FCC PART 15C TESTREPORT

No. I17Z60331-SRD01

for

TCL Communication Ltd.

LTE / UMTS / GSM mobile phone

5085G

with

FCC ID: 2ACCJH073

Hardware Version: 10

Software Version: v7J5H

Issued Date: 2017-05-10

Note:

The test results in this test report relate only to the devices specified in this report. This report shall not be reproduced except in full without the written approval of CTTL.

Test Laboratory:

CTTL, Telecommunication Technology Labs, Academy of Telecommunication Research, MIIT

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REPORT HISTORY

Report Number	Revision	Description	Issue Date
I17Z60331-SRD01	Rev.0	1st edition	2017-05-10

CONTENTS

1. Test Laboratory

1.1. Testing Location

Conducted testing Location: CTTL(huayuan North Road)

Address: No. 52, Huayuan North Road, Haidian District, Beijing, P. R. China100191

Radiated testing Location: CTTL(BDA)

Address: No.18A, Kangding Street, Beijing Economic-Technology Development Area, Beijing, P. R. China 100176

1.2. Testing Environment

Normal Temperature: 15-35℃

Extreme Temperature: -20/+55℃

Relative Humidity: 20-75%

1.3. Project data

Testing Start Date: 2017-04-13

Testing End Date: 2017-05-05

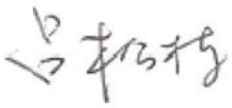
1.4. Signature

Jiang Xue

(Prepared this test report)

Zheng Wei

(Reviewed this test report)



Lv Songdong

(Approved this test report)

2. Client Information

2.1. Applicant Information

Company Name:	TCL Communication Ltd.
Address:	5F, C building, No. 232, Liang Jing Road ZhangJiang High-Tech Park, Pudong Area Shanghai, P.R. China. 201203
City:	Shanghai
Postal Code:	201203
Country:	China
Telephone:	0086-21-31363544
Fax:	0086-21-61460602

2.2. Manufacturer Information

Company Name:	TCL Communication Ltd.
Address:	5F, C building, No. 232, Liang Jing Road ZhangJiang High-Tech Park, Pudong Area Shanghai, P.R. China. 201203
City:	Shanghai
Postal Code:	201203
Country:	China
Telephone:	0086-21-31363544
Fax:	0086-21-61460602

3. Equipment Under Test (EUT) and Ancillary Equipment (AE)

3.1. About EUT

Description	LTE / UMTS / GSM mobile phone
Model name	5085G
FCC ID	2ACCJH073
IC ID	/
With WLAN Function	Yes
Frequency Range	ISM 2400MHz~2483.5MHz
Type of Modulation	DSSS/CCK/OFDM
Number of Channels	11
Antenna	Integral Antenna
MAX Conducted Power	24.15dBm(OFDM)
Power Supply	3.8V DC by Battery

3.2. Internal Identification of EUT

EUT ID*	SN or IMEI	HW Version	SW Version
EUT1	/	10	v7J5H
EUT2	/	10	v7J5H

*EUT ID: is used to identify the test sample in the lab internally.

3.3. Internal Identification of AE

AE ID*	Description	SN
AE1	Battery	/
AE3	Travel charger	/
AE11	USB cable	/
AE12	USB cable	/

AE1

Model	TLp027AJ
SN	CAC2710010CJ
Manufacturer	COSLIGHT
Capacitance	2710 mAh
Nominal voltage	/

AE3

Model	CBA0058AGAD2
Manufacturer	TENPAO
Length of cable	/

AE11

Model	CDA0000078CF
Manufacturer	LUXSHARE

Length of cable 98cm

AE12

Model CDA0000104CF

Manufacturer LUXSHARE

Length of cable 98cm

*AE ID: is used to identify the test sample in the lab internally.

3.4. General Description

The Equipment under Test (EUT) is a model of LTE / UMTS / GSM mobile phone with integrated antenna and inbuilt battery.

It has Bluetooth (EDR) function.

It consists of normal options: travel charger, USB cable and Phone.

Manual and specifications of the EUT were provided to fulfil the test.

Samples undergoing test were selected by the client.

3.5. Interpretation of the Test Environment

For the test methods, the test environment uncertainty figures correspond to an expansion factor k=2.

Measurement Uncertainty

Parameter	Uncertainty
temperature	0.48°C
humidity	2 %
DC voltages	0.003V

4. Reference Documents

4.1. Documents supplied by applicant

EUT feature information is supplied by the applicant or manufacturer, which is the basis of testing.

4.2. Reference Documents for testing

The following documents listed in this section are referred for testing.

Reference	Title	Version
FCC Part15	FCC CFR 47, Part 15, Subpart C: 15.205 Restricted bands of operation; 15.209 Radiated emission limits, general requirements; 15.247 Operation within the bands 902-928MHz, 2400-2483.5 MHz, and 5725-5850 MHz.	2015
ANSI C63.10	American National Standard of Procedures for Compliance Testing of Unlicensed Wireless Devices	2013

5. Test Results

5.1. Summary of Test Results

SUMMARY OF MEASUREMENT RESULTS	Sub-clause of Part15C	Sub-clause of IC	Verdict
Maximum Peak Output Power	15.247 (b)	/	P
Peak Power Spectral Density	15.247 (e)	/	P
Occupied 6dB Bandwidth	15.247 (a)	/	P
Band Edges Compliance	15.247 (d)	/	P
Transmitter Spurious Emission - Conducted	15.247 (d)	/	P
Transmitter Spurious Emission - Radiated	15.247, 15.205, 15.209	/	P
AC Powerline Conducted Emission	15.107, 15.207	/	P

Please refer to **ANNEX A** for detail.

Terms used in Verdict column

P	Pass, The EUT complies with the essential requirements in the standard.
NP	Not Perform, The test was not performed by CTTL
NA	Not Applicable, The test was not applicable
F	Fail, The EUT does not comply with the essential requirements in the standard
F	Fail, The EUT does not comply with the essential requirements in the standard

5.2. Statements

The test cases as listed in section 5.1 of this report for the EUT specified in section 3 was performed by CTTL and according to the standards or reference documents listed in section 4.2

The EUT met all requirements of the standards or reference documents, and only the WLAN function was tested in this report.

This model is a variant product which model name is 5085C; all the test result has been derived from test report of 5085C.

5.3. Test Conditions

T nom	Normal Temperature
T min	Low Temperature
T max	High Temperature
V nom	Normal Voltage

For this report, if the test cases listed above are tested under normal temperature and normal voltage, and also under norm humidity, the specific condition is shown as follows:

Temperature	T nom	26℃
Voltage	V nom	3.8V (By battery)
Humidity	H nom	44%

6. Test Facilities Utilized

Conducted test system

No.	Equipment	Model	Serial Number	Manufacturer	Calibration date	Calibration Due date
1	Vector Signal Analyzer	FSQ40	200089	Rohde & Schwarz	2016-06-07	2017-06-06
2	Shielding Room	S81	/	ETS-Lindgren	/	/

Radiated emission test system

No.	Equipment	Model	Serial Number	Manufacturer	Calibration Period	Calibration Due date
1	Test Receiver	ESU26	100376	Rohde & Schwarz	1 year	2017-11-30
2	BiLog Antenna	VULB9163	514	Schwarzbeck	3 years	2017-11-24
3	Dual-Ridge Waveguide Horn Antenna	3116	2661	ETS-Lindgren	3 years	2017-06-17
4	Dual-Ridge Waveguide Horn Antenna	3115	6914	ETS-Lindgren	3 years	2017-09-21
5	Vector Signal Analyzer	FSV	101047	Rohde & Schwarz	1 year	2017-06-28
6	Test Receiver	ESCI7	100948	Rohde & Schwarz	1 year	2017-07-05
7	AMN	ESH3-Z5	825562/028	Rohde & Schwarz	1 year	2017-07-06

7. Measurement Uncertainty

7.1. Maximum Output Power

Measurement Uncertainty: 0.339dB,k=1.96

7.2. Peak Power Spectral Density

Measurement Uncertainty: 0.705dBm/MHz,k=1.96

7.3. DTS 6-dB Signal Bandwidth

Measurement Uncertainty: 60.80Hz,k=1.96

7.4. Band Edges Compliance

Measurement Uncertainty : 0.62dBm,k=1.96

7.5. Transmitter Spurious Emission

Conducted (k=1.96)

Frequency Range	Uncertainty(dBm)
30MHz ≤ f ≤ 2GHz	1.22
2GHz ≤ f ≤3.6GHz	1.22
3.6GHz ≤ f ≤8GHz	1.22
8GHz ≤ f ≤12.75GHz	1.51
12.75GHz ≤ f ≤26GHz	1.51
26GHz ≤ f ≤40GHz	1.59

Radiated (k=2)

Frequency Range	Uncertainty(dBm)
30MHz ≤ f ≤ 1GHz	4.86
1GHz ≤ f ≤18GHz	5.26
18GHz ≤ f ≤40GHz	5.28

7.6. AC Power-line Conducted Emission

Measurement Uncertainty : 3.38dBm,k=2

ANNEX A: Detailed Test Results

A.1. Measurement Method

A.1.1. Conducted Measurements

Connect the EUT to the test system as Fig.A.1.1.1 shows.
Set the EUT to the required work mode.
Set the EUT to the required channel.
Set the Vector Signal Analyzer and start measurement.
Record the values. Vector Signal Analyzer

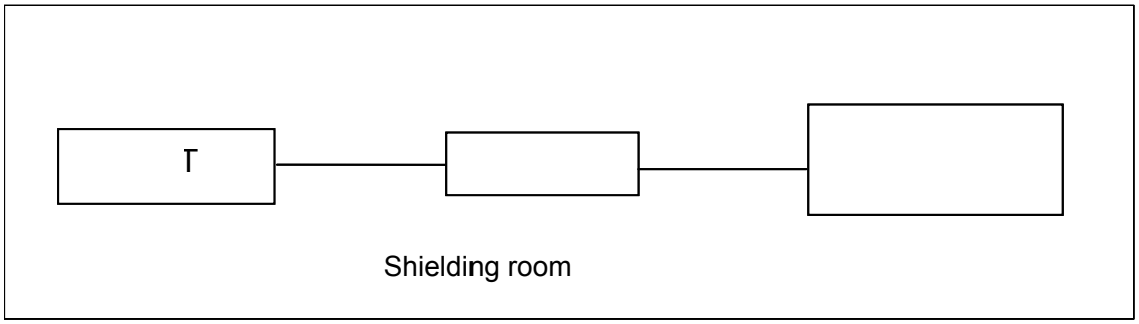


Fig.A.1.1.1: Test Setup Diagram for Conducted Measurements

A.1.2. Radiated Emission Measurements

In the case of radiated emission, the used settings are as follows,
Sweep frequency from 30 MHz to 1GHz, RBW = 100 kHz, VBW = 300 kHz;
Sweep frequency from 1 GHz to 26GHz, RBW = 1MHz, VBW = 10Hz;

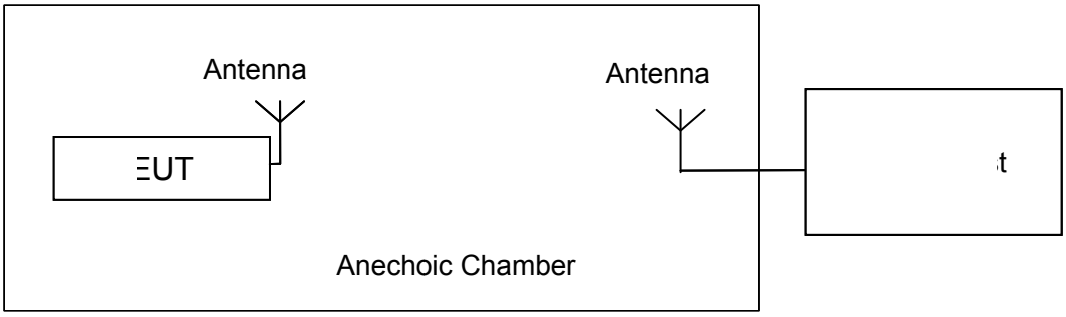


Fig.A.1.2.1: Test Setup Diagram for Radiated Measurements

A.2. Maximum Output Power

Method of Measurement: See ANSI C63.10-2013-clause 11.9.1.2

a) Set the RBW = 1 MHz.
b) Set the VBW = 3 MHz.
c) Set the span ≥ [1.5 × DTS bandwidth].
d) Detector = peak.
e) Sweep time = auto couple.
f) Trace mode = max hold.
g) Allow trace to fully stabilize.
h) Use the instrument's band/channel power measurement function with the band limits set equal to the DTS bandwidth edges (for some instruments, this may require a manual override to select the peak detector).

Measurement Limit:

Standard	Limit (dBm)
FCC CRF Part 15.247(b)	< 30

EUT ID: EUT2

A.2.1. Peak Output Power-conducted

Measurement Results:

802.11b/g mode

Mode	Data Rate (Mbps)	Test Result (dBm)		
		2412MHz (Ch1)	2437MHz (Ch6)	2462 MHz (Ch11)
802.11b	1	20.56	/	/
	2	20.81	/	/
	5.5	22.18	/	/
	11	23.90	23.54	23.50
802.11g	6	23.09	/	/
	9	23.10	/	/
	12	23.14	/	/
	18	23.10	/	/
	24	23.46	/	/
	36	23.45	/	/
	48	23.63	/	/
	54	24.15	24.10	23.61

The data rate 11Mbps and 54Mbps are selected as worse condition, and the following cases are performed with this condition.

802.11n-HT20 mode

Mode	Data Rate (Index)	Test Result (dBm)		
		2412MHz (Ch1)	2437MHz (Ch6)	2462 MHz (Ch11)
802.11n (20MHz)	MCS0	21.64	/	/
	MCS1	21.13	/	/
	MCS2	21.32	/	/
	MCS3	21.53	/	/
	MCS4	21.69	/	/
	MCS5	21.55	/	/
	MCS6	21.67	/	/
	MCS7	22.07	21.94	21.53

The data rate MCS7 is selected as worse condition, and the following cases are performed with this condition.

802.11n-HT40 mode

Mode	Data Rate (Index)	Test Result (dBm)		
		2422MHz (Ch3)	2437MHz (Ch6)	2452 MHz (Ch9)
802.11n (40MHz)	MCS0	20.98	/	/
	MCS1	20.34	/	/
	MCS2	20.41	/	/
	MCS3	21.01	/	/
	MCS4	20.98	/	/
	MCS5	21.12	21.08	20.71
	MCS6	21.07	/	/
	MCS7	20.99	/	/

The data rate MCS5 is selected as worse condition, and the following cases are performed with this condition.

Conclusion: Pass

A.2.2. Average Output Power-conducted

Method of Measurement: See ANSI C63.10-2013-clause 11.9.2.2.2

The procedure for this method is as follows:

a) Set span = 80MHz.

b) Set RBW = 1MHz.

c) Set VBW = 3MHz

d) Number of points in sweep = 625

e) Sweep time = auto.

f) Detector = RMS.

g) The trigger shall be set to “free run.”

h) Trace average 100 traces in power averaging (rms) mode.

i) Compute power by integrating the spectrum across the OBW of the signal using the instrument’s

band power measurement function, with band limits set equal to the OBW band edges.

802.11b/g mode

Mode	Test Result (dBm)		
	2412MHz (Ch1)	2437MHz (Ch6)	2462 MHz (Ch11)
802.11b	17.66	17.23	17.11
802.11g	15.36	15.31	14.96

802.11n-HT20 mode

Mode	Test Result (dBm)		
	2412MHz (Ch1)	2437MHz (Ch6)	2462 MHz (Ch11)
802.11n (20MHz)	13.46	13.35	12.98

802.11n-HT40 mode

Mode	Test Result (dBm)		
	2422MHz (Ch3)	2437MHz (Ch6)	2452 MHz (Ch9)
802.11n(40MHz)	12.59	12.38	12.28

Conclusion: Pass

A.3. Peak Power Spectral Density

Method of Measurement: See ANSI C63.10-2013-clause 11.10.2

a) Set analyzer center frequency to DTS channel center frequency.
b) Set the span to 1.5 times the DTS bandwidth.
c) Set the RBW to RBW = 3 kHz.
d) Set the VBW = 10 kHz.
e) Detector = peak.
f) Sweep time = auto couple.
g) Trace mode = max hold.
h) Allow trace to fully stabilize.
i) Use the peak marker function to determine the maximum amplitude level within the RBW.

Measurement Limit:

Standard	Limit
FCC CRF Part 15.247(e)	< 8 dBm/3 kHz

Measurement Results:

802.11b/g mode

Mode	Channel	Power Spectral Density (dBm/3 kHz)		Conclusion
802.11b	1	Fig.A.3.1	-4.56	**P**
	6	Fig.A.3.2	-6.61	**P**
	11	Fig.A.3.3	-6.27	**P**

Note:802.11b was selected as the worst-case of the test case.

Conclusion: Pass

Test graphs as below:

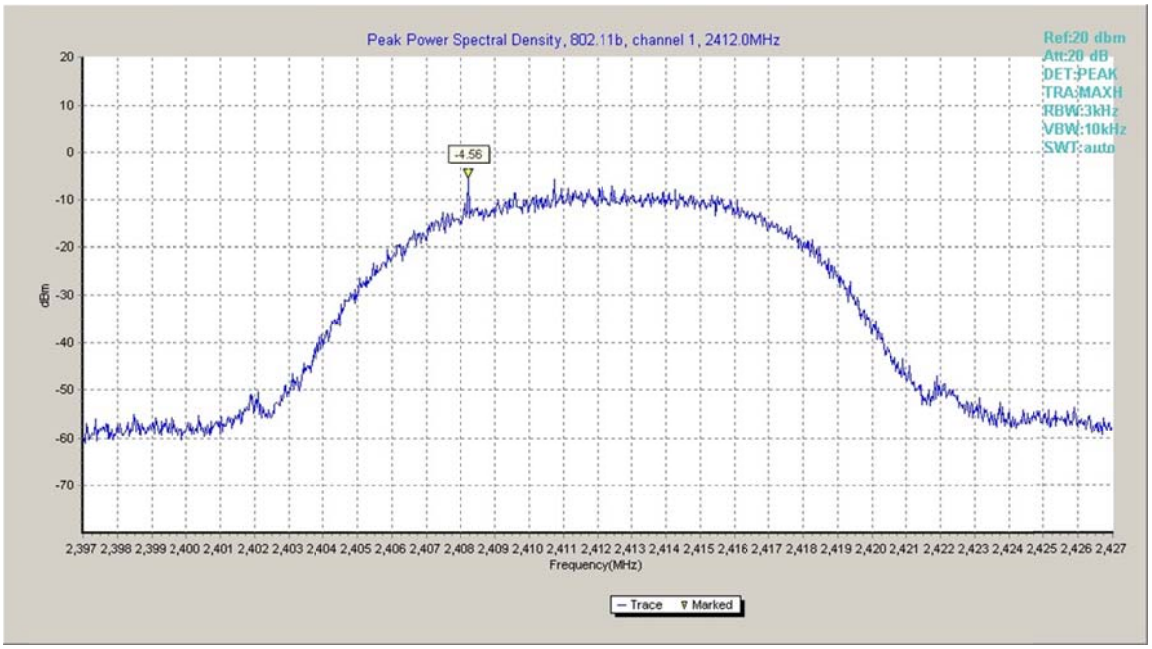


Fig.A.3.1 Power Spectral Density(802.11b,Ch1)

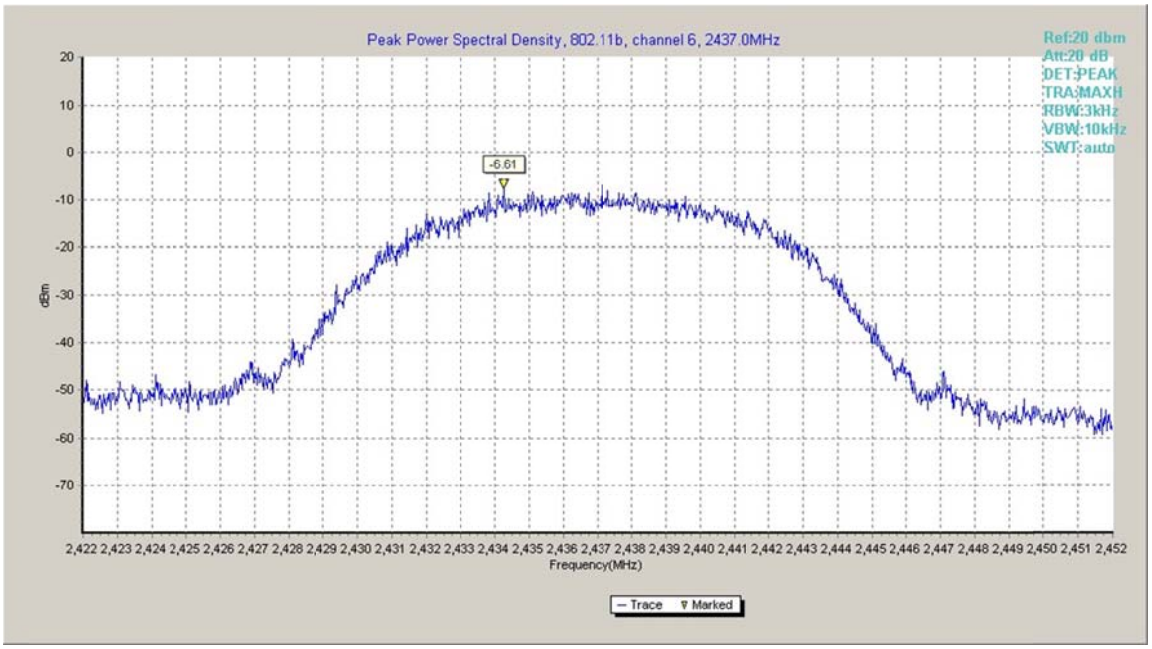


Fig.A.3.2 Power Spectral Density (802.11b, Ch 6)

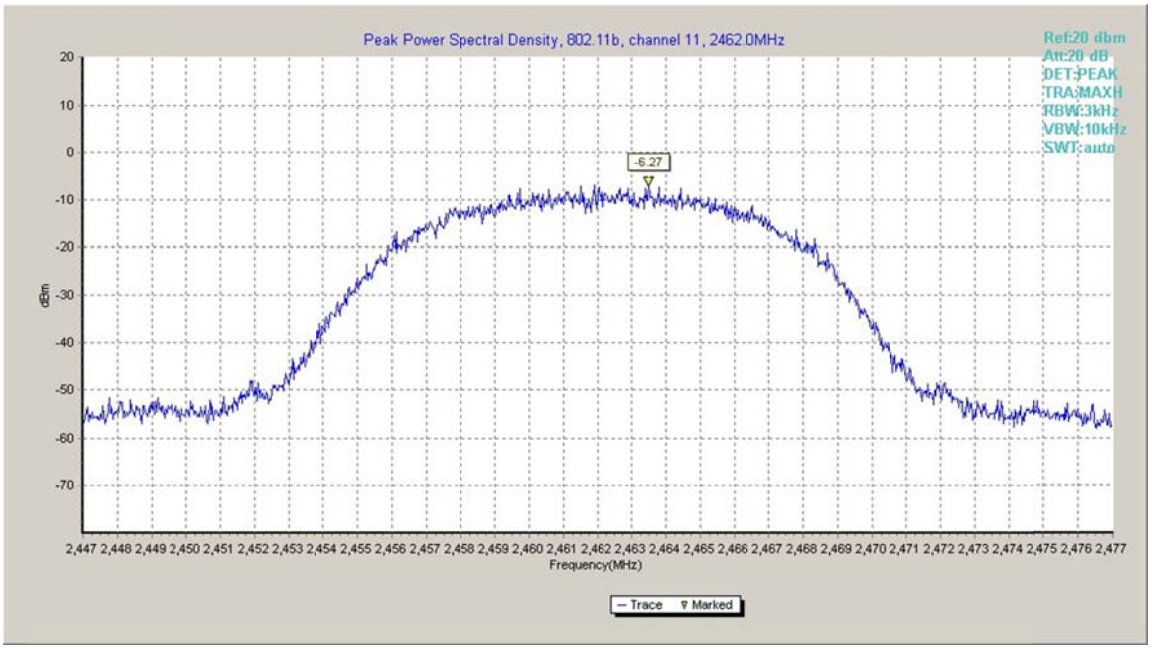


Fig.A.3.3 Power Spectral Density (802.11b, Ch 11)

A.4. DTS 6-dB Signal Bandwidth

Method of Measurement: See ANSI C63.10-2013 section 11.8.1.

a) Set RBW = 100 kHz.
b) Set the video bandwidth (VBW) = 300 kHz.
c) Detector = Peak.
d) Trace mode = max hold.
e) Sweep = auto couple.
f) Allow the trace to stabilize.
g) Measure the maximum width of the emission that is constrained by the frequencies associated with the two outermost amplitude points (upper and lower frequencies) that are attenuated by 6 dB relative to the maximum level measured in the fundamental emission.

