Shenzhen Huatongwei International Inspection Co., Ltd.
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FCC PART 15 SUBPART C TEST REPORT

FCC PART 15.247

Report Reference No.....:	**WE10040003**
FCC ID..... :	**TE7TDW8950ND**
Compiled by (position+printed name+signature)..:	File administrators Xiankun Ding
Supervised by (position+printed name+signature)..:	Test Engineer Wenliang Li
Approved by (position+printed name+signature)..:	Manager Jimmy Li
Date of issue.....:	May 20, 2010
Testing Laboratory Name .....:	**Shenzhen Huatongwei International Inspection Co., Ltd**
Address .....:	Keji Nan No.12 Road, Hi-tech Park, Shenzhen, China
Applicant's name.....:	**TP-LINK TECHNOLOGIES CO.,LTD.**
Address .....:	Building 7,Section 2,Honghualing Industrial Park,Xili,Nanshan District, Shenzhen, P.R.C.
Test specification:	
Standard .....:	**FCC Part 15.247: Operation within the bands 920-928 MHz, 2400-2483.5 MHz and 5725-5850 MHz Direct Sequence System**
TRF Originator.....:	Shenzhen Huatongwei International Inspection CO., Ltd
Master TRF.....:	Dated 2006-06

Test item description .....:	150Mbps Wireless Lite N ADSL2+ Modem Router
Trade Mark .....:	TP-LINK
Model/Type reference.....:	TD-W8950ND
Listed Models .....:	/
Result.....:	**Positive**

T E S T R E P O R T

Test Report No. :	WE10040003	May 20, 2010 Date of issue

Equipment under Test	:	150Mbps Wireless Lite N ADSL2+ Modem Router
Model /Type	:	TD-W8950ND
Listed Models	:	/
Applicant	:	**TP-LINK TECHNOLOGIES CO.,LTD.**
Address	:	Building 7,Section 2,Honghualing Industrial Park,Xili,Nanshan District, Shenzhen, P.R.C.
Manufacturer		**TP-LINK TECHNOLOGIES CO.,LTD.**
Address	:	Building 7,Section 2,Honghualing Industrial Park,Xili,Nanshan District, Shenzhen, P.R.C.

Test Result according to the standards on page 4:	**Positive**

The test report merely corresponds to the test sample.
It is not permitted to copy extracts of these test result without the written permission of the test laboratory.

Contents

1. TEST STANDARDS

The tests were performed according to following standards:

FCC Rules Part 15.247: Frequency Hopping, Direct Spread Spectrum and Hybrid Systems that are in operation within the bands of 902-928 MHz, 2400-2483.5 MHz, and 5725-5850 MHz.

ANSI C63.4-2009: American National Standard for Methods of Measurement of Radio-Noise Emissions From Low Voltage Electrical and Electronic Equipment in the Range of 9kHz to 40GHz.

ANSI C63.10: American National Standard for Testing Unlicensed Wireless Devices

2 . SUMMARY

2.1. General Remarks

Date of receipt of test sample : Apr 06, 2010

Testing commenced on : Apr 06, 2010

Testing concluded on : May 20, 2010

2.2. Equipment Under Test

Power supply system utilised

Power supply voltage : ○ 120V / 60 Hz ○ 115V / 60Hz
○ 12 V DC ○ 24 V DC
● Other (specified in blank below)

DC 12V Adapter from AC 120V/60Hz

Description of the test mode

IEEE 802.11b/g/n: Thirteen channels are provided to the EUT,but only eleventh channels used for USA.

Channel	Frequency(MHz)	Channel	Frequency(MHz)
1	2412	8	2447
2	2417	9	2452
3	2422	10	2457
4	2427	11	2462
5	2432	12	2467
6	2437	13	2472
7	2442		

2.3. Short description of the Equipment under Test (EUT)

2.4GHz (150Mbps Wireless Lite N ADSL2+ Modem Router)

For more details, refer to the user's manual of the EUT.

Serial number: Prototype

2.4. EUT operation mode

The EUT has been tested under typical operating condition. The Applicant provides software (W8950N_ART_100303) to control the EUT for staying in continous transmitting and receiving mode for testing.

2.5. EUT configuration

The following peripheral devices and interface cables were connected during the measurement:

● - supplied by the manufacturer

○ - supplied by the lab

○ Power Cable	Length (m) : /
	Shield : /
	Detachable : /
○ Multimeter	Manufacturer : /
	Model No. : /
● AC Adapter	MODEL:MU12-2120100-A1
	INPUT:100-240V～50/60Hz 0.5A
	OUTPUT:12V DC 1.0A
	Power Cable:150cm
	◇ Shield ◆ Unshield

2.6. Related Submittal(s) / Grant (s)

This submittal(s) (test report) is intended for **FCC ID: TE7TDW8950ND** filing to comply with Section 15.247 of the FCC Part 15, Subpart C Rules.

2.7. Modifications

No modifications were implemented to meet testing criteria.

2.8. NOTE

1. The EUT is an 802.11b/g/n 150Mbps Wireless Lite N ADSL2+ Modem Router,The functions of the EUT listed as below:

	Test Standards	Reference Report
WLAN 802.11b/g, 802.11n	FCC Part 15 Subpart C (Section15.247)	WE10040003
WLAN 802.11b/g, 802.11n	FCC Part 15 Subpart B	SQE100400010

2. The frequency bands used in this EUT are listed as follows:

Frequency Band(MHz)	2400-2483.5	5150-5350	5470-5725	5725-5850
802.11b	√	—	—	—
802.11g	√	—	—	—
802.11n(20MHz)	√	—	—	—
802.11n(40MHz)	√	—	—	—

3. The EUT incorporates a SISO function,Physically,the EUT provides one completed transmitter and one completed receivers.

Modulation Mode	TX Function
802.11b	1TX
802.11g	1TX
802.11n (20MHz)	1TX
802.11n (40MHz)	1TX

3. TEST ENVIRONMENT

3.1. Address of the test laboratory

Shenzhen Huatongwei International Inspection Co., Ltd
Keji Nan No.12 Road, Hi-tech Park, Shenzhen, China
Phone: 86-755-26715686 Fax: 86-755-26748089

The sites are constructed in conformance with the requirements of ANSI C63.7, ANSI C63.4 (2009) and CISPR Publication 22.

3.2. Test Facility

The test facility is recognized, certified, or accredited by the following organizations:

CNAS-Lab Code: L1225

Shenzhen Huatongwei International Inspection Co., Ltd has been assessed and proved to be in compliance with CNAS-CL01 Accreditation Criteria for Testing and Calibration Laboratories (identical to ISO/IEC 17025: 2005 General Requirements) for the Competence of Testing and Calibration Laboratories, Date of Registration: August 02, 2007. Valid time is until March 29, 2012.

A2LA-Lab Cert. No. 2243.01

Shenzhen Huatongwei International Inspection Co., Ltd, EMC Laboratory has been accredited by A2LA for technical competence in the field of electrical testing, and proved to be in compliance with ISO/IEC 17025: 2005 General Requirements for the Competence of Testing and Calibration Laboratories and any additional program requirements in the identified field of testing. Valid time is from Aug 24, 2005 to Oct 31, 2009.

FCC-Registration No.: 662850

Shenzhen Huatongwei International Inspection Co., Ltd, EMC Laboratory has been registered and fully described in a report filed with the FCC (Federal Communications Commission). The acceptance letter from the FCC is maintained in our files. Registration 662850, Renewal date July 01, 2009.

IC-Registration No.: 5377

The 3m Alternate Test Site of Shenzhen Huatongwei International Inspection Co., Ltd has been registered by Certification and Engineering Bureau of Industry Canada for the performance of radiated measurements with Registration No. 5377 on February 13th , 2011.

ACA

Shenzhen Huatongwei International Inspection Co., Ltd, EMC Laboratory can also perform testing for the Australian C-Tick mark as a result of our A2LA accreditation.

NEMKO-Aut. No.: ELA125

Shenzhen Huatongwei International Inspection Co., Ltd has been assessed the quality assurance system, the testing facilities, qualifications and testing practices of the relevant parts of the organization. The quality assurance system of the Laboratory has been validated against ISO/IEC 17025:2005 or equivalent. The laboratory also fulfils the conditions described in Nemko Document NLA-10, the Authorization is valid through April 25, 2009.

VCCI

The 3m Semi-anechoic chamber (12.2m×7.95m×6.7m) and Shielded Room (8m×4m×3m) of Shenzhen Huatongwei International Inspection Co., Ltd has been registered in accordance with the Regulations for Voluntary Control Measures with Registration No.: R-2484. Date of Registration: December 20, 2006. Valid time is until December 19, 2009.

Main Ports Conducted Interference Measurement of Shenzhen Huatongwei International Inspection Co., Ltd has been registered in accordance with the Regulations for Voluntary Control Measures with Registration No.: C-2726. Date of Registration: December 20, 2006. Valid time is until December 19, 2009.

DNV

Shenzhen Huatongwei International Inspection Co Ltd has been found to comply with the requirements of DNV towards subcontractor of EMC and safety testing services in conjunction with the EMC and Low voltage Directives and in the voluntary field. The acceptance is based on a formal quality Audit and follow-ups according to relevant parts of ISO/IEC Guide 17025(2005), in accordance with the requirements of the DNV Laboratory Quality Manual towards subcontractors. Valid time is until 09 July, 2010.

3.3. Environmental conditions

During the measurement the environmental conditions were within the listed ranges:

Temperature: 15-35 ° C

Humidity: 30-60 %

Atmospheric pressure: 950-1050mbar

3.4. Configuration of Tested System

Fig. 2-1 Configuration of Tested System

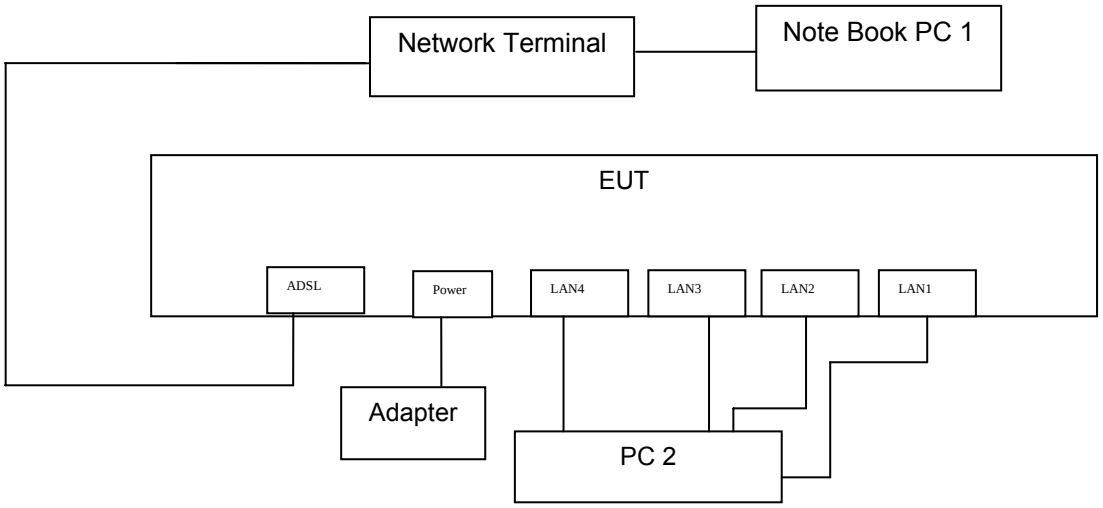


Table 2-1 Equipment Used in Tested System

No.	Product	Manufacturer	Model No.	Serial No.	FCC ID
1	Notebook PC 1	IBM	1843-2XL	LV-BLH05 06/02	FCC DoC
2	PC 2	IBM	8126KCF	L3DC575	FCC DoC
3	LCD Display	BenQ	FP71G^{+}	ETR7701900CL0	CCC
4	Network Terminal	ZTE	ZXDSL 9860H	94A52X419TNP50Y	------

3.5. Test Description

FCC PART 15		
FCC Part 15.207	AC Power Conducted Emission	PASS
FCC Part 15.247(a)(2)	6dB Bandwidth	PASS
FCC Part 15.247(d)	Spurious RF Conducted Emission	PASS
FCC Part 15.247(b)	Maximum Peak Output Power	PASS
FCC Part 15.247(e)	Power Spectral Density	PASS
FCC Part 15.109/ 15.205/ 15.209	Radiated Emissions	PASS
FCC Part 15.247(d)	Band Edge Compliance of RF Emission	PASS
FCC Part 15.203/15.247 (b)	Antenna Requirement	PASS
FCC Part1.1307 (b)	MPE Evaluation	PASS

Remark: The measurement uncertainty is not included in the test result.

Preliminary tests were performed in different data rate to find the worst radiated emission. The data rate shown in the table below is the worst-case rate with respect to the specific test item. Investigation has been done on all the possible configurations for searching the worst cases. The following table is a list of the test modes shown in this test report.

Test Items	Mode	Data Rate	Channel
AC Power Conducted Emission	Normal Link	11 Mbps	1
Maximum Peak Conducted Output Power Power Spectral Density 6dB Bandwidth Spurious RF conducted emission	11b/DSSS	11 Mbps	1/6/11
	11g/OFDM	54 Mbps	1/6/11
	11n(20MHz)/OFDM	65 Mbps	1/6/11
	11n(40MHz)/OFDM	135 Mbps	3/6/9
Radiated Emission 9kHz~1GHz	11b/DSSS	11 Mbps	1/6/11
	11g/OFDM	54 Mbps	1/6/11
	11n(20MHz)/OFDM	65 Mbps	1/6/11
	11n(40MHz)/OFDM	135 Mbps	3/6/9
Radiated Emission 1GHz~10th Harmonic	11b/DSSS	11 Mbps	1/6/11
	11g/OFDM	54 Mbps	1/6/11
	11n(20MHz)/OFDM	65 Mbps	1/6/11
	11n(40MHz)/OFDM	135 Mbps	3/6/9
Band Edge Compliance of RF Emission	11b/DSSS	11 Mbps	1/11
	11g/OFDM	54 Mbps	1/11
	11n(20MHz)/OFDM	65 Mbps	1/11
	11n(40MHz)/OFDM	135 Mbps	3/9

3.6. Statement of the measurement uncertainty

The data and results referenced in this document are true and accurate. The reader is cautioned that there may be errors within the calibration limits of the equipment and facilities. The measurement uncertainty was calculated for all measurements listed in this test report acc. to CISPR 16 - 4 „Specification for radio disturbance and immunity measuring apparatus and methods – Part 4: Uncertainty in EMC Measurements“ and is documented in the Shenzhen Huatongwei International Inspection Co., Ltd quality system acc. to DIN EN ISO/IEC 17025. Furthermore, component and process variability of devices similar to that tested may result in additional deviation. The manufacturer has the sole responsibility of continued compliance of the device.

Hereafter the best measurement capability for Shenzhen Huatongwei laboratory is reported:

Test	Range	Measurement Uncertainty	Notes
Radiated Emission	30~1000MHz	4.24 dB	(1)
Radiated Emission	1~18GHz	5.16 dB	(1)
Radiated Emission	18-40GHz	5.54 dB	(1)
Conducted Disturbance	0.15~30MHz	3.39 dB	(1)

(1) This uncertainty represents an expanded uncertainty expressed at approximately the 95% confidence level using a coverage factor of k=2.

3.7. Equipments Used during the Test

AC Power Conducted Emission					
Item	Test Equipment	Manufacturer	Model No.	Serial No.	Last Cal.
1	EMI TEST RECEIVER	ROHDE & SCHWARZ	ESCS30	100038	2009/11
2	ARTIFICIAL MAINS	ROHDE & SCHWARZ	ESH2-Z5	100028	2009/11
3	PULSE LIMITER	ROHDE & SCHWARZ	ESHSZ2	100044	2009/11
4	EMI TEST SOFTWARE	ROHDE & SCHWARZ	ES-K1 1.71	N/A	2009/11

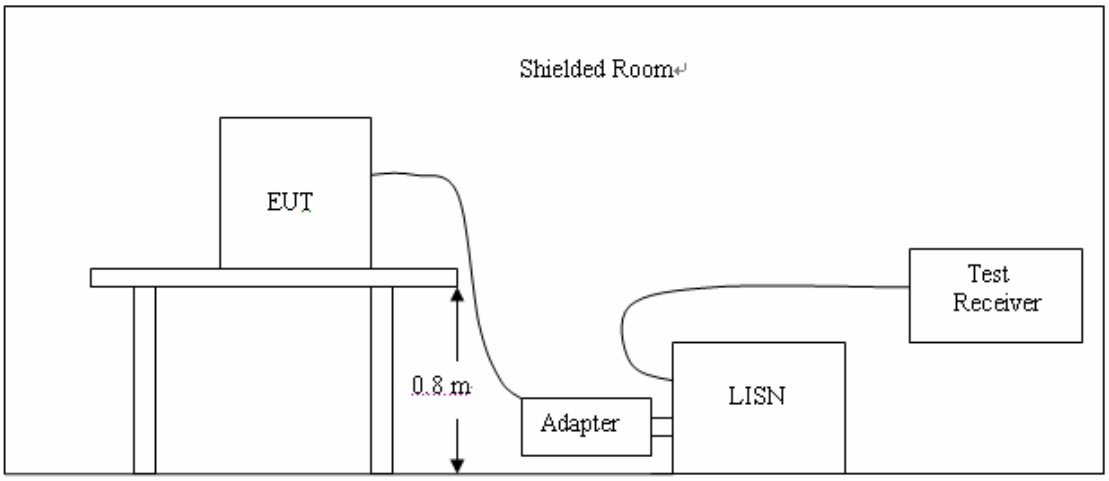
Radiated Emission					
Item	Test Equipment	Manufacturer	Model No.	Serial No.	Last Cal.
1	ULTRA-BROADBAND ANTENNA	ROHDE & SCHWARZ	HL562	100015	2009/11
2	EMI TEST RECEIVER	ROHDE & SCHWARZ	ESI 26	100009	2009/11
3	RF TEST PANEL	ROHDE & SCHWARZ	TS / RSP	335015/ 0017	2009/11
4	TURNTABLE	ETS	2088	2149	2009/11
5	ANTENNA MAST	ETS	2075	2346	2009/11
6	EMI TEST SOFTWARE	ROHDE & SCHWARZ	ESK1	N/A	2009/11

Maximum Peak Output Power / Power Spectral Density / 6dB Bandwidth / Band Edge Compliance of RF Emission / Spurious RF Conducted Emission					
Item	Test Equipment	Manufacturer	Model No.	Serial No.	Last Cal.
1	EMI TEST RECEIVER	ROHDE & SCHWARZ	ESI 26	100009	2009/11
2	Power Meter	Anritsu	ML2487A	6K00001568	2009/11
3	Power Meter Sensor	Anritsu	ML2491A	0630989	2009/11

4. TEST CONDITIONS AND RESULTS

4.1. AC Power Conducted Emission

TEST CONFIGURATION



TEST PROCEDURE

1 The equipment was set up as per the test configuration to simulate typical actual usage per the user's manual. The EUT is a tabletop system, a wooden table with a height of 0.8 meters is used and is placed on the ground plane as per ANSI C63.4-2009.
2 Support equipment, if needed, was placed as per ANSI C63.4-2009
3 All I/O cables were positioned to simulate typical actual usage as per ANSI C63.4-2009
4 The EUT received DC8V power from the adapter, the adapter received AC120V/60Hz power through a Line Impedance Stabilization Network (LISN) which supplied power source and was grounded to the ground plane.
5 All support equipments received AC power from a second LISN, if any.
6 The EUT test program was started. Emissions were measured on each current carrying line of the EUT using a spectrum Analyzer / Receiver connected to the LISN powering the EUT. The LISN has two monitoring points: Line 1 (Hot Side) and Line 2 (Neutral Side). Two scans were taken: one with Line 1 connected to Analyzer / Receiver and Line 2 connected to a 50 ohm load; the second scan had Line 1 connected to a 50 ohm load and Line 2 connected to the Analyzer / Receiver.
7 Analyzer / Receiver scanned from 150 KHz to 30MHz for emissions in each of the test modes.
8 During the above scans, the emissions were maximized by cable manipulation.

AC Power Conducted Emission Limit

For intentional device, according to § 15.207(a) AC Power Conducted Emission Limits is as following：

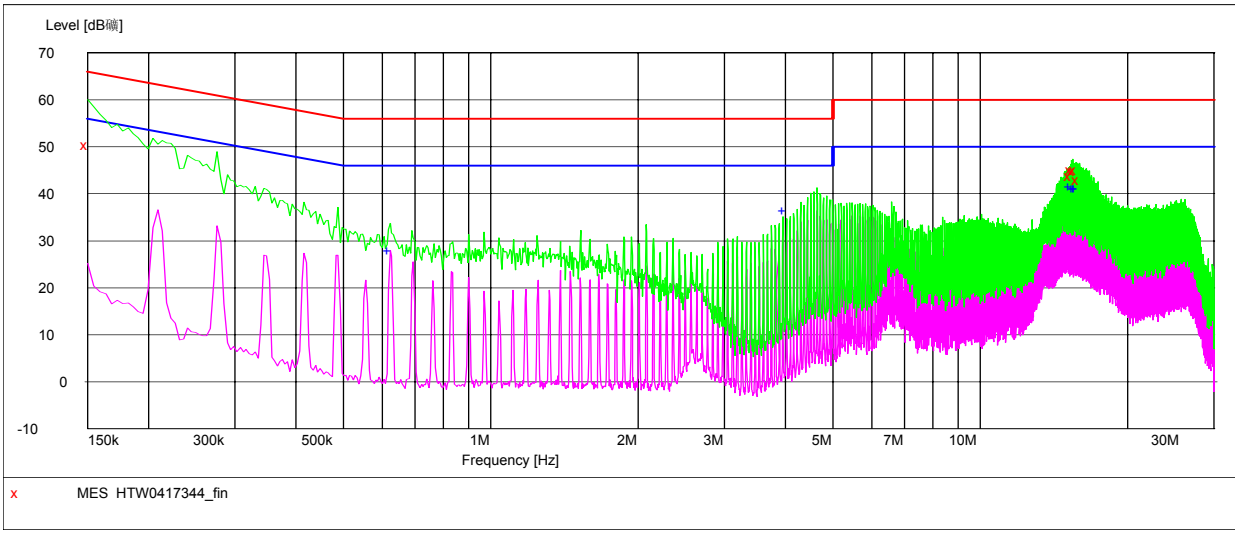
Frequency (MHz)	Maximum RF Line Voltage (dBμV)			
	CLASS A		CLASS B	
	Q.P.	Ave.	Q.P.	Ave.
0.15 - 0.50	79	66	66-56*	56-46*
0.50 - 5.00	73	60	56	46
5.00 - 30.0	73	60	60	50

* Decreasing linearly with the logarithm of the frequency

TEST RESULTS

SCAN TABLE: "Voltage (9K-30M)FIN"

Short Description: 150K-30M Voltage



MEASUREMENT RESULT: "HTW0417344_fin"

4/17/2010 7:48PM

Frequency MHz	Level dBµV	Transd dB	Limit dBµV	Margin dB	Detector	Line	PE
0.150000	50.40	10.1	66	15.6	QP	L1	GND
15.355500	43.70	10.6	60	16.3	QP	L1	GND
15.423000	45.00	10.7	60	15.0	QP	L1	GND
15.625500	44.80	10.7	60	15.2	QP	L1	GND
15.697500	45.00	10.7	60	15.0	QP	L1	GND
15.909000	43.00	10.7	60	17.0	QP	L1	GND

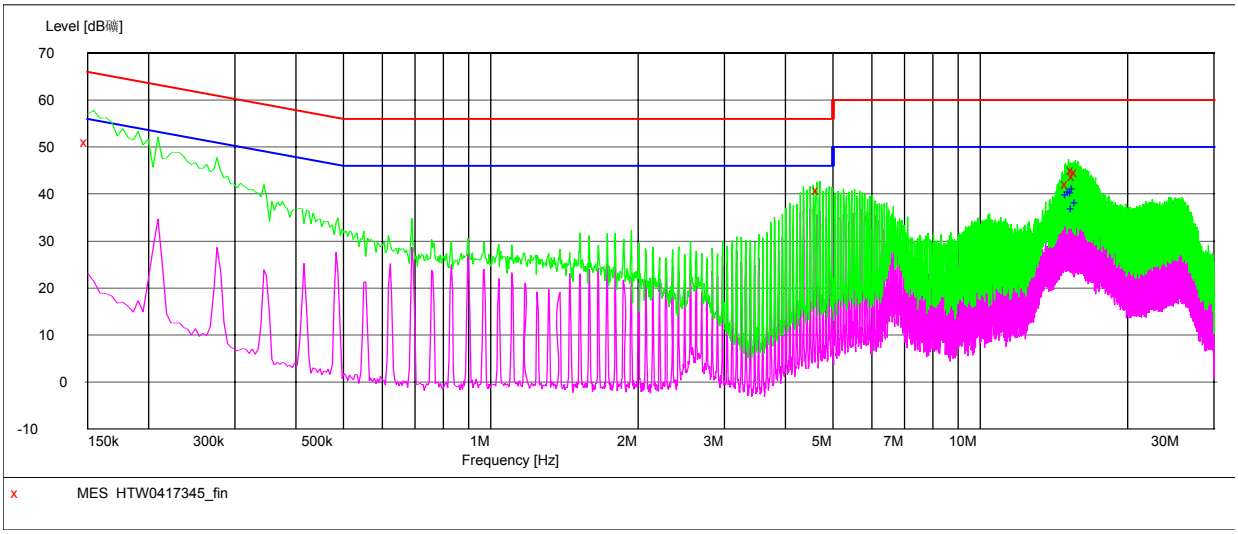
MEASUREMENT RESULT: "HTW0417344_fin2"

4/17/2010 7:50PM

Frequency MHz	Level dBµV	Transd dB	Limit dBµV	Margin dB	Detector	Line	PE
0.622500	27.90	10.1	46	18.1	AV	L1	GND
4.000000	36.40	10.1	46	9.6	AV	L1	GND
15.351000	41.50	10.6	50	8.5	AV	L1	GND
15.558000	41.10	10.7	50	8.9	AV	L1	GND
15.697500	41.00	10.7	50	9.0	AV	L1	GND
15.765000	40.90	10.7	50	9.1	AV	L1	GND

SCAN TABLE: "Voltage (9K-30M)FIN"

Short Description: 150K-30M Voltage



MEASUREMENT RESULT: "HTW0417345_fin"

4/17/2010 7:55PM

Frequency MHz	Level dBµV	Transd dB	Limit dBµV	Margin dB	Detector	Line	PE
0.150000	51.00	10.1	66	15.0	QP	N	GND
4.695000	40.90	10.2	56	15.1	QP	N	GND
15.126000	42.10	10.6	60	17.9	QP	N	GND
15.535500	45.00	10.7	60	15.0	QP	N	GND
15.607500	43.80	10.7	60	16.2	QP	N	GND
15.810000	44.60	10.7	60	15.4	QP	N	GND

MEASUREMENT RESULT: "HTW0417345_fin2"

4/17/2010 7:55PM

Frequency MHz	Level dBµV	Transd dB	Limit dBµV	Margin dB	Detector	Line	PE
15.121500	39.80	10.6	50	10.2	AV	N	GND
15.328500	40.40	10.6	50	9.6	AV	N	GND
15.468000	40.20	10.7	50	9.8	AV	N	GND
15.540000	36.80	10.7	50	13.2	AV	N	GND
15.603000	41.10	10.7	50	8.9	AV	N	GND
15.814500	38.10	10.7	50	11.9	AV	N	GND

REMARKS：

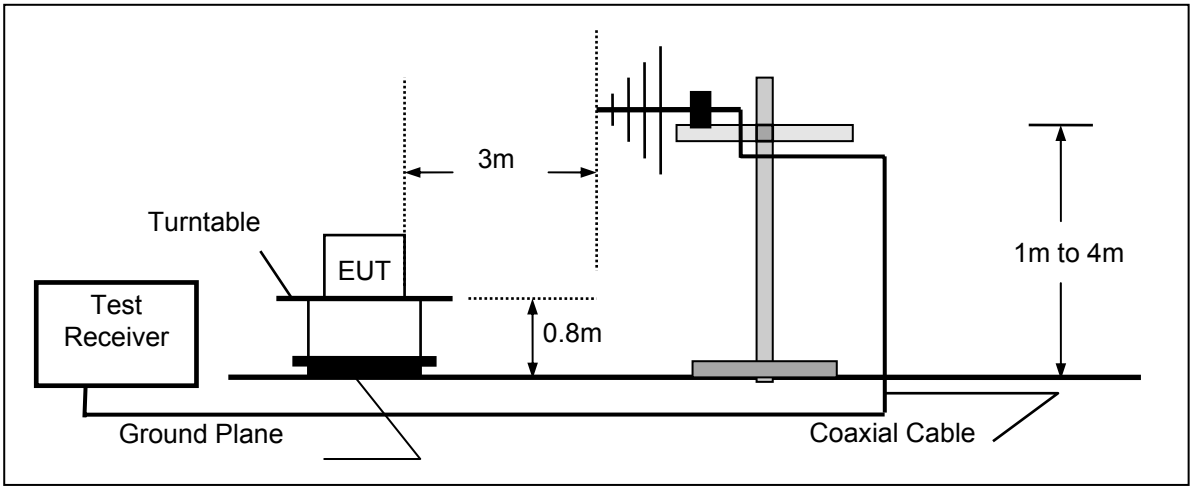
1. Margin value = Limit value- Emission level

2. The EUT was set to be normal operation condition. Each Ethernet port was connected and data pay lead was transmitted at highest data rate. The RF chip can be operated in 802.11g and 802.11b and 802.11n mode. The rf chip will detect the environment and select the proper mode automatically. The WLAN function was set to normal operation condition.

