



TEST REPORT

For

Applicant : Global United Technology (Beijing) Co., Ltd

Address : Section B, Floor 11, Building A, NO.8 Haidian Street,
Haidian District, Beijing

Product Name : OTT BOX

Model Name : MBX03

Brand Name : CIBN

FCC ID : 2AD27MBX03

Report No. : MTE/SAL/A15020229

Date of Issue : Feb. 11, 2015

Issued by : Most Technology Service Co., Ltd.

Address : No.5, 2nd Langshan Road, North District, Hi-tech Industrial
Park, Nanshan, Shenzhen, Guangdong, China

Tel : 86-755-8602 6850

Fax : 86-755-2698 0464

The report consists 47 pages in total. It may be duplicated completely for legal use with the approval of the applicant. It should not be reproduced except in full, without the written approval of our laboratory. The client should not use it to claim product endorsement by MOST. The test results in the report only apply to the tested sample. The test report shall be invalid without all the signatures of testing engineers, reviewer and approver.

TABLE OF CONTENTS

VERIFICATION OF CONFORMITY	4
2. GENERAL INFORMATION	5
2.1 Product Information	5
2.2 Objective	5
2.3 Test Standards and Results.....	6
2.4 Environmental Conditions.....	6
3. TEST METHODOLOGY	7
3.1 TEST FACILITY	7
3.2 GENERAL TEST PROCEDURES	7
4. SETUP OF EQUIPMENT UNDER TEST	8
4.1 SETUP CONFIGURATION OF EUT	8
4.2 SUPPORT EQUIPMENT	8
4.3 TEST EQUIPMENT LIST	9
5. 47 CFR Part 15 C Requirements.....	10
5.1 RF EXPOSURE	10
5.1.1 Applicable Standard	10
5.1.2 Result:.....	10
5.2 ANTENNA REQUIREMENT	12
5.2.1 Applicable Standard	12
5.2.2 Evaluation Criteria	12
5.2.3 Result: Compliance.....	12
5.3 AC Power Line Conducted Emission	13
5.3.1 Requirement	13
5.3.2 Block Diagram of Test Setup.....	13
5.3.3 Test procedure	13
5.3.4 Test Result	13
5.4 Radiated Emission	16
5.4.1 Requirement	16
5.4.2 Test Configuration	16
5.4.3 Test Procedure:.....	17
5.4.4 Test Result	18
5.5 Conducted Peak Output Power.....	27
5.5.1 Requirement.....	27
5.5.2 Block Diagram of Test Setup.....	27
5.5.3 Test Procedure.....	27
5.5.4 Test Result	27
5.6 6dB Emission Bandwidth	28
5.6.1 Test Requirement.....	28
5.6.2 Block Diagram of Test Setup.....	28
5.6.3 Test Procedure.....	28
5.6.4 Test Result	28
5.7 POWER SPECTRAL DENSITY	34
5.7.1 Applicable Standard	34

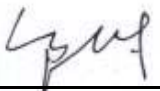



5.7.2 Block Diagram of Test Setup.....	34
5.7.3 Test Procedure	34
5.7.4 Test Result	34
5.8 Band Edge and Conducted Spurious Emissions	40
5.8.1 Test Requirement.....	40
5.8.2 Test Procedure.....	40
5.8.3 Test Result	40
5.9 Restricted Frequency Bands	44
5.9.1 Test Requirement.....	44
5.9.2 Test Configuration	44
5.9.3 Test Procedure:.....	44
5.9.4 Test Result	44

VERIFICATION OF CONFORMITY

Equipment Under Test: OTT BOX
Brand Name: CIBN
Model Number: MBX03
FCC ID: 2AD27MBX03
Applicant: Global United Technology (Beijing) Co., Ltd
 Section B, Floor 11, Building A, NO.8 Haidian Street, Haidian District, Beijing
Manufacturer: SHENZHEN GENTING TECHNOLOGY LIMITED
 B5b Building, Yingzhan Industrial Park, Long Tian Road, Kengzi Town, Pingshan New District, Shenzhen, 518122, China.
Technical Standards: 47 CFR Part 15 Subpart C
File Number: MTE/SAL/A15020229
Date of test: Feb. 02-Feb. 10, 2015
Deviation: None
Condition of Test Sample: Normal
Test Result: PASS

The above equipment was tested by Most Technology Service Co., Ltd. for compliance with the requirements set forth in FCC rules and the Technical Standards mentioned above. This said equipment in the configuration described in this report shows the maximum emission levels emanating from equipment and the level of the immunity endurance of the equipment are within the compliance requirements.

The test results of this report relate only to the tested sample identified in this report.

Tested by (+ signature): 
 Sophia Liu Feb. 02-09, 2015
 Review by (+ signature): 

 Henry Chen Feb. 10, 2015
 Approved by (+ signature): 
 Yvette Zhou(Manager) Feb. 10, 2015

2. GENERAL INFORMATION

2.1 Product Information

Product	OTT BOX
Brand Name	CIBN
Model Number	MBX03
Series Model Name:	Nil
Series Model Difference description:	Nil
Power Supply	DC 5V by Adapter
Frequency Range	802.11b/g/n(20MHz): 2412-2462MHz 802.11n(40MHz): 2422-2452MHz
Modulation Type:	IEEE 802.11b mode: DSSS IEEE 802.11g mode: OFDM 802.11n Standard-20 MHz Channel mode: OFDM 802.11n Standard-40 MHz Channel mode: OFDM
Channel Number	802.11b/g/n(20MHz): 11 802.11n(40MHz): 7
Antenna Type	Internal PCB Antenna, 2.2dBi
Temperature Range	0°C ~ +45°C

NOTE:

1. For a more detailed features description about the EUT, please refer to User's Manual.

2.2 Objective

The objective of the report is to perform tests according to RSS-210 Issue 8, RSS-102 Issue 4 and RSS-Gen Issue 4 for the EUT IC ID Certification:

No.	Identity	Document Title
1	47 CFR Part 15	Radio Frequency Devices

2.3 Test Standards and Results

No.	Section	Test Items	Result	Date of Test
1	FCC 15.247 (i)	RF EXPOSURE	PASS	2015-02-05
2	FCC 15.203	Antenna Requirement	PASS	2015-02-05
3	FCC15.207 (a)	AC Power Line Conducted Emission	PASS	2015-02-05
4	FCC15.209, 15.247(d)	Radiated Emission	PASS	2015-02-05
5	FCC15.247(b)(3)	Conducted Peak Output Power	PASS	2015-02-05
6	FCC15.247(a)(2)	6dB Emission Bandwidth	PASS	2015-02-05
7	FCC15.247(e)	Power Spectral Density	PASS	2015-02-05
8	FCC15.247(d)	Band Edge and Conducted Spurious Emissions	PASS	2015-02-05
9	FCC15.247(d)	Restricted Frequency Bands	PASS	2015-02-05

Note: 1. The test result judgment is decided by the limit of measurement standard
 2. The information of measurement uncertainty is available upon the customer's request.

2.4 Environmental Conditions

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

- Temperature: 15-35°C
- Humidity: 30-60 %
- Atmospheric pressure: 86-106 kPa

3. TEST METHODOLOGY

3.1 TEST FACILITY

Test Site:	Most Technology Service Co., Ltd
Location:	No.5, Langshan 2nd Rd., North Hi-Tech Industrial park, Nanshan, Shenzhen, Guangdong, China
Description:	There is one 3m semi-anechoic an area test sites and two line conducted labs for final test. The Open Area Test Sites and the Line Conducted labs are constructed and calibrated to meet the FCC requirements in documents ANSI C63.4:2014 and CISPR 16 requirements. The FCC Registration Number is 490827 . The IC Registration Number is 7103A-1 .
Site Filing:	The site description is on file with the Federal Communications Commission, 7435 Oakland Mills Road, Columbia, MD 21046.
Instrument	All measuring equipment is in accord with ANSI C63.4:2014 and CISPR 16
Tolerance:	requirements that meet industry regulatory agency and accreditation agency requirement.
Ground Plane:	Two conductive reference ground planes were used during the Line Conducted Emission, one in vertical and the other in horizontal. The dimensions of these ground planes are as below. The vertical ground plane was placed distancing 40 cm to the rear of the wooden test table on where the EUT and the support equipment were placed during test. The horizontal ground plane projected 50 cm beyond the footprint of the EUT system and distanced 80 cm to the wooden test table. For Radiated Emission Test, one horizontal conductive ground plane extended at least 1m beyond the periphery of the EUT and the largest measuring antenna, and covered the entire area between the EUT and the antenna.

3.2 GENERAL TEST PROCEDURES

Radiated Emissions

The EUT is placed on a turn table, which is 0.8 m above ground plane. The turntable shall rotate 360 degrees to determine the position of maximum emission level. EUT is set 3m away from the receiving antenna, which varied from 1m to 4m to find out the highest emission. And also, each emission was to be maximized by changing the polarization of receiving antenna both horizontal and vertical. In order to find out the maximum emissions, exploratory radiated emission measurements were made according to the requirements in Section 13.1.4.1 of ANSI C63.4:2014.

Conducted Emissions

The EUT is placed on the turntable, which is 0.8 m above ground plane. According to the requirements in Section 13.1.4.1 of ANSI C63.4:2014, Conducted emissions from the EUT measured in the frequency range between 0.15 MHz and 30MHz using CISPR Quasi-peak and average detector modes.

4. SETUP OF EQUIPMENT UNDER TEST

4.1 SETUP CONFIGURATION OF EUT

See test photographs attached in Appendix 1 for the actual connections between EUT and support equipment.

4.2 SUPPORT EQUIPMENT

Device Type	Manufacturer	Model Name	Serial No.	Data Cable	Power Cable
Notebook	Lenovo	E425	R9-KZL4B	1.6m Un-shielded	1.8m Un-shielded

Remark:

All the equipment/cables were placed in the worst-case configuration to maximize the emission during the test. Grounding was established in accordance with the manufacturer's requirements and conditions for the intended use.

4.3 TEST EQUIPMENT LIST

Instrumentation: The following list contains equipment used at Most for testing. The equipment conforms to the CISPR 16-1 / ANSI C63.2 Specifications for Electromagnetic Interference and Field Strength Instrumentation from 10 kHz to 1.0 GHz or above.

No.	Equipment	Manufacturer	Model No.	S/N	Calibration date	Calibration Interval
1	Test Receiver	Rohde & Schwarz	ESCI	100492	2014/03/10	1 Year
2	L.I.S.N.	Rohde & Schwarz	ENV216	100093	2014/03/10	1 Year
3	Coaxial Switch	Anritsu Corp	MP59B	6200283933	2014/03/07	1 Year
4	Terminator	Hubersuhner	50Ω	No.1	2014/03/07	1 Year
5	RF Cable	SchwarzBeck	N/A	No.1	2014/03/07	1 Year
6	Test Receiver	Rohde & Schwarz	ESPI	101202	2014/03/10	1 Year
7	Bilog Antenna	Sunol	JB3	A121206	2014/03/14	1 Year
8	Horn Antenna	SCHWARZBECK	BBHA9120D	756	2014/03/14	1 Year
9	Horn Antenna	Penn Engineering	9034	8376	2014/03/14	1 Year
10	Cable	Resenberger	N/A	NO.1	2014/03/07	1 Year
11	Cable	SchwarzBeck	N/A	NO.2	2014/03/07	1 Year
12	Cable	SchwarzBeck	N/A	NO.3	2014/03/07	1 Year
13	DC Power Filter	DuoJi	DL2×30B	N/A	2014/03/07	1 Year
14	Single Phase Power Line Filter	DuoJi	FNF 202B30	N/A	2014/03/07	1 Year
15	3 Phase Power Line Filter	DuoJi	FNF 402B30	N/A	2014/03/07	1 Year
16	Test Receiver	Rohde & Schwarz	ESCI	100492	2014/03/10	1 Year
17	Absorbing Clamp	Luthi	MDS21	3635	2014/03/12	1 Year
18	Coaxial Switch	Anritsu Corp	MP59B	6200283933	2014/03/07	1 Year
19	AC Power Source	Kikusui	AC40MA	LM003232	2014/03/10	1 Year
20	Test Analyzer	Kikusui	KHA1000	LM003720	2014/03/10	1 Year
21	Line Impedence Network	Kikusui	LIN40MA-PCR-L	LM002352	2014/03/10	1 Year
22	ESD Tester	Kikusui	KES4021	LM003537	2014/03/07	1 Year
23	EMC PRO System	EM Test	UCS-500-M4	V0648102026	2014/03/10	1 Year
24	Signal Generator	IFR	2032	203002/100	2014/03/10	1 Year
25	Amplifier	A&R	150W1000	301584	2014/03/14	1 Year
26	CDN	FCC	FCC-801-M2-25	47	2014/03/10	1 Year
27	CDN	FCC	FCC-801-M3-25	107	2014/03/10	1 Year
28	EM Injection Clamp	FCC	F-203I-23mm	403	2014/03/10	1 Year
29	RF Cable	MIYAZAKI	N/A	No.1/No.2	2014/03/10	1 Year
30	Universal Radio Communication Tester	ROHDE&SCHWARZ	CMU200	0304789	2014/03/10	1 Year
31	Telecommunication Antenna	European Antennas	PSA 75301R/170	0304213	2014/03/10	1 Year
32	Telecommunication Test Equipment	R&S	CMU200	N/A	2014/03/07	1 Year
33	8 Loop Antenna	ARA	PLA-1030/B	1029	2015/01/10	1 Year

NOTE: Equipments listed above have been calibrated and are in the period of validation.

5. 47 CFR Part 15 C Requirements

5.1 RF EXPOSURE

5.1.1 Applicable Standard

According to §15.247(i) and §1.1310, systems operating under the provisions of this section shall be operated in a manner that ensure that the public is not exposed to radio frequency energy level in excess of the Commission's guideline.

Limits for Maximum Permissible Exposure (MPE) (§1.1310, §2.1091)

(B) Limits for General Population/Uncontrolled Exposure				
Frequency range (MHz)	Electric field strength (V/m)	Magnetic field strength (A/m)	Power density (mW/cm ²)	Averaging time (minutes)
0.3-1.34	614	1.63	*100	30
1.34-30	824/f	2.19/f	*180/f ²	30
30-300	27.5	0.073	0.2	30
300-1,500			f/1500	30
1,500-100,000			1.0	30

f = frequency in MHz; * = Plane-wave equivalent power density;
According to §1.1310 and §2.1091 RF exposure is calculated.

Calculated Formulary:

Predication of MPE limit at a given distance

$S = PG/4\pi R^2$ = power density (in appropriate units, e.g. mW/cm²);

P = power input to the antenna (in appropriate units, e.g., mW);

G = power gain of the antenna in the direction of interest relative to an isotropic radiator, the power gain factor, is normally numeric gain;

R = distance to the center of radiation of the antenna (appropriate units, e.g., cm);

5.1.2 Result:

Mode	Frequency (MHz)	Antenna Gain		Conducted Power		Evaluation Distance(cm)	Power Density (mW/cm ²)	MPE Limit (mW/cm ²)
		(dBi)	(numeric)	(dBm)	(mW)			
802.11 b	2462	2.2	1.66	9.52	8.95	20	0.003	1
802.11 g	2462	2.2	1.66	9.51	8.93	20	0.003	1
802.11n(20)	2462	2.2	1.66	9.33	8.57	20	0.003	1
802.11n(40)	2462	2.2	1.66	9.47	8.85	20	0.003	1

Note: To maintain compliance with the FCC's RF exposure guidelines, place the equipment at least 20cm from nearby persons.

Result: Compliance

5.2 ANTENNA REQUIREMENT

5.2.1 Applicable Standard

According to FCC § 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. The use of a permanently attached antenna or of an antenna that uses a unique coupling to the intentional radiator shall be considered sufficient to comply with the provisions of this section. The manufacturer may design the unit so that a broken antenna can be replaced by the user, but the use of a standard antenna jack or electrical connector is prohibited. This requirement does not apply to carrier current devices or to devices operated under the provisions of §15.211, §15.213, §15.217, §15.219, or §15.221. Further, this requirement does not apply to intentional radiators that must be professionally installed, such as perimeter protection systems and some field disturbance sensors, or to other intentional radiators which, in accordance with §15.31(d), must be measured at the installation site. However, the installer shall be responsible for ensuring that the proper antenna is employed so that the limits in this part are not exceeded.

