FCC Test Report

Equipment	:	**IP Wireless Camera**
Brand Name	:	**FLIR SECURE、LOREX SECURE**
Model No.	:	**Fxx2xxx (x= 0-9, A-Z)、FXCx2xxx (x= 0-9, A-Z)**
FCC ID	:	**UCZFXC22**
Standard	:	**47 CFR FCC Part 15.247**
Operating Band	:	**2400 MHz – 2483.5 MHz**
Function	:	**☒ Point-to-multipoint; ☐ Point-to-point**
Applicant	:	**Lorex Technology Inc 250 Royal Crest Court, Markham, Ontario, L3R 3S1, Canada**
Manufacturer	:	**Chicony Electronics (Dong Guan) Co.,Ltd. San Zhong Guan Li Qu, Qingxi Town, Dongguan City Guangdong 523651 China**

The product sample received on Apr. 14, 2016 and completely tested on May 09, 2017. We, SPORTON, would like to declare that the tested sample has been evaluated in accordance with the procedures given in ANSI C63.10-2013 and shown compliance with the applicable technical standards.

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

Phoenix Chen
SPORTON INTERNATIONAL INC.

Testing Laboratory
1190

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PHOTOGRAPHS OF EUT v01

Summary of Test Result

Conformance Test Specifications				
Report Clause	**Ref. Std. Clause**	**Description**	**Limit**	**Result**
1.1.2	15.203	Antenna Requirement	FCC 15.203	Complied
3.1	15.207	AC Power-line Conducted Emissions	FCC 15.207	Complied
3.2	15.247(a)	DTS Bandwidth	≥500kHz	Complied
3.3	15.247(b)	Maximum Conducted Output Power	Power [dBm]:30	Complied
3.4	15.247(e)	Power Spectral Density	PSD [dBm/3kHz]:8	Complied
3.5	15.247(d)	Emissions in Non-restricted Frequency Bands	Non-Restricted Bands: > 30 dBc	Complied
3.6	15.247(d)	Emissions in Restricted Frequency Bands	Restricted Bands: FCC 15.209	Complied

Revision History

Report No.	Version	Description	Issued Date
FR640901-03AC	Rev. 01	Initial issue of report	Jun. 15, 2017

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	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

Note:
- 11b mode uses a combination of DSSS-DBPSK, DQPSK, CCK modulation.
- 11g use a combination of OFDM-BPSK, QPSK, 16QAM, 64QAM modulation.
- BWch is the nominal channel bandwidth.

1.1.2 Antenna Information

Ant.	Brand	Model Name	Antenna Type	Connector	Gain (dBi)
1	-	FX_C	PIFA Antenna	fixed on board	0.61

1.1.3 EUT Information

Operational Condition				
EUT Power Type	From AC Adapter / Host System			
Beamforming Function	☐	With beamforming	☒	Without beamforming

Type of EUT		
☒	Stand-alone	
☐	Combined (EUT where the radio part is fully integrated within another device)	
	Combined Equipment - Brand Name / Model No.:	…
☐	Plug-in radio (EUT intended for a variety of host systems)	
	Host System - Brand Name / Model No.:	…
☐	Other:	

1.1.4 Mode Test Duty Cycle

Mode	DC	DCF(dB)	T(s)	VBW(Hz) ≥ 1/T
802.11b	0.986	0.061	n/a (DC>=0.98)	n/a (DC>=0.98)
802.11g	0.936	0.287	1.429m	1k

1.1.5 Table for Permissive Change

This product is an extension of original one reported under Sporton project number: FR640901-02AC

Below is the table for the change of the product with respect to the original one.

Modifications	Performance Checking
1. Power was increased 2. FW Version was changed 3. Model name and brand name were added	All test items other than AC power-line conducted emissions were re-tested

1.2 Testing Applied Standards

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

- 47 CFR FCC Part 15
- ANSI C63.10-2013
- KDB 558074 D01 v04

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
Test site Designation No. 553509 with FCC.					
☐	JHUBEI	ADD :	No.8, Ln. 724, Bo'ai St., Zhubei City, Hsinchu County, Taiwan (R.O.C.)		
		TEL :	886-3-656-9065	FAX :	886-3-656-9085
Test site Designation No. TW0006 with FCC.					

Test Condition	Test Site No.	Test Engineer	Test Environment	Test Date
AC Conduction	CO04-HY	Ryan Hong	23°C / 56%	17/May/2016
Radiated	03CH09-HY	Jeff	24.2°C / 58%	05/May/2017
RF Conducted	TH01-HY	Gary	21.5°C / 61%	09/May/2017

1.4 Measurement Uncertainty

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

Test Items	Uncertainty	Remark
Conducted Emission (150kHz ~ 30MHz)	3.6 dB	Confidence levels of 95%
Radiated Emission (30MHz ~ 1,000MHz)	2.1 dB	Confidence levels of 95%
Radiated Emission (1GHz ~ 18GHz)	2.6 dB	Confidence levels of 95%
Radiated Emission (18GHz ~ 40GHz)	2.9 dB	Confidence levels of 95%
Conducted Emission	1.3 dB	Confidence levels of 95%

2 Test Configuration of EUT

2.1 Test Condition

Condition Item	Abbreviation/Remark	Remark
RF Conducted	Abbreviation	Remark
TnomVnom	Tnom	20°C
-	Vnom	120V

2.2 Test Channel Mode

Test Software	DoS

Mode	Power Setting
802.11b_(1Mbps)_1TX	-
2412MHz	76
2437MHz	80
2462MHz	75
802.11g_(6Mbps)_1TX	-
2412MHz	67
2437MHz	80
2462MHz	67

2.3 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	CTX
1	Adapter Mode
2	USB Mode
Mode 1 configuration was pretested to be the worst case for EMI and measured during the test.	

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	CTX	
1	Adapter Mode	
2	USB Mode	
Orthogonal Planes of EUT	**Y Plane**	**Z Plane**
Worst Planes of EUT		V

2.4 Accessories

Specification of Accessory				
AC Adapter 1	Brand Name	SPPS	Model Name	SC/10WA050200US
	Power Rating	I/P:100 - 240 Vac, 0.5 A, O/P: 5 Vdc, 2 A		
AC Adapter 2	Brand Name	I.T.E	Model Name	YJC010W-0502000U
	Power Rating	I/P:100 - 240 Vac, 0.5 A, O/P: 5 Vdc, 2 A		
USB Cable	Signal Line	2.7 meter, shielded cable, w/o ferrite core		

Note: Regarding to more detail and other information, please refer to user manual.

2.5 Support Equipment

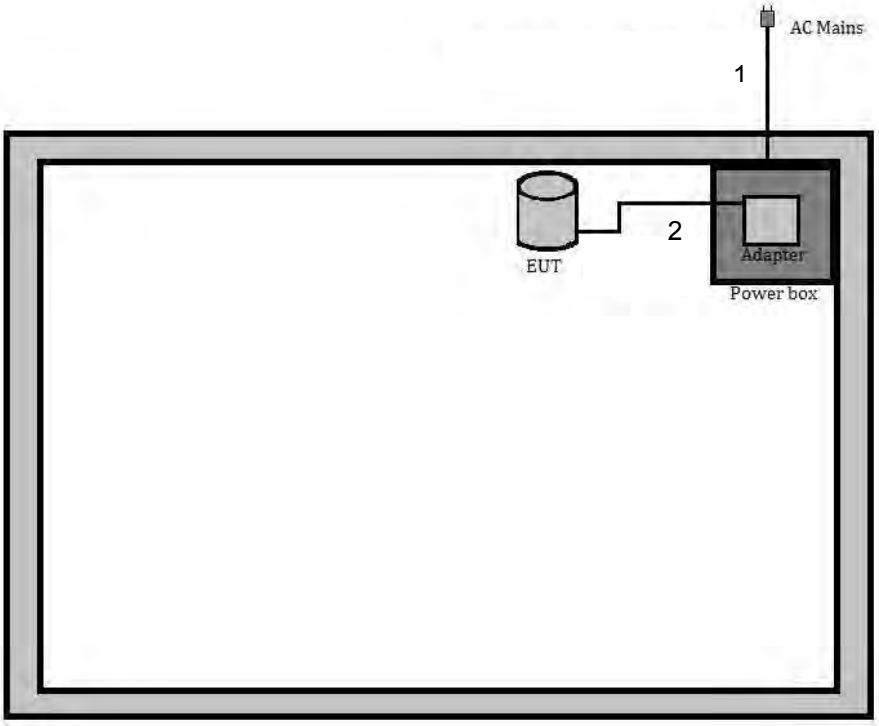
Support Equipment- Conduction				
No.	**Equipment**	**Brand Name**	**Model Name**	**FCC ID**
1	Notebook	DELL	E5530	DoC
2	AC adapter for NB	DELL	LA65NS2-01	DoC

Support Equipment – RF Conducted				
No.	**Equipment**	**Brand Name**	**Model Name**	**FCC ID**
1	Notebook	DELL	E5410	DoC
2	Adapter for NB	DELL	HA65NM130	DoC

Support Equipment – Radiated Emission				
No.	**Equipment**	**Brand Name**	**Model Name**	**FCC ID**
1	Notebook	DELL	E6400	DoC
2	Adapter for NB	DELL	LA65NS2-01	DoC

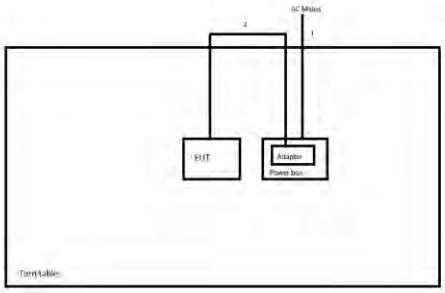
2.6 Test Setup Diagram

Test Setup Diagram – AC Line Conducted Emission Test



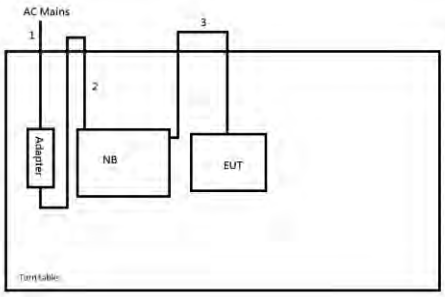
Item	Connection	Shielded	Length
1	AC Power line	No	1.8m
2	USB Cable	No	2.7m

Test Setup Diagram - Radiated Test (Mode 1)



Item	Connection	Shielded	Length
1	AC Power line	No	1.8m
2	USB Cable	No	2.7m

Test Setup Diagram - Radiated Test (Mode 2)



Item	Connection	Shielded	Length
1	AC Power line	No	1.8m
2	DC Power line	No	1.8m
3	USB Cable	No	2.7m

3 Transmitter Test Result

3.1 AC Power-line Conducted Emissions

3.1.1 AC Power-line Conducted Emissions Limit

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

3.1.2 Measuring Instruments

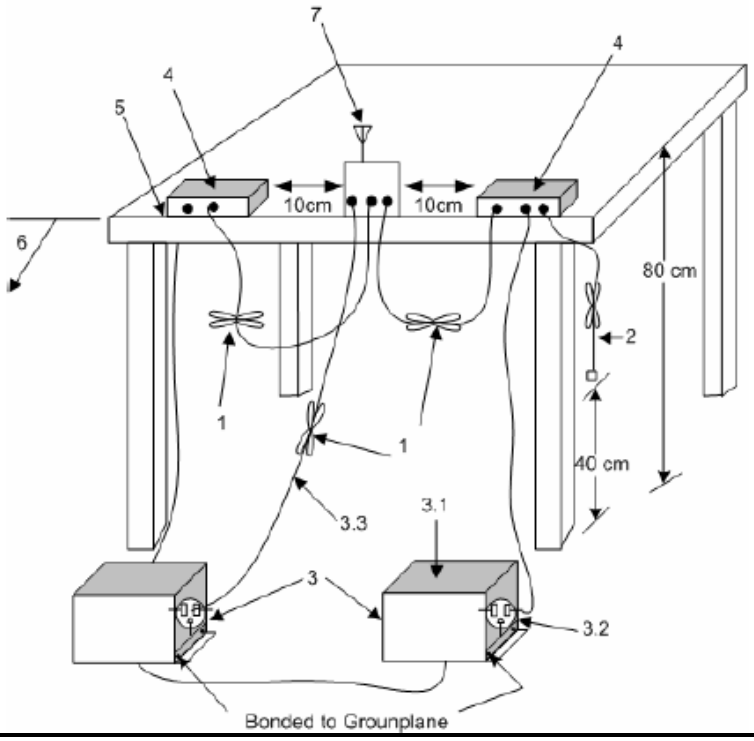
Refer a test equipment and calibration data table in this test report.

3.1.3 Test Procedures

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

3.1.4 Test Setup

AC Power-line Conducted Emissions



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

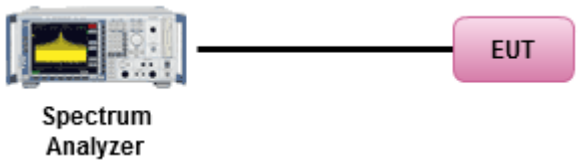
Refer a test equipment and calibration data table in this test report.

3.2.3 Test Procedures

Test Method	
▪ For the emission bandwidth shall be measured using one of the options below:	
	☒ Refer as KDB 558074, clause 8.1 Option 1 for 6 dB bandwidth measurement.
	☐ Refer as KDB 558074, clause 8.2 Option 2 for 6 dB bandwidth measurement.
	☐ Refer as ANSI C63.10, clause 6.9.3 for occupied bandwidth testing.

3.2.4 Test Setup

Emission Bandwidth



3.2.5 Test Result of Emission Bandwidth

Refer as Appendix B

3.3 Maximum Conducted Output Power

3.3.1 Maximum Conducted Output Power Limit

Maximum Conducted Output Power Limit		
	▪ If $G_{TX} \leq 6$ dBi, then $P_{Out} \leq 30$ dBm (1 W)	
	▪ Point-to-multipoint systems (P2M): If $G_{TX} > 6$ dBi, then $P_{Out} = 30 – (G_{TX} – 6)$ dBm	
	▪ Point-to-point systems (P2P): If $G_{TX} > 6$ dBi, then $P_{Out} = 30 – (G_{TX} – 6)/3$ dBm	
	▪ Smart antenna system (SAS):	
		- Single beam: If $G_{TX} > 6$ dBi, then $P_{Out} = 30 – (G_{TX} – 6)/3$ dBm
		- Overlap beam: If $G_{TX} > 6$ dBi, then $P_{Out} = 30 – (G_{TX} – 6)/3$ dBm
		- Aggregate power on all beams: If $G_{TX} > 6$ dBi, then $P_{Out} = 30 – (G_{TX} – 6)/3 + 8$dB dBm
e.i.r.p. Power Limit:		
▪ 2400-2483.5 MHz Band		
	▪ Point-to-multipoint systems (P2M): $P_{eirp} \leq 36$ dBm (4 W)	
	▪ Point-to-point systems (P2P): $P_{eirp} \leq MAX(36, [P_{Out} + G_{TX}])$ dBm	
	▪ Smart antenna system (SAS)	
		- Single beam: $P_{eirp} \leq MAX(36, P_{Out} + G_{TX})$ dBm
		- Overlap beam: $P_{eirp} \leq MAX(36, P_{Out} + G_{TX})$ dBm
		- Aggregate power on all beams: $P_{eirp} \leq MAX(36, [P_{Out} + G_{TX} + 8])$ 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 KDB 558074, clause 9.1.1 Option 1 (RBW ≥ EBW method).
	☐ Refer as KDB 558074, clause 9.1.2 Option 2 (integrated band power method)
	☐ Refer as KDB 558074, clause 9.1.3 Option 3 (peak power meter for VBW ≥ DTS BW)
▪ Maximum Average Conducted Output Power	
	Duty cycle ≥ 98%
	☐ Refer as KDB 558074, clause 9.2.2.4 Method AVGSA-2 (spectral trace averaging).
	Duty cycle < 98%
	☐ Refer as KDB 558074, clause 9.2.2.5 Method AVGSA-2 Alt. (slow sweep speed)
	RF power meter and average over on/off periods with duty factor or gated trigger
	☒ Refer as KDB 558074, clause 9.2.3.1 Method AVGPM (using an RF average power meter).
▪ For conducted measurement.	
	▪ If the EUT supports multiple transmit chains using options given below: Refer as KDB 662911, In-band power measurements. Using the measure-and-sum approach, measured all transmit ports individually. Sum the power (in linear power units e.g., mW) of all ports for each individual sample and save them.
	▪ If multiple transmit chains, EIRP calculation could be following as methods: $P_{total} = P_1 + P_2 + \ldots + P_n$ (calculated in linear unit [mW] and transfer to log unit [dBm]) $EIRP_{total} = P_{total} + DG$

3.3.4 Test Setup

Maximum Conducted Output Power (Power Meter)

3.3.5 Test Result of Maximum Conducted Output Power

Refer as Appendix C

3.4 Power Spectral Density

3.4.1 Power Spectral Density Limit

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

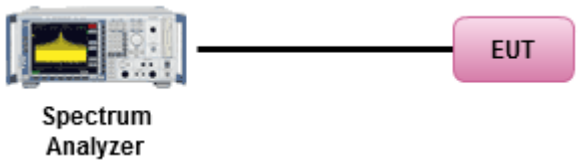
3.4.2 Measuring Instruments

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

3.4.3 Test Procedures

Test Method			
▪ Peak power spectral density procedures that the same method as used to determine the conducted output power. If maximum peak conducted output power was measured to demonstrate compliance to the output power limit, then the peak PSD procedure below (Method PKPSD) shall be used. If maximum conducted output power was measured to demonstrate compliance to the output power limit, then one of the average PSD procedures shall be used, as applicable based on the following criteria (the peak PSD procedure is also an acceptable option).			
	☒ Refer as KDB 558074, clause 10.2 Method PKPSD (RBW=3-100kHz; Detector=peak).		
▪ For conducted measurement.			
	▪ If The EUT supports multiple transmit chains using options given below:		
		☐	Measure and sum the spectra across the outputs. Refer as 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.

3.4.4 Test Setup

Power Spectral Density


3.4.5 Test Result of Power Spectral Density

Refer as Appendix D

3.5 Emissions in Non-restricted Frequency Bands

3.5.1 Emissions in Non-restricted Frequency Bands Limit

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

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

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

3.5.2 Measuring Instruments

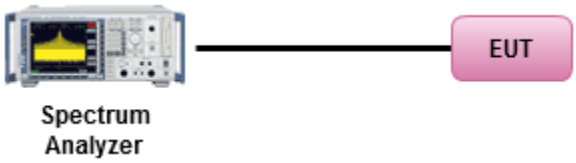
Refer a test equipment and calibration data table in this test report.

