



FCC RADIO TEST REPORT

FCC ID : JNZVR0018
Equipment : Camera
Brand Name : Logitech
Model Name : VR0018
Applicant : Logitech Far East Ltd.
No. 2 Creation Road 4, Science-Based Industrial
Park, Hsinchu, 300 Taiwan
Manufacturer : Chicony Electronics (Dongguan) Co., Ltd.
San Zhong Guan Li Qu, Qingxi Town, Dongguan
City, Guangdong 523651 China (Peoples Republic
Of China)
Standard : 47 CFR FCC Part 15.247

The product was received on Aug. 27, 2019, and testing was started from Aug. 27, 2019 and completed on Oct. 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: Cliff Chang

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



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TEL : 886-3-656-9065
FAX : 886-3-656-9085
Report Template No.: CB-A10_10 Ver1.0



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: 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]

Band	Mode	BWch (MHz)	Nant
2.4-2.4835GHz	802.11b	20	1TX
2.4-2.4835GHz	802.11g	20	1TX
2.4-2.4835GHz	802.11n HT20	20	1TX

Note:

- ♦ 11b mode uses a combination of DSSS-DBPSK, DQPSK, CCK modulation.
- ♦ 11g, HT20 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.
- ♦ The EUT doesn't support 40MHz

1.1.2 Antenna Information

Ant.	Port	Brand	P/N	Antenna Type	Connector	Gain (dBi)
1	1	Amphenol	C5828-12-001-C	PIFA Antenna	I-PEX	2.29

Note: The above information was declared by manufacturer.

For IEEE 802.11b/g/n mode (1TX, 1RX):

Port 1 can be used as transmitting/receiving antenna.

1.1.3 Mode Test Duty Cycle

Mode	DC	DCF(dB)	T(s)	VBW(Hz) $\geq 1/T$
802.11b	0.991	0.04	n/a (DC $\geq$ 0.98)	n/a (DC $\geq$ 0.98)
802.11g	0.936	0.29	1.433m	1k
802.11n HT20	0.932	0.31	1.34m	1k

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	☒ Without beamforming	
Function	☒ Point-to-multipoint	☐ Point-to-point	
Test Software Version	Tera Term V4.79		

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 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
☒	JHUBEI	ADD	No.8, Lane 724, Bo-ai St., Jhubei City, HsinChu County 302, Taiwan, R.O.C.	
		TEL	886-3-656-9065	FAX : 886-3-656-9085

Test Condition	Test Site No.	Test Engineer	Test Environment	Test Date
RF Conducted	TH01-CB	Owen Hsu	23.9-25.3°C / 63-68%	Aug. 27, 2019~ Oct. 02, 2019
Radiated (Below 1GHz)	03CH01-CB	Justin Lin	25-25.3°C / 59-63%	Sep. 02, 2019~ Oct. 16, 2019
Radiated (Above 1GHz)	03CH04-CB	Bruce Yang	24.5-25.9°C / 62-68%	Aug. 29, 2019
AC Conduction	CO01-CB	Ryo Fan	24-25°C / 56~57%	Sep. 02, 2019~ Sep. 26, 2019

Test site Designation No. TW0006 with FCC.

Test site registered number IC 4086D with Industry Canada.



1.4 Measurement Uncertainty

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

Test Items	Uncertainty	Remark
Conducted Emission (150kHz ~ 30MHz)	2.0 dB	Confidence levels of 95%
Radiated Emission (30MHz ~ 1,000MHz)	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	PowerSetting
802.11b_Nss1,(1Mbps)_1TX	-
2412MHz	78
2437MHz	78
2462MHz	80
802.11g_Nss1,(6Mbps)_1TX	-
2412MHz	75
2417MHz	88
2437MHz	88
2457MHz	78
2462MHz	70
802.11n HT20_Nss1,(MCS0)_1TX	-
2412MHz	73
2417MHz	88
2437MHz	88
2457MHz	77
2462MHz	69



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 - Powered by 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



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 - Powered by adapter in X axis
2	EUT - Powered by adapter in Y axis
3	EUT - Powered by adapter in Z axis
For operating mode 2 is the worst case and it was record in this test report.	
Operating Mode > 1GHz	CTX
For Radiated Emission The EUT was performed at X axis, Y axis and Z axis position. The worst case was found at Z axis, thus the measurement will follow this same test configuration.	
For Band Edge Emission The EUT was performed at X axis, Y axis and Z axis position. The worst case was found at X axis, thus the measurement will follow this same test configuration.	

Note: The eut should powered by host system that RF tool can control EUT contineously transmit.

2.3 EUT Operation during Test

For CTX Mode:

The EUT was programmed to be in continuously transmitting mode.

For Normal Link:

During the test, the EUT operation to normal function.



2.4 Accessories

Accessories				
No.	Equipment Name	Brand Name	Model Name	Rating
1	Adapter	logi	SOY-0510140US-348	Input: 100-240V~50/60Hz 0.3A Max. Output: 5.1V, 1.4A

2.5 Support Equipment

For AC Conduction:

Support Equipment				
No.	Equipment	Brand Name	Model Name	FCC ID
A	NB	DELL	E6430	N/A

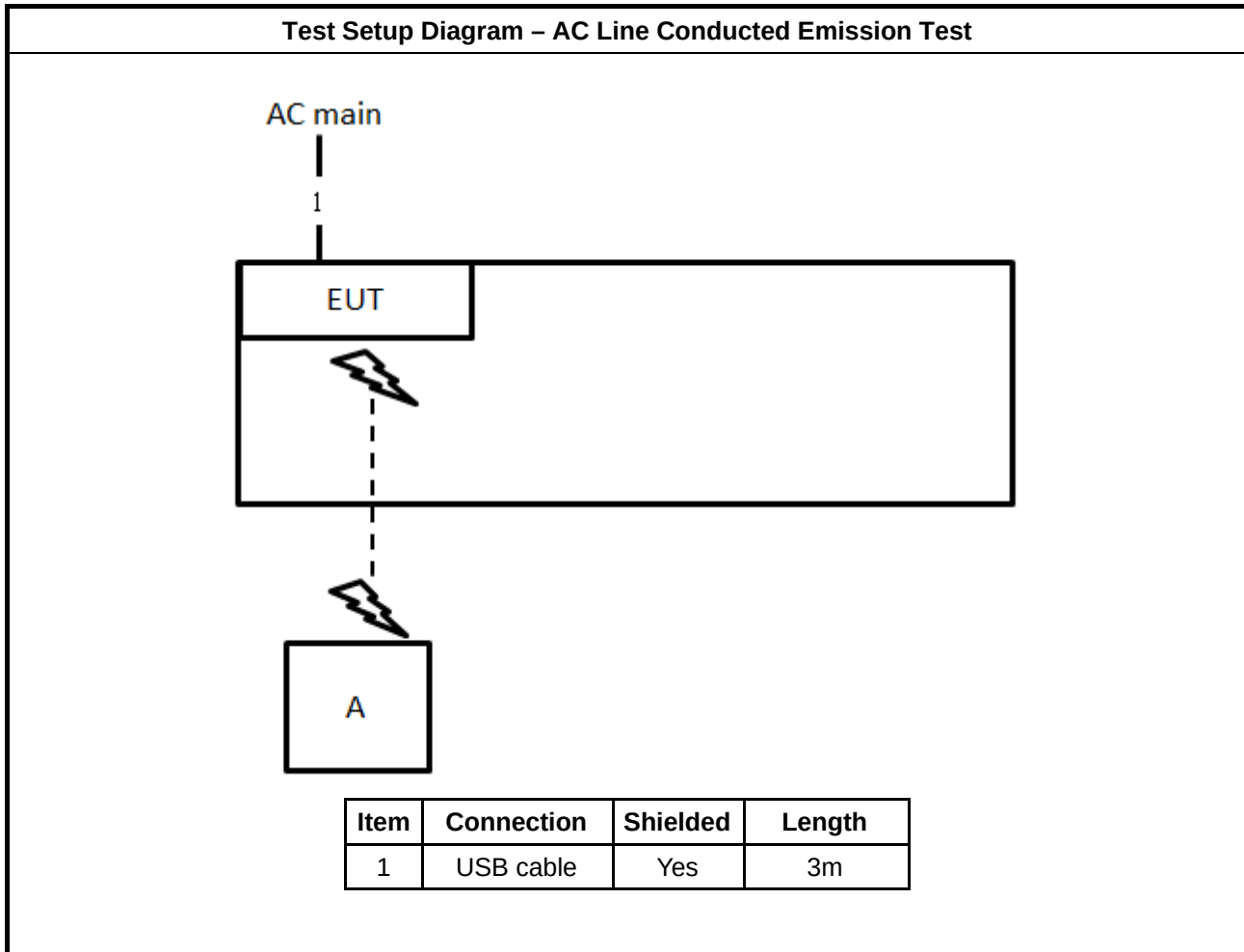
For Radiated:

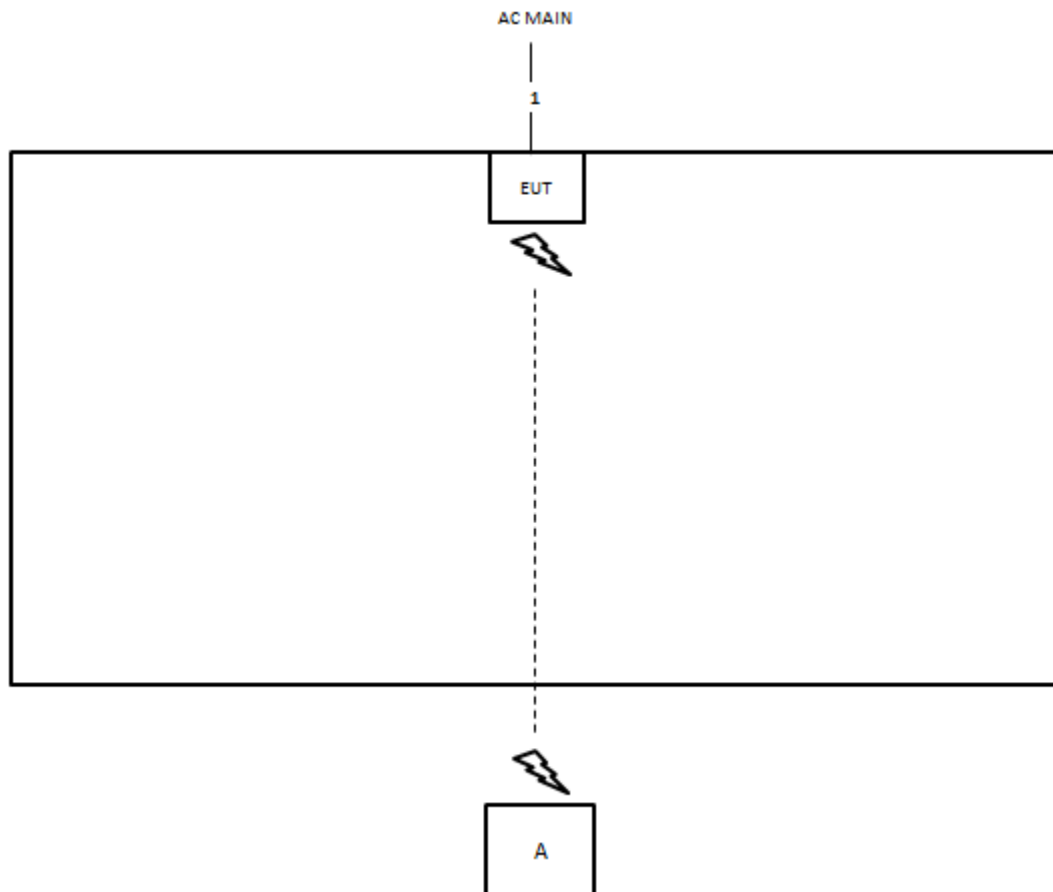
Support Equipment				
No.	Equipment	Brand Name	Model Name	FCC ID
A	NB	DELL	E4300	N/A

For RF Conducted:

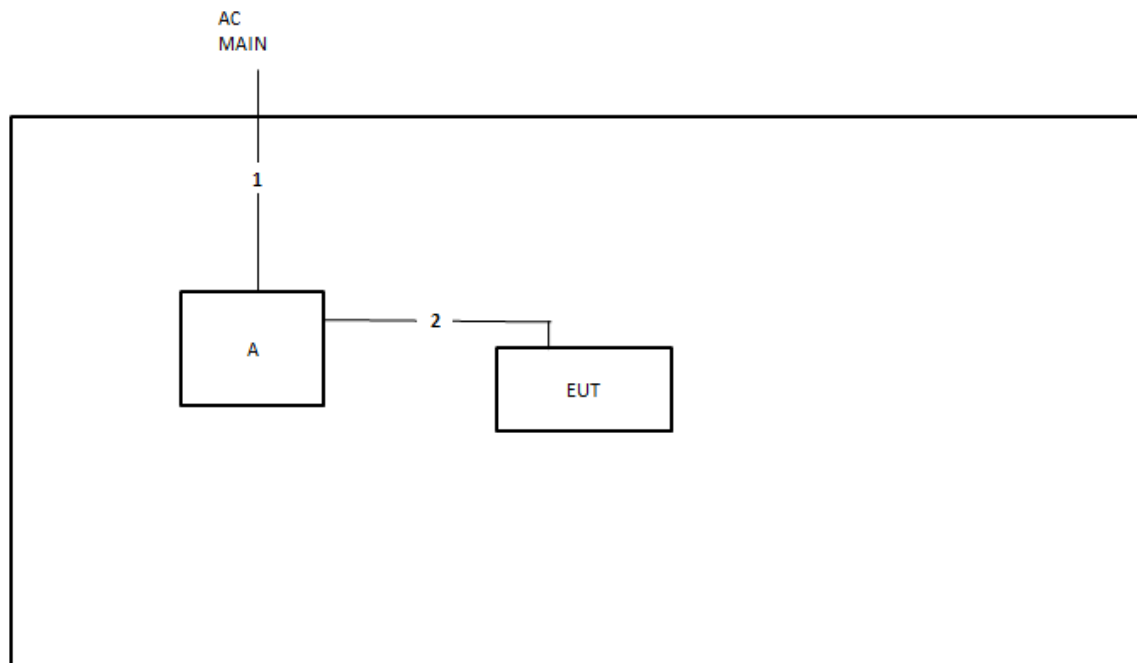
Support Equipment				
No.	Equipment	Brand Name	Model Name	FCC ID
A	NB	DELL	E4300	N/A

2.6 Test Setup Diagram



Test Setup Diagram - Radiated Test < 1GHz


Item	Connection	Shielded	Length
1	USB cable	Yes	3m

Test Setup Diagram - Radiated Test > 1GHz


Item	Connection	Shielded	Length
1	Power cable	No	2.6m
2	USB cable	Yes	3m



3 Transmitter Test Result

3.1 AC Power-line Conducted Emissions

3.1.1 AC Power-line Conducted Emissions Limit

AC Power-line Conducted Emissions Limit		
Frequency Emission (MHz)	Quasi-Peak	Average
0.15-0.5	66 - 56 *	56 - 46 *
0.5-5	56	46
5-30	60	50

Note 1: * Decreases with the logarithm of the frequency.

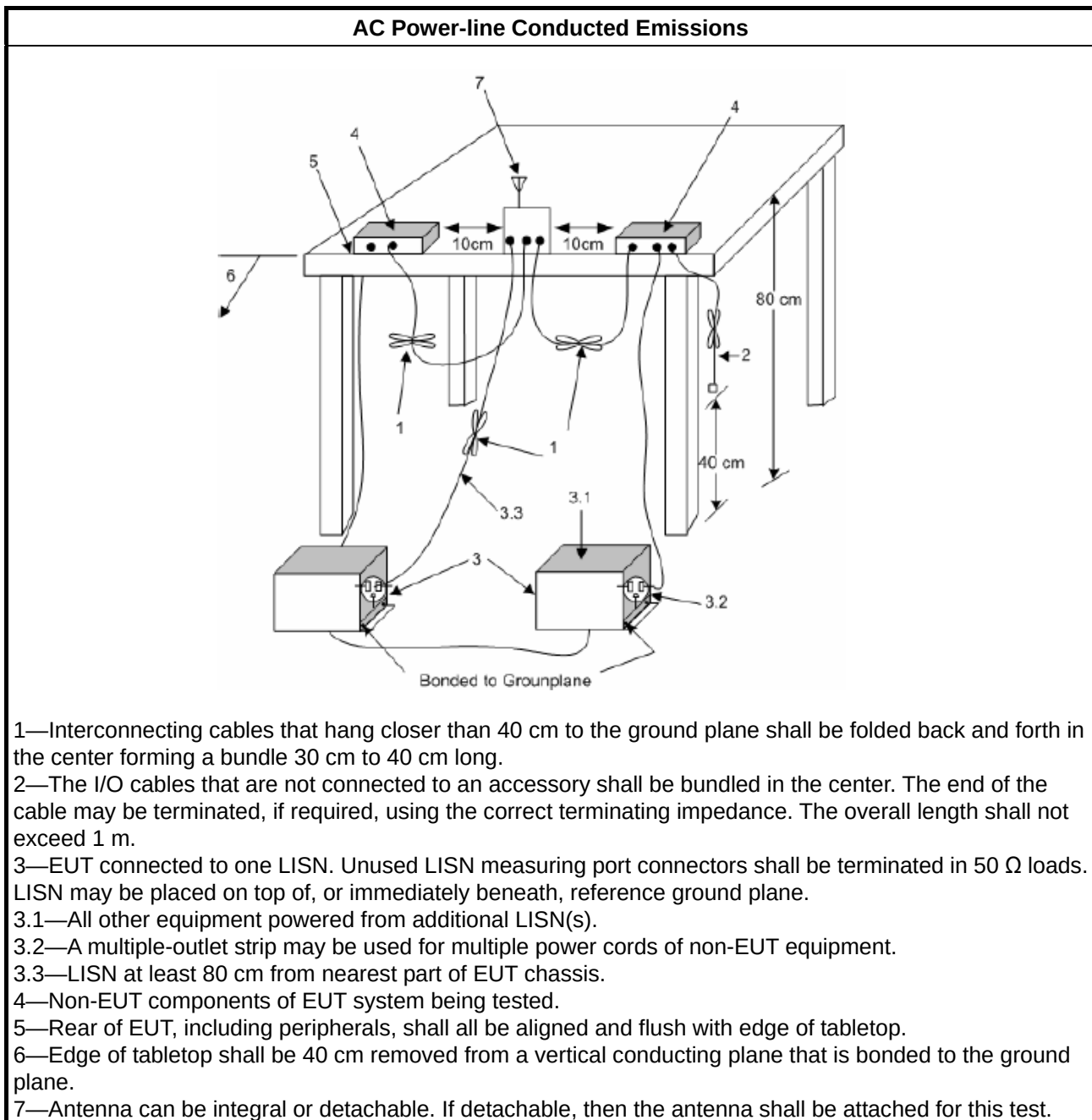
3.1.2 Measuring Instruments

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

3.1.3 Test Procedures

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

3.1.4 Test Setup



3.1.5 Test Result of AC Power-line Conducted Emissions

Refer as Appendix A

3.2 DTS Bandwidth

3.2.1 6dB Bandwidth Limit

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

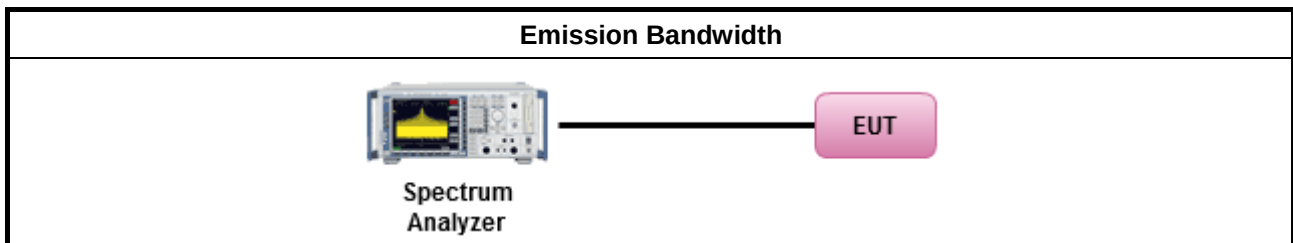
3.2.2 Measuring Instruments

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

3.2.3 Test Procedures

Test Method	
▪	For the emission bandwidth shall be measured using one of the options below:
☒	Refer as FCC KDB 558074, clause 8.2 & 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	
	▪ If $G_{TX} \leq 6$ dBi, then $P_{Out} \leq 30$ dBm (1 W)
	▪ Point-to-multipoint systems (P2M): If $G_{TX} > 6$ dBi, then $P_{Out} = 30 - (G_{TX} - 6)$ dBm
	▪ Point-to-point systems (P2P): If $G_{TX} > 6$ dBi, then $P_{Out} = 30 - (G_{TX} - 6)/3$ dBm
	▪ Smart antenna system (SAS):
	- Single beam: If $G_{TX} > 6$ dBi, then $P_{Out} = 30 - (G_{TX} - 6)/3$ dBm
	- Overlap beam: If $G_{TX} > 6$ dBi, then $P_{Out} = 30 - (G_{TX} - 6)/3$ dBm
	- Aggregate power on all beams: If $G_{TX} > 6$ dBi, then $P_{Out} = 30 - (G_{TX} - 6)/3 + 8$ dB dBm
P_{Out} = maximum peak conducted output power or maximum conducted output power in dBm, G_{TX} = the maximum transmitting antenna directional gain in dBi.	

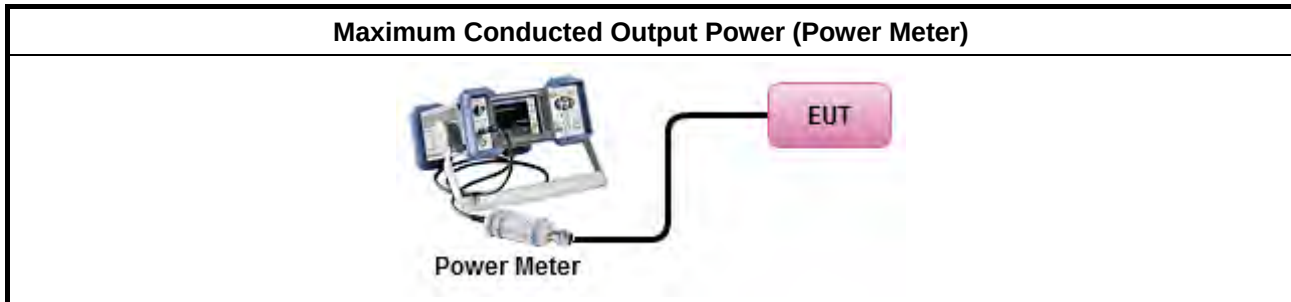
3.3.2 Measuring Instruments

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

3.3.3 Test Procedures

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

3.3.4 Test Setup



3.3.5 Test Result of Maximum Conducted Output Power

Refer as Appendix C



3.4 Power Spectral Density

3.4.1 Power Spectral Density Limit

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

3.4.2 Measuring Instruments

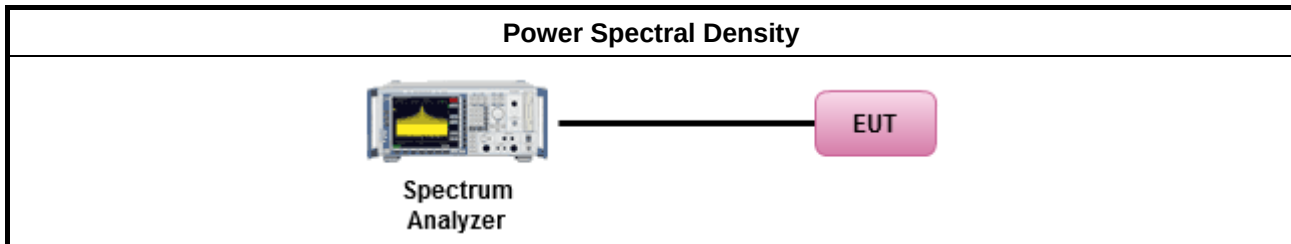
Refer a test equipment and calibration data table in this test report.

3.4.3 Test Procedures

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

- | | |
|--|--|
| | ☐ Option 3: Measure and add $10 \log(N)$ dB, where N is the number of transmit chains. Refer as FCC KDB 662911, In-band power spectral density (PSD). Performed at each transmit chains and each transmit chains shall be compared with the limit have been reduced with $10 \log(N)$. Or each transmit chains shall be add $10 \log(N)$ to compared with the limit. |
|--|--|

3.4.4 Test Setup



3.4.5 Test Result of Power Spectral Density

Refer as Appendix D

3.5 Emissions in Non-restricted Frequency Bands

3.5.1 Emissions in Non-restricted Frequency Bands Limit

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

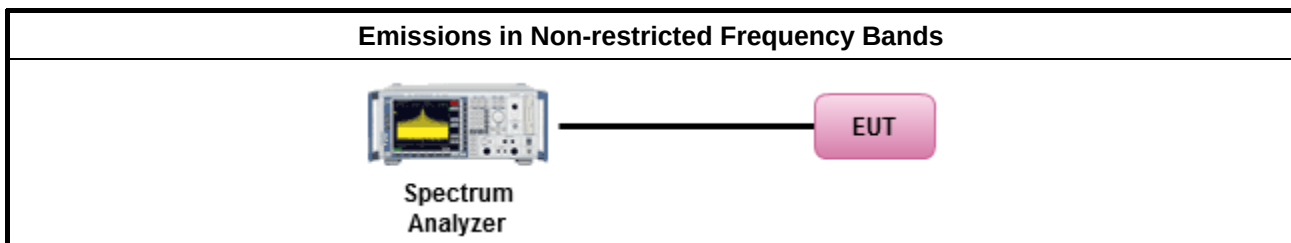
3.5.2 Measuring Instruments

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

3.5.3 Test Procedures

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

3.5.4 Test Setup



3.5.5 Test Result of Emissions in Non-restricted Frequency Bands

Refer as Appendix E



3.6 Emissions in Restricted Frequency Bands

3.6.1 Emissions in Restricted Frequency Bands Limit

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

Note 1: Test distance for frequencies at or above 30 MHz, measurements may be performed at a distance other than the limit distance provided they are not performed in the near field and the emissions to be measured can be detected by the measurement equipment. When performing measurements at a distance other than that specified, the results shall be extrapolated to the specified distance using an extrapolation factor of 20 dB/decade (inverse of linear distance for field-strength measurements, inverse of linear distance-squared for power-density measurements).