Measurement Limit:

Standard	Limit (kHz)
FCC 47 CFR Part 15.247 (a)	≥ 500

EUT ID: EUT2

Measurement Result:

802.11b/g mode

Mode	Channel	Occupied 6dB Bandwidth (kHz)		conclusion
802.11b	1	Fig.A.4.1	9550.00	P
	6	Fig.A.4.2	9950.00	P
	11	Fig.A.4.3	9350.00	P
802.11g	1	Fig.A.4.4	15750.00	P
	6	Fig.A.4.5	16000.00	P
	11	Fig.A.4.6	16000.00	P

802.11n-HT20 mode

Mode	Channel	Occupied 6dB Bandwidth (kHz)		conclusion
802.11n (HT20)	1	Fig.A.4.7	16350.00	P
	6	Fig.A.4.8	17200.00	P
	11	Fig.A.4.9	17350.00	P

802.11n-HT40 mode

Mode	Channel	Occupied 6dB Bandwidth (kHz)		conclusion
802.11n (HT40)	3	Fig.A.4.10	35040.00	P
	6	Fig.A.4.11	35760.00	P
	9	Fig.A.4.12	36320.00	P

Conclusion: Pass

Test graphs as below:

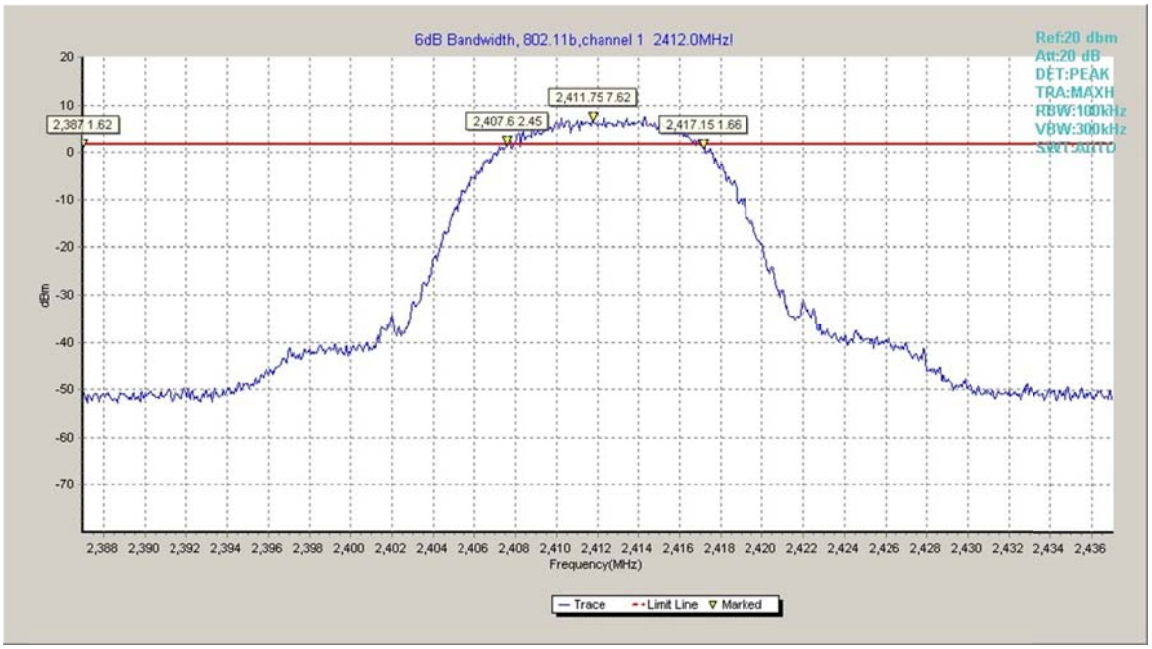


Fig.A.4.1 Occupied 6dB Bandwidth(802.11b,Ch 1)

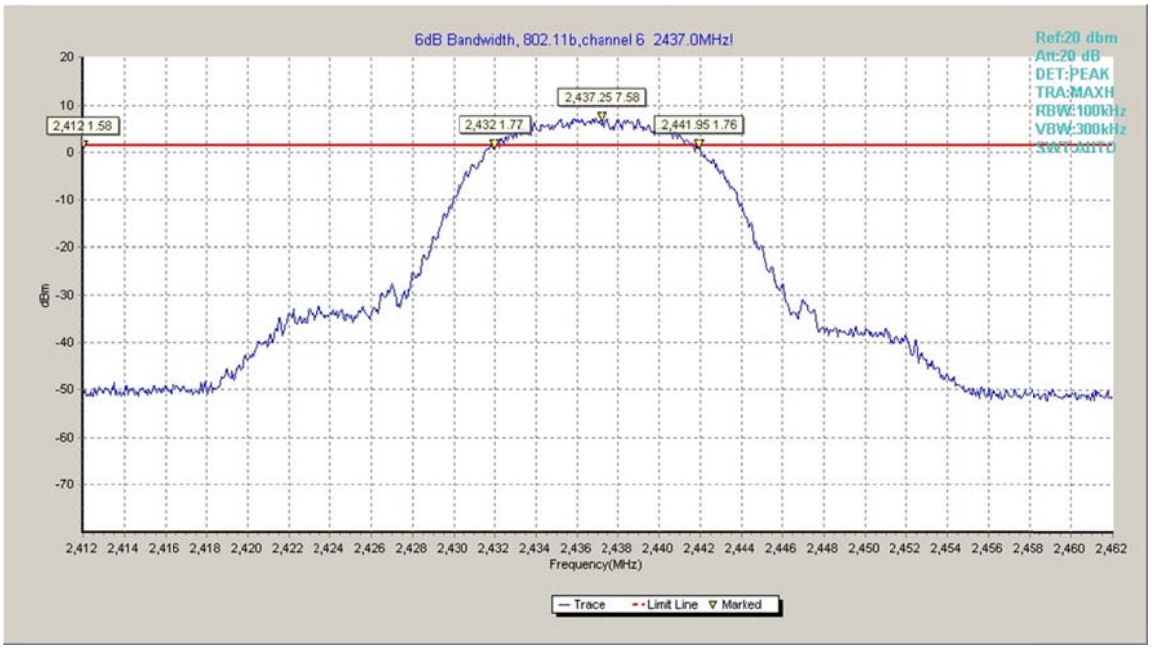


Fig.A.4.2 Occupied 6dB Bandwidth (802.11b, Ch 6)

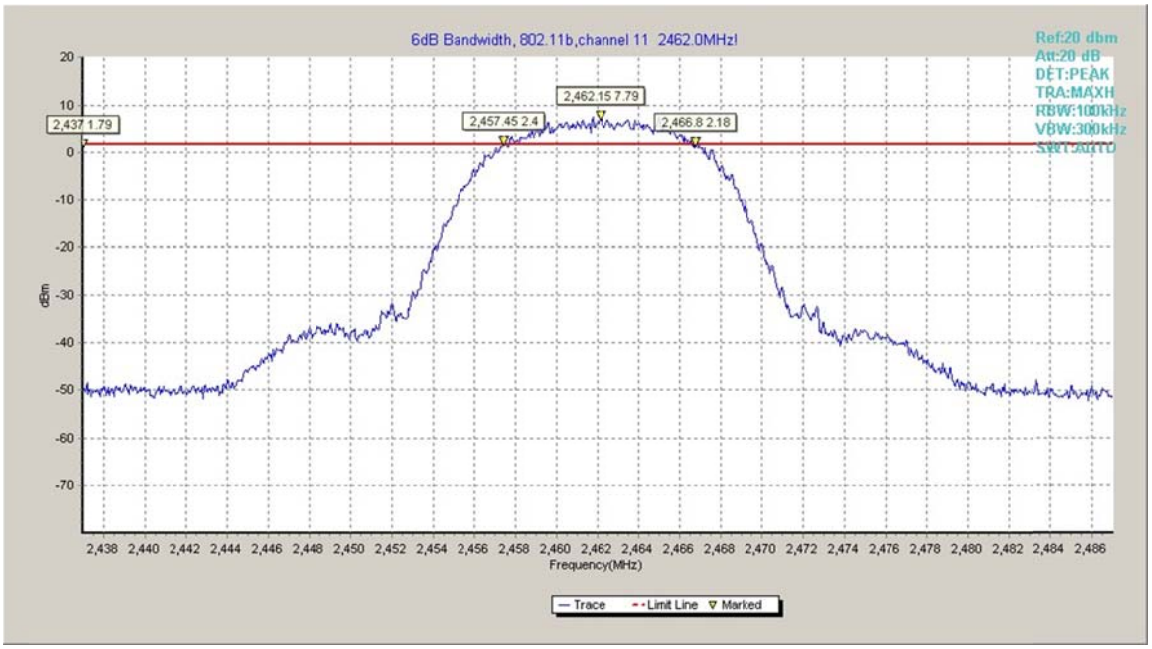


Fig.A.4.3 Occupied 6dB Bandwidth (802.11b, Ch 11)

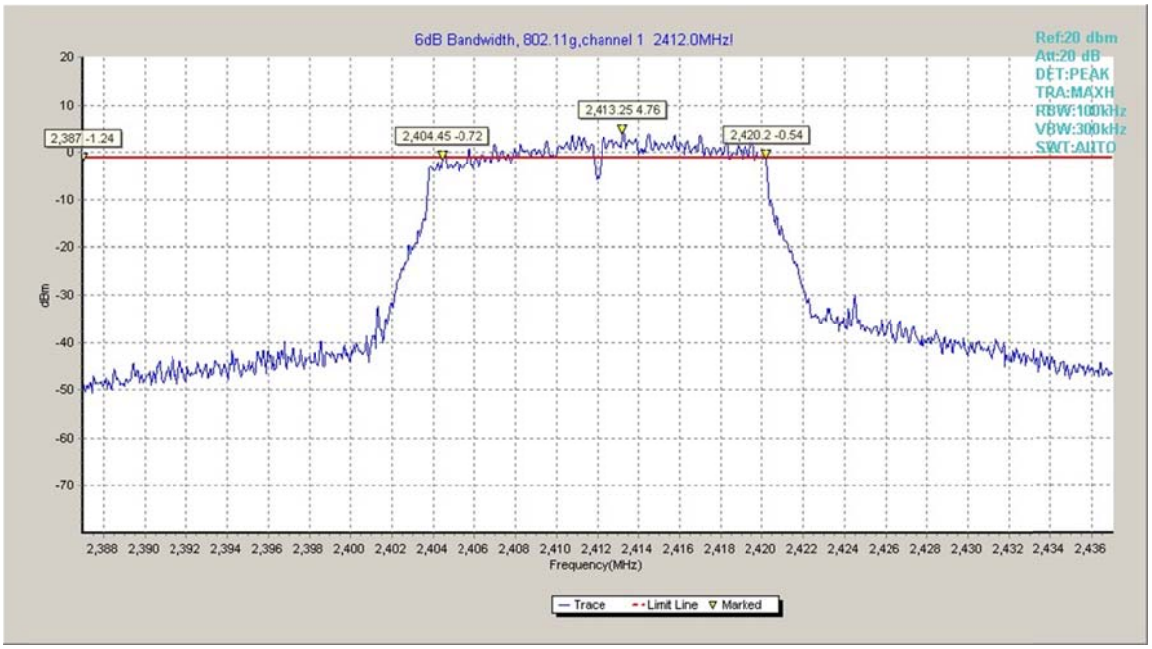


Fig.A.4.4 Occupied 6dB Bandwidth (802.11g, Ch 1)

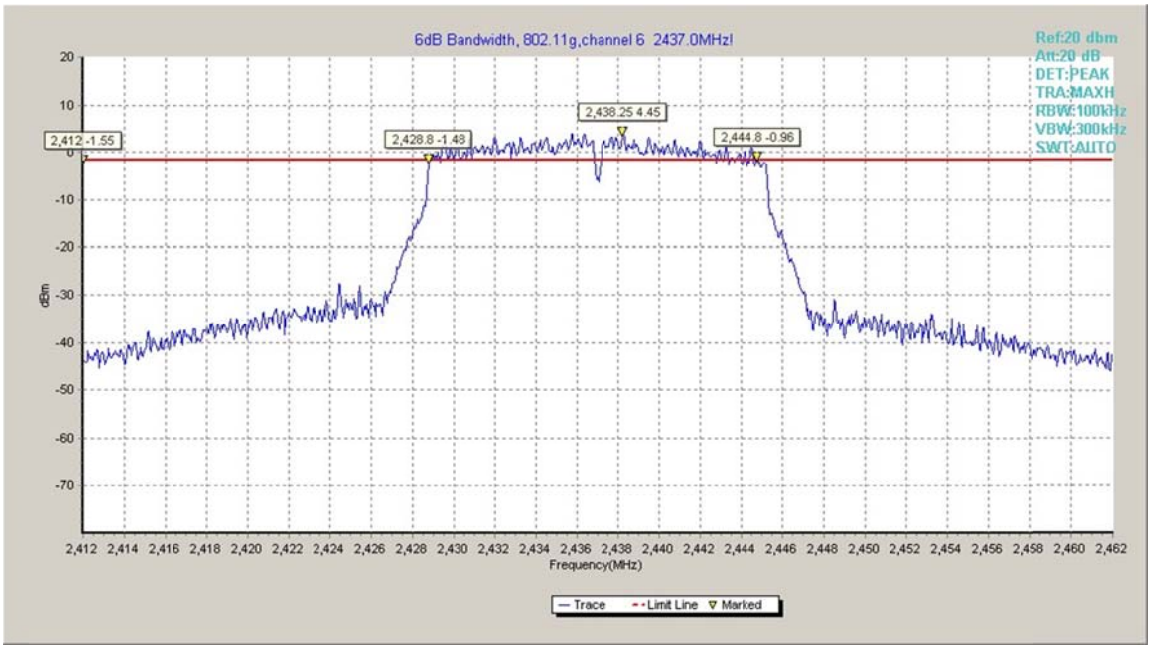


Fig.A.4.5 Occupied 6dB Bandwidth (802.11g, Ch 6)

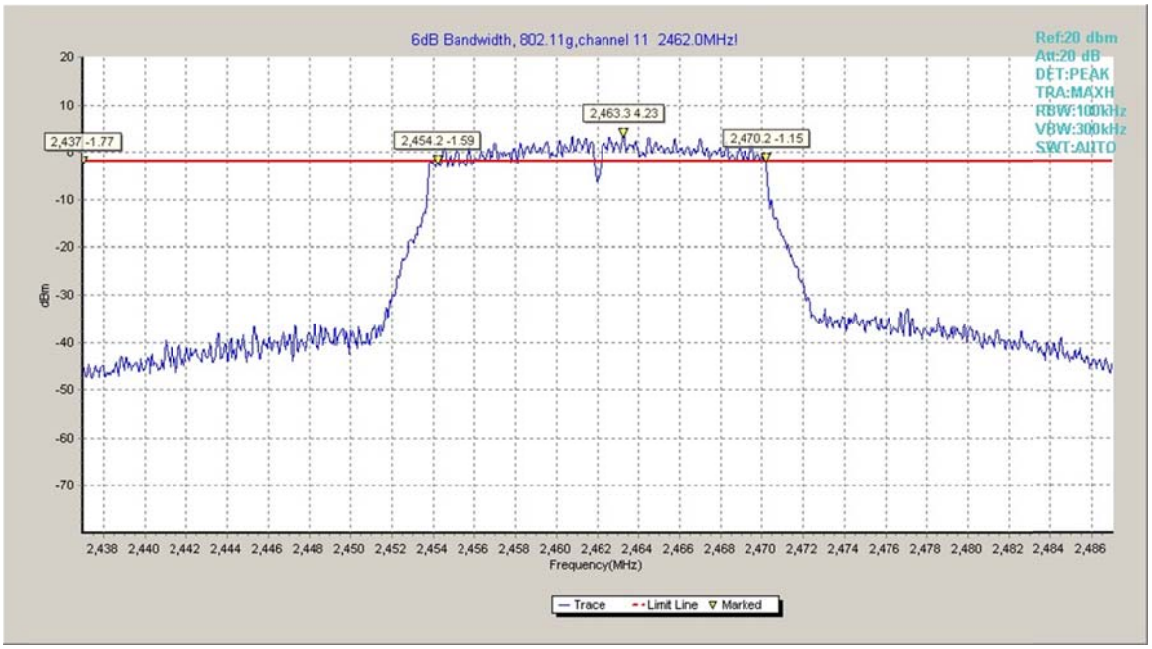


Fig.A.4.6 Occupied 6dB Bandwidth (802.11g, Ch 11)

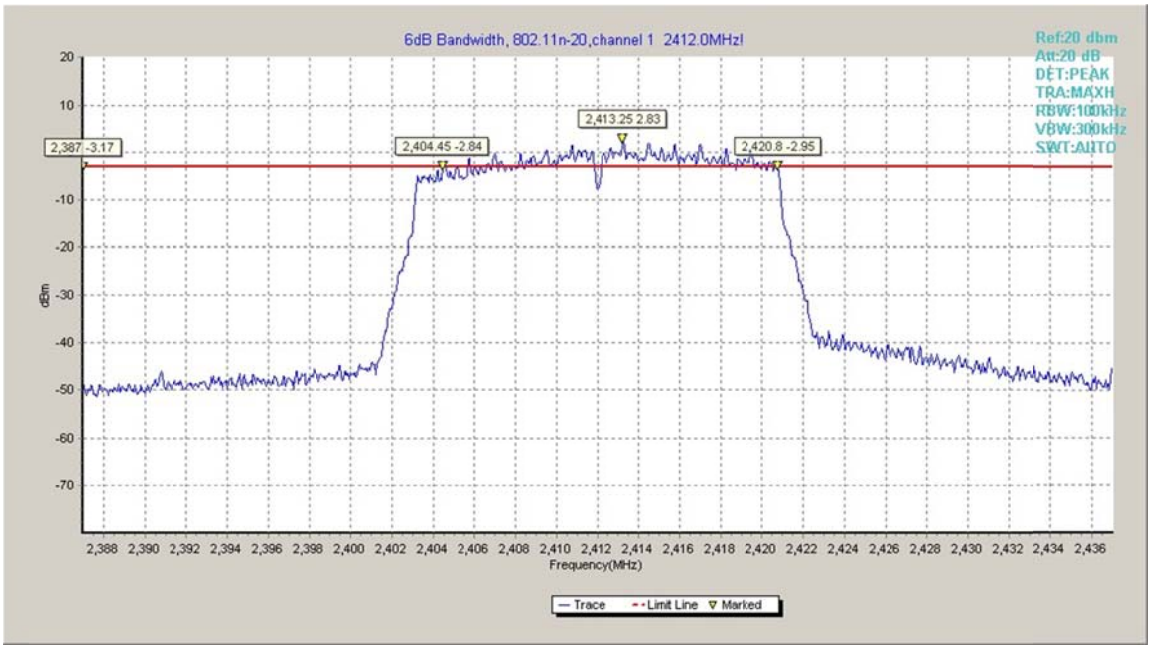


Fig.A.4.7 Occupied 6dB Bandwidth (802.11n-20MHz, Ch 1)

