IC: 9323A-AK093

### FCC PART 15C and RSS-210 TEST REPORT FOR CERTIFICATION On Behalf of

OPPO Digital, Inc

150Mbps Wireless Lite N USB Adapter

Model No.: AK093

FCC ID: YTXAK093

IC: 9323A-AK093

Prepared for: OPPO Digital, Inc

2629 Terminal Blvd. Suite B, Mountain View, CA 94043

Prepared By: Audix Technology (Shenzhen) Co., Ltd.

No. 6, Ke Feng Rd., 52 Block, Shenzhen Science & Industrial Park,

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Report Number : ACS-F10307

Date of Test : Oct.26~29, 2010

Date of Report : Nov.02, 2010



IC: 9323A-AK093

# TABLE OF CONTENTS

Des	Description		
1.	SUMMARY OF STANDARDS AND RESULTS		
	1.1. Description of Standards and Results	1-	
2.	GENERAL INFORMATION	2-	
	2.1. Description of Device (EUT)	2-	
	2.2. Test Information		
	2.3. Data VS Power	2-	
	2.4. Tested Supporting System Details		
	2.5. Block diagram of connection between the EUT and simulators		
	2.6. Test Facility		
	2.7. Measurement Uncertainty (95% confidence levels, k=2)		
3.	POWER LINE CONDUCTED EMISSION TEST	3-1	
	3.1. Test Equipments		
	3.2. Block Diagram of Test Setup	3-	
	3.3. Power Line Conducted Emission Test Limits		
	3.4. Configuration of EUT on Test		
	3.5. Operating Condition of EUT		
	<ul><li>3.6. Test Procedure</li><li>3.7. Power Line Conducted Emission Test Results</li></ul>		
4.	RADIATED EMISSION TEST		
	4.1. Test Equipment		
	4.2. Block Diagram of Test Setup		
	4.3. Radiated Emission Limit		
	<ul><li>4.4. EUT Configuration on Test.</li><li>4.5. Operating Condition of EUT.</li></ul>		
	4.6. Test Procedure		
	4.7. Radiated Emission Test Results		
5.	CONDUCTED SPURIOUS EMISSIONS		
٥.	5.1. Test Equipment		
	5.2. Limit		
	5.3. Test Procedure.		
	5.4. Test result		
6.	BAND EDGE COMPLIANCE TEST		
•	6.1. Test Equipment		
	6.2. Limit		
	6.3. Test Produce		
	6.4. Test Results	6-1	
7.	6dB and 99% Bandwidth Test	7-1	
	7.1. Test Equipment	7-	
	7.2. Limit	7-	
	7.3. Test Procedure	7-	
	7.4. Test Results		
8.	OUTPUT POWER TEST	<b>8-</b> 1	
	8.1. Test Equipment		
	8.2. Limit (FCC Part 15C 15.247 b(3))		
	8.3. Test Procedure	8-1	



#### IC: 9323A-AK093

	8.4. Test Results	8-2
9.	POWER SPECTRAL DENSITY TEST	9-1
	9.1. Test Equipment	9-1
	9.2. Limit	
	9.3. Test Procedure	9-1
	9.4. Test Results	9-2
10.	ANTENNA REQUIREMENT	10-1
	10.1. STANDARD APPLICABLE	10-1
	10.2. ANTENNA CONNECTED CONSTRUCTION	10-1
11.	DEVIATION TO TEST SPECIFICATIONS	11-1
12.	PHOTOGRAPH OF TEST	12-1
	12.1. Photos of Power Line Conducted Emission Test	12-1
	12.2. Photos of Radiated Emission Test	12-2
13.	PHOTOGRAPH OF EUT	13-1



IC: 9323A-AK093

### TEST REPORT CERTIFICATION

**Applicant** 

OPPO Digital, Inc

Manufacturer

OPPO Digital, Inc

**EUT** Description

150Mbps Wireless Lite N USB Adapter

FCC ID

YTXAK093

IC

9323A-AK093

(A) MODEL NO.

: AK093

(B) SERIAL NO.

: N/A

(C) POWER SUPPLY: DC 5V From PC

(D) TEST VOLTAGE: DC 5V From PC Input AC 120V/60Hz

Tested for comply with:

FCC Rules and Regulations Part 15 Subpart C:2008, ANSI C63.10:2009

RSS-210, ISSUE 7, June 2007

RSS-Gen, ISSUE 2, June 2007

The device described above is tested by AUDIX TECHNOLOGY (SHENZHEN) CO., LTD. to confirm comply with all the FCC Part 15 Subpart C and RSS-210,RSS-GEN requirements.

The test results are contained in this test report and AUDIX TECHNOLOGY (SHENZHEN) CO., LTD. is assumed full responsibility for the accuracy and completeness of these tests. Also, this report shows that the Equipment Under Test (EUT) is to be technically compliant with the FCC and IC requirements.

This report applies to above tested sample only. This report shall not be reproduced in part without written approval of AUDIX TECHNOLOGY (SHENZHEN) CO., LTD.

Date of Test : _	Oct.26~ 29, 2010	Report of date:	Nov.02,2010
Prepared by: _	Amrie Wu	Reviewer by :	James In
	Annie Wu / Superviso	or	Jamy Yu / Supervisor
		Audix Techn EMC 部門	深圳)有限公司 nology (Shenzhen) Co., Ltd. 報告専用章
		Stamp only for E	MC Dept. Report
Approved & Au	nthorized Signer:	Signature:	en lu 1/5/10
		Ken Lu /	Manager



# 1. SUMMARY OF STANDARDS AND RESULTS

# 1.1.Description of Standards and Results

The EUT have been tested according to the applicable standards as referenced below.

EMISSION				
Description of Test Item	Standard	Results		
	FCC Part 15: 15.207			
Power Line Conducted Emission	ANSI C63.10: 2009	PASS		
	RSS-210 ISSUE 7			
	FCC Part 15: 15.209			
Radiated Emission	ANSI C63.10: 2009	PASS		
	RSS-210 ISSUE 7			
	FCC Part 15: 15.247			
Band Edge Compliance	ANSI C63.10: 2009	PASS		
	RSS-210 ISSUE 7			
	FCC Part 15: 15.247			
Conducted spurious emissions	ANSI C63.10: 2009	PASS		
	RSS-210 ISSUE 7			
	FCC Part 15: 15.247			
6dB Bandwidth	ANSI C63.10: 2009	PASS		
	RSS-210 ISSUE 7			
	FCC Part 15: 15.247			
Peak Output Power	ANSI C63.10: 2009	PASS		
	RSS-210 ISSUE 7			
	FCC Part 15: 15.247			
Power Spectral Density	ANSI C63.10: 2009	PASS		
	RSS-210 ISSUE 7			
99% bandwidth	RSS-210 ISSUE 7	PASS		
Antenna requirement	FCC Part 15: 15.203 RSS-210 ISSUE 7	PASS		



### 2. GENERAL INFORMATION

2.1.Description of Device (EUT)

Product Name : 150Mbps Wireless Lite N USB Adapter

Model Number : AK093

FCC ID : YTXAK093

IC : 9323A-AK093

Operation Frequency : IEEE 802.11b: 2412MHz—2462MHz

IEEE 802.11g: 2412MHz—2462MHz

IEEE 802.11n HT20: 2412MHz—2462MHz IEEE 802.11n HT40: 2422MHz—2452MHz

Channel Number : IEEE 802.11b/g, IEEE 802.11n HT20: 11 Channels

IEEE 802.11n HT40: 7Channels

Modulation Technology: IEEE 802.11b: DSSS(CCK,DQPSK,DBPSK)

IEEE 802.11g: OFDM(64QAM, 16QAM, QPSK, BPSK) IEEE 802.11n HT20, HT40: OFDM (64QAM, 16QAM,

QPSK,BPSK)

Antenna Assembly

Gain

Integrated PCB antenna, 1TX2R 2.12dBi (maximum)

Applicant : OPPO Digital, Inc

2629 Terminal Blvd. Suite B, Mountain View, CA 94043

Manufacturer : OPPO Digital, Inc

2629 Terminal Blvd. Suite B, Mountain View, CA 94043

Date of Test : Oct.26~29, 2010

Date of Receipt : Oct.25, 2010

Sample Type : Prototype production



### 2.2.Test Information

A special test software was used to control EUT work in Continuous TX mode(100% duty cycle), and select test channel, wireless mode and data rate.

Tested mode, channel, and data rate information				
Mode	data rate	Channel	Frequency	
	(Mpbs)(see Note)		(MHz)	
IEEE 802.11b	11	Low:CH1	2412	
	11	Middle: CH6	2437	
	11	High: CH11	2462	
IEEE 802.11g	54	Low:CH1	2412	
	54	Middle: CH6	2437	
	54	High: CH11	2462	
IEEE 802.11n HT20	65	Low:CH1	2412	
	65	Middle: CH6	2437	
	65	High: CH11	2462	
IEEE 802.11n HT40	302.11n HT40 162		2422	
	162	Middle: CH4	2437	
	162	High: CH7	2452	

Note: According exploratory test, EUT will have maximum output power in those data rate, so those data rate were used for all test.



# 2.3.Data VS Power

Mode	Data rate (Mbps)	СН	AV Power (dBm)	PK Power (dBm)
	1	CH1	16.95	18.40
11b	2	CH1	16.90	18.42
110	5.5	CH1	16.89	18.47
	11	CH1	16.88	18.49
	6	CH1	15.42	23.49
	9	CH1	15.39	23.51
	12	CH1	15.38	23.53
110	18	CH1	15.34	23.55
11g	24	CH1	15.35	23.57
	36	CH1	15.30	23.59
	48	CH1	15.29	23.60
	54	CH1	15.27	23.62
	6.5	CH1	14.99	23.67
	13	CH1	14.95	23.65
	19.5	CH1	14.96	23.69
11n	26	CH1	14.92	23.71
HT20	39	CH1	14.94	23.74
	52	CH1	14.91	23.76
	58.5	CH1	14.92	23.74
	65	CH1	14.89	23.80
	13.5	CH1	8.76	16.10
	27	CH1	8.72	16.14
	40.5	CH1	8.70	16.18
	54	CH1	8.69	16.17
11n	81	CH1	8.67	16.13
HT40	108	CH1	8.64	16.19
	121.5	CH1	8.60	16.09
	135	CH1	8.55	16.20
	162	CH1	8.53	16.21



Mode	Data rate (Mbps)	СН	AV Power (dBm)	PK Power (dBm)
	1	СН6	17.56	18.79
11b	2	СН6	17.52	18.82
110	5.5	CH6	17.49	18.84
	11	CH6	17.45	18.86
	6	CH6	17.68	24.89
	9	CH6	17.69	24.87
	12	CH6	17.59	24.96
11~	18	CH6	17.62	24.98
11g	24	CH6	17.54	25.00
	36	CH6	17.53	24.97
	48	CH6	17.50	25.01
	54	CH6	17.49	25.04
	6.5	CH6	17.64	25.06
	13	CH6	17.60	25.10
	19.5	CH6	17.56	25.14
11n	26	CH6	17.54	25.18
HT20	39	CH6	17.50	25.20
	52	CH6	17.52	25.19
	58.5	CH6	17.46	25.24
	65	CH6	17.41	25.26
	13.5	CH4	13.59	21.20
	27	CH4	13.54	21.26
	40.5	CH4	13.49	21.29
	54	CH4	13.45	21.27
11n	81	CH4	13.39	21.34
HT40	108	CH4	13.34	21.39
	121.5	CH4	13.30	21.30
	135	CH4	13.46	21.23
	162	CH4	13.37	21.38



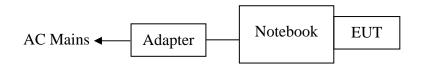
	Data rate		AV Power	PK Power
Mode	(Mbps)	СН	(dBm)	(dBm)
	1	CH11	17.95	19.15
11b	2	CH11	17.92	19.18
110	5.5	CH11	17.86	19.21
	11	CH11	17.82	19.24
	6	CH11	17.21	24.59
	9	CH11	17.19	24.46
	12	CH11	17.20	24.62
11~	18	CH11	17.15	24.63
11g	24	CH11	17.13	24.74
	36	CH11	17.10	24.68
	48	CH11	17.06	24.73
	54	CH11	16.99	24.78
	6.5	CH11	16.68	24.26
	13	CH11	16.64	24.30
	19.5	CH11	16.61	24.35
11n	26	CH11	16.59	24.39
HT20	39	CH11	16.54	24.42
	52	CH11	16.50	24.40
	58.5	CH11	16.48	24.43
	65	CH11	16.44	24.49
	13.5	CH7	9.89	17.58
	27	CH7	9.85	17.62
	40.5	CH7	9.81	17.65
	54	CH7	9.78	17.60
11n	81	CH7	9.80	17.69
HT40	108	CH7	9.73	17.75
	121.5	CH7	9.70	17.79
	135	CH7	9.68	17.84
	162	CH7	9.74	17.73

# 2.4. Tested Supporting System Details

No.	Description	ACS No.	Manufacturer	Model	Serial Number	Approved type
1	Notebook	-	DELL	PP09S	N/A	☑FCC DoC ☑BSMI ID: R41108
1		Power Cord: Unshielded, Detachabled, 1.8m Power Adapter: Manufacturer: DELL, M/N: LA65NS1-00 Cable: Unshielded, Detachabled, 4.0m(Bond one ferrite core)				



### 2.5. Block diagram of connection between the EUT and simulators



### (EUT: 150Mbps Wireless Lite N USB Adapter)

### 2.6. Test Facility

Site Description

Name of Firm : Audix Technology (Shenzhen) Co., Ltd.

No. 6, Ke Feng Rd., 52 Block, Shenzhen

Science & Industrial Park, Nantou, Shenzhen, Guangdong, China

3m Anechoic Chamber : Mar.31, 2009 File on Federal

Communication Commission Registration Number: 90454

3m & 10m Anechoic Chamber : Dec. 30, 2009 File on Federal

Communication Commission Registration Number: 794232

EMC Lab. : Certificated by Industry Canada

Registration Number: IC 5183A-1

Jul. 03, 2009

: Accredited by DATech, German

Registration Number: DAT-P-091/99-01

Feb. 02, 2009

Accredited by NVLAP, USA

NVLAP Code: 200372-0

Apr. 01, 2010



# 2.7. Measurement Uncertainty (95% confidence levels, k=2)

Test Item	Uncertainty
Uncertainty for Conduction emission test	3.64 dB (9kHz to 150kHz
in No. 1 Conduction	3.22 dB(150kHz to 30MHz)
Uncertainty for Radiation Emission test	4.20 dB (Polarize: V)
in 3m chamber	4.66 dB (Polarize: H)
Uncertainty for Radiated Spurious	2.70 dB(Bilog antenna 30M~1000MHz)
Emission test in RF chamber	2.27 dB(Horn antenna 1000M~12750MHz)
Uncertainty for Conduction Spurious emission test	2.12 dB
Uncertainty for Output power test	0.97 dB
Uncertainty for Power density test	2.21 dB
Uncertainty for Frequency range test	$1x10^{-9}$
Uncertainty for Bandwidth test	$1x10^{-9}$
Uncertainty for DC power test	0.038 %
Uncertainty for test site temperature and	0.3℃
humidity	2%

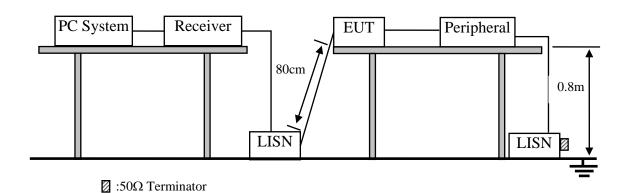


# 3. POWER LINE CONDUCTED EMISSION TEST

## 3.1. Test Equipments

Item	Equipment	Manufacturer	Model No.	Serial No.	Last Cal.	Cal. Interval
1.	Test Receiver	Rohde & Schwarz	ESHS10	838693/001	Dec.18, 09	1 Year
2.	L.I.S.N.#1	Rohde & Schwarz	ESH2-Z5	834066/011	Mar.30, 10	1 Year
3.	Terminator	Hubersuhner	50Ω	No. 1	May.08, 10	1 Year
4.	RF Cable	Fujikura	3D-2W	LISN Cable 1#	May.08, 10	1Year
5.	Coaxial Switch	Anritsu	MP59B	M55367	May.08, 10	1 Year
6.	Passive Probe	Rohde & Schwarz	ESH2-Z3	299.7810.52	May.08, 10	1 Year
7.	Pulse Limiter	Rohde & Schwarz	ESH3-Z2	100341	May.08, 10	1 Year

## 3.2.Block Diagram of Test Setup



### 3.3. Power Line Conducted Emission Test Limits

	Maximum RF Line Voltage		
Frequency	Quasi-Peak Level	Average Level	
	$dB(\mu V)$	$dB(\mu V)$	
150kHz ~ 500kHz	66 ~ 56*	56 ~ 46*	
500kHz ~ 5MHz	56	46	
5MHz ~ 30MHz	60	50	

Notes: 1. \* Decreasing linearly with logarithm of frequency.

2. The lower limit shall apply at the transition frequencies.

### 3.4. Configuration of EUT on Test

The following equipment are installed on Power Line Conducted Emission Test to meet the commission requirement and operating regulations in a manner which tends to maximize its emission characteristics in a normal application.

3.4.1.150Mbps Wireless Lite N USB Adapter (EUT)

Model Number : AK093 Serial Number : N/A

3.4.2. Support Equipment: As Tested Supporting System Details, in Section 2.3.

### 3.5. Operating Condition of EUT

- 3.5.1. Setup the EUT and simulator as shown as Section 2.4.
- 3.5.2. Turned on the power of all equipment.
- 3.5.3.PC run test software to control EUT work in Tx mode.

### 3.6.Test Procedure

The EUT was placed on a non-metallic table, 80cm above the ground plane. The EUT Power Via Notebook connected to the power mains through a line impedance stabilization network (L.I.S.N. 1#). This provides a 50 ohm coupling impedance for the EUT (Please refer the block diagram of the test setup and photographs). The AC line are checked to find out the maximum conducted emission. In order to find the maximum emission levels, the relative positions of equipment and all of the interface cables shall be changed according to ANSI C63.10: 2009 on Conducted Emission Test.

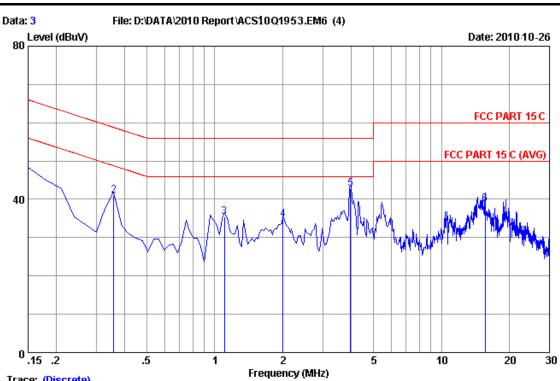
The bandwidth of test receiver (R & S ESHS10) is set at 10kHz.

The frequency range from 150kHz to 30MHz is checked.

### 3.7. Power Line Conducted Emission Test Results

**PASS.** (All emissions not reported below are too low against the prescribed limits.)

IC: 9323A-AK093 *page* 3-3 FCC ID:YTXAK093



Trace: (Discrete)

Site no :Audix No.1 Conduction Data no :3

:\*\* 2009 KNW407 VA Dis./Ant.

:FCC PART 15 C Limit

Env./Ins. :Temp:23'C Humi:54% Engineer : Paul Tian

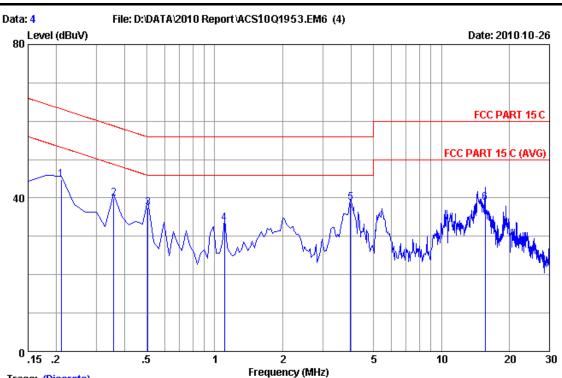
:150Mbps Wireless Lite N USB Adapter Power Rating :DC 5V From PC Input AC 120V/60Hz

Test Mode : Tx Mode : AK093 M/N

No	Freq (MHz)	LISN Factor (dB)	Cable Loss (dB)	Reading (dBuV)	Emission Level (dBuV)	Limits (dBuV)	Margin (dB)	Remark
1	0.15000	0.20	9.88	37.17	47.25	66.00	18.75	QP
2	0.35895	0.20	9.89	30.85	40.94	58.75	17.81	QP
3	1.105	0.19	9.89	25.38	35.46	56.00	20.54	QP
4	2.001	0.21	9.90	24.62	34.73	56.00	21.27	QP
5	3.971	0.27	9.91	32.58	42.76	56.00	13.24	QP
6	15.612	0.34	9.97	28.45	38.76	60.00	21.24	QP

Remarks: 1.Emission Level=LISN Factor+Cable Loss(Include 10dB pulse limit)+Reading 2. If the average limit is met when useing a quasi-peak detector. the EUT shall be deemed to meet both limits and measurement with average detector is unnecessary.

IC: 9323A-AK093 FCC ID:YTXAK093 page 3-4



Trace: (Discrete)

Site no :Audix No.1 Conduction Data no :4

Dis./Ant. :\*\* 2009 KNW407 VB

Limit :FCC PART 15 C

Env./Ins. :Temp:23'C Humi:54% Engineer : Paul Tian

:150Mbps Wireless Lite N USB Adapter Power Rating :DC 5V From PC Input AC 120V/60Hz

:Tx Mode Test Mode M/N:AK093

No	Freq (MHz)	LISN Factor (dB)	Cable Loss (dB)	Reading (dBuV)	Emission Level (dBuV)	Limits (dBuV)	Margin (dB)	Remark
1	0.20970	0.20	9.88	34.60	44.68	63.22	18.54	QP
2	0.35895	0.20	9.89	29.85	39.94	58.75	18.81	QP
3	0.50820	0.20	9.89	27.29	37.38	56.00	18.62	QP
4	1.105	0.19	9.89	23.38	33.46	56.00	22.54	QP
5	3.971	0.27	9.91	28.58	38.76	56.00	17.24	QP
6	15.612	0.34	9.97	28.45	38.76	60.00	21.24	QP

Remarks: 1.Emission Level=LISN Factor+Cable Loss(Include 10dB pulse limit)+Reading 2.If the average limit is met when useing a quasi-peak detector. the EUT shall be deemed to meet both limits and measurement with average detector is unnecessary.



## 4. RADIATED EMISSION TEST

## 4.1.Test Equipment

Frequency rang: 30~1000MHz

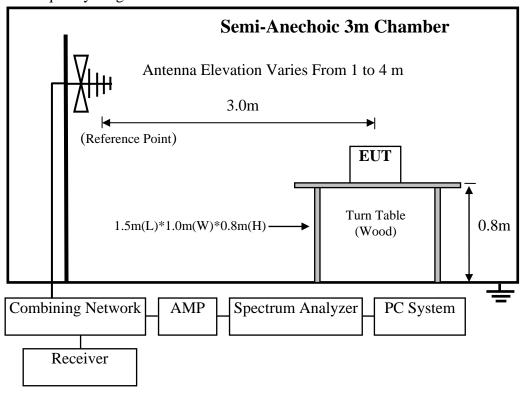
Item	Equipment	Manufacturer	Model No.	Serial No.	Last Cal.	Cal. Interval
1	3#Chamber	AUDIX	N/A	N/A	Dec.05,09	1 Year
2	EMI Spectrum	Agilent	E4407B	MY41440292	May.08, 10	1 Year
3	Test Receiver	Rohde & Schwarz	ESVS10	834468/011	May.08, 10	1 Year
4	Amplifier	HP	8447D	2648A04738	May.08, 10	1 Year
5	Bilog Antenna	Schaffner	CBL6111C	2598	Dec.14, 09	1 Year
6	RF Cable	MIYAZAKI	8D-FB	3# Chamber No.1	May.08, 10	1 Year
7	Coaxial Switch	Anritsu	MP59B	M73989	May.08, 10	1 Year

Frequency rang: above 1000MHz

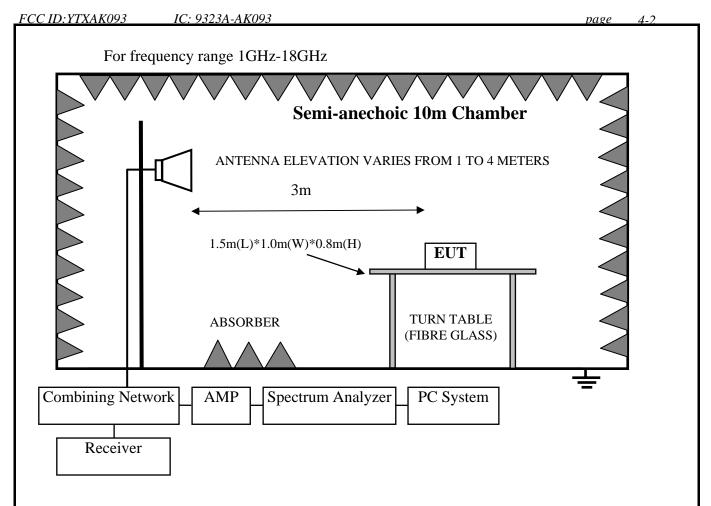
Item	Equipment	Manufacturer	Model No.	Serial No.	Last Cal.	Cal. Interval
1	Spectrum Analyzer	Agilent	E4446A	US44300459	May.08, 10	1 Year
2	Horn Antenna	EMCO	3115	9607-4877	Nov.25, 09	1.5 Year
3	Horn Antenna	EMCO	3116	00060089	Nov.25, 09	1.5 Year
4	Amplifier	Agilent	8449B	3008A00863	May.08, 10	1 Year
5	RF Cable	Hubersuhner	SUCOFLEX102	28620/2	May.08, 10	1 Year
6	RF Cable	Hubersuhner	SUCOFLEX102	29091/2	May.08, 10	1 Year

## 4.2.Block Diagram of Test Setup

For frequency range 30MHz-1000MHz







### 4.3. Radiated Emission Limit

#### 4.3.1.15.209 limits

FREQUENCY	DISTANCE	FIELD STREM	NGTHS LIMIT	
MHz	Meters	$\mu V/m$	$dB(\mu V)/m$	
30 ~ 88	3	100	40.0	
88 ~ 216	3	150	43.5	
216 ~ 960	3	200	46.0	
960 ~ 1000	3	500	54.0	
Above 1000	3	74.0 dB(μV)/m (Peak)		
		54.0 dB(μV	V)/m (Average)	

Remark : (1) Emission level  $dB\mu V = 20 \log Emission level \mu V/m$ 

- (2) The smaller limit shall apply at the cross point between two frequency bands.
- (3) Distance is the distance in meters between the measuring instrument, antenna and the closest point of any part of the device or system.



#### 4.3.2.15.205 Restricted bands of operation

MHz	MHz	MHz	GHz
0.090 - 0.110	16.42 - 16.423	399.9 - 410	4.5 - 5.15
<sup>1</sup> 0.495 - 0.505	16.69475 - 16.69525	608 - 614	5.35 - 5.46
2.1735 - 2.1905	16.80425 - 16.80475	960 - 1240	7.25 - 7.75
4.125 - 4.128	25.5 - 25.67	1300 - 1427	8.025 - 8.5
4.17725 - 4.17775	37.5 - 38.25	1435 - 1626.5	9.0 - 9.2
4.20725 - 4.20775	73 - 74.6	1645.5 - 1646.5	9.3 - 9.5
6.215 - 6.218	74.8 - 75.2	1660 - 1710	10.6 - 12.7
6.26775 - 6.26825	108 - 121.94	1718.8 - 1722.2	13.25 - 13.4
6.31175 - 6.31225	123 - 138	2200 - 2300	14.47 - 14.5
8.291 - 8.294	149.9 - 150.05	2310 - 2390	15.35 - 16.2
8.362 - 8.366	156.52475 - 156.52525	2483.5 - 2500	17.7 - 21.4
8.37625 - 8.38675	156.7 - 156.9	2690 - 2900	22.01 - 23.12
8.41425 - 8.41475	162.0125 - 167.17	3260 - 3267	23.6 - 24.0
12.29 - 12.293	167.72 - 173.2	3332 - 3339	31.2 - 31.8
12.51975 - 12.52025	240 - 285	3345.8 - 3358	36.43 - 36.5
12.57675 - 12.57725	322 - 335.4	3600 - 4400	( <sup>2</sup> )

All the emissions appearing within 15.205 restricted frequency bands shall not exceed the limits shown in 15.209, all the other emissions shall be at least 20dB below the fundamental emissions, or comply with 15.209 limits.

### 4.4.EUT Configuration on Test

The configurations of EUT are listed in Section 3.5.

### 4.5. Operating Condition of EUT

Same as Conducted Emission test that is listed in Section 3.6. except the test set up replaced by Section 4.2.

#### 4.6. Test Procedure

EUT and its simulators are placed on a turn table, which is 0.8 meter high above ground. The turn table can rotate 360 degrees to determine the position of the maximum emission level. Power on the EUT and let it working in test mode, then test it. EUT is set 3 meters away from the receiving antenna, which is mounted on a antenna tower. The antenna can be moved up and down between 1 meter and 4 meters to find out the maximum emission level. Broadband antenna (calibrated bilog antenna) is used as receiving antenna. Both horizontal and vertical polarization of the antenna are set on test.

The bandwidth of the EMI test receiver (R&S ESVS10) is set at 120kHz for frequency range from 30MHz to 1000 MHz.

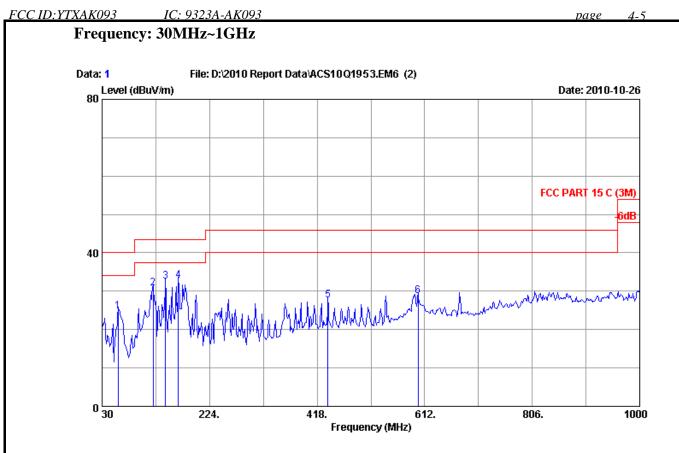
The bandwidth of the Spectrum's VBW is set at 3MHz and RBW is set at 1MHz for peak emissions measurement above 1GHz and 1MHz RBW, 10Hz VBW for average emissions measure above 1GHz

The frequency range from 30MHz to 10<sup>th</sup> harmonic (25GHz) are checked. and no any emissions were found from 18GHz to 25 GHz, So the radiated emissions from 18GHz to 25GHz were not record.



FCC ID:YTXAKO	093	IC: 9323A-AK093	page	4-4
4.7	.Radiated	l Emission Test Results		
	PASS.			
	All the en	nissions from 30MHz to 25 GHz were comply with 15.209 limit	s.	
	Note: For average le	e emissions above 1GHz, if peak level comply with average vel is deemed to comply with average limit.	e limit,	then the





Site no. : 3m Chamber Data no. : 1

Dis. / Ant. : 3m CBL6111C Ant. pol. : HORIZONTAL

Limit : FCC PART 15 C (3M) Env. / Ins. : 24\*C/56%

Engineer : Paul Tian

: 150Mbps Wireless Lite N USB Adapter Power Rating : DC 5V from PC input AC 120V/60Hz

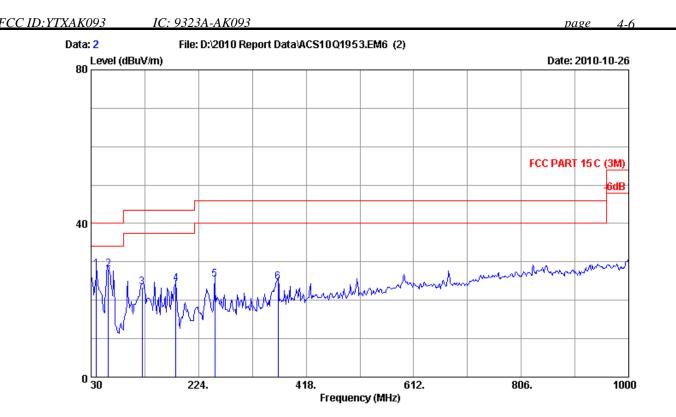
Test Mode : Tx Mode M/N : AKO93

_	No.	Freq. (MHz)	Ant. Factor (dB/m)	Cable Loss (dB)	Reading (dBuV)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
	1	59.100	6.10	0.52	18.12	24.74	40.00	15.26	QP
	2	122.150	11.87	0.84	18.12	30.83	43.50	12.67	QP
	3	144.460	11.78	0.94	19.72	32.44	43.50	11.06	QP
	4	167.740	10.33	0.97	21.37	32.67	43.50	10.83	QP
	5	437.400	16.90	1.97	8.69	27.56	46.00	18.44	QP
	6	600.360	19.47	2.44	6.75	28.66	46.00	17.34	QP

Remarks: 1. Emission Level= Antenna Factor + Cable Loss + Reading.

2. The emission levels that are 20dB below the official limit are not reported.





Site no. : 3m Chamber Data no. : 2 Ant. pol. : VERTICAL Dis. / Ant. : 3m CBL6111C

: FCC PART 15 C (3M) Limit

Env. / Ins. : 24\*C/56% Engineer : Paul Tian

: 150Mbps Wireless Lite N USB Adapter Power Rating : DC 5V from PC input AC 120V/60Hz

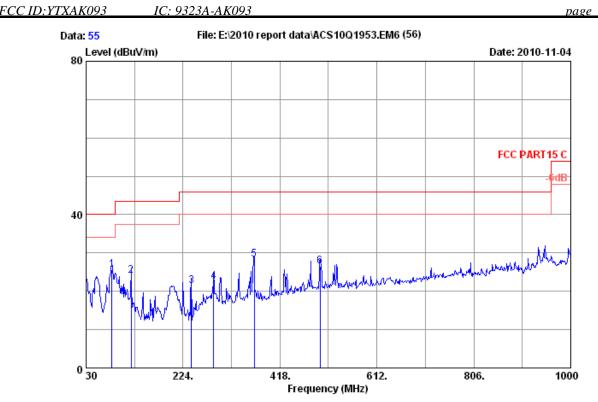
Test Mode : Tx Mode M/N: AKO93

No.	Freq. (MHz)	Ant. Factor (dB/m)	Cable Loss (dB)	Reading (dBuV)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	39.700	14.41	0.35	13.24	28.00	40.00	12.00	QP
2	61.040	5.90	0.50	21.63	28.03	40.00	11.97	QP
3	122.150	11.87	0.84	10.58	23.29	43.50	20.21	QP
4	183.260	9.37	1.07	13.85	24.29	43.50	19.21	QP
5	253.100	12.96	1.48	11.01	25.45	46.00	20.55	QP
6	367.560	15.41	1.78	7.66	24.85	46.00	21.15	QP

Remarks: 1. Emission Level= Antenna Factor + Cable Loss + Reading.