5.2.2 Evaluation Criteria

(a) Antenna must be permanently attached to the unit.

(b) Antenna must use a unique type of connector to attach to the EUT.

Unit must be professionally installed, Installer shall be responsible for verifying that the correct antenna is employed with the unit.

5.2.3 Result: Compliance.

The EUT has one integral antenna arrangement, which was permanently attached and the antenna gain is -2.0 dBi, fulfill the requirement of this section.

5.3 AC Power Line Conducted Emission

5.3.1 Requirement

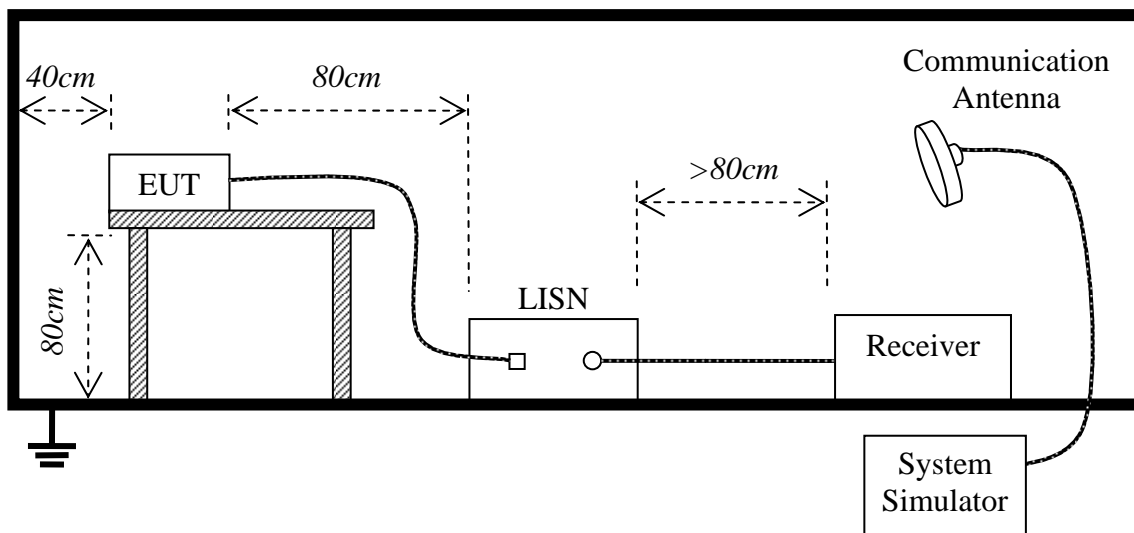
A radio apparatus that is designed to be connected to the public utility (AC) power line shall ensure that the radio frequency voltage, which is conducted back onto the AC power line on any frequency or frequencies within the and 150 kHz-30 MHz, shall not exceed the limits in the following table:

Frequency	Maximum RF Line Voltage	
	Q.P.(dBuV)	Average(dBuV)
150kHz-500kHz	66-56	56-46
500kHz-5MHz	56	46
5MHz-30MHz	60	50

****Note:** 1. the lower limit shall apply at the band edges.

2. The limit decreases linearly with the logarithm of the frequency in the range 0.15 MHz to 0.50 MHz

5.3.2 Block Diagram of Test Setup



5.3.3 Test procedure

1. The E.U.T and simulators are connected to the main power through a line impedance stabilization network (L.I.S.N.). This provides a 50ohm/50uH coupling impedance for the measuring equipment.
2. The peripheral devices are also connected to the main power through a LISN that provides a 50ohm/50uH coupling impedance with 50ohm termination. (Please refer to the block diagram of the test setup and photographs).
3. Both sides of A.C. line are checked for maximum conducted interference. In order to find the maximum emission, the relative positions of equipment and all of the interface cables must be changed according to ANSI C63.4: 2014 on conducted measurement.
4. The bandwidth of test receiver (ESCI) set at 9 KHz.
5. All data was recorded in the Quasi-peak and average detection mode.

5.3.4 Test Result

Pass

Note: All test modes are performed, only the worst case is recorded in this report.

Please refer the following pages.



Address: No. 5, Langshan 2nd Rd., North Hi-Tech Industrial park
Guangdong, China
Tel: 0755-86026850 Fax: 0755-26013350

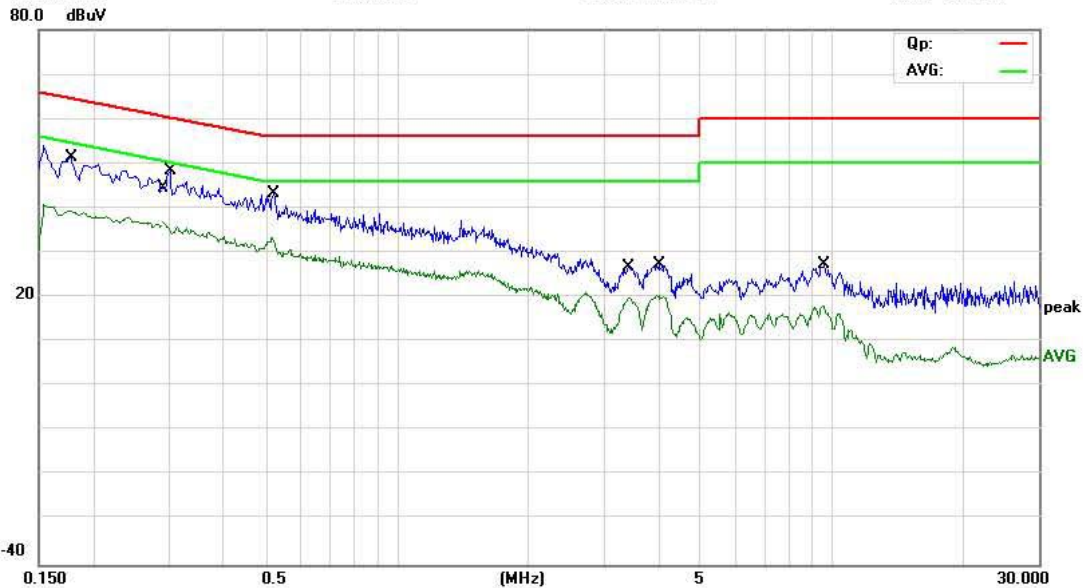
Conducted Emission Measurement

File: MBX03

Data: #29

Date: 2015/02/05

Time: 10:23:01



Site: MOST #1

Phase: **N**

Temperature: 23

Limit: FCC Part15 B Class B QP

Power: DC 5V by Adapter

Humidity: 53 %

EUT: OTT BOX

M/N: MBX03

Mode: 802.11b Mode

Note:

No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV	Limit dBuV	Over dB	Detector	Comment
1		0.1780	41.58	9.90	51.48	64.58	-13.10	QP	
2		0.1780	29.45	9.90	39.35	54.58	-15.23	AVG	
3		0.2900	27.30	9.72	37.02	50.52	-13.50	AVG	
4	*	0.3003	38.25	9.70	47.95	60.23	-12.28	QP	
5		0.5180	23.74	9.60	33.34	46.00	-12.66	AVG	
6		0.5220	33.51	9.60	43.11	56.00	-12.89	QP	
7		3.4180	17.36	9.40	26.76	56.00	-29.24	QP	
8		3.4380	10.42	9.40	19.82	46.00	-26.18	AVG	
9		4.0180	17.90	9.40	27.30	56.00	-28.70	QP	
10		4.0180	11.11	9.40	20.51	46.00	-25.49	AVG	
11		9.6500	18.02	9.30	27.32	60.00	-32.68	QP	
12		9.6500	8.64	9.30	17.94	50.00	-32.06	AVG	

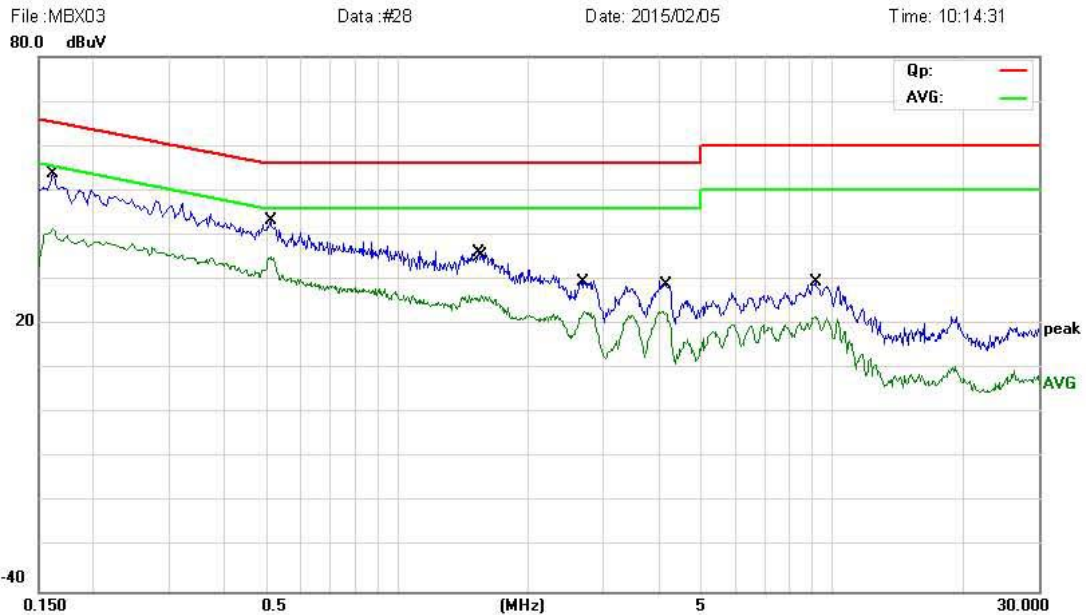
*:Maximum data x:Over limit l:over margin

Engineer Signature: Robert



Address: No. 5, Langshan 2nd Rd., North Hi-Tech Industrial park
Guangdong, China
Tel: 0755-86026850 Fax: 0755-26013350

Conducted Emission Measurement



Site: MOST #1

Phase: **L1**

Temperature: 23

Limit: FCC Part15 B Class B QP

Power: DC 5V by Adapter

Humidity: 53 %

EUT: OTT BOX

M/N: MBX03

Mode: 802.11b Mode

Note:

No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV	Limit dBuV	Over dB	Detector	Comment
1		0.1623	43.21	9.90	53.11	65.35	-12.24	QP	
2		0.1623	31.39	9.90	41.29	55.35	-14.06	AVG	
3		0.5140	33.58	9.60	43.18	56.00	-12.82	QP	
4	*	0.5140	25.43	9.60	35.03	46.00	-10.97	AVG	
5		1.5420	26.52	9.45	35.97	56.00	-20.03	QP	
6		1.5620	16.94	9.44	26.38	46.00	-19.62	AVG	
7		2.7180	19.99	9.40	29.39	56.00	-26.61	QP	
8		2.7180	13.37	9.40	22.77	46.00	-23.23	AVG	
9		4.1060	13.49	9.40	22.89	46.00	-23.11	AVG	
10		4.1580	19.51	9.40	28.91	56.00	-27.09	QP	
11		9.1780	20.27	9.30	29.57	60.00	-30.43	QP	
12		9.2420	12.43	9.30	21.73	50.00	-28.27	AVG	

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

Engineer Signature: Robert

5.4 Radiated Emission

5.4.1 Requirement

According to FCC section 15.247(d), In addition, radiated emissions which fall in the restricted bands, as defined in §15.205(a), must also comply with the radiated emission limits specified in §15.209(a) (see §15.205(c)).

According to FCC section 15.209(a), Except as provided elsewhere in this subpart, the emissions from an intentional radiator shall not exceed the field strength levels specified in the following table:

Frequency (MHz)	Field Strength ($\mu\text{V/m}$ at 3-meter)	Test Distance (m)	Field Strength ($\text{dB}\mu\text{V/m}$ at 3-meter)
0.009 - 0.490	$2400/F(\text{kHz})$	300	
0.490 - 1.705	$24000/F(\text{kHz})$	30	
1.705-30	30	30	
30-88	100	3	40
88-216	150	3	43.5
216-960	200	3	46
Above 960	500	3	54

Note:

1. For Above 1000MHz, the emission limit in this paragraph is based on measurement instrumentation employing an average detector, measurement using instrumentation with a peak detector function, corresponding to 20dB above the maximum permitted average limit.

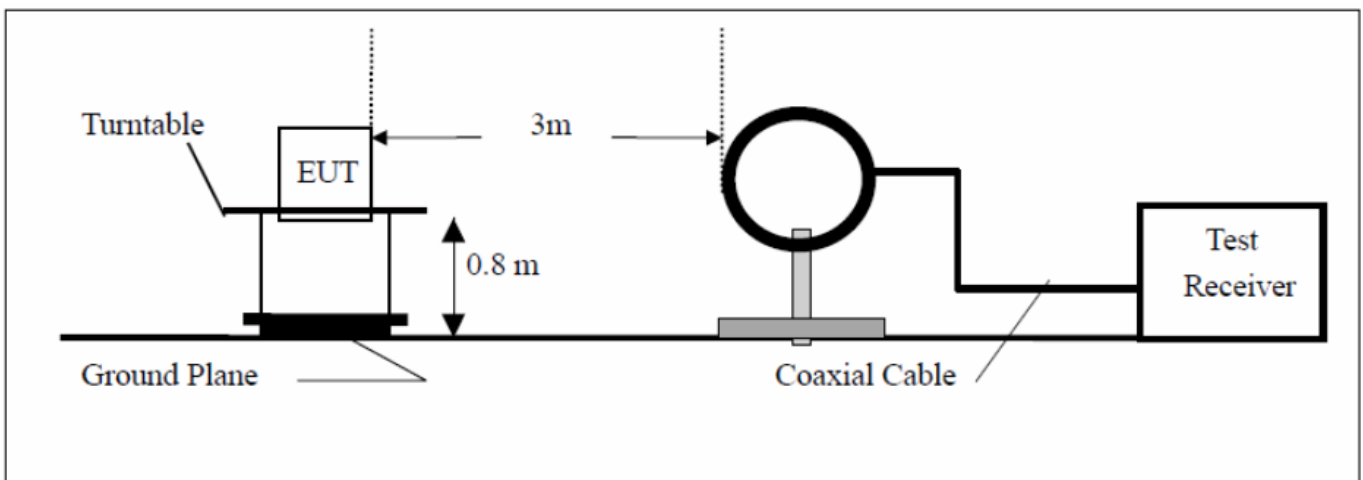
2. For above 1000MHz, limit field strength of harmonics: $54\text{dB}\mu\text{V/m}@3\text{m}$ (AV) and $74\text{dB}\mu\text{V/m}@3\text{m}$ (PK)

In addition, radiated emissions which fall in the restricted bands, as defined in RSS-Gen Cl.8.10, also should comply with the radiated emission limits specified in RSS-Gen Cl.8.9 (above table)

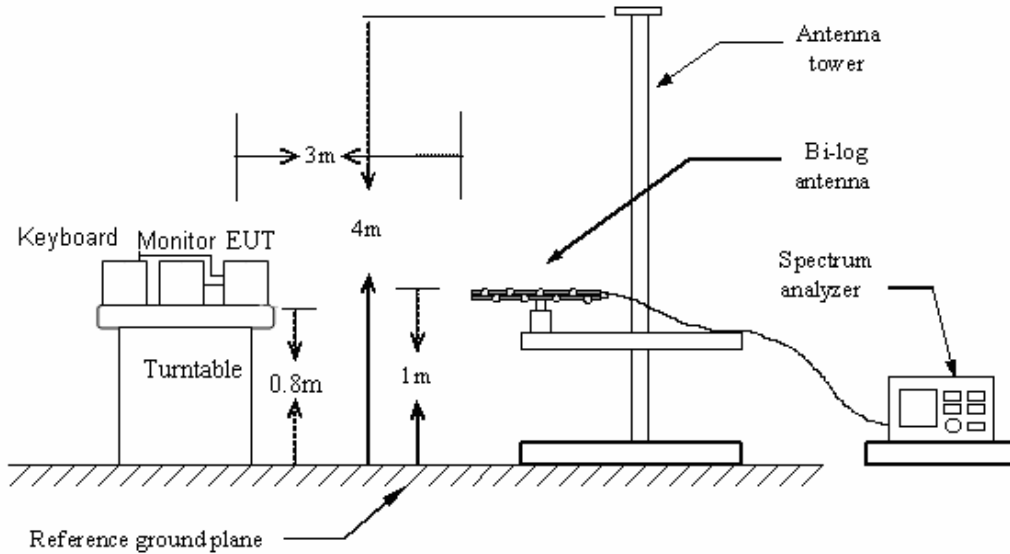
5.4.2 Test Configuration

Test Setup:

