FCC Test Report

Product Name	N150 Easy-N-Range Extender / Travel Router
Model No	TEW-713RE, TEW-714TRU
FCC ID.	XU8TEW713-714

Applicant	TRENDnet, Inc.
Address	20675 Manhattan Place , Torrance , CA90501 USA

Date of Receipt	Nov. 15, 2012
Issue Date	Apr. 01, 2013
Report No.	134030R-RFUSP42V01
Report Version	V1.0



The test results relate only to the samples tested.

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Test Report Certification

Issue Date: Apr. 01, 2013 Report No.: 134030R-RFUSP42V01



Accredited by NIST (NVLAP) NVLAP Lab Code: 200533-0

Product Name	N150 Easy-N-Range Extender / Travel Router			
Applicant	TRENDnet, Inc.			
Address	20675 Manhattan Place , Torrance , CA90501 USA			
Manufacturer	TRENDnet, Inc.			
Model No.	TEW-713RE, TEW-714TRU			
FCC ID.	XU8TEW713-714			
EUT Rated Voltage	AC 100-240V / 50-60Hz			
EUT Test Voltage	AC 120V / 60Hz			
Trade Name	TRENDnet			
Applicable Standard	FCC CFR Title 47 Part 15 Subpart C: 2010			
	ANSI C63.4: 2003, ANSI C63.10: 2009			
Test Result	Complied			

The test results relate only to the samples tested.

:

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Approved By

(Manager / Vincent Lin)

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Attachment 1: EUT Test Photographs

Attachment 2: EUT Detailed Photographs

1. GENERAL INFORMATION

1.1. EUT Description

Product Name	N150 Easy-N-Range Extender / Travel Router			
Trade Name	TRENDnet			
Model No.	TEW-713RE, TEW-714TRU			
FCC ID.	XU8TEW713-714			
Frequency Range	2412-2462MHz for 802.11b/g/n-20BW, 2422-2452MHz for 802.11n-40BW			
Number of Channels	802.11b/g/n-20MHz: 11, n-40MHz: 7			
Data Speed	802.11b: 1-11Mbps, 802.11g: 6-54Mbps, 802.11n: up to 150Mbps			
Type of Modulation	802.11b:DSSS (DBPSK, DQPSK, CCK)			
	802.11g/n:OFDM (BPSK, QPSK, 16QAM, 64QAM)			
Antenna Type	Chip Antenna			
Antenna Gain	Refer to the table "Antenna List"			
Channel Control	Auto			

Antenna List

No.	Manufacturer	Part No.	Antenna Type	Peak Gain
1	WALSIN	RFANT3216120A5T	Chip	2.12 dBi for 2.4 GHz

Note:

1. The antenna of EUT is conform to FCC 15.203.

802.11b/g/n-20MHz Center Frequency of Each Channel:

Channel	Frequency	Channel	Frequency	Channel	Frequency	Channel	Frequency
Channel 01:	2412 MHz	Channel 02:	2417 MHz	Channel 03:	2422 MHz	Channel 04:	2427 MHz
Channel 05:	2432 MHz	Channel 06:	2437 MHz	Channel 07:	2442 MHz	Channel 08:	2447 MHz
Channel 09:	2452 MHz	Channel 10:	2457 MHz	Channel 11:	2462 MHz		
802.11n-40M	Hz Center Fre	equency of Ead	ch Channel:				
Channel	Frequency	Channel	Frequency	Channel	Frequency	Channel	Frequency
Channel 03:	2422 MHz	Channel 04:	2427 MHz	Channel 05:	2432 MHz	Channel 06:	2437 MHz
Channel 07:	2442 MHz	Channel 08:	2447 MHz	Channel 09:	2452 MHz		

Note:

- 1. The EUT is an N150 Easy-N-Range Extender / Travel Router with a built-in 2.4GHz WLAN transceiver.
- 2. The EUT is including two models for different marketing requirement and two different Power board.

Model Name	Power board	USB Interface	LOGO	Note
TEW-713RE	DC 5V, 1A	0	TRENDnet	
TEW-714TRU	DC 5V, 2.1A	2	TRENDnet	One port on Power board One port on RF board

The different of the each model is shown as below:

- 3. The test item peak output power, conducted emission and 30MHz 1GHz radiated emissions are tested at two Model which describe in above note.
- 4. After tested peak output power, conducted emission and 30MHz 1GHz radiated emission, the worst case are Model: TEW-714TRU, the worst case are tested all test item.
- 5. Regarding to the operation frequency, the lowest, middle and highest frequency are selected to perform the test.
- 6. Lowest and highest data rates are tested in each mode. Only worst case is shown in the report. (802.11b is 1Mbps \$\$\sigma\$ 802.11g is 6Mbps \$\$802.11n(20M-BW) is 7.2Mbps and \$\$\$802.11n(40M-BW) is 15Mbps)
- These tests are conducted on a sample for the purpose of demonstrating compliance of 802.11b/g/n transmitter with Part 15 Subpart C Paragraph 15.247 of spread spectrum devices.
- 8. The radiation measurements are performed in X, Y, Z axis positioning. Only the worst case is shown in the report.

Test Mode:	Mode 1: Transmit (802.11b 1Mbps)
	Mode 2: Transmit (802.11g 6Mbps)
	Mode 3: Transmit (802.11n MCS0 7.2Mbps 20M-BW)
	Mode 4: Transmit (802.11n MCS0 15Mbps 40M-BW)

1.3. Tested System Details

The types for all equipment, plus descriptions of all cables used in the tested system (including inserted cards) are:

TEW-713RE:

	Product	Manufacturer	Model No.	Serial No.	Power Cord
1	Notebook PC	DELL	РРТ	N/A	Non-Shielded, 0.8m

Signa	ll Cable Type	Signal cable Description
А	LAN Cable	Shielded, 1m

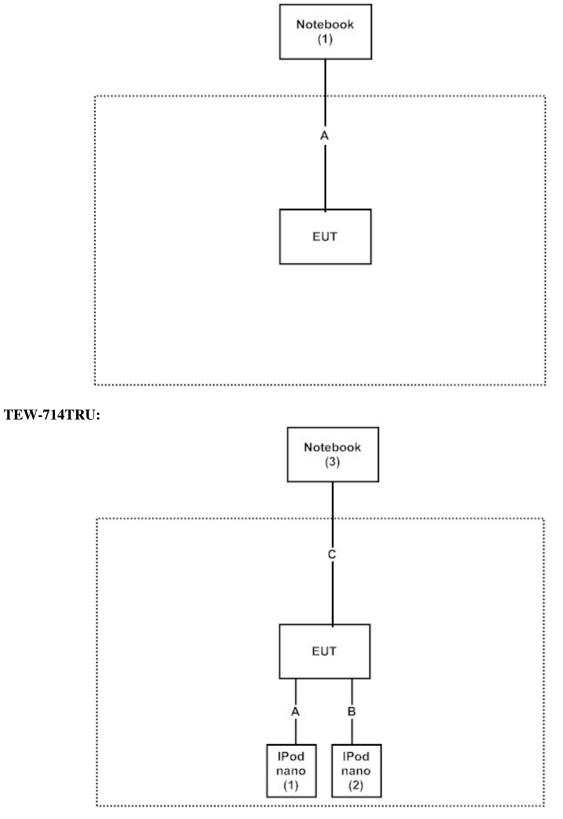
TEW-714TRU :

	Product	Manufacturer	Model No.	Serial No.	Power Cord
1	IPod nano	Apple	A1199	YM7088TVVQ5	N/A
2	IPod nano	Apple	A1199	YM733325VQ5	N/A
3	Notebook PC	DELL	PPT	N/A	Non-Shielded, 0.8m

Signal Cable Type		Signal cable Description
А	USB Cable	Non-shielded, 0.8m
В	USB Cable	Non-shielded, 0.8m
С	LAN Cable	Shielded, 1m

1.4. Configuration of Tested System

TEW-713RE:



1.5. EUT Exercise Software

- (1) Setup the EUT as shown in Section 1.4
- (2) Execute software "QA_Test.exe (v1.0.0.8)" on the EUT.
- (3) Configure the test mode, the test channel, and the data rate.
- (4) Press "OK" to start the continuous Transmit.
- (5) Verify that the EUT works properly.

1.6. Test Facility

Ambient conditions in the laboratory:

Items	Required (IEC 68-1)	Actual
Temperature (°C)	15-35	20-35
Humidity (%RH)	25-75	50-65
Barometric pressure (mbar)	860-1060	950-1000

The related certificate for our laboratories about the test site and management system can be downloaded from

QuieTek Corporation's Web Site: <u>http://www.quietek.com/tw/ctg/cts/accreditations.htm</u> The address and introduction of QuieTek Corporation's laboratories can be founded in our Web site: <u>http://www.quietek.com/</u>

Site Description:	File on
	Federal Communications Commission
	FCC Engineering Laboratory
	7435 Oakland Mills Road
	Columbia, MD 21046
	Registration Number: 92195
	Accreditation on NVLAP
	NVLAP Lab Code: 200533-0
Site Name:	Quietek Corporation
Site Address:	No.5-22, Ruishukeng,
	Linkou Dist. New Taipei City 24451,
	Taiwan, R.O.C.
	TEL: 886-2-8601-3788 / FAX : 886-2-8601-3789
	E-Mail : <u>service@quietek.com</u>

FCC Accreditation Number: TW1014

2. Conducted Emission

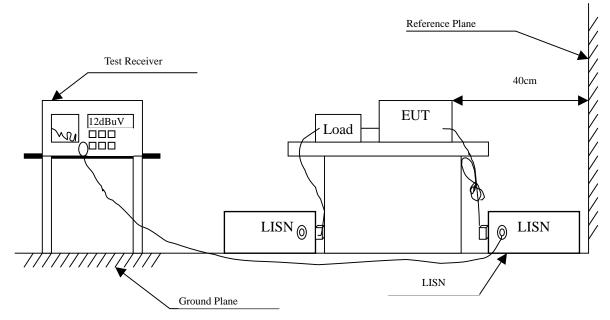
2.1. Test Equipment

	Equipment	Manufacturer	Model No. / Serial No.	Last Cal.	Remark
Х	Test Receiver	R & S	ESCS 30 / 825442/018	Sep., 2012	
Х	Artificial Mains Network	R & S	ENV4200 / 848411/10	Feb., 2013	Peripherals
Х	LISN	R & S	ESH3-Z5 / 825562/002	Feb., 2013	EUT
	DC LISN	Schwarzbeck	8226 / 176	Mar, 2013	EUT
Х	Pulse Limiter	R & S	ESH3-Z2 / 357.8810.52	Feb., 2013	
	No.1 Shielded Room				

Note:

- 1. All equipments are calibrated every one year.
- 2. The test instruments marked by "X" are used to measure the final test results.

2.2. Test Setup



2.3. Limits

FCC Part 15 Subpart C Paragraph 15.207 (dBuV) Limit							
Frequency	Limits						
MHz	QP	AVG					
0.15 - 0.50	66-56	56-46					
0.50-5.0	56	46					
5.0 - 30	60	50					

2.4. Test Procedure

The EUT and simulators are connected to the main power through a line impedance stabilization network (L.I.S.N.). This provides a 50 ohm /50uH coupling impedance for the measuring equipment. The peripheral devices are also connected to the main power through a LISN that provides a 50ohm /50uH coupling impedance with 50ohm termination. (Please refers to the block diagram of the test setup and photographs.)

Both sides of A.C. line are checked for maximum conducted interference. In order to find the maximum emission, the relative positions of equipment and all of the interface cables must be changed according to ANSI C63.10: 2009 on conducted measurement.

Conducted emissions were invested over the frequency range from 0.15MHz to 30MHz using a receiver bandwidth of 9kHz.

2.5. Uncertainty

± 2.26 dB

2.6. Test Result of Conducted Emission
--

Product Test Item Power Line Test Mode	: : :	N150 Easy-N-Range Extender / Travel Router Conducted Emission Test Line 1 Mode 4: Transmit (802.11n MCS0 15Mbps 40M-BW) (2437MHz) – (TEW-713RE)						
Frequency		Correct	Reading	Measurement	Margin	Limit		
		Factor	Level	Level				
MHz		dB	dBuV	dBuV	dB	dBuV		
Line 1								
Quasi-Peak								
0.162		9.830	28.930	38.760	-26.897	65.657		
0.185		9.830	27.660	37.490	-27.510	65.000		
0.341		9.830	26.300	36.130	-24.413	60.543		
1.068		9.830	18.180	28.010	-27.990	56.000		
1.701		9.840	17.230	27.070	-28.930	56.000		
2.939		9.850	15.660	25.510	-30.490	56.000		
Average								
0.162		9.830	16.670	26.500	-29.157	55.657		
0.185		9.830	21.040	30.870	-24.130	55.000		
0.341		9.830	17.890	27.720	-22.823	50.543		
1.068		9.830	8.050	17.880	-28.120	46.000		
1.701		9.840	6.440	16.280	-29.720	46.000		
2.939		9.850	5.710	15.560	-30.440	46.000		

1. All Reading Levels are Quasi-Peak and average value.

2. "means the worst emission level.

3. Measurement Level = Reading Level + Correct Factor

Product Test Item Power Line Test Mode	 N150 Easy-N-Range Extender / Travel Router Conducted Emission Test Line 2 Mode 4: Transmit (802.11n MCS0 15Mbps 40M-BW) (2437MHz) – (TEW-713RE) 					
Frequency		Correct	Reading	Measurement	Margin	Limit
		Factor	Level	Level		
MHz		dB	dBuV	dBuV	dB	dBuV
Line 2						
Quasi-Peak						
0.162		9.839	28.190	38.029	-27.628	65.657
0.193		9.830	26.030	35.860	-28.911	64.771
0.365		9.840	23.610	33.450	-26.407	59.857
0.591		9.840	17.890	27.730	-28.270	56.000
1.177		9.850	13.390	23.240	-32.760	56.000
2.724		9.860	12.630	22.490	-33.510	56.000
Average						
0.162		9.839	17.100	26.939	-28.718	55.657
0.193		9.830	8.720	18.550	-36.221	54.771
0.365		9.840	15.630	25.470	-24.387	49.857
0.591		9.840	9.450	19.290	-26.710	46.000
1.177		9.850	8.540	18.390	-27.610	46.000
2.724		9.860	7.500	17.360	-28.640	46.000

- 1. All Reading Levels are Quasi-Peak and average value.
- 2. "means the worst emission level.
- 3. Measurement Level = Reading Level + Correct Factor

Product Test Item Power Line Test Mode	:							
Frequency		Correct	Reading	Measurement	Margin	Limit		
		Factor	Level	Level				
MHz		dB	dBuV	dBuV	dB	dBuV		
Line 1								
Quasi-Peak								
0.267		9.830	17.060	26.890	-35.767	62.657		
0.412		9.830	24.520	34.350	-24.164	58.514		
0.634		9.830	20.250	30.080	-25.920	56.000		
0.990		9.830	17.080	26.910	-29.090	56.000		
1.435		9.830	16.400	26.230	-29.770	56.000		
1.814		9.840	15.310	25.150	-30.850	56.000		
Average								
0.267		9.830	6.560	16.390	-36.267	52.657		
0.412		9.830	19.630	29.460	-19.054	48.514		
0.634		9.830	8.730	18.560	-27.440	46.000		
0.990		9.830	11.090	20.920	-25.080	46.000		
1.435		9.830	9.770	19.600	-26.400	46.000		
1.814		9.840	4.190	14.030	-31.970	46.000		

- 4. All Reading Levels are Quasi-Peak and average value.
- 5. " " means the worst emission level.
- 6. Measurement Level = Reading Level + Correct Factor

Product Test Item Power Line Test Mode	: : :	Conducted En Line 2		Travel Router 60 15Mbps 40M-BW) (2437MHz) – (1	TEW-714TRU)
Frequency		Correct	Reading	Measurement	Margin	Limit
		Factor	Level	Level		
MHz		dB	dBuV	dBuV	dB	dBuV
Line 2						
Quasi-Peak						
0.197		9.830	15.890	25.720	-38.937	64.657
0.236		9.830	15.380	25.210	-38.333	63.543
0.420		9.840	22.470	32.310	-25.976	58.286
0.666		9.840	22.480	32.320	-23.680	56.000
1.048		9.850	11.620	21.470	-34.530	56.000
2.302		9.860	9.050	18.910	-37.090	56.000
Average						
0.197		9.830	9.250	19.080	-35.577	54.657
0.236		9.830	8.420	18.250	-35.293	53.543
0.420		9.840	15.400	25.240	-23.046	48.286
0.666		9.840	10.170	20.010	-25.990	46.000
1.048		9.850	8.610	18.460	-27.540	46.000
2.302		9.860	2.830	12.690	-33.310	46.000

- 4. All Reading Levels are Quasi-Peak and average value.
- 5. "means the worst emission level.
- 6. Measurement Level = Reading Level + Correct Factor

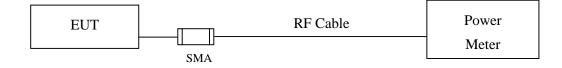
3. Peak Power Output

3.1. Test Equipment

	Equipment	Manufacturer	Model No./Serial No.	Last Cal.
Х	Power Meter	Anritsu	ML2495A/6K00003357	May, 2012
Х	Power Sensor	Anritsu	MA2411B/0738448	Jun, 2012
Note:				
1.	All equipments are	calibrated with trac	eable calibrations. Each calibr	ation is traceable to the
	national or internati	onal standards.		

2. The test instruments marked with "X" are used to measure the final test results.

3.2. Test Setup



3.3. Limits

The maximum peak power shall be less 1 Watt.

3.4. Test Procedure

The EUT was tested according to DTS test procedure of ANSI C63.10: 2009 for compliance to FCC 47CFR 15.247 requirements.

3.5. Uncertainty

± 1.27 dB

3.6. Test Result of Peak Power Output

Product	:	N150 Easy-N-Range Extender / Travel Router
Test Item	:	Peak Power Output Data
Test Site	:	No.3 OATS
Test Mode	:	Mode 1: Transmit (802.11b 1Mbps) – (TEW-714TRU)

Channel No	Frequency	For d	÷	e Power ata Rate (M	Peak Power	Required	Result	
Channel No	(MHz)	1	2	5.5	11	1	Limit	Kesun
			Measur	ement Lev	vel (dBm)			
01	2412	17.68				19.87	<30dBm	Pass
06	2437	17.65	17.61	17.58	17.55	19.88	<30dBm	Pass
11	2462	17.25				19.48	<30dBm	Pass

Note: Peak Power Output Value =Reading value on power meter + cable loss

- Product : N150 Easy-N-Range Extender / Travel Router
- Test Item : Peak Power Output Data
- Test Site : No.3 OATS
- Test Mode : Mode 2: Transmit (802.11g 6Mbps) (TEW-714TRU)

	Eraguanau		F		Ũ	e Power ata Rate		5)		Peak Power	Required	
Channel No	Frequency (MHz)	6	9	12	18	24	36	48	54	6	Limit	Result
01	2412	14.01								23.80	<30dBm	Pass
06	2437	14.00	13.95	13.91	13.89	13.84	13.81	13.79	13.78	23.98	<30dBm	Pass
11	2462	13.55								23.74	<30dBm	Pass

Note: Peak Power Output Value =Reading value on power meter + cable loss

- Product : N150 Easy-N-Range Extender / Travel Router
- Test Item : Peak Power Output Data
- Test Site : No.3 OATS
- Test Mode : Mode 3: Transmit (802.11n MCS0 7.2Mbps 20M-BW) (TEW-714TRU)

			F									
Channel No	Frequency (MHz)	7.2	14.4	21.7	28.9	43.3	57.8	65	72.2	Power 7.2	Required Limit	Result
01	2412	13.64							-	23.09	<30dBm	Pass
06	2437	13.55	13.54	13.51	13.49	13.48	13.47	13.45	13.42	23.12	<30dBm	Pass
11	2462	13.44								23.14	<30dBm	Pass

Note: Peak Power Output Value = Reading value on power meter + cable loss

Product	:	N150 Easy-N-Range Extender / Travel Router
Test Item	:	Peak Power Output Data
Test Site	:	No.3 OATS
Test Mode	:	Mode 4: Transmit (802.11n MCS0 15Mbps 40M-BW) – (TEW-714TRU)

	Energy and an		F	Peak Power	Dequired							
Channel No	Frequency (MHz)	15	30	45	60	90	120	135	150	15	Required Limit	Result
03	2422	13.64								23.41	<30dBm	Pass
06	2437	13.53	13.51	13.49	13.48	13.47	13.45	13.41	13.39	23.29	<30dBm	Pass
09	2452	13.34								23.05	<30dBm	Pass

Note: Peak Power Output Value = Reading value on power meter + cable loss



Product	:	N150 Easy-N-Range Extender / Travel Router
Test Item	:	Peak Power Output Data
Test Site	:	No.3 OATS
Test Mode	:	Mode 1: Transmit (802.11b 1Mbps) – (TEW-713RE)

Channel No	Frequency	For d	C C	e Power ata Rate (N	(lbps)	Peak Power	Required	Result
Chaimer No	(MHz)	1	2	5.5	11	1	Limit	Kesuit
			Measur	ement Lev	vel (dBm)			
01	2412	17.52				19.71	<30dBm	Pass
06	2437	17.54	17.51	17.49	17.45	19.88	<30dBm	Pass
11	2462	17.17				19.42	<30dBm	Pass

Note: Peak Power Output Value =Reading value on power meter + cable loss

- Product : N150 Easy-N-Range Extender / Travel Router
- Test Item : Peak Power Output Data
- Test Site : No.3 OATS
- Test Mode : Mode 2: Transmit (802.11g 6Mbps) (TEW-713RE)

	Fraguanay		Average PowerPeakFor different Data Rate (Mbps)Power										
Channel No	Frequency (MHz)	6	9	12	18	24	36	48	54	6	Required Limit	Result	
				Measurement Level (dBm)									
01	2412	13.81								23.68	<30dBm	Pass	
06	2437	13.82	13.80	13.74	13.74	13.71	13.68	13.68	13.64	23.91	<30dBm	Pass	
11	2462	13.39								23.61	<30dBm	Pass	

Note: Peak Power Output Value =Reading value on power meter + cable loss

- Product : N150 Easy-N-Range Extender / Travel Router
- Test Item : Peak Power Output Data
- Test Site : No.3 OATS
- Test Mode : Mode 3: Transmit (802.11n MCS0 7.2Mbps 20M-BW) (TEW-713RE)

			F	Peak Power								
Channel No	Frequency (MHz)	7.2	14.4	21.7	28.9	43.3	57.8	65	72.2	7.2	Required Limit	Result
01	2412	13.48								22.92	<30dBm	Pass
06	2437	13.42	13.40	13.37	13.36	13.31	13.32	13.30	13.30	22.91	<30dBm	Pass
11	2462	13.32								22.85	<30dBm	Pass

Note: Peak Power Output Value = Reading value on power meter + cable loss

:	N150 Easy-N-Range Extender / Travel Router
:	Peak Power Output Data
:	No.3 OATS
:	Mode 4: Transmit (802.11n MCS0 15Mbps 40M-BW) – (TEW-713RE)
	: :

	Fraguanau	C					Peak Power	Required				
Channel No	Frequency (MHz)	15	30	45	60	90	120	135	150	15	Limit	Result
			Measurement Level (dBm)									
03	2422	13.47								23.31	<30dBm	Pass
06	2437	13.41	13.34	13.36	13.33	13.33	13.29	13.30	13.26	23.34	<30dBm	Pass
09	2452	13.23								22.93	<30dBm	Pass

Note: Peak Power Output Value = Reading value on power meter + cable loss

4. Radiated Emission

4.1. Test Equipment

The following test equipment are used during the radiated emission test:

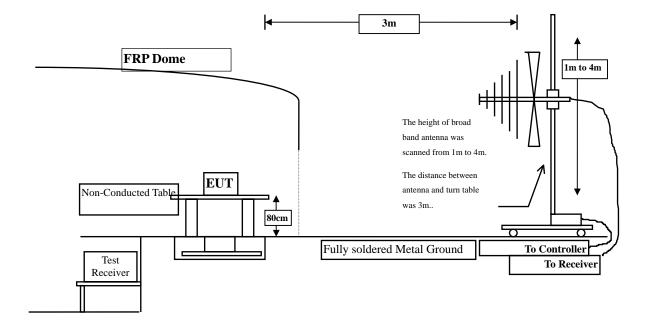
Test Site	Equipment		Manufacturer	Model No./Serial No.	Last Cal.
Site # 3	Х	Bilog Antenna	Schaffner Chase	CBL6112B/2673	Sep., 2012
	Х	Horn Antenna	Schwarzbeck	BBHA9120D/D305	Sep., 2012
	Х	Horn Antenna	Schwarzbeck	BBHA9170/208	Jul., 2012
	Х	Pre-Amplifier	Agilent	8447D/2944A09549	Sep., 2012
	Х	Spectrum Analyzer	Agilent	E4407B / US39440758	May, 2012
	Х	Test Receiver	R & S	ESCS 30/ 825442/018	Sep., 2012
	Х	Coaxial Cable	QuieTek	QTK-CABLE/ CAB5	Feb., 2013
	Х	Controller	QuieTek	QTK-CONTROLLER/ CTRL3	N/A
	Х	Coaxial Switch	Anritsu	MP59B/6200265729	N/A

Note: 1. All equipments are calibrated with traceable calibrations. Each calibration is traceable to the national or international standards.

