

# FCC PART 15C TESTREPORT No. I15Z43241-SRD01

for

## **TCL Communication Ltd**

# HSUPA/HSDPA/UMTS quad band /GSM quad band mobile phone

**MODEL NAME: 4034A** 

with

FCC ID: 2ACCJH045

**Hardware Version: PIO** 

**Software Version: SW3D51** 

Issued Date: 2016-02-16



#### 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:**

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# **REPORT HISTORY**

Report Number	Revision	Description	Issue Date
I15Z43241-SRD01	Rev.0	1st edition	2016-02-16



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# 1. Test Laboratory

# 1.1. Testing Location

Location 1:CTTL(Huayuan North Road)

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

P. R. China100191

Location 2:CTTL(Shouxiang)

Address: No. 51 Shouxiang Science Building, Xueyuan Road,

Haidian District, Beijing, P. R. China100191

1.2. <u>Testing Environment</u>

Normal Temperature:  $15-35^{\circ}$ C Extreme Temperature:  $-20/+55^{\circ}$ C Relative Humidity: 20-75%

1.3. Project data

Testing Start Date: 2015-12-28
Testing End Date: 2016-02-16

1.4. Signature

Xu Zhongfei

(Prepared this test report)

Li Zhibin

(Reviewed this test report)

Lv Songdong

(Approved this test report)



# 2. Client Information

# 2.1. Applicant Information

Company Name: TCL Communication Ltd

5F, C building, No. 232, Liang Jing Road ZhangJiang High-Tech Park, Address:

Pudong Area Shanghai, P.R. China. 201203

City: Shanghai Postal Code: 201203 Country: China

Telephone: 0086-21-51798260 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: 0086-21-51798260 Fax: 0086-21-61460602



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

## 3.1. About EUT

Description HSUPA/HSDPA/UMTS quad band /GSM quad band mobile

phone

Model name 4034A

FCC ID 2ACCJH045

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 22.62dBm(DSSS)
Power Supply 3.8V DC by Battery

## 3.2. Internal Identification of EUT

EUT ID*	SN or IMEI	<b>HW Version</b>	SW Version
UT01a	1	PIO	SW3D51
UT02a	1	PIO	SW3D51

<sup>\*</sup>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	
AE2	Charger	

AE1

Commercial name Battery

Type CAB1500040C1

Manufacturer / Length of cable /

AE2

Commercial name Charger

Type CBA0066AG0C2

Manufacturer Tenpao

Length of cable /

<sup>\*</sup>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 HSUPA/HSDPA/UMTS quad band /GSM quad band 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 CFR 47, Part 15, Subpart C:	
	15.205 Restricted bands of operation;	
FCC Part15	15.209 Radiated emission limits, general requirements;	2014-10-1
	15.247 Operation within the bands 902-928MHz,	
	2400-2483.5 MHz, and 5725-5850 MHz.	
ANCI 062 40	American National Standard of Procedures for Compliance	2012
ANSI C63.10	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)	1	Р
Peak Power Spectral Density	15.247 (e)	1	Р
Occupied 6dB Bandwidth	15.247 (a)	1	Р
Band Edges Compliance	15.247 (d)	1	Р
Transmitter Spurious Emission - Conducted	15.247 (d)	1	Р
Transmitter Spurious Emission - Radiated	15.247, 15.205, 15.209	/	Р
AC Powerline Conducted Emission	15.107, 15.207	1	Р

Please refer to ANNEX A for detail.

Terms used in Verdict column

Р	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 market name is 4034G; all the test results have been derived from test report of 4034G.

# 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	FSQ40	200089	Rohde &	2015-07-08	2016-07-07
'	Analyzer	10070	200009	Schwarz	2010-07-00	2010-01-01
2	Test Receiver	ESCI	100344	Rohde &	2015-03-04	2016-03-03
2	rest Receiver	ESCI	100344	Schwarz	2015-03-04	2010-03-03
	LICN	ENIVO40	404200	Rohde &	2045 07 00	2046 07 07
3	LISN	ENV216	101200	Schwarz	2015-07-08	2016-07-07
4	Shielding Room	S81	1	ETS-Lindgren	1	/

Radiated emission test system

No.	Equipment	Model	Serial Number	Manufacturer	Calibration date	Calibratio n Due date
1	Test Receiver	ESCI 7	100948	Rohde & Schwarz	2015-07-17	2016-07-16
2	Loop antenna	HFH2-Z2	829324/007	Rohde & Schwarz	2014-12-17	2017-12-16
3	BiLog Antenna	VULB9163	234	Schwarzbeck	2013-09-16	2016-09-15
4	Dual-Ridge Waveguide Horn Antenna	3115	6914	EMCO	2014-12-16	2017-12-15
5	Dual-Ridge Waveguide Horn Antenna	3116	2661	ETS-Lindgren	2014-06-18	2017-06-17
6	Vector Signal Analyzer	FSV	101047	Rohde & Schwarz	2015-07-04	2016-07-03
7	Semi-anechoic chamber	1	CT000332-1 074	Frankonia German	1	1



# **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

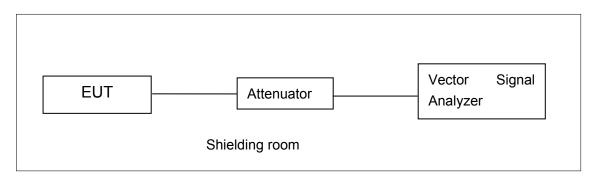


Fig.A.1.1.1: Test Setup Diagram for Conducted Measurements

### 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;

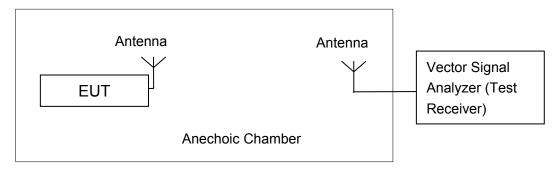


Fig.A.1.2.1: Test Setup Diagram for Radiated Measurements



# 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  $\geq$  [1.5  $\times$  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/a mode

