



FCC RF Test Report

APPLICANT : AzureWave Technologies, Inc.
EQUIPMENT : IEEE 802.11 2x2 MIMO a/b/g/n/ac
Wireless LAN + Bluetooth + NFC
NGFF Module
BRAND NAME : AzureWave
MODEL NAME : AW-CM389NF
FCC ID : TLZ-CM389NF
STANDARD : FCC Part 15 Subpart C §15.247
CLASSIFICATION : (DTS) Digital Transmission System

The product was installed into ChromeBook (Brand Name: Hisense, CTL, POIN2, BITLAND;
Model Name: C11, J2, LT0101-01, B800) during test.

The product was received on Mar. 03, 2015 and testing was completed on Apr. 02, 2015. We,
SPORTON INTERNATIONAL (SHENZHEN) INC., would like to declare that the tested sample
has been evaluated in accordance with the test procedures and has been in compliance
with the applicable technical standards.

The test results in this report apply exclusively to the tested model / sample. Without written
approval of SPORTON INTERNATIONAL (SHENZHEN) INC., the test report shall not be
reproduced except in full.



Reviewed by: Joseph Lin / Supervisor

Approved by: Jones Tsai / Manager



SPORTON INTERNATIONAL (SHENZHEN) INC.

**1F & 2F, Building A, Morning Business Center, No. 4003 ShiGu Rd., Xili Town,
Nanshan District, Shenzhen, Guangdong, P. R. China**



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REVISION HISTORY

REPORT NO.	VERSION	DESCRIPTION	ISSUED DATE
FR530302C	Rev. 01	Initial issue of report	Apr. 03, 2015

SUMMARY OF TEST RESULT

Report Section	FCC Rule	IC Rule	Description	Limit	Result	Remark
3.1	15.247(a)(2)	RSS-210 A8.2(a)	6dB Bandwidth	$\geq 0.5\text{MHz}$	Pass	-
3.1	-	RSS-Gen 4.6.1	99% Bandwidth	-	Pass	-
3.2	15.247(b)	RSS-210 A8.4	Power Output Measurement	$\leq 30\text{dBm}$	Pass	-
3.3	15.247(e)	RSS-210 A8.2(b)	Power Spectral Density	$\leq 8\text{dBm}/3\text{kHz}$	Pass	-
3.4	15.247(d)	RSS-210 A8.5	Conducted Band Edges	$\leq 20\text{dBc}$	Pass	-
			Conducted Spurious Emission		Pass	-
3.5	15.247(d)	RSS-210 A8.5	Radiated Band Edges and Radiated Spurious Emission	15.209(a) & 15.247(d)	Pass	Under limit 2.54 dB at 4924.000 MHz
3.6	15.207	RSS-Gen 7.2.4	AC Conducted Emission	15.207(a)	Pass	Under limit 12.20 dB at 0.180 MHz
3.7	15.203 & 15.247(b)	RSS-210 A8.4	Antenna Requirement	N/A	Pass	-



1 General Description

1.1 Applicant

AzureWave Technologies, Inc.

8F., No.94, Baozhong Rd., Xindian, Taipei, Taiwan 231

1.2 Manufacturer

AzureWave Technologies, Inc..

8F., No.94, Baozhong Rd., Xindian, Taipei, Taiwan 231

1.3 Product Feature of Equipment Under Test

Product Feature	
Equipment	IEEE 802.11 2x2 MIMO a/b/g/n/ac Wireless LAN + Bluetooth + NFC NGFF Module
Brand Name	AzureWave
Model Name	AW-CM389NF
FCC ID	TLZ-CM389NF
EUT supports Radios application	WLAN 11a/b/g/n HT20/HT40 WLAN 11ac VHT20/VHT40/VHT80 Bluetooth v2.1 + EDR/Bluetooth v4.0 LE

Remark: The above EUT's information was declared by manufacturer. Please refer to the specifications or user's manual for more detailed description.

Host Feature & Specification	
Host	ChromeBook
Brand Name	Hisense, CTL, POIN2, BITLAND
Model Name	C11, J2, LT0101-01, B800
HW Version	1.3
SW Version	google chrome
EUT Stage	Production Unit

1.4 Product Specification subjective to this standard

Product Specification subjective to this standard				
Tx/Rx Channel Frequency Range		802.11b/g/n : 2412 MHz ~ 2462 MHz		
Maximum (Peak) Output Power to Antenna		802.11b : 21.62 dBm (0.1452 W) 802.11g : 26.38 dBm (0.4345 W) 802.11n HT20 : 26.16 dBm (0.4130 W) 802.11n HT40 : 23.21 dBm (0.2094 W)		
99% Occupied Bandwidth		<2412 MHz ~ 2462 MHz> 802.11b : 13.65MHz 802.11g : 17.55MHz 802.11n HT20 : 18.35MHz 802.11n HT40 : 36.50MHz		
Antenna Type		WLAN for Chain Port 0: PIFA Antenna with gain 2.47 dBi WLAN for Chain Port 1: PIFA Antenna with gain 1.81 dBi		
Type of Modulation		802.11b : DSSS (DBPSK / DQPSK / CCK) 802.11g/n : OFDM (BPSK / QPSK / 16QAM / 64QAM)		
Antenna Function for Transmitter				
		Chain Port 0	Chain Port 1	
		802.11 b/g/n SISO	V	V
		802.11 b/g/n MIMO	V	V

1.5 Modification of EUT

No modifications are made to the EUT during all test items.



1.6 Testing Location

Test Site	SPORTON INTERNATIONAL (SHENZHEN) INC.	
Test Site Location	1F & 2F,Building A, Morning Business Center, No. 4003 ShiGu Rd., Xili Town, Nanshan District, Shenzhen, Guangdong, P. R. China TEL: +86-755-8637-9589 FAX: +86-755-8637-9595	
Test Site No.	Sporton Site No.	
	TH01-SZ	CO01-SZ

Test Site	SPORTON INTERNATIONAL (SHENZHEN) INC.	
Test Site Location	No. 3 Building, the third floor of south, Shahe River west, Fengzeyuan warehouse, Nanshan District, Shenzhen, Guangdong, P. R. China TEL: +86-755- 3320-2398	
Test Site No.	Sporton Site No.	FCC Registration No.
	03CH02-SZ	831040

Note: The test site complies with ANSI C63.4 2009 requirement.

1.7 Applicable Standards

According to the specifications of the manufacturer, the EUT must comply with the requirements of the following standards:

- ♦ FCC Part 15 Subpart C §15.247
- ♦ FCC KDB Publication No. 558074 D01 DTS Meas. Guidance v03r02
- ♦ ANSI C63.10-2013
- ♦ IC RSS-210 Issue 8
- ♦ IC RSS-Gen Issue 4
- ♦ NOTICE 2012-DRS0126

Remark:

1. All test items were verified and recorded according to the standards and without any deviation during the test.
2. FCC permits the use of the 1.5 meter table as an alternative in C63.10-2013 through inquiry tracking number 961829.
3. This EUT has also been tested and complied with the requirements of FCC Part 15, Subpart B, recorded in a separate test report.
4. Per the section 2.2.3 of Notice of 2012-DRS0126, “ Receivers Excluded from Industry Canada Requirements”, only radiocommunication receivers operating in stand-alone mode within the band 30-960 MHz and scanner receivers are subject to Industry Canada requirements.

2 Test Configuration of Equipment Under Test

The EUT has been associated with peripherals and configuration operated in a manner tended to maximize its emission characteristics in a typical application. Frequency range investigated: conducted emission (150 kHz to 30 MHz) and radiated emission (9 kHz to the 10th harmonic of the highest fundamental frequency or to 40 GHz, whichever is lower).

The final configuration from all the combinations and the worst-case data rates were investigated by measuring the maximum power across all the data rates and modulation modes under section 2.2.

Based on the worst configuration found above, the RF power setting is set individually to meet FCC compliance limit for the final conducted and radiated tests shown in section 2.3.

2.1 Carrier Frequency Channel

Frequency Band	Channel	Freq. (MHz)	Channel	Freq. (MHz)
2400-2483.5 MHz	1	2412	7	2442
	2	2417	8	2447
	3	2422	9	2452
	4	2427	10	2457
	5	2432	11	2462
	6	2437	-	-



2.2 Pre-Scanned RF Power

Preliminary tests were performed in different data rate and data rate associated with the highest power were chosen for full test shown in the following tables.

WLAN 2.4GHz 802.11b Peak Power (dBm)							
Power vs. Channel				Power vs. Data Rate			
Channel	Frequency (MHz)	Chain Port	Data Rate 1Mbps	Channel	2Mbps	5.5Mbps	11Mbps
CH 01	2412	0	20.78	CH 01	20.74	20.73	20.71
CH 06	2437	0	20.72				
CH 11	2462	0	20.68				
CH 01	2412	1	19.60	CH 06	19.82	19.84	19.85
CH 06	2437	1	19.87				
CH 11	2462	1	19.78				
CH 01	2412	0+1(0)	18.95	CH 01	18.94	18.92	18.90
CH 06	2437	0+1(0)	18.94				
CH 11	2462	0+1(0)	18.93				
CH 01	2412	0+1(1)	18.25	CH 01	18.12	18.06	18.07
CH 06	2437	0+1(1)	18.10				
CH 11	2462	0+1(1)	18.04				
CH 01	2412	0+1	21.62	CH 01	21.56	21.52	21.52
CH 06	2437	0+1	21.55				
CH 11	2462	0+1	21.52				

WLAN 2.4GHz 802.11g Peak Power (dBm)											
Power vs. Channel				Power vs. Data Rate							
Channel	Frequency (MHz)	Chain Port	Data Rate 6Mbps	Channel	9Mbps	12Mbps	18Mbps	24Mbps	36Mbps	48Mbps	54Mbps
CH 01	2412	0	25.56	CH 01	25.52	25.53	25.44	25.46	25.47	25.41	25.43
CH 06	2437	0	25.32								
CH 11	2462	0	25.40								
CH 01	2412	1	24.87	CH 11	25.11	24.98	24.96	25.03	24.99	25.01	25.07
CH 06	2437	1	24.84								
CH 11	2462	1	25.12								
CH 01	2412	0+1(0)	23.72	CH 01	23.71	23.68	23.69	23.67	23.70	23.65	23.66
CH 06	2437	0+1(0)	23.54								
CH 11	2462	0+1(0)	23.62								
CH 01	2412	0+1(1)	22.98	CH 01	22.88	22.86	22.87	22.83	22.94	22.93	22.89
CH 06	2437	0+1(1)	22.75								
CH 11	2462	0+1(1)	22.69								
CH 01	2412	0+1	26.38	CH 01	26.33	26.30	26.31	26.28	26.35	26.32	26.30
CH 06	2437	0+1	26.17								
CH 11	2462	0+1	26.19								



WLAN 2.4GHz 802.11n HT20 Peak Power (dBm)											
Power vs. Channel				Power vs. Data Rate							
Channel	Frequency (MHz)	Chain Port	Data Rate MCS0	Channel	MCS1	MCS2	MCS3	MCS4	MCS5	MCS6	MCS7
CH 01	2412	0	25.23	CH 01	25.21	23.41	23.39	23.55	23.52	23.59	23.58
CH 06	2437	0	24.69								
CH 11	2462	0	24.58								
CH 01	2412	1	24.56	CH 01	24.55	24.54	24.53	24.53	24.51	24.52	24.55
CH 06	2437	1	24.45								
CH 11	2462	1	24.23								
CH 01	2412	0+1(0)	23.32	CH 01	23.25	23.28	23.26	23.30	23.31	23.32	23.28
CH 06	2437	0+1(0)	23.24								
CH 11	2462	0+1(0)	23.15								
CH 01	2412	0+1(1)	22.98	CH 01	22.97	22.98	22.96	22.95	22.94	22.96	22.95
CH 06	2437	0+1(1)	22.84								
CH 11	2462	0+1(1)	22.69								
CH 01	2412	0+1	26.16	CH 01	26.12	26.14	26.12	26.14	26.14	26.15	26.13
CH 06	2437	0+1	26.05								
CH 11	2462	0+1	25.94								

WLAN 2.4GHz 802.11n HT40 Peak Power (dBm)											
Power vs. Channel				Power vs. Data Rate							
Channel	Frequency (MHz)	Chain Port	Data Rate MCS0	Channel	MCS1	MCS2	MCS3	MCS4	MCS5	MCS6	MCS7
CH 03	2422	0	23.21	CH 03	23.20	23.18	23.19	23.20	23.18	23.19	23.20
CH 06	2437	0	22.88								
CH 09	2452	0	22.94								
CH 03	2422	1	22.87	CH 03	22.84	22.86	22.85	22.83	22.86	22.85	22.86
CH 06	2437	1	22.53								
CH 09	2452	1	22.43								
CH 03	2422	0+1(0)	20.32	CH 03	20.31	20.30	20.19	20.18	20.22	20.23	20.17
CH 06	2437	0+1(0)	19.75								
CH 09	2452	0+1(0)	17.32								
CH 03	2422	0+1(1)	19.78	CH 03	19.77	19.76	19.76	19.75	19.74	19.75	19.76
CH 06	2437	0+1(1)	19.71								
CH 09	2452	0+1(1)	19.68								
CH 03	2422	0+1	23.07	CH 03	23.06	23.05	22.99	22.98	23.00	23.01	22.98
CH 06	2437	0+1	22.74								
CH 09	2452	0+1	21.67								

2.3 Test Mode

Final test mode of conducted test items and radiated spurious emissions are considering the modulation and worse data rates from the power table described in section 2.2.

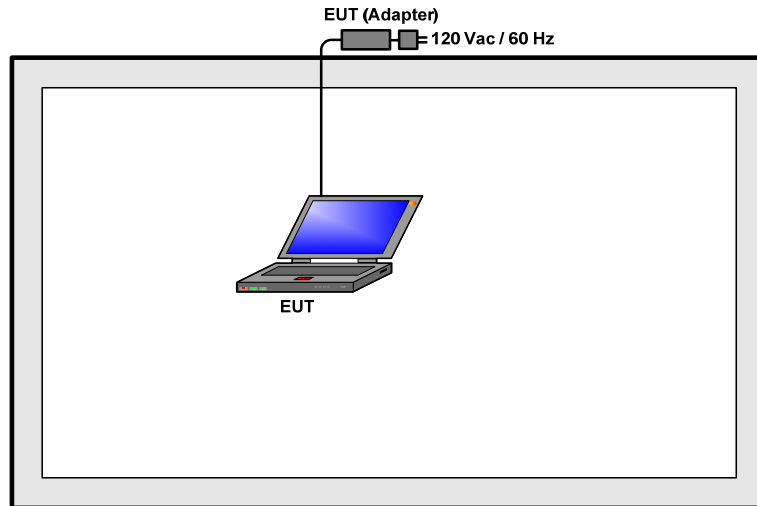
<2.4GHz>

Modulation	Data Rate
802.11b	1 Mbps
802.11g	6 Mbps
802.11n HT20	MCS0
802.11n HT40	MCS0

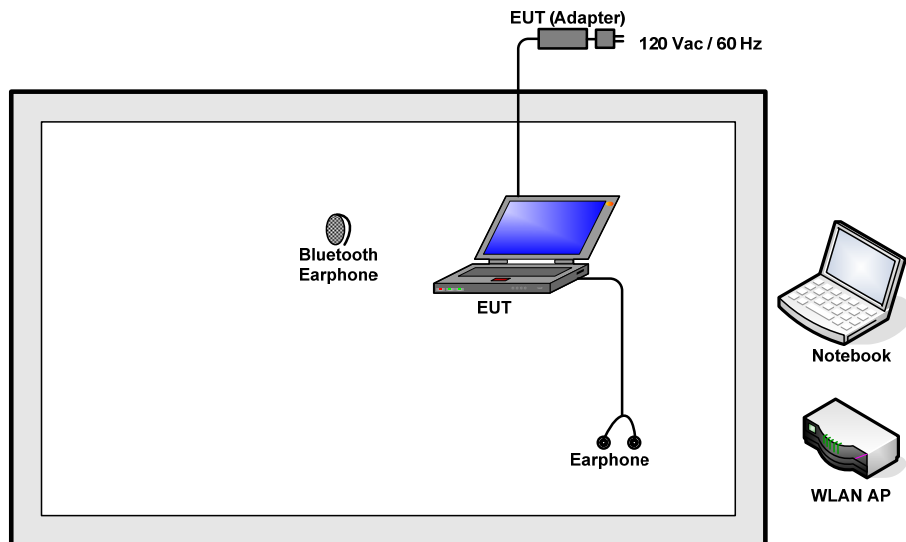
Test Cases	
AC Conducted Emission	Mode 1 : Bluetooth Link + WLAN (2.4G) Link + Earphone + Battery 1 + Adapter 2
Remark: For Radiated TCs, The tests were performance with Adapter, Battery, and USB Cable.	

2.4 Connection Diagram of Test System

<WLAN Tx Mode>



<AC Conducted Emission Mode>



2.5 Support Unit used in test configuration and system

Item	Equipment	Trade Name	Model Name	FCC ID	Data Cable	Power Cord
1.	WLAN AP	D-Link	DIR-815	KA2IR815A1	N/A	Unshielded, 1.8 m
2.	Bluetooth Earphone	Nokia	BH-108	PYAHS-107W	N/A	N/A
3.	Earphone	Lenovo	SH100	N/A	N/A	N/A
4.	Notebook	Lenovo	G480	N/A	N/A	Unshielded, 1.8 m

2.6 EUT Operation Test Setup

For WLAN function, the engineering test program was provided and enabled to make EUT continuous transmit/receive.

For AC power line conducted emissions, the EUT was set to connect with the WLAN AP under large package sizes transmission.

2.7 Measurement Results Explanation Example

For all conducted test items:

The offset level is set in the spectrum analyzer to compensate the RF cable loss and attenuator factor between EUT conducted output port and spectrum analyzer. With the offset compensation, the spectrum analyzer reading level is exactly the EUT RF output level.

Example:

The spectrum analyzer offset is derived from RF cable loss and attenuator factor.

Offset = RF cable loss + attenuator factor.

Following shows an offset computation example with cable loss 5 dB and 10dB attenuator.

Offset(dB) = RF cable loss(dB) + attenuator factor(dB).

= 5 + 10 = 15 (dB)

3 Test Result

3.1 6dB and 99% Bandwidth Measurement

3.1.1 Limit of 6dB and 99% Bandwidth

The minimum 6 dB bandwidth shall be at least 500 kHz.

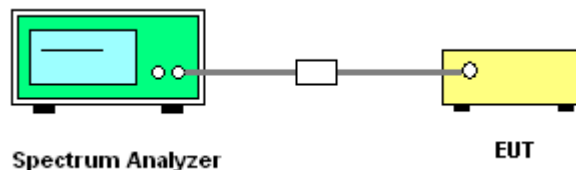
3.1.2 Measuring Instruments

The measuring equipment is listed in the section 4 of this test report.

3.1.3 Test Procedures

1. The testing follows FCC KDB Publication No. 558074 DTS D01 Meas. Guidance v03r02.
2. The RF output of EUT was connected to the spectrum analyzer by RF cable and attenuator. The path loss was compensated to the results for each measurement.
3. Set to the maximum power setting and enable the EUT transmit continuously.
4. Make the measurement with the spectrum analyzer's resolution bandwidth (RBW) = 100 kHz. Set the Video bandwidth (VBW) = 300 kHz. In order to make an accurate measurement. The 6 dB bandwidth must be greater than 500 kHz.
5. For 99% Bandwidth Measurement, the spectrum analyzer's resolution bandwidth (RBW) = 1MHz and set the Video bandwidth (VBW) = 3MHz.
6. Measure and record the results in the test report.

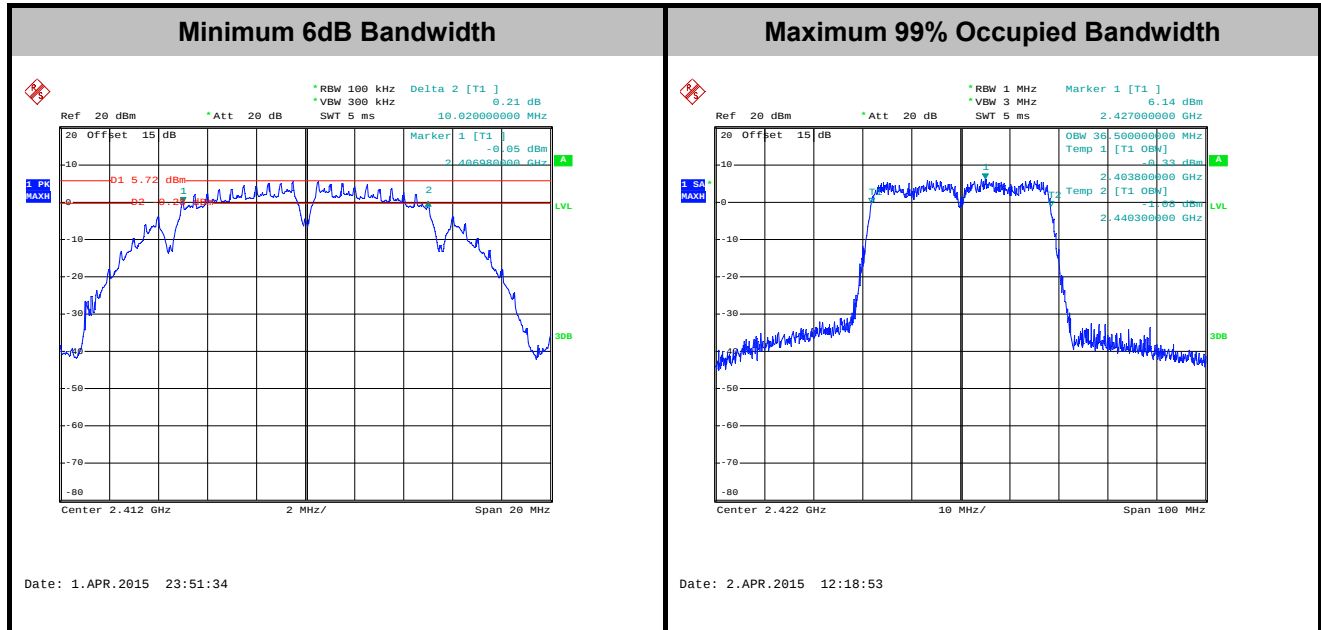
3.1.4 Test Setup





3.1.5 Test Result of 6dB and 99% Occupied Bandwidth

Please refer to Appendix A of this test report.



Note : The occupied channel bandwidth is maintained within the band of operation for all of the modulations.

3.2 Output Power Measurement

3.2.1 Limit of Output Power

For systems using digital modulation in the 2400-2483.5MHz, the limit for peak output power is 30dBm. If transmitting Antenna of directional gain greater than 6dBi are used the peak output power from the intentional radiator shall be reduced below the above stated value by the amount in dB that the directional gain of the Antenna exceeds 6 dBi. In case of point-to-point operation, the limit has to be reduced by 1dB for every 3dB that the directional gain of the Antenna exceeds 6dBi.

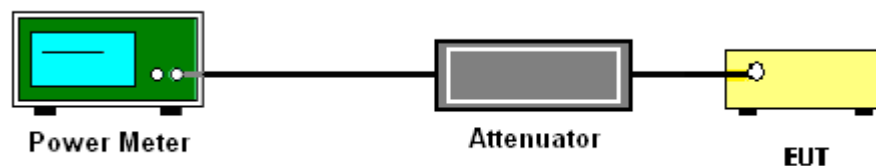
3.2.2 Measuring Instruments

The measuring equipment is listed in the section 4 of this test report.

3.2.3 Test Procedures

1. The testing follows the Measurement Procedure of FCC KDB No. 558074 DTS D01 Meas. Guidance v03r02.
2. The RF output of EUT was connected to the power meter by RF cable and attenuator. The path loss was compensated to the results for each measurement.
3. Set to the maximum power setting and enable the EUT transmit continuously.
4. Measure the conducted output power and record the results in the test report.
5. For MIMO mode, calculation method follows FCC KDB 662911 D01 Multiple Transmitter Output v02r01.

3.2.4 Test Setup





3.2.5 Test Result of Peak Output Power

Please refer to Appendix A of this test report.

3.2.6 Test Result of Average output Power (Reporting Only)

Please refer to Appendix A of this test report.

3.3 Power Spectral Density Measurement

3.3.1 Limit of Power Spectral Density

The peak power spectral density shall not be greater than 8dBm in any 3kHz band at any time interval of continuous transmission.

3.3.2 Measuring Instruments

The measuring equipment is listed in the section 4 of this test report.

3.3.3 Test Procedures

1. The testing follows Measurement Procedure 10.2 Method PKPSD of FCC KDB Publication No. 558074 D01 DTS Meas. Guidance v03r02
2. The RF output of EUT was connected to the spectrum analyzer by RF cable and attenuator. The path loss was compensated to the results for each measurement.
3. Set to the maximum power setting and enable the EUT transmit continuously.
4. Make the measurement with the spectrum analyzer's resolution bandwidth (RBW) = 3 kHz. Video bandwidth VBW = 10 kHz In order to make an accurate measurement, set the span to 1.5 times DTS Channel Bandwidth. (6dB BW)
5. Detector = peak, Sweep time = auto couple, Trace mode = max hold, Allow trace to fully stabilize. Use the peak marker function to determine the maximum power level.
6. Measure and record the results in the test report.
7. For MIMO mode, calculation method follows FCC KDB 662911 D01 Multiple Transmitter Output v02r01.

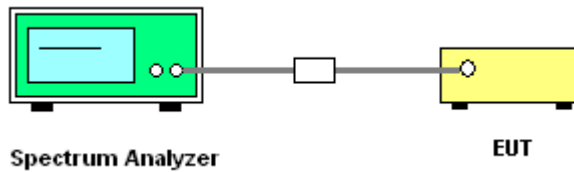
If measurements performed using method (2) plus $10 \log(N)$ exceeds the emission limit, the test should choose method (1) before declaring that the device fails the emission limit.

Method (1): Measure and sum the spectra across the outputs.

The total final Power Spectral Density is from a device with 2 transmitter outputs. The spectrum measurements of the individual outputs are all performed with the same span and number of points, the spectrum value in the first spectral bin of output 1 is summed with that in the first spectral bin of output 2 to obtain the value for the first frequency bin of the summed spectrum.

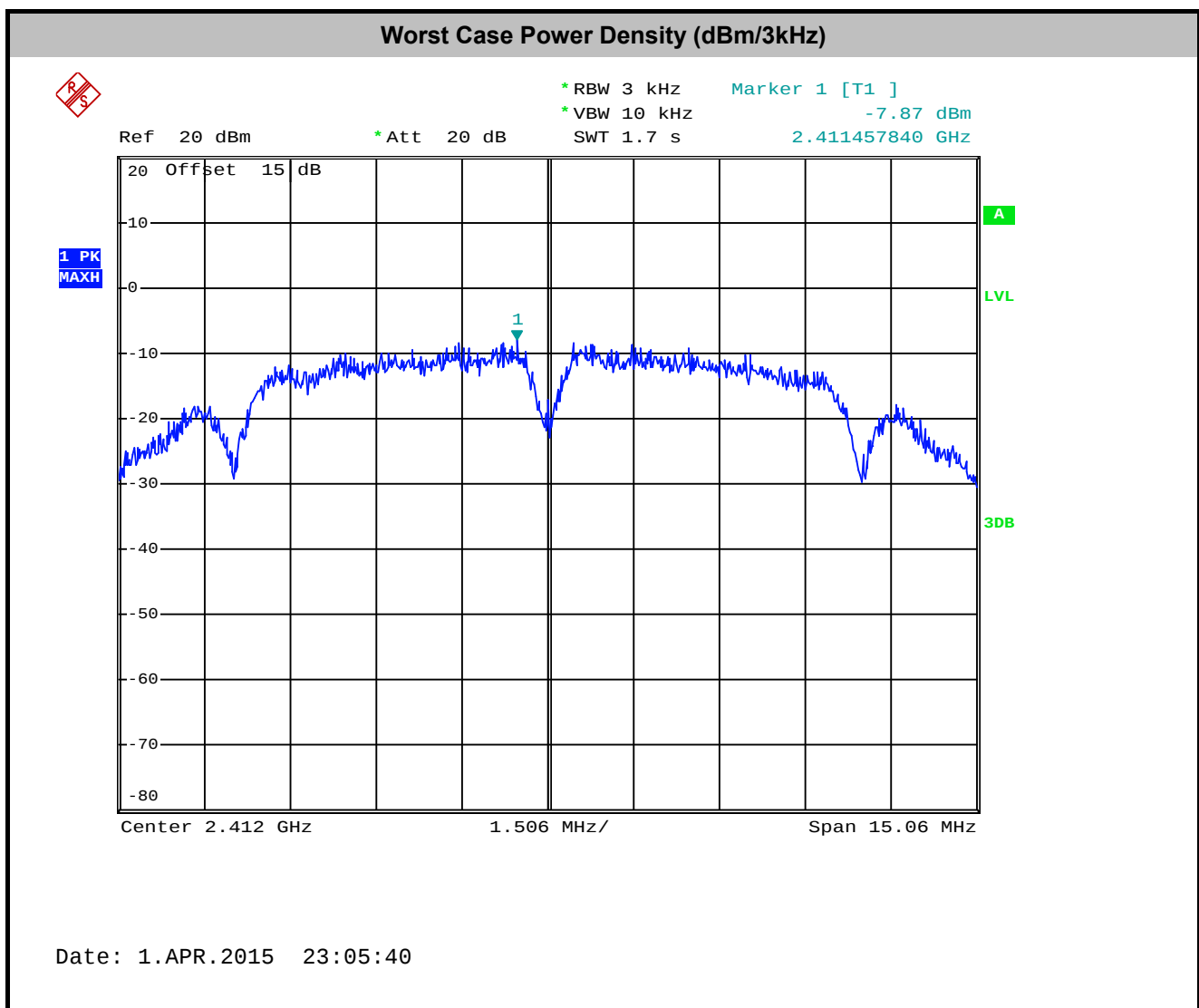
Method (2): Measure and add $10 \log(N)$ dB, where N is the number of outputs. (N=2)

3.3.4 Test Setup



3.3.5 Test Result of Power Spectral Density

Please refer to Appendix A of this test report.



3.4 Conducted Band Edges and Spurious Emission Measurement

3.4.1 Limit of Conducted Band Edges and Spurious Emission Measurement

In any 100 kHz bandwidth outside of the authorized frequency band, the emissions which fall in the non-restricted bands shall be attenuated at least 20 dB / 30dB relative to the maximum PSD level in 100 kHz by RF conducted measurement and radiated emissions which fall in the restricted bands, as defined in Section 15.205(a), must also comply with the radiated emission limits specified in Section 15.209(a).

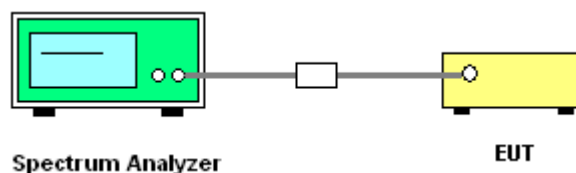
3.4.2 Measuring Instruments

The measuring equipment is listed in the section 4 of this test report.

3.4.3 Test Procedures

1. The testing follows FCC KDB Publication No. 558074 D01 DTS Meas. Guidance v03r02.
2. The RF output of EUT was connected to the spectrum analyzer by RF cable and attenuator. The path loss was compensated to the results for each measurement.
3. Set to the maximum power setting and enable the EUT transmit continuously.
4. Set RBW = 100 kHz, VBW=300 kHz, Peak Detector. Unwanted Emissions measured in any 100 kHz bandwidth outside of the authorized frequency band shall be attenuated by at least 20 dB relative to the maximum in-band peak PSD level in 100 kHz when maximum peak conducted output power procedure is used. If the transmitter complies with the conducted power limits based on the use of RMS averaging over a time interval, the attenuation required under this paragraph shall be 30 dB instead of 20 dB per 15.247(d).
5. Measure and record the results in the test report.
6. The RF fundamental frequency should be excluded against the limit line in the operating frequency band.

