



FCC RADIO TEST REPORT

FCC ID	:	PPQ-V523
Equipment	и и	Wi-Fi Indoor Camera
Brand Name	n s	ALARM.COM
Model Name	ż	ADC-V523
Applicant		LITE-ON Technology Corp. Bldg. C, 90, Chien 1 Rd., Chung-Ho, New Taipei City, 23585 Taiwan
Manufacturer	:	Lite-On Network Communication (Dongguan) Limited 30#Keji Rd.,Yin Hu Industrial Area,Qingxi Town,DongGuan City,Guangdong,China
Standard		47 CFR FCC Part 15.247

The product was received on Dec. 17, 2018, and testing was started from May 13, 2019 and completed on Aug. 16, 2019. We, SPORTON INTERNATIONAL INC. EMC & Wireless Communications Laboratory, would like to declare that the tested sample has been evaluated in accordance with the procedures given in ANSI C63.10-2013 and shown compliance with the applicable technical standards.

The report must not be used by the client to claim product certification, approval, or endorsement by TAF or any agency of government.

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

Approved by: Sam Chen

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



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Photographs of EUT v01



History of this test report

Report No.	Version	Description	Issued Date
FR8D1231AA	01	Initial issue of report	Sep. 04, 2019



Summary of Test Result

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

Declaration of Conformity:

The test results with all measurement uncertainty excluded are presented in accordance with the regulation limits or requirements declared by manufacturers.

Comments and Explanations:

The declared of product specification for EUT presented in the report are provided by the manufacturer, and the manufacturer takes all the responsibilities for the accuracy of product specification.

Reviewed by: Sam Chen

Report Producer: Vicky Huang



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

		Por	t			Antenna		Gain (dBi)		
Ant.	2.4 GHz	5 GHz	Bluetooth	Brand	Model Name	Туре	Connector	2.4 GHz	5 GHz	Bluetooth
1	1	1	-	LYNwave	ALX18F-222A A4-00	Dipole Antenna	I-PEX	4.9	5.4	-
2	2	2	1	LYNwave	ALX18F-222A A5-00	Dipole Antenna	I-PEX	5.2	4.7	5.2

Note: The above information was declared by manufacturer.

For 2.4GHz WLAN function

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

Ant. 1(Port 1) and Ant. 2(Port 2) could transmit/receive simultaneously.

For 5GHz WLAN function

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

Ant. 1(Port 1) and Ant. 2(Port 2) could transmit/receive simultaneously.

For Bluetooth function (1TX, 1RX):

Only Ant. 2(Port 1) can be used as transmitting/receiving functions.



1.1.3 Mode Test Duty Cycle

Mode	DC	DCF(dB)	T(s)	VBW(Hz) ≥ 1/T
802.11b	0.994	0.03	n/a (DC>=0.98)	n/a (DC>=0.98)
802.11g	0.963	0.16	2.065m	1k
802.11n HT20	0.969	0.14	1.921m	1k
802.11n HT40	0.929	0.32	945u	3k

Note:

• DC is Duty Cycle.

DCF is Duty Cycle Factor.

1.1.4 EUT Operational Condition

EUT Power Type	From Power Adapter					
Beamforming Function	☐ With beamforming					
Function	Point-to-multipoint Depint-to-point					
Test Software Version	Tera Term version 4.75					

Note: The above information was declared by manufacturer.



1.2 Applicable 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 v05r02
- FCC KDB 662911 D01 v02r01
- FCC KDB 414788 D01 v01r01

1.3 Testing Location Information

	Testing Location						
	HWA YA	ADD	:	No. 52, Huaya 1st Rd., Guishan Dist., Taoyuan City, Taiwan (R.O.C.)			
		TEL	:	886-3-327-3456 FAX : 886-3-327-0973			
\boxtimes	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	Benson Su	24.6~26.5°C / 63~65%	May 14, 2019~Aug. 16, 2019
Radiated (Below 1GHz)	03CH06-CB	KJ Chang	24.3~26°C / 60~63%	Aug. 05, 2019~Aug. 06, 2019
Radiated (Above 1GHz)	03CH06-CB	Mason Chen	25.4~26°C / 63~66%	May 13, 2019~Aug. 16, 2019
AC Conduction	CO01-CB	Deven Huang	24~25°C / 63~65%	Aug. 15, 2019

Test site Designation No. TW0006 with FCC.

Test site registered number IC 4086B with Industry Canada.

1.4 Measurement Uncertainty

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

Test Items	Uncertainty	Remark
Conducted Emission (150kHz ~ 30MHz)	2.0 dB	Confidence levels of 95%
Radiated Emission (30MHz ~ 1,000MHz)	4.3 dB	Confidence levels of 95%
Radiated Emission (1GHz ~ 18GHz)	4.3 dB	Confidence levels of 95%
Radiated Emission (18GHz ~ 40GHz)	5.1 dB	Confidence levels of 95%
Conducted Emission	2.4 dB	Confidence levels of 95%
Output Power Measurement	1.5 dB	Confidence levels of 95%
Power Density Measurement	2.4 dB	Confidence levels of 95%
Bandwidth Measurement	2%	Confidence levels of 95%



2 Test Configuration of EUT

2.1 Test Channel Mode

Mode	Power Setting
802.11b_Nss1,(1Mbps)_2TX	-
2412MHz	36/37
2437MHz	37/38
2462MHz	39/39
802.11g_Nss1,(6Mbps)_2TX	-
2412MHz	42/43
2437MHz	49/50
2462MHz	43/43
802.11n HT20_Nss1,(MCS0)_2TX	-
2412MHz	40/42
2417MHz	47/48
2437MHz	48/50
2457MHz	48/49
2462MHz	42/42
802.11n HT40_Nss1,(MCS0)_2TX	-
2422MHz	35/36
2427MHz	39/40
2437MHz	42/43
2452MHz	37/38



2.2 The Worst Case Measurement Configuration

The Worst Case Mode for Following Conformance Tests			
Tests Item	Tests Item AC power-line conducted emissions		
Condition	AC power-line conducted measurement for line and neutral		
Operating Mode Normal Link			
1 EUT+Adapter+LAN mode			
2 EUT+Adapter+WLAN-2.4GHz mode			
3 EUT+Adapter+WLAN-5GHz mode			
For operating mode 1 is the worst case and it was record in this test report.			

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

Th	The Worst Case Mode for Following Conformance Tests			
Tests Item Emissions in Restricted Frequency Bands				
Test Condition	Radiated measurement If EUT consist of multiple antenna assembly (multiple antenna are used in EUT regardless of spatial multiplexing MIMO configuration), the radiated test should be performed with highest antenna gain of each antenna type.			
Operating Mode < 1GHz	Normal Link			
The EUT was performed at X axis, Y axis and Z axis position. The worst case was found at Y axis, so selected to perform test and its test result was written in the report.				
1	EUT at Y-axis+Adapter+LAN mode			
2	EUT at Y-axis+Adapter+WLAN-2.4GHz mode			
3	EUT at Y-axis+Adapter+WLAN-5GHz mode			
For operating mode 1 is the worst case and it was record in this test report.				
Operating Mode > 1GHz CTX				
The EUT was performed at X axis, Y axis and Z axis position. The worst case was found at Y axis, so it selected to perform test and its test result was written in the report.				
1 EUT at Y-axis				



2.3 EUT Operation during Test

For CTX Mode:

The EUT was programmed to be in continuously transmitting mode.

For Normal Link:

During the test, the EUT operation to normal function.

2.4 Accessories

Accessories			
Equipment Name	Brand Name	Model Name	Rating
Adapter	APD	WB-12G12FU	INPUT: 100-240V~50-60Hz, 0.3A Max. OUTPUT: 12V, 1A
Other			
Wall-mounted rack*1			

2.5 Support Equipment

For AC Conduction:

	Support Equipment					
No.	Equipment	Brand Name	Model Name	FCC ID		
А	Micro SD Card	Transcend	TS16GUSDHC10	N/A		
В	AP Router	ASUS	RP-N53	MSQ-RPN53		
С	LAN NB	DELL	E6430	N/A		
D	Smart phone	Samsung	Galaxy J2	N/A		

For Radiated (below 1GHz):

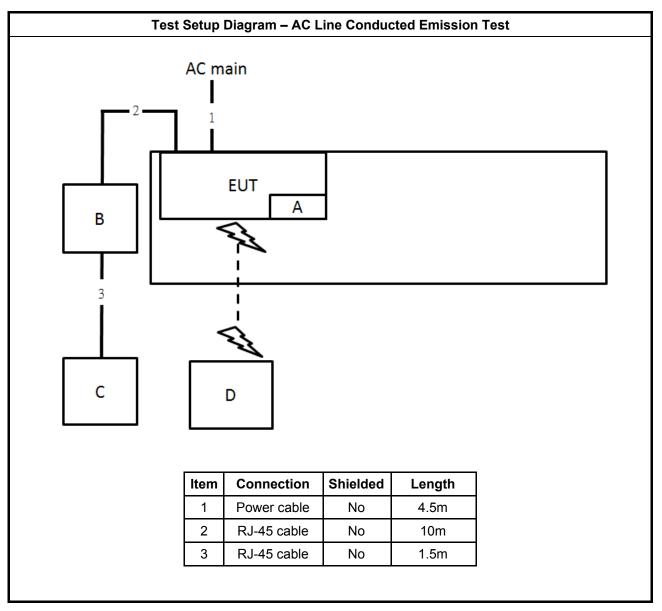
	Support Equipment				
No.	Equipment	Brand Name	Model Name	FCC ID	
А	WLAN AP	NETGEAR	WNDR3300v2	PY309300116	
В	NB	DELL	E4300	N/A	
С	SD Card	Apacer	SD Card	N/A	
D	Smart phone	Samsung	Galaxy J2	N/A	

For Radiated (above 1GHz) and RF Conducted:

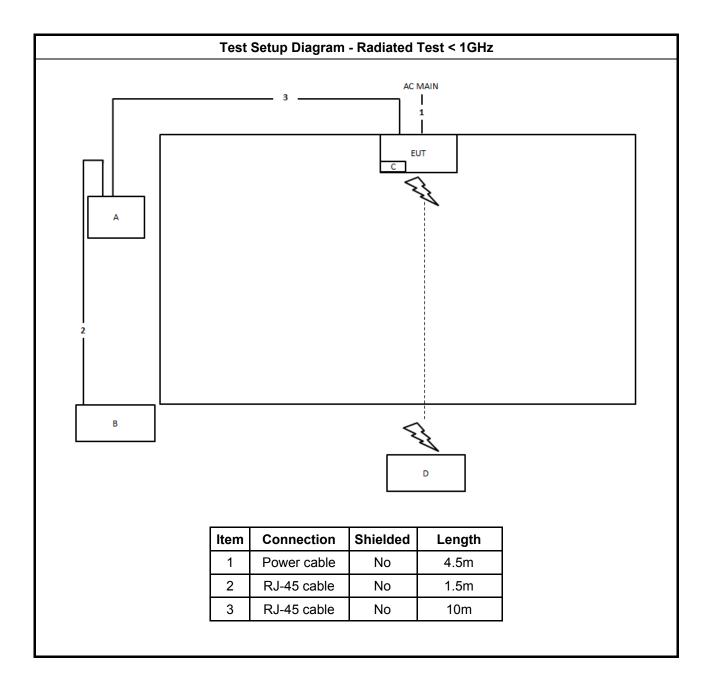
	Support Equipment			
No. Equipment Brand Name Model Name FCC ID				FCC ID
А	NB	DELL	E4300	N/A



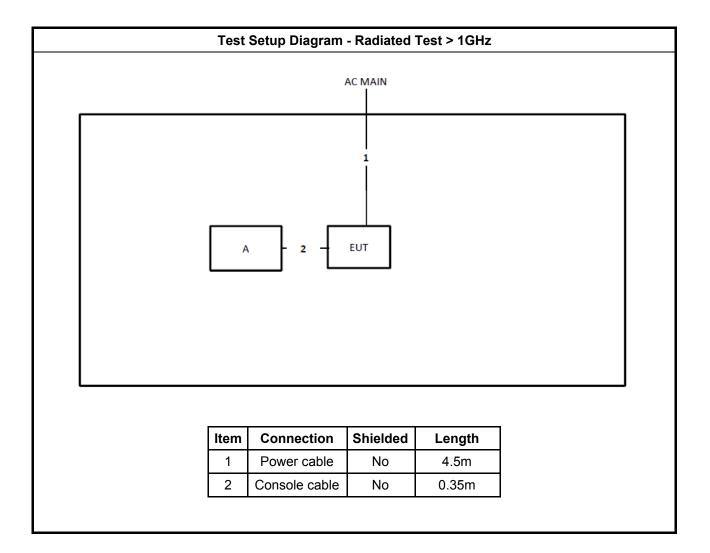
2.6 Test Setup Diagram













3 Transmitter Test Result

3.1 AC Power-line Conducted Emissions

3.1.1 AC Power-line Conducted Emissions Limit

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

3.1.2 Measuring Instruments

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

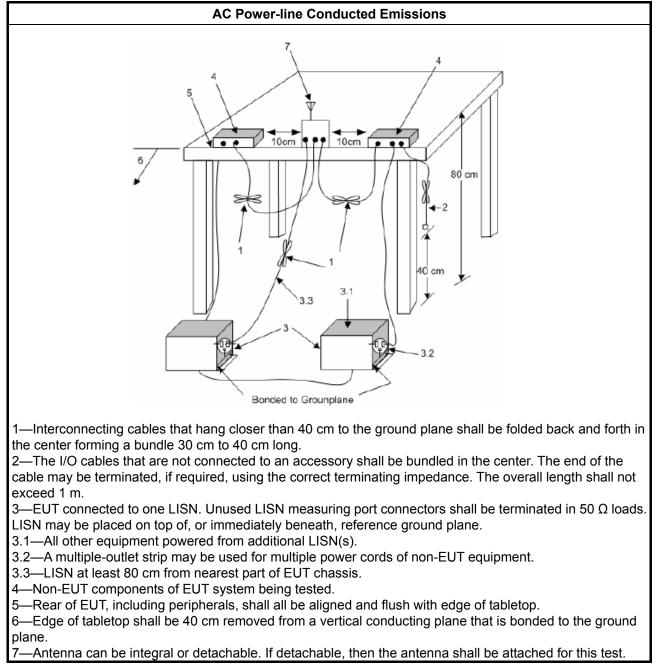
3.1.3 Test Procedures

Test Method

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



3.1.4 Test Setup



3.1.5 Test Result of AC Power-line Conducted Emissions

Refer as Appendix A



3.2 DTS Bandwidth

3.2.1 6dB Bandwidth Limit

6dB Bandwidth Limit	
Systems using digital modulation techniques:	
 6 dB bandwidth ≥ 500 kHz. 	

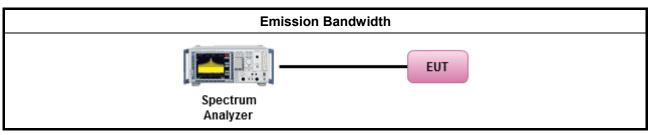
3.2.2 Measuring Instruments

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

3.2.3 Test Procedures

	Test Method				
•	For	the emission bandwidth shall be measured using one of the options below:			
	Refer as FCC KDB 558074, clause 8.2 & C63.10 clause 11.8.1 Option 1 for 6 dB bandwidth measurement.				
		Refer as FCC KDB 558074, clause 8.2 & C63.10 clause 11.8.2 Option 2 for 6 dB bandwidth measurement.			
		Refer as ANSI C63.10, clause 6.9.1 for occupied bandwidth testing.			

3.2.4 Test Setup



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
maximani	Conductod	Sutput	

•	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 $G_{TX} > 6 \text{ dBi}$, then $P_{Out} = 30 - (G_{TX} - 6)/3 \text{ dBm}$

- Aggregate power on all beams: If $G_{TX} > 6 \text{ dBi}$, then $P_{Out} = 30 - (G_{TX} - 6)/3 + 8 \text{dB dBm}$

 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.

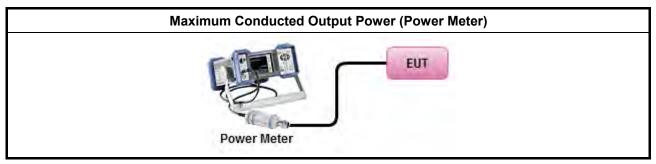


3.3.3 Test Procedures

		Test Method
•	Max	imum Peak Conducted Output Power
		Refer as FCC KDB 558074, clause 8.3.1.1 & C63.10 clause 11.9.1.1 (RBW ≥ EBW method).
		Refer as FCC KDB 558074, clause 8.3.1.3 & C63.10 clause 11.9.1.3 (peak power meter).
•	Max	imum Conducted Output Power
	[duty	/ cycle ≥ 98% or external video / power trigger]
		Refer as FCC KDB 558074, clause 8.3.2.2 & C63.10 clause 11.9.2.2.2 Method AVGSA-1.
		Refer as FCC KDB 558074, clause 8.3.2.2 & C63.10 clause 11.9.2.2.3 Method AVGSA-1A. (alternative)
	duty	cycle < 98% and average over on/off periods with duty factor
		Refer as FCC KDB 558074, clause 8.3.2.2 & C63.10 clause 11.9.2.2.4 Method AVGSA-2.
		Refer as FCC KDB 558074, clause 8.3.2.2 & C63.10 clause 11.9.2.2.5 Method AVGSA-2A (alternative)
		Refer as FCC KDB 558074, clause 8.3.2.2 & C63.10 clause 11.9.2.2.6 Method AVGSA-3
		Refer as FCC KDB 558074, clause 8.3.2.2 & C63.10 clause 11.9.2.2.7 Method AVGSA-3A (alternative)
	Mea	surement using a power meter (PM)
	\bowtie	Refer as FCC KDB 558074, clause 8.3.2.3 & C63.10 clause 11.9.2.3.1 Method AVGPM (using an RF average power meter).
		Refer as FCC KDB 558074, clause 8.3.2.3 & C63.10 clause 11.9.2.3.2 Method AVGPM-G (using an gate RF average power meter).
•	For	conducted measurement.
		If the EUT supports multiple transmit chains using options given below: Refer as FCC KDB 662911, In-band power measurements. Using the measure-and-sum approach, measured all transmit ports individually. Sum the power (in linear power units e.g., mW) of all ports for each individual sample and save them.
	•	If multiple transmit chains, EIRP calculation could be following as methods: $P_{total} = P_1 + P_2 + + P_n$ (calculated in linear unit [mW] and transfer to log unit [dBm]) $EIRP_{total} = P_{total} + DG$



3.3.4 Test Setup



3.3.5 Test Result of Maximum Conducted Output Power

Refer as Appendix C



3.4 **Power Spectral Density**

3.4.1 Power Spectral Density Limit

Power Spectral Density Limit

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

3.4.2 Measuring Instruments

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

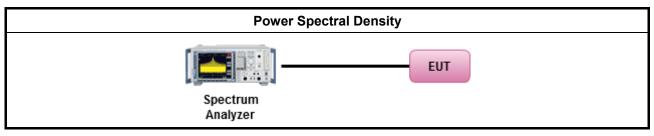
3.4.3 Test Procedures

		Test Method
	outp the o cond of th	k power spectral density procedures that the same method as used to determine the conducted but power. If maximum peak conducted output power was measured to demonstrate compliance to butput power limit, then the peak PSD procedure below (Method PKPSD) shall be used. If maximum ducted output power was measured to demonstrate compliance to the output power limit, then one he average PSD procedures shall be used, as applicable based on the following criteria (the peak 0 procedure is also an acceptable option).
	\boxtimes	Refer as FCC KDB 558074, clause 8.4 & C63.10 clause 11.10.2 Method PKPSD.
	[duty	y cycle ≥ 98% or external video / power trigger]
		Refer as FCC KDB 558074, clause 8.4 & C63.10 clause 11.10.3 Method AVGPSD-1.
		Refer as FCC KDB 558074, clause 8.4 & C63.10 clause 11.10.5 Method AVGPSD-2.
		Refer as FCC KDB 558074, clause 8.4 & C63.10 clause 11.10.7 Method AVGPSD-3.
	duty	cycle < 98% and average over on/off periods with duty factor
		Refer as FCC KDB 558074, clause 8.4 & C63.10 clause 11.10.4 Method AVGPSD-1A. (alternative).
		Refer as FCC KDB 558074, clause 8.4 & C63.10 clause 11.10.6 Method AVGPSD-2A. (alternative)
		Refer as FCC KDB 558074, clause 8.4 & C63.10 clause 11.10.8 Method AVGPSD-3A. (alternative)
•	For	conducted measurement.
		If The EUT supports multiple transmit chains using options given below:
		Option 1: Measure and sum the spectra across the outputs. Refer as FCC KDB 662911, In-band power spectral density (PSD). Sample all transmit ports simultaneously using a spectrum analyzer for each transmit port. Where the trace bin-by-bin of each transmit port summing can be performed. (i.e., in the first spectral bin of output 1 is summed with that in the first spectral bin of output 2 and that from the first spectral bin of output 3, and so on up to the NTX output to obtain the value for the first frequency bin of the summed spectrum.). Add up the amplitude (power) values for the different transmit chains and use this as the new data trace.
		Option 2: Measure and sum spectral maxima across the outputs. With this technique, spectra are measured at each output of the device at the required resolution bandwidth. The maximum value (peak) of each spectrum is determined. These maximum values are then summed mathematically in linear power units across the outputs. These operations shall be performed separately over frequency spans that have different out-of-band or spurious emission limits,
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Option 3: Measure and add 10 log(N) dB, where N is the number of transmit chains. Refer as FCC KDB 662911, In-band power spectral density (PSD). Performed at each transmit chains and each transmit chains shall be compared with the limit have been reduced with 10 log(N). Or each transmit chains shall be add 10 log(N) to compared with the limit.

