

FCC Radio Test Report

FCC ID: 2AE6WRP-R1

Original Grant

Report No. : TB-FCC153955
Applicant : Shenzhen omimo Technology Co.,Ltd.
Equipment Under Test (EUT)
EUT Name : omimo WIFI Repeater
Model No. : RP-R1
Series Model No. : N/A
Brand Name : omimo
Receipt Date : 2017-05-18
Test Date : 2017-05-19 to 2016-06-08
Issue Date : 2017-06-09
Standards : FCC Part 15, Subpart C (15.247:2016)
Test Method : ANSI C63.10: 2013
Conclusions : **PASS**

In the configuration tested, the EUT complied with the standards specified above,
The EUT technically complies with the FCC and IC requirements

Test/Witness Engineer :

IVAN SU

**Approved &
Authorized**

Ray Li



This report details the results of the testing carried out on one sample. The results contained in this test report do not relate to other samples of the same product. The manufacturer should ensure that all products in series production are in conformity with the product sample detailed in the report.

TB-RF-074-1.0

Contents

CONTENTS.....	2
1. GENERAL INFORMATION ABOUT EUT	4
1.1 Client Information.....	4
1.2 General Description of EUT (Equipment Under Test)	4
1.3 Block Diagram Showing the Configuration of System Tested.....	5
1.4 Description of Support Units	6
1.5 Description of Test Mode.....	6
1.6 Description of Test Software Setting	7
1.7 Measurement Uncertainty	8
1.8 Test Facility.....	8
2. TEST SUMMARY.....	9
3. TEST EQUIPMENT.....	10
4. CONDUCTED EMISSION TEST	11
4.1 Test Standard and Limit.....	11
4.2 Test Setup.....	11
4.3 Test Procedure.....	11
4.4 EUT Operating Mode	12
4.5 Test Data.....	12
5. RADIATED EMISSION TEST	17
5.1 Test Standard and Limit.....	17
5.2 Test Setup.....	18
5.3 Test Procedure.....	19
5.4 EUT Operating Condition	19
5.5 Test Data.....	20
6. RESTRICTED BANDS REQUIREMENT	47
6.1 Test Standard and Limit.....	47
6.2 Test Setup.....	47
6.3 Test Procedure.....	47
6.4 EUT Operating Condition	48
6.5 Test Data.....	48
7. BANDWIDTH TEST.....	71
7.1 Test Standard and Limit.....	71
7.2 Test Setup.....	71
7.3 Test Procedure.....	71
7.4 EUT Operating Condition	71
7.5 Test Data.....	72
8. PEAK OUTPUT POWER TEST.....	88
8.1 Test Standard and Limit.....	88
8.2 Test Setup.....	88

8.3 Test Procedure.....	88
8.4 EUT Operating Condition	88
8.5 Test Data.....	89
9. POWER SPECTRAL DENSITY TEST	92
9.1 Test Standard and Limit.....	92
9.2 Test Setup.....	92
9.3 Test Procedure.....	92
9.4 EUT Operating Condition	92
9.5 Test Data.....	93
10. ANTENNA REQUIREMENT.....	102
10.1 Standard Requirement.....	102
10.2 Antenna Connected Construction.....	102

1. General Information about EUT

1.1 Client Information

Applicant : Shenzhen omimo Technology Co.,Ltd.
Address : Room1212, Chuangjian Building, No.6023, Shennan Boulevard, Futian District, Shenzhen, China
Manufacturer : Shenzhen omimo Technology Co.,Ltd.
Address : Room1212, Chuangjian Building, No.6023, Shennan Boulevard, Futian District, Shenzhen, China

1.2 General Description of EUT (Equipment Under Test)

EUT Name	:	omimo WIFI Repeater	
Models No.	:	RP-R1	
Model Difference	:	N/A	
Product Description		Operation Frequency:	802.11b/g/n(HT20): 2412MHz~2462MHz 802.11n(HT40): 2422MHz~2452MHz
		Number of Channel:	802.11b/g/n(HT20):11 channels see note(3) 802.11n(HT40): 7 channels see note(3)
		RF Output Power:	802.11b: 14.54 dBm 802.11g: 14.64 dBm 802.11n (HT20): 14.33 dBm 802.11n (HT40): 14.41 dBm
	:	Antenna Gain:	1 dBi PCB Antenna
		Modulation Type:	802.11b: DSSS(BPSK, QPSK, CCK) 802.11g/n:OFDM(BPSK,QPSK,16QAM, 64QAM)
		Bit Rate of Transmitter:	802.11b:11/5.5/2/1 Mbps 802.11g:54/48/36/24/18/12/9/6 Mbps 802.11n(HT20):14.44/28.88/43.34/57.78/86.66/115.56 /130/144.44Mbps 802.11n(HT40):30/60/90/120/180/240/270/300Mbps
Power Supply	:	DC 5V supplied by AC/DC Adapter.	
Power Rating	:	Input: AC 100~240V, 50/60Hz Output: DC 5V	
Connecting I/O Port(S)	:	Please refer to the User's Manual	

Note:

(1) This Test Report is FCC Part 15.247 for 802.11b/g/n, the test procedure follows the FCC KDB 558074 D01 DTS Meas Guidance v04 and KDB 662911 D01 Multiple Transmitter

Output v02r01.

(2) For a more detailed features description, please refer to the manufacturer's specifications or the User's Manual.

(3) Channel List:

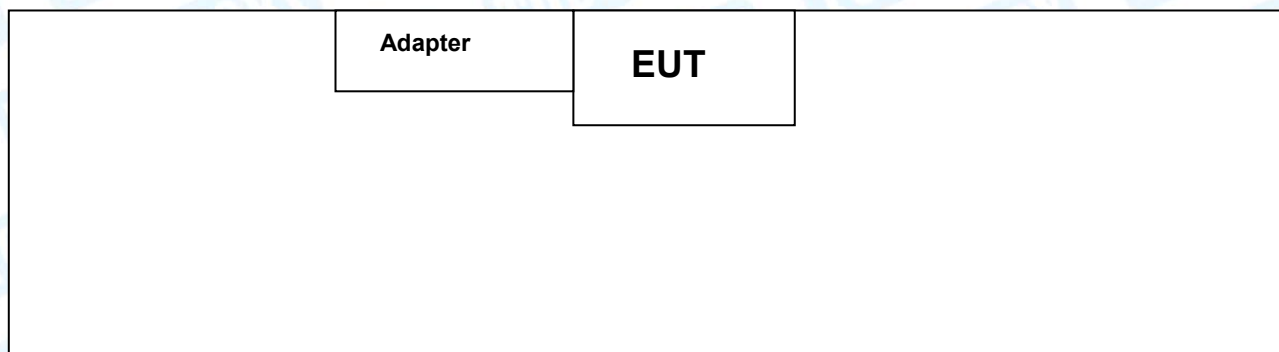
Channel	Frequency (MHz)	Channel	Frequency (MHz)	Channel	Frequency (MHz)
01	2412	05	2432	09	2452
02	2417	06	2437	10	2457
03	2422	07	2442	11	2462
04	2427	08	2447		
Note: CH 01~CH 11 for 802.11b/g/n(HT20) CH 03~CH 09 for 802.11n(HT40)					

(4) Antenna information

Mode		TX Antenna (s)		Remark
802.11b		1		The worst case is ANT. a TX
802.11g		1		The worst case is ANT. a TX
802.11n(HT20)		2		ANT. a+b TX
802.11n(HT40)		2		ANT. a+b TX
Antenna	Brand	Model Name	Type	Antenna Gain(dBi)
ANT. a	N/A	N/A	PCB	1
ANT. b	N/A	N/A	PCB	1
Note:For MIMO mode: Directional gain=Gain(Ant. a)+Gain(Ant. b)=4.01 dBi in 2.4G 802.11 n(HT20/HT40) has MIMO mode.				

1.3 Block Diagram Showing the Configuration of System Tested

TX Mode



1.4 Description of Support Units

Equipment Information				
Name	Model	S/N	Manufacturer	Used “√”
AC/DC Adapter	TEKA012	----	TEKA	√
AC/DC Adapter: Input:100~240V, 50/60Hz, 0.2A. Output: 5V, 1A				

1.5 Description of Test Mode

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 follow was evaluated respectively.

For Conducted Test	
Final Test Mode	Description
Mode 1	TX B Mode

For Radiated Test	
Final Test Mode	Description
Mode 2	TX Mode B Mode Channel 01/06/11
Mode 3	TX Mode G Mode Channel 01/06/11
Mode 4	TX Mode N(HT20) Mode Channel 01/06/11
Mode 5	TX Mode N(HT40) Mode Channel 03/06/09

Note:

- (1) For all test, we have verified the construction and function in typical operation. And all the test modes were carried out with the EUT in transmitting operation in maximum power with all kinds of data rate.

According to ANSI C63.10 standards, the measurements are performed at the highest, middle, lowest available channels, and the worst case data rate as follows:

- 802.11b Mode: CCK (1 Mbps)
- 802.11g Mode: OFDM (6 Mbps)
- 802.11n (HT20) Mode: MCS 0 (14.4 Mbps)
- 802.11n (HT40) Mode: MCS 0 (30 Mbps)

- (2) During the testing procedure, the continuously transmitting with the maximum power mode was programmed by the customer.
- (3) The EUT is considered a fixed unit; in normal use it was positioned on X-plane. The worst case was found positioned on X-plane. Therefore only the test data of this X-plane was used for radiated emission measurement test.

1.6 Description of Test 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 power parameters of WLAN.

Test Software:N/A				
Test Mode: Continuously transmitting				
Mode	Data Rate	Channel	Parameters	
			ANT a	ANT b
802.11b	CCK/ 1Mbps	01	DEF	DEF
	CCK/ 1Mbps	06	DEF	DEF
	CCK/ 1Mbps	11	DEF	DEF
802.11g	OFDM/ 6Mbps	01	DEF	DEF
	OFDM/ 6Mbps	06	DEF	DEF
	OFDM/ 6Mbps	11	DEF	DEF
802.11n(20)	MCS 0	01	DEF	DEF
	MCS 0	06	DEF	DEF
	MCS 0	11	DEF	DEF
802.11n(40)	MCS 0	03	DEF	DEF
	MCS 0	06	DEF	DEF
	MCS 0	09	DEF	DEF
Note: TX signal at 802.11b/g mode only could transmit at Ant.a or Ant. b. All the test mode have pretest with two Antenna, but the worst case is Ant. a.The report only show the worst case.				

1.7 Measurement Uncertainty

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

Test Item	Parameters	Expanded Uncertainty (U_{Lab})
Conducted Emission	Level Accuracy: 9kHz~150kHz 150kHz to 30MHz	± 3.42 dB ± 3.42 dB
Radiated Emission	Level Accuracy: 9kHz to 30 MHz	± 4.60 dB
Radiated Emission	Level Accuracy: 30MHz to 1000 MHz	± 4.40 dB
Radiated Emission	Level Accuracy: Above 1000MHz	± 4.20 dB

1.8 Test Facility

The testing report were performed by the Shenzhen Toby Technology Co., Ltd., in their facilities located at 1A/F., Bldg.6, Yusheng Industrial Zone, The National Road No.107 Xixiang Section 467, Xixiang, Bao'an, Shenzhen, Guangdong, China. At the time of testing, the following bodies accredited the Laboratory:

CNAS (L5813)

The Laboratory has been accredited by CNAS to ISO/IEC 17025: 2005 General Requirements for the Competence of Testing and Calibration Laboratories for the competence in the field of testing. And the Registration No.: CNAS L5813.

FCC List No.: (811562)

The Laboratory is listed in the United States of American Federal Communications Commission (FCC), and the registration number is 811562.

IC Registration No.: (11950A-1)

The Laboratory has been registered by Certification and Engineering Bureau of Industry Canada for radio equipment testing. The site registration: Site# 11950A-1.

2. Test Summary

FCC Part 15 Subpart C(15.247)/ RSS 247 Issue 1				
Standard Section		Test Item	Judgment	Remark
FCC	IC			
15.203	/	Antenna Requirement	PASS	N/A
15.207	RSS-GEN 7.2.4	Conducted Emission	PASS	N/A
15.205	RSS-GEN 7.2.2	Restricted Bands	PASS	N/A
15.247(a)(2)	RSS 247 5.2 (1)	6dB Bandwidth	PASS	N/A
15.247(b)	RSS 247 5.4 (4)	Peak Output Power	PASS	N/A
15.247(e)	RSS 247 5.2 (2)	Power Spectral Density	PASS	N/A
15.247(d)	RSS 247 5.5	Band Edge	PASS	N/A
15.247(d)& 15.209	RSS 247 5.5	Transmitter Radiated Spurious Emission	PASS	N/A
Note: “/” for no requirement for this test item. N/A is an abbreviation for Not Applicable.				

3. Test Equipment

Conducted Emission Test					
Equipment	Manufacturer	Model No.	Serial No.	Last Cal.	Cal. Due Date
EMI Test Receiver	Rohde & Schwarz	ESCI	100321	Jul. 22, 2016	Jul. 21, 2017
RF Switching Unit	Compliance Direction Systems Inc	RSU-A4	34403	Jul. 22, 2016	Jul. 21, 2017
AMN	SCHWARZBECK	NNBL 8226-2	8226-2/164	Jul. 22, 2016	Jul. 21, 2017
LISN	Rohde & Schwarz	ENV216	101131	Jul. 22, 2016	Jul. 21, 2017
Radiation Emission Test					
Equipment	Manufacturer	Model No.	Serial No.	Last Cal.	Cal. Due Date
Spectrum Analyzer	Agilent	E4407B	MY45106456	Jul. 22, 2016	Jul. 21, 2017
EMI Test Receiver	Rohde & Schwarz	ESPI	100010/007	Jul. 22, 2016	Jul. 21, 2017
Bilog Antenna	ETS-LINDGREN	3142E	00117537	Mar. 24, 2017	Mar. 23, 2018
Bilog Antenna	ETS-LINDGREN	3142E	00117542	Mar. 24, 2017	Mar. 23, 2018
Horn Antenna	ETS-LINDGREN	3117	00143207	Mar. 25, 2017	Mar. 24, 2018
Horn Antenna	ETS-LINDGREN	3117	00143209	Mar. 25, 2017	Mar. 24, 2018
Pre-amplifier	Sonoma	310N	185903	Mar. 24, 2017	Mar. 23, 2018
Pre-amplifier	HP	8447B	3008A00849	Mar. 24, 2017	Mar. 23, 2018
Loop Antenna	Laplace instrument	RF300	0701	Mar. 29, 2017	Mar. 28, 2018
Cable	HUBER+SUHNER	100	SUCOFLEX	Mar. 29, 2017	Mar. 28, 2018
Positioning Controller	ETS-LINDGREN	2090	N/A	N/A	N/A
Antenna Conducted Emission					
Equipment	Manufacturer	Model No.	Serial No.	Last Cal.	Cal. Due Date
Spectrum Analyzer	Agilent	E4407B	MY45106456	Jul. 22, 2016	Jul. 21, 2017
Spectrum Analyzer	Rohde & Schwarz	ESCI	100321	Jul. 22, 2016	Jul. 21, 2017
Power Meter	Anritsu	ML2495A	25406005	Jul. 22, 2016	Jul. 21, 2017
Power Sensor	Anritsu	ML2411B	25406005	Jul. 22, 2016	Jul. 21, 2017

4. Conducted Emission Test

4.1 Test Standard and Limit

4.1.1 Test Standard

FCC Part 15.207

4.1.2 Test Limit

Conducted Emission Test Limit

Frequency	Maximum RF Line Voltage (dB μ V)	
	Quasi-peak Level	Average Level
150kHz~500kHz	66 ~ 56 *	56 ~ 46 *
500kHz~5MHz	56	46
5MHz~30MHz	60	50

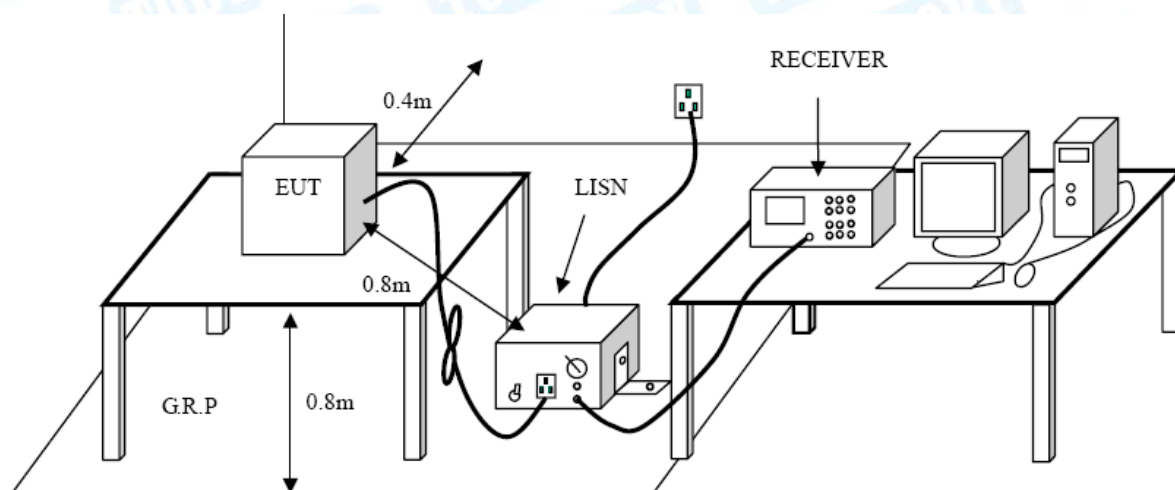
Notes:

(1) *Decreasing linearly with logarithm of the frequency.

(2) The lower limit shall apply at the transition frequencies.

(3) The limit decrease in line with the logarithm of the frequency in the range of 0.15 to 0.50MHz.

4.2 Test Setup



4.3 Test Procedure

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.

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.

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.

LISN at least 80 cm from nearest part of EUT chassis.

The bandwidth of EMI test receiver is set at 9kHz, and the test frequency band is from 0.15MHz to 30MHz.

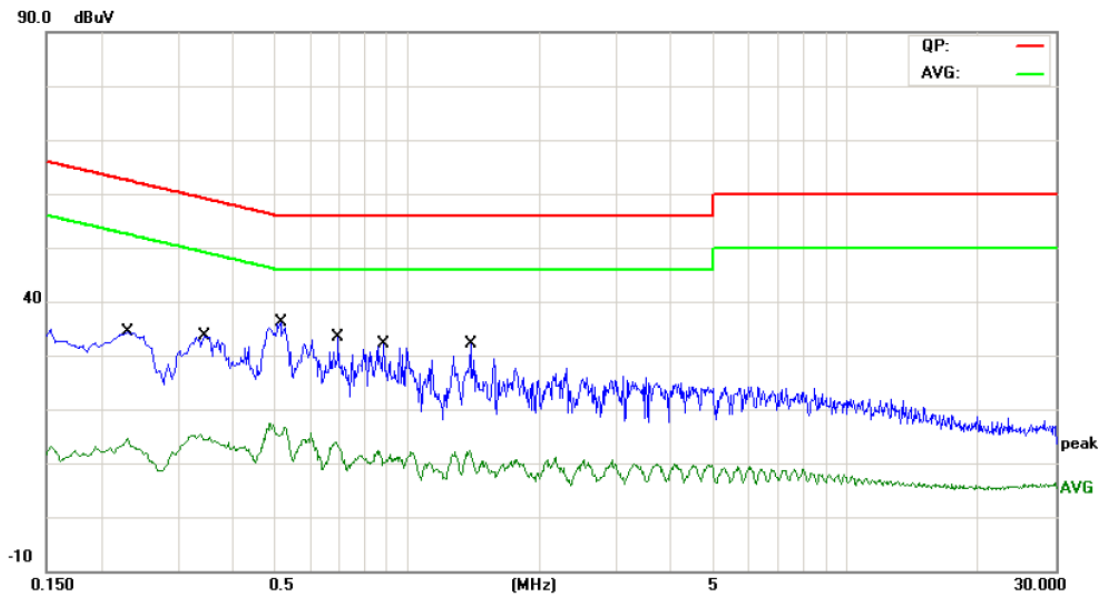
4.4 EUT Operating Mode

Please refer to the description of test mode.

4.5 Test Data

Please see the next page.

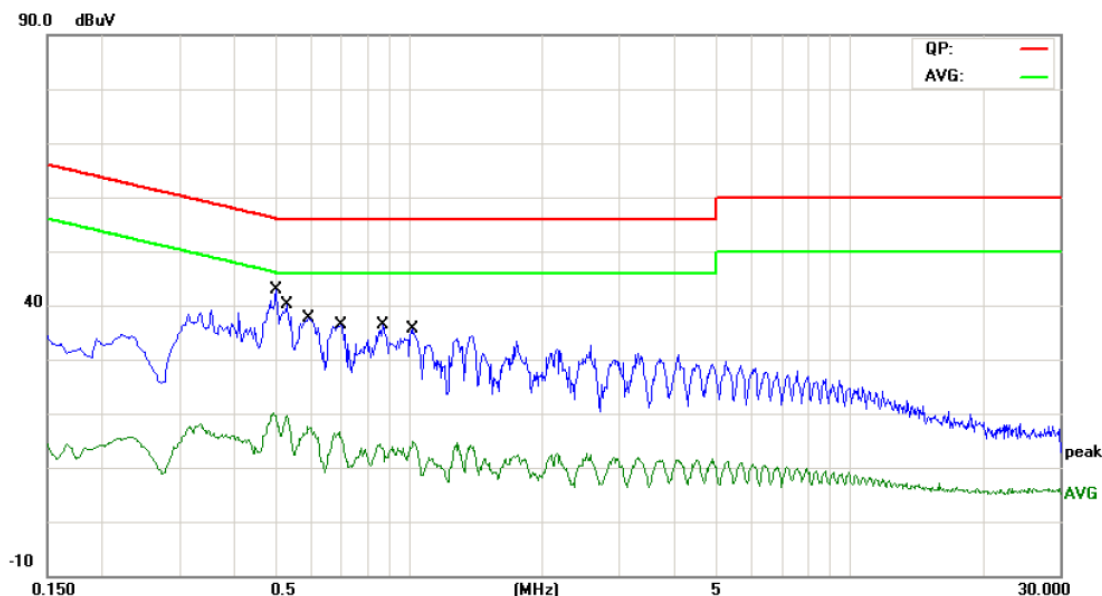
EUT:	omimo WIFI Repeater	Model Name :	RP-R1
Temperature:	25 °C	Relative Humidity:	55%
Test Voltage:	AC 120V/60 Hz		
Terminal:	Line		
Test Mode:	TX B Mode		
Remark:	Only worse case is reported		



No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV	Limit dBuV	Over dB	Detector
1		0.2300	16.20	10.02	26.22	62.45	-36.23	QP
2		0.2300	3.72	10.02	13.74	52.45	-38.71	AVG
3		0.3460	16.79	10.02	26.81	59.06	-32.25	QP
4		0.3460	4.06	10.02	14.08	49.06	-34.98	AVG
5	*	0.5140	18.40	10.03	28.43	56.00	-27.57	QP
6		0.5140	4.27	10.03	14.30	46.00	-31.70	AVG
7		0.6940	14.07	10.12	24.19	56.00	-31.81	QP
8		0.6940	2.60	10.12	12.72	46.00	-33.28	AVG
9		0.8820	12.50	10.08	22.58	56.00	-33.42	QP
10		0.8820	-0.67	10.08	9.41	46.00	-36.59	AVG
11		1.3940	12.55	10.06	22.61	56.00	-33.39	QP
12		1.3940	1.01	10.06	11.07	46.00	-34.93	AVG

Emission Level= Read Level+ Correct Factor

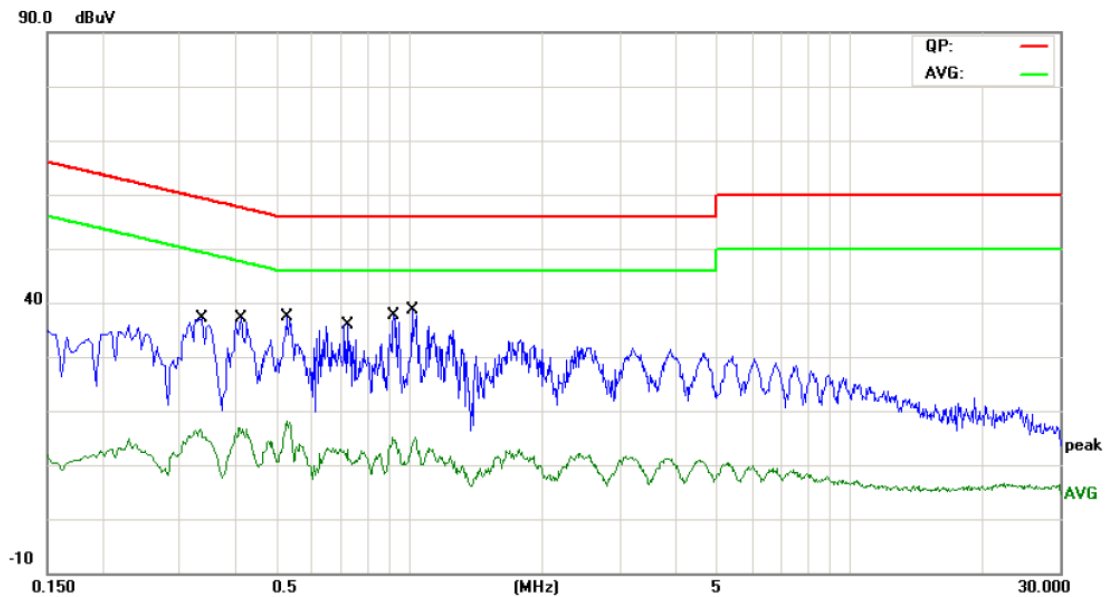
EUT:	omimo WIFI Repeater	Model Name :	RP-R1
Temperature:	25 °C	Relative Humidity:	55%
Test Voltage:	AC 120V/60 Hz		
Terminal:	Neutral		
Test Mode:	TX B Mode		
Remark:	Only worse case is reported		



No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV	Limit dBuV	Over dB	Detector
1	*	0.4980	24.43	10.02	34.45	56.03	-21.58	QP
2		0.4980	8.45	10.02	18.47	46.03	-27.56	AVG
3		0.5260	24.35	10.02	34.37	56.00	-21.63	QP
4		0.5260	9.16	10.02	19.18	46.00	-26.82	AVG
5		0.5899	21.36	10.02	31.38	56.00	-24.62	QP
6		0.5899	6.49	10.02	16.51	46.00	-29.49	AVG
7		0.6980	18.91	10.02	28.93	56.00	-27.07	QP
8		0.6980	4.52	10.02	14.54	46.00	-31.46	AVG
9		0.8700	18.20	10.10	28.30	56.00	-27.70	QP
10		0.8700	2.67	10.10	12.77	46.00	-33.23	AVG
11		1.0140	17.52	10.16	27.68	56.00	-28.32	QP
12		1.0140	3.48	10.16	13.64	46.00	-32.36	AVG

Emission Level= Read Level+ Correct Factor

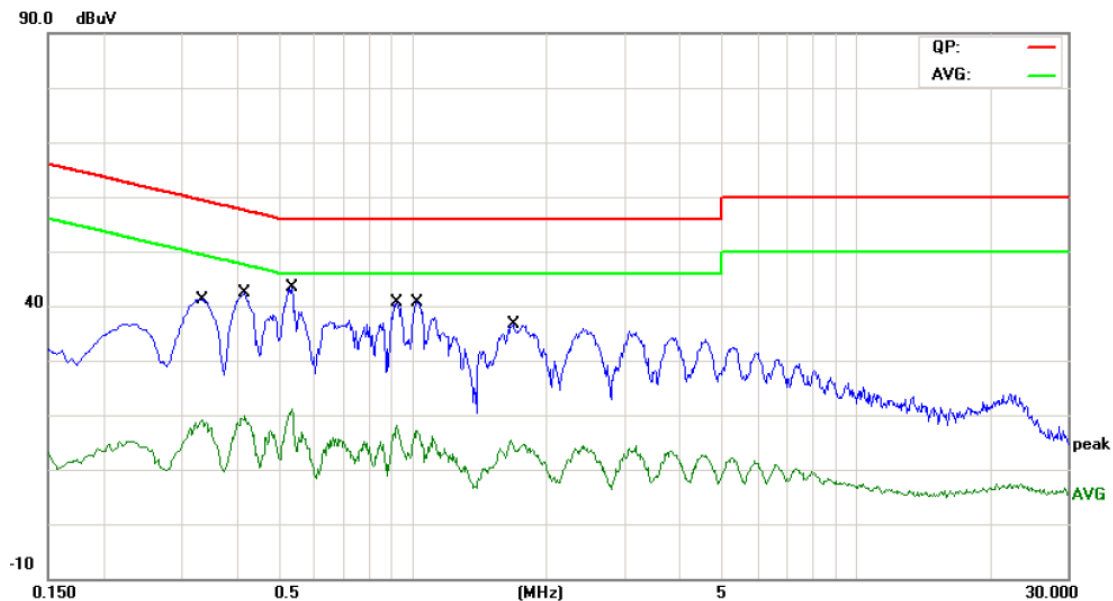
EUT:	omimo WIFI Repeater	Model Name :	RP-R1
Temperature:	25 °C	Relative Humidity:	55%
Test Voltage:	AC 240V/60 Hz		
Terminal:	Line		
Test Mode:	TX B Mode		
Remark:	Only worse case is reported		



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over	
		MHz	dBuV	dB	dBuV	dBuV	dB	Detector
1		0.3379	19.42	10.02	29.44	59.25	-29.81	QP
2		0.3379	5.60	10.02	15.62	49.25	-33.63	AVG
3		0.4140	19.72	10.02	29.74	57.57	-27.83	QP
4		0.4140	6.14	10.02	16.16	47.57	-31.41	AVG
5	*	0.5260	20.58	10.03	30.61	56.00	-25.39	QP
6		0.5260	7.23	10.03	17.26	46.00	-28.74	AVG
7		0.7220	16.21	10.12	26.33	56.00	-29.67	QP
8		0.7220	1.39	10.12	11.51	46.00	-34.49	AVG
9		0.9220	17.88	10.08	27.96	56.00	-28.04	QP
10		0.9220	4.33	10.08	14.41	46.00	-31.59	AVG
11		1.0140	17.36	10.06	27.42	56.00	-28.58	QP
12		1.0140	3.71	10.06	13.77	46.00	-32.23	AVG

Emission Level= Read Level+ Correct Factor

EUT:	omimo WIFI Repeater	Model Name :	RP-R1
Temperature:	25 °C	Relative Humidity:	55%
Test Voltage:	AC 240V/60 Hz		
Terminal:	Neutral		
Test Mode:	TX B Mode		
Remark:	Only worse case is reported		



No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV	Limit dBuV	Over dB	Detector
1		0.3339	24.50	10.08	34.58	59.35	-24.77	QP
2		0.3339	7.73	10.08	17.81	49.35	-31.54	AVG
3		0.4180	25.38	10.05	35.43	57.49	-22.06	QP
4		0.4180	8.65	10.05	18.70	47.49	-28.79	AVG
5	*	0.5340	26.40	10.02	36.42	56.00	-19.58	QP
6		0.5340	9.60	10.02	19.62	46.00	-26.38	AVG
7		0.9220	23.03	10.12	33.15	56.00	-22.85	QP
8		0.9220	6.35	10.12	16.47	46.00	-29.53	AVG
9		1.0220	23.01	10.16	33.17	56.00	-22.83	QP
10		1.0220	6.06	10.16	16.22	46.00	-29.78	AVG
11		1.6820	19.06	10.09	29.15	56.00	-26.85	QP
12		1.6820	3.53	10.09	13.62	46.00	-32.38	AVG

Emission Level= Read Level+ Correct Factor

5. Radiated Emission Test

5.1 Test Standard and Limit

5.1.1 Test Standard

FCC Part 15.209

5.1.2 Test Limit

Radiated Emission Limits (9kHz~1000MHz)

Frequency (MHz)	Field Strength (microvolt/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

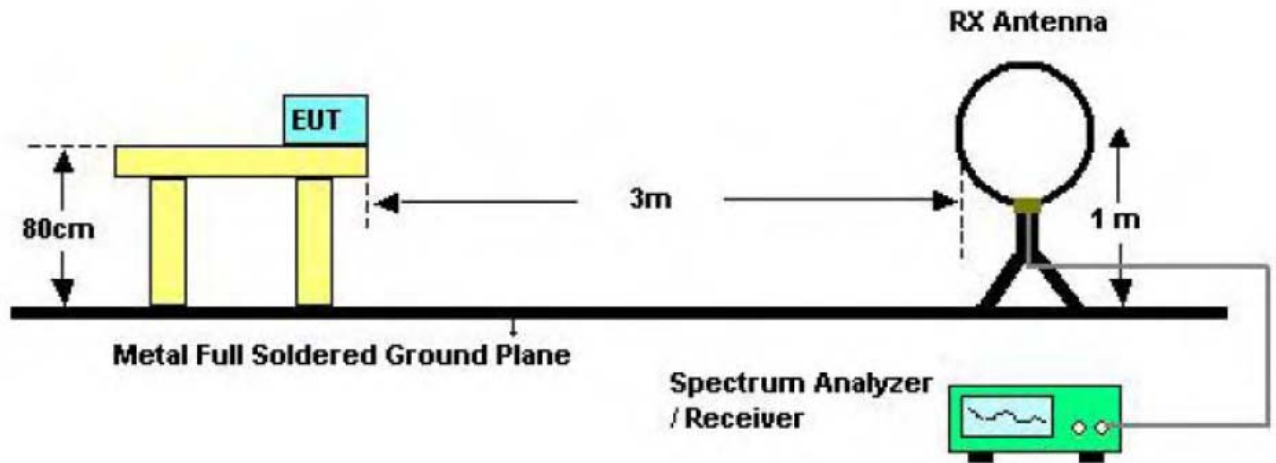
Radiated Emission Limit (Above 1000MHz)

Frequency (MHz)	Distance Meters (at 3m)	
	Peak (dBuV/m)	Average (dBuV/m)
Above 1000	74	54

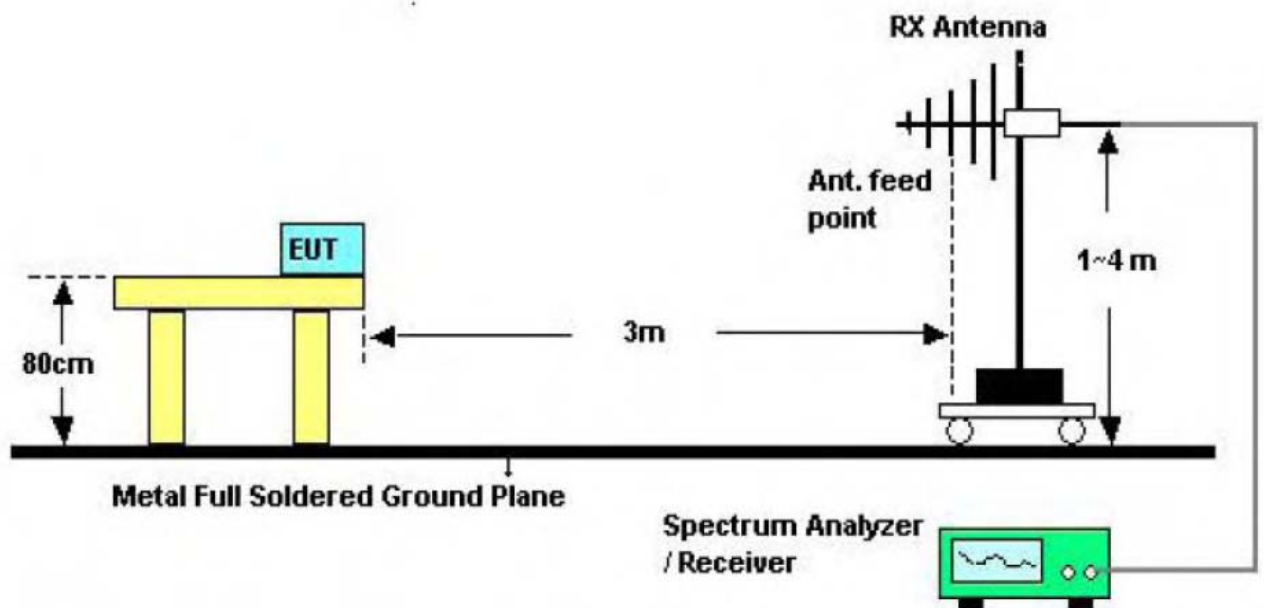
Note:

- (1) The tighter limit applies at the band edges.
- (2) Emission Level (dBuV/m)=20log Emission Level(uV/m)

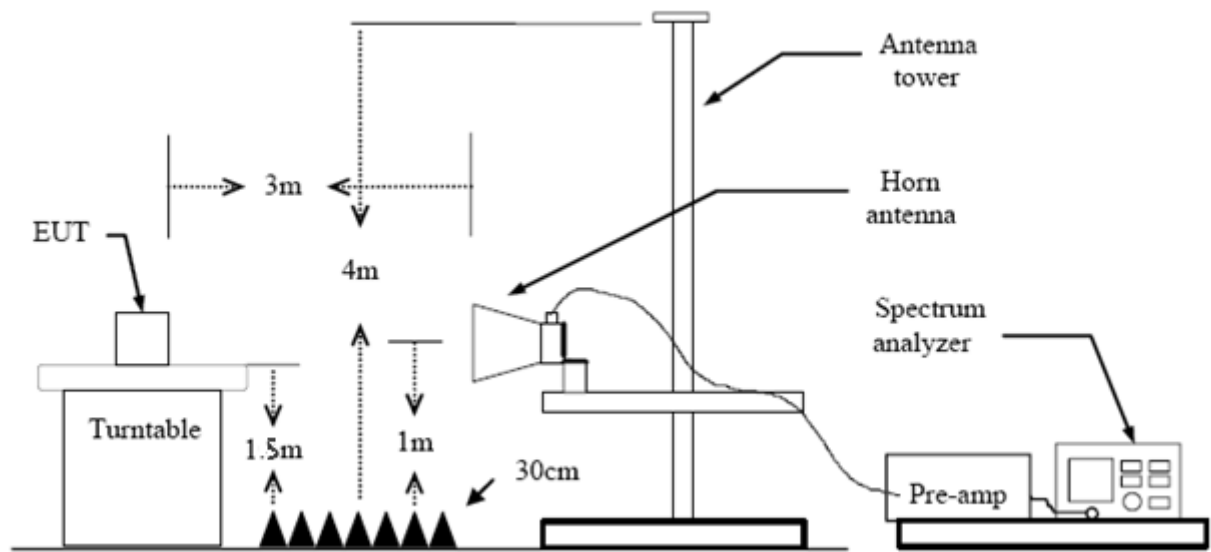
5.2 Test Setup



Below 30MHz Test Setup



Below 1000MHz Test Setup



Above 1GHz Test Setup

5.3 Test Procedure

- (1) Measurements at frequency above 1GHz. The EUT was placed on a rotating 1.5m high above the ground. RF absorbers covered the ground plane with a minimum area of 3.0m by 3.0m between the EUT and measurement receiver antenna. The RF absorber shall not exceed 30cm in high above the conducting floor. The table was rotated 360 degrees to determine the position of the highest radiation.
- (2) The Test antenna shall vary between 1m and 4m, Both Horizontal and Vertical antenna are set to make measurement.
- (3) 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.
- (4) If the Peak Mode measured value compliance with and lower than Quasi Peak Mode Limit Bellow 1 GHz, the EUT shall be deemed to meet QP Limits and then no additional QP Mode measurement performed. But the Peak Value and average value both need to comply with applicable limit above 1 GHz.
- (5) Testing frequency range below 1GHz the measuring instrument use VBW=120 kHz with Quasi-peak detection.
- (6) Testing frequency range above 1GHz the measuring instrument use RBW=1 MHz and VBW=3 MHz with Peak Detector for Peak Values, and use RBW=1 MHz and VBW=10 Hz with Peak Detector for Average Values.
- (7) For the actual test configuration, please see the test setup photo.