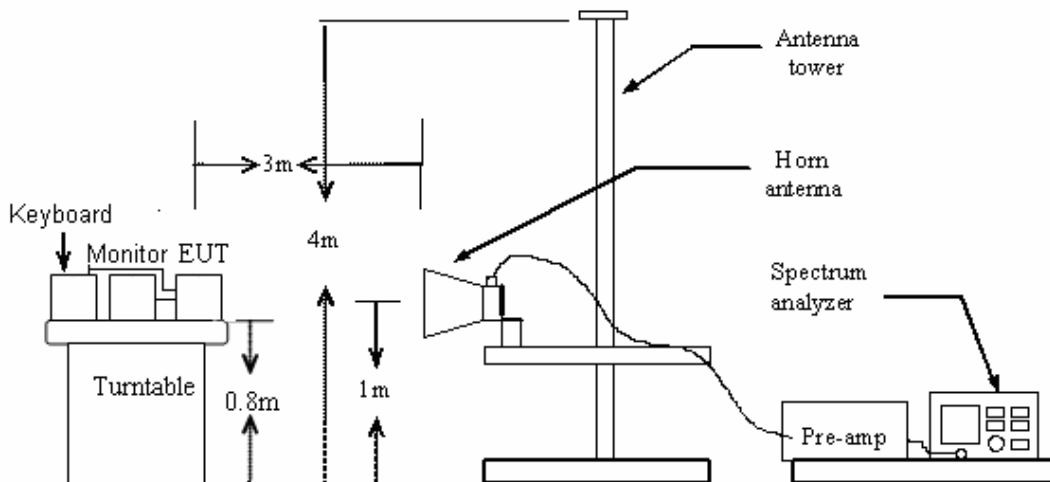
1) For radiated emissions from 9kHz to 30MHz



2) For radiated emissions from 30MHz to 1GHz



3) For radiated emissions above 1GHz

**5.4.3 Test Procedure:**

1. The EUT was placed on the top of a rotating table 0.8 meters above the ground at a 3 meter chamber. The table was rotated 360 degrees to determine the position of the highest radiation.
2. The EUT was set 3 meters away from the interference-receiving antenna, which was mounted on the top of a variable-height antenna tower.
3. The antenna height is varied from one meter to four meters above the ground to determine the maximum value of the field strength. Both horizontal and vertical polarizations of the antenna are set to make the measurement.
4. For each suspected emission, the EUT was arranged to its worst case and then the antenna was tuned to heights from 1 meter to 4 meters and the rota table was turned from 0 degrees to 360 degrees to find the maximum reading.

5. Set the spectrum analyzer in the following setting as:

Below 1GHz: PEAK: RBW=100 kHz / VBW=300 kHz / Sweep=AUTO QP: RBW=120 kHz / Sweep=AUTO

Above 1GHz: (a) PEAK: RBW=VBW=1MHz / Sweep=AUTO

(b) AVERAGE: RBW=1MHz / VBW=10Hz / Sweep=AUTO

The test-receiver system was set to Peak Detect Function and Specified Bandwidth with Maximum Hold Mode.

6. If the emission level of the EUT in peak mode was 10dB lower than the limit specified, then testing could be stopped and the peak values of the EUT would be reported. Otherwise the emissions that did not have 10dB margin would be re-tested one by one using peak, quasi-peak or average method as specified and then reported in a data sheet.

5.4.4 Test Result

Pass

Remark:

1. During the test, pre-scan the 802.11b, 802.11g, 802.11n(20M), 802.11n(40M) modulation, and found the 802.11b modulation which it is worse case in above 1GHz and the 802.11b Low channel modulation which it is worse case in below 1GHz.

2. Pre-scan all kind of the place mode (X-axis, Y-axis, Z-axis), and found the Y-axis which it is worse case.

Please refer the following pages.

Below 1GHz:

Address: No.5, Langshan 2nd Rd., North Hi-Tech Industrial park
Guangdong, China
Tel: 0755-86026850 Fax: 0755-26013350

Radiated Emission Measurement

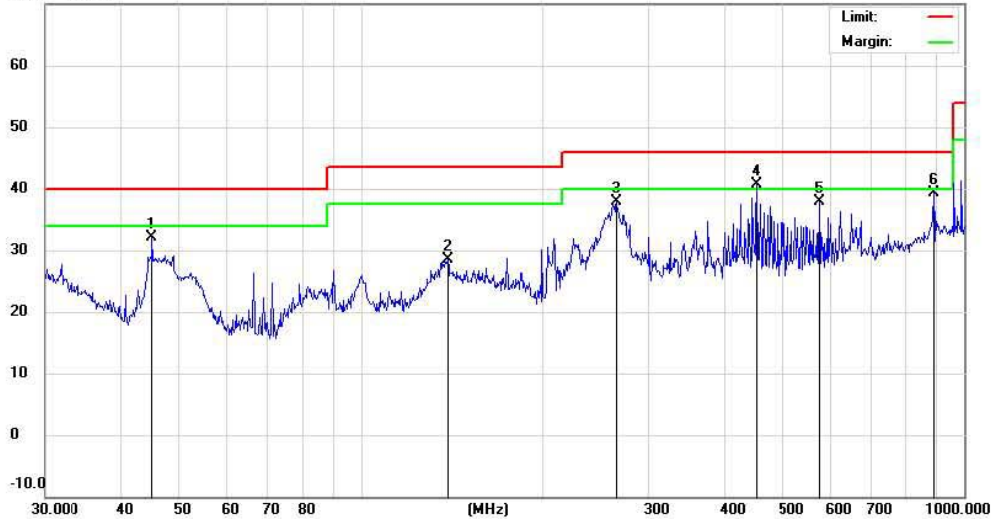
File: MBX03

Data: #81

Date: 2015-2-04

Time: 9:22:26

70.0 dBuV/m



Site: Chamber #1

Polarization: **Vertical**

Temperature: 25.9

Limit: FCC Part15 B 3M Radiation

Power: DC 5V by Adapter

Humidity: 51.6 %

EUT: OTT BOX

Distance: 3m

M/N: MBX03

Mode: 802.11b Mode

Note:

No.	Mk.	Freq.	Reading	Correct	Measure-	Limit	Over	Antenna	Table	
		MHz	Level	Factor	ment			Height	Degree	
			dBuV	dB	dBuV/m	dBuV/m	dB	cm	degree	Comment
1		45.2165	19.08	13.03	32.11	40.00	-7.89	QP		
2		139.8508	11.37	17.21	28.58	43.50	-14.92	QP		
3		265.6757	19.58	18.34	37.92	46.00	-8.08	QP		
4	*	452.7197	20.58	20.18	40.76	46.00	-5.24	QP		
5		576.6443	14.96	22.90	37.86	46.00	-8.14	QP		
6		890.7277	11.92	27.31	39.23	46.00	-6.77	QP		

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

Engineer Signature: Robert



Address: No. 5, Langshan 2nd Rd., North Hi-Tech Industrial park
Guangdong, China
Tel: 0755-86026850 Fax: 0755-26013350

Radiated Emission Measurement

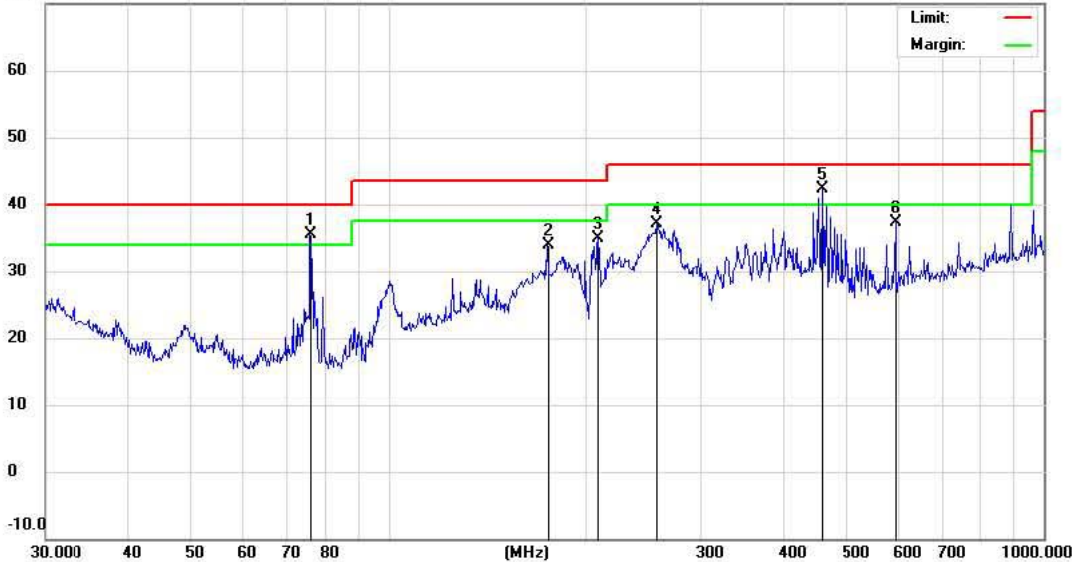
File: MBX03

Data: #85

Date: 2015-2-04

Time: 9:58:33

70.0 dBuV/m



Site: Chamber #1

Polarization: **Horizontal**

Temperature: 25.9

Limit: FCC Part15 B 3M Radiation

Power: DC 5V by Adapter

Humidity: 51.6 %

EUT: OTT BOX

Distance: 3m

M/N: MBX03

Mode: 802.11b Mode

Note:

No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV/m	Limit dBuV/m	Over dB	Antenna Height cm	Table Degree degree	Comment
1	I	75.9773	24.06	11.52	35.58	40.00	-4.42	QP		
2		175.0367	16.89	16.95	33.84	43.50	-9.66	QP		
3		209.3129	18.84	16.00	34.84	43.50	-8.66	QP		
4		256.5210	19.51	17.53	37.04	46.00	-8.96	QP		
5	*	459.1144	21.97	20.37	42.34	46.00	-3.66	QP		
6		595.1327	14.37	22.90	37.27	46.00	-8.73	QP		

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

Engineer Signature: Robert

Above 1GHz



Address: No.5, Langshan 2nd Rd., North Hi-Tech Industrial park
Guangdong, China
Tel: 0755-86026850 Fax: 0755-26013350

Radiated Emission Measurement

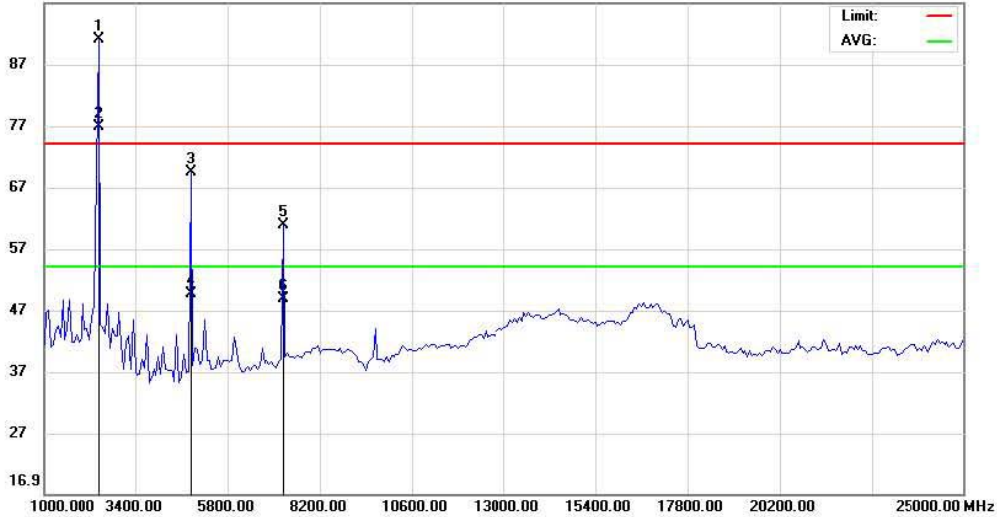
File: MXB03

Data: #19

Date: 2015-2-12

Time: 10:08:54

96.9 dBuV/m



Site: site #1

Polarization: **Horizontal**

Temperature: 23

Limit: FCC RF Limit

Power: DC 5V by Adapter

Humidity: 54 %

EUT: OTT BOX

Distance: 3m

M/N: MBX03

Mode: 802.11b CH0

Note:

No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV/m	Limit dBuV/m	Over dB	Detector	Antenna Height cm	Table Degree degree	Comment
1	X	2412.000	99.35	-8.41	90.94	74.00	16.94	peak			
2	*	2412.000	85.16	-8.41	76.75	54.00	22.75	AVG			
3		4840.000	75.16	-5.72	69.44	74.00	-4.56	peak			
4		4840.000	55.23	-5.72	49.51	54.00	-4.49	AVG			
5		7240.000	63.92	-3.17	60.75	74.00	-13.25	peak			
6		7240.000	52.07	-3.17	48.90	54.00	-5.10	AVG			

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

Engineer Signature: John



Address: No.5, Langshan 2nd Rd., North Hi-Tech Industrial park
Guangdong, China
Tel: 0755-86026850 Fax: 0755-26013350

Radiated Emission Measurement

File: MXB03

Data: #20

Date: 2015-2-12

Time: 10:22:02

96.9 dBuV/m



Site: site #1

Polarization: **Vertical**

Temperature: 23

Limit: FCC RF Limit

Power: DC 5V by Adapter

Humidity: 54 %

EUT: OTT BOX

Distance: 3m

M/N: MBX03

Mode: 802.11b CH0

Note:

No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV/m	Limit dBuV/m	Over dB	Antenna Height cm	Table Degree degree	Comment
1	X	2412.000	99.35	-8.41	90.94	74.00	16.94	peak		
2	*	2412.000	84.88	-8.41	76.47	54.00	22.47	AVG		
3		4840.000	74.46	-5.72	68.74	74.00	-5.26	peak		
4		4840.000	55.12	-5.72	49.40	54.00	-4.60	AVG		
5		7240.000	63.75	-3.17	60.58	74.00	-13.42	peak		
6		7240.000	48.97	-3.17	45.80	54.00	-8.20	AVG		

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

Engineer Signature: John



Address: No.5, Langshan 2nd Rd., North Hi-Tech Industrial park
Guangdong, China
Tel: 0755-86026850 Fax: 0755-26013350

Radiated Emission Measurement

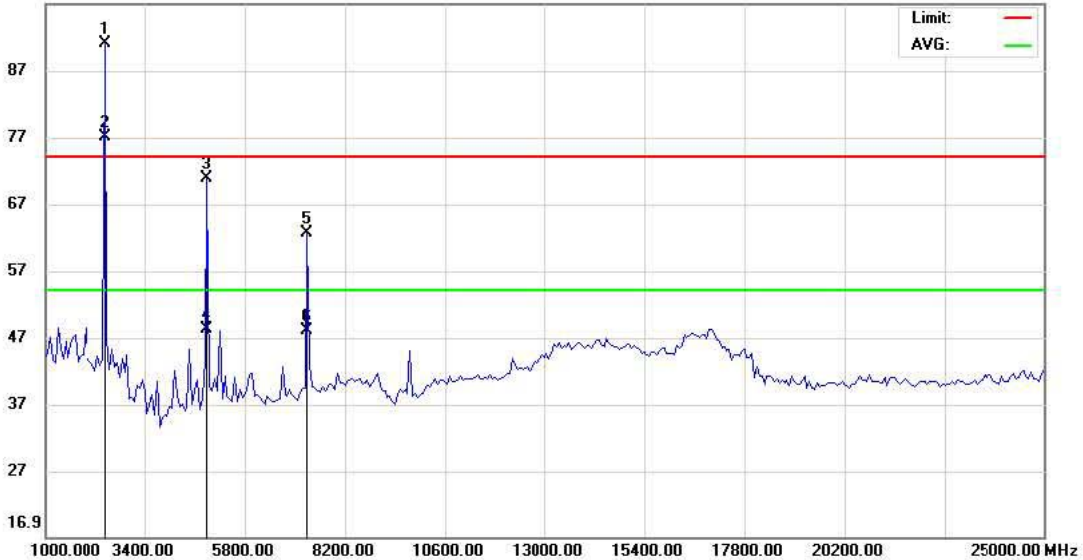
File: MXB03

Data: #21

Date: 2015-2-12

Time: 10:32:39

96.9 dBuV/m



Site: site #1

Polarization: **Vertical**

Temperature: 23

Limit: FCC RF Limit

Power: DC 5V by Adapter

Humidity: 54 %

EUT: OTT BOX

Distance: 3m

M/N: MBX03

Mode: 802.11b CH6

Note:

No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV/m	Limit dBuV/m	Over dB	Antenna Height cm	Table Degree degree	Comment
1	X	2437.000	99.31	-8.37	90.94	74.00	16.94	peak		
2	*	2437.000	85.44	-8.37	77.07	54.00	23.07	AVG		
3		4900.000	75.79	-5.00	70.79	74.00	-3.21	peak		
4		4900.000	53.21	-5.00	48.21	54.00	-5.79	AVG		
5		7300.000	65.63	-3.01	62.62	74.00	-11.38	peak		
6		7300.000	50.97	-3.01	47.96	54.00	-6.04	AVG		

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

Engineer Signature: John



Address: No. 5, Langshan 2nd Rd., North Hi-Tech Industrial park
Guangdong, China
Tel: 0755-86026850 Fax: 0755-26013350

Radiated Emission Measurement

File: MXB03

Data: #22

Date: 2015-2-12

Time: 10:44:09

96.9 dBuV/m



Site: site #1

Polarization: **Horizontal**

Temperature: 23

Limit: FCC RF Limit

Power: DC 5V by Adapter

Humidity: 54 %

EUT: OTT BOX

Distance: 3m

M/N: MBX03

Mode: 802.11b CH6

Note:

No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV/m	Limit dBuV/m	Over dB	Antenna Height cm	Table Degree degree	Comment
1	X	2437.000	99.31	-8.37	90.94	74.00	16.94	peak		
2	*	2437.000	85.97	-8.37	77.60	54.00	23.60	AVG		
3		4900.000	75.73	-5.00	70.73	74.00	-3.27	peak		
4		4900.000	52.30	-5.00	47.30	54.00	-6.70	AVG		
5		7300.000	64.57	-3.01	61.56	74.00	-12.44	peak		
6		7300.000	51.35	-3.01	48.34	54.00	-5.66	AVG		

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

Engineer Signature: John



Address: No. 5, Langshan 2nd Rd., North Hi-Tech Industrial park
Guangdong, China
Tel: 0755-86026850 Fax: 0755-26013350

Radiated Emission Measurement

File: MXB03

Data: #23

Date: 2015-2-12

Time: 10:56:07

96.9 dBuV/m



Site: site #1

Polarization: **Horizontal**

Temperature: 23

Limit: FCC RF Limit

Power: DC 5V by Adapter

Humidity: 54 %

EUT: OTT BOX

Distance: 3m

M/N: MBX03

Mode: 802.11b CH11

Note:

No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV/m	Limit dBuV/m	Over dB	Detector	Antenna Height cm	Table Degree degree	Comment
1	X	2462.000	99.37	-8.33	91.04	74.00	17.04	peak			
2	*	2462.000	85.30	-8.33	76.97	54.00	22.97	AVG			
3		4960.000	69.89	-4.27	65.62	74.00	-8.38	peak			
4		4960.000	51.12	-4.27	46.85	54.00	-7.15	AVG			
5		7420.000	62.05	-2.74	59.31	74.00	-14.69	peak			
6		7420.000	51.36	-2.74	48.62	54.00	-5.38	AVG			

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

Engineer Signature: John



Address: No. 5, Langshan 2nd Rd., North Hi-Tech Industrial park
Guangdong, China
Tel: 0755-86026850 Fax: 0755-26013350

Radiated Emission Measurement

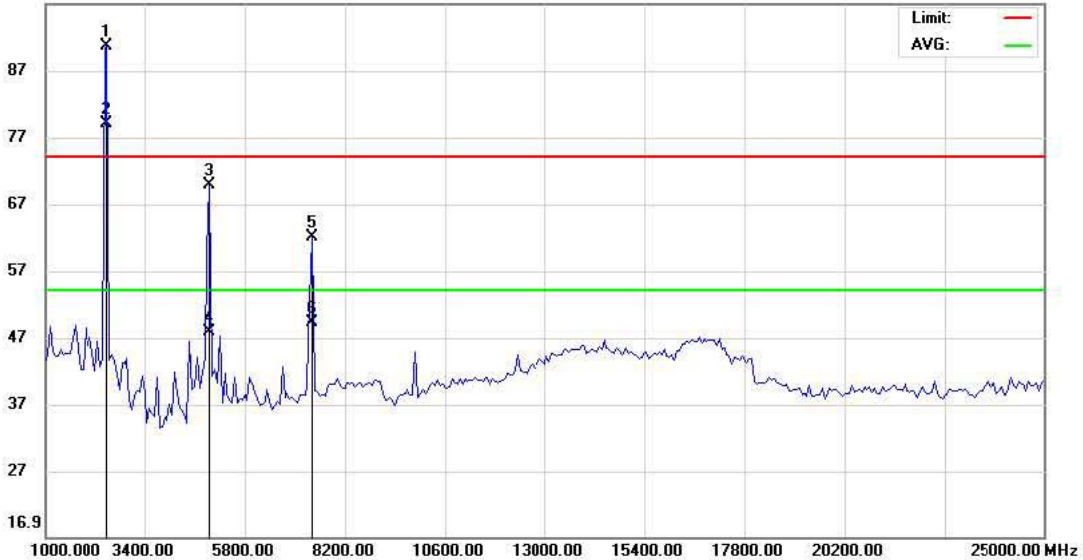
File: MXB03

Data: #24

Date: 2015-2-12

Time: 11:07:28

96.9 dBuV/m



Site: site #1

Polarization: **Vertical**

Temperature: 23

Limit: FCC RF Limit

Power: DC 5V by Adapter

Humidity: 54 %

EUT: OTT BOX

Distance: 3m

M/N: MBX03

Mode: 802.11b CH11

Note:

No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV/m	Limit dBuV/m	Over dB	Antenna Height cm	Table Degree degree	Comment
1	X	2462.000	98.87	-8.33	90.54	74.00	16.54	peak		
2	*	2462.000	87.36	-8.33	79.03	54.00	25.03	AVG		
3		4960.000	74.06	-4.27	69.79	74.00	-4.21	peak		
4		4960.000	52.14	-4.27	47.87	54.00	-6.13	AVG		
5		7420.000	64.79	-2.74	62.05	74.00	-11.95	peak		
6		7420.000	52.03	-2.74	49.29	54.00	-4.71	AVG		

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

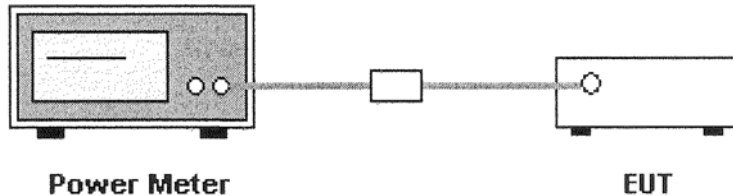
Engineer Signature: John

5.5 Conducted Peak Output Power

5.5.1 Requirement

According to FCC section 15.247(b)(3), for frequency hopping systems operating in the 2400–2483.5 MHz band employing at least 75 non-overlapping hopping channels, and all frequency hopping systems in the 5725– 5850 MHz band: 1 watt. For all other frequency hopping systems in the 2400–2483.5 MHz band: 0.125 watts

5.5.2 Block Diagram of Test Setup



5.5.3 Test Procedure

1. Place the EUT on a bench and set in transmitting mode.
2. Remove the antenna from the EUT and then connect a low loss RF cable from the antenna port to the power meter.
3. Add a correction factor to the reading.

5.5.4 Test Result

Test Item:	Peak Output Power	Temperature :	20°C
Test Engineer:	Kang	Relative Humidity :	55%

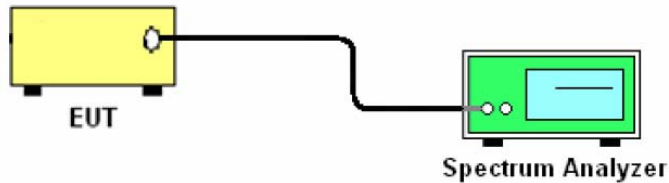
Mode	Channel	Frequency (MHz)	Peak Output Power(dBm)	Limit		Pass/Fail
				(mW)	(dBm)	
802.11b	Low	2412	9.34	1000	30	Pass
	Middle	2437	9.07	1000	30	Pass
	High	2462	9.52	1000	30	Pass
802.11g	Low	2412	9.17	1000	30	Pass
	Middle	2437	9.28	1000	30	Pass
	High	2462	9.51	1000	30	Pass
802.11n (20MHz)	Low	2412	9.08	1000	30	Pass
	Middle	2437	9.18	1000	30	Pass
	High	2462	9.33	1000	30	Pass
802.11n (40MHz)	Low	2422	9.21	1000	30	Pass
	Middle	2437	9.19	1000	30	Pass
	High	2452	9.47	1000	30	Pass

5.6 6dB Emission Bandwidth

5.6.1 Test Requirement

Systems using digital modulation techniques may operate in the 902–928 MHz, 2400–2483.5 MHz, and 5725–5850 MHz bands. The minimum 6 dB bandwidth shall be at least 500 kHz.

5.6.2 Block Diagram of Test Setup



5.6.3 Test Procedure

According to KDB 558074 D01 DTS Meas Guidance v03r02 clause 8.1 Option 1:

- a) Set RBW = 100 kHz.
- b) Set the video bandwidth (VBW) $\geq 3 \times \text{RBW}$.
- c) Detector = Peak.
- d) Trace mode = max hold.
- e) Sweep = auto couple.
- f) Allow the trace to stabilize.
- g) Measure the maximum width of the emission that is constrained by the frequencies associated with the two outermost amplitude points (upper and lower frequencies) that are attenuated by 6 dB relative to the maximum level measured in the fundamental emission.

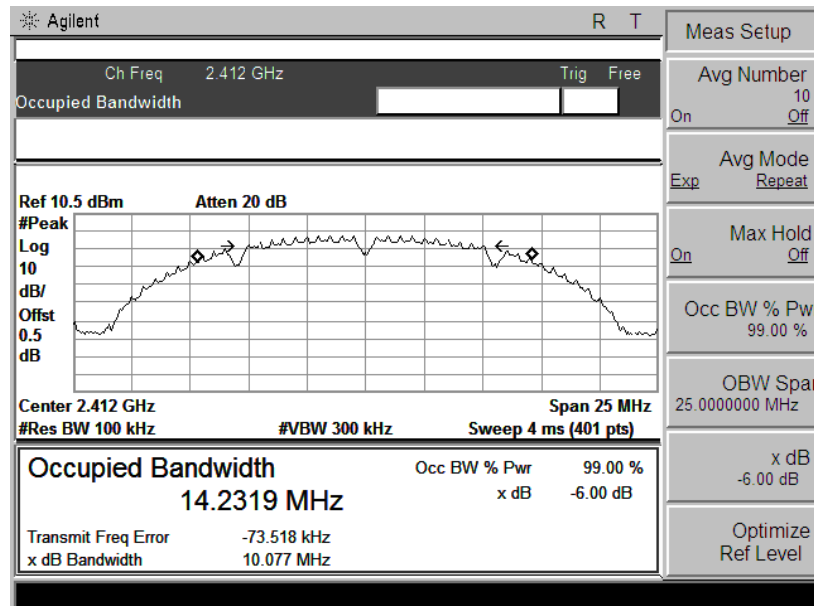
5.6.4 Test Result

Pass

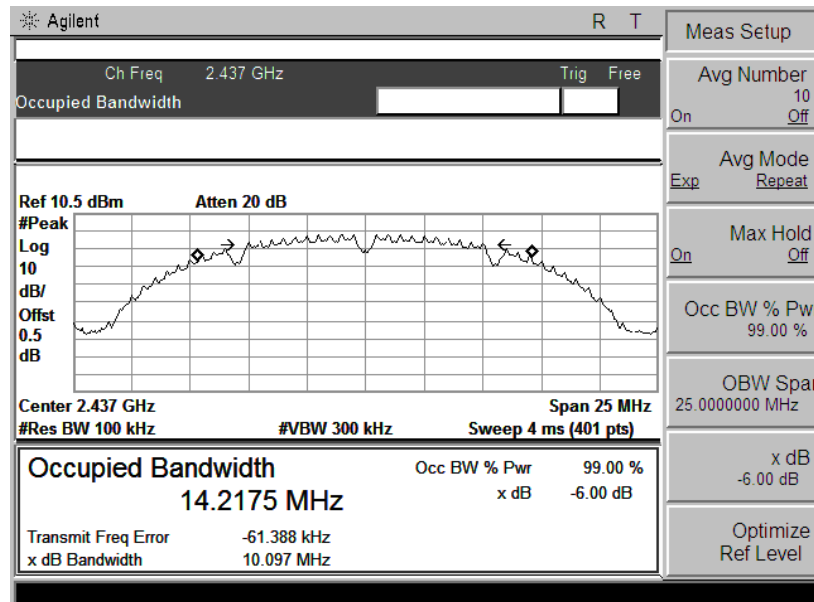
Test Item:	6dB Emission Bandwidth	Temperature :	20°C
Test Engineer:	Kang	Relative Humidity :	55%

Mode	Channel	Frequency (MHz)	6dB Bandwidth(MHz)	Limit(KHz)
802.11b	Low	2412	10.077	≥ 500
	Middle	2437	10.097	≥ 500
	High	2462	10.123	≥ 500
802.11g	Low	2412	16.444	≥ 500
	Middle	2437	16.459	≥ 500
	High	2462	16.424	≥ 500
802.11n (20MHz)	Low	2412	17.621	≥ 500
	Middle	2437	17.596	≥ 500
	High	2462	17.656	≥ 500
802.11n (20MHz)	Low	2422	36.055	≥ 500
	Middle	2437	36.250	≥ 500
	High	2452	36.052	≥ 500