2. The emission levels that are 20dB below the official limit are not reported.





Site no. : 3m Chamber Data no. : 55

Dis. / Ant. : 3m 2768(200912) Ant. pol. : HORIZONTAL

Limit : FCC PART15 C

Env. / Ins. : 23\*C/54% Engineer : Paul Tian

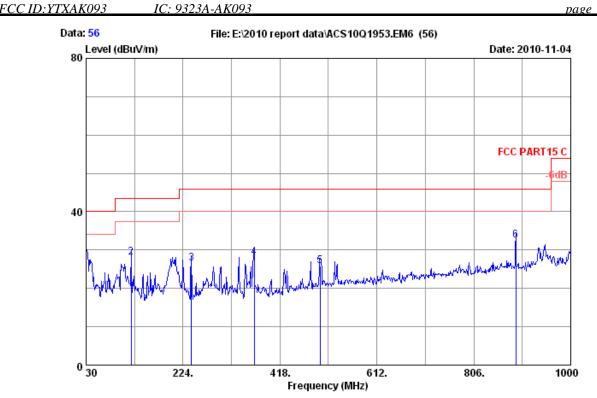
EUT : 150Mbps Wireless lite N USB Adapter Power Rating : DC 5V From PC input AC 120V/60Hz

Test mode : Rx Mode M/N : AK093

	Freq. (MHz)	Ant. Factor (dB/m)	Cable Loss (dB)	Reading (dBuV)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	81.410	7.80	1.38	16.42	25.60	40.00	14.40	QP
2	120.210	11.80	1.64	10.66	24.10	43.50	19.40	QP
3	240.490	11.70	2.29	7.33	21.32	46.00	24.68	QP
4	285.110	13.40	2.50	6.57	22.47	46.00	23.53	QP
5	366.590	15.53	2.83	9.85	28.21	46.00	17.79	QP
6	498.510	18.17	3.28	5.04	26.49	46.00	19.51	QP

- 1. Emission Level= Antenna Factor + Cable Loss + Reading.
- 2. The emission levels that are 20dB below the official limit are not reported.





Site no. : 3m Chamber Data no. : 56

Dis. / Ant. : 3m 2768(200912) Ant. pol. : HORIZONTAL

Limit : FCC PART15 C

Env. / Ins. : 23\*C/54% Engineer : Paul Tian

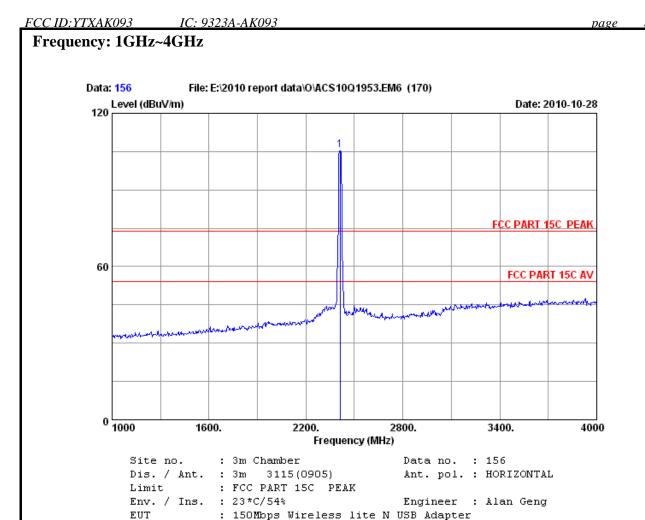
EUT : 150Mbps Wireless lite N USB Adapter Power Rating : DC 5V From PC input AC 120V/60Hz

Test mode : Rx Mode M/N : AK093

	Freq.	Ant. Factor (dB/m)	Cable Loss (dB)	Reading (dBuV)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	30.000	19.80	0.81	7.74	28.35	40.00	11.65	QP
2	120.210	11.80	1.64	14.62	28.06	43.50	15.44	QP
3	240.490	11.70	2.29	12.42	26.41	46.00	19.59	QP
4	366.590	15.53	2.83	9.65	28.01	46.00	17.99	QP
5	498.510	18.17	3.28	4.48	25.93	46.00	20.07	QP
6	890.390	22.80	4.41	5.31	32.52	46.00	13.48	QP

- 1. Emission Level= Antenna Factor + Cable Loss + Reading.
- 2. The emission levels that are 20dB below the official limit are not reported.





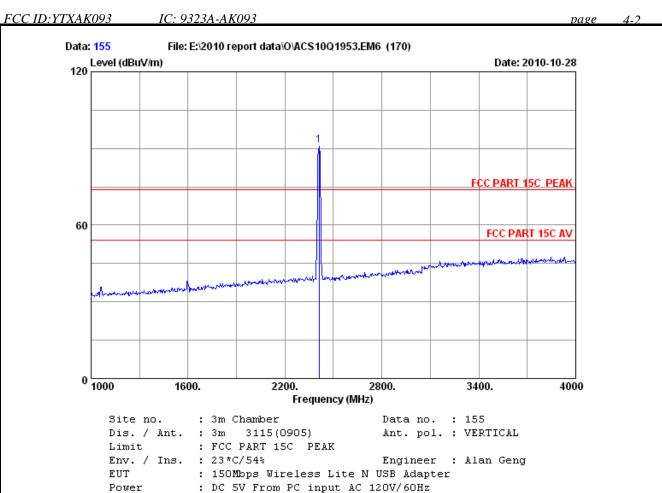
: DC 5V From PC input AC 120V/60Hz Test mode : IEEE802.11b CH1 2412MHz

: AK093

		Ant.	Cable	Amp.		Emissio:	n			
	Freq.	Factor	loss	Factor	Reading	Level	Limits	Margin	Remark	
	(MHz)	(dB/m)	(dB)	(dB)	(dbuv)	(dBuV/m)	(dBuV/m	) (dB)		
L	2412.000	28.48	8.60	35.95	104.49	105.62	74.00	-31.62	Peak	

\_\_\_\_\_\_

- 1. Emission Level= Antenna Factor + Cable Loss -Amp Factor + Reading.
- 2. The emission levels that are 20dB below the official limit are not reported.

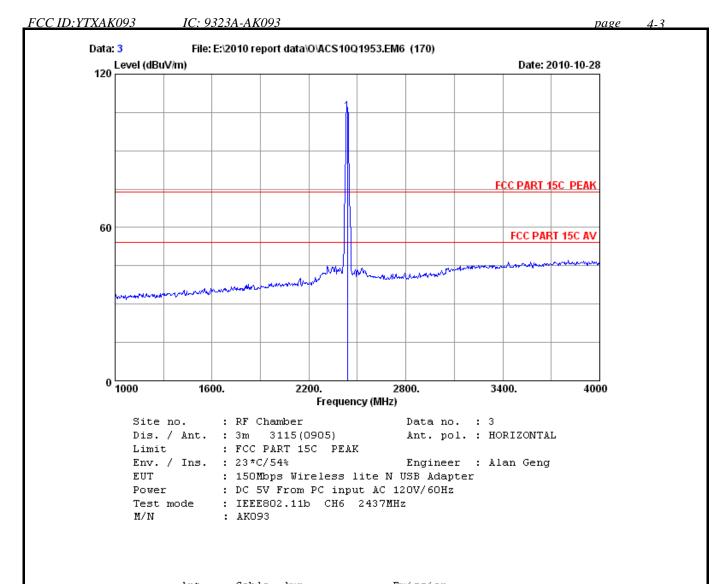


Test mode : IEEE802.11b CH1 2412MHz

M/N : AK093

		Ant.	Cable	Amp.		Emission			
	Freq.	Factor	loss	Factor	Reading	Level	Limits	Margin	Remark
	(MHz)	(dB/m)	(dB)	(dB)	(dbuv)	(dBuV/m)	(dBuV/m)	(dB)	
1	2412.000	28.48	8.60	35.95	90.19	91.32	74.00	-17.32	Peak

- 1. Emission Level= Antenna Factor + Cable Loss -Amp Factor + Reading.
- 2. The emission levels that are 20dB below the official limit are not reported.

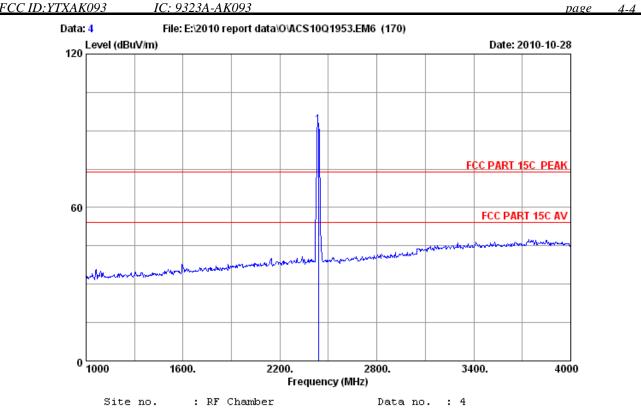


	-		loss	Factor	Reading (dbuv)		Limits	_	Remark	
L	2437.000	28.53	8.60	36.06	104.37	105.44	74.00	-31.44	Peak	_

#### Remarks

1

- 1. Emission Level= Antenna Factor + Cable Loss Amp Factor + Reading.
- 2. The emission levels that are 20dB below the official limit are not reported.



Ant. pol. : VERTICAL Dis. / Ant. : 3m 3115(0905)

Limit : FCC PART 15C PEAK

Env. / Ins. : 23\*C/54% Engineer : Alan Geng

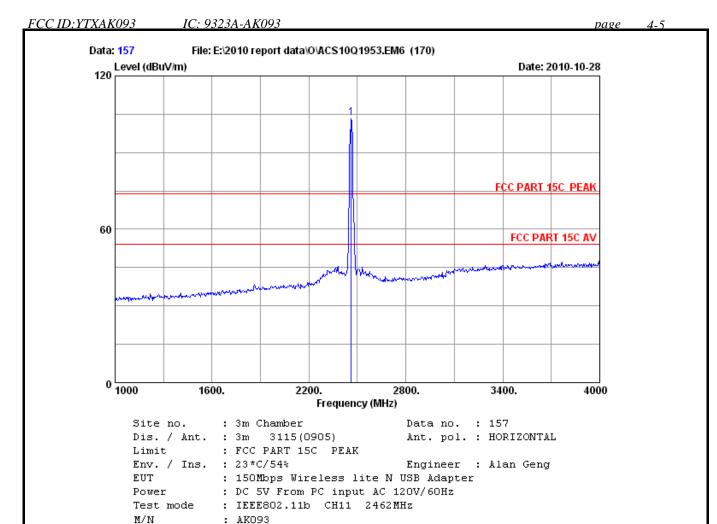
: 150Mbps Wireless lite N USB Adapter EUT : DC 5V From PC input AC 120V/60Hz Power

Test mode : IEEE802.11b CH6 2437MHz

M/N : AKO93

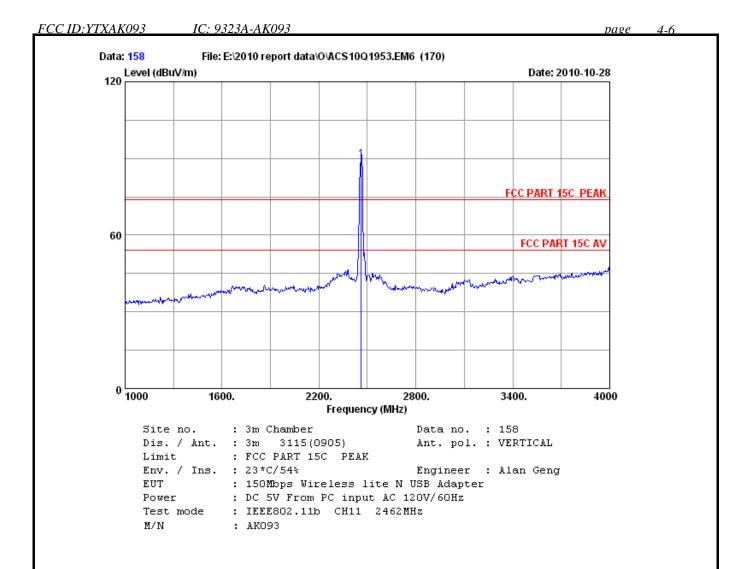
	Ant.	Cable	Amp.		Emissio:	n		
Freq.	Factor	loss	Factor	Reading	Level	Limits	Margin	Remark
(MHz)	(dB/m)	(dB)	(dB)	(dbuv)	(dBuV/m)	(dBuV/m)	(dB)	
2437.000	28.53	8.60	36.06	91.28	92.35	74.00	-18.35	Peak

- 1. Emission Level= Antenna Factor + Cable Loss -Amp Factor + Reading.
- 2. The emission levels that are 20dB below the official limit are not reported.



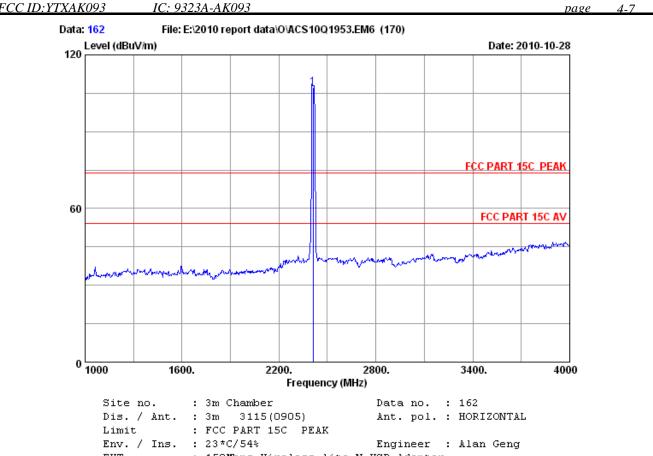
	Ant. Ca		Cable Amp.		Emission				
	Freq.	Factor	loss	Factor	Reading	Level	Limits	Margin	Remark
	(MHz)	(dB/m)	(dB)	(dB)	(dbuv)	(dBuV/m)	(dBuV/m	) (dB)	
1	2462.000	28.55	8.76	36.02	102.36	103.65	74.00	-29.65	Peak

- 1. Emission Level= Antenna Factor + Cable Loss -Amp Factor + Reading.
- 2. The emission levels that are 20dB below the official limit are not reported.



	Freq. Factor			Amp. Factor		Emissio: Level		Margin Remark		
	(MHz)	(dB/m) 	(dB)	(dB)	(dbuv)	(dBuV/m)	(dBuV/m	) (dB) 		
1	2462.000	28.55	8.76	36.02	88.18	89.47	74.00	-15.47	Peak	

- 1. Emission Level= Antenna Factor + Cable Loss -Amp Factor + Reading.
- 2. The emission levels that are 20dB below the official limit are not reported.



Engineer : Alan Geng

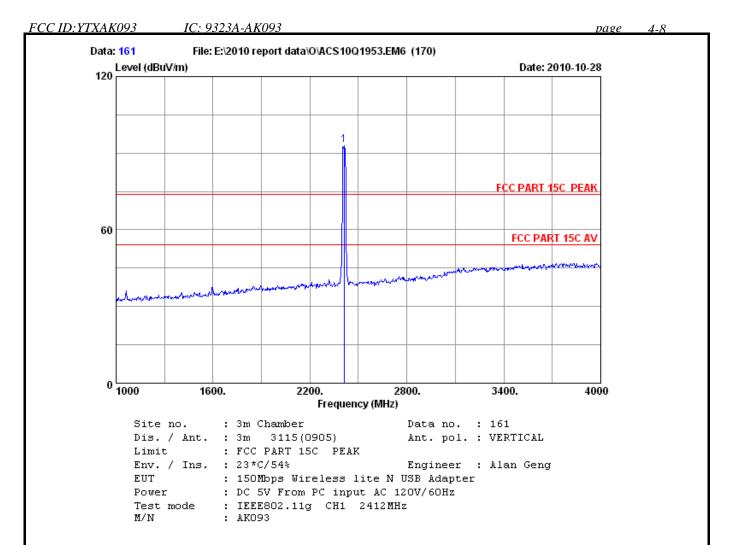
: 150Mbps Wireless lite N USB Adapter : DC 5V From PC input AC 120V/60Hz Power

Test mode : IEEE802.11g CH1 2412MHz

: AK093 M/N

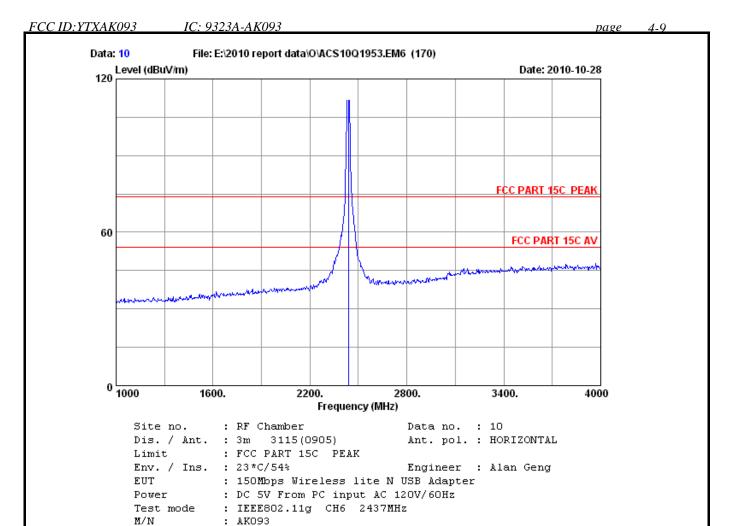
	Ant.	Cable	Amp.		Emissio	n			
Freq.	Factor	loss	Factor	Reading	Level	Limits	Margin	Remark	
(MHz)	(dB/m)	(dB)	(dB)	(dbuv)	(dBuV/m)	(dBuV/m	) (dB)		
2412.000	28.48	8.60	35.95	106.29	107.42	74.00	-33.42	Peak	

- 1. Emission Level= Antenna Factor + Cable Loss -Amp Factor + Reading.
- 2. The emission levels that are 20dB below the official limit are not reported.



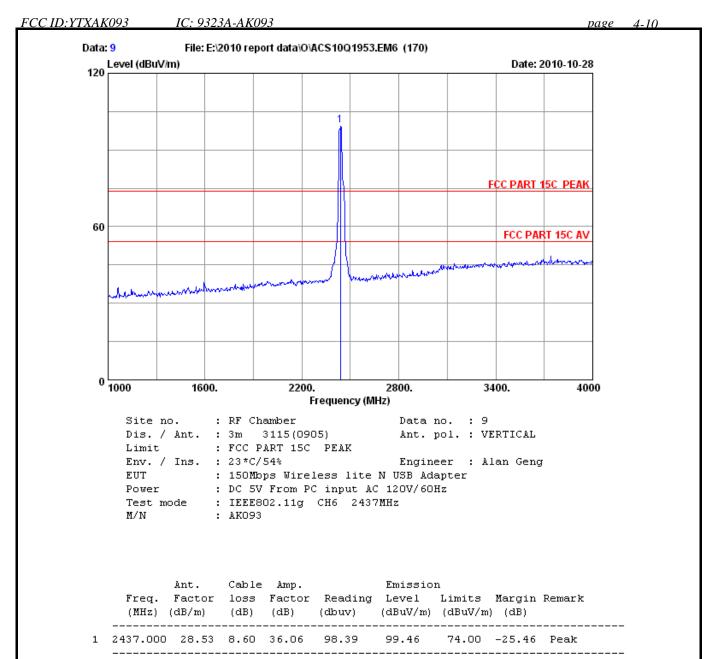
	Ant.	Cable	Amp.		Emission	n			
•				Reading			_	Remark	
(MHz)	(dB/m)	(dB)	(dB)	(dbuv)	(dBuV/m)	(dBuV/m)	(dB)		
412.000	28.48	8.60	35.95	91.99	93.12	74.00 -	-19.12	Peak	

- 1. Emission Level= Antenna Factor + Cable Loss -Amp Factor + Reading.
- 2. The emission levels that are 20dB below the official limit are not reported.

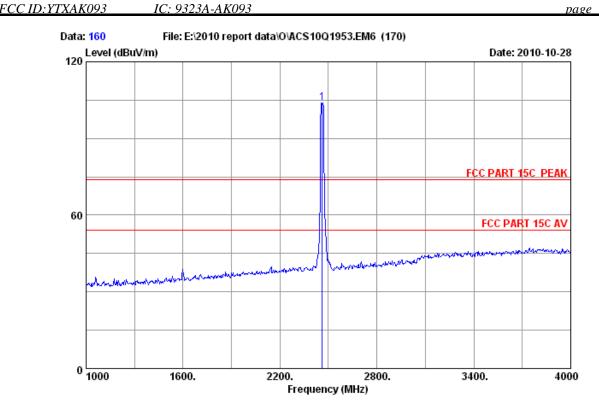


	Ant.	Cable	Amp.		Emissio	n			
Freq.	Factor	loss	Factor	Reading	Level	Limits	Margin	Remark	
(MHz)	(dB/m)	(dB)	(dB)	(dbuv)	(dBuV/m)	(dBuV/m)	(dB)		
2437.000	28.53	8.60	36.06	111.87	112.94	74.00	-38.94	Peak	

- 1. Emission Level= Antenna Factor + Cable Loss Amp Factor + Reading.
- 2. The emission levels that are 20dB below the official limit are not reported.



- 1. Emission Level= Antenna Factor + Cable Loss -Amp Factor + Reading.
- 2. The emission levels that are 20dB below the official limit are not reported.



Site no. : 3m Chamber Data no. : 160

Dis. / Ant. : 3m 3115(0905) Ant. pol. : HORIZONTAL

Limit : FCC PART 15C PEAK

Env. / Ins. : 23\*C/54% Engineer : Alan Geng

EUT : 150Mbps Wireless lite N USB Adapter Power : DC 5V From PC input AC 120V/60Hz

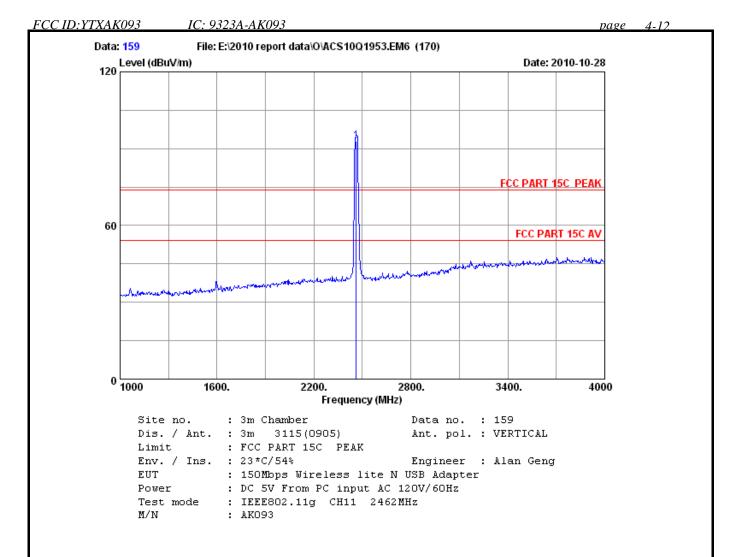
Test mode : IEEE802.11g CH11 2462MHz

M/N : AK093

		Ant.	Cable	Amp.					
	Freq.	Factor	loss	Factor	Reading	Level	Limits	Margin	Remark
	(MHz)	(dB/m)	(dB)	(dB)	(dbuv)	(dBuV/m)	(dBuV/m)	(dB)	
	2462 000	20 55		26 02	102.66	102 05	74 00	20 05	Peak
Т	2402.000	40.33	0.70	30.04	104.00	103.95	74.00 -	-29.95	reak

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- 1. Emission Level= Antenna Factor + Cable Loss -Amp Factor + Reading.
- 2. The emission levels that are 20dB below the official limit are not reported.



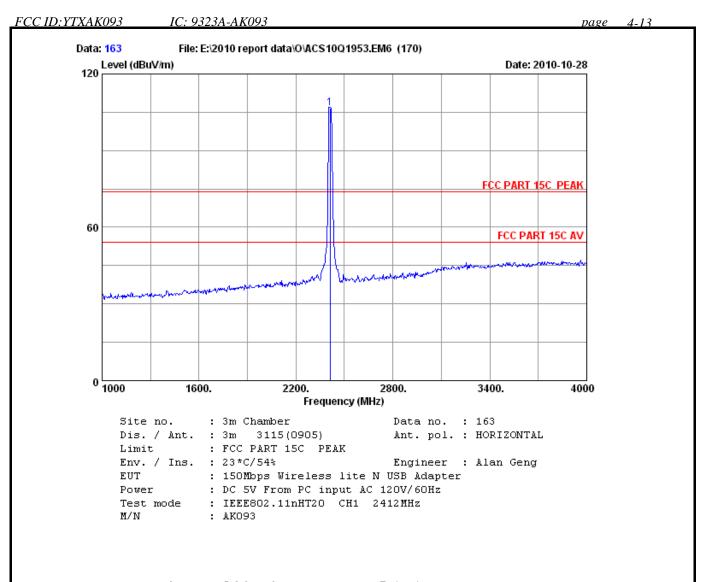
	Ant.	Cable	Amp.		Emission	n		
-				Reading (dbuv)			_	Remark
2462.000	28.55	8.76	36.02	91.59	92.88	74.00	-18.88	Peak

#### Remarks:

1

- 1. Emission Level= Antenna Factor + Cable Loss -Amp Factor + Reading.
- 2. The emission levels that are 20dB below the official limit are not reported.

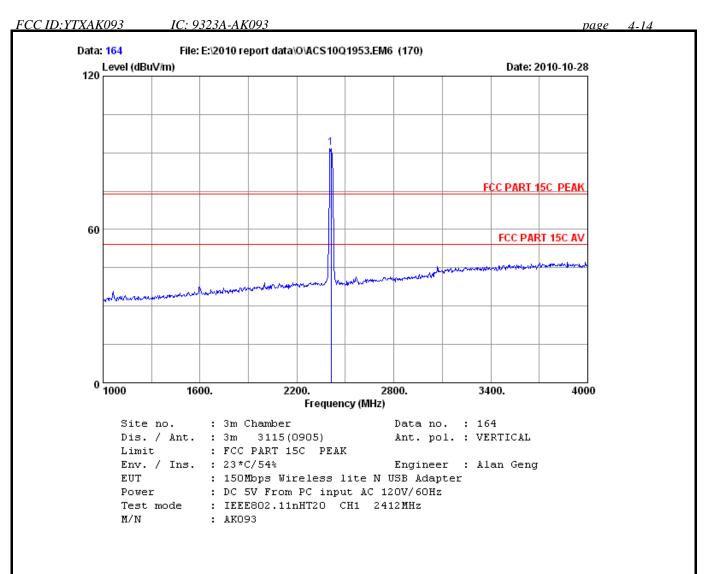




	-		loss	Factor	Reading (dbuv)		Limits	_	Remark
1	2412.000	28.48 	8.60	35.95	105.40	106.53	74.00	 -32.53	Peak

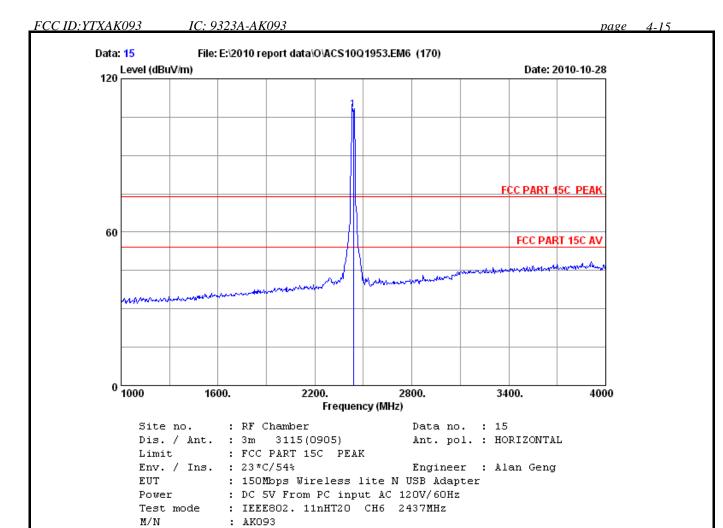
- 1. Emission Level= Antenna Factor + Cable Loss Amp Factor + Reading.
- 2. The emission levels that are 20dB below the official limit are not reported.





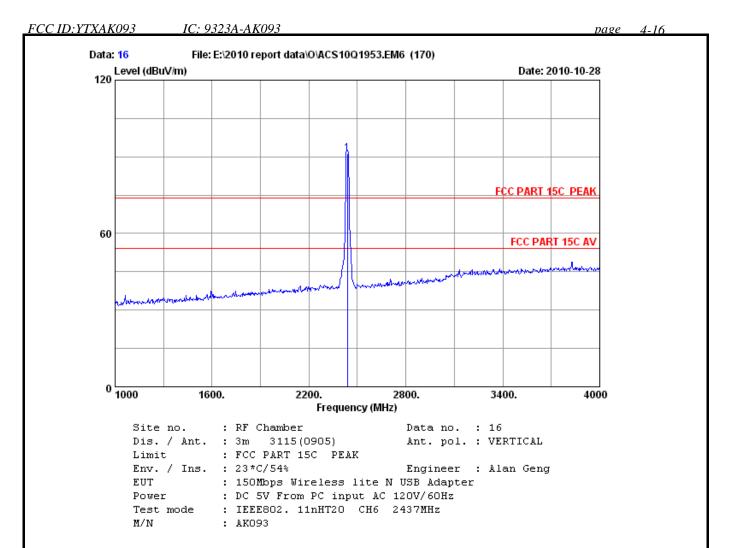
	-		loss	Factor	Reading (dbuv)		Limits	_	Remark	
1	2412.000	28.48	8.60	35.95	90.78	91.91	74.00	-17.91	Peak	

- 1. Emission Level= Antenna Factor + Cable Loss Amp Factor + Reading.
- 2. The emission levels that are 20dB below the official limit are not reported.



		Ant.	Cable Amp. loss Factor			Emission	n		
	-				_			_	Remark
	(MHZ)	(ab/m) 	(aB) 	(aв) 	(dbuv)	(aBuv/m)	(aBuv/m) 	(aB)	
1	2437.000	28.53	8.60	36.06	106.82	107.89	74.00	-33.89	Peak

- 1. Emission Level= Antenna Factor + Cable Loss -Amp Factor + Reading.
- 2. The emission levels that are 20dB below the official limit are not reported.

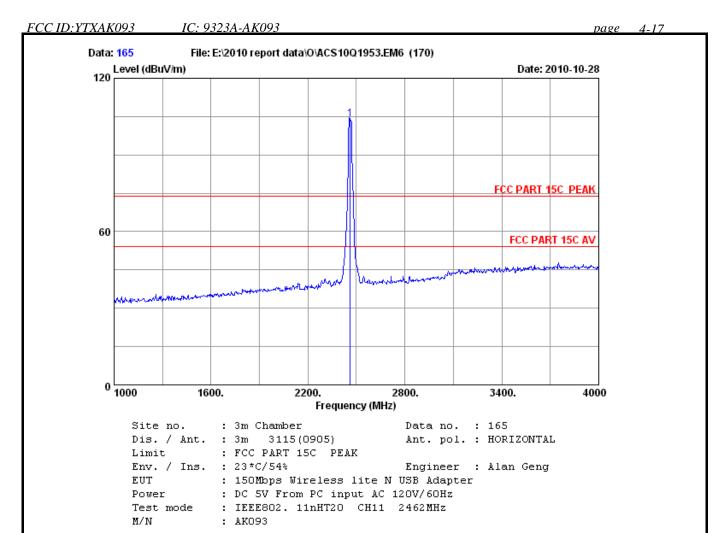


	Ant.	Cable	Amp.		Emissio	n			
Freq.	Factor	loss	Factor	Reading	Level	Limits	Margin	Remark	
(MHz)	(dB/m)	(dB)	(dB)	(dbuv)	(dBuV/m)	(dBuV/m)	(dB)		
2437.000	28.53	8.60	36.06	90.16	91.23	74.00	-17.23	Peak	

#### Remarks

1

- 1. Emission Level= Antenna Factor + Cable Loss Amp Factor + Reading.
- 2. The emission levels that are 20dB below the official limit are not reported.

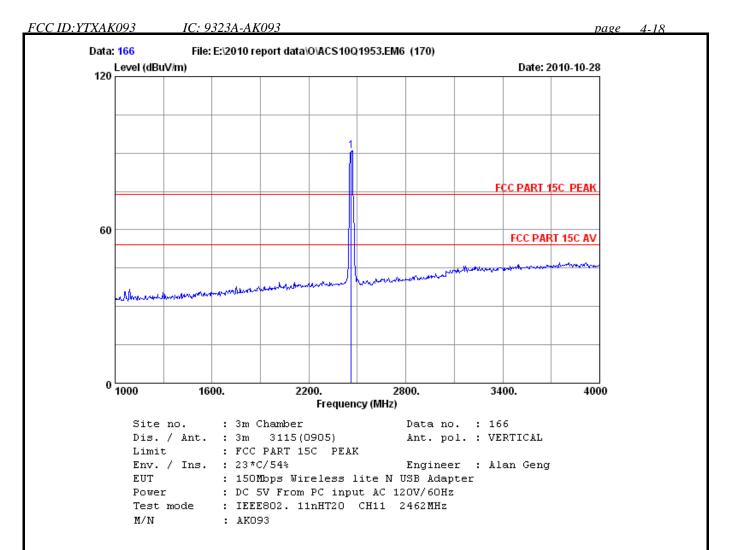


	Ant.	Cable	Amp.					
Freq.	Factor	loss	Factor	Reading	Level	Limits	Margin	Remark
(MHz)	(dB/m)	(dB)	(dB)	(dbuv)	(dBuV/m)	(dBuV/m)	(dB)	
2462.000	28.55	8.76	36.02	102.53	103.82	74.00 -	-29.82	Peak

#### Remarks:

1

- 1. Emission Level= Antenna Factor + Cable Loss -Amp Factor + Reading.
- 2. The emission levels that are 20dB below the official limit are not reported.



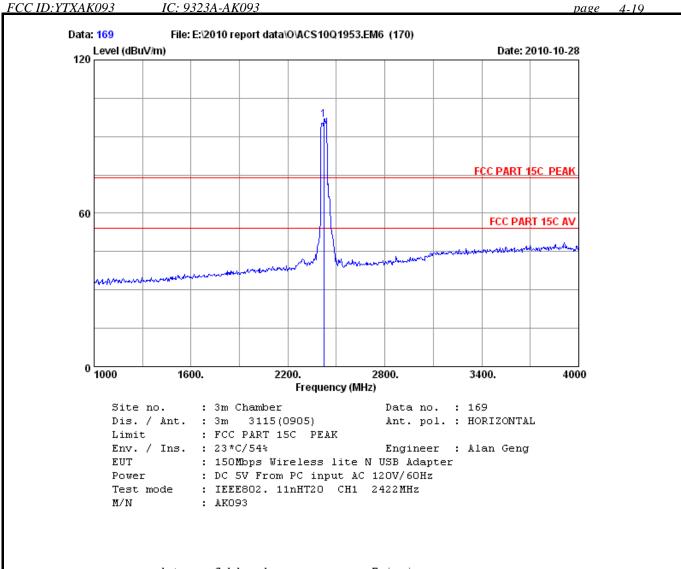
Ant. Cable Amp. Emission

Freq. Factor loss Factor Reading Level Limits Margin Remark

(MHz) (dB/m) (dB) (dB) (dbuv) (dBuV/m) (dBuV/m) (dB)

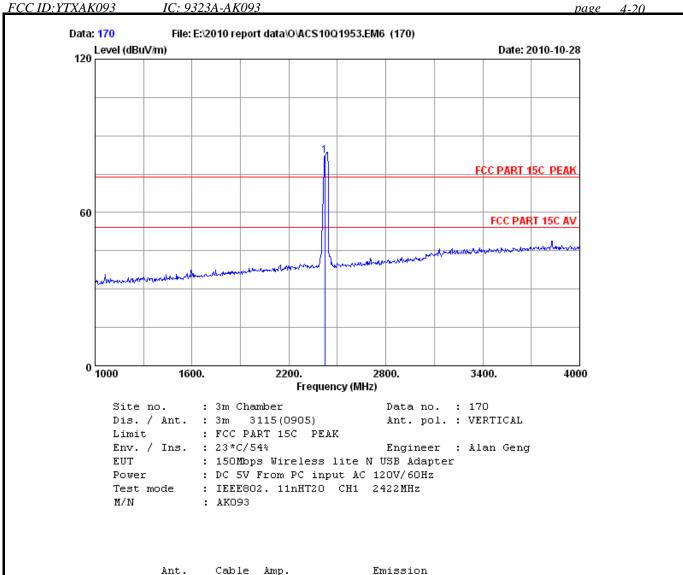
1 2462.000 28.55 8.76 36.02 89.58 90.87 74.00 -16.87 Peak

- 1. Emission Level= Antenna Factor + Cable Loss -Amp Factor + Reading.
- 2. The emission levels that are 20dB below the official limit are not reported.