3.5.3 Test Procedures

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

3.5.4 Test Setup

Emissions in Non-restricted Frequency Bands



3.5.5 Test Result of Emissions in Non-restricted Frequency Bands

Refer as Appendix E

3.6 Emissions in Restricted Frequency Bands

3.6.1 Emissions in Restricted Frequency Bands Limit

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

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

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

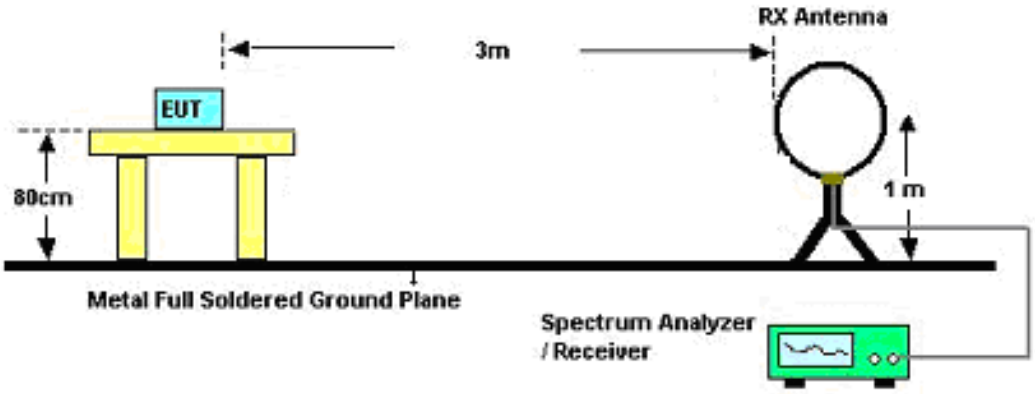
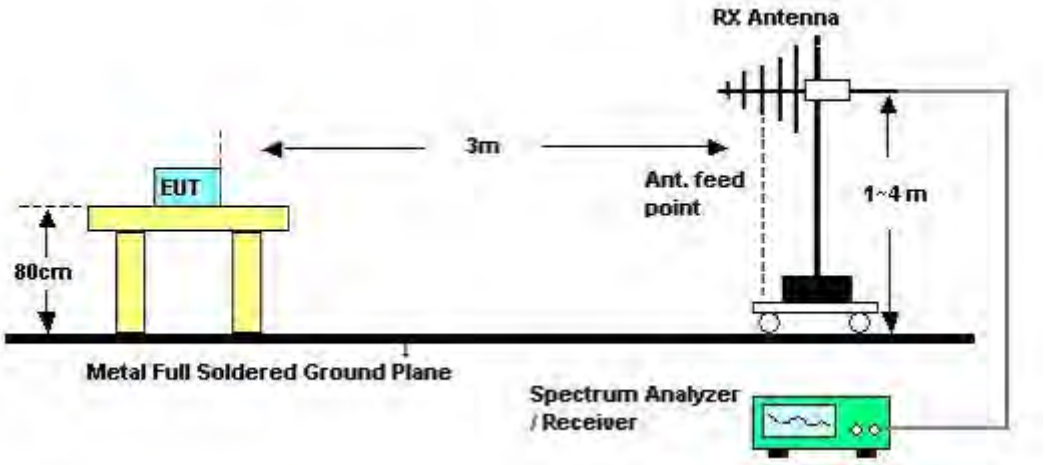
3.6.2 Measuring Instruments

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

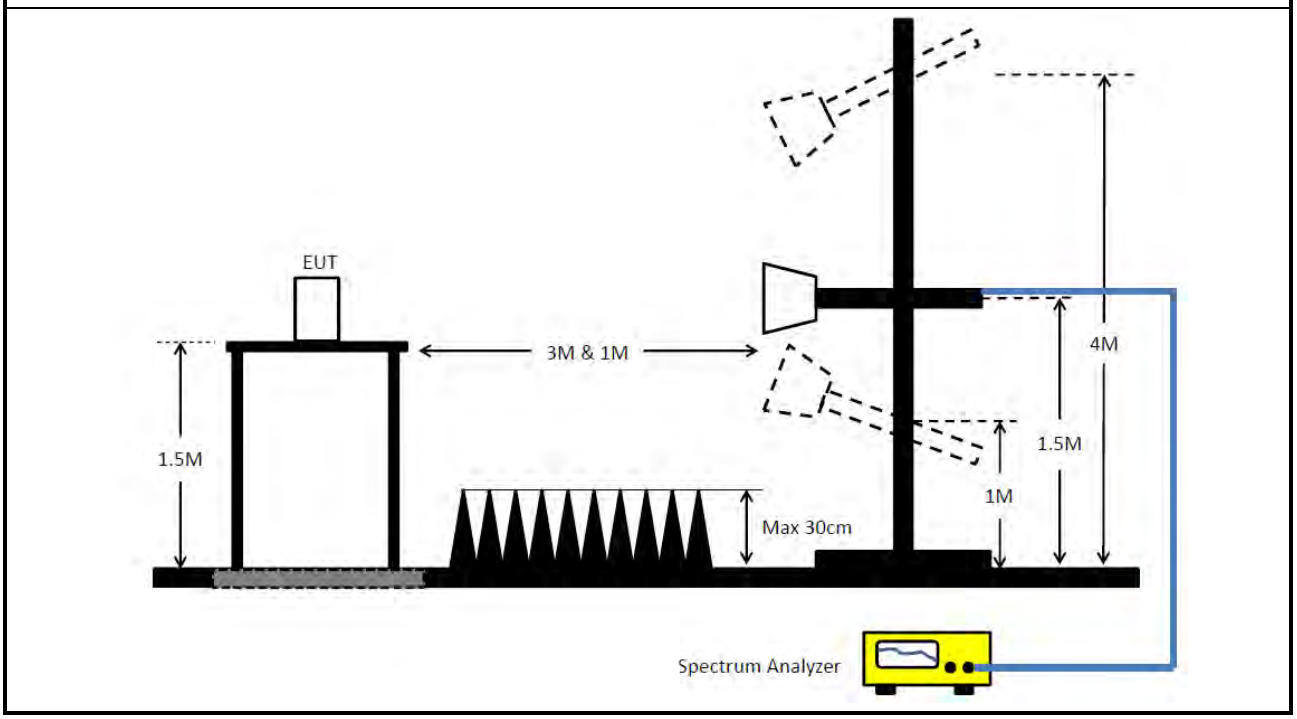
3.6.3 Test Procedures

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 KDB 558074, clause 12 for unwanted emissions into restricted bands.	
		☒ Refer as KDB 558074, clause 12.2.5.3 (ANSI C63.10, clause 4.1.4.2.3), Reduced VBW≥1/T.
		☒ Refer as KDB 558074, clause 12.2.4 measurement procedure peak limit.
▪ For the transmitter band-edge emissions shall be measured using following options below:		
	▪ Refer as KDB 558074 clause 13.1, When the performing peak or average radiated measurements, emissions within 2 MHz of the authorized band edge may be measured using the marker-delta method described below.	
	▪ Refer as KDB 558074, clause 13.2 (ANSI C63.10, clause 6.10.6) for marker-delta method for band-edge measurements.	
	▪ Refer as KDB 558074, clause 13.3 for narrower resolution bandwidth (100kHz) using the band power and summing the spectral levels (i.e., 1 MHz).	
▪ For conducted and cabinet radiation measurement, refer as KDB 558074, clause 12.2.2.		
	▪ For conducted unwanted emissions into restricted bands (absolute emission limits). Devices with multiple transmit chains using options given below: (1) Measure and sum the spectra across the outputs or (2) Measure and add 10 log(N) dB	
	▪ For 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

Emissions in Restricted Frequency Bands
9kHz ~30MHz

30MHz~1GHz


Above 1GHz



3.6.5 Test Result of Emissions in Restricted Frequency Bands (Below 30MHz)

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

3.6.6 Test Result of Emissions in Restricted Frequency Bands

Refer as Appendix F

4 Test Equipment and Calibration Data

Instrument for AC Conduction

Instrument	Manufacturer	Model No.	Serial No.	Spec.	Calibration Date	Calibration Due Date
EMC Receiver	KETSIGHT	N9038A	MY54130031	20Hz~8.4GHz	14/Apr/2016	13/Apr/2017
LISN	SCHWARZBECK MESS-ELEKTRONIK	NSLK 8127	8127-477	9kHz~30MHz	26/Jan/2016	25/Jan/2017
RF Cable-CON	HUBER+SUHNER	RG213/U	07611832020001	9kHz~30MHz	30/Oct/2015	29/Oct/2016
EMI Filter	LINDGREN	LRE-2030	2651	< 450Hz	NCR	NCR

NCR : Non-Calibration Require

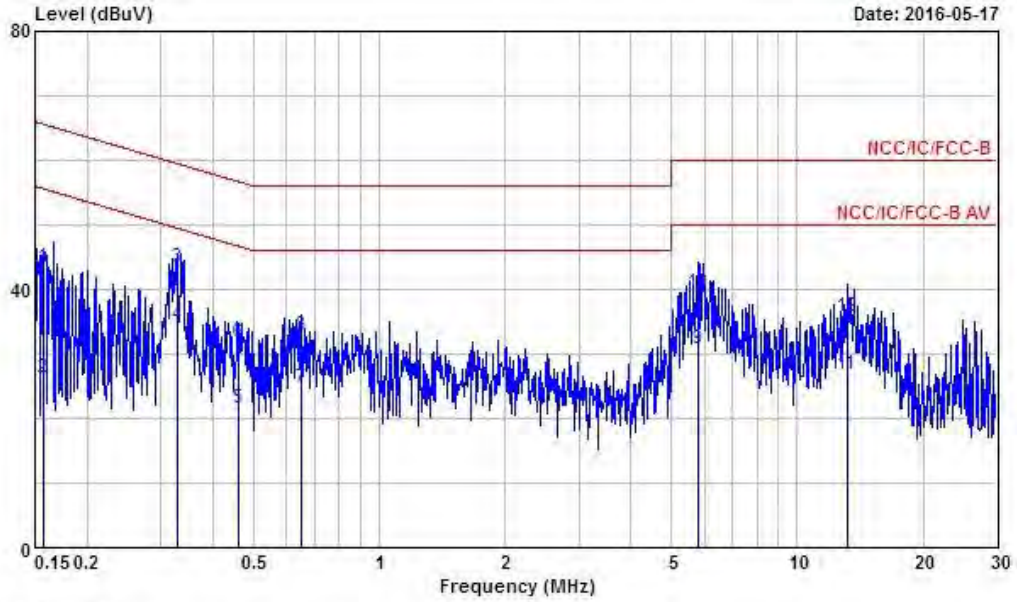
Instrument for Conducted Test

Instrument	Manufacturer	Model No.	Serial No.	Spec.	Calibration Date	Calibration Due Date
Spectrum Analyzer	R&S	FSV 40	101013	9kHz~40GHz	30/Dec/2016	29/Dec/2017
Power Sensor	Anritsu	MA2411B	0917017	300MHz ~ 40GHz	10/Feb/2017	09/Feb/2018
Power Meter	Anritsu	ML2495A	0949003	300MHz ~ 40GHz	10/Feb/2017	09/Feb/2018
Signal Generator	R&S	SMR40	100116	10MHz ~ 40GHz	21/Jul/2016	20/Jul/2017
RF Cable-0.2m	HUBER+SUHNER	SUCOFLEX_104	MY10710/4	30MHz~26.5GHz	02/Oct/2016	01/Oct/2017
RF Cable-0.2m	HUBER+SUHNER	SUCOFLEX_104	MY10709/4	30MHz~26.5GHz	02/Oct/2016	01/Oct/2017
RF Cable-0.5m	HUBER+SUHNER	SUCOFLEX_104	MY10713/4	30MHz~26.5GHz	02/Oct/2016	01/Oct/2017
AC Power Source	G.W	APS-9102	EL920581	AC 0V ~ 300V	04/Jun/2016	03/Jun/2017

Instrument for Radiated Test

Instrument	Manufacturer	Model No.	Serial No.	Spec.	Calibration Date	Calibration Due Date
3m Semi Anechoic Chamber	TDK	SAC-3M	03CH09-HY	30MHz ~ 1GHz	25/Apr/2017	24/Apr/2018
3m Semi Anechoic Chamber	TDK	SAC-3M	03CH09-HY	1GHz ~ 18GHz	21/Jun/2016	20/Jun/2017
Amplifier	Agilent	8449B	3008A02364	1GHz ~ 26.5GHz	17/Nov/2016	16/Nov/2017
Amplifier	EMC	EMC9135	980209	9KHz~1GHz	05/Sep/2016	04/Sep/2017
Spectrum Analyzer	KEYSIGHT	N9010A	MY54200885	10Hz ~ 44GHz	04/Jul/2016	03/Jul/2017
Bilog Antenna	TESEQ	CBL 6111D	35418	30MHz~1GHz	01/Oct/2016	30/Sep/2017
Horn Antenna	SCHWARZBECK	BBHA9170	BBHA9170614	18GHz ~ 40GHz	06/Feb/2017	05/Feb/2018
Loop Antenna	R&S	HFH2-Z2	100330	9 kHz~30 MHz	10/Nov/2016	09/Nov/2017
RF Cable-R03m	Jye Bao	RG142	CB021	9kHz ~ 1GHz	23/Jul/2016	22/Jul/2017
RF Cable-high	Jye Bao	RG142	03CH09-HY	1GHz ~ 40GHz	23/Jul/2016	22/Jul/2017
Horn Antenna	AARONIA AG	POWERLOG 70180	05192	1G~18G	05/Jan/2017	04/Jan/2018

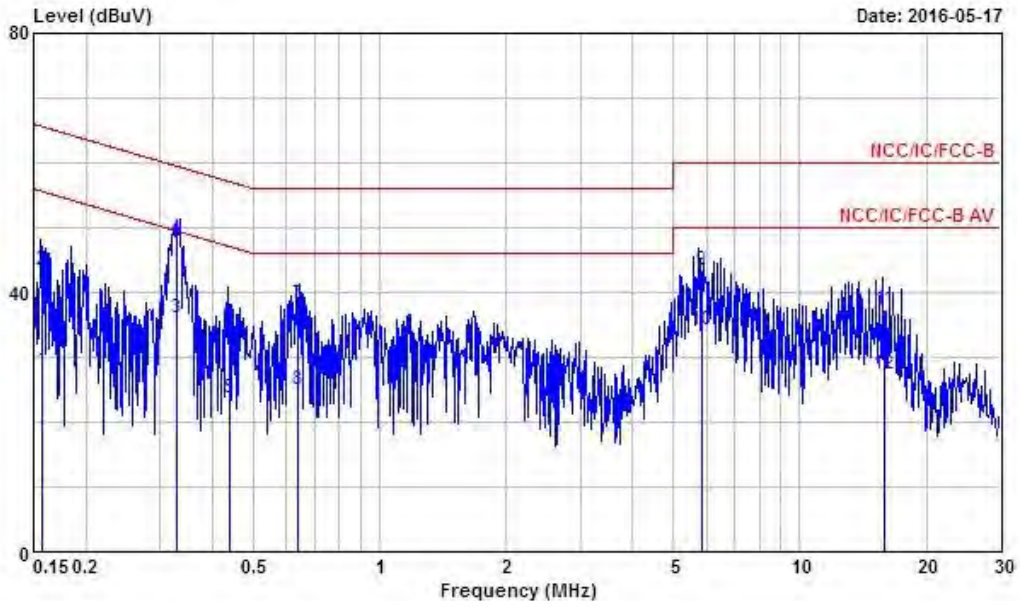
AC Power-line Conducted Emissions Result			
Operating Mode	1	**Power Phase**	Neutral
Operating Function	Adapter Mode		



	Freq	Level	Over Limit	Limit Line	Read Level	LISN Factor	Cable Loss	Remark
	MHz	dBuV	dB	dBuV	dBuV	dB	dB	
1	0.1577680	43.33	-22.25	65.58	43.00	0.10	0.23	QP
2	0.1577680	26.25	-29.33	55.58	25.92	0.10	0.23	Average
3	0.3298820	43.41	-16.04	59.45	43.13	0.12	0.16	QP
4	@0.3298820	34.53	-14.92	49.45	34.25	0.12	0.16	Average
5	0.4596110	21.46	-25.24	46.70	21.24	0.12	0.10	Average
6	0.4596110	31.89	-24.81	56.70	31.67	0.12	0.10	QP
7	0.6483440	24.75	-21.25	46.00	24.52	0.13	0.10	Average
8	0.6483440	32.78	-23.22	56.00	32.55	0.13	0.10	QP
9	5.809	30.82	-19.18	50.00	30.46	0.22	0.14	Average
10	5.809	39.48	-20.52	60.00	39.12	0.22	0.14	QP
11	13.130	26.85	-23.15	50.00	26.33	0.32	0.20	Average
12	13.130	35.77	-24.23	60.00	35.25	0.32	0.20	QP

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

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



	Freq	Level	Over Limit	Limit Line	Read Level	LISN Factor	Cable Loss	Remark
	MHz	dBuV	dB	dBuV	dBuV	dB	dB	
1	0.1576680	27.94	-27.65	55.59	27.60	0.11	0.23	Average
2	0.1576680	43.36	-22.23	65.59	43.02	0.11	0.23	QP
3	@0.3295470	36.09	-13.37	49.46	35.81	0.12	0.16	Average
4	@0.3295470	48.34	-11.12	59.46	48.06	0.12	0.16	QP
5	0.4381090	23.58	-23.52	47.10	23.36	0.12	0.10	Average
6	0.4381090	35.20	-21.90	57.10	34.98	0.12	0.10	QP
7	0.6409040	38.28	-17.72	56.00	38.05	0.13	0.10	QP
8	0.6409040	25.13	-20.87	46.00	24.90	0.13	0.10	Average
9	5.854	43.38	-16.62	60.00	43.03	0.21	0.14	QP
10	5.854	34.28	-15.72	50.00	33.93	0.21	0.14	Average
11	15.904	37.37	-22.63	60.00	36.85	0.32	0.20	QP
12	15.904	27.39	-22.61	50.00	26.87	0.32	0.20	Average

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

Summary

Mode	Max-N dB (Hz)	Max-OBW (Hz)	ITU-Code	Min-N dB (Hz)	Min-OBW (Hz)
802.11b_(1Mbps)_1TX	-	-	-	-	-
2.4-2.4835GHz	9.025M	14.318M	14M3G1D	8.55M	14.193M
802.11g_(6Mbps)_1TX	-	-	-	-	-
2.4-2.4835GHz	15.3M	16.567M	16M6D1D	14.175M	16.317M

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;