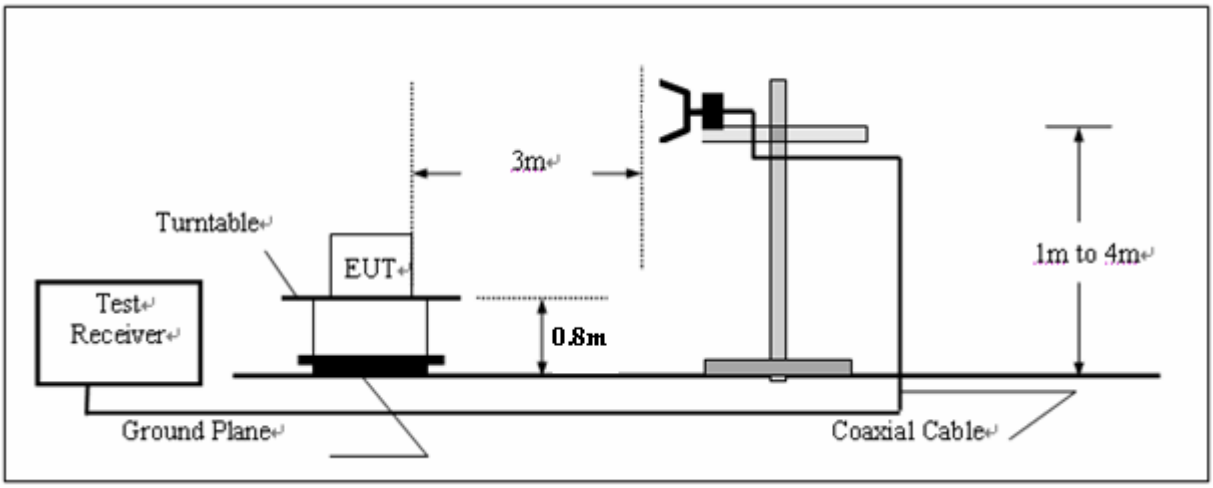
4.2. Radiated Emission

TEST CONFIGURATION

(a) Radiated Emission Test Set-Up, Frequency below 1000MHz



(b) Radiated Emission Test Set-Up, Frequency above 1000MHz



TEST PROCEDURE

1 The EUT was placed on a turn table which is 0.8m above ground plane.
2 Maximum procedure was performed by raising the receiving antenna from 1m to 4m and rotating the turn table from 0℃ to 360℃ to acquire the highest emissions from EUT
3. And also, each emission was to be maximized by changing the polarization of receiving antenna both horizontal and vertical.
4. Repeat above procedures until all frequency measurements have been completed.

Field Strength Calculation

The field strength is calculated by adding the Antenna Factor and Cable Factor and subtracting the Amplifier Gain and Duty Cycle Correction Factor(if any) from the measured reading. The basic equation with a sample calculation is as follows:

FS = RA + AF + CL - AG

Where FS = Field Strength	CL = Cable Attenuation Factor (Cable Loss)
RA = Reading Amplitude	AG = Amplifier Gain
AF = Antenna Factor	

RADIATION LIMIT

For intentional device, according to § 15.209(a), the general requirement of field strength of radiated emission from intentional radiators at a distance of 3 meters shall not exceed the following table. According to § 15.247(d), in any 100kHz bandwidth outside the frequency band in which the EUT is operating, the radio frequency power that is produced by the intentional radiator shall be at least 20dB below that in the100kHz bandwidth within the band that contains the highest level of desired power.

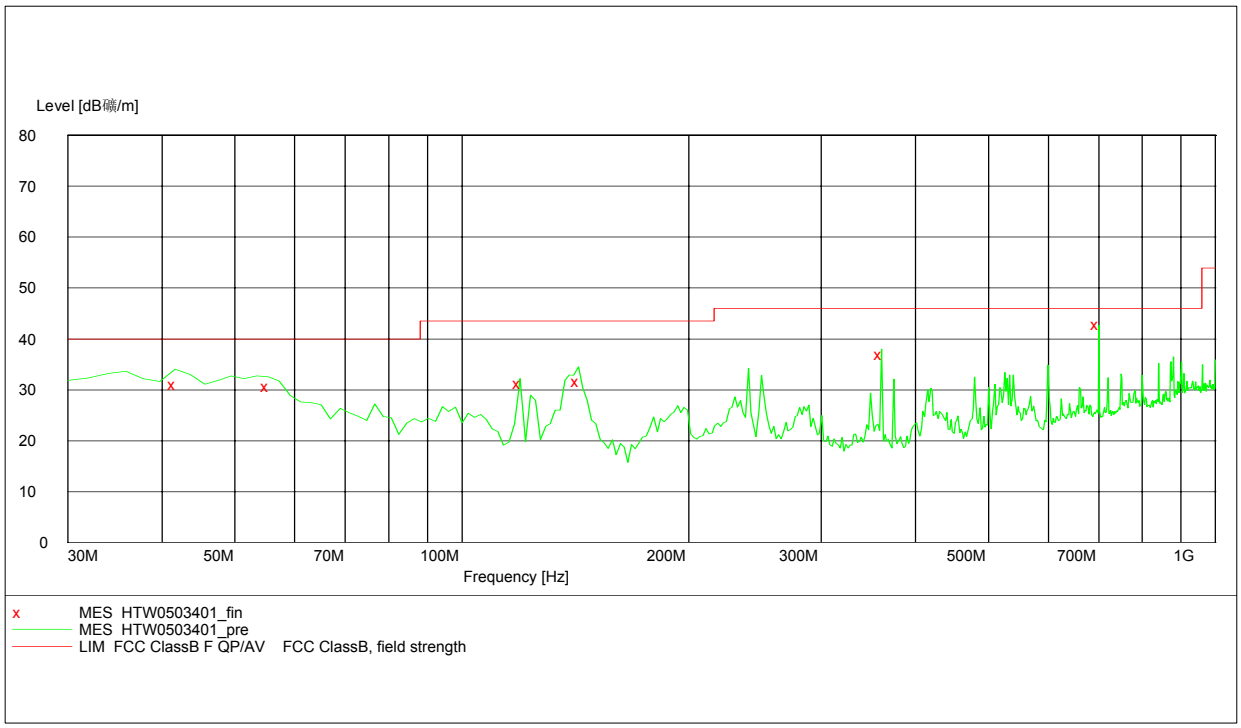
Frequency (MHz)	Distance (Meters)	Radiated (dBμV/m)	Radiated (μV/m)
30-88	3	40.0	100
88-216	3	43.5	150
216-960	3	46.0	200
Above 960	3	54.0	500

TEST RESULTS

The radiated measurement are performed the each test mode (b/g/n) and channel (low/mid/high), the datum recorded below (802.11b mode,the middle channel) is the worst case for all the test mode and channel.

SCAN TABLE: "test Field(30M-1G)QP"

```
Short Description:            Field Strength(30M-1G)
Start      Stop       Step       Detector  Meas.     IF       Transducer
Frequency  Frequency  Width                Time      Bandw.
30.0 MHz   1.0 GHz    60.0 kHz   QuasiPeak 1.0 s     120 kHz HL562 09
```



MEASUREMENT RESULT: "HTW0503401_fin"

Frequency (MHz)	Emssion Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (cm)	Dete ctor	Antenna Factor (dB/m)	Cable Factor (dB)	Pre-amplifier (dB)	Correction Factor (dB/m)	Polari-zation
41.6	31.10	40.00	8.90	100	QP	14.20	6.40	-31.80	-11.20	V
55.27	30.60	40.00	9.40	150	QP	7.30	9.70	-34.80	-17.80	V
119.42	31.20	43.50	12.30	100	QP	11.60	7.50	-31.90	-12.80	V
142.75	31.50	43.50	12.00	150	QP	9.00	7.60	-32.00	-15.40	V
360.46	37.00	46.00	9.00	150	QP	13.90	8.50	-31.90	-9.50	V
699.96	42.70	46.00	3.30	150	QP	19.40	9.80	-32.00	-2.80	V

REMARKS :

1. ∗Undetectable
2. The IF bandwidth of EMI Test Receiver was 120KHz for measuring from 30 MHz to 1 GHz and 1 MHz for measuring above 1 GHz
3.The Transd=Cabel loss +Antenna factor +pre-amplifier factor

