Neutron Engineering Inc.

Radio Test Report

FCC ID: VJA-RJ1301
IC: 7382A-RJ1301

This report concerns (check one) : ☒ **Original Grant** ☐ **Class II Change**

Issued Date	:	Mar. 03, 2014
Project No.	:	1402132
Equipment	:	Mini PCI Radio Module, 2x2 IEEE 802.11 b/g/n ,2.4 GHz
Model Name	:	RJ-1301
Applicant	:	RAJANT CORPORATION
Address	:	400 EAST KING STREET, MALVERN PA 19355

Tested by: Neutron Engineering Inc. EMC Laboratory
Date of Receipt: Feb. 18, 2014
Date of Test: Feb. 18, 2014 ~ Feb. 28, 2014

Testing Engineer : _____
(Josh Lin)

Technical Manager : _____
(Jeff Yang)

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Declaration

Neutron represents to the client that testing is done in accordance with standard procedures as applicable and that test instruments used has been calibrated with the standards traceable to National Measurement Laboratory (**NML**) of **R.O.C**., or National Institute of Standards and Technology (**NIST**) of **U.S.A.**

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Limitation

For the use of the authority's logo is limited unless the Test Standard(s)/Scope(s)/Item(s) mentioned in this test report is (are) included in the conformity assessment authorities acceptance respective.

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REPORT ISSUED HISTORY

Revised Version No.	Description	Issued Date
-	Initial Issue.	Mar. 03, 2014

1 CERTIFICATION

Equipment	: Mini PCI Radio Module, 2x2 IEEE 802.11 b/g/n ,2.4 GHz
Brand Name	: Rajant Corporation
Model Name	: RJ-1301
Applicant	: RAJANT CORPORATION
Date of Test	: Feb. 18, 2014 ~ Feb. 28, 2014
Standards	: RSS-210, Issue 8: 2010
	FCC Part 15, Subpart C: 2012
	ANSI C63.4: 2009

The above equipment has been tested and found compliance with the requirement of the relative standards by Neutron Engineering Inc. EMC Laboratory.
The test data, data evaluation, and equipment configuration contained in our test report (Ref No. NEI-FCCP-1-1402132) were obtained utilizing the test procedures, test instruments, test sites that has been accredited by the Authority of TAF according to the ISO-17025 quality assessment standard and technical standard(s).

2. SUMMARY OF TEST RESULTS

RSS-210, Issue 8: 2010; FCC Part 15, Subpart C: 2012			
Standard Clause		Test Item	Result
RSS-210	FCC Part 15, Subpart C		
NOTE (2)	15.207	Conducted Emission	**PASS**
A8.5	15.247 (c)	Antenna conducted Spurious Emission	**PASS**
A8.2 (a)	15.247 (a)(2)	6 dB Bandwidth	**PASS**
A8.4 (4)	15.247 (b)	Maximum Peak Conducted Output Power	**PASS**
NOTE (3)	15.247 (c)	Radiated Spurious Emission	**PASS**
A8.2 (b)	15.247 (d)(e)	Power Spectral Density	**PASS**
NOTE (4)	15.205	Restricted Bands	**PASS**
NOTE (5)	15.203	Antenna Requirement	**PASS**
NOTE (6)	1.1307 1.1310 2.1091 2.1093	RF Exposure Compliance	**PASS**

NOTE:

(1) N/A: denotes test is not applicable in this Test Report
(2) Reference standerads is RSS-GEN 7.2.4
(3) Reference standerads is RSS-GEN 7.2.5
(4) Reference standerads is RSS-GEN 7.2.2
(5) Reference standerads is RSS-GEN 7.1.2
(6) Reference standerads is RSS-102

2.1 TEST FACILITY

The test facilities used to collect the test data in this report:

Conducted emission Test:

C02: 1F., No. 61, Ln. 77, Sing-ai Rd., Neihu Dist., Taipei City 114, Taiwan (R.O.C.)

Radiated emission Test (Below 1 GHz):

CB08: 1F., No. 61, Ln. 77, Sing-ai Rd., Neihu Dist., Taipei City 114, Taiwan (R.O.C.)

Radiated emission Test (Above 1 GHz):

CB08: 1F., No. 61, Ln. 77, Sing-ai Rd., Neihu Dist., Taipei City 114, Taiwan (R.O.C.)

2.2 MEASUREMENT UNCERTAINTY

The measurement uncertainty is not specified by FCC/Industry Canada rules and for reference only.

The reported uncertainty of measurement **y** ± **U**，where expended uncertainty **U** is based on a standard uncertainty multiplied by a coverage factor of **k=2**，providing a level of confidence of approximately **95**%.

The measurement instrumentation uncertainty considerations contained in CISPR 16-4-2.

A. Conducted emission test:

Test Site	Measurement Frequency Range	U，(dB)	NOTE
C02	150 kHz ~ 30 MHz	2.59	

B. Radiated emission test:

Test Site	Item	Measurement Frequency Range		Uncertainty	NOTE
CB08	Radiated emission at 3m	Horizontal Polarization	30 - 200MHz	3.35 dB	
			200 - 1000MHz	3.11 dB	
			1 - 18GHz	3.97 dB	
			18 - 40GHz	4.01 dB	
		Vertical Polarization	30 - 200MHz	3.22 dB	
			200 - 1000MHz	3.24 dB	
			1 - 18GHz	4.05 dB	
			18 - 40GHz	4.04 dB	

Our calculated Measurement Instrumentation Uncertainty is shown in the tables above. These are our U_{lab} values in CISPR 16-4-2 terminology.

Since Table 1 of CISPR 16-4-2 has values of measurement instrumentation uncertainty, called U_{CISPR}, as follows:

Conducted Disturbance (mains port) – 150 kHz – 30 MHz: 3.6 dB

Radiated Disturbance (electric field strength on an open area test site or alternative test site) – 30 MHz – 1000 MHz: 5.2 dB

It can be seen that our U_{lab} values are smaller than U_{CISPR}.

If U_{lab} is less than or equal to U_{CISPR}, then:

- compliance is deemed to occur if no measured disturbance level exceeds the disturbance limit;
- non-compliance is deemed to occur if any measured disturbance level exceeds the disturbance limit.

If U_{lab} is greater than U_{CISPR}, then:

- compliance is deemed to occur if no measured disturbance level, increased by (U_{lab} - U_{CISPR}), exceeds the disturbance limit;
- non-compliance is deemed to occur if any measured disturbance level, increased by (U_{lab} - U_{CISPR}), exceeds the disturbance limit.

3 GENERAL INFORMATION

3.1 GENERAL DESCRIPTION OF EUT

<table>
<tr><td>Equipment</td><td>Mini PCI Radio Module, 2x2 IEEE 802.11 b/g/n ,2.4 GHz</td></tr>
<tr><td>Brand Name</td><td>Rajant Corporation</td></tr>
<tr><td>Model Name</td><td>RJ-1301</td></tr>
<tr><td>OEM Brand/Model Name</td><td>VIZMONET/ RJ-1301</td></tr>
<tr><td>Model Difference</td><td>N/A</td></tr>
<tr><td>Product Description</td><td>
<table>
<tr><td>Operation Frequency</td><td>2412~2462 MHz</td></tr>
<tr><td>Modulation Type</td><td>IEEE 802.11b: DSSS (CCK, DQPSK, DBPSK)
IEEE 802.11g: OFDM,(64 QAM, 16 QAM, QPSK, BPSK)
IEEE 802.11n: OFDM(64 QAM, 16 QAM, QPSK, BPSK)</td></tr>
<tr><td>Bit Rate of Transmitter</td><td>IEEE 802.11b: 11/5.5/2/1 Mbps
IEEE 802.11g: 54/48/36/24/18/12/9/6 Mbps
IEEE 802.11n: up to 150 Mbps</td></tr>
<tr><td>Number Of Channel</td><td>Please refer to the Note 2.</td></tr>
<tr><td>Antenna Designation</td><td>Please refer to the Note 3.</td></tr>
<tr><td>Antenna Gain(Peak)</td><td>Please refer to the Note 3.</td></tr>
<tr><td>Maximum Conducted Output Power</td><td>IEEE 802.11b: 25.10 dBm (0.3236 W)
IEEE 802.11g: 26.62 dBm (0.4592 W)
IEEE 802.11n (20 MHz): 26.72 dBm (0.4699 W)-1TX
IEEE 802.11n (40 MHz): 25.52 dBm (0.3565 W)-1TX
IEEE 802.11n (20 MHz): 27.89 dBm (0.6147 W)-2TX
IEEE 802.11n (40 MHz): 27.12 dBm (0.5157 W)-2TX</td></tr>
</table>
More details of EUT technical specification, please refer to the User's Manual.
</td></tr>
<tr><td>Power Source</td><td>Supplied from PC.</td></tr>
<tr><td>Power Rating</td><td>Please refer to the User's Manual</td></tr>
<tr><td>Connecting I/O Port(s)</td><td>Please refer to the User's Manual</td></tr>
</table>

NOTE:

1. For a more detailed features description, please refer to the manufacturer's specifications or the User's Manual.
2. Channel List:

IEEE 802.11b/g/n (20MHz)					
Channel	Frequency (MHz)	Channel	Frequency (MHz)	Channel	Frequency (MHz)
01	2412	05	2432	09	2452
02	2417	06	2437	10	2457
03	2422	07	2442	11	2462
04	2427	08	2447		

IEEE 802.11n (40MHz)					
Channel	Frequency (MHz)	Channel	Frequency (MHz)	Channel	Frequency (MHz)
03	2422	06	2437	09	2452
04	2427	07	2442		
05	2432	08	2447		

3. Table for Filed Antenna

Ant.	Brand	Model Name	Antenna Type	Connector	Gain (dBi)
1	PCTEL	BOA24005NM-RJT	DIPOLE OMNI-DIRECTIONAL	N-Type	5dBi
2	PCTEL	BOA24005NM-RJT	DIPOLE OMNI-DIRECTIONAL	N-Type	5dBi

3.2 DESCRIPTION OF TEST MODES

To investigate the maximum EMI emission characteristics generates from EUT, the test system was pre-scanning tested base on the consideration of following EUT operation mode or test configuration mode which possible have effect on EMI emission level. Each of these EUT operation mode(s) or test configuration mode(s) mentioned above was evaluated respectively.

Test Items	IEEE	Mode	Data Rate	Channel	Note
Conducted Emission	802.11b	DSSS	1 Mbps	06	
Antenna conducted Spurious Emission	802.11b	DSSS	1 Mbps	01/06/11	
	802.11g	OFDM	6 Mbps	01/06/11	
	802.11n (20 MHz)	BPSK	MCS0	01/06/11	
	802.11n (40 MHz)	BPSK	MCS0	03/06/09	
6 dB Bandwidth	802.11b	DSSS	1 Mbps	01/06/11	
	802.11g	OFDM	6 Mbps	01/06/11	
	802.11n (20 MHz)	BPSK	MCS0	01/06/11	
	802.11n (40 MHz)	BPSK	MCS0	03/06/09	
Maximum Peak Conducted Output Power	802.11b	DSSS	1 Mbps	01/06/11	
	802.11g	OFDM	6 Mbps	01/06/11	
	802.11n (20 MHz)	BPSK	MCS0	01/06/11	
	802.11n (40 MHz)	BPSK	MCS0	03/06/09	
Radiated Spurious Emission (30 MHz to 1 GHz)	802.11n (20 MHz)	OFDM	MCS0	06	
Radiated Spurious Emission (above 1 GHz)	802.11b	DSSS	1 Mbps	01/06/11	
	802.11g	OFDM	6 Mbps	01/06/11	
	802.11n (20 MHz)	BPSK	MCS0	01/06/11	
	802.11n (40 MHz)	BPSK	MCS0	03/06/09	
Restricted Bands	802.11b	DSSS	1 Mbps	01/11	
	802.11g	OFDM	6 Mbps	01/11	
	802.11n (20 MHz)	BPSK	MCS0	01/11	
	802.11n (40 MHz)	BPSK	MCS0	03/09	
Antenna Requirement	---		---	---	
RF Exposure Compliance	---		---	---	

NOTE: The measurements are performed at the highest, middle, lowest available channels.

3.3 TABLE OF PARAMETERS OF TEXT SOFTWARE SETTING

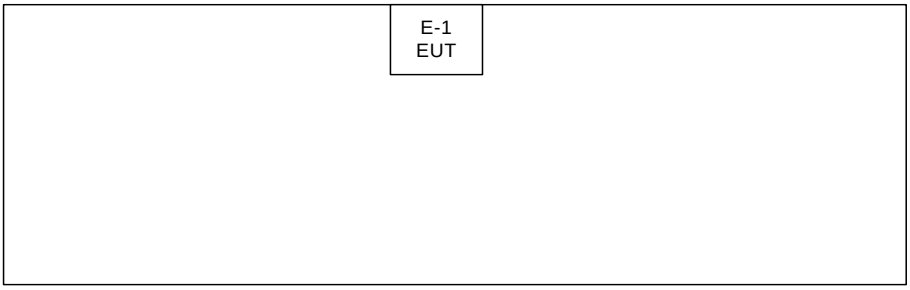
During testing channel & power controlling software provided by the customer was used to control the operating channel as well as the output power level. The RF output power selection is for the setting of RF output power expected by the customer and is going to be fixed on the firmware of the final end product.

IEEE	802.11b			802.11g		
Test software Version	ART v0.9 b34			ART v0.9 b34		
Frequency	2412 MHz	2437 MHz	2462 MHz	2412 MHz	2437 MHz	2462 MHz
Parameter	12	14	11.5	11	14	14

IEEE	802.11n (20 MHz)-1TX			802.11n (40 MHz) -1TX		
Test software Version	ART v0.9 b34			ART v0.9 b34		
Frequency	2412 MHz	2437 MHz	2462 MHz	2422 MHz	2437 MHz	2452 MHz
Parameter	8	14	13	7	11	12

IEEE	802.11n (20 MHz) -2TX			802.11n (40 MHz) -2TX		
Test software Version	ART v0.9 b34			ART v0.9 b34		
Frequency	2412 MHz	2437 MHz	2462 MHz	2422 MHz	2437 MHz	2452 MHz
Parameter	8	11	11	6	11	11

3.4 BLOCK DIAGRAM SHOWING THE CONFIGURATION OF SYSTEM TESTED



3.5 DESCRIPTION OF SUPPORT UNITS

The EUT has been tested as an independent unit together with other necessary accessories or support units. The following support units or accessories were used to form a representative test configuration during the tests.

Item	Equipment	Mfr/Brand	Model/Type No.	FCC ID/IC	Series No.	Note
E-1	Mini PCI Radio Module, 2x2 IEEE 802.11 b/g/n ,2.4 GHz	Rajant Corporation	RJ-1301	FCC ID: VJA-RJ1301 IC: 7382A-RJ1301	N/A	EUT

Item	Shielded Type	Ferrite Core	Length	Note
N/A	-	-	-	-

NOTE: The support equipment was authorized by Declaration of Conformity (DOC).

4 CONDUCTED EMISSION

4.1 LIMIT

FREQUENCY (MHz)	Class A (dBuV)		Class B (dBuV)	
	Quasi-peak	Average	Quasi-peak	Average
0.15 - 0.5	79.00	66.00	66 - 56 *	56 - 46 *
0.50 - 5.0	73.00	60.00	56.00	46.00
5.0 - 30.0	73.00	60.00	60.00	50.00

NOTE:

1. The tighter limit applies at the band edges.
2. The limit of " * " marked band means the limitation decreases linearly with the logarithm of the frequency in the range.
3. The test result calculated as following:
   Measurement Value = Reading Level + Correct Factor
   Correct Factor = Insertion Loss + Cable Loss + Attenuator Factor(if use)
   Margin Level = Measurement Value – Limit Value

4.2 MEASUREMENT INSTRUMENTS LIST

Item	Kind of Equipment	Manufacturer	Type No.	Serial No.	Calibrated until
1	LISN	Schwarzbeck	NSLK 8127	8127685	Feb. 23, 2015
2	Test Cable	TIMES	CFD300-NL	C01	Jun. 16, 2014
3	EMI Test Receiver	Agilent	N9038A	MY51210215	Mar. 21, 2014
4	Measurement Software	EZ	EZ_EMC (Version NB-02A)	N/A	N/A

NOTE: **N/A**: denotes No Model Name, No Serial No. or No Calibration specified.

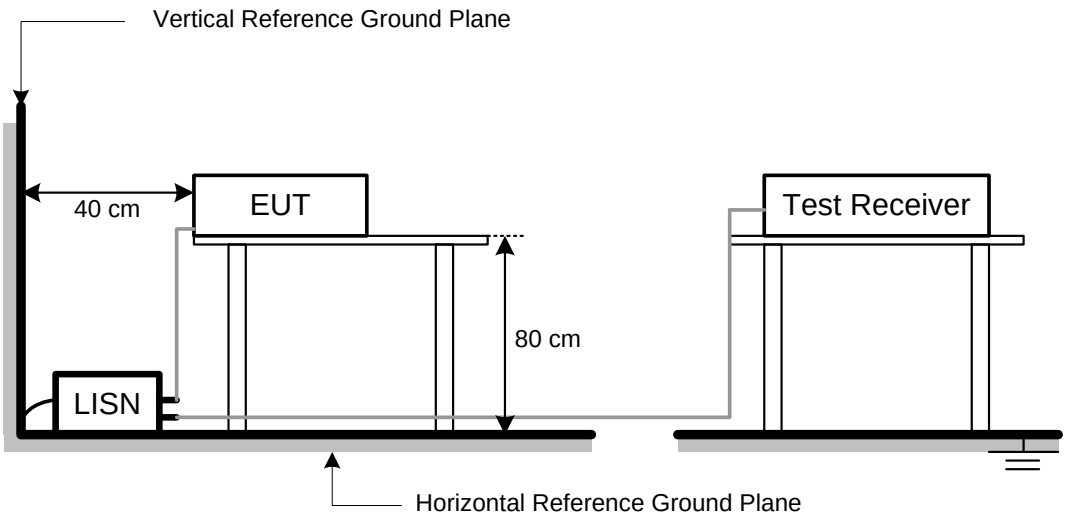
4.3 TEST PROCEDURES

a. The EUT was placed 0.8 meters from the horizontal ground plane with EUT being connected to the power mains through a line impedance stabilization network (LISN). All other support equipments powered from additional LISN(s). The LISN provide 50 Ohm/ 50uH of coupling impedance for the measuring instrument.
b. Interconnecting cables that hang closer than 40 cm to the ground plane shall be folded back and forth in the center forming a bundle 30 to 40 cm long.
c. I/O cables that are not connected to a peripheral shall be bundled in the center. The end of the cable may be terminated, if required, using the correct terminating impedance. The overall length shall not exceed 1 m.
d. LISN at least 80 cm from nearest part of EUT chassis.
e. For the actual test configuration, please refer to the related Item –EUT Test Photos.

NOTE:

a. Reading in which marked as Peak, QP or AVG means measurements by using are Quasi-Peak or Average Mode with Detector BW=9 kHz (6 dB Bandwidth).
b. All readings are Peak Mode value unless otherwise stated QP or AVG in column of Note. If the Peak or QP Mode Measured value compliance with the QP Limits and lower than AVG Limits, the EUT shall be deemed to meet both QP & AVG Limits and then only Peak or QP Mode was measured, but AVG Mode didn‘t perform.

4.4 TEST SETUP LAYOUT



4.5 DEVIATION FROM TEST STANDARD

No deviation

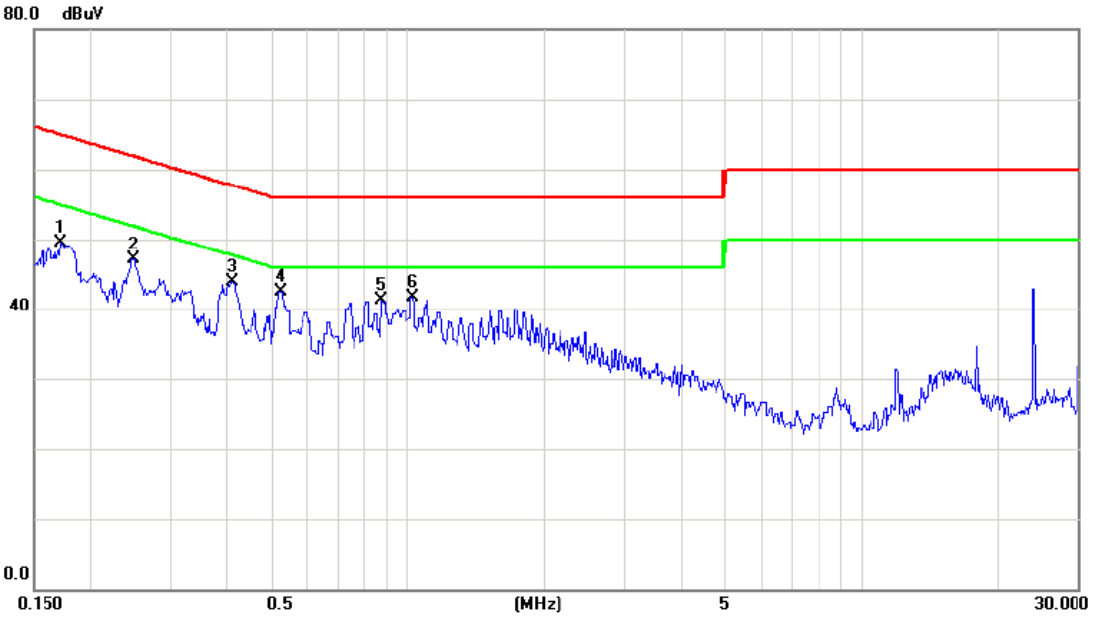
4.6 EUT OPERATING CONDITIONS

The EUT used during radiated and/or conducted emission measurement was designed to exercise in a manner similar to a typical use.

4.7 TEST RESULTS

EUT	Mini PCI Radio Module, 2x2 IEEE 802.11 b/g/n ,2.4 GHz	Model Name	RJ-1301
Temperature	24°C	Relative Humidity	46%
Test Voltage	AC 120V/60Hz		
Test Mode	IEEE 802.11b/2437 MHz		

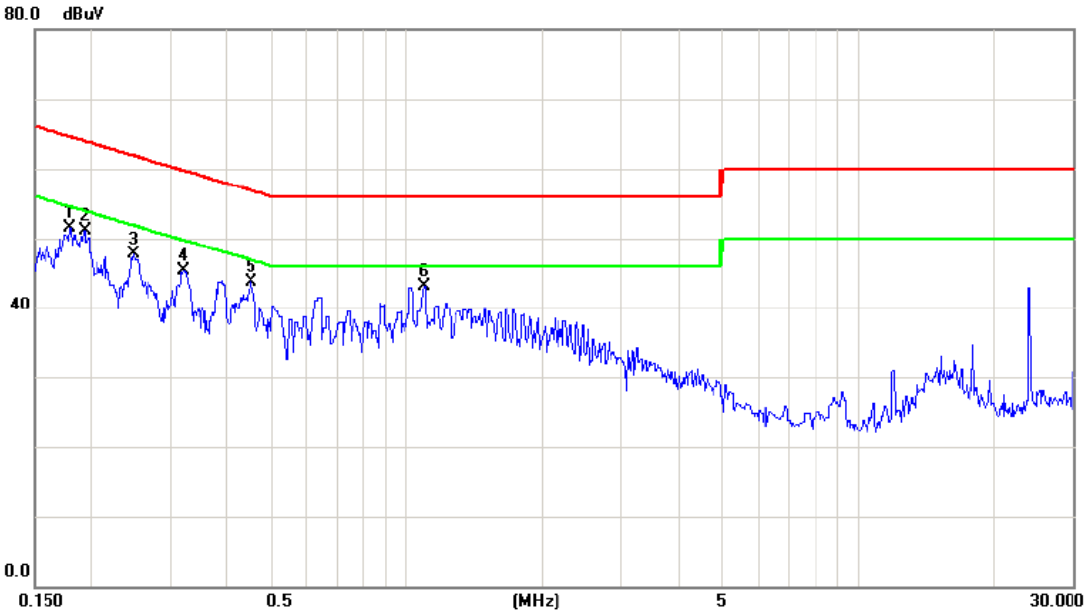
Phase: Line



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBuV	dB	dBuV	dBuV	dB	Detector	Comment
1		0.1720	40.45	9.04	49.49	64.86	-15.37	peak	
2		0.2477	38.47	8.71	47.18	61.83	-14.65	peak	
3		0.4088	36.11	7.83	43.94	57.67	-13.73	peak	
4	*	0.5270	33.97	8.58	42.55	56.00	-13.45	peak	
5		0.8780	31.86	9.40	41.26	56.00	-14.74	peak	
6		1.0220	31.93	9.68	41.61	56.00	-14.39	peak	

EUT	Mini PCI Radio Module, 2x2 IEEE 802.11 b/g/n ,2.4 GHz	Model Name	RJ-1301
Temperature	24°C	Relative Humidity	46%
Test Voltage	AC 120V/60Hz		
Test Mode	IEEE 802.11b/2437 MHz		

Phase: Neutral



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBuV	dB	dBuV	dBuV	dB	Detector	Comment
1		0.1800	41.81	9.78	51.59	64.49	-12.90	peak	
2	*	0.1923	40.97	10.22	51.19	63.94	-12.75	peak	
3		0.2477	38.39	9.23	47.62	61.83	-14.21	peak	
4		0.3200	37.54	7.82	45.36	59.71	-14.35	peak	
5		0.4508	35.65	8.15	43.80	56.86	-13.06	peak	
6		1.0937	33.37	9.66	43.03	56.00	-12.97	peak	

5 ANTENNA CONDUCTED SPURIOUS EMISSION

5.1 LIMIT

Test Item	Frequency Range (MHz)	Limit
Antenna conducted Spurious Emission	30-25000	20 dB less than the peak value of fundamental frequency

5.2 MEASUREMENT INSTRUMENTS LIST

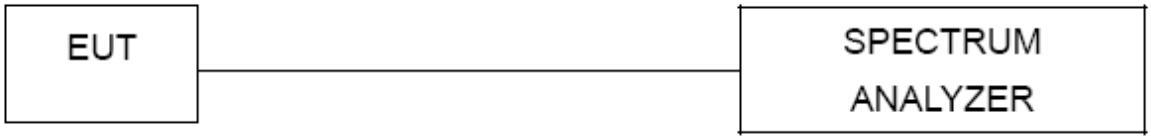
Item	Kind of Equipment	Manufacturer	Type No.	Serial No.	Calibrated until
1	Spectrum Analyzer	R&S	FSP-30	100854	Sep. 08, 2014

NOTE: **N/A**: denotes No Model Name, No Serial No. or No Calibration specified.

5.3 TEST PROCEDURES

a. The EUT was directly connected to the spectrum analyzer and antenna output port as show in the block diagram below,
b. Spectrum Setting: RBW= 100KHz, VBW=100KHz, Sweep time = Auto.

5.4 TEST SETUP LAYOUT



5.5 DEVIATION FROM TEST STANDARD

No deviation

5.6 EUT OPERATING CONDITIONS

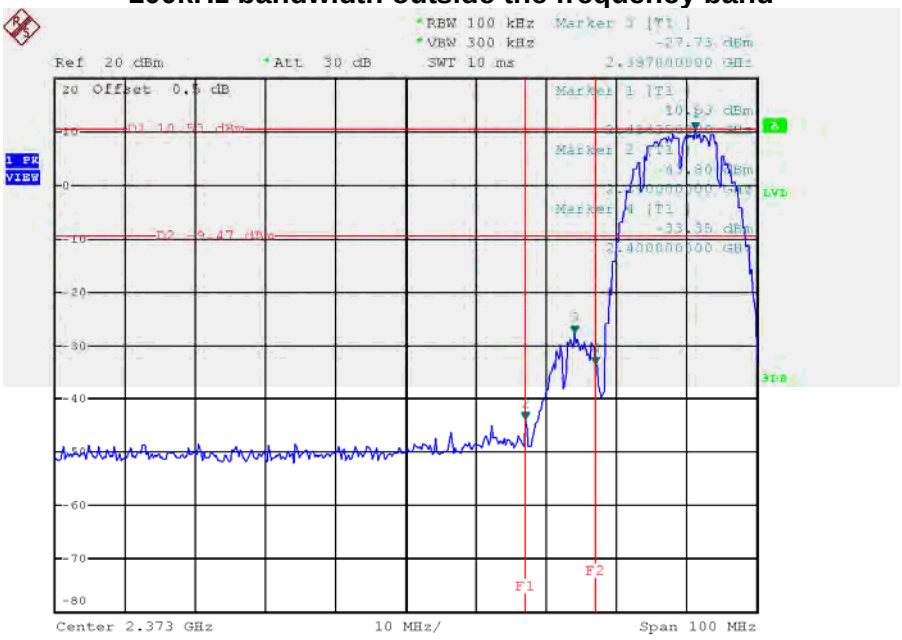
The EUT tested system was configured as the statements of 4.6 Unless otherwise a special operating condition is specified in the follows during the testing.

5.7 TEST RESULTS

EUT	Mini PCI Radio Module, 2x2 IEEE 802.11 b/g/n ,2.4 GHz	Model Name	RJ-1301
Temperature	26°C	Relative Humidity	46%
Test Voltage	AC 120V/60Hz		
Test Mode	IEEE 802.11b		

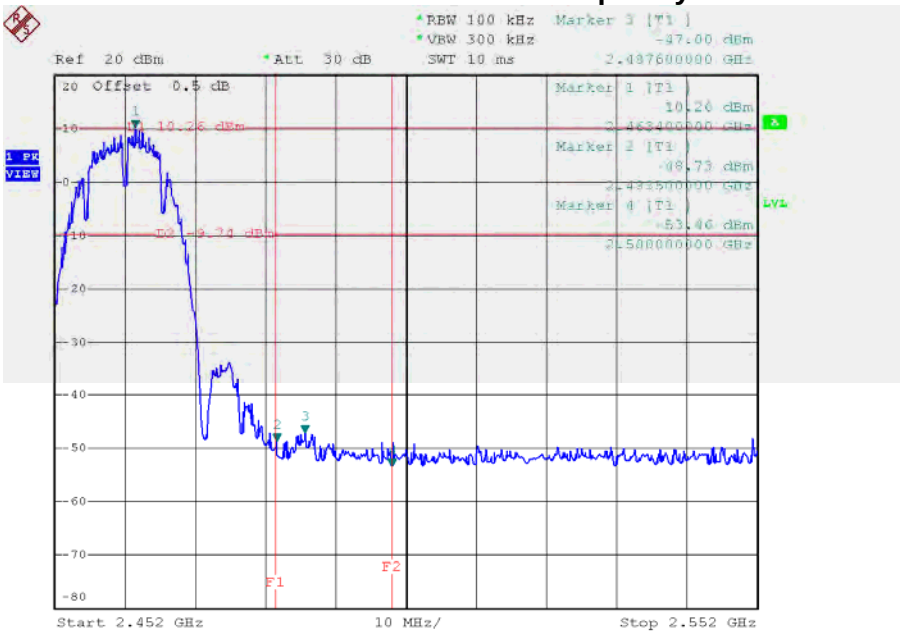
Channel of Worst Data			
The max. radio frequency power in any 100 kHz bandwidth outside the frequency band		The max. radio frequency power in any 100 kHz bandwidth within the frequency band.	
FREQUENCY(MHz)	POWER(dBm)	FREQUENCY(MHz)	POWER(dBm)
2397.00	-27.73	2487.60	-47.00
Result			
In any 100kHz bandwidth outside the frequency band, the radio frequency power is at least 20dB below that in the 100kHz bandwidth within the band that contains the highest lever of the desired power.			

IEEE 802.11b/The max. radio frequency power in any 100kHz bandwidth outside the frequency band



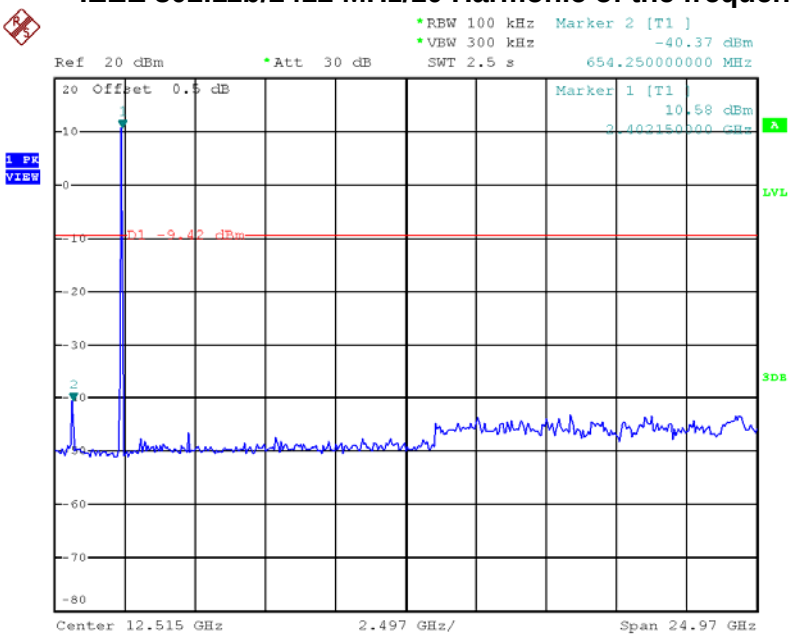
Date: 14.FEB.2014 17:30:27

IEEE 802.11b/The max. radio frequency power in any 100 kHz bandwidth within the frequency band



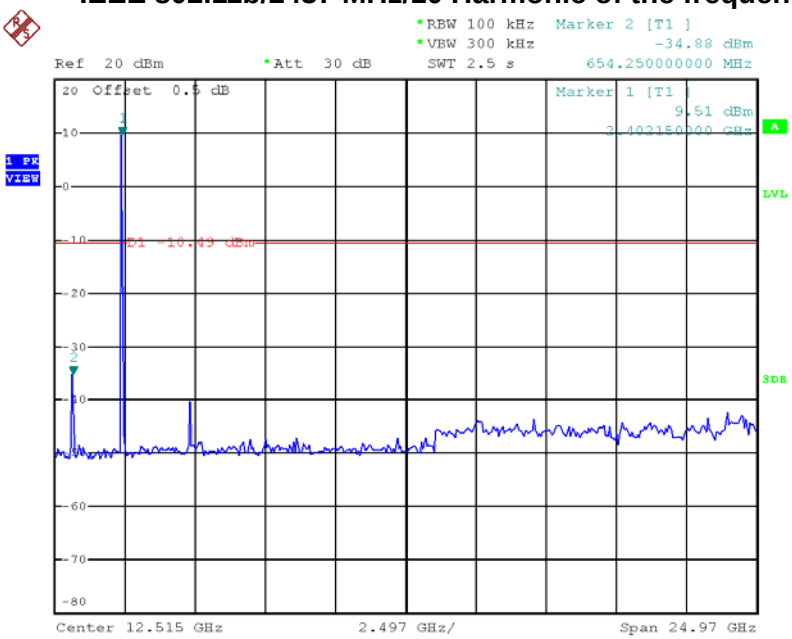
Date: 14.FEB.2014 21:06:48

IEEE 802.11b/2412 MHz/10 Harmonic of the frequency



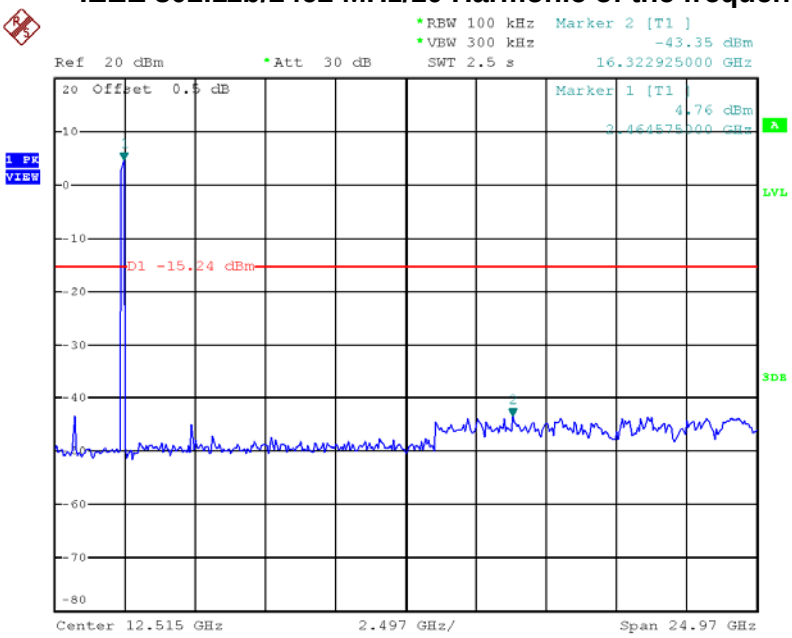
Date: 14.FEB.2014 17:29:58

IEEE 802.11b/2437 MHz/10 Harmonic of the frequency



Date: 14.FEB.2014 17:40:21

IEEE 802.11b/2462 MHz/10 Harmonic of the frequency

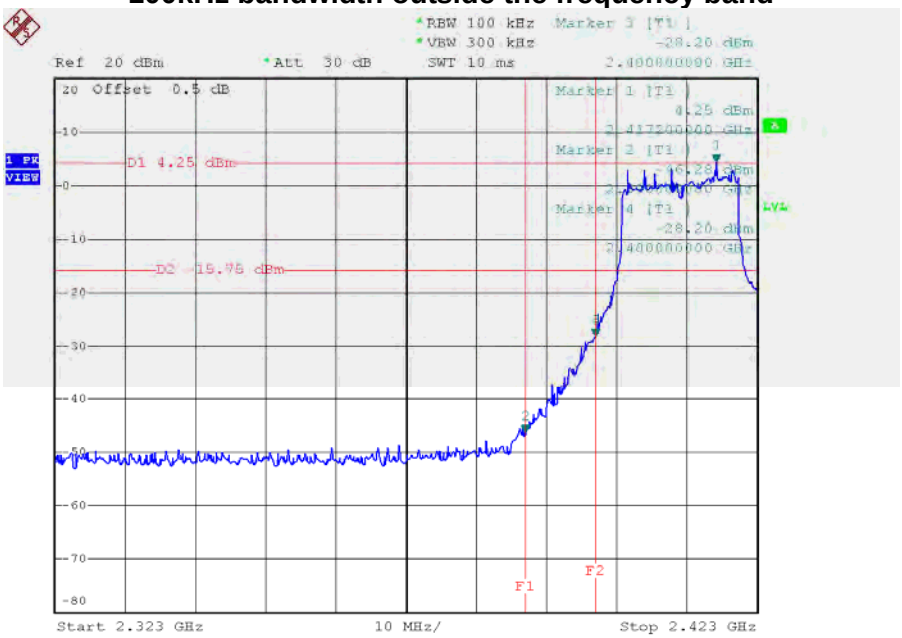


Date: 14.FEB.2014 17:47:15

EUT	Mini PCI Radio Module, 2x2 IEEE 802.11 b/g/n ,2.4 GHz	Model Name	RJ-1301
Temperature	26°C	Relative Humidity	46%
Test Voltage	AC 120V/60Hz		
Test Mode	IEEE 802.11g		

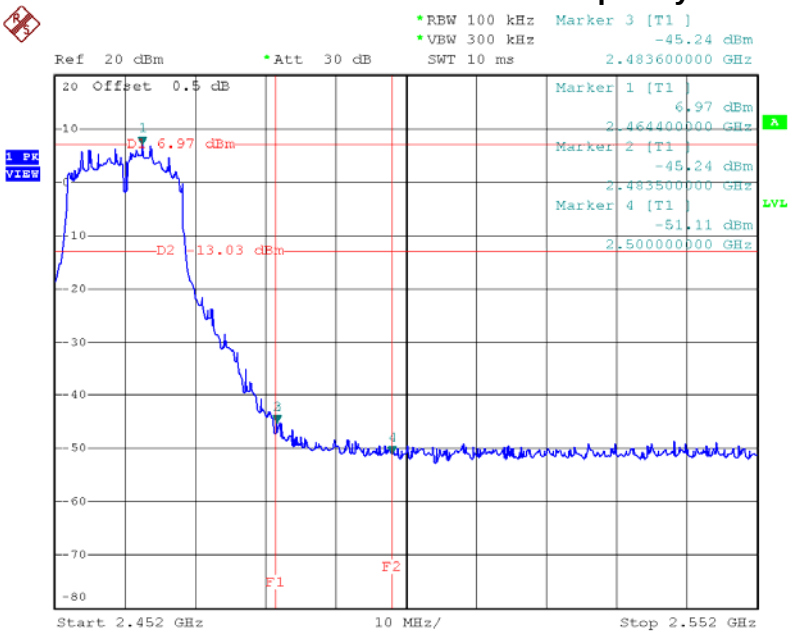
Channel of Worst Data			
The max. radio frequency power in any 100kHz bandwidth outside the frequency band		The max. radio frequency power in any 100 kHz bandwidth within the frequency band.	
FREQUENCY(MHz)	POWER(dBm)	FREQUENCY(MHz)	POWER(dBm)
2400.00	-28.20	2483.60	-45.24
Result			
In any 100kHz bandwidth outside the frequency band, the radio frequency power is at least 20dB below that in the 100kHz bandwidth within the band that contains the highest lever of the desired power.			

IEEE 802.11g/The max. radio frequency power in any 100kHz bandwidth outside the frequency band



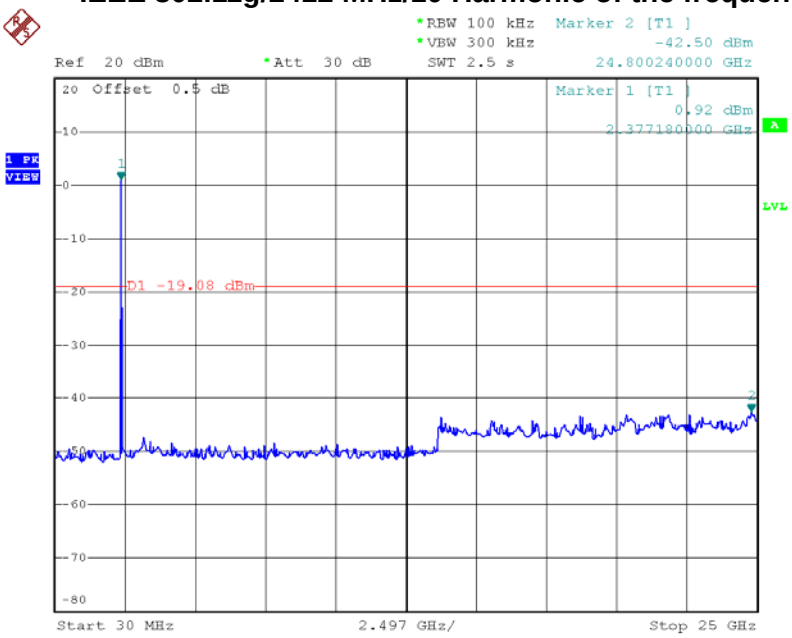
Date: 14.FEB.2014 21:14:56

IEEE 802.11g/The max. radio frequency power in any 100 kHz bandwidth within the frequency band



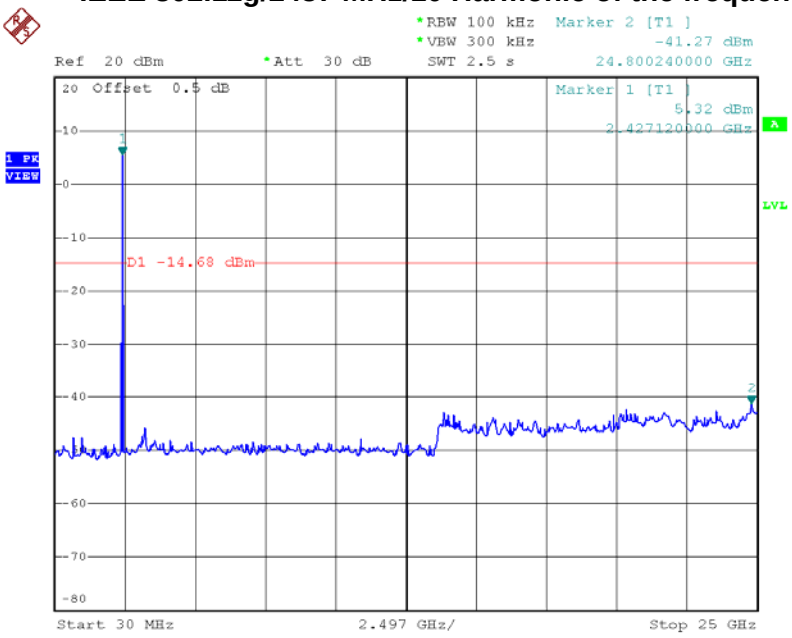
Date: 14.FEB.2014 21:29:39

IEEE 802.11g/2412 MHz/10 Harmonic of the frequency



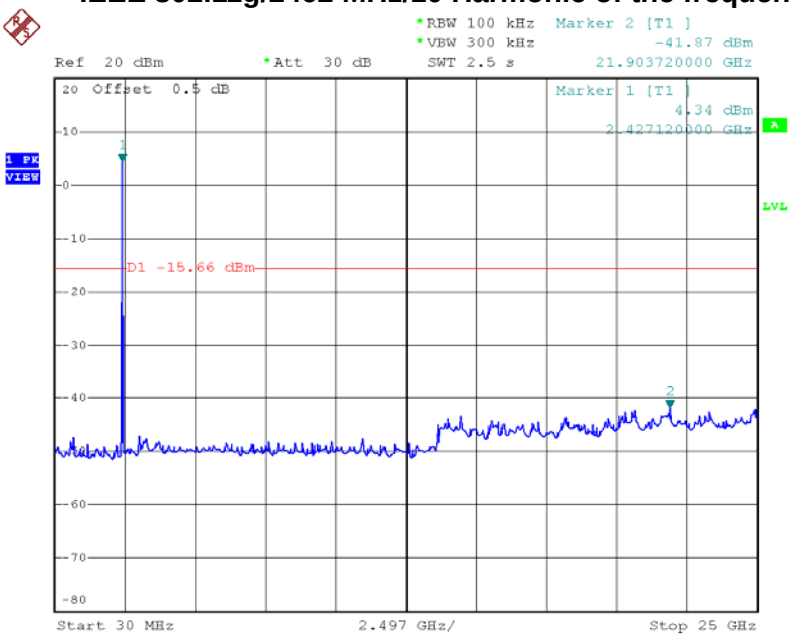
Date: 14.FEB.2014 21:14:31

IEEE 802.11g/2437 MHz/10 Harmonic of the frequency



Date: 14.FEB.2014 21:21:07

IEEE 802.11g/2462 MHz/10 Harmonic of the frequency

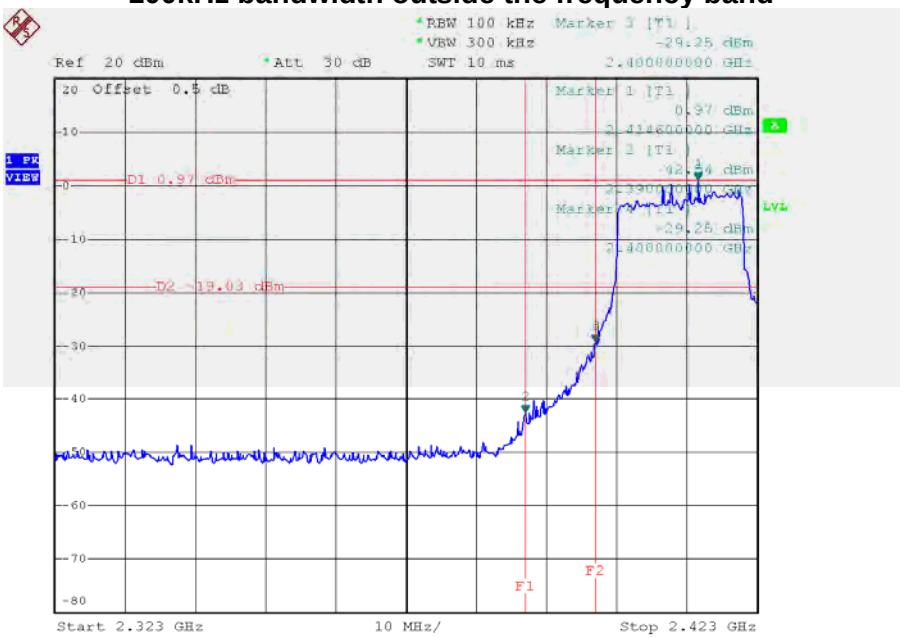


Date: 14.FEB.2014 21:29:13

EUT	Mini PCI Radio Module, 2x2 IEEE 802.11 b/g/n ,2.4 GHz	Model Name	RJ-1301
Temperature	26°C	Relative Humidity	46%
Test Voltage	AC 120V/60Hz		
Test Mode	IEEE 802.11n (20 MHz)-1TX		

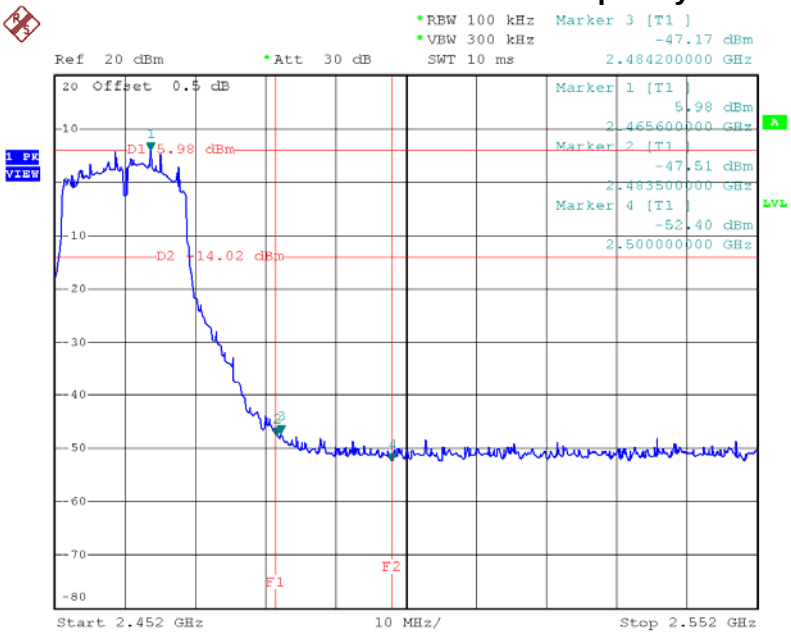
Channel of Worst Data			
The max. radio frequency power in any 100kHz bandwidth outside the frequency band		The max. radio frequency power in any 100 kHz bandwidth within the frequency band.	
FREQUENCY(MHz)	POWER(dBm)	FREQUENCY(MHz)	POWER(dBm)
2400.00	-29.25	2484.20	-47.17
Result			
In any 100kHz bandwidth outside the frequency band, the radio frequency power is at least 20dB below that in the 100kHz bandwidth within the band that contains the highest lever of the desired power.			

IEEE 802.11n (20 MHz)/The max. radio frequency power in any 100kHz bandwidth outside the frequency band



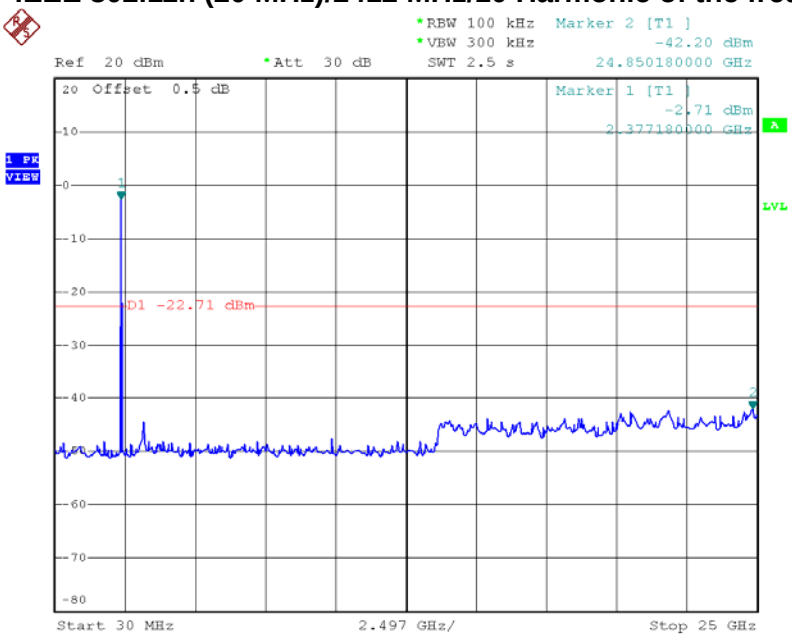
Date: 14.FEB.2014 21:40:48

IEEE 802.11n (20 MHz)/The max. radio frequency power in any 100 kHz bandwidth within the frequency band



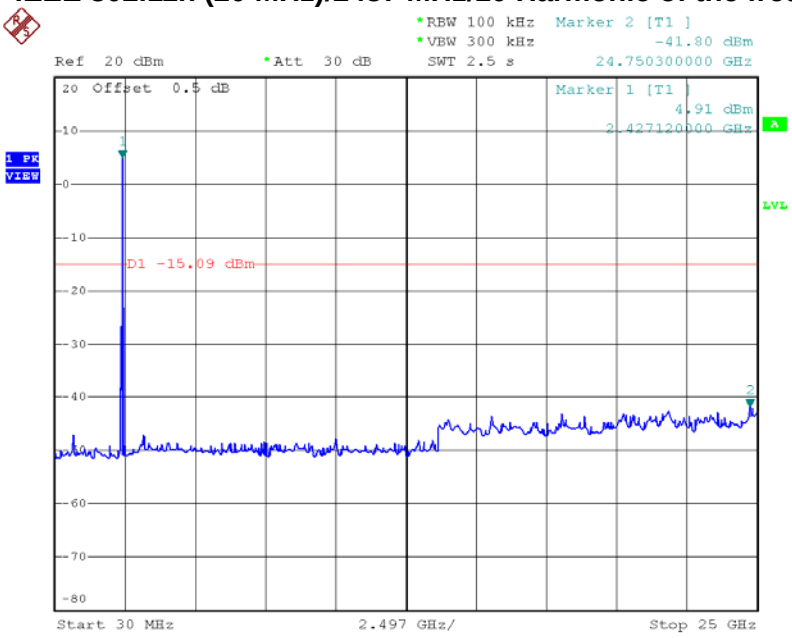
Date: 14.FEB.2014 22:07:29

IEEE 802.11n (20 MHz)/2412 MHz/10 Harmonic of the frequency



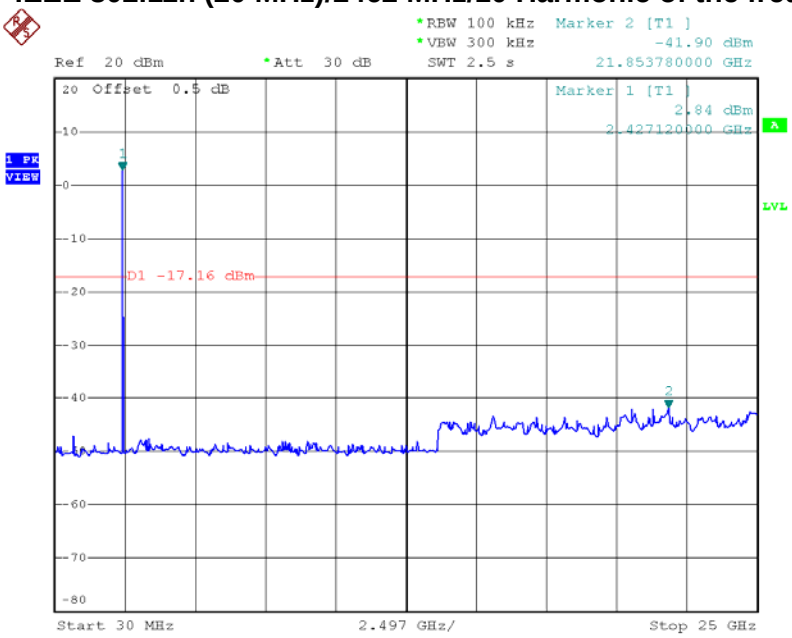
Date: 14.FEB.2014 21:40:23

IEEE 802.11n (20 MHz)/2437 MHz/10 Harmonic of the frequency



Date: 14.FEB.2014 21:51:09

IEEE 802.11n (20 MHz)/2462 MHz/10 Harmonic of the frequency

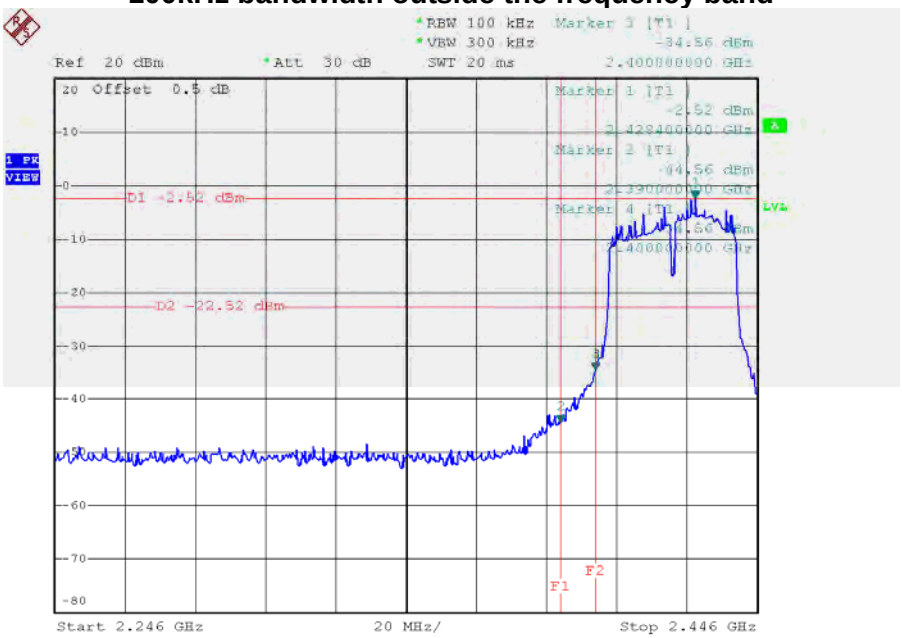


Date: 14.FEB.2014 22:05:57

EUT	Mini PCI Radio Module, 2x2 IEEE 802.11 b/g/n ,2.4 GHz	Model Name	RJ-1301
Temperature	26°C	Relative Humidity	46%
Test Voltage	AC 120V/60Hz		
Test Mode	IEEE 802.11n (40 MHz)-1TX		

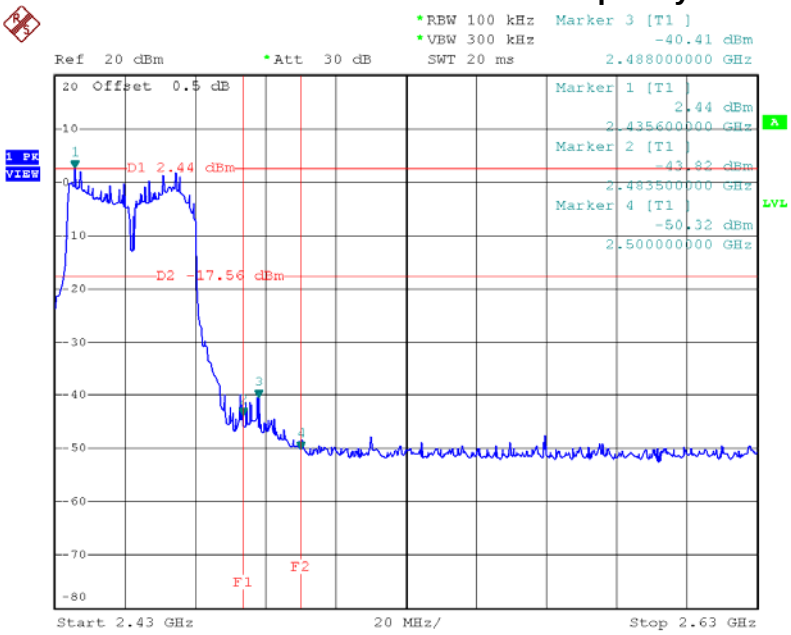
Channel of Worst Data			
The max. radio frequency power in any 100kHz bandwidth outside the frequency band		The max. radio frequency power in any 100 kHz bandwidth within the frequency band.	
FREQUENCY(MHz)	POWER(dBm)	FREQUENCY(MHz)	POWER(dBm)
2400.00	-34.56	2488.00	-40.41
Result			
In any 100kHz bandwidth outside the frequency band, the radio frequency power is at least 20dB below that in the 100kHz bandwidth within the band that contains the highest lever of the desired power.			