Note 2: Test distance for frequencies at below 30 MHz, measurements may be performed at a distance closer than the EUT limit distance; however, an attempt should be made to avoid making measurements in the near field. When performing measurements below 30 MHz at a closer distance than the limit distance, the results shall be extrapolated to the specified distance by either making measurements at a minimum of two or more distances on at least one radial to determine the proper extrapolation factor or by using the square of an inverse linear distance extrapolation factor (40 dB/decade). The test report shall specify the extrapolation method used to determine compliance of the EUT.

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

3.6.2 Measuring Instruments

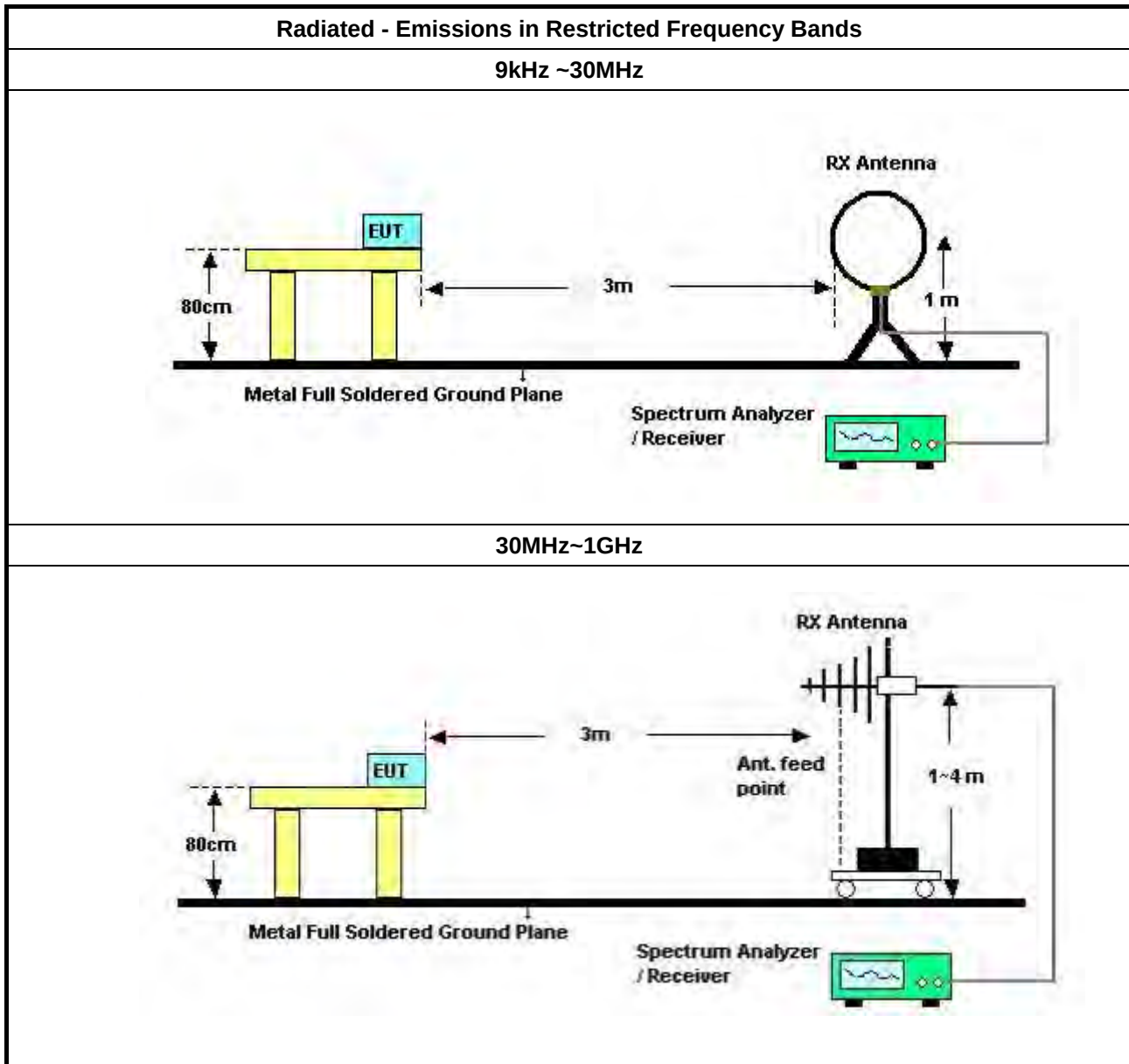
Refer a test equipment and calibration data table in this test report.

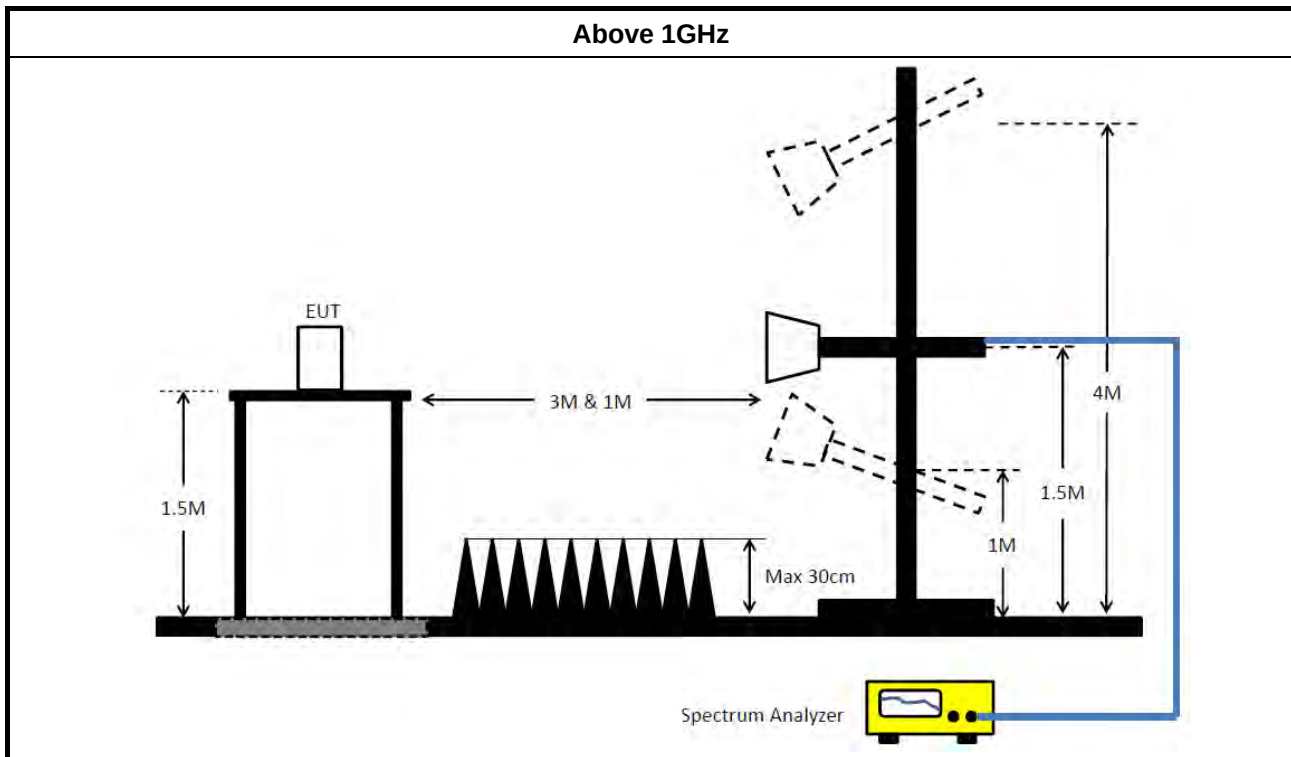


3.6.3 Test Procedures

Test Method	
▪ The average emission levels shall be measured in [duty cycle ≥ 98 or duty factor].	
▪ Refer as ANSI C63.10, clause 6.10.3 band-edge testing shall be performed at the lowest frequency channel and highest frequency channel within the allowed operating band.	
▪ For the transmitter unwanted emissions shall be measured using following options below:	
	▪ Refer as FCC KDB 558074, clause 8.6 for unwanted emissions into restricted bands.
	☐ Refer as FCC KDB 558074, clause 8.6 & C63.10 clause 11.12.2.5.1(trace averaging for duty cycle $\geq 98\%$).
	☐ 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 $\geq 1/T$).
	☐ Refer as ANSI C63.10, clause 11.12.2.5.3 (Reduced VBW). VBW $\geq 1/T$, 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



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. 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)
Loop Antenna	Teseq	HLA 6120	24155	9kHz - 30 MHz	Mar. 29, 2019	Mar. 28, 2020	Radiation (03CH01-CB)
Bilog Antenna with 6 dB attenuator	Schaffner	CBL6112B & N-6-06	2928 & AT-N0607	20MHz ~ 2GHz	Jan. 02, 2019	Jan. 01, 2020	Radiation (03CH01-CB)
Horn Antenna	EMCO	3115	00075790	750MHz ~ 18GHz	Nov. 13, 2018	Nov. 12, 2019	Radiation (03CH01-CB)
Pre-Amplifier	EMCI	EMC330N	980332	20MHz ~ 3GHz	May 01, 2019	Apr. 30, 2020	Radiation (03CH01-CB)
Spectrum Analyzer	R&S	FSP40	100056	9kHz ~ 40GHz	Jan. 31, 2019	Jan. 30, 2020	Radiation (03CH01-CB)
EMI Test Receiver	R&S	ESCS	826547/017	9kHz ~ 2.75GHz	May 15, 2019	May 14, 2020	Radiation (03CH01-CB)
RF Cable-low	Woken	RG402	Low Cable-16+17	30 MHz ~ 1 GHz	Oct. 08, 2018	Oct. 07, 2019	Radiation (03CH01-CB)
RF Cable-low	Woken	RG402	Low Cable-16+17	30 MHz ~ 1 GHz	Oct. 07, 2019	Oct. 06, 2020	Radiation (03CH01-CB)
Horn Antenna	ETS • Lindgren	3115	00143147	750MHz~18GHz	Oct. 26, 2018	Oct. 25, 2019	Radiation (03CH04-CB)
Horn Antenna	SCHWARZBECK	BBHA 9170	BBHA9170507	15GHz ~ 40GHz	Jun. 12, 2019	Jun. 11, 2020	Radiation (03CH04-CB)
Pre-Amplifier	Agilent	83017A	MY53270063	0.5GHz ~ 26.5GHz	Mar. 19, 2019	Mar. 18, 2020	Radiation (03CH04-CB)
Pre-Amplifier	MITEQ	TTA1840-35-HG	1864479	18GHz ~ 40GHz	Jul. 03, 2019	Jul. 02, 2020	Radiation (03CH04-CB)
Spectrum Analyzer	R&S	FSP40	100142	9kHz~40GHz	Dec. 26, 2018	Dec. 25, 2019	Radiation (03CH04-CB)
RF Cable-high	Woken	RG402	High Cable-21	1GHz - 18GHz	Oct. 08, 2018	Oct. 07, 2019	Radiation (03CH04-CB)
RF Cable-high	Woken	RG402	High Cable-21+22	1GHz - 18GHz	Oct. 08, 2018	Oct. 07, 2019	Radiation (03CH04-CB)
RF Cable-high	Woken	RG402	High Cable-40G#1	18GHz ~ 40 GHz	Jul. 24, 2019	Jul. 23, 2020	Radiation (03CH04-CB)
RF Cable-high	Woken	RG402	High Cable-40G#2	18GHz ~ 40 GHz	Jul. 24, 2019	Jul. 23, 2020	Radiation (03CH04-CB)



Instrument	Manufacturer	Model No.	Serial No.	Characteristics	Calibration Date	Calibration Due Date	Remark
Spectrum analyzer	R&S	FSV40	100979	9kHz~40GHz	Feb. 25, 2019	Feb. 24, 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)

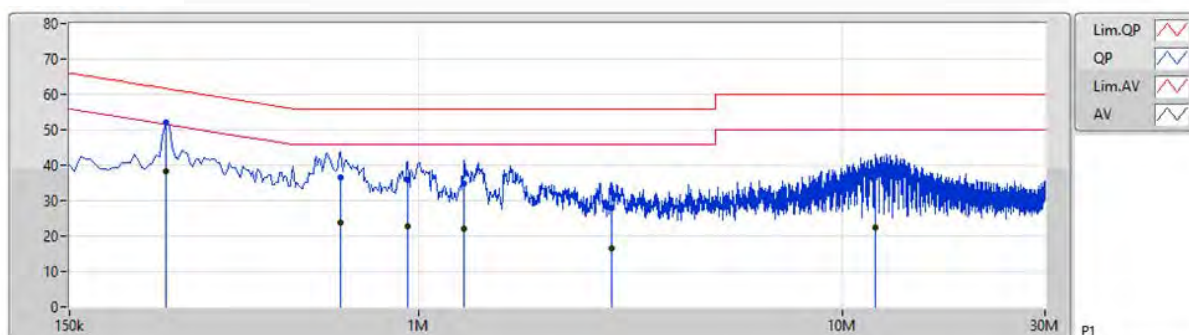
Note: Calibration Interval of instruments listed above is one year.

NCR means Non-Calibration required.

AC Power-line Conducted Emissions Result

Operating Mode	1	Power Phase	Line
Operating Function	Normal Link		

03/09/2019



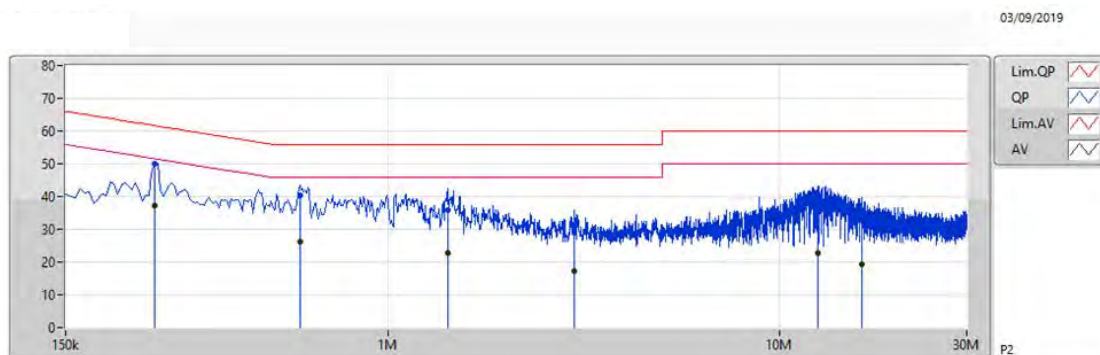
Type	Freq (Hz)	Level (dBuV)	Limit (dBuV)	Margin (dB)	Factor (dB)	Condition	Comment	Raw (dBuV)	AF (dB)	CL (dB)	AT (dB)
QP	253.5k	52.16	61.64	-9.48	9.92	Line	"Worst"	42.24	0.06	0.06	9.80
AV	253.5k	38.30	51.64	-13.34	9.92	Line	-	28.38	0.06	0.06	9.80
QP	654k	36.54	56.00	-19.46	9.97	Line	-	26.57	0.07	0.08	9.82
AV	654k	23.89	46.00	-22.11	9.97	Line	-	13.92	0.07	0.08	9.82
QP	942k	35.90	56.00	-20.10	9.98	Line	-	25.92	0.07	0.09	9.82
AV	942k	22.81	46.00	-23.19	9.98	Line	-	12.83	0.07	0.09	9.82
QP	1.28M	34.73	56.00	-21.27	10.00	Line	-	24.73	0.08	0.10	9.82
AV	1.28M	21.93	46.00	-24.07	10.00	Line	-	11.93	0.08	0.10	9.82
QP	2.855M	28.04	56.00	-27.96	10.08	Line	-	17.96	0.11	0.15	9.82
AV	2.855M	16.65	46.00	-29.35	10.08	Line	-	6.57	0.11	0.15	9.82
QP	11.963M	38.27	60.00	-21.73	10.38	Line	-	27.89	0.23	0.23	9.92
AV	11.963M	22.55	50.00	-27.45	10.38	Line	-	12.17	0.23	0.23	9.92

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

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

AC Power-line Conducted Emissions Result

Operating Mode	1	Power Phase	Neutral
Operating Function	Normal Link		



Type	Freq (Hz)	Level (dBuV)	Limit (dBuV)	Margin (dB)	Factor (dB)	Condition	Comment	Raw (dBuV)	AF (dB)	CL (dB)	AT (dB)
QP	253.5k	50.09	61.64	-11.55	9.90	Neutral	"Worst"	40.19	0.04	0.06	9.80
AV	253.5k	37.37	51.64	-14.27	9.90	Neutral	-	27.47	0.04	0.06	9.80
QP	595.5k	40.22	56.00	-15.78	9.93	Neutral	-	30.29	0.05	0.07	9.81
AV	595.5k	26.29	46.00	-19.71	9.93	Neutral	-	16.36	0.05	0.07	9.81
QP	1.419M	35.91	56.00	-20.09	10.01	Neutral	-	25.90	0.07	0.11	9.83
AV	1.419M	22.77	46.00	-23.23	10.01	Neutral	-	12.76	0.07	0.11	9.83
QP	2.99M	28.91	56.00	-27.09	10.06	Neutral	-	18.85	0.09	0.15	9.82
AV	2.99M	17.28	46.00	-28.72	10.06	Neutral	-	7.22	0.09	0.15	9.82
QP	12.462M	38.40	60.00	-21.60	10.35	Neutral	-	28.05	0.21	0.22	9.92
AV	12.462M	22.66	50.00	-27.34	10.35	Neutral	-	12.31	0.21	0.22	9.92
QP	16.184M	33.44	60.00	-26.56	10.40	Neutral	-	23.04	0.23	0.23	9.94
AV	16.184M	19.45	50.00	-30.55	10.40	Neutral	-	9.05	0.23	0.23	9.94

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)_1TX	9.525M	14.118M	14M1G1D	8.525M	14.091M
802.11g_Nss1,(6Mbps)_1TX	15.075M	16.886M	16M9D1D	15.05M	16.341M
802.11n HT20_Nss1,(MCS0)_1TX	15.1M	17.787M	17M8D1D	15.025M	17.491M

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;

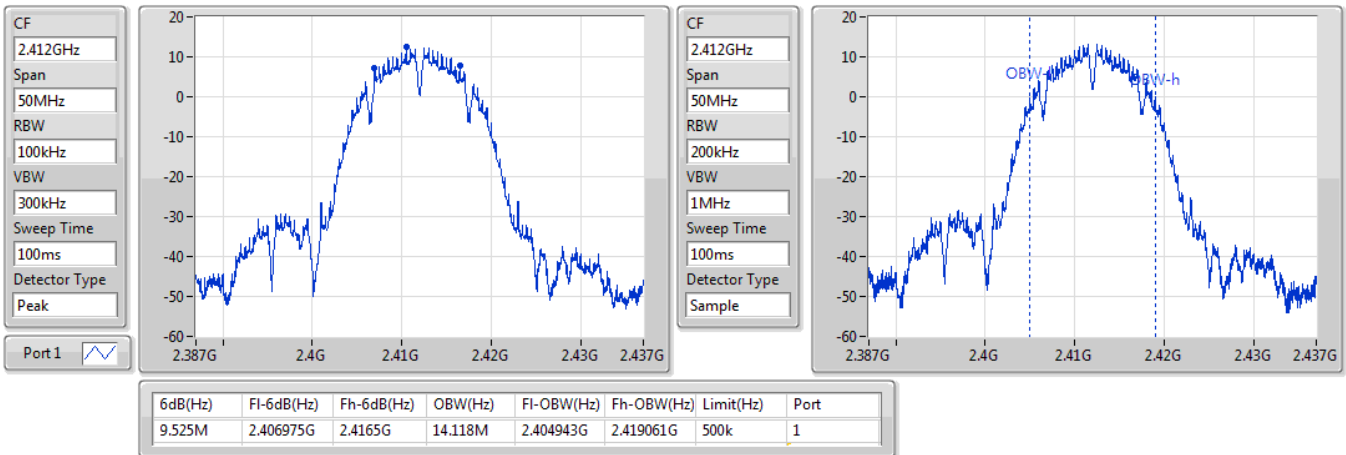
Result

Mode	Result	Limit (Hz)	Port 1-N dB (Hz)	Port 1-OBW (Hz)
802.11b_Nss1,(1Mbps)_1TX	-	-	-	-
2412MHz	Pass	500k	9.525M	14.118M
2437MHz	Pass	500k	9.5M	14.115M
2462MHz	Pass	500k	8.525M	14.091M
802.11g_Nss1,(6Mbps)_1TX	-	-	-	-
2412MHz	Pass	500k	15.05M	16.422M
2437MHz	Pass	500k	15.075M	16.886M
2462MHz	Pass	500k	15.075M	16.341M
802.11n HT20_Nss1,(MCS0)_1TX	-	-	-	-
2412MHz	Pass	500k	15.025M	17.518M
2437MHz	Pass	500k	15.1M	17.787M
2462MHz	Pass	500k	15.1M	17.491M

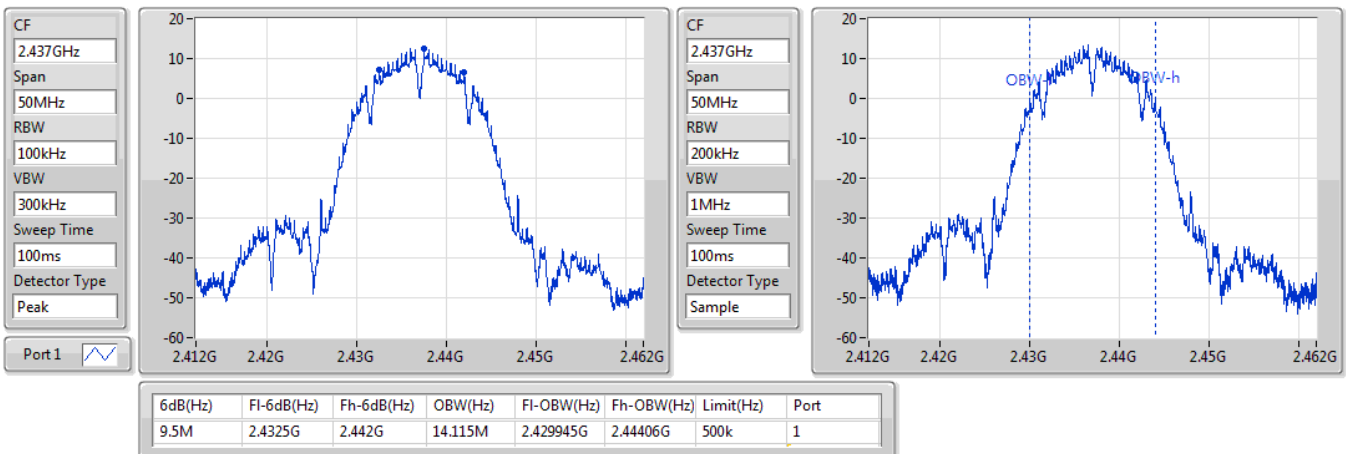
Port X-N dB = Port X 6dB down bandwidth; **Port X-OBW** = Port X 99% occupied bandwidth;

802.11b_Nss1,(1Mbps)_1TX
EBW
2412MHz

29/08/2019


802.11b_Nss1,(1Mbps)_1TX
EBW
2437MHz

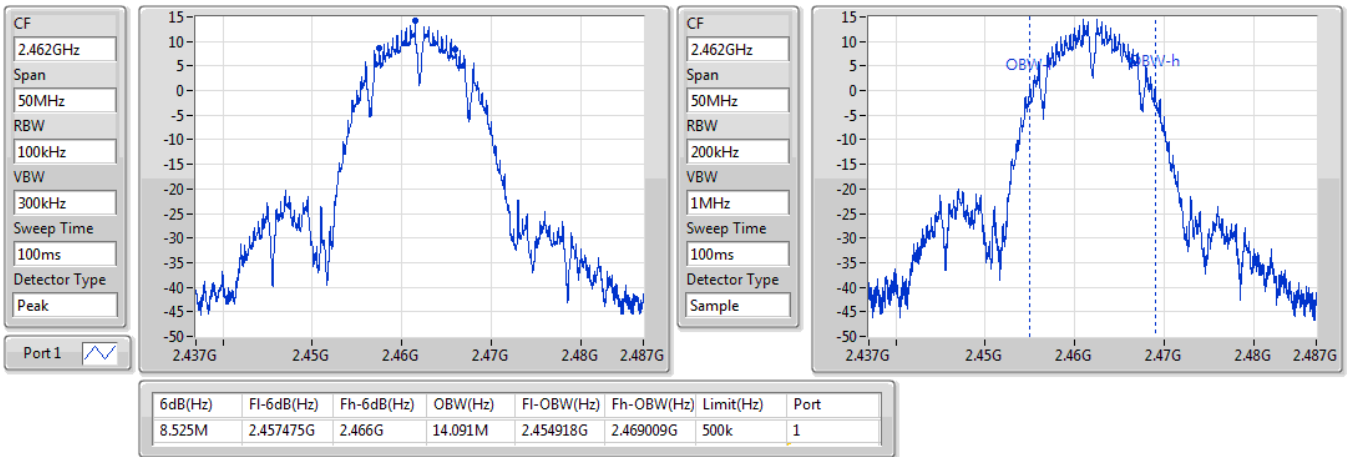
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802.11b_Nss1,(1Mbps)_1TX

EBW
2462MHz

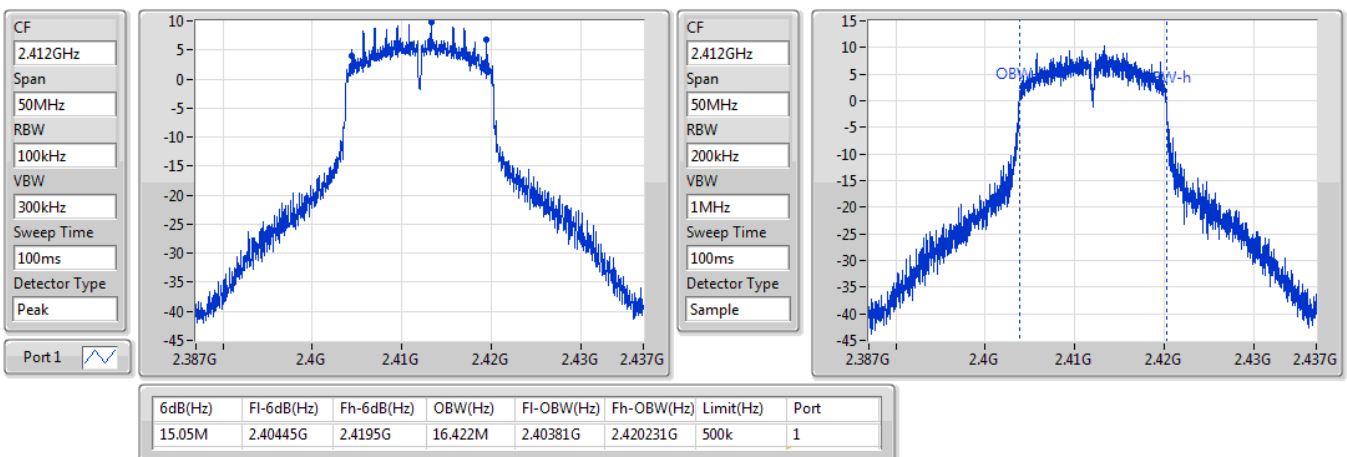
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802.11g_Nss1,(6Mbps)_1TX