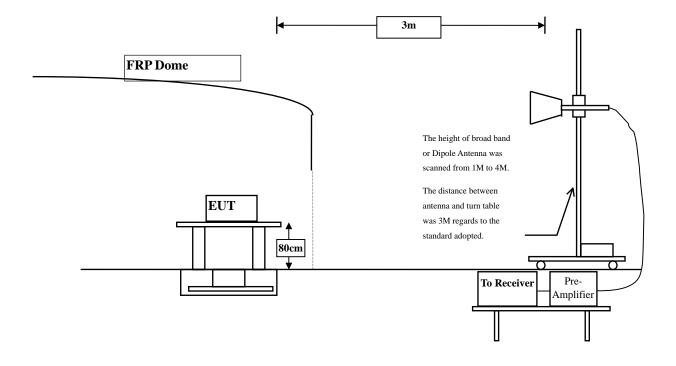
2. The test instruments marked with "X" are used to measure the final test results.

4.2. Test Setup

Radiated Emission Below 1GHz



Radiated Emission Above 1GHz



4.3. Limits

Emissions radiated outside of the specified frequency bands, except for harmonics, shall be attenuated by at least 20dB below the level of the fundamental or to the general radiated emission limits in paragraph 15.209, whichever is the lesser attenuation.

FCC Part 15 Subpart C Paragraph 15.209(a) Limits							
Frequency MHz	uV/m @3m	dBuV/m@3m					
30-88	100	40					
88-216	150	43.5					
216-960	200	46					
Above 960	500	54					

Remarks: E field strength $(dBuV/m) = 20 \log E$ field strength (uV/m)

4.4. Test Procedure

The EUT was setup according to ANSI C63.10: 2009: 2003 and tested according to DTS test procedure of ANSI C63.10: 2009 for compliance to FCC 47CFR 15.247 requirements.

The EUT is placed on a turn table which is 0.8 meter above ground. The turn table is rotated 360 degrees to determine the position of the maximum emission level. The EUT was positioned such that the distance from antenna to the EUT was 3 meters.

The antenna is scanned between 1 meter and 4 meters to find out the maximum emission level. This is repeated for both horizontal and vertical polarization of the antenna. In order to find the maximum emission, all of the interface cables were manipulated according to ANSI C63.10: 2009 on radiated measurement.

The resolution bandwidth below 1GHz setting on the field strength meter is 120 kHz and above 1GHz is 1MHz.

Radiated emission measurements below 1GHz are made using broadband Bilog antenna and above 1GHz are made using Horn Antennas.

The measurement is divided into the Preliminary Measurement and the Final Measurement. The suspected frequencies are searched for in Preliminary Measurement with the measurement antenna kept pointed at the source of the emission both in azimuth and elevation, with the polarization of the antenna oriented for maximum response. The antenna is pointed at an angle towards the source of the emission, and the EUT is rotated in both height and polarization to maximize the measured emission. The emission is kept within the illumination area of the 3 dB bandwidth of the antenna. The worst radiated emission is measured in the Open Area Test Site on the Final Measurement. The frequency range from 30MHz to 10th harminics is checked.

4.5. Uncertainty

- ± 3.9 dB above 1GHz
- ± 3.8 dB below 1GHz

4.6. **Test Result of Radiated Emission**

Product:Test Item:Test Site:Test Mode:	Harmonic Rad No.3 OATS	N150 Easy-N-Range Extender / Travel Router Harmonic Radiated Emission Data No.3 OATS Mode 1: Transmit (802.11b 1Mbps) (2412MHz)					
Frequency	Correct	Reading	Measurement	Margin	Limit		
	Factor	Level	Level				
MHz	dB	dBuV	dBuV/m	dB	dBuV/m		
Horizontal							
Peak Detector:							
4824.000	2.428	42.490	44.919	-29.081	74.000		
7236.000	9.177	38.680	47.857	-26.143	74.000		
9648.000	10.019	39.280	49.300	-24.700	74.000		
Average Detector	:						
Vertical							
Peak Detector:							
4824.000	2.836	47.500	50.337	-23.663	74.000		
7236.000	9.676	39.150	48.826	-25.174	74.000		
9648.000	10.556	38.990	49.547	-24.453	74.000		

Average Detector:

Note:

- 1. All Readings below 1GHz are Quasi-Peak, above 1GHz are performed with peak and/or average measurements as necessary.
- 2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
- 3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
- 4. Measurement Level = Reading Level + Correct Factor.
- 5. Correct Factor = Antenna factor + Cable loss Amplifier gain.
- 6. The average measurement was not performed when the peak measured data under the limit of average detection.
- 7. The emission levels of other frequencies are very lower than the limit and not show in test report.

Product	:	N150 Easy-N-Range Extender / Travel Router							
Test Item	:	Harmonic Rac	Harmonic Radiated Emission Data						
Test Site	:	No.3 OATS							
Test Mode	:	Mode 1: Trans	smit (802.11b 1M	lbps) (2437 MHz)					
Frequency		Correct	Reading	Measurement	Margin	Limit			
		Factor	Level	Level					
MHz		dB	dBuV	dBuV/m	dB	dBuV/m			
Horizontal									
Peak Detector									
4874.000		2.076	42.450	44.527	-29.473	74.000			
7311.000		9.512	39.020	48.532	-25.468	74.000			
9748.000		9.630	38.910	48.540	-25.460	74.000			
Average Detector	or:								
Vertical									
Peak Detector									
4874.000		2.532	45.730	48.262	-25.738	74.000			
7311.000		10.089	38.200	48.289	-25.711	74.000			
9748.000		10.266	39.930	50.197	-23.803	74.000			

- 1. All Readings below 1GHz are Quasi-Peak, above 1GHz are performed with peak and/or average measurements as necessary.
- 2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
- 3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
- 4. Measurement Level = Reading Level + Correct Factor.
- 5. Correct Factor = Antenna factor + Cable loss Amplifier gain.
- 6. The average measurement was not performed when the peak measured data under the limit of average detection.
- 7. The emission levels of other frequencies are very lower than the limit and not show in test report.

	Harmonic Rad No.3 OATS	N150 Easy-N-Range Extender / Travel Router Harmonic Radiated Emission Data No.3 OATS Mode 1: Transmit (802.11b 1Mbps) (2462 MHz)					
Frequency	Correct	Reading	Measurement	Margin	Limit		
	Factor	Level	Level				
MHz	dB	dBuV	dBuV/m	dB	dBuV/m		
Horizontal							
Peak Detector:							
4924.000	2.191	43.060	45.251	-28.749	74.000		
7386.000	10.373	38.090	48.464	-25.536	74.000		
9848.000	9.964	38.740	48.704	-25.296	74.000		
Average Detector	:						
Vertical							
Peak Detector:							
4924.000	2.805	46.850	49.655	-24.345	74.000		
7386.000	11.180	38.630	49.810	-24.190	74.000		
9848.000	10.801	39.220	50.021	-23.979	74.000		

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- 1. All Readings below 1GHz are Quasi-Peak, above 1GHz are performed with peak and/or average measurements as necessary.
- 2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
- 3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
- 4. Measurement Level = Reading Level + Correct Factor.
- 5. Correct Factor = Antenna factor + Cable loss Amplifier gain.
- 6. The average measurement was not performed when the peak measured data under the limit of average detection.
- 7. The emission levels of other frequencies are very lower than the limit and not show in test report.

Product Test Item Test Site Test Mode	: : :	N150 Easy-N-Range Extender / Travel Router Harmonic Radiated Emission Data No.3 OATS Mode 2: Transmit (802.11g 6Mbps) (2412MHz)					
Frequency		Correct	Reading	Measurement	Margin	Limit	
MHz		Factor dB	Level dBuV	Level dBuV/m	dB	dBuV/m	
Horizontal							
Peak Detector							
4824.000		2.428	41.170	43.599	-30.401	74.000	
7236.000		9.177	38.250	47.427	-26.573	74.000	
9648.000		10.019	39.210	49.230	-24.770	74.000	
Average Detect	or:						
Vertical							
Peak Detector							
4824.000		2.836	42.380	45.217	-28.783	74.000	
7236.000		9.676	38.820	48.496	-25.504	74.000	
9648.000		10.556	39.520	50.077	-23.923	74.000	

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- 1. All Readings below 1GHz are Quasi-Peak, above 1GHz are performed with peak and/or average measurements as necessary.
- 2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
- 3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
- 4. Measurement Level = Reading Level + Correct Factor.
- 5. Correct Factor = Antenna factor + Cable loss Amplifier gain.
- 6. The average measurement was not performed when the peak measured data under the limit of average detection.
- 7. The emission levels of other frequencies are very lower than the limit and not show in test report.

Test Item Test Site	: Harmonic Rad : No.3 OATS	N150 Easy-N-Range Extender / Travel Router Harmonic Radiated Emission Data No.3 OATS Mode 2: Transmit (802.11g 6Mbps) (2437 MHz)					
Frequency	Correct Factor	Reading Level	Measurement Level	Margin	Limit		
MHz	dB	dBuV	dBuV/m	dB	dBuV/m		
Horizontal							
Peak Detector:							
4874.000	2.076	42.560	44.637	-29.363	74.000		
7311.000	9.512	38.600	48.112	-25.888	74.000		
9748.000	9.630	38.500	48.130	-25.870	74.000		
Average Detector							
Peak Detector:							
4874.000	2.532	43.370	45.902	-28.098	74.000		
7311.000	10.089	39.450	49.539	-24.461	74.000		
9748.000	10.266	39.160	49.427	-24.573	74.000		

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- 1. All Readings below 1GHz are Quasi-Peak, above 1GHz are performed with peak and/or average measurements as necessary.
- 2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
- 3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
- 4. Measurement Level = Reading Level + Correct Factor.
- 5. Correct Factor = Antenna factor + Cable loss Amplifier gain.
- 6. The average measurement was not performed when the peak measured data under the limit of average detection.
- 7. The emission levels of other frequencies are very lower than the limit and not show in test report.

Product : Test Item : Test Site :	Harmonic Rac	N150 Easy-N-Range Extender / Travel Router Harmonic Radiated Emission Data No 3 OATS					
Test Mode :	Mode 2: Trans	Mode 2: Transmit (802.11g 6Mbps) (2462 MHz)					
Frequency	Correct Factor	Reading Level	Measurement Level	Margin	Limit		
MHz	dB	dBuV	dBuV/m	dB	dBuV/m		
Horizontal							
Peak Detector:							
4924.000	2.191	41.900	44.091	-29.909	74.000		
7386.000	10.373	38.410	48.784	-25.216	74.000		
9848.000	9.964	39.260	49.224	-24.776	74.000		
Average Detector	:						
Vertical							
Peak Detector:							
4924.000	2.805	42.100	44.905	-29.095	74.000		
7386.000	11.180	39.140	50.320	-23.680	74.000		
9848.000	10.801	39.320	50.121	-23.879	74.000		

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- 1. All Readings below 1GHz are Quasi-Peak, above 1GHz are performed with peak and/or average measurements as necessary.
- 2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
- 3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
- 4. Measurement Level = Reading Level + Correct Factor.
- 5. Correct Factor = Antenna factor + Cable loss Amplifier gain.
- 6. The average measurement was not performed when the peak measured data under the limit of average detection.
- 7. The emission levels of other frequencies are very lower than the limit and not show in test report.

	Harmonic Ra No.3 OATS	N150 Easy-N-Range Extender / Travel Router Harmonic Radiated Emission Data No.3 OATS Mode 3: Transmit (802.11n MCS0 7.2Mbps 20M-BW)(2412MHz)					
Frequency	Correct	Reading	Measurement	Margin	Limit		
	Factor	Level	Level	-			
MHz	dB	dBuV	dBuV/m	dB	dBuV/m		
Horizontal							
Peak Detector:							
4824.000	2.428	40.640	43.069	-30.931	74.000		
7236.000	9.177	38.650	47.827	-26.173	74.000		
9648.000	10.019	38.600	48.620	-25.380	74.000		
Average Detector:							
Vertical							
Peak Detector:							
4824.000	2.836	42.050	44.887	-29.113	74.000		
7236.000	9.676	38.530	48.206	-25.794	74.000		
9648.000	10.556	39.800	50.357	-23.643	74.000		

- 1. All Readings below 1GHz are Quasi-Peak, above 1GHz are performed with peak and/or average measurements as necessary.
- 2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
- 3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
- 4. Measurement Level = Reading Level + Correct Factor.
- 5. Correct Factor = Antenna factor + Cable loss Amplifier gain.
- 6. The average measurement was not performed when the peak measured data under the limit of average detection.
- 7. The emission levels of other frequencies are very lower than the limit and not show in test report.

Product Test Item Test Site Test Mode	: : :	N150 Easy-N-Range Extender / Travel Router Harmonic Radiated Emission Data No.3 OATS Mode 3: Transmit (802.11n MCS0 7.2Mbps 20M-BW) (2437 MHz)							
Frequency		Correct	Reading	Measurement	Margin	Limit			
		Factor	Level	Level					
MHz		dB	dBuV	dBuV/m	dB	dBuV/m			
Horizontal	Horizontal								
Peak Detector:	:								
4874.000		2.076	40.280	42.357	-31.643	74.000			
7311.000		9.512	38.180	47.692	-26.308	74.000			
9748.000		9.630	38.060	47.690	-26.310	74.000			
Average Detecto	Average Detector:								
Vertical									
Peak Detector:	:								
4874.000		2.532	41.730	44.262	-29.738	74.000			
7311.000		10.089	38.510	48.599	-25.401	74.000			
9748.000		10.266	38.630	48.897	-25.103	74.000			

Average Detector:

- 1. All Readings below 1GHz are Quasi-Peak, above 1GHz are performed with peak and/or average measurements as necessary.
- 2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
- 3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
- 4. Measurement Level = Reading Level + Correct Factor.
- 5. Correct Factor = Antenna factor + Cable loss Amplifier gain.
- 6. The average measurement was not performed when the peak measured data under the limit of average detection.
- 7. The emission levels of other frequencies are very lower than the limit and not show in test report.

Product:Test Item:Test Site:Test Mode:	N150 Easy-N-Range Extender / Travel Router Harmonic Radiated Emission Data No.3 OATS Mode 3: Transmit (802.11n MCS0 7.2Mbps 20M-BW) (2462 MHz)							
Frequency	Correct	Reading	Measurement	Margin	Limit			
	Factor	Level	Level					
MHz	dB	dBuV	dBuV/m	dB	dBuV/m			
Horizontal								
Peak Detector:								
4924.000	2.191	40.680	42.871	-31.129	74.000			
7386.000	10.373	38.910	49.284	-24.716	74.000			
9848.000	9.964	38.990	48.954	-25.046	74.000			
Average Detector:								
Vertical								
Peak Detector:								
4924.000	2.805	41.080	43.885	-30.115	74.000			
7386.000	11.180	38.630	49.810	-24.190	74.000			
9848.000	10.801	39.920	50.721	-23.279	74.000			

Average Detector:

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- 1. All Readings below 1GHz are Quasi-Peak, above 1GHz are performed with peak and/or average measurements as necessary.
- 2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
- 3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
- 4. Measurement Level = Reading Level + Correct Factor.
- 5. Correct Factor = Antenna factor + Cable loss Amplifier gain.
- 6. The average measurement was not performed when the peak measured data under the limit of average detection.
- 7. The emission levels of other frequencies are very lower than the limit and not show in test report.

Product:Test Item:Test Site:Test Mode:	N150 Easy-N-Range Extender / Travel Router Harmonic Radiated Emission Data No.3 OATS Mode 4: Transmit (802.11n MCS0 15Mbps 40M-BW)(2422MHz)							
Frequency	Correct	Reading	Measurement	Margin	Limit			
	Factor	Level	Level					
MHz	dB	dBuV	dBuV/m	dB	dBuV/m			
Horizontal								
Peak Detector:								
4844.000	2.280	40.540	42.821	-31.179	74.000			
7266.000	9.106	38.340	47.446	-26.554	74.000			
9688.000	9.663	38.300	47.963	-26.037	74.000			
Average Detector:	:							
Vertical								
Peak Detector:								
4844.000	2.707	42.090	44.798	-29.202	74.000			
7266.000	9.626	39.820	49.446	-24.554	74.000			
9688.000	10.284	39.830	50.114	-23.886	74.000			

Average Detector: __

Note:

- 1. All Readings below 1GHz are Quasi-Peak, above 1GHz are performed with peak and/or average measurements as necessary.
- 2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
- 3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
- 4. Measurement Level = Reading Level + Correct Factor.
- 5. Correct Factor = Antenna factor + Cable loss Amplifier gain.
- 6. The average measurement was not performed when the peak measured data under the limit of average detection.
- 7. The emission levels of other frequencies are very lower than the limit and not show in test report.

Product Test Item Test Site Test Mode	: : :	N150 Easy-N-Range Extender / Travel Router Harmonic Radiated Emission Data No.3 OATS Mode 4: Transmit (802.11n MCS0 15Mbps 40M-BW) (2437 MHz)						
Frequency		Correct Factor	Reading Level	Measurement Level	Margin	Limit		
MHz		dB	dBuV	dBuV/m	dB	dBuV/m		
Horizontal Peak Detector: 4874.000 7311.000 9748.000	:	2.076 9.512 9.630	40.750 38.060 38.610	42.827 47.572 48.240	-31.173 -26.428 -25.760	74.000 74.000 74.000		
Average Detector: Vertical Peak Detector:								
4874.000		2.532	41.640	44.172	-29.828	74.000		
7311.000		10.089	38.740	48.829	-25.171	74.000		
9748.000		10.266	39.160	49.427	-24.573	74.000		

Average Detector:

- 1. All Readings below 1GHz are Quasi-Peak, above 1GHz are performed with peak and/or average measurements as necessary.
- 2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
- 3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
- 4. Measurement Level = Reading Level + Correct Factor.
- 5. Correct Factor = Antenna factor + Cable loss Amplifier gain.
- 6. The average measurement was not performed when the peak measured data under the limit of average detection.
- 7. The emission levels of other frequencies are very lower than the limit and not show in test report.

Product Test Item Test Site	: : :	N150 Easy-N-Range Extender / Travel Router Harmonic Radiated Emission Data No.3 OATS							
Test Mode	:		nsmit (802.11n M	CS0 15Mbps 40M-B	W)(2452 MHz)				
			X	1	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,				
Frequency		Correct	Reading	Measurement	Margin	Limit			
		Factor	Level	Level					
MHz		dB	dBuV	dBuV/m	dB	dBuV/m			
Horizontal	Horizontal								
Peak Detector	:								
4904.000		2.000	40.340	42.341	-31.659	74.000			
7356.000		10.308	38.340	48.648	-25.352	74.000			
9808.000		9.850	38.450	48.300	-25.700	74.000			
Average Detecto	or:								
Vertical									
Peak Detector	:								
4904.000		2.513	41.830	44.344	-29.656	74.000			
7356.000		11.022	38.620	49.642	-24.358	74.000			
9808.000		10.512	39.840	50.352	-23.648	74.000			

Average Detector:

- 1. All Readings below 1GHz are Quasi-Peak, above 1GHz are performed with peak and/or average measurements as necessary.
- 2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
- 3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
- 4. Measurement Level = Reading Level + Correct Factor.
- 5. Correct Factor = Antenna factor + Cable loss Amplifier gain.
- 6. The average measurement was not performed when the peak measured data under the limit of average detection.
- 7. The emission levels of other frequencies are very lower than the limit and not show in test report.