IEEE 802.11n (40 MHz)/The max. radio frequency power in any 100kHz bandwidth outside the frequency band



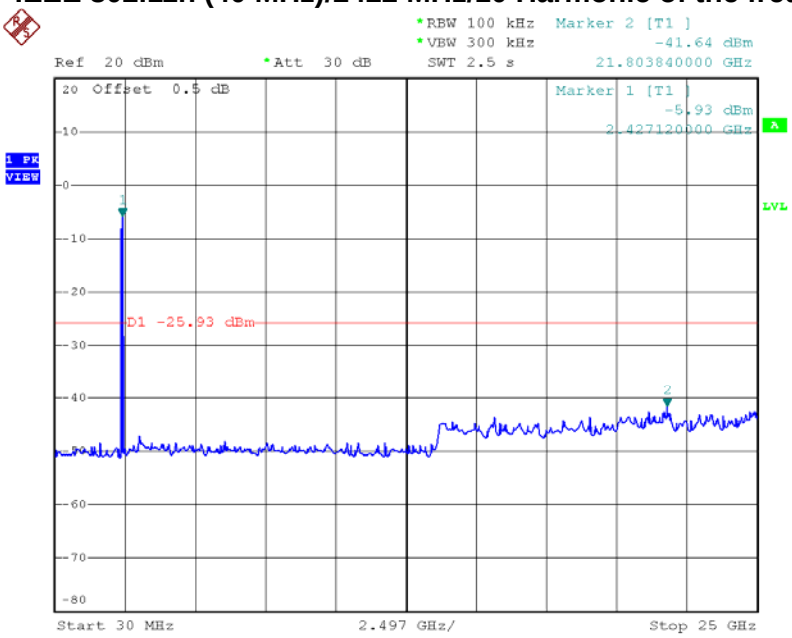
Date: 14.FEB.2014 22:15:52

IEEE 802.11n (40 MHz)/The max. radio frequency power in any 100 kHz bandwidth within the frequency band



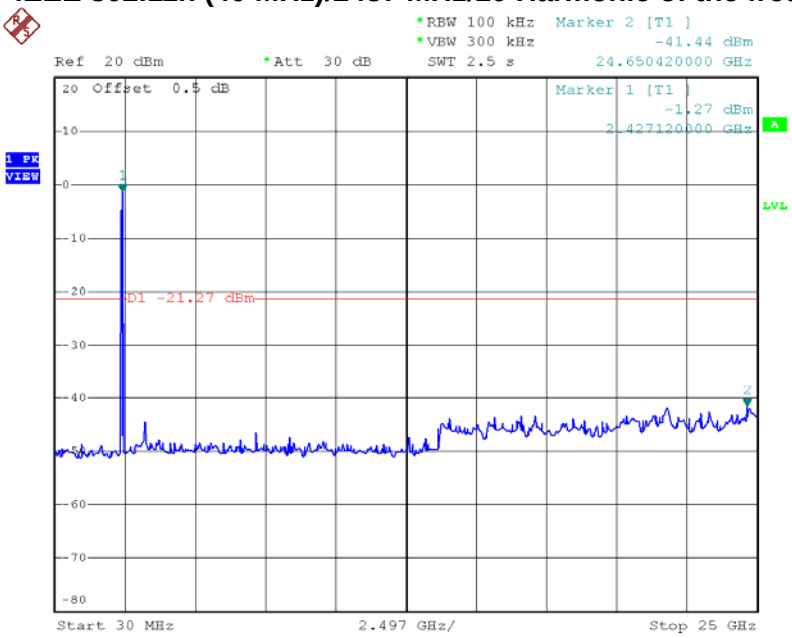
Date: 14.FEB.2014 22:29:53

IEEE 802.11n (40 MHz)/2422 MHz/10 Harmonic of the frequency



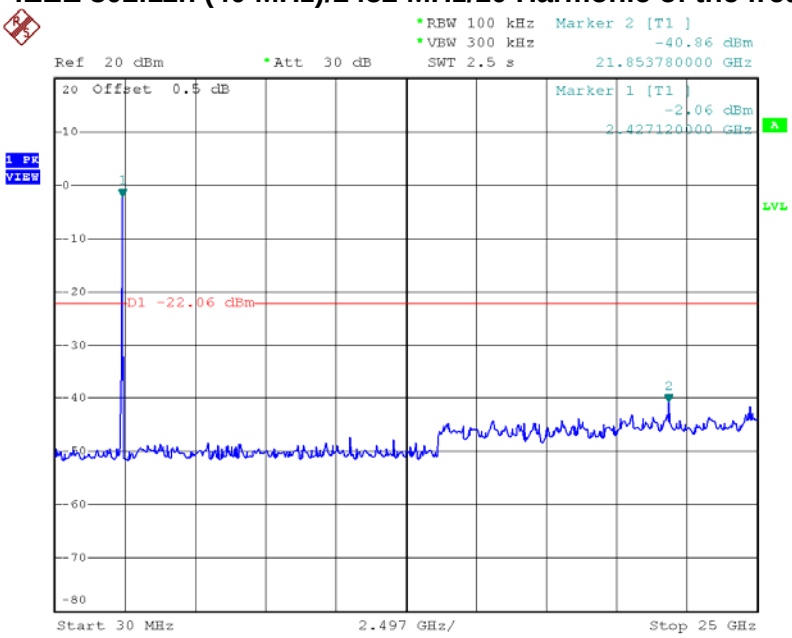
Date: 14.FEB.2014 22:15:03

IEEE 802.11n (40 MHz)/2437 MHz/10 Harmonic of the frequency



Date: 14.FEB.2014 22:21:55

IEEE 802.11n (40 MHz)/2452 MHz/10 Harmonic of the frequency

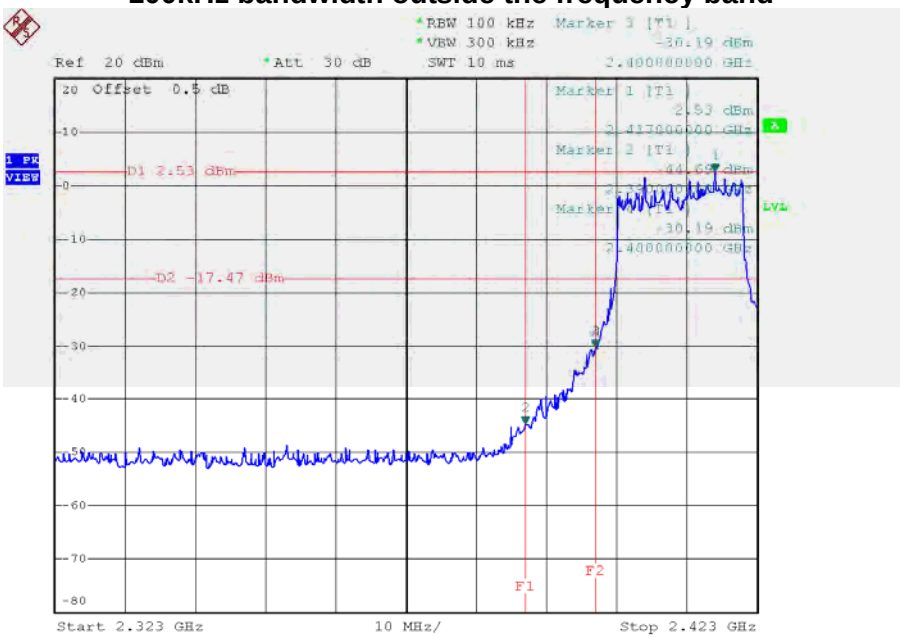


Date: 14.FEB.2014 22:28:47

EUT	Mini PCI Radio Module, 2x2 IEEE 802.11 b/g/n ,2.4 GHz	Model Name	RJ-1301
Temperature	26°C	Relative Humidity	46%
Test Voltage	AC 120V/60Hz		
Test Mode	IEEE 802.11n (20 MHz)-2TX-ANT 1		

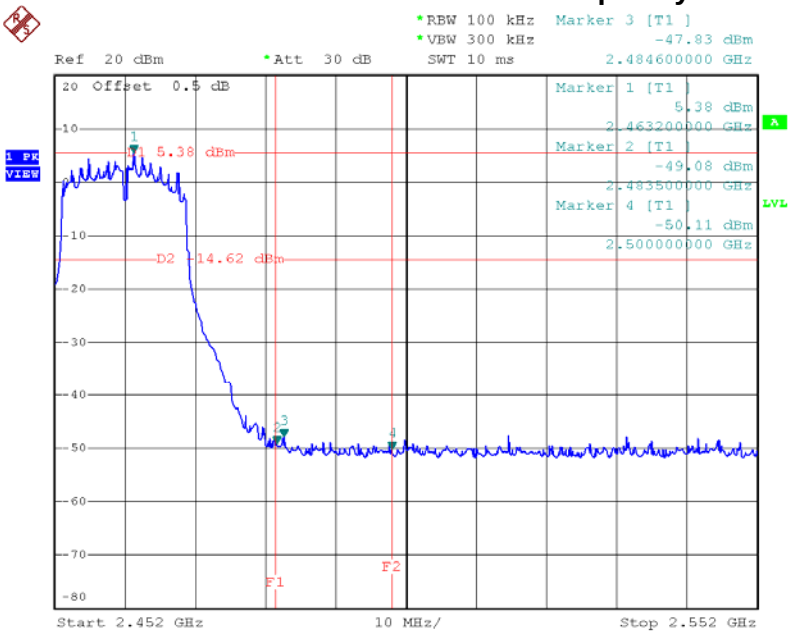
Channel of Worst Data			
The max. radio frequency power in any 100kHz bandwidth outside the frequency band		The max. radio frequency power in any 100 kHz bandwidth within the frequency band.	
FREQUENCY(MHz)	POWER(dBm)	FREQUENCY(MHz)	POWER(dBm)
2400.00	-30.19	2484.60	-47.83
Result			
In any 100kHz bandwidth outside the frequency band, the radio frequency power is at least 20dB below that in the 100kHz bandwidth within the band that contains the highest lever of the desired power.			

IEEE 802.11n (20 MHz)/The max. radio frequency power in any 100kHz bandwidth outside the frequency band



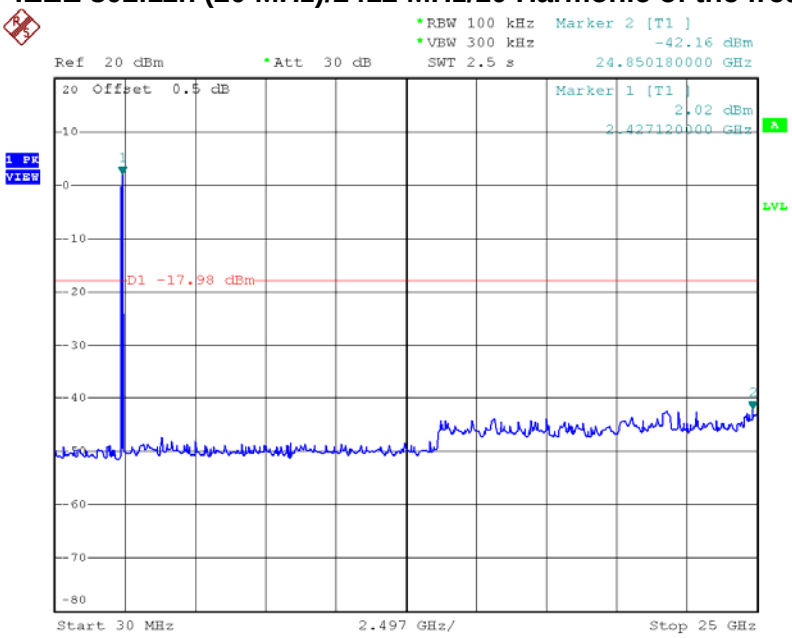
Date: 14.FEB.2014 22:51:43

IEEE 802.11n (20 MHz)/The max. radio frequency power in any 100 kHz bandwidth within the frequency band



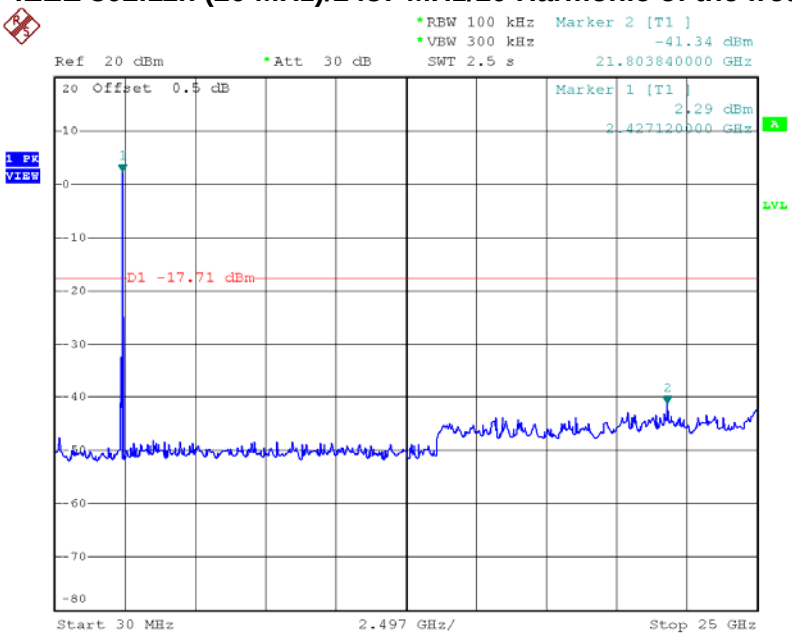
Date: 14.FEB.2014 23:21:58

IEEE 802.11n (20 MHz)/2412 MHz/10 Harmonic of the frequency



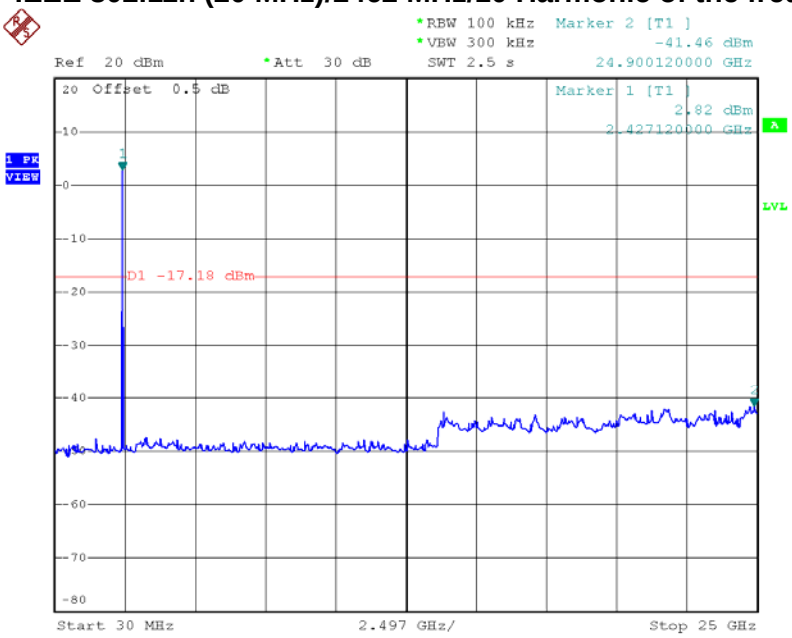
Date: 14.FEB.2014 22:49:25

IEEE 802.11n (20 MHz)/2437 MHz/10 Harmonic of the frequency



Date: 14.FEB.2014 23:12:18

IEEE 802.11n (20 MHz)/2462 MHz/10 Harmonic of the frequency

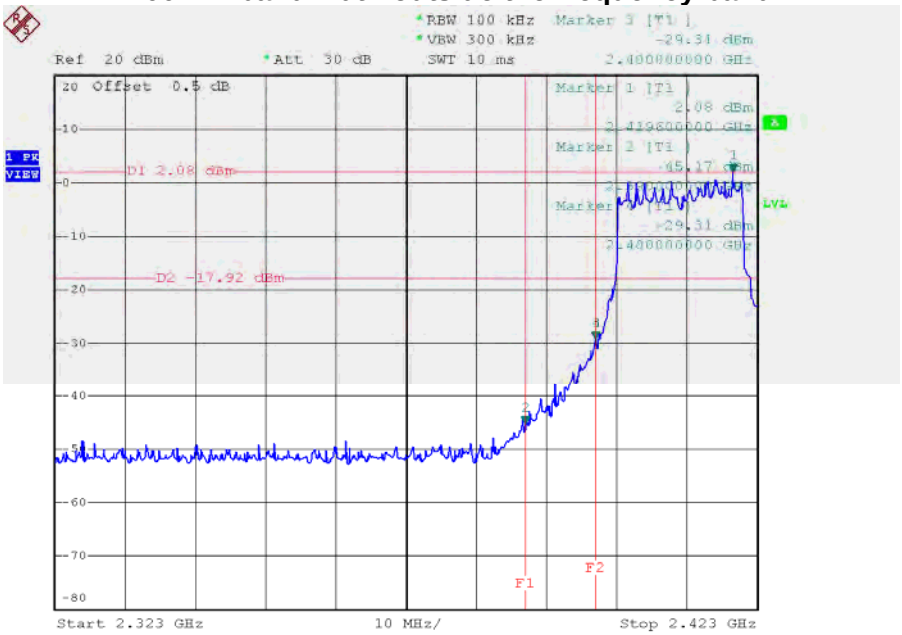


Date: 14.FEB.2014 23:21:13

EUT	Mini PCI Radio Module, 2x2 IEEE 802.11 b/g/n ,2.4 GHz	Model Name	RJ-1301
Temperature	26°C	Relative Humidity	46%
Test Voltage	AC 120V/60Hz		
Test Mode	IEEE 802.11n (20 MHz)-2TX-ANT 2		

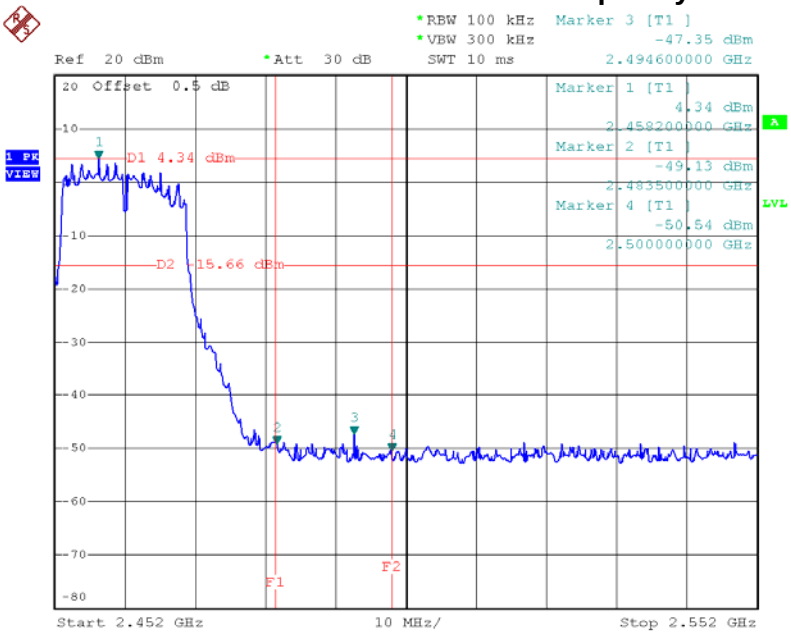
Channel of Worst Data			
The max. radio frequency power in any 100kHz bandwidth outside the frequency band		The max. radio frequency power in any 100 kHz bandwidth within the frequency band.	
FREQUENCY(MHz)	POWER(dBm)	FREQUENCY(MHz)	POWER(dBm)
2400.00	-29.31	2494.60	-47.35
Result			
In any 100kHz bandwidth outside the frequency band, the radio frequency power is at least 20dB below that in the 100kHz bandwidth within the band that contains the highest lever of the desired power.			

IEEE 802.11n (20 MHz)/The max. radio frequency power in any 100kHz bandwidth outside the frequency band



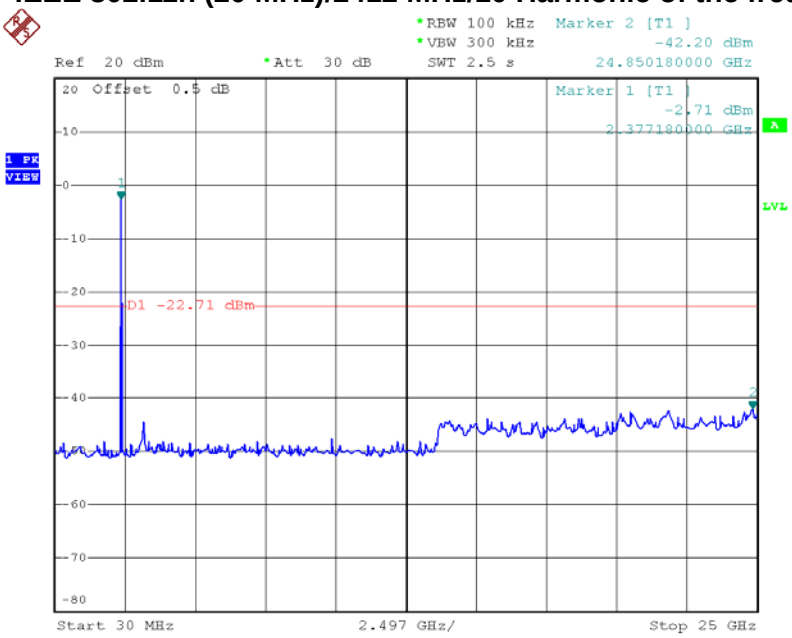
Date: 14.FEB.2014 23:29:09

IEEE 802.11n (20 MHz)/The max. radio frequency power in any 100 kHz bandwidth within the frequency band



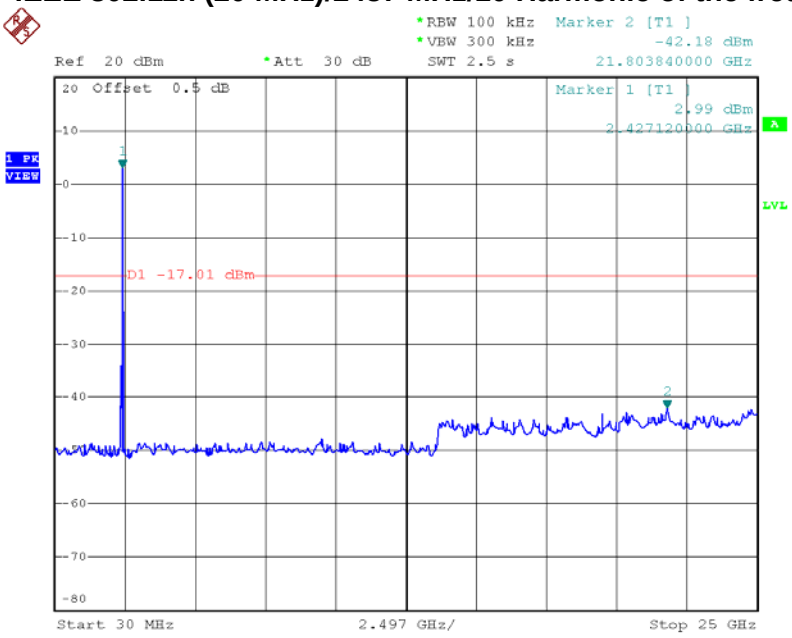
Date: 14.FEB.2014 23:40:03

IEEE 802.11n (20 MHz)/2412 MHz/10 Harmonic of the frequency



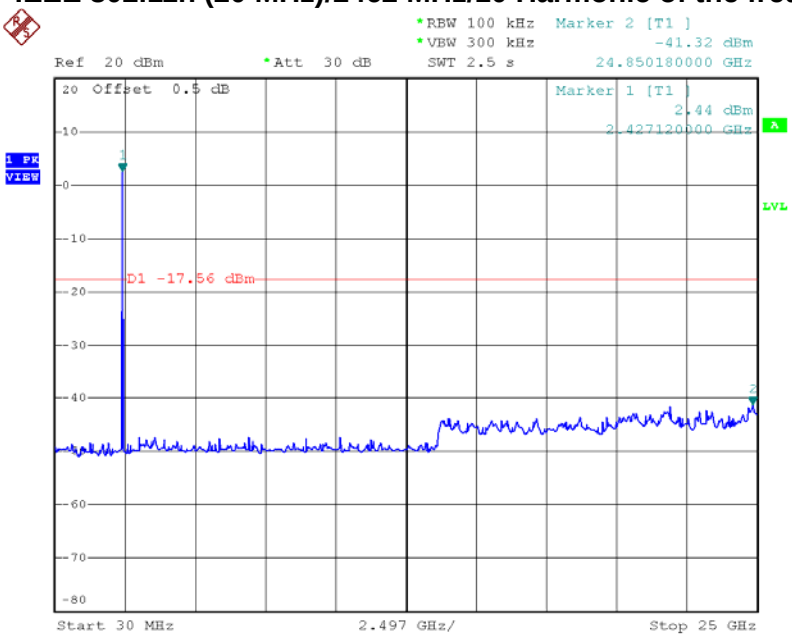
Date: 14.FEB.2014 21:40:23

IEEE 802.11n (20 MHz)/2437 MHz/10 Harmonic of the frequency



Date: 14.FEB.2014 23:34:13

IEEE 802.11n (20 MHz)/2462 MHz/10 Harmonic of the frequency

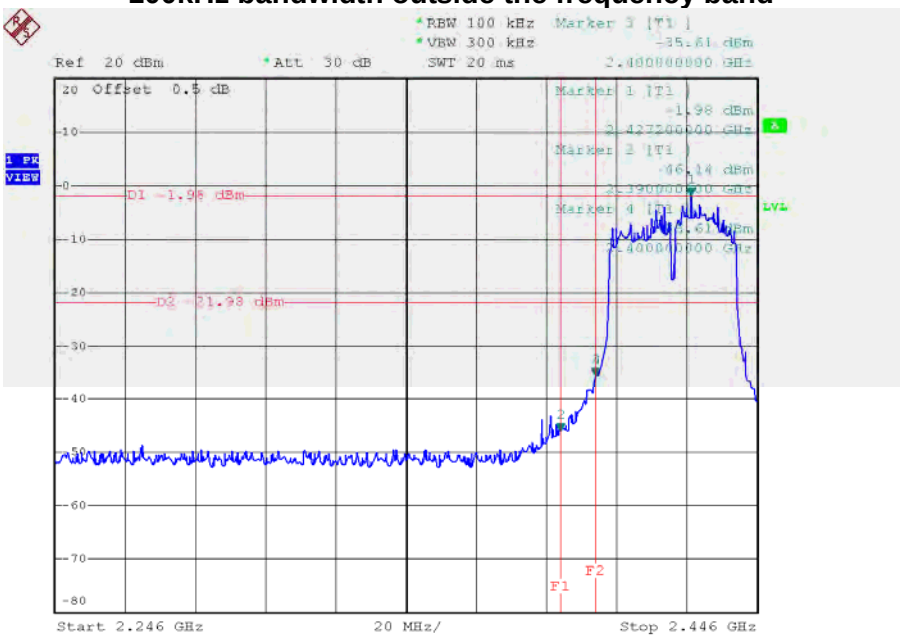


Date: 14.FEB.2014 23:39:14

EUT	Mini PCI Radio Module, 2x2 IEEE 802.11 b/g/n ,2.4 GHz	Model Name	RJ-1301
Temperature	26°C	Relative Humidity	46%
Test Voltage	AC 120V/60Hz		
Test Mode	IEEE 802.11n (40 MHz)-2TX-ANT 1		

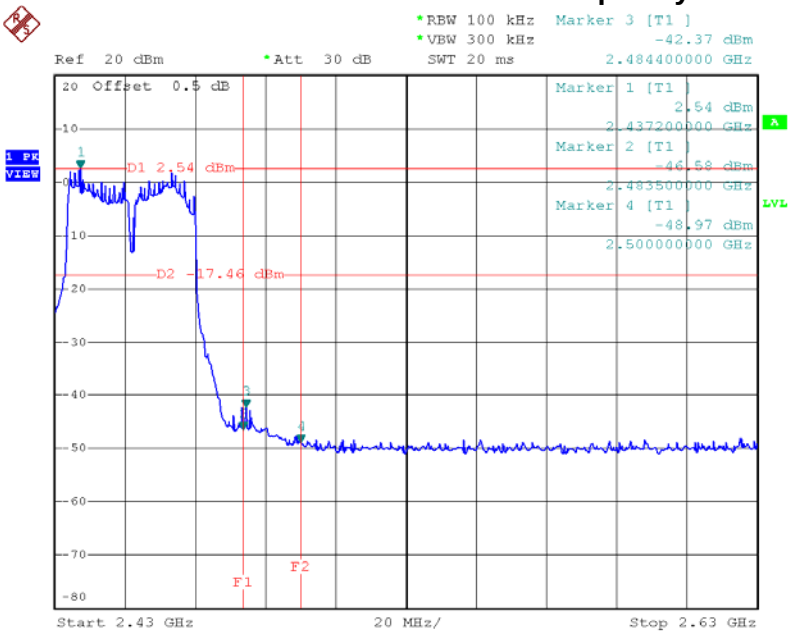
Channel of Worst Data			
The max. radio frequency power in any 100kHz bandwidth outside the frequency band		The max. radio frequency power in any 100 kHz bandwidth within the frequency band.	
FREQUENCY(MHz)	POWER(dBm)	FREQUENCY(MHz)	POWER(dBm)
2400.00	-35.61	2484.40	-42.37
Result			
In any 100kHz bandwidth outside the frequency band, the radio frequency power is at least 20dB below that in the 100kHz bandwidth within the band that contains the highest lever of the desired power.			

IEEE 802.11n (40 MHz)/The max. radio frequency power in any 100kHz bandwidth outside the frequency band



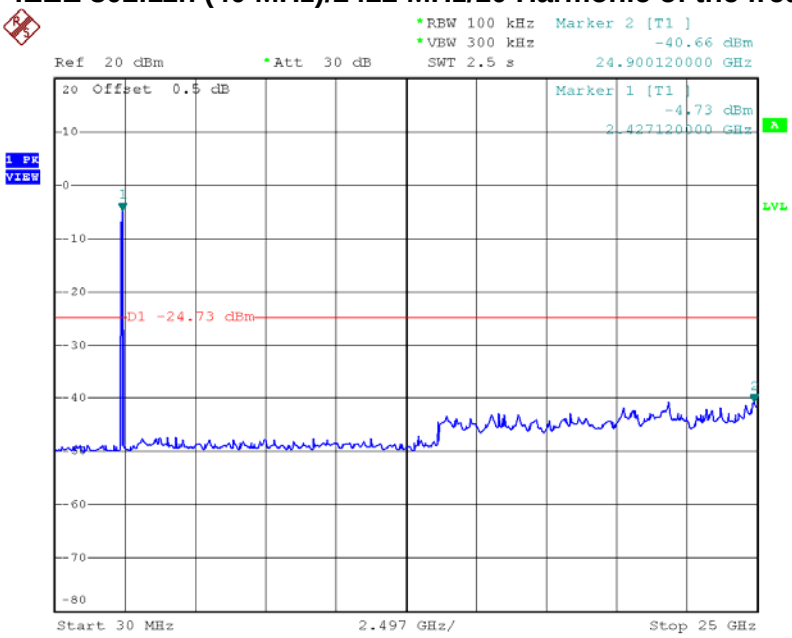
Date: 15.FEB.2014 00:12:29

IEEE 802.11n (40 MHz)/The max. radio frequency power in any 100 kHz bandwidth within the frequency band



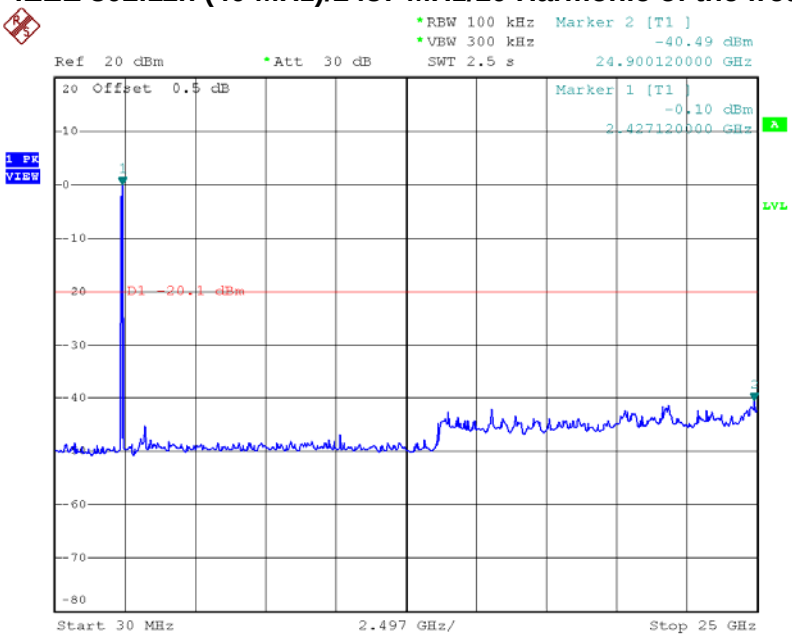
Date: 15.FEB.2014 00:31:29

IEEE 802.11n (40 MHz)/2422 MHz/10 Harmonic of the frequency



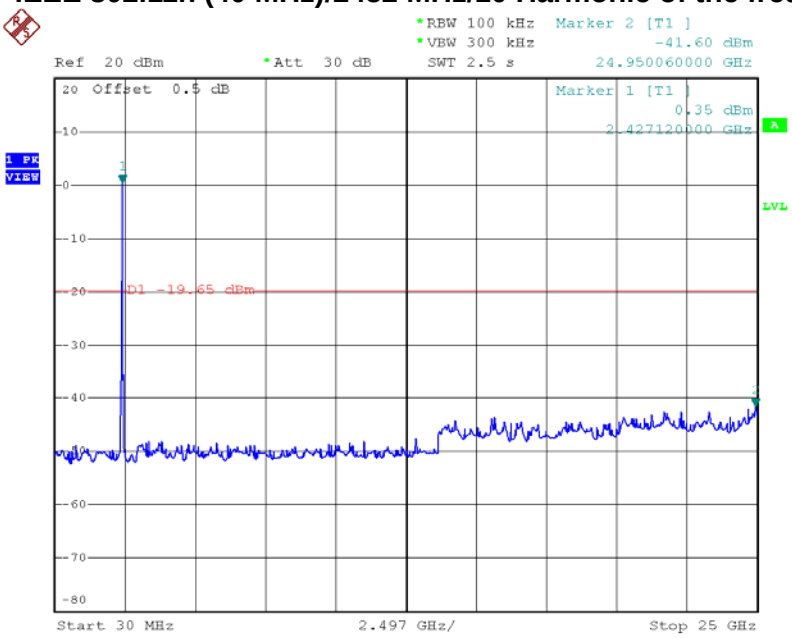
Date: 15.FEB.2014 00:11:30

IEEE 802.11n (40 MHz)/2437 MHz/10 Harmonic of the frequency



Date: 15.FEB.2014 00:21:23

IEEE 802.11n (40 MHz)/2452 MHz/10 Harmonic of the frequency

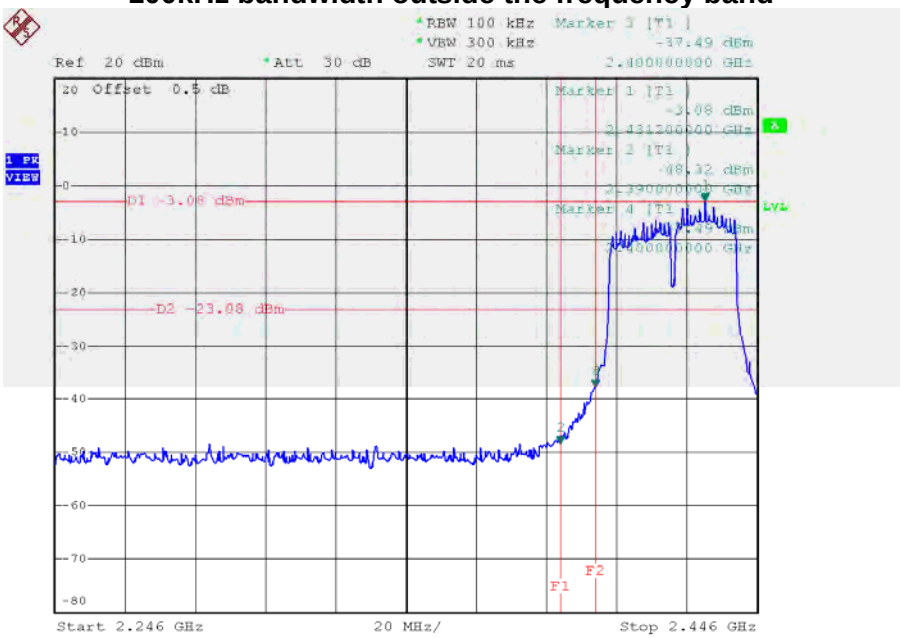


Date: 15.FEB.2014 00:29:48

EUT	Mini PCI Radio Module, 2x2 IEEE 802.11 b/g/n ,2.4 GHz	Model Name	RJ-1301
Temperature	26°C	Relative Humidity	46%
Test Voltage	AC 120V/60Hz		
Test Mode	IEEE 802.11n (40 MHz)-2TX-ANT 2		

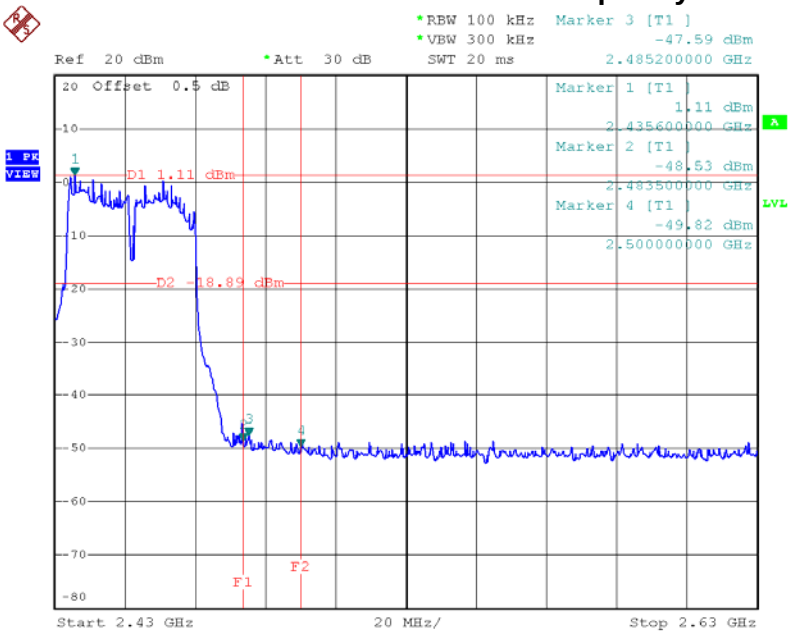
Channel of Worst Data			
The max. radio frequency power in any 100kHz bandwidth outside the frequency band		The max. radio frequency power in any 100 kHz bandwidth within the frequency band.	
FREQUENCY(MHz)	POWER(dBm)	FREQUENCY(MHz)	POWER(dBm)
2400.00	-37.49	2485.20	-47.59
Result			
In any 100kHz bandwidth outside the frequency band, the radio frequency power is at least 20dB below that in the 100kHz bandwidth within the band that contains the highest lever of the desired power.			

IEEE 802.11n (40 MHz)/The max. radio frequency power in any 100kHz bandwidth outside the frequency band



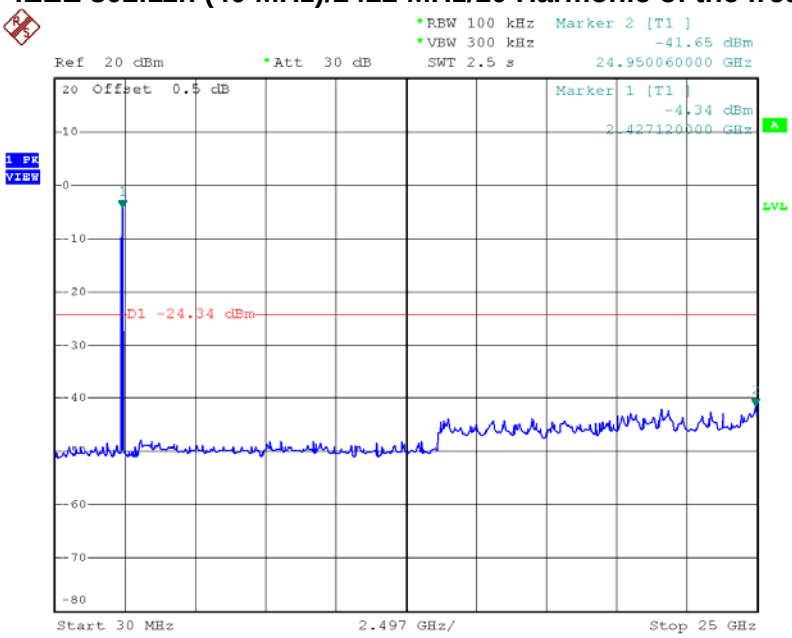
Date: 14.FEB.2014 23:53:53

IEEE 802.11n (40 MHz)/The max. radio frequency power in any 100 kHz bandwidth within the frequency band



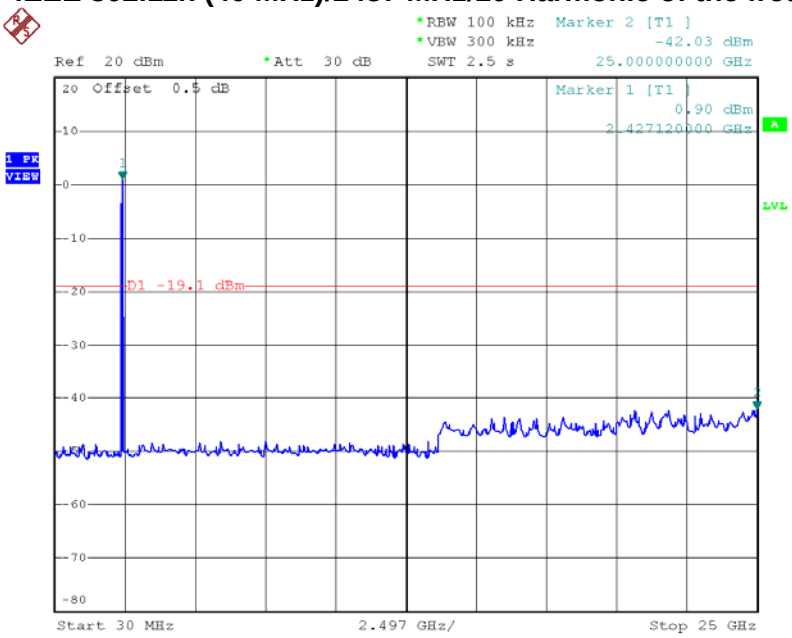
Date: 15.FEB.2014 00:03:43

IEEE 802.11n (40 MHz)/2422 MHz/10 Harmonic of the frequency



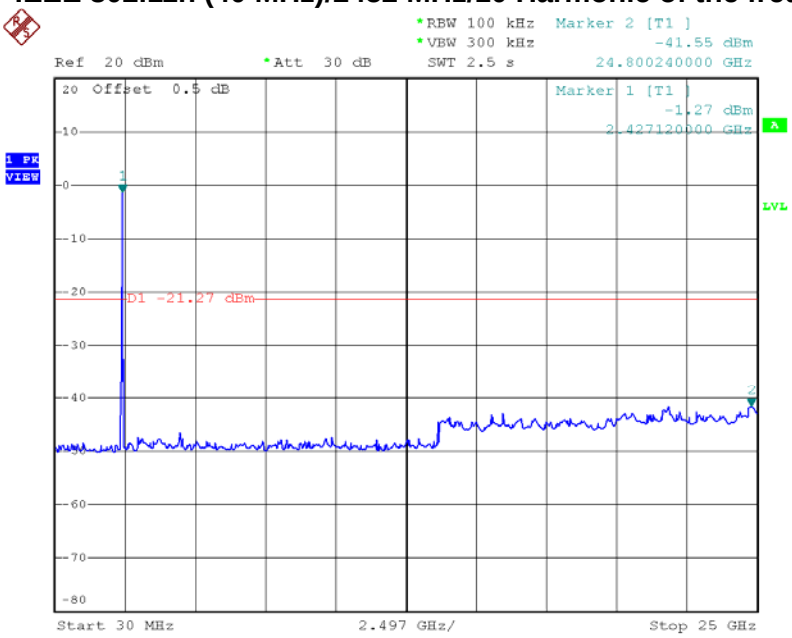
Date: 14.FEB.2014 23:52:36

IEEE 802.11n (40 MHz)/2437 MHz/10 Harmonic of the frequency



Date: 14.FEB.2014 23:58:17

IEEE 802.11n (40 MHz)/2452 MHz/10 Harmonic of the frequency



Date: 15.FEB.2014 00:03:13

6 6 DB BANDWIDTH

6.1 LIMIT

Test Item	Frequency Range (MHz)	Limit
Bandwidth	2400-2483.5	>= 500KHz (6dB bandwidth)

6.2 MEASUREMENT INSTRUMENTS LIST

Item	Kind of Equipment	Manufacturer	Type No.	Serial No.	Calibrated until
1	Spectrum Analyzer	R&S	FSP-30	100854	Sep. 08, 2014

NOTE: **N/A**: denotes No Model Name, No Serial No. or No Calibration specified.

6.3 TEST PROCEDURES

a. The EUT was directly connected to the spectrum analyzer and antenna output port as show in the block diagram below.
b. Spectrum Setting: RBW= 100KHz, VBW=100KHz, Sweep time = Auto.

6.4 TEST SETUP LAYOUT

6.5 DEVIATION FROM TEST STANDARD

No deviation

6.6 EUT OPERATING CONDITIONS

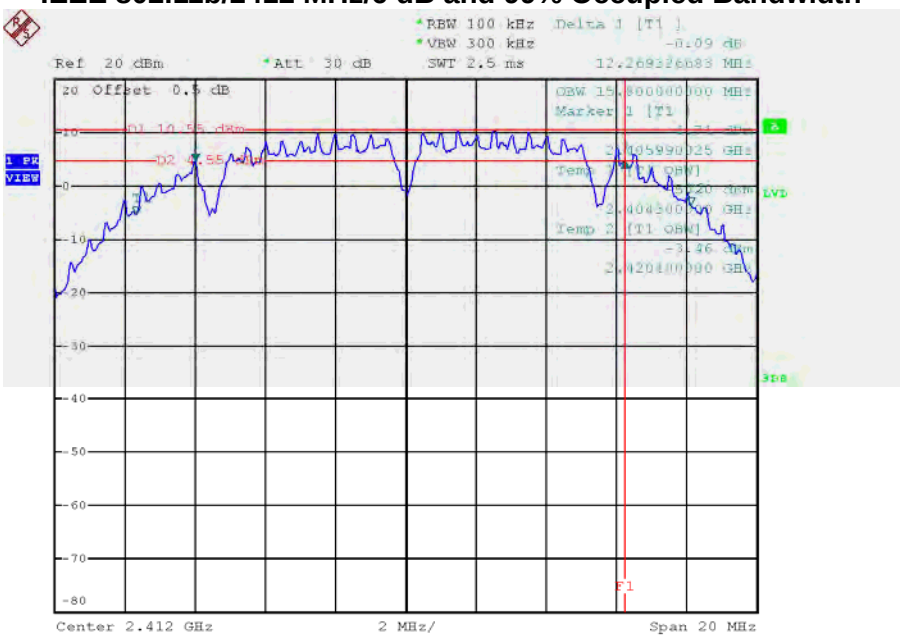
The EUT tested system was configured as the statements of 4.6 Unless otherwise a special operating condition is specified in the follows during the testing.

6.7 TEST RESULTS

EUT	Mini PCI Radio Module, 2x2 IEEE 802.11 b/g/n ,2.4 GHz	Model Name	RJ-1301
Temperature	26°C	Relative Humidity	46%
Test Voltage	AC 120V/60Hz		
Test Mode	IEEE 802.11b/2412 MHz, 2437 MHz, 2462 MHz		

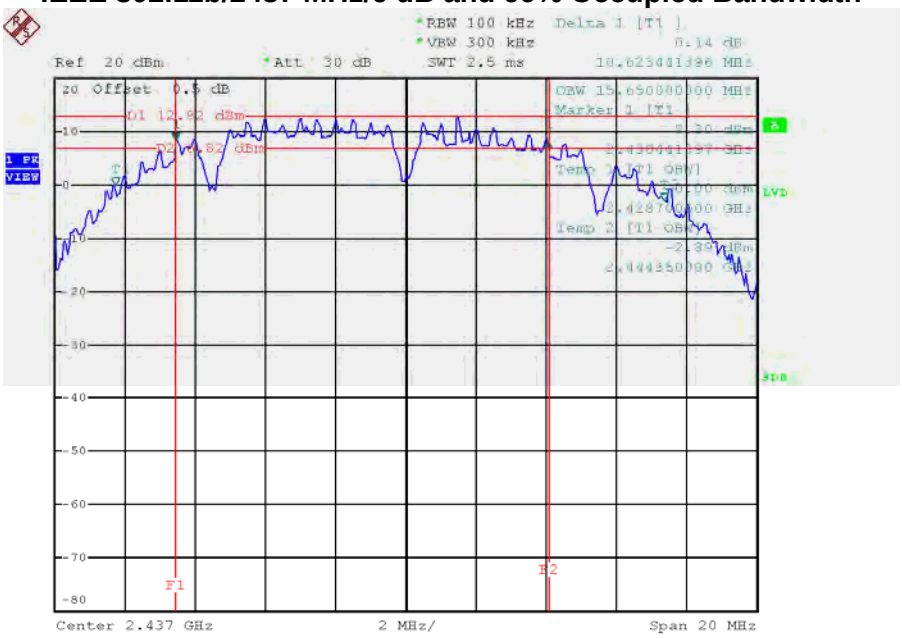
Frequency	6 dB Bandwidth (MHz)	99% Occupied Bandwidth (MHz)	Limit	Result
2412 MHz	12.27	15.80	>=500 kHz	PASS
2437 MHz	10.62	15.65	>=500 kHz	PASS
2462 MHz	10.14	14.92	>=500 kHz	PASS

IEEE 802.11b/2412 MHz/6 dB and 99% Occupied Bandwidth



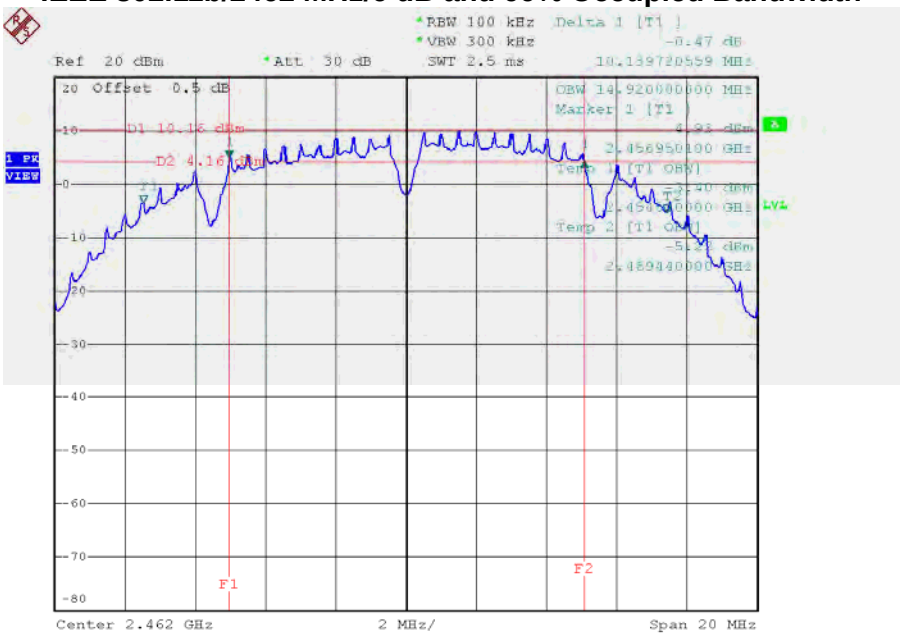
Date: 14.FEB.2014 17:30:14

IEEE 802.11b/2437 MHz/6 dB and 99% Occupied Bandwidth



Date: 14.FEB.2014 17:42:51

IEEE 802.11b/2462 MHz/6 dB and 99% Occupied Bandwidth

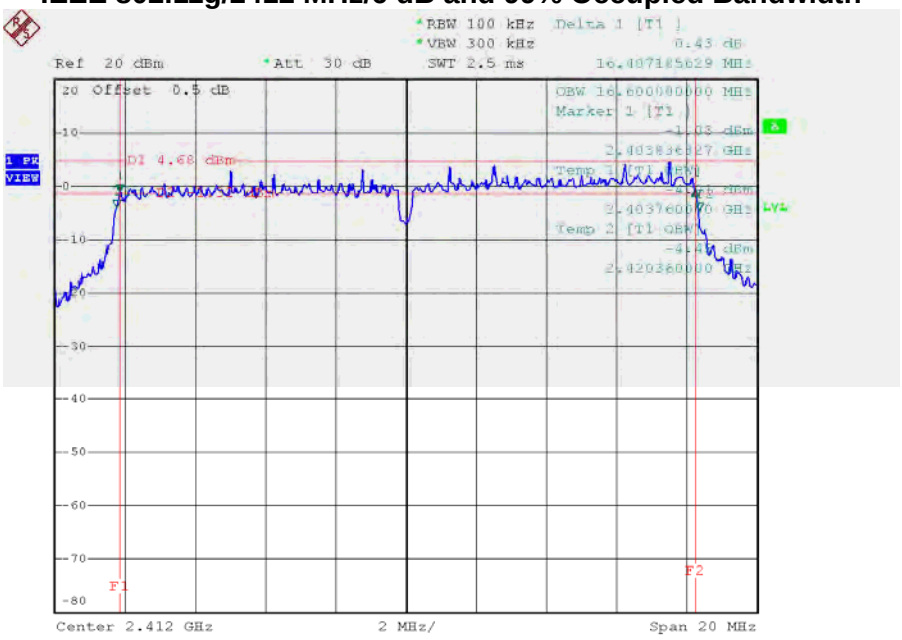


Date: 14.FEB.2014 21:05:08

EUT	Mini PCI Radio Module, 2x2 IEEE 802.11 b/g/n ,2.4 GHz	Model Name	RJ-1301
Temperature	26°C	Relative Humidity	46%
Test Voltage	AC 120V/60Hz		
Test Mode	IEEE 802.11g/2412 MHz, 2437 MHz, 2462 MHz		

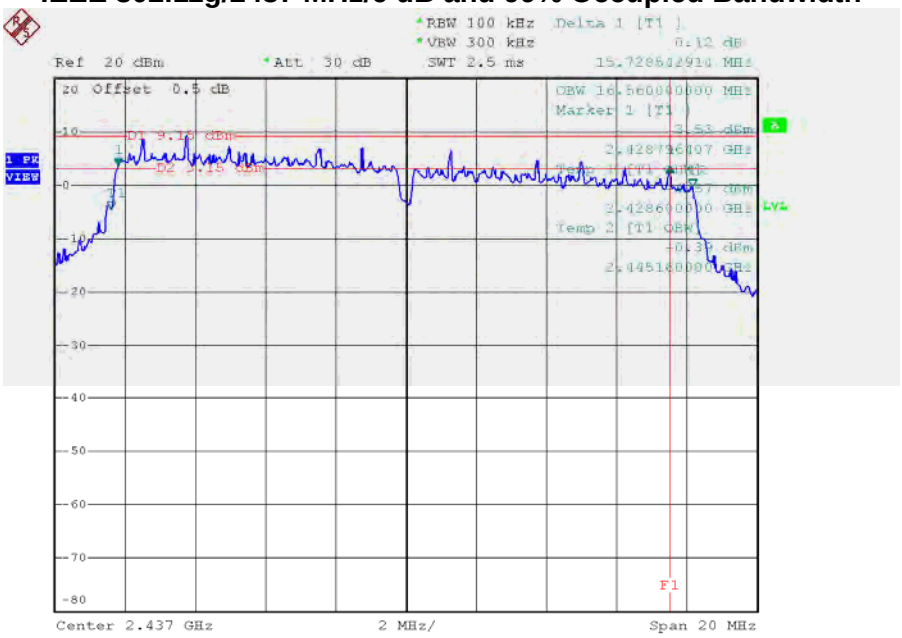
Frequency	6 dB Bandwidth (MHz)	99% Occupied Bandwidth (MHz)	Limit	Result
2412 MHz	16.41	16.60	>=500 kHz	PASS
2437 MHz	15.73	16.56	>=500 kHz	PASS
2462 MHz	14.93	16.36	>=500 kHz	PASS

IEEE 802.11g/2412 MHz/6 dB and 99% Occupied Bandwidth



Date: 14.FEB.2014 21:14:44

IEEE 802.11g/2437 MHz/6 dB and 99% Occupied Bandwidth



Date: 14.FEB.2014 21:22:29

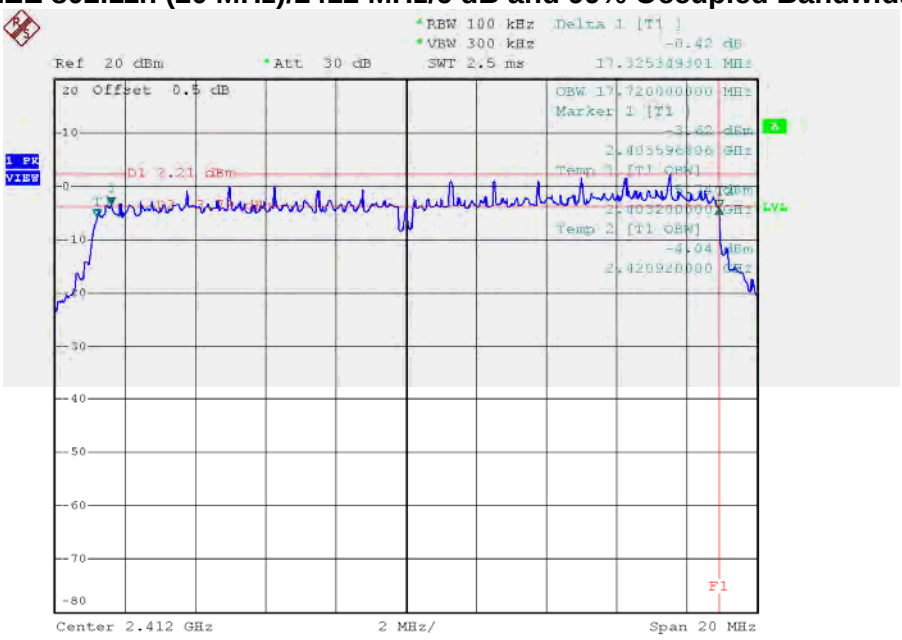
IEEE 802.11g/2462 MHz/6 dB and 99% Occupied Bandwidth

Date: 14.FEB.2014 21:29:28

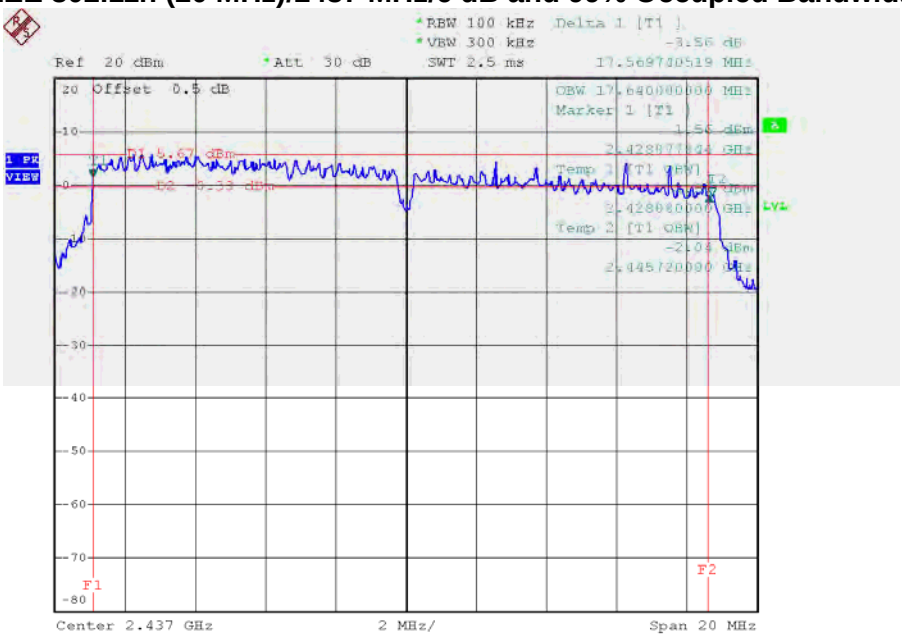
EUT	Mini PCI Radio Module, 2x2 IEEE 802.11 b/g/n ,2.4 GHz	Model Name	RJ-1301
Temperature	26°C	Relative Humidity	46%
Test Voltage	AC 120V/60Hz		
Test Mode	IEEE 802.11n (20 MHz)/2412 MHz, 2437 MHz, 2462 MHz-1TX		

Frequency	6 dB Bandwidth (MHz)	99% Occupied Bandwidth (MHz)	Limit	Result
2412 MHz	17.33	17.72	>=500 kHz	PASS
2437 MHz	17.57	17.64	>=500 kHz	PASS
2462 MHz	15.41	17.52	>=500 kHz	PASS

IEEE 802.11n (20 MHz)/2412 MHz/6 dB and 99% Occupied Bandwidth



IEEE 802.11n (20 MHz)/2437 MHz/6 dB and 99% Occupied Bandwidth



Date: 14.FEB.2014 21:54:33

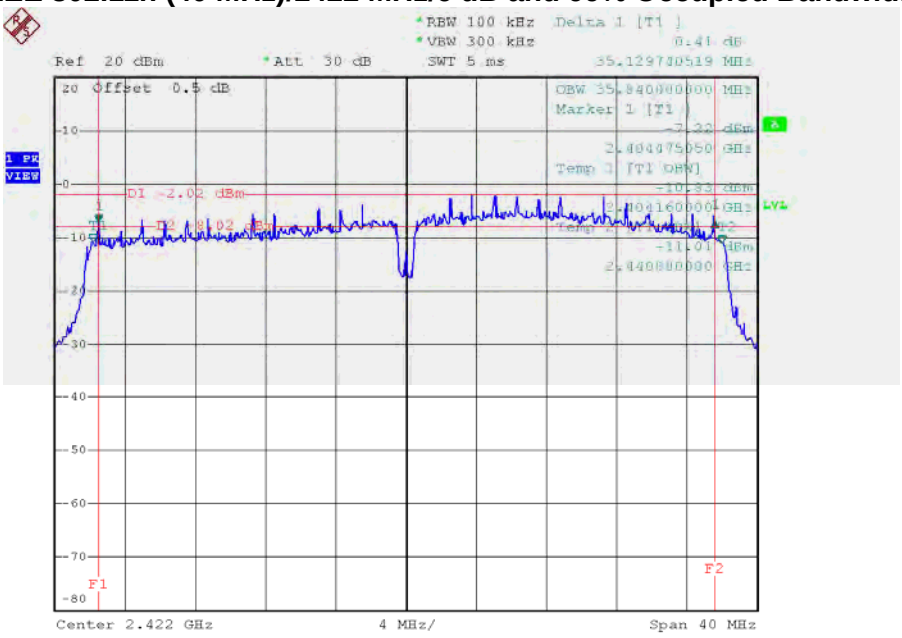
IEEE 802.11n (20 MHz)/2462 MHz/6 dB and 99% Occupied Bandwidth

Date: 14.FEB.2014 22:07:15

EUT	Mini PCI Radio Module, 2x2 IEEE 802.11 b/g/n ,2.4 GHz	Model Name	RJ-1301
Temperature	26°C	Relative Humidity	46%
Test Voltage	AC 120V/60Hz		
Test Mode	IEEE 802.11n (40 MHz)/2422 MHz, 2437 MHz, 2452 MHz-1TX		

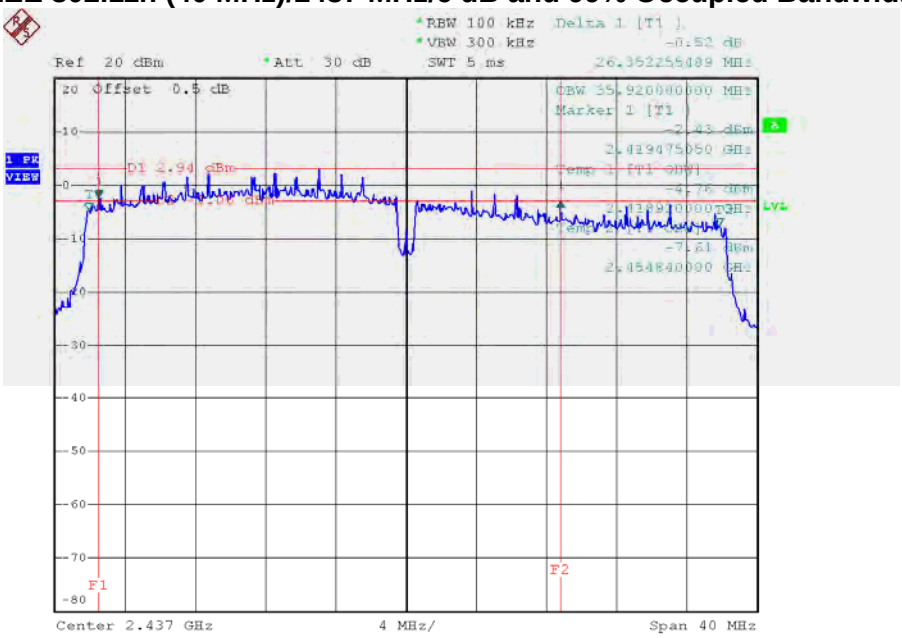
Frequency	6 dB Bandwidth (MHz)	99% Occupied Bandwidth (MHz)	Limit	Result
2422 MHz	35.13	35.84	>=500 kHz	PASS
2437 MHz	26.35	35.92	>=500 kHz	PASS
2452 MHz	35.85	36.16	>=500 kHz	PASS