	-	Factor	loss		Reading (dbuv)		Limits	_	Remark
1	2422.000	28.50	8.60	36.01	95.67	96.76	74.00	 -22.76	Peak

- 1. Emission Level= Antenna Factor + Cable Loss Amp Factor + Reading.
- 2. The emission levels that are 20dB below the official limit are not reported.

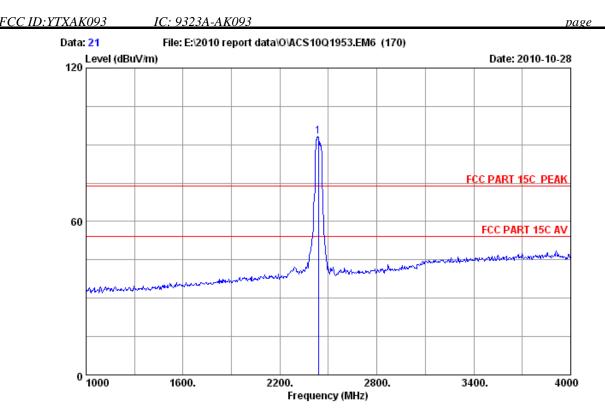


Freq. Factor loss Factor Reading Level Limits Margin Remark

(MHz) (dB/m) (dB) (dB) (dbuv) (dBuV/m) (dBuV/m) (dB)

1 2422.000 28.50 8.60 36.01 81.27 82.36 74.00 -8.36 Peak

- 1. Emission Level= Antenna Factor + Cable Loss -Amp Factor + Reading.
- 2. The emission levels that are 20dB below the official limit are not reported.



Site no. : RF Chamber Data no. : 21

Dis. / Ant. : 3m 3115(0905) Ant. pol. : HORIZONTAL

Limit : FCC PART 15C PEAK

Env. / Ins. : 23\*C/54% Engineer : Alan Geng

EUT : 150Mbps Wireless lite N USB Adapter Power : DC 5V From PC input AC 120V/60Hz Test mode : IEEE802. 11nHT40 CH4 2437MHz

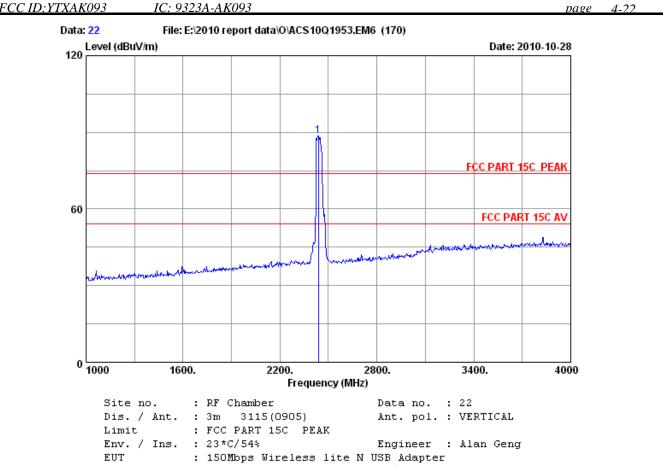
M/N : AK093

Ant. Cable Amp.					Emissio:	n			
Freq.	Factor	loss	Factor	Reading	Level	Limits	Margin	Remark	
(MHz)	(dB/m)	(dB)	(dB)	(dbuv)	(dBuV/m)	(dBuV/m)	(dB)		
2437.000	28.53	8.60	36.06	92.23	93.30	74.00	-19.30	Peak	

#### Remarks:

1

- 1. Emission Level= Antenna Factor + Cable Loss -Amp Factor + Reading.
- 2. The emission levels that are 20dB below the official limit are not reported.

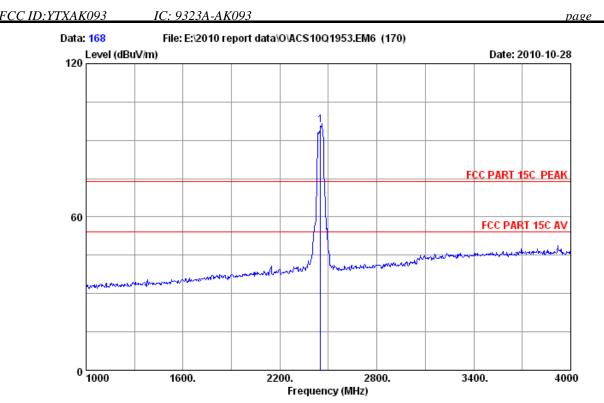


Power : DC 5V From PC input AC 120V/60Hz Test mode : IEEE802. 11nHT40 CH4 2437MHz

M/N : AK093

	Ant.	Cable	Amp.		Emissio	n			
Freq.	Factor	loss	Factor	Reading	Level	Limits	Margin	Remark	
(MHz)	(dB/m)	(dB)	(dB)	(dbuv)	(dBuV/m)	(dBuV/m)	(dB)		
2437.000	28.53	8.60	36.06	87.45	88.52	74.00	-14.52	Peak	-

- 1. Emission Level= Antenna Factor + Cable Loss -Amp Factor + Reading.
- 2. The emission levels that are 20dB below the official limit are not reported.



Site no. : 3m Chamber Data no. : 168

Dis. / Ant. : 3m 3115(0905) Ant. pol. : HORIZONTAL

Limit : FCC PART 15C PEAK

Env. / Ins. : 23\*C/54% Engineer : Alan Geng

EUT : 150Mbps Wireless lite N USB Adapter Power : DC 5V From PC input AC 120V/60Hz Test mode : IEEE802. 11nHT40 CH7 2452MHz

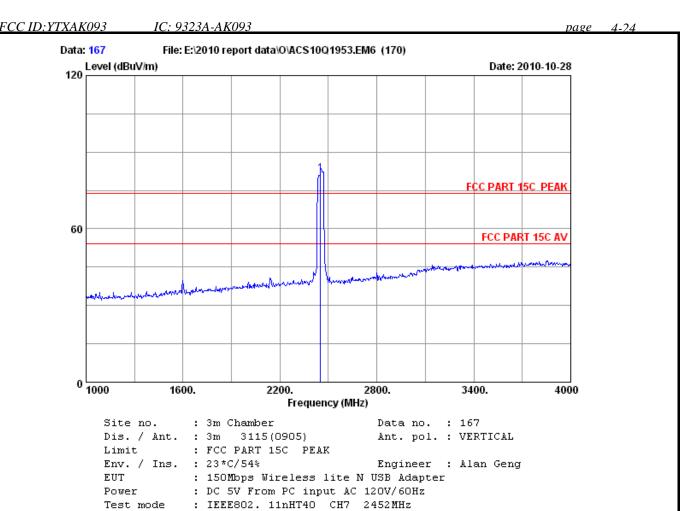
M/N : AK093

	Ant.	Cable	Amp.		Emissio	n		
Freq.	Factor	loss	Factor	Reading	Level	Limits	Margin	Remark
(MHz)	(dB/m)	(dB)	(dB)	(dbuv)	(dBuV/m)	(dBuV/m)	(dB)	
2452.000	28.53	8.48	36.06	95.11	96.06	74.00 -	-22.06	Peak

#### Remarks

1

- 1. Emission Level= Antenna Factor + Cable Loss -Amp Factor + Reading.
- 2. The emission levels that are 20dB below the official limit are not reported.



•		loss	Factor	Reading (dbuv)		Limits	_	Remark
2452.000	28.53	8.48	36.06	80.55	81.50	74.00	-7.50	Peak

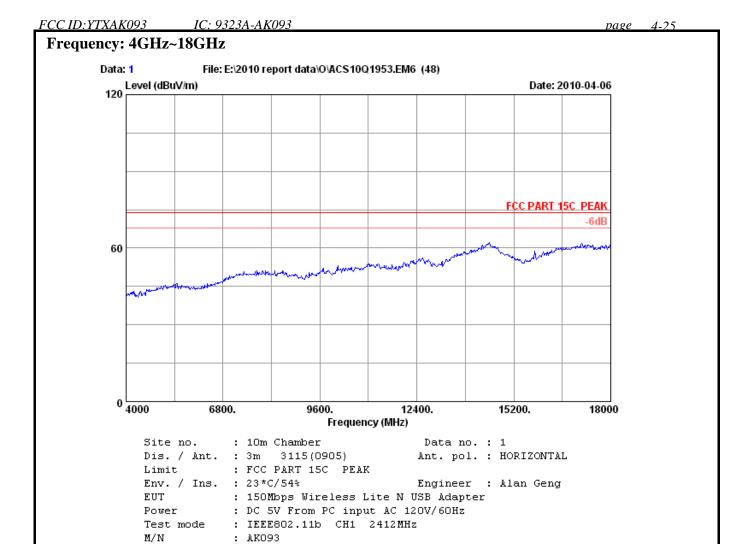
Remarks:

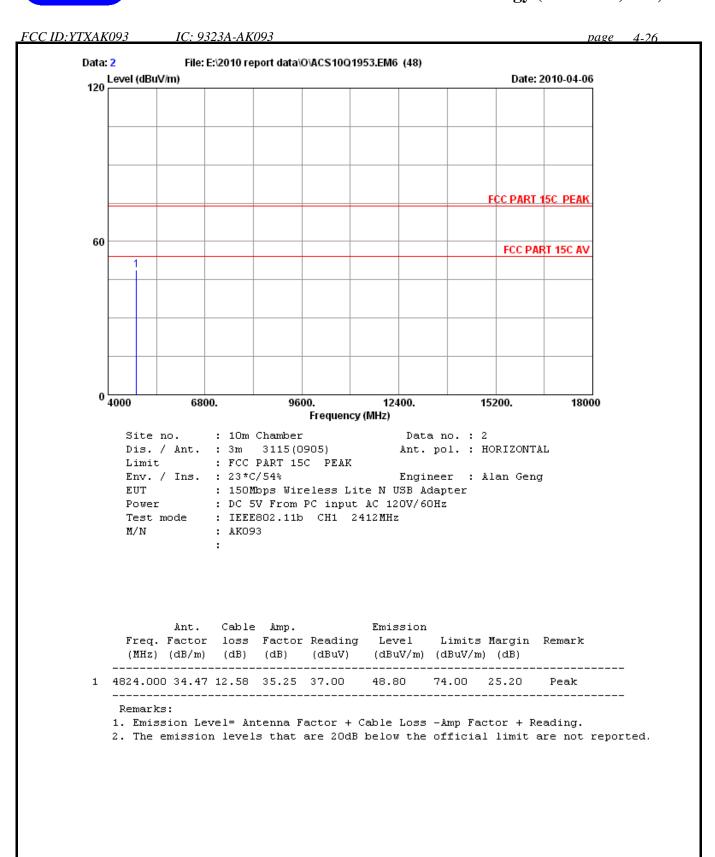
: AKO93

M/N

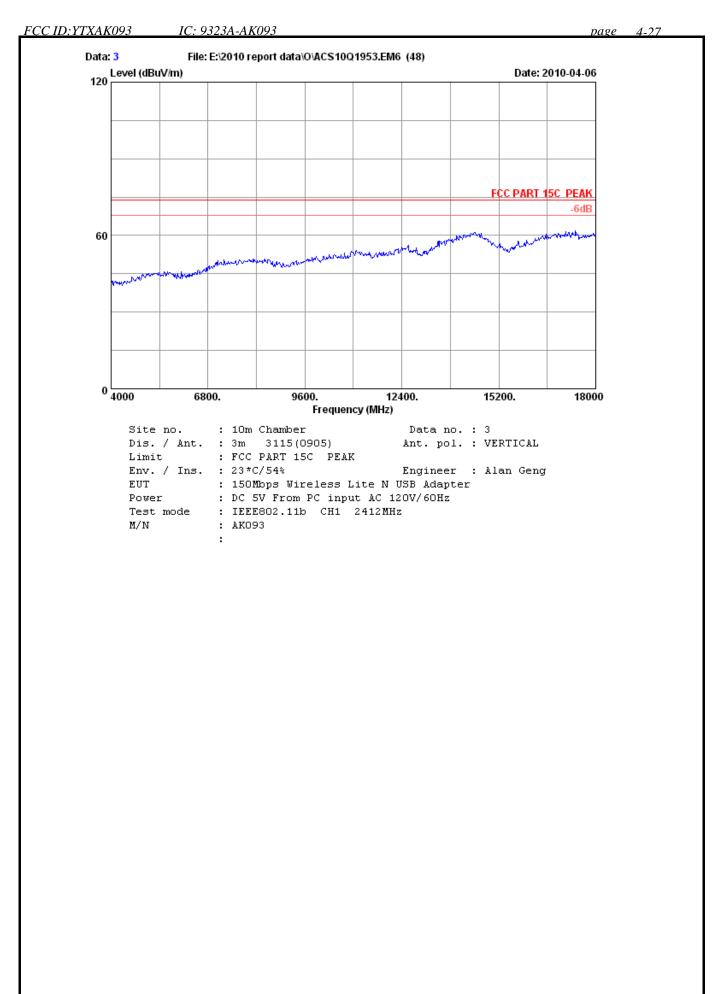
- 1. Emission Level= Antenna Factor + Cable Loss -Amp Factor + Reading.
- 2. The emission levels that are 20dB below the official limit are not reported.

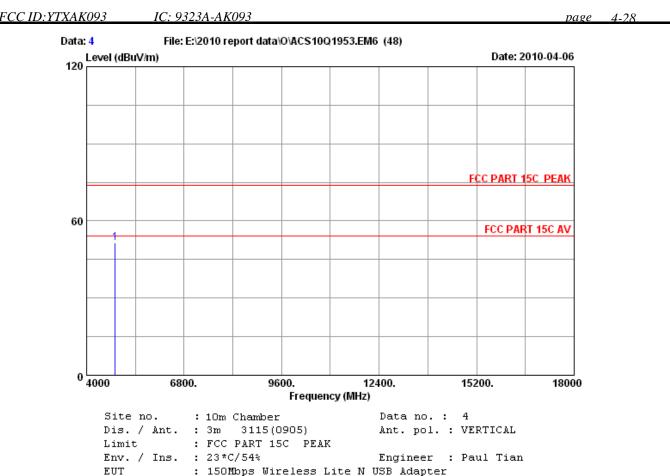












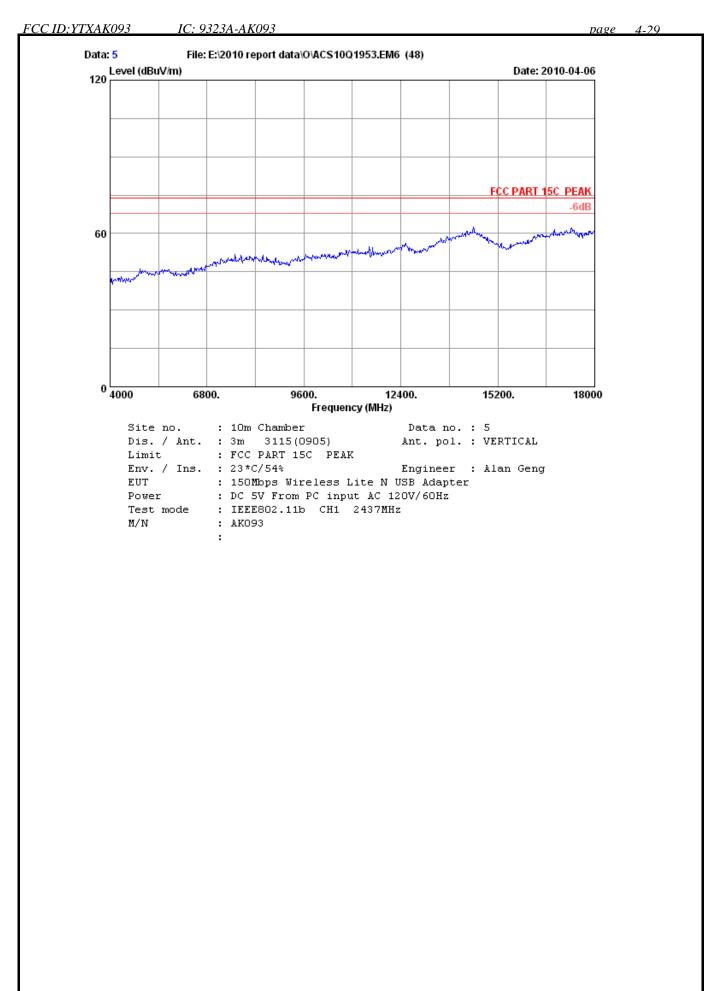
Power : DC 5V From PC input AC 120V/60Hz Test mode : IEEE802.11b CH1 2412MHz

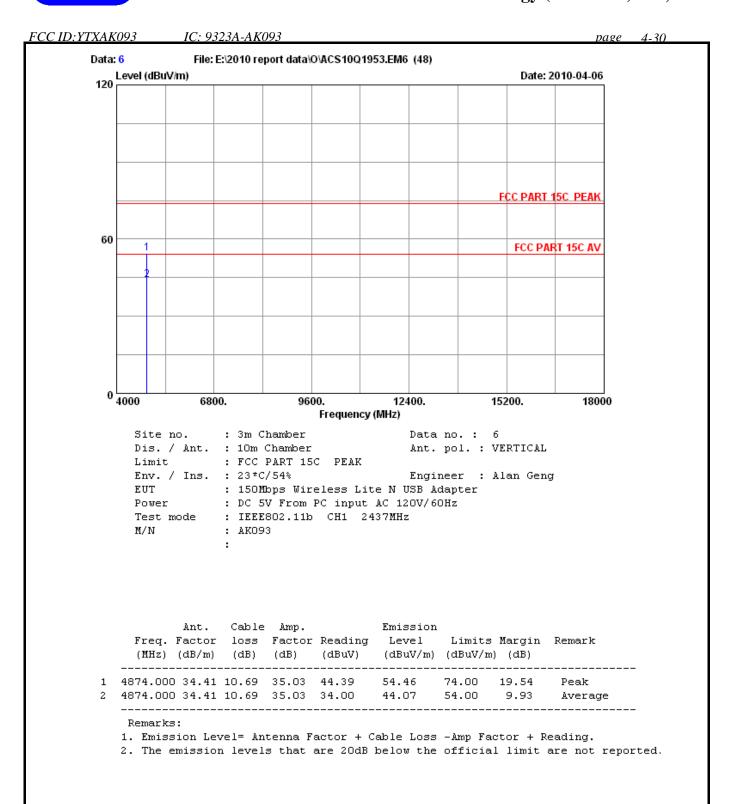
M/N : AK093

	-	Factor		Factor	_	Emission Level (dBuV/m)		_	Remark
1	4824.000	34.32	10.64	35.08	41.53	51.41	74.00	22.59	Peak

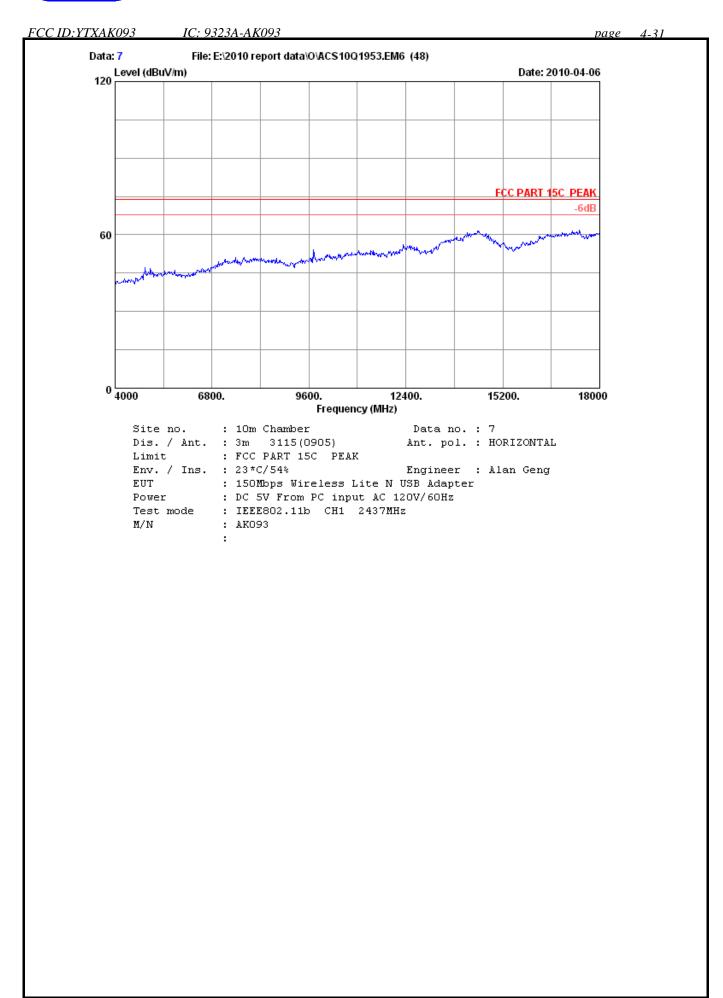
- 1. Emission Level= Antenna Factor + Cable Loss -Amp Factor + Reading.
- 2. The emission levels that are 20dB below the official limit are not reported.



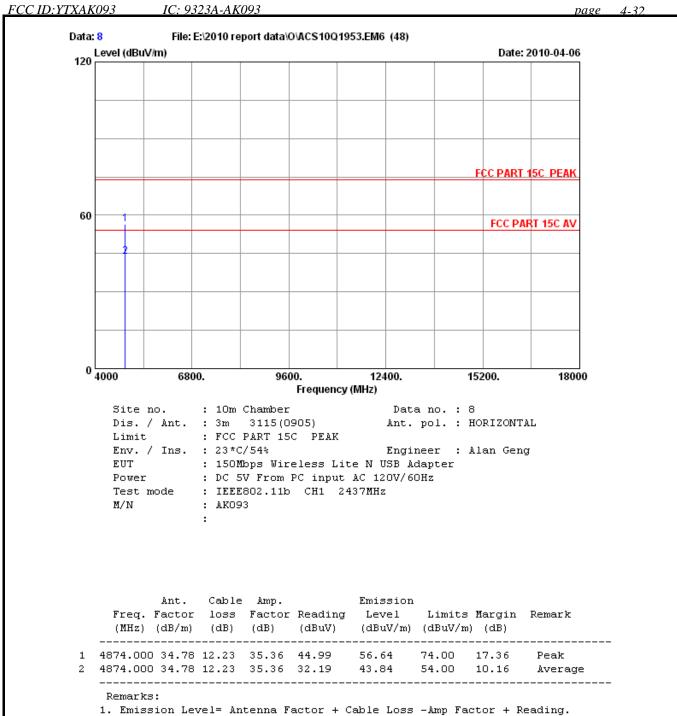






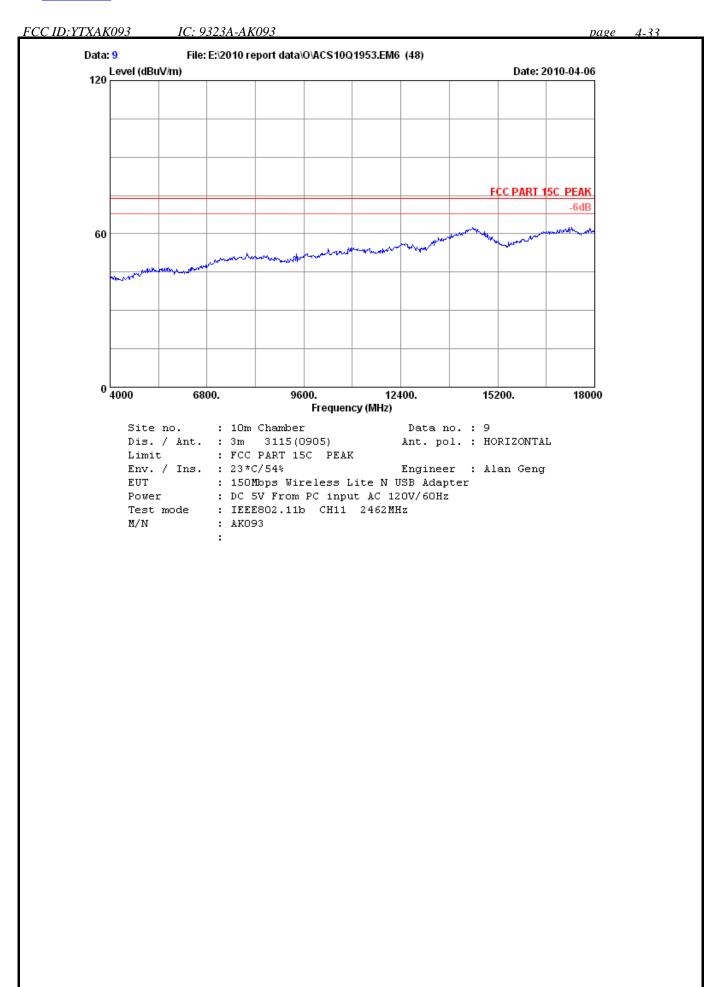


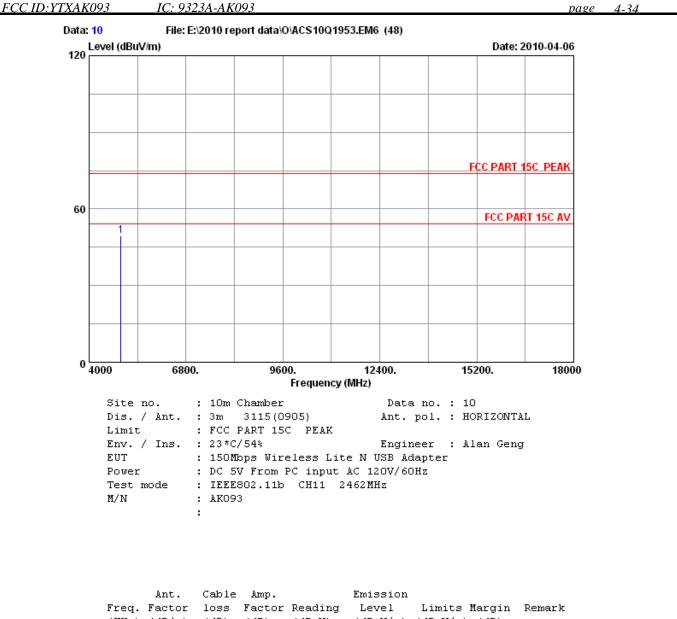




2. The emission levels that are 20dB below the official limit are not reported.



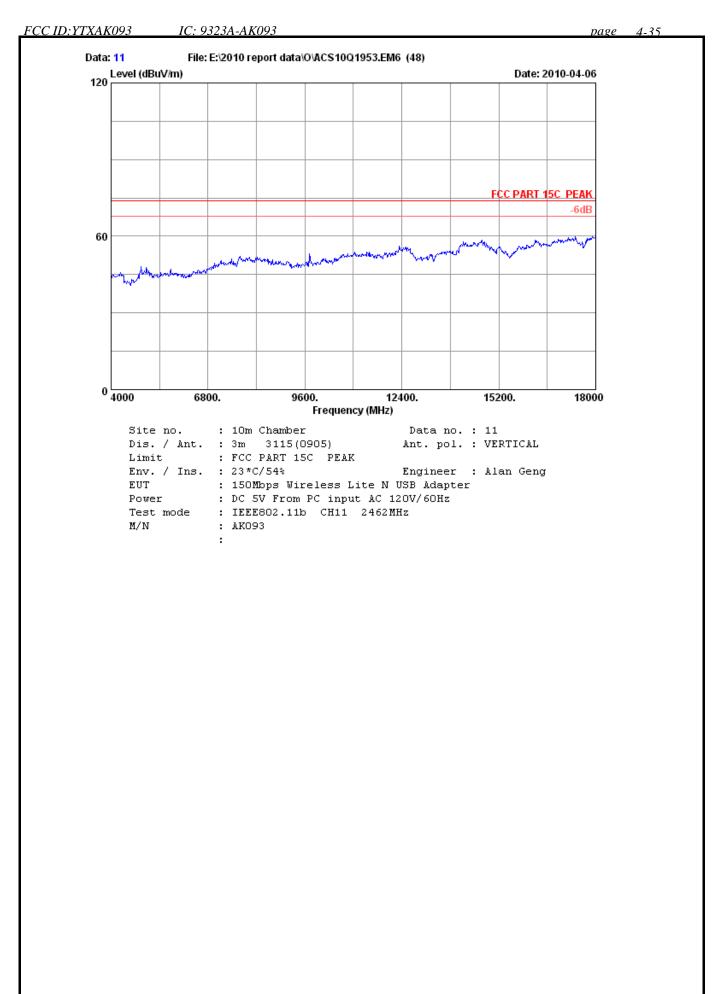


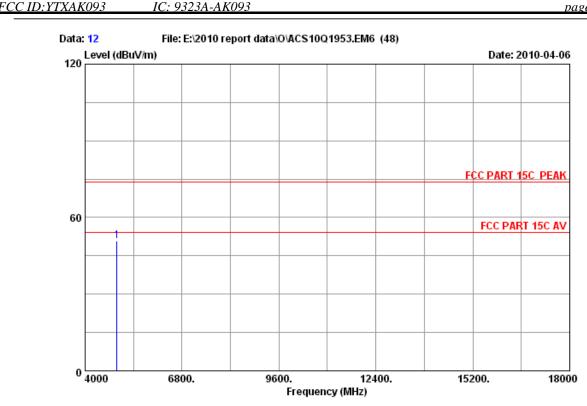


-	Factor		Factor	Reading (dBuV)			_	Remark
4924.000	35.09	12.58	35.34	37.01	49.34	74.00	24.66	Peak

- 1. Emission Level= Antenna Factor + Cable Loss -Amp Factor + Reading.
- 2. The emission levels that are 20dB below the official limit are not reported.







Site no. : 10m Chamber Data no. : 12
Dis. / Ant. : 3m 3115(0905) Ant. pol. : VERTICAL

Limit : FCC PART 15C PEAK

Env. / Ins. : 23 \* C/54% Engineer : Alan Geng

EUT : 150Mbps Wireless Lite N USB Adapter
Power : DC 5V From PC input AC 120V/60Hz

Test mode : IEEE802.11b CH11 2462MHz

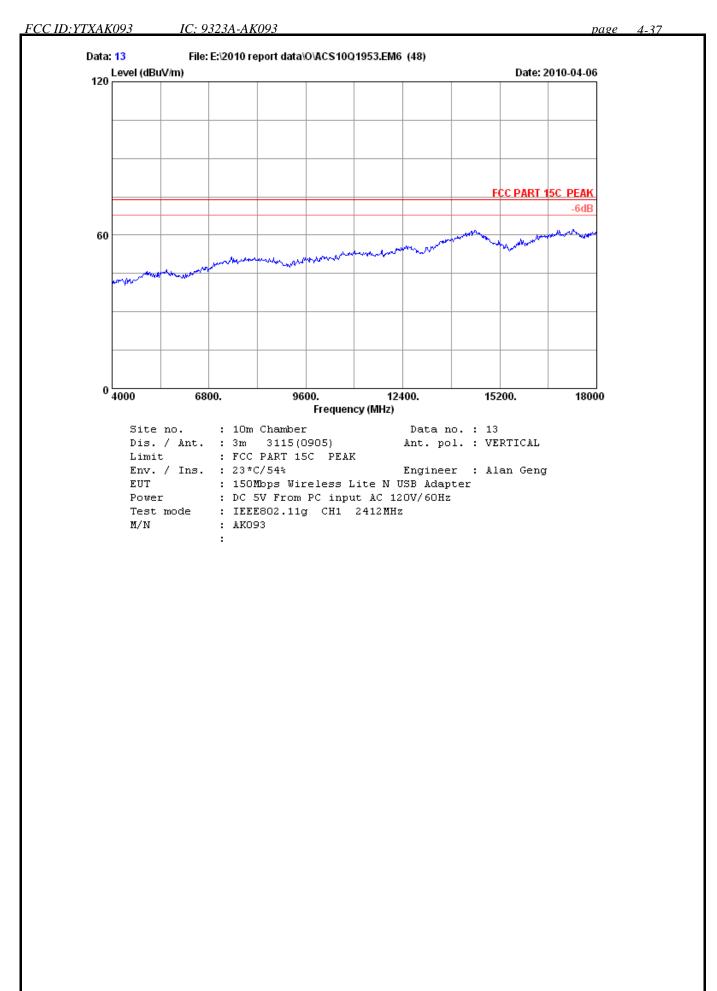
M/N : AK093

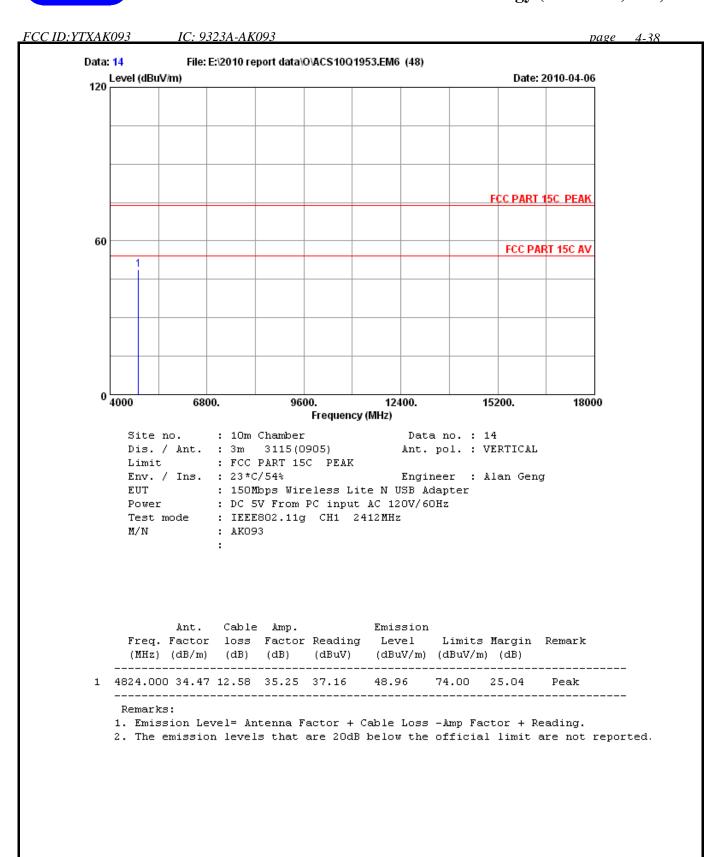
:

	-	Factor	loss		Reading	Emission Level (dBuV/m)	Limits	_	Remark	
1	4924.000	35.09	12.58	35.34	38.32	50.65	74.00	23.35	Peak	

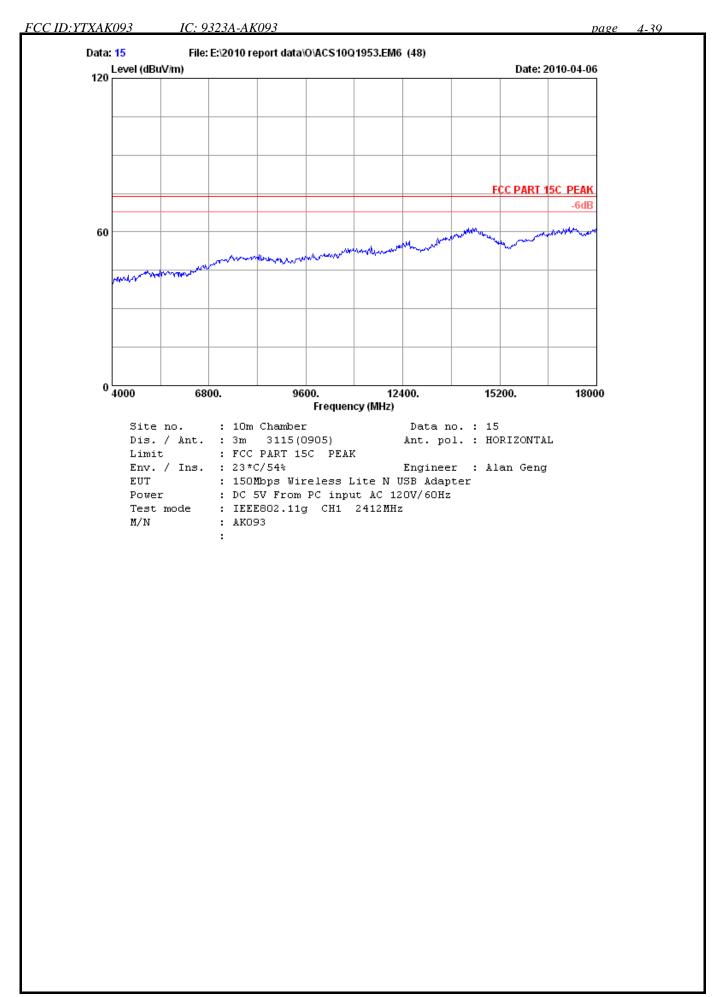
- 1. Emission Level= Antenna Factor + Cable Loss -Amp Factor + Reading.
- 2. The emission levels that are 20dB below the official limit are not reported.