Product Test Item Test Site Test Mode	: General Rac : No.3 OATS	N150 Easy-N-Range Extender / Travel Router General Radiated Emission Data No.3 OATS Mode 1: Transmit (802.11b 1Mbps)(2437 MHz) – (TEW-713RE)						
Frequency	Correct	Reading	Measurement	Margin	Limit			
	Factor	Level	Level					
MHz	dB	dBuV	dBuV/m	dB	dBuV/m			
Horizontal								
119.240	-7.291	43.296	36.006	-7.494	43.500			
239.520	-6.878	42.851	35.973	-10.027	46.000			
480.080	1.870	40.578	42.448	-3.552	46.000			
600.360	3.472	34.786	38.258	-7.742	46.000			
720.640	3.826	36.814	40.640	-5.360	46.000			
961.200	6.810	28.779	35.589	-18.411	54.000			
Vertical								
159.980	-5.120	39.891	34.770	-8.730	43.500			
328.760	-2.407	38.768	36.361	-9.639	46.000			
480.080	-3.390	40.578	37.188	-8.812	46.000			
674.080	0.003	32.659	32.662	-13.338	46.000			
840.920	2.284	33.556	35.840	-10.160	46.000			
961.200	3.310	28.779	32.089	-21.911	54.000			

- 1. All Readings below 1GHz are Quasi-Peak, above 1GHz are performed with peak and/or average measurements as necessary.
- 2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
- 3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
- 4. Measurement Level = Reading Level + Correct Factor.
- 5. Correct Factor = Antenna factor + Cable loss Amplifier gain.
- 6. The average measurement was not performed when the peak measured data under the limit of average detection.
- 7. The emission levels of other frequencies are very lower than the limit and not show in test report.

Product Test Item Test Site Test Mode	 N150 Easy-N-Range Extender / Travel Router General Radiated Emission Data No.3 OATS Mode 2: Transmit (802.11g 6Mbps)(2437 MHz) – (TEW-713RE) 						
Frequency	Correct	Reading	Measurement	Margin	Limit		
	Factor	Level	Level				
MHz	dB	dBuV	dBuV/m	dB	dBuV/m		
Horizontal							
119.240	-7.291	43.296	36.006	-7.494	43.500		
239.520	-6.878	42.851	35.973	-10.027	46.000		
328.760	-4.477	38.768	34.291	-11.709	46.000		
472.320	2.932	28.659	31.591	-14.409	46.000		
674.080	2.713	32.659	35.372	-10.628	46.000		
887.480	6.623	24.714	31.337	-14.663	46.000		
Vertical	c 100	10.051	26 712	0.007	16.000		
239.520	-6.138	42.851	36.713	-9.287	46.000		
480.080	-3.390	40.578	37.188	-8.812	46.000		
600.360	1.302	34.786	36.088	-9.912	46.000		
720.640	-0.754	36.814	36.060	-9.940	46.000		
840.920	2.284	33.556	35.840	-10.160	46.000		
961.200	3.310	28.779	32.089	-21.911	54.000		

- 1. All Readings below 1GHz are Quasi-Peak, above 1GHz are performed with peak and/or average measurements as necessary.
- 2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
- 3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
- 4. Measurement Level = Reading Level + Correct Factor.
- 5. Correct Factor = Antenna factor + Cable loss Amplifier gain.
- 6. The average measurement was not performed when the peak measured data under the limit of average detection.
- 7. The emission levels of other frequencies are very lower than the limit and not show in test report.

Product Test Item Test Site Test Mode	: General Radia : No.3 OATS	N150 Easy-N-Range Extender / Travel Router General Radiated Emission Data No.3 OATS Mode 3: Transmit (802.11n MCS0 7.2Mbps 20M-BW)(2437 MHz) – (TEW-713RE)						
Frequency	Correct	Reading	Measurement	Margin	Limit			
	Factor	Level	Level					
MHz	dB	dBuV	dBuV/m	dB	dBuV/m			
Horizontal								
39.700	-3.625	33.253	29.628	-10.372	40.000			
119.240	-7.291	43.296	36.006	-7.494	43.500			
328.760	-4.477	38.768	34.291	-11.709	46.000			
480.080	1.870	40.578	42.448	-3.552	46.000			
674.080	2.713	32.659	35.372	-10.628	46.000			
887.480	6.623	24.714	31.337	-14.663	46.000			
Vertical								
119.240	-3.571	43.296	39.726	-3.774	43.500			
328.760	-2.407	38.768	36.361	-9.639	46.000			
480.080	-3.390	40.578	37.188	-8.812	46.000			
600.360	1.302	34.786	36.088	-9.912	46.000			
720.640	-0.754	36.814	36.060	-9.940	46.000			
932.100	3.430	23.187	26.617	-19.383	46.000			

- 1. All Readings below 1GHz are Quasi-Peak, above 1GHz are performed with peak and/or average measurements as necessary.
- 2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
- 3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
- 4. Measurement Level = Reading Level + Correct Factor.
- 5. Correct Factor = Antenna factor + Cable loss Amplifier gain.
- 6. The average measurement was not performed when the peak measured data under the limit of average detection.
- 7. The emission levels of other frequencies are very lower than the limit and not show in test report.

Product Test Item Test Site Test Mode	: General Radia : No.3 OATS	N150 Easy-N-Range Extender / Travel Router General Radiated Emission Data No.3 OATS Mode 4: Transmit (802.11n MCS0 15Mbps 40M-BW)(2437 MHz) – (TEW-713RE)						
Frequency	Correct	Reading	Measurement	Margin	Limit			
	Factor	Level	Level					
MHz	dB	dBuV	dBuV/m	dB	dBuV/m			
Horizontal								
167.740	-9.816	43.251	33.435	-10.065	43.500			
328.760	-4.477	38.768	34.291	-11.709	46.000			
499.480	1.991	27.275	29.265	-16.735	46.000			
600.360	3.472	34.786	38.258	-7.742	46.000			
802.120	6.356	23.395	29.751	-16.249	46.000			
961.200	6.810	28.779	35.589	-18.411	54.000			
Vertical								
119.240	-3.571	43.298	39.728	-3.772	43.500			
328.760	-2.407	38.768	36.361	-9.639	46.000			
540.220	2.169	28.915	31.084	-14.916	46.000			
720.640	-0.754	36.814	36.060	-9.940	46.000			
840.920	2.284	33.556	35.840	-10.160	46.000			
961.200	3.310	28.779	32.089	-21.911	54.000			

- 1. All Readings below 1GHz are Quasi-Peak, above 1GHz are performed with peak and/or average measurements as necessary.
- 2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
- 3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
- 4. Measurement Level = Reading Level + Correct Factor.
- 5. Correct Factor = Antenna factor + Cable loss Amplifier gain.
- 6. The average measurement was not performed when the peak measured data under the limit of average detection.
- 7. The emission levels of other frequencies are very lower than the limit and not show in test report.

	Product Test Item Test Site Test Mode	 N150 Easy-N-Range Extender / Travel Router General Radiated Emission Data No.3 OATS Mode 1: Transmit (802.11b 1Mbps)(2437 MHz) – (TEW-714TRU) 							
	Frequency	Correct	Reading	Measurement	Margin	Limit			
		Factor	Level	Level					
_	MHz	dB	dBuV	dBuV/m	dB	dBuV/m			
	Horizontal								
_	179.380	-11.904	48.505	36.601	-6.899	43.500			
	299.660	-4.751	46.026	41.275	-4.725	46.000			
	472.320	2.932	34.372	37.304	-8.696	46.000			
	600.360	3.472	37.794	41.266	-4.734	46.000			
	720.640	3.826	34.679	38.505	-7.495	46.000			
	961.200	6.810	29.927	36.737	-17.263	54.000			
	Vertical 173,560	-2.713	40.879	38.166	-5.334	43.500			
	299.660	-4.061	46.026	41.965	-4.035	46.000			
	419.940	-6.694	45.734	39.040	-6.960	46.000			
	600.360	1.302	37.794	39.096	-6.904	46.000			
	749.740	2.023	33.502	35.525	-10.475	46.000			
	961.200	3.310	29.927	33.237	-20.763	54.000			

- 1. All Readings below 1GHz are Quasi-Peak, above 1GHz are performed with peak and/or average measurements as necessary.
- 2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
- 3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
- 4. Measurement Level = Reading Level + Correct Factor.
- 5. Correct Factor = Antenna factor + Cable loss Amplifier gain.
- 6. The average measurement was not performed when the peak measured data under the limit of average detection.
- 7. The emission levels of other frequencies are very lower than the limit and not show in test report.

	Product Test Item Test Site Test Mode	 N150 Easy-N-Range Extender / Travel Router General Radiated Emission Data No.3 OATS Mode 2: Transmit (802.11g 6Mbps)(2437 MHz) – (TEW-714TRU) 							
	Frequency	Correct	Reading	Measurement	Margin	Limit			
		Factor	Level	Level					
_	MHz	dB	dBuV	dBuV/m	dB	dBuV/m			
_	Horizontal								
	179.380	-11.904	48.505	36.601	-6.899	43.500			
	344.280	-1.814	36.831	35.017	-10.983	46.000			
	472.320	2.932	34.372	37.304	-8.696	46.000			
	600.360	3.472	37.794	41.266	-4.734	46.000			
	749.740	3.963	33.502	37.465	-8.535	46.000			
	961.200	6.810	29.927	36.737	-17.263	54.000			
	Vertical								
	121.180	-3.559	43.751	40.192	-3.308	43.500			
	299.660	-4.061	46.026	41.965	-4.035	46.000			
	480.080	-3.390	40.986	37.596	-8.404	46.000			
	600.360	1.302	37.794	39.096	-6.904	46.000			
	720.640	-0.754	34.679	33.925	-12.075	46.000			
	961.200	3.310	29.927	33.237	-20.763	54.000			

- 1. All Readings below 1GHz are Quasi-Peak, above 1GHz are performed with peak and/or average measurements as necessary.
- 2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
- 3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
- 4. Measurement Level = Reading Level + Correct Factor.
- 5. Correct Factor = Antenna factor + Cable loss Amplifier gain.
- 6. The average measurement was not performed when the peak measured data under the limit of average detection.
- 7. The emission levels of other frequencies are very lower than the limit and not show in test report.

Product:N150 Easy-N-Range Extender / Travel RouterTest Item:General Radiated Emission DataTest Site:No.3 OATSTest Mode:Mode 3: Transmit (802.11n MCS0 7.2Mbps 20M-BW)(2437 MHz) – (TE	EW-714TRU)
Frequency Correct Reading Measurement Margin	Limit
Factor Level Level	
MHz dB dBuV dBuV/m dB	dBuV/m
Horizontal	
64.920 -12.587 44.646 32.059 -7.941	40.000
179.380 -11.904 48.505 36.601 -6.899	43.500
429.640 0.630 36.492 37.121 -8.879	46.000
674.080 2.713 29.375 32.088 -13.912	46.000
840.920 6.064 32.763 38.827 -7.173	46.000
961.200 6.810 29.927 36.737 -17.263	54.000
Vertical	
74.620 -7.726 43.490 35.764 -4.236	40.000
326.820 -2.759 37.356 34.597 -11.403	46.000
472.320 -3.508 34.372 30.864 -15.136	46.000
600.3601.30237.93739.239-6.761	46.000
840.920 2.284 32.763 35.047 -10.953	46.000
961.200 3.310 29.927 33.237 -20.763	54.000

- 1. All Readings below 1GHz are Quasi-Peak, above 1GHz are performed with peak and/or average measurements as necessary.
- 2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
- 3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
- 4. Measurement Level = Reading Level + Correct Factor.
- 5. Correct Factor = Antenna factor + Cable loss Amplifier gain.
- 6. The average measurement was not performed when the peak measured data under the limit of average detection.
- 7. The emission levels of other frequencies are very lower than the limit and not show in test report.

Product	:	N150 Easy-	N-Range Exter	nder / Travel Router						
Test Item	:	General Rad	General Radiated Emission Data							
Test Site	:	No.3 OATS								
Test Mode	:	Mode 4: Tra	ansmit (802.11	n MCS0 15Mbps 40N	A-BW)(2437 MH	(z) – (TEW-714TRU)				
Frequency	Co	rrect	Reading	Measurement	Margin	Limit				

Frequency	Correct	Reading	Measurement	Margın	Limit
	Factor	Level	Level		
MHz	dB	dBuV	dBuV/m	dB	dBuV/m
Horizontal					
121.180	-7.289	43.751	36.462	-7.038	43.500
305.480	-3.836	40.178	36.342	-9.658	46.000
472.320	2.932	34.372	37.304	-8.696	46.000
575.140	3.025	28.097	31.122	-14.878	46.000
720.640	3.826	34.679	38.505	-7.495	46.000
961.200	6.810	29.927	36.737	-17.263	54.000
Vertical					
105.660	-4.576	42.230	37.653	-5.847	43.500
305.480	-4.016	40.178	36.162	-9.838	46.000
499.480	-0.199	40.516	40.316	-5.684	46.000
600.360	1.302	37.937	39.239	-6.761	46.000
720.640	-0.754	34.679	33.925	-12.075	46.000
961.200	3.310	29.927	33.237	-20.763	54.000

- 1. All Readings below 1GHz are Quasi-Peak, above 1GHz are performed with peak and/or average measurements as necessary.
- 2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
- 3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
- 4. Measurement Level = Reading Level + Correct Factor.
- 5. Correct Factor = Antenna factor + Cable loss Amplifier gain.
- 6. The average measurement was not performed when the peak measured data under the limit of average detection.
- 7. The emission levels of other frequencies are very lower than the limit and not show in test report.

5. **RF** antenna conducted test

5.1. Test Equipment

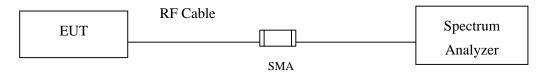
	Equipment	Manufacturer	Model No./Serial No.	Last Cal.
	Spectrum Analyzer	R&S	FSP40 / 100170	Jun, 2012
	Spectrum Analyzer	Agilent	E4407B / US39440758	Jun, 2012
Х	Spectrum Analyzer	Agilent	N9010A/MY48030495	Apr., 2013

Note: 1. All equipments are calibrated with traceable calibrations. Each calibration is traceable to the national or international standards.

2. The test instruments marked with "X" are used to measure the final test results.

5.2. Test Setup

RF antenna Conducted Measurement:



5.3. Limits

In any 100 kHz bandwidth outside the frequency band in which the spread spectrum intentional radiator is operating, the radio frequency power that is produced by the intentional radiator shall be at least 20 dB below that in the 100 kHz bandwidth within the band that contains the highest level of the desired power, based on either an RF conducted or a radiated measurement. Attenuation below the general limits specified in Section 15.209(a) is not required. In addition, radiated emissions which fall in the restricted bands, as defined in Section 15.205(a), must also comply with the radiated emission limits specified in Section 15.209(a) (see Section 15.205(c)).

5.4. Test Procedure

The EUT was tested according to DTS test procedure of ANSI C63.10: 2009 for compliance to FCC 47CFR 15.247 requirements.

Set RBW = 100 kHz, Set VBW> RBW, scan up through 10th harmonic.

5.5. Uncertainty

The measurement uncertainty Conducted is defined as ± 1.27 dB

5.6. Test Result of RF antenna conducted test

Product	:	N150 Easy-N-Range Extender / Travel Router
Test Item	:	RF antenna conducted test
Test Site	:	No.3 OATS
Test Mode	:	Mode 1: Transmit (802.11b 1Mbps)

Channel 01 (2412MHz)

RL RF	50 Q AC		SENS	BE:INT		ALIGN AUTO	03:30:34 P	MNov 28, 2012	
enter Freq 51	5.000000 N	Hz PNO: Fast 😱] Trig: Free	Run	Avg Type	: Log-Pwr	TYP	E 123456 E M W////////	Frequency
	20.00 dBm	IFGain:Low	#Atten: 30	dB		Mkr	1 479.9	83 MHz 88 dBm	Auto Tune
og 10.0			-	1					Center Free 515.000000 MH
0.00					, I				
10.0							_		Start Free 30.000000 MH
20.0		1					·	-18.51 dBm	
30.0									Stop Free 1.000000000 GH
40.0									CF Ste
50.0			♦ ¹						97.000000 MH <u>Auto</u> Ma
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70.0									
tart 30.0 MHz Res BW 100 kl	47	#VBM	1.0 MHz			Sweep 9		0000 GHz	

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Frequency	CE 123456 /PE MWWWWWW DET P NNNNN	TY	: Log-Pwr	Avg Type	Free Run en: 30 dB	-	PNO: Fast	500000000	er Fred
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6.500000000 GH								▲ 1	
Start Free									-
1.000000000 GH			_					-	
	-18.51 dBm					_			
Stop Free 12.000000000 GH	1								
CF Ste									
1.100000000 GH Auto Ma									
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	2.000 GHz 10001 pts)		Sweep		/H7	NAT 1	#VBN	71.24	1.000 C
	10001 pts)	1.02 S (1	Sweep		AHZ	WV 1	and a first of	(HZ nged; all traces o	

KIRL RF 50 Q AC		SENSE:INT	AL	IGN AUTO	03:31:10 PM Nov 28, 2012	a protocol and a second
Center Freq 18.500000	PNO: Fast 😱	Trig: Free Run	Avg Type: L	og-Pwr	TRACE 123456 TYPE MWWWWWWW DET P N N N N N	Frequency
10 dB/div Ref 20.00 dBm	IFGain:Low	#Atten: 30 dB		Mkr	23.702 6 GHz -47.680 dBm	Auto Tune
.og				_ 1		Center Free
10.0						18.500000000 GH:
0.00				_		Start Fre
10.0				-		12.000000000 GH
20.0					-18.51 dBm	
	6. L. J 1					Stop Free 25.00000000 GH
30.0						
40.0					↓ ¹	CF Stej 1.300000000 GH Auto Ma
-50.0	In the second	and a post of a standard and	March 1		Min Statigat Aran	<u>Auto</u> ma
60.0						Freq Offse 0 H
-70.0						
Start 12.000 GHz #Res BW 100 kHz	#VBW	1.0 MHz		Sweep	Stop 25.000 GHz 1.20 s (10001 pts)	
sg JFile <image.png> saved</image.png>	#VDVV			SWEEP	1.20 S (10001 pts)	



Frequency	03:49:32 PMNov 28, 2012 TRACE 1 2 3 4 5 6	ALIGNAUTO De: Log-Pwr	Avg	SENSE:INT			Ω AC	um Analyzer - S RF 50 req 515.00	nter Fi
Auto Tur	TYPE MWWWWW DET PNNNNN 1 359.994 MHz	Mkr1	PNO: Fast 🏳 Trig: Free Run IFGain:Low #Atten: 30 dB						
	-49.67 dBm		-			1) dBm	Ref 20.00	dB/div
Center Fre 515.000000 Mi								_	0
Start Fre 30.000000 Mi									o o
Stop Fre	-18.71 dBm								0
CF Ste									o o
97.000000 Mi <u>Auto</u> Ma					t				0
Freq Offs 01	Nice and Security March and a second second		t de la composition d				and the second		
	Stop 1.0000 GHz		-						art 30.0
Frequency	0.0 ms (10001 pts)	Sweep 90.0 STATUS	Aus	AHZ SENSE:INT	/BW 1		Swept SA ΓΩ ΑC	100 kHz <image.png> um Analyzer - So RF 50</image.png>	es BW
Frequency Auto Tur	0.0 ms (10001 pts)	SWeep 90.0 STATUS ALIGNAUTO C De: Log-Pwr	Avg		# @		Swept SA) Ω AC 0000000 (100 kHz <image.png> um Analyzer - S RF 50 reg 6.5000</image.png>	es BW File < ent Spectr RL nter Fi
	0.0 ms (10001 pts)	SWeep 90.0 STATUS ALIGNAUTO C De: Log-Pwr	Avg	SENSE:INT	# @	GHz PNO: F	Swept SA) Ω AC 0000000 (100 kHz <image.png> um Analyzer - S RF 50 req 6.5000 Ref 20.00</image.png>	es BW
Auto Tur Center Fre	0.0 ms (10001 pts)	SWeep 90.0 STATUS ALIGNAUTO C De: Log-Pwr	Avg	SENSE:INT	# @	GHz PNO: F	Swept SA) Ω AC 0000000 (100 kHz <image.png> um Analyzer - S RF 50 reg 6.5000</image.png>	es BW
Auto Tur Center Fre 6.50000000 GP Start Fre	0.0 ms (10001 pts)	SWeep 90.0 STATUS ALIGNAUTO C De: Log-Pwr	Avg	SENSE:INT	# @	GHz PNO: F	Swept SA) Ω AC 0000000 (100 kHz <image.png> um Analyzer - S RF 50 req 6.5000 Ref 20.00</image.png>	es BW
Auto Tur Center Fre 6.50000000 GF Start Fre 1.000000000 GF Stop Fre	0.0 ms (10001 pts)	SWeep 90.0 STATUS ALIGNAUTO C De: Log-Pwr	Avg	SENSE:INT	# @	GHz PNO: F	Swept SA) Ω AC 0000000 (100 kHz <image.png> um Analyzer - S RF 50 req 6.5000 Ref 20.00</image.png>	es BW
Auto Tur Center Fre 6.50000000 GP Start Fre 1.00000000 GP 22.00000000 GP CF Ste 1.100000000 GP	0.0 ms (10001 pts)	Sweep 90.0 STATUS ALIGNAUTO E ALIGNAUTO Mkr1		SENSE:INT		GHz PNO: F	Swept SA) Ω AC 0000000 (100 kHz <image.png> req 6.5000 Ref 20.00 1 1 1 1 1 1 1 1 1 1 1 1 1</image.png>	es BW
Auto Tur Center Fre 6.50000000 GP Start Fre 1.00000000 GP 12.00000000 GP 12.00000000 GP CF Ste 1.100000000 GP Auto Ma	0.0 ms (10001 pts)	Sweep 90.0 STATUS ALIGNAUTO Control Status Mkr1		SENSEJINT		GHz PNO: F	Swept SA) Ω AC 0000000 (100 kHz <image.png> req 6.5000 Ref 20.00 1 1 1 1 1 1 1 1 1 1 1 1 1</image.png>	es BW

Channel 06 (2437MHz)

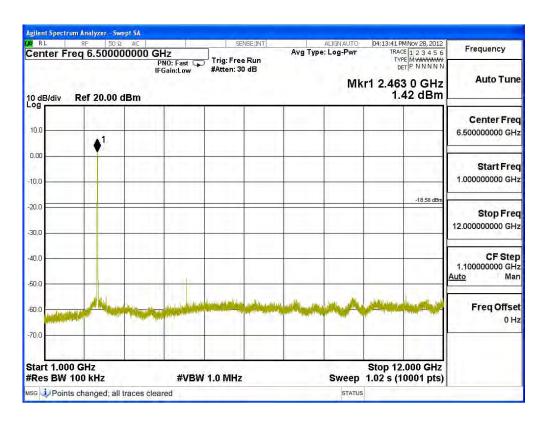


	PMNov 28, 2012	03:50:07 P	ALIGNAUTO	1	INSE:INT	SE		Ω AC	RF 50	RL	
Frequency	CE 1 2 3 4 5 6 PE MWWWWWW DET P N N N N N	TRAC TY		Avg Type: Log- Trig: Free Run			NO: Fast 😱	enter Freq 18.500000000 GHz			
Auto Tun	6 6 GHz 92 dBm	1 23.93	Mkr		0 dB	#Atten: 30	D dB/div Ref 20.00 dBm				
Center Fre					1	1				g	
18.500000000 GH					-				-	0.0	
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Start Free 12.000000000 GH						1	154	0.2		0.0	
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Stop Free 25.00000000 GH						1.001				0.0	
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1										0.0	
	5.000 GHz	Stop 25 1.20 s (1	Sweep			1.0 MHz	#\/D\M			art 12.00 Res BW	



