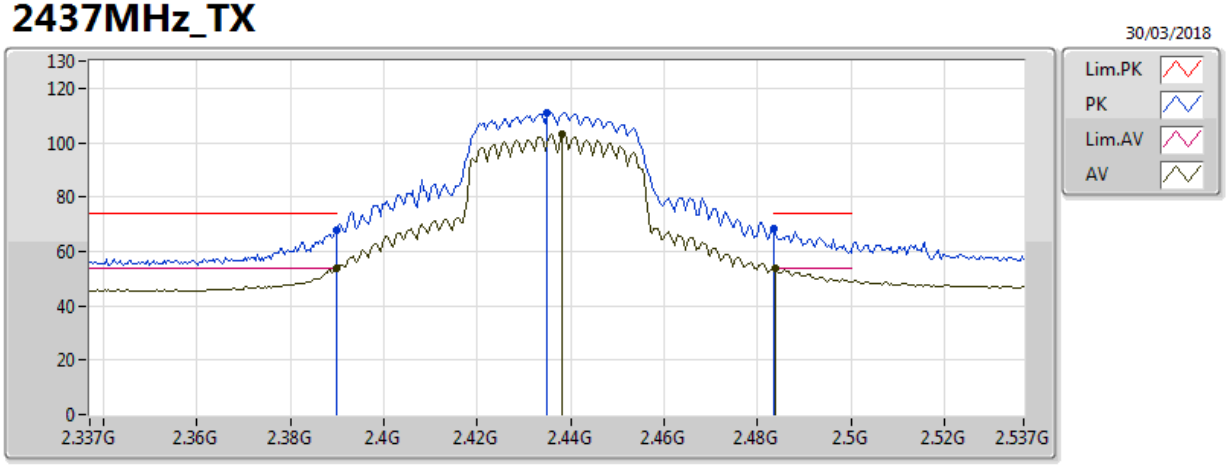


20180329
EUT Y_2TX_Dipole
Setting 1D
03-J-4
FSP

Type	Freq	Level	Limit	Margin	Factor	Dist	Condition	Azimuth	Height
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB)	(m)		(°)	(m)
PK	2.388G	69.70	74.00	-4.30	32.13	3	Vertical	3	2.95
AV	2.389998G	53.86	54.00	-0.14	32.13	3	Vertical	3	2.95
PK	2.4308G	108.99	Inf	-Inf	32.25	3	Vertical	3	2.95
AV	2.4308G	101.73	Inf	-Inf	32.25	3	Vertical	3	2.95
PK	2.4868G	61.48	74.00	-12.52	32.42	3	Vertical	3	2.95
AV	2.483502G	49.17	54.00	-4.83	32.42	3	Vertical	3	2.95

