



FCC RADIO TEST REPORT

FCC ID: Y2PWRT150N

Product : 150M Wireless Router

Trade Name :  **ReadyNet**
CONNECTIVITY SIMPLIFIED

Model Name : WRT150N

Serial Model : N/A

Report No. : NTEK- 2012NT0917865F

Prepared for

Phonex Broadband Corporation

6952 High Tech Drive, Suite B Midvale, UT 84047, USA

Prepared by

NTEK Testing Technology Co., Ltd.

1/F, Building E, Fenda Science Park, Sanwei Community, Xixiang Street
Bao'an District, Shenzhen P.R. China

Tel.: +86-0755-61156588 Fax.: +86-0755-61156599

Website: www.ntek.org.cn

TEST RESULT CERTIFICATION

Applicant's name : Phonex Broadband Corporation
Address : 6952 High Tech Drive, Suite B Midvale, UT 84047, USA
Manufacturer's Name..... : Shenzhen MTN Electronics Co., Ltd.
Address : Longgang District the floor Cifo China Road MAGOTAN Industrial Park III

Product description

Product name : 150M Wireless Router
Model and/or type reference : WRT150N
Serial Model : N/A

Standards : FCC Part15.247

Test procedure..... ANSI C63.4-2003

This device described above has been tested by NTEK, and the test results show that the equipment under test (EUT) is in compliance with the FCC requirements. And it is applicable only to the tested sample identified in the report.

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Date of Test

Date (s) of performance of tests : 17 Sep. 2012 ~26 Sep. 2012

Date of Issue..... : 28 Sep. 2012

Test Result..... : **Pass**

Testing Engineer : Apple Huang
(Apple Huang)

Technical Manager : Tom Zhang
(Tom Zhang)

Authorized Signatory : Bovey Yang
(Bovey Yang)

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1. SUMMARY OF TEST RESULTS

Test procedures according to the technical standards:

FCC Part15 (15.247) , Subpart C			
Standard Section	Test Item	Judgment	Remark
15.207	Conducted Emission	PASS	
15.247 (a)(2)	6dB Bandwidth	PASS	
15.247 (b)	Peak Output Power	PASS	
15.247 (c)	Radiated Spurious Emission	PASS	
15.247 (d)	Power Spectral Density	PASS	
15.205	Band Edge Emission	PASS	
15.203	Antenna Requirement	PASS	

NOTE:

(1) "N/A" denotes test is not applicable in this Test Report

1.1 TEST FACILITY

NTEK Testing Technology Co., Ltd

Add.:1/F, Building E, Fenda Science Park, Sanwei Community, Xixiang Street, Bao'an District, Shenzhen P.R. China.

FCC Registration No.:238937; IC Registration No.:9270A-1

CNAS Registration No.:L5516


1.2 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 %.

No.	Item	Uncertainty
1	Conducted Emission Test	$\pm 1.38\text{dB}$
2	RF power,conducted	$\pm 0.16\text{dB}$
3	Spurious emissions,conducted	$\pm 0.21\text{dB}$
4	All emissions,radiated(<1G)	$\pm 4.68\text{dB}$
5	All emissions,radiated(>1G)	$\pm 4.89\text{dB}$
6	Temperature	$\pm 0.5^\circ\text{C}$
7	Humidity	$\pm 2\%$

2. GENERAL INFORMATION

2.1 GENERAL DESCRIPTION OF EUT

Equipment	150M Wireless Router	
Trade Name	 <small>CONNECTIVITY SIMPLIFIED</small>	
Model Name	WRT150N	
Serial Model	N/A	
Model Difference	N/A	
Product Description	The EUT is a 150M Wireless Router	
	Operation Frequency:	802.11b/g/n 20:2412~2462 MHz 802.11n 40: 2422~2452MHz
	Modulation Type:	CCK/OFDM/DBPSK/DAPSK
	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(20/40MHz):150/144.44/130/117/115.56/104/86.67/78/52/6.5 Mbps
	Number Of Channel	802.11b/g/n20: 11CH 802.11n 40: 7CH
	Antenna Designation:	Please see Note 3.
	Output Power(Conducted):	802.11b: 20.78 dBm (Max.) 802.11g: 17.43 dBm (Max.) 802.11n20: 17.42 dBm (Max.) 802.11n40: 16.98 dBm (Max.)
	Antenna Gain (dBi)	1.0dbi
	Based on the application, features, or specification exhibited in User's Manual, the EUT is considered as an ITE/Computing Device. More details of EUT technical specification, please refer to the User's Manual.	
	Channel List	Please refer to the Note 2.
Ratings	DC 5V from Adapter	
Adapter	Model: TPA101-05050-US(S) INPUT:100~240V, 50/60Hz, 0.5A MAX OUTPUT:DC 5V,1A	
Battery	N/A	
Connecting I/O Port(s)	Please refer to the User's Manual	

Note:

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

2.

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

Channel List for 802.11n(40MHz)							
Channel	Frequency (MHz)	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)	NOTE
A	N/A	N/A	Integrated Antenna	N/A	1.0	N/A

2.2 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.

Pretest Mode	Description
Mode 1	802.11b CH1/ CH6/ CH11
Mode 2	802.11g CH1/ CH6/ CH11
Mode 3	802.11n(20)CH1/ CH6/ CH11
Mode 4	802.11n(40) CH3/ CH6/ CH9
Mode 5	NORMAL LINK

For Conducted Emission	
Final Test Mode	Description
Mode 5	NORMAL LINK

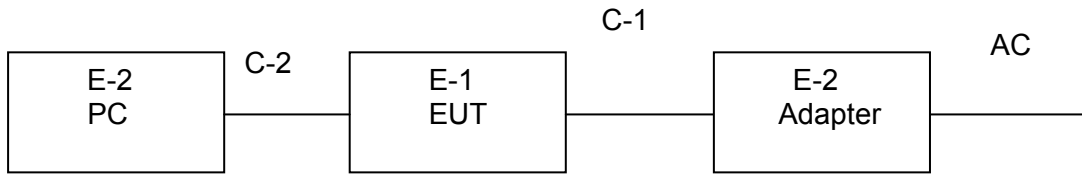
For Radiated Emission	
Final Test Mode	Description
Mode 1	802.11b CH1/ CH6/ CH11
Mode 2	802.11g CH1/ CH6/ CH11
Mode 3	802.11n CH1/ CH6/ CH11
Mode 4	802.11n(40) CH3/ CH6/ CH9

Note:

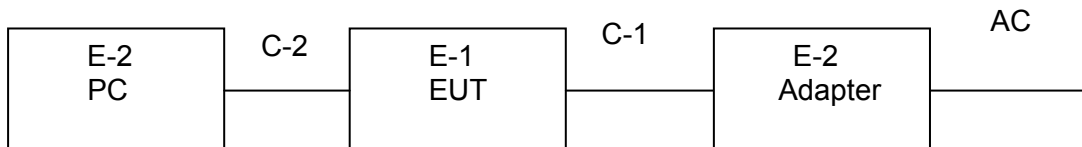
- (1) The measurements are performed at the highest, middle, lowest available channels.
- (2) The measurements are performed at all Bit Rate of Transmitter, the worst data was reported

2.3 BLOCK DIGRAM SHOWING THE CONFIGURATION OF SYSTEM TESTED

Conducted Emission Test



Radiated Spurious Emission Test



2.4 DESCRIPTION OF SUPPORT UNITS(CONDUCTED MODE)

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.	Series No.	Note
E-1	150M Wireless Router		WRT150N	N/A	EUT
E-2	Notebook computer	IBM	2366	N/A	
E-3	Adapter	IBM	TPA101-05050-US(S)	N/A	

Item	Shielded Type	Ferrite Core	Length	Note
C-1	NO	NO	0.8M	
C-2	NO	NO	1.0M	

Note:

- (1) The support equipment was authorized by Declaration of Confirmation.
- (2) For detachable type I/O cable should be specified the length in cm in 『Length』 column.

2.5 EQUIPMENTS LIST FOR ALL TEST ITEMS

Radiation Test equipment

Item	Kind of Equipment	Manufacturer	Type No.	Serial No.	Calibrated until
1	Spectrum Analyzer	Agilent	E4407B	160400005	Jul. 06. 2013
2	Test Receiver	R&S	ESPI	101318	Jul. 06. 2013
3	Bilog Antenna	TESEQ	CBL6111D	31216	Jul. 06. 2013
4	50Ω Coaxial Switch	Anritsu	MP59B	6200264416	Jul. 06. 2013
5	Spectrum Analyzer	ADVANTEST	R3132	150900201	Jul. 06. 2013
6	Horn Antenna	EM	EM-AH-10180	2011071402	Jul. 06. 2013
7	Horn Ant	Schwarzbeck	BBHA 9170	9170-181	Jul. 06. 2013
8	Amplifier	EM	EM-30180	060538	Jul. 06. 2013
9	Loop Antenna	ARA	PLA-1030/B	1029	Jul. 06. 2013
10	Power Meter	R&S	NRVS	100696	Jul. 06. 2013

Conduction Test equipment

Item	Kind of Equipment	Manufacturer	Type No.	Serial No.	Calibrated until
1	Test Receiver	R&S	ESCI	101160	Jul. 06. 2013
2	LISN	R&S	ENV216	101313	Jul. 06. 2013
3	LISN	EMCO	3816/2	00042990	Jul. 06. 2013
4	50Ω Coaxial Switch	Anritsu	MP59B	6200264417	Jul. 06. 2013
5	Passive Voltage Probe	R&S	ESH2-Z3	100196	Jul. 06. 2013
6	Absorbing clamp	R&S	MOS-21	100423	Jul. 06. 2013

3. EMC EMISSION TEST

3.1 CONDUCTED EMISSION MEASUREMENT

3.1.1 POWER LINE CONDUCTED EMISSION Limits (Frequency Range 150KHz-30MHz)

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

0.15 -0.5	79.00	66.00	66 - 56 *	56 - 46 *	FCC
0.50 -5.0	73.00	60.00	56.00	46.00	FCC
5.0 -30.0	73.00	60.00	60.00	50.00	FCC

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.

The following table is the setting of the receiver

Receiver Parameters	Setting
Attenuation	10 dB
Start Frequency	0.15 MHz
Stop Frequency	30 MHz
IF Bandwidth	9 kHz

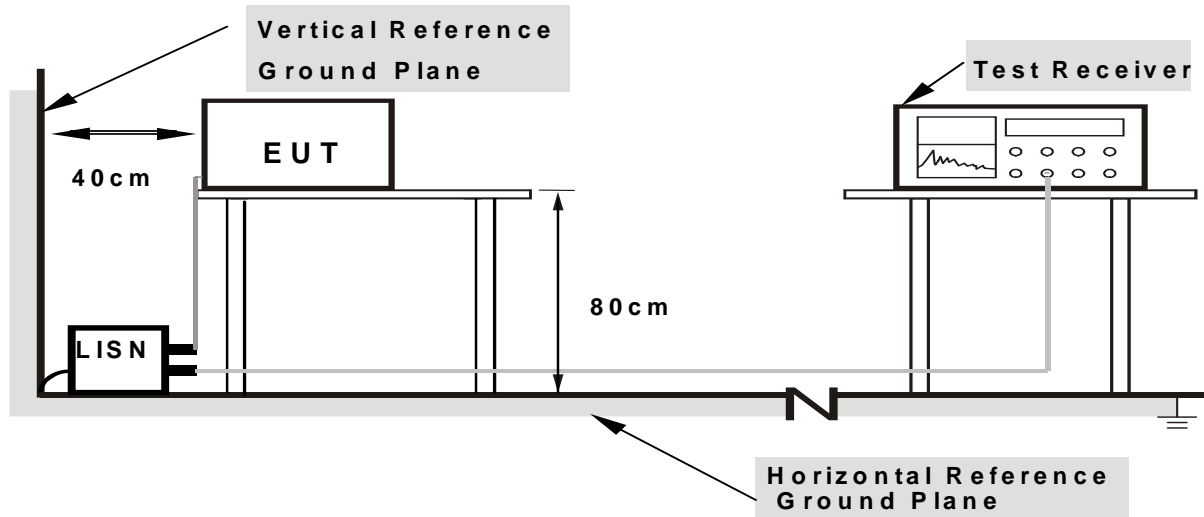
3.1.2 TEST PROCEDURE

- a. The EUT was placed 0.4 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.

3.1.3 DEVIATION FROM TEST STANDARD

No deviation

3.1.4 TEST SETUP



- Note:**
- 1. Support units were connected to second LISN.
 - 2. Both of LISNs (AMN) are 80 cm from EUT and at least 80 from other units and other metal planes

3.1.5 EUT OPERATING CONDITIONS

The EUT was configured for testing in a typical fashion (as a customer would normally use it). The EUT has been programmed to continuously transmit during test. This operating condition was tested and used to collect the included data.

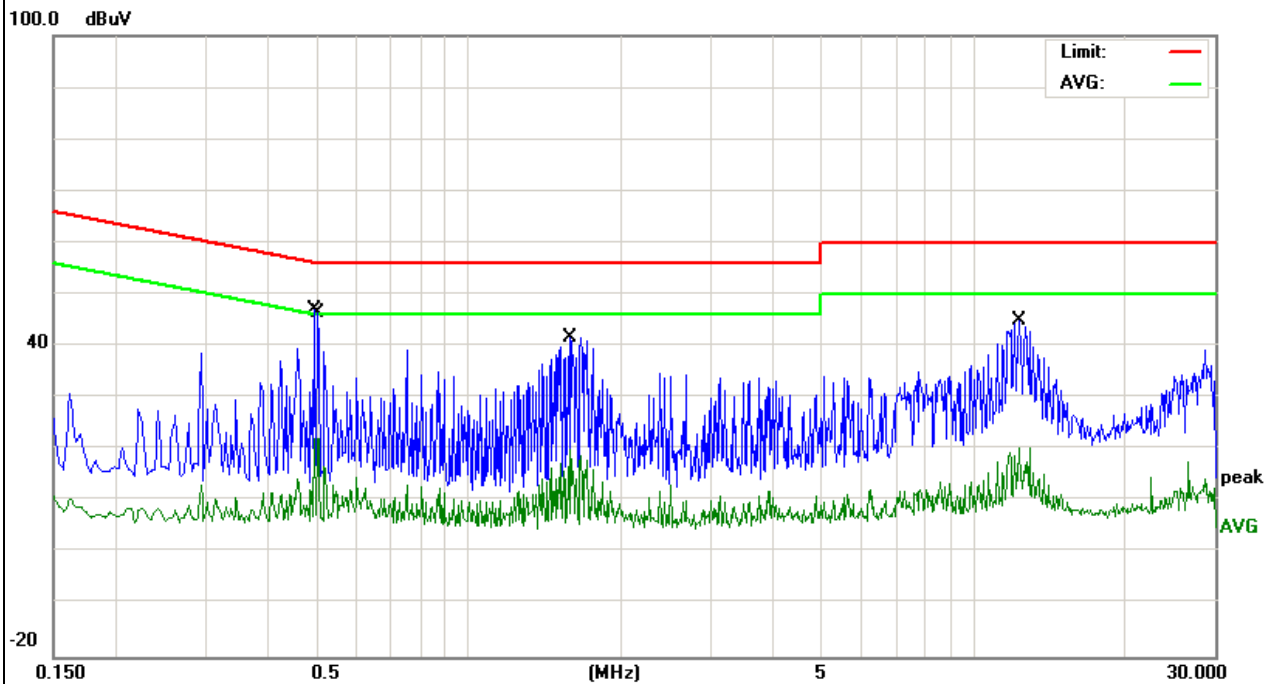
3.1.6 TEST RESULTS

EUT :	150M Wireless Router	Model Name. :	WRT150N
Temperature :	26 °C	Relative Humidity :	54%
Pressure :	1010hPa	Phase :	L
Test Voltage :	DC 5.0V from adapter AC120V/60Hz	Test Mode :	Mode 5

Frequency (MHz)	Meter Reading (dBμV)	Factor (dB)	Emission Level (dBμV)	Limits (dBμV)	Margin (dB)	Detector Type
0.4939	36.71	10.4	47.11	56.1	-8.99	QP
0.502	11.89	10.4	22.29	46	-23.71	AVG
1.578	31.18	10.42	41.6	56	-14.4	QP
1.578	9.77	10.42	20.19	46	-25.81	AVG
12.29	34.29	10.69	44.98	60	-15.02	QP
12.29	9.62	10.69	20.31	50	-29.69	AVG

Remark:

1. All readings are Quasi-Peak and Average values.
2. Factor = Insertion Loss + Cable Loss.

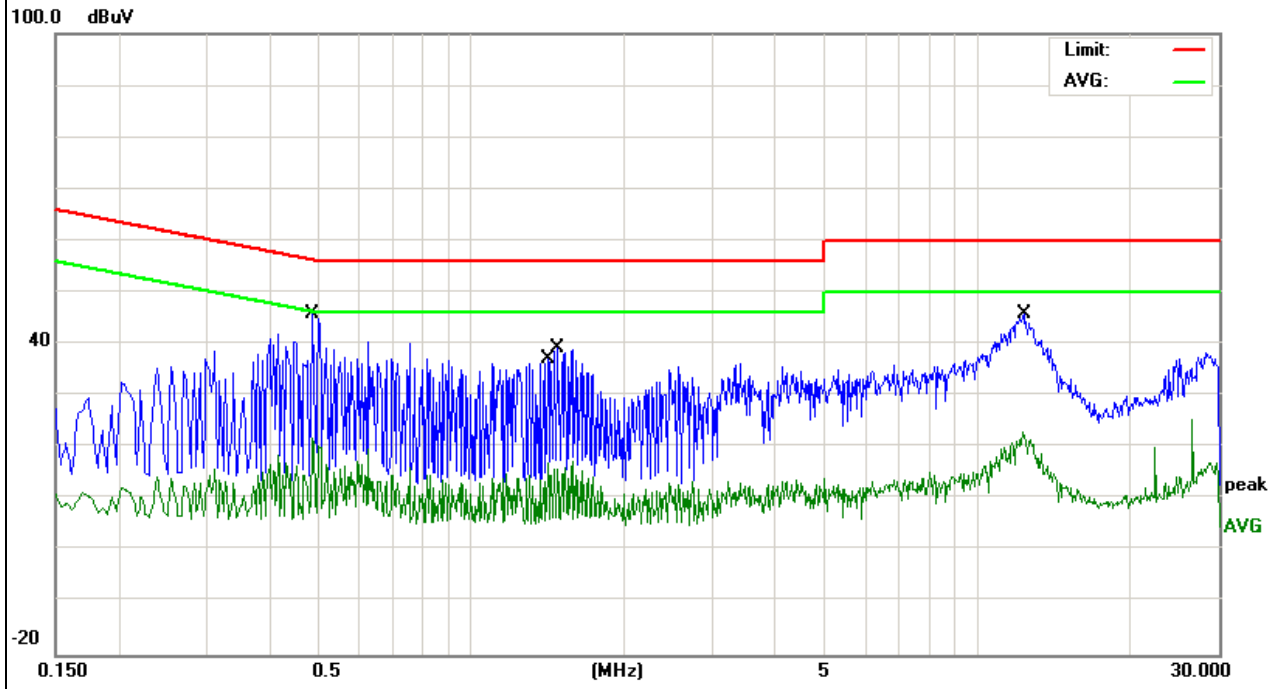


EUT :	150M Wireless Router	Model Name. :	WRT150N
Temperature :	26 °C	Relative Humidity :	54%
Pressure :	1010hPa	Phase :	N
Test Voltage :	DC 5.0V from adapter AC120V/60Hz	Test Mode :	Mode 5

Frequency (MHz)	Meter Reading (dBμV)	Factor (dB)	Emission Level (dBμV)	Limits (dBμV)	Margin (dB)	Detector Type
0.486	35.39	10.41	45.8	56.24	-10.44	QP
0.486	11.52	10.41	21.93	46.24	-24.31	AVG
1.414	6.48	10.45	16.93	46	-29.07	AVG
1.474	28.94	10.45	39.39	56	-16.61	QP
12.2579	12.2	10.71	22.91	50	-27.09	AVG
12.3499	35.25	10.71	45.96	60	-14.04	QP

Remark:

1. All readings are Quasi-Peak and Average values.
2. Factor = Insertion Loss + Cable Loss.



3.2 RADIATED EMISSION MEASUREMENT

3.2.1 RADIATED EMISSION LIMITS (Frequency Range 9kHz-1000MHz)

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.

Frequencies (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

LIMITS OF RADIATED EMISSION MEASUREMENT (Above 1000MHz)

FREQUENCY (MHz)	Class A (dBuV/m) (at 3M)		Class B (dBuV/m) (at 3M)	
	PEAK	AVERAGE	PEAK	AVERAGE
Above 1000	80	60	74	54

Notes:

- (1) The limit for radiated test was performed according to FCC PART 15C.
- (2) The tighter limit applies at the band edges.
- (3) Emission level (dBuV/m)=20log Emission level (uV/m).

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

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

3.2.2 TEST PROCEDURE

- a. The measuring distance of at 3 m shall be used for measurements at frequency up to 1GHz. For frequencies above 1GHz, 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 3 meter open area test site. 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.

Note:

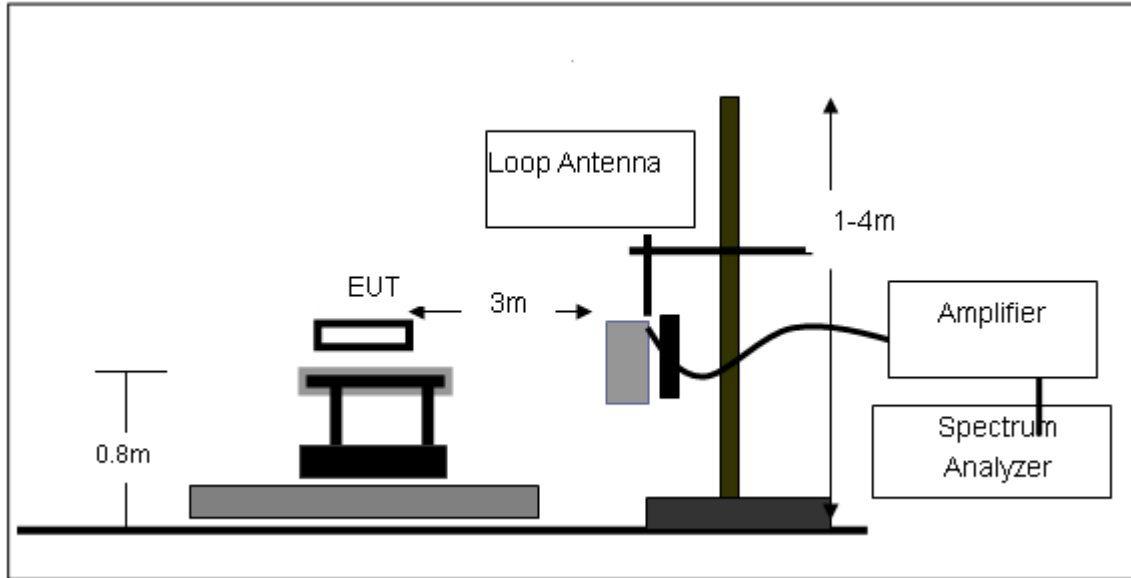
Both horizontal and vertical antenna polarities were tested and performed pretest to three orthogonal axis. The worst case emissions were reported

3.2.3 DEVIATION FROM TEST STANDARD

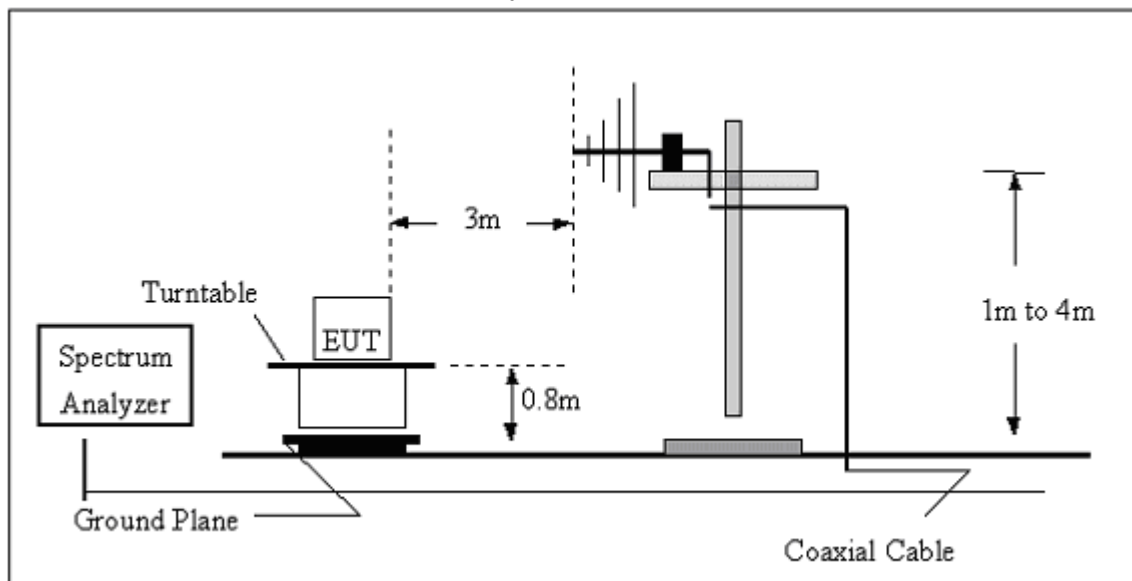
No deviation

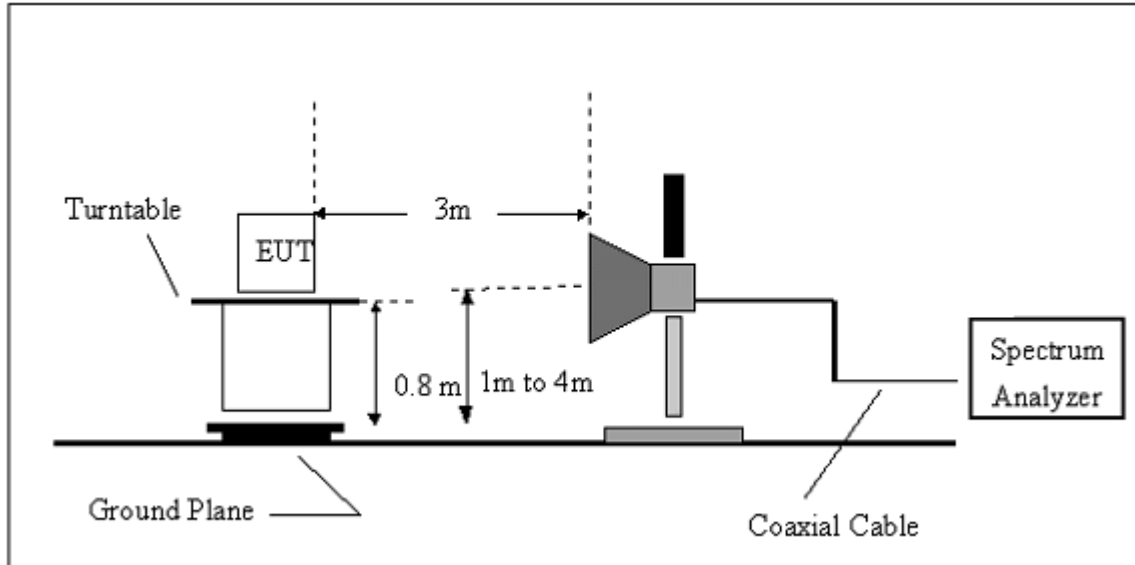
3.2.4 TEST SETUP

(A) Radiated Emission Test-Up Frequency Below 30MHz



(B) Radiated Emission Test-Up Frequency 30MHz~1GHz



(C) Radiated Emission Test-Up Frequency Above 1GHz**3.2.5 EUT OPERATING CONDITIONS**

The EUT tested system was configured as the statements of 2.4 Unless otherwise a special operating condition is specified in the follows during the testing.

3.2.6 TEST RESULTS (BETWEEN 9KHZ – 30 MHZ)

EUT:	150M Wireless Router	Model Name. :	WRT150N
Temperature:	20 °C	Relative Humidity:	48%
Pressure:	1010 hPa	Test Voltage :	DC 5.0V
Test Mode :	TX	Polarization :	--

Freq. (MHz)	Reading (dBuV/m)	Limit (dBuV/m)	Margin (dB)	State P/F
--	--	--	--	PASS
--	--	--	--	PASS

NOTE:

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

Distance extrapolation factor = $20 \log (\text{specific distance}/\text{test distance})(\text{dB})$;

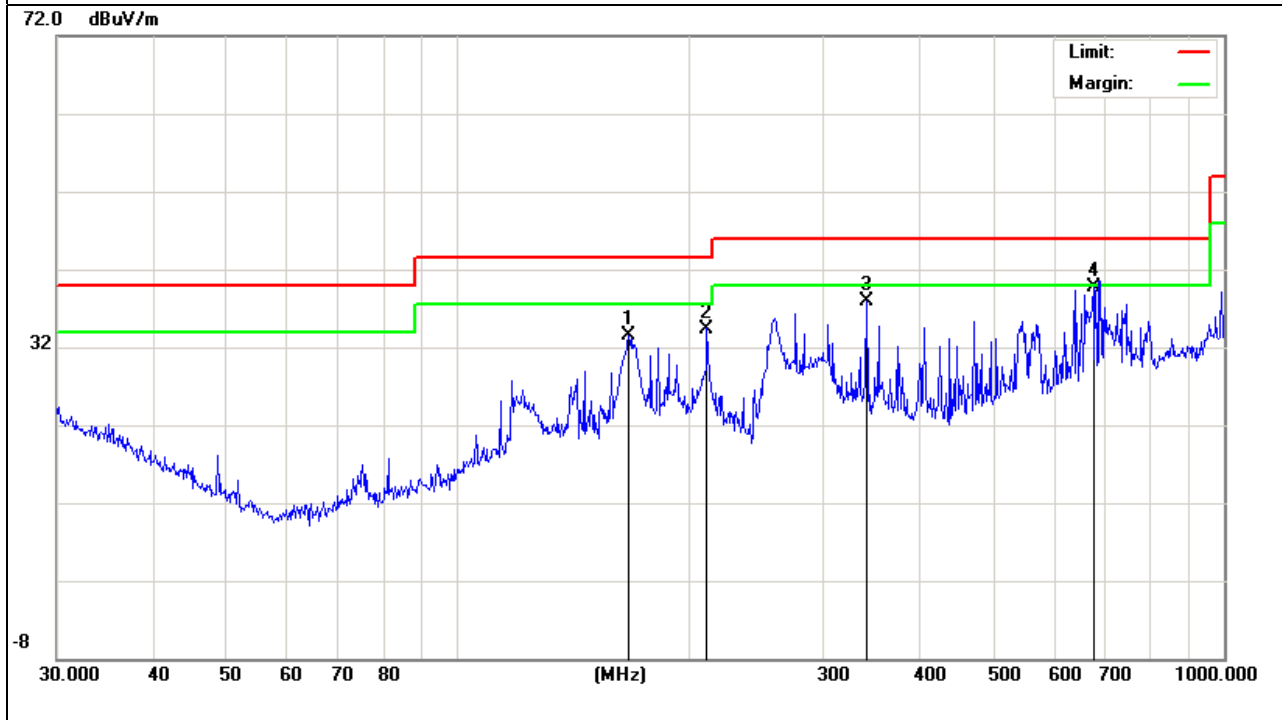
Limit line = specific limits(dBuv) + distance extrapolation factor.

