

FCC Radio Test Report FCC ID: KA2IR605LB1

This report concerns (check one): Original Grant Class I Change

Issued Date : Mar. 28, 2013 **Project No.** : 1303C144

Equipment: Wireless N 300 Cloud Router

Model Name : DIR-605L;DIR-905L
Applicant : D-LINK CORPORATION

Address: No. 289, Sinhu 3rd Rd., Neihu District, Taiwan

Manufacturer: Alpha Networks Inc.

Address: NO. 8 Li-shing Rd. VII, Science-based Industrial

Park, Hsinchu, Taiwan.

Tested by:

Neutron Engineering Inc. EMC Laboratory

Date of Receipt: Mar. 14, 2013

Date of Test:

Mar. 14, 2013 ~ Mar. 27, 2013

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Declaration

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

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9. EUT PHOTO

1. CERTIFICATION

Equipment : Wireless N 300 Cloud Router

Brand Name: D-Link

Model Name : DIR-605L;DIR-905L
Applicant : D-LINK CORPORATION
Date of Test : Mar. 14, 2013 ~ Mar. 27, 2013
Test Item : ENGINEERING SAMPLE

Standards : FCC Part15, Subpart C(15.247) / ANSI C63.4-2009

The above equipment has been tested and found compliance with the requirement of the relative standards by Neutron Engineering Inc. EMC Laboratory.

The test data, data evaluation, and equipment configuration contained in our test report (Ref No. NEI-FCCP-1-1303C144) were obtained utilizing the test procedures, test instruments, test sites that has been accredited by the Authority of NVLAP and TAF according to the ISO-17025 quality assessment standard and technical standard(s).

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2. SUMMARY OF TEST RESULTS

Test procedures according to the technical standards:

FCC Part15 (15.247) , Subpart C						
Standard Section	Test Item	Judgment	Remark			
15.207	Conducted Emission	PASS				
15.247(d)	Antenna conducted Spurious Emission	PASS				
15.247(a)(2)	6dB Bandwidth	PASS				
15.247(b)(3)	Peak Output Power	PASS				
15.209/15.205	Radiated Spurious Emission	PASS				
15.247(e)	Power Spectral Density	PASS				
15.203	Antenna Requirement	PASS				

NOTE:

- (1)" N/A" denotes test is not applicable in this test report
- (2) The test follows FCC KDB Publication No. 558074 D01 DTS Meas Guidance v02 (Measurement Guidelines of DTS)

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2.1 TEST FACILITY

The test facilities used to collect the test data in this report is **DG-C02/DG-CB03** at the location of No.3, Jinshagang 1st Road, ShiXia, Dalang Town, Dong Guan, China.523792 Neutron's test firm number for FCC 319330

2.2 MEASUREMENT UNCERTAINTY

Where relevant, the following measurement uncertainty levels have been estimated for tests performed on the EUT as specified in CISPR 16-4-2:

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

A. Conducted Measurement:

Test Site	Method	Measurement Frequency Range	U , (dB)	NOTE
DG-C02	CISPR	150 KHz ~ 30MHz	1.94	

B. Radiated Measurement:

Test Site	Method	Measurement Frequency Range	Ant. H / V	U , (dB)	NOTE
		30MHz ~ 200MHz	V	3.82	
		30MHz ~ 200MHz	Н	3.60	
		200MHz ~ 1,000MHz	V	3.86	
DG-CB03	CISPR	200MHz ~ 1,000MHz	Н	3.94	
DG-CB03	CISER	1GHz~18GHz	V	3.12	
		1GHz~18GHz	Н	3.68	
		18GHz~40GHz	V	4.15	
		18GHz~40GHz	Н	4.14	

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3. GENERAL INFORMATION

3.1 GENERAL DESCRIPTION OF EUT

Equipment	Wireless N 300 Cloud Router			
Brand Name	D-Link			
Model Name	DIR-605L;DIR-905L			
Model Difference	There are two kinds of samples, one is with magnetic ring, another without magnetic ring. DIR-605L and DIR-905L are the same.			
	The EUT is a Wireless N	300 Cloud Router.		
	Operation Frequency	2412~2462 MHz		
	Modulation Technology	802.11b:DSSS 802.11g:OFDM 802.11n:OFDM		
	Bit Rate of Transmitter	802.11b:11/5.5/2/1 Mbps 802.11g:54/48/36/24/18/12/9/6 Mbps Draft 802.11n:up to 300Mbps		
	Number of Channel	11 CH, Please see note 2.(Page 9)		
Product Description	Antenna Designation Antenna Gain(Peak)	Please see note 3.(Page 9)		
	Output Power	802.11b: 20.87dBm 802.11g: 25.14dBm 802.11n(20MHz): 26.54 dBm 802.11n(40MHz): 26.49 dBm		
	Based on the application, features, or specification exhibited in User's Manual, the EUT is considered as an ITE/Computing Device. More details of EUT technical specification. Please refer to the User's Manual.			
Power Source	DC voltage supplied from AC/DC adapter. #1 Brand/ Model name: D-Link / F05W-050100SPAU #2 Brand/ Model name: D-Link / AMS47-0501000FU			
Power Rating		/60Hz, 190mA O/P DC 5V 1A /60Hz, 0.2A/15VA O/P DC 5V 1.0A		
Connecting I/O Port(s)	Please refer to the User's	,		

Note:

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

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2. CH 01 – CH 11 for 802.11b, 802.11g, 802.11n(20MHz) CH 03 – CH 09 for 802.11n(40MHz)

Channel List

	Channel	Frequency (MHz)	Channel	Frequency (MHz)	Channel	Frequency (MHz)	Channel	Frequency (MHz)
Γ	01	2412	04	2427	07	2442	10	2457
Γ	02	2417	05	2432	08	2447	11	2462
ſ	03	2422	06	2437	09	2452		

3. Table for Filed Antenna

	Group 1						
Ant.	Brand	Model Name	Antenna Type	Connector	Gain (dBi)	Note	
1	\bigcirc	260-31069	Dipole	N/A	3.29	60mm	
2	Θ	260-31068	Dipole	N/A	3.12	135mm	

	Group 2					
Ant.	Brand	Model Name	Antenna Type	Connector	Gain (dBi)	Note
1	⊘ M•gear	C037-511238-A (SSR-30090)	Dipole	N/A	5	60mm
2	⊘ M•gear	C037-511237-A (SSR-30089)	Dipole	N/A	5	135mm

The Group 1 and Group 2 is the same type antenna, Group 2 is recorded as the worst case since which gain is higher than Group 1.

The EUT incorporates a MIMO function. Physically, the EUT provides two completed transmitters and two receivers (2T2R). all transmit signals are completely uncorrelated, then, **Direction gain = G**_{ANT}, that is Directional gain=5.

4.

Operating Mode	1TX	2TX
TX Mode	117	217
802.11b	V (ANT 1 or ANT 2)	-
802.11g	V (ANT 1 or ANT 2)	-
802.11n(20MHz)	-	V (ANT1 & ANT 2)
802.11n(40MHz)	-	V (ANT1 & ANT 2)

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3.2 DESCRIPTION OF TEST MODES

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

Pretest Mode	Description
Mode 1	TX B MODE CHANNEL 01/06/11
Mode 2	TX G MODE CHANNEL 01/06/11
Mode 3	TX N-20MHZ MODE CHANNEL 01/06/11
Mode 4	TX N-40MHZ MODE CHANNEL 03/06/09
Mode 5	Normal Link

The EUT system operated these modes were found to be the worst case during the pre-scanning test as following:

For Conducted Test				
Final Test Mode	Description			
Mode 5	Normal Link			

For Radiated Test						
Final Test Mode	Description					
Mode 1	TX B MODE CHANNEL 01/06/11					
Mode 2	TX G MODE CHANNEL 01/06/11					
Mode 3	TX N-20MHZ MODE CHANNEL 01/06/11					
Mode 4	TX N-40MHZ MODE CHANNEL 03/06/09					

Note:

(1) The measurements are performed at the high, middle, low available channels.

(2) 802.11b mode: DBPSK (1Mbps) 802.11g mode: OFDM (6Mbps)

802.11n HT20 mode : BPSK (6.5Mbps) 802.11n HT40 mode : BPSK (13.5Mbps)

For radiated emission tests, the highest output powers were set for final test.

(3)The sample without magnetic ring is recorded as the worst case.

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3.3 TABLE OF PARAMETERS OF TEXT SOFTWARE SETTING

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

Test software version	n/a					
Frequency	2412 MHz	2437 MHz	2462 MHz			
IEEE 802.11b DSSS	50	50	50			
IEEE 802.11g OFDM	49	49	49			

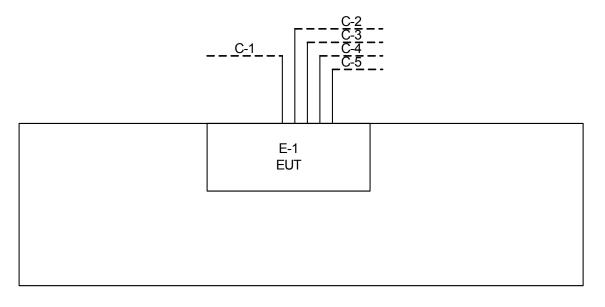
Test software version	n/a					
Frequency (MHz)	2412 MHz	2437 MHz	2462 MHz			
IEEE 802.11n (20MHz)	48	48	48			
Frequency (MHz)	2422 MHz	2437 MHz	2452 MHz			
IEEE 802.11n (40MHz)	47	47	47			

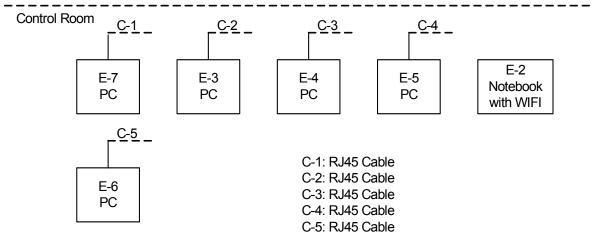
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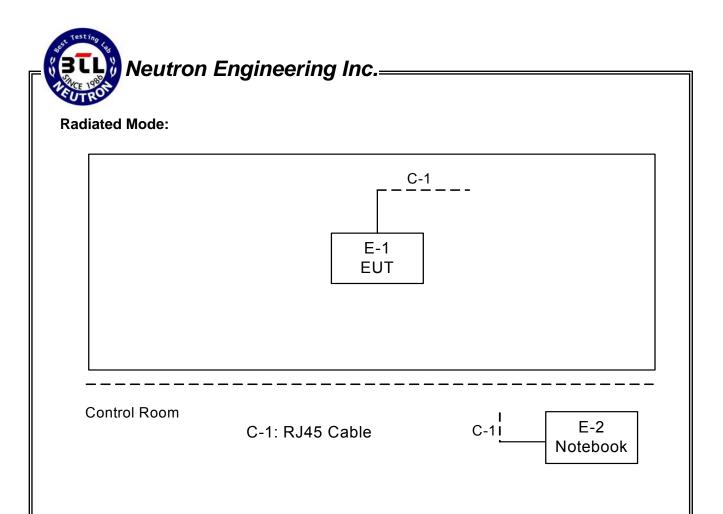
3.4 BLOCK DIGRAM SHOWING THE CONFIGURATION OF SYSTEM TESTED

Conducted Mode:





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3.5 DESCRIPTION OF SUPPORT UNITS

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

Item	Equipment	Mfr/Brand	Model/Type No. FCC ID		Series No.	Note
E-1	Wireless N 300 Cloud Router	D-Link	DIR-605L	KA2IR605LB1	N/A	EUT
E-2	NOTEBOOK	DELL	INSPIRON 1420	ΝΙΔ		
E-3	PC	HP	Dx7400	DOC	CNG7430PX0	
E-4	PC	HP	Dx7400	DOC	CNG7430PWL	
E-5	PC	HP	G3321Cx	DOC	CNX8120R16	
E-6	PC	IBM	8705	DOC	L3G4741	
E-7	PC	IBM	8705	DOC	L3K2875	

Item	Shielded Type	Ferrite Core	Length	Note
C-1	NO	ОИ	10m	
C-2	NO	NO	10m	
C-3	NO	NO	10m	
C-4	NO	NO	10m	
C-5	NO	NO	10m	

Note:

- (1) The support equipment was authorized by Declaration of Confirmation.
- (2) For detachable type I/O cable should be specified the length in m in <code>[Length]</code> column.

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4. EMC EMISSION TEST

4.1 CONDUCTED EMISSION MEASUREMENT

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

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

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

Note:

- (1) The tighter limit applies at the band edges.
- (2) The limit of " * " marked band means the limitation decreases linearly with the logarithm of the frequency in the range.

4.1.2 MEASUREMENT INSTRUMENTS LIST AND SETTING

Item	Kind of Equipment	Manufacturer	Type No.	Serial No.	Last Calibration	Next Calibration
1	LISN	EMCO	3816/2	00052765	May.26.2012	May.04.2013
2	LISN	R&S	ENV216	100087	May.26.2012	May.04.2013
3	Test Cable	N/A	C_17	N/A	Mar.28.2012	Mar.28.2013
4	EMI TEST RECEIVER	R&S	ESCS30	826547/02 2	May.26.2012	May.04.2013
5	50Ω Terminator	SHX	TF2-3G-A	08122902	May.26.2012	May.04.2013

Remark: "N/A" denotes no model name, serial no. or calibration specified.

All calibration period of Equipment List is One Year.

The following table is the setting of the receiver

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

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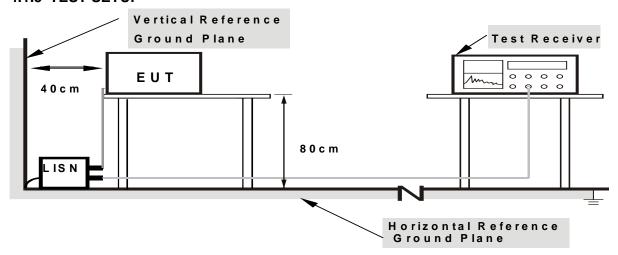
4.1.3 TEST PROCEDURE

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

4.1.4 DEVIATION FROM TEST STANDARD

No deviation

4.1.5 TEST SETUP



Note: 1.Support units were connected to second LISN.

2.Both of LISNs (AMN) are 80 cm from EUT and at least 80 from other units and other metal planes

4.1.6 EUT OPERATING CONDITIONS

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

The EUT was programmed to be in continuously transmitting mode.

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4.1.7 TEST RESULTS

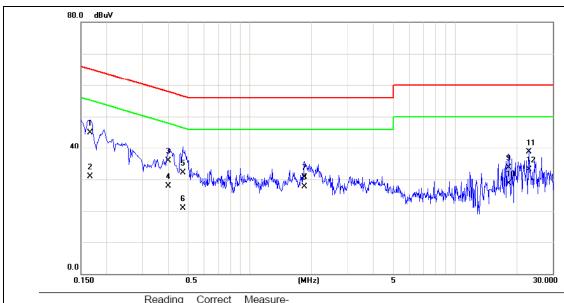
Remark

- (1) Reading in which marked as QP means measurements by using are Quasi-Peak Mode with Detector BW=9KHz; SPA setting in RBW=10KHz, VBW =10KHz, Swp. Time = 0.3 sec./MHz Reading in which marked as AV means measurements by using are Average Mode with instrument setting in RBW=10KHz, VBW=10KHz, Swp. Time =0.3 sec./MHz
- (2) All readings are QP Mode value unless otherwise stated AVG in column of Note ... If the QP Mode Measured value compliance with the QP Limits and lower than AVG Limits, the EUT shall be deemed to meet both QP & AVG Limits and then only QP Mode was measured, but AVG Mode didn't perform In this case, a " * " marked in AVG Mode column of Interference Voltage Measured •
- (3) Measuring frequency range from 150KHz to 30MHz •

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EUT:	Wireless N 300 Cloud Router	Model Name:	DIR-605L				
Temperature:	25 °C	Relative Humidity:	58 %				
Test Voltage :	AC 120V/60Hz Phase: Line						
Test Mode:	Normal Link- Adapter: F05W-050100SPAU						

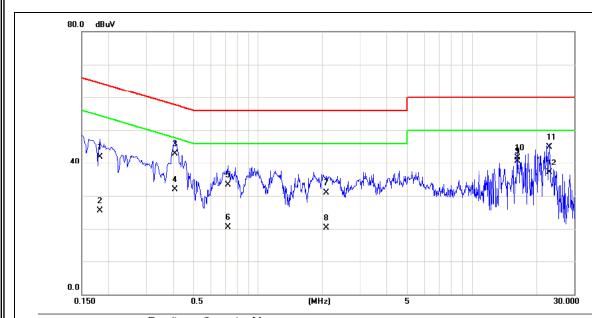


No. Mk.	Freq.	Reading Level	Correct Factor	Measure- ment	Limit	Over		
	MHz	dBuV	dB	dBuV	dBuV	dB	Detector	Comment
1	0.1660	35.27	9.72	44.99	65.16	-20.17	QP	
2	0.1660	21.12	9.72	30.84	55.16	-24.32	AVG	
3	0.3996	26.20	9.72	35.92	57.86	-21.94	QP	
4	0.3996	18.23	9.72	27.95	47.86	-19.91	AVG	
5	0.4711	22.49	9.71	32.20	56.49	-24.29	QP	
6	0.4711	11.20	9.71	20.91	46.49	-25.58	AVG	
7	1.8500	20.86	9.78	30.64	56.00	-25.36	QP	
8	1.8500	17.86	9.78	27.64	46.00	-18.36	AVG	
9	18.3060	23.57	10.16	33.73	60.00	-26.27	QP	
10	18.3060	18.55	10.16	28.71	50.00	-21.29	AVG	
11	23.1300	28.53	10.26	38.79	60.00	-21.21	QP	
12 *	23.1300	22.83	10.26	33.09	50.00	-16.91	AVG	

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EUT:	Wireless N 300 Cloud Router	Model Name:	DIR-605L				
Temperature:	25 °C	Relative Humidity:	58 %				
Test Voltage :	AC 120V/60Hz Phase: Neutral						
Test Mode:	Normal Link- Adapter: F05W-050100SPAU						

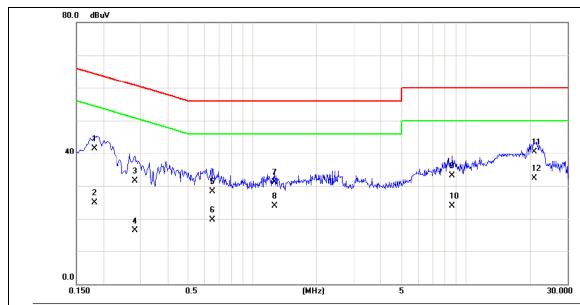


No. N	Λk.	Freq.	Reading Level	Correct Factor	Measure- ment	Limit	Over		
		MHz	dBuV	dB	dBuV	dBuV	dB	Detector	Comment
1		0.1800	32.23	9.72	41.95	64.49	-22.54	QP	
2		0.1800	15.78	9.72	25.50	54.49	-28.99	AVG	
3		0.4060	33.13	9.72	42.85	57.73	-14.88	QP	
4		0.4060	22.23	9.72	31.95	47.73	-15.78	AVG	
5		0.7220	23.53	9.74	33.27	56.00	-22.73	QP	
6		0.7220	10.83	9.74	20.57	46.00	-25.43	AVG	
7		2.0780	21.03	9.79	30.82	56.00	-25.18	QP	
8		2.0780	10.43	9.79	20.22	46.00	-25.78	AVG	
9	1	6.2300	30.58	10.15	40.73	60.00	-19.27	QP	
10 *	1	6.2300	31.58	10.15	41.73	50.00	-8.27	AVG	
11	2	23.1300	34.65	10.35	45.00	60.00	-15.00	QP	
12	2	23.1300	26.73	10.35	37.08	50.00	-12.92	AVG	

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EUT:	Wireless N 300 Cloud Router	Model Name:	DIR-605L			
Temperature:	25 °C	Relative Humidity:	58 %			
Test Voltage :	AC 120V/60Hz	Phase:	Line			
Test Mode:	Normal Link- Adapter: AMS47-0501000FU					

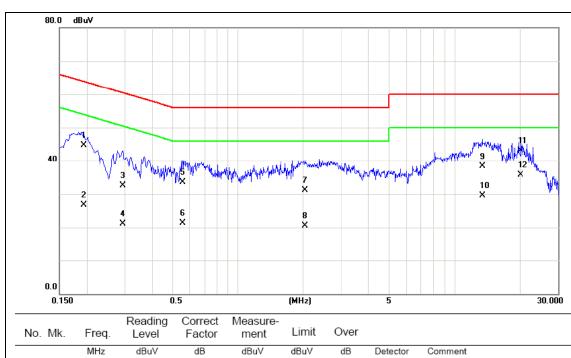


No.	Mk.	Freq.	Reading Level	Correct Factor	Measure- ment	Limit	Over		
		MHz	dBuV	dB	dBuV	dBuV	dB	Detector	Comment
1		0.1824	31.75	9.72	41.47	64.38	-22.91	QP	
2		0.1824	15.13	9.72	24.85	54.38	-29.53	AVG	
3		0.2820	21.85	9.71	31.56	60.76	-29.20	QP	
4		0.2820	6.54	9.71	16.25	50.76	-34.51	AVG	
5		0.6540	18.56	9.72	28.28	56.00	-27.72	QP	
6		0.6540	9.99	9.72	19.71	46.00	-26.29	AVG	
7		1.2700	21.28	9.75	31.03	56.00	-24.97	QP	
8		1.2700	14.10	9.75	23.85	46.00	-22.15	AVG	
9		8.6420	23.06	9.97	33.03	60.00	-26.97	QP	
10		8.6420	13.88	9.97	23.85	50.00	-26.15	AVG	
11		20.9940	30.37	10.22	40.59	60.00	-19.41	QP	
12	*	20.9940	22.03	10.22	32.25	50.00	-17.75	AVG	

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EUT:	Wireless N 300 Cloud Router	Model Name:	DIR-605L			
Temperature:	25 °C	Relative Humidity:	58 %			
Test Voltage :	AC 120V/60Hz	Phase:	Neutral			
Test Mode:	Normal Link- Adapter: AMS47-0501000FU					



No. M	k. Freq.	Reading Level	Correct Factor	Measure- ment	Limit	Over		
	MHz	dBuV	dB	dBuV	dBu∀	dB	Detector	Comment
1	0.1940	34.89	9.72	44.61	63.86	-19.25	QP	
2	0.1940	16.97	9.72	26.69	53.86	-27.17	AVG	
3	0.2940	22.83	9.71	32.54	60.41	-27.87	QP	
4	0.2940	11.30	9.71	21.01	50.41	-29.40	AVG	
5	0.5580	23.75	9.72	33.47	56.00	-22.53	QP	
6	0.5580	11.53	9.72	21.25	46.00	-24.75	AVG	
7	2.0460	21.25	9.79	31.04	56.00	-24.96	QP	
8	2.0460	10.68	9.79	20.47	46.00	-25.53	AVG	
9	13.4180	28.16	10.10	38.26	60.00	-21.74	QP	
10	13.4180	19.31	10.10	29.41	50.00	-20.59	AVG	
11	20.2580	32.94	10.23	43.17	60.00	-16.83	QP	
12 *	20.2580	25.48	10.23	35.71	50.00	-14.29	AVG	
								<u> </u>

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4.1.8. EUT TEST PHOTO

Conducted Measurement Photos





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4.2 RADIATED EMISSION MEASUREMENT

4.2.1 RADIATED EMISSION LIMITS (Frequency Range 9KHz-1000MHz)

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

Frequencies	Field Strength	Measurement Distance
(MHz)	(micorvolts/meter)	(meters)
0.009~0.490	2400/F(KHz)	300
0.490~1.705	24000/F(KHz)	30
1.705~30.0	30	30
30~88	100	3
88~216	150	3
216~960	200	3
Above 960	500	3

LIMITS OF RADIATED EMISSION MEASUREMENT (Above 1000MHz)

FREQUENCY (MHz)	(dBuV/m) (at 3m)		
PREQUENCY (MHZ)	PEAK	AVERAGE	
Above 1000	74	54	

Notes:

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

FREQUENCY RANGE OF RADIATED MEASUREMENT (For unintentional radiators)

Highest frequency generated or Upper frequency of measurement used in the device or on which the device operates or tunes (MHz)	Range (MHz)
Below 1.705	30
1.705 – 108	1000
108 – 500	2000
500 – 1000	5000
Above 1000	5 th harmonic of the highest frequency or 40 GHz, whichever is lower

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4.2.2 MEASUREMENT INSTRUMENTS LIST ANS SETTING

Item	Kind of Equipment	Manufacturer	Type No.	Serial No.	Last Calibration	Next Calibration
1	Antenna	Schwarbeck	VULB9160	9160-3232	Jun .04.2012	May.25.2013
2	Amplifier	HP	8447D	2944A09673	May.26.2012	May.04.2013
3	Test Receiver	R&S	ESCI	100382	May.26.2012	May.04.2013
4	Test Cable	N/A	C-01_CB03	N/A	Jul.01.2012	Jul.01.2013
5	Antenna	ETS	3115	00075789	May.25.2012	May.25.2013
6	Amplifier	Agilent	8449B	3008A02274	May.25.2012	May.04.2013
7	Spectrum	Agilent	E4408B	US39240143	Nov.24.2012	Nov.24.2013
8	Test Cable	HUBER+SUH NER	C-45	N/A	May.04.2012	May.02.2013
9	Controller	СТ	SC100	N/A	N/A	N/A
10	Horn Antenna	EMCO	3115	9605-4803	May.26.2012	May.25.2013
11	Active Loop Antenna	R&S	HFH2-Z2	830749/020	Oct.13.2012	May.04.2013
12	Broad-Band Horn Antenna	Schwarzbeck	BBHA 9170	9170319	Oct.13.2012	Oct.12.2013

Remark: "N/A" denotes no model name, serial no. or calibration specified.

All calibration period of Equipment List is One Year.

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

Receiver Parameter	Setting
Attenuation	Auto
Start ~ Stop Frequency	9kHz~90kHz for PK/AVG detector
Start ~ Stop Frequency	90kHz~110kHz for QP detector
Start ~ Stop Frequency	110kHz~490kHz for PK/AVG detector
Start ~ Stop Frequency	490kHz~30MHz for QP detector
Start ~ Stop Frequency	30MHz~1000MHz for QP detector

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4.2.3 TEST PROCEDURE

- a. The measuring distance of at 3 m shall be used for measurements at frequency up to 1GHz. For frequencies above 1GHz, any suitable measuring distance may be used.
- b. The EUT was placed on the top of a rotating table 0.8 meters above the ground at a 3 meter semi-anechoic chamber. The table was rotated 360 degrees to determine the position of the highest radiation.
- c. The height of the equipment or of the substitution antenna shall be 0.8 m; the height of the test antenna shall vary between 1 m to 4 m. Both horizontal and vertical polarizations of the antenna are set to make the measurement.
- d. The initial step in collecting conducted emission data is a spectrum analyzer peak detector mode pre-scanning the measurement frequency range. Significant peaks are then marked and then Quasi Peak detector mode re-measured.
- e. If the Peak Mode measured value compliance with and lower than Quasi Peak Mode Limit, the EUT shall be deemed to meet QP Limits and then no additional QP Mode measurement performed.
- f. For the actual test configuration, please refer to the related Item –EUT Test Photos.

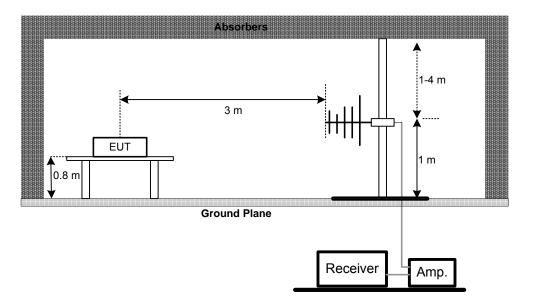
A.2.4 DEVIATION FROM TEST STANDARD
No deviation

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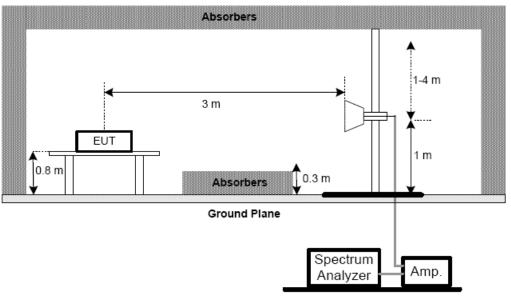


4.2.5 TEST SETUP

(A) Radiated Emission Test Set-Up Frequency Below 1 GHz



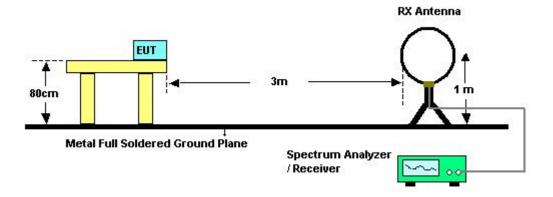
(B) Radiated Emission Test Set-Up Frequency Above 1 GHz



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(C) For radiated emissions below 30MHz



4.2.6 EUT OPERATING CONDITIONS

The EUT tested system was configured as the statements of **4.1.6** Unless otherwise a special operating condition is specified in the follows during the testing.