802.11n HT40_Nss1,(MCS0)_2TX

2437MHz_TX

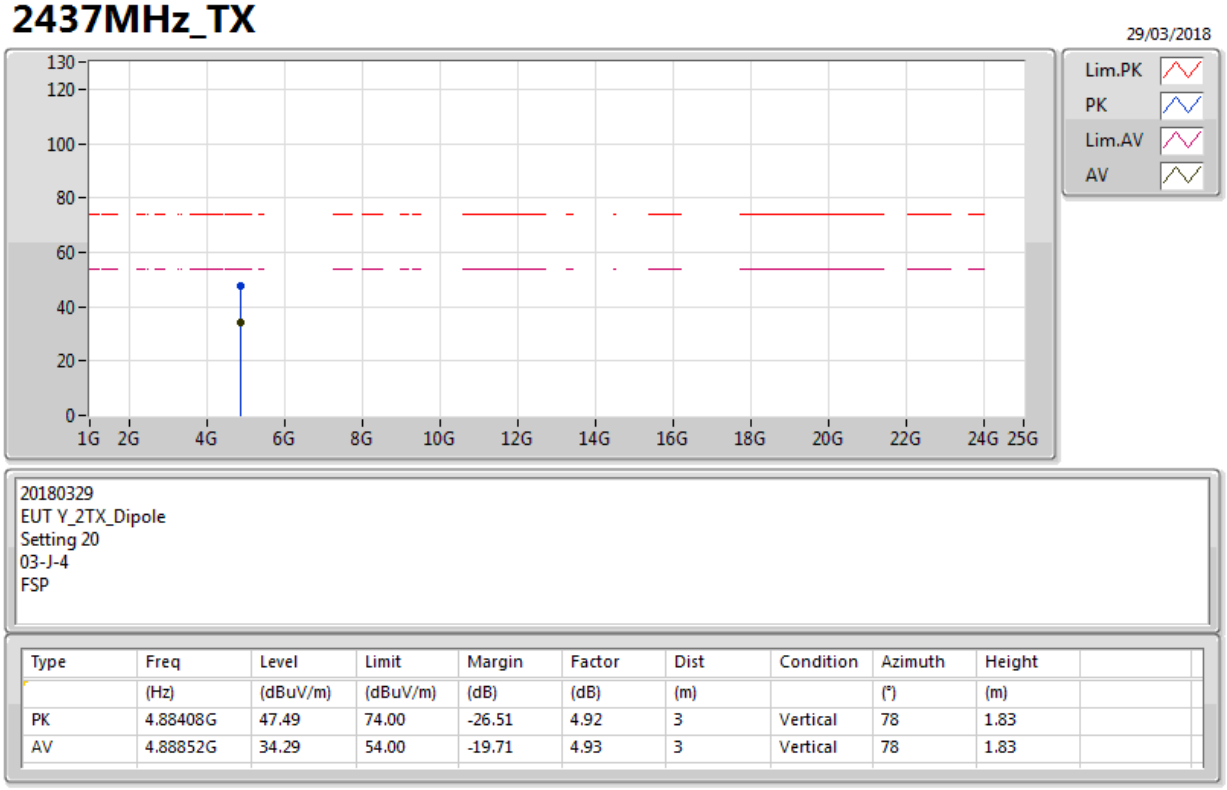


20180329
EUT Y_2TX_Dipole
Setting 20
03-J-4
FSP

Type	Freq	Level	Limit	Margin	Factor	Dist	Condition	Azimuth	Height
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB)	(m)		(°)	(m)
PK	2.3898G	67.53	74.00	-6.47	32.13	3	Vertical	171	1.83
AV	2.3898G	53.62	54.00	-0.38	32.13	3	Vertical	171	1.83
PK	2.435G	111.02	Inf	-Inf	32.27	3	Vertical	171	1.83
AV	2.4382G	103.36	Inf	-Inf	32.27	3	Vertical	171	1.83
PK	2.483502G	68.52	74.00	-5.48	32.42	3	Vertical	171	1.83
AV	2.4838G	53.54	54.00	-0.46	32.42	3	Vertical	171	1.83