3.4.4 Test Setup

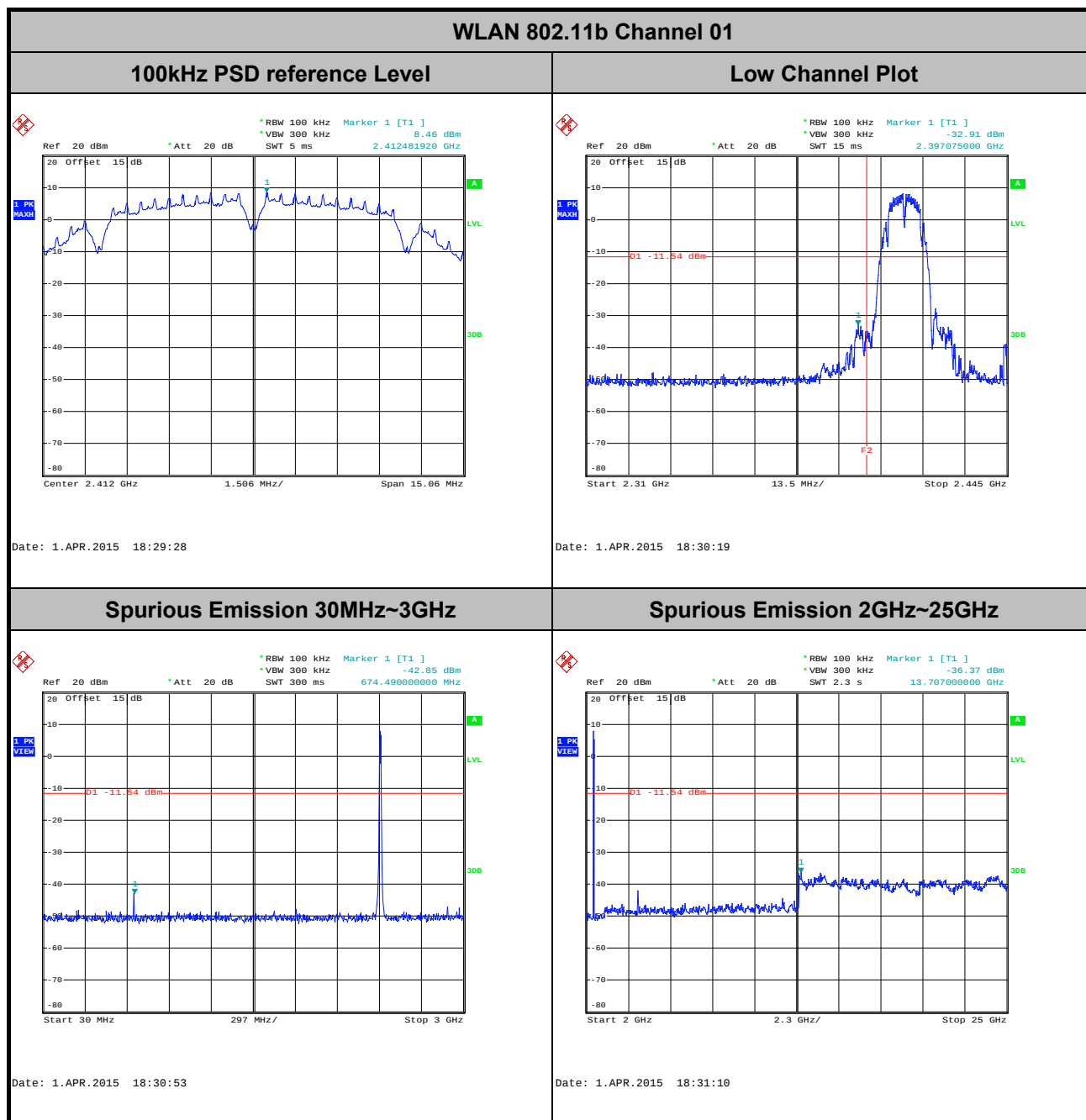




3.4.5 Test Result of Conducted Band Edges and Spurious Emission

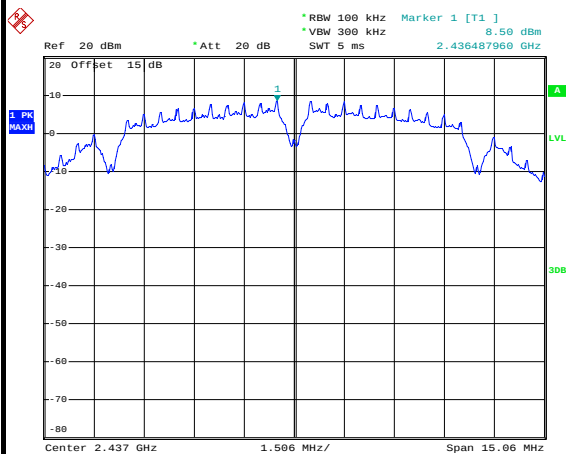
Number of TX = 1, Chain Port 0 (Measured)

Number of TX	1	Chain Port:	0
Test Mode :	802.11b	Temperature :	21~25℃
Test Band :	2.4GHz Low	Relative Humidity :	51~54%
Test Channel :	01	Test Engineer :	Tiny You

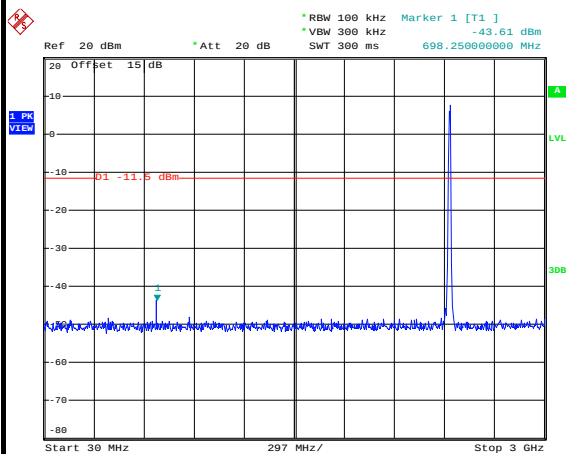




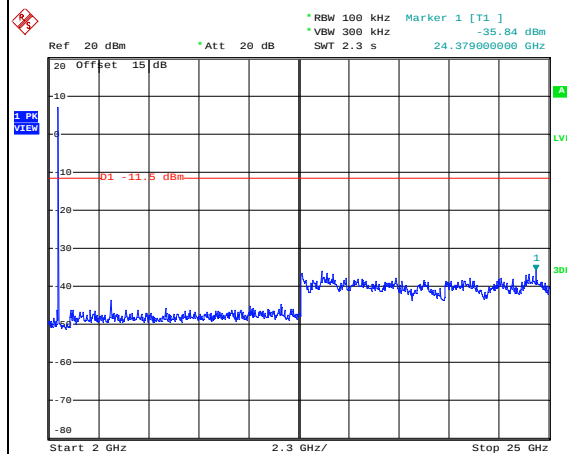
Number of TX :	1	Chain Port:	0
Test Mode :	802.11b	Temperature :	21~25℃
Test Band :	2.4GHz Mid	Relative Humidity :	51~54%
Test Channel :	06	Test Engineer :	Tiny You

WLAN 802.11b Channel 06**100kHz PSD reference Level**

Date: 1.APR.2015 18:36:59

Spurious Emission 30MHz~3GHz

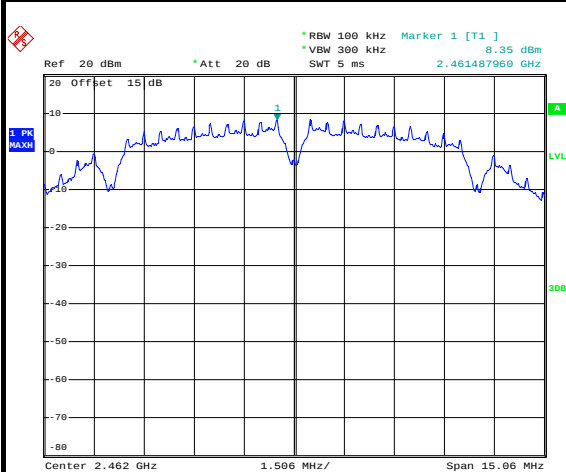
Date: 1.APR.2015 18:38:02

Spurious Emission 2GHz~25GHz

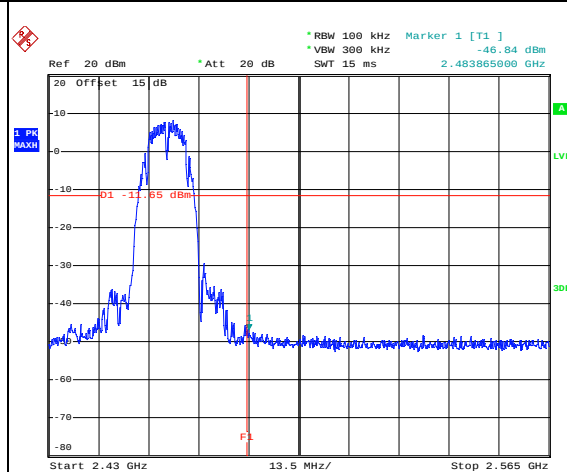
Date: 1.APR.2015 18:38:20



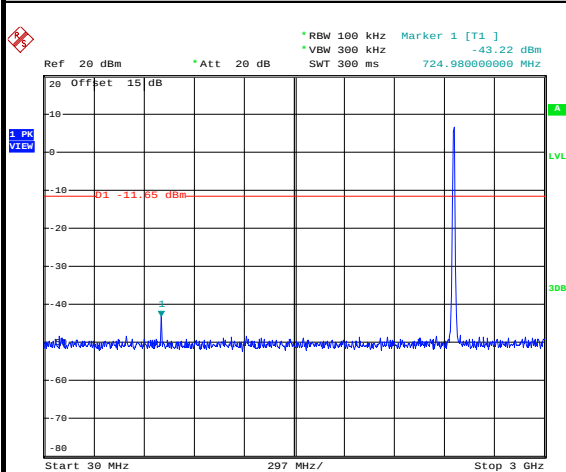
Number of TX :	1	Chain Port:	0
Test Mode :	802.11b	Temperature :	21~25°C
Test Band :	2.4GHz High	Relative Humidity :	51~54%
Test Channel :	11	Test Engineer :	Tiny You

WLAN 802.11b Channel 11**100kHz PSD reference Level**

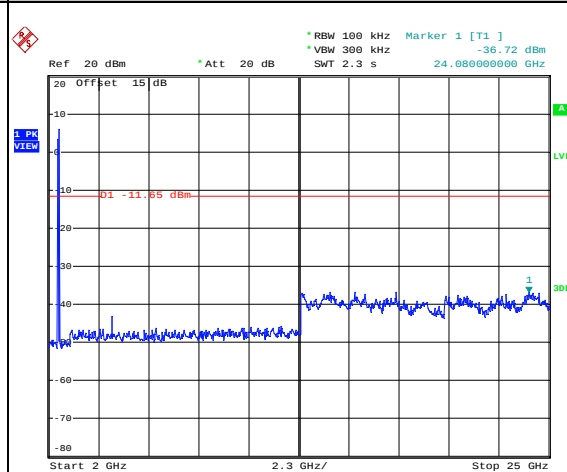
Date: 1.APR.2015 18:43:12

High Channel Plot

Date: 1.APR.2015 18:46:53

Spurious Emission 30MHz~3GHz

Date: 1.APR.2015 18:47:19

Spurious Emission 2GHz~25GHz

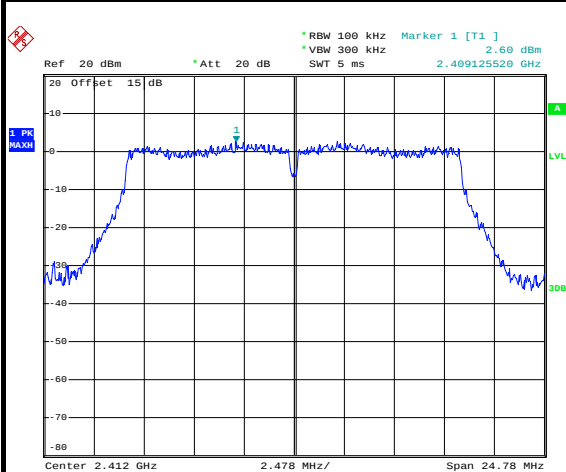
Date: 1.APR.2015 18:47:37



Number of TX :	1	Chain Port:	0
Test Mode :	802.11g	Temperature :	21~25°C
Test Band :	2.4GHz Low	Relative Humidity :	51~54%
Test Channel :	01	Test Engineer :	Tiny You

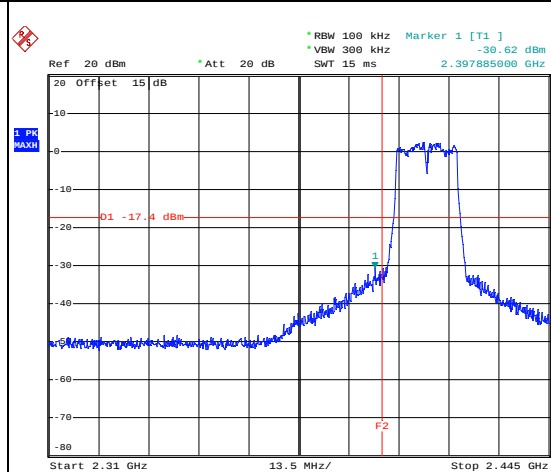
WLAN 802.11g Channel 01

100kHz PSD reference Level



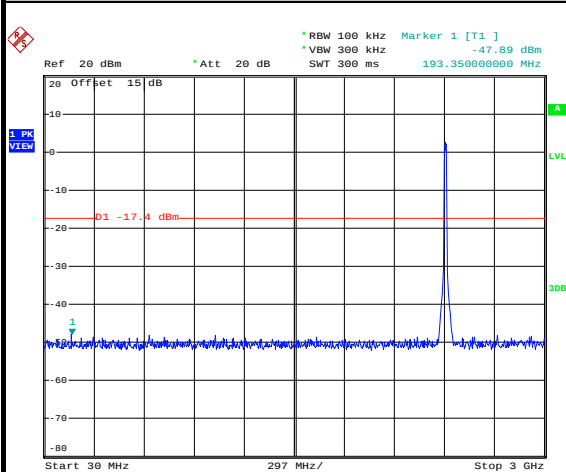
Date: 1.APR.2015 20:04:26

Low Channel Plot



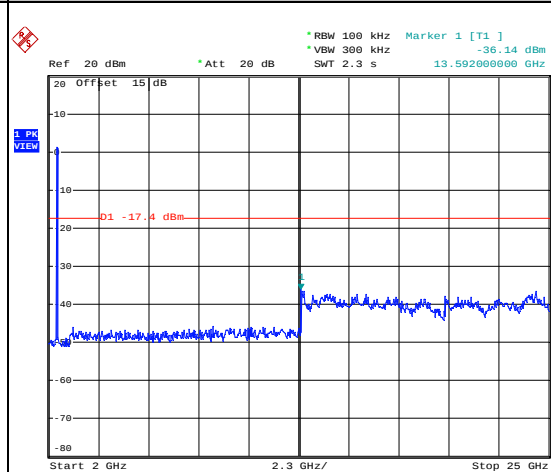
Date: 1.APR.2015 20:06:09

Spurious Emission 30MHz~3GHz



Date: 1.APR.2015 20:08:12

Spurious Emission 2GHz~25GHz



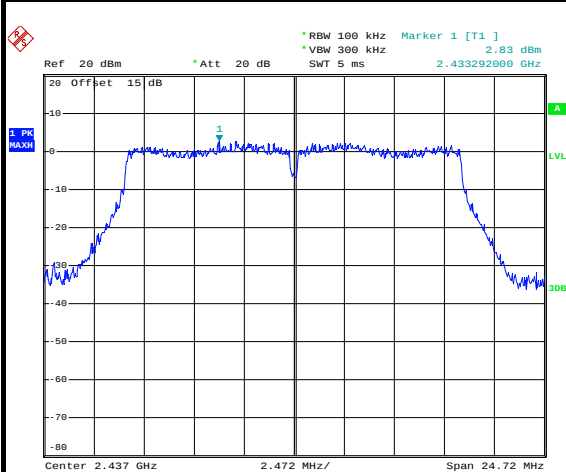
Date: 1.APR.2015 20:08:30



Number of TX :	1	Chain Port:	0
Test Mode :	802.11g	Temperature :	21~25°C
Test Band :	2.4GHz Mid	Relative Humidity :	51~54%
Test Channel :	06	Test Engineer :	Tiny You

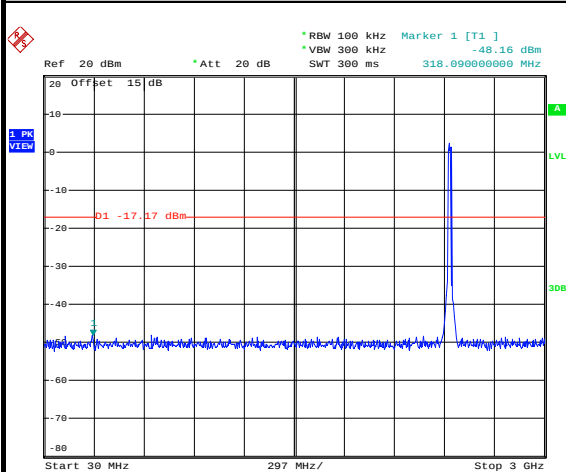
WLAN 802.11g Channel 06

100kHz PSD reference Level



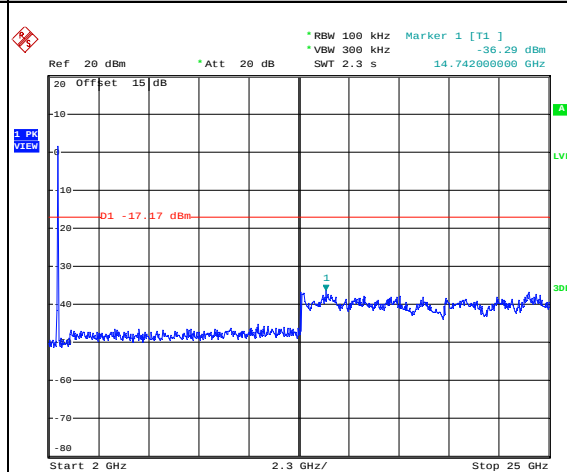
Date: 1.APR.2015 19:56:55

Spurious Emission 30MHz~3GHz



Date: 1.APR.2015 19:57:49

Spurious Emission 2GHz~25GHz



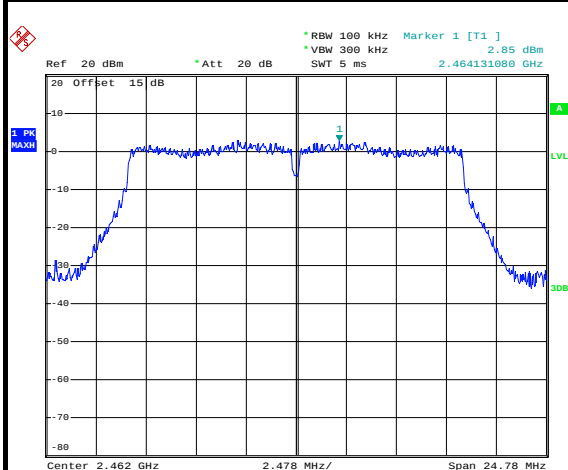
Date: 1.APR.2015 19:58:07



Number of TX :	1	Chain Port:	0
Test Mode :	802.11g	Temperature :	21~25°C
Test Band :	2.4GHz High	Relative Humidity :	51~54%
Test Channel :	11	Test Engineer :	Tiny You

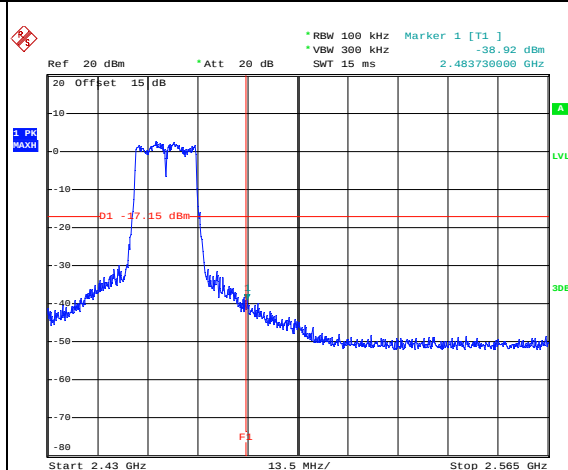
WLAN 802.11g Channel 11

100kHz PSD reference Level



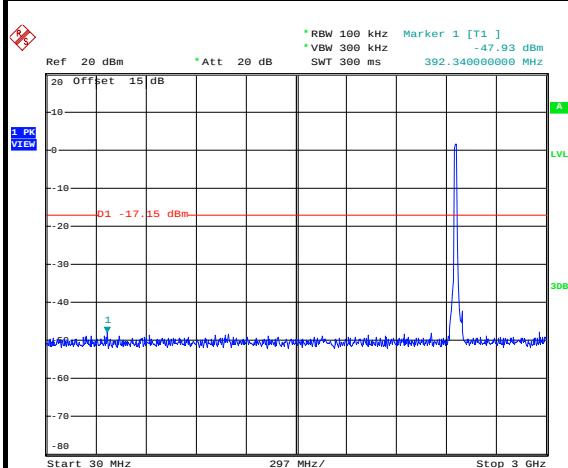
Date: 1.APR.2015 20:14:48

High Channel Plot



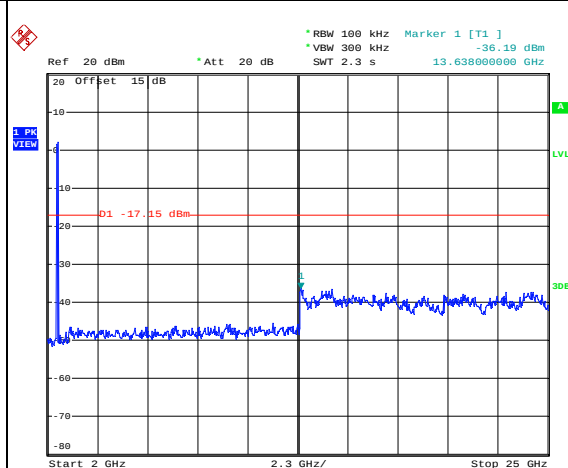
Date: 1.APR.2015 20:15:53

Spurious Emission 30MHz~3GHz



Date: 1.APR.2015 20:17:37

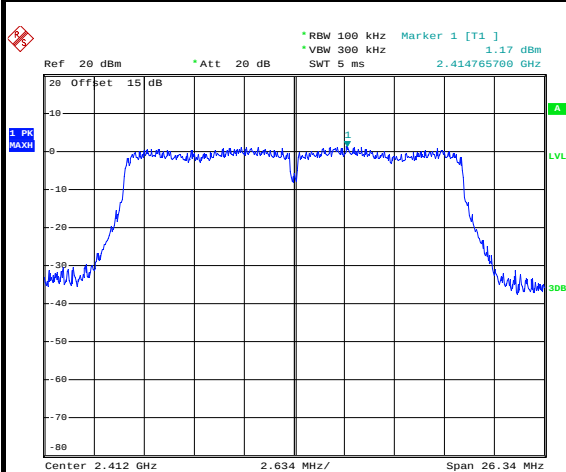
Spurious Emission 2GHz~25GHz



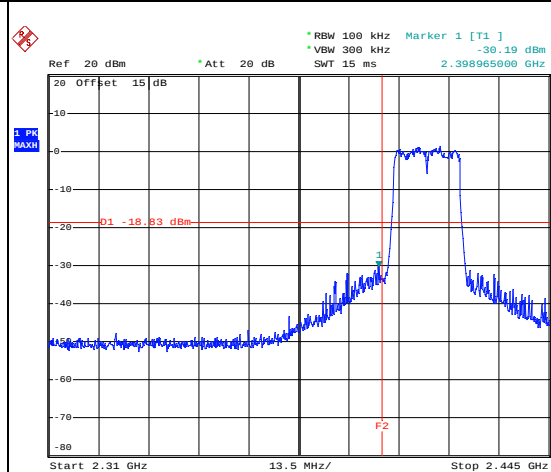
Date: 1.APR.2015 20:17:55



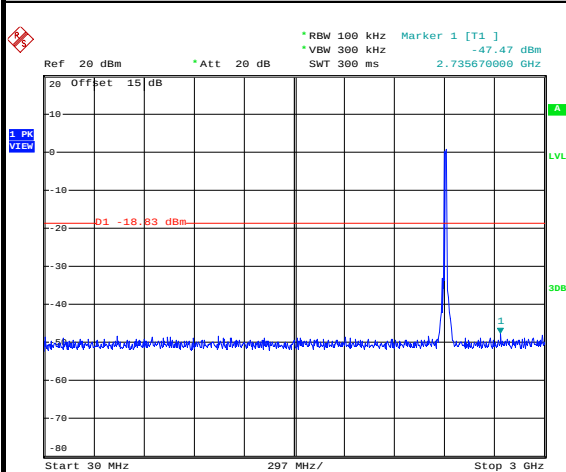
Number of TX :	1	Chain Port:	0
Test Mode :	802.11n HT20	Temperature :	21~25°C
Test Band :	2.4GHz Low	Relative Humidity :	51~54%
Test Channel :	01	Test Engineer :	Tiny You

WLAN 802.11n HT20 Channel 01**100kHz PSD reference Level**

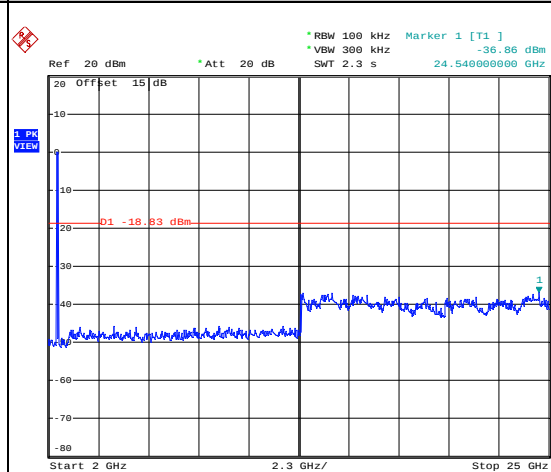
Date: 1.APR.2015 20:25:18

Low Channel Plot

Date: 1.APR.2015 20:29:09

Spurious Emission 30MHz~3GHz

Date: 1.APR.2015 20:27:38

Spurious Emission 2GHz~25GHz

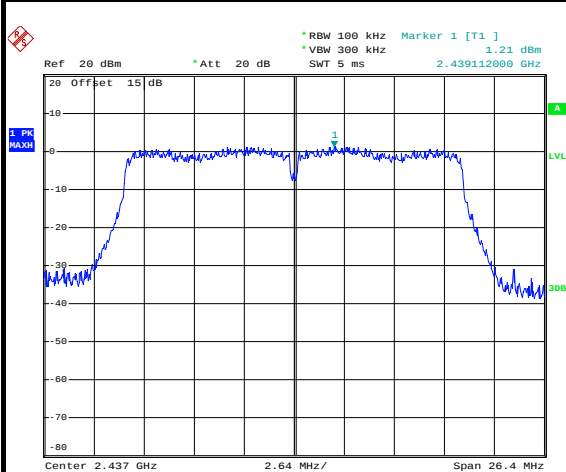
Date: 1.APR.2015 20:27:56



Number of TX :	1	Chain Port:	0
Test Mode :	802.11n HT20	Temperature :	21~25°C
Test Band :	2.4GHz Mid	Relative Humidity :	51~54%
Test Channel :	06	Test Engineer :	Tiny You

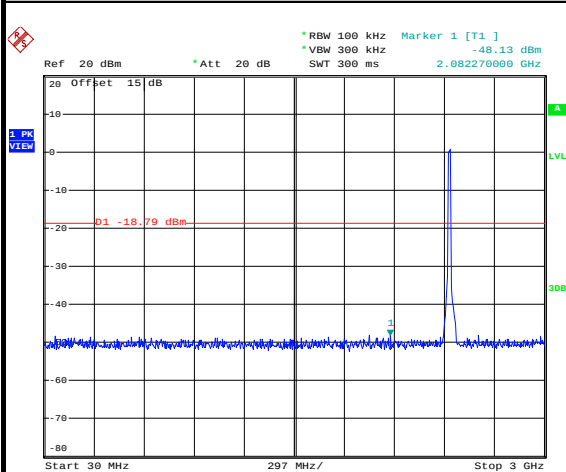
WLAN 802.11n HT20 Channel 06

100kHz PSD reference Level



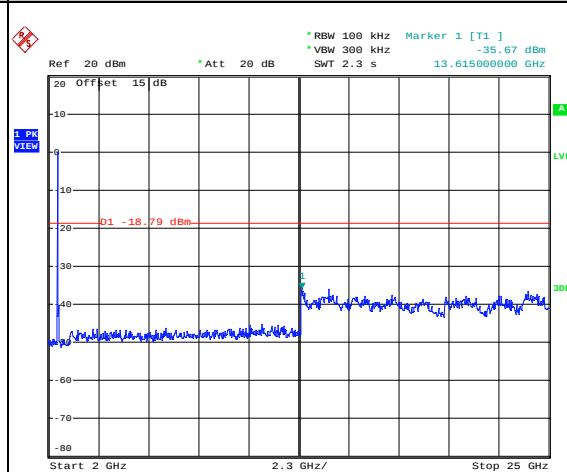
Date: 1.APR.2015 20:40:53

Spurious Emission 30MHz~3GHz



Date: 1.APR.2015 20:43:01

Spurious Emission 2GHz~25GHz



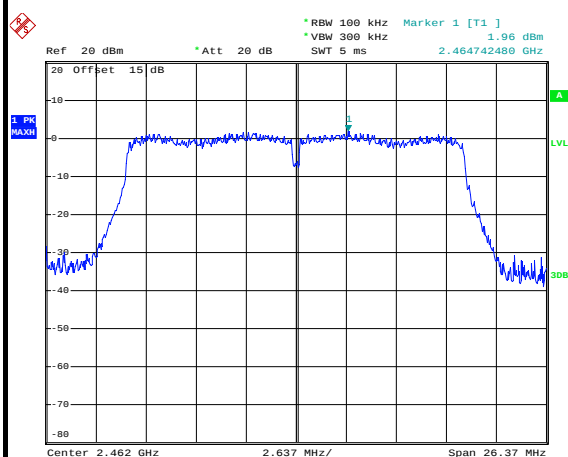
Date: 1.APR.2015 20:43:19



Number of TX :	1	Chain Port:	0
Test Mode :	802.11n HT20	Temperature :	21~25°C
Test Band :	2.4GHz High	Relative Humidity :	51~54%
Test Channel :	11	Test Engineer :	Tiny You

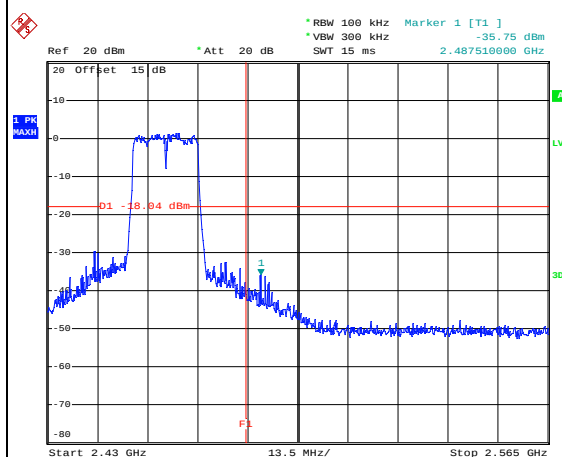
WLAN 802.11n HT20 Channel 11

100kHz PSD reference Level



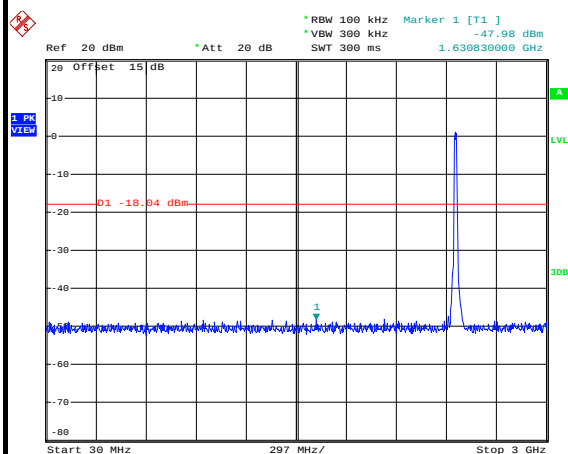
Date: 1.APR.2015 20:59:23

High Channel Plot



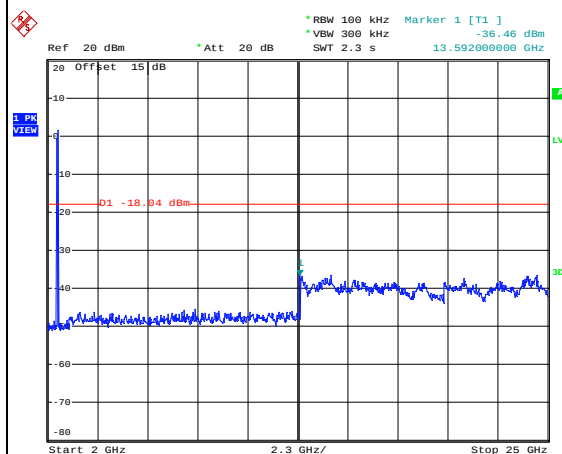
Date: 1.APR.2015 21:00:05

Spurious Emission 30MHz~3GHz



Date: 1.APR.2015 21:06:13

Spurious Emission 2GHz~25GHz



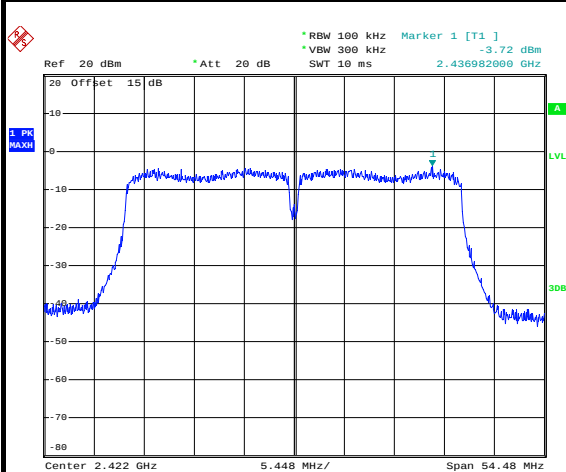
Date: 1.APR.2015 21:06:31



Number of TX :	1	Chain Port:	0
Test Mode :	802.11n HT40	Temperature :	21~25°C
Test Band :	2.4GHz Low	Relative Humidity :	51~54%
Test Channel :	03	Test Engineer :	Tiny You

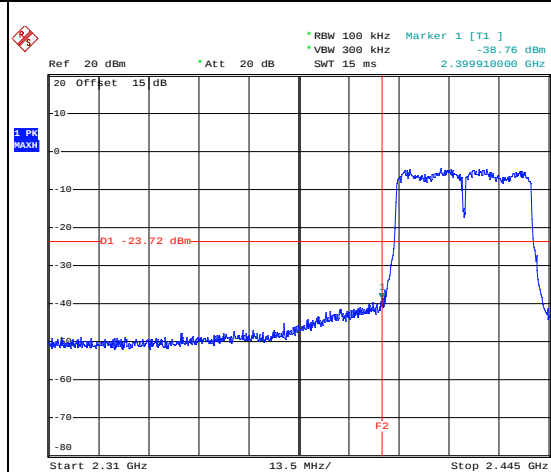
WLAN 802.11n HT40 Channel 03

100kHz PSD reference Level



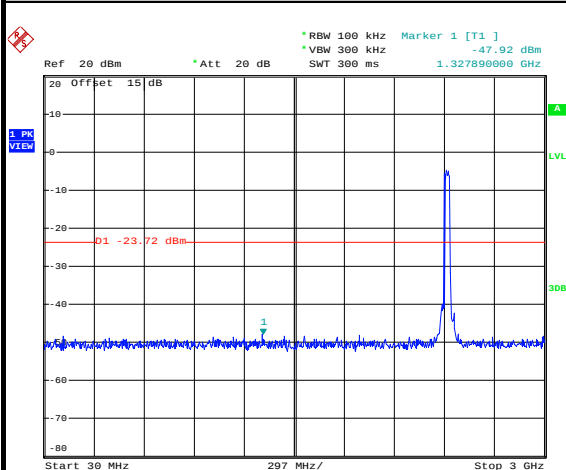
Date: 1.APR.2015 21:25:21

Low Channel Plot



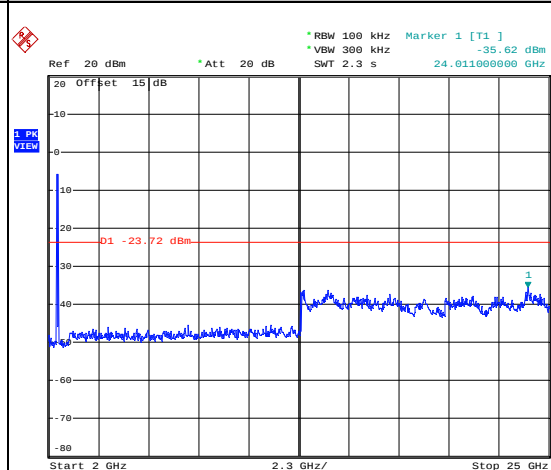
Date: 1.APR.2015 21:26:11

Spurious Emission 30MHz~3GHz



Date: 1.APR.2015 21:27:14

Spurious Emission 2GHz~25GHz



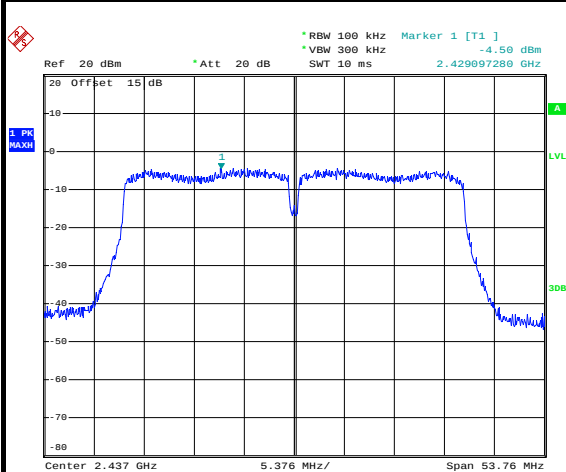
Date: 1.APR.2015 21:27:32



Number of TX :	1	Chain Port:	0
Test Mode :	802.11n HT40	Temperature :	21~25°C
Test Band :	2.4GHz Mid	Relative Humidity :	51~54%
Test Channel :	06	Test Engineer :	Tiny You