Frequency	04:14:17 PMNov 28, 2012 TRACE 1 2 3 4 5 6	AUTO	A Avg Type:	SE:INT	SEN	10-2		RF 5	RL
Auto Tune	TYPE MWWWWW Det PNNNN 1 479.983 MHz -49.73 dBm				Trig: Free #Atten: 30	PNO: Fast 😱 IFGain:Low		Ref 20.0	0 dB/div
11		-		1. 7				Rei 20.0	
Center Free 515.000000 MH									10.0
Start Free									0.00
30.000000 MH									10.0
Stop Free 1.000000000 GH	-18.58 dBm								20.0
1.00000000 GH									30.0
CF Ste 97.000000 MH					•1		-		40.0
<u>Auto</u> Ma			-		•			_	50.0
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			and the second se					nengkag og som et oppdale	70.0
	Stop 1.0000 GHz).0 ms (10001 pts)		S		1.0 MHz	#VBW			tart 30.0 Res BW

Channel 11 (2462MHz)





Agilent Spectrum Analyzer - Swept	SA.				
	AC	SENSE:INT	ALIGNAUTO	04:14:53 PM Nov 28, 2012	Frequency
Center Freq 18.50000	PN0: Fast IFGain:Low	Trig: Free Run #Atten: 30 dB	Avg Type: Log-Pwr	TRACE 123456 TYPE MWWWWW DET P N N N N N	Trequency
10 dB/div Ref 20.00 dB		watten. 50 db	Mkr	1 23.817 0 GHz -47.44 dBm	Auto Tune
Log					Center Freq
10.0					18.500000000 GHz
0.00	_				
10.0					Start Fred 12.000000000 GH:
20.0				-18.58 dBm	
30.0					Stop Free 25.00000000 GH:
					CF Ster
40.0				♦ ¹	1.300000000 GH: Auto Mar
-50.0	a that has not the	and the same based by an	And the second second		
60.0					Freq Offse 0 Hi
70.0					
Start 12.000 GHz #Res BW 100 kHz	#VBW	1.0 MHz	Sweep	Stop 25.000 GHz 1.20 s (10001 pts)	
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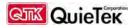
:	N150 Easy-N-Range Extender / Travel Router
:	RF Antenna Conducted Spurious
:	No.3 OATS
:	Mode 2: Transmit (802.11g 6Mbps)

Channel 01 (2412MHz)

		la sua ser a	A REPORT OF A REPORT		energia de contra de la					Agilent Spectrum
Frequency	MNov 28, 2012 CE 1 2 3 4 5 6	TRAC	Log-Pwr	Avg Typ	NSE:INT		Hz	Ω AC	1.55	Center Fre
Auto Tun	TyreE Det P NNNN Mkr1 479.983 MHz -50.06 dBm					Trig: Free #Atten: 30	PNO: Fast 😱 IFGain:Low		Ref 20.00	
Center Fre 515.000000 MH	1									10.0
Start Fre 30.000000 M⊦										0.00
Stop Fre 1.000000000 GH	-22.18 dBm									20.0
CF Ste 97.000000 MH <u>Auto</u> Ma						♦ ¹				40.0
Freq Offse		19. arium 19.6.1		e ke jijine i jine te						60.0
										-70.0
	0.0 MHz Stop 1.0000 GHz W 100 kHz #VBW 1.0 MHz Sweep 90.0 ms (10001 pts)							Start 30.0 N Res BW 10		
			STATUS					saved	mage.png> s	Isg 🤳 File <in< td=""></in<>

TECTOMON	PM Nov 28, 2012		ALIGN AUTO		NSE:INT	SEI		ioΩ AC	RF	RL
Frequency	ACE 123456 YPE MWWWWWW DET P NNNNN	TY	: Log-Pwr	Avg Type	e Run	Trig: Free	PNO: Fast 😱	000000 G	req 6.50	enter F
Auto Tune	FGain:Low #Atten: 30 dB ©ET[P NNNN Mkr1 2.413 5 GHz Ref 20.00 dBm -2.18 dBm									0 dB/div
Center Free										og
6.500000000 GH				1						10.0
Start Free		-							∳ ¹	0.00
1.000000000 GH										10,0
Stop Fre 12.000000000 GH	-22.18 dBm									20.0
										30.0
CF Ste										40.0
1.100000000 GH Auto Ma										50.0
Eron Office	and the second second	(all and an		ne Tellin	and a start of the start		- I de mil	and then be at the	A	
Freq Offse 0 H					and the second	an dia pada di	A CONTRACTOR			60.0 () () ()
									-	70.0
	2.000 GHz		Owner			4 0 1411-	#\/D\A/			tart 1.0
	2.000 GHz (10001 pts)		Sweep			1.0 MHz	#VBW		10 GHz 100 kHz	

XI RL RF 50 Q	AC	SENSE:INT	ALIGNAUTO	04:30:22 PMNov 28, 2012	
Center Freq 18.5000	PNO: Fast	Avg Type: Log-Pwr TRACE 1 2 3 4 5 6 Trig: Free Run Watton: 30 dB			Frequency
0 dB/div Ref 20.00 dl	IFGain:Low	#Atten: 30 dB	Auto Tune		
og					Center Fre
					18.500000000 GH
10.0				= =	Start Free 12.000000000 GH
-20.0				-22.18 dBm	Stop Free 25.000000000 GH
30.0					CF Step
40.0			♦ ¹		1.300000000 GH Auto Ma
50.0	and the second second second	and the second	And the state of the	State of the second	1
60.0		an a state of the			Freq Offse 0 H
70.0					
Start 12.000 GHz #Res BW 100 kHz	#VBW	1.0 MHz	Sweep	Stop 25.000 GHz 1.20 s (10001 pts)	



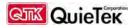
	MNov 28, 2012	04:39:50 P	ALIGNAUTO		SENSE:INT			AC	RF 50 9	RL
Frequency	E 123456 E MWWWWW	TRAC	e: Log-Pwr	Avg Ty	Free Run],		0000	eq 515.00	enter Fr
Auto Tun	Atten: 30 dB Der P NNNN Mkr1 479.983 MHz -49.91 dBm						PNO: Fast 🦕 IFGain:Low	dBm	Ref 20.00) dB/div
Center Fre					1 1 1 1					
Center Fre 515.00000 MH Start Fre 30.000000 MH Stop Fre 1.000000000 GH CF Ste 97.000000 MH										0.0
Start Fre								-).00
30.000000 MH									-	0.0
Stop Free 1.000000000 GH	-22.50 dBm	_			_				_	0.0
										0.0
CF Ste									1 1 1	0.0
97.000000 MH Auto Ma					1					0.0
Freq Offse		1					115	1		
0 H		Participation of	and the second	ne del pritos IV	And a literature of the		all the second second		adue til superiorie	
						-				ro.o
		Stop 1.0000 GHz Sweep 90.0 ms (10001 pts)					#VBW		tart 30.0 Res BW	

Channel 06 (2437MHz)

THE CONTRACTOR	04:39:14 PMNov 28, 2012 TRACE 1, 2, 3, 4, 5, 6		ALIGN AUTO			SE		2 AC	RF 50 \$	RL		
Frequency	ACE 123456 YPE MIMMAMAN DET PINNNNN	TY	: Log-Pwr	Avg Type	NO: Fast 😱 Trig: Free Run				q 6.5000	enter Fr		
Auto Tu	Mkr1 2.437 7 GHz JdB/div Ref 20.00 dBm -2.50 dBm											
Center Fre					·	i al				og		
6.500000000 GH								1		10.0		
Start Fre 1.000000000 GH										0.00		
Stop Fre 12.00000000 GH	-22.50 dBm									20.0		
CF Stej 1.100000000 GH Auto Ma										10.0		
Freq Offse 0 H	al water		m.A		l ditter de feler	nadan (Makan			$ \wedge$	50.0 Martin		
										70.0		
		Stop 12.000 GHz W 1.0 MHz Sweep 1.02 s (10001 pts)						tart 1.000 GHz Res BW 100 kHz #VBW 1.				



Agilent Spectrum Analyzer - Swept SA					
RL RF 50Ω AC		SENSE:INT	ALIGNAUTO Avg Type: Log-Pwr	04:40:25 PMNov 28, 2012 TRACE 1 2 3 4 5 6	Frequency
Center Freq 18.5000000	PNO: Fast IFGain:Low	Trig: Free Run #Atten: 30 dB	Avg Type. Log-rwi	TYPE MWWWWW DET P N N N N N	
10 dB/div Ref 20.00 dBm	IFGain.LUw		Auto Tune		
og		1.1			Center Free
10.0					18.500000000 GH
0.00					
10,0					Start Free 12.000000000 GH
20.0				-22.50 dBm	Stop Fre
30.0	_				25.00000000 GH
40.0					CF Ste
		_	♦ ¹	Louis willied a solution	1.300000000 GH <u>Auto</u> Ma
50.0	and the second second	Land to a straight of the			
60.0					Freq Offse 0 H
70.0					
Start 12.000 GHz #Res BW 100 kHz	#VBW	1.0 MHz	Sweep	Stop 25.000 GHz 1.20 s (10001 pts)	
ISG JFile <image.png> saved</image.png>	100 p 25 6 5	1	STATU	And a set of the A	



1	MNov 28, 2012	04:55:34 P	ALIGN AUTO		SENSE:INT			AC	RF 50 G	RL
Frequency	E 123456		e: Log-Pwr	Avg Ty]		0000	eq 515.00	enter Fi
Auto Tur	83 MHz 85 dBm	⊳ 1 479.9	Mkr		: Free Run en: 30 dB		PNO: Fast 🖵 IFGain:Low	dBm	Ref 20.00	0 dB/div
Center Fre	1				1.1	i.		12		10.0
Center Fn 515.000000 M Start Fn 30.000000 M Stop Fn 1.00000000 G CF Stt 97.000000 M										
Start Fre 30.000000 MH										0.00
Stop Fre 1.000000000 GH	-22.39 dBm									20.0
CF Ste 97.000000 MI <u>Auto</u> Ma					♦ ¹	ł				10.0
Freq Offs	minister	il.			the second s		ing Allock, and good Allocation for the second	1	ter fision a street balant	i0.0
		10.000								70.0
	0000 GHz		Sweep 90		VIHz	1.0	#VBW			tart 30.0 Res BW

Channel 11 (2462MHz)

2	PMNov 28, 2012	04:54:59 P	ALIGN AUTO		SENSE:INT	9		Q AC	RF 50 G	RL
	CE 1 2 3 4 5 6 PE M W M M M M M M M M M M M M M M M M M	TY	Avg Type: Log-Pwr ig: Free Run htten: 30 dB			Hz PNO: Fast 😱 Gain:Low		eq 6.5000	enter Fr	
Auto Tu	Mkr1 2.460 8 GHz Bidiv Ref 20.00 dBm -2.39 dBm									
Center F	1				1	1				og
6.500000000										0.0
Start F									+ † ').00
1.000000000										0.0
Stopr	-22.39 dBm				-					0.0
12.000000000										0.0
CF St 1.100000000										0.0
Auto N		0.5			-	-				0.0
Freq Off 0			m.A			an dilayan kata Marina dilayan kata		-		
										0.0
		Stop 12.000 GHz					itart 1.000 GHz Res BW 100 kHz #VBW 1.			
	2.000 GHz 10001 pts)		Sweep		Iz	1.0 MH:	and at the sec			Res BW 1



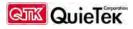
Agilent Spectrum Analyzer - Swept XI RL RF 50 Ω 4	IC	SENSE:INT	1	ALIGNAUTO	04:56:10 PM Nov 28, 2012	
Center Freq 18.500000		Trig: Free Run	Avg Type		TRACE 1 2 3 4 5 6 TYPE MWWWWW DET P N N N N N	Frequency
10 dB/div Ref 20.00 dB	IFGain:Low	#Atten: 30 dB		Auto Tune		
10.0						Center Fred 18.50000000 GHz
10,0						Start Free 12.000000000 GH
30.0					-22;39 dBm	Stop Free 25.000000000 GH
10.0				Ann. 4.	↓	CF Stej 1.300000000 GH <u>Auto</u> Ma
50.0	ال ^{مر} سانيورية الماميرانيو ا		and the second second			Freq Offse 0 H
70.0						
Start 12.000 GHz #Res BW 100 kHz	#VBW	1.0 MHz		Sweep	Stop 25.000 GHz 1.20 s (10001 pts)	
sg JAlignment Completed				STATUS	1	

Product	:	N150 Easy-N-Range Extender / Travel Router
Test Item	:	RF Antenna Conducted Spurious
Test Site	:	No.3 OATS
Test Mode	:	Mode 3: Transmit (802.11n MCS0 7.2Mbps 20M-BW)

Channel 01 (2412MHz)

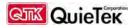
-	MNov 28, 2012		ALIGN AUTO		VSE:INT	SEI		50 Q AC		RL
Frequency	E 123456	TRA	: Log-Pwr	Avg Type	Due	Trig: Free	Hz	5.000000 N	Freq 515.	Center F
Auto Tur	94 MHz 87 dBm	1 359.9	Mkr			#Atten: 30	PNO: Fast 🖵 IFGain:Low	0.00 dBm	Ref 20.	10 dB/div
Center Fre 515.000000 MH										10.0
Start Fre 30.000000 MF										-10.0
Stop Fre 1.000000000 GH	-22.10 dBm							-		30.0
CF Ste 97.000000 MH Auto Ma							↓ ¹			40.0
Freq Offs				alada ya katata			Ma, algunation and		etta (1970)	60.0
										-70.0
	Start 30.0 MHz Stop 1.0000 GHz #Res BW 100 kHz #VBW 1.0 MHz Sweep 90.0 ms (10001 pts)									
			Sweep 91	3		1.0 MHz	#VBW	7		#Res BW

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1	MNov 28, 2012	05:29:01 P	ALIGN AUTO		SENSE:INT	SE		50 Q AC	RF	RL
Frequency	E123456	TRAC	: Log-Pwr	Avg Type			GHz	0000000		
Auto Tune	et PNNNN 6 9 GHz 10 dBm	⊳ 1 2.40	30 dB			Trig: Free #Atten: 30	PNO: Fast 🦕 IFGain:Low		Ref 20.	10 dB/div
Center Fred 6.500000000 GH;						A				10.0
Start Fred 1.000000000 GH;										-10.0
Stop Fred 12.000000000 GH2	-22.10 dBm									-20.0
CF Step 1.100000000 GH: Auto Mar										-40.0
Freq Offse 0 H:		nelli sanja	~~	وللجها		npertodoro,				-60.0
	.000 GHz 0001 pts)		Sweep		łz	1.0 MHz	#VBW			5tart 1.00

120 20 20 20 20	05:30:12 PMNov 28, 2012	ALIGNAUTO		SENSE:INT		50 Q AC	RP 5	XI RL
Frequency	TRACE 123456 TYPE MWWWWWWW DET P N N N N N	pe: Log-Pwr	Avg Ty	Trig: Free Run #Atten: 30 dB	PNO: Fast		ter Freq 18.50	Cent
Auto Tun	1 23.831 3 GHz -47.75 dBm	Mkr		#Atten: 30 dB	IFGain:Low	0.00 dBm	3/div Ref 20.0	10 dB.
Contor Fra								
Center Fre 18.50000000 GH								10.0 -
		-						0.00 -
Start Fre 12.00000000 GH		-						10.0 -
Stop Fre	-22.10 dBm							20.0
25.00000000 GH					1			30.0 -
CF Ste						<u></u>		40.0 -
1.300000000 GH Auto Ma	♦ ¹							
	and the second	de la contraction de la contra	A. Bergerelle	اوامل و	Mar	the second second and	The	50.0
Freq Offso 0 H								60.0
								70.0 -
	Stop 25.000 GHz 1.20 s (10001 pts)	Sweep		1.0 MHz	#VBW		t 12.000 GHz s BW 100 kHz	



- Protocol and a	MNov 28, 2012	05:44:04 F	ALIGN AUTO		NSE:INT	SEL		2 AC	RF 50	RL
Frequency	CE 1 2 3 4 5 6 PE MWWWWW	TRA	e: Log-Pwr	Avg Typ	e Run	Trig: Free	/Hz	0000 N	eq 515.00	enter Fi
Auto Tune	_{Derl} P NNNN Mkr1 479.983 MHz -50.06 dBm					#Atten: 30	PNO: Fast 😱 IFGain:Low	dBm	Ref 20.00) dB/div
Center Fre					1.1			1		og
515.000000 MH										0.0
Start Fre							1).00
30.000000 MH									-	0.0
Stop Fre	-22.19 dBm					<u> </u>	1 - 1			0.0
1.000000000 GH							1			0.0
CF Ste							11111			0.0
97.000000 MH Auto Ma		_			-					0.0
Freq Offse			1		A second		July I			0.0
01	former and the state of the sta	. And the second s		a farmer farmer		and the second		and a fill by party	internet affed afferer	in that the
							1			0.0
	0000 GHz		Sweep 90			1.0 MHz	#VBW	<u> </u>		tart 30.0 Res BW

Channel 06 (2437MHz)

Frequency	4Nov 28, 2012		ALIGN AUTO		NSE:INT	SE			RF 50	RL
Frequency	E 1 2 3 4 5 6 E M WMMMM T P N N N N N	TYP	: Log-Pwr	Avg Type		Trig: Free #Atten: 30	HZ PNO: Fast 😱 Gain:Low		q 6.5000	enter Fre
Auto Tun Center Fre	Mkr1 2.432 2 GHz Ref 20.00 dBm -2.19 dBm									
	1.11					1				og
6.500000000 GH										10.0
2.5.5.1					_		1-1-1		♦ ¹	0.00
Start Fre 1.000000000 GH		_								10.0
Stop Free 12.00000000 GH; CF Step 1.10000000 GH;	-22:19 dBm				_	_				20.0
										30.0
										40.0
<u>Auto</u> Ma			_			-				50.0
Freq Offse 0 H	whe	and the loss				and an antailean an incident an	and a share		A	60.0
										70.0
	.000 GHz									tart 1.000 Res BW 1

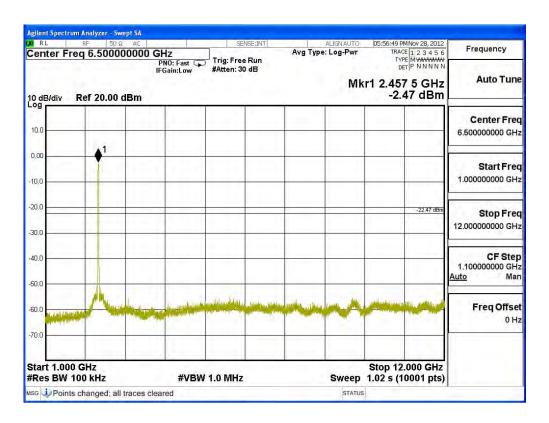


RL RF 50 Q AC		SEN	ISE:INT		ALIGN AUTO	05:44:39 P	MNov 28, 2012	
Center Freq 18.50000000	PNO: Fast	Trig: Free #Atten: 30		Avg Type: Log-Pwr		TYP	E 123456 E MWAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA	Frequency
l0 dB/div Ref 20.00 dBm	IFGain:Low	#Atten: 30	ав				36 GHz 27 dBm	Auto Tun
-og		1	1				1.1.1	Center Fred
10.0		_						18.500000000 GH:
0.00			<u></u>		<u></u>		·	
10.0		1						Start Fred 12.000000000 GH
20.0		-	_		-	-	-22.19 dBm	Stop Fre
30.0								25.000000000 GH
40.0						▲ 1		CF Step 1.300000000 GH
50.0			in all the second	N	and the second second second	Install with Table		<u>Auto</u> Mar
60.0		the second s						Freq Offse
70.0								
Start 12.000 GHz #Res BW 100 kHz	#VBW	1.0 MHz			Sweep		.000 GHz 0001 pts)	



Frequency	5 PM Nov 28, 2012 ACE 1 2 3 4 5 6		ALIGNAUTO	Ava T	SENSE:INT		IQ AC		RL		
Auto Tun Center Fre 515.00000 MH		T\ [Avgi	g: Free Run tten: 30 dB	0: Fast	00000 MH P IF	req 515.(enter Fr		
	9.75 dBm) dBm	10 dB/div Ref 20.00 dBm			
									10.0		
515.000000 MH											
Start Fre			1 - 1			1.2.4	1.21	- 1-	0.00		
30.000000 MH									10.0		
Stop Fre	-22.47 dBm							-	20.0		
1.000000000 GH	-	· · · · · · · · · · · · · · · · · · ·			-				30.0		
CF Ste 97.000000 MH	-	-	-				-	_	40.0		
<u>Auto</u> Ma	-	_	-		♦ ¹		_	_	50.0		
Freq Offse				a mar mar	and unberry to opportune	L. I.L. A. M. M. L. T. M. S.	1		60.0		
01-		and the second section.	in page of the second		and the second						
		_									
	.0000 GHz (10001 pts)		Sweep 9		MHz	#VBW 1			tart 30.0 Res BW		

Channel 11 (2462MHz)





RL RF 50 Q AC	1	SENSE:INT	1	ALIGNAUTO	05:58:01 PMNov 28, 2012	
enter Freq 18.500000	00 GHz PNO: Fast 😱] Trig: Free Run		: Log-Pwr	TRACE 1 2 3 4 5 6 TYPE MWWWWW DET P N N N N N	Frequency
0 dB/div Ref 20.00 dBm	IFGain:Low	#Atten: 30 dB		Auto Tune		
			-			Center Fred 18.500000000 GH;
0.00						Start Free 12.000000000 GH
20.0					-22:47 dBm	Stop Free 25.000000000 GH
10.0				and the second	•1	CF Step 1.300000000 GH <u>Auto</u> Ma
						Freq Offse 0 H
10.0					Stop 25.000 GHz	
Res BW 100 kHz	#VBW	1.0 MHz		Sweep	1.20 s (10001 pts)	