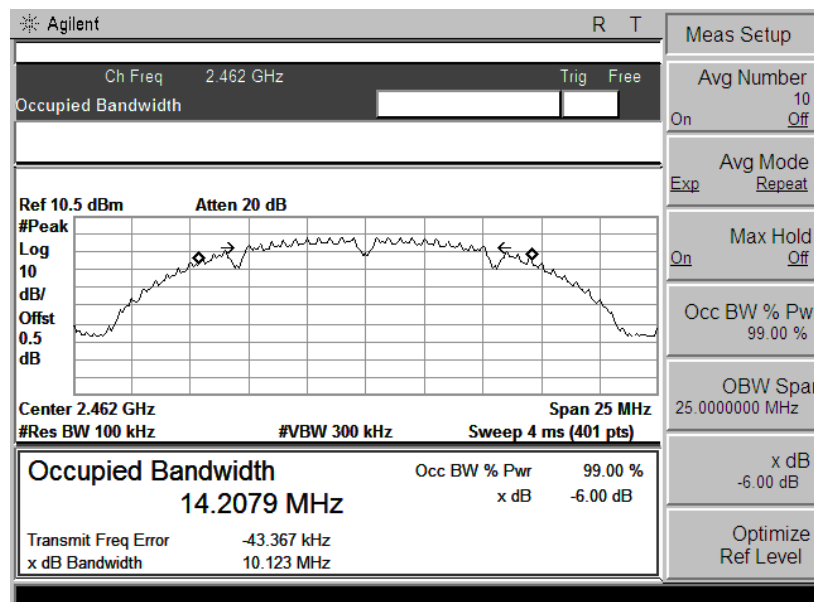
802.11 b Mode



Ch 1

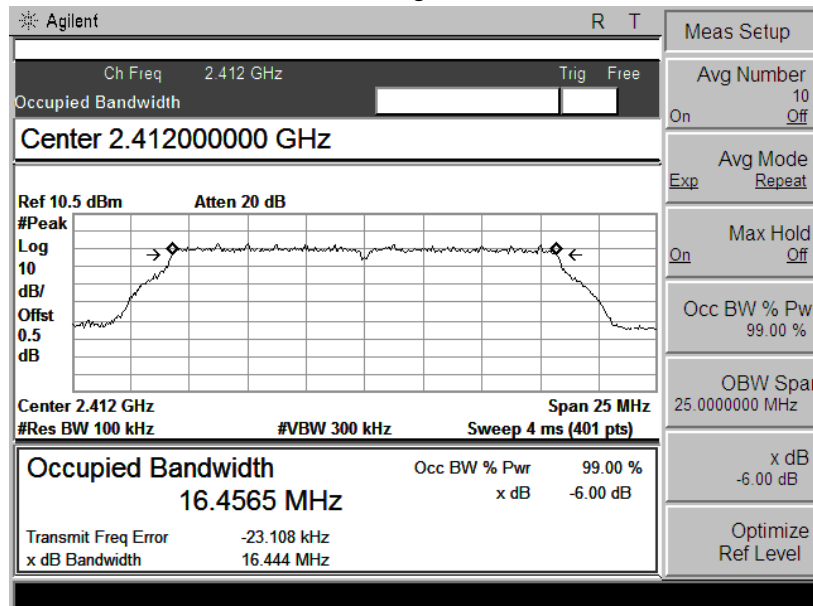


Ch 6

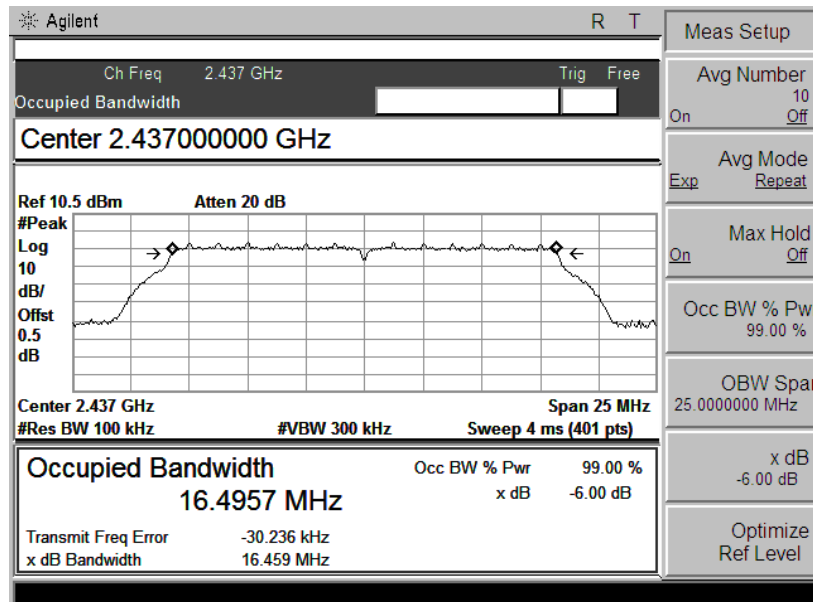


Ch 11

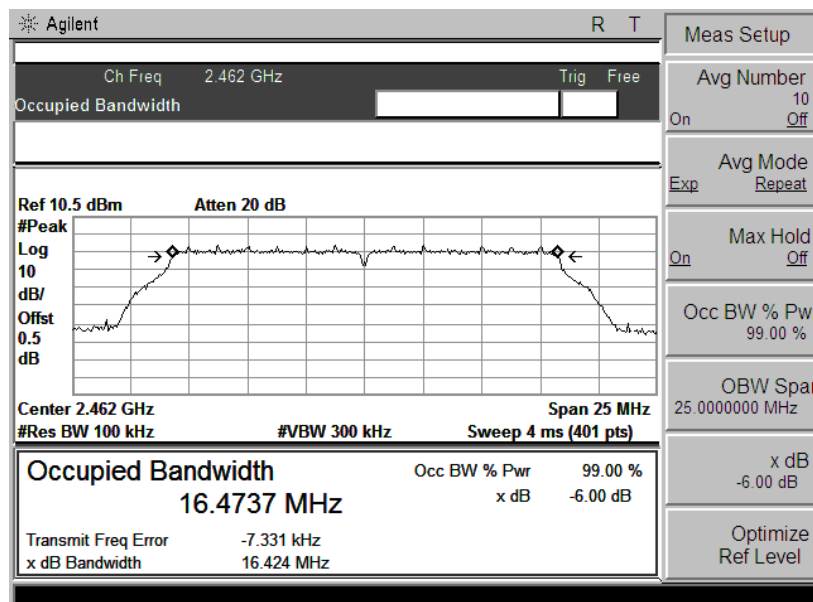
802.11 g Mode



Ch 1

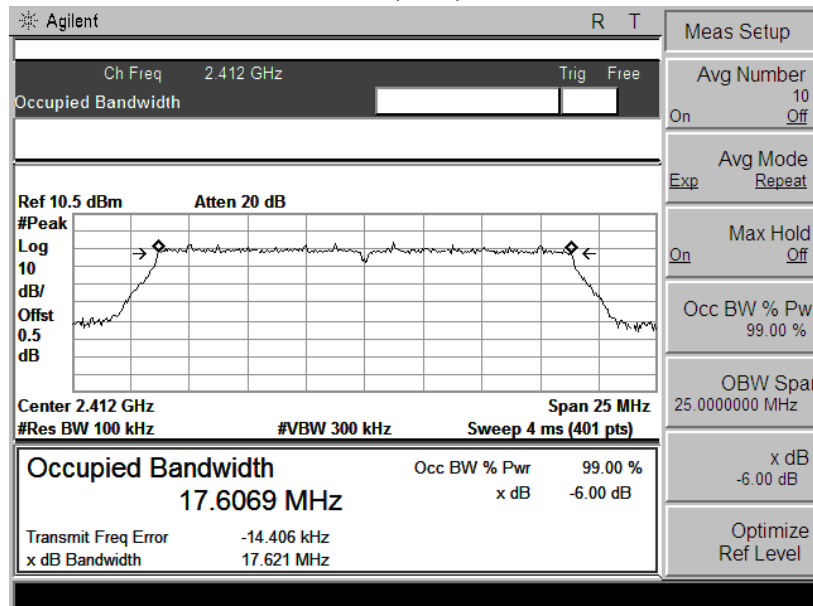


Ch 6

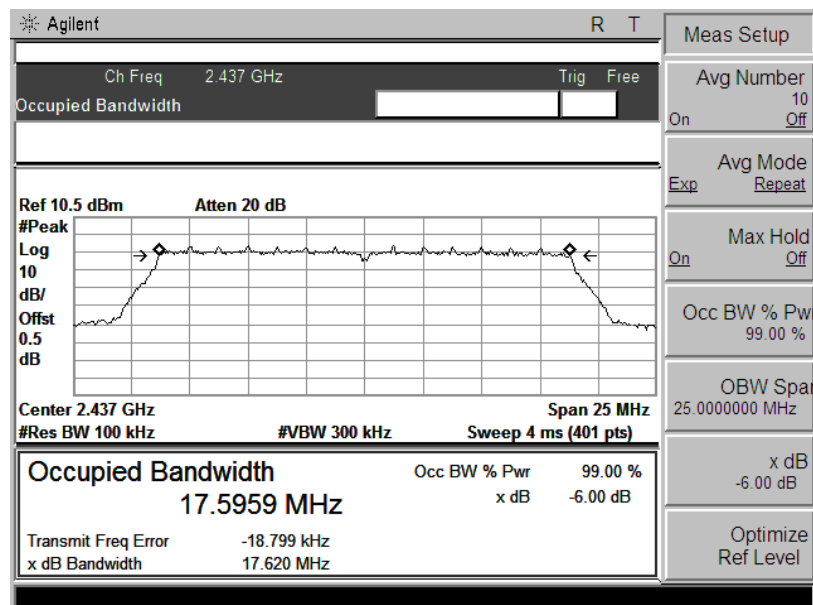


Ch 11

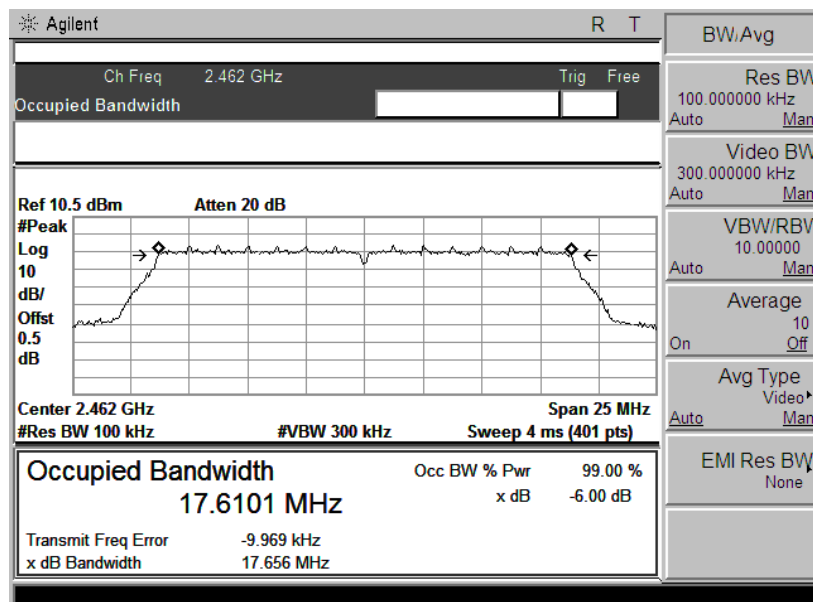
802.11 n(20M) Mode



Ch 1

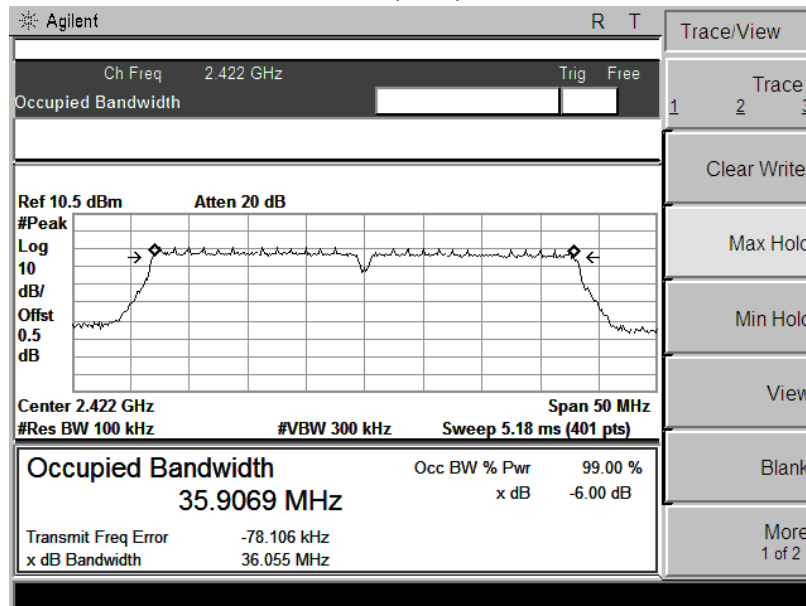


Ch 6

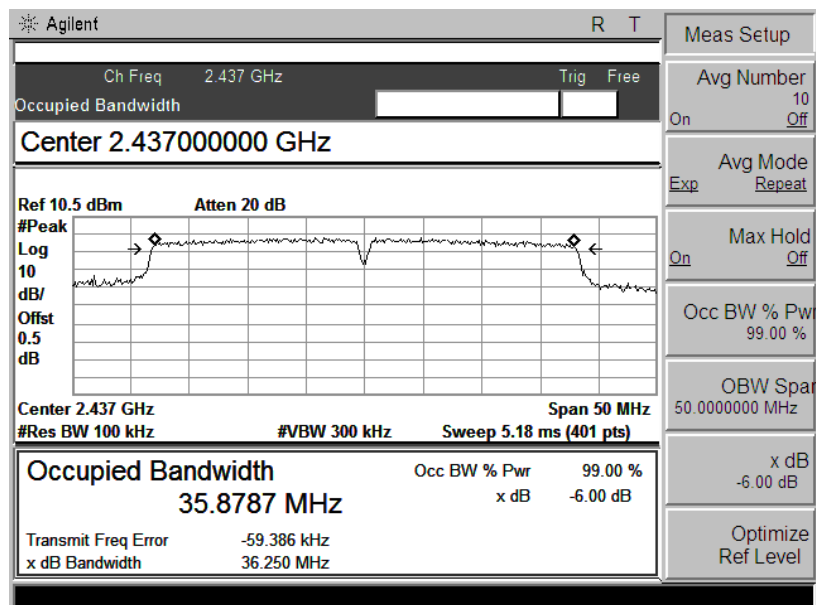


Ch 11

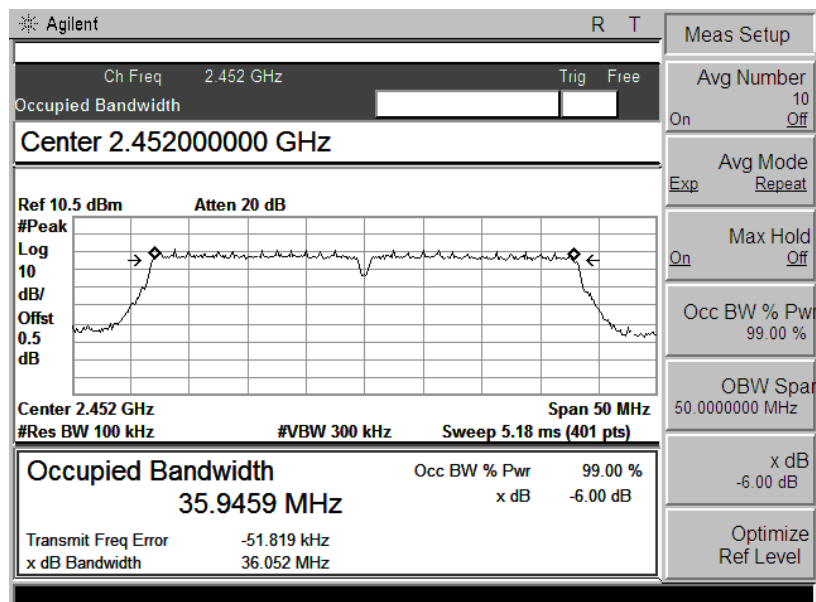
802.11 n(40M) Mode



Ch 3



Ch 6



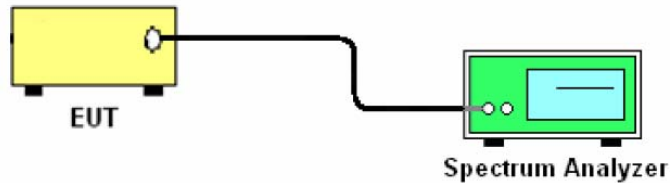
Ch 9

5.7 POWER SPECTRAL DENSITY

5.7.1 Applicable Standard

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. This power spectral density shall be determined in accordance with the provisions of paragraph (b) of this section. The same method of determining the conducted output power shall be used to determine the power spectral density.

5.7.2 Block Diagram of Test Setup



5.7.3 Test Procedure

According to KDB 558074 D01 DTS Meas Guidance v03r01clause10.2:

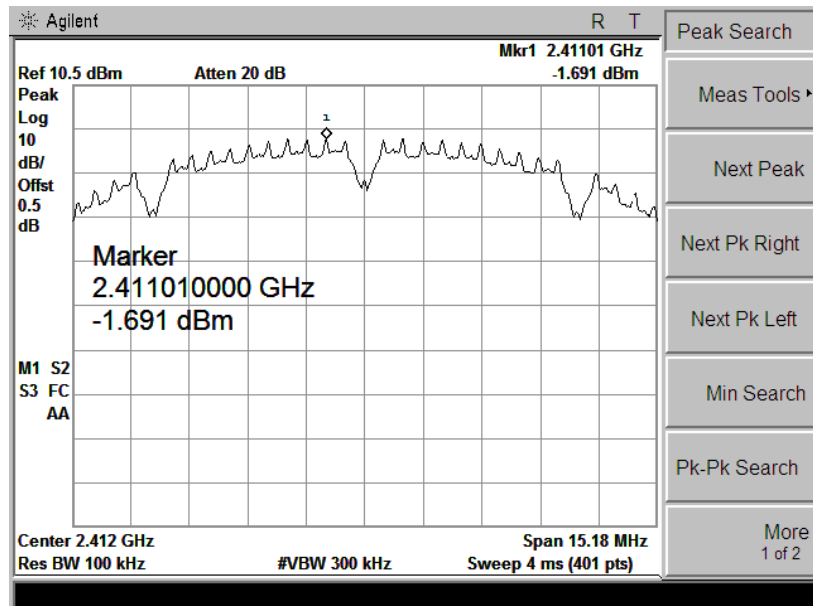
- a) Set analyzer center frequency to DTS channel center frequency.
- b) Set the span to 1.5 times the DTS bandwidth.
- c) Set the RBW to: $3 \text{ kHz} \leq \text{RBW} \leq 100 \text{ kHz}$.
- d) Set the VBW $\geq 3 \times \text{RBW}$.
- e) Detector = peak.
- f) Sweep time = auto couple.
- g) Trace mode = max hold.
- h) Allow trace to fully stabilize.
- i) Use the peak marker function to determine the maximum amplitude level within the RBW.
- j) If measured value exceeds limit, reduce RBW (no less than 3 kHz) and repeat.