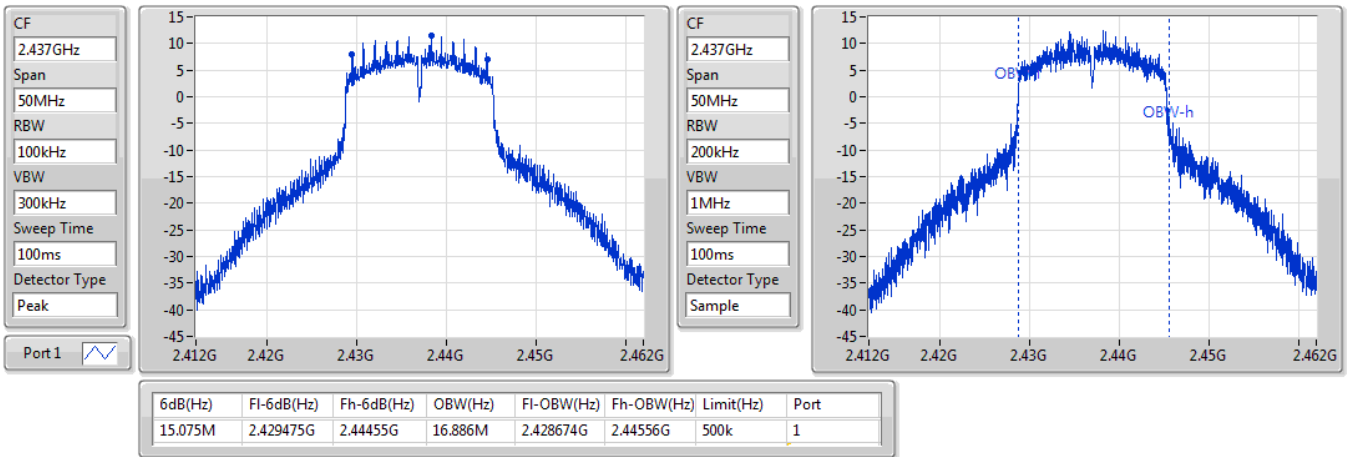
EBW
2412MHz

29/08/2019

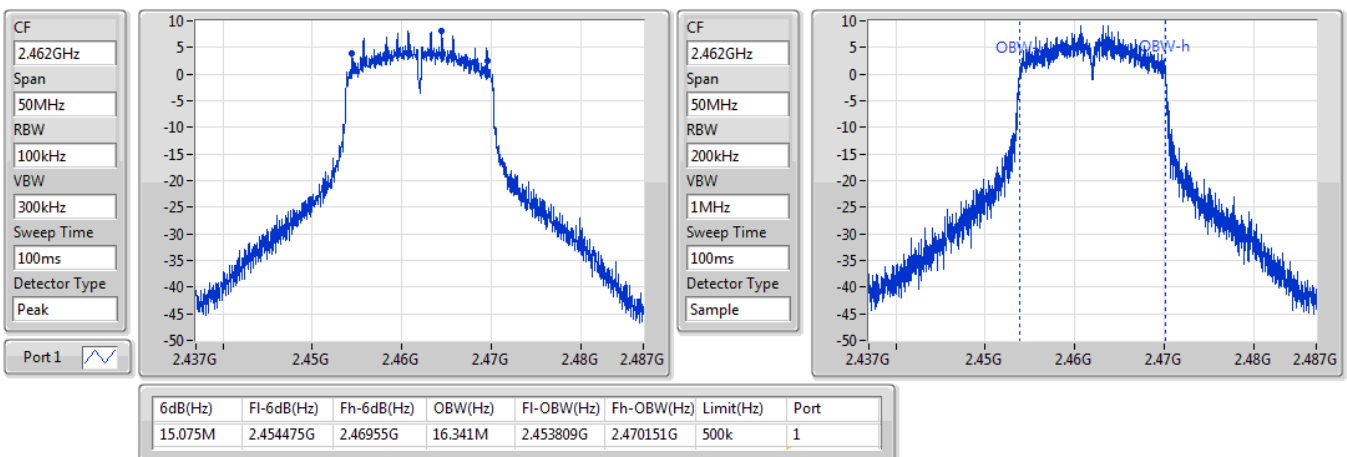


802.11g_Nss1,(6Mbps)_1TX
EBW
2437MHz

29/08/2019

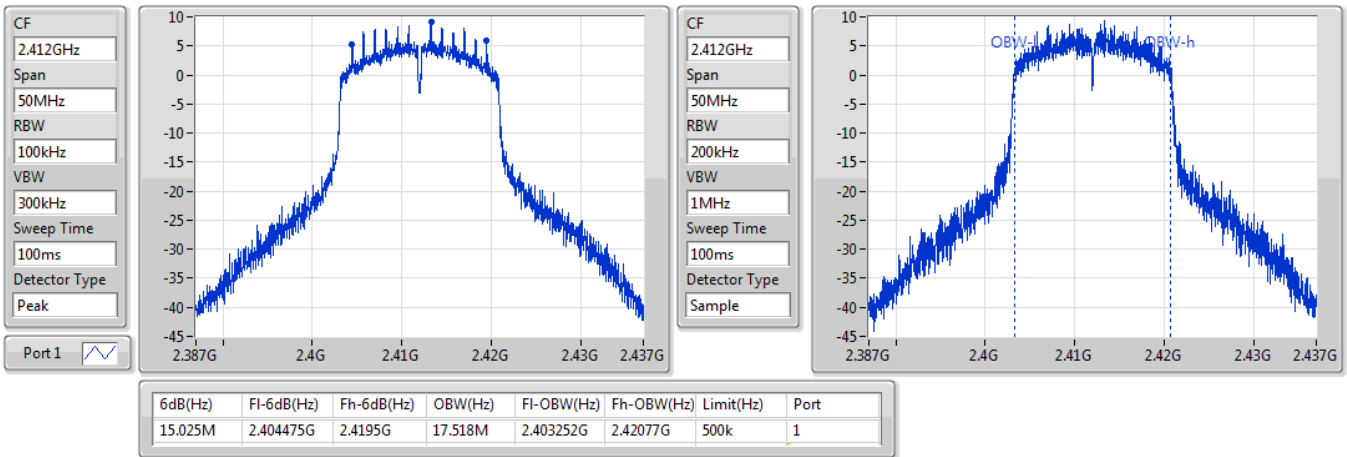

802.11g_Nss1,(6Mbps)_1TX
EBW
2462MHz

29/08/2019

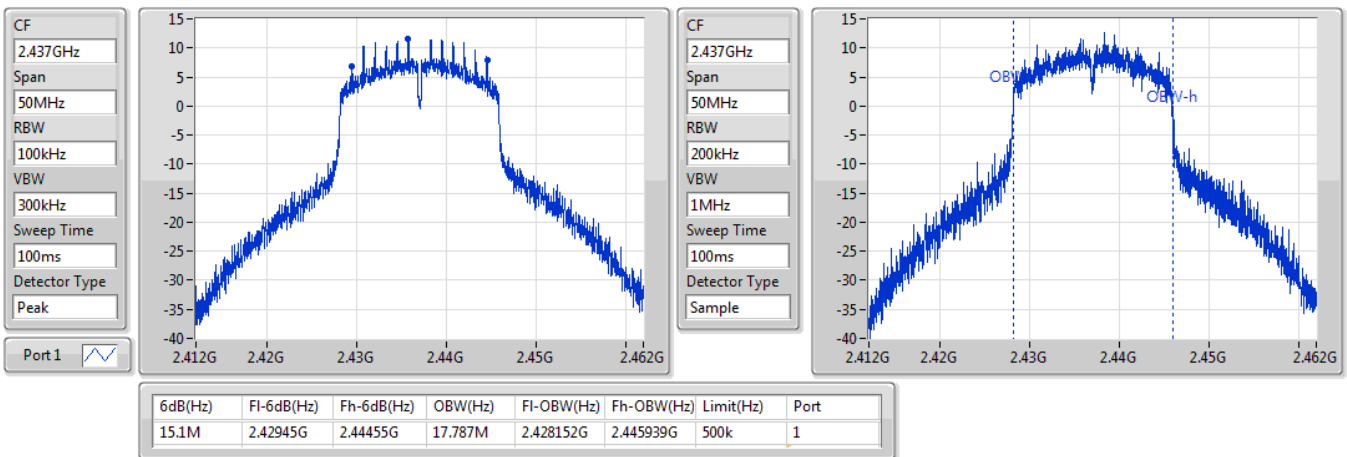


802.11n HT20_Nss1,(MCS0)_1TX
EBW
2412MHz

29/08/2019


802.11n HT20_Nss1,(MCS0)_1TX
EBW
2437MHz

29/08/2019

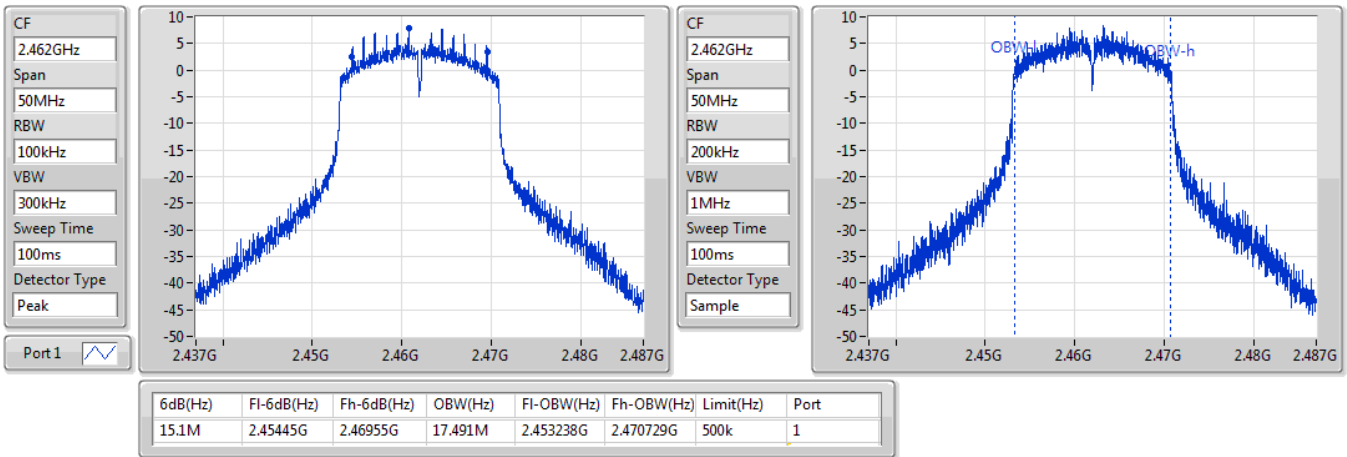


802.11n HT20_Nss1,(MCS0)_1TX

EBW

2462MHz

29/08/2019





Summary

Mode	Total Power (dBm)	Total Power (W)
2.4-2.4835GHz	-	-
802.11b_Nss1,(1Mbps)_1TX	20.08	0.10186
802.11g_Nss1,(6Mbps)_1TX	22.10	0.16218
802.11n HT20_Nss1,(MCS0)_1TX	22.12	0.16293

**Result**

Mode	Result	DG (dBi)	Port 1 (dBm)	Total Power (dBm)	Power Limit (dBm)
802.11b_Nss1,(1Mbps)_1TX	-	-	-	-	-
2412MHz	Pass	2.29	19.52	19.52	30.00
2437MHz	Pass	2.29	19.53	19.53	30.00
2462MHz	Pass	2.29	20.08	20.08	30.00
802.11g_Nss1,(6Mbps)_1TX	-	-	-	-	-
2412MHz	Pass	2.29	18.77	18.77	30.00
2417MHz	Pass	2.29	22.08	22.08	30.00
2437MHz	Pass	2.29	22.10	22.10	30.00
2457MHz	Pass	2.29	19.57	19.57	30.00
2462MHz	Pass	2.29	17.55	17.55	30.00
802.11n HT20_Nss1,(MCS0)_1TX	-	-	-	-	-
2412MHz	Pass	2.29	18.31	18.31	30.00
2417MHz	Pass	2.29	22.07	22.07	30.00
2437MHz	Pass	2.29	22.12	22.12	30.00
2457MHz	Pass	2.29	19.31	19.31	30.00
2462MHz	Pass	2.29	17.29	17.29	30.00

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

Summary

Mode	PD (dBm/RBW)
2.4-2.4835GHz	-
802.11b_Nss1,(1Mbps)_1TX	3.45
802.11g_Nss1,(6Mbps)_1TX	-2.87
802.11n HT20_Nss1,(MCS0)_1TX	-2.59

RBW=3 kHz.

Result

Mode	Result	DG (dBi)	Port 1 (dBm/RBW)	PD (dBm/RBW)	PD Limit (dBm/RBW)
802.11b_Nss1,(1Mbps)_1TX	-	-	-	-	-
2412MHz	Pass	2.29	0.11	0.11	8.00
2437MHz	Pass	2.29	-0.82	-0.82	8.00
2462MHz	Pass	2.29	3.45	3.45	8.00
802.11g_Nss1,(6Mbps)_1TX	-	-	-	-	-
2412MHz	Pass	2.29	-4.62	-4.62	8.00
2437MHz	Pass	2.29	-2.87	-2.87	8.00
2462MHz	Pass	2.29	-6.14	-6.14	8.00
802.11n HT20_Nss1,(MCS0)_1TX	-	-	-	-	-
2412MHz	Pass	2.29	-5.38	-5.38	8.00
2437MHz	Pass	2.29	-2.59	-2.59	8.00
2462MHz	Pass	2.29	-6.16	-6.16	8.00

DG = Directional Gain; RBW=3 kHz;

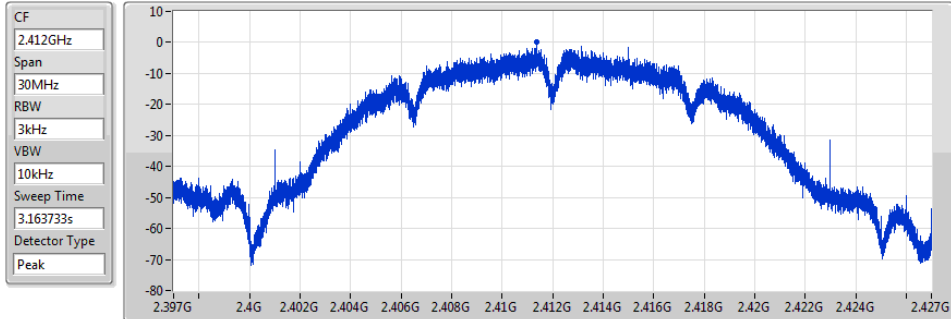
PD = trace bin-by-bin of each transmits port summing can be performed maximum power density; **Port X** = Port X power density;

802.11b_Nss1,(1Mbps)_1TX

PSD

2412MHz

29/08/2019



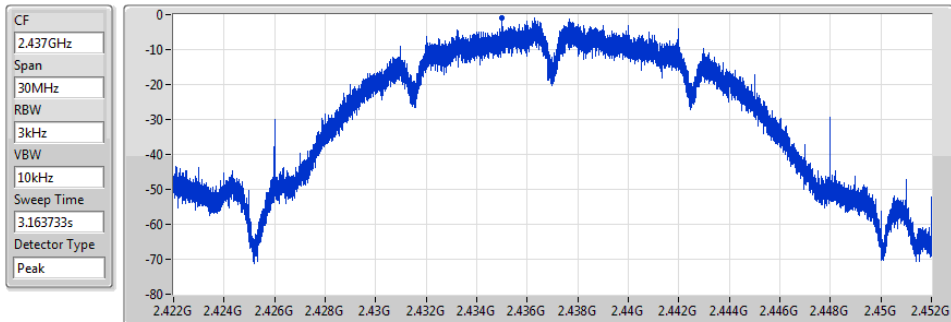
Sum	PD	Port 1
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
0.11	0.11	0.11

802.11b_Nss1,(1Mbps)_1TX

PSD

2437MHz

29/08/2019



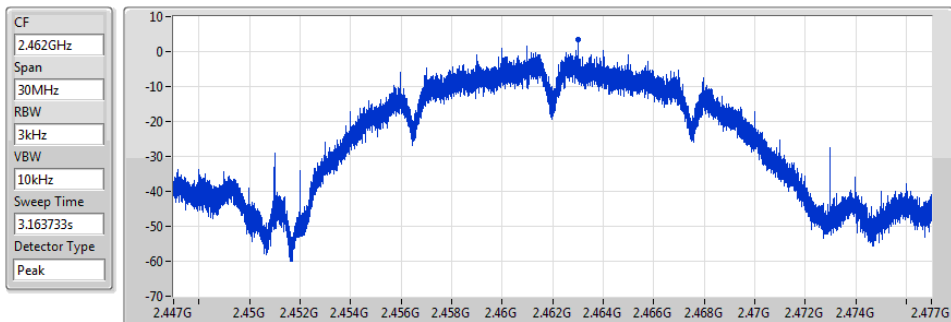
Sum	PD	Port 1
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
-0.82	-0.82	-0.82

802.11b_Nss1,(1Mbps)_1TX

PSD

2462MHz

29/08/2019



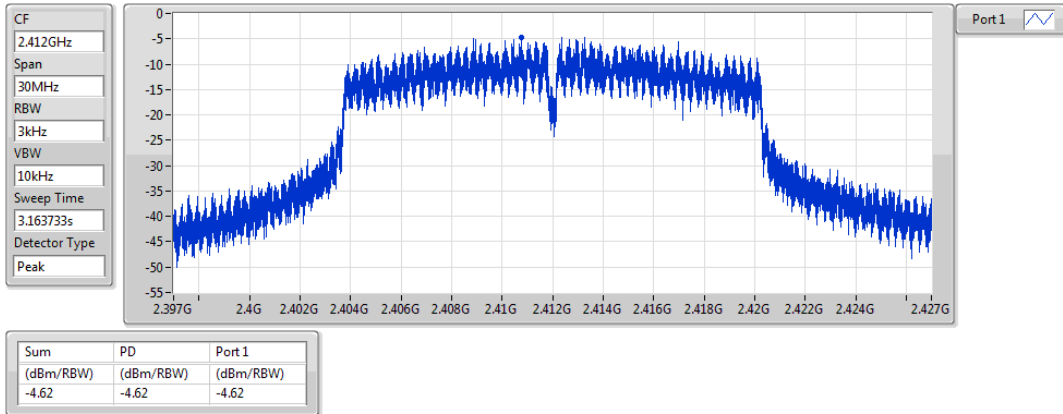
Sum	PD	Port 1
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
3.45	3.45	3.45

802.11g_Nss1,(6Mbps)_1TX

PSD

2412MHz

29/08/2019

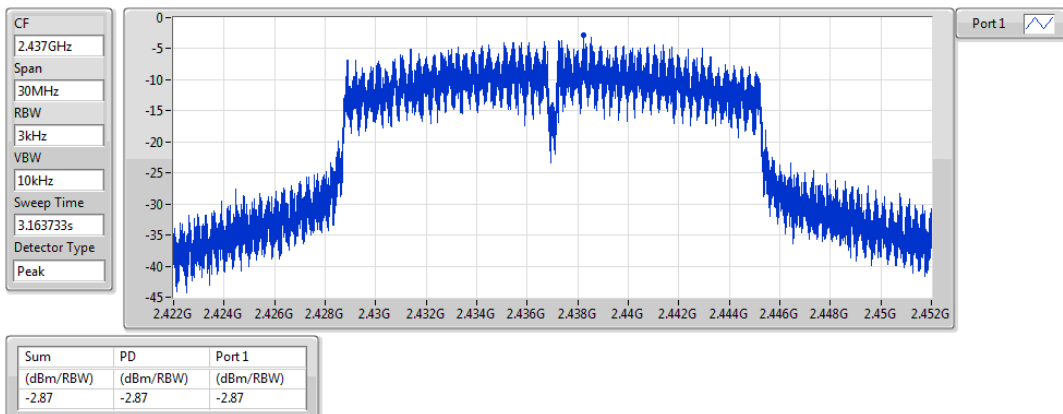


802.11g_Nss1,(6Mbps)_1TX

PSD

2437MHz

29/08/2019

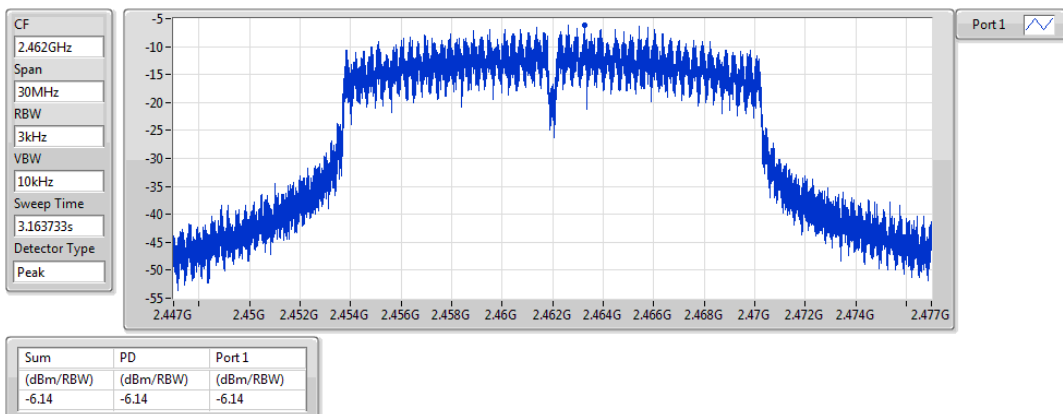


802.11g_Nss1,(6Mbps)_1TX

PSD

2462MHz

29/08/2019

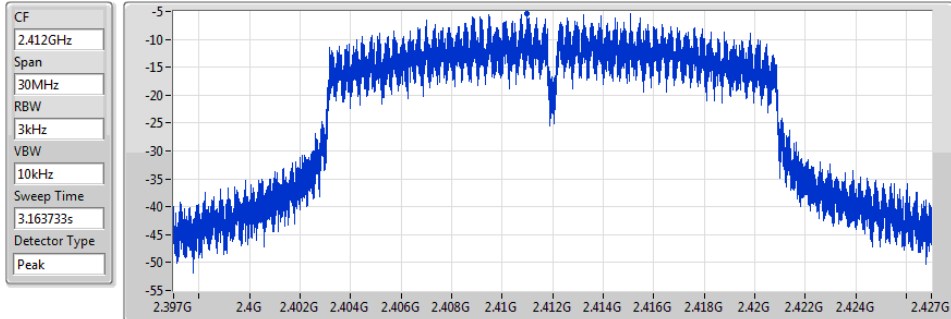


802.11n HT20_Nss1,(MCS0)_1TX

PSD

2412MHz

29/08/2019



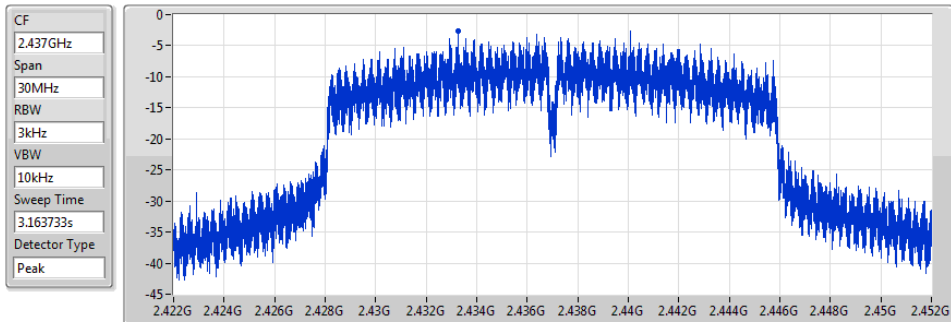
Sum	PD	Port 1
(dBm/Hz)	(dBm/Hz)	(dBm/Hz)
-5.38	-5.38	-5.38

802.11n HT20_Nss1,(MCS0)_1TX

PSD

2437MHz

29/08/2019



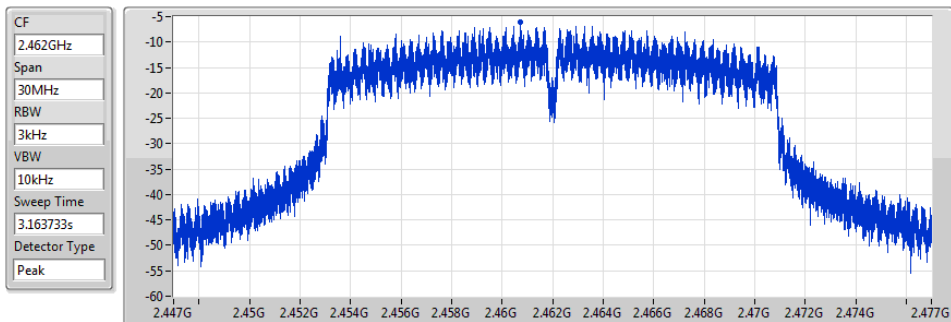
Sum	PD	Port 1
(dBm/Hz)	(dBm/Hz)	(dBm/Hz)
-2.59	-2.59	-2.59

802.11n HT20_Nss1,(MCS0)_1TX

PSD

2462MHz

29/08/2019



Sum	PD	Port 1
(dBm/Hz)	(dBm/Hz)	(dBm/Hz)
-6.16	-6.16	-6.16



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)_1TX	Pass	2.4625G	13.88	-16.12	2.18671G	-51.40	2.39702G	-29.74	2.4878G	-49.83	7.23514G	-46.32	1
802.11g_Nss1,(6Mbps)_1TX	Pass	2.43578G	9.98	-20.02	2.19166G	-52.97	2.39948G	-20.82	2.48808G	-51.24	24.4128G	-48.72	1
802.11n HT20_Nss1,(MCS0)_1TX	Pass	2.44075G	9.55	-20.45	2.18117G	-53.60	2.39952G	-21.91	2.48768G	-52.46	24.95505G	-47.80	1

