FCC RF Test Report

APPLICANT	:	Motorola Solutions, Inc.
EQUIPMENT	:	Touch Computer
BRAND NAME	:	Motorola
MODEL NAME	:	TC55AH
FCC ID	:	UZ7TC55AH
STANDARD	:	FCC Part 15 Subpart C §15.247
CLASSIFICATION	:	(DTS) Digital Transmission System

The product was received on Jun. 13, 2013 and completely tested on Jul. 21, 2013. We, SPORTON INTERNATIONAL INC., would like to declare that the tested sample has been evaluated in accordance with the procedures and shown the 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 INC., the test report shall not be reproduced except in full.

Louis Wu

Reviewed by: Louis Wu / Manager

Jones Tsai

Approved by: Jones Tsai / Manager

Testing Laboratory 1190

SPORTON INTERNATIONAL INC.
No. 52, Hwa Ya 1st Rd., Hwa Ya Technology Park, Kwei-Shan Hsiang, Tao Yuan Hsien, Taiwan, R.O.C.

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REVISION HISTORY

REPORT NO.	VERSION	DESCRIPTION	ISSUED DATE
FR322304-07C	Rev. 01	Initial issue of report	Aug. 14, 2013

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	≥ 0.5MHz	Pass	-
3.1	-	RSS-Gen 4.6.1	99% Bandwidth	-	Pass	-
3.2	15.247(b)	RSS-210 A8.4	Power Output Measurement	≤ 30dBm	Pass	-
3.3	15.247(e)	RSS-210 A8.2(b)	Power Spectral Density	≤ 8dBm/3kHz	Pass	-
3.4	15.247(d)	RSS-210 A8.5	Conducted Band Edges	≤ 20dBc	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 1.1 dB at 2483.620 MHz
3.6	15.207	RSS-Gen 7.2.4	AC Conducted Emission	15.207(a)	Pass	Under limit 5.40 dB at 13.558 MHz
3.7	15.203 & 15.247(b)	RSS-210 A8.4	Antenna Requirement	N/A	Pass	-

1 General Description

1.1 Applicant

Motorola Solutions, Inc.
One Motorola Plaza, Holtsville, NY 11742-1300 USA

1.2 Manufacturer

Motorola Solutions, Inc.
One Motorola Plaza, Holtsville, NY 11742-1300 USA

1.3 Feature of Equipment Under Test

Product Feature	
Equipment	Touch Computer
Brand Name	Motorola
Model Name	TC55AH
FCC ID	UZ7TC55AH
Sample 1	EUT with Scanner
Sample 2	EUT without Scanner
EUT supports Radios application	GSM/EGPRS/WCDMA/HSPA/LTE WLAN 11abgn / Bluetooth 2.1/3.0/4.0 / NFC
HW Version	DV1
SW Version	Android 4.1.2
FW Version	BSP 1.27
EUT Stage	Identical Prototype

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

1.4 Product Specification of Equipment Under Test

Product Specification subjective to this standard	
Tx/Rx Channel Frequency Range	802.11b/g/n : 2412 MHz ~ 2472 MHz 802.11a/n: 5745~5825MHz.
Maximum Output Power to Antenna	**<2412 MHz ~ 2472 MHz>** 802.11b : 22.02 dBm (0.1592 W) 802.11g : 22.95 dBm (0.1972 W) 802.11n HT20 : 22.84 dBm (0.1923 W) **<5745 MHz ~ 5825 MHz>** 802.11a : 21.24 dBm (0.1330 W) 802.11n HT20 : 21.11 dBm (0.1291 W) 802.11n HT40 : 20.71 dBm (0.1178 W)
99% Occupied Bandwidth	**<2412 MHz ~ 2472 MHz>** 802.11b : 14.40MHz 802.11g : 20.30MHz 802.11n HT20 : 19.85MHz **<5745 MHz ~ 5825 MHz>** 802.11a : 22.80MHz 802.11n HT20 : 21.55MHz 802.11n HT40 : 36.90MHz
Antenna Type	802.11b/g/n : PIFA Antenna type with gain 0.37 dBi(Battery1) PIFA Antenna type with gain 0.24 dBi(Battery2) 802.11a/n : PIFA Antenna type with gain 0.81 dBi(Battery1) PIFA Antenna type with gain 1.30 dBi(Battery2)
Type of Modulation	802.11b : DSSS (DBPSK / DQPSK / CCK) 802.11a/g/n : OFDM (BPSK / QPSK / 16QAM / 64QAM)

The wifi antenna is not changed while using battery cover 1 or 2. The antenna gain difference is due to antenna gain measurement result by using different battery covers.

1.5 Modification of EUT

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

1.6 Testing Site

Test Site	SPORTON INTERNATIONAL INC.			
Test Site Location	No. 52, Hwa Ya 1st Rd., Hwa Ya Technology Park, Kwei-Shan Hsiang, Tao Yuan Hsien, Taiwan, R.O.C. TEL: +886-3-3273456 / FAX: +886-3-3284978			
Test Site No.	Sporton Site No.			FCC/IC Registration No.
	TH02-HY	CO05-HY	03CH07-HY	722060/4086B-1

Note: The test site complies with ANSI C63.4 2003 requirement.

1.7 Applied 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 v03r01
- ANSI C63.10-2009

Remark:

1. All test items were verified and recorded according to the standards and without any deviation during the test.
2. This EUT has also been tested and complied with the requirements of FCC Part 15, Subpart B, recorded in a separate test report.

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). For radiated measurement, pre-scanned in three orthogonal panels, X, Y, Z was recorded in this report.

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	8	2447
	2	2417	9	2452
	3	2422	10	2457
	4	2427	11	2462
	5	2432	12	2467
	6	2437	13	2472
	7	2442		

Frequency Band	Channel	Freq. (MHz)	Channel	Freq. (MHz)
5725-5850 MHz Band 4	149	5745	159	5795
	151	5755	161	5805
	153	5765	165	5825
	157	5785	-	-

2.2 RF Power

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

Channel	Frequency	2.4GHz 802.11b RF Power (dBm)			
		DSSS Data Rate			
		1 Mbps	2 Mbps	5.5 Mbps	11 Mbps
CH 01	2412MHz	21.64	21.48	21.52	21.57
CH 02	2417MHz	21.47	21.37	21.36	21.38
CH 06	2437MHz	21.72	21.59	21.63	21.66
CH 07	2442MHz	**22.02**	21.92	21.88	21.94
CH 11	2462MHz	20.12	20.09	20.07	20.11
CH 12	2467MHz	17.94	17.90	17.88	17.93
CH 13	2472MHz	12.66	12.62	12.58	12.65

Channel	Frequency	2.4GHz 802.11g RF Power (dBm)							
		OFDM Data Rate							
		6 Mbps	9 Mbps	12 Mbps	18 Mbps	24 Mbps	36 Mbps	48 Mbps	54 Mbps
CH 01	2412MHz	22.27	22.17	22.26	22.16	22.25	22.19	22.20	22.15
CH 02	2417MHz	22.84	22.73	22.80	22.72	22.78	22.75	22.77	22.74
CH 06	2437MHz	**22.95**	22.87	22.86	22.91	22.86	22.91	22.86	22.89
CH 07	2442MHz	22.89	22.81	22.86	22.74	22.88	22.76	22.81	22.85
CH 11	2462MHz	21.14	21.03	21.09	21.04	21.11	21.06	21.09	21.02
CH 12	2467MHz	19.31	19.26	19.21	19.26	19.22	19.14	19.30	19.28
CH 13	2472MHz	7.36	7.26	7.30	7.26	7.26	7.24	7.28	7.34

Channel	Frequency	2.4GHz 802.11n HT20 RF Power (dBm)							
		OFDM Data Rate							
		MCS0	MCS1	MCS2	MCS3	MCS4	MCS5	MCS6	MCS7
CH 01	2412MHz	21.68	21.56	21.62	21.66	21.54	21.53	21.63	21.59
CH 02	2417MHz	22.75	22.59	22.61	22.72	22.68	22.64	22.70	22.68
CH 06	2437MHz	**22.84**	22.81	22.76	22.71	22.75	22.78	22.74	22.79
CH 07	2442MHz	22.79	22.74	22.71	22.68	22.73	22.75	22.68	22.64
CH 11	2462MHz	20.34	20.22	20.19	20.23	20.26	20.28	20.32	20.21
CH 12	2467MHz	18.87	18.76	18.81	18.78	18.72	18.81	18.83	18.79
CH 13	2472MHz	6.57	6.48	6.50	6.41	6.37	6.41	6.21	6.39

Channel	Frequency	5GHz 802.11a RF Power (dBm)							
		OFDM Data Rate							
		6 Mbps	9 Mbps	12 Mbps	18 Mbps	24 Mbps	36 Mbps	48 Mbps	54 Mbps
CH149	5745MHz	21.02	20.89	20.91	20.92	20.83	20.97	20.92	20.86
CH157	5785MHz	21.19	21.02	21.08	21.05	21.16	21.13	21.03	21.11
CH165	5825MHz	**21.24**	21.16	21.08	21.11	21.02	21.01	21.06	21.12

Channel	Frequency	5GHz 802.11n HT20 RF Power (dBm)							
		OFDM Data Rate							
		MCS0	MCS1	MCS2	MCS3	MCS4	MCS5	MCS6	MCS7
CH149	5745MHz	20.93	20.86	20.74	20.79	20.81	20.82	20.79	20.75
CH157	5785MHz	**21.11**	20.93	20.96	20.89	20.92	20.96	20.84	20.88
CH165	5825MHz	21.04	20.86	20.81	20.86	20.89	20.96	20.82	20.87

Channel	Frequency	5GHz 802.11n HT40 RF Power (dBm)							
		OFDM Data Rate							
		MCS0	MCS1	MCS2	MCS3	MCS4	MCS5	MCS6	MCS7
CH 151	5755MHz	**20.71**	20.61	20.52	20.56	20.61	20.66	20.59	20.51
CH 159	5795MHz	20.68	20.58	20.54	20.58	20.49	20.64	20.58	20.54

Remark: The EUT is programmed to transmit signals continuously for all testing.

2.3 Average Conducted Output Power

The conducted power tables are as follow.

Channel	Frequency	2.4GHz 802.11b RF Power (dBm)			
		DSSS Data Rate			
		1 Mbps	2 Mbps	5.5 Mbps	11 Mbps
CH 01	2412MHz	19.40	19.24	19.36	19.39
CH 02	2417MHz	19.21	19.12	19.17	19.04
CH 06	2437MHz	19.64	19.46	19.60	19.48
CH 07	2442MHz	20.00	19.87	19.98	19.96
CH 11	2462MHz	17.61	17.52	17.58	17.60
CH 12	2467MHz	15.23	15.21	15.20	15.17
CH 13	2472MHz	9.78	9.74	9.72	9.72

Channel	Frequency	2.4GHz 802.11g RF Power (dBm)							
		OFDM Data Rate							
		6 Mbps	9 Mbps	12 Mbps	18 Mbps	24 Mbps	36 Mbps	48 Mbps	54 Mbps
CH 01	2412MHz	14.40	14.13	14.21	14.22	14.22	14.38	14.35	14.33
CH 02	2417MHz	16.30	16.10	16.18	16.05	16.03	16.18	16.14	16.23
CH 06	2437MHz	17.68	17.61	17.64	17.55	17.51	17.64	17.65	17.60
CH 07	2442MHz	17.53	17.52	17.50	17.49	17.47	17.47	17.50	17.49
CH 11	2462MHz	11.92	11.86	11.86	11.84	11.91	11.85	11.88	11.81
CH 12	2467MHz	9.93	9.66	9.72	9.91	9.82	9.85	9.89	9.82
CH 13	2472MHz	-1.99	-1.91	-1.72	-1.58	-1.44	-1.14	-0.92	-0.73

Channel	Frequency	2.4GHz 802.11n HT20 RF Power (dBm)							
		OFDM Data Rate							
		MCS0	MCS1	MCS2	MCS3	MCS4	MCS5	MCS6	MCS7
CH 01	2412MHz	13.02	13.00	12.78	12.81	12.81	12.76	12.87	12.86
CH 02	2417MHz	15.31	15.19	15.21	15.30	15.26	15.26	15.23	15.26
CH 06	2437MHz	16.96	16.91	16.91	16.89	16.85	16.85	16.90	16.89
CH 07	2442MHz	16.69	16.67	16.55	16.62	16.64	16.61	16.61	16.68
CH 11	2462MHz	10.75	10.70	10.71	10.64	10.74	10.62	10.71	10.74
CH 12	2467MHz	8.94	8.82	8.85	8.89	8.93	8.86	8.91	8.90
CH 13	2472MHz	-2.74	-2.44	-2.29	-2.00	-1.69	-1.56	-1.28	-1.17

Channel	Frequency	5GHz 802.11a RF Power (dBm)							
		OFDM Data Rate							
		6 Mbps	9 Mbps	12 Mbps	18 Mbps	24 Mbps	36 Mbps	48 Mbps	54 Mbps
CH149	5745MHz	16.56	16.45	16.40	16.40	16.46	16.51	16.44	16.42
CH157	5785MHz	16.97	16.72	16.70	16.58	16.57	16.64	16.68	16.66
CH165	5825MHz	16.90	16.77	16.72	16.78	16.79	16.65	16.66	16.70

Channel	Frequency	5GHz 802.11n HT20 RF Power (dBm)							
		OFDM Data Rate							
		MCS0	MCS1	MCS2	MCS3	MCS4	MCS5	MCS6	MCS7
CH149	5745MHz	15.95	15.87	15.88	15.85	15.93	15.92	15.91	15.90
CH157	5785MHz	15.99	15.91	15.90	15.89	15.98	15.94	15.95	15.93
CH165	5825MHz	15.97	15.71	15.73	15.75	15.83	15.71	15.69	15.78

Channel	Frequency	5GHz 802.11n HT40 RF Power (dBm)							
		OFDM Data Rate							
		MCS0	MCS1	MCS2	MCS3	MCS4	MCS5	MCS6	MCS7
CH 151	5755MHz	14.47	14.41	14.32	14.30	14.38	14.20	14.44	14.45
CH 159	5795MHz	14.38	14.36	14.24	14.28	14.35	14.26	14.29	14.31

2.4 Test Mode

Final results of test modes, data rates and test channels are shown as following table.

<2.4GHz>

Test Cases						
	Test Items	Mode	Data Rate	Test Channel	Note	Test Plane
Conducted TCs	6dB and 99% BW Power Spectral Density	802.11b	1 Mbps	1/6/11	-	-
		802.11g	6 Mbps	1/6/11	-	-
		802.11n HT20	MCS0	1/6/11	-	-
	Output Power	802.11b	1 Mbps	1/2/6/7/11/12/13	-	-
		802.11g	6 Mbps	1/2/6/7/11/12/13	-	-
		802.11n HT20	MCS0	1/2/6/7/11/12/13	-	-
	Conducted Band Edge	802.11b	1 Mbps	1/11	-	-
		802.11g	6 Mbps	1/11	-	-
		802.11n HT20	MCS0	1/11	-	-
	Conducted Spurious Emission	802.11b	1 Mbps	1/6/11	-	-
		802.11g	6 Mbps	1/6/11	-	-
		802.11n HT20	MCS0	1/6/11	-	-
Radiated TCs	Radiated Band Edge	802.11b	1 Mbps	1/2/11/12/13	Sample 1 with Battery 2	X
		802.11g	6 Mbps	1/2/11/12/13	Sample 1 with Battery 2	X
		802.11n HT20	MCS0	1/2/11/12/13	Sample 1 with Battery 2	X
				13	Sample 1 with Battery 1	Y
				13	Sample 2 with Battery 2	Y
	Radiated Spurious Emission	802.11b	1 Mbps	1/6/11	Sample 1 with Battery 2	X
		802.11g	6 Mbps	1/6/11	Sample 1 with Battery 2	X
		802.11n HT20	MCS0	1/6/11	Sample 1 with Battery 2	X

Note: After pre-scanned the EUT by rotating three orthogonal orientations and configuring with possible used accessories, the radiated spurious emissions were mainly tested by sample 1 + Battery 2, and verified Radiated Band edge(s) on worst channels listed above.

<5GHz>

Test Cases						
	Test Items	Mode	Data Rate	Test Channel	Note	Test Plane
Conducted TCs	6dB and 99% BW Power Spectral Density	802.11a	6 Mbps	149/157/165	-	-
		802.11n HT20	MCS0	149/157/165	-	-
		802.11n HT40	MCS0	151/159	-	-
	Output Power	802.11a	6 Mbps	149/157/165	-	-
		802.11n HT20	MCS0	149/157/165	-	-
		802.11n HT40	MCS0	151/159	-	-
	Conducted Band Edge	802.11a	6 Mbps	149/165	-	-
		802.11n HT20	MCS0	149/165	-	-
		802.11n HT40	MCS0	151/159	-	-
	Conducted Spurious Emission	802.11a	6 Mbps	149/157/165	-	-
		802.11n HT20	MCS0	149/157/165	-	-
		802.11n HT40	MCS0	151/159	-	-
Radiated TCs	Radiated Band Edge	802.11a	6 Mbps	149/165	Sample 1 with Battery 2	X
				149	Sample 1 with Battery 1	X
				149	Sample 2 with Battery 1	X
		802.11n HT20	MCS0	149/165	Sample 1 with Battery 2	X
		802.11n HT40	MCS0	151/159	Sample 1 with Battery 2	X
	Radiated Spurious Emission	802.11a	6 Mbps	149/157/165	Sample 1 with Battery 2	X
				149	Sample 1 with Battery 1	X
				149	Sample 2 with Battery 1	X
		802.11n HT20	MCS0	149/157/165	Sample 1 with Battery 2	X
		802.11n HT40	MCS0	151/159	Sample 1 with Battery 2	X

Note: After pre-scanned the EUT by rotating three orthogonal orientations and configuring with possible used accessories, the radiated spurious emissions were mainly tested by sample 1 + Battery 2, and verified Radiated Band edge(s) on worst channels listed above.

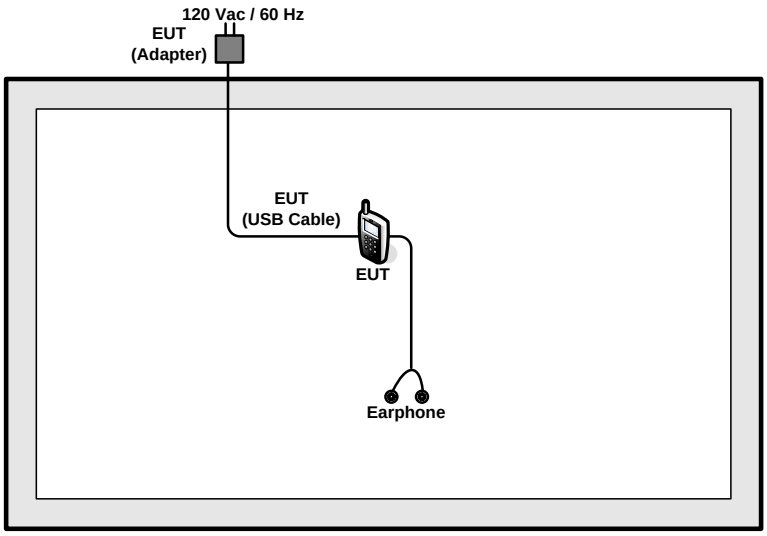
Test Cases	
AC Conducted Emission	Mode 1 : GSM850 Idle + Bluetooth Link + WLAN (2.4G) Link + NFC active + Scanner + Battery 2 + USB Cable (USB File transfer) for Sample 1 Mode 2 : WCDMA band V Idle + Bluetooth Link + WLAN (5G) Link + NFC active + Scanner + Battery 1 + USB Cable (USB File transfer) for Sample 1 Mode 3 : LTE Band 5 Idle + Bluetooth Link + WLAN (5G) Link + NFC active + Battery 1 + USB Cable (USB File transfer) for Sample 2

Remark:

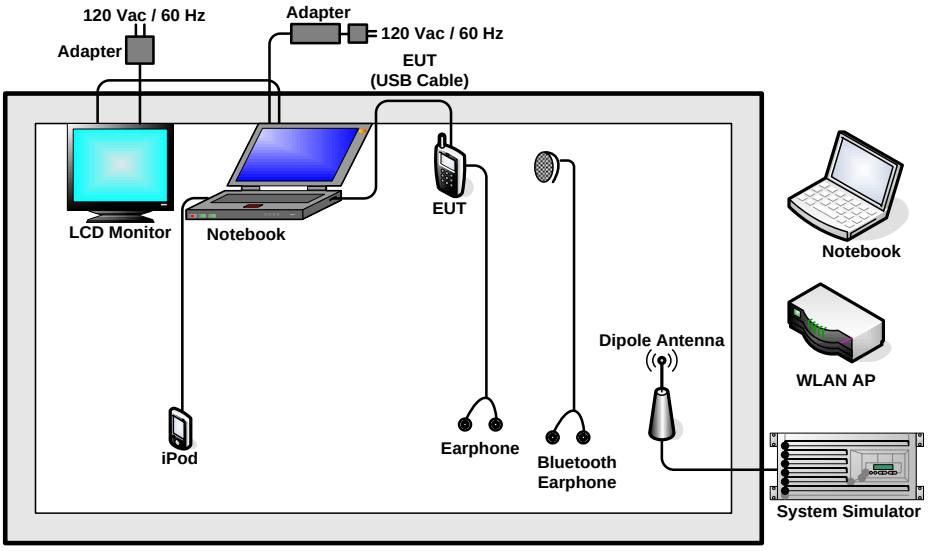
1. "Bluetooth Link" means EUT linked with Bluetooth headset.
2. "WLAN Link" means EUT associated with AP at 2.4GHz or 5GHz band.
3. "Scanner" means scanning and decoding a barcode by scanner.
4. "USB File transfer" means data application transferred mode between EUT and Notebook through USB port.
5. "NFC active" means turning on NFC function of EUT.

2.5 Connection Diagram of Test System

<WLAN Tx Mode>



<AC Conducted Emission Mode>



2.6 Support Unit used in test configuration and system

Item	Equipment	Trade Name	Model Name	FCC ID	Data Cable	Power Cord
1.	System Simulator	R&S	CMU 200	N/A	N/A	Unshielded, 1.8 m
2.	LTE Base Station	Anritsu	MT8820C	N/A	N/A	Unshielded, 1.8 m
3.	WLAN AP	D-Link	DIR-628	KA2DIR628A2	N/A	Unshielded, 1.8 m
4.	Notebook	DELL	Latitude E6320	FCC DoC	N/A	AC I/P: Unshielded, 1.2 m DC O/P: Shielded, 1.8 m
5.	LCD Monitor	DELL	U2410	FCC DoC	Shielded, 1.6 m	Unshielded, 1.8 m
6.	Bluetooth Earphone	Sony Ericsson	MW600	PY7DDA-2029	N/A	N/A
7.	iPod	Apple	A1285	FCC DoC	Shielded, 1.0 m	N/A
8.	SD Card	SanDisk	MicroSD HC	FCC DoC	N/A	N/A
9.	Earphone	Cotron	MAX-300	N/A	Unshielded, 1.2 m	N/A

2.7 Description of RF Function Operation Test Setup

For WLAN function, programmed RF utility, “ADB” installed in the notebook make the EUT provides functions like channel selection and power level for continuous transmitting and receiving signals.

2.8 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 4.2 dB and 10dB attenuator.

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

= 4.2 + 10 = 14.2 (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.

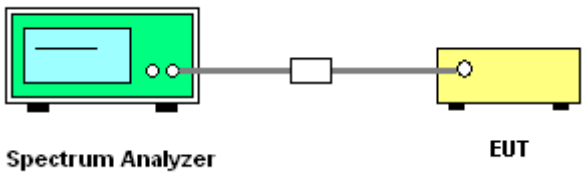
3.1.2 Measuring Instruments

See list of measuring instruments of this test report.

3.1.3 Test Procedures

1. The testing follows FCC KDB Publication No. 558074 DTS D01 Meas. Guidance v03r01.
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

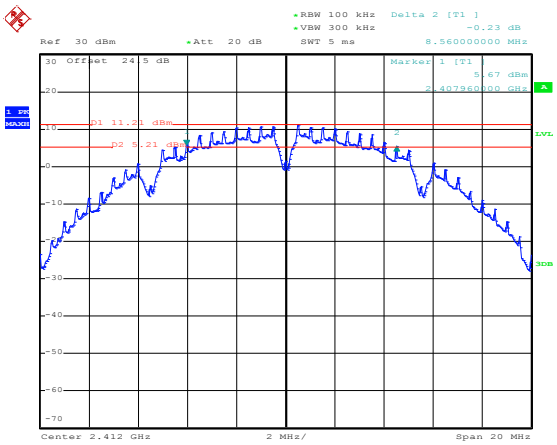
Test Band :	2.4GHz + 5GHz band 4	Temperature :	24-26℃
Test Engineer :	Jun Yang	Relative Humidity :	50-53%

Mod.	Data Rate	N_{TX}	Channel	Freq. (MHz)	99% Bandwidth (MHz)	6dB Bandwidth (MHz)	6dB Bandwidth Min. Limit (MHz)	Pass/Fail
11b	1Mbps	1	1	2412	14.15	8.56	0.5	Pass
11b	1Mbps	1	6	2437	14.40	9.00	0.5	Pass
11b	1Mbps	1	11	2462	13.70	8.56	0.5	Pass
11g	6Mbps	1	1	2412	18.45	16.32	0.5	Pass
11g	6Mbps	1	6	2437	20.30	16.36	0.5	Pass
11g	6Mbps	1	11	2462	18.25	16.36	0.5	Pass
HT20	MCS0	1	1	2412	19.05	17.58	0.5	Pass
HT20	MCS0	1	6	2437	19.85	17.60	0.5	Pass
HT20	MCS0	1	11	2462	19.00	17.56	0.5	Pass

Mod.	Data Rate	N_{TX}	Channel	Freq. (MHz)	99% Bandwidth (MHz)	6dB Bandwidth (MHz)	6dB Bandwidth Min. Limit (MHz)	Pass/Fail
11a	6Mbps	1	149	5745	22.80	16.32	0.5	Pass
11a	6Mbps	1	157	5785	21.15	16.32	0.5	Pass
11a	6Mbps	1	165	5825	20.80	16.32	0.5	Pass
HT20	MCS0	1	149	5745	21.55	17.56	0.5	Pass
HT20	MCS0	1	157	5785	19.85	17.54	0.5	Pass
HT20	MCS0	1	165	5825	20.35	17.60	0.5	Pass
HT40	MCS0	1	151	5755	36.90	35.72	0.5	Pass
HT40	MCS0	1	159	5795	36.90	35.68	0.5	Pass

6dB Bandwidth

802.11b CH01 2412MHz



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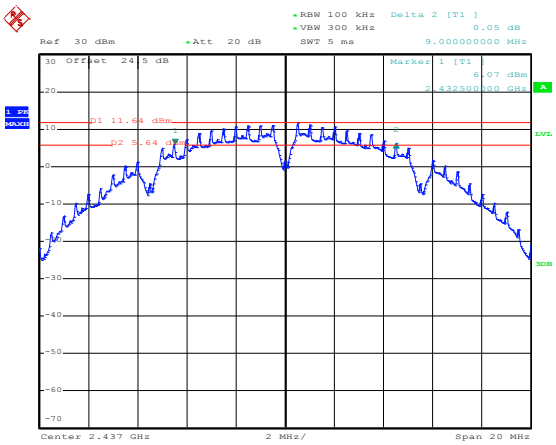
802.11b CH06 2437MHz



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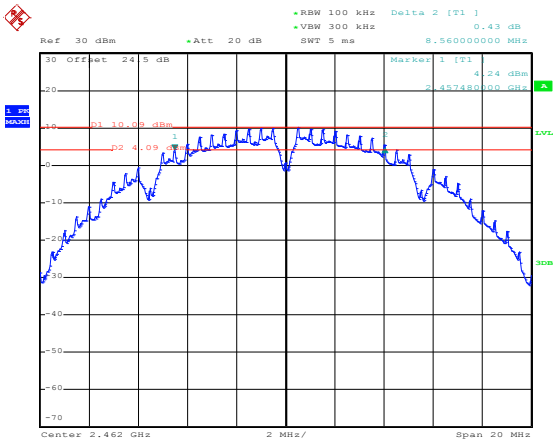
802.11b CH11 2462MHz