802.11n HT40_Nss1,(MCS0)_2TX

2437MHz_TX

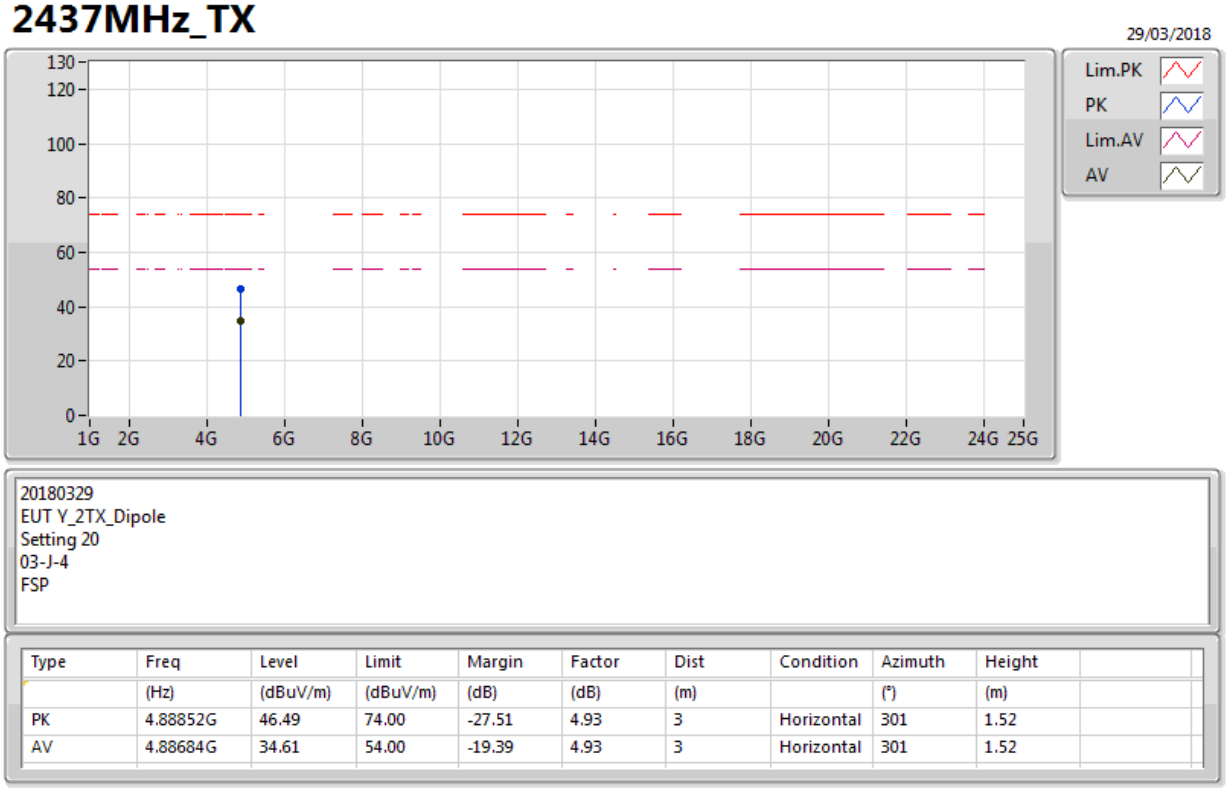


20180329
EUT Y_2TX_Dipole
Setting 20
03-J-4
FSP

Type	Freq	Level	Limit	Margin	Factor	Dist	Condition	Azimuth	Height
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB)	(m)		(°)	(m)
PK	4.88408G	47.49	74.00	-26.51	4.92	3	Vertical	78	1.83
AV	4.88852G	34.29	54.00	-19.71	4.93	3	Vertical	78	1.83

802.11n HT40_Nss1,(MCS0)_2TX

2437MHz_TX

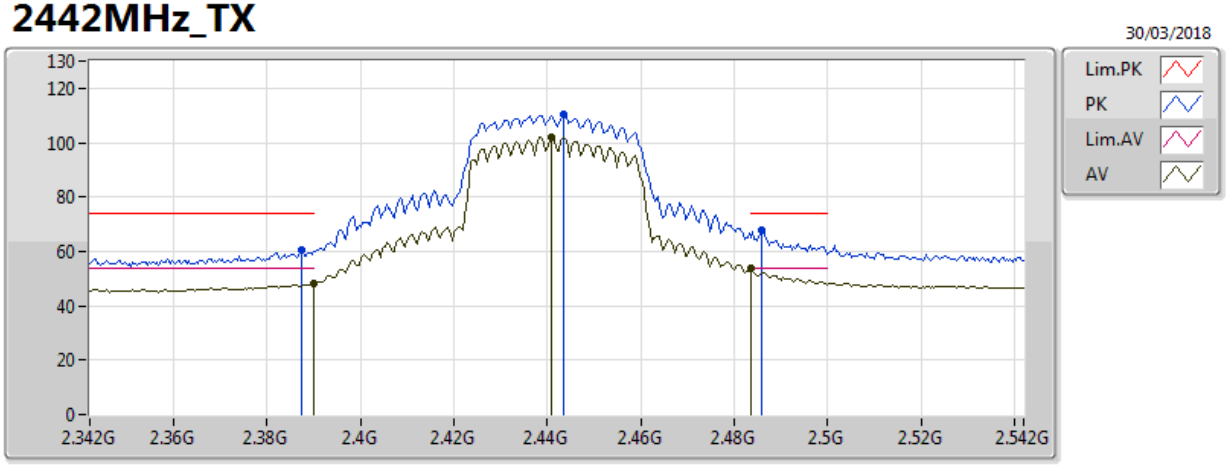


20180329
EUT Y_2TX_Dipole
Setting 20
03-J-4
FSP

Type	Freq	Level	Limit	Margin	Factor	Dist	Condition	Azimuth	Height
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB)	(m)		(°)	(m)
PK	4.88852G	46.49	74.00	-27.51	4.93	3	Horizontal	301	1.52
AV	4.88684G	34.61	54.00	-19.39	4.93	3	Horizontal	301	1.52