3.2.7 TEST RESULTS (BETWEEN 30MHZ – 1GHZ)

EUT :	150M Wireless Router	Model Name :	WRT150N
Temperature :	20 °C	Relative Humidity :	48%
Pressure :	1010 hPa	Test Voltage :	DC 5.0V
Test Mode :	TX	Polarization :	Horizontal

Frequency (MHz)	Meter Reading (dBμV)	Factor (dB)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Detector Type
167.2366	23.18	10.26	33.44	43.5	-10.06	QP
211.5264	25.04	9.36	34.4	43.5	-9.1	QP
341.9786	22.8	15.15	37.95	46	-8.05	QP
675.2078	17.54	22.15	39.69	46	-6.31	QP

Remark:
Factor = Antenna Factor + Cable Loss – Pre-amplifier.

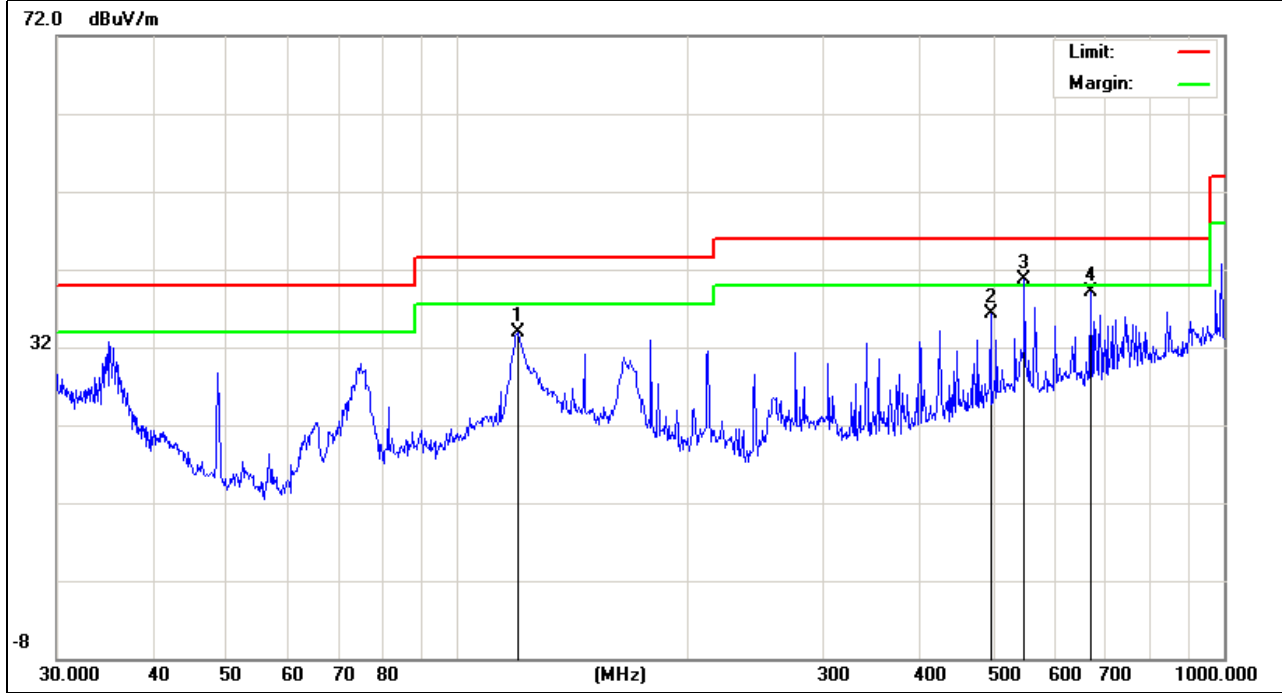


EUT :	150M Wireless Router	Model Name :	WRT150N
Temperature :	20 °C	Relative Humidity :	48%
Pressure :	1010 hPa	Test Voltage :	DC 5.0V
Test Mode :	TX	Polarization :	Vertical

Frequency (MHz)	Meter Reading (dBμV)	Factor (dB)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Detector Type
119.8555	22.06	11.77	33.83	43.5	-9.67	QP
495.9343	17.03	19.3	36.33	46	-9.67	QP
549.0193	18.83	21.83	40.66	46	-5.34	QP
670.4892	17.07	22.08	39.15	46	-6.85	QP

Remark:

Factor = Antenna Factor + Cable Loss – Pre-amplifier.

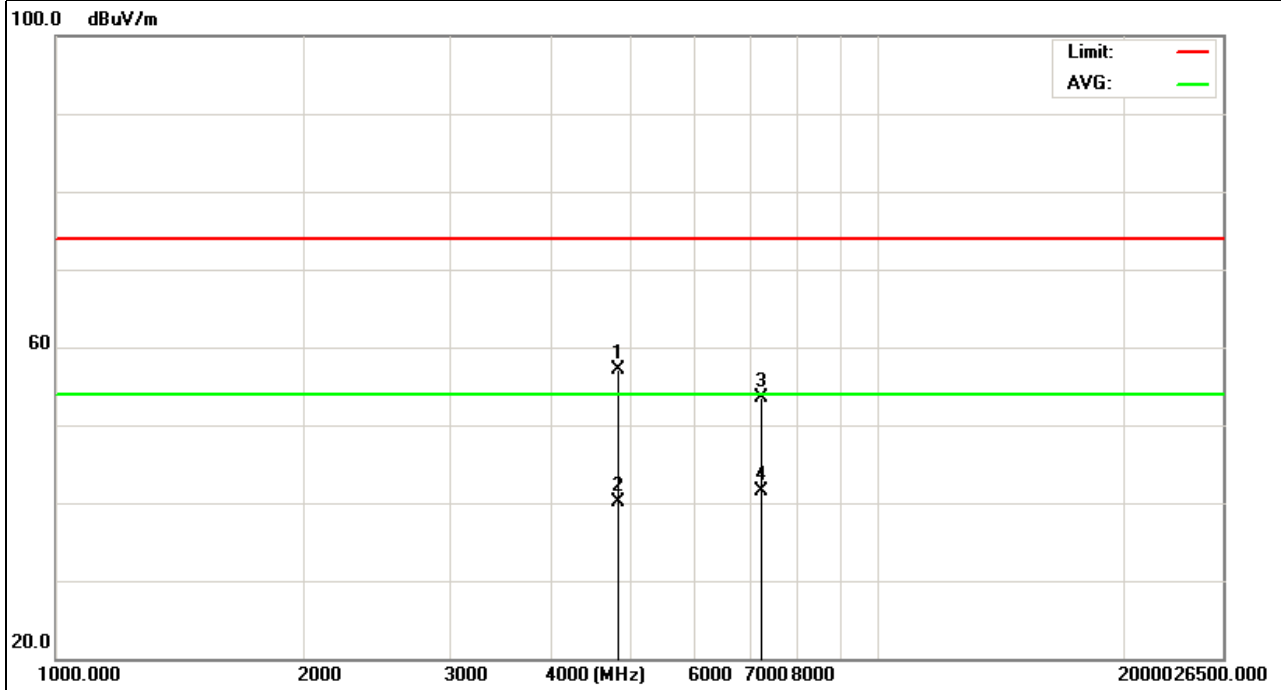


3.2.8 TEST RESULTS (ABOVE 1000 MHZ)

EUT :	150M Wireless Router	Model Name :	WRT150N
Temperature :	20 °C	Relative Humidity :	48%
Pressure :	1010 hPa	Test Voltage :	DC 5.0V
Test Mode :	CH1 (802.11b Mode)/2412	Polarization :	Horizontal

Frequency (MHz)	Meter Reading (dBμV)	Factor (dB)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Detector Type
4824	65.31	-8.12	57.19	74	-16.81	peak
4824	48.21	-8.12	40.09	54	-13.91	AVG
7239	61.02	-7.47	53.55	74	-20.45	peak
7239	48.99	-7.47	41.52	54	-12.48	AVG

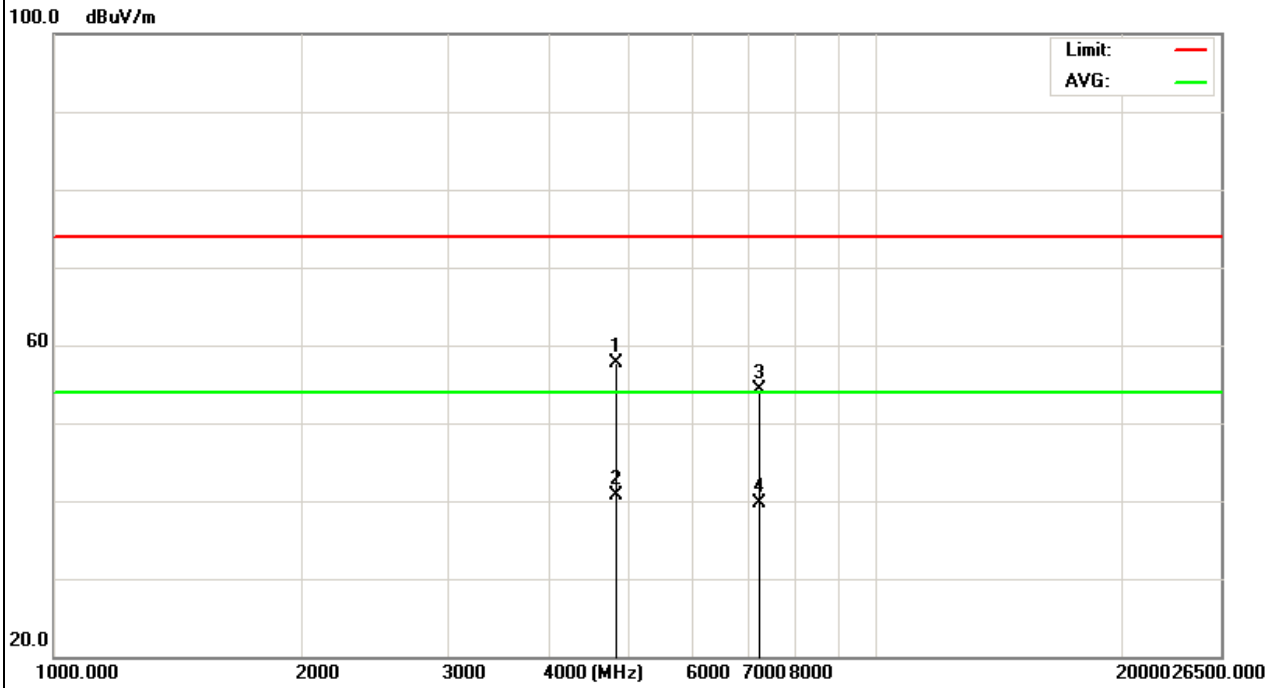
Remark:
Factor = Antenna Factor + Cable Loss – Pre-amplifier.



EUT :	150M Wireless Router	Model Name :	WRT150N
Temperature :	20 °C	Relative Humidity :	48%
Pressure :	1010 hPa	Test Voltage :	DC 5.0V
Test Mode :	CH1 (802.11b Mode)/2412	Polarization :	Vertical

Frequency (MHz)	Meter Reading (dBμV)	Factor (dB)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Detector Type
4824	65.74	-8.12	57.62	74	-16.38	peak
4824	48.89	-8.12	40.77	54	-13.23	AVG
7239	61.79	-7.47	54.32	74	-19.68	peak
7239	47.1	-7.47	39.63	54	-14.37	AVG

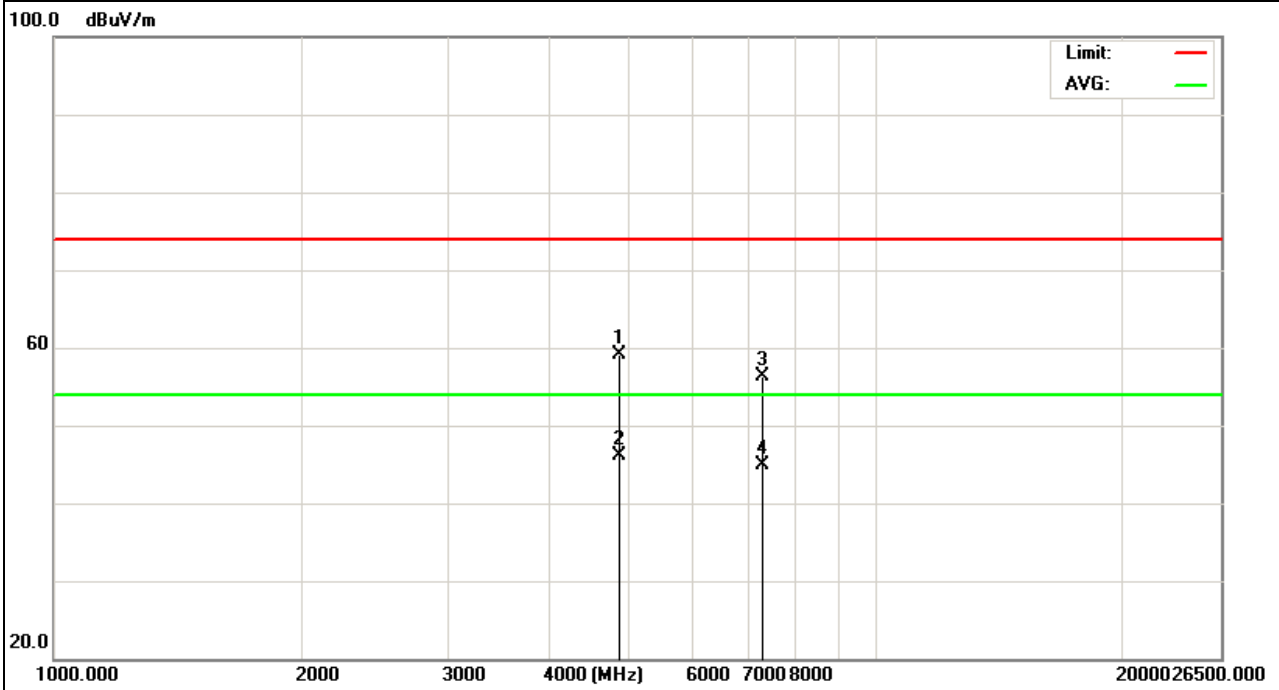
Remark:
Factor = Antenna Factor + Cable Loss – Pre-amplifier.



EUT :	150M Wireless Router	Model Name :	WRT150N
Temperature :	20 °C	Relative Humidity :	48%
Pressure :	1010 hPa	Test Voltage :	DC 5.0V
Test Mode :	CH6 (802.11b Mode)/2437	Polarization :	Horizontal

Frequency (MHz)	Meter Reading (dBμV)	Factor (dB)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Detector Type
4874	67.22	-8.19	59.03	74	-14.97	peak
4874	54.31	-8.19	46.12	54	-7.88	AVG
7311	63.44	-7.21	56.23	74	-17.77	peak
7311	52.11	-7.21	44.9	54	-9.1	AVG

Remark:
Factor = Antenna Factor + Cable Loss – Pre-amplifier.

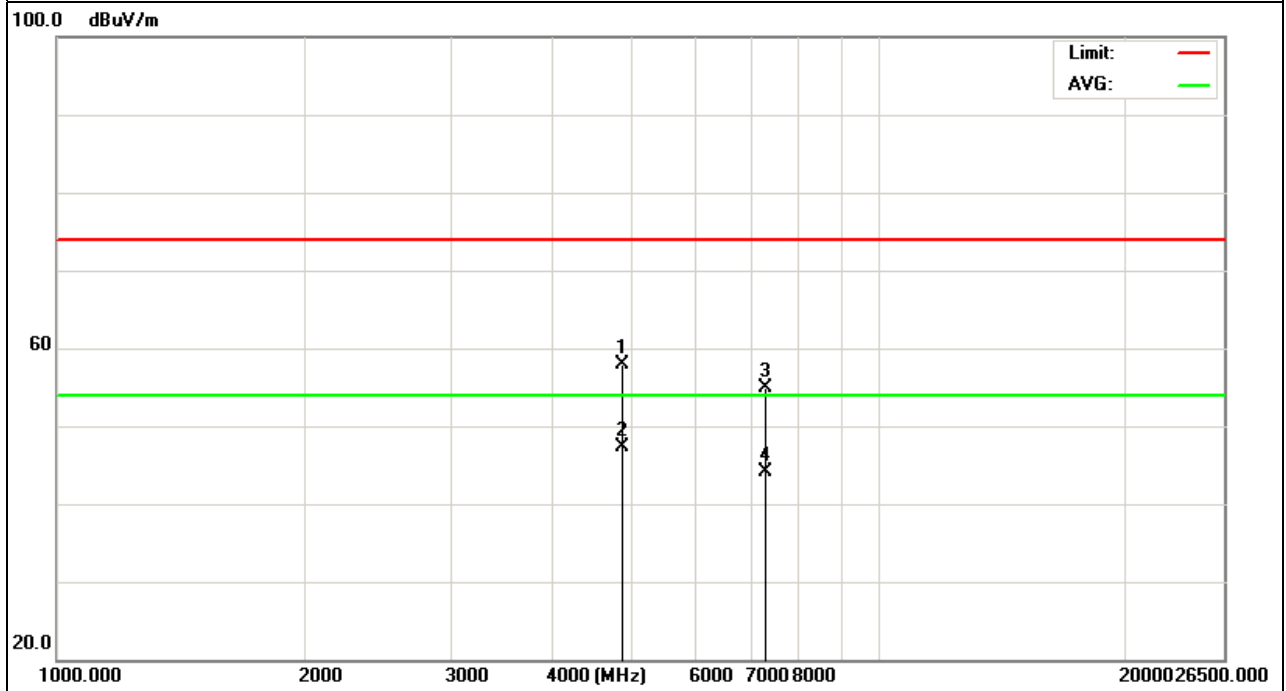


EUT :	150M Wireless Router	Model Name :	WRT150N
Temperature :	20 °C	Relative Humidity :	48%
Pressure :	1010 hPa	Test Voltage :	DC 5.0V
Test Mode :	CH6 (802.11b Mode)/2437	Polarization :	Vertical

Frequency (MHz)	Meter Reading (dBμV)	Factor (dB)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Detector Type
4874	66.01	-8.19	57.82	74	-16.18	peak
4874	55.51	-8.19	47.32	54	-6.68	AVG
7311	62.12	-7.21	54.91	74	-19.09	peak
7311	51.29	-7.21	44.08	54	-9.92	AVG

Remark:

- Factor = Antenna Factor + Cable Loss – Pre-amplifier.
- No emission detected above 18GHz

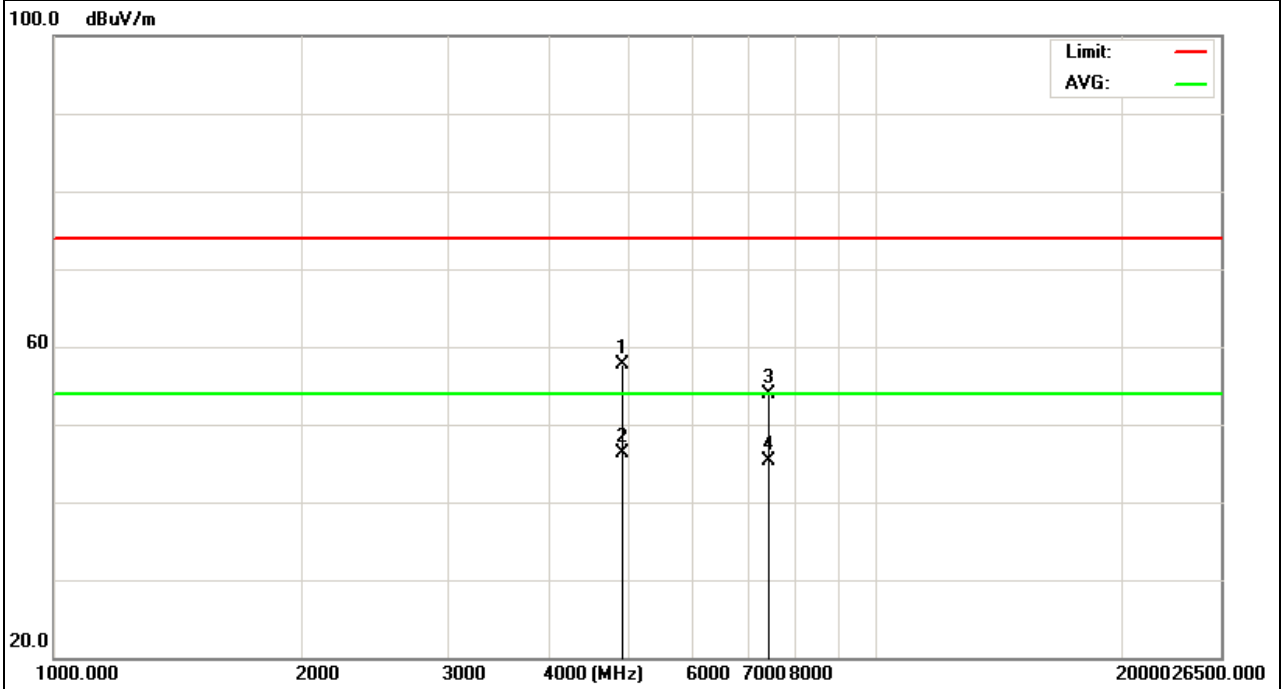


EUT :	150M Wireless Router	Model Name :	WRT150N
Temperature :	20 °C	Relative Humidity :	48%
Pressure :	1010 hPa	Test Voltage :	DC 5.0V
Test Mode :	CH11 (802.11b Mode)/2462	Polarization :	Horizontal

Frequency (MHz)	Meter Reading (dBµV)	Factor (dB)	Emission Level (dBµV/m)	Limits (dBµV/m)	Margin (dB)	Detector Type
4924	65.9	-8.22	57.68	74	-16.32	peak
4924	54.48	-8.22	46.26	54	-7.74	AVG
7386	61.39	-7.39	54	74	-20	peak
7386	52.69	-7.39	45.3	54	-8.7	AVG

Remark:

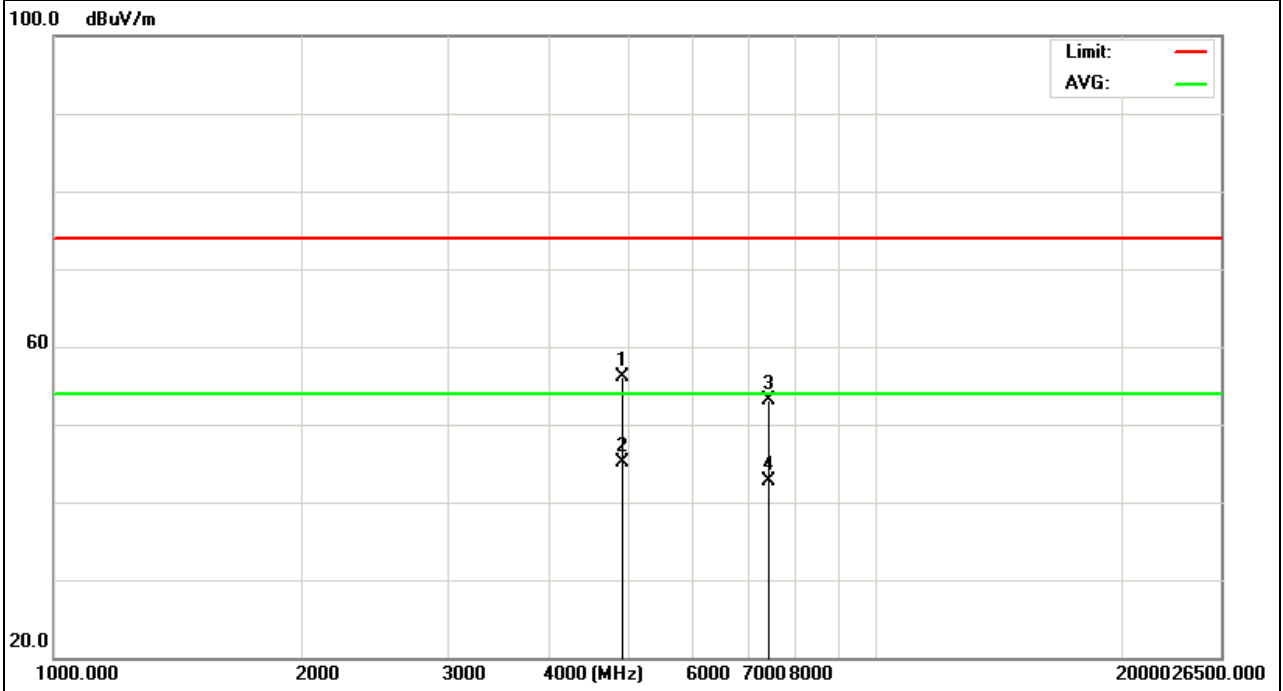
- Factor = Antenna Factor + Cable Loss – Pre-amplifier.
- No emission detected above 18GHz



EUT :	150M Wireless Router	Model Name :	WRT150N
Temperature :	20 °C	Relative Humidity :	48%
Pressure :	1010 hPa	Test Voltage :	DC 5.0V
Test Mode :	CH11 (802.11b Mode)/2462	Polarization :	Vertical

Frequency (MHz)	Meter Reading (dBμV)	Factor (dB)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Detector Type
4924	64.33	-8.22	56.11	74	-17.89	peak
4924	53.31	-8.22	45.09	54	-8.91	AVG
7386	60.51	-7.39	53.12	74	-20.88	peak
7386	50.11	-7.39	42.72	54	-11.28	AVG

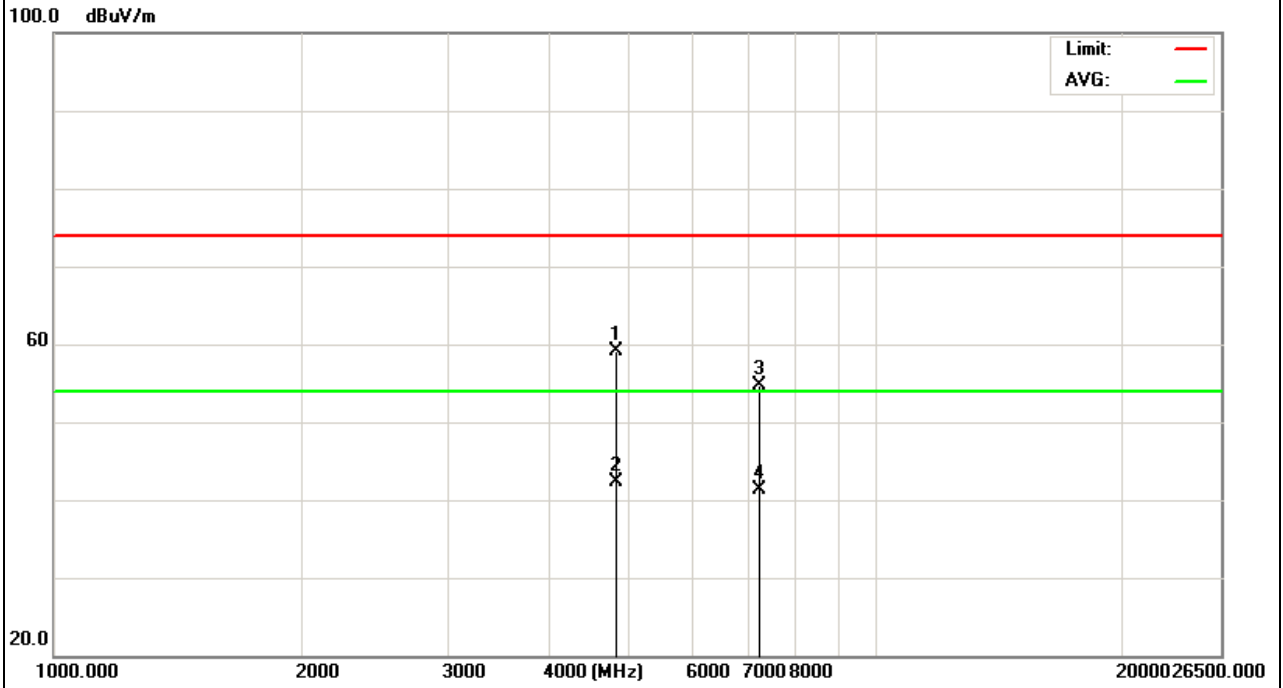
Remark:
Factor = Antenna Factor + Cable Loss – Pre-amplifier.