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4.2.7 TEST RESULTS (BELOW 30MHZ)

EUT:	Wireless N 300 Cloud Router	Model Name:	DIR-605L			
Temperature:	25 ℃	Relative Humidity:	55 %			
Test Voltage:	AC 120V/60Hz					
Test Mode:	TX Mode – Adapter: AMS47-0501000FU					

Freq.	Ant.	Reading(RA)	Corr.Factor(CF)	Measured(FS)	Limits(QP)	Margin	Noto
(MHz)	0°/90°	°/90° (dBuV) (d		(dB) (dBuV/m)		(dB)	Note
0.0905	0°	29.91	21.59	51.50	108.47	-56.97	QP
0.0982	0°	42.98	21.44	64.42	107.76	-43.35	QP
0.1063	0°	24.42	21.30	45.72	107.07	-61.35	QP
0.1081	0°	23.71	21.27	44.98	106.93	-61.95	QP
0.5217	0°	22.05	19.87	41.92	73.26	-31.34	QP
1.2872	0°	24.17	19.57	43.74	65.41	-21.67	QP

Freq.	Ant.	Reading(RA)	Corr.Factor(CF)	Measured(FS)	Limits(QP)	Margin	Note
(MHz)	0°/90°	(dBuV)	(dB)	(dBuV/m)	(dBuV/m)	(dB)	NOLE
0.0943	90°	28.17	21.51	49.68	108.11	-58.43	QP
0.1050	90°	25.43	21.32	46.75	107.18	-60.43	QP
0.1093	90°	27.02	21.25	48.27	106.83	-58.56	QP
0.5138	90°	21.52	19.84	41.36	73.39	-32.02	QP
0.6243	90°	22.11	20.20	42.31	71.70	-29.39	QP
1.2150	90°	23.82	19.58	43.40	65.91	-22.51	QP

Remark:

- (1) The amplitude of spurious emissions which are attenuated by more than 20 dB below the permissible value has no need to be reported $^{\circ}$
- (2) Distance extrapolation factor = 40 log (specific distance / test distance) (dB); •
- (3) Limit line = specific limits (dBuV) + distance extrapolation factor.

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4.2.8 TEST RESULTS (BETWEEN 30 – 1000 MHZ)

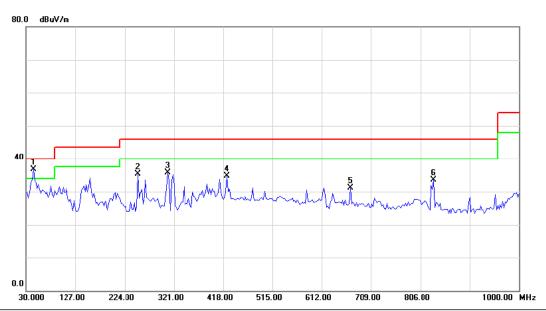
Remark:

- (1) Reading in which marked as QP or Peak means measurements by using are Quasi-Peak Mode or Peak Mode with Detector BW=120KHz ; SPA setting in RBW=120KHz, VBW =120KHz, Swp. Time = 0.3 sec./MHz
- (2) All readings are Peak unless otherwise stated QP in column of ${}^{\mathbb{F}}$ Note ${}_{\mathbb{J}}$. Peak denotes that the Peak reading compliance with the QP Limits and then QP Mode measurement didn't perform ${}_{\circ}$
- (3) Measuring frequency range from 30MHz to 1000MHz •
- (4) If the peak scan value lower limit more than 20dB, then this signal data does not show in table \circ

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EUT:	Wireless N 300 Cloud Router	Model Name:	DIR-605L					
Temperature:	25 ℃	Relative Humidity:	58 %					
Test Voltage:	AC 120V/60Hz Phase: Vertical							
Test Mode:	TX B MODE CHANNEL 01 – Adapter: F05W-050100SPAU							

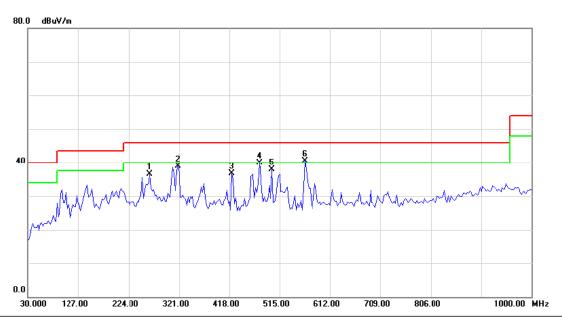


No.	Mk	. Freq.	Reading Level	Correct Factor	Measure- ment	Limit	Over		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1	*	44.5500	53.74	-17.08	36.66	40.00	-3.34	peak	
2		250.6750	50.34	-14.99	35.35	46.00	-10.65	peak	
3		308.8750	48.14	-12.45	35.69	46.00	-10.31	peak	
4		425.2750	44.12	-9.41	34.71	46.00	-11.29	peak	
5		667.7750	35.81	-4.67	31.14	46.00	-14.86	peak	
6		832.6750	36.56	-3.03	33.53	46.00	-12.47	peak	

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EUT:	Wireless N 300 Cloud Router	Model Name:	DIR-605L					
Temperature:	25 ℃	Relative Humidity:	58 %					
Test Voltage:	AC 120V/60Hz	Horizontal						
Test Mode:	TX B MODE CHANNEL 01 – Adapter: F05W-050100SPAU							

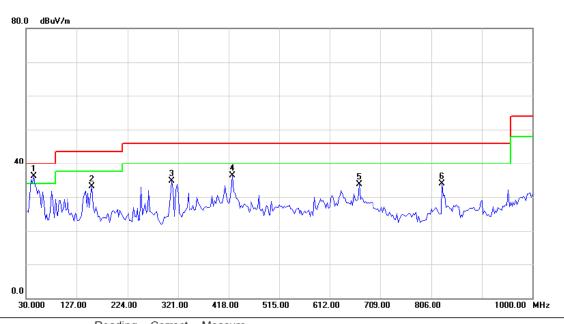


No.	Mk.	Freq.	Reading Level	Correct Factor	Measure- ment	Limit	Over		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1	2	65.2250	50.54	-14.08	36.46	46.00	-9.54	peak	
2	3	18.5750	51.23	-12.23	39.00	46.00	-7.00	peak	
3	4	22.8500	46.15	-9.44	36.71	46.00	-9.29	peak	
4	4	76.2000	48.68	-8.68	40.00	46.00	-6.00	peak	
5	5	00.4500	46.32	-8.37	37.95	46.00	-8.05	peak	
6	* 5	63.5000	46.85	-6.30	40.55	46.00	-5.45	peak	

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EUT:	Wireless N 300 Cloud Router	Model Name:	DIR-605L					
Temperature:	25 ℃	Relative Humidity:	58 %					
Test Voltage:	AC 120V/60Hz	Vertical						
Test Mode:	TX B MODE CHANNEL 06 – Adapter: F05W-050100SPAU							

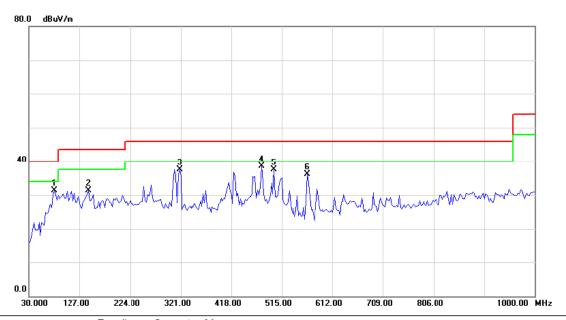


	No.	Mk.	Freq.	Reading Level	Correct Factor	Measure- ment	Limit	Over		
			MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
_	1	*	44.5500	53.27	-17.08	36.19	40.00	-3.81	peak	
	2	,	156.1000	51.05	-17.91	33.14	43.50	-10.36	peak	
	3	3	308.8750	47.14	-12.45	34.69	46.00	-11.31	peak	
	4	2	125.2750	45.62	-9.41	36.21	46.00	-9.79	peak	
_	5	6	667.7750	38.31	-4.67	33.64	46.00	-12.36	peak	
_	6	8	327.8250	37.06	-3.12	33.94	46.00	-12.06	peak	
_										

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EUT:	Wireless N 300 Cloud Router	Model Name:	DIR-605L					
Temperature:	25 ℃	Relative Humidity:	58 %					
Test Voltage:	AC 120V/60Hz	Horizontal						
Test Mode:	TX B MODE CHANNEL 06 – Adapter: F05W-050100SPAU							

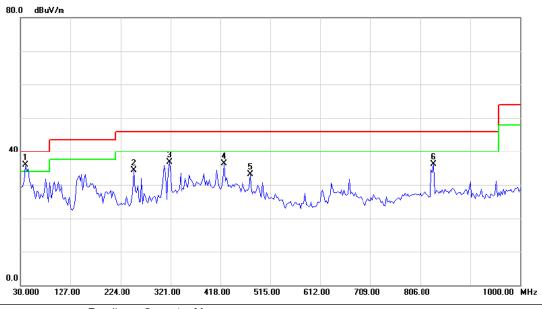


No	. Mk	. Freq.	Reading Level	Correct Factor	Measure- ment	Limit	Over		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1		78.5000	50.44	-19.14	31.30	40.00	-8.70	peak	
2		143.9750	49.19	-17.93	31.26	43.50	-12.24	peak	
3		318.5750	49.73	-12.23	37.50	46.00	-8.50	peak	
4	*	476.2000	47.18	-8.68	38.50	46.00	-7.50	peak	
5	,	500.4500	45.82	-8.37	37.45	46.00	-8.55	peak	
6	i	563.5000	42.35	-6.30	36.05	46.00	-9.95	peak	

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EUT:	Wireless N 300 Cloud Router	Model Name:	DIR-605L					
Temperature:	25 ℃	Relative Humidity:	58 %					
Test Voltage:	AC 120V/60Hz	Vertical						
Test Mode:	TX B MODE CHANNEL 11 – Adapter: F05W-050100SPAU							

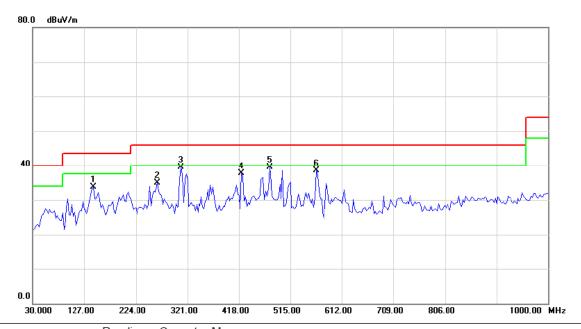


	No.	Mk.	Freq.	Reading Level	Correct Factor	Measure- ment	Limit	Over		
-			MHz	dBu∨	dB	dBuV/m	dBuV/m	dB	Detector	Comment
_	1	*	39.7000	52.83	-16.90	35.93	40.00	-4.07	peak	
	2		250.6750	49.34	-14.99	34.35	46.00	-11.65	peak	
_	3		318.5750	48.88	-12.23	36.65	46.00	-9.35	peak	
_	4		425.2750	45.62	-9.41	36.21	46.00	-9.79	peak	
_	5		476.2000	41.74	-8.68	33.06	46.00	-12.94	peak	
_	6		832.6750	39.06	-3.03	36.03	46.00	-9.97	peak	

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EUT:	Wireless N 300 Cloud Router	Model Name:	DIR-605L				
Temperature:	25 ℃	Relative Humidity:	58 %				
Test Voltage:	AC 120V/60Hz	Phase:	Horizontal				
Test Mode:	TX B MODE CHANNEL 11 – Adapter: F05W-050100SPAU						

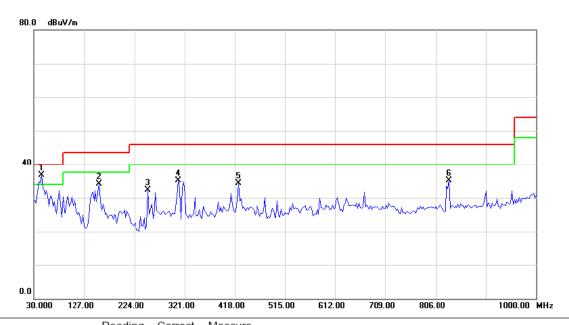


	No.	Mk.	. Freq.	Reading Level	Correct Factor	Measure- ment	Limit	Over		
-			MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
_	1		143.9750	51.69	-17.93	33.76	43.50	-9.74	peak	
_	2		265.2250	49.04	-14.08	34.96	46.00	-11.04	peak	
_	3		308.8750	51.87	-12.45	39.42	46.00	-6.58	peak	
-	4		422.8500	47.15	-9.44	37.71	46.00	-8.29	peak	
-	5	*	476.2000	48.18	-8.68	39.50	46.00	-6.50	peak	
-	6		563.5000	44.85	-6.30	38.55	46.00	-7.45	peak	
-										

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EUT:	Wireless N 300 Cloud Router	Model Name:	DIR-605L				
Temperature:	25 ℃	Relative Humidity:	58 %				
Test Voltage:	AC 120V/60Hz	Phase:	Vertical				
Test Mode:	TX B MODE CHANNEL 01 – Adapter: AMS47-0501000FU						

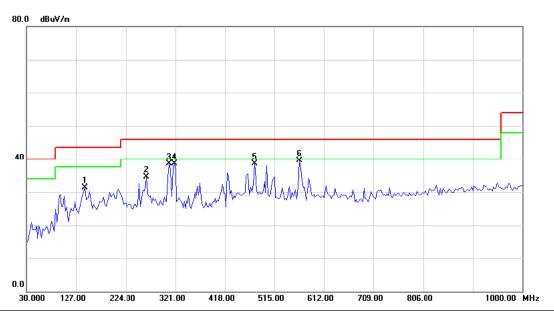


	No.	Mk.	Freq.	Reading Level	Factor	Measure- ment	Limit	Over		
			MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
	1	*	44.5500	53.74	-17.08	36.66	40.00	-3.34	peak	
	2		156.1000	52.05	-17.91	34.14	43.50	-9.36	peak	
_	3		250.6750	47.34	-14.99	32.35	46.00	-13.65	peak	
_	4	,	308.8750	47.64	-12.45	35.19	46.00	-10.81	peak	
_	5	4	425.2750	43.62	-9.41	34.21	46.00	-11.79	peak	
_	6		832.6750	38.06	-3.03	35.03	46.00	-10.97	peak	
_										

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EUT:	Wireless N 300 Cloud Router	Model Name:	DIR-605L					
Temperature:	25 ℃	Relative Humidity:	58 %					
Test Voltage:	AC 120V/60Hz	Phase:	Horizontal					
Test Mode:	TX B MODE CHANNEL 01 – Adapter: AMS47-0501000FU							

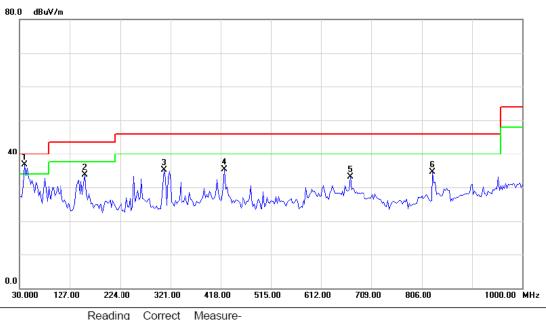


No	Mk	c. Freq.	Reading Level	Correct Factor	Measure- ment	Limit	Over		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1		143.9750	49.19	-17.93	31.26	43.50	-12.24	peak	
2		265.2250	48.54	-14.08	34.46	46.00	-11.54	peak	
3		308.8750	50.87	-12.45	38.42	46.00	-7.58	peak	
4		318.5750	50.73	-12.23	38.50	46.00	-7.50	peak	
5		476.2000	47.18	-8.68	38.50	46.00	-7.50	peak	
6	*	563.5000	45.85	-6.30	39.55	46.00	-6.45	peak	

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EUT:	Wireless N 300 Cloud Router	Model Name:	DIR-605L					
Temperature:	25 ℃	Relative Humidity:	58 %					
Test Voltage:	AC 120V/60Hz	Phase:	Vertical					
Test Mode:	TX B MODE CHANNEL 06 – Adapter: AMS47-0501000FU							

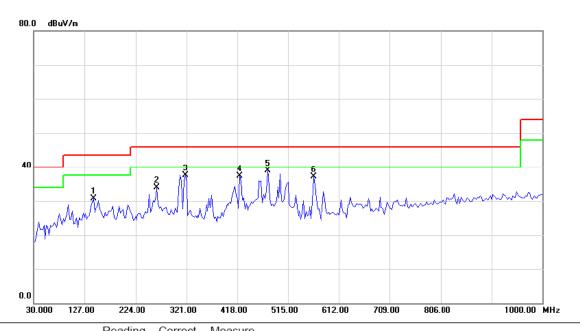


	No.	Mk.	Freq.	Level	Factor	ment	Limit	Over		
_			MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
_	1	*	39.7000	53.51	-16.90	36.61	40.00	-3.39	peak	
_	2	1	156.1000	51.55	-17.91	33.64	43.50	-9.86	peak	
_	3	3	308.8750	47.64	-12.45	35.19	46.00	-10.81	peak	
	4	2	125.2750	44.62	-9.41	35.21	46.00	-10.79	peak	
_	5	6	667.7750	37.81	-4.67	33.14	46.00	-12.86	peak	
_	6	8	327.8250	37.56	-3.12	34.44	46.00	-11.56	peak	
_										

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EUT:	Wireless N 300 Cloud Router	Model Name:	DIR-605L					
Temperature:	25 ℃	Relative Humidity:	58 %					
Test Voltage:	AC 120V/60Hz	Phase:	Horizontal					
Test Mode:	TX B MODE CHANNEL 06 – Adapter: AMS47-0501000FU							

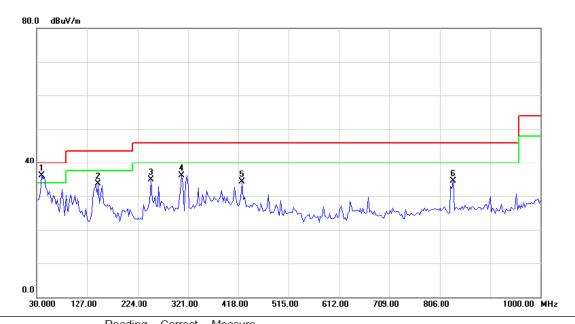


	No.	Mk.	Freq.	Level	Factor	ment	Limit	Over		
_			MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
_	1		143.9750	48.69	-17.93	30.76	43.50	-12.74	peak	
_	2	:	265.2250	48.04	-14.08	33.96	46.00	-12.04	peak	
_	3	;	318.5750	49.73	-12.23	37.50	46.00	-8.50	peak	
_	4		422.8500	46.65	-9.44	37.21	46.00	-8.79	peak	
_	5	*	476.2000	47.68	-8.68	39.00	46.00	-7.00	peak	
_	6	;	563.5000	43.35	-6.30	37.05	46.00	-8.95	peak	
_										

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EUT:	Wireless N 300 Cloud Router	Model Name:	DIR-605L					
Temperature:	25 ℃	Relative Humidity:	58 %					
Test Voltage:	AC 120V/60Hz	Phase:	Vertical					
Test Mode:	TX B MODE CHANNEL 11 – Adapter: AMS47-0501000FU							

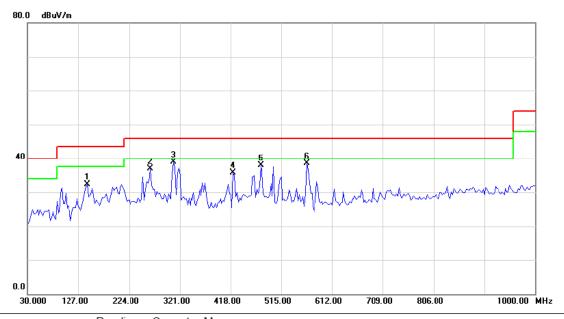


	No.	Mk.	Freq.	Reading Level	Factor	Measure- ment	Limit	Over		
			MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
_	1	*	39.7000	53.01	-16.90	36.11	40.00	-3.89	peak	
	2	,	148.8250	51.47	-17.85	33.62	43.50	-9.88	peak	
-	3	2	250.6750	49.84	-14.99	34.85	46.00	-11.15	peak	
-	4	3	308.8750	48.64	-12.45	36.19	46.00	-9.81	peak	
-	5	2	425.2750	43.62	-9.41	34.21	46.00	-11.79	peak	
-	6	3	332.6750	37.56	-3.03	34.53	46.00	-11.47	peak	
-										

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EUT:	Wireless N 300 Cloud Router	Model Name:	DIR-605L					
Temperature:	25 ℃	Relative Humidity:	58 %					
Test Voltage:	AC 120V/60Hz	Phase:	Horizontal					
Test Mode:	TX B MODE CHANNEL 11 – Adapter: AMS47-0501000FU							



Ο.	Mk.	Freq.	Reading Level	Correct Factor	Measure- ment	Limit	Over		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1	14	43.9750	50.19	-17.93	32.26	43.50	-11.24	peak	
2	2	65.2250	51.04	-14.08	36.96	46.00	-9.04	peak	
3	* 3	08.8750	51.37	-12.45	38.92	46.00	-7.08	peak	
4	4:	22.8500	45.15	-9.44	35.71	46.00	-10.29	peak	
5	4	76.2000	46.68	-8.68	38.00	46.00	-8.00	peak	
6	5	63.5000	44.85	-6.30	38.55	46.00	-7.45	peak	
	1 2 3 4 5	2 2 3 * 3 4 4 5 4	MHz 1 143.9750 2 265.2250 3 * 308.8750 4 422.8500 5 476.2000	MHz dBuV 1 143.9750 50.19 2 265.2250 51.04 3 * 308.8750 51.37 4 422.8500 45.15 5 476.2000 46.68	Mk. Freq. Level Factor MHz dBuV dB 1 143.9750 50.19 -17.93 2 265.2250 51.04 -14.08 3 * 308.8750 51.37 -12.45 4 422.8500 45.15 -9.44 5 476.2000 46.68 -8.68	Name	Mk. Freq. Level Factor ment Limit MHz dBuV dB dBuV/m dBuV/m 1 143.9750 50.19 -17.93 32.26 43.50 2 265.2250 51.04 -14.08 36.96 46.00 3 * 308.8750 51.37 -12.45 38.92 46.00 4 422.8500 45.15 -9.44 35.71 46.00 5 476.2000 46.68 -8.68 38.00 46.00	Mo. Mk. Freq. Level MHz Factor MHz ment MHz Limit Over MHz Over MHz 1 143.9750 50.19 -17.93 32.26 43.50 -11.24 2 265.2250 51.04 -14.08 36.96 46.00 -9.04 3 * 308.8750 51.37 -12.45 38.92 46.00 -7.08 4 422.8500 45.15 -9.44 35.71 46.00 -10.29 5 476.2000 46.68 -8.68 38.00 46.00 -8.00	No. Mk. Freq. Level Factor ment Limit Over MHz dBuV dB dBuV/m dBuV/m dB Detector

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4.2.9 TEST RESULTS (ABOVE 1000 MHZ)

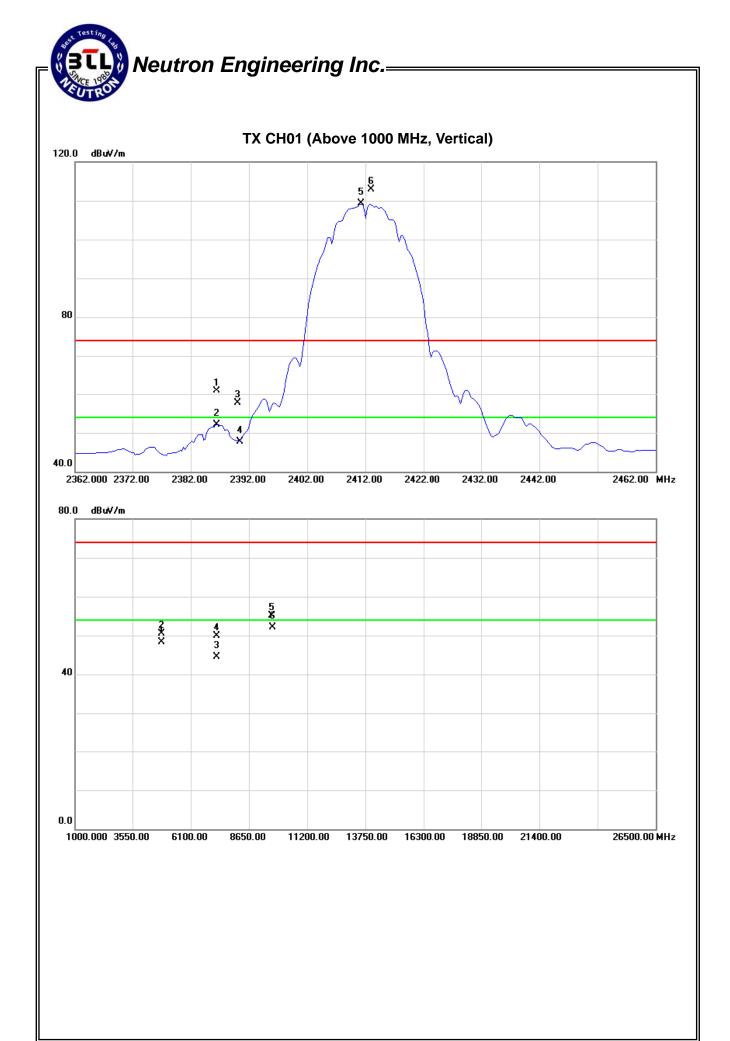
EUT:	Wireless N 300 Cloud Router	Model Name:	DIR-605L
Temperature:	25 ℃	Relative Humidity:	51 %
Pressure:	1010 hPa	Test Voltage:	AC 120V/60Hz
Test Mode:	TX B MODE 2412MHz		

Freq.	Ant.Pol.	Reading		Ant./CF	A	Act.		Limit		
1164.	AHL.FUI.	Peak	AV		Peak	AV	Peak	AV	Note	
(MHz)	H/V	(dBuV)	(dBuV)	CF(dB)	(dBuV/m)	(dBuV/m)	(dBuV/m)	(dBuV/m)		
2386.50	V	28.56	19.74	32.29	60.85	52.03	74.00	54.00	X/Ε	
2390.00	V	25.45	19.40	32.28	57.73	51.68	74.00	54.00	X/Ε	
2413.00	V	80.67	76.95	32.25	11292	109.20			X/F	
4824.05	V	44.34	42.10	6.19	50.53	48.29	74.00	54.00	X/H	
7236.20	V	37.50	32.26	12.31	49.81	44.57	74.00	54.00	X/H	
9648.05	V	42.48	39.40	12.66	55.14	52.06	74.00	54.00	X/H	

Remark:

- (1) All readings are Peak unless otherwise stated QP in column of ${}^{\mathbb{F}}$ Note ${}_{\mathbb{J}}$. Peak denotes that the Peak reading compliance with the QP Limits and then QP Mode measurement didn't perform ${}_{\circ}$
- (2) Measuring frequency range from 30MHz to 1000MHz or the 10th harmonic of highest fundamental frequency "F" denotes fundamental frequency; "H" denotes spurious frequency. "E" denotes band edge frequency. (This judgment method includes the Band Edge Requirement.)
- (3) Radiated emissions measured in frequency range above 1000MHz were made with an instrument using Peak detector mode and AV detector mode of the emission
- (4) Data of measurement within this frequency range shown " * " in the table above means the reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.
- (5) A preamp and high pass filter were used for this test in order to provide sufficient measurement sensitivity.
- (6) EUT Orthogonal Axis:
 - "X" denotes Laid on Table; "Y" denotes Vertical Stand; "Z" denotes Side Stand
- (7) During the measurements above 1 GHz it is taken care of that the EUT is always within the 3 dB cone of radiation BW of the used antenna

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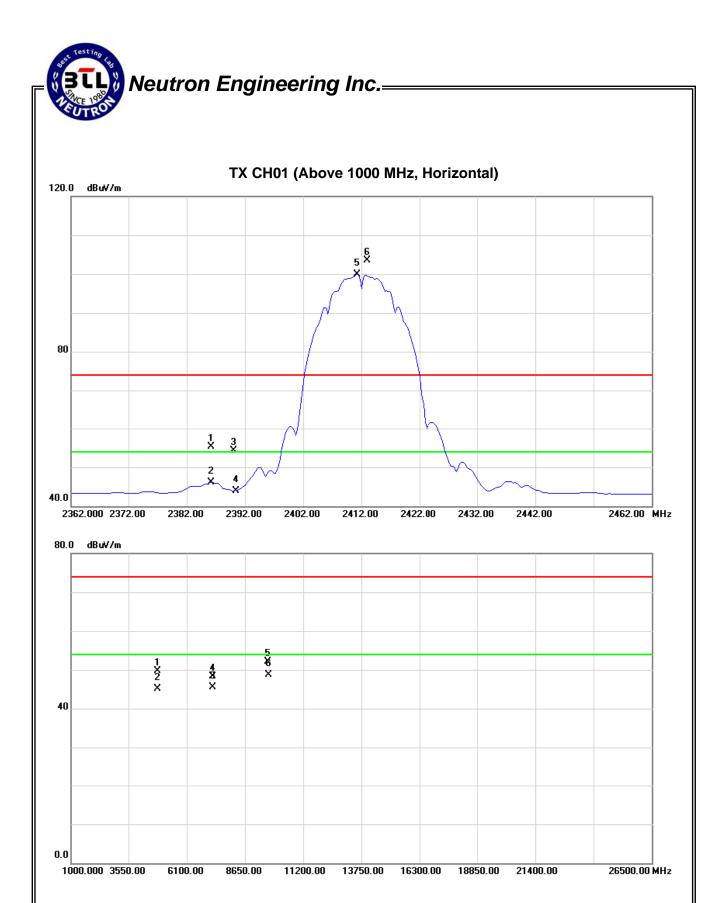
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EUT:	Wireless N 300 Cloud Router	Model Name:	DIR-605L
Temperature:	25 ℃	Relative Humidity:	51 %
Pressure:	1010 hPa	Test Voltage:	AC 120V/60Hz
Test Mode:	TX B MODE 2412MHz		