IEEE 802.11n (40 MHz)/2422 MHz/6 dB and 99% Occupied Bandwidth



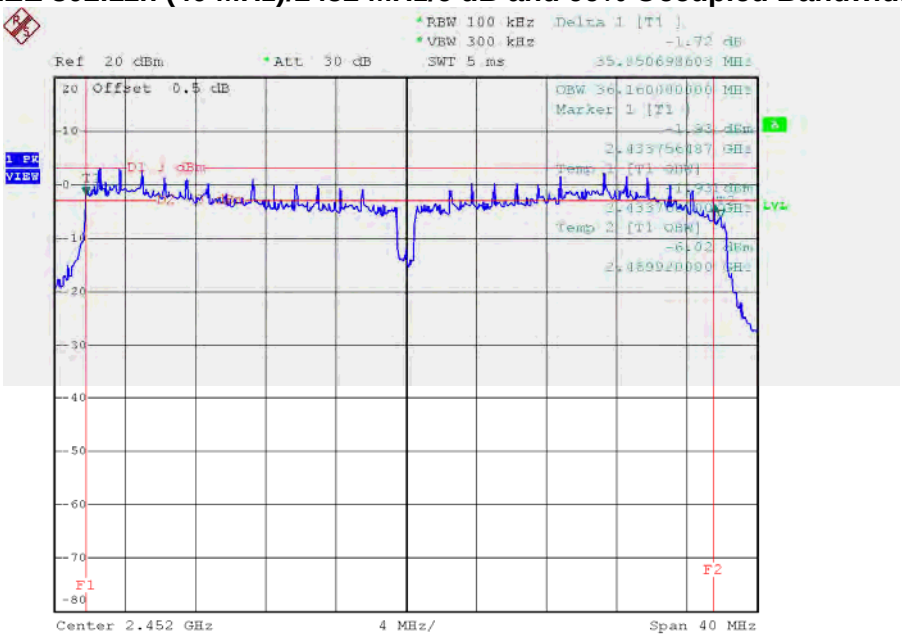
Date: 14.FEB.2014 22:15:41

IEEE 802.11n (40 MHz)/2437 MHz/6 dB and 99% Occupied Bandwidth



Date: 14.FEB.2014 22:23:08

IEEE 802.11n (40 MHz)/2452 MHz/6 dB and 99% Occupied Bandwidth

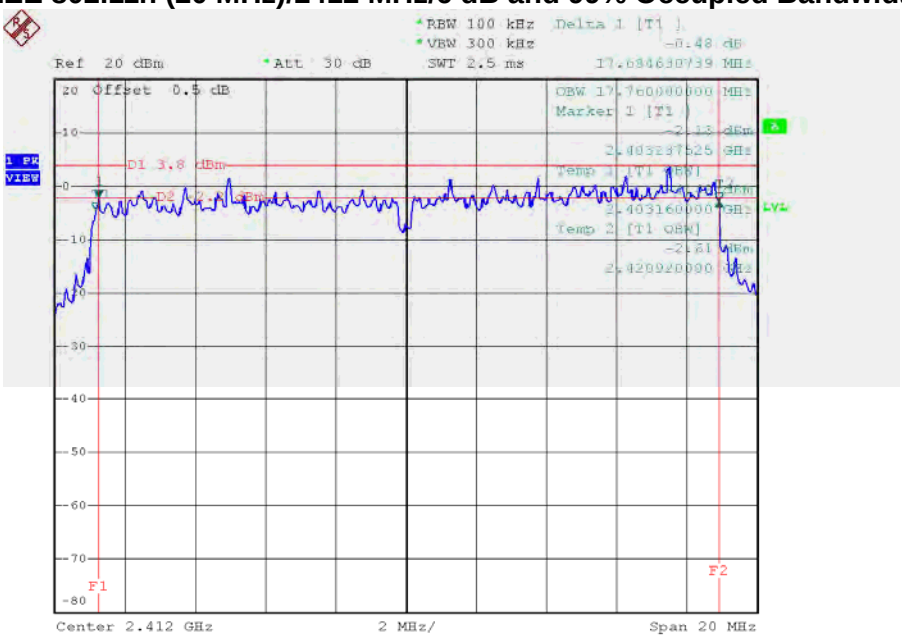


Date: 14.FEB.2014 22:29:38

EUT	Mini PCI Radio Module, 2x2 IEEE 802.11 b/g/n ,2.4 GHz	Model Name	RJ-1301
Temperature	26°C	Relative Humidity	46%
Test Voltage	AC 120V/60Hz		
Test Mode	IEEE 802.11n (20 MHz)/2412 MHz, 2437 MHz, 2462 MHz-2TX-ANT 1		

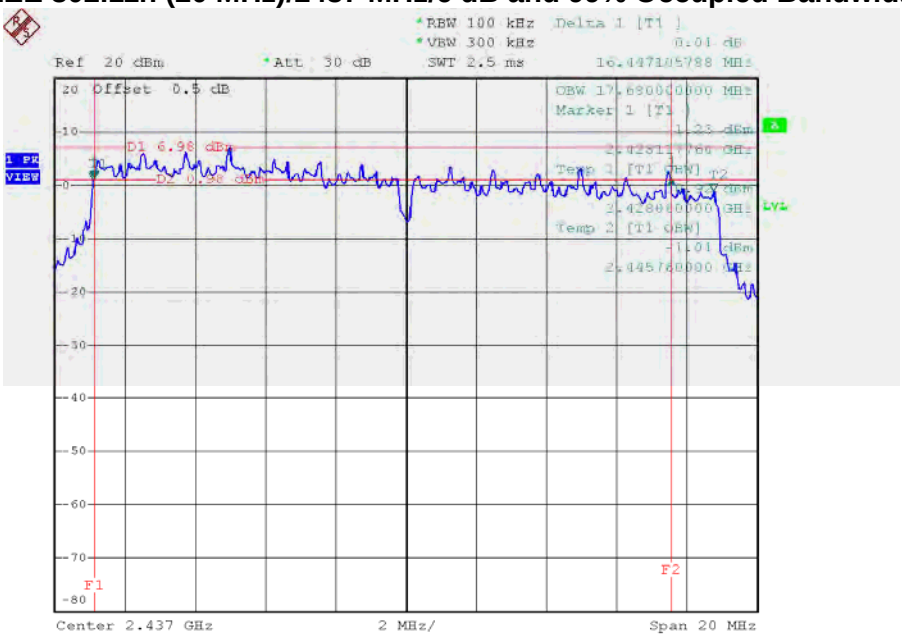
Frequency	6 dB Bandwidth (MHz)	99% Occupied Bandwidth (MHz)	Limit	Result
2412 MHz	17.68	17.76	>=500 kHz	PASS
2437 MHz	16.45	17.68	>=500 kHz	PASS
2462 MHz	16.33	17.60	>=500 kHz	PASS

IEEE 802.11n (20 MHz)/2412 MHz/6 dB and 99% Occupied Bandwidth



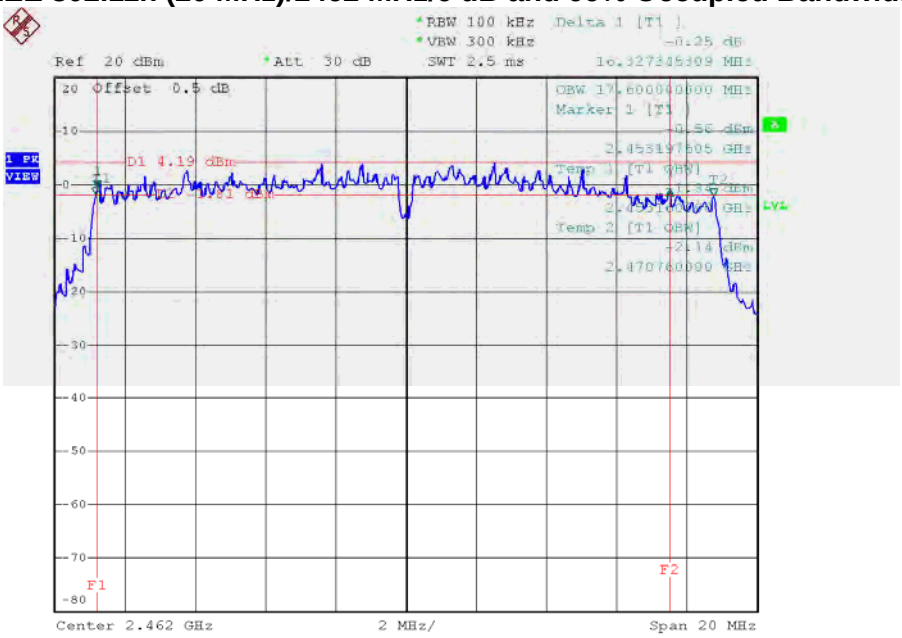
Date: 14.FEB.2014 22:51:30

IEEE 802.11n (20 MHz)/2437 MHz/6 dB and 99% Occupied Bandwidth



Date: 14.FEB.2014 23:12:54

IEEE 802.11n (20 MHz)/2462 MHz/6 dB and 99% Occupied Bandwidth

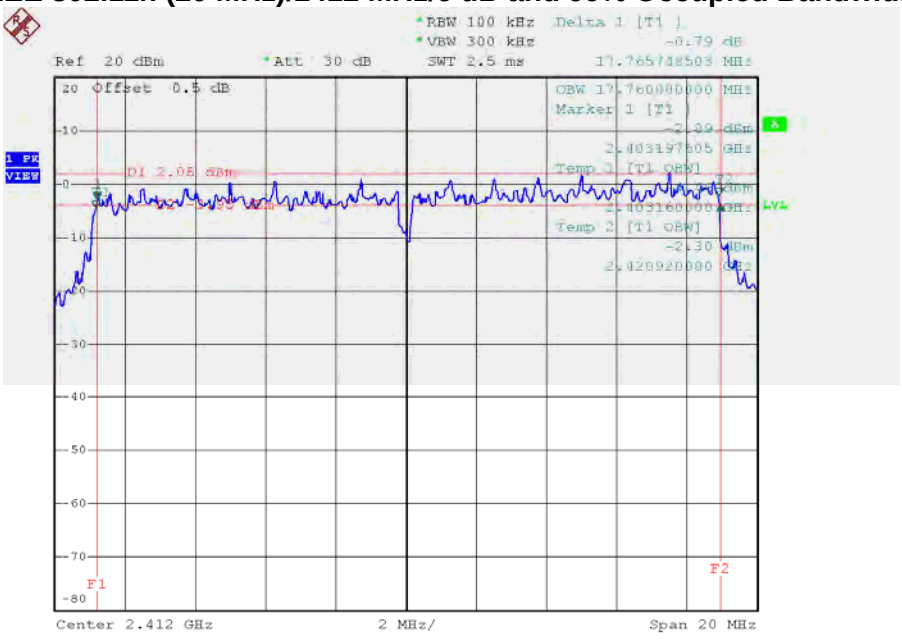


Date: 14.FEB.2014 23:21:40

EUT	Mini PCI Radio Module, 2x2 IEEE 802.11 b/g/n ,2.4 GHz	Model Name	RJ-1301
Temperature	26°C	Relative Humidity	46%
Test Voltage	AC 120V/60Hz		
Test Mode	IEEE 802.11n (20 MHz)/2412 MHz, 2437 MHz, 2462 MHz-2TX-ANT 2		

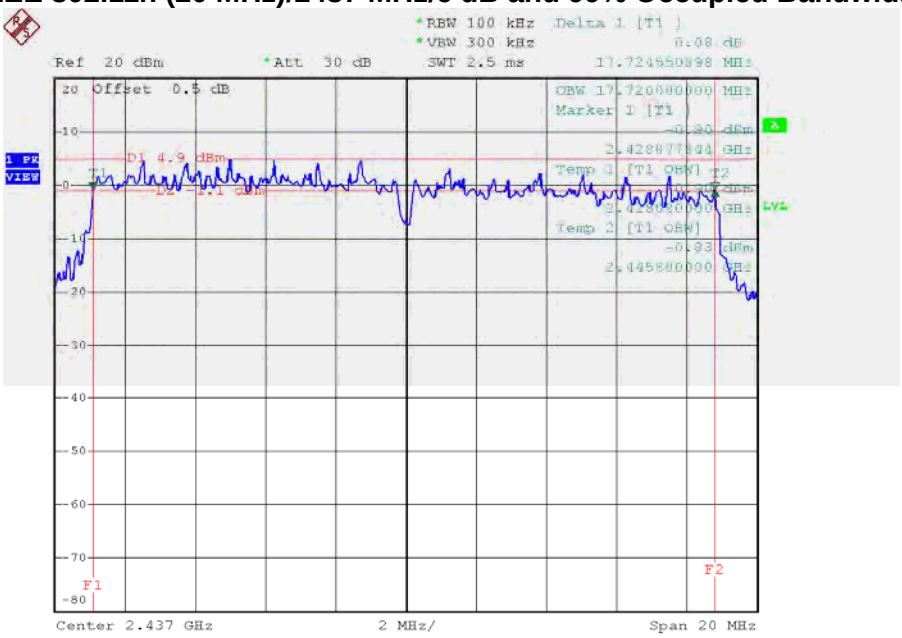
Frequency	6 dB Bandwidth (MHz)	99% Occupied Bandwidth (MHz)	Limit	Result
2412 MHz	17.77	17.76	>=500 kHz	PASS
2437 MHz	17.72	17.72	>=500 kHz	PASS
2462 MHz	16.37	17.60	>=500 kHz	PASS

IEEE 802.11n (20 MHz)/2412 MHz/6 dB and 99% Occupied Bandwidth



Date: 14.FEB.2014 23:28:59

IEEE 802.11n (20 MHz)/2437 MHz/6 dB and 99% Occupied Bandwidth



Date: 14.FEB.2014 23:34:30

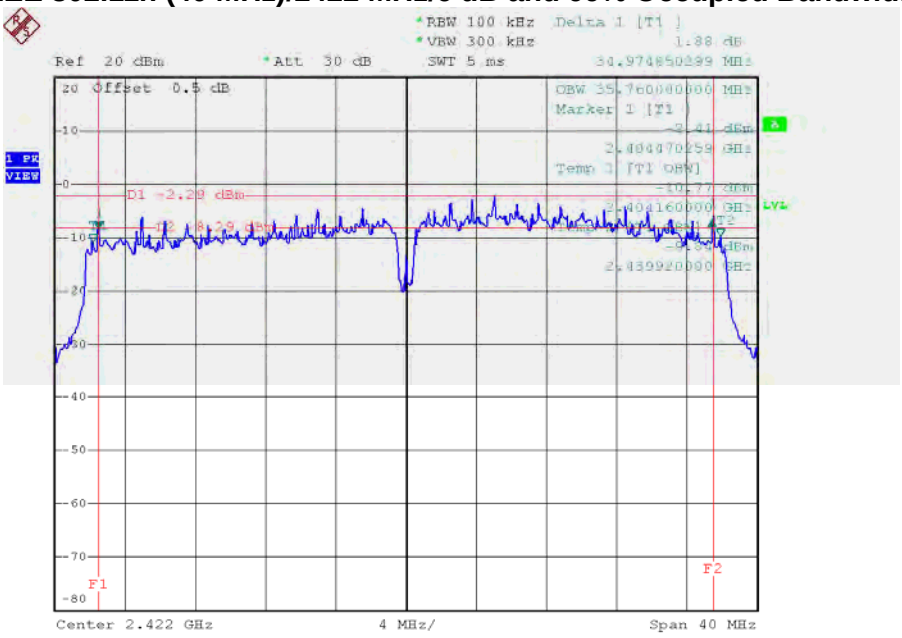
IEEE 802.11n (20 MHz)/2462 MHz/6 dB and 99% Occupied Bandwidth

Date: 14.FEB.2014 23:39:52

EUT	Mini PCI Radio Module, 2x2 IEEE 802.11 b/g/n ,2.4 GHz	Model Name	RJ-1301
Temperature	26°C	Relative Humidity	46%
Test Voltage	AC 120V/60Hz		
Test Mode	IEEE 802.11n (40 MHz)/2422 MHz, 2437 MHz, 2452 MHz-2TX-ANT 1		

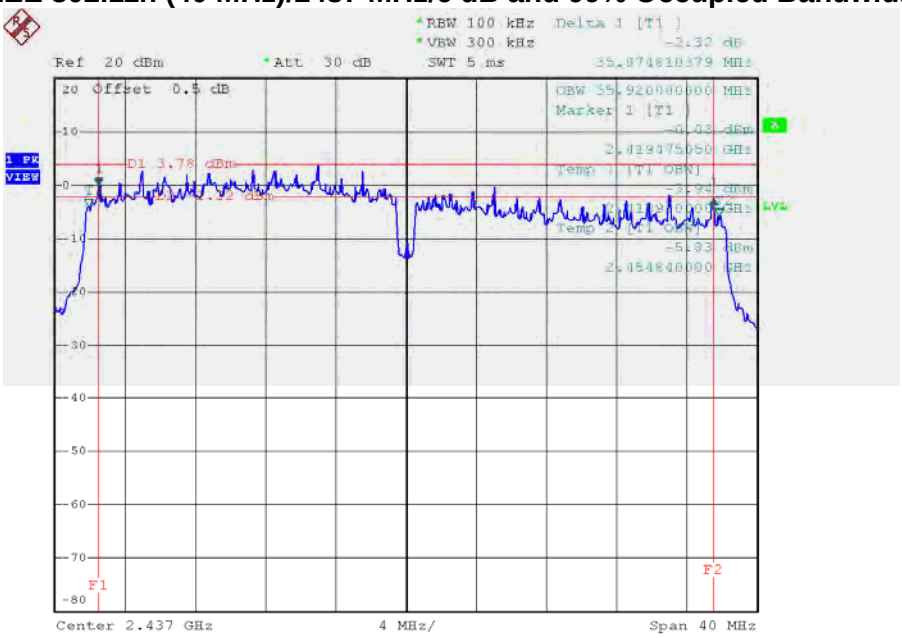
Frequency	6 dB Bandwidth (MHz)	99% Occupied Bandwidth (MHz)	Limit	Result
2422 MHz	34.97	35.76	>=500 kHz	PASS
2437 MHz	35.07	35.92	>=500 kHz	PASS
2452 MHz	35.77	36.00	>=500 kHz	PASS

IEEE 802.11n (40 MHz)/2422 MHz/6 dB and 99% Occupied Bandwidth



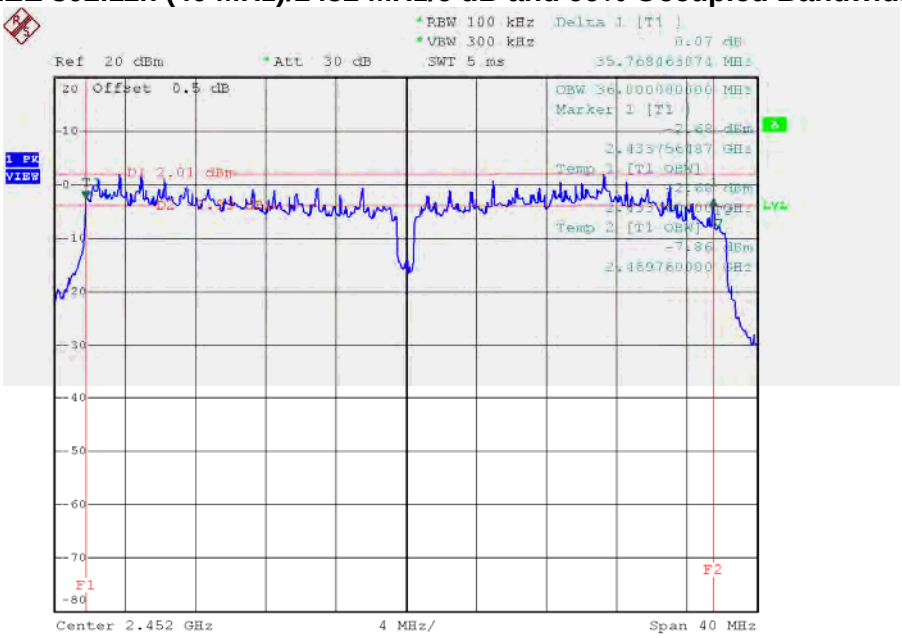
Date: 15.FEB.2014 00:12:15

IEEE 802.11n (40 MHz)/2437 MHz/6 dB and 99% Occupied Bandwidth



Date: 15.FEB.2014 00:22:36

IEEE 802.11n (40 MHz)/2452 MHz/6 dB and 99% Occupied Bandwidth

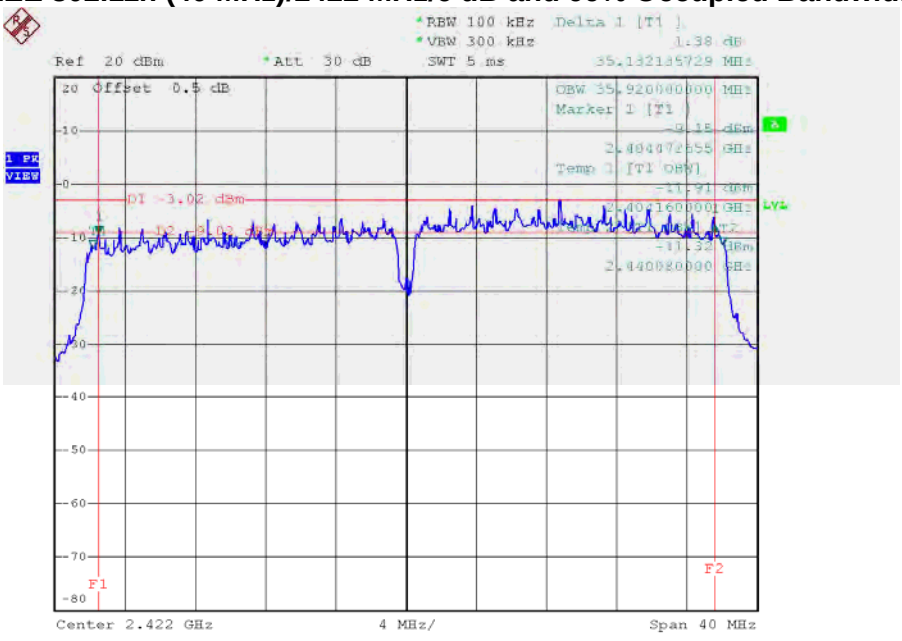


Date: 15.FEB.2014 00:30:53

EUT	Mini PCI Radio Module, 2x2 IEEE 802.11 b/g/n ,2.4 GHz	Model Name	RJ-1301
Temperature	26°C	Relative Humidity	46%
Test Voltage	AC 120V/60Hz		
Test Mode	IEEE 802.11n (40 MHz)/2422 MHz, 2437 MHz, 2452 MHz-2TX-ANT 2		

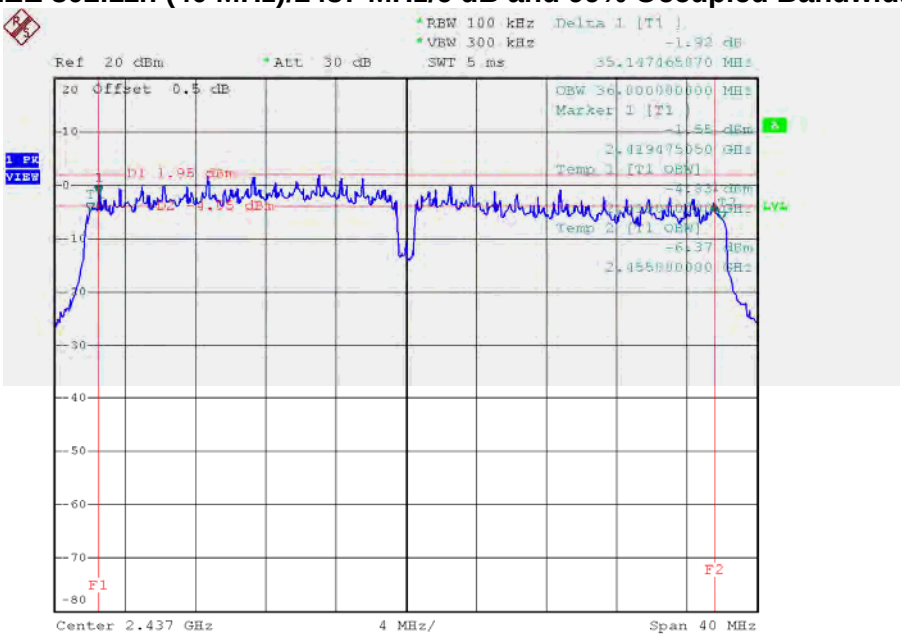
Frequency	6 dB Bandwidth (MHz)	99% Occupied Bandwidth (MHz)	Limit	Result
2422 MHz	35.13	35.92	>=500 kHz	PASS
2437 MHz	35.15	36.00	>=500 kHz	PASS
2452 MHz	33.29	35.92	>=500 kHz	PASS

IEEE 802.11n (40 MHz)/2422 MHz/6 dB and 99% Occupied Bandwidth



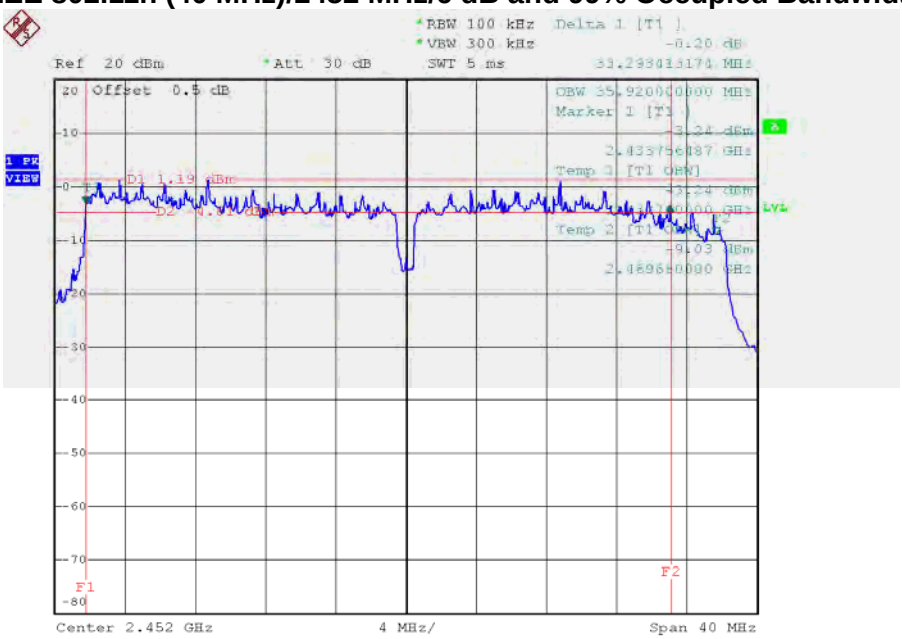
Date: 14.FEB.2014 23:53:42

IEEE 802.11n (40 MHz)/2437 MHz/6 dB and 99% Occupied Bandwidth



Date: 14.FEB.2014 23:59:02

IEEE 802.11n (40 MHz)/2452 MHz/6 dB and 99% Occupied Bandwidth



Date: 15.FEB.2014 00:03:31

7 MAXIMUM PEAK CONDUCTED OUTPUT POWER

7.1 LIMIT

Test Item	Frequency Range (MHz)	Limit
Maximum Peak Conducted Output Power	2400-2483.5	1 watt or 30 dBm

7.2 MEASUREMENT INSTRUMENTS LIST

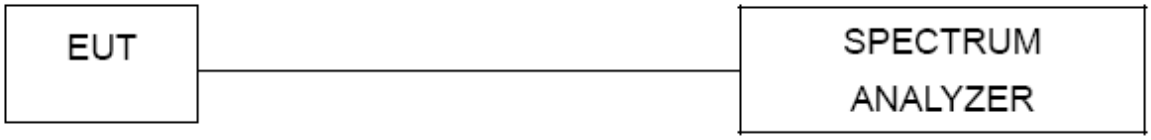
Item	Kind of Equipment	Manufacturer	Type No.	Serial No.	Calibrated until
1	Spectrum Analyzer	R&S	FSP-30	100854	Sep. 08, 2014

NOTE: **N/A**: denotes No Model Name, No Serial No. or No Calibration specified.

7.3 TEST PROCEDURES

a. The EUT was directly connected to the spectrum analyzer and antenna output port as show in the block diagram below,
b. Spectrum Setting: RBW= 3 MHz, VBW= 3 MHz, Sweep time = Auto.

7.4 TEST SETUP LAYOUT



7.5 DEVIATION FROM TEST STANDARD

No deviation

7.6 EUT OPERATING CONDITIONS

The EUT tested system was configured as the statements of 5.6 Unless otherwise a special operating condition is specified in the follows during the testing.

7.7 TEST RESULTS

EUT	Mini PCI Radio Module, 2x2 IEEE 802.11 b/g/n ,2.4 GHz	Model Name	RJ-1301
Temperature	26°C	Relative Humidity	46%
Test Voltage	AC 120V/60Hz		
Test Mode	IEEE 802.11b/2412 MHz, 2437 MHz, 2462 MHz		

Frequency	Peak Output Power		Limit		Result
	(dBm)	(W)	(dBm)	(W)	
2412 MHz	23.34	0.2158	30	1	PASS
2437 MHz	25.10	0.3236	30	1	PASS
2462 MHz	22.02	0.1592	30	1	PASS

EUT	Mini PCI Radio Module, 2x2 IEEE 802.11 b/g/n ,2.4 GHz	Model Name	RJ-1301
Temperature	26°C	Relative Humidity	46%
Test Voltage	AC 120V/60Hz		
Test Mode	IEEE 802.11g/2412 MHz, 2437 MHz, 2462 MHz		

Frequency	Peak Output Power		Limit		Result
	(dBm)	(W)	(dBm)	(W)	
2412 MHz	24.89	0.3083	30	1	PASS
2437 MHz	26.62	0.4592	30	1	PASS
2462 MHz	26.08	0.4055	30	1	PASS

EUT	Mini PCI Radio Module, 2x2 IEEE 802.11 b/g/n ,2.4 GHz	Model Name	RJ-1301
Temperature	26°C	Relative Humidity	46%
Test Voltage	AC 120V/60Hz		
Test Mode	IEEE 802.11n (20 MHz)/2412 MHz, 2437 MHz, 2462 MHz-1TX		

Frequency	Peak Output Power		Limit		Result
	(dBm)	(W)	(dBm)	(W)	
2412 MHz	22.52	0.1786	30	1	PASS
2437 MHz	26.72	0.4699	30	1	PASS
2462 MHz	25.78	0.3784	30	1	PASS

EUT	Mini PCI Radio Module, 2x2 IEEE 802.11 b/g/n ,2.4 GHz	Model Name	RJ-1301
Temperature	26°C	Relative Humidity	46%
Test Voltage	AC 120V/60Hz		
Test Mode	IEEE 802.11n (40 MHz)/2422 MHz, 2437 MHz, 2452 MHz-1TX		

Frequency	Peak Output Power		Limit		Result
	(dBm)	(W)	(dBm)	(W)	
2422 MHz	22.29	0.1694	30	1	PASS
2437 MHz	25.10	0.3236	30	1	PASS
2452 MHz	25.52	0.3565	30	1	PASS

EUT	Mini PCI Radio Module, 2x2 IEEE 802.11 b/g/n ,2.4 GHz	Model Name	RJ-1301
Temperature	26°C	Relative Humidity	46%
Test Voltage	AC 120V/60Hz		
Test Mode	IEEE 802.11n (20 MHz)/2412 MHz, 2437 MHz, 2462 MHz-2TX-ANT 1		

Frequency	Peak Output Power		Limit		Result
	(dBm)	(W)	(dBm)	(W)	
2412 MHz	22.44	0.1754	-	-	PASS
2437 MHz	25.11	0.3243	-	-	PASS
2462 MHz	24.60	0.2884	-	-	PASS

EUT	Mini PCI Radio Module, 2x2 IEEE 802.11 b/g/n ,2.4 GHz	Model Name	RJ-1301
Temperature	26°C	Relative Humidity	46%
Test Voltage	AC 120V/60Hz		
Test Mode	IEEE 802.11n (20 MHz)/2412 MHz, 2437 MHz, 2462 MHz-2TX-ANT 2		

Frequency	Peak Output Power		Limit		Result
	(dBm)	(W)	(dBm)	(W)	
2412 MHz	22.58	0.1811	-	-	PASS
2437 MHz	24.63	0.2904	-	-	PASS
2462 MHz	24.30	0.2692	-	-	PASS

EUT	Mini PCI Radio Module, 2x2 IEEE 802.11 b/g/n ,2.4 GHz	Model Name	RJ-1301
Temperature	26°C	Relative Humidity	46%
Test Voltage	AC 120V/60Hz		
Test Mode	IEEE 802.11n (20 MHz)/2412 MHz, 2437 MHz, 2462 MHz-2TX-Total		

Frequency	Peak Output Power		Limit		Result
	(dBm)	(W)	(dBm)	(W)	
2412 MHz	25.52	0.3565	28	0.6310	PASS
2437 MHz	27.89	0.6147	28	0.6310	PASS
2462 MHz	27.46	0.5576	28	0.6310	PASS

NOTE:

1. The MIMO test requirement, RF conducted output power shall measure each transmitter chain by using channel power method.
   And after obtain each individual transmitter chain power, then sum the output power by using the following formula:
   ((dBm/Chain 1)/10^Log) + ((dBm/Chain 2)/10^log) + ((dBm/ChainN)/10^log) = Combined peak output power in mW.
2. Antenna Gain = 5dBi.

EUT	Mini PCI Radio Module, 2x2 IEEE 802.11 b/g/n ,2.4 GHz	Model Name	RJ-1301
Temperature	26°C	Relative Humidity	46%
Test Voltage	AC 120V/60Hz		
Test Mode	IEEE 802.11n (40 MHz)/2422 MHz, 2437 MHz, 2452 MHz-2TX-ANT 1		

Frequency	Peak Output Power		Limit		Result
	(dBm)	(W)	(dBm)	(W)	
2422 MHz	20.03	0.1007	-	-	PASS
2437 MHz	24.38	0.2742	-	-	PASS
2452 MHz	24.03	0.2529	-	-	PASS

EUT	Mini PCI Radio Module, 2x2 IEEE 802.11 b/g/n ,2.4 GHz	Model Name	RJ-1301
Temperature	26°C	Relative Humidity	46%
Test Voltage	AC 120V/60Hz		
Test Mode	IEEE 802.11n (40 MHz)/2422 MHz, 2437 MHz, 2452 MHz-2TX-ANT 2		

Frequency	Peak Output Power		Limit		Result
	(dBm)	(W)	(dBm)	(W)	
2422 MHz	19.48	0.0887	-	-	PASS
2437 MHz	23.83	0.2415	-	-	PASS
2452 MHz	23.65	0.2317	-	-	PASS

EUT	Mini PCI Radio Module, 2x2 IEEE 802.11 b/g/n ,2.4 GHz	Model Name	RJ-1301
Temperature	26°C	Relative Humidity	46%
Test Voltage	AC 120V/60Hz		
Test Mode	IEEE 802.11n (40 MHz)/2422 MHz, 2437 MHz, 2452 MHz-2TX-Total		

Frequency	Peak Output Power		Limit		Result
	(dBm)	(W)	(dBm)	(W)	
2422 MHz	22.77	0.1894	28	0.6310	PASS
2437 MHz	27.12	0.5157	28	0.6310	PASS
2452 MHz	26.85	0.4847	28	0.6310	PASS

NOTE:

1. The MIMO test requirement, RF conducted output power shall measure each transmitter chain by using channel power method.
   And after obtain each individual transmitter chain power, then sum the output power by using the following formula:
   ((dBm/Chain 1)/10^Log) + ((dBm/Chain 2)/10^log) + ((dBm/ChainN)/10^log) = Combined peak output power in mW.
2. Antenna Gain = 5dBi.

8 RADIATED SPURIOUS EMISSION (9 KHZ TO 1 GHZ)

8.1 LIMIT

20 dB in any 100 kHz bandwidth outside the operating frequency band. In case the emission fall within the restricted band specified on 15.205(a), then the 15.209(a) limit in the table below has to be followed.

Frequency Range: 9 kHz to 1 GHz		
FREQUENCY (MHz)	Field Strength (micorvolts/meter)	Measurement Distance (meters)
0.009~0.490	2400/F(kHz)	300
0.490~1.705	24000/F(kHz)	30
1.705~30.0	30	30
30~88	100	3
88~216	150	3
216~960	200	3
Above 960	500	3

Frequency Range: above 1 GHz				
FREQUENCY (MHz)	Class A (dBuV/m) (at 3m)		Class B (dBuV/m) (at 3m)	
	PEAK	AVERAGE	PEAK	AVERAGE
above 1 GHz	80	60	74	54

NOTE:

1. The limit for radiated test was performed according to FCC PART 15B.
2. The tighter limit applies at the band edges.
3. Emission level (dBuV/m)=20log Emission level (uV/m).
4. The test result calculated as following:
   Measurement Value = Reading Level + Correct Factor
   Correct Factor = Antenna Factor + Cable Loss – Amplifier Gain(if use)
   Margin Level = Measurement Value – Limit Value

8.2 MEASUREMENT INSTRUMENTS LIST

Item	Kind of Equipment	Manufacturer	Type No.	Serial No.	Calibrated until
1	Spectrum Analyzer	R&S	FSP-30	100854	Sep. 08, 2014
2	Horn Antenna	Schwarzbeck	BBHA 9120	D-325	Apr. 15, 2014
3	Microwave Pre_amplifier	Agilent	8449B	3008A01714	Apr. 16, 2014
4	Microflex Cable	Harbour industries	27478LL142	1m	May. 13, 2014
5	Microflex Cable	EMC	S104-SMA	8m	May. 13, 2014
6	Microflex Cable	Harbour industries	27478LL142	3m	May. 13, 2014
7	Test Cable	LMR	LMR-400	12m	May. 14, 2014
8	Test Cable	LMR	LMR-400	3m	May. 14, 2014
9	Pre-Amplifier	Anritsu	MH648A	M92649	Jun. 18, 2014
10	Log-Bicon Antenna	Schwarzbeck	VULB9168-352	9168-352	Jun. 11, 2014
11	Preamplifier With Adaptor	EMC	EMC2654045	980030	Feb. 18, 2014
12	Horn Antenna	Schwarzbeck	BBHA 9170	187	Dec. 23, 2014

Remark: “N/A” denotes No Model Name, No Serial No. or No Calibration specified.

8.3 MEASURING INSTRUMENTS SETTING

EMI Test Receiver	Parameter Setting
Attenuation	Auto
Start ~ Stop Frequency	9kHz~150kHz / RB 200Hz for QP
Start ~ Stop Frequency	150kHz~30MHz / RB 9kHz for QP
Start ~ Stop Frequency	30MHz~1000MHz / RB 120kHz for QP

8.4 TEST PROCEDURES

a. The measuring distance of at 3 m shall be used for measurements at frequency up to 1 GHz. For frequencies above 1 GHz, any suitable measuring distance may be used.
b. The EUT was placed on the top of a rotating table 0.8 meters above the ground at a 3m Semi-anechoic chamber. The table was rotated 360 degrees to determine the position of the highest radiation.
c. The height of the equipment or of the substitution antenna shall be 0.8 m; the height of the test antenna shall vary between 1 m to 4 m. Both horizontal and vertical polarizations of the antenna are set to make the measurement.
d. The initial step in collecting conducted emission data is a spectrum analyzer peak detector mode pre-scanning the measurement frequency range. Significant peaks are then marked and then Quasi Peak detector mode re-measured.
e. If the Peak Mode measured value compliance with and lower than Quasi Peak Mode Limit, the EUT shall be deemed to meet QP Limits and then no additional QP Mode measurement performed.
f. For the actual test configuration, please refer to the related Item –EUT Test Photos.
g. The testing follows the guidelines in ANSI C63.4 and FCC Public Notice DA 00-705 Measurement Guidelines. In case the emission is fail due to the used RBW/VBW is too wide, marker-delta method of FCC Public Notice DA 00-705 will be followed.

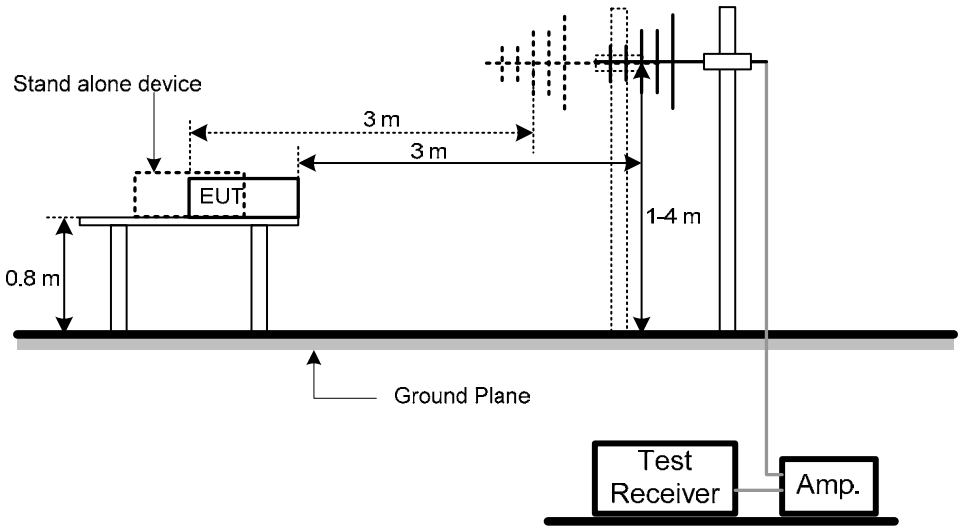
NOTE:

a. Reading in which marked as QP or Peak means measurements by using are Quasi-Peak Mode with Detector BW=120 kHz; SPA setting in RBW=100 kHz, VBW =100 kHz, Swp. Time = 0.3 sec./ MHz.
b. All readings are Peak unless otherwise stated QP in column of Note. Peak denotes that the Peak reading compliance with the QP Limits and then QP Mode measurement didn‘t perform.

8.5 DEVIATION FROM TEST STANDARD

No deviation

8.6 TEST SETUP LAYOUT



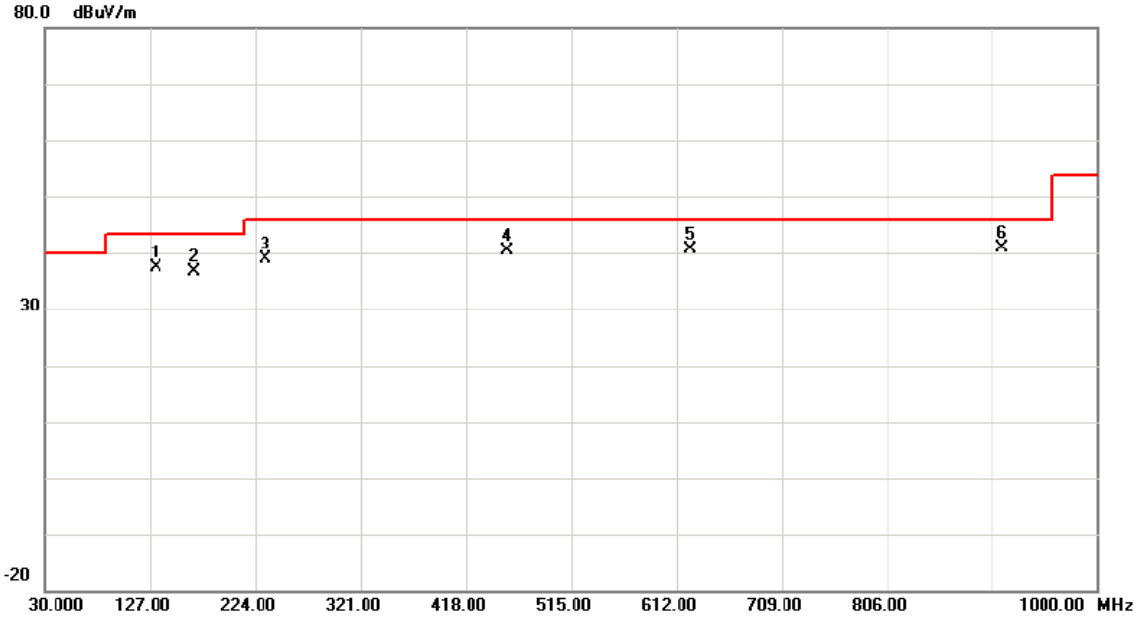
8.7 EUT OPERATING CONDITIONS

The EUT tested system was configured as the statements of 5.6 Unless otherwise a special operating condition is specified in the follows during the testing.

8.8 TEST RESULTS

EUT	Mini PCI Radio Module, 2x2 IEEE 802.11 b/g/n ,2.4 GHz	Model Name	RJ-1301
Temperature	26°C	Relative Humidity	60%
Test Voltage	AC 120V/60Hz		
Test Mode	IEEE 802.11b/2437 MHz		

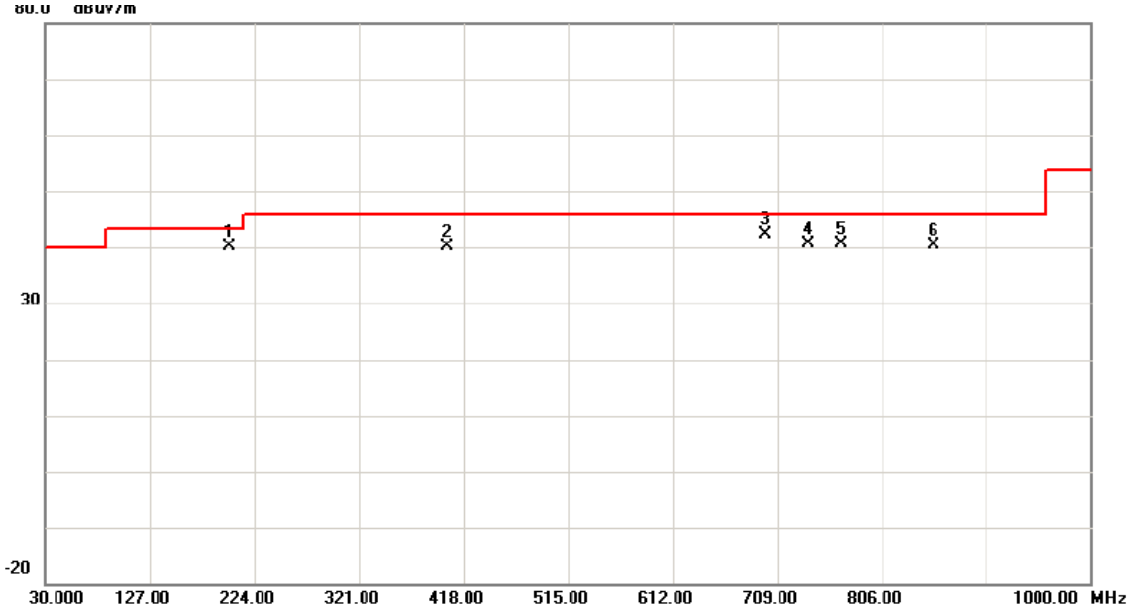
Polarization: Vertical



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1		132.8200	52.87	-15.54	37.33	43.50	-6.17	peak	
2		167.7400	51.18	-14.47	36.71	43.50	-6.79	peak	
3		233.7000	54.94	-15.99	38.95	46.00	-7.05	peak	
4		456.7998	50.07	-9.73	40.34	46.00	-5.66	peak	
5		625.5800	47.49	-6.83	40.66	46.00	-5.34	peak	
6	*	912.7000	44.36	-3.36	41.00	46.00	-5.00	peak	

EUT	Mini PCI Radio Module, 2x2 IEEE 802.11 b/g/n ,2.4 GHz	Model Name	RJ-1301
Temperature	26°C	Relative Humidity	60%
Test Voltage	AC 120V/60Hz		
Test Mode	IEEE 802.11b/2437 MHz		

Polarization: Horizontal



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1	*	200.7200	56.94	-16.90	40.04	43.50	-3.46	peak	
2		402.4800	51.13	-11.12	40.01	46.00	-5.99	peak	
3		697.3600	48.94	-6.49	42.45	46.00	-3.55	peak	
4		738.1000	46.32	-5.62	40.70	46.00	-5.30	peak	
5		769.1400	45.82	-5.15	40.67	46.00	-5.33	peak	
6		854.5000	44.31	-4.00	40.31	46.00	-5.69	peak	

9 RADIATED SPURIOUS EMISSION (ABOVE 1 GHZ)

9.1 LIMIT

20dBc in any 100 kHz bandwidth outside the operating frequency band. In case the emission fall within the restricted band specified on 15.205(a), then the 15.209(a) limit in the table below has to be followed.

Frequency Range: 9 kHz to 1 GHz		
FREQUENCY (MHz)	Field Strength (micorvolts/meter)	Measurement Distance (meters)
0.009~0.490	2400/F(kHz)	300
0.490~1.705	24000/F(kHz)	30
1.705~30.0	30	30
30~88	100	3
88~216	150	3
216~960	200	3
Above 960	500	3

Frequency Range: above 1 GHz				
FREQUENCY (MHz)	Class A (dBuV/m) (at 3m)		Class B (dBuV/m) (at 3m)	
	PEAK	AVERAGE	PEAK	AVERAGE
above 1 GHz	80	60	74	54

NOTE:

(1) The limit for radiated test was performed according to FCC PART 15B.
(2) The tighter limit applies at the band edges.
(3) Emission level (dBuV/m)=20log Emission level (uV/m).
(4) The test result calculated as following:
Measurement Value = Reading Level + Correct Factor
Correct Factor = Antenna Factor + Cable Loss – Amplifier Gain(if use)
Margin Level = Measurement Value – Limit Value

9.2 MEASUREMENT INSTRUMENTS LIST

Item	Kind of Equipment	Manufacturer	Type No.	Serial No.	Calibrated until
1	Spectrum Analyzer	R&S	FSP-30	100854	Sep. 08, 2014
2	Horn Antenna	Schwarzbeck	BBHA 9120	D-325	Apr. 15, 2014
3	Microwave Pre_amplifier	Agilent	8449B	3008A01714	Apr. 16, 2014
4	Microflex Cable	Harbour industries	27478LL142	1m	May. 13, 2014
5	Microflex Cable	EMC	S104-SMA	8m	May. 13, 2014
6	Microflex Cable	Harbour industries	27478LL142	3m	May. 13, 2014
7	Test Cable	LMR	LMR-400	12m	May. 14, 2014
8	Test Cable	LMR	LMR-400	3m	May. 14, 2014
9	Pre-Amplifier	Anritsu	MH648A	M92649	Jun. 18, 2014
10	Log-Bicon Antenna	Schwarzbeck	VULB9168-352	9168-352	Jun. 11, 2014
11	Preamplifier With Adaptor	EMC	EMC2654045	980030	Feb. 18, 2014
12	Horn Antenna	Schwarzbeck	BBHA 9170	187	Dec. 23, 2014

Remark: “N/A” denotes No Model Name, No Serial No. or No Calibration specified.

9.3 MEASURING INSTRUMENTS SETTING

Spectrum Analyzer	Parameter Setting
Attenuation	Auto
Start Frequency	1000 MHz
Stop Frequency	10th carrier harmonic
RB / VB (emission in restricted band)	1MHz / 1MHz for Peak, 1 MHz / 10Hz for Average
RB / VB (other emission)	1MHz / 1MHz for Peak, 1 MHz / 10Hz for Average

9.4 TEST PROCEDURES

a. The EUT was placed on the top of a rotating table 0.8 meters above the ground at a 3m Semi-anechoic chamber. The table was rotated 360 degrees to determine the position of the highest radiation.
b. The height of the equipment or of the substitution antenna shall be 0.8 m; the height of the test antenna shall vary between 1 m to 4 m. Both horizontal and vertical polarizations of the antenna are set to make the measurement.
c. The initial step in collecting conducted emission data is a spectrum analyzer peak detector mode pre-scanning the measurement frequency range. Significant peaks are then marked and then Quasi Peak detector mode re-measured.
d. If the Peak Mode measured value compliance with and lower than Quasi Peak Mode Limit, the EUT shall be deemed to meet QP Limits and then no additional QP Mode measurement performed.
e. For the actual test configuration, please refer to the related Item –EUT Test Photos.
f. The testing follows the guidelines in ANSI C63.4 and FCC Public Notice DA 00-705 Measurement Guidelines. In case the emission is fail due to the used RBW/VBW is too wide, marker-delta method of FCC Public Notice DA 00-705 will be followed.

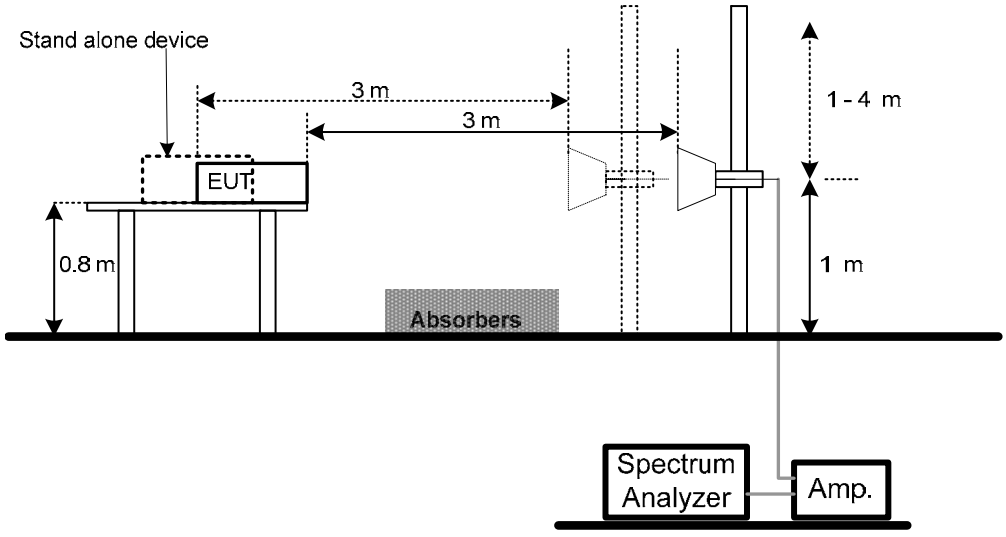
NOTE:

a. Reading in which marked as Peak means measurements by using are Peak Mode with instrument setting in RBW= 1 MHz, VBW= 1 MHz, Swp. Time = Auto.
Reading in which marked as AV means measurements by using are Average Mode with instrument setting in RBW= 1 MHz, VBW= 10 Hz, Swp. Time = Auto.
b. All readings are Peak Mode value unless otherwise stated AVG in column of Note. If the Peak Mode Measured value compliance with the Peak Limits and lower than AVG Limits, the EUT shall be deemed to meet both Peak & AVG Limits and then only Peak Mode was measured, but AVG Mode didn't perform.

9.5 DEVIATION FROM TEST STANDARD

No deviation

9.6 TEST SETUP LAYOUT



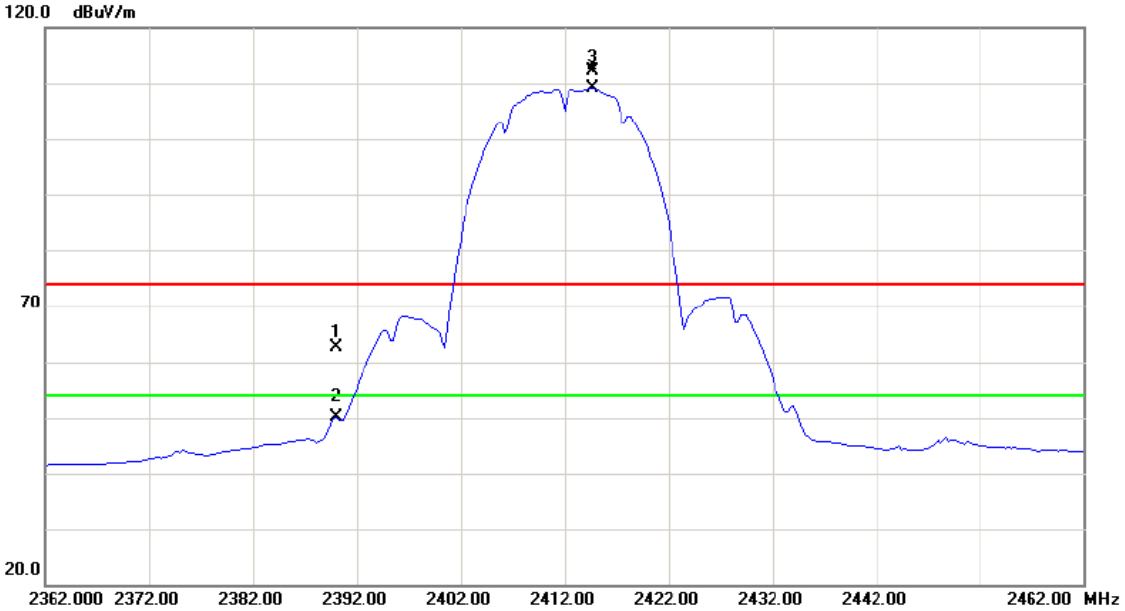
9.7 EUT OPERATING CONDITIONS

The EUT tested system was configured as the statements of 5.6 Unless otherwise a special operating condition is specified in the follows during the testing.