EUT :	150M Wireless Router	Model Name :	WRT150N
Temperature :	20 °C	Relative Humidity :	48%
Pressure :	1010 hPa	Test Voltage :	DC 5.0V
Test Mode :	CH1 (802.11g Mode)/2412	Polarization :	Horizontal

Frequency (MHz)	Meter Reading (dBμV)	Factor (dB)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Detector Type
4824	67.21	-8.12	59.09	74	-14.91	peak
4824	50.33	-8.12	42.21	54	-11.79	AVG
7239	62.12	-7.47	54.65	74	-19.35	peak
7239	48.87	-7.47	41.4	54	-12.6	AVG

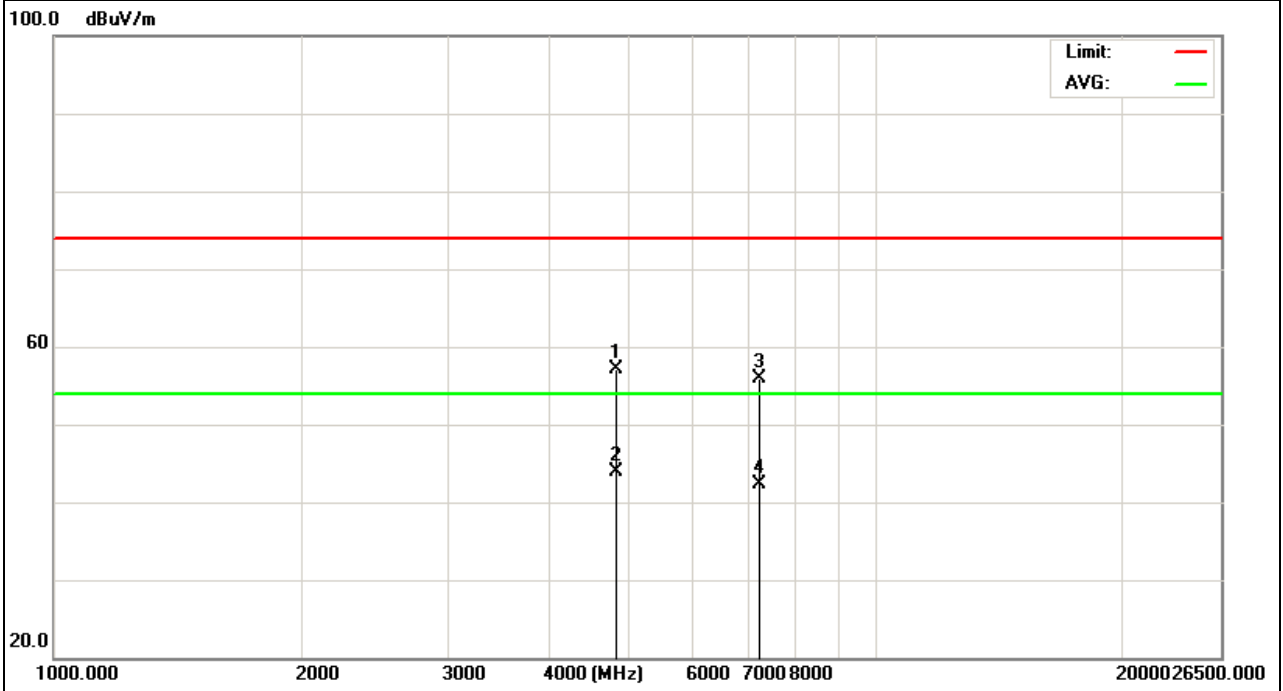
Remark:
Factor = Antenna Factor + Cable Loss – Pre-amplifier.



EUT :	150M Wireless Router	Model Name :	WRT150N
Temperature :	20 °C	Relative Humidity :	48%
Pressure :	1010 hPa	Test Voltage :	DC 5.0V
Test Mode :	CH1 (802.11g Mode)/2412	Polarization :	Vertical

Frequency (MHz)	Meter Reading (dBμV)	Factor (dB)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Detector Type
4824	65.21	-8.12	57.09	74	-16.91	peak
4824	52.12	-8.12	44	54	-10	AVG
7239	63.33	-7.47	55.86	74	-18.14	peak
7239	49.8	-7.47	42.33	54	-11.67	AVG

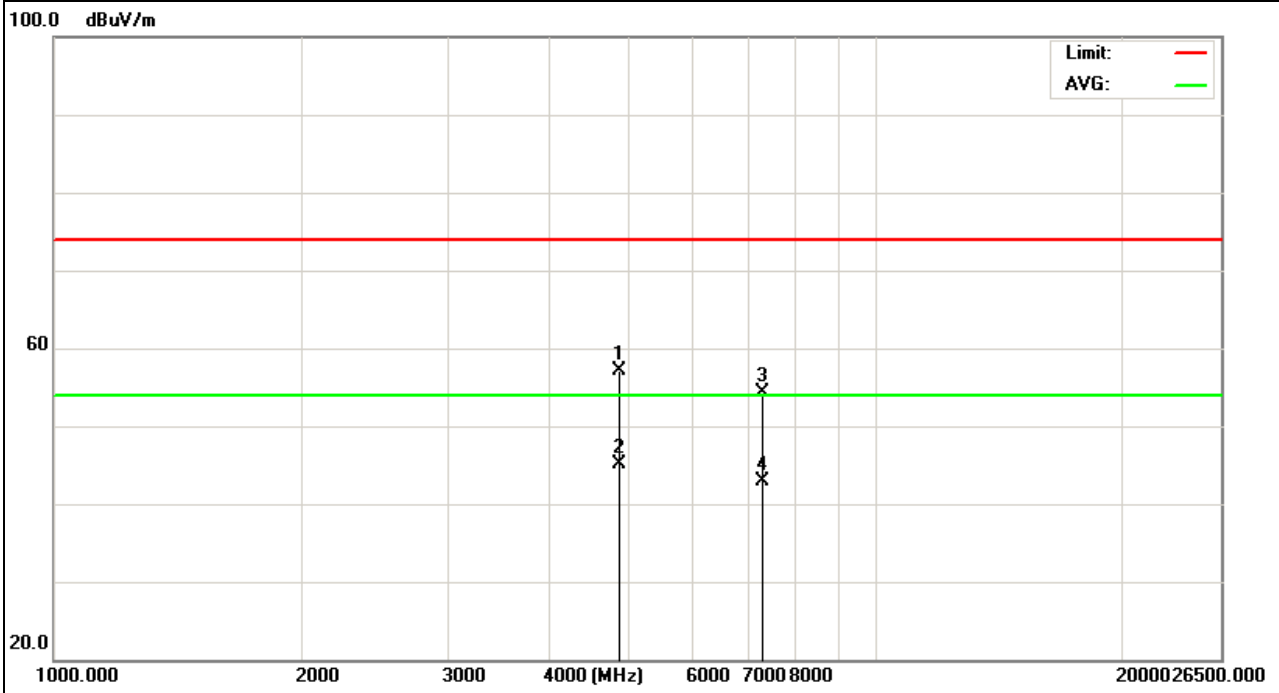
Remark:
Factor = Antenna Factor + Cable Loss – Pre-amplifier.



EUT :	150M Wireless Router	Model Name :	WRT150N
Temperature :	20 °C	Relative Humidity :	48%
Pressure :	1010 hPa	Test Voltage :	DC 5.0V
Test Mode :	CH6 (802.11g Mode)/2437	Polarization :	Horizontal

Frequency (MHz)	Meter Reading (dBμV)	Factor (dB)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Detector Type
4874	65.32	-8.19	57.13	74	-16.87	peak
4874	53.21	-8.19	45.02	54	-8.98	AVG
7311	61.44	-7.21	54.23	74	-19.77	peak
7311	50.09	-7.21	42.88	54	-11.12	AVG

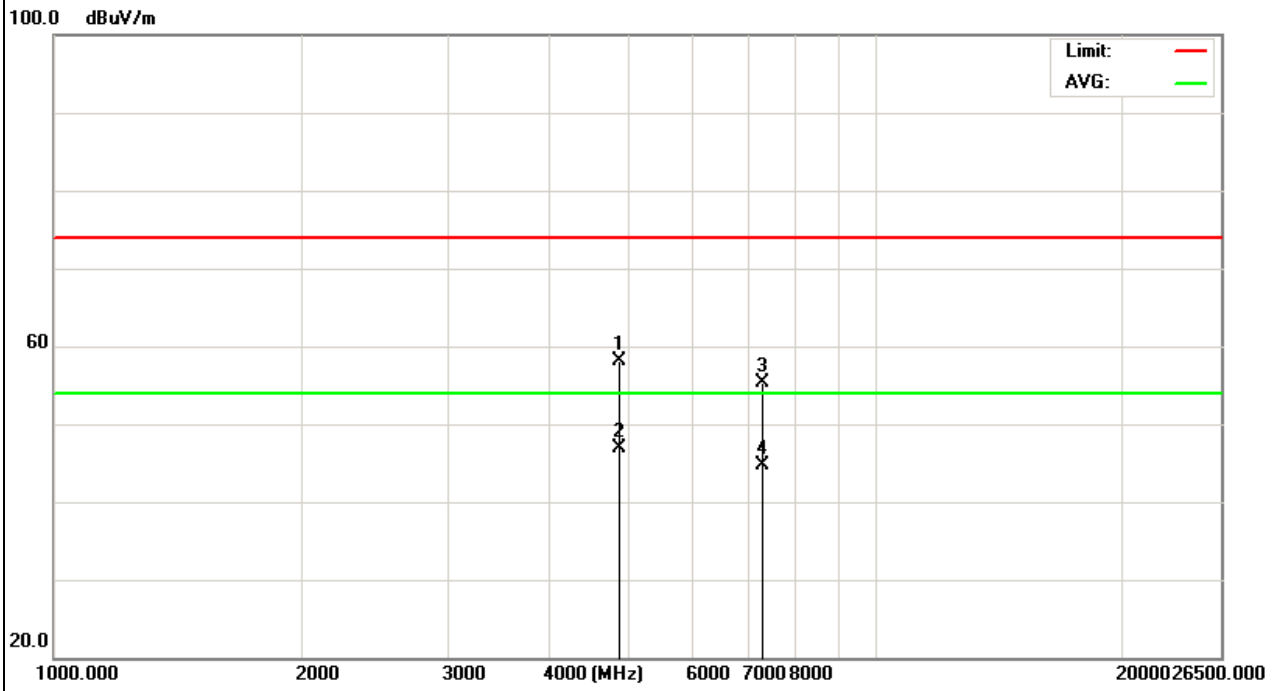
Remark:
Factor = Antenna Factor + Cable Loss – Pre-amplifier.



EUT :	150M Wireless Router	Model Name :	WRT150N
Temperature :	20 °C	Relative Humidity :	48%
Pressure :	1010 hPa	Test Voltage :	DC 5.0V
Test Mode :	CH6 (802.11g Mode)/2437	Polarization :	Vertical

Frequency (MHz)	Meter Reading (dBμV)	Factor (dB)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Detector Type
4874	66.22	-8.19	58.03	74	-15.97	peak
4874	55.14	-8.19	46.95	54	-7.05	AVG
7311	62.56	-7.21	55.35	74	-18.65	peak
7311	51.89	-7.21	44.68	54	-9.32	AVG

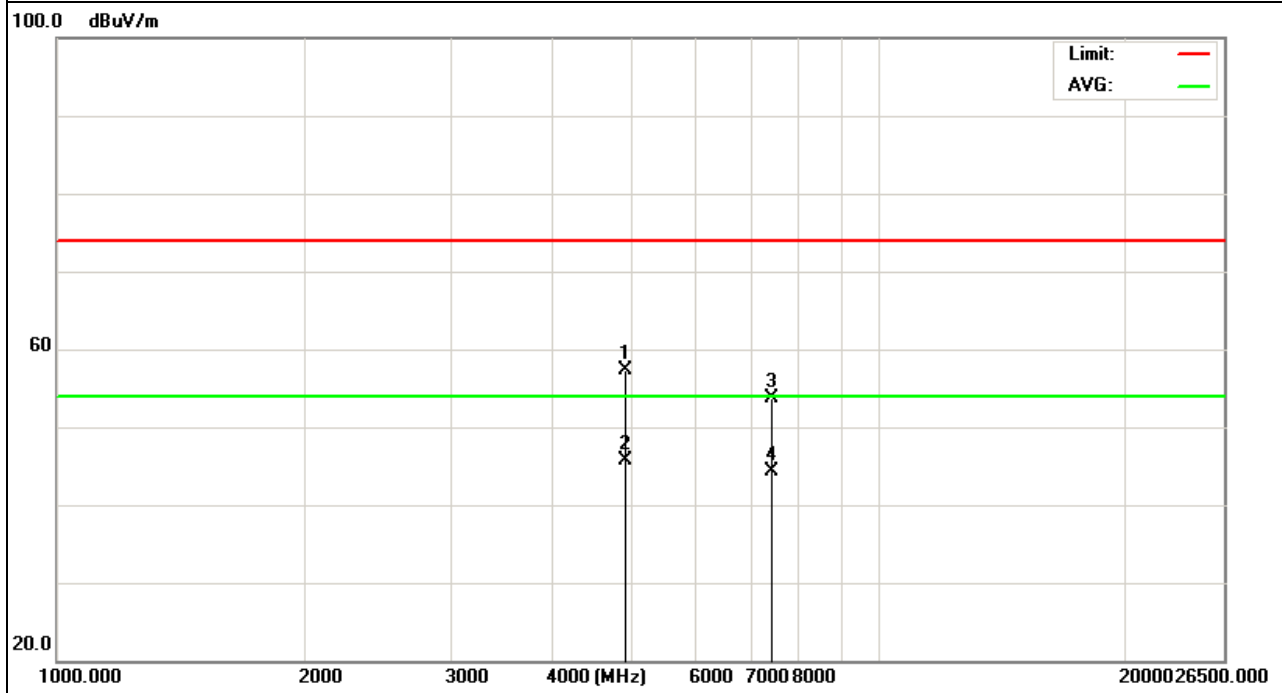
Remark:
Factor = Antenna Factor + Cable Loss – Pre-amplifier.



EUT :	150M Wireless Router	Model Name :	WRT150N
Temperature :	20 °C	Relative Humidity :	48%
Pressure :	1010 hPa	Test Voltage :	DC 5.0V
Test Mode :	CH11 (802.11g Mode)/2462	Polarization :	Horizontal

Frequency (MHz)	Meter Reading (dBμV)	Factor (dB)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Detector Type
4924	65.46	-8.22	57.24	74	-16.76	peak
4924	54.01	-8.22	45.79	54	-8.21	AVG
7386	61.11	-7.39	53.72	74	-20.28	peak
7386	51.65	-7.39	44.26	54	-9.74	AVG

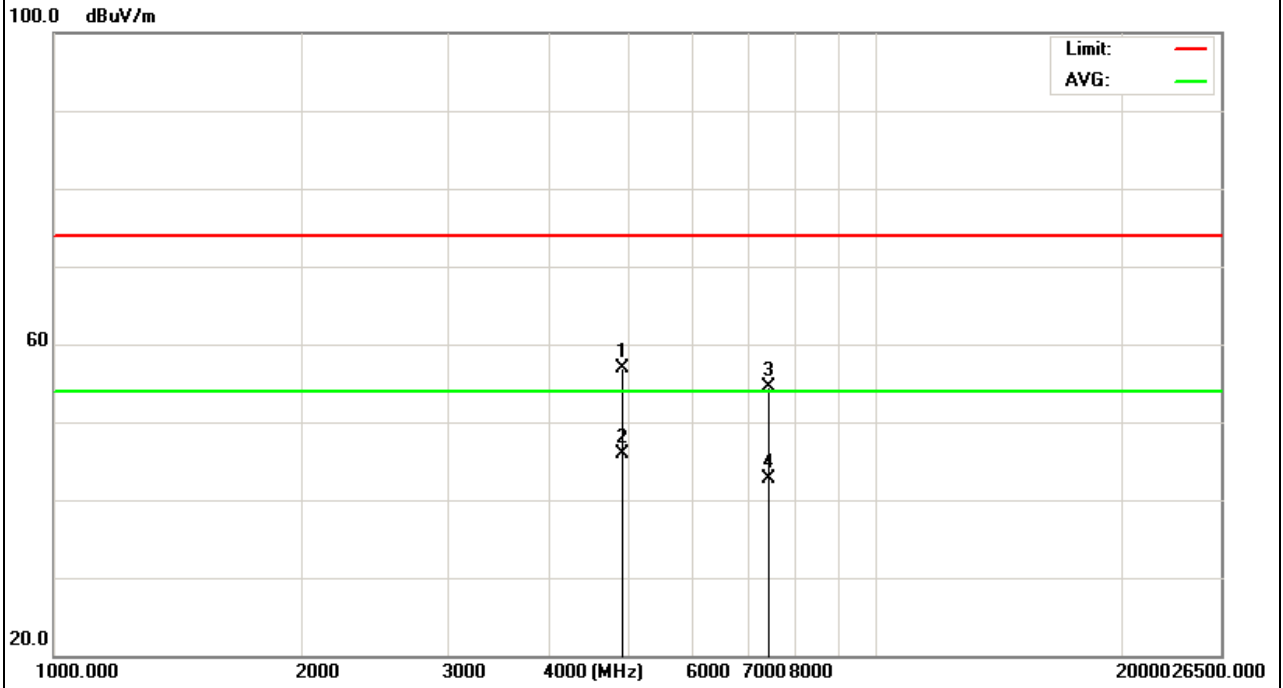
Remark:
Factor = Antenna Factor + Cable Loss – Pre-amplifier.



EUT :	150M Wireless Router	Model Name :	WRT150N
Temperature :	20 °C	Relative Humidity :	48%
Pressure :	1010 hPa	Test Voltage :	DC 5.0V
Test Mode :	CH11(802.11g Mode)/2462	Polarization :	Vertical

Frequency (MHz)	Meter Reading (dBμV)	Factor (dB)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Detector Type
4924	65.21	-8.22	56.99	74	-17.01	peak
4924	54.11	-8.22	45.89	54	-8.11	AVG
7386	61.89	-7.39	54.5	74	-19.5	peak
7386	50.09	-7.39	42.7	54	-11.3	AVG

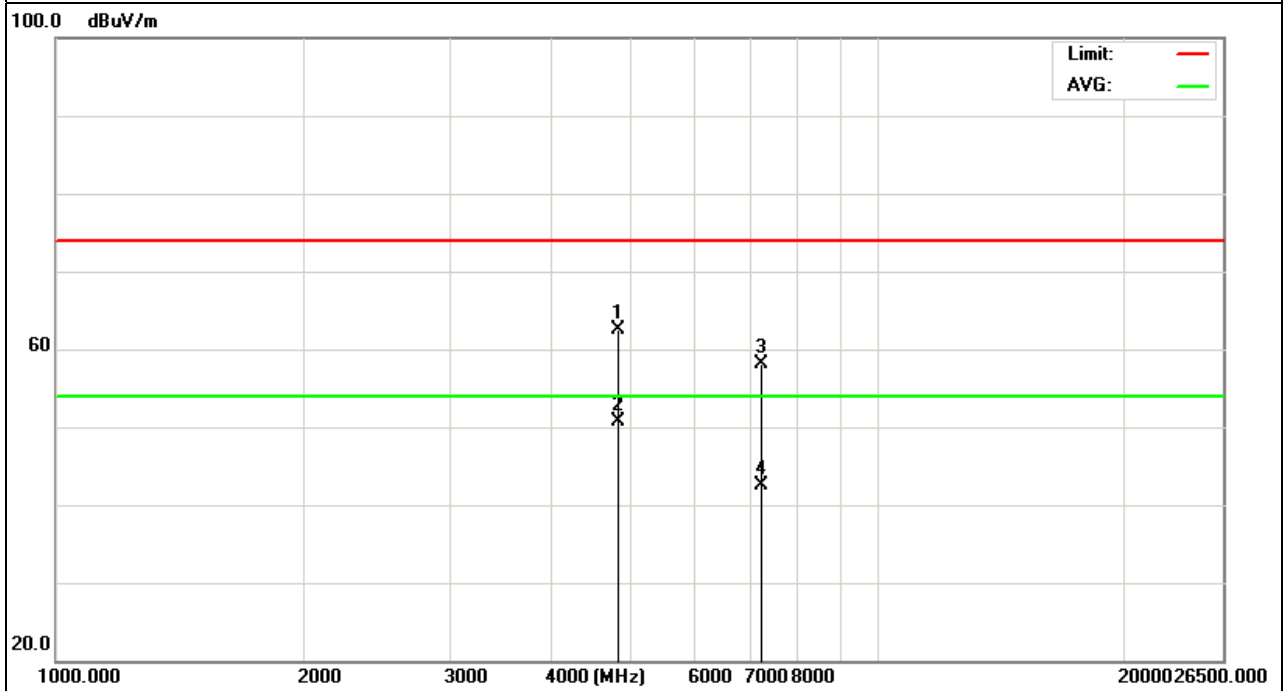
Remark:
Factor = Antenna Factor + Cable Loss – Pre-amplifier.



EUT :	150M Wireless Router	Model Name :	WRT150N
Temperature :	20 °C	Relative Humidity :	48%
Pressure :	1010 hPa	Test Voltage :	DC 5.0V
Test Mode :	CH1(802.11n Mode)/20MHz	Polarization :	Horizontal

Frequency (MHz)	Meter Reading (dBμV)	Factor (dB)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Detector Type
4824	70.57	-8.12	62.45	74	-11.55	peak
4824	57.89	-8.12	49.77	54	-4.23	AVG
7239	65.59	-7.47	58.12	74	-15.88	peak
7239	49.99	-7.47	42.52	54	-11.48	AVG

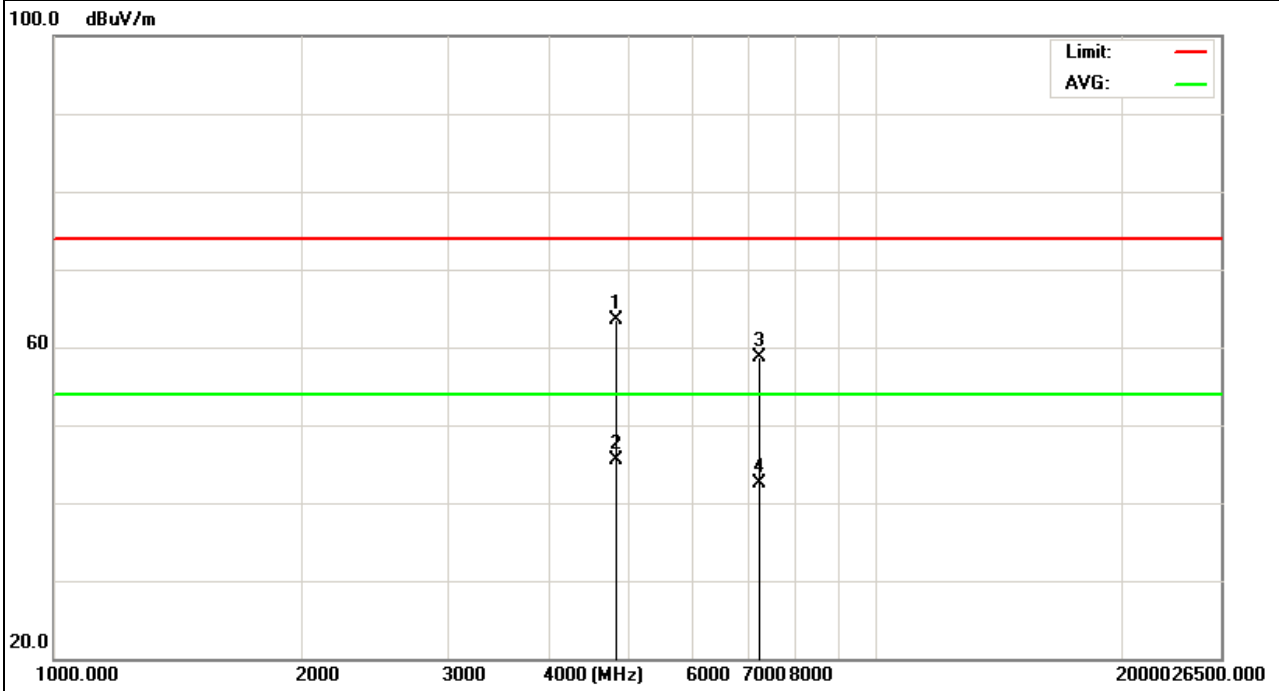
Remark:
 Factor = Antenna Factor + Cable Loss – Pre-amplifier.



EUT :	150M Wireless Router	Model Name :	WRT150N
Temperature :	20 °C	Relative Humidity :	48%
Pressure :	1010 hPa	Test Voltage :	DC 5.0V
Test Mode :	CH1(802.11n Mode)/20MHz	Polarization :	Vertical

Frequency (MHz)	Meter Reading (dBμV)	Factor (dB)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Detector Type
4824	71.71	-8.12	63.59	74	-10.41	peak
4824	53.56	-8.12	45.44	54	-8.56	AVG
7239	66.24	-7.47	58.77	74	-15.23	peak
7239	49.99	-7.47	42.52	54	-11.48	AVG

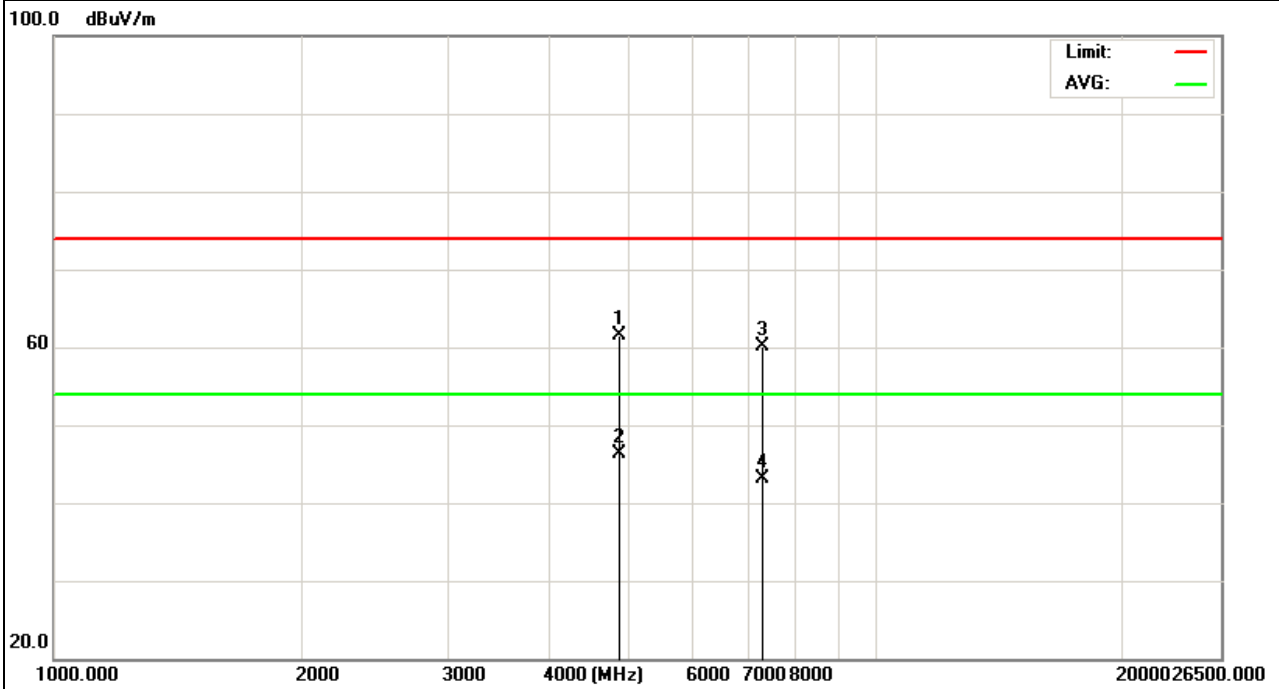
Remark:
Factor = Antenna Factor + Cable Loss – Pre-amplifier.



EUT :	150M Wireless Router	Model Name :	WRT150N
Temperature :	20 °C	Relative Humidity :	48%
Pressure :	1010 hPa	Test Voltage :	DC 5.0V
Test Mode :	CH6(802.11n Mode)/20MHz	Polarization :	Horizontal

Frequency (MHz)	Meter Reading (dBμV)	Factor (dB)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Detector Type
4874	69.63	-8.19	61.44	74	-12.56	peak
4874	54.43	-8.19	46.24	54	-7.76	AVG
7311	67.22	-7.21	60.01	74	-13.99	peak
7311	50.28	-7.21	43.07	54	-10.93	AVG

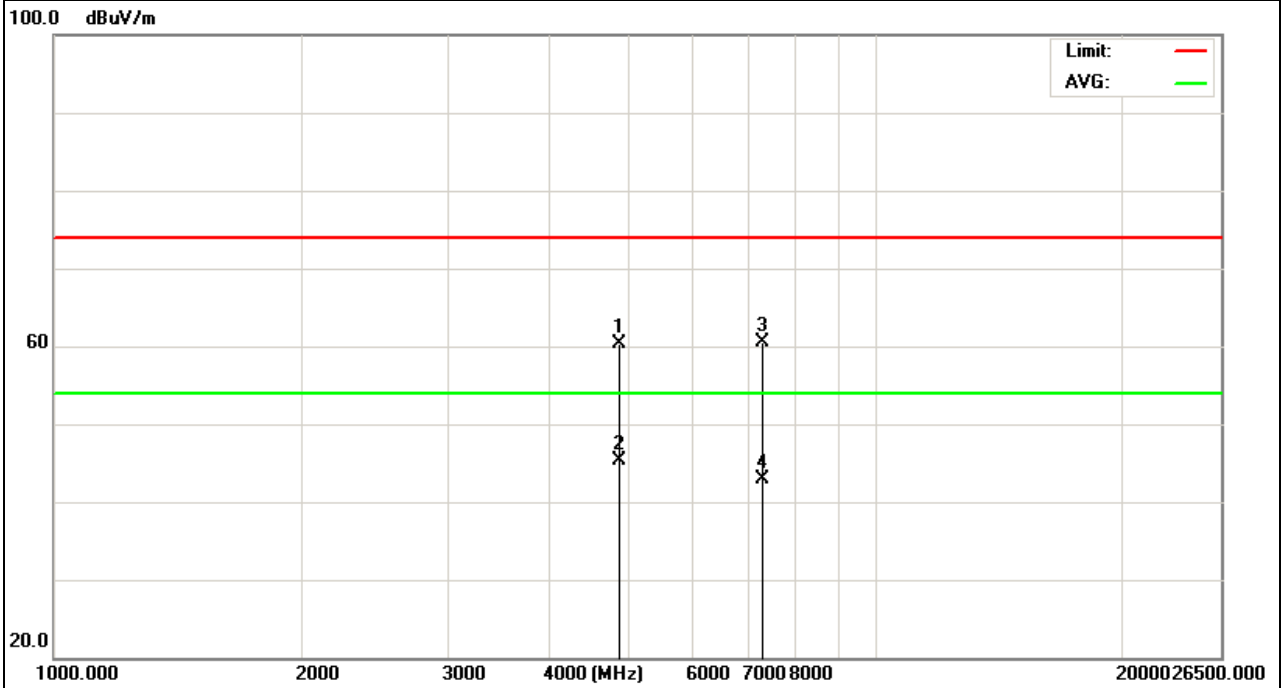
Remark:
 Factor = Antenna Factor + Cable Loss – Pre-amplifier.