Freq.	Ant.Pol.	Reading Reading		Ant./CF	Ant./CF Act.			mit	
пец.	AIII.FUI.	Peak	AV		Peak	AV	Peak	AV	Note
(MHz)	H/V	(dBuV)	(dBuV)	CF(dB)	(dBuV/m)	(dBuV/m)	(dBuV/m)	(dBuV/m)	
2386.25	Н	23.11	13.78	32.29	55.40	46.07	74.00	54.00	X/Ε
2390.00	Н	22.00	11.62	32.28	54.28	43.90	74.00	54.00	X/Ε
2413.00	Н	71.35	67.66	32.26	103.61	99.92			X/F
4823.88	Н	43.50	38.94	6.19	49.69	45.13	74.00	54.00	X/H
7235.50	Н	35.94	33.17	12.31	48.25	45.48	74.00	54.00	X/H
9648.06	Н	39.50	36.00	12.66	52.16	48.66	74.00	54.00	X/H

- (1) All readings are Peak unless otherwise stated QP in column of $^{\mathbb{F}}$ Note $_{\mathbb{J}}$. Peak denotes that the Peak reading compliance with the QP Limits and then QP Mode measurement didn't perform $_{\circ}$
- (2) Measuring frequency range from 30MHz to 1000MHz or the 10th harmonic of highest fundamental frequency "F" denotes fundamental frequency; "H" denotes spurious frequency. "E" denotes band edge frequency. (This judgment method includes the Band Edge Requirement.)
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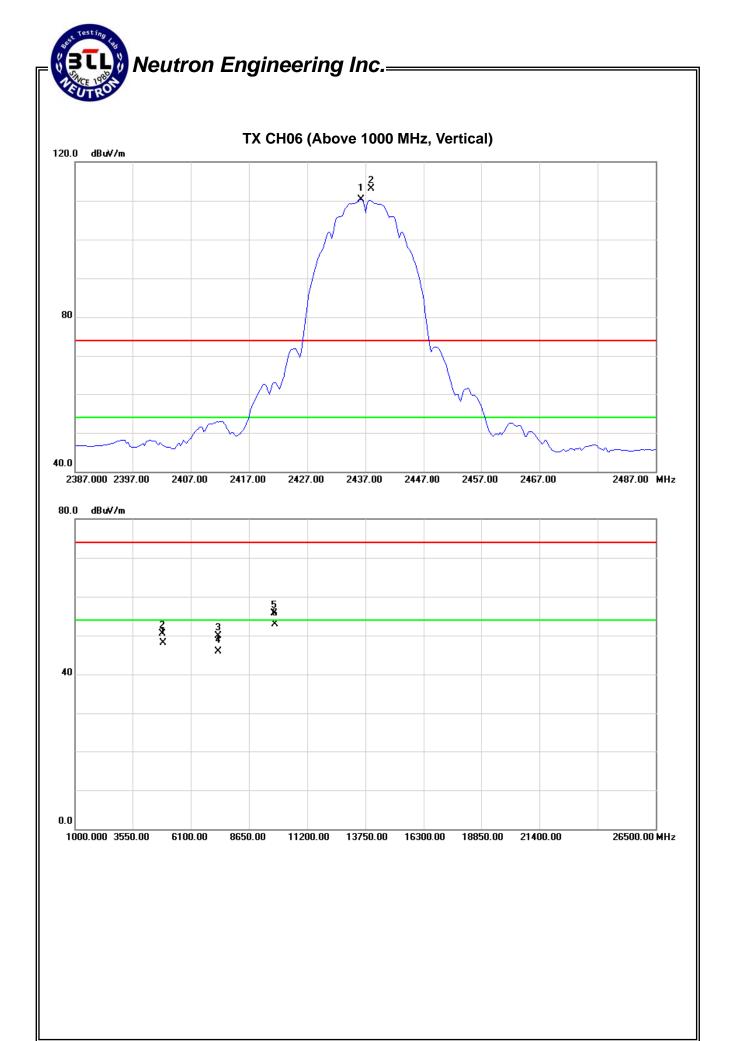


EUT:	Wireless N 300 Cloud Router	Model Name:	DIR-605L
Temperature:	25 ℃	Relative Humidity:	51 %
Pressure:	1010 hPa	Test Voltage:	AC 120V/60Hz
Test Mode:	TX B MODE 2437MHz		

Freq. Ant.F	Ant Dol	Ant.Pol. Read		Ant./CF	Act.		Lir		
1164.	AIIL.FOI.	Peak	AV		Peak	AV	Peak	AV	Note
(MHz)	H/V	(dBuV)	(dBuV)	CF(dB)	(dBuV/m)	(dBuV/m)	(dBuV/m)	(dBuV/m)	
2438.00	٧	80.94	78.11	32.23	113.17	110.34			X/F
4874.15	V	44.14	41.70	6.39	50.53	48.09	74.00	54.00	X/Η
7310.97	V	37.58	33.62	12.35	49.93	45.97	74.00	54.00	X/Η
9748.02	V	42.83	40.06	12.84	55.67	52.90	74.00	54.00	XΉ

- (1) All readings are Peak unless otherwise stated QP in column of ${}^{\mathbb{F}}$ Note ${}_{\mathbb{J}}$. Peak denotes that the Peak reading compliance with the QP Limits and then QP Mode measurement didn't perform ${}_{\circ}$
- (2) Measuring frequency range from 30MHz to 1000MHz or the 10th harmonic of highest fundamental frequency "F" denotes fundamental frequency; "H" denotes spurious frequency. "E" denotes band edge frequency. (This judgment method includes the Band Edge Requirement.)
- (3) Radiated emissions measured in frequency range above 1000MHz were made with an instrument using Peak detector mode and AV detector mode of the emission
- (4) Data of measurement within this frequency range shown " * " in the table above means the reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.
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- (7) During the measurements above 1 GHz it is taken care of that the EUT is always within the 3 dB cone of radiation BW of the used antenna

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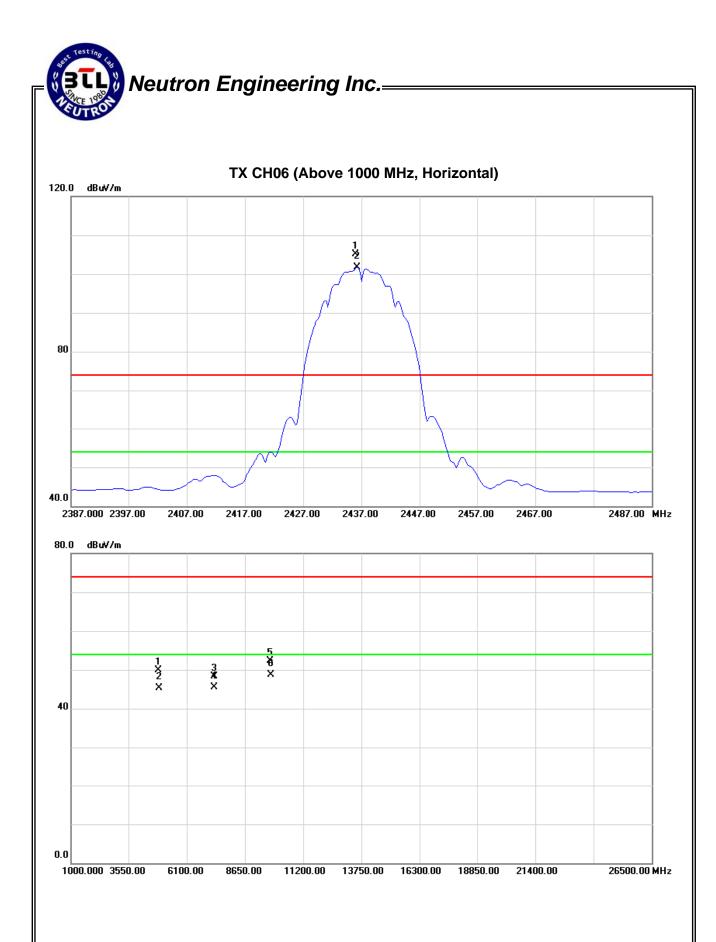


EUT:	Wireless N 300 Cloud Router	Model Name:	DIR-605L
Temperature:	25 ℃	Relative Humidity:	51 %
Pressure:	1010 hPa	Test Voltage:	AC 120V/60Hz
Test Mode:	TX B MODE 2437MHz		

Freq. Ant.F	Ant.Pol. Rea	ding Ant/CF		Act.		Lir			
пщ.	AHL.FOI.	Peak	AV		Peak	AV	Peak	AV	Note
(MHz)	H/V	(dBuV)	(dBuV)	CF(dB)	(dBuV/m)	(dBuV/m)	(dBuV/m)	(dBuV/m)	
2436.00	Н	7291	69.40	32.23	105.14	101.63			Χ/F
4873.88	Η	43.47	38.95	6.39	49.86	45.34	74.00	54.00	X/H
7311.14	Η	36.00	6.00	12.35	48.35	18.35	74.00	54.00	XH
9748.05	Н	39.40	35.87	12.84	52.24	48.71	74.00	54.00	Χ/H

- (1) All readings are Peak unless otherwise stated QP in column of 『Note』. Peak denotes that the Peak reading compliance with the QP Limits and then QP Mode measurement didn't perform ∘
- (2) Measuring frequency range from 30MHz to 1000MHz or the 10th harmonic of highest fundamental frequency "F" denotes fundamental frequency; "H" denotes spurious frequency. "E" denotes band edge frequency. (This judgment method includes the Band Edge Requirement.)
- (3) Radiated emissions measured in frequency range above 1000MHz were made with an instrument using Peak detector mode and AV detector mode of the emission •
- (4) Data of measurement within this frequency range shown " * " in the table above means the reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.
- (5) A preamp and high pass filter were used for this test in order to provide sufficient measurement sensitivity.
- (6) EUT Orthogonal Axis:
 - "X" denotes Laid on Table; "Y" denotes Vertical Stand; "Z" denotes Side Stand
- (7) During the measurements above 1 GHz it is taken care of that the EUT is always within the 3 dB cone of radiation BW of the used antenna

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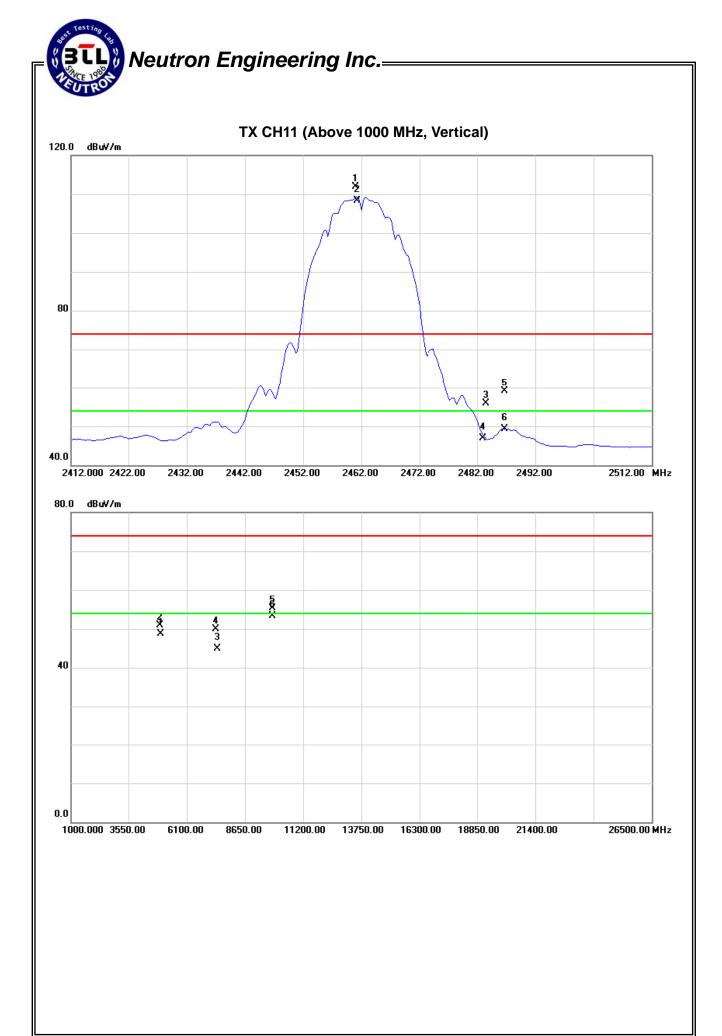


EUT:	Wireless N 300 Cloud Router	Model Name:	DIR-605L
Temperature:	25 ℃	Relative Humidity:	51 %
Pressure:	1010 hPa	Test Voltage:	AC 120V/60Hz
Test Mode:	TX B MODE 2462MHz		

Freq.	Ant.Pol.	Rea	ding	Ant./CF		ct.	Limit		
		Peak	AV		Peak	AV	Peak	AV	Note
(MHz)	HΛ	(dBuV)	(dBuV)	CF(dB)	(dBuV/m)	(dBuV/m)	(dBuV/m)	(dBuV/m)	
2461.00	٧	79.62	76.14	32.20	111.82	108.34			X/F
2483.50	V	23.71	14.67	32.17	55.88	46.84	74.00	54.00	X/E
2486.75	V	26.94	17.19	32.18	59.12	49.37	74.00	54.00	X/E
4924.05	V	44.25	42.02	6.59	50.84	48.61	74.00	54.00	X/H
7386.20	V	37.45	32.52	12.40	49.85	44.92	74.00	54.00	X/H
9948.02	V	42.33	40.19	13.02	55.35	53.21	74.00	54.00	X/H

- (1) All readings are Peak unless otherwise stated QP in column of $^{\mathbb{F}}$ Note $_{\mathbb{J}}$. Peak denotes that the Peak reading compliance with the QP Limits and then QP Mode measurement didn't perform $_{\circ}$
- (2) Measuring frequency range from 30MHz to 1000MHz or the 10th harmonic of highest fundamental frequency "F" denotes fundamental frequency; "H" denotes spurious frequency. "E" denotes band edge frequency. (This judgment method includes the Band Edge Requirement.)
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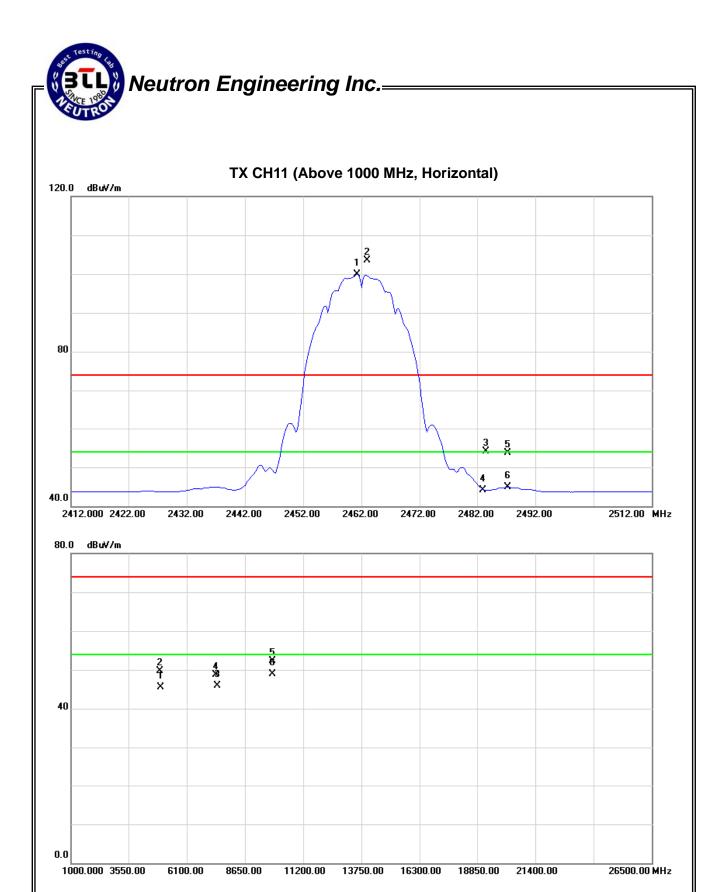


EUT:	Wireless N 300 Cloud Router	Model Name:	DIR-605L
Temperature:	25 ℃	Relative Humidity:	51 %
Pressure:	1010 hPa	Test Voltage:	AC 120V/60Hz
Test Mode:	TX B MODE 2462MHz		

Freq.	Ant.Pol.	Rea	ding	Ant./CF		ct.	Limit		
		Peak	AV		Peak	AV	Peak	AV	Note
(MHz)	ΗN	(dBuV)	(dBuV)	CF(dB)	(dBuV/m)	(dBuV/m)	(dBuV/m)	(dBuV/m)	
2463.00	Н	71.31	67.69	32.20	103.51	99.89			X/F
2483.50	Н	21.85	11.88	32.17	54.02	44.05	74.00	54.00	X/E
2487.25	Н	21.48	12.70	32.18	53.66	44.88	74.00	54.00	X/E
4923.91	Н	43.10	39.04	6.59	49.69	45.63	74.00	54.00	X/H
7386.03	Н	36.36	33.58	12.40	48.76	45.98	74.00	54.00	X/H
9948.06	Н	39.24	35.89	13.02	52.26	48.91	74.00	54.00	X/H

- (1) All readings are Peak unless otherwise stated QP in column of ${}^{\mathbb{F}}$ Note ${}_{\mathbb{J}}$. Peak denotes that the Peak reading compliance with the QP Limits and then QP Mode measurement didn't perform ${}_{\circ}$
- (2) Measuring frequency range from 30MHz to 1000MHz or the 10th harmonic of highest fundamental frequency "F" denotes fundamental frequency; "H" denotes spurious frequency. "E" denotes band edge frequency. (This judgment method includes the Band Edge Requirement.)
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- (7) During the measurements above 1 GHz it is taken care of that the EUT is always within the 3 dB cone of radiation BW of the used antenna

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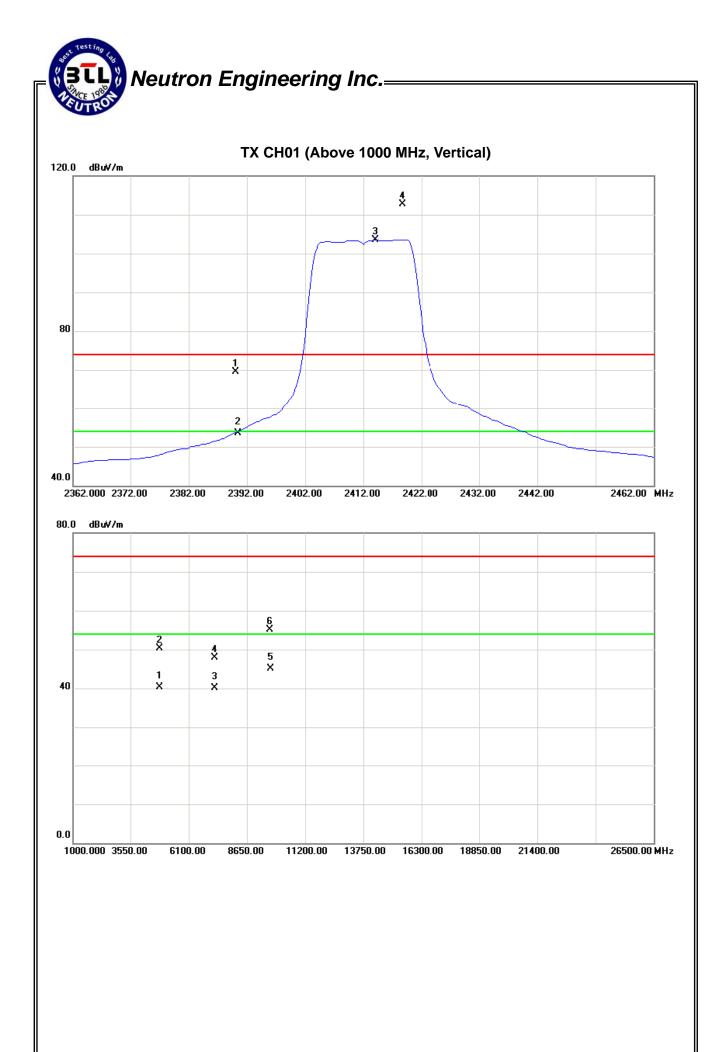


EUT:	Wireless N 300 Cloud Router	Model Name:	DIR-605L
Temperature:	25 ℃	Relative Humidity:	51 %
Pressure:	1010 hPa	Test Voltage:	AC 120V/60Hz
Test Mode:	TX G MODE 2412MHz		

Freq.	Ant.Pol.	Reading		Ant./CF	Act.		Limit		
		Peak	AV		Peak	AV	Peak	AV	Note
(MHz)	H/V	(dBuV)	(dBuV)	CF(dB)	(dBuV/m)	(dBuV/m)	(dBuV/m)	(dBuV/m)	
2390.00	V	37.27	21.15	32.28	69.55	53.43	74.00	54.00	X/E
2414.00	V	80.42	71.27	32.25	112.67	103.52			X/F
4824.03	V	44.04	34.10	6.19	50.23	40.29	74.00	54.00	X/H
7236.24	V	35.50	27.83	12.31	47.81	40.14	74.00	54.00	X/H
9648.55	V	42.36	32.40	12.66	55.02	45.06	74.00	54.00	X/H

- (1) All readings are Peak unless otherwise stated QP in column of ${}^{\mathbb{F}}$ Note ${}_{\mathbb{J}}$. Peak denotes that the Peak reading compliance with the QP Limits and then QP Mode measurement didn't perform ${}_{\circ}$
- (2) Measuring frequency range from 30MHz to 1000MHz or the 10th harmonic of highest fundamental frequency "F" denotes fundamental frequency; "H" denotes spurious frequency. "E" denotes band edge frequency. (This judgment method includes the Band Edge Requirement.)
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- (6) EUT Orthogonal Axis:
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- (7) During the measurements above 1 GHz it is taken care of that the EUT is always within the 3 dB cone of radiation BW of the used antenna

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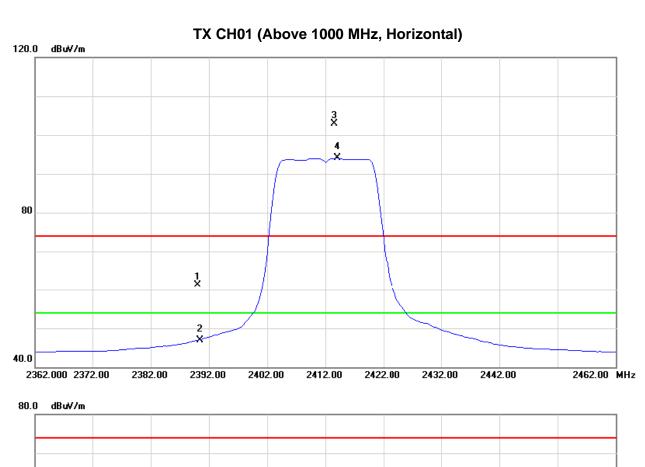
EUT:	Wireless N 300 Cloud Router	Model Name:	DIR-605L
Temperature:	25 ℃	Relative Humidity:	51 %
Pressure:	1010 hPa	Test Voltage:	AC 120V/60Hz
Test Mode:	TX G MODE 2412MHz		

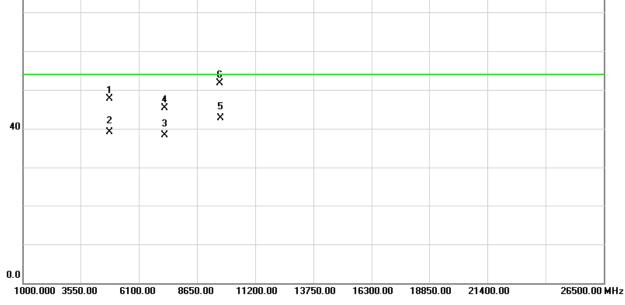
Freq.	Ant.Pol.	Reading		Ant./CF	Act.		Limit		
		Peak	AV		Peak	AV	Peak	AV	Note
(MHz)	H/V	(dBuV)	(dBuV)	CF(dB)	(dBuV/m)	(dBuV/m)	(dBuV/m)	(dBuV/m)	
2390.00	Н	29.04	14.62	32.28	61.32	46.90	74.00	54.00	X/E
2413.50	Н	70.73	61.81	32.25	102.98	94.06			X/F
4823.90	Н	41.55	32.94	6.19	47.74	39.13	74.00	54.00	X/H
7235.42	Н	32.94	25.94	12.31	45.25	38.25	74.00	54.00	X/H
9648.09	Н	39.05	30.00	12.66	51.71	42.66	74.00	54.00	X/H

- (1) All readings are Peak unless otherwise stated QP in column of ${}^{\mathbb{F}}$ Note ${}_{\mathbb{J}}$. Peak denotes that the Peak reading compliance with the QP Limits and then QP Mode measurement didn't perform ${}_{\circ}$
- (2) Measuring frequency range from 30MHz to 1000MHz or the 10th harmonic of highest fundamental frequency "F" denotes fundamental frequency; "H" denotes spurious frequency. "E" denotes band edge frequency. (This judgment method includes the Band Edge Requirement.)
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- (7) During the measurements above 1 GHz it is taken care of that the EUT is always within the 3 dB cone of radiation BW of the used antenna

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Neutron Engineering Inc.