5.4 EUT Operating Condition

The Equipment Under Test was set to Continual Transmitting in maximum power.

5.5 Test Data

Remark: During testing above 1GHz the measuring instrument use RBW=1 MHz and VBW=3 MHz with Peak Detector for Peak Values, and use RBW=1 MHz and VBW=10 Hz with Peak Detector for Average Values.

Test data please refer the following pages.

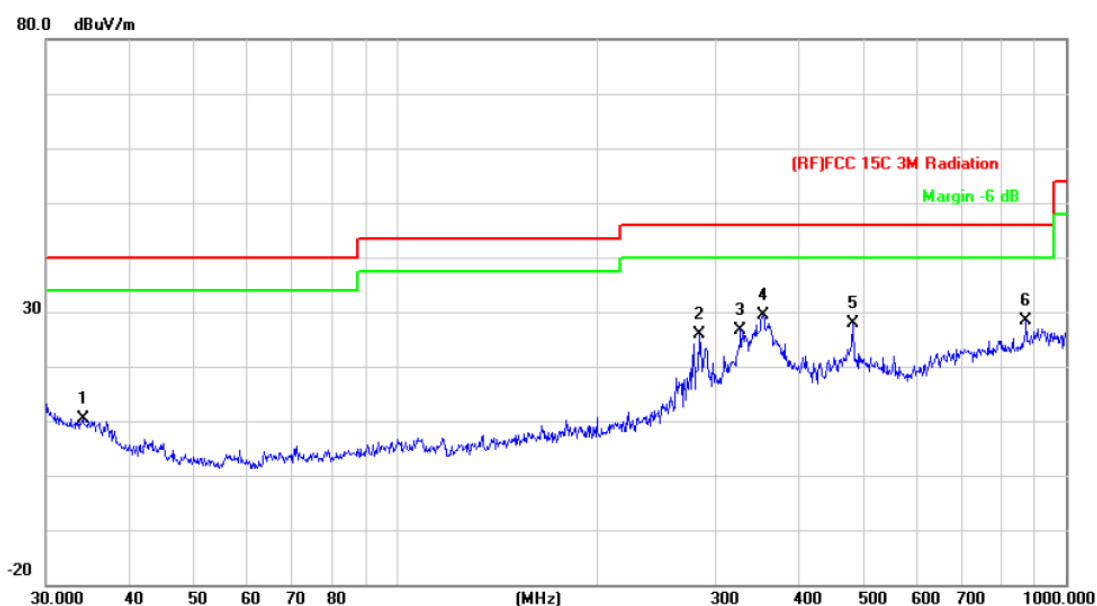
9 KHz~30 MHz

From 9 KHz to 30 MHz: Conclusion: PASS

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

30MHz~1GHz

EUT:	omimo WIFI Repeater	Model:	RP-R1
Temperature:	25 °C	Relative Humidity:	55%
Test Voltage:	AC 120V/60 Hz		
Ant. Pol.	Horizontal		
Test Mode:	TX B Mode 2412MHz		
Remark:	Only worse case is reported		

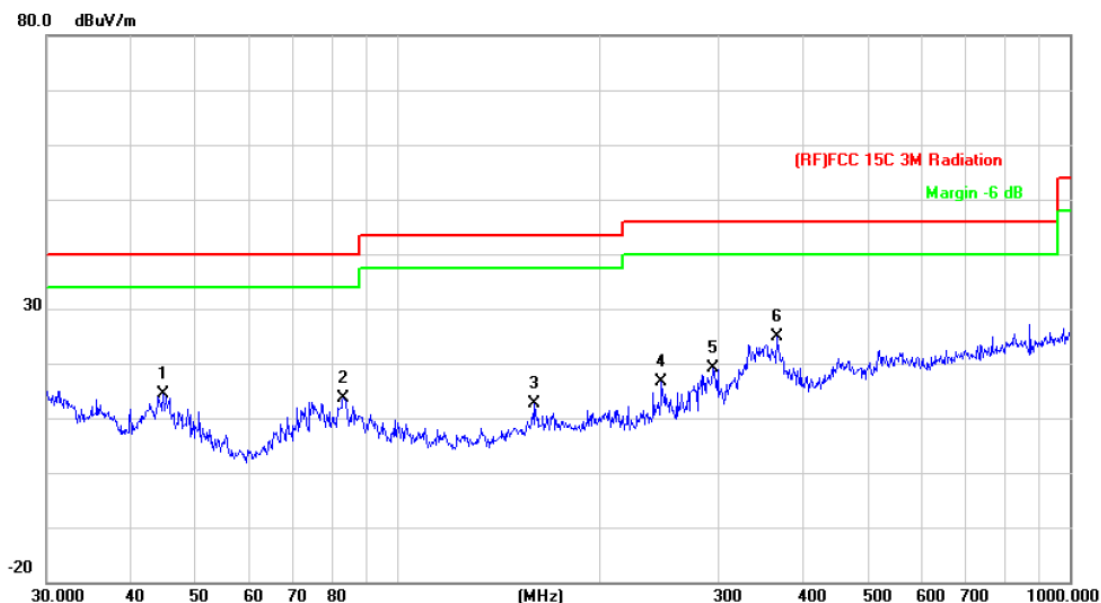


No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB/m	Measure- ment dBuV/m	Limit dBuV/m	Over dB	Detector
1		34.0365	27.06	-16.63	10.43	40.00	-29.57	QP
2		282.9852	42.90	-16.99	25.91	46.00	-20.09	QP
3		326.7395	42.34	-15.59	26.75	46.00	-19.25	QP
4	*	352.9433	43.58	-14.14	29.44	46.00	-16.56	QP
5		480.5276	39.09	-11.13	27.96	46.00	-18.04	QP
6		872.1832	33.12	-4.71	28.41	46.00	-17.59	QP

*:Maximum data x:Over limit !:over margin

Emission Level= Read Level+ Correct Factor

EUT:	omimo WIFI Repeater	Model:	RP-R1
Temperature:	25 °C	Relative Humidity:	55%
Test Voltage:	AC 120V/60 Hz		
Ant. Pol.	Vertical		
Test Mode:	TX B Mode 2412MHz		
Remark:	Only worse case is reported		



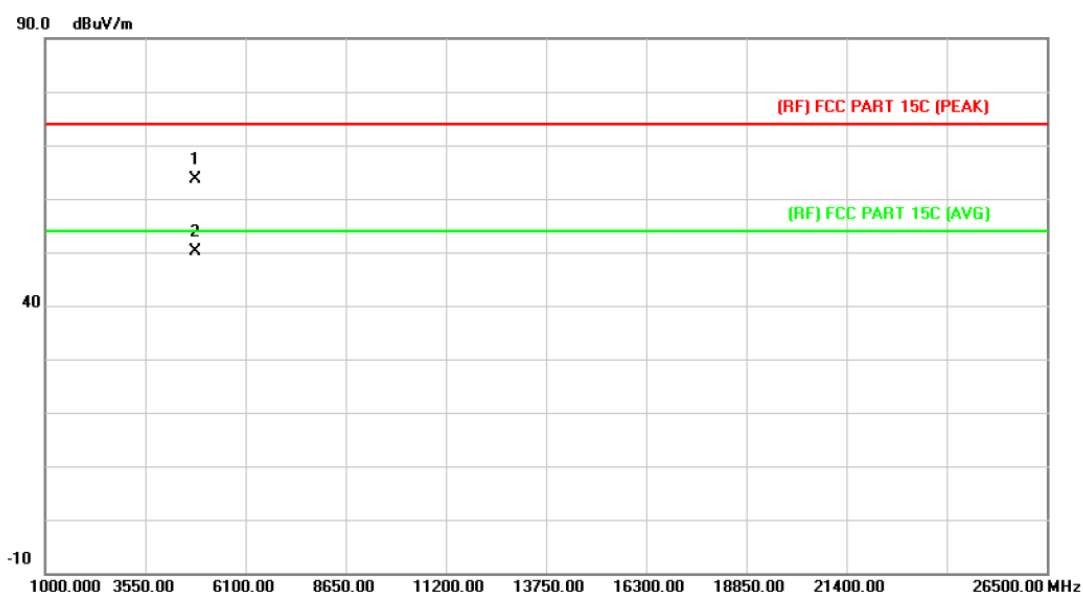
No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over	
		MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB	Detector
1		44.7433	36.59	-22.28	14.31	40.00	-25.69	QP
2		82.9385	36.83	-23.16	13.67	40.00	-26.33	QP
3		159.7844	33.04	-20.29	12.75	43.50	-30.75	QP
4		246.8149	34.45	-17.85	16.60	46.00	-29.40	QP
5		294.1137	35.87	-16.77	19.10	46.00	-26.90	QP
6	*	366.8231	39.00	-14.05	24.95	46.00	-21.05	QP

*:Maximum data x:Over limit !:over margin

Emission Level= Read Level+ Correct Factor

Above 1GHz

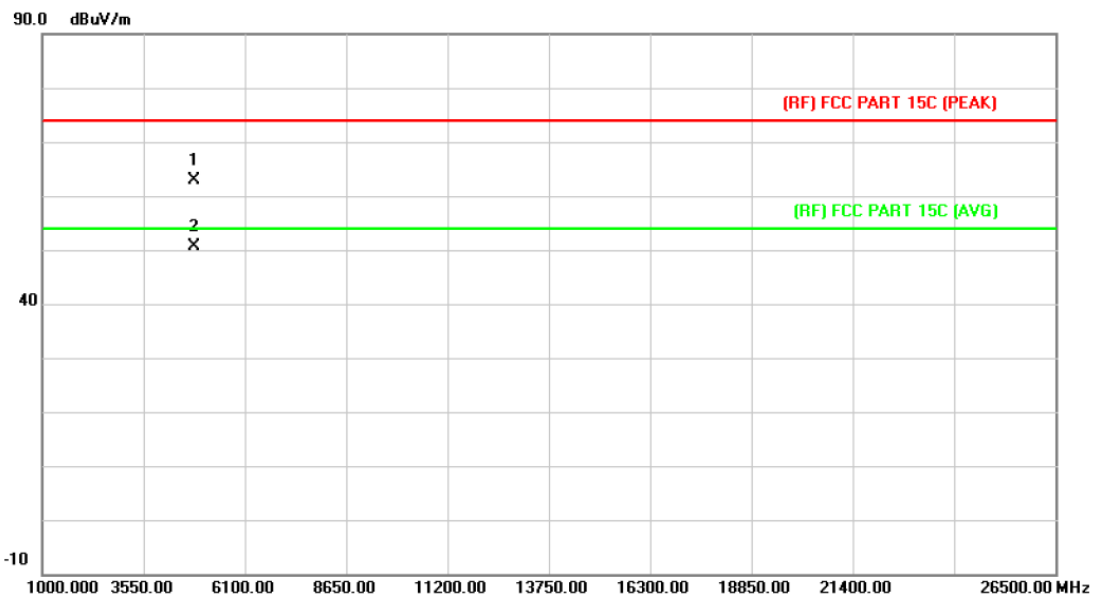
EUT:	omimo WIFI Repeater	Model:	RP-R1
Temperature:	25 °C	Relative Humidity:	55%
Test Voltage:	AC 120V/60 Hz		
Ant. Pol.	Horizontal		
Test Mode:	TX B Mode 2412MHz ANT a		
Remark:	No report for the emission which more than 10 dB below the prescribed limit.		



No.	Mk.	Freq.	Reading Level	Correct Factor	Measurement	Limit	Over	
		MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB	Detector
1		4817.160	50.01	13.53	63.54	74.00	-10.46	peak
2	*	4838.760	36.60	13.64	50.24	54.00	-3.76	AVG

Emission Level= Read Level+ Correct Factor

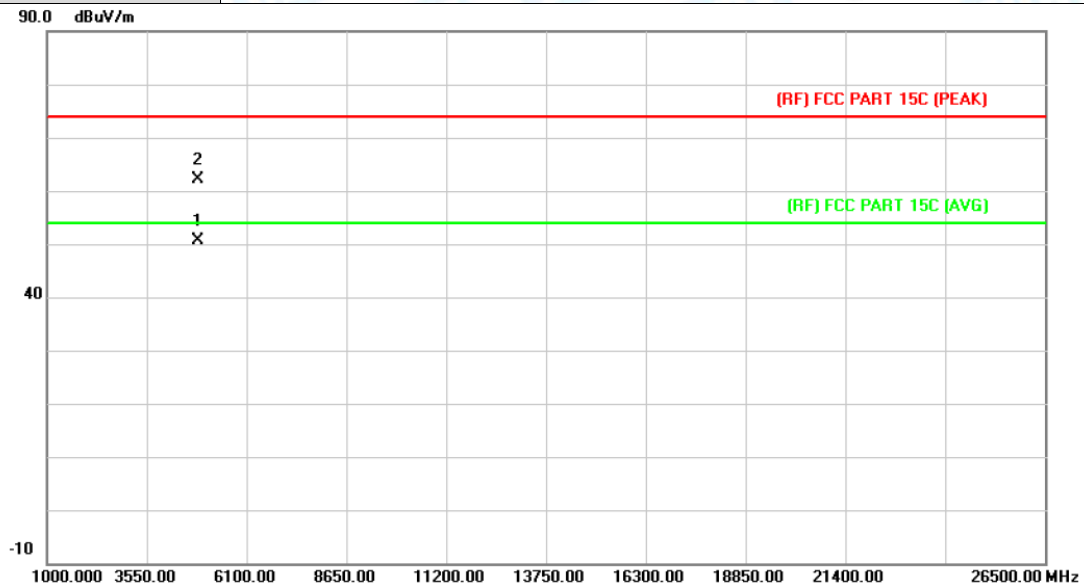
EUT:	omimo WIFI Repeater	Model:	RP-R1
Temperature:	25 °C	Relative Humidity:	55%
Test Voltage:	AC 120V/60 Hz		
Ant. Pol.	Vertical		
Test Mode:	TX B Mode 2412MHz ANT a		
Remark:	No report for the emission which more than 10 dB below the prescribed limit.		



No.	Mk.	Freq.	Reading Level	Correct Factor	Measurement	Limit	Over	
		MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB	Detector
1		4818.720	49.34	13.53	62.87	74.00	-11.13	peak
2	*	4834.000	37.07	13.62	50.69	54.00	-3.31	AVG

Emission Level= Read Level+ Correct Factor

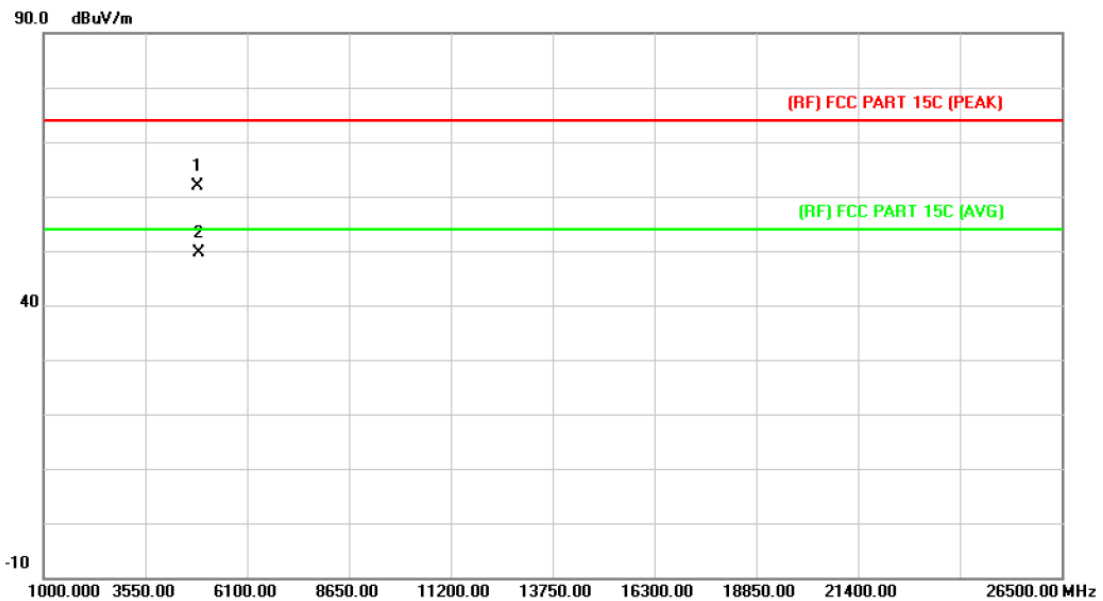
EUT:	omimo WIFI Repeater	Model:	RP-R1
Temperature:	25 °C	Relative Humidity:	55%
Test Voltage:	AC 120V/60 Hz		
Ant. Pol.	Horizontal		
Test Mode:	TX B Mode 2437MHz ANT a		
Remark:	No report for the emission which more than 10 dB below the prescribed limit.		



No.	Mk.	Freq.	Reading Level	Correct Factor	Measurement	Limit	Over	
		MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB	Detector
1	*	4871.860	36.85	13.84	50.69	54.00	-3.31	AVG
2		4872.500	48.28	13.85	62.13	74.00	-11.87	peak

Emission Level= Read Level+ Correct Factor

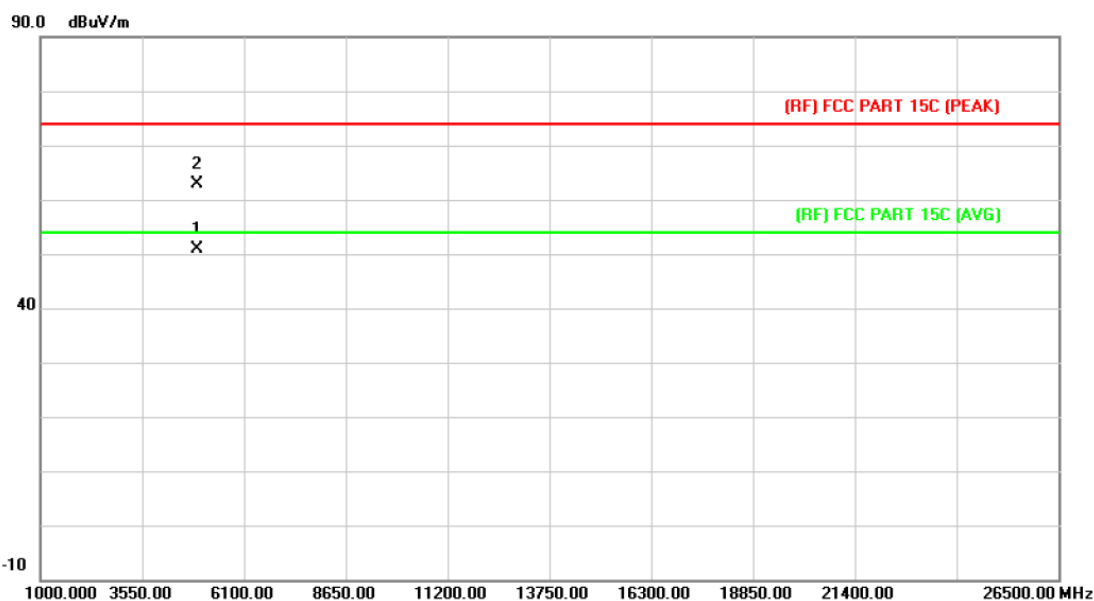
EUT:	omimo WIFI Repeater	Model:	RP-R1
Temperature:	25 °C	Relative Humidity:	55%
Test Voltage:	AC 120V/60 Hz		
Ant. Pol.	Vertical		
Test Mode:	TX B Mode 2437MHz ANT a		
Remark:	No report for the emission which more than 10 dB below the prescribed limit.		



No.	Mk.	Freq.	Reading Level	Correct Factor	Measurement	Limit	Over	
		MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB	Detector
1		4865.240	48.02	13.81	61.83	74.00	-12.17	peak
2	*	4878.040	35.80	13.88	49.68	54.00	-4.32	AVG

Emission Level= Read Level+ Correct Factor

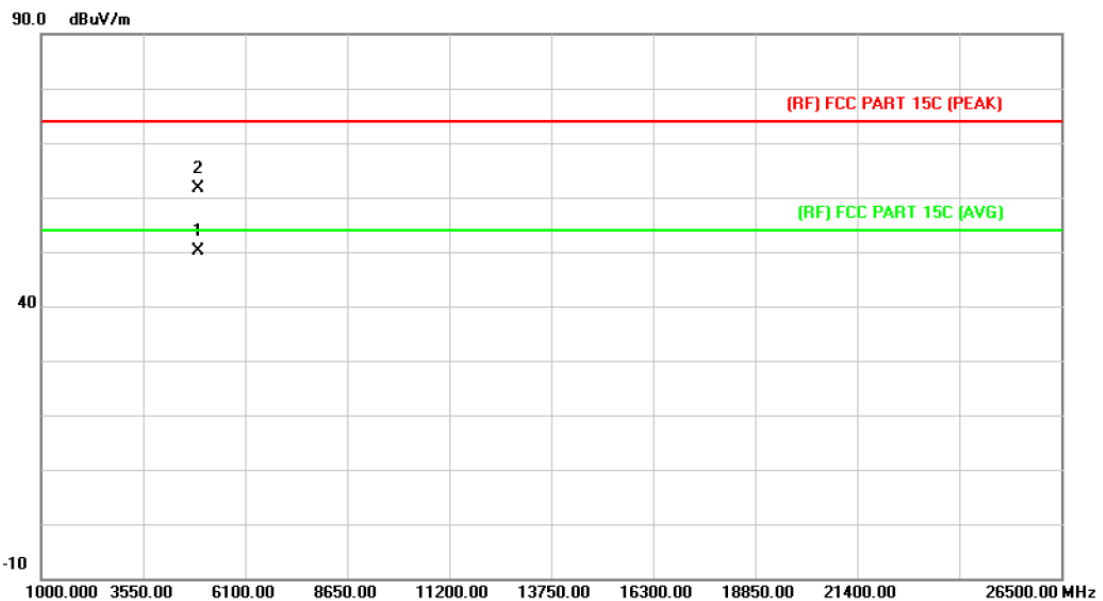
EUT:	omimo WIFI Repeater	Model:	RP-R1
Temperature:	25 °C	Relative Humidity:	55%
Test Voltage:	AC 120V/60 Hz		
Ant. Pol.	Horizontal		
Test Mode:	TX B Mode 2462MHz ANT a		
Remark:	No report for the emission which more than 10 dB below the prescribed limit.		



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over	
		MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB	Detector
1	*	4926.580	36.83	14.16	50.99	54.00	-3.01	AVG
2		4928.500	48.59	14.18	62.77	74.00	-11.23	peak

Emission Level= Read Level+ Correct Factor

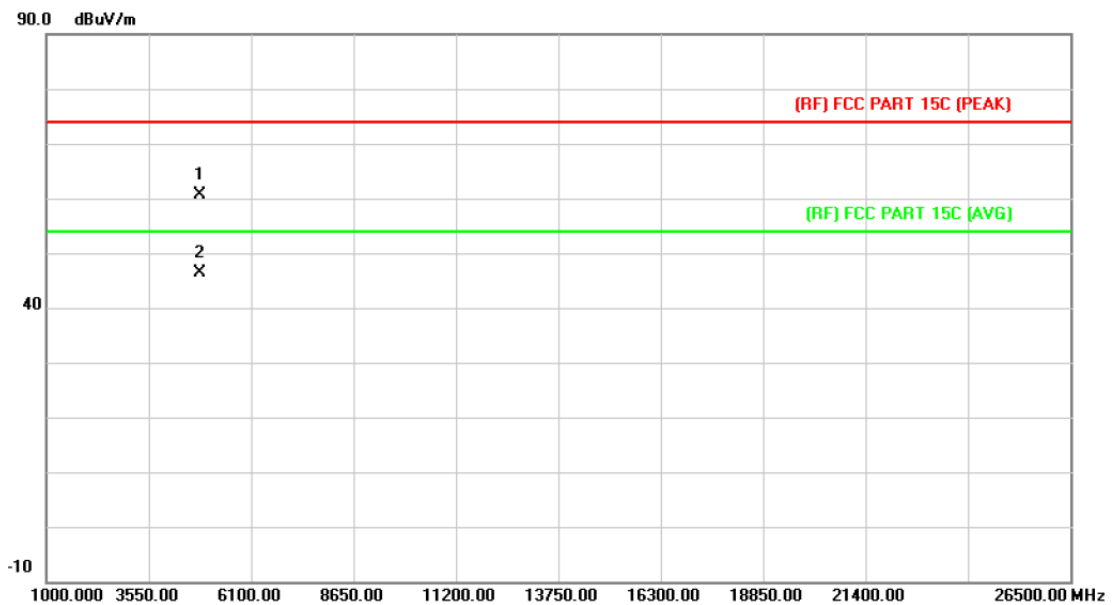
EUT:	omimo WIFI Repeater	Model:	RP-R1
Temperature:	25 °C	Relative Humidity:	55%
Test Voltage:	AC 120V/60 Hz		
Ant. Pol.	Vertical		
Test Mode:	TX B Mode 2462MHz ANT a		
Remark:	No report for the emission which more than 10 dB below the prescribed limit.		



No.	Mk.	Freq.	Reading Level	Correct Factor	Measurement	Limit	Over	
		MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB	Detector
1	*	4930.960	36.05	14.19	50.24	54.00	-3.76	AVG
2		4933.580	47.38	14.21	61.59	74.00	-12.41	peak

Emission Level= Read Level+ Correct Factor

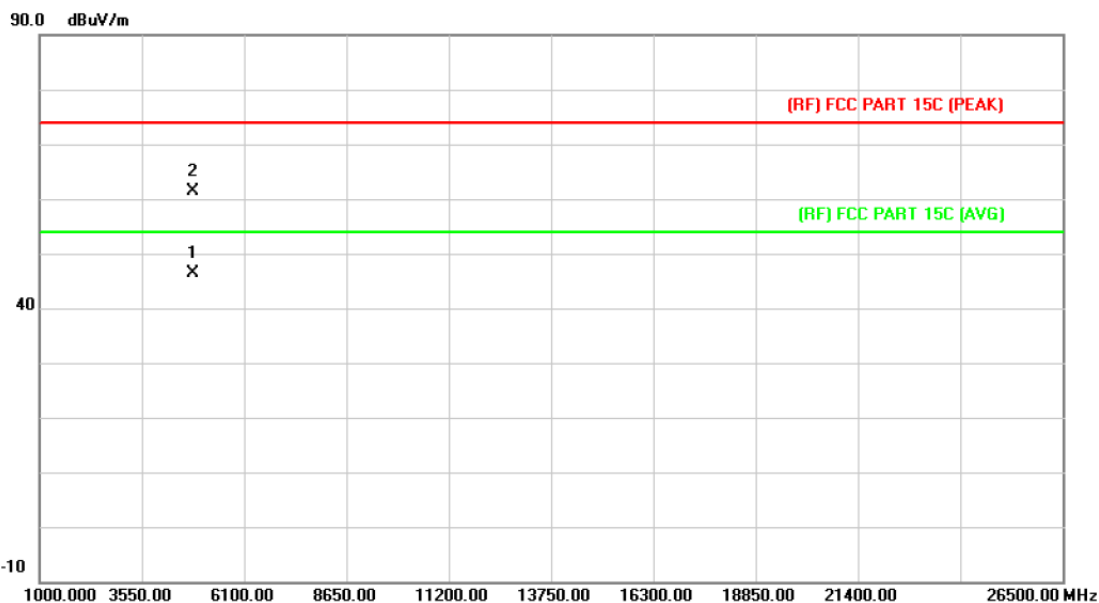
EUT:	omimo WIFI Repeater	Model:	RP-R1
Temperature:	25 °C	Relative Humidity:	55%
Test Voltage:	AC 120V/60 Hz		
Ant. Pol.	Horizontal		
Test Mode:	TX G Mode 2412MHz ANT a		
Remark:	No report for the emission which more than 10 dB below the prescribed limit.		



No.	Mk.	Freq.	Reading Level	Correct Factor	Measurement	Limit	Over	
		MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB	Detector
1		4822.000	46.96	13.55	60.51	74.00	-13.49	peak
2	*	4831.340	32.73	13.61	46.34	54.00	-7.66	AVG

Emission Level= Read Level+ Correct Factor

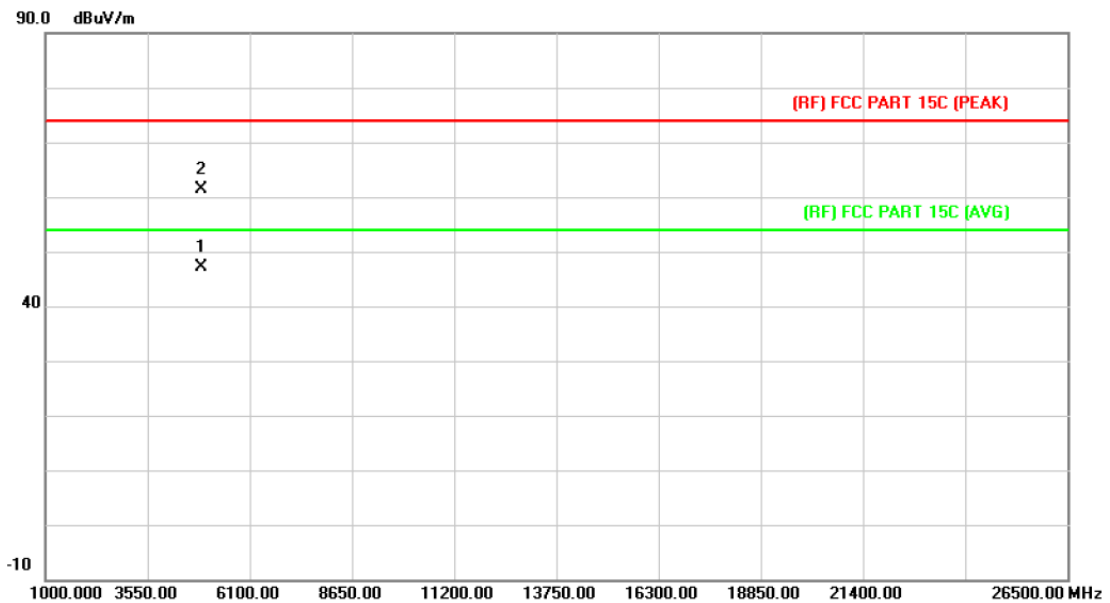
EUT:	omimo WIFI Repeater	Model:	RP-R1
Temperature:	25 °C	Relative Humidity:	55%
Test Voltage:	AC 120V/60 Hz		
Ant. Pol.	Vertical		
Test Mode:	TX G Mode 2412MHz ANT a		
Remark:	No report for the emission which more than 10 dB below the prescribed limit.		



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over	
		MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB	Detector
1	*	4831.940	32.72	13.61	46.33	54.00	-7.67	AVG
2		4834.000	47.72	13.62	61.34	74.00	-12.66	peak

Emission Level= Read Level+ Correct Factor

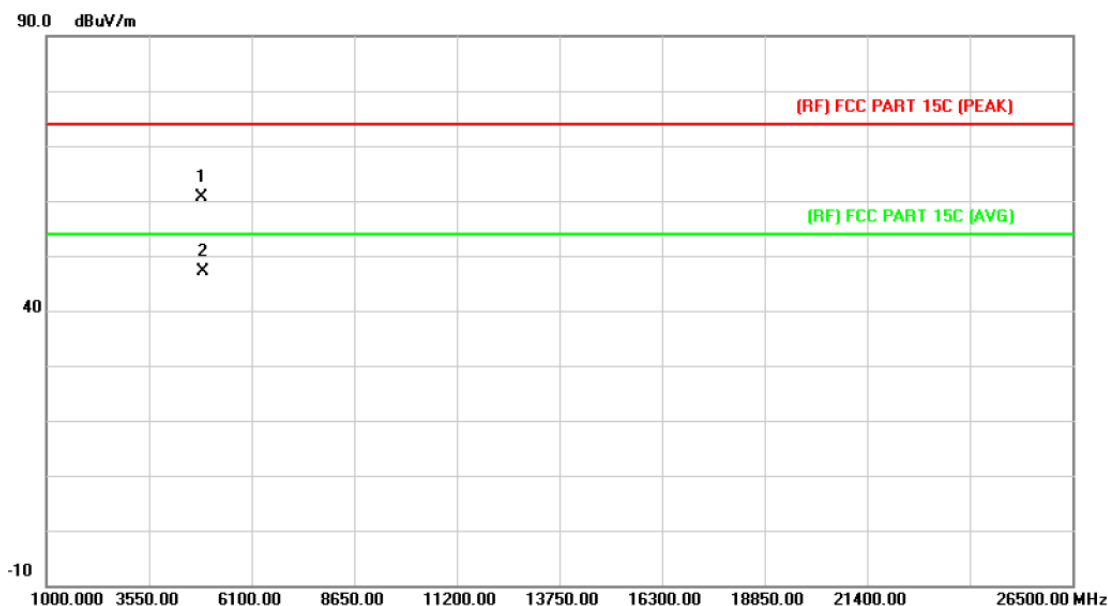
EUT:	omimo WIFI Repeater	Model:	RP-R1
Temperature:	25 °C	Relative Humidity:	55%
Test Voltage:	AC 120V/60 Hz		
Ant. Pol.	Horizontal		
Test Mode:	TX G Mode 2437MHz ANT a		
Remark:	No report for the emission which more than 10 dB below the prescribed limit.		