5.7.4 Test Result

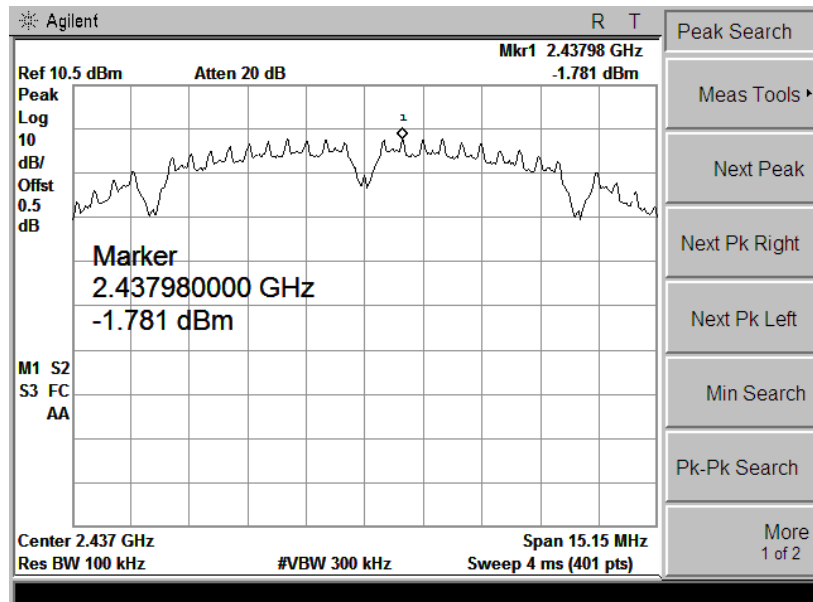
Test Item:	POWER SPECTRAL DENSITY	Temperature :	20°C
Test Engineer:	Kang	Relative Humidity :	55%

Mode	Channel	Frequency (MHz)	PSD (dBm/100kHz)	Limit (dBm/100kHz)	Result
802.11b	Low	2412	-1.691	≤ 8	Pass
	Middle	2437	-1.781	≤ 8	Pass
	High	2462	-1.447	≤ 8	Pass
802.11g	Low	2412	-5.888	≤ 8	Pass
	Middle	2437	-6.110	≤ 8	Pass
	High	2462	-5.907	≤ 8	Pass
802.11n (20MHz)	Low	2412	-6.016	≤ 8	Pass
	Middle	2437	-6.255	≤ 8	Pass
	High	2462	-5.956	≤ 8	Pass
802.11n (20MHz)	Low	2422	-8.454	≤ 8	Pass
	Middle	2437	-8.216	≤ 8	Pass
	High	2452	-8.198	≤ 8	Pass