	Data Bata	Test Result (dBm)				
Mode	Data Rate	2412MHz	2437MHz	2462 MHz		
	(Mbps)	(Ch1)	(Ch6)	(Ch11)		
	1	19.69	1	1		
802.11b	2	19.51	1	1		
002.110	5.5	21.16	1	1		
<u> </u>	11	22.62	21.35	20.47		
	6	21.63	1	1		
<u> </u>	9	21.30	1	1		
<u> </u>	12	21.23	1	1		
000 11 ~	18	21.10	1	1		
802.11g	24	21.61	1	1		
	36	21.58	1	1		
	48	21.98	1	1		
	54	22.01	22.07	20.79		

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



#### 802.11n-HT20 mode

	Data Rate	Test Result (dBm)			
Mode	(Index)	2412MHz	2437MHz	2462 MHz	
		(Ch1)	(Ch6)	(Ch11)	
	MCS0	20.89	1	1	
	MCS1	20.74	1	1	
	MCS2	20.23	1	1	
802.11n	MCS3	20.69	1	1	
(20MHz)	MCS4	20.73	1	1	
	MCS5	21.33	20.23	18.85	
	MCS6	20.78	1	1	
	MCS7	21.30	1	1	

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

### 802.11n-HT40 mode

	Data Bata	Test Result (dBm)			
Mode	Data Rate (Index)	2422MHz (Ch3)	2437MHz (Ch6)	2452 MHz (Ch9)	
	MCS0	18.47	1	1	
 	MCS1	18.26	1	1	
- -	MCS2	17.88	1	1	
802.11n	MCS3	18.03	1	1	
(40MHz)	MCS4	18.19	1	1	
	MCS5	18.21	1	1	
	MCS6	18.66	18.66	15.01	
	MCS7	17.96	1	1	

The data rate MCS6 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 ©Copyright. All rights reserved by CTTL.



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

# 802.11b/g mode

Mada	Test Result (dBm)				
Mode	2412MHz (Ch1)	2437MHz (Ch6)	2462 MHz (Ch11)		
802.11b	16.21	15.17	13.86		
802.11g	13.27	13.27	12.34		

### 802.11n-HT20 mode

Mode	Test Result (dBm)				
Wiode	2412MHz (Ch1) 2437MHz (Ch6) 2462 MHz (Ch11)				
802.11n (20MHz)	12.50	11.20	10.43		

### 802.11n-HT40 mode

Mode	Test Result (dBm)				
Mode	2422MHz (Ch3) 2437MHz (Ch6) 2452 MHz (Ch9)				
802.11n(40MHz)	9.82	8.33	8.08		

**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
	1	Fig.A.3.1	3.24	Р
802.11b	6	Fig.A.3.2	-6.05	Р
	11	Fig.A.3.3	-9.91	Р
	1	Fig.A.3.4	-12.30	Р
802.11g	6	Fig.A.3.5	-11.18	Р
	11	Fig.A.3.6	-13.02	Р

### 802.11n-HT20 mode

Mode	Channel	-	ctral Density /3 kHz )	Conclusion
000 44 =	1	Fig.A.3.7	-13.17	Р
802.11n	6	Fig.A.3.8	-14.48	Р
(HT20)	11	Fig.A.3.9	-14.58	Р

### 802.11n-HT40 mode

Mode	Channel	-	ctral Density /3 kHz )	Conclusion
000 44 =	3	Fig.A.3.10	-19.15	Р
802.11n	6	Fig.A.3.11	-20.09	Р
(HT40)	9	Fig.A.3.12	-20.53	Р

**Conclusion: Pass** 

### Test graphs as below:



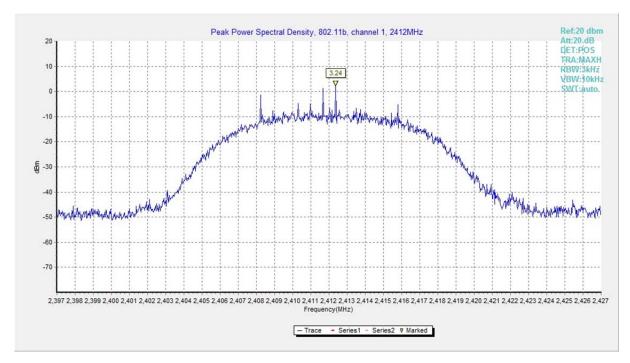


Fig.A.3.1 Power Spectral Density(802.11b,Ch1)

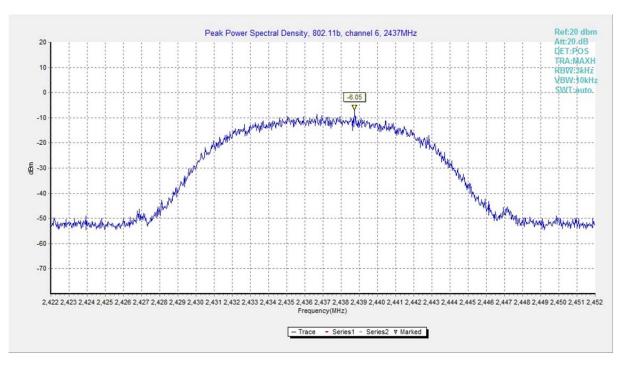


Fig.A.3.2 Power Spectral Density (802.11b, Ch 6)



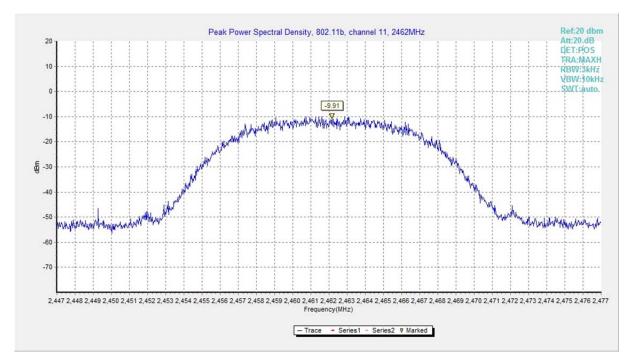


Fig.A.3.3 Power Spectral Density (802.11b, Ch 11)