No.	Mk.	Freq.	Reading Level	Correct Factor	Measurement	Limit	Over	
		MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB	Detector
1	*	4879.260	33.20	13.89	47.09	54.00	-6.91	AVG
2		4883.420	47.36	13.92	61.28	74.00	-12.72	peak

Emission Level= Read Level+ Correct Factor

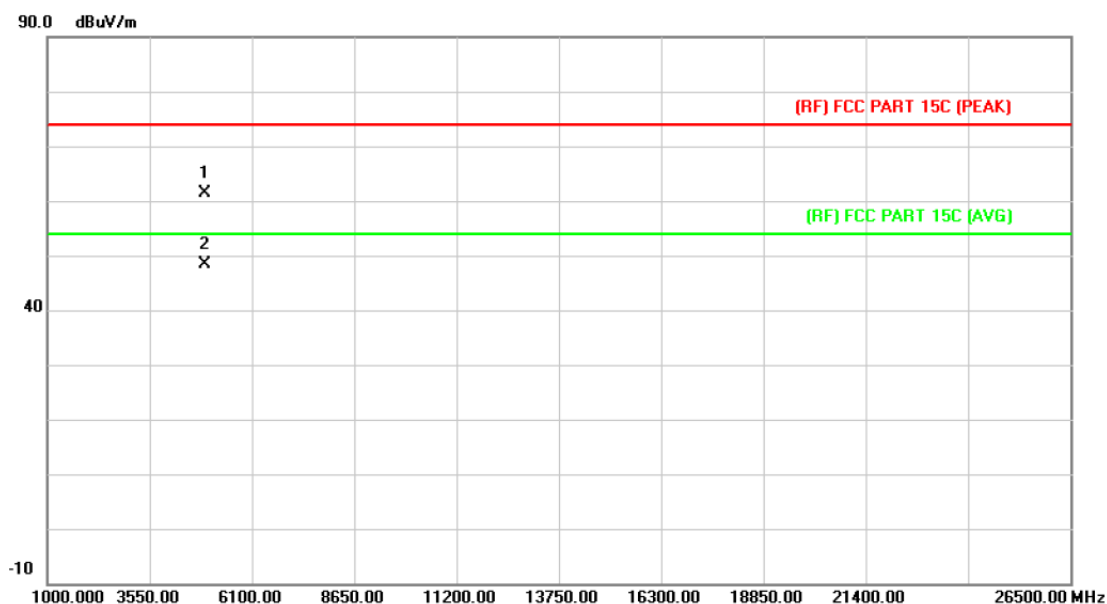
EUT:	omimo WIFI Repeater	Model:	RP-R1
Temperature:	25 °C	Relative Humidity:	55%
Test Voltage:	AC 120V/60 Hz		
Ant. Pol.	Vertical		
Test Mode:	TX G Mode 2437MHz ANT a		
Remark:	No report for the emission which more than 10 dB below the prescribed limit.		



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over	
		MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB	Detector
1		4865.920	46.84	13.81	60.65	74.00	-13.35	peak
2	*	4881.040	33.15	13.90	47.05	54.00	-6.95	AVG

Emission Level= Read Level+ Correct Factor

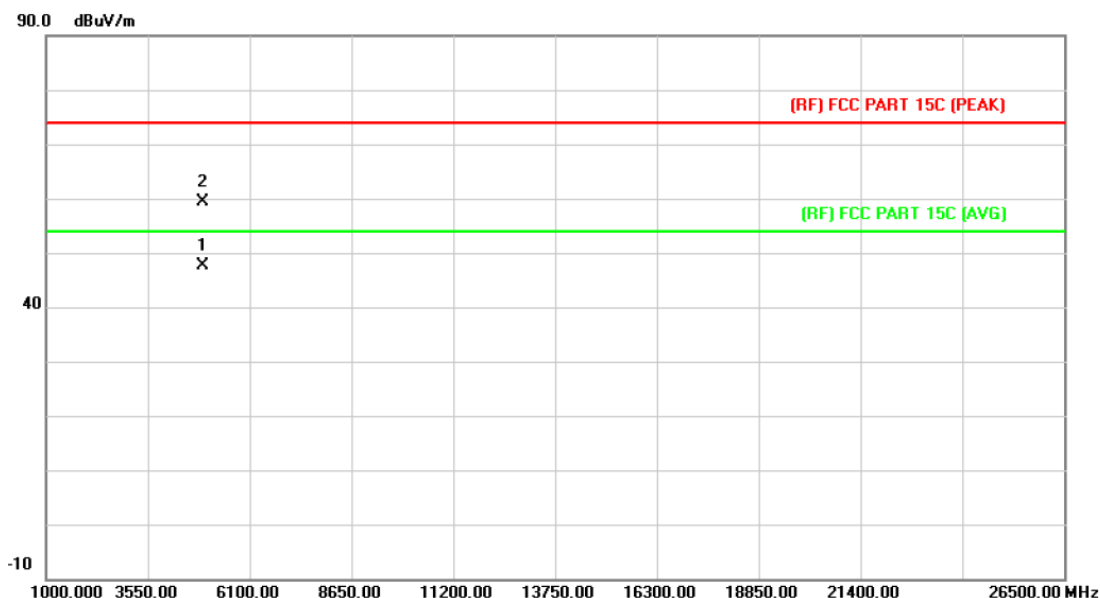
EUT:	omimo WIFI Repeater	Model:	RP-R1
Temperature:	25 °C	Relative Humidity:	55%
Test Voltage:	AC 120V/60 Hz		
Ant. Pol.	Horizontal		
Test Mode:	TX G Mode 2462MHz ANT a		
Remark:	No report for the emission which more than 10 dB below the prescribed limit.		



No.	Mk.	Freq.	Reading Level	Correct Factor	Measurement	Limit	Over	
		MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB	Detector
1		4916.640	47.35	14.10	61.45	74.00	-12.55	peak
2	*	4922.780	34.15	14.14	48.29	54.00	-5.71	AVG

Emission Level= Read Level+ Correct Factor

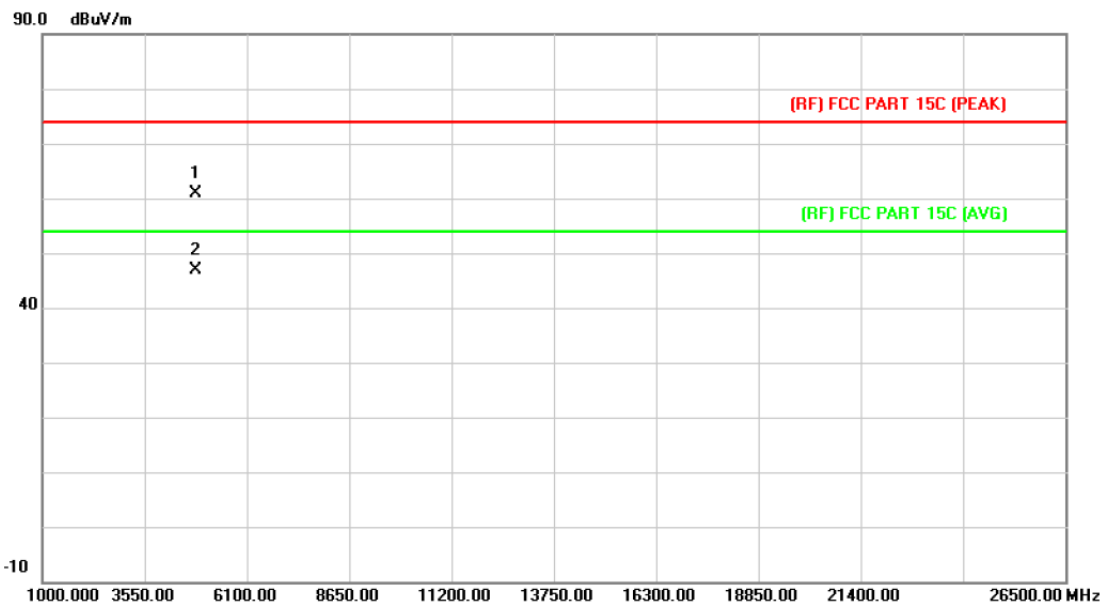
EUT:	omimo WIFI Repeater	Model:	RP-R1
Temperature:	25 °C	Relative Humidity:	55%
Test Voltage:	AC 120V/60 Hz		
Ant. Pol.	Vertical		
Test Mode:	TX G Mode 2462MHz ANT a		
Remark:	No report for the emission which more than 10 dB below the prescribed limit.		



No.	Mk.	Freq.	Reading Level	Correct Factor	Measurement	Limit	Over	
		MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB	Detector
1	*	4922.520	33.57	14.14	47.71	54.00	-6.29	AVG
2		4924.480	45.18	14.15	59.33	74.00	-14.67	peak

Emission Level= Read Level+ Correct Factor

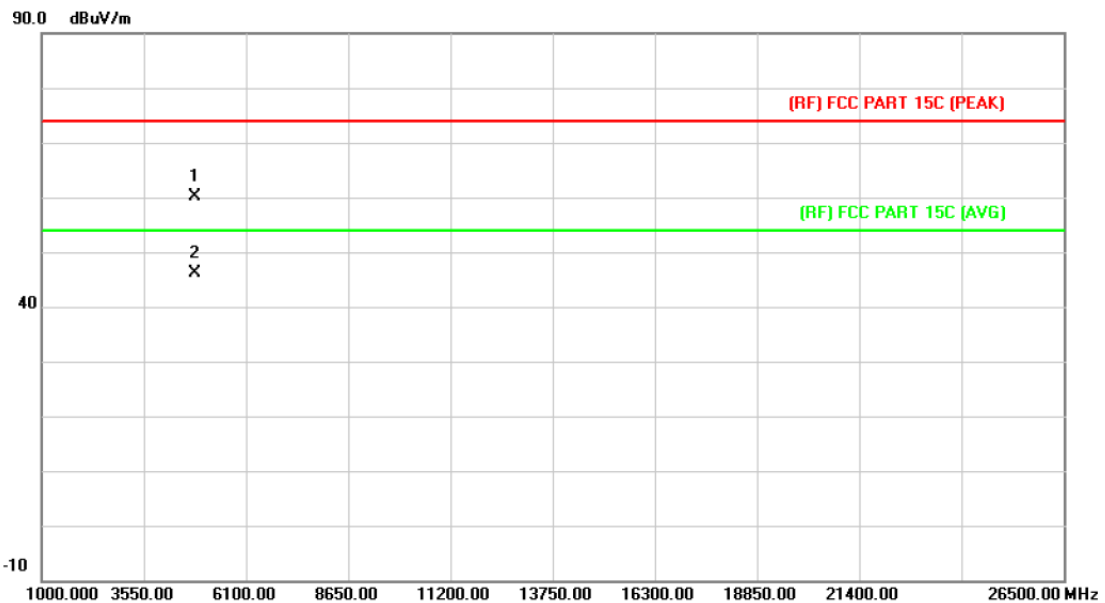
EUT:	omimo WIFI Repeater	Model:	RP-R1
Temperature:	25 °C	Relative Humidity:	55%
Test Voltage:	AC 120V/60 Hz		
Ant. Pol.	Horizontal		
Test Mode:	TX N(HT20) Mode 2412MHz ANT a+b		
Remark:	No report for the emission which more than 10 dB below the prescribed limit.		



No.	Mk.	Freq.	Reading Level	Correct Factor	Measurement	Limit	Over	
		MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB	Detector
1		4830.260	47.25	13.60	60.85	74.00	-13.15	peak
2	*	4832.360	33.30	13.61	46.91	54.00	-7.09	AVG

Emission Level= Read Level+ Correct Factor

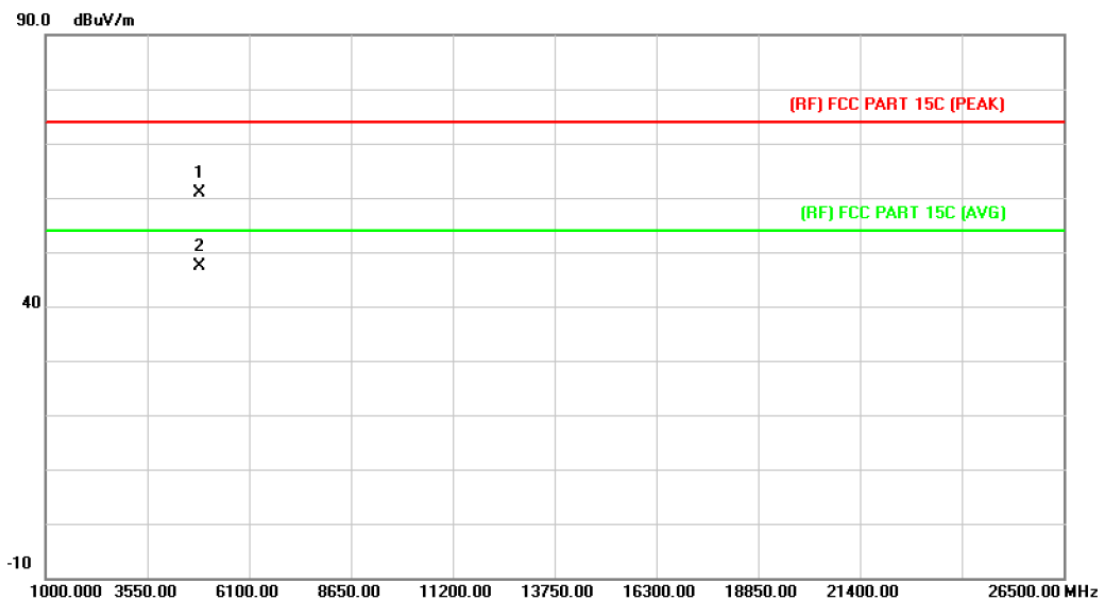
EUT:	omimo WIFI Repeater	Model:	RP-R1
Temperature:	25 °C	Relative Humidity:	55%
Test Voltage:	AC 120V/60 Hz		
Ant. Pol.	Vertical		
Test Mode:	TX N(HT20) Mode 2412MHz ANT a+b		
Remark:	No report for the emission which more than 10 dB below the prescribed limit.		



No.	Mk.	Freq.	Reading Level	Correct Factor	Measurement	Limit	Over	
		MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB	Detector
1		4816.200	46.55	13.51	60.06	74.00	-13.94	peak
2	*	4822.180	32.59	13.55	46.14	54.00	-7.86	AVG

Emission Level= Read Level+ Correct Factor

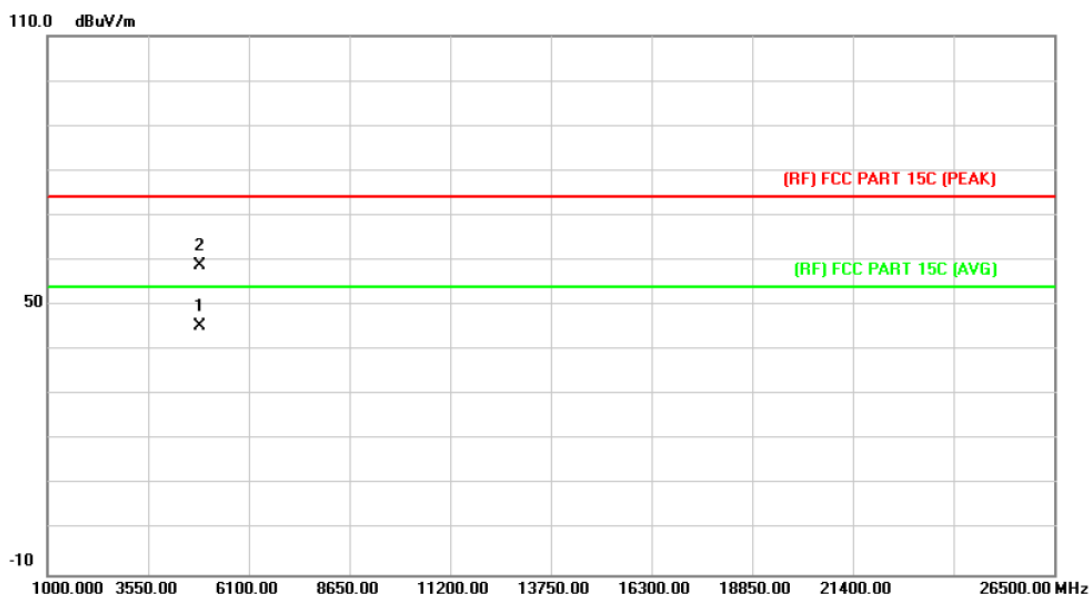
EUT:	omimo WIFI Repeater	Model:	RP-R1
Temperature:	25 °C	Relative Humidity:	55%
Test Voltage:	AC 120V/60 Hz		
Ant. Pol.	Horizontal		
Test Mode:	TX N(HT20) Mode 2437MHz ANT a+b		
Remark:	No report for the emission which more than 10 dB below the prescribed limit.		



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over	
		MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB	Detector
1		4864.500	47.13	13.80	60.93	74.00	-13.07	peak
2	*	4869.540	33.48	13.83	47.31	54.00	-6.69	AVG

Emission Level= Read Level+ Correct Factor

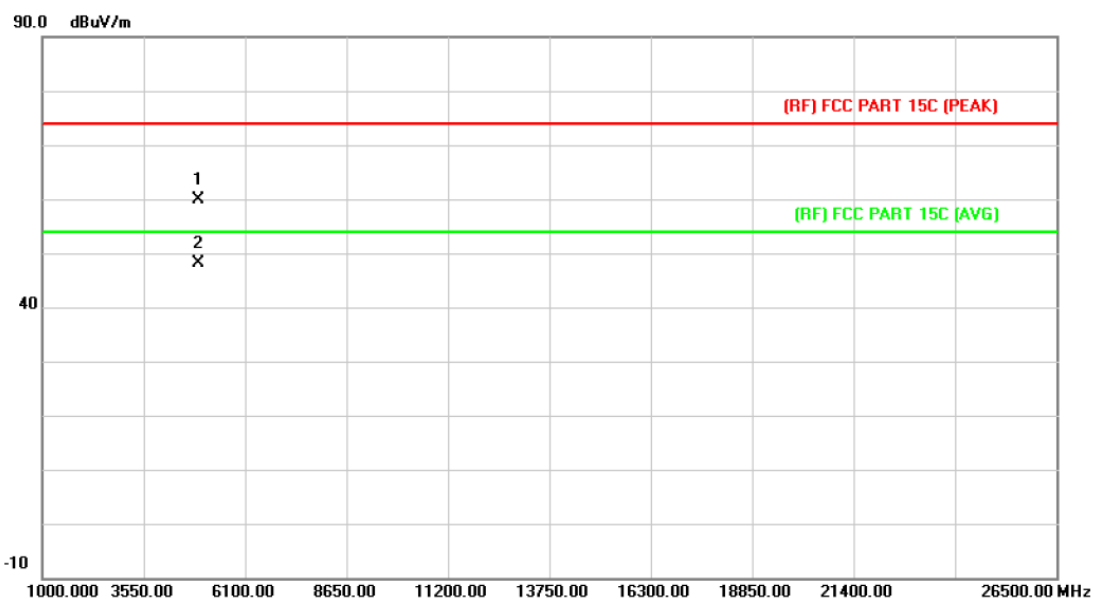
EUT:	omimo WIFI Repeater	Model:	RP-R1
Temperature:	25 °C	Relative Humidity:	55%
Test Voltage:	AC 120V/60 Hz		
Ant. Pol.	Vertical		
Test Mode:	TX N(HT20) Mode 2437MHz ANT a+b		
Remark:	No report for the emission which more than 10 dB below the prescribed limit.		



No.	Mk.	Freq.	Reading Level	Correct Factor	Measurement	Limit	Over	
		MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB	Detector
1	*	4874.258	31.43	13.86	45.29	54.00	-8.71	AVG
2		4875.163	45.09	13.87	58.96	74.00	-15.04	peak

Emission Level= Read Level+ Correct Factor

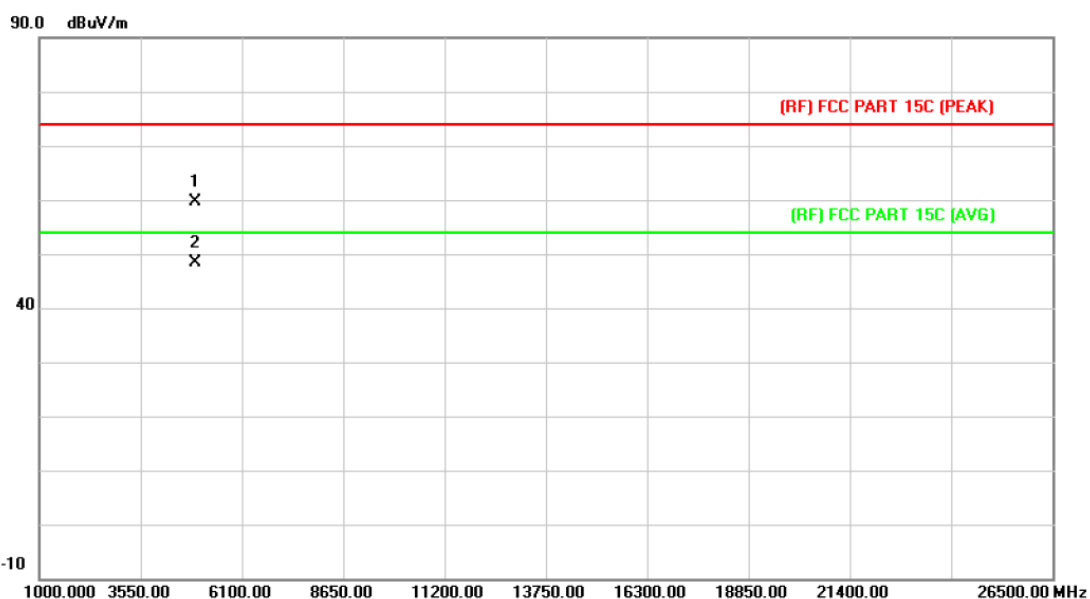
EUT:	omimo WIFI Repeater	Model:	RP-R1
Temperature:	25 °C	Relative Humidity:	55%
Test Voltage:	AC 120V/60 Hz		
Ant. Pol.	Horizontal		
Test Mode:	TX N(HT20) Mode 2462MHz ANT a+b		
Remark:	No report for the emission which more than 10 dB below the prescribed limit.		



No.	Mk.	Freq.	Reading Level	Correct Factor	Measurement	Limit	Over	
		MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB	Detector
1		4923.680	45.69	14.15	59.84	74.00	-14.16	peak
2	*	4926.560	33.86	14.16	48.02	54.00	-5.98	AVG

Emission Level= Read Level+ Correct Factor

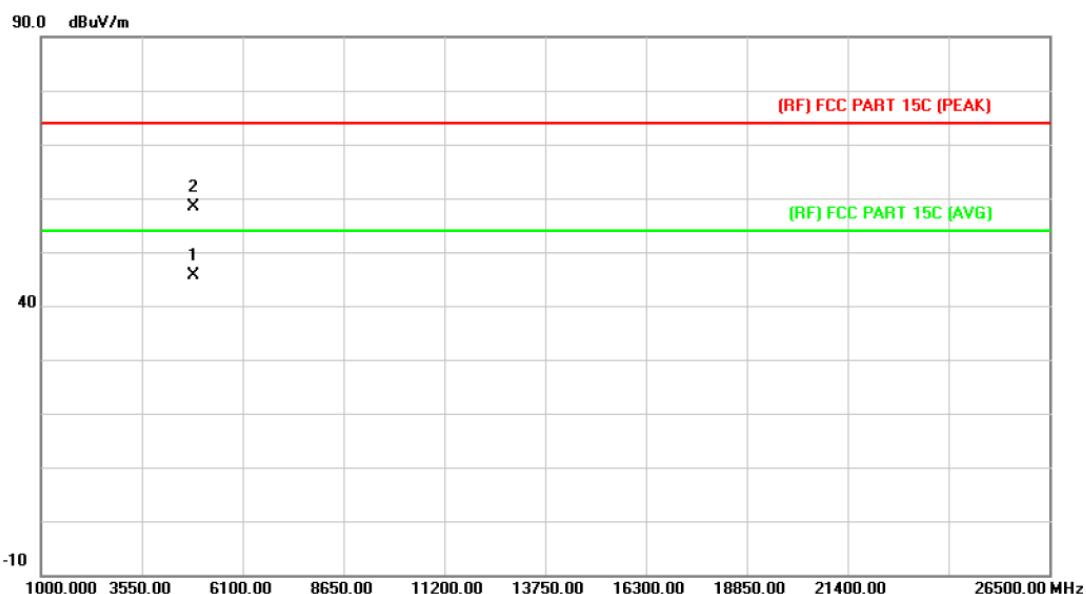
EUT:	omimo WIFI Repeater	Model:	RP-R1
Temperature:	25 °C	Relative Humidity:	55%
Test Voltage:	AC 120V/60 Hz		
Ant. Pol.	Vertical		
Test Mode:	TX N(HT20) Mode 2462MHz ANT a+b		
Remark:	No report for the emission which more than 10 dB below the prescribed limit.		



No.	Mk.	Freq.	Reading Level	Correct Factor	Measurement	Limit	Over	
		MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB	Detector
1		4921.920	45.38	14.14	59.52	74.00	-14.48	peak
2	*	4929.100	34.08	14.19	48.27	54.00	-5.73	AVG

Emission Level= Read Level+ Correct Factor

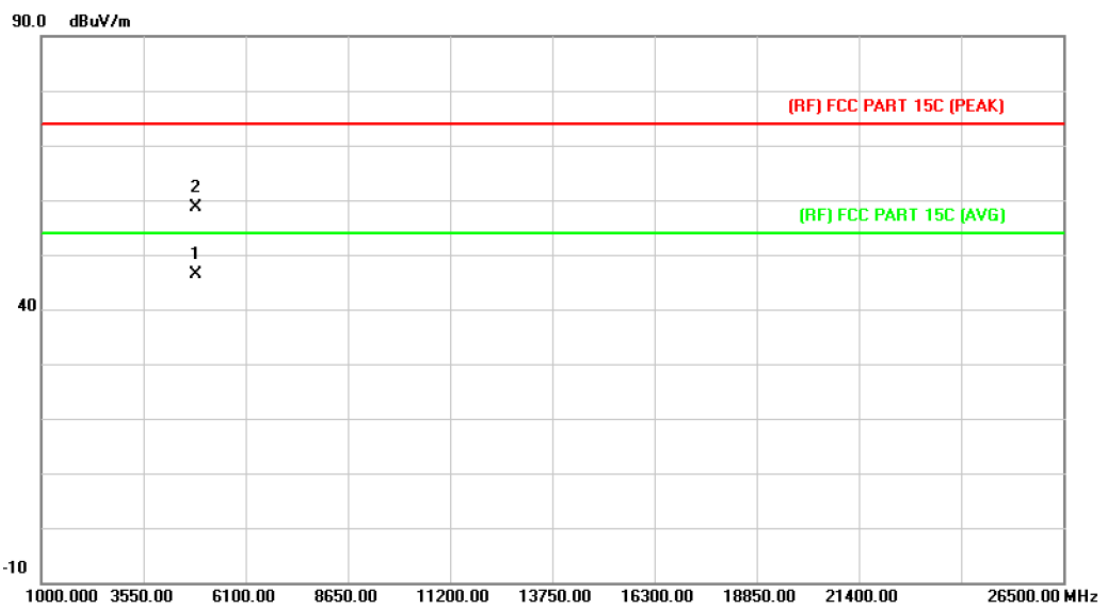
EUT:	omimo WIFI Repeater	Model:	RP-R1
Temperature:	25 °C	Relative Humidity:	55%
Test Voltage:	AC 120V/60 Hz		
Ant. Pol.	Horizontal		
Test Mode:	TX N(HT40) Mode 2422MHz ANT a+b		
Remark:	No report for the emission which more than 10 dB below the prescribed limit.		



No.	Mk.	Freq.	Reading Level	Correct Factor	Measurement	Limit	Over	
		MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB	Detector
1	*	4846.352	31.99	13.69	45.68	54.00	-8.32	AVG
2		4848.362	44.62	13.70	58.32	74.00	-15.68	peak

Emission Level= Read Level+ Correct Factor

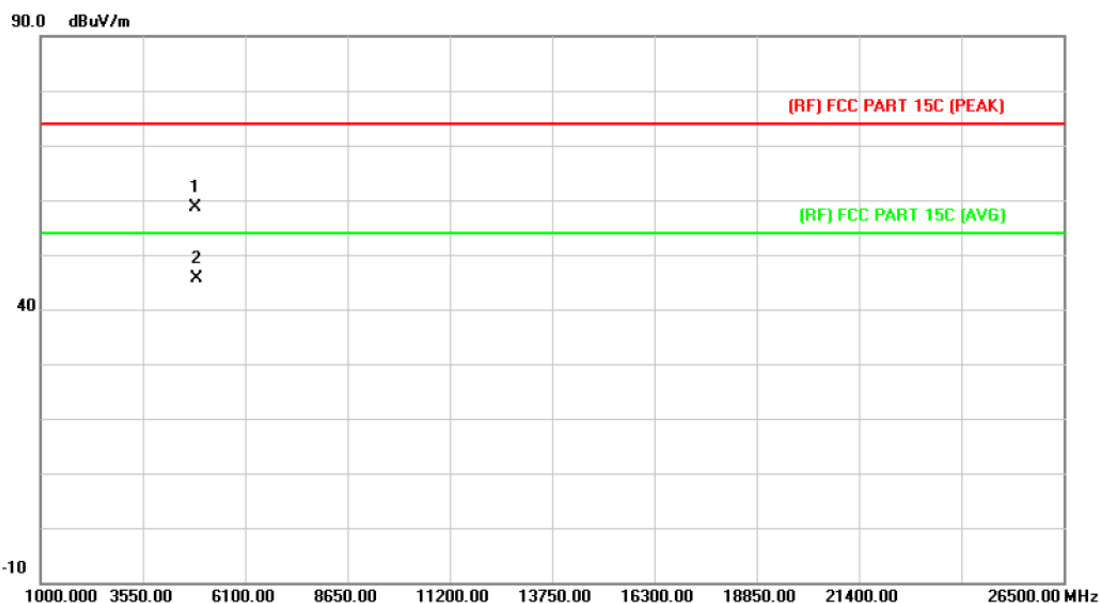
EUT:	omimo WIFI Repeater	Model:	RP-R1
Temperature:	25 °C	Relative Humidity:	55%
Test Voltage:	AC 120V/60 Hz		
Ant. Pol.	Vertical		
Test Mode:	TX N(HT40) Mode 2422MHz ANT a+b		
Remark:	No report for the emission which more than 10 dB below the prescribed limit.		



No.	Mk.	Freq.	Reading Level	Correct Factor	Measurement	Limit	Over	
		MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB	Detector
1	*	4845.870	32.63	13.69	46.32	54.00	-7.68	AVG
2		4846.360	44.98	13.69	58.67	74.00	-15.33	peak

Emission Level= Read Level+ Correct Factor

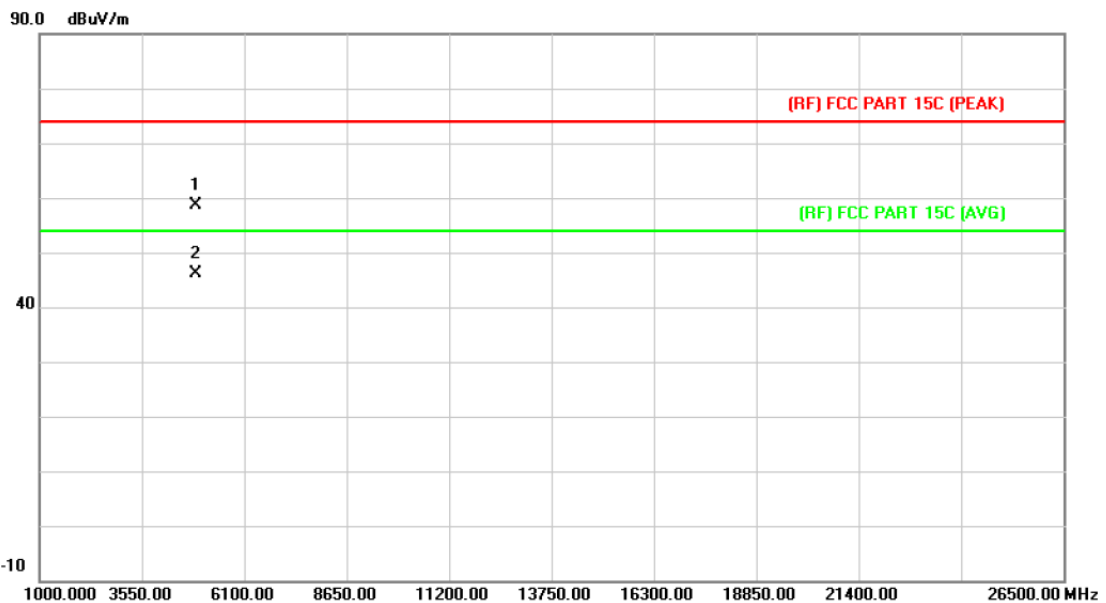
EUT:	omimo WIFI Repeater	Model:	RP-R1
Temperature:	25 °C	Relative Humidity:	55%
Test Voltage:	AC 120V/60 Hz		
Ant. Pol.	Horizontal		
Test Mode:	TX N(HT40) Mode 2437MHz ANT a+b		
Remark:	No report for the emission which more than 10 dB below the prescribed limit.		



No.	Mk.	Freq.	Reading Level	Correct Factor	Measurement	Limit	Over	
		MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB	Detector
1		4874.660	44.76	13.86	58.62	74.00	-15.38	peak
2	*	4876.520	31.81	13.87	45.68	54.00	-8.32	AVG

Emission Level= Read Level+ Correct Factor

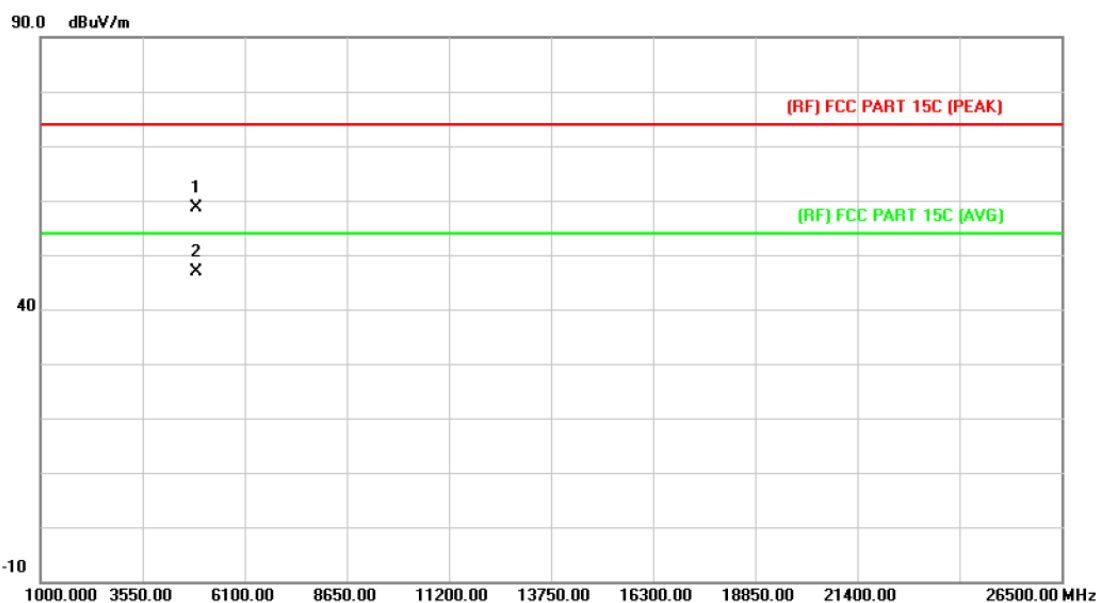
EUT:	omimo WIFI Repeater	Model:	RP-R1
Temperature:	25 °C	Relative Humidity:	55%
Test Voltage:	AC 120V/60 Hz		
Ant. Pol.	Vertical		
Test Mode:	TX N(HT40) Mode 2437MHz ANT a+b		
Remark:	No report for the emission which more than 10 dB below the prescribed limit.		