SCAN TABLE: "test Field(30M-1G)QP"

```
Short Description:              Field Strength(30M-1G)
Start      Stop       Step       Detector  Meas.     IF       Transducer
Frequency  Frequency  Width                Time      Bandw.
30.0 MHz   1.0 GHz    60.0 kHz   QuasiPeak 1.0 s     120 kHz HL562 09
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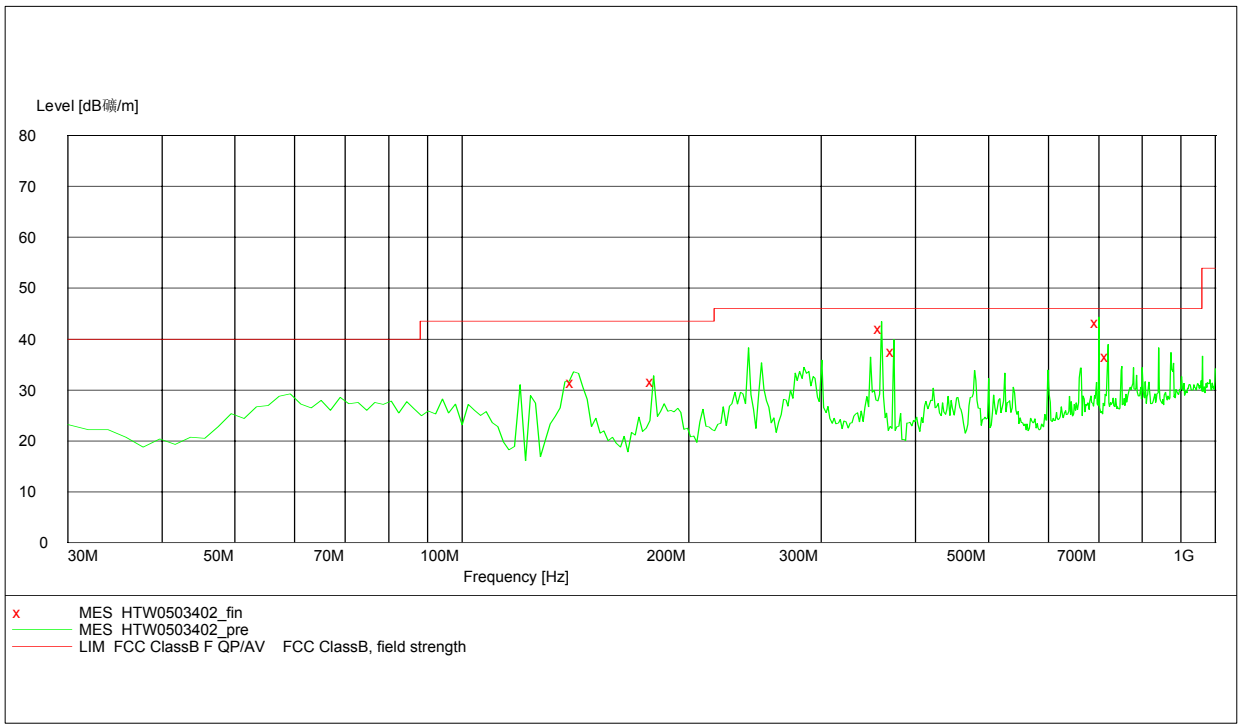


MEASUREMENT RESULT: "HTW0503402_fin"

Frequency (MHz)	Emssion Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (cm)	Dete ctor	Antenna Factor (dB/m)	Cable Factor (dB)	Pre-amplifier (dB)	Correction Factor (dB/m)	Polari-zation
140.80	31.50	43.50	12.0	300	QP	9.3	7.4	-32.0	-15.3	H
179.68	31.60	43.50	11.9	100	QP	7.3	7.9	-32.0	-16.8	H
360.46	42.10	46.00	3.9	100	QP	13.9	8.5	-31.9	-9.5	H
374.07	37.50	46.00	8.5	100	QP	14.2	8.5	-31.9	-9.2	H
699.96	43.20	46.00	2.8	100	QP	19.4	9.8	-32.0	-2.8	H
720.08	36.50	46.00	9.5	100	QP	19.3	9.7	-31.9	-2.9	H

REMARKS：

1. ∗Undetectable
2. The IF bandwidth of EMI Test Receiver was 120KHz for measuring from 30 MHz to 1 GHz and 1 MHz for measuring above 1 GHz
3.The Transd=Cabel loss +Antenna factor +pre-amplifier factor

The frequency spectrum above 1 GHz for Transmitter was investigated. All emission not reported are much lower than the prescribed limits. Set the RBW=1MHz,VBW=3MHz for Peak Detector while the RBW=1MHz,VBW=10Hz for Average Detector,Readings are both peak and average values.

Company	TP-LINK TECHNOLOGIES CO.,LTD.	Test Date	20/04/2010
Test Mode	802.11b Channel 1	Detector Function	Peak(PK)/Average(AV)
Product Name	150Mbps Wireless Lite N ADSL2+ Modem Router	Test By	Wenliang Li
Model Name	TD-W8950ND	TEMP&Humidity	25°C, 55%

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M

No.	Frequency (MHz)	Emssion Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Antenna Factor (dB/m)	Cable Factor (dB)	Pre-amplifier (dB)	Correction Factor (dB/m)
1	1408.10	36.30 PK	74.00	37.70	1.00 H	178	45.10	25.1	2.80	-36.7	-8.80
1	1408.10	27.70 AV	54.00	26.30	1.00 H	89	36.50	25.1	2.80	-36.7	-8.80
2	2390.00	37.60 PK	74.00	36.40	1.00 H	216	41.00	28.3	4.90	-36.6	-3.40
2	2390.00	23.40 AV	54.00	36.60	1.00 H	216	26.80	28.3	4.90	-36.6	-3.40
3	*2412.00	102.40 PK			1.00 H	360	105.80	28.3	4.90	-36.6	-3.40
3	*2412.00	88.30 AV			1.00 H	360	91.60	28.3	4.90	-36.6	-3.40
4	4824.00	44.70 PK	74.00	29.30	1.00 H	359	41.50	32.7	7.00	-36.5	3.20
4	4824.00	33.30 AV	54.00	20.70	1.00 H	359	30.10	32.7	7.00	-36.5	3.20
5	7236.00	51.30 PK	74.00	22.70	1.00 H	152	41.90	35.8	8.90	-35.3	9.40
5	7236.00	39.00 AV	54.00	15.00	1.00 H	152	29.60	35.8	8.90	-35.3	9.40
6	9648.00	58.00 PK	74.00	16.00	1.00 H	140	45.40	37.2	10.20	-34.8	12.60
6	9648.00	46.20 AV	54.00	7.80	1.00 H	140	33.60	37.2	10.20	-34.8	12.60

ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M

No.	Frequency (MHz)	Emssion Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Antenna Factor (dB/m)	Cable Factor (dB)	Pre-amplifier (dB)	Correction Factor (dB/m)
1	1408.10	40.00 PK	74.00	34.00	1.00 V	330	48.80	25.1	2.80	-36.7	-8.80
1	1408.10	31.50 AV	54.00	22.50	1.00 V	330	40.30	25.1	2.80	-36.7	-8.80
2	2390.00	57.00 PK	74.00	17.00	1.00 V	192	60.40	28.3	4.90	-36.6	-3.40
2	2390.00	43.60 AV	54.00	10.40	1.00 V	192	47.00	28.3	4.90	-36.6	-3.40
3	*2412.00	106.40 PK			1.00 V	124	109.80	28.3	4.90	-36.6	-3.40
3	*2412.00	91.20 AV			1.00 V	124	94.60	28.3	4.90	-36.6	-3.40
4	4824.00	47.30 PK	74.00	26.70	1.00 V	339	44.10	32.7	7.00	-36.5	3.20
4	4824.00	35.30 AV	54.00	18.70	1.00 V	339	32.10	32.7	7.00	-36.5	3.20
5	7236.00	51.70 PK	74.00	22.30	1.00 V	340	42.30	35.8	8.90	-35.3	9.40
5	7236.00	38.70 AV	54.00	15.30	1.00 V	340	29.30	35.8	8.90	-35.3	9.40
6	9648.00	58.70 PK	74.00	15.30	1.00	20	46.10	37.2	10.20	-34.8	12.60
6	9648.00	46.40 AV	54.00	7.60	1.00 V	20	33.80	37.2	10.20	-34.8	12.60

REMARKS:
1. Emission level (dBuV/m) =Raw Value (dBuV) + Correction Factor (dB/m)
2. Correction Factor (dB/m) = Antenna Factor (dB/m) + Cable Factor (dB)+Pre-amplifier Factor
3. The other emission levels were very low against the limit.
4. Margin value = Limit value- Emission level.
5. The limit value is defined as per 15.247
6. “* “: Fundamental frequency
7. For Wireless 802.11b mode at 11Mbps.

Company	TP-LINK TECHNOLOGIES CO.,LTD.	Test Date	20/04/2010
Test Mode	802.11b Channel 6	Detector Function	Peak(PK)/Average(AV)
Product Name	150Mbps Wireless Lite N ADSL2+ Modem Router	Test By	Wenliang Li
Model Name	TD-W8950ND	TEMP&Humidity	25°C, 55%

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M

No.	Frequency (MHz)	Emssion Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Antenna Factor (dB/m)	Cable Factor (dB)	Pre-amplifier (dB)	Correction Factor (dB/m)
1	*2437.00	105.30 PK			1.00 H	153	108.50	28.3	5.10	-36.6	-3.20
1	*2437.00	92.30 AV			1.00 H	153	95.50	28.3	5.10	-36.6	-3.20
2	4874.00	46.40 PK	74.00	27.60	1.00 H	202	43.20	32.3	7.60	-36.5	3.40
2	4874.00	35.00 AV	54.00	19.00	1.00 H	202	31.60	32.3	7.60	-36.5	3.40
3	7311.00	51.10 PK	74.00	22.90	1.00 H	355	41.70	36.1	8.60	-35.3	9.40
3	7311.00	39.00 AV	54.00	15.00	1.00 H	355	29.60	36.1	8.60	-35.3	9.40
4	9748.00	58.20 PK	74.00	15.80	1.00 H	28	45.60	37.2	10.20	-34.8	12.60
4	9748.00	46.20 AV	54.00	7.80	1.00 H	28	33.60	37.2	10.20	-34.8	12.60

ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M

No.	Frequency (MHz)	Emssion Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Antenna Factor (dB/m)	Cable Factor (dB)	Pre-amplifier (dB)	Correction Factor (dB/m)
1	*2437.00	107.70 PK			1.00 V	121	110.90	28.3	5.10	-36.6	-3.20
1	*2437.00	96.20 AV			1.00 V	121	98.40	28.3	5.10	-36.6	-3.20
2	4874.00	47.00 PK	74.00	27.00	1.00 V	97	43.60	32.3	7.60	-36.5	3.40
2	4874.00	35.10 AV	54.00	18.90	1.00 V	97	32.10	32.3	7.60	-36.5	3.40
3	7311.00	55.10 PK	74.00	22.90	1.00 V	288	45.70	36.1	8.60	-35.3	9.40
3	7311.00	39.10 AV	54.00	14.90	1.00 V	288	29.70	36.1	8.60	-35.3	9.40
4	9748.00	59.30 PK	74.00	14.70	1.00 V	89	46.70	37.2	10.20	-34.8	12.60
4	9748.00	46.20 AV	54.00	7.80	1.00 V	89	33.60	37.2	10.20	-34.8	12.60

REMARKS: 1. Emission level (dBuV/m)=Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor (dB/m) = Antenna Factor (dB/m) + Cable Factor (dB))+ Pre-amplifier Factor
3. The other emission levels were very low against the limit.
4. Margin value = Limit value- Emission level.
5. The limit value is defined as per 15.247
6. "* ": Fundamental frequency
7. For Wireless 802.11b mode at 11Mbps.

Company	TP-LINK TECHNOLOGIES CO.,LTD.	Test Date	20/04/2010
Test Mode	802.11b Channel 11	Detector Function	Peak(PK)/Average(AV)
Product Name	150Mbps Wireless Lite N ADSL2+ Modem Router	Test By	Wenliang Li
Model Name	TD-W8950ND	TEMP&Humidity	25°C, 55%

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M

No.	Frequency (MHz)	Emssion Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Antenna Factor (dB/m)	Cable Factor (dB)	Pre-amplifier (dB)	Correction Factor (dB/m)
1	*2462.00	104.90 PK			1.00 H	154	108.20	28.6	4.70	-36.6	-3.30
1	*2462.00	91.70 AV			1.00 H	154	95.00	28.6	4.70	-36.6	-3.30
2	2483.50	36.70 PK	74.00	37.30	1.00 H	146	40.00	28.6	4.70	-36.6	-3.30
2	2483.50	23.10 AV	54.00	30.90	1.00 H	146	26.40	28.6	4.70	-36.6	-3.30
3	4022.04	45.20 PK	74.00	28.80	1.00 H	341	43.30	32.2	6.20	-36.5	1.90
3	4022.04	33.30 AV	54.00	20.70	1.00 H	341	31.40	32.2	6.20	-36.5	1.90
4	4924.00	47.10 PK	74.00	26.90	1.00 H	100	43.30	33.0	7.00	-36.2	3.80
4	4924.00	35.10 AV	54.00	18.90	1.00 H	100	31.30	33.0	7.00	-36.2	3.80
5	7386.00	54.40 PK	74.00	19.60	1.00 H	190	45.00	36.2	8.50	-35.3	9.40
5	7386.00	42.30 AV	54.00	11.70	1.00 H	190	32.90	36.2	8.50	-35.3	9.40
6	9848.00	59.00 PK	74.00	15.00	1.00 H	113	46.40	37.2	10.20	-34.8	12.60
6	9848.00	46.40 AV	54.00	7.60	1.00 H	113	33.80	37.2	10.20	-34.8	12.60

ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M

No.	Frequency (MHz)	Emssion Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Antenna Factor (dB/m)	Cable Factor (dB)	Pre-amplifier (dB)	Correction Factor (dB/m)
1	*2462.00	107.90 PK			1.00 V	247	111.20	28.6	4.70	-36.6	-3.30
1	*2462.00	97.60 AV			1.00 V	247	100.90	28.6	4.70	-36.6	-3.30
2	2483.50	53.40 PK	74.00	20.60	1.00 V	150	56.70	28.6	4.70	-36.6	-3.30
2	2483.50	40.80 AV	54.00	13.20	1.00 V	150	44.10	28.6	4.70	-36.6	-3.30
3	4022.04	45.10 PK	74.00	28.90	1.00 V	299	43.20	32.2	6.20	-36.5	1.90
3	4022.04	33.30 AV	54.00	20.70	1.00 V	299	31.40	32.2	6.20	-36.5	1.90
4	4924.00	46.40 PK	74.00	27.60	1.00 V	90	42.60	33.0	7.00	-36.2	3.80
4	4924.00	35.10 AV	54.00	18.90	1.00 V	90	31.30	33.0	7.00	-36.2	3.80
5	7386.00	55.00 PK	74.00	19.00	1.00 V	29	45.60	36.2	8.50	-35.3	9.40
5	7386.00	42.60 AV	54.00	11.40	1.00 V	29	33.20	36.2	8.50	-35.3	9.40
6	9848.00	58.30 PK	74.00	15.70	1.00 V	222	45.70	37.2	10.20	-34.8	12.60
6	9848.00	46.10 AV	54.00	7.90	1.00 V	222	33.50	37.2	10.20	-34.8	12.60