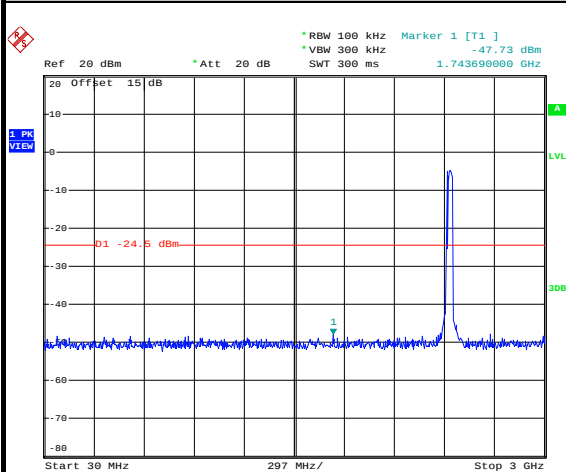
WLAN 802.11n HT40 Channel 06

100kHz PSD reference Level



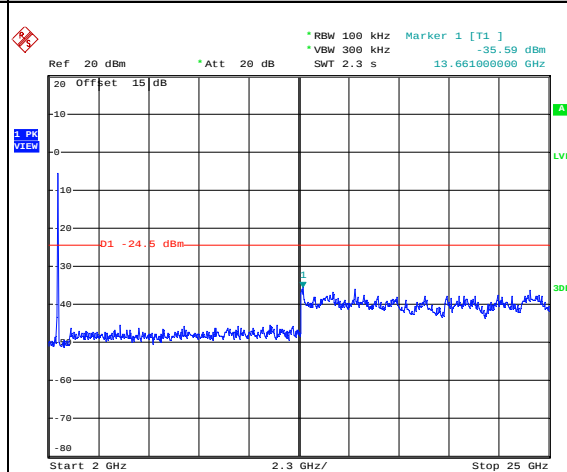
Date: 1.APR.2015 21:31:25

Spurious Emission 30MHz~3GHz



Date: 1.APR.2015 21:32:55

Spurious Emission 2GHz~25GHz



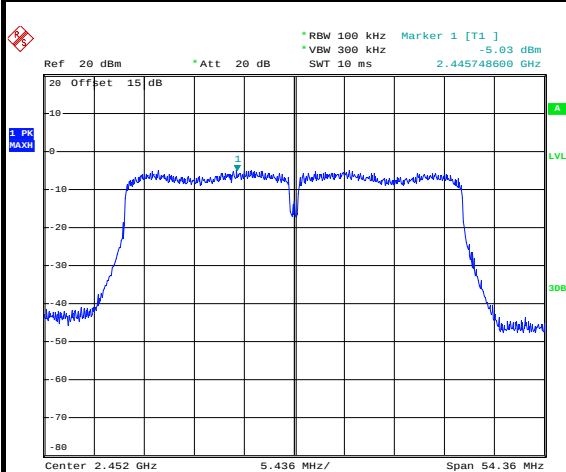
Date: 1.APR.2015 21:33:13



Number of TX :	1	Chain Port:	0
Test Mode :	802.11n HT40	Temperature :	21~25°C
Test Band :	2.4GHz High	Relative Humidity :	51~54%
Test Channel :	09	Test Engineer :	Tiny You

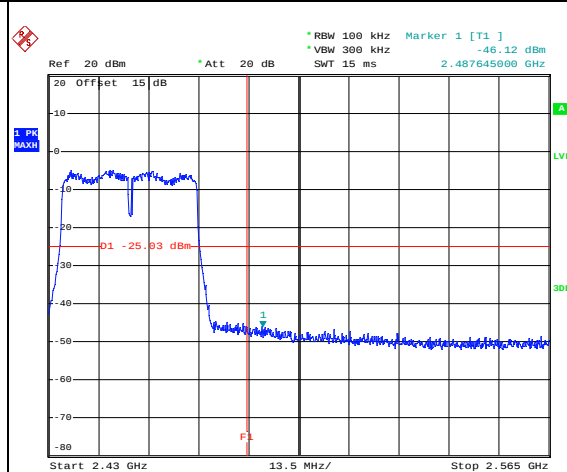
WLAN 802.11n HT40 Channel 09

100kHz PSD reference Level



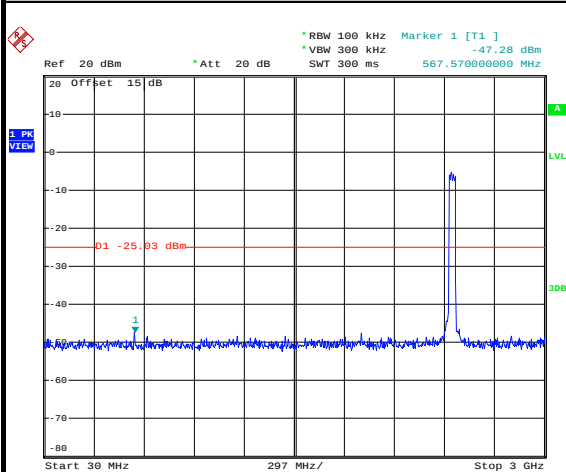
Date: 1.APR.2015 21:39:58

High Channel Plot



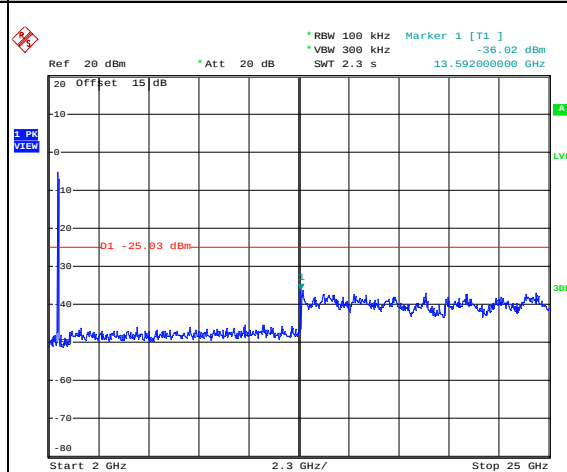
Date: 1.APR.2015 21:40:17

Spurious Emission 30MHz~3GHz



Date: 1.APR.2015 21:42:27

Spurious Emission 2GHz~25GHz



Date: 1.APR.2015 21:42:45

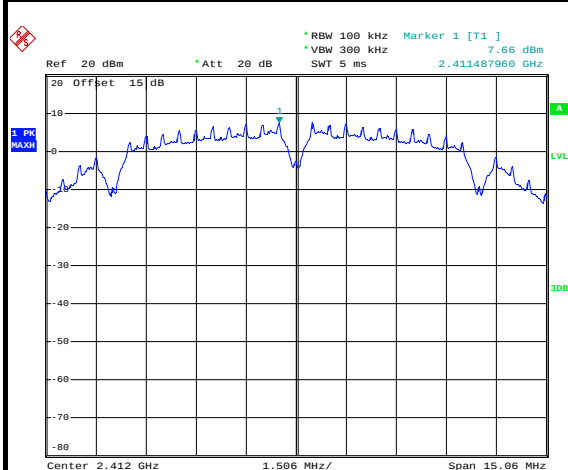


Number of TX = 1, Chain Port 1 (Measured)

Number of TX :	1	Chain Port:	1
Test Mode :	802.11b	Temperature :	21~25°C
Test Band :	2.4GHz Low	Relative Humidity :	51~54%
Test Channel :	01	Test Engineer :	Tiny You

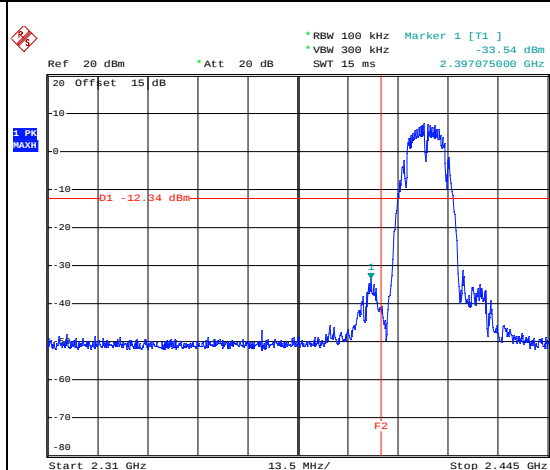
WLAN 802.11b Channel 01

100kHz PSD reference Level



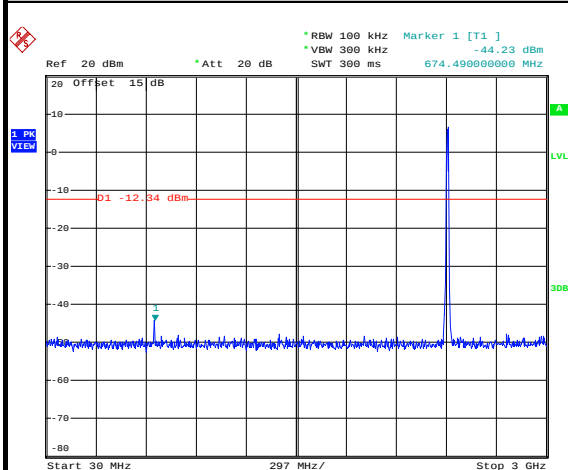
Date: 2.APR.2015 10:21:58

Low Channel Plot



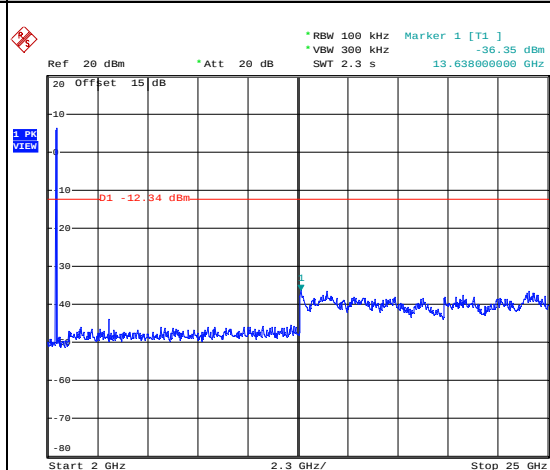
Date: 2.APR.2015 10:22:45

Spurious Emission 30MHz~3GHz



Date: 2.APR.2015 10:38:43

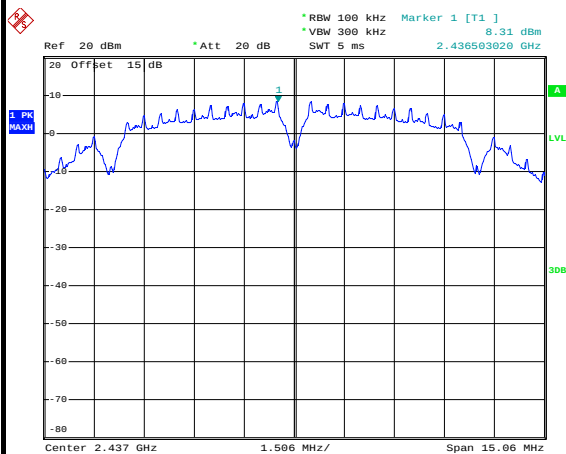
Spurious Emission 2GHz~25GHz



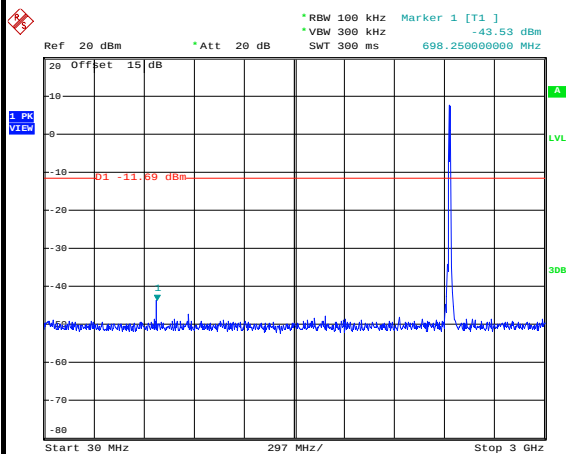
Date: 2.APR.2015 10:23:31



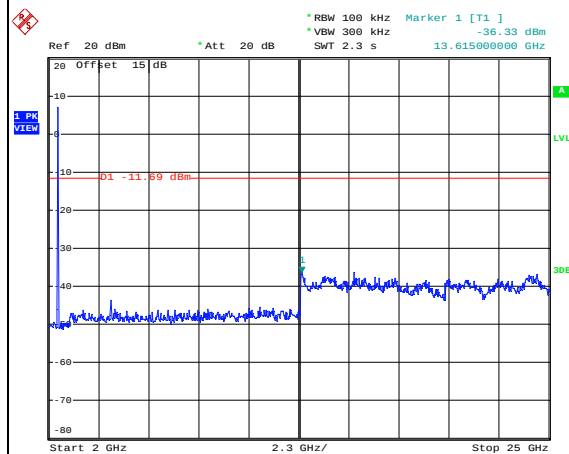
Number of TX :	1	Chain Port:	1
Test Mode :	802.11b	Temperature :	21~25℃
Test Band :	2.4GHz Mid	Relative Humidity :	51~54%
Test Channel :	06	Test Engineer :	Tiny You

WLAN 802.11b Channel 06**100kHz PSD reference Level**

Date: 2.APR.2015 10:46:23

Spurious Emission 30MHz~3GHz

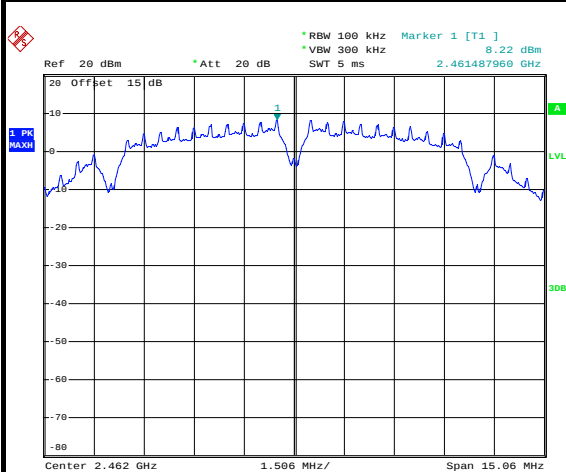
Date: 2.APR.2015 10:46:50

Spurious Emission 2GHz~25GHz

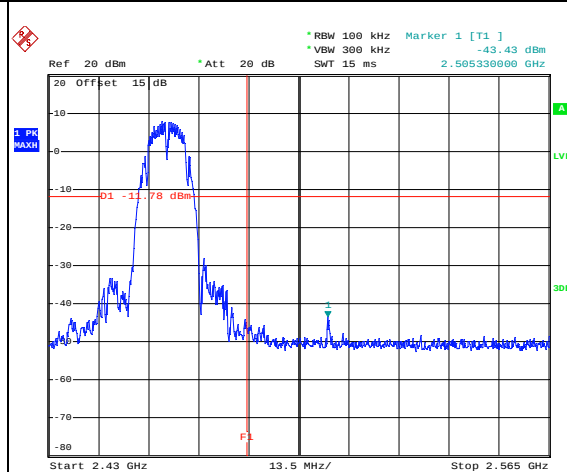
Date: 2.APR.2015 10:47:08



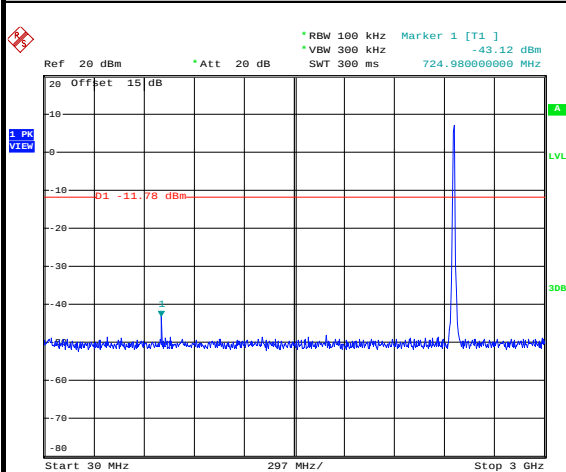
Number of TX :	1	Chain Port:	1
Test Mode :	802.11b	Temperature :	21~25°C
Test Band :	2.4GHz High	Relative Humidity :	51~54%
Test Channel :	11	Test Engineer :	Tiny You

WLAN 802.11b Channel 11**100kHz PSD reference Level**

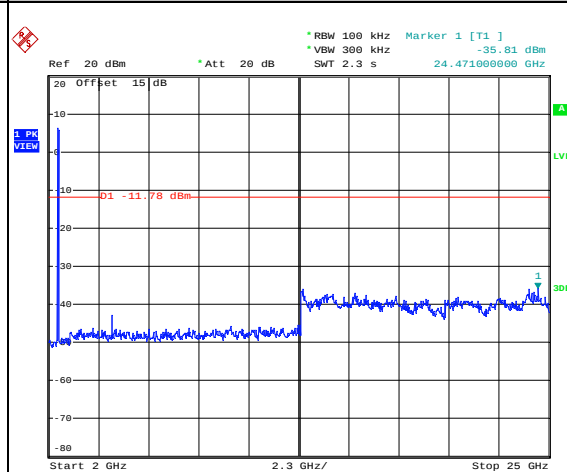
Date: 2.APR.2015 10:52:41

High Channel Plot

Date: 2.APR.2015 11:01:53

Spurious Emission 30MHz~3GHz

Date: 2.APR.2015 11:02:18

Spurious Emission 2GHz~25GHz

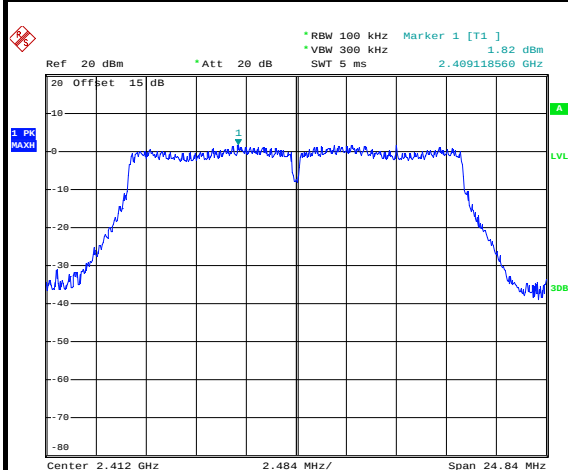
Date: 2.APR.2015 11:02:35



Number of TX :	1	Chain Port:	1
Test Mode :	802.11g	Temperature :	21~25°C
Test Band :	2.4GHz Low	Relative Humidity :	51~54%
Test Channel :	01	Test Engineer :	Tiny You

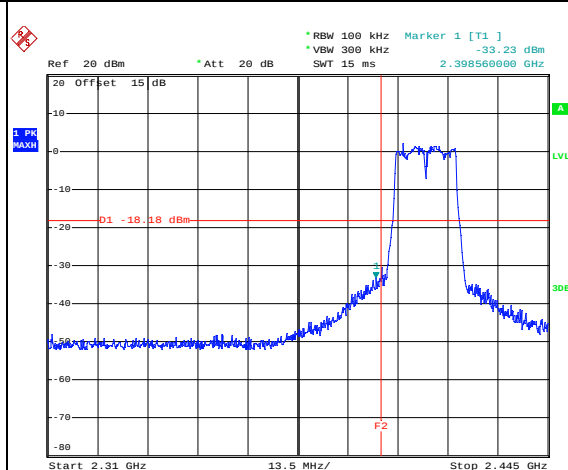
WLAN 802.11g Channel 01

100kHz PSD reference Level



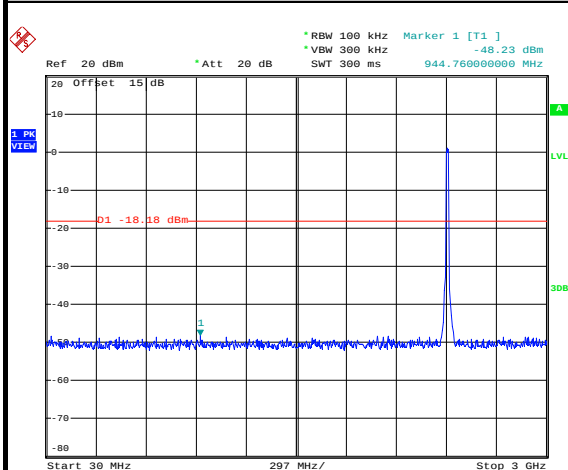
Date: 2.APR.2015 11:34:53

Low Channel Plot



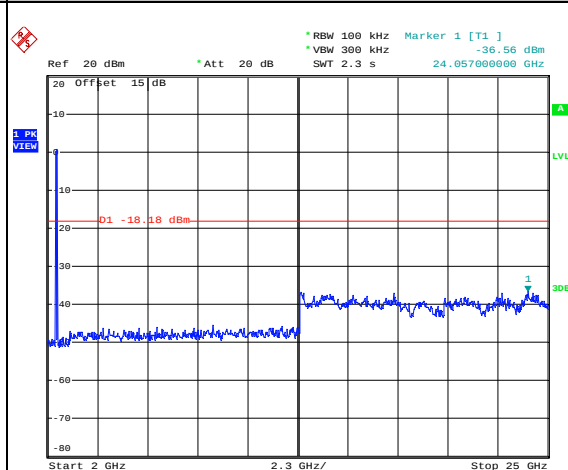
Date: 2.APR.2015 11:35:57

Spurious Emission 30MHz~3GHz



Date: 2.APR.2015 11:36:44

Spurious Emission 2GHz~25GHz



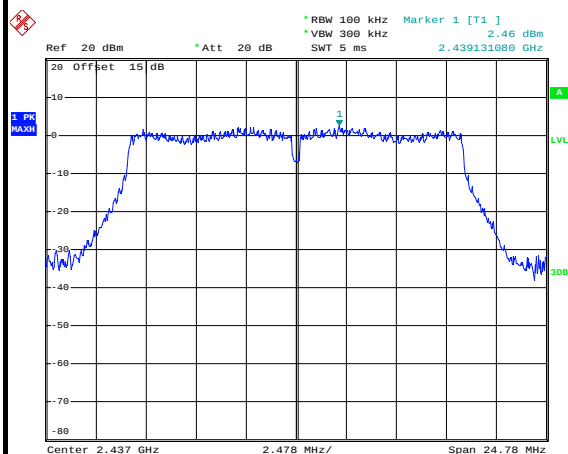
Date: 2.APR.2015 11:37:02



Number of TX :	1	Chain Port:	1
Test Mode :	802.11g	Temperature :	21~25°C
Test Band :	2.4GHz Mid	Relative Humidity :	51~54%
Test Channel :	06	Test Engineer :	Tiny You

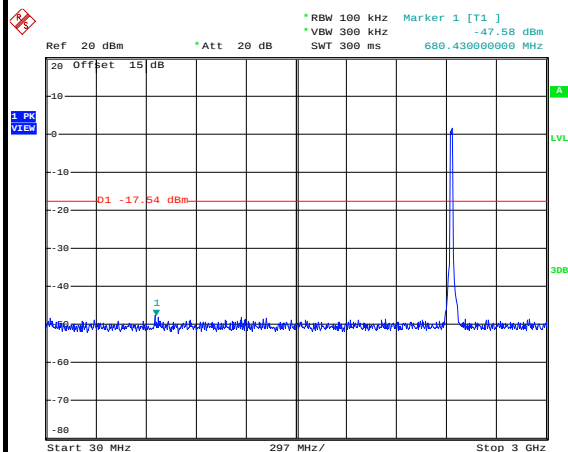
WLAN 802.11g Channel 06

100kHz PSD reference Level



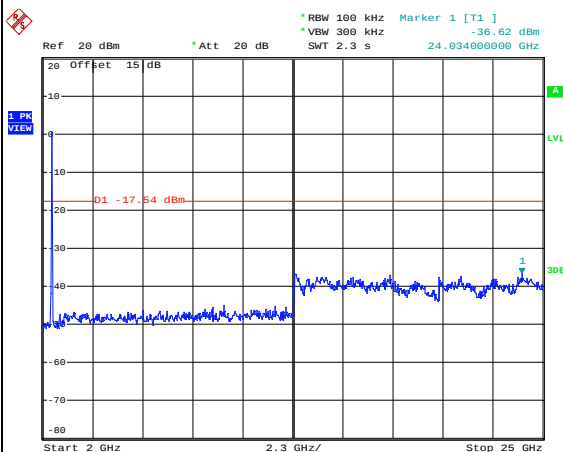
Date: 2.APR.2015 11:26:03

Spurious Emission 30MHz~3GHz



Date: 2.APR.2015 11:27:15

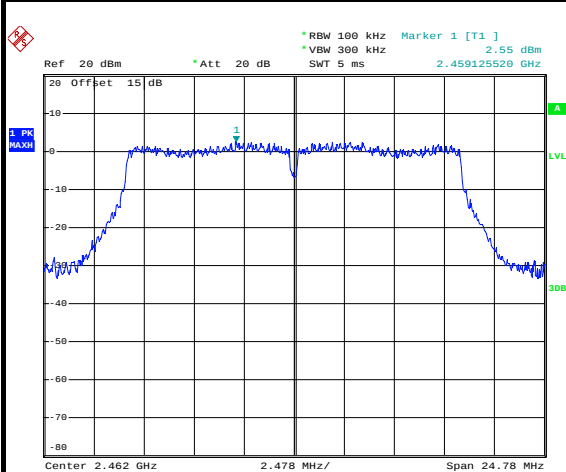
Spurious Emission 2GHz~25GHz



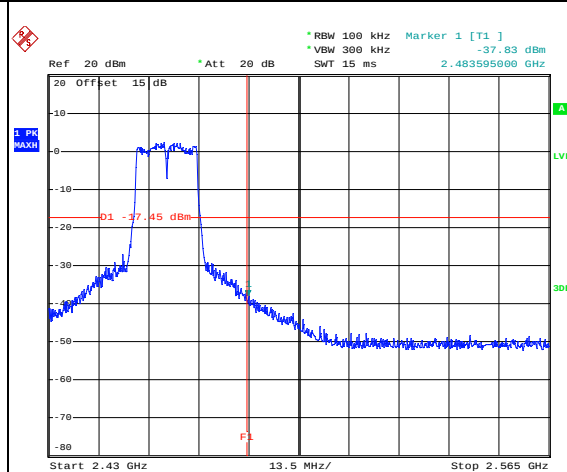
Date: 2.APR.2015 11:27:32



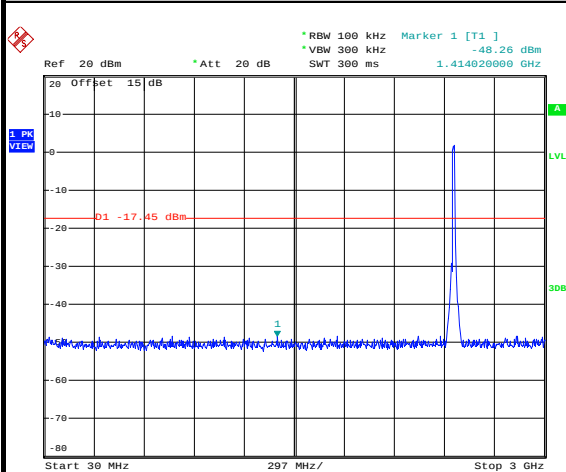
Number of TX :	1	Chain Port:	1
Test Mode :	802.11g	Temperature :	21~25°C
Test Band :	2.4GHz High	Relative Humidity :	51~54%
Test Channel :	11	Test Engineer :	Tiny You

WLAN 802.11g Channel 11**100kHz PSD reference Level**

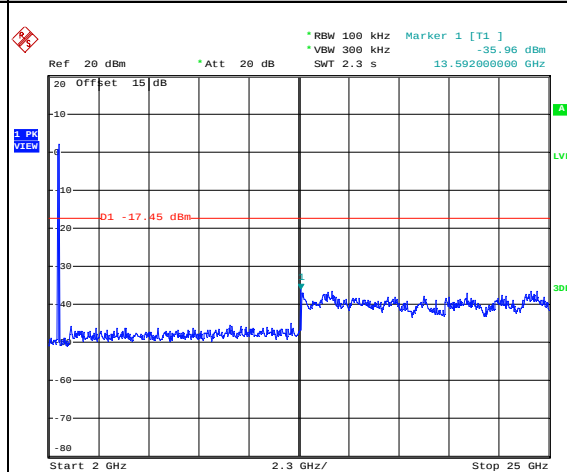
Date: 2.APR.2015 11:13:40

High Channel Plot

Date: 2.APR.2015 11:15:44

Spurious Emission 30MHz~3GHz

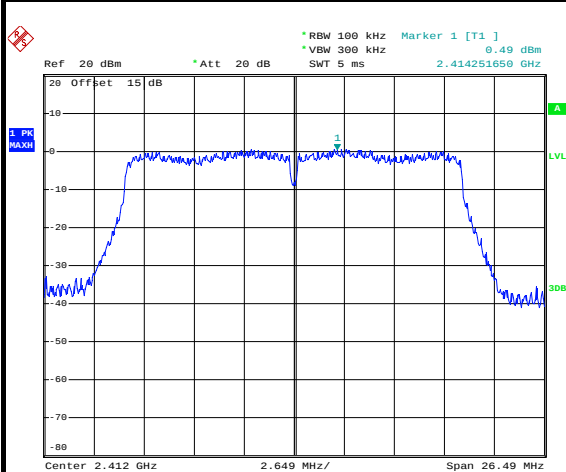
Date: 2.APR.2015 11:16:09

Spurious Emission 2GHz~25GHz

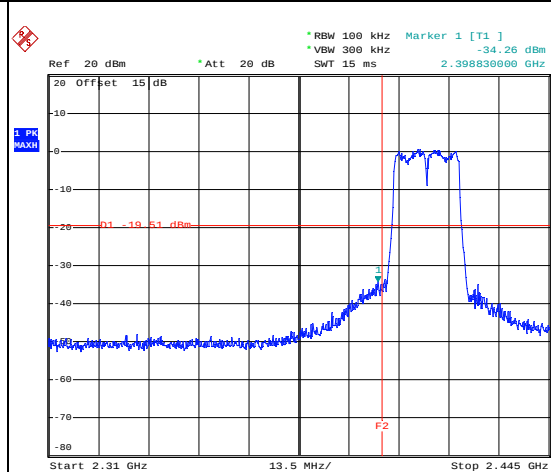
Date: 2.APR.2015 11:16:26



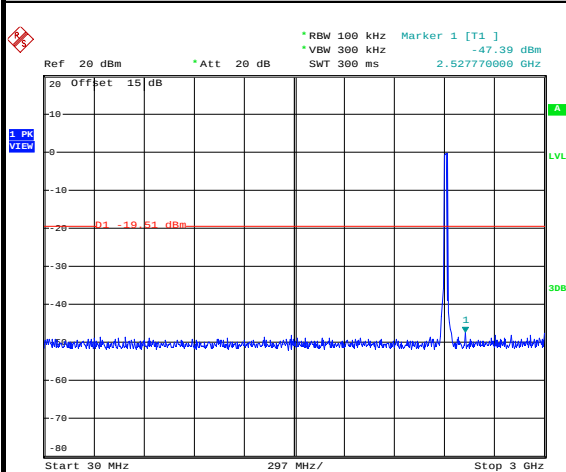
Number of TX :	1	Chain Port:	1
Test Mode :	802.11n HT20	Temperature :	21~25°C
Test Band :	2.4GHz Low	Relative Humidity :	51~54%
Test Channel :	01	Test Engineer :	Tiny You