Result

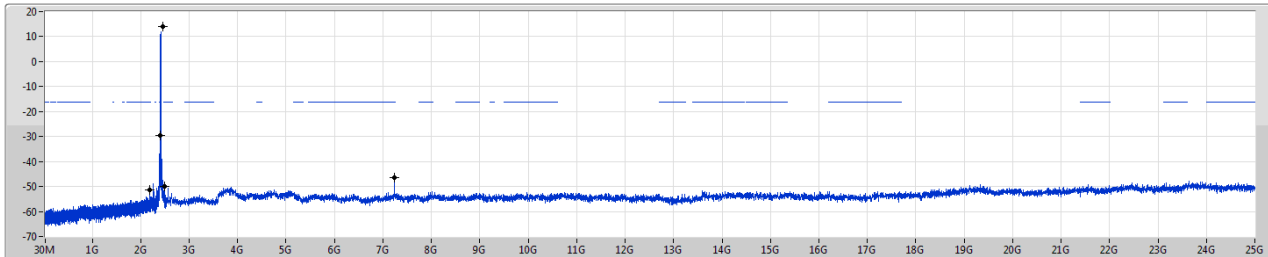
Mode	Result	Ref (Hz)	Ref (dBm)	Limit (dBm)	Freq (Hz)	Level (dBm)	Freq (Hz)	Level (dBm)	Freq (Hz)	Level (dBm)	Freq (Hz)	Level (dBm)	Port
802.11b_Nss1.(1Mbps)_1TX	-	-	-	-	-	-	-	-	-	-	-	-	-
2412MHz	Pass	2.4625G	13.88	-16.12	2.18671G	-51.40	2.39702G	-29.74	2.4878G	-49.83	7.23514G	-46.32	1
2437MHz	Pass	2.4625G	13.88	-16.12	2.30408G	-53.29	2.39798G	-46.85	2.51128G	-50.26	24.57014G	-48.19	1
2462MHz	Pass	2.4625G	13.88	-16.12	2.30932G	-50.68	2.39112G	-48.43	2.48738G	-42.01	21.63976G	-48.12	1
802.11g_Nss1.(6Mbps)_1TX	-	-	-	-	-	-	-	-	-	-	-	-	-
2412MHz	Pass	2.43578G	9.98	-20.02	2.19166G	-52.97	2.39948G	-20.82	2.48808G	-51.24	24.4128G	-48.72	1
2437MHz	Pass	2.43578G	9.98	-20.02	2.13486G	-54.19	2.39852G	-44.62	2.48576G	-48.48	24.74152G	-48.66	1
2462MHz	Pass	2.43578G	9.98	-20.02	2.30961G	-52.36	2.39032G	-52.59	2.48364G	-38.84	24.95786G	-48.55	1
802.11n HT20_Nss1.(MCS0)_1TX	-	-	-	-	-	-	-	-	-	-	-	-	-
2412MHz	Pass	2.44075G	9.55	-20.45	2.18117G	-53.60	2.39952G	-21.91	2.48768G	-52.46	24.95505G	-47.80	1
2437MHz	Pass	2.44075G	9.55	-20.45	2.17273G	-53.85	2.39988G	-45.11	2.4839G	-48.19	24.66847G	-48.48	1
2462MHz	Pass	2.44075G	9.55	-20.45	2.30728G	-53.62	2.39266G	-52.22	2.48388G	-37.90	24.17961G	-48.36	1

802.11b_Nss1,(1Mbps)_1TX

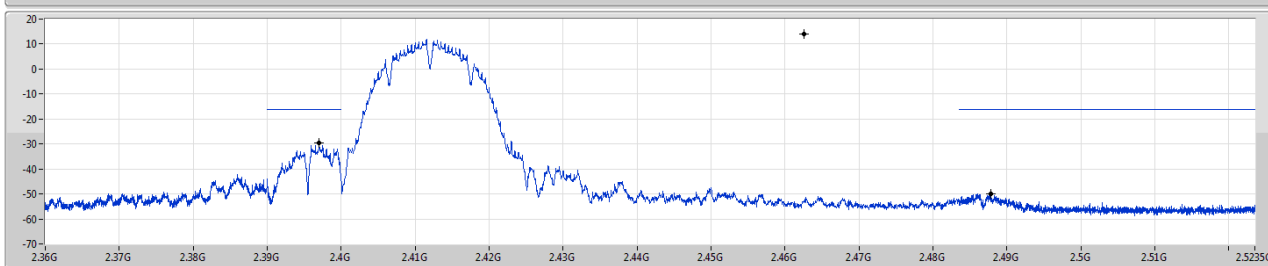
CSE NdB

2412MHz

29/08/2019



Port1



RBW (Hz)
100k
VBW (Hz)
300k
Detector
Peak

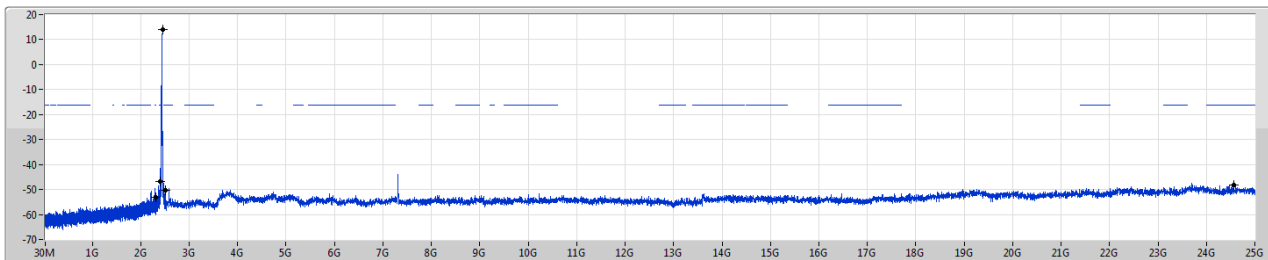
Ref(Hz)	Ref(dBm)	Limit(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Port
2.4625G	13.88	-16.12	2.18671G	-51.40	2.39702G	-29.74	2.4878G	-49.83	7.23514G	-46.32	1

802.11b_Nss1,(1Mbps)_1TX

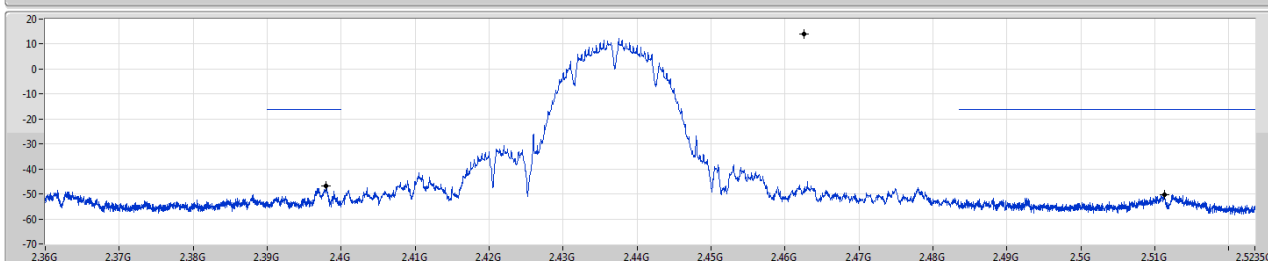
CSE NdB

2437MHz

29/08/2019



Port1



RBW (Hz)
100k
VBW (Hz)
300k
Detector
Peak

Ref(Hz)	Ref(dBm)	Limit(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Port
2.4625G	13.88	-16.12	2.30408G	-53.29	2.39798G	-46.85	2.51128G	-50.26	24.57014G	-48.19	1

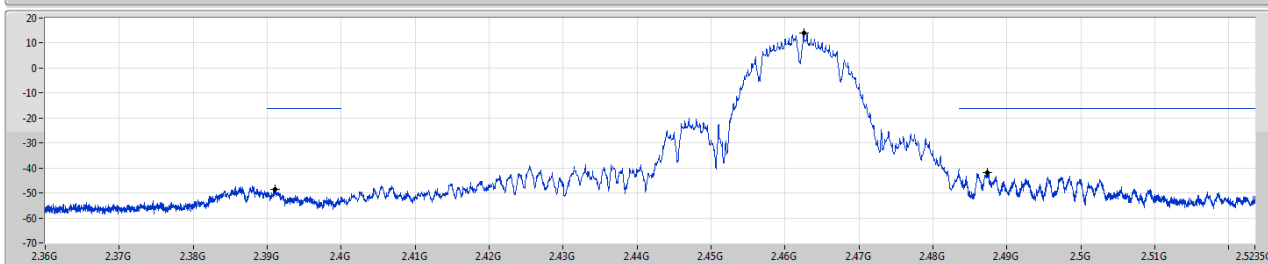
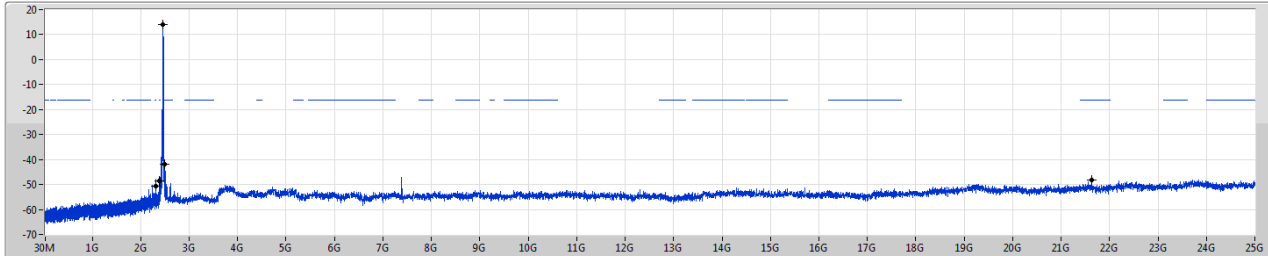
802.11b_Nss1,(1Mbps)_1TX

2462MHz

CSE NdB

29/08/2019

Port1



RBW (Hz)
100k
VBW (Hz)
300k
Detector
Peak

Ref(Hz)	Ref(dBm)	Limit(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Port
2.4625G	13.88	-16.12	2.30932G	-50.68	2.39112G	-48.43	2.48738G	-42.01	21.63976G	-48.12	1

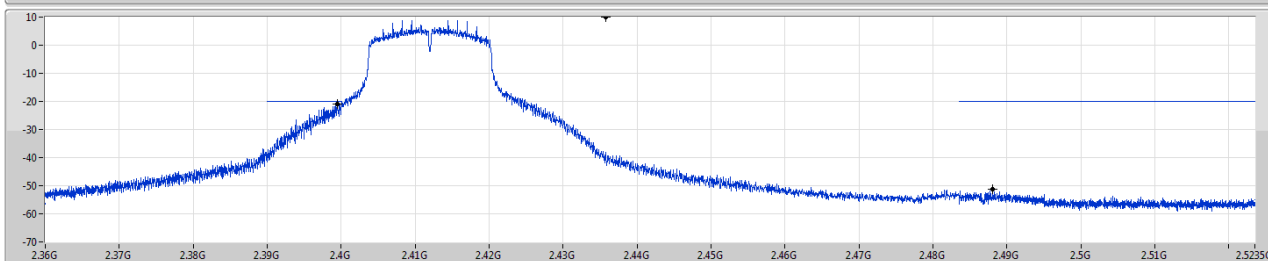
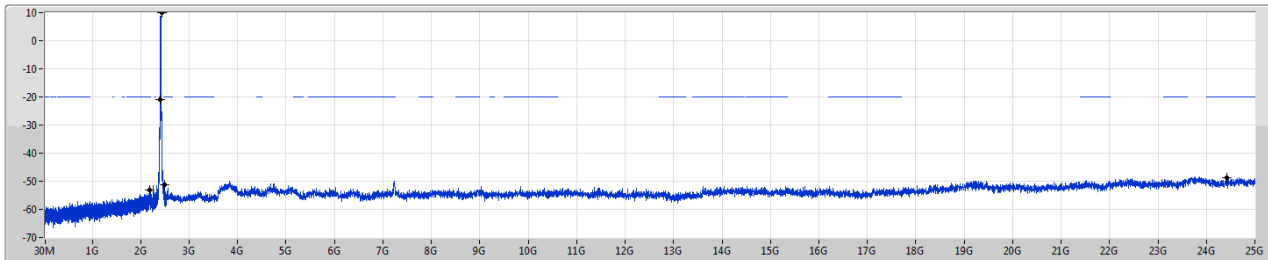
802.11g_Nss1,(6Mbps)_1TX

2412MHz

CSE NdB

29/08/2019

Port1



RBW (Hz)
100k
VBW (Hz)
300k
Detector
Peak

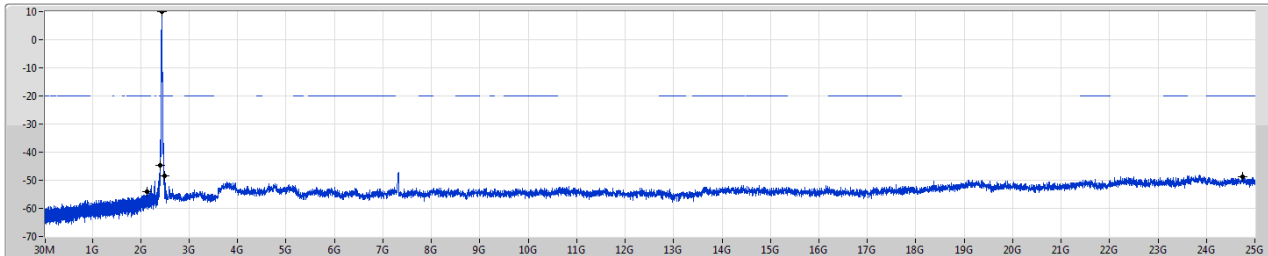
Ref(Hz)	Ref(dBm)	Limit(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Port
2.43578G	9.98	-20.02	2.19166G	-52.97	2.39948G	-20.82	2.48808G	-51.24	24.4128G	-48.72	1

802.11g_Nss1,(6Mbps)_1TX

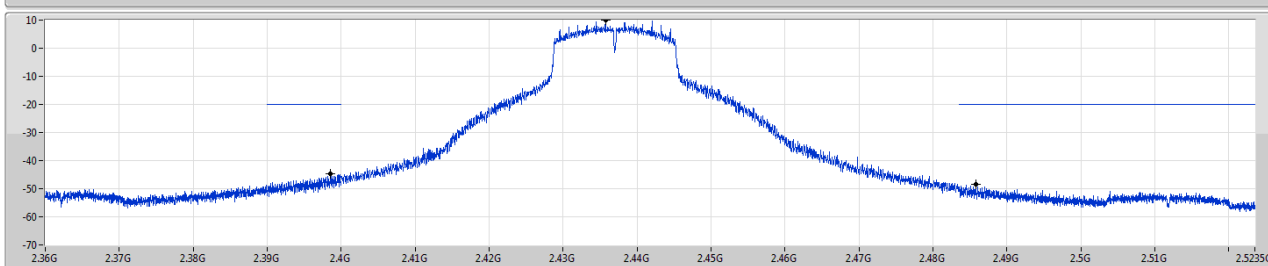
CSE NdB

2437MHz

29/08/2019



Port1



RBW (Hz)
100k
VBW (Hz)
300k
Detector
Peak

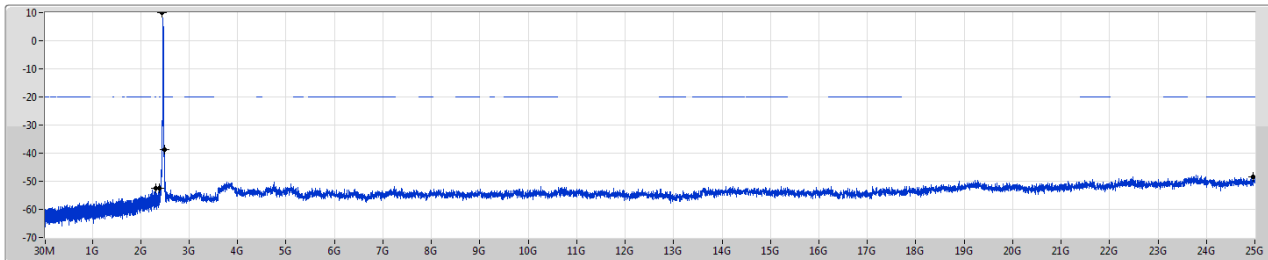
Ref(Hz)	Ref(dBm)	Limit(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Port
2.43578G	9.98	-20.02	2.13486G	-54.19	2.39852G	-44.62	2.48576G	-48.48	2.474152G	-48.66	1

802.11g_Nss1,(6Mbps)_1TX

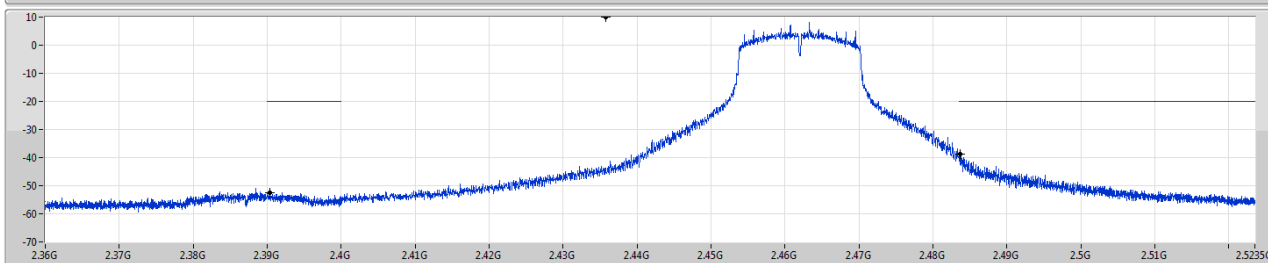
CSE NdB

2462MHz

29/08/2019



Port1



RBW (Hz)
100k
VBW (Hz)
300k
Detector
Peak

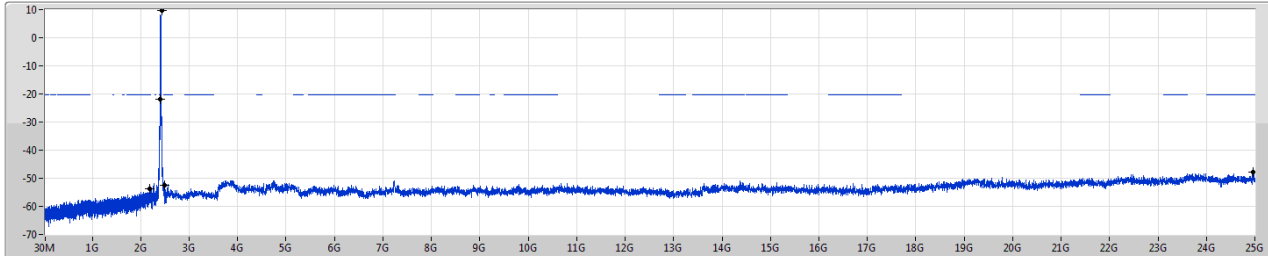
Ref(Hz)	Ref(dBm)	Limit(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Port
2.43578G	9.98	-20.02	2.30961G	-52.36	2.39032G	-52.59	2.48364G	-38.84	2.495786G	-48.55	1

802.11n HT20_Nss1,(MCS0)_1TX

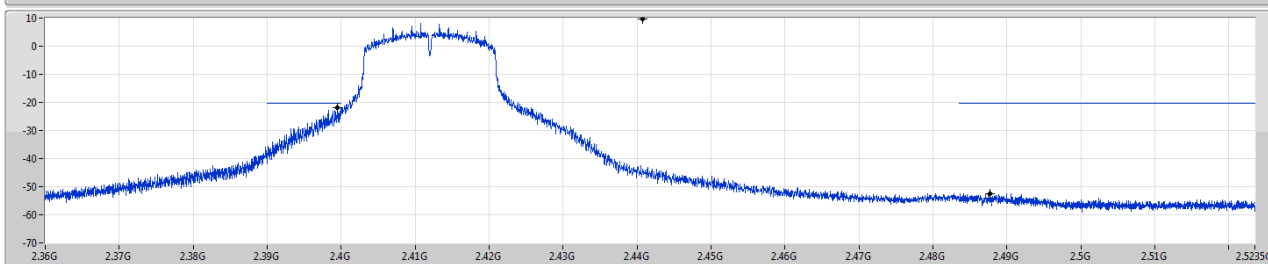
CSE NdB

2412MHz

29/08/2019



Port1



RBW (Hz)
100k
VBW (Hz)
300k
Detector
Peak

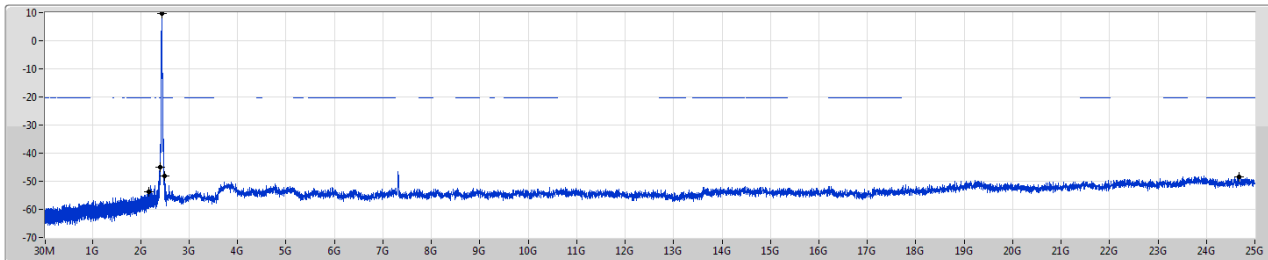
Ref(Hz)	Ref(dBm)	Limit(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Port
2.44075G	9.55	-20.45	2.18117G	-53.60	2.39952G	-21.91	2.48768G	-52.46	24.95505G	-47.80	1

802.11n HT20_Nss1,(MCS0)_1TX

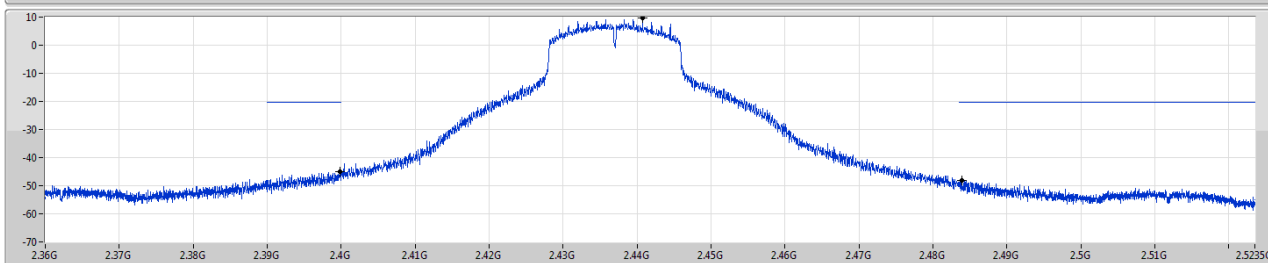
CSE NdB

2437MHz

29/08/2019



Port1



RBW (Hz)
100k
VBW (Hz)
300k
Detector
Peak

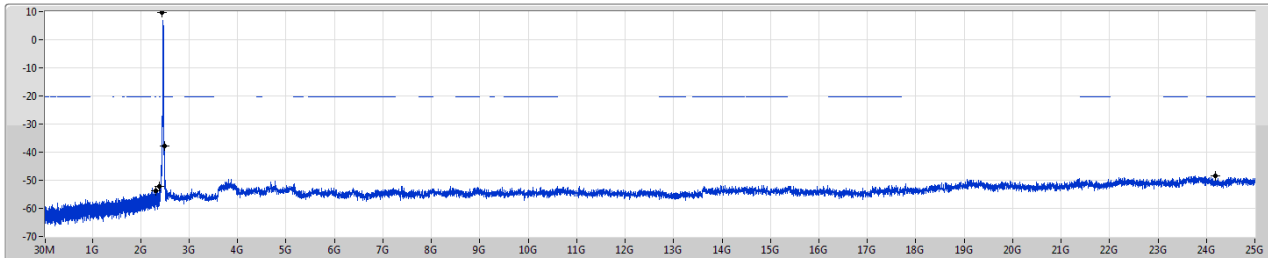
Ref(Hz)	Ref(dBm)	Limit(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Port
2.44075G	9.55	-20.45	2.17273G	-53.85	2.39988G	-45.11	2.4839G	-48.19	24.66847G	-48.48	1