802.11n HT40_Nss1,(MCS0)_2TX

2442MHz_TX

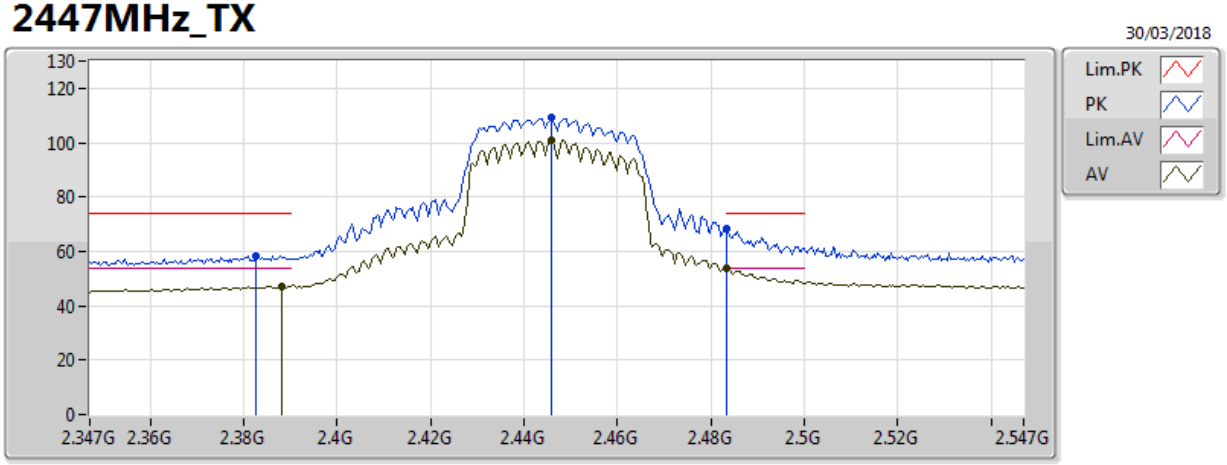


20180329
EUT Y_2TX_Dipole
Setting 1E
03-J-4
FSP

Type	Freq	Level	Limit	Margin	Factor	Dist	Condition	Azimuth	Height
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB)	(m)		(°)	(m)
PK	2.3872G	60.69	74.00	-13.31	32.12	3	Vertical	163	1.81
AV	2.389998G	48.33	54.00	-5.67	32.13	3	Vertical	163	1.81
PK	2.4436G	110.15	Inf	-Inf	32.29	3	Vertical	163	1.81
AV	2.4408G	102.06	Inf	-Inf	32.28	3	Vertical	163	1.81
PK	2.486G	67.96	74.00	-6.04	32.42	3	Vertical	163	1.81
AV	2.483502G	53.77	54.00	-0.23	32.42	3	Vertical	163	1.81