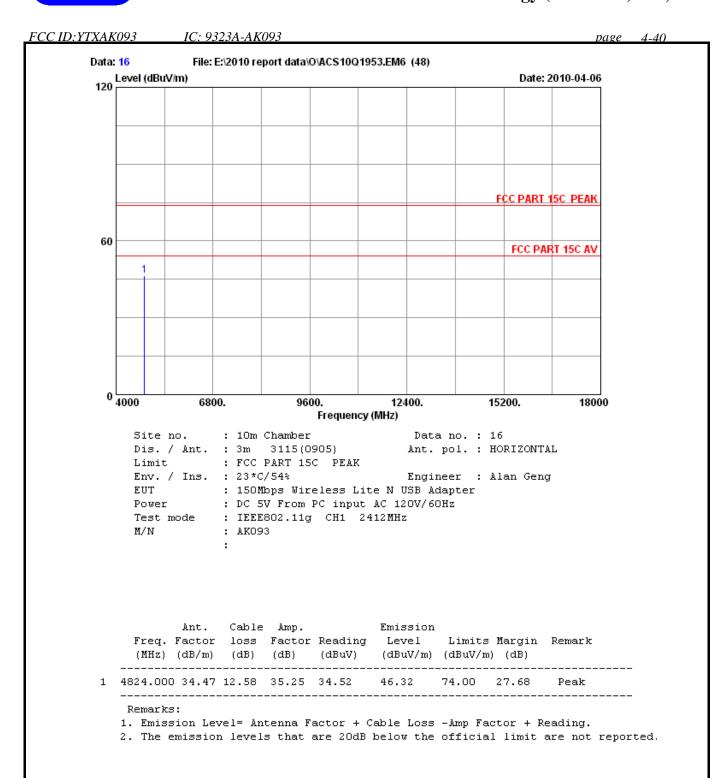




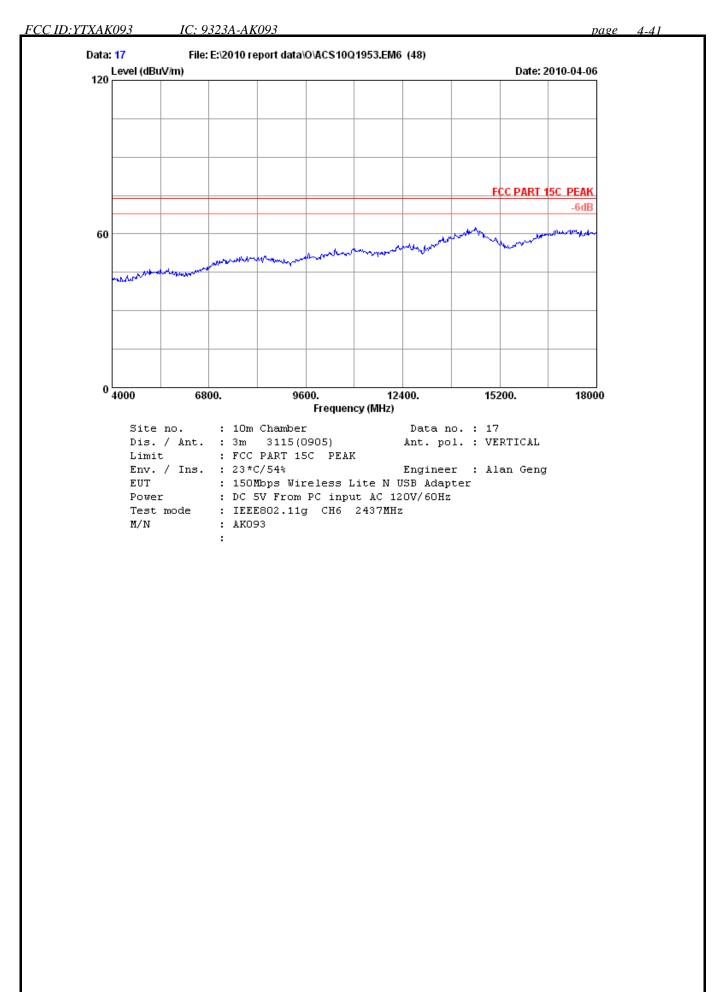




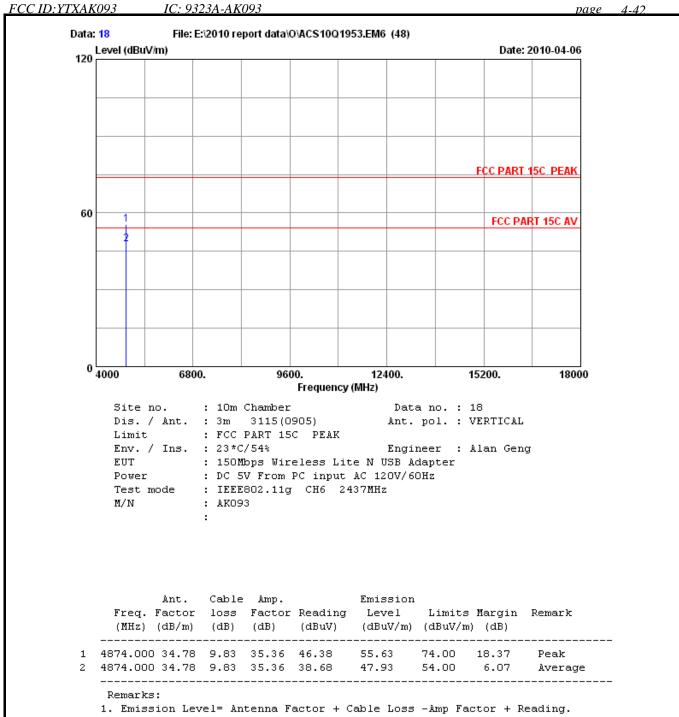






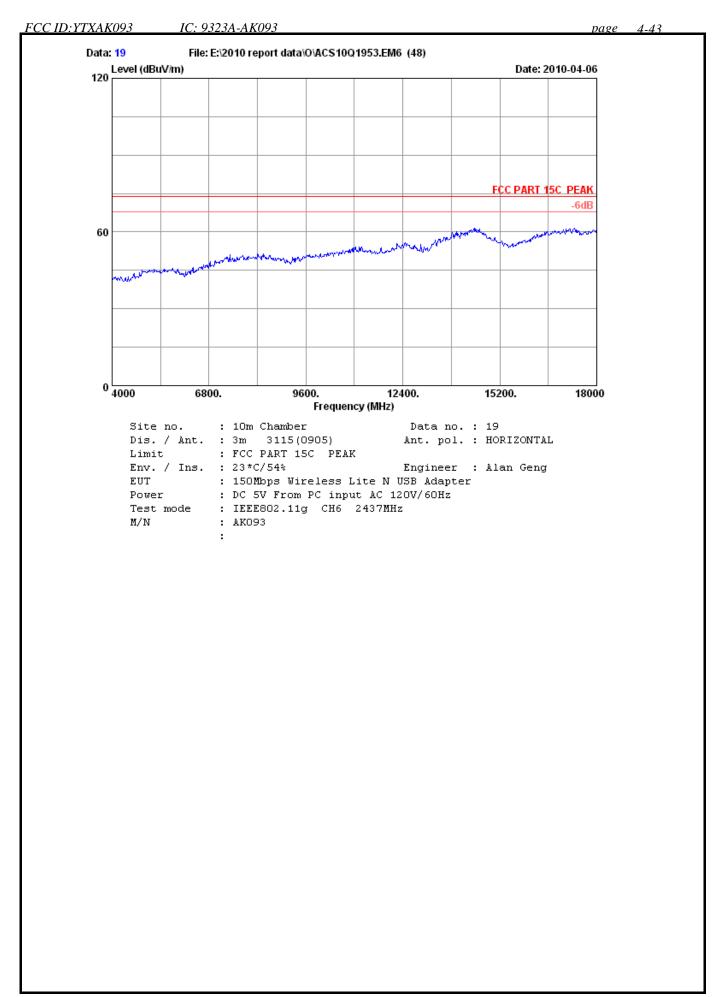


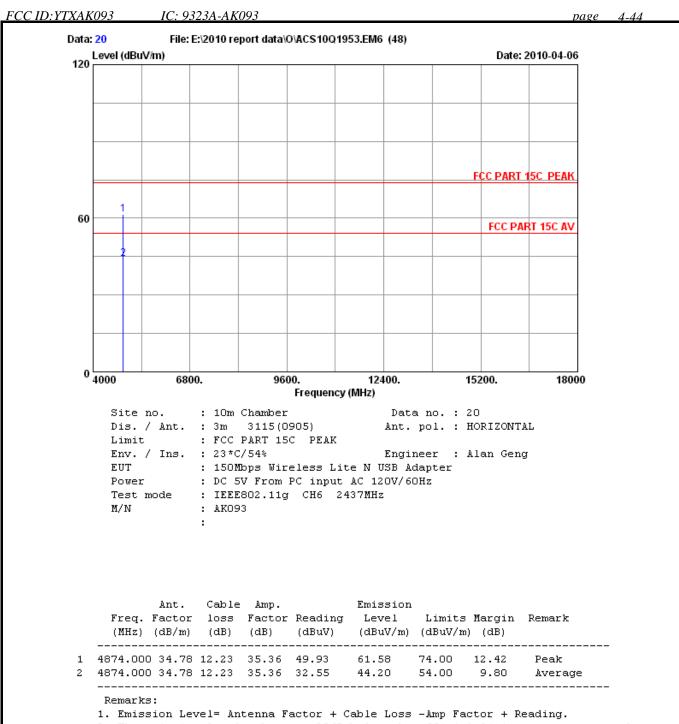




2. The emission levels that are 20dB below the official limit are not reported.

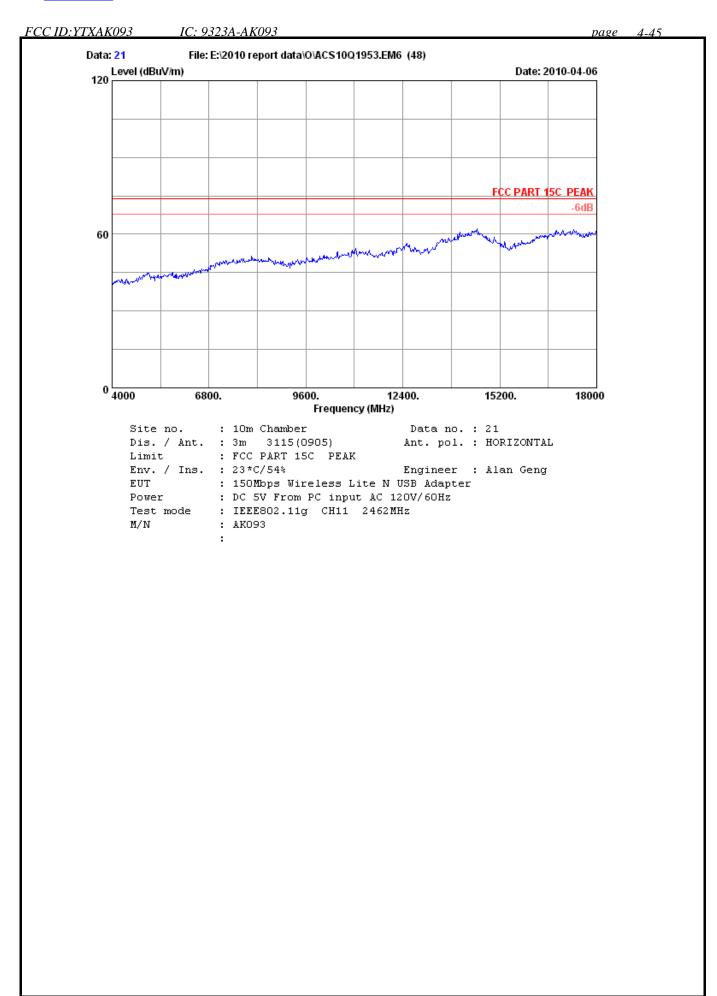


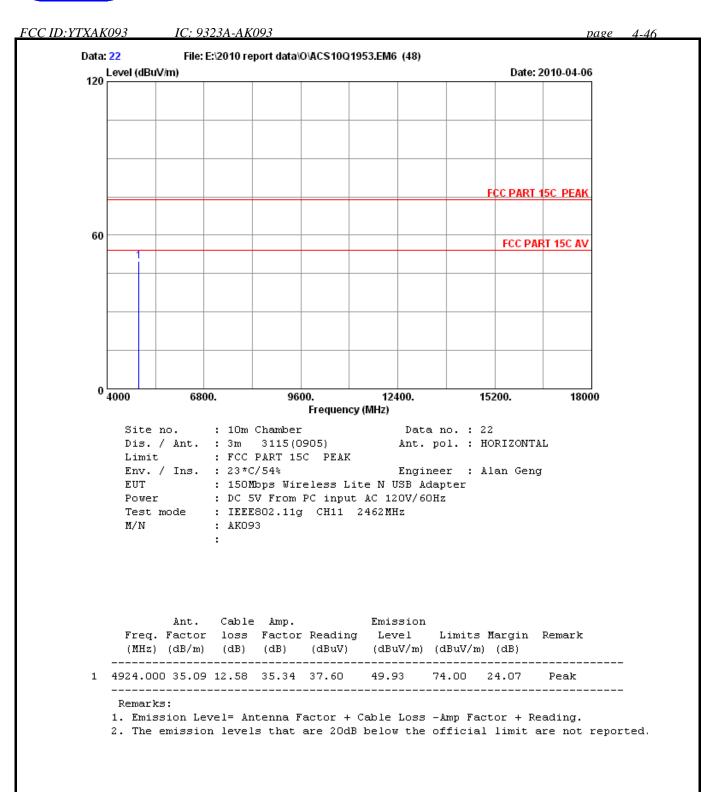




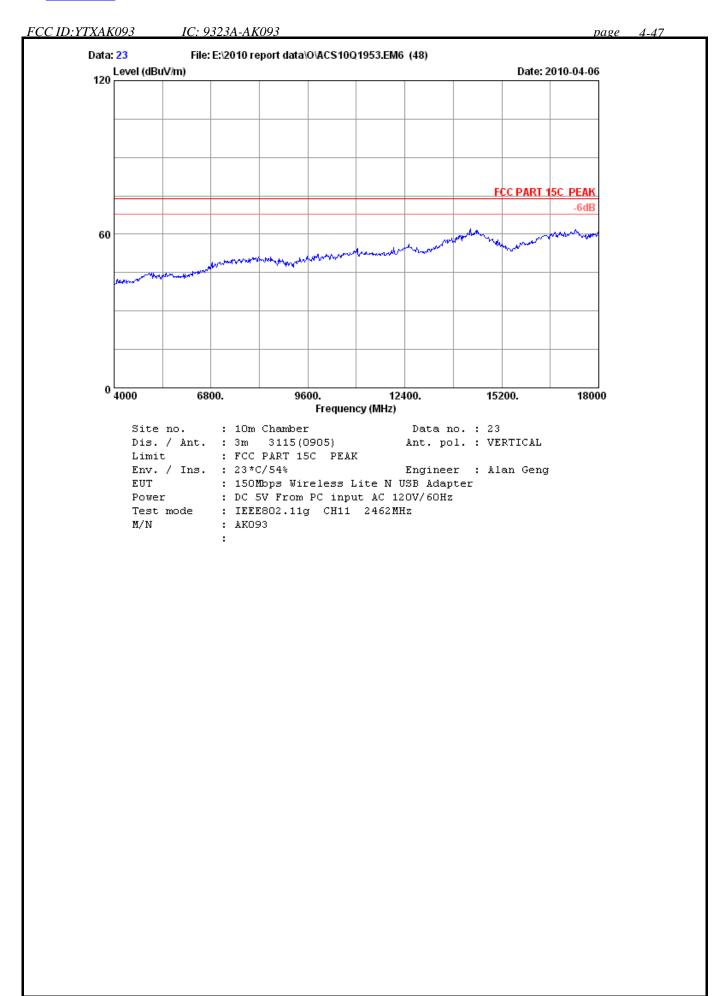
2. The emission levels that are 20dB below the official limit are not reported.

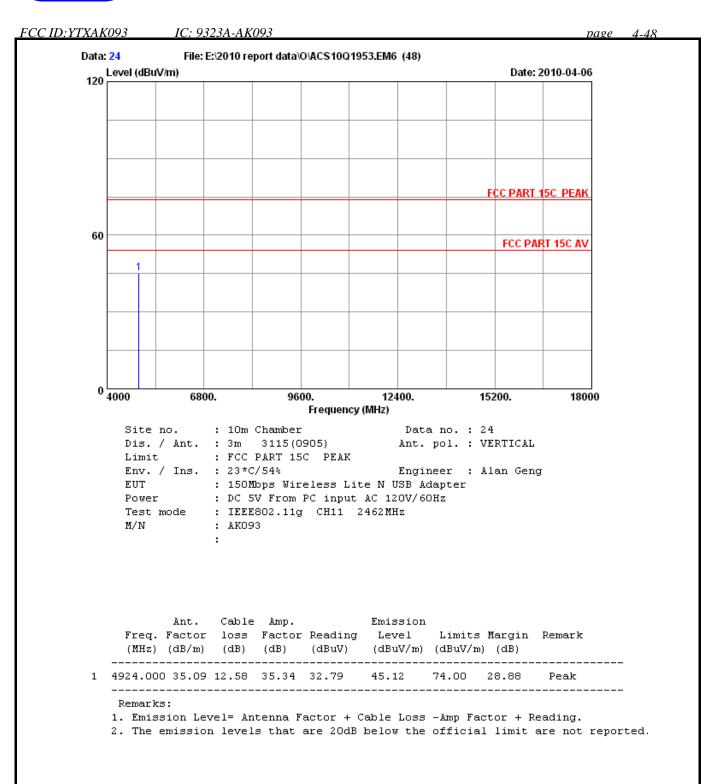


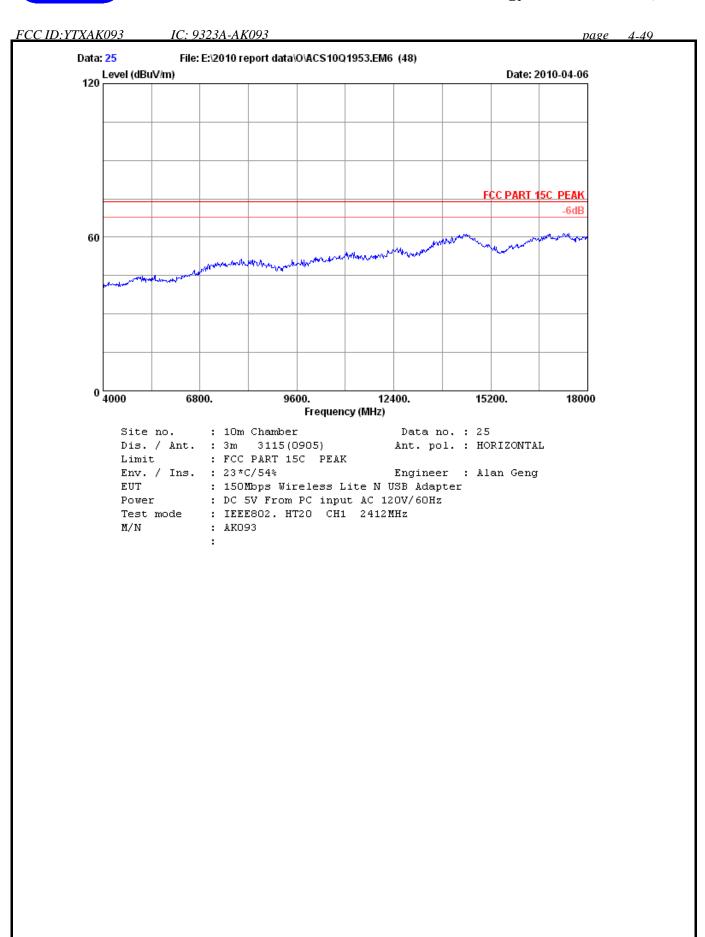


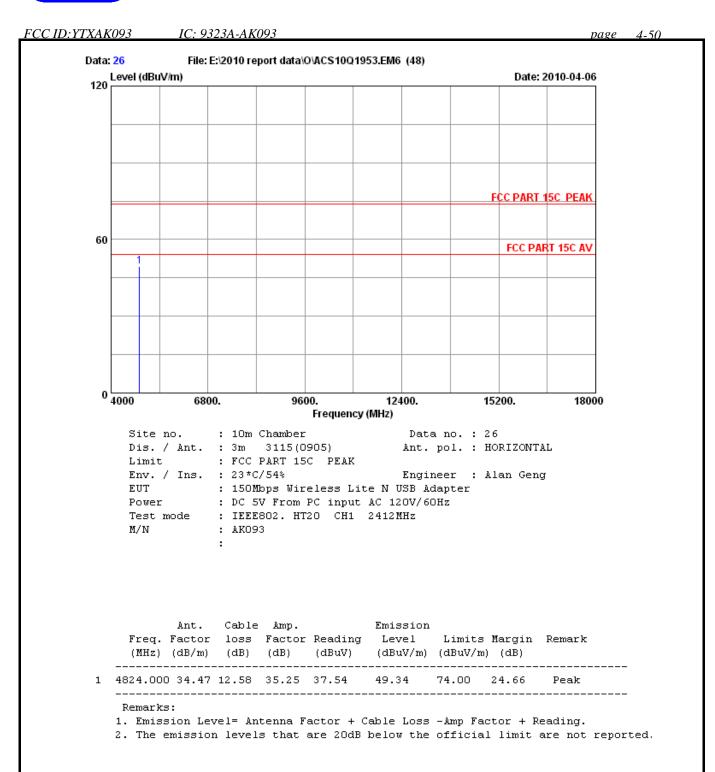




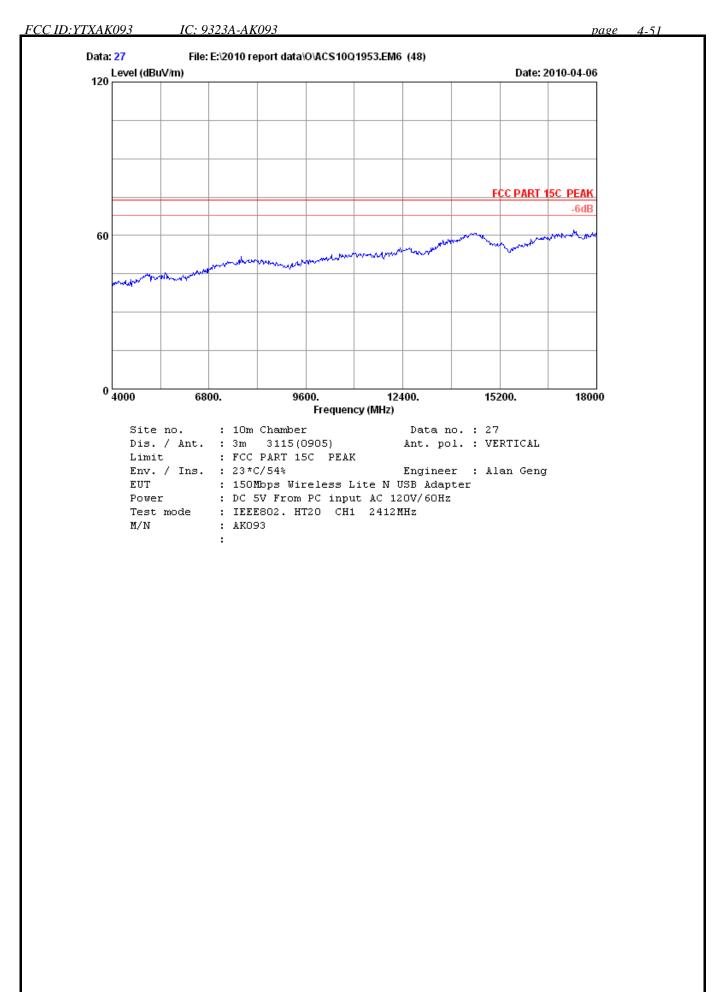


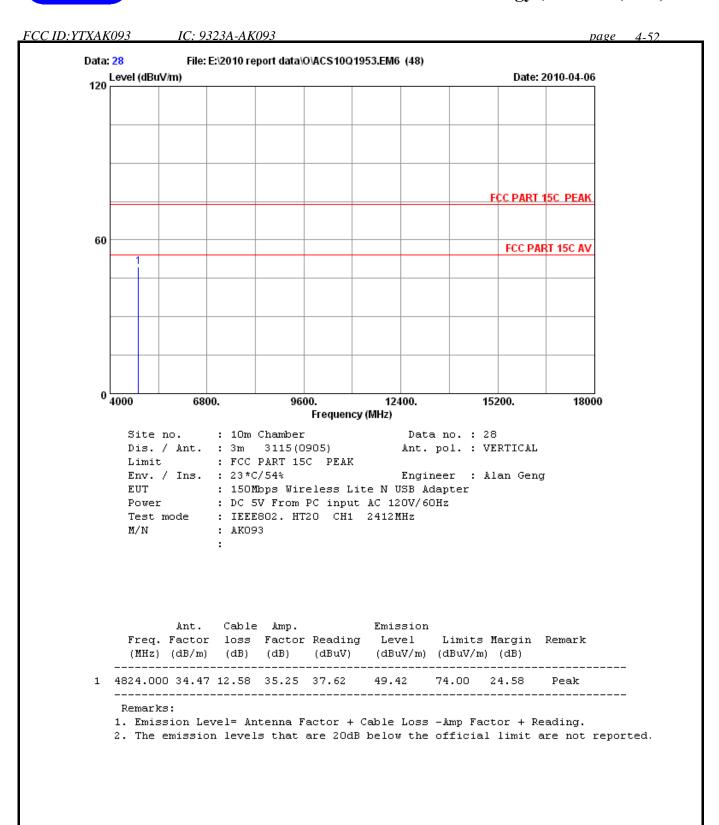




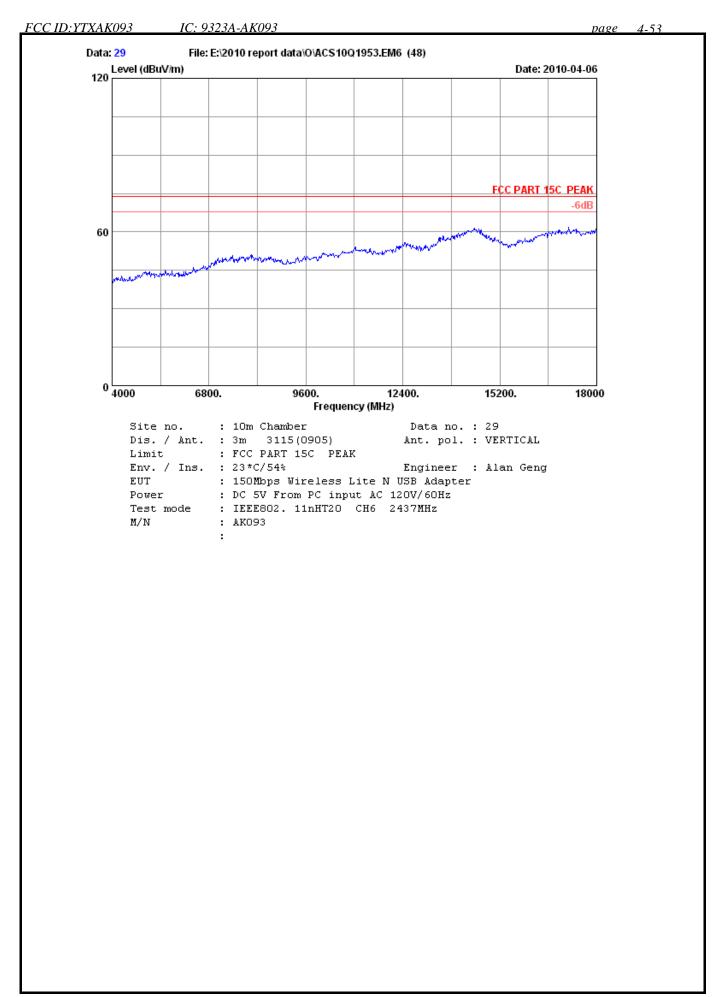


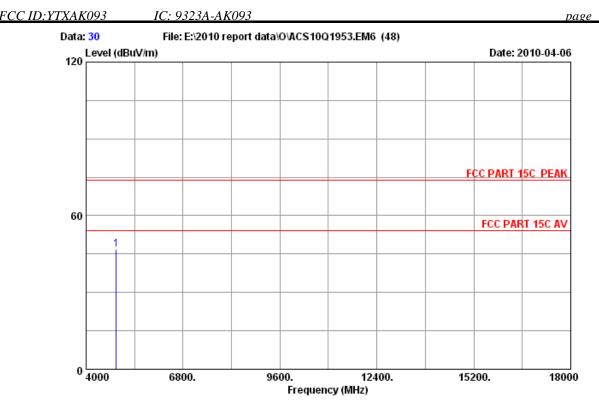












Site no. : 10m Chamber Data no. : 30 Dis. / Ant. : 3m 3115(0905) Ant. pol. : VERTICAL

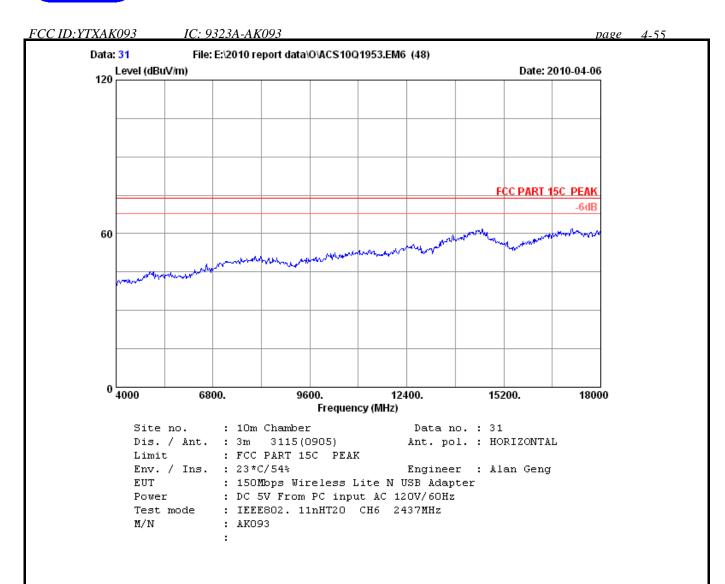
Limit : FCC PART 15C PEAK Env. / Ins. : 23\*C/54% Engineer : Alan Geng

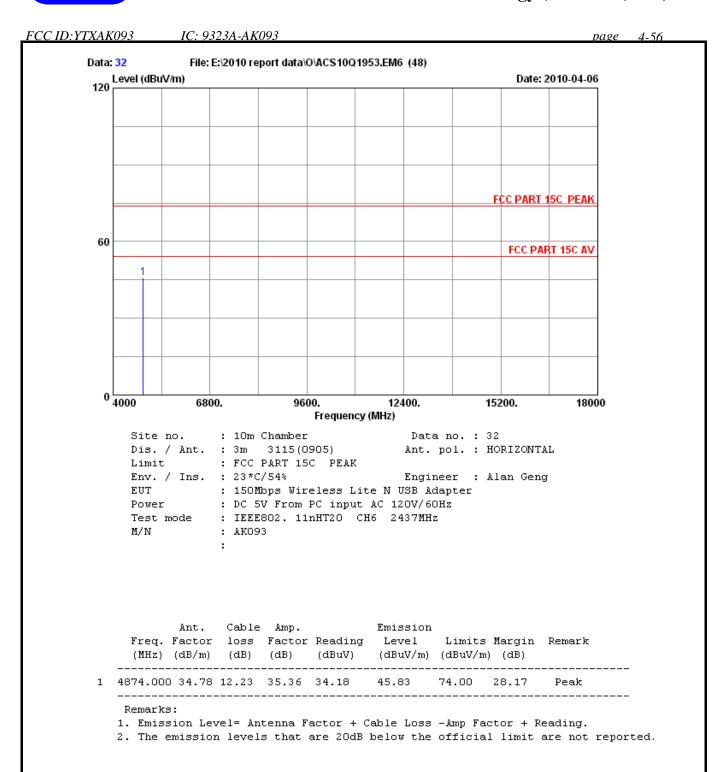
: 150Mbps Wireless Lite N USB Adapter EIIT : DC 5V From PC input AC 120V/60Hz Power Test mode : IEEE802. 11nHT20 CH6 2437MHz

: AKO93 M/N

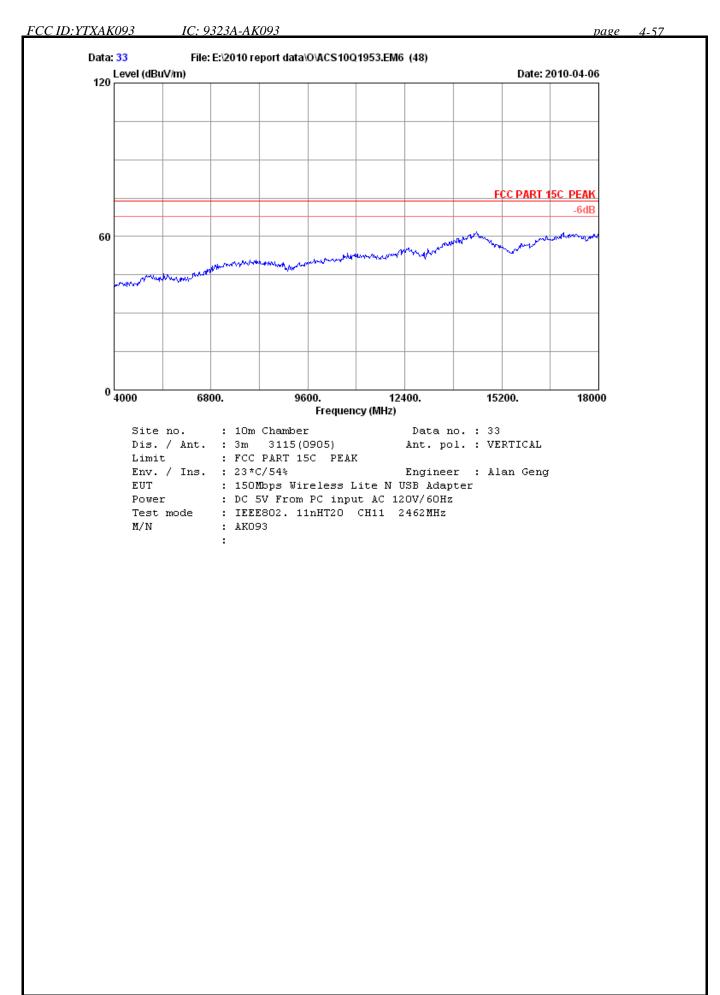
	Ant.	Cable	Amp.		Emission			
Freq.	Factor	loss	Factor	Reading	Level	Limits	Margin	Remark
(MHz)	(dB/m)	(dB)	(dB)	(dBuV)	(dBuV/m)	(dBuV/m)	(dB)	
4874.000	34.78	12.23	35.36	34.99	46.64	74.00	27.36	Peak

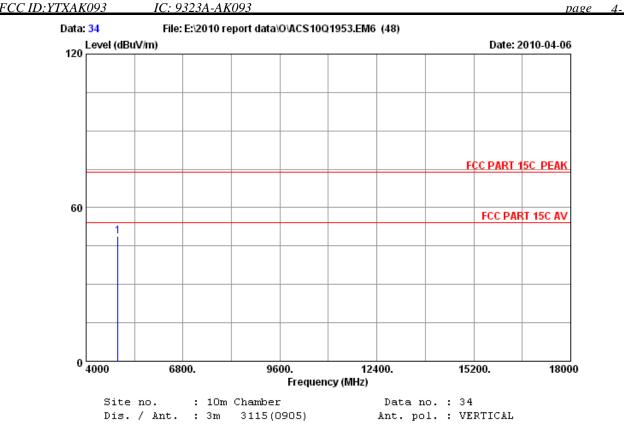
- 1. Emission Level= Antenna Factor + Cable Loss -Amp Factor + Reading.
- 2. The emission levels that are 20dB below the official limit are not reported.