WLAN 802.11n HT20 Channel 01**100kHz PSD reference Level**

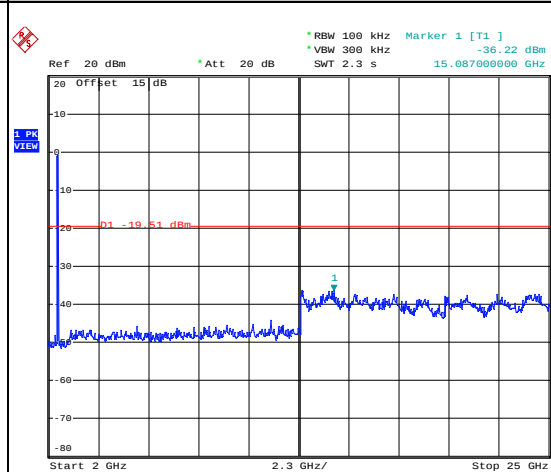
Date: 2.APR.2015 11:46:35

Low Channel Plot

Date: 2.APR.2015 11:47:58

Spurious Emission 30MHz~3GHz

Date: 2.APR.2015 11:49:37

Spurious Emission 2GHz~25GHz

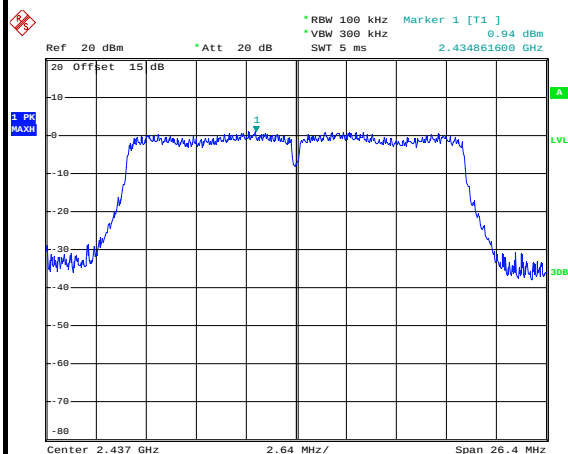
Date: 2.APR.2015 11:49:55



Number of TX :	1	Chain Port:	1
Test Mode :	802.11n HT20	Temperature :	21~25℃
Test Band :	2.4GHz Mid	Relative Humidity :	51~54%
Test Channel :	06	Test Engineer :	Tiny You

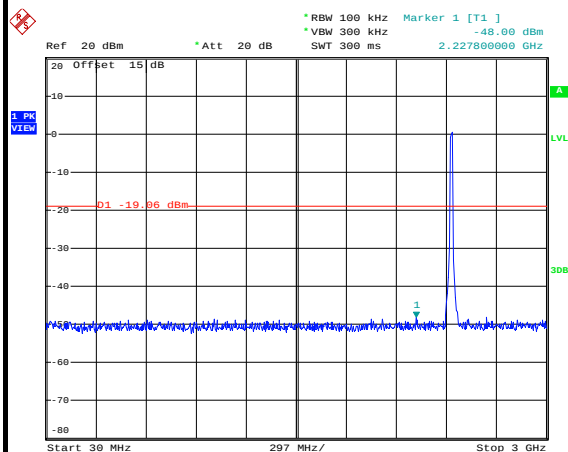
WLAN 802.11n HT20 Channel 06

100kHz PSD reference Level



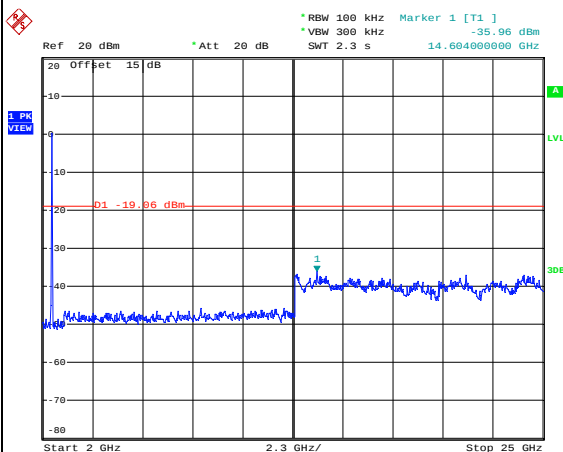
Date: 2.APR.2015 11:59:49

Spurious Emission 30MHz~3GHz



Date: 2.APR.2015 12:00:13

Spurious Emission 2GHz~25GHz



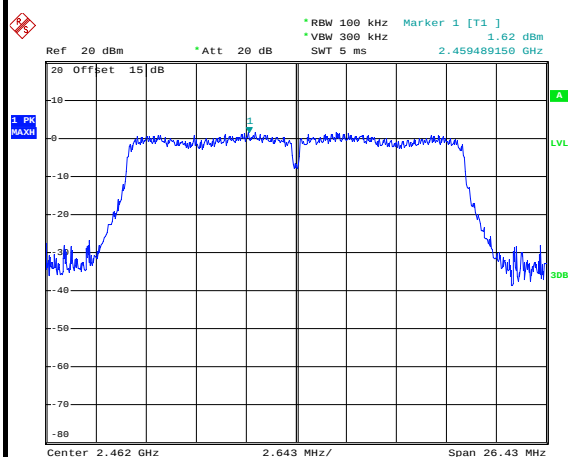
Date: 2.APR.2015 12:00:30



Number of TX :	1	Chain Port:	1
Test Mode :	802.11n HT20	Temperature :	21~25°C
Test Band :	2.4GHz High	Relative Humidity :	51~54%
Test Channel :	11	Test Engineer :	Tiny You

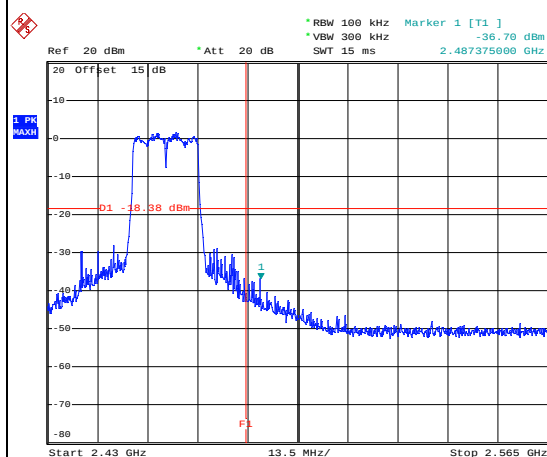
WLAN 802.11n HT20 Channel 11

100kHz PSD reference Level



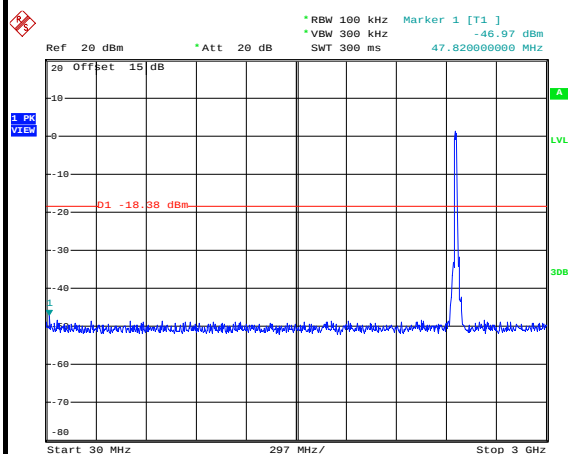
Date: 2.APR.2015 12:06:35

High Channel Plot



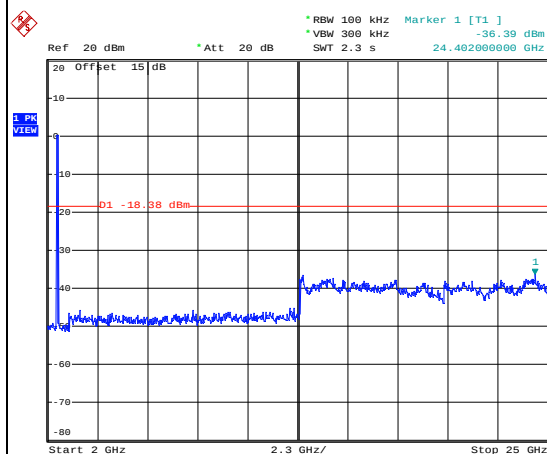
Date: 2.APR.2015 12:08:13

Spurious Emission 30MHz~3GHz



Date: 2.APR.2015 12:12:22

Spurious Emission 2GHz~25GHz



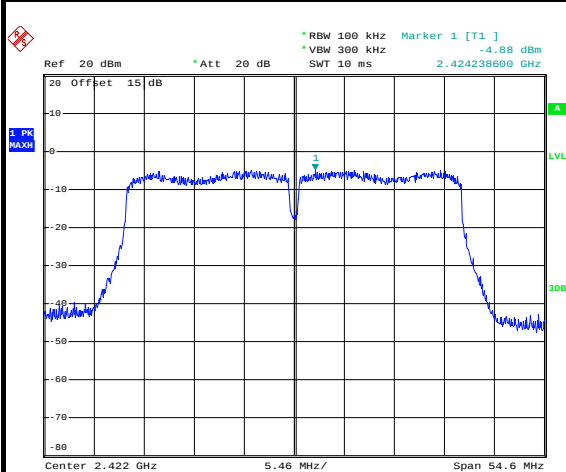
Date: 2.APR.2015 12:12:40



Number of TX :	1	Chain Port:	1
Test Mode :	802.11n HT40	Temperature :	21~25°C
Test Band :	2.4GHz Low	Relative Humidity :	51~54%
Test Channel :	03	Test Engineer :	Tiny You

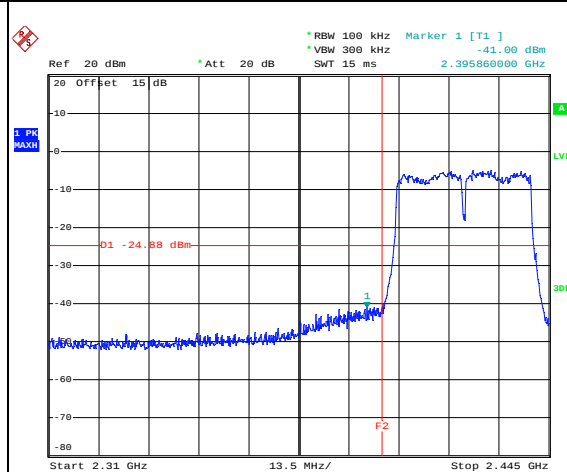
WLAN 802.11n HT40 Channel 03

100kHz PSD reference Level



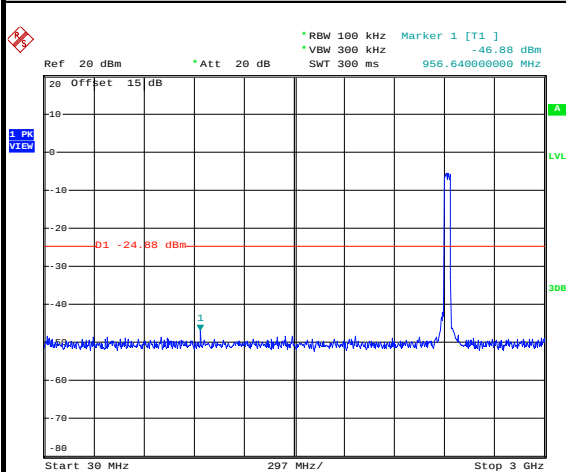
Date: 2.APR.2015 12:16:25

Low Channel Plot



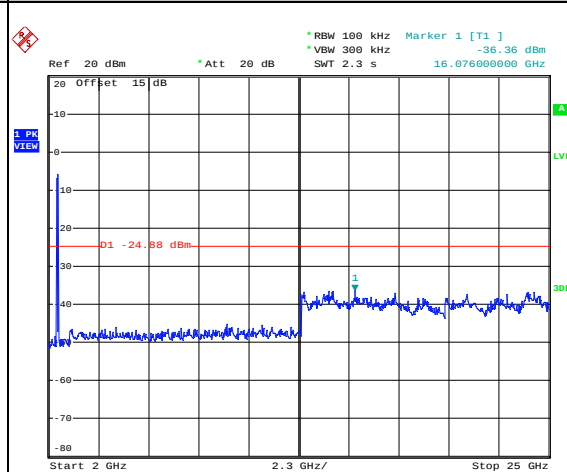
Date: 2.APR.2015 12:17:03

Spurious Emission 30MHz~3GHz



Date: 2.APR.2015 12:17:45

Spurious Emission 2GHz~25GHz



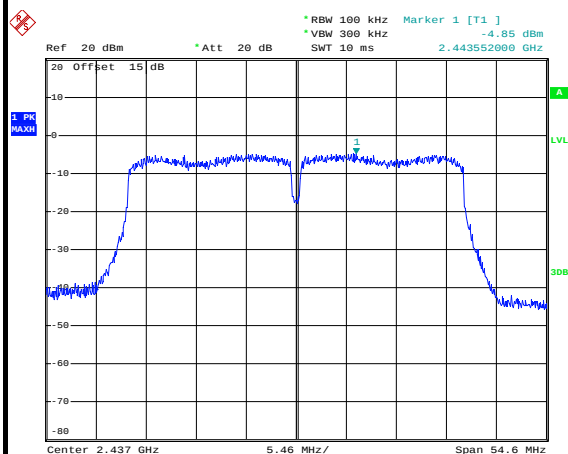
Date: 2.APR.2015 12:18:02



Number of TX :	1	Chain Port:	1
Test Mode :	802.11n HT40	Temperature :	21~25°C
Test Band :	2.4GHz Mid	Relative Humidity :	51~54%
Test Channel :	06	Test Engineer :	Tiny You

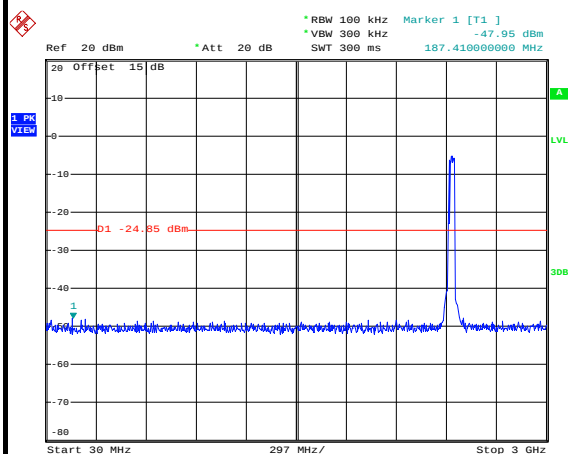
WLAN 802.11n HT40 Channel 06

100kHz PSD reference Level



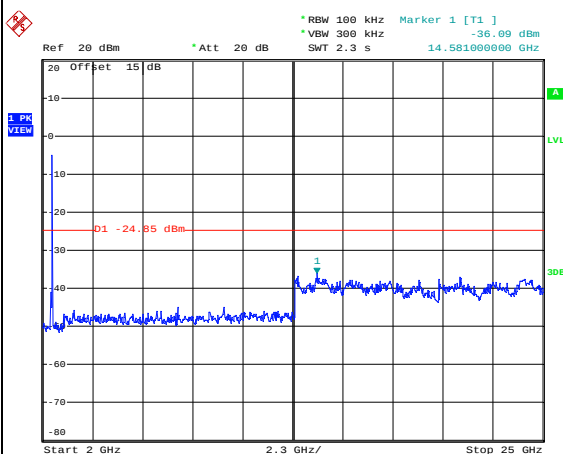
Date: 2.APR.2015 12:23:43

Spurious Emission 30MHz~3GHz



Date: 2.APR.2015 12:25:04

Spurious Emission 2GHz~25GHz



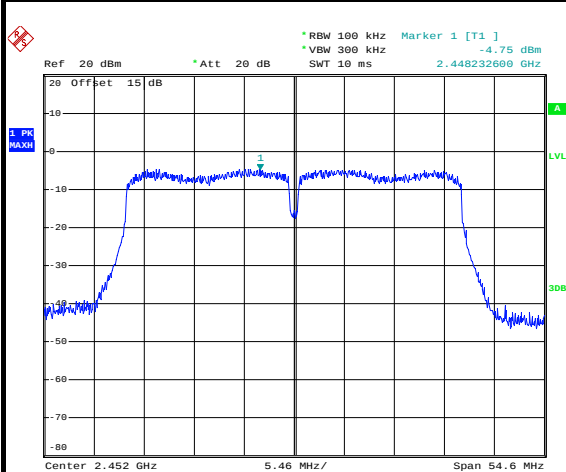
Date: 2.APR.2015 12:25:21



Number of TX :	1	Chain Port:	1
Test Mode :	802.11n HT40	Temperature :	21~25°C
Test Band :	2.4GHz High	Relative Humidity :	51~54%
Test Channel :	09	Test Engineer :	Tiny You

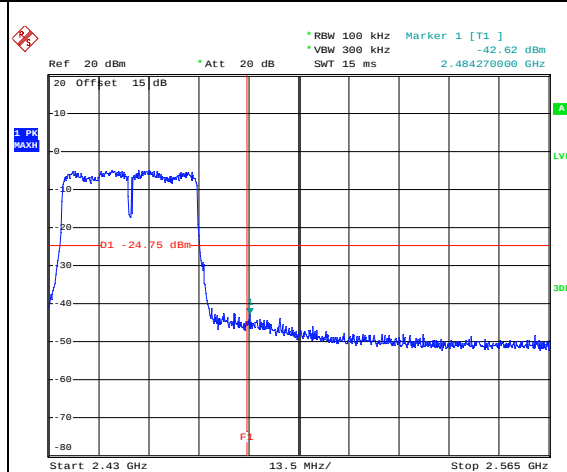
WLAN 802.11n HT40 Channel 09

100kHz PSD reference Level



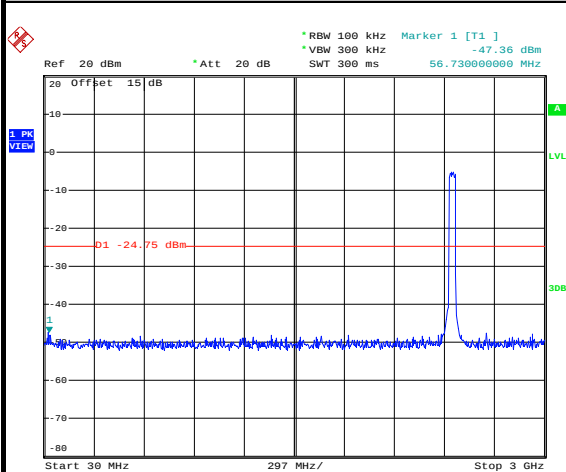
Date: 2.APR.2015 12:29:52

High Channel Plot



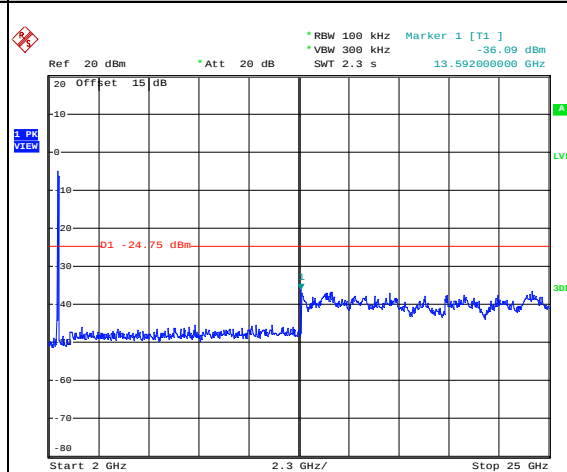
Date: 2.APR.2015 12:30:57

Spurious Emission 30MHz~3GHz



Date: 2.APR.2015 12:31:20

Spurious Emission 2GHz~25GHz



Date: 2.APR.2015 12:31:37

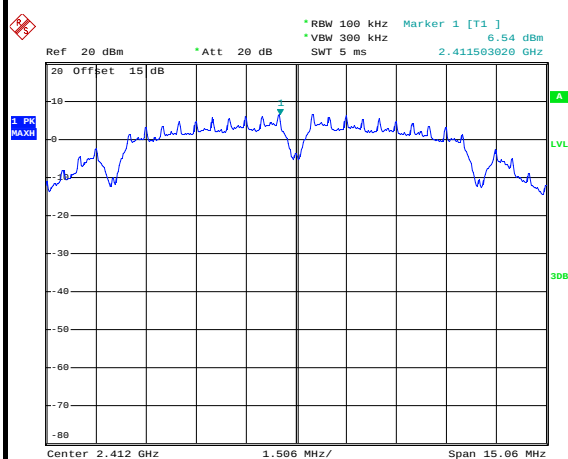


Number of TX = 2, Chain Port 0+1(0) (Measured)

Number of TX :	2	Chain Port:	0+1(0)
Test Mode :	802.11b	Temperature :	21~25°C
Test Band :	2.4GHz Low	Relative Humidity :	51~54%
Test Channel :	01	Test Engineer :	Tiny You

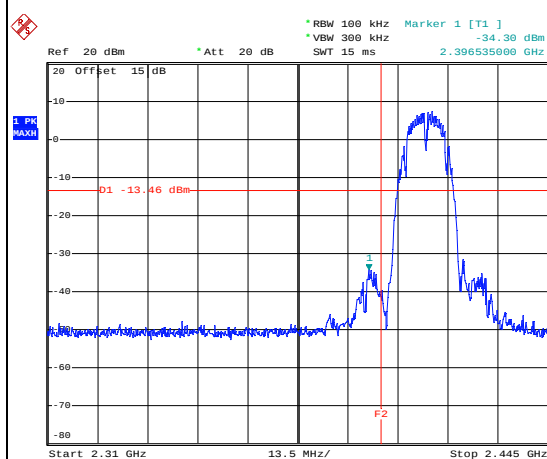
WLAN 802.11b Channel 01

100kHz PSD reference Level



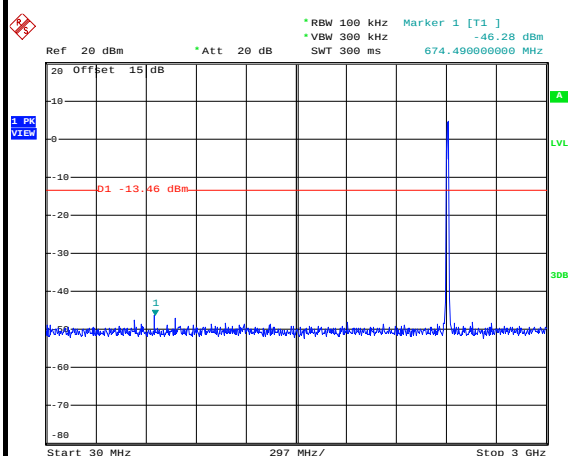
Date: 1.APR.2015 23:06:05

Low Channel Plot



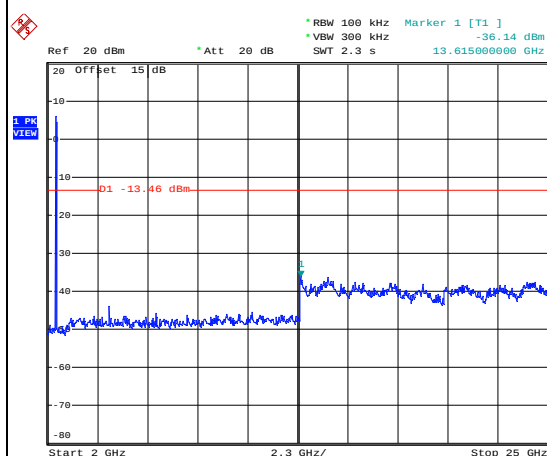
Date: 2.APR.2015 10:26:22

Spurious Emission 30MHz~3GHz



Date: 1.APR.2015 23:14:41

Spurious Emission 2GHz~25GHz



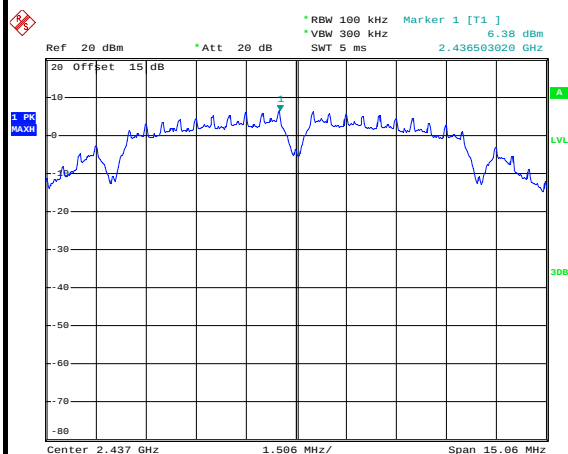
Date: 1.APR.2015 23:14:59



Number of TX :	2	Chain Port:	0+1(0)
Test Mode :	802.11b	Temperature :	21~25°C
Test Band :	2.4GHz Mid	Relative Humidity :	51~54%
Test Channel :	06	Test Engineer :	Tiny You

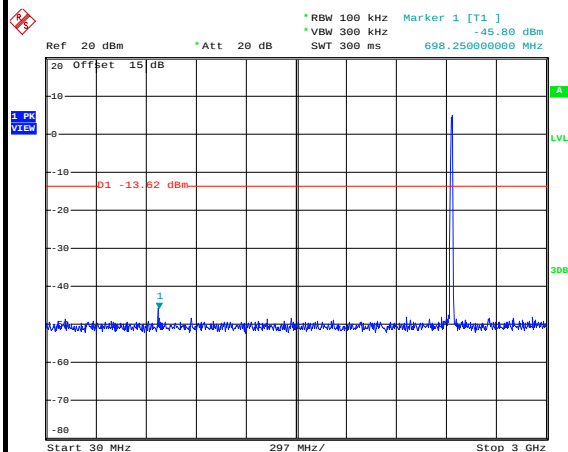
WLAN 802.11b Channel 06

100kHz PSD reference Level



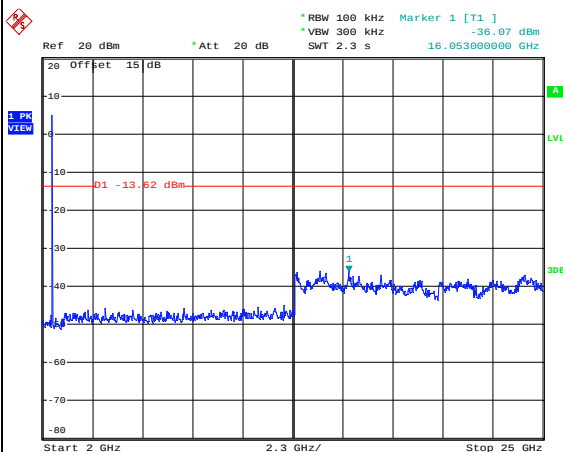
Date: 1.APR.2015 23:21:37

Spurious Emission 30MHz~3GHz



Date: 1.APR.2015 23:22:43

Spurious Emission 2GHz~25GHz



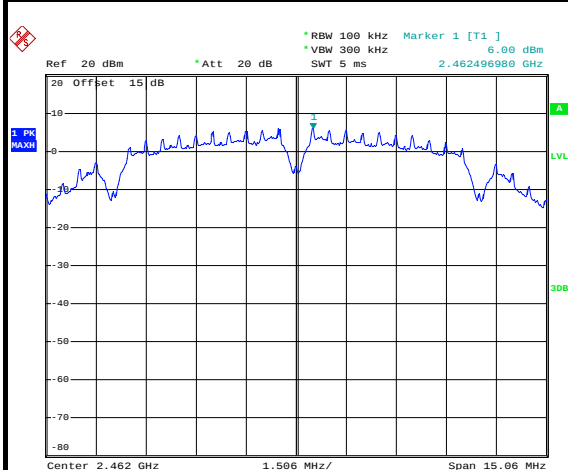
Date: 1.APR.2015 23:23:01



Number of TX :	2	Chain Port:	0+1(0)
Test Mode :	802.11b	Temperature :	21~25°C
Test Band :	2.4GHz High	Relative Humidity :	51~54%
Test Channel :	11	Test Engineer :	Tiny You

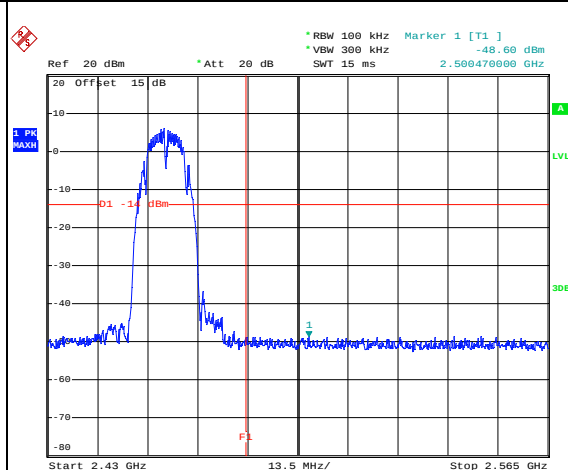
WLAN 802.11b Channel 11

100kHz PSD reference Level



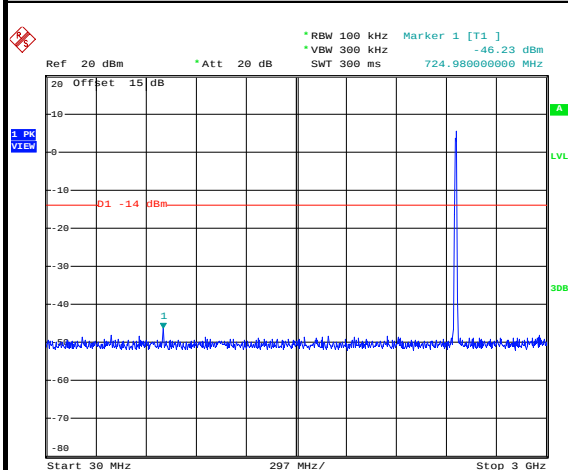
Date: 1.APR.2015 23:28:19

High Channel Plot



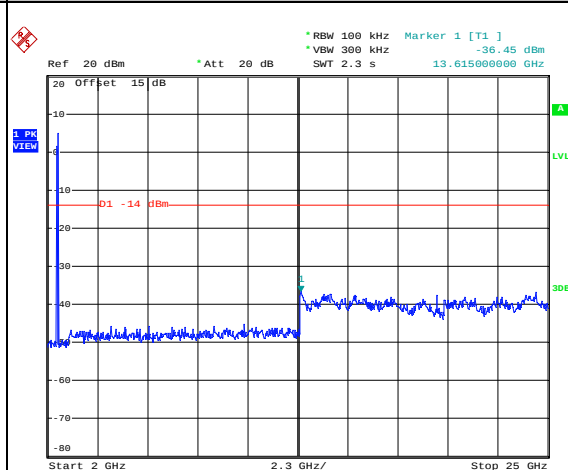
Date: 1.APR.2015 23:31:04

Spurious Emission 30MHz~3GHz



Date: 1.APR.2015 23:29:22

Spurious Emission 2GHz~25GHz



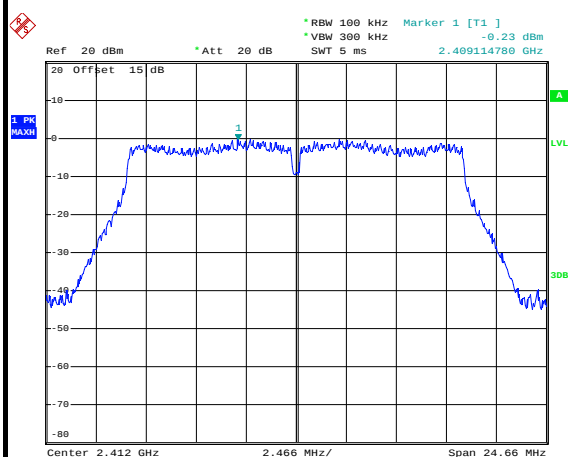
Date: 1.APR.2015 23:29:40



Number of TX :	2	Chain Port:	0+1(0)
Test Mode :	802.11g	Temperature :	21~25°C
Test Band :	2.4GHz Low	Relative Humidity :	51~54%
Test Channel :	01	Test Engineer :	Tiny You

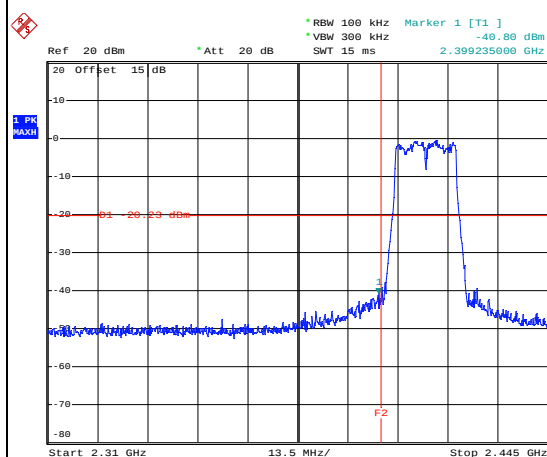
WLAN 802.11g Channel 01

100kHz PSD reference Level



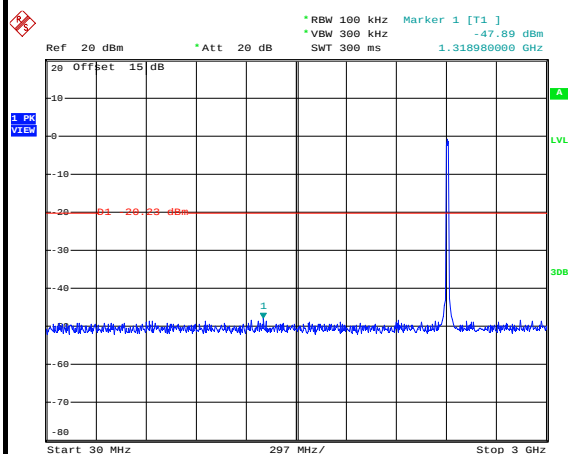
Date: 1.APR.2015 22:59:18

Low Channel Plot



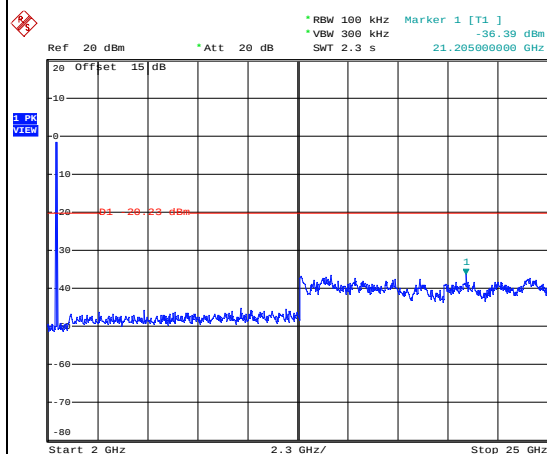
Date: 1.APR.2015 22:59:59

Spurious Emission 30MHz~3GHz



Date: 1.APR.2015 23:00:43

Spurious Emission 2GHz~25GHz



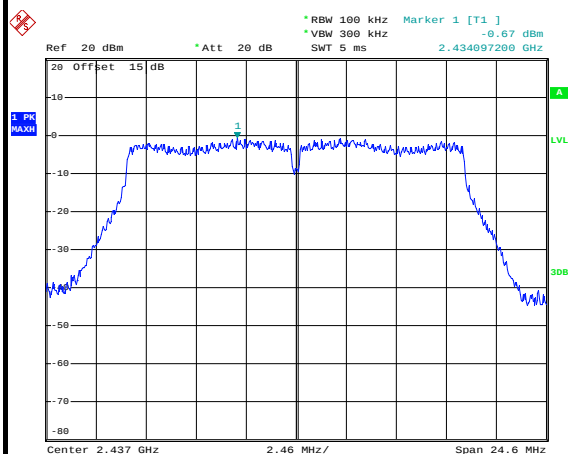
Date: 1.APR.2015 23:01:01



Number of TX :	2	Chain Port:	0+1(0)
Test Mode :	802.11g	Temperature :	21~25°C
Test Band :	2.4GHz Mid	Relative Humidity :	51~54%
Test Channel :	06	Test Engineer :	Tiny You