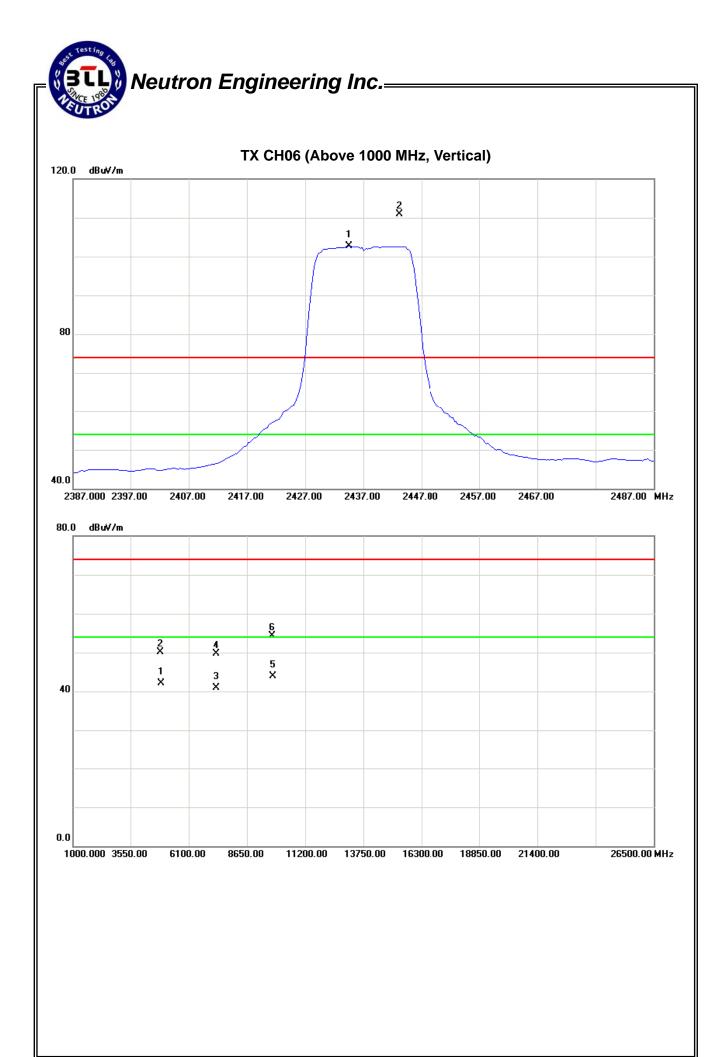
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EUT:	Wireless N 300 Cloud Router	Model Name:	DIR-605L
Temperature:	25 ℃	Relative Humidity:	51 %
Pressure:	1010 hPa	Test Voltage:	AC 120V/60Hz
Test Mode:	TX G MODE 2437MHz		

Freq. Ant.Po	Ant.Pol.	Ant Bol Read		Ant./CF	Act.		Lir		
Freq.	AIII.PUI.	Peak	AV		Peak	AV	Peak	AV	Note
(MHz)	H/V	(dBuV)	(dBuV)	CF(dB)	(dBuV/m)	(dBuV/m)	(dBuV/m)	(dBuV/m)	
2443.25	٧	78.60	70.42	32.23	110.83	102.65			X/F
4874.14	V	43.64	35.70	6.39	50.03	42.09	74.00	54.00	X/H
7310.96	V	37.44	28.47	12.35	49.79	40.82	74.00	54.00	X/H
9748.11	V	41.40	31.06	12.84	54.24	43.90	74.00	54.00	X/H

- (1) All readings are Peak unless otherwise stated QP in column of ${}^{\mathbb{F}}$ Note ${}_{\mathbb{J}}$. Peak denotes that the Peak reading compliance with the QP Limits and then QP Mode measurement didn't perform ${}_{\circ}$
- (2) Measuring frequency range from 30MHz to 1000MHz or the 10th harmonic of highest fundamental frequency. "F" denotes fundamental frequency; "H" denotes spurious frequency. "E" denotes band edge frequency. (This judgment method includes the Band Edge Requirement.)
- (3) Radiated emissions measured in frequency range above 1000MHz were made with an instrument using Peak detector mode and AV detector mode of the emission
- (4) Data of measurement within this frequency range shown " * " in the table above means the reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.
- (5) A preamp and high pass filter were used for this test in order to provide sufficient measurement sensitivity.
- (6) EUT Orthogonal Axis:
 - "X" denotes Laid on Table; "Y" denotes Vertical Stand; "Z" denotes Side Stand
- (7) During the measurements above 1 GHz it is taken care of that the EUT is always within the 3 dB cone of radiation BW of the used antenna

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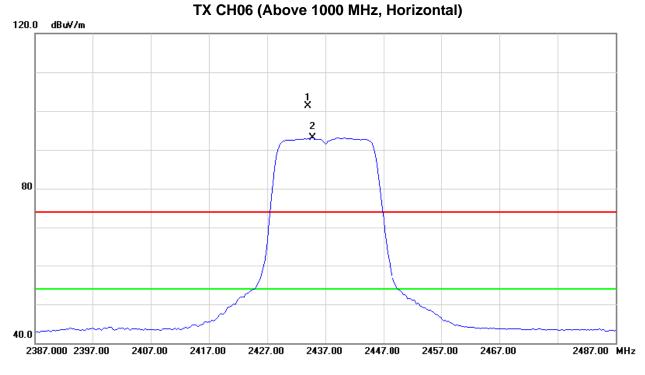
EUT:	Wireless N 300 Cloud Router	Model Name:	DIR-605L
Temperature:	25 ℃	Relative Humidity:	51 %
Pressure:	1010 hPa	Test Voltage:	AC 120V/60Hz
Test Mode:	TX G MODE 2437MHz		

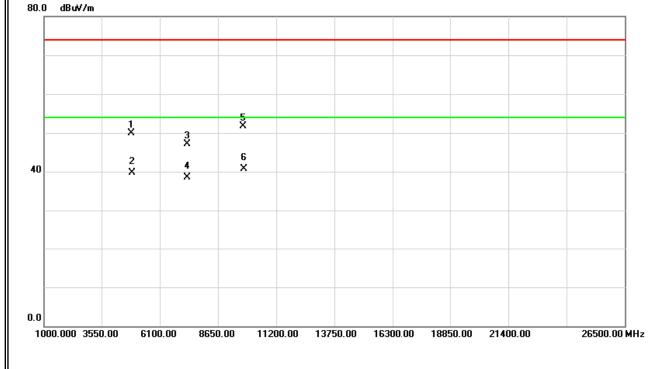
Freq. Ant.Po	Ant.Pol.	nt Pol Reading		Ant./CF	A	Act.		Limit	
i req.	AIII.FUI.	Peak	AV		Peak	AV	Peak	AV	Note
(MHz)	H/V	(dBuV)	(dBuV)	CF(dB)	(dBuV/m)	(dBuV/m)	(dBuV/m)	(dBuV/m)	
2434.00	Н	69.08	60.88	32.23	101.31	93.11			X/F
4873.87	Н	43.57	33.25	6.39	49.96	39.64	74.00	54.00	X/H
7311.17	Н	34.78	26.11	12.35	47.13	38.46	74.00	54.00	X/H
9748.03	Η	38.78	27.88	12.84	51.62	40.72	74.00	54.00	X/H

- (1) All readings are Peak unless otherwise stated QP in column of ${}^{\mathbb{F}}$ Note ${}_{\mathbb{J}}$. Peak denotes that the Peak reading compliance with the QP Limits and then QP Mode measurement didn't perform ${}_{\circ}$
- (2) Measuring frequency range from 30MHz to 1000MHz or the 10th harmonic of highest fundamental frequency "F" denotes fundamental frequency; "H" denotes spurious frequency. "E" denotes band edge frequency. (This judgment method includes the Band Edge Requirement.)
- (3) Radiated emissions measured in frequency range above 1000MHz were made with an instrument using Peak detector mode and AV detector mode of the emission •
- (4) Data of measurement within this frequency range shown " * " in the table above means the reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.
- (5) A preamp and high pass filter were used for this test in order to provide sufficient measurement sensitivity.
- (6) EUT Orthogonal Axis:
 - "X" denotes Laid on Table; "Y" denotes Vertical Stand; "Z" denotes Side Stand
- (7) During the measurements above 1 GHz it is taken care of that the EUT is always within the 3 dB cone of radiation BW of the used antenna

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Neutron Engineering Inc.— TX CH06 (Above 1000 MI





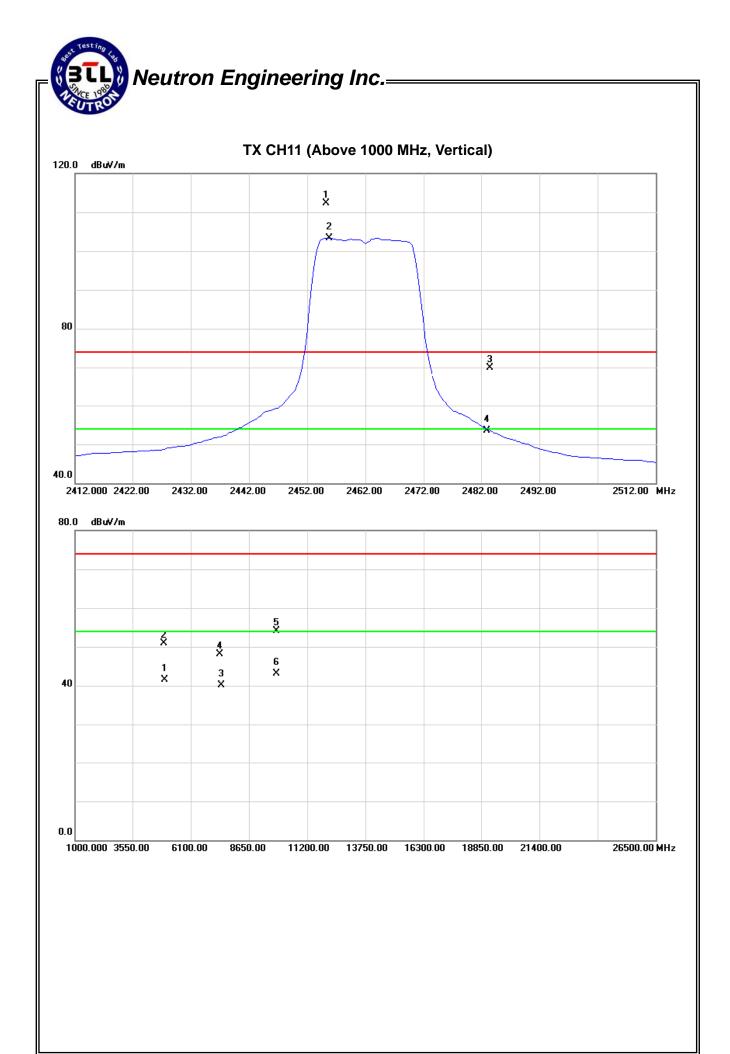
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EUT:	Wireless N 300 Cloud Router	Model Name:	DIR-605L
Temperature:	25 ℃	Relative Humidity:	51 %
Pressure:	1010 hPa	Test Voltage:	AC 120V/60Hz
Test Mode:	TX G MODE 2462MHz		

Freq.	Ant.Pol.	Reading A		Ant./CF	A	Act.		Limit	
		Peak	AV		Peak	AV	Peak	AV	Note
(MHz)	ΗN	(dBuV)	(dBuV)	CF(dB)	(dBuV/m)	(dBuV/m)	(dBuV/m)	(dBuV/m)	
2455.25	V	80.09	71.03	32.21	112.30	103.24			X/F
2483.50	V	37.83	21.37	32.17	70.00	53.54	74.00	54.00	X/E
4924.21	V	44.35	34.93	6.59	50.94	41.52	74.00	54.00	X/H
7385.24	V	35.76	27.62	12.40	48.16	40.02	74.00	54.00	X/H
9848.04	V	41.15	30.09	13.02	54.17	43.11	74.00	54.00	X/H

- (1) All readings are Peak unless otherwise stated QP in column of ${}^{\mathbb{F}}$ Note ${}_{\mathbb{J}}$. Peak denotes that the Peak reading compliance with the QP Limits and then QP Mode measurement didn't perform ${}_{\circ}$
- (2) Measuring frequency range from 30MHz to 1000MHz or the 10th harmonic of highest fundamental frequency "F" denotes fundamental frequency; "H" denotes spurious frequency. "E" denotes band edge frequency. (This judgment method includes the Band Edge Requirement.)
- (3) Radiated emissions measured in frequency range above 1000MHz were made with an instrument using Peak detector mode and AV detector mode of the emission
- (4) Data of measurement within this frequency range shown " * " in the table above means the reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.
- (5) A preamp and high pass filter were used for this test in order to provide sufficient measurement sensitivity.
- (6) EUT Orthogonal Axis:
 - "X" denotes Laid on Table; "Y" denotes Vertical Stand; "Z" denotes Side Stand
- (7) During the measurements above 1 GHz it is taken care of that the EUT is always within the 3 dB cone of radiation BW of the used antenna

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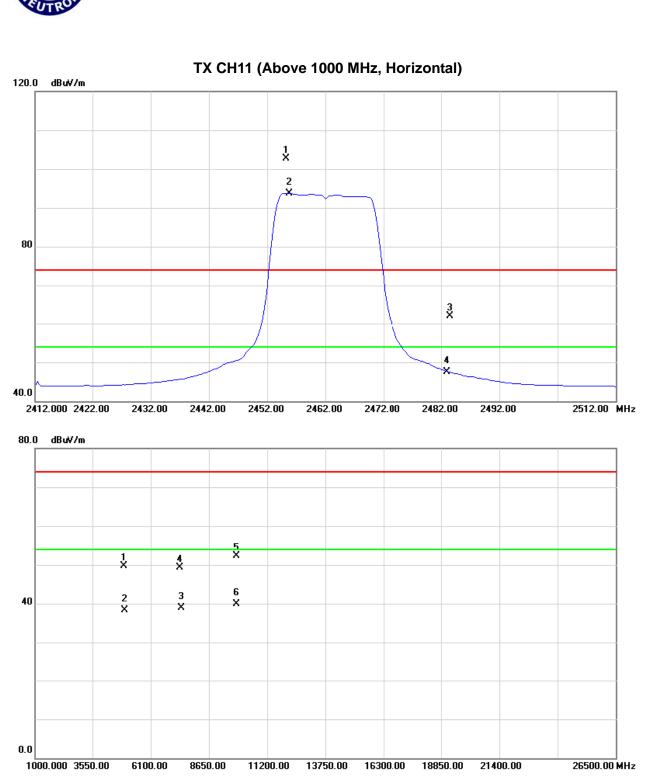
EUT:	Wireless N 300 Cloud Router	Model Name:	DIR-605L
Temperature:	25 ℃	Relative Humidity:	51 %
Pressure:	1010 hPa	Test Voltage:	AC 120V/60Hz
Test Mode:	TX G MODE 2462MHz		

Freq.	Ant.Pol.	Rea	Reading Ant./C		A	Act.		Limit	
		Peak	AV		Peak	AV	Peak	AV	Note
(MHz)	ΗN	(dBuV)	(dBuV)	CF(dB)	(dBuV/m)	(dBuV/m)	(dBuV/m)	(dBuV/m)	
2455.25	Н	70.52	61.51	32.21	102.73	93.72			X/F
2483.50	Н	30.02	15.29	32.17	62.19	47.46	74.00	54.00	X/E
4923.92	Н	43.10	31.65	6.59	49.69	38.24	74.00	54.00	X/H
7386.13	Н	36.81	26.58	12.40	49.21	38.98	74.00	54.00	X/H
9848.04	Н	39.24	26.92	13.02	52.26	39.94	74.00	54.00	X/H

- (1) All readings are Peak unless otherwise stated QP in column of 『Note』. Peak denotes that the Peak reading compliance with the QP Limits and then QP Mode measurement didn't perform ∘
- (2) Measuring frequency range from 30MHz to 1000MHz or the 10th harmonic of highest fundamental frequency "F" denotes fundamental frequency; "H" denotes spurious frequency. "E" denotes band edge frequency. (This judgment method includes the Band Edge Requirement.)
- (3) Radiated emissions measured in frequency range above 1000MHz were made with an instrument using Peak detector mode and AV detector mode of the emission •
- (4) Data of measurement within this frequency range shown " * " in the table above means the reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.
- (5) A preamp and high pass filter were used for this test in order to provide sufficient measurement sensitivity.
- (6) EUT Orthogonal Axis:
 - "X" denotes Laid on Table; "Y" denotes Vertical Stand; "Z" denotes Side Stand
- (7) During the measurements above 1 GHz it is taken care of that the EUT is always within the 3 dB cone of radiation BW of the used antenna

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Neutron Engineering Inc.

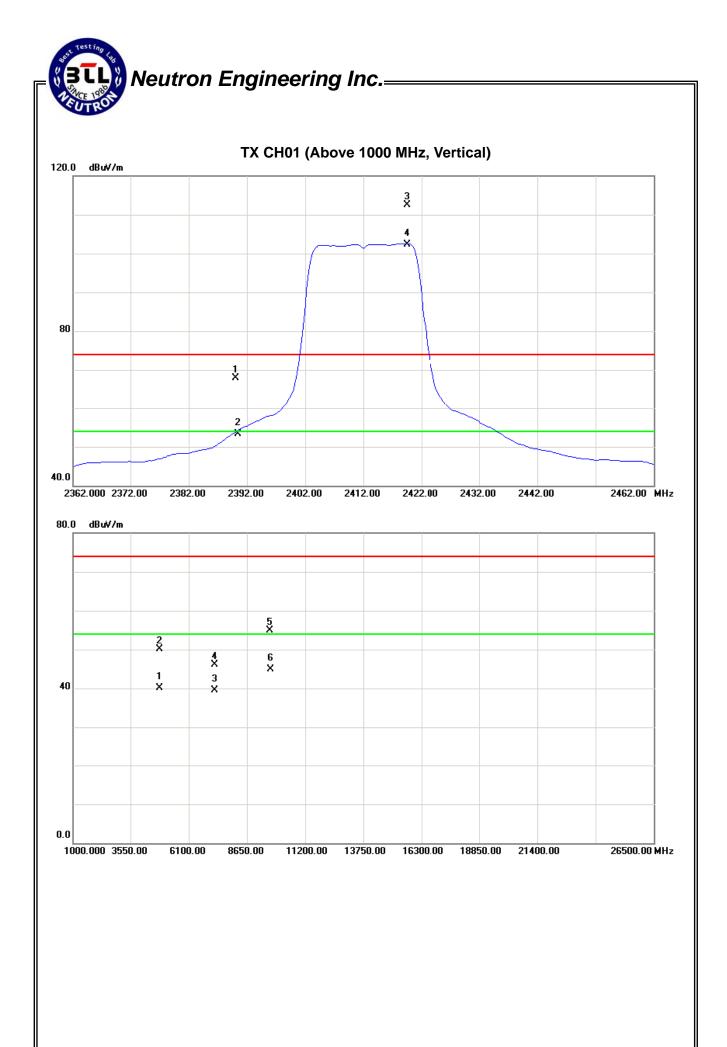


EUT:	Wireless N 300 Cloud Router	Model Name:	DIR-605L
Temperature:	25 ℃	Relative Humidity:	51 %
Pressure:	1010 hPa	Test Voltage:	AC 120V/60Hz
Test Mode:	TX N-20M MODE 2412MHz		

Freq.	Ant.Pol.	Rea	ding	Ant./CF	A	ct.	Limit		
		Peak	AV		Peak	AV	Peak	AV	Note
(MHz)	ΗN	(dBuV)	(dBuV)	CF(dB)	(dBuV/m)	(dBuV/m)	(dBuV/m)	(dBuV/m)	
2390.00	V	35.66	21.07	32.28	67.94	53.35	74.00	54.00	X/E
2419.50	V	80.19	70.10	32.25	112.44	102.35			X/F
4824.13	V	43.95	33.82	6.19	50.14	40.01	74.00	54.00	X/H
7235.21	V	33.80	27.29	12.31	46.11	39.60	74.00	54.00	X/H
9648.14	V	42.27	32.30	12.66	54.93	44.96	74.00	54.00	X/H

- (1) All readings are Peak unless otherwise stated QP in column of ${}^{\mathbb{F}}$ Note ${}_{\mathbb{J}}$. Peak denotes that the Peak reading compliance with the QP Limits and then QP Mode measurement didn't perform ${}_{\circ}$
- (2) Measuring frequency range from 30MHz to 1000MHz or the 10th harmonic of highest fundamental frequency. "F" denotes fundamental frequency; "H" denotes spurious frequency. "E" denotes band edge frequency. (This judgment method includes the Band Edge Requirement.)
- (3) Radiated emissions measured in frequency range above 1000MHz were made with an instrument using Peak detector mode and AV detector mode of the emission •
- (4) Data of measurement within this frequency range shown " * " in the table above means the reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.
- (5) A preamp and high pass filter were used for this test in order to provide sufficient measurement sensitivity.
- (6) EUT Orthogonal Axis:
 - "X" denotes Laid on Table; "Y" denotes Vertical Stand; "Z" denotes Side Stand
- (7) During the measurements above 1 GHz it is taken care of that the EUT is always within the 3 dB cone of radiation BW of the used antenna

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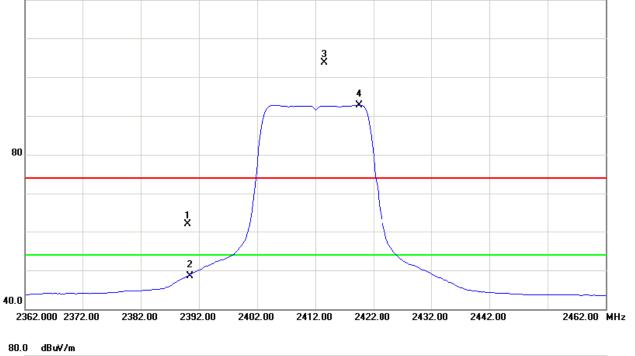
EUT:	Wireless N 300 Cloud Router	Model Name:	DIR-605L
Temperature:	25 ℃	Relative Humidity:	51 %
Pressure:	1010 hPa	Test Voltage:	AC 120V/60Hz
Test Mode:	TX N-20M MODE 2412MHz		

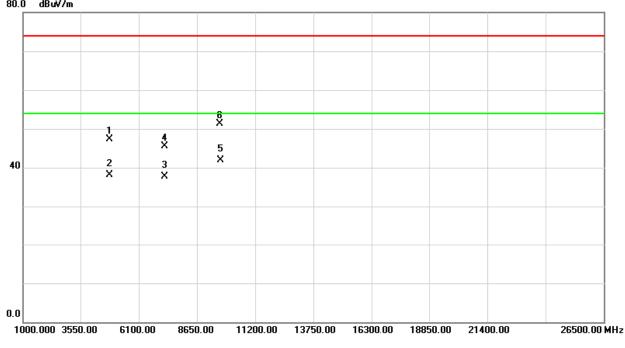
Freq.	Ant.Pol.	Rea	ding	Ant./CF	Act.		Limit		
		Peak	AV		Peak	AV	Peak	AV	Note
(MHz)	H/V	(dBuV)	(dBuV)	CF(dB)	(dBuV/m)	(dBuV/m)	(dBuV/m)	(dBuV/m)	
2390.00	Η	29.80	16.28	32.28	62.08	48.56	74.00	54.00	X/E
2413.50	Η	71.44	60.50	32.25	103.69	92.75			X/F
4823.89	Τ	41.05	31.92	6.19	47.24	38.11	74.00	54.00	X/H
7235.32	Н	33.14	25.34	12.31	45.45	37.65	74.00	54.00	X/H
9648.09	Н	38.66	29.30	12.66	51.32	41.96	74.00	54.00	X/H

- (1) All readings are Peak unless otherwise stated QP in column of ${}^{\mathbb{F}}$ Note ${}_{\mathbb{J}}$. Peak denotes that the Peak reading compliance with the QP Limits and then QP Mode measurement didn't perform ${}_{\circ}$
- (2) Measuring frequency range from 30MHz to 1000MHz or the 10th harmonic of highest fundamental frequency "F" denotes fundamental frequency; "H" denotes spurious frequency. "E" denotes band edge frequency. (This judgment method includes the Band Edge Requirement.)
- (3) Radiated emissions measured in frequency range above 1000MHz were made with an instrument using Peak detector mode and AV detector mode of the emission
- (4) Data of measurement within this frequency range shown " * " in the table above means the reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.
- (5) A preamp and high pass filter were used for this test in order to provide sufficient measurement sensitivity.
- (6) EUT Orthogonal Axis:
 - "X" denotes Laid on Table; "Y" denotes Vertical Stand; "Z" denotes Side Stand
- (7) During the measurements above 1 GHz it is taken care of that the EUT is always within the 3 dB cone of radiation BW of the used antenna

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TX CH01 (Above 1000 MHz, Horizontal) 3 4





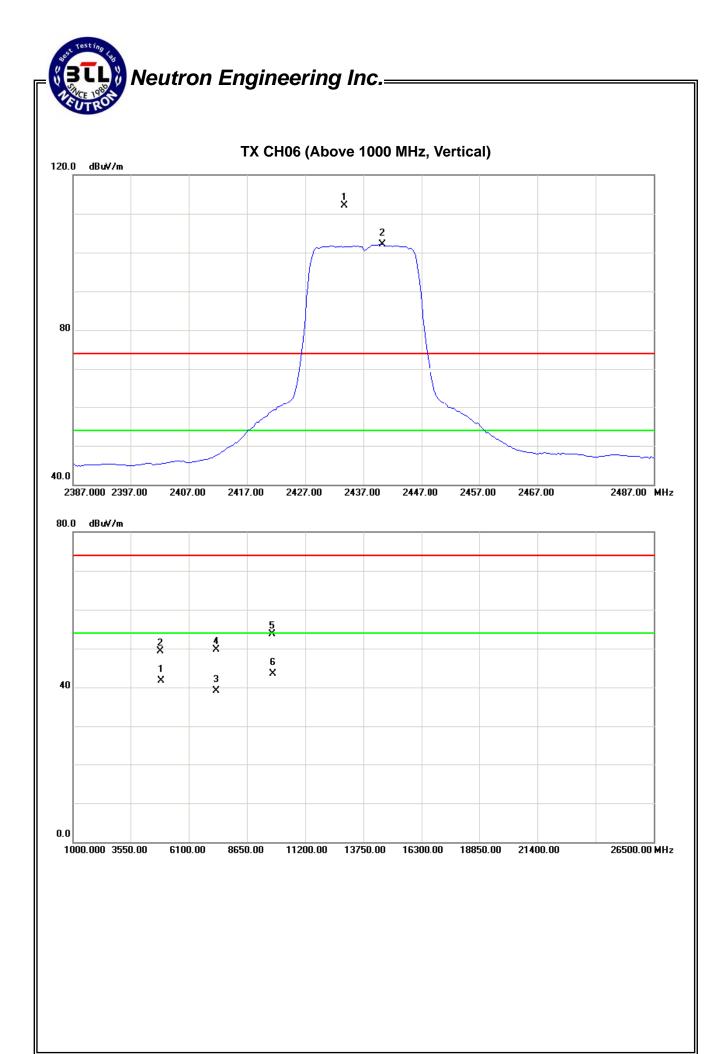
Report No.: NEI-FCCP-1-1303C144 Page 69 of 158

EUT:	Wireless N 300 Cloud Router	Model Name:	DIR-605L
Temperature:	25 ℃	Relative Humidity:	51 %
Pressure:	1010 hPa	Test Voltage:	AC 120V/60Hz
Test Mode:	TX N-20M MODE 2437MHz		

Eroa Ant	Ant.Pol.	Rea	ading Ant./CF		Act.		Limit		
Freq.	AIII.FUI.	Peak	AV		Peak	AV	Peak	AV	Note
(MHz)	H/V	(dBuV)	(dBuV)	CF(dB)	(dBuV/m)	(dBuV/m)	(dBuV/m)	(dBuV/m)	
2433.75	٧	79.94	69.95	32.23	112.17	102.18			X/F
4874.10	V	42.91	35.26	6.39	49.30	41.65	74.00	54.00	X/H
7310.91	V	37.34	26.85	12.35	49.69	39.20	74.00	54.00	X/H
9748.10	V	40.81	30.76	12.84	53.65	43.60	74.00	54.00	X/H

- (1) All readings are Peak unless otherwise stated QP in column of ${}^{\mathbb{F}}$ Note ${}_{\mathbb{J}}$. Peak denotes that the Peak reading compliance with the QP Limits and then QP Mode measurement didn't perform ${}_{\circ}$
- (2) Measuring frequency range from 30MHz to 1000MHz or the 10th harmonic of highest fundamental frequency "F" denotes fundamental frequency; "H" denotes spurious frequency. "E" denotes band edge frequency. (This judgment method includes the Band Edge Requirement.)
- (3) Radiated emissions measured in frequency range above 1000MHz were made with an instrument using Peak detector mode and AV detector mode of the emission
- (4) Data of measurement within this frequency range shown " * " in the table above means the reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.
- (5) A preamp and high pass filter were used for this test in order to provide sufficient measurement sensitivity.
- (6) EUT Orthogonal Axis:
 - "X" denotes Laid on Table; "Y" denotes Vertical Stand; "Z" denotes Side Stand
- (7) During the measurements above 1 GHz it is taken care of that the EUT is always within the 3 dB cone of radiation BW of the used antenna

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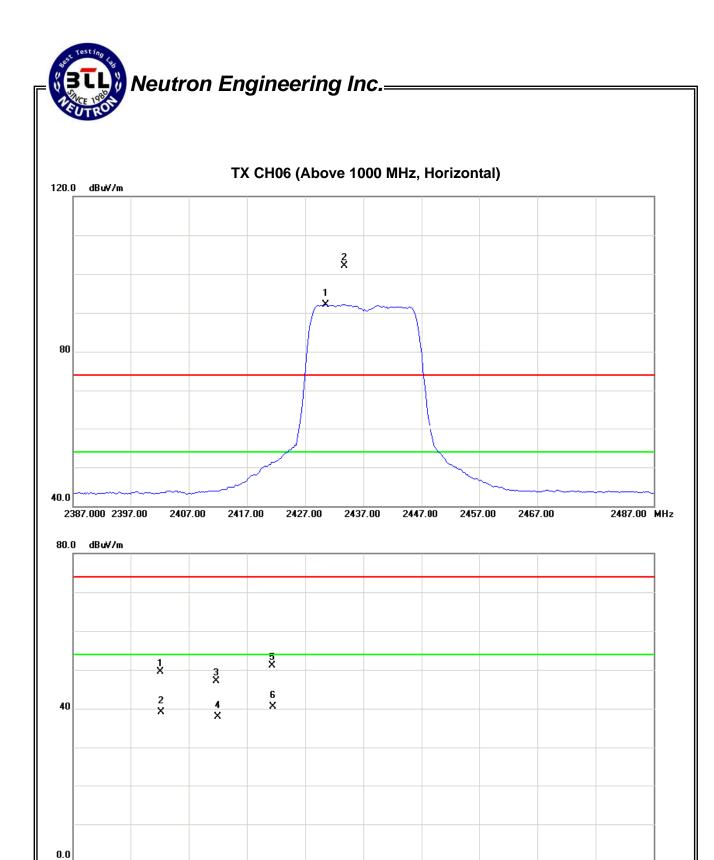


EUT:	Wireless N 300 Cloud Router	Model Name:	DIR-605L
Temperature:	25 ℃	Relative Humidity:	51 %
Pressure:	1010 hPa	Test Voltage:	AC 120V/60Hz
Test Mode:	TX N-20M MODE 2437MHz		

Freq. An	Ant.Pol.	Rea	Reading		Act.		Limit		
i req.	AIII.FUI.	Peak	AV		Peak	AV	Peak	AV	Note
(MHz)	H/V	(dBuV)	(dBuV)	CF(dB)	(dBuV/m)	(dBuV/m)	(dBuV/m)	(dBuV/m)	
2433.75	Н	69.78	59.92	32.24	102.02	92.16			X/F
4873.87	Н	43.13	32.75	6.39	49.52	39.14	74.00	54.00	X/H
7311.18	Н	34.68	25.58	12.35	47.03	37.93	74.00	54.00	X/H
9748.05	Η	38.26	27.67	12.84	51.10	40.51	74.00	54.00	X/H

- (1) All readings are Peak unless otherwise stated QP in column of ${}^{\mathbb{F}}$ Note ${}_{\mathbb{J}}$. Peak denotes that the Peak reading compliance with the QP Limits and then QP Mode measurement didn't perform ${}_{\circ}$
- (2) Measuring frequency range from 30MHz to 1000MHz or the 10th harmonic of highest fundamental frequency "F" denotes fundamental frequency; "H" denotes spurious frequency. "E" denotes band edge frequency. (This judgment method includes the Band Edge Requirement.)
- (3) Radiated emissions measured in frequency range above 1000MHz were made with an instrument using Peak detector mode and AV detector mode of the emission •
- (4) Data of measurement within this frequency range shown " * " in the table above means the reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.
- (5) A preamp and high pass filter were used for this test in order to provide sufficient measurement sensitivity.
- (6) EUT Orthogonal Axis:
 - "X" denotes Laid on Table; "Y" denotes Vertical Stand; "Z" denotes Side Stand
- (7) During the measurements above 1 GHz it is taken care of that the EUT is always within the 3 dB cone of radiation BW of the used antenna