Limit : FCC PART 15C PEAK Env. / Ins. : 23\*C/54% Engineer : Alan Geng

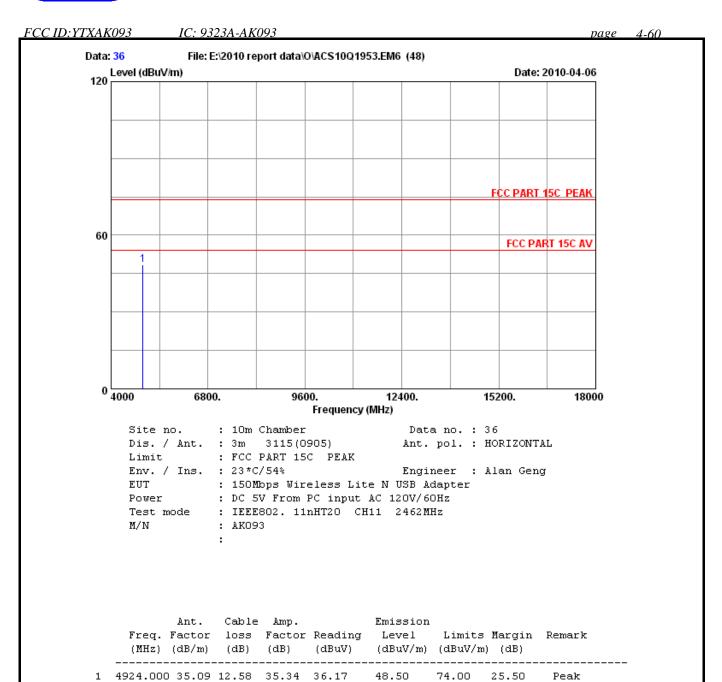
: 150Mbps Wireless Lite N USB Adapter EIIT : DC 5V From PC input AC 120V/60Hz Power Test mode : IEEE802. 11nHT20 CH11 2462MHz

: AKO93 M/N

	Ant.	Cable	Amp.		Emission				
Freq.	Factor	loss	Factor	Reading	Level	Limits	Margin	Remark	
(MHz)	(dB/m)	(dB)	(dB)	(dBuV)	(dBuV/m)	(dBuV/m)	(dB)		
4924.000	35.09	12.58	35.34	36.41	48.74	74.00	25.26	Peak	-

- 1. Emission Level= Antenna Factor + Cable Loss -Amp Factor + Reading.
- 2. The emission levels that are 20dB below the official limit are not reported.

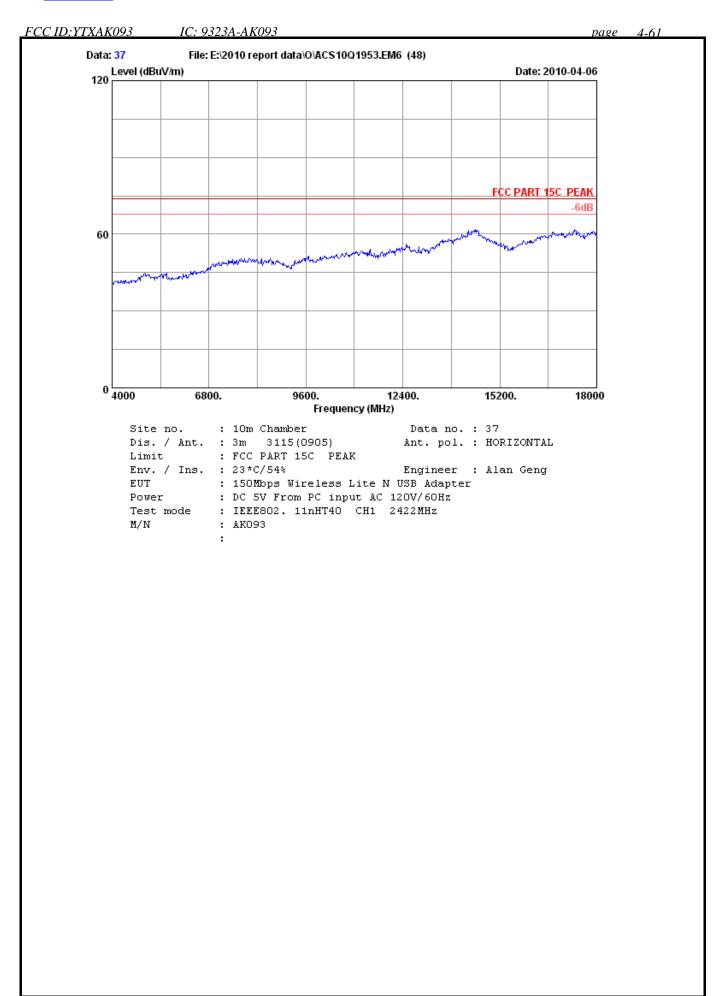


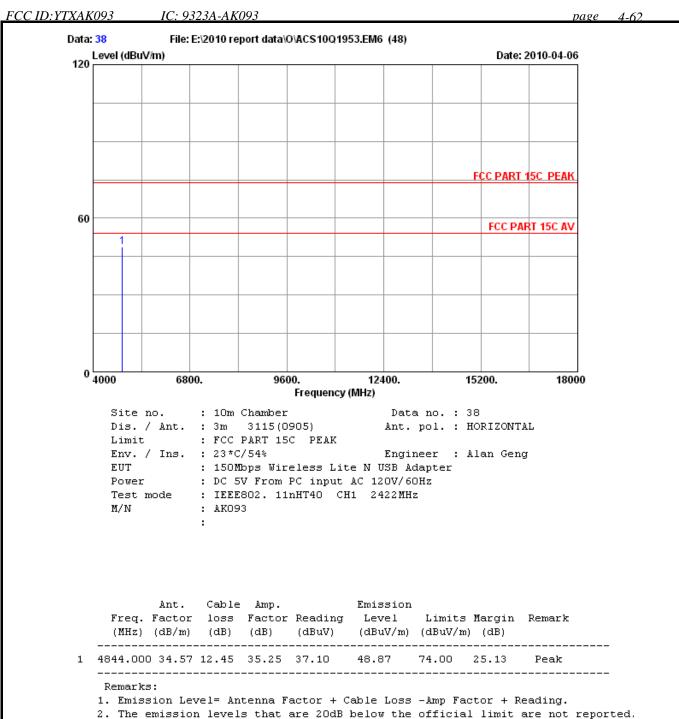


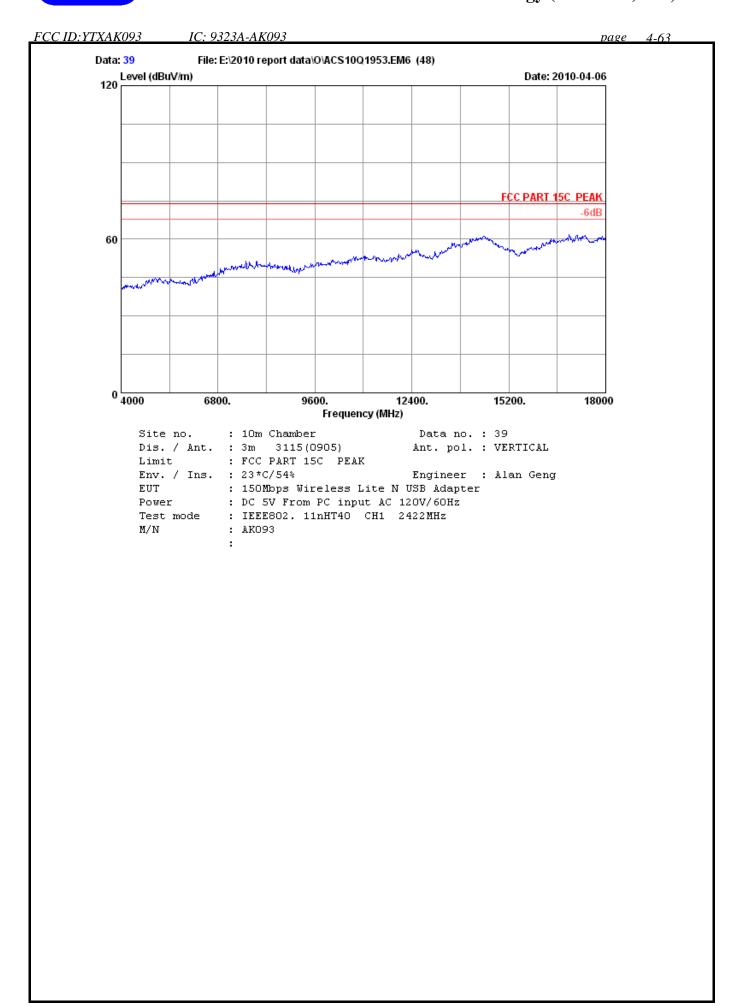
#### D-----

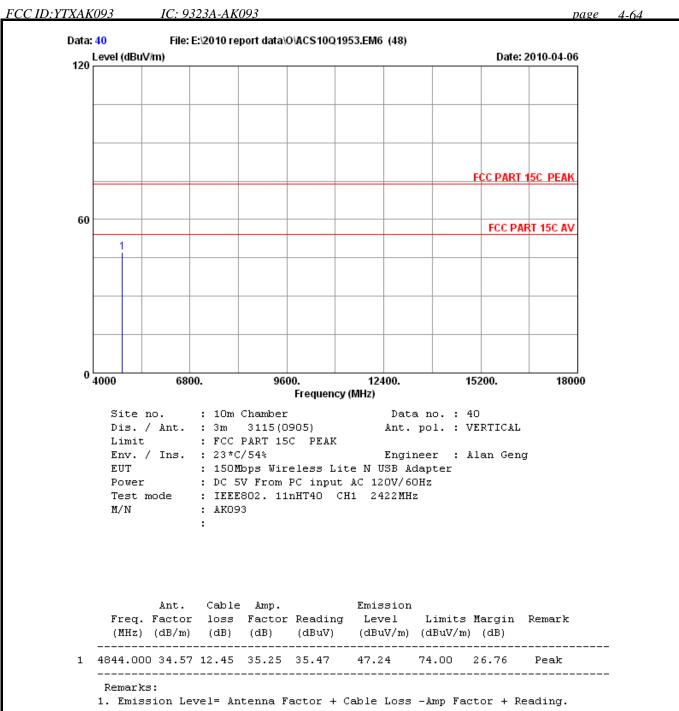
- 1. Emission Level= Antenna Factor + Cable Loss Amp Factor + Reading.
- 2. The emission levels that are 20dB below the official limit are not reported.





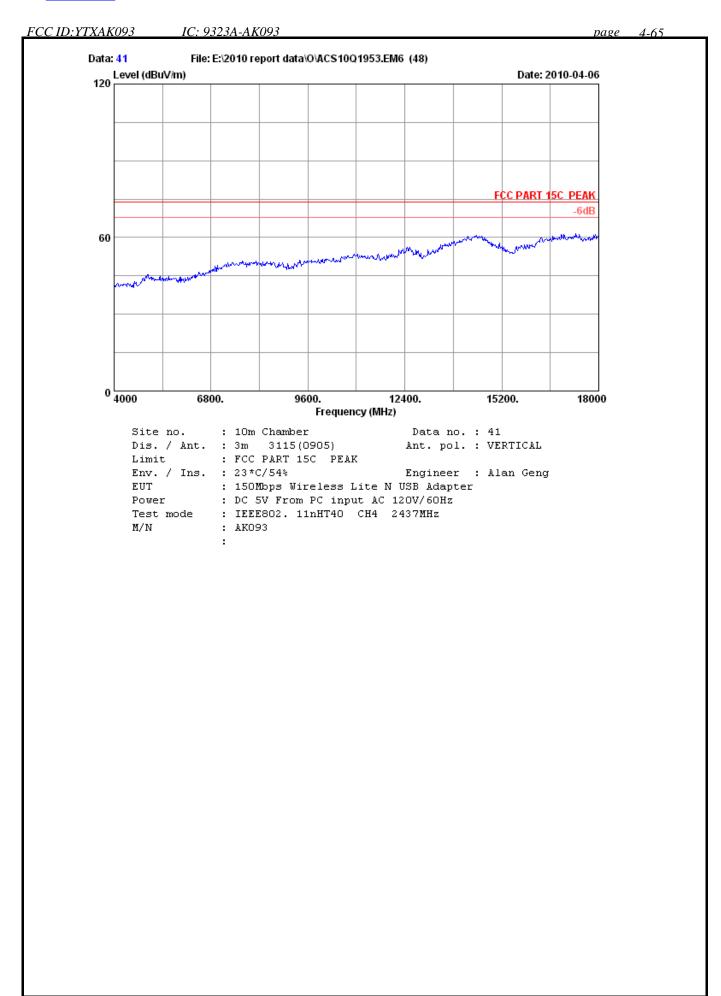


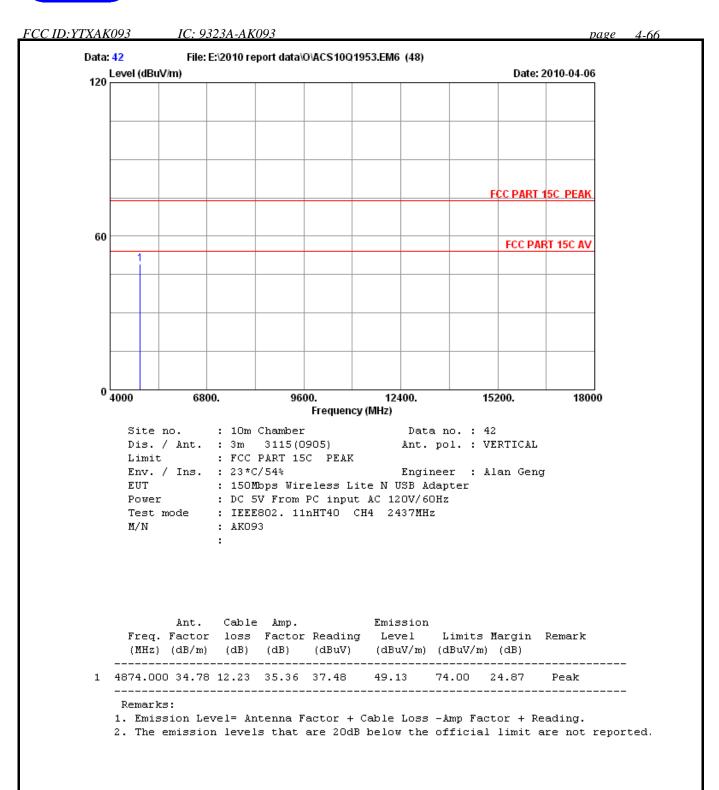


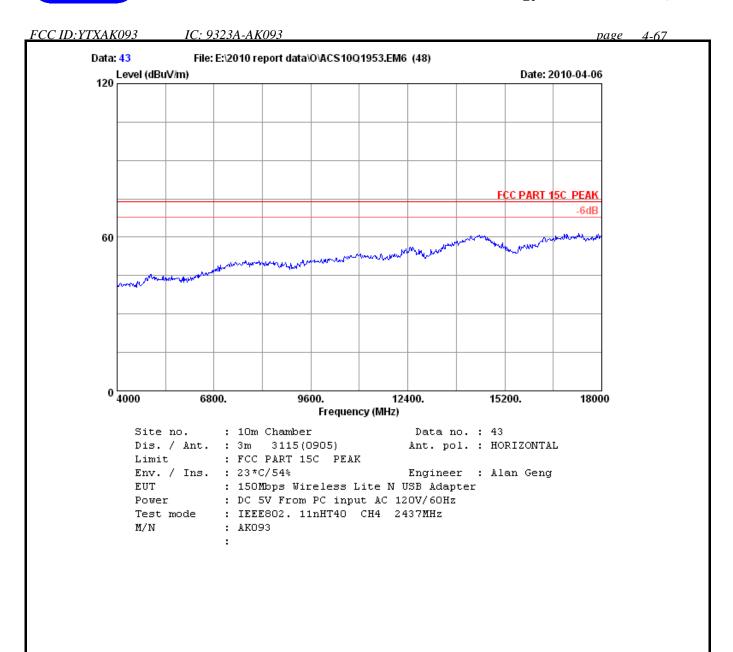


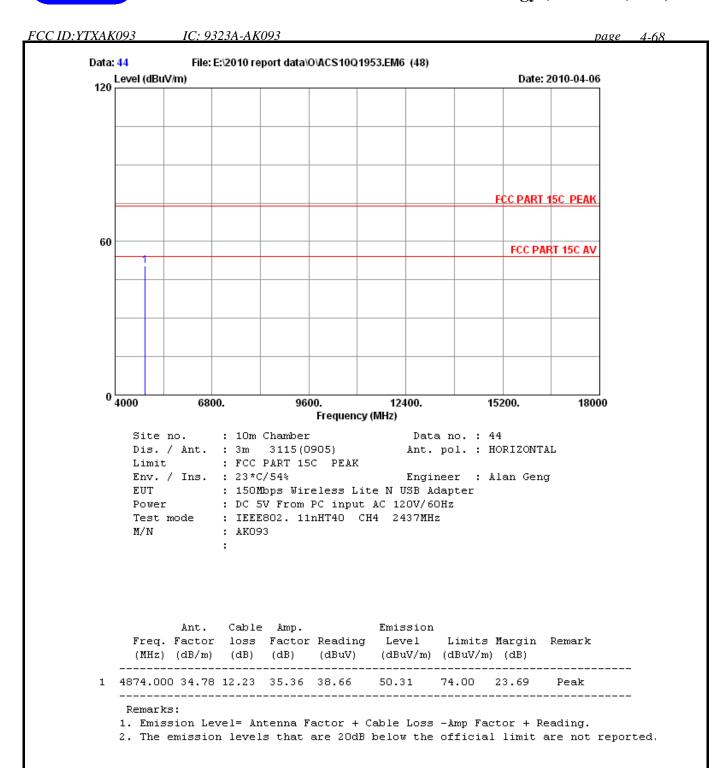
2. The emission levels that are 20dB below the official limit are not reported.



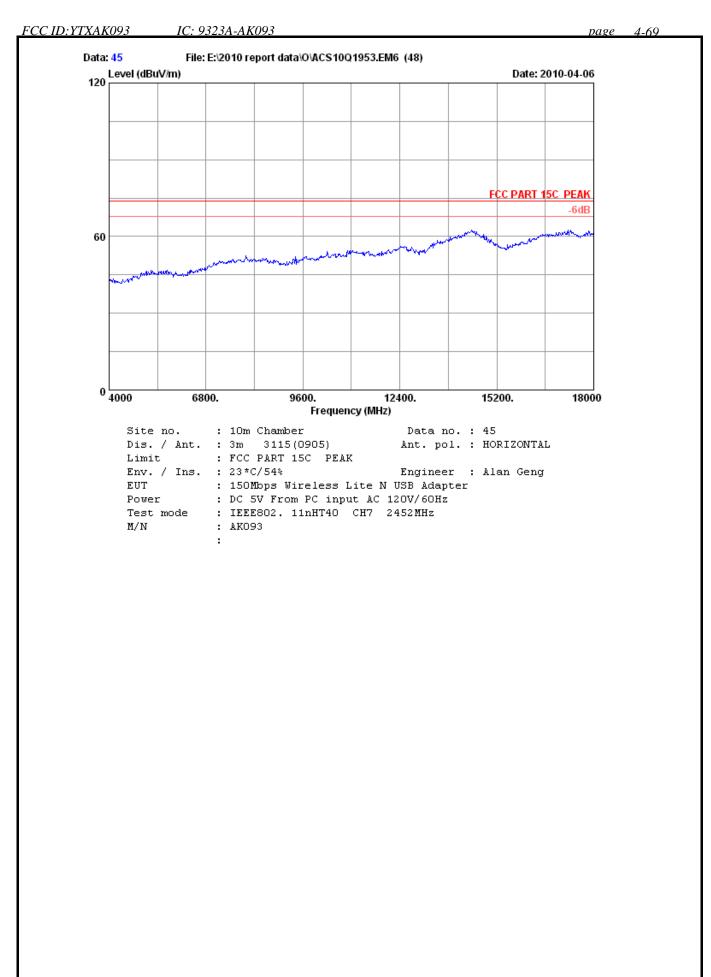


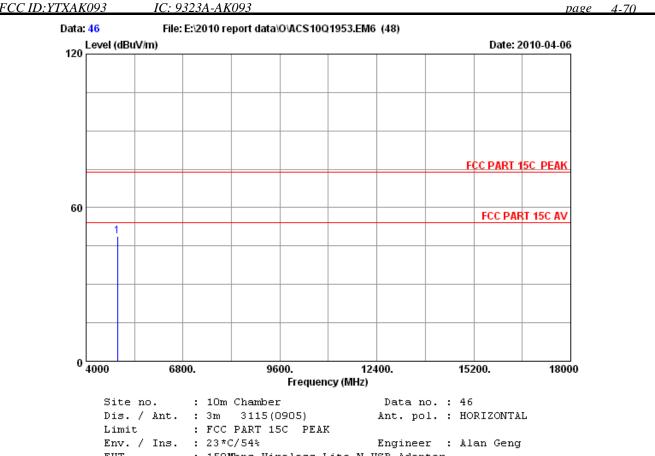












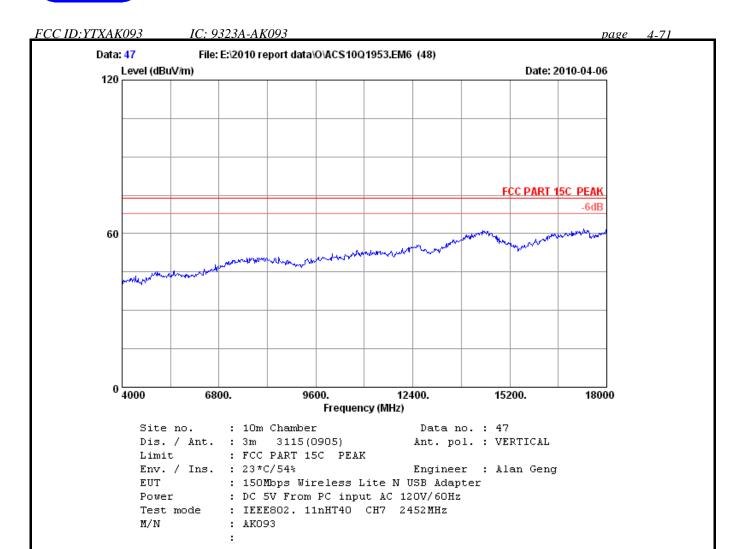
EUT : 150Mbps Wireless Lite N USB Adapter Power : DC 5V From PC input AC 120V/60Hz Test mode : IEEE802. 11nHT40 CH7 2452MHz

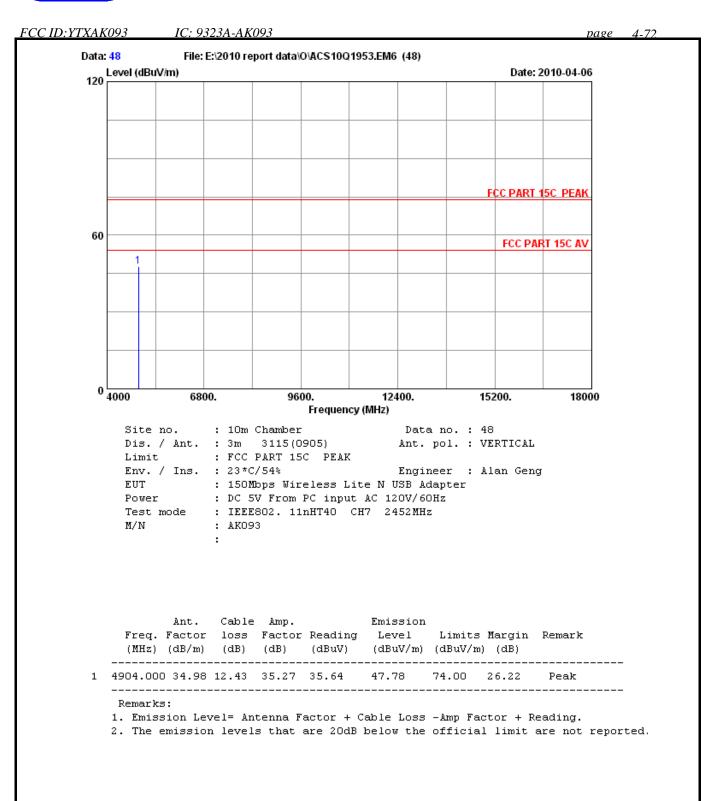
M/N : AK093

:

	Ant.	Cable	Amp.		Emission			
Freq.	Factor	loss	Factor	Reading	Level	Limits	Margin	Remark
(MHz)	(dB/m)	(dB)	(dB)	(dBuV)	(dBuV/m)	(dBuV/m)	(dB)	
4904.000	34.98	12.43	35.27	36.63	48.77	74.00	25.23	Peak

- 1. Emission Level= Antenna Factor + Cable Loss -Amp Factor + Reading.
- 2. The emission levels that are 20dB below the official limit are not reported.

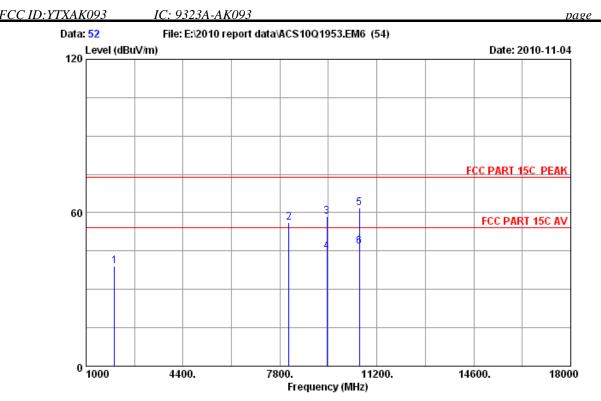








4-74



Site no. : 3m Chamber Data no. : 52
Dis. / Ant. : 3m 3115(0911) Ant. pol. : VERTICAL

Limit : FCC PART 15C PEAK

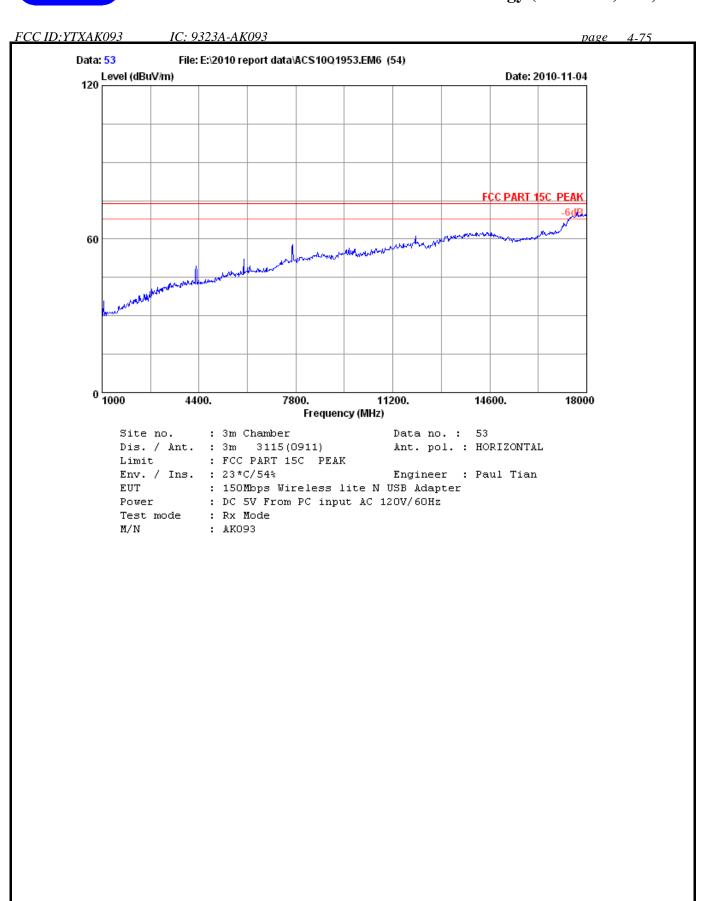
Env. / Ins. : 23\*C/54% Engineer : Paul Tian

EUT : 150Mbps Wireless lite N USB Adapter Power : DC 5V From PC input AC 120V/60Hz

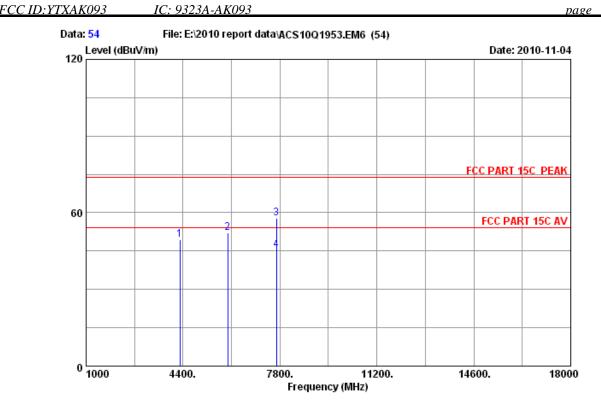
Test mode : Rx Mode M/N : AK093

	Freq. (MHz)	Ant. Factor (dB/m)	Cable loss (dB)		Reading (dBuV)	Emission Level (dBuV/m)	Limits (dBuV/m)	_	Remark
1	2003.000	29.20	6.67	36.70	39.87	39.04	74.00	34.96	Peak
2	8106.000	39.07	14.10	34.76	37.75	56.16	74.00	17.84	Peak
3	9449.000	39.53	15.27	35.09	38.71	58.42	74.00	15.58	Peak
4	9449.000	39.53	15.27	35.09	25.07	44.78	54.00	9.22	Average
5	10588.000	38.34	16.23	34.18	41.38	61.77	74.00	12.23	Peak
6	10588.000	38.34	16.23	34.18	26.55	46.94	54.00	7.06	Average

- 1. Emission Level= Antenna Factor + Cable Loss -Amp Factor + Reading.
- 2. The emission levels that are 20dB below the official limit are not reported.



4-76



Site no. : 3m Chamber Data no. : 54

Dis. / Ant. : 3m 3115(0911) Ant. pol. : HORIZONTAL

Limit : FCC PART 15C PEAK

Env. / Ins. : 23\*C/54% Engineer : Paul Tian

EUT : 150Mbps Wireless lite N USB Adapter
Power : DC 5V From PC input AC 120V/60Hz

Test mode : Rx Mode M/N : AK093

	Freq. (MHz)	Ant. Factor (dB/m)	Cable loss (dB)	•	Reading (dBuV)	Emission Level (dBuV/m)	Limits (dBuV/m	Margin ) (dB)	Remark
1	4298.000	33.88	10.05	35.48	41.00	49.45	74.00	24.55	Peak
2	5964.000	36.00	11.95	34.41	38.66	52.20	74.00	21.80	Peak
3	7681.000	38.52	13.73	34.22	39.95	57.98	74.00	16.02	Peak
4	7681.000	38.52	13.73	34.22	27.59	45.62	54.00	8.38	Average

- 1. Emission Level= Antenna Factor + Cable Loss -Amp Factor + Reading.
- 2. The emission levels that are 20dB below the official limit are not reported.



### 5. CONDUCTED SPURIOUS EMISSIONS

#### 5.1.Test Equipment

Item	Equipment	Manufacturer	Model No.	Serial No.	Last Cal.	Cal. Interval
1.	Spectrum Analyzer	Agilent	E4446A	US44300459	May.08,1	1 Year
2.	Attenuator	Agilent	8491B	MY39262165	May.08,1	1 Year
3.	RF Cable	Hubersuhner	SUCOFLEX102	28618/2	May.08,1	1Year

#### 5.2.Limit

In any 100kHz bandwidth outside the frequency bands in which the spread spectrum intentional radiator in operating, the radio frequency power that is produced by the intentional radiator shall be at least 20dB below that in the 100kHz bandwidth within the band that contains the highest level of the desired power.

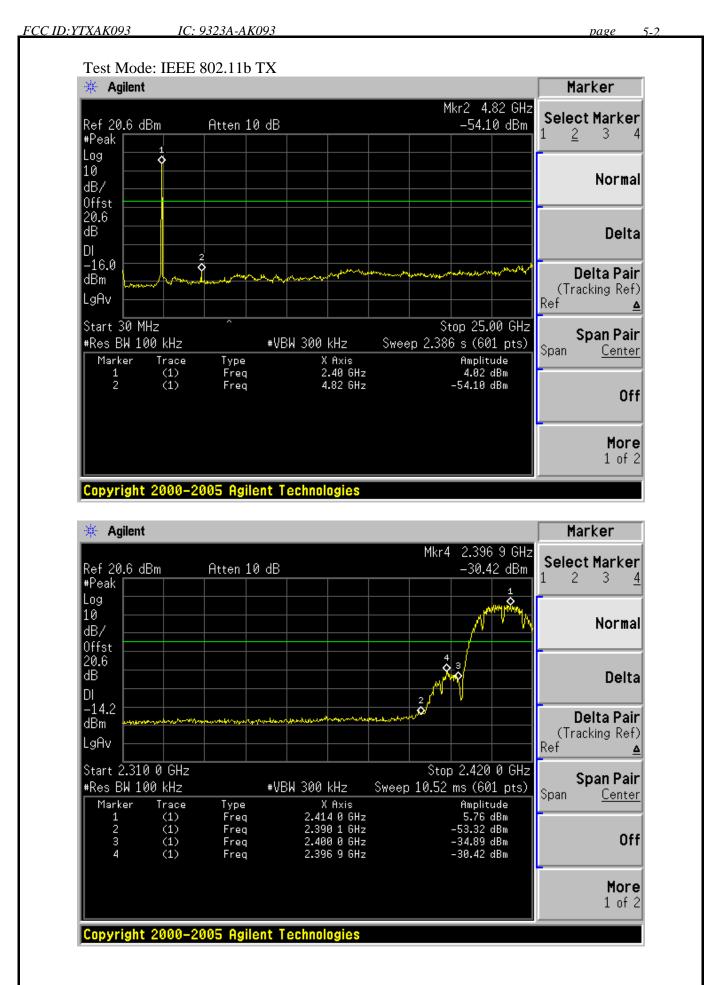
#### 5.3.Test Procedure

The transmitter output was connected to a spectrum analyzer, The resolution bandwidth is set to 100 kHz, The video bandwidth is set to 300 kHz and measure all the emissions detected.