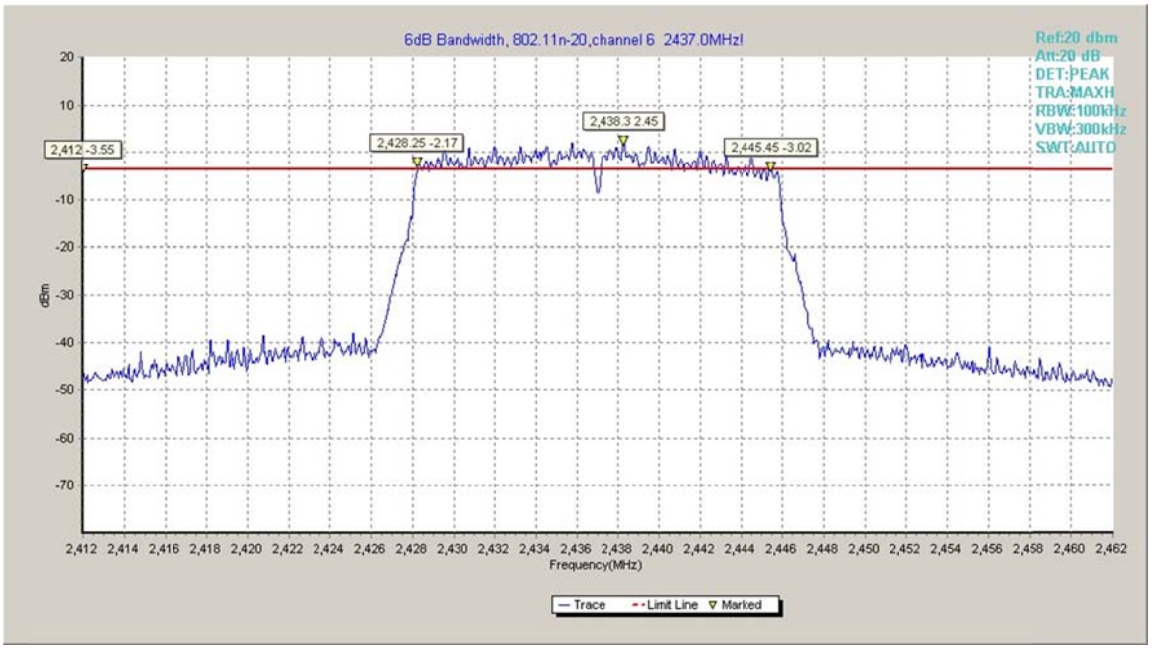


Fig.A.4.8 Occupied 6dB Bandwidth (802.11n-HT20, Ch 6)

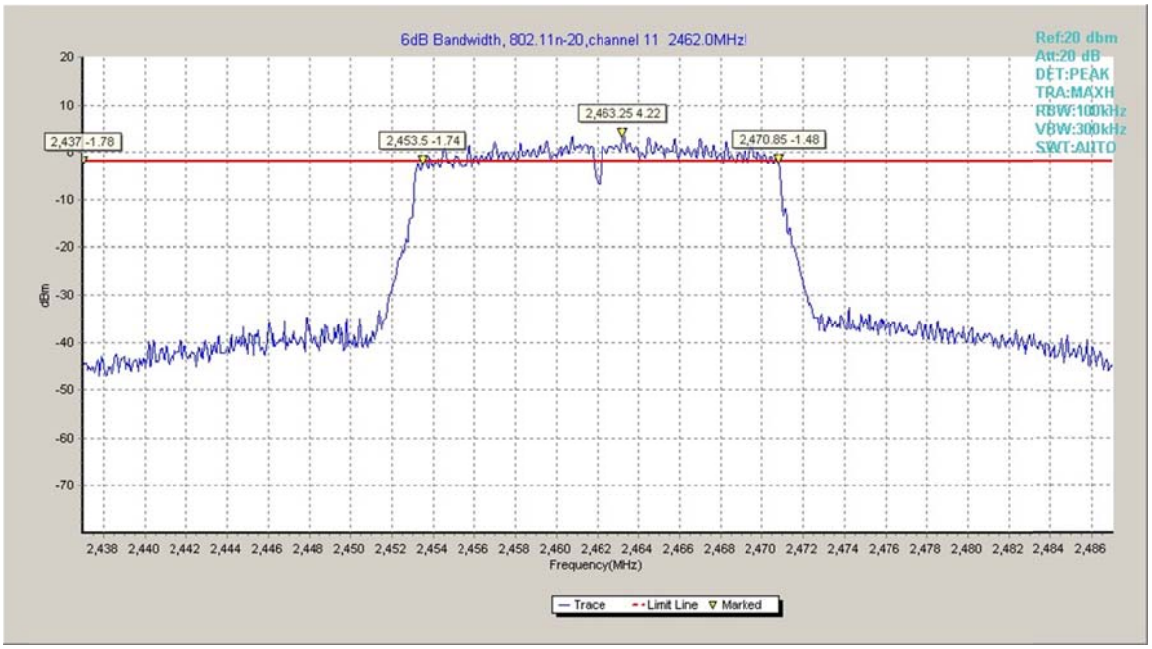


Fig.A.4.9 Occupied 6dB Bandwidth (802.11n-HT20, Ch 11)

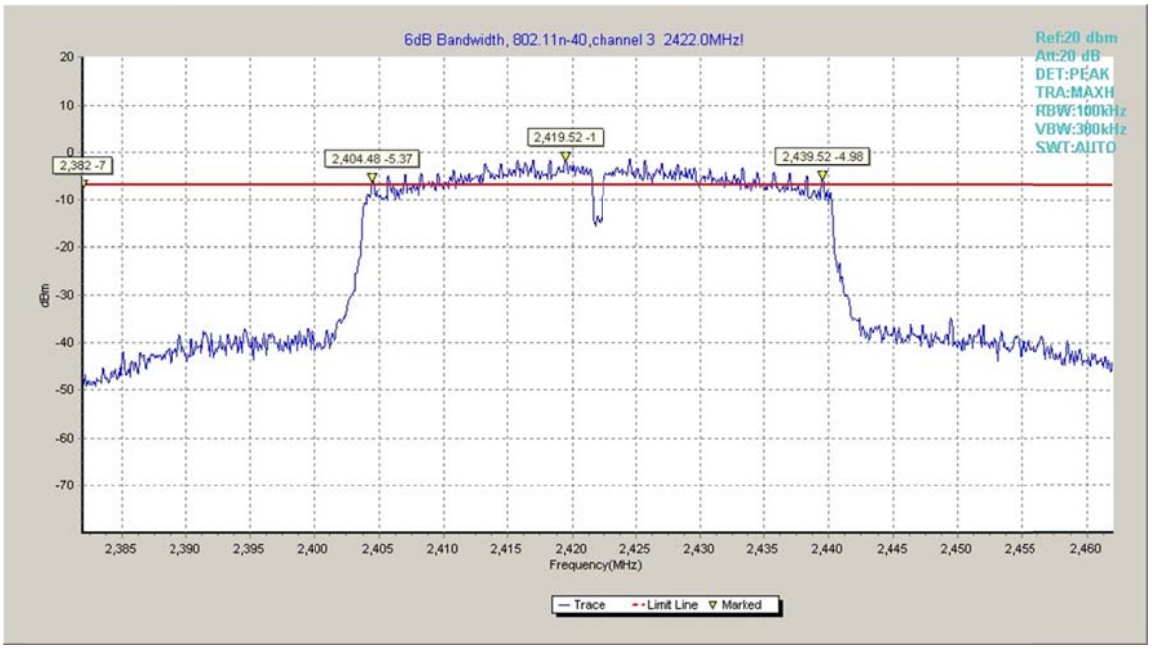


Fig.A.4.10 Occupied 6dB Bandwidth (802.11n-40MHz, Ch 3)

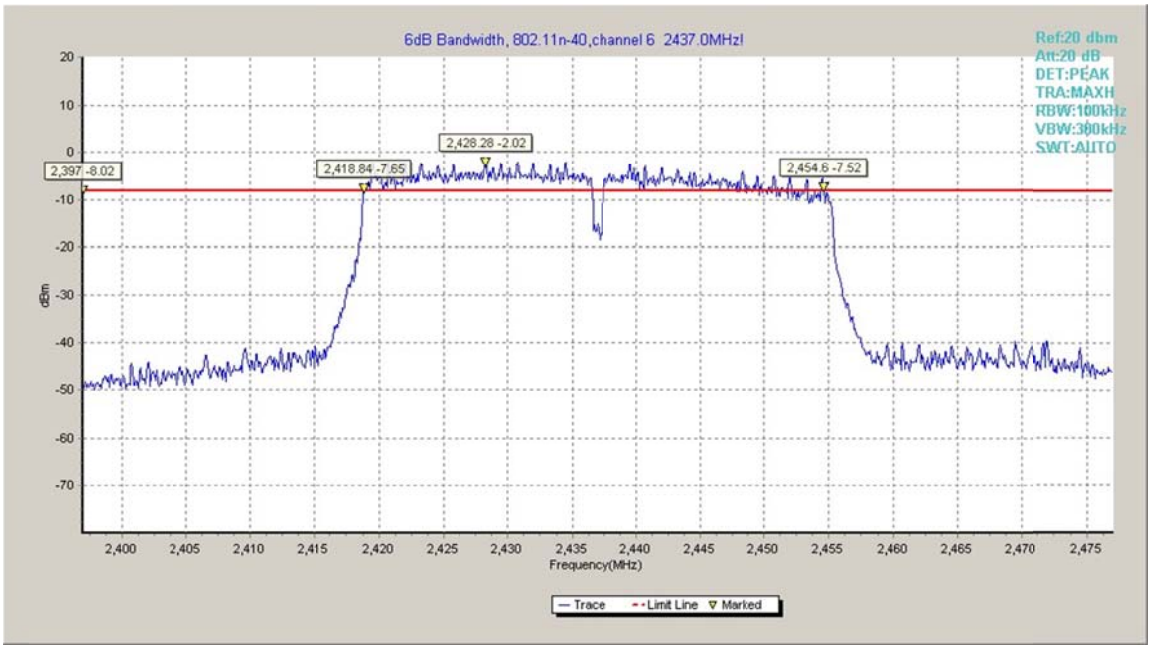


Fig.A.4.11 Occupied 6dB Bandwidth (802.11n-HT40, Ch 6)

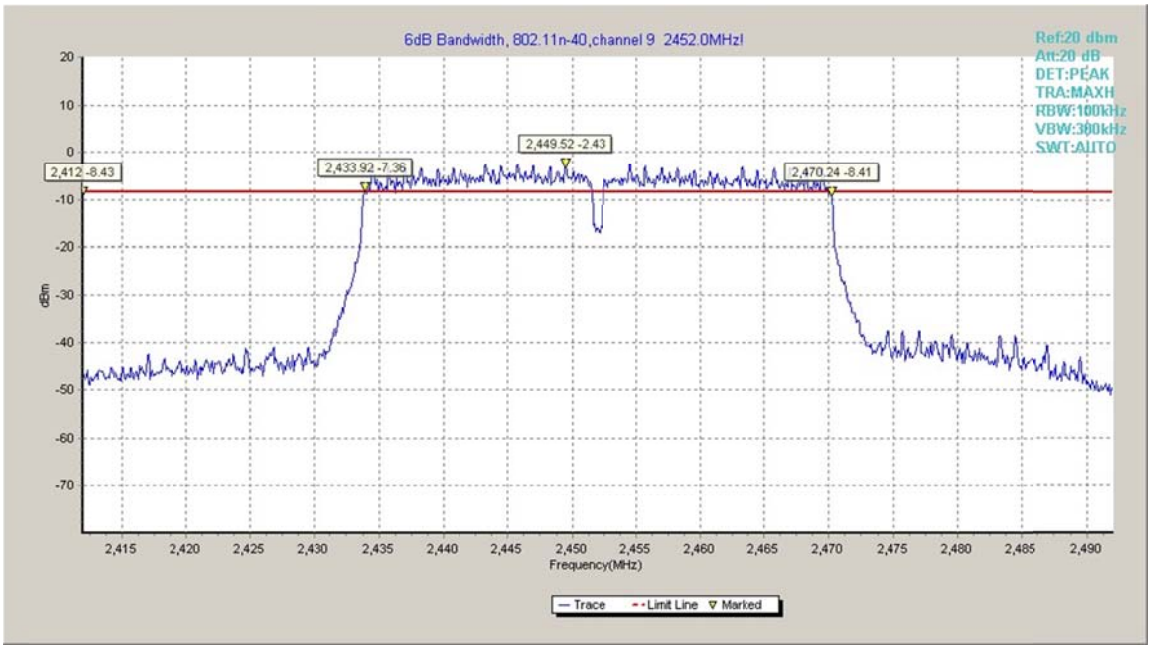


Fig.A.4.12 Occupied 6dB Bandwidth (802.11n-HT40, Ch 9)

A.5. Band Edges Compliance

Method of Measurement: See ANSI C63.10-2013-clause 6.10.4

Connect the spectrum analyzer to the EUT using an appropriate RF cable connected to the EUT output. Configure the spectrum analyzer settings as described below.

a) Set Span = 100MHz
b) Sweep Time: coupled
c) Set the RBW= 100 kHz
c) Set the VBW= 300 kHz
d) Detector: Peak
e) Trace: Max hold

Measurement Limit:

Standard	Limit (dBc)
FCC 47 CFR Part 15.247 (d)	> 20

EUT ID: EUT2

Measurement Result:

802.11n-HT40 mode

Mode	Channel	Test Results	Conclusion
802.11n (HT40)	3	Fig.A.5.1	**P**
	9	Fig.A.5.2	**P**

Note: 802.11n(HT40) was selected as the worst-case of the test case.

Conclusion: Pass

Test graphs as below:

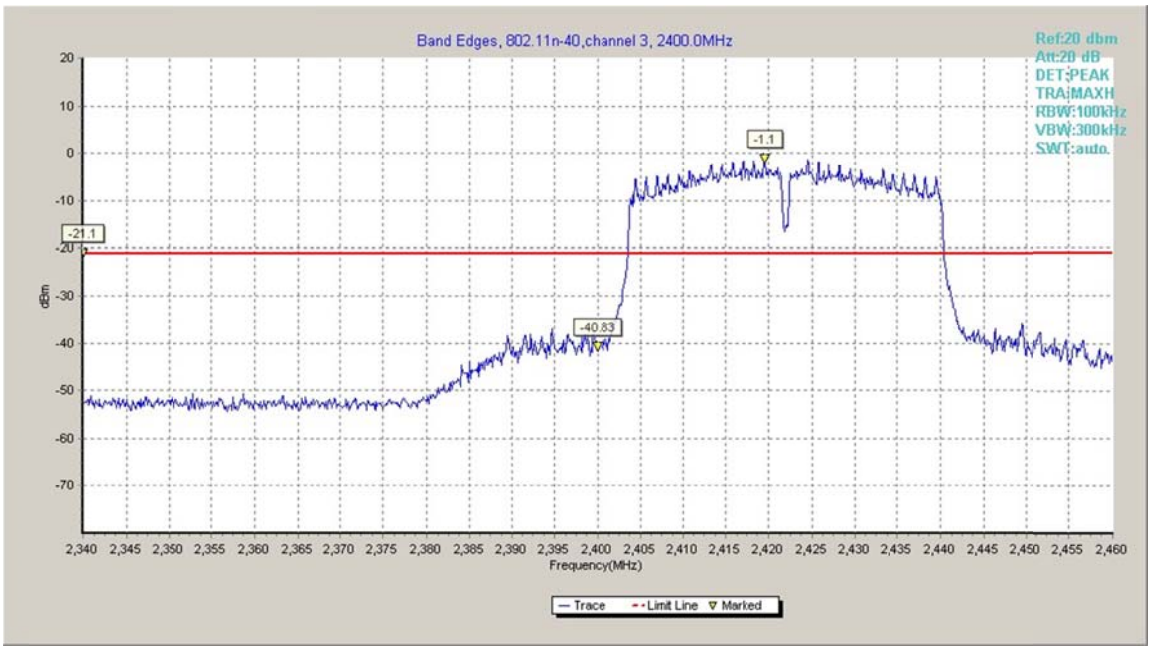


Fig.A.5.1 Band Edges (802.11n-HT40, Ch 3)

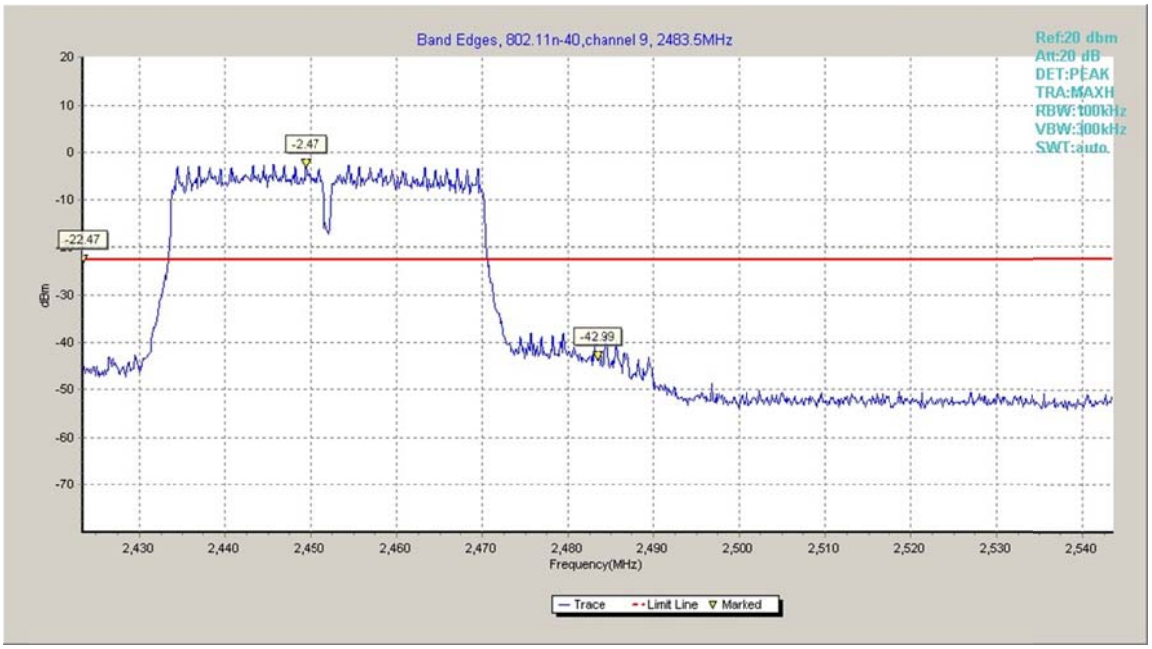


Fig.A.5.2 Band Edges (802.11n-HT40, Ch 9)

A.6. Transmitter Spurious Emission

A.6.1 Transmitter Spurious Emission – Conducted

Method of Measurement: See ANSI C63.10-2013-clause 11.11.2

Establish a reference level by using the following procedure:

a) Set instrument center frequency to DTS channel center frequency
b) Set the span to ≥ 1.5 times the DTS bandwidth
c) Set the RBW= 100 kHz
d) Set the VBW= 300 kHz
e) Detector = Peak
f) Sweep time = auto couple
g) Trace mode = max hold
h) Allow trace to fully stabilize
i) Use the peak marker function to determine the maximum PSD level

Note that the channel found to contain the maximum PSD level can be used to establish the reference level.

Establish an emission level by using the following procedure:

a) Set the center frequency and span to encompass frequency range to be measured.
b) Set the RBW = 100 kHz.
c) Set the VBW = 300 kHz.
d) Detector = peak.
e) Sweep time = auto couple.
f) Trace mode = max hold.
g) Allow trace to fully stabilize.
h) Use the peak marker function to determine the maximum amplitude level.

Ensure that the amplitude of all unwanted emissions outside of the authorized frequency band (excluding restricted frequency bands) is attenuated by at least the minimum requirements specified in 11.11. Report the three highest emissions relative to the limit.

Measurement Limit:

Standard	Limit
FCC 47 CFR Part 15.247 (d)	20dB below peak output power in 100 kHz bandwidth

EUT ID: EUT2

Measurement Results:

802.11g mode

MODE	Channel	Frequency Range	Test Results	Conclusion
802.11g	1	2.412 GHz	Fig.A.6.1.1	P
		30 MHz ~ 1 GHz	Fig.A.6.1.2	P
		1 GHz ~ 2.5 GHz	Fig.A.6.1.3	P
		2.5 GHz ~ 7.5 GHz	Fig.A.6.1.4	P
		7.5 GHz ~ 10 GHz	Fig.A.6.1.5	P
		10 GHz ~ 15 GHz	Fig.A.6.1.6	P
		15 GHz ~ 20 GHz	Fig.A.6.1.7	P
		20 GHz ~ 26 GHz	Fig.A.6.1.8	P
	6	2.437 GHz	Fig.A.6.1.9	P
		30 MHz ~ 1 GHz	Fig.A.6.1.10	P
		1 GHz ~ 2.5 GHz	Fig.A.6.1.11	P
		2.5 GHz ~ 7.5 GHz	Fig.A.6.1.12	P
		7.5 GHz ~ 10 GHz	Fig.A.6.1.13	P
		10 GHz ~ 15 GHz	Fig.A.6.1.14	P
		15 GHz ~ 20 GHz	Fig.A.6.1.15	P
		20 GHz ~ 26 GHz	Fig.A.6.1.16	P
	11	2.462 GHz	Fig.A.6.1.17	P
		30 MHz ~ 1 GHz	Fig.A.6.1.18	P
		1 GHz ~ 2.5 GHz	Fig.A.6.1.19	P
		2.5 GHz ~ 7.5 GHz	Fig.A.6.1.20	P
		7.5 GHz ~ 10 GHz	Fig.A.6.1.21	P
		10 GHz ~ 15 GHz	Fig.A.6.1.22	P
		15 GHz ~ 20 GHz	Fig.A.6.1.23	P
		20 GHz ~ 26 GHz	Fig.A.6.1.24	P

Note:802.11g was selected as the worst-case of the test case.