3.4.4 Test Setup



3.4.5 Test Result of Power Spectral Density

Refer as Appendix D



3.5 Emissions in Non-restricted Frequency Bands

3.5.1 Emissions in Non-restricted Frequency Bands Limit

Un-restricted Band Emissions Limit					
RF output power procedure	Limit (dBc)				
Peak output power procedure	20				
Average output power procedure	30				
Average output power procedure	50				

Note 1: If the peak output power procedure is used to measure the fundamental emission power to demonstrate compliance to requirements, then the peak conducted output power measured within any 100 kHz outside the authorized frequency band shall be attenuated by at least 20 dB relative to the maximum measured in-band peak PSD level.

Note 2: If the average output power procedure is used to measure the fundamental emission power to demonstrate compliance to requirements, then the power in any 100 kHz outside of the authorized frequency band shall be attenuated by at least 30 dB relative to the maximum measured in-band average PSD level.

3.5.2 Measuring Instruments

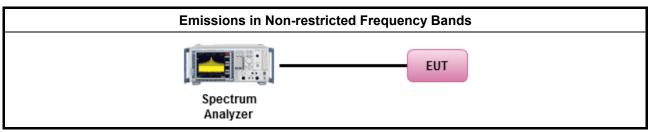
Refer a test equipment and calibration data table in this test report.

3.5.3 Test Procedures

Test Method

Refer as FCC KDB 558074, clause 8.5 for unwanted emissions into non-restricted bands.

3.5.4 Test Setup



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.

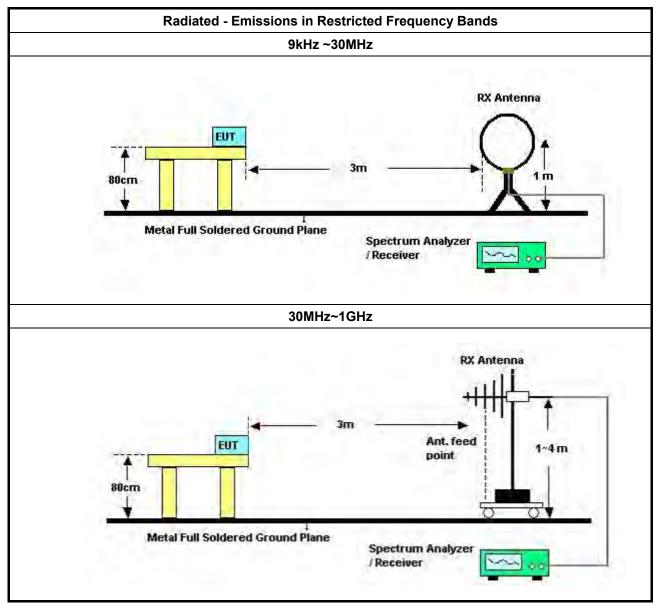


3.6.3 Test Procedures

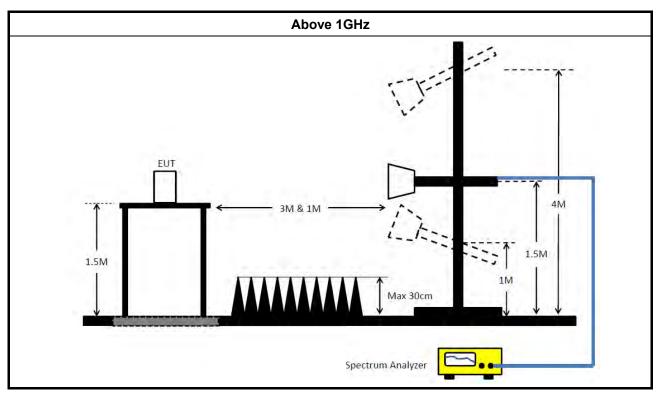
	Test Method
•	The average emission levels shall be measured in [duty cycle \geq 98 or duty factor].
•	Refer as ANSI C63.10, clause 6.10.3 band-edge testing shall be performed at the lowest frequency channel and highest frequency channel within the allowed operating band.
•	For the transmitter unwanted emissions shall be measured using following options below:
	 Refer as FCC KDB 558074, clause 8.6 for unwanted emissions into restricted bands.
	Refer as FCC KDB 558074, clause 8.6 & C63.10 clause 11.12.2.5.1(trace averaging for duty cycle ≥98%).
	Refer as FCC KDB 558074, clause 8.6 & C63.10 clause 11.12.2.5.2(trace averaging + duty factor).
	⊠ Refer as FCC KDB 558074, clause 8.6 & C63.10 clause 11.12.2.5.3(Reduced VBW≥1/T).
	□ Refer as ANSI C63.10, clause 11.12.2.5.3 (Reduced VBW). VBW \ge 1/T, where T is pulse time.
	Refer as ANSI C63.10, clause 7.5 average value of pulsed emissions.
	Refer as FCC KDB 558074, clause 8.6 & C63.10 clause 11.12.2.4 measurement procedure peak limit.
•	For the transmitter band-edge emissions shall be measured using following options below:
	 Refer as FCC KDB 558074 clause 8.7 & C63.10 clause 11.13.1, When the performing peak or average radiated measurements, emissions within 2 MHz of the authorized band edge may be measured using the marker-delta method described below.
	 Refer as FCC KDB 558074, clause 8.7 (ANSI C63.10, clause 6.10.6) for marker-delta method for band-edge measurements.
	 Refer as FCC KDB 558074, clause 8.7 for narrower resolution bandwidth (100kHz) using the band power and summing the spectral levels (i.e., 1 MHz).
	 For conducted unwanted emissions into restricted bands (absolute emission limits). Devices with multiple transmit chains using options given below: (1) Measure and sum the spectra across the outputs or (2) Measure and add 10 log(N) dB
	 For FCC KDB 662911 The methodology described here may overestimate array gain, thereby resulting in apparent failures to satisfy the out-of-band limits even if the device is actually compliant. In such cases, compliance may be demonstrated by performing radiated tests around the frequencies at which the apparent failures occurred.



3.6.4 Test Setup







3.6.5 Measurement Results Calculation

The measured Level is calculated using:

Corrected Reading: Antenna Factor + Cable Loss + Read Level - Preamp Factor = Level.

3.6.6 Emissions in Restricted Frequency Bands (Below 30MHz)

There is a comparison data of both open-field test site and alternative test site - semi-Anechoic chamber according to KDB414788 Radiated Test Site, and the result came out very similar.

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.

3.6.7 Test Result of Emissions in Restricted Frequency Bands

Refer as Appendix F



Test Equipment and Calibration Data 4

Instrument	Manufacturer	Model No.	Serial No.	Characteristics	Calibration Date	Calibration Due Date	Remark
EMI Receiver	Agilent	N9038A	My52260123	9kHz ~ 8.45GHz	Jan. 28, 2019	Jan. 29, 2020	Conduction (CO01-CB)
LISN	F.C.C.	FCC-LISN-50- 16-2	04083	150kHz ~ 100MHz	Dec. 24, 2018	Dec. 23, 2019	Conduction (CO01-CB)
LISN	Schwarzbeck	NSLK 8127	8127647	9kHz ~ 30MHz	Jan. 11, 2019	Jan. 10, 2020	Conduction (CO01-CB)
COND Cable	Woken	Cable	Low cable-CO01	9kHz ~ 30MHz	May 21, 2019	May 20, 2020	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. 27, 2018	Aug. 26, 2019	Radiation (03CH06-CB)
Horn Antenna	SCHWARZBE CK	BBHA9120D	9120D-1292	1GHz~18GHz	Jul. 20, 2018	Jul. 19, 2019	Radiation (03CH06-CB)
Horn Antenna	SCHWARZBE CK	BBHA9120D	9120D-1292	1GHz~18GHz	Jul. 17, 2019	Jul. 16, 2020	Radiation (03CH06-CB)
Horn Antenna	SCHWARZBE CK	BBHA 9170	BBHA9170507	15GHz ~ 40GHz	Jun. 07, 2018	Jun. 06, 2019	Radiation (03CH06-CB)
Horn Antenna	SCHWARZBE CK	BBHA 9170	BBHA9170507	15GHz ~ 40GHz	Jun. 12, 2019	Jun. 11, 2020	Radiation (03CH06-CB)
Pre-Amplifier	Agilent	310N	187290	0.1MHz ~ 1GHz	May 07, 2019	May 06, 2020	Radiation (03CH06-CB)
Pre-Amplifier	Agilent	83017A	MY53270064	0.5GHz ~ 26.5GHz	May 08, 2019	May 07, 2020	Radiation (03CH06-CB)
Amplifier	MITEQ	TTA1840-35-H G	1864479	18GHz ~ 40GHz	Jul. 04, 2018	Jul. 03, 2019	Radiation (03CH06-CB)
Pre-Amplifier	MITEQ	TTA1840-35-H G	1864479	18GHz ~ 40GHz	Jul. 03, 2019	Jul. 02, 2020	Radiation (03CH06-CB)
Spectrum analyzer	R&S	FSP40	100080	9kHz~40GHz	Oct. 03, 2018	Oct. 02, 2019	Radiation (03CH06-CB)
EMI Test Receiver	R&S	ESCS	826547/017	9kHz ~ 2.75GHz	May 15, 2019	May 14, 2020	Radiation (03CH06-CB)
Loop Antenna	Teseq	HLA 6120	24155	9kHz - 30 MHz	Mar. 29, 2019	Mar. 28, 2020	Radiation (03CH06-CB)
RF Cable-low	HUBER+SUH NER	RG402	Low Cable-05+24	30MHz~1GHz	Oct. 08, 2018	Oct. 07, 2019	Radiation (03CH06-CB)
RF Cable-high	HUBER+SUH NER	RG402	High Cable-05	1GHz~18GHz	Oct. 08, 2018	Oct. 07, 2019	Radiation (03CH06-CB)
RF Cable-high	HUBER+SUH NER	RG402	High Cable-05+24	1GHz~18GHz	Oct. 08, 2018	Oct. 07, 2019	Radiation (03CH06-CB)
RF Cable-high	Woken	RG402	High Cable-40G#1	18GHz ~ 40 GHz	Jul. 27, 2018	Jul. 26, 2019	Radiation (03CH06-CB)
RF Cable-high	Woken	RG402	High Cable-40G#1	18GHz ~ 40 GHz	Jul. 24, 2019	Jul. 23, 2020	Radiation (03CH06-CB)

: Sep. 04, 2019

Report Version : 01



Instrument	Manufacturer	Model No.	Serial No.	Characteristics	Calibration Date	Calibration Due Date	Remark
RF Cable-high	Woken	RG402	High Cable-40G#2	18GHz ~ 40 GHz	Jul. 27, 2018	Jul. 26, 2019	Radiation (03CH06-CB)
RF Cable-high	Woken	RG402	High Cable-40G#2	18GHz ~ 40 GHz	Jul. 24, 2019	Jul. 23, 2020	Radiation (03CH06-CB)
Spectrum analyzer	R&S	FSV40	100979	9kHz~40GHz	Feb. 25, 2019	Feb. 24, 2020	Conducted (TH01-CB)
Temp. and Humidity Chamber	Ten Billion	TTH-C2SP	TBN-1010206	-20~150 degree	Mar. 04. 2019	Mar. 03. 2020	Conducted (TH01-CB)
RF Cable-high	Woken	RG402	High Cable-06	1 GHz – 26.5 GHz	Oct. 08, 2018	Oct. 07, 2019	Conducted (TH01-CB)
RF Cable-high	Woken	RG402	High Cable-07	1 GHz –26.5 GHz	Oct. 08, 2018	Oct. 07, 2019	Conducted (TH01-CB)
RF Cable-high	Woken	RG402	High Cable-08	1 GHz –26.5 GHz	Oct. 08, 2018	Oct. 07, 2019	Conducted (TH01-CB)
RF Cable-high	Woken	RG402	High Cable-09	1 GHz –26.5 GHz	Oct. 08, 2018	Oct. 07, 2019	Conducted (TH01-CB)
RF Cable-high	Woken	RG402	High Cable-10	1 GHz –26.5 GHz	Oct. 08, 2018	Oct. 07, 2019	Conducted (TH01-CB)
RF Cable-high	Woken	RG402	High Cable-28	1 GHz –26.5 GHz	Nov. 19, 2018	Nov. 18, 2019	Conducted (TH01-CB)
Power Sensor	Agilent	E9327A	US40442088	50MHz~18GHz	Jan. 15, 2019	Jan. 14, 2020	Conducted (TH01-CB)
Power Meter	Agilent	E4416A	GB41291199	50MHz~18GHz	Jan. 15, 2019	Jan. 14, 2020	Conducted (TH01-CB)

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

NCR means Non-Calibration required.



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Туре	Freq	Level	Limit	Margin	Factor	Condition	Comment		AF	CL	AT			
	(Hz)	(dBuV)	(dBuV)	(dB)	(dB)			(dBuV)	(dB)	(dB)	(dB)			
Type QP AV						Condition Line Line	Comment "Worst" -							
QP	(Hz) 150k	(dBuV) 54.55	(dBuV) 66.00	(dB) -11.45	(dB) 9.90	Line	"Worst"	(dBuV) 44.65	(dB) 0.05	(dB) 0.06	(dB) 9.79			
QP AV QP AV	(Hz) 150k 150k 159k 159k	(dBuV) 54.55 39.35 53.00 38.09	(dBuV) 66.00 56.00 65.52 55.52	(dB) -11.45 -16.65 -12.52 -17.43	(dB) 9.90 9.90 9.90 9.90	Line Line Line Line	"Worst" - -	(dBuV) 44.65 29.45 43.10 28.19	(dB) 0.05 0.05 0.05 0.05	(dB) 0.06 0.06 0.06 0.06	(dB) 9.79 9.79 9.79 9.79 9.79			
QP AV QP AV QP	(Hz) 150k 150k 159k 159k 262.5k	(dBuV) 54.55 39.35 53.00 38.09 42.15	(dBuV) 66.00 56.00 65.52 55.52 61.35	(dB) -11.45 -16.65 -12.52 -17.43 -19.20	(dB) 9.90 9.90 9.90 9.90 9.90 9.92	Line Line Line Line Line Line	"Worst" - - -	(dBuV) 44.65 29.45 43.10 28.19 32.23	(dB) 0.05 0.05 0.05 0.05 0.06	(dB) 0.06 0.06 0.06 0.06 0.06	(dB) 9.79 9.79 9.79 9.79 9.79 9.80			
QP AV QP AV QP AV	(Hz) 150k 150k 159k 159k 262.5k 262.5k	(dBuV) 54.55 39.35 53.00 38.09 42.15 29.73	(dBuV) 66.00 56.00 65.52 55.52 61.35 51.35	(dB) -11.45 -16.65 -12.52 -17.43 -19.20 -21.62	(dB) 9.90 9.90 9.90 9.90 9.90 9.92 9.92	Line Line Line Line Line Line Line	"Worst" - - - -	(dBuV) 44.65 29.45 43.10 28.19 32.23 19.81	(dB) 0.05 0.05 0.05 0.05 0.06 0.06	(dB) 0.06 0.06 0.06 0.06 0.06 0.06	(dB) 9.79 9.79 9.79 9.79 9.79 9.80 9.80			
QP AV QP AV QP	(Hz) 150k 150k 159k 159k 262.5k	(dBuV) 54.55 39.35 53.00 38.09 42.15	(dBuV) 66.00 56.00 65.52 55.52 61.35	(dB) -11.45 -16.65 -12.52 -17.43 -19.20	(dB) 9.90 9.90 9.90 9.90 9.90 9.92	Line Line Line Line Line Line	"Worst" - - -	(dBuV) 44.65 29.45 43.10 28.19 32.23	(dB) 0.05 0.05 0.05 0.05 0.06	(dB) 0.06 0.06 0.06 0.06 0.06	(dB) 9.79 9.79 9.79 9.79 9.79 9.80			
QP AV QP AV QP AV QP AV QP	(Hz) 150k 150k 159k 262.5k 262.5k 1.586M 1.586M 1.586M 16.17M	(dBuV) 54.55 39.35 53.00 38.09 42.15 29.73 32.10 23.21 35.60	(dBuV) 66.00 56.00 65.52 55.52 61.35 51.35 56.00 46.00 60.00	(dB) -11.45 -16.65 -12.52 -17.43 -19.20 -21.62 -23.90 -22.79 -24.40	(dB) 9.90 9.90 9.90 9.90 9.92 9.92 10.02 10.02 10.44	Line Line Line Line Line Line Line Line	"Worst" - - - - -	(dBuV) 44.65 29.45 43.10 28.19 32.23 19.81 22.08 13.19 25.16	(dB) 0.05 0.05 0.05 0.06 0.06 0.08 0.08 0.27	(dB) 0.06 0.06 0.06 0.06 0.06 0.06 0.11 0.11	(dB) 9.79 9.79 9.79 9.80 9.80 9.80 9.83 9.83 9.83 9.94			
QP AV QP AV	(Hz) 150k 150k 159k 262.5k 262.5k 1.586M 1.586M 1.586M 16.17M 16.17M	(dBuV) 54.55 39.35 53.00 38.09 42.15 29.73 32.10 23.21 35.60 29.82	(dBuV) 66.00 56.00 65.52 55.52 61.35 51.35 56.00 46.00 60.00 50.00	(dB) -11.45 -16.65 -12.52 -17.43 -19.20 -21.62 -23.90 -22.79 -24.40 -20.18	(dB) 9.90 9.90 9.90 9.92 9.92 10.02 10.02 10.44 10.44	Line Line Line Line Line Line Line Line	"Worst" - - - - - - - - - - - - -	(dBuV) 44.65 29.45 43.10 28.19 32.23 19.81 22.08 13.19 25.16 19.38	(dB) 0.05 0.05 0.05 0.05 0.06 0.06 0.08 0.08 0.08 0.27 0.27	(dB) 0.06 0.06 0.06 0.06 0.06 0.11 0.11 0.23 0.23	(dB) 9.79 9.79 9.79 9.80 9.80 9.83 9.83 9.83 9.94			
QP AV QP AV QP AV QP AV QP	(Hz) 150k 150k 159k 262.5k 262.5k 1.586M 1.586M 1.586M 16.17M	(dBuV) 54.55 39.35 53.00 38.09 42.15 29.73 32.10 23.21 35.60	(dBuV) 66.00 56.00 65.52 55.52 61.35 51.35 56.00 46.00 60.00	(dB) -11.45 -16.65 -12.52 -17.43 -19.20 -21.62 -23.90 -22.79 -24.40	(dB) 9.90 9.90 9.90 9.90 9.92 9.92 10.02 10.02 10.44	Line Line Line Line Line Line Line Line	"Worst" - - - - - - - - - - -	(dBuV) 44.65 29.45 43.10 28.19 32.23 19.81 22.08 13.19 25.16	(dB) 0.05 0.05 0.05 0.06 0.06 0.08 0.08 0.27	(dB) 0.06 0.06 0.06 0.06 0.06 0.06 0.11 0.11	(dB) 9.79 9.79 9.79 9.80 9.80 9.80 9.83 9.83 9.83 9.94			