802.11n HT20_Nss1,(MCS0)_1TX

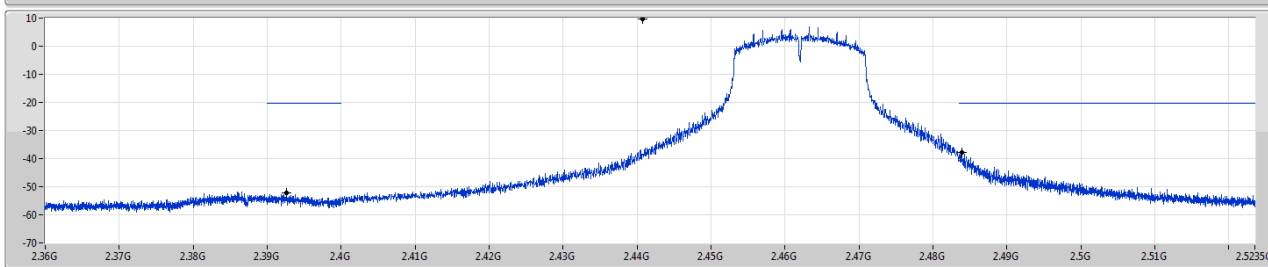
CSE NdB

2462MHz

29/08/2019

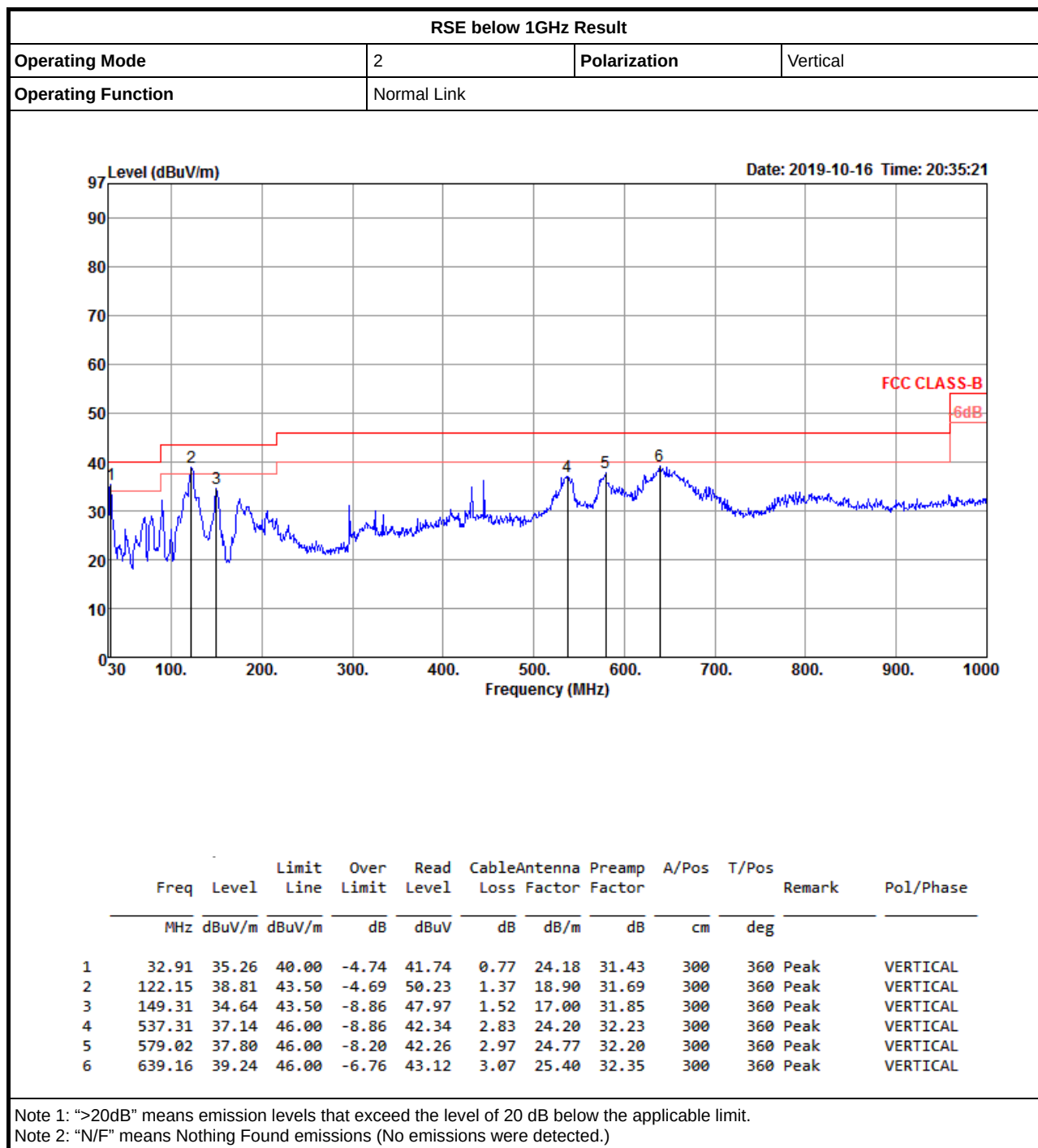


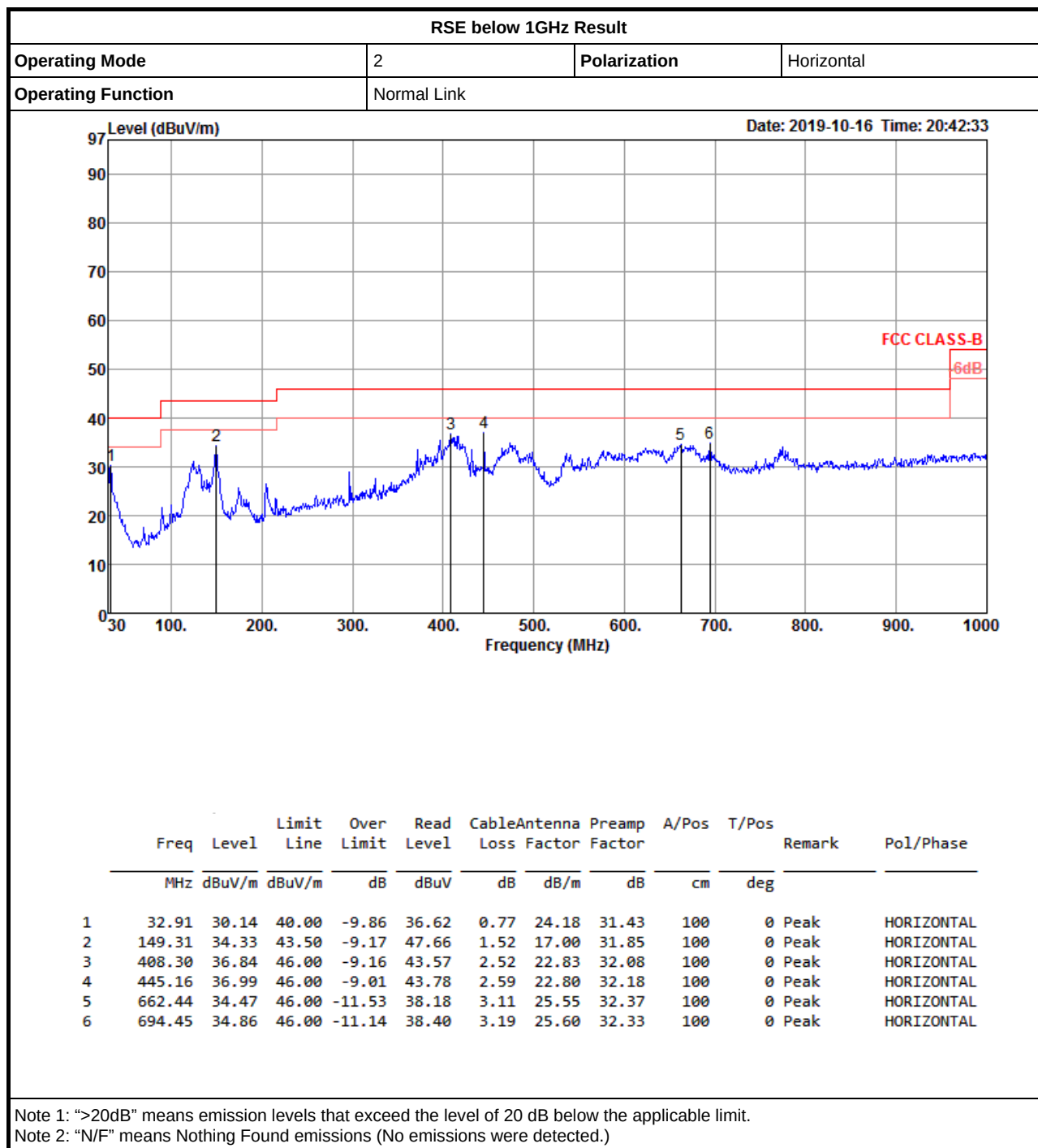
Port1



RBW (Hz)
100k
VBW (Hz)
300k
Detector
Peak

Ref(Hz)	Ref(dBm)	Limit(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Port
2.44075G	9.55	-20.45	2.30728G	-53.62	2.39266G	-52.22	2.48388G	-37.90	24.17961G	-48.36	1







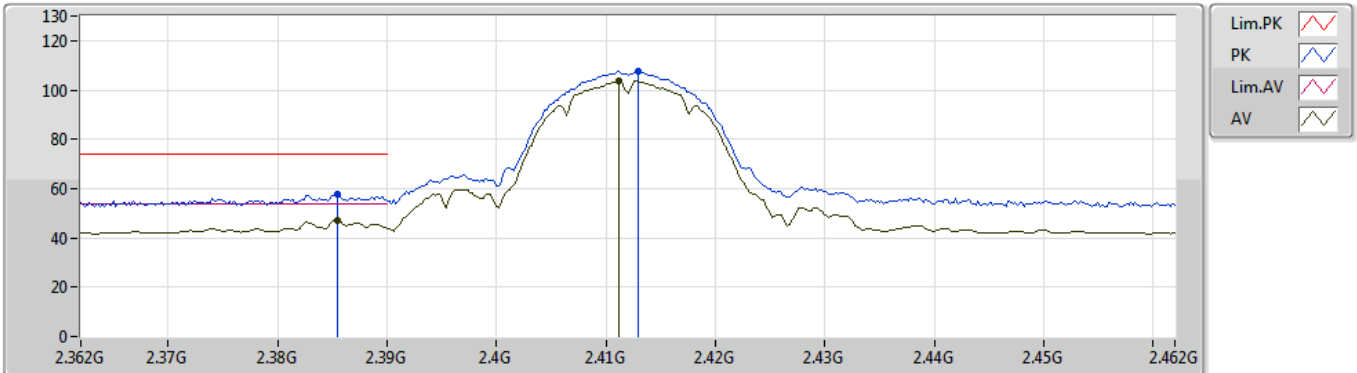
Summary

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	-	-	-	-	-	-	-	-	-	-	-	-
802.11b_Nss1,(1Mbps)_1TX	Pass	AV	7.31172G	53.92	54.00	-0.08	8.49	3	Vertical	140	2.50	-

802.11b_Nss1,(1Mbps)_1TX

29/08/2019

2412MHz_TX



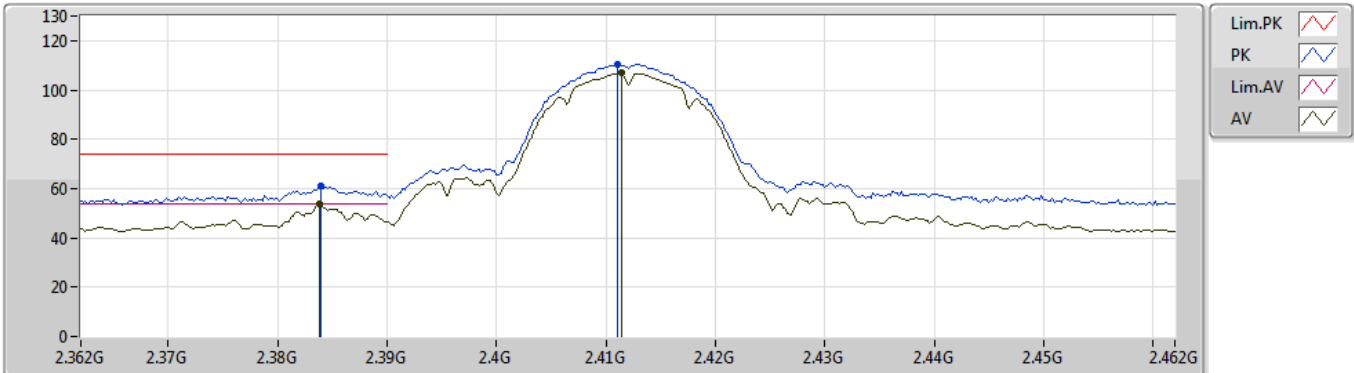
EUT X_1TX
Setting 78
04-B-4
FSP(100019)

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment	Raw (dBuV)			
PK	2.3854G	57.48	74.00	-16.52	29.84	3	Vertical	288	1.86	-	27.64			
AV	2.3854G	47.01	54.00	-6.99	29.84	3	Vertical	288	1.86	-	17.17			
PK	2.413G	107.51	Inf	-Inf	29.88	3	Vertical	288	1.86	-	77.63			
AV	2.4112G	103.63	Inf	-Inf	29.87	3	Vertical	288	1.86	-	73.76			

802.11b_Nss1,(1Mbps)_1TX

29/08/2019

2412MHz_TX



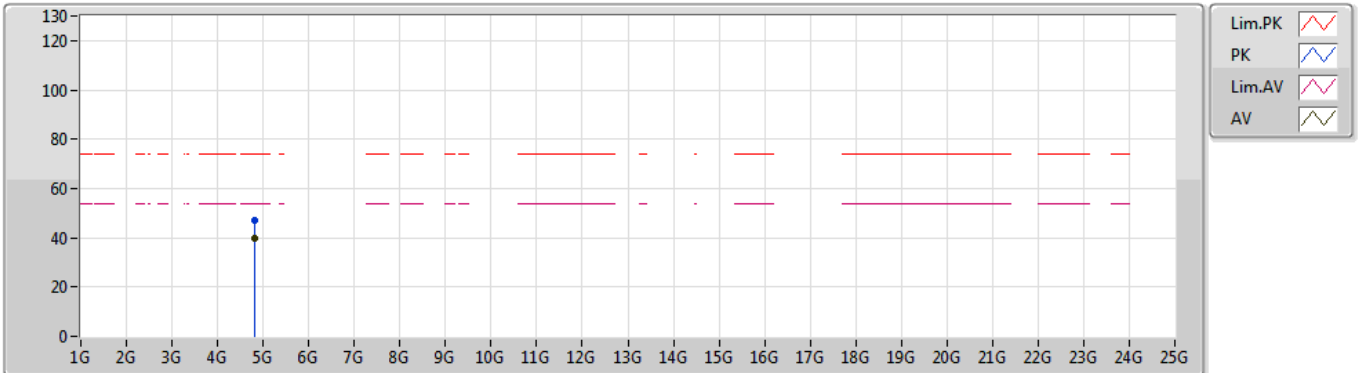
EUT X_1TX
Setting 78
04-B-4
FSP(100019)

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment	Raw (dBuV)
PK	2.384G	61.28	74.00	-12.72	29.85	3	Horizontal	326	1.01	-	31.43
AV	2.3838G	53.78	54.00	-0.22	29.85	3	Horizontal	326	1.01	-	23.93
PK	2.411G	110.64	Inf	-Inf	29.87	3	Horizontal	326	1.01	-	80.77
AV	2.4114G	107.09	Inf	-Inf	29.87	3	Horizontal	326	1.01	-	77.22

802.11b_Nss1,(1Mbps)_1TX

29/08/2019

2412MHz_TX



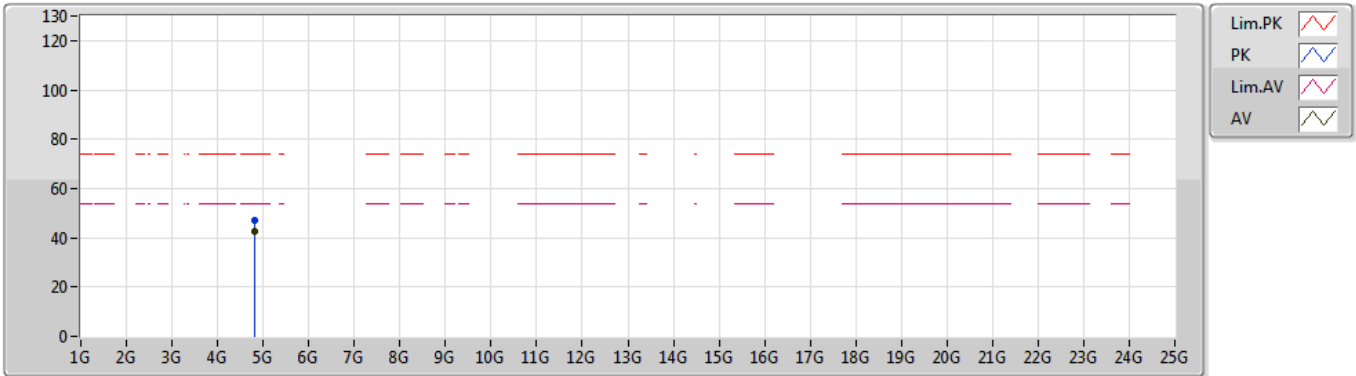
EUT Z_1TX
Setting 78
04-B-4
FSP(100019)

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment	Raw (dBuV)			
PK	4.824G	46.92	74.00	-27.08	2.96	3	Vertical	164	2.05	-	43.96			
AV	4.82394G	39.95	54.00	-14.05	2.96	3	Vertical	164	2.05	-	36.99			

802.11b_Nss1,(1Mbps)_1TX

29/08/2019

2412MHz_TX



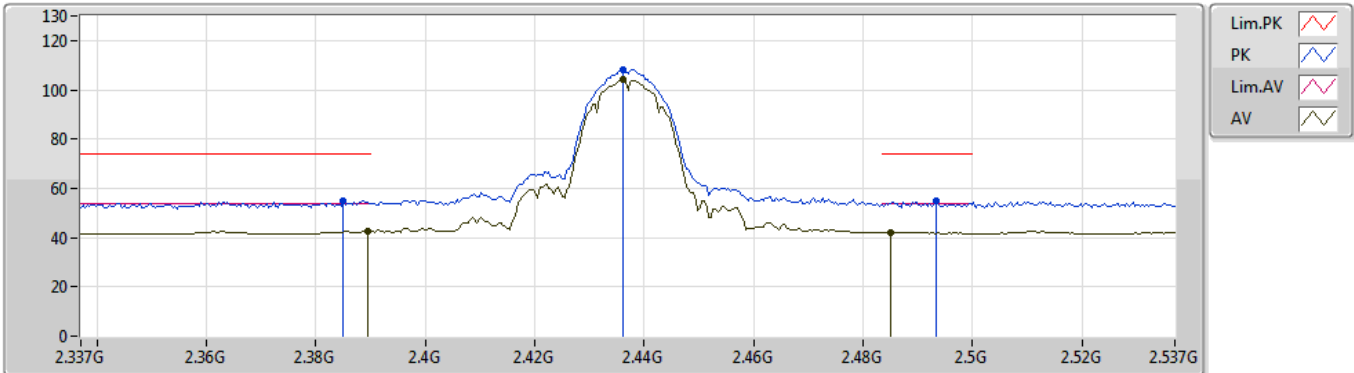
EUT Z_1TX
Setting 78
04-B-4
FSP(100019)

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment	Raw (dBuV)			
PK	4.82406G	46.86	74.00	-27.14	2.96	3	Horizontal	207	2.47	-	43.90			
AV	4.824G	42.37	54.00	-11.63	2.96	3	Horizontal	207	2.47	-	39.41			

802.11b_Nss1,(1Mbps)_1TX

29/08/2019

2437MHz_TX



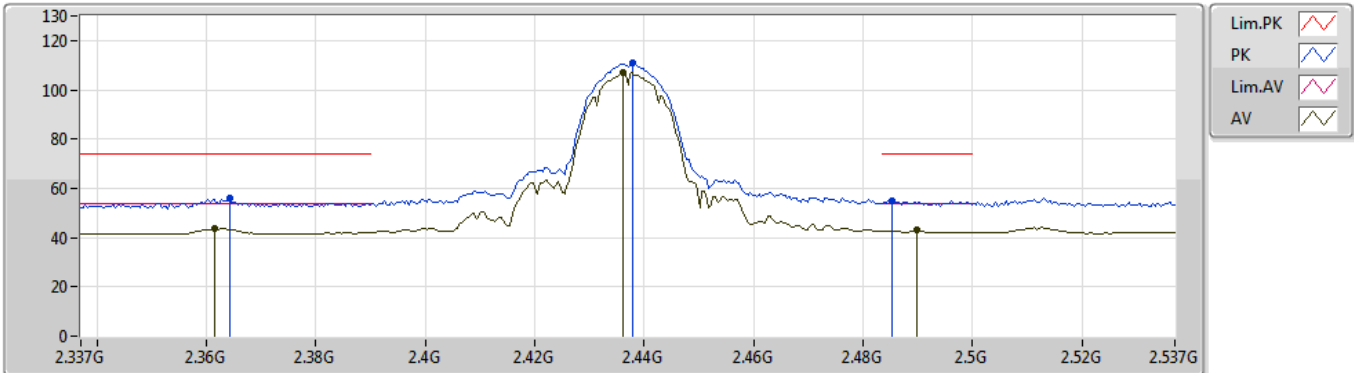
EUT X_1TX
Setting 78
04-B-4
FSP(100019)

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment	Raw (dBuV)
PK	2.385G	54.83	74.00	-19.17	29.85	3	Vertical	312	2.30	-	24.98
AV	2.3894G	42.83	54.00	-11.17	29.84	3	Vertical	312	2.30	-	12.99
PK	2.4362G	108.13	Inf	-Inf	29.93	3	Vertical	312	2.30	-	78.20
AV	2.4362G	104.35	Inf	-Inf	29.93	3	Vertical	312	2.30	-	74.42
PK	2.4934G	54.69	74.00	-19.31	30.08	3	Vertical	312	2.30	-	24.61
AV	2.485G	42.23	54.00	-11.77	30.05	3	Vertical	312	2.30	-	12.18

802.11b_Nss1,(1Mbps)_1TX

29/08/2019

2437MHz_TX



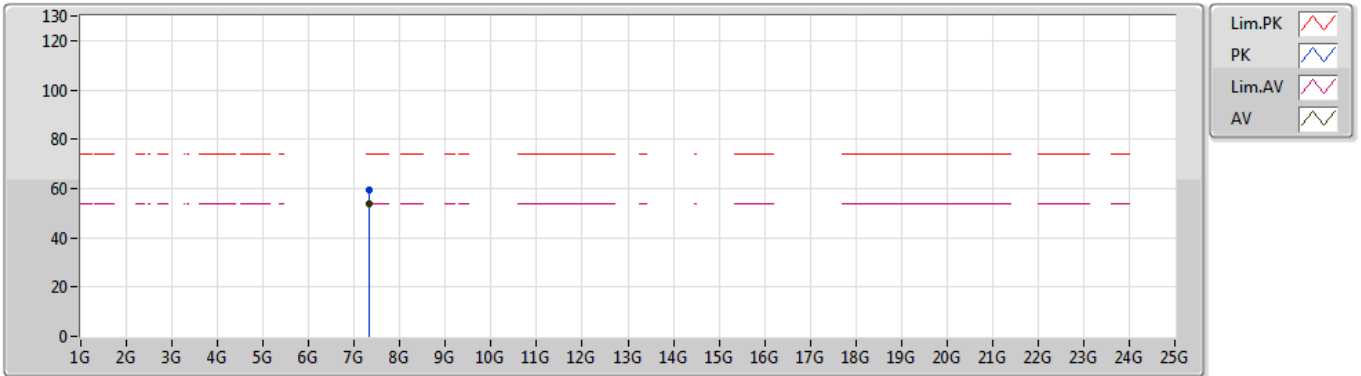
EUT X_1TX
Setting 78
04-B-4
FSP(100019)

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment	Raw (dBuV)
PK	2.3642G	55.88	74.00	-18.12	29.86	3	Horizontal	19	1.01	-	26.02
AV	2.3614G	43.68	54.00	-10.32	29.86	3	Horizontal	19	1.01	-	13.82
PK	2.4378G	110.72	Inf	-Inf	29.94	3	Horizontal	19	1.01	-	80.78
AV	2.4362G	106.89	Inf	-Inf	29.93	3	Horizontal	19	1.01	-	76.96
PK	2.4854G	55.08	74.00	-18.92	30.05	3	Horizontal	19	1.01	-	25.03
AV	2.4898G	42.88	54.00	-11.12	30.06	3	Horizontal	19	1.01	-	12.82

802.11b_Nss1,(1Mbps)_1TX

29/08/2019

2437MHz_TX



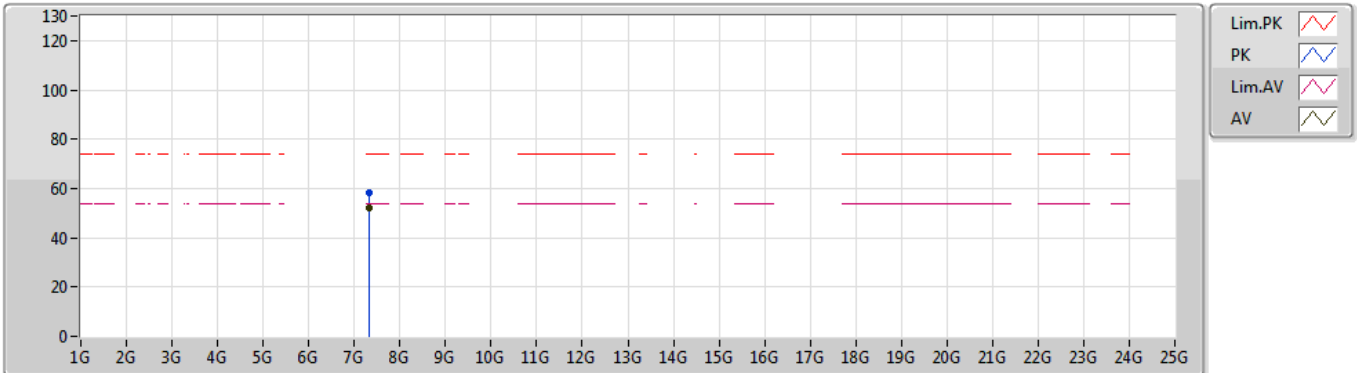
EUT Z_1TX
Setting 78
04-B-4
FSP(100019)

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment	Raw (dBuV)			
PK	7.31196G	59.63	74.00	-14.37	8.49	3	Vertical	140	2.50	-	51.14			
AV	7.31172G	53.92	54.00	-0.08	8.49	3	Vertical	140	2.50	-	45.43			

802.11b_Nss1,(1Mbps)_1TX

29/08/2019

2437MHz_TX



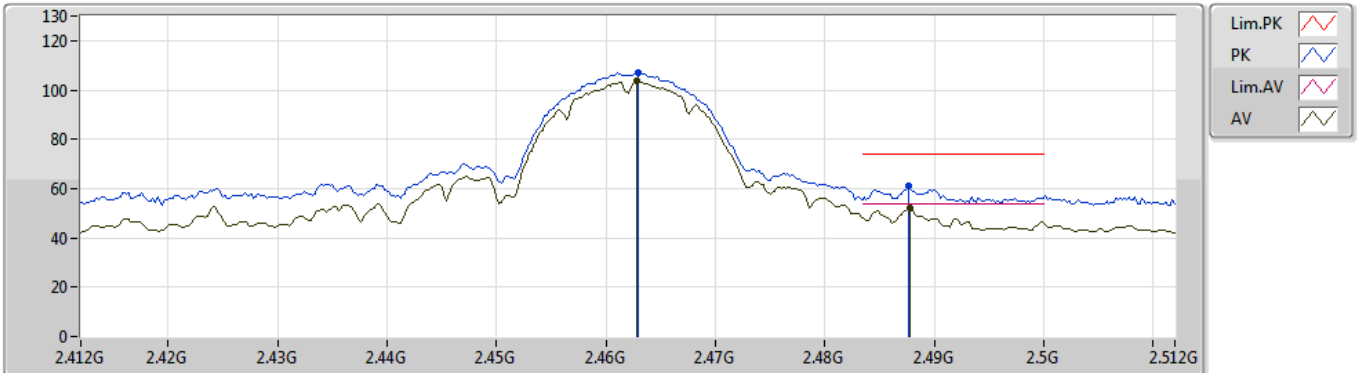
EUT_Z_1TX
Setting 78
04-B-4
FSP(100019)