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11200.00 13750.00 16300.00 18850.00

26500.00 MHz

21400.00

1000.000 3550.00

6100.00

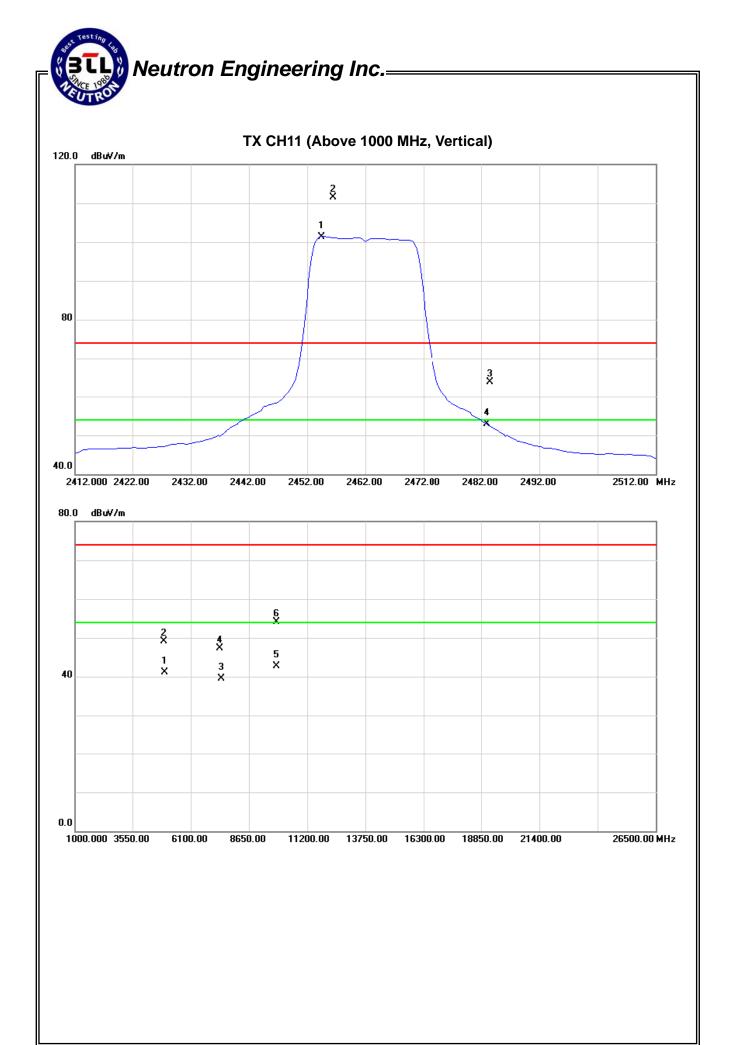
8650.00

EUT:	Wireless N 300 Cloud Router	Model Name:	DIR-605L
Temperature:	25 ℃	Relative Humidity:	51 %
Pressure:	1010 hPa	Test Voltage:	AC 120V/60Hz
Test Mode:	TX N-20M MODE 2462MHz		

Freq.	Ant.Pol.	Rea	ding	Ant./CF	Act.		Liı		
		Peak	AV		Peak	AV	Peak	AV	Note
(MHz)	ΗN	(dBuV)	(dBuV)	CF(dB)	(dBuV/m)	(dBuV/m)	(dBuV/m)	(dBuV/m)	
2456.50	٧	79.32	69.03	32.21	111.53	101.24			X/F
2483.50	V	31.79	20.67	32.17	63.96	52.84	74.00	54.00	X/E
4924.47	V	42.61	34.53	6.59	49.20	41.12	74.00	54.00	X/H
7386.14	V	34.96	27.12	12.40	47.36	39.52	74.00	54.00	X/H
9848.53	V	41.04	29.59	13.03	54.07	42.62	74.00	54.00	X/H

- (1) All readings are Peak unless otherwise stated QP in column of ${}^{\mathbb{F}}$ Note ${}_{\mathbb{J}}$. Peak denotes that the Peak reading compliance with the QP Limits and then QP Mode measurement didn't perform ${}_{\circ}$
- (2) Measuring frequency range from 30MHz to 1000MHz or the 10th harmonic of highest fundamental frequency "F" denotes fundamental frequency; "H" denotes spurious frequency. "E" denotes band edge frequency. (This judgment method includes the Band Edge Requirement.)
- (3) Radiated emissions measured in frequency range above 1000MHz were made with an instrument using Peak detector mode and AV detector mode of the emission
- (4) Data of measurement within this frequency range shown " * " in the table above means the reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.
- (5) A preamp and high pass filter were used for this test in order to provide sufficient measurement sensitivity.
- (6) EUT Orthogonal Axis:
 - "X" denotes Laid on Table; "Y" denotes Vertical Stand; "Z" denotes Side Stand
- (7) During the measurements above 1 GHz it is taken care of that the EUT is always within the 3 dB cone of radiation BW of the used antenna

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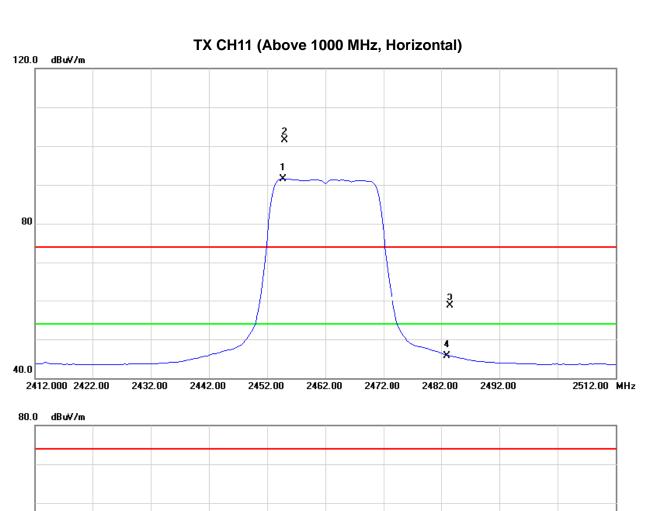
EUT:	Wireless N 300 Cloud Router	Model Name:	DIR-605L
Temperature:	25 ℃	Relative Humidity:	51 %
Pressure:	1010 hPa	Test Voltage:	AC 120V/60Hz
Test Mode:	TX N-20M MODE 2462MHz		

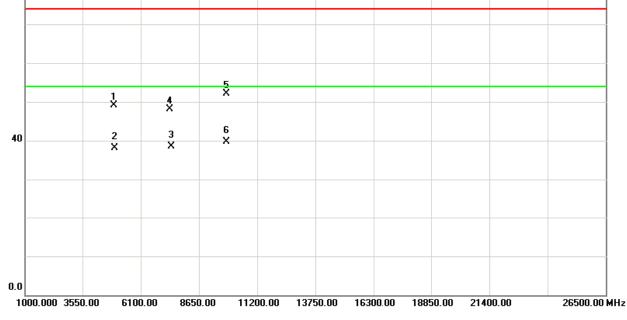
Freq.	Ant.Pol.	Rea	Reading Ant./0		A	Act.		Limit	
		Peak	AV		Peak	AV	Peak	AV	Note
(MHz)	ΗN	(dBuV)	(dBuV)	CF(dB)	(dBuV/m)	(dBuV/m)	(dBuV/m)	(dBuV/m)	
2455.00	Н	69.24	59.35	32.21	101.45	91.56			X/F
2483.50	Н	26.50	13.61	32.17	58.67	45.78	74.00	54.00	X/E
4923.92	Н	42.51	31.55	6.59	49.10	38.14	74.00	54.00	X/H
7386.14	Н	35.62	26.03	12.40	48.02	38.43	74.00	54.00	X/H
9848.02	Н	39.14	26.72	13.02	52.16	39.74	74.00	54.00	X/H

- (1) All readings are Peak unless otherwise stated QP in column of ${}^{\mathbb{F}}$ Note ${}_{\mathbb{J}}$. Peak denotes that the Peak reading compliance with the QP Limits and then QP Mode measurement didn't perform ${}_{\circ}$
- (2) Measuring frequency range from 30MHz to 1000MHz or the 10th harmonic of highest fundamental frequency "F" denotes fundamental frequency; "H" denotes spurious frequency. "E" denotes band edge frequency. (This judgment method includes the Band Edge Requirement.)
- (3) Radiated emissions measured in frequency range above 1000MHz were made with an instrument using Peak detector mode and AV detector mode of the emission
- (4) Data of measurement within this frequency range shown " * " in the table above means the reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.
- (5) A preamp and high pass filter were used for this test in order to provide sufficient measurement sensitivity.
- (6) EUT Orthogonal Axis:
 - "X" denotes Laid on Table; "Y" denotes Vertical Stand; "Z" denotes Side Stand
- (7) During the measurements above 1 GHz it is taken care of that the EUT is always within the 3 dB cone of radiation BW of the used antenna

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Neutron Engineering Inc.— TX CH11 (Above 1000 MF





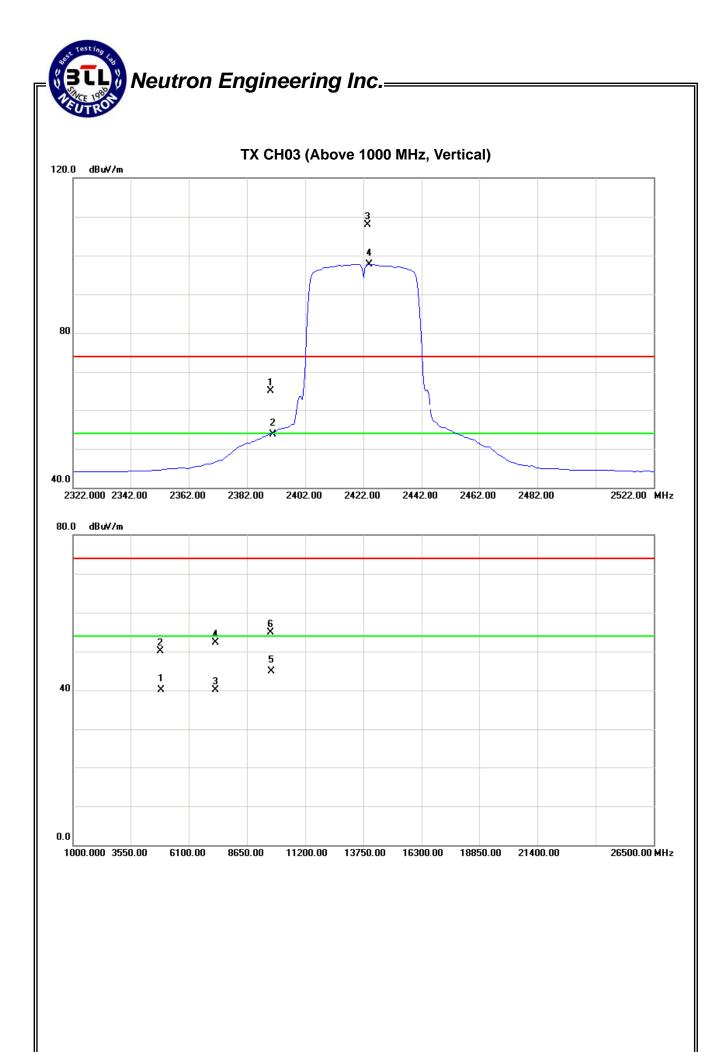
Report No.: NEI-FCCP-1-1303C144 Page 77 of 158

EUT:	Wireless N 300 Cloud Router	Model Name:	DIR-605L
Temperature:	25 ℃	Relative Humidity:	51 %
Pressure:	1010 hPa	Test Voltage:	AC 120V/60Hz
Test Mode:	TX N-40M MODE 2422MHz		

Freq.	Ant.Pol.	Rea	ding	Ant./CF	Act.		Li		
		Peak	AV		Peak	AV	Peak	AV	Note
(MHz)	ΗN	(dBuV)	(dBuV)	CF(dB)	(dBuV/m)	(dBuV/m)	(dBuV/m)	(dBuV/m)	
2390.00	V	32.87	21.37	32.28	65.15	53.65	74.00	54.00	X/E
2423.50	V	75.70	65.52	32.24	107.94	97.76			X/F
4843.13	V	43.88	33.75	6.26	50.14	40.01	74.00	54.00	X/H
7266.21	V	40.00	27.78	12.33	52.33	40.11	74.00	54.00	X/H
9688.24	V	42.19	32.22	12.74	54.93	44.96	74.00	54.00	X/H

- (1) All readings are Peak unless otherwise stated QP in column of ${}^{\mathbb{F}}$ Note ${}_{\mathbb{J}}$. Peak denotes that the Peak reading compliance with the QP Limits and then QP Mode measurement didn't perform ${}_{\circ}$
- (2) Measuring frequency range from 30MHz to 1000MHz or the 10th harmonic of highest fundamental frequency. "F" denotes fundamental frequency; "H" denotes spurious frequency. "E" denotes band edge frequency. (This judgment method includes the Band Edge Requirement.)
- (3) Radiated emissions measured in frequency range above 1000MHz were made with an instrument using Peak detector mode and AV detector mode of the emission •
- (4) Data of measurement within this frequency range shown " * " in the table above means the reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.
- (5) A preamp and high pass filter were used for this test in order to provide sufficient measurement sensitivity.
- (6) EUT Orthogonal Axis:
 - "X" denotes Laid on Table; "Y" denotes Vertical Stand; "Z" denotes Side Stand
- (7) During the measurements above 1 GHz it is taken care of that the EUT is always within the 3 dB cone of radiation BW of the used antenna

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EUT:	Wireless N 300 Cloud Router	Model Name:	DIR-605L
Temperature:	25 ℃	Relative Humidity:	51 %
Pressure:	1010 hPa	Test Voltage:	AC 120V/60Hz
Test Mode:	TX N-40M MODE 2422MHz		

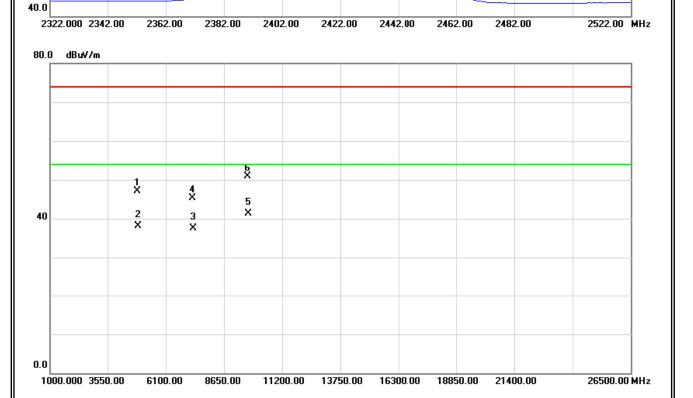
Freq.	Ant.Pol.	Rea	ding	Ant./CF	A	ct.	Limit		
		Peak	ΑV		Peak	AV	Peak	AV	Note
(MHz)	ΗN	(dBuV)	(dBuV)	CF(dB)	(dBuV/m)	(dBuV/m)	(dBuV/m)	(dBuV/m)	
2390.00	Н	30.14	17.31	32.28	62.42	49.59	74.00	54.00	X/E
2427.00	Н	67.21	56.14	32.24	99.45	88.38			X/F
4843.89	Н	40.84	31.74	6.27	47.11	38.01	74.00	54.00	X/H
7266.32	Н	32.88	25.12	12.33	45.21	37.45	74.00	54.00	X/H
9688.02	Н	38.18	28.63	12.74	50.92	41.37	74.00	54.00	X/H

- (1) All readings are Peak unless otherwise stated QP in column of ${}^{\mathbb{F}}$ Note ${}_{\mathbb{J}}$. Peak denotes that the Peak reading compliance with the QP Limits and then QP Mode measurement didn't perform ${}_{\circ}$
- (2) Measuring frequency range from 30MHz to 1000MHz or the 10th harmonic of highest fundamental frequency. "F" denotes fundamental frequency; "H" denotes spurious frequency. "E" denotes band edge frequency. (This judgment method includes the Band Edge Requirement.)
- (3) Radiated emissions measured in frequency range above 1000MHz were made with an instrument using Peak detector mode and AV detector mode of the emission
- (4) Data of measurement within this frequency range shown " * " in the table above means the reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.
- (5) A preamp and high pass filter were used for this test in order to provide sufficient measurement sensitivity.
- (6) EUT Orthogonal Axis:
 - "X" denotes Laid on Table; "Y" denotes Vertical Stand; "Z" denotes Side Stand
- (7) During the measurements above 1 GHz it is taken care of that the EUT is always within the 3 dB cone of radiation BW of the used antenna

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TX CH03 (Above 1000 MHz, Horizontal) 120.0 dBuV/m

1 X



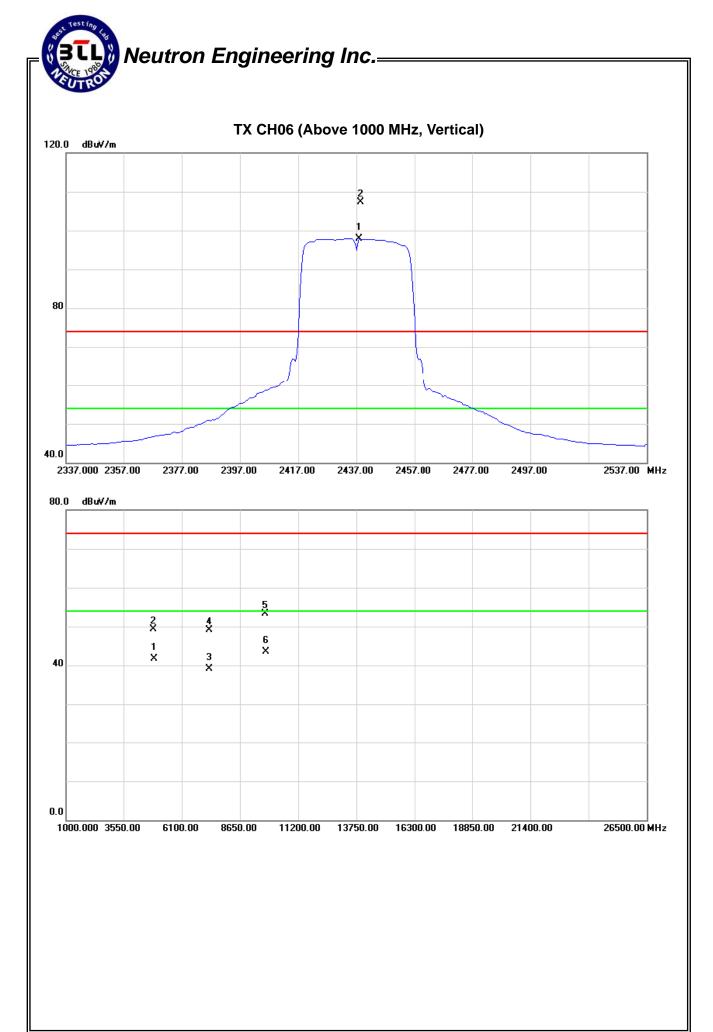
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EUT:	Wireless N 300 Cloud Router	Model Name:	DIR-605L
Temperature:	25 ℃	Relative Humidity:	51 %
Pressure:	1010 hPa	Test Voltage:	AC 120V/60Hz
Test Mode:	TX N-40M MODE 2437MHz		

Freq. Ant.Pol.	Ant Pol	Reading		Ant./CF	Act.		Lir	nit	
rreq.	AIII.FUI.	Peak	AV		Peak	AV	Peak	AV	Note
(MHz)	H/V	(dBuV)	(dBuV)	CF(dB)	(dBuV/m)	(dBuV/m)	(dBuV/m)	(dBuV/m)	
2438.50	٧	75.06	65.77	32.22	107.28	97.99			X/F
4874.01	V	42.85	35.22	6.39	49.24	41.61	74.00	54.00	X/H
7310.96	V	36.74	26.76	12.35	49.09	39.11	74.00	54.00	X/H
9748.02	V	40.47	30.70	12.84	53.31	43.54	74.00	54.00	X/H

- (1) All readings are Peak unless otherwise stated QP in column of ${}^{\mathbb{F}}$ Note ${}_{\mathbb{J}}$. Peak denotes that the Peak reading compliance with the QP Limits and then QP Mode measurement didn't perform ${}_{\circ}$
- (2) Measuring frequency range from 30MHz to 1000MHz or the 10th harmonic of highest fundamental frequency "F" denotes fundamental frequency; "H" denotes spurious frequency. "E" denotes band edge frequency. (This judgment method includes the Band Edge Requirement.)
- (3) Radiated emissions measured in frequency range above 1000MHz were made with an instrument using Peak detector mode and AV detector mode of the emission
- (4) Data of measurement within this frequency range shown " * " in the table above means the reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.
- (5) A preamp and high pass filter were used for this test in order to provide sufficient measurement sensitivity.
- (6) EUT Orthogonal Axis:
 - "X" denotes Laid on Table; "Y" denotes Vertical Stand; "Z" denotes Side Stand
- (7) During the measurements above 1 GHz it is taken care of that the EUT is always within the 3 dB cone of radiation BW of the used antenna

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EUT:	Wireless N 300 Cloud Router	Model Name:	DIR-605L
Temperature:	25 ℃	Relative Humidity:	51 %
Pressure:	1010 hPa	Test Voltage:	AC 120V/60Hz
Test Mode:	TX N-40M MODE 2437MHz		

Freq. Ant.Po	Ant Pol	Ant Pol Reading		Ant./CF	Ant./CF Act.		Lir	nit	
r req.	Ant.r oi.	Peak	AV		Peak	AV	Peak	AV	Note
(MHz)	H/V	(dBuV)	(dBuV)	CF(dB)	(dBuV/m)	(dBuV/m)	(dBuV/m)	(dBuV/m)	
2429.00	Н	66.09	56.37	32.23	98.32	88.60			X/F
4873.87	Н	42.74	32.63	6.39	49.13	39.02	74.00	54.00	X/H
7311.18	Н	33.98	25.17	12.35	46.33	37.52	74.00	54.00	X/H
9748.05	Н	37.57	27.17	12.84	50.41	40.01	74.00	54.00	X/H

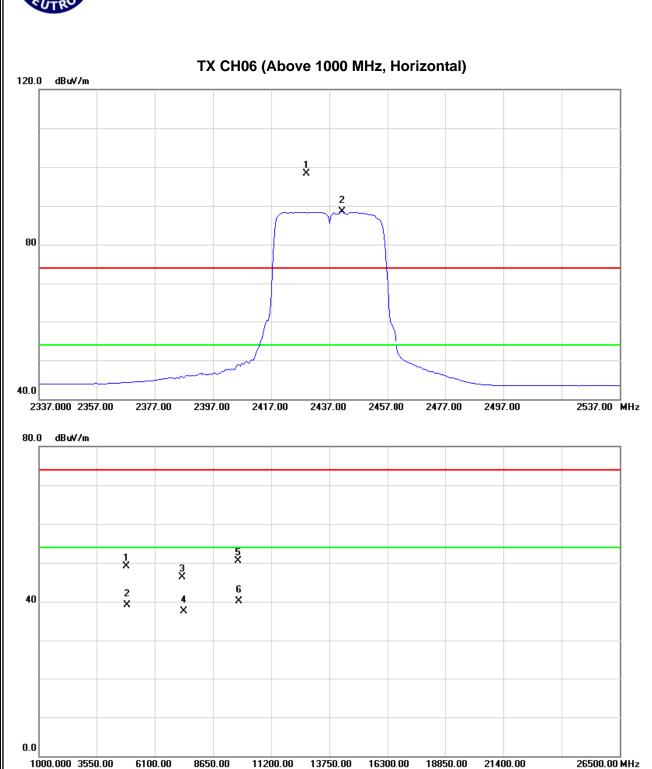
- (1) All readings are Peak unless otherwise stated QP in column of $^{\mathbb{F}}$ Note $_{\mathbb{J}}$. Peak denotes that the Peak reading compliance with the QP Limits and then QP Mode measurement didn't perform $_{\circ}$
- (2) Measuring frequency range from 30MHz to 1000MHz or the 10th harmonic of highest fundamental frequency "F" denotes fundamental frequency; "H" denotes spurious frequency. "E" denotes band edge frequency. (This judgment method includes the Band Edge Requirement.)
- (3) Radiated emissions measured in frequency range above 1000MHz were made with an instrument using Peak detector mode and AV detector mode of the emission •
- (4) Data of measurement within this frequency range shown " * " in the table above means the reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.
- (5) A preamp and high pass filter were used for this test in order to provide sufficient measurement sensitivity.
- (6) EUT Orthogonal Axis:
 - "X" denotes Laid on Table; "Y" denotes Vertical Stand; "Z" denotes Side Stand
- (7) During the measurements above 1 GHz it is taken care of that the EUT is always within the 3 dB cone of radiation BW of the used antenna

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Neutron Engineering Inc.