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1M Factor C((dB) 9.89 N 9.89 N	Condition Comm Neutral "Wors Neutral -	nt Raw (dBuV) 43.96	(dB) 0.04	CL (dB)		and the second sec	QP
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Factor Ci (dB) 9.89 N 9.89 N	Neutral "Wors Neutral -	(dBuV) 43.96	(dB) 0.04	CL (dB)		30M	
(dB) 9.89 N 9.89 N	Neutral "Wors Neutral -	(dBuV) 43.96	(dB) 0.04	(dB)			
9.89 N 9.89 N	Neutral -	43.96	0.04				
		29.09		0.06	9.79		
9.89 N		41.63	0.04	0.06	9.79 9.79		
	Neutral -	27.15	0.04	0.06	9.79		
	Neutral -	35.78	0.04	0.06	9.79		
	Neutral -	23.76	0.04	0.06	9.79		
	Neutral - Neutral -	34.34 22.14	0.04	0.06	9.80		
	Neutral -	22.14	0.04	0.00	9.80		
	Neutral -	13.38	0.07	0.12	9.83		
	Neutral -	26.99	0.24	0.24	9.97		
10.45 N	Neutral -	22.07	0.24	0.24	9.97		



Summary

Mode	Max-N dB	Max-OBW	ITU-Code	Min-N dB	Min-OBW
	(Hz)	(Hz)		(Hz)	(Hz)
2.4-2.4835GHz	-	-	-	-	-
802.11b_Nss1,(1Mbps)_2TX	9.55M	13.568M	13M6G1D	9.05M	13.443M
802.11g_Nss1,(6Mbps)_2TX	16.3M	16.542M	16M5D1D	16.025M	16.442M
802.11n HT20_Nss1,(MCS0)_2TX	17M	17.591M	17M6D1D	15.95M	17.541M
802.11n HT40_Nss1,(MCS0)_2TX	35.7M	36.182M	36M2D1D	35.05M	36.132M

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

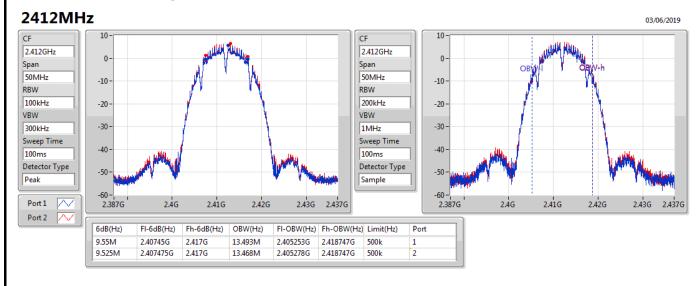
Mode	Result	Limit	Port 1-N dB	Port 1-OBW	Port 2-N dB	Port 2-OBW
		(Hz)	(Hz)	(Hz)	(Hz)	(Hz)
802.11b_Nss1,(1Mbps)_2TX	-	-	-	-	-	-
2412MHz	Pass	500k	9.55M	13.493M	9.525M	13.468M
2437MHz	Pass	500k	9.05M	13.443M	9.05M	13.518M
2462MHz	Pass	500k	9.05M	13.568M	9.525M	13.568M
802.11g_Nss1,(6Mbps)_2TX	-	-	-	-	-	-
2412MHz	Pass	500k	16.3M	16.492M	16.275M	16.442M
2437MHz	Pass	500k	16.05M	16.542M	16.025M	16.542M
2462MHz	Pass	500k	16.05M	16.517M	16.3M	16.442M
802.11n HT20_Nss1,(MCS0)_2TX	-	-	-	-	-	-
2412MHz	Pass	500k	16.25M	17.566M	16.475M	17.541M
2437MHz	Pass	500k	17M	17.591M	15.95M	17.591M
2462MHz	Pass	500k	16.675M	17.591M	16.3M	17.566M
802.11n HT40_Nss1,(MCS0)_2TX	-	-	-	-	-	-
2422MHz	Pass	500k	35.3M	36.182M	35.1M	36.182M
2437MHz	Pass	500k	35.5M	36.182M	35.05M	36.132M
2452MHz	Pass	500k	35.7M	36.182M	35.65M	36.132M

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

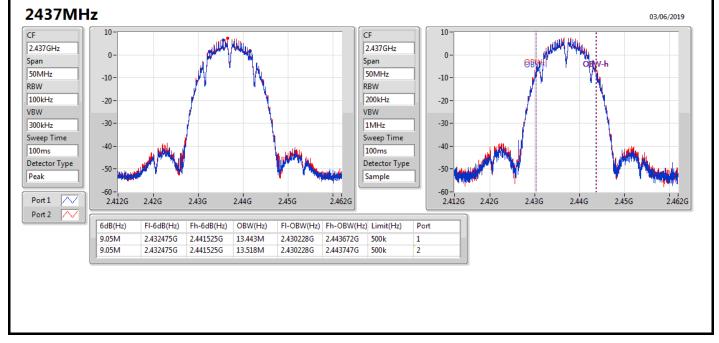


EBW

802.11b_Nss1,(1Mbps)_2TX

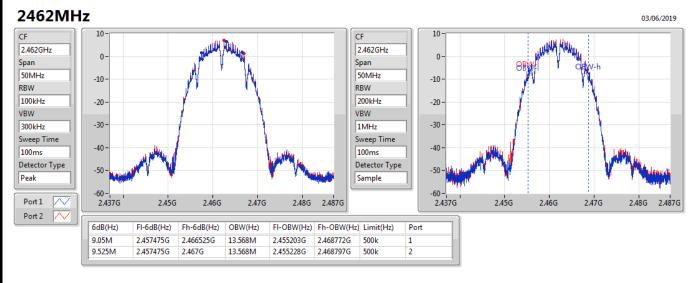


802.11b_Nss1,(1Mbps)_2TX

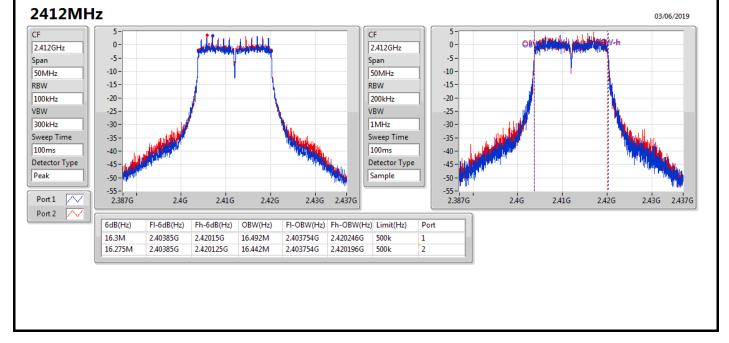




802.11b_Nss1,(1Mbps)_2TX

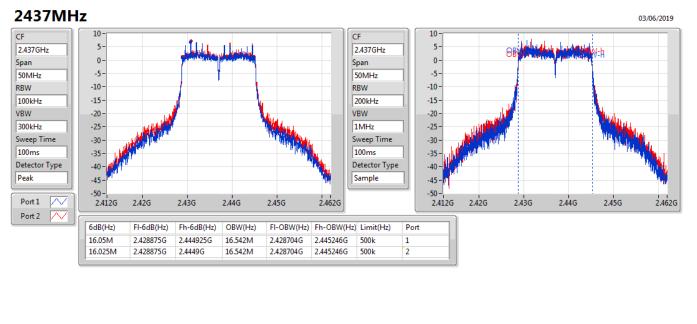


802.11g_Nss1,(6Mbps)_2TX

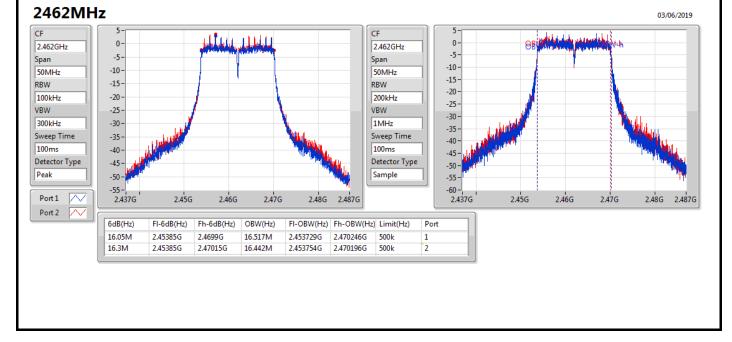




802.11g_Nss1,(6Mbps)_2TX

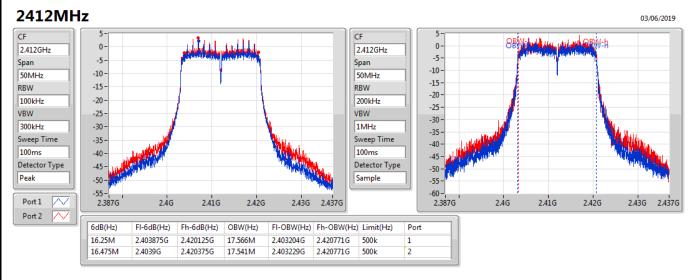


802.11g_Nss1,(6Mbps)_2TX

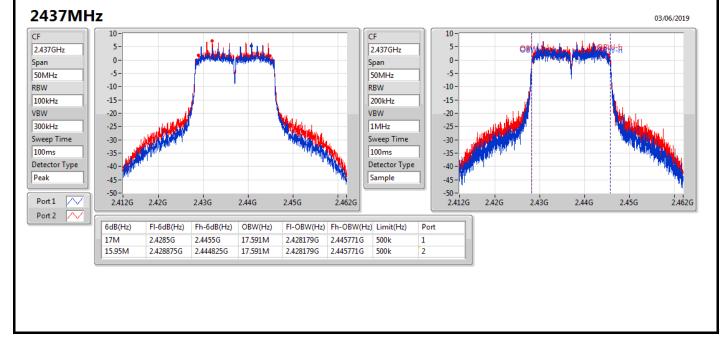




802.11n HT20_Nss1,(MCS0)_2TX



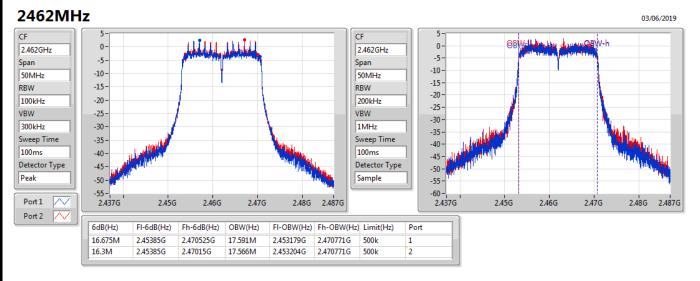
802.11n HT20_Nss1,(MCS0)_2TX



EBW

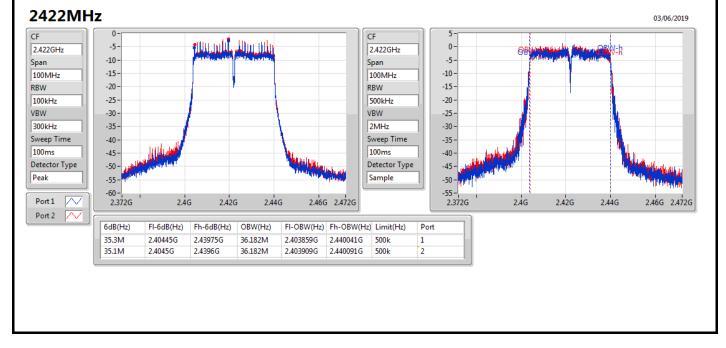


802.11n HT20_Nss1,(MCS0)_2TX



802.11n HT40_Nss1,(MCS0)_2TX

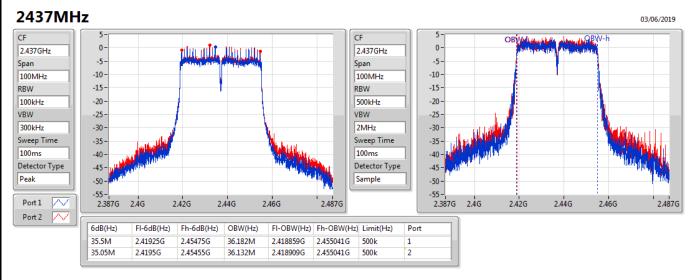
EBW



EBW

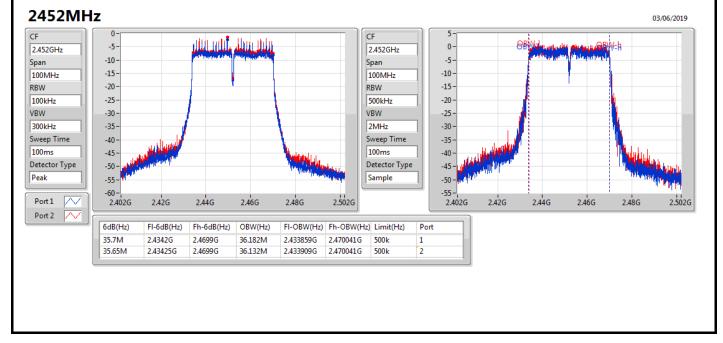


802.11n HT40_Nss1,(MCS0)_2TX



802.11n HT40_Nss1,(MCS0)_2TX

EBW





Summary

Mode	Total Power	Total Power
	(dBm)	(W)
2.4-2.4835GHz	-	-
802.11b_Nss1,(1Mbps)_2TX	22.90	0.19498
802.11g_Nss1,(6Mbps)_2TX	24.18	0.26182
802.11n HT20_Nss1,(MCS0)_2TX	23.95	0.24831
802.11n HT40_Nss1,(MCS0)_2TX	21.60	0.14454



Average Power

Appendix C

Result

Mode	Result	DG	Port 1	Port 2	Total Power	Power Limit
		(dBi)	(dBm)	(dBm)	(dBm)	(dBm)
802.11b_Nss1,(1Mbps)_2TX	-	-	-	-	-	-
2412MHz	Pass	5.20	19.42	19.41	22.43	30.00
2437MHz	Pass	5.20	19.49	19.66	22.59	30.00
2462MHz	Pass	5.20	19.92	19.86	22.90	30.00
802.11g_Nss1,(6Mbps)_2TX	-	-	-	-	-	-
2412MHz	Pass	5.20	18.57	18.49	21.54	30.00
2437MHz	Pass	5.20	21.12	21.21	24.18	30.00
2462MHz	Pass	5.20	18.36	18.30	21.34	30.00
802.11n HT20_Nss1,(MCS0)_2TX	-	-	-	-	-	-
2412MHz	Pass	5.20	17.61	18.01	20.82	30.00
2417MHz	Pass	5.20	19.55	19.68	22.63	30.00
2437MHz	Pass	5.20	20.72	21.14	23.95	30.00
2457MHz	Pass	5.20	19.53	19.91	22.73	30.00
2462MHz	Pass	5.20	16.77	17.72	20.28	30.00
802.11n HT40_Nss1,(MCS0)_2TX	-	-	-	-	-	-
2422MHz	Pass	5.20	15.26	15.40	18.34	30.00
2427MHz	Pass	5.20	16.42	16.75	19.60	30.00
2437MHz	Pass	5.20	18.52	18.65	21.60	30.00
2452MHz	Pass	5.20	15.95	16.30	19.14	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	-0.99
802.11g_Nss1,(6Mbps)_2TX	-2.64
802.11n HT20_Nss1,(MCS0)_2TX	-1.83
802.11n HT40_Nss1,(MCS0)_2TX	-7.17

RBW=3 kHz.

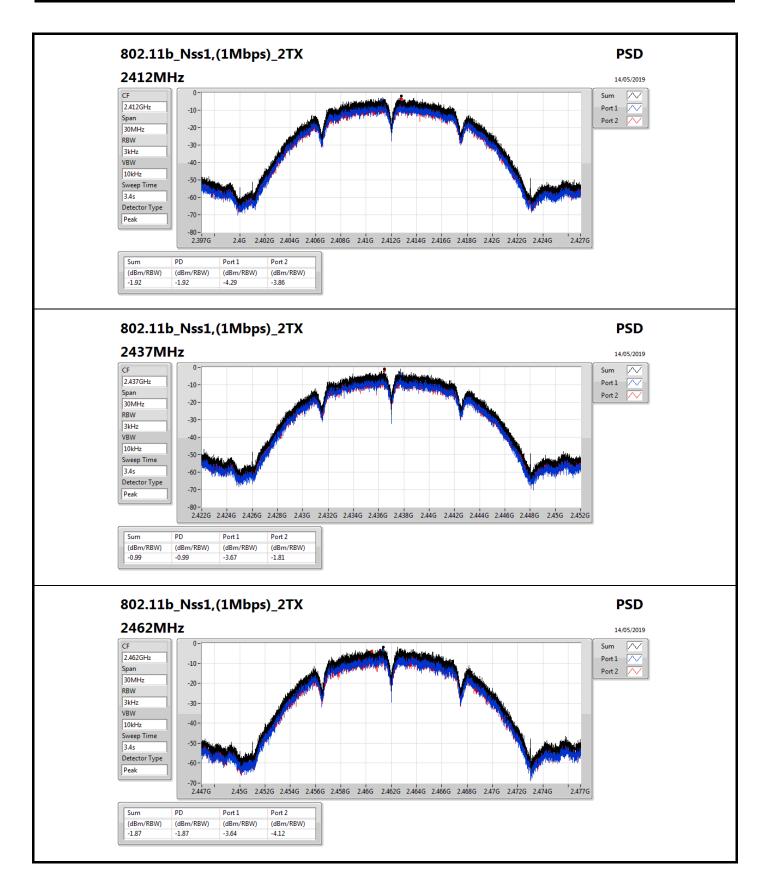


Result

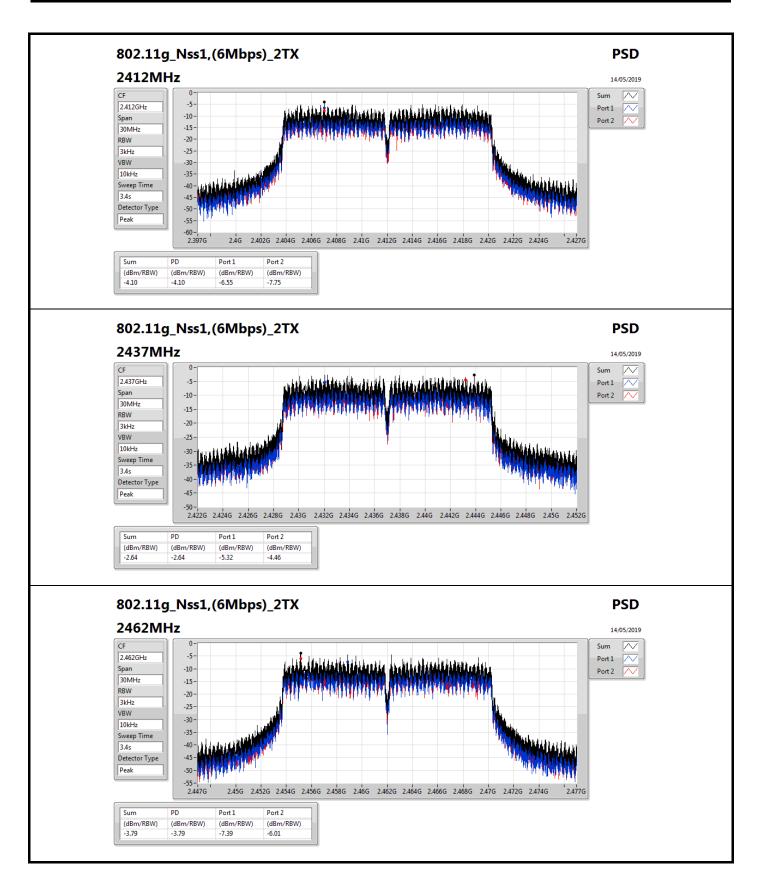
Mode	Result	DG	Port 1	Port 2	PD	PD Limit
		(dBi)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
802.11b_Nss1,(1Mbps)_2TX	-	-	-	-	-	-
2412MHz	Pass	8.06	-4.29	-3.86	-1.92	5.94
2437MHz	Pass	8.06	-3.67	-1.81	-0.99	5.94
2462MHz	Pass	8.06	-3.64	-4.12	-1.87	5.94
802.11g_Nss1,(6Mbps)_2TX	-	-	-	-	-	-
2412MHz	Pass	8.06	-6.55	-7.75	-4.10	5.94
2437MHz	Pass	8.06	-5.32	-4.46	-2.64	5.94
2462MHz	Pass	8.06	-7.39	-6.01	-3.79	5.94
802.11n HT20_Nss1,(MCS0)_2TX	-	-	-	-	-	-
2412MHz	Pass	8.06	-8.25	-8.14	-5.23	5.94
2437MHz	Pass	8.06	-4.56	-4.68	-1.83	5.94
2462MHz	Pass	8.06	-9.21	-7.86	-5.47	5.94
802.11n HT40_Nss1,(MCS0)_2TX	-	-	-	-	-	-
2422MHz	Pass	8.06	-13.53	-10.71	-9.00	5.94
2437MHz	Pass	8.06	-10.46	-9.92	-7.17	5.94
2452MHz	Pass	8.06	-12.42	-12.75	-9.86	5.94