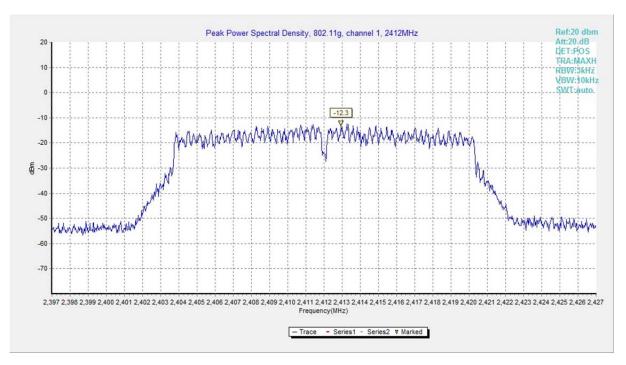


Fig.A.3.4 Power Spectral Density (802.11g, Ch 1)



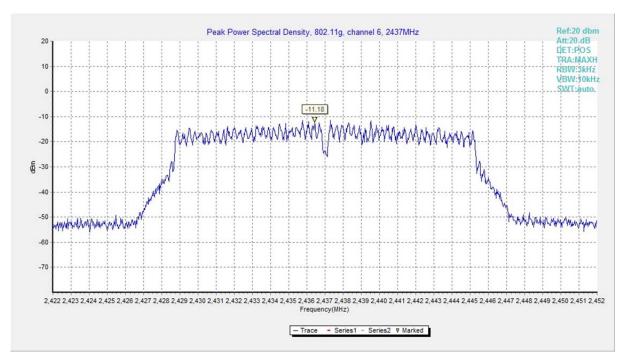


Fig.A.3.5 Power Spectral Density (802.11g, Ch 6)

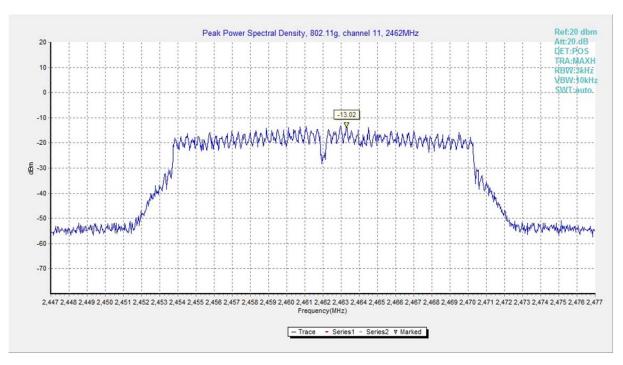


Fig.A.3.6 Power Spectral Density (802.11g, Ch 11)



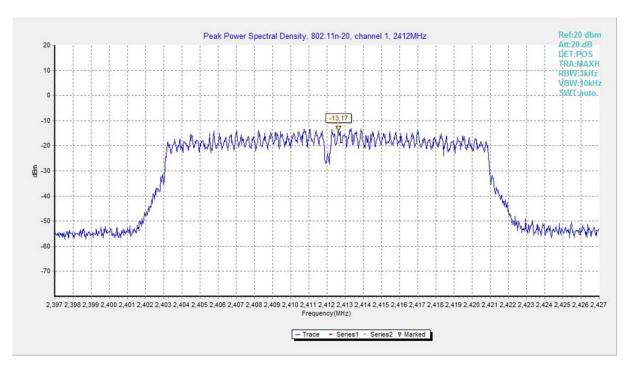


Fig.A.3.7 Power Spectral Density (802.11n-HT20, Ch 1)

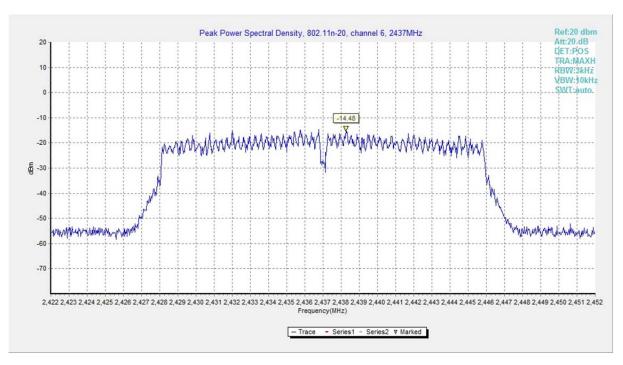


Fig.A.3.8 Power Spectral Density (802.11n-HT20, Ch 6)



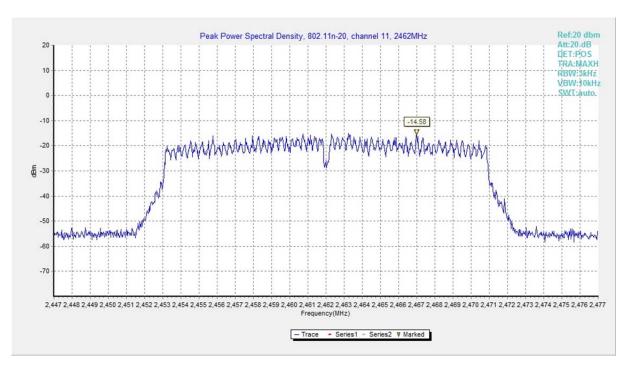


Fig.A.3.9 Power Spectral Density (802.11n-HT20, Ch 11)

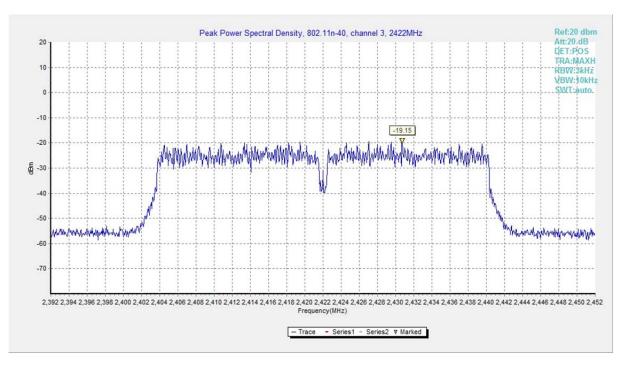


Fig.A.3.10 Power Spectral Density (802.11n-HT40, Ch 3)