9.8 TEST RESULTS

EUT	Mini PCI Radio Module, 2x2 IEEE 802.11 b/g/n ,2.4 GHz	Model Name	RJ-1301
Temperature	26°C	Relative Humidity	60%
Test Voltage	AC 120V/60Hz		
Test Mode	IEEE 802.11b/2412 MHz		

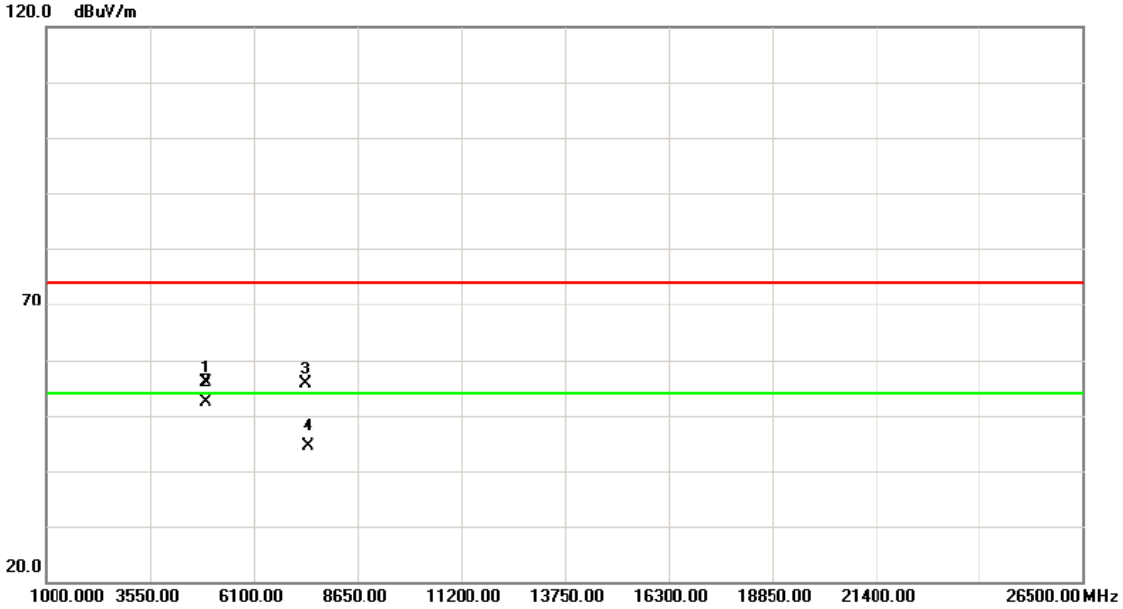
Polarization: Vertical



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1		2390.000	30.85	31.81	62.66	74.00	-11.34	peak	
2		2390.000	18.26	31.81	50.07	54.00	-3.93	AVG	
3	X	2414.750	80.27	31.91	112.18	74.00	38.18	peak	
4	*	2414.750	77.21	31.91	109.12	54.00	55.12	AVG	

EUT	Mini PCI Radio Module, 2x2 IEEE 802.11 b/g/n ,2.4 GHz	Model Name	RJ-1301
Temperature	26°C	Relative Humidity	60%
Test Voltage	AC 120V/60Hz		
Test Mode	IEEE 802.11b/2412 MHz		

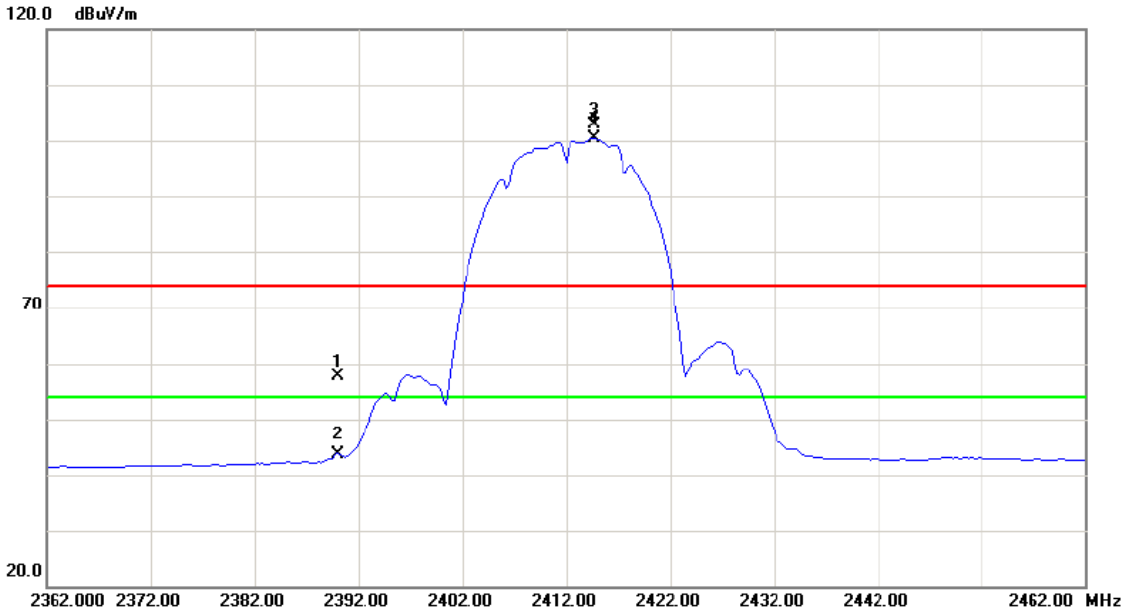
Polarization: Vertical



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1		4923.980	49.65	6.34	55.99	74.00	-18.01	peak	
2	*	4923.980	46.06	6.34	52.40	54.00	-1.60	AVG	
3		7385.940	42.64	13.05	55.69	74.00	-18.31	peak	
4		7385.940	31.36	13.05	44.41	54.00	-9.59	AVG	

EUT	Mini PCI Radio Module, 2x2 IEEE 802.11 b/g/n ,2.4 GHz	Model Name	RJ-1301
Temperature	26°C	Relative Humidity	60%
Test Voltage	AC 120V/60Hz		
Test Mode	IEEE 802.11b/2412 MHz		

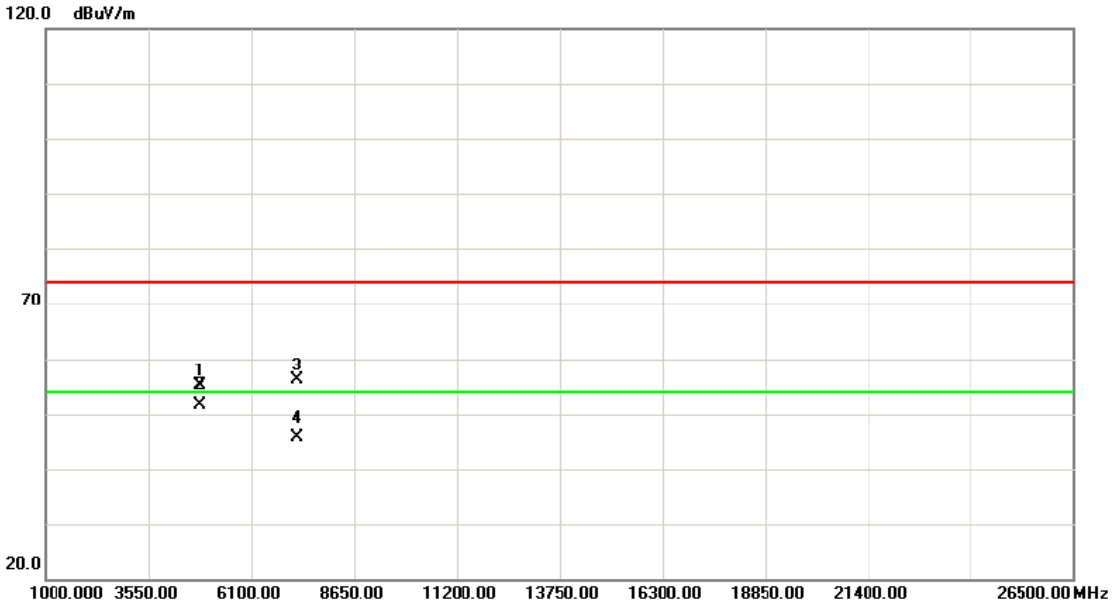
Polarization: Horizontal



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1		2390.000	25.88	31.81	57.69	74.00	-16.31	peak	
2		2390.000	11.94	31.81	43.75	54.00	-10.25	AVG	
3	X	2414.750	70.92	31.91	102.83	74.00	28.83	peak	
4	*	2414.750	68.56	31.91	100.47	54.00	46.47	AVG	

EUT	Mini PCI Radio Module, 2x2 IEEE 802.11 b/g/n ,2.4 GHz	Model Name	RJ-1301
Temperature	26°C	Relative Humidity	60%
Test Voltage	AC 120V/60Hz		
Test Mode	IEEE 802.11b/2412 MHz		

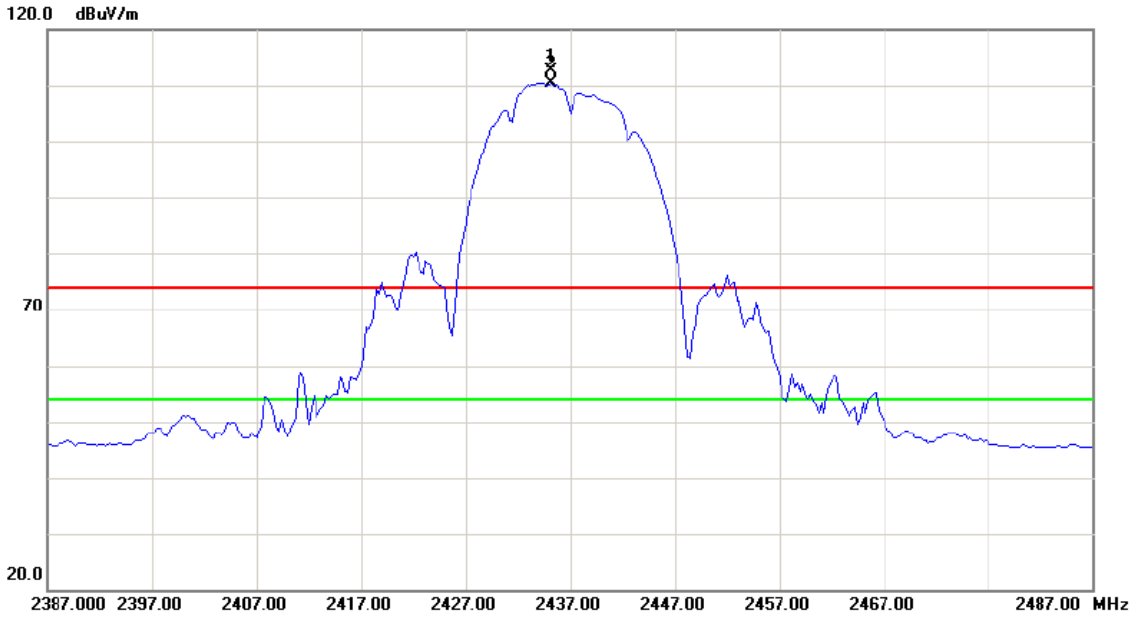
Polarization: Horizontal



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1		4824.025	48.82	6.21	55.03	74.00	-18.97	peak	
2	*	4824.025	45.31	6.21	51.52	54.00	-2.48	AVG	
3		7236.000	43.57	12.49	56.06	74.00	-17.94	peak	
4		7236.000	33.11	12.49	45.60	54.00	-8.40	AVG	

EUT	Mini PCI Radio Module, 2x2 IEEE 802.11 b/g/n ,2.4 GHz	Model Name	RJ-1301
Temperature	26°C	Relative Humidity	60%
Test Voltage	AC 120V/60Hz		
Test Mode	IEEE 802.11b/2437 MHz		

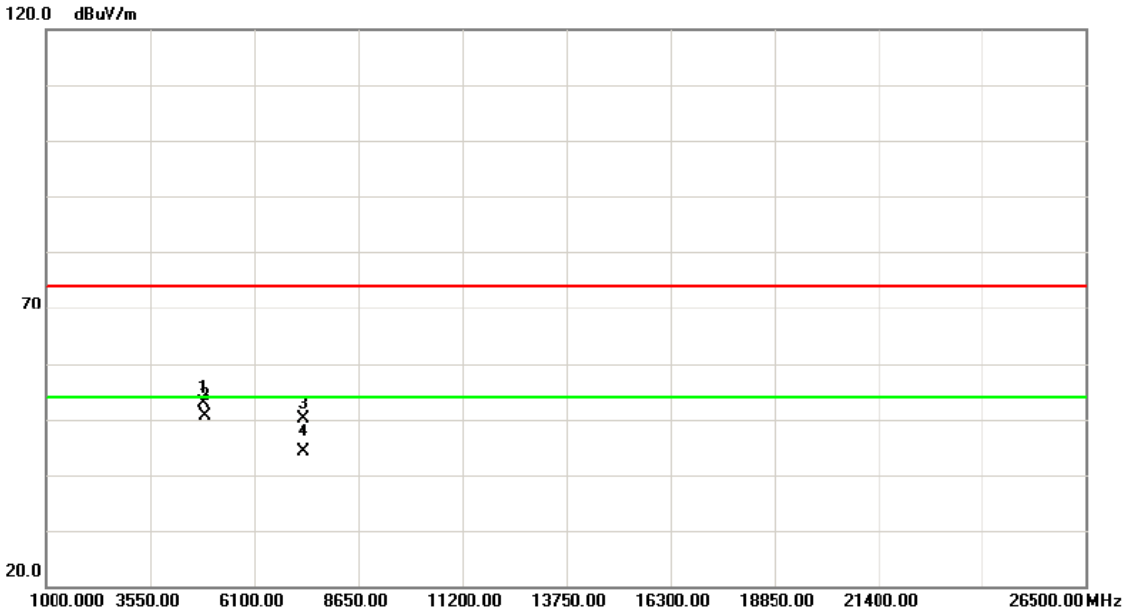
Polarization: Vertical



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1	X	2435.250	80.65	32.00	112.65	74.00	38.65	peak	
2	*	2435.250	78.40	32.00	110.40	54.00	56.40	AVG	

EUT	Mini PCI Radio Module, 2x2 IEEE 802.11 b/g/n ,2.4 GHz	Model Name	RJ-1301
Temperature	26°C	Relative Humidity	60%
Test Voltage	AC 120V/60Hz		
Test Mode	IEEE 802.11b/2437 MHz		

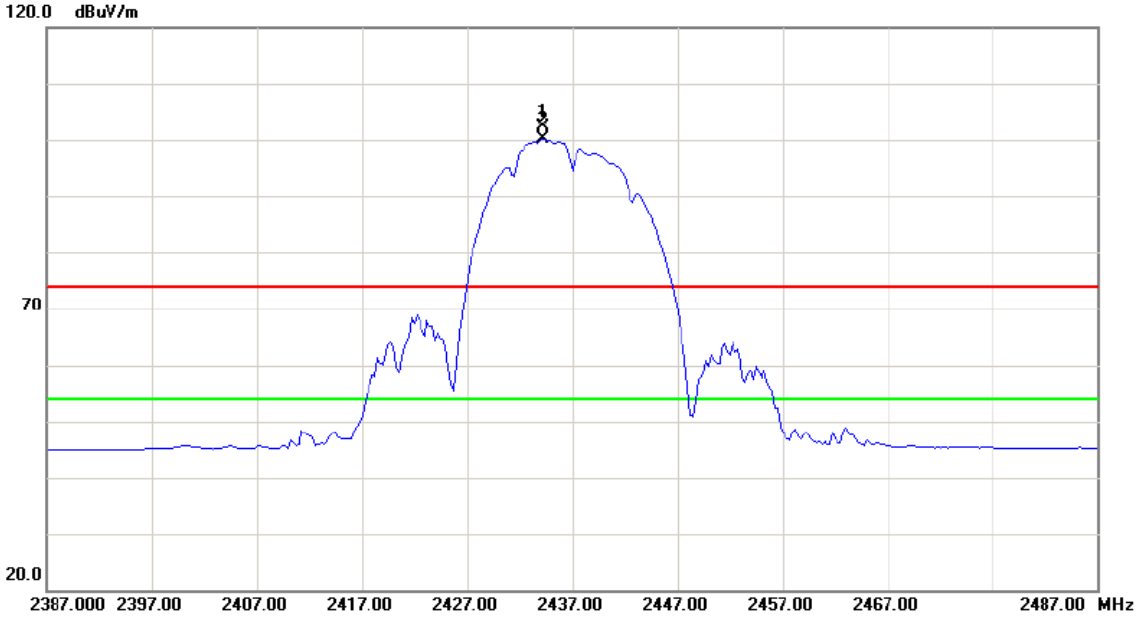
Polarization: Vertical



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1		4874.050	46.69	6.28	52.97	74.00	-21.03	peak	
2	*	4874.050	44.37	6.28	50.65	54.00	-3.35	AVG	
3		7310.925	37.45	12.77	50.22	74.00	-23.78	peak	
4		7310.925	31.26	12.77	44.03	54.00	-9.97	AVG	

EUT	Mini PCI Radio Module, 2x2 IEEE 802.11 b/g/n ,2.4 GHz	Model Name	RJ-1301
Temperature	26°C	Relative Humidity	60%
Test Voltage	AC 120V/60Hz		
Test Mode	IEEE 802.11b/2437 MHz		

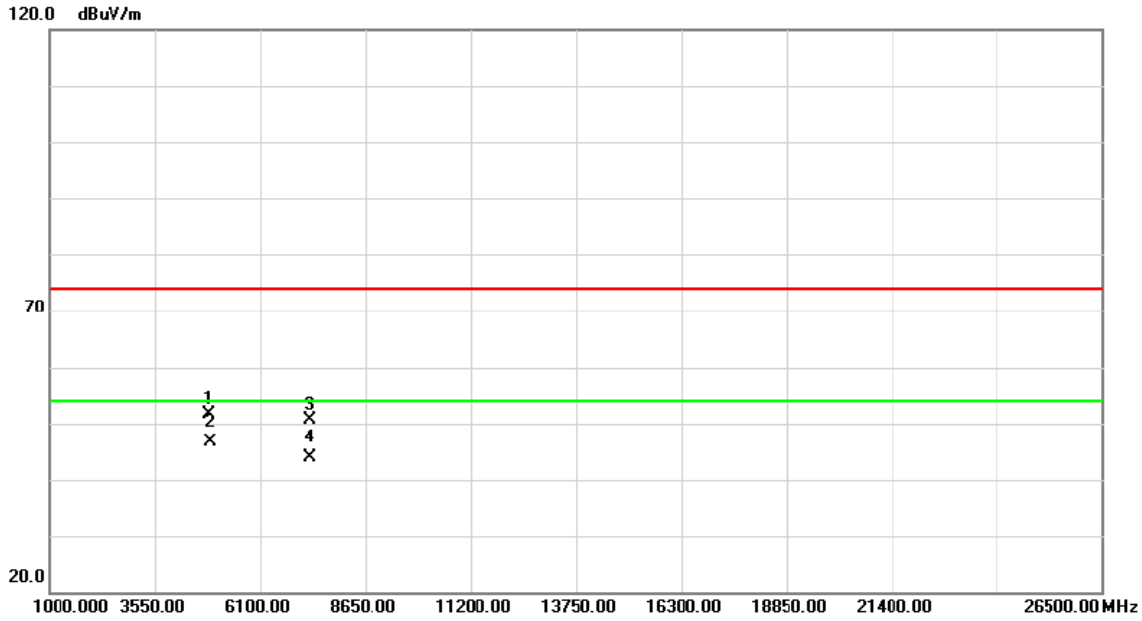
Polarization: Horizontal



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1	X	2434.250	70.28	31.99	102.27	74.00	28.27	peak	
2	*	2434.250	68.09	31.99	100.08	54.00	46.08	AVG	

EUT	Mini PCI Radio Module, 2x2 IEEE 802.11 b/g/n ,2.4 GHz	Model Name	RJ-1301
Temperature	26°C	Relative Humidity	60%
Test Voltage	AC 120V/60Hz		
Test Mode	IEEE 802.11b/2437 MHz		

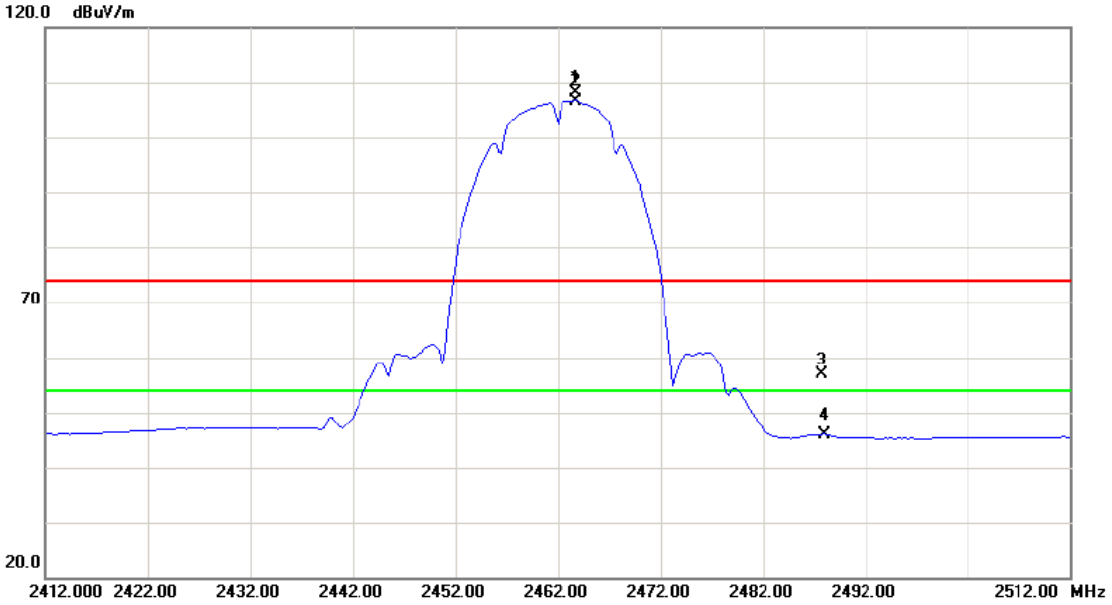
Polarization: Horizontal



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1		4874.000	45.31	6.28	51.59	74.00	-22.41	peak	
2	*	4874.000	40.32	6.28	46.60	54.00	-7.40	AVG	
3		7311.050	37.81	12.77	50.58	74.00	-23.42	peak	
4		7311.050	31.23	12.77	44.00	54.00	-10.00	AVG	

EUT	Mini PCI Radio Module, 2x2 IEEE 802.11 b/g/n ,2.4 GHz	Model Name	RJ-1301
Temperature	26°C	Relative Humidity	60%
Test Voltage	AC 120V/60Hz		
Test Mode	IEEE 802.11b/2462 MHz		

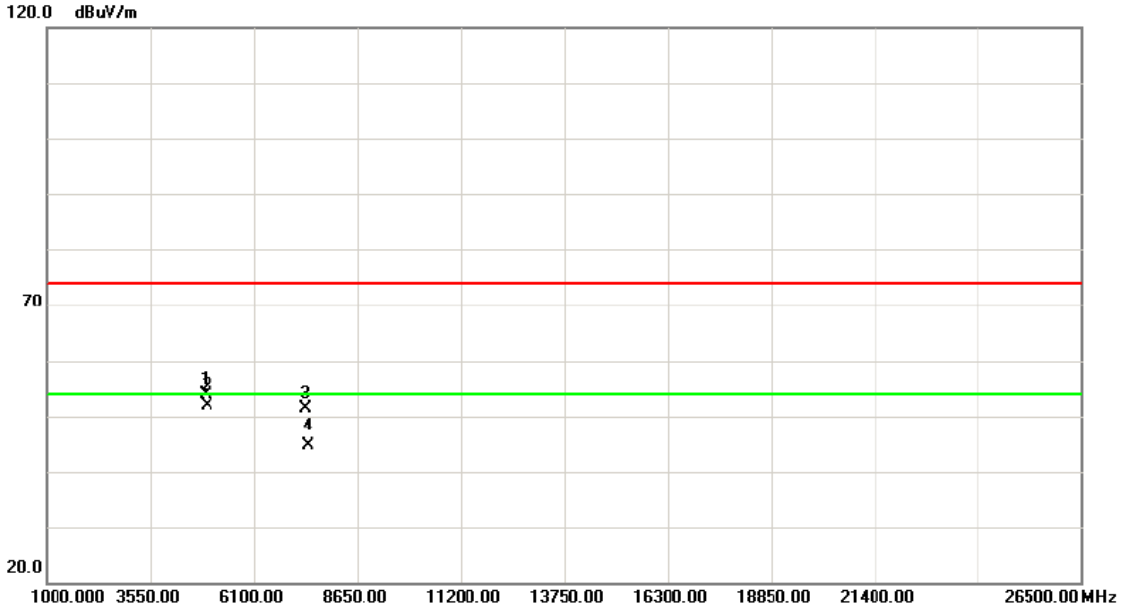
Polarization: Vertical



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1	X	2463.750	76.07	32.11	108.18	74.00	34.18	peak	
2	*	2463.750	74.64	32.11	106.75	54.00	52.75	AVG	
3		2487.750	24.79	32.21	57.00	74.00	-17.00	peak	
4		2487.750	13.78	32.21	45.99	54.00	-8.01	AVG	

EUT	Mini PCI Radio Module, 2x2 IEEE 802.11 b/g/n ,2.4 GHz	Model Name	RJ-1301
Temperature	26°C	Relative Humidity	60%
Test Voltage	AC 120V/60Hz		
Test Mode	IEEE 802.11b/2462 MHz		

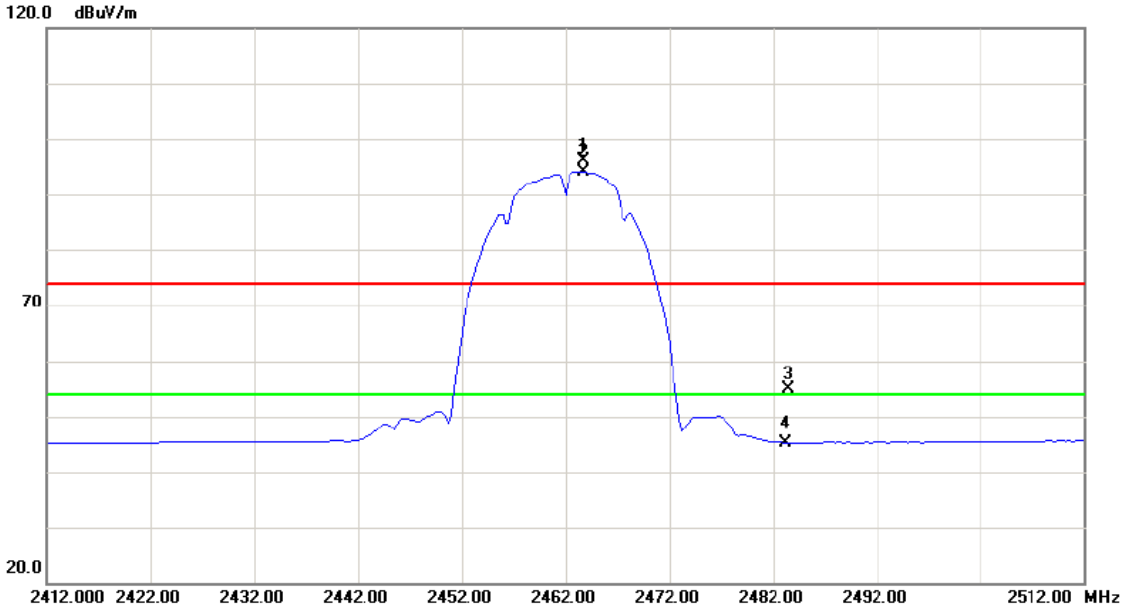
Polarization: Vertical



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1		4924.000	47.59	6.34	53.93	74.00	-20.07	peak	
2	*	4924.000	45.51	6.34	51.85	54.00	-2.15	AVG	
3		7386.075	38.29	13.05	51.34	74.00	-22.66	peak	
4		7386.075	31.55	13.05	44.60	54.00	-9.40	AVG	

EUT	Mini PCI Radio Module, 2x2 IEEE 802.11 b/g/n ,2.4 GHz	Model Name	RJ-1301
Temperature	26°C	Relative Humidity	60%
Test Voltage	AC 120V/60Hz		
Test Mode	IEEE 802.11b/2462 MHz		

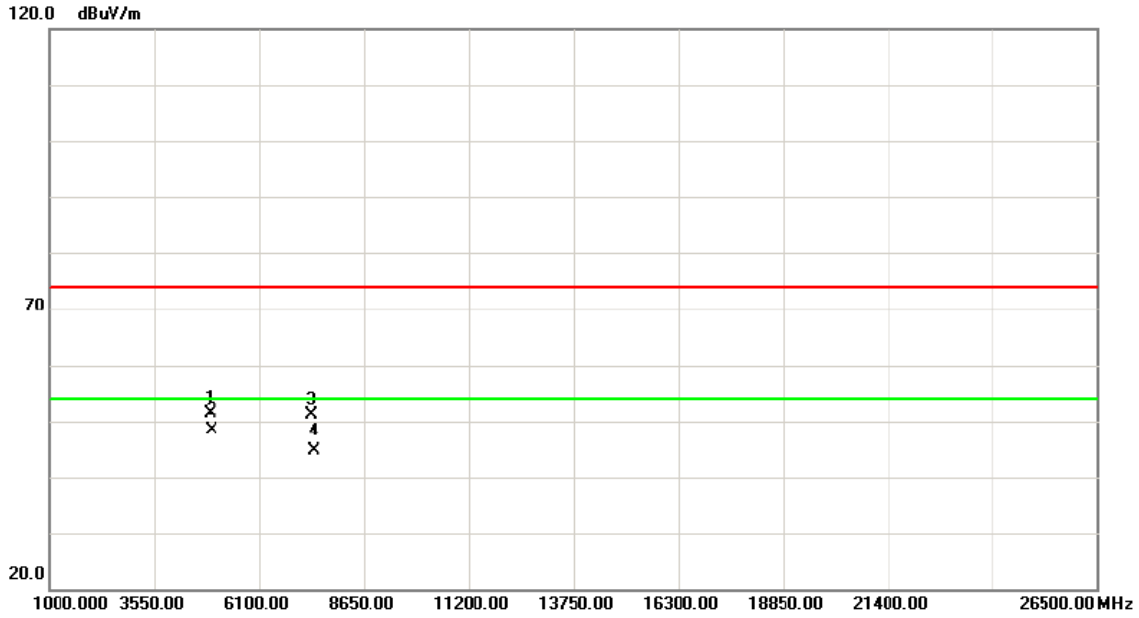
Polarization: Horizontal



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1	X	2463.750	63.95	32.11	96.06	74.00	22.06	peak	
2	*	2463.750	62.13	32.11	94.24	54.00	40.24	AVG	
3		2483.500	22.81	32.19	55.00	74.00	-19.00	peak	
4		2483.500	13.03	32.19	45.22	54.00	-8.78	AVG	

EUT	Mini PCI Radio Module, 2x2 IEEE 802.11 b/g/n ,2.4 GHz	Model Name	RJ-1301
Temperature	26°C	Relative Humidity	60%
Test Voltage	AC 120V/60Hz		
Test Mode	IEEE 802.11b/2462 MHz		

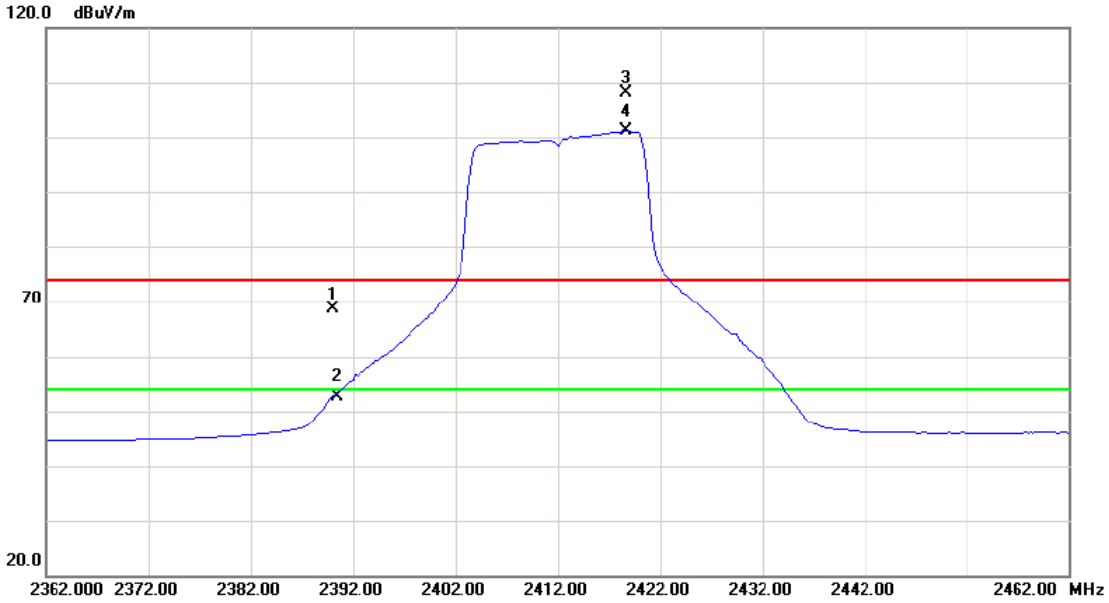
Polarization: Horizontal



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1		4924.025	44.99	6.34	51.33	74.00	-22.67	peak	
2	*	4924.025	41.92	6.34	48.26	54.00	-5.74	AVG	
3		7386.050	38.15	13.05	51.20	74.00	-22.80	peak	
4		7386.050	31.49	13.05	44.54	54.00	-9.46	AVG	

EUT	Mini PCI Radio Module, 2x2 IEEE 802.11 b/g/n ,2.4 GHz	Model Name	RJ-1301
Temperature	26°C	Relative Humidity	60%
Test Voltage	AC 120V/60Hz		
Test Mode	IEEE 802.11g/2412 MHz		

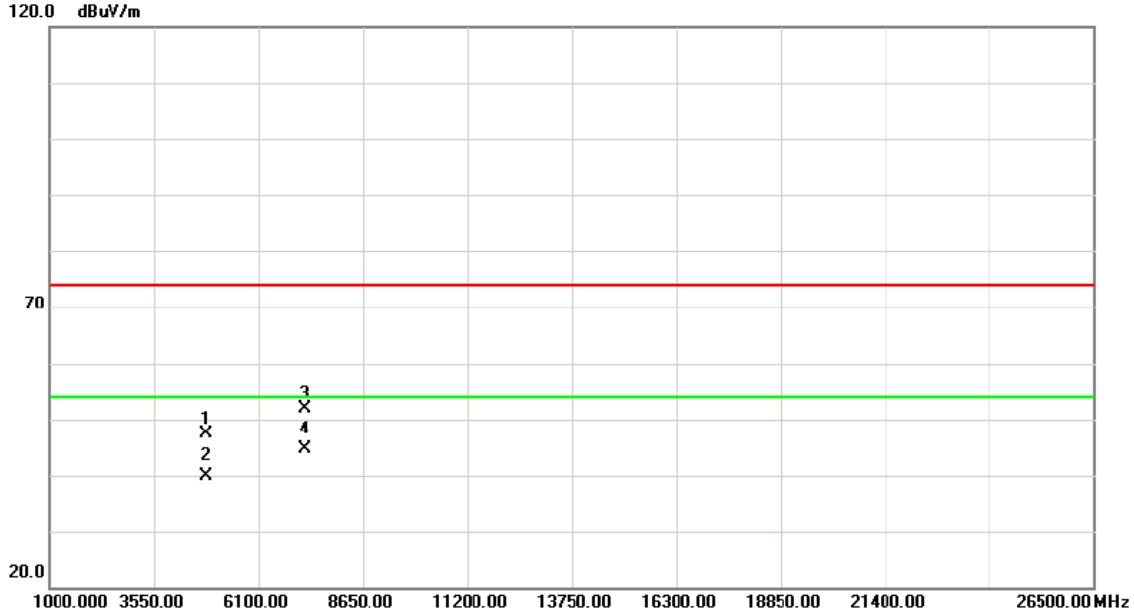
Polarization: Vertical



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1		2390.000	36.74	31.81	68.55	74.00	-5.45	peak	
2		2390.000	20.94	31.81	52.75	54.00	-1.25	AVG	
3	X	2418.750	76.17	31.93	108.10	74.00	34.10	peak	
4	*	2418.750	69.20	31.93	101.13	54.00	47.13	AVG	

EUT	Mini PCI Radio Module, 2x2 IEEE 802.11 b/g/n ,2.4 GHz	Model Name	RJ-1301
Temperature	26°C	Relative Humidity	60%
Test Voltage	AC 120V/60Hz		
Test Mode	IEEE 802.11g/2412 MHz		

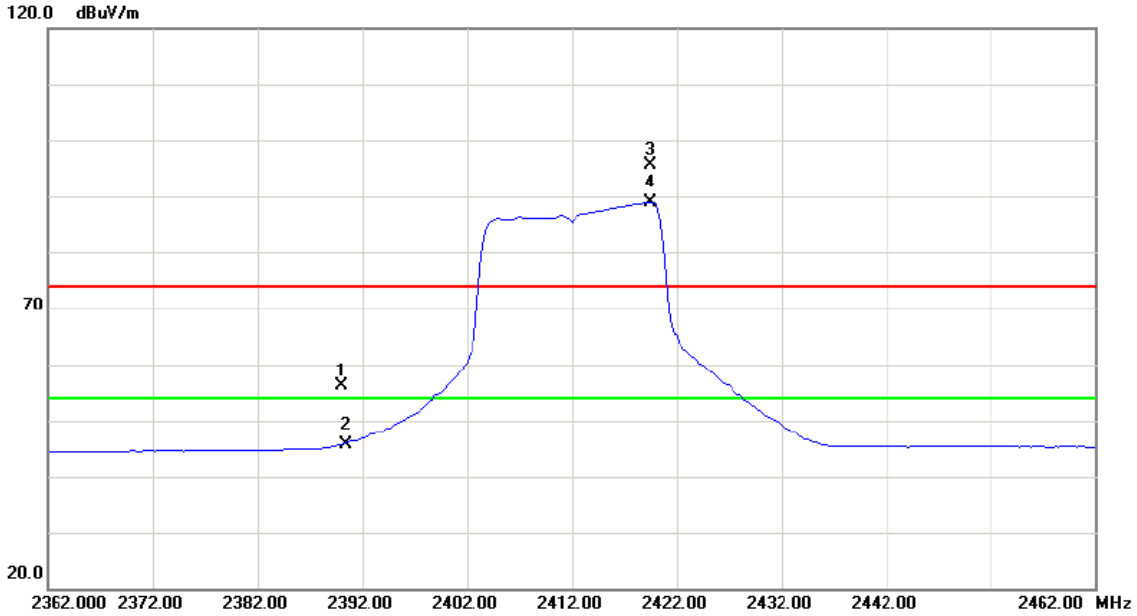
Polarization: Vertical



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1		4824.000	41.17	6.21	47.38	74.00	-26.62	peak	
2		4824.000	33.74	6.21	39.95	54.00	-14.05	AVG	
3		7236.250	39.36	12.49	51.85	74.00	-22.15	peak	
4	*	7236.250	32.26	12.49	44.75	54.00	-9.25	AVG	

EUT	Mini PCI Radio Module, 2x2 IEEE 802.11 b/g/n ,2.4 GHz	Model Name	RJ-1301
Temperature	26°C	Relative Humidity	60%
Test Voltage	AC 120V/60Hz		
Test Mode	IEEE 802.11g/2412 MHz		

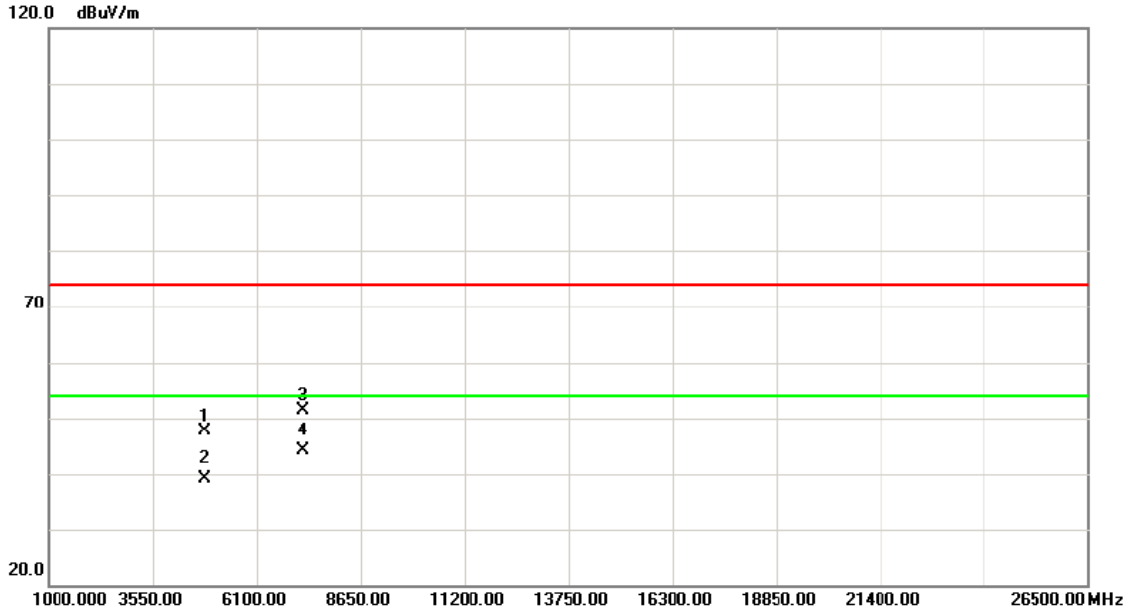
Polarization: Horizontal



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1		2390.000	24.23	31.81	56.04	74.00	-17.96	peak	
2		2390.000	13.85	31.81	45.66	54.00	-8.34	AVG	
3	X	2419.500	63.78	31.93	95.71	74.00	21.71	peak	
4	*	2419.500	56.89	31.93	88.82	54.00	34.82	AVG	

EUT	Mini PCI Radio Module, 2x2 IEEE 802.11 b/g/n ,2.4 GHz	Model Name	RJ-1301
Temperature	26°C	Relative Humidity	60%
Test Voltage	AC 120V/60Hz		
Test Mode	IEEE 802.11g/2412 MHz		

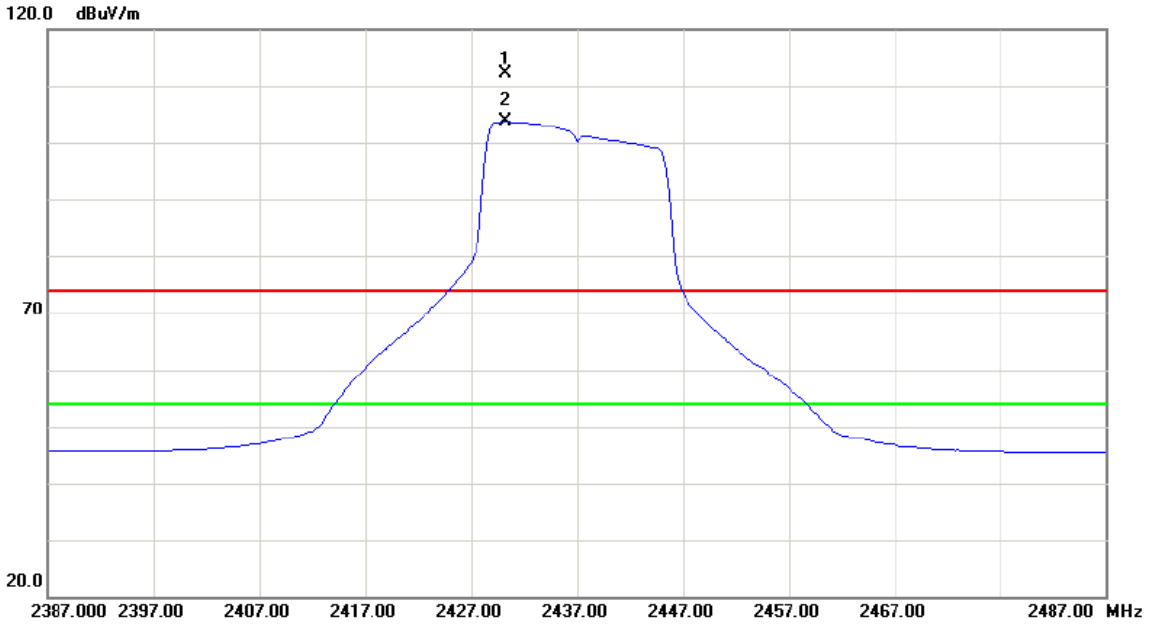
Polarization: Horizontal



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1		4823.850	41.34	6.21	47.55	74.00	-26.45	peak	
2		4823.850	33.03	6.21	39.24	54.00	-14.76	AVG	
3		7235.900	38.95	12.49	51.44	74.00	-22.56	peak	
4	*	7235.900	31.71	12.49	44.20	54.00	-9.80	AVG	

EUT	Mini PCI Radio Module, 2x2 IEEE 802.11 b/g/n ,2.4 GHz	Model Name	RJ-1301
Temperature	26°C	Relative Humidity	60%
Test Voltage	AC 120V/60Hz		
Test Mode	IEEE 802.11g/2437 MHz		

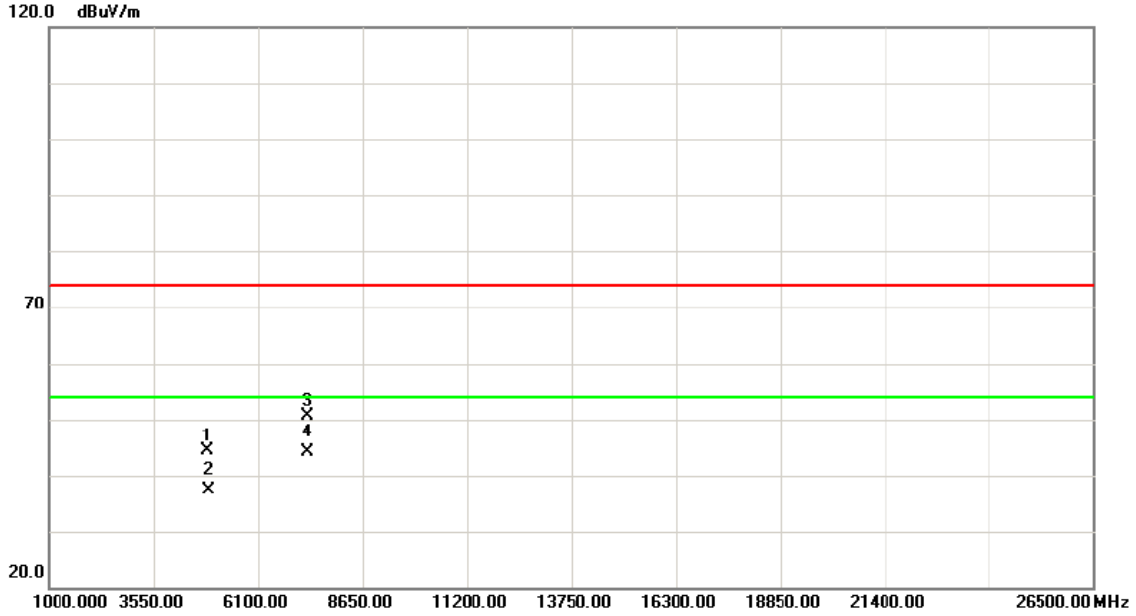
Polarization: Vertical



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1	X	2430.250	80.21	31.97	112.18	74.00	38.18	peak	
2	*	2430.250	71.79	31.97	103.76	54.00	49.76	AVG	

EUT	Mini PCI Radio Module, 2x2 IEEE 802.11 b/g/n ,2.4 GHz	Model Name	RJ-1301
Temperature	26°C	Relative Humidity	60%
Test Voltage	AC 120V/60Hz		
Test Mode	IEEE 802.11g/2437 MHz		

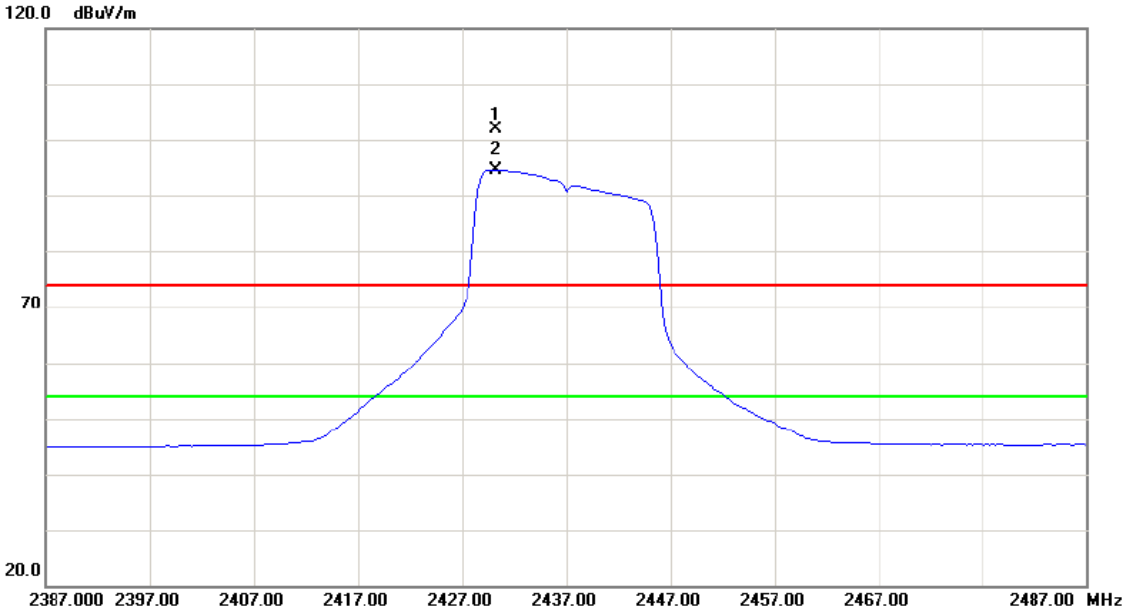
Polarization: Vertical



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1		4873.750	38.22	6.28	44.50	74.00	-29.50	peak	
2		4873.750	31.15	6.28	37.43	54.00	-16.57	AVG	
3		7310.925	37.96	12.77	50.73	74.00	-23.27	peak	
4	*	7310.925	31.48	12.77	44.25	54.00	-9.75	AVG	

EUT	Mini PCI Radio Module, 2x2 IEEE 802.11 b/g/n ,2.4 GHz	Model Name	RJ-1301
Temperature	26°C	Relative Humidity	60%
Test Voltage	AC 120V/60Hz		
Test Mode	IEEE 802.11g/2437 MHz		

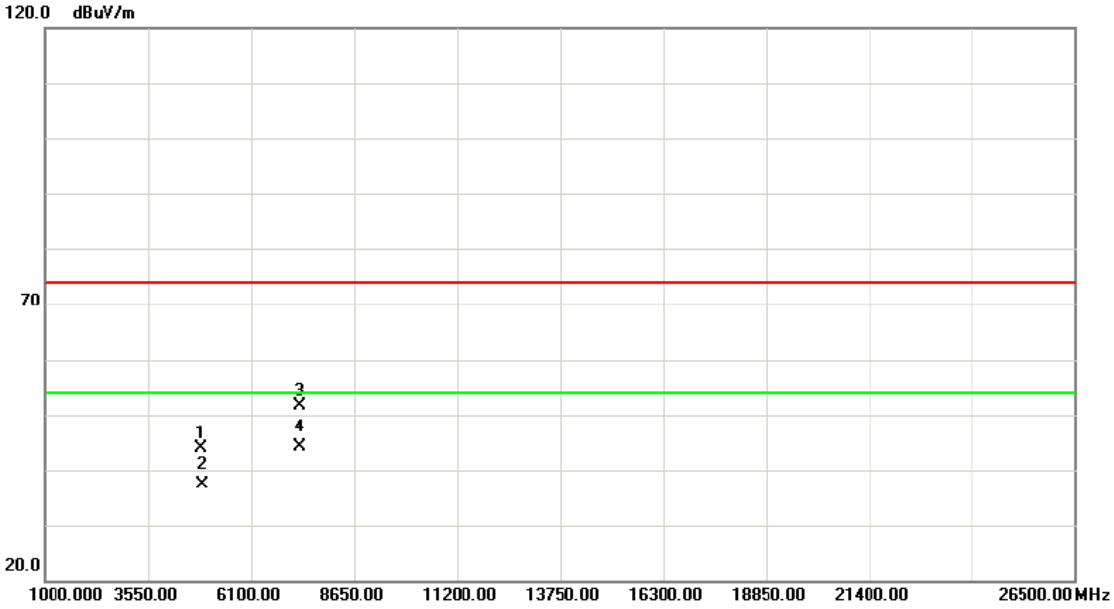
Polarization: Horizontal



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1	X	2430.250	69.87	31.97	101.84	74.00	27.84	peak	
2	*	2430.250	62.63	31.97	94.60	54.00	40.60	AVG	

EUT	Mini PCI Radio Module, 2x2 IEEE 802.11 b/g/n ,2.4 GHz	Model Name	RJ-1301
Temperature	26°C	Relative Humidity	60%
Test Voltage	AC 120V/60Hz		
Test Mode	IEEE 802.11g/2437 MHz		

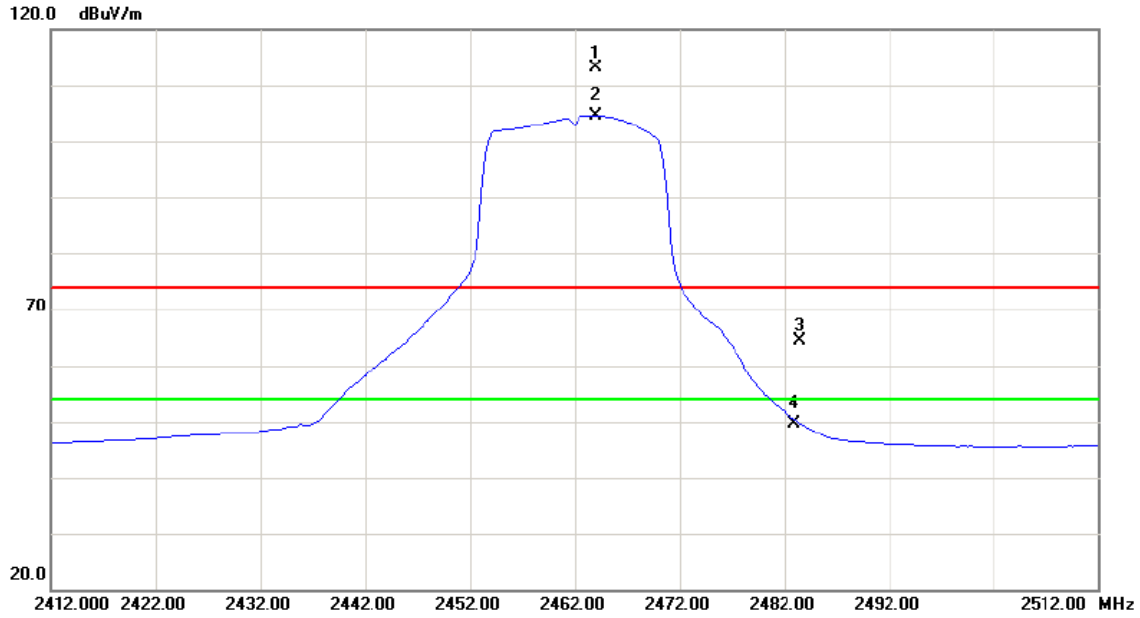
Polarization: Horizontal



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1		4874.250	37.51	6.28	43.79	74.00	-30.21	peak	
2		4874.250	31.07	6.28	37.35	54.00	-16.65	AVG	
3		7311.050	38.94	12.77	51.71	74.00	-22.29	peak	
4	*	7311.050	31.46	12.77	44.23	54.00	-9.77	AVG	

EUT	Mini PCI Radio Module, 2x2 IEEE 802.11 b/g/n ,2.4 GHz	Model Name	RJ-1301
Temperature	26°C	Relative Humidity	60%
Test Voltage	AC 120V/60Hz		
Test Mode	IEEE 802.11g/2462 MHz		

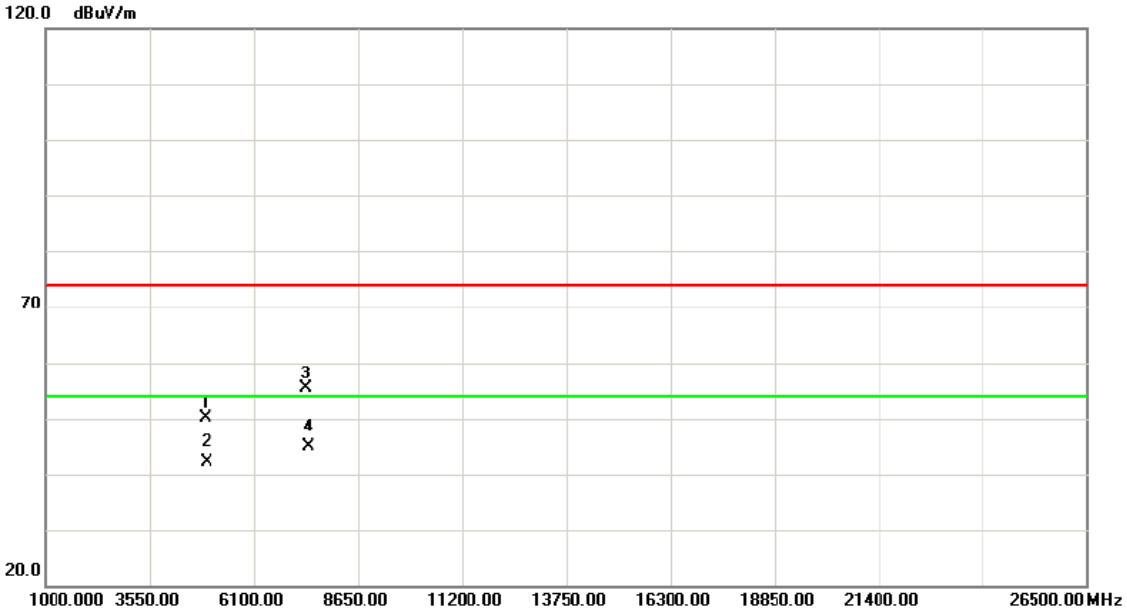
Polarization: Vertical



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1	X	2464.000	80.99	32.11	113.10	74.00	39.10	peak	
2	*	2464.000	72.59	32.11	104.70	54.00	50.70	AVG	
3		2483.500	32.12	32.19	64.31	74.00	-9.69	peak	
4		2483.500	17.51	32.19	49.70	54.00	-4.30	AVG	

EUT	Mini PCI Radio Module, 2x2 IEEE 802.11 b/g/n ,2.4 GHz	Model Name	RJ-1301
Temperature	26°C	Relative Humidity	60%
Test Voltage	AC 120V/60Hz		
Test Mode	IEEE 802.11g/2462 MHz		

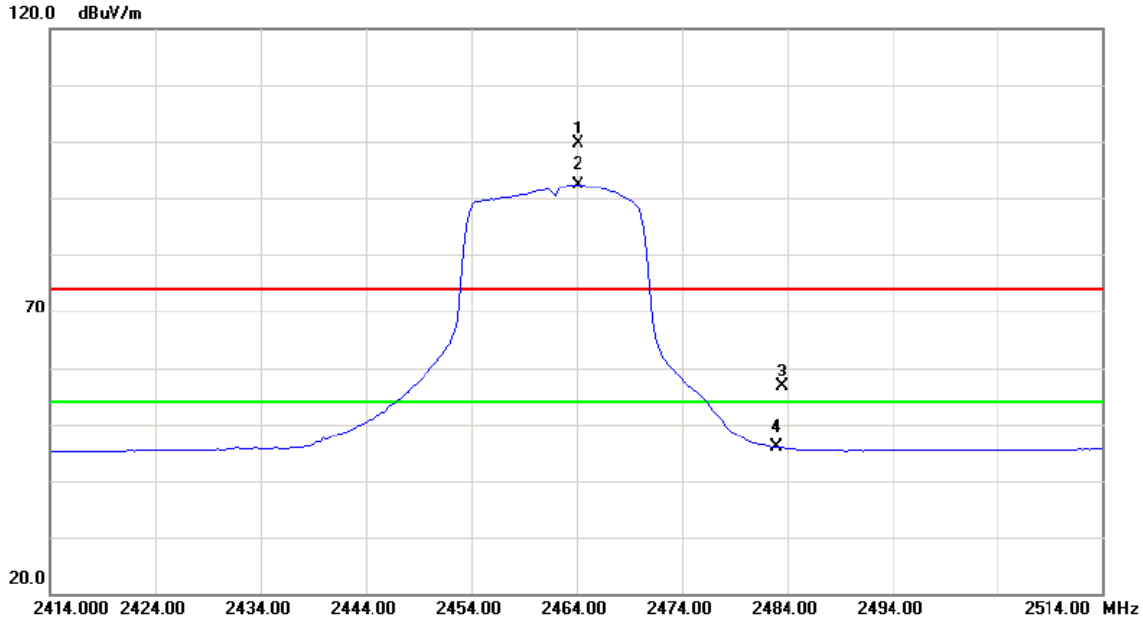
Polarization: Vertical



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1		4925.125	43.82	6.35	50.17	74.00	-23.83	peak	
2		4925.125	35.87	6.35	42.22	54.00	-11.78	AVG	
3		7385.750	42.25	13.05	55.30	74.00	-18.70	peak	
4	*	7385.750	31.78	13.05	44.83	54.00	-9.17	AVG	

EUT	Mini PCI Radio Module, 2x2 IEEE 802.11 b/g/n ,2.4 GHz	Model Name	RJ-1301
Temperature	26°C	Relative Humidity	60%
Test Voltage	AC 120V/60Hz		
Test Mode	IEEE 802.11g/2462 MHz		

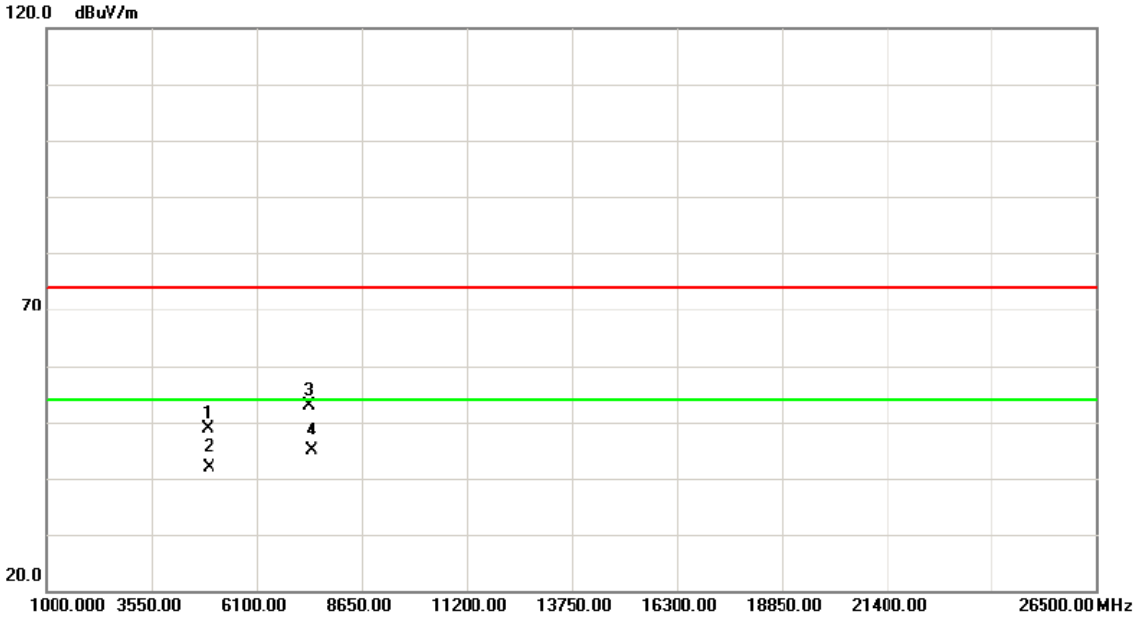
Polarization: Horizontal



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1	X	2464.250	67.44	32.11	99.55	74.00	25.55	peak	
2	*	2464.250	60.24	32.11	92.35	54.00	38.35	AVG	
3		2483.500	24.42	32.19	56.61	74.00	-17.39	peak	
4		2483.500	13.61	32.19	45.80	54.00	-8.20	AVG	

EUT	Mini PCI Radio Module, 2x2 IEEE 802.11 b/g/n ,2.4 GHz	Model Name	RJ-1301
Temperature	26°C	Relative Humidity	60%
Test Voltage	AC 120V/60Hz		
Test Mode	IEEE 802.11g/2462 MHz		

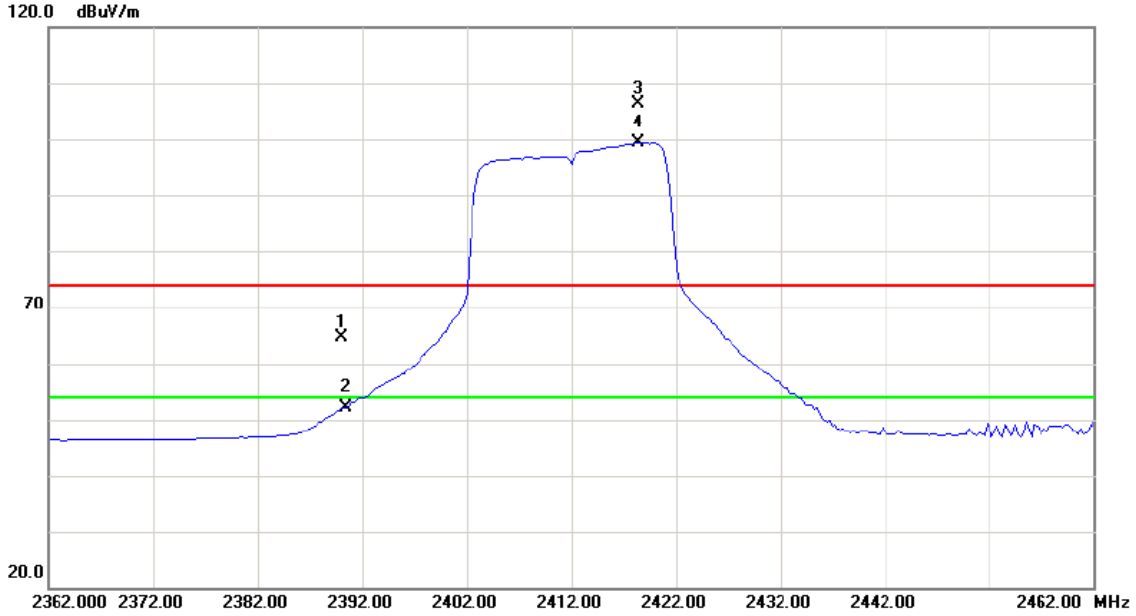
Polarization: Horizontal



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1		4925.000	42.45	6.35	48.80	74.00	-25.20	peak	
2		4925.000	35.50	6.35	41.85	54.00	-12.15	AVG	
3		7385.875	39.88	13.05	52.93	74.00	-21.07	peak	
4	*	7385.875	31.79	13.05	44.84	54.00	-9.16	AVG	

EUT	Mini PCI Radio Module, 2x2 IEEE 802.11 b/g/n ,2.4 GHz	Model Name	RJ-1301
Temperature	26°C	Relative Humidity	60%
Test Voltage	AC 120V/60Hz		
Test Mode	IEEE 802.11n (20 MHz)/2412 MHz-1TX		

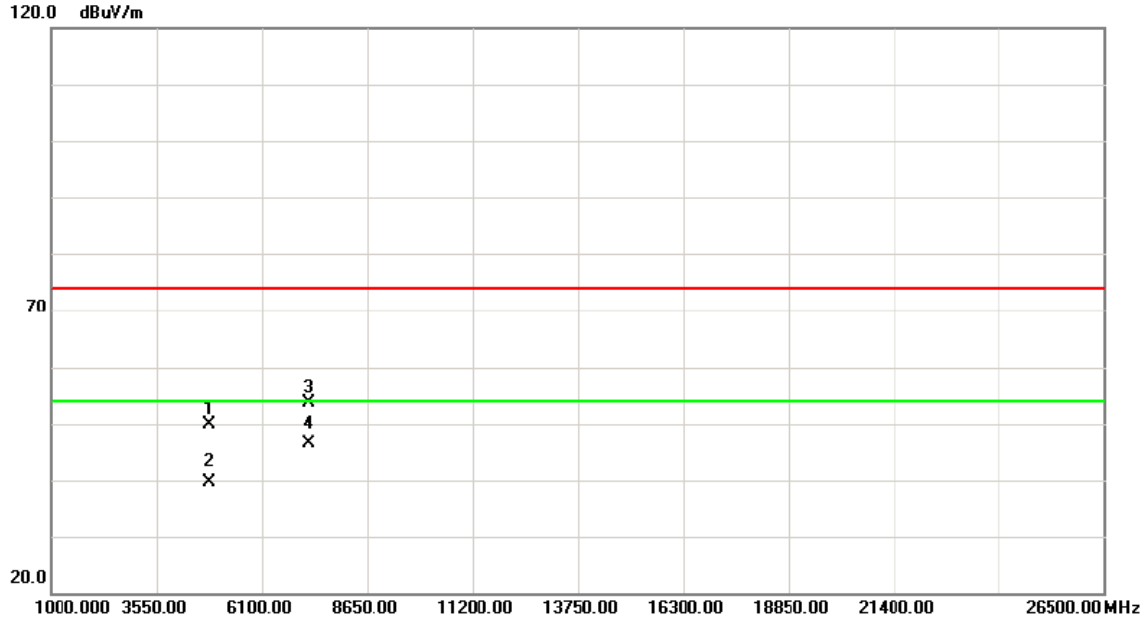
Polarization: Vertical



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1		2390.000	32.88	31.81	64.69	74.00	-9.31	peak	
2		2390.000	20.22	31.81	52.03	54.00	-1.97	AVG	
3	X	2418.500	74.48	31.93	106.41	74.00	32.41	peak	
4	*	2418.500	67.44	31.93	99.37	54.00	45.37	AVG	