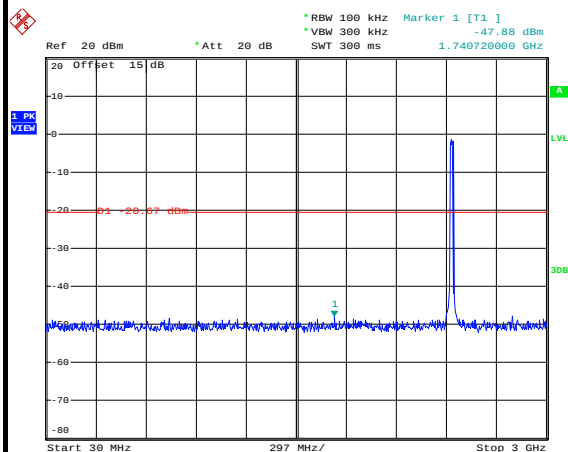
WLAN 802.11g Channel 06

100kHz PSD reference Level



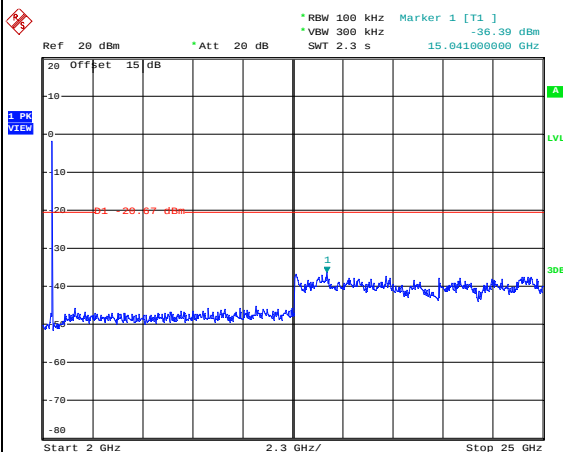
Date: 1.APR.2015 22:44:51

Spurious Emission 30MHz~3GHz



Date: 1.APR.2015 22:46:41

Spurious Emission 2GHz~25GHz



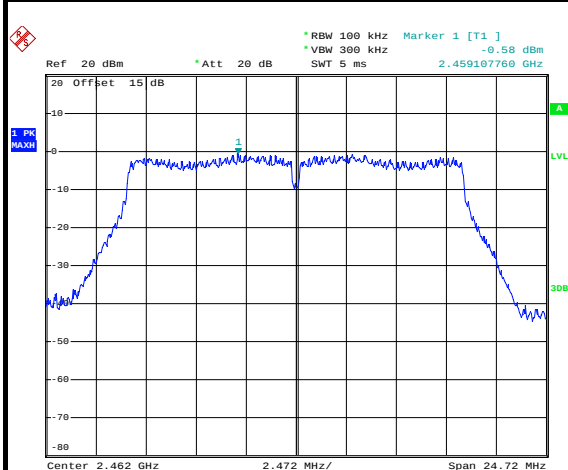
Date: 1.APR.2015 22:46:59



Number of TX :	2	Chain Port:	0+1(0)
Test Mode :	802.11g	Temperature :	21~25°C
Test Band :	2.4GHz High	Relative Humidity :	51~54%
Test Channel :	11	Test Engineer :	Tiny You

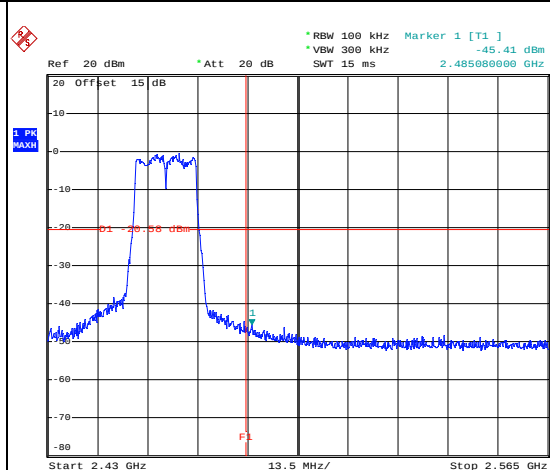
WLAN 802.11g Channel 11

100kHz PSD reference Level



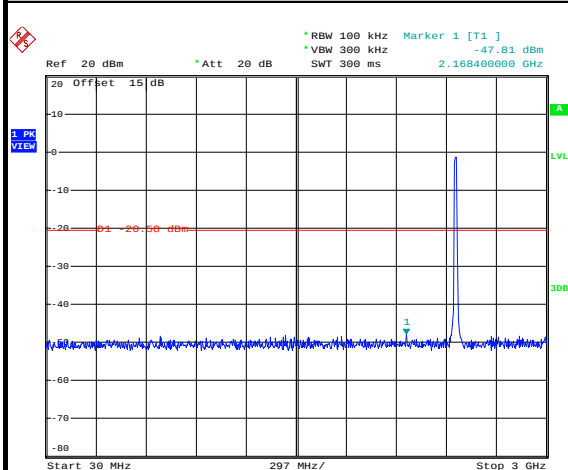
Date: 1.APR.2015 22:38:11

High Channel Plot



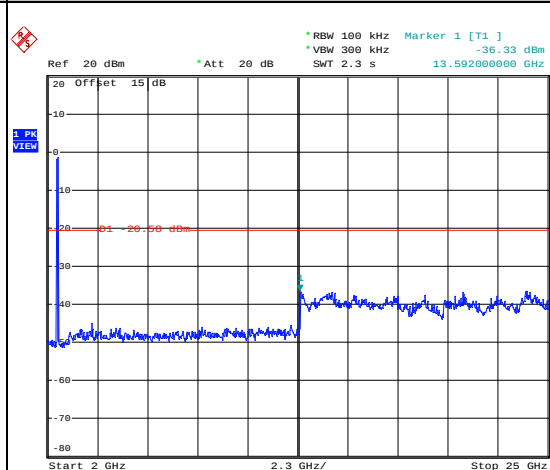
Date: 1.APR.2015 22:39:14

Spurious Emission 30MHz~3GHz



Date: 1.APR.2015 22:40:39

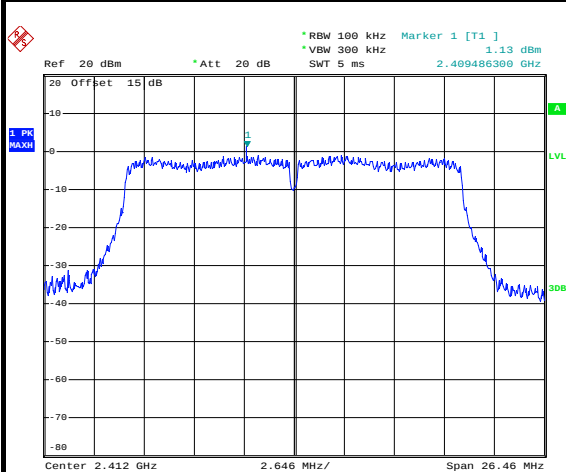
Spurious Emission 2GHz~25GHz



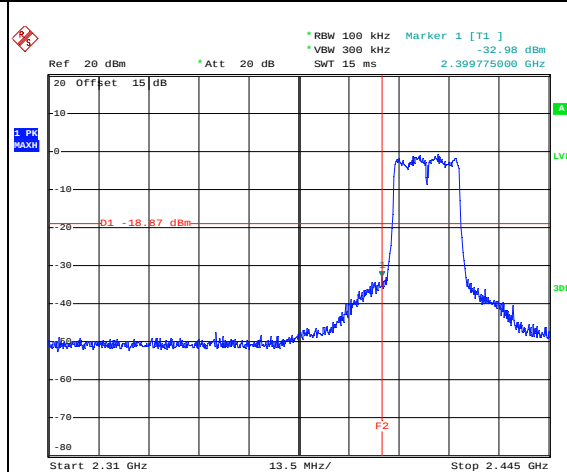
Date: 1.APR.2015 22:40:57



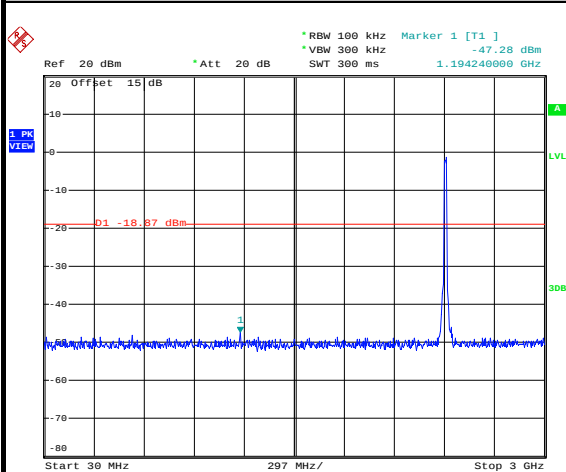
Number of TX :	2	Chain Port:	0+1(0)
Test Mode :	802.11n HT20	Temperature :	21~25°C
Test Band :	2.4GHz Low	Relative Humidity :	51~54%
Test Channel :	01	Test Engineer :	Tiny You

WLAN 802.11n HT20 Channel 01**100kHz PSD reference Level**

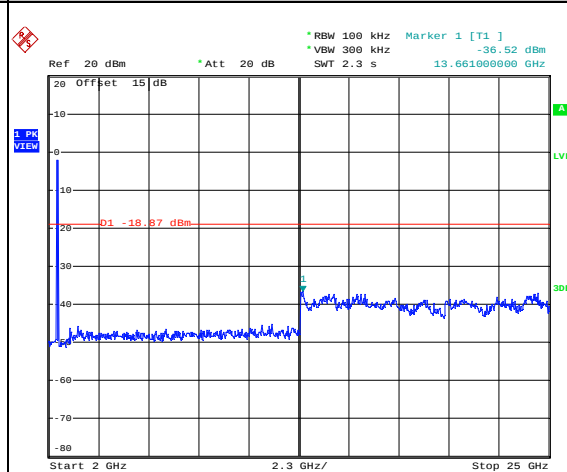
Date: 1.APR.2015 22:09:42

Low Channel Plot

Date: 1.APR.2015 22:11:13

Spurious Emission 30MHz~3GHz

Date: 1.APR.2015 22:16:12

Spurious Emission 2GHz~25GHz

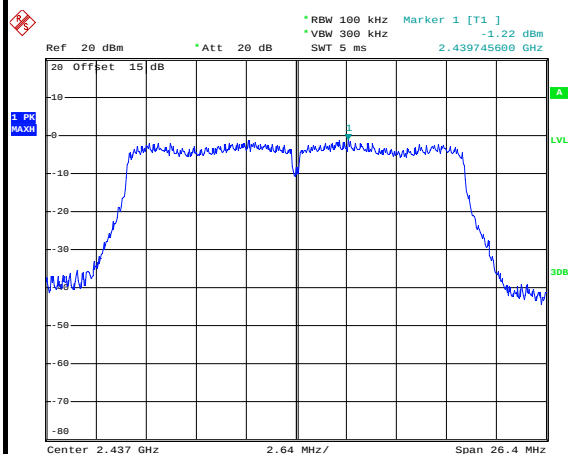
Date: 1.APR.2015 22:16:30



Number of TX :	2	Chain Port:	0+1(0)
Test Mode :	802.11n HT20	Temperature :	21~25°C
Test Band :	2.4GHz Mid	Relative Humidity :	51~54%
Test Channel :	06	Test Engineer :	Tiny You

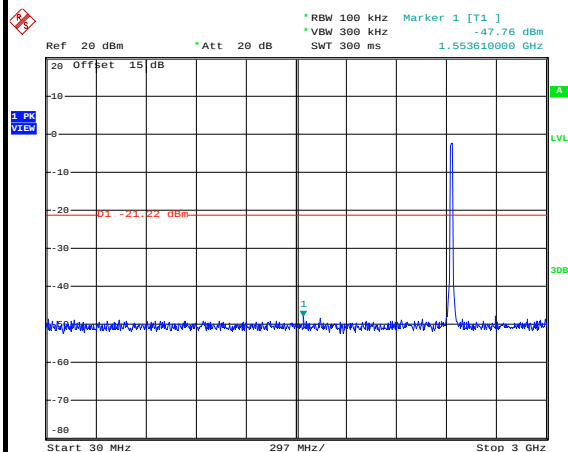
WLAN 802.11n HT20 Channel 06

100kHz PSD reference Level



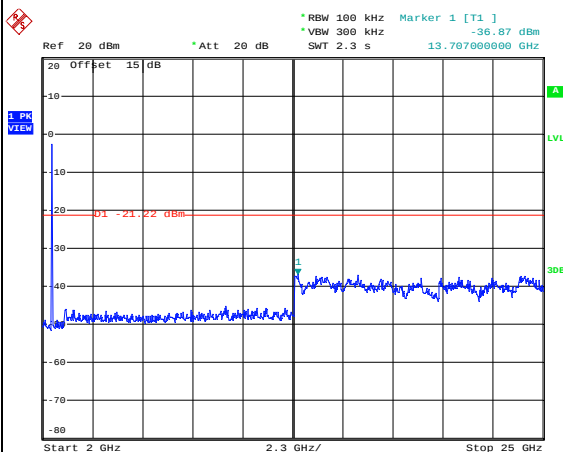
Date: 1.APR.2015 22:20:23

Spurious Emission 30MHz~3GHz



Date: 1.APR.2015 22:22:24

Spurious Emission 2GHz~25GHz



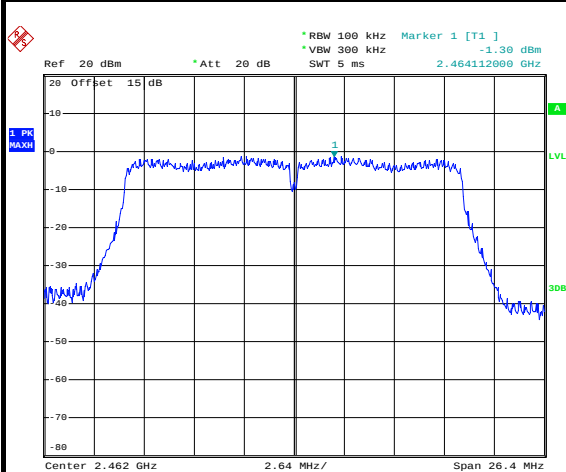
Date: 1.APR.2015 22:22:42



Number of TX :	2	Chain Port:	0+1(0)
Test Mode :	802.11n HT20	Temperature :	21~25°C
Test Band :	2.4GHz High	Relative Humidity :	51~54%
Test Channel :	11	Test Engineer :	Tiny You

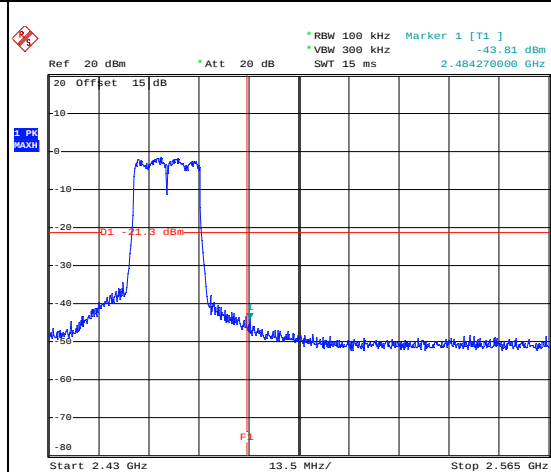
WLAN 802.11n HT20 Channel 11

100kHz PSD reference Level



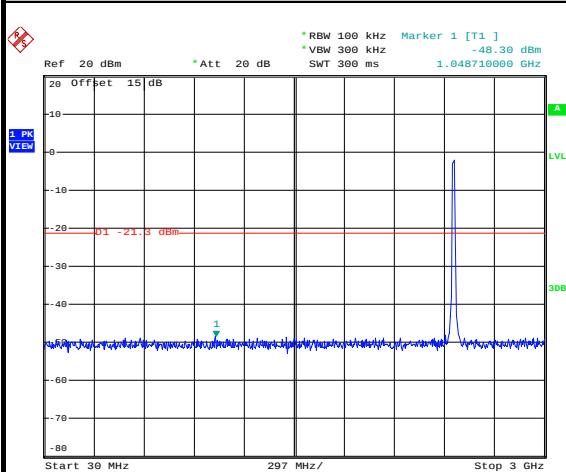
Date: 1.APR.2015 22:27:43

High Channel Plot



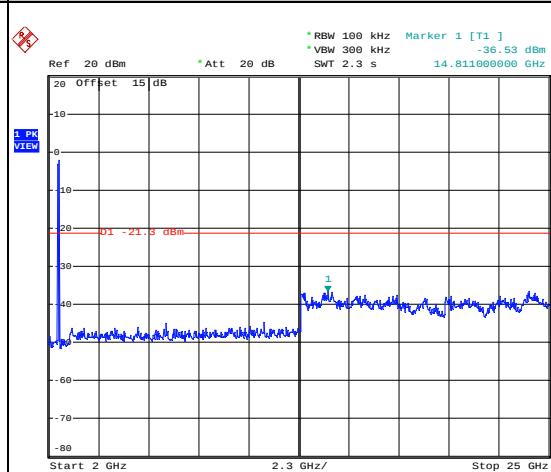
Date: 1.APR.2015 22:28:25

Spurious Emission 30MHz~3GHz



Date: 1.APR.2015 22:30:51

Spurious Emission 2GHz~25GHz



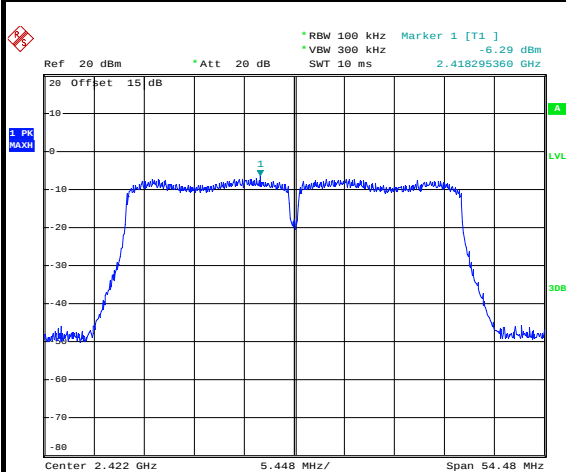
Date: 1.APR.2015 22:31:08



Number of TX :	2	Chain Port:	0+1(0)
Test Mode :	802.11n HT40	Temperature :	21~25°C
Test Band :	2.4GHz Low	Relative Humidity :	51~54%
Test Channel :	03	Test Engineer :	Tiny You

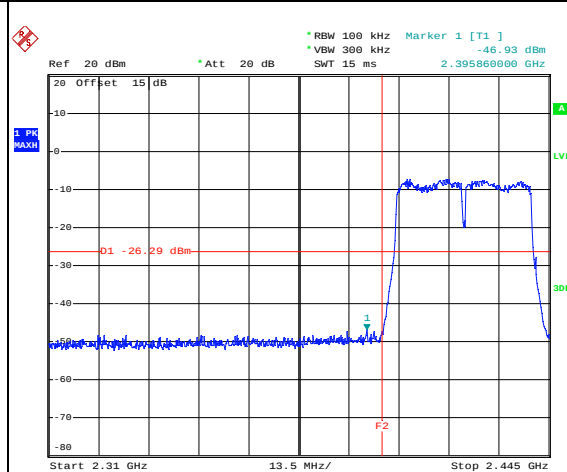
WLAN 802.11n HT40 Channel 03

100kHz PSD reference Level



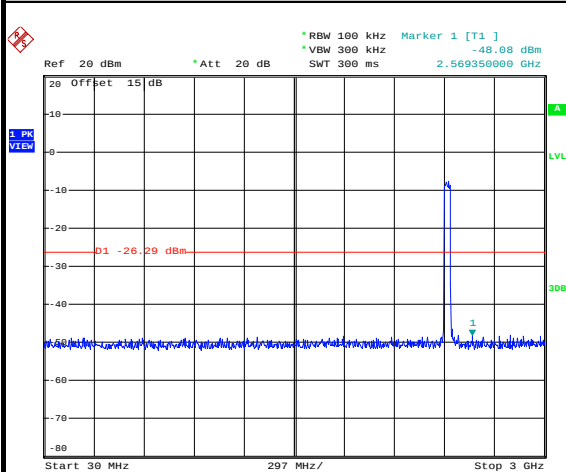
Date: 1.APR.2015 22:00:10

Low Channel Plot



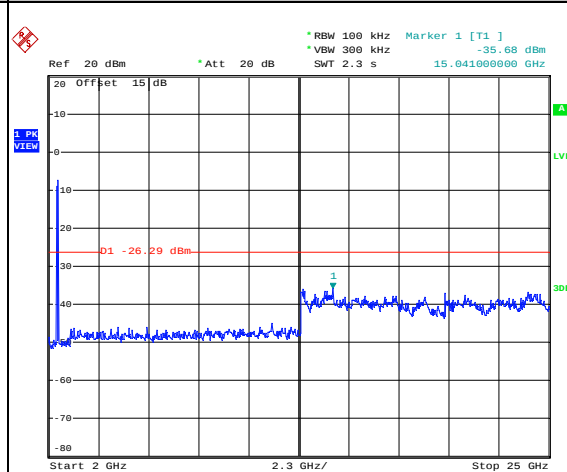
Date: 1.APR.2015 22:01:41

Spurious Emission 30MHz~3GHz



Date: 1.APR.2015 22:02:49

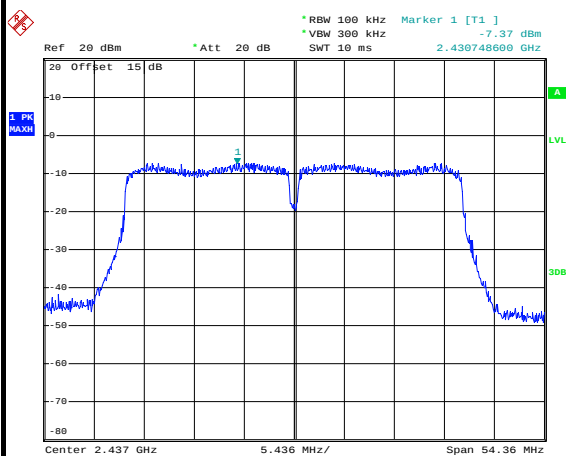
Spurious Emission 2GHz~25GHz



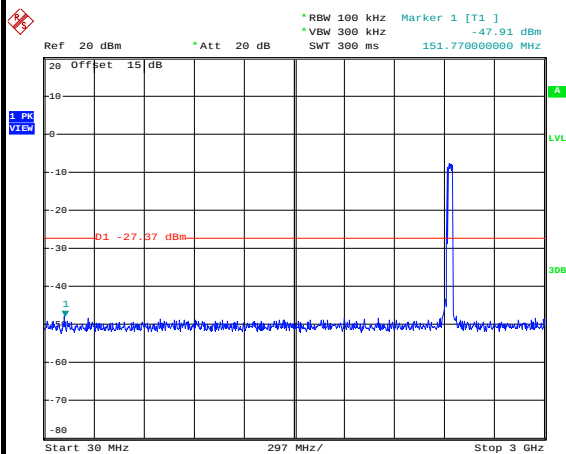
Date: 1.APR.2015 22:03:07



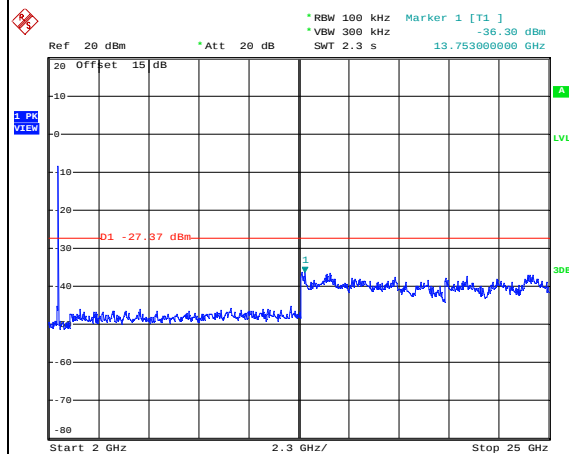
Number of TX :	2	Chain Port:	0+1(0)
Test Mode :	802.11n HT40	Temperature :	21~25°C
Test Band :	2.4GHz Mid	Relative Humidity :	51~54%
Test Channel :	06	Test Engineer :	Tiny You

WLAN 802.11n HT40 Channel 06**100kHz PSD reference Level**

Date: 1.APR.2015 21:55:31

Spurious Emission 30MHz~3GHz

Date: 1.APR.2015 21:56:19

Spurious Emission 2GHz~25GHz

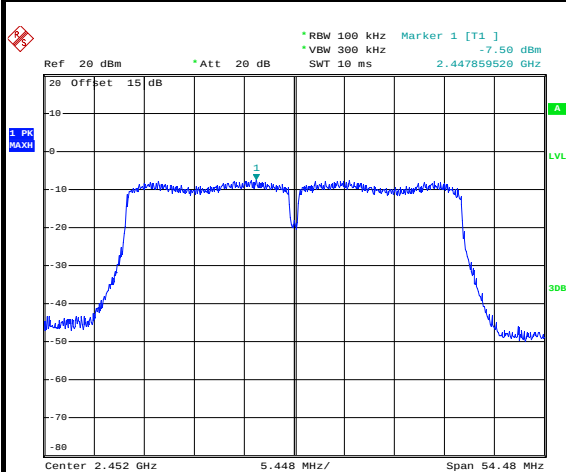
Date: 1.APR.2015 21:56:37



Number of TX :	2	Chain Port:	0+1(0)
Test Mode :	802.11n HT40	Temperature :	21~25°C
Test Band :	2.4GHz High	Relative Humidity :	51~54%
Test Channel :	09	Test Engineer :	Tiny You

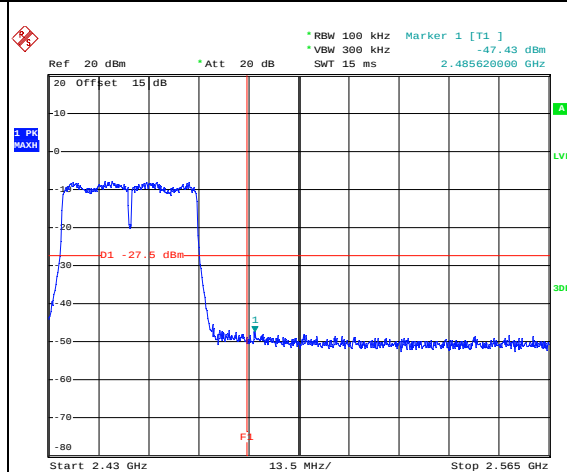
WLAN 802.11n HT40 Channel 09

100kHz PSD reference Level



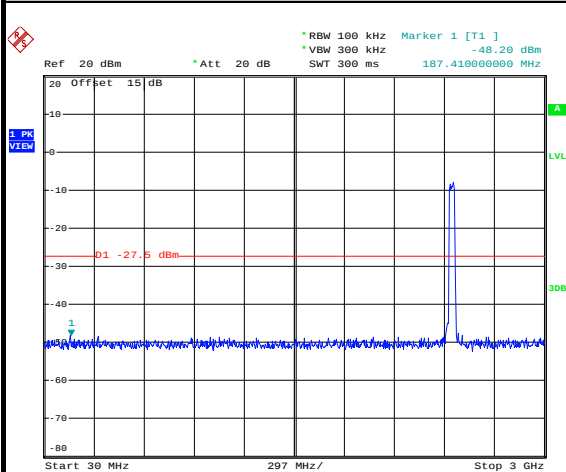
Date: 1.APR.2015 21:49:08

High Channel Plot



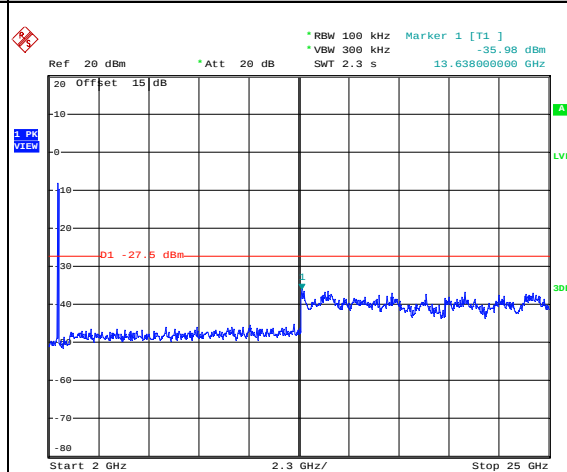
Date: 1.APR.2015 21:50:13

Spurious Emission 30MHz~3GHz



Date: 1.APR.2015 21:51:46

Spurious Emission 2GHz~25GHz



Date: 1.APR.2015 21:52:04

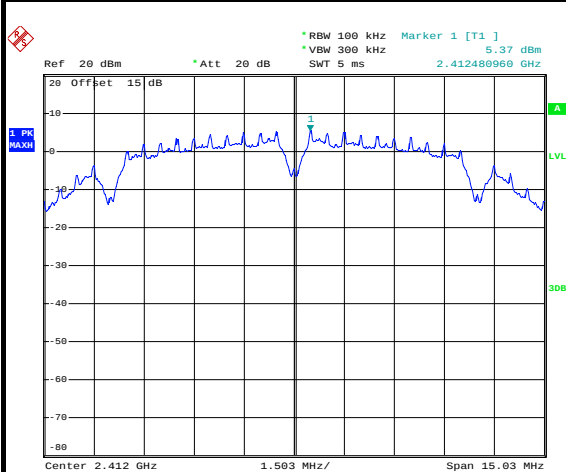


Number of TX = 2, Chain Port 0+1(1) (Measured)

Number of TX :	2	Chain Port:	0+1(1)
Test Mode :	802.11b	Temperature :	21~25°C
Test Band :	2.4GHz Low	Relative Humidity :	51~54%
Test Channel :	01	Test Engineer :	Tiny You

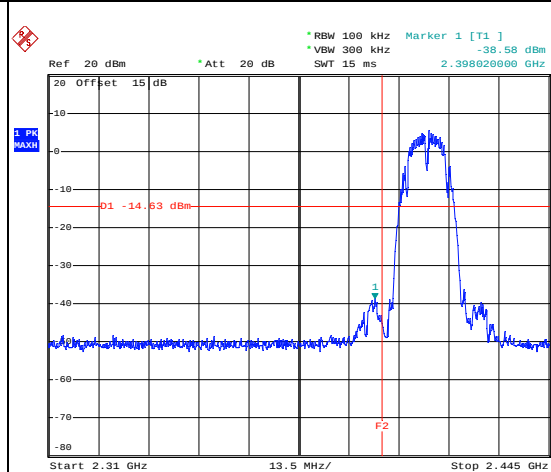
WLAN 802.11b Channel 01

100kHz PSD reference Level



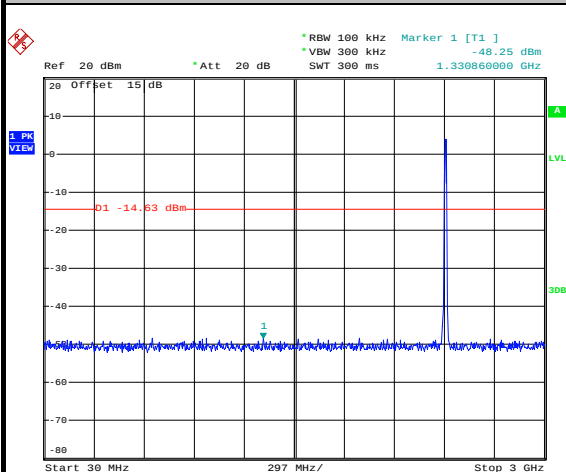
Date: 1.APR.2015 23:52:29

Low Channel Plot



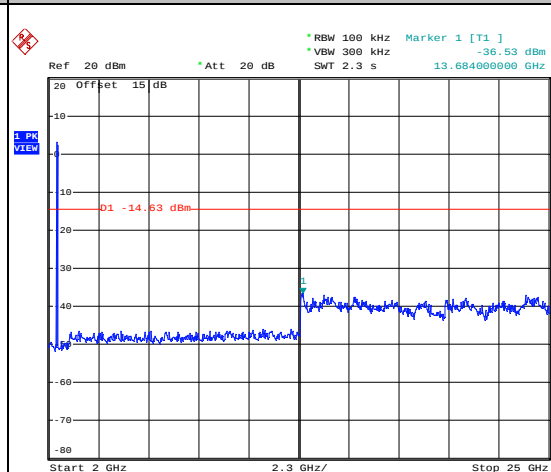
Date: 1.APR.2015 23:54:56

Spurious Emission 30MHz~3GHz



Date: 1.APR.2015 23:59:50

Spurious Emission 2GHz~25GHz



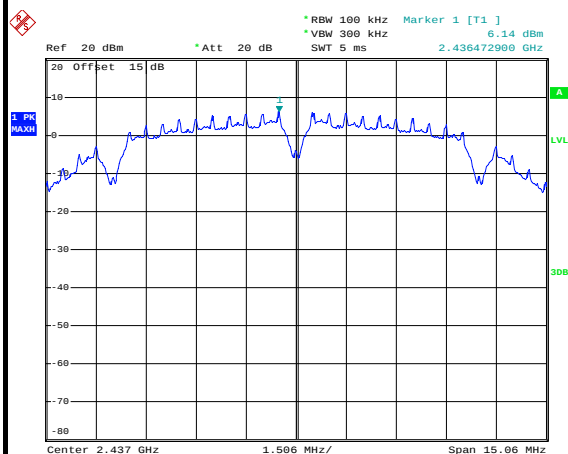
Date: 2.APR.2015 00:00:08



Number of TX :	2	Chain Port:	0+1(1)
Test Mode :	802.11b	Temperature :	21~25°C
Test Band :	2.4GHz Mid	Relative Humidity :	51~54%
Test Channel :	06	Test Engineer :	Tiny You