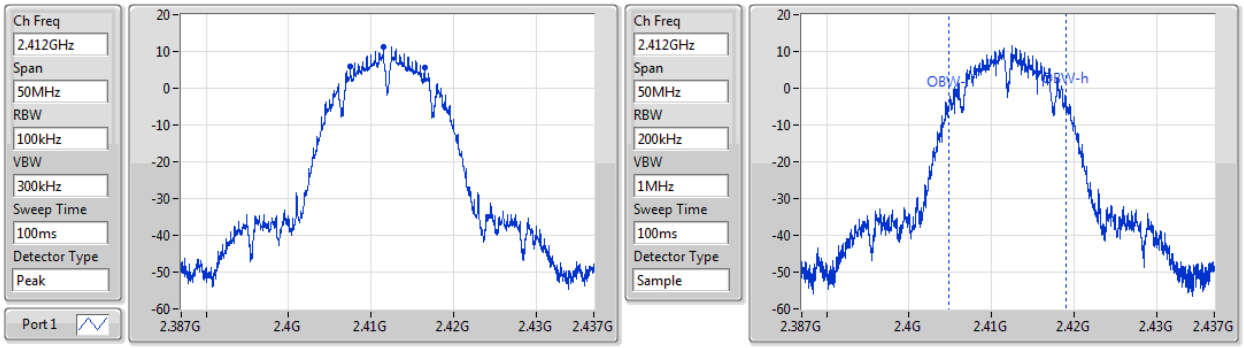
Result

Mode	Result	Limit (Hz)	Port 1-N dB (Hz)	Port 1-OBW (Hz)
802.11b_(1Mbps)_1TX	-	-	-	-
2412MHz_TnomVnom	Pass	500k	9M	14.193M
2437MHz_TnomVnom	Pass	500k	9.025M	14.318M
2462MHz_TnomVnom	Pass	500k	8.55M	14.218M
802.11g_(6Mbps)_1TX	-	-	-	-
2412MHz_TnomVnom	Pass	500k	14.9M	16.342M
2437MHz_TnomVnom	Pass	500k	14.175M	16.567M
2462MHz_TnomVnom	Pass	500k	15.3M	16.317M

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

802.11b_(1Mbps)_1TX — EBW

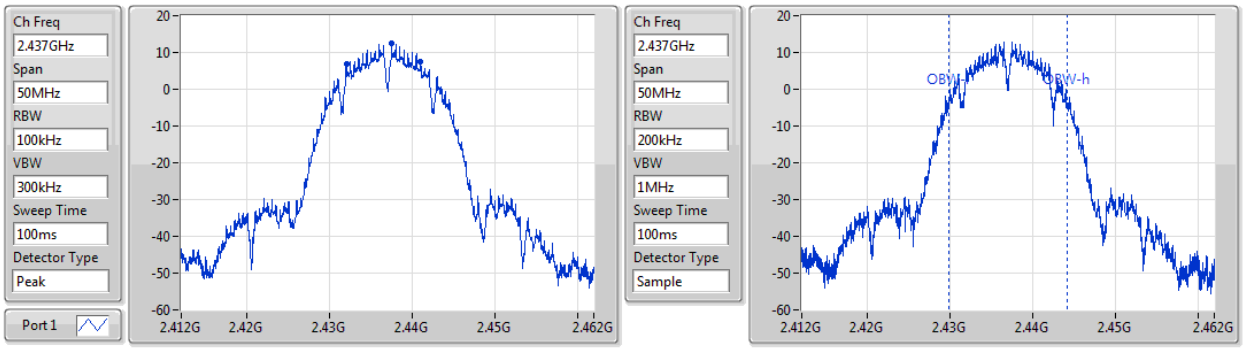
2412MHz



6dB(Hz)	Fl-6dB(Hz)	Fh-6dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
9M	2.4075G	2.4165G	14.193M	2.404879G	2.419071G	500k	1

802.11b_(1Mbps)_1TX — EBW

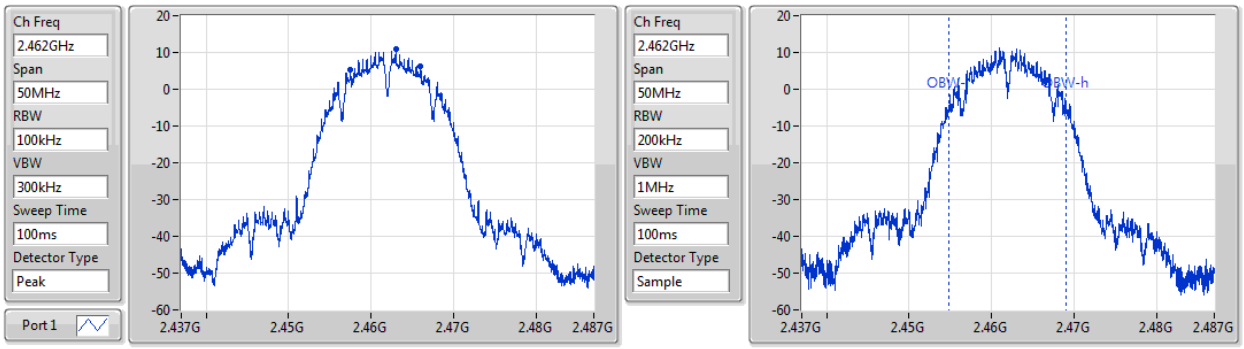
2437MHz



6dB(Hz)	Fl-6dB(Hz)	Fh-6dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
9.025M	2.432G	2.441025G	14.318M	2.429804G	2.444121G	500k	1

802.11b_(1Mbps)_1TX — EBW

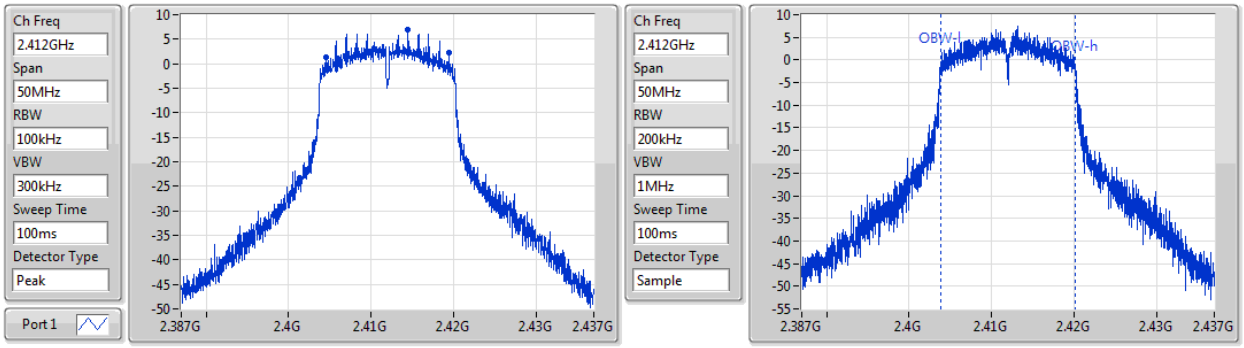
2462MHz



6dB(Hz)	Fl-6dB(Hz)	Fh-6dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
8.55M	2.457475G	2.466025G	14.218M	2.454879G	2.469096G	500k	1

802.11g_(6Mbps)_1TX — EBW

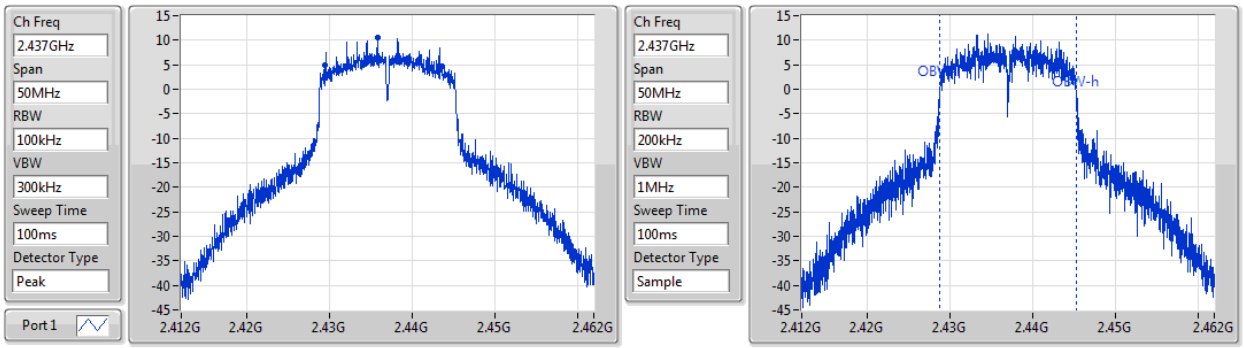
2412MHz



6dB(Hz)	Fl-6dB(Hz)	Fh-6dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
14.9M	2.404575G	2.419475G	16.342M	2.403829G	2.420171G	500k	1

802.11g_(6Mbps)_1TX — EBW

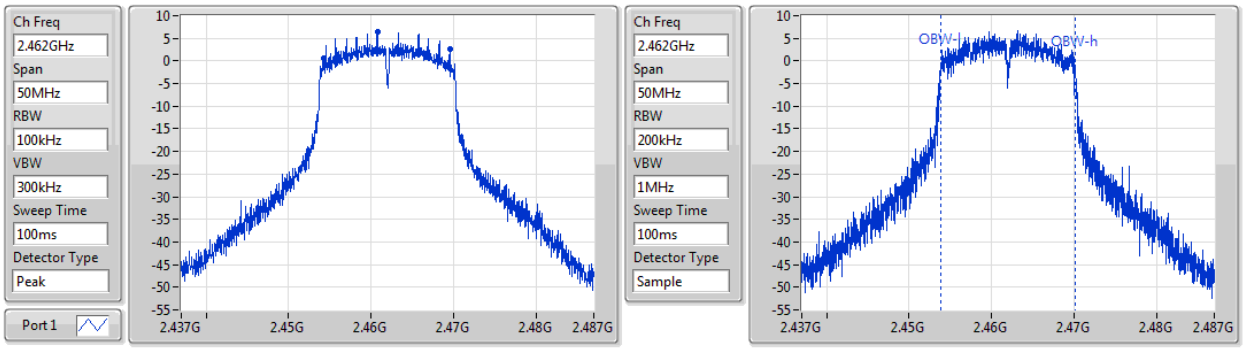
2437MHz



6dB(Hz)	Fl-6dB(Hz)	Fh-6dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
14.175M	2.429475G	2.44365G	16.567M	2.428754G	2.445321G	500k	1

802.11g_(6Mbps)_1TX — EBW

2462MHz



6dB(Hz)	Fl-6dB(Hz)	Fh-6dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
15.3M	2.45425G	2.46955G	16.317M	2.453829G	2.470146G	500k	1

Summary

Mode	Total Power (dBm)	Total Power (W)
802.11b_(1Mbps)_1TX	-	-
2.4-2.4835GHz	21.04	0.12706
802.11g_(6Mbps)_1TX	-	-
2.4-2.4835GHz	20.81	0.12050

Result

Mode	Result	DG (dBi)	Port 1 (dBm)	Total Power (dBm)	Power Limit (dBm)
802.11b_(1Mbps)_1TX	-	-	-	-	-
2412MHz	Pass	0.61	19.71	19.71	30.00
2437MHz	Pass	0.61	21.04	21.04	30.00
2462MHz	Pass	0.61	19.33	19.33	30.00
802.11g_(6Mbps)_1TX	-	-	-	-	-
2412MHz	Pass	0.61	18.10	18.10	30.00
2437MHz	Pass	0.61	20.81	20.81	30.00
2462MHz	Pass	0.61	18.09	18.09	30.00

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

Summary

Mode	PD (dBm/RBW)
802.11b_(1Mbps)_1TX	-
2.4-2.4835GHz	-2.23
802.11g_(6Mbps)_1TX	-
2.4-2.4835GHz	-3.46

RBW=3kHz.

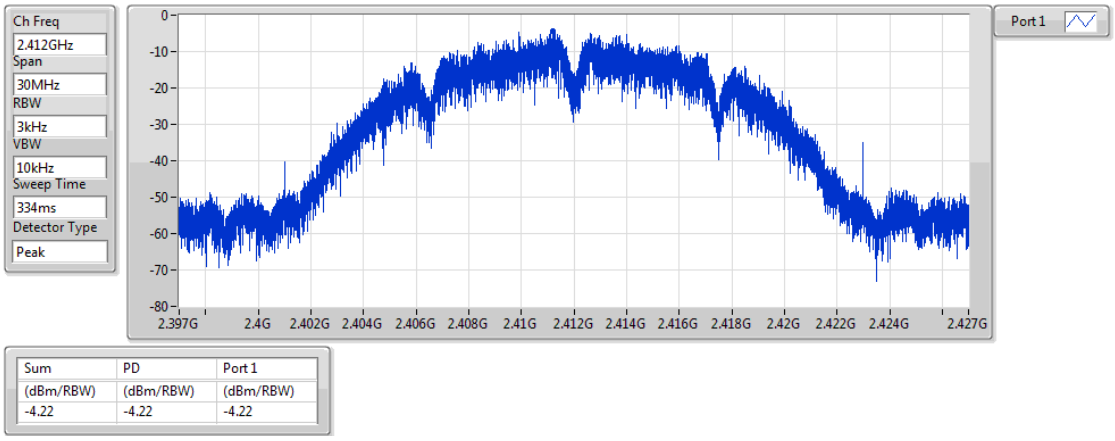
Result

Mode	Result	DG (dBi)	Port 1 (dBm/RBW)	PD (dBm/RBW)	PD Limit (dBm/RBW)
802.11b_(1Mbps)_1TX	-	-	-	-	-
2412MHz_TnomVnom	Pass	0.61	-4.22	-4.22	8.00
2437MHz_TnomVnom	Pass	0.61	-2.23	-2.23	8.00
2462MHz_TnomVnom	Pass	0.61	-3.89	-3.89	8.00
802.11g_(6Mbps)_1TX	-	-	-	-	-
2412MHz_TnomVnom	Pass	0.61	-7.14	-7.14	8.00
2437MHz_TnomVnom	Pass	0.61	-3.46	-3.46	8.00
2462MHz_TnomVnom	Pass	0.61	-8.05	-8.05	8.00

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

802.11b_(1Mbps)_1TX PSD

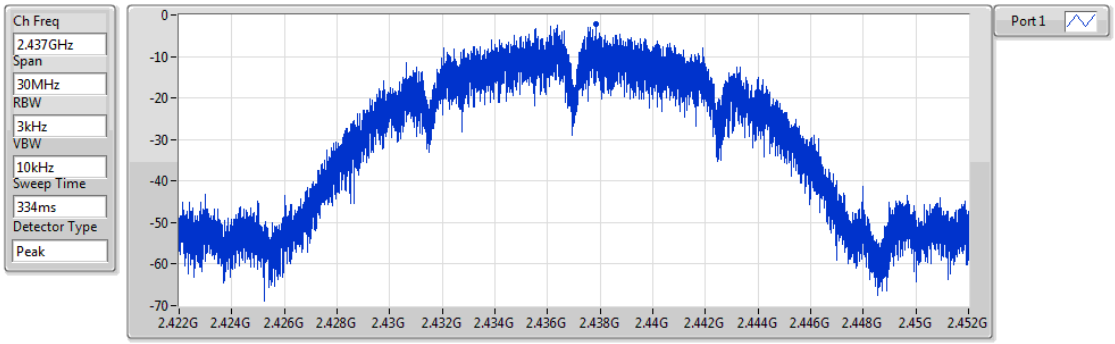
2412MHz



Sum	PD	Port 1
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
-4.22	-4.22	-4.22

802.11b_(1Mbps)_1TX PSD

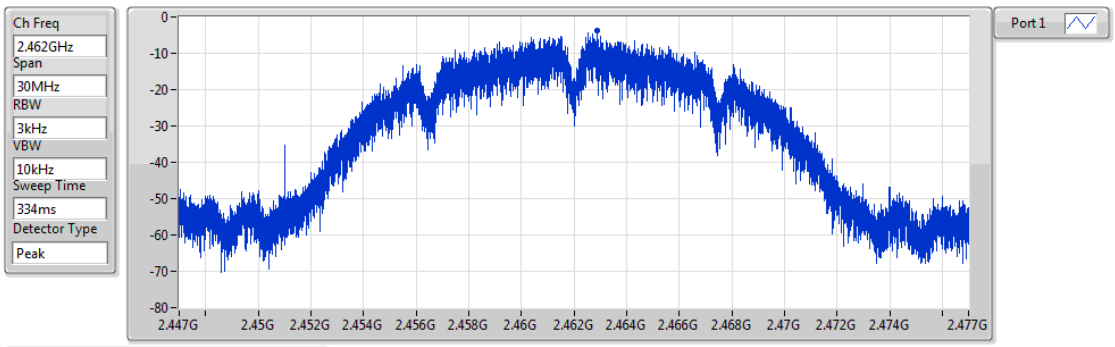
2437MHz



Sum	PD	Port 1
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
-2.23	-2.23	-2.23

802.11b_(1Mbps)_1TX PSD

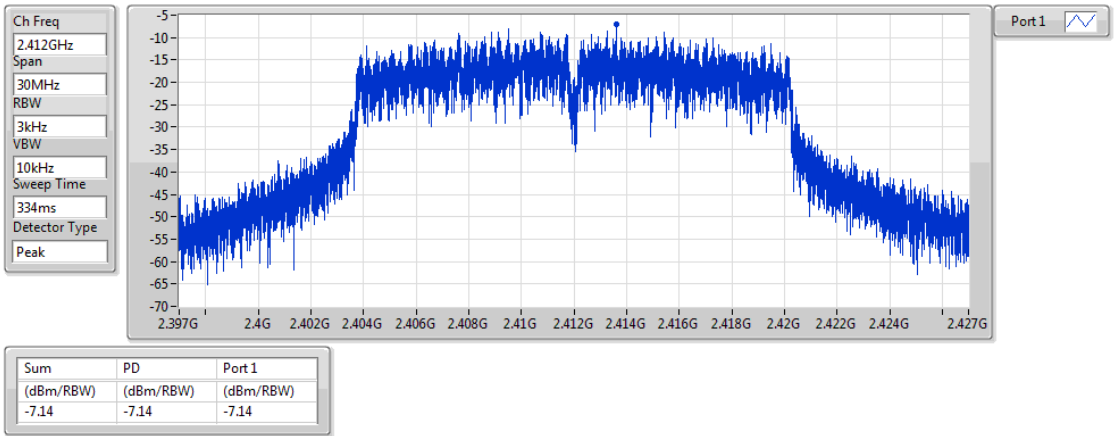
2462MHz



Sum	PD	Port 1
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
-3.89	-3.89	-3.89