REMARKS:
1. Emission level (dBuV/m)=Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor (dB/m) = Antenna Factor (dB/m) + Cable Factor (dB))+ Pre-amplifier Factor
3. The other emission levels were very low against the limit.
4. Margin value = Limit value- Emission level.
5. The limit value is defined as per 15.247
6. "* ": Fundamental frequency
7. For Wireless 802.11b mode at 11Mbps.

The frequency spectrum above 1 GHz for Transmitter was investigated. All emissions not reported are much lower than the prescribed limits. Readings are both peak and average values.

Company	TP-LINK TECHNOLOGIES CO.,LTD.	Test Date	20/04/2010
Test Mode	802.11g Channel 1	Detector Function	Peak(PK)/Average(AV)
Product Name	150Mbps Wireless Lite N ADSL2+ Modem Router	Test By	Wenliang Li
Model Name	TD-W8950ND	TEMP&Humidity	25°C, 55%

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M

No.	Frequency (MHz)	Emssion Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Antenna Factor (dB/m)	Cable Factor (dB)	Pre-amplifier (dB)	Correction Factor (dB/m)
1	2390.00	45.40 PK	74.00	28.60	1.00 H	142	48.70	28.3	5.00	-36.6	-3.30
1	2390.00	30.10 AV	54.00	23.90	1.00 H	142	33.40	28.3	5.00	-36.6	-3.30
2	*2412.00	102.20 PK			1.00 H	123	105.50	28.3	5.00	-36.6	-3.30
2	*2412.00	86.20 AV			1.00 H	123	89.50	28.3	5.00	-36.6	-3.30
3	4824.00	46.20 PK	74.00	27.80	1.00 H	216	42.40	32.7	7.30	-36.2	3.80
3	4824.00	35.10 AV	54.00	18.90	1.00 H	216	31.30	32.7	7.30	-36.2	3.80
4	7236.00	54.00 PK	74.00	20.00	1.00 H	176	44.60	35.8	8.90	-35.3	9.40
4	7236.00	42.30 AV	54.00	11.70	1.00 H	176	32.90	35.8	8.90	-35.3	9.40
5	9648.00	58.10 PK	74.00	15.90	1.00 H	72	45.50	37.2	10.20	-34.8	12.60
5	9648.00	46.20 AV	54.00	7.80	1.00 H	72	33.60	37.2	10.20	-34.8	12.60

ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M

No.	Frequency (MHz)	Emssion Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Antenna Factor (dB/m)	Cable Factor (dB)	Pre-amplifier (dB)	Correction Factor (dB/m)
1	2390.00	66.20 PK	74.00	7.80	1.00 V	199	69.50	28.3	5.00	-36.6	-3.30
1	2390.00	52.70 AV	54.00	1.30	1.00 V	199	56.00	28.3	5.00	-36.6	-3.30
2	*2412.00	105.30 PK			1.00 V	127	108.60	28.3	5.00	-36.6	-3.30
2	*2412.00	96.50 AV			1.00 V	127	99.80	28.3	5.00	-36.6	-3.30
3	4824.00	46.10 PK	74.00	27.90	1.00 V	95	42.30	32.7	7.30	-36.2	3.80
3	4824.00	35.00 AV	54.00	19.00	1.00 V	95	31.20	32.7	7.30	-36.2	3.80
4	7236.00	54.10 PK	74.00	19.90	1.00 V	0	44.70	35.8	8.90	-35.3	9.40
4	7236.00	41.90 AV	54.00	12.10	1.00 V	0	32.50	35.8	8.90	-35.3	9.40
5	9648.00	58.60 PK	74.00	15.40	1.00 V	264	46.00	37.2	10.20	-34.8	12.60
5	9648.00	46.20 AV	54.00	7.80	1.00 V	264	33.60	37.2	10.20	-34.8	12.60

REMARKS: 1. Emission level (dBuV/m)=Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor (dB/m) = Antenna Factor (dB/m) + Cable Factor (dB))+ Pre-amplifier Factor
3. The other emission levels were very low against the limit.
4. Margin value = Limit value- Emission level.
5. The limit value is defined as per 15.247
6. "* ": Fundamental frequency
7. For Wireless 802.11g mode at 54Mbps.

Company	TP-LINK TECHNOLOGIES CO.,LTD.	Test Date	20/04/2010
Test Mode	802.11g Channel 6	Detector Function	Peak(PK)/Average(AV)
Product Name	150Mbps Wireless Lite N ADSL2+ Modem Router	Test By	Wenliang Li
Model Name	TD-W8950ND	TEMP&Humidity	25°C, 55%

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M

No.	Frequency (MHz)	Emssion Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Antenna Factor (dB/m)	Cable Factor (dB)	Pre-amplifier (dB)	Correction Factor (dB/m)
1	*2437.00	104.40 PK			1.00 H	100	107.60	28.3	5.10	-36.6	-3.20
1	*2437.00	87.00 AV			1.00 H	100	90.20	28.3	5.10	-36.6	-3.20
2	4874.00	46.40 PK	74.00	27.60	1.00 H	214	43.00	32.8	7.10	-36.5	3.40
2	4874.00	35.10 AV	54.00	18.90	1.00 H	214	31.70	32.8	7.10	-36.5	3.40
3	7311.00	54.70 PK	74.00	19.30	1.00 H	0	45.30	36.1	8.60	-35.3	9.40
3	7311.00	42.30 AV	54.00	11.70	1.00 H	0	3290	36.1	8.60	-35.3	9.40
4	9748.00	57.80 PK	74.00	16.20	1.00 H	163	45.20	37.2	10.20	-34.8	12.60
4	9748.00	46.30 AV	54.00	7.70	1.00 H	163	33.70	37.2	10.20	-34.8	12.60

ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M

No.	Frequency (MHz)	Emssion Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Antenna Factor (dB/m)	Cable Factor (dB)	Pre-amplifier (dB)	Correction Factor (dB/m)
1	*2437.00	107.50 PK			1.00 V	122	110.70	28.3	5.10	-36.6	-3.20
1	*2437.00	94.80 AV			1.00 V	122	98.00	28.3	5.10	-36.6	-3.20
2	4874.00	46.10 PK	74.00	27.90	1.00 V	100	42.70	32.8	7.10	-36.5	3.40
2	4874.00	35.10 AV	54.00	18.90	1.00 V	100	31.70	32.8	7.10	-36.5	3.40
3	7311.00	54.90 PK	74.00	19.10	1.00 V	356	45.50	36.1	8.60	-35.3	9.40
3	7311.00	42.40 AV	54.00	11.60	1.00 V	356	33.00	36.1	8.60	-35.3	9.40
4	9748.00	58.60 PK	74.00	15.40	1.00 V	26	46.00	37.2	10.20	-34.8	12.60
4	9748.00	48.20 AV	54.00	7.80	1.00 V	26	35.60	37.2	10.20	-34.8	12.60

REMARKS: 1. Emission level (dBuV/m) =Raw Value (dBuV) + Correction Factor (dB/m)
2. Correction Factor (dB/m) = Antenna Factor (dB/m) + Cable Factor (dB))+ Pre-amplifier Factor
3. The other emission levels were very low against the limit.
4. Margin value = Limit value- Emission level.
5. The limit value is defined as per 15.247
6. "* ": Fundamental frequency
7. For Wireless 802.11g mode at 54Mbps.

Company	TP-LINK TECHNOLOGIES CO.,LTD.	Test Date	20/04/2010
Test Mode	802.11g Channel 11	Detector Function	Peak(PK)/Average(AV)
Product Name	150Mbps Wireless Lite N ADSL2+ Modem Router	Test By	Wenliang Li
Model Name	TD-W8950ND	TEMP&Humidity	25°C, 55%

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M

No.	Frequency (MHz)	Emssion Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Antenna Factor (dB/m)	Cable Factor (dB)	Pre-amplifier (dB)	Correction Factor (dB/m)
1	*2462.00	99.50 PK			1.00 H	156	102.80	28.2	5.10	-36.6	-3.30
1	*2462.00	85.80 AV			1.00 H	156	89.10	28.2	5.10	-36.6	-3.30
2	2483.50	47.70 PK	74.00	26.30	1.00 H	191	51.00	28.2	5.10	-36.6	-3.30
2	2483.50	30.10 AV	54.00	23.90	1.00 H	191	33.40	28.2	5.10	-36.6	-3.30
3	4924.00	46.90 PK	74.00	27.10	1.00 H	198	43.10	33.0	7.00	-36.2	3.80
3	4924.00	34.90 AV	54.00	19.10	1.00 H	198	31.10	33.0	7.00	-36.2	3.80
4	7386.00	54.70 PK	74.00	19.30	1.00 H	90	45.30	36.2	8.50	-35.3	9.40
4	7386.00	42.30 AV	54.00	11.70	1.00 H	90	32.90	36.2	8.50	-35.3	9.40
5	9848.00	58.60 PK	74.00	15.40	1.00 H	124	46.00	37.3	10.10	-34.8	12.60
5	9848.00	46.20 AV	54.00	7.80	1.00 H	124	33.60	37.3	10.10	-34.8	12.60

ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M

No.	Frequency (MHz)	Emssion Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Antenna Factor (dB/m)	Cable Factor (dB)	Pre-amplifier (dB)	Correction Factor (dB/m)
1	*2462.00	101.50 PK			1.00 V	125	105.80	28.2	5.10	-36.6	-3.30
1	*2462.00	89.10 AV			1.00 V	125	94.40	28.2	5.10	-36.6	-3.30
2	2483.50	65.70 PK	74.00	8.30	1.00 V	348	69.00	28.2	5.10	-36.6	-3.30
2	2483.50	50.90 AV	54.00	3.10	1.00 V	348	54.20	28.2	5.10	-36.6	-3.30
3	4924.00	46.10 PK	74.00	27.90	1.00 V	96	42.30	33.0	7.00	-36.2	3.80
3	4924.00	34.80 AV	54.00	19.20	1.00 V	96	31.00	33.0	7.00	-36.2	3.80
4	7386.00	54.40 PK	74.00	19.60	1.00 V	35	45.00	36.2	8.50	-35.3	9.40
4	7386.00	42.30 AV	54.00	11.70	1.00 V	35	32.90	36.2	8.50	-35.3	9.40
5	9848.00	58.60 PK	74.00	15.40	1.00 V	37	46.00	37.3	10.10	-34.8	12.60
5	9848.00	46.20 AV	54.00	7.80	1.00 V	37	33.60	37.3	10.10	-34.8	12.60

REMARKS: 1. Emission level (dBuV/m) =Raw Value (dBuV) + Correction Factor (dB/m)
2. Correction Factor (dB/m) = Antenna Factor (dB/m) + Cable Factor (dB))+ Pre-amplifier Factor
3. The other emission levels were very low against the limit.
4. Margin value = Limit value- Emission level.
5. The limit value is defined as per 15.247
6. " * " : Fundamental frequency
7. For Wireless 802.11g mode at 54Mbps.

The frequency spectrum above 1 GHz for Transmitter was investigated. All emissions not reported are much lower than the prescribed limits. Readings are both peak and average values.

Company	TP-LINK TECHNOLOGIES CO.,LTD.	Test Date	20/04/2010
Test Mode	802.11n (20MHz) Channel 1	Detector Function	Peak(PK)/Average(AV)
Product Name	150Mbps Wireless Lite N ADSL2+ Modem Router	Test By	Wenliang Li
Model Name	TD-W8950ND	TEMP&Humidity	25°C, 55%

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M

No.	Frequency (MHz)	Emssion Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Antenna Factor (dB/m)	Cable Factor (dB)	Pre-amplifier (dB)	Correction Factor (dB/m)
1	2390.00	45.60 PK	74.00	28.40	1.00 H	248	48.90	28.3	5.00	-36.6	-3.30
1	2390.00	31.40 AV	54.00	22.60	1.00 H	248	34.70	28.3	5.00	-36.6	-3.30
2	*2412.00	101.40 PK			1.00 H	100	104.70	28.3	5.00	-36.6	-3.30
2	*2412.00	85.30 AV			1.00 H	100	88.60	28.3	5.00	-36.6	-3.30
3	4824.00	46.20 PK	74.00	27.80	1.00 H	204	42.40	32.7	7.30	-36.2	3.80