EUT :	150M Wireless Router	Model Name :	WRT150N
Temperature :	20 °C	Relative Humidity :	48%
Pressure :	1010 hPa	Test Voltage :	DC 5.0V
Test Mode :	CH6(802.11n Mode)/20MHz	Polarization :	Vertical

Frequency (MHz)	Meter Reading (dBμV)	Factor (dB)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Detector Type
4874	68.46	-8.19	60.27	74	-13.73	peak
4874	53.53	-8.19	45.34	54	-8.66	AVG
7311	67.63	-7.21	60.42	74	-13.58	peak
7311	50.09	-7.21	42.88	54	-11.12	AVG

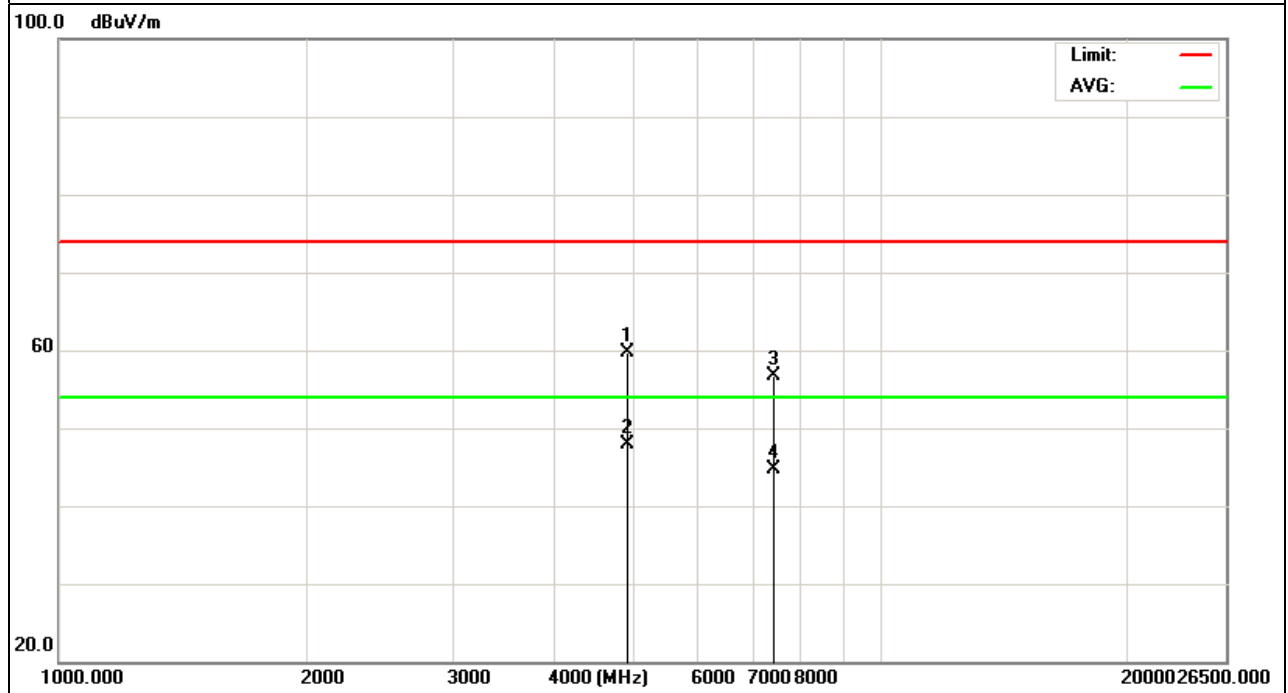
Remark:
 Factor = Antenna Factor + Cable Loss – Pre-amplifier.



EUT :	150M Wireless Router	Model Name :	WRT150N
Temperature :	20 °C	Relative Humidity :	48%
Pressure :	1010 hPa	Test Voltage :	DC 5.0V
Test Mode :	CH11(802.11n Mode)/20MHz	Polarization :	Horizontal

Frequency (MHz)	Meter Reading (dBμV)	Factor (dB)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Detector Type
4924	67.87	-8.22	59.65	74	-14.35	peak
4924	56.12	-8.22	47.9	54	-6.1	AVG
7386	64.11	-7.39	56.72	74	-17.28	peak
7386	52.12	-7.39	44.73	54	-9.27	AVG

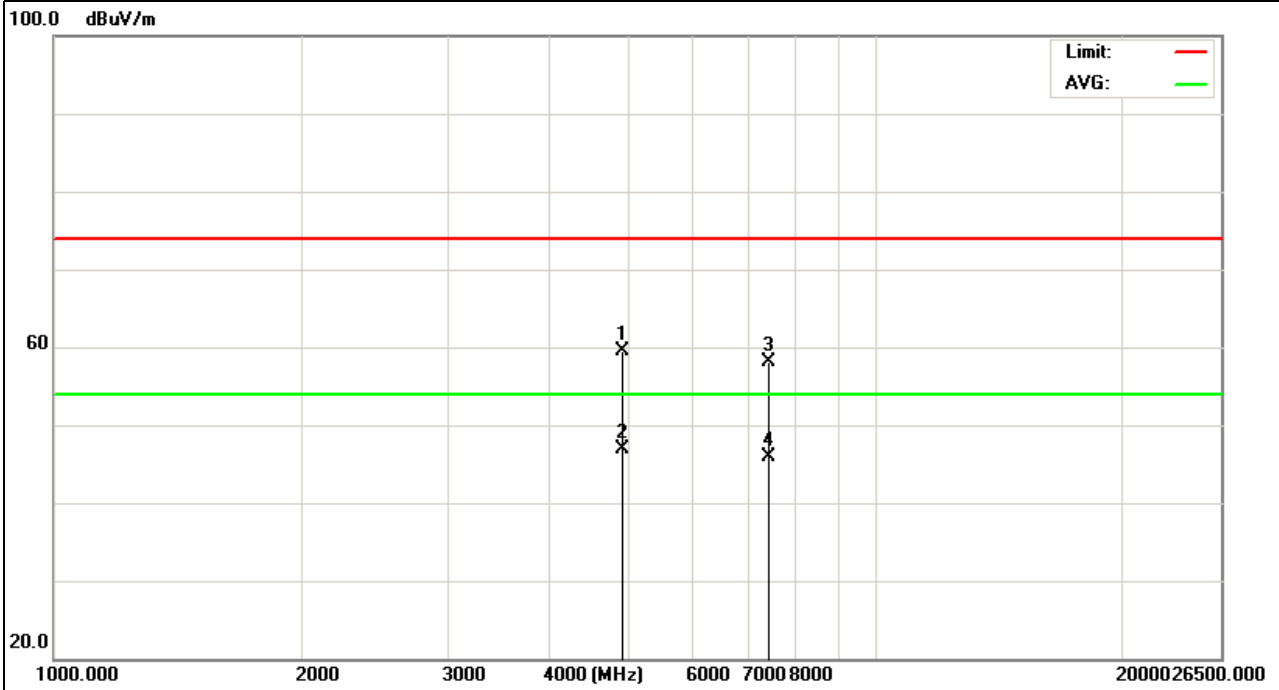
Remark:
Factor = Antenna Factor + Cable Loss – Pre-amplifier.



EUT :	150M Wireless Router	Model Name :	WRT150N
Temperature :	20 °C	Relative Humidity :	48%
Pressure :	1010 hPa	Test Voltage :	DC 5.0V
Test Mode :	CH11(802.11n Mode)/20MHz	Polarization :	Vertical

Frequency (MHz)	Meter Reading (dBμV)	Factor (dB)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Detector Type
4924	67.65	-8.22	59.43	74	-14.57	peak
4924	55.22	-8.22	47	54	-7	AVG
7386	65.55	-7.39	58.16	74	-15.84	peak
7386	53.23	-7.39	45.84	54	-8.16	AVG

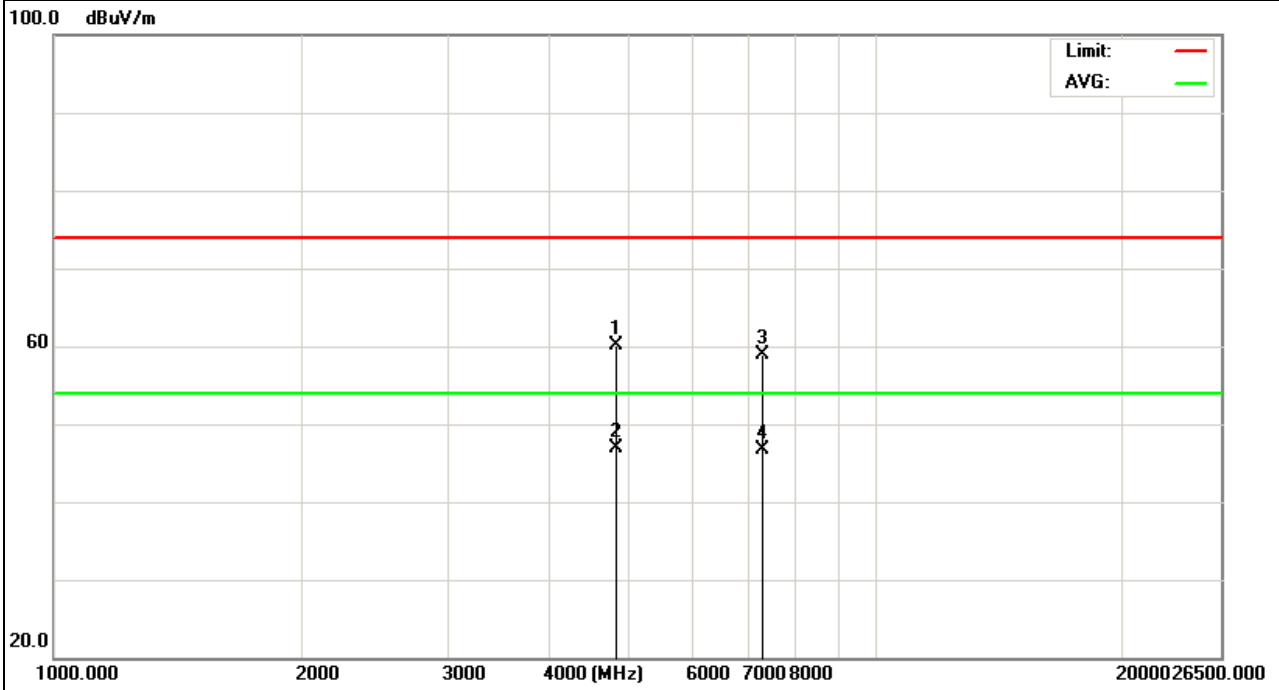
Remark:
 Factor = Antenna Factor + Cable Loss – Pre-amplifier.



EUT :	150M Wireless Router	Model Name :	WRT150N
Temperature :	20 °C	Relative Humidity :	48%
Pressure :	1010 hPa	Test Voltage :	DC 5.0V
Test Mode :	CH3(802.11n Mode)/40MHz	Polarization :	Horizontal

Frequency (MHz)	Meter Reading (dBµV)	Factor (dB)	Emission Level (dBµV/m)	Limits (dBµV/m)	Margin (dB)	Detector Type
4844	68.22	-8.07	60.15	74	-13.85	peak
4844	54.99	-8.07	46.92	54	-7.08	AVG
7266	66.35	-7.4	58.95	74	-15.05	peak
7266	54.09	-7.4	46.69	54	-7.31	AVG

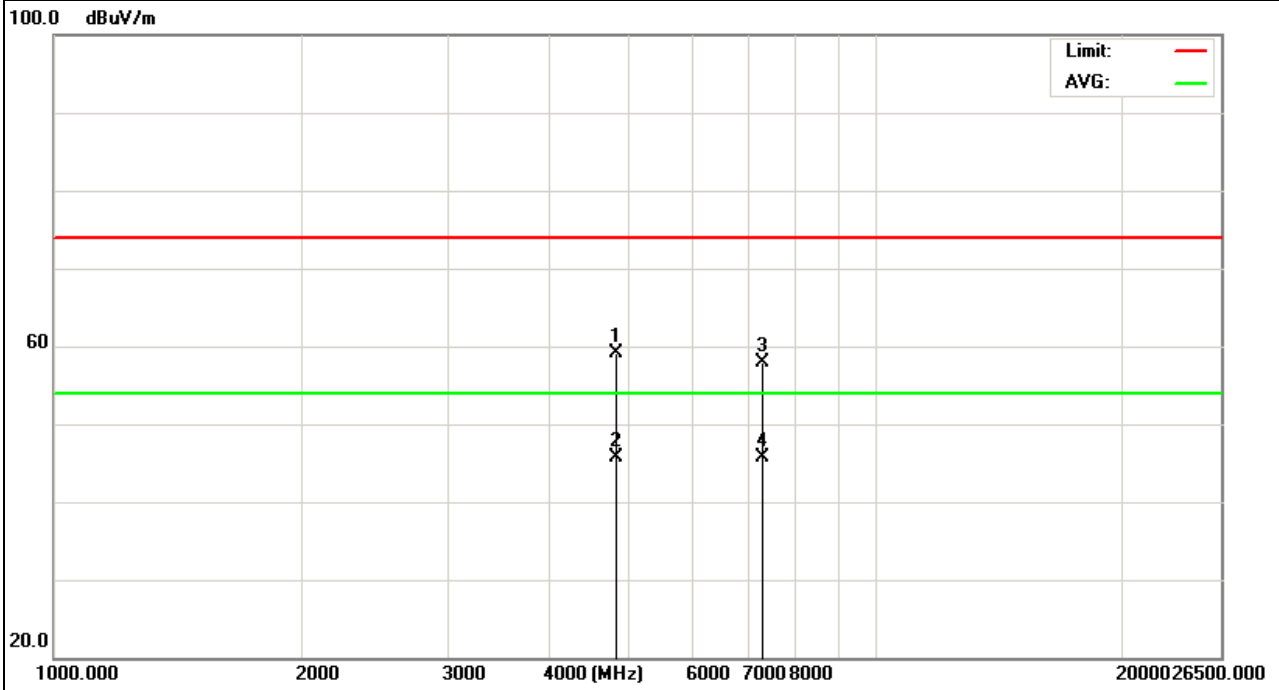
Remark:
 Factor = Antenna Factor + Cable Loss – Pre-amplifier.



EUT :	150M Wireless Router	Model Name :	WRT150N
Temperature :	20 °C	Relative Humidity :	48%
Pressure :	1010 hPa	Test Voltage :	DC 5.0V
Test Mode :	CH3(802.11n Mode)/40MHz	Polarization :	Vertical

Frequency (MHz)	Meter Reading (dBμV)	Factor (dB)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Detector Type
4844	67.09	-8.07	59.02	74	-14.98	peak
4844	53.76	-8.07	45.69	54	-8.31	AVG
7266	65.21	-7.4	57.81	74	-16.19	peak
7266	53.19	-7.4	45.79	54	-8.21	AVG

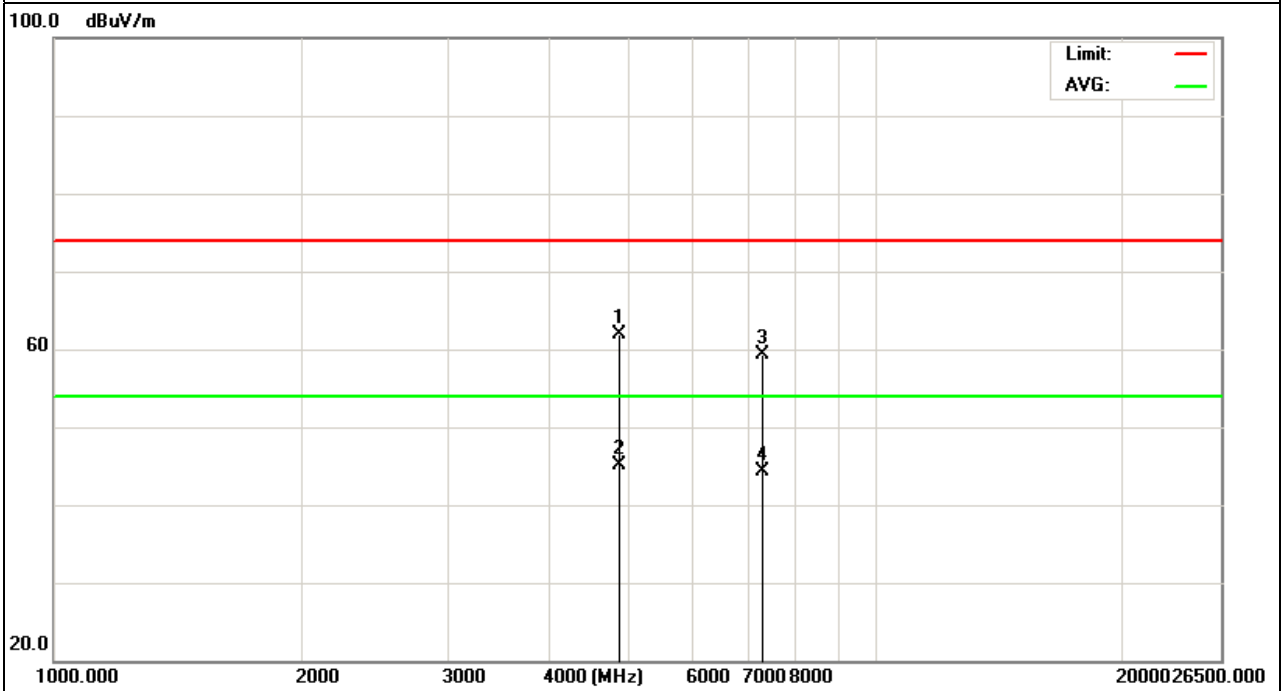
Remark:
 Factor = Antenna Factor + Cable Loss – Pre-amplifier.



EUT :	150M Wireless Router	Model Name :	WRT150N
Temperature :	20 °C	Relative Humidity :	48%
Pressure :	1010 hPa	Test Voltage :	DC 5.0V
Test Mode :	CH6(802.11n Mode)/40MHz	Polarization :	Horizontal

Frequency (MHz)	Meter Reading (dBµV)	Factor (dB)	Emission Level (dBµV/m)	Limits (dBµV/m)	Margin (dB)	Detector Type
4874	70.14	-8.19	61.95	74	-12.05	peak
4874	53.22	-8.19	45.03	54	-8.97	AVG
7311	66.44	-7.21	59.23	74	-14.77	peak
7311	51.48	-7.21	44.27	54	-9.73	AVG

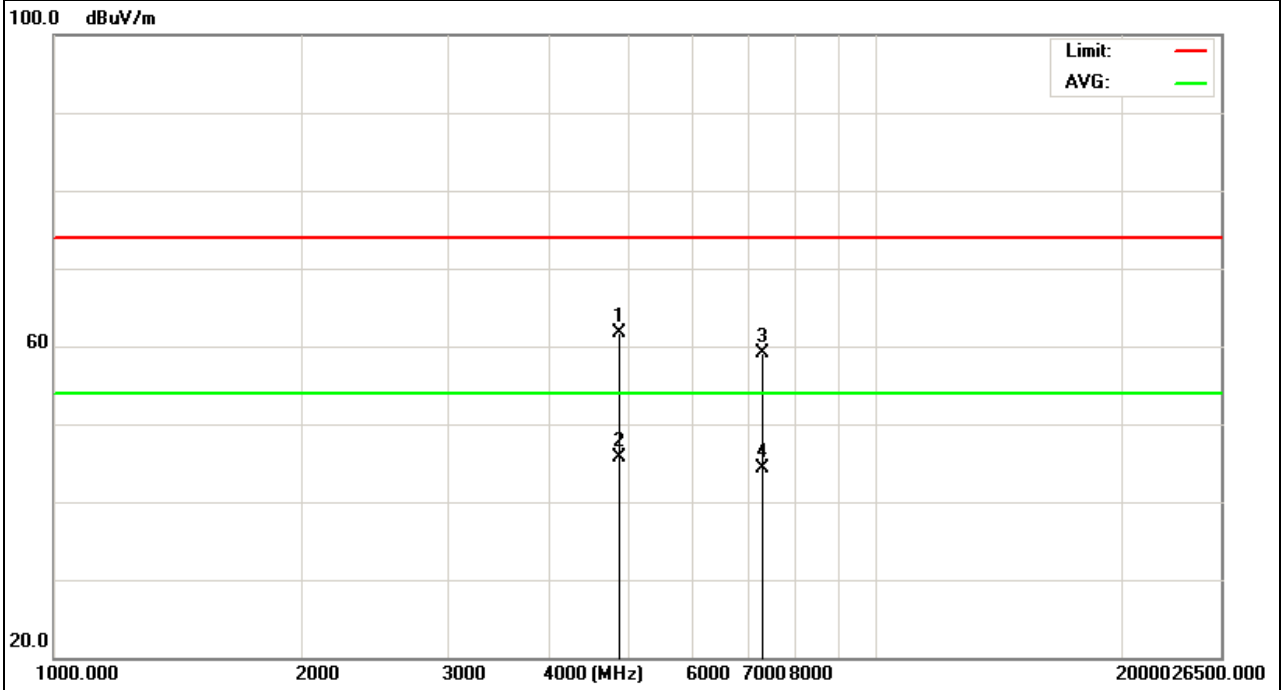
Remark:
 Factor = Antenna Factor + Cable Loss – Pre-amplifier.



EUT :	150M Wireless Router	Model Name :	WRT150N
Temperature :	20 °C	Relative Humidity :	48%
Pressure :	1010 hPa	Test Voltage :	DC 5.0V
Test Mode :	CH6(802.11n Mode)/40MHz	Polarization :	Vertical

Frequency (MHz)	Meter Reading (dBμV)	Factor (dB)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Detector Type
4874	69.99	-8.19	61.8	74	-12.2	peak
4874	53.87	-8.19	45.68	54	-8.32	AVG
7311	66.41	-7.21	59.2	74	-14.8	peak
7311	51.51	-7.21	44.3	54	-9.7	AVG

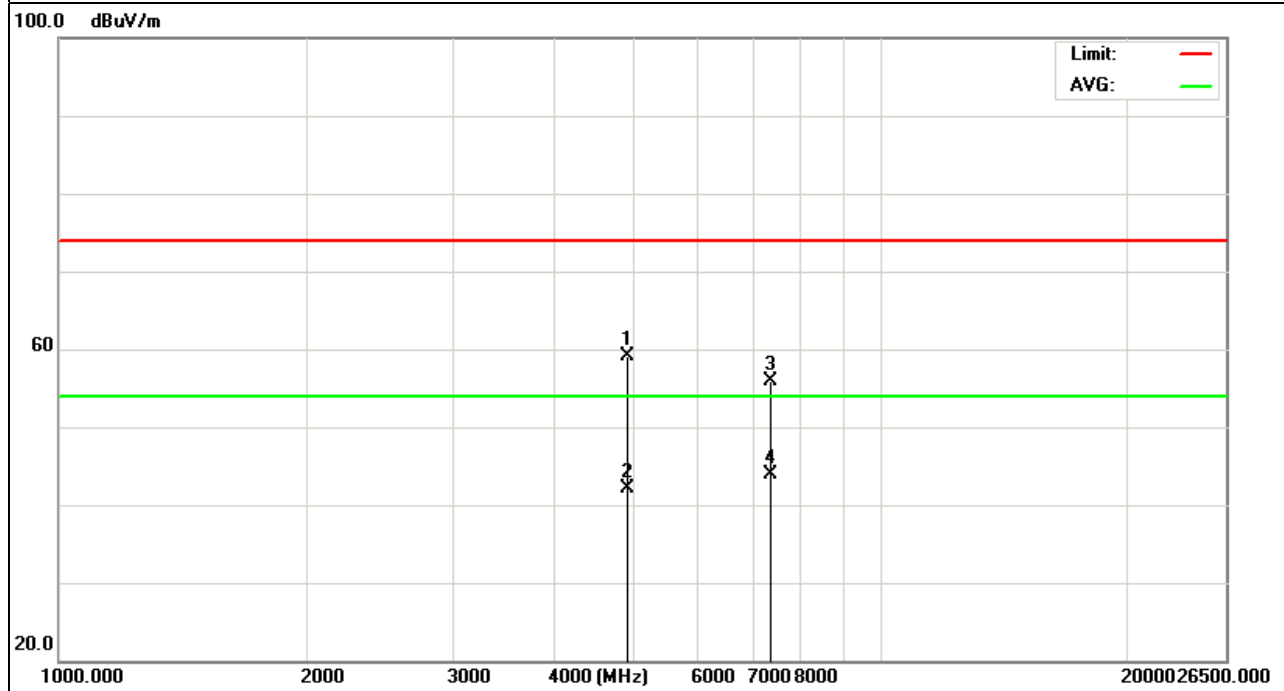
Remark:
 Factor = Antenna Factor + Cable Loss – Pre-amplifier.



EUT :	150M Wireless Router	Model Name :	WRT150N
Temperature :	20 °C	Relative Humidity :	48%
Pressure :	1010 hPa	Test Voltage :	DC 5.0V
Test Mode :	CH9(802.11n Mode)/40MHz	Polarization :	Horizontal

Frequency (MHz)	Meter Reading (dBµV)	Factor (dB)	Emission Level (dBµV/m)	Limits (dBµV/m)	Margin (dB)	Detector Type
4904	67.45	-8.31	59.14	74	-14.86	peak
4904	50.34	-8.31	42.03	54	-11.97	AVG
7356	63.24	-7.24	56	74	-18	peak
7356	51.09	-7.24	43.85	54	-10.15	AVG

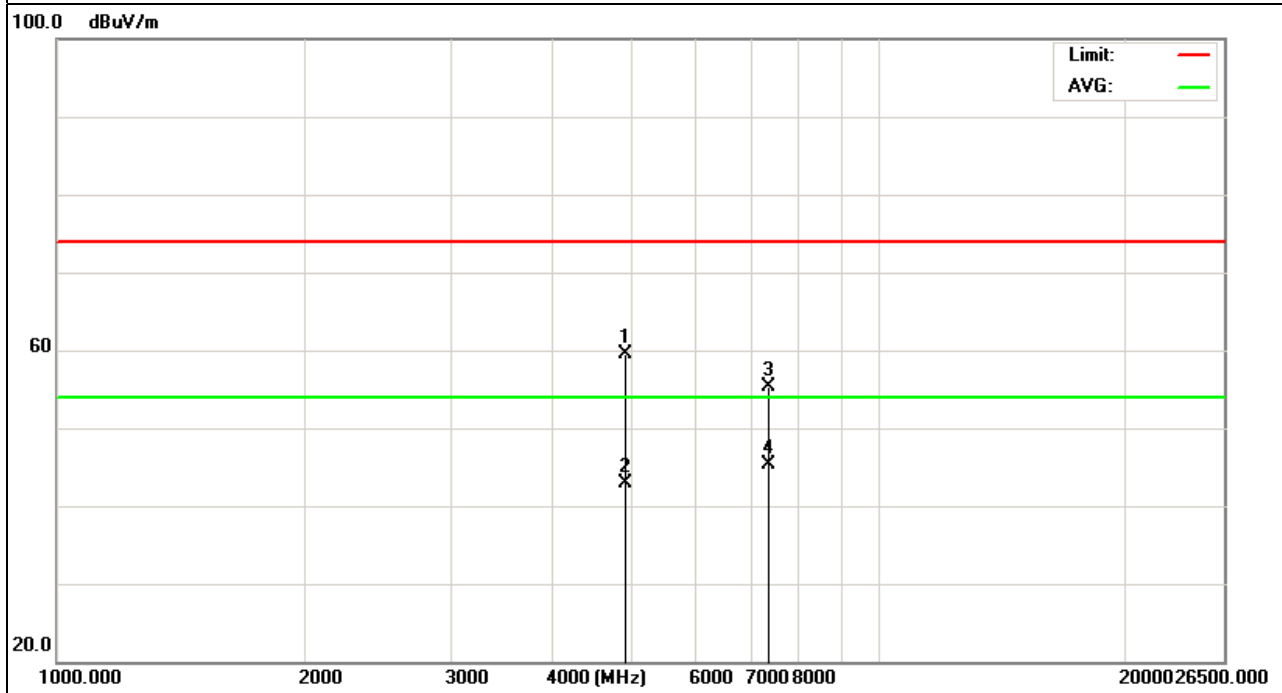
Remark:
 Factor = Antenna Factor + Cable Loss – Pre-amplifier.