6100.00

8650.00



11200.00 13750.00 16300.00 18850.00

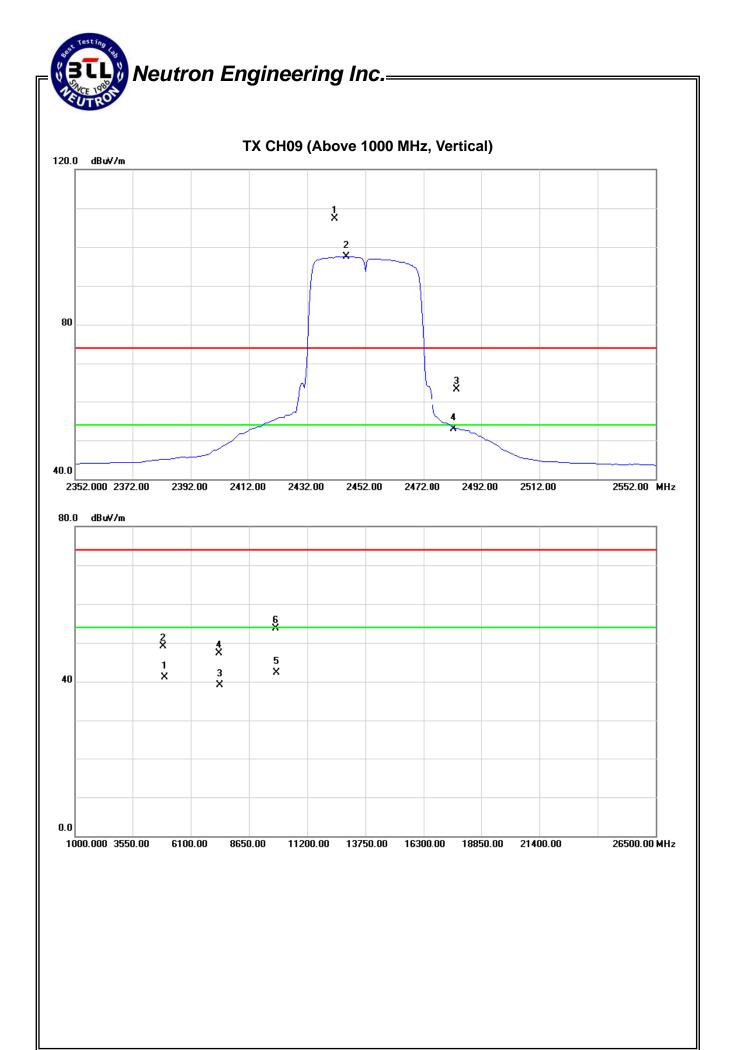
21400.00

EUT:	Wireless N 300 Cloud Router	Model Name:	DIR-605L
Temperature:	25 ℃	Relative Humidity:	51 %
Pressure:	1010 hPa	Test Voltage:	AC 120V/60Hz
Test Mode:	TX N-40M MODE 2452MHz		

Freq.	Ant.Pol.	Rea	ding	Ant./CF	A	ct.	Liı	mit	
		Peak	ΑV		Peak	AV	Peak	AV	Note
(MHz)	HΛ	(dBuV)	(dBuV)	CF(dB)	(dBuV/m)	(dBuV/m)	(dBuV/m)	(dBuV/m)	
2441.50	٧	75.14	65.33	32.23	107.37	97.56			X/F
2483.50	V	31.07	20.78	32.17	63.24	52.95	74.00	54.00	X/E
4904.07	V	42.61	34.51	6.51	49.12	41.02	74.00	54.00	X/H
7356.19	V	34.83	26.69	12.38	47.21	39.07	74.00	54.00	X/H
9808.51	V	40.85	29.40	12.95	53.80	42.35	74.00	54.00	X/H

- (1) All readings are Peak unless otherwise stated QP in column of ${}^{\mathbb{F}}$ Note ${}_{\mathbb{J}}$. Peak denotes that the Peak reading compliance with the QP Limits and then QP Mode measurement didn't perform ${}_{\circ}$
- (2) Measuring frequency range from 30MHz to 1000MHz or the 10th harmonic of highest fundamental frequency "F" denotes fundamental frequency; "H" denotes spurious frequency. "E" denotes band edge frequency. (This judgment method includes the Band Edge Requirement.)
- (3) Radiated emissions measured in frequency range above 1000MHz were made with an instrument using Peak detector mode and AV detector mode of the emission
- (4) Data of measurement within this frequency range shown " * " in the table above means the reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.
- (5) A preamp and high pass filter were used for this test in order to provide sufficient measurement sensitivity.
- (6) EUT Orthogonal Axis:
 - "X" denotes Laid on Table; "Y" denotes Vertical Stand; "Z" denotes Side Stand
- (7) During the measurements above 1 GHz it is taken care of that the EUT is always within the 3 dB cone of radiation BW of the used antenna

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EUT:	Wireless N 300 Cloud Router	Model Name:	DIR-605L
Temperature:	25 ℃	Relative Humidity:	51 %
Pressure:	1010 hPa	Test Voltage:	AC 120V/60Hz
Test Mode:	TX N-40M MODE 2452MHz		

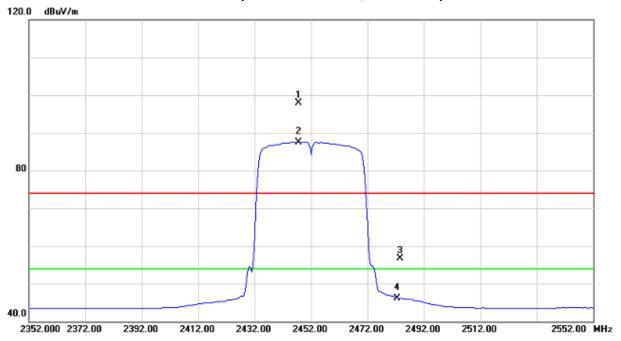
Freq.	Ant.Pol.	Rea	ding	Ant./CF	A	ct.	Liı	mit	
		Peak	AV		Peak	AV	Peak	AV	Note
(MHz)	ΗN	(dBuV)	(dBuV)	CF(dB)	(dBuV/m)	(dBuV/m)	(dBuV/m)	(dBuV/m)	
2447.50	Н	65.63	55.38	32.22	97.85	87.60			X/F
2483.50	Н	24.47	13.95	32.17	56.64	46.12	74.00	54.00	X/E
4903.98	Н	42.39	31.60	6.51	48.90	38.11	74.00	54.00	X/H
7356.13	Н	35.47	25.65	12.38	47.85	38.03	74.00	54.00	X/H
9808.02	Н	38.73	26.19	12.95	51.68	39.14	74.00	54.00	X/H

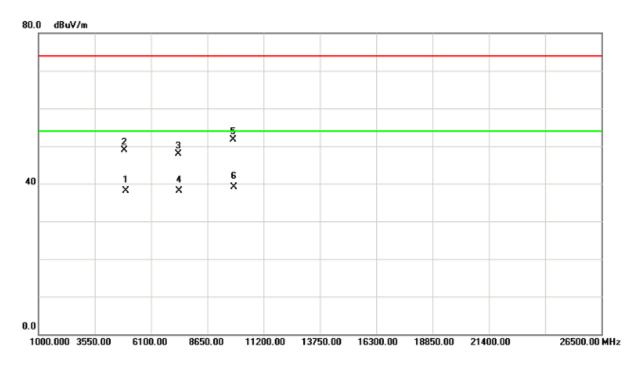
- (1) All readings are Peak unless otherwise stated QP in column of ${}^{\mathbb{F}}$ Note ${}_{\mathbb{J}}$. Peak denotes that the Peak reading compliance with the QP Limits and then QP Mode measurement didn't perform ${}_{\circ}$
- (2) Measuring frequency range from 30MHz to 1000MHz or the 10th harmonic of highest fundamental frequency "F" denotes fundamental frequency; "H" denotes spurious frequency. "E" denotes band edge frequency. (This judgment method includes the Band Edge Requirement.)
- (3) Radiated emissions measured in frequency range above 1000MHz were made with an instrument using Peak detector mode and AV detector mode of the emission
- (4) Data of measurement within this frequency range shown " * " in the table above means the reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.
- (5) A preamp and high pass filter were used for this test in order to provide sufficient measurement sensitivity.
- (6) EUT Orthogonal Axis:
 - "X" denotes Laid on Table; "Y" denotes Vertical Stand; "Z" denotes Side Stand
- (7) During the measurements above 1 GHz it is taken care of that the EUT is always within the 3 dB cone of radiation BW of the used antenna

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TX CH09 (Above 1000 MHz, Horizontal)





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4.2.10. EUT TEST PHOTO

Radiated Measurement Photos 9K~ 30MHz





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Radiated Measurement Photos 30MHz~1000MHz





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Radiated Measurement Photos Above 1000MHz





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5. BANDWIDTH TEST

5.1 Applied procedures / limit

FCC Part15 (15.247) , Subpart C			
Section	Test Item	Frequency Range (MHz)	Result
15.247(a)(2)	Bandwidth	2400-2483.5	PASS

5.1.1 MEASUREMENT INSTRUMENTS LIST

Item	Kind of Equipment	Manufacturer	Type No.	Serial No.	Last Calibration	Next Calibration
1	Spectrum Analyzer	R&S	FSP_40	100185	Nov. 16.2012	Nov. 16.2013

Remark: "N/A" denotes no model name, serial no. or calibration specified.

All calibration period of Equipment List is One Year.

5.1.2 TEST PROCEDURE

- a. The EUT was directly connected to the spectrum analyzer and antenna output port as show in the block diagram below,
- b. Spectrum Setting: RBW= 100KHz, VBW=300KHz, Sweep time = 5 ms.

5.1.3 DEVIATION FROM STANDARD

No deviation.

5.1.4 TEST SETUP

EUT	SPECTRUM
	ANALYZER

5.1.5 EUT OPERATION CONDITIONS

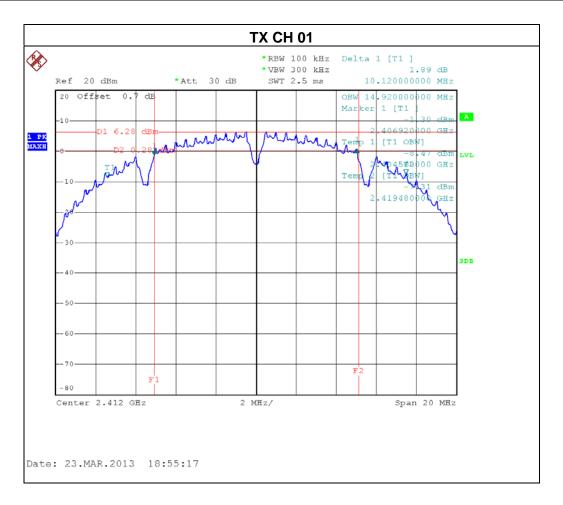
The EUT tested system was configured as the statements of 4.1.6 Unless otherwise a special operating condition is specified in the follows during the testing.

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5.1.6 TEST RESULTS

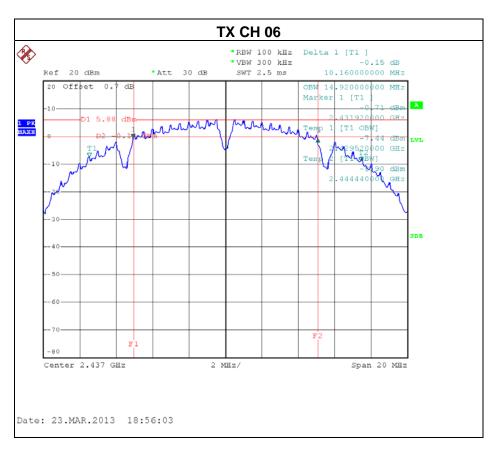
EUT:	Wireless N 300 Cloud Router	Model Name. :	DIR-605L	
Temperature :	24 ℃	Relative Humidity:	60 %	
Pressure :	1016 hPa	Test Voltage :	AC 120V/60Hz	
Test Mode :	TX B MODE /CH01, CH06, CH11			

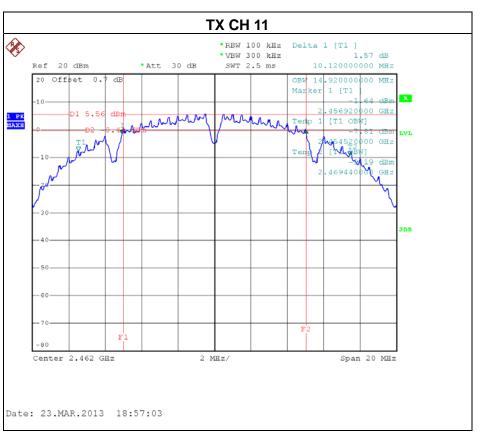
Test Channel	Frequency (MHz)	Bandwidth (MHz)	99% Occupied BW (MHz)	Test Result
CH01	2412	10.12	14.92	PASS
CH06	2437	10.16	14.92	PASS
CH11	2462	10.12	14.92	PASS



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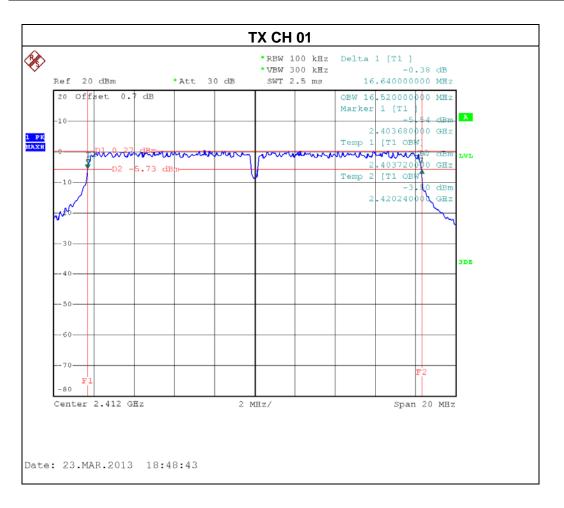




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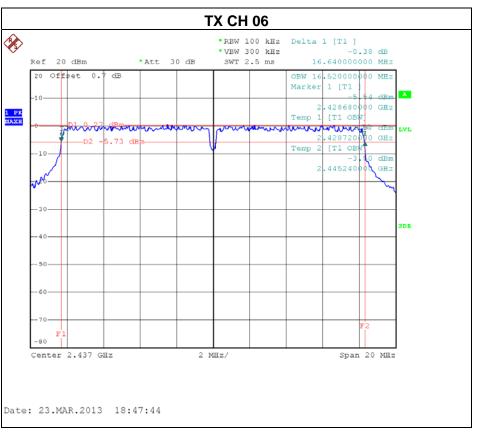
EUT:	Wireless N 300 Cloud Router	Model Name. :	DIR-605L	
Temperature :	24 ℃	Relative Humidity:	60 %	
Pressure :	1016 hPa	Test Voltage :	AC 120V/60Hz	
Test Mode :	TX G MODE /CH01, CH06, CH11			

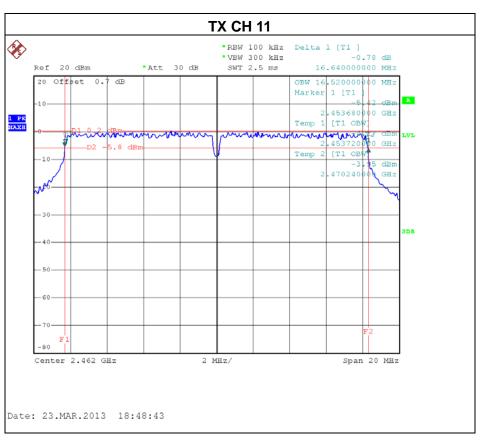
Test Channel	Frequency (MHz)	Bandwidth (MHz)	99% Occupied BW (MHz)	Test Result
CH01	2412	16.64	16.52	PASS
CH06	2437	16.54	16.52	PASS
CH11	2462	16.64	16.52	PASS



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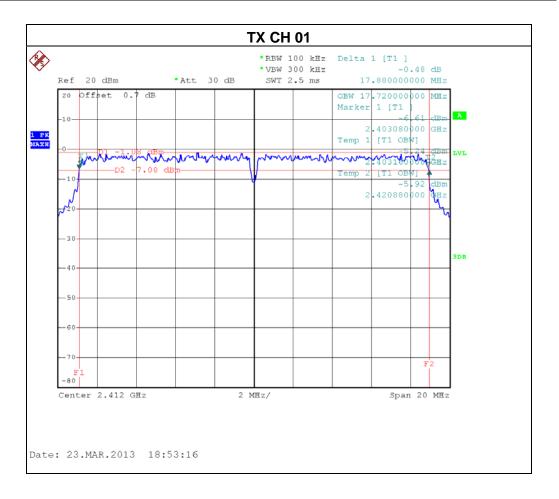




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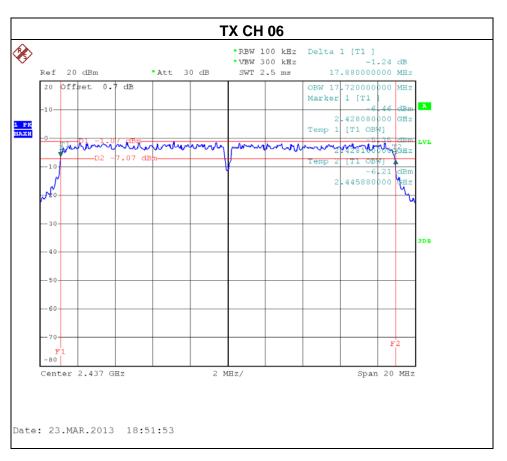
EUT:	Wireless N 300 Cloud Router	Model Name. :	DIR-605L		
Temperature :	24 ℃	Relative Humidity:	60 %		
Pressure :	1016 hPa Test Voltage : AC 120V/60Hz				
Test Mode :	TX N MODE -20MHz/ CH01, CH06, CH11				

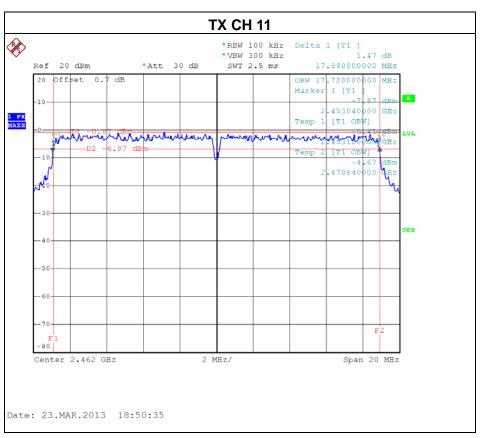
Test Channel	Frequency (MHz)	Bandwidth (MHz)	99% Occupied BW (MHz)	Test Result
CH01	2412	17.88	17.72	PASS
CH06	2437	17.88	17.72	PASS
CH11	2462	17.88	17.72	PASS



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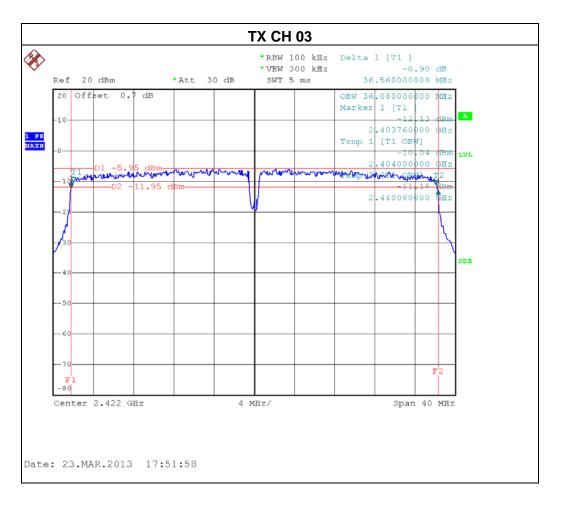




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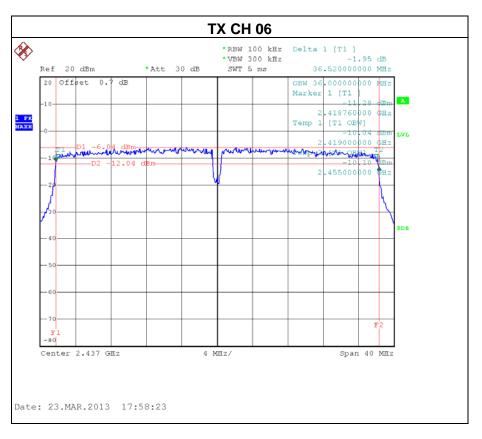
EUT:	Wireless N 300 Cloud Router	Model Name. :	DIR-605L	
Temperature :	24 ℃	Relative Humidity:	60 %	
Pressure :	1016 hPa	Test Voltage :	AC 120V/60Hz	
Test Mode : TX N MODE -40MHz/ CH03, CH06, CH09				

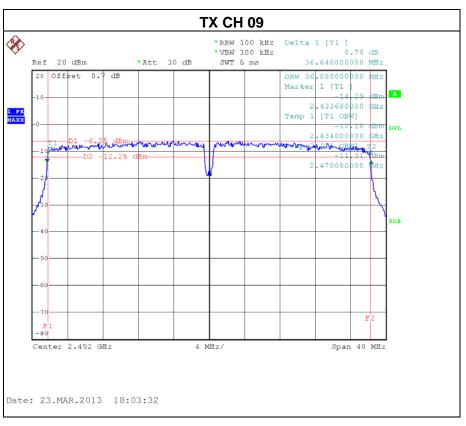
Test Channel	Frequency (MHz)	Bandwidth (MHz)	99% Occupied BW (MHz)	Test Result
CH03	2422	36.56	36.58	PASS
CH06	2437	36.52	36.00	PASS
CH09	2452	36.64	36.08	PASS



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5.1.7. EUT TEST PHOTO

BANDWIDTH MEASUREMENT PHOTOS



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6. MAXIMUM OUTPUT POWER TEST

6.1 Applied procedures / limit

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

6.1.1 MEASUREMENT INSTRUMENTS LIST

Item	Kind of Equipment	Manufacturer	Type No.	Serial No.	Last Calibration	Next Calibration
1	Power Meter	ANRITSU	ML2495A	1128009	Nov.01.2012	Nov.01.2013
2	Pulse Power Sensor	ANRITSU	MA 2411B	1027500	Nov.01.2012	Nov.01.2013

Remark: "N/A" denotes no model name, serial no. or calibration specified.

All calibration period of Equipment List is One Year.

6.1.2 TEST PROCEDURE

- a. The EUT was directly connected to the power meter and antenna output port as show in the block diagram below.
- b. The maximum peak conducted output power was performed in accordance with method 8.1.3 of FCC KDB 558074.

6.1.3 DEVIATION FROM STANDARD

No deviation.

6.1.4 TEST SETUP

EUT	Power Meter
	1 Ower meter

6.1.5 EUT OPERATION CONDITIONS

The EUT tested system was configured as the statements of 4.1.6 Unless otherwise a special operating condition is specified in the follows during the testing.

Transmit output power was measured while the host equipment supply voltage was varied from 85 % to 115 % of the nominal rated supply voltage. No change in transmit output power was observed.

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6.1.6 TEST RESULTS

EUT:	Wireless N 300 Cloud Router	Model Name :	DIR-605L	
Temperature :	24 ℃	Relative Humidity:	60 %	
Pressure :	1016 hPa	Test Voltage :	AC 120V/60Hz	
Test Mode :	TX B MODE /CH01, CH06, CH11			

Maximum Output Power

Test Channel	Frequency (MHz)	Output Power (dBm)	LIMIT (dBm)	LIMIT (W)
CH01	2412 MHz	20.87	30	1
CH06	2437 MHz	20.36	30	1
CH11	2462 MHz	19.89	30	1

EUT:	Wireless N 300 Cloud Router	Model Name :	DIR-605L	
Temperature :	24 ℃	Relative Humidity:	60 %	
Pressure:	1016 hPa	Test Voltage :	AC 120V/60Hz	
Test Mode :	TX G MODE /CH01, CH06, CH11			

Maximum Output Power

Test Channel	Frequency	Output Power	LIMIT	LIMIT
Took onamio	(MHz)	(dBm)	(dBm)	(W)
CH01	2412 MHz	25.10	30	1
CH06	2437 MHz	25.14	30	1
CH11	2462 MHz	24.26	30	1

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EUT:	Wireless N 300 Cloud Router	Model Name :	DIR-605LB1	
Temperature :	24 ℃	Relative Humidity:	60 %	
Pressure :	1016 hPa Test Voltage : AC 120V/60Hz			
Test Mode :	TX N-20M MODE /CH01, CH06, CH11ANT 1			

Maximum Output Power

Test Channel	Frequency (MHz)	Output Power (dBm)	LIMIT (dBm)	LIMIT (W)
CH01	2412 MHz	24.03	30	1
CH06	2437 MHz	23.85	30	1
CH11	2462 MHz	23.76	30	1

EUT:	Wireless N 300 Cloud Router	Model Name :	DIR-605LB1	
Temperature :	24 ℃	Relative Humidity:	60 %	
Pressure:	1016 hPa	Test Voltage :	AC 120V/60Hz	
Test Mode :	TX N-20M MODE /CH01, CH06, CH11ANT 2			

Maximum Output Power

Test Channel	Frequency (MHz)	Output Power (dBm)	LIMIT (dBm)	LIMIT (W)
CH01	2412 MHz	22.64	30	1
CH06	2437 MHz	23.19	30	1
CH11	2462 MHz	23.27	30	1

EUT:	Wireless N 300 Cloud Router	Model Name :	DIR-605LB1	
Temperature:	24 ℃	Relative Humidity:	60 %	
Pressure:	1016 hPa	Test Voltage :	AC 120V/60Hz	
Test Mode :	TX N-20M MODE /CH01, CH06, CH11 ANT 1+2			

Maximum Output Power

Test Channel	Frequency (MHz)	Output Power (dBm)	LIMIT (dBm)	LIMIT (W)
CH01	2412 MHz	26.40	30	1
CH06	2437 MHz	26.54	30	1
CH11	2462 MHz	26.53	30	1

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EUT:	Wireless N 300 Cloud Router	Model Name :	DIR-605LB1	
Temperature :	24 ℃	Relative Humidity:	60 %	
Pressure :	1016 hPa	Test Voltage :	AC 120V/60Hz	
Test Mode :	TX N-40M MODE /CH03, CH06, CH09ANT 1			

Maximum Output Power

Test Channel	Frequency (MHz)	Output Power (dBm)	LIMIT (dBm)	LIMIT (W)
CH03	2422 MHz	23.87	30	1
CH06	2437 MHz	23.79	30	1
CH09	2452 MHz	23.52	30	1

EUT:	Wireless N 300 Cloud Router	Model Name :	DIR-605LB1	
Temperature :	24 ℃	Relative Humidity:	60 %	
Pressure:	1016 hPa	Test Voltage :	AC 120V/60Hz	
Test Mode :	TX N-40M MODE /CH03, CH06, CH09ANT 2			

Maximum Output Power

Test Channel	Frequency (MHz)	Output Power (dBm)	LIMIT (dBm)	LIMIT (W)
CH03	2422 MHz	21.95	30	1
CH06	2437 MHz	23.14	30	1
CH09	2452 MHz	23.28	30	1

EUT:	Wireless N 300 Cloud Router	Model Name :	DIR-605LB1	
Temperature :	24 ℃	Relative Humidity:	60 %	
Pressure :	1016 hPa	Test Voltage :	AC 120V/60Hz	
Test Mode :	TX N-40M MODE /CH03, CH06, CH09ANT 1+2			

Maximum Output Power

Test Channel	Frequency (MHz)	Output Power (dBm)	LIMIT (dBm)	LIMIT (W)
CH03	2422 MHz	26.03	30	1
CH06	2437 MHz	26.49	30	1
CH09	2452 MHz	26.41	30	1

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6.1.7. EUT TEST PHOTO

MAXIMUM OUTPUT POWER MEASUREMENT PHOTOS



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7. ANTENNA CONDUCTED SPURIOUS EMISSION

7.1 Applied procedures / limit

30dBc in any 100 kHz bandwidth outside the operating frequency band. In case the emission fall within the restricted band specified on 15.205(a), then the 15.209(a) limit in the table below has to be followed.

Frequencies (MHz)	Field Strength (micorvolts/meter)	Measurement Distance (meters)
0.009~0.490	2400/F(KHz)	300
0.490~1.705	24000/F(KHz)	30
1.705~30.0	30	30
30~88	100	3
88~216	150	3
216~960	200	3
Above 960	500	3

7.1.1 MEASUREMENT INSTRUMENTS LIST

Item	Kind of Equipment	Manufacturer	Type No.	Serial No.	Last Calibration	Next Calibration
1	Spectrum Analyzer	R&S	FSP_40	100185	Nov. 16.2012	Nov. 16.2013

Remark: "N/A" denotes no model name, serial no. or calibration specified.

All calibration period of Equipment List is One Year.

7.1.2 TEST PROCEDURE

- a. The EUT was directly connected to the spectrum analyzer and antenna output port as show in the block diagram below,
- b. Spectrum Setting: RBW= 100KHz, VBW=300KHz, Sweep time = 10 ms.

7.1.3 DEVIATION FROM STANDARD

No deviation.

7.1.4 TEST SETUP

EUT	SPECTRUM
	ANALYZER

7.1.5 EUT OPERATION CONDITIONS

The EUT tested system was configured as the statements of 4.1.6 Unless otherwise a special operating condition is specified in the follows during the testing.

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7.1.6 TEST RESULTS

EUT:	Wireless N 300 Cloud Router	Model Name :	DIR-605L
Temperature :	24 ℃	Relative Humidity:	60 %
Pressure:	1016 hPa	Test Voltage :	AC 120V/60Hz
Test Mode :	TX B MODE /CH01, CH06, CH11		

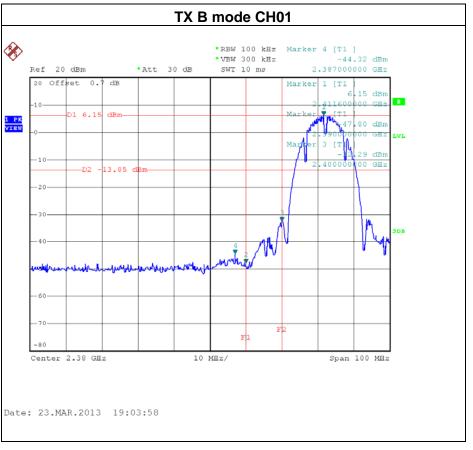
Channel of Worst Data: CH01				
The max. radio frequency power in any 100kHz bandwidth outside the frequency band bandwidth outside the frequency band.				
FREQUENCY(MHz) POWER(dBm) FREQUENCY(MHz) POWER(dBm)			POWER(dBm)	
2400.00 -32.29 2488.20 -47.32				
	Result			

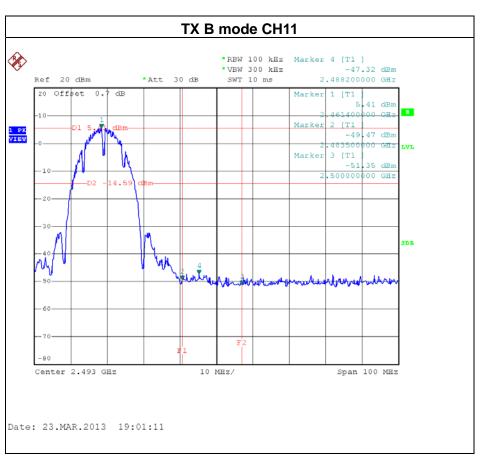
Result

In any 100kHz bandwidth outside the frequency band, the radio frequency power is at least 20dB below that in the 100kHz bandwidth within the band that contains the highest lever of the desired power.