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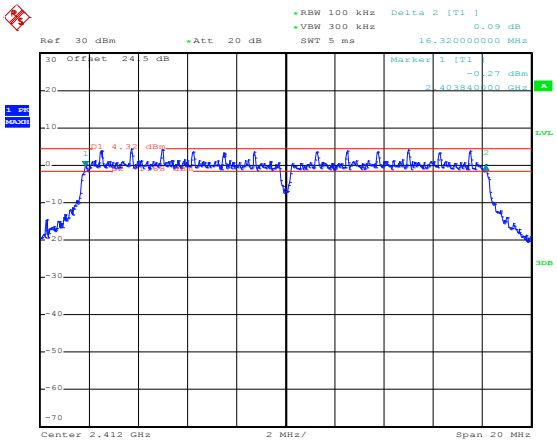
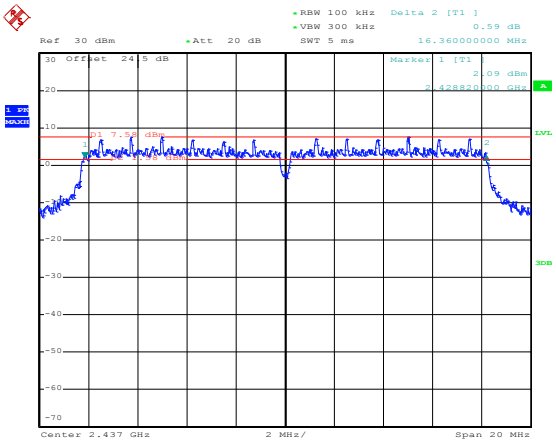
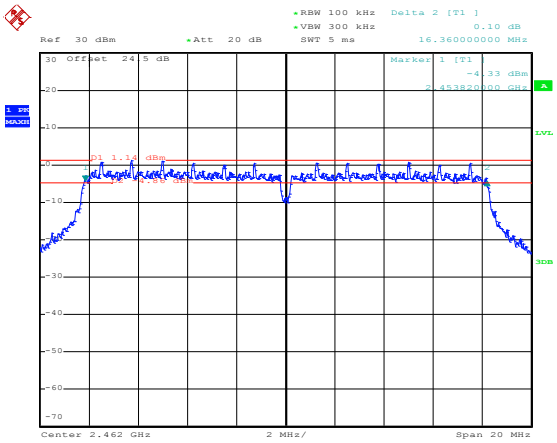
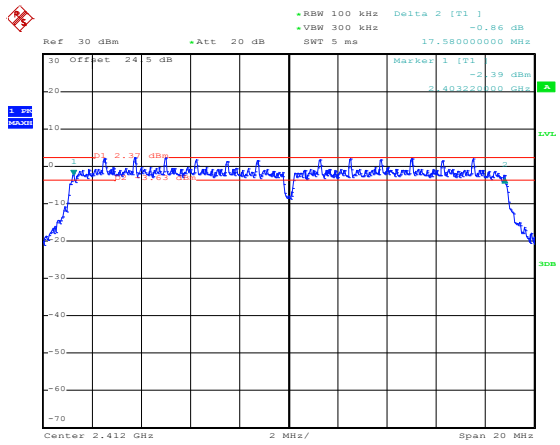
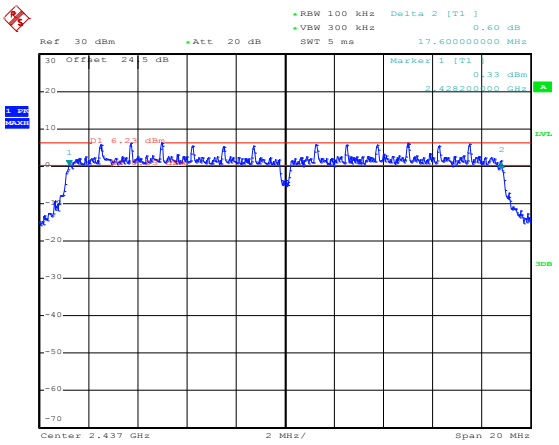
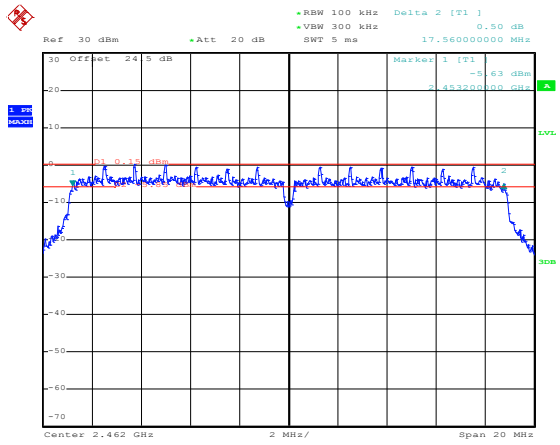
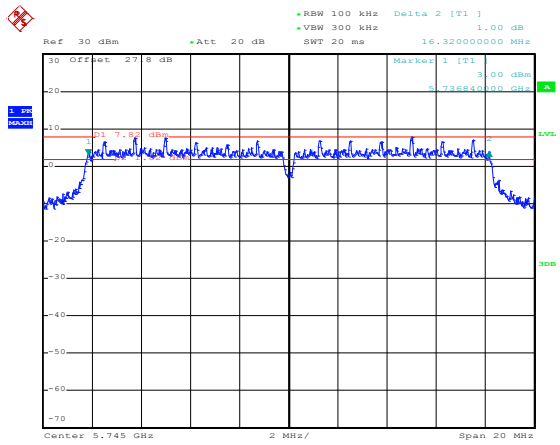
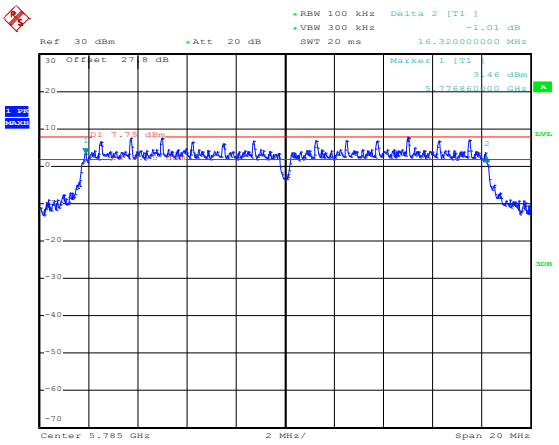
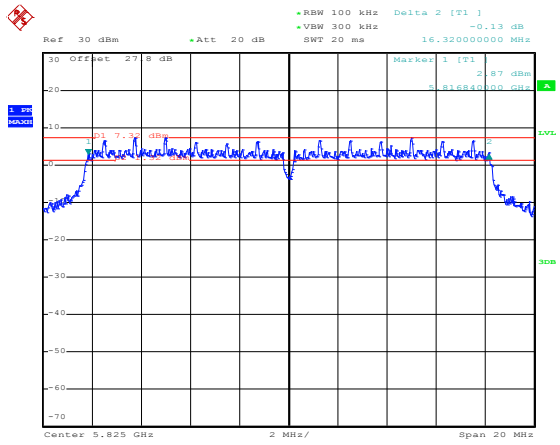
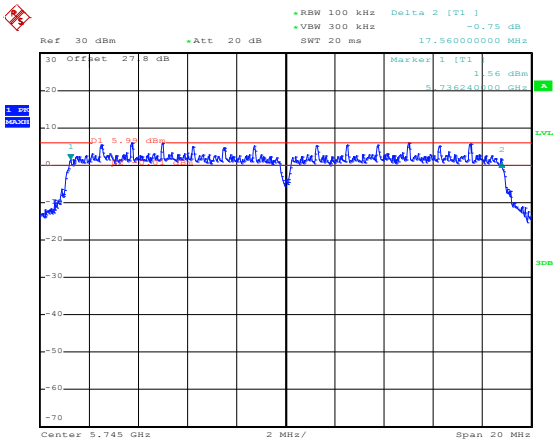
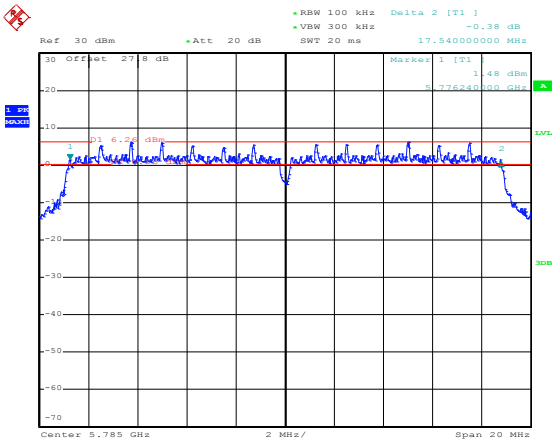
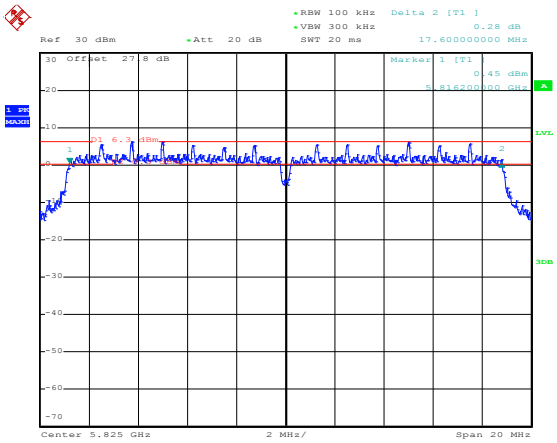
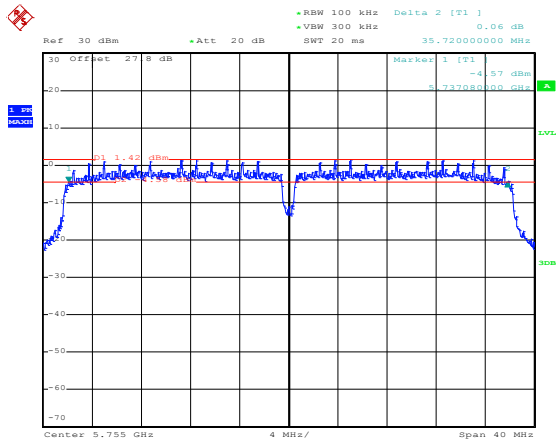
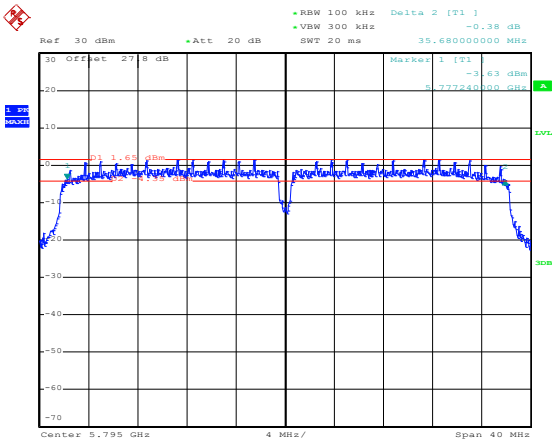
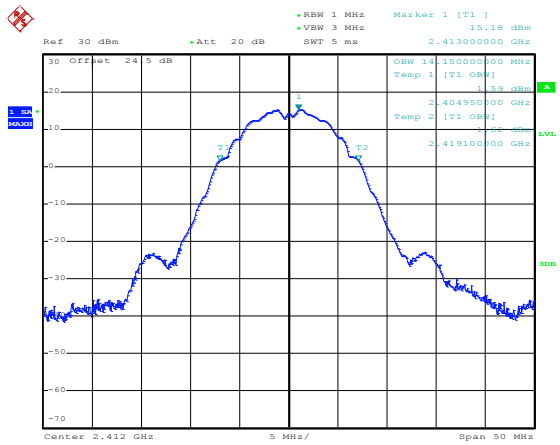
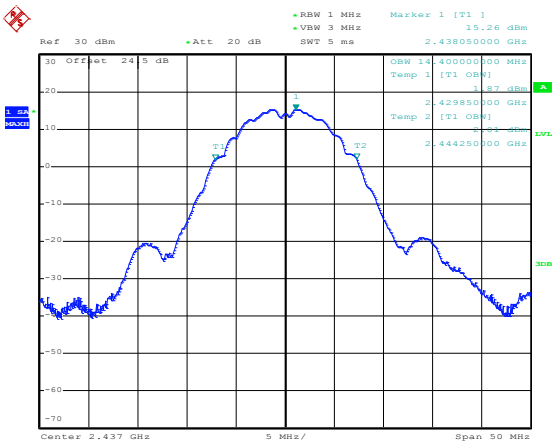
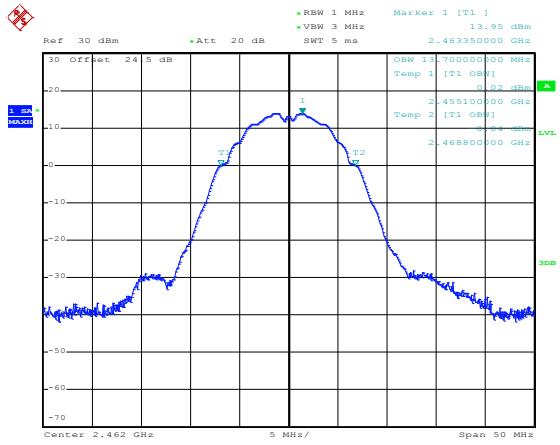
802.11g CH01 2412MHz	802.11g CH06 2437MHz
 Date: 26.JUN.2013 17:43:23	 Date: 26.JUN.2013 17:51:45
802.11g CH11 2462MHz	
 Date: 26.JUN.2013 17:58:26	

802.11n HT20 CH01 2412MHz	802.11n HT20 CH06 2437MHz
 Date: 26.JUN.2013 18:03:36	 Date: 26.JUN.2013 18:11:47
802.11n HT20 CH11 2462MHz	
 Date: 26.JUN.2013 18:15:45	

802.11a CH149 5745MHz	802.11a CH157 5785MHz
 Date: 26.JUN.2013 18:28:22	 Date: 26.JUN.2013 18:33:41
802.11a CH165 5825MHz	
 Date: 26.JUN.2013 18:57:10	

802.11a/n HT20 CH149 5745MHz	802.11a/n HT20 CH157 5785MHz
 Date: 26.JUN.2013 19:09:14	 Date: 26.JUN.2013 19:34:32
802.11a/n HT20 CH165 5825MHz	
 Date: 26.JUN.2013 19:37:58	

802.11a/n HT40 CH151 5755MHz	802.11a/n HT40 CH159 5795MHz
 Date: 26.JUN.2013 19:44:16	 Date: 26.JUN.2013 19:49:16

99% Occupied Bandwidth	
802.11b CH01 2412MHz	802.11b CH06 2437MHz
	
Date: 26.JUN.2013 17:28:47	Date: 26.JUN.2013 17:32:57
802.11b CH11 2462MHz	
	
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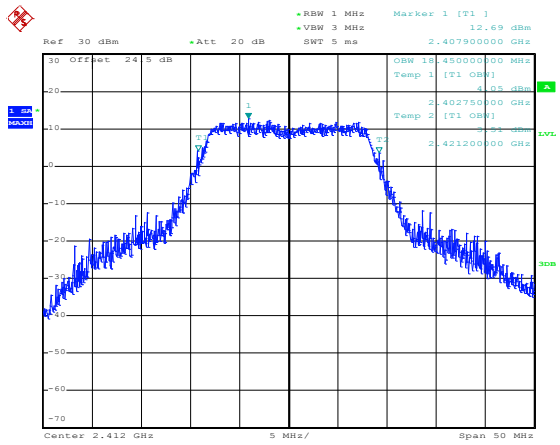
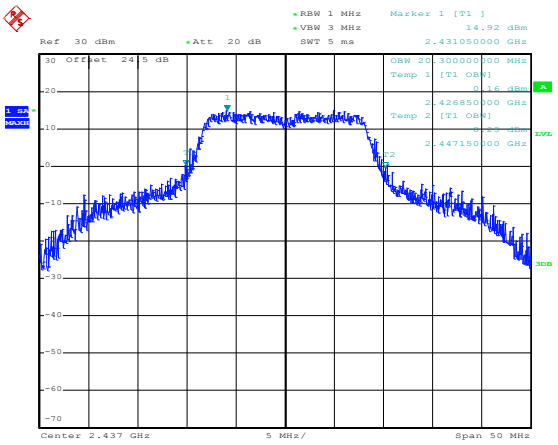
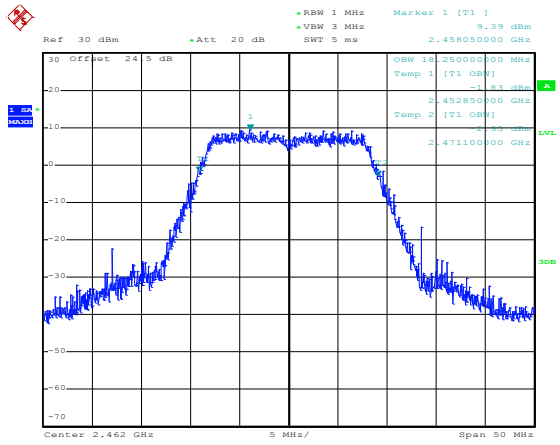
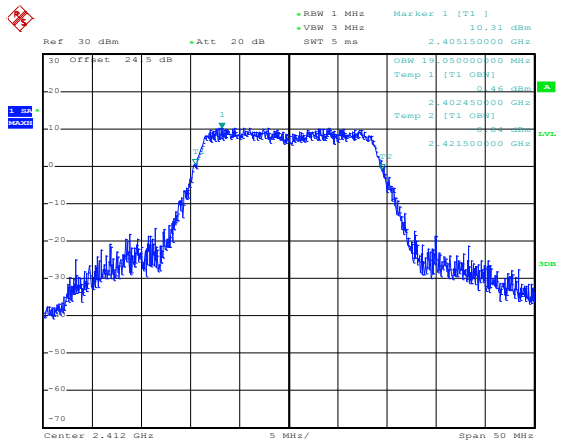
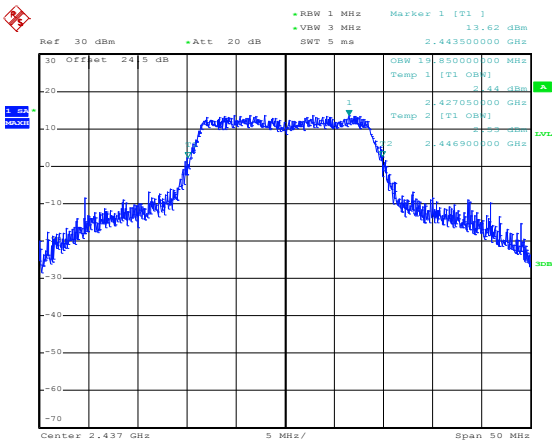
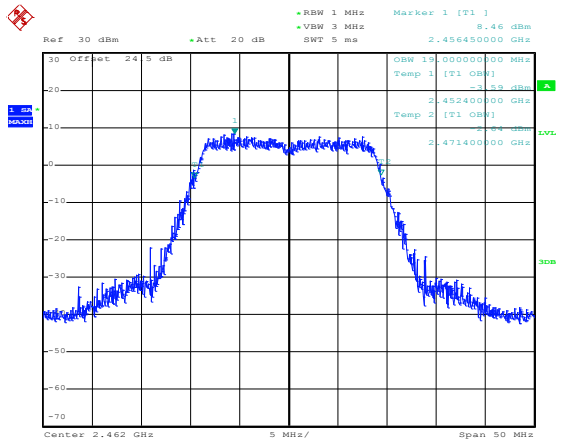
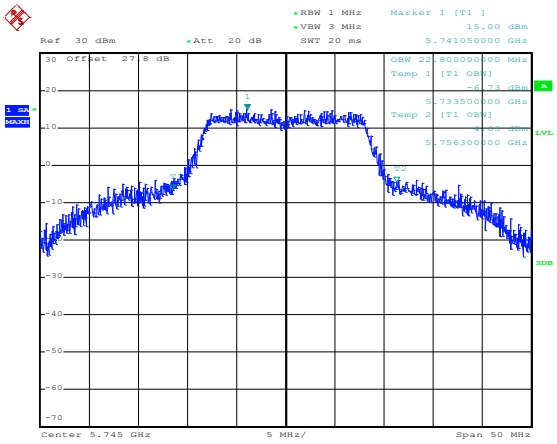
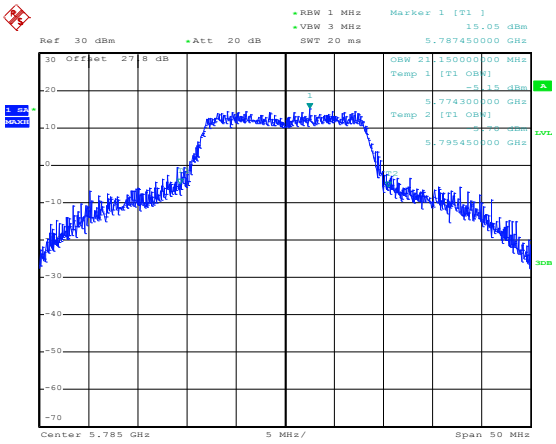
802.11g CH01 2412MHz	802.11g CH06 2437MHz
 Date: 26.JUN.2013 17:45:21	 Date: 26.JUN.2013 17:54:58
802.11g CH11 2462MHz	
 Date: 26.JUN.2013 18:00:17	

802.11n HT20 CH01 2412MHz	802.11n HT20 CH06 2437MHz
	
802.11n HT20 CH11 2462MHz	
	

802.11a CH149 5745MHz	802.11a CH157 5785MHz
	
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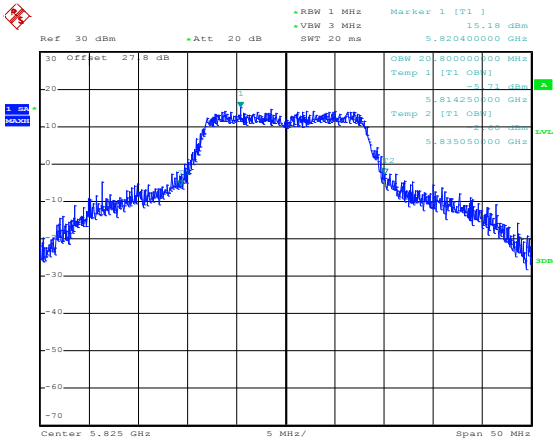
802.11a CH165 5825MHz	
	
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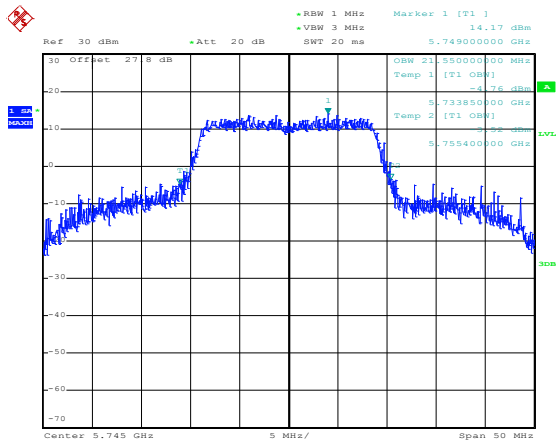
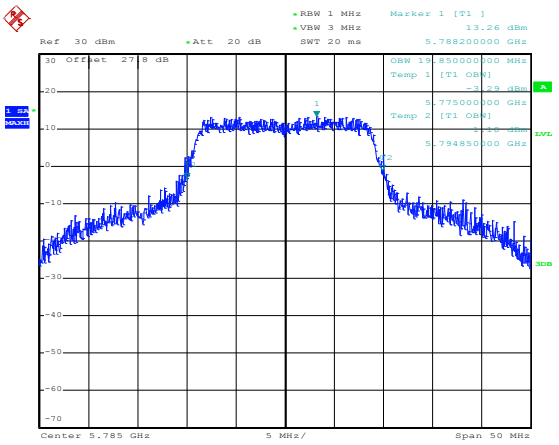
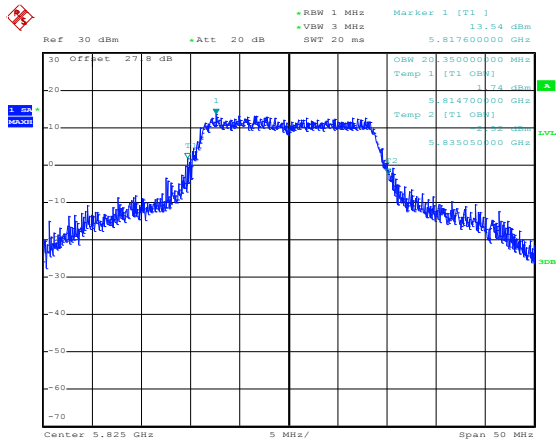
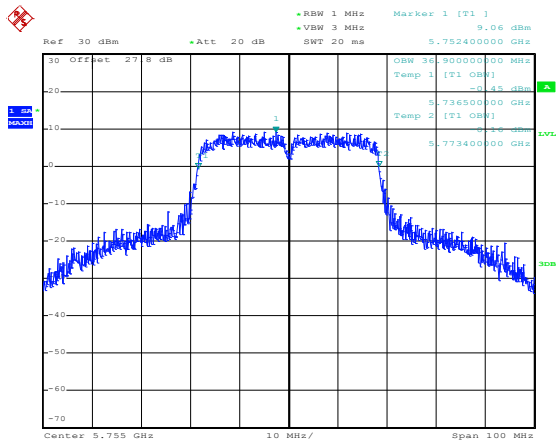
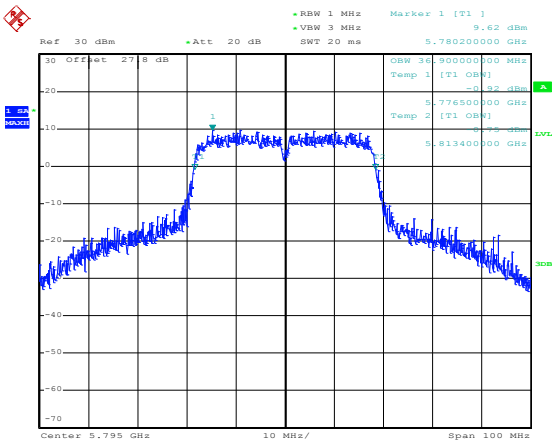
802.11a/n HT20 CH149 5745MHz	802.11a/n HT20 CH157 5785MHz
	
802.11a/n HT20 CH165 5825MHz	
	

802.11a/n HT40 CH151 5755MHz	802.11a/n HT40 CH159 5795MHz
	
Date: 26.JUN.2013 19:46:06	Date: 26.JUN.2013 19:51:11

3.2 Output Power Measurement

3.2.1 Limit of Output Power

For systems using digital modulation in the 2400-2483.5MHz and 5725-5850MHz, 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.

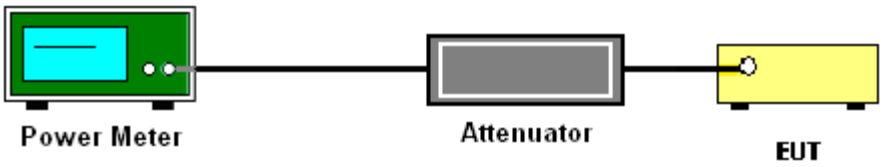
3.2.2 Measuring Instruments

See list of measuring instruments 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 v03r01.
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.

3.2.4 Test Setup



3.2.5 Test Result of Peak Output Power

Test Mode :	2.4GHz + 5GHz band 4	Temperature :	24-26℃
Test Engineer :	Jun Yang	Relative Humidity :	50-53%

Mod.	Data Rate	N_{TX}	Channel	Freq. (MHz)	RF Output Power (dBm)	Power Limit (dBm)	DG (dBi)	Pass/Fail
11b	1Mbps	1	1	2412	21.64	30	0.37	Pass
11b	1Mbps	1	2	2417	21.47	30	0.37	Pass
11b	1Mbps	1	6	2437	21.72	30	0.37	Pass
11b	1Mbps	1	7	2442	22.02	30	0.37	Pass
11b	1Mbps	1	11	2462	20.12	30	0.37	Pass
11b	1Mbps	1	12	2467	17.94	30	0.37	Pass
11b	1Mbps	1	13	2472	12.66	30	0.37	Pass
11g	6Mbps	1	1	2412	22.27	30	0.37	Pass
11g	6Mbps	1	2	2417	22.84	30	0.37	Pass
11g	6Mbps	1	6	2437	22.95	30	0.37	Pass
11g	6Mbps	1	7	2442	22.89	30	0.37	Pass
11g	6Mbps	1	11	2462	21.14	30	0.37	Pass
11g	6Mbps	1	12	2467	19.31	30	0.37	Pass
11g	6Mbps	1	13	2472	7.36	30	0.37	Pass
HT20	MCS0	1	1	2412	21.68	30	0.37	Pass
HT20	MCS0	1	2	2417	22.75	30	0.37	Pass
HT20	MCS0	1	6	2437	22.84	30	0.37	Pass
HT20	MCS0	1	7	2442	22.79	30	0.37	Pass
HT20	MCS0	1	11	2462	20.34	30	0.37	Pass
HT20	MCS0	1	12	2467	18.87	30	0.37	Pass
HT20	MCS0	1	13	2472	6.57	30	0.37	Pass

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

Mod.	Data Rate	N_{TX}	Channel	Freq. (MHz)	RF Output Power (dBm)	Power Limit (dBm)	DG (dBi)	Pass/Fail
11a	6Mbps	1	149	5745	21.02	30	1.30	Pass
11a	6Mbps	1	157	5785	21.19	30	1.30	Pass
11a	6Mbps	1	165	5825	21.24	30	1.30	Pass
HT20	MCS0	1	149	5745	20.93	30	1.30	Pass
HT20	MCS0	1	157	5785	21.11	30	1.30	Pass
HT20	MCS0	1	165	5825	21.04	30	1.30	Pass
HT40	MCS0	1	151	5755	20.71	30	1.30	Pass
HT40	MCS0	1	159	5795	20.68	30	1.30	Pass

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

3.2.6 Test Result of Average output Power (Reporting Only)

Test Mode :	2.4GHz + 5GHz band 4	Temperature :	24-26℃
Test Engineer :	Jun Yang	Relative Humidity :	50-53%

Mod.	Data Rate	N_{TX}	Channel	Freq. (MHz)	Duty Factor (dB)	Average Output Power (dBm)	Power Limit (dBm)	DG (dBi)	Pass/Fail
11b	1Mbps	1	1	2412	0.10	19.40	30	0.37	Pass
11b	1Mbps	1	2	2417	0.10	19.21	30	0.37	Pass
11b	1Mbps	1	6	2437	0.10	19.64	30	0.37	Pass
11b	1Mbps	1	7	2442	0.10	20.00	30	0.37	Pass
11b	1Mbps	1	11	2462	0.10	17.61	30	0.37	Pass
11b	1Mbps	1	12	2467	0.10	15.23	30	0.37	Pass
11b	1Mbps	1	13	2472	0.10	9.78	30	0.37	Pass
11g	6Mbps	1	1	2412	0.59	14.40	30	0.37	Pass
11g	6Mbps	1	2	2417	0.59	16.30	30	0.37	Pass
11g	6Mbps	1	6	2437	0.59	17.68	30	0.37	Pass
11g	6Mbps	1	7	2442	0.59	17.53	30	0.37	Pass
11g	6Mbps	1	11	2462	0.59	11.92	30	0.37	Pass
11g	6Mbps	1	12	2467	0.59	9.93	30	0.37	Pass
11g	6Mbps	1	13	2472	0.59	-1.99	30	0.37	Pass
HT20	MCS0	1	1	2412	0.63	13.02	30	0.37	Pass
HT20	MCS0	1	2	2417	0.63	15.31	30	0.37	Pass
HT20	MCS0	1	6	2437	0.63	16.96	30	0.37	Pass
HT20	MCS0	1	7	2442	0.63	16.69	30	0.37	Pass
HT20	MCS0	1	11	2462	0.63	10.75	30	0.37	Pass
HT20	MCS0	1	12	2467	0.63	8.94	30	0.37	Pass
HT20	MCS0	1	13	2472	0.63	-2.74	30	0.37	Pass

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

Mod.	Data Rate	N_{TX}	Channel	Freq. (MHz)	Duty Factor (dB)	Average Output Power (dBm)	Power Limit (dBm)	DG (dBi)	Pass/Fail
11a	6Mbps	1	149	5745	0.59	16.56	30	1.30	Pass
11a	6Mbps	1	157	5785	0.59	16.97	30	1.30	Pass
11a	6Mbps	1	165	5825	0.59	16.90	30	1.30	Pass
HT20	MCS0	1	149	5745	0.63	15.95	30	1.30	Pass
HT20	MCS0	1	157	5785	0.63	15.99	30	1.30	Pass
HT20	MCS0	1	165	5825	0.63	15.97	30	1.30	Pass
HT40	MCS0	1	151	5755	0.63	14.47	30	1.30	Pass
HT40	MCS0	1	159	5795	0.63	14.38	30	1.30	Pass

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

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.