EUT :	150M Wireless Router	Model Name :	WRT150N
Temperature :	20 °C	Relative Humidity :	48%
Pressure :	1010 hPa	Test Voltage :	DC 5.0V
Test Mode :	CH9(802.11n Mode)/40MHz	Polarization :	Vertical

Frequency (MHz)	Meter Reading (dBμV)	Factor (dB)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Detector Type
4904	67.88	-8.31	59.57	74	-14.43	peak
4904	51.22	-8.31	42.91	54	-11.09	AVG
7356	62.58	-7.24	55.34	74	-18.66	peak
7356	52.47	-7.24	45.23	54	-8.77	AVG

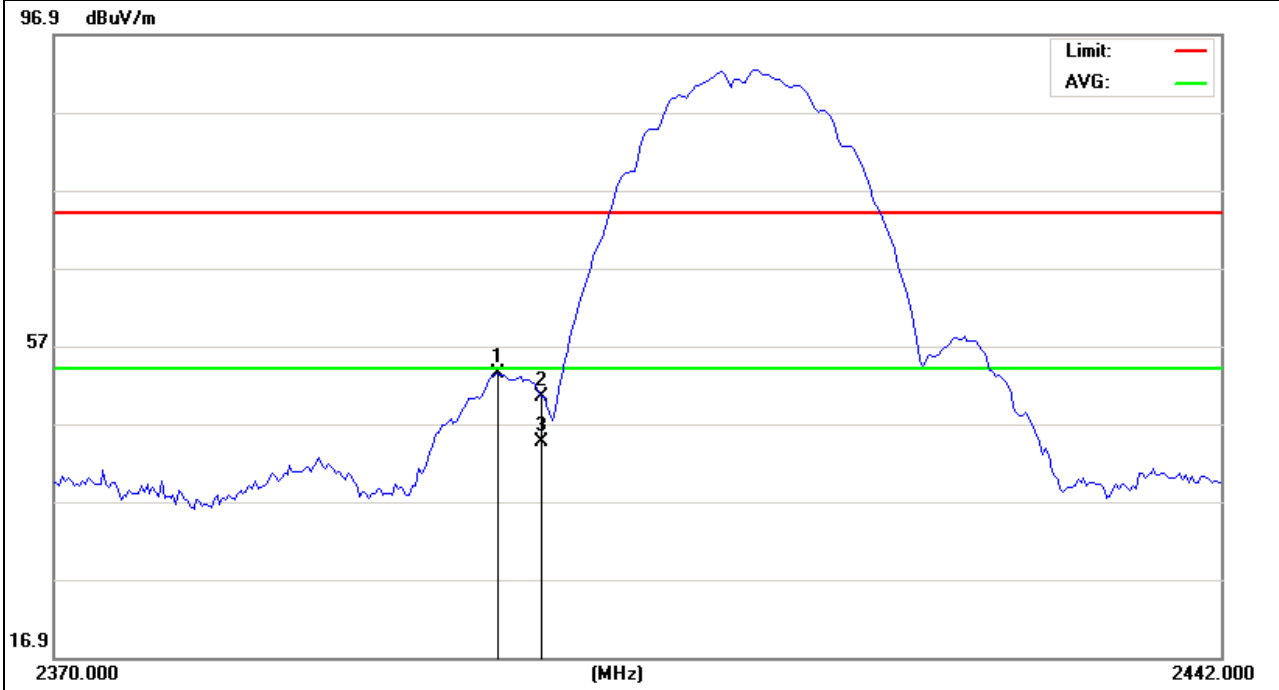
Remark:
Factor = Antenna Factor + Cable Loss – Pre-amplifier.



EUT :	150M Wireless Router	Model Name :	WRT150N
Temperature :	20 °C	Relative Humidity :	48%
Pressure :	1010 hPa	Test Voltage :	DC 5.0V
Test Mode :	CH1(802.11b Mode)	Polarization :	Horizontal

Frequency (MHz)	Meter Reading (dBµV)	Factor (dB)	Emission Level (dBµV/m)	Limits (dBµV/m)	Margin (dB)	Detector Type
2397.18	70.84	-17.48	53.36	74	-20.64	peak
2400	67.77	-17.46	50.31	74	-23.69	peak
2400	61.97	-17.46	44.51	54	-9.49	AVG

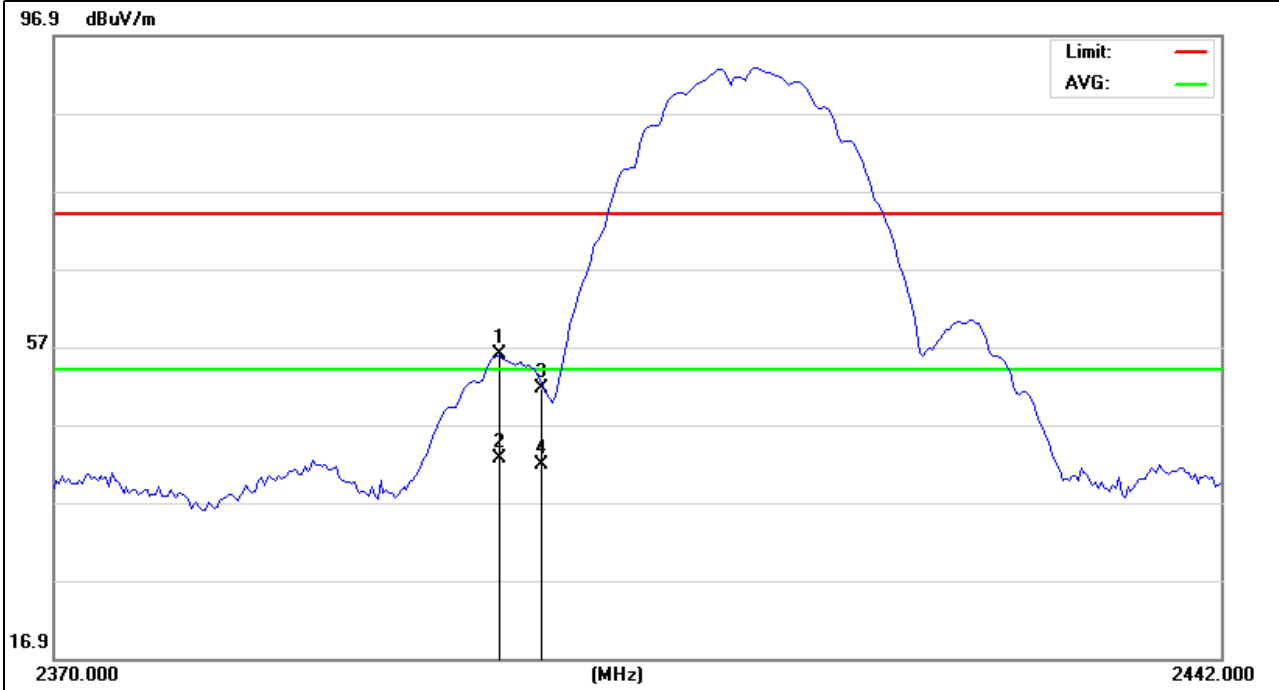
Remark:
 Factor = Antenna Factor + Cable Loss – Pre-amplifier.



EUT :	150M Wireless Router	Model Name :	WRT150N
Temperature :	20 °C	Relative Humidity :	48%
Pressure :	1010 hPa	Test Voltage :	DC 5.0V
Test Mode :	CH1(802.11b Mode)	Polarization :	Vertical

Frequency (MHz)	Meter Reading (dBμV)	Factor (dB)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Detector Type
2397.36	73.45	-17.48	55.97	74	-18.03	peak
2397.36	60.14	-17.48	42.66	54	-11.34	AVG
2400	69.15	-17.46	51.69	74	-22.31	peak
2400	59.22	-17.46	41.76	54	-12.24	AVG

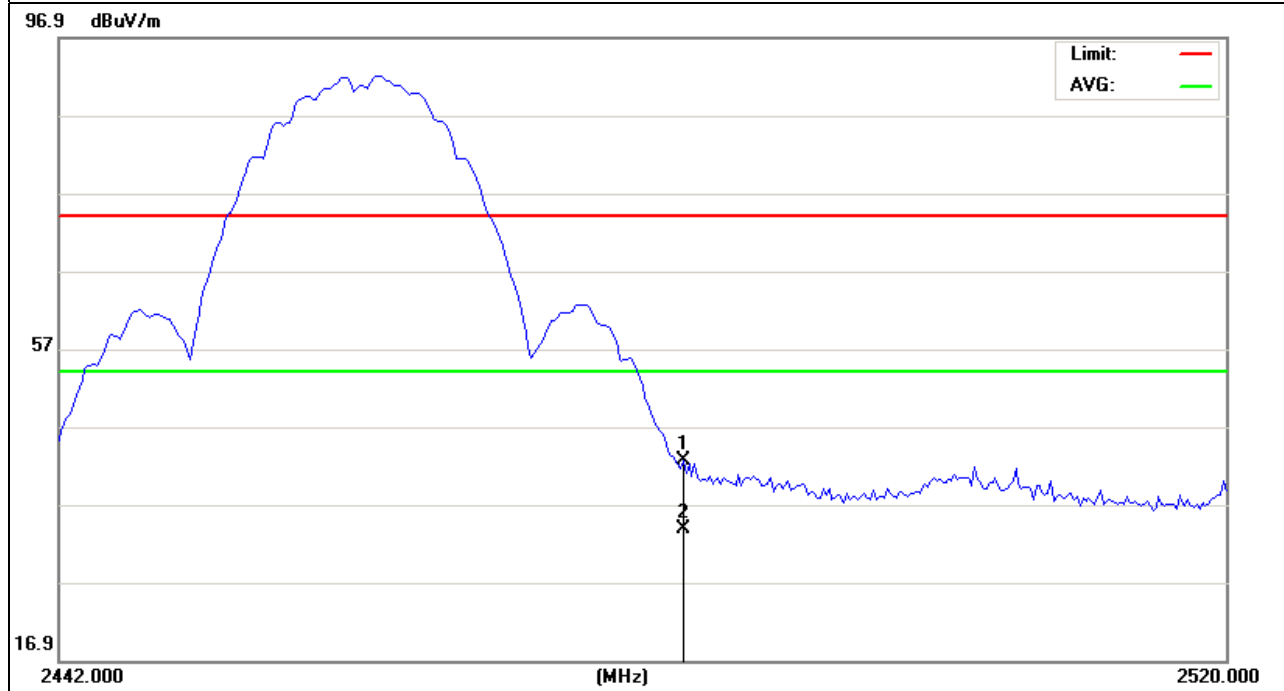
Remark:
 Factor = Antenna Factor + Cable Loss – Pre-amplifier.



EUT :	150M Wireless Router	Model Name :	WRT150N
Temperature :	20 °C	Relative Humidity :	48%
Pressure :	1010 hPa	Test Voltage :	DC 5.0V
Test Mode :	CH11(802.11b Mode)	Polarization :	Horizontal

Frequency (MHz)	Meter Reading (dBμV)	Factor (dB)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Detector Type
2483.5	59.91	-17.35	42.56	74	-31.44	peak
2483.5	51.09	-17.35	33.74	54	-20.26	AVG

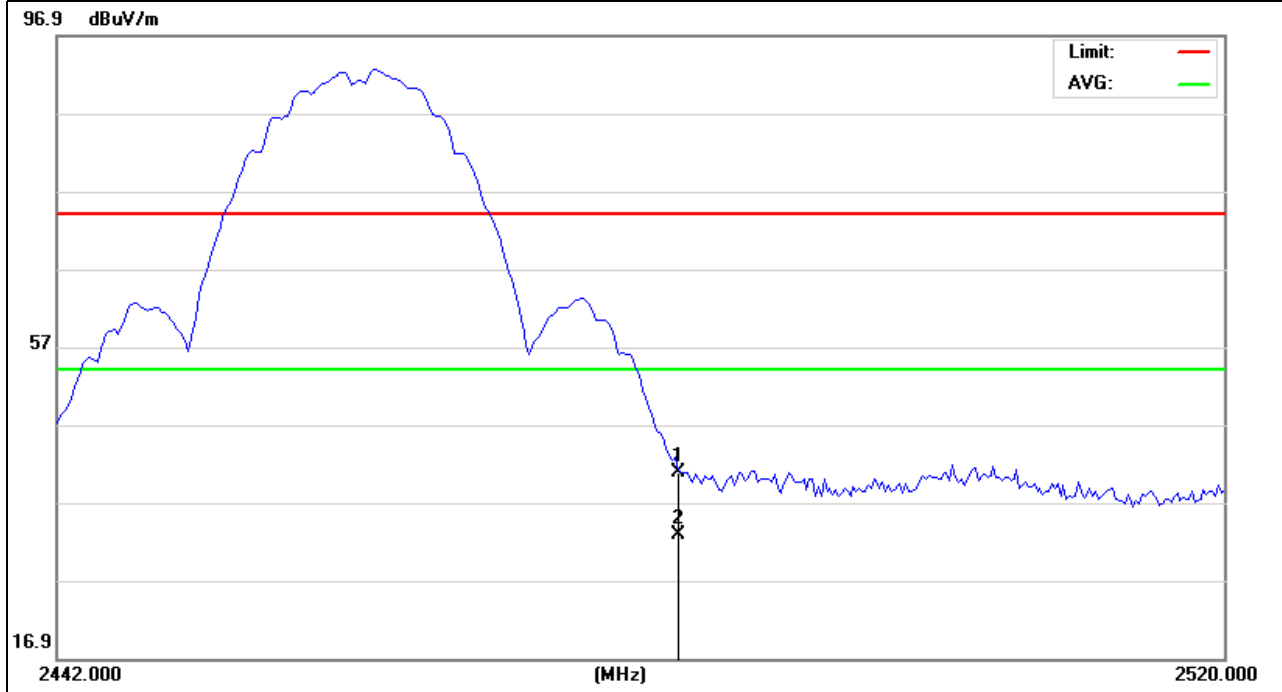
Remark:
 Factor = Antenna Factor + Cable Loss – Pre-amplifier.



EUT :	150M Wireless Router	Model Name :	WRT150N
Temperature :	20 °C	Relative Humidity :	48%
Pressure :	1010 hPa	Test Voltage :	DC 5.0V
Test Mode :	CH11(802.11b Mode)	Polarization :	Vertical

Frequency (MHz)	Meter Reading (dBμV)	Factor (dB)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Detector Type
2483.5	58.19	-17.35	40.84	74	-33.16	peak
2483.5	50.17	-17.35	32.82	54	-21.18	AVG

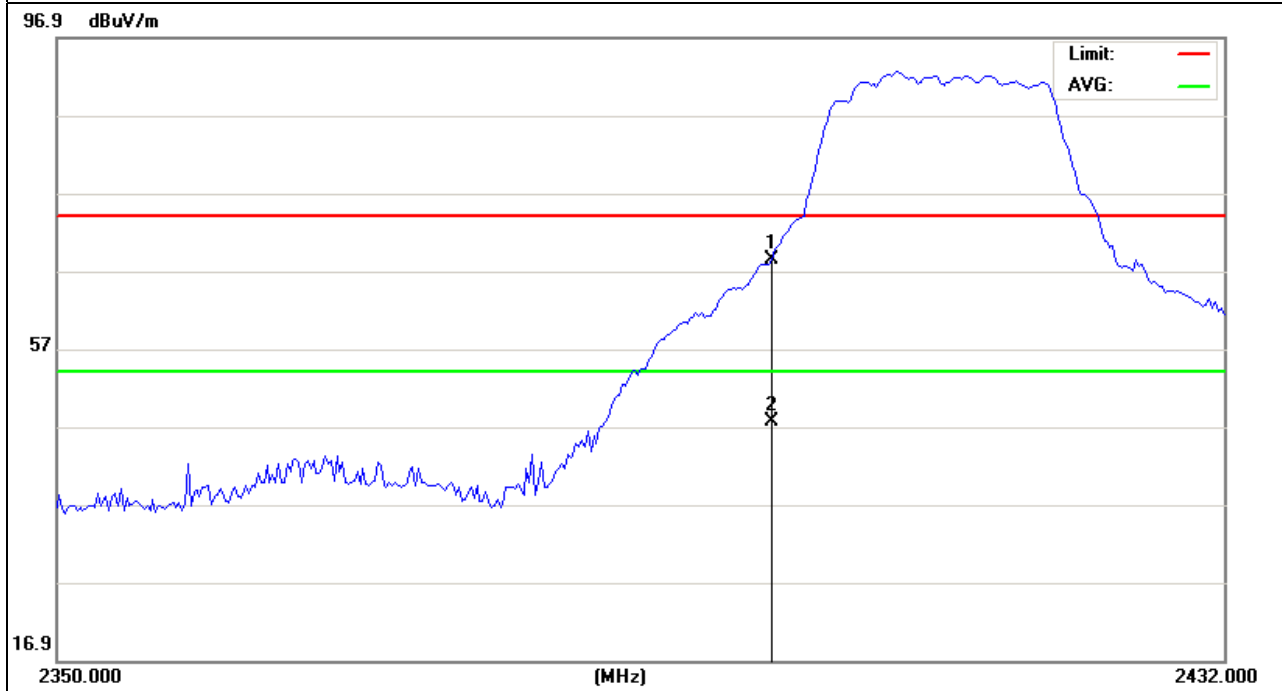
Remark:
Factor = Antenna Factor + Cable Loss – Pre-amplifier.



EUT :	150M Wireless Router	Model Name :	WRT150N
Temperature :	20 °C	Relative Humidity :	48%
Pressure :	1010 hPa	Test Voltage :	DC 5.0V
Test Mode :	CH1(802.11g Mode)	Polarization :	Horizontal

Frequency (MHz)	Meter Reading (dBμV)	Factor (dB)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Detector Type
2400	85.86	-17.46	68.4	74	-5.6	peak
2400	64.97	-17.46	47.51	54	-6.49	AVG

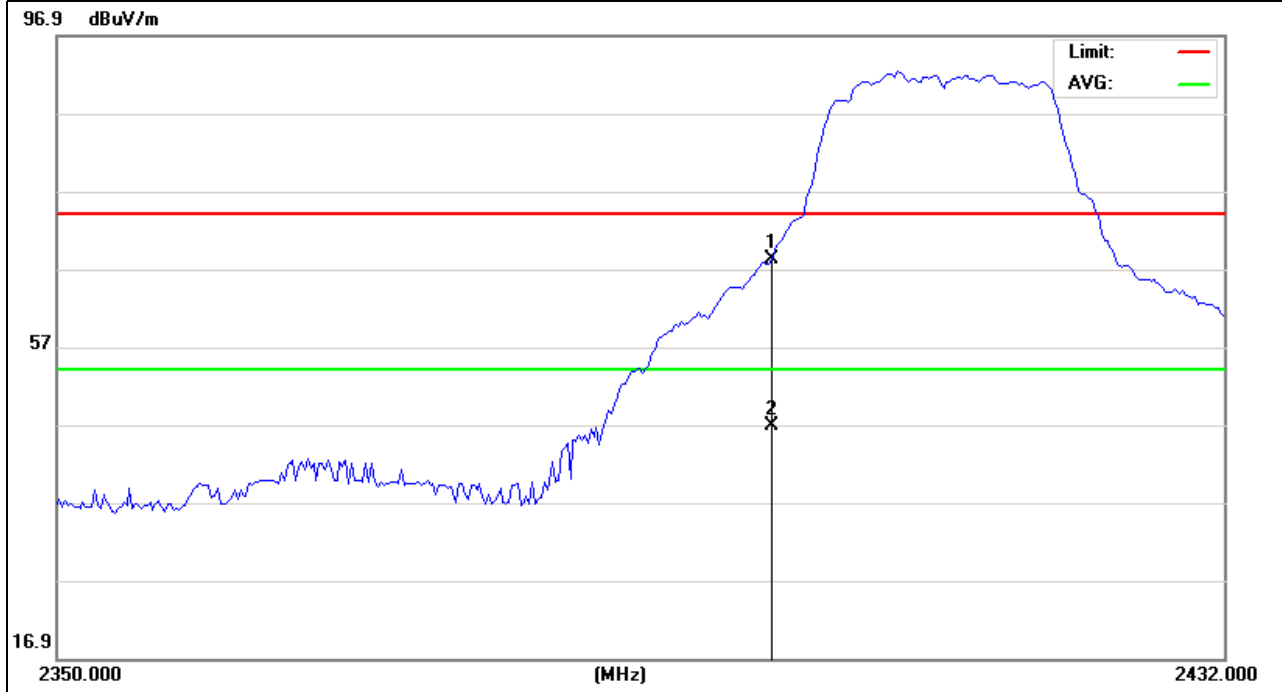
Remark:
 Factor = Antenna Factor + Cable Loss – Pre-amplifier.



EUT :	150M Wireless Router	Model Name :	WRT150N
Temperature :	20 °C	Relative Humidity :	48%
Pressure :	1010 hPa	Test Voltage :	DC 5.0V
Test Mode :	CH1(802.11gMode)	Polarization :	Vertical

Frequency (MHz)	Meter Reading (dBμV)	Factor (dB)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Detector Type
2400	85.66	-17.46	68.2	74	-5.8	peak
2400	64.34	-17.46	46.88	54	-7.12	AVG

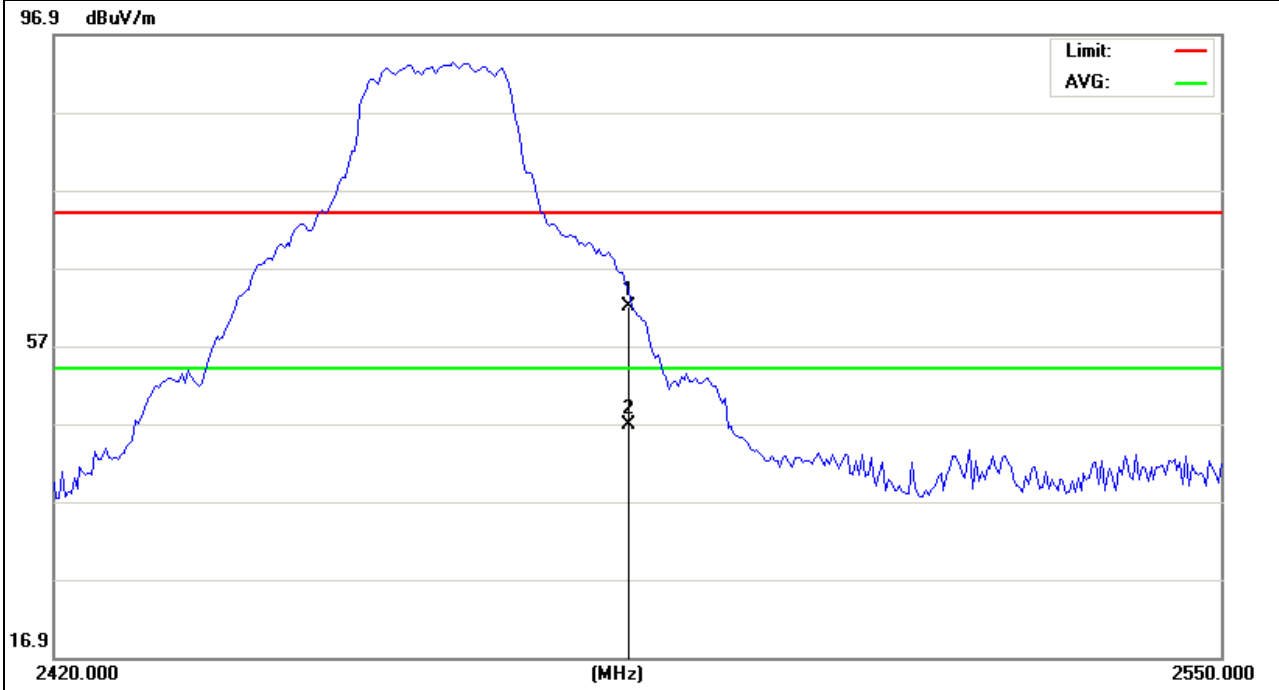
Remark:
 Factor = Antenna Factor + Cable Loss – Pre-amplifier.



EUT :	150M Wireless Router	Model Name :	WRT150N
Temperature :	20 °C	Relative Humidity :	48%
Pressure :	1010 hPa	Test Voltage :	DC 5.0V
Test Mode :	CH11(802.11g Mode)	Polarization :	Horizontal

Frequency (MHz)	Meter Reading (dBµV)	Factor (dB)	Emission Level (dBµV/m)	Limits (dBµV/m)	Margin (dB)	Detector Type
2483.5	79.26	-17.35	61.91	74	-12.09	peak
2483.5	64.12	-17.35	46.77	54	-7.23	AVG

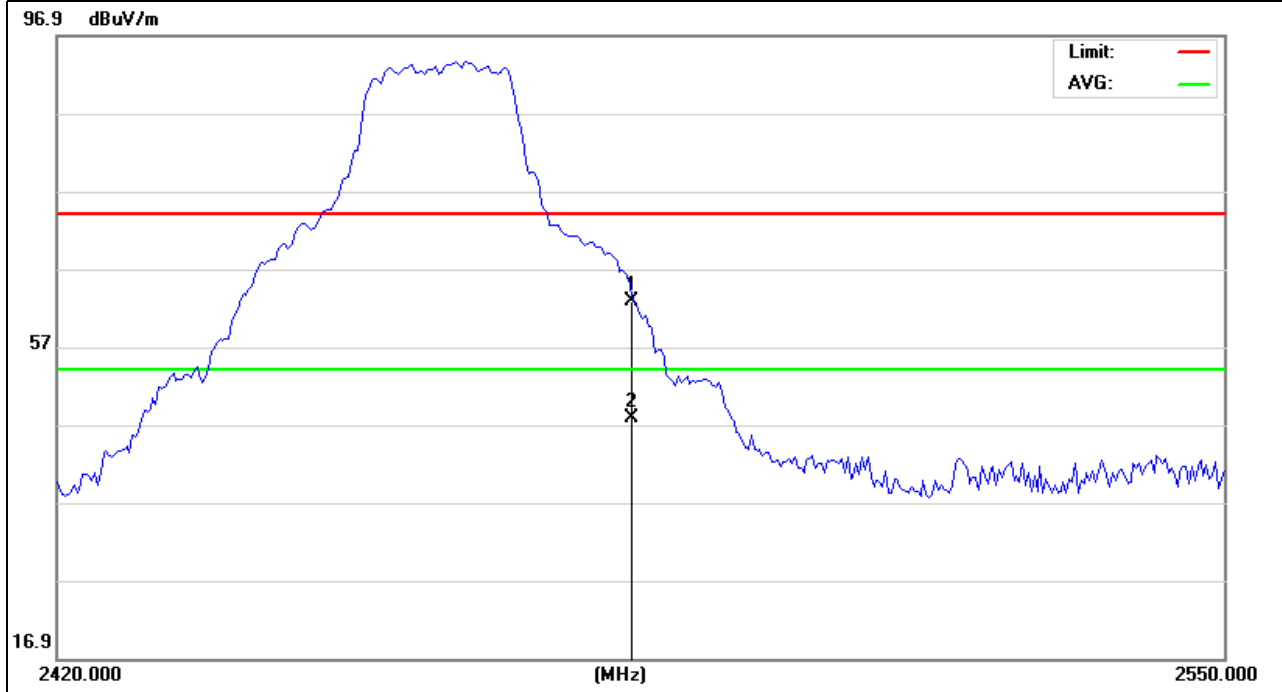
Remark:
 Factor = Antenna Factor + Cable Loss – Pre-amplifier.



EUT :	150M Wireless Router	Model Name :	WRT150N
Temperature :	20 °C	Relative Humidity :	48%
Pressure :	1010 hPa	Test Voltage :	DC 5.0V
Test Mode :	CH11(802.11g Mode)	Polarization :	Vertical

Frequency (MHz)	Meter Reading (dBμV)	Factor (dB)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Detector Type
2483.5	80.18	-17.35	62.83	74	-11.17	peak
2483.5	65.15	-17.35	47.8	54	-6.2	AVG

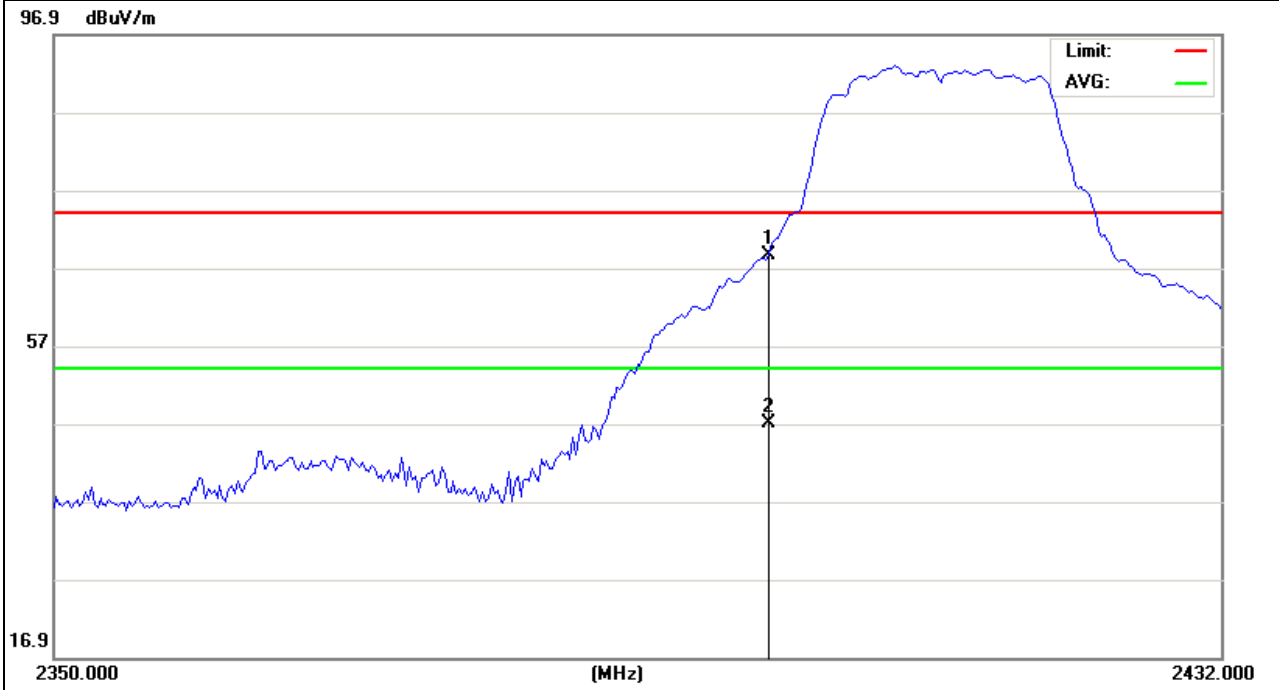
Remark:
Factor = Antenna Factor + Cable Loss – Pre-amplifier.