No.	Mk.	Freq.	Reading Level	Correct Factor	Measurement	Limit	Over	
		MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB	Detector
1		4878.320	44.79	13.88	58.67	74.00	-15.33	peak
2	*	4876.520	32.34	13.87	46.21	54.00	-7.79	AVG

Emission Level= Read Level+ Correct Factor

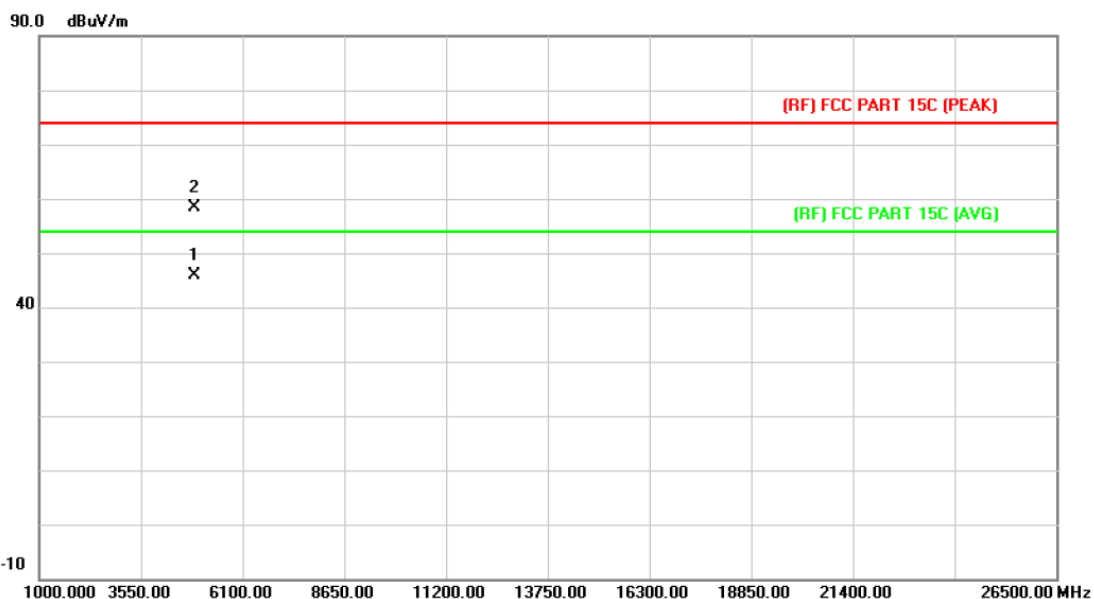
EUT:	omimo WIFI Repeater	Model:	RP-R1
Temperature:	25 °C	Relative Humidity:	55%
Test Voltage:	AC 120V/60 Hz		
Ant. Pol.	Horizontal		
Test Mode:	TX N(HT40) Mode 2452MHz ANT a+b		
Remark:	No report for the emission which more than 10 dB below the prescribed limit.		



No.	Mk.	Freq.	Reading Level	Correct Factor	Measurement	Limit	Over	
		MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB	Detector
1		4905.250	44.60	14.04	58.64	74.00	-15.36	peak
2	*	4906.541	32.82	14.05	46.87	54.00	-7.13	AVG

Emission Level= Read Level+ Correct Factor

EUT:	omimo WIFI Repeater	Model:	RP-R1
Temperature:	25 °C	Relative Humidity:	55%
Test Voltage:	AC 120V/60 Hz		
Ant. Pol.	Vertical		
Test Mode:	TX N(HT40) Mode 2452MHz ANT a+b		
Remark:	No report for the emission which more than 10 dB below the prescribed limit.		



No.	Mk.	Freq.	Reading Level	Correct Factor	Measurement	Limit	Over	
		MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB	Detector
1	*	4906.548	31.93	14.05	45.98	54.00	-8.02	AVG
2		4907.652	44.29	14.06	58.35	74.00	-15.65	peak

Emission Level= Read Level+ Correct Factor

6. Restricted Bands Requirement

6.1 Test Standard and Limit

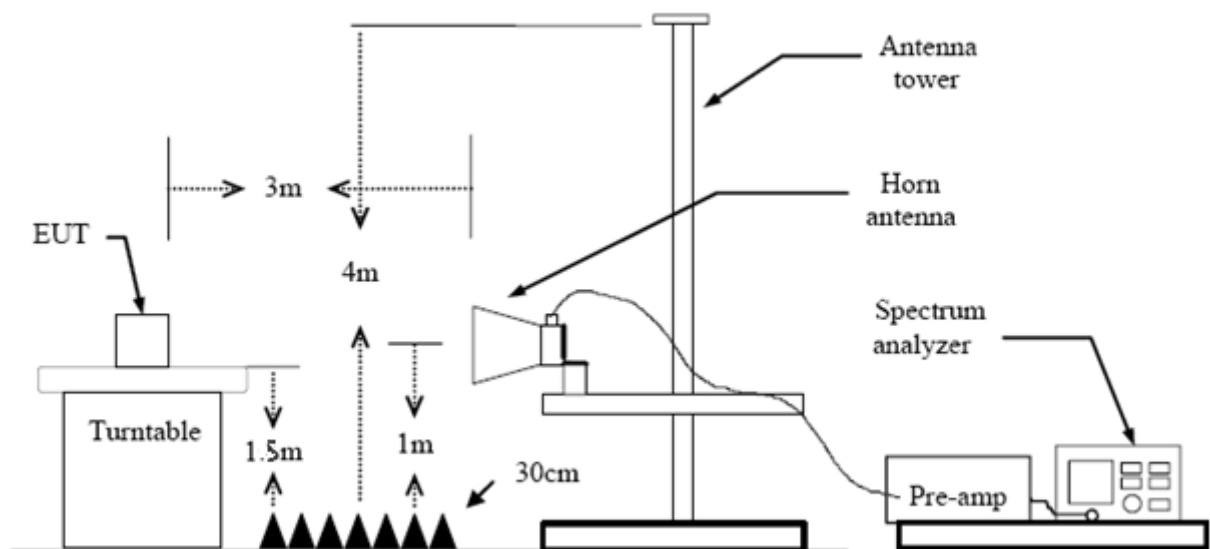
6.1.1 Test Standard

FCC Part 15.209 FCC Part 15.205

6.1.2 Test Limit

Restricted Frequency Band (MHz)	Distance Meters (at 3m)	
	Peak (dBuV/m)	Average (dBuV/m)
2310 ~2390	74	54
2483.5 ~2500	74	54

6.2 Test Setup



6.3 Test Procedure

- (1) The measuring distance of 3m shall be used for measurements at frequency up to 1GHz and above 1 GHz. The EUT was placed on a rotating 0.8m high above ground, the table was rotated 360 degrees to determine the position of the highest radiation.
- (2) Measurements at frequency above 1GHz. The EUT was placed on a rotating 1.5m high above the ground. RF absorbers covered the ground plane with a minimum area of 3.0m by 3.0m between the EUT and measurement receiver antenna. The RF absorber shall not exceed 30cm in high above the conducting floor. The table was rotated 360 degrees to determine the position of the highest radiation.
- (3) The Test antenna shall vary between 1m and 4m, Both Horizontal and Vertical antenna are

set to make measurement.

- (4) 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.
- (5) If the Peak Mode measured value compliance with and lower than Quasi Peak Mode Limit Bellow 1 GHz, the EUT shall be deemed to meet QP Limits and then no additional QP Mode measurement performed. But the Peak Value and average value both need to comply with applicable limit above 1 GHz.
- (6) Testing frequency range below 1GHz the measuring instrument use VBW=120 kHz with Quasi-peak detection.
- (7) Testing frequency range above 1GHz the measuring instrument use RBW=1 MHz and VBW=3 MHz with Peak Detector for Peak Values, and use RBW=1 MHz and VBW=10 Hz with Peak Detector for Average Values.
- (8) For the actual test configuration, please see the test setup photo.

6.4 EUT Operating Condition

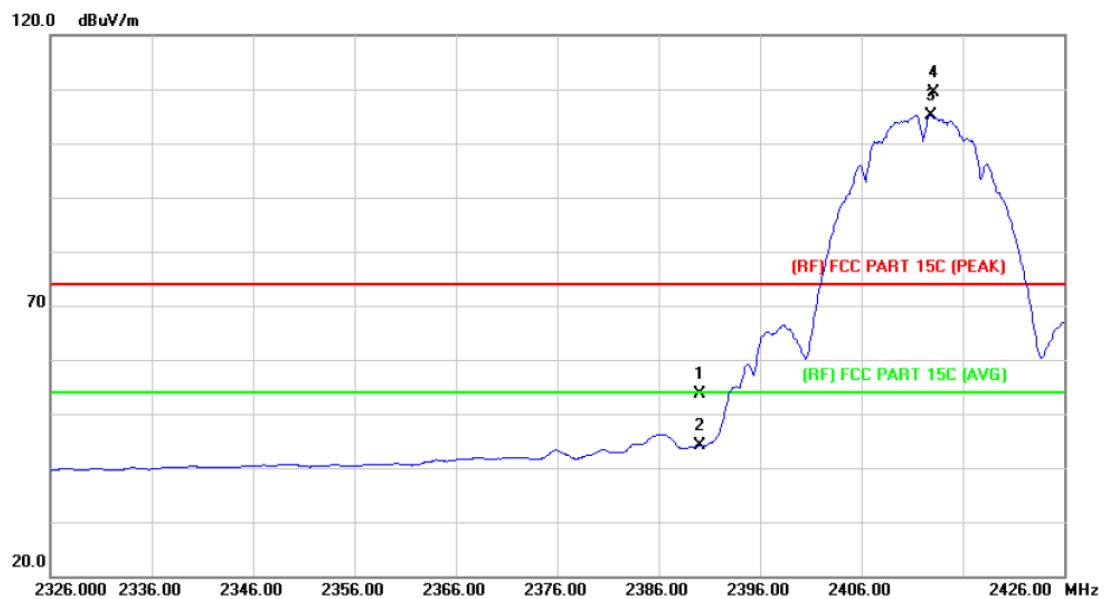
The Equipment Under Test was set to Continual Transmitting in maximum power.

6.5 Test Data

Please see the next page.

(1) Radiation Test

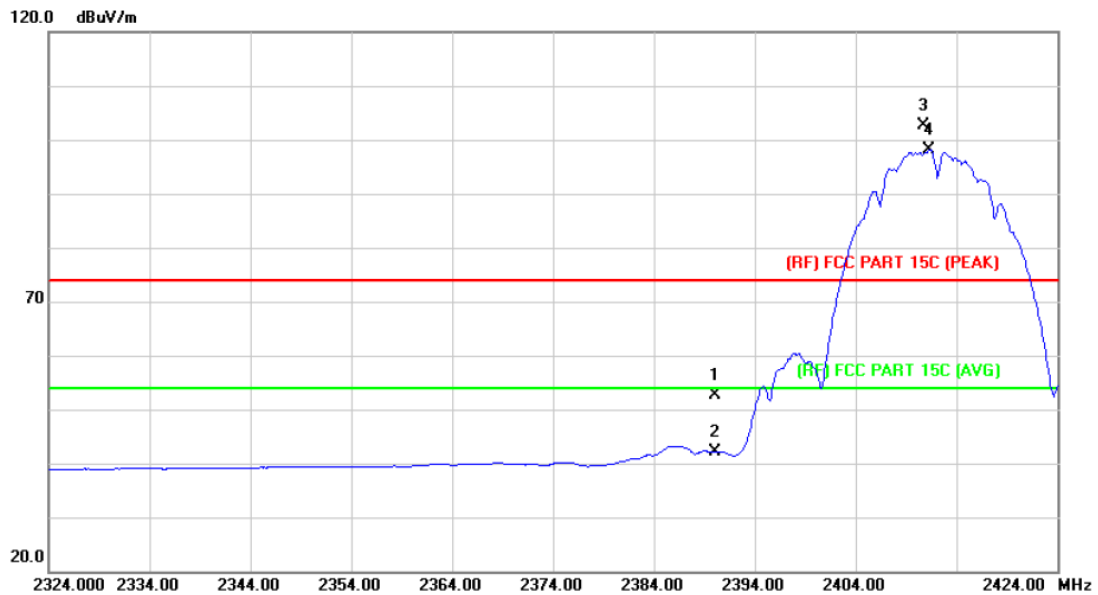
EUT:	omimo WIFI Repeater	Model:	RP-R1
Temperature:	25 °C	Relative Humidity:	55%
Test Voltage:	AC 120V/60 Hz		
Ant. Pol.	Horizontal		
Test Mode:	TX B Mode 2412MHz ANT a		
Remark:	N/A		



No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB/m	Measure- ment dBuV/m	Limit dBuV/m	Over dB	Detector
1		2390.000	52.97	0.77	53.74	74.00	-20.26	peak
2		2390.000	43.25	0.77	44.02	54.00	-9.98	AVG
3	*	2412.800	104.37	0.86	105.23	Fundamental Frequency		AVG
4	X	2413.200	108.54	0.86	109.40	Fundamental Frequency		peak

Emission Level= Read Level+ Correct Factor

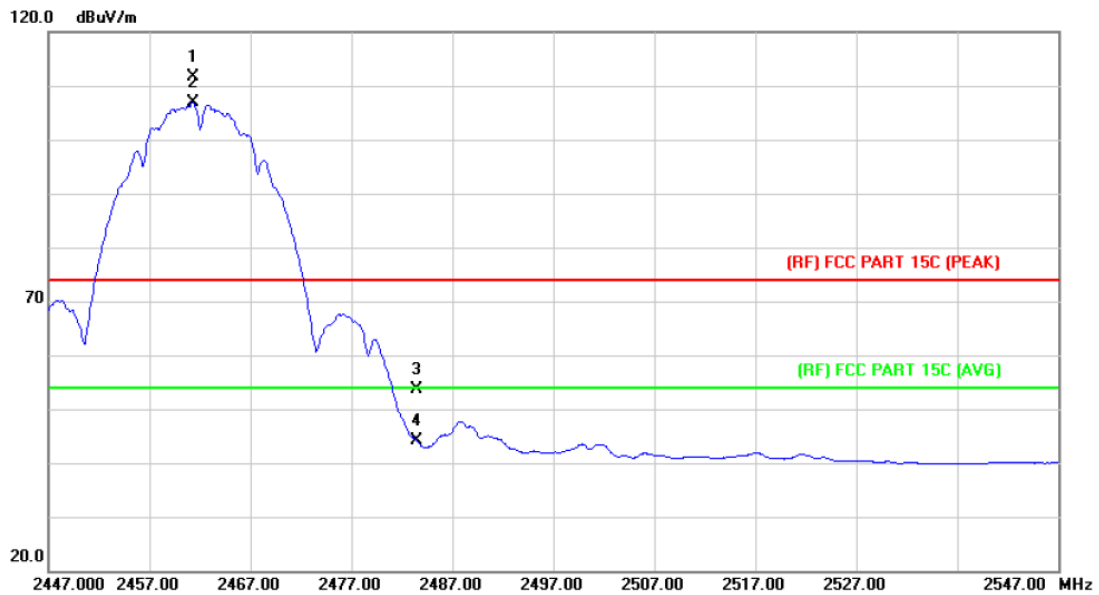
EUT:	omimo WIFI Repeater	Model:	RP-R1
Temperature:	25 °C	Relative Humidity:	55%
Test Voltage:	AC 120V/60 Hz		
Ant. Pol.	Vertical		
Test Mode:	TX B Mode 2412MHz ANT a		
Remark:	N/A		



No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB/m	Measure- ment dBuV/m	Limit dBuV/m	Over dB	Detector
1		2390.000	51.83	0.77	52.60	74.00	-21.40	peak
2		2390.000	41.31	0.77	42.08	54.00	-11.92	AVG
3	X	2410.700	101.87	0.86	102.73	Fundamental Frequency		peak
4	*	2411.300	97.28	0.86	98.14	Fundamental Frequency		AVG

Emission Level= Read Level+ Correct Factor

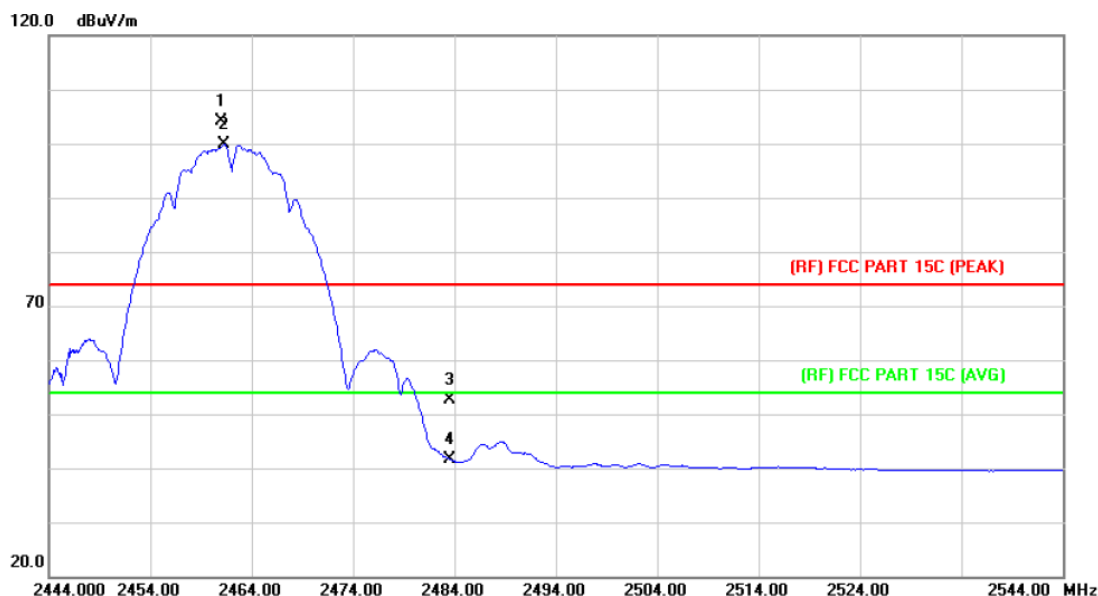
EUT:	omimo WIFI Repeater	Model:	RP-R1
Temperature:	25 °C	Relative Humidity:	55%
Test Voltage:	AC 120V/60 Hz		
Ant. Pol.	Horizontal		
Test Mode:	TX B Mode 2462MHz ANT a		
Remark:	N/A		



No.	Mk.	Freq.	Reading Level	Correct Factor	Measurement	Limit	Over	
		MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB	Detector
1	X	2461.300	110.46	1.07	111.53	Fundamental Frequency		peak
2	*	2461.300	105.69	1.07	106.76	Fundamental Frequency		AVG
3		2483.500	52.48	1.17	53.65	74.00	-20.35	peak
4		2483.500	42.94	1.17	44.11	54.00	-9.89	AVG

Emission Level= Read Level+ Correct Factor

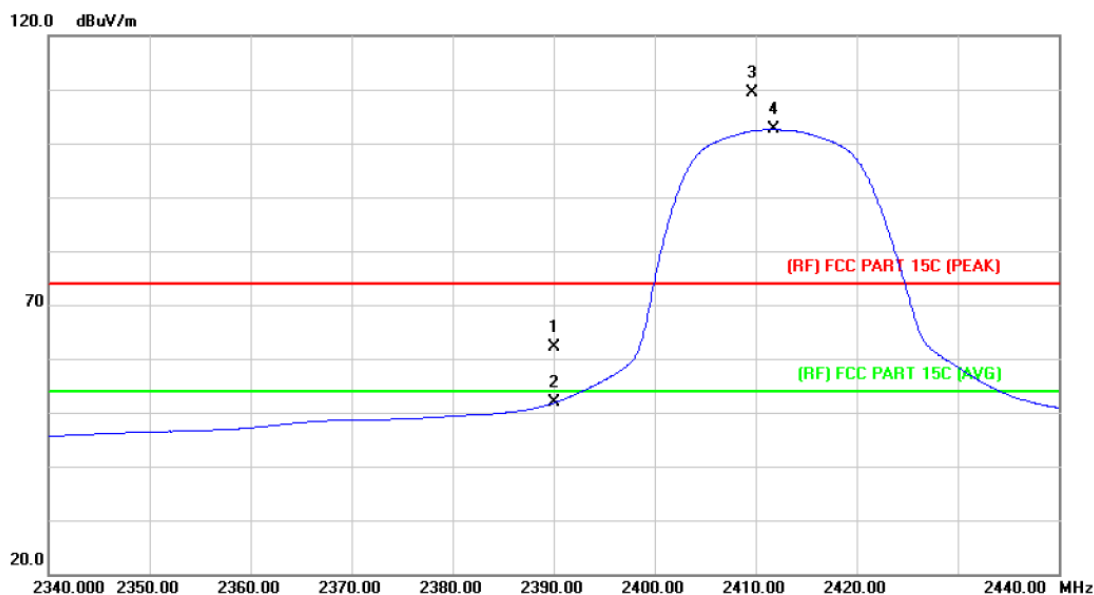
EUT:	omimo WIFI Repeater	Model:	RP-R1
Temperature:	25 °C	Relative Humidity:	55%
Test Voltage:	AC 120V/60 Hz		
Ant. Pol.	Vertical		
Test Mode:	TX B Mode 2462MHz ANT a		
Remark:	N/A		



No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB/m	Measure- ment dBuV/m	Limit dBuV/m	Over dB	Detector
1	X	2461.000	103.13	1.06	104.19	Fundamental Frequency		peak
2	*	2461.300	98.78	1.07	99.85	Fundamental Frequency		AVG
3		2483.500	51.50	1.17	52.67	74.00	-21.33	peak
4		2483.500	40.53	1.17	41.70	54.00	-12.30	AVG

Emission Level= Read Level+ Correct Factor

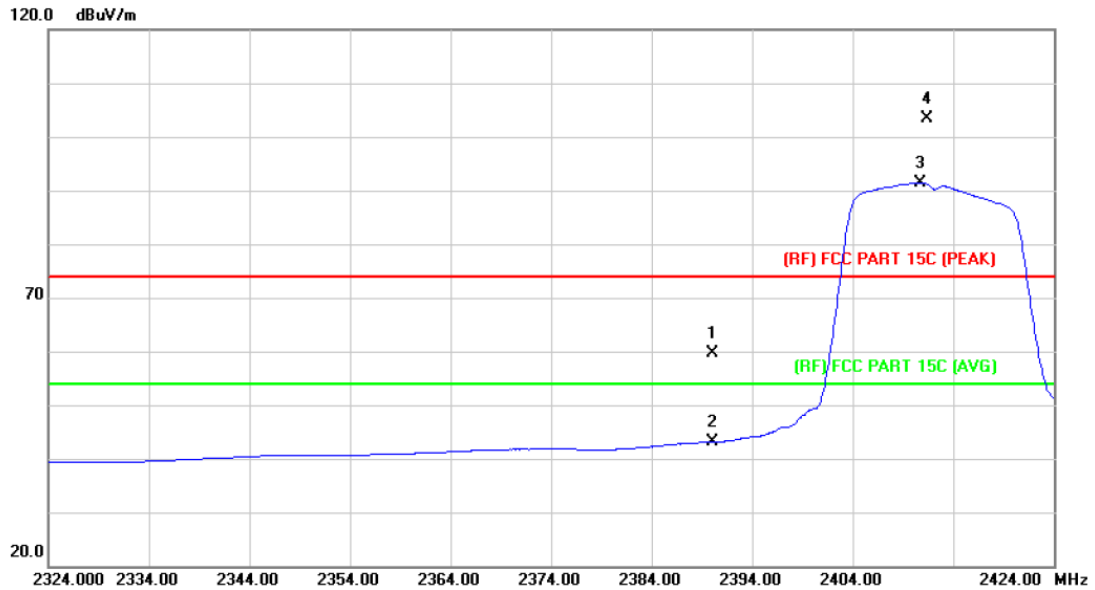
EUT:	omimo WIFI Repeater	Model:	RP-R1
Temperature:	25 °C	Relative Humidity:	55%
Test Voltage:	AC 120V/60 Hz		
Ant. Pol.	Horizontal		
Test Mode:	TX G Mode 2412MHz ANT a		
Remark:	N/A		



No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB/m	Measure- ment dBuV/m	Limit dBuV/m	Over dB	Detector
1		2390.000	61.34	0.77	62.11	74.00	-11.89	peak
2		2390.000	51.06	0.77	51.83	54.00	-2.17	AVG
3	X	2409.700	108.51	0.85	109.36	Fundamental Frequency		peak
4	*	2411.800	101.69	0.86	102.55	Fundamental Frequency		AVG

Emission Level= Read Level+ Correct Factor

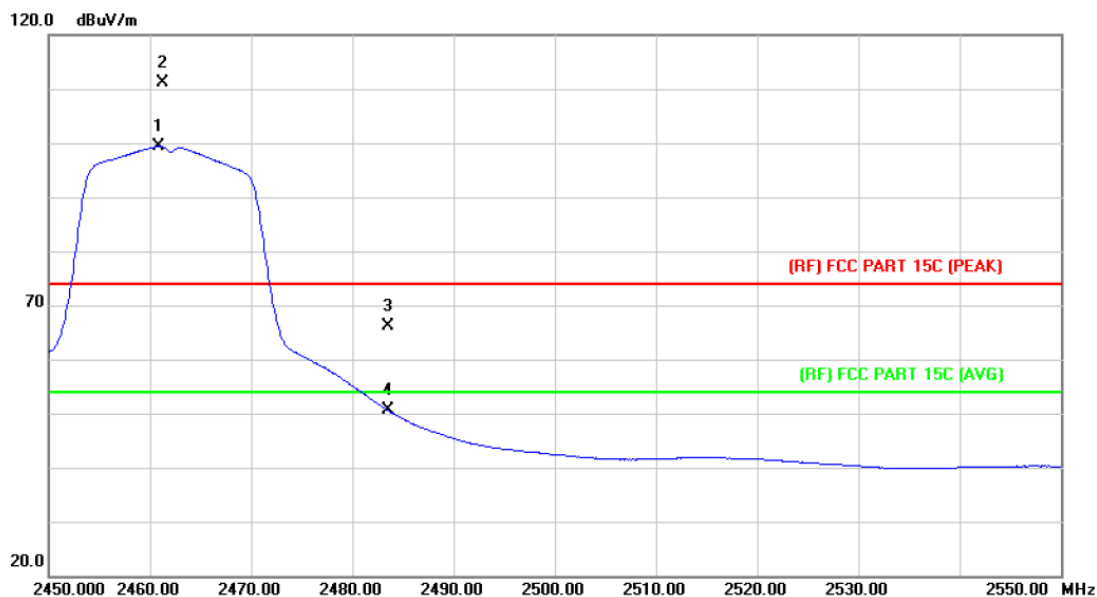
EUT:	omimo WIFI Repeater	Model:	RP-R1
Temperature:	25 °C	Relative Humidity:	55%
Test Voltage:	AC 120V/60 Hz		
Ant. Pol.	Vertical		
Test Mode:	TX G Mode 2412MHz ANT a		
Remark:	N/A		



No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB/m	Measure- ment dBuV/m	Limit dBuV/m	Over dB	Detector
1		2390.000	58.97	0.77	59.74	74.00	-14.26	peak
2		2390.000	42.36	0.77	43.13	54.00	-10.87	AVG
3	*	2410.700	90.56	0.86	91.42	Fundamental Frequency		AVG
4	X	2411.400	102.40	0.86	103.26	Fundamental Frequency		peak

Emission Level= Read Level+ Correct Factor

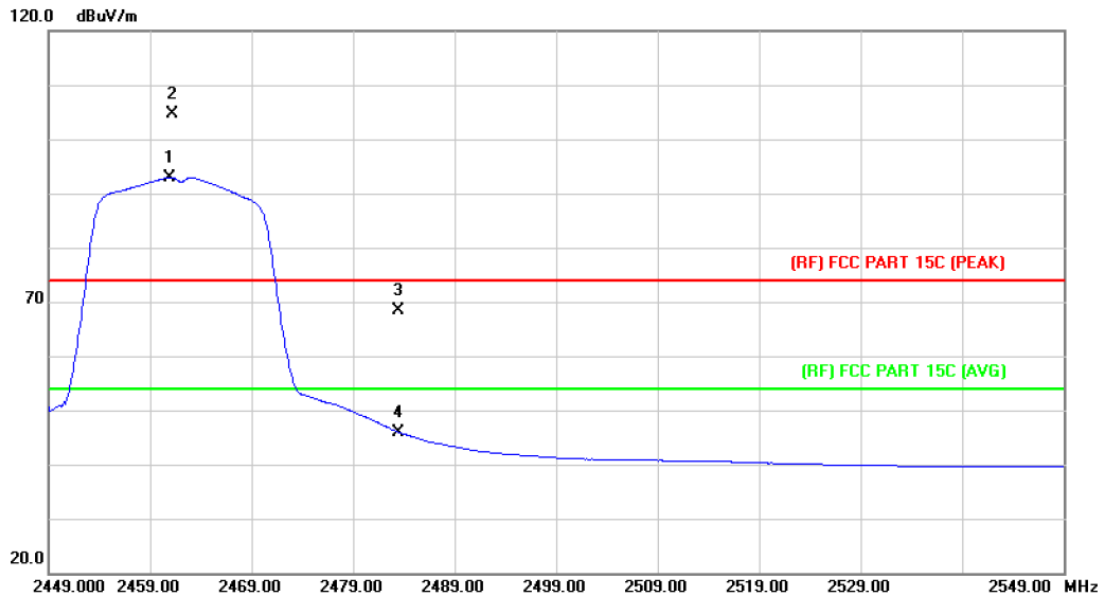
EUT:	omimo WIFI Repeater	Model:	RP-R1
Temperature:	25 °C	Relative Humidity:	55%
Test Voltage:	AC 120V/60 Hz		
Ant. Pol.	Horizontal		
Test Mode:	TX G Mode 2462MHz ANT a		
Remark:	N/A		



No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB/m	Measure- ment dBuV/m	Limit dBuV/m	Over dB	Detector
1	*	2460.900	98.32	1.06	99.38	Fundamental Frequency		AVG
2	X	2461.300	110.05	1.07	111.12	Fundamental Frequency		peak
3		2483.500	64.86	1.17	66.03	74.00	-7.97	peak
4		2483.500	49.35	1.17	50.52	54.00	-3.48	AVG

Emission Level= Read Level+ Correct Factor

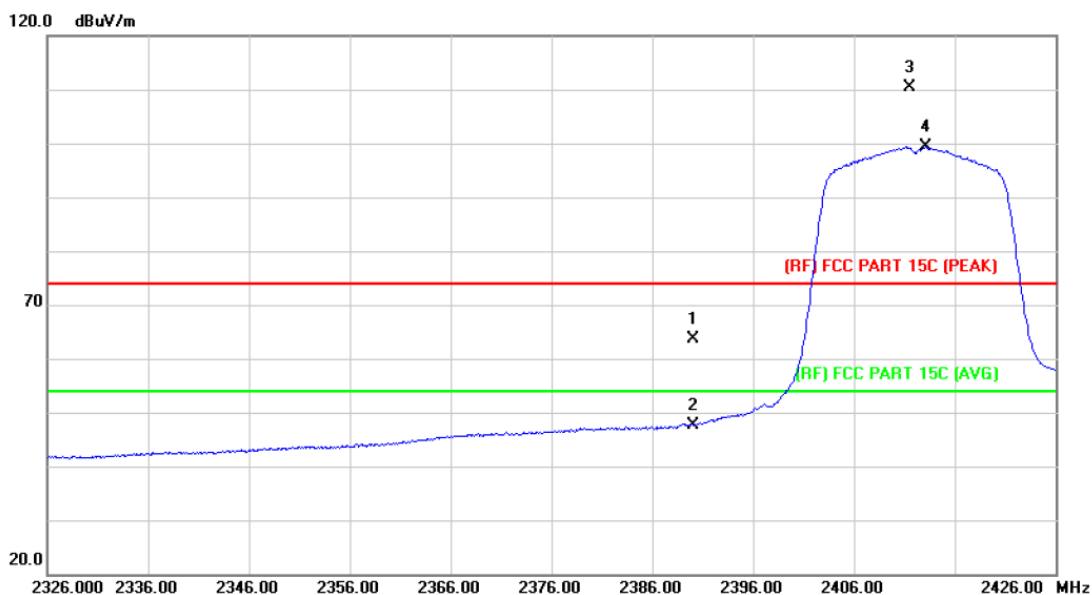
EUT:	omimo WIFI Repeater	Model:	RP-R1
Temperature:	25 °C	Relative Humidity:	55%
Test Voltage:	AC 120V/60 Hz		
Ant. Pol.	Vertical		
Test Mode:	TX G Mode 2462MHz ANT a		
Remark:	N/A		



No.	Mk.	Freq.	Reading Level	Correct Factor	Measurement	Limit	Over	Detector
		MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB	
1	*	2460.900	91.89	1.06	92.95	Fundamental Frequency		AVG
2	X	2461.200	103.66	1.07	104.73	Fundamental Frequency		peak
3		2483.500	67.22	1.17	68.39	74.00	-5.61	peak
4		2483.500	44.77	1.17	45.94	54.00	-8.06	AVG

Emission Level= Read Level+ Correct Factor

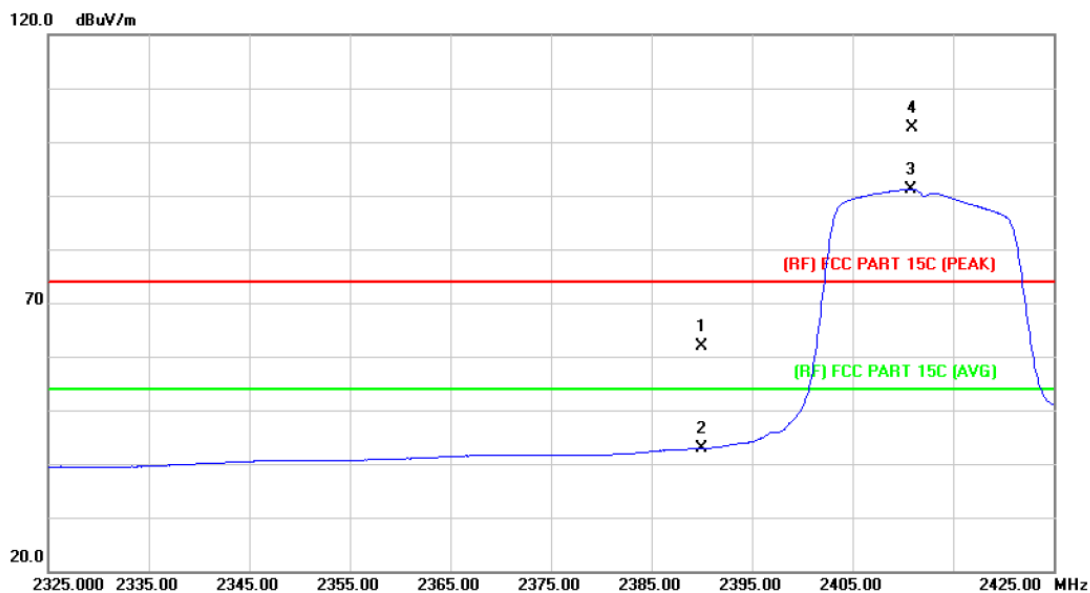
EUT:	omimo WIFI Repeater	Model:	RP-R1
Temperature:	25 °C	Relative Humidity:	55%
Test Voltage:	AC 120V/60 Hz		
Ant. Pol.	Horizontal		
Test Mode:	TX N(HT20) Mode 2412MHz ANT a+b		
Remark:	N/A		