EUT	Mini PCI Radio Module, 2x2 IEEE 802.11 b/g/n ,2.4 GHz	Model Name	RJ-1301
Temperature	26°C	Relative Humidity	60%
Test Voltage	AC 120V/60Hz		
Test Mode	IEEE 802.11n (20 MHz)/2412 MHz-1TX		

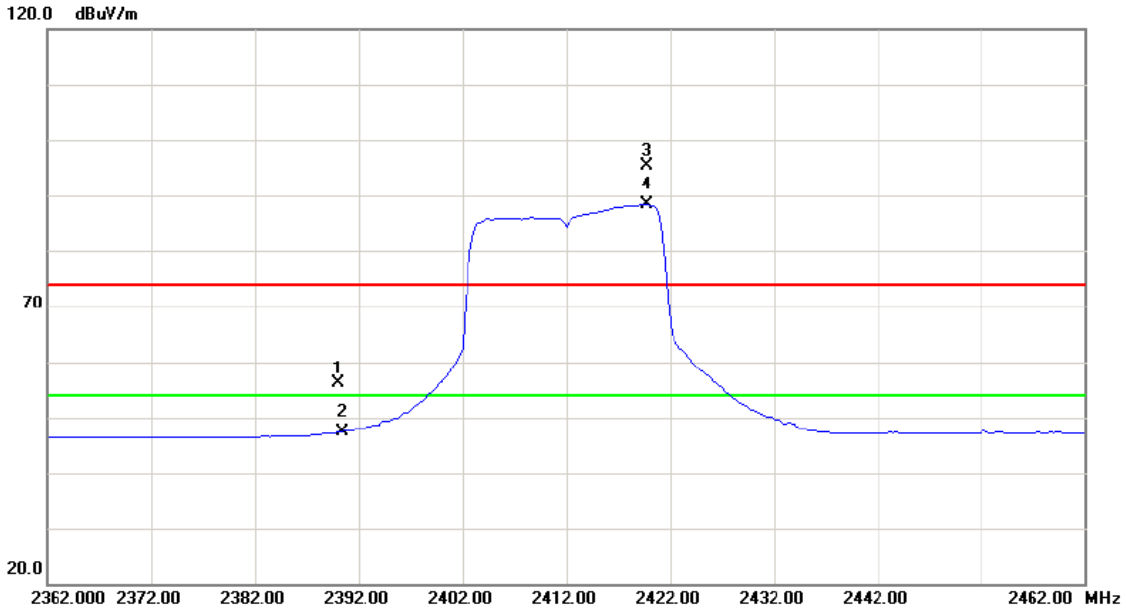
Polarization: Vertical



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1		4824.000	43.61	6.21	49.82	74.00	-24.18	peak	
2		4824.000	33.32	6.21	39.53	54.00	-14.47	AVG	
3		7236.000	41.03	12.49	53.52	74.00	-20.48	peak	
4	*	7236.000	33.87	12.49	46.36	54.00	-7.64	AVG	

EUT	Mini PCI Radio Module, 2x2 IEEE 802.11 b/g/n ,2.4 GHz	Model Name	RJ-1301
Temperature	26°C	Relative Humidity	60%
Test Voltage	AC 120V/60Hz		
Test Mode	IEEE 802.11n (20 MHz)/2412 MHz-1TX		

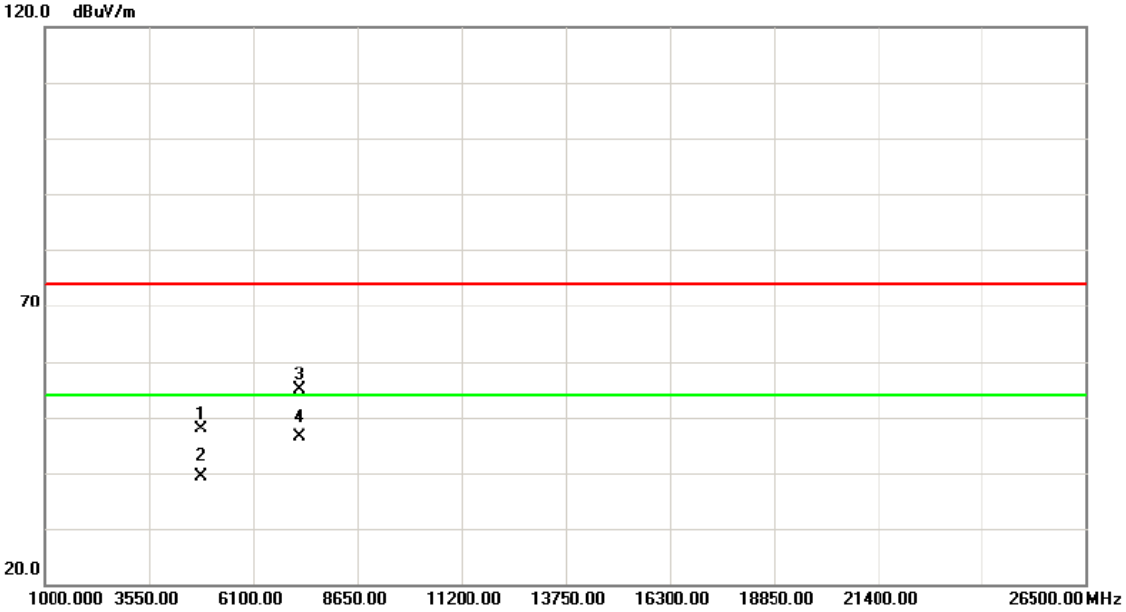
Polarization: Horizontal



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1		2390.000	24.25	31.81	56.06	74.00	-17.94	peak	
2		2390.000	15.46	31.81	47.27	54.00	-6.73	AVG	
3	X	2419.750	63.53	31.93	95.46	74.00	21.46	peak	
4	*	2419.750	56.44	31.93	88.37	54.00	34.37	AVG	

EUT	Mini PCI Radio Module, 2x2 IEEE 802.11 b/g/n ,2.4 GHz	Model Name	RJ-1301
Temperature	26°C	Relative Humidity	60%
Test Voltage	AC 120V/60Hz		
Test Mode	IEEE 802.11n (20 MHz)/2412 MHz-1TX		

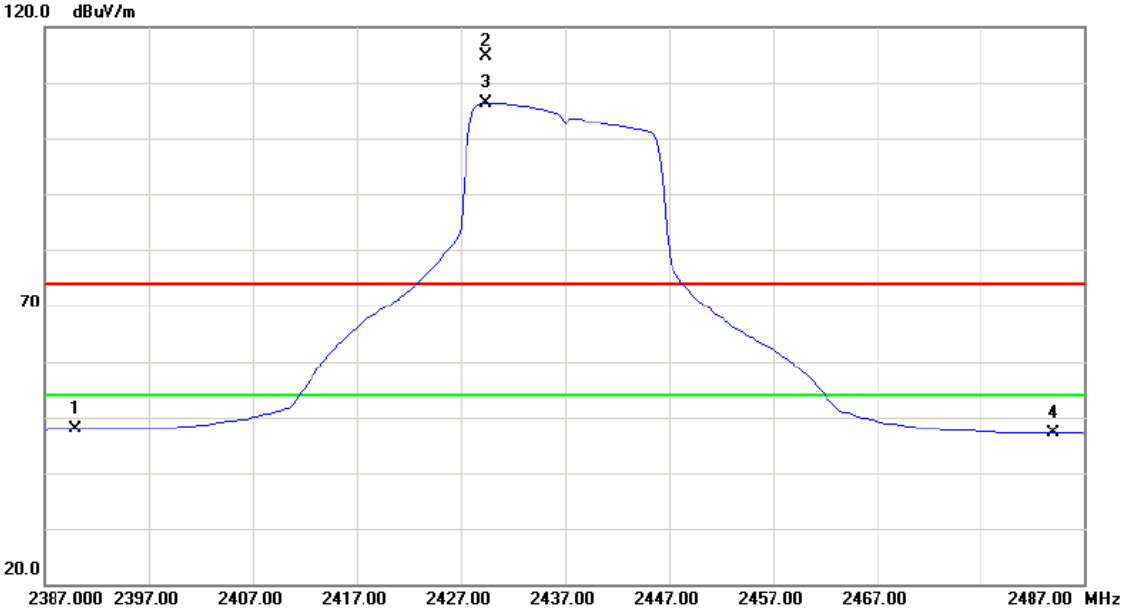
Polarization: Horizontal



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1		4824.000	41.57	6.21	47.78	74.00	-26.22	peak	
2		4824.000	33.08	6.21	39.29	54.00	-14.71	AVG	
3		7236.000	42.39	12.49	54.88	74.00	-19.12	peak	
4	*	7236.000	33.87	12.49	46.36	54.00	-7.64	AVG	

EUT	Mini PCI Radio Module, 2x2 IEEE 802.11 b/g/n ,2.4 GHz	Model Name	RJ-1301
Temperature	26°C	Relative Humidity	60%
Test Voltage	AC 120V/60Hz		
Test Mode	IEEE 802.11n (20 MHz)/2437 MHz-1TX		

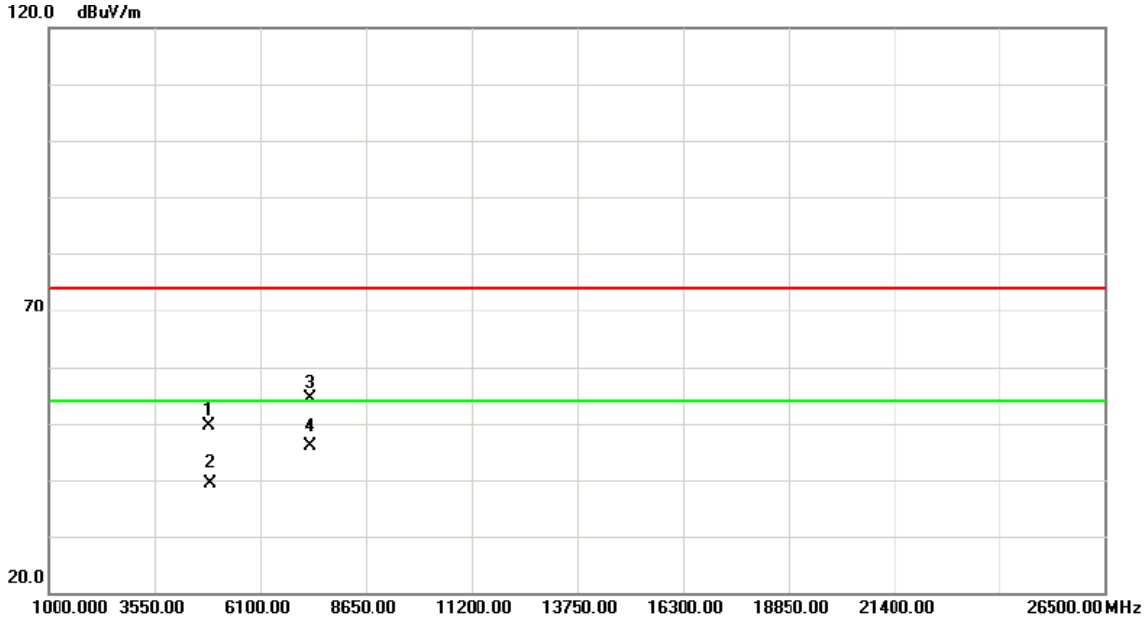
Polarization: Vertical



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1		2390.000	16.02	31.81	47.83	54.00	-6.17	AVG	
2	X	2429.500	82.86	31.97	114.83	74.00	40.83	peak	
3	*	2429.500	74.38	31.97	106.35	54.00	52.35	AVG	
4		2483.500	14.85	32.19	47.04	54.00	-6.96	AVG	

EUT	Mini PCI Radio Module, 2x2 IEEE 802.11 b/g/n ,2.4 GHz	Model Name	RJ-1301
Temperature	26°C	Relative Humidity	60%
Test Voltage	AC 120V/60Hz		
Test Mode	IEEE 802.11n (20 MHz)/2437 MHz-1TX		

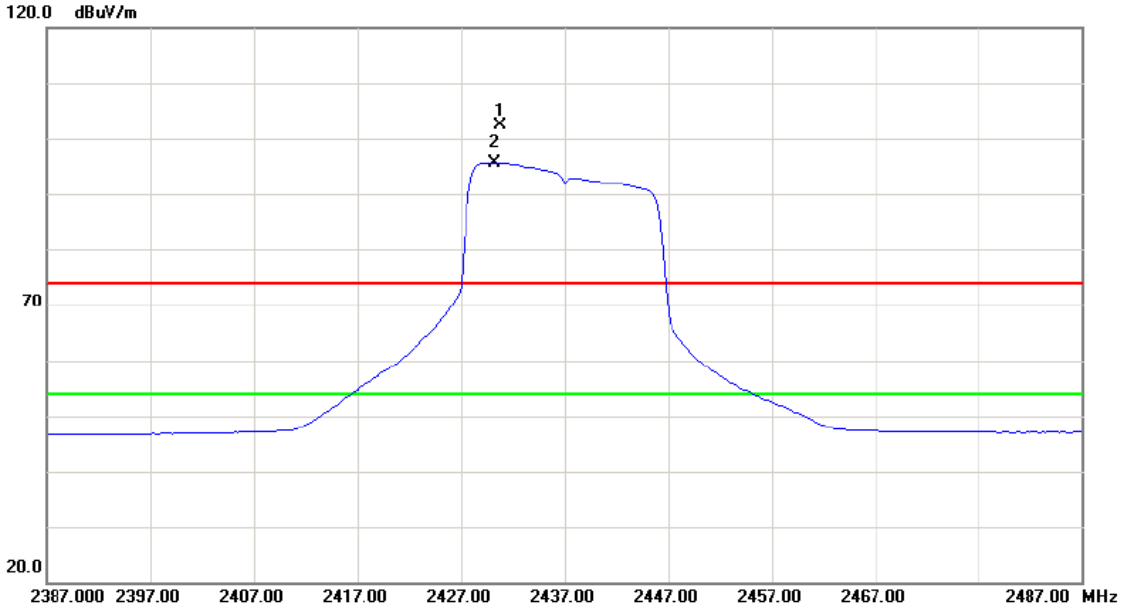
Polarization: Vertical



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1		4874.000	43.42	6.28	49.70	74.00	-24.30	peak	
2		4874.000	33.13	6.28	39.41	54.00	-14.59	AVG	
3		7311.250	41.69	12.77	54.46	74.00	-19.54	peak	
4	*	7311.250	33.02	12.77	45.79	54.00	-8.21	AVG	

EUT	Mini PCI Radio Module, 2x2 IEEE 802.11 b/g/n ,2.4 GHz	Model Name	RJ-1301
Temperature	26°C	Relative Humidity	60%
Test Voltage	AC 120V/60Hz		
Test Mode	IEEE 802.11n (20 MHz)/2437 MHz-1TX		

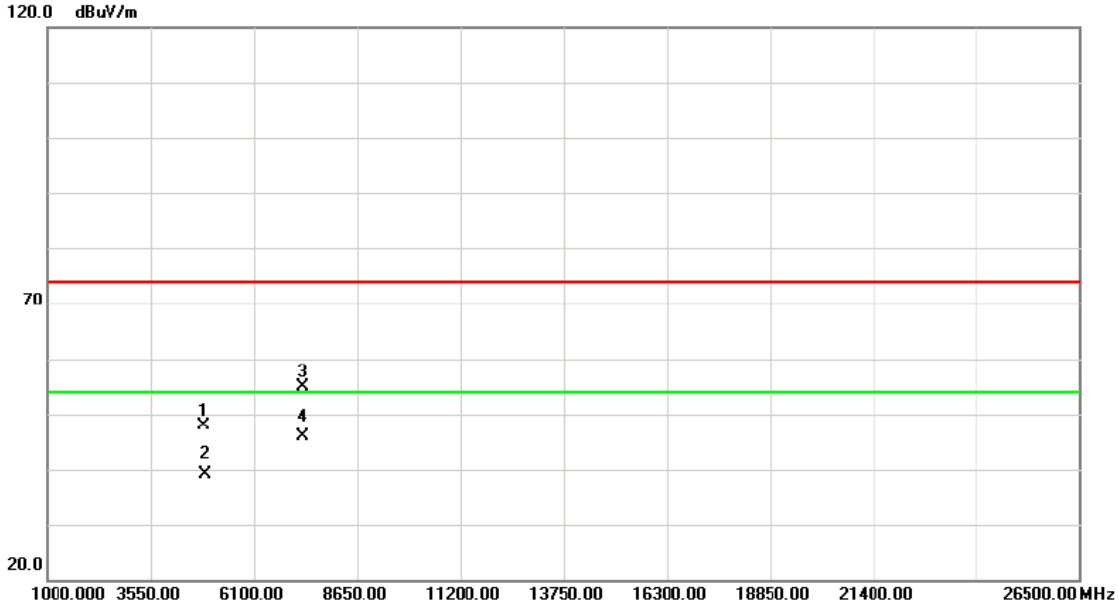
Polarization: Horizontal



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1	X	2430.750	70.31	31.98	102.29	74.00	28.29	peak	
2	*	2430.750	63.70	31.98	95.68	54.00	41.68	AVG	

EUT	Mini PCI Radio Module, 2x2 IEEE 802.11 b/g/n ,2.4 GHz	Model Name	RJ-1301
Temperature	26°C	Relative Humidity	60%
Test Voltage	AC 120V/60Hz		
Test Mode	IEEE 802.11n (20 MHz)/2437 MHz-1TX		

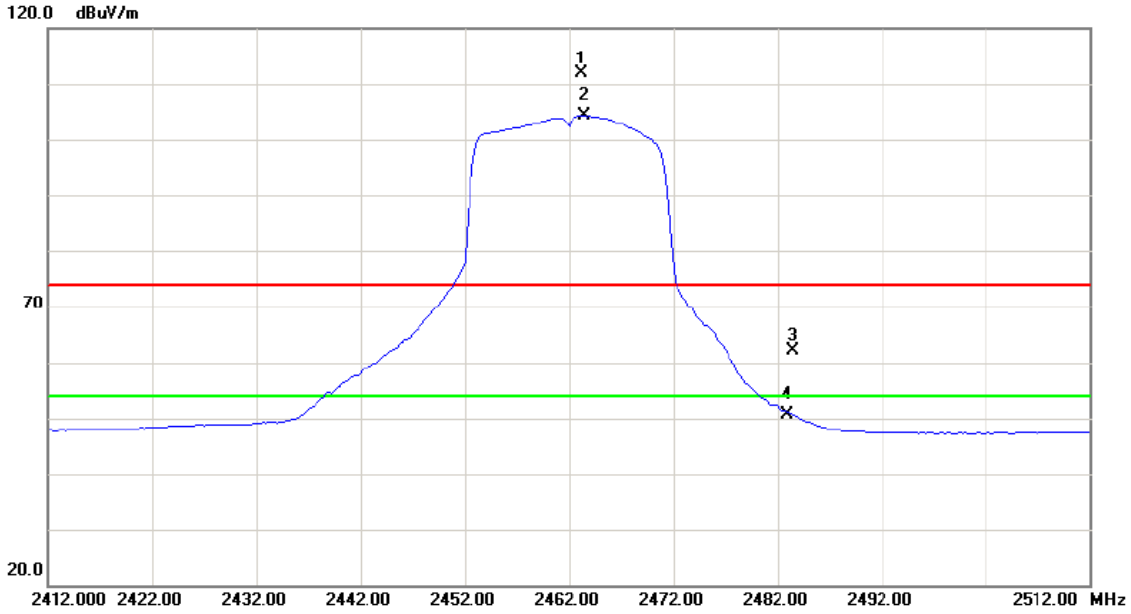
Polarization: Horizontal



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1		4873.750	41.56	6.28	47.84	74.00	-26.16	peak	
2		4873.750	32.93	6.28	39.21	54.00	-14.79	AVG	
3		7310.250	42.15	12.76	54.91	74.00	-19.09	peak	
4	*	7310.250	33.04	12.76	45.80	54.00	-8.20	AVG	

EUT	Mini PCI Radio Module, 2x2 IEEE 802.11 b/g/n ,2.4 GHz	Model Name	RJ-1301
Temperature	26°C	Relative Humidity	60%
Test Voltage	AC 120V/60Hz		
Test Mode	IEEE 802.11n (20 MHz)/2462 MHz-1TX		

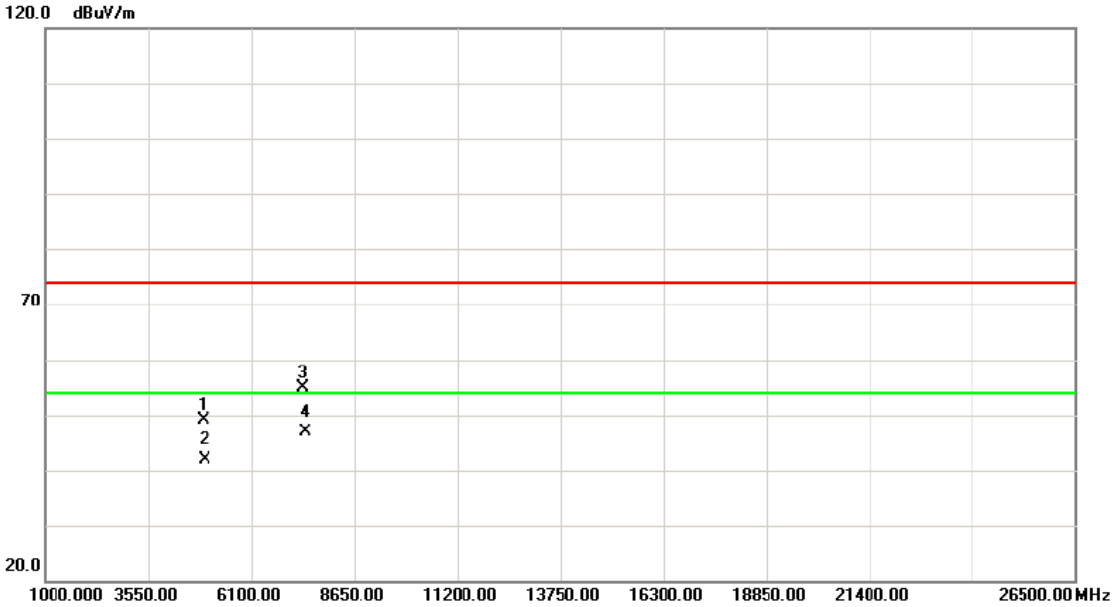
Polarization: Vertical



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1	X	2463.250	79.84	32.11	111.95	74.00	37.95	peak	
2	*	2463.250	72.17	32.11	104.28	54.00	50.28	AVG	
3		2483.500	29.86	32.19	62.05	74.00	-11.95	peak	
4		2483.500	18.42	32.19	50.61	54.00	-3.39	AVG	

EUT	Mini PCI Radio Module, 2x2 IEEE 802.11 b/g/n ,2.4 GHz	Model Name	RJ-1301
Temperature	26°C	Relative Humidity	60%
Test Voltage	AC 120V/60Hz		
Test Mode	IEEE 802.11n (20 MHz)/2462 MHz-1TX		

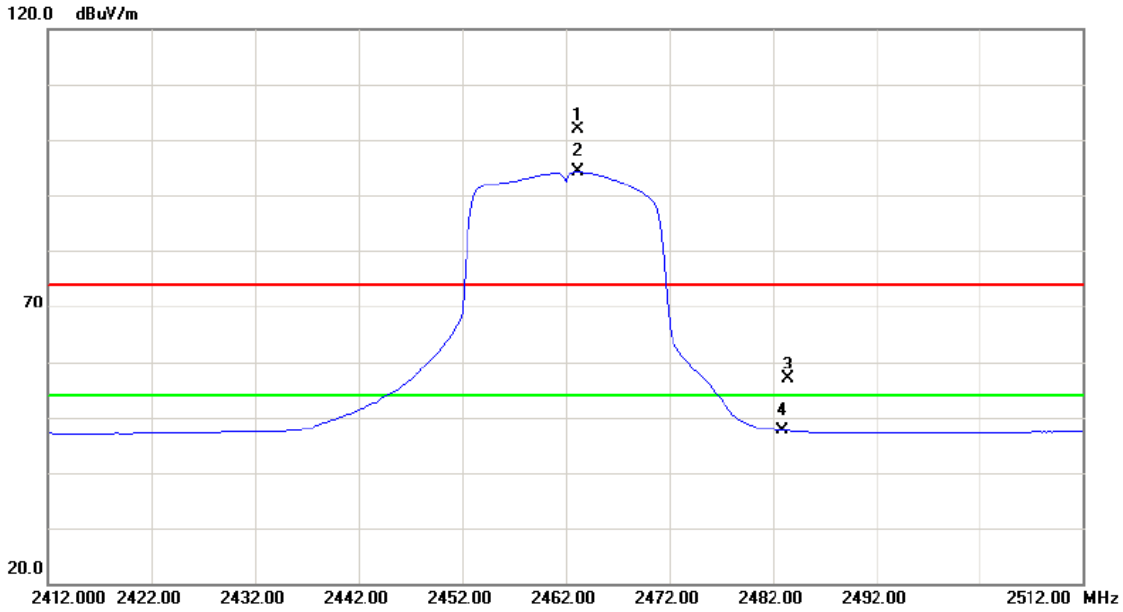
Polarization: Vertical



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1		4925.000	42.78	6.35	49.13	74.00	-24.87	peak	
2		4925.000	35.46	6.35	41.81	54.00	-12.19	AVG	
3		7385.500	41.95	13.05	55.00	74.00	-19.00	peak	
4	*	7385.500	33.81	13.05	46.86	54.00	-7.14	AVG	

EUT	Mini PCI Radio Module, 2x2 IEEE 802.11 b/g/n ,2.4 GHz	Model Name	RJ-1301
Temperature	26°C	Relative Humidity	60%
Test Voltage	AC 120V/60Hz		
Test Mode	IEEE 802.11n (20 MHz)/2462 MHz-1TX		

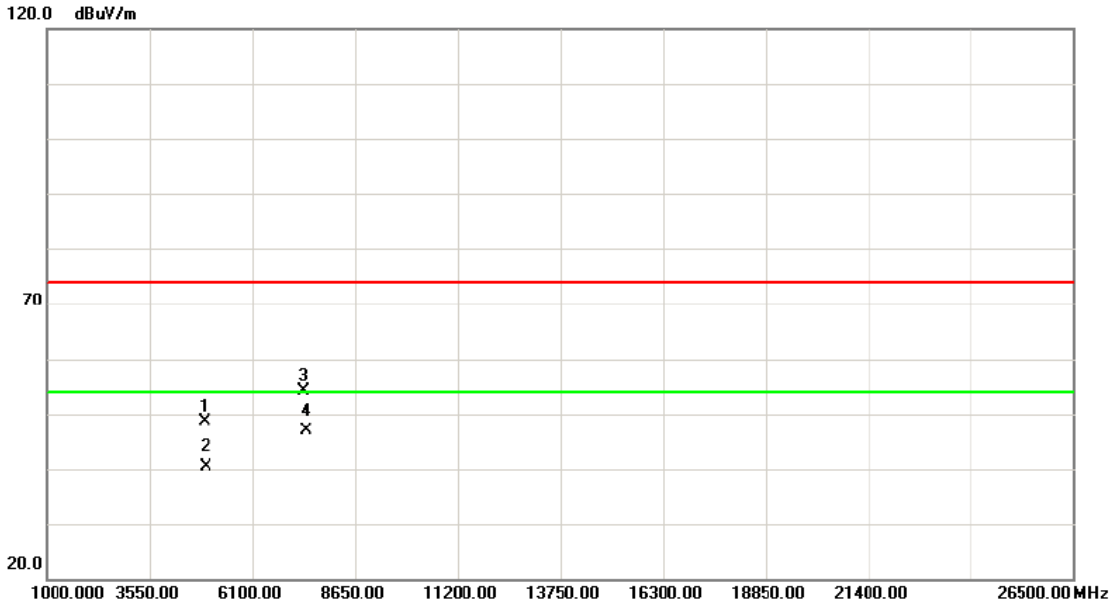
Polarization: Horizontal



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1	X	2463.250	69.88	32.11	101.99	74.00	27.99	peak	
2	*	2463.250	62.19	32.11	94.30	54.00	40.30	AVG	
3		2483.500	24.62	32.19	56.81	74.00	-17.19	peak	
4		2483.500	15.32	32.19	47.51	54.00	-6.49	AVG	

EUT	Mini PCI Radio Module, 2x2 IEEE 802.11 b/g/n ,2.4 GHz	Model Name	RJ-1301
Temperature	26°C	Relative Humidity	60%
Test Voltage	AC 120V/60Hz		
Test Mode	IEEE 802.11n (20 MHz)/2462 MHz-1TX		

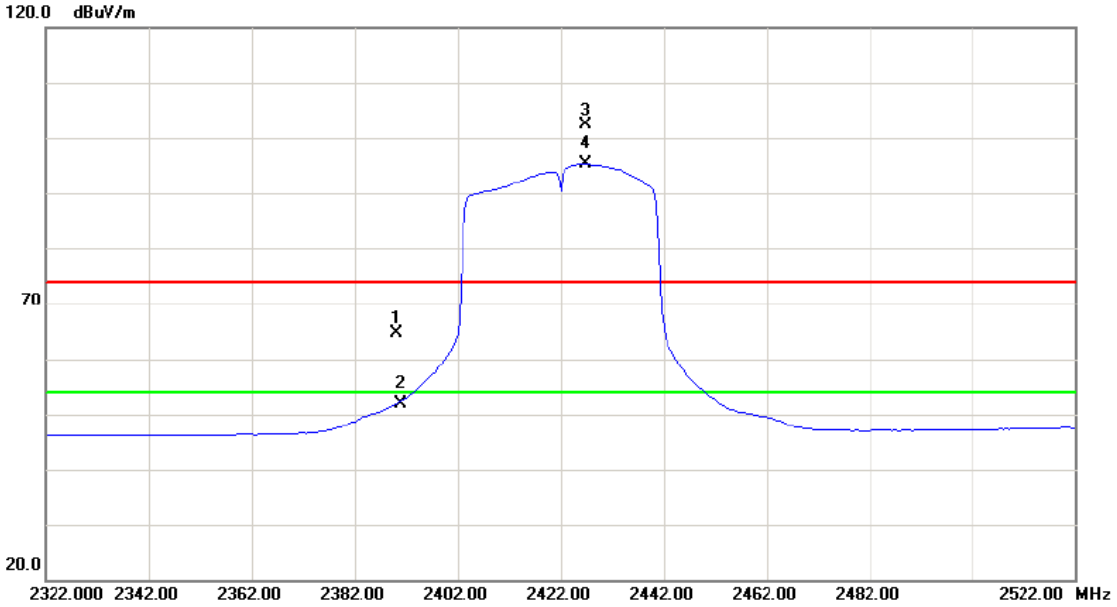
Polarization: Horizontal



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1		4923.500	42.33	6.34	48.67	74.00	-25.33	peak	
2		4923.500	34.10	6.34	40.44	54.00	-13.56	AVG	
3		7385.500	41.14	13.05	54.19	74.00	-19.81	peak	
4	*	7385.500	33.88	13.05	46.93	54.00	-7.07	AVG	

EUT	Mini PCI Radio Module, 2x2 IEEE 802.11 b/g/n ,2.4 GHz	Model Name	RJ-1301
Temperature	26°C	Relative Humidity	60%
Test Voltage	AC 120V/60Hz		
Test Mode	IEEE 802.11n (40 MHz)/2422 MHz-1TX		

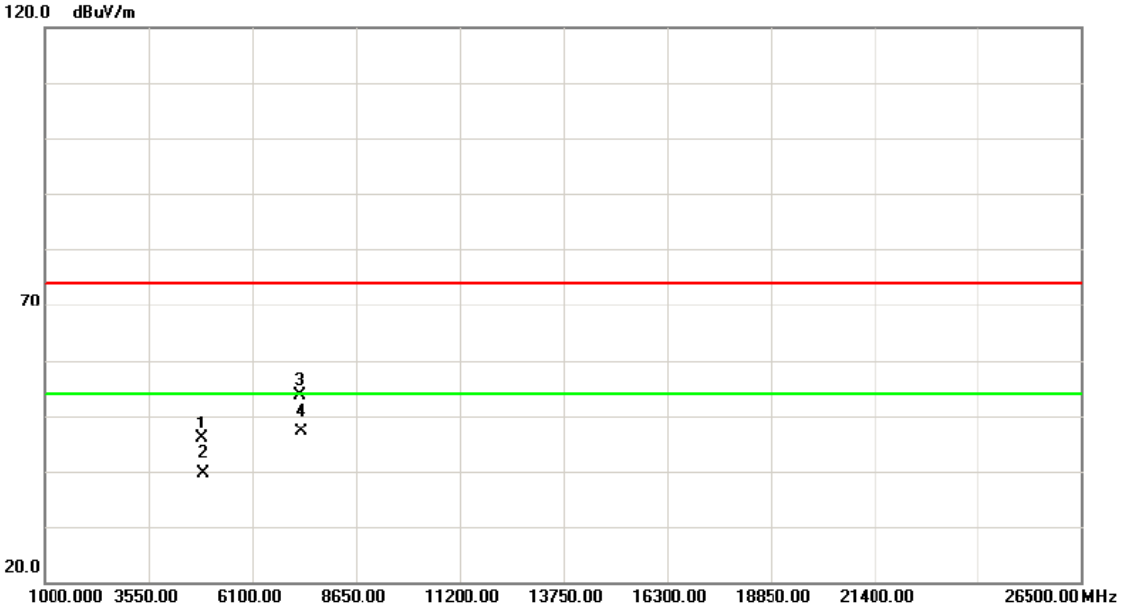
Polarization: Vertical



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1		2390.000	32.85	31.81	64.66	74.00	-9.34	peak	
2		2390.000	20.06	31.81	51.87	54.00	-2.13	AVG	
3	X	2427.000	70.42	31.96	102.38	74.00	28.38	peak	
4	*	2427.000	63.38	31.96	95.34	54.00	41.34	AVG	

EUT	Mini PCI Radio Module, 2x2 IEEE 802.11 b/g/n ,2.4 GHz	Model Name	RJ-1301
Temperature	26°C	Relative Humidity	60%
Test Voltage	AC 120V/60Hz		
Test Mode	IEEE 802.11n (40 MHz)/2422 MHz-1TX		

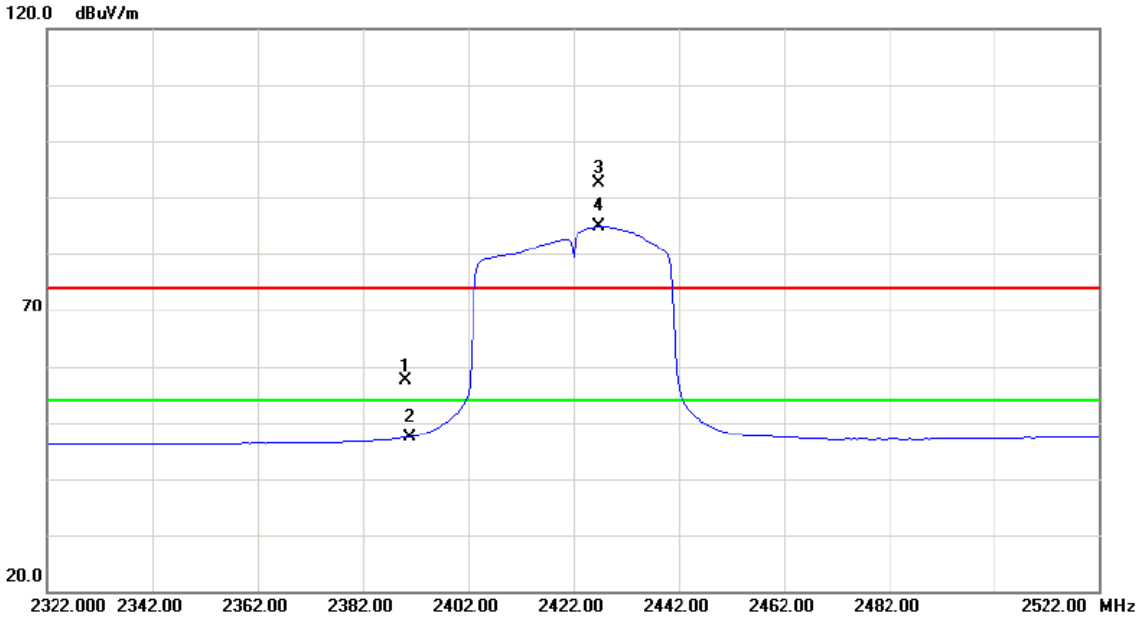
Polarization: Vertical



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1		4844.000	39.56	6.24	45.80	74.00	-28.20	peak	
2		4844.000	33.35	6.24	39.59	54.00	-14.41	AVG	
3		7266.000	41.13	12.61	53.74	74.00	-20.26	peak	
4	*	7266.000	34.51	12.61	47.12	54.00	-6.88	AVG	

EUT	Mini PCI Radio Module, 2x2 IEEE 802.11 b/g/n ,2.4 GHz	Model Name	RJ-1301
Temperature	26°C	Relative Humidity	60%
Test Voltage	AC 120V/60Hz		
Test Mode	IEEE 802.11n (40 MHz)/2422 MHz-1TX		

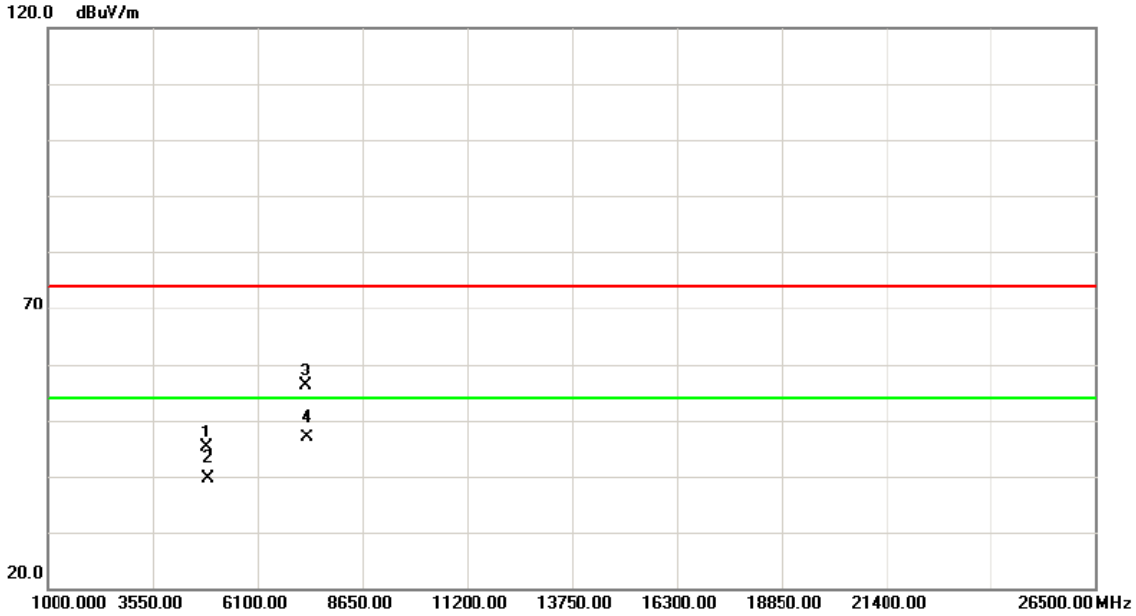
Polarization: Horizontal



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1		2390.000	25.48	31.81	57.29	74.00	-16.71	peak	
2		2390.000	15.46	31.81	47.27	54.00	-6.73	AVG	
3	X	2427.000	60.55	31.96	92.51	74.00	18.51	peak	
4	*	2427.000	52.84	31.96	84.80	54.00	30.80	AVG	

EUT	Mini PCI Radio Module, 2x2 IEEE 802.11 b/g/n ,2.4 GHz	Model Name	RJ-1301
Temperature	26°C	Relative Humidity	60%
Test Voltage	AC 120V/60Hz		
Test Mode	IEEE 802.11n (40 MHz)/2422 MHz-1TX		

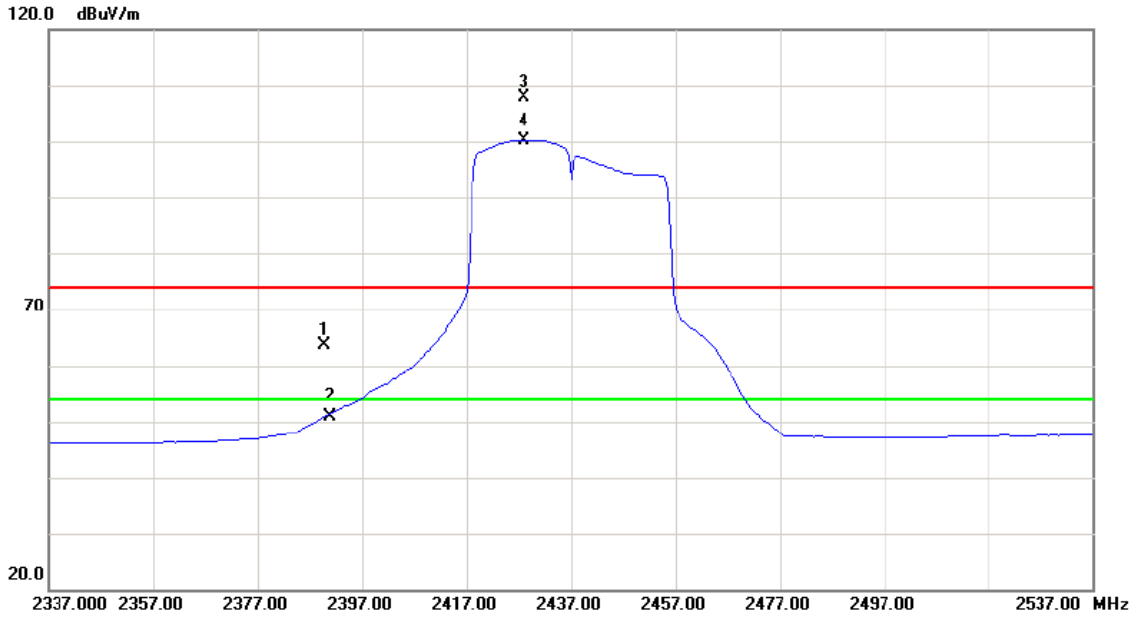
Polarization: Horizontal



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1		4844.000	38.84	6.24	45.08	74.00	-28.92	peak	
2		4844.000	33.29	6.24	39.53	54.00	-14.47	AVG	
3		7266.000	43.41	12.61	56.02	74.00	-17.98	peak	
4	*	7266.000	34.16	12.61	46.77	54.00	-7.23	AVG	

EUT	Mini PCI Radio Module, 2x2 IEEE 802.11 b/g/n ,2.4 GHz	Model Name	RJ-1301
Temperature	26°C	Relative Humidity	60%
Test Voltage	AC 120V/60Hz		
Test Mode	IEEE 802.11n (40 MHz)/2437 MHz-1TX		

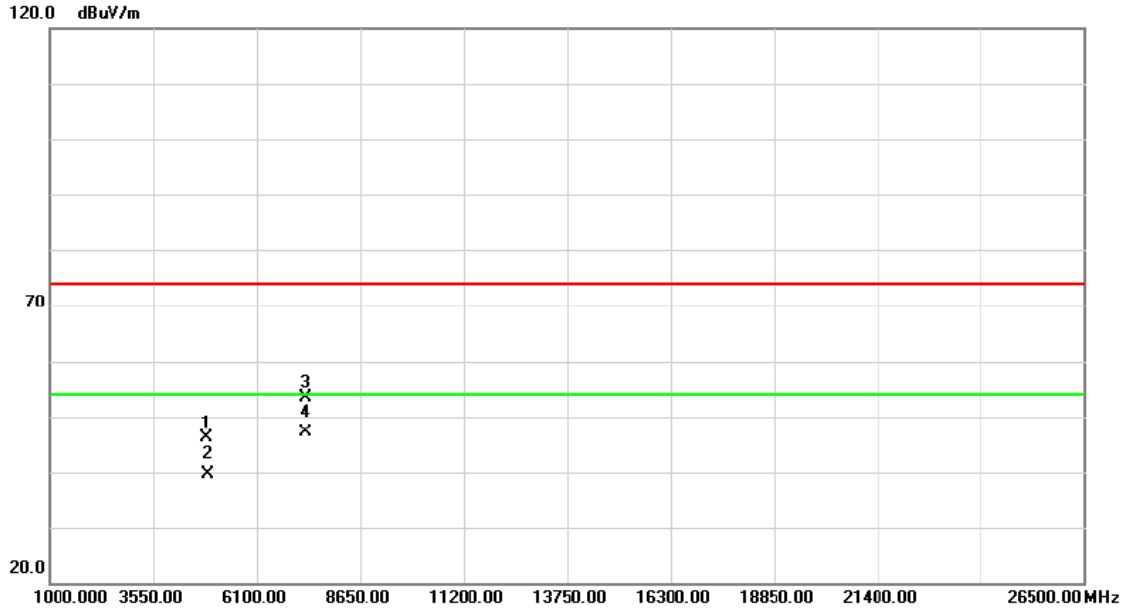
Polarization: Vertical



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1		2390.000	31.90	31.81	63.71	74.00	-10.29	peak	
2		2390.000	19.11	31.81	50.92	54.00	-3.08	AVG	
3	X	2428.000	75.96	31.96	107.92	74.00	33.92	peak	
4	*	2428.000	68.23	31.96	100.19	54.00	46.19	AVG	

EUT	Mini PCI Radio Module, 2x2 IEEE 802.11 b/g/n ,2.4 GHz	Model Name	RJ-1301
Temperature	26°C	Relative Humidity	60%
Test Voltage	AC 120V/60Hz		
Test Mode	IEEE 802.11n (40 MHz)/2437 MHz-1TX		

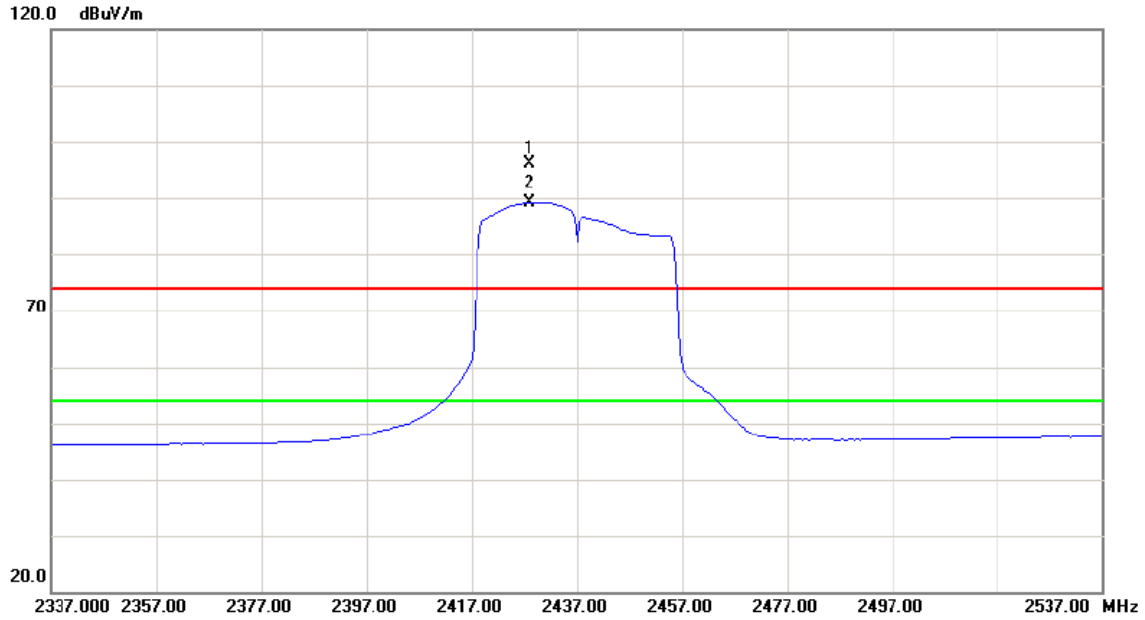
Polarization: Vertical



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1		4874.000	39.85	6.28	46.13	74.00	-27.87	peak	
2		4874.000	33.28	6.28	39.56	54.00	-14.44	AVG	
3		7311.000	40.64	12.77	53.41	74.00	-20.59	peak	
4	*	7311.000	34.29	12.77	47.06	54.00	-6.94	AVG	

EUT	Mini PCI Radio Module, 2x2 IEEE 802.11 b/g/n ,2.4 GHz	Model Name	RJ-1301
Temperature	26°C	Relative Humidity	60%
Test Voltage	AC 120V/60Hz		
Test Mode	IEEE 802.11n (40 MHz)/2437 MHz-1TX		

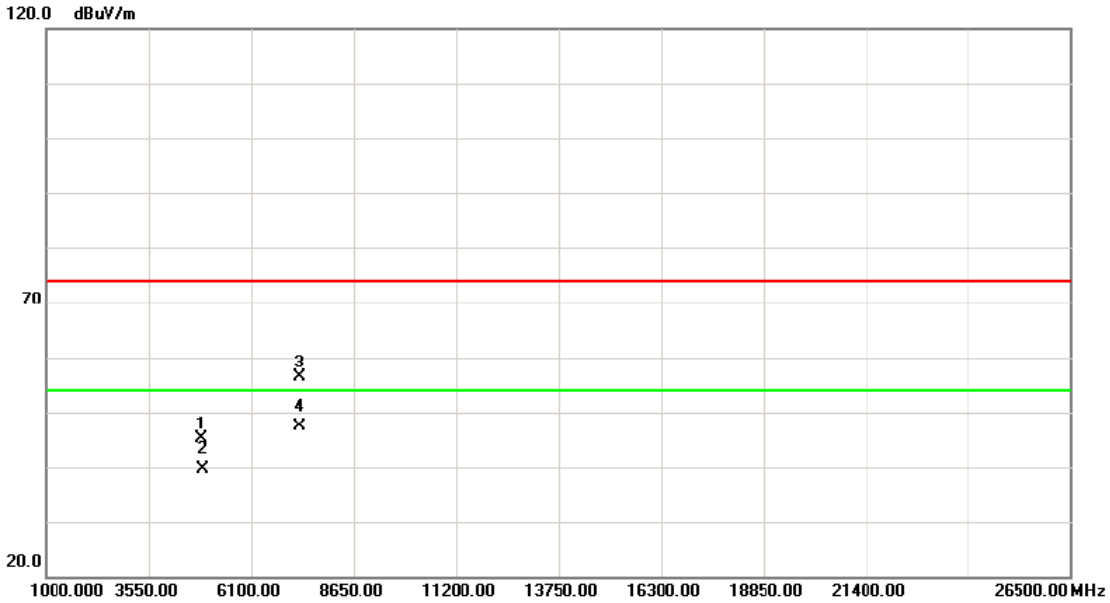
Polarization: Horizontal



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1	X	2428.000	64.24	31.96	96.20	74.00	22.20	peak	
2	*	2428.000	57.22	31.96	89.18	54.00	35.18	AVG	

EUT	Mini PCI Radio Module, 2x2 IEEE 802.11 b/g/n ,2.4 GHz	Model Name	RJ-1301
Temperature	26°C	Relative Humidity	60%
Test Voltage	AC 120V/60Hz		
Test Mode	IEEE 802.11n (40 MHz)/2437 MHz-1TX		

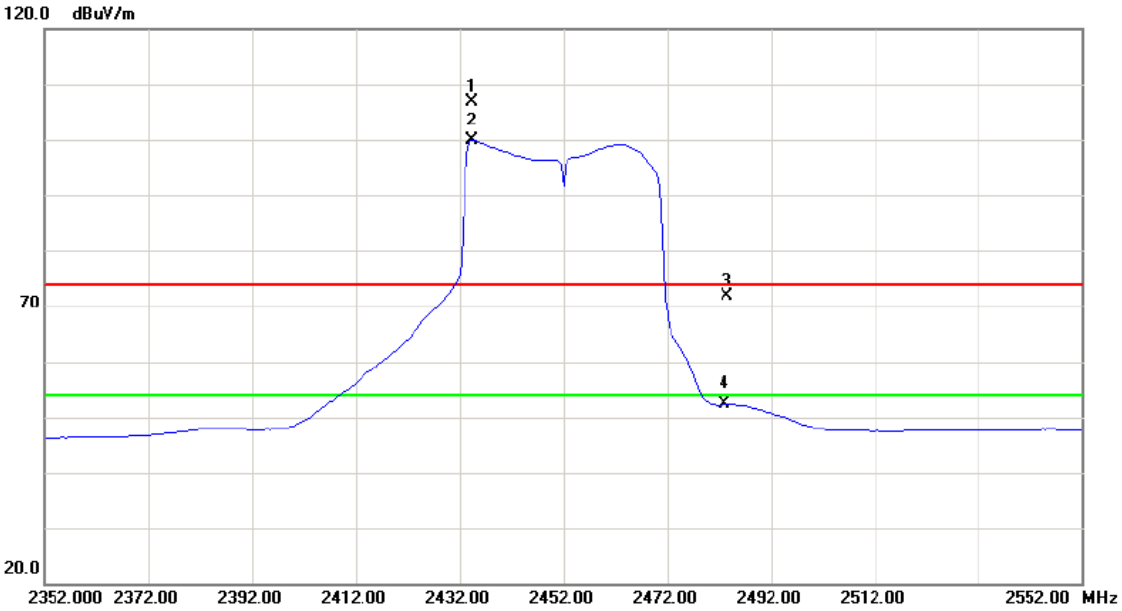
Polarization: Horizontal



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1		4874.000	38.76	6.28	45.04	74.00	-28.96	peak	
2		4874.000	33.39	6.28	39.67	54.00	-14.33	AVG	
3		7311.000	43.52	12.77	56.29	74.00	-17.71	peak	
4	*	7311.000	34.64	12.77	47.41	54.00	-6.59	AVG	

EUT	Mini PCI Radio Module, 2x2 IEEE 802.11 b/g/n ,2.4 GHz	Model Name	RJ-1301
Temperature	26°C	Relative Humidity	60%
Test Voltage	AC 120V/60Hz		
Test Mode	IEEE 802.11n (40 MHz)/2452 MHz-1TX		

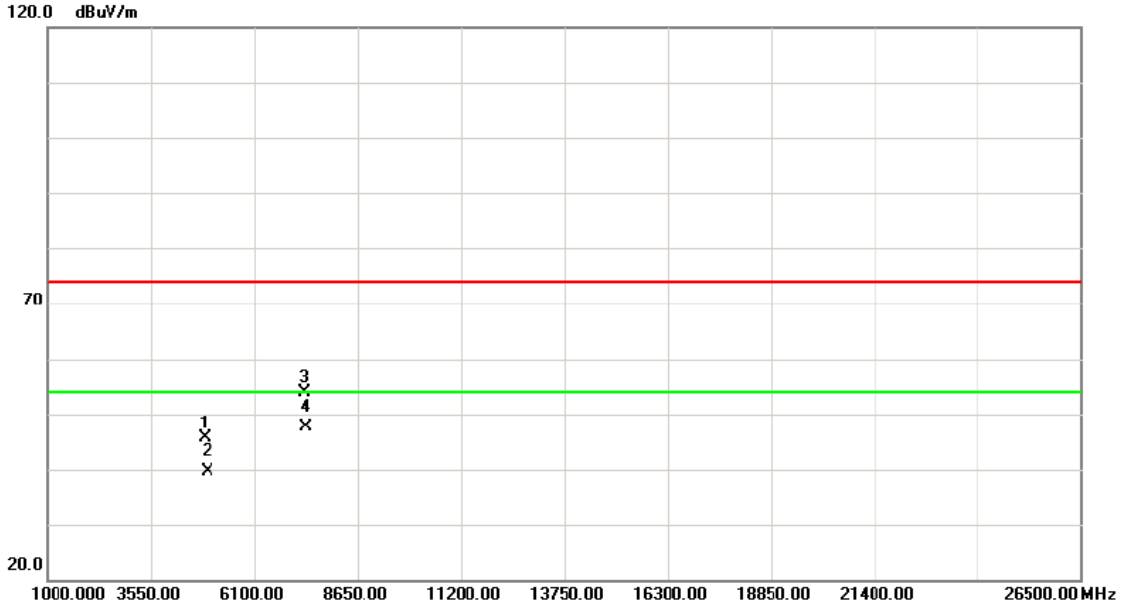
Polarization: Vertical



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1	X	2434.500	74.98	31.99	106.97	74.00	32.97	peak	
2	*	2434.500	67.84	31.99	99.83	54.00	45.83	AVG	
3		2483.500	39.68	32.19	71.87	74.00	-2.13	peak	
4		2483.500	20.15	32.19	52.34	54.00	-1.66	AVG	

EUT	Mini PCI Radio Module, 2x2 IEEE 802.11 b/g/n ,2.4 GHz	Model Name	RJ-1301
Temperature	26°C	Relative Humidity	60%
Test Voltage	AC 120V/60Hz		
Test Mode	IEEE 802.11n (40 MHz)/2452 MHz-1TX		

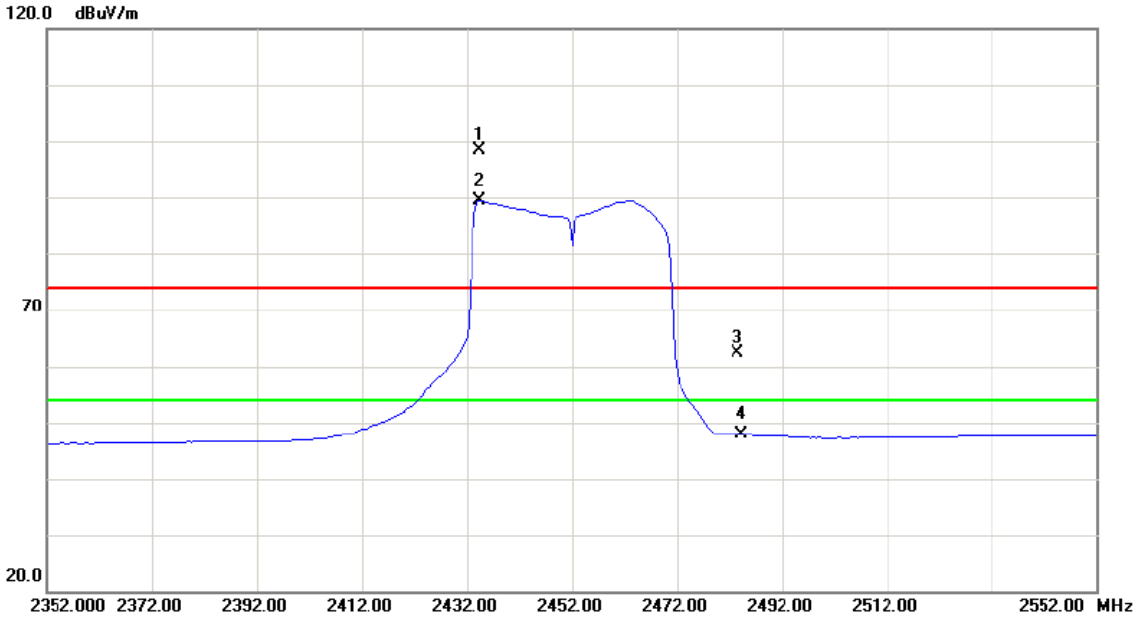
Polarization: Vertical



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1		4904.000	39.28	6.32	45.60	74.00	-28.40	peak	
2		4904.000	33.39	6.32	39.71	54.00	-14.29	AVG	
3		7356.000	40.87	12.93	53.80	74.00	-20.20	peak	
4	*	7356.000	34.64	12.93	47.57	54.00	-6.43	AVG	

EUT	Mini PCI Radio Module, 2x2 IEEE 802.11 b/g/n ,2.4 GHz	Model Name	RJ-1301
Temperature	26°C	Relative Humidity	60%
Test Voltage	AC 120V/60Hz		
Test Mode	IEEE 802.11n (40 MHz)/2452 MHz-1TX		

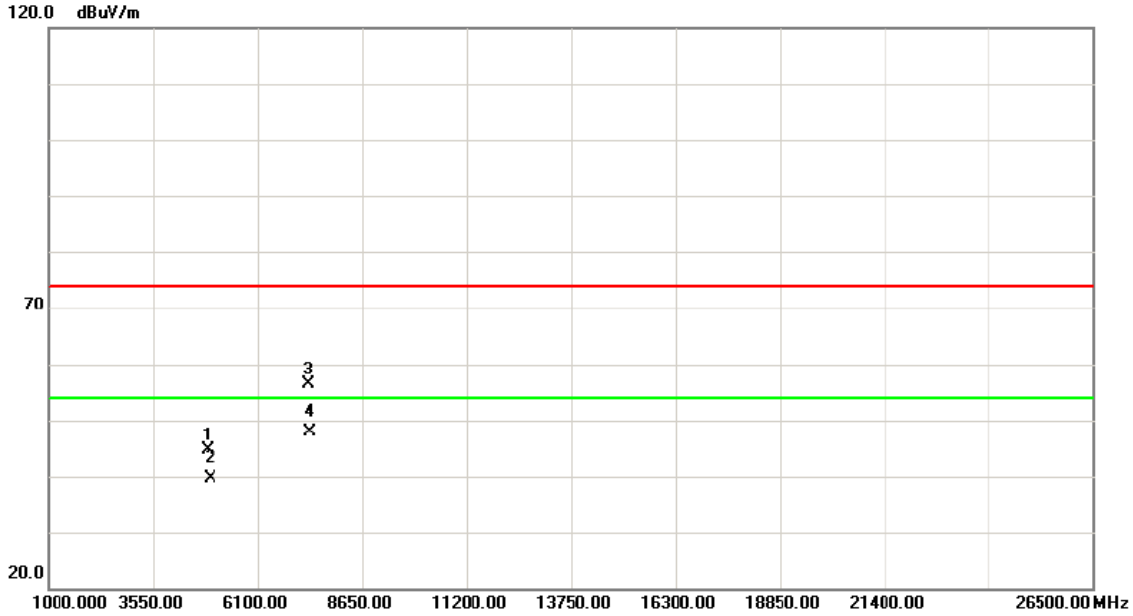
Polarization: Horizontal



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1	X	2434.500	66.50	31.99	98.49	74.00	24.49	peak	
2	*	2434.500	57.34	31.99	89.33	54.00	35.33	AVG	
3		2483.500	30.20	32.19	62.39	74.00	-11.61	peak	
4		2483.500	15.61	32.19	47.80	54.00	-6.20	AVG	

EUT	Mini PCI Radio Module, 2x2 IEEE 802.11 b/g/n ,2.4 GHz	Model Name	RJ-1301
Temperature	26°C	Relative Humidity	60%
Test Voltage	AC 120V/60Hz		
Test Mode	IEEE 802.11n (40 MHz)/2452 MHz-1TX		