Product	:	N150 Easy-N-Range Extender / Travel Router
Test Item	:	RF Antenna Conducted Spurious
Test Site	:	No.3 OATS
Test Mode	:	Mode 4: Transmit (802.11n MCS0 15Mbps 40M-BW)

Channel 01 (2422MHz)

	MNov 28, 2012	be-00-00 D	ALIGN AUTO	-	NSE:INT	l en		OΩ AC	um Analyzer - S	RL RL
Frequency	E123456	TRAC	: Log-Pwr	Avg Type			Hz		reg 515.0	
Auto Tun	er PNNNNN 83 MHz 01 dBm	DI 1 479.9	Mkr1		' Trig: Free Run #Atten: 30 dB		PNO: Fast 🖵 IFGain:Low		Ref 20.00	10 dB/div -99 r
Center Fre 515.000000 MH										10.0
Start Fre 30.000000 MH										0.00
Stop Free 1.000000000 GH:	-25.29 dBm									30.0
CF Ste 97.000000 MH <u>Auto</u> Ma						♦ ¹				40.0
Freq Offse 0 H	and the second second	di <mark>na kana kana k</mark> aran		(manufacture and interve	test and the state	append (Venet			rten i Manha dan	
										70.0
	Start 30.0 MHz Stop 1.0000 GHz #Res BW 100 kHz #VBW 1.0 MHz Sweep 90.0 ms (10001 pts)									
			STATUS					> saved	<lmage.png></lmage.png>	

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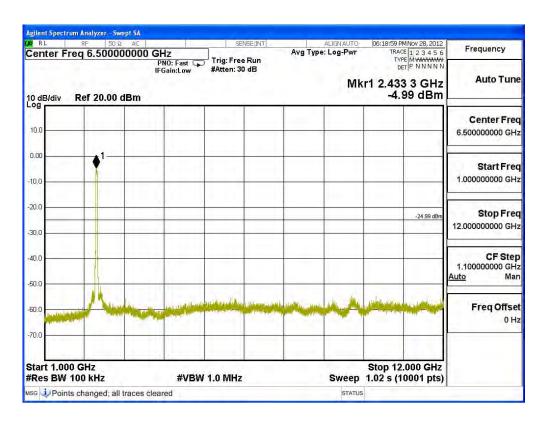
RL RF 50 Q AC		SENSE:INT		ALIGN AUTO	06:08:55 PM Nov 28, 2012	2
enter Freq 6.500000000	PNO: Fast 💭	Trig: Free Run	Avg Type	Log-Pwr	TRACE 1 2 3 4 5 6 TYPE MWWWWW DET P N N N N	4
) dB/div Ref 20.00 dBm	IFGain:Low	#Atten: 30 dB	Auto Tune			
1.0						Center Free 6.500000000 GH
.0						Start Fre 1.000000000 GH
.0					25,29 dBri	Stop Fre 12.000000000 GH
.0						CF Ste 1.100000000 GH Auto Ma
		dimensional Princip		k A	AND IN CONTRACT	Freq Offse 0 H
tart 1.000 GHz Res BW 100 kHz	#\/BIA/	1.0 MHz		Sween	Stop 12.000 GHz 1.02 s (10001 pts	

Execution	06:10:06 PMNov 28, 2012	ALIGN AUTO		SENSE:INT			RF 50 9	RL
Frequency	TRACE 1 2 3 4 5 6 TYPE MWWWWWW DET P N N N N N	oe: Log-Pwr	Avg Typ	Trig: Free Run #Atten: 30 dB	GHz PNO: Fast 😱 Gain:Low	P	eq 18.500	Center Fr
Auto Tun	1 23.139 7 GHz -47.17 dBm	Mkr1		#Allen. 30 dB	Gain:Low		Ref 20.00	0 dB/div
Center Fre				C 10.0				.og
18.500000000 GH		-						10.0
1. N.			-				_	0.00
Start Fre 12.000000000 GH								10.0
Stop Fre	-25.29 dBm							20.0
25.00000000 GH			-					30.0
CF Ste	1							40.0
1.300000000 GH Auto Ma	and the same same							
	Contraction of the local division of the loc		and a stand	a projektion de la competencia	and the state of the	and an		50.0
Freq Offse 0 H					and the second			60.0
1						-		70.0
	Stop 25.000 GHz 1.20 s (10001 pts)	Sweep		.0 MHz	#VBW			tart 12.0 Res BW



Frequency Auto Tun Center Free 515.000000 MH	5 PM Nov 28, 2012 RACE 1 2 3 4 5 6		ALIGNAUTO	Aur	SENSE:INT			50 Ω AC	RF	RL
	Run TYPE MWAAAAAA			ree Run : 30 dB		IHZ PNO: Fast 😱 IFGain:Low	000000 M 00 dBm		0 dB/div	
										-og 10.0
Start Fre 30.000000 MF										0.00
Stop Free 1.000000000 GH	-24.99 dBm									30.0
CF Ste 97.000000 MH <u>Auto</u> Ma					,1	•				40.0
Freq Offs		tinte de			na ha tana di Mara		Iper a section of the sector of	an bert (100) tree the	n	60.0
									and the factor of the second	70.0
	.0000 GHz (10001 pts)		Sweep 9	_1	Hz	1.0 MI	#VBW		.0 MHz V 100 kHz	Start 30.0 #Res BW

Channel 04 (2437MHz)



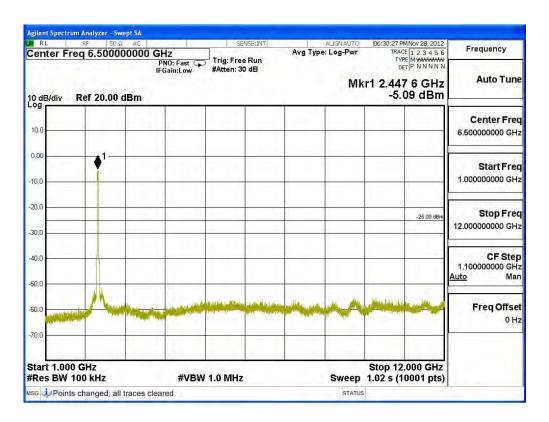


1 The second sec	0 PM Nov 28, 2012	06:20:10 P	ALIGN AUTO		ENSE:INT	SE		IQ AC	RF 50	RL
Frequency	RACE 123456 TYPE MWWWWWWW DET P N N N N N	TY	: Log-Pwr	Avg Type		Trig: Fre #Atten: 3	GHz PNO: Fast 😱 IFGain:Low	0000000	req 18.50	enter F
Auto Tun	46 2 GHz 7.86 dBm		Mkr			WALLETI. U	IFGain:Low		Ref 20.00	0 dB/div
Center Fre					10.0	1				og
18.500000000 GH								-		10.0
									_	0.00
Start Fre 12.000000000 GH										10.0
Stop Fre	-24.99 dBm									20.0
25.000000000 GH										30.0
CF Ste		 1								40.0
<u>Auto</u> Ma	auto and a start of the start	THE REPORT	10	in	a an a	ac hao		_	-	50.0
Freq Offse		and the second							in the second	50.0
0 H										70.0
	25.000 GHz (10001 pts)		Sweep			1.0 MHz	#\/B\A/	11, 1 111	000 GHz 100 kHz	tart 12.0



Frequency	06:31:04 PMNov 28, 2012 TRACE 1 2 3 4 5 6	ALIGNAUT	Ava 1	VSE:INT	SE		IQ AC	RF 515.0	RL
Auto Tun	479.983 MHz -49.57 dBm				Trig: Free #Atten: 30	PNO: Fast 🖵 IFGain:Low		Ref 20.0	0 dB/div
Center Fre 515.000000 MH					1				.og
Start Fre 30.000000 MH									0.00
Stop Fre	-25.09 dBm								20.0
CF Ste 97.000000 MH					•1				40.0
<u>Auto</u> Ma Freq Offso	Second a second second state and the second	 i e			•		1		50.0
0 H	Constant (PV) (See Second Second Second Second					nardifelt, fakarladınları mayor yaşaraşı			Autom
	Stop 1.0000 GHz 0 ms (10001 pts)	Sweep			1.0 MHz	#VBW) MHz 100 kHz	tart 30.0 Res BW

Channel 07 (2452MHz)





RL RF 50 Q AC		SENSE:INT		ALIGN AUTO	06:31:40 PM Nov 28, 20:	
Center Freq 18.5000000	PNO: Fast ()	Trig: Free Run #Atten: 30 dB	Avg Typ	e: Log-Pwr	TRACE 1 2 3 4 5 TYPE MWWWWWW DET P N N N N	KAL .
10 dB/div Ref 20.00 dBm	IFGain:Low	#Atten: 30 dB		Mkr	1 23.252 8 GH -48.46 dBr	z Auto Tune
10.0						Center Free 18.500000000 GH
10.0						Start Free 12.000000000 GH
30.0					-25,09 dE	Stop Free 25.000000000 GH
40.0					♦ ¹	CF Ste 1.300000000 GH <u>Auto</u> Ma
60.0 Week Week Week Week						Freq Offse
70.0						
Start 12.000 GHz #Res BW 100 kHz	#VBW	1.0 MHz	T.	Sweep	Stop 25.000 GH 1.20 s (10001 pt	

6. Band Edge

6.1. Test Equipment

RF Conducted Measurement

The following test equipments are used during the band edge tests:

	Equipment	Manufacturer	Model No./Serial No.	Last Cal.
	Spectrum Analyzer	R&S	FSP40 / 100170	Jun, 2012
	Spectrum Analyzer	Agilent	E4407B / US39440758	Jun, 2012
Х	Spectrum Analyzer	Agilent	N9010A/MY48030495	Apr., 2013

Note:

- 1. All equipments are calibrated with traceable calibrations. Each calibration is traceable to the national or international standards.
- 2. The test instruments marked with "X" are used to measure the final test results.

RF Radiated Measurement:

The following test equipments are used during the band edge tests:

Test Site		Equipment	Manufacturer	Model No./Serial No.	Last Cal.
Site # 3		Bilog Antenna	Schaffner Chase	CBL6112B/2673	Sep., 2012
	Х	Horn Antenna	Schwarzbeck	BBHA9120D/D305	Sep., 2012
		Horn Antenna	Schwarzbeck	BBHA9170/208	Jul., 2012
	Х	Pre-Amplifier	Agilent	8447D/2944A09549	Sep., 2012
	Х	Spectrum Analyzer	Agilent	E4407B / US39440758	May, 2012
		Test Receiver	R & S	ESCS 30/ 825442/018	Sep., 2012
	Х	Coaxial Cable	QuieTek	QTK-CABLE/ CAB5	Feb., 2013
	Х	Controller	QuieTek	QTK-CONTROLLER/ CTRL3	N/A
	Х	Coaxial Switch	Anritsu	MP59B/6200265729	N/A

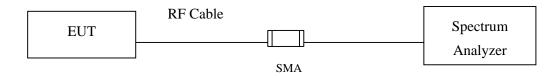
Note:

1. All instruments are calibrated every one year.

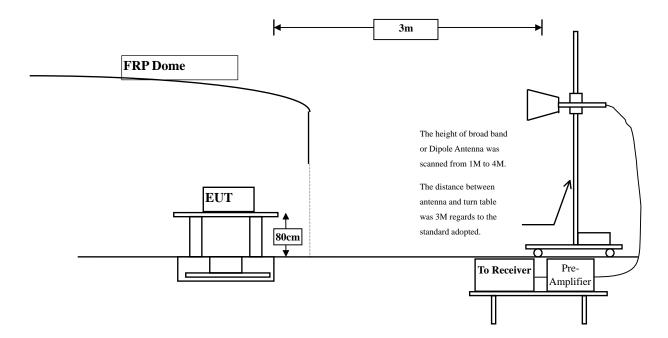
2. The test instruments marked by "X" are used to measure the final test results.

6.2. Test Setup

RF Conducted Measurement



RF Radiated Measurement:



6.3. Limits

Emissions radiated outside of the specified frequency bands, except for harmonics, shall be attenuated by at least 20dB below the level of the fundamental or to the general radiated emission limits in paragraph 15.209, whichever is the lesser attenuation.

6.4. Test Procedure

The EUT was setup according to ANSI C63.10: 2009 and tested according to DTS test procedure of ANSI C63.10: 2009 for compliance to FCC 47CFR 15.247 requirements.

The EUT is placed on a turn table which is 0.8 meter above ground. The turn table is rotated 360 degrees to determine the position of the maximum emission level. The EUT was positioned such that the distance from antenna to the EUT was 3 meters.

The antenna is scanned from 1 meter to 4 meters to find out the maximum emission level. This is repeated for both horizontal and vertical polarization of the antenna. In order to find the maximum emission, all of the interface cables were manipulated according to ANSI C63.4: 2003 on radiated measurement.

6.5. Uncertainty

- \pm 3.9 dB above 1GHz
- ± 3.8 dB below 1GHz



6.6. Test Result of Band Edge

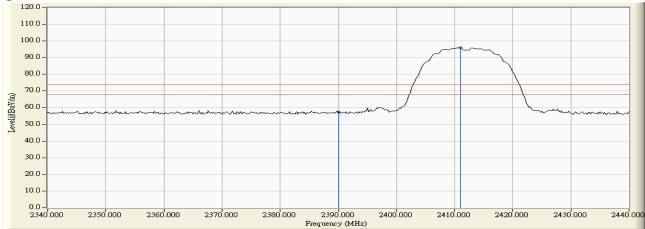
Product	:	N150 Easy-N-Range Extender / Travel Router
Test Item	:	Band Edge Data
Test Site	:	No.3 OATS
Test Mode	:	Mode 1: Transmit (802.11b 1Mbps)

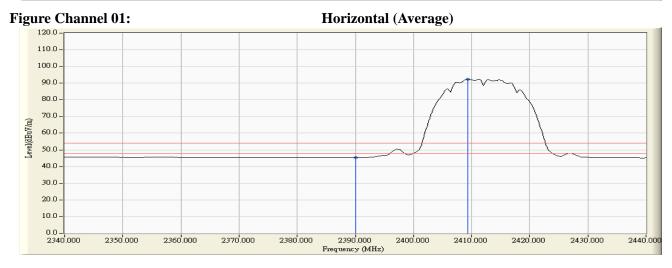
RF Radiated Measurement (Horizontal):

	Frequency	Correct Factor	Reading Level	Emission Level	Peak Limit	Arerage Limit	Result
Channel No.	(MHz)	(dB)	(dBuV)	(dBuV/m)	(dBuV/m)	(dBuV/m)	Result
01 (Peak)	2390.000	33.739	23.424	57.163	74.00	54.00	Pass
01 (Peak)	2411.000	33.769	62.077	95.846			Pass
01 (Average)	2390.000	33.739	11.777	45.516	74.00	54.00	Pass
01 (Average)	2409.400	33.767	58.583	92.350			Pass

Figure Channel 01:

Horizontal (Peak)





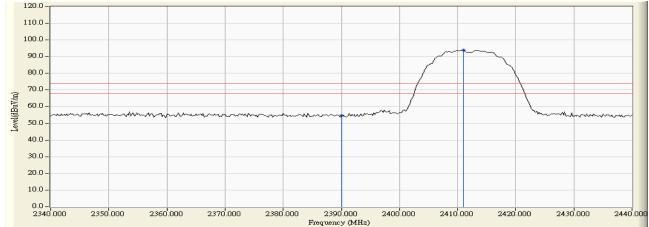
- 1. All readings above 1GHz are performed with peak and/or average measurements as necessary.
- 2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
- 3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
- 4. "*", means this data is the worst emission level.
- 5. Measurement Level = Reading Level + Correct Factor.
- 6. The average measurement was not performed when the peak measured data under the limit of average detection.

Product	:	N150 Easy-N-Range Extender / Travel Router
Test Item	:	Band Edge Data
Test Site	:	No.3 OATS
Test Mode	:	Mode 1: Transmit (802.11b 1Mbps)

	Frequency	Correct Factor	Reading Level	Emission Level	Peak Limit	Arerage Limit	Result
Channel No.	(MHz)	(dB)	(dBuV)	(dBuV/m)	(dBuV/m)	(dBuV/m)	Result
01 (Peak)	2390.000	32.267	22.434	54.701	74.00	54.00	Pass
01 (Peak)	2411.000	32.244	61.589	93.833			Pass
01 (Average)	2390.000	32.267	13.260	45.527	74.00	54.00	Pass
01 (Average)	2409.400	32.245	58.163	90.407			Pass

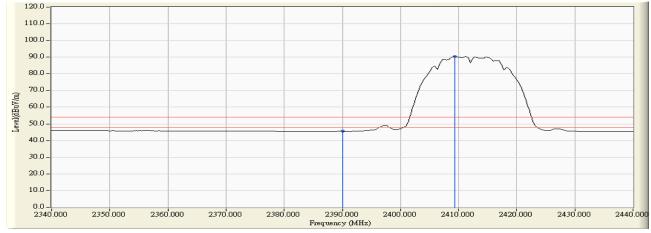
Figure Channel 01:

VERTICAL (Peak)





VERTICAL (Average)



- 1. All readings above 1GHz are performed with peak and/or average measurements as necessary.
- 2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
- 3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
- 4. "*", means this data is the worst emission level.
- 5. Measurement Level = Reading Level + Correct Factor.
- 6. The average measurement was not performed when the peak measured data under the limit of average detection.

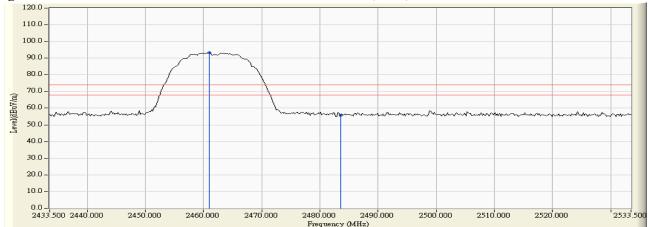
Product	:	N150 Easy-N-Range Extender / Travel Router
Test Item	:	Band Edge Data
Test Site	:	No.3 OATS
Test Mode	:	Mode 1: Transmit (802.11b 1Mbps)

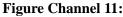
RF Radiated Measurement (Horizontal):

	Frequency	Correct Factor	Reading Level	Emission Level	Peak Limit	Arerage Limit	Result
Channel No.	(MHz)	(dB)	(dBuV)	(dBuV/m)	(dBuV/m)	(dBuV/m)	Result
11 (Peak)	2460.900	33.890	59.252	93.142			Pass
11 (Peak)	2483.500	33.951	21.683	55.633	74.00	54.00	Pass
11 (Average)	2459.300	33.886	55.891	89.777			Pass
11 (Average)	2483.500	33.951	11.132	45.082	74.00	54.00	Pass

Figure Channel 11:

Horizontal (Peak)





Horizontal (Average)



- All readings above 1GHz are performed with peak and/or average measurements as necessary. 1.
- Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto. 2.
- Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto. 3.
- 4. "*", means this data is the worst emission level.
- 5. Measurement Level = Reading Level + Correct Factor.
- The average measurement was not performed when the peak measured data under the limit of average 6. detection.

Product	:	N150 Easy-N-Range Extender / Travel Router
Test Item	:	Band Edge Data
Test Site	:	No.3 OATS
Test Mode	:	Mode 1: Transmit (802.11b 1Mbps)

Channel No.	Frequency	Correct Factor	Reading Level	Emission Level	Peak Limit	Arerage Limit	Result
	(MHz)	(dB)	(dBuV)	(dBuV/m)	(dBuV/m)	(dBuV/m)	Result
11 (Peak)	2460.900	32.476	59.267	91.742			Pass
11 (Peak)	2483.500	32.586	22.165	54.750	74.00	54.00	Pass
11 (Average)	2459.300	32.468	55.973	88.440			Pass
11 (Average)	2483.500	32.586	11.128	43.713	74.00	54.00	Pass

Figure Channel 11:

VERTICAL (Peak)

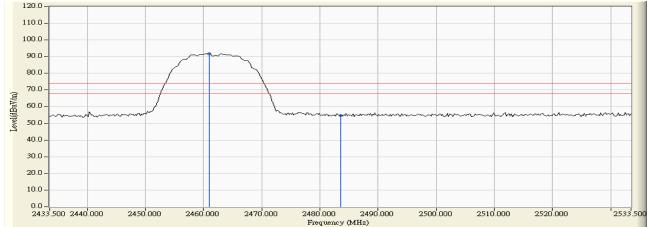
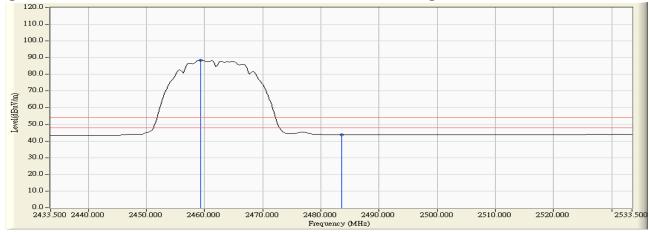


Figure Channel 11:

VERTICAL (Average)



- 1. All readings above 1GHz are performed with peak and/or average measurements as necessary.
- 2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
- 3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
- 4. "*", means this data is the worst emission level.
- 5. Measurement Level = Reading Level + Correct Factor.
- 6. The average measurement was not performed when the peak measured data under the limit of average detection.

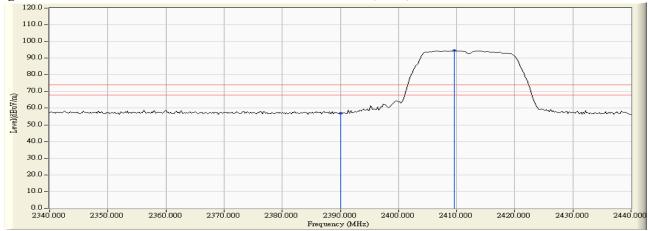
Product	:	N150 Easy-N-Range Extender / Travel Router
Test Item	:	Band Edge Data
Test Site	:	No.3 OATS
Test Mode	:	Mode 2: Transmit (802.11g 6Mbps)

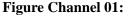
RF Radiated Measurement (Horizontal):

Channel No.	Frequency	Correct Factor	Reading Level	Emission Level	Peak Limit	Arerage Limit	Result
	(MHz)	(dB)	(dBuV)	(dBuV/m)	(dBuV/m)	(dBuV/m)	Kesult
01 (Peak)	2390.000	33.739	23.273	57.012	74.00	54.00	Pass
01 (Peak)	2409.600	33.768	60.704	94.471			Pass
01 (Average)	2390.000	33.739	11.486	45.225	74.00	54.00	Pass
01 (Average)	2410.200	33.768	51.691	85.459			Pass

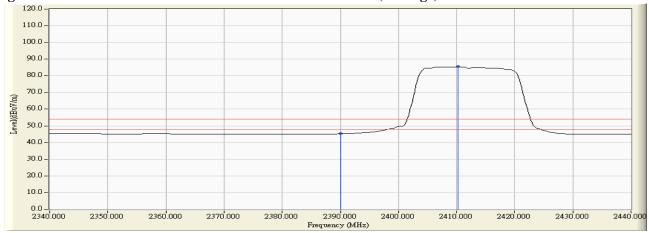
Figure Channel 01:

Horizontal (Peak)





Horizontal (Average)



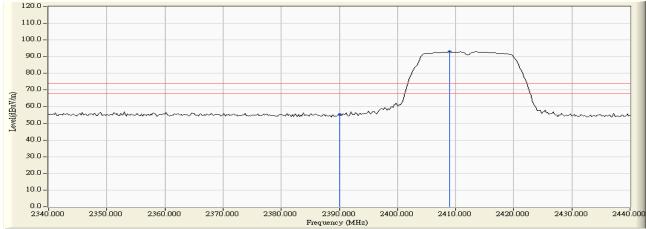
- All readings above 1GHz are performed with peak and/or average measurements as necessary. 1.
- Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto. 2.
- 3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
- 4. "*", means this data is the worst emission level.
- 5. Measurement Level = Reading Level + Correct Factor.
- The average measurement was not performed when the peak measured data under the limit of average 6. detection.