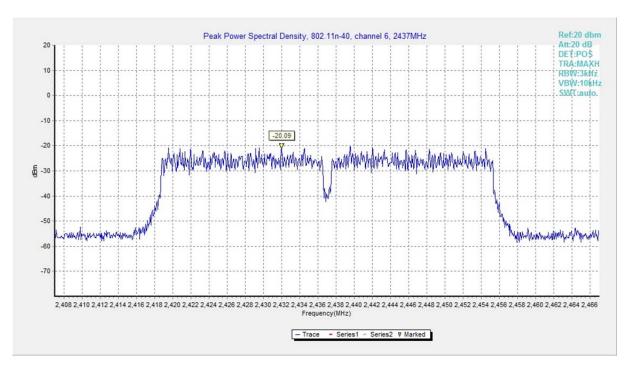


Fig.A.3.11 Power Spectral Density (802.11n-HT40, Ch 6)

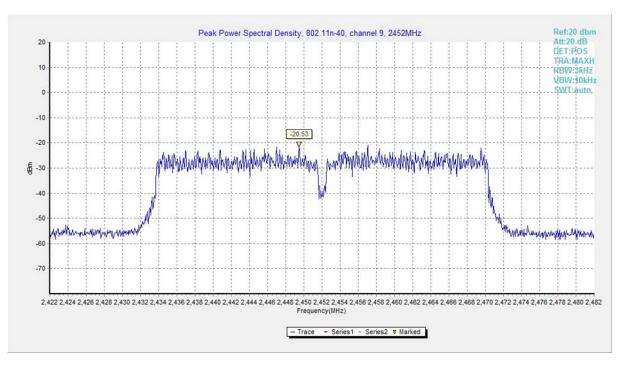


Fig.A.3.12 Power Spectral Density (802.11n-HT40, Ch 9)



# 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
	1	Fig.A.4.1	9550	Р
802.11b	6	Fig.A.4.2	9200	Р
	11	Fig.A.4.3	9650	Р
	1	Fig.A.4.4	16350	Р
802.11g	6	Fig.A.4.5	16350	Р
	11	Fig.A.4.6	16300	Р

### 802.11n-HT20 mode

Mode	Channel	Occupied 6dB Bandwidth ( kHz)		conclusion
000 44*	1	Fig.A.4.7	17200	Р
802.11n	6	Fig.A.4.8	17300	Р
(HT20)	11	Fig.A.4.9	17500	Р

### 802.11n-HT40 mode

Mode	Channel	Occupied 6dB Bandwidth ( kHz)		conclusion
000 11n	3	Fig.A.4.10	36400	Р
802.11n (HT40)	6	Fig.A.4.11	36320	Р
	9	Fig.A.4.12	36400	Р

**Conclusion: Pass** 



### Test graphs as below:

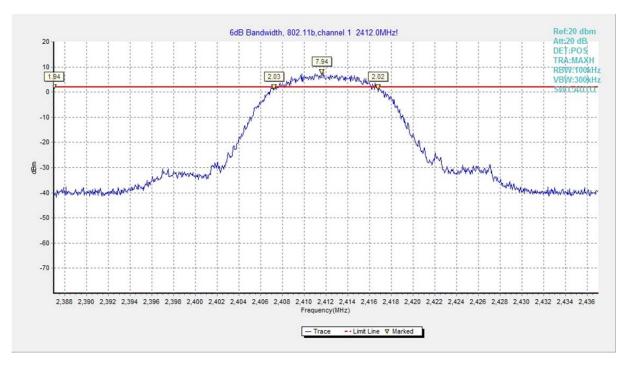


Fig.A.4.1 Occupied 6dB Bandwidth(802.11b,Ch 1)



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



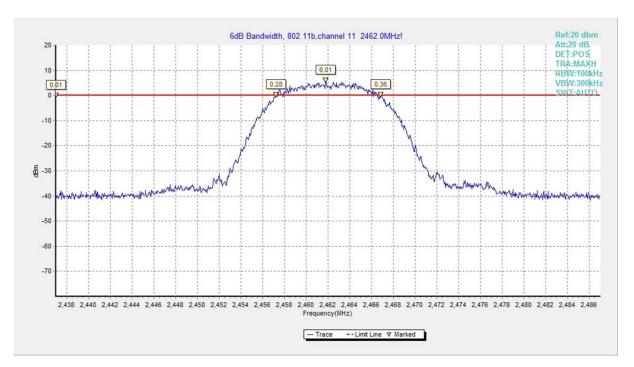


Fig.A.4.3 Occupied 6dB Bandwidth (802.11b, Ch 11)

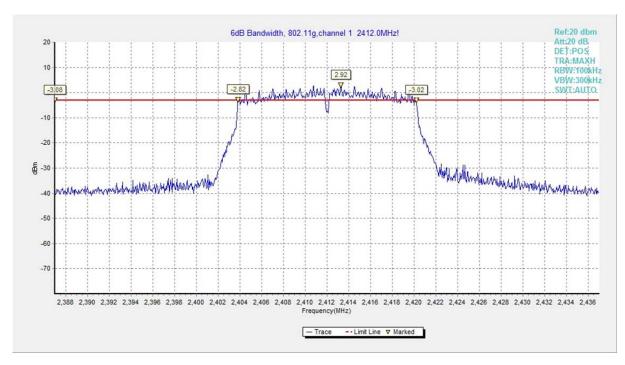


Fig.A.4.4 Occupied 6dB Bandwidth (802.11g, Ch 1)



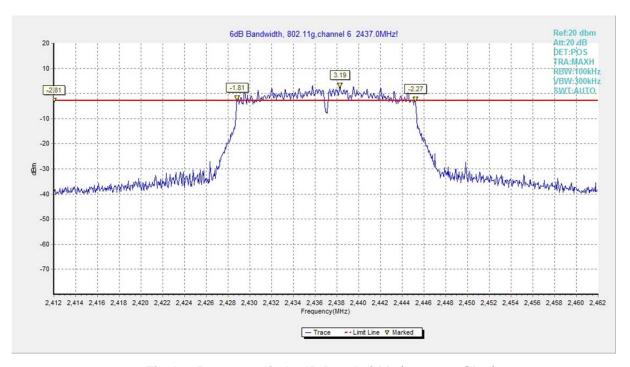


Fig.A.4.5 Occupied 6dB Bandwidth (802.11g, Ch 6)