3	4824.00	35.10 AV	54.00	18.90	1.00 H	204	31.30	32.7	7.30	-36.2	3.80
4	7236.00	54.60 PK	74.00	19.40	1.00 H	114	4520	35.8	8.90	-35.3	9.40
4	7236.00	42.10 AV	54.00	11.90	1.00 H	114	32.50	35.8	8.90	-35.3	9.40
5	9648.00	58.60 PK	74.00	15.40	1.00 H	93	46.00	37.2	10.20	-34.8	12.60
5	9648.00	46.20 AV	54.00	7.80	1.00 H	93	33.60	37.2	10.20	-34.8	12.60

ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M

No.	Frequency (MHz)	Emssion Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Antenna Factor (dB/m)	Cable Factor (dB)	Pre-amplifier (dB)	Correction Factor (dB/m)
1	2390.00	61.40 PK	74.00	12.60	1.00 V	123	64.70	28.3	5.00	-36.6	-3.30
1	2390.00	47.40 AV	54.00	6.60	1.00 V	123	50.70	28.3	5.00	-36.6	-3.30
2	*2412.00	102.40 PK			1.00 V	123	105.70	28.3	5.00	-36.6	-3.30
2	*2412.00	88.00 AV			1.00 V	123	91.30	28.3	5.00	-36.6	-3.30
3	4824.00	46.40 PK	74.00	27.60	1.00 V	100	42.60	32.7	7.30	-36.2	3.80
3	4824.00	34.70 AV	54.00	19.30	1.00 V	100	30.90	32.7	7.30	-36.2	3.80
4	7236.00	54.90 PK	74.00	19.10	1.00 V	236	45.50	35.8	8.90	-35.3	9.40
4	7236.00	42.10 AV	54.00	11.90	1.00 V	236	32.70	35.8	8.90	-35.3	9.40
5	9648.00	58.90 PK	74.00	15.10	1.00 V	116	46.30	37.2	10.20	-34.8	12.60
5	9648.00	46.00 AV	54.00	8.00	1.00 V	116	33.40	37.2	10.20	-34.8	12.60

REMARKS: 1. Emission level (dBuV/m)=Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor (dB/m) = Antenna Factor (dB/m) + Cable Factor (dB))+ Pre-amplifier Factor
3. The other emission levels were very low against the limit.
4. Margin value = Limit value- Emission level.
5. The limit value is defined as per 15.247
6. "* ": Fundamental frequency
7. For Wireless 802.11n (20MHz) mode at 65Mbps.

Company	TP-LINK TECHNOLOGIES CO.,LTD.	Test Date	20/04/2010
Test Mode	802.11n (20MHz) Channel 6	Detector Function	Peak(PK)/Average(AV)
Product Name	150Mbps Wireless Lite N ADSL2+ Modem Router	Test By	Wenliang Li
Model Name	TD-W8950ND	TEMP&Humidity	25°C, 55%

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M

No.	Frequency (MHz)	Emssion Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Antenna Factor (dB/m)	Cable Factor (dB)	Pre-amplifier (dB)	Correction Factor (dB/m)
1	*2437.00	103.40 PK			1.00 H	120	106.60	28.3	5.10	-36.6	-3.20
1	*2437.00	90.80 AV			1.00 H	120	94.00	28.3	5.10	-36.6	-3.20
2	4874.00	46.30 PK	74.00	27.70	1.00 H	194	42.90	32.3	7.60	-36.5	3.40
2	4874.00	34.90 AV	54.00	19.10	1.00 H	194	31.50	32.3	7.60	-36.5	3.40
3	7311.00	55.10 PK	74.00	18.90	1.00 H	248	45.70	36.1	8.60	-35.3	9.40
3	7311.00	42.30 AV	54.00	11.70	1.00 H	248	32.90	36.1	8.60	-35.3	9.40
4	9748.00	58.70 PK	74.00	15.30	1.00 H	36	46.10	37.2	10.20	-34.8	12.60
4	9748.00	46.20 AV	54.00	7.80	1.00 H	36	33.60	37.2	10.20	-34.8	12.60

ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M

No.	Frequency (MHz)	Emssion Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Antenna Factor (dB/m)	Cable Factor (dB)	Pre-amplifier (dB)	Correction Factor (dB/m)
1	*2437.00	107.50 PK			1.00 V	122	110.70	28.3	5.10	-36.6	-3.20
1	*2437.00	93.60 AV			1.00 V	122	99.80	28.3	5.10	-36.6	-3.20
2	4874.00	47.50 PK	74.00	26.50	1.00 V	181	44.10	32.3	7.60	-36.5	3.40
2	4874.00	34.90 AV	54.00	19.10	1.00 V	181	31.50	32.3	7.60	-36.5	3.40
3	7311.00	53.80 PK	74.00	20.20	1.00 V	346	44.40	36.1	8.60	-35.3	9.40
3	7311.00	42.10 AV	54.00	11.90	1.00 V	346	32.70	36.1	8.60	-35.3	9.40
4	9748.00	58.50 PK	74.00	15.50	1.00 V	335	45.90	37.2	10.20	-34.8	12.60
4	9748.00	46.00 AV	54.00	8.00	1.00 V	335	33.40	37.2	10.20	-34.8	12.60

REMARKS: 1. Emission level (dBuV/m) =Raw Value (dBuV) + Correction Factor (dB/m)
2. Correction Factor (dB/m) = Antenna Factor (dB/m) + Cable Factor (dB))+ Pre-amplifier Factor
3. The other emission levels were very low against the limit.
4. Margin value = Limit value- Emission level.
5. The limit value is defined as per 15.247
6. "* ": Fundamental frequency
7. For Wireless 802.11n (20MHz) mode at 65Mbps.

Company	TP-LINK TECHNOLOGIES CO.,LTD.	Test Date	20/04/2010
Test Mode	802.11n (20MHz) Channel 11	Detector Function	Peak(PK)/Average(AV)
Product Name	150Mbps Wireless Lite N ADSL2+ Modem Router	Test By	Wenliang Li
Model Name	TD-W8950ND	TEMP&Humidity	25°C, 55%

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M

No.	Frequency (MHz)	Emssion Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Antenna Factor (dB/m)	Cable Factor (dB)	Pre-amplifier (dB)	Correction Factor (dB/m)
1	*2462.00	99.50 PK			1.00 H	122	102.80	28.2	5.10	-36.6	-3.30
1	*2462.00	85.50 AV			1.00 H	122	88.80	28.2	5.10	-36.6	-3.30
2	2483.50	46.20 PK	74.00	27.80	1.00 H	354	49.50	28.2	5.10	-36.6	-3.30
2	2483.50	30.60 AV	54.00	23.40	1.00 H	354	33.90	28.2	5.10	-36.6	-3.30
3	4924.00	46.40 PK	74.00	27.60	1.00 H	217	42.60	33.0	7.00	-36.2	3.80
3	4924.00	34.90 AV	54.00	19.10	1.00 H	217	31.10	33.0	7.00	-36.2	3.80
4	7386.00	54.20 PK	74.00	19.80	1.00 H	0	44.80	36.2	8.50	-35.3	9.40
4	7386.00	42.10 AV	54.00	11.90	1.00 H	0	32.70	36.2	8.50	-35.3	9.40
5	9848.00	58.20 PK	74.00	15.80	1.00 H	118	45.60	37.3	10.10	-34.8	12.60
5	9848.00	46.20 AV	54.00	7.80	1.00 H	118	33.60	37.3	10.10	-34.8	12.60

ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M

No.	Frequency (MHz)	Emssion Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Antenna Factor (dB/m)	Cable Factor (dB)	Pre-amplifier (dB)	Correction Factor (dB/m)
1	*2462.00	101.50 PK			1.00 V	125	104.80	28.2	5.10	-36.6	-3.30
1	*2462.00	87.30 AV			1.00 V	125	90.60	28.2	5.10	-36.6	-3.30
2	2483.50	63.80 PK	74.00	10.20	1.00 V	153	67.10	28.2	5.10	-36.6	-3.30
2	2483.50	50.40 AV	54.00	3.60	1.00 V	153	53.70	28.2	5.10	-36.6	-3.30
3	4924.00	46.80 PK	74.00	27.20	1.00 V	100	51.60	33.0	7.00	-36.2	3.80
3	4924.00	35.00 AV	54.00	19.00	1.00 V	100	36.40	33.0	7.00	-36.2	3.80
4	7386.00	54.70 PK	74.00	19.30	1.00 V	0	45.30	36.2	8.50	-35.3	9.40
4	7386.00	42.10 AV	54.00	11.90	1.00 V	0	32.7	36.2	8.50	-35.3	9.40
5	9848.00	57.80 PK	74.00	16.20	1.00 V	187	45.20	37.3	10.10	-34.8	12.60
5	9848.00	46.00 AV	54.00	8.00	1.00 V	187	33.40	37.3	10.10	-34.8	12.60

REMARKS: 1. Emission level (dBuV/m) =Raw Value (dBuV) + Correction Factor (dB/m)
2. Correction Factor (dB/m) = Antenna Factor (dB/m) + Cable Factor (dB))+ Pre-amplifier Factor
3. The other emission levels were very low against the limit.
4. Margin value = Limit value- Emission level.
5. The limit value is defined as per 15.247
6. " * " : Fundamental frequency
7. For Wireless 802.11n (20MHz) mode at 65Mbps.

The frequency spectrum above 1 GHz for Transmitter was investigated. All emissions not reported are much lower than the prescribed limits. Readings are both peak and average values.

Company	TP-LINK TECHNOLOGIES CO.,LTD.	Test Date	20/04/2010
Test Mode	802.11n (40MHz) Channel 3	Detector Function	Peak(PK)/Average(AV)
Product Name	150Mbps Wireless Lite N ADSL2+ Modem Router	Test By	Wenliang Li
Model Name	TD-W8950ND	TEMP&Humidity	25°C, 55%

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M

No.	Frequency (MHz)	Emssion Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Antenna Factor (dB/m)	Cable Factor (dB)	Pre-amplifier (dB)	Correction Factor (dB/m)
1	2390.00	49.30 PK	74.00	24.70	1.00 H	222	52.60	28.3	5.00	-36.6	-3.30
1	2390.00	36.00 AV	54.00	18.00	1.00 H	222	39.30	28.3	5.00	-36.6	-3.30
2	*2422.00	95.70 PK			1.00 H	123	99.00	28.3	5.00	-36.6	-3.30
2	*2422.00	78.10 AV			1.00 H	123	81.40	28.3	5.00	-36.6	-3.30
3	4844.00	45.80 PK	74.00	28.20	1.00 H	91	42.00	32.7	7.30	-36.2	3.80
3	4844.00	34.60 AV	54.00	19.40	1.00 H	91	30.80	32.7	7.30	-36.2	3.80
4	7266.00	53.80 PK	74.00	20.20	1.00 H	266	44.40	35.8	8.90	-35.3	9.40
4	7266.00	41.90 AV	54.00	12.10	1.00 H	266	32.50	35.8	8.90	-35.3	9.40
5	9688.00	57.60 PK	74.00	16.40	1.00 H	337	45.00	37.2	10.20	-34.8	12.60
5	9688.00	45.70 AV	54.00	8.30	1.00 H	337	33.10	37.2	10.20	-34.8	12.60

ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M

No.	Frequency (MHz)	Emssion Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Antenna Factor (dB/m)	Cable Factor (dB)	Pre-amplifier (dB)	Correction Factor (dB/m)
1	2390.00	63.60 PK	74.00	10.40	1.00 V	80	66.90	28.3	5.00	-36.6	-3.30
1	2390.00	51.70 AV	54.00	2.30	1.00 V	80	55.00	28.3	5.00	-36.6	-3.30
2	*2422.00	98.70 PK			1.00 V	127	102.00	28.3	5.00	-36.6	-3.30
2	*2422.00	81.60 AV			1.00 V	127	85.90	28.3	5.00	-36.6	-3.30
3	4844.00	46.10 PK	74.00	27.90	1.00 V	211	42.30	32.7	7.30	-36.2	3.80
3	4844.00	34.60 AV	54.00	19.40	1.00 V	211	30.80	32.7	7.30	-36.2	3.80
4	7266.00	54.00 PK	74.00	20.00	1.00 V	57	44.60	35.8	8.90	-35.3	9.40
4	7266.00	42.10 AV	54.00	11.90	1.00 V	57	32.70	35.8	8.90	-35.3	9.40
5	9688.00	57.90 PK	74.00	16.10	1.00 V	249	45.30	37.2	10.20	-34.8	12.60
5	9688.00	46.00 AV	54.00	8.00	1.00 V	249	33.40	37.2	10.20	-34.8	12.60

REMARKS: 1. Emission level (dBuV/m)=Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor (dB/m) = Antenna Factor (dB/m) + Cable Factor (dB))+ Pre-amplifier Factor