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

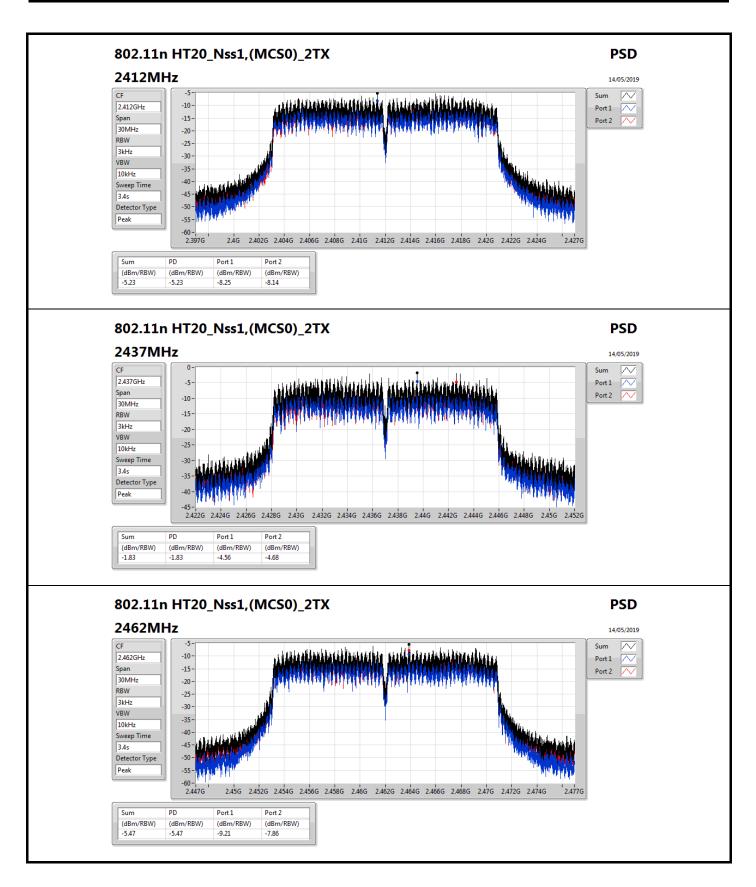




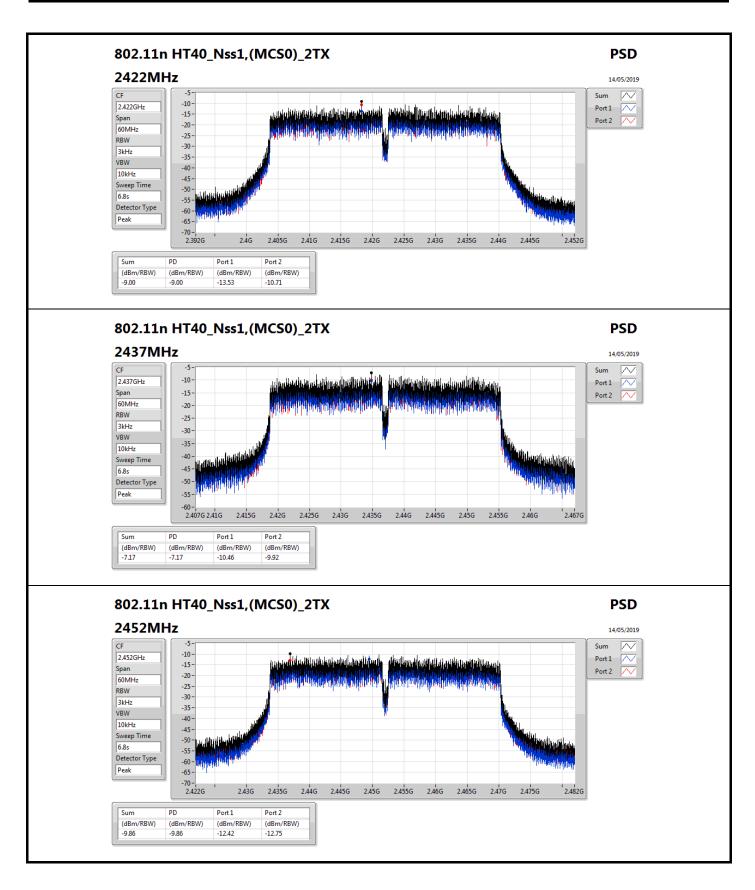














Appendix E

Summary

Mode	Result	Ref	Ref	Limit	Freq	Level	Freq	Level	Freq	Level	Freq	Level	Port
		(Hz)	(dBm)	(dBm)	(Hz)	(dBm)	(Hz)	(dBm)	(Hz)	(dBm)	(Hz)	(dBm)	
2.4-2.4835GHz	-	-	-	-	-	-	-	-	-	-	-	-	-
802.11b_Nss1,(1Mbps)_2TX	Pass	2.43749G	6.83	-23.17	2.30233G	-52.74	2.39702G	-40.22	2.49016G	-50.88	15.22834G	-44.35	2
802.11g_Nss1,(6Mbps)_2TX	Pass	2.43202G	7.04	-22.96	735.41M	-52.65	2.39794G	-32.17	2.5086G	-50.90	16.40836G	-44.79	2
802.11n HT20_Nss1,(MCS0)_2TX	Pass	2.43198G	7.11	-22.89	835.31M	-52.70	2.3998G	-32.70	2.50512G	-51.04	24.85952G	-44.42	2
802.11n HT40_Nss1,(MCS0)_2TX	Pass	2.43449G	1.09	-28.91	714.14M	-52.24	2.39988G	-35.47	2.48434G	-44.57	24.93269G	-43.36	2



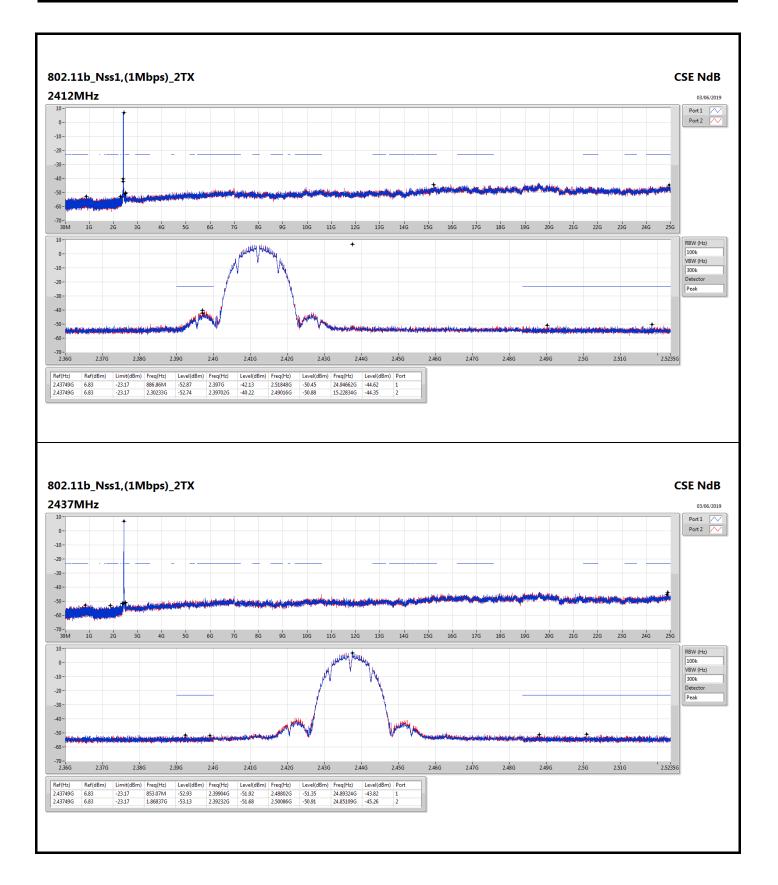
CSE(Non-restricted Band)

Appendix E

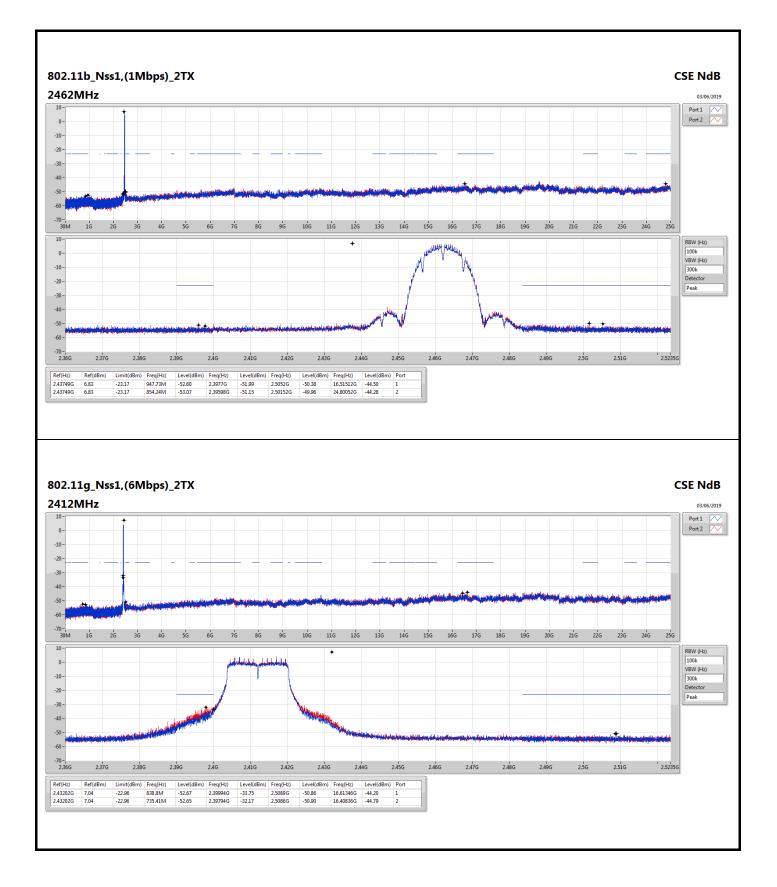
Result

Mode	Result	Ref	Ref	Limit	Freq	Level	Freq	Level	Freq	Level	Freq	Level	Port
		(Hz)	(dBm)	(dBm)	(Hz)	(dBm)	(Hz)	(dBm)	(Hz)	(dBm)	(Hz)	(dBm)	
802.11b_Nss1,(1Mbps)_2TX	-	-	-	-	-	-	-	-	-	-	-	-	-
2412MHz	Pass	2.43749G	6.83	-23.17	886.86M	-52.87	2.397G	-42.13	2.51848G	-50.45	24.94662G	-44.62	1
2412MHz	Pass	2.43749G	6.83	-23.17	2.30233G	-52.74	2.39702G	-40.22	2.49016G	-50.88	15.22834G	-44.35	2
2437MHz	Pass	2.43749G	6.83	-23.17	853.07M	-52.93	2.39904G	-51.92	2.48802G	-51.35	24.89324G	-43.82	1
2437MHz	Pass	2.43749G	6.83	-23.17	1.86837G	-53.13	2.39232G	-51.68	2.50086G	-50.91	24.85109G	-45.26	2
2462MHz	Pass	2.43749G	6.83	-23.17	947.73M	-52.60	2.3977G	-51.99	2.5052G	-50.38	16.51512G	-44.50	1
2462MHz	Pass	2.43749G	6.83	-23.17	854.24M	-53.07	2.39598G	-51.15	2.50152G	-49.96	24.80052G	-44.28	2
802.11g_Nss1,(6Mbps)_2TX	-	-	-	-	-	-	-	-	-	-	-	-	-
2412MHz	Pass	2.43202G	7.04	-22.96	838.8M	-52.67	2.39994G	-33.75	2.5089G	-50.86	16.61346G	-44.20	1
2412MHz	Pass	2.43202G	7.04	-22.96	735.41M	-52.65	2.39794G	-32.17	2.5086G	-50.90	16.40836G	-44.79	2
2437MHz	Pass	2.43202G	7.04	-22.96	2.1902G	-51.31	2.39958G	-47.46	2.49796G	-49.81	14.90524G	-44.71	1
2437MHz	Pass	2.43202G	7.04	-22.96	2.30233G	-52.03	2.39884G	-46.58	2.50878G	-49.08	16.43364G	-44.20	2
2462MHz	Pass	2.43202G	7.04	-22.96	2.3067G	-52.03	2.39784G	-52.13	2.48386G	-46.02	24.87357G	-43.54	1
2462MHz	Pass	2.43202G	7.04	-22.96	2.12991G	-52.15	2.39996G	-52.00	2.48356G	-43.72	24.33413G	-44.68	2
802.11n HT20_Nss1,(MCS0)_2TX	-	-	-	-	-	-	-	-	-	-	-	-	-
2412MHz	Pass	2.43198G	7.11	-22.89	830.06M	-52.22	2.3998G	-35.50	2.48652G	-51.19	24.88481G	-43.83	1
2412MHz	Pass	2.43198G	7.11	-22.89	835.31M	-52.70	2.3998G	-32.70	2.50512G	-51.04	24.85952G	-44.42	2
2437MHz	Pass	2.43198G	7.11	-22.89	2.30699G	-51.19	2.39952G	-48.17	2.48462G	-49.97	16.42522G	-45.22	1
2437MHz	Pass	2.43198G	7.11	-22.89	2.30699G	-51.04	2.3995G	-45.00	2.48456G	-49.66	24.88481G	-44.10	2
2462MHz	Pass	2.43198G	7.11	-22.89	593.86M	-52.88	2.3993G	-52.03	2.48362G	-45.66	24.73309G	-44.51	1
2462MHz	Pass	2.43198G	7.11	-22.89	2.12467G	-52.43	2.39998G	-51.81	2.48356G	-43.51	24.21332G	-44.44	2
802.11n HT40_Nss1,(MCS0)_2TX	-	-	-	-	-	-	-	-	-	-	-	-	-
2422MHz	Pass	2.43449G	1.09	-28.91	762.8M	-51.58	2.39976G	-36.72	2.49998G	-51.40	24.80368G	-44.52	1
2422MHz	Pass	2.43449G	1.09	-28.91	827.49M	-52.82	2.39976G	-36.11	2.50922G	-51.38	16.49096G	-43.68	2
2437MHz	Pass	2.43449G	1.09	-28.91	2.30912G	-52.21	2.39996G	-39.71	2.48538G	-46.41	24.89343G	-44.53	1
2437MHz	Pass	2.43449G	1.09	-28.91	714.14M	-52.24	2.39988G	-35.47	2.48434G	-44.57	24.93269G	-43.36	2
2452MHz	Pass	2.43449G	1.09	-28.91	789.99M	-52.89	2.3976G	-51.57	2.48378G	-47.62	16.28342G	-44.31	1
2452MHz	Pass	2.43449G	1.09	-28.91	741.33M	-52.50	2.39924G	-50.33	2.48914G	-45.68	16.55546G	-43.78	2