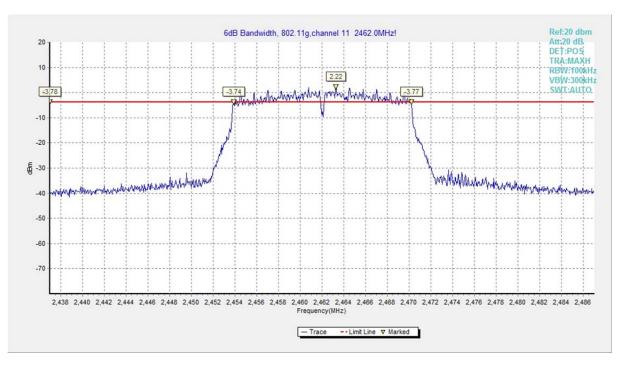


Fig.A.4.6 Occupied 6dB Bandwidth (802.11g, Ch 11)



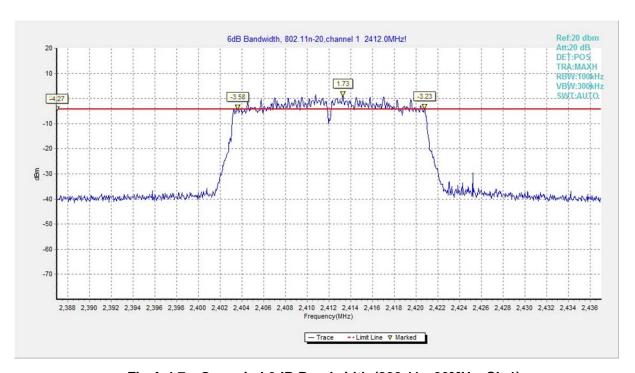


Fig.A.4.7 Occupied 6dB Bandwidth (802.11n-20MHz, Ch 1)

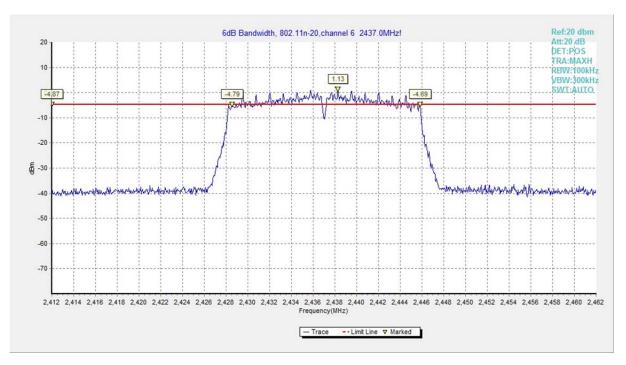


Fig.A.4.8 Occupied 6dB Bandwidth (802.11n-HT20, Ch 6)



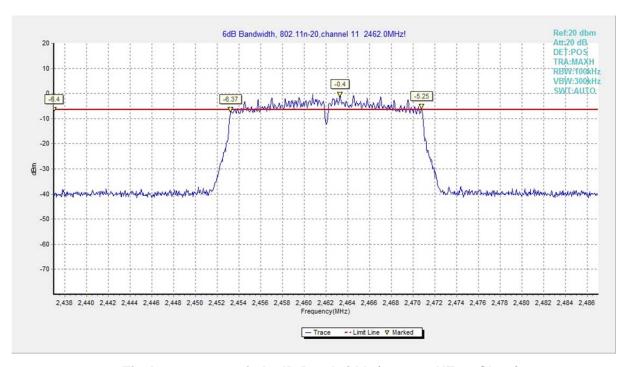


Fig.A.4.9 Occupied 6dB Bandwidth (802.11n-HT20, Ch 11)

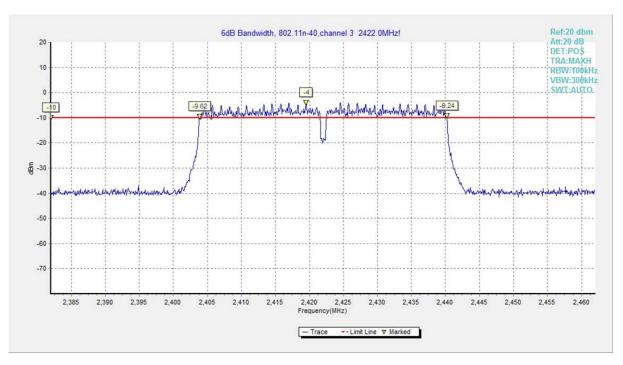


Fig.A.4.10 Occupied 6dB Bandwidth (802.11n-40MHz, Ch 3)



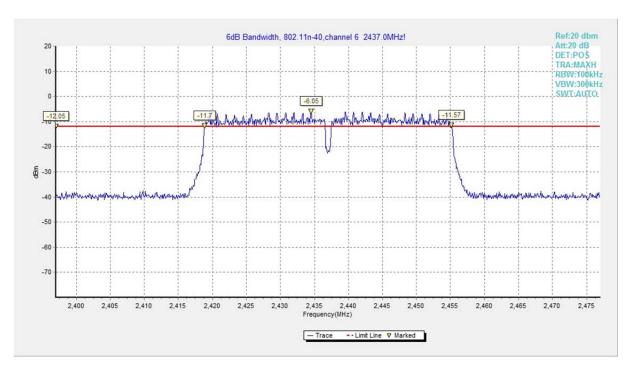


Fig.A.4.11 Occupied 6dB Bandwidth (802.11n-HT40, Ch 6)

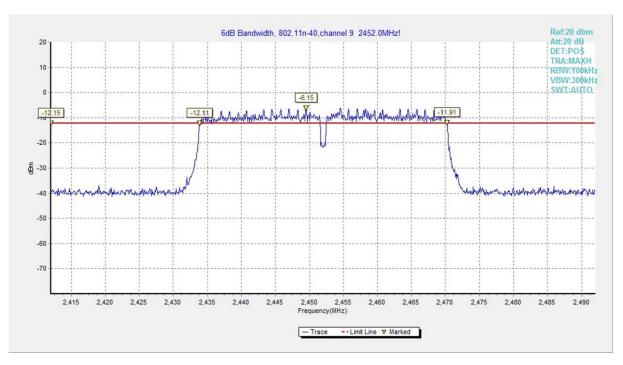


Fig.A.4.12 Occupied 6dB Bandwidth (802.11n-HT40, Ch 9)