Conclusion: Pass

Test graphs as below:

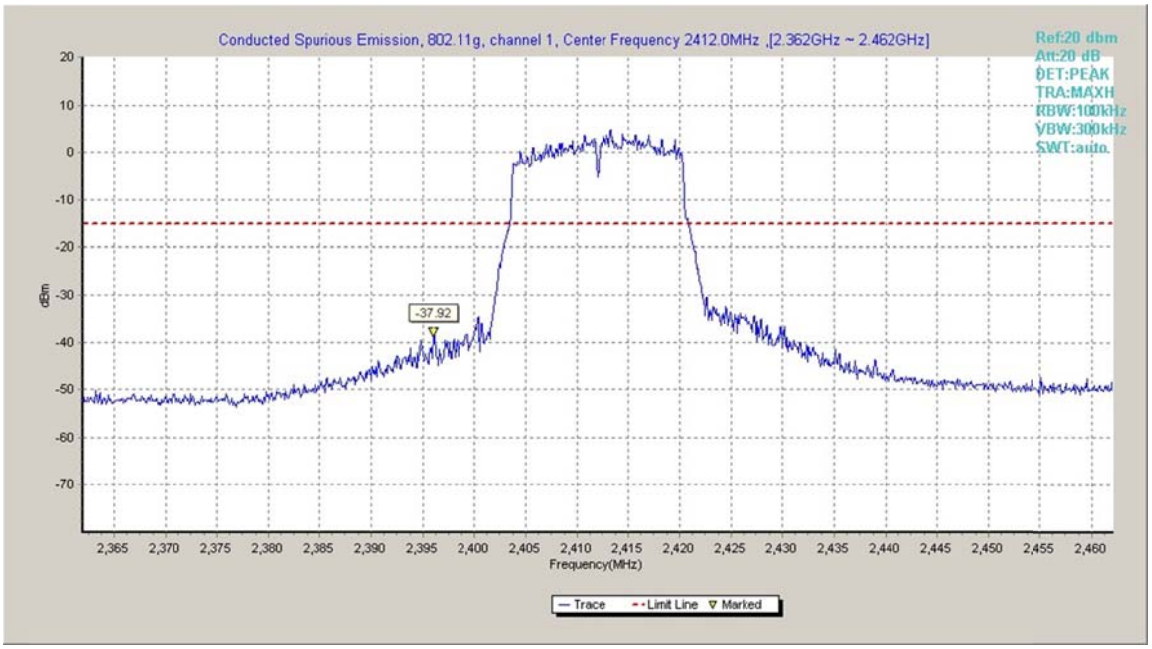


Fig.A.6.1.1 Transmitter Spurious Emission - Conducted (802.11g, Ch1, Center Frequency)

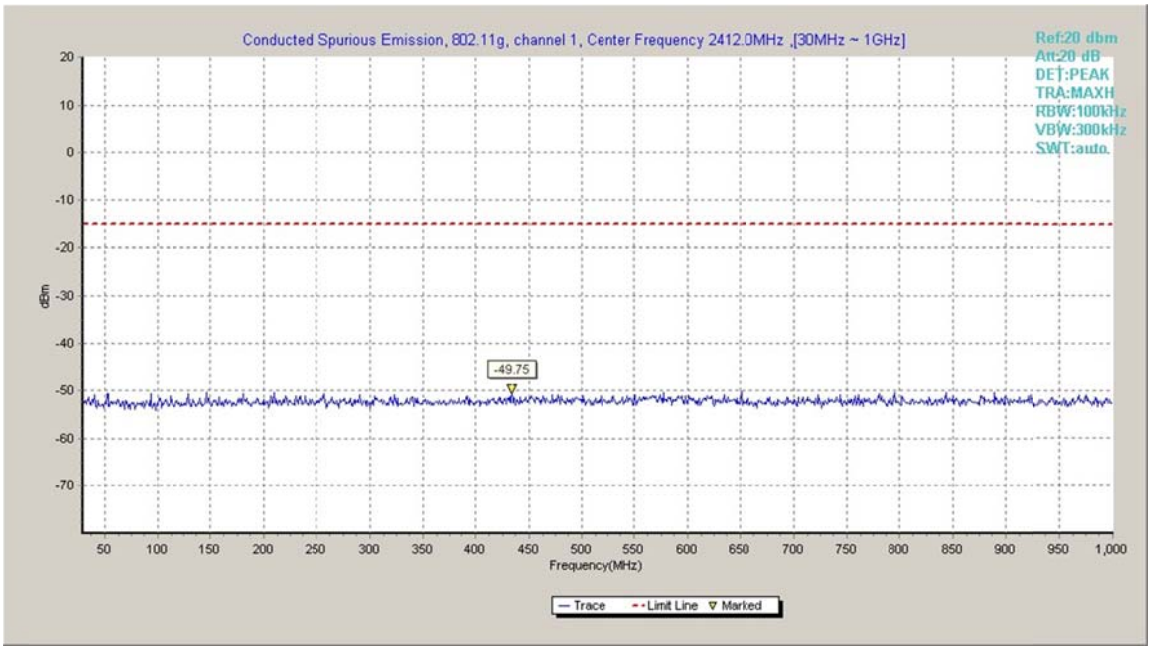


Fig.A.6.1.2 Transmitter Spurious Emission - Conducted (802.11g, Ch1, 30 MHz-1 GHz)

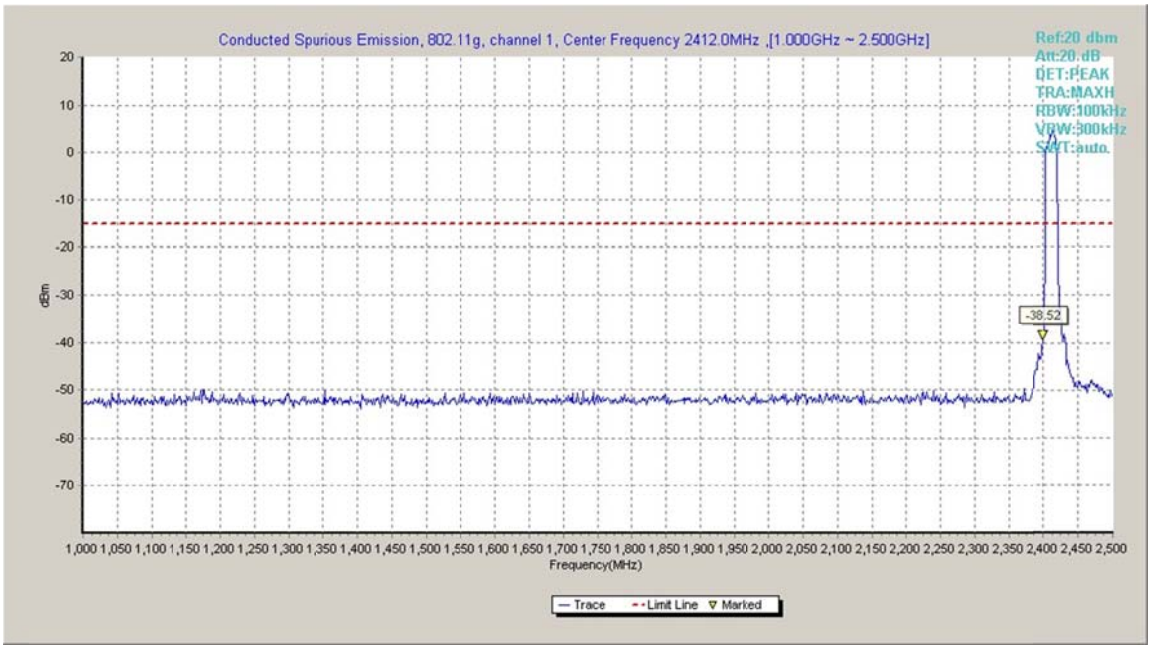


Fig.A.6.1.3 Transmitter Spurious Emission - Conducted (802.11g, Ch1, 1 GHz-2.5 GHz)

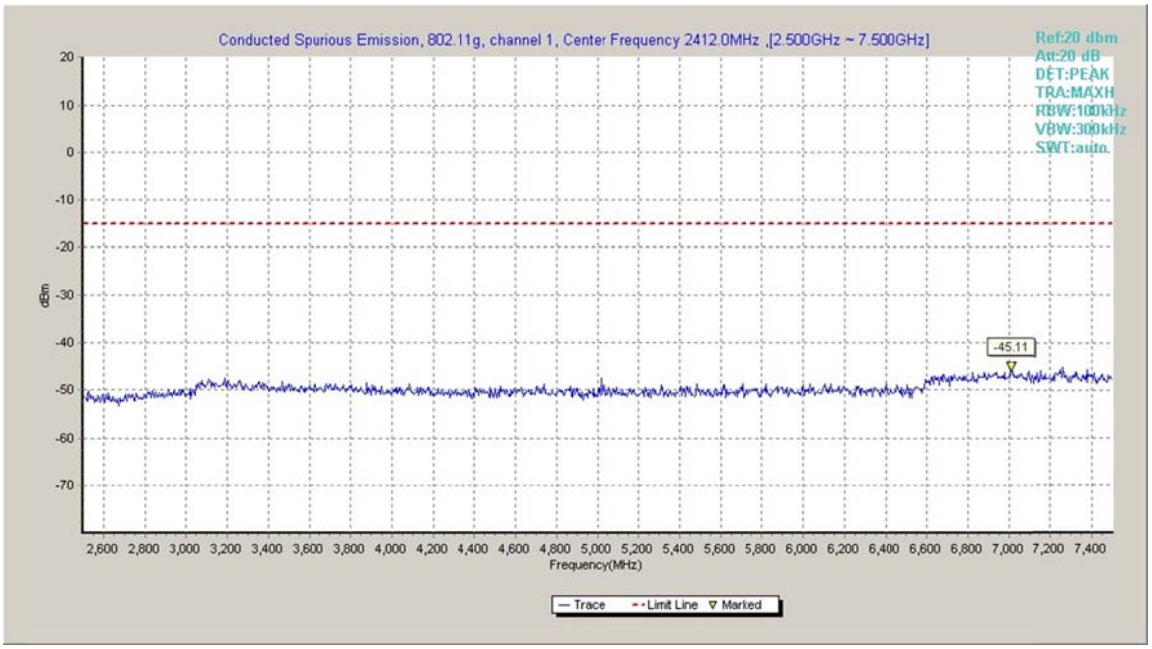


Fig.A.6.1.4 Transmitter Spurious Emission - Conducted (802.11g, Ch1, 2.5 GHz-7.5 GHz)

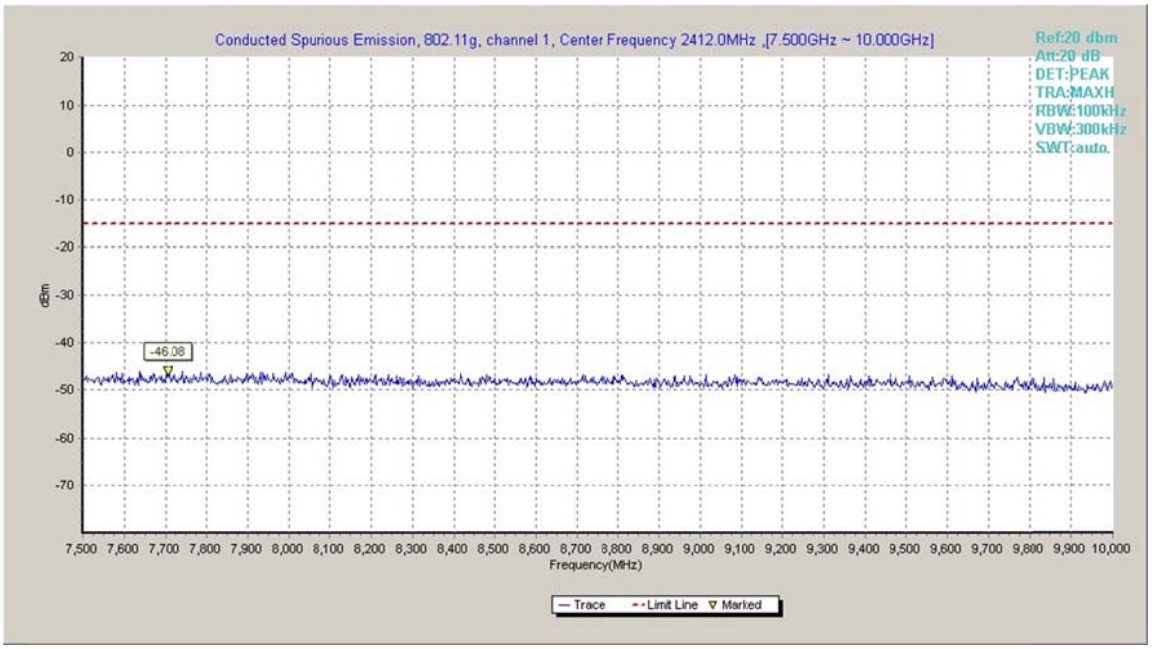


Fig.A.6.1.5 Transmitter Spurious Emission - Conducted (802.11g, Ch1, 7.5 GHz-10 GHz)

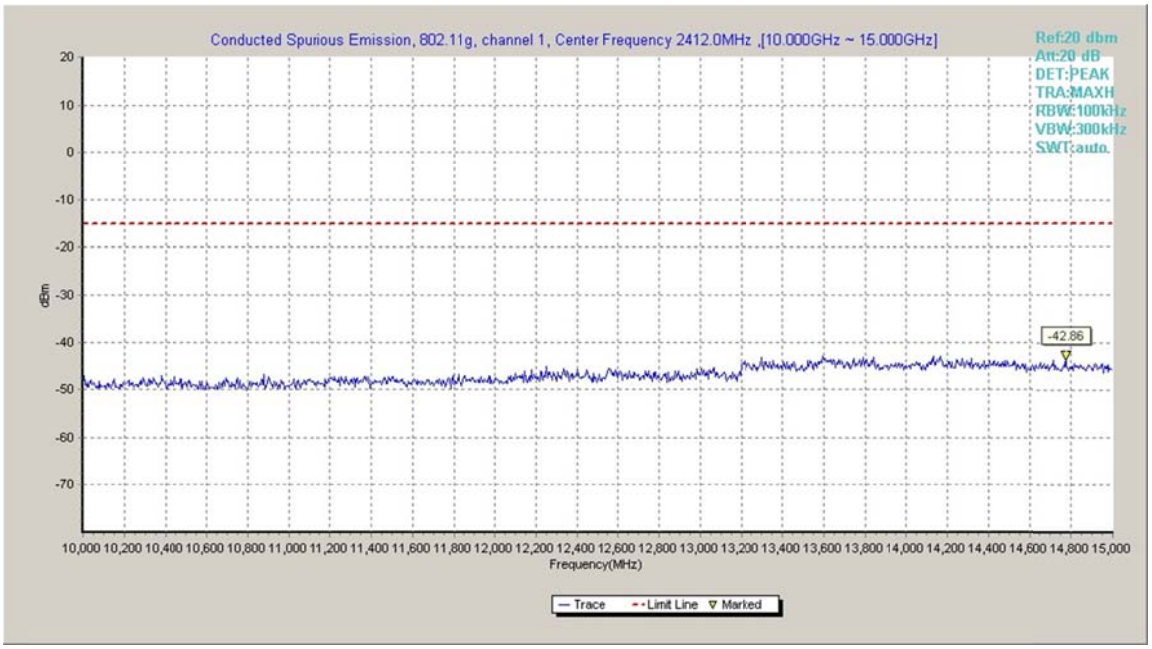


Fig.A.6.1.6 Transmitter Spurious Emission - Conducted (802.11g, Ch1, 10 GHz-15 GHz)

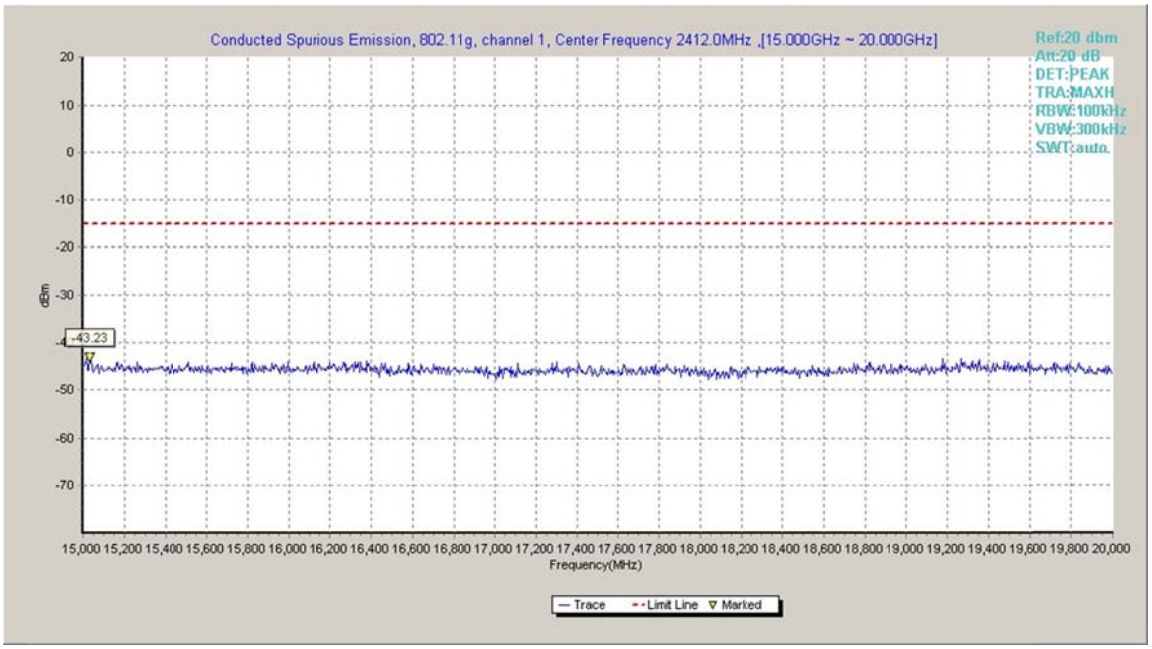


Fig.A.6.1.7 Transmitter Spurious Emission - Conducted (802.11g, Ch1, 15 GHz-20 GHz)

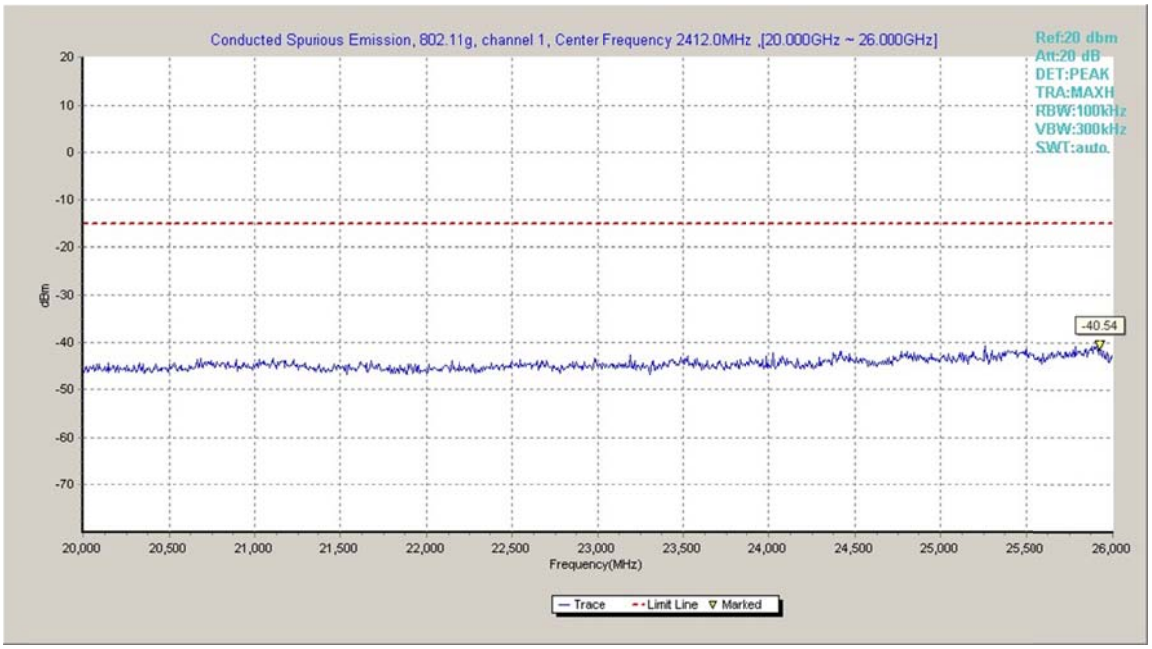


Fig.A.6.1.8 Transmitter Spurious Emission - Conducted (802.11g, Ch1, 20 GHz-26 GHz)