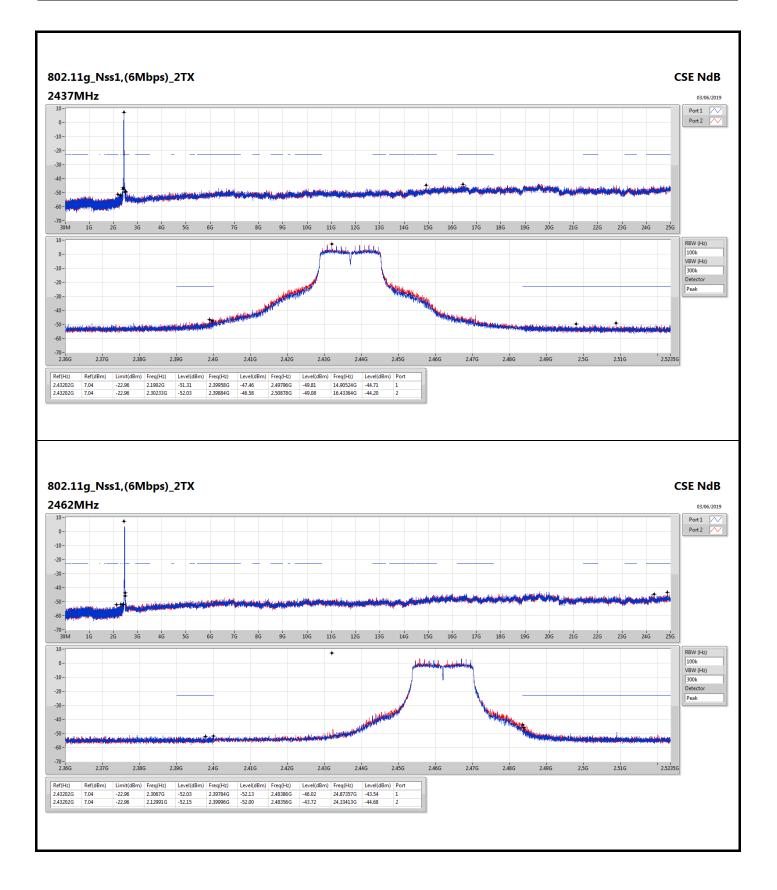




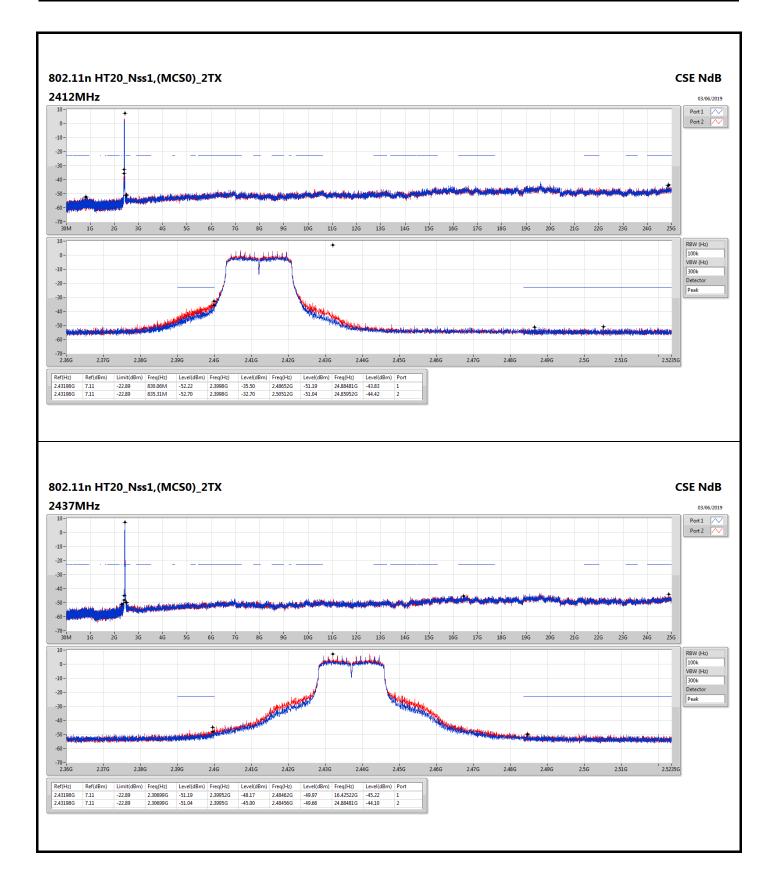




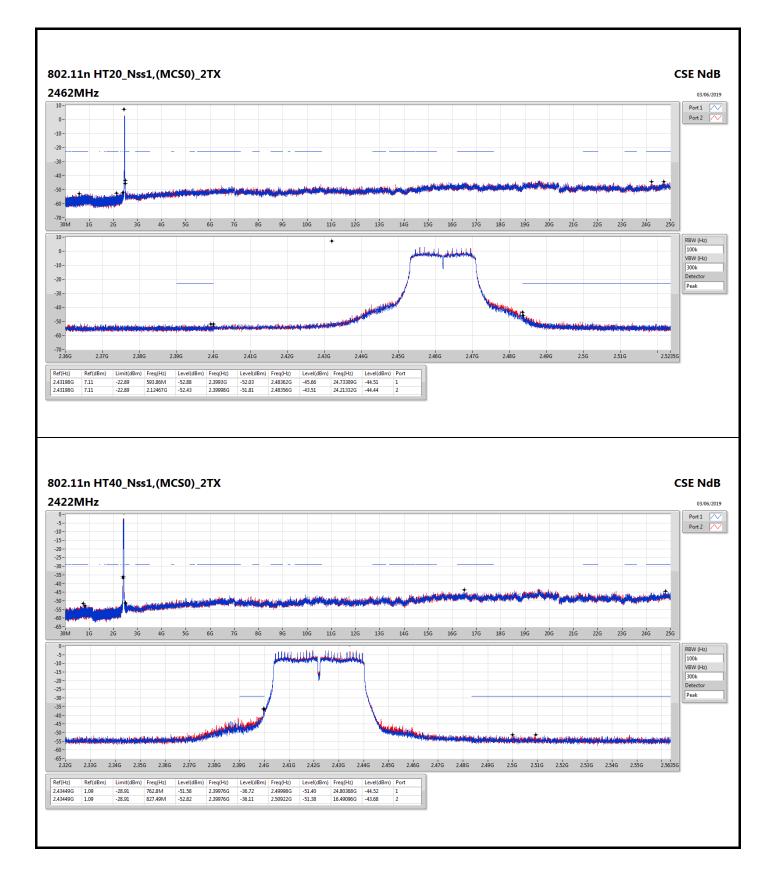




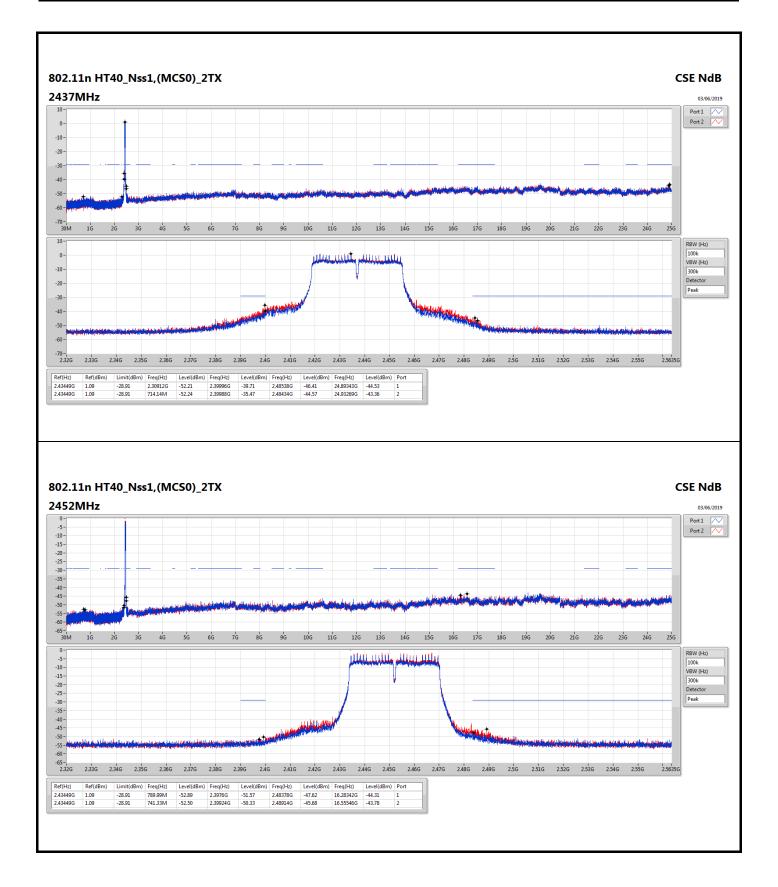




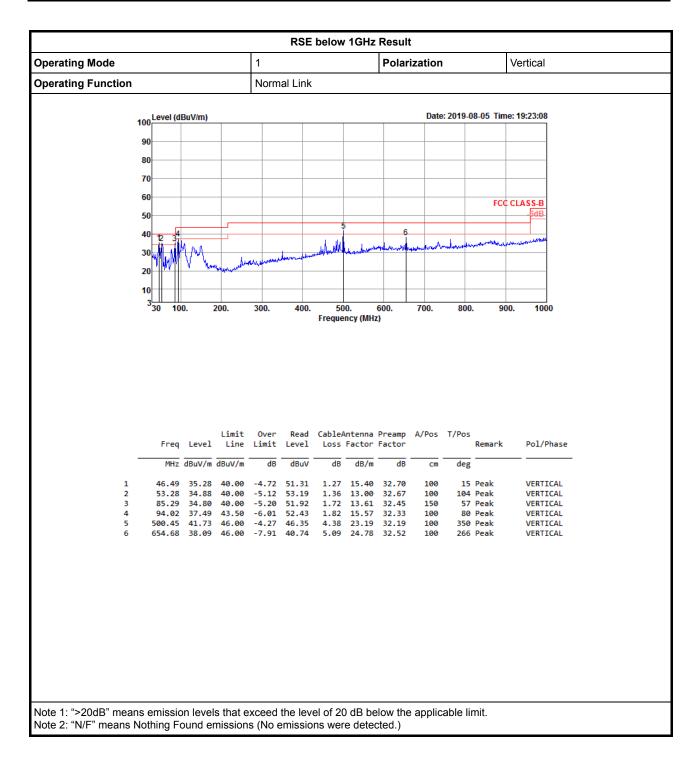




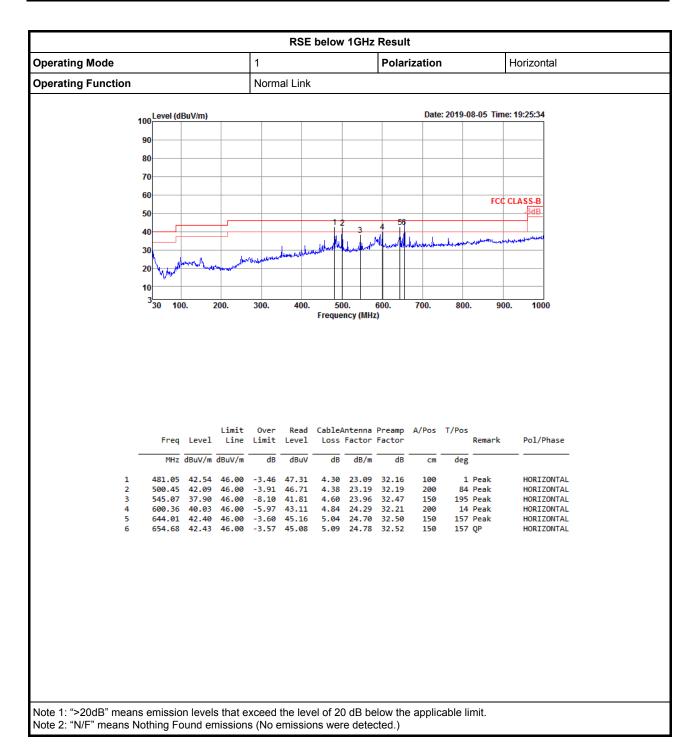












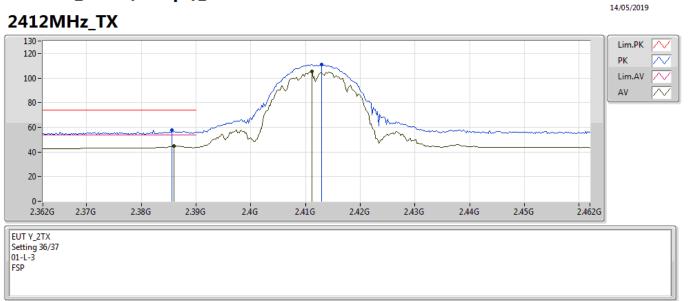


Summary

Mode	Result	Туре	Freq	Level	Limit	Margin	Factor	Dist	Condition	Azimuth	Height	Comments
			(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB)	(m)		(°)	(m)	
2.4-2.4835GHz	-	-	-	-	-	-	-	-	-	-	-	-
802.11n HT40_Nss1,(MCS0)_2TX	Pass	AV	2.3896G	53.82	54.00	-0.18	30.80	3	Vertical	30	1.22	-

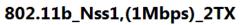


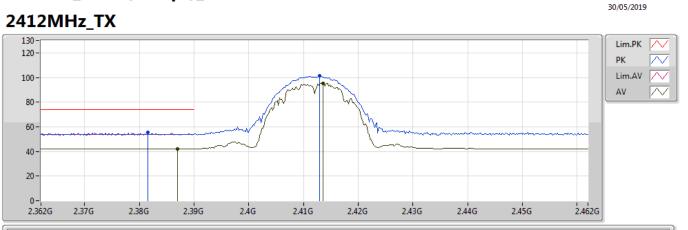
802.11b_Nss1,(1Mbps)_2TX



Freq	Level	Limit	Margin	Factor	Dist	Condition	Azimuth	Height	Comment				
(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB)	(m)		(°)	(m)					
2.3856G	57.99	74.00	-16.01	30.79	3	Vertical	29	1.47	-				
2.386G	44.91	54.00	-9.09	30.79	3	Vertical	29	1.47	-				
2.413G	110.92	Inf	-Inf	30.86	3	Vertical	29	1.47	-				
2.4112G	105.49	Inf	-Inf	30.86	3	Vertical	29	1.47	-				
	(Hz) 2.3856G 2.386G 2.413G	(Hz) (dBuV/m) 2.3856G 57.99 2.386G 44.91 2.413G 110.92	(Hz) (dBuV/m) (dBuV/m) 2.3856G 57.99 74.00 2.386G 44.91 54.00 2.413G 110.92 Inf	(Hz) (dBuV/m) (dBuV/m) (dB 2.3856G 57.99 74.00 -16.01 2.386G 44.91 54.00 -9.09 2.413G 110.92 Inf -Inf	(Hz) (dBuV/m) (dBuV/m) (dB) (dB) 2.3856G 57.99 74.00 -16.01 30.79 2.386G 44.91 54.00 -9.09 30.79 2.413G 110.92 Inf -Inf 30.86	(Hz) (dBuV/m) (dB) (dB) (m) 2.3856G 57.99 74.00 -16.01 30.79 3 2.386G 44.91 54.00 -9.09 30.79 3 2.413G 110.92 Inf -Inf 30.86 3	(Hz) (dBuV/m) (dB) (dB) (m) 2.3856G 57.99 74.00 -16.01 30.79 3 Vertical 2.386G 44.91 54.00 -9.09 30.79 3 Vertical 2.413G 110.92 Inf -Inf 30.86 3 Vertical	(Hz) (dBuV/m) (dB) (dB) (m) (*) 2.3856G 57.99 74.00 -16.01 30.79 3 Vertical 29 2.386G 44.91 54.00 -9.09 30.79 3 Vertical 29 2.413G 110.92 Inf -Inf 30.86 3 Vertical 29	(H2) (dBuV/m) (dB) (dB) (m) (°) (m) 2.3856G 57.99 74.00 -16.01 30.79 3 Vertical 29 1.47 2.386G 44.91 54.00 -9.09 30.79 3 Vertical 29 1.47 2.413G 110.92 Inf -Inf 30.86 3 Vertical 29 1.47	(Hz) (dBuV/m) (dB) (m) (°) (m) 2.3856G 57.99 74.00 -16.01 30.79 3 Vertical 29 1.47 - 2.3866G 44.91 54.00 -9.09 30.79 3 Vertical 29 1.47 - 2.413G 110.92 Inf -Inf 30.86 3 Vertical 29 1.47 -	(Hz) (dBuV/m) (dB) (dB) (m) (°) (m) 2.3856G 57.99 74.00 -16.01 30.79 3 Vertical 29 1.47 - 2.3866G 44.91 54.00 -9.09 30.79 3 Vertical 29 1.47 - 2.413G 110.92 Inf -Inf 30.86 3 Vertical 29 1.47 -	(Hz) (dBuV/m) (dB) (m) (°) (m) (m) 2.3856G 57.99 74.00 -16.01 30.79 3 Vertical 29 1.47 - 2.3866G 44.91 54.00 -9.09 30.79 3 Vertical 29 1.47 - 2.413G 110.92 Inf -Inf 30.86 3 Vertical 29 1.47 -	(H2) (dBuV/m) (dB) (dB) (m) (°) (m) (m) 2.3856G 57.99 74.00 -16.01 30.79 3 Vertical 29 1.47 - 2.3866G 44.91 54.00 -9.09 30.79 3 Vertical 29 1.47 - 2.413G 110.92 Inf -Inf 30.86 3 Vertical 29 1.47 -







EUT Y_2TX

Setting 36/37 01-L-3 FSP

Туре	Freq	Level	Limit	Margin	Factor	Dist	Condition	Azimuth	Height	Comment		
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB)	(m)		(°)	(m)			
РК	2.3816G	55.20	74.00	-18.80	30.77	3	Horizontal	181	2.41	-		
AV	2.387G	42.24	54.00	-11.76	30.79	3	Horizontal	181	2.41	-		
РК	2.413G	101.17	Inf	-Inf	30.86	3	Horizontal	181	2.41	-		
AV	2.4136G	95.22	Inf	-Inf	30.86	3	Horizontal	181	2.41	-		



802.11b_Nss1,(1Mbps)_2TX 30/05/2019 2412MHz_TX 130-Lim.PK \sim 120- \sim РК Lim.AV 100-AV \square 80 -60 -40-20 -0-1G 2G 3G 4G 5G 6G 7G 8G 9G 10G 11G 12G 13G 14G 15G 16G 17G 18G 19G 20G 21G 22G 23G 24G 25G EUT Y_2TX Setting 36/37 01-L-3 FSP Туре Freq Level Limit Margin Factor Dist Condition Azimuth Height Comment (dBuV/m) (dBuV/m) (dB) (Hz) (dB) (m) (°) (m) РК 4.82402G 56.01 74.00 -17.99 3.59 3 Vertical 82 1.31 4.82404G AV 52.61 54.00 -1.39 3.59 3 Vertical 82 1.31 РК 12.0591G 56.57 74.00 -17.43 12.33 3 Vertical 159 2.76 -AV 12.06092G 43.72 54.00 -10.28 12.33 3 Vertical 159 2.76



802.11b_Nss1,(1Mbps)_2TX 14/05/2019 2412MHz_TX 130-Lim.PK \sim 120- \sim РК Lim.AV 100-AV \square 80 -60 -40-20 -0-1G 2G 3G 4G 5G 6G 7G 8G 9G 10G 11G 12G 13G 14G 15G 16G 17G 18G 19G 20G 21G 22G 23G 24G 25G EUT Y_2TX Setting 36/37 01-L-3 FSP Туре Freq Level Limit Margin Factor Dist Condition Azimuth Height Comment (dBuV/m) (dBuV/m) (dB) (Hz) (dB) (m) (°) (m) РК 4.82399G 56.35 74.00 -17.65 3.59 3 Horizontal 20 1.23 4.82397G AV 52.33 54.00 -1.67 3.59 3 Horizontal 20 1.23 РК 12.06099G 60.20 74.00 -13.80 12.33 3 Horizontal 179 1.92 -AV 12.06081G 50.82 54.00 -3.18 12.33 3 Horizontal 179 1.92



2.38G

2.36G

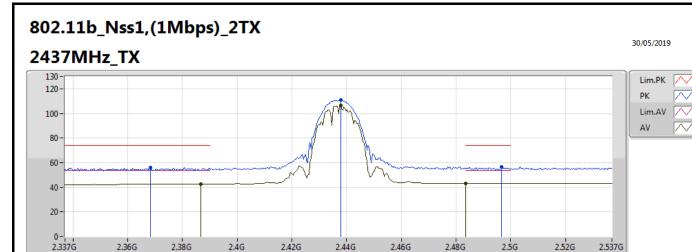
2.4G

2.42G

Appendix F.2

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EUT Y_2TX Setting 37/)1-L-3 FSP												
Туре	Freq	Level	Limit	Margin	Factor	Dist	Condition	Azimuth	Height	Comment		
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB)	(m)		(°)	(m)			
PK	2.3682G	55.86	74.00	-18.14	30.71	3	Vertical	20	2.83	-		
AV	2.3866G	42.61	54.00	-11.39	30.79	3	Vertical	20	2.83	-		
	2.4378G	110.87	Inf	-Inf	30.90	3	Vertical	20	2.83	-		
PK	2.45700	110.07			20120	-						
PK AV	2.4378G	106.70	Inf	-Inf	30.90	3	Vertical	20	2.83	-		
										-		

2.44G

2.48G

2.5G

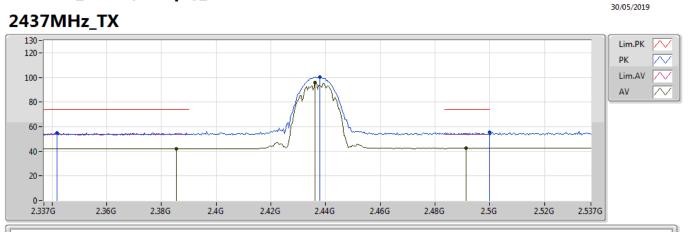
2.52G

2.537G

2.46G



802.11b_Nss1,(1Mbps)_2TX

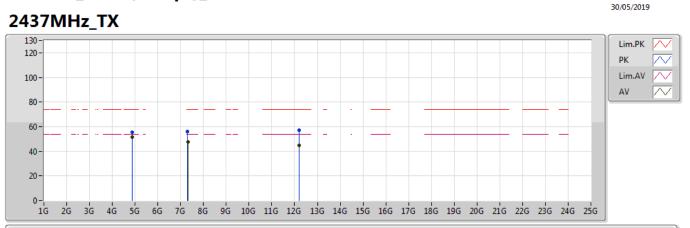


EUT Y_2TX Setting 37/38 01-L-3 FSP

Туре	Freq	Level	Limit	Margin	Factor	Dist	Condition	Azimuth	Height	Comment		
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB)	(m)		(°)	(m)			
PK	2.3418G	55.00	74.00	-19.00	30.62	3	Horizontal	167	1.20	-		
AV	2.3854G	42.11	54.00	-11.89	30.79	3	Horizontal	167	1.20	-		
PK	2.4378G	100.40	Inf	-Inf	30.90	3	Horizontal	167	1.20	-		
AV	2.4362G	95.97	Inf	-Inf	30.90	3	Horizontal	167	1.20	-		
PK	2.4998G	55.39	74.00	-18.61	30.99	3	Horizontal	167	1.20	-		
AV	2.4914G	42.36	54.00	-11.64	30.98	3	Horizontal	167	1.20	-		