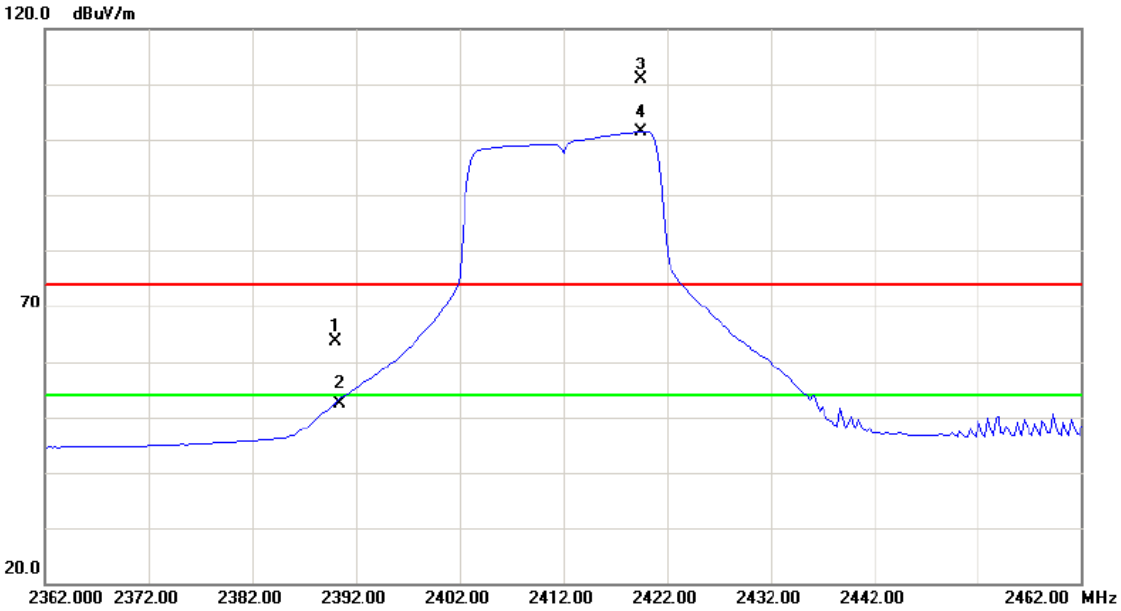
Polarization: Horizontal



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1		4904.000	38.36	6.32	44.68	74.00	-29.32	peak	
2		4904.000	33.27	6.32	39.59	54.00	-14.41	AVG	
3		7356.000	43.42	12.93	56.35	74.00	-17.65	peak	
4	*	7356.000	34.83	12.93	47.76	54.00	-6.24	AVG	

EUT	Mini PCI Radio Module, 2x2 IEEE 802.11 b/g/n ,2.4 GHz	Model Name	RJ-1301
Temperature	26°C	Relative Humidity	60%
Test Voltage	AC 120V/60Hz		
Test Mode	IEEE 802.11n (20 MHz)/2412 MHz-2TX		

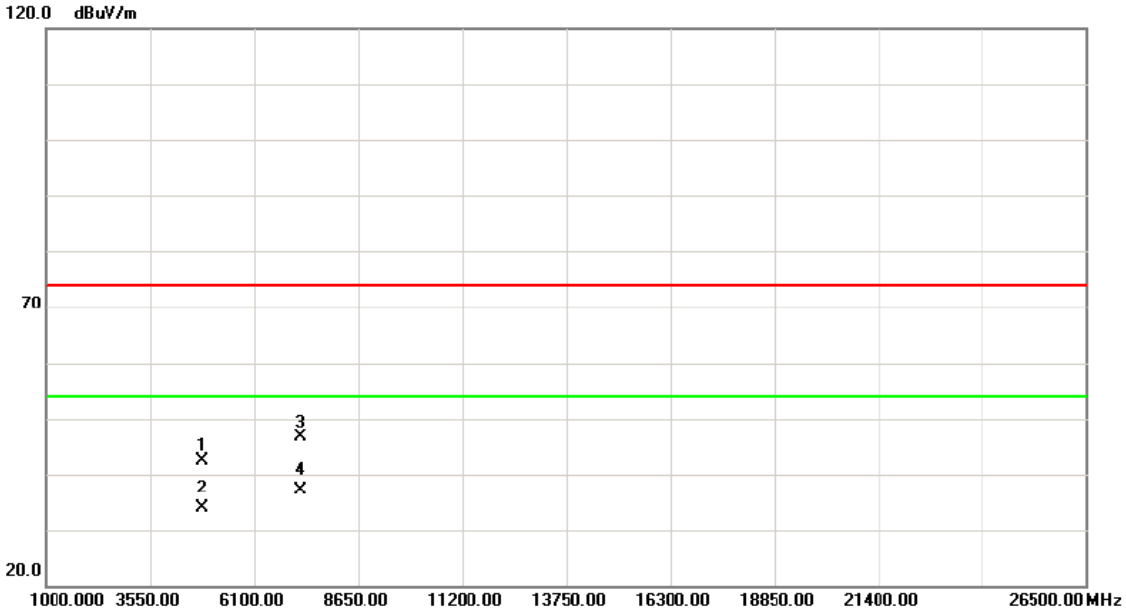
Polarization: Vertical



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1		2390.000	31.83	31.81	63.64	74.00	-10.36	peak	
2		2390.000	20.60	31.81	52.41	54.00	-1.59	AVG	
3	X	2419.500	79.07	31.93	111.00	74.00	37.00	peak	
4	*	2419.500	69.44	31.93	101.37	54.00	47.37	AVG	

EUT	Mini PCI Radio Module, 2x2 IEEE 802.11 b/g/n ,2.4 GHz	Model Name	RJ-1301
Temperature	26°C	Relative Humidity	60%
Test Voltage	AC 120V/60Hz		
Test Mode	IEEE 802.11n (20 MHz)/2412 MHz-2TX		

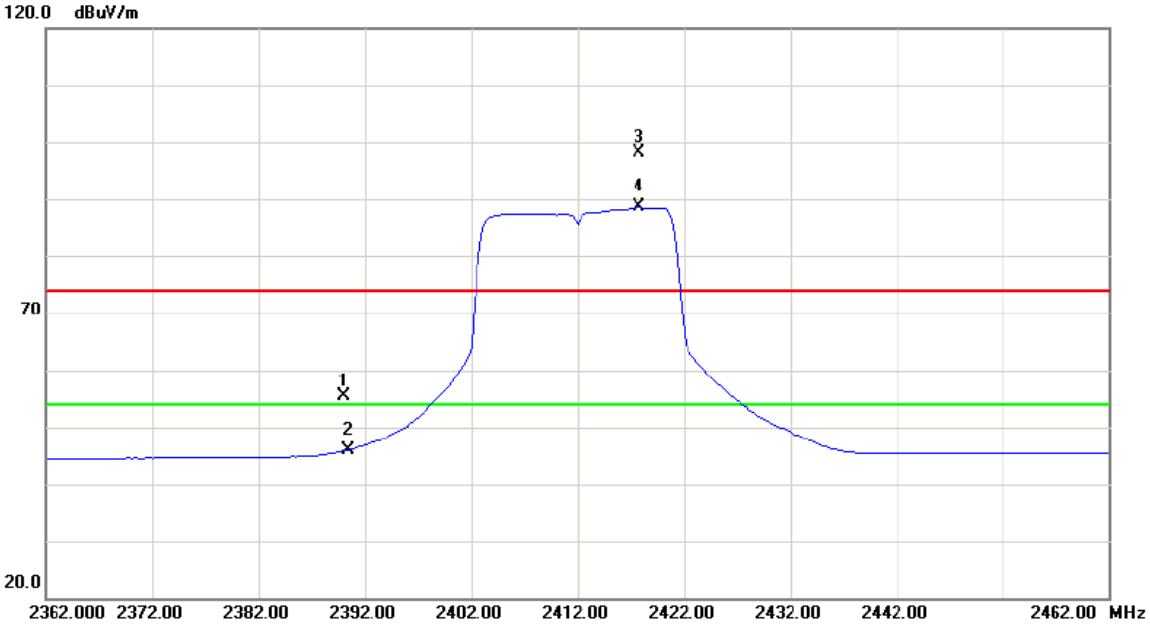
Polarization: Vertical



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1		4824.000	36.25	6.21	42.46	74.00	-31.54	peak	
2		4824.000	27.63	6.21	33.84	54.00	-20.16	AVG	
3		7236.000	34.18	12.49	46.67	74.00	-27.33	peak	
4	*	7236.000	24.66	12.49	37.15	54.00	-16.85	AVG	

EUT	Mini PCI Radio Module, 2x2 IEEE 802.11 b/g/n ,2.4 GHz	Model Name	RJ-1301
Temperature	26°C	Relative Humidity	60%
Test Voltage	AC 120V/60Hz		
Test Mode	IEEE 802.11n (20 MHz)/2412 MHz-2TX		

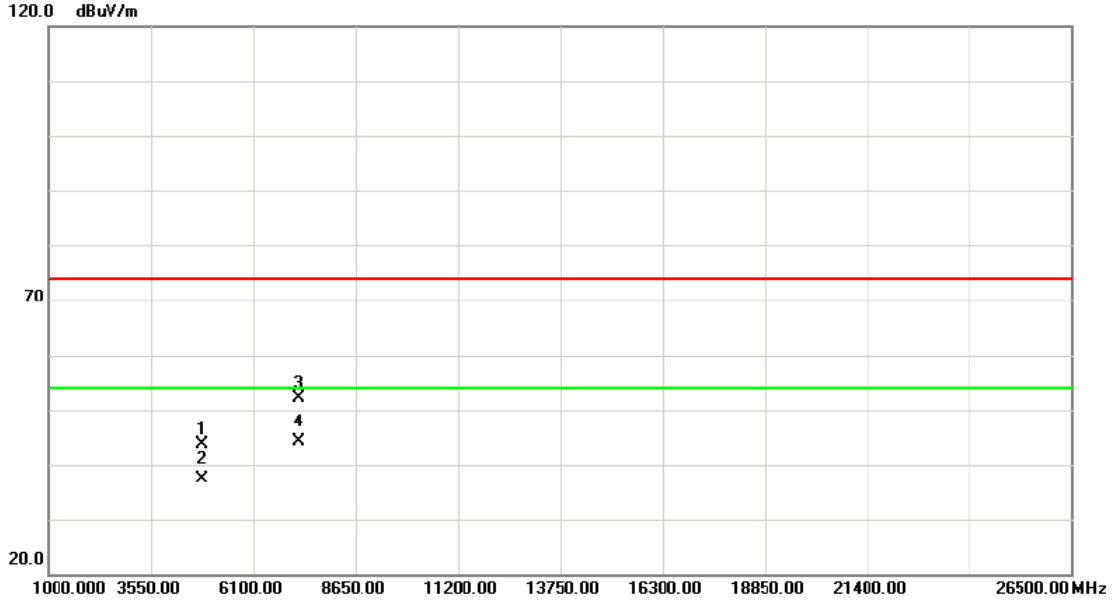
Polarization: Horizontal



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1		2390.000	23.59	31.81	55.40	74.00	-18.60	peak	
2		2390.000	13.95	31.81	45.76	54.00	-8.24	AVG	
3	X	2417.750	66.23	31.92	98.15	74.00	24.15	peak	
4	*	2417.750	56.60	31.92	88.52	54.00	34.52	AVG	

EUT	Mini PCI Radio Module, 2x2 IEEE 802.11 b/g/n ,2.4 GHz	Model Name	RJ-1301
Temperature	26°C	Relative Humidity	60%
Test Voltage	AC 120V/60Hz		
Test Mode	IEEE 802.11n (20 MHz)/2412 MHz-2TX		

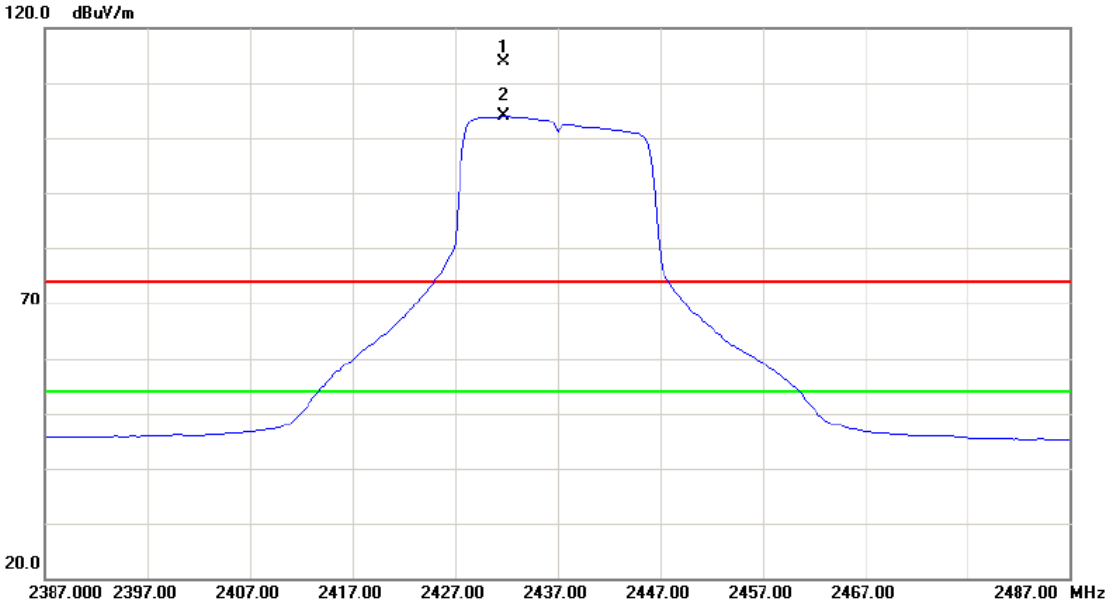
Polarization: Horizontal



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1		4824.125	37.34	6.21	43.55	74.00	-30.45	peak	
2		4824.125	31.19	6.21	37.40	54.00	-16.60	AVG	
3		7236.250	39.68	12.49	52.17	74.00	-21.83	peak	
4	*	7236.250	31.53	12.49	44.02	54.00	-9.98	AVG	

EUT	Mini PCI Radio Module, 2x2 IEEE 802.11 b/g/n ,2.4 GHz	Model Name	RJ-1301
Temperature	26°C	Relative Humidity	60%
Test Voltage	AC 120V/60Hz		
Test Mode	IEEE 802.11n (20 MHz)/2437 MHz-2TX		

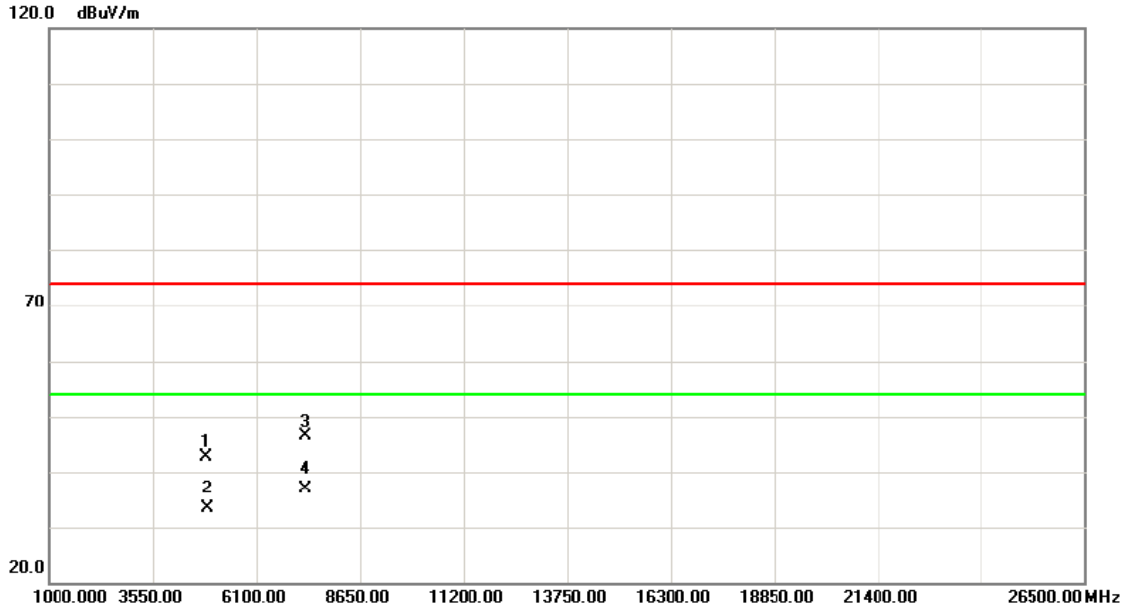
Polarization: Vertical



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1	X	2431.750	81.82	31.99	113.81	74.00	39.81	peak	
2	*	2431.750	72.06	31.99	104.05	54.00	50.05	AVG	

EUT	Mini PCI Radio Module, 2x2 IEEE 802.11 b/g/n ,2.4 GHz	Model Name	RJ-1301
Temperature	26°C	Relative Humidity	60%
Test Voltage	AC 120V/60Hz		
Test Mode	IEEE 802.11n (20 MHz)/2437 MHz-2TX		

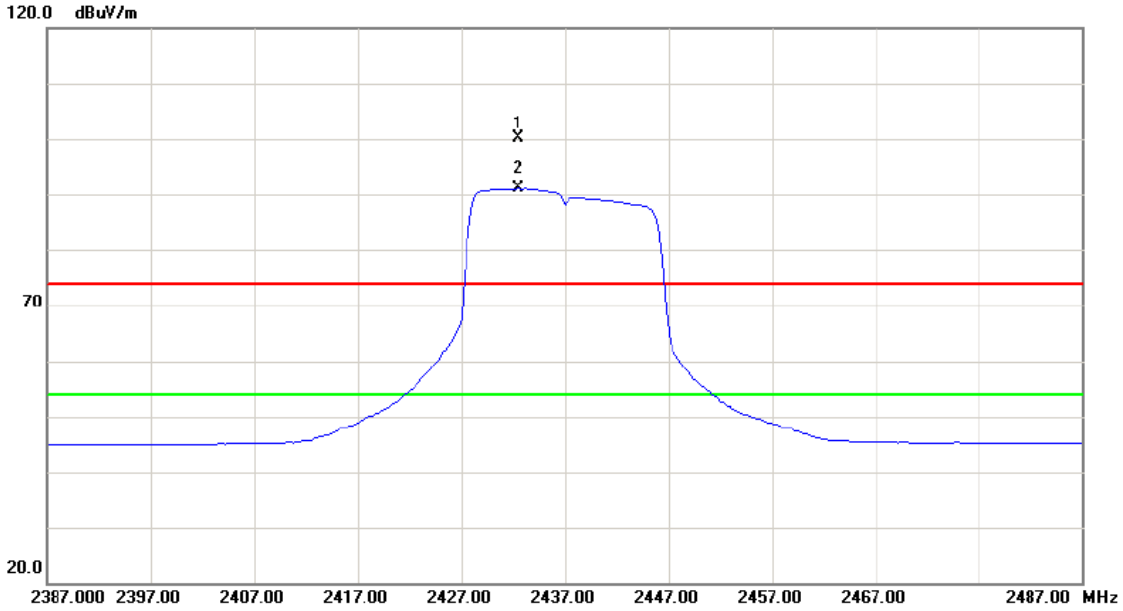
Polarization: Vertical



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1		4874.000	36.23	6.28	42.51	74.00	-31.49	peak	
2		4874.000	27.18	6.28	33.46	54.00	-20.54	AVG	
3		7311.000	33.52	12.77	46.29	74.00	-27.71	peak	
4	*	7311.000	24.16	12.77	36.93	54.00	-17.07	AVG	

EUT	Mini PCI Radio Module, 2x2 IEEE 802.11 b/g/n ,2.4 GHz	Model Name	RJ-1301
Temperature	26°C	Relative Humidity	60%
Test Voltage	AC 120V/60Hz		
Test Mode	IEEE 802.11n (20 MHz)/2437 MHz-2TX		

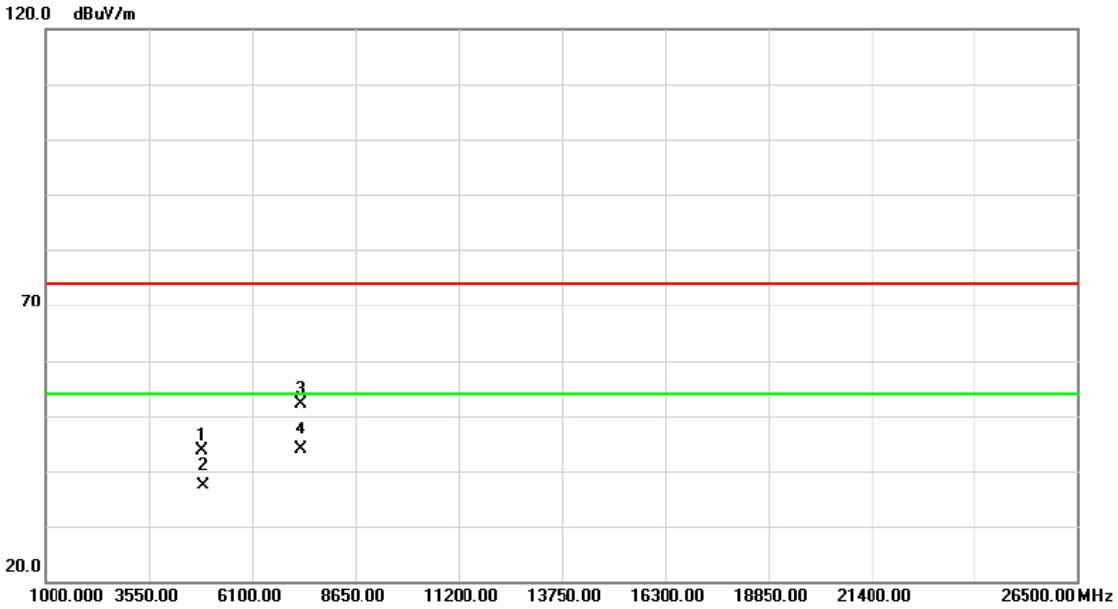
Polarization: Horizontal



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1	X	2432.500	68.02	31.99	100.01	74.00	26.01	peak	
2	*	2432.500	59.05	31.99	91.04	54.00	37.04	AVG	

EUT	Mini PCI Radio Module, 2x2 IEEE 802.11 b/g/n ,2.4 GHz	Model Name	RJ-1301
Temperature	26°C	Relative Humidity	60%
Test Voltage	AC 120V/60Hz		
Test Mode	IEEE 802.11n (20 MHz)/2437 MHz-2TX		

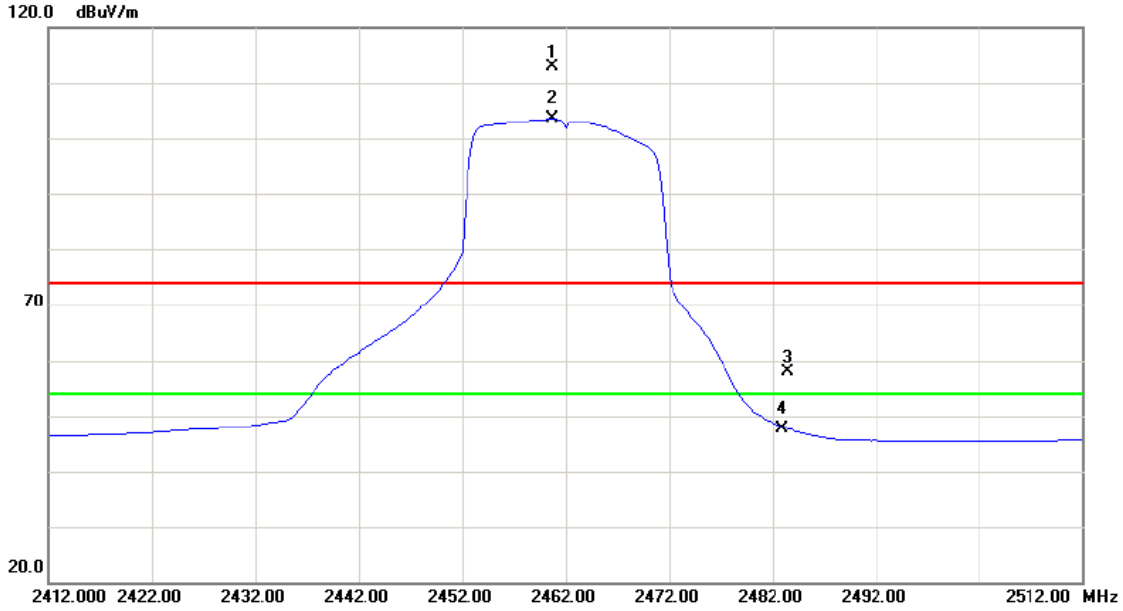
Polarization: Horizontal



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1		4874.000	37.23	6.28	43.51	74.00	-30.49	peak	
2		4874.000	31.18	6.28	37.46	54.00	-16.54	AVG	
3		7311.000	39.39	12.77	52.16	74.00	-21.84	peak	
4	*	7311.000	31.20	12.77	43.97	54.00	-10.03	AVG	

EUT	Mini PCI Radio Module, 2x2 IEEE 802.11 b/g/n ,2.4 GHz	Model Name	RJ-1301
Temperature	26°C	Relative Humidity	60%
Test Voltage	AC 120V/60Hz		
Test Mode	IEEE 802.11n (20 MHz)/2462 MHz-2TX		

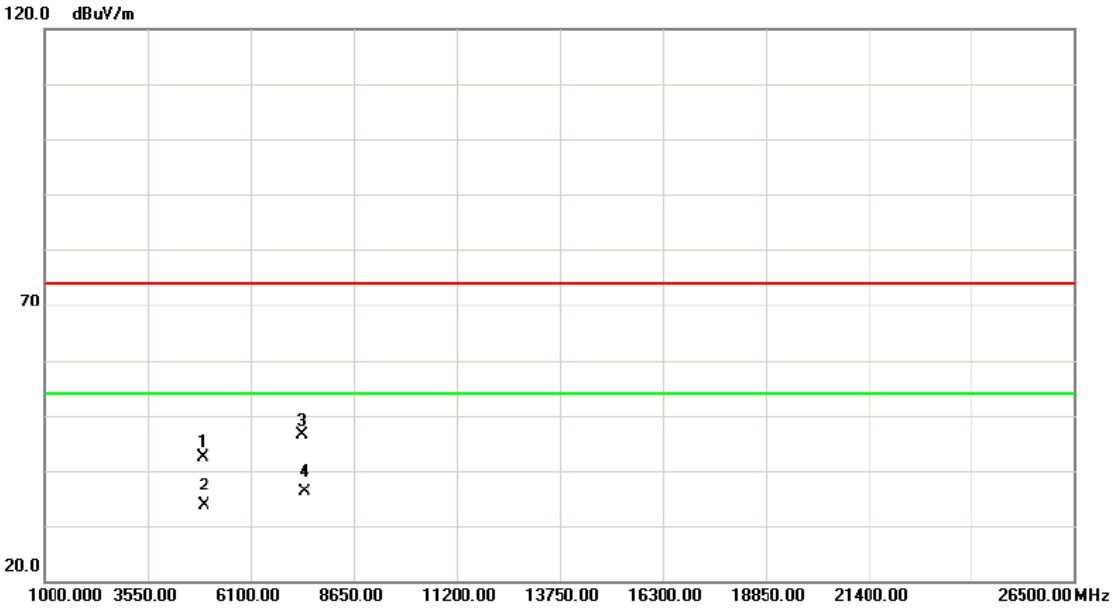
Polarization: Vertical



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1	X	2460.750	80.81	32.10	112.91	74.00	38.91	peak	
2	*	2460.750	71.53	32.10	103.63	54.00	49.63	AVG	
3		2483.500	25.69	32.19	57.88	74.00	-16.12	peak	
4		2483.500	15.52	32.19	47.71	54.00	-6.29	AVG	

EUT	Mini PCI Radio Module, 2x2 IEEE 802.11 b/g/n ,2.4 GHz	Model Name	RJ-1301
Temperature	26°C	Relative Humidity	60%
Test Voltage	AC 120V/60Hz		
Test Mode	IEEE 802.11n (20 MHz)/2462 MHz-2TX		

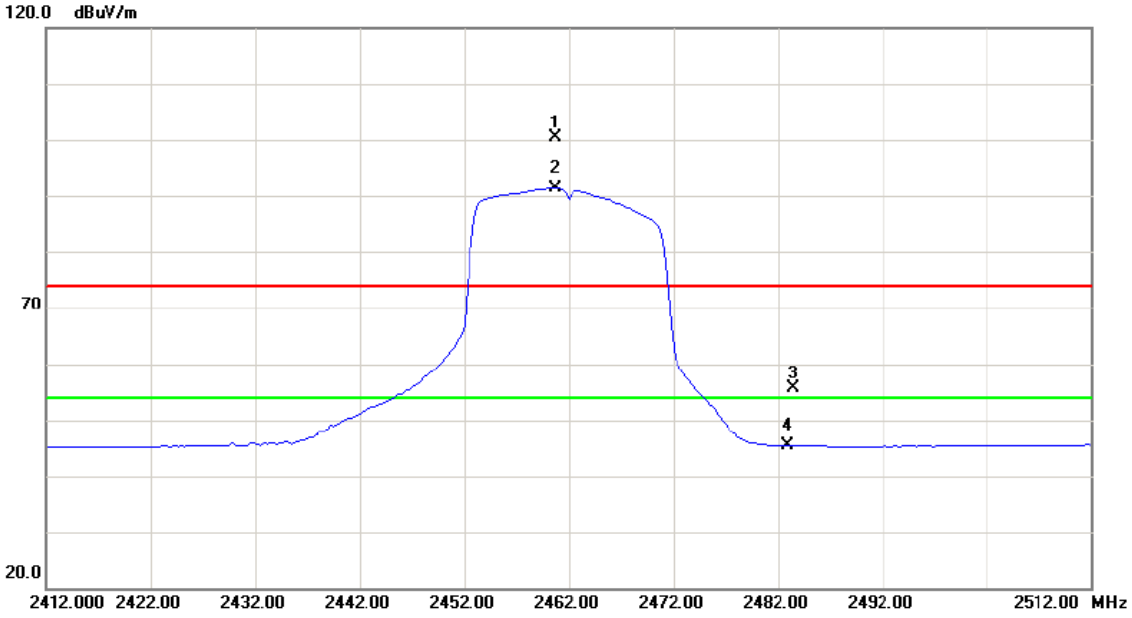
Polarization: Vertical



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1		4924.000	36.13	6.34	42.47	74.00	-31.53	peak	
2		4924.000	27.25	6.34	33.59	54.00	-20.41	AVG	
3		7386.000	33.39	13.05	46.44	74.00	-27.56	peak	
4	*	7386.000	23.16	13.05	36.21	54.00	-17.79	AVG	

EUT	Mini PCI Radio Module, 2x2 IEEE 802.11 b/g/n ,2.4 GHz	Model Name	RJ-1301
Temperature	26°C	Relative Humidity	60%
Test Voltage	AC 120V/60Hz		
Test Mode	IEEE 802.11n (20 MHz)/2462 MHz-2TX		

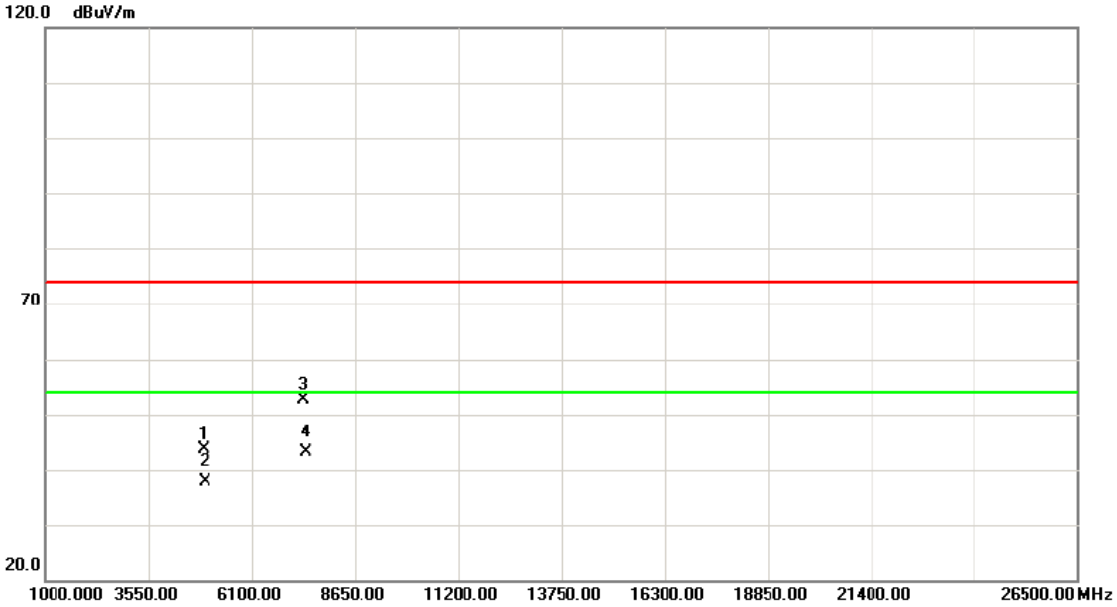
Polarization: Horizontal



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1	X	2460.750	68.26	32.10	100.36	74.00	26.36	peak	
2	*	2460.750	59.26	32.10	91.36	54.00	37.36	AVG	
3		2483.500	23.54	32.19	55.73	74.00	-18.27	peak	
4		2483.500	13.10	32.19	45.29	54.00	-8.71	AVG	

EUT	Mini PCI Radio Module, 2x2 IEEE 802.11 b/g/n ,2.4 GHz	Model Name	RJ-1301
Temperature	26°C	Relative Humidity	60%
Test Voltage	AC 120V/60Hz		
Test Mode	IEEE 802.11n (20 MHz)/2462 MHz-2TX		

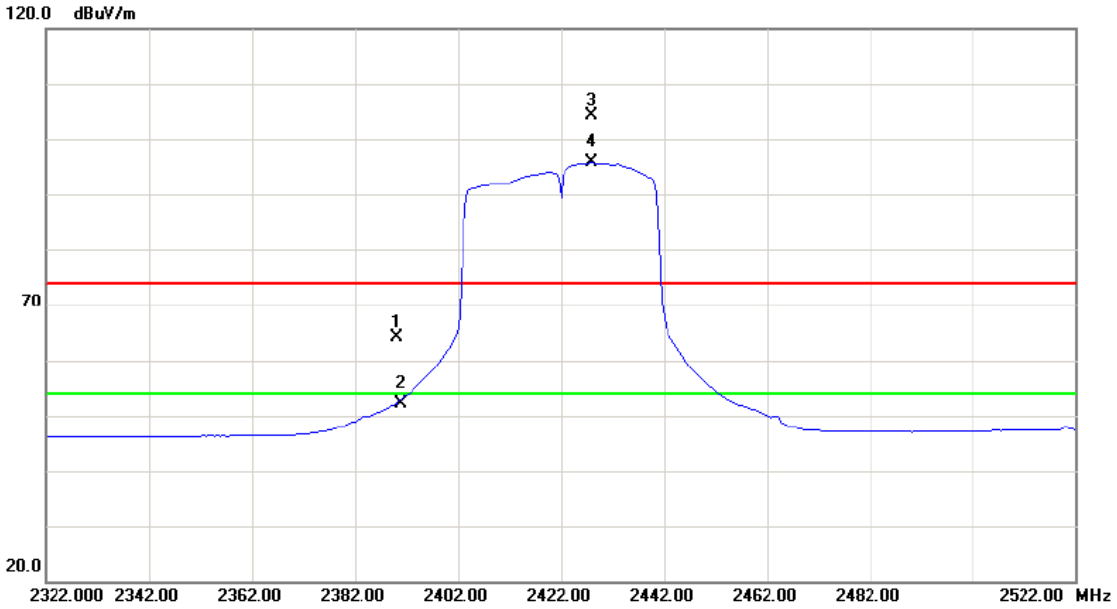
Polarization: Horizontal



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1		4924.000	37.23	6.34	43.57	74.00	-30.43	peak	
2		4924.000	31.64	6.34	37.98	54.00	-16.02	AVG	
3		7386.000	39.52	13.05	52.57	74.00	-21.43	peak	
4	*	7386.000	30.18	13.05	43.23	54.00	-10.77	AVG	

EUT	Mini PCI Radio Module, 2x2 IEEE 802.11 b/g/n ,2.4 GHz	Model Name	RJ-1301
Temperature	26°C	Relative Humidity	60%
Test Voltage	AC 120V/60Hz		
Test Mode	IEEE 802.11n (40 MHz)/2422 MHz-2TX		

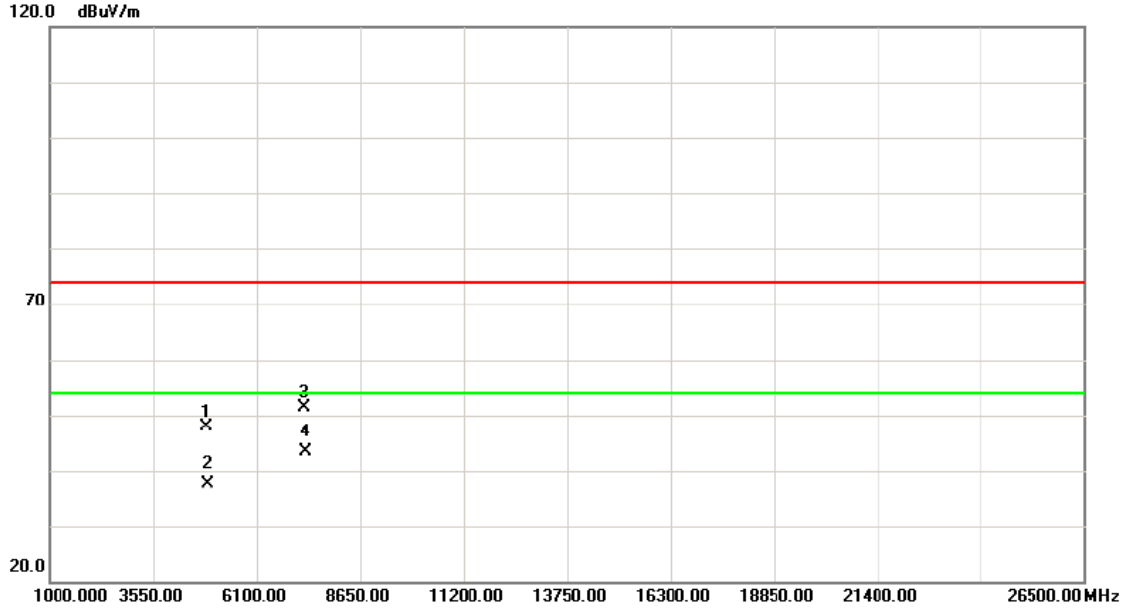
Polarization: Vertical



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1		2390.000	32.29	31.81	64.10	74.00	-9.90	peak	
2		2390.000	20.44	31.81	52.25	54.00	-1.75	AVG	
3	X	2428.000	72.47	31.96	104.43	74.00	30.43	peak	
4	*	2428.000	63.80	31.96	95.76	54.00	41.76	AVG	

EUT	Mini PCI Radio Module, 2x2 IEEE 802.11 b/g/n ,2.4 GHz	Model Name	RJ-1301
Temperature	26°C	Relative Humidity	60%
Test Voltage	AC 120V/60Hz		
Test Mode	IEEE 802.11n (40 MHz)/2422 MHz-2TX		

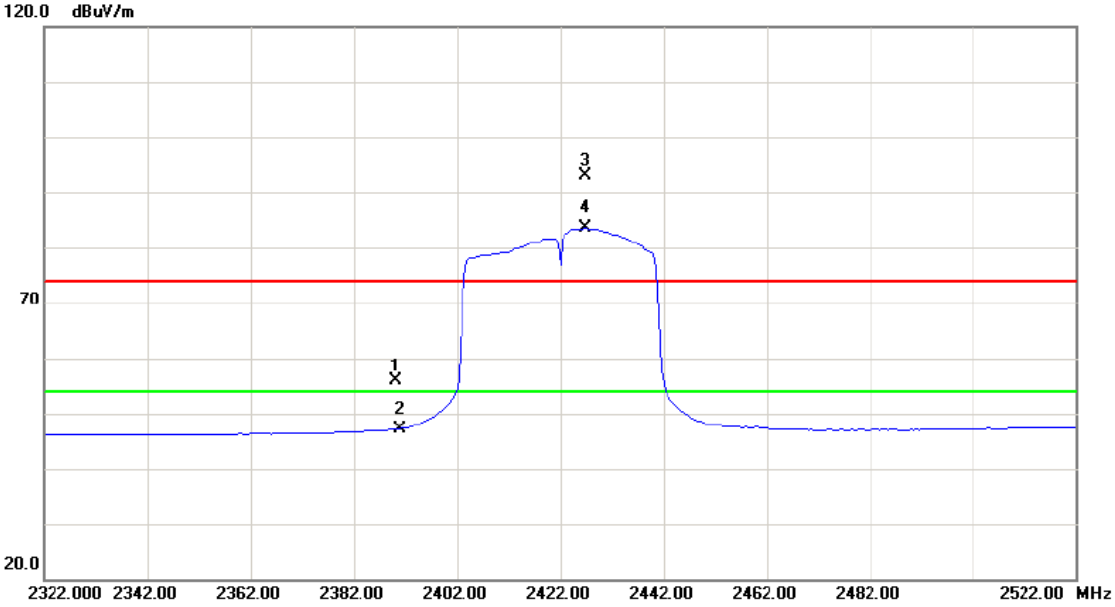
Polarization: Vertical



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1		4844.000	41.72	6.24	47.96	74.00	-26.04	peak	
2		4844.000	31.36	6.24	37.60	54.00	-16.40	AVG	
3		7265.500	38.80	12.61	51.41	74.00	-22.59	peak	
4	*	7265.500	30.86	12.61	43.47	54.00	-10.53	AVG	

EUT	Mini PCI Radio Module, 2x2 IEEE 802.11 b/g/n ,2.4 GHz	Model Name	RJ-1301
Temperature	26°C	Relative Humidity	60%
Test Voltage	AC 120V/60Hz		
Test Mode	IEEE 802.11n (40 MHz)/2422 MHz-2TX		

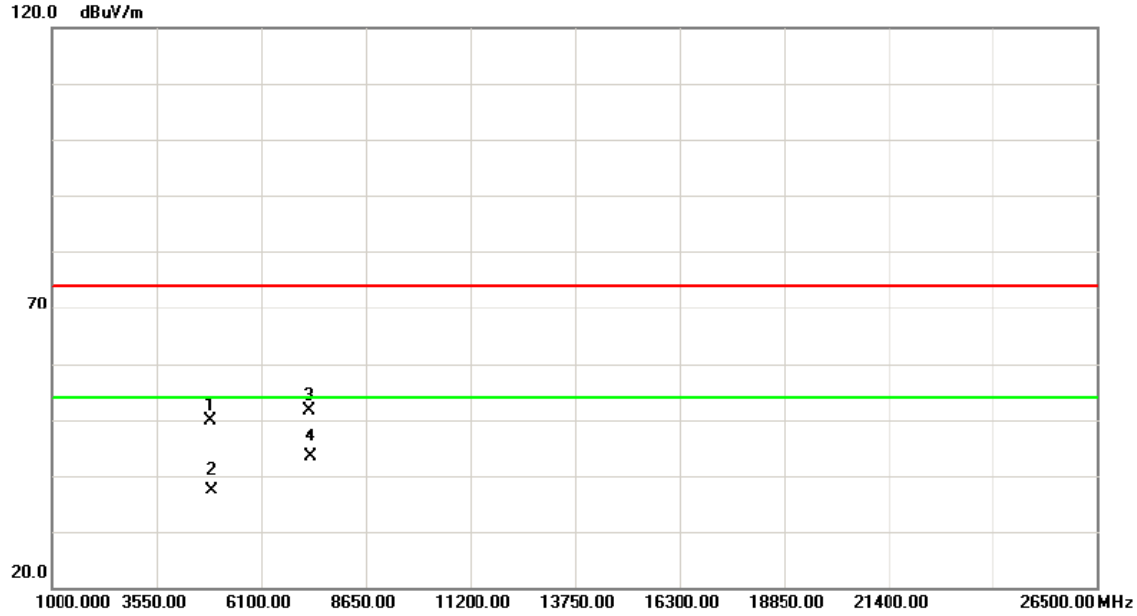
Polarization: Horizontal



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1		2390.000	24.15	31.81	55.96	74.00	-18.04	peak	
2		2390.000	15.33	31.81	47.14	54.00	-6.86	AVG	
3	X	2427.000	61.08	31.96	93.04	74.00	19.04	peak	
4	*	2427.000	51.55	31.96	83.51	54.00	29.51	AVG	

EUT	Mini PCI Radio Module, 2x2 IEEE 802.11 b/g/n ,2.4 GHz	Model Name	RJ-1301
Temperature	26°C	Relative Humidity	60%
Test Voltage	AC 120V/60Hz		
Test Mode	IEEE 802.11n (40 MHz)/2422 MHz-2TX		

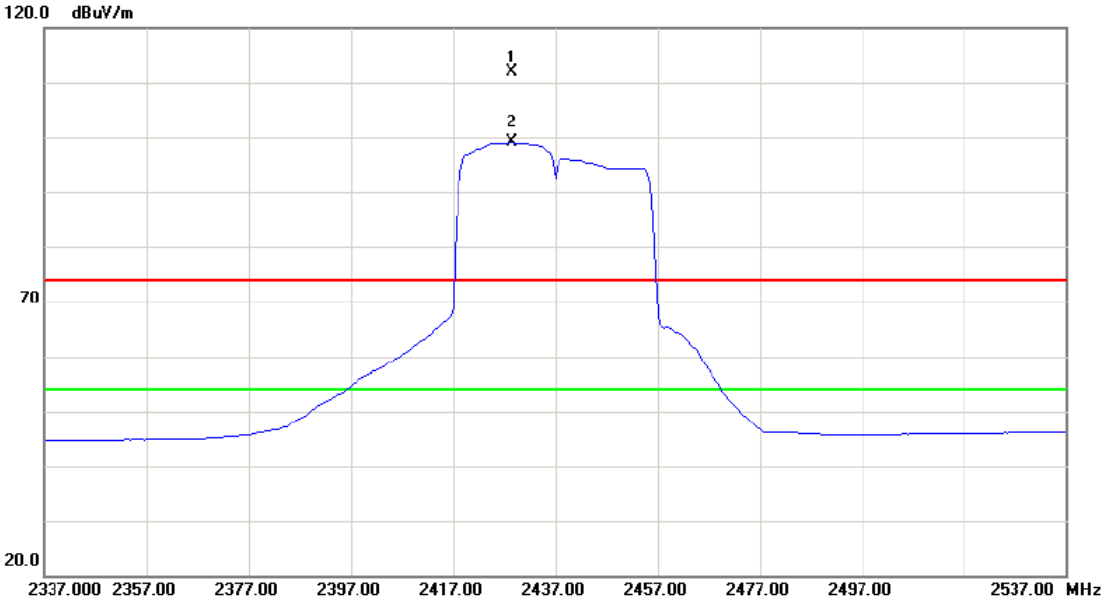
Polarization: Horizontal



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1		4845.000	43.70	6.24	49.94	74.00	-24.06	peak	
2		4845.000	31.20	6.24	37.44	54.00	-16.56	AVG	
3		7267.000	38.99	12.61	51.60	74.00	-22.40	peak	
4	*	7267.000	30.77	12.61	43.38	54.00	-10.62	AVG	

EUT	Mini PCI Radio Module, 2x2 IEEE 802.11 b/g/n ,2.4 GHz	Model Name	RJ-1301
Temperature	26°C	Relative Humidity	60%
Test Voltage	AC 120V/60Hz		
Test Mode	IEEE 802.11n (40 MHz)/2437 MHz-2TX		

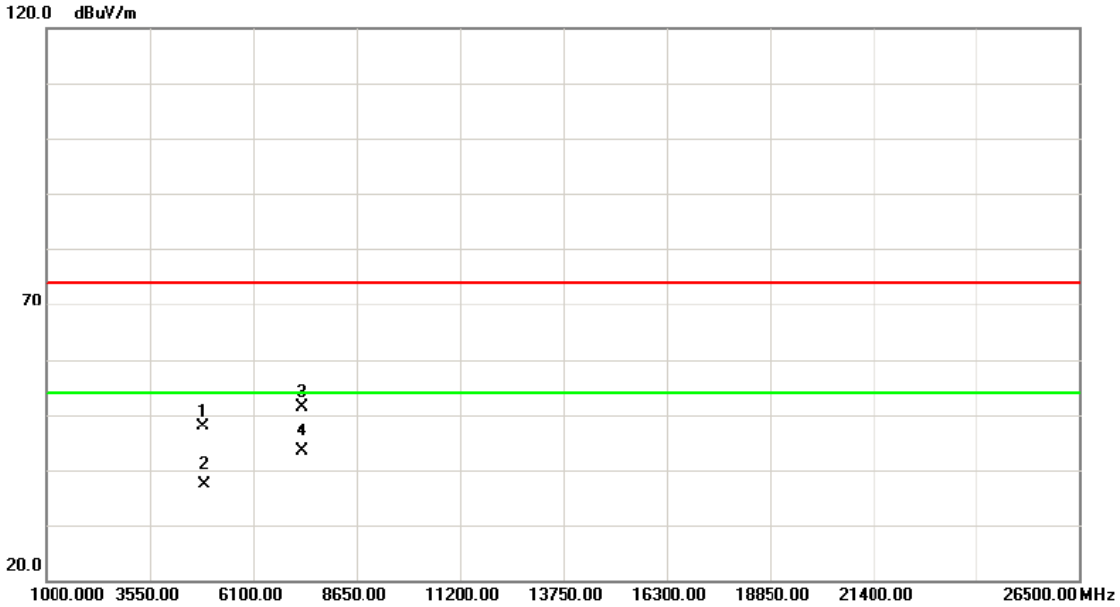
Polarization: Vertical



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1	X	2428.500	79.96	31.97	111.93	74.00	37.93	peak	
2	*	2428.500	67.05	31.97	99.02	54.00	45.02	AVG	

EUT	Mini PCI Radio Module, 2x2 IEEE 802.11 b/g/n ,2.4 GHz	Model Name	RJ-1301
Temperature	26°C	Relative Humidity	60%
Test Voltage	AC 120V/60Hz		
Test Mode	IEEE 802.11n (40 MHz)/2437 MHz-2TX		

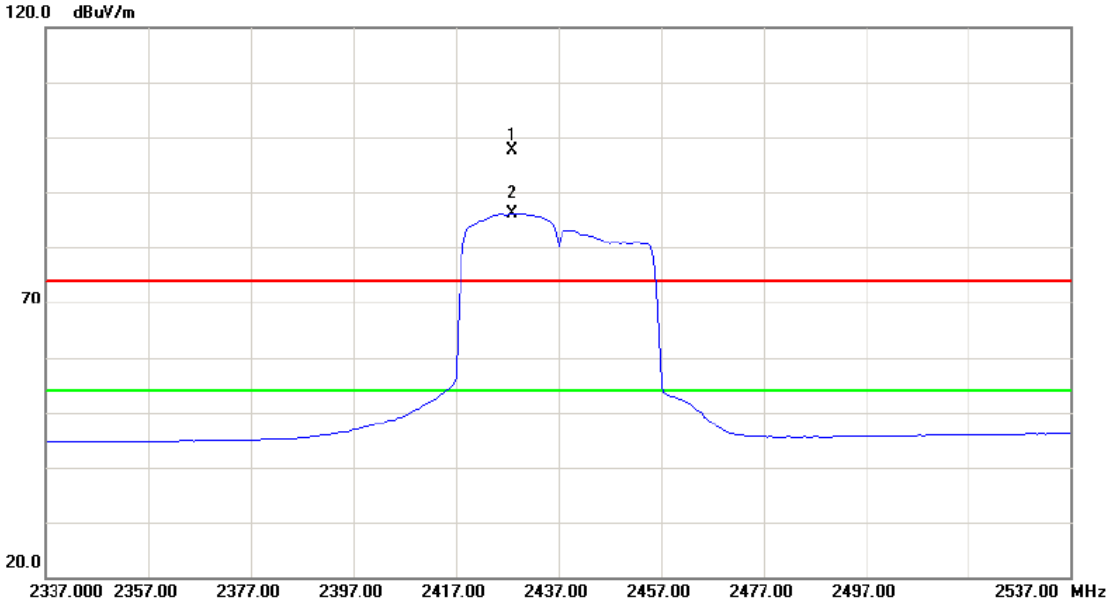
Polarization: Vertical



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1		4874.000	41.52	6.28	47.80	74.00	-26.20	peak	
2		4874.000	31.13	6.28	37.41	54.00	-16.59	AVG	
3		7311.000	38.57	12.77	51.34	74.00	-22.66	peak	
4	*	7311.000	30.51	12.77	43.28	54.00	-10.72	AVG	

EUT	Mini PCI Radio Module, 2x2 IEEE 802.11 b/g/n ,2.4 GHz	Model Name	RJ-1301
Temperature	26°C	Relative Humidity	60%
Test Voltage	AC 120V/60Hz		
Test Mode	IEEE 802.11n (40 MHz)/2437 MHz-2TX		

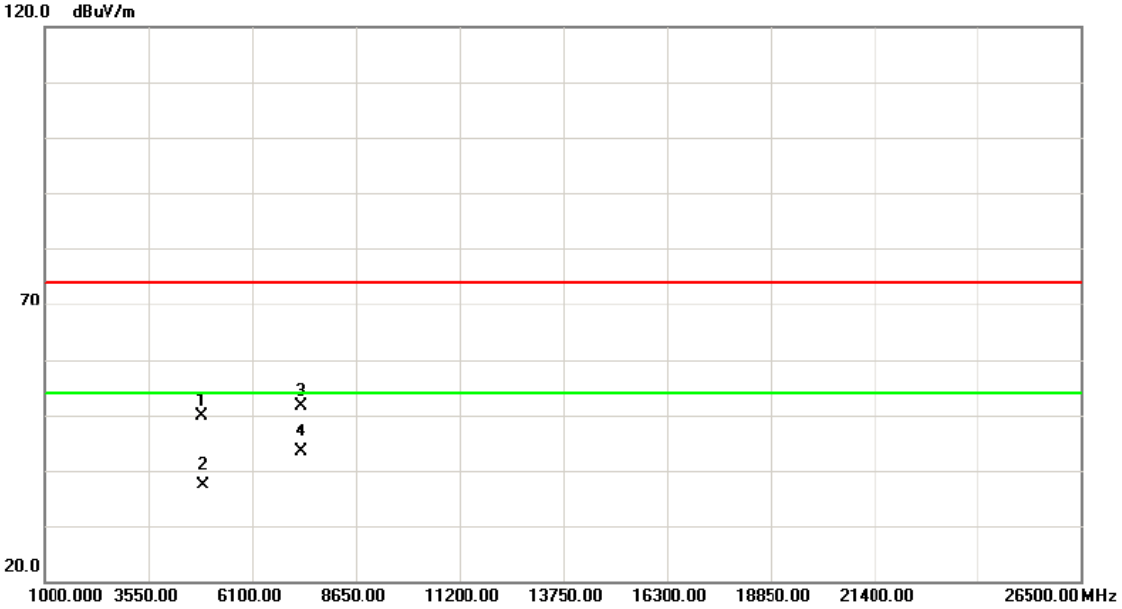
Polarization: Horizontal



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1	X	2428.000	65.75	31.96	97.71	74.00	23.71	peak	
2	*	2428.000	54.25	31.96	86.21	54.00	32.21	AVG	

EUT	Mini PCI Radio Module, 2x2 IEEE 802.11 b/g/n ,2.4 GHz	Model Name	RJ-1301
Temperature	26°C	Relative Humidity	60%
Test Voltage	AC 120V/60Hz		
Test Mode	IEEE 802.11n (40 MHz)/2437 MHz-2TX		

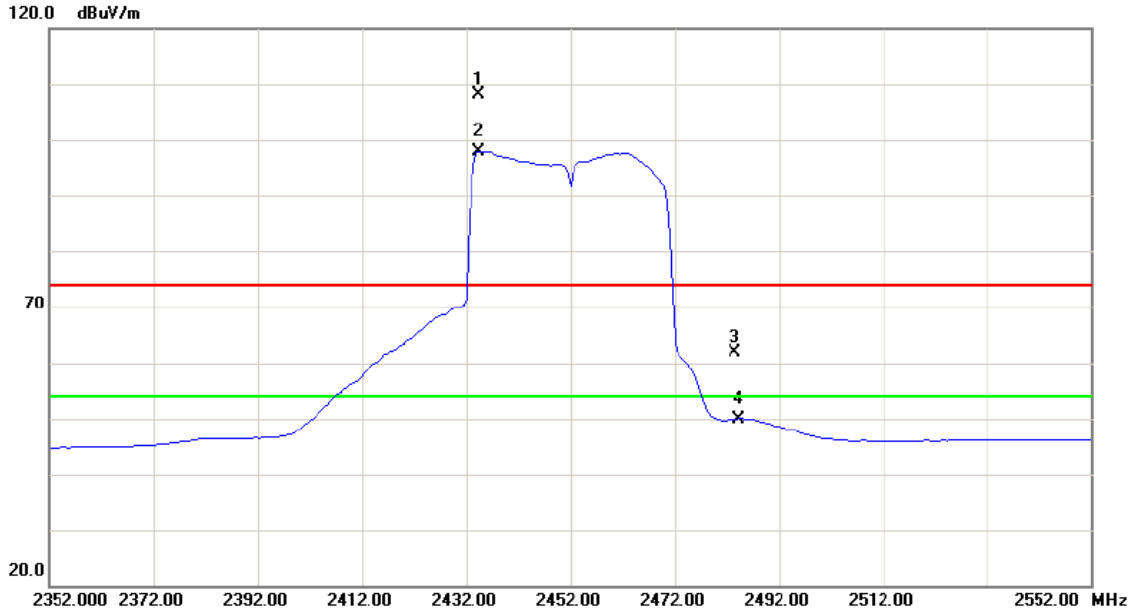
Polarization: Horizontal



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1		4874.000	43.66	6.28	49.94	74.00	-24.06	peak	
2		4874.000	31.16	6.28	37.44	54.00	-16.56	AVG	
3		7311.000	38.83	12.77	51.60	74.00	-22.40	peak	
4	*	7311.000	30.61	12.77	43.38	54.00	-10.62	AVG	

EUT	Mini PCI Radio Module, 2x2 IEEE 802.11 b/g/n ,2.4 GHz	Model Name	RJ-1301
Temperature	26°C	Relative Humidity	60%
Test Voltage	AC 120V/60Hz		
Test Mode	IEEE 802.11n (40 MHz)/2452 MHz-2TX		

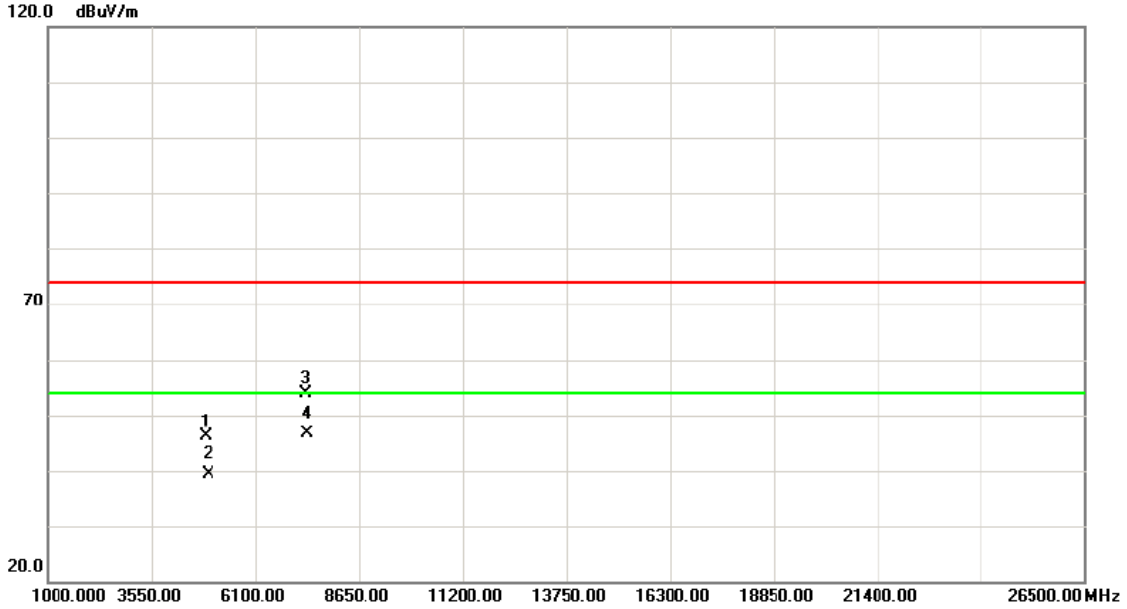
Polarization: Vertical



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1	X	2434.500	76.20	31.99	108.19	74.00	34.19	peak	
2	*	2434.500	66.01	31.99	98.00	54.00	44.00	AVG	
3		2483.500	29.78	32.19	61.97	74.00	-12.03	peak	
4		2483.500	17.76	32.19	49.95	54.00	-4.05	AVG	

EUT	Mini PCI Radio Module, 2x2 IEEE 802.11 b/g/n ,2.4 GHz	Model Name	RJ-1301
Temperature	26°C	Relative Humidity	60%
Test Voltage	AC 120V/60Hz		
Test Mode	IEEE 802.11n (40 MHz)/2452 MHz-2TX		

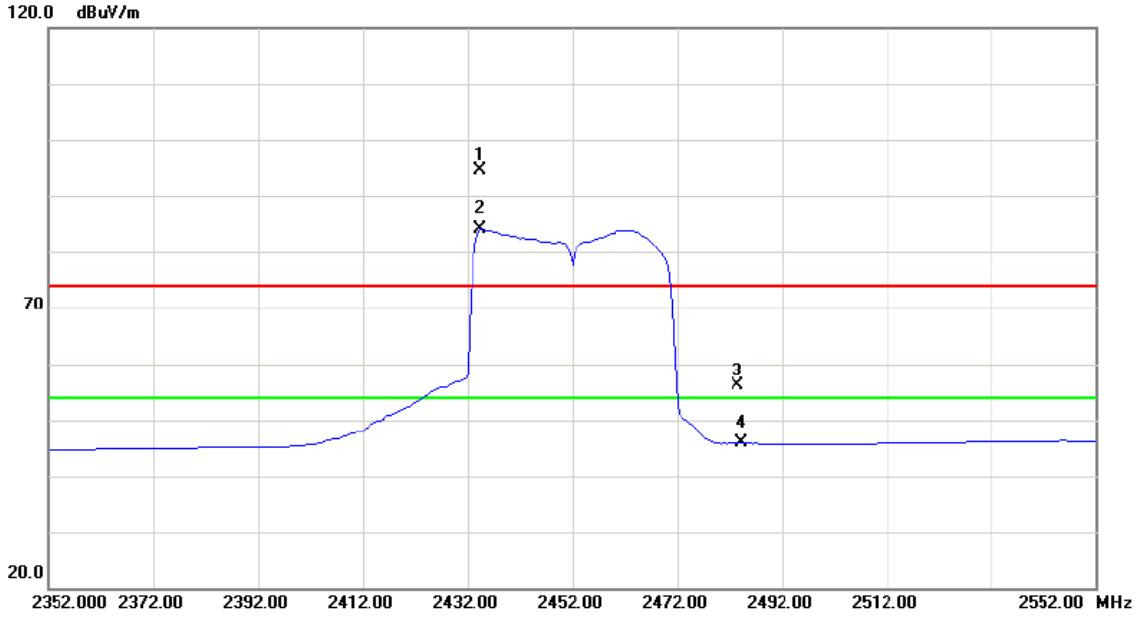
Polarization: Vertical



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1		4904.000	39.76	6.32	46.08	74.00	-27.92	peak	
2		4904.000	33.17	6.32	39.49	54.00	-14.51	AVG	
3		7357.000	40.92	12.94	53.86	74.00	-20.14	peak	
4	*	7357.000	33.58	12.94	46.52	54.00	-7.48	AVG	

EUT	Mini PCI Radio Module, 2x2 IEEE 802.11 b/g/n ,2.4 GHz	Model Name	RJ-1301
Temperature	26°C	Relative Humidity	60%
Test Voltage	AC 120V/60Hz		
Test Mode	IEEE 802.11n (40 MHz)/2452 MHz-2TX		

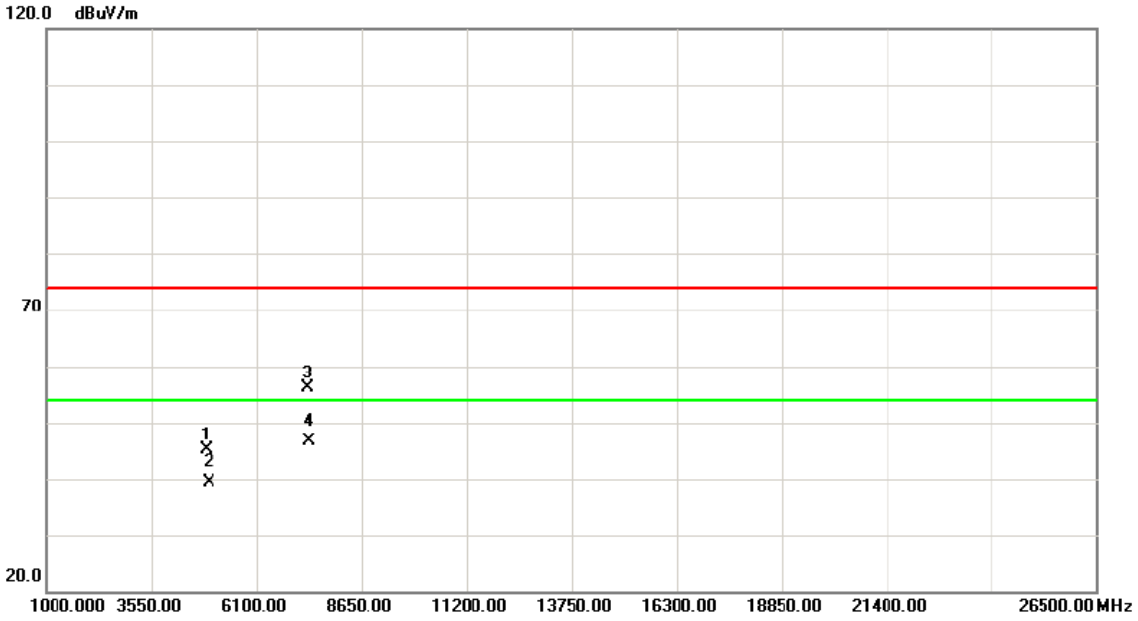
Polarization: Horizontal



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1	X	2434.500	62.55	31.99	94.54	74.00	20.54	peak	
2	*	2434.500	52.03	31.99	84.02	54.00	30.02	AVG	
3		2483.500	23.91	32.19	56.10	74.00	-17.90	peak	
4		2483.500	13.61	32.19	45.80	54.00	-8.20	AVG	

EUT	Mini PCI Radio Module, 2x2 IEEE 802.11 b/g/n ,2.4 GHz	Model Name	RJ-1301
Temperature	26°C	Relative Humidity	60%
Test Voltage	AC 120V/60Hz		
Test Mode	IEEE 802.11n (40 MHz)/2452 MHz-2TX		

Polarization: Horizontal

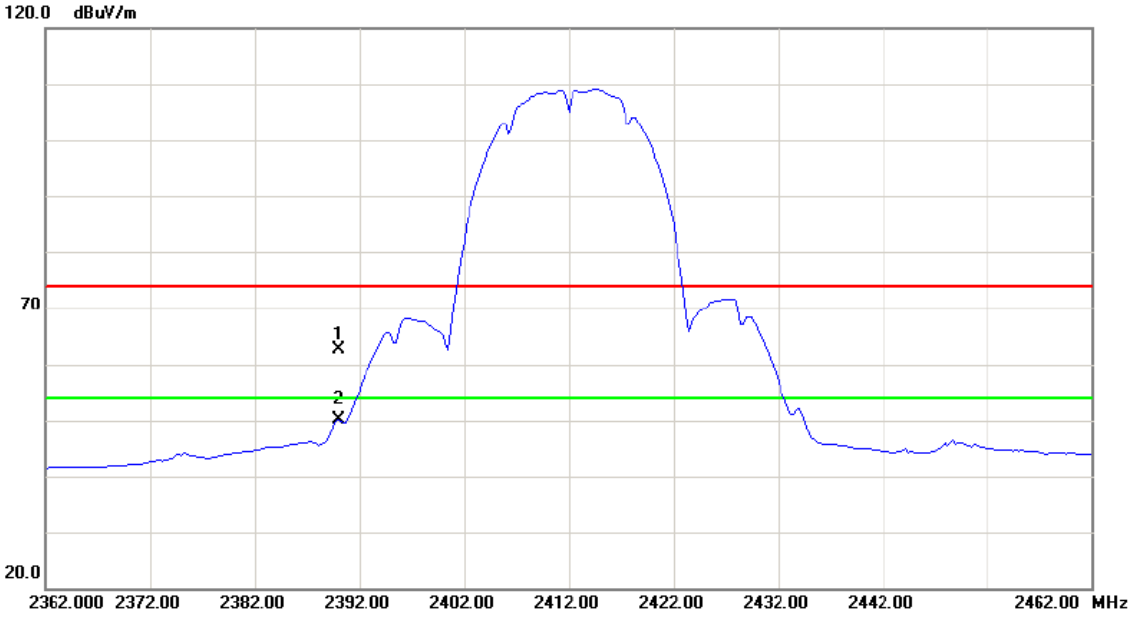


No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1		4902.500	38.82	6.31	45.13	74.00	-28.87	peak	
2		4902.500	33.06	6.31	39.37	54.00	-14.63	AVG	
3		7355.000	43.32	12.93	56.25	74.00	-17.75	peak	
4	*	7355.000	33.63	12.93	46.56	54.00	-7.44	AVG	

9.9 TEST RESULTS (RESTRICTED BANDS)

EUT	Mini PCI Radio Module, 2x2 IEEE 802.11 b/g/n ,2.4 GHz	Model Name	RJ-1301
Temperature	24°C	Relative Humidity	46%
Test Voltage	AC 120V/60Hz		
Test Mode	IEEE 802.11b		
NOTE	The transmitter was setup to transmit at the lowest channel and the field strength was measured at 2310-2390 MHz.		