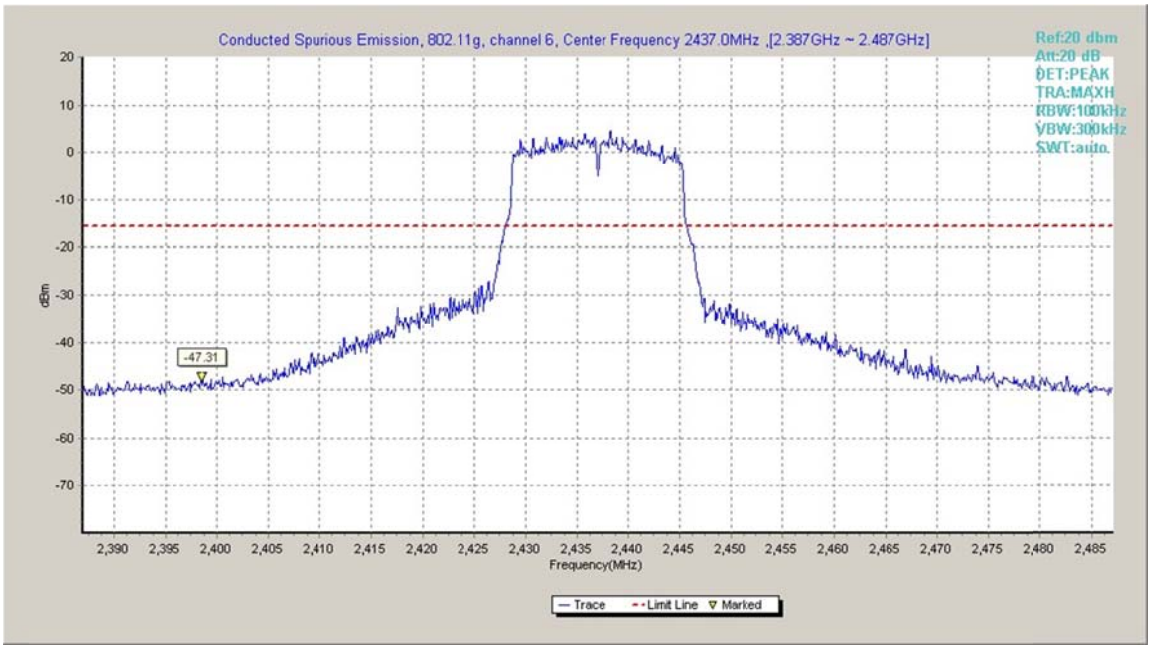


Fig.A.6.1.9 Transmitter Spurious Emission - Conducted (802.11g, Ch6, Center Frequency)

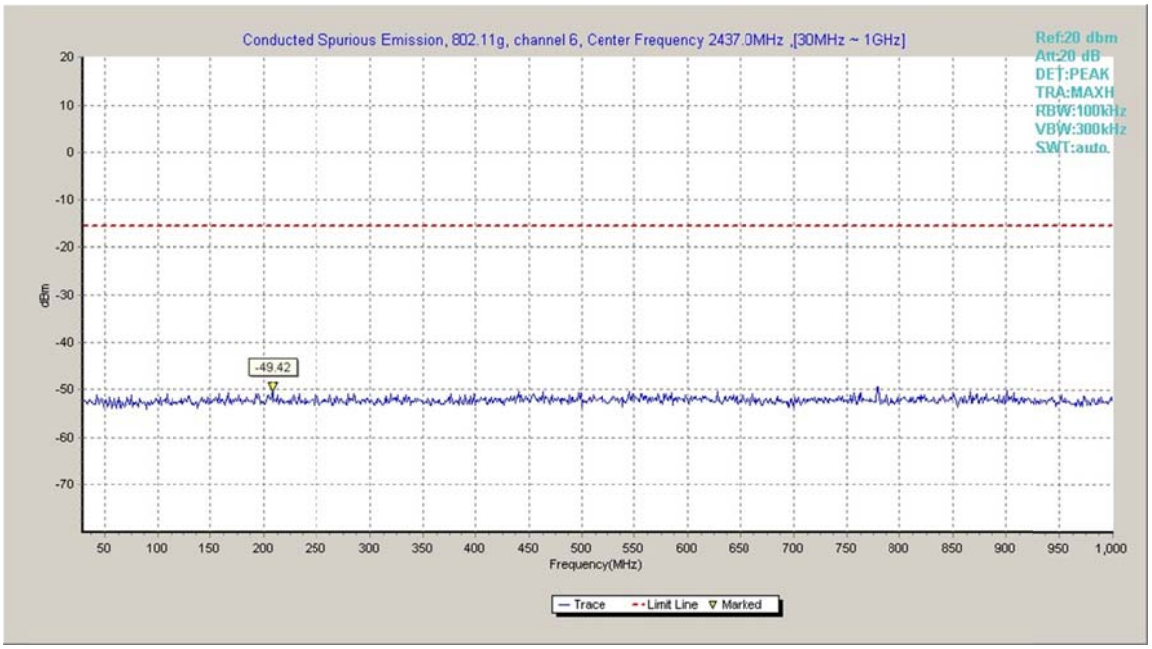


Fig.A.6.1.10 Transmitter Spurious Emission - Conducted (802.11g, Ch6, 30 MHz-1 GHz)

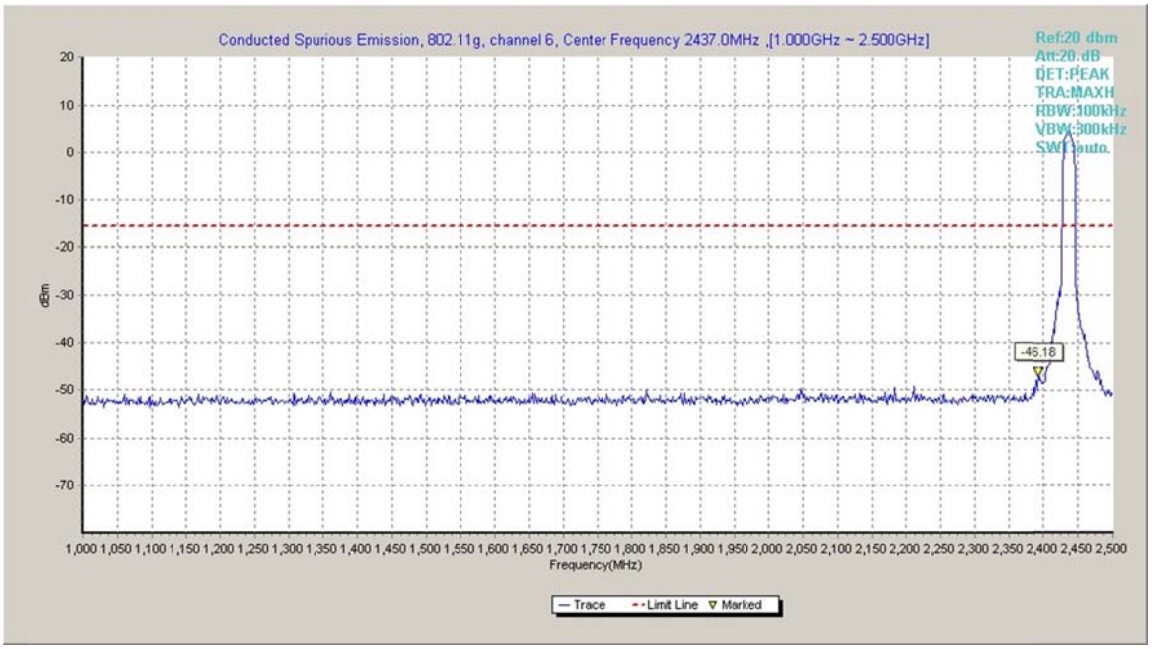


Fig.A.6.1.11 Transmitter Spurious Emission - Conducted (802.11g, Ch6, 1 GHz-2.5 GHz)

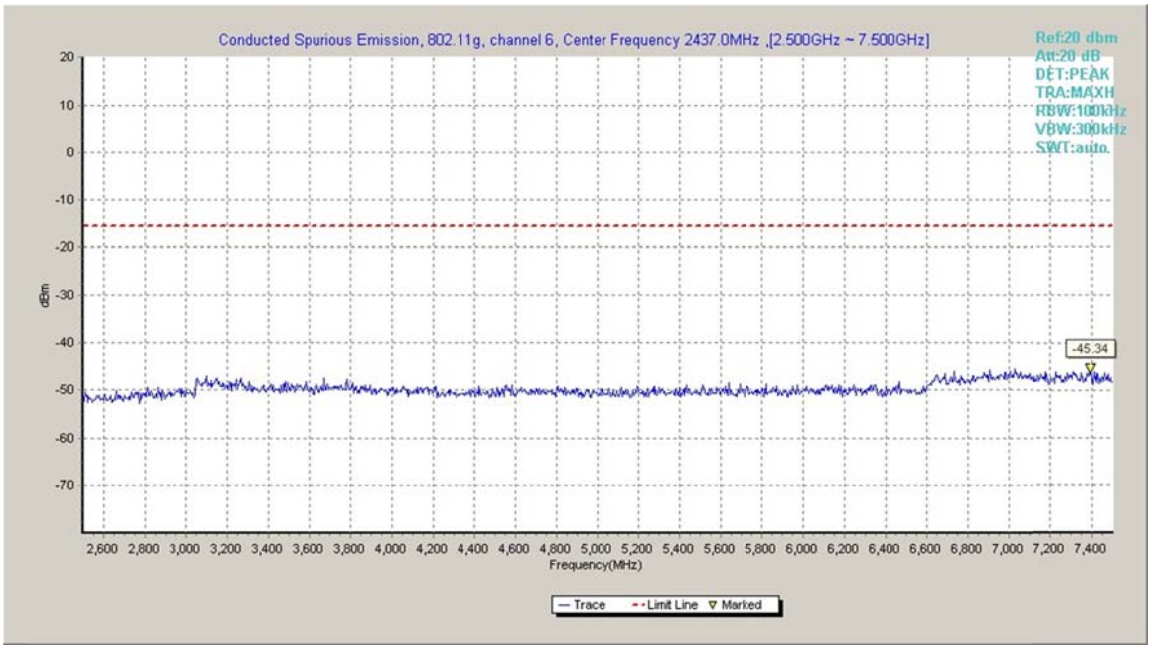


Fig.A.6.1.12 Transmitter Spurious Emission - Conducted (802.11g, Ch6, 2.5 GHz-7.5 GHz)

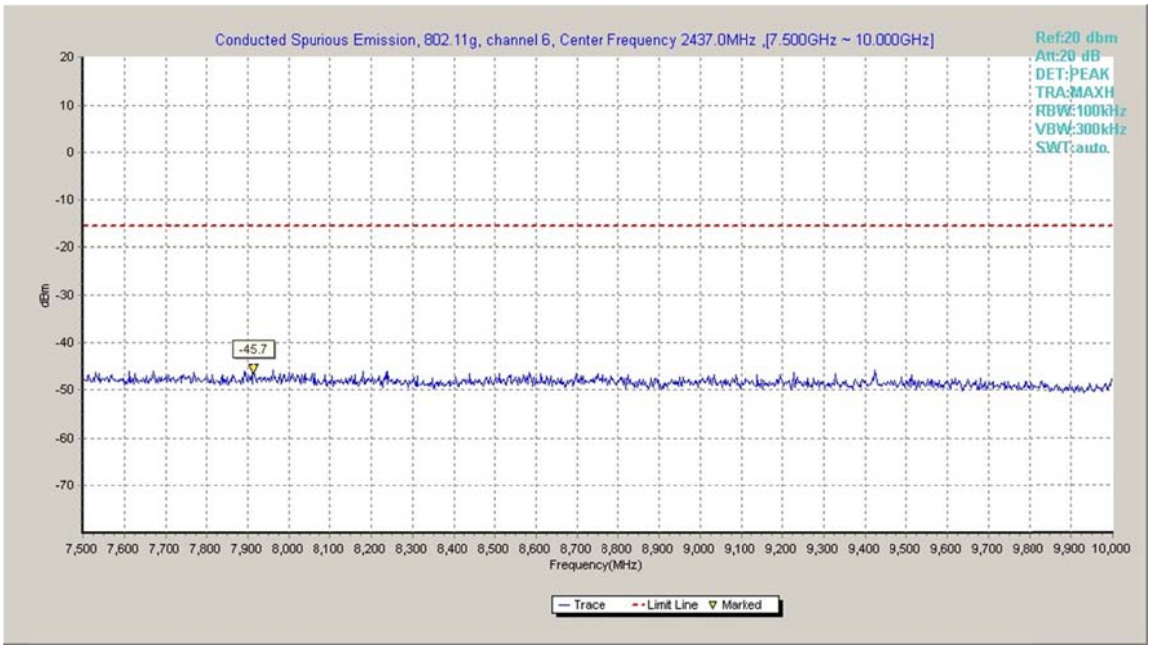


Fig.A.6.1.13 Transmitter Spurious Emission - Conducted (802.11g, Ch6, 7.5 GHz-10 GHz)

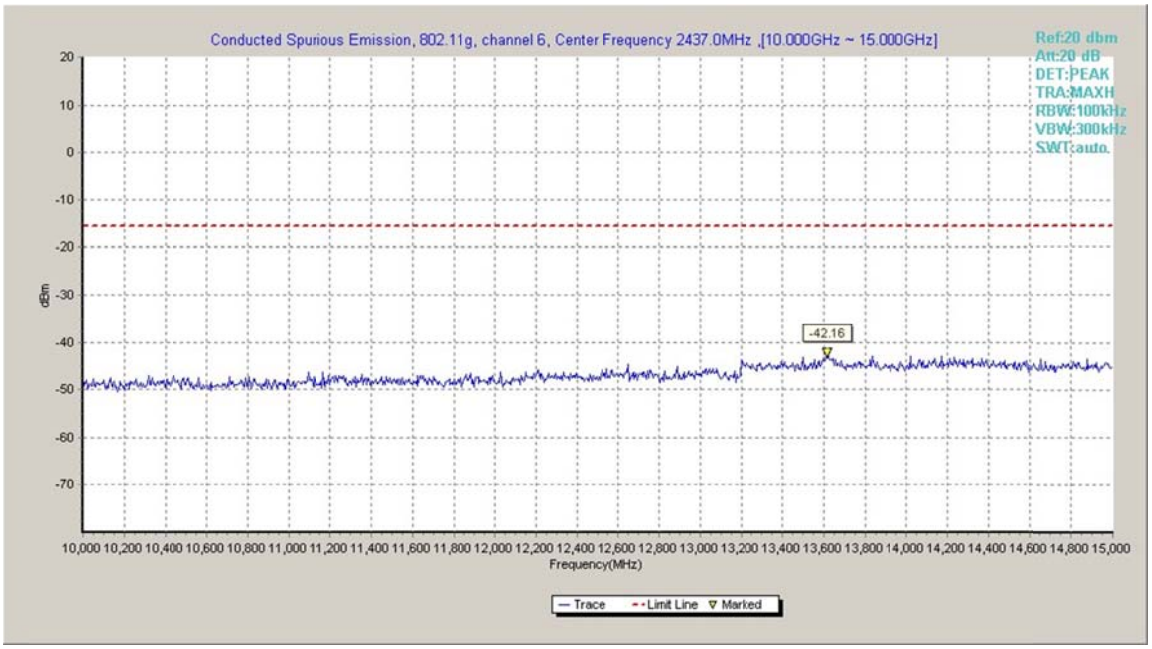


Fig.A.6.1.14 Transmitter Spurious Emission - Conducted (802.11g, Ch6, 10 GHz-15 GHz)

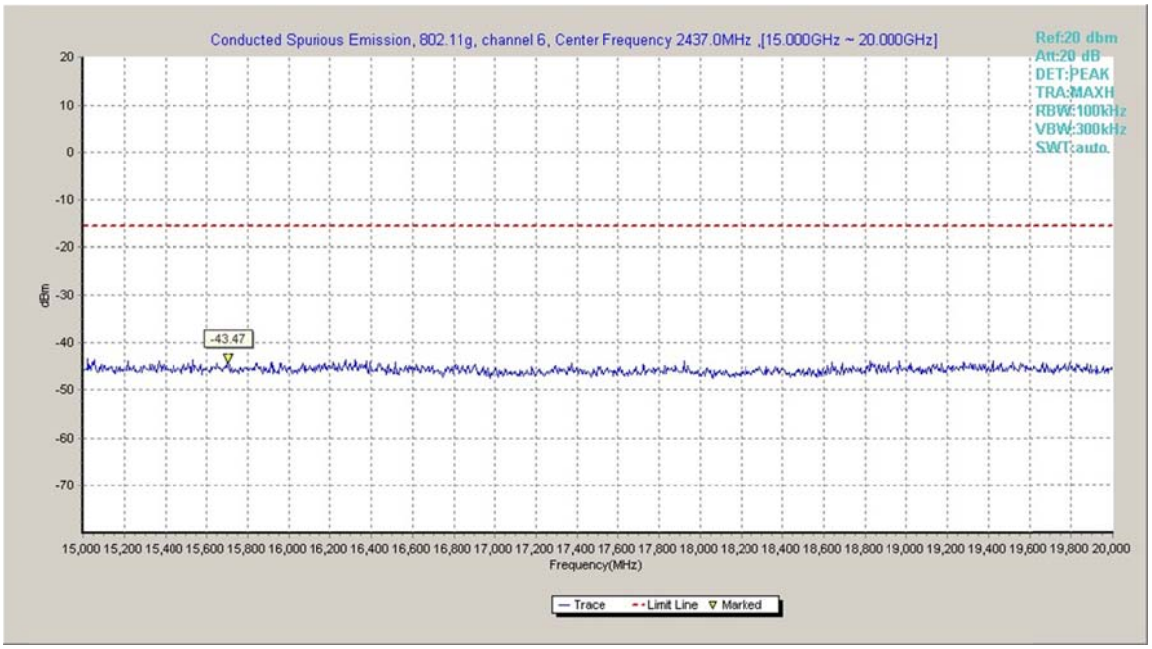


Fig.A.6.1.15 Transmitter Spurious Emission - Conducted (802.11g, Ch6, 15 GHz-20 GHz)

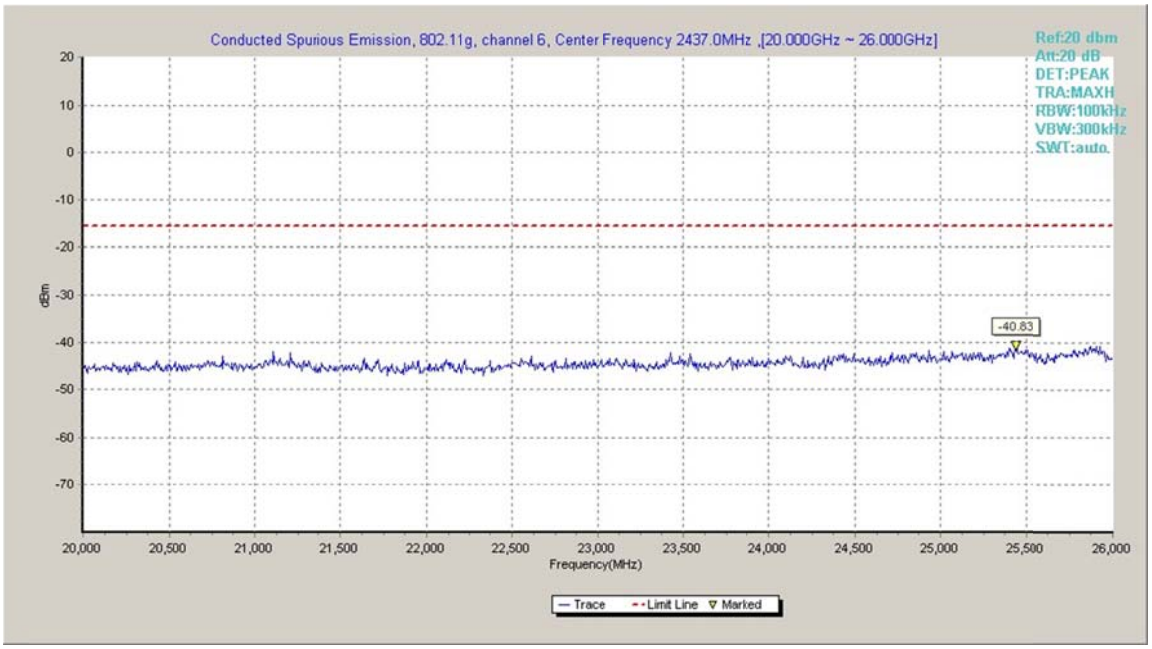


Fig.A.6.1.16 Transmitter Spurious Emission - Conducted (802.11g, Ch6, 20 GHz-26 GHz)

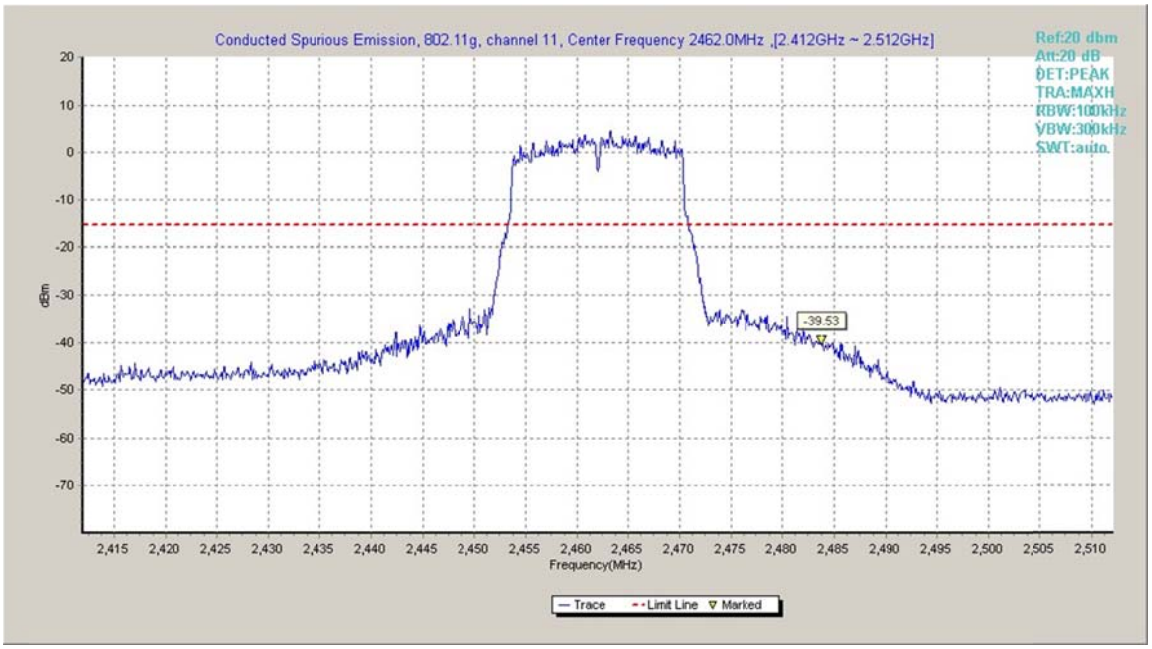


Fig.A.6.1.17 Transmitter Spurious Emission - Conducted (802.11g, Ch11, Center Frequency)