802.11b_Nss1,(1Mbps)_2TX



EUT Y_2TX Setting 37/38 01-L-3 FSP

Туре	Freq	Level	Limit	Margin	Factor	Dist	Condition	Azimuth	Height	Comment		
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB)	(m)		(°)	(m)			
РК	4.87409G	55.31	74.00	-18.69	3.81	3	Vertical	86	1.50	-		
AV	4.87404G	51.81	54.00	-2.19	3.81	3	Vertical	86	1.50	-		
РК	7.31006G	55.98	74.00	-18.02	9.25	3	Vertical	167	2.31	-		
AV	7.31022G	47.43	54.00	-6.57	9.25	3	Vertical	167	2.31	-		
PK	12.18444G	57.08	74.00	-16.92	12.68	3	Vertical	102	2.21	-		
AV	12.18579G	44.69	54.00	-9.31	12.68	3	Vertical	102	2.21	-		



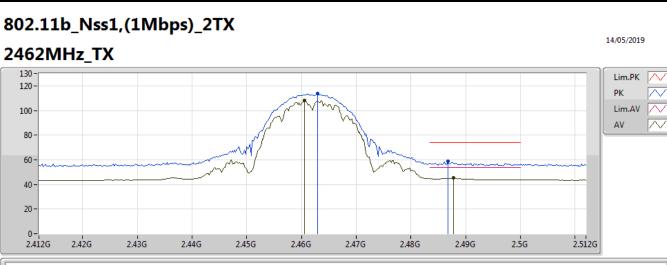
802.11b_Nss1,(1Mbps)_2TX 30/05/2019 2437MHz_TX 130-Lim.PK 120- \sim РК \sim Lim.AV 100-AV \square 80 -60 -40-20 -0-1G 6G 7G 8G 9G 10G 11G 12G 13G 14G 15G 16G 17G 18G 19G 20G 21G 22G 23G 24G 25G 2G 3G 4G 5G EUT Y_2TX Setting 37/38 01-L-3 FSP Туре Freq Level Limit Margin Factor Dist Condition Azimuth Height Comment (dBuV/m) (dBuV/m) (dB) (Hz) (dB) (m) (°) (m) PK 4.87406G 57.55 74.00 -16.45 3.81 3 Horizontal 154 1.01 4.87396G Horizontal 154 AV 53.64 54.00 -0.36 3.81 3 1.01 9.25 Horizontal 188 7.31196G 74.00 2.18 РК 59,59 -14.41 3 -AV 7.31173G 53.36 54.00 -0.64 9.25 3 Horizontal 188 2.18 _ PK 12.18587G 60.82 74.00 -13.18 12.68 Horizontal 178 1.95 3 12.18574G 1.95 54.00 12.68 3 Horizontal 178 AV 50.81 -3.19 _



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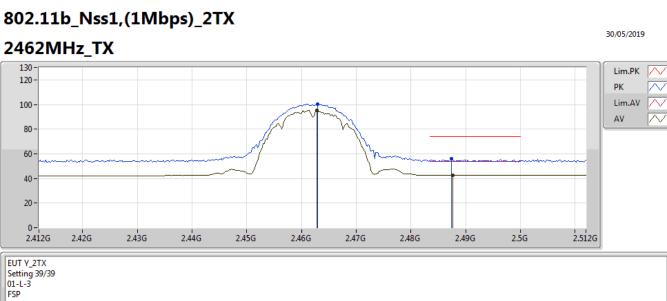
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EUT Y_2TX Setting 39/39 01-L-3 FSP

Туре	Freq	Level	Limit	Margin	Factor	Dist	Condition	Azimuth	Height	Comment		
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB)	(m)		(°)	(m)			
PK	2.463G	113.48	Inf	-Inf	30.93	3	Vertical	28	1.13	-		
AV	2.4606G	108.34	Inf	-Inf	30.93	3	Vertical	28	1.13	-		
PK	2.4868G	58.91	74.00	-15.09	30.97	3	Vertical	28	1.13	-		
AV	2.4878G	45.40	54.00	-8.60	30.97	3	Vertical	28	1.13	-		





Туре	Freq	Level	Limit	Margin	Factor	Dist	Condition	Azimuth	Height	Comment		
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB)	(m)		(°)	(m)			
РК	2.463G	100.23	Inf	-Inf	30.93	3	Horizontal	95	1.50	-		
AV	2.4628G	95.43	Inf	-Inf	30.93	3	Horizontal	95	1.50	-		
PK	2.4874G	55.82	74.00	-18.18	30.97	3	Horizontal	95	1.50	-		
AV	2.4876G	42.47	54.00	-11.53	30.97	3	Horizontal	95	1.50	-		



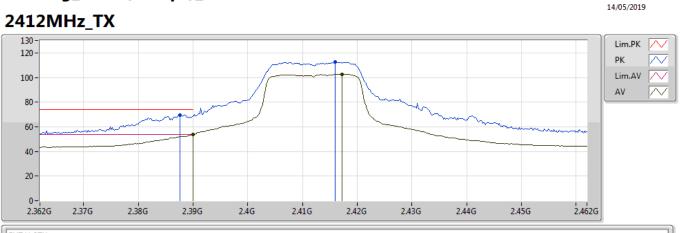
802.11b_Nss1,(1Mbps)_2TX 30/05/2019 2462MHz_TX 130-Lim.PK 120- \sim РК \sim Lim.AV 100-AV \square 80 -60 -40-20 -0-1G 6G 7G 8G 9G 10G 11G 12G 13G 14G 15G 16G 17G 18G 19G 20G 21G 22G 23G 24G 25G 2G 3G 4G 5G EUT Y_2TX Setting 39/39 01-L-3 FSP Туре Freq Level Limit Margin Factor Dist Condition Azimuth Height Comment (dBuV/m) (dBuV/m) (dB) (Hz) (dB) (m) (°) (m) PK 4.92396G 54.70 74.00 -19.30 4.04 3 Vertical 69 1.50 4.92403G 4.04 1.50 AV 50.21 54.00 -3.79 3 Vertical 69 7.38504G 74.00 2.07 РК 58.06 -15.94 9.24 3 Vertical 224 -AV 7.38524G 50.07 54.00 -3.93 9.24 3 Vertical 224 2.07 PK 12.30914G 57.03 74.00 -16.97 13.03 Vertical 157 1.49 3 12.30915G 54.00 -10.85 13.03 3 157 AV 43.15 Vertical 1.49 _



802.11b_Nss1,(1Mbps)_2TX 30/05/2019 2462MHz_TX 130-Lim.PK 120- \sim РК \sim Lim.AV 100-AV \square 80 -60 -40-20 -0-1G 6G 7G 8G 9G 10G 11G 12G 13G 14G 15G 16G 17G 18G 19G 20G 21G 22G 23G 24G 25G 2G 3G 4G 5G EUT Y_2TX Setting 39/39 01-L-3 FSP Туре Freq Level Limit Margin Factor Dist Condition Azimuth Height Comment (dBuV/m) (dBuV/m) (dB) (Hz) (dB) (m) (°) (m) PK 4.92385G 55.56 74.00 -18.44 4.04 3 Horizontal 31 1.30 4.92397G 4.04 Horizontal 31 1.30 AV 51.00 54.00 -3.00 3 Horizontal 178 7.38509G 74.00 3 2.08 РК 60.00 -14.00 9.24 -AV 7.38517G 53.46 54.00 -0.54 9.24 3 Horizontal 178 2.08 _ PK 12.31098G 60.95 74.00 -13.05 13.03 Horizontal 178 1.90 3 12.30923G 51.34 54.00 -2.66 13.03 3 Horizontal 178 1.90 AV _



802.11g_Nss1,(6Mbps)_2TX



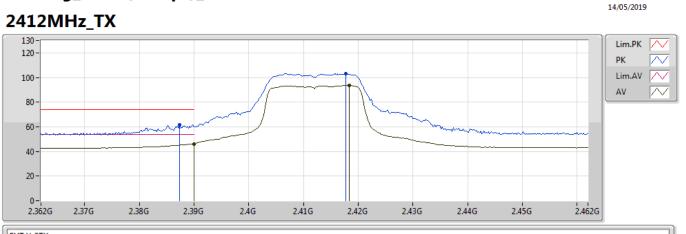
EUT Y_2TX

Setting 42/43 01-L-3 FSP

Туре	Freq	Level	Limit	Margin	Factor	Dist	Condition	Azimuth	Height	Comment		
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB)	(m)		(°)	(m)			
PK	2.3876G	69.47	74.00	-4.53	30.79	3	Vertical	31	1.26	-		
AV	2.39G	53.58	54.00	-0.42	30.80	3	Vertical	31	1.26	-		
PK	2.416G	112.56	Inf	-Inf	30.87	3	Vertical	31	1.26	-		
AV	2.4172G	102.77	Inf	-Inf	30.87	3	Vertical	31	1.26	-		



802.11g_Nss1,(6Mbps)_2TX



EUT Y_2TX

Туре	Freq	Level	Limit	Margin	Factor	Dist	Condition	Azimuth	Height	Comment		
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB)	(m)		(°)	(m)			
PK	2.3874G	61.50	74.00	-12.50	30.79	3	Horizontal	206	2.11	-		
AV	2.39G	46.19	54.00	-7.81	30.80	3	Horizontal	206	2.11	-		
PK	2.4178G	102.97	Inf	-Inf	30.87	3	Horizontal	206	2.11	-		
AV	2.4184G	93.58	Inf	-Inf	30.87	3	Horizontal	206	2.11	-		
	2.41040	35.50		-1111	50.07	-	Tionzontai	200	2.11	-		

Setting 42/43 01-L-3 FSP



AV

12.05844G

42.14

54.00

-11.86

12.33

3

802.11g_Nss1,(6Mbps)_2TX 30/05/2019 2412MHz_TX 130-Lim.PK \sim 120- \sim РК Lim.AV 100-AV \square 80 -60 -40-20 -0-1G 2G 3G 4G 5G 6G 7G 8G 9G 10G 11G 12G 13G 14G 15G 16G 17G 18G 19G 20G 21G 22G 23G 24G 25G EUT Y_2TX Setting 42/43 01-L-3 FSP Туре Freq Level Limit Margin Factor Dist Condition Azimuth Height Comment (dBuV/m) (dBuV/m) (dB) (Hz) (dB) (m) (°) (m) РК 4.8259G 53.03 74.00 -20.97 3.60 3 Vertical 84 1.43 4.82373G AV 38.75 54.00 -15.25 3.59 3 Vertical 84 1.43 РК 12.05828G 55.80 74.00 -18.20 12.33 3 Vertical 297 1.01 -

Vertical

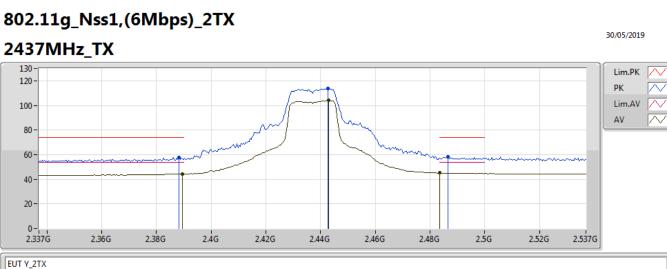
297

1.01



802.11g_Nss1,(6Mbps)_2TX 30/05/2019 2412MHz_TX 130-Lim.PK \sim 120- \sim РК Lim.AV 100-AV \square 80 -60 -40-20 -0-1G 2G 3G 4G 5G 6G 7G 8G 9G 10G 11G 12G 13G 14G 15G 16G 17G 18G 19G 20G 21G 22G 23G 24G 25G EUT Y_2TX Setting 42/43 01-L-3 FSP Туре Freq Level Limit Margin Factor Dist Condition Azimuth Height Comment (dBuV/m) (dBuV/m) (dB) (Hz) (dB) (m) (°) (m) РК 4.8258G 53.17 74.00 -20.83 3.60 3 Horizontal 162 1.50 4.82436G AV 39.05 54.00 -14.95 3.59 3 Horizontal 162 1.50 РК 12.0575G 59.87 74.00 -14.13 12.30 3 Horizontal 179 1.82 -AV 12.05856G 44.48 54.00 -9.52 12.33 3 Horizontal 179 1.82

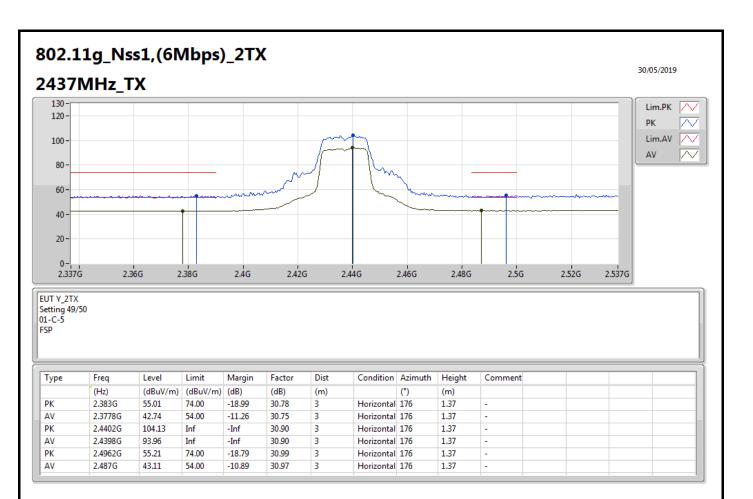




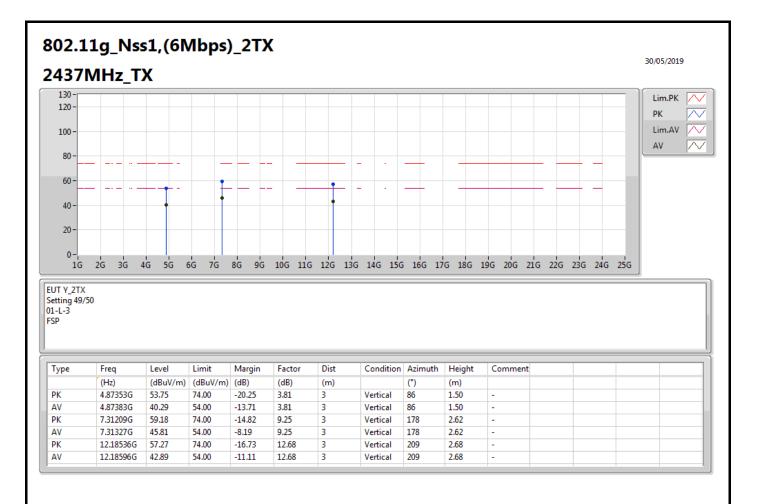
EUT Y_2TX Setting 49/50 01-C-5 FSP

Туре	Freq	Level	Limit	Margin	Factor	Dist	Condition	Azimuth	Height	Comment		
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB)	(m)		(°)	(m)			
PK	2.3882G	57.64	74.00	-16.36	30.79	3	Vertical	23	1.45	-		
AV	2.3894G	44.28	54.00	-9.72	30.80	3	Vertical	23	1.45	-		
PK	2.4426G	113.82	Inf	-Inf	30.90	3	Vertical	23	1.45	-		
AV	2.443G	104.01	Inf	-Inf	30.90	3	Vertical	23	1.45	-		
PK	2.4866G	58.46	74.00	-15.54	30.97	3	Vertical	23	1.45	-		
AV	2.4835G	45.16	54.00	-8.84	30.96	3	Vertical	23	1.45	-		



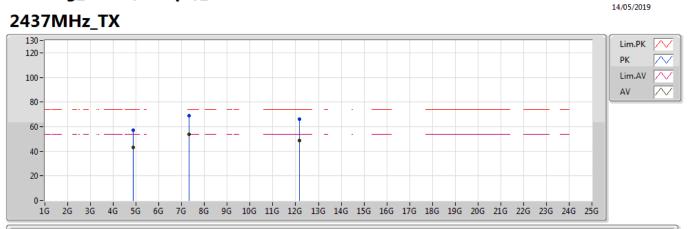








802.11g_Nss1,(6Mbps)_2TX

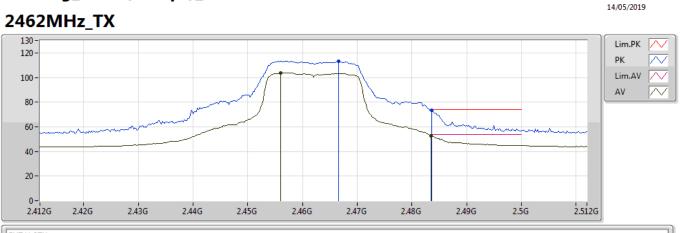


EUT Y_2TX Setting 49/50 01-L-3 FSP

Туре	Freq	Level	Limit	Margin	Factor	Dist	Condition	Azimuth	Height	Comment		
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB)	(m)		(°)	(m)			
PK	4.8744G	57.07	74.00	-16.93	3.81	3	Horizontal	166	1.00	-		
AV	4.87472G	43.00	54.00	-11.00	3.81	3	Horizontal	166	1.00	-		
PK	7.31232G	69.01	74.00	-4.99	9.25	3	Horizontal	215	1.82	-		
AV	7.31103G	53.81	54.00	-0.19	9.25	3	Horizontal	215	1.82	-		
PK	12.18144G	65.94	74.00	-8.06	12.67	3	Horizontal	204	1.50	-		
AV	12.18276G	49.02	54.00	-4.98	12.67	3	Horizontal	204	1.50	-		



802.11g_Nss1,(6Mbps)_2TX



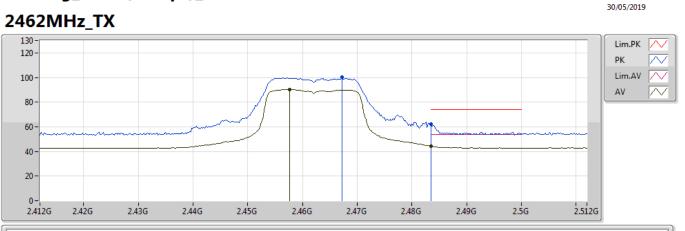
EUT Y_2TX

Туре	Freq	Level	Limit	Margin	Factor	Dist	Condition	Azimuth	Height	Comment		
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB)	(m)		(°)	(m)			
PK	2.4666G	113.38	Inf	-Inf	30.94	3	Vertical	31	1.17	-		
AV	2.456G	103.80	Inf	-Inf	30.93	3	Vertical	31	1.17	-		
РК	2.4836G	73.24	74.00	-0.76	30.96	3	Vertical	31	1.17	-		
AV	2.4835G	52.89	54.00	-1.11	30.96	3	Vertical	31	1.17	-		