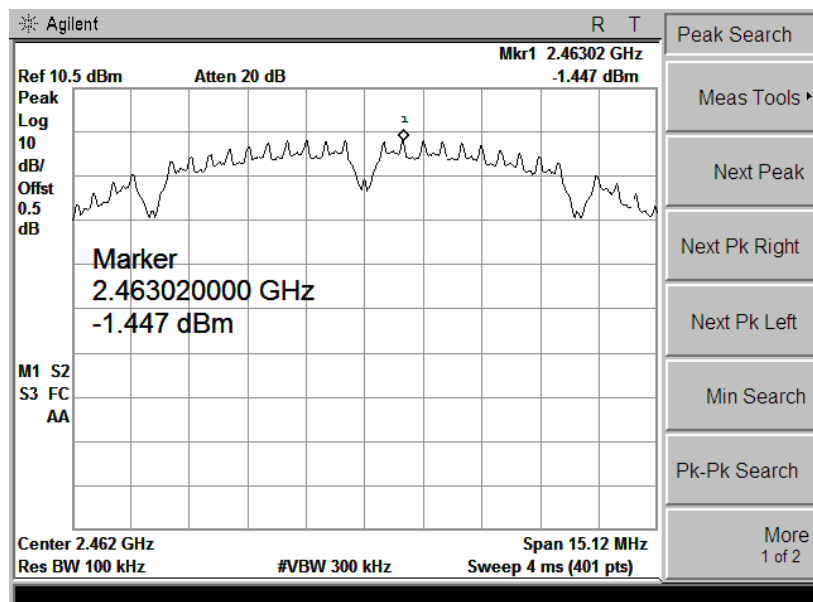
802.11 b Mode



Ch 1

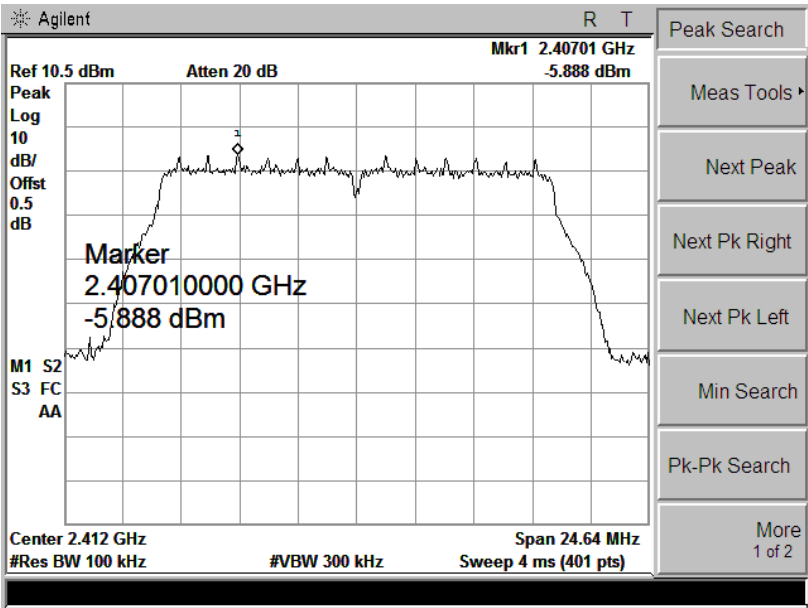


Ch 6

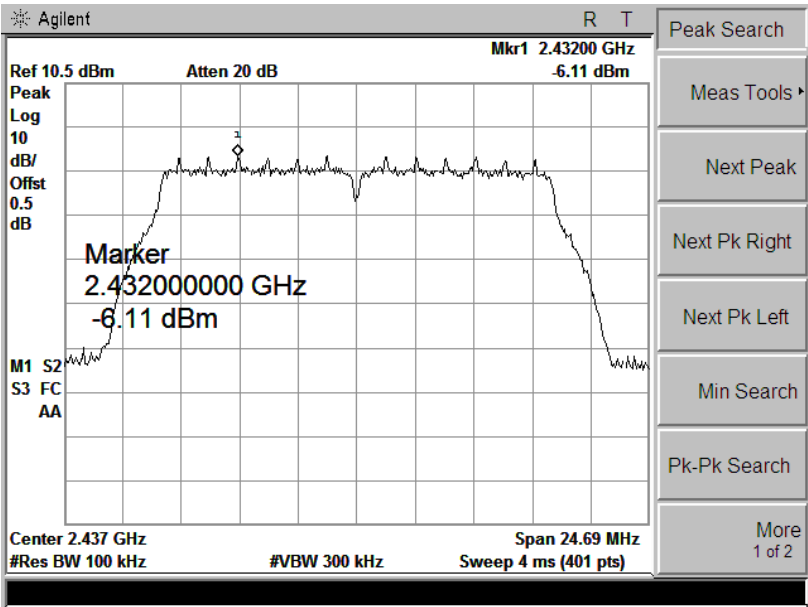


Ch 11

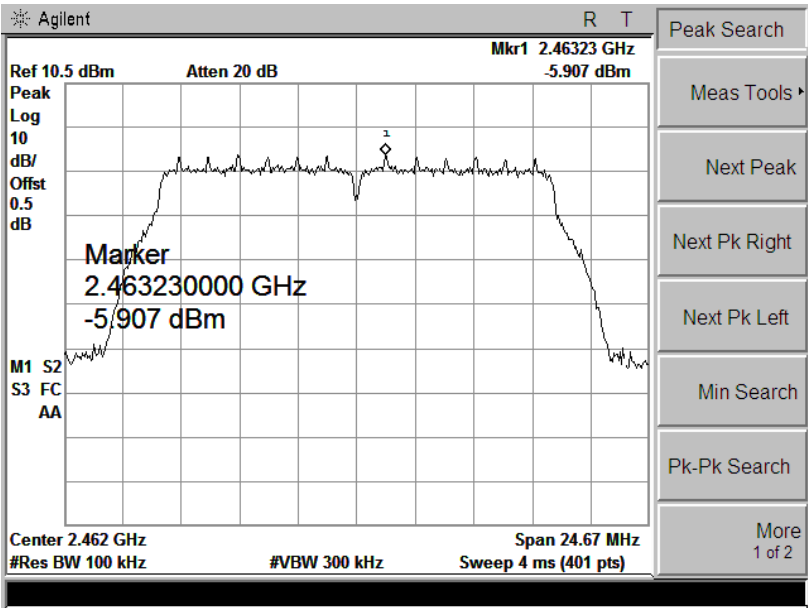
802.11 g Mode



Ch 1

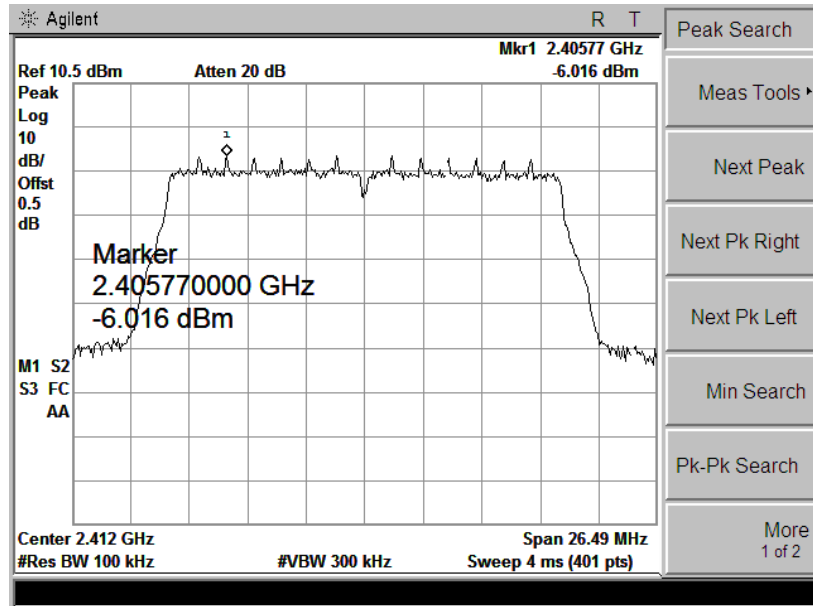


Ch 6

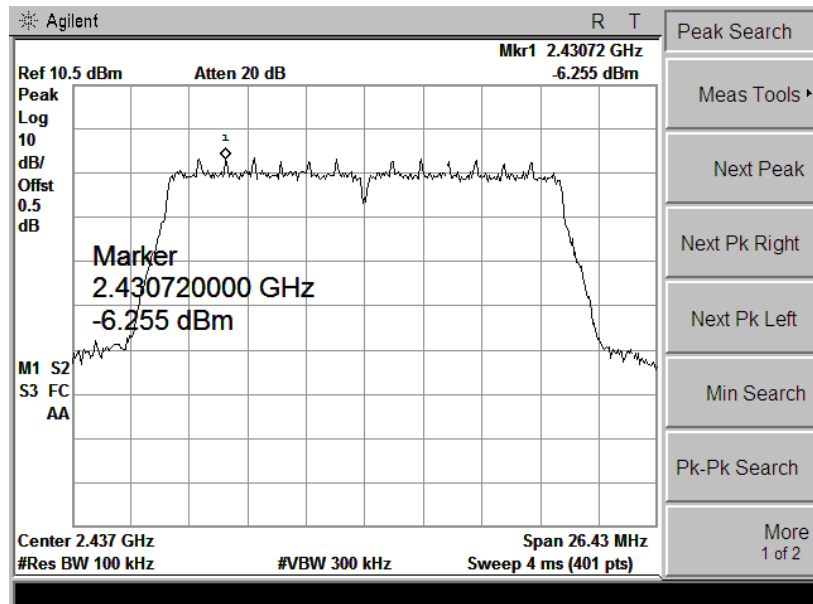


Ch 11

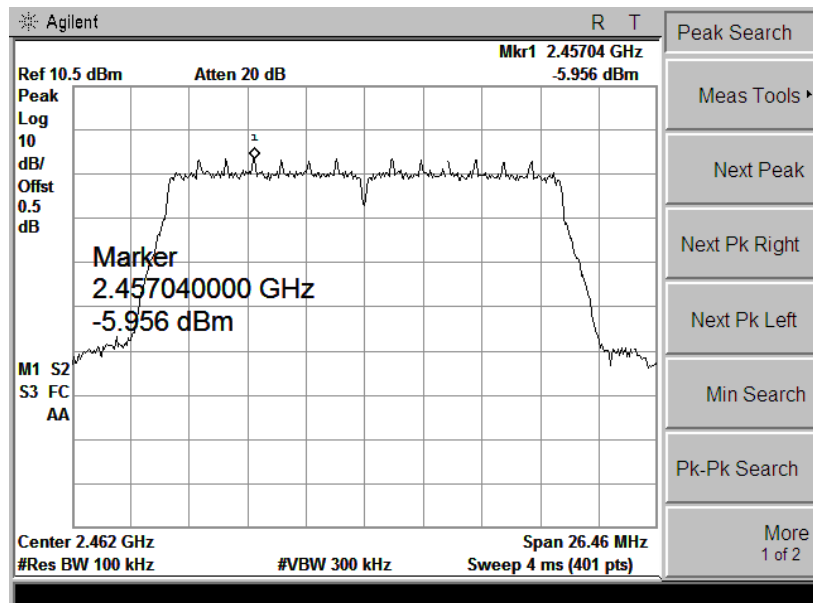
802.11 n(20M) Mode



Ch 1

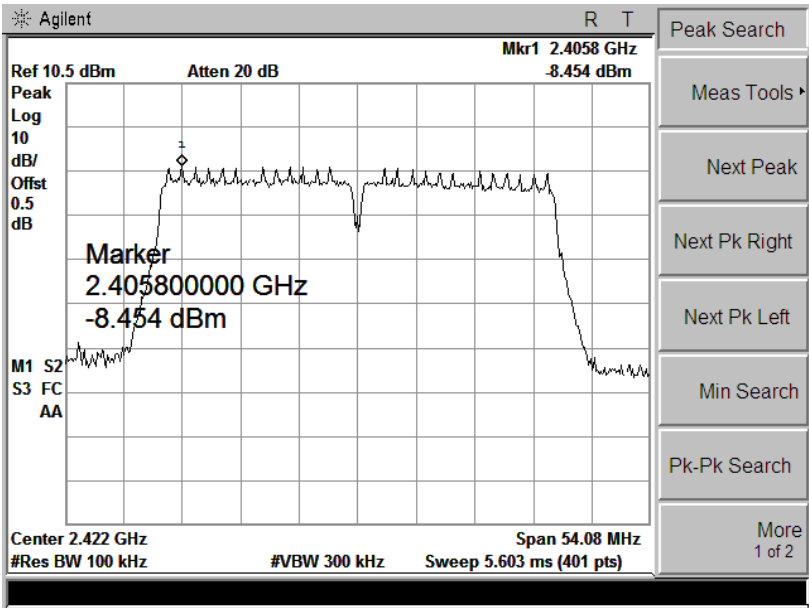


Ch 6

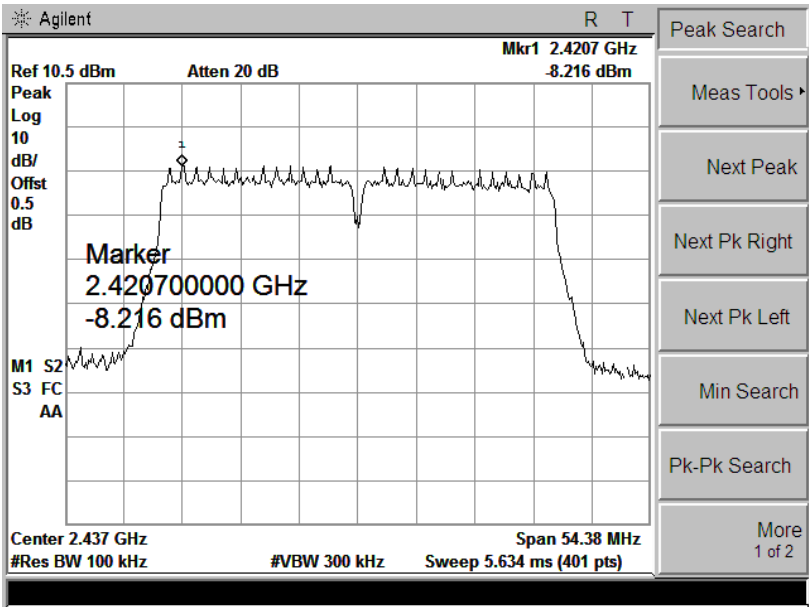


Ch 11

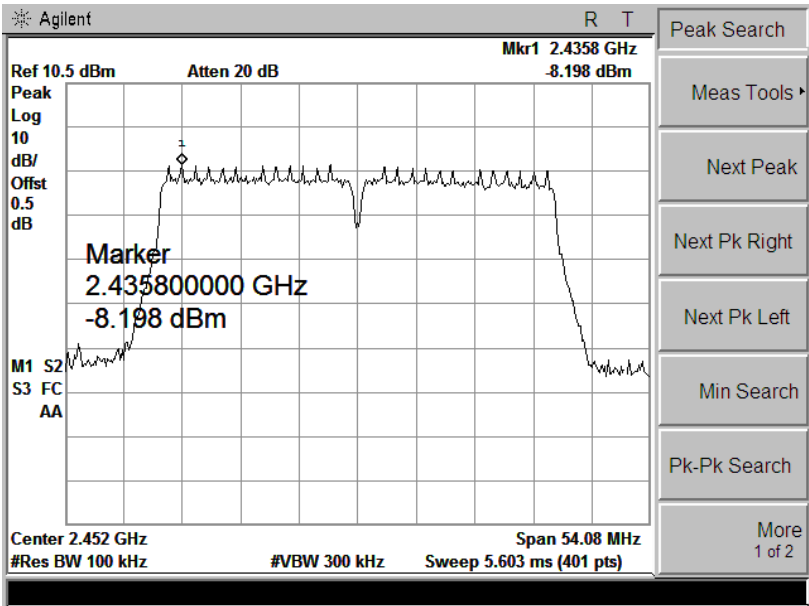
802.11 n(40M) Mode



Ch 1



Ch 6



Ch 9

5.8 Band Edge and Conducted Spurious Emissions

5.8.1 Test Requirement

In any 100 kHz bandwidth outside the frequency band in which the spread spectrum or digitally modulated intentional radiator is operating, the radio frequency power that is produced by the intentional radiator shall be at least 20 dB below that in the 100 kHz bandwidth within the band that contains the highest level of the desired power, based on either an RF conducted or a radiated measurement, provided the transmitter demonstrates compliance with the peak conducted power limits. If the transmitter complies with the conducted power limits based on the use of RMS averaging over a time interval, as permitted under paragraph (b)(3) of this section, the attenuation required under this paragraph shall be 30 dB instead of 20 dB. Attenuation below the general limits specified in §15.209(a) is not required.

5.8.2 Test Procedure

1. Check the calibration of the measuring instrument using either an internal calibrator or a known signal from an external generator.
2. Remove the antenna from the EUT and then connect to a low loss RF cable from the antenna port to a EMI test receiver, then turn on the EUT and make it operate in transmitting mode. Then set it to Low Channel and High Channel within its operating range, and make sure the instrument is operated in its linear range.
3. Set both RBW and VBW of spectrum analyzer to 100 kHz with a convenient frequency span including 100 kHz bandwidth from band edge.
4. Measure the highest amplitude appearing on spectral display and set it as a reference level. Plot the graph with marking the highest point and edge frequency.
5. Repeat above procedures until all measured frequencies were complete.

5.8.3 Test Result

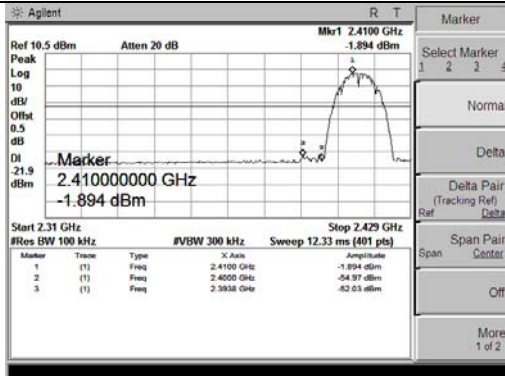
Pass

Remark:

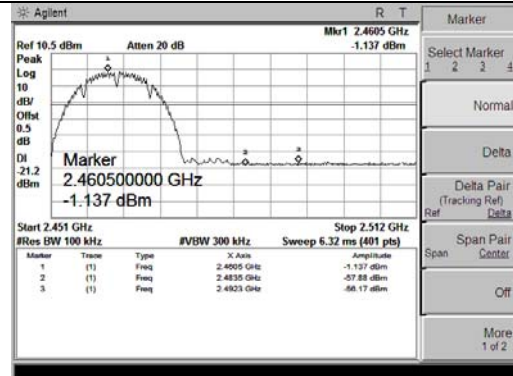
During the Conducted Spurious Emissions test, pre-scan the 802.11b, 802.11g, 802.11n(20/40)modulation, and found the 802.11b modulation which it is worse case.

Test Item:	Band Edge	Temperature :	23°C
Test Engineer:	Kang	Relative Humidity :	65%

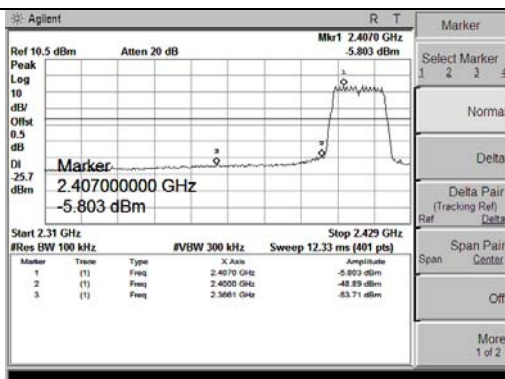
Band Edge, Left Side



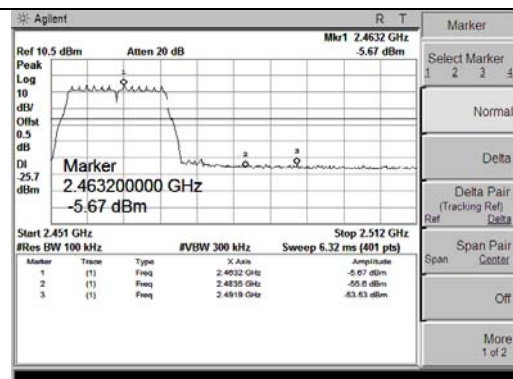
Band Edge, Right Side



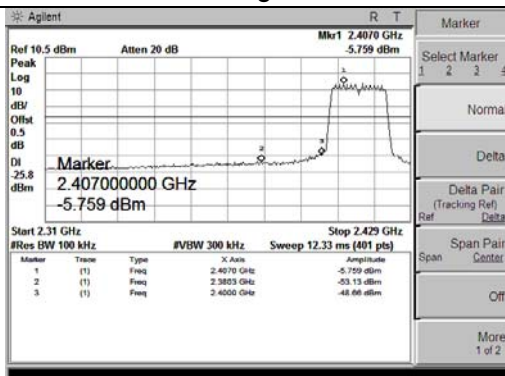
802.11 b Mode



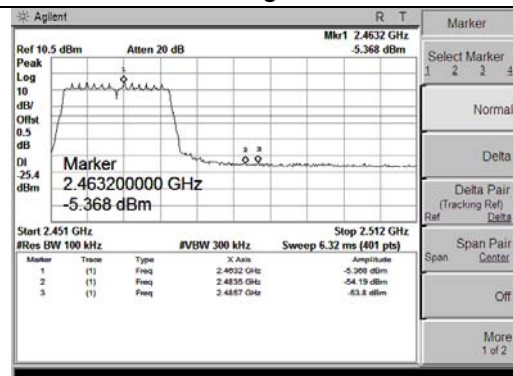
802.11 b Mode



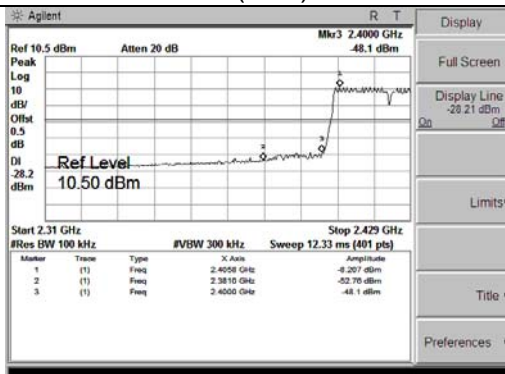
802.11 g Mode



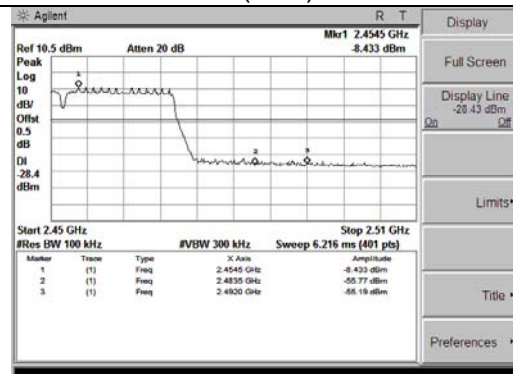
802.11 g Mode



802.11 n(20M) Mode



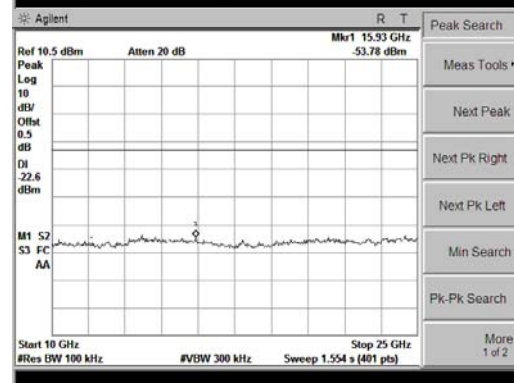
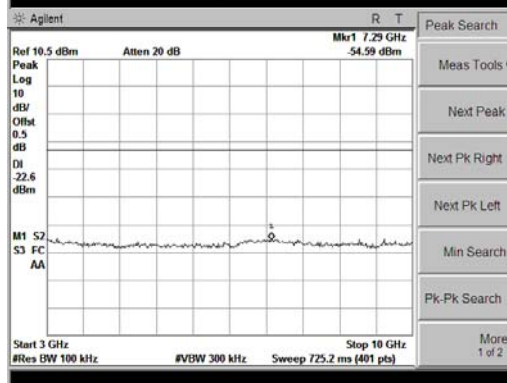
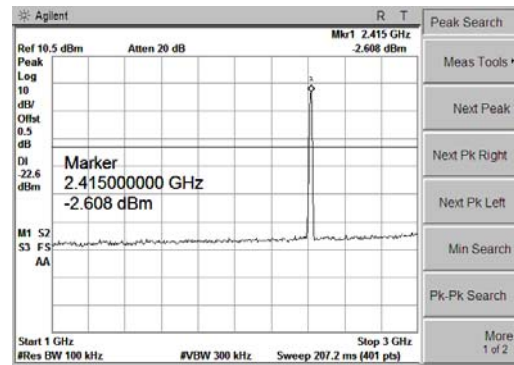
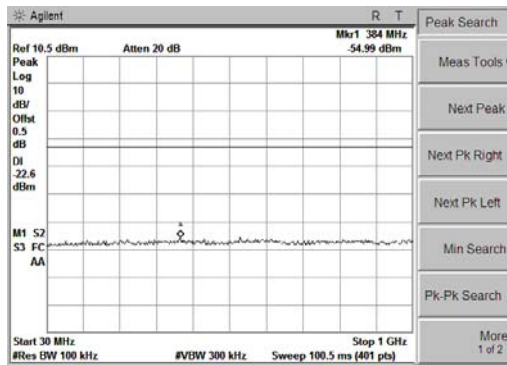
802.11 n(20M) Mode



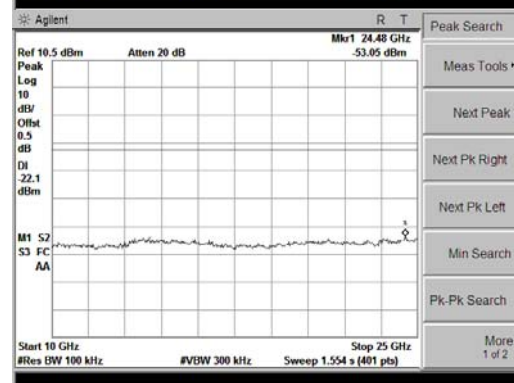
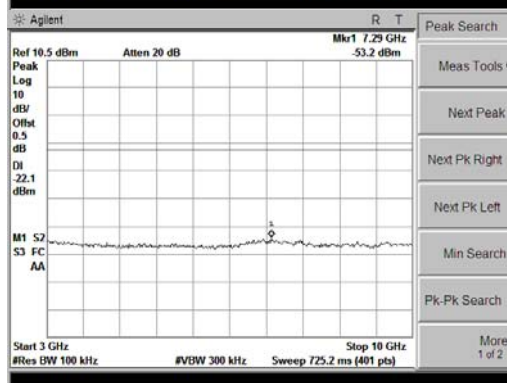
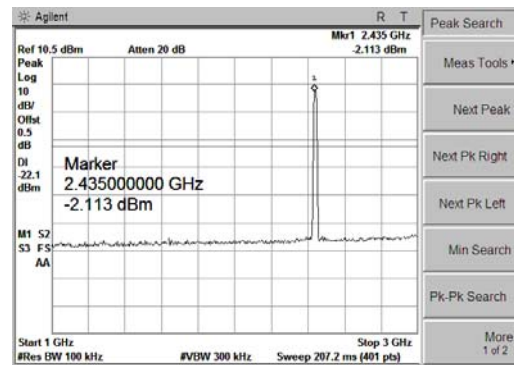
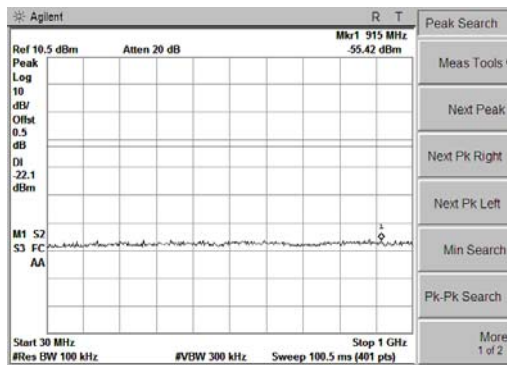
802.11 n(40M) Mode