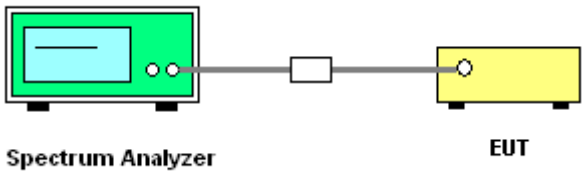
3.3.2 Measuring Instruments

See list of measuring instruments 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 v03r01
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.

3.3.4 Test Setup



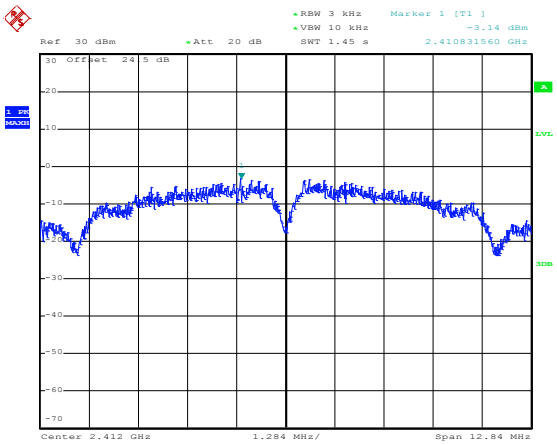
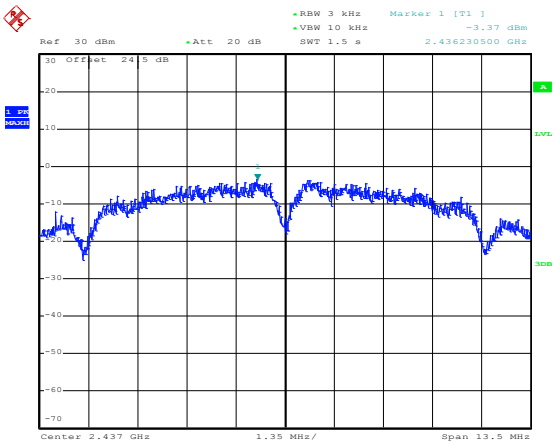
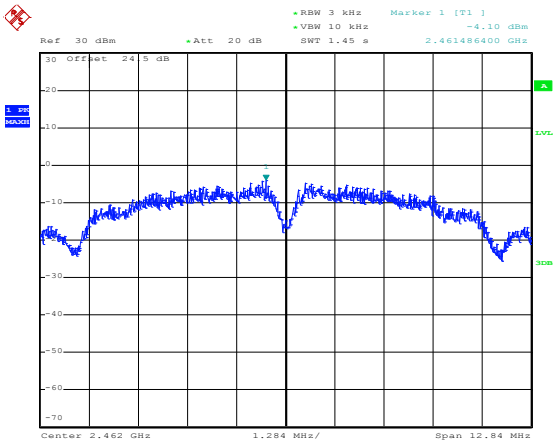
3.3.5 Test Result of Power Spectral Density

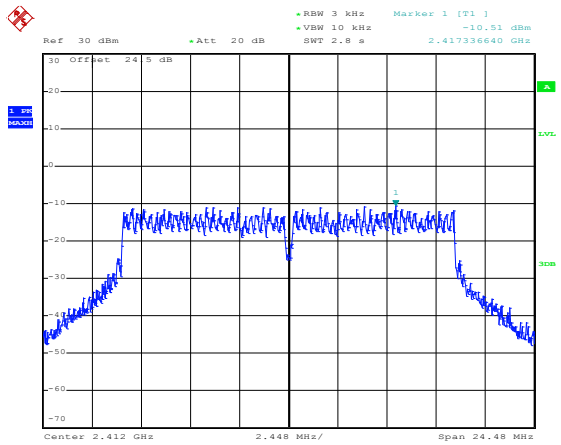
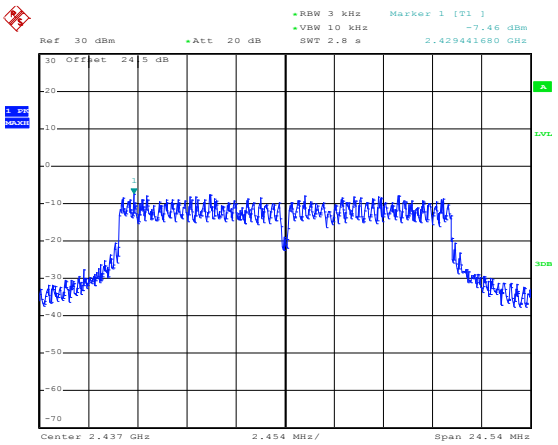
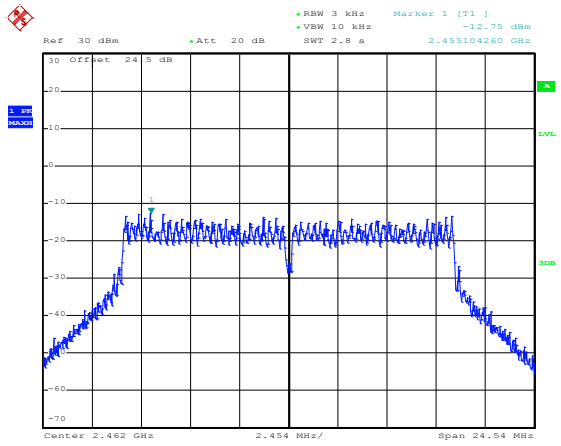
Test Mode :	2.4GHz + 5GHz band 4	Temperature :	24-26℃
Test Engineer :	Jun Yang	Relative Humidity :	50-53%

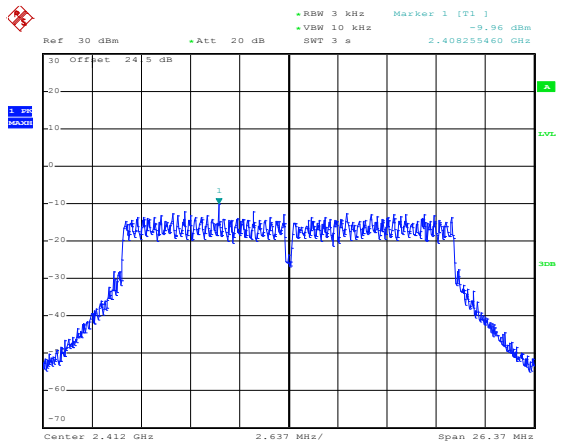
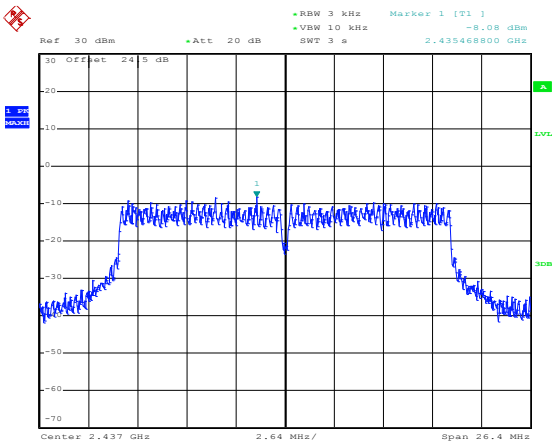
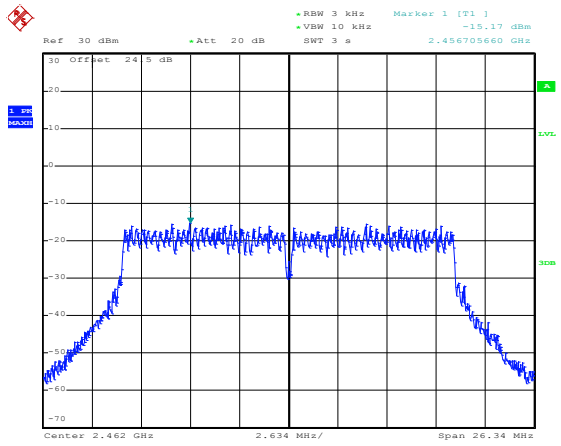
Mod.	Data Rate	N_{TX}	Channel	Freq. (MHz)	Peak Power Density (dBm/3kHz)	Max. Limits (dBm/3kHz)	DG (dBi)	Pass/Fail
11b	1Mbps	1	1	2412	-3.14	8	0.37	Pass
11b	1Mbps	1	6	2437	-3.37	8	0.37	Pass
11b	1Mbps	1	11	2462	-4.10	8	0.37	Pass
11g	6Mbps	1	1	2412	-10.51	8	0.37	Pass
11g	6Mbps	1	6	2437	-7.46	8	0.37	Pass
11g	6Mbps	1	11	2462	-12.75	8	0.37	Pass
HT20	MCS0	1	1	2412	-9.96	8	0.37	Pass
HT20	MCS0	1	6	2437	-8.08	8	0.37	Pass
HT20	MCS0	1	11	2462	-15.17	8	0.37	Pass

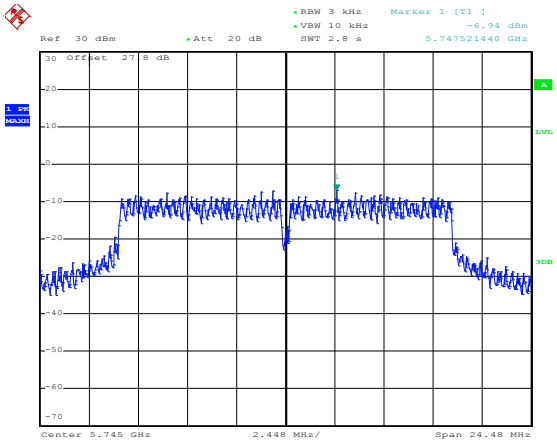
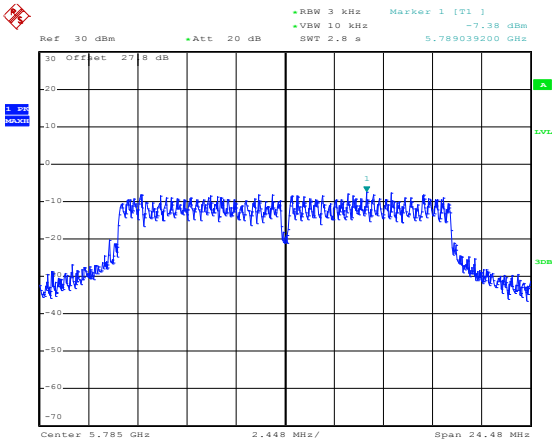
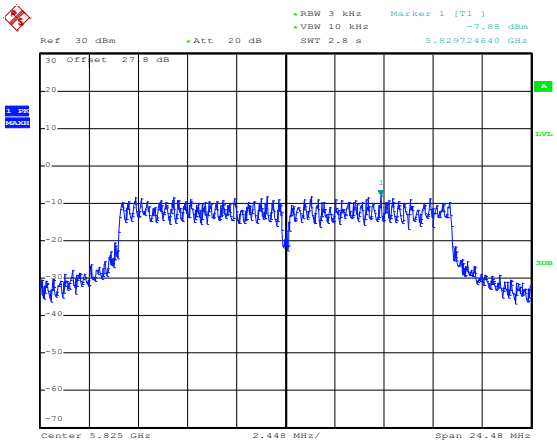
Mod.	Data Rate	N_{TX}	Channel	Freq. (MHz)	Peak Power Density (dBm/3kHz)	Max. Limits (dBm/3kHz)	DG (dBi)	Pass/Fail
11a	6Mbps	1	149	5745	-6.94	8	1.30	Pass
11a	6Mbps	1	157	5785	-7.38	8	1.30	Pass
11a	6Mbps	1	165	5825	-7.88	8	1.30	Pass
HT20	MCS0	1	149	5745	-7.51	8	1.30	Pass
HT20	MCS0	1	157	5785	-8.70	8	1.30	Pass
HT20	MCS0	1	165	5825	-8.06	8	1.30	Pass
HT40	MCS0	1	151	5755	-12.26	8	1.30	Pass
HT40	MCS0	1	159	5795	-12.13	8	1.30	Pass

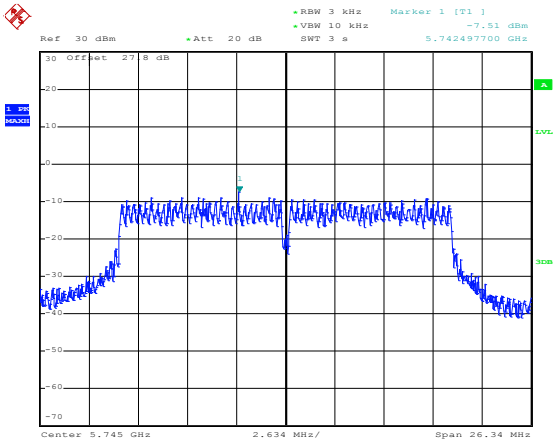
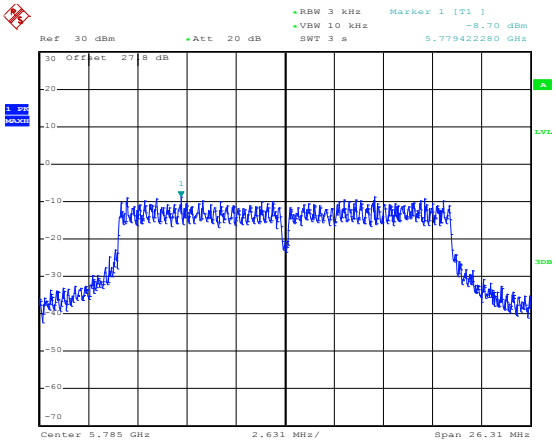
Note: Measured power density (dBm) has offset with cable loss.

Power Density (dBm/3kHz)	
802.11b CH01 2412MHz	**802.11b CH06 2437MHz**
 Date: 26.JUN.2013 17:27:11	 Date: 26.JUN.2013 17:31:12
802.11b CH11 2462MHz	
 Date: 26.JUN.2013 17:38:20	

802.11g CH01 2412MHz	802.11g CH06 2437MHz
 Date: 26.JUN.2013 17:43:52	 Date: 26.JUN.2013 17:52:20
802.11g CH11 2462MHz	
 Date: 26.JUN.2013 17:58:52	

802.11n HT20 CH01 2412MHz	802.11n HT20 CH06 2437MHz
 Date: 26.JUN.2013 18:04:07	 Date: 26.JUN.2013 18:12:12
802.11n HT20 CH11 2462MHz	
 Date: 26.JUN.2013 18:16:11	

802.11a CH149 5745MHz	802.11a CH157 5785MHz
 Date: 26.JUN.2013 18:28:50	 Date: 26.JUN.2013 18:34:06
802.11a CH165 5825MHz	
 Date: 26.JUN.2013 18:57:35	

802.11a/n HT20 CH149 5745MHz	802.11a/n HT20 CH157 5785MHz
 Date: 26.JUN.2013 19:09:42	 Date: 26.JUN.2013 19:34:57
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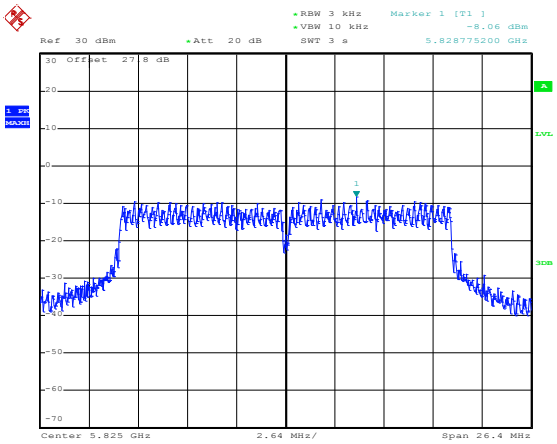
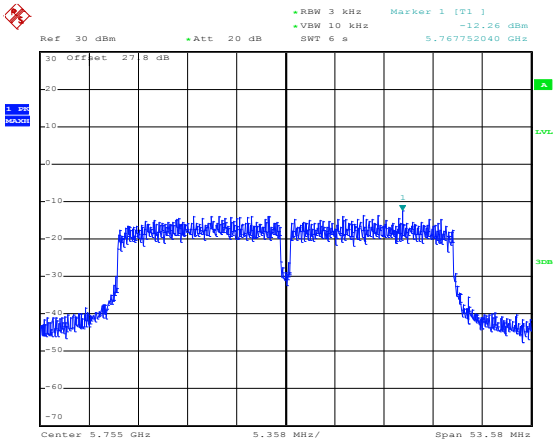
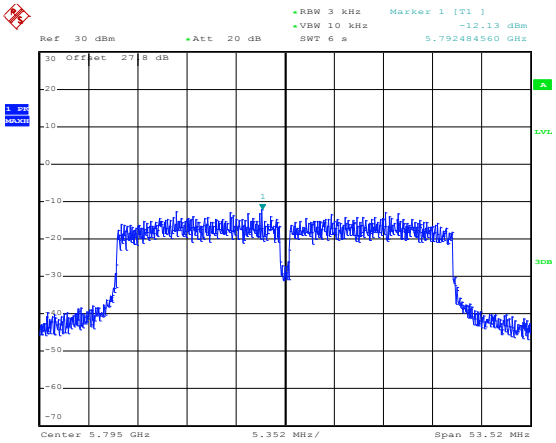
 Date: 26.JUN.2013 19:38:26	

802.11a/n HT40 CH151 5755MHz	802.11a/n HT40 CH159 5795MHz
	
Date: 26.JUN.2013 19:44:43	Date: 26.JUN.2013 19:49:43

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).

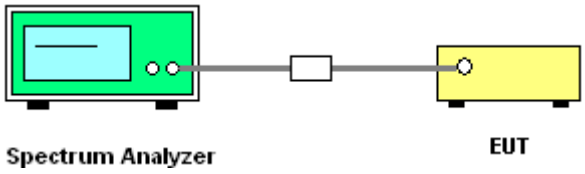
3.4.2 Measuring Instruments

See list of measuring instruments of this test report.

3.4.3 Test Procedures

1. The testing follows FCC KDB Publication No. 558074 D01 DTS Meas. Guidance v03r01.
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

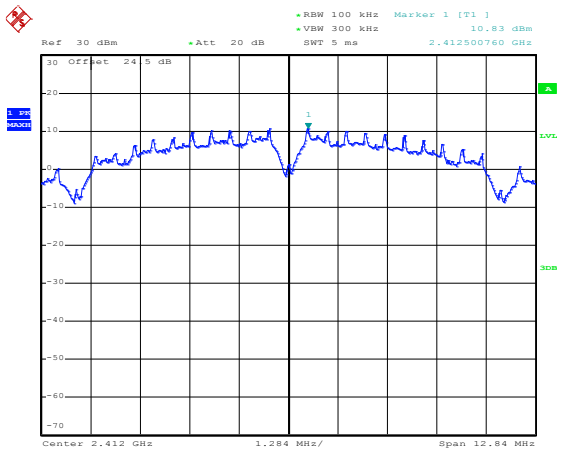


2.4.5 Test Result of Conducted Band Edges and Spurious Emission

Test Mode :	802.11b	**Temperature :**	24-26℃
Test Band :	2.4GHz Low	**Relative Humidity :**	50-53%
Test Channel :	01	**Test Engineer :**	Jun Yang

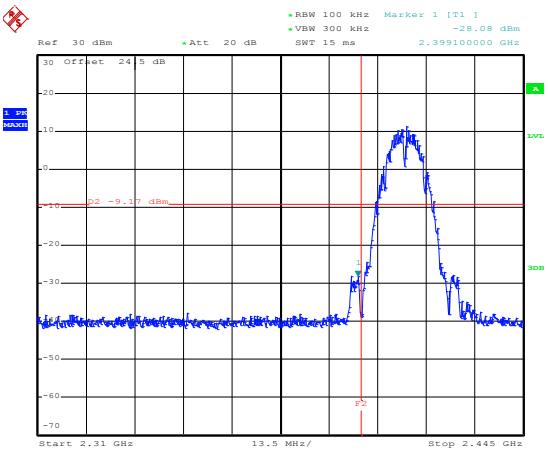
WLAN 802.11b Channel 01

100kHz PSD reference Level



Date: 26.JUN.2013 17:27:23

Low Channel Plot



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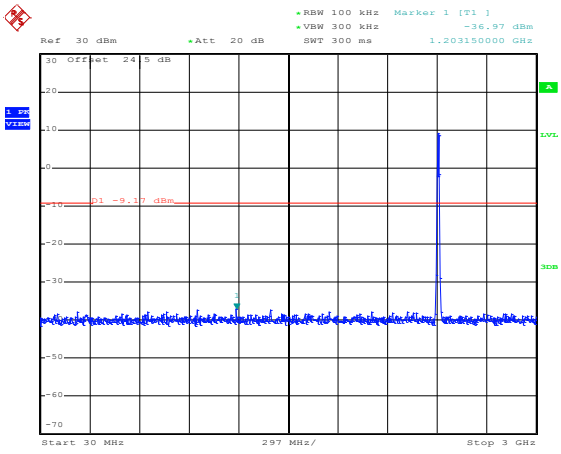
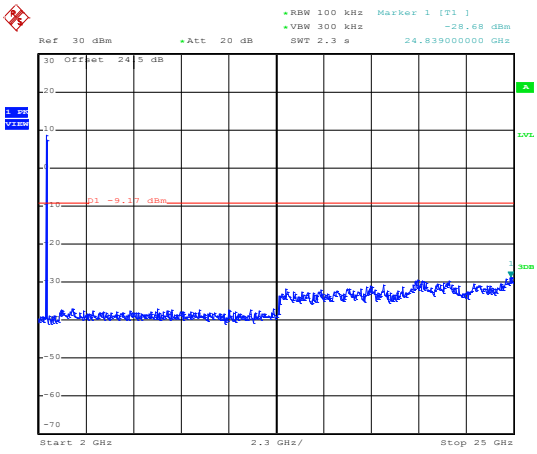
Spurious Emission 30MHz~3GHz



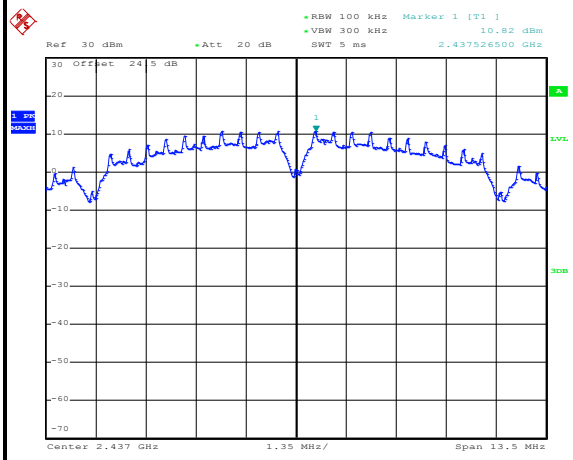
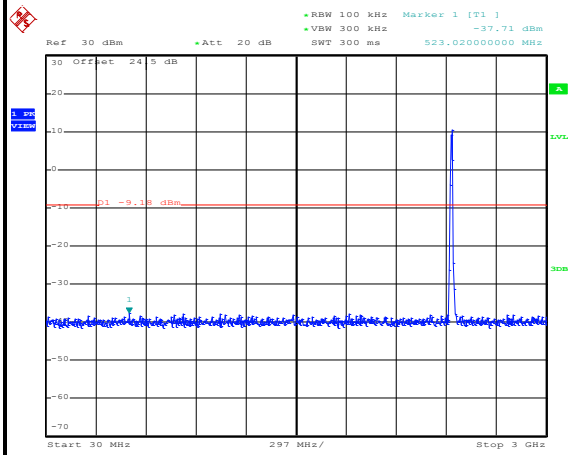
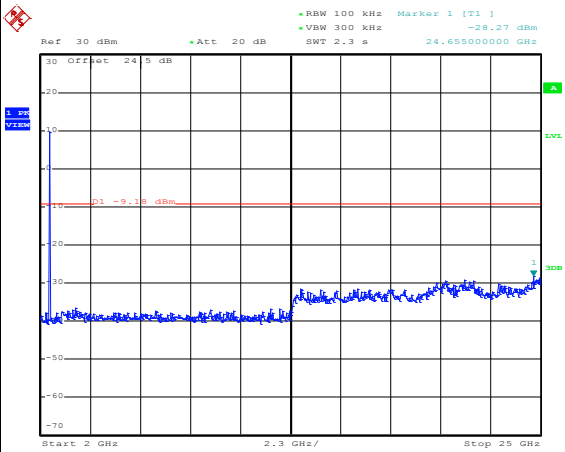
Date: 26.JUN.2013 17:28:16

Spurious Emission 2GHz~25GHz



Date: 26.JUN.2013 17:28:35

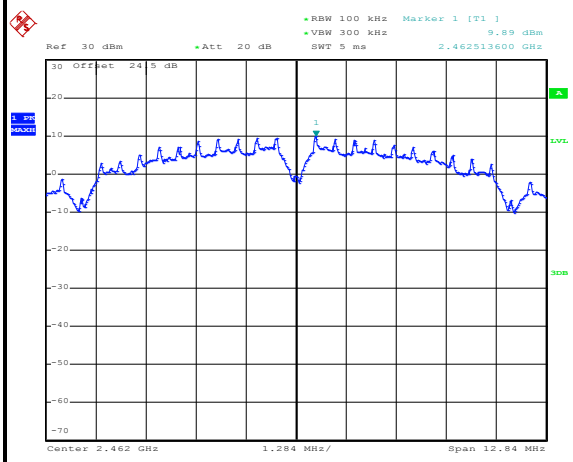
Test Mode :	802.11b	Temperature :	24-26℃
Test Band :	2.4GHz Mid	Relative Humidity :	50-53%
Test Channel :	06	Test Engineer :	Jun Yang

WLAN 802.11b Channel 06	
100kHz PSD reference Level	
	
Spurious Emission 30MHz~3GHz	Spurious Emission 2GHz~25GHz
	

Test Mode :	802.11b	Temperature :	24-26℃
Test Band :	2.4GHz High	Relative Humidity :	50-53%
Test Channel :	11	Test Engineer :	Jun Yang

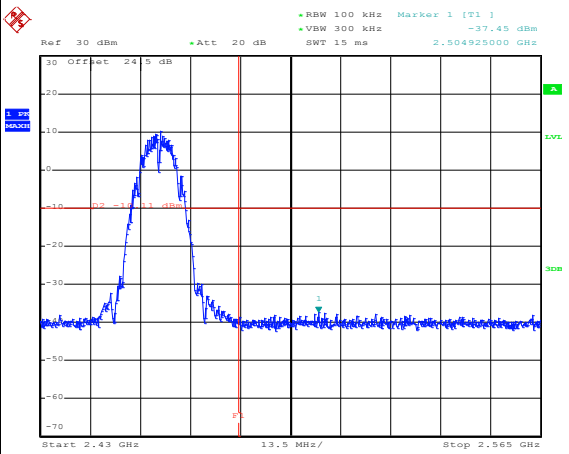
WLAN 802.11b Channel 11

100kHz PSD reference Level



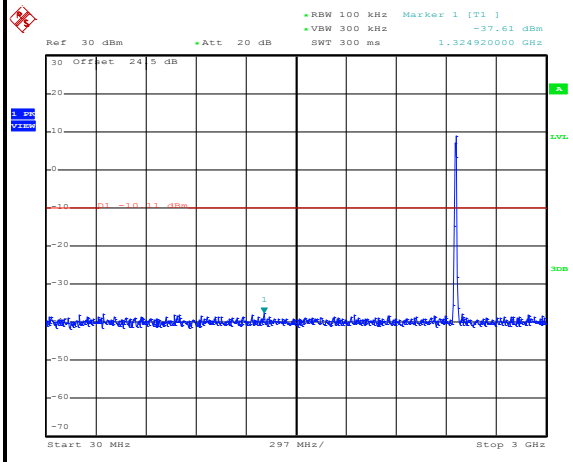
Date: 26.JUN.2013 17:38:31

High Channel Plot



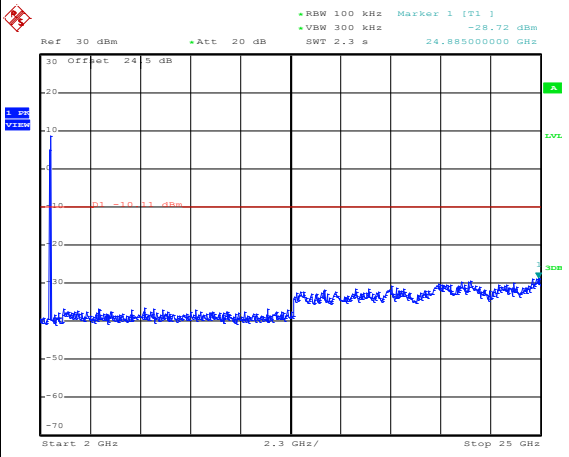
Date: 26.JUN.2013 17:38:47

Spurious Emission 30MHz~3GHz



Date: 26.JUN.2013 17:39:08

Spurious Emission 2GHz~25GHz

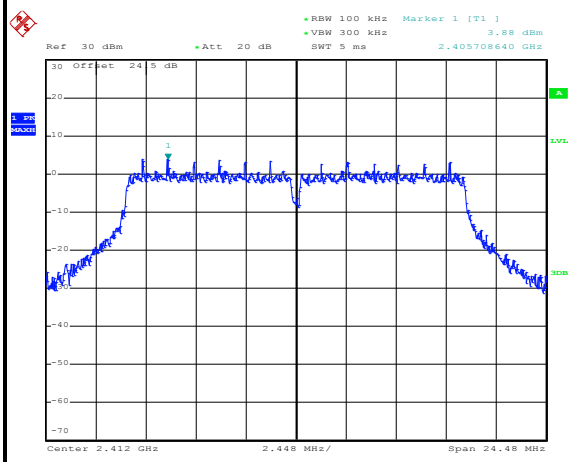


Date: 26.JUN.2013 17:39:26

Test Mode :	802.11g	Temperature :	24-26℃
Test Band :	2.4GHz Low	Relative Humidity :	50-53%
Test Channel :	01	Test Engineer :	Jun Yang