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment	Raw (dBuV)			
PK	7.31196G	58.35	74.00	-15.65	8.49	3	Horizontal	234	2.45	-	49.86			
AV	7.31172G	52.21	54.00	-1.79	8.49	3	Horizontal	234	2.45	-	43.72			

802.11b_Nss1,(1Mbps)_1TX

29/08/2019

2462MHz_TX



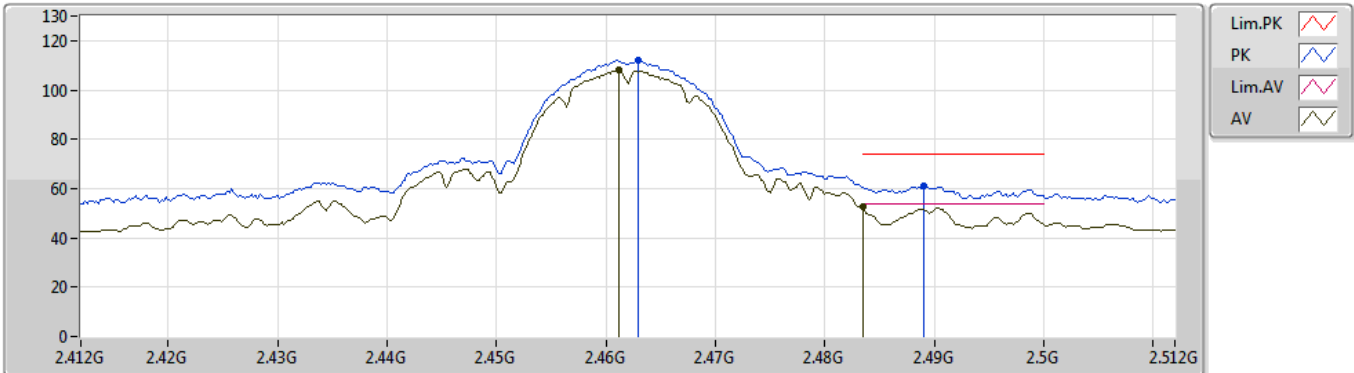
EUT X_1TX
Setting 80
04-B-4
FSP(100019)

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment	Raw (dBuV)			
PK	2.463G	107.17	Inf	-Inf	30.00	3	Vertical	297	1.41	-	77.17			
AV	2.4628G	103.40	Inf	-Inf	30.00	3	Vertical	297	1.41	-	73.40			
PK	2.4876G	60.84	74.00	-13.16	30.06	3	Vertical	297	1.41	-	30.78			
AV	2.4878G	52.11	54.00	-1.89	30.06	3	Vertical	297	1.41	-	22.05			

802.11b_Nss1,(1Mbps)_1TX

29/08/2019

2462MHz_TX



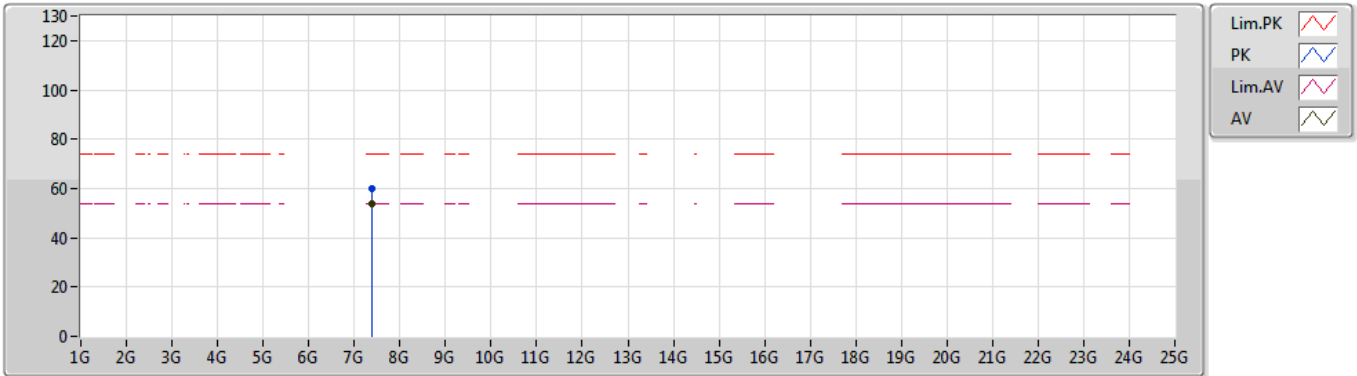
EUT X_1TX
Setting 80
04-B-4
FSP(100019)

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment	Raw (dBuV)			
PK	2.463G	111.90	Inf	-Inf	30.00	3	Horizontal	14	1.16	-	81.90			
AV	2.4612G	107.97	Inf	-Inf	29.99	3	Horizontal	14	1.16	-	77.98			
PK	2.489G	61.10	74.00	-12.90	30.06	3	Horizontal	14	1.16	-	31.04			
AV	2.4835G	52.61	54.00	-1.39	30.05	3	Horizontal	14	1.16	-	22.56			

802.11b_Nss1,(1Mbps)_1TX

29/08/2019

2462MHz_TX



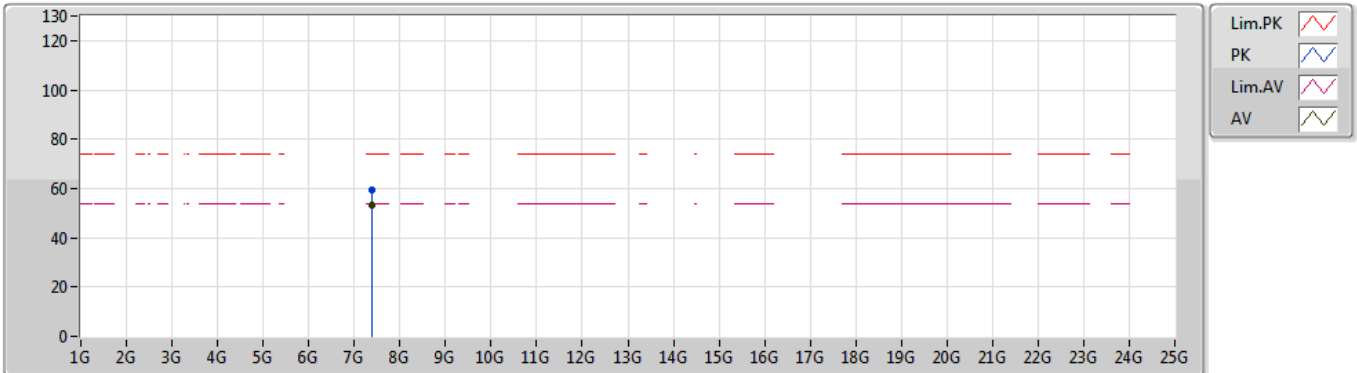
EUT Z_1TX
Setting 80
04-B-4
FSP(100019)

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment	Raw (dBuV)			
PK	7.38498G	59.81	74.00	-14.19	8.52	3	Vertical	134	2.63	-	51.29			
AV	7.38522G	53.75	54.00	-0.25	8.52	3	Vertical	134	2.63	-	45.23			

802.11b_Nss1,(1Mbps)_1TX

29/08/2019

2462MHz_TX



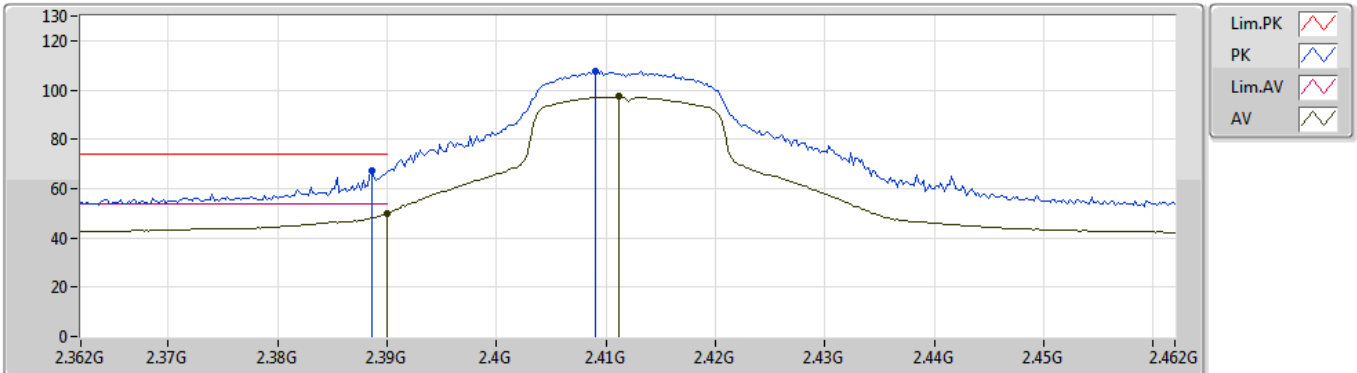
EUT_Z_1TX
Setting 80
04-B-4
FSP(100019)

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment	Raw (dBuV)			
PK	7.38504G	59.25	74.00	-14.75	8.52	3	Horizontal	234	2.46	-	50.73			
AV	7.38522G	53.39	54.00	-0.61	8.52	3	Horizontal	234	2.46	-	44.87			

802.11g_Nss1,(6Mbps)_1TX

29/08/2019

2412MHz_TX



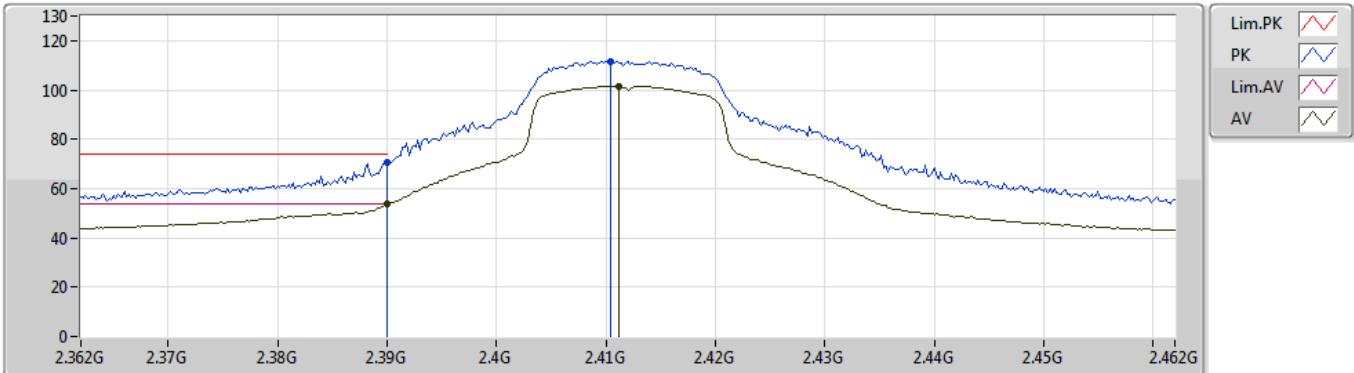
EUT X_1TX
Setting 75
04-B-4
FSP(100019)

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment	Raw (dBuV)			
PK	2.3886G	67.49	74.00	-6.51	29.84	3	Vertical	296	1.55	-	37.65			
AV	2.39G	49.77	54.00	-4.23	29.84	3	Vertical	296	1.55	-	19.93			
PK	2.409G	107.60	Inf	-Inf	29.86	3	Vertical	296	1.55	-	77.74			
AV	2.4112G	97.27	Inf	-Inf	29.87	3	Vertical	296	1.55	-	67.40			

802.11g_Nss1,(6Mbps)_1TX

29/08/2019

2412MHz_TX



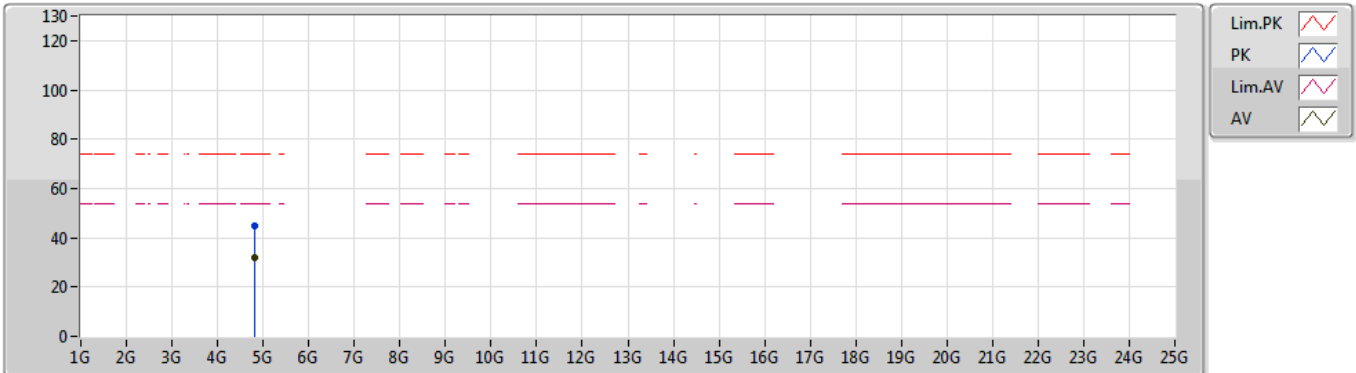
EUT X_1TX
Setting 75
04-B-4
FSP(100019)

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment	Raw (dBuV)
PK	2.39G	70.66	74.00	-3.34	29.84	3	Horizontal	325	1.01	-	40.82
AV	2.39G	53.78	54.00	-0.22	29.84	3	Horizontal	325	1.01	-	23.94
PK	2.4104G	111.74	Inf	-Inf	29.87	3	Horizontal	325	1.01	-	81.87
AV	2.4112G	101.62	Inf	-Inf	29.87	3	Horizontal	325	1.01	-	71.75

802.11g_Nss1,(6Mbps)_1TX

29/08/2019

2412MHz_TX



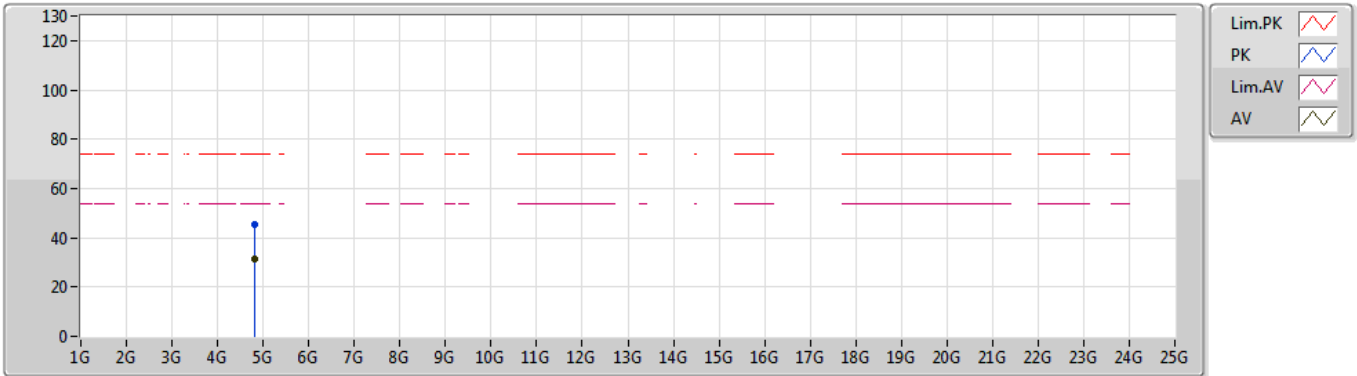
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Setting 75
04-B-4
FSP(100019)

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment	Raw (dBuV)			
PK	4.82848G	44.89	74.00	-29.11	2.98	3	Vertical	202	1.13	-	41.91			
AV	4.82758G	31.66	54.00	-22.34	2.97	3	Vertical	202	1.13	-	28.69			

802.11g_Nss1,(6Mbps)_1TX

29/08/2019

2412MHz_TX



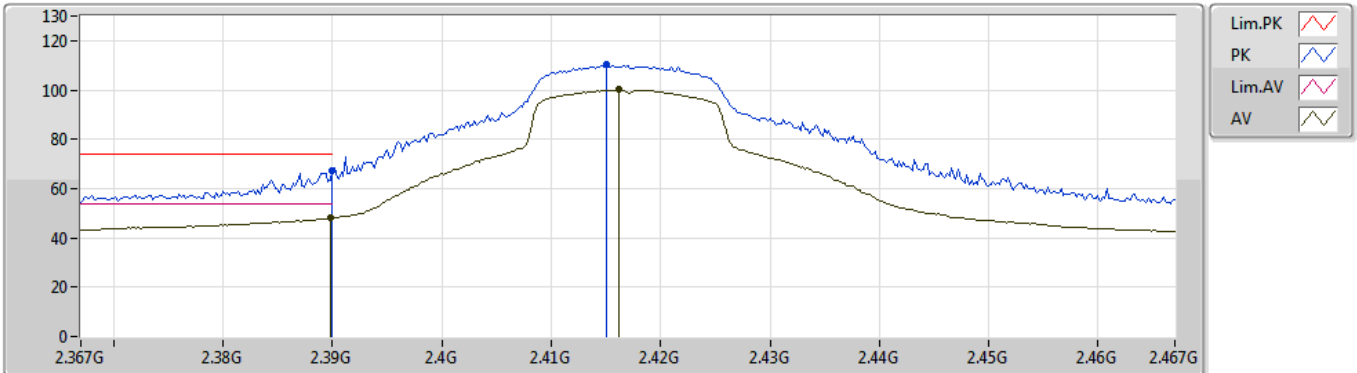
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Setting 75
04-B-4
FSP(100019)

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment	Raw (dBuV)			
PK	4.8254G	45.41	74.00	-28.59	2.97	3	Horizontal	196	2.17	-	42.44			
AV	4.82434G	31.56	54.00	-22.44	2.96	3	Horizontal	196	2.17	-	28.60			

802.11g_Nss1,(6Mbps)_1TX

29/08/2019

2417MHz_TX



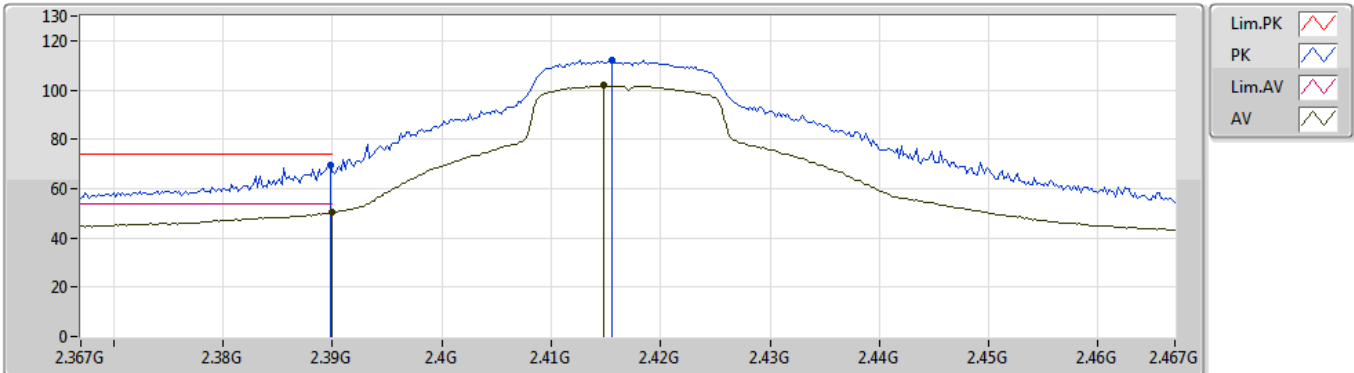
EUT X_1TX
Setting 88
04-B-4
FSP(100019)

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment	Raw (dBuV)
PK	2.39G	67.19	74.00	-6.81	29.84	3	Vertical	287	1.87	-	37.35
AV	2.3898G	47.96	54.00	-6.04	29.84	3	Vertical	287	1.87	-	18.12
PK	2.415G	110.18	Inf	-Inf	29.88	3	Vertical	287	1.87	-	80.30
AV	2.4162G	100.03	Inf	-Inf	29.88	3	Vertical	287	1.87	-	70.15

802.11g_Nss1,(6Mbps)_1TX

29/08/2019

2417MHz_TX



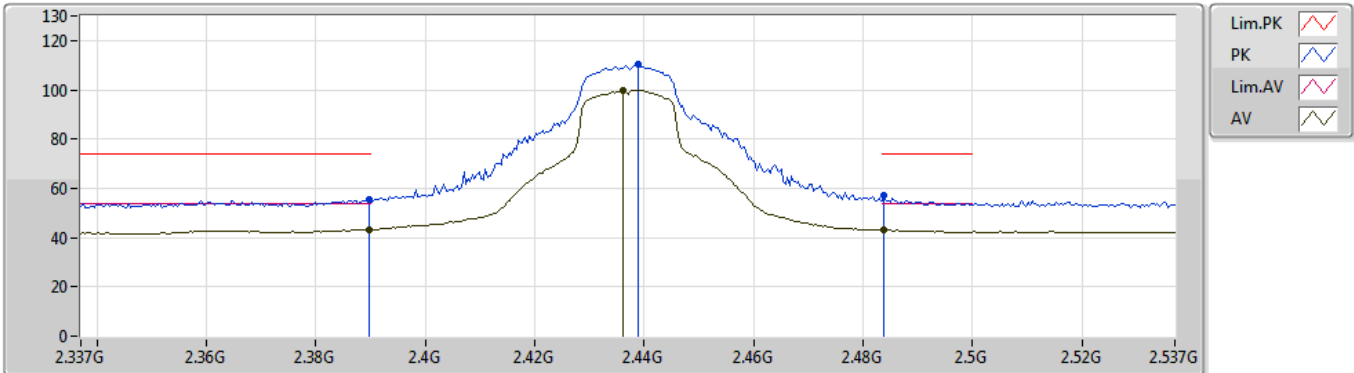
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Setting 88
04-B-4
FSP(100019)

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment	Raw (dBuV)
PK	2.3898G	69.63	74.00	-4.37	29.84	3	Horizontal	356	1.01	-	39.79
AV	2.39G	50.28	54.00	-3.72	29.84	3	Horizontal	356	1.01	-	20.44
PK	2.4156G	112.16	Inf	-Inf	29.88	3	Horizontal	356	1.01	-	82.28
AV	2.4148G	101.73	Inf	-Inf	29.88	3	Horizontal	356	1.01	-	71.85

802.11g_Nss1,(6Mbps)_1TX

29/08/2019

2437MHz_TX



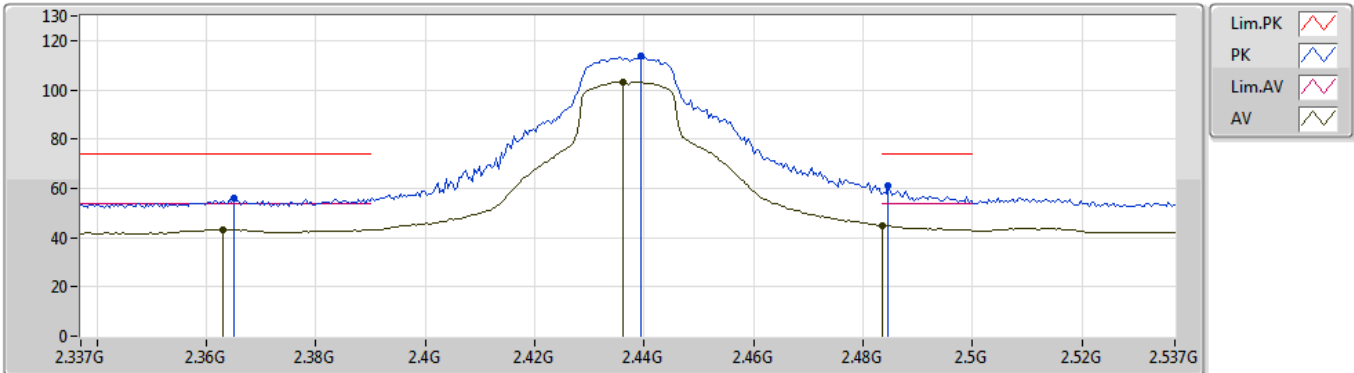
EUT X_1TX
Setting 88
04-B-4
FSP(100019)

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment	Raw (dBuV)
PK	2.3898G	55.45	74.00	-18.55	29.84	3	Vertical	292	2.05	-	25.61
AV	2.3898G	43.18	54.00	-10.82	29.84	3	Vertical	292	2.05	-	13.34
PK	2.439G	110.18	Inf	-Inf	29.94	3	Vertical	292	2.05	-	80.24
AV	2.4362G	99.70	Inf	-Inf	29.93	3	Vertical	292	2.05	-	69.77
PK	2.4838G	56.98	74.00	-17.02	30.05	3	Vertical	292	2.05	-	26.93
AV	2.4838G	43.18	54.00	-10.82	30.05	3	Vertical	292	2.05	-	13.13

802.11g_Nss1,(6Mbps)_1TX

29/08/2019

2437MHz_TX



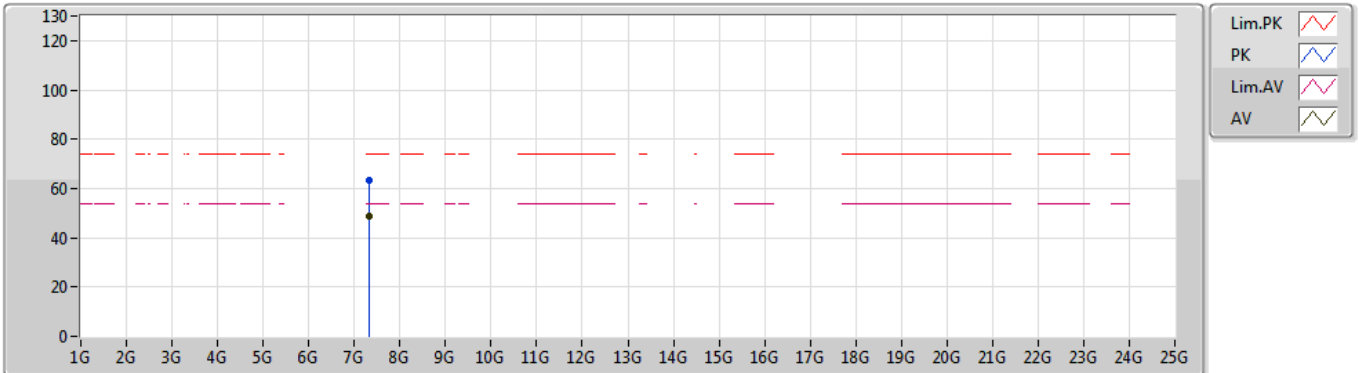
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Setting 88
04-B-4
FSP(100019)