802.11n HT40_Nss1,(MCS0)_2TX

2447MHz_TX

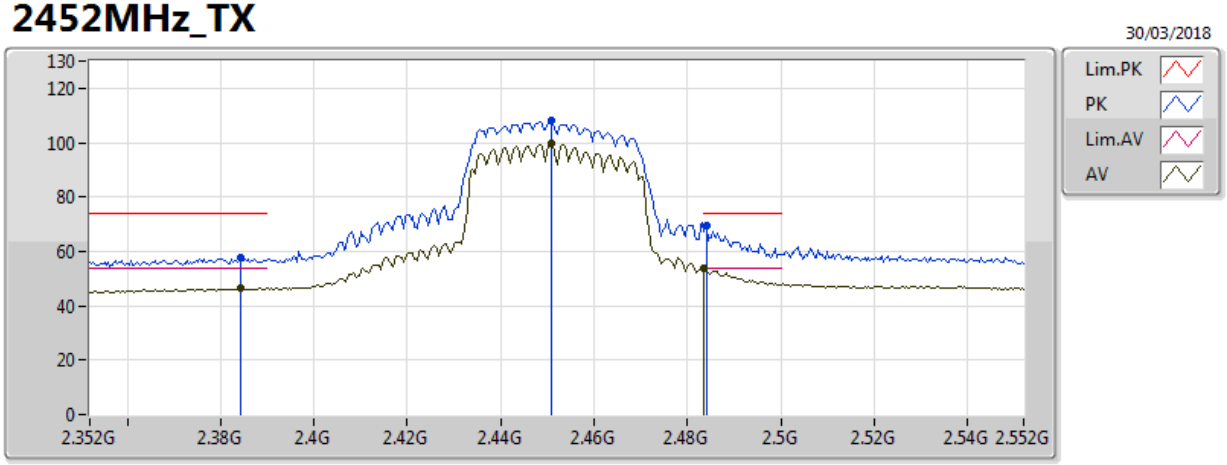


20180329
EUT Y_2TX_Dipole
Setting 1C
03-J-4
FSP

Type	Freq	Level	Limit	Margin	Factor	Dist	Condition	Azimuth	Height
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB)	(m)		(°)	(m)
PK	2.3826G	58.39	74.00	-15.61	32.11	3	Vertical	170	1.84
AV	2.3882G	47.02	54.00	-6.98	32.12	3	Vertical	170	1.84
PK	2.4458G	109.14	Inf	-Inf	32.30	3	Vertical	170	1.84
AV	2.4458G	101.10	Inf	-Inf	32.30	3	Vertical	170	1.84
PK	2.483502G	68.45	74.00	-5.55	32.41	3	Vertical	170	1.84
AV	2.483502G	53.98	54.00	-0.02	32.41	3	Vertical	170	1.84