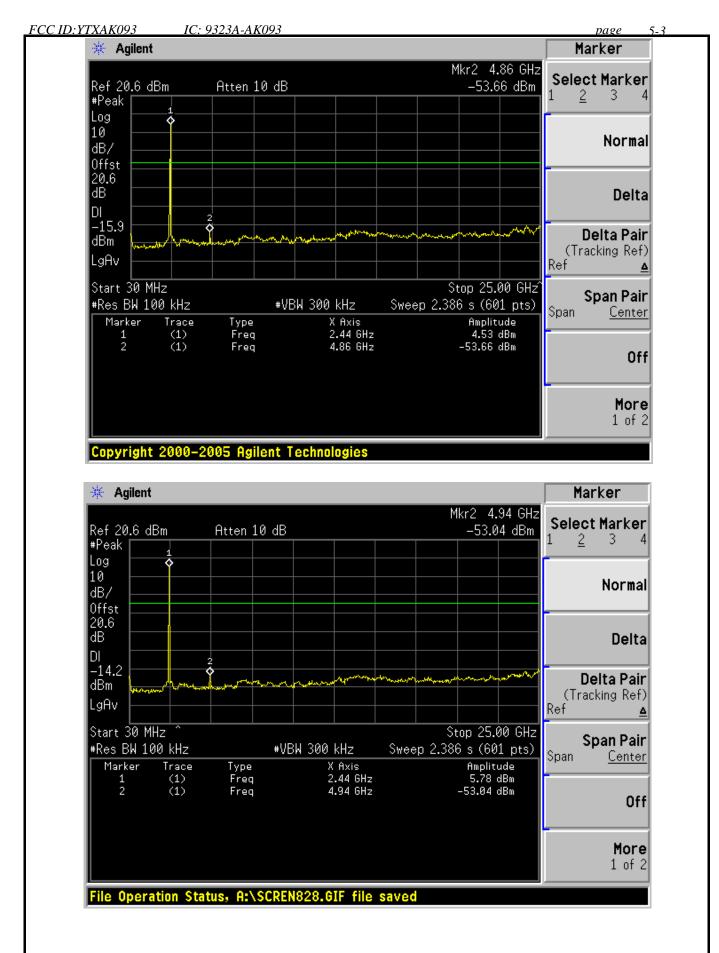
#### 5.4. Test result

PASS (The testing data was attached in the next pages.)

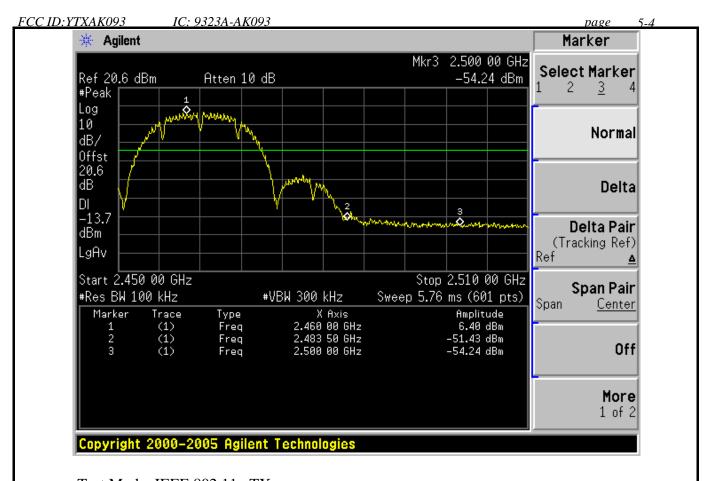


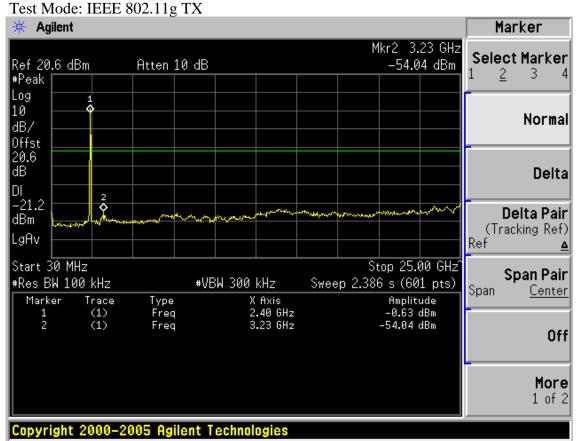




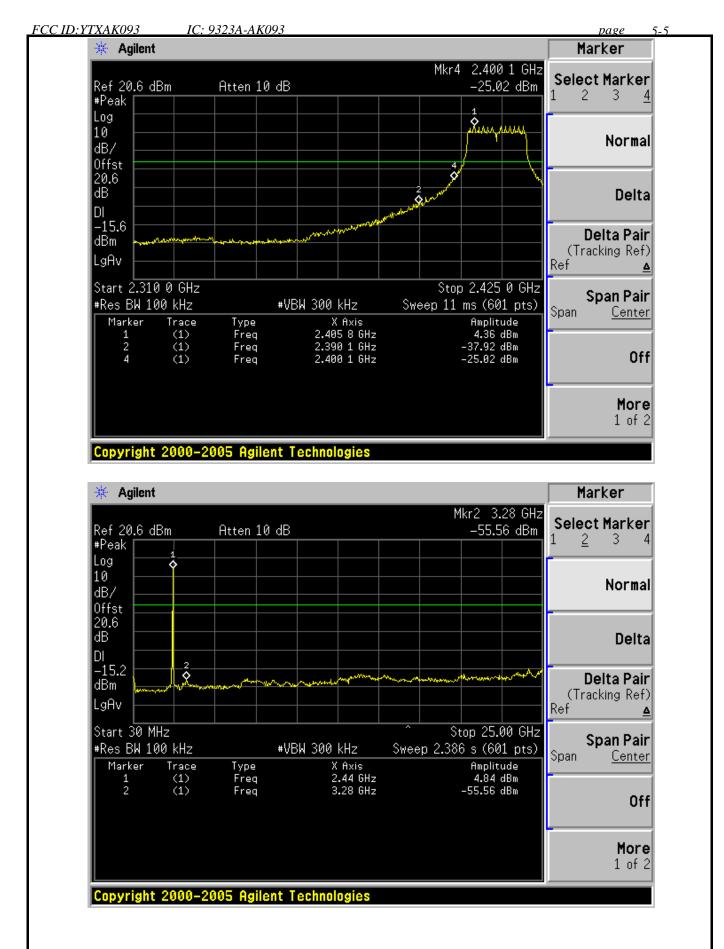




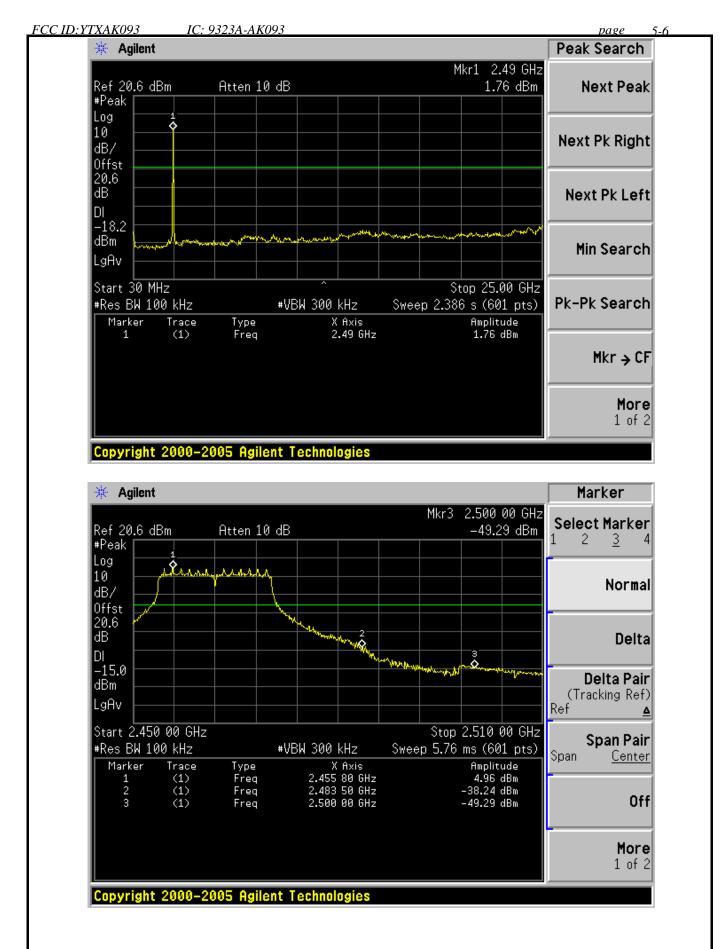




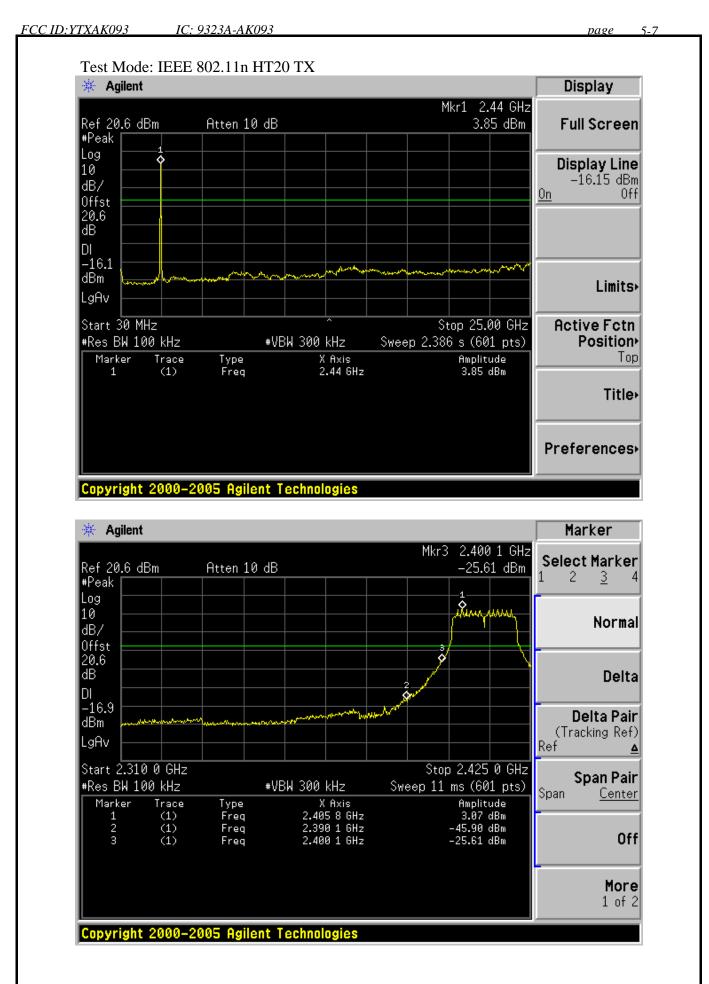




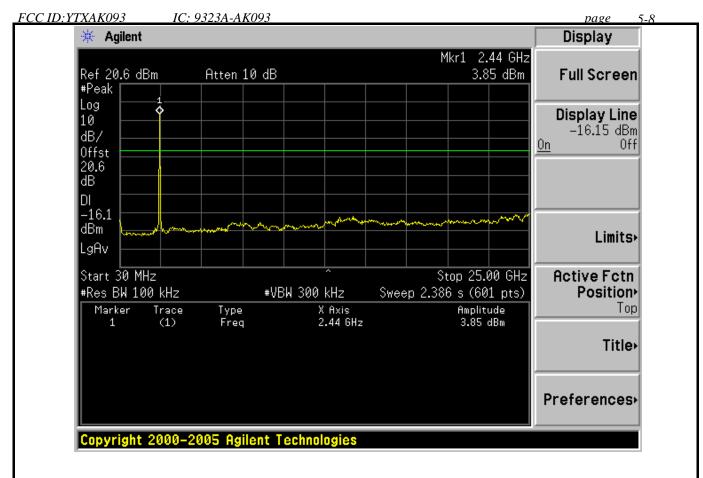


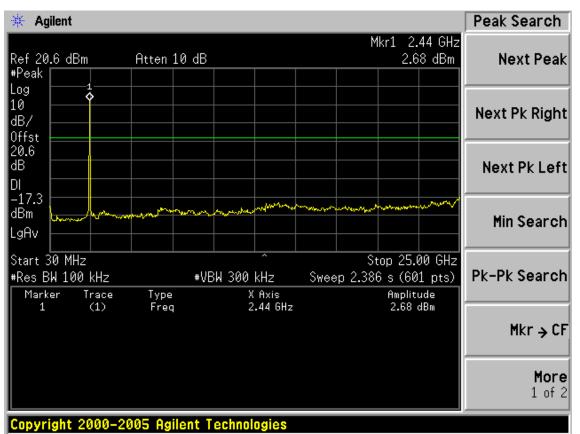




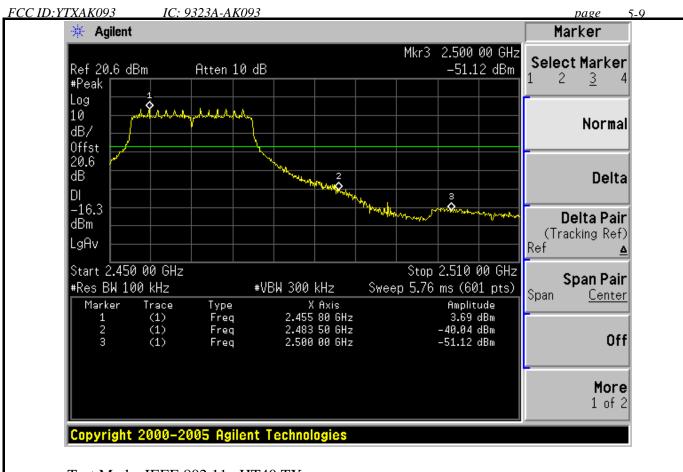


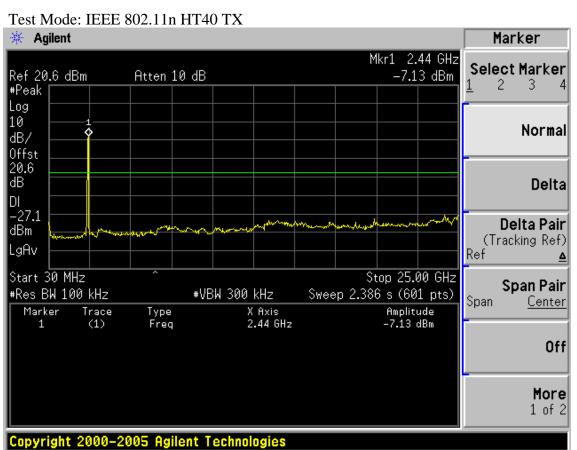




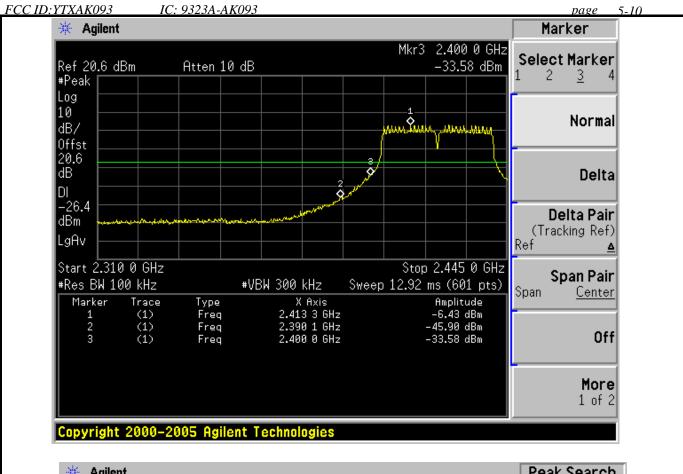


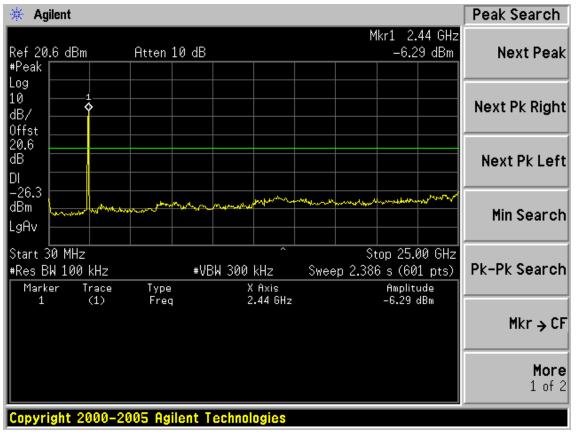




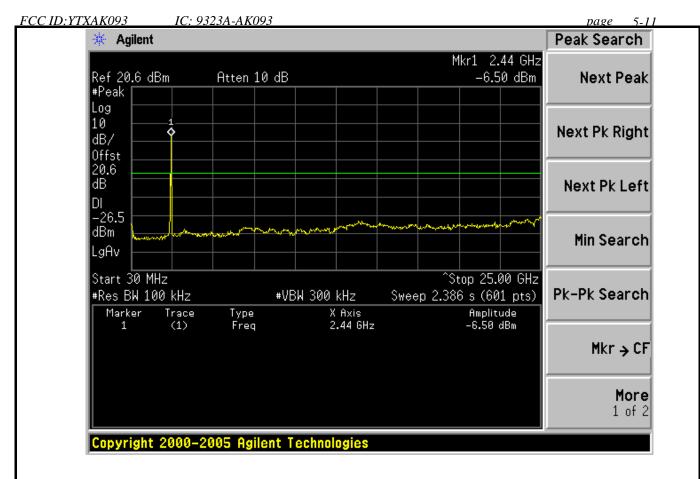


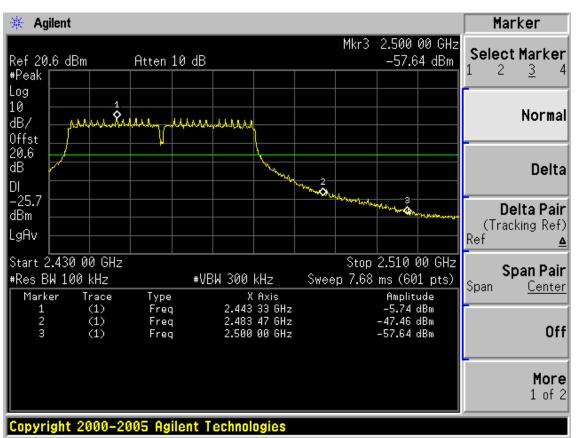














# 6. BAND EDGE COMPLIANCE TEST

# 6.1.Test Equipment

Item	Equipment	Manufacturer	Model No.	Serial No.	Last Cal.	Cal. Interval
1.	Spectrum Analyzer	Agilent	E4446A	US44300459	May.08,10	1 Year
2.	Horn Antenna	EMCO	3115	9607-4877	Nov.25, 09	1.5 Year
3.	Amplifier	Agilent	8449B	3008A02495	May.08, 10	1 Year
4.	RF Cable	Hubersuhner	SUCOFLEX102	28620/2	May.08,10	1 Year
5.	RF Cable	Hubersuhner	SUCOFLEX102	28618/2	May.08,10	1 Year
6.	RF Cable	Hubersuhner	SUCOFLEX102	28610/2	May.08,10	1 Year

# 6.2.Limit

All the lower and upper band-edges emissions appearing within 2310MHz to 2390MHz and 2483.5MHz to 2500MHz restricted frequency bands shall not exceed the limits shown in 15.209, all the other emissions outside operation frequency band 2400MHz to 2483.5MHz shall be at least 20dB below the fundamental emissions, or comply with 15.209 limits.

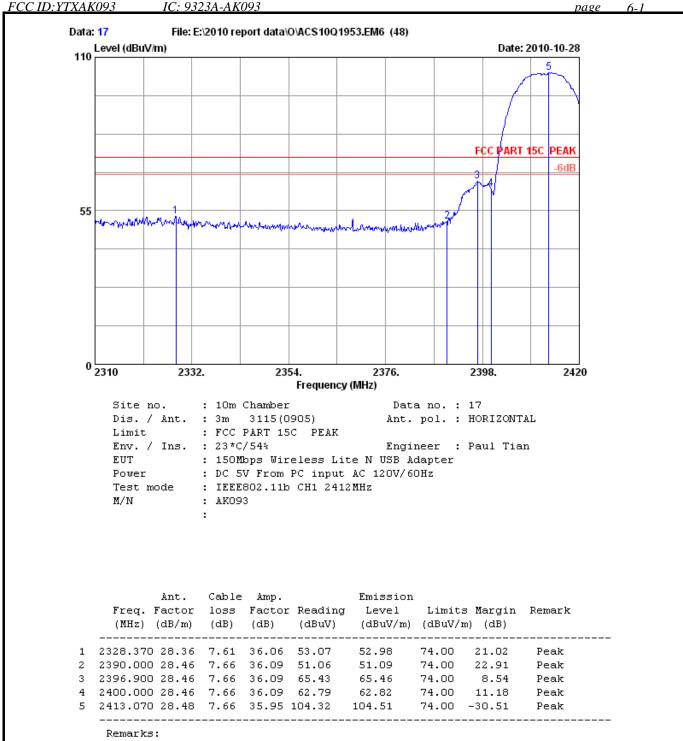
## 6.3. Test Produce

- 1. The EUT is placed on a turntable, which is 0.8m above the ground plane and worked at highest radiated power.
- 2. The turntable was rotated for 360 degrees to determine the position of maximum emission level.
- 3. EUT is set 3m away from the receiving antenna, which is varied from 1m to 4m to find out the highest emission.
- 4. Set the spectrum analyzer in the following setting in order to capture the lower and upper band-edges of the emission:
- (a) PEAK: RBW=1MHz; VBW=3MHz ; Sweep=AUTO
- (b) AVERAGE: RBW=1MHz; VBW=10Hz; Sweep=AUTO

# 6.4. Test Results

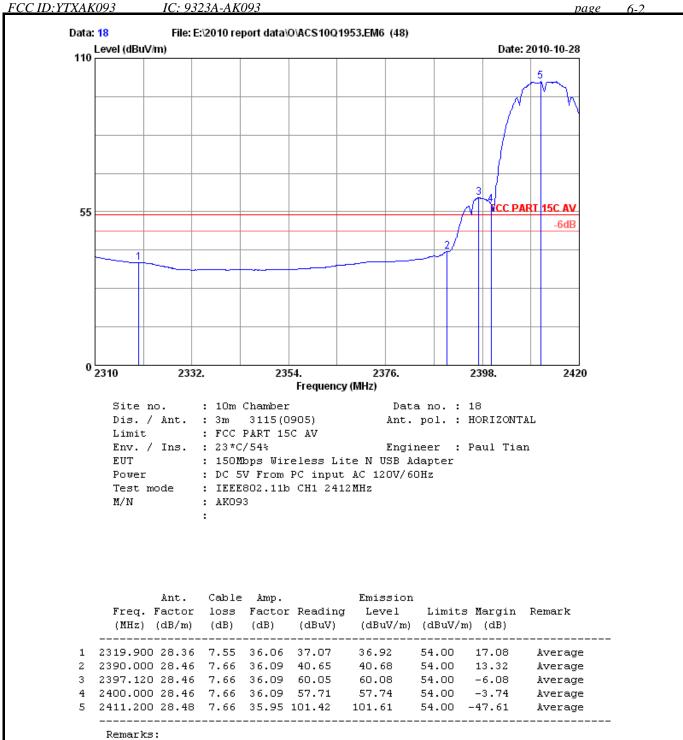
Pass (The testing data was attached in the next pages.)



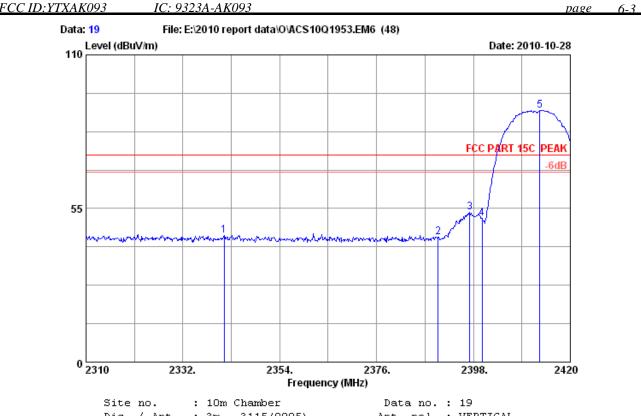


- 1. Emission Level= Antenna Factor + Cable Loss -Amp Factor + Reading.
- 2. The emission levels that are 20dB below the official limit are not reported.





- 1. Emission Level= Antenna Factor + Cable Loss -Amp Factor + Reading.
- 2. The emission levels that are 20dB below the official limit are not reported.



Dis. / Ant. : 3m 3115 (0905) Ant. pol. : VERTICAL

: FCC PART 15C PEAK Limit

Env. / Ins. : 23\*C/54% Engineer : Paul Tian

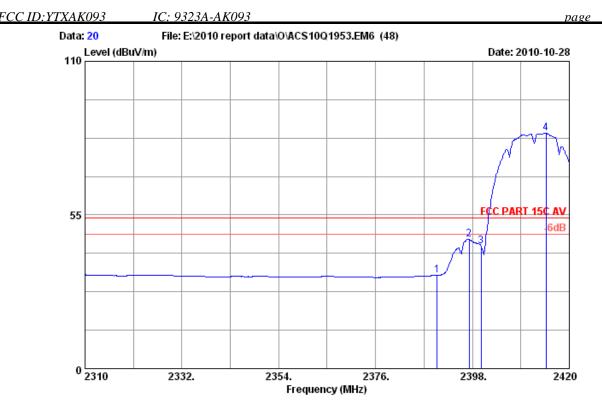
EUT : 150Mbps Wireless Lite N USB Adapter : DC 5V From PC input AC 120V/60Hz Power

Test mode : IEEE802.11b CH1 2412MHz

M/N: AKO93

	-	Factor	loss		Reading (dBuV)			_	Remark
1	2341.350	28.38	7.61	35.99	45.42	45.42	74.00	28.58	Peak
2	2390.000	28.46	7.66	36.09	44.84	44.87	74.00	29.13	Peak
3	2397.120	28.46	7.66	36.09	53.64	53.67	74.00	20.33	Peak
4	2400.000	28.46	7.66	36.09	51.51	51.54	74.00	22.46	Peak
5	2413.070	28.48	7.66	35.95	90.00	90.19	74.00 -	-16.19	Peak

- 1. Emission Level= Antenna Factor + Cable Loss -Amp Factor + Reading.
- 2. The emission levels that are 20dB below the official limit are not reported.



Site no. : 10m Chamber Data no. : 20
Dis. / Ant. : 3m 3115(0905) Ant. pol. : VERTICAL

Limit : FCC PART 15C AV

Env. / Ins. : 23 \*C/54% Engineer : Paul Tian

EUT : 150Mbps Wireless Lite N USB Adapter Power : DC 5V From PC input AC 120V/60Hz

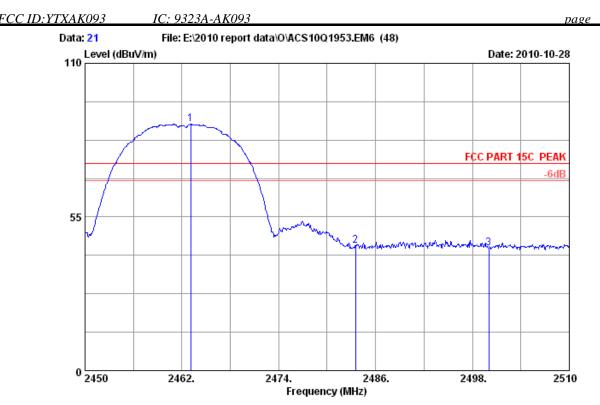
Test mode : IEEE802.11b CH1 2412MHz

M/N : AKO93

:

	-	Ant. Factor (dB/m)	Cable loss (dB)	•	Reading (dBuV)	Level (dBuV/m)			Remark
1	2390.000	28.46	7.66	36.09	33.41	33.44	54.00	20.56	Average
2	2397.230	28.46	7.66	36.09	46.23	46.26	54.00	7.74	Average
3	2400.000	28.46	7.66	36.09	43.73	43.76	54.00	10.24	Average
4	2414.720	28.48	7.66	35.95	84.15	84.34	54.00	-30.34	Average

- 1. Emission Level= Antenna Factor + Cable Loss -Amp Factor + Reading.
- 2. The emission levels that are 20dB below the official limit are not reported.



Site no. : 10m Chamber Data no. : 21
Dis. / Ant. : 3m 3115(0905) Ant. pol. : VERTICAL

Limit : FCC PART 15C PEAK

Env. / Ins. : 23 \*C/54% Engineer : Paul Tian

EUT : 150Mbps Wireless Lite N USB Adapter Power : DC 5V From PC input AC 120V/60Hz

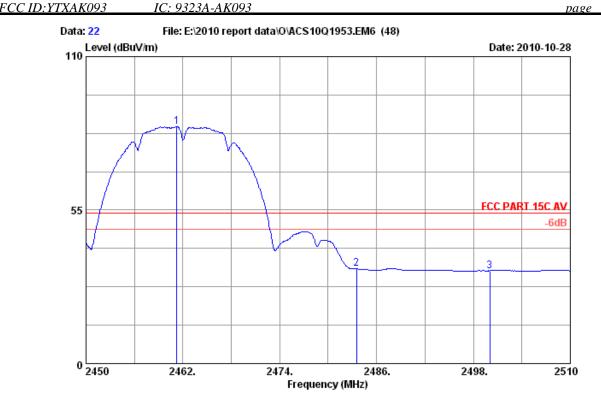
Test mode : IEEE802.11b CH11 2462MHz

M/N : AK093

:

	Ant.	Cable Amp.		Emission			
	Freq. Factor	loss Factor	Reading	Level	Limits	Margin	Remark
	(MHz) (dB/m)	(dB) (dB)	(dBuV)	(dBuV/m)	(dBuV/n	n) (dB)	
1	2463.080 28.55	7.72 36.02	87.92	88.17	74.00	-14.17	Peak
2	2483.500 28.58	7.77 35.97	44.37	44.75	74.00	29.25	Peak
3	2500.000 28.60	7.77 36.00	43.53	43.90	74.00	30.10	Peak

- 1. Emission Level= Antenna Factor + Cable Loss -Amp Factor + Reading.
- 2. The emission levels that are 20dB below the official limit are not reported.



Site no. : 10m Chamber Data no. : 22
Dis. / Ant. : 3m 3115(0905) Ant. pol. : VERTICAL

Limit : FCC PART 15C AV

Env. / Ins. : 23\*C/54% Engineer : Paul Tian

EUT : 150Mbps Wireless Lite N USB Adapter
Power : DC 5V From PC input AC 120V/60Hz

Test mode : IEEE802.11b CH11 2462MHz

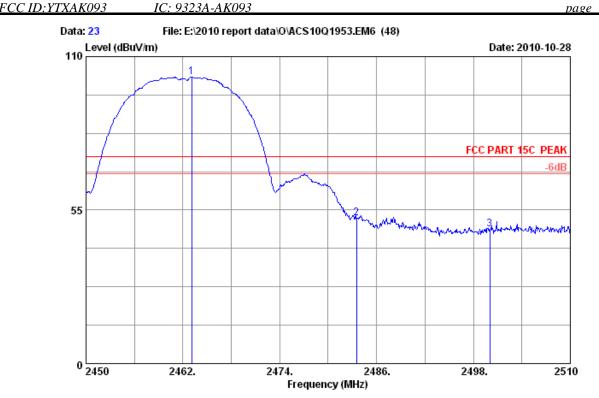
M/N : AKO93

:

	Freq. (MHz)			Factor	Reading (dBuV)	Emission Level (dBuV/m)	Limits	Margin	Remark
2	2461.220 2483.500 2500.000	28.58	7.77	35.97	33.52	84.85 33.90 33.24	54.00 54.00 54.00	-30.85 20.10 20.76	Average Average Average

- 1. Emission Level= Antenna Factor + Cable Loss -Amp Factor + Reading.
- 2. The emission levels that are 20dB below the official limit are not reported.





Site no. : 10m Chamber Data no. : 23

Dis. / Ant. : 3m 3115(0905) Ant. pol. : HORIZONTAL

: FCC PART 15C PEAK

Env. / Ins. : 23\*C/54% Engineer : Paul Tian

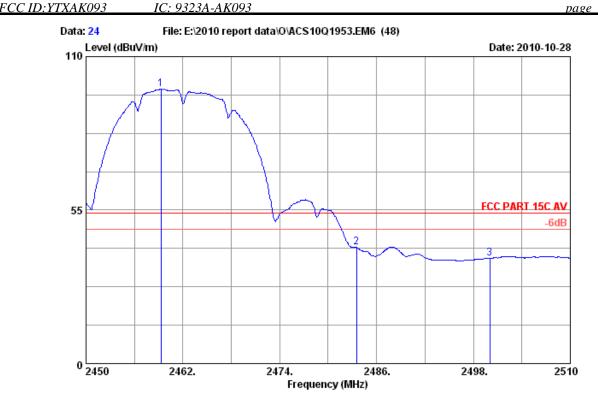
: 150Mbps Wireless Lite N USB Adapter : DC 5V From PC input AC 120V/60Hz

Test mode : IEEE802.11b CH11 2462MHz

: AK093 M/N

	Ant. eq. Factor Iz) (dB/m)	loss		Reading		Limit:	_	Remark	
2 2483.	080 28.55 500 28.58 000 28.60	7.77	35.97	51.69	102.60 52.07 47.99	74.00	-28.60 21.93 26.01	Peak Peak Peak	

- 1. Emission Level= Antenna Factor + Cable Loss -Amp Factor + Reading.
- 2. The emission levels that are 20dB below the official limit are not reported.



Site no. : 10m Chamber Data no. : 24
Dis. / Ant. : 3m 3115(0905) Ant. pol. : HORIZONTAL

Limit : FCC PART 15C AV

Env. / Ins. : 23\*C/54% Engineer : Paul Tian

EUT : 150Mbps Wireless Lite N USB Adapter Power : DC 5V From PC input AC 120V/60Hz

Test mode : IEEE802.11b CH11 2462MHz

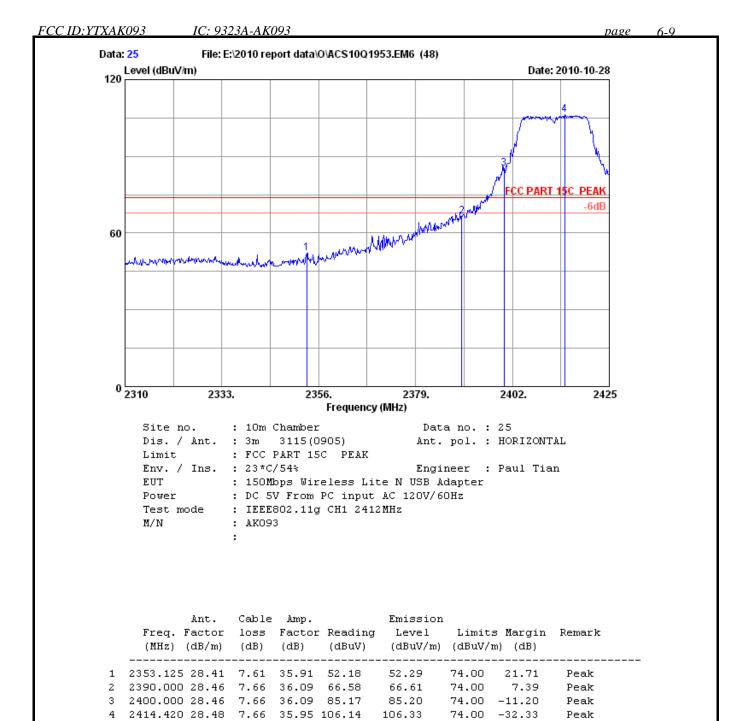
M/N : AK093

:

		tor loss	Amp. Factor (dB)	Reading (dBuV)	Emission Level (dBuV/m)	Margin ) (dB)	Remark
2	2459.300 28 2483.500 28 2500.000 28	.58 7.77	35.97	41.33	98.35 41.71 37.71	 -44.35 12.29 16.29	Average Average Average

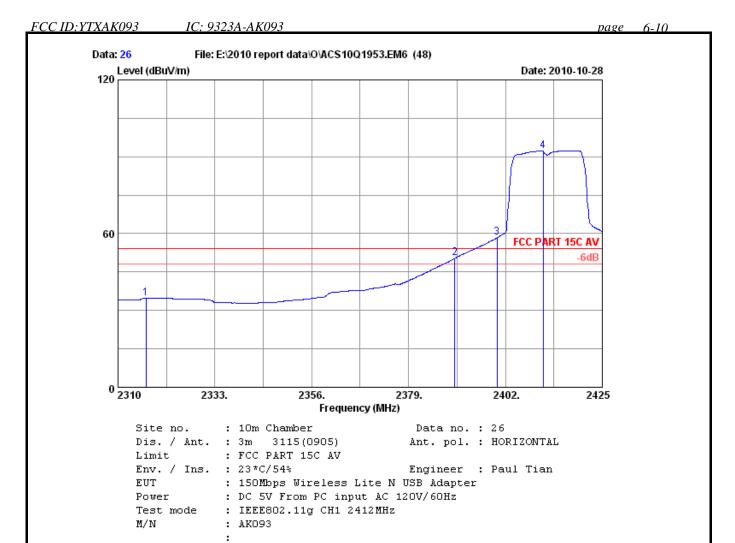
- 1. Emission Level= Antenna Factor + Cable Loss -Amp Factor + Reading.
- 2. The emission levels that are 20dB below the official limit are not reported.