802.11g_(6Mbps)_1TX **PSD**

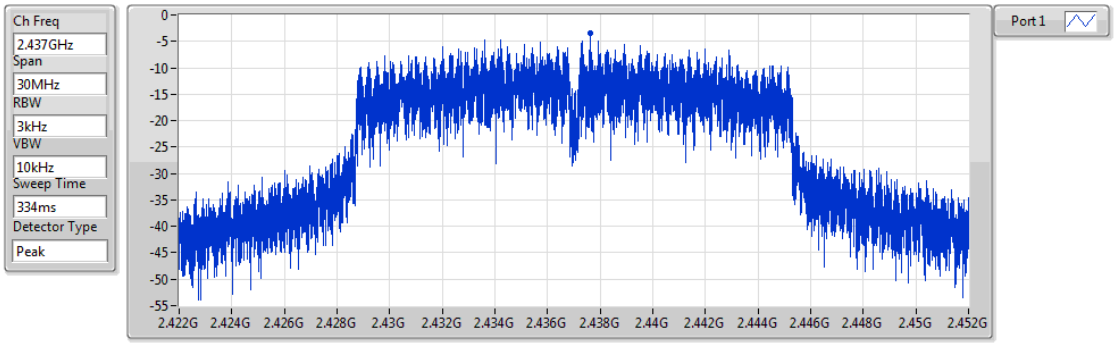
2412MHz



Sum	PD	Port 1
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
-7.14	-7.14	-7.14

802.11g_(6Mbps)_1TX **PSD**

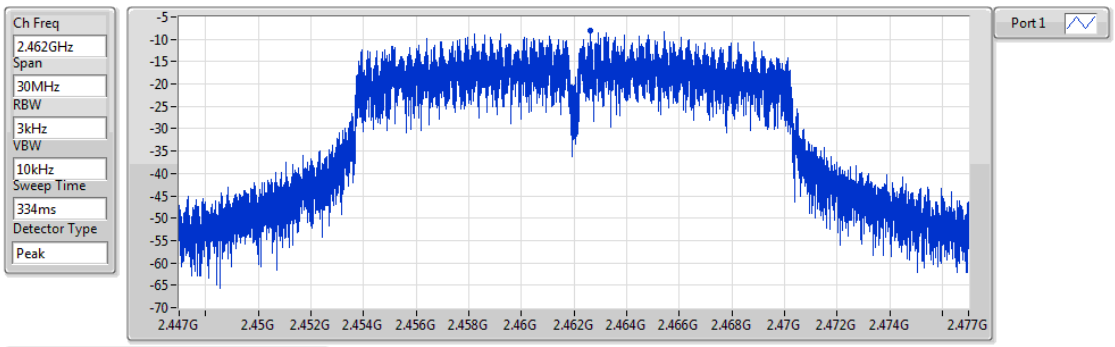
2437MHz



Sum	PD	Port 1
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
-3.46	-3.46	-3.46

802.11g_(6Mbps)_1TX **PSD**

2462MHz



Sum	PD	Port 1
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
-8.05	-8.05	-8.05

Summary

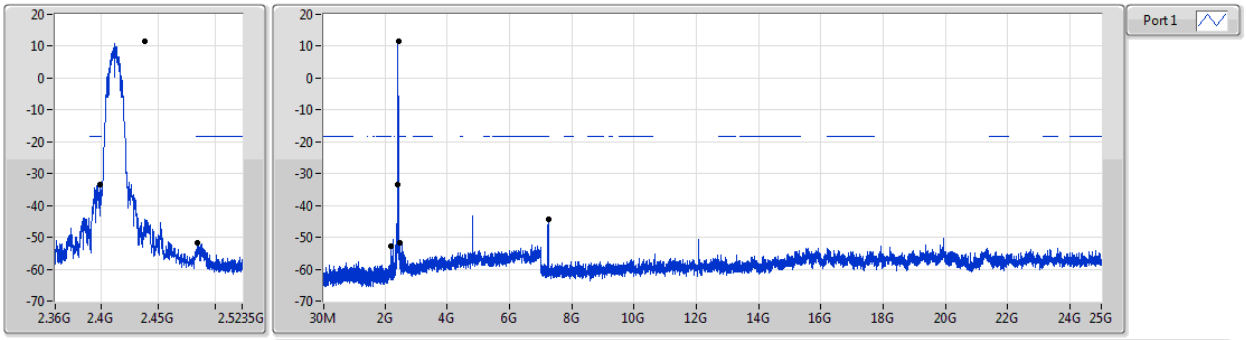
Mode	Result	Ref (Hz)	Ref (dBm)	Limit (dBm)	Freq (Hz)	Level (dBm)	Freq (Hz)	Level (dBm)	Freq (Hz)	Level (dBm)	Freq (Hz)	Level (dBm)	Port
802.11g_(6Mbps)_1TX	-	-	-	-	-	-	-	-	-	-	-	-	-
2.4-2.4835GHz	Pass	2.438243G	6.21	-23.79	2.18991G	-55.48	2.39952G	-25.55	2.48582G	-54.17	7.232327G	-50.13	1

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_(1Mbps)_1TX	-	-	-	-	-	-	-	-	-	-	-	-	-
2412MHz_TnomVnom	Pass	2.43841G	11.73	-18.27	2.18758G	-52.62	2.39952G	-33.38	2.48422G	-51.75	7.235136G	-44.36	1
2437MHz_TnomVnom	Pass	2.43841G	11.73	-18.27	2.139815G	-56.40	2.39976G	-49.60	2.5123G	-50.00	6.226503G	-51.87	1
2462MHz_TnomVnom	Pass	2.43841G	11.73	-18.27	2.30874G	-53.33	2.39032G	-52.20	2.48894G	-45.15	6.830559G	-52.24	1
802.11g_(6Mbps)_1TX	-	-	-	-	-	-	-	-	-	-	-	-	-
2412MHz_TnomVnom	Pass	2.438243G	6.21	-23.79	2.18991G	-55.48	2.39952G	-25.55	2.48582G	-54.17	7.232327G	-50.13	1
2437MHz_TnomVnom	Pass	2.438243G	6.21	-23.79	2.14098G	-57.39	2.39936G	-46.62	2.49134G	-51.64	6.198408G	-53.14	1
2462MHz_TnomVnom	Pass	2.438243G	6.21	-23.79	2.30874G	-55.00	2.3916G	-53.30	2.48358G	-40.86	6.128169G	-52.08	1

802.11b_(1Mbps)_1TX **CSE NdB**

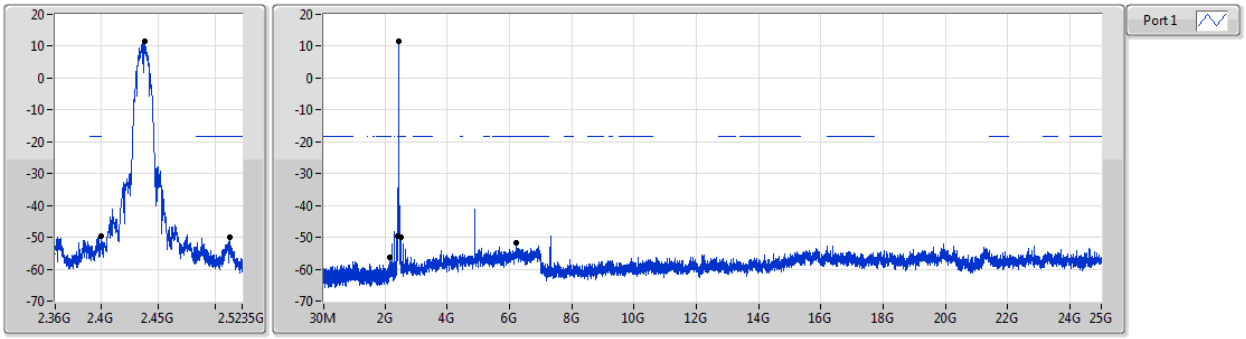
2412MHz



Ref(Hz)	Ref(dBm)	Limit(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Port
2.43841G	11.73	-18.27	2.18758G	-52.62	2.39952G	-33.38	2.48422G	-51.75	7.235136G	-44.36	1

802.11b_(1Mbps)_1TX **CSE NdB**

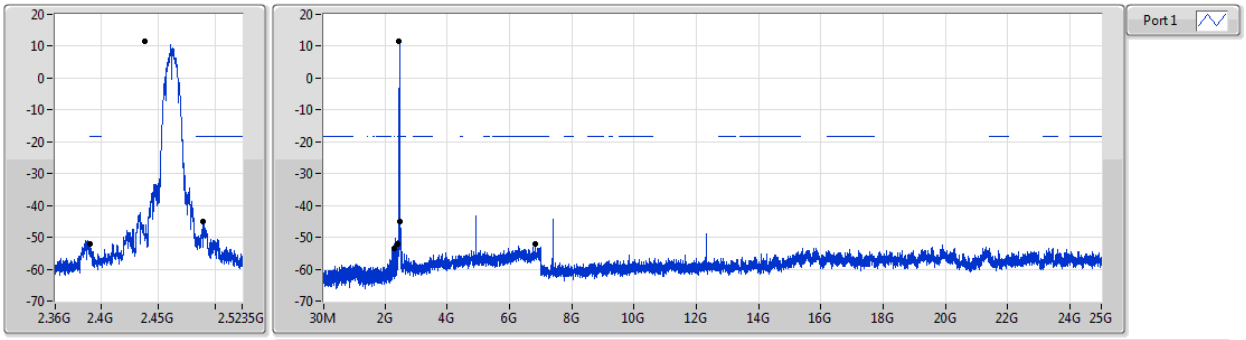
2437MHz



Ref(Hz)	Ref(dBm)	Limit(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Port
2.43841G	11.73	-18.27	2.139815G	-56.40	2.39976G	-49.60	2.5123G	-50.00	6.226503G	-51.87	1

802.11b_(1Mbps)_1TX **CSE NdB**

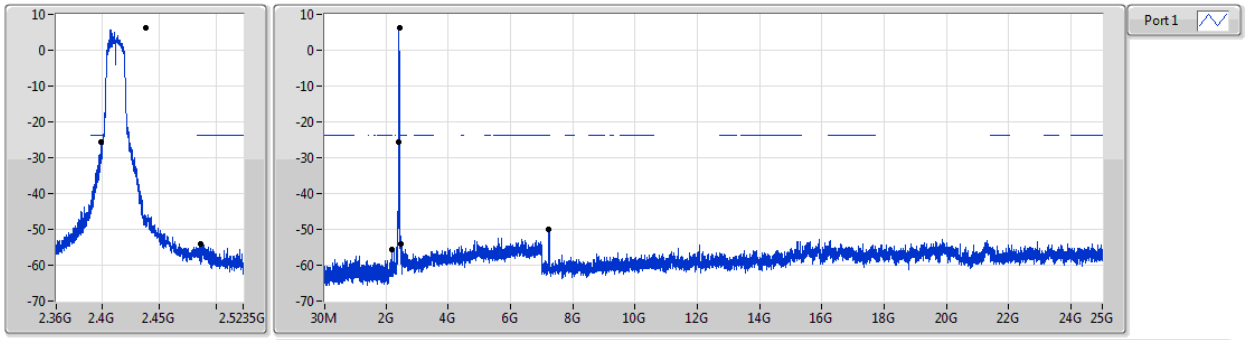
2462MHz



Ref(Hz)	Ref(dBm)	Limit(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Port
2.43841G	11.73	-18.27	2.30874G	-53.33	2.39032G	-52.20	2.48894G	-45.15	6.830559G	-52.24	1

802.11g_(6Mbps)_1TX **CSE NdB**

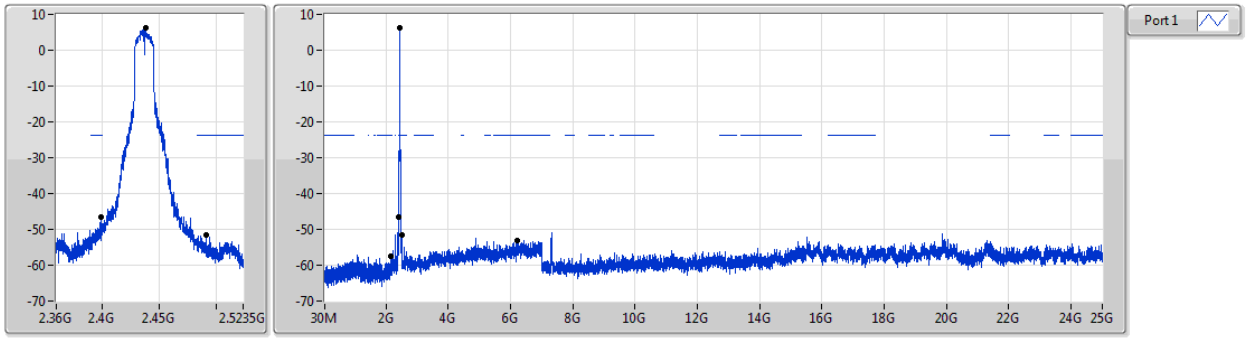
2412MHz



Ref(Hz)	Ref(dBm)	Limit(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Port
2.438243G	6.21	-23.79	2.18991G	-55.48	2.39952G	-25.55	2.48582G	-54.17	7.232327G	-50.13	1

802.11g_(6Mbps)_1TX **CSE NdB**

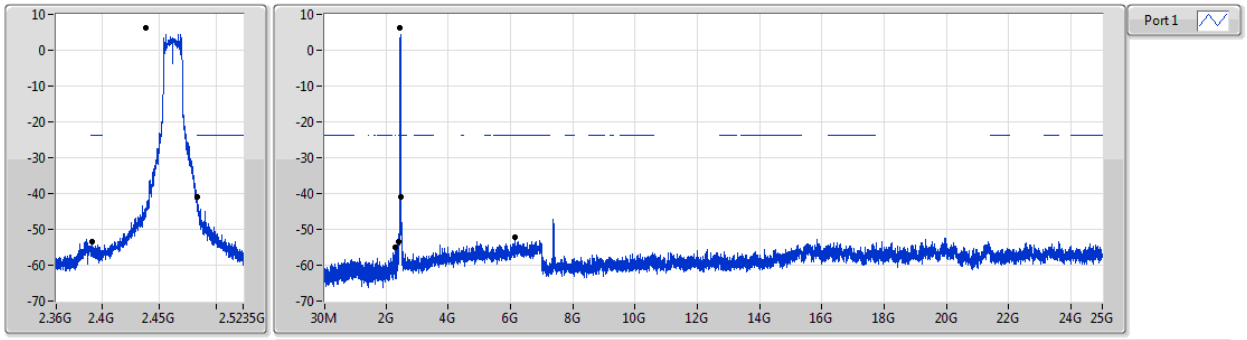
2437MHz



Ref(Hz)	Ref(dBm)	Limit(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Port
2.438243G	6.21	-23.79	2.14098G	-57.39	2.39936G	-46.62	2.49134G	-51.64	6.198408G	-53.14	1

802.11g_(6Mbps)_1TX **CSE NdB**

2462MHz



Ref(Hz)	Ref(dBm)	Limit(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Port
2.438243G	6.21	-23.79	2.30874G	-55.00	2.3916G	-53.30	2.48358G	-40.86	6.128169G	-52.08	1

Summary

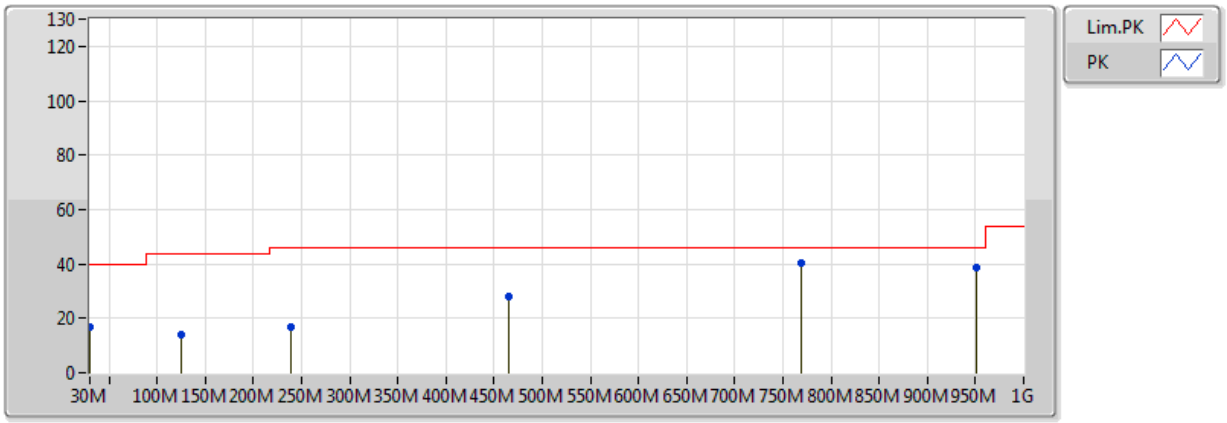
Mode	Result	Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Pol. (H/V)	Azimuth (°)	Height (m)	Comments
802.11g_(6Mbps)_1TX	-	-	-	-	-	-	-	-	-	-	-	-
2.4-2.4835GHz_USB	Pass	PK	776.9M	42.36	46.00	-3.64	-5.87	3	V	0	1.00	-

Result

Mode	Result	Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Pol. (H/V)	Azimuth (°)	Height (m)	Comments
802.11g_(6Mbps)_1TX	-	-	-	-	-	-	-	-	-	-	-	-
2437MHz_Adapter	Pass	PK	30M	17.45	40.00	-22.55	-14.14	3	H	0	1.00	-
2437MHz_Adapter	Pass	PK	125.06M	13.53	43.50	-29.97	-18.33	3	H	0	1.00	-
2437MHz_Adapter	Pass	PK	249.22M	16.88	46.00	-29.12	-16.47	3	H	0	1.00	-
2437MHz_Adapter	Pass	PK	450.98M	25.56	46.00	-20.44	-11.18	3	H	0	1.00	-
2437MHz_Adapter	Pass	PK	776.9M	41.34	46.00	-4.66	-5.87	3	H	0	1.00	-
2437MHz_Adapter	Pass	PK	951.5M	38.92	46.00	-7.08	-2.54	3	H	0	1.00	-
2437MHz_Adapter	Pass	PK	30M	17.06	40.00	-22.94	-14.14	3	V	360	1.00	-
2437MHz_Adapter	Pass	PK	125.06M	13.85	43.50	-29.65	-18.33	3	V	360	1.00	-
2437MHz_Adapter	Pass	PK	239.52M	16.80	46.00	-29.20	-17.82	3	V	360	1.00	-
2437MHz_Adapter	Pass	PK	464.56M	28.19	46.00	-17.81	-10.88	3	V	360	1.00	-
2437MHz_Adapter	Pass	PK	769.14M	40.18	46.00	-5.82	-6.00	3	V	360	1.00	-
2437MHz_Adapter	Pass	PK	951.5M	38.70	46.00	-7.30	-2.54	3	V	360	1.00	-
2437MHz_USB	Pass	PK	30M	17.39	40.00	-22.61	-14.14	3	H	360	1.00	-
2437MHz_USB	Pass	PK	229.82M	24.51	46.00	-21.49	-18.81	3	H	360	1.00	-
2437MHz_USB	Pass	PK	299.66M	25.78	46.00	-20.22	-15.32	3	H	360	1.00	-
2437MHz_USB	Pass	PK	450.98M	34.28	46.00	-11.72	-11.18	3	H	360	1.00	-
2437MHz_USB	Pass	PK	951.5M	41.93	46.00	-4.07	-2.54	3	H	360	1.00	-
2437MHz_USB	Pass	QP	774.96M	39.17	46.00	-6.83	-5.90	3	H	357	1.74	-
2437MHz_USB	Pass	PK	30M	16.80	40.00	-23.20	-14.14	3	V	0	1.00	-
2437MHz_USB	Pass	PK	218.18M	16.28	46.00	-29.72	-19.85	3	V	0	1.00	-
2437MHz_USB	Pass	PK	251.16M	23.97	46.00	-22.03	-16.19	3	V	0	1.00	-
2437MHz_USB	Pass	PK	449.04M	30.62	46.00	-15.38	-11.22	3	V	0	1.00	-
2437MHz_USB	Pass	PK	776.9M	42.36	46.00	-3.64	-5.87	3	V	0	1.00	-
2437MHz_USB	Pass	PK	951.5M	41.41	46.00	-4.59	-2.54	3	V	0	1.00	-