# 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 = 100MHzb) Sweep Time: coupledc) Set the RBW= 100 kHzc) Set the VBW= 300 kHz

d) Detector: Peake) Trace: Max hold

### **Measurement Limit:**

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

**EUT ID: EUT2** 

#### **Measurement Result:**

### 802.11b/g mode

Mode	Channel	Test Results	Conclusion
902 11b	1	Fig.A.5.1	Р
802.11b	11	Fig.A.5.2	Р
002.11~	1	Fig.A.5.3	Р
802.11g	11	Fig.A.5.4	Р

### 802.11n-HT20 mode

Mode	Channel	Test Results	Conclusion
802.11n	1	Fig.A.5.5	Р
(HT20)	11	Fig.A.5.6	Р

### 802.11n-HT40 mode

Mode	Channel	Test Results	Conclusion
802.11n	3	Fig.A.5.7	Р
(HT40)	9	Fig.A.5.8	Р

Conclusion: Pass Test graphs as below:



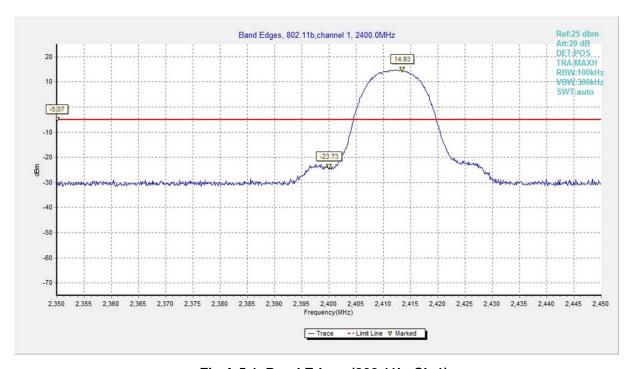


Fig.A.5.1 Band Edges (802.11b, Ch 1)



Fig.A.5.2 Band Edges (802.11b, Ch 11)



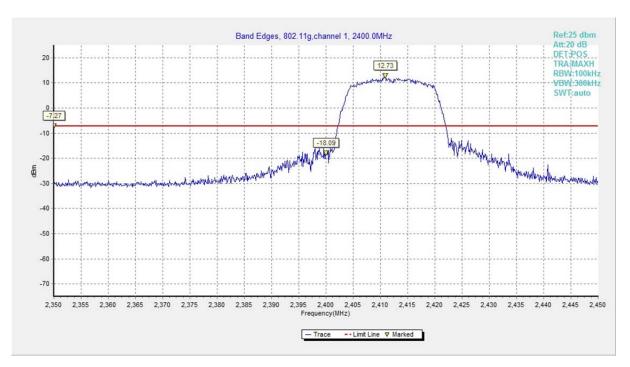


Fig.A.5.3 Band Edges (802.11g, Ch 1)

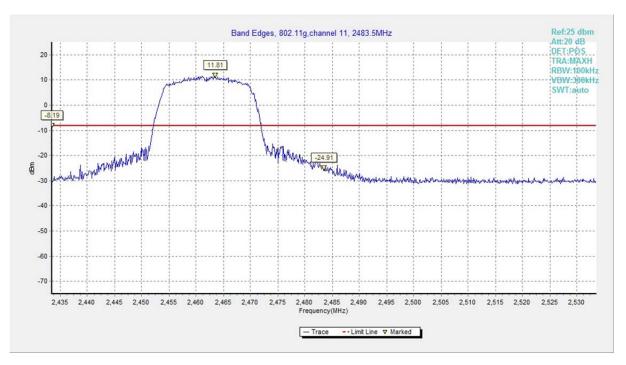


Fig.A.5.4 Band Edges (802.11g, Ch 11)



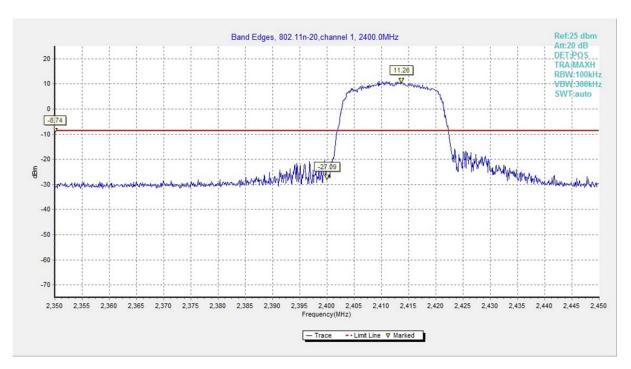


Fig.A.5.5 Band Edges (802.11n-HT20, Ch 1)

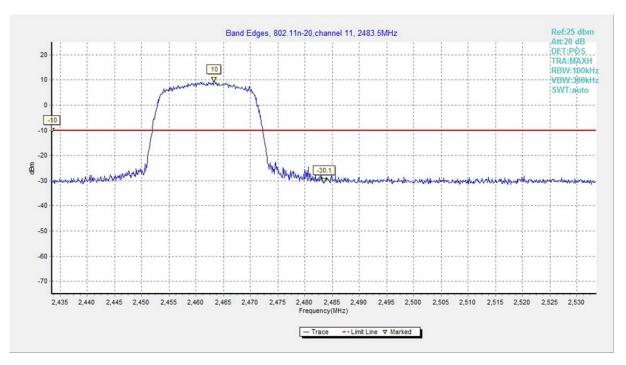


Fig.A.5.6 Band Edges (802.11n-HT20, Ch 11)