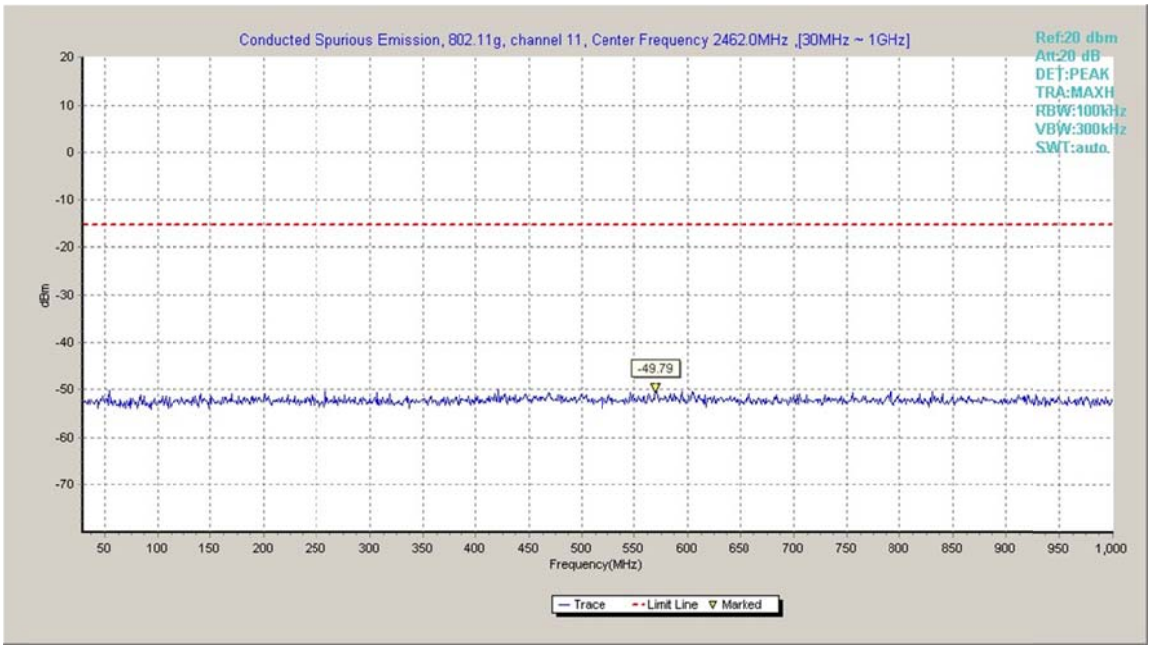


Fig.A.6.1.18 Transmitter Spurious Emission - Conducted (802.11g, Ch11, 30 MHz-1 GHz)

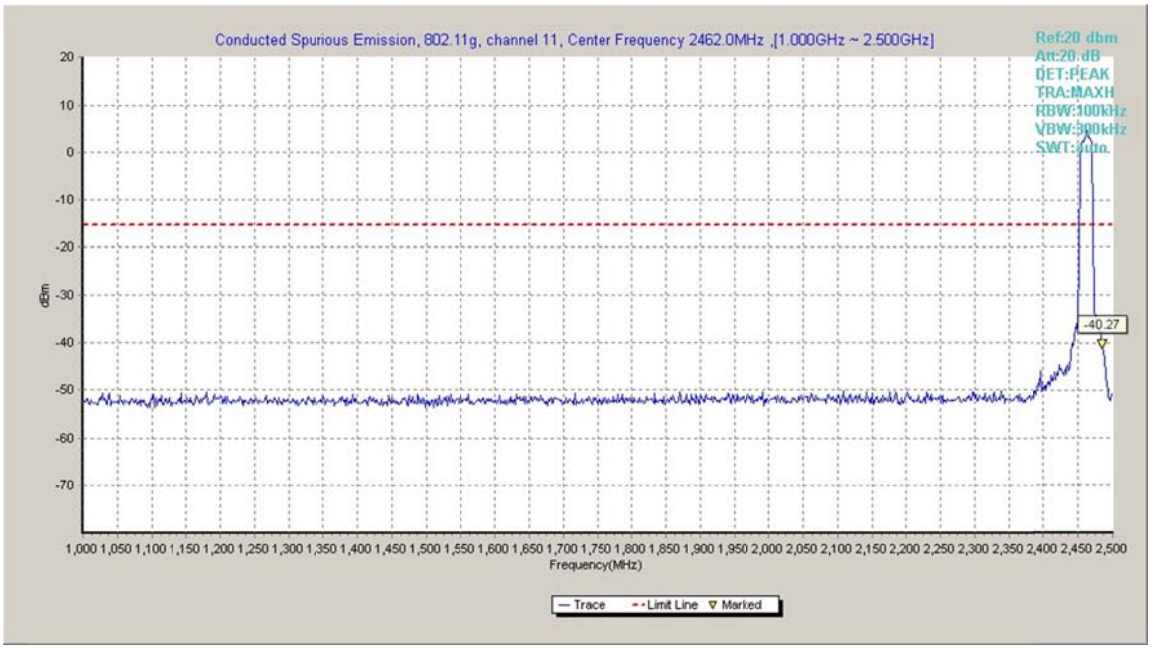


Fig.A.6.1.19 Transmitter Spurious Emission - Conducted (802.11g, Ch11, 1 GHz-2.5 GHz)

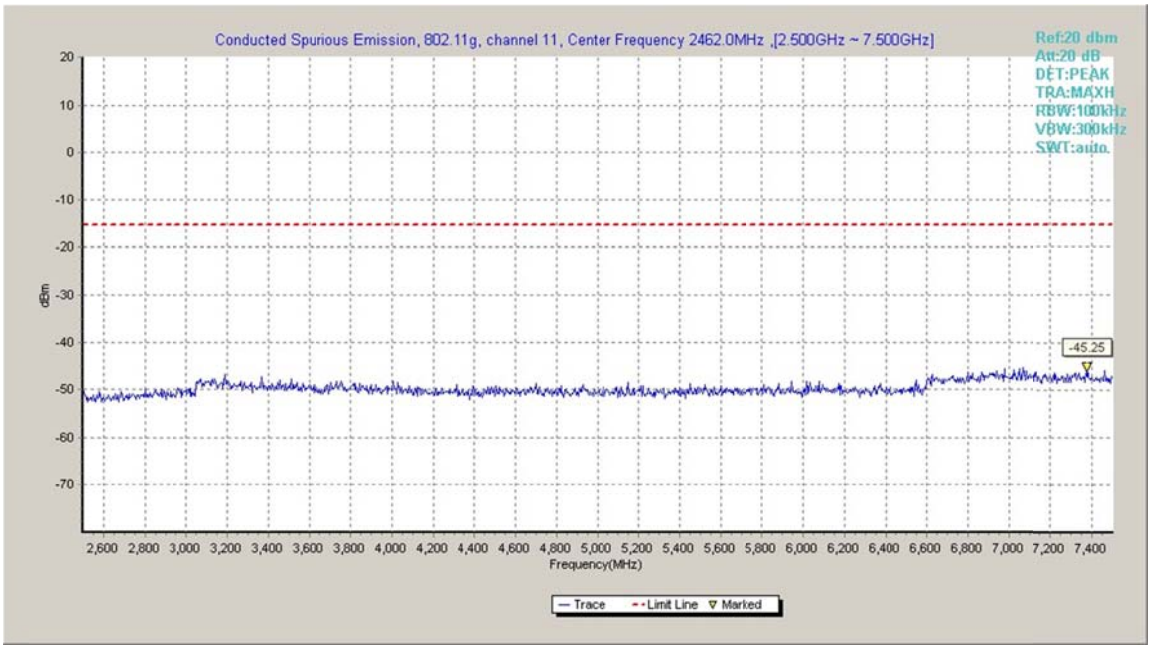


Fig.A.6.1.20 Transmitter Spurious Emission - Conducted (802.11g, Ch11, 2.5 GHz-7.5 GHz)

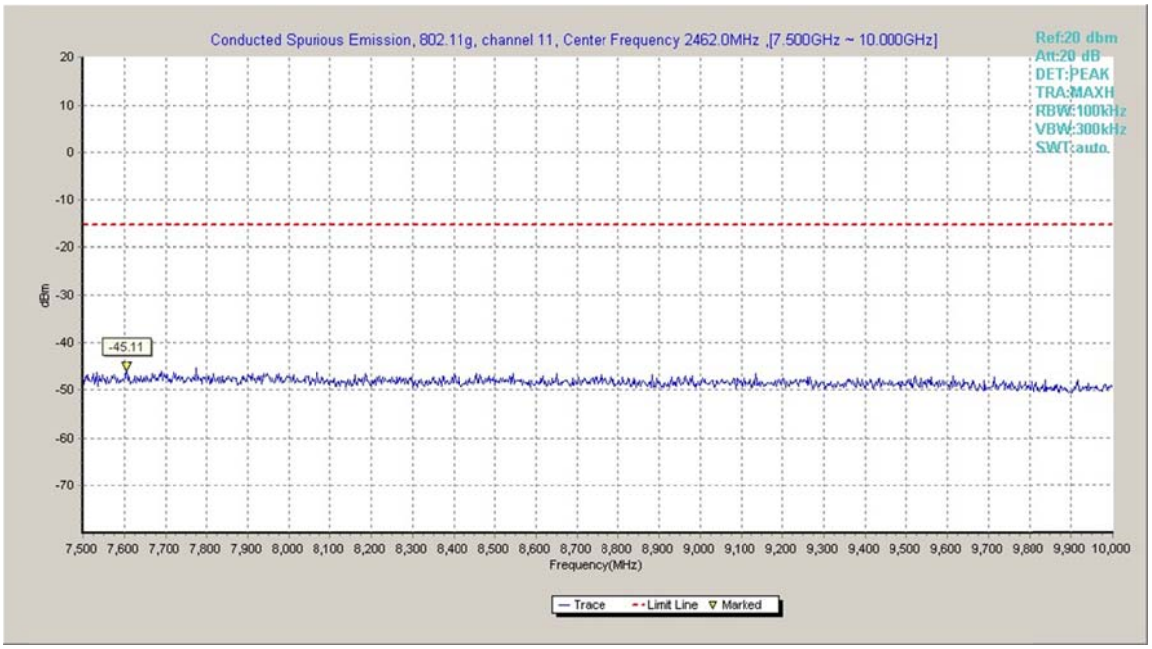


Fig.A.6.1.21 Transmitter Spurious Emission - Conducted (802.11g, Ch11, 7.5 GHz-10 GHz)

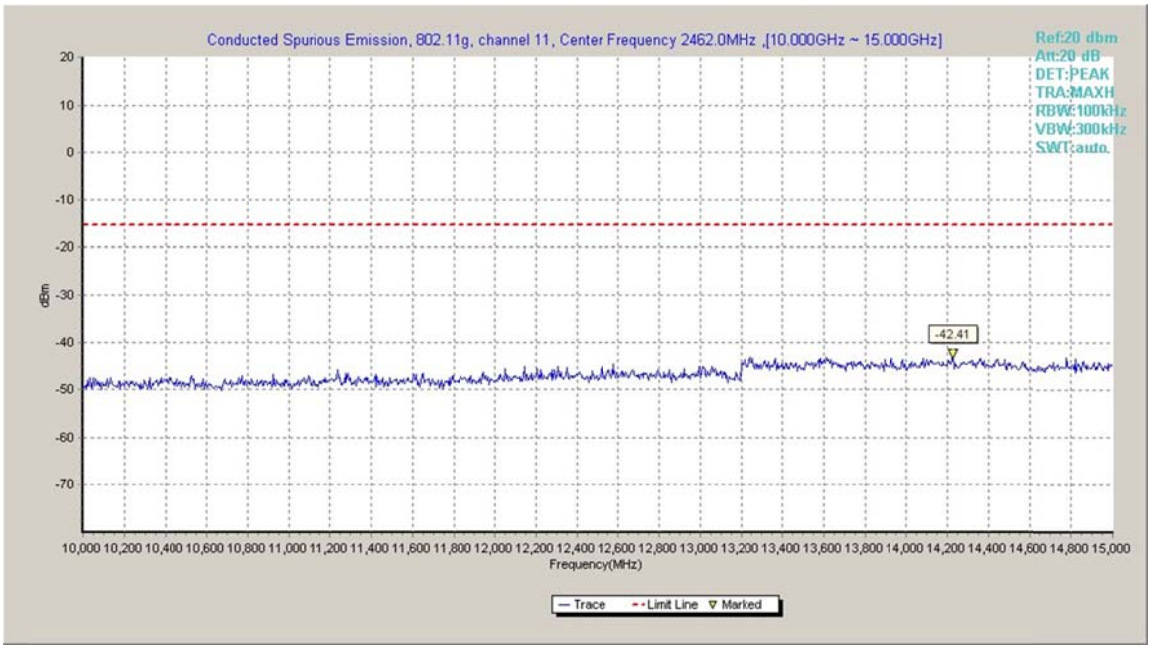


Fig.A.6.1.22 Transmitter Spurious Emission - Conducted (802.11g, Ch11, 10 GHz-15 GHz)

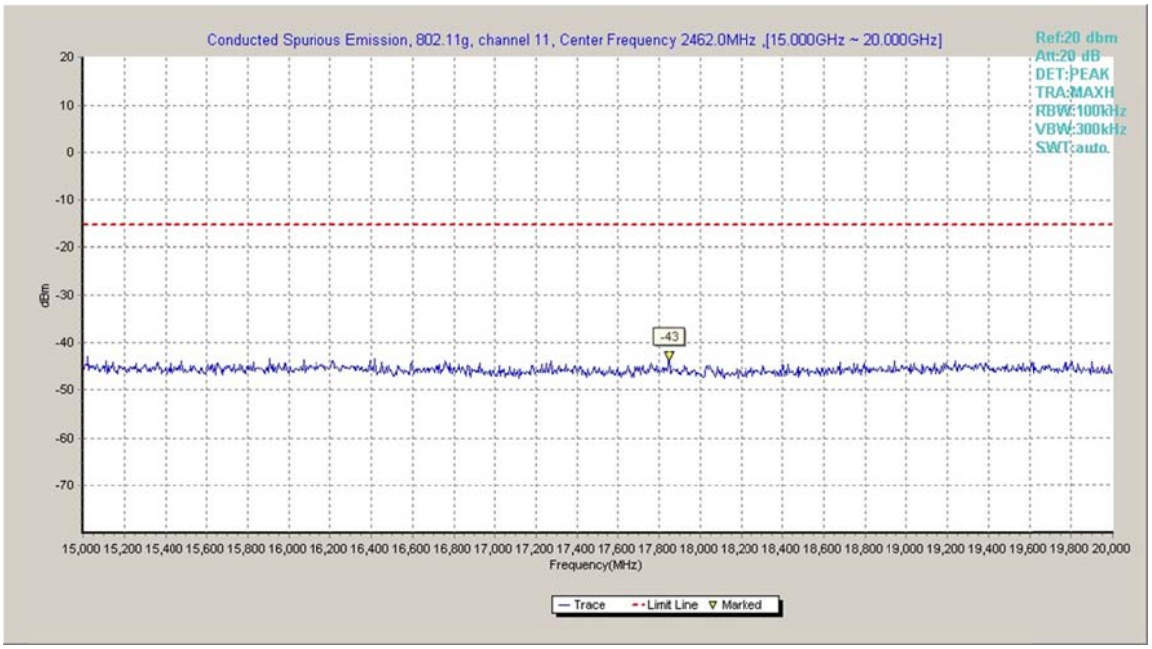


Fig.A.6.1.23 Transmitter Spurious Emission - Conducted (802.11g, Ch11, 15 GHz-20 GHz)

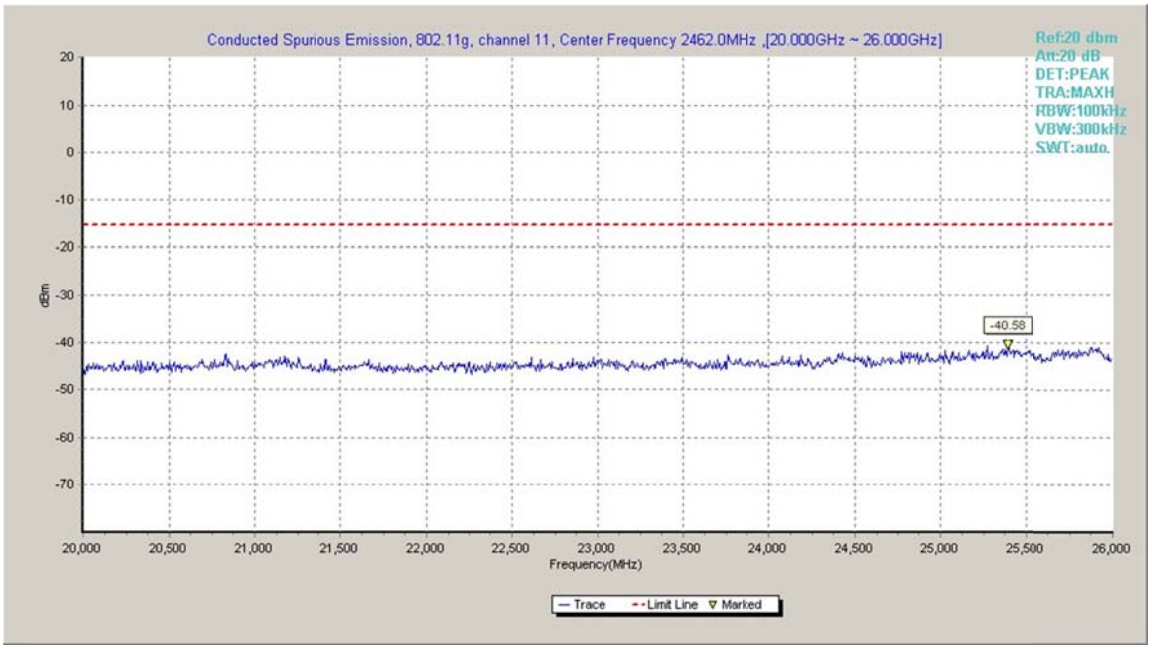


Fig.A.6.1.24 Transmitter Spurious Emission - Conducted (802.11g, Ch11, 20 GHz-26 GHz)

A.6.2 Transmitter Spurious Emission - Radiated

Method of Measurement: See ANSI C63.10-2013-clause 6.4 &6.5 & 6.6

Measurement Limit:

Standard	Limit
FCC 47 CFR Part 15.247, 15.205, 15.209	20dB below peak output power

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

Limit in restricted band:

Frequency of emission (MHz)	Field strength(uV/m)	Field strength(dBuV/m)
30-88	100	40
88-216	150	43.5
216-960	200	46
Above 960	500	54

Frequency (MHz)	Field strength(μV/m)	Measurement distance (m)
0.009 - 0.490	2400/F(kHz)	300
0.490 - 1.705	24000/F(kHz)	30
1.705 – 30.0	30	30

Test Condition

The EUT was placed on a non-conductive table. The measurement antenna was placed at a distance of 3 meters from the EUT. During the tests, the antenna height and the EUT azimuth were varied in order to identify the maximum level of emissions from the EUT. This maximization process was repeated with the EUT positioned in each of its three orthogonal orientations.

Frequency of emission (MHz)	RBW/VBW	Sweep Time(s)
30-1000	100KHz/300KHz	5
1000-4000	1MHz/1MHz	15
4000-18000	1MHz/1MHz	40
18000-26500	1MHz/1MHz	20

EUT ID: EUT1

Measurement Results:

802.11b mode

Mode	Channel	Frequency Range	Test Results	Conclusion
802.11b	Power	2.38GHz ~2.45GHz	Fig.A.6.2.1	**P**
	Power	2.45GHz ~2.5GHz	Fig.A.6.2.2	**P**

802.11g mode

Mode	Channel	Frequency Range	Test Results	Conclusion
802.11g	Power	2.38GHz ~2.43GHz	Fig.A.6.2.3	**P**
	Power	2.45GHz ~2.5GHz	Fig.A.6.2.4	**P**

802.11n-HT20 mode

Mode	Channel	Frequency Range	Test Results	Conclusion
802.11n (HT20)	Power	2.38GHz ~2.45GHz	Fig.A.6.2.5	**P**
	Power	2.45GHz ~2.5GHz	Fig.A.6.2.6	**P**

802.11n-HT40 mode

Mode	Channel	Frequency Range	Test Results	Conclusion
802.11n (HT40)	Power	2.38GHz ~2.45GHz	Fig.A.6.2.7	**P**
	Power	2.45GHz ~2.5GHz	Fig.A.6.2.8	**P**

Conclusion: Pass

Note:

A "reference path loss" is established and the A_{Rpl} is the attenuation of “reference path loss”, and including the gain of receive antenna, the gain of the preamplifier, the cable loss.

P_{Mea} is the field strength recorded from the instrument.