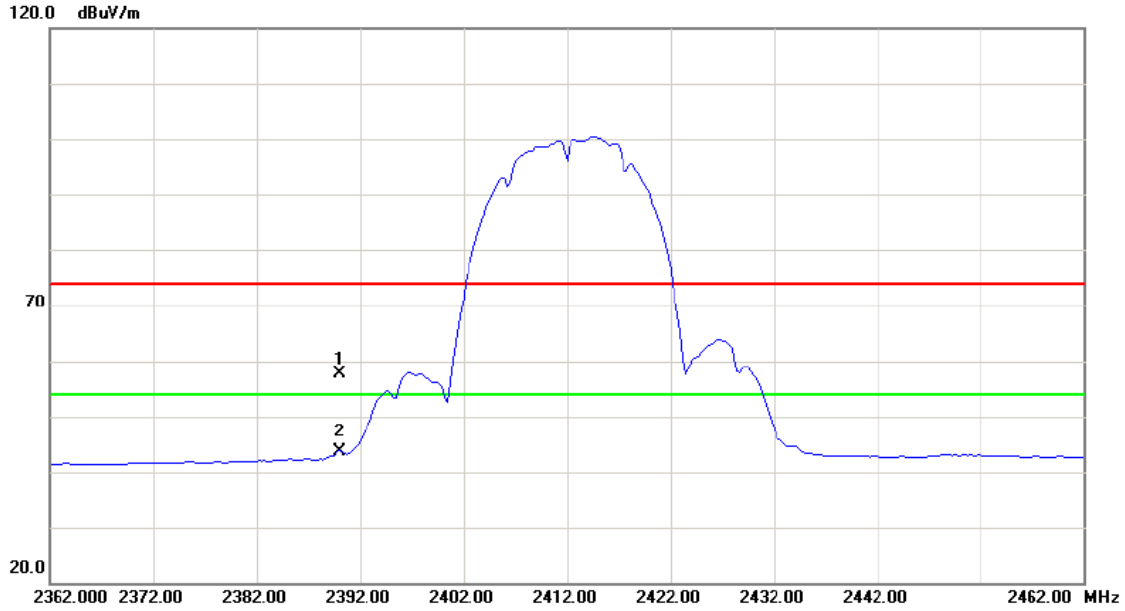
Polarization: Vertical



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1		2390.000	30.85	31.81	62.66	74.00	-11.34	peak	
2	*	2390.000	18.26	31.81	50.07	54.00	-3.93	AVG	

EUT	Mini PCI Radio Module, 2x2 IEEE 802.11 b/g/n ,2.4 GHz	Model Name	RJ-1301
Temperature	24°C	Relative Humidity	46%
Test Voltage	AC 120V/60Hz		
Test Mode	IEEE 802.11b		
NOTE	The transmitter was setup to transmit at the lowest channel and the field strength was measured at 2310-2390 MHz.		

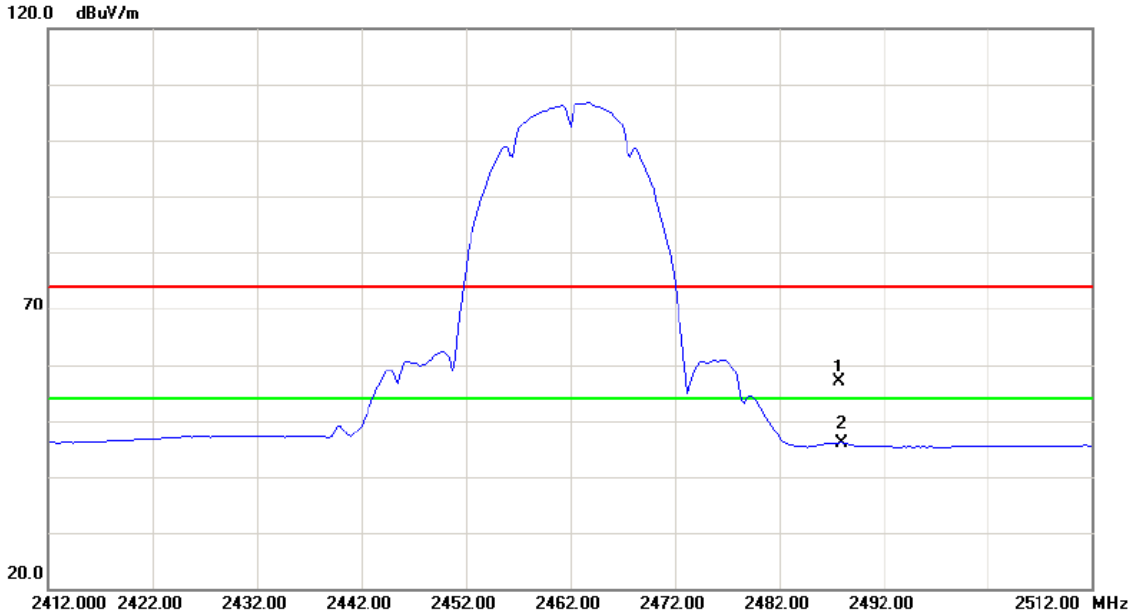
Polarization: Horizontal



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1		2390.000	25.88	31.81	57.69	74.00	-16.31	peak	
2	*	2390.000	11.94	31.81	43.75	54.00	-10.25	AVG	

EUT	Mini PCI Radio Module, 2x2 IEEE 802.11 b/g/n ,2.4 GHz	Model Name	RJ-1301
Temperature	24°C	Relative Humidity	46%
Test Voltage	AC 120V/60Hz		
Test Mode	IEEE 802.11b		
NOTE	The transmitter was setup to transmit at the highest channel and the field strength was measured at 2483.5-2500 MHz.		

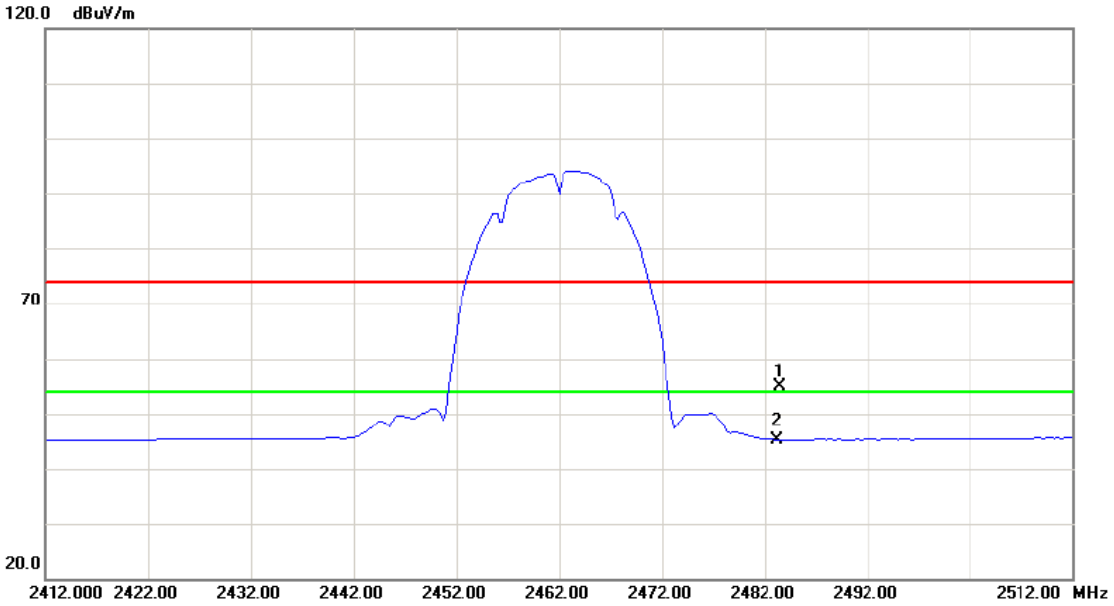
Polarization: Vertical



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1		2487.750	24.79	32.21	57.00	74.00	-17.00	peak	
2	*	2487.750	13.78	32.21	45.99	54.00	-8.01	AVG	

EUT	Mini PCI Radio Module, 2x2 IEEE 802.11 b/g/n ,2.4 GHz	Model Name	RJ-1301
Temperature	24°C	Relative Humidity	46%
Test Voltage	AC 120V/60Hz		
Test Mode	IEEE 802.11b		
NOTE	The transmitter was setup to transmit at the highest channel and the field strength was measured at 2483.5-2500 MHz.		

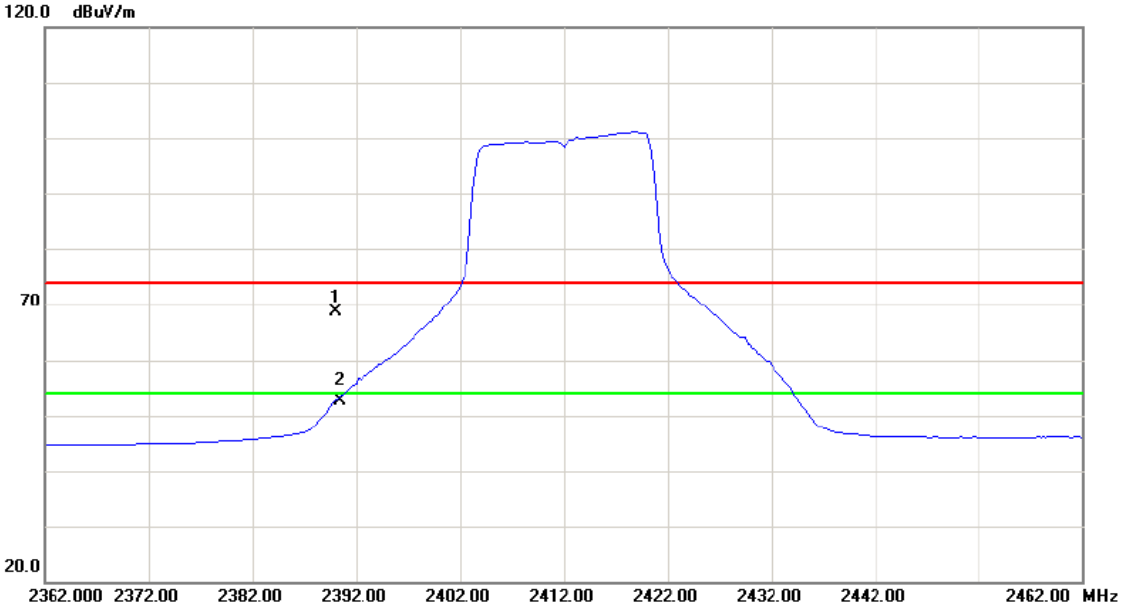
Polarization: Horizontal



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1		2483.500	22.81	32.19	55.00	74.00	-19.00	peak	
2	*	2483.500	13.03	32.19	45.22	54.00	-8.78	AVG	

EUT	Mini PCI Radio Module, 2x2 IEEE 802.11 b/g/n ,2.4 GHz	Model Name	RJ-1301
Temperature	24°C	Relative Humidity	46%
Test Voltage	AC 120V/60Hz		
Test Mode	IEEE 802.11g		
NOTE	The transmitter was setup to transmit at the lowest channel and the field strength was measured at 2310-2390 MHz.		

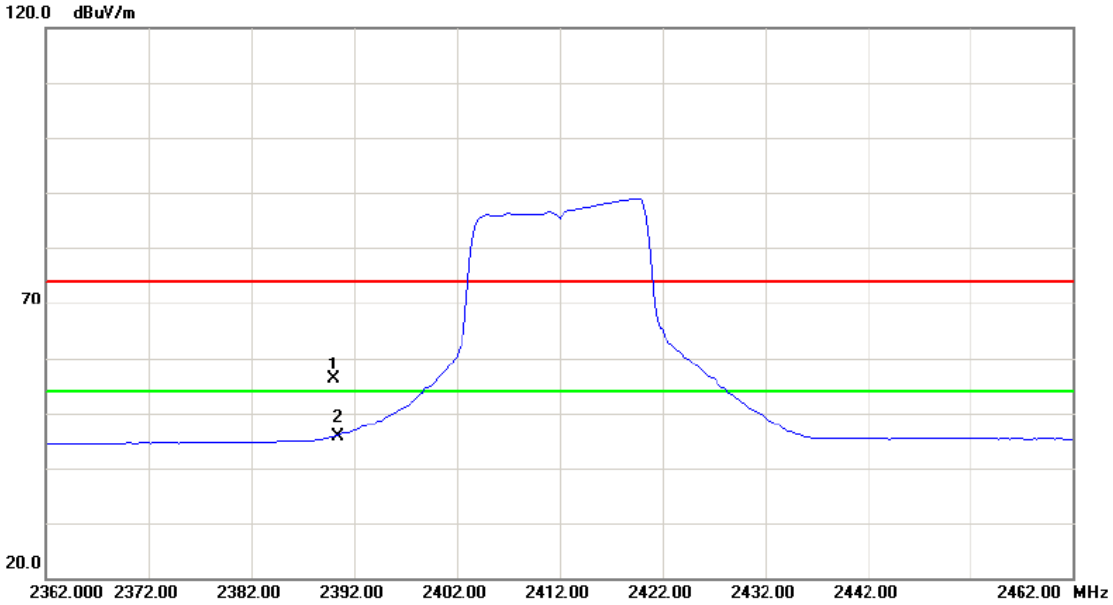
Polarization: Vertical



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1		2390.000	36.74	31.81	68.55	74.00	-5.45	peak	
2	*	2390.000	20.94	31.81	52.75	54.00	-1.25	AVG	

EUT	Mini PCI Radio Module, 2x2 IEEE 802.11 b/g/n ,2.4 GHz	Model Name	RJ-1301
Temperature	24°C	Relative Humidity	46%
Test Voltage	AC 120V/60Hz		
Test Mode	IEEE 802.11g		
NOTE	The transmitter was setup to transmit at the lowest channel and the field strength was measured at 2310-2390 MHz.		

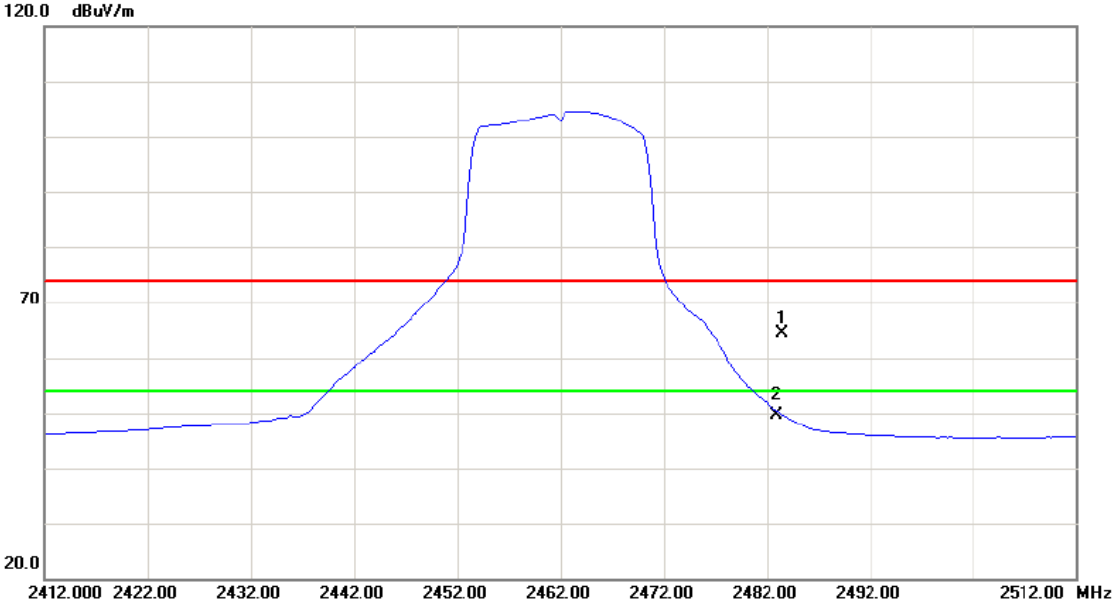
Polarization: Horizontal



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1		2390.000	24.23	31.81	56.04	74.00	-17.96	peak	
2	*	2390.000	13.85	31.81	45.66	54.00	-8.34	AVG	

EUT	Mini PCI Radio Module, 2x2 IEEE 802.11 b/g/n ,2.4 GHz	Model Name	RJ-1301
Temperature	24°C	Relative Humidity	46%
Test Voltage	AC 120V/60Hz		
Test Mode	IEEE 802.11g		
NOTE	The transmitter was setup to transmit at the highest channel and the field strength was measured at 2483.5-2500 MHz.		

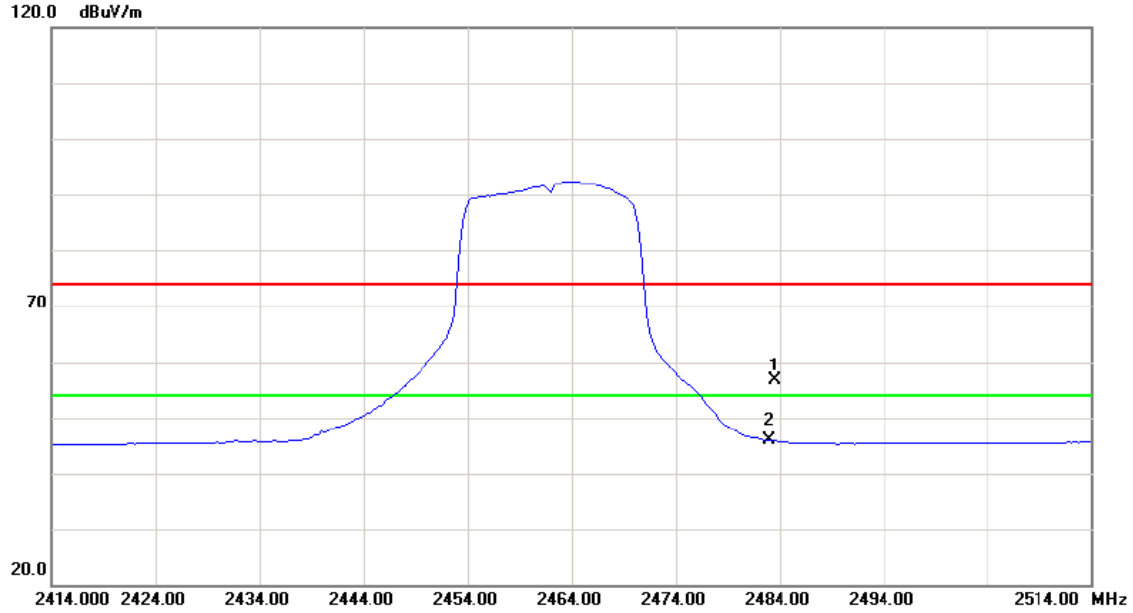
Polarization: Vertical



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1		2483.500	32.12	32.19	64.31	74.00	-9.69	peak	
2	*	2483.500	17.51	32.19	49.70	54.00	-4.30	AVG	

EUT	Mini PCI Radio Module, 2x2 IEEE 802.11 b/g/n ,2.4 GHz	Model Name	RJ-1301
Temperature	24°C	Relative Humidity	46%
Test Voltage	AC 120V/60Hz		
Test Mode	IEEE 802.11g		
NOTE	The transmitter was setup to transmit at the highest channel and the field strength was measured at 2483.5-2500 MHz.		

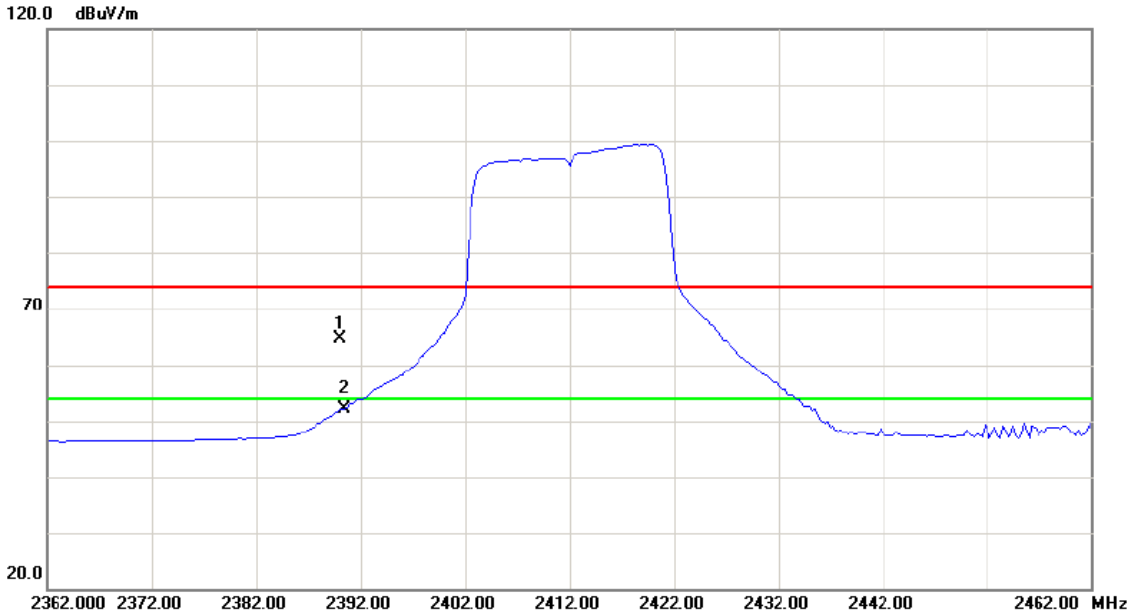
Polarization: Horizontal



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1		2483.500	24.42	32.19	56.61	74.00	-17.39	peak	
2	*	2483.500	13.61	32.19	45.80	54.00	-8.20	AVG	

EUT	Mini PCI Radio Module, 2x2 IEEE 802.11 b/g/n ,2.4 GHz	Model Name	RJ-1301
Temperature	24°C	Relative Humidity	46%
Test Voltage	AC 120V/60Hz		
Test Mode	IEEE 802.11n (20 MHz)-1TX		
NOTE	The transmitter was setup to transmit at the lowest channel and the field strength was measured at 2310-2390 MHz.		

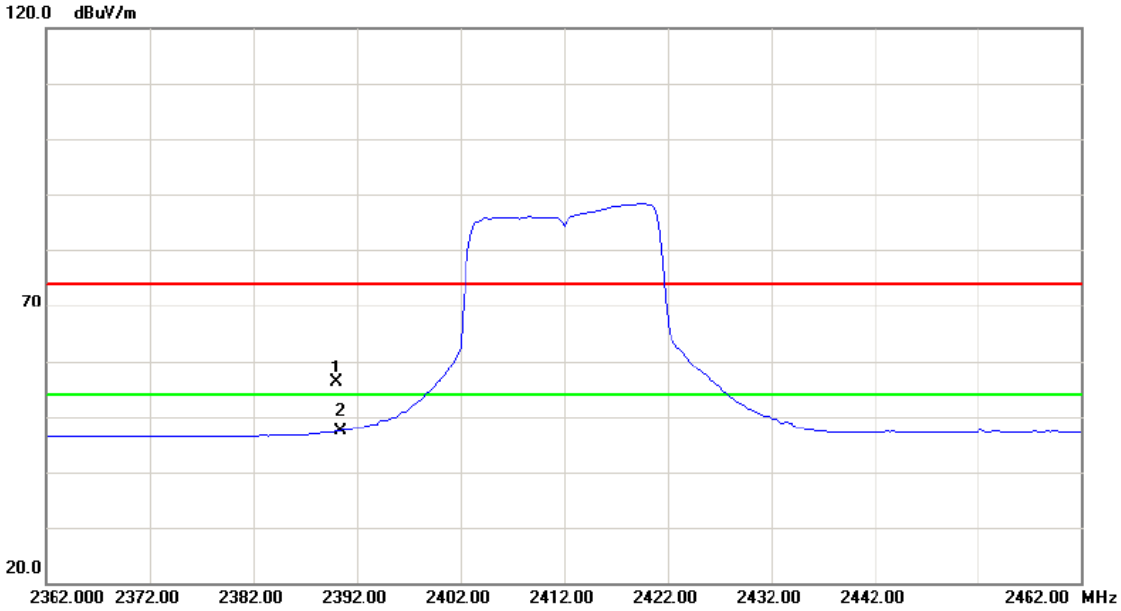
Polarization: Vertical



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1		2390.000	32.88	31.81	64.69	74.00	-9.31	peak	
2	*	2390.000	20.22	31.81	52.03	54.00	-1.97	AVG	

EUT	Mini PCI Radio Module, 2x2 IEEE 802.11 b/g/n ,2.4 GHz	Model Name	RJ-1301
Temperature	24°C	Relative Humidity	46%
Test Voltage	AC 120V/60Hz		
Test Mode	IEEE 802.11n (20 MHz)-1TX		
NOTE	The transmitter was setup to transmit at the lowest channel and the field strength was measured at 2310-2390 MHz.		

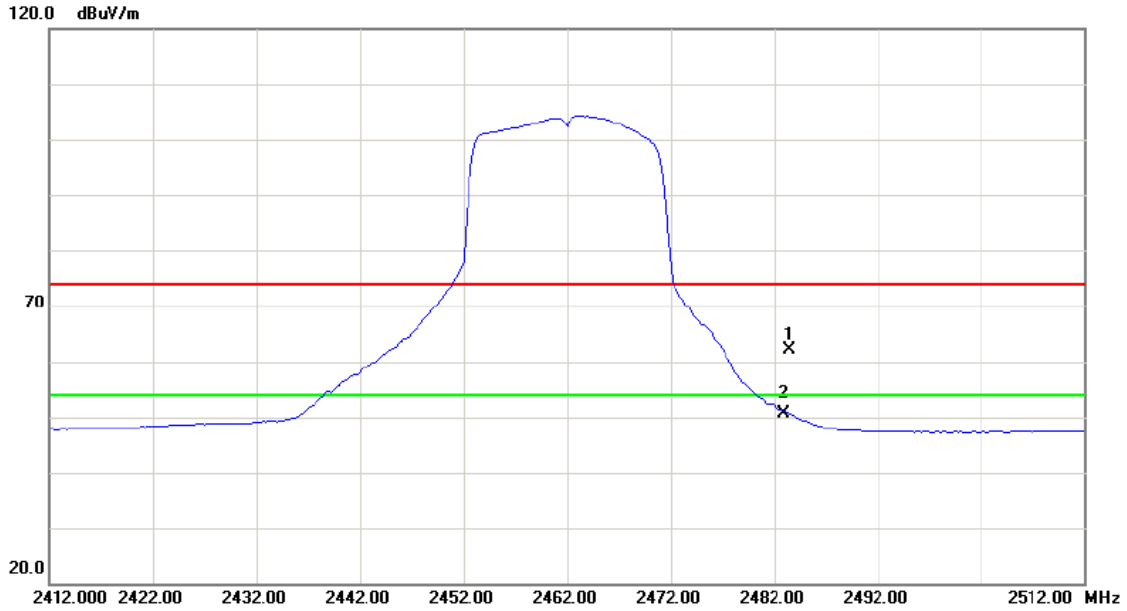
Polarization: Horizontal



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1		2390.000	24.25	31.81	56.06	74.00	-17.94	peak	
2	*	2390.000	15.46	31.81	47.27	54.00	-6.73	AVG	

EUT	Mini PCI Radio Module, 2x2 IEEE 802.11 b/g/n ,2.4 GHz	Model Name	RJ-1301
Temperature	24°C	Relative Humidity	46%
Test Voltage	AC 120V/60Hz		
Test Mode	IEEE 802.11n (20 MHz)-1TX		
NOTE	The transmitter was setup to transmit at the highest channel and the field strength was measured at 2483.5-2500 MHz.		

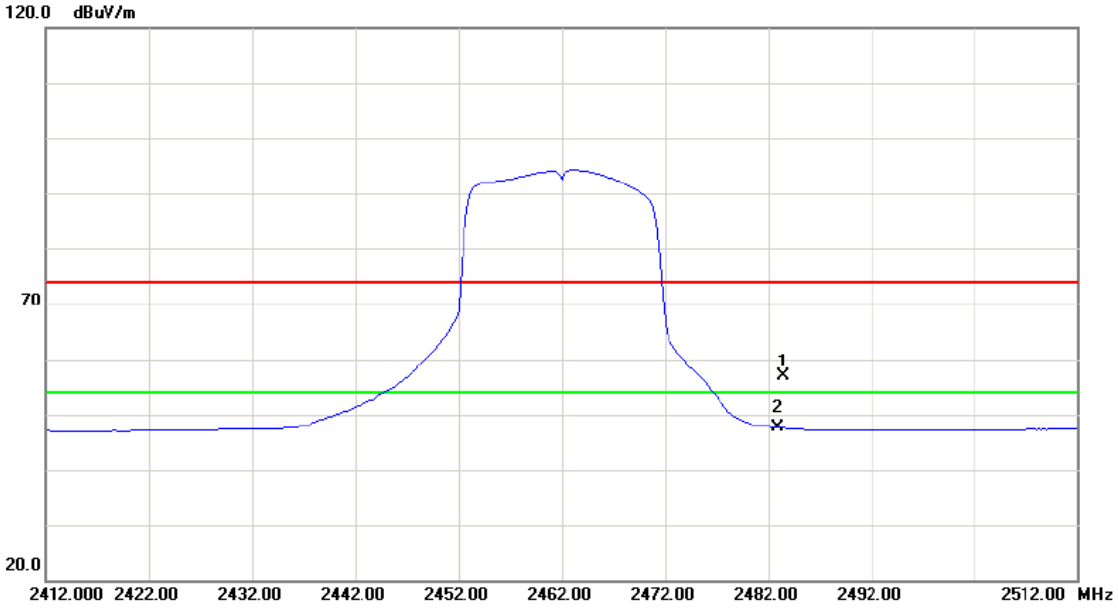
Polarization: Vertical



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1		2483.500	29.86	32.19	62.05	74.00	-11.95	peak	
2	*	2483.500	18.42	32.19	50.61	54.00	-3.39	AVG	

EUT	Mini PCI Radio Module, 2x2 IEEE 802.11 b/g/n ,2.4 GHz	Model Name	RJ-1301
Temperature	24°C	Relative Humidity	46%
Test Voltage	AC 120V/60Hz		
Test Mode	IEEE 802.11n (20 MHz)-1TX		
NOTE	The transmitter was setup to transmit at the highest channel and the field strength was measured at 2483.5-2500 MHz.		

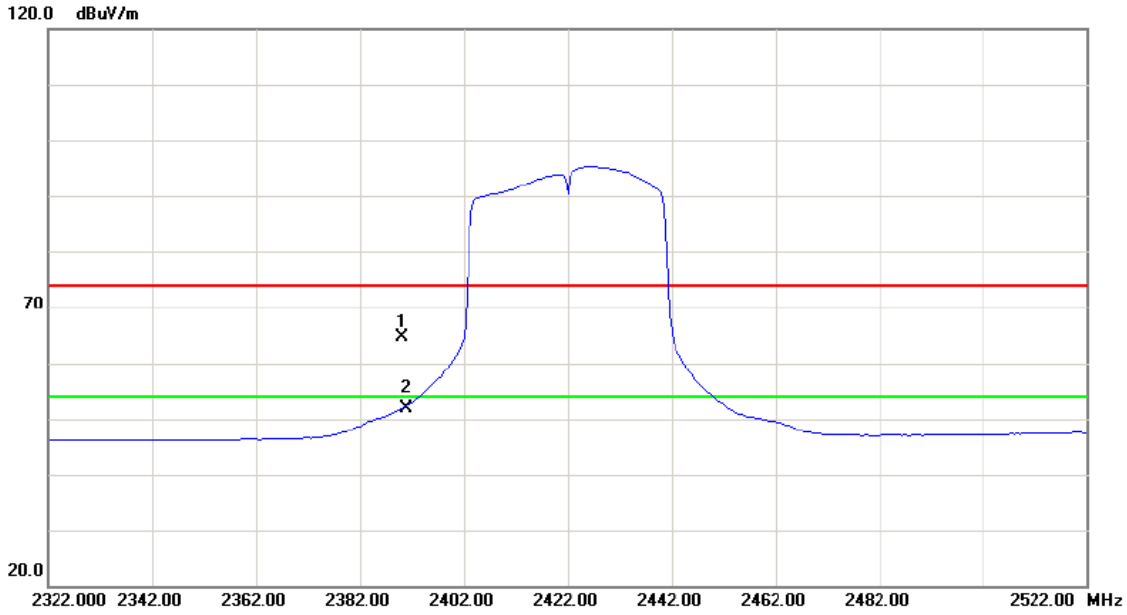
Polarization: Horizontal



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1		2483.500	24.62	32.19	56.81	74.00	-17.19	peak	
2	*	2483.500	15.32	32.19	47.51	54.00	-6.49	AVG	

EUT	Mini PCI Radio Module, 2x2 IEEE 802.11 b/g/n ,2.4 GHz	Model Name	RJ-1301
Temperature	24°C	Relative Humidity	46%
Test Voltage	AC 120V/60Hz		
Test Mode	IEEE 802.11n (40 MHz)-1TX		
NOTE	The transmitter was setup to transmit at the lowest channel and the field strength was measured at 2310-2390 MHz.		

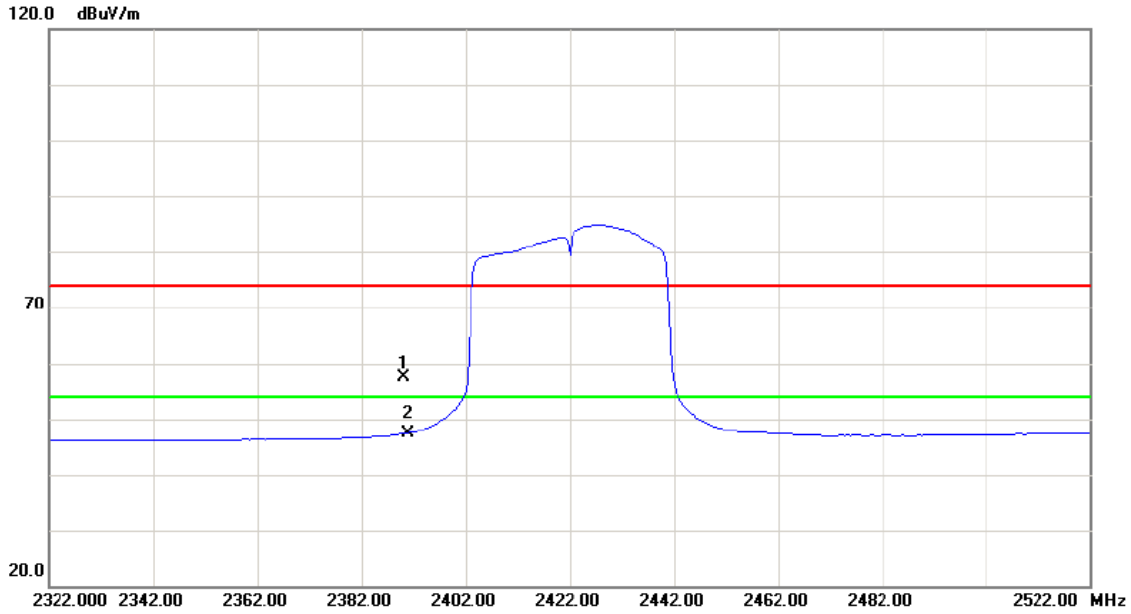
Polarization: Vertical



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1		2390.000	32.85	31.81	64.66	74.00	-9.34	peak	
2	*	2390.000	20.06	31.81	51.87	54.00	-2.13	AVG	

EUT	Mini PCI Radio Module, 2x2 IEEE 802.11 b/g/n ,2.4 GHz	Model Name	RJ-1301
Temperature	24°C	Relative Humidity	46%
Test Voltage	AC 120V/60Hz		
Test Mode	IEEE 802.11n (40 MHz)-1TX		
NOTE	The transmitter was setup to transmit at the lowest channel and the field strength was measured at 2310-2390 MHz.		

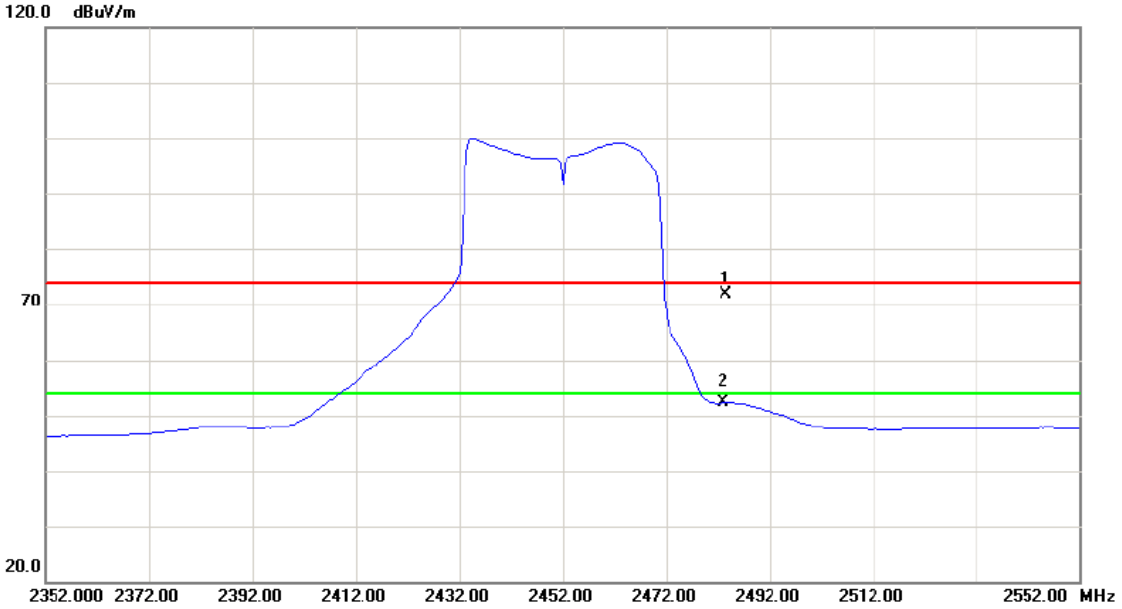
Polarization: Horizontal



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1		2390.000	25.48	31.81	57.29	74.00	-16.71	peak	
2	*	2390.000	15.46	31.81	47.27	54.00	-6.73	AVG	

EUT	Mini PCI Radio Module, 2x2 IEEE 802.11 b/g/n ,2.4 GHz	Model Name	RJ-1301
Temperature	24°C	Relative Humidity	46%
Test Voltage	AC 120V/60Hz		
Test Mode	IEEE 802.11n (40 MHz)-1TX		
NOTE	The transmitter was setup to transmit at the highest channel and the field strength was measured at 2483.5-2500 MHz.		

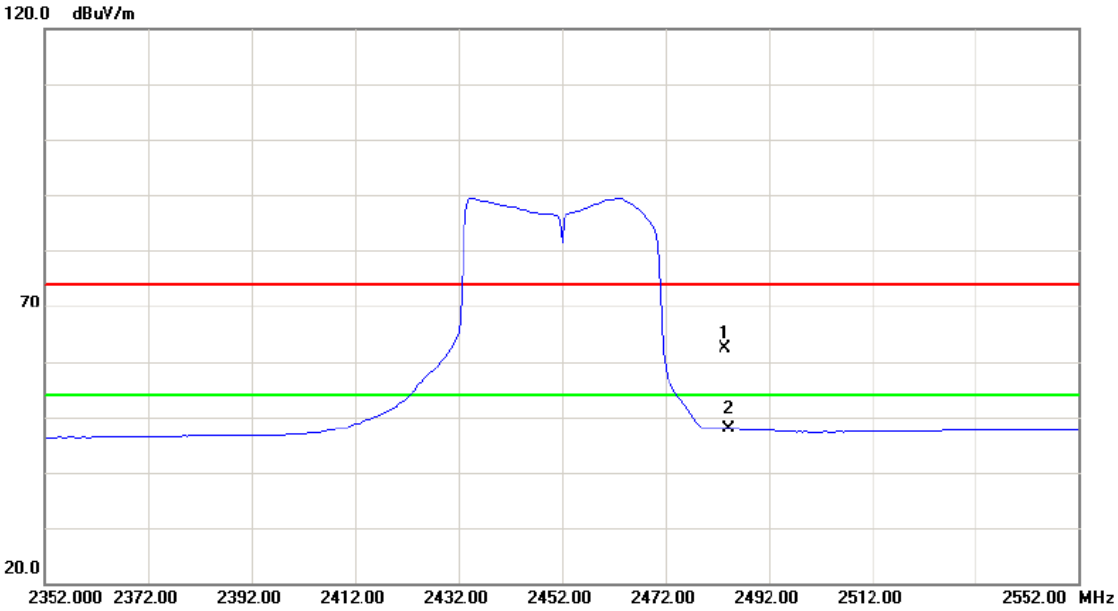
Polarization: Vertical



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1		2483.500	39.68	32.19	71.87	74.00	-2.13	peak	
2	*	2483.500	20.15	32.19	52.34	54.00	-1.66	AVG	

EUT	Mini PCI Radio Module, 2x2 IEEE 802.11 b/g/n ,2.4 GHz	Model Name	RJ-1301
Temperature	24°C	Relative Humidity	46%
Test Voltage	AC 120V/60Hz		
Test Mode	IEEE 802.11n (40 MHz)-1TX		
NOTE	The transmitter was setup to transmit at the highest channel and the field strength was measured at 2483.5-2500 MHz.		

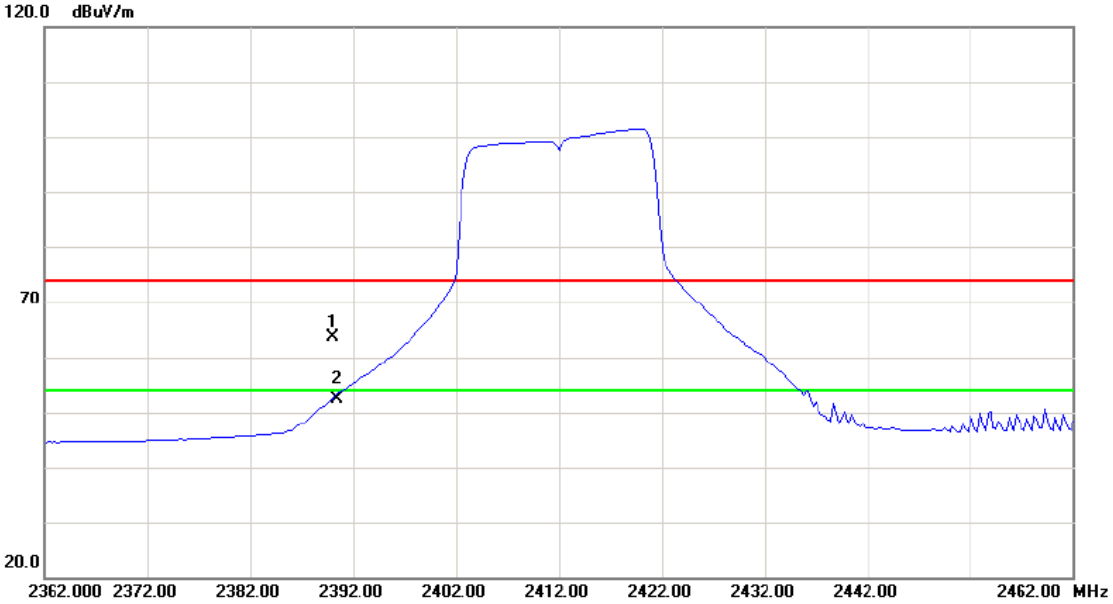
Polarization: Horizontal



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1		2483.500	30.20	32.19	62.39	74.00	-11.61	peak	
2	*	2483.500	15.61	32.19	47.80	54.00	-6.20	AVG	

EUT	Mini PCI Radio Module, 2x2 IEEE 802.11 b/g/n ,2.4 GHz	Model Name	RJ-1301
Temperature	24°C	Relative Humidity	46%
Test Voltage	AC 120V/60Hz		
Test Mode	IEEE 802.11n (20 MHz)-2TX		
NOTE	The transmitter was setup to transmit at the lowest channel and the field strength was measured at 2310-2390 MHz.		

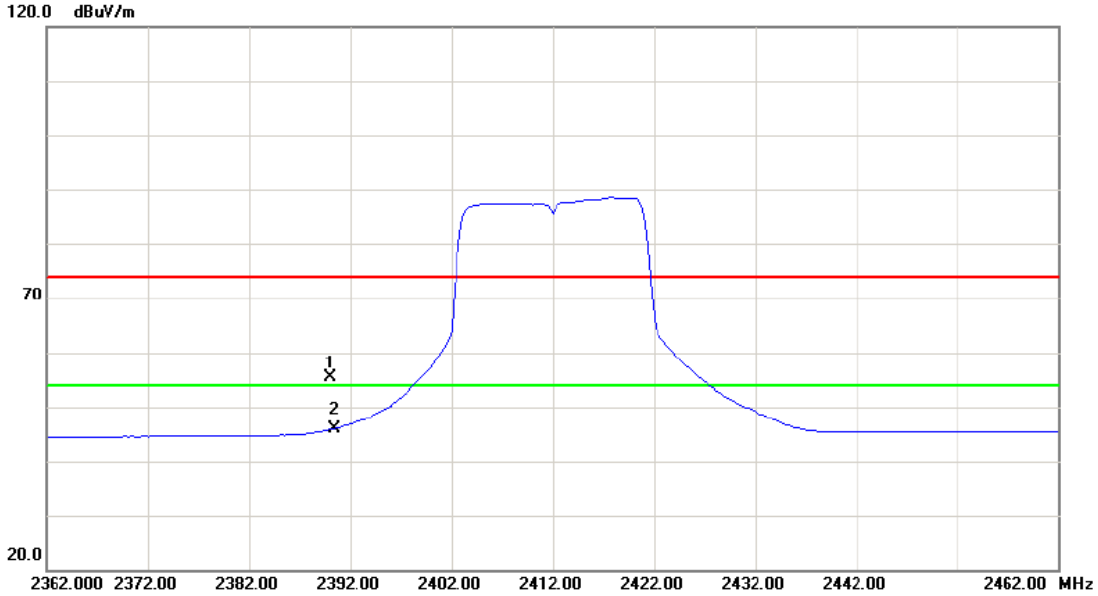
Polarization: Vertical



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1		2390.000	31.83	31.81	63.64	74.00	-10.36	peak	
2	*	2390.000	20.60	31.81	52.41	54.00	-1.59	AVG	

EUT	Mini PCI Radio Module, 2x2 IEEE 802.11 b/g/n ,2.4 GHz	Model Name	RJ-1301
Temperature	24°C	Relative Humidity	46%
Test Voltage	AC 120V/60Hz		
Test Mode	IEEE 802.11n (20 MHz)-2TX		
NOTE	The transmitter was setup to transmit at the lowest channel and the field strength was measured at 2310-2390 MHz.		

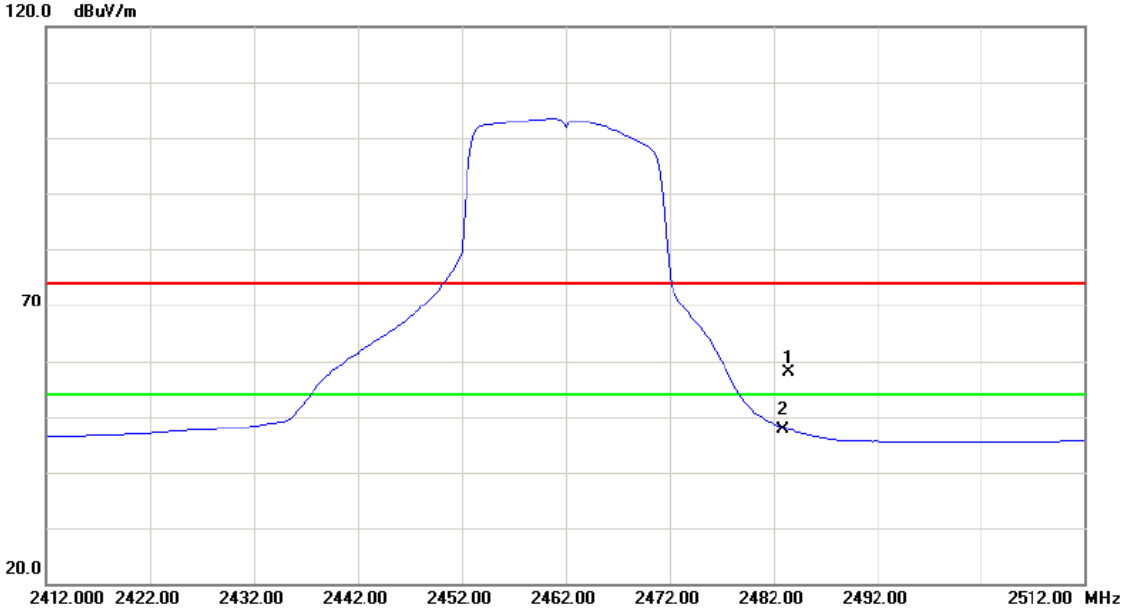
Polarization: Horizontal



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1		2390.000	23.59	31.81	55.40	74.00	-18.60	peak	
2	*	2390.000	13.95	31.81	45.76	54.00	-8.24	AVG	

EUT	Mini PCI Radio Module, 2x2 IEEE 802.11 b/g/n ,2.4 GHz	Model Name	RJ-1301
Temperature	24°C	Relative Humidity	46%
Test Voltage	AC 120V/60Hz		
Test Mode	IEEE 802.11n (20 MHz)-2TX		
NOTE	The transmitter was setup to transmit at the highest channel and the field strength was measured at 2483.5-2500 MHz.		

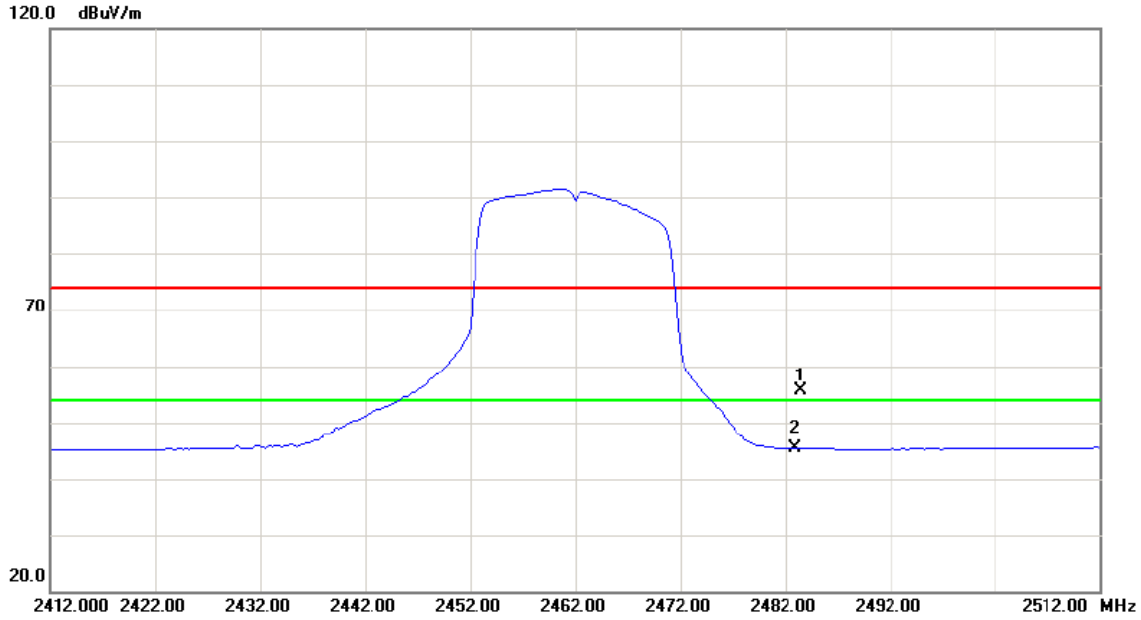
Polarization: Vertical



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1		2483.500	25.69	32.19	57.88	74.00	-16.12	peak	
2	*	2483.500	15.52	32.19	47.71	54.00	-6.29	AVG	

EUT	Mini PCI Radio Module, 2x2 IEEE 802.11 b/g/n ,2.4 GHz	Model Name	RJ-1301
Temperature	24°C	Relative Humidity	46%
Test Voltage	AC 120V/60Hz		
Test Mode	IEEE 802.11n (20 MHz)-2TX		
NOTE	The transmitter was setup to transmit at the highest channel and the field strength was measured at 2483.5-2500 MHz.		

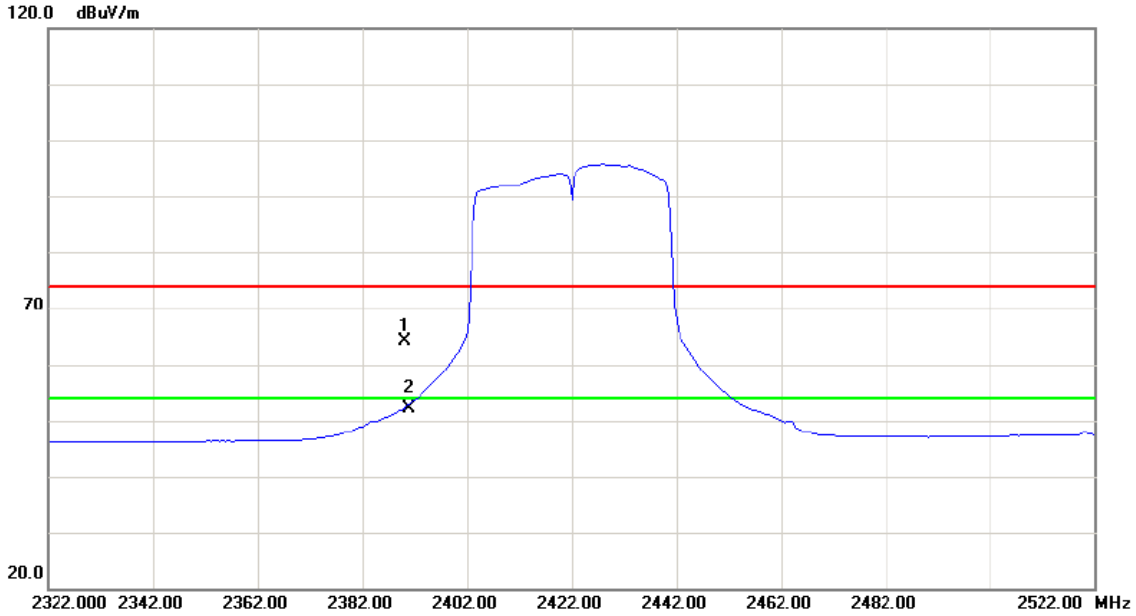
Polarization: Horizontal



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1		2483.500	23.54	32.19	55.73	74.00	-18.27	peak	
2	*	2483.500	13.10	32.19	45.29	54.00	-8.71	AVG	

EUT	Mini PCI Radio Module, 2x2 IEEE 802.11 b/g/n ,2.4 GHz	Model Name	RJ-1301
Temperature	24°C	Relative Humidity	46%
Test Voltage	AC 120V/60Hz		
Test Mode	IEEE 802.11n (40 MHz)-2TX		
NOTE	The transmitter was setup to transmit at the lowest channel and the field strength was measured at 2310-2390 MHz.		

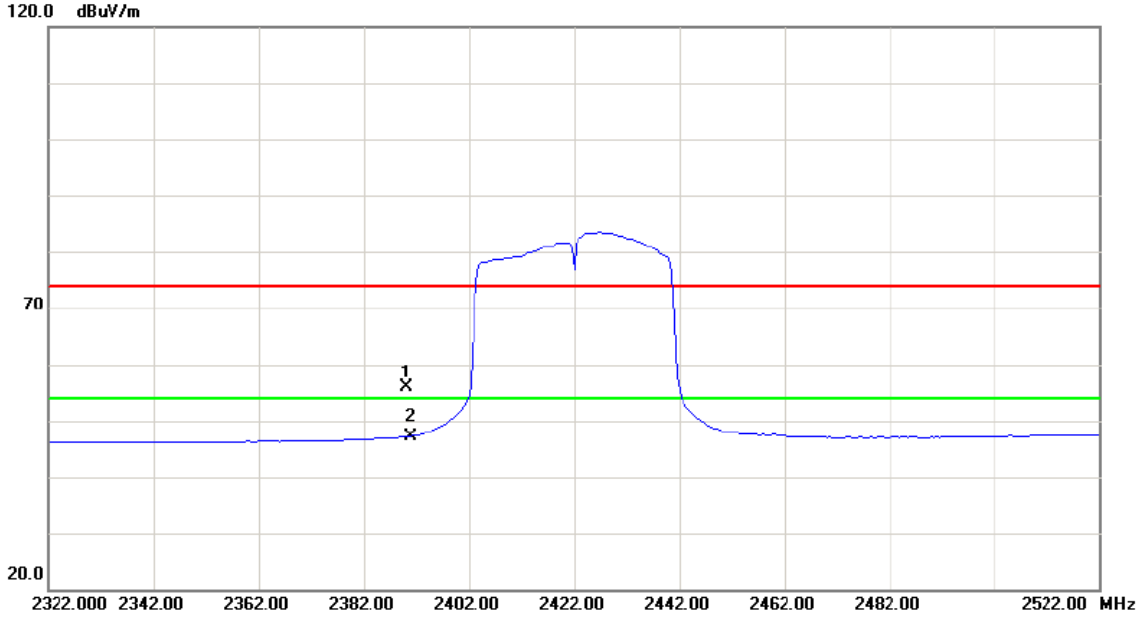
Polarization: Vertical



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1		2390.000	32.29	31.81	64.10	74.00	-9.90	peak	
2	*	2390.000	20.44	31.81	52.25	54.00	-1.75	AVG	

EUT	Mini PCI Radio Module, 2x2 IEEE 802.11 b/g/n ,2.4 GHz	Model Name	RJ-1301
Temperature	24°C	Relative Humidity	46%
Test Voltage	AC 120V/60Hz		
Test Mode	IEEE 802.11n (40 MHz)-2TX		
NOTE	The transmitter was setup to transmit at the lowest channel and the field strength was measured at 2310-2390 MHz.		