- 1. Emission Level= Antenna Factor + Cable Loss -Amp Factor + Reading.
- 2. The emission levels that are 20dB below the official limit are not reported.





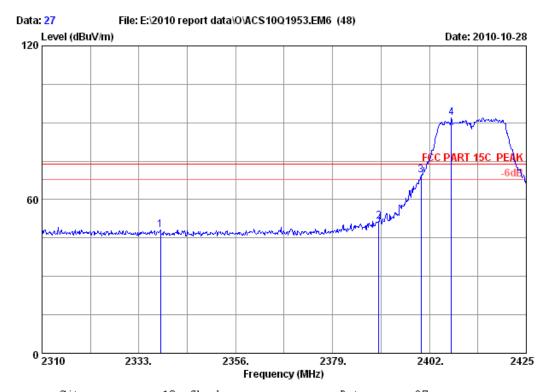
_	Freq.	Ant. Factor (dB/m)		Amp. Factor (dB)	Reading (dBuV)	Emission Level (dBuV/m)	Limits (dBuV/r	s Margin n) (dB)	Remark
2 2	2390.000 2400.000	28.33 28.46 28.46 28.46	7.66 7.66	36.09 36.09	34.87 50.45 58.39 92.20	34.89 50.48 58.42 92.39	54.00 54.00 54.00 54.00	19.11 3.52 -4.42 -38.39	lverage lverage lverage lverage

- 1. Emission Level= Antenna Factor + Cable Loss -Amp Factor + Reading.
- 2. The emission levels that are 20dB below the official limit are not reported.

page



FCC ID:YTXAK093



: 10m Chamber Data no.: 27 Dis. / Ant. : 3m 3115(0905) Ant. pol. : VERTICAL

IC: 9323A-AK093

Limit : FCC PART 15C PEAK Env. / Ins. : 23\*C/54% Engineer : Paul Tian

EUT : 150Mbps Wireless Lite N USB Adapter : DC 5V From PC input AC 120V/60Hz Power

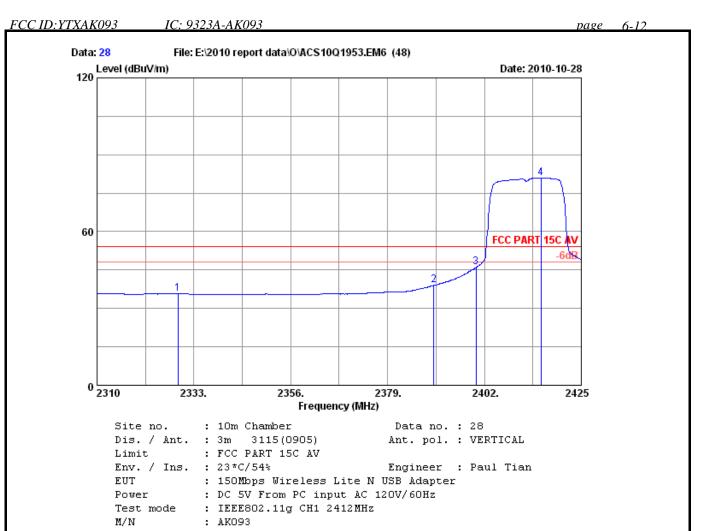
Test mode : IEEE802.11g CH1 2412MHz

M/N: AKO93

	-	Factor	loss		Reading (dBuV)			_	Remark
1	2338.175	5 28.38	7.61	35.99	47.99	47.99	74.00	26.01	Peak
2	2390.000	28.46	7.66	36.09	51.49	51.52	74.00	22.48	Peak
3	2400.000	28.46	7.66	36.09	69.33	69.36	74.00	4.64	Peak
4	2407.175	28.48	7.66	35.95	91.80	91.99	74.00	-17.99	Peak

- 1. Emission Level= Antenna Factor + Cable Loss -Amp Factor + Reading.
- 2. The emission levels that are 20dB below the official limit are not reported.

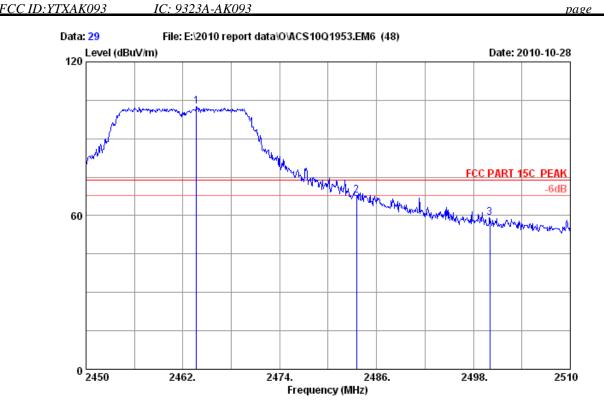




Freq. (MHz)	Ant. Factor (dB/m)	Cable loss (dB)		Reading (dBuV)	Emission Level (dBuV/m)		s Margin m) (dB)	Remark	_
1 2329.200 2 2390.000 3 2400.000 4 2415.45	28.46 28.46	7.66 7.66	36.09 36.09	35.85 38.93 46.03 80.75	35.76 38.96 46.06 80.94	54.00 54.00 54.00 54.00	18.24 15.04 7.94 -26.94	Average Average Average Average	

- 1. Emission Level= Antenna Factor + Cable Loss -Amp Factor + Reading.
- 2. The emission levels that are 20dB below the official limit are not reported.





Site no. : 10m Chamber Data no. : 29
Dis. / Ant. : 3m 3115(0905) Ant. pol. : HORIZONTAL

Limit : FCC PART 15C PEAK

Env. / Ins. : 23\*C/54% Engineer : Paul Tian

EUT : 150Mbps Wireless Lite N USB Adapter Power : DC 5V From PC input AC 120V/60Hz

Test mode : IEEE802.11g CH11 2462MHz

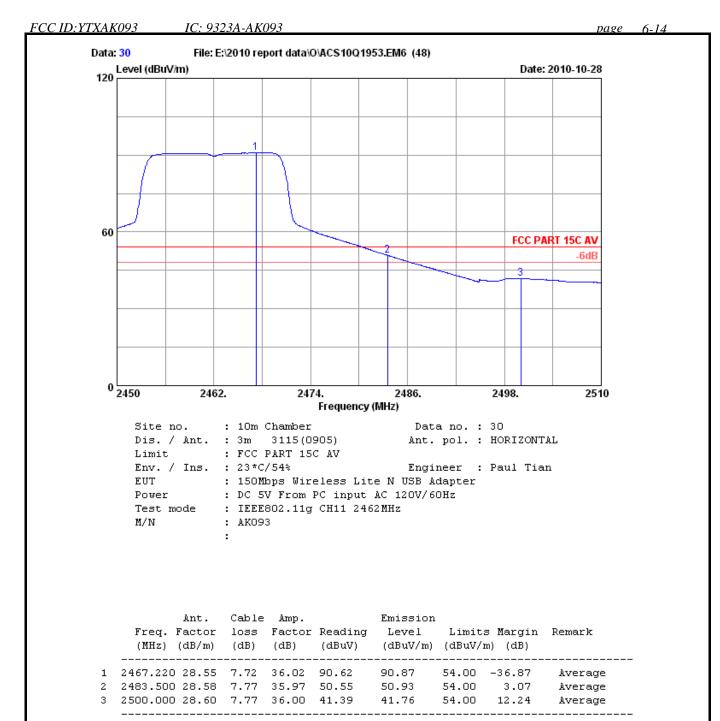
M/N : AK093

:

	-	Factor	loss			Emission Level (dBuV/m)		_	Remark	
2	2463.680 2483.500 2500.000	28.58	7.77	35.97	67.34	102.65 67.72 59.16	74.00	-28.65 6.28 14.84	Peak Peak Peak	

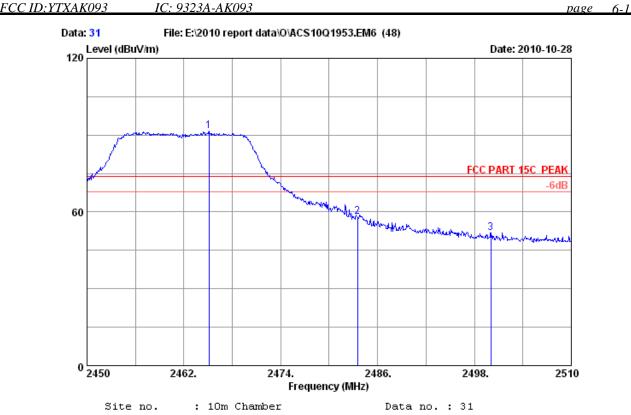
- 1. Emission Level= Antenna Factor + Cable Loss -Amp Factor + Reading.
- 2. The emission levels that are 20dB below the official limit are not reported.





- 1. Emission Level= Antenna Factor + Cable Loss -Amp Factor + Reading.
- 2. The emission levels that are 20dB below the official limit are not reported.





Site no. : 10m Chamber Dis. / Ant. : 3m 3115(09 3115 (0905) Ant. pol. : VERTICAL

: FCC PART 15C PEAK Limit

Engineer : Paul Tian Env. / Ins. : 23\*C/54%

: 150Mbps Wireless Lite N USB Adapter : DC 5V From PC input AC 120V/60Hz Power

Test mode : IEEE802.11g CH11 2462MHz

M/N: AKO93

-	Factor		Factor	Reading (dBuV)		Limits Margin (dBuV/m) (dB)	Remark
1 2465.12 2 2483.50 3 2500.00	28.58	7.77	35.97	57.74	91.58 58.12 51.89	74.00 -17.58 74.00 15.88 74.00 22.11	Peak Peak Peak

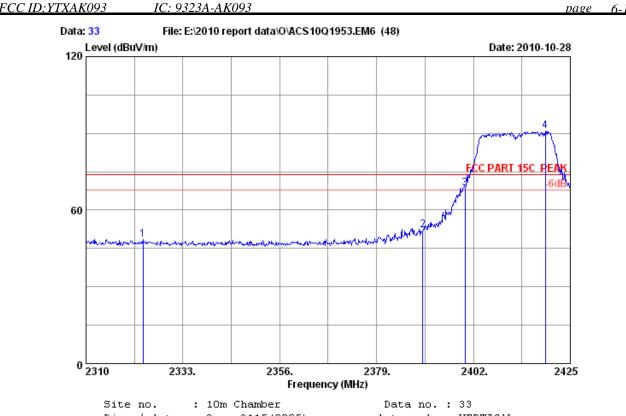
- 1. Emission Level= Antenna Factor + Cable Loss -Amp Factor + Reading.
- 2. The emission levels that are 20dB below the official limit are not reported.



	Frea.		Cable loss	•	Reading	Emission Level		Margin	Remark
	(MHz)	(dB/m)	(dB)		(dBuV)	(dBuV/m)		_	
1	2464.520	28.55	7.72	36.02	81.20	81.45	54.00	-27.45	Average
2	2483.500	28.58	7.77	35.97	41.34	41.72	54.00	12.28	Average
3	2500.000	28.60	7.77	36.00	37.30	37.67	54.00	16.33	Average

- 1. Emission Level= Antenna Factor + Cable Loss -Amp Factor + Reading.
- 2. The emission levels that are 20dB below the official limit are not reported.





Dis. / Ant. : 3m 3115 (0905) Ant. pol. : VERTICAL

: FCC PART 15C PEAK

Env. / Ins. : 23\*C/54% Engineer : Paul Tian

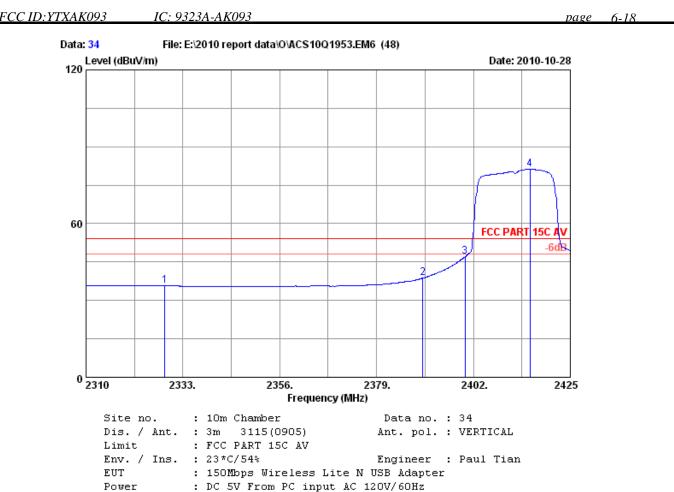
: 150Mbps Wireless Lite N USB Adapter : DC 5V From PC input AC 120V/60Hz : IEEE802.11n HT20 CH1 2412MHz Test mode

: AKO93 M/N

	-			Factor	Reading (dBuV)	Emission Level (dBuV/m)	Limit	_	Remark	
_	2323.570					48.60	74.00	25.40	Peak	
2	2390.000	28.46	7.66	36.09	52.06	52.09	74.00	21.91	Peak	
3	2400.000	28.46	7.66	36.09	68.61	68.64	74.00	5.36	Peak	
4	2419.020	28.48	7.66	35.95	90.60	90.79	74.00	-16.79	Peak	

- 1. Emission Level= Antenna Factor + Cable Loss -Amp Factor + Reading.
- 2. The emission levels that are 20dB below the official limit are not reported.





	Freq. (MHz)	Ant. Factor (dB/m)	Cable loss (dB)	•	Reading (dBuV)	Emission Level (dBuV/m)		s Margin m) (dB)	Remark
2	2328.745 2390.000 2400.000 2415.455	28.46	7.66 7.66	36.09 36.09	35.77 38.69 47.13 81.05	35.68 38.72 47.16 81.24	54.00 54.00 54.00 54.00	18.32 15.28 6.84 -27.24	lverage lverage lverage lverage

Test mode : IEEE802.11n HT20 CH1 2412MHz

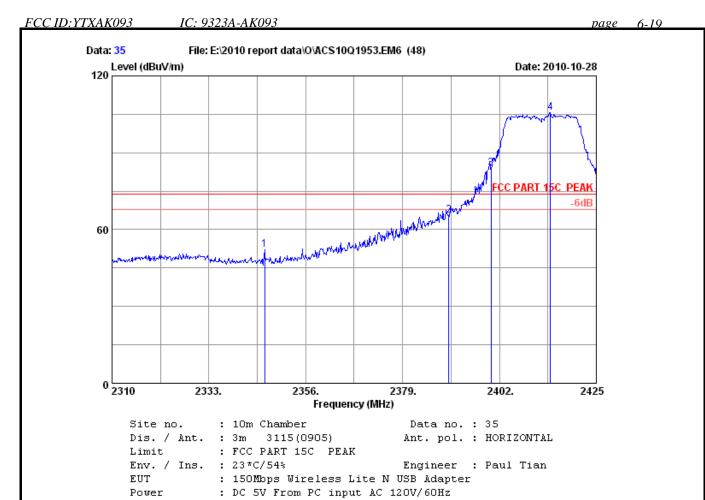
: AKO93

# Remarks:

M/N

- 1. Emission Level= Antenna Factor + Cable Loss -Amp Factor + Reading.
- 2. The emission levels that are 20dB below the official limit are not reported.





Freq. (MHz)				Reading (dBuV)	Emission Level (dBuV/m)		s Margin m) (dB)	Remark	
1 2346.225 2 2390.000 3 2400.000 4 2414.075	28.46	7.66 7.66	36.09 36.09	65.33 83.72	52.19 65.36 83.75 105.60	74.00 74.00 74.00 74.00	21.81 8.64 -9.75 -31.60	Peak Peak Peak Peak	

Test mode : IEEE802.11n HT20 CH1 2412MHz

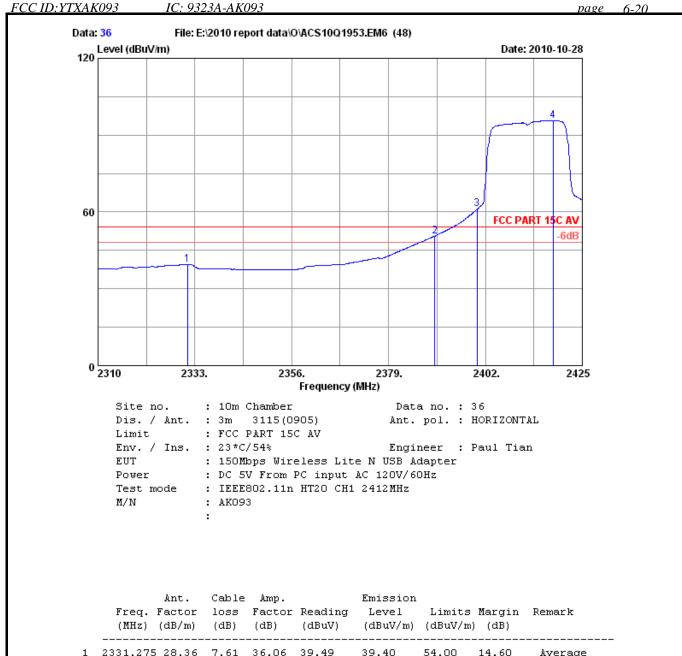
: AKO93

# Remarks:

M/N

- 1. Emission Level= Antenna Factor + Cable Loss -Amp Factor + Reading.
- 2. The emission levels that are 20dB below the official limit are not reported.

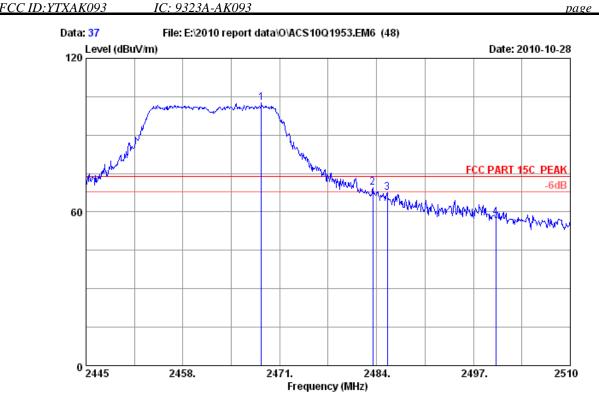




Freq. (MHz)			Amp. Factor (dB)	Reading (dBuV)	Emission Level (dBuV/m)			Remark
1 2331.27 2 2390.00 3 2400.00 4 2418.10	0 28.46 0 28.46	7.66 7.66	36.09 36.09	50.59 61.10	39.40 50.62 61.13 95.58	54.00	14.60 3.38 -7.13 -41.58	Average Average Average Average

- 1. Emission Level= Antenna Factor + Cable Loss -Amp Factor + Reading.
- 2. The emission levels that are 20dB below the official limit are not reported.





Site no. : 10m Chamber Data no. : 37

Dis. / Ant. : 3m 3115 (0905) Ant. pol. : HORIZONTAL

: FCC PART 15C PEAK Limit

Engineer : Paul Tian Env. / Ins. : 23\*C/54%

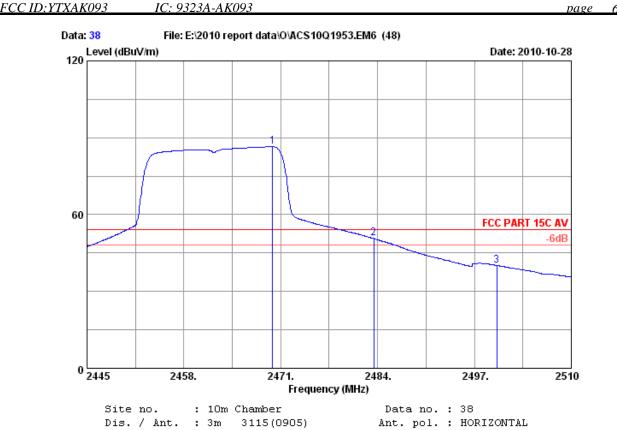
: 150Mbps Wireless Lite N USB Adapter : DC 5V From PC input AC 120V/60Hz Power Test mode : IEEE802.11n HT20 CH11 2462MHz

M/N: AKO93

1 2468.530 28.55 7.72 36.02 102.27 102.52 74.00 -28.52 Peak 2 2483.500 28.58 7.77 35.97 69.20 69.58 74.00 4.42 Peak	 Remark	_		Level (dBuV/m)	Reading (dBuV)			. Factor (dB/m)	-	
3 2485.430 28.58 7.77 35.97 66.99 67.37 74.00 6.63 Peak	Peak	4.42	74.00	69.58	69.20	35.97	7.77	00 28.58	2483.500	2
4 2500.000 28.60 7.77 36.00 57.37 57.74 74.00 16.26 Peak	Peak	6.63	74.00	67.37	66.99	35.97	7.77	30 28.58	2485.430	3

- 1. Emission Level= Antenna Factor + Cable Loss -Amp Factor + Reading.
- 2. The emission levels that are 20dB below the official limit are not reported.



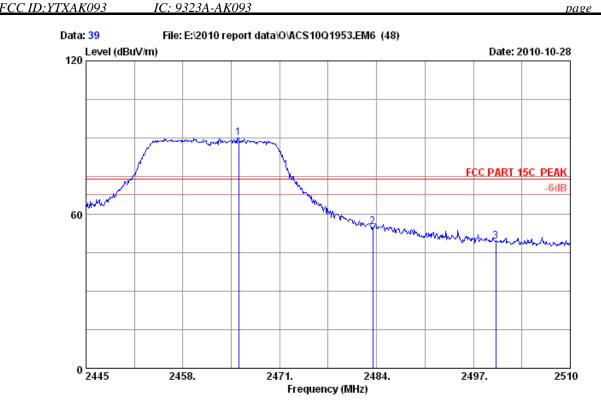


Site no.	: 10m Chamber	Data no. : 38
Dis. / Ant.	: 3m 3115(0905)	Ant. pol. : HORIZONTAL
Limit	: FCC PART 15C AV	
Env. / Ins.	: 23*C/54%	Engineer : Paul Tian
EUT	: 150Mbps Wireless Lite	N USB Adapter
Power	: DC 5V From PC input AC	120V/60Hz
Test mode	: IEEE802.11n HT20 CH11	2462MHz
M/N	: AKO93	

Freq. F		Cable loss (dB)		Reading (dBuV)	Emission Level (dBuV/m)		_	Remark
2469.895 2483.500 2500.000	28.58	7.77	35.97	86.23 50.33 39.76	86.48 50.71 40.13	54.00 54.00 54.00	-32.48 3.29 13.87	lverage lverage lverage

- 1. Emission Level= Antenna Factor + Cable Loss -Amp Factor + Reading.
- 2. The emission levels that are 20dB below the official limit are not reported.





: 10m Chamber Data no.: 39 Dis. / Ant. : 3m 3115(0905) Ant. pol. : VERTICAL

Limit : FCC PART 15C PEAK

Env. / Ins. : 23\*C/54% Engineer : Paul Tian

EUT : 150Mbps Wireless Lite N USB Adapter : DC 5V From PC input AC 120V/60Hz Power Test mode : IEEE802.11n HT20 CH11 2462MHz

M/N: AKO93

	-	Factor	loss		Reading	Emission Level (dBuV/m)	Limit	_	Remark	
1	2465.475	28.55	7.72	36.02	89.72	89.97	74.00	-15.97	Peak	
2	2483.500	28.58	7.77	35.97	54.86	55.24	74.00	18.76	Peak	
3	2500.000	28.60	7.77	36.00	49.19	49.56	74.00	24.44	Peak	

- 1. Emission Level= Antenna Factor + Cable Loss -Amp Factor + Reading.
- 2. The emission levels that are 20dB below the official limit are not reported.

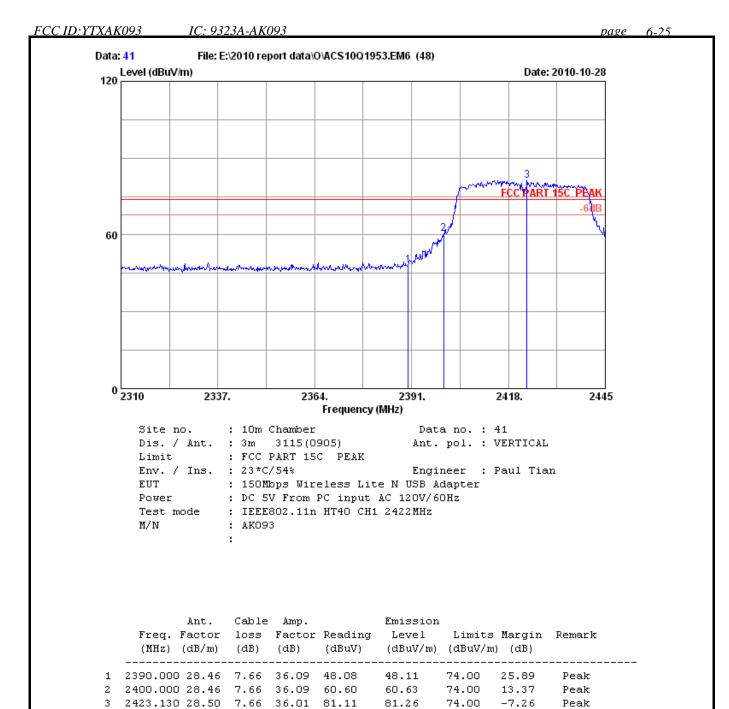




Freq.		Cable loss (dB)	•	Reading (dBuV)	Emission Level (dBuV/m)	Limits		Remark
1 2467.10 2 2483.50 3 2500.00	28.58	7.77	35.97	42.21	79.53 42.59 37.94	54.00 54.00 54.00	-25.53 11.41 16.06	Average Average Average

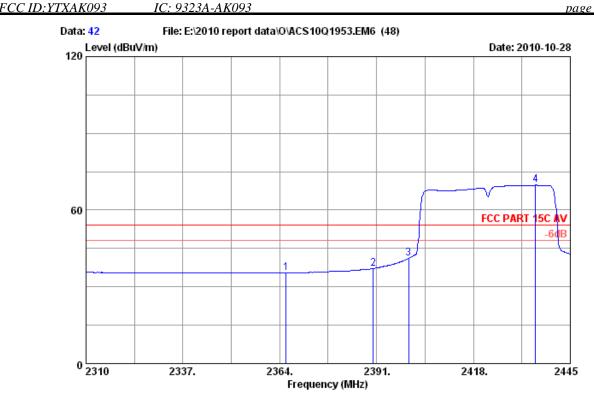
- 1. Emission Level= Antenna Factor + Cable Loss -Amp Factor + Reading.
- 2. The emission levels that are 20dB below the official limit are not reported.





- 1. Emission Level= Antenna Factor + Cable Loss -Amp Factor + Reading.
- 2. The emission levels that are 20dB below the official limit are not reported.





Site no. : 10m Chamber Data no.: 42 Dis. / Ant. : 3m 3115(0905) Ant. pol. : VERTICAL

: FCC PART 15C AV

Env. / Ins. : 23\*C/54% Engineer : Paul Tian

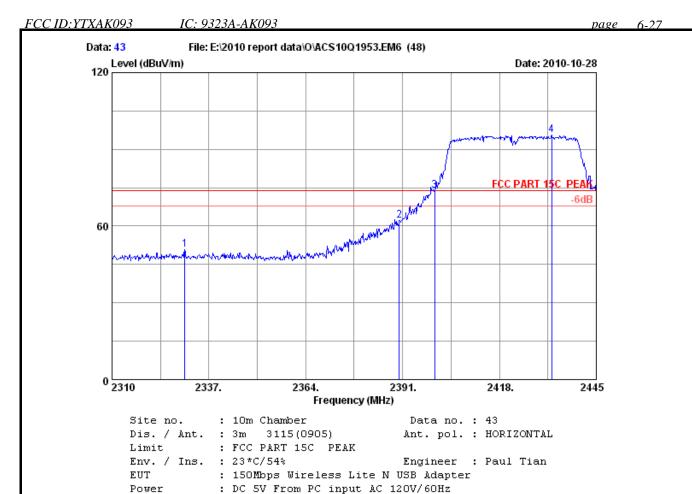
: 150Mbps Wireless Lite N USB Adapter : DC 5V From PC input AC 120V/60Hz : IEEE802.11n HT40 CH1 2422MHz Test mode

: AKO93 M/N

	Freq. (MHz)	Ant. Factor (dB/m)	Cable loss (dB)	•	Reading (dBuV)	Emission Level (dBuV/m)		s Margin n) (dB)	Remark
1	2365.75	28.41	7.61	35.91	35.43	35.54	54.00	18.46	Average
2	2390.000	28.46	7.66	36.09	37.09	37.12	54.00	16.88	Average
3	2400.000	28.46	7.66	36.09	41.14	41.17	54.00	12.83	Average
4	2435.280	28.50	7.72	36.01	69.54	69.75	54.00	-15.75	Average

- 1. Emission Level= Antenna Factor + Cable Loss -Amp Factor + Reading.
- 2. The emission levels that are 20dB below the official limit are not reported.





Freq. (MHz)	Ant. Factor (dB/m)	Cable loss (dB)	•	Reading (dBuV)	Emission Level (dBuV/m)			Remark
1 2330.250 2 2390.000 3 2400.000 4 2432.580	28.46 28.46	7.66 7.66	36.09 36.09	62.03 73.99	50.76 62.06 74.02 95.66	74.00 74.00 74.00	23.24 11.94 -0.02	Peak Peak Peak Peak

: IEEE802.11n HT40 CH1 2422MHz

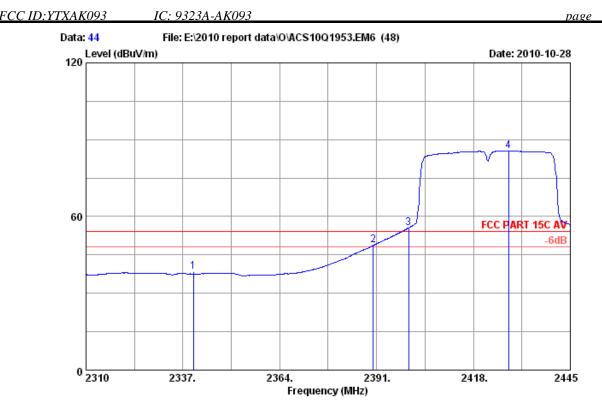
## Remarks:

Test mode

M/N

: AKO93

- 1. Emission Level= Antenna Factor + Cable Loss -Amp Factor + Reading.
- 2. The emission levels that are 20dB below the official limit are not reported.



Site no. : 10m Chamber Data no. : 44

Dis. / Ant. : 3m 3115(0905) Ant. pol. : HORIZONTAL

Limit : FCC PART 15C AV

Env. / Ins. : 23 \*C/54% Engineer : Paul Tian

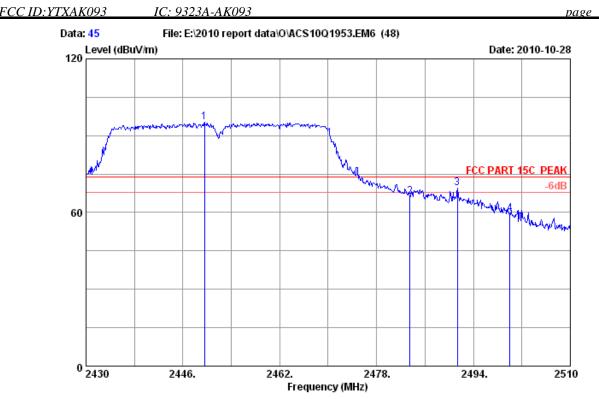
EUT : 150Mbps Wireless Lite N USB Adapter
Power : DC 5V From PC input AC 120V/60Hz
Test mode : IEEE802.11n HT40 CH1 2422MHz

M/N : AK093

:

	Freq. (MHz)	Ant. Factor (dB/m)	Cable loss (dB)	•	Reading (dBuV)	Emission Level (dBuV/m)	Limits (dBuV/m	Margin ) (dB)	Remark
2	2339.970 2390.000 2400.000 2427.855	28.46 28.46	7.66 7.66	36.09 36.09	38.29 48.62 55.57 85.29	38.29 48.65 55.60 85.50	54.00 54.00 54.00 54.00	15.71 5.35 -1.60 -31.50	Average Average Average Average

- 1. Emission Level= Antenna Factor + Cable Loss -Amp Factor + Reading.
- 2. The emission levels that are 20dB below the official limit are not reported.



Site no. : 10m Chamber Data no. : 45

Dis. / Ant. : 3m 3115(0905) Ant. pol. : HORIZONTAL

Limit : FCC PART 15C PEAK

Env. / Ins. : 23\*C/54% Engineer : Paul Tian

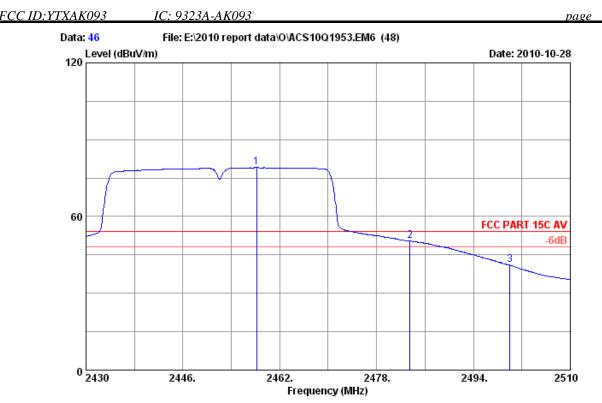
EUT : 150Mbps Wireless Lite N USB Adapter
Power : DC 5V From PC input AC 120V/60Hz
Test mode : IEEE802.11n HT40 CH7 2452MHz

M/N : AK093

:

	Ant. Freq. Facto (MHz) (dB/m		Factor	Reading		Limits	_	Remark	
1	2449.600 28.5	3 7.72	36.06	94.92	95.11	74.00	-21.11	Peak	
2	2483.500 28.5	3 7.77	35.97	65.85	66.23	74.00	7.77	Peak	
3	2491.360 28.6	7.77	36.00	69.22	69.59	74.00	4.41	Peak	
4	2500.000 28.6	7.77	36.00	59.26	59.63	74.00	14.37	Peak	

- 1. Emission Level= Antenna Factor + Cable Loss -Amp Factor + Reading.
- 2. The emission levels that are 20dB below the official limit are not reported.



Site no. : 10m Chamber Data no. : 46

Dis. / Ant. : 3m 3115 (0905) Ant. pol. : HORIZONTAL

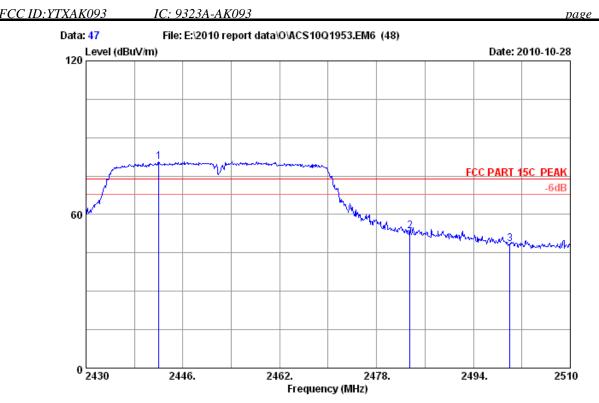
Limit : FCC PART 15C AV Env. / Ins. : 23\*C/54% Engineer : Paul Tian

EUT : 150Mbps Wireless Lite N USB Adapter : DC 5V From PC input AC 120V/60Hz Power Test mode : IEEE802.11n HT40 CH7 2452MHz

M/N: AKO93

	Ant. Freq. Factor (MHz) (dB/m)		Amp. Factor (dB)	Reading (dBuV)	Emission Level (dBuV/m)			Remark
2	2458.160 28.55 2483.500 28.58 2500.000 28.60	7.77	35.97	50.08	79.08 50.46 40.96	54.00 54.00 54.00	-25.08 3.54 13.04	Average Average Average

- 1. Emission Level= Antenna Factor + Cable Loss -Amp Factor + Reading.
- 2. The emission levels that are 20dB below the official limit are not reported.