No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB/m	Measure- ment dBuV/m	Limit dBuV/m	Over dB	Detector
1		2390.000	62.81	0.77	63.58	74.00	-10.42	peak
2		2390.000	46.96	0.77	47.73	54.00	-6.27	AVG
3	X	2411.500	109.45	0.86	110.31	Fundamental Frequency		peak
4	*	2413.100	98.47	0.86	99.33	Fundamental Frequency		AVG

Emission Level= Read Level+ Correct Factor

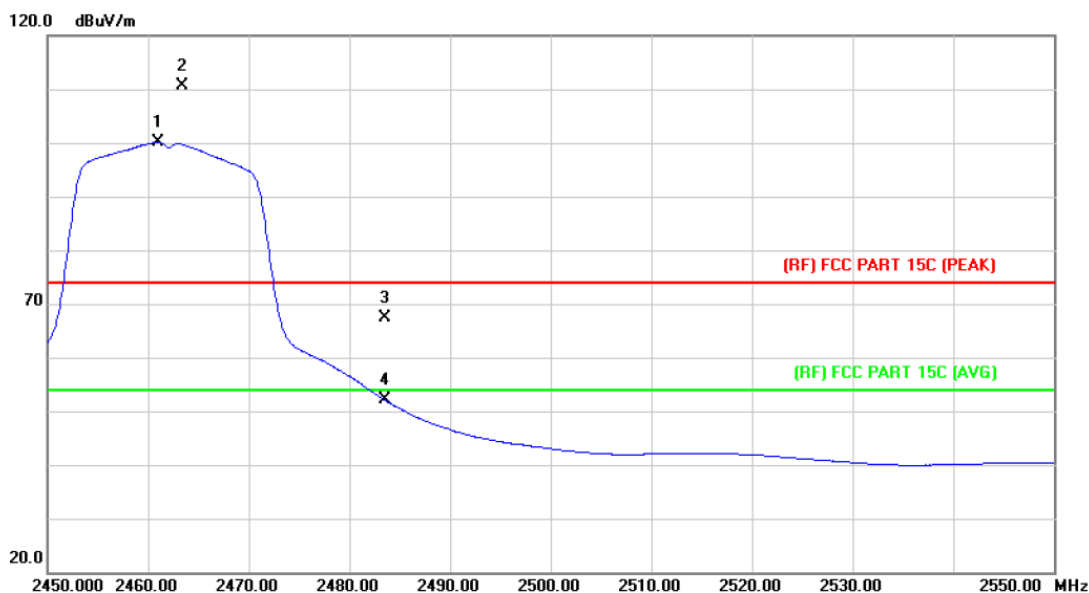
EUT:	omimo WIFI Repeater	Model:	RP-R1
Temperature:	25 °C	Relative Humidity:	55%
Test Voltage:	AC 120V/60 Hz		
Ant. Pol.	Vertical		
Test Mode:	TX N(HT20) Mode 2412MHz ANT a+b		
Remark:	N/A		



No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB/m	Measure- ment dBuV/m	Limit dBuV/m	Over dB	Detector
1		2390.000	61.14	0.77	61.91	74.00	-12.09	peak
2		2390.000	42.12	0.77	42.89	54.00	-11.11	AVG
3	*	2410.800	90.29	0.86	91.15	Fundamental Frequency		AVG
4	X	2410.900	101.66	0.86	102.52	Fundamental Frequency		peak

Emission Level= Read Level+ Correct Factor

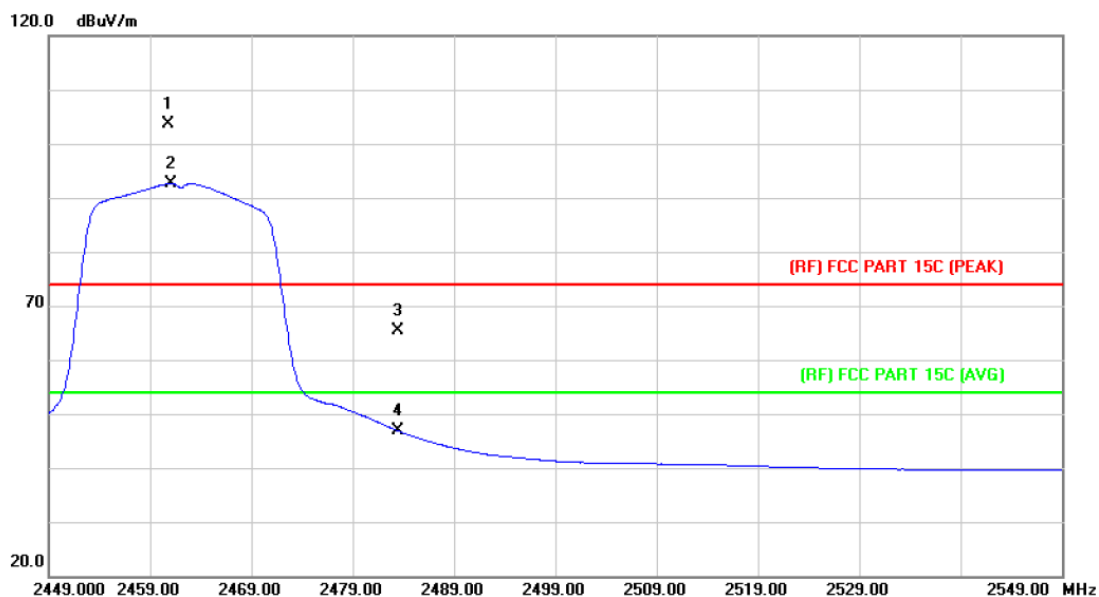
EUT:	omimo WIFI Repeater	Model:	RP-R1
Temperature:	25 °C	Relative Humidity:	55%
Test Voltage:	AC 120V/60 Hz		
Ant. Pol.	Horizontal		
Test Mode:	TX N(HT20) Mode 2462MHz ANT a+b		
Remark:	N/A		



No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB/m	Measure- ment dBuV/m	Limit dBuV/m	Over dB	Detector
1	*	2461.000	99.11	1.06	100.17	Fundamental Frequency		AVG
2	X	2463.400	109.49	1.08	110.57	Fundamental Frequency		peak
3		2483.500	66.11	1.17	67.28	74.00	-6.72	peak
4		2483.500	50.96	1.17	52.13	54.00	-1.87	AVG

Emission Level= Read Level+ Correct Factor

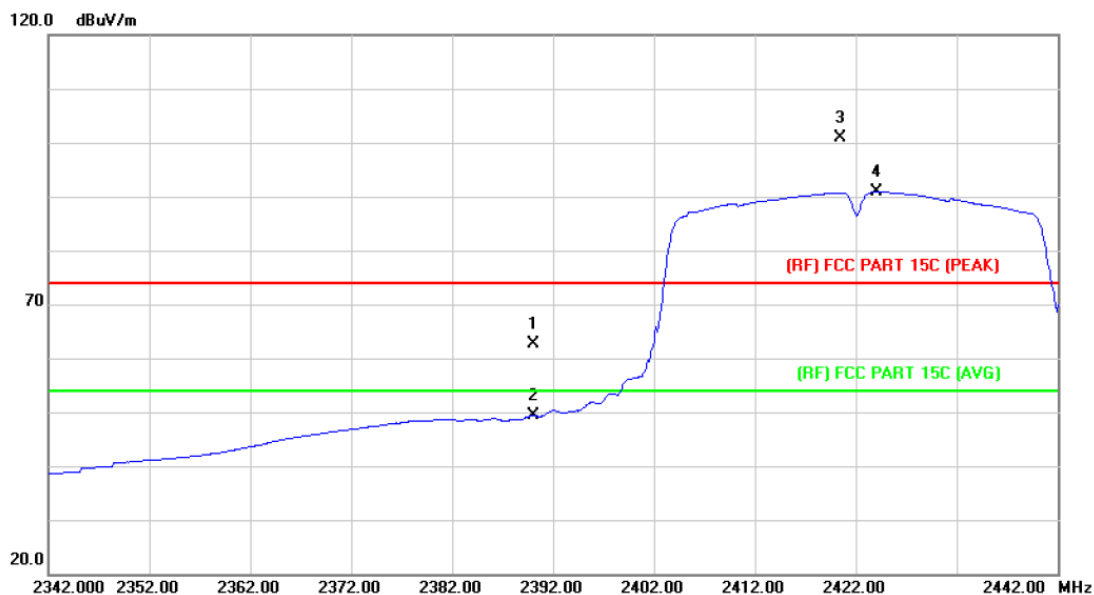
EUT:	omimo WIFI Repeater	Model:	RP-R1
Temperature:	25 °C	Relative Humidity:	55%
Test Voltage:	AC 120V/60 Hz		
Ant. Pol.	Vertical		
Test Mode:	TX N(HT20) Mode 2462MHz ANT a+b		
Remark:	N/A		



No.	Mk.	Freq.	Reading Level	Correct Factor	Measurement	Limit	Over	
		MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB	Detector
1	X	2460.800	102.69	1.06	103.75	Fundamental Frequency		peak
2	*	2461.000	91.64	1.06	92.70	Fundamental Frequency		AVG
3		2483.500	64.09	1.17	65.26	74.00	-8.74	peak
4		2483.500	45.66	1.17	46.83	54.00	-7.17	AVG

Emission Level= Read Level+ Correct Factor

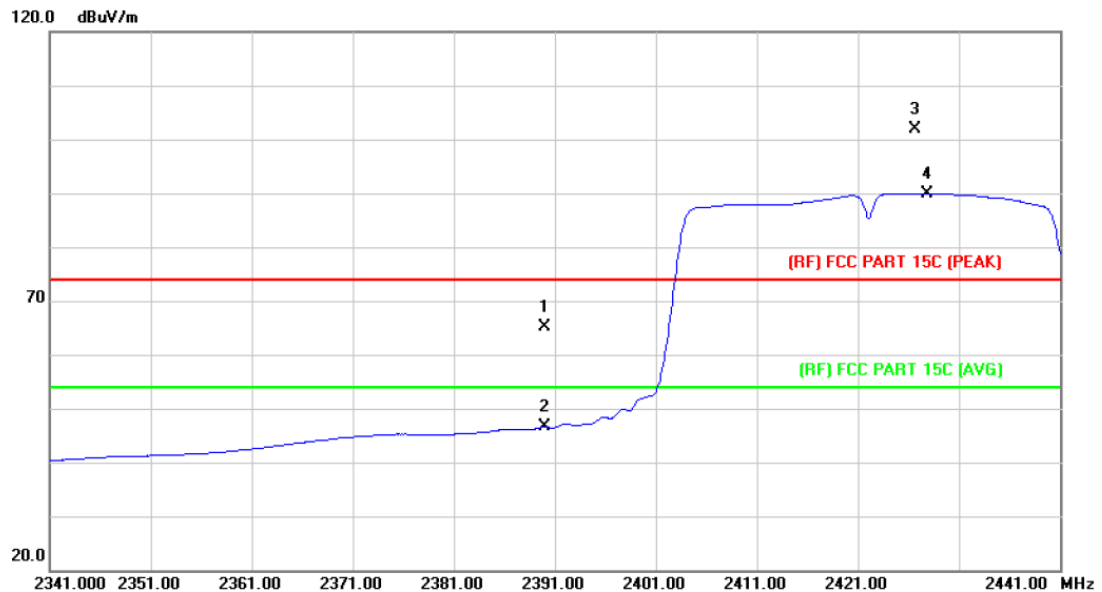
EUT:	omimo WIFI Repeater	Model:	RP-R1
Temperature:	25 °C	Relative Humidity:	55%
Test Voltage:	AC 120V/60 Hz		
Ant. Pol.	Horizontal		
Test Mode:	TX N(HT40) Mode 2422MHz ANT a+b		
Remark:	N/A		



No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB/m	Measure- ment dBuV/m	Limit dBuV/m	Over dB	Detector
1		2390.000	61.91	0.77	62.68	74.00	-11.32	peak
2		2390.000	48.57	0.77	49.34	54.00	-4.66	AVG
3	X	2420.400	99.96	0.89	100.85	Fundamental Frequency		peak
4	*	2424.100	89.95	0.93	90.88	Fundamental Frequency		AVG

Emission Level= Read Level+ Correct Factor

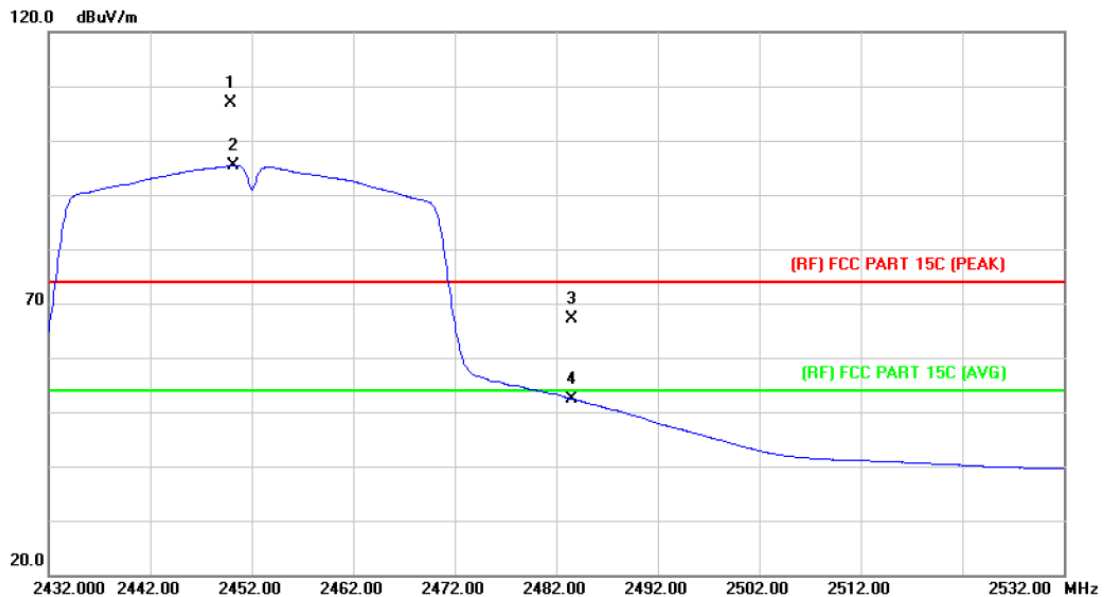
EUT:	omimo WIFI Repeater	Model:	RP-R1
Temperature:	25 °C	Relative Humidity:	55%
Test Voltage:	AC 120V/60 Hz		
Ant. Pol.	Vertical		
Test Mode:	TX N(HT40) Mode 2422MHz ANT a+b		
Remark:	N/A		



No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB/m	Measure- ment dBuV/m	Limit dBuV/m	Over dB	Detector
1		2390.000	64.46	0.77	65.23	74.00	-8.77	peak
2		2390.000	45.82	0.77	46.59	54.00	-7.41	AVG
3	X	2426.700	100.87	0.93	101.80	Fundamental Frequency		peak
4	*	2427.800	89.02	0.94	89.96	Fundamental Frequency		AVG

Emission Level= Read Level+ Correct Factor

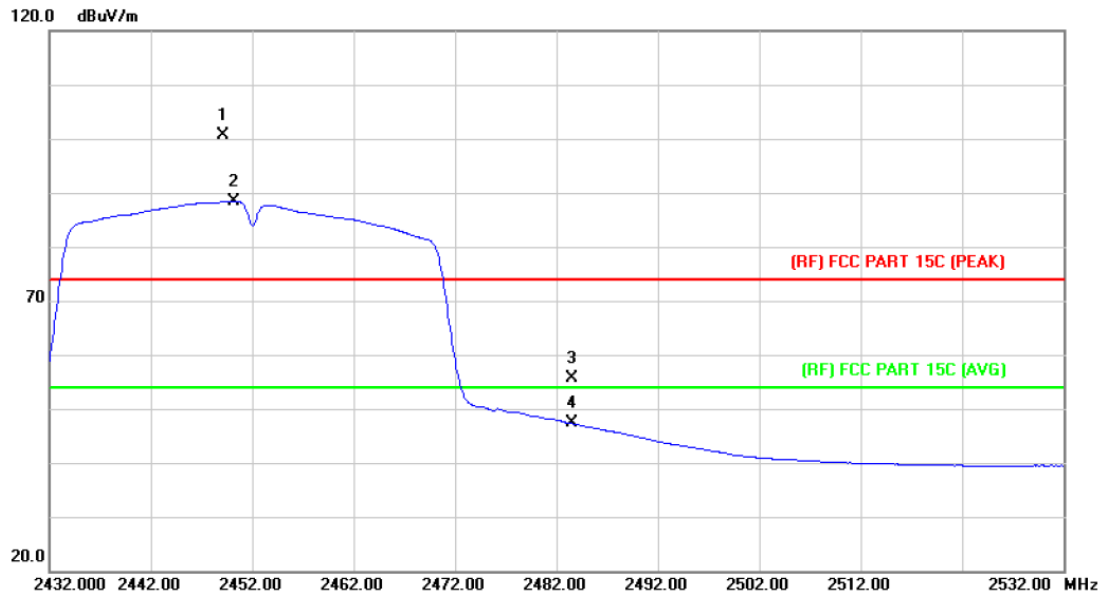
EUT:	omimo WIFI Repeater	Model:	RP-R1
Temperature:	25 °C	Relative Humidity:	55%
Test Voltage:	AC 120V/60 Hz		
Ant. Pol.	Horizontal		
Test Mode:	TX N(HT40) Mode 2452MHz ANT a+b		
Remark:	N/A		



No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB/m	Measure- ment dBuV/m	Limit dBuV/m	Over dB	Detector
1	X	2449.900	105.95	1.02	106.97	Fundamental Frequency		peak
2	*	2450.200	94.45	1.02	95.47	Fundamental Frequency		AVG
3		2483.500	66.02	1.17	67.19	74.00	-6.81	peak
4		2483.500	51.24	1.17	52.41	54.00	-1.59	AVG

Emission Level= Read Level+ Correct Factor

EUT:	omimo WIFI Repeater	Model:	RP-R1
Temperature:	25 °C	Relative Humidity:	55%
Test Voltage:	AC 120V/60 Hz		
Ant. Pol.	Vertical		
Test Mode:	TX N(HT40) Mode 2452MHz ANT a+b		
Remark:	N/A		

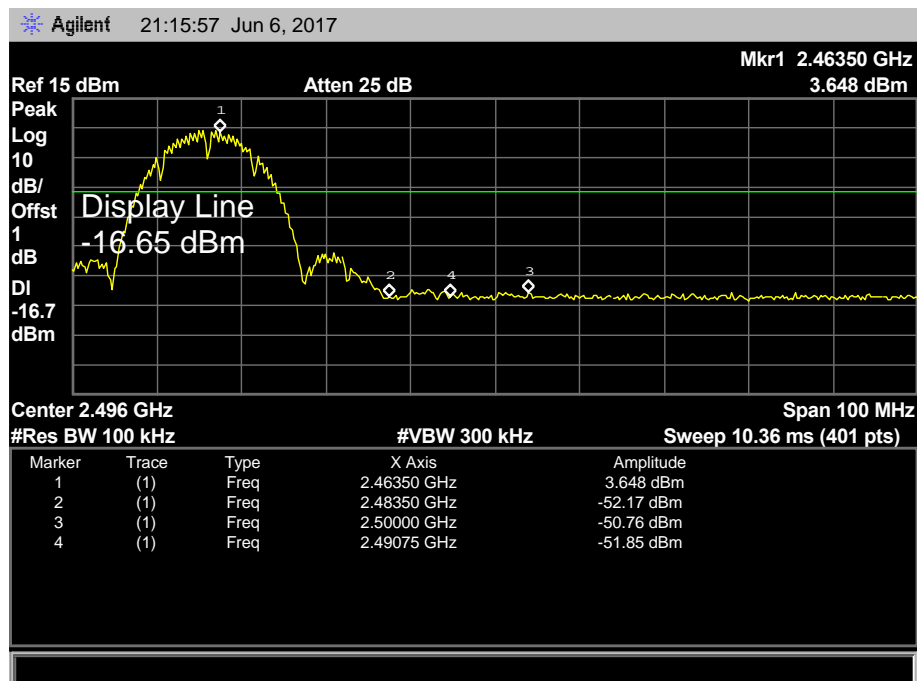
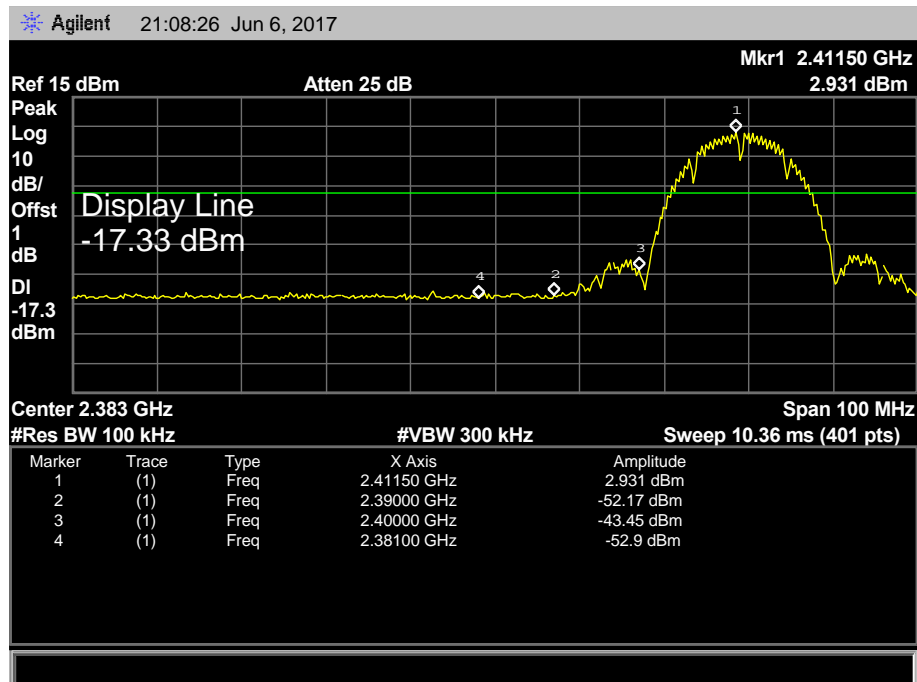


No.	Mk.	Freq.	Reading Level	Correct Factor	Measurement	Limit	Over	
		MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB	Detector
1	X	2449.100	99.50	1.02	100.52	Fundamental Frequency		peak
2	*	2450.200	87.43	1.02	88.45	Fundamental Frequency		AVG
3		2483.500	54.39	1.17	55.56	74.00	-18.44	peak
4		2483.500	46.11	1.17	47.28	54.00	-6.72	AVG

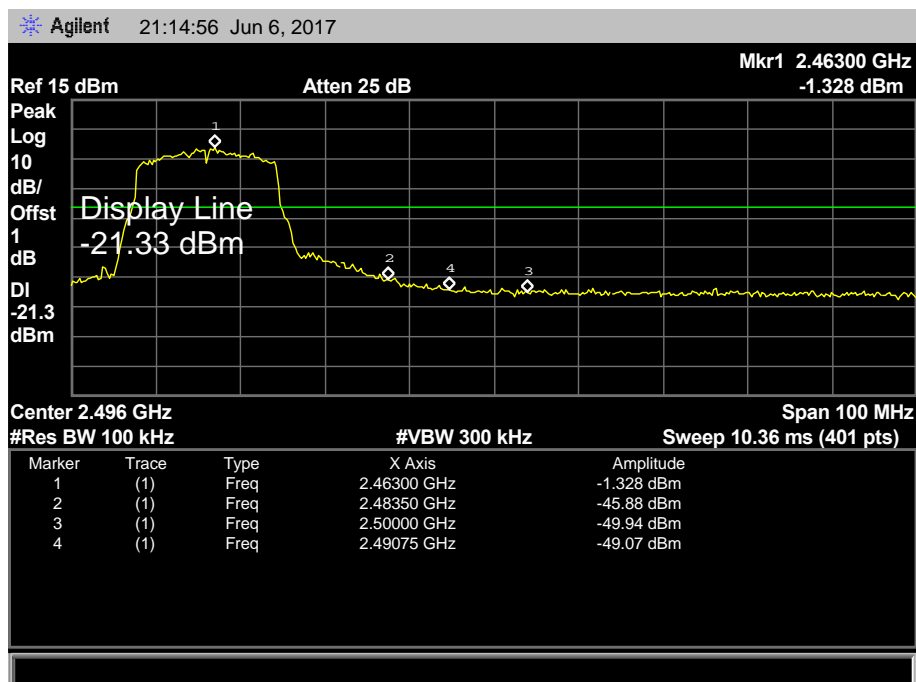
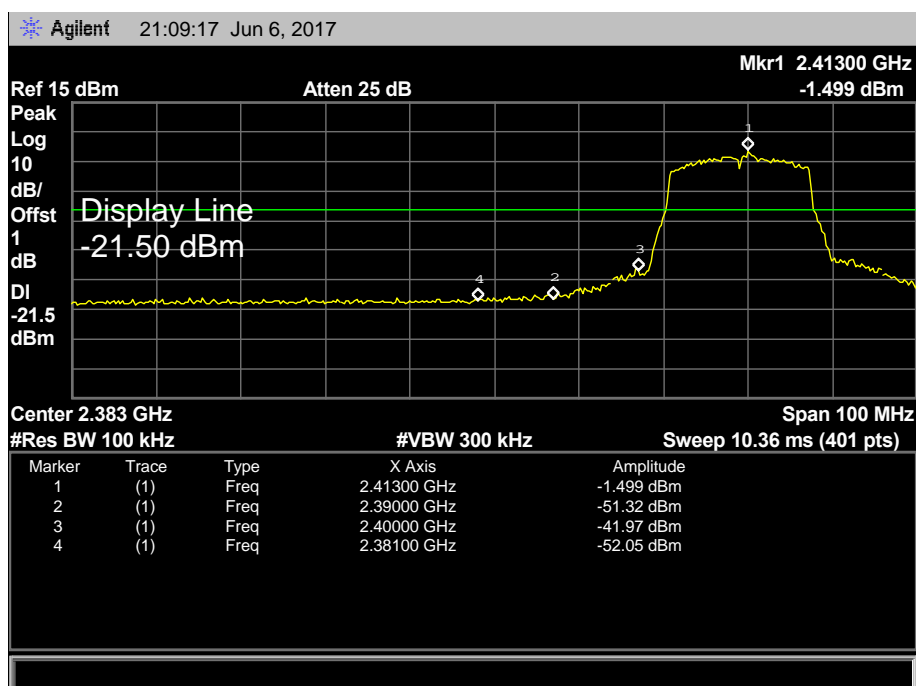
Emission Level= Read Level+ Correct Factor

(2) Conducted Test

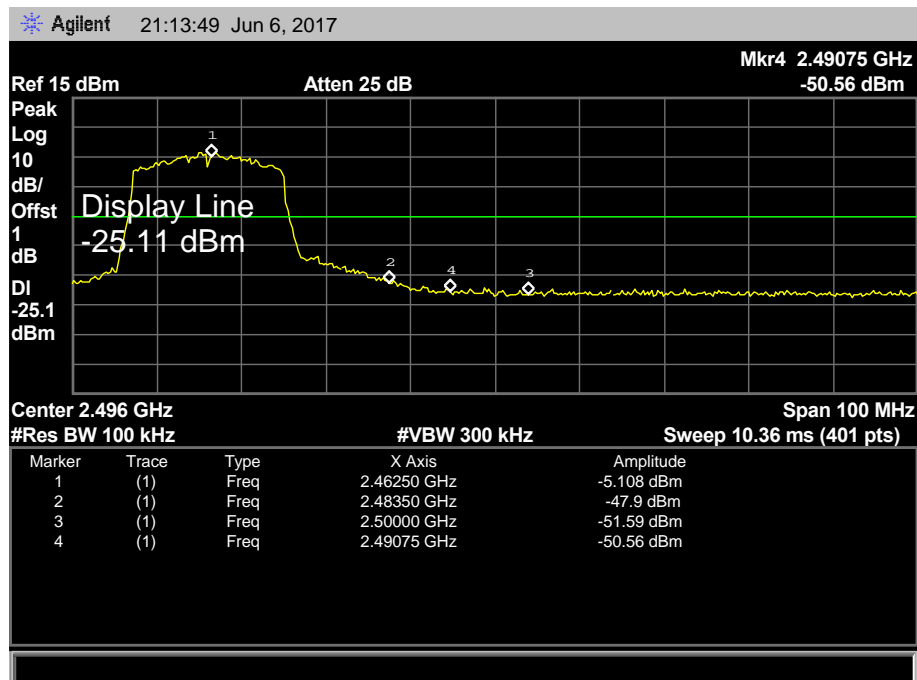
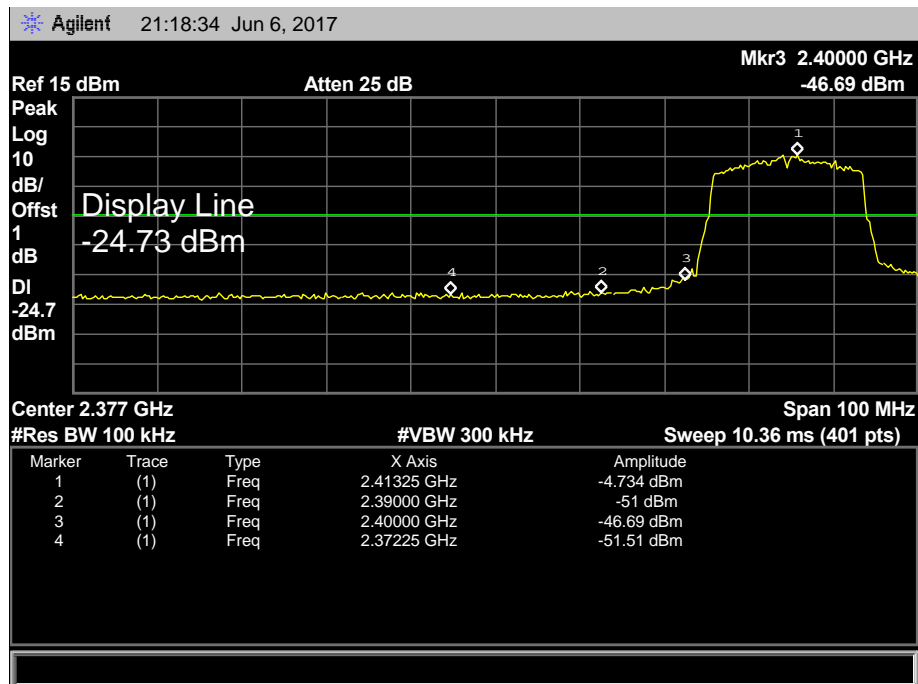
EUT:	omimo WIFI Repeater	Model:	RP-R1
Temperature:	25 °C	Relative Humidity:	55%
Test Voltage:	AC 120V/60 Hz		
Test Mode:	TX B Mode 2412MHz / TX B Mode 2462MHz ANT a		
Remark:	The EUT is programed in continuously transmitting mode		



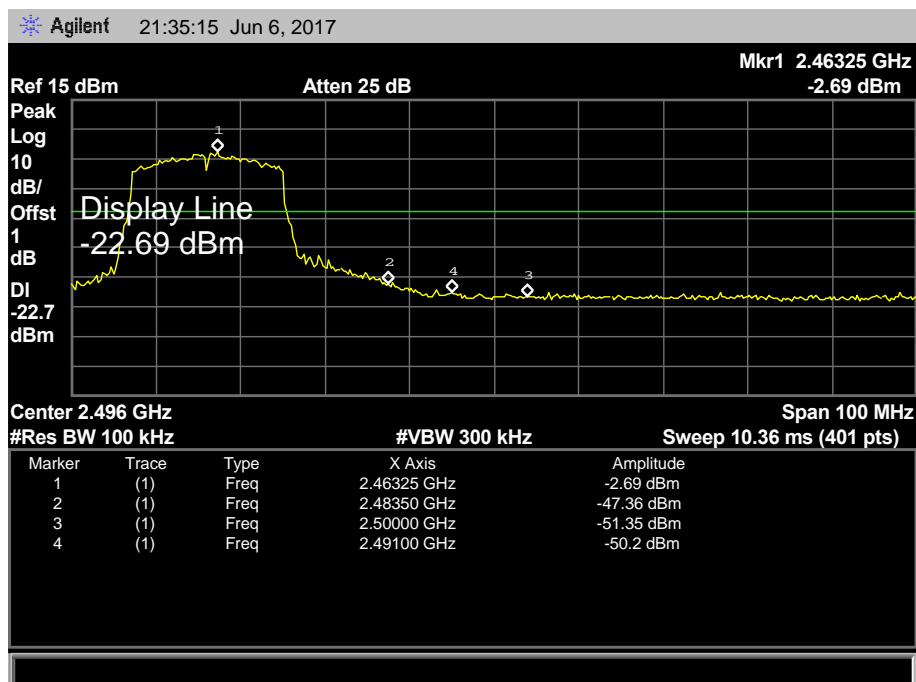
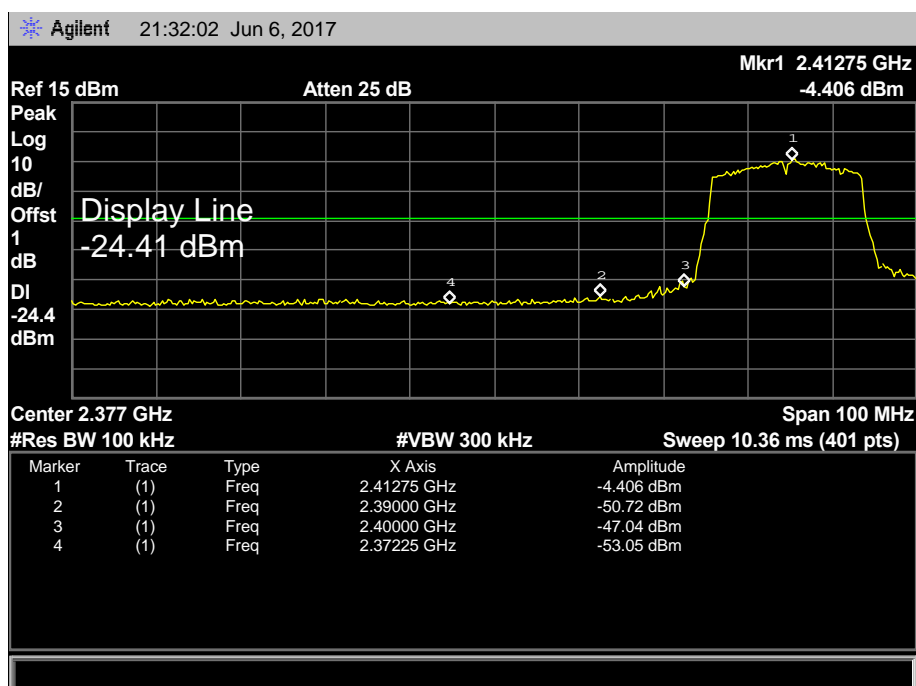
EUT:	omimo WIFI Repeater	Model:	RP-R1
Temperature:	25 °C	Relative Humidity:	55%
Test Voltage:	AC 120V/60 Hz		
Test Mode:	TX G Mode 2412MHz / TX G Mode 2462MHz ANT a		
Remark:	The EUT is programed in continuously transmitting mode		