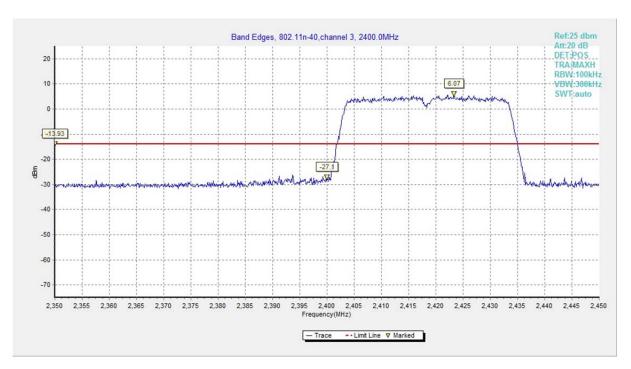


Fig.A.5.7 Band Edges (802.11n-HT40, Ch 3)



Fig.A.5.8 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  $\,\geqslant\,$  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:**



## 802.11b mode

MODE	Channel	Frequency Range	Test Results	Conclusion
		2.412 GHz	Fig.A.6.1.1	Р
		30 MHz ~ 1 GHz	Fig.A.6.1.2	Р
		1 GHz ~ 2.5 GHz	Fig.A.6.1.3	Р
	1	2.5 GHz ~ 7.5 GHz	Fig.A.6.1.4	Р
	ı	7.5 GHz ~ 10 GHz	Fig.A.6.1.5	Р
		10 GHz ~ 15 GHz	Fig.A.6.1.6	Р
		15 GHz ~ 20 GHz	Fig.A.6.1.7	Р
		20 GHz ~ 26 GHz	Fig.A.6.1.8	Р
		2.437 GHz	Fig.A.6.1.9	Р
		30 MHz ~ 1 GHz	Fig.A.6.1.10	Р
	6	1 GHz ~ 2.5 GHz	Fig.A.6.1.11	Р
802.11b		2.5 GHz ~ 7.5 GHz	Fig.A.6.1.12	Р
002.110		7.5 GHz ~ 10 GHz	Fig.A.6.1.13	Р
		10 GHz ~ 15 GHz	Fig.A.6.1.14	Р
		15 GHz ~ 20 GHz	Fig.A.6.1.15	Р
		20 GHz ~ 26 GHz	Fig.A.6.1.16	Р
		2.462 GHz	Fig.A.6.1.17	Р
		30 MHz ~ 1 GHz	Fig.A.6.1.18	Р
		1 GHz ~ 2.5 GHz	Fig.A.6.1.19	Р
	11	2.5 GHz ~ 7.5 GHz	Fig.A.6.1.20	Р
	"1	7.5 GHz ~ 10 GHz	Fig.A.6.1.21	Р
		10 GHz ~ 15 GHz	Fig.A.6.1.22	Р
		15 GHz ~ 20 GHz	Fig.A.6.1.23	Р
		20 GHz ~ 26 GHz	Fig.A.6.1.24	Р



# 802.11g mode

MODE	Channel	Frequency Range	Test Results	Conclusion
		2.412 GHz	Fig.A.6.1.25	Р
		30 MHz ~ 1 GHz	Fig.A.6.1.26	Р
		1 GHz ~ 2.5 GHz	Fig.A.6.1.27	Р
	1	2.5 GHz ~ 7.5 GHz	Fig.A.6.1.28	Р
	ľ	7.5 GHz ~ 10 GHz	Fig.A.6.1.29	Р
		10 GHz ~ 15 GHz	Fig.A.6.1.30	Р
		15 GHz ~ 20 GHz	Fig.A.6.1.31	Р
		20 GHz ~ 26 GHz	Fig.A.6.1.32	Р
		2.437 GHz	Fig.A.6.1.33	Р
		30 MHz ~ 1 GHz	Fig.A.6.1.34	Р
	6	1 GHz ~ 2.5 GHz	Fig.A.6.1.35	Р
902 11~		2.5 GHz ~ 7.5 GHz	Fig.A.6.1.36	Р
802.11g		7.5 GHz ~ 10 GHz	Fig.A.6.1.37	Р
		10 GHz ~ 15 GHz	Fig.A.6.1.38	Р
		15 GHz ~ 20 GHz	Fig.A.6.1.39	Р
		20 GHz ~ 26 GHz	Fig.A.6.1.40	Р
		2.462 GHz	Fig.A.6.1.41	Р
		30 MHz ~ 1 GHz	Fig.A.6.1.42	Р
		1 GHz ~ 2.5 GHz	Fig.A.6.1.43	Р
	11	2.5 GHz ~ 7.5 GHz	Fig.A.6.1.44	Р
	''	7.5 GHz ~ 10 GHz	Fig.A.6.1.45	Р
		10 GHz ~ 15 GHz	Fig.A.6.1.46	Р
		15 GHz ~ 20 GHz	Fig.A.6.1.47	Р
		20 GHz ~ 26 GHz	Fig.A.6.1.48	Р



# 802.11n-HT20 mode

MODE	Channel	Frequency Range	Test Results	Conclusion
		2.412 GHz	Fig.A.6.1.49	Р
		30 MHz ~ 1 GHz	Fig.A.6.1.50	Р
		1 GHz ~ 2.5 GHz	Fig.A.6.1.51	Р
	1	2.5 GHz ~ 7.5 GHz	Fig.A.6.1.52	Р
	'	7.5 GHz ~ 10 GHz	Fig.A.6.1.53	Р
		10 GHz ~ 15 GHz	Fig.A.6.1.54	Р
		15 GHz ~ 20 GHz	Fig.A.6.1.55	Р
		20 GHz ~ 26 GHz	Fig.A.6.1.56	Р
		2.437 GHz	Fig.A.6.1.57	Р
	6	30 MHz ~ 1 GHz	Fig.A.6.1.58	Р
		1 GHz ~ 2.5 GHz	Fig.A.6.1.59	Р
802.11n		2.5 GHz ~ 7.5 GHz	Fig.A.6.1.60	Р
(HT20)		7.5 GHz ~ 10 GHz	Fig.A.6.1.61	Р
		10 GHz ~ 15 GHz	Fig.A.6.1.62	Р
		15 GHz ~ 20 GHz	Fig.A.6.1.63	Р
		20 GHz ~ 26 GHz	Fig.A.6.1.64	Р
		2.462 GHz	Fig.A.6.1.65	Р
		30 MHz ~ 1 GHz	Fig.A.6.1.66	Р
		1 GHz ~ 2.5 GHz	Fig.A.6.1.67	Р
	11	2.5 GHz ~ 7.5 GHz	Fig.A.6.1.68	Р
		7.5 GHz ~ 10 GHz	Fig.A.6.1.69	Р
		10 GHz ~ 15 GHz	Fig.A.6.1.70	Р
		15 GHz ~ 20 GHz	Fig.A.6.1.71	Р
		20 GHz ~ 26 GHz	Fig.A.6.1.72	Р