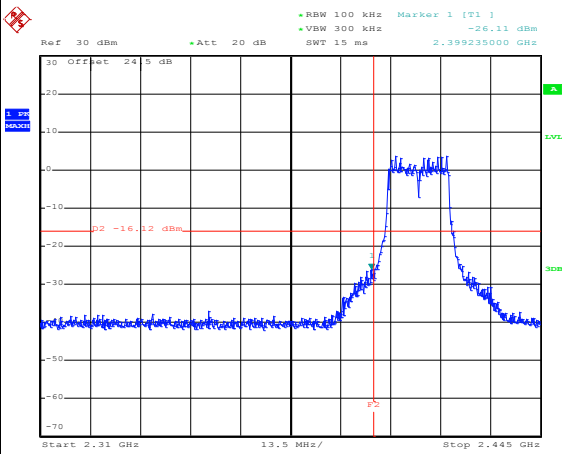
WLAN 802.11g Channel 01

100kHz PSD reference Level



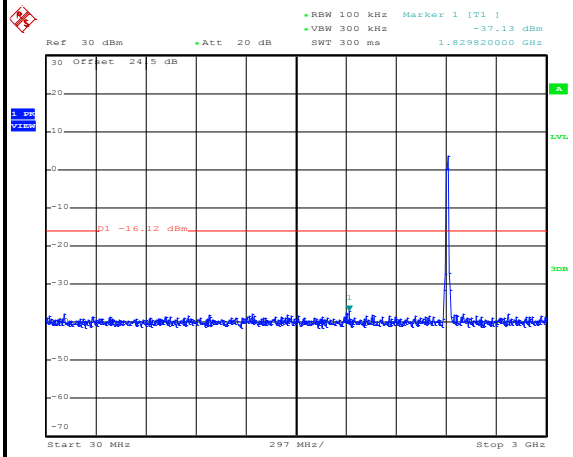
Date: 26.JUN.2013 17:44:04

Low Channel Plot



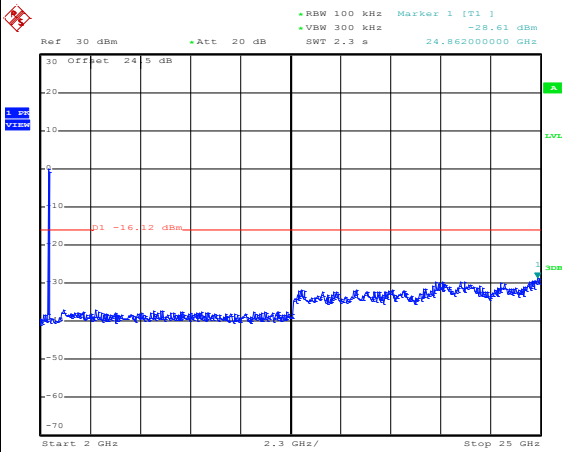
Date: 26.JUN.2013 17:44:25

Spurious Emission 30MHz~3GHz



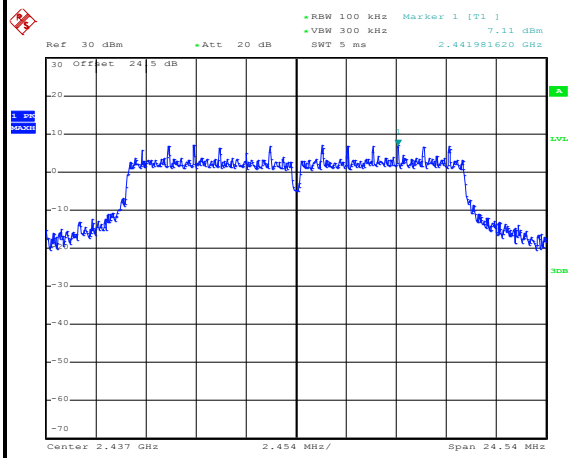
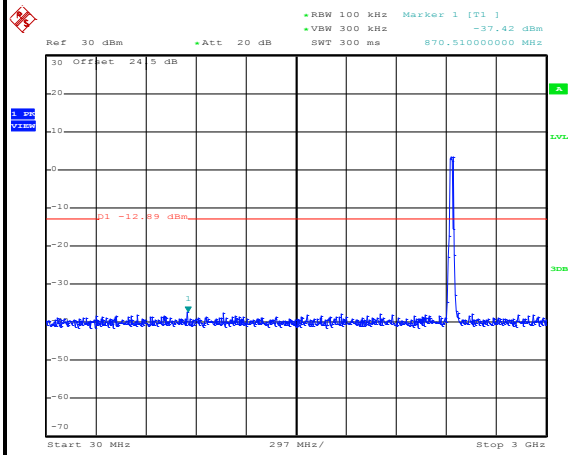
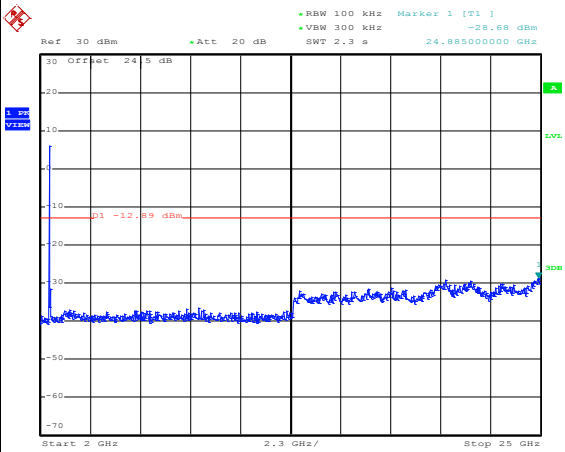
Date: 26.JUN.2013 17:44:49

Spurious Emission 2GHz~25GHz



Date: 26.JUN.2013 17:45:07

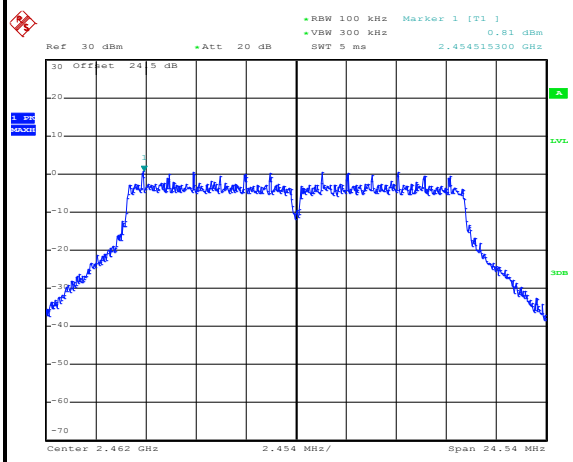
Test Mode :	802.11g	Temperature :	24-26℃
Test Band :	2.4GHz Mid	Relative Humidity :	50-53%
Test Channel :	06	Test Engineer :	Jun Yang

WLAN 802.11g Channel 06	
100kHz PSD reference Level	
	
Spurious Emission 30MHz~3GHz	Spurious Emission 2GHz~25GHz
	

Test Mode :	802.11g	Temperature :	24-26℃
Test Band :	2.4GHz High	Relative Humidity :	50-53%
Test Channel :	11	Test Engineer :	Jun Yang

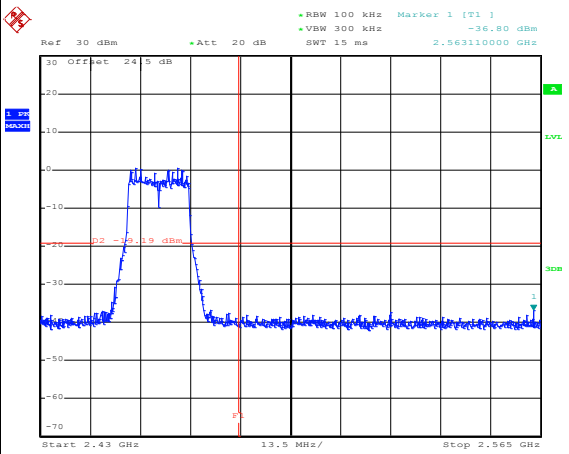
WLAN 802.11g Channel 11

100kHz PSD reference Level



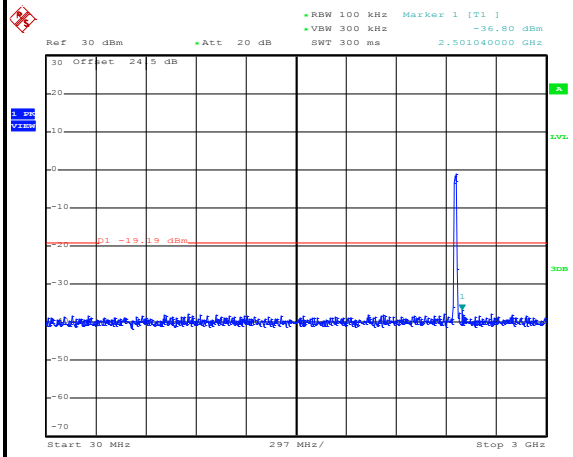
Date: 26.JUN.2013 17:59:04

High Channel Plot



Date: 26.JUN.2013 17:59:25

Spurious Emission 30MHz~3GHz



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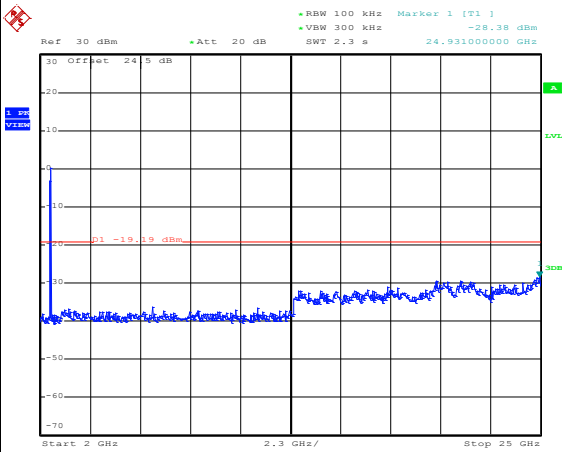
Spurious Emission 2GHz~25GHz

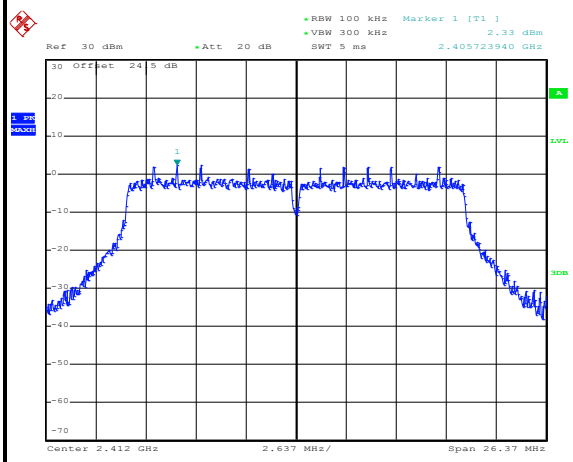


Date: 26.JUN.2013 18:00:05

Test Mode :	802.11n HT20	Temperature :	24-26℃
Test Band :	2.4GHz Low	Relative Humidity :	50-53%
Test Channel :	01	Test Engineer :	Jun Yang

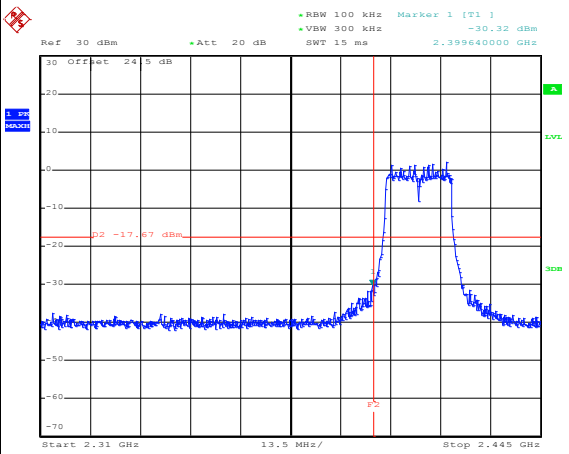
WLAN 802.11n HT20 Channel 01

100kHz PSD reference Level



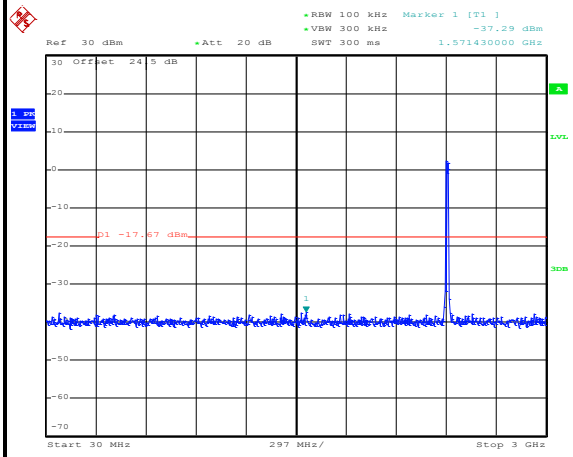
Date: 26.JUN.2013 18:04:21

Low Channel Plot



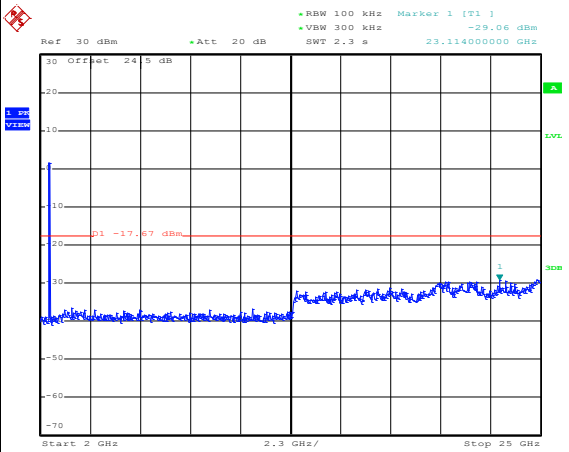
Date: 26.JUN.2013 18:06:47

Spurious Emission 30MHz~3GHz



Date: 26.JUN.2013 18:07:09

Spurious Emission 2GHz~25GHz

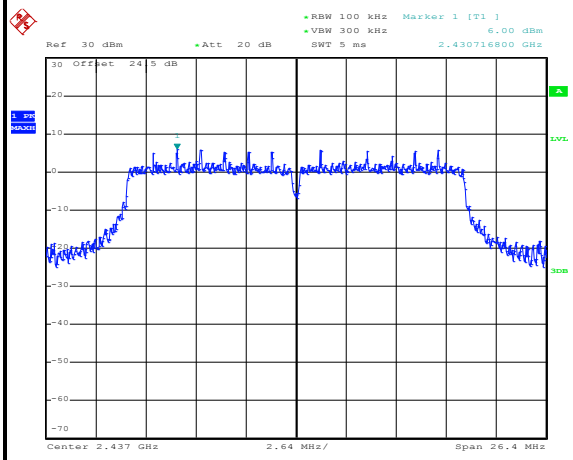


Date: 26.JUN.2013 18:07:27

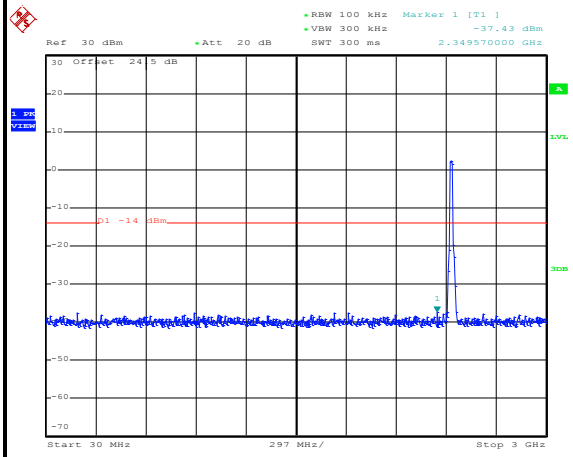
Test Mode :	802.11n HT20	Temperature :	24-26℃
Test Band :	2.4GHz Mid	Relative Humidity :	50-53%
Test Channel :	06	Test Engineer :	Jun Yang

WLAN 802.11n HT20 Channel 06

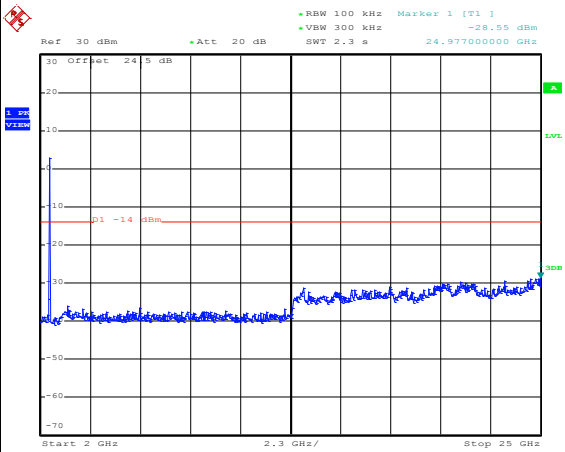
100kHz PSD reference Level



Spurious Emission 30MHz~3GHz



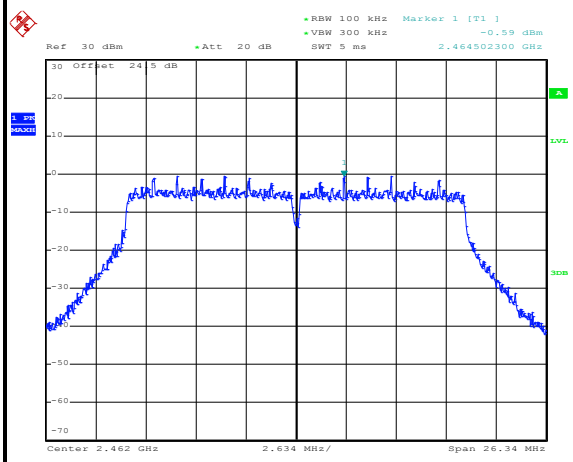
Spurious Emission 2GHz~25GHz



Test Mode :	802.11n HT20	Temperature :	24-26℃
Test Band :	2.4GHz High	Relative Humidity :	50-53%
Test Channel :	11	Test Engineer :	Jun Yang

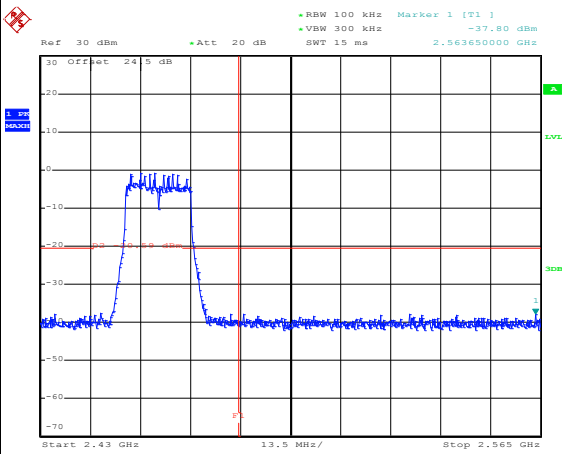
WLAN 802.11n HT20 Channel 11

100kHz PSD reference Level



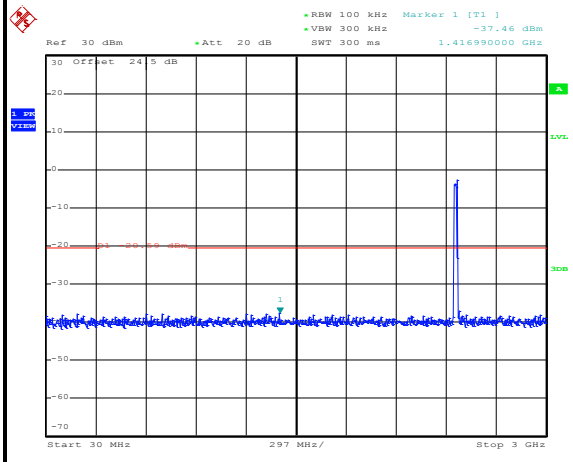
Date: 26.JUN.2013 18:16:28

High Channel Plot



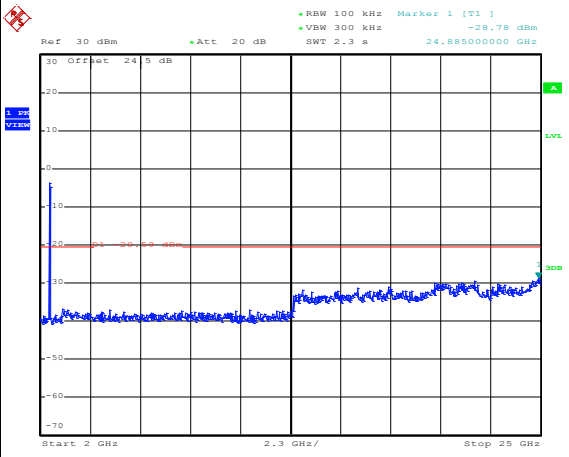
Date: 26.JUN.2013 18:16:43

Spurious Emission 30MHz~3GHz



Date: 26.JUN.2013 18:17:04

Spurious Emission 2GHz~25GHz

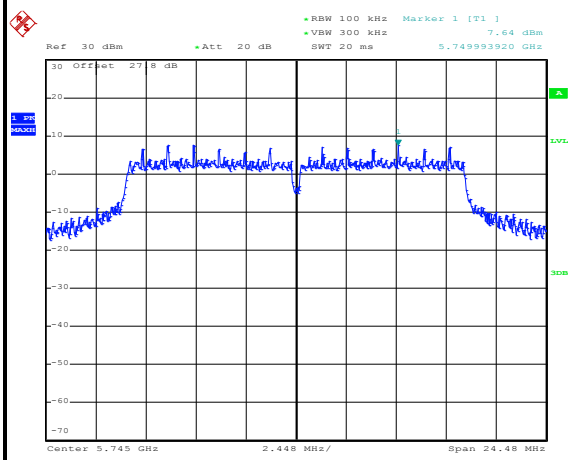


Date: 26.JUN.2013 18:17:23

Test Mode :	802.11a	Temperature :	24-26℃
Test Band :	5GHz Low	Relative Humidity :	50-53%
Test Channel :	149	Test Engineer :	Jun Yang

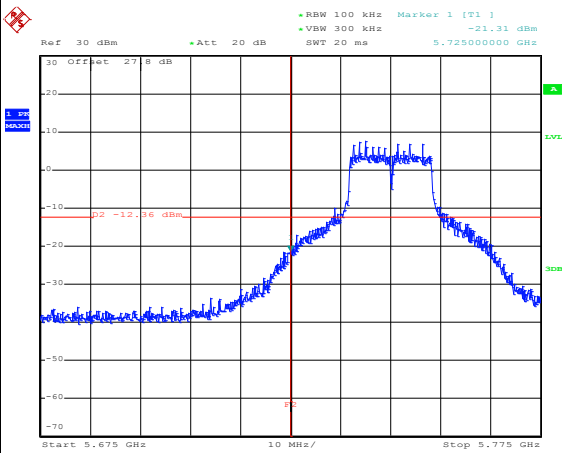
WLAN 802.11a Channel 149

100kHz PSD reference Level



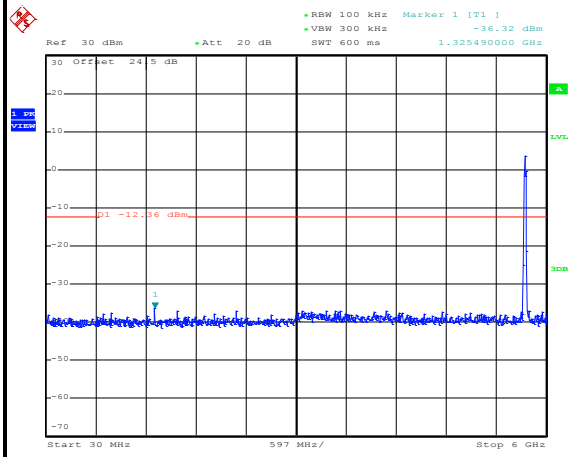
Date: 26.JUN.2013 18:29:09

Low Channel Plot



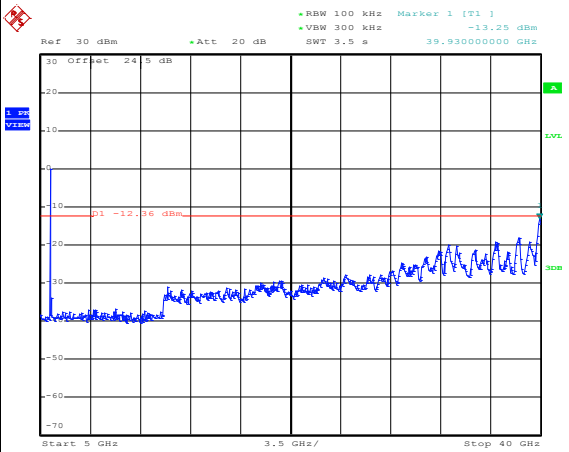
Date: 26.JUN.2013 18:29:48

Spurious Emission 30MHz~6GHz



Date: 26.JUN.2013 18:31:24

Spurious Emission 5GHz~40GHz



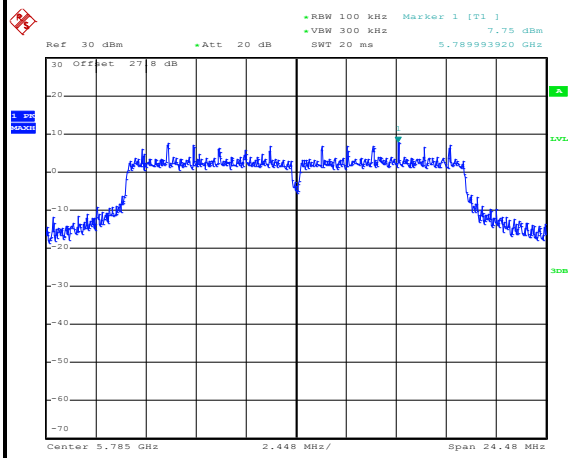
Date: 26.JUN.2013 18:31:43

Remark: The signal above 33GHz is background noise of spectrum analyzer.

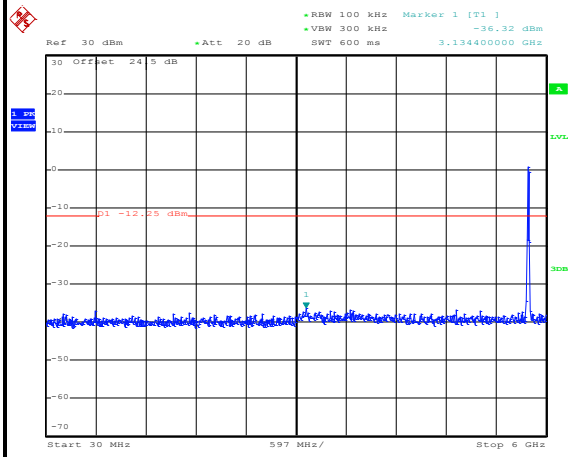
Test Mode :	802.11a	Temperature :	24-26℃
Test Band :	5GHz Mid	Relative Humidity :	50-53%
Test Channel :	157	Test Engineer :	Jun Yang

WLAN 802.11a Channel 157

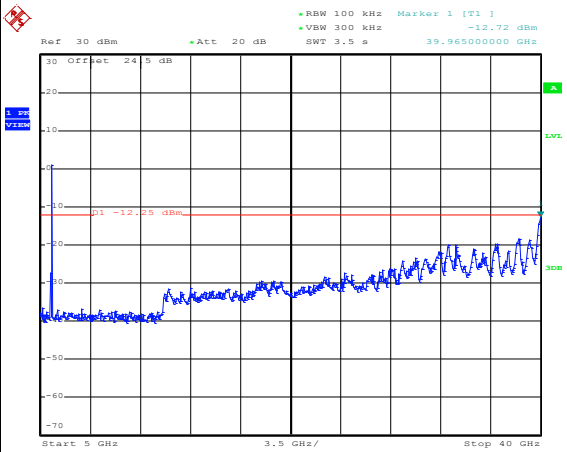
100kHz PSD reference Level



Spurious Emission 30MHz~6GHz



Spurious Emission 5GHz~40GHz

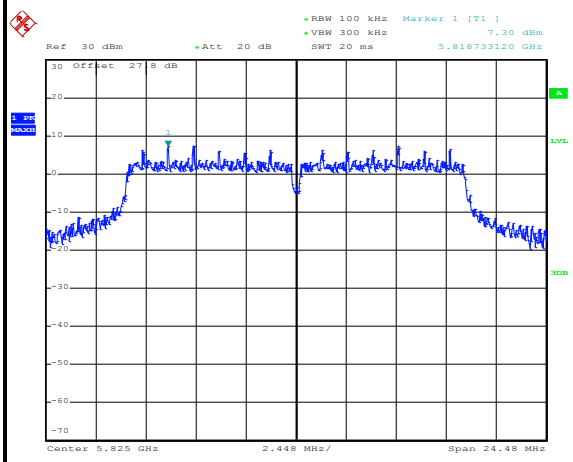


Remark: The signal above 33GHz is background noise of spectrum analyzer.

Test Mode :	802.11a	Temperature :	24-26℃
Test Band :	5GHz High	Relative Humidity :	50-53%
Test Channel :	165	Test Engineer :	Jun Yang

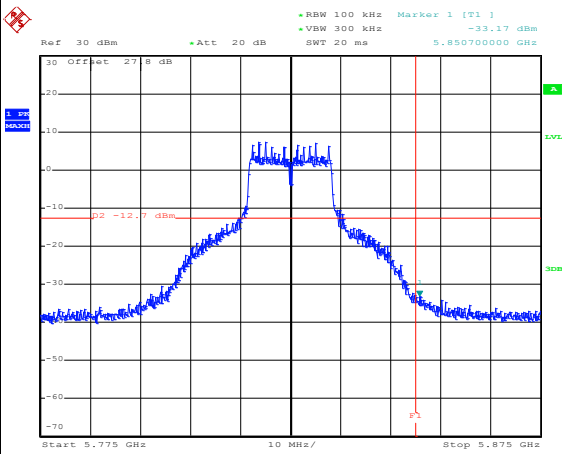
WLAN 802.11a Channel 165

100kHz PSD reference Level



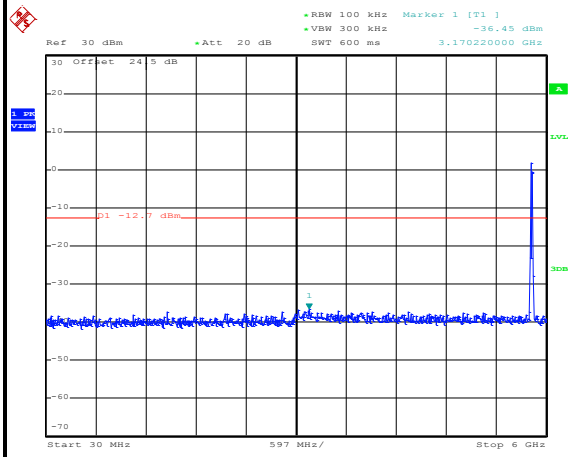
Date: 26.JUN.2013 18:57:45

High Channel Plot



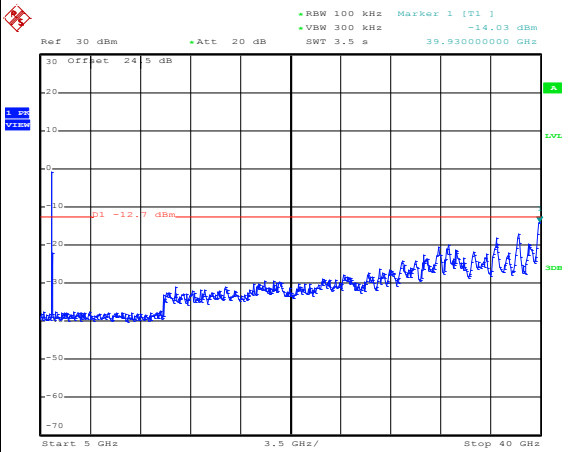
Date: 26.JUN.2013 18:58:07

Spurious Emission 30MHz~6GHz



Date: 26.JUN.2013 18:58:32

Spurious Emission 5GHz~40GHz



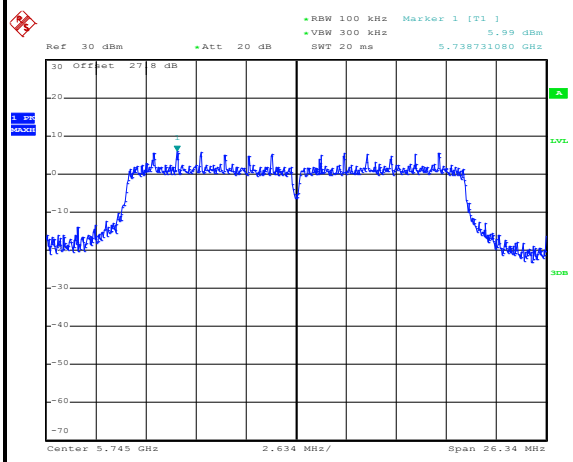
Date: 26.JUN.2013 18:58:51

Remark: The signal above 33GHz is background noise of spectrum analyzer.