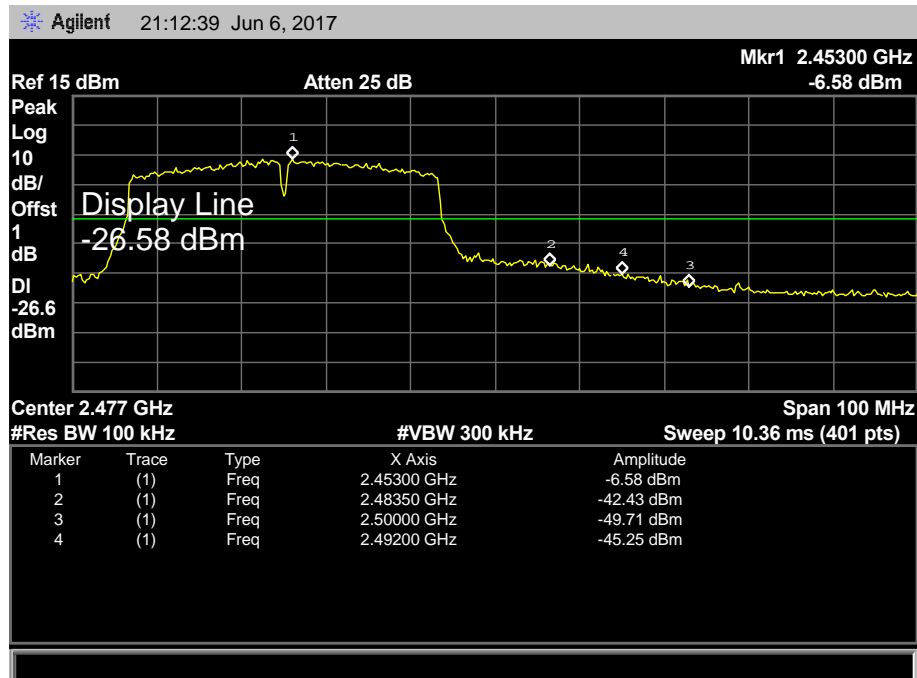
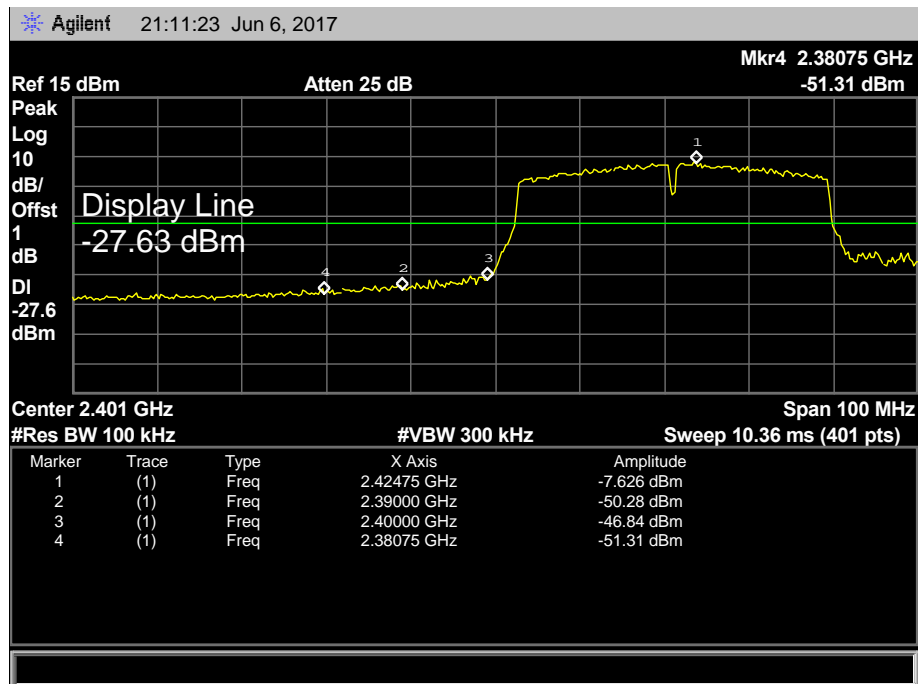
EUT:	omimo WIFI Repeater	Model:	RP-R1
Temperature:	25 °C	Relative Humidity:	55%
Test Voltage:	AC 120V/60 Hz		
Test Mode:	TX N(HT20) Mode 2412MHz / TX N(HT20) Mode 2462MHz ANT a		
Remark:	The EUT is programed in continuously transmitting mode		



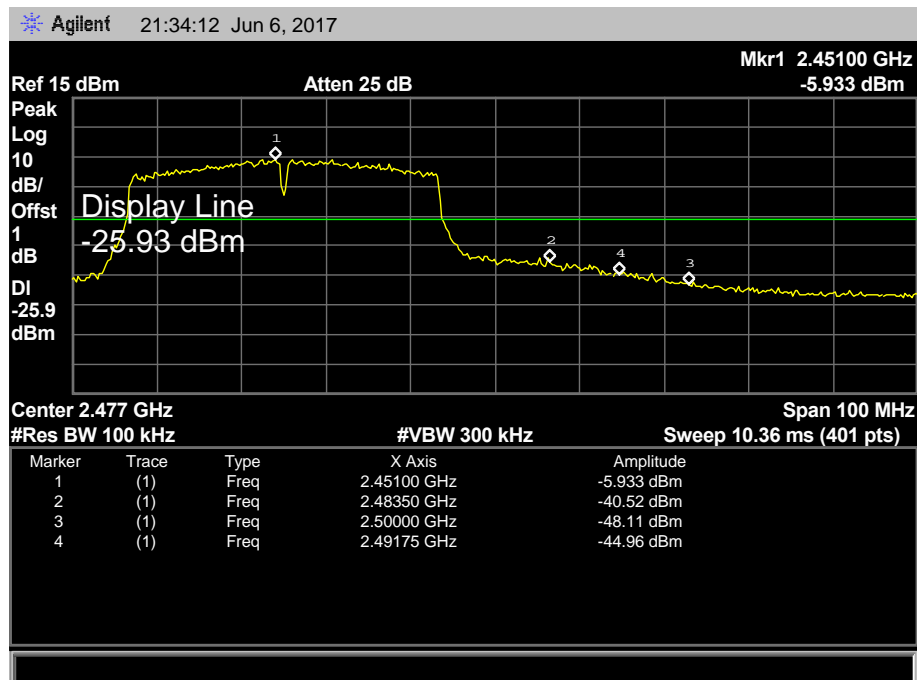
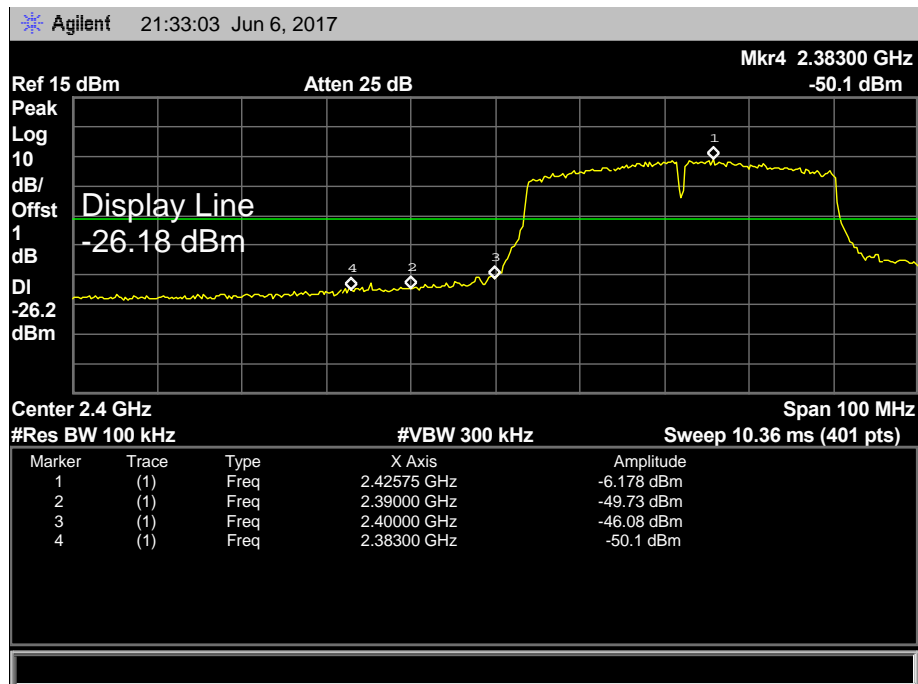
EUT:	omimo WIFI Repeater	Model:	RP-R1
Temperature:	25 °C	Relative Humidity:	55%
Test Voltage:	AC 120V/60 Hz		
Test Mode:	TX N(HT20) Mode 2412MHz / TX N(HT20) Mode 2462MHz ANT b		
Remark:	The EUT is programed in continuously transmitting mode		



EUT:	omimo WIFI Repeater	Model:	RP-R1
Temperature:	25 °C	Relative Humidity:	55%
Test Voltage:	AC 120V/60 Hz		
Test Mode:	TX N(HT40) Mode 2422MHz / TX N(HT40) Mode 2452MHz ANT a		
Remark:	The EUT is programed in continuously transmitting mode		



EUT:	omimo WIFI Repeater	Model:	RP-R1
Temperature:	25 °C	Relative Humidity:	55%
Test Voltage:	AC 120V/60 Hz		
Test Mode:	TX N(HT40) Mode 2422MHz / TX N(HT40) Mode 2452MHz ANT b		
Remark:	The EUT is programed in continuously transmitting mode		



7. Bandwidth Test

7.1 Test Standard and Limit

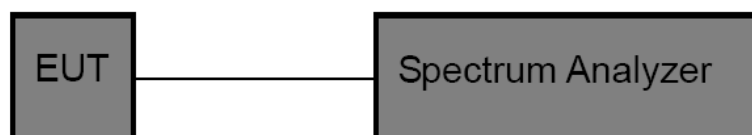
7.1.1 Test Standard

FCC Part 15.247 (a)(2)

7.1.2 Test Limit

FCC Part 15 Subpart C(15.247)/RSS-210		
Test Item	Limit	Frequency Range(MHz)
Bandwidth	≥ 500 KHz (6dB bandwidth)	2400~2483.5

7.2 Test Setup



7.3 Test Procedure

- (1) The EUT was directly connected to the spectrum analyzer and antenna output port as show in the block diagram above.
- (2) The bandwidth is measured at an amplitude level reduced 6dB from the reference level. The reference level is the level of the highest amplitude signal observed from the transmitter at the fundamental frequency. Once the reference level is established, the equipment is conditioned with typical modulating signal to produce the worst -case (i.e the widest) bandwidth.
- (3) Measure the channel separation the spectrum analyzer was set to Resolution Bandwidth:100 kHz, and Video Bandwidth:300 kHz, Detector: Peak, Sweep Time set auto.

7.4 EUT Operating Condition

The EUT was set to continuously transmitting in each mode and low, middle and high channel for the test.

7.5 Test Data

EUT:	omimo WIFI Repeater	Model:	RP-R1
Temperature:	25 °C	Relative Humidity:	55%
Test Voltage:	AC 120V/60 Hz		
Test Mode:	TX 802.11B Mode ANT a		
Channel frequency (MHz)	6dB Bandwidth (MHz)	99% Bandwidth (MHz)	Limit (MHz)
2412	9.573	14.1435	>=0.5
2437	9.583	14.1801	
2462	10.060	14.1540	
802.11B Mode (Antenna a)			
2412 MHz			

Agilent 17:56:44 Jun 6, 2017

Ref 15 dBm

Atten 25 dB

#Peak

Log

10

dB/

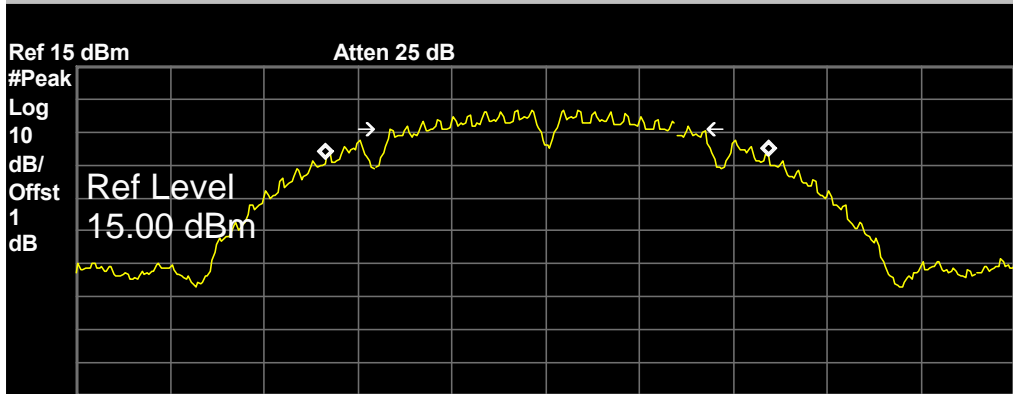
Offst

1

dB

Ref Level

15.00 dBm



Center 2.412 GHz

#Res BW 100 kHz

#VBW 300 kHz

Span 30 MHz

Sweep 4 ms (401 pts)

Occupied Bandwidth

14.1435 MHz

Occ BW % Pwr

99.00 %

x dB

-6.00 dB

Transmit Freq Error

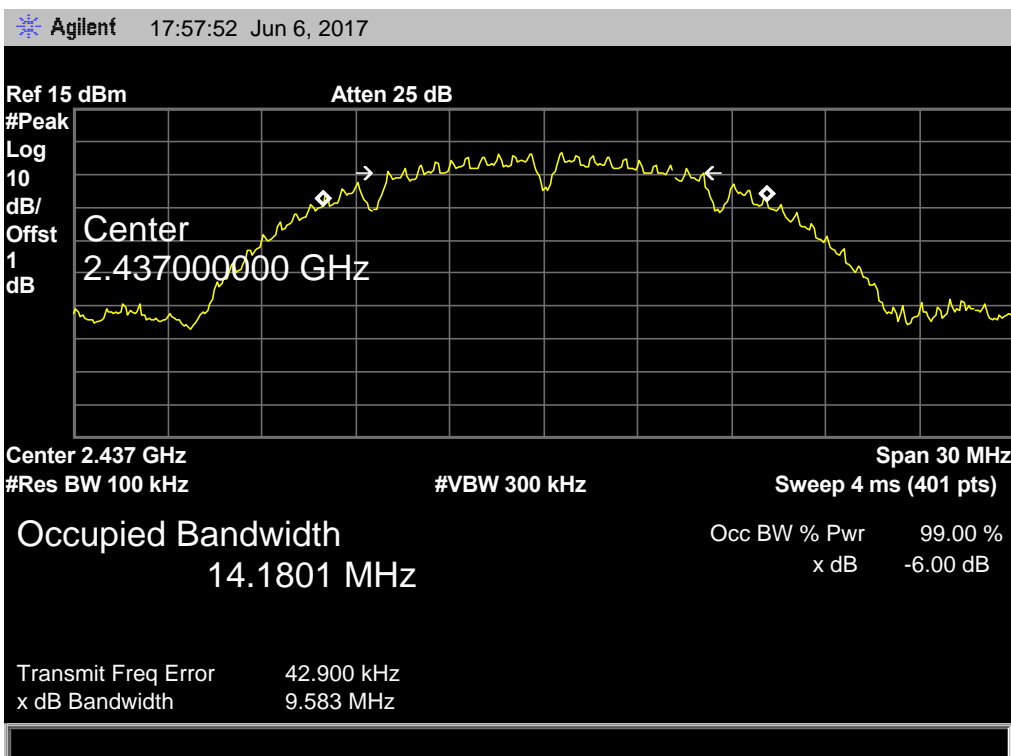
56.974 kHz

x dB Bandwidth

9.573 MHz

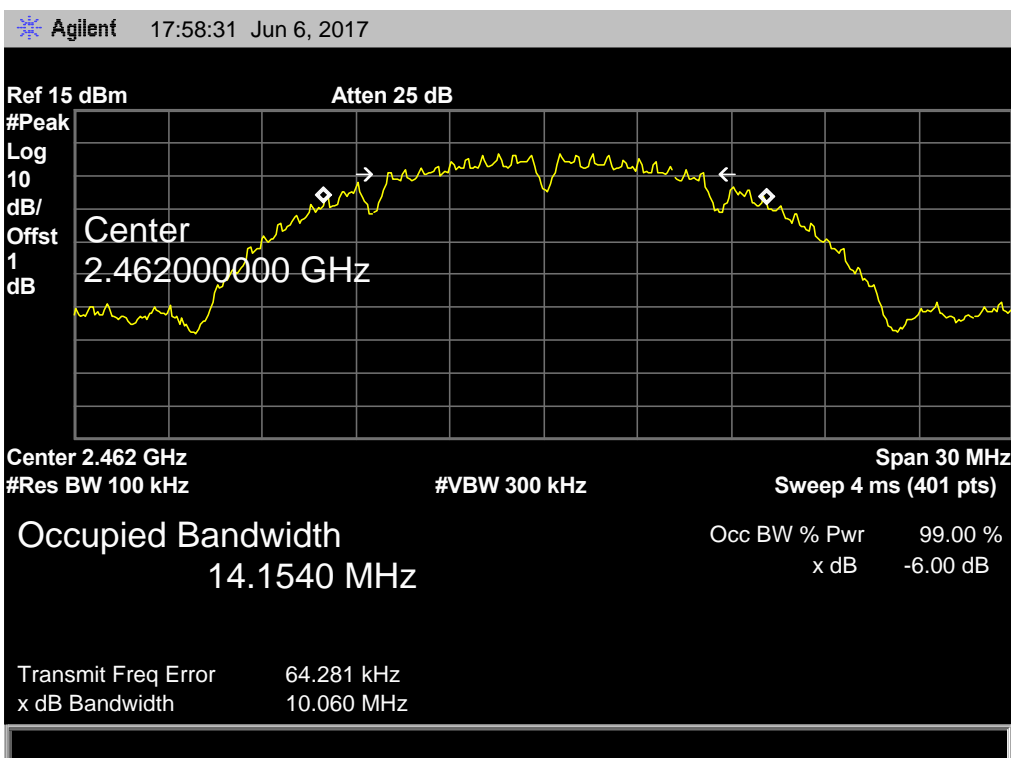
802.11B Mode (Antenna a)

2437 MHz



802.11B Mode (Antenna a)

2462 MHz



EUT:	omimo WIFI Repeater	Model:	RP-R1
Temperature:	25 °C	Relative Humidity:	55%
Test Voltage:	AC 120V/60 Hz		
Test Mode:	TX 802.11B Mode ANT b		
Channel frequency (MHz)	6dB Bandwidth (MHz)	99% Bandwidth (MHz)	Limit (MHz)
2412	9.556	14.2826	>=0.5
2437	9.103	14.2422	
2462	9.542	14.1813	

802.11B Mode (Antenna b)

2412 MHz

Agilent22:29:47 Jun 6, 2017

Ref 15 dBm

Atten 25 dB

#Peak

Log

10

dB/

Offst

1

dB

Span

20.00000000 MHz

Center 2.412 GHz

#Res BW 100 kHz

#VBW 300 kHz

Span 20 MHz

Sweep 4 ms (401 pts)

Occupied Bandwidth

14.2826 MHz

Occ BW % Pwr

99.00 %

x dB

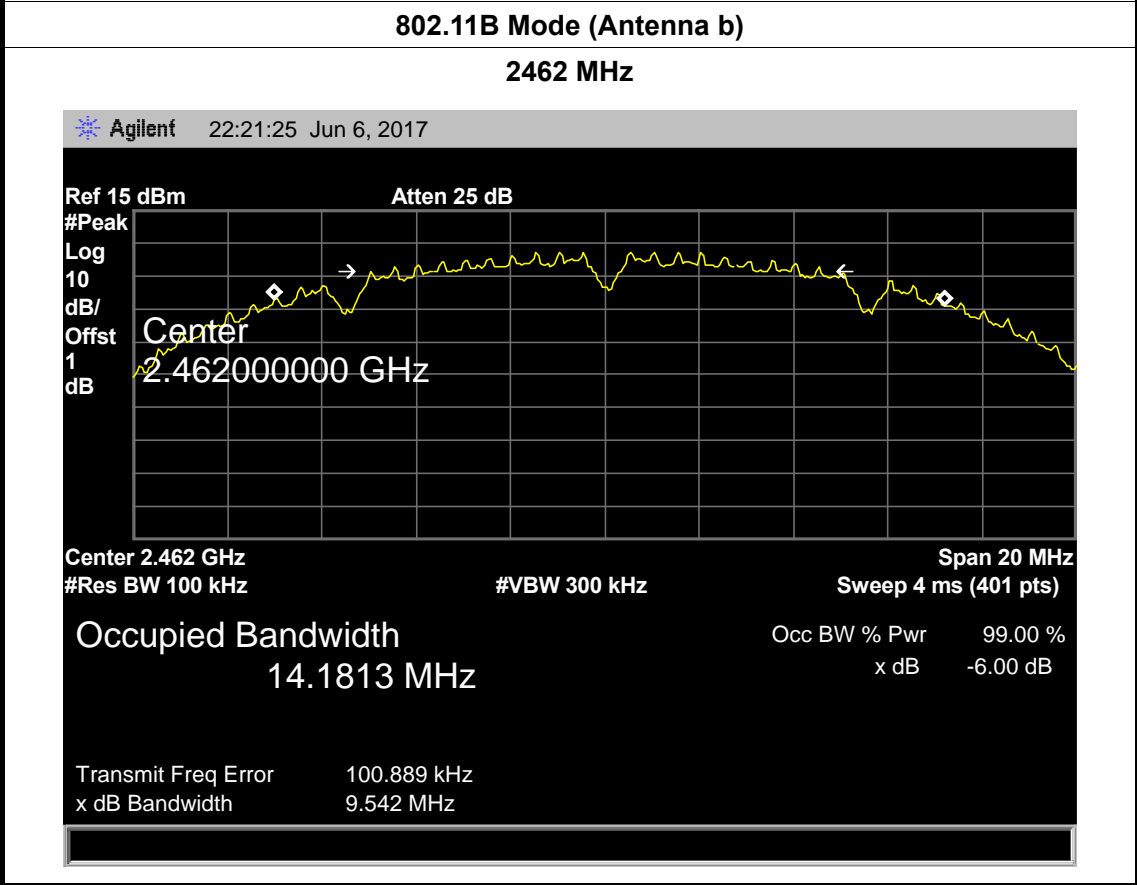
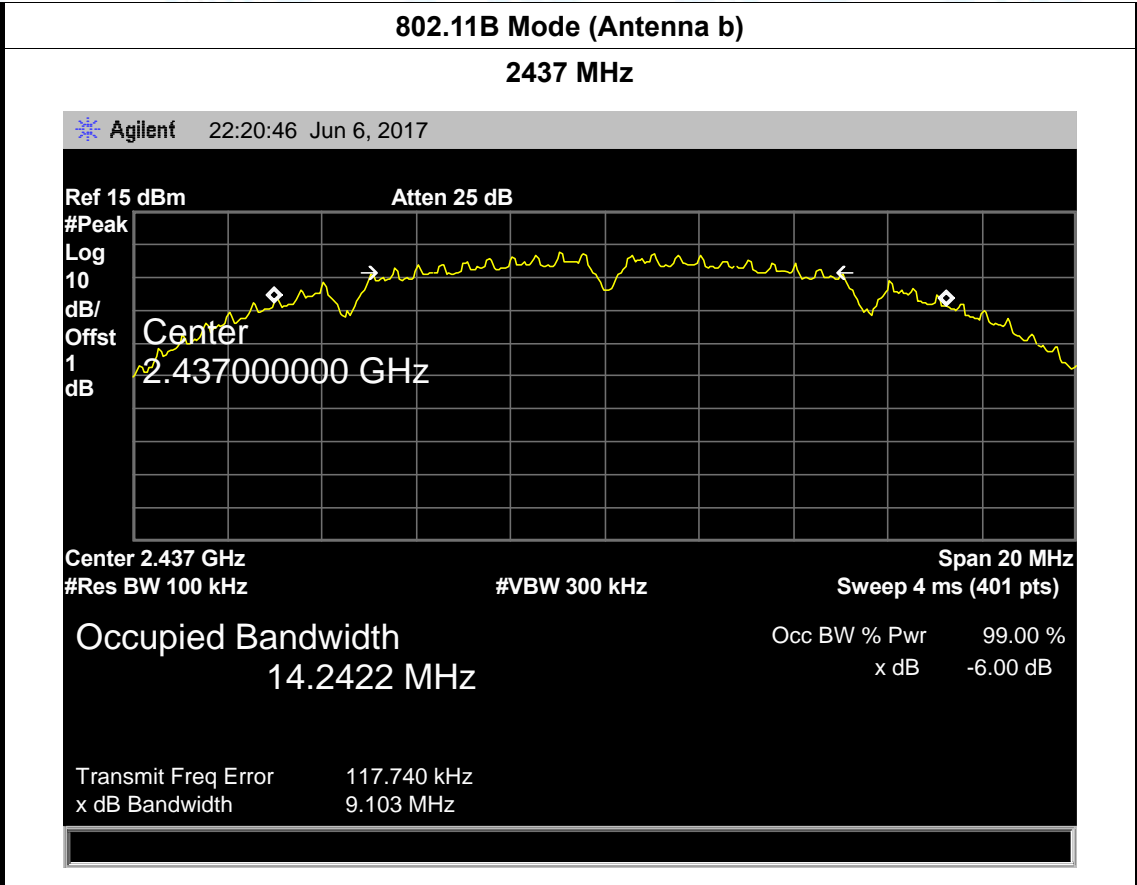
-6.00 dB

Transmit Freq Error

154.288 kHz

x dB Bandwidth

9.556 MHz



EUT:	omimo WIFI Repeater	Model:	RP-R1
Temperature:	25 °C	Relative Humidity:	55%
Test Voltage:	AC 120V/60 Hz		
Test Mode:	TX 802.11G Mode ANT a		
Channel frequency (MHz)	6dB Bandwidth (MHz)	99% Bandwidth (MHz)	Limit (MHz)
2412	16.340	16.3135	>=0.5
2437	15.972	16.3165	
2462	16.076	16.3094	
802.11G Mode (Antenna a)			
2412 MHz			

Agilent18:02:27 Jun 6, 2017

Ref 15 dBm

Atten 25 dB

#Peak

Log

10

dB/

Offst

1

dB

Center

2.412000000 GHz

Center 2.412 GHz

#Res BW 100 kHz

#VBW 300 kHz

Span 30 MHz

Sweep 4 ms (401 pts)

Occupied Bandwidth

16.3135 MHz

Occ BW % Pwr

99.00 %

x dB

-6.00 dB

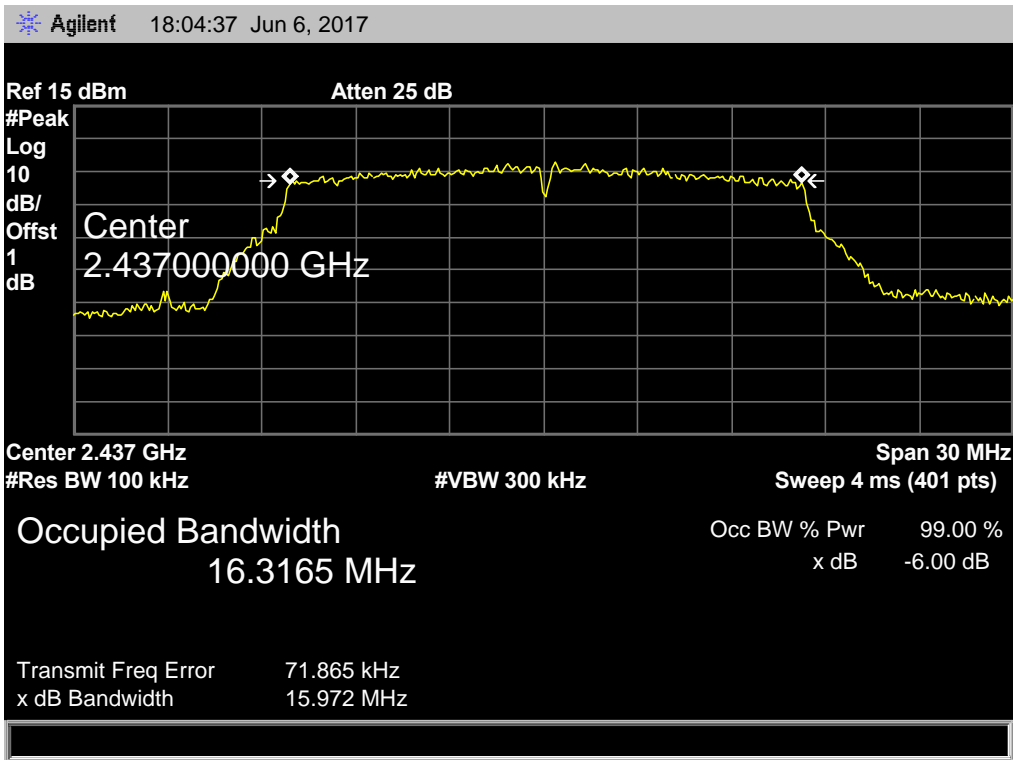
Transmit Freq Error

67.102 kHz

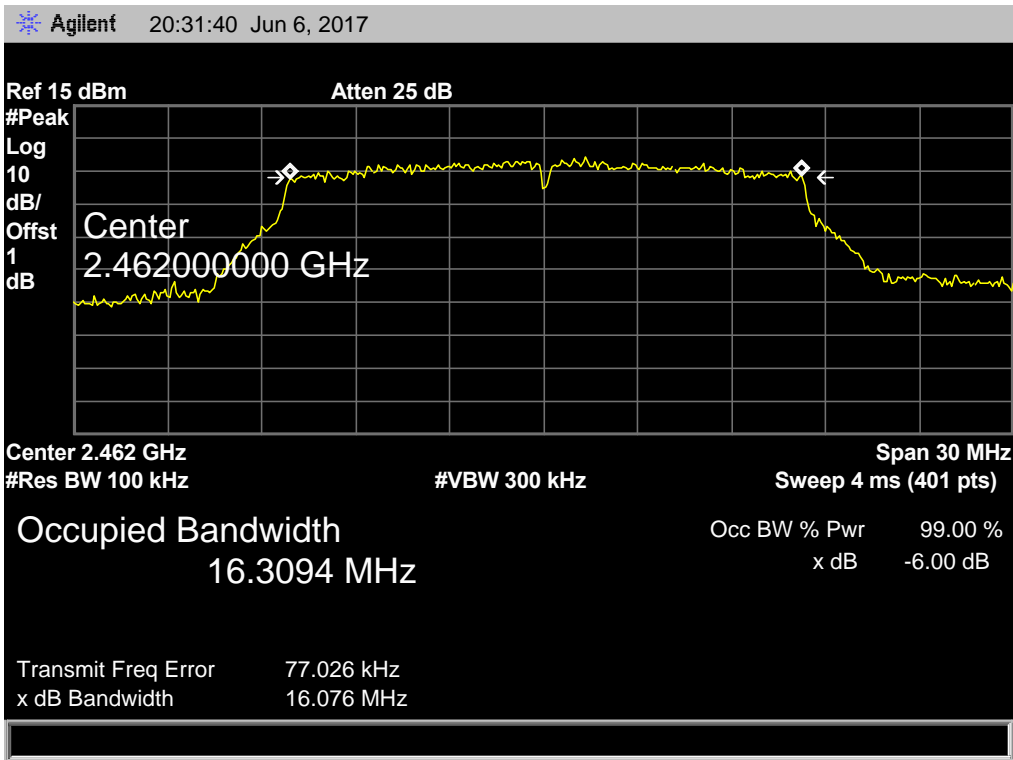
x dB Bandwidth

16.340 MHz

802.11G Mode (Antenna a)
2437 MHz



802.11G Mode (Antenna a)
2462 MHz



EUT:	omimo WIFI Repeater	Model:	RP-R1
Temperature:	25 °C	Relative Humidity:	55%
Test Voltage:	AC 120V/60 Hz		
Test Mode:	TX 802.11G Mode ANT b		
Channel frequency (MHz)	6dB Bandwidth (MHz)	99% Bandwidth (MHz)	Limit (MHz)
2412	15.964	16.2919	>=0.5
2437	15.547	16.2968	
2462	16.393	16.3045	

802.11G Mode (Antenna b)

2412 MHz

Agilent22:22:06 Jun 6, 2017

Ref 15 dBm

Atten 25 dB

#Peak

Log

10

dB/Offst

1

dB

Center

2.412000000 GHz

Center 2.412 GHz

#Res BW 100 kHz

#VBW 300 kHz

Span 20 MHz

Sweep 4 ms (401 pts)

Occupied Bandwidth

16.2919 MHz

Transmit Freq Error

65.982 kHz

x dB Bandwidth

15.964 MHz

Occ BW % Pwr

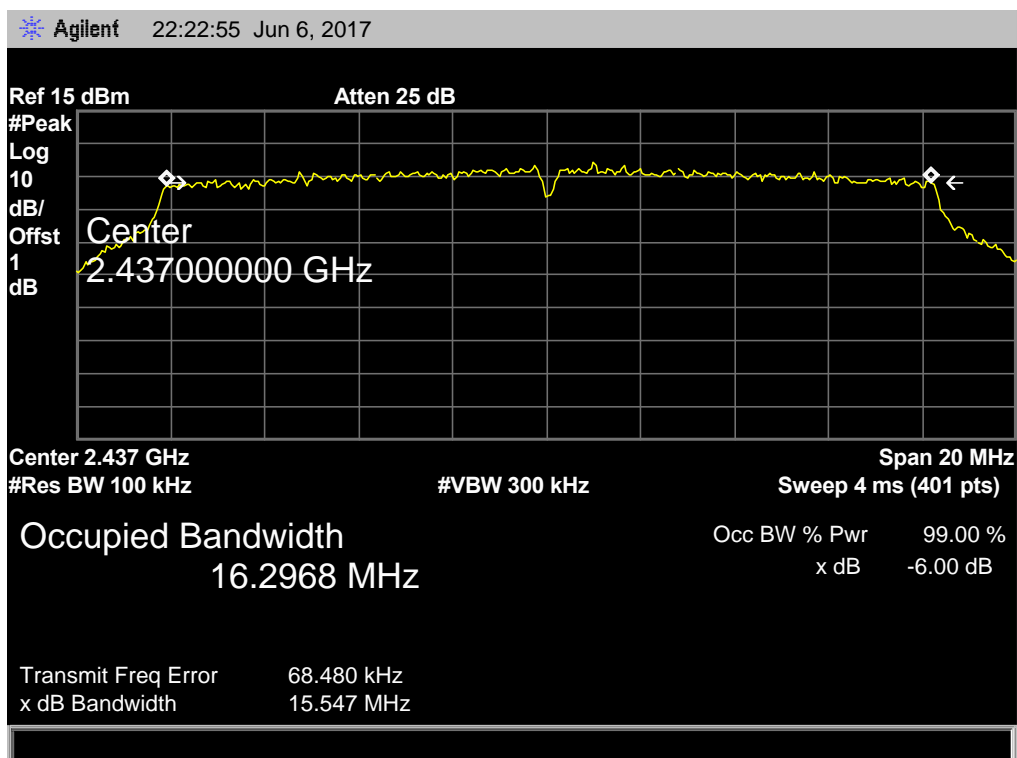
99.00 %

x dB

-6.00 dB

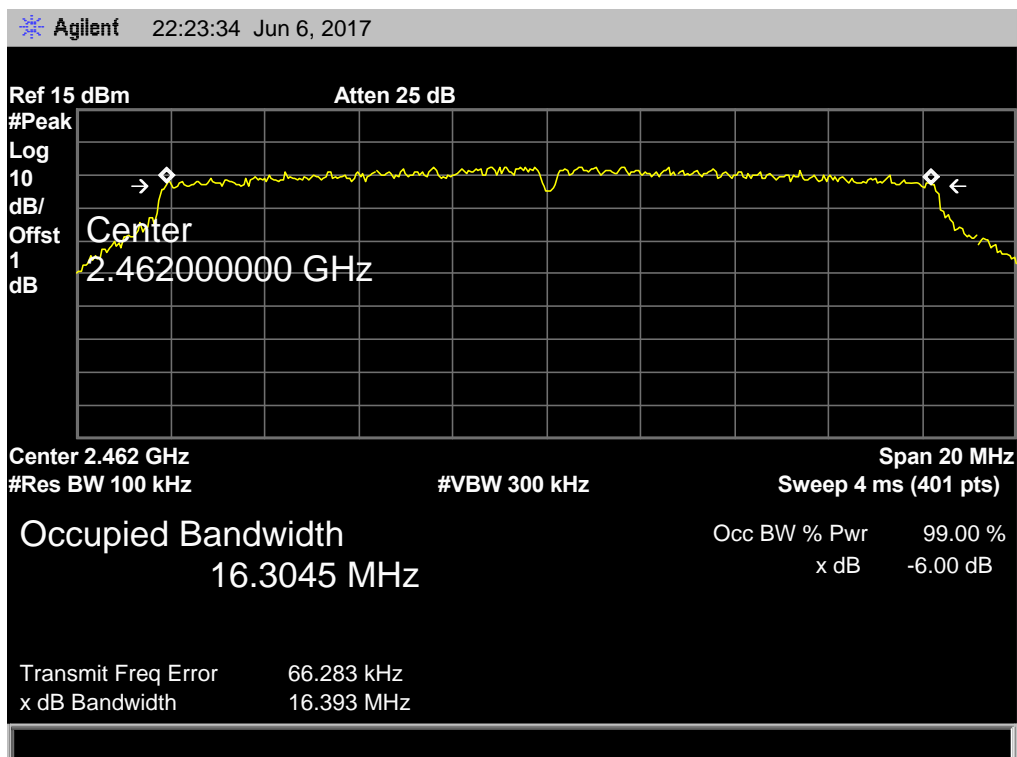
802.11G Mode (Antenna b)