3. The other emission levels were very low against the limit.
4. Margin value = Limit value- Emission level.
5. The limit value is defined as per 15.247
6. "* ": Fundamental frequency
7. For Wireless 802.11n (40MHz) mode at 135Mbps.

Company	TP-LINK TECHNOLOGIES CO.,LTD.	Test Date	20/04/2010
Test Mode	802.11n (40MHz) Channel 6	Detector Function	Peak(PK)/Average(AV)
Product Name	150Mbps Wireless Lite N ADSL2+ Modem Router	Test By	Wenliang Li
Model Name	TD-W8950ND	TEMP&Humidity	25°C, 55%

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M

No.	Frequency (MHz)	Emssion Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Antenna Factor (dB/m)	Cable Factor (dB)	Pre-amplifier (dB)	Correction Factor (dB/m)
1	*2437.00	99.30 PK			1.00 H	100	102.50	28.3	5.10	-36.6	-3.20
1	*2437.00	83.70 AV			1.00 H	100	86.90	28.3	5.10	-36.6	-3.20
2	4874.00	46.40 PK	74.00	27.60	1.00 H	198	43.00	32.3	7.60	-36.5	3.40
2	4874.00	34.60 AV	54.00	19.40	1.00 H	198	31.20	32.3	7.60	-36.5	3.40
3	7311.00	53.80 PK	74.00	20.20	1.00 H	203	44.40	36.1	8.60	-35.3	9.40
3	7311.00	41.90 AV	54.00	12.10	1.00 H	203	32.50	36.1	8.60	-35.3	9.40
4	9748.00	58.30 PK	74.00	15.70	1.00 H	56	45.70	37.2	10.20	-34.8	12.60
4	9748.00	45.70 AV	54.00	8.30	1.00 H	56	33.10	37.2	10.20	-34.8	12.60

ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M

No.	Frequency (MHz)	Emssion Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Antenna Factor (dB/m)	Cable Factor (dB)	Pre-amplifier (dB)	Correction Factor (dB/m)
1	*2437.00	102.50 PK			1.00 V	122	105.70	28.3	5.10	-36.6	-3.20
1	*2437.00	85.00 AV			1.00 V	122	88.20	28.3	5.10	-36.6	-3.20
2	4874.00	46.20 PK	74.00	27.80	1.00 V	96	42.80	32.3	7.60	-36.5	3.40
2	4874.00	34.60 AV	54.00	19.40	1.00 V	96	31.20	32.3	7.60	-36.5	3.40
3	7311.00	54.60 PK	74.00	19.40	1.00 V	26	45.20	36.1	8.60	-35.3	9.40
3	7311.00	41.90 AV	54.00	12.10	1.00 V	26	32.50	36.1	8.60	-35.3	9.40
4	9748.00	58.50 PK	74.00	15.50	1.00 V	299	45.90	37.2	10.20	-34.8	12.60
4	9748.00	46.00 AV	54.00	8.00	1.00 V	299	33.40	37.2	10.20	-34.8	12.60

REMARKS: 1. Emission level (dBuV/m) =Raw Value (dBuV) + Correction Factor (dB/m)
2. Correction Factor (dB/m) = Antenna Factor (dB/m) + Cable Factor (dB))+ Pre-amplifier Factor
3. The other emission levels were very low against the limit.
4. Margin value = Limit value- Emission level.
5. The limit value is defined as per 15.247
6. "* ": Fundamental frequency
7. For Wireless 802.11n (40MHz) mode at 135Mbps.

Company	TP-LINK TECHNOLOGIES CO.,LTD.	Test Date	20/04/2010
Test Mode	802.11n (40MHz) Channel 9	Detector Function	Peak(PK)/Average(AV)
Product Name	150Mbps Wireless Lite N ADSL2+ Modem Router	Test By	Wenliang Li
Model Name	TD-W8950ND	TEMP&Humidity	25°C, 55%

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M

No.	Frequency (MHz)	Emssion Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Antenna Factor (dB/m)	Cable Factor (dB)	Pre-amplifier (dB)	Correction Factor (dB/m)
1	*2452.00	91.60 PK			1.00 H	153	94.80	28.2	5.20	-36.6	-3.20
1	*2452.00	73.90 AV			1.00 H	153	77.10	28.2	5.20	-36.6	-3.20
2	2483.50	50.90 PK	74.00	23.10	1.00 H	127	54.20	28.2	5.10	-36.6	-3.30
2	2483.50	37.40 AV	54.00	16.60	1.00 H	127	40.70	28.2	5.10	-36.6	-3.30
3	4904.00	46.50 PK	74.00	27.50	1.00 H	204	42.70	33.0	7.00	-36.2	3.80
3	4904.00	34.70 AV	54.00	19.30	1.00 H	204	30.90	33.0	7.00	-36.2	3.80
4	7356.00	54.40 PK	74.00	19.60	1.00 H	301	45.00	36.2	8.50	-35.3	9.40
4	7356.00	41.90 AV	54.00	12.10	1.00 H	301	32.50	36.2	8.50	-35.3	9.40
5	9808.00	58.10 PK	74.00	15.90	1.00 H	118	45.50	37.3	10.10	-34.8	12.60
5	9808.00	46.00 AV	54.00	8.00	1.00 H	118	33.40	37.3	10.10	-34.8	12.60

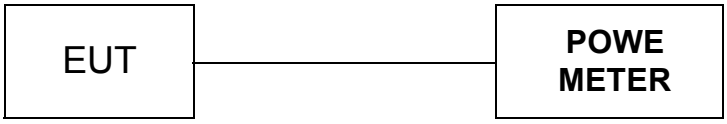
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M

No.	Frequency (MHz)	Emssion Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Antenna Factor (dB/m)	Cable Factor (dB)	Pre-amplifier (dB)	Correction Factor (dB/m)
1	*2452.00	93.50 PK			1.00 V	125	96.70	28.2	5.20	-36.6	-3.20
1	*2452.00	75.80 AV			1.00 V	125	79.00	28.2	5.20	-36.6	-3.20
2	2483.50	49.30 PK	74.00	24.70	1.00 V	143	52.60	28.2	5.10	-36.6	-3.30
2	2483.50	36.00 AV	54.00	18.00	1.00 V	143	39.30	28.2	5.10	-36.6	-3.30
3	4904.00	45.70 PK	74.00	28.80	1.00 V	177	41.90	33.0	7.00	-36.2	3.80
3	4904.00	34.70 AV	54.00	19.30	1.00 V	177	30.90	33.0	7.00	-36.2	3.80
4	7356.00	54.20 PK	74.00	15.10	1.00 V	0	44.80	36.2	8.50	-35.3	9.40
4	7356.00	42.10 AV	54.00	11.90	1.00 V	0	32.70	36.2	8.50	-35.3	9.40
5	9808.00	58.90 PK	74.00	15.10	1.00 V	315	46.30	37.3	10.10	-34.8	12.60
5	9808.00	46.20 AV	54.00	7.80	1.00 V	315	33.60	37.3	10.10	-34.8	12.60

REMARKS: 1. Emission level (dBuV/m) =Raw Value (dBuV) + Correction Factor (dB/m)
2. Correction Factor (dB/m) = Antenna Factor (dB/m) + Cable Factor (dB))+ Pre-amplifier Factor
3. The other emission levels were very low against the limit.
4. Margin value = Limit value- Emission level.
5. The limit value is defined as per 15.247
6. " * " : Fundamental frequency
7. For Wireless 802.11n (40MHz) mode at 135Mbps.

4.3. Maximum Peak Output Power

TEST CONFIGURATION



TEST PROCEDURE

The EUT was directly connected to the power meter and antenna output port as show in the block diagram as TEST CONFIGURATION shows.

LIMIT

The Maximum Peak Output Power Measurement is 30dBm.

TEST RESULTS

Company	TP-LINK TECHNOLOGIES CO.,LTD.	Test Date	20/04/2010
Product Name	150Mbps Wireless Lite N ADSL2+ Modem Router	Test By	Wenliang Li
Model Name	TD-W8950ND	TEMP&Humidity	25°C, 55%

Data Rate (Mbps)	Channel Frequency (MHz)	Peak Power Output (dBm)	Peak Power Limit (dBm)	Pass / Fail
1	2412	20.58	30	PASS
2	2412	21.09	30	PASS
5.5	2412	21.83	30	PASS
11	2412	21.96	30	PASS

Note: 1. The test results including the cable lose.

2. From the channel power vs the transmission rate,we can see the maximum output power as the transimissin rate is 11 M bps.

Channel	Channel Frequency (MHz)	Peak Power Output (dBm)	Peak Power Limit (dBm)	Pass / Fail
1	2412	21.96	30	PASS
6	2437	22.68	30	PASS
11	2462	21.49	30	PASS

Note: 1. For 802.11b Mode at 11M bps

Data Rate (Mbps)	Channel Frequency (MHz)	Peak Power Output (dBm)	Peak Power Limit (dBm)	Pass / Fail
6	2412	20.62	30	PASS
9	2412	20.65	30	PASS
12	2412	20.67	30	PASS
18	2412	21.26	30	PASS
24	2412	21.24	30	PASS
36	2412	21.36	30	PASS
48	2412	21.03	30	PASS
54	2412	21.63	30	PASS

Note: 1. The test results including the cable lose.

2. From the channel power vs the transmission rate,we can see the maximum output power as the transimissin rate is 54 M bps.

Channel	Channel Frequency (MHz)	Peak Power Output (dBm)	Peak Power Limit (dBm)	Pass / Fail
1	2412	21.63	30	PASS
6	2437	22.26	30	PASS
11	2462	20.95	30	PASS

Note: 1. For 802.11g Mode at 54M bps

Data Rate (Mbps)	Channel Frequency (MHz)	Peak Power Output (dBm)	Peak Power Limit (dBm)	Pass / Fail
6.5	2412	20.74	30	PASS
13	2412	20.80	30	PASS
19.5	2412	20.81	30	PASS
26	2412	21.46	30	PASS
39	2412	21.48	30	PASS
52	2412	21.55	30	PASS
58.5	2412	21.68	30	PASS
65	2412	21.69	30	PASS

Note: 1. The test results including the cable lose.

2. From the channel power vs the transmission rate,we can see the maximum output power as the transimissin rate is 65 M bps.

Channel	Channel Frequency (MHz)	Peak Power Output (dBm)	Peak Power Limit (dBm)	Pass / Fail
1	2412	21.69	30	PASS
6	2437	22.29	30	PASS
11	2462	21.05	30	PASS

Note: 1. For 802.11n (20MHz) Mode at 65M bps

Data Rate (Mbps)	Channel Frequency (MHz)	Peak Power Output (dBm)	Peak Power Limit (dBm)	Pass / Fail
13.5	2422	21.46	30	PASS
27	2422	21.48	30	PASS
40.5	2422	21.49	30	PASS
54	2422	22.16	30	PASS
81	2422	22.16	30	PASS
108	2422	22.44	30	PASS
121.5	2422	22.49	30	PASS
135	2422	22.50	30	PASS

Note: 1. The test results including the cable lose.

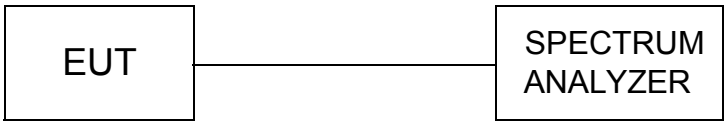
2. From the channel power vs the transmission rate,we can see the maximum output power as the transimissin rate is 135 M bps.

Channel	Channel Frequency (MHz)	Peak Power Output (dBm)	Peak Power Limit (dBm)	Pass / Fail
3	2422	22.50	30	PASS
6	2437	22.51	30	PASS
9	2452	22.05	30	PASS

Note: 1. For 802.11n (40MHz) Mode at 135M bps

4.4. Power Spectral Density

TEST CONFIGURATION



TEST PROCEDURE

1. Set CENTER FREQUENCY = Frequency from Power Spectral Density Test Matrix
2. Set SPAN = 20 MHz (For devices with a nominal 40 MHz BW, 50 MHz span will be needed)
3. Set REFERENCE LEVEL = 20 dBm
4. Set ATTENUATION = 0 dB (add internal attenuation, if necessary)
5. Set SWEEP TIME = Coupled
6. Set RBW = 3 kHz
7. Set VBW = 10 kHz
8. Set DETECTOR = Peak
9. Set MKR = Center Frequency
10. Set TRACE = CLEAR WRITE