Test Mode :	802.11n HT20	Temperature :	24-26℃
Test Band :	5GHz Low	Relative Humidity :	50-53%
Test Channel :	149	Test Engineer :	Jun Yang

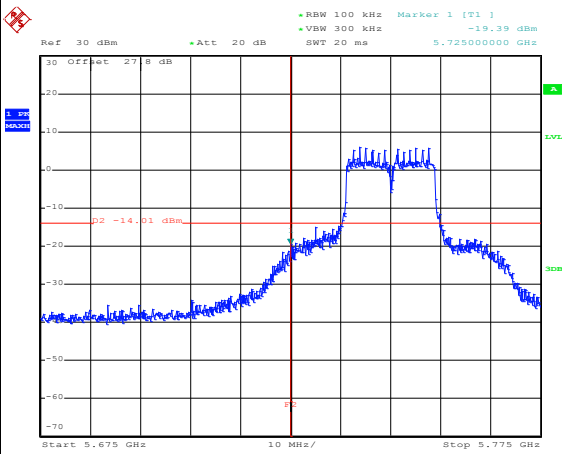
WLAN 802.11n HT20 Channel 149

100kHz PSD reference Level



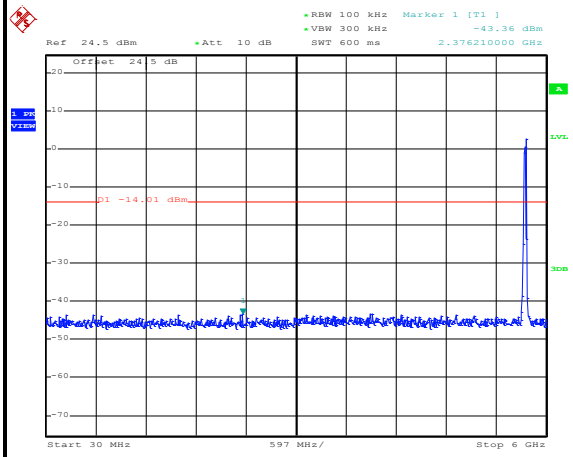
Date: 26.JUN.2013 19:09:52

Low Channel Plot



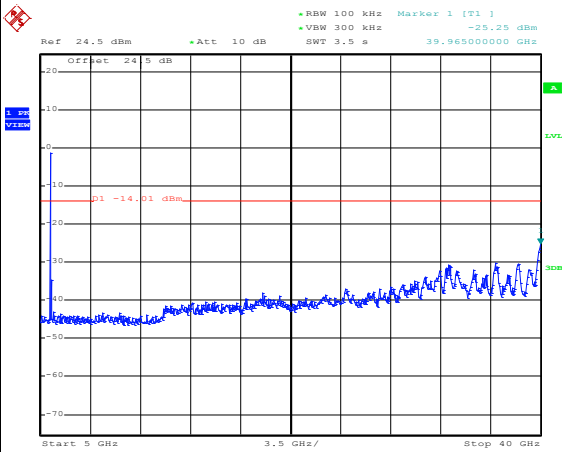
Date: 26.JUN.2013 19:10:09

Spurious Emission 30MHz~6GHz



Date: 26.JUN.2013 19:31:38

Spurious Emission 5GHz~40GHz



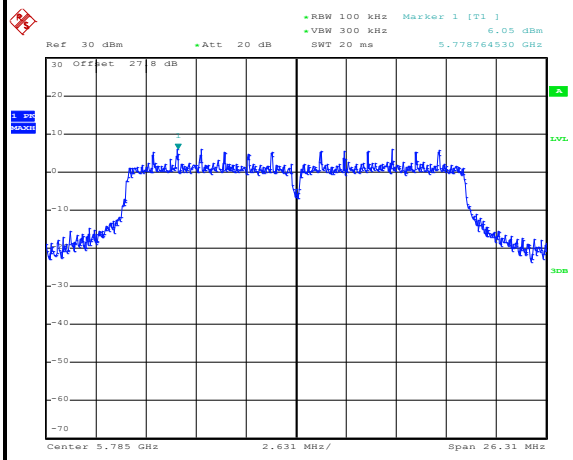
Date: 26.JUN.2013 19:31:56

Remark: The signal above 33GHz is background noise of spectrum analyzer.

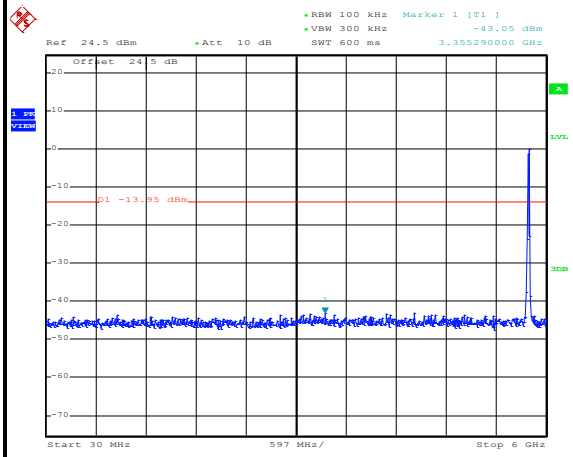
Test Mode :	802.11n HT20	Temperature :	24-26℃
Test Band :	5GHz Mid	Relative Humidity :	50-53%
Test Channel :	157	Test Engineer :	Jun Yang

WLAN 802.11n HT20 Channel 157

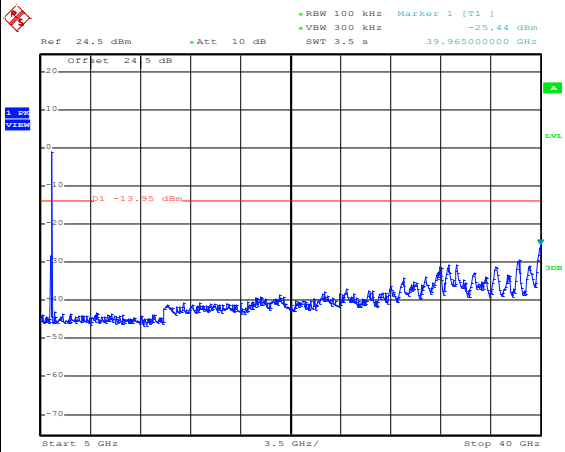
100kHz PSD reference Level



Spurious Emission 30MHz~6GHz



Spurious Emission 5GHz~40GHz

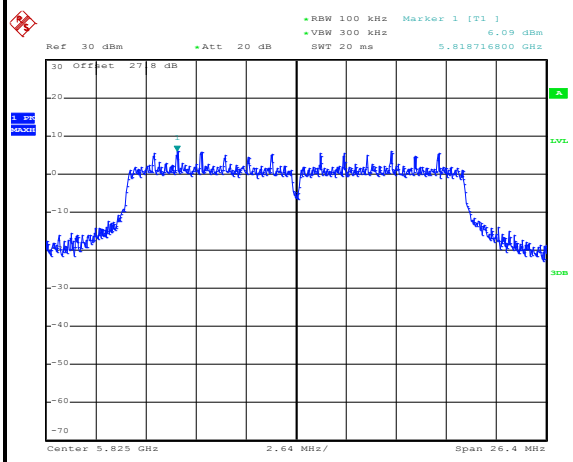


Remark: The signal above 33GHz is background noise of spectrum analyzer.

Test Mode :	802.11n HT20	Temperature :	24-26℃
Test Band :	5GHz High	Relative Humidity :	50-53%
Test Channel :	165	Test Engineer :	Jun Yang

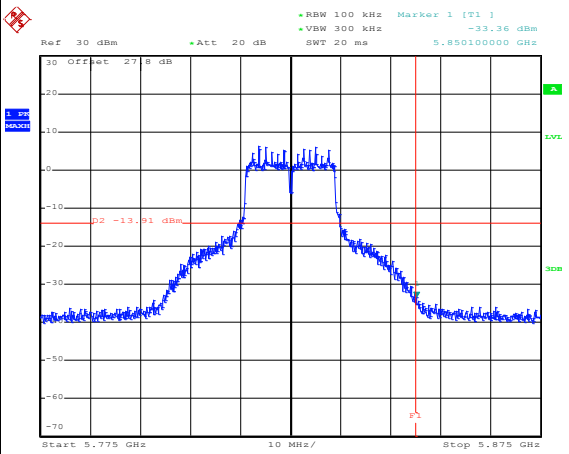
WLAN 802.11n HT20 Channel 165

100kHz PSD reference Level



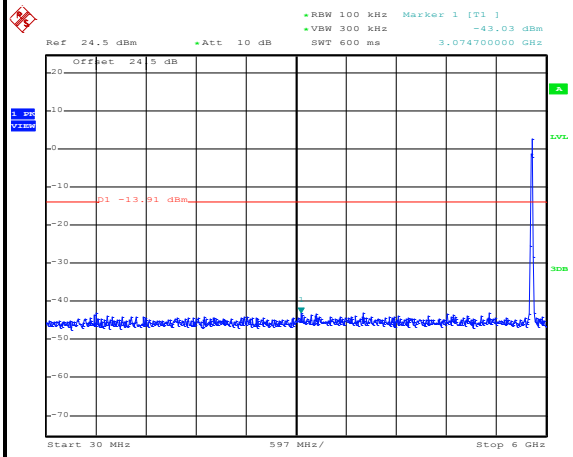
Date: 26.JUN.2013 19:38:51

High Channel Plot



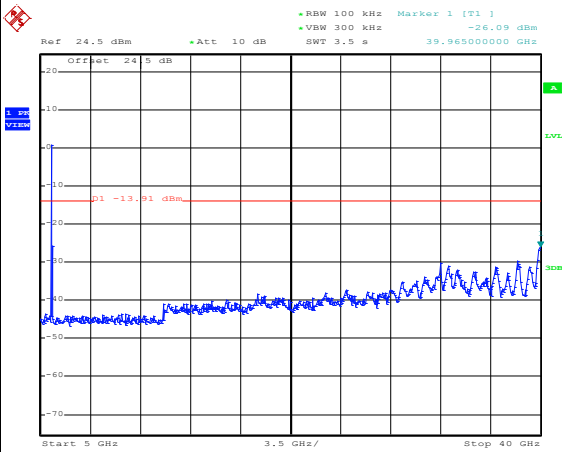
Date: 26.JUN.2013 19:39:19

Spurious Emission 30MHz~6GHz



Date: 26.JUN.2013 19:40:00

Spurious Emission 5GHz~40GHz



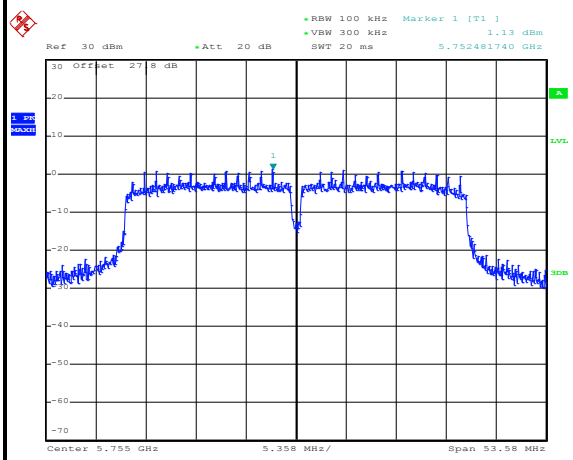
Date: 26.JUN.2013 19:40:19

Remark: The signal above 33GHz is background noise of spectrum analyzer.

Test Mode :	802.11n HT40	Temperature :	24-26℃
Test Band :	5GHz Low	Relative Humidity :	50-53%
Test Channel :	151	Test Engineer :	Jun Yang

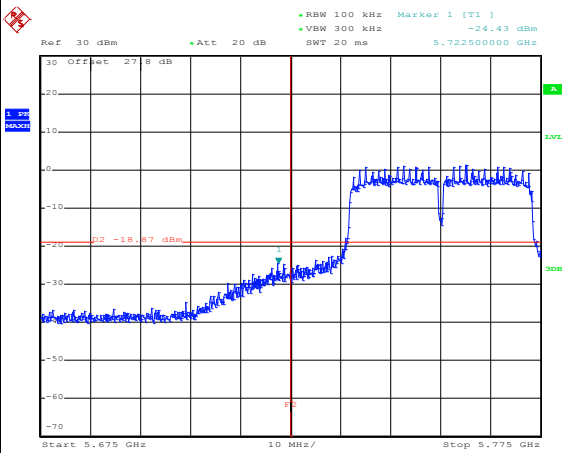
WLAN 802.11n HT40 Channel 151

100kHz PSD reference Level



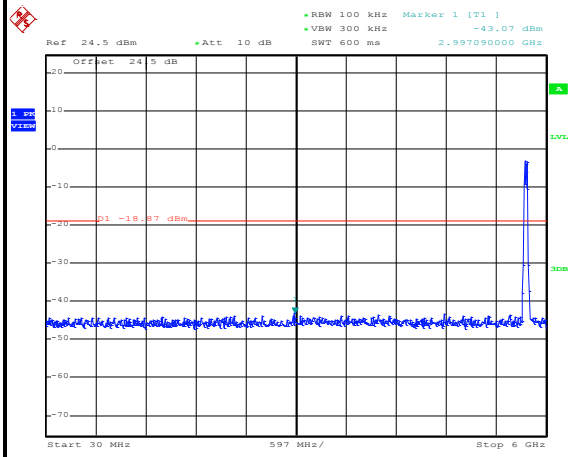
Date: 26.JUN.2013 19:44:53

Low Channel Plot



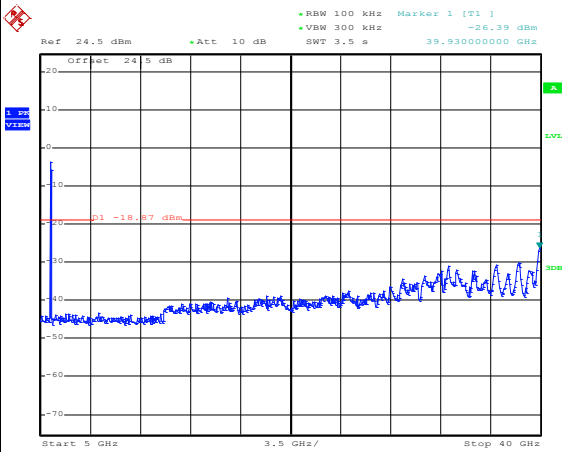
Date: 26.JUN.2013 19:45:12

Spurious Emission 30MHz~6GHz



Date: 26.JUN.2013 19:45:34

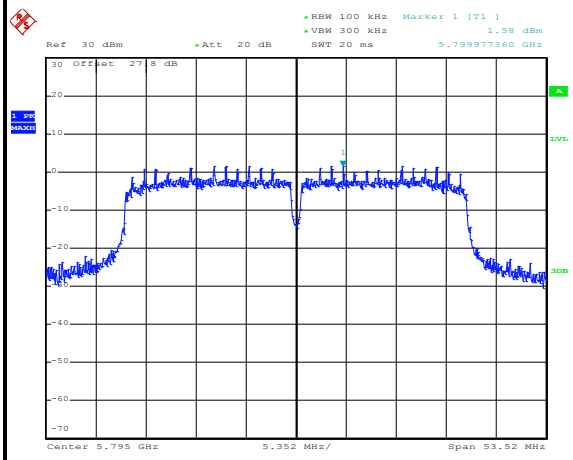
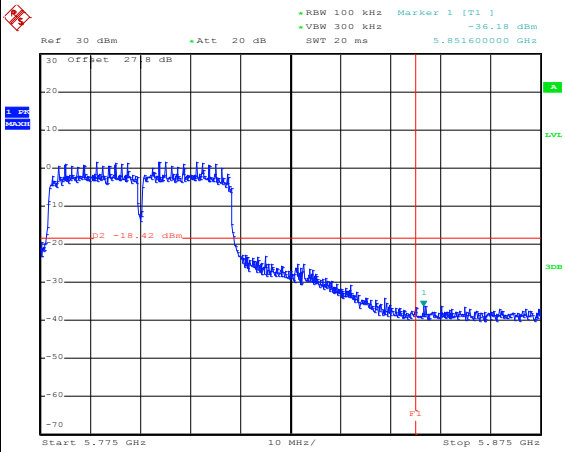
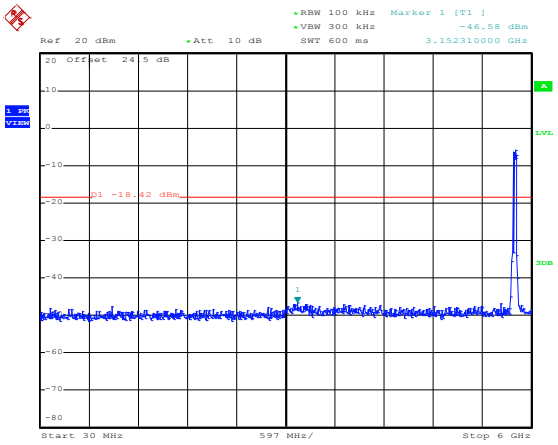
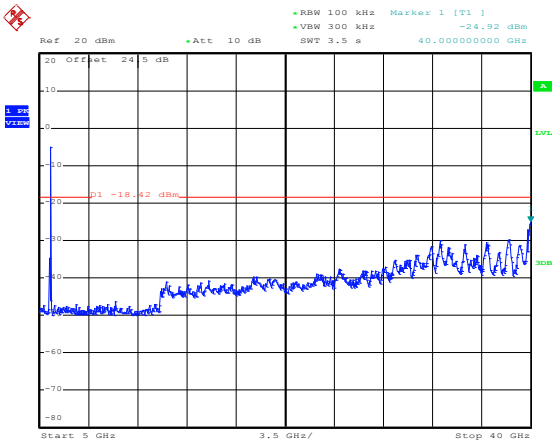
Spurious Emission 5GHz~40GHz



Date: 26.JUN.2013 19:45:53

Remark: The signal above 33GHz is background noise of spectrum analyzer.

Test Mode :	802.11n HT40	Temperature :	24-26℃
Test Band :	5GHz High	Relative Humidity :	50-53%
Test Channel :	159	Test Engineer :	Jun Yang

WLAN 802.11n HT40 Channel 159	
100kHz PSD reference Level	High Channel Plot
	
Date: 26.JUN.2013 19:49:55	Date: 26.JUN.2013 19:50:20
Spurious Emission 30MHz~6GHz	Spurious Emission 5GHz~40GHz
	
Date: 21.JUL.2013 10:32:27	Date: 21.JUL.2013 10:32:46

Remark: The signal above 33GHz is background noise of spectrum analyzer.

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

See list of measuring instruments of this test report.

3.5.3 Test Procedures

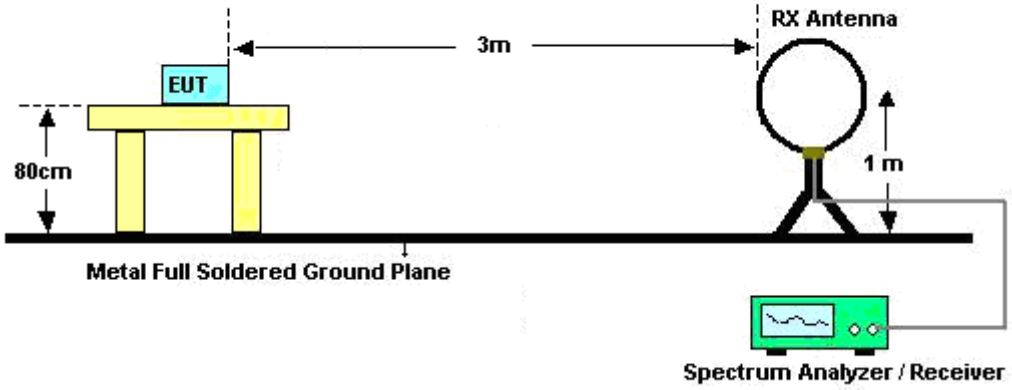
1. The testing follows the guidelines in ANSI C63.10-2009.
2. The EUT was arranged to its worst case and then tune the antenna tower (from 1 m to 4 m) and turntable (from 0 degree to 360 degrees) to find the maximum reading. A pre-amp and a high pass filter are used for the test in order to get better signal level.
3. The EUT was placed on a turntable with 0.8 meter 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 ≥ RBW; Sweep = auto; Detector function = peak; Trace = max hold;
   (3) Set RBW = 1 MHz, VBW= 3MHz for f ≥ 1 GHz for peak measurement.
   For average measurement:
   - VBW = 10 Hz, when duty cycle is no less than 98 percent.
   - VBW ≥ 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(μs)	1/T(kHz)	VBW Setting
802.11b	97.63	8240.00	0.12	300Hz
802.11g	87.26	1370.00	0.73	1kHz
2.4GHz 802.11n HT20	86.49	1280.00	0.78	1kHz
802.11a	87.26	1370.00	0.73	1kHz
5GHz 802.11n HT20	86.49	1280.00	0.78	1kHz
5GHz 802.11n HT40	86.49	640.00	1.56	3kHz

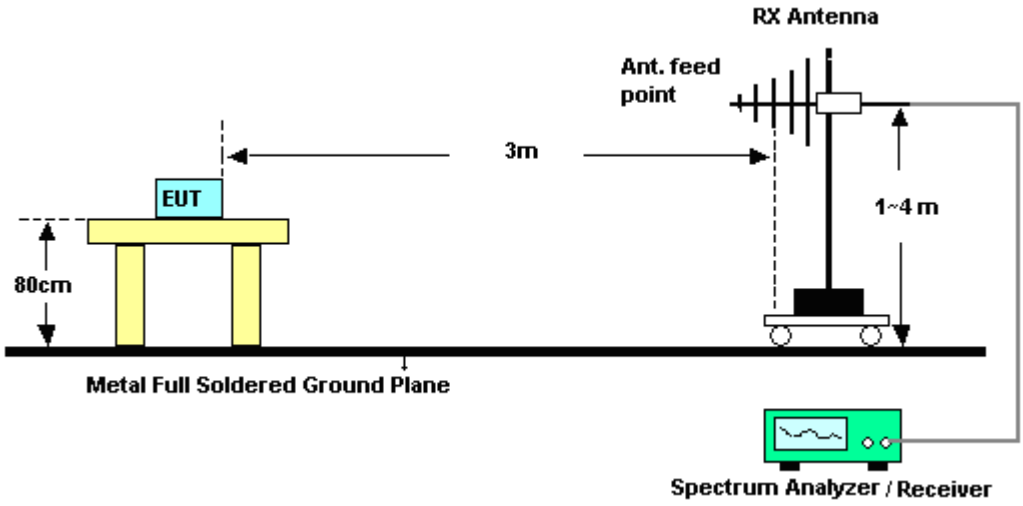
Note: For average measurement with duty cycle < 98%, use reduced VBW measurement method 4.2.3.2.3 in ANSI C63.10.

3.5.4 Test Setup

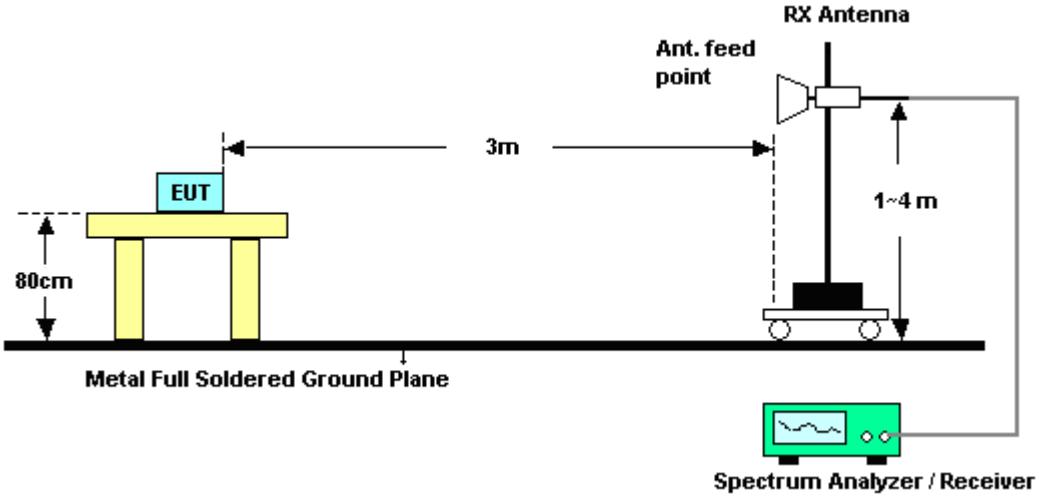
For radiated emissions below 30MHz



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

<Sample 1 with Battery 2>

Test Mode :	802.11b	**Temperature :**	21~23°C
Test Channel :	01	**Relative Humidity :**	51~53%
Test Engineer :	Eric Shih		

ANTENNA POLARITY : HORIZONTAL										
Frequency (MHz)	**Level (dBµV/m)**	**Over Limit (dB)**	**Limit Line (dBµV/m)**	**Read Level (dBµV)**	**Antenna Factor (dB)**	**Cable Loss (dB)**	**Preamp Factor (dB)**	**Ant Pos (cm)**	**Table Pos (deg)**	**Remark**
2387.67	60.3	-13.7	74	55.36	32.3	6.91	34.27	196	332	Peak
2387.67	50.43	-3.57	54	45.49	32.3	6.91	34.27	196	332	Average

ANTENNA POLARITY : VERTICAL										
Frequency (MHz)	**Level (dBµV/m)**	**Over Limit (dB)**	**Limit Line (dBµV/m)**	**Read Level (dBµV)**	**Antenna Factor (dB)**	**Cable Loss (dB)**	**Preamp Factor (dB)**	**Ant Pos (cm)**	**Table Pos (deg)**	**Remark**
2387.13	57.77	-16.23	74	52.83	32.3	6.91	34.27	200	354	Peak
2387.31	46.63	-7.37	54	41.69	32.3	6.91	34.27	200	354	Average

Test Mode :	802.11b	**Temperature :**	21~23°C
Test Channel :	02	**Relative Humidity :**	51~53%
Test Engineer :	Eric Shih		

ANTENNA POLARITY : HORIZONTAL										
Frequency (MHz)	**Level (dBµV/m)**	**Over Limit (dB)**	**Limit Line (dBµV/m)**	**Read Level (dBµV)**	**Antenna Factor (dB)**	**Cable Loss (dB)**	**Preamp Factor (dB)**	**Ant Pos (cm)**	**Table Pos (deg)**	**Remark**
2390	58.36	-15.64	74	53.45	32.3	6.91	34.3	163	263	Peak
2390	47.83	-6.17	54	42.92	32.3	6.91	34.3	163	263	Average

ANTENNA POLARITY : VERTICAL										
Frequency (MHz)	**Level (dBµV/m)**	**Over Limit (dB)**	**Limit Line (dBµV/m)**	**Read Level (dBµV)**	**Antenna Factor (dB)**	**Cable Loss (dB)**	**Preamp Factor (dB)**	**Ant Pos (cm)**	**Table Pos (deg)**	**Remark**
2390	58.15	-15.85	74	53.24	32.3	6.91	34.3	100	356	Peak
2390	49.45	-4.55	54	44.54	32.3	6.91	34.3	100	356	Average

Test Mode :	802.11b	Temperature :	21~23°C
Test Channel :	11	Relative Humidity :	51~53%
Test Engineer :	Eric Shih		

ANTENNA POLARITY : HORIZONTAL										
Frequency (MHz)	Level (dBµV/m)	Over Limit (dB)	Limit Line (dBµV/m)	Read Level (dBµV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
2490.34	57.63	-16.37	74	52.6	32.4	7.06	34.43	130	83	Peak
2483.8	44.57	-9.43	54	39.56	32.38	7.06	34.43	130	83	Average

ANTENNA POLARITY : VERTICAL										
Frequency (MHz)	Level (dBµV/m)	Over Limit (dB)	Limit Line (dBµV/m)	Read Level (dBµV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
2489.77	56.77	-17.23	74	51.74	32.4	7.06	34.43	155	190	Peak
2484.91	43.84	-10.16	54	38.83	32.38	7.06	34.43	155	190	Average

Test Mode :	802.11b	Temperature :	21~23°C
Test Channel :	12	Relative Humidity :	51~53%
Test Engineer :	Eric Shih		

ANTENNA POLARITY : HORIZONTAL										
Frequency (MHz)	Level (dBµV/m)	Over Limit (dB)	Limit Line (dBµV/m)	Read Level (dBµV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
2483.8	58.18	-15.82	74	53.17	32.38	7.06	34.43	107	321	Peak
2483.5	46.34	-7.66	54	41.33	32.38	7.06	34.43	107	321	Average

ANTENNA POLARITY : VERTICAL										
Frequency (MHz)	Level (dBµV/m)	Over Limit (dB)	Limit Line (dBµV/m)	Read Level (dBµV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
2485.54	57.28	-16.72	74	52.27	32.38	7.06	34.43	154	194	Peak
2483.5	44.25	-9.75	54	39.24	32.38	7.06	34.43	154	194	Average