2437 MHz



802.11G Mode (Antenna b)

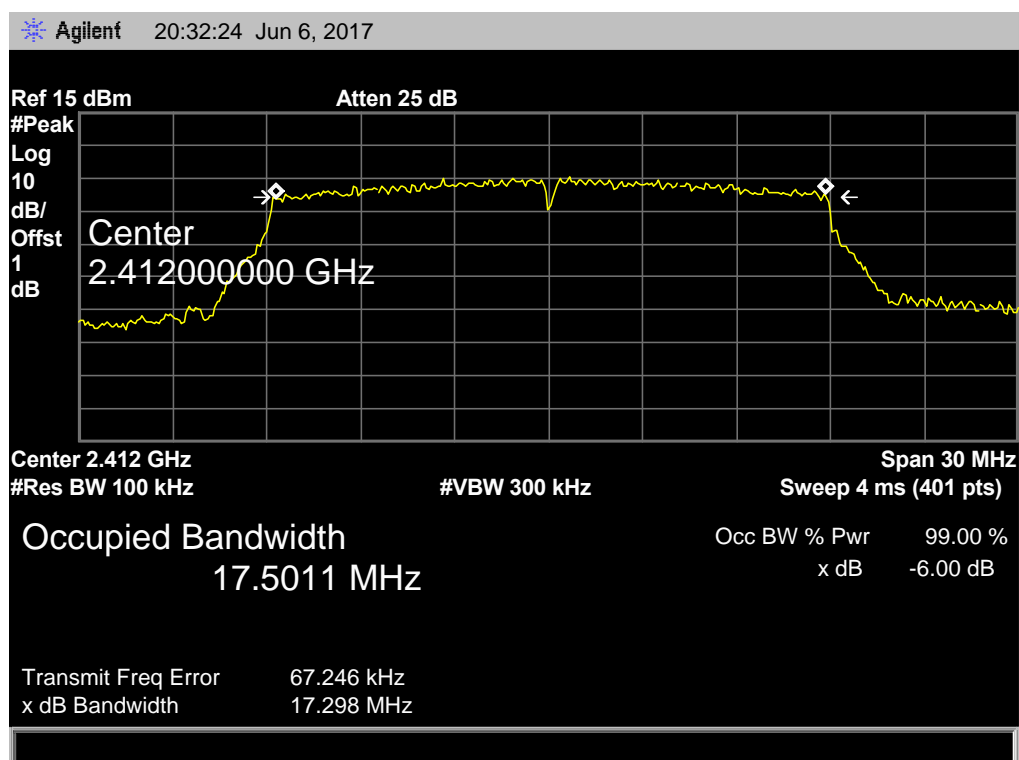
2462 MHz



EUT:	omimo WIFI Repeater	Model:	RP-R1
Temperature:	25 °C	Relative Humidity:	55%
Test Voltage:	AC 120V/60 Hz		
Test Mode:	TX 802.11N(HT20) Mode ANT a		
Channel frequency (MHz)	6dB Bandwidth (MHz)	99% Bandwidth (MHz)	Limit (MHz)
2412	17.298	17.5011	>=0.5
2437	17.476	17.4932	
2462	17.301	17.4928	

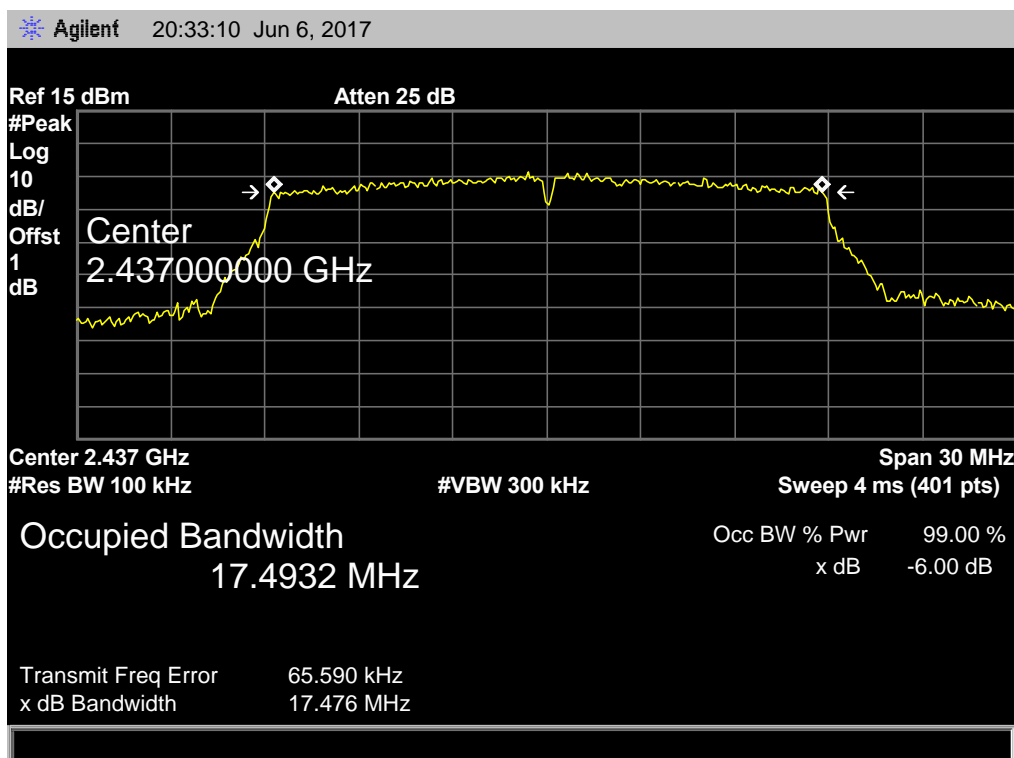
802.11N(HT20) Mode (Antenna a)

2412 MHz



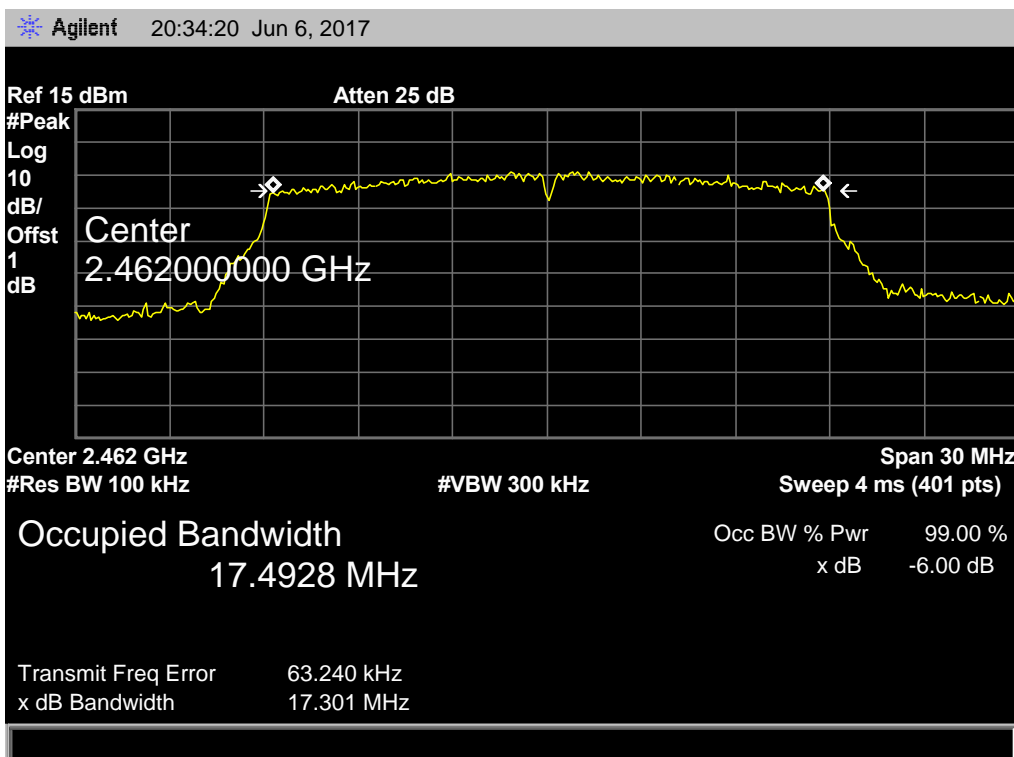
802.11N(HT20) Mode (Antenna a)

2437 MHz



802.11N(HT20) Mode (Antenna a)

2462 MHz



EUT:	omimo WIFI Repeater	Model:	RP-R1
Temperature:	25 °C	Relative Humidity:	55%
Test Voltage:	AC 120V/60 Hz		
Test Mode:	TX 802.11N(HT20) Mode ANT b		
Channel frequency (MHz)	6dB Bandwidth (MHz)	99% Bandwidth (MHz)	Limit (MHz)
2412	17.325	17.4876	>=0.5
2437	17.335	17.4703	
2462	17.317	17.4938	
802.11N(HT20) Mode (Antenna b)			
2412 MHz			

Agilent22:24:09 Jun 6, 2017

Ref 15 dBm

Atten 25 dB

#Peak

Log

10

dB/

Offst

1

dB

Center

2.412000000 GHz

Center 2.412 GHz

#Res BW 100 kHz

#VBW 300 kHz

Span 20 MHz

Sweep 4 ms (401 pts)

Occupied Bandwidth

17.4876 MHz

Occ BW % Pwr

99.00 %

x dB

-6.00 dB

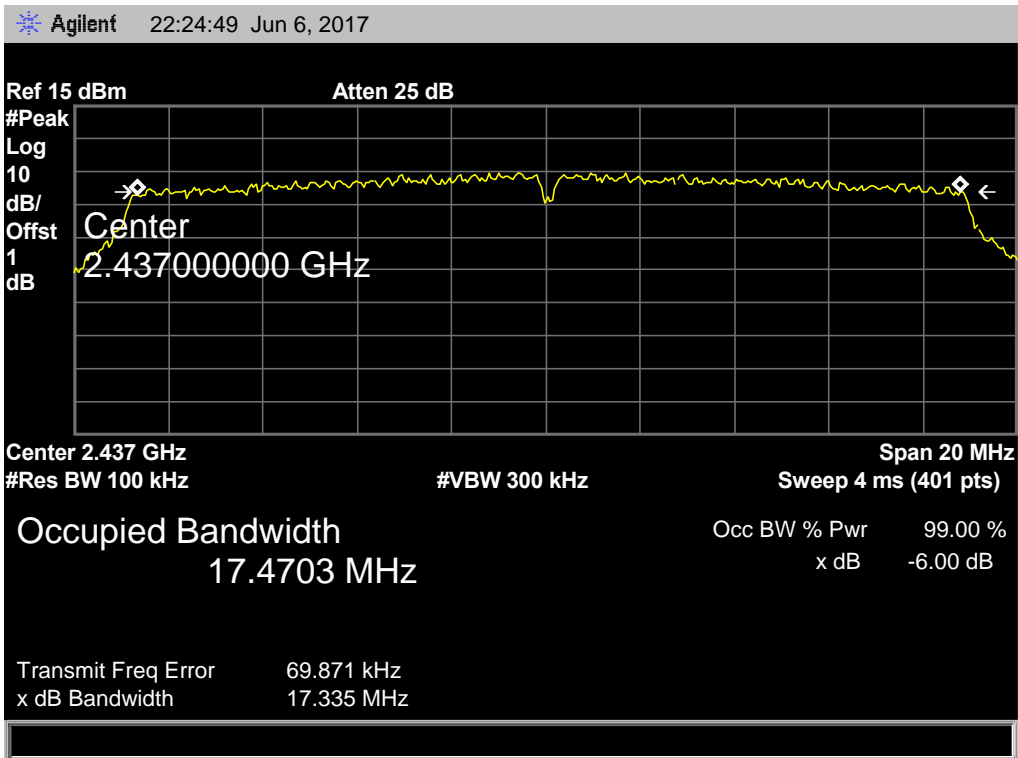
Transmit Freq Error

77.811 kHz

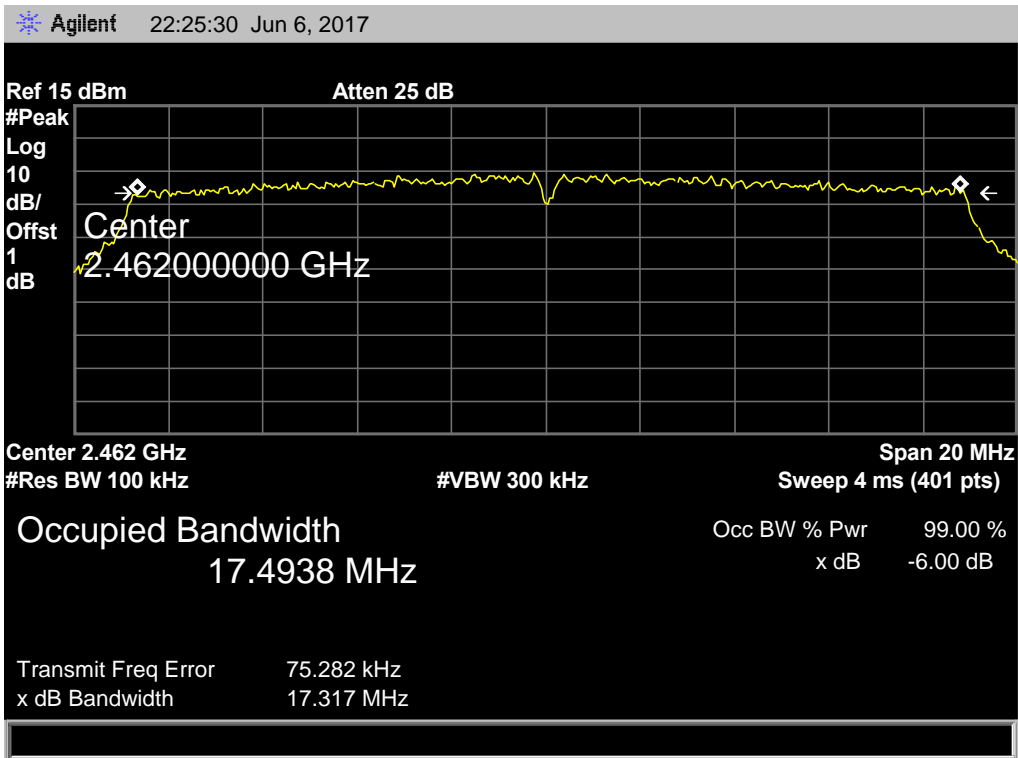
x dB Bandwidth

17.325 MHz

802.11N(HT20) Mode (Antenna b)
2437 MHz



802.11N(HT20) Mode (Antenna b)
2462 MHz



EUT:	omimo WIFI Repeater		Model:	RP-R1
Temperature:	25 °C		Relative Humidity:	55%
Test Voltage:	AC 120V/60 Hz			
Test Mode:	TX 802.11N(HT40) Mode ANT a			
Channel frequency (MHz)	6dB Bandwidth (MHz)	99% Bandwidth (MHz)	Limit (MHz)	
2422	35.666	35.7502	>=0.5	
2437	35.252	35.7382		
2452	35.680	35.7956		
802.11N(HT40) Mode (Antenna a)				
2422 MHz				

Agilent

20:35:24 Jun 6, 2017

Ref 15 dBm

Atten 25 dB

#Peak

Log

10

dB/

Offst

1

dB

Span

50.00000000 MHz

Center 2.422 GHz

#Res BW 100 kHz

#VBW 300 kHz

Sweep 5.18 ms (401 pts)

Span 50 MHz

Occupied Bandwidth

35.7502 MHz

Occ BW % Pwr

99.00 %

x dB

-6.00 dB

Transmit Freq Error

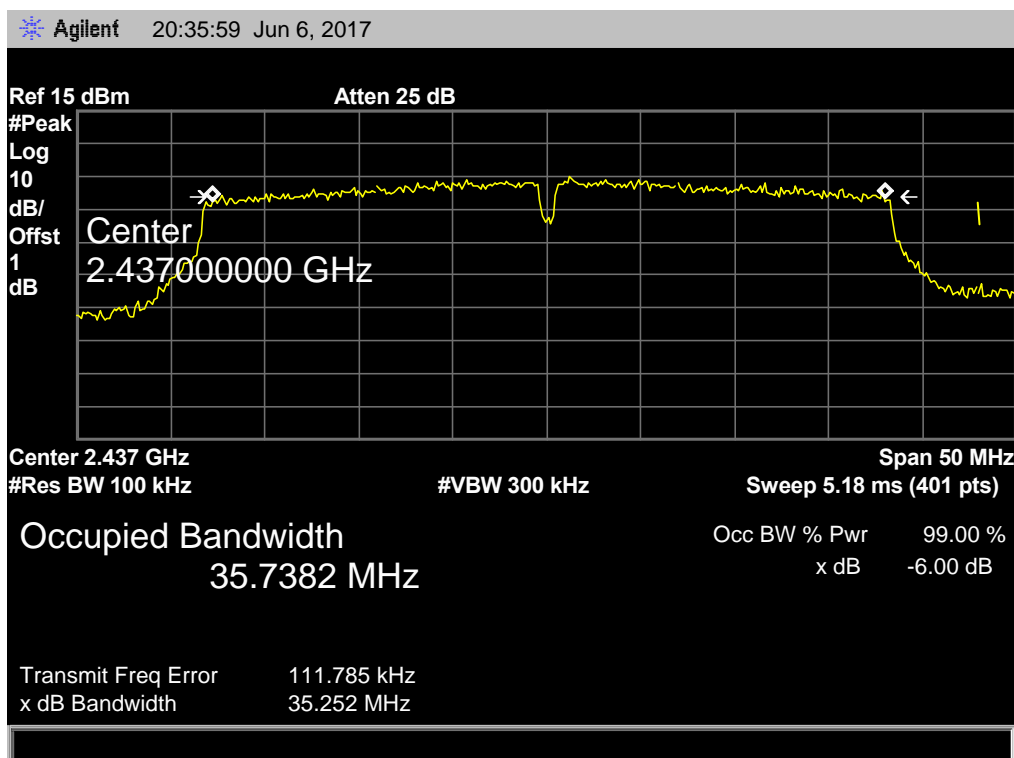
129.150 kHz

x dB Bandwidth

35.666 MHz

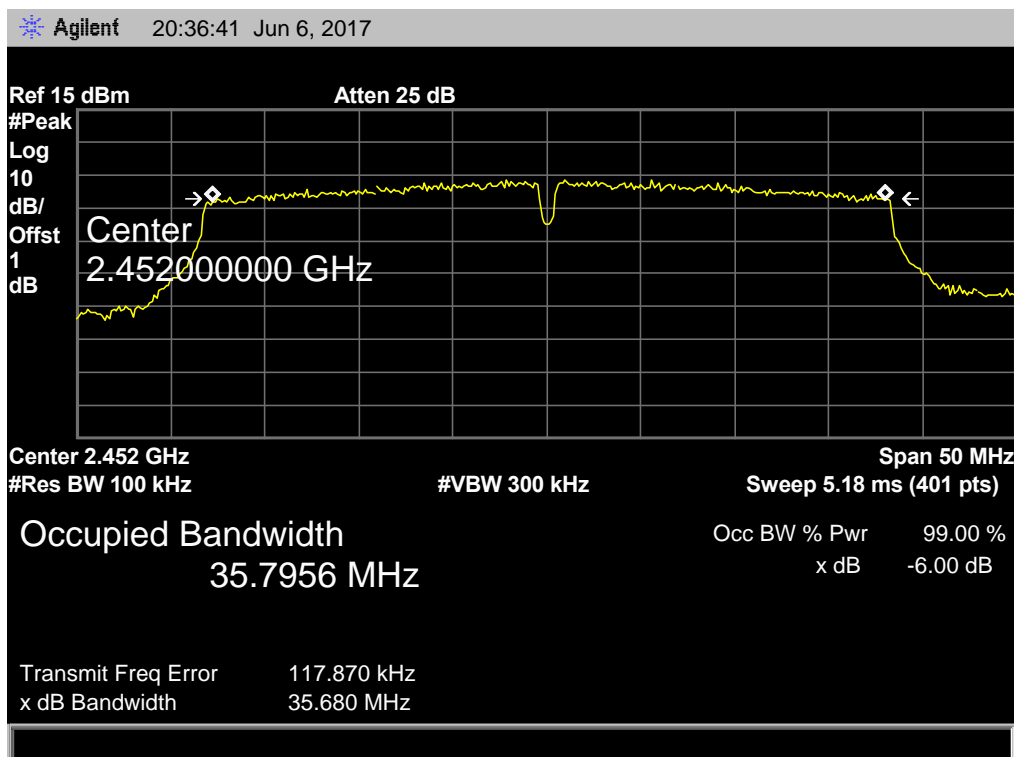
802.11N(HT40) Mode (Antenna a)

2437 MHz



802.11N(HT40) Mode (Antenna a)

2452 MHz



EUT:	omimo WIFI Repeater		Model:	RP-R1
Temperature:	25 °C		Relative Humidity:	55%
Test Voltage:	AC 120V/60 Hz			
Test Mode:	TX 802.11N(HT40) Mode ANT b			
Channel frequency (MHz)	6dB Bandwidth (MHz)	99% Bandwidth (MHz)	Limit (MHz)	
2422	35.457	35.7287	>=0.5	
2437	36.045	35.7579		
2452	33.200	35.7351		
802.11N(HT20) Mode (Antenna b)				
2422 MHz				

Agilent

22:26:33 Jun 6, 2017

Ref 15 dBm

Atten 25 dB

#Peak

Log

10

dB/

Offst

1

dB

Span

40.00000000 MHz

Center 2.422 GHz

#Res BW 100 kHz

#VBW 300 kHz

Sweep 4.144 ms (401 pts)

Span 40 MHz

Occupied Bandwidth

35.7287 MHz

Occ BW % Pwr

99.00 %

x dB

-6.00 dB

Transmit Freq Error

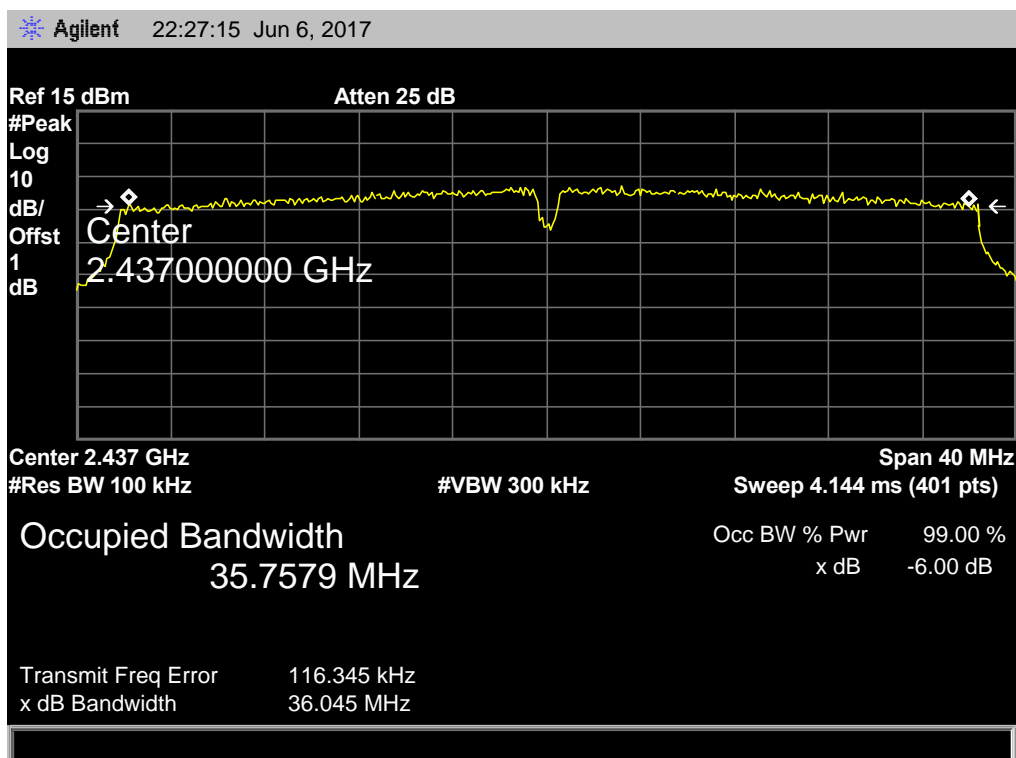
147.949 kHz

x dB Bandwidth

35.457 MHz

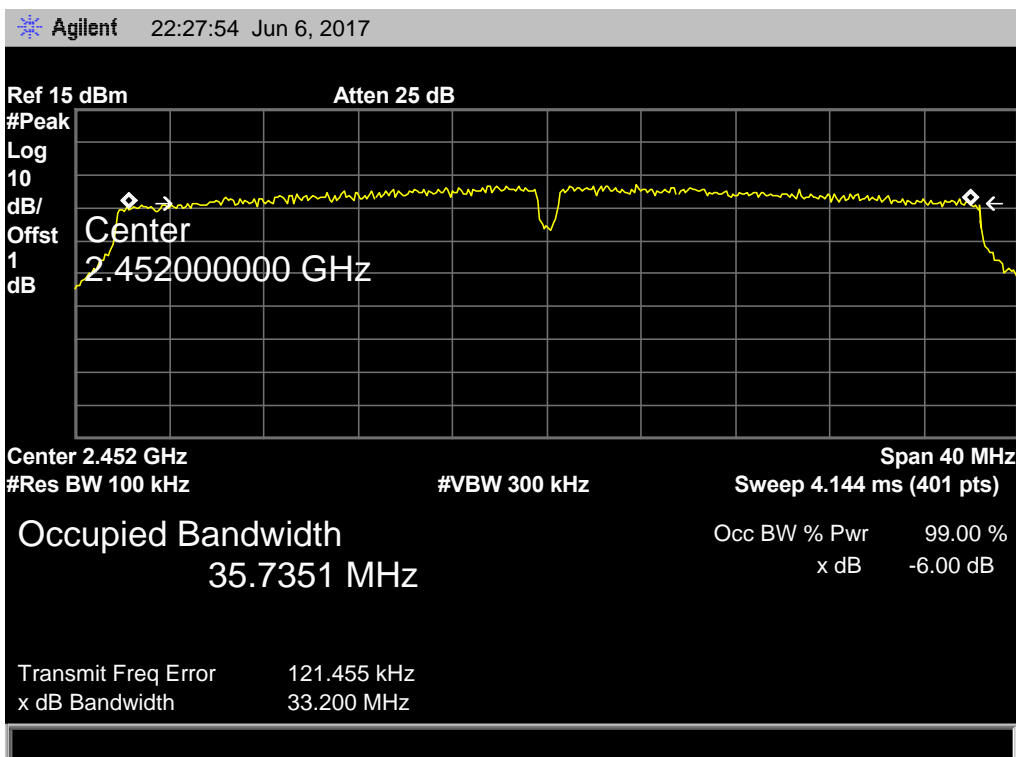
802.11N(HT40) Mode (Antenna b)

2437 MHz



802.11N(HT40) Mode (Antenna b)

2452 MHz



8. Peak Output Power Test

8.1 Test Standard and Limit

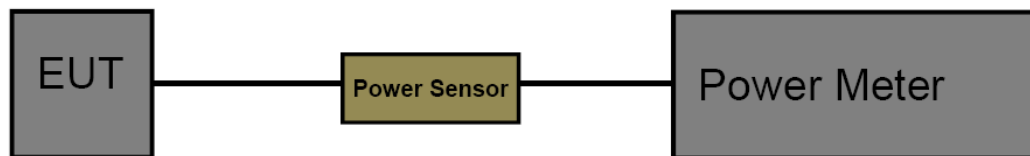
8.1.1 Test Standard

FCC Part 15.247 (b)

8.1.2 Test Limit

FCC Part 15 Subpart C(15.247)/RSS-210		
Test Item	Limit	Frequency Range(MHz)
Peak Output Power	1 Watt or 30 dBm	2400~2483.5

8.2 Test Setup



8.3 Test Procedure

The measurement is according to section 9.1.2 of KDB 558074 D01 DTS Meas Guidance v04 and KDB 662911 D01 Multiple Transmitter Output v02r01.

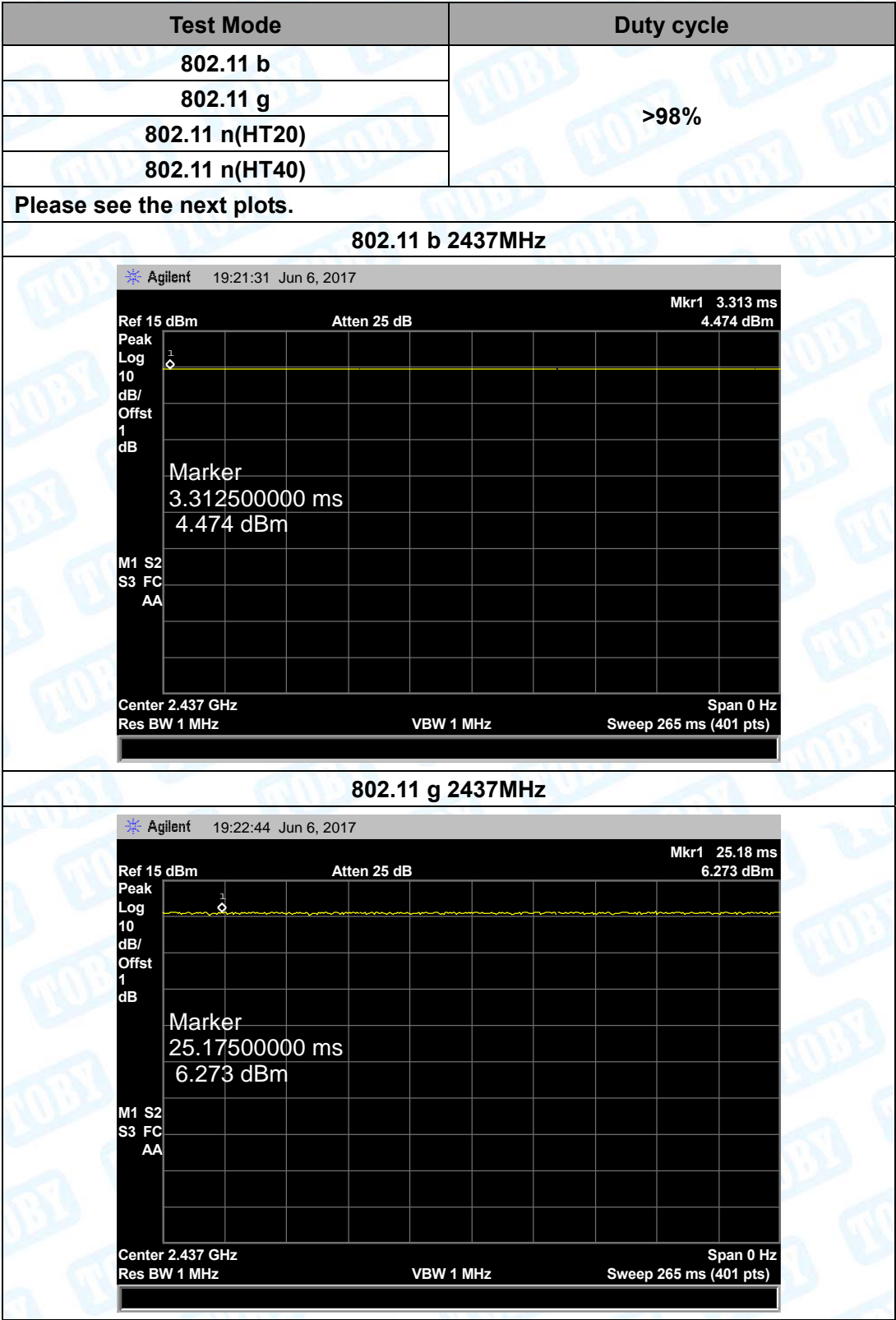
The EUT was connected to RF power meter via a broadband power sensor as show the block above. The power sensor video bandwidth is greater than or equal to the DTS bandwidth of the equipment.

8.4 EUT Operating Condition

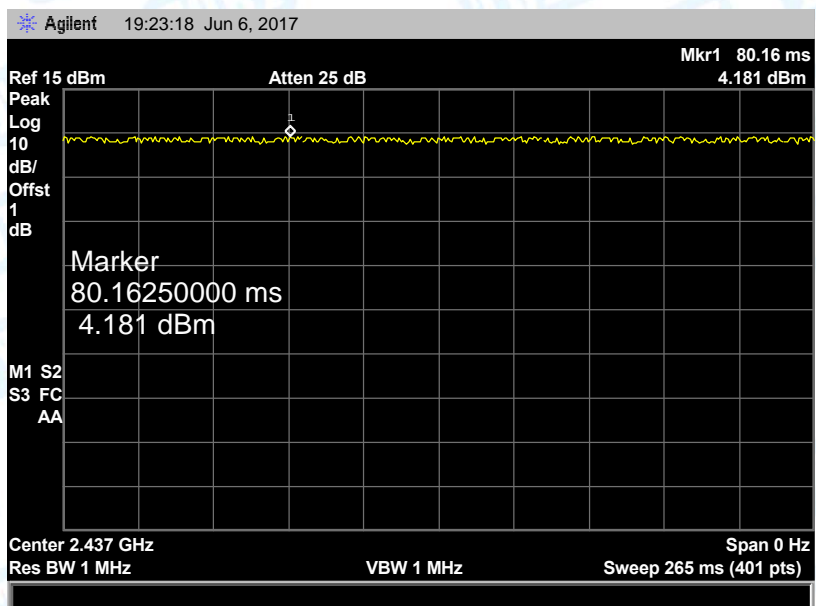
The EUT was set to continuously transmitting in the max power during the test.