The measurement results are obtained as described below:

Result=P_{Mea}+$A_{Rpl=}$ P_{Mea}+Cable Loss+Antenna Factor

AVERAGE

802.11b

Ch1

Frequency (MHz)	Measurement Result (dBμV/m)	Cable loss (dB)	Antenna Factor (dB/m)	Receiver eading (dBμV)	Limit (dBμV/m)	Margin (dB)	Antenna Pol. (H/V)
2386.600	46.4	2.9	32.0	11.48	54.0	7.7	H
2388.400	46.3	2.9	32.0	11.45	54.0	7.7	H
4824.000	41.31	-32.8	34.5	39.56	54.0	12.7	H
7236.000	35.11	-31.7	36.1	30.75	54.0	18.9	H
9648.000	33.53	-30.4	37.0	26.85	54.0	20.5	H
12060.000	35.81	-29.6	39.3	26.14	54.0	18.2	H

Ch6

Frequency (MHz)	Measurement Result (dBμV/m)	Cable loss (dB)	Antenna Factor (dB/m)	Receiver eading (dBμV)	Limit (dBμV/m)	Margin (dB)	Antenna Pol. (H/V)
2374.200	46.60	2.9	32.1	11.66	54.0	7.4	H
2508.800	46.80	2.9	32.4	11.41	54.0	7.2	H
4874.000	42.10	-32.7	34.5	40.31	54.0	11.9	H
7311.000	31.53	-31.9	36.1	27.36	54.0	22.5	H
9748.000	32.80	-30.7	37.2	26.27	54.0	21.2	H
12185.000	35.58	-29.4	39.2	25.78	54.0	18.4	H

Ch11

Frequency (MHz)	Measurement Result (dBμV/m)	Cable loss (dB)	Antenna Factor (dB/m)	Receiver eading (dBμV)	Limit (dBμV/m)	Margin (dB)	Antenna Pol. (H/V)
2484.500	47.0	2.9	32.7	11.36	54.0	7.0	H
2486.400	47.0	2.9	32.7	11.36	54.0	7.0	H
4923.000	41.66	-33.1	34.5	40.23	54.0	12.3	H
7384.500	32.93	-31.8	36.0	28.72	54.0	21.1	H
9848.000	34.71	-30.1	37.3	27.46	54.0	19.3	H
12310.000	35.39	-29.7	39.2	25.92	54.0	18.6	H

802.11g

Ch1

Frequency (MHz)	Measurement Result (dBμV/m)	Cable loss (dB)	Antenna Factor (dB/m)	Receiver eading (dBμV)	Limit (dBμV/m)	Margin (dB)	Antenna Pol. (H/V)
2383.000	46.3	2.9	32.0	11.45	54.0	7.7	H
2390.000	46.5	2.9	32.0	11.70	54.0	7.5	H
4824.000	30.89	-32.8	34.5	29.14	54.0	23.1	H
7236.000	31.13	-31.7	36.1	26.76	54.0	22.9	H
9648.000	32.89	-30.4	37.0	26.20	54.0	21.1	H
12060.000	35.24	-29.6	39.3	25.56	54.0	18.8	H

Ch6

Frequency (MHz)	Measurement Result (dBμV/m)	Cable loss (dB)	Antenna Factor (dB/m)	Receiver eading (dBμV)	Limit (dBμV/m)	Margin (dB)	Antenna Pol. (H/V)
2379.600	46.50	2.9	32.1	11.58	54.0	7.5	H
2518.700	46.60	3.0	32.6	11.04	54.0	7.4	H
4874.000	30.39	-32.7	34.5	28.60	54.0	23.6	H
7311.000	31.08	-31.9	36.1	26.91	54.0	22.9	H
9748.000	32.56	-30.7	37.2	26.03	54.0	21.4	H
12185.000	35.17	-29.4	39.2	25.38	54.0	18.8	H

Ch11

Frequency (MHz)	Measurement Result (dBμV/m)	Cable loss (dB)	Antenna Factor (dB/m)	Receiver eading (dBμV)	Limit (dBμV/m)	Margin (dB)	Antenna Pol. (H/V)
2483.600	47.1	2.9	32.8	11.43	54.0	6.9	H
2484.700	47.1	2.9	32.7	11.39	54.0	6.9	H
4924.000	30.54	-33.1	34.5	29.13	54.0	23.5	H
7386.000	31.22	-31.8	36.0	27.02	54.0	22.8	H
9848.000	32.96	-30.1	37.3	25.71	54.0	21.0	H
12310.000	35.42	-29.7	39.2	25.95	54.0	18.6	H

802.11n-HT20

Ch1

Frequency (MHz)	Measurement Result (dBμV/m)	Cable loss (dB)	Antenna Factor (dB/m)	Receiver eading (dBμV)	Limit (dBμV/m)	Margin (dB)	Antenna Pol. (H/V)
2389.500	46.5	2.9	32.0	11.65	54.0	7.5	H
2389.810	46.5	2.9	32.0	11.68	54.0	7.5	H
4824.000	30.56	-32.8	34.5	28.81	54.0	23.4	H
7236.000	31.33	-31.7	36.1	26.97	54.0	22.7	H
9648.000	33.00	-30.4	37.0	26.32	54.0	21.0	H
12060.000	35.83	-29.6	39.3	26.16	54.0	18.2	H

Ch6

Frequency (MHz)	Measurement Result (dBμV/m)	Cable loss (dB)	Antenna Factor (dB/m)	Receiver eading (dBμV)	Limit (dBμV/m)	Margin (dB)	Antenna Pol. (H/V)
2380.000	46.50	2.9	32.1	11.58	54.0	7.5	H
2511.900	46.70	3.0	32.5	11.26	54.0	7.3	H
4874.000	30.62	-32.7	34.5	28.83	54.0	23.4	H
7311.000	31.35	-31.9	36.1	27.18	54.0	22.7	H
9748.000	33.02	-30.7	37.2	26.49	54.0	21.0	H
12185.000	35.56	-29.4	39.2	25.77	54.0	18.4	H

Ch11

Frequency (MHz)	Measurement Result (dBμV/m)	Cable loss (dB)	Antenna Factor (dB/m)	Receiver eading (dBμV)	Limit (dBμV/m)	Margin (dB)	Antenna Pol. (H/V)
2484.220	47.0	2.9	32.7	11.37	54.0	7.0	H
2485.000	47.0	2.9	32.7	11.36	54.0	7.0	H
4924.000	30.88	-33.1	34.5	29.46	54.0	23.1	H
7386.000	31.68	-31.8	36.0	27.48	54.0	22.3	H
9848.000	33.12	-30.1	37.3	25.87	54.0	20.9	H
12310.000	36.56	-29.7	39.2	27.09	54.0	17.4	H

802.11n-HT40

Ch3

Frequency (MHz)	Measurement Result (dBμV/m)	Cable loss (dB)	Antenna Factor (dB/m)	Receiver eading (dBμV)	Limit (dBμV/m)	Margin (dB)	Antenna Pol. (H/V)
2388.700	46.7	2.9	32.0	11.85	54.0	7.3	H
2389.940	46.8	2.9	32.0	11.91	54.0	7.2	H
4843.500	28.78	-32.7	34.5	26.97	54.0	25.2	H
7266.000	30.15	-31.9	36.1	25.91	54.0	23.9	H
9688.500	32.53	-30.7	37.1	26.15	54.0	21.5	H
12109.500	34.79	-29.5	39.3	25.03	54.0	19.2	H

Ch6

Frequency (MHz)	Measurement Result (dBμV/m)	Cable loss (dB)	Antenna Factor (dB/m)	Receiver eading (dBμV)	Limit (dBμV/m)	Margin (dB)	Antenna Pol. (H/V)
2371.100	46.60	2.9	32.0	11.72	54.0	7.4	H
2510.100	46.70	3.0	32.5	11.29	54.0	7.3	H
4873.500	29.01	-32.7	34.5	27.21	54.0	25.0	H
7311.000	29.55	-31.9	36.1	25.38	54.0	24.5	H
9748.500	32.50	-30.7	37.2	25.97	54.0	21.5	H
12184.500	35.05	-29.4	39.2	25.26	54.0	19.0	H

Ch9

Frequency (MHz)	Measurement Result (dBμV/m)	Cable loss (dB)	Antenna Factor (dB/m)	Receiver eading (dBμV)	Limit (dBμV/m)	Margin (dB)	Antenna Pol. (H/V)
2483.600	47.1	2.9	32.8	11.43	54.0	6.9	H
2484.500	47.1	2.9	32.7	11.44	54.0	6.9	H
4903.500	29.16	-32.9	34.5	27.55	54.0	24.8	H
7356.000	30.64	-31.9	36.1	26.48	54.0	23.4	H
9808.500	32.71	-30.3	37.3	25.78	54.0	21.3	H
12259.500	34.66	-29.6	39.2	25.04	54.0	19.3	H

PEAK

802.11b

Ch1

Frequency (MHz)	Measurement Result (dBμV/m)	Cable loss (dB)	Antenna Factor (dB/m)	Receiver eading (dBμV)	Limit (dBμV/m)	Margin (dB)	Antenna Pol. (H/V)
2380.196	60.0	2.9	32.1	25.10	74.0	14.0	H
2389.170	58.9	2.9	32.0	24.08	74.0	15.1	H
4824.000	46.3	-32.8	34.5	44.56	74.0	27.7	H
17798.250	53.1	-23.2	41.0	35.36	74.0	20.9	H
17787.750	52.8	-23.3	41.0	35.18	74.0	21.2	V
17795.250	52.6	-23.2	41.0	34.83	74.0	21.4	H

Ch6

Frequency (MHz)	Measurement Result (dBμV/m)	Cable loss (dB)	Antenna Factor (dB/m)	Receiver eading (dBμV)	Limit (dBμV/m)	Margin (dB)	Antenna Pol. (H/V)
2378.800	50.0	-26.4	32.1	44.36	74.0	24.0	H
2521.000	50.4	-26.7	32.6	44.46	74.0	23.6	H
4873.500	47.9	-32.7	34.5	46.08	74.0	26.1	V
11685.750	50.0	-29.9	39.0	40.93	74.0	24.0	V
17808.650	53.4	-23.0	41.0	35.45	74.0	20.6	H
17809.520	53.5	-23.0	41.0	35.51	74.0	20.5	V

Ch11

Frequency (MHz)	Measurement Result (dBμV/m)	Cable loss (dB)	Antenna Factor (dB/m)	Receiver eading (dBμV)	Limit (dBμV/m)	Margin (dB)	Antenna Pol. (H/V)
2484.260	60.6	2.9	32.7	24.91	74.0	13.4	H
2488.870	59.9	2.9	32.6	24.35	74.0	14.1	H
4923.750	49.4	-33.1	34.5	47.98	74.0	24.6	H
17778.750	53.1	-23.5	41.0	35.61	74.0	20.9	V
17354.250	52.5	-25.6	41.2	36.96	74.0	21.5	H
17809.500	53.4	-23.0	41.0	35.48	74.0	20.6	H

802.11g

Ch1

Frequency (MHz)	Measurement Result (dBμV/m)	Cable loss (dB)	Antenna Factor (dB/m)	Receiver eading (dBμV)	Limit (dBμV/m)	Margin (dB)	Antenna Pol. (H/V)
2383.514	59.2	2.9	32.0	24.28	74.0	14.8	H
2389.632	60.0	2.9	32.0	25.17	74.0	14.0	H
4823.250	44.7	-32.8	34.5	42.91	74.0	29.3	V
17803.500	53.0	-23.1	41.0	35.13	74.0	21.0	H
17738.250	52.8	-24.2	41.0	35.98	74.0	21.2	H
17796.750	53.7	-23.2	41.0	35.91	74.0	20.3	V

Ch6

Frequency (MHz)	Measurement Result (dBμV/m)	Cable loss (dB)	Antenna Factor (dB/m)	Receiver eading (dBμV)	Limit (dBμV/m)	Margin (dB)	Antenna Pol. (H/V)
2367.000	50.0	-27.2	32.0	45.18	74.0	24.0	H
2524.200	51.0	-26.8	32.7	45.12	74.0	23.0	H
17793.020	52.4	-23.3	41.0	34.73	74.0	21.6	H
17799.750	52.8	-23.2	41.0	34.95	74.0	21.2	H
17803.500	52.3	-23.1	41.0	34.41	74.0	21.7	H
17813.250	52.2	-23.0	40.9	34.31	74.0	21.8	H

Ch11

Frequency (MHz)	Measurement Result (dBμV/m)	Cable loss (dB)	Antenna Factor (dB/m)	Receiver eading (dBμV)	Limit (dBμV/m)	Margin (dB)	Antenna Pol. (H/V)
2483.820	61.0	2.9	32.8	25.35	74.0	13.0	H
2487.340	60.3	2.9	32.7	24.68	74.0	13.7	H
17779.500	52.7	-23.5	41.0	35.19	74.0	21.3	H
17814.750	52.6	-23.1	40.9	34.73	74.0	21.4	V
17808.000	52.5	-23.0	41.0	34.60	74.0	21.5	H
17802.750	52.5	-23.1	41.0	34.63	74.0	21.5	V

802.11n-HT20

Ch1

Frequency (MHz)	Measurement Result (dBμV/m)	Cable loss (dB)	Antenna Factor (dB/m)	Receiver eading (dBμV)	Limit (dBμV/m)	Margin (dB)	Antenna Pol. (H/V)
2389.780	62.4	2.9	32.0	27.53	74.0	11.6	H
2389.954	61.2	2.9	32.0	26.31	74.0	12.8	H
17887.500	52.8	-24.0	40.9	35.92	74.0	21.2	V
17718.750	52.4	-24.5	41.0	35.82	74.0	21.6	V
17848.500	52.4	-23.5	40.9	34.96	74.0	21.6	H
17796.750	52.4	-23.2	41.0	34.59	74.0	21.6	V

Ch6

Frequency (MHz)	Measurement Result (dBμV/m)	Cable loss (dB)	Antenna Factor (dB/m)	Receiver eading (dBμV)	Limit (dBμV/m)	Margin (dB)	Antenna Pol. (H/V)
2378.600	50.6	-26.4	32.1	44.93	74.0	23.4	H
2507.000	50.7	-26.4	32.4	44.74	74.0	23.3	H
4874.250	40.5	-32.7	34.5	38.68	74.0	33.5	V
7311.000	39.9	-31.9	36.1	35.72	74.0	34.1	H
9747.750	43.0	-30.7	37.2	36.47	74.0	31.0	V
12185.250	46.6	-29.4	39.2	36.81	74.0	27.4	V

Ch11

Frequency (MHz)	Measurement Result (dBμV/m)	Cable loss (dB)	Antenna Factor (dB/m)	Receiver eading (dBμV)	Limit (dBμV/m)	Margin (dB)	Antenna Pol. (H/V)
2484.220	60.6	2.9	32.7	24.96	74.0	13.4	H
2486.350	59.9	2.9	32.7	24.27	74.0	14.1	H
4923.750	39.8	-33.1	34.5	38.37	74.0	34.2	H
7386.000	40.9	-31.8	36.0	36.73	74.0	33.1	V
9848.250	45.6	-30.1	37.3	38.37	74.0	28.4	V
12309.750	45.3	-29.7	39.2	35.82	74.0	28.7	H

802.11n-HT40

Ch3

Frequency (MHz)	Measurement Result (dBμV/m)	Cable loss (dB)	Antenna Factor (dB/m)	Receiver eading (dBμV)	Limit (dBμV/m)	Margin (dB)	Antenna Pol. (H/V)
2388.750	64.7	2.9	32.0	29.86	74.0	9.3	H
2389.240	64.2	2.9	32.0	29.34	74.0	9.8	H
4844.250	39.7	-32.7	34.5	37.85	74.0	34.3	V
7266.000	41.4	-31.9	36.1	37.16	74.0	32.6	V
9687.750	44.0	-30.7	37.1	37.57	74.0	30.0	V
12110.250	46.2	-29.5	39.3	36.44	74.0	27.8	H

Ch6

Frequency (MHz)	Measurement Result (dBμV/m)	Cable loss (dB)	Antenna Factor (dB/m)	Receiver eading (dBμV)	Limit (dBμV/m)	Margin (dB)	Antenna Pol. (H/V)
2361.200	49.5	-27.5	31.9	45.19	74.0	24.5	H
2506.600	49.9	-26.4	32.4	43.95	74.0	24.1	H
4874.250	40.6	-32.7	34.5	38.77	74.0	33.4	V
7311.000	39.5	-31.9	36.1	35.29	74.0	34.5	H
9747.750	43.5	-30.7	37.2	36.95	74.0	30.5	V
12185.250	48.8	-29.4	39.2	39.04	74.0	25.2	V

Ch9

Frequency (MHz)	Measurement Result (dBμV/m)	Cable loss (dB)	Antenna Factor (dB/m)	Receiver eading (dBμV)	Limit (dBμV/m)	Margin (dB)	Antenna Pol. (H/V)
2483.550	62.1	2.9	32.8	26.39	74.0	11.9	H
2484.580	61.8	2.9	32.7	26.18	74.0	12.2	H
4904.250	39.7	-32.9	34.5	38.10	74.0	34.3	V
7356.000	42.0	-31.9	36.1	37.89	74.0	32.0	H
9807.750	43.5	-30.4	37.3	36.60	74.0	30.5	V
12260.250	46.0	-29.6	39.2	36.42	74.0	28.0	V

Test graphs as below:

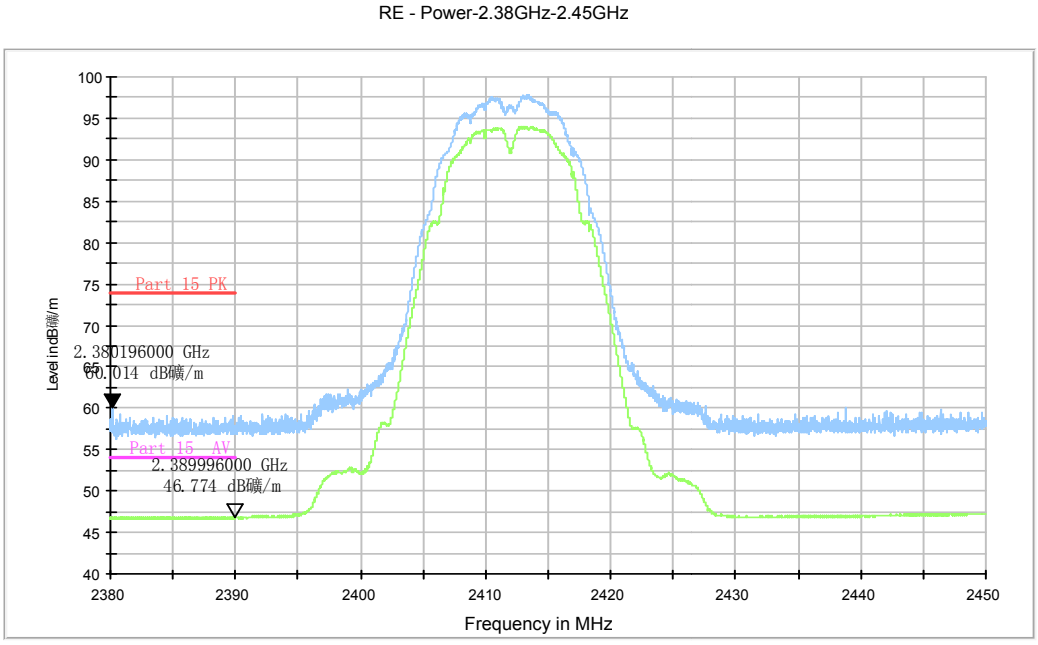


Fig.A.6.2.1 Transmitter Spurious Emission - Radiated (Power): 802.11b, ch1, 2.38 GHz – 2.45GHz

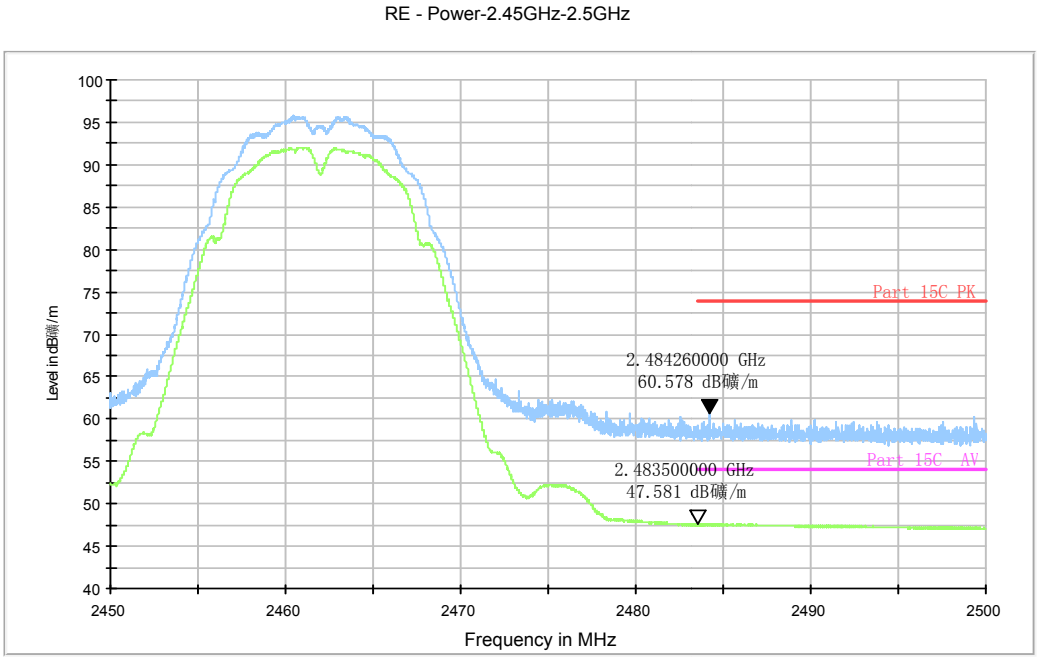


Fig.A.6.2.2 Transmitter Spurious Emission - Radiated (Power): 802.11b, ch11, 2.45 GHz - 2.50GHz

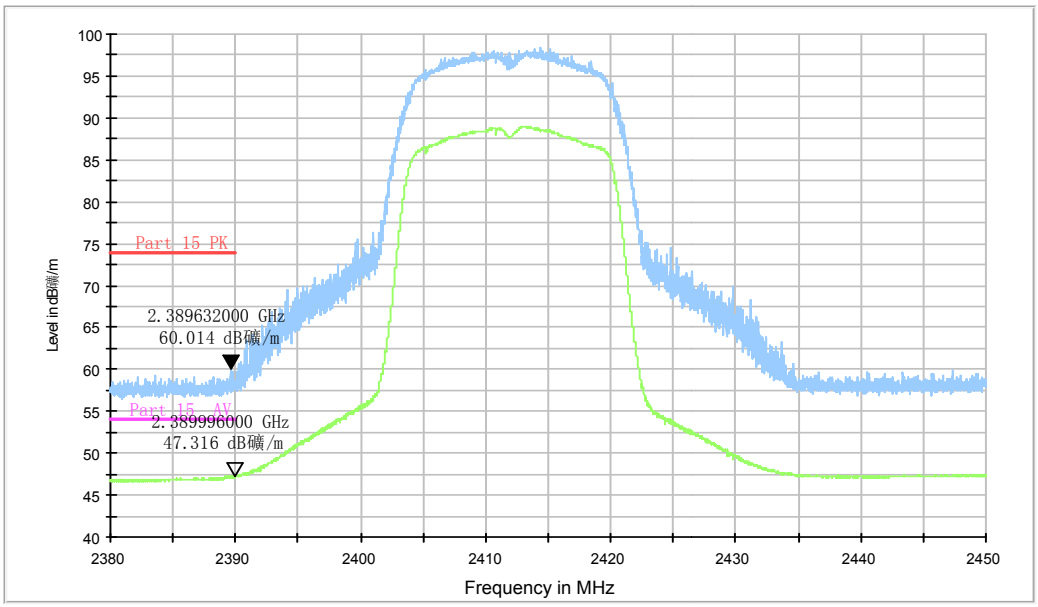


Fig.A.6.2.3 Transmitter Spurious Emission - Radiated (Power): 802.11g, ch1, 2.38 GHz - 2.45GHz