802.11g_(6Mbps)_1TX

2437MHz_Adapter

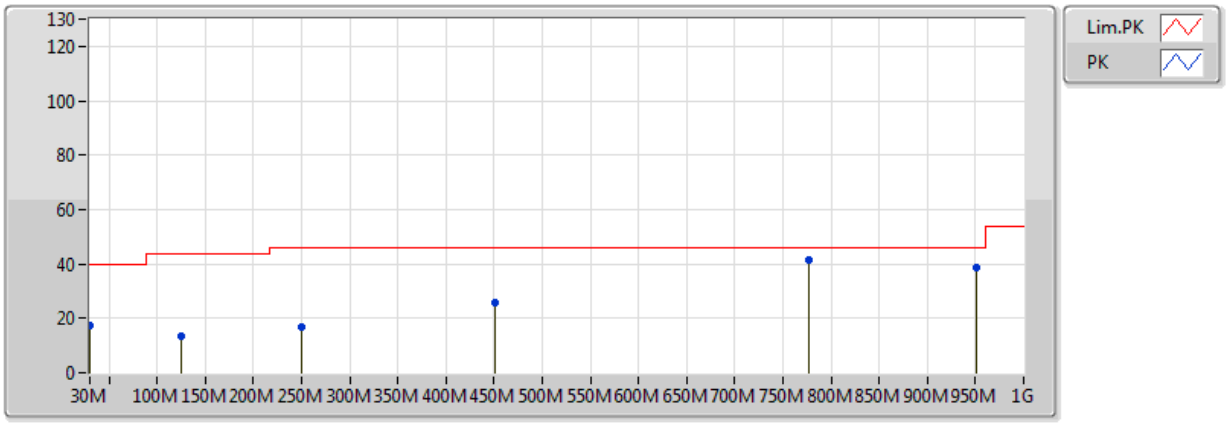


EUT = Z

Type	Freq(Hz)	Level(dBuV/m)	Limit(dBuV/m)	Margin(dB)	Factor(dB)	Dist(m)	Pol.(H/V)	Azimuth(°)	Height(m)	Comments
PK	30M	17.06	40.00	-22.94	-14.14	3	V	360	1.00	-
PK	125.06M	13.85	43.50	-29.65	-18.33	3	V	360	1.00	-
PK	239.52M	16.80	46.00	-29.20	-17.82	3	V	360	1.00	-
PK	464.56M	28.19	46.00	-17.81	-10.88	3	V	360	1.00	-
PK	769.14M	40.18	46.00	-5.82	-6.00	3	V	360	1.00	-
PK	951.5M	38.70	46.00	-7.30	-2.54	3	V	360	1.00	-

802.11g_(6Mbps)_1TX

2437MHz_Adapter

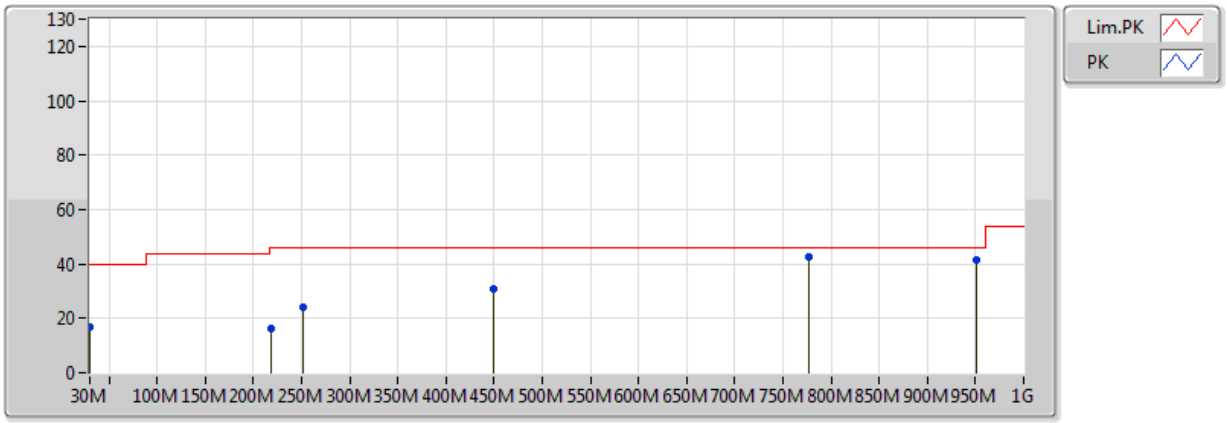


EUT = Z

Type	Freq(Hz)	Level(dBuV/m)	Limit(dBuV/m)	Margin(dB)	Factor(dB)	Dist(m)	Pol.(H/V)	Azimuth(°)	Height(m)	Comments
PK	30M	17.45	40.00	-22.55	-14.14	3	H	0	1.00	-
PK	125.06M	13.53	43.50	-29.97	-18.33	3	H	0	1.00	-
PK	249.22M	16.88	46.00	-29.12	-16.47	3	H	0	1.00	-
PK	450.98M	25.56	46.00	-20.44	-11.18	3	H	0	1.00	-
PK	776.9M	41.34	46.00	-4.66	-5.87	3	H	0	1.00	-
PK	951.5M	38.92	46.00	-7.08	-2.54	3	H	0	1.00	-

802.11g_(6Mbps)_1TX

2437MHz_USB

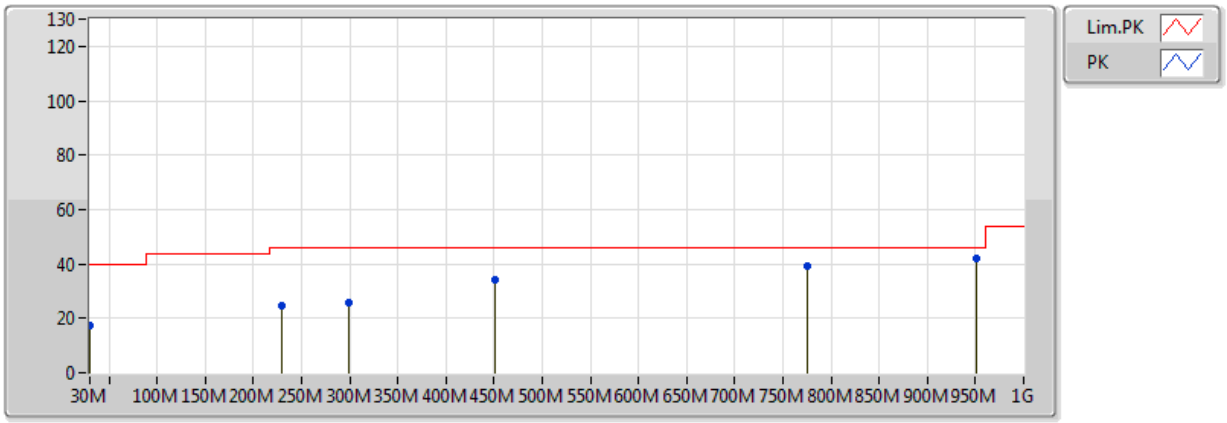


EUT = Z

Type	Freq(Hz)	Level(dBuV/m)	Limit(dBuV/m)	Margin(dB)	Factor(dB)	Dist(m)	Pol.(H/V)	Azimuth(°)	Height(m)	Comments
PK	30M	16.80	40.00	-23.20	-14.14	3	V	0	1.00	-
PK	218.18M	16.28	46.00	-29.72	-19.85	3	V	0	1.00	-
PK	251.16M	23.97	46.00	-22.03	-16.19	3	V	0	1.00	-
PK	449.04M	30.62	46.00	-15.38	-11.22	3	V	0	1.00	-
PK	776.9M	42.36	46.00	-3.64	-5.87	3	V	0	1.00	-
PK	951.5M	41.41	46.00	-4.59	-2.54	3	V	0	1.00	-

802.11g_(6Mbps)_1TX

2437MHz_USB



EUT = Z

Type	Freq(Hz)	Level(dBuV/m)	Limit(dBuV/m)	Margin(dB)	Factor(dB)	Dist(m)	Pol.(H/V)	Azimuth(°)	Height(m)	Comments
PK	30M	17.39	40.00	-22.61	-14.14	3	H	360	1.00	-
PK	229.82M	24.51	46.00	-21.49	-18.81	3	H	360	1.00	-
PK	299.66M	25.78	46.00	-20.22	-15.32	3	H	360	1.00	-
PK	450.98M	34.28	46.00	-11.72	-11.18	3	H	360	1.00	-
PK	951.5M	41.93	46.00	-4.07	-2.54	3	H	360	1.00	-
QP	774.96M	39.17	46.00	-6.83	-5.90	3	H	357	1.74	-

Summary

Mode	Result	Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Pol. (H/V)	Azimuth (°)	Height (m)	Comments
802.11b_(1Mbps)_1TX	-	-	-	-	-	-	-	-	-	-	-	-
2.4-2.4835GHz	Pass	AV	2.3856G	53.96	54.00	-0.04	31.15	3	H	41	1.01	-

Result

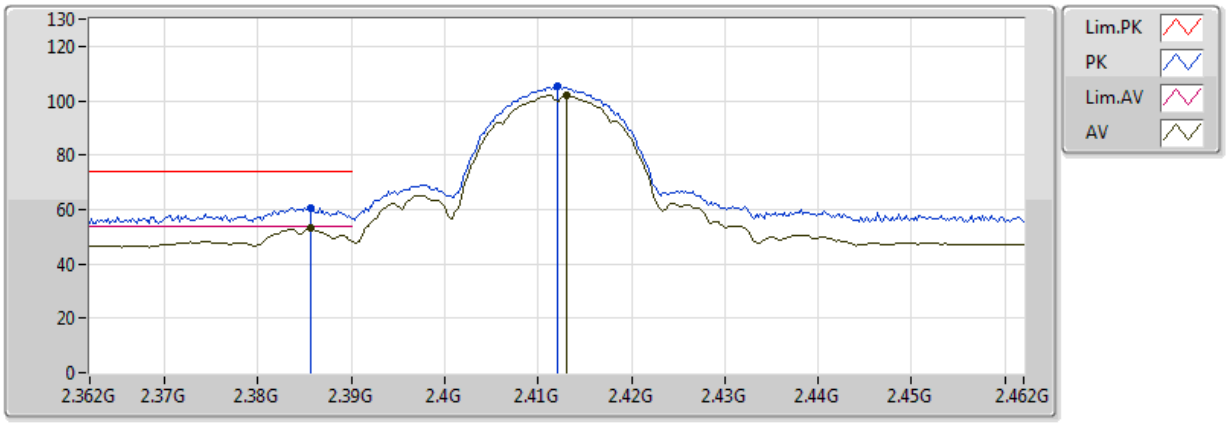
Mode	Result	Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Pol. (H/V)	Azimuth (°)	Height (m)	Comments
802.11b_(1Mbps)_1TX	-	-	-	-	-	-	-	-	-	-	-	-
2412MHz	Pass	AV	2.3856G	53.96	54.00	-0.04	31.15	3	H	41	1.01	-
2412MHz	Pass	AV	2.4112G	102.45	Inf	-Inf	31.25	3	H	41	1.01	-
2412MHz	Pass	AV	4.824G	46.43	54.00	-7.57	3.83	3	H	83	1.06	-
2412MHz	Pass	PK	2.3838G	61.10	74.00	-12.90	31.15	3	H	41	1.01	-
2412MHz	Pass	PK	2.412G	105.55	Inf	-Inf	31.26	3	H	41	1.01	-
2412MHz	Pass	PK	4.824G	51.12	74.00	-22.88	3.83	3	H	83	1.06	-
2412MHz	Pass	AV	2.3856G	53.05	54.00	-0.95	31.15	3	V	18	2.82	-
2412MHz	Pass	AV	2.413G	102.01	Inf	-Inf	31.26	3	V	18	2.82	-
2412MHz	Pass	AV	4.824G	44.44	54.00	-9.56	3.83	3	V	75	1.10	-
2412MHz	Pass	PK	2.3856G	60.62	74.00	-13.38	31.15	3	V	18	2.82	-
2412MHz	Pass	PK	2.412G	105.10	Inf	-Inf	31.26	3	V	18	2.82	-
2412MHz	Pass	PK	4.824G	50.20	74.00	-23.80	3.83	3	V	75	1.10	-
2437MHz	Pass	AV	2.3614G	46.59	54.00	-7.41	31.06	3	H	42	2.19	-
2437MHz	Pass	AV	2.4362G	103.52	Inf	-Inf	31.35	3	H	42	2.19	-
2437MHz	Pass	AV	2.4846G	47.27	54.00	-6.73	31.53	3	H	42	2.19	-
2437MHz	Pass	AV	4.874G	38.14	54.00	-15.86	3.92	3	H	93	1.00	-
2437MHz	Pass	PK	2.361G	57.87	74.00	-16.13	31.06	3	H	42	2.19	-
2437MHz	Pass	PK	2.437G	106.64	Inf	-Inf	31.35	3	H	42	2.19	-
2437MHz	Pass	PK	2.4918G	58.85	74.00	-15.15	31.56	3	H	42	2.19	-
2437MHz	Pass	PK	4.874G	46.46	74.00	-27.54	3.92	3	H	93	1.00	-
2437MHz	Pass	AV	2.3886G	46.49	54.00	-7.51	31.17	3	V	49	1.50	-
2437MHz	Pass	AV	2.4362G	100.24	Inf	-Inf	31.35	3	V	49	1.50	-
2437MHz	Pass	AV	2.497G	47.12	54.00	-6.88	31.58	3	V	49	1.50	-
2437MHz	Pass	AV	4.874G	35.68	54.00	-18.32	3.92	3	V	140	2.18	-
2437MHz	Pass	PK	2.3874G	57.84	74.00	-16.16	31.16	3	V	49	1.50	-
2437MHz	Pass	PK	2.437G	103.51	Inf	-Inf	31.35	3	V	49	1.50	-
2437MHz	Pass	PK	2.4934G	58.28	74.00	-15.72	31.56	3	V	49	1.50	-
2437MHz	Pass	PK	4.874G	45.34	74.00	-28.66	3.92	3	V	140	2.18	-
2462MHz	Pass	AV	2.4612G	103.18	Inf	-Inf	31.44	3	H	44	1.00	-
2462MHz	Pass	AV	2.4886G	53.63	54.00	-0.37	31.55	3	H	44	1.00	-
2462MHz	Pass	AV	4.924G	39.25	54.00	-14.75	4.01	3	H	345	1.03	-
2462MHz	Pass	PK	2.462G	106.26	Inf	-Inf	31.45	3	H	44	1.00	-
2462MHz	Pass	PK	2.4892G	60.88	74.00	-13.12	31.55	3	H	44	1.00	-
2462MHz	Pass	PK	4.924G	48.60	74.00	-25.40	4.01	3	H	345	1.03	-
2462MHz	Pass	AV	2.4612G	99.18	Inf	-Inf	31.44	3	V	54	1.41	-
2462MHz	Pass	AV	2.4882G	50.94	54.00	-3.06	31.55	3	V	54	1.41	-
2462MHz	Pass	AV	4.924G	41.42	54.00	-12.58	4.01	3	V	49	1.05	-
2462MHz	Pass	PK	2.462G	102.22	Inf	-Inf	31.45	3	V	54	1.41	-
2462MHz	Pass	PK	2.488G	60.40	74.00	-13.60	31.54	3	V	54	1.41	-
2462MHz	Pass	PK	4.924G	53.25	74.00	-20.75	4.01	3	V	49	1.05	-
802.11g_(6Mbps)_1TX	-	-	-	-	-	-	-	-	-	-	-	-
2412MHz	Pass	AV	2.39G	53.81	54.00	-0.19	31.17	3	H	47	1.02	-
2412MHz	Pass	AV	2.4104G	97.58	Inf	-Inf	31.25	3	H	47	1.02	-
2412MHz	Pass	AV	4.824G	35.77	54.00	-18.23	3.83	3	H	360	1.50	-
2412MHz	Pass	PK	2.39G	66.22	74.00	-7.78	31.17	3	H	47	1.02	-
2412MHz	Pass	PK	2.412G	106.31	Inf	-Inf	31.26	3	H	47	1.02	-
2412MHz	Pass	PK	4.824G	48.03	74.00	-25.97	3.83	3	H	360	1.50	-
2412MHz	Pass	AV	2.39G	52.89	54.00	-1.11	31.17	3	V	18	2.82	-