802.11n HT40_Nss1,(MCS0)_2TX

2452MHz_TX

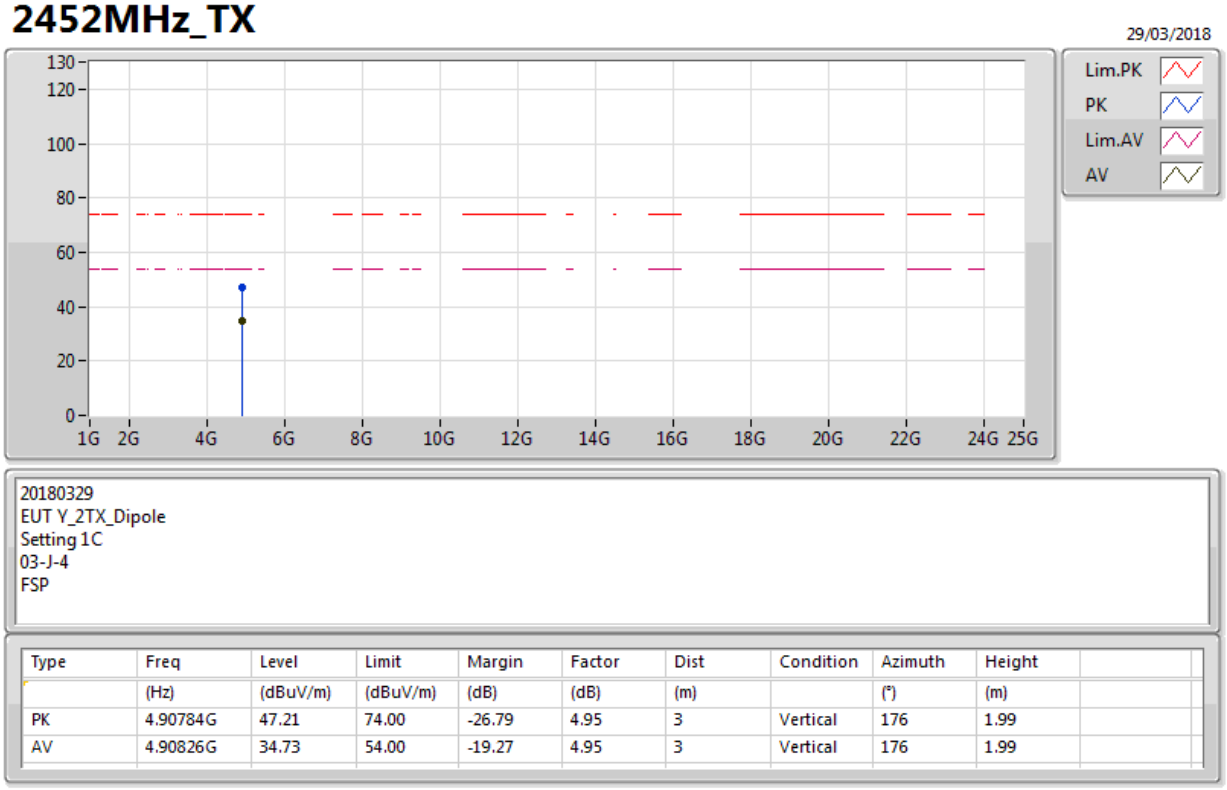


20180125
EUT Y_2TX_Dipole
Setting 1C
03-C-5
FSP

Type	Freq	Level	Limit	Margin	Factor	Dist	Condition	Azimuth	Height
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB)	(m)		(°)	(m)
PK	2.3844G	57.55	74.00	-16.45	32.11	3	Vertical	175	1.82
AV	2.3844G	46.30	54.00	-7.70	32.11	3	Vertical	175	1.82
PK	2.4508G	108.11	Inf	-Inf	32.31	3	Vertical	175	1.82
AV	2.4508G	99.74	Inf	-Inf	32.31	3	Vertical	175	1.82
PK	2.484G	69.68	74.00	-4.32	32.42	3	Vertical	175	1.82
AV	2.483502G	53.75	54.00	-0.25	32.42	3	Vertical	175	1.82

802.11n HT40_Nss1,(MCS0)_2TX

2452MHz_TX

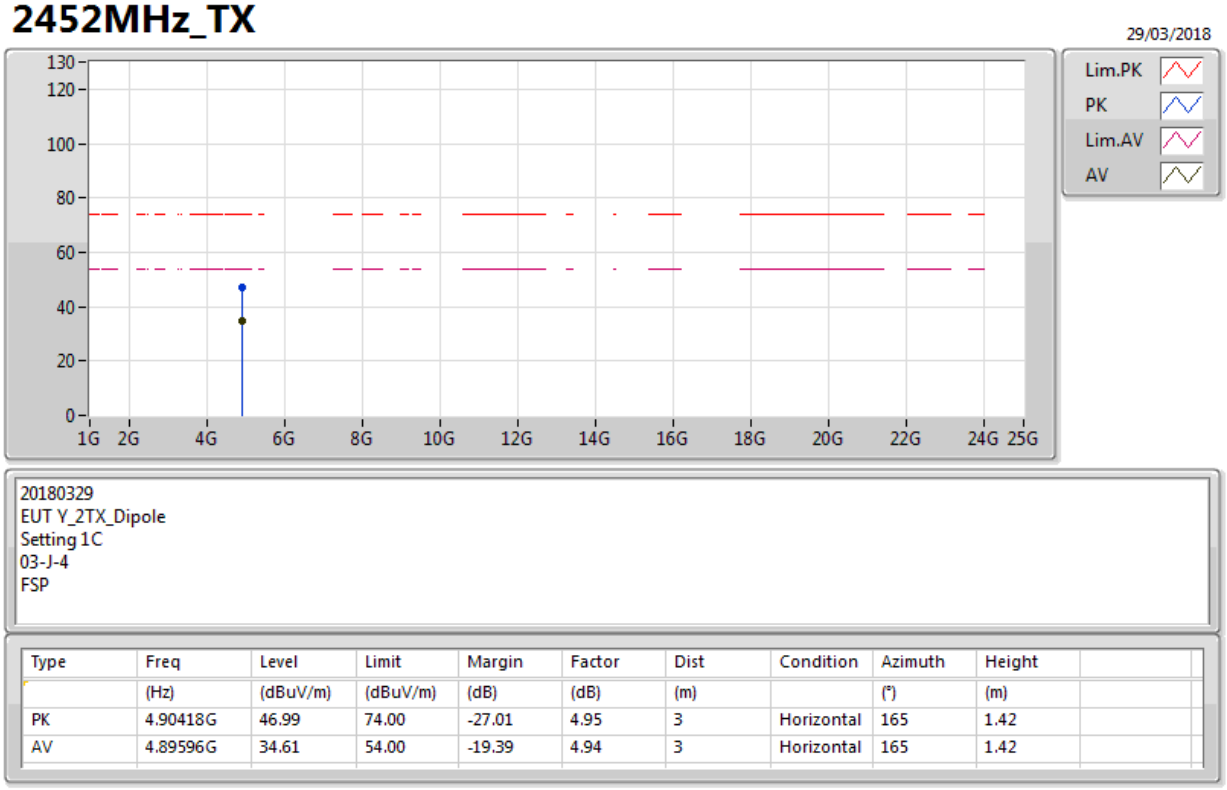


20180329
EUT Y_2TX_Dipole
Setting 1C
03-J-4
FSP

Type	Freq	Level	Limit	Margin	Factor	Dist	Condition	Azimuth	Height
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB)	(m)		(°)	(m)
PK	4.90784G	47.21	74.00	-26.79	4.95	3	Vertical	176	1.99
AV	4.90826G	34.73	54.00	-19.27	4.95	3	Vertical	176	1.99