EUT :	150M Wireless Router	Model Name :	WRT150N
Temperature :	20 °C	Relative Humidity :	48%
Pressure :	1010 hPa	Test Voltage :	DC 5.0V
Test Mode :	CH1(802.11N Mode)/20MHz	Polarization :	Horizontal

Frequency (MHz)	Meter Reading (dBμV)	Factor (dB)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Detector Type
2400	86.14	-17.46	68.68	74	-5.32	peak
2400	64.43	-17.46	48.97	54	-5.03	AVG

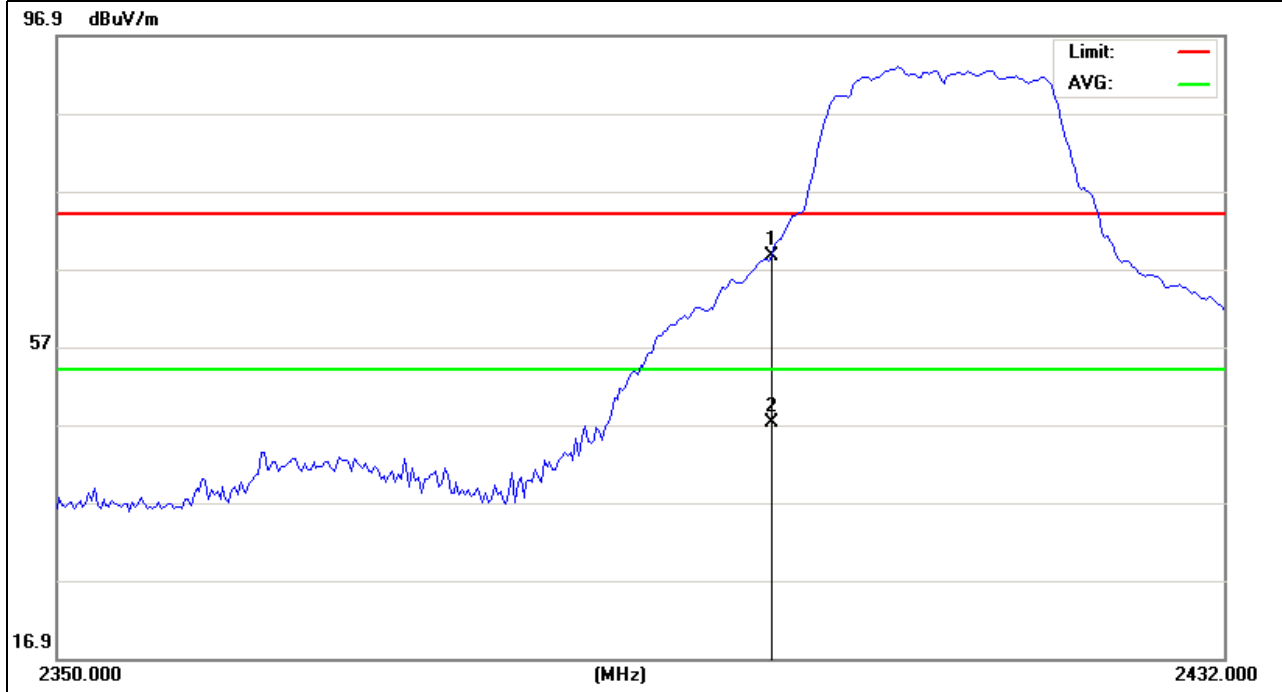
Remark:
 Factor = Antenna Factor + Cable Loss – Pre-amplifier.



EUT :	150M Wireless Router	Model Name :	WRT150N
Temperature :	20 °C	Relative Humidity :	48%
Pressure :	1010 hPa	Test Voltage :	DC 5.0V
Test Mode :	CH1(802.11N Mode)/20M	Polarization :	Vertical

Frequency (MHz)	Meter Reading (dBμV)	Factor (dB)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Detector Type
2400	86.14	-17.46	68.68	74	-5.32	peak
2400	65.65	-17.46	48.19	54	-5.81	AVG

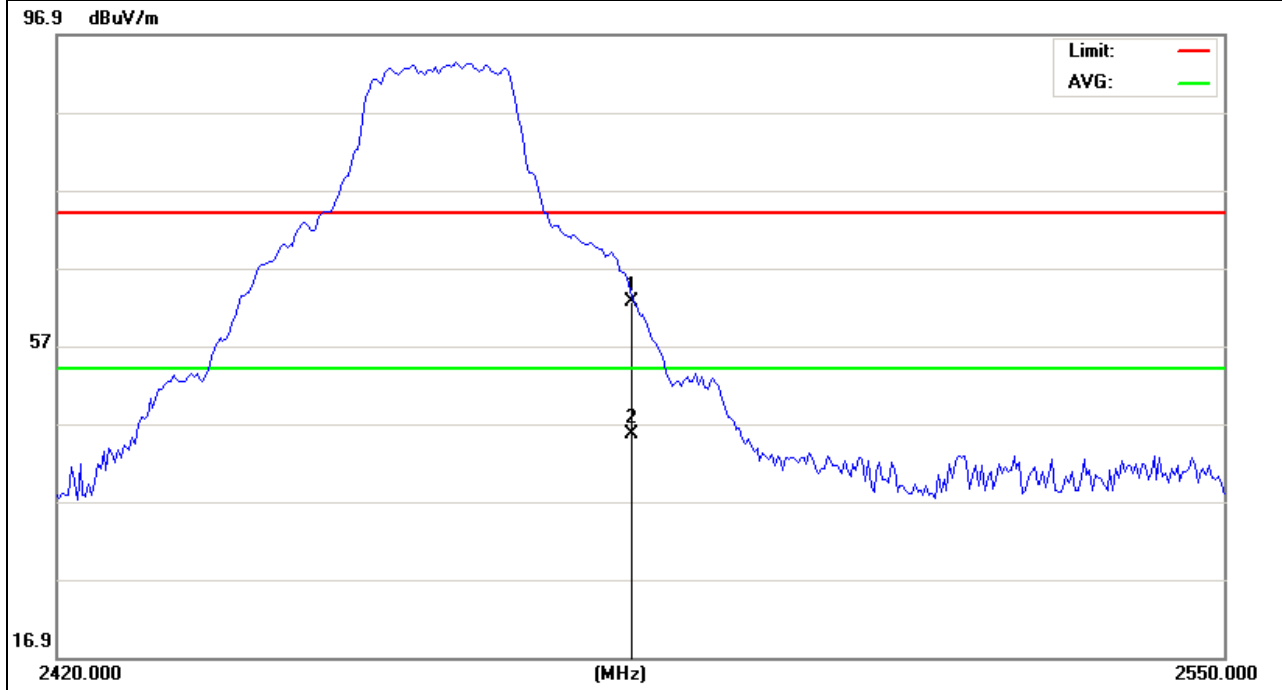
Remark:
Factor = Antenna Factor + Cable Loss – Pre-amplifier.



EUT :	150M Wireless Router	Model Name :	WRT150N
Temperature :	20 °C	Relative Humidity :	48%
Pressure :	1010 hPa	Test Voltage :	DC 5.0V
Test Mode :	CH11(802.11N Mode)/20MHz	Polarization :	Horizontal

Frequency (MHz)	Meter Reading (dBμV)	Factor (dB)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Detector Type
2483.5	81.91	-17.35	64.56	74	-9.44	peak
2483.5	64	-17.35	46.65	54	-7.35	AVG

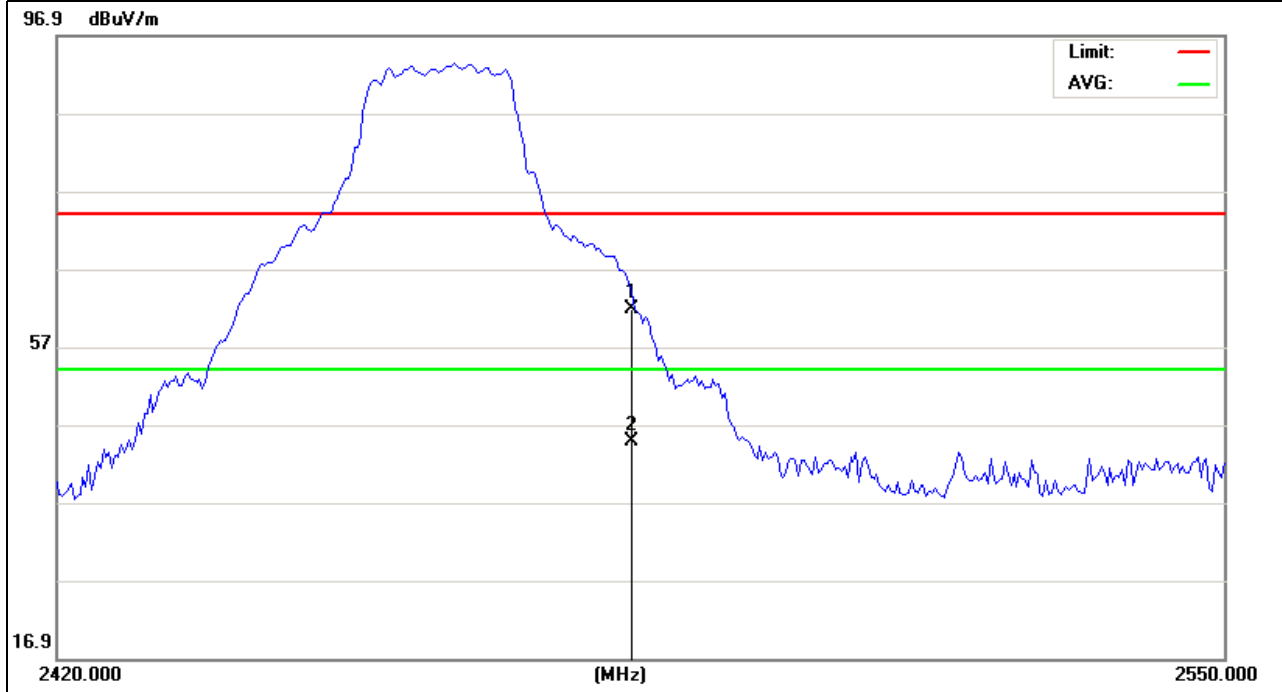
Remark:
 Factor = Antenna Factor + Cable Loss – Pre-amplifier.



EUT :	150M Wireless Router	Model Name :	WRT150N
Temperature :	20 °C	Relative Humidity :	48%
Pressure :	1010 hPa	Test Voltage :	DC 5.0V
Test Mode :	CH11(802.11N Mode)/20MHz	Polarization :	Vertical

Frequency (MHz)	Meter Reading (dBμV)	Factor (dB)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Detector Type
2483.5	81.21	-17.35	63.86	74	-10.14	peak
2483.5	64.17	-17.35	46.82	54	-7.18	AVG

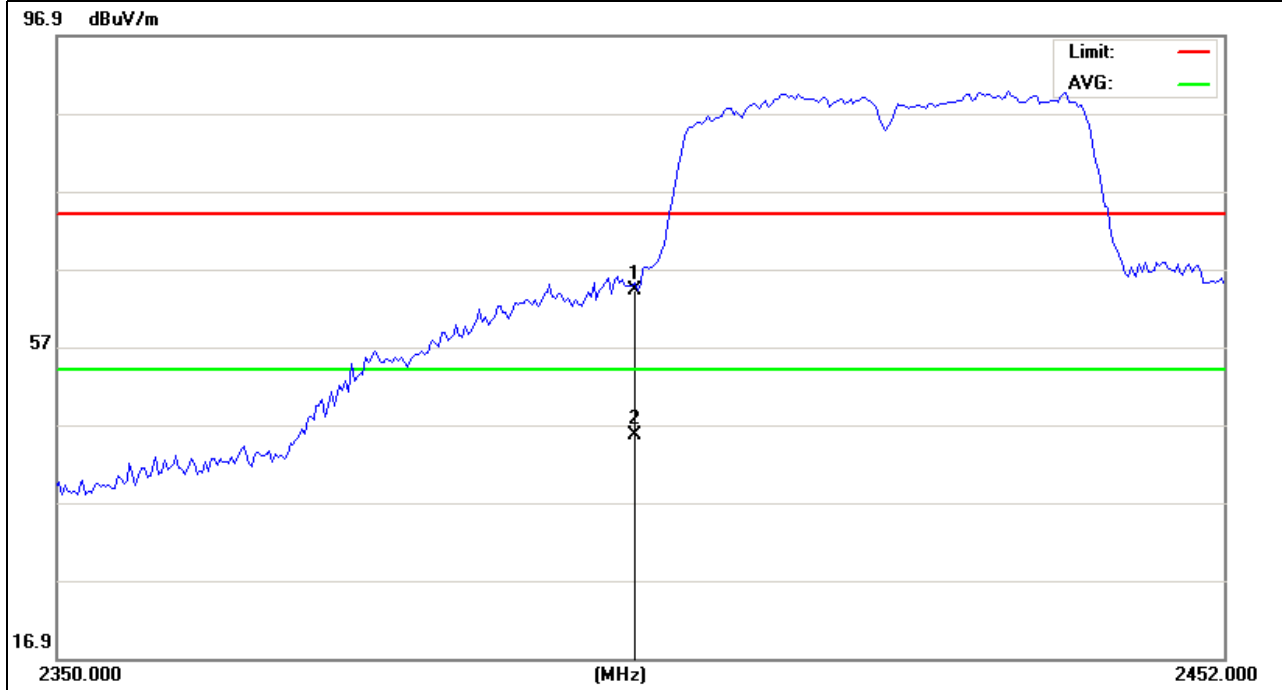
Remark:
Factor = Antenna Factor + Cable Loss – Pre-amplifier.



EUT :	150M Wireless Router	Model Name :	WRT150N
Temperature :	20 °C	Relative Humidity :	48%
Pressure :	1010 hPa	Test Voltage :	DC 5.0V
Test Mode :	CH3(802.11n Mode)/40M	Polarization :	Horizontal

Frequency (MHz)	Meter Reading (dBμV)	Factor (dB)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Detector Type
2400	83.86	-17.46	66.4	74	-7.6	peak
2400	65.25	-17.46	47.79	54	-7.21	AVG

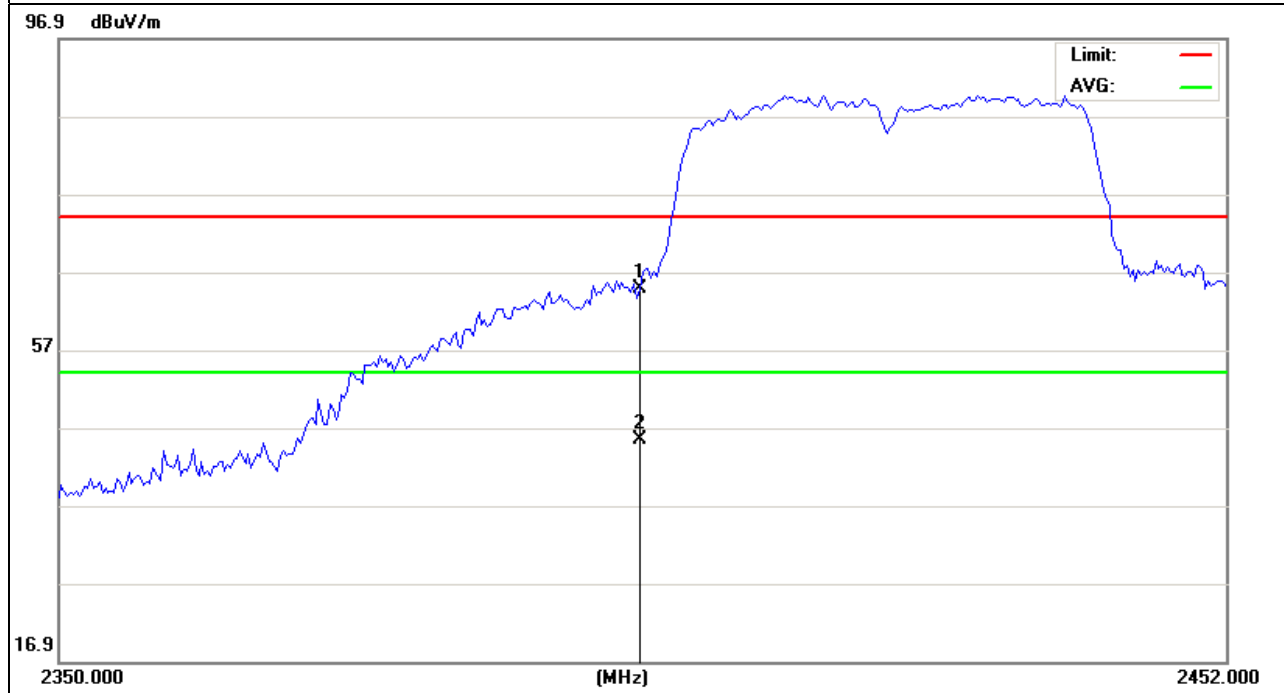
Remark:
Factor = Antenna Factor + Cable Loss – Pre-amplifier.



EUT :	150M Wireless Router	Model Name :	WRT150N
Temperature :	20 °C	Relative Humidity :	48%
Pressure :	1010 hPa	Test Voltage :	DC 5.0V
Test Mode :	CH3(802.11n Mode)/40MHz	Polarization :	Vertical

Frequency (MHz)	Meter Reading (dBμV)	Factor (dB)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Detector Type
2400	84.35	-17.35	67	74	-7	peak
2400	64	-17.35	46.65	54	-7.35	AVG

Remark:
Factor = Antenna Factor + Cable Loss – Pre-amplifier.



EUT :	150M Wireless Router	Model Name :	WRT150N
Temperature :	20 °C	Relative Humidity :	48%
Pressure :	1010 hPa	Test Voltage :	DC 5.0V
Test Mode :	CH9(802.11n Mode)/40MHz	Polarization :	Horizontal

Frequency (MHz)	Meter Reading (dBμV)	Factor (dB)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Detector Type
2483.5	81.2	-17.35	67.85	74	-6.15	peak
2483.5	65.19	-17.35	47.84	54	-6.16	AVG

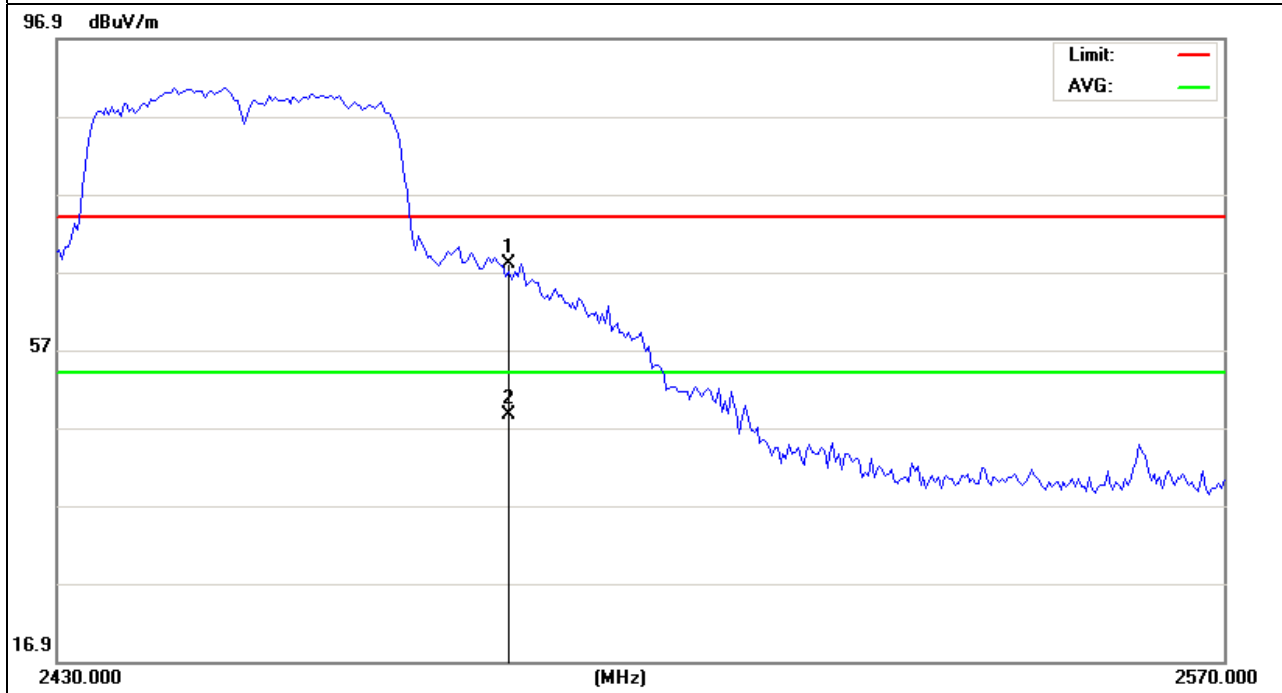
Remark:
 Factor = Antenna Factor + Cable Loss – Pre-amplifier.



EUT :	150M Wireless Router	Model Name :	WRT150N
Temperature :	20 °C	Relative Humidity :	48%
Pressure :	1010 hPa	Test Voltage :	DC 5.0V
Test Mode :	CH9(802.11n Mode)/40MHz	Polarization :	Vertical

Frequency (MHz)	Meter Reading (dBμV)	Factor (dB)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Detector Type
2483.5	85.57	-17.35	68.22	74	-5.78	peak
2483.5	65.66	-17.35	48.31	54	-5.69	AVG

Remark:
Factor = Antenna Factor + Cable Loss – Pre-amplifier.



4. POWER SPECTRAL DENSITY TEST

4.1 APPLIED PROCEDURES / LIMIT

FCC Part15 (15.247) , Subpart C				
Section	Test Item	Limit	Frequency Range (MHz)	Result
15.247	Power Spectral Density	8 dBm (in any 3KHz)	2400-2483.5	PASS

4.1.1 TEST PROCEDURE

1. The testing follows Measurement Procedure PKPSD of FCC KDB Publication No. 558074 D01 DTS Meas. Guidance v01.
2. The RF output of EUT was connected to the spectrum analyzer by a low loss cable. The path loss was compensated to the results for each measurement.
3. Record the measurement data derived from spectrum analyzer.
4. Make the measurement with the spectrum analyzer's resolution bandwidth (RBW) = 100 KHz. Video bandwidth (VBW) >= 300 KHz In order to make an accurate measurement, set the span to 5-30% greater than Emission Bandwidth (EBW)
5. Detector = peak, Sweep time = auto couple, Trace mode = max hold, Allow trace to fully stabilize. Use the peak marker function to determine the maximum power level in any 100 kHz band segment within the fundamental EBW.
6. Scale the observed power level to an equivalent value in 3 kHz by adjusting (reducing) the measured power by a bandwidth correction factor (BWCF) where $BWCF = 10\log(3\text{ kHz}/100\text{ kHz}) = -15.2\text{ dB}$.

4.1.2 DEVIATION FROM STANDARD

No deviation.

4.1.3 TEST SETUP



4.1.4 EUT OPERATION CONDITIONS

The EUT tested system was configured as the statements of 2.1 Unless otherwise a special operating condition is specified in the follows during the testing.

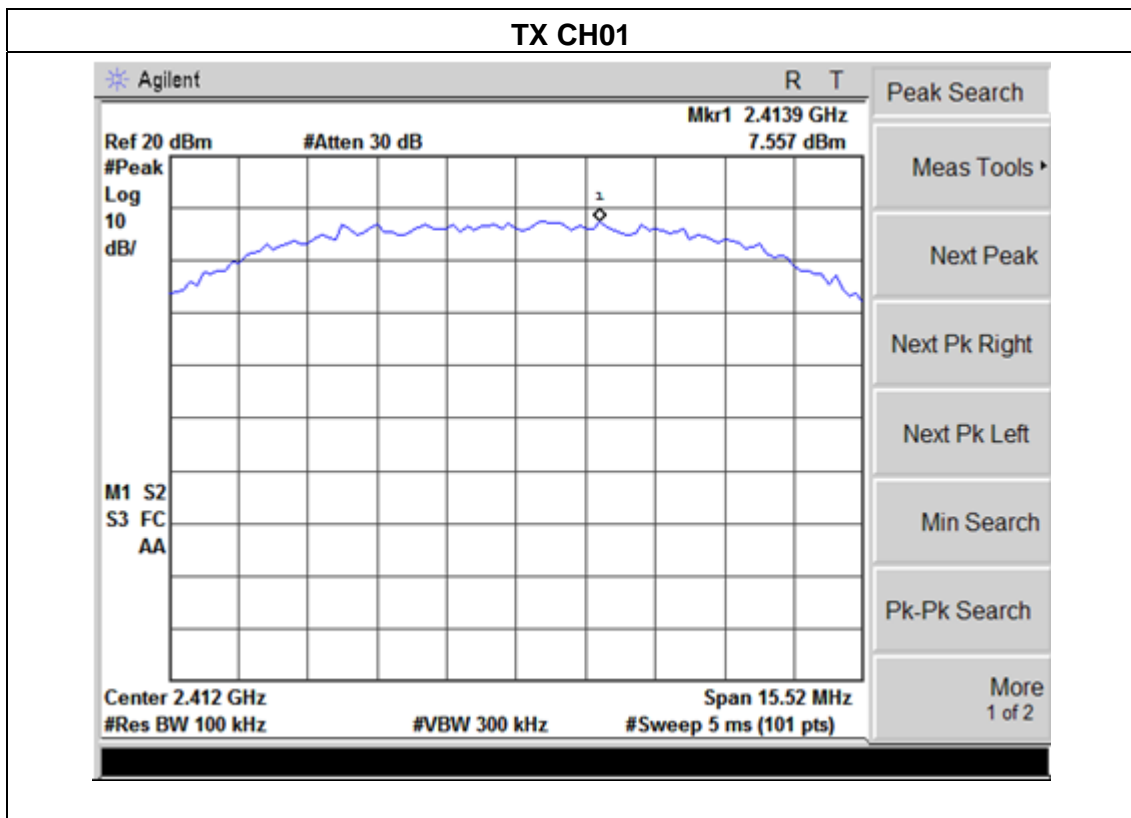
4.1.5 TEST RESULTS

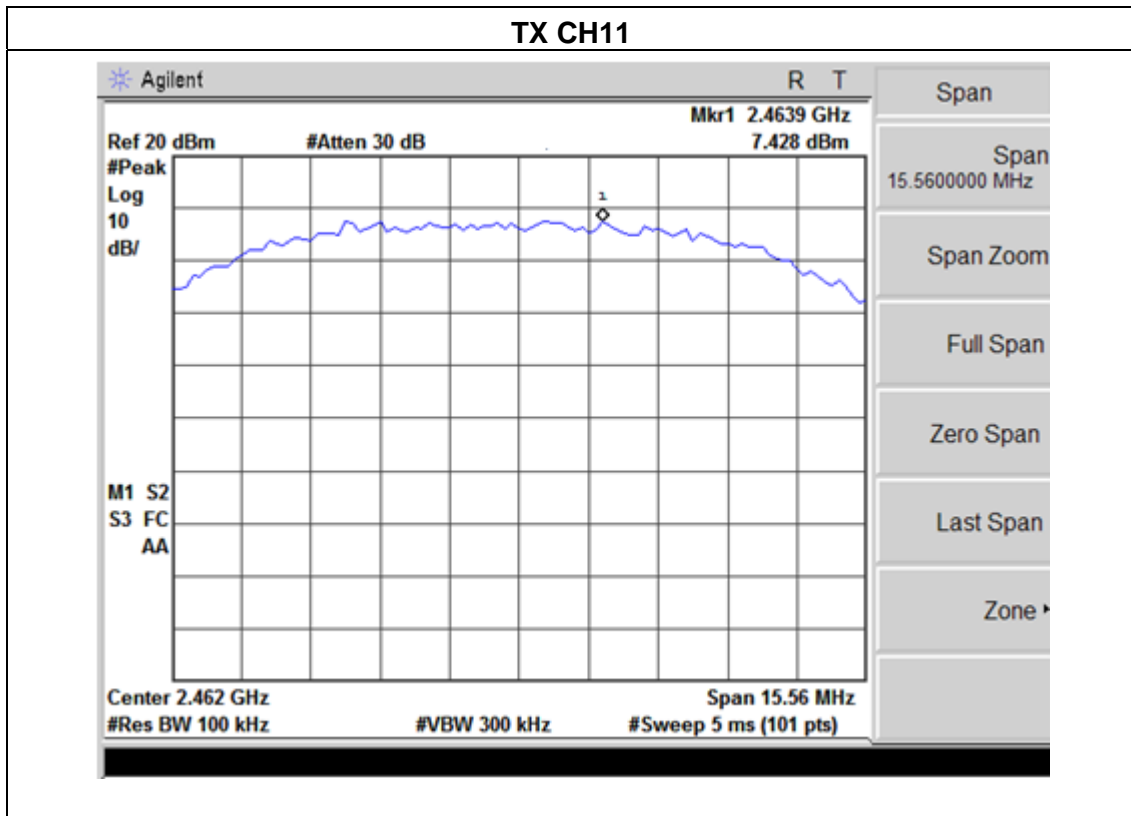
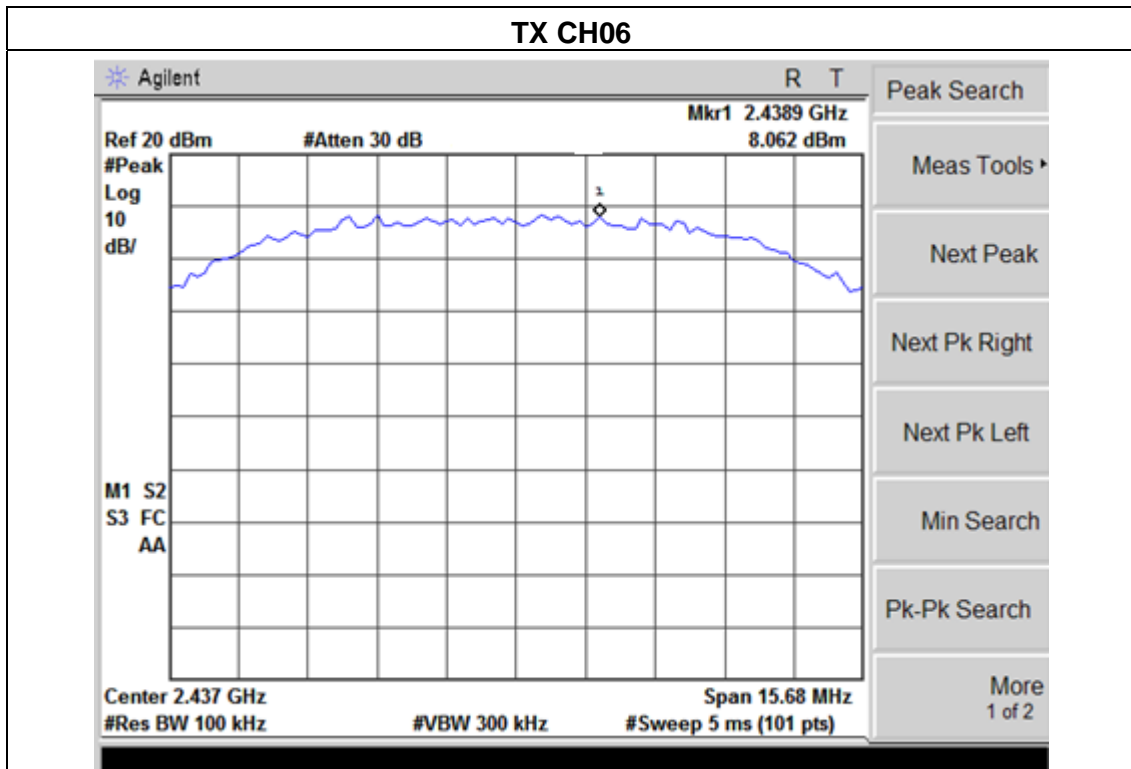
EUT :	150M Wireless Router	Model Name :	WRT150N
Temperature :	25 °C	Relative Humidity :	60%
Pressure :	1015 hPa	Test Voltage :	DC 5.0V
Test Mode :	TX b Mode /CH01, CH06, CH11		

Frequency	Power Density (dBm)	PSD/ 3KHz (dBm)	Limit (dBm)	Result
2412 MHz	7.55	-7.65	8	PASS
2437 MHz	8.06	-7.14	8	PASS
2462 MHz	7.42	-7.78	8	PASS

Note:

BWCF = $10\log(3\text{ kHz}/100\text{ kHz} = -15.2\text{ dB})$.