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment	Raw (dBuV)
PK	2.365G	55.96	74.00	-18.04	29.86	3	Horizontal	19	1.00	-	26.10
AV	2.363G	43.27	54.00	-10.73	29.86	3	Horizontal	19	1.00	-	13.41
PK	2.4394G	113.81	Inf	-Inf	29.94	3	Horizontal	19	1.00	-	83.87
AV	2.4362G	103.23	Inf	-Inf	29.93	3	Horizontal	19	1.00	-	73.30
PK	2.4846G	60.89	74.00	-13.11	30.05	3	Horizontal	19	1.00	-	30.84
AV	2.4835G	44.94	54.00	-9.06	30.05	3	Horizontal	19	1.00	-	14.89

802.11g_Nss1,(6Mbps)_1TX

29/08/2019

2437MHz_TX



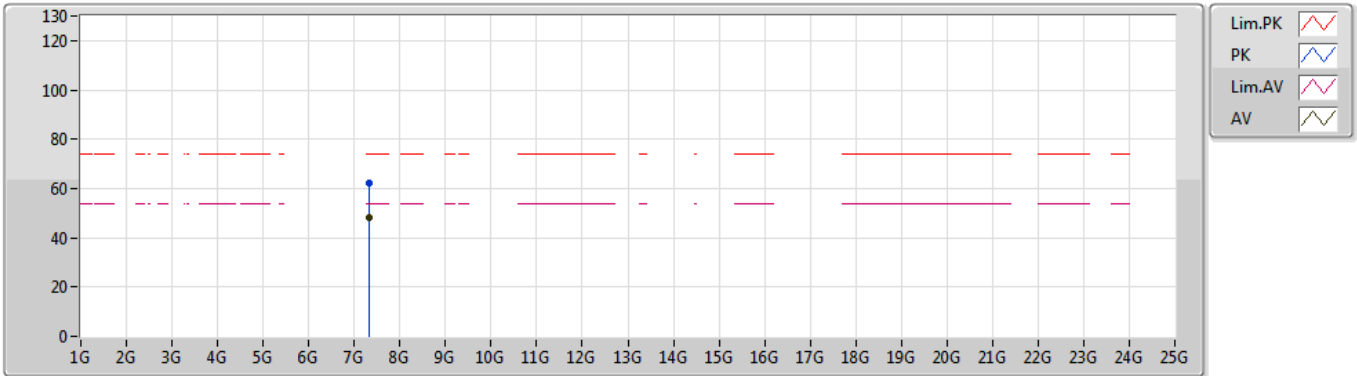
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Setting 88
04-B-4
FSP(100019)

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment	Raw (dBuV)			
PK	7.31622G	63.16	74.00	-10.84	8.48	3	Vertical	141	2.56	-	54.68			
AV	7.31358G	48.95	54.00	-5.05	8.48	3	Vertical	141	2.56	-	40.47			

802.11g_Nss1,(6Mbps)_1TX

29/08/2019

2437MHz_TX



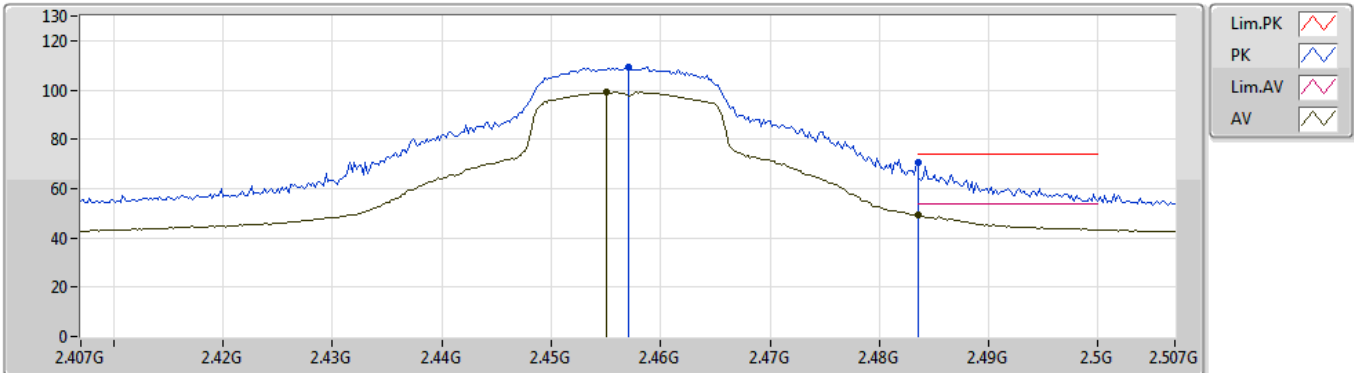
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Setting 88
04-B-4
FSP(100019)

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment	Raw (dBuV)			
PK	7.31244G	62.04	74.00	-11.96	8.49	3	Horizontal	239	2.56	-	53.55			
AV	7.31082G	48.22	54.00	-5.78	8.49	3	Horizontal	239	2.56	-	39.73			

802.11g_Nss1,(6Mbps)_1TX

29/08/2019

2457MHz_TX



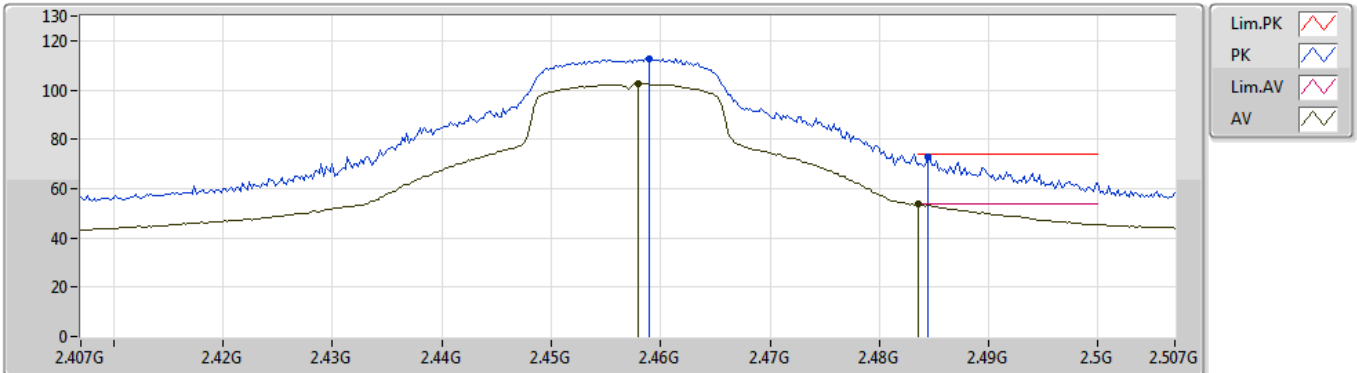
EUT X_1TX
Setting 78
04-B-4
FSP(100019)

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment	Raw (dBuV)			
PK	2.457G	109.48	Inf	-Inf	29.98	3	Vertical	282	1.87	-	79.50			
AV	2.455G	99.23	Inf	-Inf	29.98	3	Vertical	282	1.87	-	69.25			
PK	2.4835G	70.40	74.00	-3.60	30.05	3	Vertical	282	1.87	-	40.35			
AV	2.4835G	49.10	54.00	-4.90	30.05	3	Vertical	282	1.87	-	19.05			

802.11g_Nss1,(6Mbps)_1TX

29/08/2019

2457MHz_TX



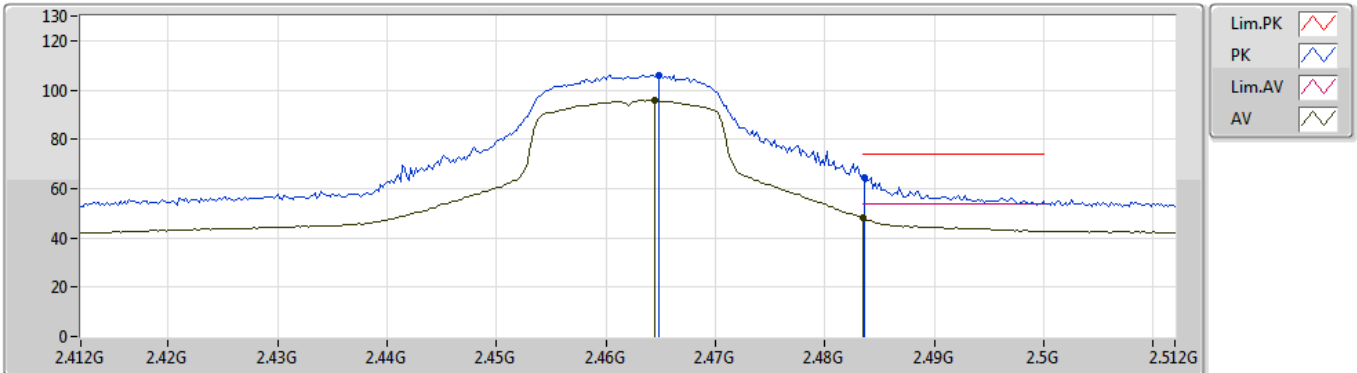
EUT X_1TX
Setting 78
04-B-4
FSP(100019)

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment	Raw (dBuV)			
PK	2.459G	112.55	Inf	-Inf	29.99	3	Horizontal	16	1.19	-	82.56			
AV	2.458G	102.55	Inf	-Inf	29.99	3	Horizontal	16	1.19	-	72.56			
PK	2.4844G	72.83	74.00	-1.17	30.05	3	Horizontal	16	1.19	-	42.78			
AV	2.483501G	53.78	54.00	-0.22	30.05	3	Horizontal	16	1.19	-	23.73			

802.11g_Nss1,(6Mbps)_1TX

29/08/2019

2462MHz_TX



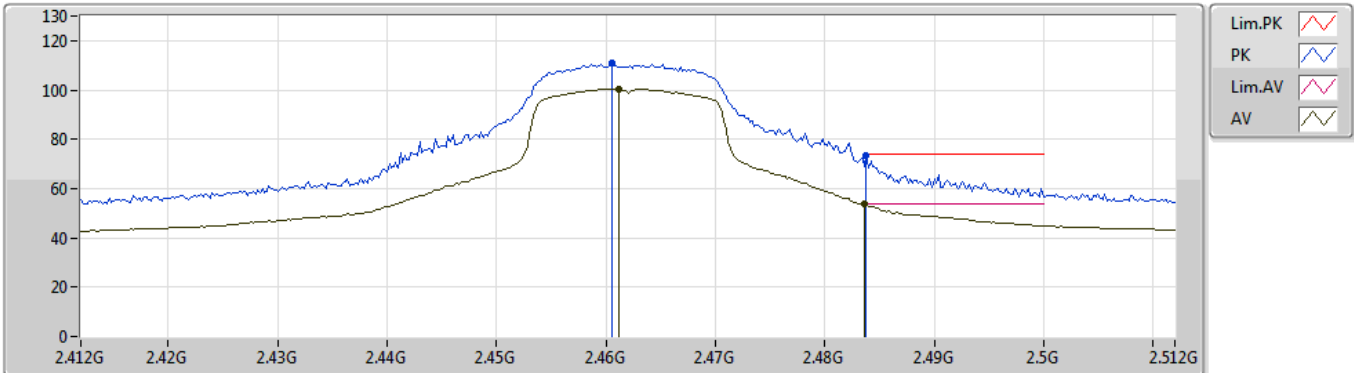
EUT X_1TX
Setting 70
04-B-4
FSP(100019)

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment	Raw (dBuV)
PK	2.4648G	106.04	Inf	-Inf	30.00	3	Vertical	297	1.42	-	76.04
AV	2.4644G	95.86	Inf	-Inf	30.00	3	Vertical	297	1.42	-	65.86
PK	2.4836G	64.54	74.00	-9.46	30.05	3	Vertical	297	1.42	-	34.49
AV	2.4835G	48.01	54.00	-5.99	30.05	3	Vertical	297	1.42	-	17.96

802.11g_Nss1,(6Mbps)_1TX

29/08/2019

2462MHz_TX



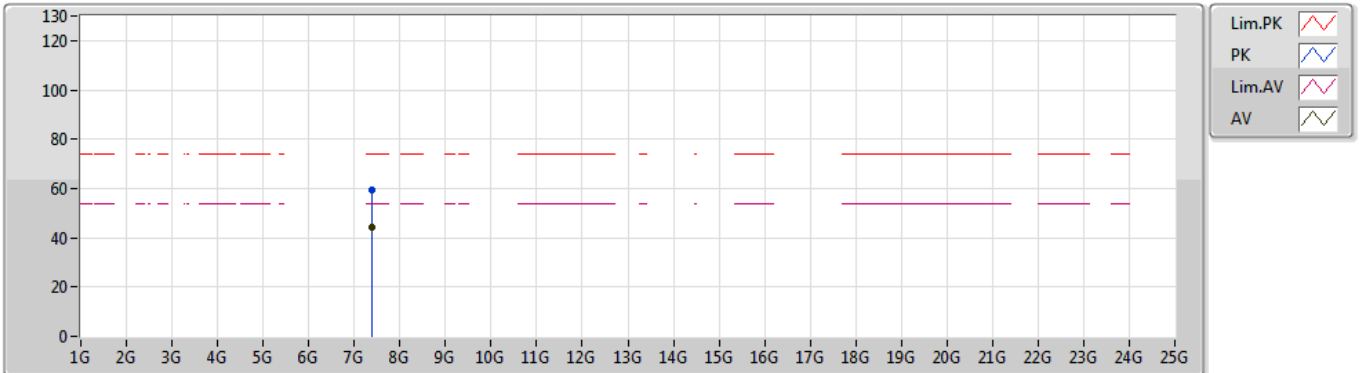
EUT X_1TX
Setting 70
04-B-4
FSP(100019)

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment	Raw (dBuV)			
PK	2.4606G	110.69	Inf	-Inf	29.99	3	Horizontal	14	1.19	-	80.70			
AV	2.4612G	100.50	Inf	-Inf	29.99	3	Horizontal	14	1.19	-	70.51			
PK	2.4838G	73.22	74.00	-0.78	30.05	3	Horizontal	14	1.19	-	43.17			
AV	2.4836G	53.76	54.00	-0.24	30.05	3	Horizontal	14	1.19	-	23.71			

802.11g_Nss1,(6Mbps)_1TX

29/08/2019

2462MHz_TX



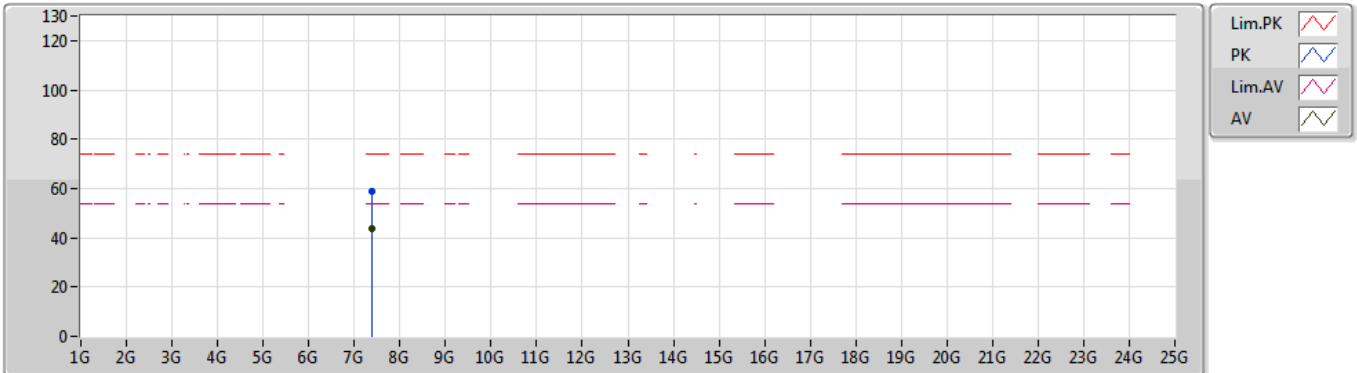
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Setting 70
04-B-4
FSP(100019)

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment	Raw (dBuV)			
PK	7.38732G	59.41	74.00	-14.59	8.52	3	Vertical	144	2.56	-	50.89			
AV	7.38756G	44.44	54.00	-9.56	8.51	3	Vertical	144	2.56	-	35.93			

802.11g_Nss1,(6Mbps)_1TX

29/08/2019

2462MHz_TX



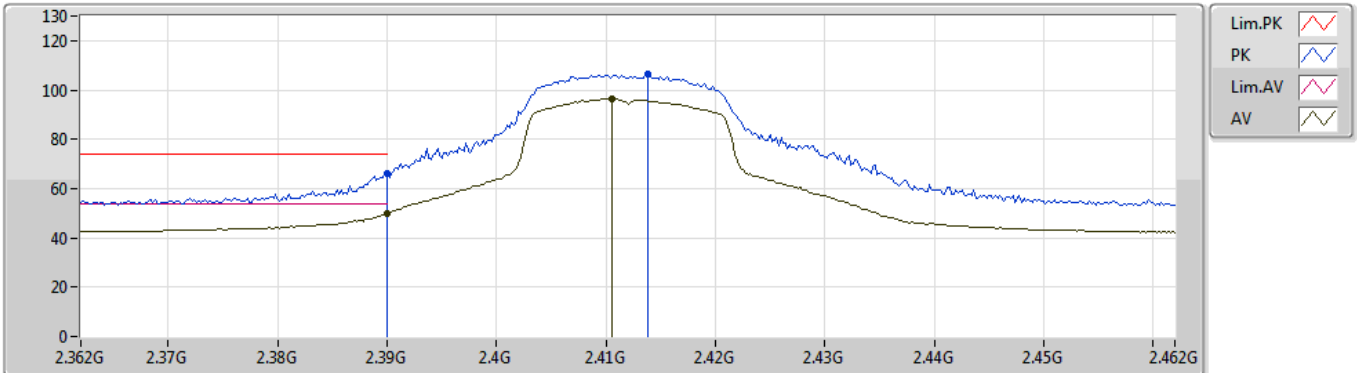
EUT Z_1TX
Setting 70
04-B-4
FSP(100019)

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment	Raw (dBuV)			
PK	7.38786G	58.76	74.00	-15.24	8.51	3	Horizontal	244	2.56	-	50.25			
AV	7.38384G	43.44	54.00	-10.56	8.52	3	Horizontal	244	2.56	-	34.92			

802.11n HT20_Nss1,(MCS0)_1TX

29/08/2019

2412MHz_TX



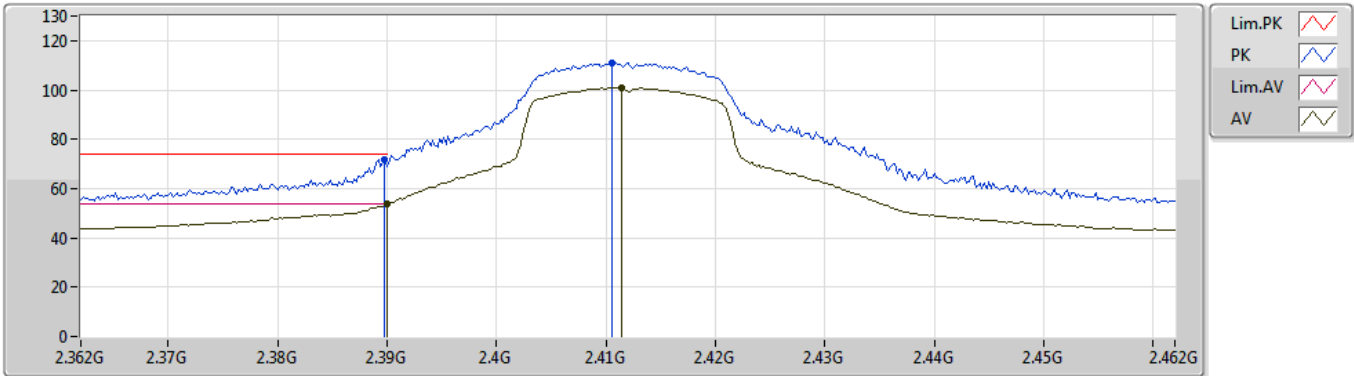
EUT X_1TX
Setting 73
04-B-4
FSP(100019)

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment	Raw (dBuV)
PK	2.39G	66.16	74.00	-7.84	29.84	3	Vertical	294	1.54	-	36.32
AV	2.39G	50.06	54.00	-3.94	29.84	3	Vertical	294	1.54	-	20.22
PK	2.4138G	106.22	Inf	-Inf	29.88	3	Vertical	294	1.54	-	76.34
AV	2.4106G	96.29	Inf	-Inf	29.87	3	Vertical	294	1.54	-	66.42

802.11n HT20_Nss1,(MCS0)_1TX

29/08/2019

2412MHz_TX



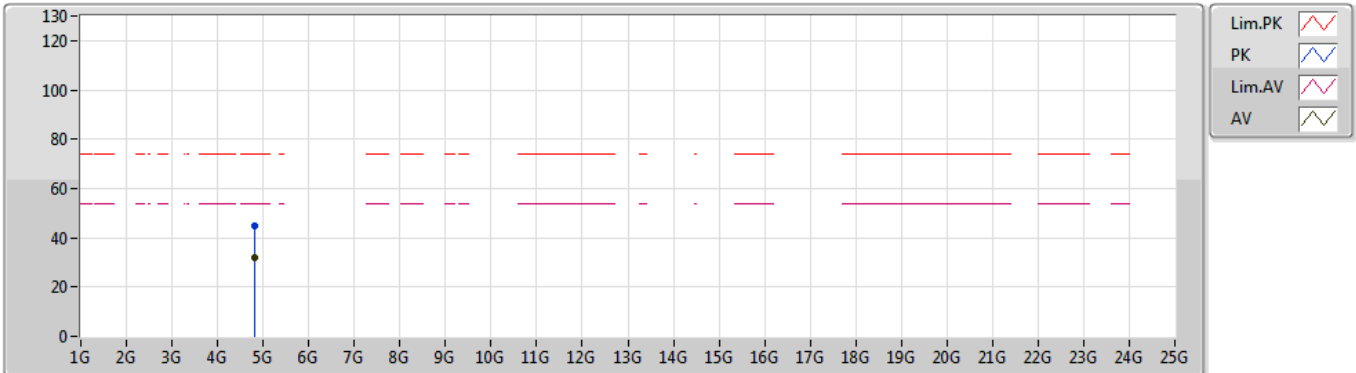
EUT X_1TX
Setting 73
04-B-4
FSP(100019)

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment	Raw (dBuV)
PK	2.3898G	71.89	74.00	-2.11	29.84	3	Horizontal	324	1.02	-	42.05
AV	2.39G	53.76	54.00	-0.24	29.84	3	Horizontal	324	1.02	-	23.92
PK	2.4106G	111.00	Inf	-Inf	29.87	3	Horizontal	324	1.02	-	81.13
AV	2.4114G	100.84	Inf	-Inf	29.87	3	Horizontal	324	1.02	-	70.97

802.11n HT20_Nss1,(MCS0)_1TX

29/08/2019

2412MHz_TX



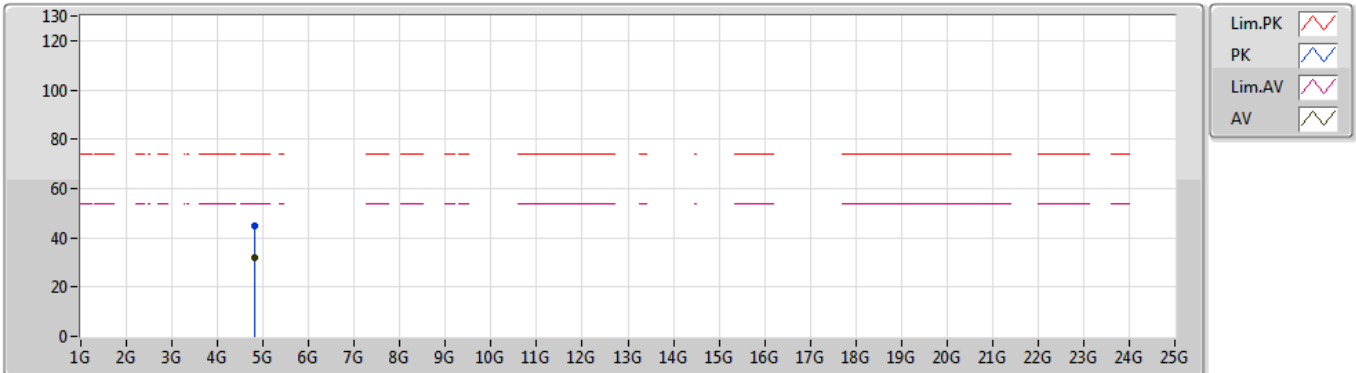
EUT Z_1TX
Setting 73
04-B-4
FSP(100019)

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment	Raw (dBuV)			
PK	4.82642G	45.03	74.00	-28.97	2.97	3	Vertical	213	1.91	-	42.06			
AV	4.8246G	31.72	54.00	-22.28	2.96	3	Vertical	213	1.91	-	28.76			

802.11n HT20_Nss1,(MCS0)_1TX

29/08/2019

2412MHz_TX



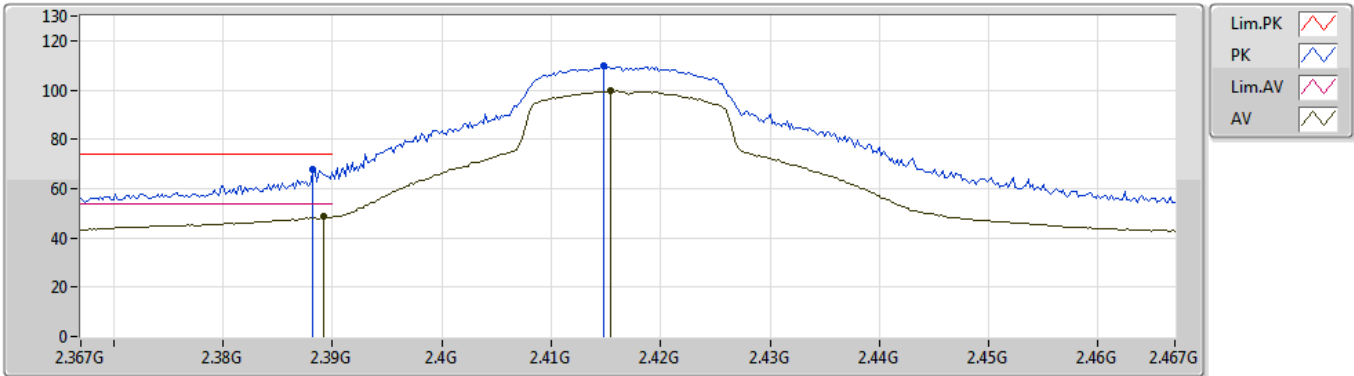
EUT Z_1TX
Setting 73
04-B-4
FSP(100019)