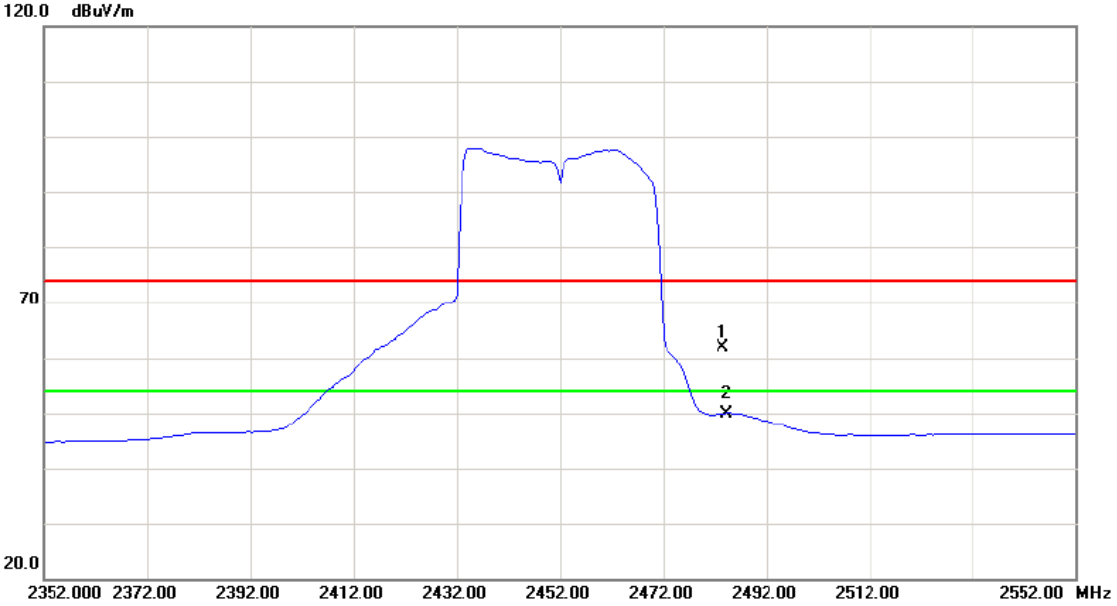
Polarization: Horizontal



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1		2390.000	24.15	31.81	55.96	74.00	-18.04	peak	
2	*	2390.000	15.33	31.81	47.14	54.00	-6.86	AVG	

EUT	Mini PCI Radio Module, 2x2 IEEE 802.11 b/g/n ,2.4 GHz	Model Name	RJ-1301
Temperature	24°C	Relative Humidity	46%
Test Voltage	AC 120V/60Hz		
Test Mode	IEEE 802.11n (40 MHz)-2TX		
NOTE	The transmitter was setup to transmit at the highest channel and the field strength was measured at 2483.5-2500 MHz.		

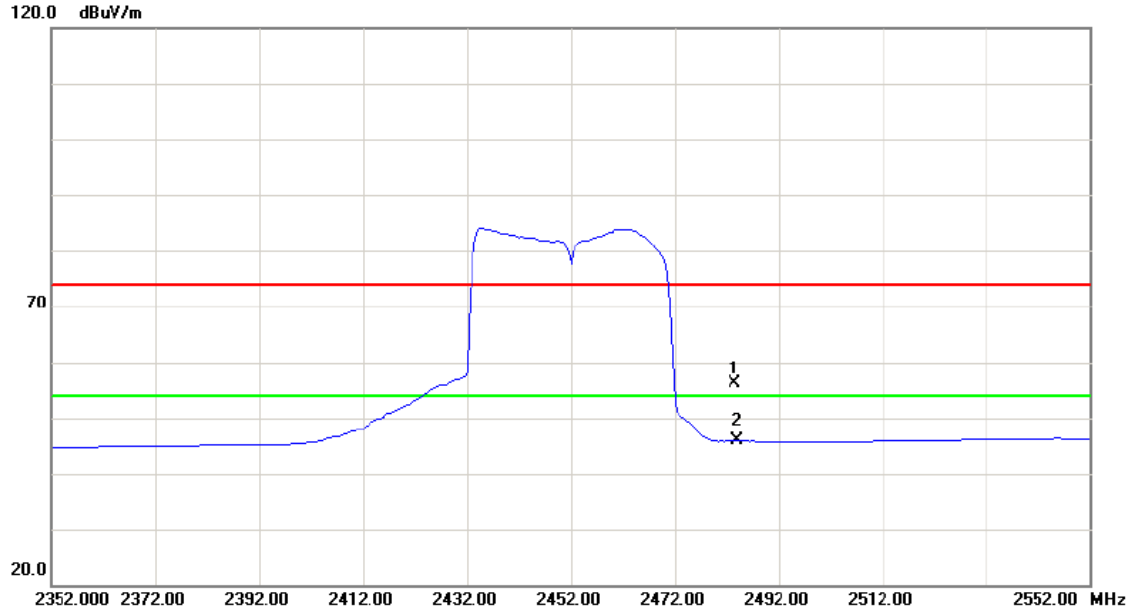
Polarization: Vertical



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1		2483.500	29.78	32.19	61.97	74.00	-12.03	peak	
2	*	2483.500	17.76	32.19	49.95	54.00	-4.05	AVG	

EUT	Mini PCI Radio Module, 2x2 IEEE 802.11 b/g/n ,2.4 GHz	Model Name	RJ-1301
Temperature	24°C	Relative Humidity	46%
Test Voltage	AC 120V/60Hz		
Test Mode	IEEE 802.11n (40 MHz)-2TX		
NOTE	The transmitter was setup to transmit at the highest channel and the field strength was measured at 2483.5-2500 MHz.		

Polarization: Horizontal



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1		2483.500	23.91	32.19	56.10	74.00	-17.90	peak	
2	*	2483.500	13.61	32.19	45.80	54.00	-8.20	AVG	

10 POWER SPECTRAL DENSITY

10.1 LIMIT

Test Item	Frequency Range (MHz)	Limit
Power Spectral Density	2400-2483.5	8 dBm (in any 3 kHz)

10.2 MEASUREMENT INSTRUMENTS LIST

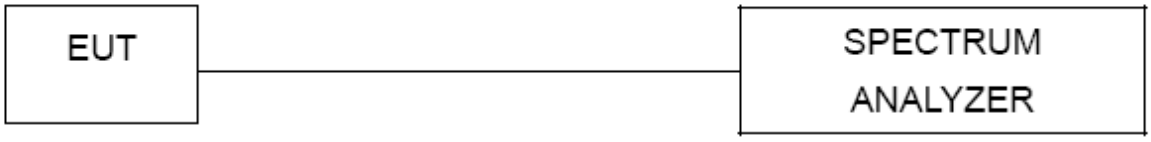
Item	Kind of Equipment	Manufacturer	Type No.	Serial No.	Calibrated until
1	Spectrum Analyzer	R&S	FSP-30	100854	Sep. 08, 2014

NOTE: **N/A**: denotes No Model Name, No Serial No. or No Calibration specified.

10.3 TEST PROCEDURES

a. The EUT was directly connected to the spectrum analyzer and antenna output port as show in the block diagram below.
b. Spectrum Setting: RBW=3 kHz, VBW=30 kHz, Sweep time = 500s.

10.4 TEST SETUP LAYOUT



10.5 DEVIATION FROM TEST STANDARD

No deviation

10.6 EUT OPERATING CONDITIONS

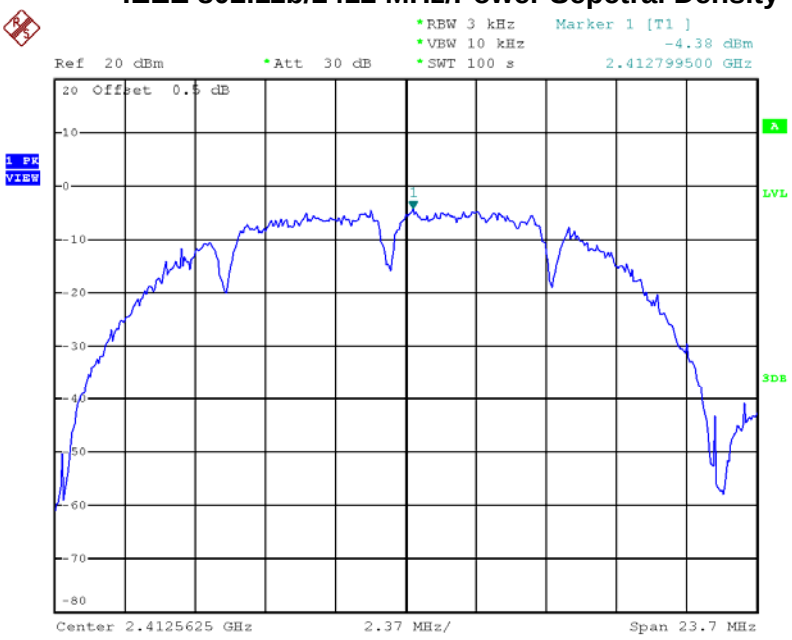
The EUT tested system was configured as the statements of 5.6 Unless otherwise a special operating condition is specified in the follows during the testing.

10.7TEST RESULTS

EUT	Mini PCI Radio Module, 2x2 IEEE 802.11 b/g/n ,2.4 GHz	Model Name	RJ-1301
Temperature	26°C	Relative Humidity	60%
Test Voltage	AC 120V/60Hz		
Test Mode	IEEE 802.11b/2412 MHz, 2437 MHz, 2462 MHz		

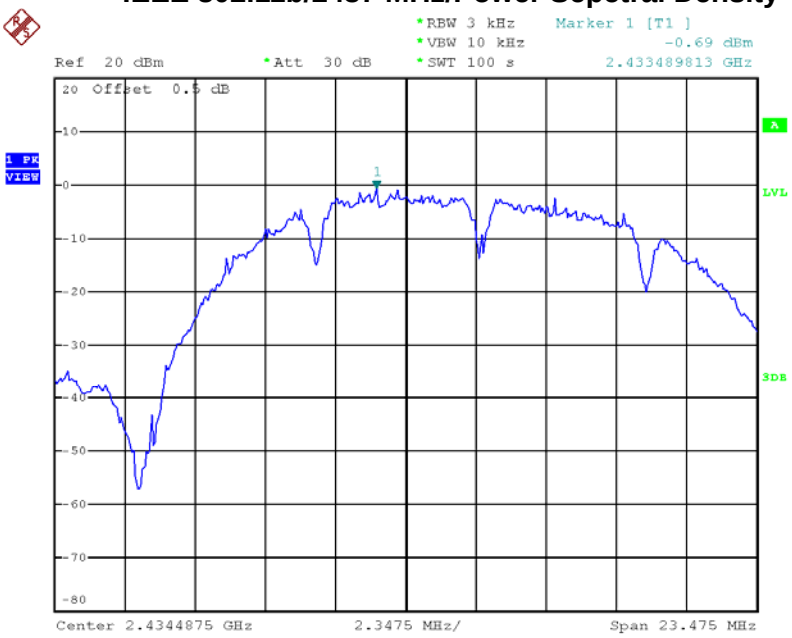
Frequency	Power Density (dBm)	Limit (dBm)	Result
2412 MHz	-4.38	8	PASS
2437 MHz	-0.69	8	PASS
2462 MHz	-3.78	8	PASS

IEEE 802.11b/2412 MHz/Power Sepctral Density



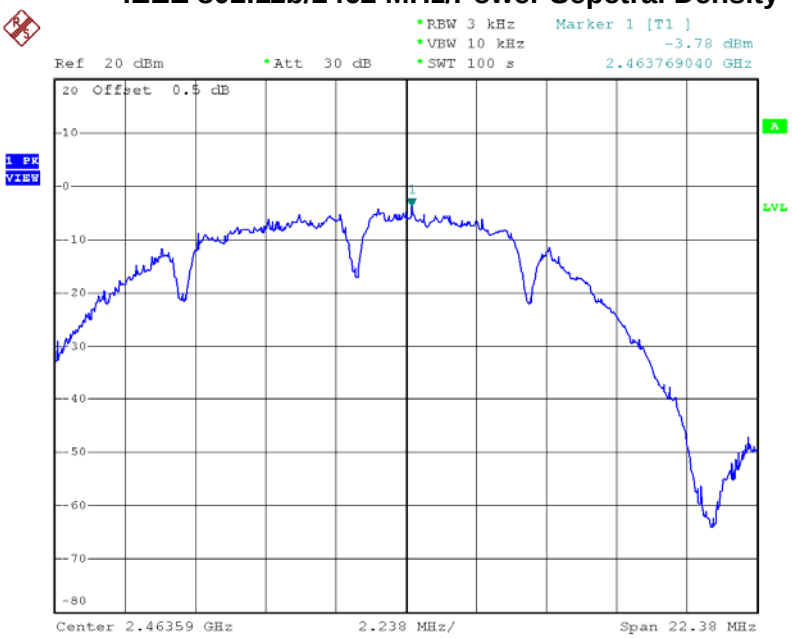
Date: 14.FEB.2014 17:37:49

IEEE 802.11b/2437 MHz/Power Sepctral Density



Date: 14.FEB.2014 17:45:48

IEEE 802.11b/2462 MHz/Power Sepctral Density

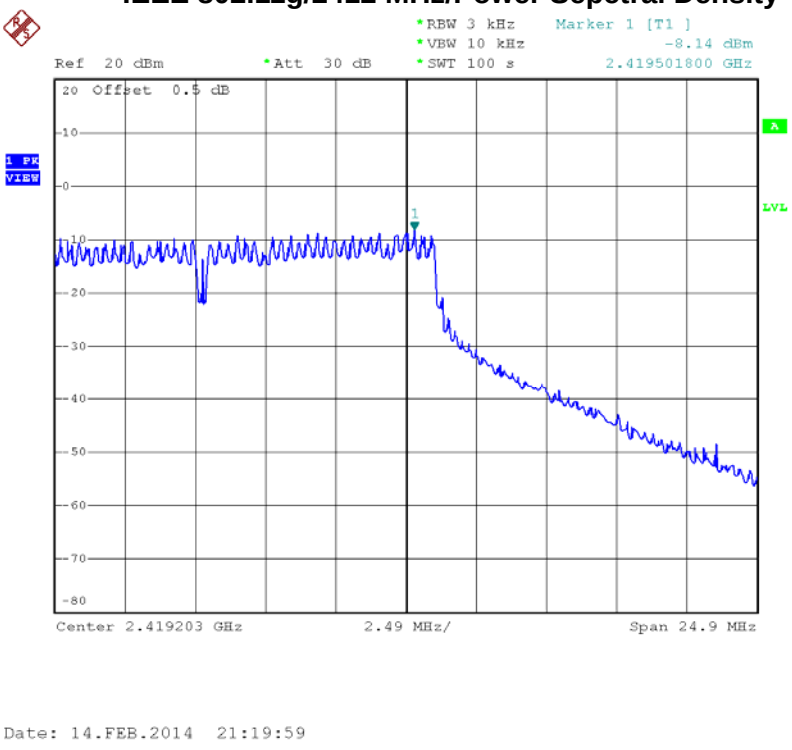


Date: 14.FEB.2014 21:10:50

EUT	Mini PCI Radio Module, 2x2 IEEE 802.11 b/g/n ,2.4 GHz	Model Name	RJ-1301
Temperature	26°C	Relative Humidity	60%
Test Voltage	AC 120V/60Hz		
Test Mode	IEEE 802.11g/2412 MHz, 2437 MHz, 2462 MHz		

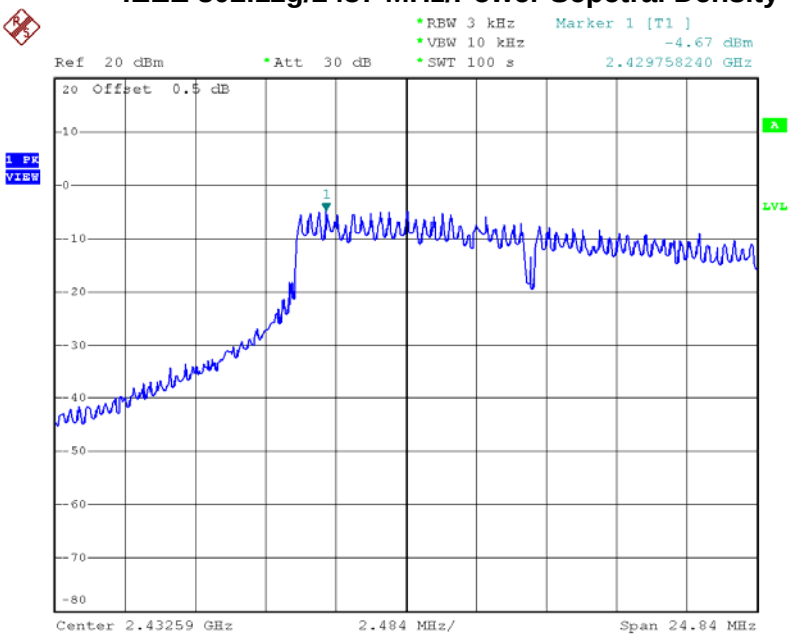
Frequency	Power Density (dBm)	Limit (dBm)	Result
2412 MHz	-8.14	8	PASS
2437 MHz	-4.67	8	PASS
2462 MHz	-5.39	8	PASS

IEEE 802.11g/2412 MHz/Power Sepctral Density



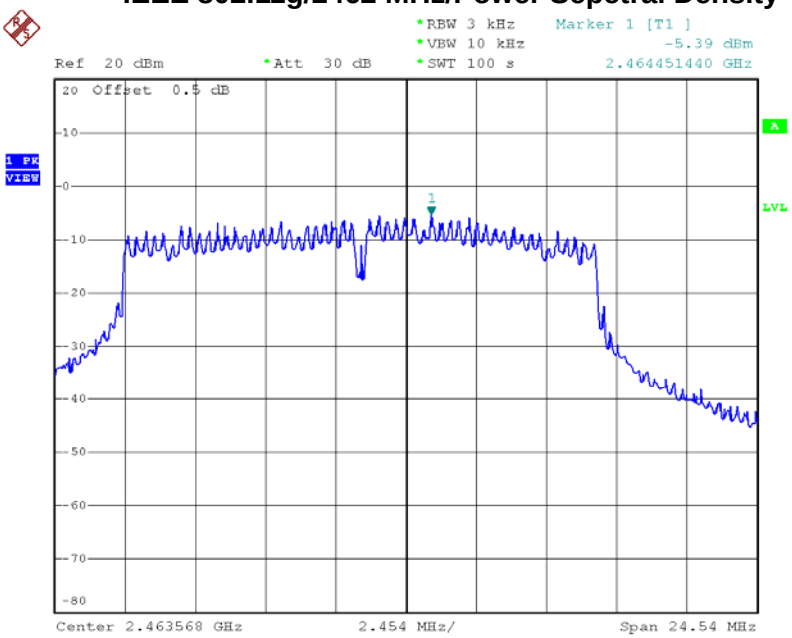
Date: 14.FEB.2014 21:19:59

IEEE 802.11g/2437 MHz/Power Sepctral Density



Date: 14.FEB.2014 21:26:37

IEEE 802.11g/2462 MHz/Power Sepctral Density

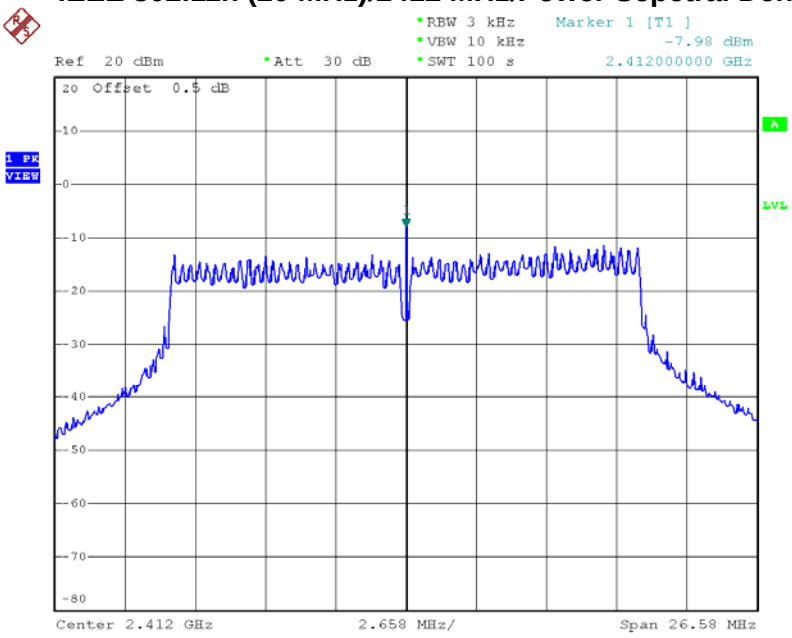


Date: 14.FEB.2014 21:34:29

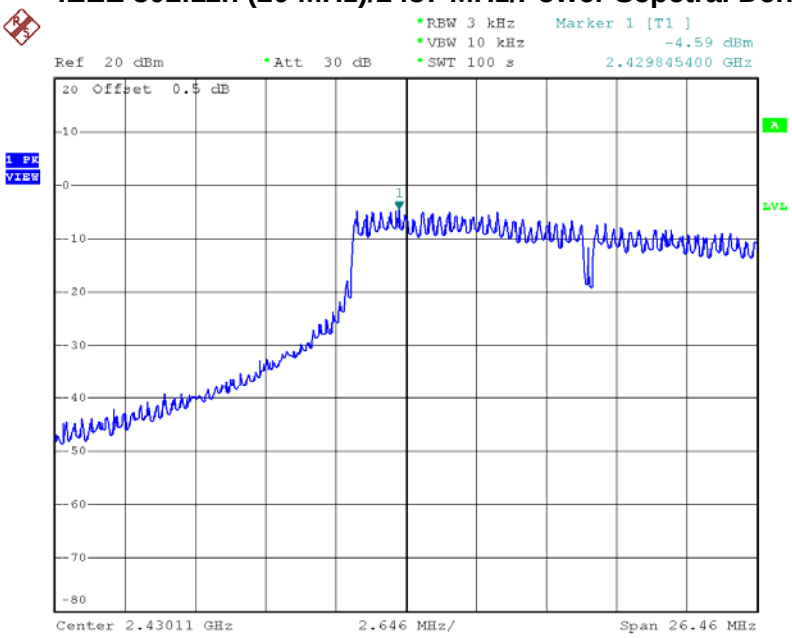
EUT	Mini PCI Radio Module, 2x2 IEEE 802.11 b/g/n ,2.4 GHz	Model Name	RJ-1301
Temperature	26°C	Relative Humidity	60%
Test Voltage	AC 120V/60Hz		
Test Mode	IEEE 802.11n (20 MHz)/2412 MHz, 2437 MHz, 2462 MHz-1TX		

Frequency	Power Density (dBm)	Limit (dBm)	Result
2412 MHz	-7.98	8	PASS
2437 MHz	-4.59	8	PASS
2462 MHz	-5.60	8	PASS

IEEE 802.11n (20 MHz)/2412 MHz/Power Sepctral Density

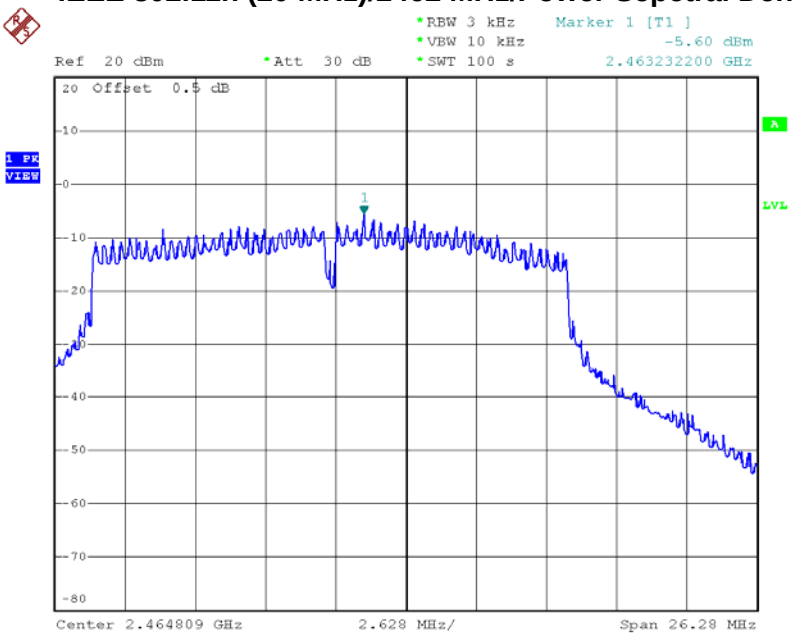


IEEE 802.11n (20 MHz)/2437 MHz/Power Sepctral Density



Date: 14.FEB.2014 22:04:33

IEEE 802.11n (20 MHz)/2462 MHz/Power Sepctral Density

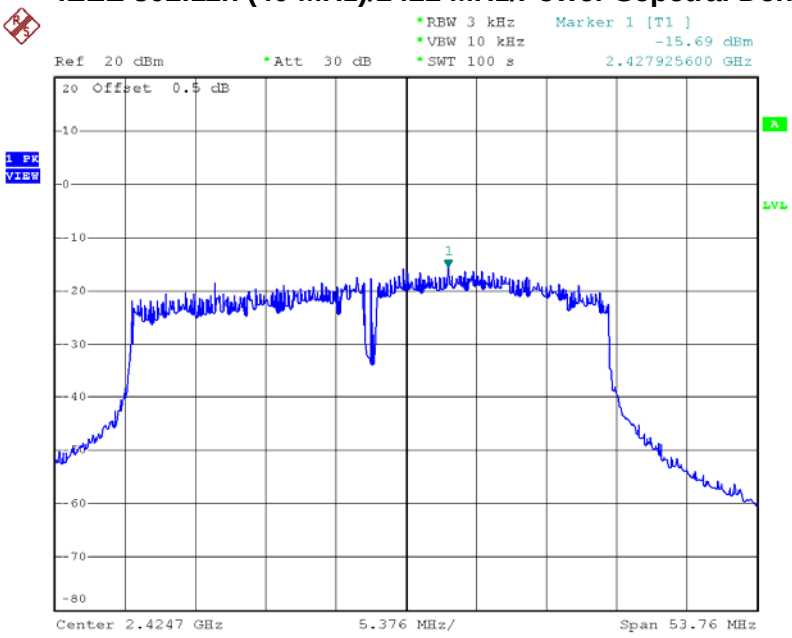


Date: 14.FEB.2014 22:11:52

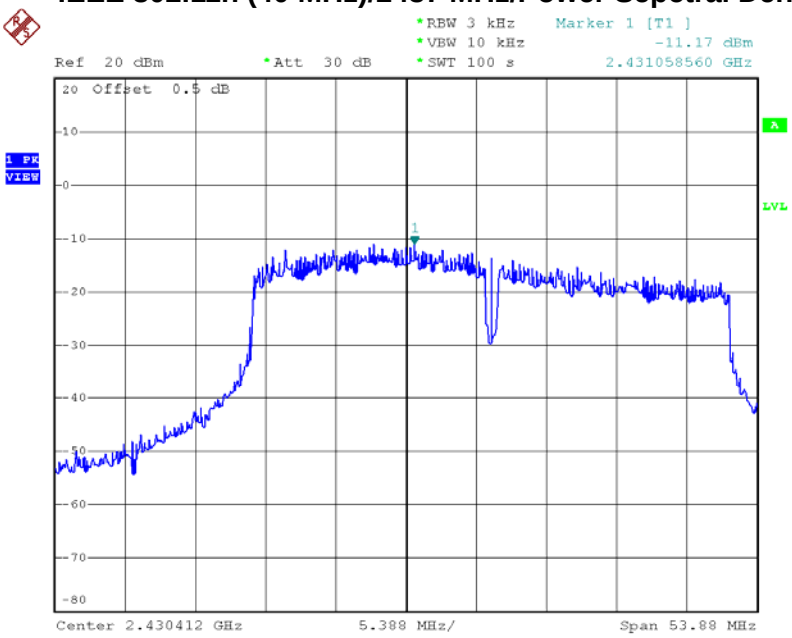
EUT	Mini PCI Radio Module, 2x2 IEEE 802.11 b/g/n ,2.4 GHz	Model Name	RJ-1301
Temperature	26°C	Relative Humidity	60%
Test Voltage	AC 120V/60Hz		
Test Mode	IEEE 802.11n (40 MHz)/2422 MHz, 2437 MHz, 2452 MHz-1TX		

Frequency	Power Density (dBm)	Limit (dBm)	Result
2422 MHz	-15.69	8	PASS
2437 MHz	-11.17	8	PASS
2452 MHz	-9.54	8	PASS

IEEE 802.11n (40 MHz)/2422 MHz/Power Sepctral Density

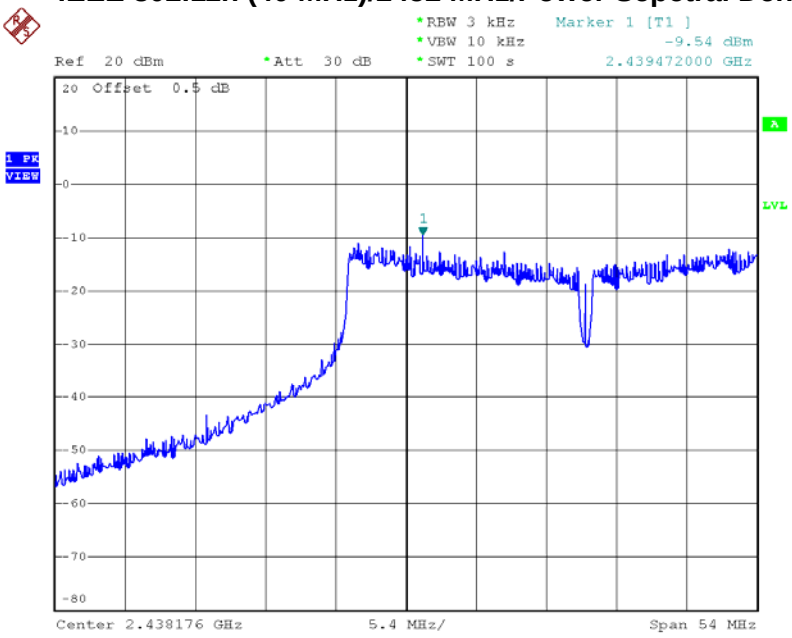


IEEE 802.11n (40 MHz)/2437 MHz/Power Sepctral Density



Date: 14.FEB.2014 22:26:56

IEEE 802.11n (40 MHz)/2452 MHz/Power Sepctral Density

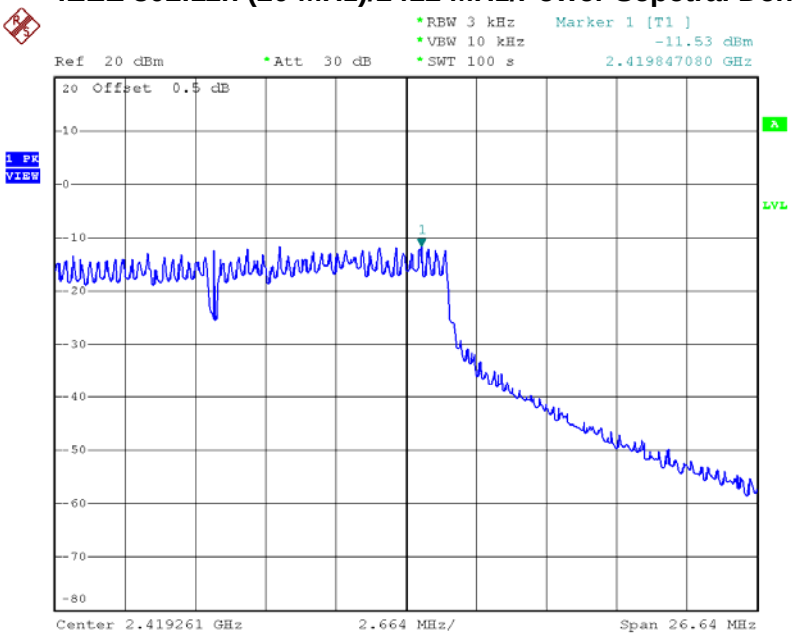


Date: 14.FEB.2014 22:39:20

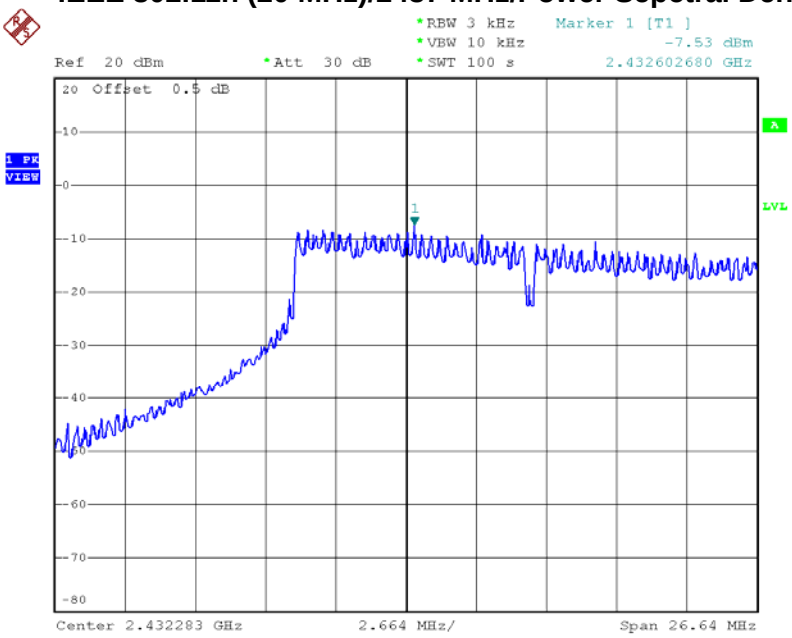
EUT	Mini PCI Radio Module, 2x2 IEEE 802.11 b/g/n ,2.4 GHz	Model Name	RJ-1301
Temperature	26°C	Relative Humidity	60%
Test Voltage	AC 120V/60Hz		
Test Mode	IEEE 802.11n (20 MHz)/2412 MHz, 2437 MHz, 2462 MHz-2TX-ANT 1		

Frequency	Power Density (dBm)	Limit (dBm)	Result
2412 MHz	-11.53	8	PASS
2437 MHz	-7.53	8	PASS
2462 MHz	-8.99	8	PASS

IEEE 802.11n (20 MHz)/2412 MHz/Power Sepctral Density

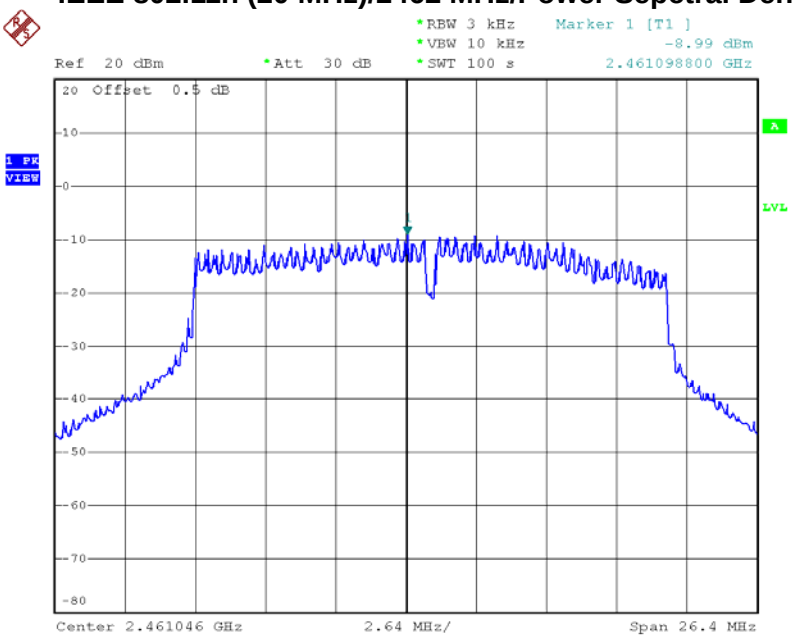


IEEE 802.11n (20 MHz)/2437 MHz/Power Sepctral Density



Date: 14.FEB.2014 23:19:41

IEEE 802.11n (20 MHz)/2462 MHz/Power Sepctral Density

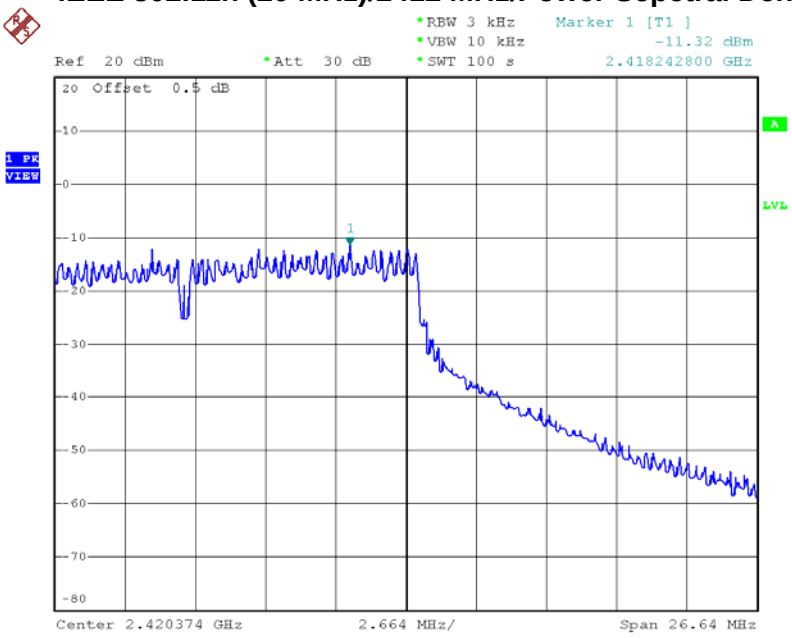


Date: 14.FEB.2014 23:24:27

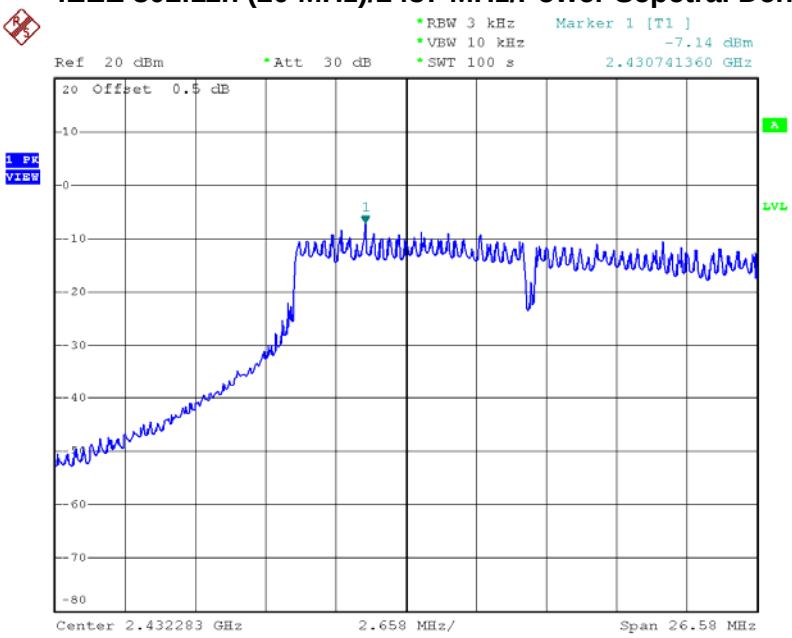
EUT	Mini PCI Radio Module, 2x2 IEEE 802.11 b/g/n ,2.4 GHz	Model Name	RJ-1301
Temperature	26°C	Relative Humidity	60%
Test Voltage	AC 120V/60Hz		
Test Mode	IEEE 802.11n (20 MHz)/2412 MHz, 2437 MHz, 2462 MHz-2TX-ANT 2		

Frequency	Power Density (dBm)	Limit (dBm)	Result
2412 MHz	-11.32	8	PASS
2437 MHz	-7.14	8	PASS
2462 MHz	-9.77	8	PASS

IEEE 802.11n (20 MHz)/2412 MHz/Power Sepctral Density

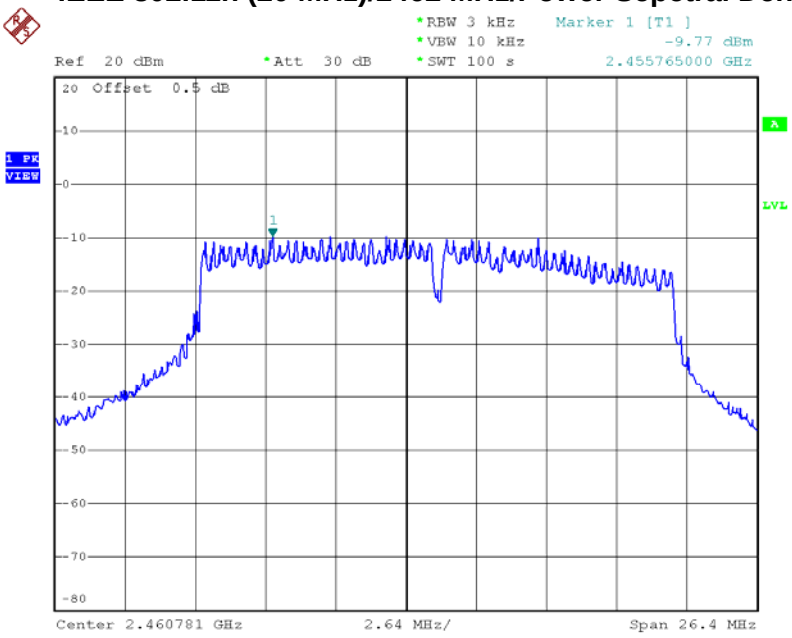


IEEE 802.11n (20 MHz)/2437 MHz/Power Sepctral Density



Date: 14.FEB.2014 23:37:59

IEEE 802.11n (20 MHz)/2462 MHz/Power Sepctral Density



Date: 14.FEB.2014 23:42:29

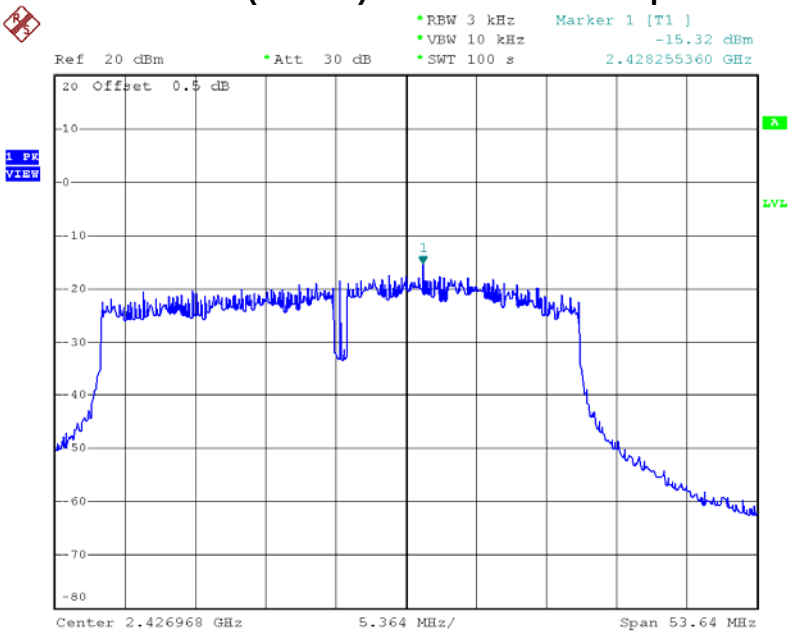
EUT	Mini PCI Radio Module, 2x2 IEEE 802.11 b/g/n ,2.4 GHz	Model Name	RJ-1301
Temperature	26°C	Relative Humidity	60%
Test Voltage	AC 120V/60Hz		
Test Mode	IEEE 802.11n (20 MHz)/2412 MHz, 2437 MHz, 2462 MHz-2TX-Total		

Frequency	Power Density (dBm)	Limit (dBm)	Result
2412 MHz	-8.41	8	PASS
2437 MHz	-4.32	8	PASS
2462 MHz	-6.35	8	PASS

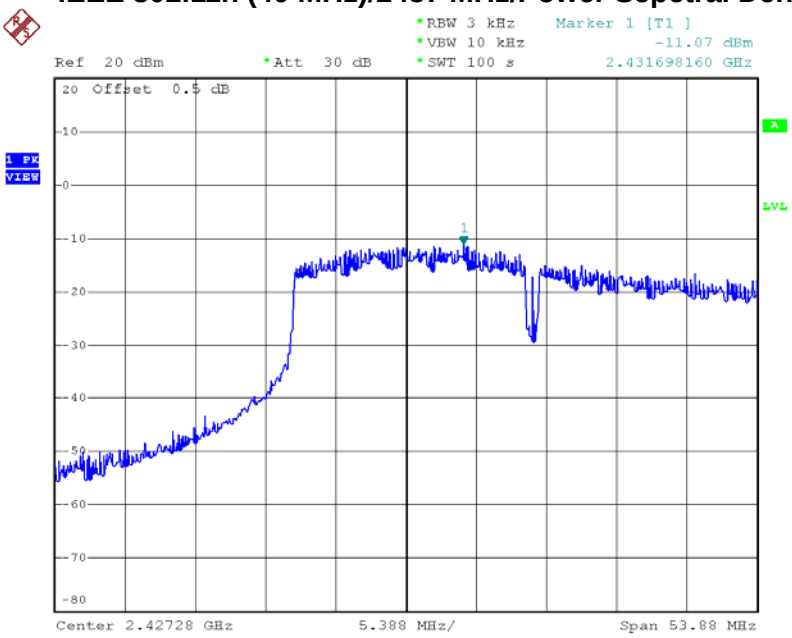
EUT	Mini PCI Radio Module, 2x2 IEEE 802.11 b/g/n ,2.4 GHz	Model Name	RJ-1301
Temperature	26°C	Relative Humidity	60%
Test Voltage	AC 120V/60Hz		
Test Mode	IEEE 802.11n (40 MHz)/2422 MHz, 2437 MHz, 2452 MHz-2TX-ANT 1		

Frequency	Power Density (dBm)	Limit (dBm)	Result
2422 MHz	-15.32	8	PASS
2437 MHz	-11.07	8	PASS
2452 MHz	-11.70	8	PASS

IEEE 802.11n (40 MHz)/2422 MHz/Power Sepctral Density

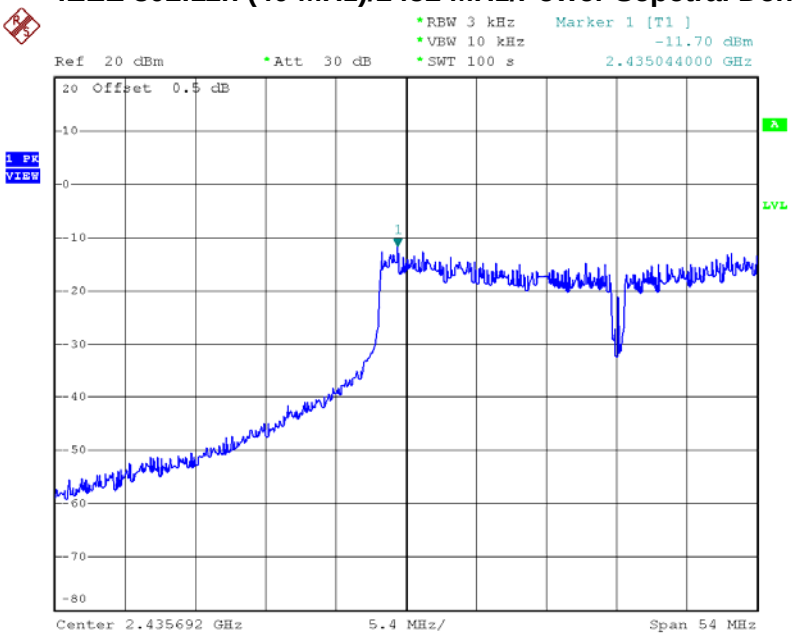


IEEE 802.11n (40 MHz)/2437 MHz/Power Sepctral Density



Date: 15.FEB.2014 00:27:18

IEEE 802.11n (40 MHz)/2452 MHz/Power Sepctral Density

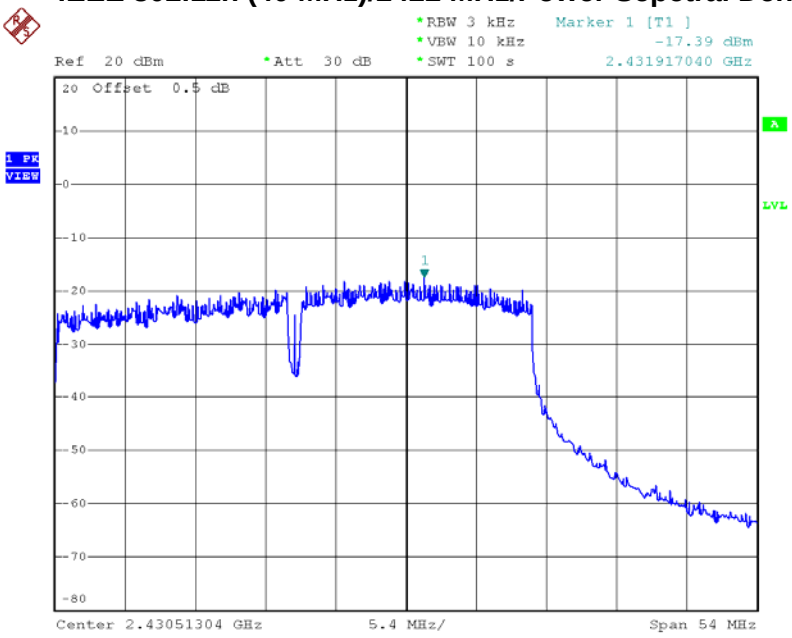


Date: 15.FEB.2014 00:34:24

EUT	Mini PCI Radio Module, 2x2 IEEE 802.11 b/g/n ,2.4 GHz	Model Name	RJ-1301
Temperature	26°C	Relative Humidity	60%
Test Voltage	AC 120V/60Hz		
Test Mode	IEEE 802.11n (40 MHz)/2422 MHz, 2437 MHz, 2452 MHz-2TX-ANT 2		

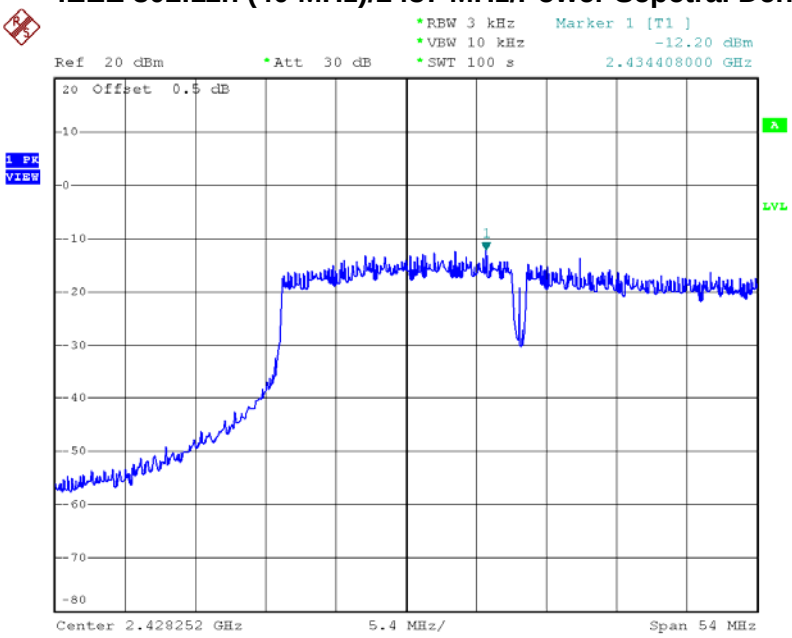
Frequency	Power Density (dBm)	Limit (dBm)	Result
2422 MHz	-17.39	8	PASS
2437 MHz	-12.20	8	PASS
2452 MHz	-13.59	8	PASS

IEEE 802.11n (40 MHz)/2422 MHz/Power Sepctral Density



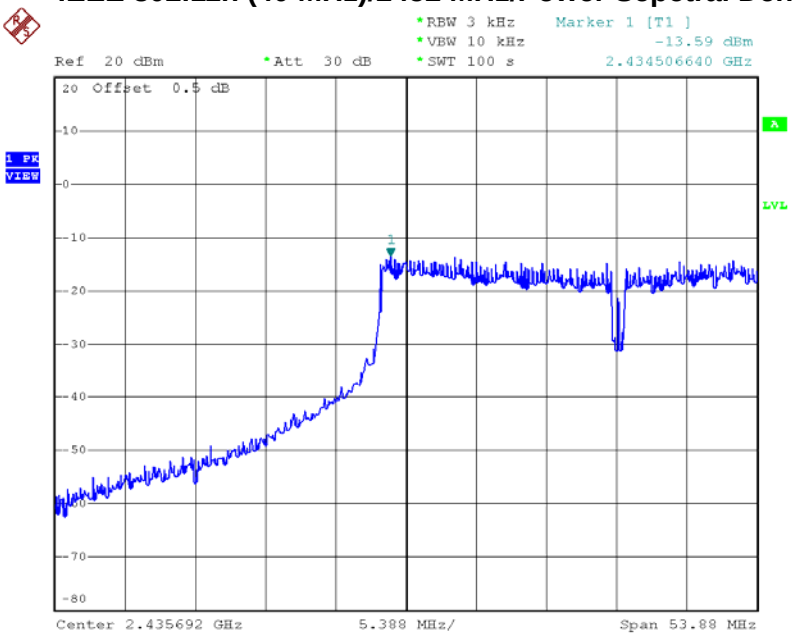
Date: 14.FEB.2014 23:56:37

IEEE 802.11n (40 MHz)/2437 MHz/Power Sepctral Density



Date: 15.FEB.2014 00:01:26

IEEE 802.11n (40 MHz)/2452 MHz/Power Sepctral Density



Date: 15.FEB.2014 00:06:53

EUT	Mini PCI Radio Module, 2x2 IEEE 802.11 b/g/n ,2.4 GHz	Model Name	RJ-1301
Temperature	26°C	Relative Humidity	60%
Test Voltage	AC 120V/60Hz		
Test Mode	IEEE 802.11n (40 MHz)/2422 MHz, 2437 MHz, 2452 MHz-2TX-Total		

Frequency	Power Density (dBm)	Limit (dBm)	Result
2422 MHz	-13.22	8	PASS
2437 MHz	-8.59	8	PASS
2452 MHz	-9.53	8	PASS

11 RF EXPOSURE COMPLIANCE

11.1LIMIT

Systems operating under the provisions of this section shall be operated in a manner that ensures that the public is not exposed to radio frequency energy levels in excess limit for maximum permissible exposure. In accordance with 47 CFR FCC Part 2 Subpart J, section 2.1091 this device has been defined as a mobile device whereby a distance of 0.2 m normally can be maintained between the user and the device.

(A) Limits for Occupational / Controlled Exposure

Frequency Range (MHz)	Electric Field Strength (E) (V/m)	Magnetic Field Strength (H) (A/m)	Power Density (S) (mW/ cm^2)	Averaging Time $\|E\|^2$,$\|H\|^2$or S (minutes)
0.3-3.0	614	1.63	(100)*	6
3.0-30	1842 / f	4.89 / f	(900 / f)*	6
30-300	61.4	0.163	1.0	6
300-1500			F/300	6
1500-100,000			5	6

(B) Limits for General Population / Uncontrolled Exposure

Frequency Range (MHz)	Electric Field Strength (E) (V/m)	Magnetic Field Strength (H) (A/m)	Power Density (S) (mW/ cm^2)	Averaging Time $\|E\|^2$,$\|H\|^2$ or S (minutes)
0.3-1.34	614	1.63	(100)*	30
1.34-30	824/f	2.19/f	(180/f)*	30
30-300	27.5	0.073	0.2	30
300-1500			F/1500	30
1500-100,000			1.0	30

NOTE: f = frequency in MHz ; *Plane-wave equivalent power density.

11.2MEASUREMENT INSTRUMENTS LIST

Item	Kind of Equipment	Manufacturer	Type No.	Serial No.	Calibrated until
1	Power Meter	Anritsu	ML2495A	1128008	Feb,08,2015
2	Power Meter Sensor	Anritsu	MA2411B	1126001	Feb,18,2015

NOTE: **N/A**: denotes No Model Name, No Serial No. or No Calibration specified.

11.3MPE CALCULATION METHOD

E (V/m) $= \frac{\sqrt{30 \times P \times G}}{d}$ Power Density: *Pd* (W/m²) $= \frac{E^2}{377}$

E = Electric field (V/m)

P = Peak RF output power (W)

G = EUT Antenna numeric gain (numeric)

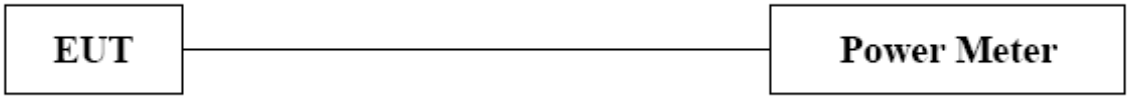
d = Separation distance between radiator and human body (m)

The formula can be changed to

Pd $= \frac{30 \times P \times G}{377 \times d^2}$

From the peak EUT RF output power, the minimum mobile separation distance, d=0.2m, as well as the gain of the used antenna, the RF power density can be obtained

11.4TEST SETUP LAYOUT



11.5DEVIATION FROM TEST STANDARD

No deviation

11.6EUT OPERATING CONDITIONS

The EUT tested system was configured as the statements of 5.6 Unless otherwise a special operating condition is specified in the follows during the testing.

11.7TEST RESULTS

EUT	Mini PCI Radio Module, 2x2 IEEE 802.11 b/g/n ,2.4 GHz	Model Name	RJ-1301
Temperature	26°C	Relative Humidity	60%
Test Voltage	AC 120V/60Hz		
Test Mode	IEEE 802.11b/2412 MHz, 2437 MHz, 2462 MHz		

Frequency	Antenna Gain (dBi)	Antenna Gain (numeric)	Peak Output Power (dBm)	Peak Output Power (mW)	Power Density (S) (mW/cm^2)	Limit of Power Density (S) (mW/cm^2)	Result
2412 MHz	5	3.1623	23.3400	215.7744	0.13581582	1	PASS
2437 MHz	5	3.1623	25.1000	323.5937	0.20368093	1	PASS
2462 MHz	5	3.1623	22.0200	159.2209	0.10021907	1	PASS

EUT	Mini PCI Radio Module, 2x2 IEEE 802.11 b/g/n ,2.4 GHz	Model Name	RJ-1301
Temperature	26°C	Relative Humidity	60%
Test Voltage	AC 120V/60Hz		
Test Mode	IEEE 802.11g/2412 MHz, 2437 MHz, 2462 MHz		

Frequency	Antenna Gain (dBi)	Antenna Gain (numeric)	Peak Output Power (dBm)	Peak Output Power (mW)	Power Density (S) (mW/cm^2)	Limit of Power Density (S) (mW/cm^2)	Result
2412 MHz	5	3.1623	24.8900	308.3188	0.19406641	1	PASS
2437 MHz	5	3.1623	26.6200	459.1980	0.28903496	1	PASS
2462 MHz	5	3.1623	26.0800	405.5085	0.25524096	1	PASS

EUT	Mini PCI Radio Module, 2x2 IEEE 802.11 b/g/n ,2.4 GHz	Model Name	RJ-1301
Temperature	26°C	Relative Humidity	60%
Test Voltage	AC 120V/60Hz		
Test Mode	IEEE 802.11n (20 MHz)/2412 MHz, 2437 MHz, 2462 MHz-1TX		

Frequency	Antenna Gain (dBi)	Antenna Gain (numeric)	Peak Output Power (dBm)	Peak Output Power (mW)	Power Density (S) (mW/cm^2)	Limit of Power Density (S) (mW/cm^2)	Result
2412 MHz	5	3.1623	22.5200	178.6488	0.11244765	1	PASS
2437 MHz	5	3.1623	26.7200	469.8941	0.29576744	1	PASS
2462 MHz	5	3.1623	25.7800	378.4426	0.23820472	1	PASS

EUT	Mini PCI Radio Module, 2x2 IEEE 802.11 b/g/n ,2.4 GHz	Model Name	RJ-1301
Temperature	26°C	Relative Humidity	60%
Test Voltage	AC 120V/60Hz		
Test Mode	IEEE 802.11n (40 MHz)/2422 MHz, 2437 MHz, 2452 MHz-1TX		

Frequency	Antenna Gain (dBi)	Antenna Gain (numeric)	Peak Output Power (dBm)	Peak Output Power (mW)	Power Density (S) (mW/cm^2)	Limit of Power Density (S) (mW/cm^2)	Result
2412 MHz	5	3.1623	22.2900	169.4338	0.10664742	1	PASS
2437 MHz	5	3.1623	25.1000	323.5937	0.20368093	1	PASS
2462 MHz	5	3.1623	25.5200	356.4511	0.22436255	1	PASS

EUT	Mini PCI Radio Module, 2x2 IEEE 802.11 b/g/n ,2.4 GHz	Model Name	RJ-1301
Temperature	26°C	Relative Humidity	60%
Test Voltage	AC 120V/60Hz		
Test Mode	IEEE 802.11n (20 MHz)/2412 MHz, 2437 MHz, 2462 MHz-2TX-Total		

Frequency	Antenna Gain (dBi)	Antenna Gain (numeric)	Peak Output Power (dBm)	Peak Output Power (mW)	Power Density (S) (mW/cm^2)	Limit of Power Density (S) (mW/cm^2)	Result
2412 MHz	5	3.1623	25.5200	356.4511	0.22436255	1	PASS
2437 MHz	5	3.1623	27.8900	615.1769	0.38721339	1	PASS
2462 MHz	5	3.1623	27.4600	557.1857	0.35071179	1	PASS

EUT	Mini PCI Radio Module, 2x2 IEEE 802.11 b/g/n ,2.4 GHz	Model Name	RJ-1301
Temperature	26°C	Relative Humidity	60%
Test Voltage	AC 120V/60Hz		
Test Mode	IEEE 802.11n (40 MHz)/2422 MHz, 2437 MHz, 2452 MHz-2TX-Total		

Frequency	Antenna Gain (dBi)	Antenna Gain (numeric)	Peak Output Power (dBm)	Peak Output Power (mW)	Power Density (S) (mW/cm^2)	Limit of Power Density (S) (mW/cm^2)	Result
2412 MHz	5	3.1623	22.7700	189.2344	0.11911059	1	PASS
2437 MHz	5	3.1623	27.1200	515.2286	0.32430255	1	PASS
2462 MHz	5	3.1623	26.8500	484.1724	0.30475467	1	PASS