8.5 Test Data

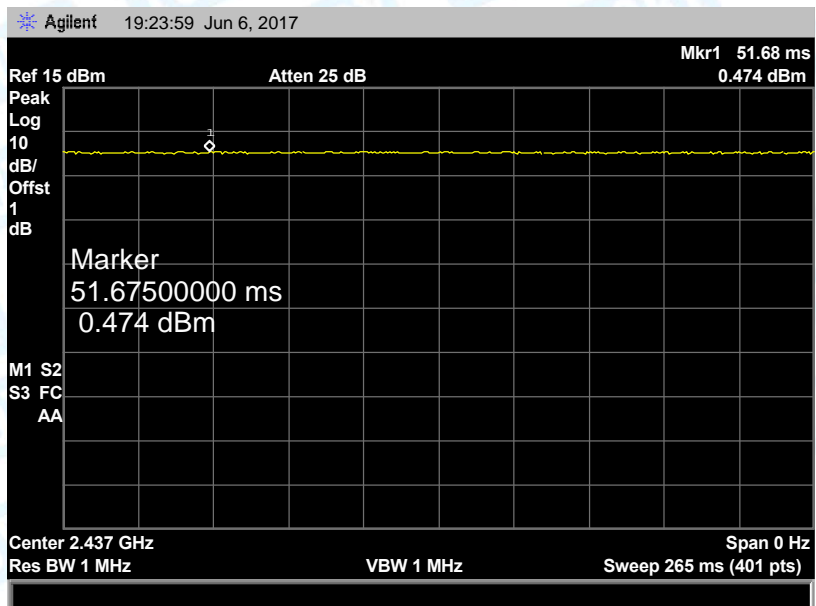
Conducted Power					
802.11b Power					
Channel	Frequency	Conducted Power (dBm)			Max. Limit (dBm)
		Ant. a	Ant. b	Total	
1	2412 MHz	14.28	14.34	---	30
6	2437 MHz	14.52	14.48	---	
11	2462 MHz	14.54	14.41	---	
802.11g Power					
Channel	Frequency	Conducted Power (dBm)			Max. Limit (dBm)
		Ant. a	Ant. b	Total	
1	2412 MHz	14.14	14.34	---	30
6	2437 MHz	14.49	14.14	---	
11	2462 MHz	14.64	14.16	---	
802.11n(HT20) Power					
Channel	Frequency	Conducted Power (dBm)			Max. Limit (dBm)
		Ant. a	Ant. b	Total	
1	2412 MHz	11.14	11.07	14.12	30
6	2437 MHz	11.57	10.91	14.26	
11	2462 MHz	11.17	11.46	14.33	
802.11n(HT40) Power					
Channel	Frequency	Conducted Power (dBm)			Max. Limit (dBm)
		Ant. a	Ant. b	Total	
3	2422 MHz	11.71	10.90	14.33	30
6	2437 MHz	11.35	11.45	14.41	
9	2452 MHz	11.05	11.28	14.18	
Note: When ANT a and ANT b transmitting simultaneously, the total Antenna Gain=Gain a+Gani b=4.01 dBi< 6 dBi. So P _{out} =P _{limit} =30dBm					



802.11 n(HT20) 2437MHz



802.11 n(HT40) 2437MHz



9. Power Spectral Density Test

9.1 Test Standard and Limit

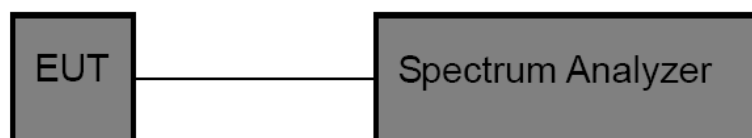
9.1.1 Test Standard

FCC Part 15.247 (e)

9.1.2 Test Limit

FCC Part 15 Subpart C(15.247)		
Test Item	Limit	Frequency Range(MHz)
Power Spectral Density	8dBm(in any 3 kHz)	2400~2483.5

9.2 Test Setup



9.3 Test Procedure

The EUT was directly connected to the Spectrum Analyzer and antenna output port as show in the block diagram above. The measurement according to section 10.2 of KDB 558074 D01 DTS Meas Guidance v04 and KDB 662911 D01 Multiple Transmitter Output v02r01.

- (1) The EUT was directly connected to the spectrum analyzer and antenna output port as show in the block diagram above.
- (2) Set analyser center frequency to DTS channel center frequency.
- (3) Set the span to 1.5 times the DTS bandwidth.
- (4) Set the RBW to: 3 kHz
- (5) Set the VBW to: 10 kHz
- (6) Detector: peak
- (7) Sweep time: auto
- (8) Allow trace to fully stabilize. Then use the peak marker function to determine the maximum amplitude level.

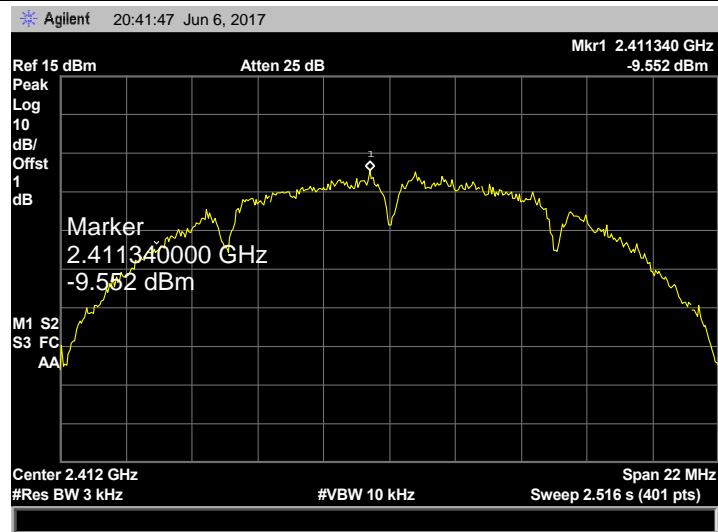
9.4 EUT Operating Condition

The EUT was set to continuously transmitting in each mode and low, middle and high channel for the test.

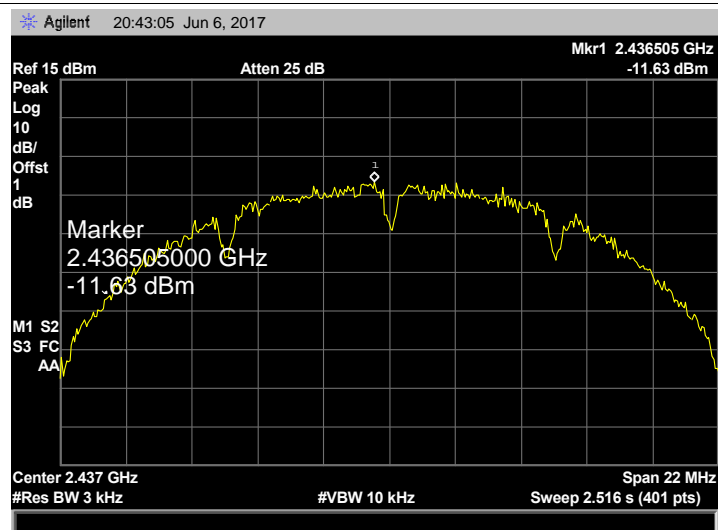
9.5 Test Data

802.11b Mode					
Channel	Frequency	Conducted Power (dBm/3KHz)			Max. Limit (dBm/3KHz)
		Ant. a	Ant. b	Total	
1	2412 MHz	-9.552	-10.97	---	8
6	2437 MHz	-11.63	-9.577	---	
11	2462 MHz	-10.03	-12.03	---	
802.11g Mode					
Channel	Frequency	Conducted Power (dBm/3KHz)			Max. Limit (dBm/3KHz)
		Ant. a	Ant. b	Total	
1	2412 MHz	-14.80	-14.99	---	8
6	2437 MHz	-15.20	-15.43	---	
11	2462 MHz	-13.66	-15.16	---	
802.11n(HT20) Mode					
Channel	Frequency	Conducted Power (dBm/3KHz)			Max. Limit (dBm/3KHz)
		Ant. a	Ant. b	Total	
1	2412 MHz	-14.86	-19.09	-13.47	8
6	2437 MHz	-17.66	-19.02	-15.28	
11	2462 MHz	-16.82	-18.74	-14.66	
802.11n(HT40) Mode					
Channel	Frequency	Conducted Power (dBm/3KHz)			Max. Limit (dBm/3KHz)
		Ant. a	Ant. b	Total	
3	2422 MHz	-19.99	-20.40	-17.18	8
6	2437 MHz	-18.72	-21.62	-16.92	
9	2452 MHz	-19.77	-22.07	-17.76	
Note: When ANT1 and ANT2 transmitting simultaneously, the total Antenna Gain=Gain 1+Gani 2=4.01 dBi<6 dBi.					
So P _{out} =P _{limit} =8					
Test plots please refer to below pages:					

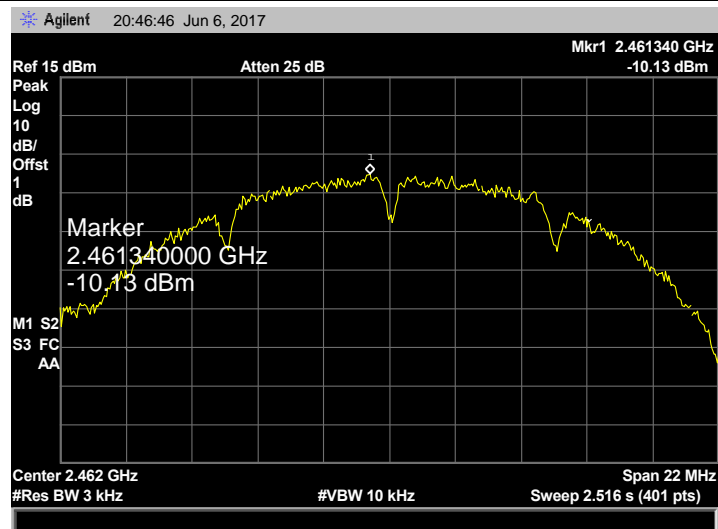
802.11 b 2412 MHz (ANT a)



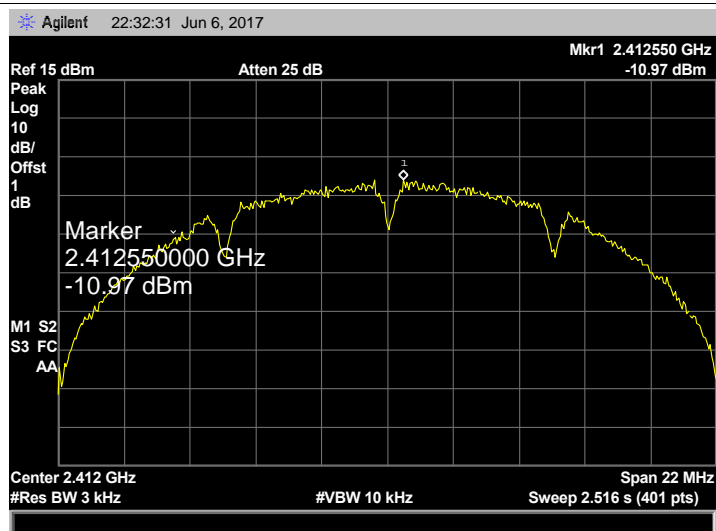
802.11 b 2437 MHz (ANT a)



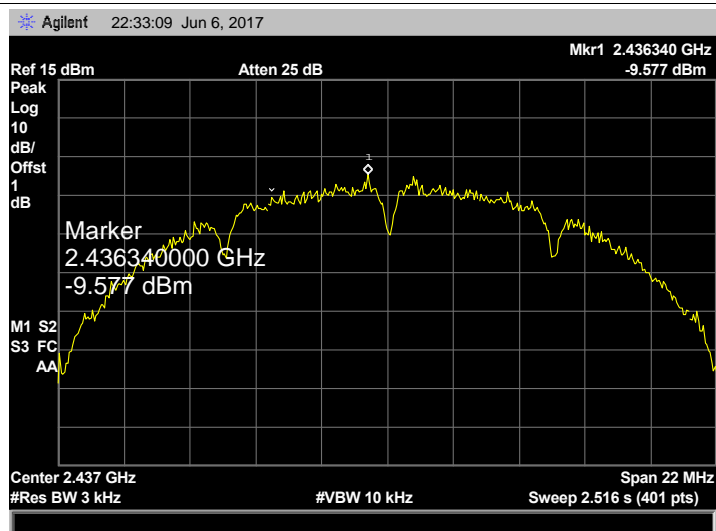
802.11 b 2462MHz (ANT a)



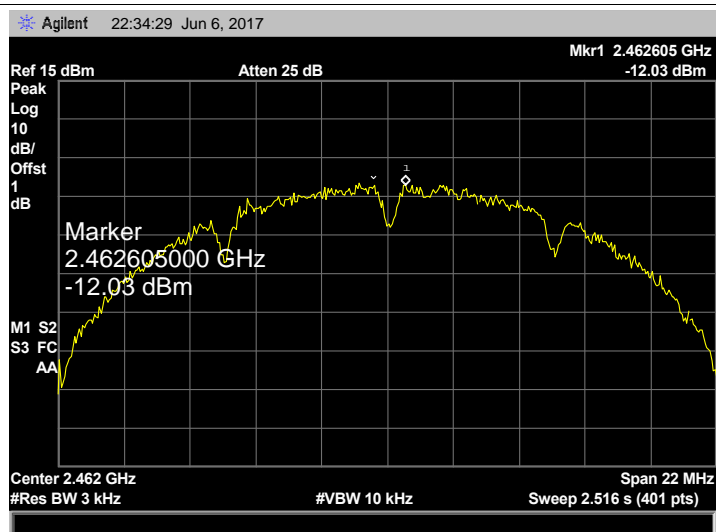
802.11 b 2412 MHz (ANT b)



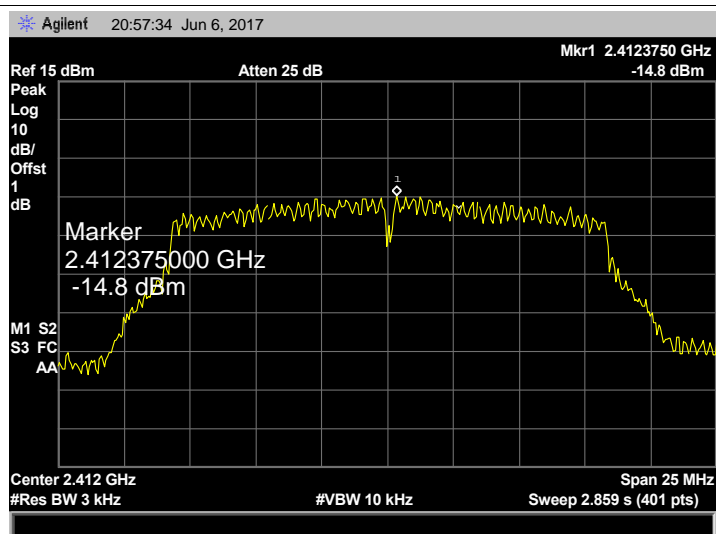
802.11 b 2437 MHz (ANT b)



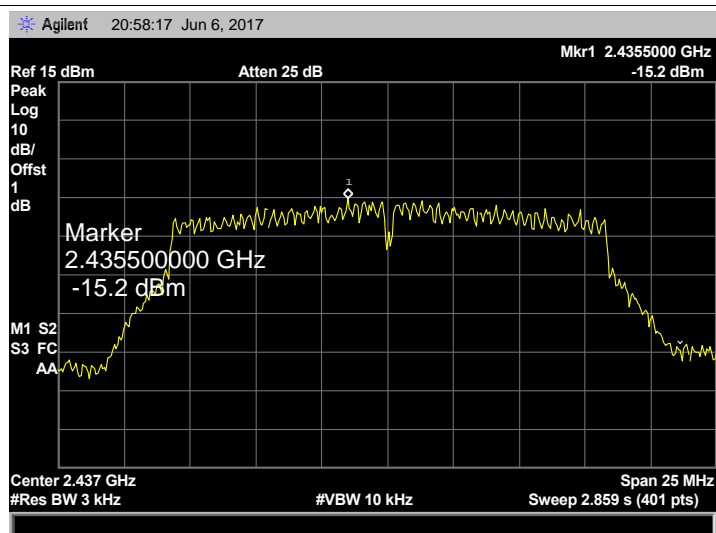
802.11 b 2462MHz (ANT b)



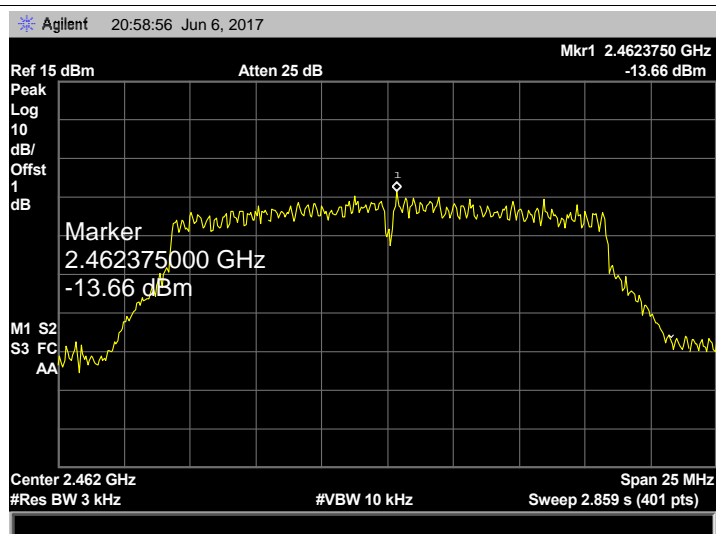
802.11 g 2412 MHz (ANT a)



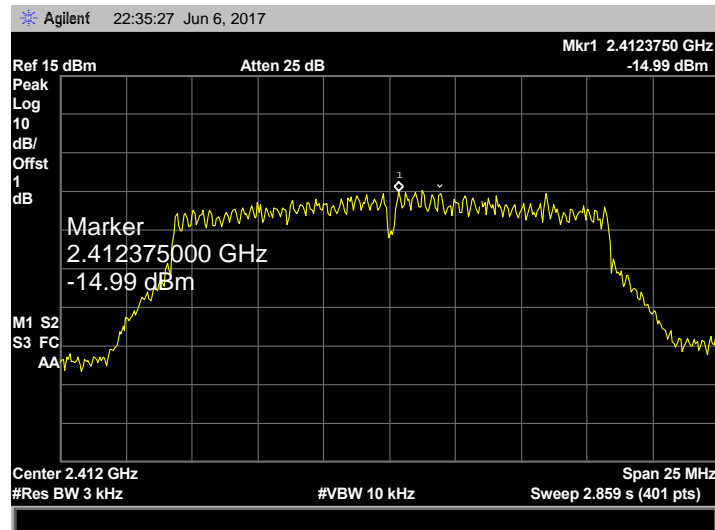
802.11 g 2437 MHz (ANT a)



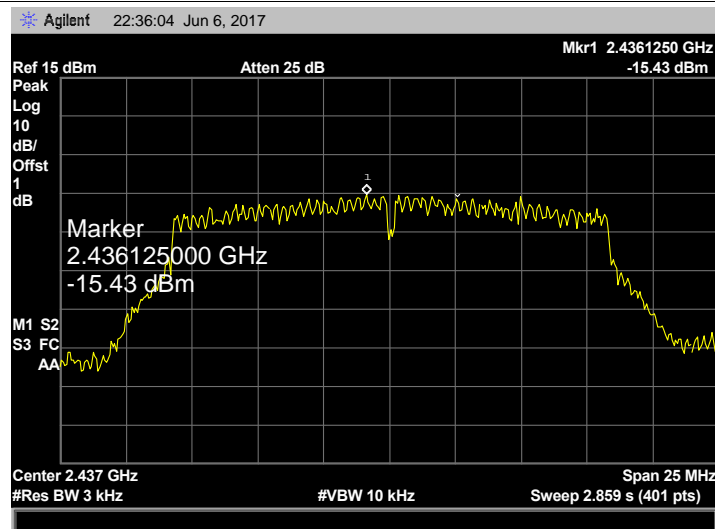
802.11 g 2462MHz (ANT a)



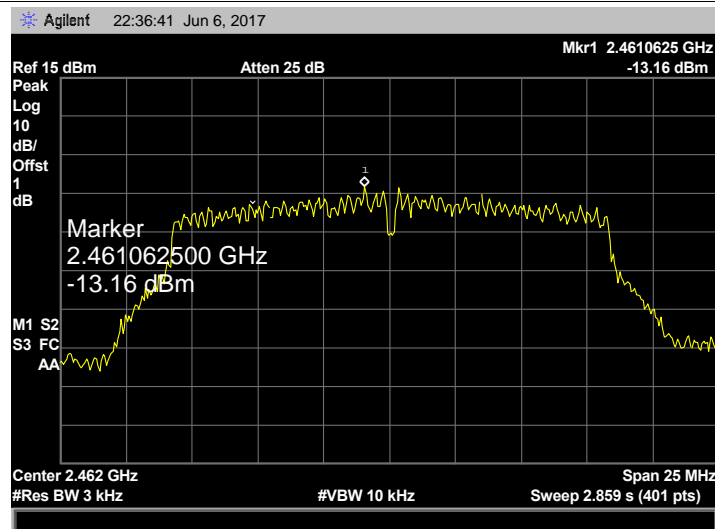
802.11 g 2412 MHz (ANT b)



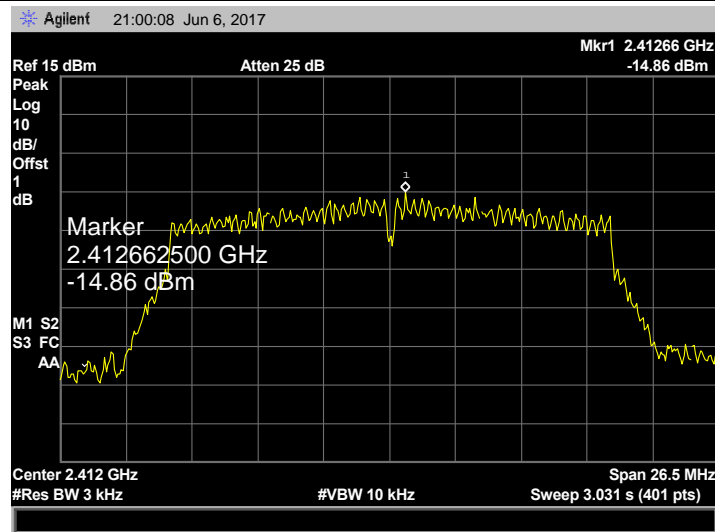
802.11 g 2437 MHz (ANT b)



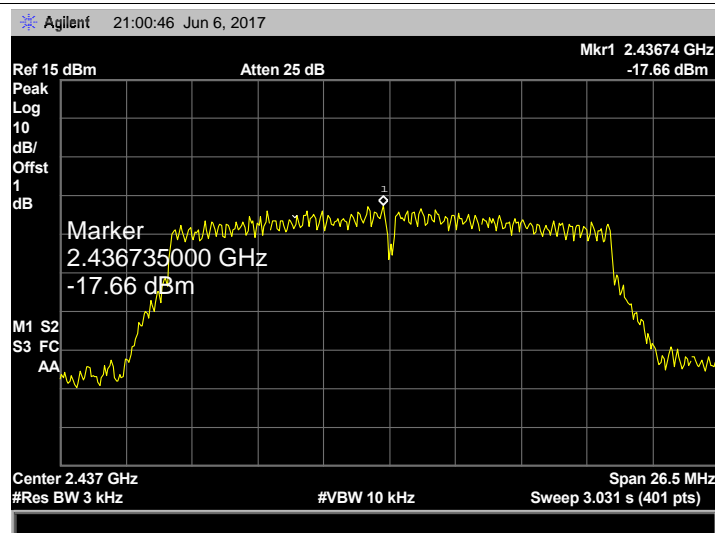
802.11 g 2462 MHz (ANT b)



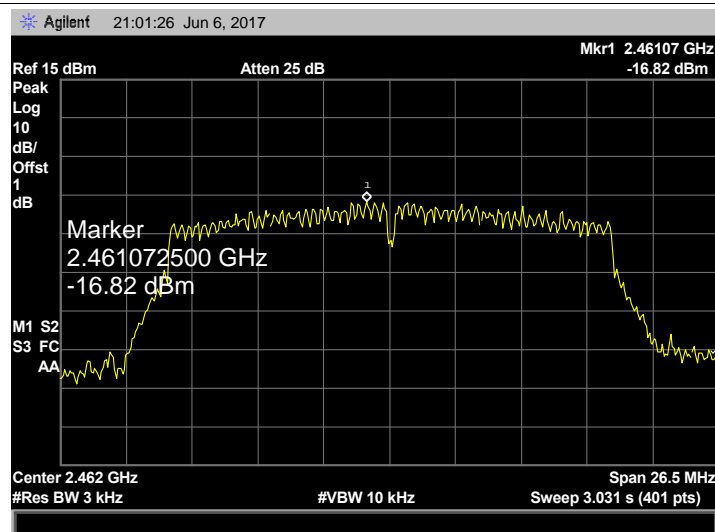
802.11 n(HT20) 2412 MHz (ANT a)



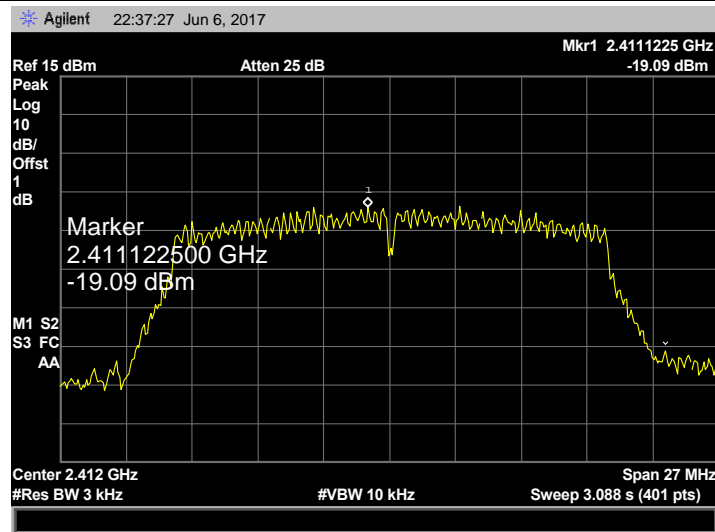
802.11 n(HT20) 2437 MHz (ANT a)



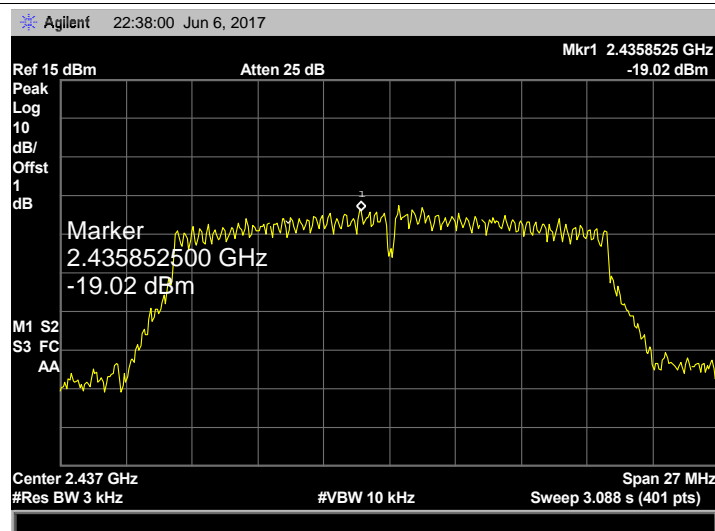
802.11 n(HT20) 2462MHz (ANT a)



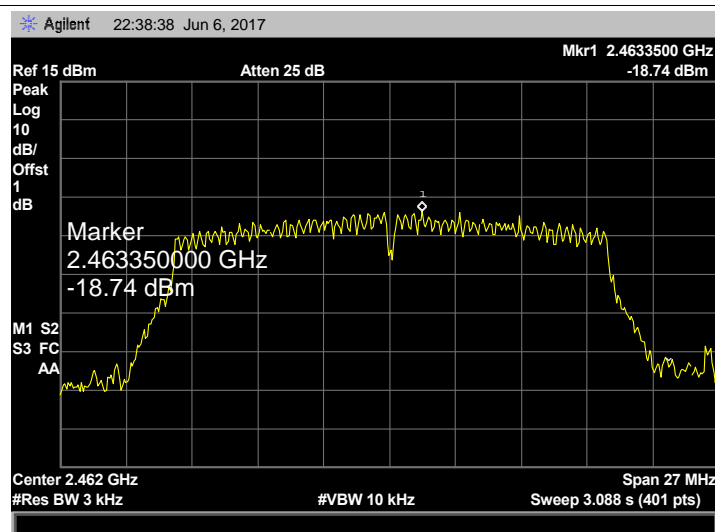
802.11 n(HT20) 2412 MHz (ANT b)



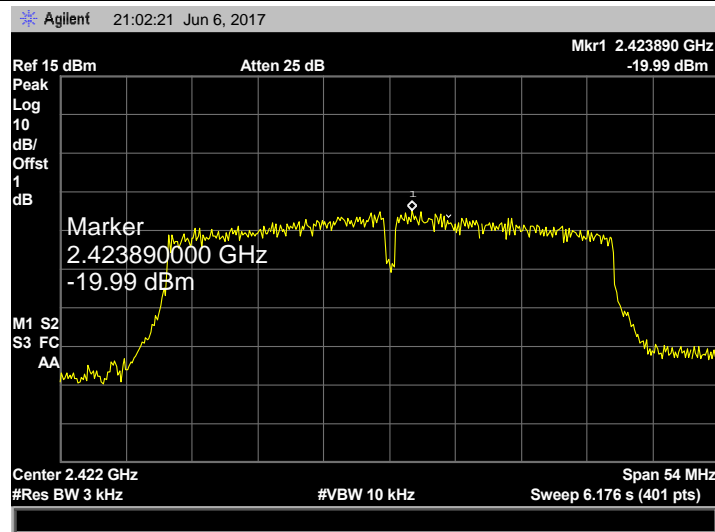
802.11 n(HT20) 2437 MHz (ANT b)



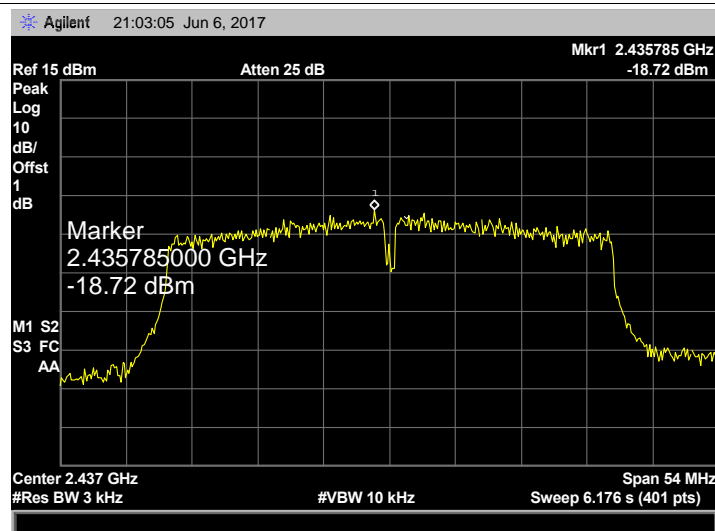
802.11 n(HT20) 2462MHz (ANT b)



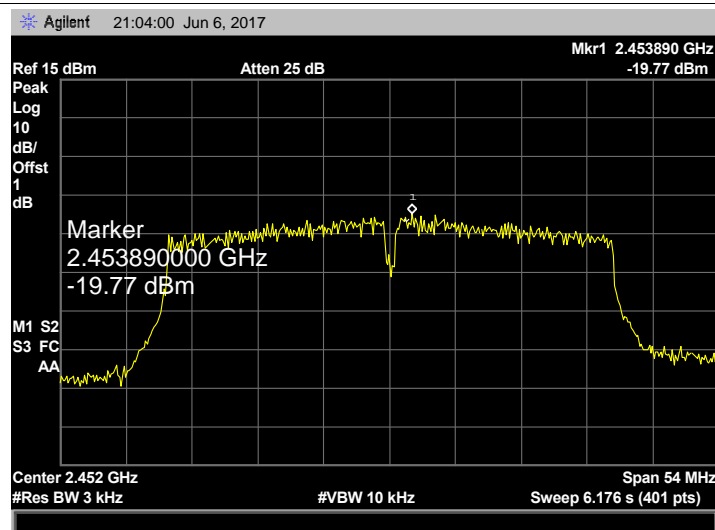
802.11 n(HT40) 2422 MHz (ANT a)



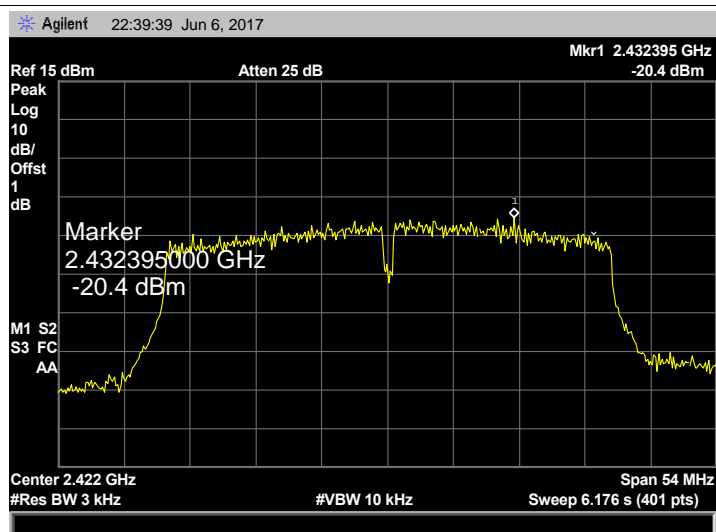
802.11 n(HT40) 2437 MHz (ANT a)



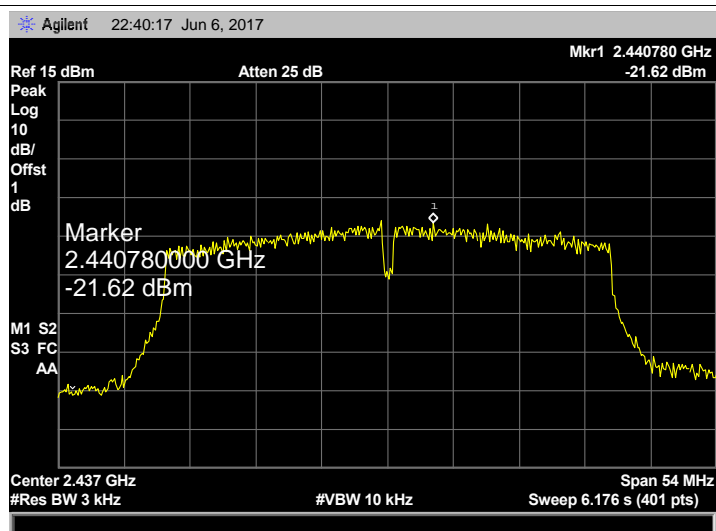
802.11 n(HT40) 2452MHz (ANT a)



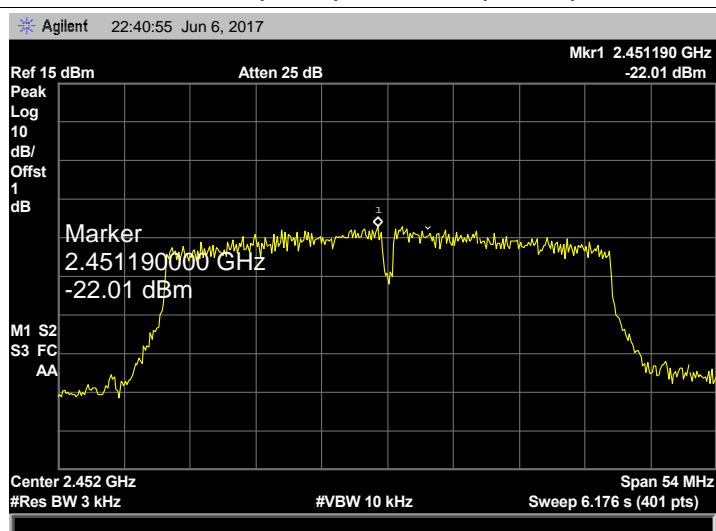
802.11 n(HT40) 2422 MHz (ANT b)



802.11 n(HT40) 2437 MHz (ANT b)



802.11 n(HT40) 2452MHz (ANT b)



10. Antenna Requirement

10.1 Standard Requirement

10.1.1 Standard

FCC Part 15.203

10.1.2 Requirement

An intentional radiator shall be designed to ensure that no antenna other than that furnished by the responsible party shall be used with the device. The use of a permanently attached antenna or of an antenna that uses a unique coupling to the intentional radiator shall be considered sufficient to comply with the provisions of this Section. The manufacturer may design the unit so that a broken antenna can be replaced by the user, but the use of a standard antenna jack or electrical connector is prohibited.

10.2 Antenna Connected Construction

The directional gains of the antenna used for transmitting is 1 dBi, and the antenna de-signed with permanent attachment and no consideration of replacement. Please see the EUT photo for details.

Result

The EUT antenna is a PCB Antenna. It complies with the standard requirement.

Antenna Type
<input checked="" type="checkbox"/> Permanent attached antenna
<input type="checkbox"/> Unique connector antenna
<input type="checkbox"/> Professional installation antenna

-----END OF REPORT-----