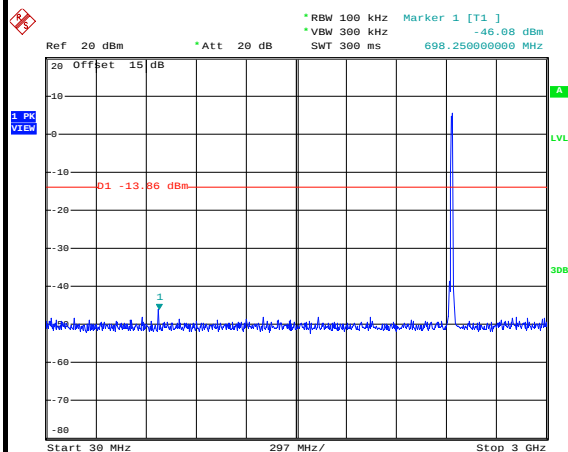
WLAN 802.11b Channel 06

100kHz PSD reference Level



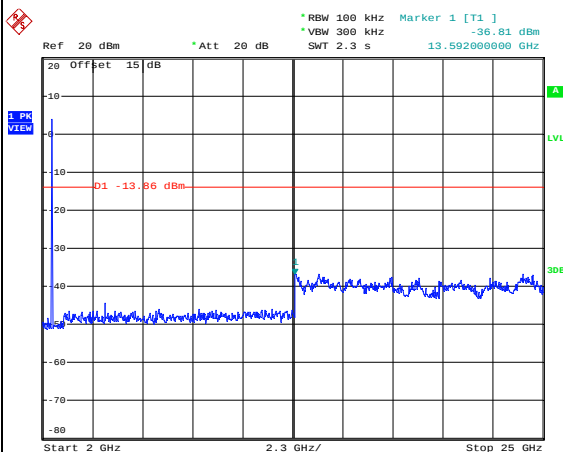
Date: 1.APR.2015 23:42:52

Spurious Emission 30MHz~3GHz



Date: 1.APR.2015 23:44:10

Spurious Emission 2GHz~25GHz



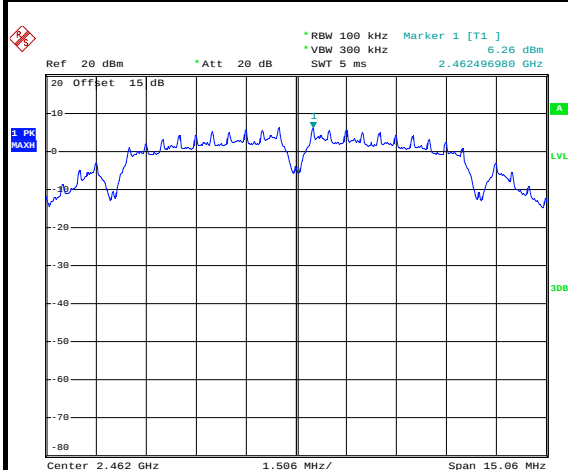
Date: 1.APR.2015 23:44:28



Number of TX :	2	Chain Port:	0+1(1)
Test Mode :	802.11b	Temperature :	21~25°C
Test Band :	2.4GHz High	Relative Humidity :	51~54%
Test Channel :	11	Test Engineer :	Tiny You

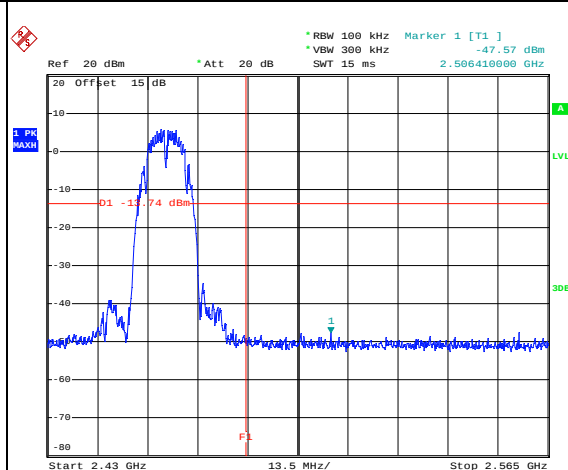
WLAN 802.11b Channel 11

100kHz PSD reference Level



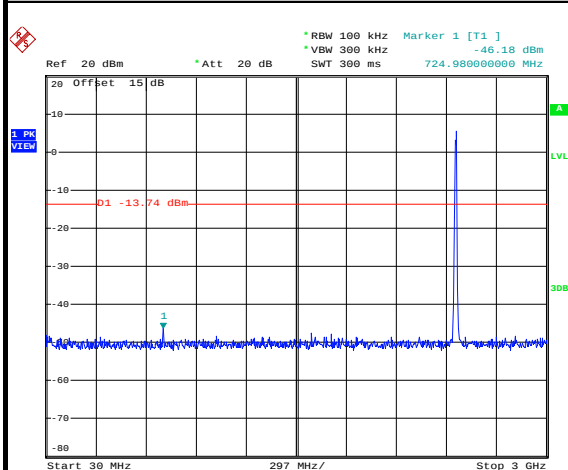
Date: 1.APR.2015 23:35:38

High Channel Plot



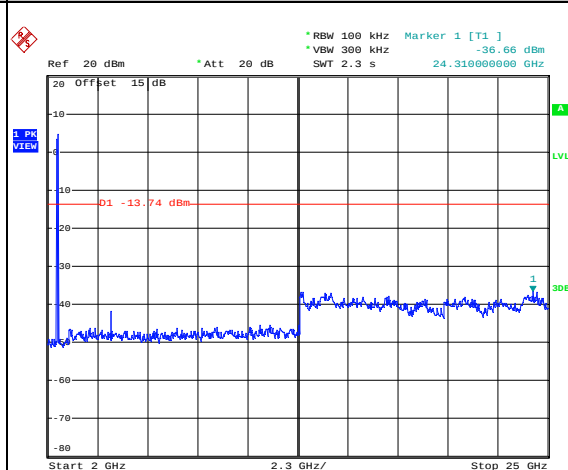
Date: 1.APR.2015 23:36:17

Spurious Emission 30MHz~3GHz



Date: 1.APR.2015 23:37:36

Spurious Emission 2GHz~25GHz



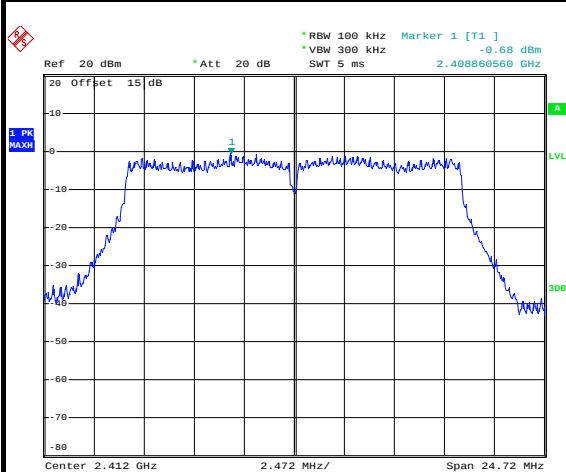
Date: 1.APR.2015 23:37:53



Number of TX :	2	Chain Port:	0+1(1)
Test Mode :	802.11g	Temperature :	21~25°C
Test Band :	2.4GHz Low	Relative Humidity :	51~54%
Test Channel :	01	Test Engineer :	Tiny You

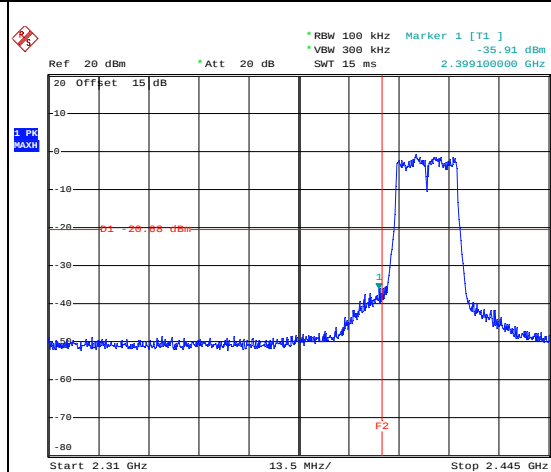
WLAN 802.11g Channel 01

100kHz PSD reference Level



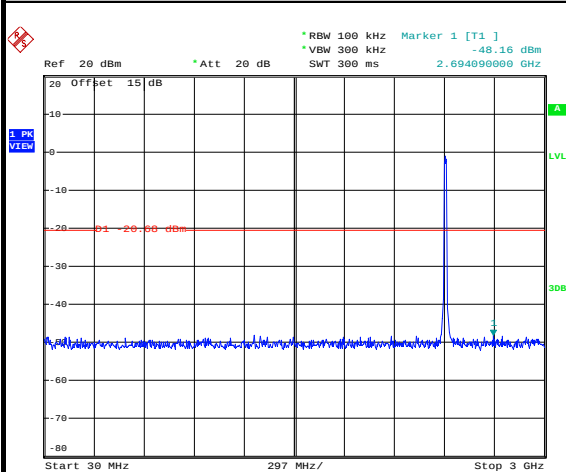
Date: 2.APR.2015 00:05:55

Low Channel Plot



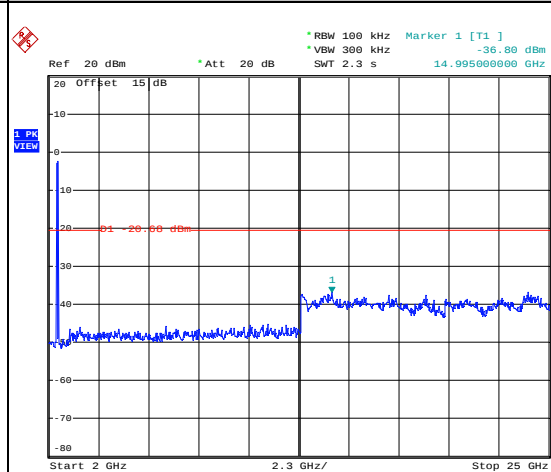
Date: 2.APR.2015 00:06:15

Spurious Emission 30MHz~3GHz



Date: 2.APR.2015 00:07:17

Spurious Emission 2GHz~25GHz



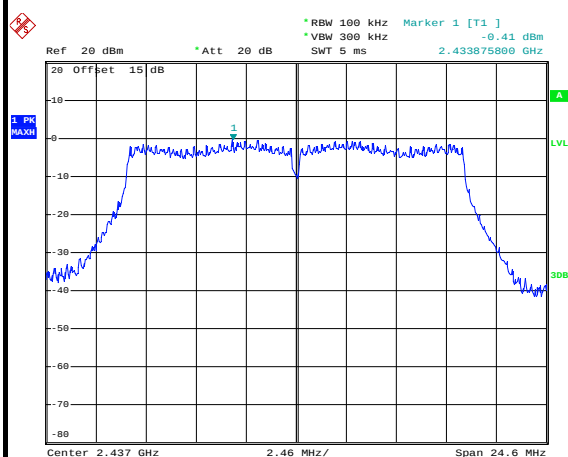
Date: 2.APR.2015 00:07:35



Number of TX :	2	Chain Port:	0+1(1)
Test Mode :	802.11g	Temperature :	21~25°C
Test Band :	2.4GHz Mid	Relative Humidity :	51~54%
Test Channel :	06	Test Engineer :	Tiny You

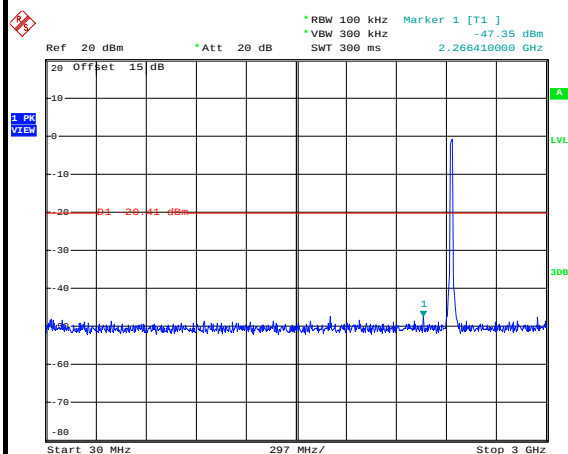
WLAN 802.11g Channel 06

100kHz PSD reference Level



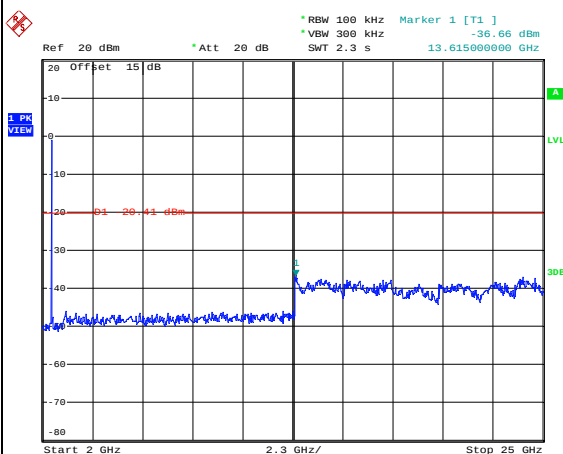
Date: 2.APR.2015 00:13:26

Spurious Emission 30MHz~3GHz



Date: 2.APR.2015 00:14:26

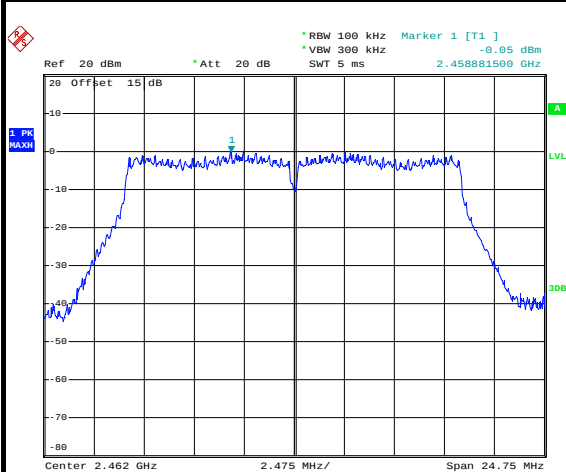
Spurious Emission 2GHz~25GHz



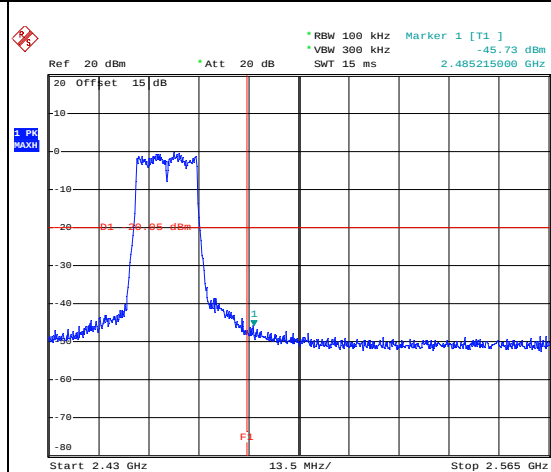
Date: 2.APR.2015 00:14:44



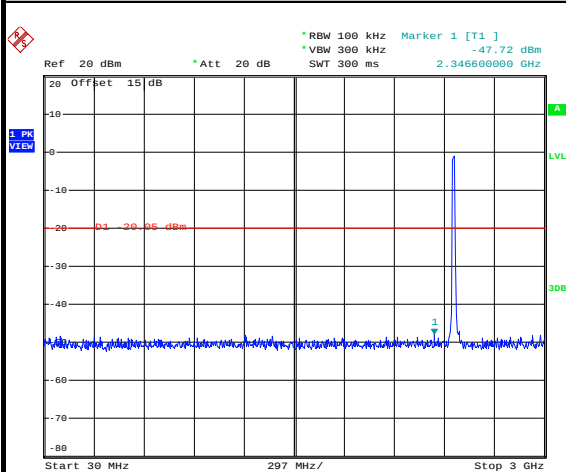
Number of TX :	2	Chain Port:	0+1(1)
Test Mode :	802.11g	Temperature :	21~25°C
Test Band :	2.4GHz High	Relative Humidity :	51~54%
Test Channel :	11	Test Engineer :	Tiny You

WLAN 802.11g Channel 11**100kHz PSD reference Level**

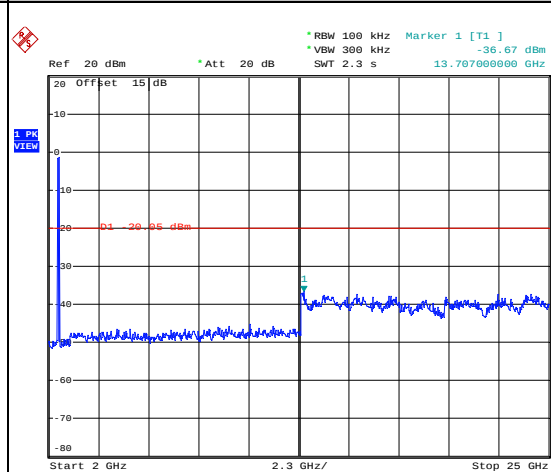
Date: 2.APR.2015 00:18:30

High Channel Plot

Date: 2.APR.2015 00:19:10

Spurious Emission 30MHz~3GHz

Date: 2.APR.2015 00:19:51

Spurious Emission 2GHz~25GHz

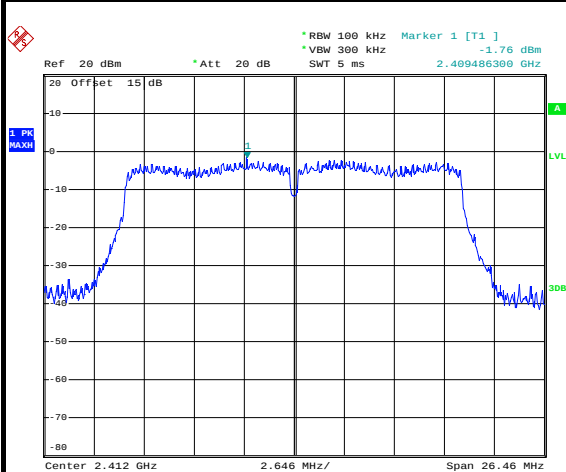
Date: 2.APR.2015 00:20:09



Number of TX :	2	Chain Port:	0+1(1)
Test Mode :	802.11n HT20	Temperature :	21~25°C
Test Band :	2.4GHz Low	Relative Humidity :	51~54%
Test Channel :	01	Test Engineer :	Tiny You

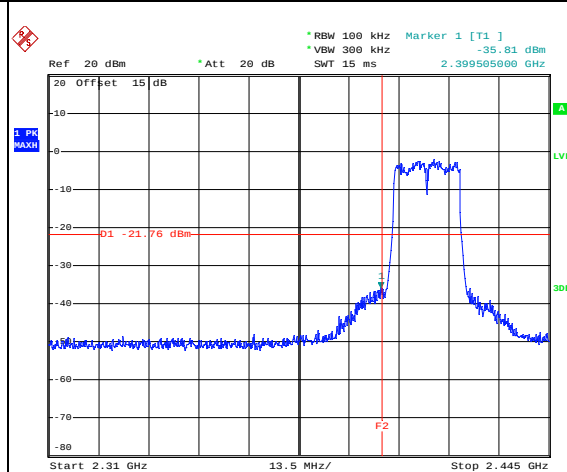
WLAN 802.11n HT20 Channel 01

100kHz PSD reference Level



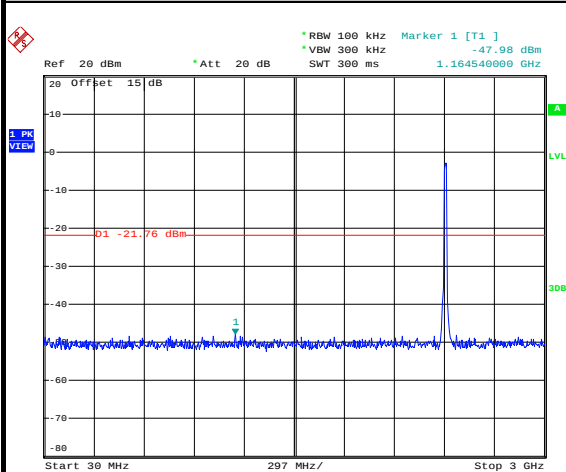
Date: 2.APR.2015 00:34:37

Low Channel Plot



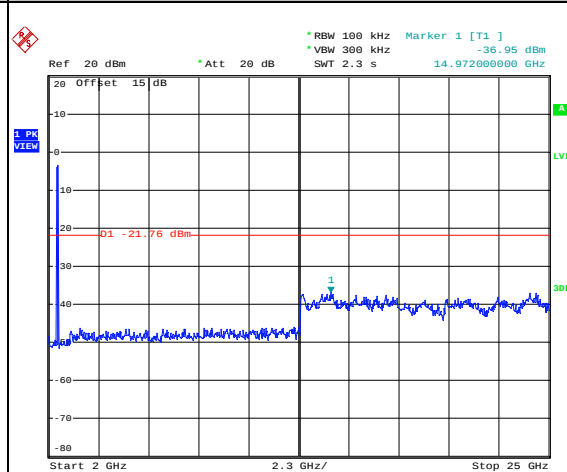
Date: 2.APR.2015 00:35:37

Spurious Emission 30MHz~3GHz



Date: 2.APR.2015 00:37:48

Spurious Emission 2GHz~25GHz



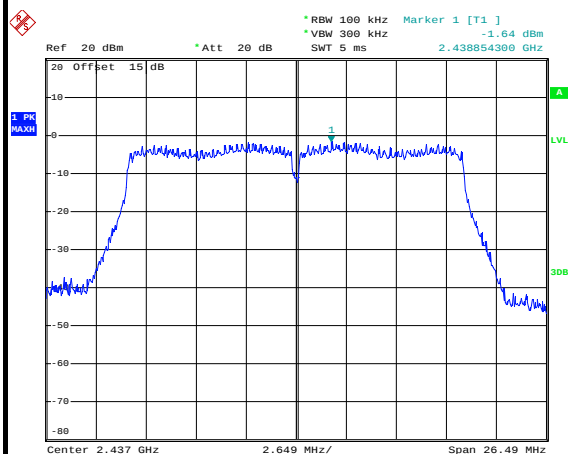
Date: 2.APR.2015 00:38:05



Number of TX :	2	Chain Port:	0+1(1)
Test Mode :	802.11n HT20	Temperature :	21~25°C
Test Band :	2.4GHz Mid	Relative Humidity :	51~54%
Test Channel :	06	Test Engineer :	Tiny You

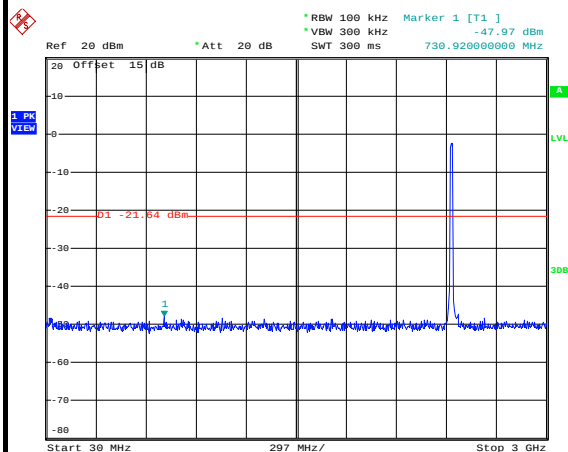
WLAN 802.11n HT20 Channel 06

100kHz PSD reference Level



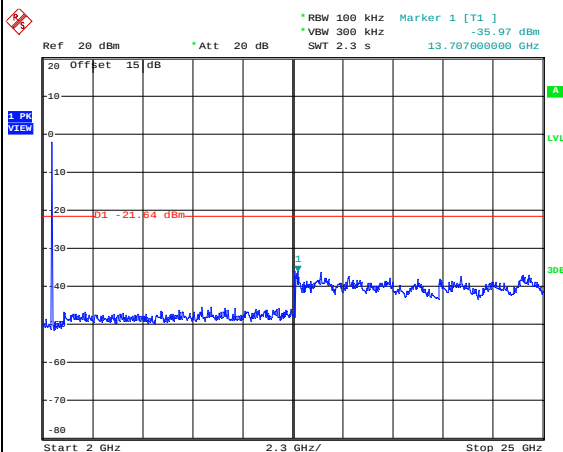
Date: 2.APR.2015 00:43:12

Spurious Emission 30MHz~3GHz



Date: 2.APR.2015 00:45:41

Spurious Emission 2GHz~25GHz



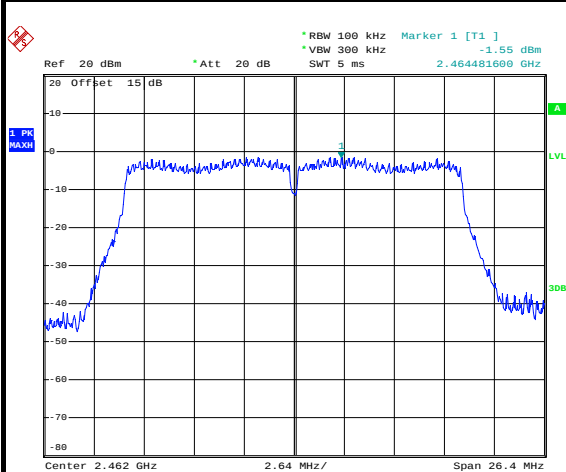
Date: 2.APR.2015 00:45:58



Number of TX :	2	Chain Port:	0+1(1)
Test Mode :	802.11n HT20	Temperature :	21~25°C
Test Band :	2.4GHz High	Relative Humidity :	51~54%
Test Channel :	11	Test Engineer :	Tiny You

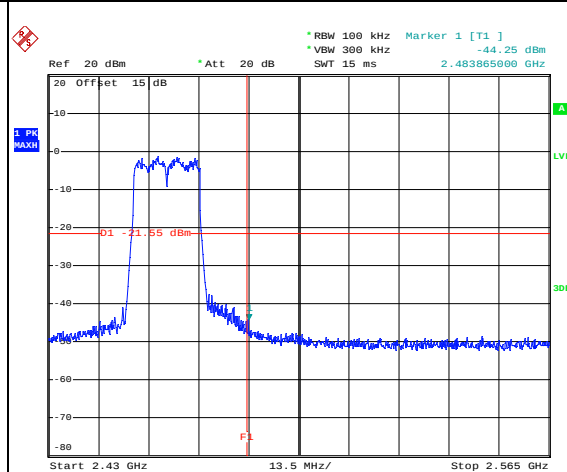
WLAN 802.11n HT20 Channel 11

100kHz PSD reference Level



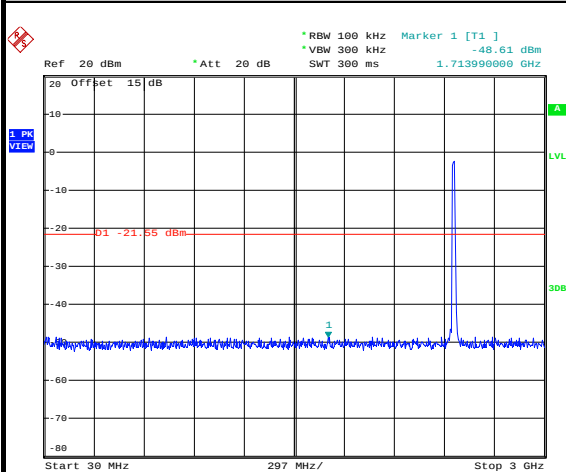
Date: 2.APR.2015 00:53:51

High Channel Plot



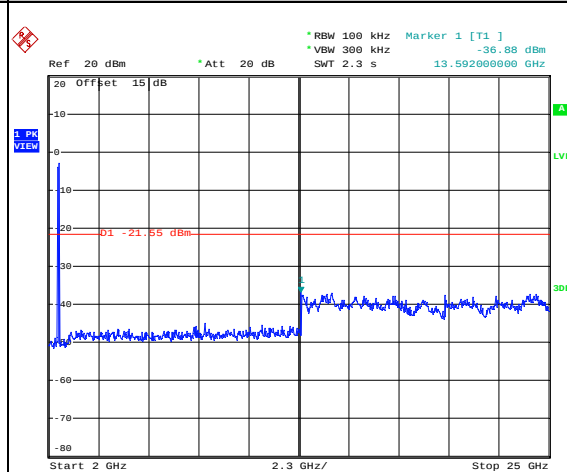
Date: 2.APR.2015 00:54:20

Spurious Emission 30MHz~3GHz



Date: 2.APR.2015 00:55:59

Spurious Emission 2GHz~25GHz



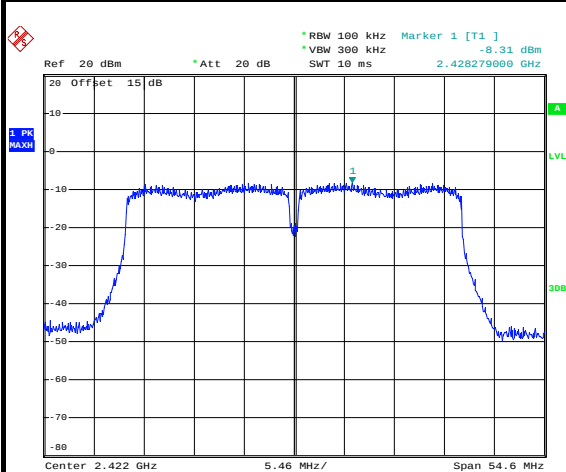
Date: 2.APR.2015 00:56:16



Number of TX :	2	Chain Port:	0+1(1)
Test Mode :	802.11n HT40	Temperature :	21~25°C
Test Band :	2.4GHz Low	Relative Humidity :	51~54%
Test Channel :	03	Test Engineer :	Tiny You

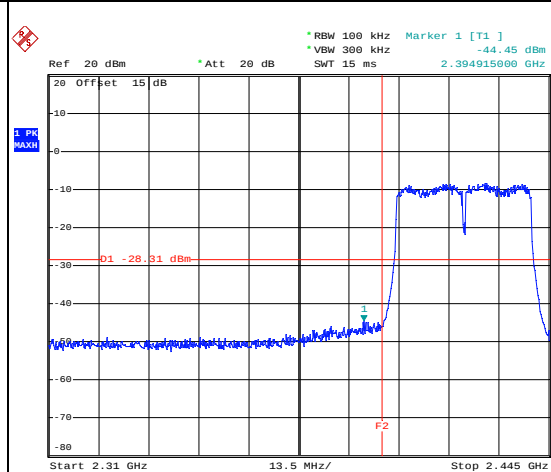
WLAN 802.11n HT40 Channel 03

100kHz PSD reference Level



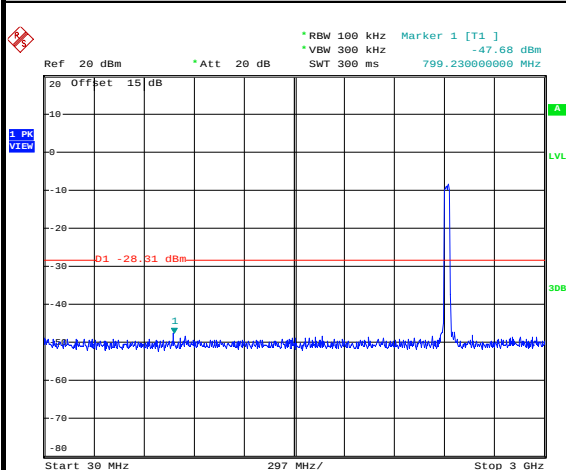
Date: 2.APR.2015 01:06:49

Low Channel Plot



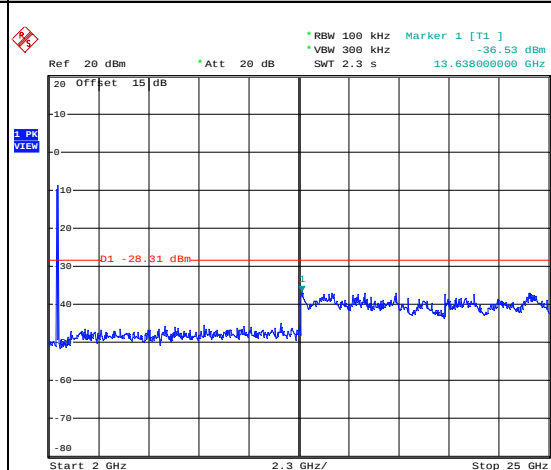
Date: 2.APR.2015 01:07:21

Spurious Emission 30MHz~3GHz



Date: 2.APR.2015 01:08:38

Spurious Emission 2GHz~25GHz



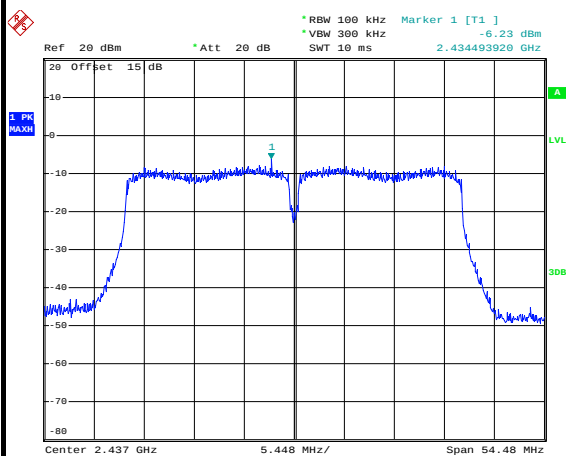
Date: 2.APR.2015 01:08:55



Number of TX :	2	Chain Port:	0+1(1)
Test Mode :	802.11n HT40	Temperature :	21~25°C
Test Band :	2.4GHz Mid	Relative Humidity :	51~54%
Test Channel :	06	Test Engineer :	Tiny You