802.11 n(40M) Mode

Conducted Spurious Emissions

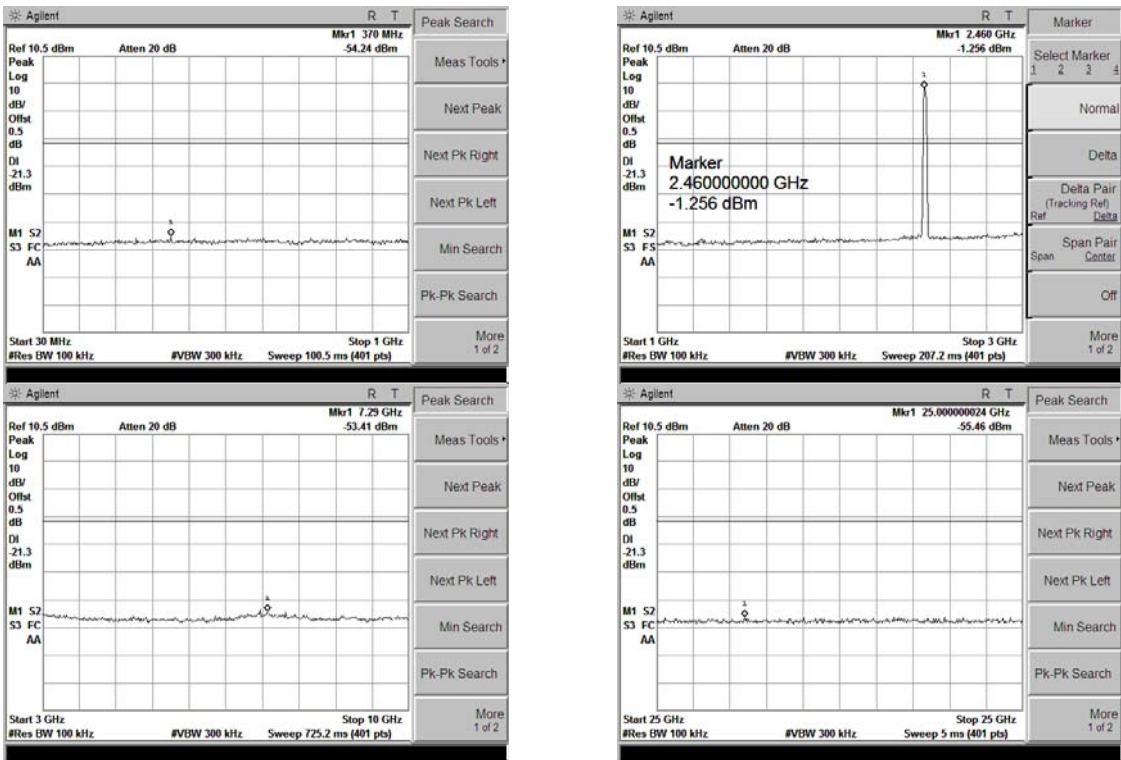


802.11b Mode, Ch1



802.11b Mode, Ch6

Conducted Spurious Emissions



802.11b Mode, Ch11

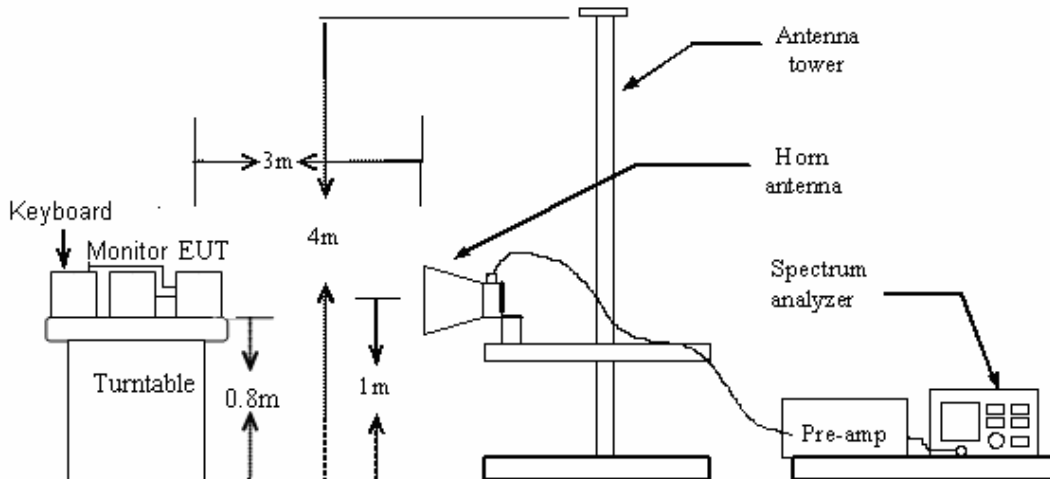
5.9 Restricted Frequency Bands

5.9.1 Test Requirement

In any 100 kHz bandwidth outside the frequency band in which the spread spectrum or digitally modulated intentional radiator is operating, the radio frequency power that is produced by the intentional radiator shall be at least 20 dB below that in the 100 kHz bandwidth within the band that contains the highest level of the desired power. In addition, radiated emissions which fall in the restricted bands, as defined in §15.205(a), must also comply with the radiated emission limits specified in §15.209(a) (see §15.205(c)).

5.9.2 Test Configuration

Test Setup:



5.9.3 Test Procedure:

1. The EUT was placed on the top of a rotating table 0.8 meters above the ground at a 3 meter chamber. The table was rotated 360 degrees to determine the position of the highest radiation.
2. The EUT was set 3 meters away from the interference-receiving antenna, which was mounted on the top of a variable-height antenna tower.
3. The antenna height is varied from one meter to four meters above the ground to determine the maximum value of the field strength. Both horizontal and vertical polarizations of the antenna are set to make the measurement.
4. For each suspected emission, the EUT was arranged to its worst case and then the antenna was tuned to heights from 1 meter to 4 meters and the table was turned from 0 degrees to 360 degrees to find the maximum reading.

5.9.4 Test Result

Pass

Note: All test modes are performed, only the worst case is recorded in this report.

Please refer the following plots.



Address: No.5, Langshan 2nd Rd., North Hi-Tech Industrial park
Guangdong, China
Tel: 0755-86026850 Fax: 0755-26013350

Radiated Emission Measurement

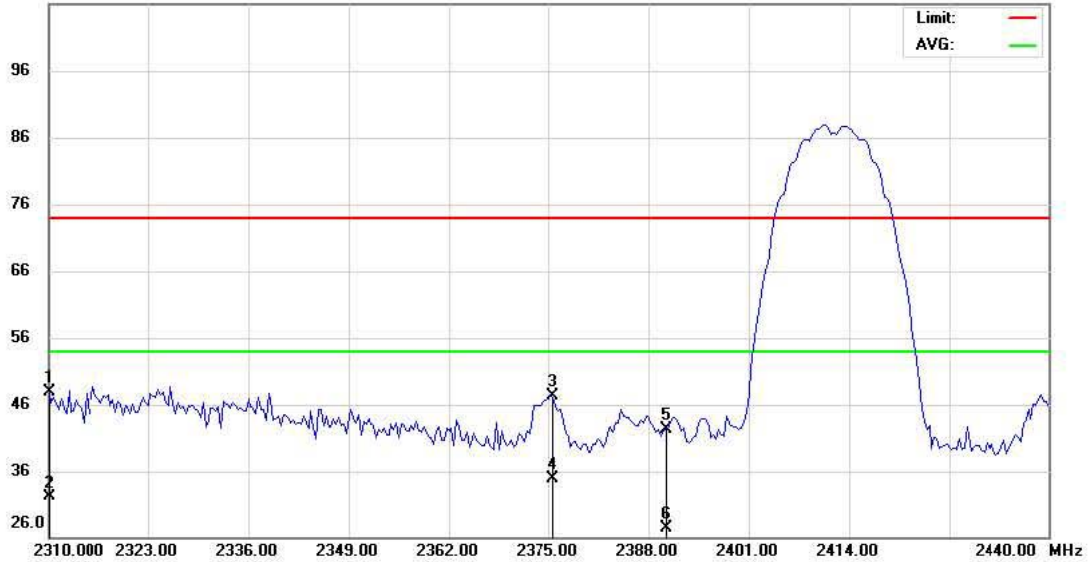
File: MXB03

Data: #10

Date: 2015-2-11

Time: 19:53:05

106.0 dBuV/m



Site: site #1

Polarization: **Horizontal**

Temperature: 23

Limit: FCC RF Limit

Power: DC 5V by Adapter

Humidity: 54 %

EUT: OTT BOX

Distance: 3m

M/N: MBX03

Mode: 802.11b CH0

Note:

No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV/m	Limit dBuV/m	Over dB	Antenna Height cm	Table Degree degree	Comment
1		2310.000	56.33	-8.43	47.90	74.00	-26.10	peak		
2		2310.000	40.49	-8.43	32.06	54.00	-21.94	AVG		
3		2375.325	55.83	-8.43	47.40	74.00	-26.60	peak		
4	*	2375.325	43.31	-8.43	34.88	54.00	-19.12	AVG		
5		2390.000	50.77	-8.43	42.34	74.00	-31.66	peak		
6		2390.000	35.64	-8.43	27.21	54.00	-26.79	AVG		

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

Engineer Signature:

John



Address: No.5, Langshan 2nd Rd., North Hi-Tech Industrial park
 ,Guangdong ,China
 Tel: 0755-86026850 Fax: 0755-26013350

Radiated Emission Measurement

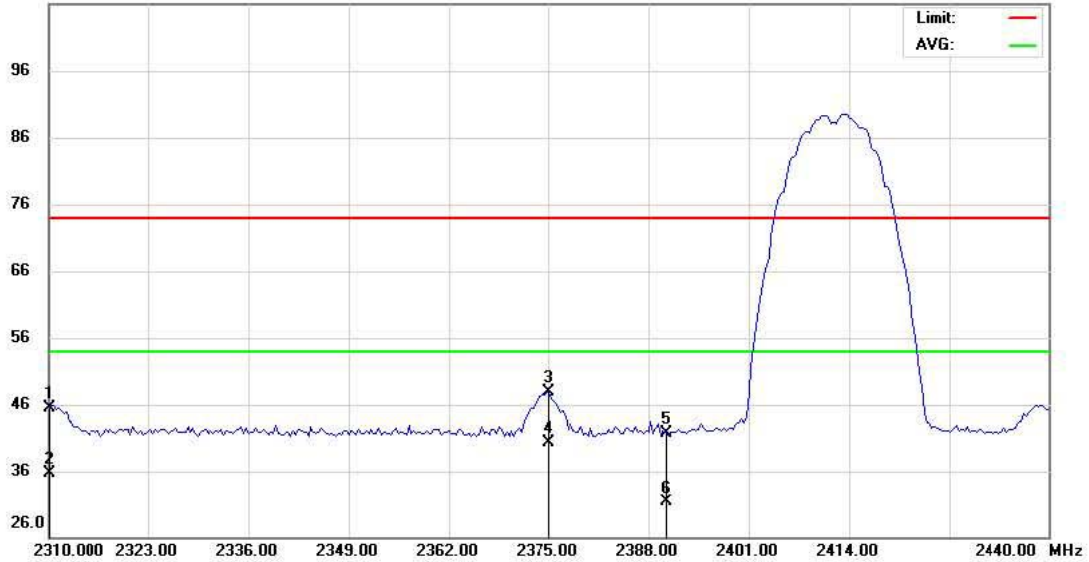
File: MXB03

Data: #9

Date: 2015-2-11

Time: 19:46:43

106.0 dBuV/m



Site: site #1

Polarization: **Vertical**

Temperature: 23

Limit: FCC RF Limit

Power: DC 5V by Adapter

Humidity: 54 %

EUT: OTT BOX

Distance: 3m

M/N: MBX03

Mode: 802.11b CH0

Note:

No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV/m	Limit dBuV/m	Over dB	Antenna Height cm	Table Degree degree	Comment
1		2310.000	53.86	-8.43	45.43	74.00	-28.57	peak		
2		2310.000	44.11	-8.43	35.68	54.00	-18.32	AVG		
3		2375.000	56.34	-8.43	47.91	74.00	-26.09	peak		
4	*	2375.000	48.76	-8.43	40.33	54.00	-13.67	AVG		
5		2390.000	50.04	-8.43	41.61	74.00	-32.39	peak		
6		2390.000	39.69	-8.43	31.26	54.00	-22.74	AVG		

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

Engineer Signature:

John



Address: No. 5, Langshan 2nd Rd., North Hi-Tech Industrial park
Guangdong, China
Tel: 0755-86026850 Fax: 0755-26013350

Radiated Emission Measurement

File: MXB03

Data: #11

Date: 2015-2-11

Time: 20:01:05

106.0 dBuV/m



Site: site #1

Polarization: **Horizontal**

Temperature: 23

Limit: FCC RF Limit

Power: DC 5V by Adapter

Humidity: 54 %

EUT: OTT BOX

Distance: 3m

M/N: MBX03

Mode: 802.11b CH11

Note:

No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV/m	Limit dBuV/m	Over dB	Antenna Height cm	Table Degree degree	Comment
1		2483.500	54.47	-8.29	46.18	74.00	-27.82	peak		
2	*	2483.500	42.10	-8.29	33.81	54.00	-20.19	AVG		
3		2488.750	55.16	-8.28	46.88	74.00	-27.12	peak		
4		2488.750	40.18	-8.28	31.90	54.00	-22.10	AVG		
5		2500.000	53.08	-8.26	44.82	74.00	-29.18	peak		
6		2500.000	41.71	-8.26	33.45	54.00	-20.55	AVG		

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

Engineer Signature:

John



Address: No. 5, Langshan 2nd Rd., North Hi-Tech Industrial park
 „Guangdong, China
 Tel: 0755-86026850 Fax: 0755-26013350

Radiated Emission Measurement

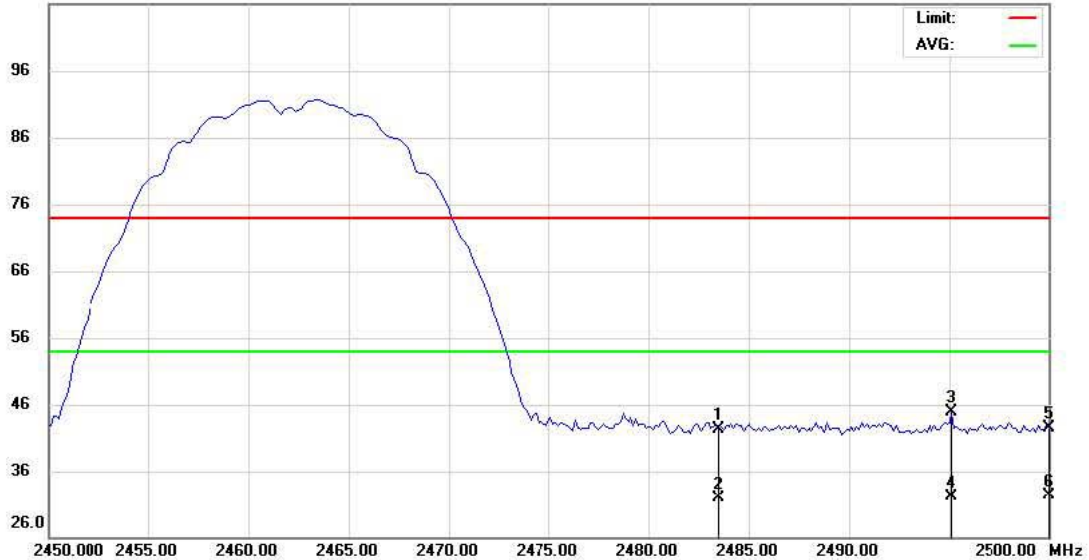
File: MXB03

Data: #12

Date: 2015-2-11

Time: 20:07:48

106.0 dBuV/m



Site: site #1

Polarization: **Vertical**

Temperature: 23

Limit: FCC RF Limit

Power: DC 5V by Adapter

Humidity: 54 %

EUT: OTT BOX

Distance: 3m

M/N: MBX03

Mode: 802.11b CH11

Note:

No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV/m	Limit dBuV/m	Over dB	Antenna Height cm	Table Degree degree	Comment
1		2483.500	50.62	-8.29	42.33	74.00	-31.67	peak		
2		2483.500	40.20	-8.29	31.91	54.00	-22.09	AVG		
3		2495.125	53.19	-8.27	44.92	74.00	-29.08	peak		
4		2495.125	40.31	-8.27	32.04	54.00	-21.96	AVG		
5		2500.000	50.84	-8.26	42.58	74.00	-31.42	peak		
6	*	2500.000	40.52	-8.26	32.26	54.00	-21.74	AVG		

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

Engineer Signature:

John

End of Report