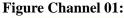
Product	:	N150 Easy-N-Range Extender / Travel Router
Test Item	:	Band Edge Data
Test Site	:	No.3 OATS
Test Mode	:	Mode 2: Transmit (802.11g 6Mbps)

Channel No.	Frequency	Correct Factor	Reading Level	Emission Level	Peak Limit	Arerage Limit	Result
	(MHz)	(dB)	(dBuV)	(dBuV/m)	(dBuV/m)	(dBuV/m)	Result
01 (Peak)	2390.000	32.267	23.059	55.326	74.00	54.00	Pass
01 (Peak)	2409.000	32.244	60.655	92.899			Pass
01 (Average)	2390.000	32.267	11.393	43.660	74.00	54.00	Pass
01 (Average)	2410.000	32.244	51.824	84.068			Pass

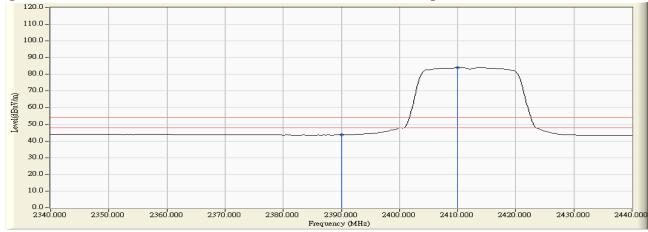
Figure Channel 01:

VERTICAL (Peak)





VERTICAL (Average)



- 1. All readings above 1GHz are performed with peak and/or average measurements as necessary.
- 2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
- 3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
- 4. "*", means this data is the worst emission level.
- 5. Measurement Level = Reading Level + Correct Factor.
- 6. The average measurement was not performed when the peak measured data under the limit of average detection.

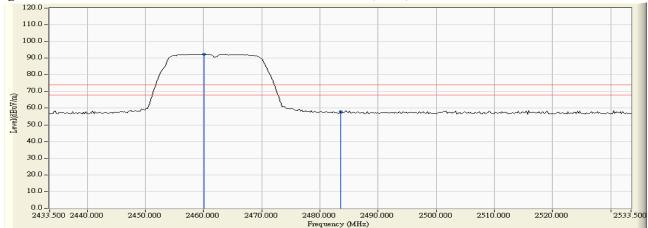
Product	:	N150 Easy-N-Range Extender / Travel Router
Test Item	:	Band Edge Data
Test Site	:	No.3 OATS
Test Mode	:	Mode 2: Transmit (802.11g 6Mbps)

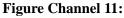
RF Radiated Measurement (Horizontal):

Channel No.	Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Emission Level (dBuV/m)	Peak Limit (dBuV/m)	Arerage Limit (dBuV/m)	Result
11 (Peak)	2460.100	33.887	58.583	92.471			Pass
11 (Peak)	2483.500	33.951	24.101	58.051	74.00	54.00	Pass
11 (Average)	2460.500	33.889	49.595	83.484			Pass
11 (Average)	2483.500	33.951	11.194	45.144	74.00	54.00	Pass

Figure Channel 11:

Horizontal (Peak)





Horizontal (Average)



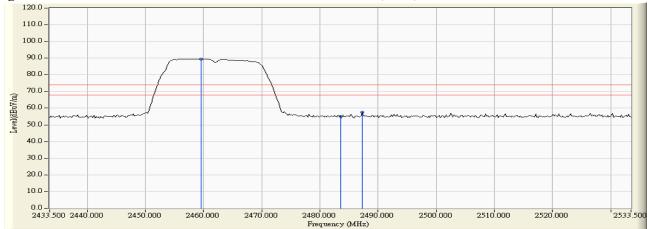
- 1. All readings above 1GHz are performed with peak and/or average measurements as necessary.
- 2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
- 3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
- 4. "*", means this data is the worst emission level.
- 5. Measurement Level = Reading Level + Correct Factor.
- 6. The average measurement was not performed when the peak measured data under the limit of average detection.

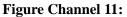
Product	:	N150 Easy-N-Range Extender / Travel Router
Test Item	:	Band Edge Data
Test Site	:	No.3 OATS
Test Mode	:	Mode 2: Transmit (802.11g 6Mbps)

Channel No.	Frequency	Correct Factor	Reading Level	Emission Level	Peak Limit	Arerage Limit	Result
	(MHz)	(dB)	(dBuV)	(dBuV/m)	(dBuV/m)	(dBuV/m)	Kesuit
11 (Peak)	2459.500	32.468	57.124	89.592			Pass
11 (Peak)	2483.500	32.586	22.498	55.083	74.00	54.00	Pass
11 (Peak)	2487.300	32.603	24.833	57.436	74.00	54.00	Pass
11 (Average)	2458.700	32.465	48.173	80.638			Pass
11 (Average)	2483.500	32.586	11.146	43.731	74.00	54.00	Pass

Figure Channel 11:

VERTICAL (Peak)





VERTICAL (Average)



- 1. All readings above 1GHz are performed with peak and/or average measurements as necessary.
- 2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
- 3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
- 4. "*", means this data is the worst emission level.
- 5. Measurement Level = Reading Level + Correct Factor.
- 6. The average measurement was not performed when the peak measured data under the limit of average detection.

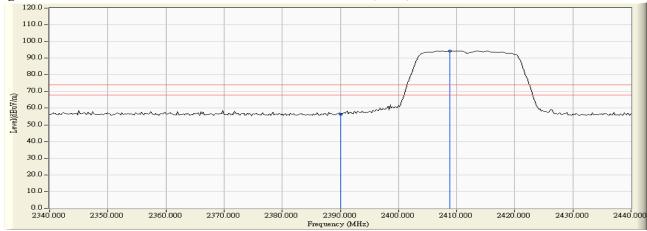
Product	:	N150 Easy-N-Range Extender / Travel Router
Test Item	:	Band Edge Data
Test Site	:	No.3 OATS
Test Mode	:	Mode 3: Transmit (802.11n MCS0 7.2Mbps 20M-BW)

RF Radiated Measurement (Horizontal):

Channel No.	Frequency	Correct Factor	Reading Level	Emission Level	Peak Limit	Arerage Limit	Result
	(MHz)	(dB)	(dBuV)	(dBuV/m)	(dBuV/m)	(dBuV/m)	Result
01 (Peak)	2390.000	33.739	22.700	56.439	74.00	54.00	Pass
01 (Peak)	2408.800	33.766	60.549	94.315			Pass
01 (Average)	2390.000	33.739	11.523	45.262	74.00	54.00	Pass
01 (Average)	2409.200	33.766	51.214	84.980			Pass

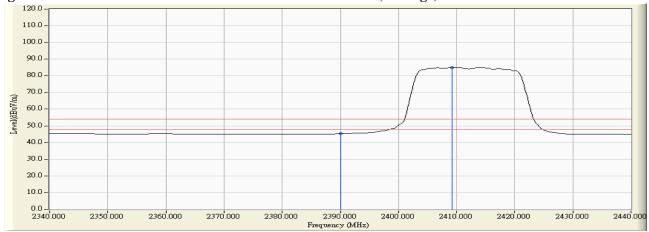
Figure Channel 01:

Horizontal (Peak)





Horizontal (Average)



- 1. All readings above 1GHz are performed with peak and/or average measurements as necessary.
- 2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
- 3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
- 4. "*", means this data is the worst emission level.
- 5. Measurement Level = Reading Level + Correct Factor.
- 6. The average measurement was not performed when the peak measured data under the limit of average detection.

Product	:	N150 Easy-N-Range Extender / Travel Router
Test Item	:	Band Edge Data
Test Site	:	No.3 OATS
Test Mode	:	Mode 3: Transmit (802.11n MCS0 7.2Mbps 20M-BW)

Channel No.	Frequency	Correct Factor	Reading Level	Emission Level	Peak Limit	Arerage Limit	Result
	(MHz)	(dB)	(dBuV)	(dBuV/m)	(dBuV/m)	(dBuV/m)	Result
01 (Peak)	2390.000	32.267	23.137	55.404	74.00	54.00	Pass
01 (Peak)	2409.000	32.244	60.157	92.401			Pass
01 (Average)	2390.000	32.267	11.509	43.776	74.00	54.00	Pass
01 (Average)	2415.000	32.263	50.843	83.105			Pass

Figure Channel 01:

VERTICAL (Peak)

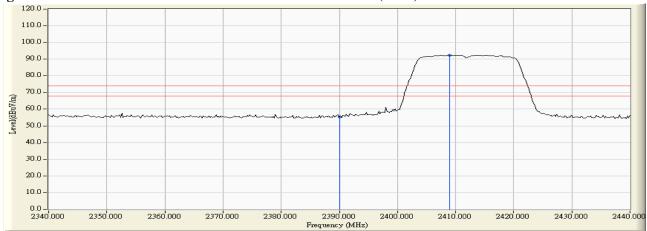
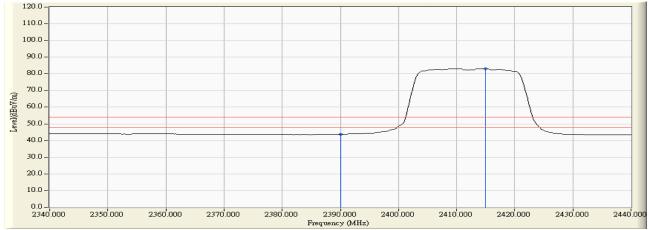


Figure Channel 01:

VERTICAL (Average)



- 1. All readings above 1GHz are performed with peak and/or average measurements as necessary.
- 2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
- 3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
- 4. "*", means this data is the worst emission level.
- 5. Measurement Level = Reading Level + Correct Factor.
- 6. The average measurement was not performed when the peak measured data under the limit of average detection.

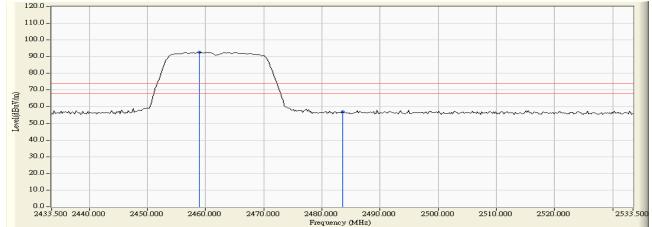
Product	:	N150 Easy-N-Range Extender / Travel Router
Test Item	:	Band Edge Data
Test Site	:	No.3 OATS
Test Mode	:	Mode 3: Transmit (802.11n MCS0 7.2Mbps 20M-BW)

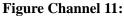
RF Radiated Measurement (Horizontal):

Channel No.	Frequency	Correct Factor	Reading Level	Emission Level	Peak Limit	Arerage Limit	Result
	(MHz)	(dB)	(dBuV)	(dBuV/m)	(dBuV/m)	(dBuV/m)	Result
11 (Peak)	2458.900	33.885	58.622	92.507			Pass
11 (Peak)	2483.500	33.951	22.911	56.861	74.00	54.00	Pass
11 (Average)	2458.900	33.885	49.104	82.989			Pass
11 (Average)	2483.500	33.951	11.192	45.142	74.00	54.00	Pass

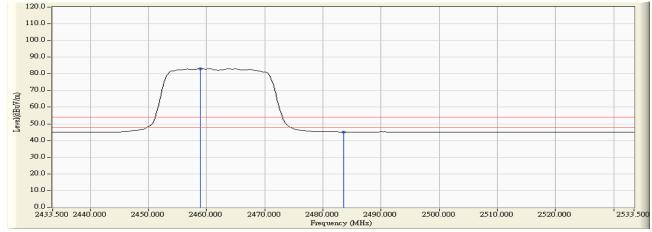
Figure Channel 11:

Horizontal (Peak)





Horizontal (Average)



- 1. All readings above 1GHz are performed with peak and/or average measurements as necessary.
- 2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
- 3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
- 4. "*", means this data is the worst emission level.
- 5. Measurement Level = Reading Level + Correct Factor.
- 6. The average measurement was not performed when the peak measured data under the limit of average detection.

Product	:	N150 Easy-N-Range Extender / Travel Router
Test Item	:	Band Edge Data
Test Site	:	No.3 OATS
Test Mode	:	Mode 3: Transmit (802.11n MCS0 7.2Mbps 20M-BW)

Channel No.	Frequency	Correct Factor	Reading Level	Emission Level	Peak Limit	Arerage Limit	Result
	(MHz)	(dB)	(dBuV)	(dBuV/m)	(dBuV/m)	(dBuV/m)	Result
11 (Peak)	2456.500	32.454	56.877	89.331			Pass
11 (Peak)	2483.500	32.586	22.843	55.428	74.00	54.00	Pass
11 (Average)	2456.700	32.454	47.382	79.837			Pass
11 (Average)	2483.500	32.586	11.129	43.714	74.00	54.00	Pass

Figure Channel 11:

VERTICAL (Peak)

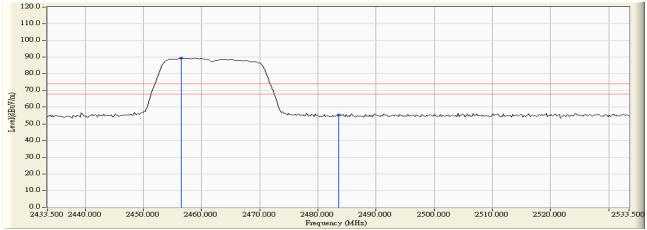


Figure Channel 11:

VERTICAL (Average)



- 1. All readings above 1GHz are performed with peak and/or average measurements as necessary.
- 2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
- 3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
- 4. "*", means this data is the worst emission level.
- 5. Measurement Level = Reading Level + Correct Factor.
- 6. The average measurement was not performed when the peak measured data under the limit of average detection.

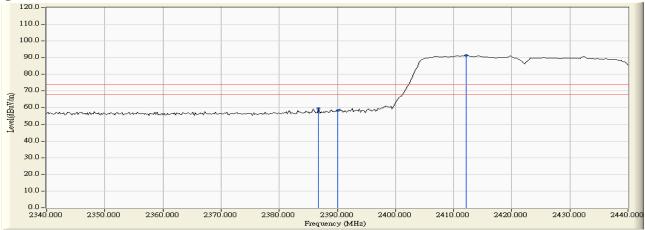
Product	:	N150 Easy-N-Range Extender / Travel Router
Test Item	:	Band Edge Data
Test Site	:	No.3 OATS
Test Mode	:	Mode 4: Transmit (802.11n MCS0 15Mbps 40M-BW)

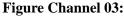
RF Radiated Measurement (Horizontal):

Channel No.	Frequency	Correct Factor	Reading Level	Emission Level	Peak Limit	Arerage Limit	Result
	(MHz)	(dB)	(dBuV)	(dBuV/m)	(dBuV/m)	(dBuV/m)	Result
03 (Peak)	2386.800	33.736	25.636	59.372	74.00	54.00	Pass
03 (Peak)	2390.000	33.739	24.538	58.277	74.00	54.00	Pass
03 (Peak)	2412.200	33.772	57.636	91.408			Pass
03 (Average)	2390.000	33.739	12.333	46.072	74.00	54.00	Pass
03 (Average)	2411.800	33.771	48.150	81.921			Pass

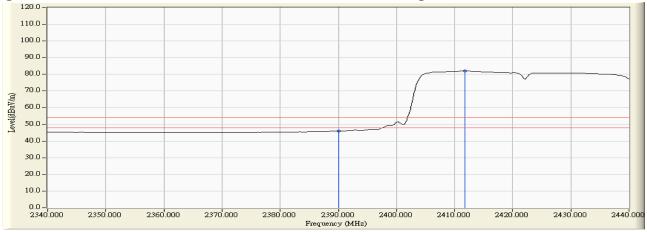
Figure Channel 03:

Horizontal (Peak)





Horizontal (Average)



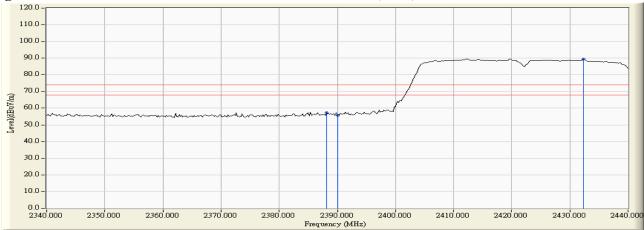
- 1. All readings above 1GHz are performed with peak and/or average measurements as necessary.
- 2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
- 3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
- 4. "*", means this data is the worst emission level.
- 5. Measurement Level = Reading Level + Correct Factor.
- 6. The average measurement was not performed when the peak measured data under the limit of average detection.

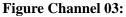
Product	:	N150 Easy-N-Range Extender / Travel Router
Test Item	:	Band Edge Data
Test Site	:	No.3 OATS
Test Mode	:	Mode 4: Transmit (802.11n MCS0 15Mbps 40M-BW)

Channel No.	Frequency	Correct Factor	Reading Level	Emission Level	Peak Limit	Arerage Limit	Result
	(MHz)	(dB)	(dBuV)	(dBuV/m)	(dBuV/m)	(dBuV/m)	Result
03 (Peak)	2388.200	32.279	25.022	57.301	74.00	54.00	Pass
03 (Peak)	2390.000	32.267	23.344	55.611	74.00	54.00	Pass
03 (Peak)	2432.400	32.341	57.139	89.480			Pass
03 (Average)	2390.000	32.267	12.178	44.445	74.00	54.00	Pass
03 (Average)	2412.400	32.250	47.743	79.994			Pass

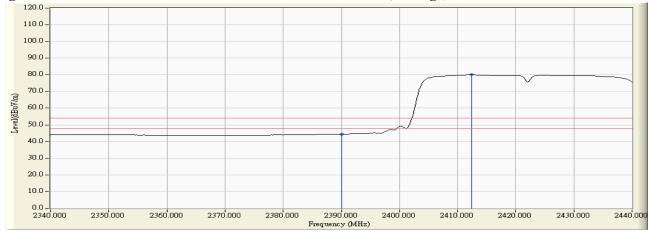
Figure Channel 03:

VERTICAL (Peak)





VERTICAL (Average)



- 1. All readings above 1GHz are performed with peak and/or average measurements as necessary.
- 2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
- 3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
- 4. "*", means this data is the worst emission level.
- 5. Measurement Level = Reading Level + Correct Factor.
- 6. The average measurement was not performed when the peak measured data under the limit of average detection.

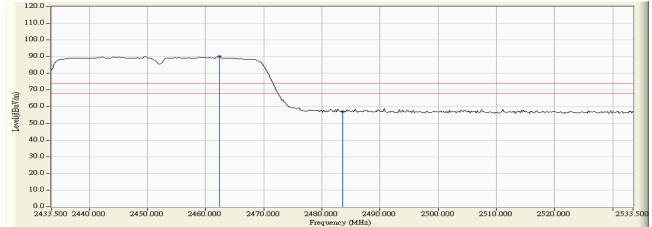
Product	:	N150 Easy-N-Range Extender / Travel Router
Test Item	:	Band Edge Data
Test Site	:	No.3 OATS
Test Mode	:	Mode 4: Transmit (802.11n MCS0 15Mbps 40M-BW)

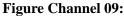
RF Radiated Measurement (Horizontal):

Channel No.	Frequency	Correct Factor	Reading Level	Emission Level	Peak Limit	Arerage Limit	Result
	(MHz)	(dB)	(dBuV)	(dBuV/m)	(dBuV/m)	(dBuV/m)	Result
09 (Peak)	2462.300	33.893	56.282	90.175			Pass
09 (Peak)	2483.500	33.951	22.945	56.895	74.00	54.00	Pass
09 (Average)	2461.300	33.890	46.443	80.334			Pass
09 (Average)	2483.500	33.951	11.461	45.411	74.00	54.00	Pass

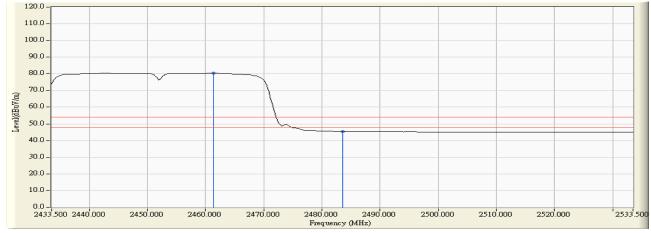
Figure Channel 09:

Horizontal (Peak)





Horizontal (Average)



- 1. All readings above 1GHz are performed with peak and/or average measurements as necessary.
- 2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
- 3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
- 4. "*", means this data is the worst emission level.
- 5. Measurement Level = Reading Level + Correct Factor.
- 6. The average measurement was not performed when the peak measured data under the limit of average detection.