Test Mode :	802.11b	Temperature :	21~23°C
Test Channel :	13	Relative Humidity :	51~53%
Test Engineer :	Eric Shih		

ANTENNA POLARITY : HORIZONTAL										
Frequency (MHz)	Level (dBµV/m)	Over Limit (dB)	Limit Line (dBµV/m)	Read Level (dBµV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
2483.77	61.85	-12.15	74	56.84	32.38	7.06	34.43	192	329	Peak
2483.5	52.48	-1.52	54	47.47	32.38	7.06	34.43	192	329	Average

ANTENNA POLARITY : VERTICAL										
Frequency (MHz)	Level (dBµV/m)	Over Limit (dB)	Limit Line (dBµV/m)	Read Level (dBµV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
2486.32	57.18	-16.82	74	52.17	32.38	7.06	34.43	100	214	Peak
2483.5	45.21	-8.79	54	40.2	32.38	7.06	34.43	100	214	Average

Test Mode :	802.11g	Temperature :	21~23°C
Test Channel :	01	Relative Humidity :	51~53%
Test Engineer :	Eric Shih		

ANTENNA POLARITY : HORIZONTAL										
Frequency (MHz)	Level (dBµV/m)	Over Limit (dB)	Limit Line (dBµV/m)	Read Level (dBµV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
2390	67.11	-6.89	74	62.2	32.3	6.91	34.3	110	333	Peak
2390	51.14	-2.86	54	46.23	32.3	6.91	34.3	110	333	Average

ANTENNA POLARITY : VERTICAL										
Frequency (MHz)	Level (dBµV/m)	Over Limit (dB)	Limit Line (dBµV/m)	Read Level (dBµV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
2389.56	62.04	-11.96	74	57.1	32.3	6.91	34.27	150	0	Peak
2390	47.04	-6.96	54	42.13	32.3	6.91	34.3	150	0	Average

Test Mode :	802.11g	Temperature :	21~23°C
Test Channel :	02	Relative Humidity :	51~53%
Test Engineer :	Eric Shih		

ANTENNA POLARITY : HORIZONTAL										
Frequency (MHz)	Level (dBµV/m)	Over Limit (dB)	Limit Line (dBµV/m)	Read Level (dBµV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
2389.2	64.96	-9.04	74	60.02	32.3	6.91	34.27	161	255	Peak
2389.74	51.29	-2.71	54	46.35	32.3	6.91	34.27	161	255	Average

ANTENNA POLARITY : VERTICAL										
Frequency (MHz)	Level (dBµV/m)	Over Limit (dB)	Limit Line (dBµV/m)	Read Level (dBµV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
2390	62.35	-11.65	74	57.44	32.3	6.91	34.3	100	355	Peak
2389.83	49.77	-4.23	54	44.86	32.3	6.91	34.3	100	355	Average

Test Mode :	802.11g	Temperature :	21~23°C
Test Channel :	11	Relative Humidity :	51~53%
Test Engineer :	Eric Shih		

ANTENNA POLARITY : HORIZONTAL										
Frequency (MHz)	Level (dBµV/m)	Over Limit (dB)	Limit Line (dBµV/m)	Read Level (dBµV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
2483.59	70.03	-3.97	74	65.02	32.38	7.06	34.43	165	82	Peak
2483.59	50.43	-3.57	54	45.42	32.38	7.06	34.43	165	82	Average

ANTENNA POLARITY : VERTICAL										
Frequency (MHz)	Level (dBµV/m)	Over Limit (dB)	Limit Line (dBµV/m)	Read Level (dBµV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
2485.15	63.49	-10.51	74	58.48	32.38	7.06	34.43	167	360	Peak
2483.56	45.99	-8.01	54	40.98	32.38	7.06	34.43	167	360	Average

Test Mode :	802.11g	Temperature :	21~23°C
Test Channel :	12	Relative Humidity :	51~53%
Test Engineer :	Eric Shih		

ANTENNA POLARITY : HORIZONTAL										
Frequency (MHz)	Level (dBµV/m)	Over Limit (dB)	Limit Line (dBµV/m)	Read Level (dBµV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
2483.68	70.38	-3.62	74	65.37	32.38	7.06	34.43	131	253	Peak
2483.77	49.37	-4.63	54	44.36	32.38	7.06	34.43	131	253	Average

ANTENNA POLARITY : VERTICAL										
Frequency (MHz)	Level (dBµV/m)	Over Limit (dB)	Limit Line (dBµV/m)	Read Level (dBµV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
2484.94	64.55	-9.45	74	59.54	32.38	7.06	34.43	154	198	Peak
2483.5	46.44	-7.56	54	41.43	32.38	7.06	34.43	154	198	Average

Test Mode :	802.11g	Temperature :	21~23°C
Test Channel :	13	Relative Humidity :	51~53%
Test Engineer :	Eric Shih		

ANTENNA POLARITY : HORIZONTAL										
Frequency (MHz)	Level (dBµV/m)	Over Limit (dB)	Limit Line (dBµV/m)	Read Level (dBµV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
2483.5	69.6	-4.4	74	64.59	32.38	7.06	34.43	158	260	Peak
2483.5	47.77	-6.23	54	42.76	32.38	7.06	34.43	158	260	Average

ANTENNA POLARITY : VERTICAL										
Frequency (MHz)	Level (dBµV/m)	Over Limit (dB)	Limit Line (dBµV/m)	Read Level (dBµV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
2483.53	67.22	-6.78	74	62.21	32.38	7.06	34.43	118	360	Peak
2483.5	46.68	-7.32	54	41.67	32.38	7.06	34.43	118	360	Average

Test Mode :	802.11n HT20	Temperature :	21~23°C
Test Channel :	01	Relative Humidity :	51~53%
Test Engineer :	Eric Shih		

ANTENNA POLARITY : HORIZONTAL										
Frequency (MHz)	Level (dBµV/m)	Over Limit (dB)	Limit Line (dBµV/m)	Read Level (dBµV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
2389.29	68.71	-5.29	74	63.77	32.3	6.91	34.27	160	265	Peak
2389.83	50.25	-3.75	54	45.34	32.3	6.91	34.3	160	265	Average

ANTENNA POLARITY : VERTICAL										
Frequency (MHz)	Level (dBµV/m)	Over Limit (dB)	Limit Line (dBµV/m)	Read Level (dBµV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
2389.47	67.68	-6.32	74	62.74	32.3	6.91	34.27	100	359	Peak
2390	48.7	-5.3	54	43.79	32.3	6.91	34.3	100	359	Average

Test Mode :	802.11n HT20	Temperature :	21~23°C
Test Channel :	02	Relative Humidity :	51~53%
Test Engineer :	Eric Shih		

ANTENNA POLARITY : HORIZONTAL										
Frequency (MHz)	Level (dBµV/m)	Over Limit (dB)	Limit Line (dBµV/m)	Read Level (dBµV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
2389.65	64.48	-9.52	74	59.54	32.3	6.91	34.27	163	266	Peak
2389.92	50.72	-3.28	54	45.81	32.3	6.91	34.3	163	266	Average

ANTENNA POLARITY : VERTICAL										
Frequency (MHz)	Level (dBµV/m)	Over Limit (dB)	Limit Line (dBµV/m)	Read Level (dBµV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
2389.02	62.2	-11.8	74	57.26	32.3	6.91	34.27	100	357	Peak
2389.65	48.88	-5.12	54	43.94	32.3	6.91	34.27	100	357	Average

Test Mode :	802.11n HT20	Temperature :	21~23°C
Test Channel :	11	Relative Humidity :	51~53%
Test Engineer :	Eric Shih		

ANTENNA POLARITY : HORIZONTAL										
Frequency (MHz)	Level (dBµV/m)	Over Limit (dB)	Limit Line (dBµV/m)	Read Level (dBµV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
2485.21	64.49	-9.51	74	59.48	32.38	7.06	34.43	198	338	Peak
2483.53	46.89	-7.11	54	41.88	32.38	7.06	34.43	198	338	Average

ANTENNA POLARITY : VERTICAL										
Frequency (MHz)	Level (dBµV/m)	Over Limit (dB)	Limit Line (dBµV/m)	Read Level (dBµV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
2485.36	57.41	-16.59	74	52.4	32.38	7.06	34.43	168	358	Peak
2483.5	44.79	-9.21	54	39.78	32.38	7.06	34.43	168	358	Average

Test Mode :	802.11n HT20	Temperature :	21~23°C
Test Channel :	12	Relative Humidity :	51~53%
Test Engineer :	Eric Shih		

ANTENNA POLARITY : HORIZONTAL										
Frequency (MHz)	Level (dBµV/m)	Over Limit (dB)	Limit Line (dBµV/m)	Read Level (dBµV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
2485.63	68.91	-5.09	74	63.9	32.38	7.06	34.43	106	325	Peak
2483.59	48.67	-5.33	54	43.66	32.38	7.06	34.43	106	325	Average

ANTENNA POLARITY : VERTICAL										
Frequency (MHz)	Level (dBµV/m)	Over Limit (dB)	Limit Line (dBµV/m)	Read Level (dBµV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
2483.56	60.72	-13.28	74	55.71	32.38	7.06	34.43	155	194	Peak
2483.53	45.46	-8.54	54	40.45	32.38	7.06	34.43	155	194	Average

Test Mode :	802.11n HT20	Temperature :	21~23°C
Test Channel :	13	Relative Humidity :	51~53%
Test Engineer :	Eric Shih		

ANTENNA POLARITY : HORIZONTAL										
Frequency (MHz)	Level (dBµV/m)	Over Limit (dB)	Limit Line (dBµV/m)	Read Level (dBµV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
2483.62	72.9	-1.1	74	67.89	32.38	7.06	34.43	160	269	Peak
2483.5	51.12	-2.88	54	46.11	32.38	7.06	34.43	160	269	Average

ANTENNA POLARITY : VERTICAL										
Frequency (MHz)	Level (dBµV/m)	Over Limit (dB)	Limit Line (dBµV/m)	Read Level (dBµV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
2483.59	64.36	-9.64	74	59.35	32.38	7.06	34.43	154	190	Peak
2483.5	46.54	-7.46	54	41.53	32.38	7.06	34.43	154	190	Average

<Sample 1 with Battery 1>

Test Mode :	802.11n HT20	**Temperature :**	21~23°C
Test Channel :	13	**Relative Humidity :**	51~53%
Test Engineer :	Eric Shih		

ANTENNA POLARITY : HORIZONTAL										
Frequency (MHz)	Level (dBµV/m)	Over Limit (dB)	Limit Line (dBµV/m)	Read Level (dBµV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
2483.5	72.77	-1.23	74	67.76	32.38	7.06	34.43	121	165	Peak
2483.5	52.77	-1.23	54	47.76	32.38	7.06	34.43	121	165	Average

ANTENNA POLARITY : VERTICAL										
Frequency (MHz)	Level (dBµV/m)	Over Limit (dB)	Limit Line (dBµV/m)	Read Level (dBµV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
2483.62	68.11	-5.89	74	63.1	32.38	7.06	34.43	105	112	Peak
2483.5	48.07	-5.93	54	43.06	32.38	7.06	34.43	105	112	Average

<Sample 2 with Battery 2>

Test Mode :	802.11n HT20	**Temperature :**	21~23°C
Test Channel :	13	**Relative Humidity :**	51~53%
Test Engineer :	Eric Shih		

ANTENNA POLARITY : HORIZONTAL										
Frequency (MHz)	Level (dBµV/m)	Over Limit (dB)	Limit Line (dBµV/m)	Read Level (dBµV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
2483.53	72.8	-1.2	74	67.73	32.38	7.06	34.43	100	21	Peak
2483.5	52.45	-1.55	54	47.44	32.38	7.06	34.43	100	21	Average

ANTENNA POLARITY : VERTICAL										
Frequency (MHz)	Level (dBµV/m)	Over Limit (dB)	Limit Line (dBµV/m)	Read Level (dBµV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
2483.65	68.43	-5.57	74	63.42	32.38	7.06	34.43	105	133	Peak
2483.5	47.95	-6.05	54	42.94	32.38	7.06	34.43	105	133	Average

<Sample 1 with Battery 2>

Test Mode :	802.11a	**Temperature :**	21~23°C
Test Channel :	149	**Relative Humidity :**	51~53%
Test Engineer :	Eric Shih		

ANTENNA POLARITY : HORIZONTAL										
Frequency (MHz)	Level (dBµV/m)	Over Limit (dB)	Limit Line (dBµV/m)	Read Level (dBµV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
5725	84.14	-4.6	88.74	72.92	35.33	10.04	34.15	143	236	Peak
5745	98.09	-	-	86.86	35.34	10.06	34.17	143	236	Average
5745	108.74	-	-	97.51	35.34	10.06	34.17	143	236	Peak

Note: 5725 MHz is not within a restricted band, and its limit line is 20dB below the highest emission level.

For example, 108.74 dBµV/m - 20dB = 88.74dBµV/m.

ANTENNA POLARITY : VERTICAL										
Frequency (MHz)	Level (dBµV/m)	Over Limit (dB)	Limit Line (dBµV/m)	Read Level (dBµV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
5725	89.96	-2.45	92.41	78.74	35.33	10.04	34.15	147	246	Peak
5744	102.19	-	-	90.96	35.34	10.06	34.17	147	246	Average
5744	112.41	-	-	101.18	35.34	10.06	34.17	147	246	Peak

Note: 5725 MHz is not within a restricted band, and its limit line is 20dB below the highest emission level.

Test Mode :	802.11a	Temperature :	21~23°C
Test Channel :	165	Relative Humidity :	51~53%
Test Engineer :	Eric Shih		

ANTENNA POLARITY : HORIZONTAL										
Frequency (MHz)	Level (dBµV/m)	Over Limit (dB)	Limit Line (dBµV/m)	Read Level (dBµV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
5823	102.53	-	-	91.29	35.4	10.11	34.27	138	241	Average
5823	112.79	-	-	101.55	35.4	10.11	34.27	138	241	Peak
5850	77.67	-15.12	92.79	66.44	35.41	10.13	34.31	138	241	Peak

ANTENNA POLARITY : VERTICAL										
Frequency (MHz)	Level (dBµV/m)	Over Limit (dB)	Limit Line (dBµV/m)	Read Level (dBµV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
5823	101.01	-	-	89.77	35.4	10.11	34.27	145	257	Average
5823	111.64	-	-	100.4	35.4	10.11	34.27	145	257	Peak
5850	76.78	-14.86	91.64	65.55	35.41	10.13	34.31	145	257	Peak

Note: 5850MHz is not within a restricted band, and its limit line is 20dB below the highest emission level.

Test Mode :	802.11n HT20	Temperature :	21~23°C
Test Channel :	149	Relative Humidity :	51~53%
Test Engineer :	Eric Shih		

ANTENNA POLARITY : HORIZONTAL										
Frequency (MHz)	Level (dBµV/m)	Over Limit (dB)	Limit Line (dBµV/m)	Read Level (dBµV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
5725	84.78	-4.84	89.62	73.56	35.33	10.04	34.15	140	250	Peak
5743	99.65	-	-	88.42	35.34	10.06	34.17	140	250	Average
5743	109.62	-	-	98.39	35.34	10.06	34.17	140	250	Peak

ANTENNA POLARITY : VERTICAL										
Frequency (MHz)	Level (dBµV/m)	Over Limit (dB)	Limit Line (dBµV/m)	Read Level (dBµV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
5725	86.43	-4.06	90.49	75.21	35.33	10.04	34.15	147	252	Peak
5743	100.33	-	-	89.1	35.34	10.06	34.17	147	252	Average
5743	110.49	-	-	99.26	35.34	10.06	34.17	147	252	Peak

Note: 5725 MHz is not within a restricted band, and its limit line is 20dB below the highest emission level.

Test Mode :	802.11n HT20	Temperature :	21~23°C
Test Channel :	165	Relative Humidity :	51~53%
Test Engineer :	Eric Shih		

ANTENNA POLARITY : HORIZONTAL										
Frequency (MHz)	Level (dBµV/m)	Over Limit (dB)	Limit Line (dBµV/m)	Read Level (dBµV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
5827	98.8	-	-	87.56	35.4	10.11	34.27	150	255	Average
5827	109.14	-	-	97.9	35.4	10.11	34.27	150	255	Peak
5850	73.18	-15.96	89.14	61.95	35.41	10.13	34.31	150	255	Peak

ANTENNA POLARITY : VERTICAL										
Frequency (MHz)	Level (dBµV/m)	Over Limit (dB)	Limit Line (dBµV/m)	Read Level (dBµV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
5827	99.86	-	-	88.62	35.4	10.11	34.27	144	263	Average
5827	110.35	-	-	99.11	35.4	10.11	34.27	144	263	Peak
5850	73.34	-17.01	90.35	62.11	35.41	10.13	34.31	144	263	Peak

Note: 5850 MHz is not within a restricted band, and its limit line is 20dB below the highest emission level.

Test Mode :	802.11n HT40	Temperature :	21~23°C
Test Channel :	151	Relative Humidity :	51~53%
Test Engineer :	Eric Shih		

ANTENNA POLARITY : HORIZONTAL										
Frequency (MHz)	Level (dBµV/m)	Over Limit (dB)	Limit Line (dBµV/m)	Read Level (dBµV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
5725	78.25	-6.02	84.27	67.03	35.33	10.04	34.15	118	215	Peak
5753	94.66	-	-	83.41	35.36	10.06	34.17	118	215	Average
5753	104.27	-	-	93.02	35.36	10.06	34.17	118	215	Peak
5850	52.45	-31.82	84.27	41.22	35.41	10.13	34.31	118	215	Peak

ANTENNA POLARITY : VERTICAL										
Frequency (MHz)	Level (dBµV/m)	Over Limit (dB)	Limit Line (dBµV/m)	Read Level (dBµV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
5725	78.91	-7.52	86.43	67.69	35.33	10.04	34.15	146	260	Peak
5753	96.62	-	-	85.37	35.36	10.06	34.17	146	260	Average
5753	106.43	-	-	95.18	35.36	10.06	34.17	146	260	Peak
5850	53.28	-33.15	86.43	42.05	35.41	10.13	34.31	146	260	Peak

Note:5725 MHz and 5850 MHz are not within a restricted band, and its limit line is 20dB below the highest emission level.

Test Mode :	802.11n HT40	Temperature :	21~23°C
Test Channel :	159	Relative Humidity :	51~53%
Test Engineer :	Eric Shih		

ANTENNA POLARITY : HORIZONTAL										
Frequency (MHz)	Level (dBµV/m)	Over Limit (dB)	Limit Line (dBµV/m)	Read Level (dBµV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
5725	56.63	-28.87	85.5	45.41	35.33	10.04	34.15	127	251	Peak
5797	95.7	-	-	84.46	35.38	10.09	34.23	127	251	Average
5797	105.5	-	-	94.26	35.38	10.09	34.23	127	251	Peak
5850	60.79	-24.71	85.5	49.56	35.41	10.13	34.31	127	251	Peak

ANTENNA POLARITY : VERTICAL										
Frequency (MHz)	Level (dBµV/m)	Over Limit (dB)	Limit Line (dBµV/m)	Read Level (dBµV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
5725	57.03	-29.42	86.45	45.81	35.33	10.04	34.15	159	256	Peak
5793	96.53	-	-	85.29	35.38	10.09	34.23	159	256	Average
5793	106.45	-	-	95.21	35.38	10.09	34.23	159	256	Peak
5850	61.26	-25.19	86.45	50.03	35.41	10.13	34.31	159	256	Peak

Note:5725 MHz and 5850 MHz are not within a restricted band, and its limit line is 20dB below the highest emission level.

<Sample 1 with Battery 1>

Test Mode :	802.11a	**Temperature :**	21~23°C
Test Channel :	149	**Relative Humidity :**	51~53%
Test Engineer :	Eric Shih		

ANTENNA POLARITY : HORIZONTAL										
Frequency (MHz)	Level (dBµV/m)	Over Limit (dB)	Limit Line (dBµV/m)	Read Level (dBµV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
5725	83.2	-5.14	88.34	71.98	35.33	10.04	34.15	143	236	Peak
5745	98.31	-	-	87.08	35.34	10.06	34.17	143	236	Average
5745	108.34	-	-	97.11	35.34	10.06	34.17	143	236	Peak

ANTENNA POLARITY : VERTICAL										
Frequency (MHz)	Level (dBµV/m)	Over Limit (dB)	Limit Line (dBµV/m)	Read Level (dBµV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
5725	89.04	-2.55	91.59	77.82	35.33	10.04	34.15	147	246	Peak
5743	102.24	-	-	91.01	35.34	10.06	34.17	147	246	Average
5743	111.59	-	-	100.36	35.34	10.06	34.17	147	246	Peak

Note: 5725MHz is not within a restricted band, and its limit line is 20dB below the highest emission level.

<Sample 2 with Battery 1>

Test Mode :	802.11a	**Temperature :**	21~23°C
Test Channel :	149	**Relative Humidity :**	51~53%
Test Engineer :	Eric Shih		

ANTENNA POLARITY : HORIZONTAL										
Frequency (MHz)	Level (dBµV/m)	Over Limit (dB)	Limit Line (dBµV/m)	Read Level (dBµV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
5725	83.7	-3.18	86.88	72.48	35.33	10.04	34.15	100	4	Peak
5746	96.77	-	-	85.54	35.34	10.06	34.17	100	4	Average
5746	106.88	-	-	95.65	35.34	10.06	34.17	100	4	Peak

ANTENNA POLARITY : VERTICAL										
Frequency (MHz)	Level (dBµV/m)	Over Limit (dB)	Limit Line (dBµV/m)	Read Level (dBµV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
5725	88.15	-3.06	91.21	76.93	35.33	10.04	34.15	124	254	Peak
5743	101.02	-	-	89.79	35.34	10.06	34.17	124	254	Average
5743	111.21	-	-	99.98	35.34	10.06	34.17	124	254	Peak

Note: 5725MHz is not within a restricted band, and its limit line is 20dB below the highest emission level.

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

<Sample 1 with Battery 2>

Test Mode :	802.11b	**Temperature :**	21~23°C
Test Channel :	01	**Relative Humidity :**	51~53%
Test Engineer :	Eric Shih	**Polarization :**	Horizontal
Remark :	1. 2411 MHz is fundamental signal which can be ignored. 2. 7236 MHz is not within a restricted band, and its limit line is 20dB below the highest emission level. For example, 112.94dBµV/m - 20dB = 92.94dBµV/m. 3. Average measurement was not performed if peak level went lower than the average limit.		

Frequency (MHz)	Level (dBµV/m)	Over Limit (dB)	Limit Line (dBµV/m)	Read Level (dBµV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
49.17	24.78	-15.22	40	46.79	8.5	0.69	31.2	142	118	Peak
149.34	27.32	-16.18	43.5	45.99	11.22	1.21	31.1	-	-	Peak
255.72	23.13	-22.87	46	39.88	12.68	1.57	31	-	-	Peak
424.6	21.42	-24.58	46	33.45	16.52	2.23	30.78	-	-	Peak
584.9	28.01	-17.99	46	36.48	19.54	2.65	30.66	-	-	Peak
944.7	26.13	-19.87	46	29.3	23.77	3.45	30.39	-	-	Peak
2411	109.14	-	-	104.18	32.31	6.95	34.3	196	332	Average
2411	112.94	-	-	107.98	32.31	6.95	34.3	196	332	Peak
4824	42.3	-31.7	74	58.49	33.97	8.77	58.93	100	0	Peak
7236	41.49	-51.45	92.94	52.77	35.55	10.83	57.66	100	0	Peak

Test Mode :	802.11b	Temperature :	21~23°C
Test Channel :	01	Relative Humidity :	51~53%
Test Engineer :	Eric Shih	Polarization :	Vertical
Remark :	1. 2413 MHz is fundamental signal which can be ignored. 2. 7236 MHz is not within a restricted band, and its limit line is 20dB below the highest emission level. 3. Average measurement was not performed if peak level went lower than the average limit.		

Frequency (MHz)	Level (dBµV/m)	Over Limit (dB)	Limit Line (dBµV/m)	Read Level (dBµV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
49.17	32.09	-7.91	40	54.1	8.5	0.69	31.2	132	88	Peak
137.73	19.74	-23.76	43.5	38.21	11.44	1.19	31.1	-	-	Peak
223.86	23.67	-22.33	46	42.45	10.78	1.44	31	-	-	Peak
435.8	18.97	-27.03	46	30.68	16.75	2.26	30.72	-	-	Peak
584.9	23.55	-22.45	46	32.02	19.54	2.65	30.66	-	-	Peak
956.6	26.15	-19.85	46	29.12	23.94	3.47	30.38	-	-	Peak
2413	103.35	-	-	98.39	32.31	6.95	34.3	200	354	Average
2413	107.91	-	-	102.95	32.31	6.95	34.3	200	354	Peak
4824	42.36	-31.64	74	58.55	33.97	8.77	58.93	100	0	Peak
7236	41.63	-46.28	87.91	52.91	35.55	10.83	57.66	100	0	Peak

Test Mode :	802.11b	Temperature :	21~23°C
Test Channel :	06	Relative Humidity :	51~53%
Test Engineer :	Eric Shih	Polarization :	Horizontal
Remark :	1. 2438 MHz is fundamental signal which can be ignored. 2. Average measurement was not performed if peak level went lower than the average limit.		

Frequency (MHz)	Level (dBµV/m)	Over Limit (dB)	Limit Line (dBµV/m)	Read Level (dBµV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
47.82	31.36	-8.64	40	52.59	9.3	0.67	31.2	149	155	Peak
149.34	26.86	-16.64	43.5	45.53	11.22	1.21	31.1	-	-	Peak
247.08	23.07	-22.93	46	40.14	12.4	1.53	31	-	-	Peak
424.6	21.22	-24.78	46	33.25	16.52	2.23	30.78	-	-	Peak
584.2	28.6	-17.4	46	37.1	19.52	2.64	30.66	-	-	Peak
869.8	24.92	-21.08	46	29.18	22.8	3.3	30.36	-	-	Peak
2438	110.58	-	-	105.59	32.35	6.99	34.35	135	333	Average
2438	115.13	-	-	110.14	32.35	6.99	34.35	135	333	Peak
4875	44.56	-29.44	74	60.62	33.95	8.82	58.83	100	0	Peak
7311	38.92	-35.08	74	50.2	35.54	10.91	57.73	100	0	Peak

Test Mode :	802.11b	Temperature :	21~23°C
Test Channel :	06	Relative Humidity :	51~53%
Test Engineer :	Eric Shih	Polarization :	Vertical
Remark :	1. 2436 MHz is fundamental signal which can be ignored. 2. Average measurement was not performed if peak level went lower than the average limit.		

Frequency (MHz)	Level (dBµV/m)	Over Limit (dB)	Limit Line (dBµV/m)	Read Level (dBµV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
49.17	32.43	-7.57	40	54.44	8.5	0.69	31.2	157	96	Peak
138.81	20.05	-23.45	43.5	38.53	11.42	1.2	31.1	-	-	Peak
213.6	21.6	-21.9	43.5	41.25	10.04	1.38	31.07	-	-	Peak
563.2	21.29	-24.71	46	30.28	19.17	2.59	30.75	-	-	Peak
720	22.43	-23.57	46	28.95	20.89	2.99	30.4	-	-	Peak
848.1	25.28	-20.72	46	29.84	22.58	3.26	30.4	-	-	Peak
2436	105.5	-	-	100.53	32.33	6.99	34.35	156	195	Average
2436	109.6	-	-	104.63	32.33	6.99	34.35	156	195	Peak
4875	42.57	-31.43	74	58.63	33.95	8.82	58.83	100	0	Peak
7311	40.89	-33.11	74	52.17	35.54	10.91	57.73	100	0	Peak

Test Mode :	802.11b	Temperature :	21~23°C
Test Channel :	11	Relative Humidity :	51~53%
Test Engineer :	Eric Shih	Polarization :	Horizontal
Remark :	1. 2463 MHz is fundamental signal which can be ignored. 2. Average measurement was not performed if peak level went lower than the average limit.		

Frequency (MHz)	Level (dBµV/m)	Over Limit (dB)	Limit Line (dBµV/m)	Read Level (dBµV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
47.82	31.84	-8.16	40	53.07	9.3	0.67	31.2	161	148	Peak
150.69	25.79	-17.71	43.5	44.49	11.2	1.21	31.11	-	-	Peak
253.56	22.71	-23.29	46	39.52	12.64	1.55	31	-	-	Peak
520.5	21.64	-24.36	46	31.38	18.45	2.49	30.68	-	-	Peak
584.2	28.74	-17.26	46	37.24	19.52	2.64	30.66	-	-	Peak
925.8	25.5	-20.5	46	28.96	23.49	3.4	30.35	-	-	Peak
2463	106.18	-	-	101.18	32.37	7.02	34.39	130	83	Average
2463	110.4	-	-	105.4	32.37	7.02	34.39	130	83	Peak
4926	43.08	-30.92	74	58.98	33.93	8.9	58.73	100	0	Peak
7386	41.8	-32.2	74	53.09	35.52	10.99	57.8	100	0	Peak

Test Mode :	802.11b	Temperature :	21~23°C
Test Channel :	11	Relative Humidity :	51~53%
Test Engineer :	Eric Shih	Polarization :	Vertical
Remark :	1. 2463 MHz is fundamental signal which can be ignored. 2. Average measurement was not performed if peak level went lower than the average limit.		

Frequency (MHz)	Level (dBµV/m)	Over Limit (dB)	Limit Line (dBµV/m)	Read Level (dBµV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
49.17	32.34	-7.66	40	54.35	8.5	0.69	31.2	163	171	Peak
138.81	19.99	-23.51	43.5	38.47	11.42	1.2	31.1	-	-	Peak
213.06	22.82	-20.68	43.5	42.47	10.04	1.38	31.07	-	-	Peak
446.3	18.93	-27.07	46	30.4	16.97	2.29	30.73	-	-	Peak
682.2	22.48	-23.52	46	29.57	20.45	2.9	30.44	-	-	Peak
853	25.29	-20.71	46	29.79	22.62	3.27	30.39	-	-	Peak
2463	102.16	-	-	97.16	32.37	7.02	34.39	155	190	Average
2463	106.6	-	-	101.6	32.37	7.02	34.39	155	190	Peak
4923	41.86	-32.14	74	57.79	33.93	8.87	58.73	100	0	Peak
7386	41.4	-32.6	74	52.69	35.52	10.99	57.8	100	0	Peak

Test Mode :	802.11g	Temperature :	21~23°C
Test Channel :	01	Relative Humidity :	51~53%
Test Engineer :	Eric Shih	Polarization :	Horizontal
Remark :	1. 2408 MHz is fundamental signal which can be ignored. 2. 7236 MHz is not within a restricted band, and its limit line is 20dB below the highest emission level. 3. Average measurement was not performed if peak level went lower than the average limit.		