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment	Raw (dBuV)			
PK	4.82468G	45.03	74.00	-28.97	2.96	3	Horizontal	157	1.93	-	42.07			
AV	4.8257G	31.67	54.00	-22.33	2.97	3	Horizontal	157	1.93	-	28.70			

802.11n HT20_Nss1,(MCS0)_1TX

29/08/2019

2417MHz_TX



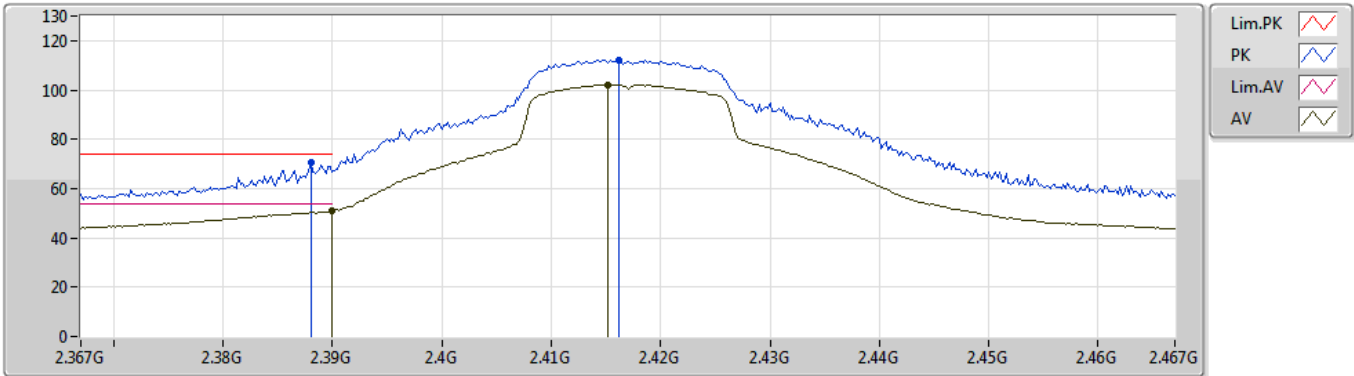
EUT X_1TX
Setting 88
04-B-4
FSP(100019)

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment	Raw (dBuV)
PK	2.3882G	67.99	74.00	-6.01	29.84	3	Vertical	290	1.86	-	38.15
AV	2.3892G	48.56	54.00	-5.44	29.84	3	Vertical	290	1.86	-	18.72
PK	2.4148G	109.94	Inf	-Inf	29.88	3	Vertical	290	1.86	-	80.06
AV	2.4154G	99.48	Inf	-Inf	29.88	3	Vertical	290	1.86	-	69.60

802.11n HT20_Nss1,(MCS0)_1TX

29/08/2019

2417MHz_TX



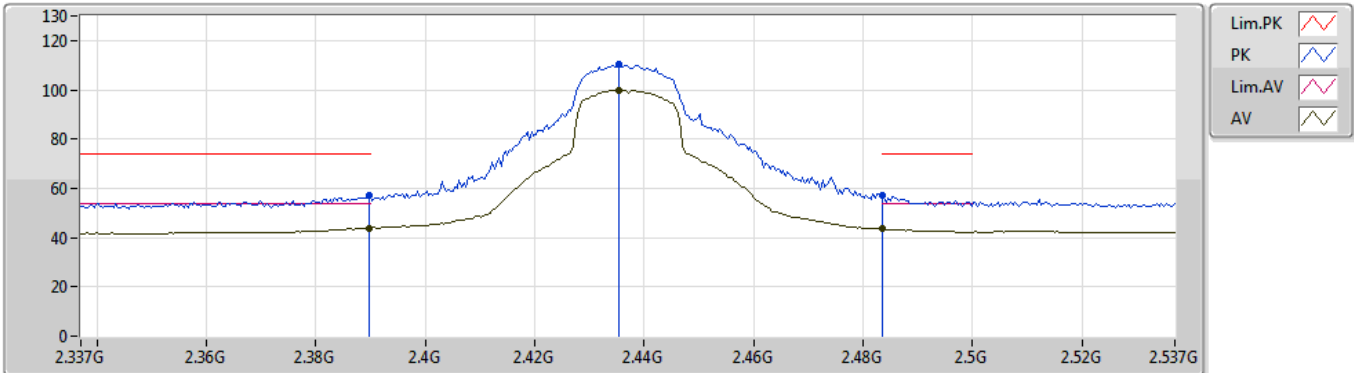
EUT X_1TX
Setting 88
04-B-4
FSP(100019)

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment	Raw (dBuV)
PK	2.388G	70.39	74.00	-3.61	29.84	3	Horizontal	341	1.08	-	40.55
AV	2.39G	50.81	54.00	-3.19	29.84	3	Horizontal	341	1.08	-	20.97
PK	2.4162G	112.28	Inf	-Inf	29.88	3	Horizontal	341	1.08	-	82.40
AV	2.4152G	102.13	Inf	-Inf	29.88	3	Horizontal	341	1.08	-	72.25

802.11n HT20_Nss1,(MCS0)_1TX

29/08/2019

2437MHz_TX



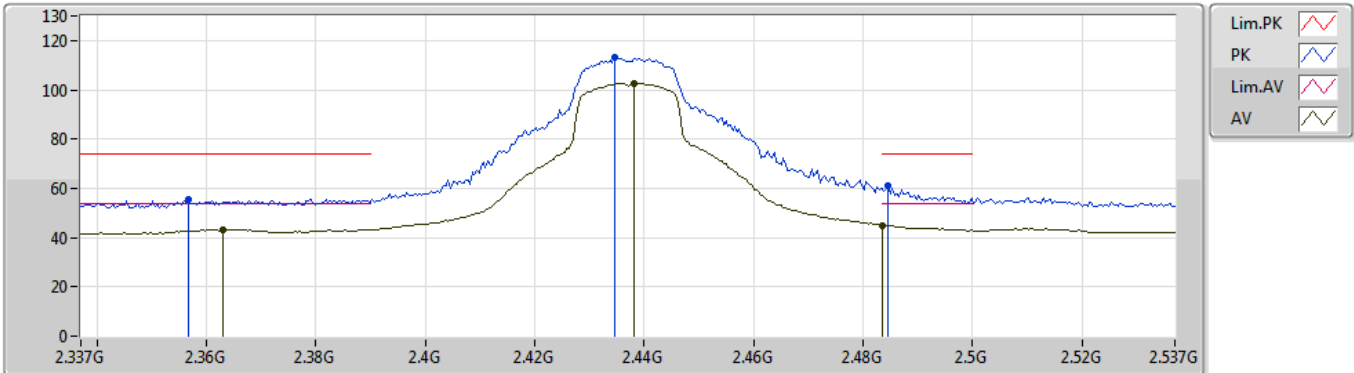
EUT X_1TX
Setting 88
04-B-4
FSP(100019)

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment	Raw (dBuV)
PK	2.3898G	56.90	74.00	-17.10	29.84	3	Vertical	313	2.29	-	27.06
AV	2.3898G	43.78	54.00	-10.22	29.84	3	Vertical	313	2.29	-	13.94
PK	2.4354G	110.22	Inf	-Inf	29.93	3	Vertical	313	2.29	-	80.29
AV	2.4354G	100.01	Inf	-Inf	29.93	3	Vertical	313	2.29	-	70.08
PK	2.4835G	57.17	74.00	-16.83	30.05	3	Vertical	313	2.29	-	27.12
AV	2.4835G	43.51	54.00	-10.49	30.05	3	Vertical	313	2.29	-	13.46

802.11n HT20_Nss1,(MCS0)_1TX

29/08/2019

2437MHz_TX



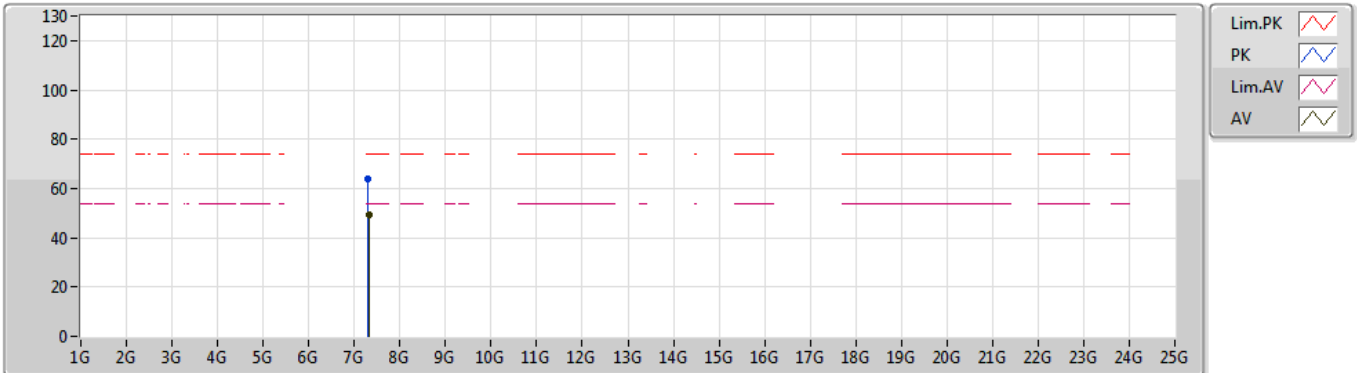
EUT X_1TX
Setting 88
04-B-4
FSP(100019)

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment	Raw (dBuV)
PK	2.3566G	55.33	74.00	-18.67	29.86	3	Horizontal	16	1.01	-	25.47
AV	2.363G	43.28	54.00	-10.72	29.86	3	Horizontal	16	1.01	-	13.42
PK	2.4346G	113.28	Inf	-Inf	29.93	3	Horizontal	16	1.01	-	83.35
AV	2.4382G	102.74	Inf	-Inf	29.94	3	Horizontal	16	1.01	-	72.80
PK	2.4846G	60.97	74.00	-13.03	30.05	3	Horizontal	16	1.01	-	30.92
AV	2.4835G	45.03	54.00	-8.97	30.05	3	Horizontal	16	1.01	-	14.98

802.11n HT20_Nss1,(MCS0)_1TX

29/08/2019

2437MHz_TX



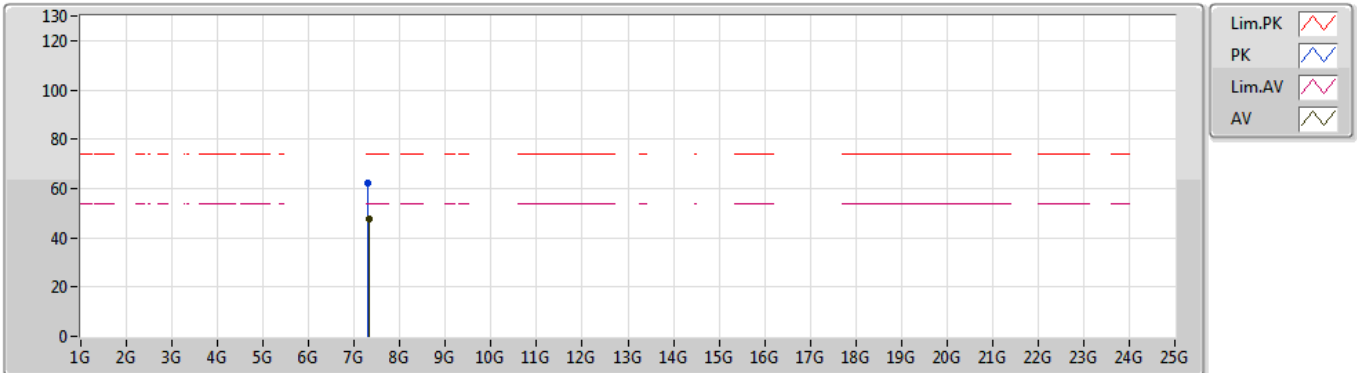
EUT Z_1TX
Setting 88
04-B-4
FSP(100019)

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment	Raw (dBuV)			
PK	7.30986G	63.68	74.00	-10.32	8.49	3	Vertical	138	2.15	-	55.19			
AV	7.31142G	49.27	54.00	-4.73	8.49	3	Vertical	138	2.15	-	40.78			

802.11n HT20_Nss1,(MCS0)_1TX

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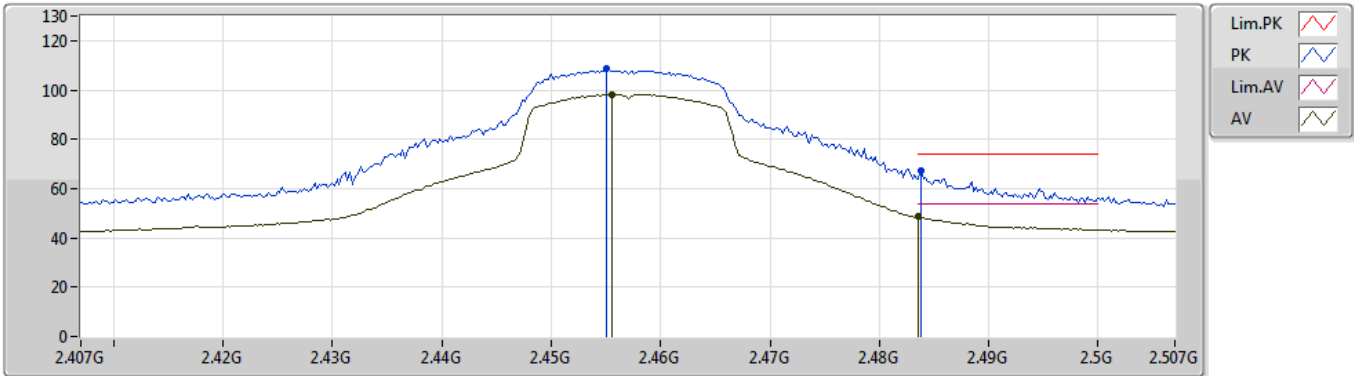
EUT_Z_1TX
Setting 88
04-B-4
FSP(100019)

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment	Raw (dBuV)			
PK	7.30992G	62.01	74.00	-11.99	8.49	3	Horizontal	234	2.42	-	53.52			
AV	7.31094G	47.40	54.00	-6.60	8.49	3	Horizontal	234	2.42	-	38.91			

802.11n HT20_Nss1,(MCS0)_1TX

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2457MHz_TX



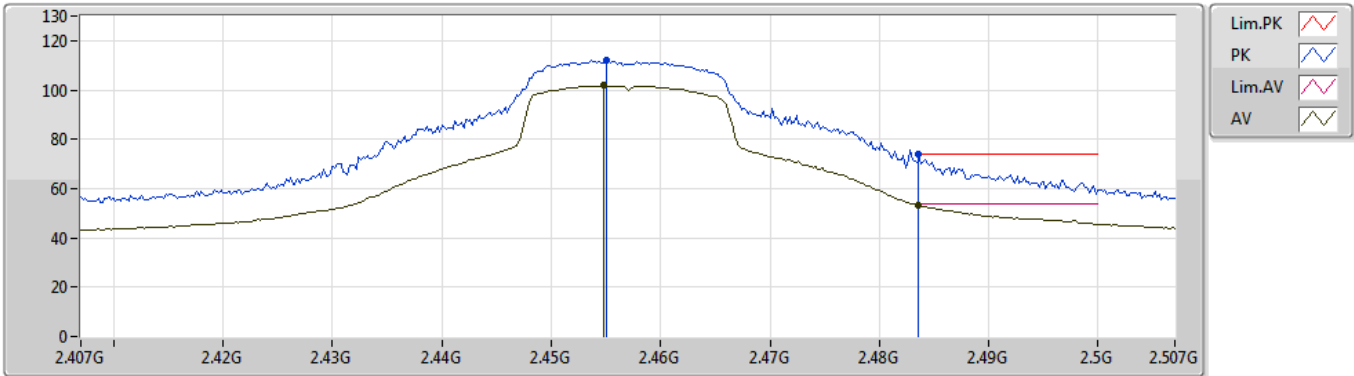
EUT X_1TX
Setting 77
04-B-4
FSP(100019)

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment	Raw (dBuV)
PK	2.455G	108.80	Inf	-Inf	29.98	3	Vertical	281	1.88	-	78.82
AV	2.4556G	98.18	Inf	-Inf	29.98	3	Vertical	281	1.88	-	68.20
PK	2.4838G	67.22	74.00	-6.78	30.05	3	Vertical	281	1.88	-	37.17
AV	2.4835G	48.57	54.00	-5.43	30.05	3	Vertical	281	1.88	-	18.52

802.11n HT20_Nss1,(MCS0)_1TX

29/08/2019

2457MHz_TX



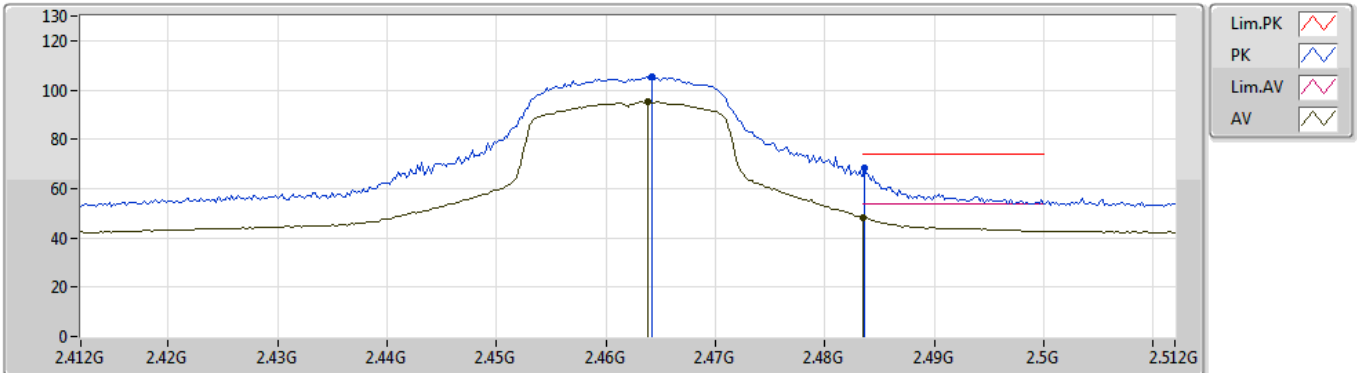
EUT X_1TX
Setting 77
04-B-4
FSP(100019)

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment	Raw (dBuV)
PK	2.455G	111.81	Inf	-Inf	29.98	3	Horizontal	15	1.00	-	81.83
AV	2.4548G	101.92	Inf	-Inf	29.98	3	Horizontal	15	1.00	-	71.94
PK	2.4836G	73.81	74.00	-0.19	30.05	3	Horizontal	15	1.00	-	43.76
AV	2.4835G	53.34	54.00	-0.66	30.05	3	Horizontal	15	1.00	-	23.29

802.11n HT20_Nss1,(MCS0)_1TX

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2462MHz_TX



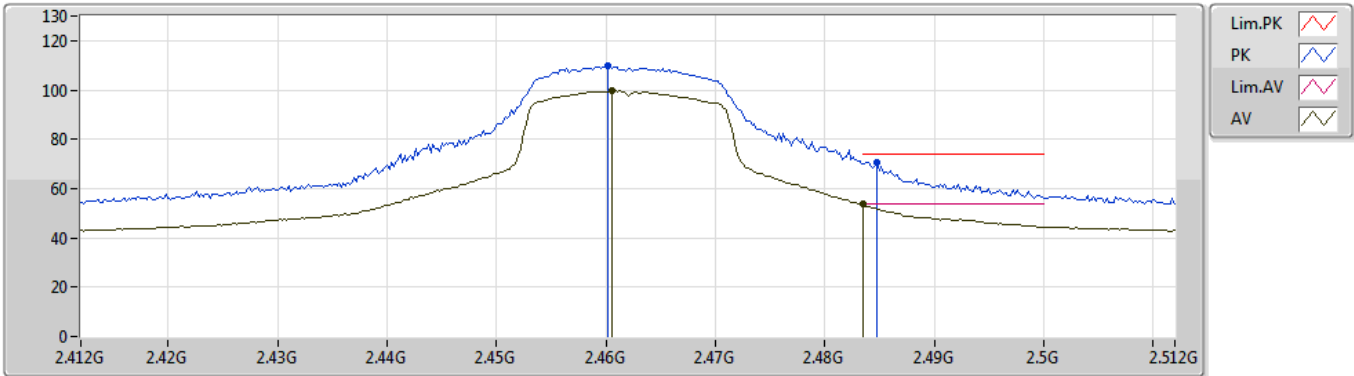
EUT X_1TX
Setting 69
04-B-4
FSP(100019)

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment	Raw (dBuV)			
PK	2.4642G	105.20	Inf	-Inf	30.00	3	Vertical	297	1.43	-	75.20			
AV	2.4638G	95.27	Inf	-Inf	30.00	3	Vertical	297	1.43	-	65.27			
PK	2.4836G	68.16	74.00	-5.84	30.05	3	Vertical	297	1.43	-	38.11			
AV	2.4835G	48.40	54.00	-5.60	30.05	3	Vertical	297	1.43	-	18.35			

802.11n HT20_Nss1,(MCS0)_1TX

29/08/2019

2462MHz_TX



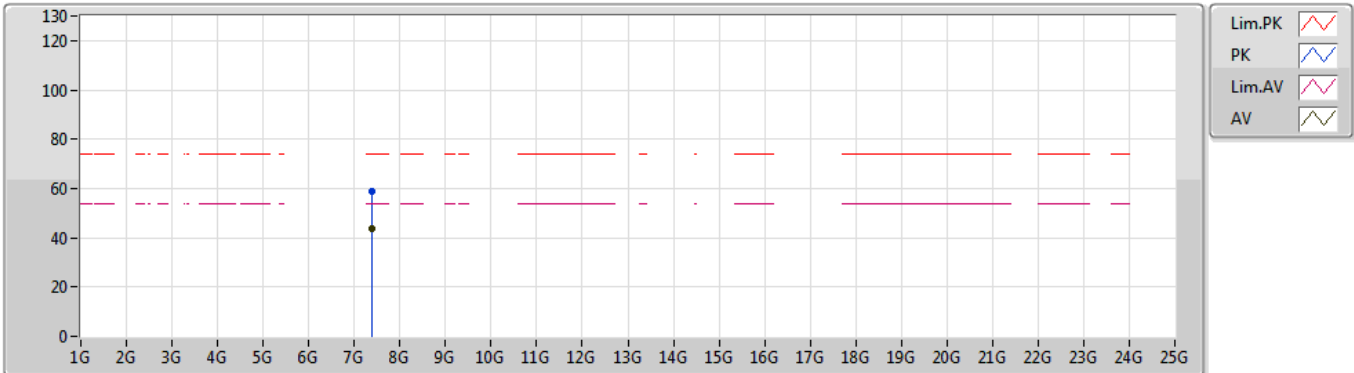
EUT X_1TX
Setting 69
04-B-4
FSP(100019)

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment	Raw (dBuV)			
PK	2.4602G	109.98	Inf	-Inf	29.99	3	Horizontal	14	1.23	-	79.99			
AV	2.4606G	99.67	Inf	-Inf	29.99	3	Horizontal	14	1.23	-	69.68			
PK	2.4848G	70.87	74.00	-3.13	30.05	3	Horizontal	14	1.23	-	40.82			
AV	2.4835G	53.90	54.00	-0.10	30.05	3	Horizontal	14	1.23	-	23.85			

802.11n HT20_Nss1,(MCS0)_1TX

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2462MHz_TX



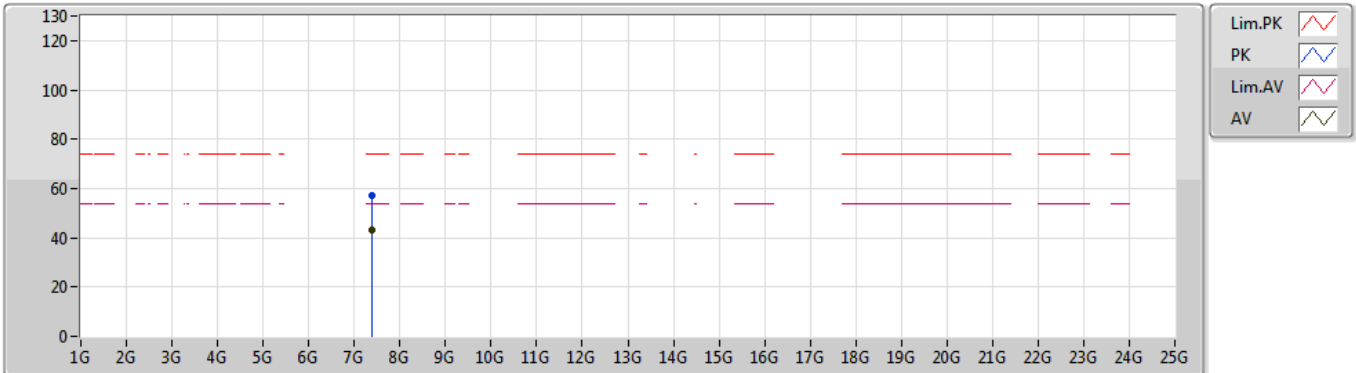
EUT Z_1TX
Setting 69
04-B-4
FSP(100019)

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment	Raw (dBuV)			
PK	7.3842G	58.76	74.00	-15.24	8.52	3	Vertical	144	2.33	-	50.24			
AV	7.38696G	43.92	54.00	-10.08	8.52	3	Vertical	144	2.33	-	35.40			

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2462MHz_TX



EUT Z_1TX
Setting 69
04-B-4
FSP(100019)

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment	Raw (dBuV)			
PK	7.38666G	57.24	74.00	-16.76	8.52	3	Horizontal	242	2.39	-	48.72			
AV	7.38714G	43.22	54.00	-10.78	8.52	3	Horizontal	242	2.39	-	34.70			