Product	:	N150 Easy-N-Range Extender / Travel Router
Test Item	:	Band Edge Data
Test Site	:	No.3 OATS
Test Mode	:	Mode 4: Transmit (802.11n MCS0 15Mbps 40M-BW)

	Frequency	Correct Factor	Reading Level	Emission Level	Peak Limit	Arerage Limit	Result
Channel No.	(MHz)	(dB)	(dBuV)	(dBuV/m)	(dBuV/m)	(dBuV/m)	Result
09 (Peak)	2442.300	32.386	55.654	88.040			Pass
09 (Peak)	2483.500	32.586	23.491	56.076	74.00	54.00	Pass
09 (Average)	2441.500	32.382	45.956	78.338			Pass
09 (Average)	2483.500	32.586	11.298	43.883	74.00	54.00	Pass

Figure Channel 09:

VERTICAL (Peak)

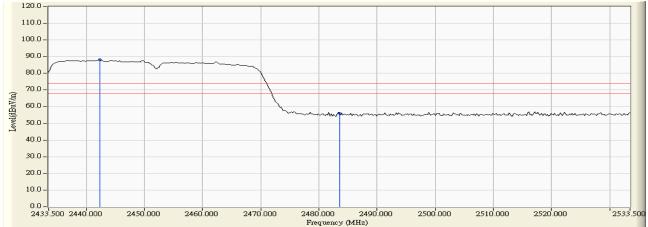


Figure Channel 09:

VERTICAL (Average)



- 1. All readings above 1GHz are performed with peak and/or average measurements as necessary.
- 2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
- 3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
- 4. "*", means this data is the worst emission level.
- 5. Measurement Level = Reading Level + Correct Factor.
- 6. The average measurement was not performed when the peak measured data under the limit of average detection.

7. Occupied Bandwidth

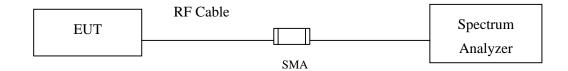
7.1. Test Equipment

	Equipment	Manufacturer	Model No./Serial No.	Last Cal.
	Spectrum Analyzer	R&S	FSP40 / 100170	Jun, 2012
	Spectrum Analyzer	Agilent	E4407B / US39440758	Jun, 2012
Х	Spectrum Analyzer	Agilent	N9010A/MY48030495	Apr., 2013

Note:

- 1. All equipments are calibrated with traceable calibrations. Each calibration is traceable to the national or international standards.
- 2. The test instruments marked with "X" are used to measure the final test results.

7.2. Test Setup



7.3. Limits

The minimum bandwidth shall be at least 500 kHz.

7.4. Test Procedure

According to DTS test procedure of ANSI C63.10: 2009 for compliance to FCC 47CFR 15.247 requirements.

Set RBW = 1-5% of the emission bandwidth, VBW \geq 3*RBW

7.5. Uncertainty

 \pm 150Hz

7.6. Test Result of Occupied Bandwidth

Product	:	N150 Easy-N-Range Extender / Travel Router
Test Item	:	Occupied Bandwidth Data
Test Site	:	No.3 OATS
Test Mode	:	Mode 1: Transmit (802.11b 1Mbps) (2412MHz)

Channel No.	Frequency (MHz)	Measurement Level (kHz)	Required Limit (kHz)	Result
1	2412	12300	>500	Pass

Figure Channel 1:

Frequency	E123456	03:27:19 PM TRAC	LIGNAUTO	Avg Typ	NSE:INT		Hz	AC 00000 GI		RF		RL
18.52	E M WWWWW TPNNNNN	TYP DE				Trig: Fre #Atten: 3	NO: Fast C Gain:Low	P				
Auto Tur	85 GHz 70 dBm		Mkr		2			dBm	f 20.00	Ref	3/div	
Center Fre				∧3		2						9 0.0
2.412000000 GH	-2.94 dBm		-	My	MININA	V	N. N.	-				.00).0
Start Fre		-		- Sy			1 de la compañía de l					0.0 0.0
2.387000000 GH		Marian .	for the stand				1	Marria	Junit P			0.0
Stop Fre	Contract of Section	C. AND							A State	- Cornel	(pertagonal)	0.0 0.0
2.437000000 GH												1.0
CF Ste 5.000000 MH	0.00 MHz 1001 pts)		Sweep			N 1.0 MHz	#VB	<u>.</u>	0 GHz kHz	4120 300		
Auto Ma	IN VALUE	FUNCTIO	ICTION WIDTH	CTION FI		¥ 3.06 c	0 GHz	× 2.411 (RC SCL		
Freq Offs					Bm	-3.70 c -3.28 c	35 GHz	2.405 8		1 f 1 f	N N	2 3 4 5
												5 7 3
6.												
							-					9

Product	:	N150 Easy-N-Range Extender / Travel Router
Test Item	:	Occupied Bandwidth Data
Test Site	:	No.3 OATS
Test Mode	:	Mode 1: Transmit (802.11b 1Mbps) (2437MHz)

Channel No.	Frequency (MHz)	Measurement Level (kHz)	Required Limit (kHz)	Result
6	2437	12300	>500	Pass

Figure Channel 6:

RL RF 50 Q AC	SENSE:INT	ALIGNAUTO	03:47:35 PM Nov 28, 2012	1 THORNWAR
enter Freq 2.437000000 GHz PNO: Fa	Trig: Free Run	Avg Type: Log-Pwr	TRACE 123456 TYPE MWWWWWW DET P N N N N N	Frequency
0 dB/div Ref 20.00 dBm		Mkr	2 2.430 85 GHz -3.80 dBm	Auto Tune
og 100 100	2 marcaning province	3	3.10 dD m	Center Free 2.437000000 GH
20.0 20.0			to May	Start Free 2.412000000 GH
20.0			The second secon	Stop Fre 2.462000000 GH
enter 2.43700 GHz Res BW 300 kHz #	VBW 1.0 MHz	Sweep	Span 50.00 MHz 1.00 ms (1001 pts)	CF Ste 5.000000 MH
KR MODE TRC SCL X 1 N 1 f 2.436 00 GH	z 2.90 dBm	UNCTION FUNCTION WIDTH	FUNCTION VALUE	<u>Auto</u> Ma
2 N 1 f 2.430 85 GH 3 N 1 f 2.431 15 GH 4 4 5 5 6 6 6 6 7 <th7< th=""> 7 7 7</th7<>				Freq Offse 0 H
7 8 9 0				
2				

Product	:	N150 Easy-N-Range Extender / Travel Router
Test Item	:	Occupied Bandwidth Data
Test Site	:	No.3 OATS
Test Mode	:	Mode 1: Transmit (802.11b 1Mbps) (2462MHz)

Channel No.	Frequency (MHz)	Measurement Level (kHz)	Required Limit (kHz)	Result
11	2462	12300	>500	Pass

Figure Channel 11:

TECTORIST	09 PMNov 28, 2012	04:11:0	ALIGN AUTO		SENSE:INT			AC	50 Ω	RF		L	RI
123456 Frequency	TRACE 123456 TYPE MWWWWW	Avg Type: Log-Pwr TRACE			Tria:	nter Freq 2.462000000 GHz PN0: Fast 🔾						en	
Auto Tur	DET P N N N N N	100	1000		en: 30 dB	* #Atte	Gain:Low			1			_
Auto Tur	55 85 GHz 3.65 dBm		Mkr					Bm	20.00 d	Ref	liv	B/di	
Center Fre		1	1		1	. Ja-							0.0
2.462000000 GH	-2,92 dBm			$\sum_{i=1}^{3}$	way anno	2,000/00/				-	-		0.00
				Ung		V	J.					11	0.0
Start Fre				1			1						0.0
2.437000000 GH		1	Lan N			1	1	a al		- 11			0.0
	"Ray	"Non	a show			1		my war	ant	A	HELD PH		0.0
Stop Fre		-			-	-	-					-	0.0
2.487000000 GH											-	-	0.0
CF Ste	n 50.00 MHz is (1001 pts)		Sweep '	ų	1Hz	W 1.0 N	#VB		GHz Hz	6200 800 k			
5.000000 Mł Auto Ma			CTION WIDTH	INCTION		Ŷ		×	_	SCL	E TRO	MODE	KR
					08 dBm 35 dBm			2.461 5		f	1	NN	1
Freq Offs 01	81				23 dBm			2.468 1		f	1	Ň	3 4 5
											-	1	6 7
												-	8 9
												-	0
		-				_						_	2

Product	:	N150 Easy-N-Range Extender / Travel Router
Test Item	:	Occupied Bandwidth Data
Test Site	:	No.3 OATS
Test Mode	:	Mode 2: Transmit (802.11g 6Mbps) (2412MHz)

Channel No.	Frequency (MHz)	Measurement Level (kHz)	Required Limit (kHz)	Result
1	2412	16400	>500	Pass

Figure Channel 1:

Frequency	PMNov 28, 2012		ALIGN AUTO		ISE:INT	SEN			50 Ω	RF	1		R
Frequency	CE 1 2 3 4 5 6	TRAC	: Log-Pwr	Avg Ty	Pue	Trig: Free		0000 G	41200	eq 2.	r Fre	nter	en
Line of		DI				#Atten: 30	NO: Fast G Gain:Low	IF					
Auto Tur	80 GHz 40 dBm		Mkr				1.5	1Bm	20.00 d	Ref 2	iv	B/div	
Center Fre	10000			13			A2	·				11	.og
2.412000000 GH	-2.04 dBm			m()	mak	monty	fine						0.00
				1			1		_	_			10.0
Start Fre							1					-	20.0
2.387000000 GH		www.	Societin					mor.	m	~		1	30.0
	Mannaster	~								-	martin	-	40.0 50.0
Stop Fre					_		11 - 11					1	50.0 60.0
2.437000000 GH												-	70.0
	50.00 MHz	Span 5						-	GHz	1200	2.4	ter	Cen
CF Ste 5.000000 MH	(1001 pts)		Sweep '		-	1.0 MHz	#VBI	_		00 kl			
Auto Ma	ION VALUE	FUNCTIO	NCTION WIDTH	TION I		Y		×			E TRC		
						3.96 dE		2.416		f	1	N	1
Freq Offs		-			3m	-2.25 dE	0 GHz	2.420 2		f	1	N	3 4
01													5
											-		6
					_						-		8
													10
		-			-						-		11 12

Product	:	N150 Easy-N-Range Extender / Travel Router
Test Item	:	Occupied Bandwidth Data
Test Site	:	No.3 OATS
Test Mode	:	Mode 2: Transmit (802.11g 6Mbps) (2437MHz)

Channel No.	Frequency (MHz)	Measurement Level (kHz)	Required Limit (kHz)	Result
6	2437	16400	>500	Pass

Figure Channel 6:

Frequency		04:37:56 PM	ALIGN AUTO		NSE:INT	SE			50 Ω	RF	1		R
Frequency	123456 E M WWWWW T P N N N N N	TRACE TYPE	: Log-Pwr	Avg Typ	e Run	Trig: Free	Hz NO: Fast G	0000 G	.43700	eq 2.	Fre	iter	en
1000 C	PNNNN	DE	100			#Atten: 30	Gain:Low	Ű				_	
Auto Tur	80 GHz 55 dBm	2 2.428 1 -2.6	Mkr				1.5	IBm	20.00 c	Ref	v	B/div	
Center Fre	1000		1	1 3				1					og 10.0
2.437000000 GH	-2.08 dBm			man ()"	mund	nini-range	\$ ²			_	_	1	0.00
							1					-	10.0
Start Fre		-	1				1		-			1	20.0
2.412000000 GH	I	www	Pranta					at any particular	with	N	-	11	30.0 40.0
	- Conce Martin										- allowing	at	50.0
Stop Fre							-		_			1	50.0
2.462000000 GH			-				-						70.0
CF Ste	0.00 MHz					C . S. Sa. S.	1.200		GHz				0.00
5.000000 MH	1001 pts)	1.00 ms (1	Sweep '		-	1.0 MHz	#VBV		Hz	00 k			-
<u>Auto</u> Ma	N VALUE	FUNCTIO	ICTION WIDTH	CTION FL		Y 3.92 d	20 GHz	2 441		f	TRC	MODE	
					Bm	-2.65 d	30 GHz 20 GHz	2.428	-	f	1	NN	2
Freq Offs	11			14	DIII	-2.10 0		2.440		1	1	IN	4 5
01									_			-	6
	-												7
											-	-	9
												-	11
											-	-	12

Product	:	N150 Easy-N-Range Extender / Travel Router
Test Item	:	Occupied Bandwidth Data
Test Site	:	No.3 OATS
Test Mode	:	Mode 2: Transmit (802.11g 6Mbps) (2462MHz)

Channel No.	Frequency (MHz)	Measurement Level (kHz)	Required Limit (kHz)	Result
11	2462	16450	>500	Pass

Figure Channel 11:

Frequency	52:25 PM Nov 28, 2012		ALIGNAUT	SENSE:INT	AC		R		R
Frequency	TRACE 1 2 3 4 5 6 TYPE MWWWWW	g-Pwr ™	Avg Type: Log-Pw	Trig: Free Run	00000 GHz	2.46200	Freq	iter	en
	DET PNNNNN			#Atten: 30 dB	PNO: Fast C IFGain:Low				
Auto Tun	453 80 GHz -2.43 dBm		Mk		dBm	ef 20.00 c	Re	B/div	
-				<u>1</u>				11	og
Center Fre	-1.98 dBm		^3	marin marin	▲ ²				10.0
2.462000000 GH	-1.90 UDN		1 N					1. 0	
	-		X		1		_	-	10.0
Start Fre				1			-		20.0
2.437000000 GH	\sim	mon	Acres		ware and	man		1	30.0
	Mennes -					un service ser	and the	-	40.0
	- avto							CANPP.	50.0
Stop Fre							-	-	50.0
2.487000000 GH								-	70.0
	an 50.00 MHz	Snan				00 GHz	2 4 6 2	ter :	en
CF Ste	ms (1001 pts)		Sweep	1.0 MHz	#VB		N 300		
5.000000 MH	FUNCTION VALUE		INCTION FUNCTION WID	Y I FU	X		TRC SC	MODE	IKB)
uto Ma				4.02 dBm	2.459 75 GHz		1 f	N	1
<u>Nuto</u> Ma				-2.43 dBm	2.453 80 GHz		1 f	N	2
				-3 04 dBm	2 470 25 GHz				
FreqOffs				-3.04 dBm	2.470 25 GHz	1	1 1	14	3
				-3.04 dBm	2.470 25 GHz		1 1		345
FreqOffs				-3.04 dBm	2.470 25 GHz		1 1		34567
FreqOffs				-3.04 dBm	2.470 25 GHz		1 1		3 4 5 6 7 8 9
FreqOffs				-3.04 dBm	2.470 25 GHz				3 4 5 6 7 8

Product	:	N150 Easy-N-Range Extender / Travel Router
Test Item	:	Occupied Bandwidth Data
Test Site	:	No.3 OATS
Test Mode	:	Mode 3: Transmit (802.11n MCS0 7.2Mbps 20M-BW) (2412MHz)

Channel No.	Frequency (MHz)	Measurement Level (kHz)	Required Limit (kHz)	Result
1	2412	17600	>500	Pass

Figure Channel 1:

100000000	05:26:23 PMNov 28, 2012	ALIGN AUTO		SENSE:INT			DA AC		R		L	R
Frequency	TRACE 1 2 3 4 5 6 TYPE MWWWWWW DET P N N N N N	e: Log-Pwr	Avg Ty	Free Run	Trig: F	PNO: Fast	000000	2.412	eq	r Fr	nter	en
Auto Tun	2.403 20 GHz	Mkr2		n: 30 dB	#Atten	IFGain:Low			-			
	-2.45 dBm				-	- 12	0 dBm	f 20.0	Re	iv	B/di	0 d
Center Fre		8	1		1	2	-		-	-	-	10.0
2.412000000 GH	-2.13 dBm	1	many	- marine	and pression	Ym				_		0.00 10.0
A.3.52.53				_		1						20.0
Start Fre 2.387000000 GH	man manter	formand.	-	-		S.		m	-		-	30.0
2.007000000	The subscriptions will							-	100	and the	pra are	40.0
Stop Fre											1	50.0 50.0
2.437000000 GH		-		-	_	-		-	_		-	70.0
CF Ste	Span 50.00 MHz						2	00 GH				
5.000000 MH	.00 ms (1001 pts)	Sweep 1		Hz	SW 1.0 MH	#VB		kHz		-		-
<u>Auto</u> Ma	FUNCTION VALUE	NCTION WIDTH	NCTION	7 dBm	3.87	7 10 GHz	2.40		C SC	E TRI	MODE	
Freq Offse				5 dBm 8 dBm	-2.45	3 20 GHz 0 80 GHz	2.40		f	1	N N	23
0 H												4
												6
					_			-		-		8
										-		10
					_		_	_	1	1	-	12

Product	:	N150 Easy-N-Range Extender / Travel Router
Test Item	:	Occupied Bandwidth Data
Test Site	:	No.3 OATS
Test Mode	:	Mode 3: Transmit (802.11n MCS0 7.2Mbps 20M-BW) (2437MHz)

Channel No.	Frequency (MHz)	Measurement Level (kHz)	Required Limit (kHz)	Result
6	2437	17600	>500	Pass

Figure Channel 6:

Frequency	05:42:08 PMNov 28, 2012	ALIGN AUTO	INT	SEN		50 Ω AC	RF		L	
	TRACE 1 2 3 4 5 6	ype: Log-Pwr		Trig: Free	GHz	7000000	q 2.43	Fre	ter	en
	DET P N N N N			#Atten: 30	PNO: Fast					
Auto Tun	2 2.428 20 GHz -2.64 dBm	Mkr2				00 dBm	Ref 20	v	B/div	
-	2			1	1.1				11	.og
Center Fre	2.58 dBm	∕\ ³		formal	♦ ²		1		1.2	n nn
2.437000000 GH	2.00 (40)	Y			1					10.00
		X								20.0
Start Fre		Nor		1	1	- and	-			30.0
2.412000000 GH	when	a shall			1.1.1	man and the	man	1 Anna		40.0
	and a start of the					1		~	-	50.0
Stop Fre				:						60.0
2.462000000 GH				1	11 11 11	1111		_	l. :	70.0
Contraction of the	1						1			
-	Span 50.00 MHz 1.00 ms (1001 pts)	Sweep 1		W 1.0 MHz	#VB	z	700 G 00 kHz			
							seil	TRC	MODE	_
CF Stej 5.000000 MH Auto Ma		FUNCTION WIDTH	FUNCT	Y	a second de la companya de	X				
5.000000 MH		FUNCTION WIDTH		3.42 dB	2 15 GHz 8 20 GHz	2.43	f	1	NN	4KB 1 2
5.000000 MH <u>Auto</u> Ma		FUNCTION WIDTH			2 15 GHz 8 20 GHz 5 80 GHz	2.43	f	1 1		1 2 3
5.000000 MH Auto Ma Freq Offse		Function width		3.42 dB -2.64 dB	8 20 GHz	2.43	f	1	N	1 2 3 4 5
5.000000 MH Auto Ma Freq Offse		FUNCTION WIDTH		3.42 dB -2.64 dB	8 20 GHz	2.43	f	1	N	1 2 3 4 5 6
5.000000 MH Auto Ma Freq Offse		FUNCTION WIDTH		3.42 dB -2.64 dB	8 20 GHz	2.43	f	1	N	1 3 4 5 6 7 8
5.000000 MH Auto Ma Freq Offse		FUNCTION WIDTH		3.42 dB -2.64 dB	8 20 GHz	2.43	f	1	N	1 3 4 5 6 7 8 9
5.000000 MH		FUNCTION WIDTH		3.42 dB -2.64 dB	8 20 GHz	2.43	f	1	N	1 3 4 5 6 7 8 9

Product	:	N150 Easy-N-Range Extender / Travel Router
Test Item	:	Occupied Bandwidth Data
Test Site	:	No.3 OATS
Test Mode	:	Mode 3: Transmit (802.11n MCS0 7.2Mbps 20M-BW) (2462MHz)

Channel No.	Frequency (MHz)	Measurement Level (kHz)	Required Limit (kHz)	Result
11	2462	17600	>500	Pass

Figure Channel 11:

	05:54:16 PMNov 28, 2012	ALIGNAUTO		ENSE:INT	S		AC	50 Ω	RF		<u> </u>	R
Frequency	TRACE 1 2 3 4 5 6	: Log-Pwr	Avg Type	-	-		00000 GH	.46200	eq 2	Fre	ter	en
Rabe	TYPE MWWWWWW DET P N N N N N				Trig: Fre #Atten: 3	NO: Fast C Gain:Low	P IF(210.00				-
Auto Tune	2.453 20 GHz -2.85 dBm	Mkr2					dBm	20.00 0	Ref	v	B/div	
Center Free	1		-	912	1		11.1				11	og
2.462000000 GH	-2.67 dBm	_	() ³	mm	mon	♦ ²			-	-		0.00
C			1			1				-		10.0
Start Fre	1	-			-	1	1				-	20.0
2.437000000 GH	- marine	1+ James					unavoatel	north	man	-	1	30.0
a Galante	2 Martin Provent			1	1.1.1.1					eul y	Arta M	40.0
Stop Free											127	30.0
2.487000000 GH								_	-	_		70.0
	Span 50.00 MHz						-) GHz	6200	2.46	ter	en
CF Step 5.000000 MH	.00 ms (1001 pts)	Sweep 1.	_	z	W 1.0 MH:	#VB		KHZ	300 k	W 3	s B	Re
uto Mar	FUNCTION VALUE	ICTION WIDTH			Y		x			TRC		
					3.33 0		2.457 1		f	1	N	1
Freq Offse					-2.81 (2.470 8		f	1	N	3
0 H				_								5
											-	7
				_						-	-	8

Product	:	N150 Easy-N-Range Extender / Travel Router
Test Item	:	Occupied Bandwidth Data
Test Site	:	No.3 OATS
Test Mode	:	Mode 4: Transmit (802.11n MCS0 15Mbps 40M-BW) (2422MHz)

Channel No.	Frequency (MHz)	Measurement Level (kHz)	Required Limit (kHz)	Result
3	2422	36200	>500	Pass

Figure Channel 1:

	06:06:18 PMNov 28, 2012	ALIGN AUTO		SENSE:INT			50 Q AC	RF		L	R
Frequency	TRACE 1 2 3 4 5 6 TYPE MWWWWWW DET P N N N N N	TY] Trig: Free Run		PNO: Fast	42200000	eq 2.4	r Fre	nter	en
Auto Tun	2 2.403 9 GHz	Mkr		ten: 30 dB	N	IFGain:Low					
	-0.65 dBm	IVINI				Idiv Ref 20.00 dBm				B/div	0 dl
Center Fre		1	1	1 1 1	-	A2				11	og 10.0
2.422000000 GH	-0.17 dBm		T Y	~~~~		-		-	-	-	0.00
		×				1					10.0
Start Fre	- with	and a special and				nd -	mon			11	20.0
2.372000000 GH	Mar Iway						- 1 h	-	Vulnutive	Jow	40.0
1.11022			-		-			-	_	-	50.0
Stop Fre 2.472000000 GH										1	50.0 70.0
CF Ste 10.000000 MH	Span 100.0 MHz .00 ms (1001 pts)	Sweep 1		MHz	BW :	#VB		2200 (.0 MH			
Auto Ma	FUNCTION VALUE	ICTION WIDTH	NCTION				×	SCL f	e Trc		
	ř			5.82 dBm 1.65 dBm		2.432 2 GHz 2.403 9 GHz		f	1	N	1
Freq Offse				0.27 dBm		2.440 1 GHz		1	1	N	345
UH									1		67
											8
											10
									1		2