Setting 43/43 01-L-3 FSP



802.11g_Nss1,(6Mbps)_2TX

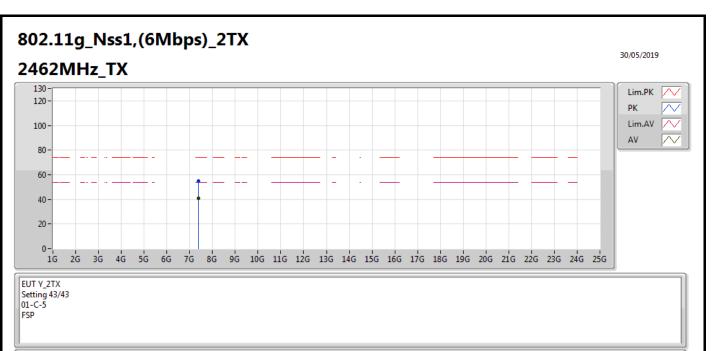


EUT Y_2TX

	Limit (dBuV/m)	Margin (dB)	Factor	Dist	Condition	Azimuth	Height	Comment				
	(dBuV/m)	(dB)	4.100									
		(ub)	(dB)	(m)		(°)	(m)					
G 100.03	Inf	-Inf	30.94	3	Horizontal	94	1.27	-				
G 90.37	Inf	-Inf	30.93	3	Horizontal	94	1.27	-				
G 62.13	74.00	-11.87	30.96	3	Horizontal	94	1.27	-				
G 44.44	54.00	-9.56	30.96	3	Horizontal	94	1.27	-				
	5 90.37 5 62.13	6 90.37 Inf 6 62.13 74.00	G 90.37 Inf -Inf G 62.13 74.00 -11.87	G 90.37 Inf -Inf 30.93 G 62.13 74.00 -11.87 30.96	5 90.37 Inf -Inf 30.93 3 5 62.13 74.00 -11.87 30.96 3	G 90.37 Inf -Inf 30.93 3 Horizontal G 62.13 74.00 -11.87 30.96 3 Horizontal	G 90.37 Inf -Inf 30.93 3 Horizontal 94 G 62.13 74.00 -11.87 30.96 3 Horizontal 94	G 90.37 Inf -Inf 30.93 3 Horizontal 94 1.27 G 62.13 74.00 -11.87 30.96 3 Horizontal 94 1.27	5 90.37 Inf -Inf 30.93 3 Horizontal 94 1.27 - 5 62.13 74.00 -11.87 30.96 3 Horizontal 94 1.27 -	5 90.37 Inf -Inf 30.93 3 Horizontal 94 1.27 - 5 62.13 74.00 -11.87 30.96 3 Horizontal 94 1.27 -	5 90.37 Inf -Inf 30.93 3 Horizontal 94 1.27 - 5 62.13 74.00 -11.87 30.96 3 Horizontal 94 1.27 -	5 90.37 Inf -Inf 30.93 3 Horizontal 94 1.27 - 5 62.13 74.00 -11.87 30.96 3 Horizontal 94 1.27 -

Setting 43/43 01-C-5 FSP





Туре	Freq	Level	Limit	Margin	Factor	Dist	Condition	Azimuth	Height	Comment		
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB)	(m)		(°)	(m)			
PK	7.38444G	55.08	74.00	-18.92	9.23	3	Vertical	209	2.26	-		
AV	7.38912G	40.63	54.00	-13.37	9.24	3	Vertical	209	2.26	-		



802.11g_Nss1,(6Mbps)_2TX 30/05/2019 2462MHz_TX 130-Lim.PK 120-РК \sim Lim.AV 100-AV \square 80 -60 -40-20 -0-1 1G 2G 3G 4G 5G 6G 7G 8G 9G 10G 11G 12G 13G 14G 15G 16G 17G 18G 19G 20G 21G 22G 23G 24G 25G EUT Y_2TX

Setting 43/43 01-C-5 FSP

Туре	Freq	Level	Limit	Margin	Factor	Dist	Condition	Azimuth	Height	Comment		
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB)	(m)		(°)	(m)			
PK	7.37988G	58.91	74.00	-15.09	9.24	3	Horizontal	186	2.16	-		
AV	7.3866G	42.77	54.00	-11.23	9.24	3	Horizontal	186	2.16	-		



AV

2.4168G

101.31

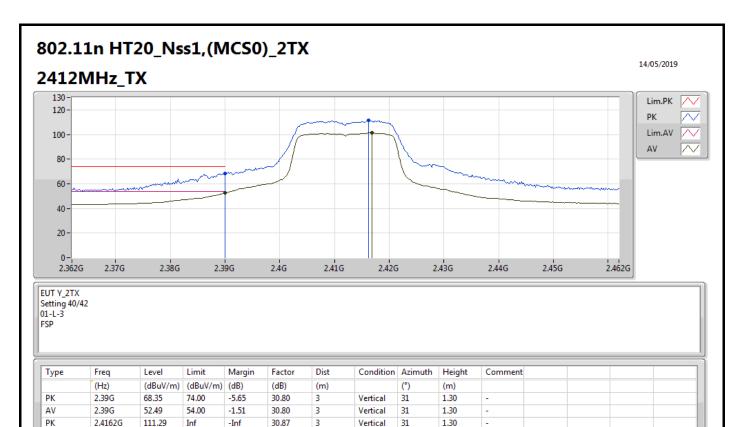
Inf

-Inf

30.87

3

Appendix F.2



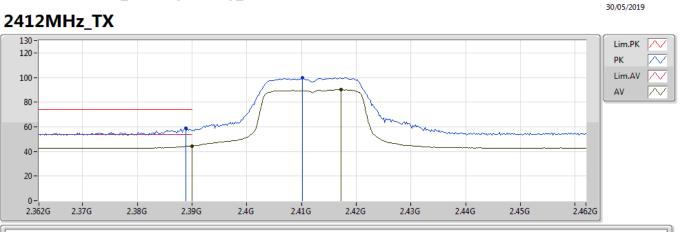
Vertical

31

1.30



802.11n HT20_Nss1,(MCS0)_2TX

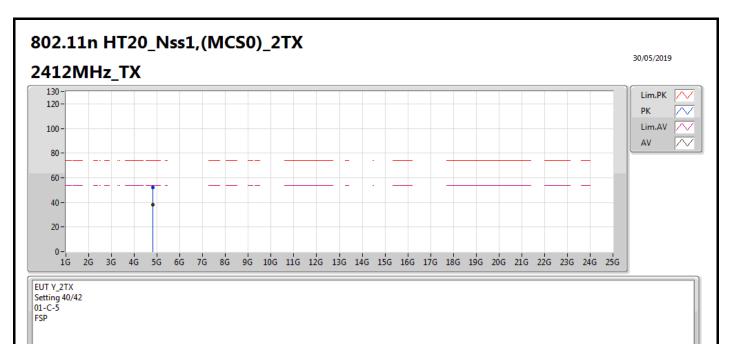


EUT Y_2TX

Setting 40/42 01-C-5 FSP

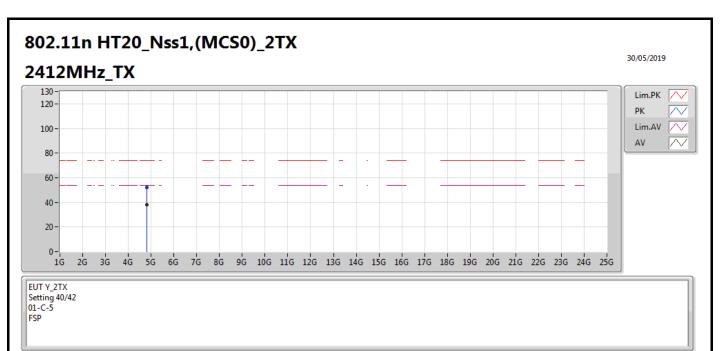
Туре	Freq	Level	Limit	Margin	Factor	Dist	Condition	Azimuth	Height	Comment		
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB)	(m)		(°)	(m)			
PK	2.3888G	58.88	74.00	-15.12	30.80	3	Horizontal	168	1.43	-		
AV	2.39G	44.50	54.00	-9.50	30.80	3	Horizontal	168	1.43	-		
PK	2.4102G	99.70	Inf	-Inf	30.86	3	Horizontal	168	1.43	-		
AV	2.4172G	90.35	Inf	-Inf	30.87	3	Horizontal	168	1.43	-		





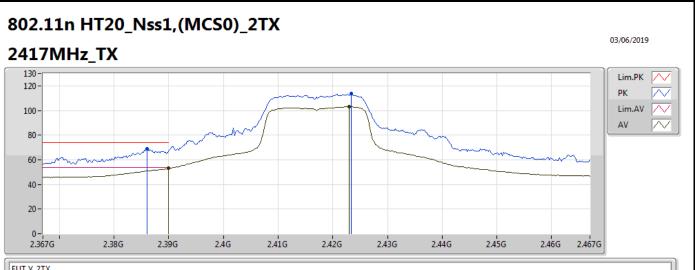
Туре	Freq	Level	Limit	Margin	Factor	Dist	Condition	Azimuth	Height	Comment		
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB)	(m)		(°)	(m)			
PK	4.82556G	51.84	74.00	-22.16	3.60	3	Vertical	83	1.48	-		
AV	4.8222G	38.19	54.00	-15.81	3.59	3	Vertical	83	1.48	-		





Туре	Freq	Level	Limit	Margin	Factor	Dist	Condition	Azimuth	Height	Comment		
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB)	(m)		(°)	(m)			
PK	4.82508G	52.18	74.00	-21.82	3.60	3	Horizontal	173	1.47	-		
AV	4.82256G	38.16	54.00	-15.84	3.59	3	Horizontal	173	1.47	-		



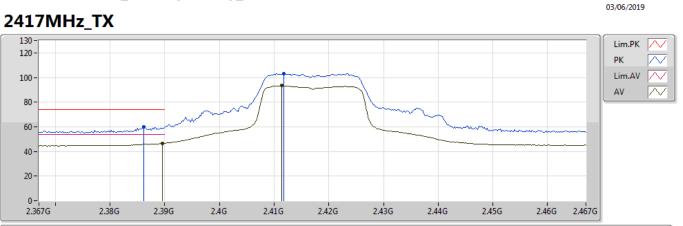


EUT Y_2TX Setting 47/48 03-S-5 FSP

Туре	Freq	Level	Limit	Margin	Factor	Dist	Condition	Azimuth	Height	Comment		
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB)	(m)		(°)	(m)			
РК	2.386G	68.84	74.00	-5.16	32.05	3	Vertical	18	1.81	-		
AV	2.39G	53.15	54.00	-0.85	32.06	3	Vertical	18	1.81	-		
РК	2.4234G	113.50	Inf	-Inf	32.18	3	Vertical	18	1.81	-		
AV	2.423G	103.00	Inf	-Inf	32.18	3	Vertical	18	1.81	-		





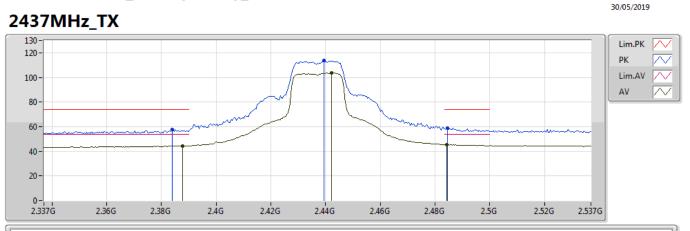


EUT Y_2TX Setting 47/48 03-S-5 FSP

Туре	Freq	Level	Limit	Margin	Factor	Dist	Condition	Azimuth	Height	Comment		
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB)	(m)		(°)	(m)			
РК	2.3862G	60.07	74.00	-13.93	32.05	3	Horizontal	73	1.12	-		
AV	2.3896G	46.49	54.00	-7.51	32.06	3	Horizontal	73	1.12	-		
РК	2.4118G	103.37	Inf	-Inf	32.14	3	Horizontal	73	1.12	-		
AV	2.4114G	93.44	Inf	-Inf	32.13	3	Horizontal	73	1.12	-		



802.11n HT20_Nss1,(MCS0)_2TX

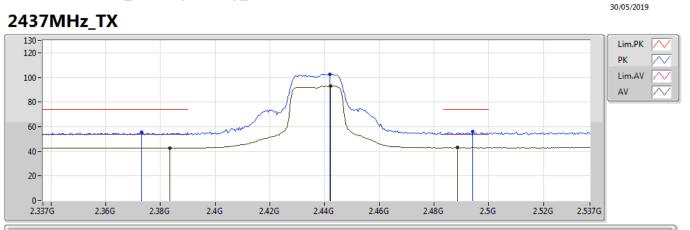


EUT Y_2TX Setting 48/50 01-C-5 FSP

Туре	Freq	Level	Limit	Margin	Factor	Dist	Condition	Azimuth	Height	Comment		
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB)	(m)		(°)	(m)			
PK	2.3838G	57.89	74.00	-16.11	30.78	3	Vertical	16	1.44	-		
AV	2.3878G	44.44	54.00	-9.56	30.79	3	Vertical	16	1.44	-		
PK	2.4394G	113.62	Inf	-Inf	30.90	3	Vertical	16	1.44	-		
AV	2.4422G	103.84	Inf	-Inf	30.90	3	Vertical	16	1.44	-		
РК	2.4846G	58.82	74.00	-15.18	30.96	3	Vertical	16	1.44	-		
AV	2.4842G	45.27	54.00	-8.73	30.96	3	Vertical	16	1.44	-		



802.11n HT20_Nss1,(MCS0)_2TX



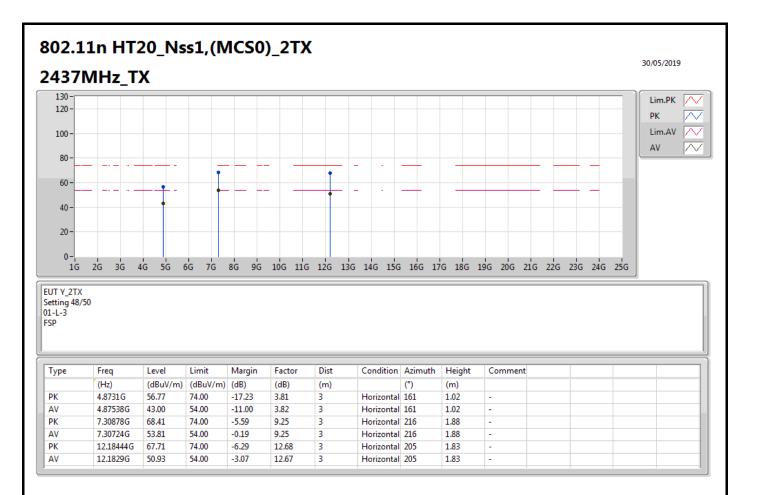
EUT Y_2TX Setting 48/50 01-C-5 FSP

Туре	Freq	Level	Limit	Margin	Factor	Dist	Condition	Azimuth	Height	Comment		
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB)	(m)		(°)	(m)			
PK	2.373G	55.29	74.00	-18.71	30.74	3	Horizontal	167	1.24	-		
AV	2.3834G	42.69	54.00	-11.31	30.78	3	Horizontal	167	1.24	-		
РК	2.4418G	102.65	Inf	-Inf	30.90	3	Horizontal	167	1.24	-		
AV	2.4422G	93.09	Inf	-Inf	30.90	3	Horizontal	167	1.24	-		
PK	2.4942G	56.27	74.00	-17.73	30.98	3	Horizontal	167	1.24	-		
AV	2.4886G	42.99	54.00	-11.01	30.97	3	Horizontal	167	1.24	-		

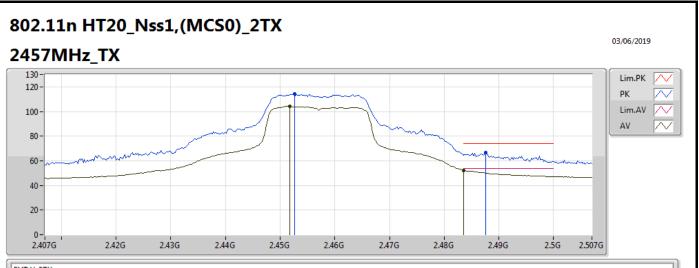








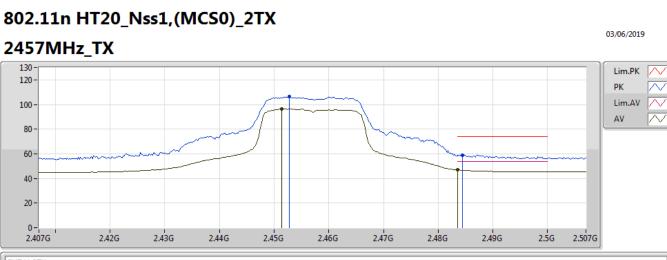




EUT Y_2TX Setting 48/49 03-S-5 FSP

Туре	Freq	Level	Limit	Margin	Factor	Dist	Condition	Azimuth	Height	Comment		
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB)	(m)		(°)	(m)			
PK	2.4526G	114.09	Inf	-Inf	32.29	3	Vertical	17	1.95	-		
AV	2.4518G	104.07	Inf	-Inf	32.29	3	Vertical	17	1.95	-		
РК	2.4876G	66.90	74.00	-7.10	32.42	3	Vertical	17	1.95	-		
AV	2.4835G	52.25	54.00	-1.75	32.41	3	Vertical	17	1.95	-		



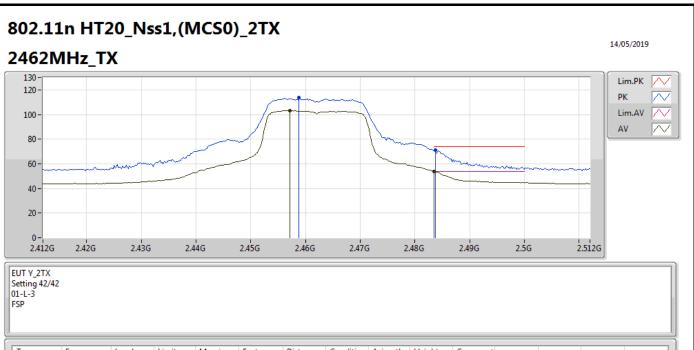


EUT Y_2TX Setting 48/49 03-S-5

FS	Р		

Туре	Freq	Level	Limit	Margin	Factor	Dist	Condition	Azimuth	Height	Comment		
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB)	(m)		(°)	(m)			
PK	2.4528G	106.32	Inf	-Inf	32.29	3	Horizontal	113	2.99	-		
AV	2.4514G	96.22	Inf	-Inf	32.28	3	Horizontal	113	2.99	-		
PK	2.4844G	59.10	74.00	-14.90	32.41	3	Horizontal	113	2.99	-		
AV	2.4835G	46.87	54.00	-7.13	32.41	3	Horizontal	113	2.99	-		

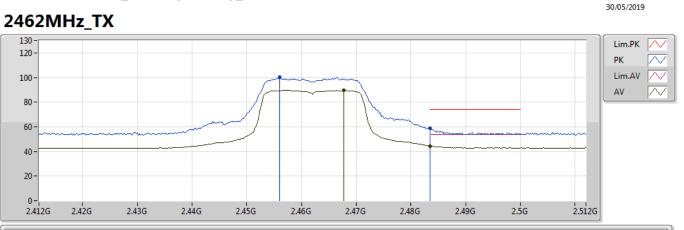




Туре	Freq	Level	Limit	Margin	Factor	Dist	Condition	Azimuth	Height	Comment		
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB)	(m)		(°)	(m)			
РК	2.4588G	113.51	Inf	-Inf	30.93	3	Vertical	28	1.16	-		
AV	2.4572G	103.23	Inf	-Inf	30.93	3	Vertical	28	1.16	-		
PK	2.4838G	71.01	74.00	-2.99	30.96	3	Vertical	28	1.16	-		
AV	2.4835G	53.52	54.00	-0.48	30.96	3	Vertical	28	1.16	-		