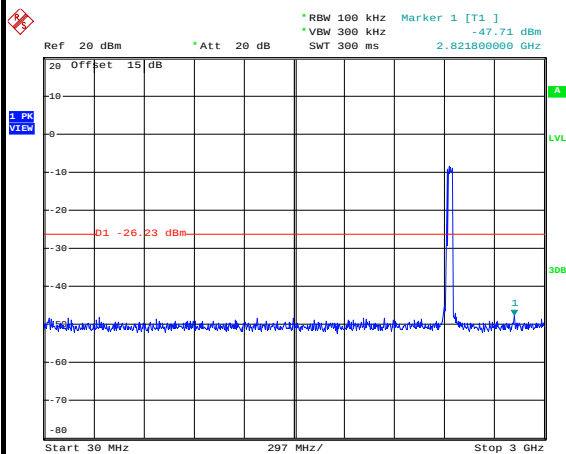
WLAN 802.11n HT40 Channel 06

100kHz PSD reference Level



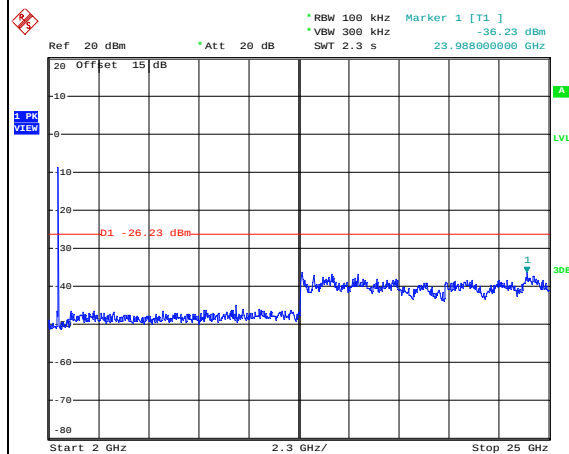
Date: 2.APR.2015 01:16:53

Spurious Emission 30MHz~3GHz



Date: 2.APR.2015 01:18:48

Spurious Emission 2GHz~25GHz



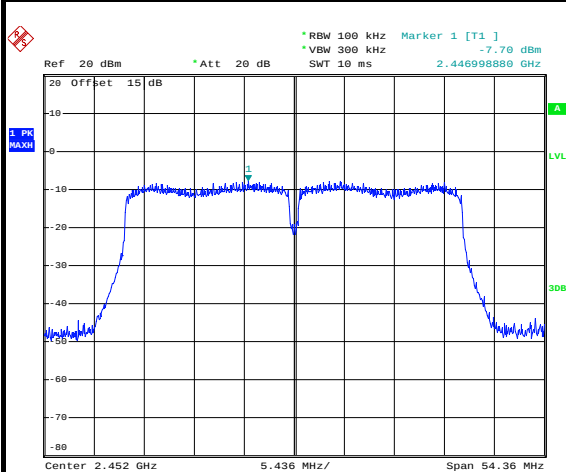
Date: 2.APR.2015 01:19:06



Number of TX :	2	Chain Port:	0+1(1)
Test Mode :	802.11n HT40	Temperature :	21~25°C
Test Band :	2.4GHz High	Relative Humidity :	51~54%
Test Channel :	09	Test Engineer :	Tiny You

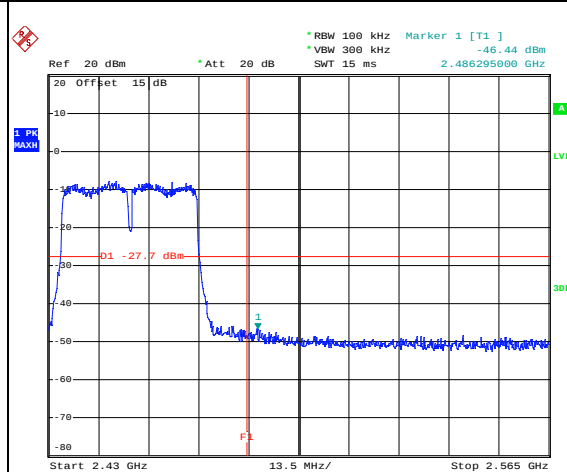
WLAN 802.11n HT40 Channel 09

100kHz PSD reference Level



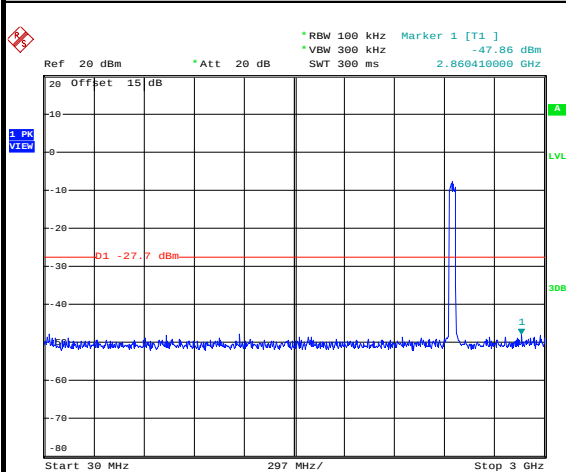
Date: 2.APR.2015 01:23:43

High Channel Plot



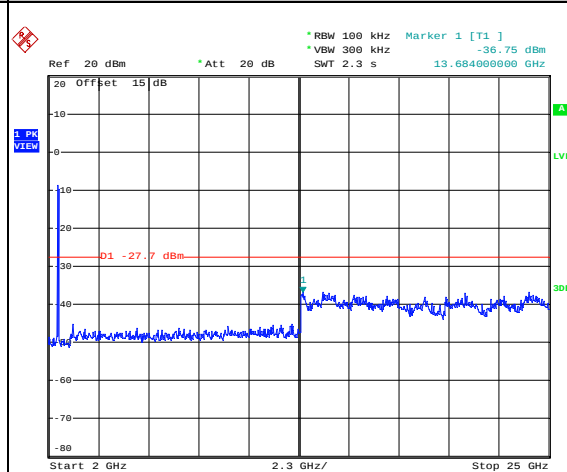
Date: 2.APR.2015 01:24:24

Spurious Emission 30MHz~3GHz



Date: 2.APR.2015 01:25:57

Spurious Emission 2GHz~25GHz



Date: 2.APR.2015 01:26:15

3.5 Radiated Band Edges and Spurious Emission Measurement

3.5.1 Limit of Radiated band edge and Spurious Emission Measurement

In any 100 kHz bandwidth outside the intentional radiator frequency band, all harmonics/spurious must be at least 20 dB below the highest emission level within the authorized band. If the output power of this device was measured by spectrum analyzer, the attenuation under this paragraph shall be 30 dB instead of 20 dB. In addition, radiated emissions which fall in the restricted bands must also comply with the FCC section 15.209 limits as below.

Frequency (MHz)	Field Strength (microvolts/meter)	Measurement Distance (meters)
0.009 – 0.490	2400/F(kHz)	300
0.490 – 1.705	24000/F(kHz)	30
1.705 – 30.0	30	30
30 – 88	100	3
88 – 216	150	3
216 - 960	200	3
Above 960	500	3

3.5.2 Measuring Instruments

The measuring equipment is listed in the section 4 of this test report.

3.5.3 Test Procedures

1. The testing follows FCC KDB Publication No. 558074 D01 DTS Meas. Guidance v03r02.
2. The EUT was arranged to its worst case and then tune the antenna tower (from 1 m to 4 m) and turntable (from 0 degree to 360 degrees) to find the maximum reading. A pre-amp and a high pass filter are used for the test in order to get better signal level.
3. The EUT was placed on a turntable with 0.8 meter for frequency below 1GHz and 1.5 meter for frequency above 1GHz respectively above ground.
4. The EUT was set 3 meters from the interference receiving antenna, which was mounted on the top of a variable height antenna tower.
5. Corrected Reading: Antenna Factor + Cable Loss + Read Level - Preamp Factor = Level
6. For measurement below 1GHz, If the emission level of the EUT measured by the peak detector is 3 dB lower than the applicable limit, the peak emission level will be reported. Otherwise, the emission measurement will be repeated using the quasi-peak detector and reported.
7. Use the following spectrum analyzer settings:
 - (1) Span shall wide enough to fully capture the emission being measured;
 - (2) Set RBW=100 kHz for $f < 1$ GHz; VBW $\geq$ RBW; Sweep = auto; Detector function = peak; Trace = max hold;
 - (3) Set RBW = 1 MHz, VBW= 3MHz for $f \geq 1$ GHz for peak measurement.

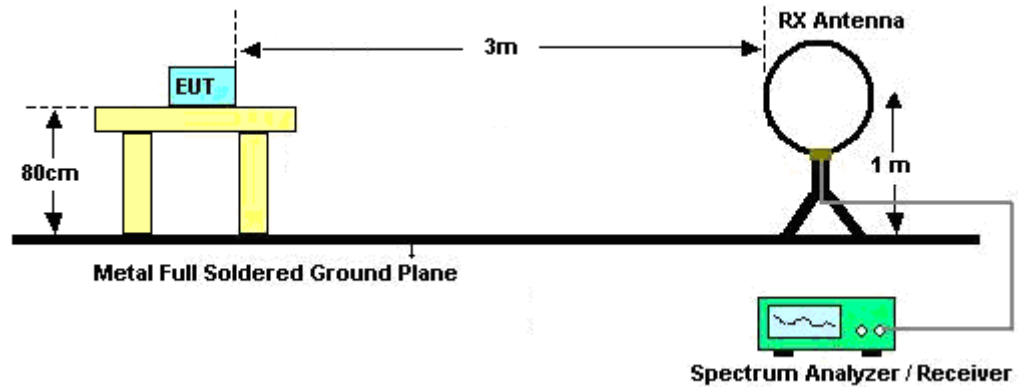
For average measurement:

 - VBW = 10 Hz, when duty cycle is no less than 98 percent.
 - VBW $\geq 1/T$, when duty cycle is less than 98 percent where T is the minimum transmission duration over which the transmitter is on and is transmitting at its maximum power control level for the tested mode of operation.

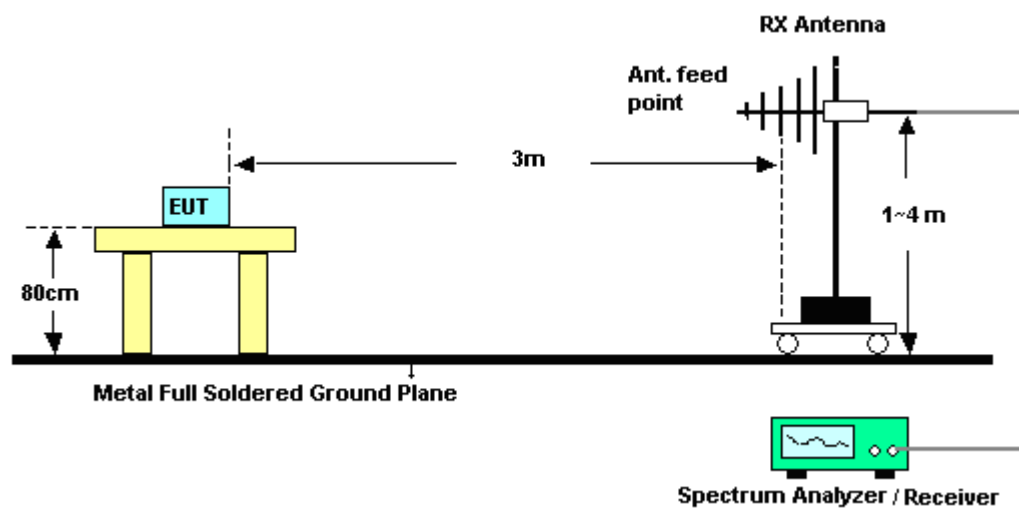
Band	Duty Cycle(%)	T(ms)	1/T(kHz)	VBW Setting
802.11b	100	-	-	10Hz
802.11g	100	-	-	10Hz
2.4GHz 802.11n HT20	100	-	-	10Hz
2.4GHz 802.11n HT40	100	-	-	10Hz

3.5.4 Test Setup

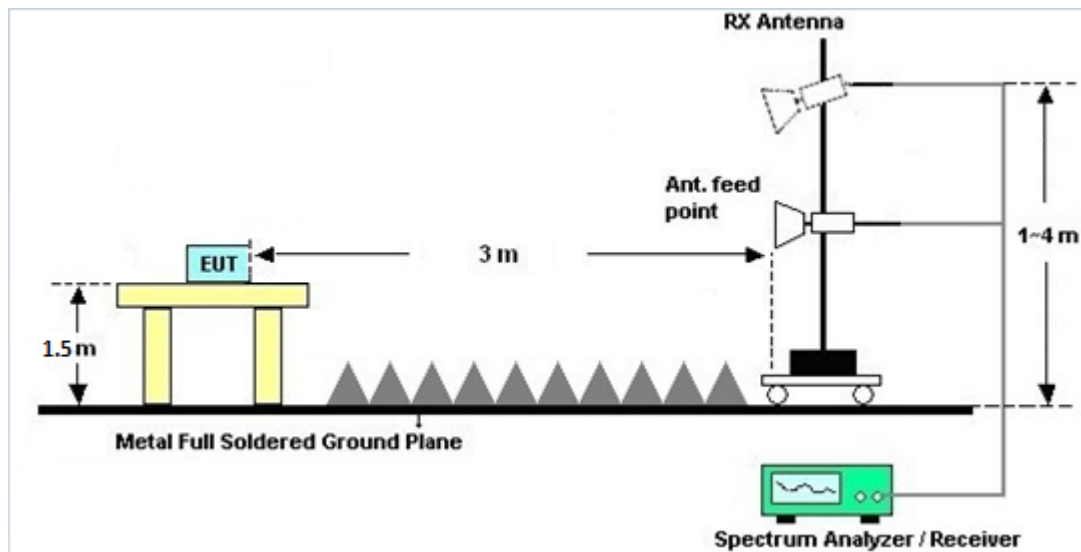
For radiated emissions below 30MHz



For radiated emissions from 30MHz to 1GHz



For radiated emissions above 1GHz



3.5.5 Test Results of Radiated Spurious Emissions (9kHz ~ 30MHz)

The low frequency, which started from 9 kHz to 30MHz, was pre-scanned and the result which was 20dB lower than the limit line per 15.31(o) was not reported.

3.5.6 Test Result of Radiated Spurious at Band Edges

Please refer to Appendix B.

3.5.7 Test Result of Radiated Spurious Emission (30MHz ~ 10th Harmonic)

Please refer to Appendix B.

3.6 AC Conducted Emission Measurement

3.6.1 Limit of AC Conducted Emission

For equipment that is designed to be connected to the public utility (AC) power line, the radio frequency voltage that is conducted back onto the AC power line on any frequency or frequencies within the band 150 kHz to 30 MHz shall not exceed the limits in the following table.

Frequency of Emission (MHz)	Conducted Limit (dB μ V)	
	Quasi-Peak	Average
0.15-0.5	66 to 56*	56 to 46*
0.5-5	56	46
5-30	60	50

*Decreases with the logarithm of the frequency.

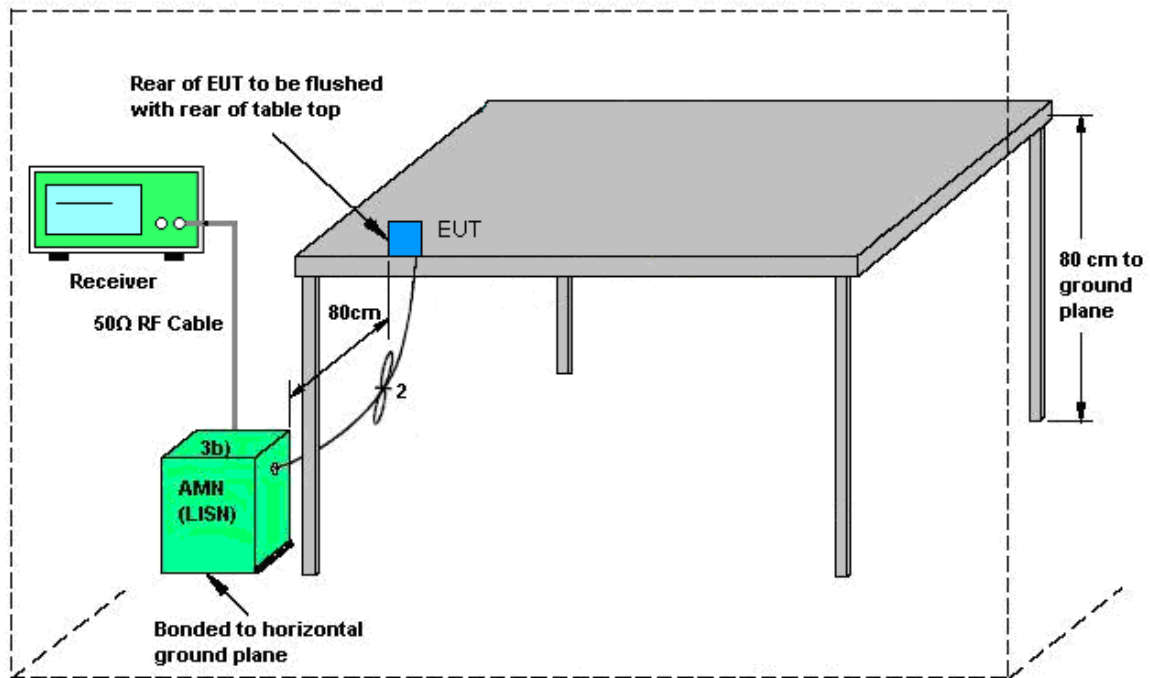
3.6.2 Measuring Instruments

The measuring equipment is listed in the section 4 of this test report.

3.6.3 Test Procedures

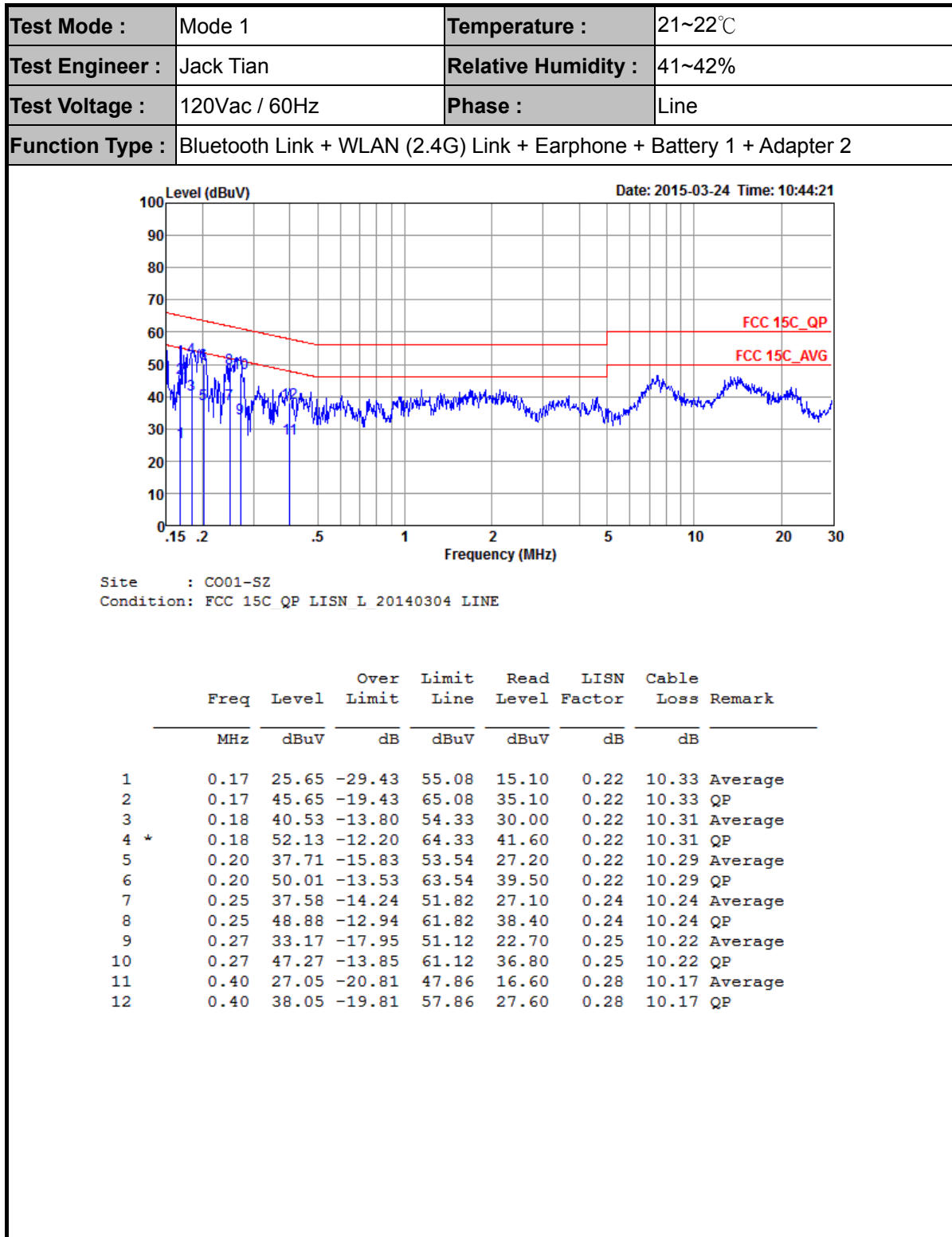
1. The EUT was placed 0.4 meter from the conducting wall of the shielding room, and it was kept at least 80 centimeters from any other grounded conducting surface.
2. Connect EUT to the power mains through a line impedance stabilization network (LISN).
3. All the support units are connecting to the other LISN.
4. The LISN provides 50 ohm coupling impedance for the measuring instrument.
5. The FCC states that a 50 ohm, 50 microhenry LISN should be used.
6. Both sides of AC line were checked for maximum conducted interference.
7. The frequency range from 150 kHz to 30 MHz was searched.
8. Set the test-receiver system to Peak Detect Function and specified bandwidth (IF bandwidth = 9kHz) with Maximum Hold Mode.

3.6.4 Test Setup

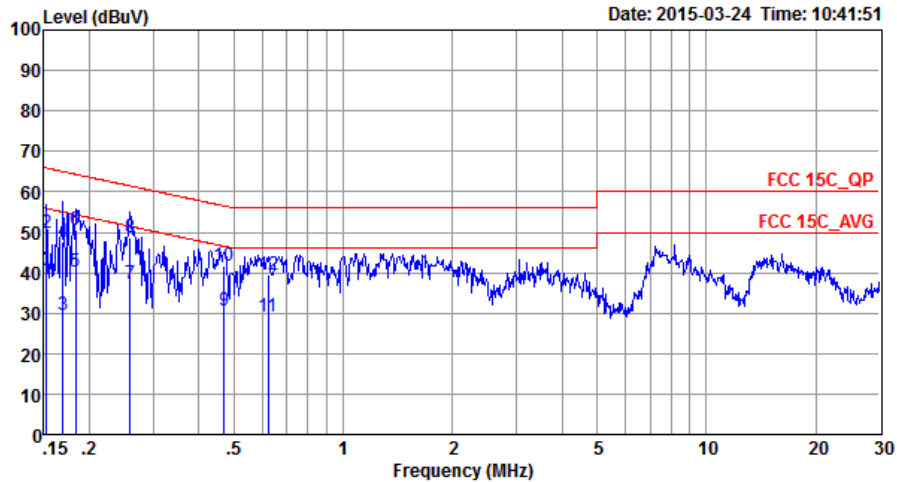


AMN = Artificial mains network (LISN)
 AE = Associated equipment
 EUT = Equipment under test
 ISN = Impedance stabilization network

3.6.5 Test Result of AC Conducted Emission



Test Mode :	Mode 1	Temperature :	21~22°C
Test Engineer :	Jack Tian	Relative Humidity :	41~42%
Test Voltage :	120Vac / 60Hz	Phase :	Neutral
Function Type :	Bluetooth Link + WLAN (2.4G) Link + Earphone + Battery 1 + Adapter 2		



Site : CO01-SZ
Condition: FCC 15C QP LISN N 20140304 NEUTRAL

	Freq	Level	Over Limit	Limit Line	Read Level	LISN Factor	Cable Loss	Remark
	MHz	dBuV	dB	dBuV	dBuV	dB	dB	
1	0.15	38.49	-17.38	55.87	27.80	0.33	10.36	Average
2	0.15	49.79	-16.08	65.87	39.10	0.33	10.36	QP
3	0.17	29.56	-25.43	54.99	18.90	0.33	10.33	Average
4	0.17	47.56	-17.43	64.99	36.90	0.33	10.33	QP
5	0.18	40.14	-14.19	54.33	29.51	0.32	10.31	Average
6	0.18	50.44	-13.89	64.33	39.81	0.32	10.31	QP
7	0.26	37.28	-14.19	51.47	26.70	0.35	10.23	Average
8 *	0.26	48.78	-12.69	61.47	38.20	0.35	10.23	QP
9	0.47	30.76	-15.73	46.49	20.20	0.40	10.16	Average
10	0.47	41.66	-14.83	56.49	31.10	0.40	10.16	QP
11	0.62	29.06	-16.94	46.00	18.60	0.31	10.15	Average
12	0.62	39.56	-16.44	56.00	29.10	0.31	10.15	QP

3.7 Antenna Requirements

3.7.1 Standard Applicable

If directional gain of transmitting antennas is greater than 6dBi, the power shall be reduced by the same level in dB comparing to gain minus 6dBi. For the fixed point-to-point operation, the power shall be reduced by one dB for every 3 dB that the directional gain of the antenna exceeds 6 dBi. The use of a permanently attached antenna or of an antenna that uses a unique coupling to the intentional radiator shall be considered sufficient to comply with the FCC rule.

3.7.2 Antenna Anti-Replacement Construction

An embedded-in antenna design is used.

3.7.3 Antenna Gain

FCC KDB 662911 D01 Multiple Transmitter Output v02r01.

For CDD transmissions, directional gain is calculated as

$$DirectionalGain = 10 \cdot \log \left[\frac{\sum_{j=1}^{N_{SS}} \left\{ \sum_{k=1}^{N_{ANT}} g_{j,k} \right\}^2}{N_{ANT}} \right]$$

where

Each antenna is driven by no more than one spatial stream;

N_{SS} = the number of independent spatial streams of data;

N_{ANT} = the total number of antennas

$g_{j,k} = 10^{G_k / 20}$ if the k th antenna is being fed by spatial stream j , or zero if it is not;

G_k is the gain in dBi of the k th antenna.

The EUT supports CDD mode.

The power and PSD limit should be modified if the directional gain of EUT is over 6 dBi,

The directional gain "DG" is calculated as following table.



			DG for Power (dBi)	DG for PSD (dBi)	Power Limit Reduction (dB)	PSD Limit Reduction (dB)
	Ant. 0 (dBi)	Ant. 1 (dBi)				
2.4 GHz	2.47	1.81	5.16	5.16	0.00	0.00

Power Limit Reduction = DG(Power) – 6dBi, (min = 0)

PSD Limit Reduction = DG(PSD) – 6dBi, (min = 0)



4 List of Measuring Equipment

Instrument	Manufacturer	Model No.	Serial No.	Characteristics	Calibration Date	Test Date	Due Date	Remark
Spectrum Analyzer	R&S	FSP30	101400	9kHz~30GHz	Jan. 28, 2015	Apr. 01, 2015~ Apr. 02, 2015	Jan. 27, 2016	Conducted (TH01-SZ)
Power Meter	Anritsu	ML2495A	1218010	10Hz~40GHz	Jan. 28, 2015	Apr. 01, 2015~ Apr. 02, 2015	Jan. 27, 2016	Conducted (TH01-SZ)
Power Sensor	Anritsu	MA2411B	1207253	0.3GHz~40GHz	Jan. 28, 2015	Apr. 01, 2015~ Apr. 02, 2015	Jan. 27, 2016	Conducted (TH01-SZ)
EMI TEST Receiver	R&S	ESCI7	100768	9kHz~3GHz	May 04, 2014	Mar. 25, 2015	May 03, 2015	Radiation (03CH02-SZ)
Spectrum Analyzer	Agilent Technologies	N9038A	MY522601 85	20Hz~26.5GHz	May 26, 2014	Mar. 25, 2015	May 25, 2015	Radiation (03CH02-SZ)
Loop Antenna	R&S	HFH2-Z2	100354	9kHz~30MHz	May 09, 2014	Mar. 25, 2015	May 08, 2015	Radiation (03CH02-SZ)
Bilog Antenna	TESEQ	CBL 6112D	37877	30MHz~2GHz	Oct. 15, 2014	Mar. 25, 2015	Oct. 14, 2015	Radiation (03CH02-SZ)
Double Ridge Horn Antenna	SCHWARZBECK	BBHA 9120D	9120D-128 5	1GHz~18GHz	Jan. 20, 2015	Mar. 25, 2015	Jan. 19, 2016	Radiation (03CH02-SZ)
Double Ridged Horn Antenna	COM-POWER	AH-840	101071	18GHz~40GHz	Sep. 04, 2014	Mar. 25, 2015	Sep. 03, 2015	Radiation (03CH02-SZ)
Amplifier	com-power	PA-103A	161069	1~1000MHz	May 04, 2014	Mar. 25, 2015	May 03, 2015	Radiation (03CH02-SZ)
Amplifier	Agilent	8449B	3008A010 23	1GHz~26.5GHz	Oct. 29, 2014	Mar. 25, 2015	Oct. 28, 2015	Radiation (03CH02-SZ)
AC Source(AVR)	CHROMA	61601ACSOURCE	616010002 470	100Vac~240Vac	NCR	Mar. 25, 2015	NCR	Radiation (03CH02-SZ)
Turn Table	Qiangdian	3000	N/A	0~360 degree	NCR	Mar. 25, 2015	NCR	Radiation (03CH02-SZ)
Antenna Mast	Qiangdian	3000	N/A	1 m~4 m	NCR	Mar. 25, 2015	NCR	Radiation (03CH02-SZ)
EMI TEST Receiver	R&S	ESCI7	100768	9kHz~3GHz	May 04, 2014	Mar. 24, 2015	May 03, 2015	Conduction (CO01-SZ)
AC LISN	EMCO	3816/2SH	00103912	9kHz~30MHz	Feb. 02, 2015	Mar. 24, 2015	Feb. 01, 2016	Conduction (CO01-SZ)
AC LISN (for auxiliary equipment)	EMCO	3816/2SH	00103892	9kHz~30MHz	Feb. 02, 2015	Mar. 24, 2015	Feb. 01, 2016	Conduction (CO01-SZ)
AC Power Source	Chroma	61602	616020000 891	100Vac~250Vac	Sep. 29, 2014	Mar. 24, 2015	Sep. 28, 2015	Conduction (CO01-SZ)



5 Uncertainty of Evaluation

Uncertainty of Conducted Emission Measurement (150 kHz ~ 30 MHz)

Measuring Uncertainty for a Level of Confidence of 95% ($U = 2Uc(y)$)	2.3dB
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Uncertainty of Radiated Emission Measurement (30 MHz ~ 1000 MHz)

Measuring Uncertainty for a Level of Confidence of 95% ($U = 2Uc(y)$)	4.5dB
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Appendix A. Conducted Test Results

Report Number : FR530302C

Test Engineer:	Tiny You	Temperature:	21~25	°C
Test Date:	2015/4/1~2015/4/2	Relative Humidity:	51~54	%

2.4GHz Band										
Mod.	Data Rate	Ntx	CH.	Freq. (MHz)	99% Occupied BW (MHz)		6dB BW (MHz)		6dB BW Limit (MHz)	Pass/Fail
					Ant 0	Ant 1	Ant 0	Ant 1		
11b	1Mbps	1	1	2412	13.65	13.55	10.04	10.04	0.50	Pass
11b	1Mbps	1	6	2437	13.65	13.60	10.04	10.04	0.50	Pass
11b	1Mbps	1	11	2462	13.60	13.65	10.04	10.04	0.50	Pass
11g	6Mbps	1	1	2412	17.40	17.50	16.52	16.56	0.50	Pass
11g	6Mbps	1	6	2437	17.55	17.50	16.48	16.52	0.50	Pass
11g	6Mbps	1	11	2462	17.50	17.50	16.52	16.52	0.50	Pass
HT20	MCS0	1	1	2412	18.30	18.30	17.56	17.66	0.50	Pass
HT20	MCS0	1	6	2437	18.25	18.35	17.60	17.60	0.50	Pass
HT20	MCS0	1	11	2462	18.30	18.35	17.58	17.62	0.50	Pass
HT40	MCS0	1	3	2422	36.50	36.50	36.32	36.40	0.50	Pass
HT40	MCS0	1	6	2437	36.40	36.40	35.84	36.40	0.50	Pass
HT40	MCS0	1	9	2452	36.30	36.40	36.24	36.40	0.50	Pass
11b	1Mbps	2	1	2412	13.55	13.50	10.04	10.02	0.50	Pass
11b	1Mbps	2	6	2437	13.55	13.50	10.04	10.04	0.50	Pass
11b	1Mbps	2	11	2462	13.55	13.55	10.04	10.04	0.50	Pass
11g	6Mbps	2	1	2412	17.40	17.35	16.44	16.48	0.50	Pass
11g	6Mbps	2	6	2437	17.45	17.40	16.40	16.40	0.50	Pass
11g	6Mbps	2	11	2462	17.55	17.50	16.48	16.50	0.50	Pass
HT20	MCS0	2	1	2412	18.35	18.35	17.64	17.64	0.50	Pass
HT20	MCS0	2	6	2437	18.30	18.25	17.60	17.66	0.50	Pass
HT20	MCS0	2	11	2462	18.30	18.30	17.60	17.60	0.50	Pass
HT40	MCS0	2	3	2422	36.40	36.40	36.32	36.40	0.50	Pass
HT40	MCS0	2	6	2437	36.50	36.40	36.24	36.32	0.50	Pass
HT40	MCS0	2	9	2452	36.30	36.40	36.32	36.24	0.50	Pass

2.4GHz Band																
Mod.	Data Rate	Ntx	CH.	Freq. (MHz)	Peak Conducted Power (dBm)			Conducted Power Limit (dBm)		DG (dBi)		EIRP Power (dBm)		EIRP Power Limit (dBm)		Pass /Fail
					Ant 0	Ant 1	SUM	Ant 0	Ant 1	Ant 0	Ant 1	Ant 0	Ant 1	Ant 0	Ant 1	
11b	1Mbps	1	1	2412	20.78	19.60		30.00	30.00	2.47	1.81	23.25	21.41	36.00	36.00	Pass
11b	1Mbps	1	6	2437	20.72	19.87		30.00	30.00	2.47	1.81	23.19	21.68	36.00	36.00	Pass
11b	1Mbps	1	11	2462	20.68	19.78		30.00	30.00	2.47	1.81	23.15	21.59	36.00	36.00	Pass
11g	6Mbps	1	1	2412	25.56	24.87		30.00	30.00	2.47	1.81	28.03	26.68	36.00	36.00	Pass
11g	6Mbps	1	6	2437	25.32	24.84		30.00	30.00	2.47	1.81	27.79	26.65	36.00	36.00	Pass
11g	6Mbps	1	11	2462	25.40	25.12		30.00	30.00	2.47	1.81	27.87	26.93	36.00	36.00	Pass
HT20	MCS0	1	1	2412	25.23	24.56		30.00	30.00	2.47	1.81	27.70	26.37	36.00	36.00	Pass
HT20	MCS0	1	6	2437	24.69	24.45		30.00	30.00	2.47	1.81	27.16	26.26	36.00	36.00	Pass
HT20	MCS0	1	11	2462	24.58	24.23		30.00	30.00	2.47	1.81	27.05	26.04	36.00	36.00	Pass
HT40	MCS0	1	3	2422	23.21	22.87		30.00	30.00	2.47	1.81	25.68	24.68	36.00	36.00	Pass
HT40	MCS0	1	6	2437	22.88	22.53		30.00	30.00	2.47	1.81	25.35	24.34	36.00	36.00	Pass
HT40	MCS0	1	9	2452	22.60	22.43		30.00	30.00	2.47	1.81	25.07	24.24	36.00	36.00	Pass
11b	1Mbps	2	1	2412	18.95	18.25	21.62	30.00		5.16		26.78		36.00		Pass
11b	1Mbps	2	6	2437	18.94	18.10	21.55	30.00		5.16		26.71		36.00		Pass
11b	1Mbps	2	11	2462	18.93	18.04	21.52	30.00		5.16		26.67		36.00		Pass
11g	6Mbps	2	1	2412	23.72	22.98	26.38	30.00		5.16		31.53		36.00		Pass
11g	6Mbps	2	6	2437	23.54	22.75	26.17	30.00		5.16		31.33		36.00		Pass
11g	6Mbps	2	11	2462	23.62	22.69	26.19	30.00		5.16		31.35		36.00		Pass
HT20	MCS0	2	1	2412	23.32	22.98	26.16	30.00		5.16		31.32		36.00		Pass
HT20	MCS0	2	6	2437	23.24	22.84	26.05	30.00		5.16		31.21		36.00		Pass
HT20	MCS0	2	11	2462	23.15	22.69	25.94	30.00		5.16		31.09		36.00		Pass
HT40	MCS0	2	3	2422	20.53	19.97	23.27	30.00		5.16		28.43		36.00		Pass
HT40	MCS0	2	6	2437	19.87	20.01	22.95	30.00		5.16		28.11		36.00		Pass
HT40	MCS0	2	9	2452	18.93	20.21	22.63	30.00		5.16		27.78		36.00		Pass

Note: Measured power (dBm) has offset with cable loss.