Frequency (MHz)	Level (dBµV/m)	Over Limit (dB)	Limit Line (dBµV/m)	Read Level (dBµV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
30.81	24.8	-15.2	40	36.44	19.28	0.54	31.46	106	186	Peak
149.61	27.18	-16.32	43.5	45.85	11.22	1.21	31.1	-	-	Peak
248.7	22.29	-23.71	46	39.29	12.47	1.53	31	-	-	Peak
541.5	24.74	-21.26	46	34.19	18.79	2.53	30.77	-	-	Peak
605.9	26.18	-19.82	46	34.21	19.85	2.71	30.59	-	-	Peak
908.3	25.73	-20.27	46	29.47	23.22	3.36	30.32	-	-	Peak
2408	100.24	-	-	95.28	32.31	6.95	34.3	110	333	Average
2408	110.31	-	-	105.35	32.31	6.95	34.3	110	333	Peak
4824	39.54	-34.46	74	55.73	33.97	8.77	58.93	100	0	Peak
7236	39.4	-50.91	90.31	50.68	35.55	10.83	57.66	100	0	Peak

Test Mode :	802.11g	Temperature :	21~23°C
Test Channel :	01	Relative Humidity :	51~53%
Test Engineer :	Eric Shih	Polarization :	Vertical
Remark :	1. 2416 MHz is fundamental signal which can be ignored. 2. 7236 MHz is not within a restricted band, and its limit line is 20dB below the highest emission level. 3. Average measurement was not performed if peak level went lower than the average limit.		

Frequency (MHz)	Level (dBµV/m)	Over Limit (dB)	Limit Line (dBµV/m)	Read Level (dBµV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
49.17	33.28	-6.72	40	55.29	8.5	0.69	31.2	108	115	Peak
138.27	19.29	-24.21	43.5	37.77	11.42	1.2	31.1	-	-	Peak
213.6	22.56	-20.94	43.5	42.21	10.04	1.38	31.07	-	-	Peak
489	19.66	-26.34	46	30.1	17.86	2.41	30.71	-	-	Peak
605.9	22.65	-23.35	46	30.68	19.85	2.71	30.59	-	-	Peak
915.3	25.34	-20.66	46	28.96	23.33	3.38	30.33	-	-	Peak
2416	94.41	-	-	89.5	32.31	6.95	34.35	150	0	Average
2416	104.29	-	-	99.38	32.31	6.95	34.35	150	0	Peak
4824	40.07	-33.93	74	56.26	33.97	8.77	58.93	100	0	Peak
7236	40.72	-43.57	84.29	52	35.55	10.83	57.66	100	0	Peak

Test Mode :	802.11g	Temperature :	21~23°C
Test Channel :	06	Relative Humidity :	51~53%
Test Engineer :	Eric Shih	Polarization :	Horizontal
Remark :	1. 2437 MHz is fundamental signal which can be ignored. 2. Average measurement was not performed if peak level went lower than the average limit.		

Frequency (MHz)	Level (dBµV/m)	Over Limit (dB)	Limit Line (dBµV/m)	Read Level (dBµV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
49.17	31.94	-8.06	40	53.95	8.5	0.69	31.2	111	98	Peak
150.42	27.1	-16.4	43.5	45.8	11.2	1.21	31.11	-	-	Peak
248.16	22.69	-23.31	46	39.69	12.47	1.53	31	-	-	Peak
435.8	20.57	-25.43	46	32.28	16.75	2.26	30.72	-	-	Peak
584.2	28.76	-17.24	46	37.26	19.52	2.64	30.66	-	-	Peak
877.5	25.75	-20.25	46	29.91	22.88	3.31	30.35	-	-	Peak
2437	104.74	-	-	99.75	32.35	6.99	34.35	167	82	Average
2437	113.84	-	-	108.89	32.35	6.99	34.39	167	82	Peak
4875	41.51	-32.49	74	57.57	33.95	8.82	58.83	100	0	Peak
7311	39.65	-34.35	74	50.93	35.54	10.91	57.73	100	0	Peak

Test Mode :	802.11g	Temperature :	21~23°C
Test Channel :	06	Relative Humidity :	51~53%
Test Engineer :	Eric Shih	Polarization :	Vertical
Remark :	1. 2440 MHz is fundamental signal which can be ignored. 2. Average measurement was not performed if peak level went lower than the average limit.		

Frequency (MHz)	Level (dBµV/m)	Over Limit (dB)	Limit Line (dBµV/m)	Read Level (dBµV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
47.82	32.3	-7.7	40	53.53	9.3	0.67	31.2	130	118	Peak
136.65	19.07	-24.43	43.5	37.52	11.46	1.19	31.1	-	-	Peak
213.6	21.45	-22.05	43.5	41.1	10.04	1.38	31.07	-	-	Peak
498.8	21.56	-24.44	46	31.67	18.06	2.44	30.61	-	-	Peak
729.1	23.22	-22.78	46	29.57	21.04	3.01	30.4	-	-	Peak
889.4	25.64	-20.36	46	29.64	22.99	3.33	30.32	-	-	Peak
2440	98	-	-	93.05	32.35	6.99	34.39	100	359	Average
2440	106.91	-	-	101.96	32.35	6.99	34.39	100	359	Peak
4875	40.8	-33.2	74	56.86	33.95	8.82	58.83	100	0	Peak
7311	39.39	-34.61	74	50.67	35.54	10.91	57.73	100	0	Peak

Test Mode :	802.11g	Temperature :	21~23°C
Test Channel :	11	Relative Humidity :	51~53%
Test Engineer :	Eric Shih	Polarization :	Horizontal
Remark :	1. 2461 MHz is fundamental signal which can be ignored. 2. Average measurement was not performed if peak level went lower than the average limit.		

Frequency (MHz)	Level (dBµV/m)	Over Limit (dB)	Limit Line (dBµV/m)	Read Level (dBµV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
32.7	33.78	-6.22	40	46.76	17.84	0.56	31.38	149	39	Peak
149.88	25.82	-17.68	43.5	44.51	11.2	1.21	31.1	-	-	Peak
253.29	22.74	-23.26	46	39.55	12.64	1.55	31	-	-	Peak
446.3	20.65	-25.35	46	32.12	16.97	2.29	30.73	-	-	Peak
733.3	23.09	-22.91	46	29.37	21.1	3.02	30.4	-	-	Peak
957.3	26	-20	46	28.94	23.96	3.47	30.37	-	-	Peak
2461	100.12	-	-	95.12	32.37	7.02	34.39	165	82	Average
2461	109.96	-	-	104.96	32.37	7.02	34.39	165	82	Peak
4923	40.42	-33.58	74	56.35	33.93	8.87	58.73	100	0	Peak
7386	41.28	-32.72	74	52.57	35.52	10.99	57.8	100	0	Peak

Test Mode :	802.11g	Temperature :	21~23°C
Test Channel :	11	Relative Humidity :	51~53%
Test Engineer :	Eric Shih	Polarization :	Vertical
Remark :	1. 2461 MHz is fundamental signal which can be ignored. 2. Average measurement was not performed if peak level went lower than the average limit.		

Frequency (MHz)	Level (dBµV/m)	Over Limit (dB)	Limit Line (dBµV/m)	Read Level (dBµV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
49.17	32.77	-7.23	40	54.78	8.5	0.69	31.2	155	123	Peak
138	20.51	-22.99	43.5	38.98	11.44	1.19	31.1	-	-	Peak
213.87	22.39	-21.11	43.5	41.96	10.11	1.38	31.06	-	-	Peak
456.8	19.06	-26.94	46	30.34	17.19	2.31	30.78	-	-	Peak
584.2	22.4	-23.6	46	30.9	19.52	2.64	30.66	-	-	Peak
884.5	25.88	-20.12	46	29.95	22.94	3.32	30.33	-	-	Peak
2461	94.41	-	-	89.41	32.37	7.02	34.39	167	360	Average
2461	103.71	-	-	98.71	32.37	7.02	34.39	167	360	Peak
4923	39.73	-34.27	74	55.66	33.93	8.87	58.73	100	0	Peak
7386	42.02	-31.98	74	53.31	35.52	10.99	57.8	100	0	Peak

Test Mode :	2.4GHz 802.11n HT20	Temperature :	21~23°C
Test Channel :	01	Relative Humidity :	51~53%
Test Engineer :	Eric Shih	Polarization :	Horizontal
Remark :	1. 2410 MHz is fundamental signal which can be ignored. 2. 7236 MHz is not within a restricted band, and its limit line is 20dB below the highest emission level. 3. Average measurement was not performed if peak level went lower than the average limit.		

Frequency (MHz)	Level (dBµV/m)	Over Limit (dB)	Limit Line (dBµV/m)	Read Level (dBµV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
49.17	31.11	-8.89	40	53.12	8.5	0.69	31.2	154	53	Peak
149.61	26.61	-16.89	43.5	45.28	11.22	1.21	31.1	-	-	Peak
252.48	22.75	-23.25	46	39.58	12.63	1.54	31	-	-	Peak
435.1	20.75	-25.25	46	32.46	16.75	2.26	30.72	-	-	Peak
605.2	25.37	-20.63	46	33.42	19.84	2.7	30.59	-	-	Peak
878.2	24.97	-21.03	46	29.12	22.88	3.31	30.34	-	-	Peak
2410	99.9	-	-	94.94	32.31	6.95	34.3	160	265	Average
2410	110.31	-	-	105.35	32.31	6.95	34.3	160	265	Peak
4824	41.43	-32.57	74	57.62	33.97	8.77	58.93	100	0	Peak
7236	41.62	-48.69	90.31	52.9	35.55	10.83	57.66	100	0	Peak

Test Mode :	2.4GHz 802.11n HT20	Temperature :	21~23°C
Test Channel :	01	Relative Humidity :	51~53%
Test Engineer :	Eric Shih	Polarization :	Vertical
Remark :	1. 2412 MHz is fundamental signal which can be ignored. 2. 7236 MHz is not within a restricted band, and its limit line is 20dB below the highest emission level. 3. Average measurement was not performed if peak level went lower than the average limit.		

Frequency (MHz)	Level (dBµV/m)	Over Limit (dB)	Limit Line (dBµV/m)	Read Level (dBµV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
49.17	31.55	-8.45	40	53.56	8.5	0.69	31.2	149	286	Peak
138.81	19.04	-24.46	43.5	37.52	11.42	1.2	31.1	-	-	Peak
213.6	21.99	-21.51	43.5	41.64	10.04	1.38	31.07	-	-	Peak
498.8	19.86	-26.14	46	29.97	18.06	2.44	30.61	-	-	Peak
689.9	22.73	-23.27	46	29.72	20.51	2.92	30.42	-	-	Peak
896.4	25.56	-20.44	46	29.48	23.06	3.33	30.31	-	-	Peak
2412	93.33	-	-	88.37	32.31	6.95	34.3	100	359	Average
2412	103.62	-	-	98.69	32.33	6.95	34.35	100	359	Peak
4824	40.19	-33.81	74	56.38	33.97	8.77	58.93	100	0	Peak
7236	41.43	-42.19	83.62	52.71	35.55	10.83	57.66	100	0	Peak

Test Mode :	2.4GHz 802.11n HT20	Temperature :	21~23°C
Test Channel :	06	Relative Humidity :	51~53%
Test Engineer :	Eric Shih	Polarization :	Horizontal
Remark :	1. 2437 MHz is fundamental signal which can be ignored. 2. Average measurement was not performed if peak level went lower than the average limit.		

Frequency (MHz)	Level (dBµV/m)	Over Limit (dB)	Limit Line (dBµV/m)	Read Level (dBµV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
49.17	31.52	-8.48	40	53.53	8.5	0.69	31.2	134	353	Peak
150.15	26.66	-16.84	43.5	45.35	11.2	1.21	31.1	-	-	Peak
249.51	22.67	-23.33	46	39.61	12.53	1.53	31	-	-	Peak
498.8	22.42	-23.58	46	32.53	18.06	2.44	30.61	-	-	Peak
584.2	28.01	-17.99	46	36.51	19.52	2.64	30.66	-	-	Peak
874.7	26	-20	46	30.2	22.85	3.3	30.35	-	-	Peak
2437	104.7	-	-	99.71	32.35	6.99	34.35	106	100	Average
2437	113.79	-	-	108.84	32.35	6.99	34.39	106	100	Peak
4875	40.25	-33.75	74	56.31	33.95	8.82	58.83	100	0	Peak
7311	41.25	-32.75	74	52.53	35.54	10.91	57.73	100	0	Peak

Test Mode :	2.4GHz 802.11n HT20	Temperature :	21~23°C
Test Channel :	06	Relative Humidity :	51~53%
Test Engineer :	Eric Shih	Polarization :	Vertical
Remark :	1. 2434 MHz is fundamental signal which can be ignored. 2. Average measurement was not performed if peak level went lower than the average limit.		

Frequency (MHz)	Level (dBµV/m)	Over Limit (dB)	Limit Line (dBµV/m)	Read Level (dBµV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
48.9	31.48	-8.52	40	53.1	8.9	0.68	31.2	128	197	Peak
136.38	19.38	-24.12	43.5	37.83	11.46	1.19	31.1	-	-	Peak
213.6	23.41	-20.09	43.5	43.06	10.04	1.38	31.07	-	-	Peak
520.5	21.87	-24.13	46	31.61	18.45	2.49	30.68	-	-	Peak
626.9	22.36	-23.64	46	30.13	20.01	2.77	30.55	-	-	Peak
895	25.6	-20.4	46	29.53	23.05	3.33	30.31	-	-	Peak
2434	97.7	-	-	92.73	32.33	6.99	34.35	120	357	Average
2434	106.9	-	-	101.93	32.33	6.99	34.35	120	357	Peak
4875	40.54	-33.46	74	56.6	33.95	8.82	58.83	100	0	Peak
7311	40.77	-33.23	74	52.05	35.54	10.91	57.73	100	0	Peak

Test Mode :	2.4GHz 802.11n HT20	Temperature :	21~23°C
Test Channel :	11	Relative Humidity :	51~53%
Test Engineer :	Eric Shih	Polarization :	Horizontal
Remark :	1. 2458 MHz is fundamental signal which can be ignored. 2. Average measurement was not performed if peak level went lower than the average limit.		

Frequency (MHz)	Level (dBµV/m)	Over Limit (dB)	Limit Line (dBµV/m)	Read Level (dBµV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
49.44	31.74	-8.26	40	53.75	8.5	0.69	31.2	154	222	Peak
149.34	26.64	-16.86	43.5	45.31	11.22	1.21	31.1	-	-	Peak
251.67	23.23	-22.77	46	40.06	12.63	1.54	31	-	-	Peak
498.8	20.93	-25.07	46	31.04	18.06	2.44	30.61	-	-	Peak
769.7	23.58	-22.42	46	29.2	21.65	3.09	30.36	-	-	Peak
924.4	25.97	-20.03	46	29.46	23.46	3.4	30.35	-	-	Peak
2458	95.28	-	-	90.28	32.37	7.02	34.39	198	338	Average
2458	104.71	-	-	99.71	32.37	7.02	34.39	198	338	Peak
4923	39.92	-34.08	74	55.85	33.93	8.87	58.73	100	0	Peak
7386	41.54	-32.46	74	52.83	35.52	10.99	57.8	100	0	Peak

Test Mode :	2.4GHz 802.11n HT20	Temperature :	21~23°C
Test Channel :	11	Relative Humidity :	51~53%
Test Engineer :	Eric Shih	Polarization :	Vertical
Remark :	1. 2460 MHz is fundamental signal which can be ignored. 2. Average measurement was not performed if peak level went lower than the average limit.		

Frequency (MHz)	Level (dBµV/m)	Over Limit (dB)	Limit Line (dBµV/m)	Read Level (dBµV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
49.17	31.6	-8.4	40	53.61	8.5	0.69	31.2	139	227	Peak
138.81	19.28	-24.22	43.5	37.76	11.42	1.2	31.1	-	-	Peak
213.6	22.31	-21.19	43.5	41.96	10.04	1.38	31.07	-	-	Peak
488.3	21.22	-24.78	46	31.69	17.84	2.41	30.72	-	-	Peak
689.9	22.6	-23.4	46	29.59	20.51	2.92	30.42	-	-	Peak
891.5	25.06	-20.94	46	29.04	23.01	3.33	30.32	-	-	Peak
2460	90.15	-	-	85.15	32.37	7.02	34.39	168	358	Average
2460	100.29	-	-	95.29	32.37	7.02	34.39	168	358	Peak
4923	39.45	-34.55	74	55.38	33.93	8.87	58.73	100	0	Peak
7386	41.32	-32.68	74	52.61	35.52	10.99	57.8	100	0	Peak

Test Mode :	802.11a	Temperature :	21~23°C
Test Channel :	149	Relative Humidity :	51~53%
Test Engineer :	Eric Shih	Polarization :	Horizontal
Remark :	1. 5745 MHz is fundamental signal which can be ignored. 2. 17235 MHz is not within a restricted band, and its limit line is 20dB below the highest emission level. 3. Average measurement was not performed if peak level went lower than the average limit.		

Frequency (MHz)	Level (dBµV/m)	Over Limit (dB)	Limit Line (dBµV/m)	Read Level (dBµV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
49.17	32.68	-7.32	40	54.69	8.5	0.69	31.2	124	120	Peak
149.34	26.19	-17.31	43.5	44.86	11.22	1.21	31.1	-	-	Peak
254.64	23.03	-22.97	46	39.8	12.67	1.56	31	-	-	Peak
562.5	24.78	-21.22	46	33.78	19.16	2.59	30.75	-	-	Peak
775.3	24.27	-21.73	46	29.8	21.72	3.1	30.35	-	-	Peak
946.1	26.15	-19.85	46	29.31	23.78	3.45	30.39	-	-	Peak
5745	98.09	-	-	86.86	35.34	10.06	34.17	143	236	Average
5745	108.74	-	-	97.51	35.34	10.06	34.17	143	236	Peak
11490	49.99	-24.01	74	54.25	38.38	14.33	56.97	100	0	Peak
17235	49.31	-39.43	88.74	47.04	41.86	16.6	56.19	100	0	Peak

Test Mode :	802.11a	Temperature :	21~23°C
Test Channel :	149	Relative Humidity :	51~53%
Test Engineer :	Eric Shih	Polarization :	Vertical
Remark :	1. 5744 MHz is fundamental signal which can be ignored. 2. 17241 MHz is not within a restricted band, and its limit line is 20dB below the highest emission level. 3. Average measurement was not performed if peak level went lower than the average limit.		

Frequency (MHz)	Level (dBµV/m)	Over Limit (dB)	Limit Line (dBµV/m)	Read Level (dBµV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
49.17	32.82	-7.18	40	54.83	8.5	0.69	31.2	141	36	Peak
136.38	19.52	-23.98	43.5	37.97	11.46	1.19	31.1	-	-	Peak
216.57	20.79	-25.21	46	40.19	10.24	1.4	31.04	-	-	Peak
541.5	23.06	-22.94	46	32.51	18.79	2.53	30.77	-	-	Peak
605.2	22.82	-23.18	46	30.87	19.84	2.7	30.59	-	-	Peak
836.9	26.61	-19.39	46	31.27	22.47	3.24	30.37	-	-	Peak
5744	102.19	-	-	90.96	35.34	10.06	34.17	147	246	Average
5744	112.41	-	-	101.18	35.34	10.06	34.17	147	246	Peak
11490	49.65	-24.35	74	53.91	38.38	14.33	56.97	100	0	Peak
17241	50.75	-41.66	92.41	48.45	41.86	16.63	56.19	100	0	Peak

Test Mode :	802.11a	Temperature :	21~23°C
Test Channel :	157	Relative Humidity :	51~53%
Test Engineer :	Eric Shih	Polarization :	Horizontal
Remark :	1. 5783 MHz is fundamental signal which can be ignored. 2. 17355 MHz is not within a restricted band, and its limit line is 20dB below the highest emission level. 3. Average measurement was not performed if peak level went lower than the average limit.		

Frequency (MHz)	Level (dBµV/m)	Over Limit (dB)	Limit Line (dBµV/m)	Read Level (dBµV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
49.17	31.75	-8.25	40	53.76	8.5	0.69	31.2	117	288	Peak
148.53	26.5	-17	43.5	45.15	11.24	1.21	31.1	-	-	Peak
254.64	22.72	-23.28	46	39.49	12.67	1.56	31	-	-	Peak
456.8	22.9	-23.1	46	34.18	17.19	2.31	30.78	-	-	Peak
637.4	22.89	-23.11	46	30.52	20.1	2.8	30.53	-	-	Peak
887.3	25.22	-20.78	46	29.26	22.97	3.32	30.33	-	-	Peak
5783	101.73	-	-	90.52	35.37	10.07	34.23	138	255	Average
5783	112.05	-	-	100.84	35.37	10.07	34.23	138	255	Peak
11577	48.51	-25.49	74	52.39	38.46	14.44	56.78	100	0	Peak
17355	50.36	-41.69	92.05	48.04	41.79	16.75	56.22	100	0	Peak

Test Mode :	802.11a	Temperature :	21~23°C
Test Channel :	157	Relative Humidity :	51~53%
Test Engineer :	Eric Shih	Polarization :	Vertical
Remark :	1. 5787 MHz is fundamental signal which can be ignored. 2. 17355 MHz is not within a restricted band, and its limit line is 20dB below the highest emission level. 3. Average measurement was not performed if peak level went lower than the average limit.		

Frequency (MHz)	Level (dBµV/m)	Over Limit (dB)	Limit Line (dBµV/m)	Read Level (dBµV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
48.36	32.15	-7.85	40	53.77	8.9	0.68	31.2	155	67	Peak
140.97	19.51	-23.99	43.5	38.03	11.38	1.2	31.1	-	-	Peak
216.3	22.53	-23.47	46	41.93	10.24	1.4	31.04	-	-	Peak
475	19.24	-26.76	46	30.09	17.58	2.37	30.8	-	-	Peak
667.5	22.19	-23.81	46	29.44	20.34	2.87	30.46	-	-	Peak
888.7	24.87	-21.13	46	28.89	22.98	3.32	30.32	-	-	Peak
5787	101.91	-	-	90.69	35.38	10.07	34.23	146	260	Average
5787	112.14	-	-	100.92	35.38	10.07	34.23	146	260	Peak
11571	50.52	-23.48	74	54.43	38.46	14.41	56.78	100	0	Peak
17355	50.45	-41.69	92.14	48.13	41.79	16.75	56.22	100	0	Peak

Test Mode :	802.11a	Temperature :	21~23°C
Test Channel :	165	Relative Humidity :	51~53%
Test Engineer :	Eric Shih	Polarization :	Horizontal
Remark :	1. 5823 MHz is fundamental signal which can be ignored. 2. 17475 MHz is not within a restricted band, and its limit line is 20dB below the highest emission level. 3. Average measurement was not performed if peak level went lower than the average limit.		

Frequency (MHz)	Level (dBµV/m)	Over Limit (dB)	Limit Line (dBµV/m)	Read Level (dBµV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
48.9	31.79	-8.21	40	53.41	8.9	0.68	31.2	109	302	Peak
139.62	25.78	-17.72	43.5	44.28	11.4	1.2	31.1	-	-	Peak
213.33	22.75	-20.75	43.5	42.4	10.04	1.38	31.07	-	-	Peak
456.1	22.27	-23.73	46	33.57	17.17	2.31	30.78	-	-	Peak
605.2	25.03	-20.97	46	33.08	19.84	2.7	30.59	-	-	Peak
916.7	25.98	-20.02	46	29.58	23.35	3.38	30.33	-	-	Peak
5823	102.53	-	-	91.29	35.4	10.11	34.27	138	241	Average
5823	112.79	-	-	101.55	35.4	10.11	34.27	138	241	Peak
11652	50.62	-23.38	74	54.15	38.52	14.52	56.57	100	0	Peak
17475	49.99	-42.8	92.79	47.63	41.72	16.89	56.25	100	0	Peak

Test Mode :	802.11a	Temperature :	21~23°C
Test Channel :	165	Relative Humidity :	51~53%
Test Engineer :	Eric Shih	Polarization :	Vertical
Remark :	1. 5823 MHz is fundamental signal which can be ignored. 2. 17475 MHz is not within a restricted band, and its limit line is 20dB below the highest emission level. 3. Average measurement was not performed if peak level went lower than the average limit.		

Frequency (MHz)	Level (dBµV/m)	Over Limit (dB)	Limit Line (dBµV/m)	Read Level (dBµV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
48.9	32.31	-7.69	40	53.93	8.9	0.68	31.2	145	212	Peak
147.99	28.21	-15.29	43.5	46.86	11.24	1.21	31.1	-	-	Peak
216.03	21.8	-24.2	46	41.2	10.24	1.4	31.04	-	-	Peak
531	20.21	-25.79	46	29.82	18.61	2.51	30.73	-	-	Peak
663.3	22.17	-23.83	46	29.47	20.3	2.87	30.47	-	-	Peak
828.5	24.92	-21.08	46	29.69	22.38	3.21	30.36	-	-	Peak
5823	101.01	-	-	89.77	35.4	10.11	34.27	145	257	Average
5823	111.64	-	-	100.4	35.4	10.11	34.27	145	257	Peak
11652	50.8	-23.2	74	54.33	38.52	14.52	56.57	100	0	Peak
17475	50.76	-40.88	91.64	48.4	41.72	16.89	56.25	100	0	Peak

Test Mode :	5GHz 802.11n HT20	Temperature :	21~23°C
Test Channel :	149	Relative Humidity :	51~53%
Test Engineer :	Eric Shih	Polarization :	Horizontal
Remark :	1. 5743MHz is fundamental signal which can be ignored. 2. 17235 MHz is not within a restricted band, and its limit line is 20dB below the highest emission level. 3. Average measurement was not performed if peak level went lower than the average limit.		

Frequency (MHz)	Level (dBµV/m)	Over Limit (dB)	Limit Line (dBµV/m)	Read Level (dBµV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
48.9	32.38	-7.62	40	54	8.9	0.68	31.2	156	323	Peak
148.53	26.39	-17.11	43.5	45.04	11.24	1.21	31.1	-	-	Peak
248.43	23.15	-22.85	46	40.15	12.47	1.53	31	-	-	Peak
456.8	22.37	-23.63	46	33.65	17.19	2.31	30.78	-	-	Peak
584.2	26.38	-19.62	46	34.88	19.52	2.64	30.66	-	-	Peak
796.3	23.77	-22.23	46	28.91	22.04	3.13	30.31	-	-	Peak
5743	99.65	-	-	88.42	35.34	10.06	34.17	140	250	Average
5743	109.62	-	-	98.39	35.34	10.06	34.17	140	250	Peak
11493	49.21	-24.79	74	53.47	38.38	14.33	56.97	100	0	Peak
17235	49.58	-40.04	89.62	47.31	41.86	16.6	56.19	100	0	Peak

Test Mode :	5GHz 802.11n HT20	**Temperature :**	21~23°C
Test Channel :	149	**Relative Humidity :**	51~53%
Test Engineer :	Eric Shih	**Polarization :**	Vertical
Remark :	1. 5743 MHz is fundamental signal which can be ignored. 2. 17235 MHz is not within a restricted band, and its limit line is 20dB below the highest emission level. 3. Average measurement was not performed if peak level went lower than the average limit.		

Frequency (MHz)	Level (dBµV/m)	Over Limit (dB)	Limit Line (dBµV/m)	Read Level (dBµV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
46.2	29.04	-10.96	40	49.87	9.7	0.67	31.2	173	262	Peak
139.08	19.4	-24.1	43.5	37.88	11.42	1.2	31.1	-	-	Peak
216.03	20.57	-25.43	46	39.97	10.24	1.4	31.04	-	-	Peak
499.5	19.66	-26.34	46	29.73	18.08	2.45	30.6	-	-	Peak
605.2	22.69	-23.31	46	30.74	19.84	2.7	30.59	-	-	Peak
857.9	24.77	-21.23	46	29.19	22.68	3.28	30.38	-	-	Peak
5743	100.33	-	-	89.1	35.34	10.06	34.17	147	252	Average
5743	110.49	-	-	99.26	35.34	10.06	34.17	147	252	Peak
11490	48.98	-25.02	74	53.24	38.38	14.33	56.97	100	0	Peak
17235	49.64	-40.85	90.49	47.37	41.86	16.6	56.19	100	0	Peak

Test Mode :	5GHz 802.11n HT20	Temperature :	21~23°C
Test Channel :	157	Relative Humidity :	51~53%
Test Engineer :	Eric Shih	Polarization :	Horizontal
Remark :	1. 5787 MHz is fundamental signal which can be ignored. 2. 17355 MHz is not within a restricted band, and its limit line is 20dB below the highest emission level. 3. Average measurement was not performed if peak level went lower than the average limit.		

Frequency (MHz)	Level (dBµV/m)	Over Limit (dB)	Limit Line (dBµV/m)	Read Level (dBµV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
48.9	31.25	-8.75	40	52.87	8.9	0.68	31.2	142	249	Peak
145.56	24.77	-18.73	43.5	43.37	11.29	1.21	31.1	-	-	Peak
213.6	22.52	-20.98	43.5	42.17	10.04	1.38	31.07	-	-	Peak
456.8	23.04	-22.96	46	34.32	17.19	2.31	30.78	-	-	Peak
605.2	25.08	-20.92	46	33.13	19.84	2.7	30.59	-	-	Peak
871.9	25.45	-20.55	46	29.68	22.82	3.3	30.35	-	-	Peak
5787	101.39	-	-	90.17	35.38	10.07	34.23	150	251	Average
5787	111.77	-	-	100.55	35.38	10.07	34.23	150	251	Peak
11571	49.13	-24.87	74	53.04	38.46	14.41	56.78	100	0	Peak
17355	50.71	-41.06	91.77	48.39	41.79	16.75	56.22	100	0	Peak

Test Mode :	5GHz 802.11n HT20	Temperature :	21~23°C
Test Channel :	157	Relative Humidity :	51~53%
Test Engineer :	Eric Shih	Polarization :	Vertical
Remark :	1. 5783 MHz is fundamental signal which can be ignored. 2. 17361 MHz is not within a restricted band, and its limit line is 20dB below the highest emission level. 3. Average measurement was not performed if peak level went lower than the average limit.		