802.11n HT20_Nss1,(MCS0)_2TX

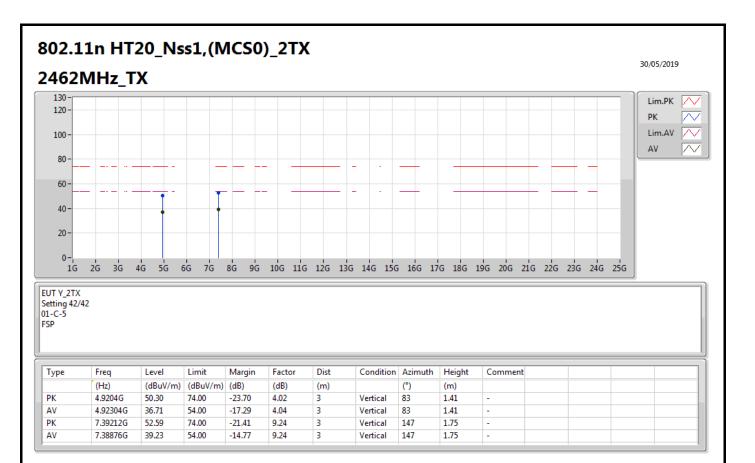


EUT Y_2TX

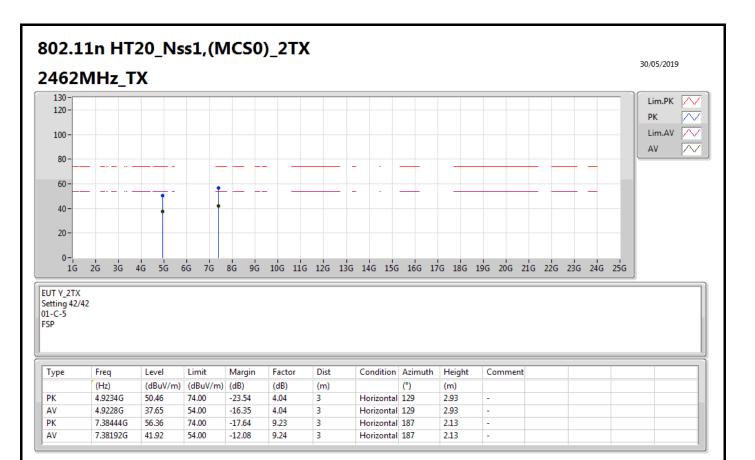
Setting 42/42 01-C-5 FSP

Туре	Freq	Level	Limit	Margin	Factor	Dist	Condition	Azimuth	Height	Comment		
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB)	(m)		(°)	(m)			
РК	2.456G	100.45	Inf	-Inf	30.93	3	Horizontal	94	1.50	-		
AV	2.4678G	89.66	Inf	-Inf	30.94	3	Horizontal	94	1.50	-		
РК	2.4835G	58.77	74.00	-15.23	30.96	3	Horizontal	94	1.50	-		
AV	2.4835G	44.53	54.00	-9.47	30.96	3	Horizontal	94	1.50	-		

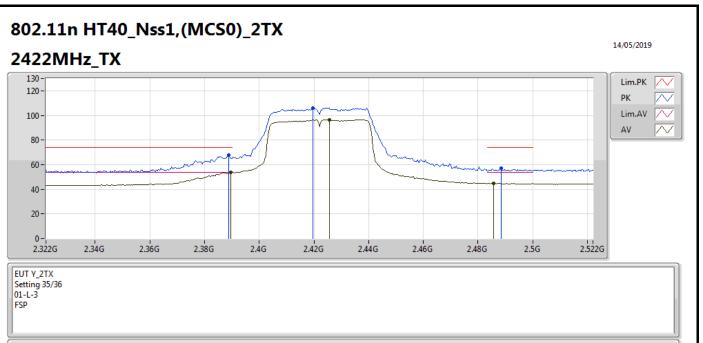












Туре	Freq	Level	Limit	Margin	Factor	Dist	Condition	Azimuth	Height	Comment		
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB)	(m)		(°)	(m)			
PK	2.3888G	67.71	74.00	-6.29	30.80	3	Vertical	30	1.22	-		
AV	2.3896G	53.82	54.00	-0.18	30.80	3	Vertical	30	1.22	-		
РК	2.4196G	106.02	Inf	-Inf	30.87	3	Vertical	30	1.22	-		
AV	2.4256G	96.47	Inf	-Inf	30.88	3	Vertical	30	1.22	-		
РК	2.4884G	57.07	74.00	-16.93	30.97	3	Vertical	30	1.22	-		
AV	2.4856G	45.02	54.00	-8.98	30.97	3	Vertical	30	1.22	-		



PK

AV

2.4912G

2.492G

55.02

43.43

74.00

54.00

-18.98

-10.57

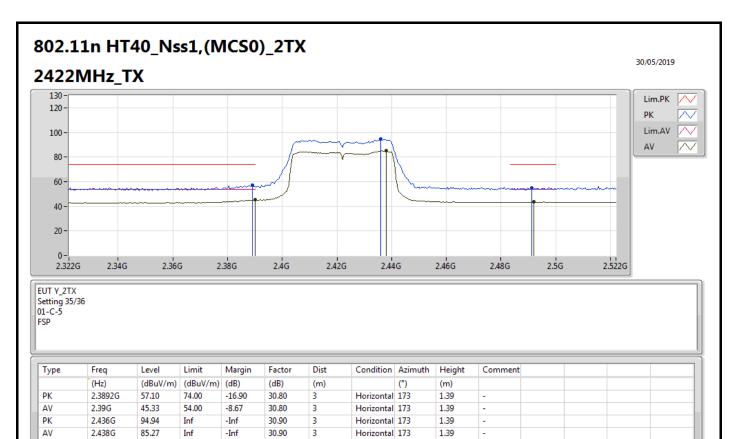
30.98

30.98

3

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Appendix F.2



Horizontal 173

Horizontal 173

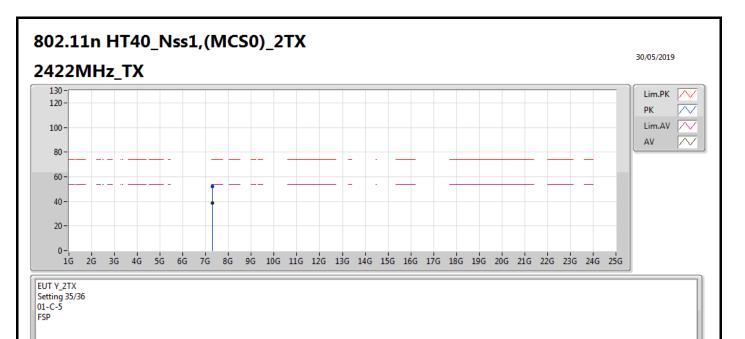
1.39

1.39

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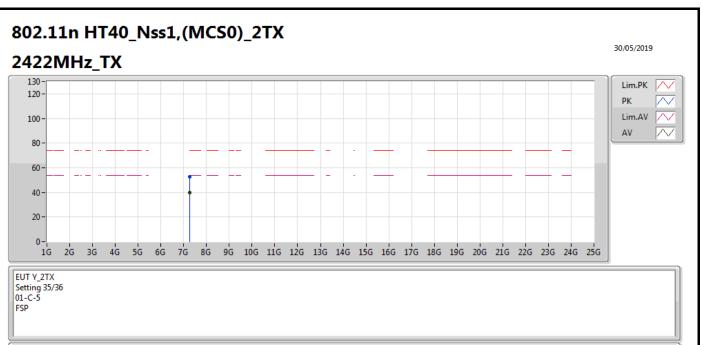
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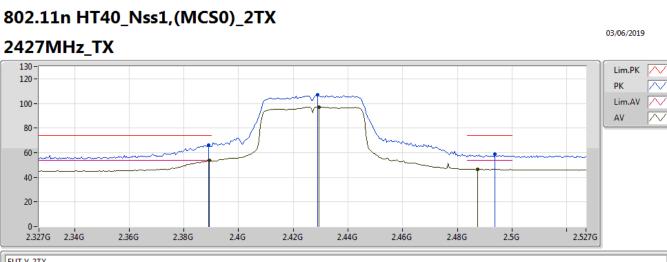
Туре	Freq	Level	Limit	Margin	Factor	Dist	Condition	Azimuth	Height	Comment		
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB)	(m)		(°)	(m)			
PK	7.28316G	51.96	74.00	-22.04	9.23	3	Vertical	214	1.71	-		
AV	7.28232G	38.91	54.00	-15.09	9.23	3	Vertical	214	1.71	-		





Туре	Freq	Level	Limit	Margin	Factor	Dist	Condition	Azimuth	Height	Comment		
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB)	(m)		(°)	(m)			
PK	7.25508G	52.47	74.00	-21.53	9.17	3	Horizontal	180	2.04	-		
AV	7.2732G	40.01	54.00	-13.99	9.21	3	Horizontal	180	2.04	-		

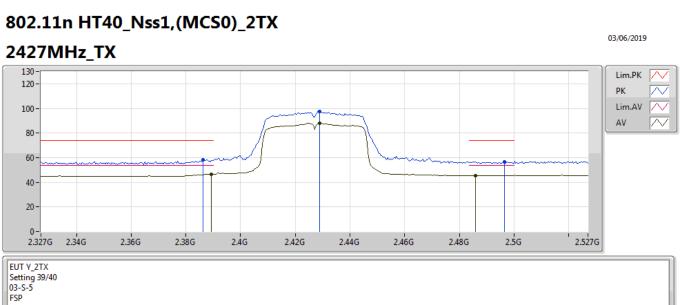




EUT Y_2TX Setting 39/40 03-S-5 FSP

Туре	Freq	Level	Limit	Margin	Factor	Dist	Condition	Azimuth	Height	Comment		
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB)	(m)		(°)	(m)			
РК	2.389G	66.23	74.00	-7.77	32.06	3	Vertical	24	1.86	-		
AV	2.3894G	53.56	54.00	-0.44	32.06	3	Vertical	24	1.86	-		
PK	2.429G	106.93	Inf	-Inf	32.20	3	Vertical	24	1.86	-		
AV	2.4294G	97.20	Inf	-Inf	32.20	3	Vertical	24	1.86	-		
PK	2.4938G	58.60	74.00	-15.40	32.45	3	Vertical	24	1.86	-		
AV	2.4874G	46.54	54.00	-7.46	32.42	3	Vertical	24	1.86	-		

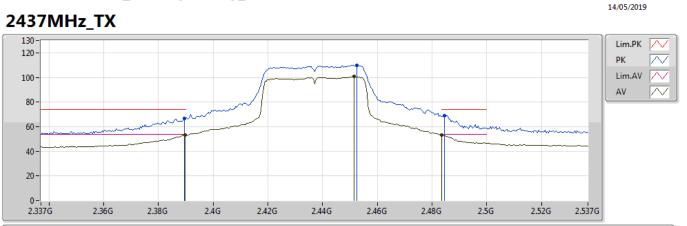




Туре	Freq	Level	Limit	Margin	Factor	Dist	Condition	Azimuth	Height	Comment		
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB)	(m)		(°)	(m)			
PK	2.3862G	58.33	74.00	-15.67	32.05	3	Horizontal	95	2.73	-		
AV	2.3894G	46.71	54.00	-7.29	32.06	3	Horizontal	95	2.73	-		
PK	2.429G	97.53	Inf	-Inf	32.20	3	Horizontal	95	2.73	-		
AV	2.429G	87.88	Inf	-Inf	32.20	3	Horizontal	95	2.73	-		
PK	2.4966G	56.87	74.00	-17.13	32.46	3	Horizontal	95	2.73	-		
AV	2.4858G	45.59	54.00	-8.41	32.42	3	Horizontal	95	2.73	-		





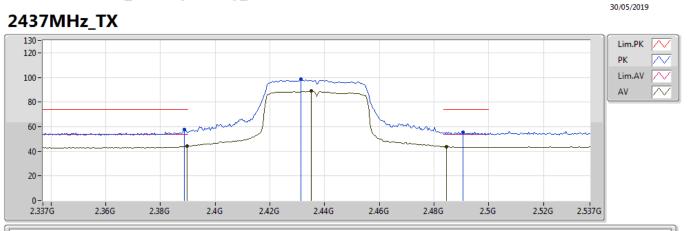


EUT Y_2TX Setting 42/43 01-L-3 FSP

Туре	Freq	Level	Limit	Margin	Factor	Dist	Condition	Azimuth	Height	Comment		
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB)	(m)		(°)	(m)			
РК	2.3894G	66.82	74.00	-7.18	30.80	3	Vertical	30	1.17	-		
AV	2.3898G	53.15	54.00	-0.85	30.80	3	Vertical	30	1.17	-		
РК	2.4526G	109.96	Inf	-Inf	30.92	3	Vertical	30	1.17	-		
AV	2.4514G	100.60	Inf	-Inf	30.92	3	Vertical	30	1.17	-		
PK	2.4846G	69.05	74.00	-4.95	30.96	3	Vertical	30	1.17	-		
AV	2.4835G	53.49	54.00	-0.51	30.96	3	Vertical	30	1.17	-		



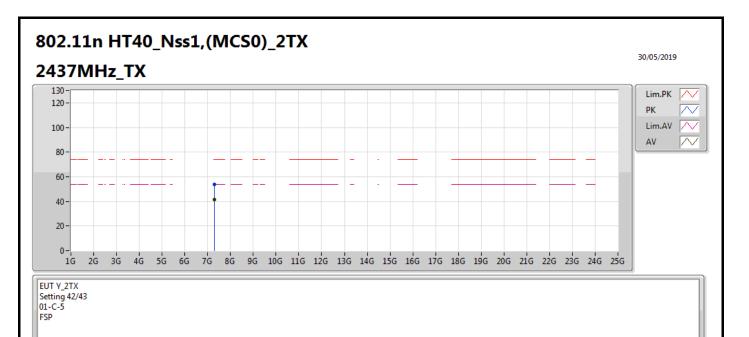
802.11n HT40_Nss1,(MCS0)_2TX



EUT Y_2TX Setting 42/43 01-C-5 FSP

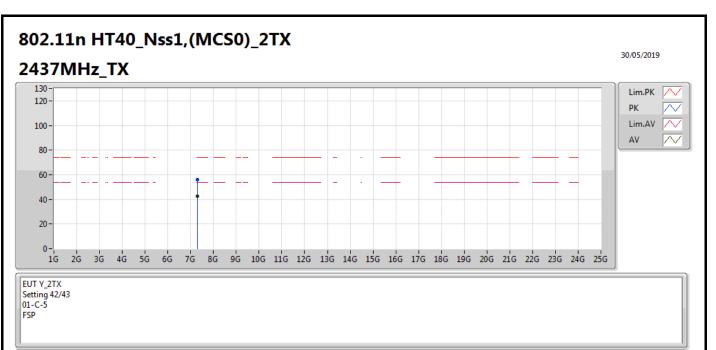
Туре	Freq	Level	Limit	Margin	Factor	Dist	Condition	Azimuth	Height	Comment		
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB)	(m)		(°)	(m)			
РК	2.3886G	57.97	74.00	-16.03	30.80	3	Horizontal	175	2.06	-		
AV	2.3898G	44.04	54.00	-9.96	30.80	3	Horizontal	175	2.06	-		
РК	2.4314G	98.52	Inf	-Inf	30.89	3	Horizontal	175	2.06	-		
AV	2.435G	88.89	Inf	-Inf	30.89	3	Horizontal	175	2.06	-		
РК	2.4906G	55.44	74.00	-18.56	30.98	3	Horizontal	175	2.06	-		
AV	2.4846G	43.84	54.00	-10.16	30.96	3	Horizontal	175	2.06	-		





Туре	Freq	Level	Limit	Margin	Factor	Dist	Condition	Azimuth	Height	Comment		
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB)	(m)		(°)	(m)			
PK	7.2954G	53.97	74.00	-20.03	9.24	3	Vertical	171	2.71	-		
AV	7.29936G	41.41	54.00	-12.59	9.25	3	Vertical	171	2.71	-		





Туре	Freq	Level	Limit	Margin	Factor	Dist	Condition	Azimuth	Height	Comment		
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB)	(m)		(°)	(m)			
РК	7.29636G	56.16	74.00	-17.84	9.24	3	Horizontal	186	2.11	-		
AV	7.30428G	42.81	54.00	-11.19	9.25	3	Horizontal	186	2.11	-		



AV

PK

AV

2.4504G

2.4864G

2.4835G

98.43

70.81

53.38

Inf

74.00

54.00

-Inf

-3.19

-0.62

30.92

30.97

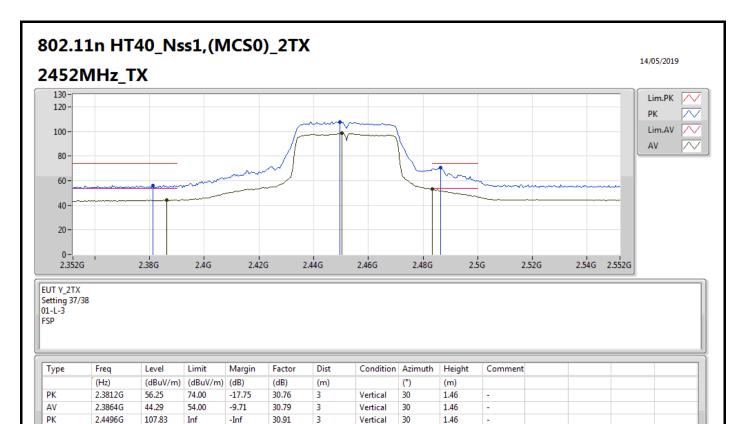
30.96

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3

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Appendix F.2



Vertical

Vertical

Vertical

30

30

30

1.46

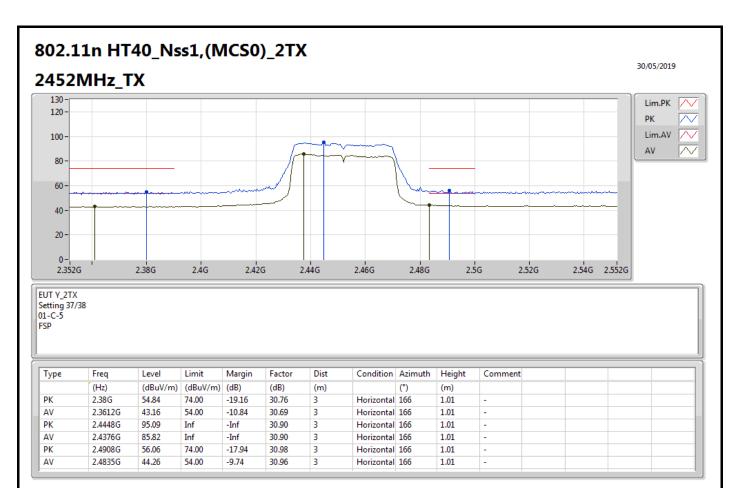
1.46

1.46

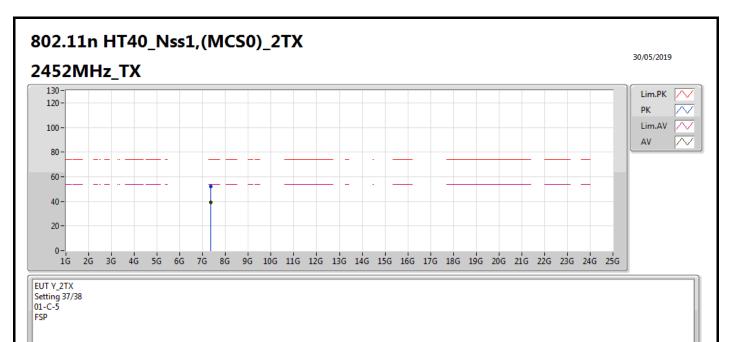
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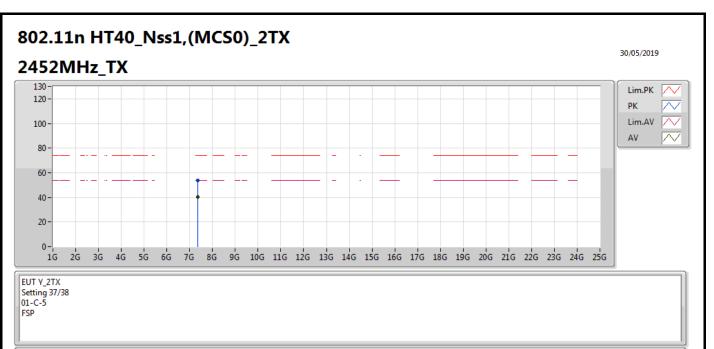






Туре	Freq	Level	Limit	Margin	Factor	Dist	Condition	Azimuth	Height	Comment		
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB)	(m)		(°)	(m)			
PK	7.36908G	52.15	74.00	-21.85	9.25	3	Vertical	174	2.26	-		
AV	7.35672G	39.26	54.00	-14.74	9.25	3	Vertical	174	2.26	-		





Туре	Freq	Level	Limit	Margin	Factor	Dist	Condition	Azimuth	Height	Comment		
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB)	(m)		(°)	(m)			
РК	7.35876G	53.53	74.00	-20.47	9.25	3	Horizontal	183	2.14	-		
AV	7.35084G	40.57	54.00	-13.43	9.24	3	Horizontal	183	2.14	-		