802.11n HT40_Nss1,(MCS0)_2TX

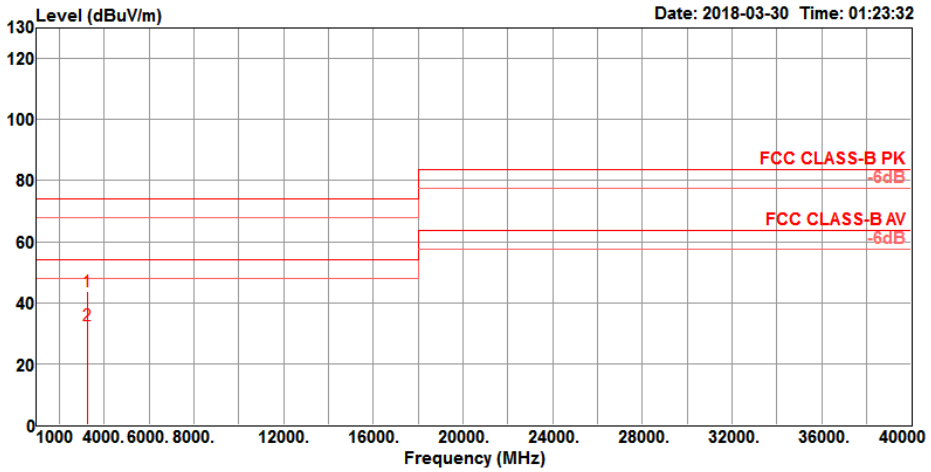
2452MHz_TX



20180329
EUT Y_2TX_Dipole
Setting 1C
03-J-4
FSP

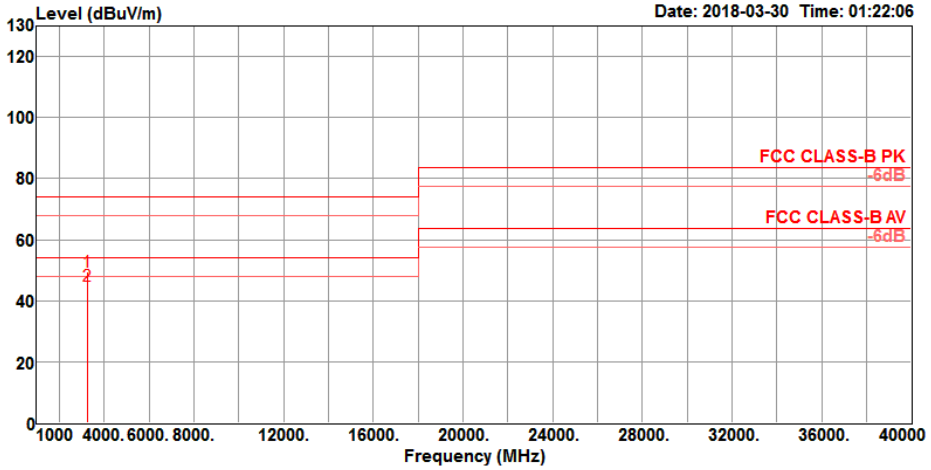
Type	Freq	Level	Limit	Margin	Factor	Dist	Condition	Azimuth	Height
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB)	(m)		(°)	(m)
PK	4.90418G	46.99	74.00	-27.01	4.95	3	Horizontal	165	1.42
AV	4.89596G	34.61	54.00	-19.39	4.94	3	Horizontal	165	1.42

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	3236.03	43.63	74.00	-30.37	41.74	5.80	28.75	32.66	160	269	Peak	HORIZONTAL
2	3236.04	32.79	54.00	-21.21	30.90	5.80	28.75	32.66	160	269	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	3235.99	49.54	74.00	-24.46	47.65	5.80	28.75	32.66	177	150	Peak	VERTICAL
2	3236.00	44.78	54.00	-9.22	42.89	5.80	28.75	32.66	177	150	Average	VERTICAL