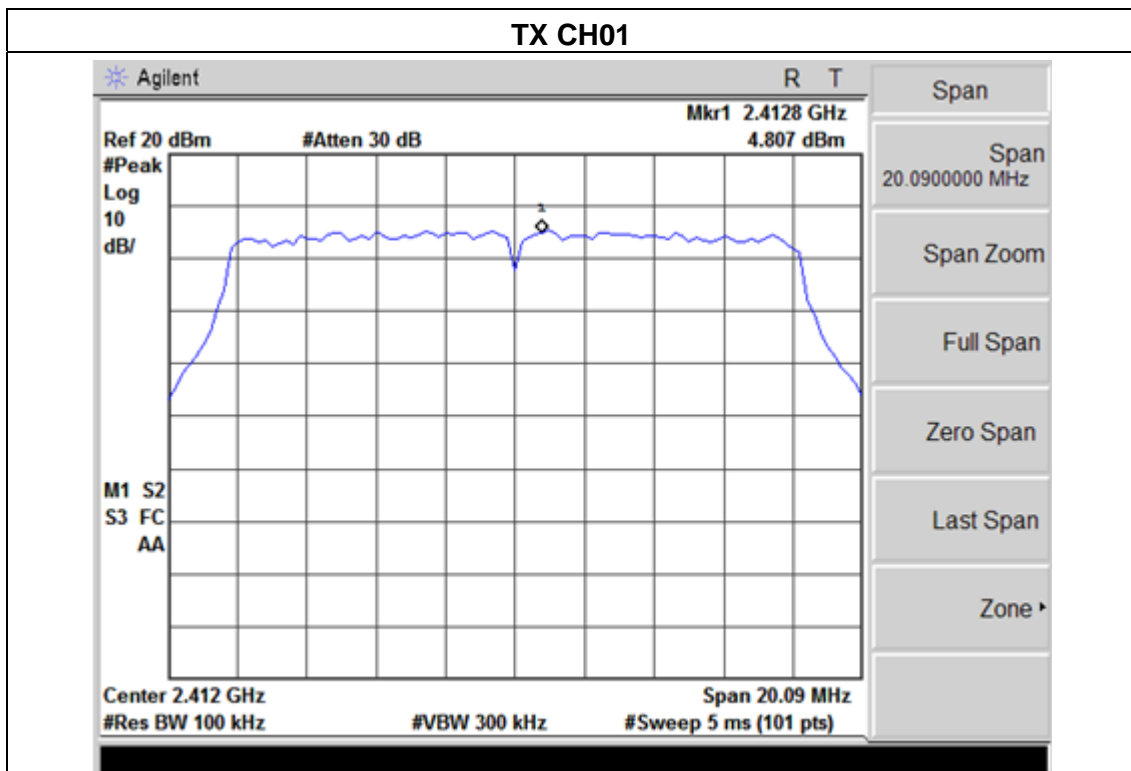


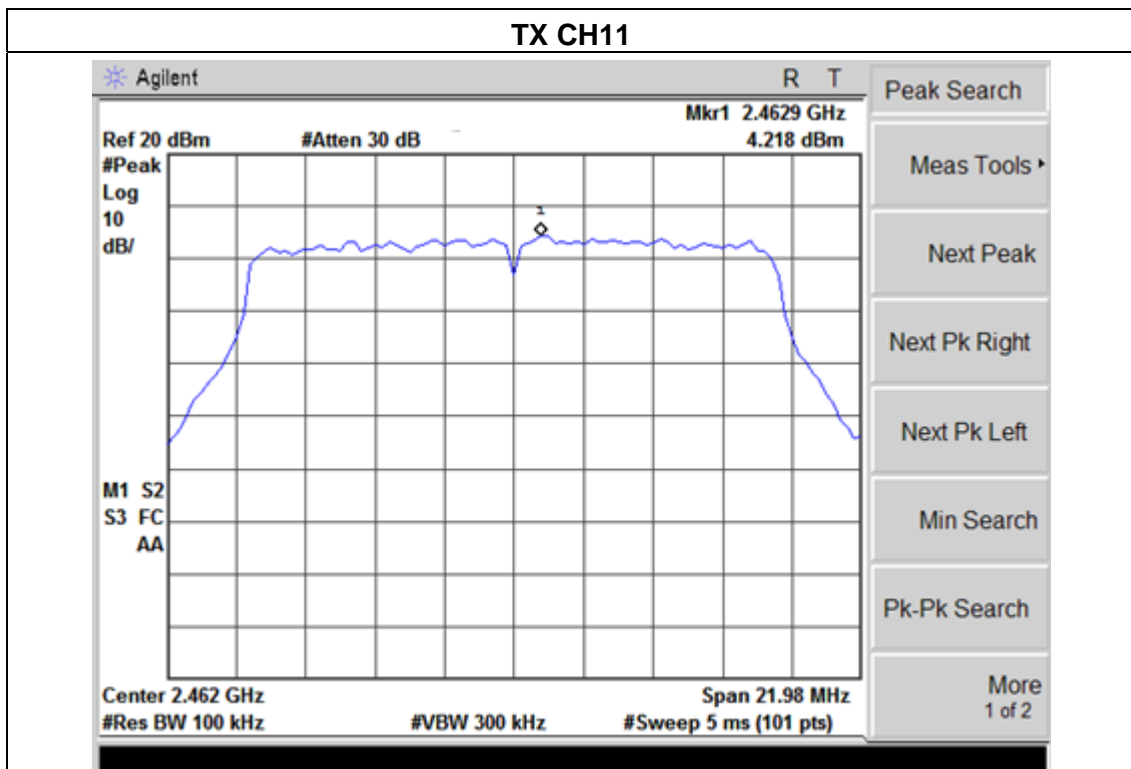
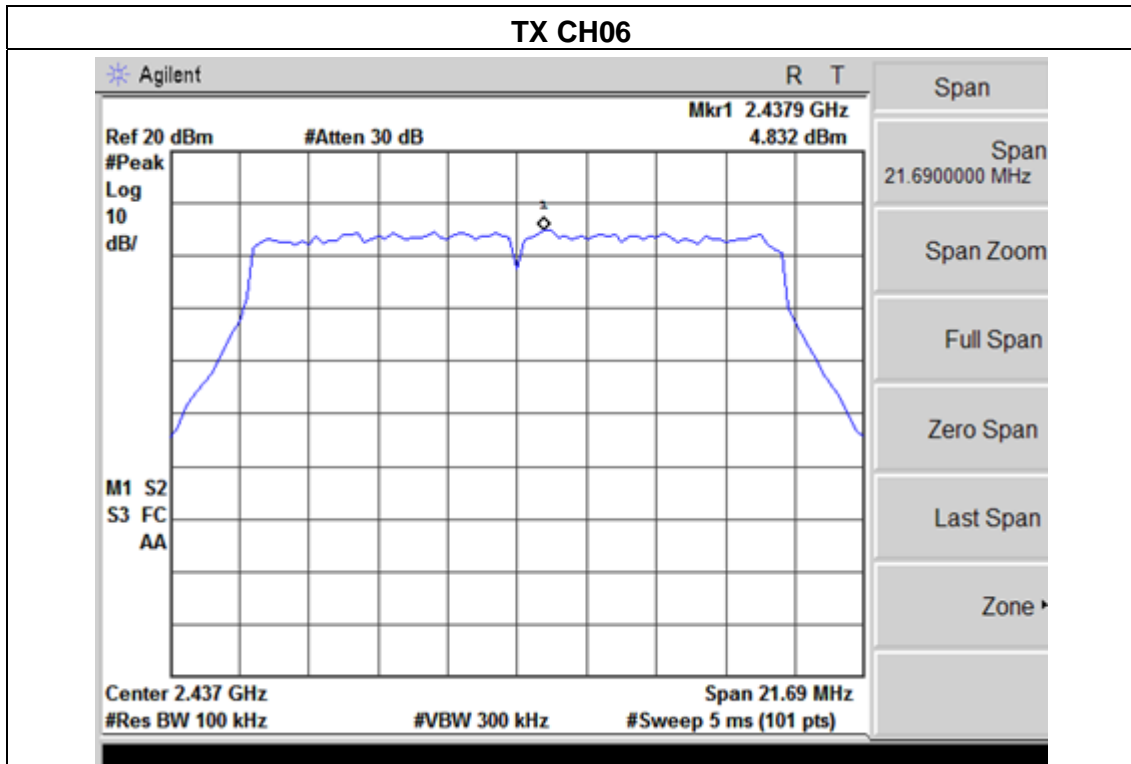
EUT :	150M Wireless Router	Model Name :	WRT150N
Temperature :	25 °C	Relative Humidity :	60%
Pressure :	1015 hPa	Test Voltage :	DC 5.0V
Test Mode :	TX g Mode /CH01, CH06, CH11		

Frequency	Power Density (dBm)	PSD/ 3KHz (dBm)	Limit (dBm)	Result
2412 MHz	4.80	-10.4	8	PASS
2437 MHz	4.83	-10.37	8	PASS
2462 MHz	4.21	-10.99	8	PASS

Note:

BWCF = $10\log(3\text{ kHz}/100\text{ kHz}) = -15.2\text{ dB}$.



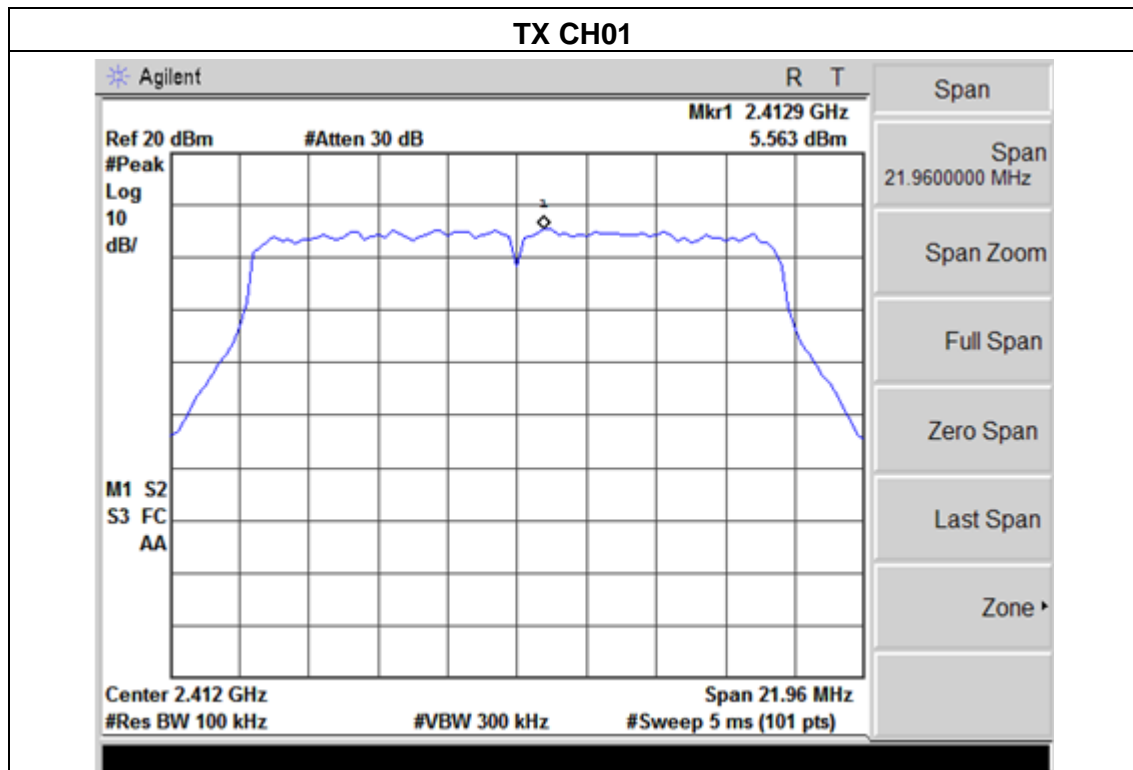


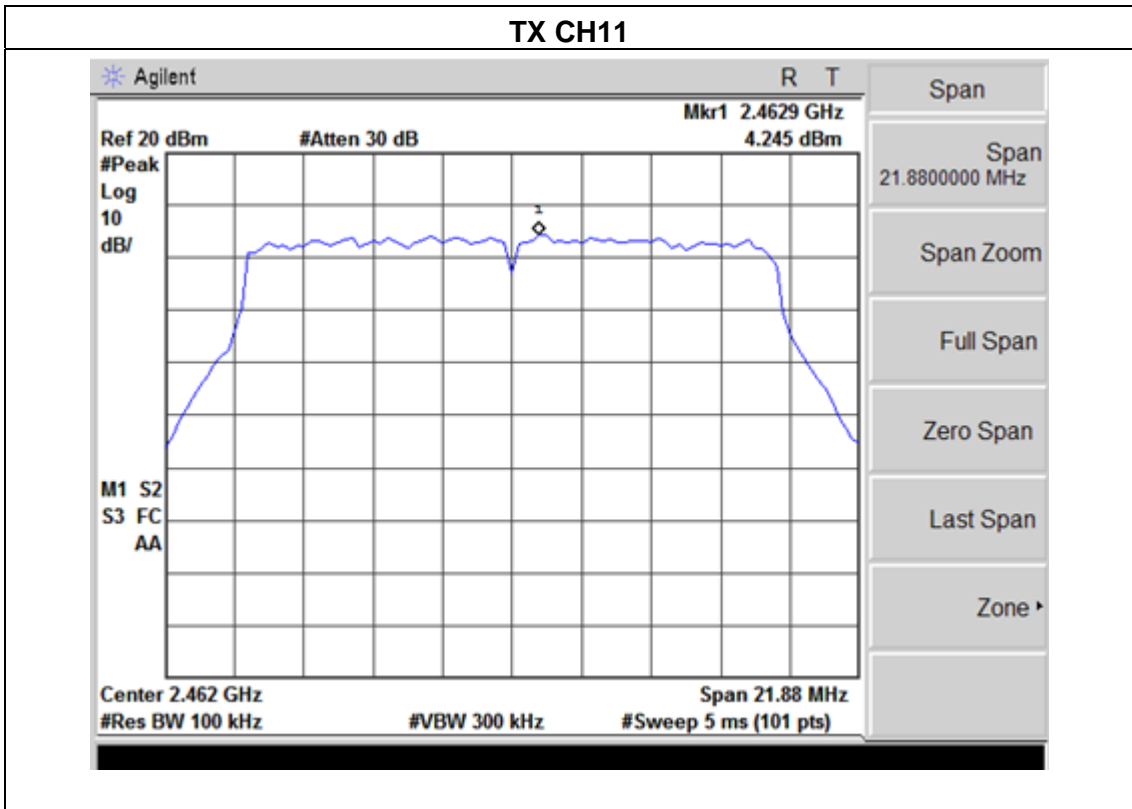
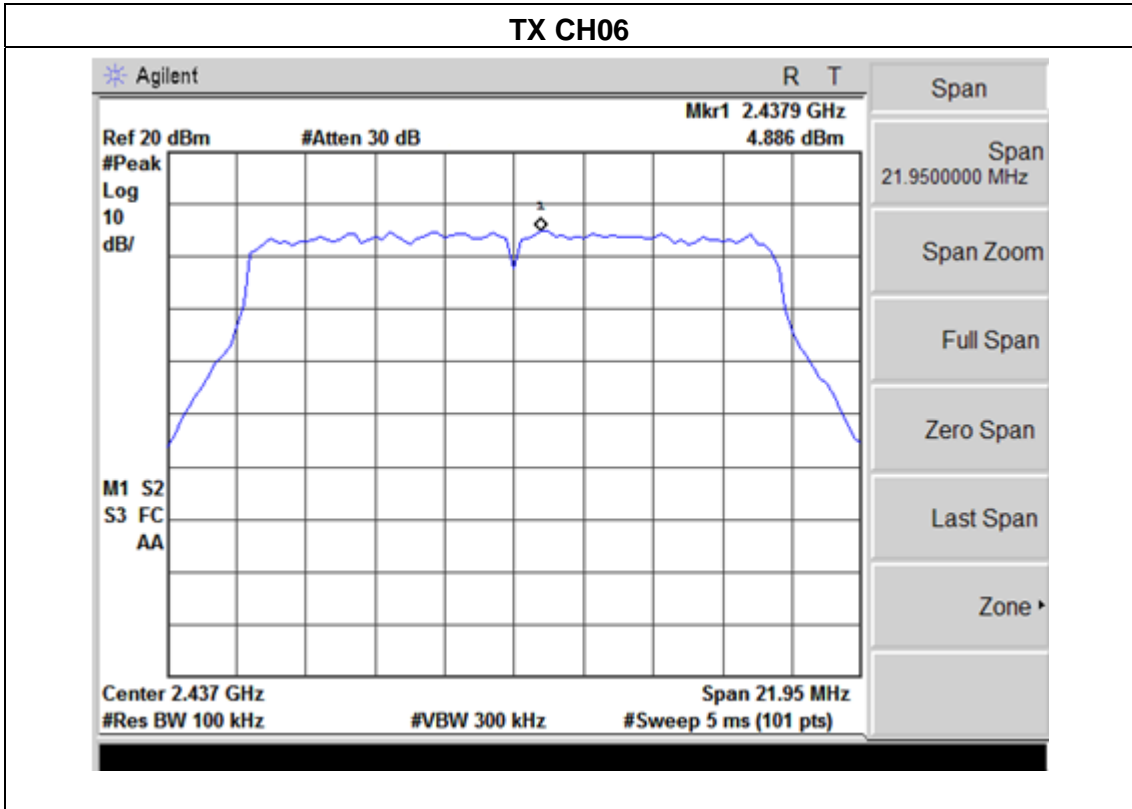
EUT :	150M Wireless Router	Model Name :	WRT150N
Temperature :	25 °C	Relative Humidity :	60%
Pressure :	1015 hPa	Test Voltage :	DC 5.0V
Test Mode :	TX n Mode(20M) /CH01, CH06, CH11		

Frequency	Power Density (dBm)	PSD/3KHz (dBm)	Limit (dBm)	Result
2412 MHz	5.56	-9.64	8	PASS
2437 MHz	4.88	-10.32	8	PASS
2462 MHz	4.24	-10.96	8	PASS

Note:

BWCF = $10\log(3\text{ kHz}/100\text{ kHz} = -15.2\text{ dB})$.



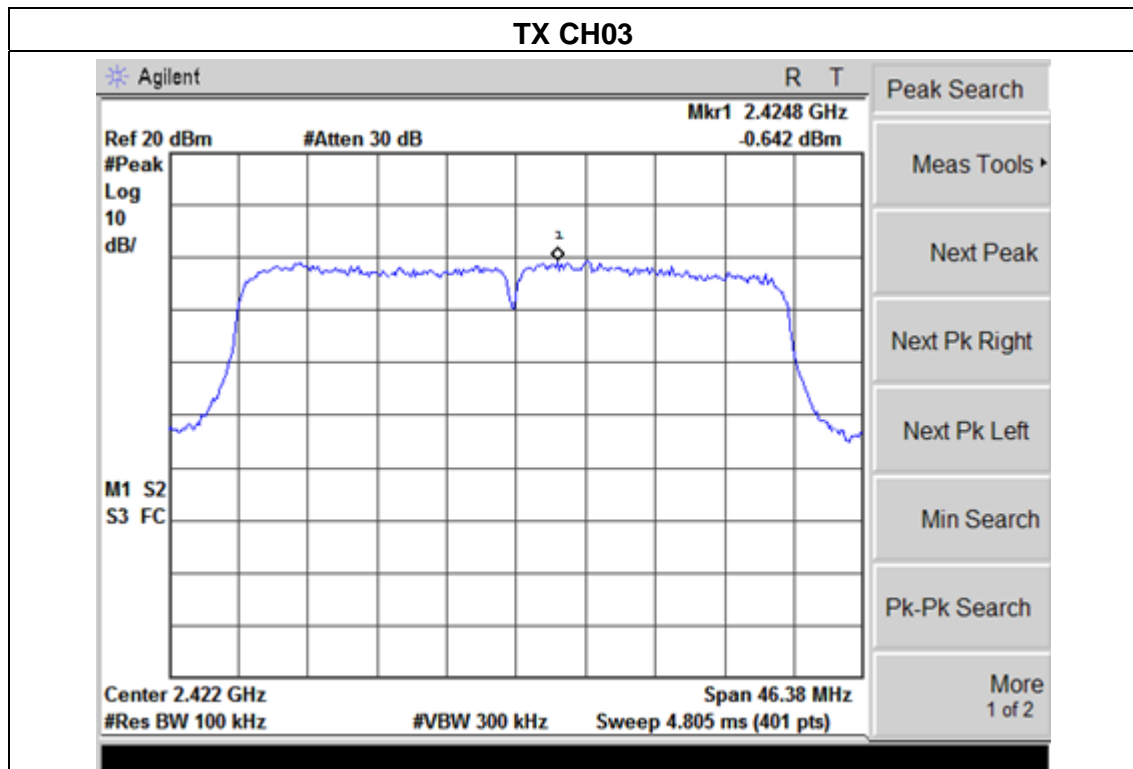


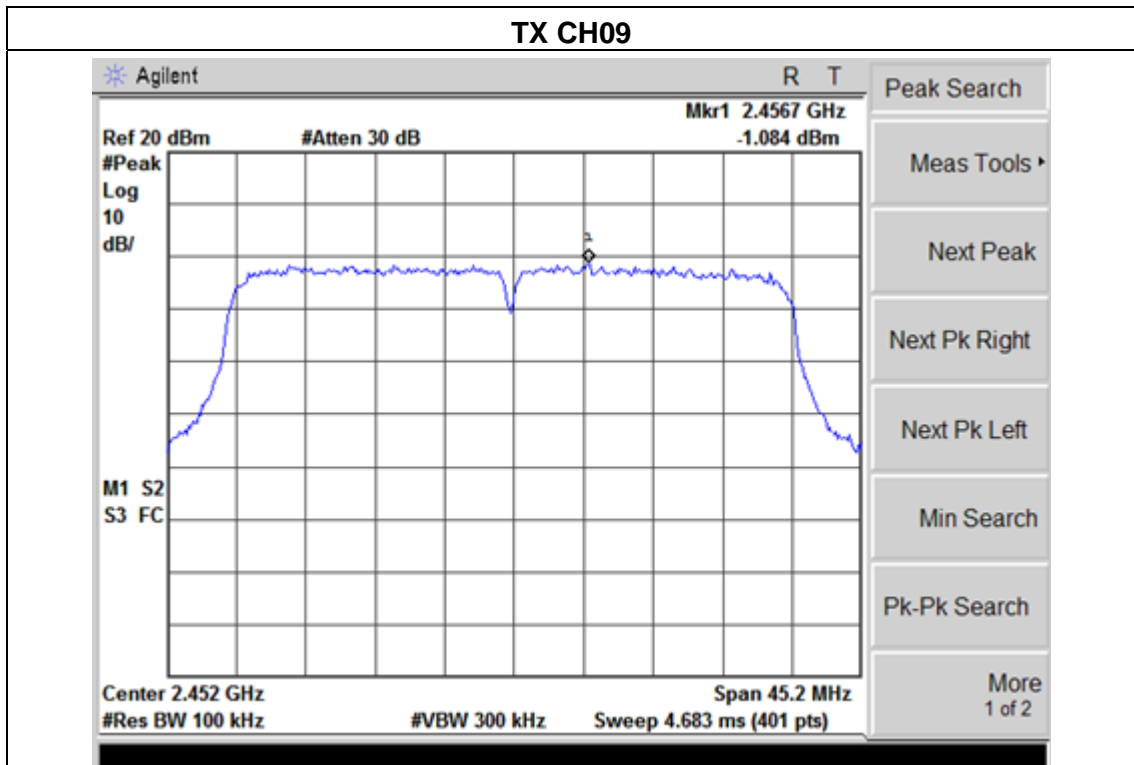
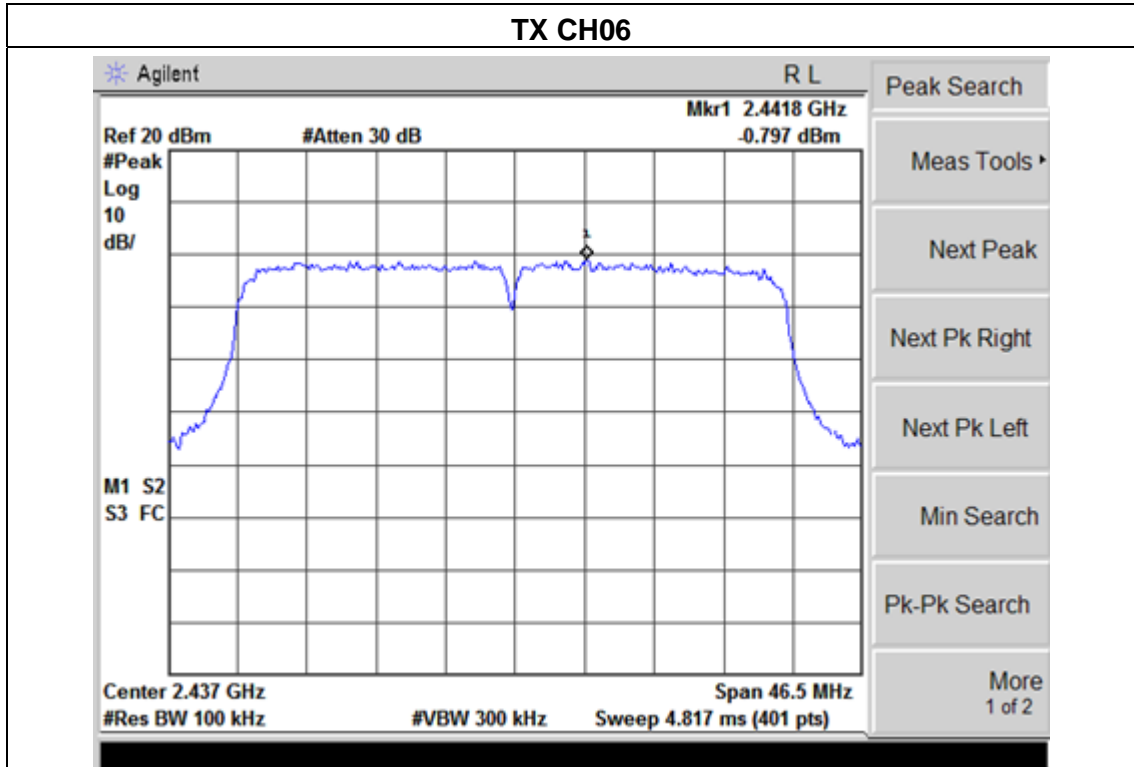
EUT :	150M Wireless Router	Model Name :	WRT150N
Temperature :	25 °C	Relative Humidity :	60%
Pressure :	1015 hPa	Test Voltage :	DC 5.0V
Test Mode :	TX n Mode(40M) /CH03, CH06, CH09		

Frequency	Power Density (dBm)	PSD/ 3KHz (dBm)	Limit (dBm)	Result
2422 MHz	-0.64	-15.84	8	PASS
2437 MHz	-0.79	-15.99	8	PASS
2452 MHz	-1.08	-16.28	8	PASS

Note:

BWCF = $10\log(3\text{ kHz}/100\text{ kHz}) = -15.2\text{ dB}$.





5. BANDWIDTH TEST

5.1 APPLIED PROCEDURES / LIMIT

FCC Part15 (15.247) , Subpart C				
Section	Test Item	Limit	Frequency Range (MHz)	Result
15.247(a)(2)	Bandwidth	$\geq 500\text{KHz}$ (6dB bandwidth)	2400-2483.5	PASS

5.1.1 TEST PROCEDURE

- a.
1. The testing follows FCC KDB Publication No. 558074 D01 DTS Meas. Guidance v01.
 2. The RF output of EUT was connected to the spectrum analyzer by a low loss cable. The path loss was compensated to the results for each measurement.
 3. Make the measurement with the spectrum analyzer's resolution bandwidth (RBW) = 1-5% of the emission bandwidth (EBW). Set the Video bandwidth (VBW) $\geq 3 * \text{RBW}$. In order to make an accurate measurement. The 6 dB bandwidth must be greater than 500 KHz.
 4. The marker-delta reading at this point is the 6 dB bandwidth of the emission.