## 802.11n-HT40 mode

MODE	Channel	Frequency Range	Test Results	Conclusion
802.11n (HT40)	3	2.422 GHz	Fig.A.6.1.73	Р
		30 MHz ~ 1 GHz	Fig.A.6.1.74	Р
		1 GHz ~ 2.5 GHz	Fig.A.6.1.75	Р
		2.5 GHz ~ 7.5 GHz	Fig.A.6.1.76	Р
		7.5 GHz ~ 10 GHz	Fig.A.6.1.77	Р
		10 GHz ~ 15 GHz	Fig.A.6.1.78	Р
		15 GHz ~ 20 GHz	Fig.A.6.1.79	Р
		20 GHz ~ 26 GHz	Fig.A.6.1.80	Р
	6	2.437 GHz	Fig.A.6.1.81	Р
		30 MHz ~ 1 GHz	Fig.A.6.1.82	Р
		1 GHz ~ 2.5 GHz	Fig.A.6.1.83	Р
		2.5 GHz ~ 7.5 GHz	Fig.A.6.1.84	Р
		7.5 GHz ~ 10 GHz	Fig.A.6.1.85	Р
		10 GHz ~ 15 GHz	Fig.A.6.1.86	Р
		15 GHz ~ 20 GHz	Fig.A.6.1.87	Р
		20 GHz ~ 26 GHz	Fig.A.6.1.88	Р
	9	2.452 GHz	Fig.A.6.1.89	Р
		30 MHz ~ 1 GHz	Fig.A.6.1.90	Р
		1 GHz ~ 2.5 GHz	Fig.A.6.1.91	Р
		2.5 GHz ~ 7.5 GHz	Fig.A.6.1.92	Р
		7.5 GHz ~ 10 GHz	Fig.A.6.1.93	Р
		10 GHz ~ 15 GHz	Fig.A.6.1.94	Р
		15 GHz ~ 20 GHz	Fig.A.6.1.95	Р
		20 GHz ~ 26 GHz	Fig.A.6.1.96	Р

Conclusion: Pass Test graphs as below:



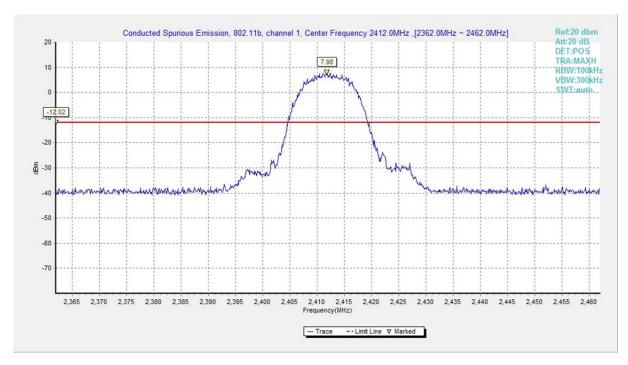


Fig.A.6.1.1 Transmitter Spurious Emission - Conducted (802.11b, Ch1, Center Frequency)

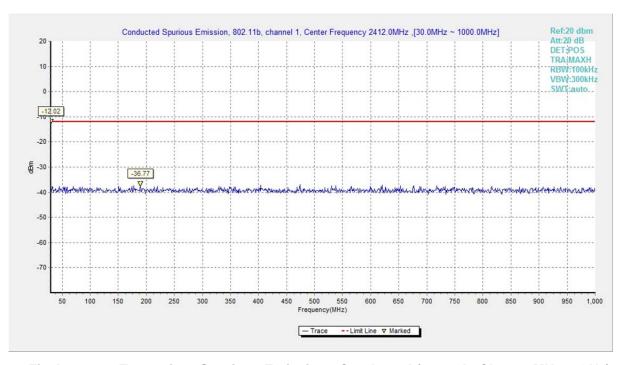


Fig.A.6.1.2 Transmitter Spurious Emission - Conducted (802.11b, Ch1, 30 MHz-1 GHz)



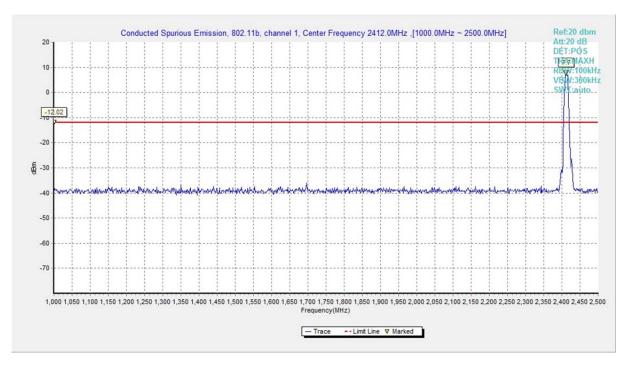


Fig.A.6.1.3 Transmitter Spurious Emission - Conducted (802.11b, Ch1, 1 GHz-2.5 GHz)

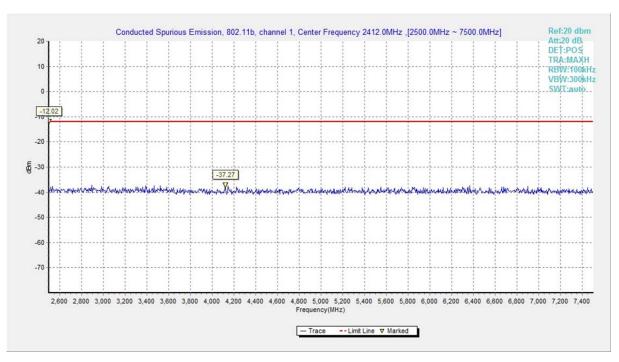


Fig.A.6.1.4 Transmitter Spurious Emission - Conducted (802.11b, Ch1, 2.5 GHz-7.5 GHz)