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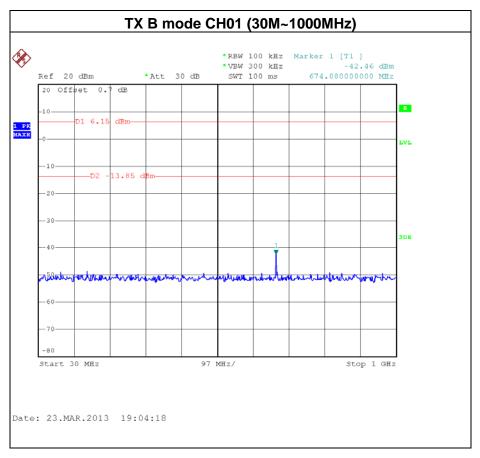


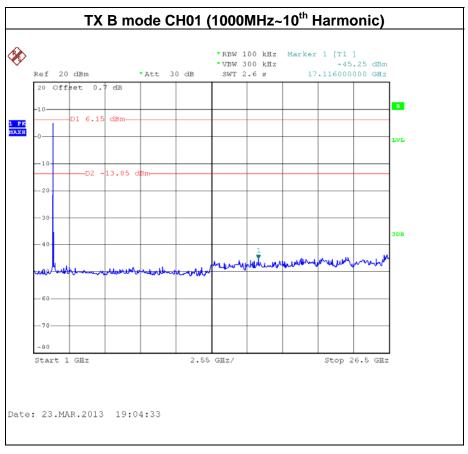




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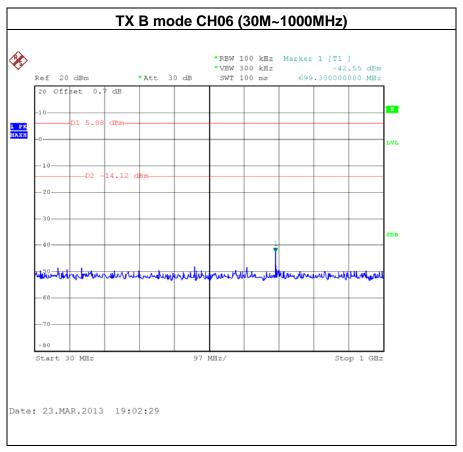


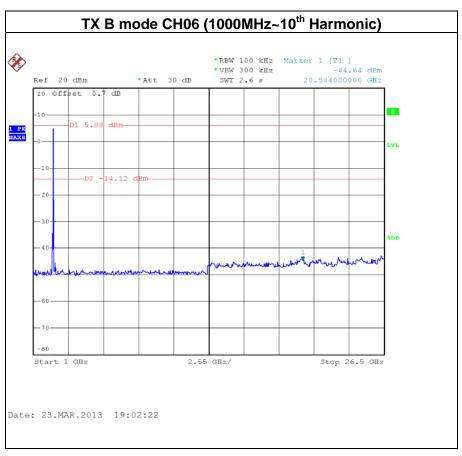




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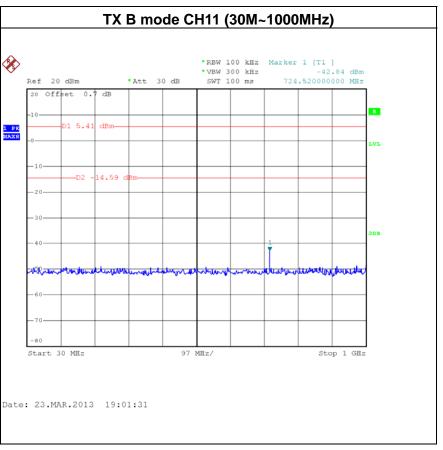


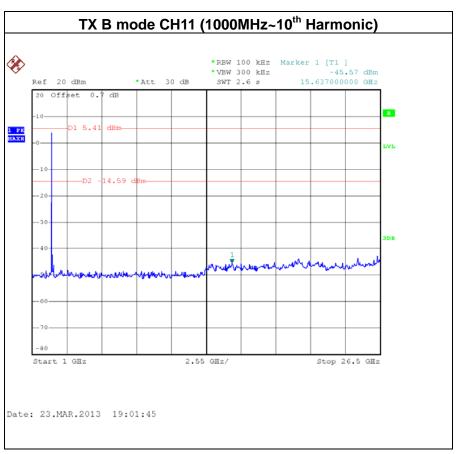




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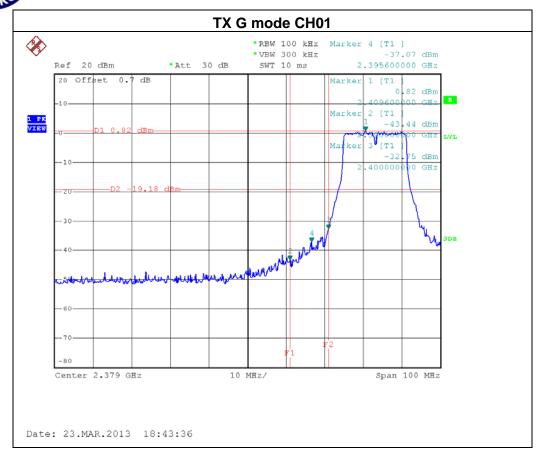


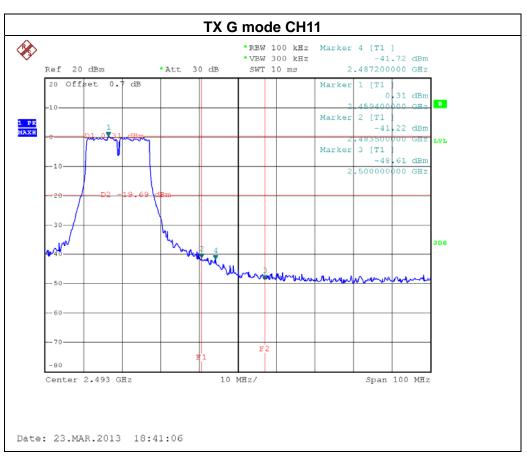
EUT:	Wireless N 300 Cloud Router	Model Name :	DIR-605L
Temperature :	24 ℃	Relative Humidity:	60 %
Pressure :	1016 hPa	Test Voltage :	AC 120V/60Hz
Test Mode :	TX G MODE / CH01, CH06, CH11		

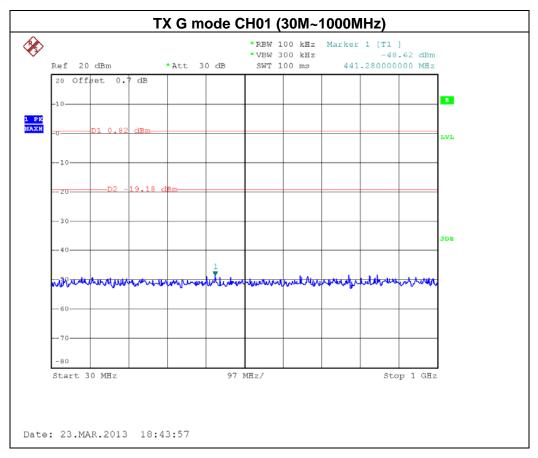
Channel of Worst Data: CH01				
The max. radio frequent bandwidth within the		The max. radio frequency power in any 100 kHz bandwidth outside the frequency band.		
FREQUENCY(MHz)	POWER(dBm)	FREQUENCY(MHz) POWER(dBm)		
2400.00 -32.75 2483.50 -41.22				
Result				

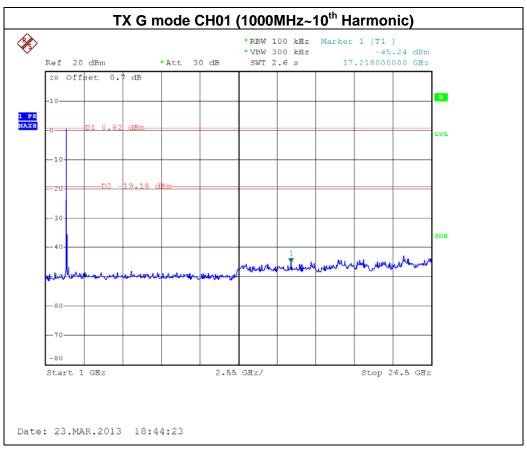
In any 100kHz bandwidth outside the frequency band, the radio frequency power is at least 20dB below that in the 100kHz bandwidth within the band that contains the highest lever of the desired power.

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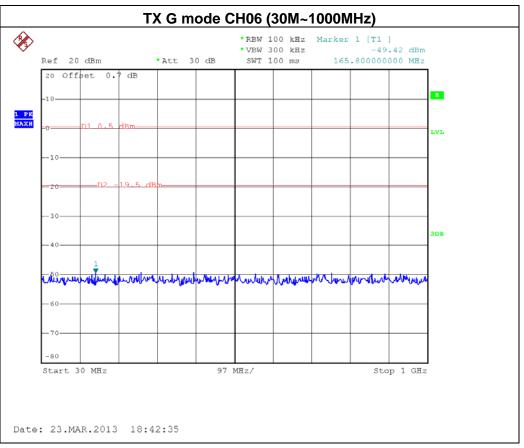


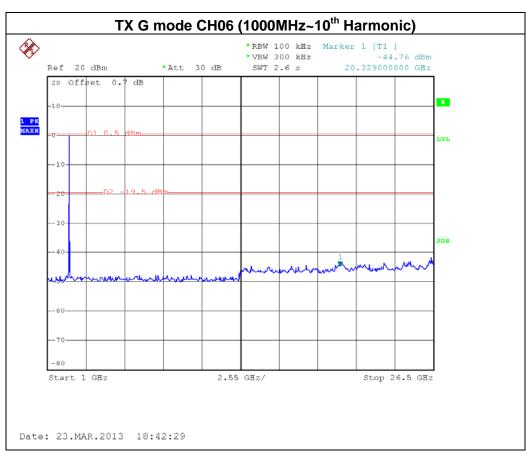




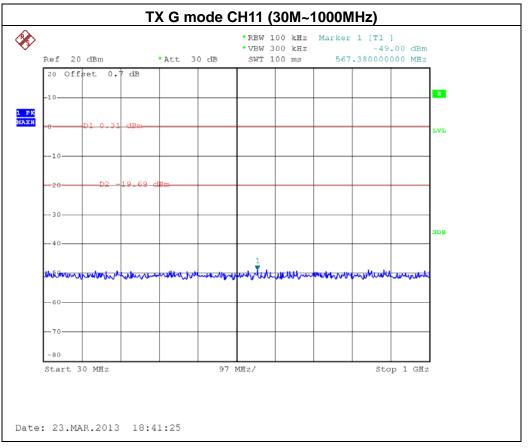


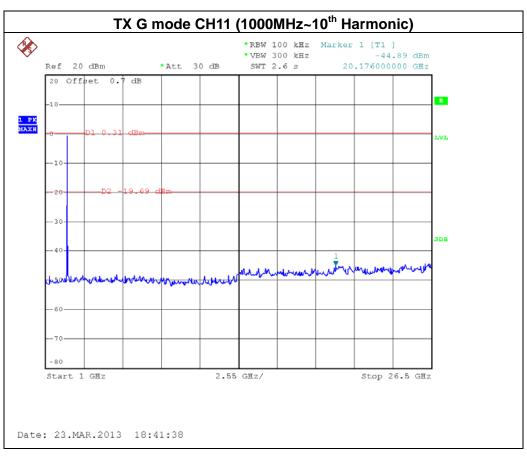
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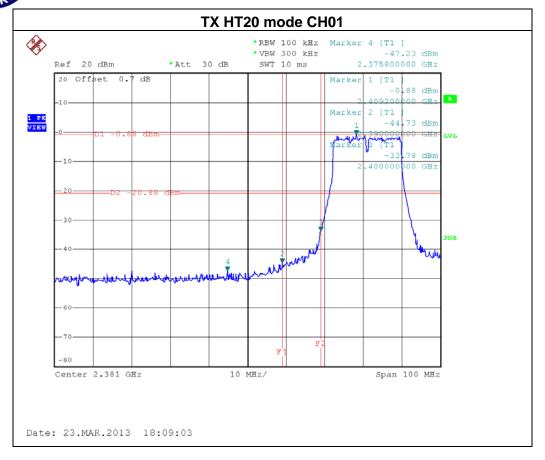


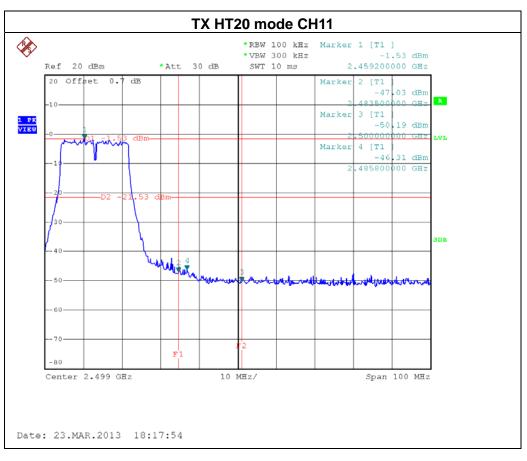
EUT:	Wireless N 300 Cloud Router	Model Name :	DIR-605L
Temperature :	24 ℃	Relative Humidity:	60 %
Pressure:	1016 hPa	Test Voltage :	AC 120V/60Hz
Test Mode :	TX N-20M MODE / CH01, CH06 , CH11-ANT 1		

Channel of Worst Data: CH01				
The max. radio frequent bandwidth within the		The max. radio frequency power in any 100 kHz bandwidth within the frequency band.		
FREQUENCY(MHz)	POWER(dBm)	FREQUENCY(MHz) POWER(dBm)		
2400.00 -33.78 2485.80 -46.31				
Result				

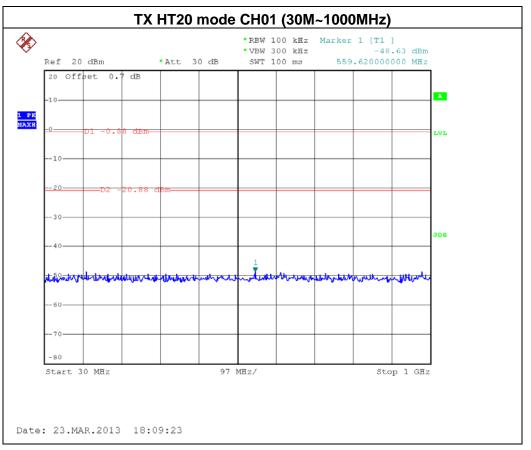
In any 100kHz bandwidth outside the frequency band, the radio frequency power is at least 20dB below that in the 100kHz bandwidth within the band that contains the highest lever of the desired power.

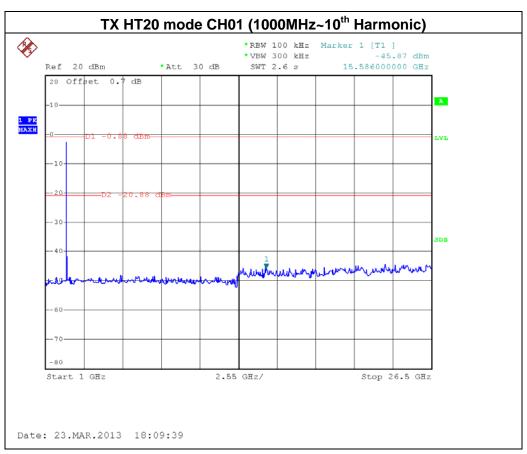
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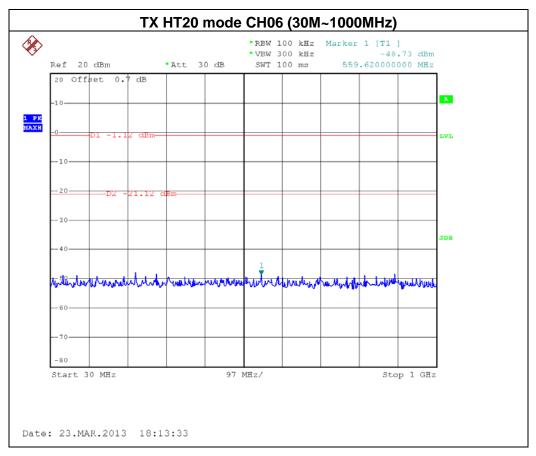


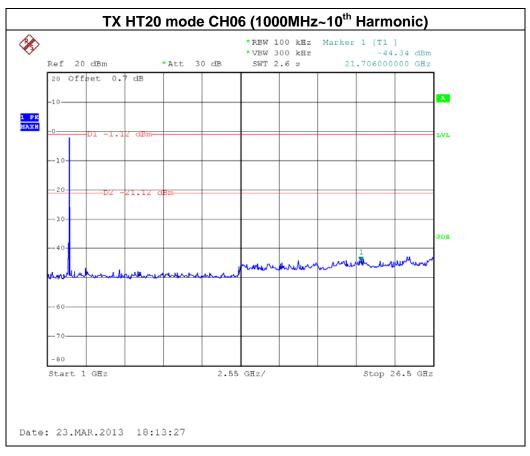
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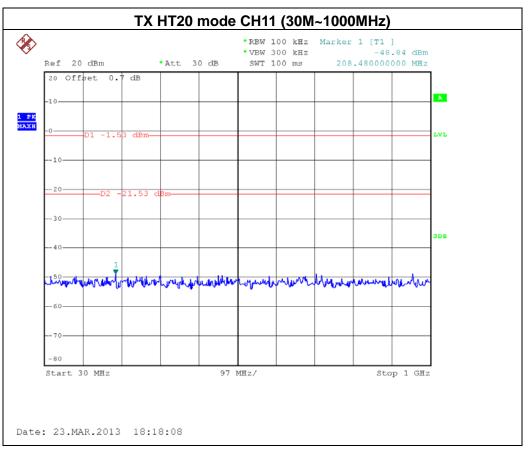


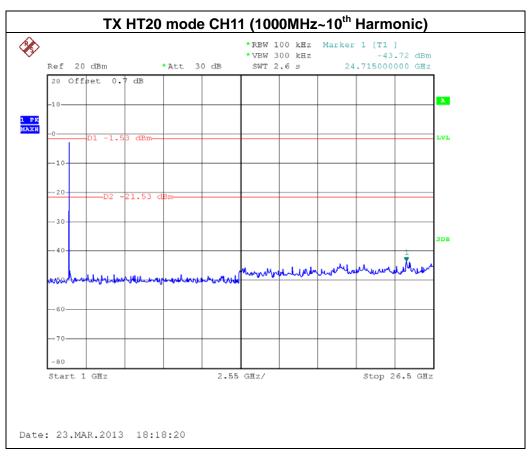
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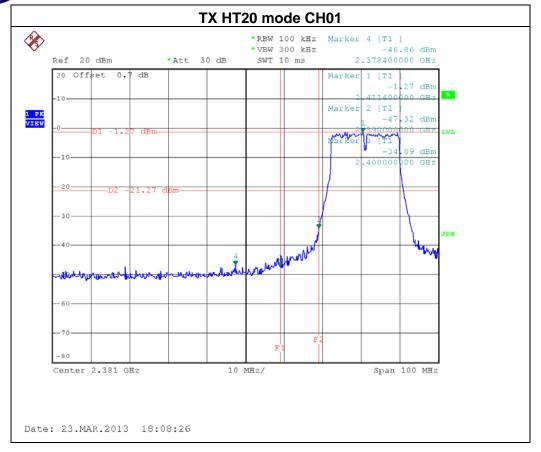


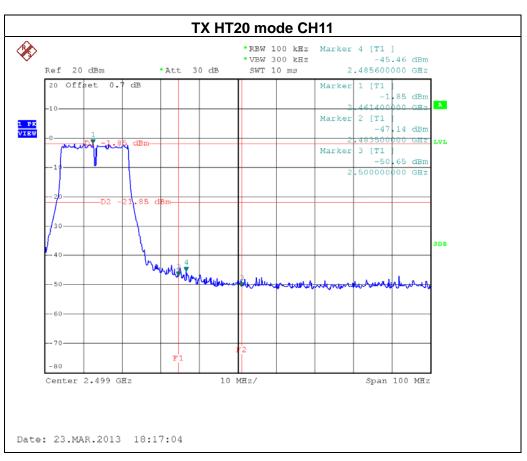
EUT:	Wireless N 300 Cloud Router	Model Name :	DIR-605L
Temperature:	24 ℃	Relative Humidity:	60 %
Pressure:	1016 hPa	Test Voltage :	AC 120V/60Hz
Test Mode :	TX N-20M MODE / CH01, CH06 , CH11-ANT 2		

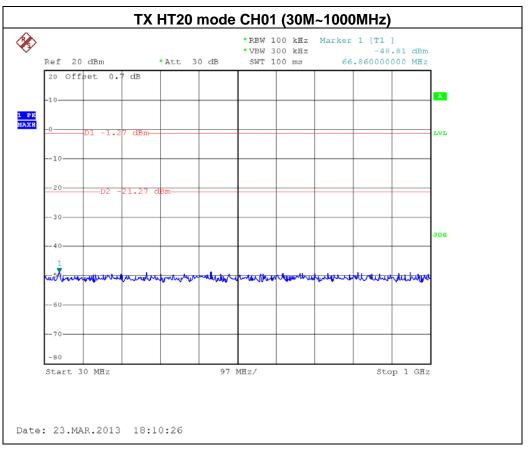
Channel of Worst Data: CH01				
	cy power in any 100kHz he frequency band	The max. radio frequence bandwidth within the		
FREQUENCY(MHz) POWER(dBm) FREQUENCY(MHz) POWER(dBm)			POWER(dBm)	
2400.00 -34.09 2485.60 -45.46				
Result				

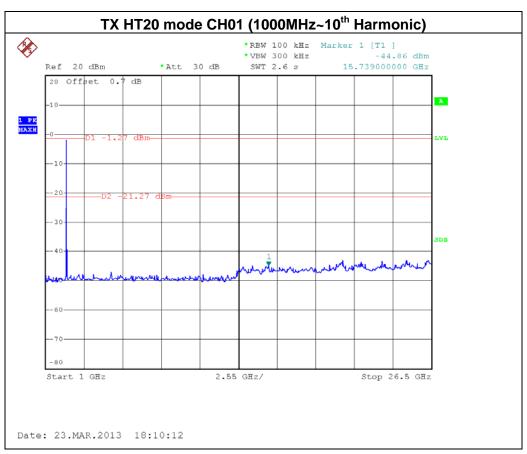
In any 100kHz bandwidth outside the frequency band, the radio frequency power is at least 20dB below that in the 100kHz bandwidth within the band that contains the highest lever of the desired power.

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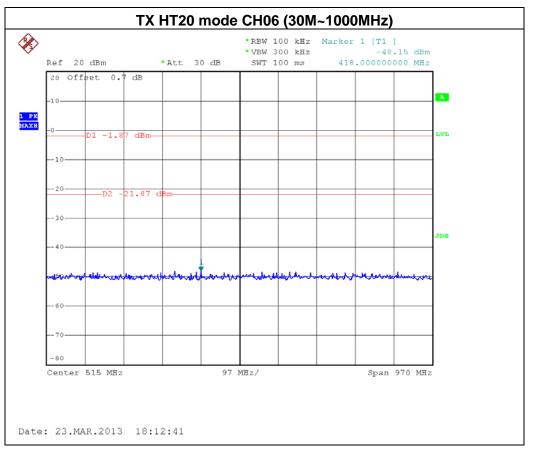


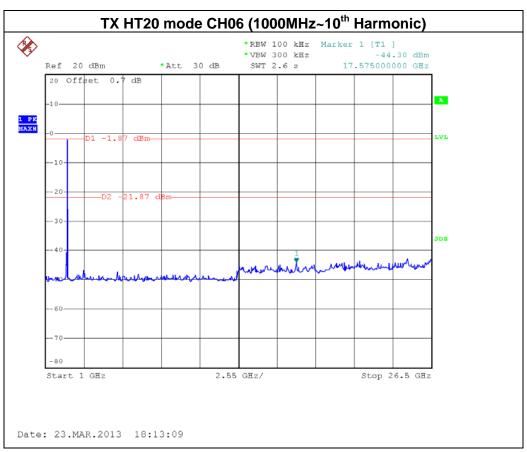




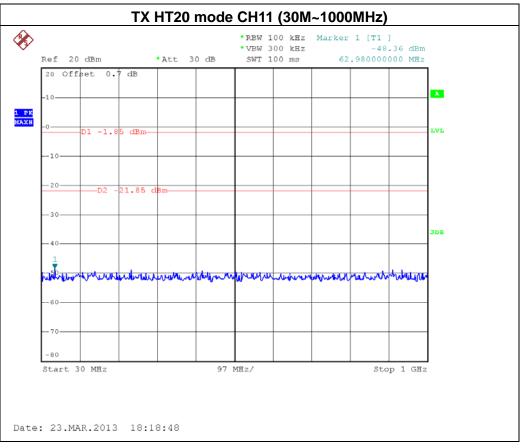


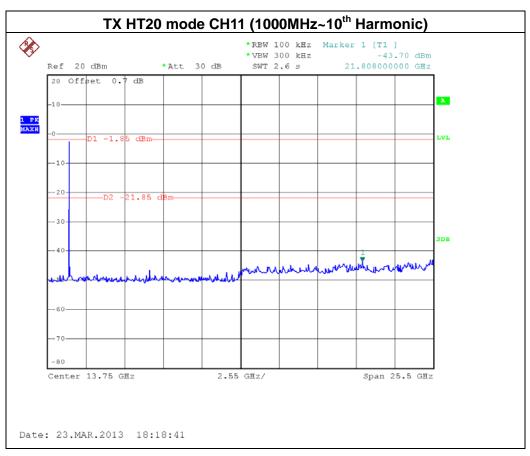
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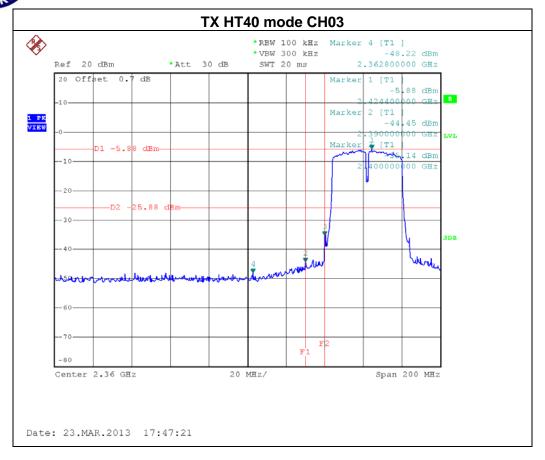


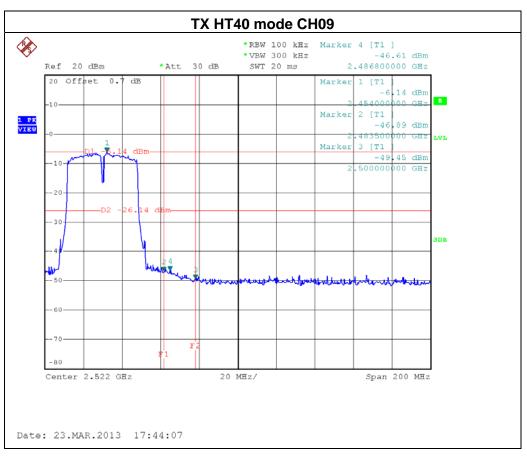
EUT:	Wireless N 300 Cloud Router	Model Name :	DIR-605L
Temperature :	24 ℃	Relative Humidity:	60 %
Pressure:	1016 hPa	Test Voltage :	AC 120V/60Hz
Test Mode : TX N-40M MODE /CH03, CH06, CH09 –ANT 1			

Channel of Worst Data: CH09				
<u> </u>	cy power in any 100kHz ne frequency band	The max. radio frequence bandwidth outside t		
FREQUENCY(MHz)	FREQUENCY(MHz) POWER(dBm) FREQUENCY(MHz) POWER(dBm			
2400.00 -35.14 2486.80 -46.61				
Result				

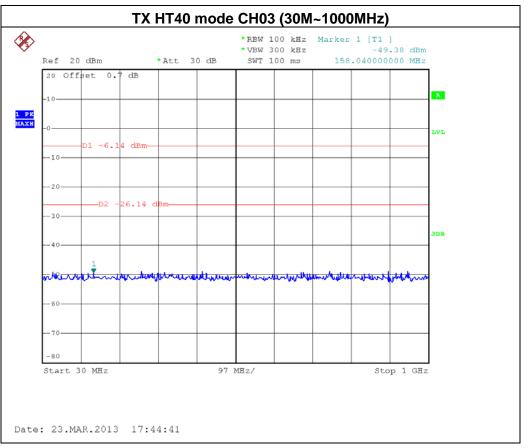
In any 100kHz bandwidth outside the frequency band, the radio frequency power is at least 20dB below that in the 100kHz bandwidth within the band that contains the highest lever of the desired power.