5.1.2 DEVIATION FROM STANDARD

No deviation.

5.1.3 TEST SETUP



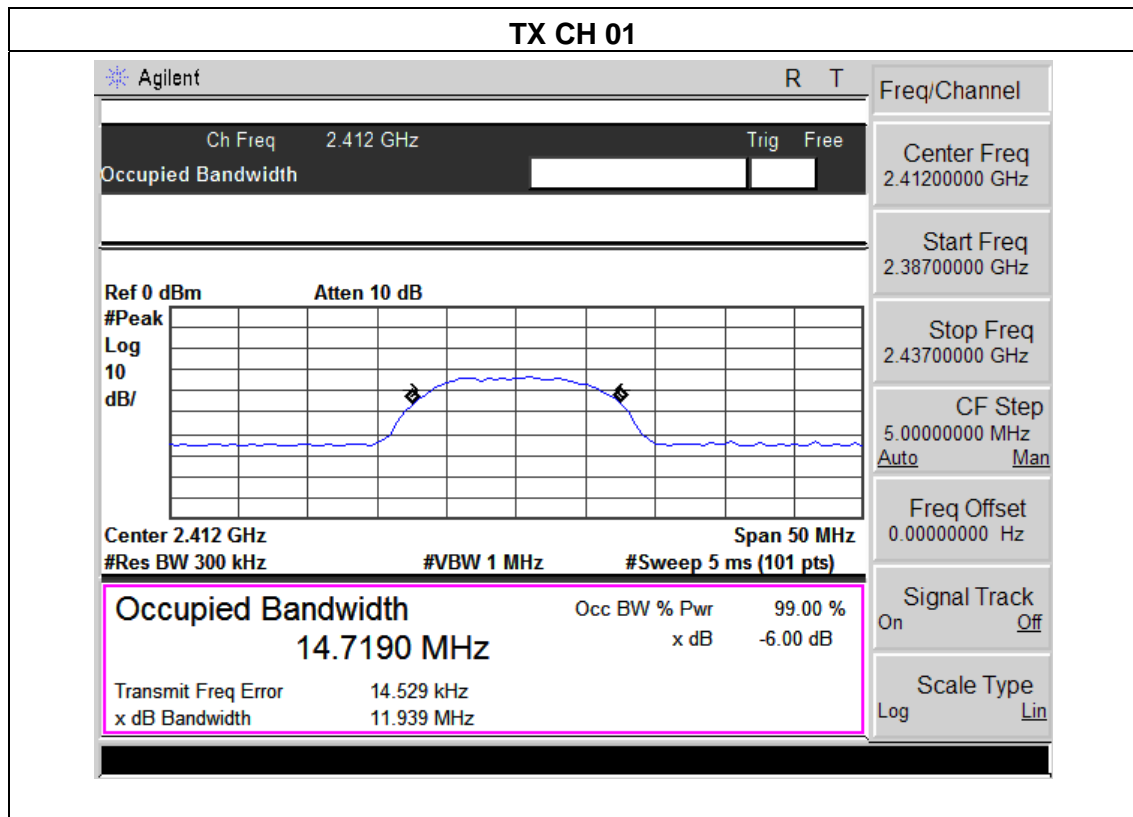
5.1.4 EUT OPERATION CONDITIONS

The EUT tested system was configured as the statements of 2.4 Unless otherwise a special operating condition is specified in the follows during the testing.

5.1.5 TEST RESULTS

EUT :	150M Wireless Router	Model Name :	WRT150N
Temperature :	25 °C	Relative Humidity :	60%
Pressure :	1012 hPa	Test Voltage :	DC 5.0V
Test Mode :	TX b Mode /CH01, CH06, CH11		

Frequency	6dB Bandwidth (MHz)	99% Occupied BW (MHz)	Channel Separation (MHz)	Result
2412 MHz	11.93	14.71	>=500KHz	PASS
2437 MHz	12.06	15.26	>=500KHz	PASS
2462 MHz	11.97	16.21	>=500KHz	PASS



TX CH 06

Agilent R T

Ch Freq 2.437 GHz Trig Free

Occupied Bandwidth [] []

Ref 0 dBm Atten 10 dB

#Peak	Log	10	dB/

Center 2.437 GHz Span 50 MHz

#Res BW 300 kHz #VBW 1 MHz #Sweep 5 ms (101 pts)

Occupied Bandwidth Occ BW % Pwr 99.00 %

15.2622 MHz x dB -6.00 dB

Transmit Freq Error -69.962 kHz

x dB Bandwidth 12.061 MHz

Freq/Channel

Center Freq 2.43700000 GHz

Start Freq 2.41200000 GHz

Stop Freq 2.46200000 GHz

CF Step 5.00000000 MHz

Auto Man

Freq Offset 0.00000000 Hz

Signal Track On Off

Scale Type Log Lin

TX CH 11

Agilent R T

Ch Freq 2.462 GHz Trig Free

Occupied Bandwidth [] []

Ref 0 dBm Atten 10 dB

#Peak	Log	10	dB/

Center 2.462 GHz Span 50 MHz

#Res BW 300 kHz #VBW 1 MHz #Sweep 5 ms (101 pts)

Occupied Bandwidth Occ BW % Pwr 99.00 %

16.2160 MHz x dB -6.00 dB

Transmit Freq Error -19.387 kHz

x dB Bandwidth 11.972 MHz

Sweep

Sweep Time 5.000 ms

Auto Man

Sweep Single Cont

Auto Sweep Coupling SR SA

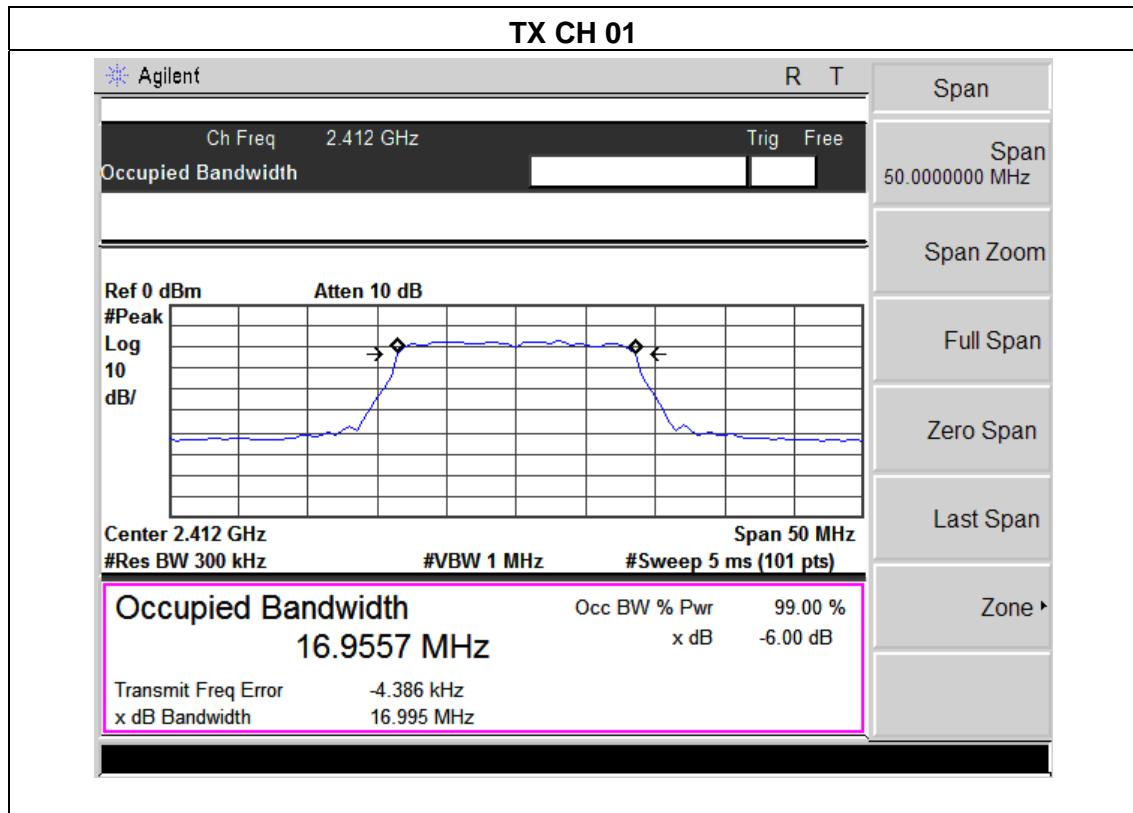
Gate [Off]

Points 101

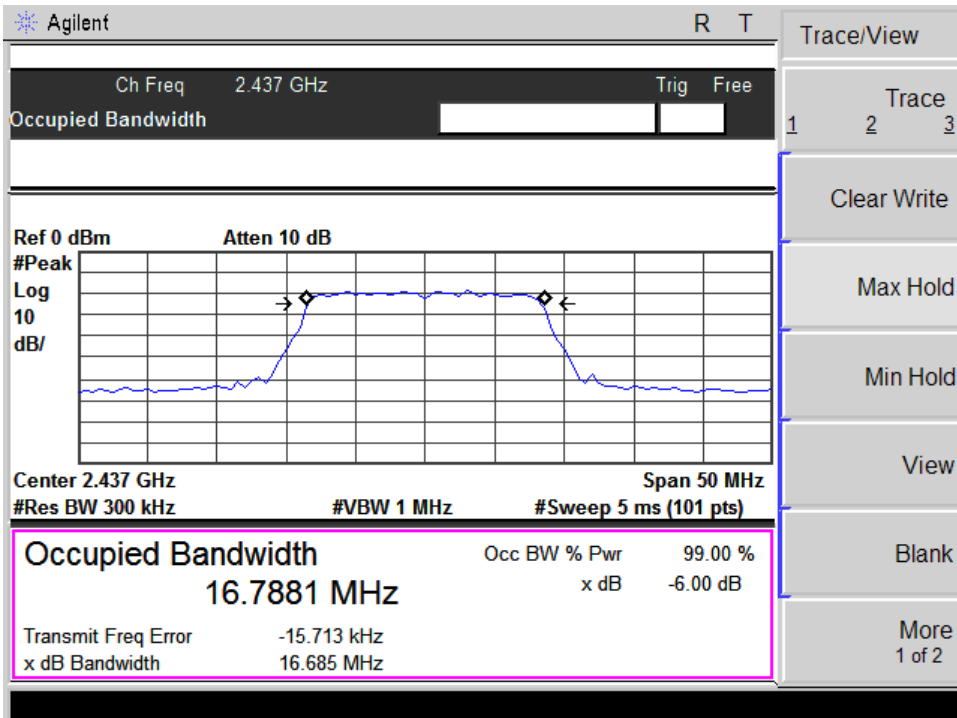
Segmented

EUT :	150M Wireless Router	Model Name :	WRT150N
Temperature :	25 °C	Relative Humidity :	60%
Pressure :	1012 hPa	Test Voltage :	DC 5.0V
Test Mode :	TX g Mode /CH01, CH06, CH11		

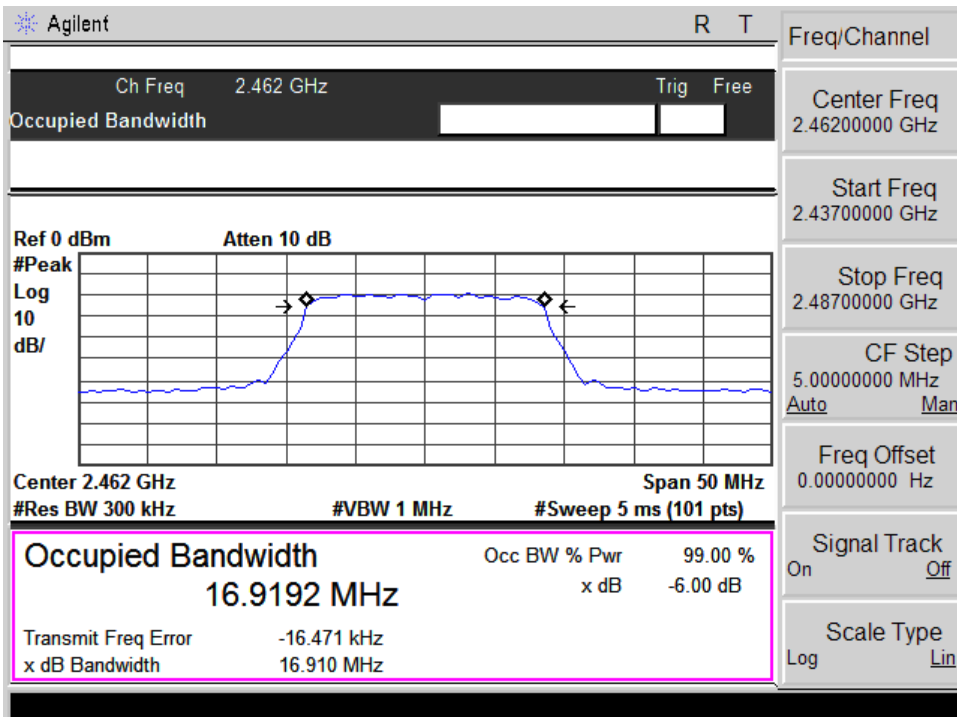
Frequency	6dB Bandwidth (MHz)	99% Occupied BW (MHz)	Channel Separation (MHz)	Result
2412 MHz	16.99	16.95	>=500KHz	PASS
2437 MHz	16.68	16.78	>=500KHz	PASS
2462 MHz	16.91	16.91	>=500KHz	PASS



TX CH 06

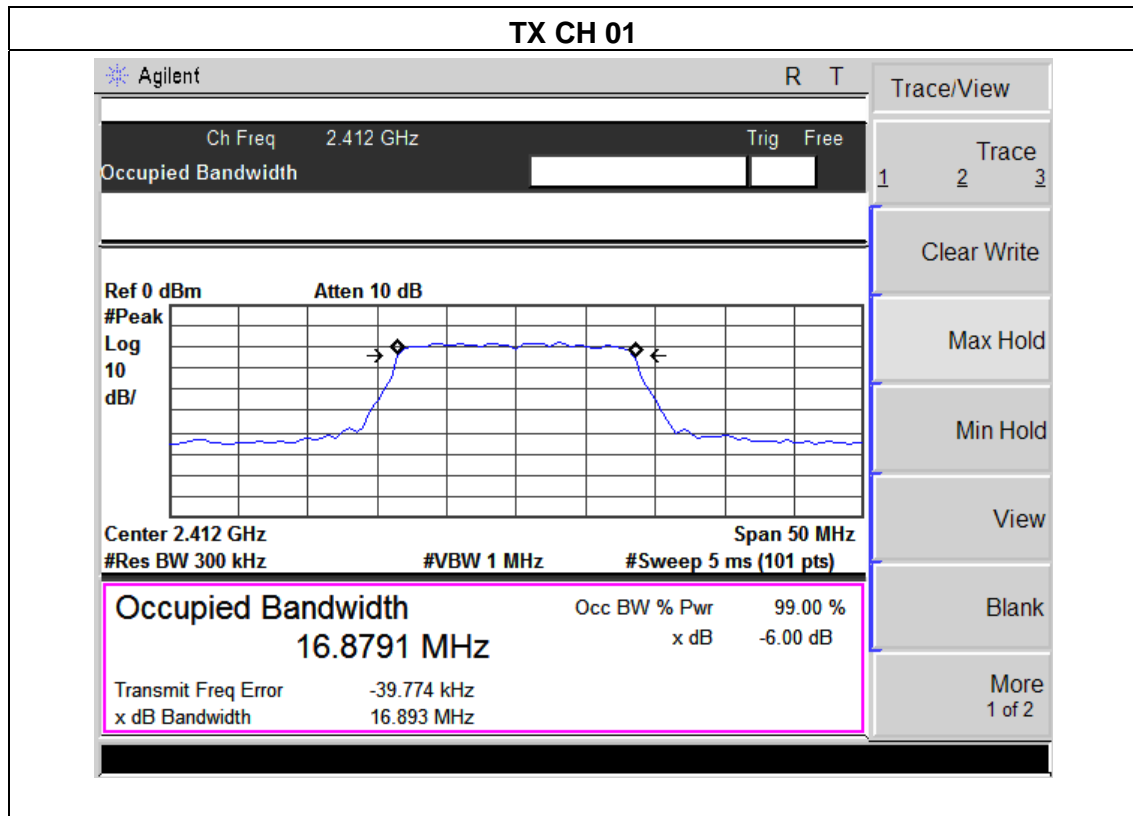


TX CH 11



EUT :	150M Wireless Router	Model Name :	WRT150N
Temperature :	25 °C	Relative Humidity :	60%
Pressure :	1012 hPa	Test Voltage :	DC 5.0V
Test Mode :	TX n Mode(20M) /CH01, CH06, CH11		

Frequency	6dB Bandwidth (MHz)	99% Occupied BW (MHz)	Channel Separation (MHz)	Result
2412 MHz	16.89	16.87	>=500KHz	PASS
2437 MHz	16.88	16.88	>=500KHz	PASS
2462 MHz	16.83	16.83	>=500KHz	PASS



TX CH 06

Agilent R T

Ch Freq 2.437 GHz Trig Free

Occupied Bandwidth [] []

Ref 0 dBm Atten 10 dB

Center 2.437 GHz Span 50 MHz

#Res BW 300 kHz #VBW 1 MHz #Sweep 5 ms (101 pts)

Occupied Bandwidth Occ BW % Pwr 99.00 %

16.8866 MHz x dB -6.00 dB

Transmit Freq Error -20.166 kHz

x dB Bandwidth 16.885 MHz

Freq/Channel

Center Freq 2.43700000 GHz

Start Freq 2.41200000 GHz

Stop Freq 2.46200000 GHz

CF Step 5.00000000 MHz

Auto Man

Freq Offset 0.00000000 Hz

Signal Track On Off

Scale Type Log Lin

TX CH 11

Agilent R T

Ch Freq 2.462 GHz Trig Free

Occupied Bandwidth [] []

Ref 0 dBm Atten 10 dB

Center 2.462 GHz Span 50 MHz

#Res BW 300 kHz #VBW 1 MHz #Sweep 5 ms (101 pts)

Occupied Bandwidth Occ BW % Pwr 99.00 %

16.8373 MHz x dB -6.00 dB

Transmit Freq Error 29.584 kHz

x dB Bandwidth 16.834 MHz

Trace/View

Trace 1 2 3

Clear Write

Max Hold

Min Hold

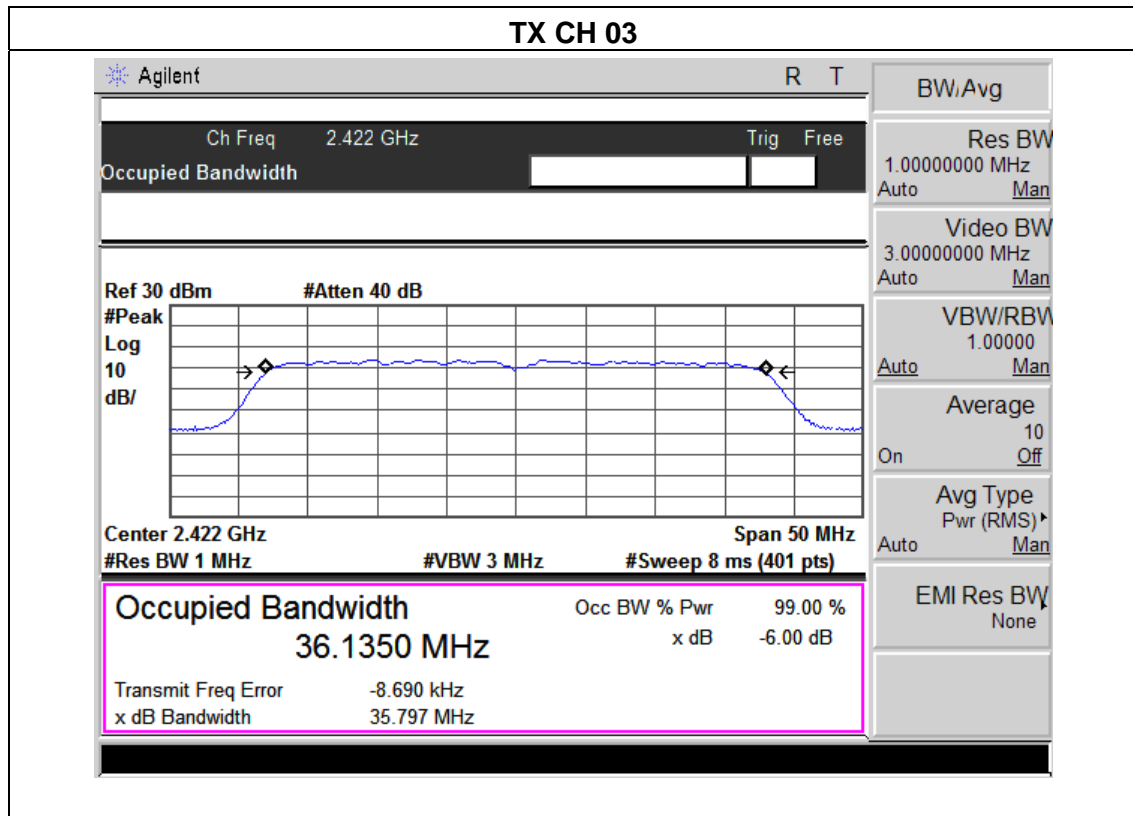
View

Blank

More 1 of 2

EUT :	150M Wireless Router	Model Name :	WRT150N
Temperature :	25 °C	Relative Humidity :	60%
Pressure :	1012 hPa	Test Voltage :	DC 5.0V
Test Mode :	TX n Mode(40M) /CH03, CH06, CH09		

Frequency	6dB Bandwidth (MHz)	99% Occupied BW (MHz)	Channel Separation (MHz)	Result
2422 MHz	35.79	36.13	>=500KHz	PASS
2437 MHz	35.59	36.06	>=500KHz	PASS
2452 MHz	35.82	36.27	>=500KHz	PASS



TX CH 06

Agilent
R T

Ch Freq 2.437 GHz
Trig Free

Occupied Bandwidth

Ref 30 dBm
#Atten 40 dB

#Peak
Log
10
dB/

Center 2.437 GHz Span 50 MHz

#Res BW 1 MHz #VBW 3 MHz #Sweep 8 ms (401 pts)

Occupied Bandwidth Occ BW % Pwr 99.00 %

36.0612 MHz x dB -6.00 dB

Transmit Freq Error -16.215 kHz

x dB Bandwidth 35.593 MHz

Trace/View
 Trace 1 2 3
 Clear Write
 Max Hold
 Min Hold
 View
 Blank
 More 1 of 2

TX CH 09

Agilent
R T

Ch Freq 2.452 GHz
Trig Free

Occupied Bandwidth

Ref 30 dBm
#Atten 40 dB

#Peak
Log
10
dB/

Center 2.452 GHz Span 50 MHz

#Res BW 1 MHz #VBW 3 MHz #Sweep 8 ms (401 pts)

Occupied Bandwidth Occ BW % Pwr 99.00 %

36.2765 MHz x dB -6.00 dB

Transmit Freq Error 35.134 kHz

x dB Bandwidth 35.824 MHz

Freq/Channel
 Center Freq 2.45200000 GHz
 Start Freq 2.42700000 GHz
 Stop Freq 2.47700000 GHz
 CF Step 36.2000000 MHz
 Auto Man
 Freq Offset 0.00000000 Hz
 Signal Track On Off
 Scale Type Log Lin

6. PEAK OUTPUT POWER TEST

6.1 APPLIED PROCEDURES / LIMIT

FCC Part15 (15.247) , Subpart C				
Section	Test Item	Limit	Frequency Range (MHz)	Result
15.247(b)(3)	Peak Output Power	1 watt or 30dBm	2400-2483.5	PASS

6.1.1 TEST PROCEDURE

- a. The EUT was directly connected to the Power meter

6.1.2 DEVIATION FROM STANDARD

No deviation.

6.1.3 TEST SETUP



6.1.4 EUT OPERATION CONDITIONS

The EUT tested system was configured as the statements of 2.4 Unless otherwise a special operating condition is specified in the follows during the testing.

6.1.5 TEST RESULTS

EUT :	150M Wireless Router	Model Name :	WRT150N
Temperature :	25 °C	Relative Humidity :	60%
Pressure :	1012 hPa	Test Voltage :	DC 5.0V
Test Mode :	TX b/g/n(20M,40M) Mode /CH01, CH06, CH11		

TX 802.11b Mode			
Test Channe	Frequency	Peak output power. Antenna port	LIMIT
	(MHz)	(dBm)	dBm
CH01	2412	20.78	30
CH06	2437	20.12	30
CH11	2462	20.51	30
TX 802.11g Mode			
CH01	2412	17.43	30
CH06	2437	17.21	30
CH11	2462	17.09	30
TX 802.11n/20M Mode			
CH01	2412	17.42	30
CH06	2437	17.33	30
CH11	2462	17.00	30
TX 802.11n/40M Mode			
CH03	2422	16.25	30
CH06	2437	16.11	30
CH11	2452	16.98	30

7. ANTENNA REQUIREMENT

7.1 STANDARD REQUIREMENT

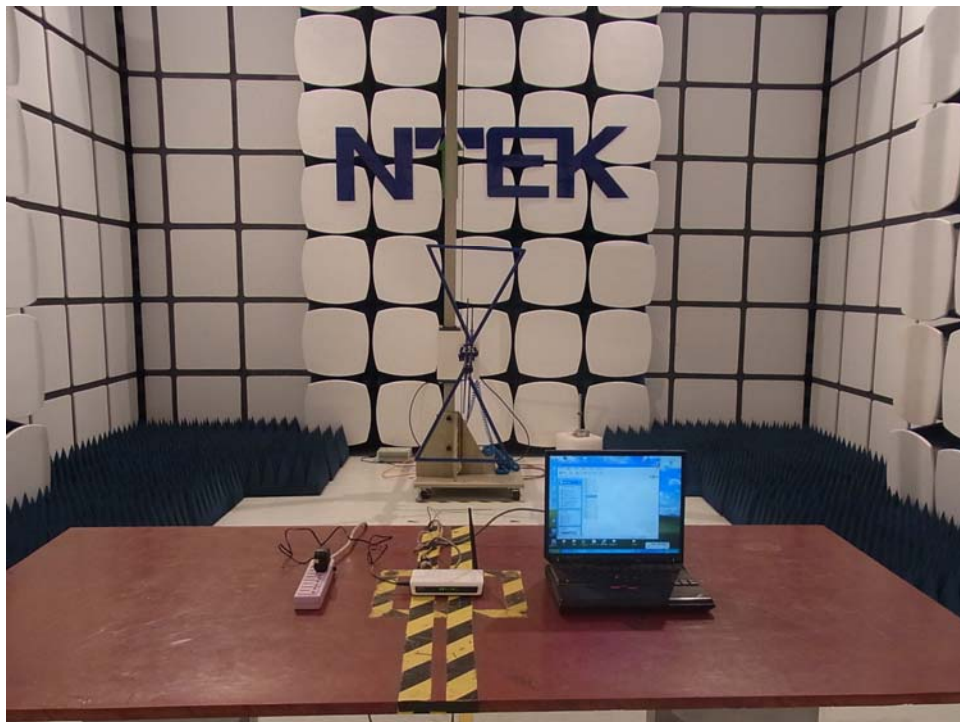
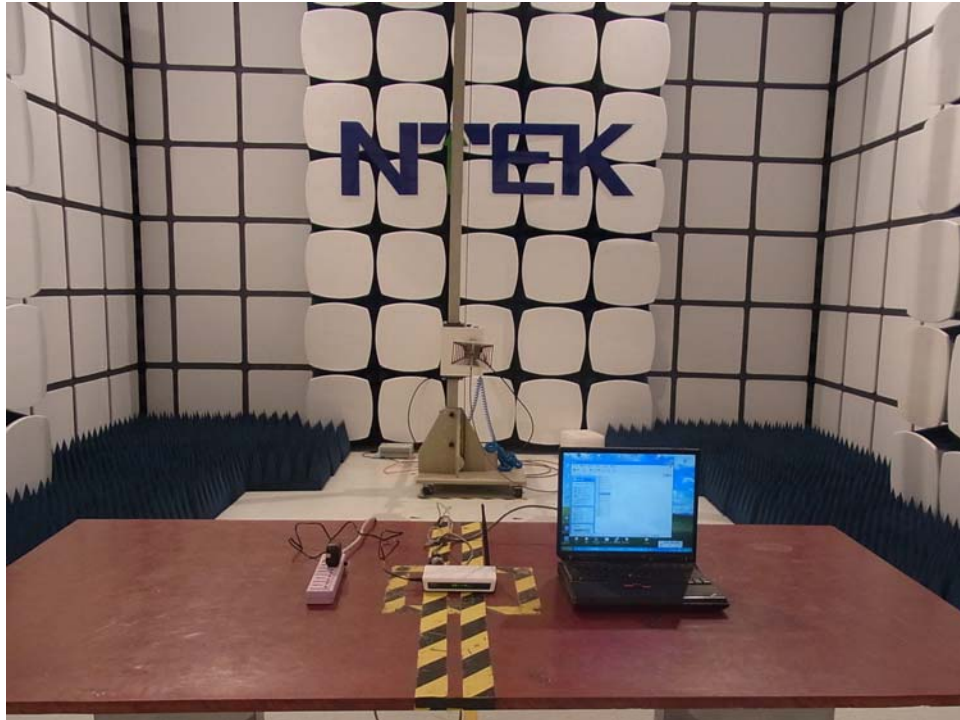
15.203 requirement: For intentional device, according to 15.203: an intentional radiator shall be designed to ensure that no antenna other than that furnished by the responsible party shall be used with the device.

7.2 EUT ANTENNA

The EUT antenna is Integrated antenna. It comply with the standard requirement.

8. EUT TEST PHOTO

Radiated Measurement Photos



Conducted Measurement Photos