RSE TX above 1GHz Result

Mode	Result	Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Pol. (H/V)	Azimuth (°)	Height (m)	Comments
2412MHz	Pass	AV	2.413G	96.91	Inf	-Inf	31.26	3	V	18	2.82	-
2412MHz	Pass	AV	4.824G	36.00	54.00	-18.00	3.83	3	V	0	1.50	-
2412MHz	Pass	PK	2.3896G	66.45	74.00	-7.55	31.17	3	V	18	2.82	-
2412MHz	Pass	PK	2.4162G	105.19	Inf	-Inf	31.27	3	V	18	2.82	-
2412MHz	Pass	PK	4.824G	48.15	74.00	-25.85	3.83	3	V	0	1.50	-
2437MHz	Pass	AV	2.3894G	46.72	54.00	-7.28	31.17	3	H	41	1.46	-
2437MHz	Pass	AV	2.4362G	98.68	Inf	-Inf	31.35	3	H	41	1.46	-
2437MHz	Pass	AV	2.483502G	47.37	54.00	-6.63	31.53	3	H	41	1.46	-
2437MHz	Pass	AV	4.874G	35.49	54.00	-18.51	3.92	3	H	0	1.50	-
2437MHz	Pass	PK	2.3602G	57.55	74.00	-16.45	31.05	3	H	41	1.46	-
2437MHz	Pass	PK	2.437G	107.82	Inf	-Inf	31.35	3	H	41	1.46	-
2437MHz	Pass	PK	2.4954G	57.95	74.00	-16.05	31.57	3	H	41	1.46	-
2437MHz	Pass	PK	4.874G	47.23	74.00	-26.77	3.92	3	H	0	1.50	-
2437MHz	Pass	AV	2.3882G	46.64	54.00	-7.36	31.16	3	V	55	1.49	-
2437MHz	Pass	AV	2.4382G	95.34	Inf	-Inf	31.36	3	V	55	1.49	-
2437MHz	Pass	AV	2.4978G	47.28	54.00	-6.72	31.58	3	V	55	1.49	-
2437MHz	Pass	AV	4.874G	35.63	54.00	-18.37	3.92	3	V	360	1.50	-
2437MHz	Pass	PK	2.3718G	57.42	74.00	-16.58	31.10	3	V	55	1.49	-
2437MHz	Pass	PK	2.435G	103.13	Inf	-Inf	31.34	3	V	55	1.49	-
2437MHz	Pass	PK	2.4994G	58.12	74.00	-15.88	31.59	3	V	55	1.49	-
2437MHz	Pass	PK	4.874G	47.23	74.00	-26.77	3.92	3	V	360	1.50	-
2462MHz	Pass	AV	2.4612G	98.61	Inf	-Inf	31.44	3	H	44	1.00	-
2462MHz	Pass	AV	2.483502G	53.86	54.00	-0.14	31.53	3	H	44	1.00	-
2462MHz	Pass	AV	4.924G	35.70	54.00	-18.30	4.01	3	H	0	1.50	-
2462MHz	Pass	PK	2.462G	106.64	Inf	-Inf	31.45	3	H	44	1.00	-
2462MHz	Pass	PK	2.4836G	68.47	74.00	-5.53	31.53	3	H	44	1.00	-
2462MHz	Pass	PK	4.924G	47.56	74.00	-26.44	4.01	3	H	0	1.50	-
2462MHz	Pass	AV	2.4612G	94.06	Inf	-Inf	31.44	3	V	45	1.90	-
2462MHz	Pass	AV	2.483502G	51.38	54.00	-2.62	31.53	3	V	45	1.90	-
2462MHz	Pass	AV	4.924G	35.81	54.00	-18.19	4.01	3	V	360	1.50	-
2462MHz	Pass	PK	2.4608G	101.45	Inf	-Inf	31.44	3	V	45	1.90	-
2462MHz	Pass	PK	2.483502G	63.24	74.00	-10.76	31.53	3	V	45	1.90	-
2462MHz	Pass	PK	4.924G	47.47	74.00	-26.53	4.01	3	V	360	1.50	-

802.11b_(1Mbps)_1TX

2412MHz_TX

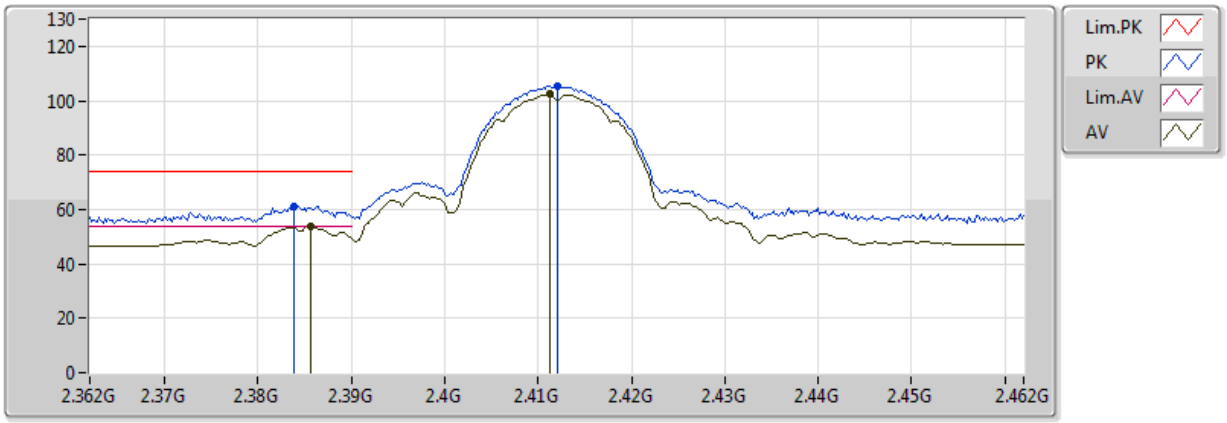


EUT = Z

Type	Freq(Hz)	Level(dBuV/m)	Limit(dBuV/m)	Margin(dB)	Factor(dB)	Dist(m)	Pol.(H/V)	Azimuth(°)	Height(m)	Comments
AV	2.3856G	53.05	54.00	-0.95	31.15	3	V	18	2.82	-
AV	2.413G	102.01	Inf	-Inf	31.26	3	V	18	2.82	-
PK	2.3856G	60.62	74.00	-13.38	31.15	3	V	18	2.82	-
PK	2.412G	105.10	Inf	-Inf	31.26	3	V	18	2.82	-

802.11b_(1Mbps)_1TX

2412MHz_TX

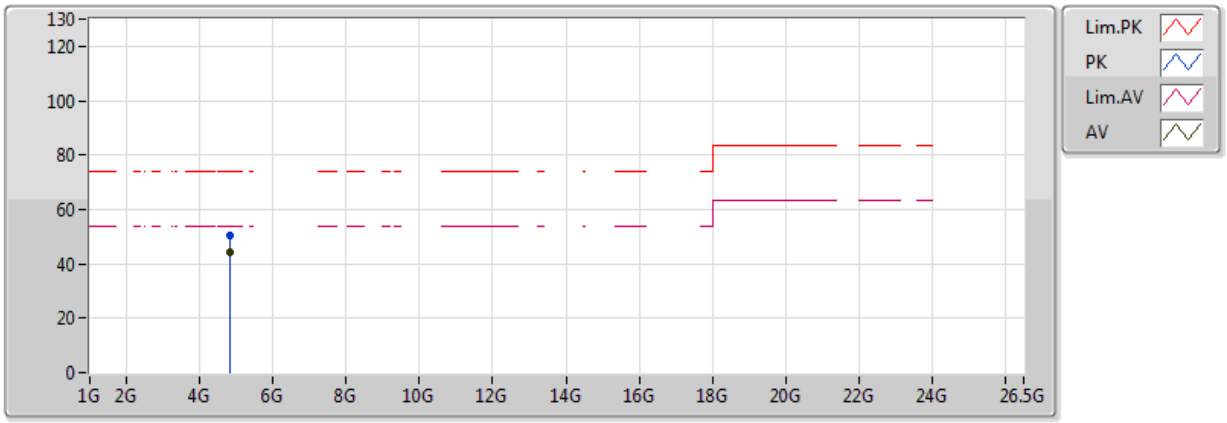


EUT = Z

Type	Freq(Hz)	Level(dBuV/m)	Limit(dBuV/m)	Margin(dB)	Factor(dB)	Dist(m)	Pol.(H/V)	Azimuth(°)	Height(m)	Comments
AV	2.3856G	53.96	54.00	-0.04	31.15	3	H	41	1.01	-
AV	2.4112G	102.45	Inf	-Inf	31.25	3	H	41	1.01	-
PK	2.3838G	61.10	74.00	-12.90	31.15	3	H	41	1.01	-
PK	2.412G	105.55	Inf	-Inf	31.26	3	H	41	1.01	-

802.11b_(1Mbps)_1TX

2412MHz_TX

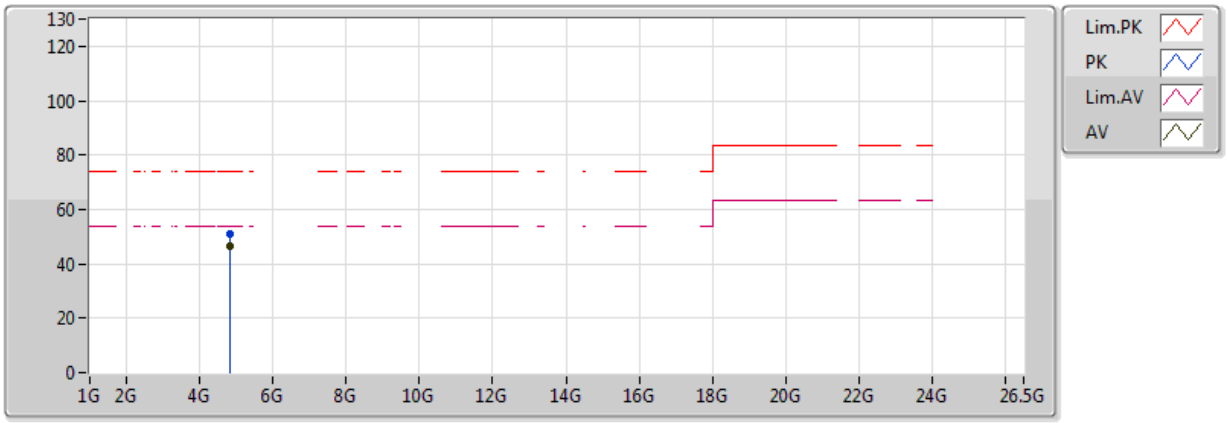


EUT = Z

Type	Freq(Hz)	Level(dBuV/m)	Limit(dBuV/m)	Margin(dB)	Factor(dB)	Dist(m)	Pol.(H/V)	Azimuth(°)	Height(m)	Comments
AV	4.824G	44.44	54.00	-9.56	3.83	3	V	75	1.10	-
PK	4.824G	50.20	74.00	-23.80	3.83	3	V	75	1.10	-

802.11b_(1Mbps)_1TX

2412MHz_TX

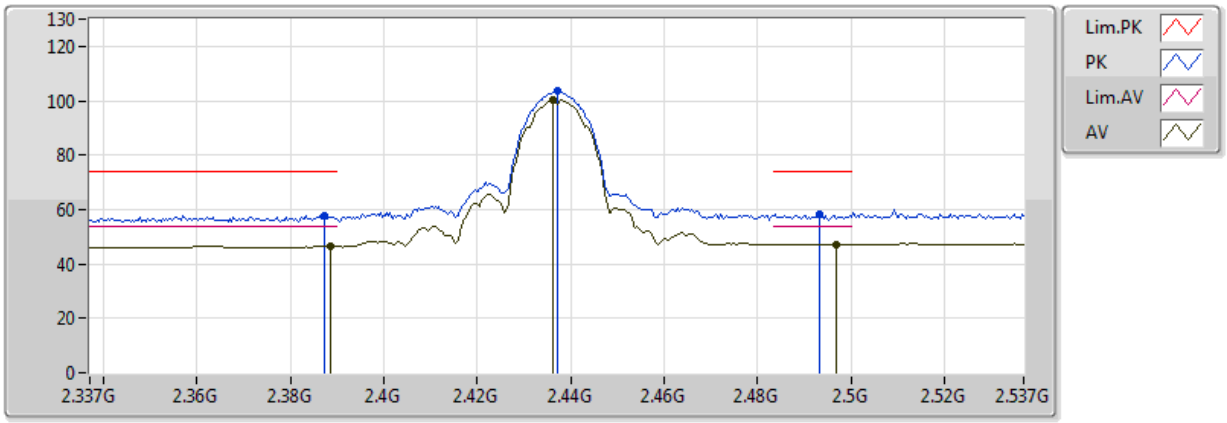


EUT = Z

Type	Freq(Hz)	Level(dBuV/m)	Limit(dBuV/m)	Margin(dB)	Factor(dB)	Dist(m)	Pol.(H/V)	Azimuth(°)	Height(m)	Comments
AV	4.824G	46.43	54.00	-7.57	3.83	3	H	83	1.06	-
PK	4.824G	51.12	74.00	-22.88	3.83	3	H	83	1.06	-

802.11b_(1Mbps)_1TX

2437MHz_TX

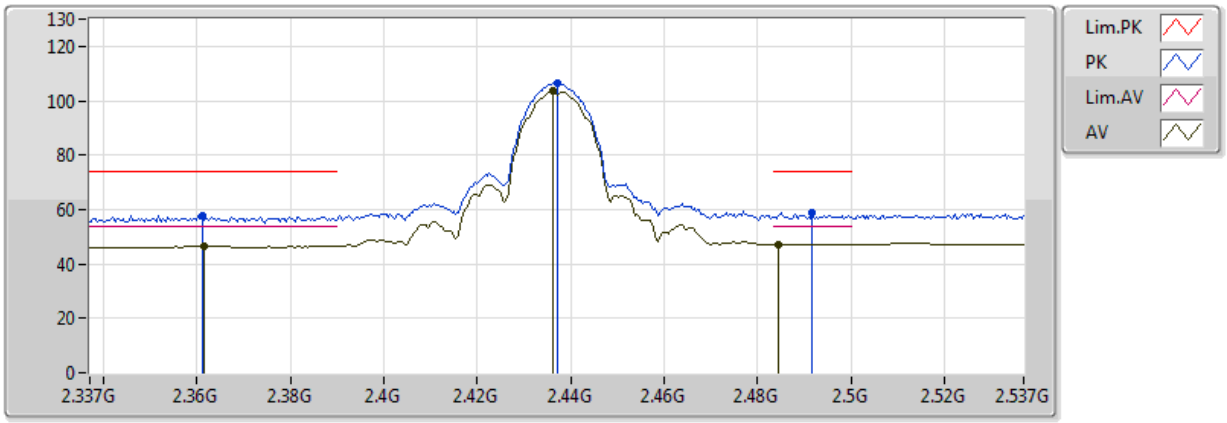


EUT = Z

Type	Freq(Hz)	Level(dBuV/m)	Limit(dBuV/m)	Margin(dB)	Factor(dB)	Dist(m)	Pol.(H/V)	Azimuth(°)	Height(m)	Comments
AV	2.3886G	46.49	54.00	-7.51	31.17	3	V	49	1.50	-
AV	2.4362G	100.24	Inf	-Inf	31.35	3	V	49	1.50	-
AV	2.497G	47.12	54.00	-6.88	31.58	3	V	49	1.50	-
PK	2.3874G	57.84	74.00	-16.16	31.16	3	V	49	1.50	-
PK	2.437G	103.51	Inf	-Inf	31.35	3	V	49	1.50	-
PK	2.4934G	58.28	74.00	-15.72	31.56	3	V	49	1.50	-

802.11b_(1Mbps)_1TX

2437MHz_TX

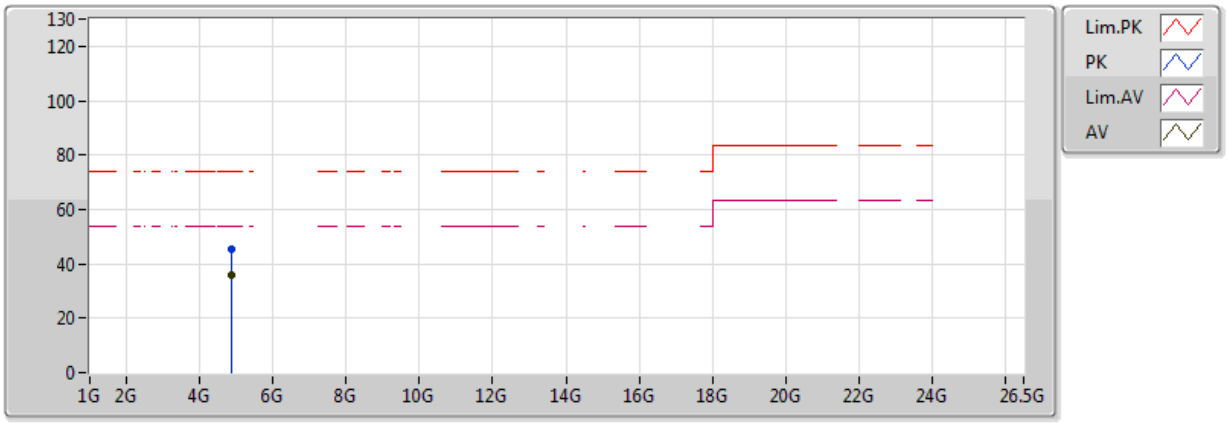


EUT = Z

Type	Freq(Hz)	Level(dBuV/m)	Limit(dBuV/m)	Margin(dB)	Factor(dB)	Dist(m)	Pol.(H/V)	Azimuth(°)	Height(m)	Comments
AV	2.3614G	46.59	54.00	-7.41	31.06	3	H	42	2.19	-
AV	2.4362G	103.52	Inf	-Inf	31.35	3	H	42	2.19	-
AV	2.4846G	47.27	54.00	-6.73	31.53	3	H	42	2.19	-
PK	2.361G	57.87	74.00	-16.13	31.06	3	H	42	2.19	-
PK	2.437G	106.64	Inf	-Inf	31.35	3	H	42	2.19	-
PK	2.4918G	58.85	74.00	-15.15	31.56	3	H	42	2.19	-

802.11b_(1Mbps)_1TX

2437MHz_TX

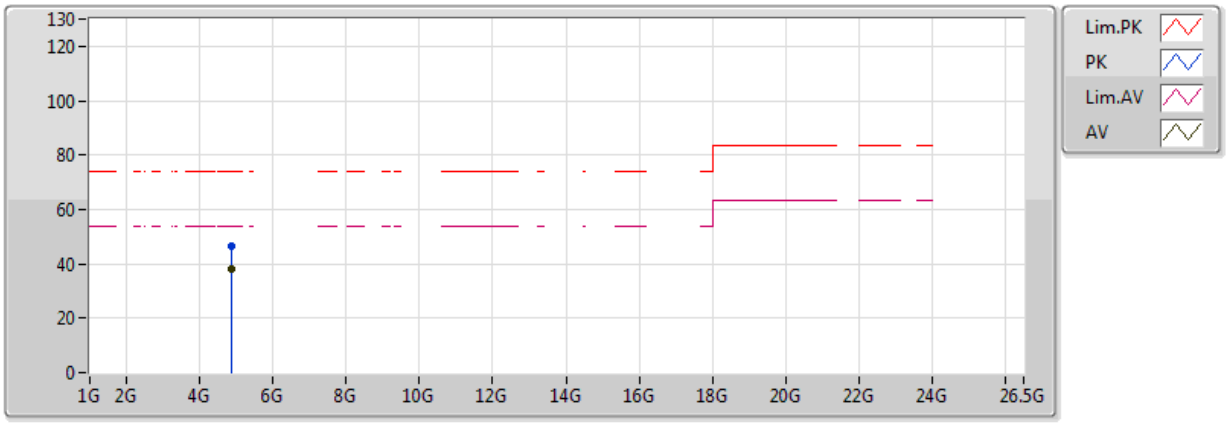


EUT = Z

Type	Freq(Hz)	Level(dBuV/m)	Limit(dBuV/m)	Margin(dB)	Factor(dB)	Dist(m)	Pol.(H/V)	Azimuth(°)	Height(m)	Comments
AV	4.874G	35.68	54.00	-18.32	3.92	3	V	140	2.18	-
PK	4.874G	45.34	74.00	-28.66	3.92	3	V	140	2.18	-