Site no. : 10m Chamber Data no.: 47 Dis. / Ant. : 3m 3115 (0905) Ant. pol. : VERTICAL

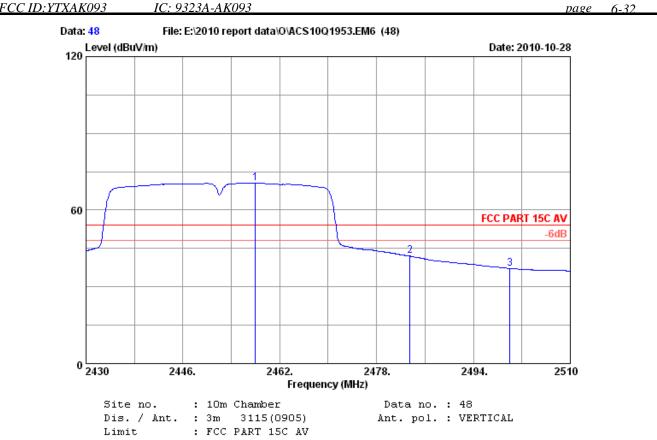
Limit : FCC PART 15C PEAK Env. / Ins. : 23\*C/54% Engineer : Paul Tian

EUT : 150Mbps Wireless Lite N USB Adapter : DC 5V From PC input AC 120V/60Hz Power Test mode : IEEE802.11n HT40 CH7 2452MHz

M/N: AKO93

	Ant. Freq. Factor (MHz) (dB/m)		Factor	_		Limits	_	Remark
2	2442.000 28.53 2483.500 28.58 2500.000 28.60	7.77	35.97	53.24	80.55 53.62 48.46	74.00 74.00 74.00	-6.55 20.38 25.54	Peak Peak Peak

- 1. Emission Level= Antenna Factor + Cable Loss -Amp Factor + Reading.
- 2. The emission levels that are 20dB below the official limit are not reported.



Env. / Ins. : 23\*C/54% Engineer : Paul Tian

EUT : 150Mbps Wireless Lite N USB Adapter
Power : DC 5V From PC input AC 120V/60Hz
Test mode : IEEE802.11n HT40 CH7 2452MHz

M/N : AK093

:

	-				_	Emission Level (dBuV/m)	Limits Mar (dBuV/m) (d	_	Remark
2	2458.000 2483.500 2500.000	28.58	7.77	35.97	41.60	70.52 41.98 37.19	54.00 -16 54.00 12 54.00 16	.02	Average Average Average

- 1. Emission Level= Antenna Factor + Cable Loss -Amp Factor + Reading.
- 2. The emission levels that are 20dB below the official limit are not reported.



# 7. 6dB and 99% Bandwidth Test

# 7.1.Test Equipment

Item	Equipment	Manufacturer	Model No.	Serial No.	Last Cal.	Cal. Interval
1.	Spectrum Analyzer	Agilent	E4446A	US44300459	May.08,10	1 Year
2.	Attenuator	Agilent	8491B	MY39262165	May.08,10	1 Year
3.	RF Cable	Hubersuhner	SUCOFLEX102	28618/2	May.08,10	1Year

#### 7.2.Limit

For direct sequence systems, the minimum 6dB bandwidth shall be at least 500kHz

#### 7.3.Test Procedure

The transmitter output was connected to a spectrum analyzer, The bandwidth of the fundamental frequency was measured by spectrum analyzer with 100kHz RBW and 300 kHz VBW. The 6dB bandwidth is defined as the total spectrum the power of which is higher than peak power minus 6dB.

### 7.4.Test Results

EUT:150Mbps Wireless Lit	EUT:150Mbps Wireless Lite N USB Adapter			
M/N:AK093				
Test date:2010-10-28	Pressure: 100.6 kpa	Humidity: 60 %		
Tested by:Sunny-lu	Test site: RF Site	Temperature : 25°C		

Cable loss: 0.6 dB		Attenuator loss: 20 dB	Antenna Gain: 2.12 dBi	
Test Mode	СН	6dB bandwidth (MHz)	Limit (KHz)	
	CH1	12.183	>500	
11b	CH6	12.222	>500	
	CH11	12.247	>500	
	CH1	16.906	>500	
11g	CH6	17.179	>500	
	CH11	16.759	>500	
11	CH1	17.910	>500	
11n HT20	CH6	17.996	>500	
11120	CH11	18.268	>500	
11	CH1	36.803	>500	
11n HT40	CH4	36.810	>500	
11140	CH7	36.591	>500	
Conclusion: PASS				



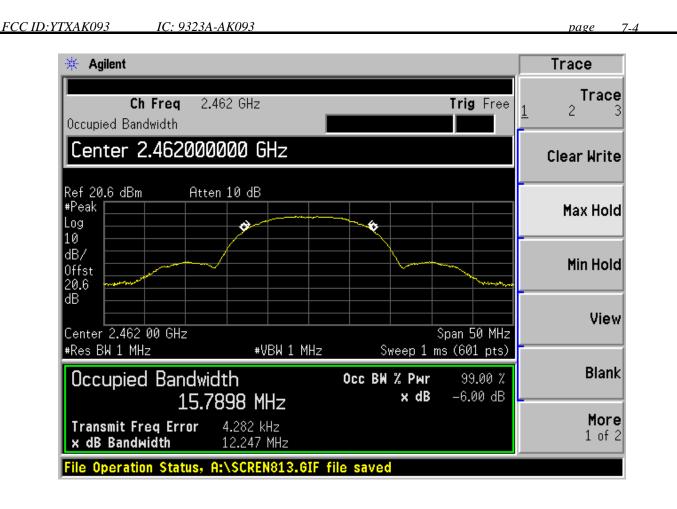
# AUDIX Technology (Shenzhen) Co., Ltd.

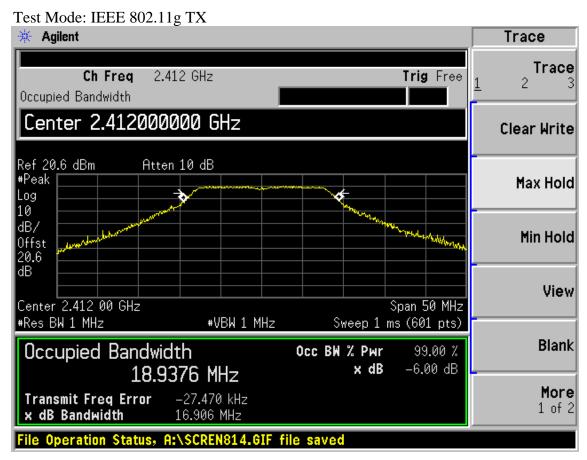
D:YTXAK093	IC: 9323A-AK093		раде
Test Mode	СН	99% bandwidth (MHz)	Limit (KHz)
	CH1	15.78	N/A
11b	СН6	15.79	N/A
	CH11	15.79	N/A
	CH1	18.94	N/A
11g	СН6	19.07	N/A
	CH11	18.78	N/A
1.1	CH1	19.82	N/A
11n HT20	СН6	19.79	N/A
H120	CH11	20.26	N/A
1.1	CH1	37.65	N/A
11n HT40	CH4	37.88	N/A
	CH7	37.47	N/A



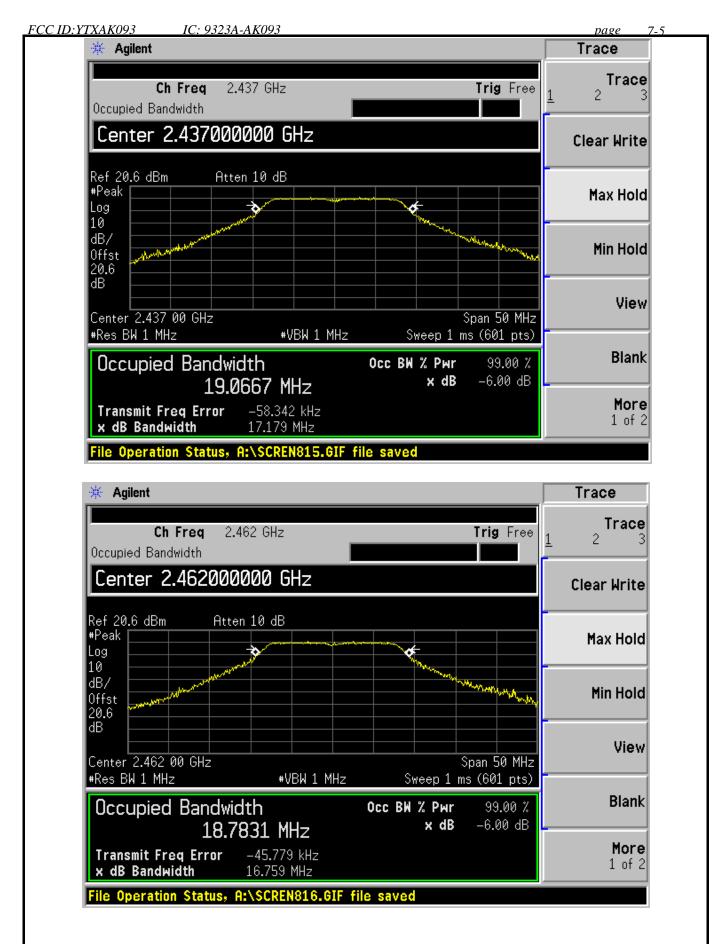




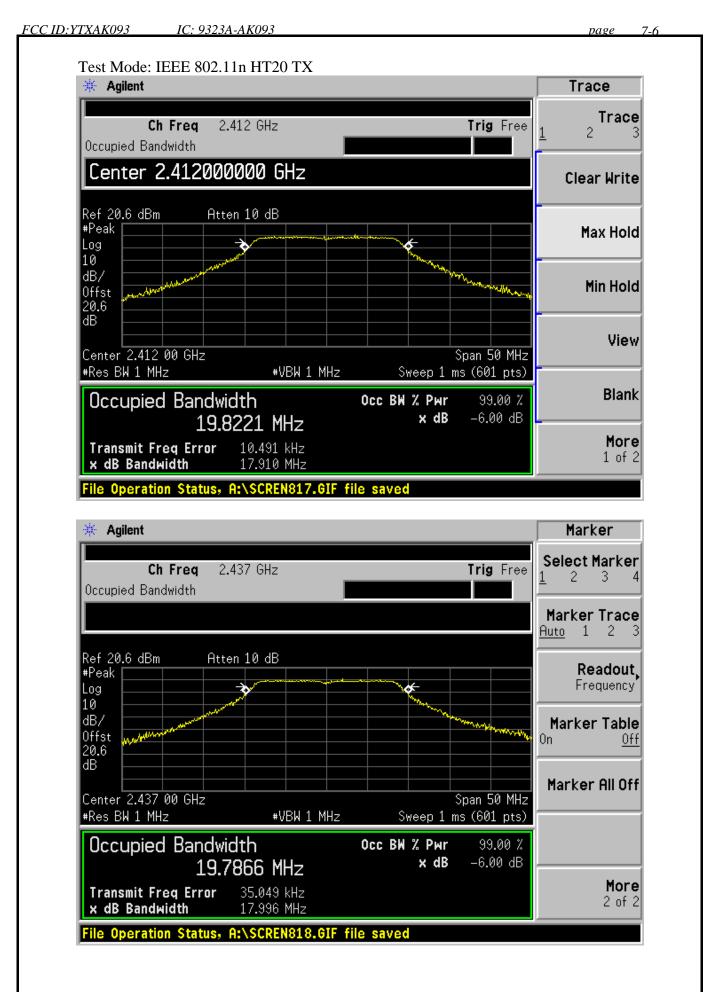




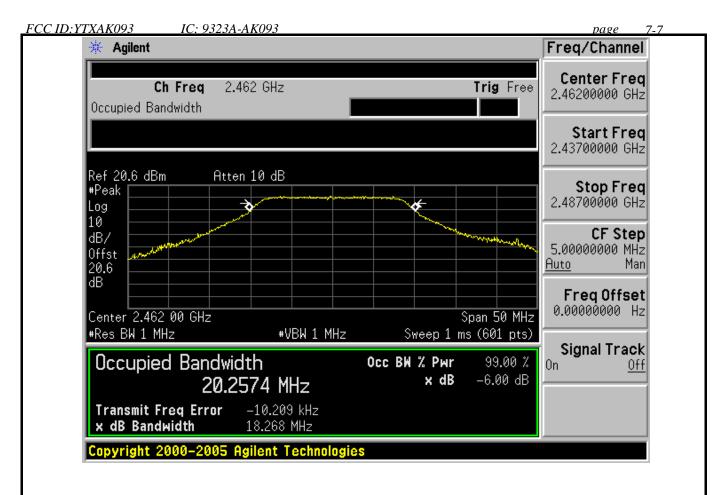




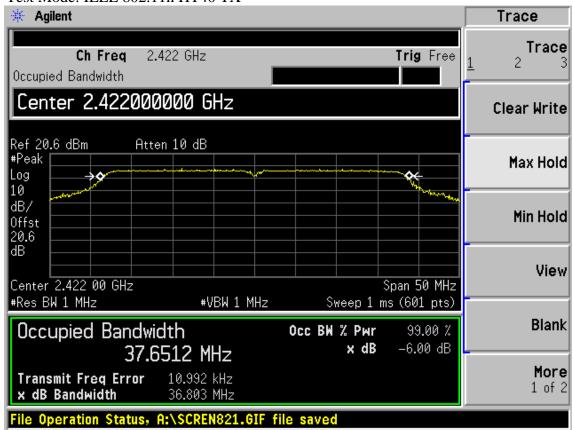




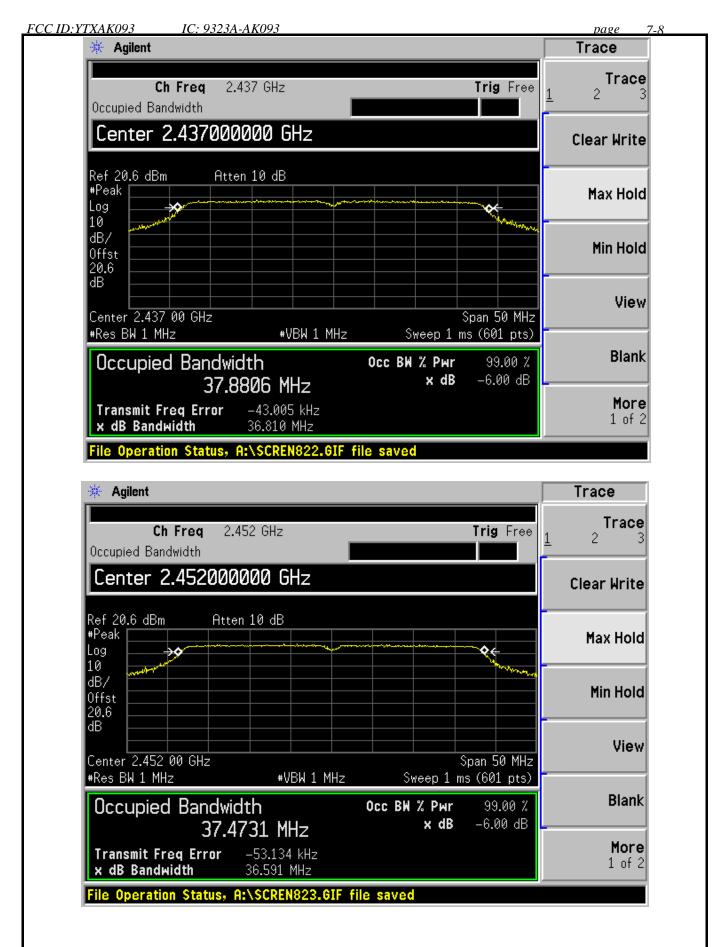














# 8. OUTPUT POWER TEST

### 8.1.Test Equipment

Item	Equipment	Manufacturer	Model No.	Serial No.	Last Cal.	Cal. Interval
1.	Power meter	Anritsu	ML2487A	6K00002472	May.08,10	1Year
2.	Power sensor	Anritsu	MA2491A	0033005	May.08,10	1Year
3	Attenuator	Agilent	8491B	MY39262165	May.08,10	1 Year
4	RF Cable	Hubersuhner	SUCOFLEX102	28618/2	May.08,10	1Year

### 8.2.Limit (FCC Part 15C 15.247 b(3))

For systems using digital modulation in the 2400—2483.5MHz, The Peak out put Power shall not exceed 1W(30dBm)

### 8.3.Test Procedure

- 1, Connected the EUT's antenna port to measure device by 20dB attenuator.
- 2, For IEEE 802.11b/g and IEEE802.11n HT20 mode, use a PK power meter which's bandwidth is above 6dB bandwidth of signal to measure out each test modes' PK output power.
- 3, For IEEE802.11n HT40 mode, because the signal's bandwidth is about 40MHz and above 20MHz bandwidth of power sensor ML2491A. So the channel power measure function of Spectrum Analyzer was used to measure out the PK output power of each test modes'

Note: The cable loss and attenuator loss were offset into measure device as an amplitude offset.



### 8.4.Test Results

EUT: 150Mbps Wireless Lite N USB Adapter

M/N: AK093

Test date:2010-10-28

Pressure: 100.6 kpa

Humidity: 60 %

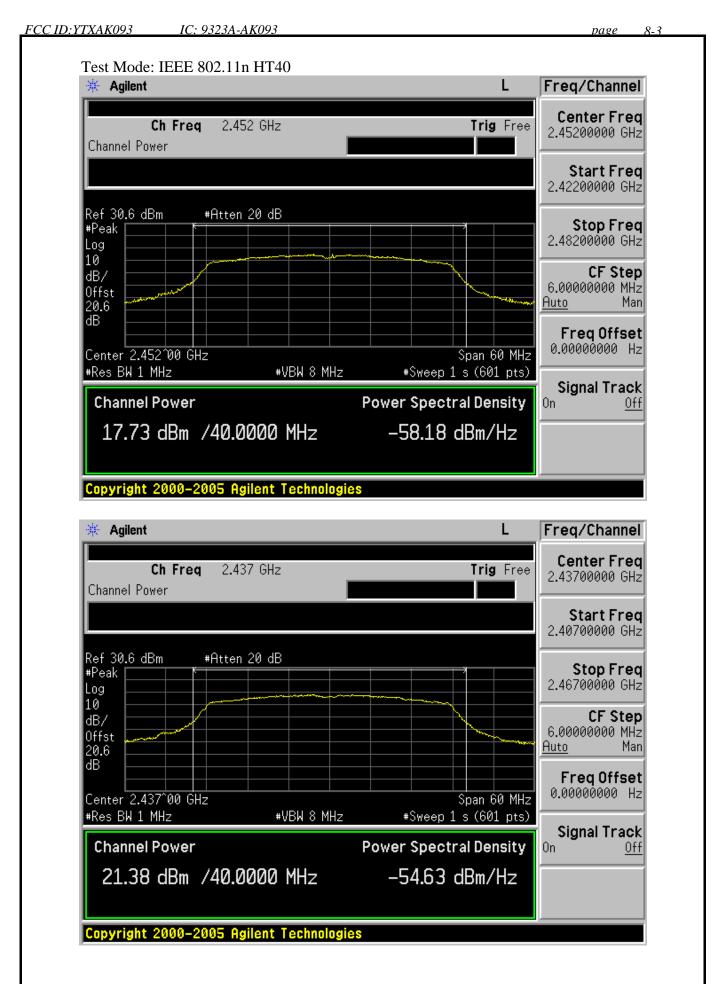
Tested by:Sunny-lu

Test site: RF Site

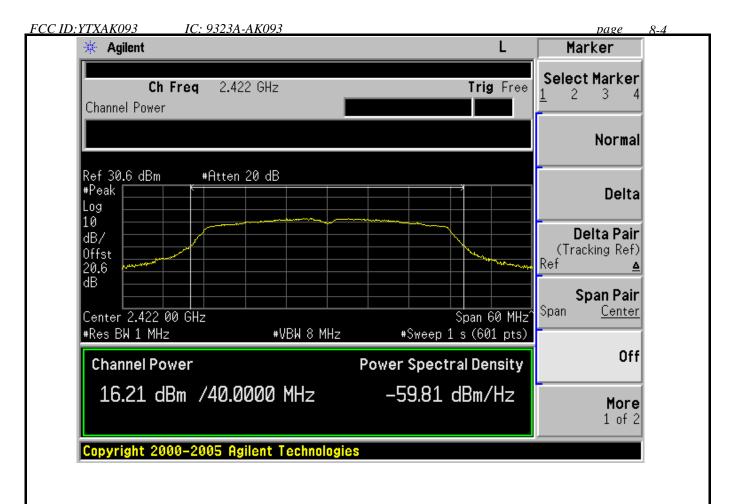
Temperature: 25 °C

Cable loss: 0.6dB		Attenuator loss: 20 dB	Antenna Gain: 2.12 dBi
Test Mode	СН	Peak output Power (dBm)	Limit (dBm)
	CH1	18.49	30
11b	CH6	18.86	30
	CH11	19.24	30
	CH1	23.62	30
11g	CH6	25.04	30
	CH11	24.78	30
11	CH1	23.80	30
11n HT20	CH6	25.26	30
11120	CH11	24.49	30
11	CH1	16.21	30
11n HT40	CH4	21.38	30
11140	CH7	17.73	30
Conclusion: PASS			











### 9. POWER SPECTRAL DENSITY TEST

### 9.1.Test Equipment

Item	Equipment	Manufacturer	Model No.	Serial No.	Last Cal.	Cal. Interval
1.	Spectrum Analyzer	Agilent	E4446A	US44300459	May.08, 10	1 Year
2.	Attenuator	Agilent	8491B	MY39262165	May.08, 10	1 Year
3.	RF Cable	Hubersuhner	SUCOFLEX102	28618/2	May.08, 10	1Year

### 9.2.Limit

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

### 9.3.Test Procedure

- 1, Connected the EUT's antenna port to spectrum analyzer device by 20dB attenuator.
- 2, Follow the test procedure as described in ANSI C.10: 2009 Clause 6.11.2.3 to measure out each test modes and chain's power density with 3KHz.

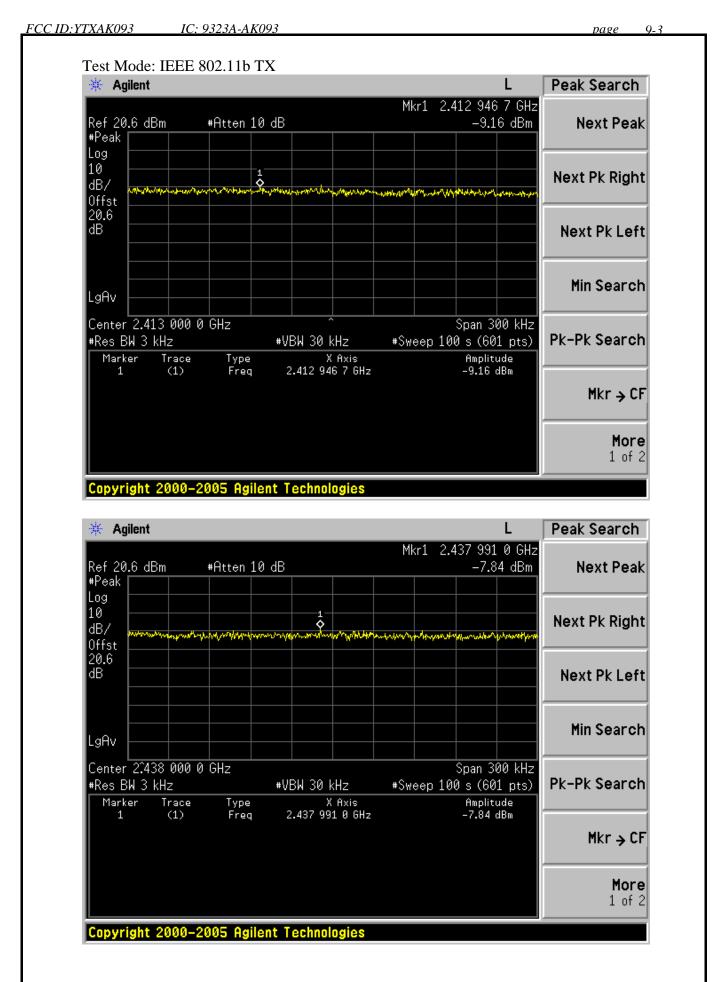


# 9.4.Test Results

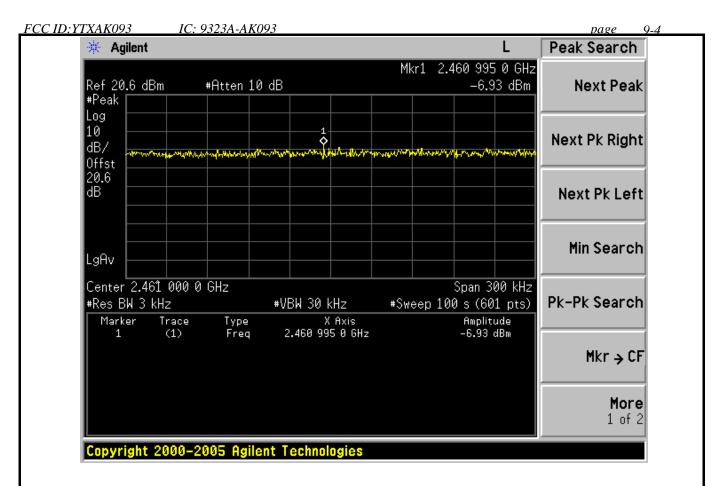
EUT: 150Mbps Wireless Lite N USB Adapter					
M/N: AK093	M/N: AK093				
Test date:2010-10-28	Pressure: 100.6 kpa	Humidity: 60 %			
Tested by:Sunny-lu	Test site: RF Site	Temperature : 25 °C			

Cable loss: 0.6 dB		Attenuator loss: 20 dB	Antenna Gain: 2.12 dBi	
Test Mode CH		Power density (dBm/3KHz)	Limit (dBm/3KHz)	
	CH1	-9.16	8	
11b	CH6	-7.84	8	
	CH11	-6.93	8	
	CH1	-11.11	8	
11g	CH6	-10.15	8	
	CH11	-9.90	8	
1.1	CH1	-11.37	8	
11n HT20	CH6	-10.07	8	
11120	CH11	-10.30	8	
115	CH1	-21.8	8	
11n HT40	CH4	-17.4	8	
11140	CH7	-21.2	8	
Conclusion: PASS				

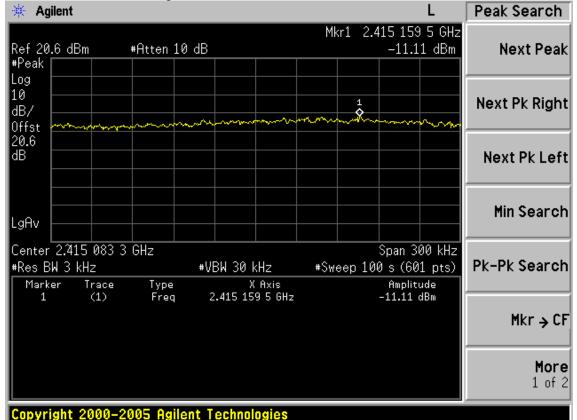




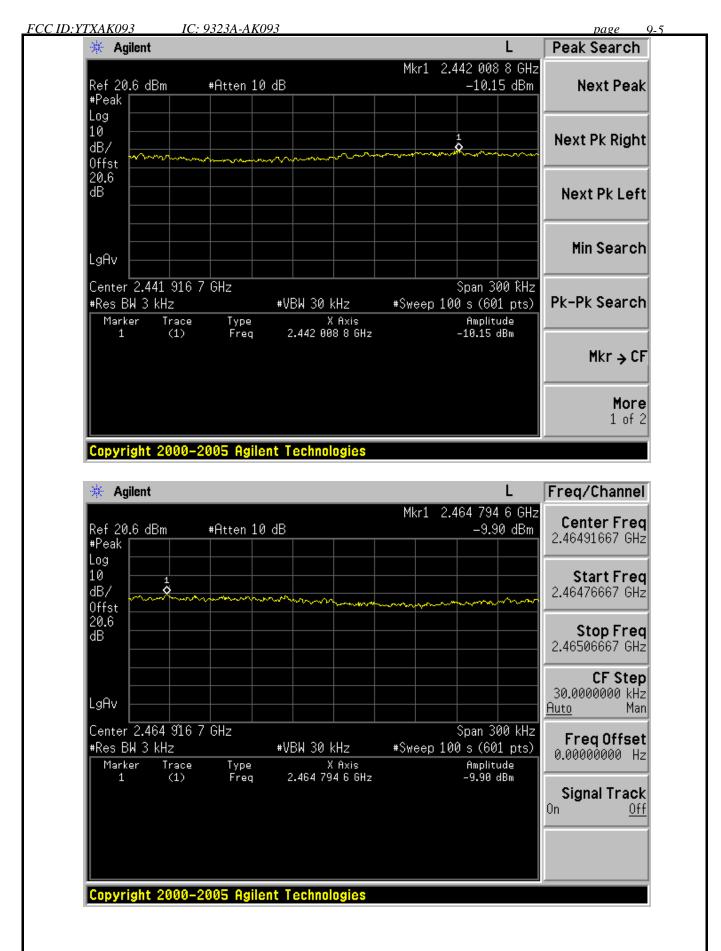




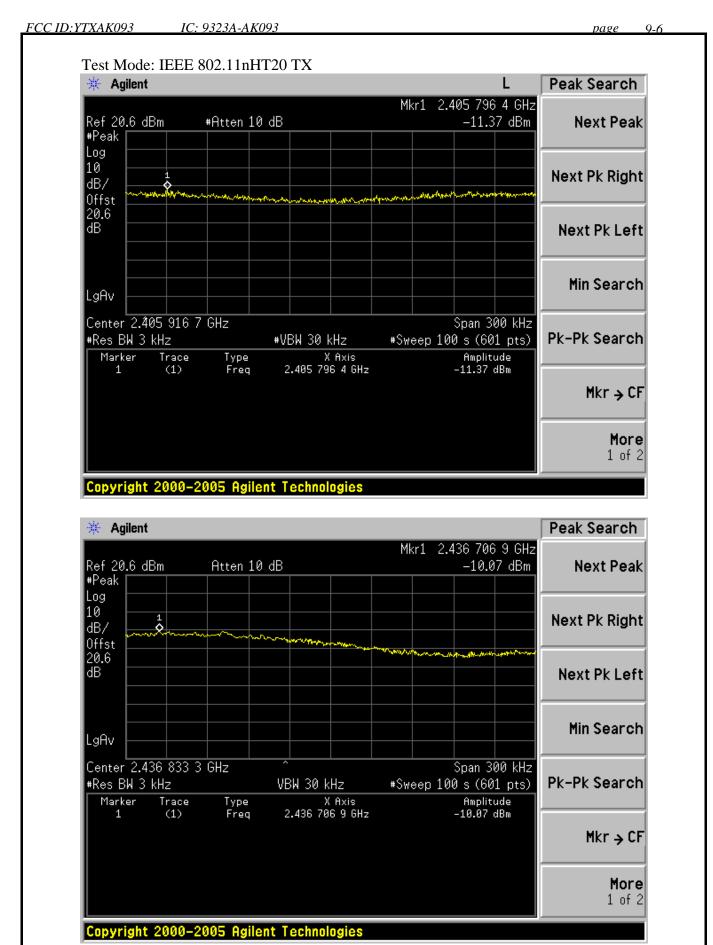




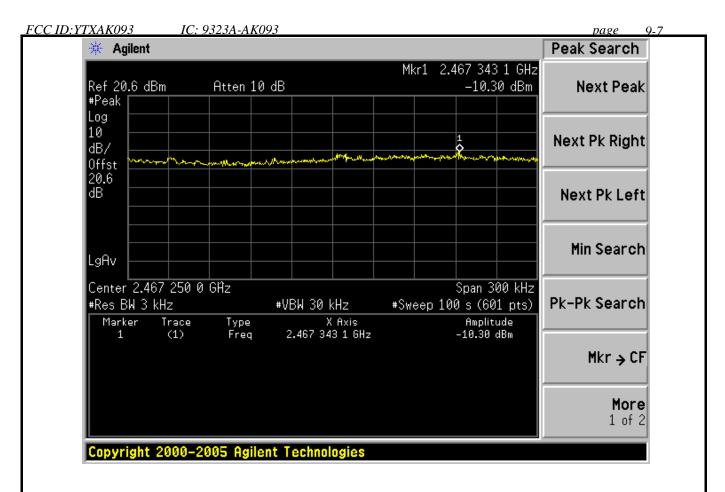


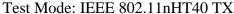


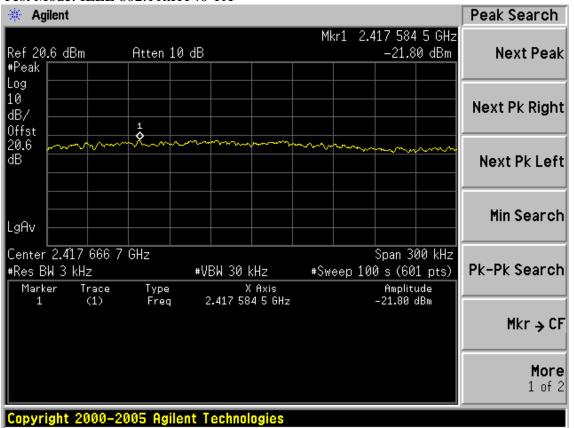




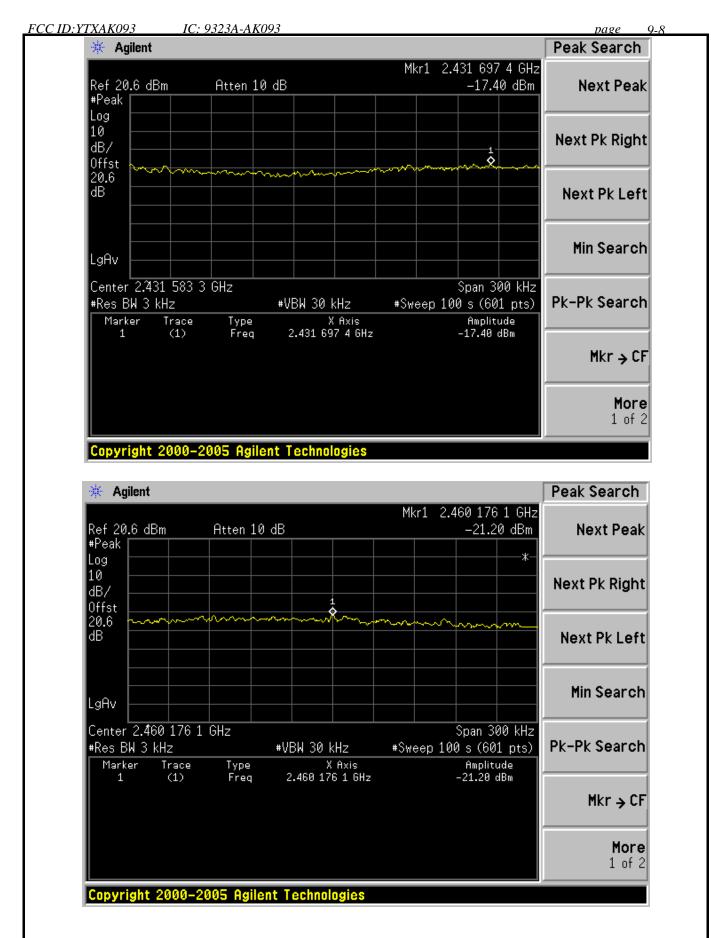














# 10. ANTENNA REQUIREMENT

### 10.1. 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 (b), 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.

### 10.2. ANTENNA CONNECTED CONSTRUCTION

The antennas used for this product is integrated PCB antenna and that no antenna other than that furnished by the responsible party shall be used with the device, the maximum peak gain of the transmit antenna is only 2.12dBi.



FCC ID:YTXAK093	IC: 9323A-AK093	page 11-1
11.DEVIAT	TION TO TEST SPECIFICATIONS	
[ NONE]		