Place the radio in continuous transmit mode. Set the TRACE to MAX HOLD, and after the trace stabilizes, the TRACE to VIEW. Set the marker on the peak of the signal and then adjust the center frequency of the spectrum analyzer to the marker frequency. After viewing the EUT waveform on the spectrum analyzer, perform the following spectrum analyzer functions to capture the trace:

11. Set SPAN = 300 kHz
12. Set SWEEP TIME = 100 s
13. Set TRACE = MAX HOLD
14. Set MKR = PEAK SEARCH
15. Record the marker level for the particular mode. Repeat these steps for other device modes.

LIMIT

For digitally modulated systems, the power spectral density conducted from the intentional radiator to the antenna shall not be greater than 8 dBm in any 3 kHz band during any time interval of continuous transmission.

TEST RESULTS

Company	TP-LINK TECHNOLOGIES CO.,LTD.	Test Date	20/05/2010
Product Name	150Mbps Wireless Lite N ADSL2+ Modem Router	Test By	Wenliang Li
Model Name	TD-W8950ND	TEMP&Humidity	25°C, 55%

CHANNEL NUMBER	CHANNEL FREQUENCY (MHz)	RF POWER LEVEL IN 3 KHz BW (dBm)	MAXIMUM LIMIT (dBm)	PASS/FAIL
1	2412	-3.27	8	PASS
6	2437	-3.49	8	PASS
11	2462	-7.26	8	PASS

Note: 1. For 802.11b mode at finial test to get the worst-case emission at 11Mbps.
2. The test results including the cable lose.

CHANNEL NUMBER	CHANNEL FREQUENCY (MHz)	RF POWER LEVEL IN 3 KHz BW (dBm)	MAXIMUM LIMIT (dBm)	PASS/FAIL
1	2412	-5.51	8	PASS
6	2437	-5.74	8	PASS
11	2462	-8.79	8	PASS

Note: 1. For 802.11g mode at finial test to get the worst-case emission at 54Mbps.
2. The test results including the cable lose.

CHANNEL NUMBER	CHANNEL FREQUENCY (MHz)	RF POWER LEVEL IN 3 KHz BW (dBm)	MAXIMUM LIMIT (dBm)	PASS/FAIL
1	2412	-7.23	8	PASS
6	2437	-6.94	8	PASS
11	2462	-10.25	8	PASS

Note: 1. For 802.11n(20MHz) mode at finial test to get the worst-case emission at 65 Mbps.
2. The test results including the cable lose.

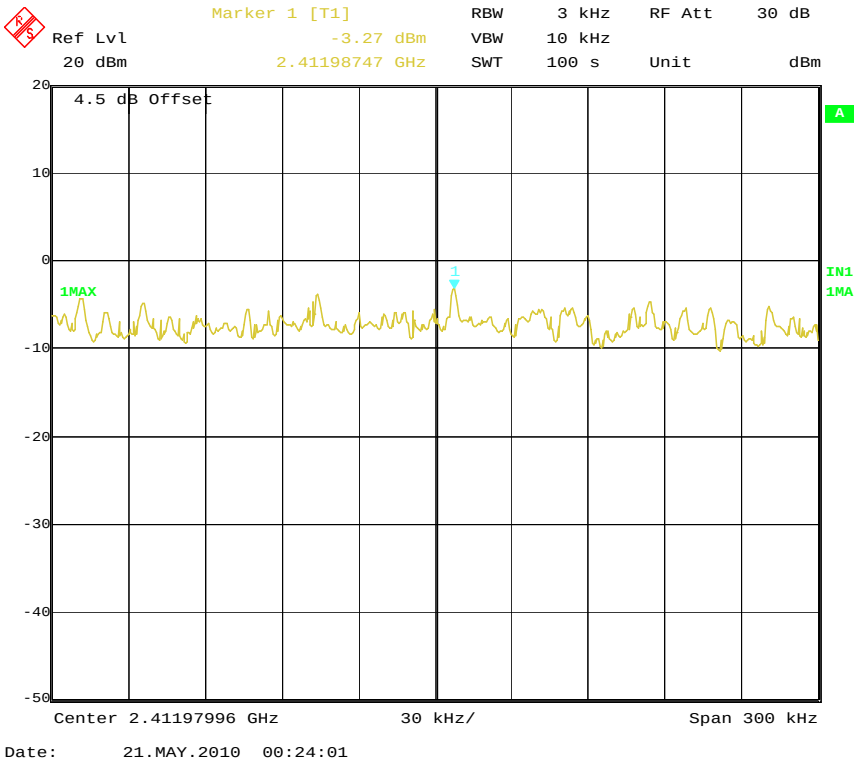
CHANNEL NUMBER	CHANNEL FREQUENCY (MHz)	RF POWER LEVEL IN 3 KHz BW (dBm)	MAXIMUM LIMIT (dBm)	PASS/FAIL
3	2422	-10.89	8	PASS
6	2437	-11.56	8	PASS
9	2452	-13.04	8	PASS

Note: 1. For 802.11n(40MHz) mode at finial test to get the worst-case emission at 135Mbps.
2. The test results including the cable lose.

Photos of Power Spectral Density Measurement

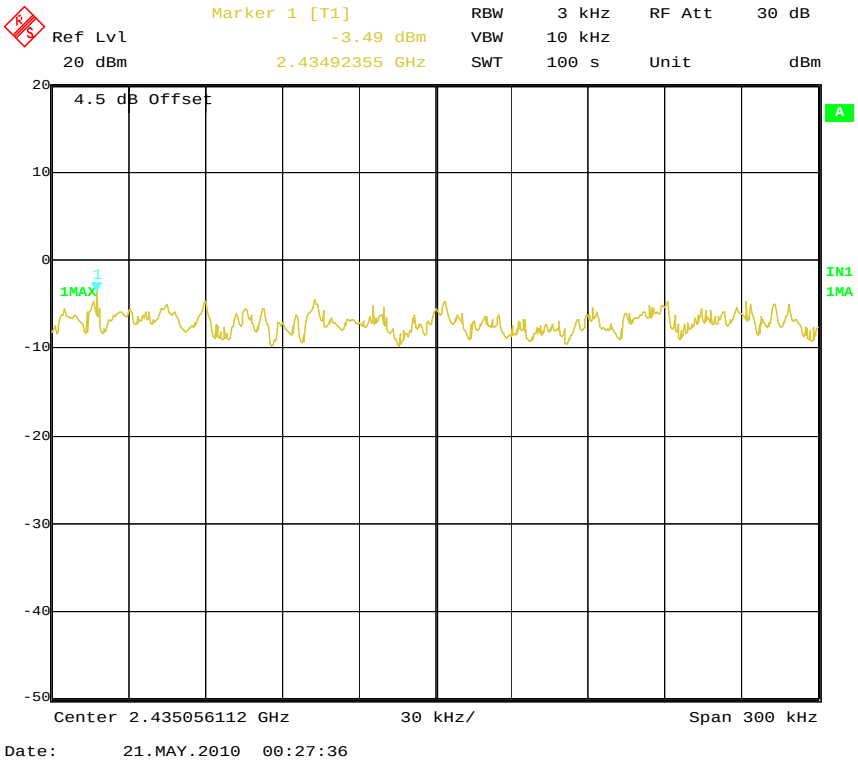
Note: For 802.11b Mode

Channel 1



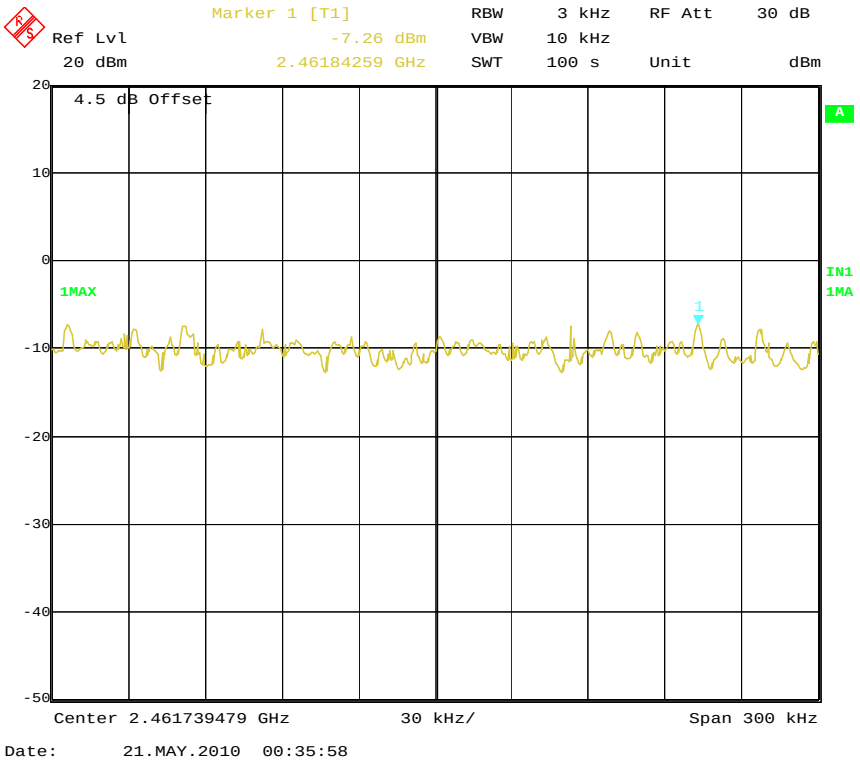
Date: 21.MAY.2010 00:24:01

Channel 6



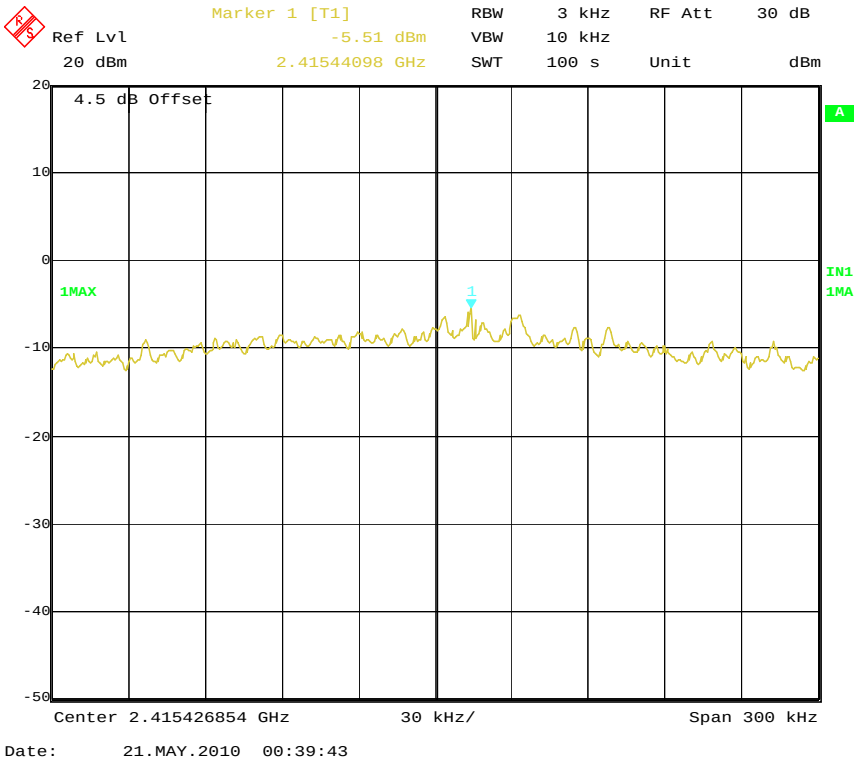
Date: 21.MAY.2010 00:27:36

Channel 11

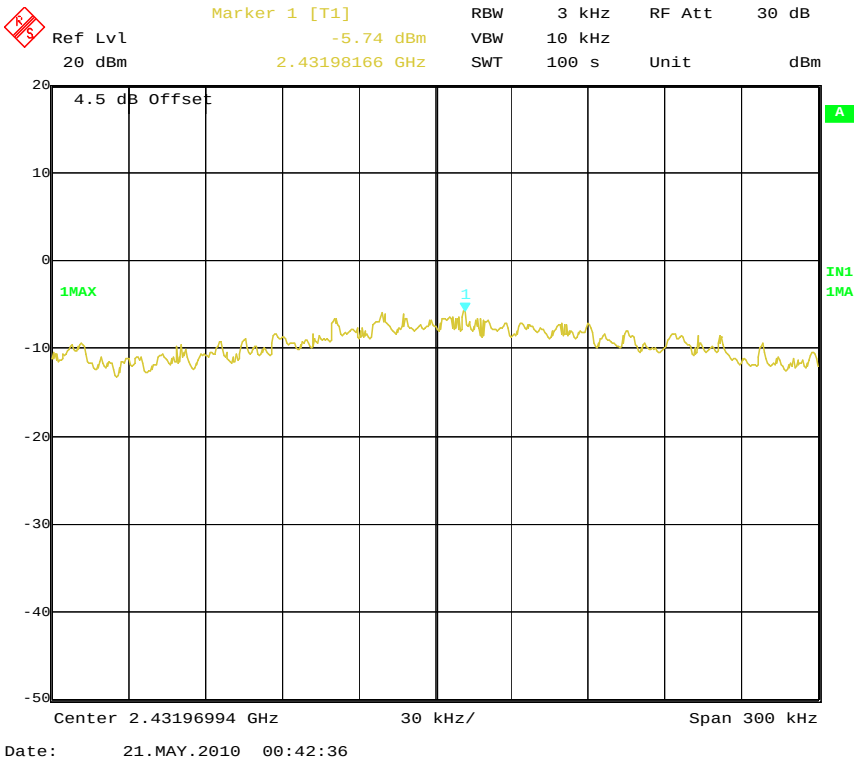


Note: For 802.11g Mode

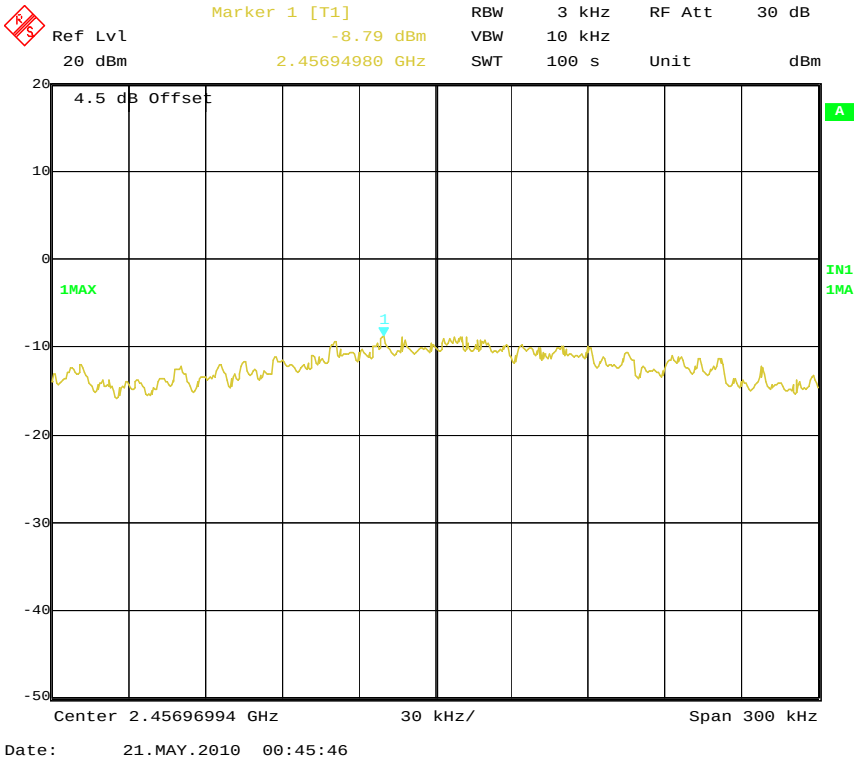
Channel 1



Channel 6

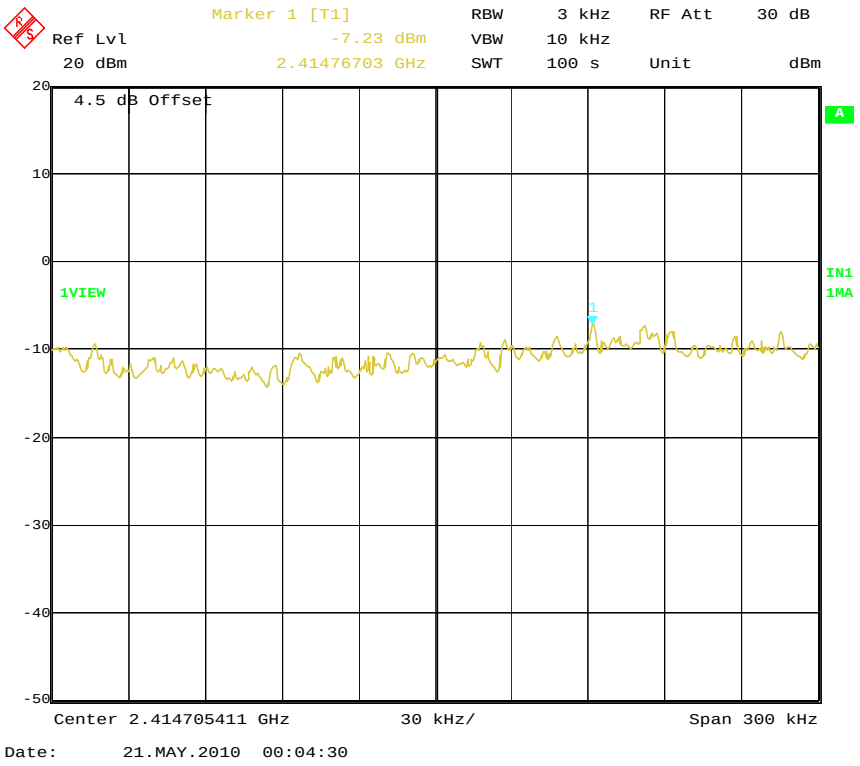


Channel 11

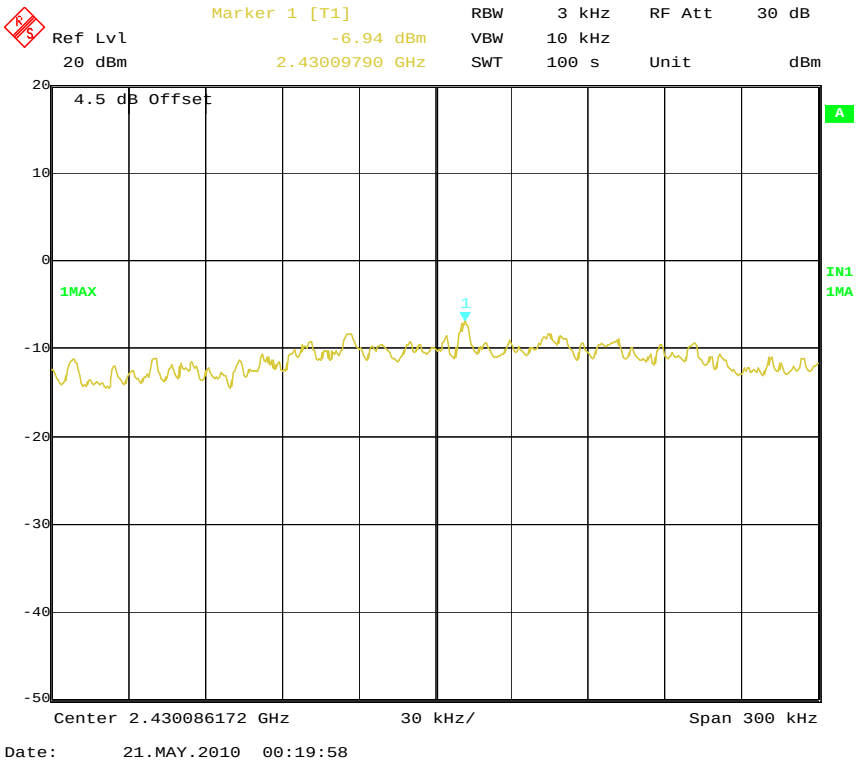


Note: For 802.11n (20MHz) Mode

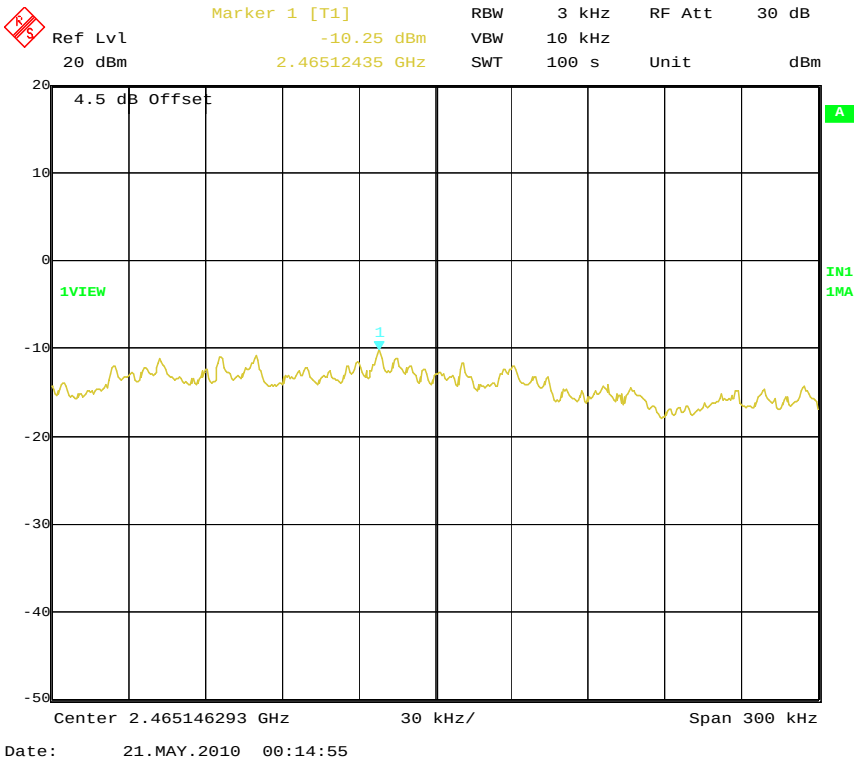
Channel 1



Channel 6

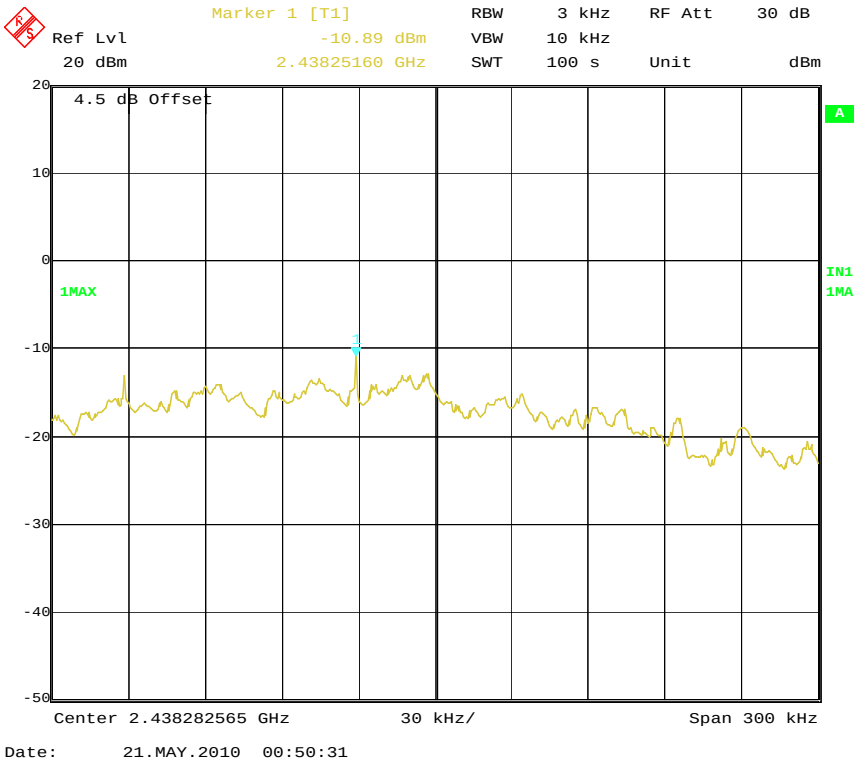


Channel 11

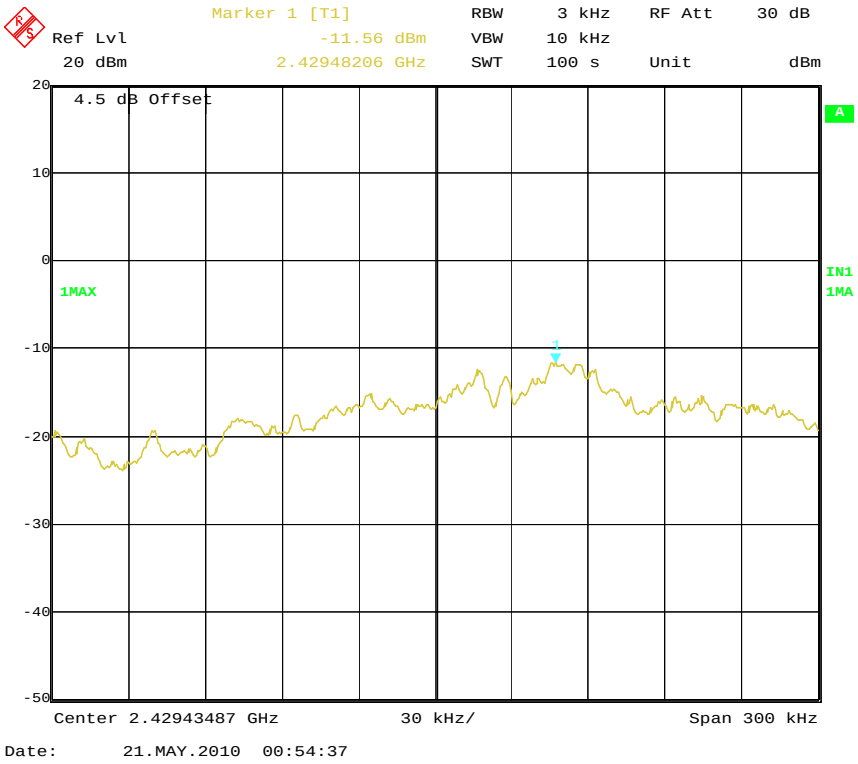


Note: For 802.11n (40MHz) Mode

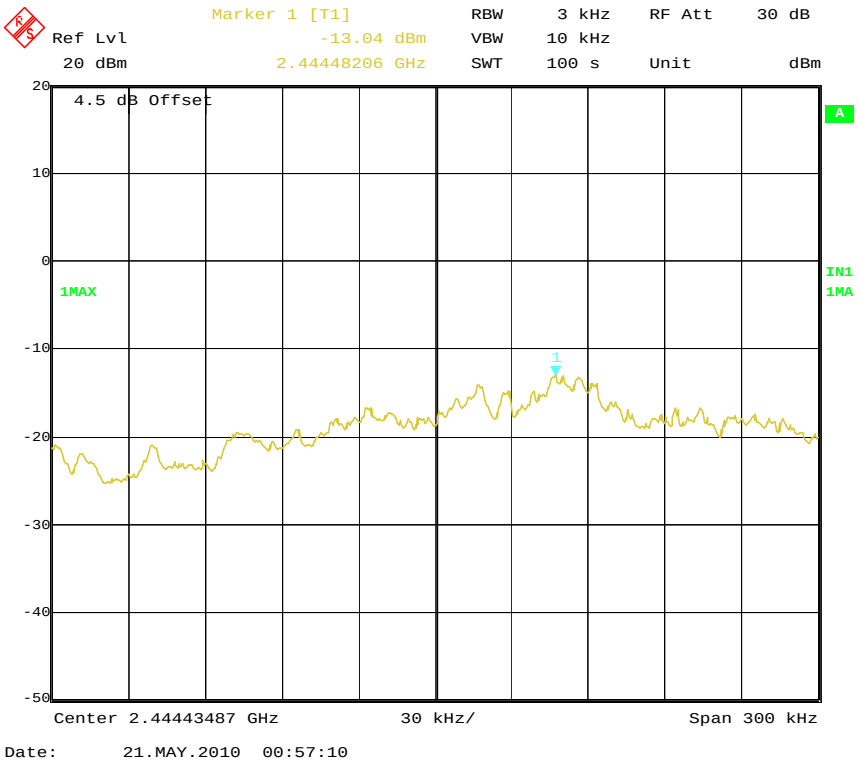
Channel 3



Channel 6

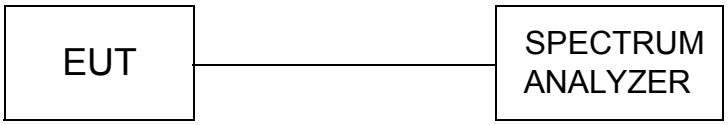


Channel 9



4.5. Band Edge Compliance of RF Emission

TEST CONFIGURATION



TEST PROCEDURE

The band edge compliance of RF radiated emission should be measured by following the guidance in ANSI C63.4:2009 with respect to maximizing the emission by rotating the EUT, measuring the emission while the EUT is situated in three orthogonal planes (if appropriate), adjusting the measurement antenna height and polarization etc. Set RBW=100kHz and VBM= 300KHz to measure the peak field strength and set RBW to 1MHz and VBW to 10Hz to measure the average radiated field strength.

The conducted RF band edge was measured by using a spectrum analyzer. Set span wide enough to capture the highest in-band emission and the emission at the band edge. Set RBW and VBW to 100 kHz, to measure the conducted peak band edge.

LIMIT

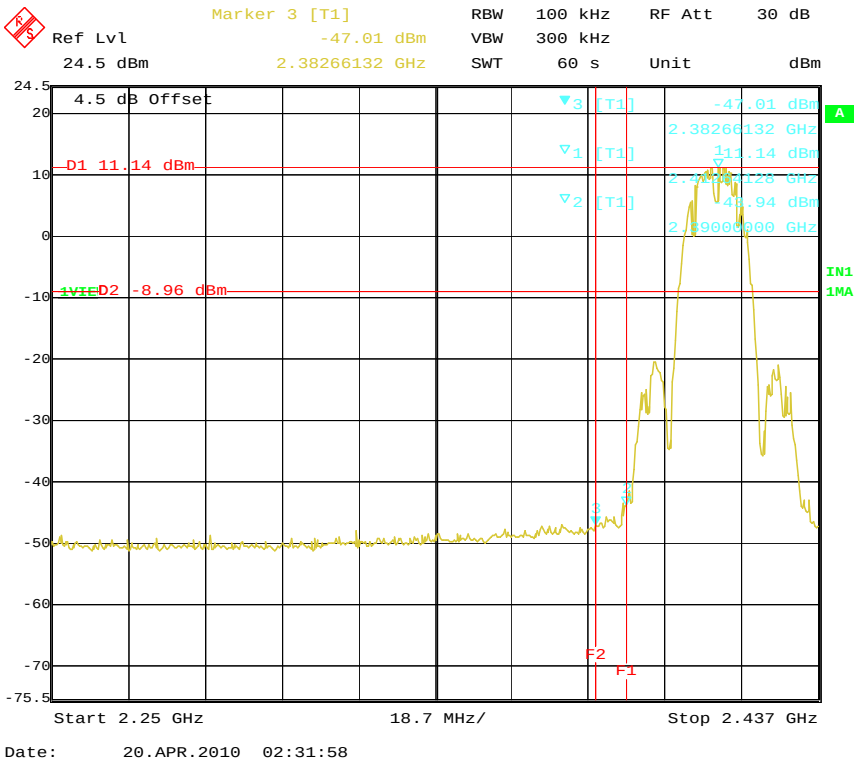
1. Below -20dB of the highest emission level in operating band.

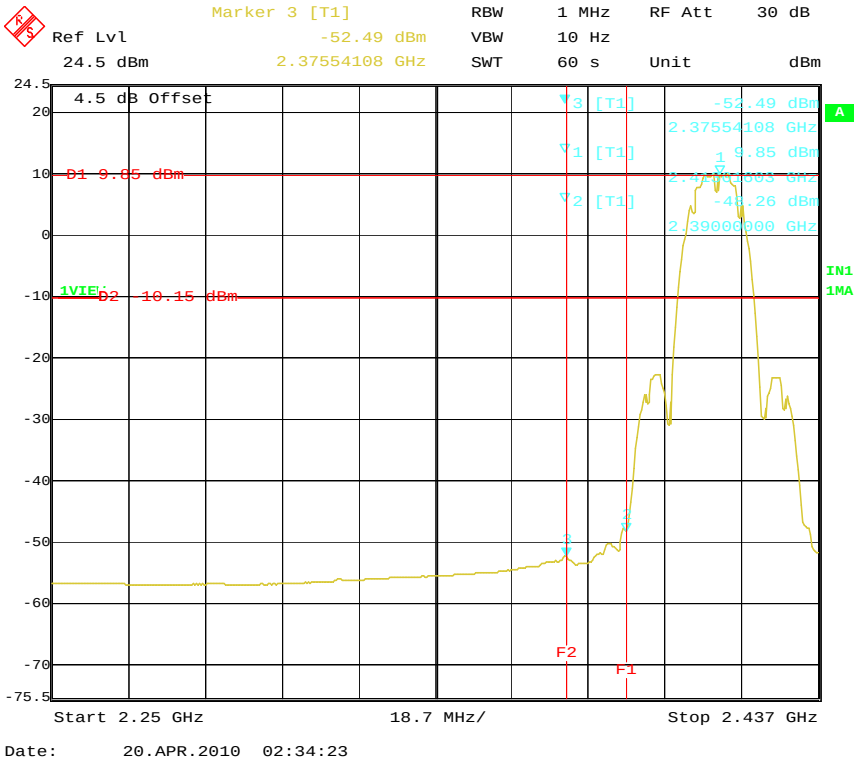
2. Fall in the restricted bands listed in section 15.205. The maximum permitted average field strength is listed in section 15.209(see Section 15.205(c)).

Frequency (MHz)	Limit Average (dBuv/m)	Limit Peak (dBuv/m)
Below 2390 or Above 2483.5	54	74

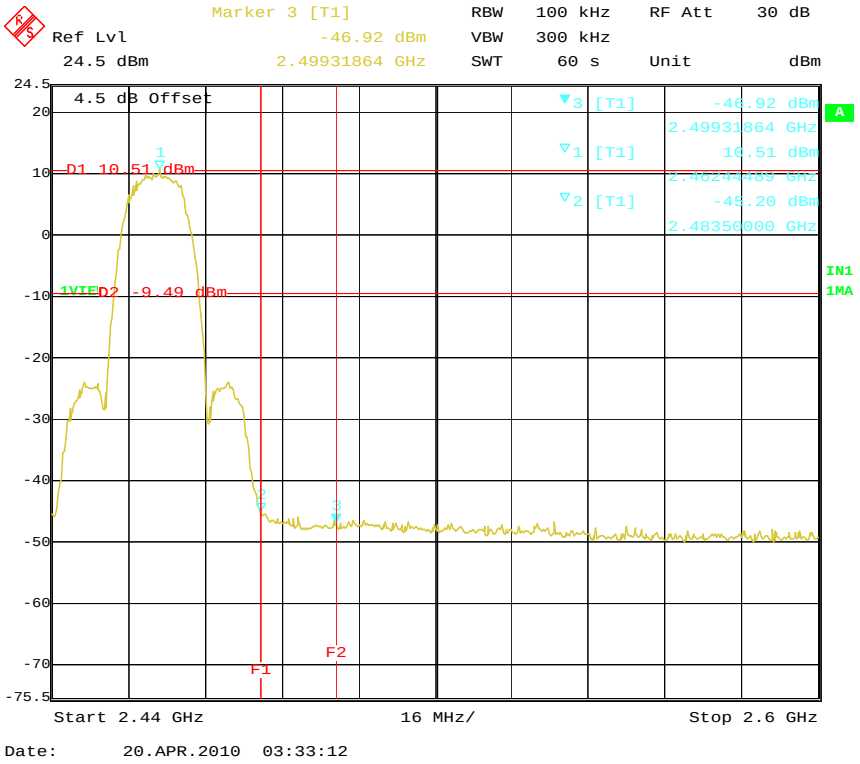
TEST RESULTS

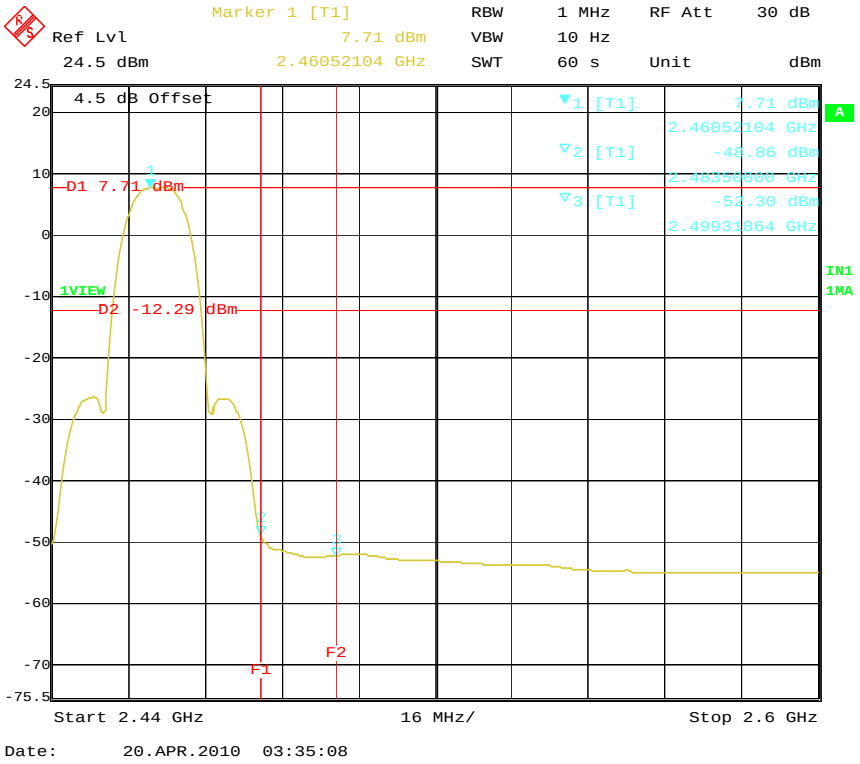
Photos of Band Edge Measurement
Note: For 802.11b Mode





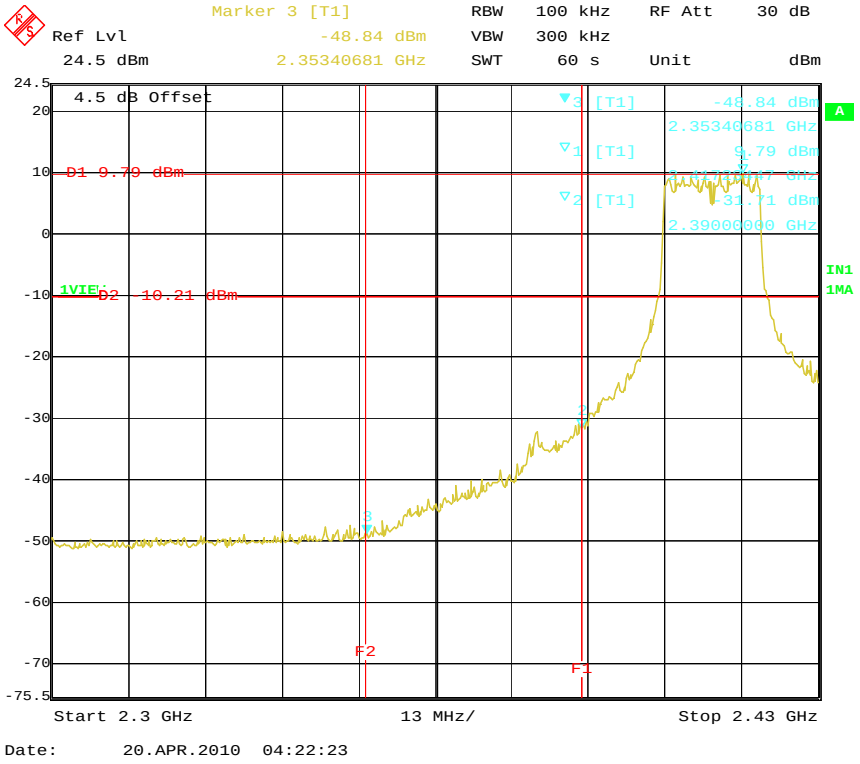
Results: Max carrier field strength PK 106.40dBuV/m, AV 91.20dBuV/m; At 2.390GHz, the deviation of PK plot is 55.08dB and the deviation of AV plot is 51.32dB; The field strength at 2.390GHz PK is 43.99dBuV/m and the field strength at 2.390GHz AV is 47.21 dBuV/m Which are fulfill the requirement of PK 74dBuV/m, AV 54dBuV/m.

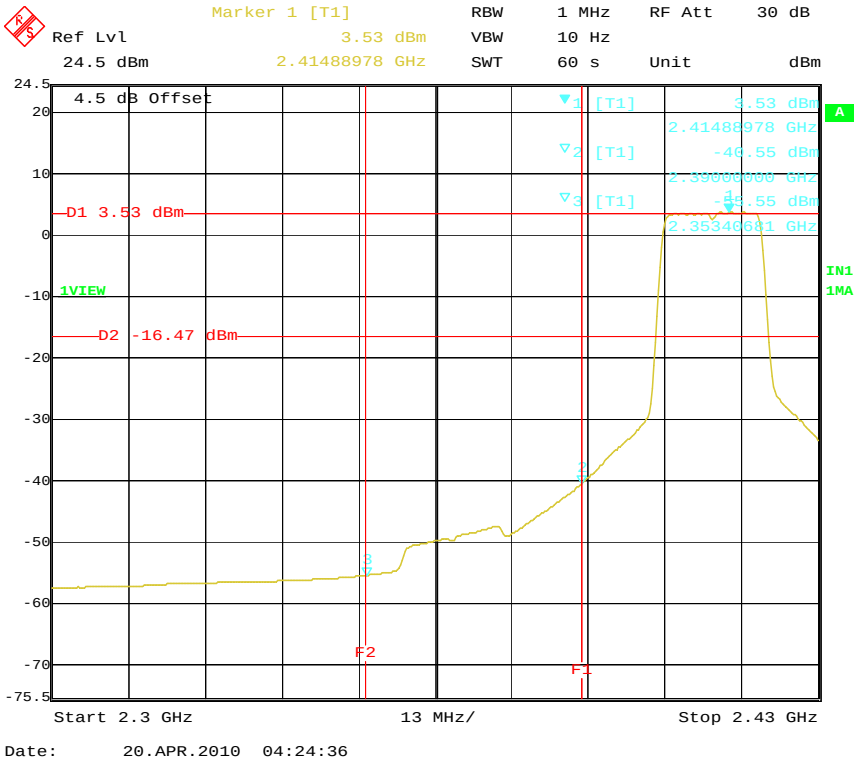




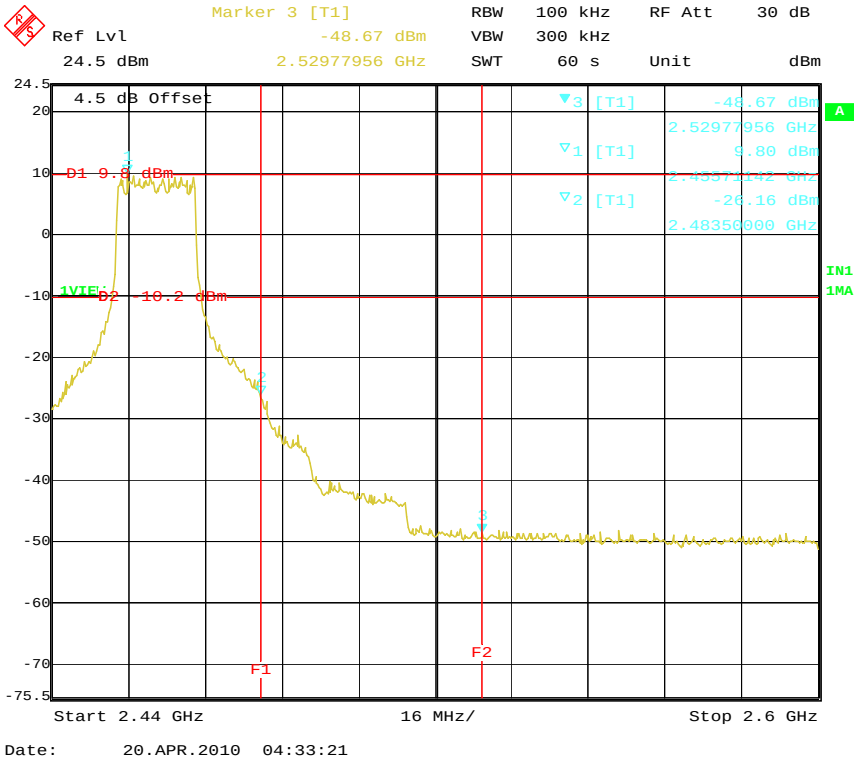
Results: Max carrier field strength PK 107.90dBuV/m, AV 97.60dBuV/m; At 2.4835GHz, the deviation of PK plot is 55.71dB and the deviation of AV plot is 56.57field strength at 2.4835GHz PK is 52.19dBuV/m and the field strength at 2.4835GHz AV is 41.03 dBuV/m Which are fulfill the requirement of PK 74dBuV/m, AV 54dBuV/m.

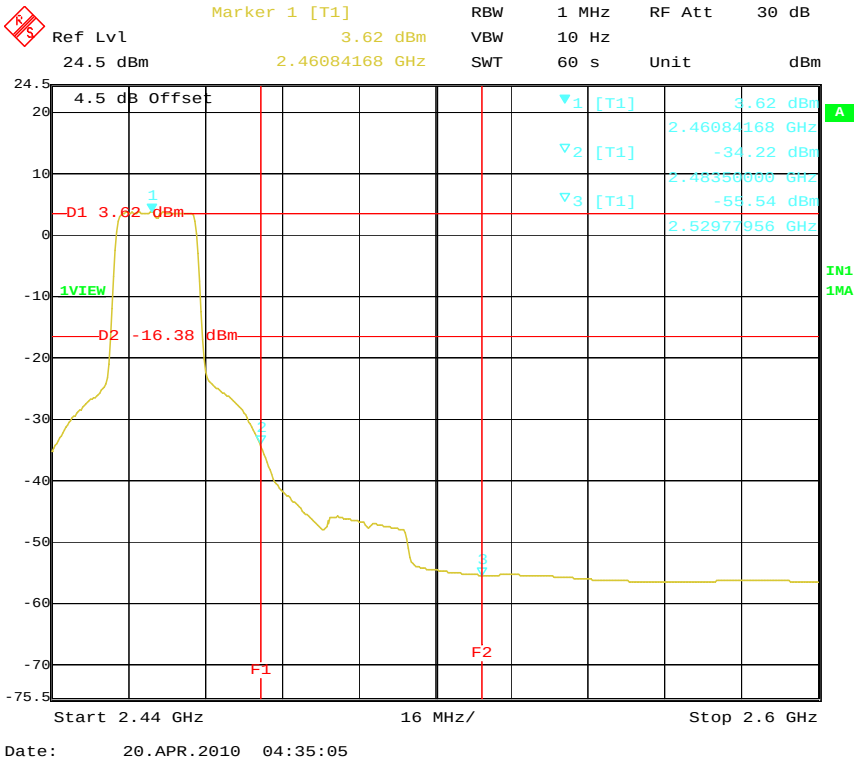
Note : For 802.11g Mode





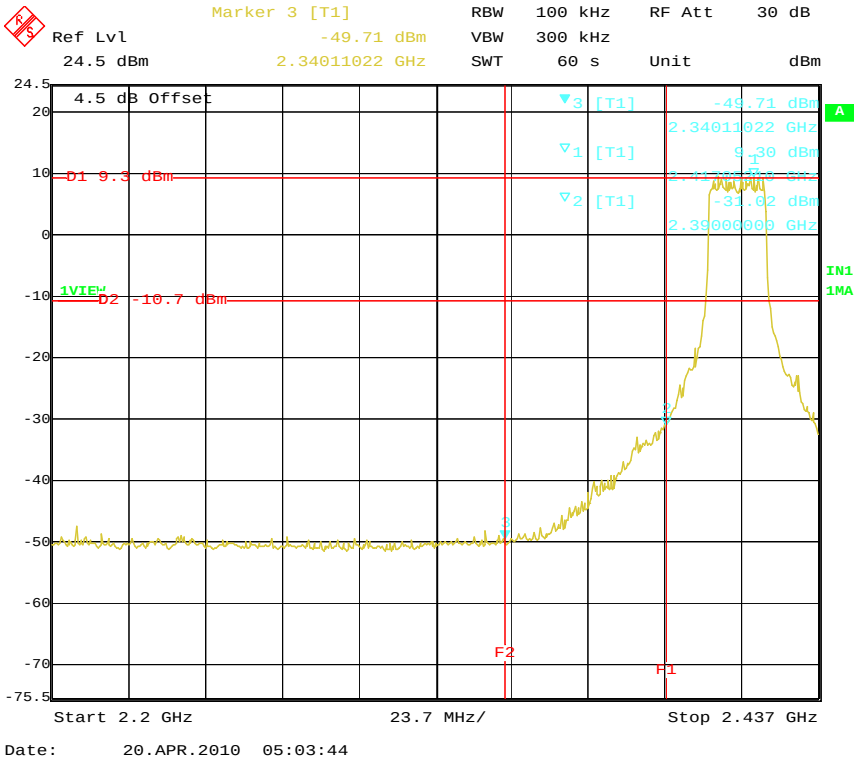
Results: Max carrier field strength PK 105.30dBuV/m, AV 96.50dBuV/m; At 2.390GHz, the deviation of PK plot is 41.50dB and the deviation of AV plot is 44.08dB; The field strength at 2.390GHz PK is 63.80dBuV/m and the field strength at 2.390GHz AV is 52.42dBuV/m Which are fulfill the requirement of PK 74dBuV/m, AV 54dBuV/m.

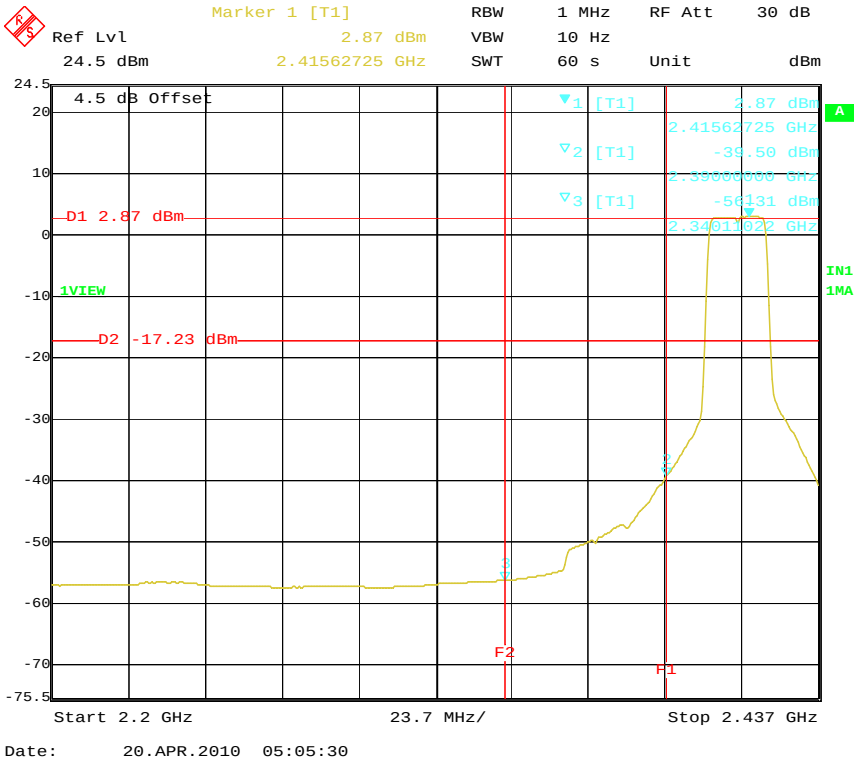




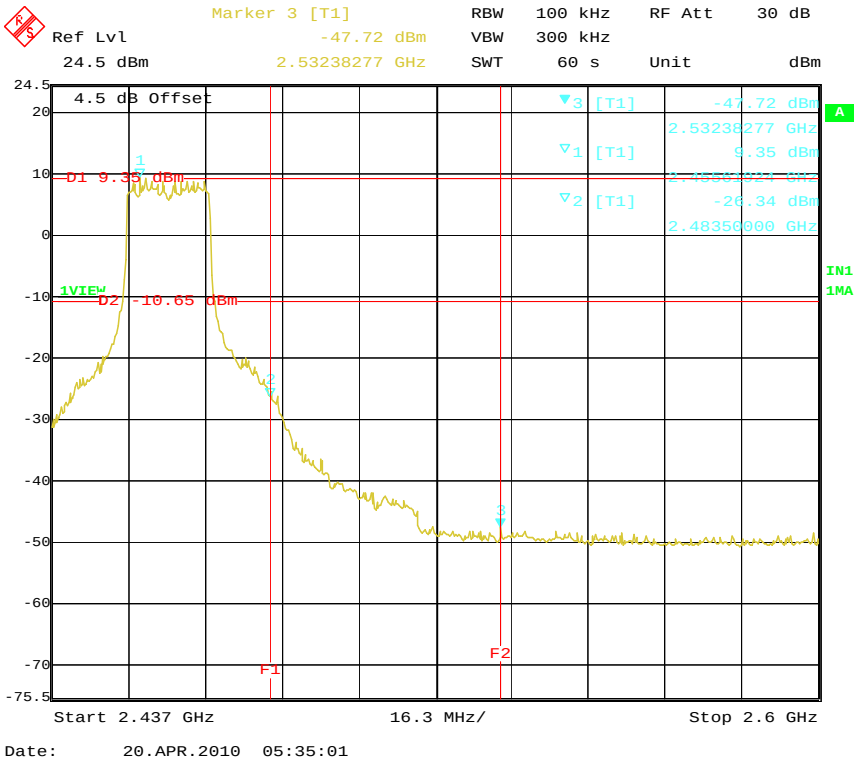
Results: Max carrier field strength PK 101.50dBuV/m, AV 89.10dBuV/m; At 2.4835GHz, the deviation of PK plot is 35.96dB and the deviation of AV plot is 37.84dB; The field strength at 2.4835GHz PK is 65.54dBuV/m and the field strength at 2.4835GHz AV is 51.26dBuV/m Which are fulfill the requirement of PK 74dBuV/m, AV 54dBuV/m.

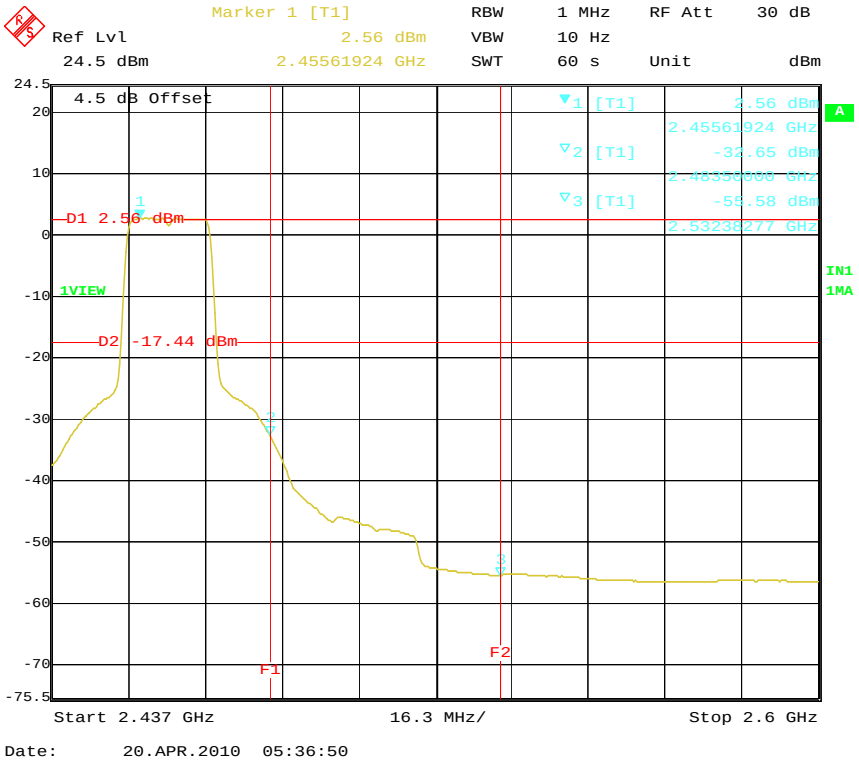
Note : For 802.11n (20MHz) Mode





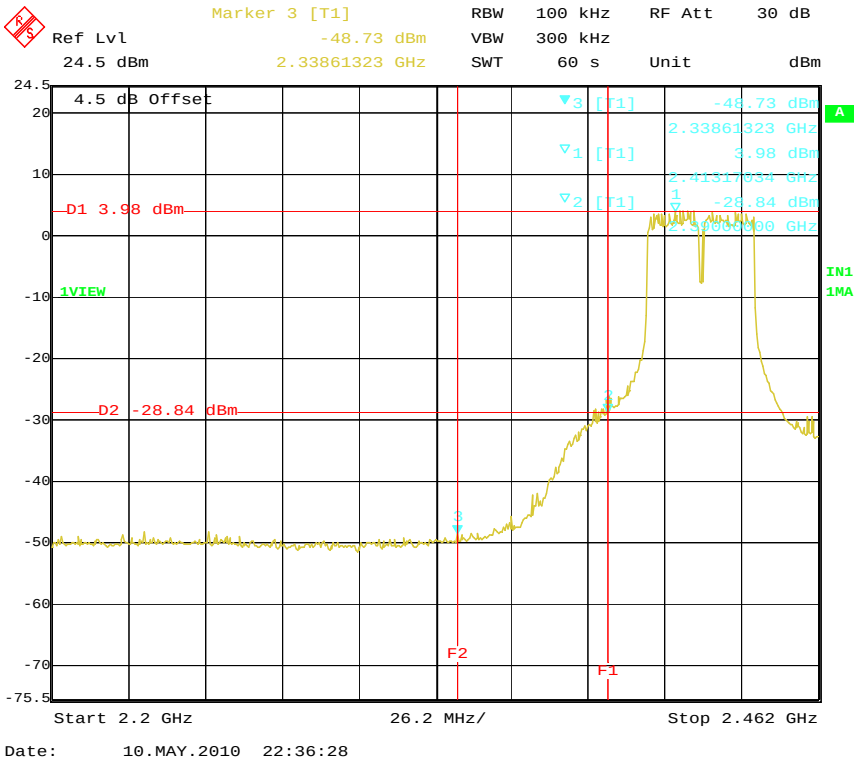
Results: Max carrier field strength PK 102.40dBuV/m, AV 88.00dBuV/m; At 2.390GHz, the deviation of PK plot is 40.32dB and the deviation of AV plot is 42.37dB; The field strength at 2.390GHz PK is 62.08dBuV/m and the field strength at 2.390GHz AV is 45.63dBuV/m Which are fulfill the requirement of PK 74dBuV/m, AV 54dBuV/m.

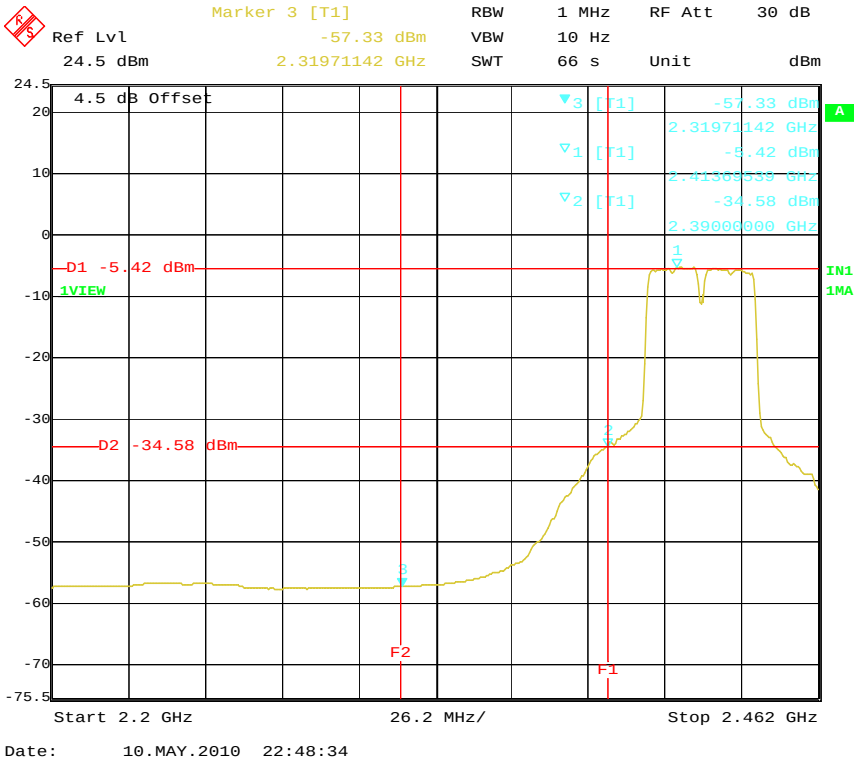




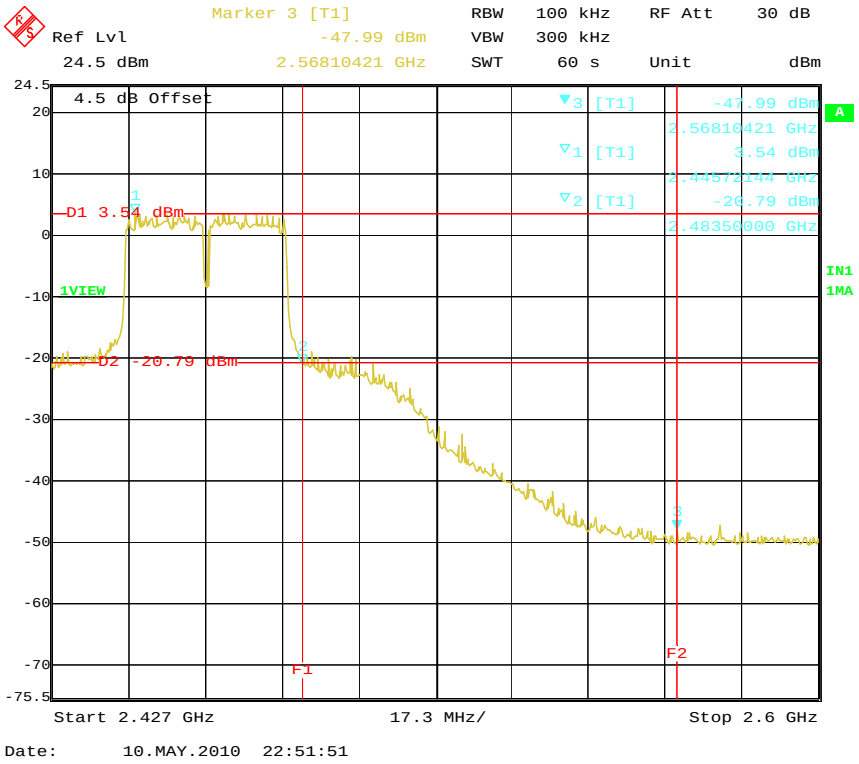
Results: Max carrier field strength PK 101.50dBuV/m, AV 87.30dBuV/m; At 2.4835GHz, the deviation of PK plot is 35.69dB and the deviation of AV plot is 35.21dB; The field strength at 2.4835GHz PK is 65.81dBuV/m and the field strength at 2.4835GHz AV is 52.09dBuV/m dBuV/m Which are fulfill the requirement of PK 74dBuV/m, AV 54dBuV/m.

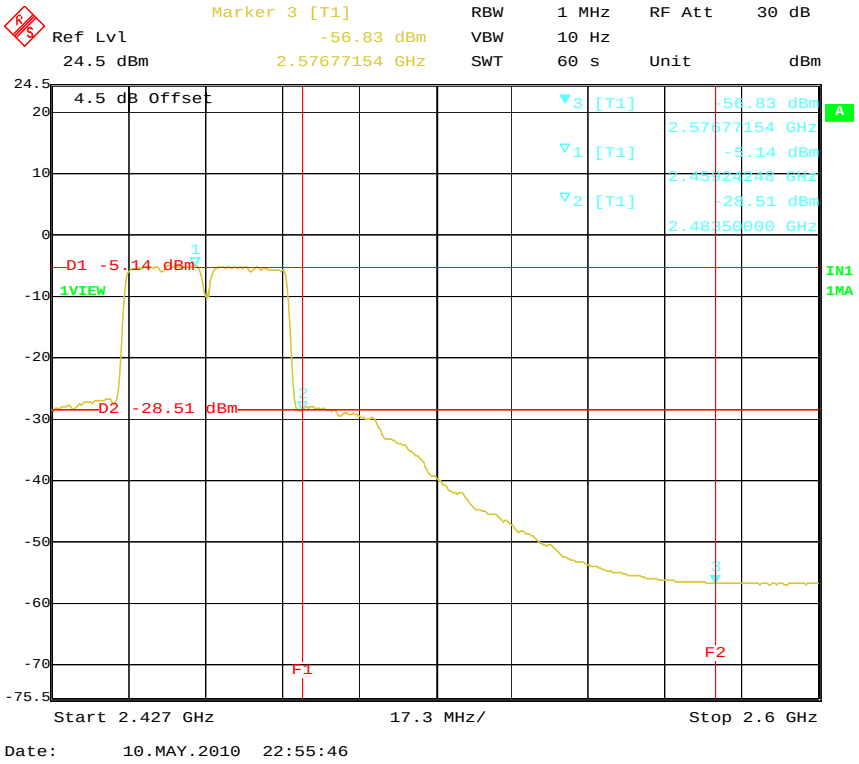
Note : For 802.11n (40MHz) Mode





Results: Max carrier field strength PK 98.70dBuV/m, AV 81.60dBuV/m; At 2.390GHz, the deviation of PK plot is 32.82dB and the deviation of AV plot is 29.16dB; The field strength at 2.390GHz PK is 65.88dBuV/m and the field strength at 2.390GHz AV is 52.44 dBuV/m Which are fulfill the requirement of PK 74dBuV/m, AV 54dBuV/m.

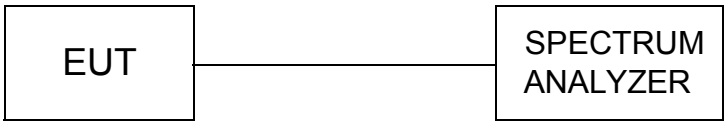




Results: Max carrier field strength PK 93.50dBuV/m, AV 75.80dBuV/m; At 2.4835GHz, the deviation of PK plot is 24.33dB and the deviation of AV plot is 23.37dB; The field strength at 2.4835GHz PK is 69.17dBuV/m and the field strength at 2.4835GHz AV is 52.43dBuV/m Which are fulfill the requirement of PK 74dBuV/m, AV 54dBuV/m.

4.6. Spurious RF Conducted Emission

TEST CONFIGURATION



TEST PROCEDURE

The Spurious RF conducted emissions compliance of RF radiated emission should be measured by following the guidance in ANSI C63.4-2009 with respect to maximizing the emission by rotating the EUT, measuring the emission while the EUT is situated in three orthogonal planes (if appropriate), adjusting the measurement antenna height and polarization etc. Set RBW=100kHz and VBM= 300KHz to measure the peak field strength , and mwasure frequeny range from 30MHz to 26.5GHz.

LIMIT

1. Below -20dB of the highest emission level in operating band.

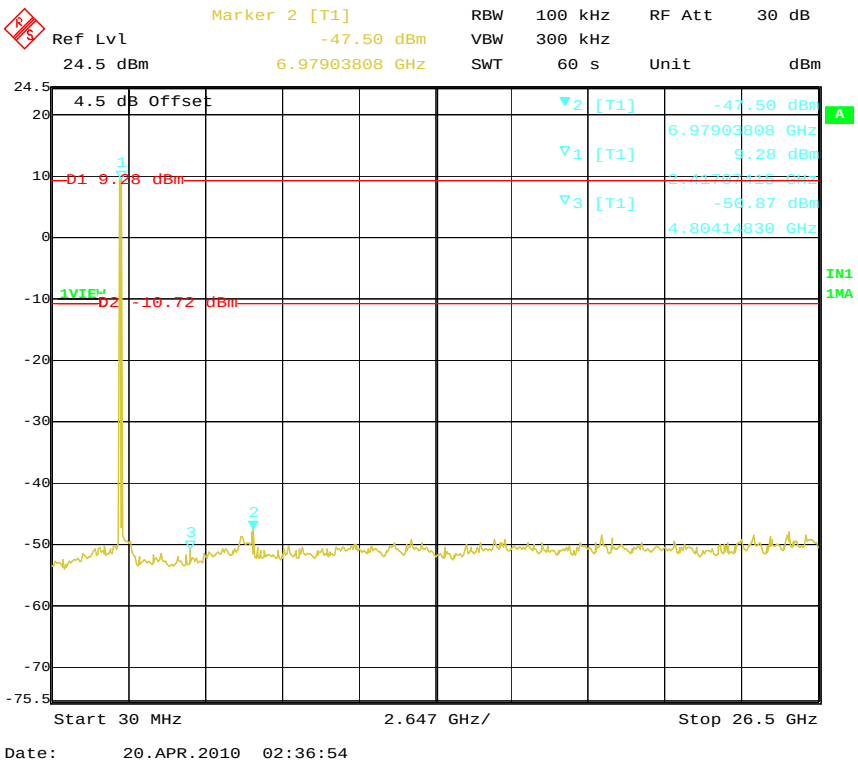
2. Fall in the restricted bands listed in section 15.205. The maximum permitted average field strength is listed in section 15.209.

TEST RESULTS

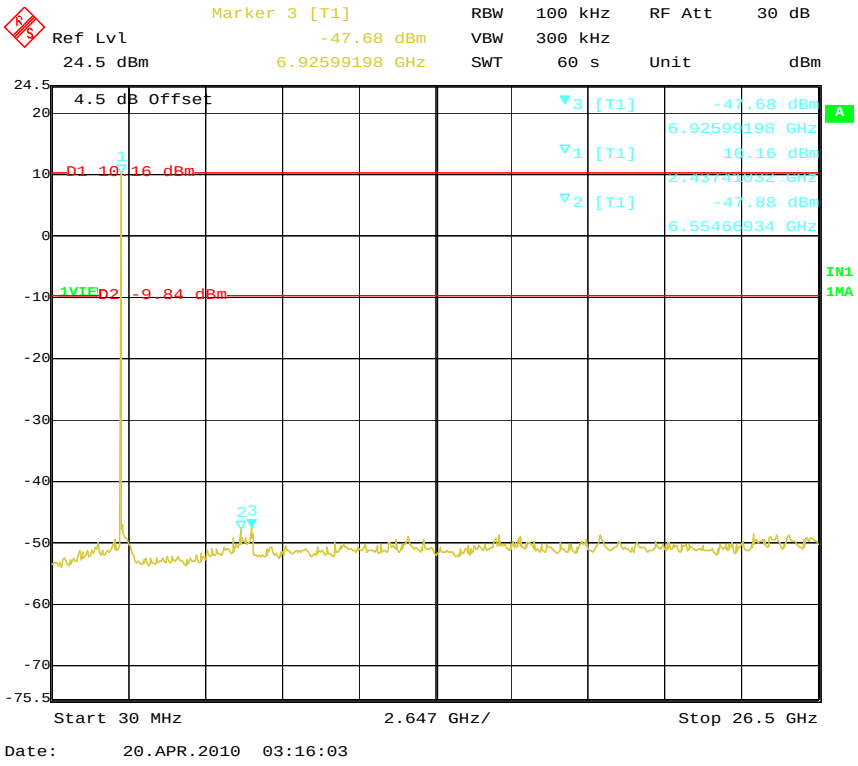
Photo of Spurious RF Conducted Emission **Measurement**

Note: For 802.11b Mode

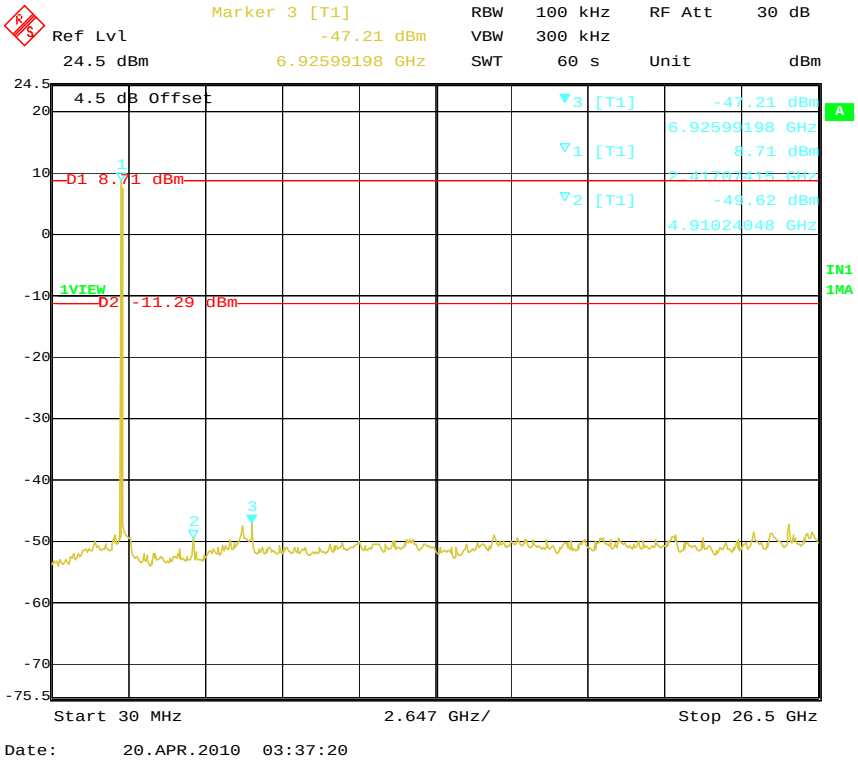
Channel 1



Channel 6

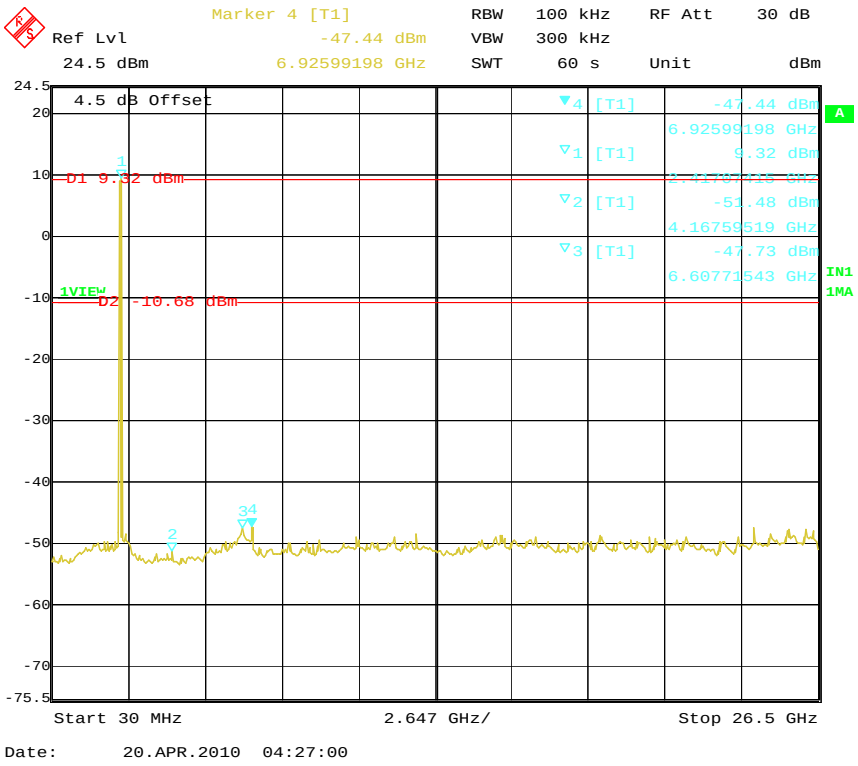