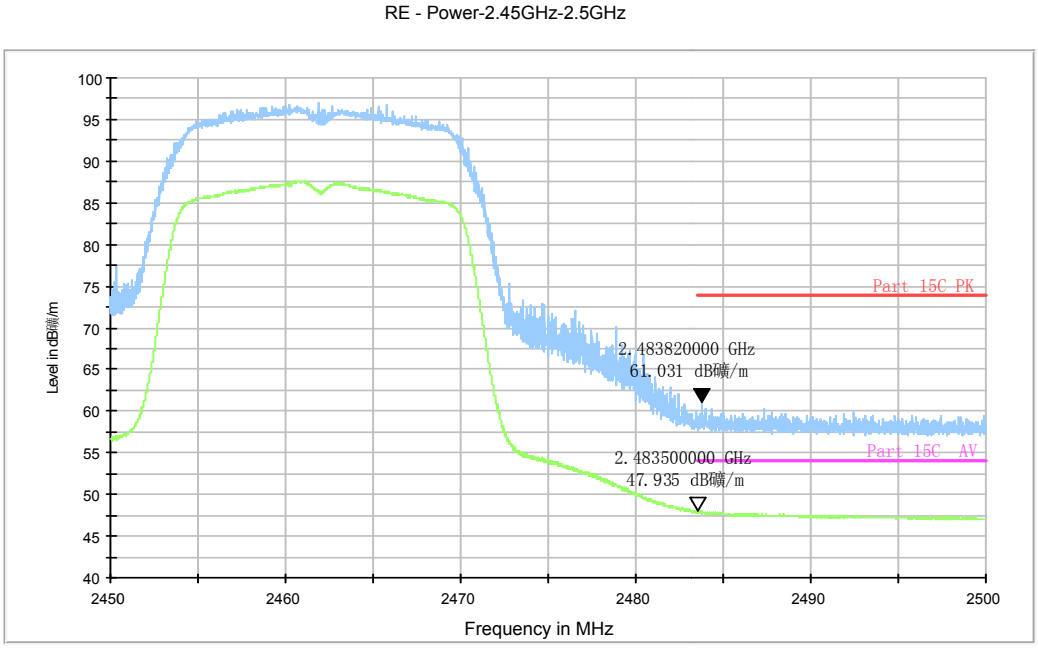


Fig.A.6.2.4 Transmitter Spurious Emission - Radiated (Power): 802.11g, ch11, 2.45 GHz - 2.50GHz

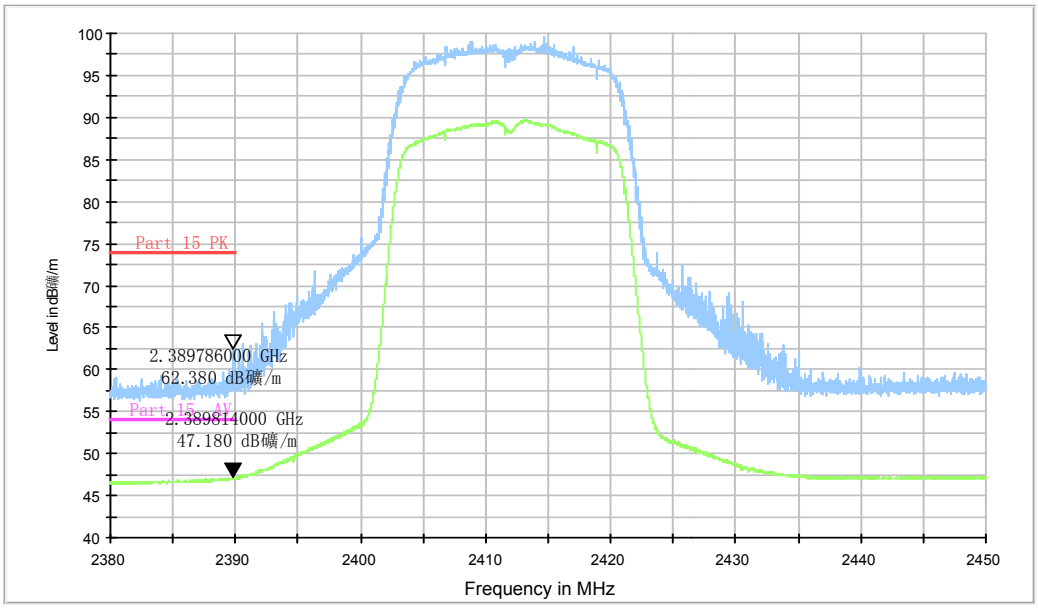


Fig.A.6.2.5 Transmitter Spurious Emission - Radiated (Power): 802.11n-HT20, ch1, 2.38 GHz - 2.45GHz

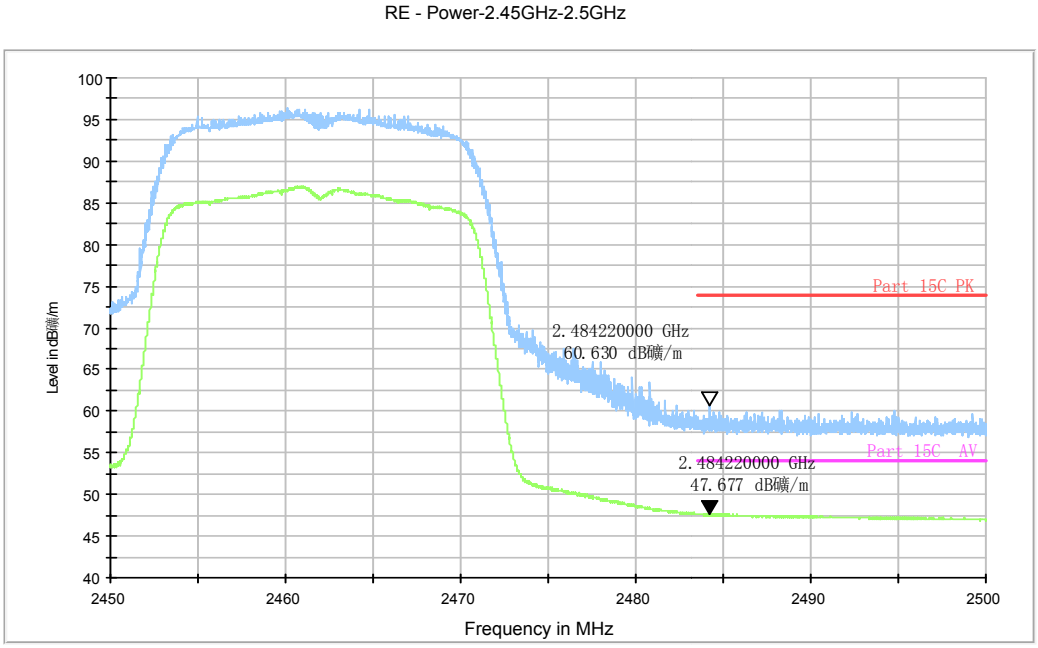


Fig.A.6.2.6 Transmitter Spurious Emission - Radiated (Power): 802.11n-HT20, ch11, 2.45 GHz - 2.50GHz

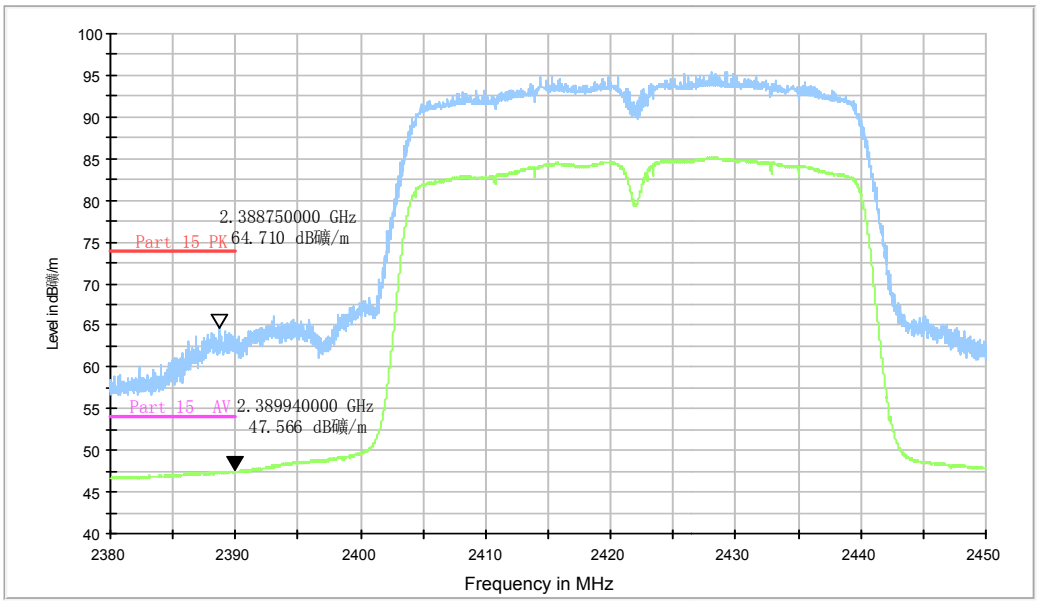


Fig.A.6.2.7 Transmitter Spurious Emission - Radiated (Power): 802.11n-HT40, ch3, 2.38 GHz - 2.45GHz

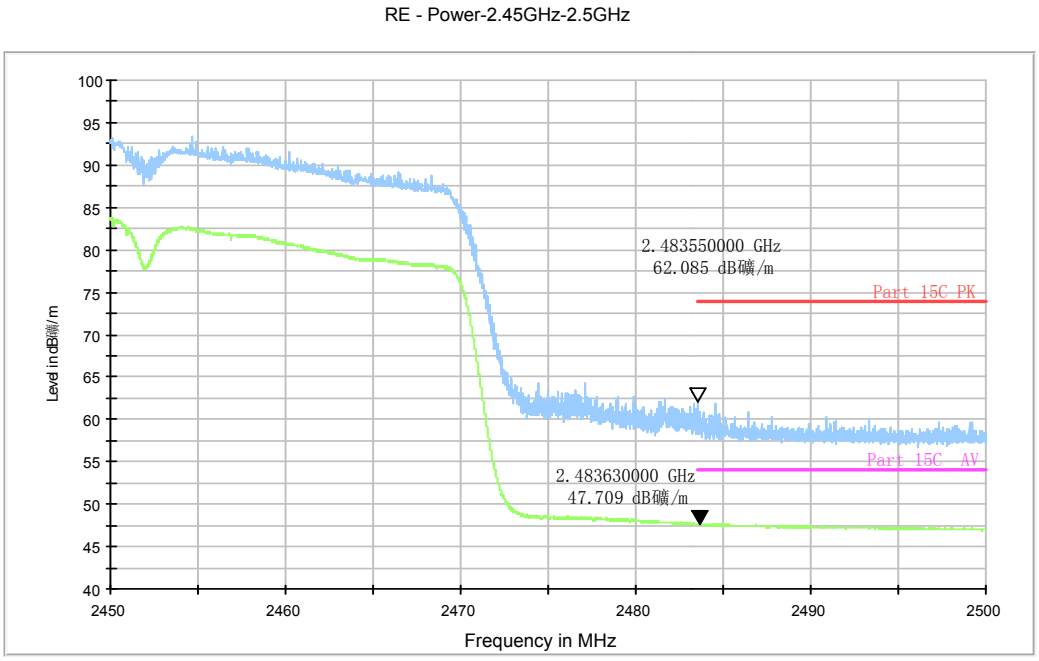


Fig.A.6.2.8 Transmitter Spurious Emission - Radiated (Power): 802.11n-HT40, ch9, 2.45 GHz - 2.50GHz

A.7. AC Power-line Conducted Emission

Method of Measurement: See ANSI C63.10-2013-clause 6.2

1 The one EUT cable configuration and arrangement and mode of operation that produced the emission with the highest amplitude relative to the limit is selected for the final measurement, while applying the appropriate modulating signal to the EUT.

2 If the EUT is relocated from an exploratory test site to a final test site, the highest emissions shall be remaximized at the final test location before final ac power-line conducted emission measurements are performed.

3 The final test on all current-carrying conductors of all of the power cords to the equipment that comprises the EUT (but not the cords associated with other non-EUT equipment in the system) is then performed for the full frequency range for which the EUT is being tested for compliance without further variation of the EUT arrangement, cable positions, or EUT mode of operation.

4 If the EUT is comprised of equipment units that have their own separate ac power connections, e.g., floor-standing equipment with independent power cords for each shelf that are able to connect directly to the ac power network, each current-carrying conductor of one unit is measured while the other units are connected to a second (or more) LISN(s). All units shall be separately measured. If a power strip is provided by the manufacturer, to supply all of the units making up the EUT, only the conductors in the power cord of the power strip shall be measured.

5 If the EUT uses a detachable antenna, these measurements shall be made with a suitable dummy load connected to the antenna output terminals; otherwise, the tests shall be made with the antenna connected and, if adjustable, fully extended. When measuring the ac conducted emissions from a device that operates between 150 kHz and 30 MHz a non-detachable antenna may be replaced with a dummy load for the measurements within the fundamental emission band of the transmitter, but only for those measurements.36 Record the six highest EUT emissions relative to the limit of each of the current-carrying conductors of the power cords of the equipment that comprises the EUT over the frequency range specified by the procuring or regulatory agency. Diagram or photograph the test setup that was used. See Clause 8 for full reporting requirements.

Test Condition:

Voltage（V）	Frequency（Hz）
120	60

Measurement Result and limit:

WLAN (Quasi-peak Limit)

Frequency range (MHz)	Quasi-peak Limit (dBμV)	Result (dBμV)		Conclusion
		With charger		
		802.11b	Idle	
0.15 to 0.5	66 to 56	Fig.A.7.1	Fig.A.7.2	P
0.5 to 5	56			
5 to 30	60			
NOTE: The limit decreases linearly with the logarithm of the frequency in the range 0.15 MHz to 0.5 MHz.				

WLAN (Average Limit)

Frequency range (MHz)	Average Limit (dBμV)	Result (dBμV)		Conclusion
		With charger		
		802.11b	Idle	
0.15 to 0.5	56 to 46	Fig.A.7.1	Fig.A.7.2	P
0.5 to 5	46			
5 to 30	50			
NOTE: The limit decreases linearly with the logarithm of the frequency in the range 0.15 MHz to 0.5 MHz.				

Conclusion: Pass

Test graphs as below:

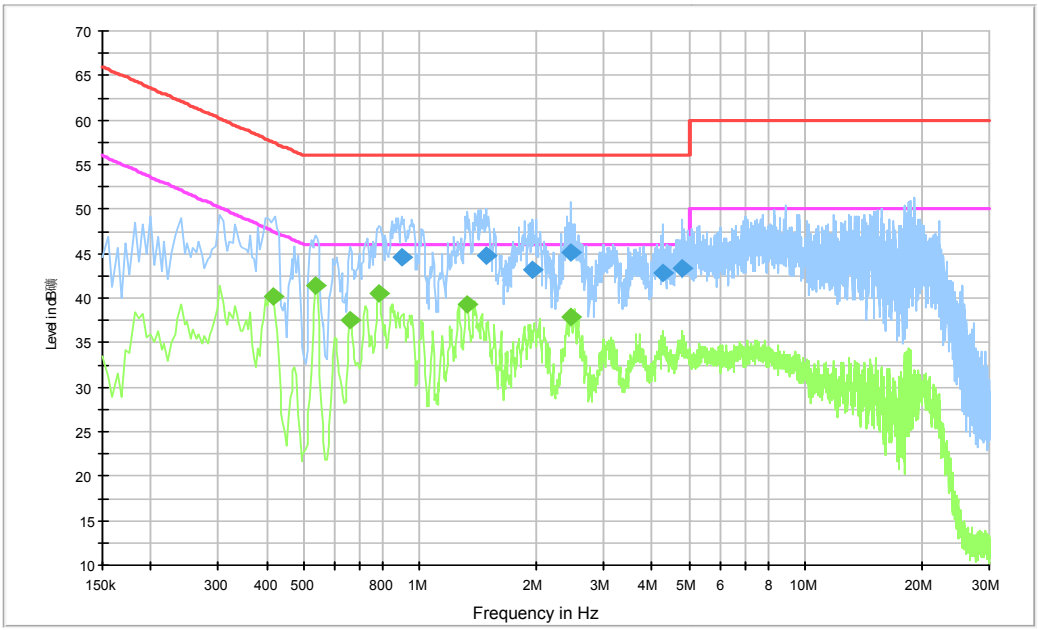


Fig.A.7.1 AC Powerline Conducted Emission-802.11b

Note: The graphic result above is the maximum of the measurements for both phase line and neutral line.

Final Result 1

Frequency (MHz)	QuasiPeak (dBµV)	PE	Line	Corr. (dB)	Margin (dB)	Limit (dBµV)
0.892500	44.6	GND	L1	10.2	11.4	56.0
1.486500	44.8	GND	L1	10.2	11.2	56.0
1.963500	43.2	GND	L1	10.3	12.8	56.0
2.454000	45.1	GND	L1	10.3	10.9	56.0
4.254000	42.9	GND	L1	10.4	13.1	56.0
4.794000	43.4	GND	L1	10.4	12.6	56.0

Final Result 2

Frequency (MHz)	Average (dBµV)	PE	Line	Corr. (dB)	Margin (dB)	Limit (dBµV)
0.415500	40.3	GND	L1	10.2	7.3	47.5
0.537000	41.3	GND	L1	10.2	4.7	46.0
0.658500	37.5	GND	L1	10.2	8.5	46.0
0.784500	40.6	GND	L1	10.2	5.4	46.0
1.329000	39.4	GND	L1	10.2	6.6	46.0
2.463000	37.9	GND	L1	10.3	8.1	46.0

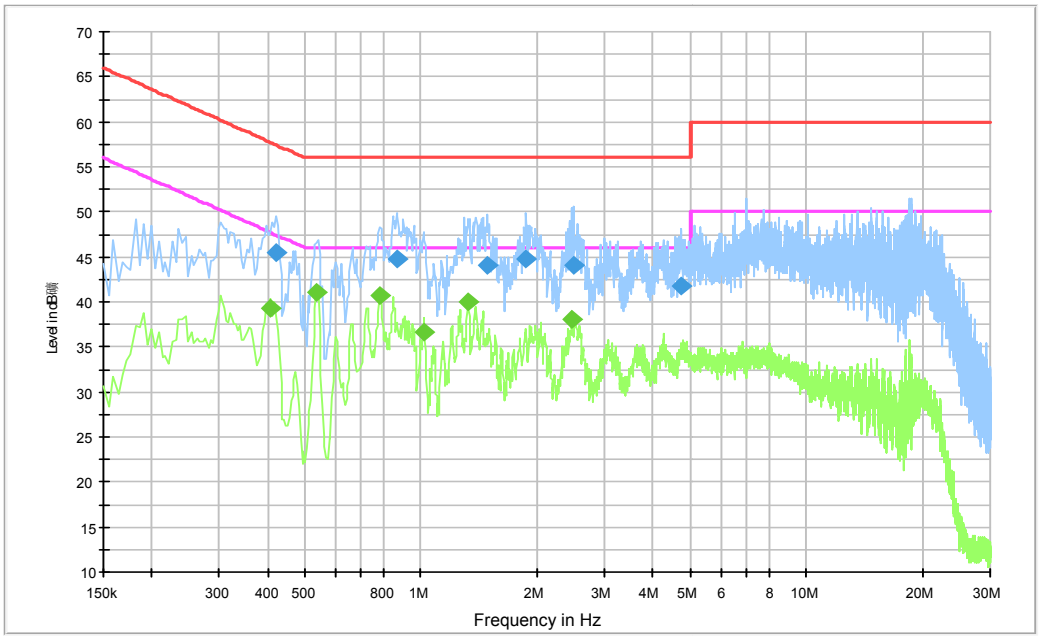


Fig.A.7.2 AC Powerline Conducted Emission-Idle

Note: The graphic result above is the maximum of the measurements for both phase line and neutral line.

Final Result 1

Frequency (MHz)	QuasiPeak (dBµV)	PE	Line	Corr. (dB)	Margin (dB)	Limit (dBµV)
0.420000	45.5	GND	L1	10.2	12.0	57.4
0.865500	44.8	GND	L1	10.2	11.2	56.0
1.486500	44.0	GND	L1	10.2	12.0	56.0
1.878000	44.8	GND	L1	10.3	11.2	56.0
2.499000	44.1	GND	L1	10.3	11.9	56.0
4.749000	41.7	GND	L1	10.4	14.3	56.0

Final Result 2

Frequency (MHz)	Average (dBµV)	PE	Line	Corr. (dB)	Margin (dB)	Limit (dBµV)
0.406500	39.3	GND	L1	10.2	8.4	47.7
0.537000	41.0	GND	L1	10.2	5.0	46.0
0.784500	40.8	GND	L1	10.2	5.2	46.0
1.018500	36.6	GND	L1	10.2	9.4	46.0
1.324500	40.0	GND	L1	10.2	6.0	46.0
2.463000	38.0	GND	L1	10.3	8.0	46.0

*****END OF REPORT*****