802.11b_(1Mbps)_1TX

2437MHz_TX

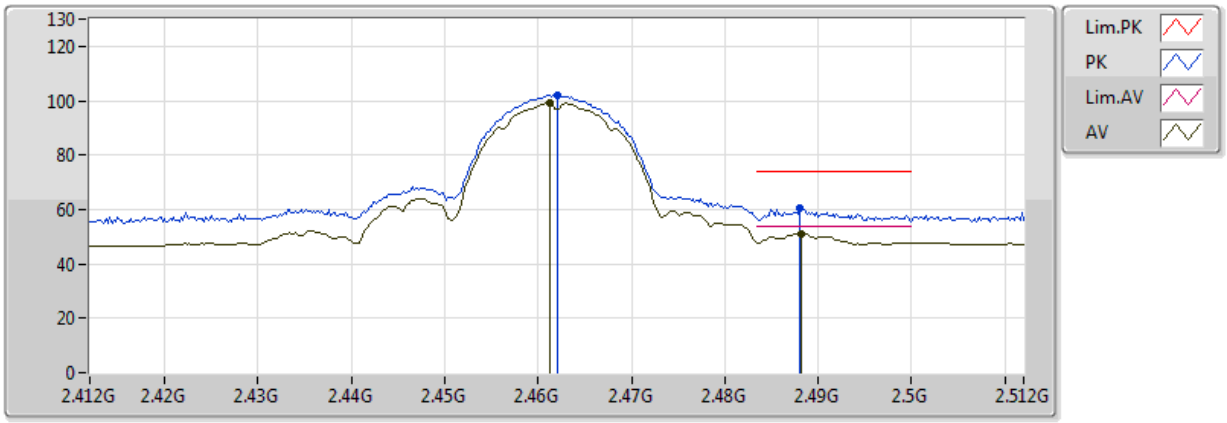


EUT = Z

Type	Freq(Hz)	Level(dBuV/m)	Limit(dBuV/m)	Margin(dB)	Factor(dB)	Dist(m)	Pol.(H/V)	Azimuth(°)	Height(m)	Comments
AV	4.874G	38.14	54.00	-15.86	3.92	3	H	93	1.00	-
PK	4.874G	46.46	74.00	-27.54	3.92	3	H	93	1.00	-

802.11b_(1Mbps)_1TX

2462MHz_TX

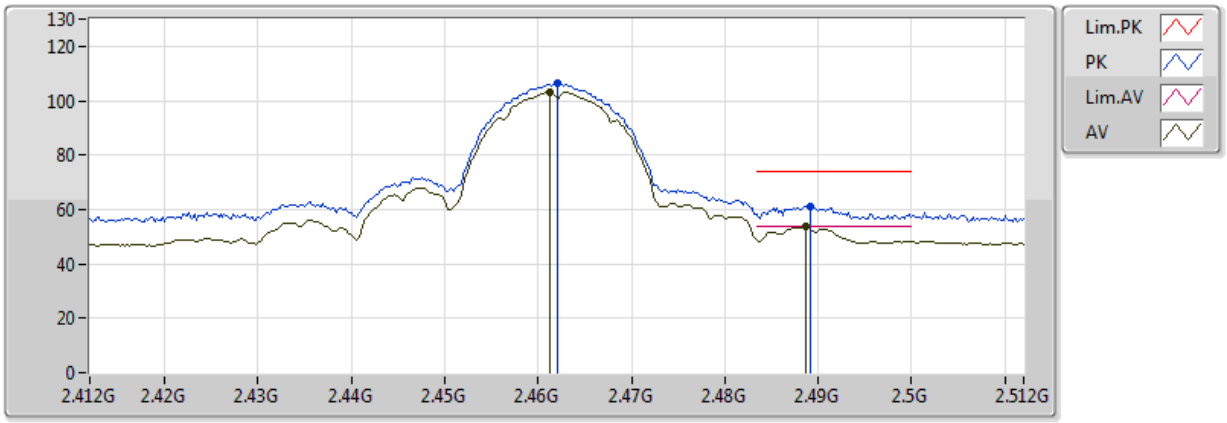


EUT = Z

Type	Freq(Hz)	Level(dBuV/m)	Limit(dBuV/m)	Margin(dB)	Factor(dB)	Dist(m)	Pol.(H/V)	Azimuth(°)	Height(m)	Comments
AV	2.4612G	99.18	Inf	-Inf	31.44	3	V	54	1.41	-
AV	2.4882G	50.94	54.00	-3.06	31.55	3	V	54	1.41	-
PK	2.462G	102.22	Inf	-Inf	31.45	3	V	54	1.41	-
PK	2.488G	60.40	74.00	-13.60	31.54	3	V	54	1.41	-

802.11b_(1Mbps)_1TX

2462MHz_TX

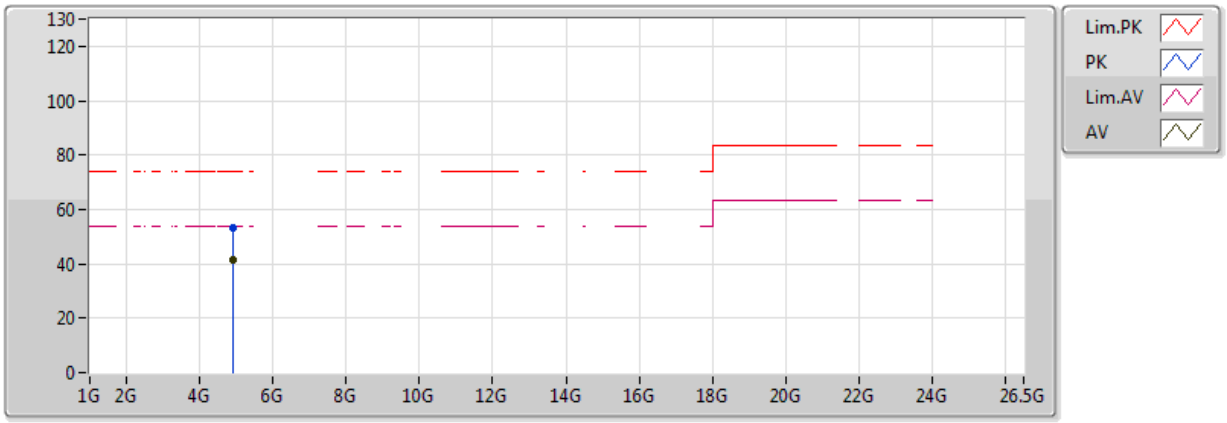


EUT = Z

Type	Freq(Hz)	Level(dBuV/m)	Limit(dBuV/m)	Margin(dB)	Factor(dB)	Dist(m)	Pol.(H/V)	Azimuth(°)	Height(m)	Comments
AV	2.4612G	103.18	Inf	-Inf	31.44	3	H	44	1.00	-
AV	2.4886G	53.63	54.00	-0.37	31.55	3	H	44	1.00	-
PK	2.462G	106.26	Inf	-Inf	31.45	3	H	44	1.00	-
PK	2.4892G	60.88	74.00	-13.12	31.55	3	H	44	1.00	-

802.11b_(1Mbps)_1TX

2462MHz_TX

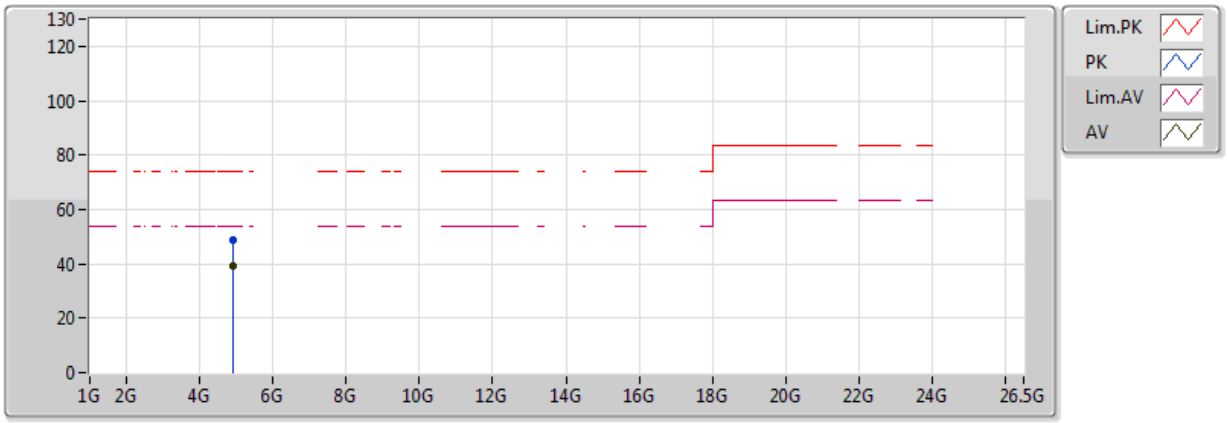


EUT = Z

Type	Freq(Hz)	Level(dBuV/m)	Limit(dBuV/m)	Margin(dB)	Factor(dB)	Dist(m)	Pol.(H/V)	Azimuth(°)	Height(m)	Comments
AV	4.924G	41.42	54.00	-12.58	4.01	3	V	49	1.05	-
PK	4.924G	53.25	74.00	-20.75	4.01	3	V	49	1.05	-

802.11b_(1Mbps)_1TX

2462MHz_TX

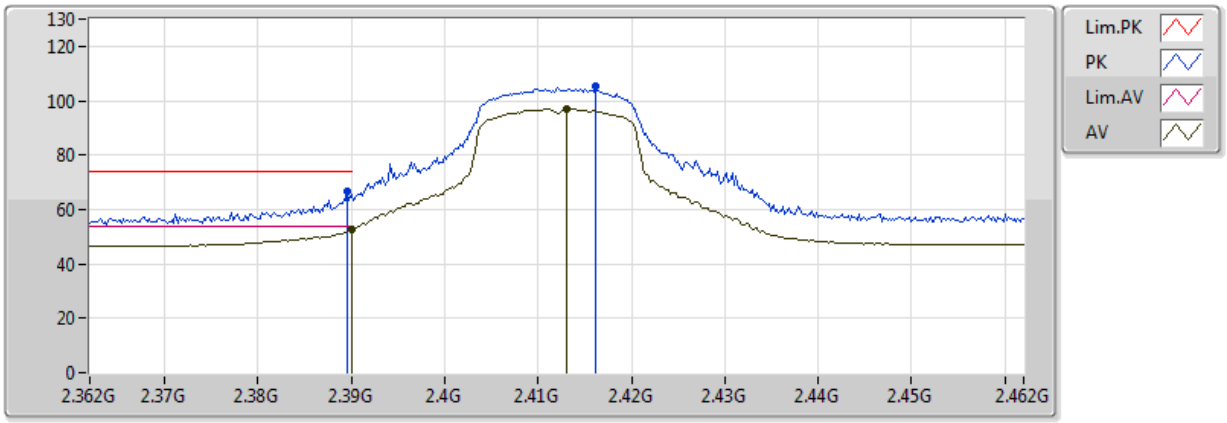


EUT = Z

Type	Freq(Hz)	Level(dBuV/m)	Limit(dBuV/m)	Margin(dB)	Factor(dB)	Dist(m)	Pol.(H/V)	Azimuth(°)	Height(m)	Comments
AV	4.924G	39.25	54.00	-14.75	4.01	3	H	345	1.03	-
PK	4.924G	48.60	74.00	-25.40	4.01	3	H	345	1.03	-

802.11g_(6Mbps)_1TX

2412MHz_TX

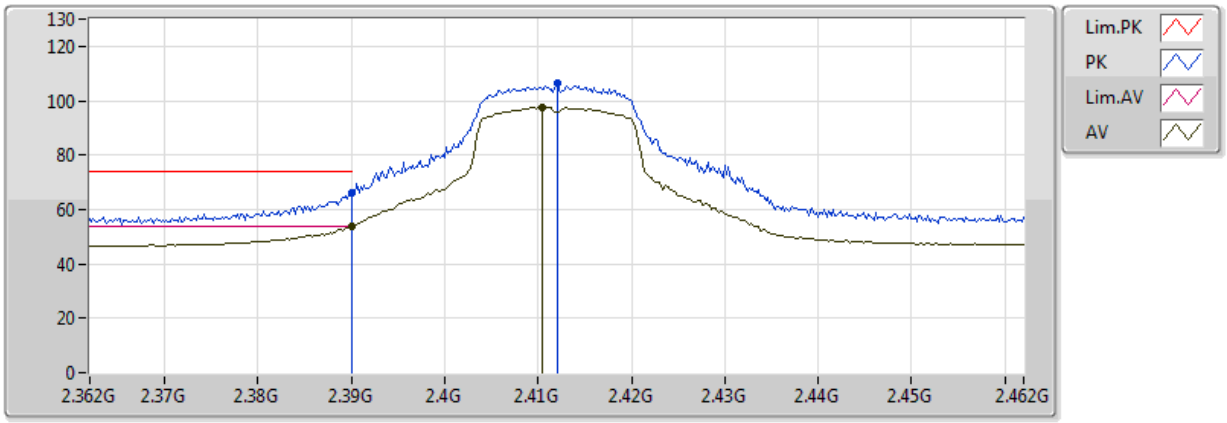


EUT = Z

Type	Freq(Hz)	Level(dBuV/m)	Limit(dBuV/m)	Margin(dB)	Factor(dB)	Dist(m)	Pol.(H/V)	Azimuth(°)	Height(m)	Comments
AV	2.39G	52.89	54.00	-1.11	31.17	3	V	18	2.82	-
AV	2.413G	96.91	Inf	-Inf	31.26	3	V	18	2.82	-
PK	2.3896G	66.45	74.00	-7.55	31.17	3	V	18	2.82	-
PK	2.4162G	105.19	Inf	-Inf	31.27	3	V	18	2.82	-

802.11g_(6Mbps)_1TX

2412MHz_TX

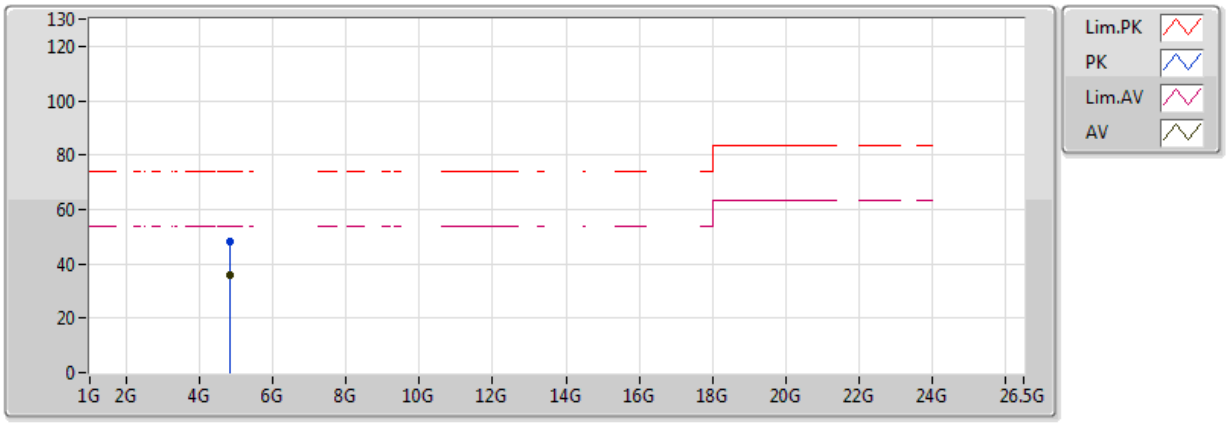


EUT = Z

Type	Freq(Hz)	Level(dBuV/m)	Limit(dBuV/m)	Margin(dB)	Factor(dB)	Dist(m)	Pol.(H/V)	Azimuth(°)	Height(m)	Comments
AV	2.39G	53.81	54.00	-0.19	31.17	3	H	47	1.02	-
AV	2.4104G	97.58	Inf	-Inf	31.25	3	H	47	1.02	-
PK	2.39G	66.22	74.00	-7.78	31.17	3	H	47	1.02	-
PK	2.412G	106.31	Inf	-Inf	31.26	3	H	47	1.02	-

802.11g_(6Mbps)_1TX

2412MHz_TX

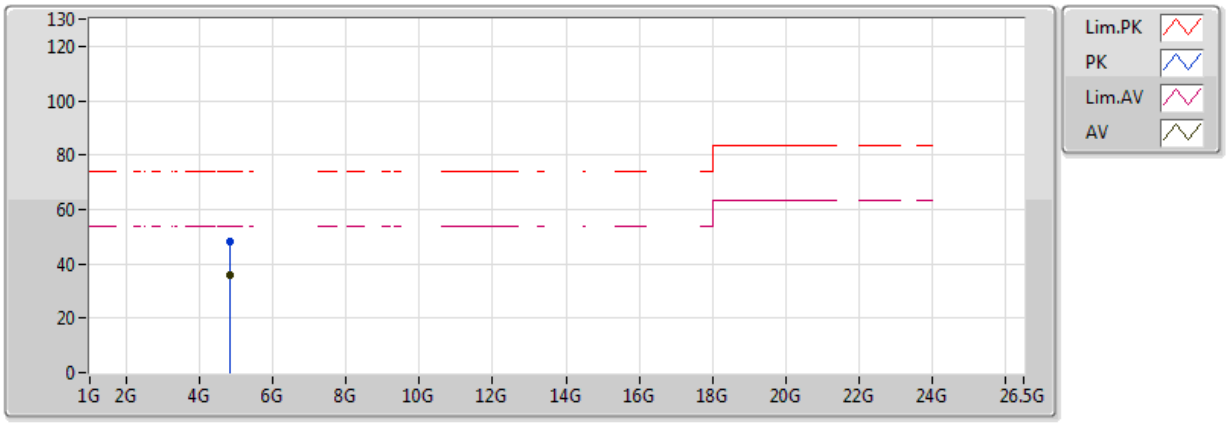


EUT = Z

Type	Freq(Hz)	Level(dBuV/m)	Limit(dBuV/m)	Margin(dB)	Factor(dB)	Dist(m)	Pol.(H/V)	Azimuth(°)	Height(m)	Comments
AV	4.824G	36.00	54.00	-18.00	3.83	3	V	0	1.50	-
PK	4.824G	48.15	74.00	-25.85	3.83	3	V	0	1.50	-