2.4GHz Band									
Mod.	Data Rate	Ntx	CH.	Freq. (MHz)	Duty Factor (dB)		Average Conducted Power (dBm)		
					Ant 0	Ant 1	Ant 0	Ant 1	SUM
11b	1Mbps	1	1	2412	0.00	0.00	17.75	16.60	
11b	1Mbps	1	6	2437	0.00	0.00	17.72	16.85	
11b	1Mbps	1	11	2462	0.00	0.00	17.69	16.73	
11g	6Mbps	1	1	2412	0.00	0.00	15.80	15.32	
11g	6Mbps	1	6	2437	0.00	0.00	15.72	15.36	
11g	6Mbps	1	11	2462	0.00	0.00	15.69	15.52	
HT20	MCS0	1	1	2412	0.00	0.00	15.04	14.89	
HT20	MCS0	1	6	2437	0.00	0.00	14.91	14.75	
HT20	MCS0	1	11	2462	0.00	0.00	14.86	14.67	
HT40	MCS0	1	3	2422	0.00	0.00	12.68	12.20	
HT40	MCS0	1	6	2437	0.00	0.00	12.25	11.98	
HT40	MCS0	1	9	2452	0.00	0.00	12.36	11.68	
11b	1Mbps	2	1	2412	0.00	0.00	16.02	15.34	18.70
11b	1Mbps	2	6	2437	0.00	0.00	15.88	15.13	18.53
11b	1Mbps	2	11	2462	0.00	0.00	15.87	15.07	18.50
11g	6Mbps	2	1	2412	0.00	0.00	13.12	12.75	15.95
11g	6Mbps	2	6	2437	0.00	0.00	12.97	12.62	15.81
11g	6Mbps	2	11	2462	0.00	0.00	12.88	12.58	15.74
HT20	MCS0	2	1	2412	0.00	0.00	12.43	11.65	15.07
HT20	MCS0	2	6	2437	0.00	0.00	12.34	11.58	14.99
HT20	MCS0	2	11	2462	0.00	0.00	12.30	11.55	14.95
HT40	MCS0	2	3	2422	0.00	0.00	10.15	9.23	12.72
HT40	MCS0	2	6	2437	0.00	0.00	9.98	8.98	12.52
HT40	MCS0	2	9	2452	0.00	0.00	9.76	8.87	12.35

Note: Measured power (dBm) has offset with cable loss.

2.4GHz Band												
Mod.	Data Rate	Ntx	CH.	Freq. (MHz)	Peak PSD (dBm/3kHz)			DG (dBi)		Peak PSD Limit (dBm/3kHz)		Pass/Fail
					Ant 0	Ant 1	Worse + 3.01	Ant 0	Ant 1	Ant 0	Ant 1	
11b	1Mbps	1	1	2412	-5.70	-6.93	-	2.47	1.81	8.00	8.00	Pass
11b	1Mbps	1	6	2437	-6.10	-6.14		2.47	1.81	8.00	8.00	Pass
11b	1Mbps	1	11	2462	-6.10	-6.31		2.47	1.81	8.00	8.00	Pass
11g	6Mbps	1	1	2412	-10.25	-11.10		2.47	1.81	8.00	8.00	Pass
11g	6Mbps	1	6	2437	-10.70	-11.57		2.47	1.81	8.00	8.00	Pass
11g	6Mbps	1	11	2462	-10.28	-10.54		2.47	1.81	8.00	8.00	Pass
HT20	MCS0	1	1	2412	-9.89	-9.66		2.47	1.81	8.00	8.00	Pass
HT20	MCS0	1	6	2437	-11.12	-11.26		2.47	1.81	8.00	8.00	Pass
HT20	MCS0	1	11	2462	-8.75	-10.26		2.47	1.81	8.00	8.00	Pass
HT40	MCS0	1	3	2422	-16.37	-16.96		2.47	1.81	8.00	8.00	Pass
HT40	MCS0	1	6	2437	-16.12	-16.54		2.47	1.81	8.00	8.00	Pass
HT40	MCS0	1	9	2452	-16.61	-15.63		2.47	1.81	8.00	8.00	Pass
11b	1Mbps	2	1	2412	-7.87	-8.98	-4.86	5.16		8.00		Pass
11b	1Mbps	2	6	2437	-8.57	-8.27	-5.26	5.16		8.00		Pass
11b	1Mbps	2	11	2462	-8.68	-8.54	-5.53	5.16		8.00		Pass
11g	6Mbps	2	1	2412	-13.21	-13.82	-10.20	5.16		8.00		Pass
11g	6Mbps	2	6	2437	-13.83	-13.45	-10.44	5.16		8.00		Pass
11g	6Mbps	2	11	2462	-13.37	-13.34	-10.33	5.16		8.00		Pass
HT20	MCS0	2	1	2412	-11.75	-14.40	-8.74	5.16		8.00		Pass
HT20	MCS0	2	6	2437	-13.35	-13.99	-10.34	5.16		8.00		Pass
HT20	MCS0	2	11	2462	-13.44	-12.46	-9.45	5.16		8.00		Pass
HT40	MCS0	2	3	2422	-18.87	-19.50	-15.86	5.16		8.00		Pass
HT40	MCS0	2	6	2437	-18.57	-20.28	-15.56	5.16		8.00		Pass
HT40	MCS0	2	9	2452	-18.92	-19.68	-15.91	5.16		8.00		Pass

Measured power density (dBm) has offset with cable loss.



Appendix B. Radiated Spurious Emission

2.4GHz 2400~2483.5MHz

WIFI 802.11b (Band Edge @ 3m)

Adaptor 1+Battery 1

WIFI	Note	Frequency	Level	Over	Limit	Read	Antenna	Cable	Preamp	Ant	Table	Peak	Pol.
Ant.				Limit	Line	Level	Factor	Loss	Factor	Pos	Pos	Avg.	
1		(MHz)	(dBμV/m)	(dB)	(dBμV/m)	(dBμV)	(dB/m)	(dB)	(dB)	(cm)	(deg)	(P/A)	(H/V)
802.11b CH 01 2412MHz		2387.04	46.39	-27.61	74	49.56	27.25	6.04	36.46	203	360	P	H
		2385.96	36	-18	54	39.17	27.25	6.04	36.46	203	360	A	H
	*	2412	103.82	-	-	106.93	27.31	6.04	36.46	203	360	P	H
	*	2412	99.93	-	-	103.04	27.31	6.04	36.46	203	360	A	H
		2373.54	56.23	-17.77	74	59.5	27.19	6	36.46	269	87	P	V
		2385.87	37.98	-16.02	54	41.15	27.25	6.04	36.46	269	87	A	V
	*	2412	105.74	-	-	108.85	27.31	6.04	36.46	269	87	P	V
	*	2412	101.85	-	-	104.96	27.31	6.04	36.46	269	87	A	V
802.11b CH 06 2437MHz		2382.09	54.15	-19.85	74	57.42	27.19	6	36.46	191	354	P	H
		2387.22	29.95	-24.05	54	33.12	27.25	6.04	36.46	191	354	A	H
	*	2437	106.76	-	-	109.7	27.42	6.09	36.45	191	354	P	H
	*	2437	102.78	-	-	105.72	27.42	6.09	36.45	191	354	A	H
		2490.8	44.07	-29.93	74	46.75	27.6	6.17	36.45	191	354	P	H
		2485.36	30.13	-23.87	54	32.87	27.54	6.17	36.45	191	354	A	H
		2385.24	44.54	-29.46	74	47.77	27.19	6.04	36.46	272	258	P	V
		2388.48	30.13	-23.87	54	33.3	27.25	6.04	36.46	272	258	A	V
	*	2437	107.47	-	-	110.41	27.42	6.09	36.45	272	258	P	V
	*	2437	103.32	-	-	106.26	27.42	6.09	36.45	272	258	A	V
		2484.12	44.37	-29.63	74	47.11	27.54	6.17	36.45	272	258	P	V
		2483.52	30.73	-23.27	54	33.47	27.54	6.17	36.45	272	258	A	V



802.11b CH 11 2462MHz	*	2462	107.05	-	-	109.89	27.48	6.13	36.45	190	355	P	H
	*	2462	103.11	-	-	105.95	27.48	6.13	36.45	190	355	A	H
		2483.52	49.82	-24.18	74	52.56	27.54	6.17	36.45	190	355	P	H
		2483.52	43.28	-10.72	54	46.02	27.54	6.17	36.45	190	355	A	H
	*	2462	107.38	-	-	110.22	27.48	6.13	36.45	272	258	P	V
	*	2462	103.31	-	-	106.15	27.48	6.13	36.45	272	258	A	V
		2483.84	50.18	-23.82	74	52.92	27.54	6.17	36.45	272	258	P	V
		2483.52	41.46	-12.54	54	44.2	27.54	6.17	36.45	272	258	A	V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												



2.4GHz 2400~2483.5MHz
WIFI 802.11b (Harmonic @ 3m)

WIFI Ant. 1	Note	Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)
802.11b CH 01 2412MHz		4824	52.41	-21.59	74	48.86	31.26	8.23	35.94	250	0	P	H
		4824	51.2	-2.8	54	47.65	31.26	8.23	35.94	250	0	A	H
		4824	49.54	-24.46	74	45.99	31.26	8.23	35.94	250	0	P	V
802.11b CH 06 2437MHz		4874	52.62	-21.38	74	48.89	31.36	8.29	35.92	145	265	P	H
		4874	51.29	-2.71	54	47.56	31.36	8.29	35.92	145	265	A	H
		7311	50.5	-23.5	74	40.78	35.96	10.29	36.53	174	321	P	H
		4874	50.82	-23.18	74	47.09	31.36	8.29	35.92	145	265	P	V
		7311	50.53	-23.47	74	40.81	35.96	10.29	36.53	174	321	P	V
802.11b CH 11 2462MHz		4924	53.64	-20.36	74	49.76	31.46	8.32	35.9	146	347	P	H
		4924	51.46	-2.54	54	47.58	31.46	8.32	35.9	146	347	A	H
		7386	50.88	-23.12	74	41.05	36.08	10.34	36.59	145	274	P	H
		4924	50.97	-23.03	74	47.09	31.46	8.32	35.9	146	347	P	V
		7386	50.56	-23.44	74	40.73	36.08	10.34	36.59	145	274	P	V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												



2.4GHz 2400~2483.5MHz
WIFI 802.11g (Band Edge @ 3m)

WIFI Ant. 1	Note	Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)
802.11g CH 01 2412MHz		2389.47	62.5	-11.5	74	65.67	27.25	6.04	36.46	150	358	P	H
		2388.66	45.23	-8.77	54	48.4	27.25	6.04	36.46	150	358	A	H
	*	2412	106.4	-	-	109.51	27.31	6.04	36.46	150	358	P	H
	*	2412	96.06	-	-	99.17	27.31	6.04	36.46	150	358	A	H
		2386.95	63.89	-10.11	74	67.06	27.25	6.04	36.46	280	258	P	V
		2388.12	46.91	-7.09	54	50.08	27.25	6.04	36.46	280	258	A	V
	*	2412	107.82	-	-	110.93	27.31	6.04	36.46	280	258	P	V
	*	2412	97.4	-	-	100.51	27.31	6.04	36.46	280	258	A	V
802.11g CH 06 2437MHz		2389.56	54.76	-19.24	74	57.93	27.25	6.04	36.46	150	358	P	H
		2364.99	33.56	-20.44	54	36.89	27.13	6	36.46	150	358	A	H
	*	2437	105.84	-	-	108.78	27.42	6.09	36.45	150	358	P	H
	*	2437	95.29	-	-	98.23	27.42	6.09	36.45	150	358	A	H
		2484.84	54.16	-19.84	74	56.9	27.54	6.17	36.45	150	358	P	H
		2483.6	31.73	-22.27	54	34.47	27.54	6.17	36.45	150	358	A	H
		2389.92	48.34	-25.66	74	51.51	27.25	6.04	36.46	280	258	P	V
		2364.72	35.71	-18.29	54	39.04	27.13	6	36.46	280	258	A	V
	*	2437	108.03	-	-	110.97	27.42	6.09	36.45	280	258	P	V
	*	2437	97.9	-	-	100.84	27.42	6.09	36.45	280	258	A	V
		2484.12	54.31	-19.69	74	57.05	27.54	6.17	36.45	280	258	P	V
		2483.8	32.3	-21.7	54	35.04	27.54	6.17	36.45	280	258	A	V



802.11g CH 11 2462MHz	*	2462	105.68	-	-	108.52	27.48	6.13	36.45	150	358	P	H
	*	2462	95.26	-	-	98.1	27.48	6.13	36.45	150	358	A	H
		2485.2	67.62	-6.38	74	70.36	27.54	6.17	36.45	150	358	P	H
		2483.52	48.12	-5.88	54	50.86	27.54	6.17	36.45	150	358	A	H
	*	2462	107.82	-	-	110.66	27.48	6.13	36.45	280	258	P	V
	*	2462	97.58	-	-	100.42	27.48	6.13	36.45	280	258	A	V
		2484.12	68.92	-5.08	74	71.66	27.54	6.17	36.45	280	258	P	V
		2483.52	49.24	-4.76	54	51.98	27.54	6.17	36.45	280	258	A	V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												



2.4GHz 2400~2483.5MHz

WIFI 802.11g (Harmonic @ 3m)

WIFI Ant. 1	Note	Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)
802.11g CH 01 2412MHz		4824	46.2	-27.8	74	42.65	31.26	8.23	35.94	105	198	P	H
		4824	46.29	-27.71	74	42.74	31.26	8.23	35.94	105	198	P	V
802.11g CH 06 2437MHz		4874	48.94	-25.06	74	45.21	31.36	8.29	35.92	145	265	P	H
		7311	49.45	-24.55	74	39.73	35.96	10.29	36.53	174	321	P	H
		4874	47.65	-26.35	74	43.92	31.36	8.29	35.92	145	265	P	V
		7311	49.76	-24.24	74	40.04	35.96	10.29	36.53	174	321	P	V
802.11g CH 11 2462MHz		4924	49.8	-24.2	74	45.92	31.46	8.32	35.9	146	347	P	H
		7386	49.38	-24.62	74	39.55	36.08	10.34	36.59	145	274	P	H
		4924	47.66	-26.34	74	43.78	31.46	8.32	35.9	146	347	P	V
		7386	49.14	-24.86	74	39.31	36.08	10.34	36.59	145	274	P	V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												



2.4GHz 2400~2483.5MHz
WIFI 802.11n HT20 (Band Edge @ 3m)

WIFI Ant. 1	Note	Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)
802.11n HT20 CH 01 2412MHz		2389.47	65.07	-8.93	74	68.24	27.25	6.04	36.46	150	356	P	H
		2389.92	45.52	-8.48	54	48.69	27.25	6.04	36.46	150	356	A	H
	*	2412	106.04	-	-	109.15	27.31	6.04	36.46	150	356	P	H
	*	2412	95.18	-	-	98.29	27.31	6.04	36.46	150	356	A	H
		2389.92	66.53	-7.47	74	69.7	27.25	6.04	36.46	150	258	P	V
		2389.92	47.13	-6.87	54	50.3	27.25	6.04	36.46	150	258	A	V
	*	2412	106.59	-	-	109.7	27.31	6.04	36.46	150	258	P	V
	*	2412	96.19	-	-	99.3	27.31	6.04	36.46	150	258	A	V
802.11n HT20 CH 06 2437MHz		2381.01	51.4	-22.6	74	54.67	27.19	6	36.46	150	356	P	H
		2365.08	33.77	-20.23	54	37.1	27.13	6	36.46	150	356	A	H
	*	2437	105.22	-	-	108.16	27.42	6.09	36.45	150	356	P	H
	*	2437	94.74	-	-	97.68	27.42	6.09	36.45	150	356	A	H
		2483.56	53.61	-20.39	74	56.35	27.54	6.17	36.45	150	356	P	H
		2483.52	31.78	-22.22	54	34.52	27.54	6.17	36.45	150	356	A	H
		2388.75	51.31	-22.69	74	54.48	27.25	6.04	36.46	280	258	P	V
		2365.08	34.98	-19.02	54	38.31	27.13	6	36.46	280	258	A	V
	*	2437	106.55	-	-	109.49	27.42	6.09	36.45	280	258	P	V
	*	2437	95.84	-	-	98.78	27.42	6.09	36.45	280	258	A	V
		2484.24	52.89	-21.11	74	55.63	27.54	6.17	36.45	280	258	P	V
		2483.56	31.79	-22.21	54	34.53	27.54	6.17	36.45	280	258	A	V



802.11n HT20 CH 11 2462MHz	*	2462	105.22	-	-	108.06	27.48	6.13	36.45	150	358	P	H
	*	2462	94.39	-	-	97.23	27.48	6.13	36.45	150	358	A	H
		2483.52	68.85	-5.15	74	71.59	27.54	6.17	36.45	150	358	P	H
		2483.76	50.55	-3.45	54	53.29	27.54	6.17	36.45	150	358	A	H
	*	2462	106.15	-	-	108.99	27.48	6.13	36.45	280	258	P	V
	*	2462	95.52	-	-	98.36	27.48	6.13	36.45	280	258	A	V
		2483.64	68.22	-5.78	74	70.96	27.54	6.17	36.45	280	258	P	V
		2483.52	49.96	-4.04	54	52.7	27.54	6.17	36.45	280	258	A	V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												



2.4GHz 2400~2483.5MHz
WIFI 802.11n HT20 (Harmonic @ 3m)

WIFI Ant. 1	Note	Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)
802.11n HT20 CH 01 2412MHz		4824	45.31	-28.69	74	41.76	31.26	8.23	35.94	105	198	P	H
		4824	45.22	-28.78	74	41.67	31.26	8.23	35.94	105	198	P	V
802.11n HT20 CH 06 2437MHz		4874	47.73	-26.27	74	44	31.36	8.29	35.92	145	265	P	H
		7311	49.78	-24.22	74	40.06	35.96	10.29	36.53	174	321	P	H
		4874	46.56	-27.44	74	42.83	31.36	8.29	35.92	145	265	P	V
		7311	49.27	-24.73	74	39.55	35.96	10.29	36.53	174	321	P	V
802.11n HT20 CH 11 2462MHz		4924	49.31	-24.69	74	45.43	31.46	8.32	35.9	146	347	P	H
		7386	49.95	-24.05	74	40.12	36.08	10.34	36.59	145	274	P	H
		4924	48.53	-25.47	74	44.65	31.46	8.32	35.9	146	347	P	V
		7386	49.35	-24.65	74	39.52	36.08	10.34	36.59	145	274	P	V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												



2.4GHz 2400~2483.5MHz
WIFI 802.11n HT40 (Band Edge @ 3m)

WIFI Ant. 1	Note	Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)
802.11n HT40 CH 03 2422MHz		2388.57	61.53	-12.47	74	64.7	27.25	6.04	36.46	150	353	P	H
		2387.58	43.37	-10.63	54	46.54	27.25	6.04	36.46	150	353	A	H
	*	2422	99.9	-	-	102.89	27.37	6.09	36.45	150	353	P	H
	*	2422	88.81	-	-	91.8	27.37	6.09	36.45	150	353	A	H
		2486.96	50.72	-23.28	74	53.46	27.54	6.17	36.45	150	353	P	H
		2486.88	33.9	-20.1	54	36.64	27.54	6.17	36.45	150	353	A	H
		2388.57	61.21	-12.79	74	64.38	27.25	6.04	36.46	150	258	P	V
		2387.67	43.88	-10.12	54	47.05	27.25	6.04	36.46	150	258	A	V
	*	2422	102.59	-	-	105.58	27.37	6.09	36.45	150	258	P	V
	*	2422	90.78	-	-	93.77	27.37	6.09	36.45	150	258	A	V
		2486.44	51.28	-22.72	74	54.02	27.54	6.17	36.45	150	258	P	V
		2486.52	34.15	-19.85	54	36.89	27.54	6.17	36.45	150	258	A	V
802.11n HT40 CH 06 2437MHz		2387.22	56.45	-17.55	74	59.62	27.25	6.04	36.46	150	356	P	H
		2387.94	38.12	-15.88	54	41.29	27.25	6.04	36.46	150	356	A	H
	*	2437	100.19	-	-	103.13	27.42	6.09	36.45	150	356	P	H
	*	2437	89.3	-	-	92.24	27.42	6.09	36.45	150	356	A	H
		2487.04	58.76	-15.24	74	61.5	27.54	6.17	36.45	150	356	P	H
		2483.52	39.71	-14.29	54	42.45	27.54	6.17	36.45	150	356	A	H
		2387.58	57.12	-16.88	74	60.29	27.25	6.04	36.46	280	258	P	V
		2387.67	38.69	-15.31	54	41.86	27.25	6.04	36.46	280	258	A	V
	*	2437	102.27	-	-	105.21	27.42	6.09	36.45	280	258	P	V
	*	2437	91.27	-	-	94.21	27.42	6.09	36.45	280	258	A	V
		2485.72	56.83	-17.17	74	59.57	27.54	6.17	36.45	280	258	P	V
		2483.52	38.46	-15.54	54	41.2	27.54	6.17	36.45	280	258	A	V



802.11n HT40 CH 09 2452MHz		2385.15	51.11	-22.89	74	54.34	27.19	6.04	36.46	150	356	P	H
		2385.51	33.37	-20.63	54	36.54	27.25	6.04	36.46	150	356	A	H
	*	2452	99.52	-	-	102.42	27.42	6.13	36.45	150	356	P	H
	*	2452	89	-	-	91.9	27.42	6.13	36.45	150	356	A	H
		2483.6	66.24	-7.76	74	68.98	27.54	6.17	36.45	150	356	P	H
		2483.56	45.89	-8.11	54	48.63	27.54	6.17	36.45	150	356	A	H
		2388.93	53.51	-20.49	74	56.68	27.25	6.04	36.46	280	256	P	V
		2389.65	34.57	-19.43	54	37.74	27.25	6.04	36.46	280	256	A	V
	*	2452	101.85	-	-	104.75	27.42	6.13	36.45	280	256	P	V
	*	2452	90.57	-	-	93.47	27.42	6.13	36.45	280	256	A	V
		2484.96	64.37	-9.63	74	67.11	27.54	6.17	36.45	280	256	P	V
		2483.52	44.47	-9.53	54	47.21	27.54	6.17	36.45	280	256	A	V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												



2.4GHz 2400~2483.5MHz
WIFI 802.11n HT40 (Harmonic @ 3m)

WIFI Ant. 1	Note	Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)
802.11n HT40 CH 03 2422MHz		4844	45.63	-28.37	74	42.01	31.29	8.26	35.93	126	248	P	H
		7266	49.68	-24.32	74	40.04	35.91	10.24	36.51	185	252	P	H
		4844	45.89	-28.11	74	42.27	31.29	8.26	35.93	126	248	P	V
		7266	50.29	-23.71	74	40.65	35.91	10.24	36.51	185	252	P	V
802.11n HT40 CH 06 2437MHz		4874	44.98	-29.02	74	41.25	31.36	8.29	35.92	132	224	P	H
		7311	49.31	-24.69	74	39.59	35.96	10.29	36.53	119	347	P	H
		4874	44.93	-29.07	74	41.2	31.36	8.29	35.92	132	224	P	V
		7311	48.99	-25.01	74	39.27	35.96	10.29	36.53	119	347	P	V
802.11n HT40 CH 09 2452MHz		4904	45.45	-28.55	74	41.61	31.43	8.32	35.91	125	214	P	H
		7356	49.31	-24.69	74	39.54	36.03	10.31	36.57	127	315	P	H
		4904	45.21	-28.79	74	41.37	31.43	8.32	35.91	125	214	P	V
		7356	49.37	-24.63	74	39.6	36.03	10.31	36.57	127	315	P	V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												



Emission below 1GHz

2.4GHz WIFI 802.11b (LF)

WIFI	Note	Frequency	Level	Over	Limit	Read	Antenna	Cable	Preamp	Ant	Table	Peak	Pol.
Ant.				Limit	Line	Level	Factor	Loss	Factor	Pos	Pos	Avg.	
1		(MHz)	(dBμV/m)	(dB)	(dBμV/m)	(dBμV)	(dB/m)	(dB)	(dB)	(cm)	(deg)	(P/A)	(H/V)
2.4GHz 802.11b LF		124.09	35.99	-7.51	43.5	51.97	12.78	1.74	30.5	165	321	P	H
		273.47	32.12	-13.88	46	46.42	13.67	2.35	30.32			P	H
		489.78	22.95	-23.05	46	32.31	17.73	2.87	29.96			P	H
		633.34	21.94	-24.06	46	28.89	19.47	3.31	29.73			P	H
		782.72	22.8	-23.2	46	27.98	20.69	3.59	29.46			P	H
		945.68	23.24	-22.76	46	26.32	22.15	3.93	29.16			P	H
		62.98	36.02	-3.98	40	58.79	6.45	1.33	30.55	185	261	P	V
		148.34	32.94	-10.56	43.5	49.42	12.14	1.85	30.47			P	V
		276.38	29.18	-16.82	46	43.34	13.8	2.35	30.31			P	V
		422.85	20.23	-25.77	46	31.26	16.27	2.78	30.08			P	V
		713.85	21.72	-24.28	46	27.95	19.9	3.49	29.62			P	V
		880.69	23.6	-22.4	46	27.21	21.85	3.81	29.27			P	V
Remark	1. No other spurious found. 2. All results are PASS against limit line.												



2.4GHz 2400~2483.5MHz

WIFI 802.11b (Band Edge @ 3m)

Adaptor 2+Battery 2

WIFI	Note	Frequency	Level	Over	Limit	Read	Antenna	Cable	Preamp	Ant	Table	Peak	Pol.
Ant.				Limit	Line	Level	Factor	Loss	Factor	Pos	Pos	Avg.	
1		(MHz)	(dBμV/m)	(dB)	(dBμV/m)	(dBμV)	(dB/m)	(dB)	(dB)	(cm)	(deg)	(P/A)	(H/V)
802.11b CH 11 2462MHz	*	2462	106.95	-	-	109.79	27.48	6.13	36.45	150	10	P	H
	*	2462	102.95	-	-	105.79	27.48	6.13	36.45	150	10	A	H
		2484	49.87	-24.13	74	52.61	27.54	6.17	36.45	150	10	P	H
		2483.52	40.66	-13.34	54	43.4	27.54	6.17	36.45	150	10	A	H
	*	2462	106.72	-	-	109.56	27.48	6.13	36.45	150	86	P	V
	*	2462	102.67	-	-	105.51	27.48	6.13	36.45	150	86	A	V
		2483.52	49.13	-24.87	74	51.87	27.54	6.17	36.45	150	86	P	V
		2483.88	38.78	-15.22	54	41.52	27.54	6.17	36.45	150	86	A	V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												

2.4GHz 2400~2483.5MHz

WIFI 802.11b (Harmonic @ 3m)

WIFI	Note	Frequency	Level	Over	Limit	Read	Antenna	Cable	Preamp	Ant	Table	Peak	Pol.
Ant.				Limit	Line	Level	Factor	Loss	Factor	Pos	Pos	Avg.	
1		(MHz)	(dBμV/m)	(dB)	(dBμV/m)	(dBμV)	(dB/m)	(dB)	(dB)	(cm)	(deg)	(P/A)	(H/V)
802.11b CH 11 2462MHz		4924	52.83	-21.17	74	48.95	31.46	8.32	35.9	146	347	P	H
		4924	51.43	-2.57	54	47.55	31.46	8.32	35.9	146	347	A	H
		7386	49.36	-24.64	74	39.53	36.08	10.34	36.59	145	274	P	H
		4924	50.98	-23.02	74	47.1	31.46	8.32	35.9	146	347	P	V
		7386	49.31	-24.69	74	39.48	36.08	10.34	36.59	145	274	P	V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												



2.4GHz 2400~2483.5MHz

WIFI 802.11b (Band Edge @ 3m)

Adaptor 1+Battery 3

WIFI	Note	Frequency	Level	Over	Limit	Read	Antenna	Cable	Preamp	Ant	Table	Peak	Pol.
Ant.				Limit	Line	Level	Factor	Loss	Factor	Pos	Pos	Avg.	
1		(MHz)	(dBμV/m)	(dB)	(dBμV/m)	(dBμV)	(dB/m)	(dB)	(dB)	(cm)	(deg)	(P/A)	(H/V)
802.11b CH 11 2462MHz	*	2462	106.74	-	-	109.58	27.48	6.13	36.45	150	11	P	H
	*	2462	102.78	-	-	105.62	27.48	6.13	36.45	150	11	A	H
		2483.92	48.8	-25.2	74	51.54	27.54	6.17	36.45	150	11	P	H
		2483.64	40.05	-13.95	54	42.79	27.54	6.17	36.45	150	11	A	H
	*	2462	106.66	-	-	109.5	27.48	6.13	36.45	150	86	P	V
	*	2462	102.6	-	-	105.44	27.48	6.13	36.45	150	86	A	V
		2483.52	48.57	-25.43	74	51.31	27.54	6.17	36.45	150	86	P	V
		2483.52	39.67	-14.33	54	42.41	27.54	6.17	36.45	150	86	A	V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												

2.4GHz 2400~2483.5MHz

WIFI 802.11b (Harmonic @ 3m)

WIFI	Note	Frequency	Level	Over	Limit	Read	Antenna	Cable	Preamp	Ant	Table	Peak	Pol.
Ant.				Limit	Line	Level	Factor	Loss	Factor	Pos	Pos	Avg.	
1		(MHz)	(dBμV/m)	(dB)	(dBμV/m)	(dBμV)	(dB/m)	(dB)	(dB)	(cm)	(deg)	(P/A)	(H/V)
802.11b CH 11 2462MHz		4924	52.21	-21.79	74	48.33	31.46	8.32	35.9	146	347	P	H
		4924	51.14	-2.86	54	47.26	31.46	8.32	35.9	146	347	A	H
		7386	50.73	-23.27	74	40.9	36.08	10.34	36.59	145	274	P	H
		4924	50.45	-23.55	74	46.57	31.46	8.32	35.9	146	347	P	V
		7386	49.45	-24.55	74	39.62	36.08	10.34	36.59	145	274	P	V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												

**Note symbol**

*	Fundamental Frequency which can be ignored. However, the level of any unwanted emissions shall not exceed the level of the fundamental frequency.
!	Test result is over limit line.
P/A	P eak or A verage
H/V	H orizontal or V ertical



A calculation example for radiated spurious emission is shown as below:

WIFI	Note	Frequency	Level	Over	Limit	Read	Antenna	Cable	Preamp	Ant	Table	Peak	Pol.
Ant.				Limit	Line	Level	Factor	Loss	Factor	Pos	Pos	Avg.	
1		(MHz)	(dBμV/m)	(dB)	(dBμV/m)	(dBμV)	(dB/m)	(dB)	(dB)	(cm)	(deg)	(P/A)	(H/V)
802.11b		2390	55.45	-18.55	74	54.51	32.22	4.58	35.86	103	308	P	H
CH 01													
2412MHz		2390	43.54	-10.46	54	42.6	32.22	4.58	35.86	103	308	A	H

1. Level(dBμV/m) =

Antenna Factor(dB/m) + Cable Loss(dB) + Read Level(dBμV) - Preamp Factor(dB)

2. Over Limit(dB) = Level(dBμV/m) – Limit Line(dBμV/m)

For Peak Limit @ 2390MHz:

1. Level(dBμV/m)

= Antenna Factor(dB/m) + Cable Loss(dB) + Read Level(dBμV) - Preamp Factor(dB)

= 32.22(dB/m) + 4.58(dB) + 54.51(dBμV) – 35.86 (dB)

= 55.45 (dBμV/m)

2. Over Limit(dB)

= Level(dBμV/m) – Limit Line(dBμV/m)

= 55.45(dBμV/m) – 74(dBμV/m)

= -18.55(dB)

For Average Limit @ 2390MHz:

1. Level(dBμV/m)

= Antenna Factor(dB/m) + Cable Loss(dB) + Read Level(dBμV) - Preamp Factor(dB)

= 32.22(dB/m) + 4.58(dB) + 42.6(dBμV) – 35.86 (dB)

= 43.54 (dBμV/m)

2. Over Limit(dB)

= Level(dBμV/m) – Limit Line(dBμV/m)

= 43.54(dBμV/m) – 54(dBμV/m)

= -10.46(dB)

Both peak and average measured complies with the limit line, so test result is “PASS”.