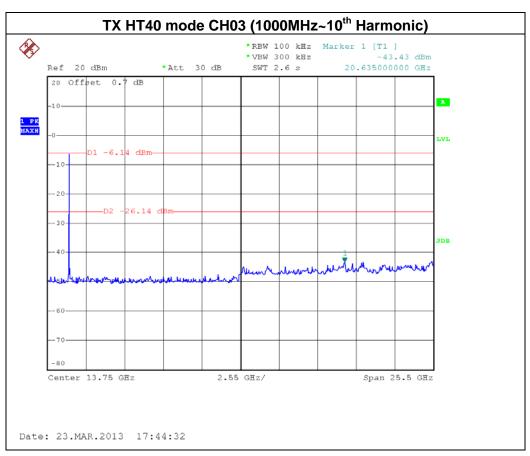
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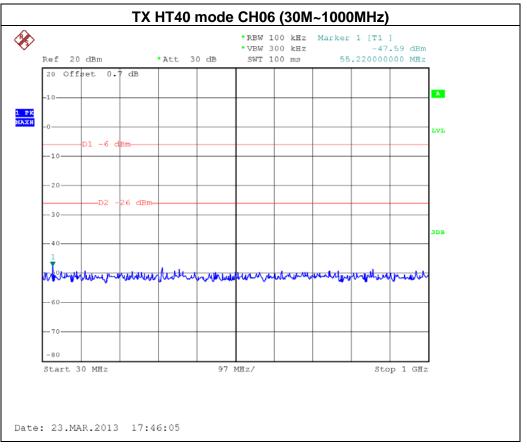


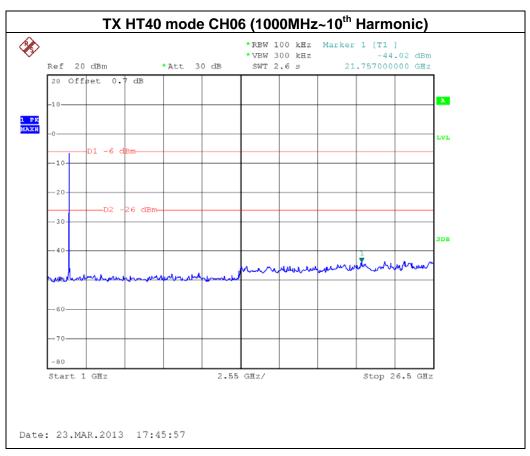
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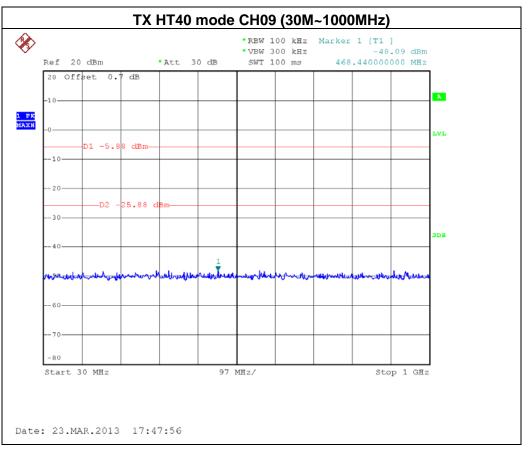


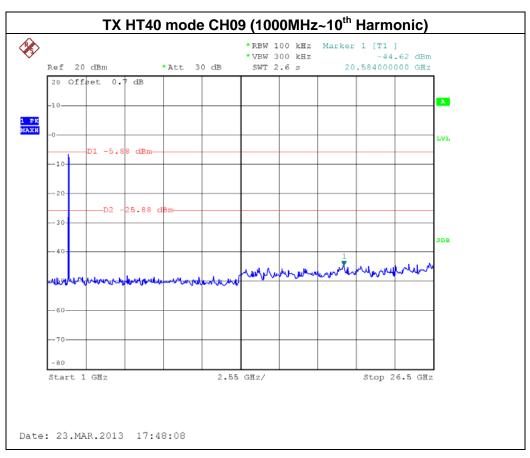
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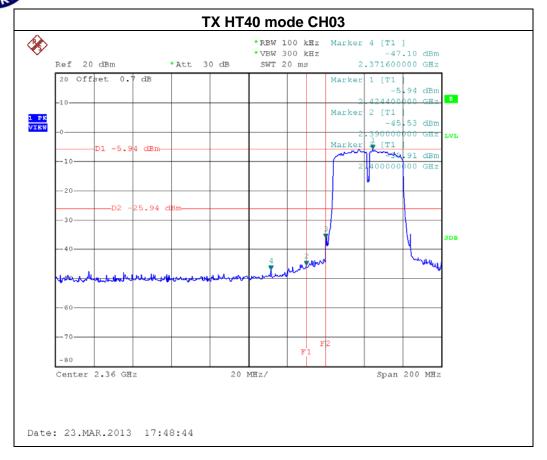


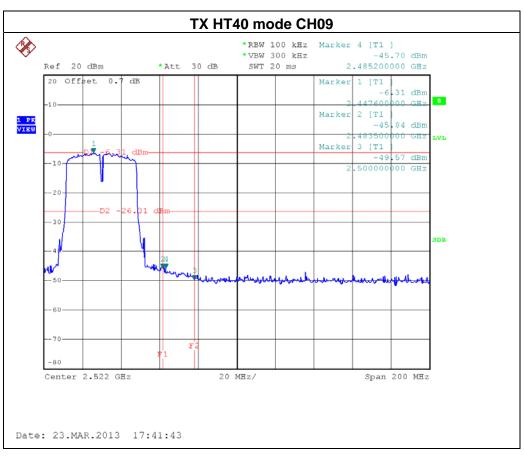
EUT:	Wireless N 300 Cloud Router	Model Name :	DIR-605L
Temperature :	24 ℃	Relative Humidity:	60 %
Pressure:	1016 hPa	Test Voltage :	AC 120V/60Hz
Test Mode : TX N-40M MODE /CH03, CH06, CH09 –ANT 2			

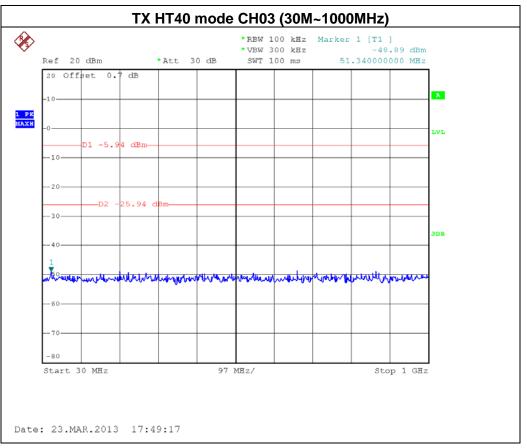
Channel of Worst Data: CH09				
The max. radio frequency power in any 100kHz bandwidth within the frequency band bandwidth outside the frequency				
FREQUENCY(MHz)	FREQUENCY(MHz) POWER(dBm) FREQUENCY(MHz) POWER(dBm			
2400.00 -35.91 2485.20 -45.70				
Result				

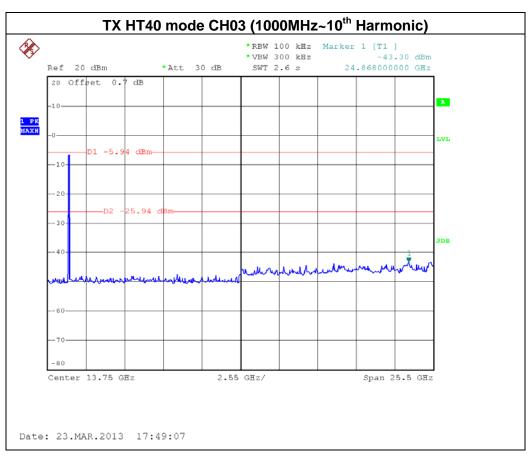
In any 100kHz bandwidth outside the frequency band, the radio frequency power is at least 20dB below that in the 100kHz bandwidth within the band that contains the highest lever of the desired power.

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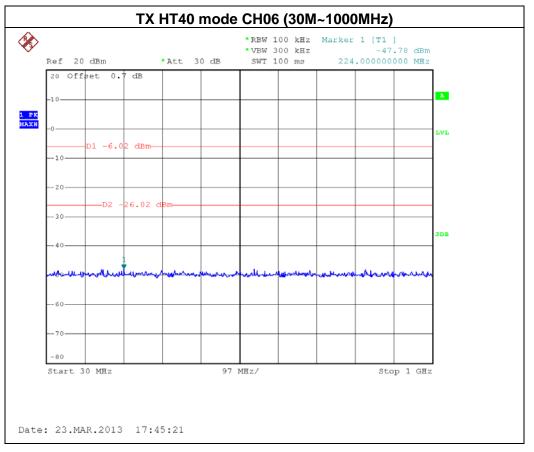


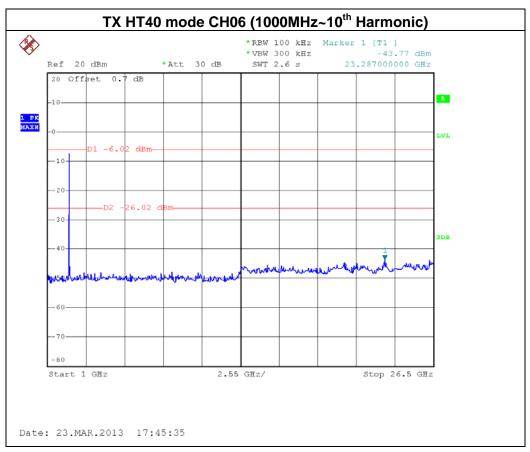




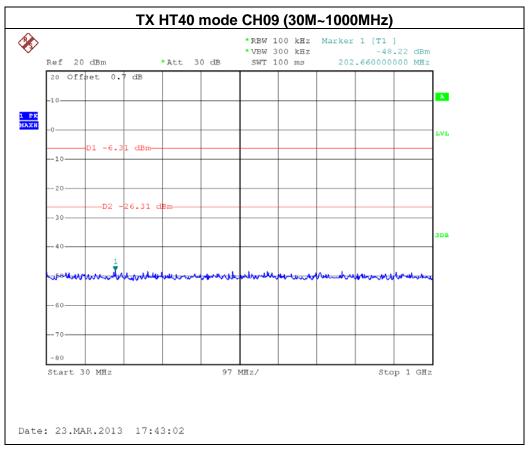


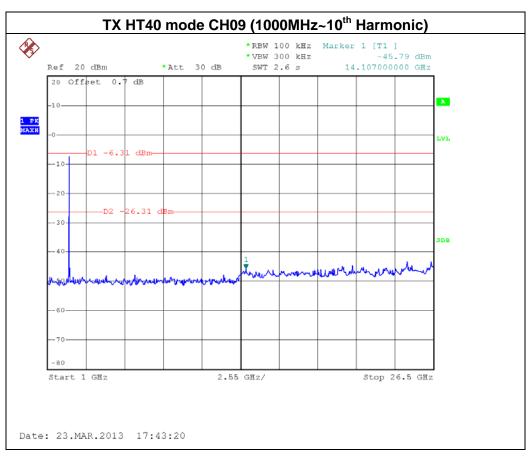
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7.1.7. EUT TEST PHOTO

ANTENNA CONDUCTED SPURIOUS EMISSION MEASUREMENT PHOTOS



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8. POWER SPECTRAL DENSITY TEST

8.1 Applied procedures / limit

or replaced processing of the control of the contro					
FCC Part15 (15.247) , Subpart C					
Section	Test Item	Limit	Frequency Range (MHz)	Result	
15.247(e)	Power Spectral Density	8 dBm (in any 3KHz)	2400-2483.5	PASS	

8.1.1 MEASUREMENT INSTRUMENTS LIST

Item	Kind of Equipment	Manufacturer	Type No.	Serial No.	Last Calibration	Next Calibration
1	Spectrum Analyzer	R&S	FSP_40	100185	Nov. 16.2012	Nov. 16.2013

Remark: "N/A" denotes no model name, serial no. or calibration specified.

All calibration period of Equipment List is One Year.

8.1.2 TEST PROCEDURE

- a. The EUT was directly connected to the spectrum analyzer and antenna output port as show in the block diagram below,
- b. Spectrum Setting: RBW=3KHz, VBW=10 KHz, Sweep time = 2.5ms.

8.1.3 DEVIATION FROM STANDARD

No deviation.

8.1.4 TEST SETUP

EUT	SPECTRUM
	ANALYZER

8.1.5 EUT OPERATION CONDITIONS

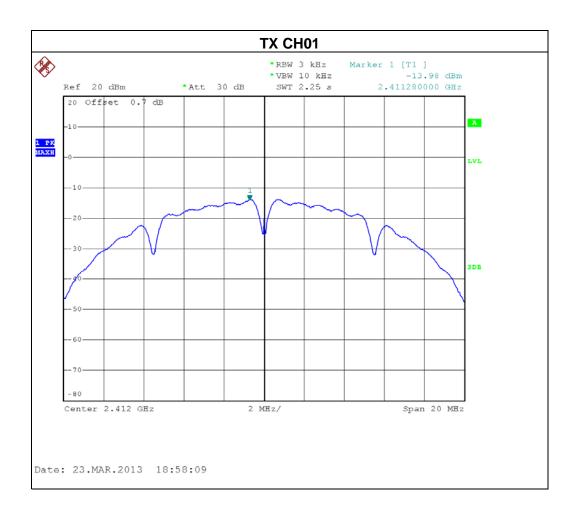
The EUT tested system was configured as the statements of 4.1.6 Unless otherwise a special operating condition is specified in the follows during the testing.

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8.1.6 TEST RESULTS

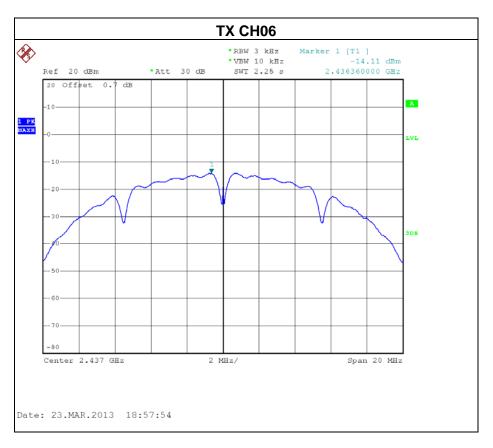
EUT:	Wireless N 300 Cloud Router	Model Name :	DIR-605L	
Temperature:	24 ℃	Relative Humidity:	60 %	
Pressure :	1016 hPa Test Voltage : AC 120V/60Hz			
Test Mode :	est Mode : TX B MODE /CH01, CH06, CH11			

Test Channel	Frequency (MHz)	Power Density (dBm)	LIMIT (dBm)
CH01	2412 MHz	-13.98	8
CH06	2437 MHz	-14.11	8
CH11	2462 MHz	-14.47	8



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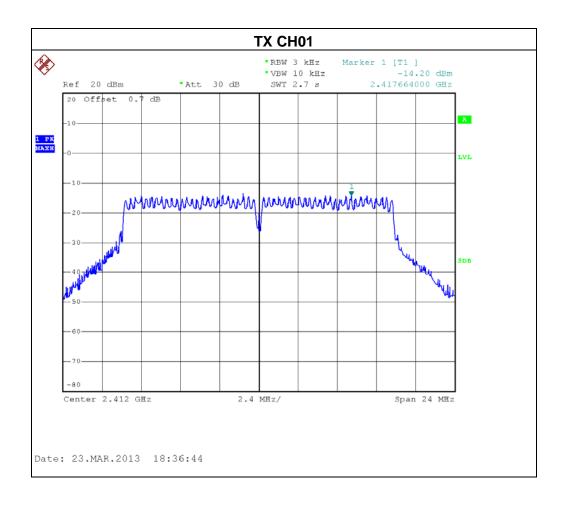




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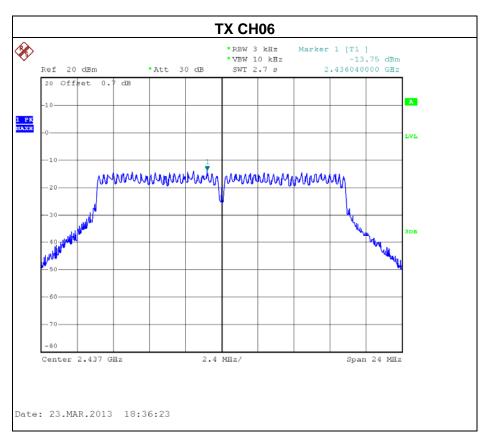
EUT:	Wireless N 300 Cloud Router	Model Name :	DIR-605L	
Temperature :	24 ℃	Relative Humidity:	60 %	
Pressure :	1016 hPa Test Voltage : AC 120V/60Hz			
Test Mode : TX G MODE /CH01, CH06, CH11				

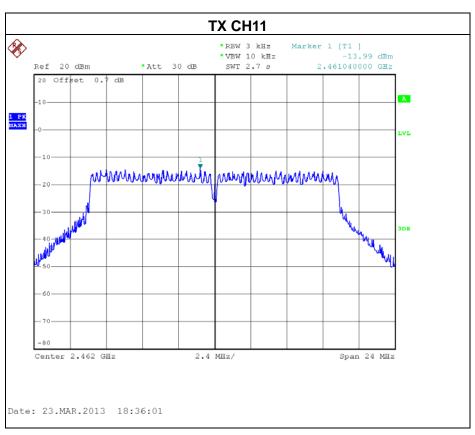
Test Channel	Frequency (MHz)	Power Density (dBm)	LIMIT (dBm)
CH01	2412 MHz	-14.20	8
CH06	2437 MHz	-13.75	8
CH11	2462 MHz	-13.99	8



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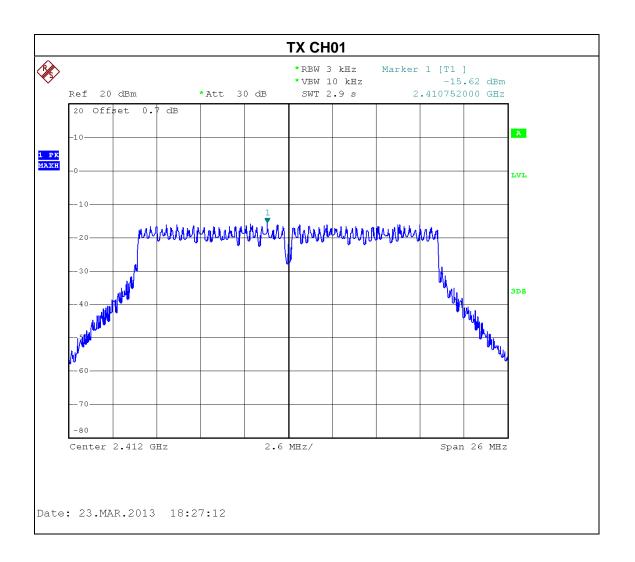




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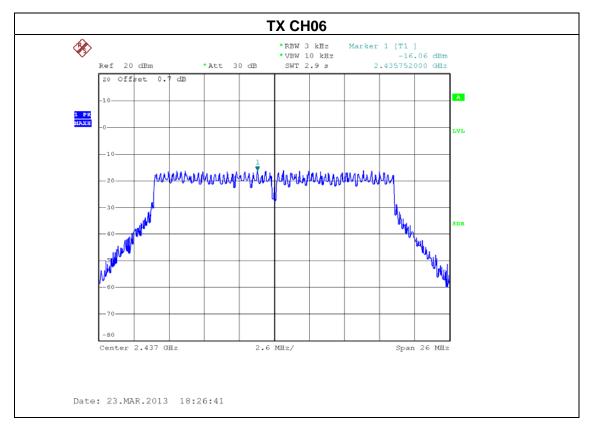
EUT:	Wireless N 300 Cloud Router	Model Name :	DIR-605L		
Temperature :	24 ℃	Relative Humidity:	60 %		
Pressure:	1016 hPa	Test Voltage :	AC 120V/60Hz		
Test Mode :	est Mode : TX N MODE-20MHz /CH01, CH06, CH11 –ANT 1				

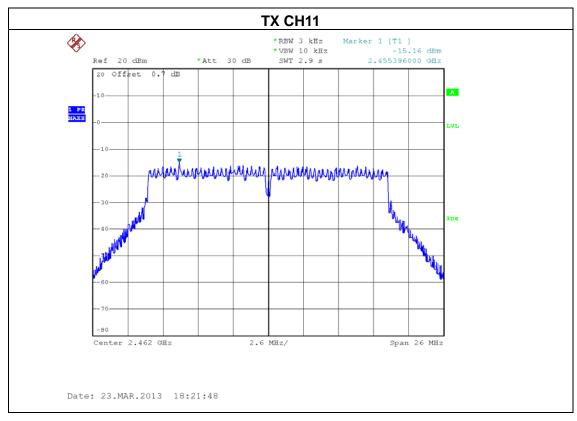
Test Channel	Frequency (MHz)	Power Density (dBm)	LIMIT (dBm)
CH01	2412 MHz	-15.62	8
CH06	2437 MHz	-16.06	8
CH11	2462 MHz	-15.16	8



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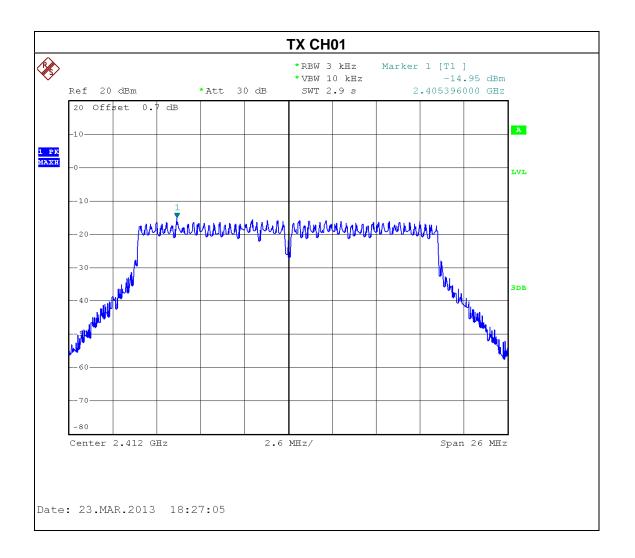




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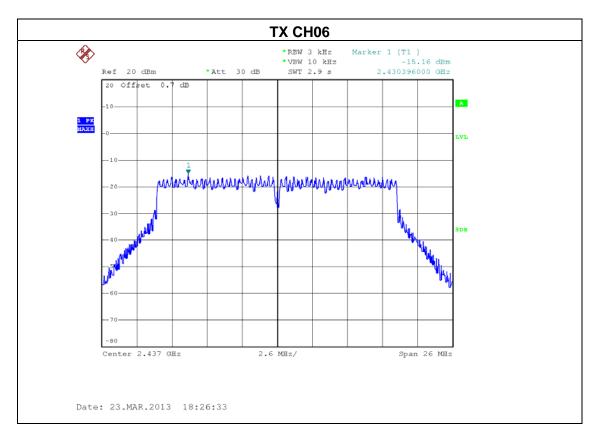
EUT:	Wireless N 300 Cloud Router	Model Name :	DIR-605L	
Temperature:	24 ℃	Relative Humidity:	60 %	
Pressure :	1016 hPa	Test Voltage :	AC 120V/60Hz	
TX N MODE-20MHz /CH01, CH06, CH11 –ANT 2				

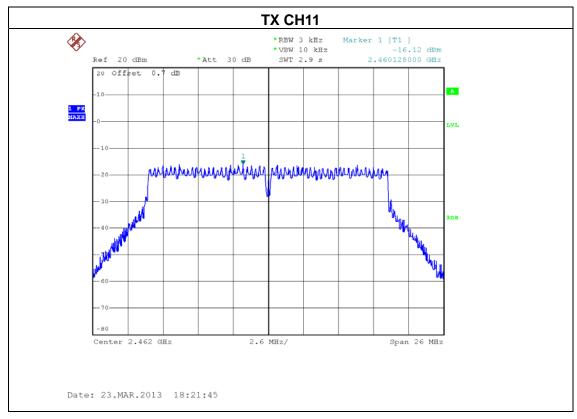
Test Channel	Frequency	Power Density	LIMIT
rest orialine	(MHz)	(dBm)	(dBm)
CH01	2412 MHz	-14.95	8
CH06	2437 MHz	-15.16	8
CH11	2462 MHz	-16.12	8



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EUT:	Wireless N 300 Cloud Router	Model Name :	DIR-605L	
Temperature :	24 ℃	Relative Humidity:	60 %	
Pressure :	1016 hPa	Test Voltage :	AC 120V/60Hz	
Test Mode :	TX N MODE-20MHz /CH01, CH06, CH11			

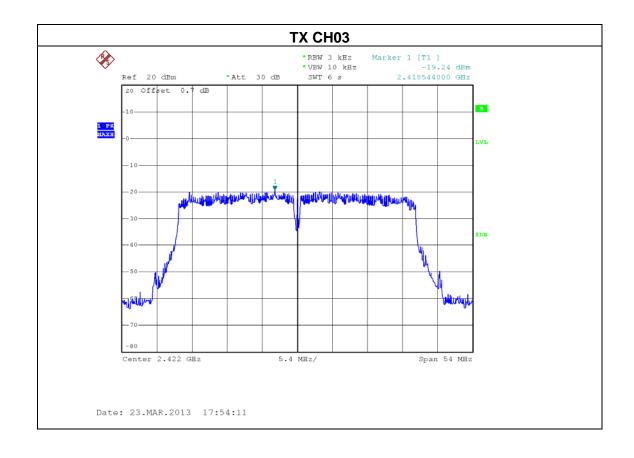
Total (ANT 1 + ANT 2)					
Test Channel	Frequency (MHz)	Power (dBm)	PASS/FAIL		
CH01	2412	-12.26	0.06	8	PASS
CH06	2437	-12.58	0.06	8	PASS
CH011	2462	-12.60	0.05	8	PASS

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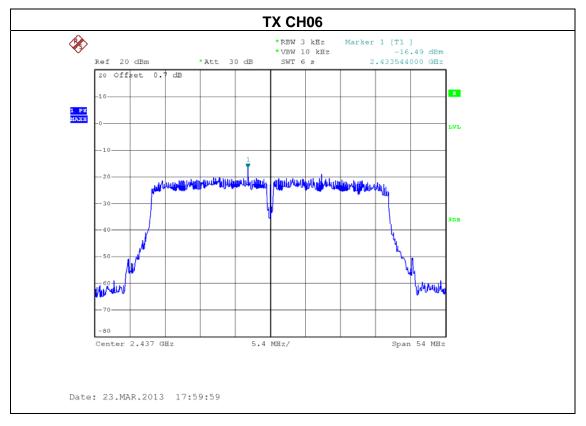
EUT:	Wireless N 300 Cloud Router	Model Name :	DIR-605L		
Temperature :	24 ℃	Relative Humidity:	60 %		
Pressure :	1016 hPa	Test Voltage :	AC 120V/60Hz		
Test Mode :	TX N MODE-40MHz /CH03, CH06, CH09-ANT 1				

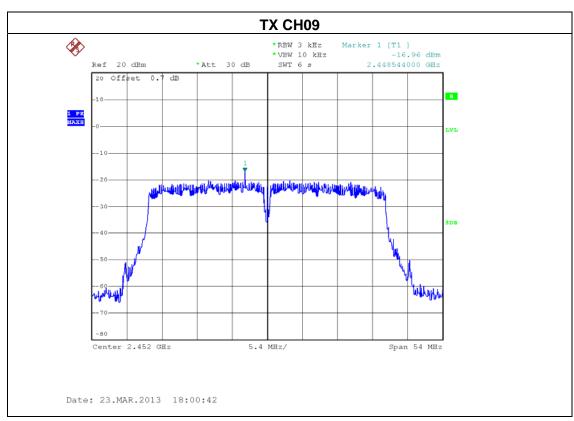
Test Channel	Frequency (MHz)	Power Density (dBm)	LIMIT (dBm)
CH03	2422 MHz	-19.24	8
CH06	2437 MHz	-16.49	8
CH09	2452 MHz	-16.96	8



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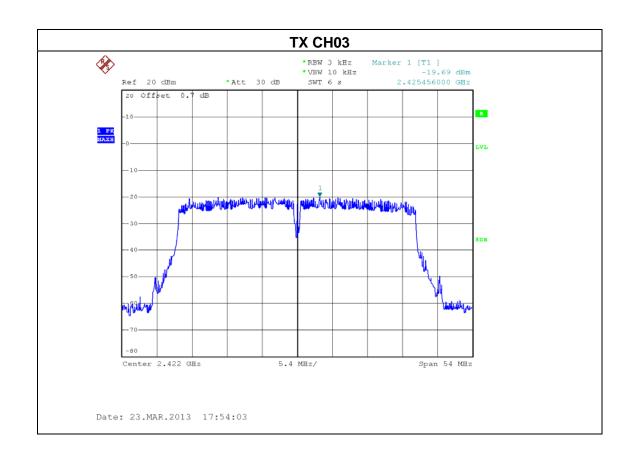




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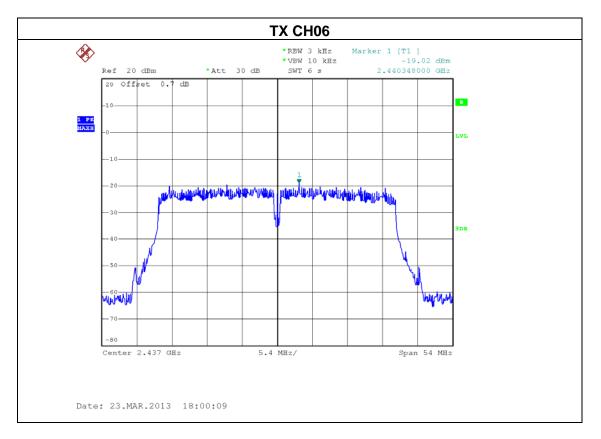
EUT:	Wireless N 300 Cloud Router	Model Name :	DIR-605L		
Temperature :	24 ℃	Relative Humidity:	60 %		
Pressure:	1016 hPa	Test Voltage :	AC 120V/60Hz		
Test Mode :	TX N MODE-40MHz /CH03, CH06, CH09-ANT 2				

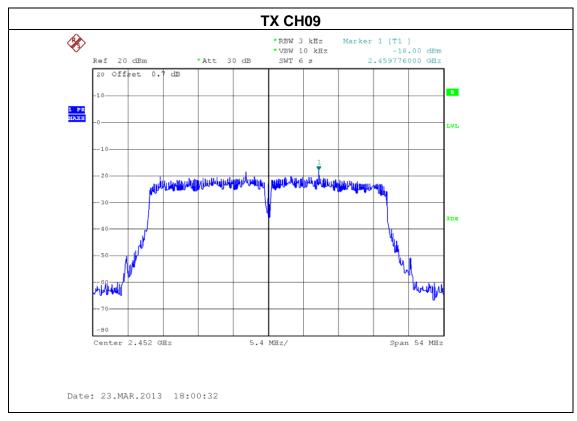
Test Channel	Frequency (MHz)	Power Density (dBm)	LIMIT (dBm)
CH03	2422 MHz	-19.69	8
CH06	2437 MHz	-19.02	8
CH09	2452 MHz	-18.00	8



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EUT:	Wireless N 300 Cloud Router	Model Name :	DIR-605L		
Temperature :	24 ℃	Relative Humidity:	60 %		
Pressure :	1016 hPa	Test Voltage :	AC 120V/60Hz		
Test Mode :	Mode: TX N MODE-40MHz /CH03, CH06, CH09				

Total (ANT 1 + ANT 2)						
Test Channel	Frequency Power density LIMIT (MHz) (dBm) (mW) (dBm)				PASS/FAIL	
CH03	2422	-16.45	0.02	8	PASS	
CH06	2437	-14.56	0.03	8	PASS	
CH09	2452	-14.44	0.04	8	PASS	

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8.1.7. EUT TEST PHOTO

POWER SPECTRAL DENSITY MEASUREMENT PHOTOS



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9. EUT PHOTO





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Adapter: D-Link / F05W-050100SPAU





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Adapter: D-Link / AMS47-0501000FU





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