802.11g_(6Mbps)_1TX

2412MHz_TX

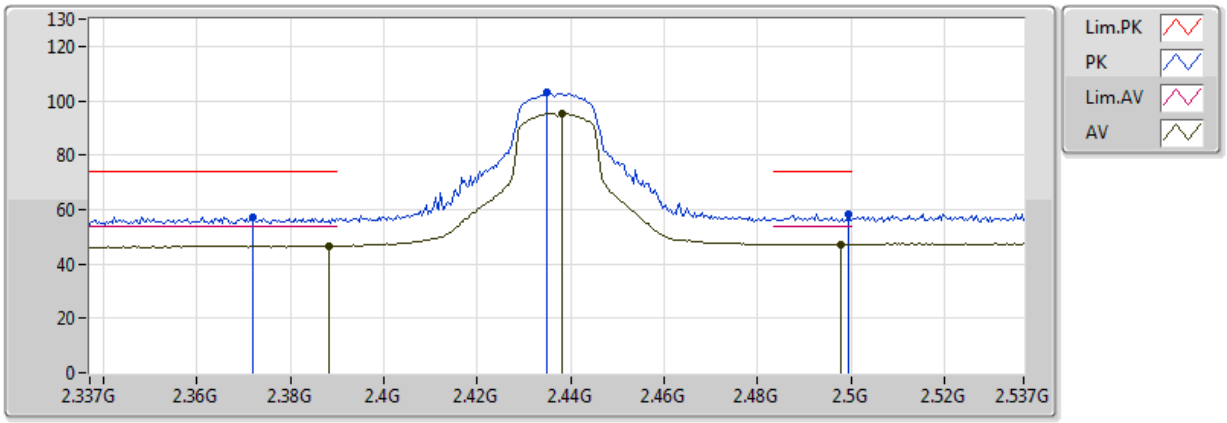


EUT = Z

Type	Freq(Hz)	Level(dBuV/m)	Limit(dBuV/m)	Margin(dB)	Factor(dB)	Dist(m)	Pol.(H/V)	Azimuth(°)	Height(m)	Comments
AV	4.824G	35.77	54.00	-18.23	3.83	3	H	360	1.50	-
PK	4.824G	48.03	74.00	-25.97	3.83	3	H	360	1.50	-

802.11g_(6Mbps)_1TX

2437MHz_TX

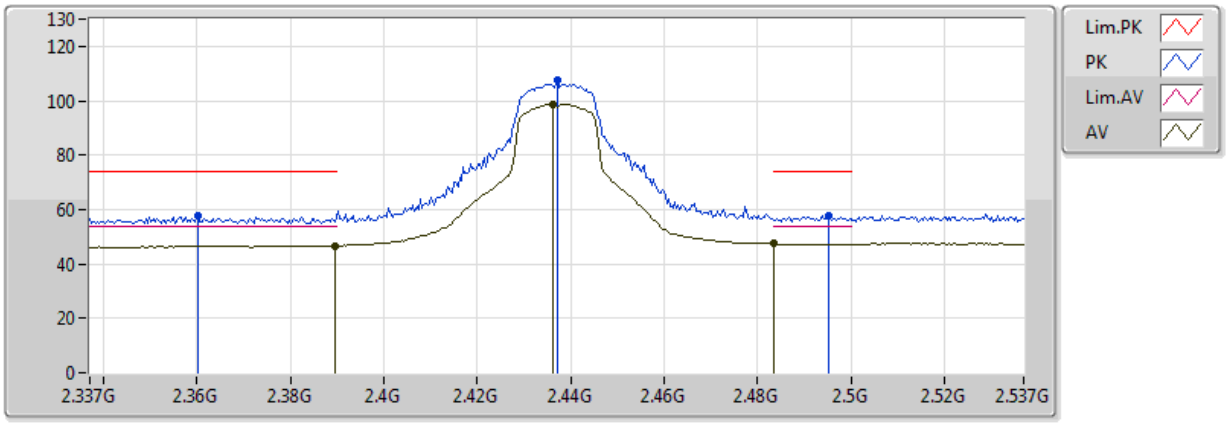


EUT = Z

Type	Freq(Hz)	Level(dBuV/m)	Limit(dBuV/m)	Margin(dB)	Factor(dB)	Dist(m)	Pol.(H/V)	Azimuth(°)	Height(m)	Comments
AV	2.3882G	46.64	54.00	-7.36	31.16	3	V	55	1.49	-
AV	2.4382G	95.34	Inf	-Inf	31.36	3	V	55	1.49	-
AV	2.4978G	47.28	54.00	-6.72	31.58	3	V	55	1.49	-
PK	2.3718G	57.42	74.00	-16.58	31.10	3	V	55	1.49	-
PK	2.435G	103.13	Inf	-Inf	31.34	3	V	55	1.49	-
PK	2.4994G	58.12	74.00	-15.88	31.59	3	V	55	1.49	-

802.11g_(6Mbps)_1TX

2437MHz_TX

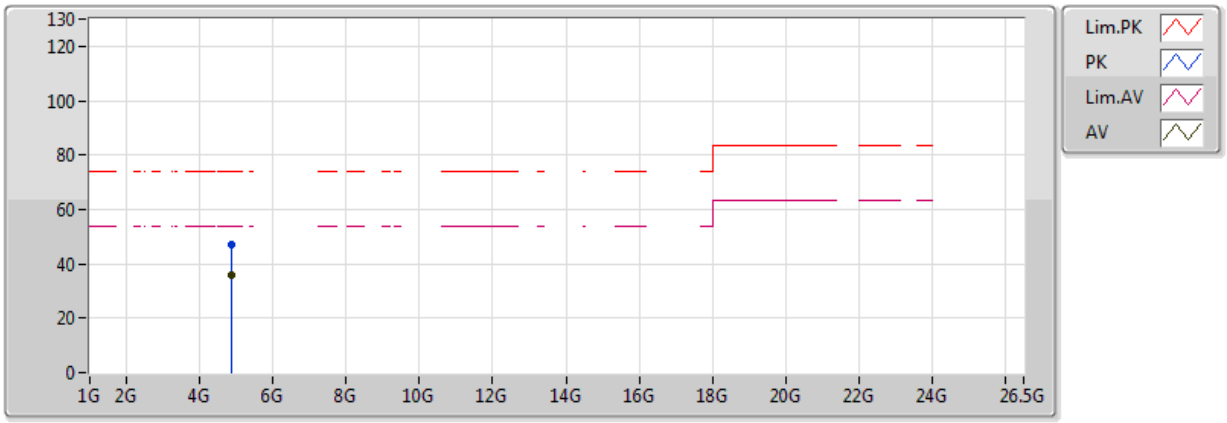


EUT = Z

Type	Freq(Hz)	Level(dBuV/m)	Limit(dBuV/m)	Margin(dB)	Factor(dB)	Dist(m)	Pol.(H/V)	Azimuth(°)	Height(m)	Comments
AV	2.3894G	46.72	54.00	-7.28	31.17	3	H	41	1.46	-
AV	2.4362G	98.68	Inf	-Inf	31.35	3	H	41	1.46	-
AV	2.483502G	47.37	54.00	-6.63	31.53	3	H	41	1.46	-
PK	2.3602G	57.55	74.00	-16.45	31.05	3	H	41	1.46	-
PK	2.437G	107.82	Inf	-Inf	31.35	3	H	41	1.46	-
PK	2.4954G	57.95	74.00	-16.05	31.57	3	H	41	1.46	-

802.11g_(6Mbps)_1TX

2437MHz_TX

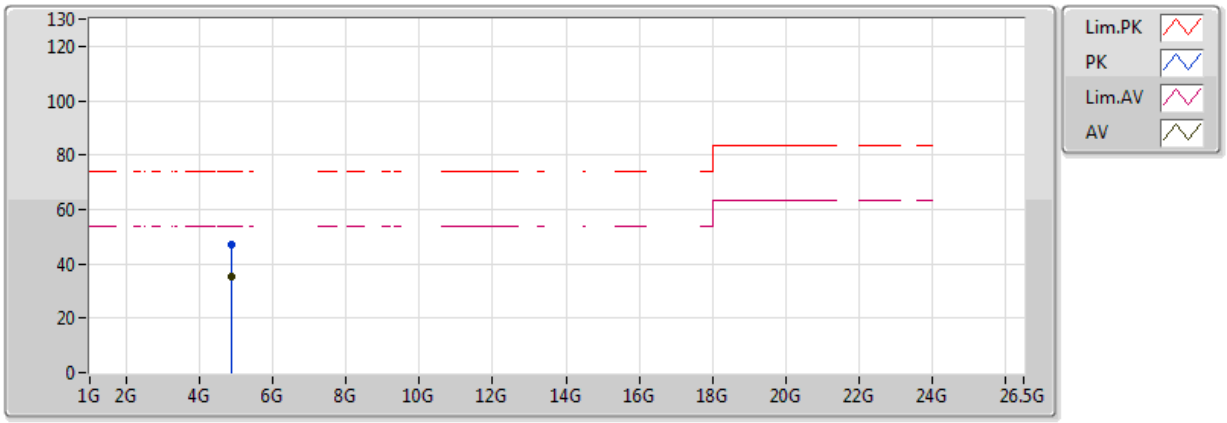


EUT = Z

Type	Freq(Hz)	Level(dBuV/m)	Limit(dBuV/m)	Margin(dB)	Factor(dB)	Dist(m)	Pol.(H/V)	Azimuth(°)	Height(m)	Comments
AV	4.874G	35.63	54.00	-18.37	3.92	3	V	360	1.50	-
PK	4.874G	47.23	74.00	-26.77	3.92	3	V	360	1.50	-

802.11g_(6Mbps)_1TX

2437MHz_TX

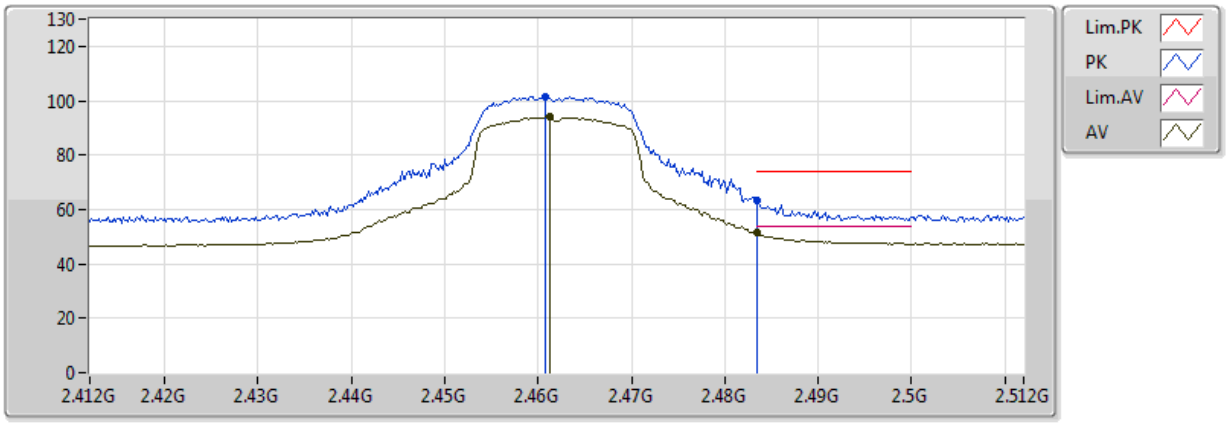


EUT = Z

Type	Freq(Hz)	Level(dBuV/m)	Limit(dBuV/m)	Margin(dB)	Factor(dB)	Dist(m)	Pol.(H/V)	Azimuth(°)	Height(m)	Comments
AV	4.874G	35.49	54.00	-18.51	3.92	3	H	0	1.50	-
PK	4.874G	47.23	74.00	-26.77	3.92	3	H	0	1.50	-

802.11g_(6Mbps)_1TX

2462MHz_TX

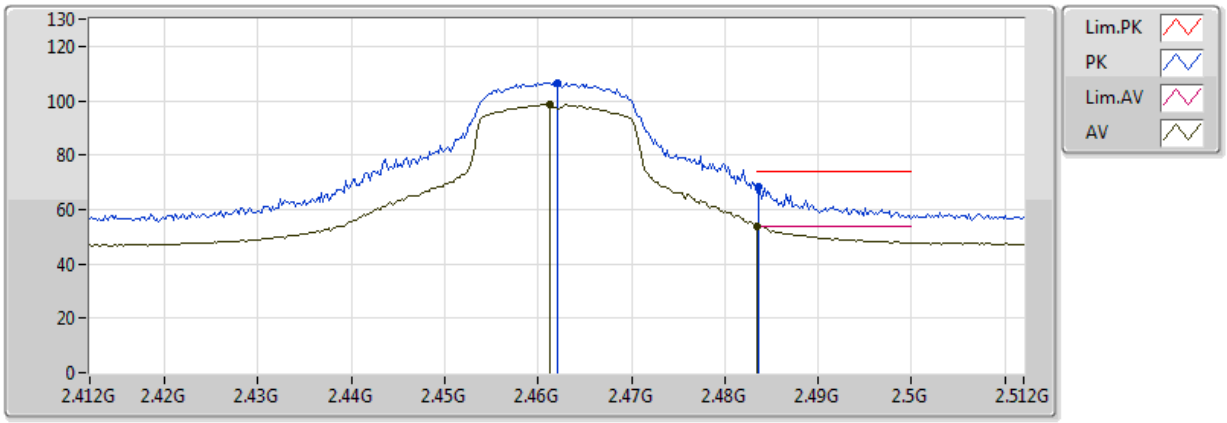


EUT = Z

Type	Freq(Hz)	Level(dBuV/m)	Limit(dBuV/m)	Margin(dB)	Factor(dB)	Dist(m)	Pol.(H/V)	Azimuth(°)	Height(m)	Comments
AV	2.4612G	94.06	Inf	-Inf	31.44	3	V	45	1.90	-
AV	2.483502G	51.38	54.00	-2.62	31.53	3	V	45	1.90	-
PK	2.4608G	101.45	Inf	-Inf	31.44	3	V	45	1.90	-
PK	2.483502G	63.24	74.00	-10.76	31.53	3	V	45	1.90	-

802.11g_(6Mbps)_1TX

2462MHz_TX

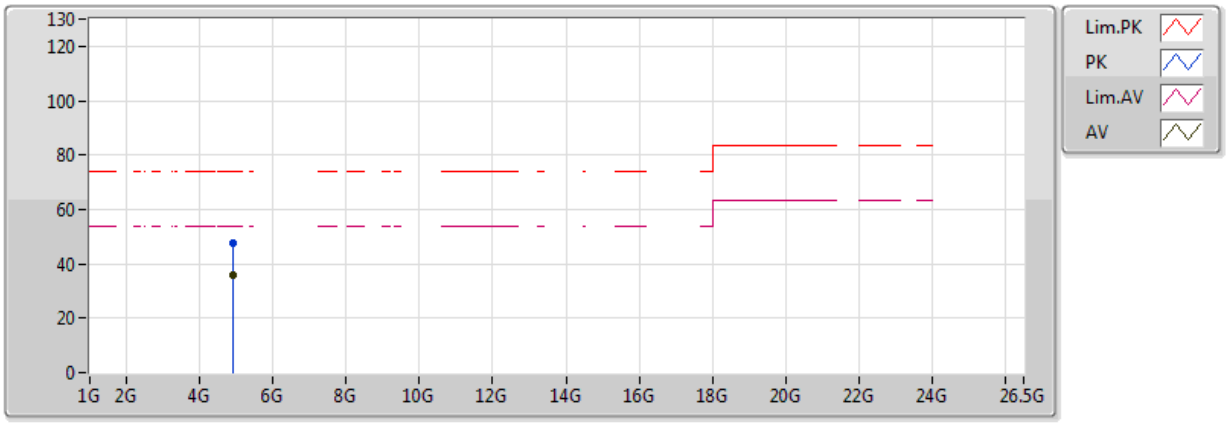


EUT = Z

Type	Freq(Hz)	Level(dBuV/m)	Limit(dBuV/m)	Margin(dB)	Factor(dB)	Dist(m)	Pol.(H/V)	Azimuth(°)	Height(m)	Comments
AV	2.4612G	98.61	Inf	-Inf	31.44	3	H	44	1.00	-
AV	2.483502G	53.86	54.00	-0.14	31.53	3	H	44	1.00	-
PK	2.462G	106.64	Inf	-Inf	31.45	3	H	44	1.00	-
PK	2.4836G	68.47	74.00	-5.53	31.53	3	H	44	1.00	-

802.11g_(6Mbps)_1TX

2462MHz_TX

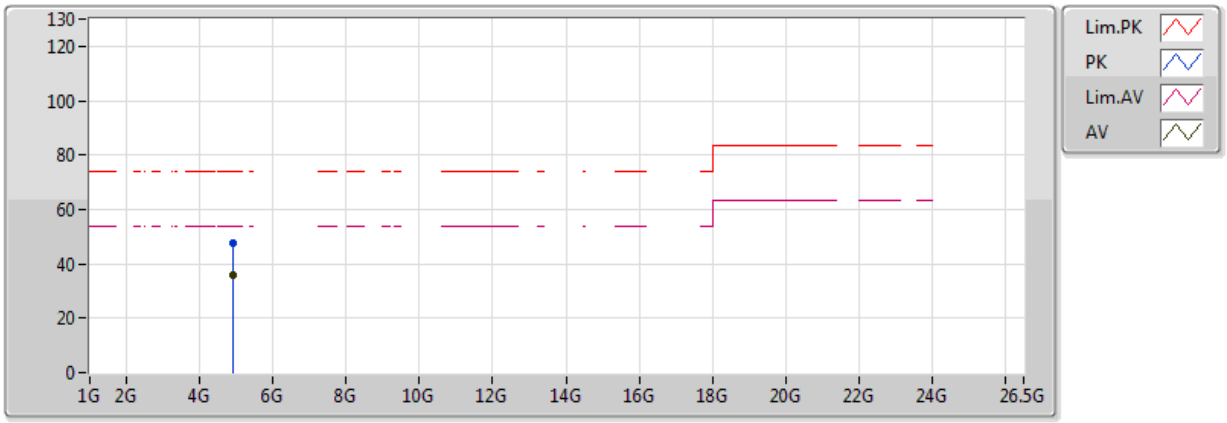


EUT = Z

Type	Freq(Hz)	Level(dBuV/m)	Limit(dBuV/m)	Margin(dB)	Factor(dB)	Dist(m)	Pol.(H/V)	Azimuth(°)	Height(m)	Comments
AV	4.924G	35.81	54.00	-18.19	4.01	3	V	360	1.50	-
PK	4.924G	47.47	74.00	-26.53	4.01	3	V	360	1.50	-

802.11g_(6Mbps)_1TX

2462MHz_TX



EUT = Z

Type	Freq(Hz)	Level(dBuV/m)	Limit(dBuV/m)	Margin(dB)	Factor(dB)	Dist(m)	Pol.(H/V)	Azimuth(°)	Height(m)	Comments
AV	4.924G	35.70	54.00	-18.30	4.01	3	H	0	1.50	-
PK	4.924G	47.56	74.00	-26.44	4.01	3	H	0	1.50	-