Product	:	N150 Easy-N-Range Extender / Travel Router
Test Item	:	Occupied Bandwidth Data
Test Site	:	No.3 OATS
Test Mode	:	Mode 4: Transmit (802.11n MCS0 15Mbps 40M-BW) (2437MHz)

Channel No.	Frequency (MHz)	Measurement Level (kHz)	Required Limit (kHz)	Result
6	2437	36200	>500	Pass

Figure Channel 4:

RL		RF 50 Ω	AC		SENSE:INT		ALIGN AUTO	06:17:40 PMNov 28, 20	12 _
enter	Freq	2.437000000 GHz PN0: Fast Trig: Free Run IFGaint.tow #Atten: 30 dB Avg Type: Log-Pwr Type Mutantant Avg Type: Log-Pwr Type Mutantant Type Mutantant Type NNNNN				Frequency			
0 dB/di	R	ef 20.00 c	1	iain:Low	#Atten: 30 dB	_	Mk	r2 2.418 9 GF -0.48 dB	z Auto Tune
.og 10.0				◆ ²	\Diamond^1			-0.24 d	Center Free 2.437000000 GH
20.0 30.0 40.0	sent.	min	mmt				han		Start Free 2.387000000 GH:
50.0 60.0 70.0									Stop Free 2.487000000 GH
Center Res B		00 GHz MHz		#VBV	V 3.0 MHz		Sweep	Span 100.0 Mi 1.00 ms (1001 pt	
MKE MODE 1 N 2 N			× 2.434		5.76 dBm	UNCTION FUI	NCTION WIDTH	FUNCTION VALUE	Auto Ma
3 N 4 5 6	1 1		2.418 2.455	1 GHz	-0.48 dBm -0.28 dBm				Freq Offse 0 H
7 8 9 10 11									
12									

Product	:	N150 Easy-N-Range Extender / Travel Router
Test Item	:	Occupied Bandwidth Data
Test Site	:	No.3 OATS
Test Mode	:	Mode 4: Transmit (802.11n MCS0 15Mbps 40M-BW) (2452MHz)

Channel No.	Frequency (MHz)	Measurement Level Required Limit (kHz) (kHz)		Result
9	2452	36200	>500	Pass

Figure Channel 7:

HOLD HOLD HAL	4 PM Nov 28, 2012		ALIGN AUTO		NSE:INT	SEN		AC	50 Ω	RF	1.000	RL
Frequency	RACE 1 2 3 4 5 6	TR	: Log-Pwr	Avg Typ	Due	Trig: Free		0000 GH	2.45200	req	er Fr	nt
1.13.167	DET PNNNNN					#Atten: 30	NO: Fast C Gain:Low					
Auto Tur	33 9 GHz).72 dBm		Mk					lBm	f 20.00 c	Re	/div	
Contra Fra		1		61				e	102.2		1.5	g
Center Fre 2.452000000 GH	-0.42 dBm			¥	~						1.2	- 00
2.402000000				3			1				-	.0 -
-	-		1				1	1				.0 -
Start Fre	the station	man	" The state				-	min	man	-		.0
2.402000000 GH	All a superior		_							and -	No-read	.0 4
				-						-	-	.0 -
Stop Fre		-		-	_		-			-	-	.0
2.50200000 GH												.0 -
CF Ste	100.0 MHz		a						0 GHz			
10.000000 MH	s (1001 pts)		Sweep		-	3.0 MHz	#VB		VIHZ	1.0	BW	es
Auto Ma	CTION VALUE	H FUNC	NCTION WIDTH	NCTION FL		5.58 dE	3 GHz	2 462		RC SCL	ODE TR	
· · · · · · · · · · · · · · · · · · ·					Bm	-0.72 dE	9 GHz	2.433		f	N 1	
Freq Offs					Bm	-0.55 dBm		2.470		f	N 1	
01		-			-				-			-
				1.1							-	
												-

8. **Power Density**

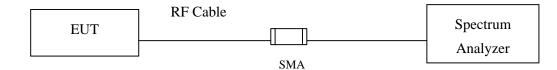
8.1. Test Equipment

	Equipment	Manufacturer	Model No./Serial No.	Last Cal.
	Spectrum Analyzer	R&S	FSP40 / 100170	Jun, 2012
	Spectrum Analyzer	Agilent	E4407B / US39440758	Jun, 2012
Х	Spectrum Analyzer	Agilent	N9010A/MY48030495	Apr., 2013

Note:

- 1. All equipments are calibrated with traceable calibrations. Each calibration is traceable to the national or international standards.
- 2. The test instruments marked with "X" are used to measure the final test results.

8.2. Test Setup



8.3. Limits

The transmitted power density averaged over any 1 second interval shall not be greater +8dBm in any 3kHz bandwidth.

8.4. Test Procedure

According to DTS test procedure of ANSI C63.10: 2009 for compliance to FCC 47CFR 15.247 requirements.

Set RBW= 100 kHz, VBW≥300KHz, SPAN to 5-30 % greater than the EBW,

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

8.5. Uncertainty

 \pm 1.27 dB

8.6. Test Result of Power Density

Product	:	N150 Easy-N-Range Extender / Travel Router
Test Item	:	Power Density Data
Test Site	:	No.3 OATS
Test Mode	:	Mode 1: Transmit (802.11b 1Mbps) (2412MHz)

Channel No.	Frequency (MHz)	Measure Level (dBm)	Limit (dBm)	Result
1	2412	-13.501	< 8dBm	Pass

RL	RF 50 Q AC		SENSE:INT	ALIG	NAUTO	03:33:38 PMNov 28, 2012	L name and the second
Center F	req 2.41200000			Avg Type: Lo		TRACE 123456 TYPE MWWWWW	Frequency
0 dB/div	Ref Offset -15.2 dB Ref 4.80 dBm	PNO: Fast 🌩 IFGain:Low	Trig: Free Run #Atten: 30 dB	Avg Hold>100		2.412 98 GHz -13.501 dBm	Auto Tune
5.20			1				Center Fred 2.412000000 GH:
5.2	M	~~~~~A	-ray na	Ame	\sim	M.	Start Free 2.402000000 GH
15.2						M	Stop Free 2.422000000 GH
5.2 <u> </u>							CF Ste 2.000000 MH <u>Auto</u> Ma
75.2							Freq Offse 0 H
85.2						-	
	41200 GHz 100 kHz	#VBW	300 kHz	Sw	/eep 1	Span 20.00 MHz .93 ms (1001 pts)	
ISG	Contract of the second s				STATUS		0

Product	:	N150 Easy-N-Range Extender / Travel Router
Test Item	:	Power Density Data
Test Site	:	No.3OATS
Test Mode	:	Mode 1: Transmit (802.11b 1Mbps) (2437MHz)

Channel No.	Frequency (MHz)	Measurement Level (dBm)	Required Limit (dBm)	Result
6	2437	-13.937	< 8dBm	Pass

RL En	RF 50 Ω	AC DOODO CL	1-	SEN	SE:INT	Ave Tu	ALIGNAUTO	03:52:35 PM TRACE	Nov 28, 2012	Frequency
0 dB/div	Ref Offset -1 Ref 4.80 d	PI IFC 5.2 dB	12 NO: Fast 😱 Gain:Low	Trig: Free #Atten: 30			id:>100/100	TYPE DET	MWMMMM PNNNNN	Auto Tune
5.20					▲ 1			-		Center Free 2.437000000 GH
25.2	-	V	nn	M	M	An	May	Jan Co		Start Fre 2.427000000 GH
15.2 15.2									M	Stop Fre 2.447000000 GH
5.2									1	CF Ste 2.000000 M⊢ Auto Ma
75.2										Freq Offse 0 H
enter 2.4	3700 GHz		#VBW	300 kHz			Sween	Span 20 1.93 ms (1		
sg				444 BUE			STATUS		~~ (pro)	

Product	:	N150 Easy-N-Range Extender / Travel Router
Test Item	:	Power Density Data
Test Site	:	No.3 OATS
Test Mode	:	Mode 1: Transmit (802.11b 1Mbps) (2462MHz)

Channel No	. Frequency (MHz)	Measurement Level (dBm)	Required Limit (dBm)	Result
11	2462	-13.819	< 8dBm	Pass

0000 GHz	SENSE:INT	Avg Type: Log-Pwr	04:17:20 PMNov 28, 2012 TRACE 1 2 3 4 5 6	Frequency
	Trig: Free Run #Atten: 30 dB			Auto Tune
	1	-	· ···	Center Free 2.462000000 GH
V	-	hand	han	Start Free 2.452000000 GH
			M	Stop Free 2.472000000 GH
				CF Ste 2.000000 MH <u>Auto</u> Ma
				Freq Offse 0 H
#VP	W 300 kHz	Sween	Span 20.00 MHz	
	PN0: Fast (IFGaintLow 2 dB 3m	PNO: Fast Trig: Free Run IFGain:Low #Atten: 30 dB	2 dB Mkr1	PNO: Fast Trig: Free Run #Avg Heid>100/100 TVEE MANNANN DEF PANNANN PER PANNAN PANNAN PER PANNAN PANNAN PER PANNAN PER PANNA

Product	:	N150 Easy-N-Range Extender / Travel Router
Test Item	:	Power Density Data
Test Site	:	No.3 OATS
Test Mode	:	Mode 2: Transmit (802.11g 6Mbps) (2412MHz)

Channel No.	Frequency (MHz)	Measure Level (dBm)	Limit (dBm)	Result
1	2412	-17.092	< 8dBm	Pass

	SENSE:INT	ALIGNAUTO Avg Type: Log-Pwr	04:32:49 PMNov 28, 2012 TRACE 1 2 3 4 5 6	Frequency
PNO: Fast 🦕 IFGain:Low	Trig: Free Run #Atten: 30 dB	Avg Hold>100/100	DET P N N N N	1.2.2.2.2.1
-1		.1		Center Fre 2.412000000 GH
www.www.	www.	mmannin	mm	Start Free 2.402000000 GH
			J. J	Stop Fre 2.422000000 GH
			-	CF Ste 2.000000 MH Auto Ma
				Freq Offse 0 F
		Sweep	Span 20.00 MHz .93 ms (1001 pts)	
	IFGain:Low I	00 GHz PNO: Fast Trig: Free Run IFGain:Low #Atten: 30 dB	OO GHz Avg Type: Log-Pwr Avg Hold>100/100 IFGain:Low #Atten: 30 dB IB Mkr1	00 GHz Trig: Free Run Avg Type: Log-Pwr TRACE 12.34.56 PHO: Fast Trig: Free Run Avg Type: Log-Pwr TRACE 12.34.56 JB Mkr1 2.416 14 GHz -17.092 dBm MMMMMMM Mkr1 2.416 14 GHz -17.092 dBm MMMMMMM MMMMMMM -17.092 dBm MMMMMMM MMMMMMMM -17.092 dBm MMMMMMM MMMMMMMM -17.092 dBm MMMMMMMM MMMMMMMMMM -17.092 dBm MMMMMMMM MMMMMMMMMMM -17.092 dBm MMMMMMMM MMMMMMMMMMMMM -17.092 dBm MMMMMMMMMM MMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMM

Product	:	N150 Easy-N-Range Extender / Travel Router
Test Item	:	Power Density Data
Test Site	:	No.3OATS
Test Mode	:	Mode 2: Transmit (802.11g 6Mbps) (2437MHz)

Channel No.	Frequency (MHz)	Measurement Level (dBm)	Required Limit (dBm)	Result
6	2437	-17.225	< 8dBm	Pass

RL	RF 50 Ω AC		SENSE:INT		IGN AUTO	04:42:53 PMNov 28, 2012	
Center F	req 2.43700000	PNO: Fast 😱 IFGain:Low	Trig: Free Run #Atten: 30 dB	Avg Type: L Avg Hold>10	00/100	TRACE 12345 (TYPE MWWWWW DET P NNNN 2.441 14 GHz	
0 dB/div	Ref 4.80 dBm					-17.225 dBm	
5.20					2		Center Fre 2.437000000 GH
.5.2 <u> </u>	forman	-non-analana	www		1	manny	Start Fre 2.427000000 GH
15.2						V. V	Stop Fre 2.447000000 GH
6.2 6.2						_	CF Ste 2.000000 M⊢ <u>Auto</u> Ma
75.2							Freq Offse
85.2						-	
Center 2.4 Res BW	43700 GHz 100 kHz	#VBW	300 kHz	s	weep 1	Span 20.00 MHz .93 ms (1001 pts	
ISG	Contraction of the second s		and a state of the second		STATUS	221000000000000000000000000000000000000	

Product	:	N150 Easy-N-Range Extender / Travel Router
Test Item	:	Power Density Data
Test Site	:	No.3 OATS
Test Mode	:	Mode 2: Transmit (802.11g 6Mbps) (2462MHz)

Channel No.	Frequency (MHz)	Measurement Level (dBm)	Required Limit (dBm)	Result
11	2462	-17.041	< 8dBm	Pass

RL RF 50 Ω AC	GHz	SENSE:INT	ALIGNAUTO Avg Type: Log-Pwr	04:58:37 PMNov 28, 2012 TRACE 1 2 3 4 5 6	Frequency
Ref Offset -15.2 dB 10 dB/div Ref 4.80 dBm	PNO: Fast	(rig: Free Run Atten: 30 dB	Avg Hold⇒100/100 Mki	1 2.459 72 GHz -17.041 dBm	Auto Tune
5.20					Center Free 2,462000000 GH
15.2 	mmmmm	man hours	Hammen Marine	amorean	Start Fre 2.452000000 GH
35.2				- John Market	Stop Free 2.472000000 GH
36.2					CF Ste 2.000000 MH <u>Auto</u> Ma
36.2					Freq Offse 0 H
Center 2.46200 GHz #Res BW 100 kHz	#VBW 3	00 kHz	Sweep	Span 20.00 MHz 1.93 ms (1001 pts)	

Product	:	N150 Easy-N-Range Extender / Travel Router
Test Item	:	Power Density Data
Test Site	:	No.3 OATS
Test Mode	:	Mode 3: Transmit (802.11n MCS0 7.2Mbps 20M-BW) (2412MHz)

Channel No.	Frequency (MHz)	Measure Level (dBm)	Limit (dBm)	Result
1	2412	-16.695	< 8dBm	Pass

RL RF	50 Q AC		SEN	SEUNT	- 1-	ALIGN AUTO		Nov 28, 2012	
enter Freq 2.	412000000 GH	z D: Fast 😱	Trig: Free	Run	Avg Type Avg Hold:		TRACE	123456 MWW/MWW	Frequency
		J: Fast () in:Low	#Atten: 30				2.409	12 GHz 15 dBm	Auto Tune
5.20		.1		_					Center Fre 2.412000000 GH
15.2 25.2	for the state of t	rodara.	month	mmmm	mann	~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~	www.	w.y	Start Fre 2.402000000 GH
35.2 								and a second	Stop Fre 2.422000000 GH
36.2									CF Ste 2.000000 MH Auto Ma
75.2									Freq Offso 0 H
85.2 Center 2.41200 Res BW 100 k	(T	#VBW 3	200 64-			Swaap		0.00 MHz	
ACS DW TOUR	12	#VDVV	00 KHZ	_	_	Sweep 1	.90 ms (1	ion (hrs)	

Product	:	N150 Easy-N-Range Extender / Travel Router
Test Item	:	Power Density Data
Test Site	:	No.3OATS
Test Mode	:	Mode 3: Transmit (802.11n MCS0 7.2Mbps 20M-BW) (2437MHz)

Channel No.	Frequency (MHz)	Measurement Level (dBm)	Required Limit (dBm)	Result
6	2437	-16.758	< 8dBm	Pass

	SENSE		ALIGNAUTO	05:47:07 PMNov 28, 20: TRACE 1 2 3 4 5	
PNO: Fast 😱 IFGain:Low		in Avg	Hold:>100/100	DET P N N N	z Auto Tune
.1				-	Center Free 2.437000000 GH
Northan	rwwww	Avin/win//www.	M. Mananananananananananananananananananan	munity	Start Free 2.427000000 GH
				- Ny	Stop Fre 2.447000000 GH
				_	CF Ste 2.000000 MH <u>Auto</u> Ma
					_ Freq Offse
				Span 20.00 MH 1.93 ms (1001 pts	
	IFGaintLow	PNO: Fast Trig: Free Ru IFGain:Low #Atten: 30 dE	PNO: Fast Trig: Free Run Avg	GHz Trig: Free Run Avg Type: Log-Pwr PN0: Fast Trig: Free Run Avg]Hold>100/100 #Atten: 30 dB Mkr Mkr Mkr	GHz PN0: Fast IFGain:Low Trig: Free Run #Atten: 30 dB Avg Type: Log.Pwr AvgIhol>100/100 Trig: Free Run PVPE MWN Mkr1 2.434 12 GH -16.758 dBr

Product	:	N150 Easy-N-Range Extender / Travel Router
Test Item	:	Power Density Data
Test Site	:	No.3 OATS
Test Mode	:	Mode 3: Transmit (802.11n MCS0 7.2Mbps 20M-BW) (2462MHz)

Channel No.	Frequency (MHz)	Measurement Level (dBm)	Required Limit (dBm)	Result
11	2462	-16.670	< 8dBm	Pass

	SENSEIINT	Avg Type: Log-Pwr	TRACE 123456	Frequency
PNO: Fast 🖵 IFGain:Low	Trig: Free Run #Atten: 30 dB		DET PNNNN	Auto Tune
				Center Free 2.462000000 GH
www.www.	month	Manyahan	mont	Start Free 2.452000000 GH
			<u> </u>	Stop Fre 2.472000000 GH
				CF Ste 2.000000 MH <u>Auto</u> Ma
				Freq Offse 0 H
#VBW	300 kHz	Sween	Span 20.00 MHz	
		D GHz PNO: Fast Trig: Free Run IFGain:Low #Atten: 30 dB	OGHz Avg Type: Log-Pwr PN0: Fast Trig: Free Run #Atten: 30 dB Mki	O GHz PNO: Fast IFGain:Low Trig: Free Run #Atten: 30 dB Avg Type: Log-Pwr Avg Hold>100/100 TRACE 12.3 4 5 f. Type: Multimetric Deriver Multimetric Band Avg Hold>100/100 Mkr1 2.459 12 GHz -16.670 dBm Avg Type: Log-Pwr Avg Hold>100/100 Mkr1 2.459 12 GHz -16.670 dBm

Product	:	N150 Easy-N-Range Extender / Travel Router
Test Item	:	Power Density Data
Test Site	:	No.3 OATS
Test Mode	:	Mode 4: Transmit (802.11n MCS0 15Mbps 40M-BW) (2422MHz)

Channel No.	Frequency (MHz)	Measure Level (dBm)	Limit (dBm)	Result
3	2422	-20.014	< 8dBm	Pass

		Avg Type: Log-Pwr	TRACE 123456	Frequency
GHz PNO: Fast 🌩 IFGain:Low	Trig: Free Run #Atten: 30 dB	Avg Hold>100/100	DET P N N N N	
			1	Center Fre 2.422000000 GH
and the second	monalia preservation	1 ให้การใหม่จากหาราชนายนายนายนายนาย 	and sent sound a sent of	Start Fre 2.402000000 GF
				Stop Fre 2.442000000 GH
				CF Ste 4.000000 MH Auto Ma
				Freq Offso 0 H
#VBW :	300 kHz	Sweep	Span 40.00 MHz 3.87 ms (1001 pts)	
			Mkr	Mkr1 2.425 48 GHz -20.014 dBm

Product	:	N150 Easy-N-Range Extender / Travel Router
Test Item	:	Power Density Data
Test Site	:	No.3OATS
Test Mode	:	Mode 4: Transmit (802.11n MCS0 15Mbps 40M-BW) (2437MHz)

Channel No.	Frequency (MHz)	Measurement Level (dBm)	Required Limit (dBm)	Result
6	2437	-20.017	< 8dBm	Pass

RL RF 50 Ω AC	GHz	SENSE:INT	ALIGNA Avg Type: Log-F	Wr TRACE 12345	Frequency
Ref Offset -15.2 dB 0 dB/div Ref 4.80 dBm	PNO: Fast IFGain:Low	^J Trig: Free Run #Atten: 30 dB	Avg Hold>100/10		z Auto Tune
5.20			-		Center Free 2.437000000 GH
15.2 25.2 million taman in mana	1	monorating provides	๙๖ _๗ ๛๛๛๛๛๛๛๛๛๛๛๛๛๛๛๛๛๛๛๛๛๛๛๛๛๛๛๛๛๛๛๛๛๛๛๛	and the second second	Start Fre 2.417000000 GH
35.2 1 45.2 10 1					Stop Fre 2.457000000 GH
36.2					CF Ste 4.000000 M⊢ <u>Auto</u> Ma
75.2		-			Freq Offse
enter 2.43700 GHz Res BW 100 kHz		300 kHz		Span 40.00 MHz ep 3.87 ms (1001 pts	

Product	:	N150 Easy-N-Range Extender / Travel Router
Test Item	:	Power Density Data
Test Site	:	No.3 OATS
Test Mode	:	Mode 4: Transmit (802.11n MCS0 15Mbps 40M-BW) (2452MHz)

Channel No.	Frequency (MHz)	Measurement Level (dBm)	Required Limit (dBm)	Result
9	2452	-19.932	< 8dBm	Pass

Center F	req 2.4520	00000 G		SEN Trig: Free	ISE:INT	Avg Type Avg Hold	ALIGNAUTO	TRAC	MNov 28, 2012 E 1 2 3 4 5 6	Frequency
0 dB/div	Ref Offset -1 Ref 4.80 d	1F 5.2 dB	NO: Fast 🦕 Gain:Low	#Atten: 30		Avginoia		2.455	52 GHz 32 dBm	Auto Tune
5.20			1					1		Center Fre 2.452000000 GH
15.2 25.2	hungerson	LA Muraserra	nowwww.	marcontrol	provense	1 	โละกลสุโกระกูปกา	hand man	www.	Start Fre 2.432000000 GH
35.2 45.2				V						Stop Fre 2.472000000 GH
65.2										CF Ste 4.000000 MH <u>Auto</u> Ma
75.2					-					Freq Offse 0 ⊢
85.2								-		
Center 2. Res BW	45200 GHz 100 kHz		#VBW	300 kHz			Sweep :		0.00 MHz 1001 pts)	
ISG							STATUS			

9. EMI Reduction Method During Compliance Testing

No modification was made during testing.