Channel 11

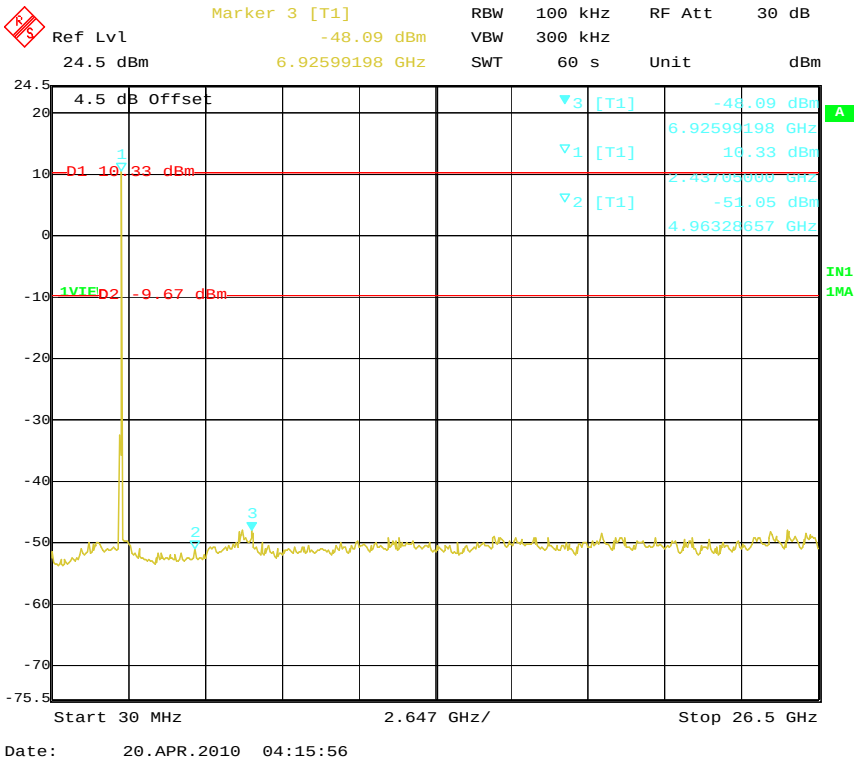


Note: For 802.11g Mode

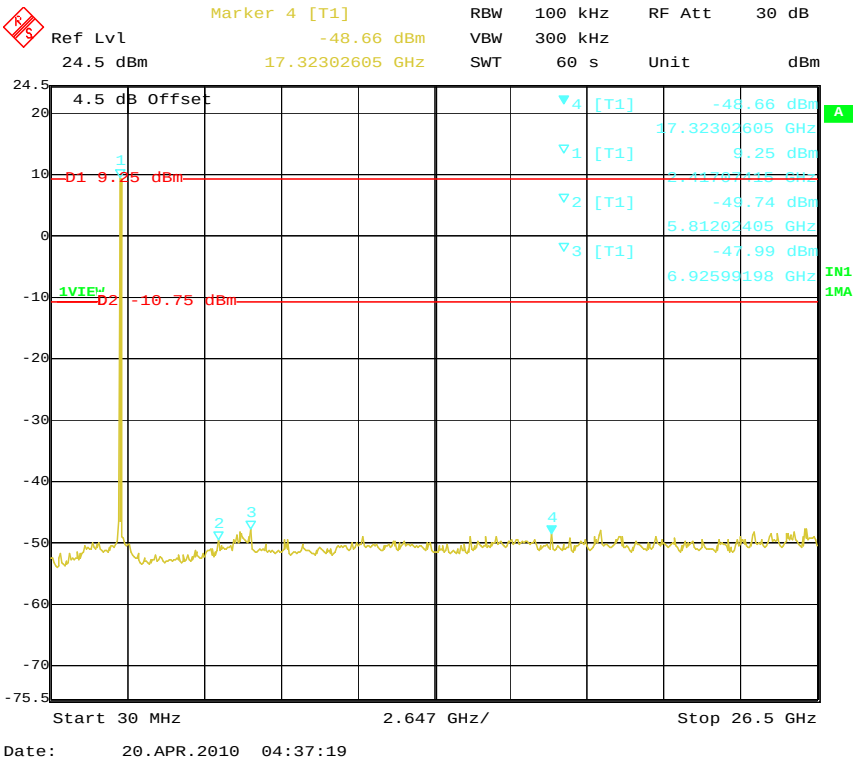
Channel 1



Channel 6

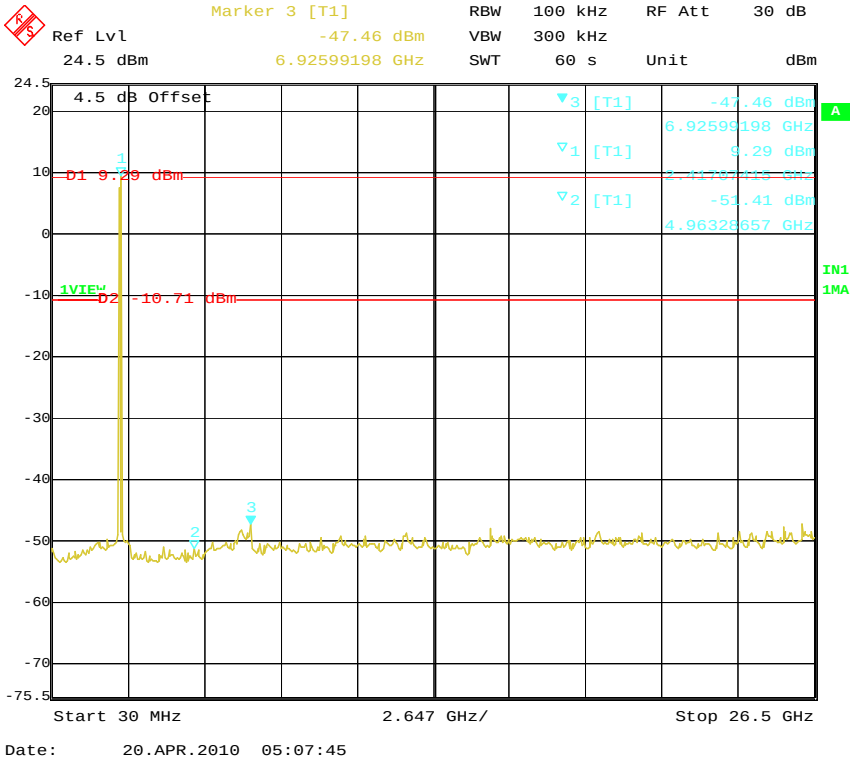


Channel 11

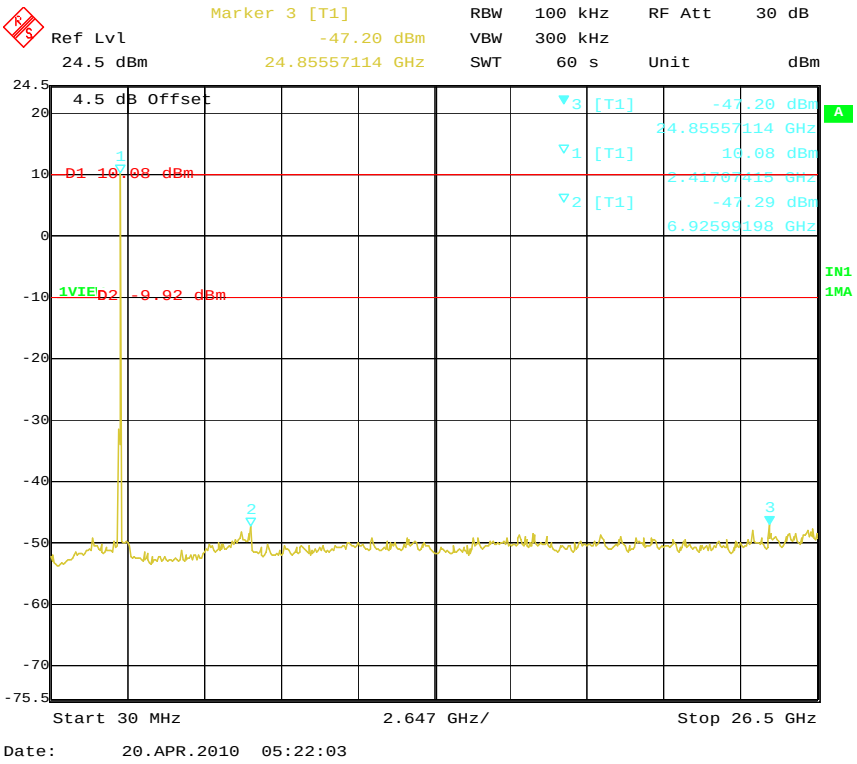


Note: For 802.11n (20MHz) Mode

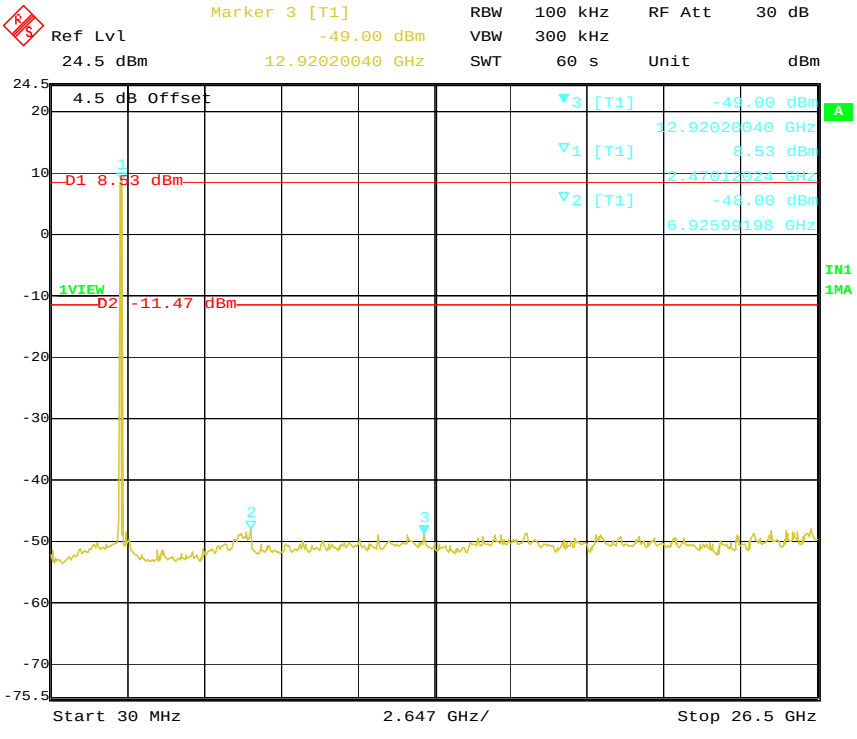
Channel 1



Channel 6

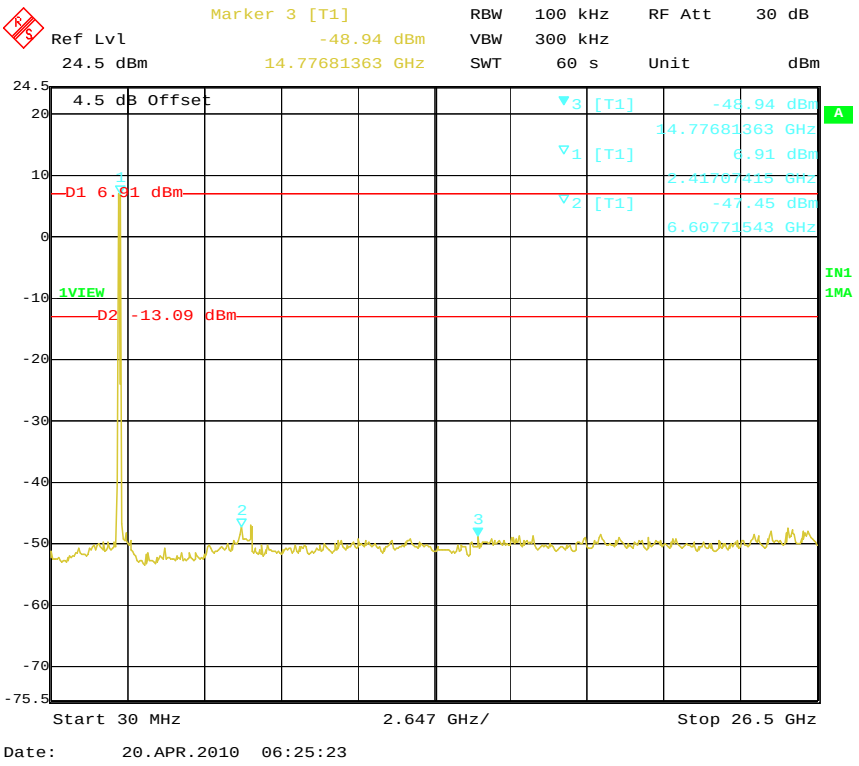


Channel 11

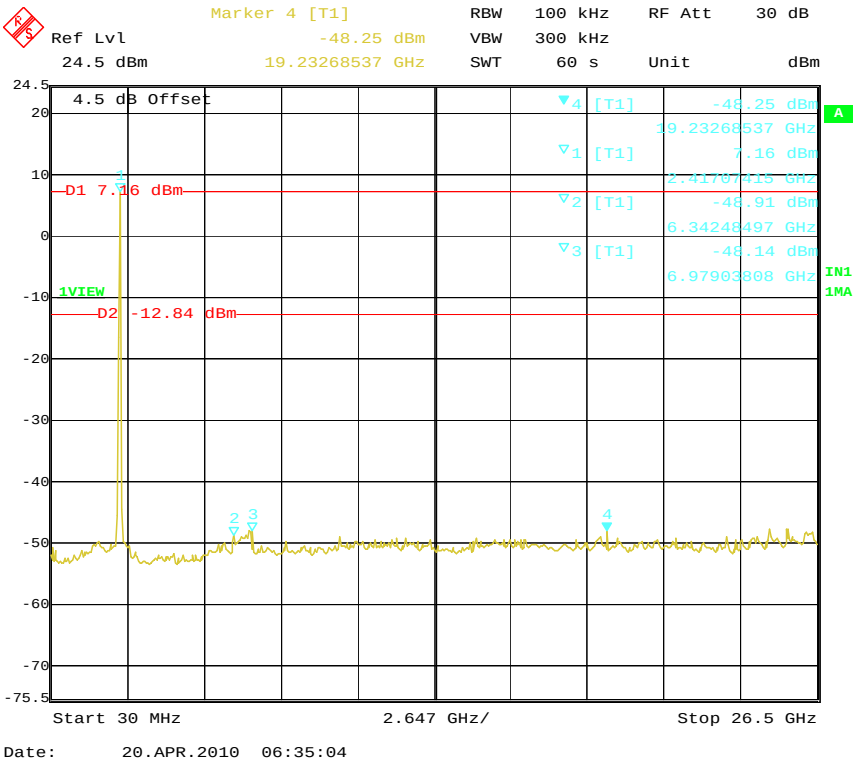


Note: For 802.11n (40MHz) Mode

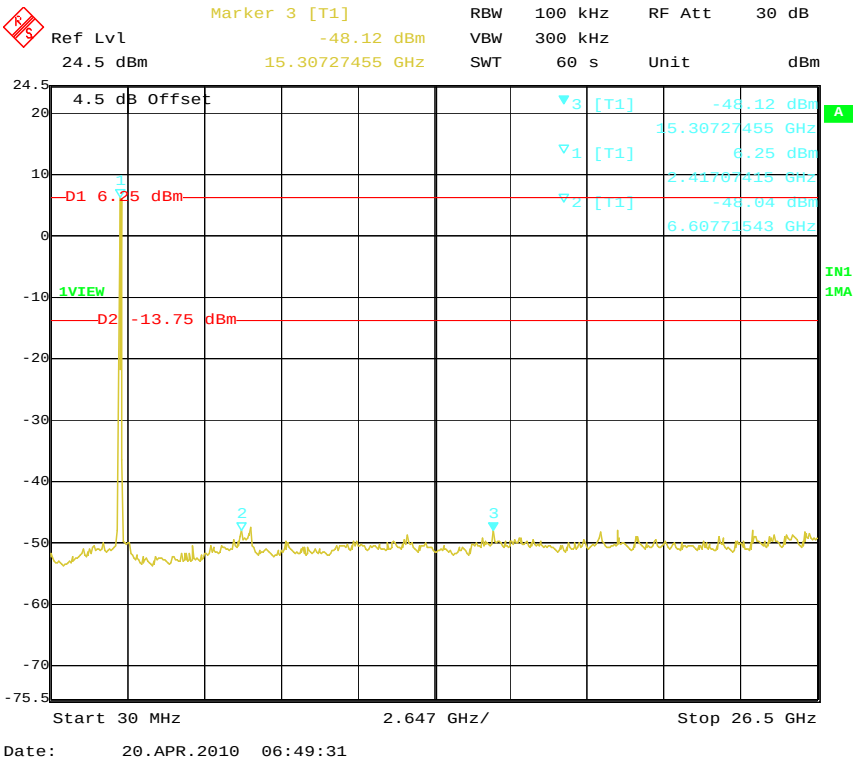
Channel 3



Channel 6

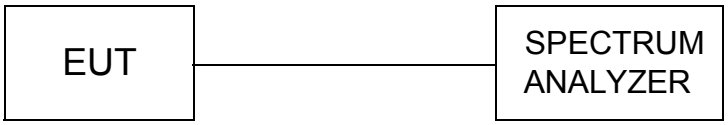


Channel 9


Marker 3 [T1]
RBW 100 kHz
RF Att 30 dB
Ref Lvl
-48.12 dBm
VBW 300 kHz
24.5 dBm
15.30727455 GHz
SWT 60 s
Unit dBm
4.5 dB Offset
3 [T1] -48.12 dBm
15.30727455 GHz
1 [T1] 6.25 dBm
2.41707415 GHz
D1 6.25 dBm
2 [T1] -48.04 dBm
6.60771543 GHz
A
IN1
1MA
1VIEW
D2 -13.75 dBm
24.5
20
10
0
-10
-20
-30
-40
-50
-60
-70
-75.5
Start 30 MHz
2.647 GHz/
Stop 26.5 GHz
Date: 20.APR.2010 06:49:31

4.7. 6dB Bandwidth

TEST CONFIGURATION



TEST PROCEDURE

The transmitter output was connected to the spectrum analyzer through an attenuator. The bandwidth of the fundamental frequency was measured by spectrum analyzer with100 KHz RBW and 300KHz VBW.

The 6dB bandwidth is defined as the total spectrum the power of which is higher than peak power minus 6dB.

LIMIT

For digital modulation systems, the minimum 6 dB bandwidth shall be at least 500 kHz.

TEST RESULTS

Company	TP-LINK TECHNOLOGIES CO.,LTD.	Test Date	20/04/2010
Product Name	150Mbps Wireless Lite N ADSL2+ Modem Router	Test By	Wenliang Li
Model Name	TD-W8950ND	TEMP&Humidity	25°C, 55%

Note: For 802.11b Mode

CHANNEL	CHANNEL FREQUENCY (MHz)	6 dB BANDWIDTH (MHz)	99% BANDWIDTH (MHz)	MINIMUM LIMIT (MHz)	PASS/FAIL
1	2412	13.01	15.93	0.5	PASS
6	2437	12.42	15.53	0.5	PASS
11	2462	13.02	15.53	0.5	PASS

Note: For 802.11g Mode

CHANNEL	CHANNEL FREQUENCY (MHz)	6 dB BANDWIDTH (MHz)	99% BANDWIDTH (MHz)	MINIMUM LIMIT (MHz)	PASS/FAIL
1	2412	16.63	16.32	0.5	PASS
6	2437	16.63	16.63	0.5	PASS
11	2462	16.63	16.53	0.5	PASS

Note: For 802.11n (20MHz) Mode

CHANNEL	CHANNEL FREQUENCY (MHz)	6 dB BANDWIDTH (MHz)	99% BANDWIDTH (MHz)	MINIMUM LIMIT (MHz)	PASS/FAIL
1	2412	18.03	17.84	0.5	PASS
6	2437	17.94	17.84	0.5	PASS
11	2462	17.94	17.84	0.5	PASS

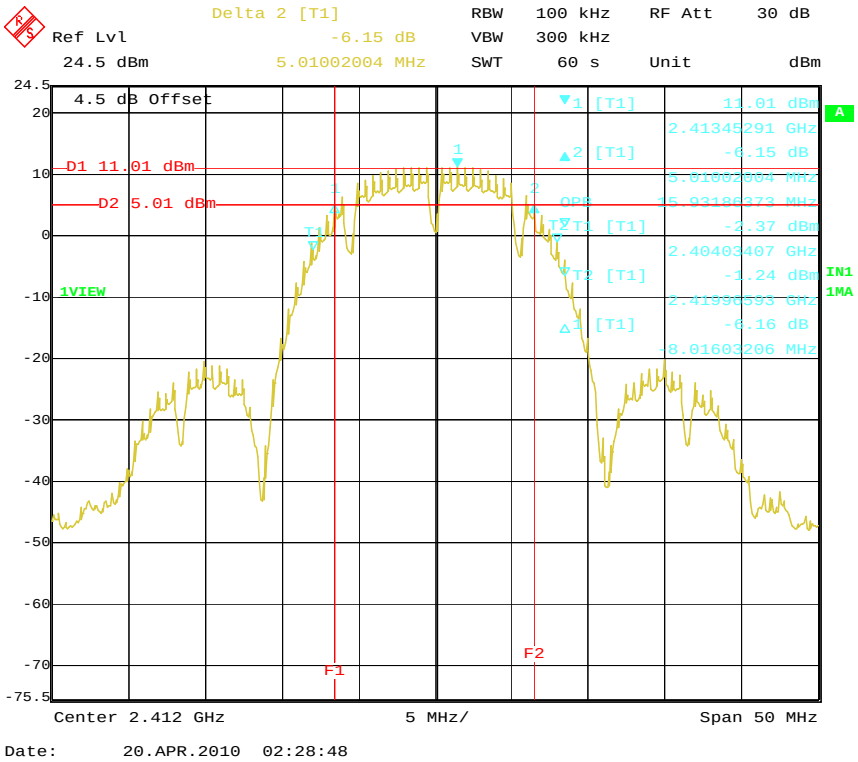
Note: 1. For 802.11n (40MHz) Mode

CHANNEL	CHANNEL FREQUENCY (MHz)	6 dB BANDWIDTH (MHz)	99% BANDWIDTH (MHz)	MINIMUM LIMIT (MHz)	PASS/FAIL
3	2422	36.65	36.39	0.5	PASS
6	2437	36.71	36.71	0.5	PASS
9	2452	36.58	36.37	0.5	PASS

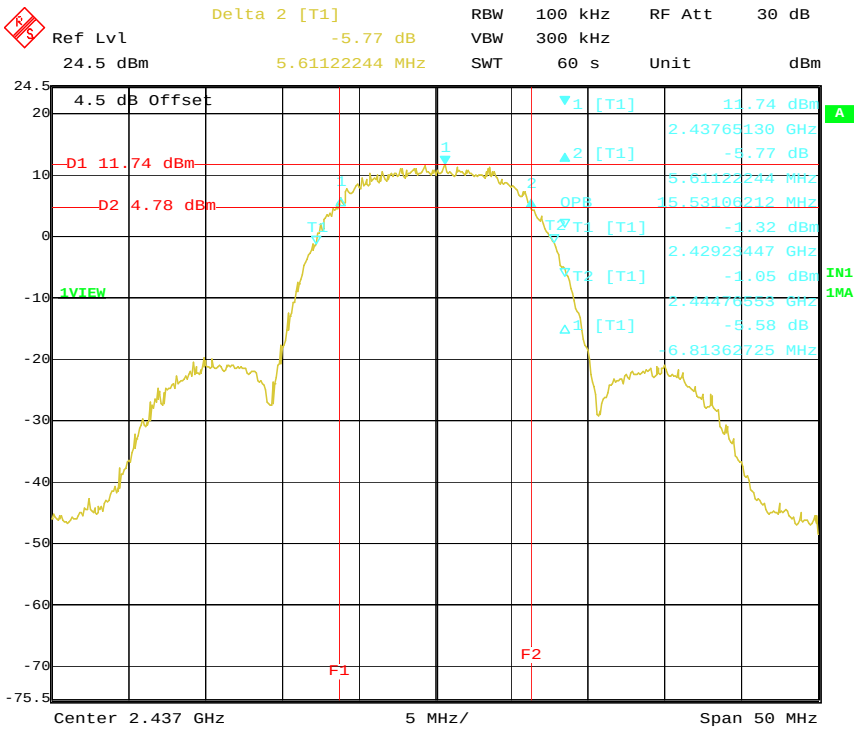
Photos of 6dB Bandwidth and 99% Bandwidth Measurement

Note: For 802.11b Mode

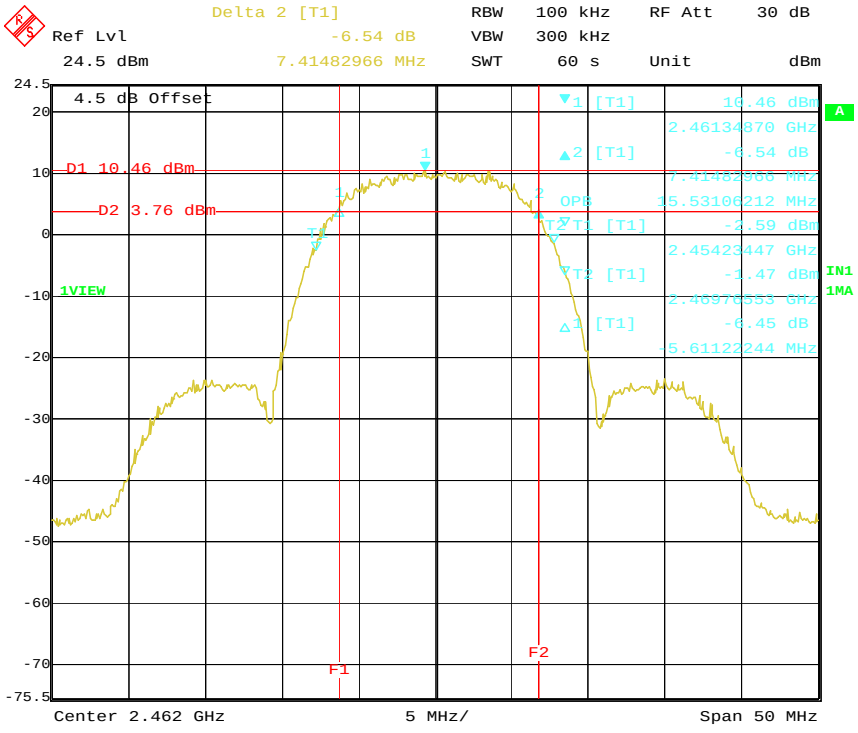
Channel 1



Channel 6

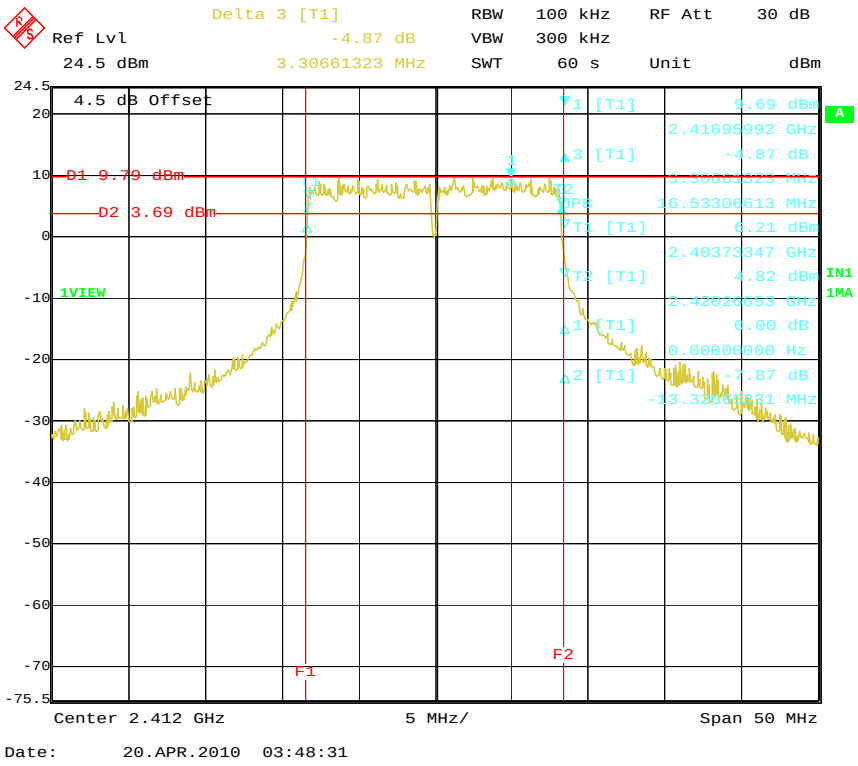


Channel 13

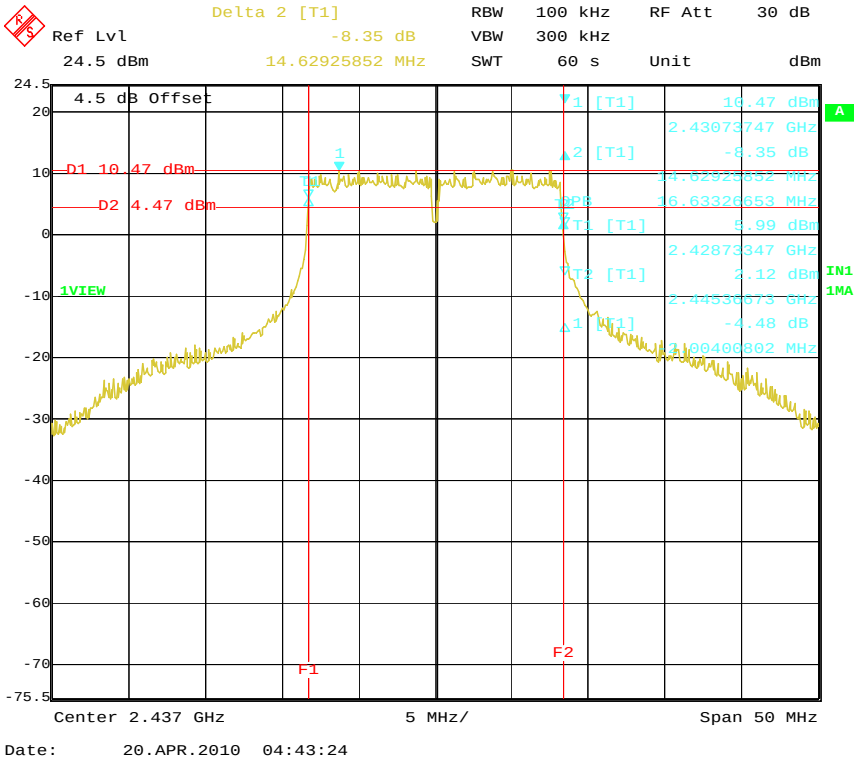


Note : For 802.11g Mode

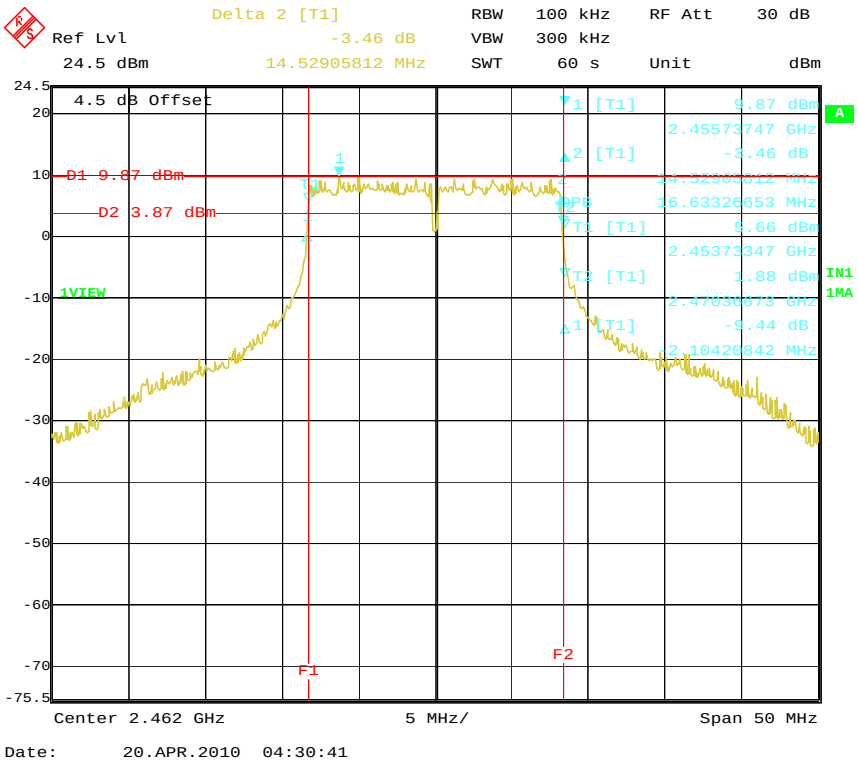
Channel 1



Channel 6

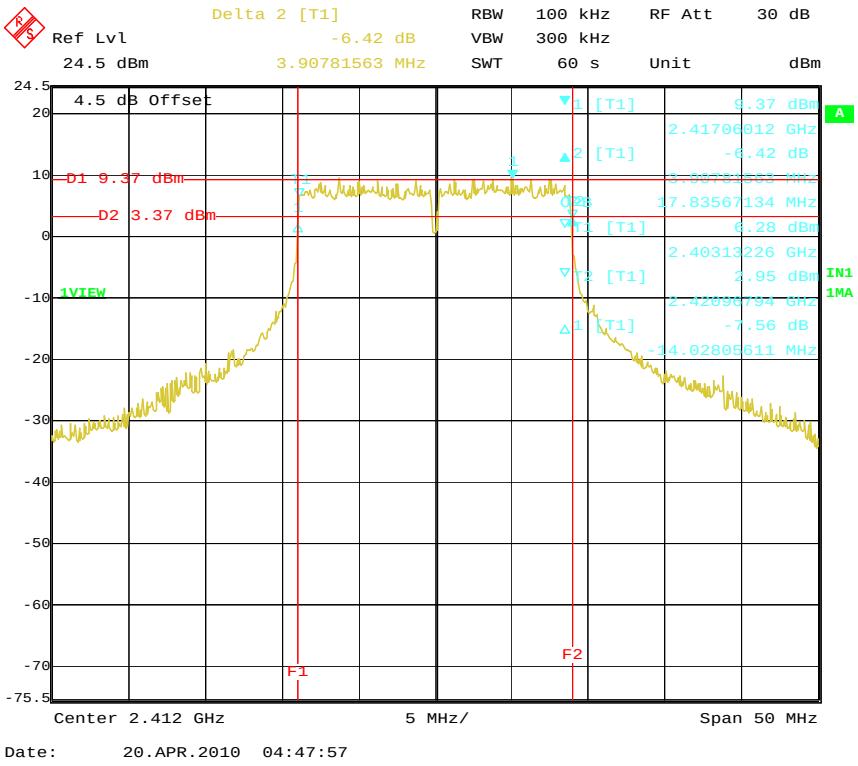


Channel 11

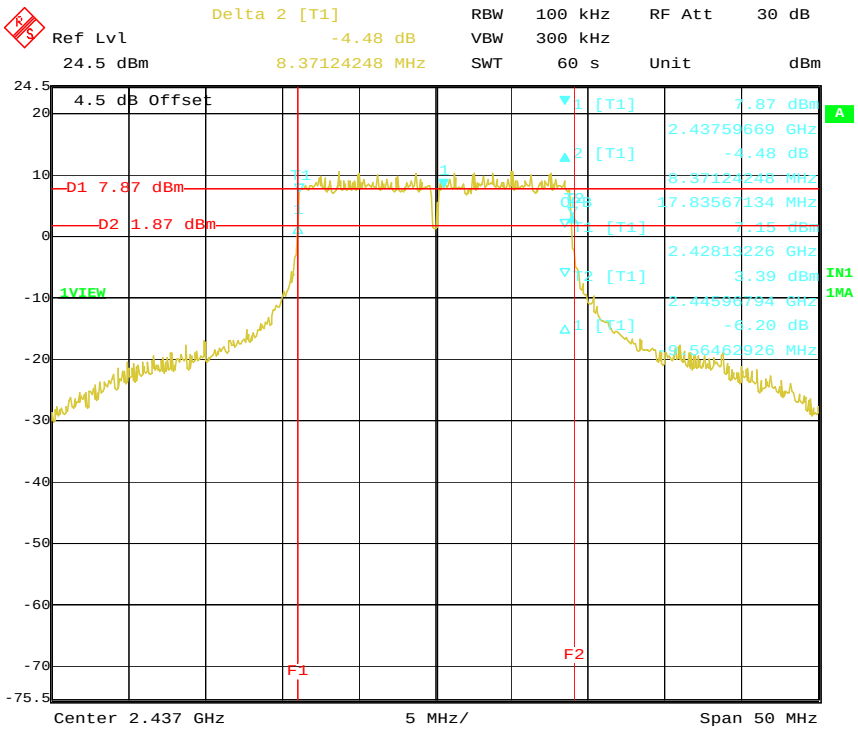


Note : For 802.11n (20MHz) Mode

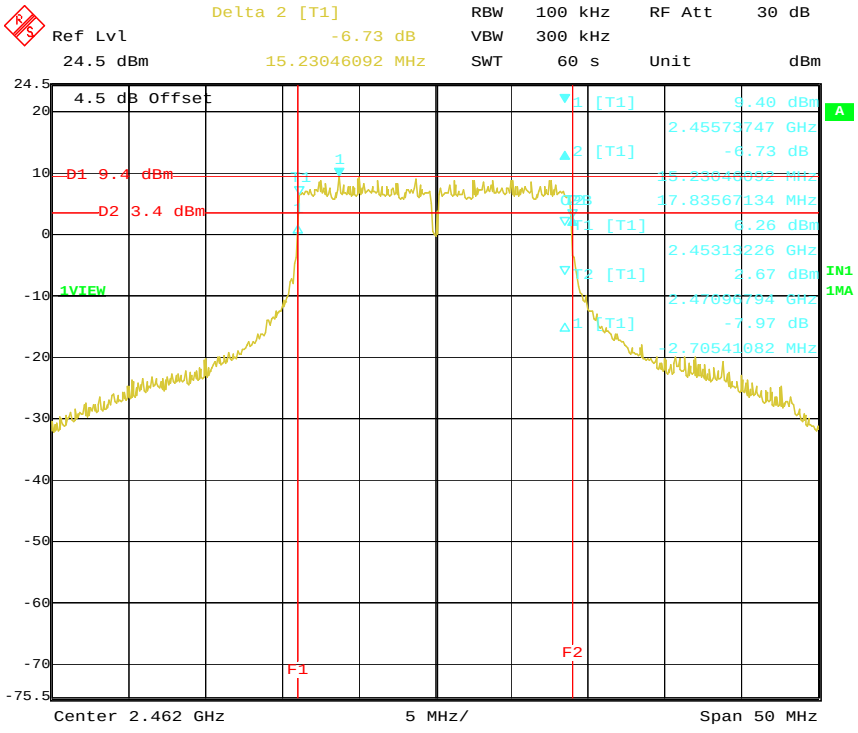
Channel 1



Channel 6

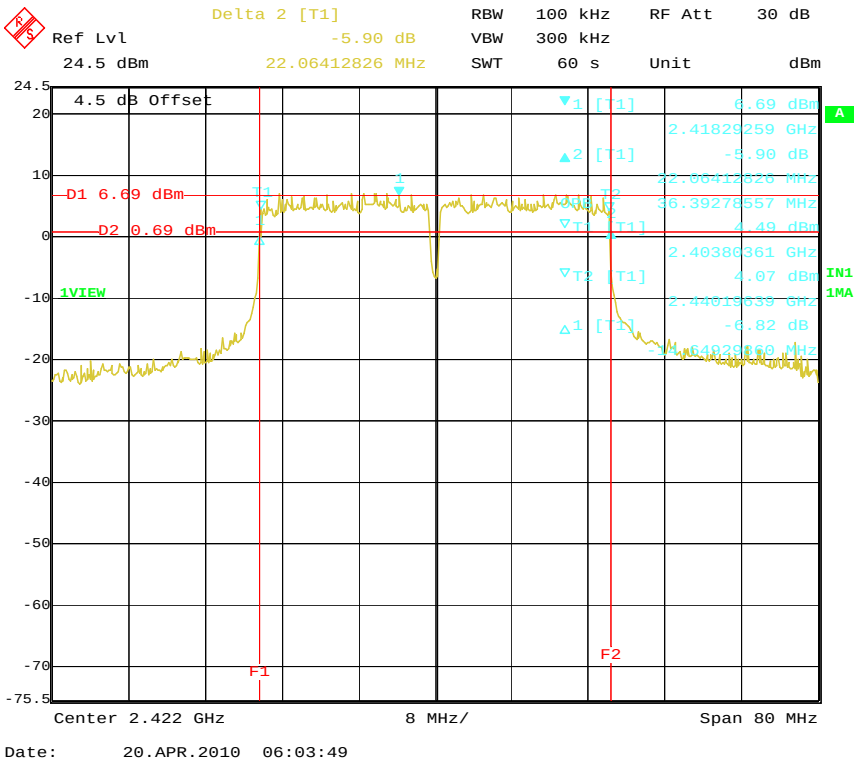


Channel 11

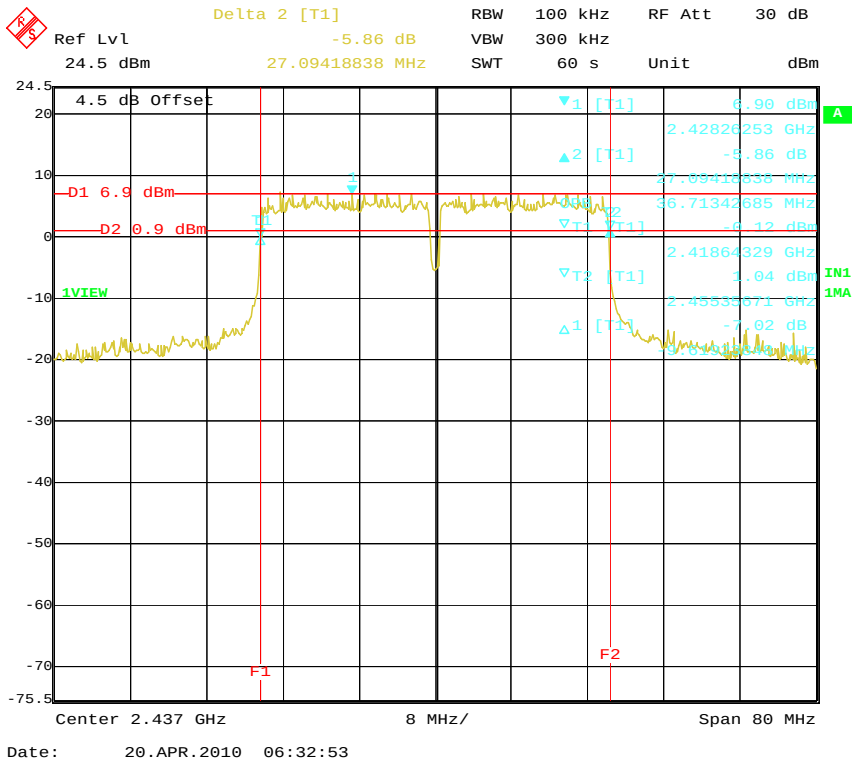


Note : For 802.11n (40MHz) Mode

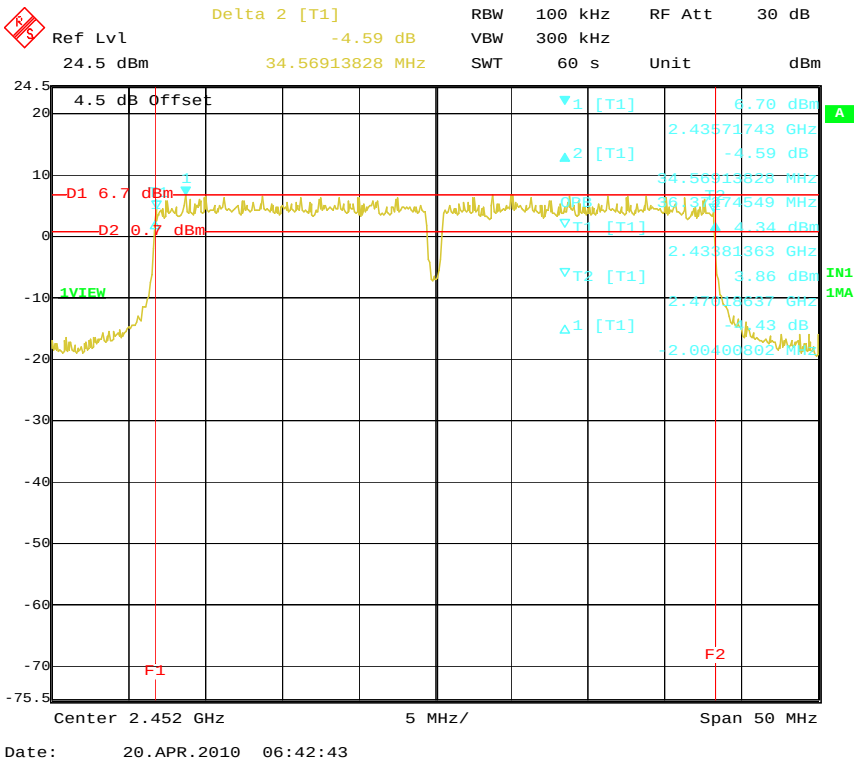
Channel 3



Channel 6



Channel 9


Delta 2 [T1]
RBW 100 kHz
RF Att 30 dB
Ref Lvl
-4.59 dB
VBW 300 kHz
24.5 dBm
34.56913828 MHz
SWT 60 s
Unit dBm
4.5 dB Offset
1 [T1] 6.70 dBm
2.43571743 GHz
2 [T1] -4.59 dB
34.56913828 MHz
D1 6.7 dBm
D2 0.7 dBm
T1 [T1] 4.34 dBm
2.43381363 GHz
T2 [T1] 3.86 dBm
1 [T1] -4.43 dB
1VIEW
A
IN1
1MA
F1
F2
Center 2.452 GHz
5 MHz/
Span 50 MHz
Date: 20.APR.2010 06:42:43

4.8. MPE Evaluation

Applicable Standard

According to §1.1307(b)(1), systems operating under the provisions of this section shall be operated in a manner that ensures that the public is not exposed to radio frequency energy level in excess of the Commission's guidelines.
According to §1.1310 and §2.1091 RF exposure is calculated.

LIMIT

Limits for Maximum Permissible Exposure (MPE)/Controlled Exposure

Frequency Range(MHz)	Electric Field Strength(V/m)	Magnetic Field Strength(A/m)	Power Density (mW/cm²)	Averaging Time (minute)
Limits for Occupational/Controlled Exposure				
0.3 – 3.0	614	1.63	(100) *	6
3.0 – 30	1842/f	4.89/f	(900/f)*	6
30 – 300	61.4	0.163	1.0	6
300 – 1500	/	/	f/300	6
1500 – 100,000	/	/	5	6

Limits for Maximum Permissible Exposure (MPE)/Uncontrolled Exposure

Frequency Range(MHz)	Electric Field Strength(V/m)	Magnetic Field Strength(A/m)	Power Density (mW/cm²)	Averaging Time (minute)
Limits for Occupational/Controlled Exposure				
0.3 – 3.0	614	1.63	(100) *	30
3.0 – 30	824/f	2.19/f	(180/f)*	30
30 – 300	27.5	0.073	0.2	30
300 – 1500	/	/	f/1500	30
1500 – 100,000	/	/	1.0	30

F=frequency in MHz
*=Plane-wave equivalent power density

MPE Calculation Method

Predication of MPE limit at a given distance
Equation from page 18 of OET Bulletin 65, Edition 97-01

$S=PG/4\pi R^2$

Where: S=power density
P=power input to antenna
G=power gain of the antenna in the direction of interest relative to an isotropic radiator
R=distance to the center of radiation of the antenna
From the peak EUT RF output power, the minimum mobile separation distance, d=0.2m, as well as the gain of the used antenna is 3dBi, the RF power density can be obtained.

TEST RESULTS

For 802.11 b

Mode	Minimum Separation Distance (cm)	Output Power (dBm)	Output Power (mW)	Antenna Gain (Nemeric)	Power Density Limit (mW/cm^2)	Power Density At 20 cm (mW/cm^2)	Test Results
2412	20.00	21.96	157.04	1.995	1.000	0.0623	Pass
2437	20.00	22.68	185.35	1.995	1.000	0.0736	Pass
2462	20.00	21.49	140.93	1.995	1.000	0.0559	Pass

For 802.11 g

Mode	Minimum Separation Distance (cm)	Output Power (dBm)	Output Power (mW)	Antenna Gain (Nemeric)	Power Density Limit (mW/cm^2)	Power Density At 20 cm (mW/cm^2)	Test Results
2412	20.00	21.63	145.55	1.995	1.000	0.0578	Pass
2437	20.00	22.26	168.27	1.995	1.000	0.0668	Pass
2462	20.00	20.95	124.45	1.995	1.000	0.0494	Pass

For 802.11 n(20MHz)

Mode	Minimum Separation Distance (cm)	Output Power (dBm)	Output Power (mW)	Antenna Gain (Nemeric)	Power Density Limit (mW/cm^2)	Power Density At 20 cm (mW/cm^2)	Test Results
2412	20.00	21.69	147.57	1.995	1.000	0.0586	Pass
2437	20.00	22.29	169.43	1.995	1.000	0.0673	Pass
2462	20.00	21.05	127.35	1.995	1.000	0.0506	Pass

For 802.11 n(40MHz)

Mode	Minimum Separation Distance (cm)	Output Power (dBm)	Output Power (mW)	Antenna Gain (Nemeric)	Power Density Limit (mW/cm^2)	Power Density At 20 cm (mW/cm^2)	Test Results
2412	20.00	22.50	177.83	1.995	1.000	0.0706	Pass
2437	20.00	22.51	178.24	1.995	1.000	0.0708	Pass
2452	20.00	22.05	160.32	1.995	1.000	0.0636	Pass

Conclusion

The measurement results comply with the FCC Limit Per 47 CFR 2.1091 (b) for the controlled RF Exposure.

4.9. Antenna Requirement

Standard Applicable

For intentional device, according to FCC 47 CFR Section 15.203, an intentional radiator shall be designed to ensure that no antenna other than that furnished by the responsible party shall be used with the device.

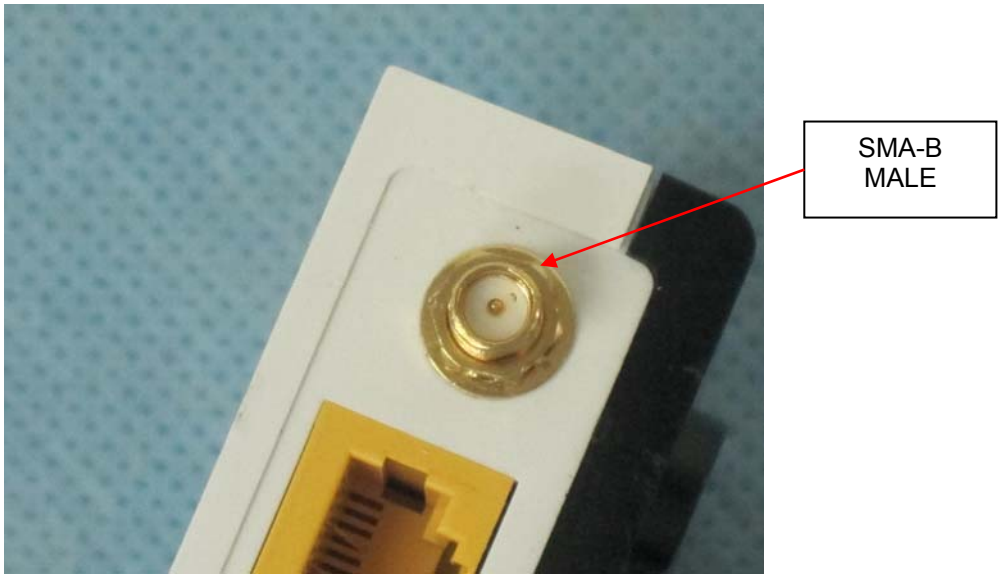
And according to FCC 47 CFR Section 15.247 (c), if transmitting antennas of directional gain greater than 6dBi are used, the power shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6dBi.

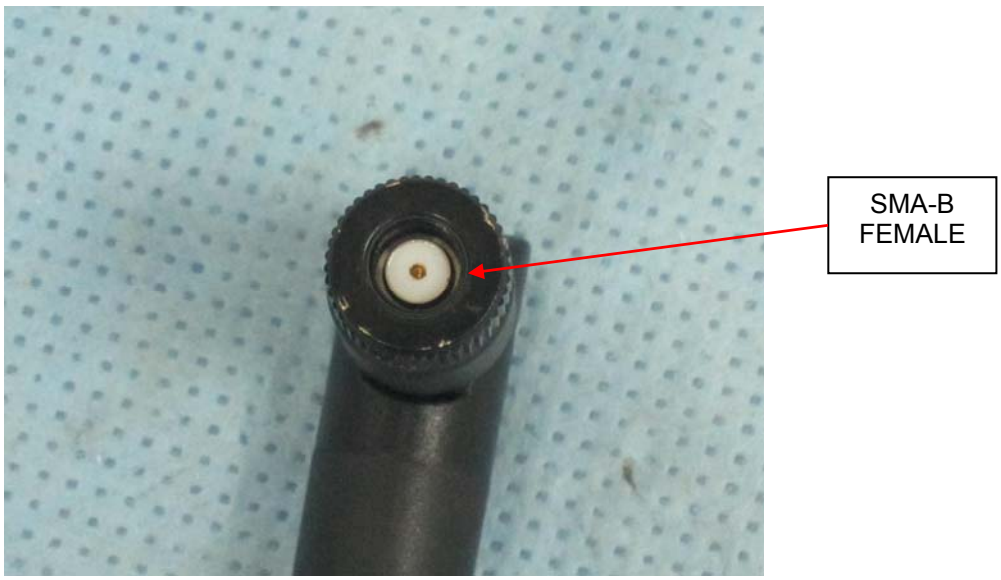
Refer to statement below for compliance.

The manufacturer may design the unit so that the user can replace a broken antenna, but the use of a standard antenna jack or electrical connector is prohibited. Further, this requirement does not apply to intentional radiators that must be professionally installed.

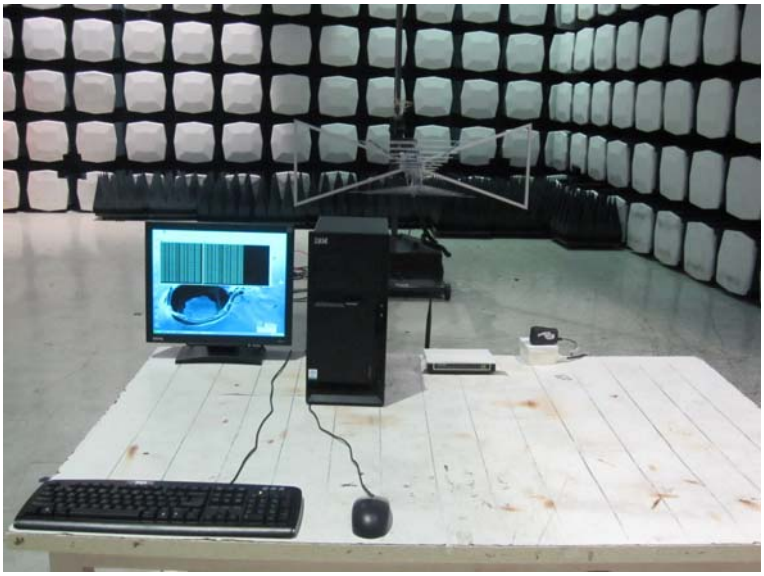
Antenna Connected Construction

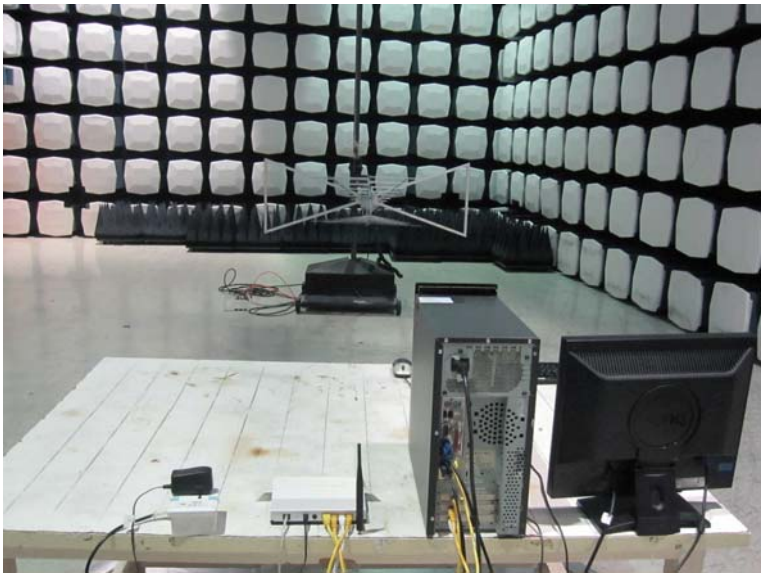
The antenna used in this product is a Dipole Antenna with SMA-B connector and no antenna other than that furnished by the responsible party shall be used with the device. The maximum Gain of the antenna only 3dBi. Detial please see the photos as following:




SMA-B
FEMALE

5. Test Setup Photos of the EUT





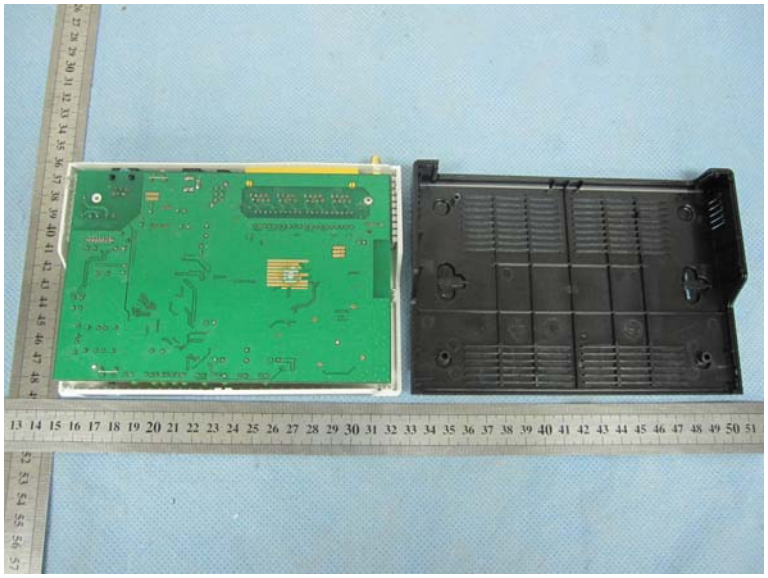
6. External and Internal Photos of the EUT

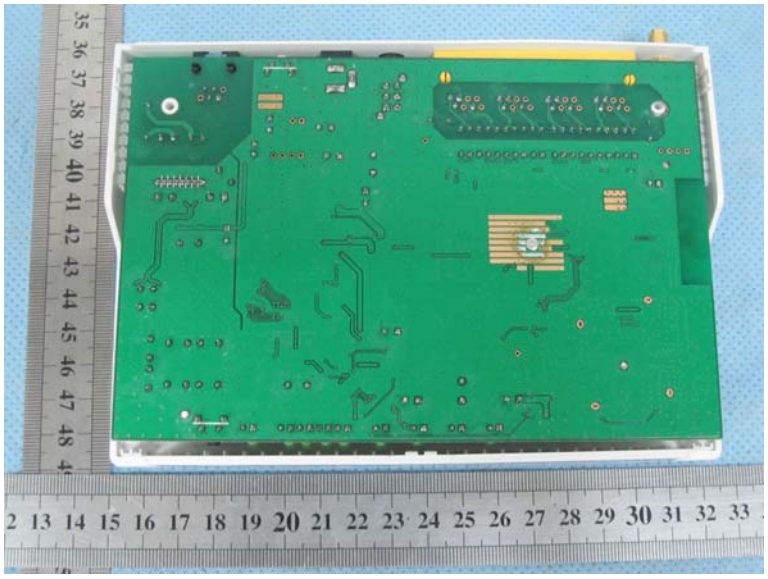
External Photos

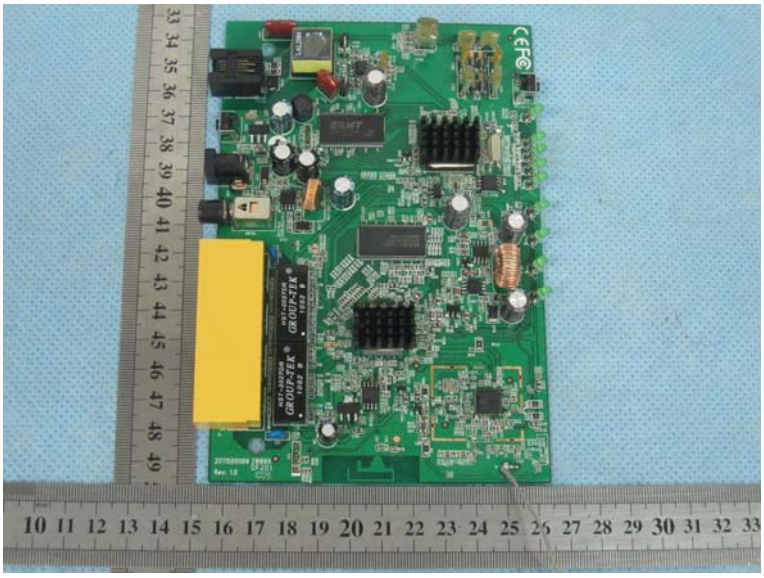

TP-LINK

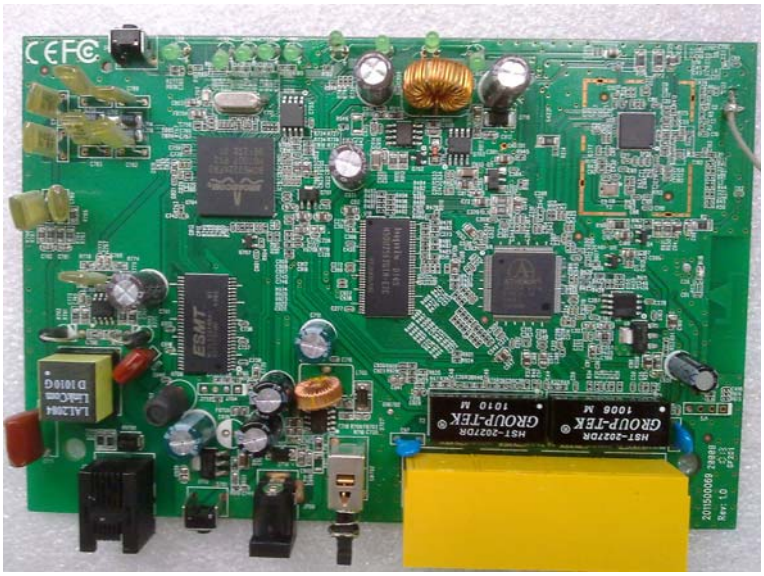

LEADER ELECTRONICS INC.
I.T.E. POWER SUPPLY
MODEL NO.: MU12-2120100-A1
INPUT:100-240V~ 50/60Hz 0.5A
OUTPUT:12V ⎓ 1.0A
Efficiency Level: IV
3G74
US
E138754
LISTED
RoHS
LEI-7 MADE IN CHINA EL

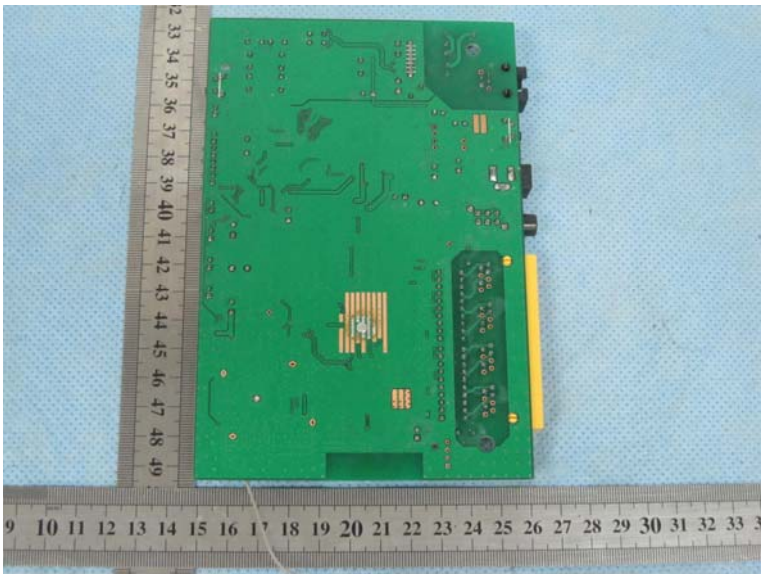
Internal Photos











.....End of Report.....