Frequency (MHz)	Level (dBµV/m)	Over Limit (dB)	Limit Line (dBµV/m)	Read Level (dBµV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
48.9	32.26	-7.74	40	53.88	8.9	0.68	31.2	110	191	Peak
139.89	19.74	-23.76	43.5	38.24	11.4	1.2	31.1	-	-	Peak
217.65	21.06	-24.94	46	40.37	10.31	1.4	31.02	-	-	Peak
498.8	20.43	-25.57	46	30.54	18.06	2.44	30.61	-	-	Peak
689.9	22.29	-23.71	46	29.28	20.51	2.92	30.42	-	-	Peak
913.2	25.77	-20.23	46	29.43	23.3	3.37	30.33	-	-	Peak
5783	99.78	-	-	88.57	35.37	10.07	34.23	106	290	Average
5783	109.8	-	-	98.59	35.37	10.07	34.23	106	290	Peak
11568	48.5	-25.5	74	52.41	38.46	14.41	56.78	100	0	Peak
17361	50.88	-38.92	89.8	48.53	41.79	16.78	56.22	100	0	Peak

Test Mode :	5GHz 802.11n HT20	Temperature :	21~23°C
Test Channel :	165	Relative Humidity :	51~53%
Test Engineer :	Eric Shih	Polarization :	Horizontal
Remark :	1. 5827 MHz is fundamental signal which can be ignored. 2. 17475 MHz is not within a restricted band, and its limit line is 20dB below the highest emission level. 3. Average measurement was not performed if peak level went lower than the average limit.		

Frequency (MHz)	Level (dBµV/m)	Over Limit (dB)	Limit Line (dBµV/m)	Read Level (dBµV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
48.90	32.30	-7.70	40	53.92	8.90	0.68	31.2	102	199	Peak
140.16	25.72	-17.78	43.5	44.24	11.38	1.20	31.1	-	-	Peak
253.56	22.94	-23.06	46	39.75	12.64	1.55	31	-	-	Peak
456.80	21.96	-24.04	46	33.24	17.19	2.31	30.78	-	-	Peak
626.90	23.14	-22.86	46	30.91	20.01	2.77	30.55	-	-	Peak
836.90	25.97	-20.03	46	30.63	22.47	3.24	30.37	-	-	Peak
5827	98.8	-	-	87.56	35.4	10.11	34.27	150	255	Average
5827	109.14	-	-	97.9	35.4	10.11	34.27	150	255	Peak
11652	49.40	-24.60	74	52.93	38.52	14.52	56.57	100	0	Peak
17475	50.89	-38.25	89.14	48.53	41.72	16.89	56.25	100	0	Peak

Test Mode :	5GHz 802.11n HT20	Temperature :	21~23°C
Test Channel :	165	Relative Humidity :	51~53%
Test Engineer :	Eric Shih	Polarization :	Vertical
Remark :	1. 5827 MHz is fundamental signal which can be ignored. 2. 17475 MHz is not within a restricted band, and its limit line is 20dB below the highest emission level. 3. Average measurement was not performed if peak level went lower than the average limit.		

Frequency (MHz)	Level (dBµV/m)	Over Limit (dB)	Limit Line (dBµV/m)	Read Level (dBµV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
49.17	31.86	-8.14	40	53.87	8.5	0.69	31.2	118	285	Peak
139.89	19.76	-23.74	43.5	38.26	11.4	1.2	31.1	-	-	Peak
217.65	21.62	-24.38	46	40.93	10.31	1.4	31.02	-	-	Peak
493.9	19.47	-26.53	46	29.74	17.96	2.43	30.66	-	-	Peak
653.5	22.38	-23.62	46	29.79	20.23	2.85	30.49	-	-	Peak
836.9	28.48	-17.52	46	33.14	22.47	3.24	30.37	-	-	Peak
5827	99.86	-	-	88.62	35.4	10.11	34.27	144	263	Average
5827	110.35	-	-	99.11	35.4	10.11	34.27	144	263	Peak
11649	48.69	-25.31	74	52.27	38.51	14.52	56.61	100	0	Peak
17475	49.89	-40.46	90.35	47.53	41.72	16.89	56.25	100	0	Peak

Test Mode :	5GHz 802.11n HT40	**Temperature :**	21~23°C
Test Channel :	151	**Relative Humidity :**	51~53%
Test Engineer :	Eric Shih	**Polarization :**	Horizontal
Remark :	1. 5753 MHz is fundamental signal which can be ignored. 2. 17625 MHz is not within a restricted band, and its limit line is 20dB below the highest emission level. 3. Average measurement was not performed if peak level went lower than the average limit.		

Frequency (MHz)	Level (dBµV/m)	Over Limit (dB)	Limit Line (dBµV/m)	Read Level (dBµV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
49.44	31.32	-8.68	40	53.33	8.5	0.69	31.2	155	96	Peak
147.99	25.36	-18.14	43.5	44.01	11.24	1.21	31.1	-	-	Peak
253.29	22.04	-23.96	46	38.85	12.64	1.55	31	-	-	Peak
456.8	22.29	-23.71	46	33.57	17.19	2.31	30.78	-	-	Peak
584.2	27.29	-18.71	46	35.79	19.52	2.64	30.66	-	-	Peak
934.2	25.24	-20.76	46	28.58	23.61	3.42	30.37	-	-	Peak
5753	94.66	-	-	83.41	35.36	10.06	34.17	118	215	Average
5753	104.27	-	-	93.02	35.36	10.06	34.17	118	215	Peak
11511	46.9	-27.1	74	51.1	38.4	14.35	56.95	100	0	Peak
17625	48.11	-36.16	84.27	45.65	41.68	17.09	56.31	100	0	Peak

Test Mode :	5GHz 802.11n HT40	Temperature :	21~23°C
Test Channel :	151	Relative Humidity :	51~53%
Test Engineer :	Eric Shih	Polarization :	Vertical
Remark :	1. 5753 MHz is fundamental signal which can be ignored. 2. 17625 MHz is not within a restricted band, and its limit line is 20dB below the highest emission level. 3. Average measurement was not performed if peak level went lower than the average limit.		

Frequency (MHz)	Level (dBµV/m)	Over Limit (dB)	Limit Line (dBµV/m)	Read Level (dBµV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
48.9	31.94	-8.06	40	53.56	8.9	0.68	31.2	128	347	Peak
147.99	19.73	-23.77	43.5	38.38	11.24	1.21	31.1	-	-	Peak
215.76	20.58	-22.92	43.5	39.98	10.24	1.4	31.04	-	-	Peak
498.8	19.88	-26.12	46	29.99	18.06	2.44	30.61	-	-	Peak
745.9	22.62	-23.38	46	28.69	21.28	3.05	30.4	-	-	Peak
902.7	25.01	-20.99	46	28.83	23.14	3.35	30.31	-	-	Peak
5753	96.62	-	-	85.37	35.36	10.06	34.17	146	260	Average
5753	106.43	-	-	95.18	35.36	10.06	34.17	146	260	Peak
11511	47.78	-26.22	74	51.98	38.4	14.35	56.95	100	0	Peak
17625	49.63	-36.8	86.43	47.17	41.68	17.09	56.31	100	0	Peak

Test Mode :	5GHz 802.11n HT40	**Temperature :**	21~23°C
Test Channel :	159	**Relative Humidity :**	51~53%
Test Engineer :	Eric Shih	**Polarization :**	Horizontal
Remark :	1. 5797 MHz is fundamental signal which can be ignored. 2. 17385 MHz is not within a restricted band, and its limit line is 20dB below the highest emission level. 3. Average measurement was not performed if peak level went lower than the average limit.		

Frequency (MHz)	Level (dBµV/m)	Over Limit (dB)	Limit Line (dBµV/m)	Read Level (dBµV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
49.17	32.11	-7.89	40	54.12	8.5	0.69	31.2	136	58	Peak
140.97	25.69	-17.81	43.5	44.21	11.38	1.2	31.1	-	-	Peak
250.86	22.79	-23.21	46	39.64	12.61	1.54	31	-	-	Peak
456.8	22.64	-23.36	46	33.92	17.19	2.31	30.78	-	-	Peak
584.2	26.85	-19.15	46	35.35	19.52	2.64	30.66	-	-	Peak
926.5	26.01	-19.99	46	29.47	23.49	3.4	30.35	-	-	Peak
5797	95.7	-	-	84.46	35.38	10.09	34.23	127	251	Average
5797	105.5	-	-	94.26	35.38	10.09	34.23	127	251	Peak
11589	45.27	-28.73	74	49.1	38.47	14.44	56.74	100	0	Peak
17385	48.97	-36.53	85.5	46.63	41.77	16.8	56.23	100	0	Peak

Test Mode :	5GHz 802.11n HT40	Temperature :	21~23°C
Test Channel :	159	Relative Humidity :	51~53%
Test Engineer :	Eric Shih	Polarization :	Vertical
Remark :	1. 5793 MHz is fundamental signal which can be ignored. 2. 17385 MHz is not within a restricted band, and its limit line is 20dB below the highest emission level. 3. Average measurement was not performed if peak level went lower than the average limit.		

Frequency (MHz)	Level (dBµV/m)	Over Limit (dB)	Limit Line (dBµV/m)	Read Level (dBµV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
49.17	31.98	-8.02	40	53.99	8.5	0.69	31.2	107	315	Peak
140.97	19.35	-24.15	43.5	37.87	11.38	1.2	31.1	-	-	Peak
218.73	21.52	-24.48	46	40.67	10.45	1.41	31.01	-	-	Peak
541.5	20.53	-25.47	46	29.98	18.79	2.53	30.77	-	-	Peak
727.7	22.81	-23.19	46	29.19	21.01	3.01	30.4	-	-	Peak
918.1	25.68	-20.32	46	29.26	23.38	3.38	30.34	-	-	Peak
5793	96.53	-	-	85.29	35.38	10.09	34.23	159	256	Average
5793	106.45	-	-	95.21	35.38	10.09	34.23	159	256	Peak
11589	46.8	-27.2	74	50.63	38.47	14.44	56.74	100	0	Peak
17385	48.18	-38.27	86.45	45.84	41.77	16.8	56.23	100	0	Peak

<Sample 1 with Battery 1>

Test Mode :	802.11a	**Temperature :**	21~23°C
Test Channel :	149	**Relative Humidity :**	51~53%
Test Engineer :	Eric Shih	**Polarization :**	Horizontal
Remark :	1. 5745 MHz is fundamental signal which can be ignored. 2. 17235 MHz is not within a restricted band, and its limit line is 20dB below the highest emission level. 3. Average measurement was not performed if peak level went lower than the average limit.		

Frequency (MHz)	Level (dBµV/m)	Over Limit (dB)	Limit Line (dBµV/m)	Read Level (dBµV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
49.17	32.34	-7.66	40	54.35	8.5	0.69	31.2	114	200	Peak
147.99	26.13	-17.37	43.5	44.78	11.24	1.21	31.1	-	-	Peak
215.76	23.26	-20.24	43.5	42.66	10.24	1.4	31.04	-	-	Peak
456.8	22.24	-23.76	46	33.52	17.19	2.31	30.78	-	-	Peak
626.9	24.19	-21.81	46	31.96	20.01	2.77	30.55	-	-	Peak
804	25.37	-20.63	46	30.39	22.14	3.15	30.31	-	-	Peak
5745	98.31	-	-	87.08	35.34	10.06	34.17	143	236	Average
5745	108.34	-	-	97.11	35.34	10.06	34.17	143	236	Peak
11490	49.29	-24.71	74	53.55	38.38	14.33	56.97	100	0	Peak
17235	48.86	-39.48	88.34	46.59	41.86	16.6	56.19	100	0	Peak

Test Mode :	802.11a	Temperature :	21~23°C
Test Channel :	149	Relative Humidity :	51~53%
Test Engineer :	Eric Shih	Polarization :	Vertical
Remark :	1. 5743 MHz is fundamental signal which can be ignored. 2. 17226 MHz is not within a restricted band, and its limit line is 20dB below the highest emission level. 3. Average measurement was not performed if peak level went lower than the average limit.		

Frequency (MHz)	Level (dBµV/m)	Over Limit (dB)	Limit Line (dBµV/m)	Read Level (dBµV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
49.17	31.54	-8.46	40	53.55	8.5	0.69	31.2	156	179	Peak
137.46	18.99	-24.51	43.5	37.46	11.44	1.19	31.1	-	-	Peak
217.65	21.17	-24.83	46	40.48	10.31	1.4	31.02	-	-	Peak
520.5	20	-26	46	29.74	18.45	2.49	30.68	-	-	Peak
626.9	22.67	-23.33	46	30.44	20.01	2.77	30.55	-	-	Peak
857.2	24.87	-21.13	46	29.3	22.67	3.28	30.38	-	-	Peak
5743	102.24	-	-	91.01	35.34	10.06	34.17	147	246	Average
5743	111.59	-	-	100.36	35.34	10.06	34.17	147	246	Peak
11490	49.71	-24.29	74	53.97	38.38	14.33	56.97	100	0	Peak
17226	50.82	-40.77	91.59	48.54	41.87	16.6	56.19	100	0	Peak

<Sample 2 with Battery 1>

Test Mode :	802.11a	**Temperature :**	21~23°C
Test Channel :	149	**Relative Humidity :**	51~53%
Test Engineer :	Eric Shih	**Polarization :**	Horizontal
Remark :	1. 5746 MHz is fundamental signal which can be ignored. 2. 17235 MHz is not within a restricted band, and its limit line is 20dB below the highest emission level. 3. Average measurement was not performed if peak level went lower than the average limit.		

Frequency (MHz)	Level (dBµV/m)	Over Limit (dB)	Limit Line (dBµV/m)	Read Level (dBµV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
48.9	32.04	-7.96	40	53.66	8.9	0.68	31.2	147	275	Peak
149.34	26.74	-16.76	43.5	45.41	11.22	1.21	31.1	-	-	Peak
249.51	22.59	-23.41	46	39.53	12.53	1.53	31	-	-	Peak
467.3	20.94	-25.06	46	31.99	17.41	2.34	30.8	-	-	Peak
626.9	23.24	-22.76	46	31.01	20.01	2.77	30.55	-	-	Peak
939.8	25.83	-20.17	46	29.07	23.7	3.44	30.38	-	-	Peak
5746	96.77	-	-	85.54	35.34	10.06	34.17	100	4	Average
5746	106.88	-	-	95.65	35.34	10.06	34.17	100	4	Peak
11490	50.42	-23.58	74	54.68	38.38	14.33	56.97	100	0	Peak
17235	49.94	-36.94	86.88	47.67	41.86	16.6	56.19	100	0	Peak

Test Mode :	802.11a	Temperature :	21~23°C
Test Channel :	149	Relative Humidity :	51~53%
Test Engineer :	Eric Shih	Polarization :	Vertical
Remark :	1. 5743 MHz is fundamental signal which can be ignored. 2. 17244 MHz is not within a restricted band, and its limit line is 20dB below the highest emission level. 3. Average measurement was not performed if peak level went lower than the average limit.		

Frequency (MHz)	Level (dBµV/m)	Over Limit (dB)	Limit Line (dBµV/m)	Read Level (dBµV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
48.63	31.85	-8.15	40	53.47	8.9	0.68	31.2	105	324	Peak
137.73	18.89	-24.61	43.5	37.36	11.44	1.19	31.1	-	-	Peak
213.6	21.31	-22.19	43.5	40.96	10.04	1.38	31.07	-	-	Peak
515.6	19.7	-26.3	46	29.52	18.36	2.48	30.66	-	-	Peak
605.2	21.72	-24.28	46	29.77	19.84	2.7	30.59	-	-	Peak
824.3	24.42	-21.58	46	29.23	22.34	3.2	30.35	-	-	Peak
5743	101.02	-	-	89.79	35.34	10.06	34.17	124	254	Average
5743	111.21	-	-	99.98	35.34	10.06	34.17	124	254	Peak
11490	49.88	-24.12	74	54.14	38.38	14.33	56.97	100	0	Peak
17244	54.37	-36.84	91.21	52.08	41.85	16.63	56.19	100	0	Peak

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 (dBμV)	
	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.

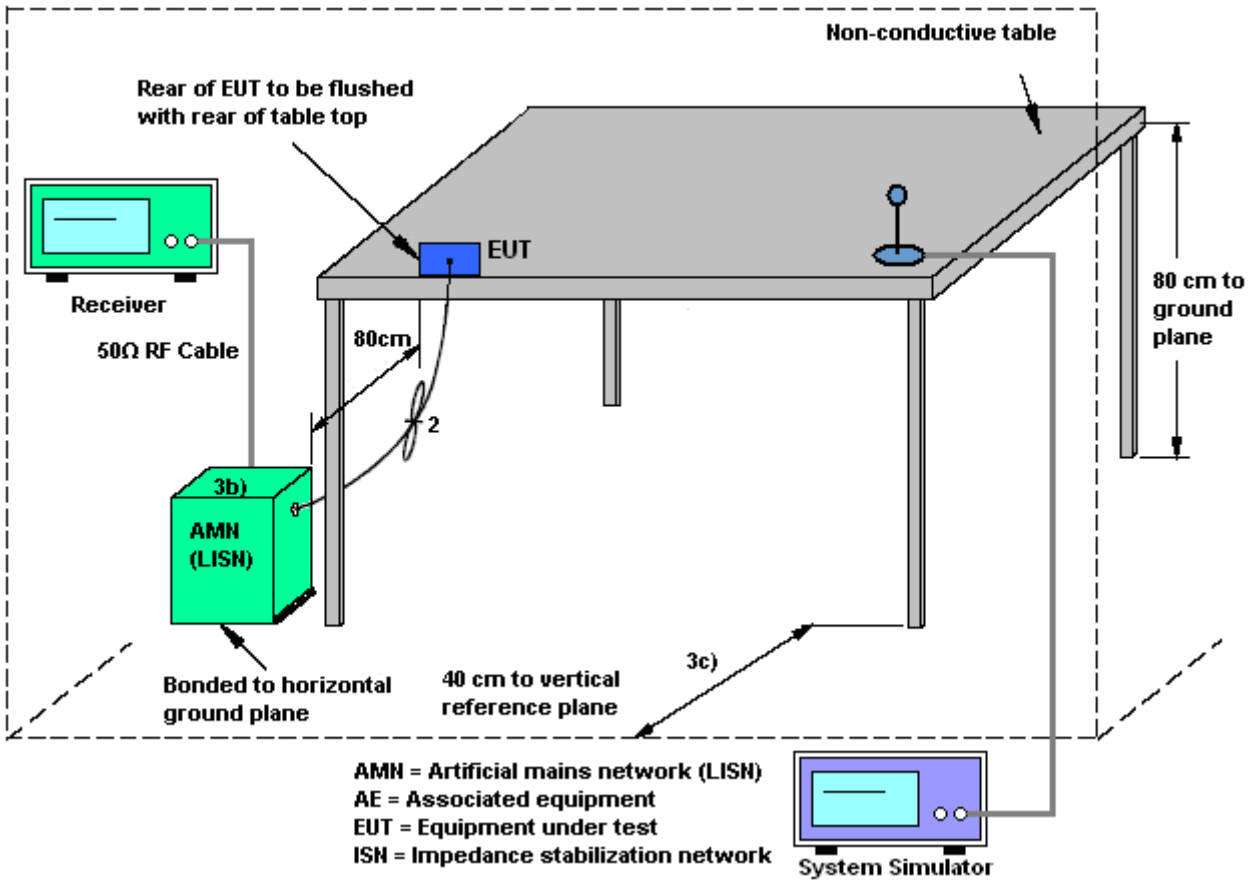
3.6.2 Measuring Instruments

See list of measuring instruments of this test report.

3.6.3 Test Procedures

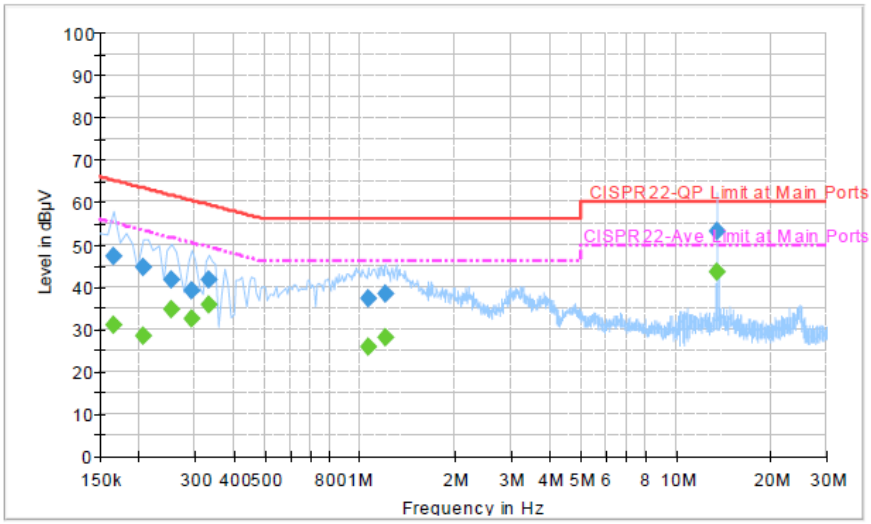
1. The testing follows the guidelines in ANSI C63.10-2009.
2. The EUT was placed 0.4 meter from the conducting wall of the shielding room, and it was kept at least 80 centimeters from any other grounded conducting surface.
3. Connect EUT to the power mains through a line impedance stabilization network (LISN).
4. All the support units are connecting to the other LISN.
5. The LISN provides 50 ohm coupling impedance for the measuring instrument.
6. The FCC states that a 50 ohm, 50 microhenry LISN should be used.
7. Both sides of AC line were checked for maximum conducted interference.
8. The frequency range from 150 kHz to 30 MHz was searched.
9. Set the test-receiver system to Peak Detect Function and specified bandwidth with Maximum Hold Mode.

3.6.4 Test Setup



3.6.5 Test Result of AC Conducted Emission

Test Mode :	Mode 1	Temperature :	20~22℃
Test Engineer :	Slash Huang	Relative Humidity :	45~47%
Test Voltage :	120Vac / 60Hz	Phase :	Line
Function Type :	GSM850 Idle + Bluetooth Link + WLAN (2.4G) Link + NFC active + Scanner + Battery 2 + USB Cable (USB File transfer) for Sample 1		



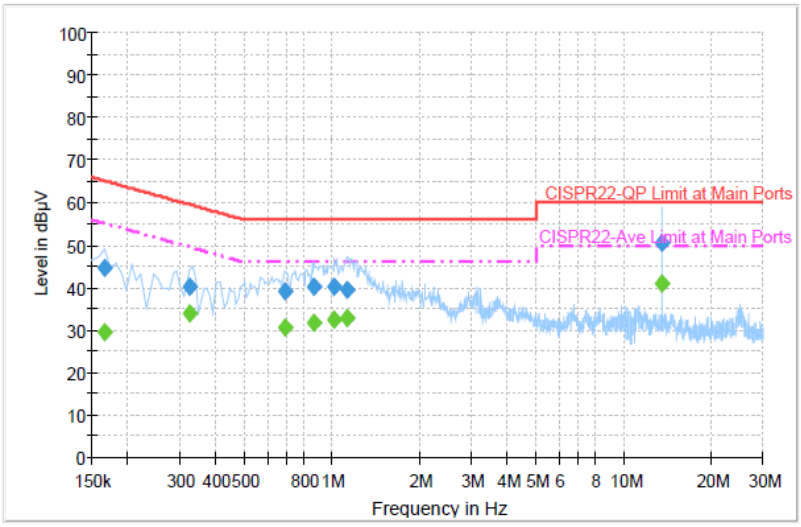
Final Result : Quasi-Peak

Frequency (MHz)	Quasi-Peak (dBµV)	Filter	Line	Corr. (dB)	Margin (dB)	Limit (dBµV)
0.166000	47.2	Off	L1	19.4	18.0	65.2
0.206000	44.6	Off	L1	19.4	18.8	63.4
0.254000	41.6	Off	L1	19.5	20.0	61.6
0.294000	39.3	Off	L1	19.4	21.1	60.4
0.334000	41.6	Off	L1	19.4	17.8	59.4
1.062000	37.3	Off	L1	19.4	18.7	56.0
1.206000	38.3	Off	L1	19.5	17.7	56.0
13.558000	53.3	Off	L1	19.8	6.7	60.0

Final Result : Average

Frequency (MHz)	Average (dBµV)	Filter	Line	Corr. (dB)	Margin (dB)	Limit (dBµV)
0.166000	31.1	Off	L1	19.4	24.1	55.2
0.206000	28.2	Off	L1	19.4	25.2	53.4
0.254000	34.7	Off	L1	19.5	16.9	51.6
0.294000	32.4	Off	L1	19.4	18.0	50.4
0.334000	35.7	Off	L1	19.4	13.7	49.4
1.062000	25.8	Off	L1	19.4	20.2	46.0
1.206000	28.2	Off	L1	19.5	17.8	46.0
13.558000	43.4	Off	L1	19.8	6.6	50.0

Test Mode :	Mode 1	Temperature :	20~22℃
Test Engineer :	Slash Huang	Relative Humidity :	45~47%
Test Voltage :	120Vac / 60Hz	Phase :	Neutral
Function Type :	GSM850 Idle + Bluetooth Link + WLAN (2.4G) Link + NFC active + Scanner + Battery 2 + USB Cable (USB File transfer) for Sample 1		



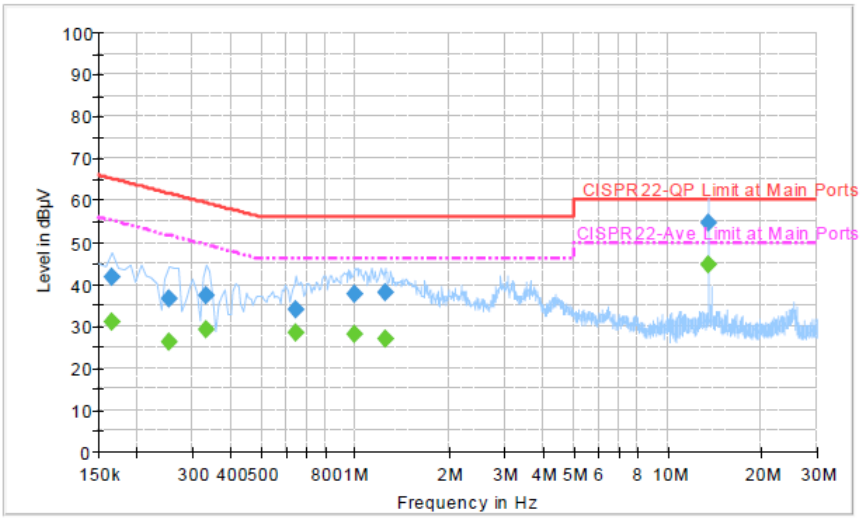
Final Result : Quasi-Peak

Frequency (MHz)	Quasi-Peak (dBµV)	Filter	Line	Corr. (dB)	Margin (dB)	Limit (dBµV)
0.166000	44.5	Off	N	19.4	20.7	65.2
0.326000	40.2	Off	N	19.4	19.4	59.6
0.694000	39.3	Off	N	19.5	16.7	56.0
0.870000	40.1	Off	N	19.5	15.9	56.0
1.022000	40.3	Off	N	19.4	15.7	56.0
1.126000	39.5	Off	N	19.5	16.5	56.0
13.558000	50.6	Off	N	19.9	9.4	60.0

Final Result : Average

Frequency (MHz)	Average (dBµV)	Filter	Line	Corr. (dB)	Margin (dB)	Limit (dBµV)
0.166000	29.5	Off	N	19.4	25.7	55.2
0.326000	34.0	Off	N	19.4	15.6	49.6
0.694000	30.5	Off	N	19.5	15.5	46.0
0.870000	31.9	Off	N	19.5	14.1	46.0
1.022000	32.5	Off	N	19.4	13.5	46.0
1.126000	32.8	Off	N	19.5	13.2	46.0
13.558000	41.1	Off	N	19.9	8.9	50.0

Test Mode :	Mode 2	Temperature :	20~22℃
Test Engineer :	Slash Huang	Relative Humidity :	45~47%
Test Voltage :	120Vac / 60Hz	Phase :	Line
Function Type :	WCDMA band V Idle + Bluetooth Link + WLAN (5G) Link + NFC active + Scanner + Battery 1 + USB Cable (USB File transfer) for Sample 1		



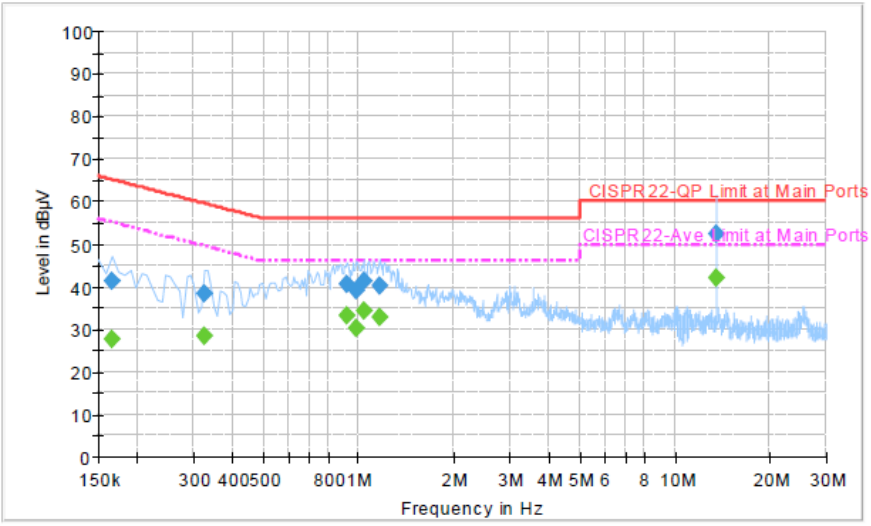
Final Result : Quasi-Peak

Frequency (MHz)	Quasi-Peak (dBµV)	Filter	Line	Corr. (dB)	Margin (dB)	Limit (dBµV)
0.166000	41.7	Off	L1	19.4	23.5	65.2
0.254000	36.4	Off	L1	19.5	25.2	61.6
0.334000	37.4	Off	L1	19.4	22.0	59.4
0.646000	34.0	Off	L1	19.4	22.0	56.0
0.998000	37.7	Off	L1	19.4	18.3	56.0
1.246000	38.0	Off	L1	19.5	18.0	56.0
13.558000	54.6	Off	L1	19.8	5.4	60.0

Final Result : Average

Frequency (MHz)	Average (dBµV)	Filter	Line	Corr. (dB)	Margin (dB)	Limit (dBµV)
0.166000	31.0	Off	L1	19.4	24.2	55.2
0.254000	26.3	Off	L1	19.5	25.3	51.6
0.334000	29.0	Off	L1	19.4	20.4	49.4
0.646000	28.4	Off	L1	19.4	17.6	46.0
0.998000	28.1	Off	L1	19.4	17.9	46.0
1.246000	26.9	Off	L1	19.5	19.1	46.0
13.558000	44.5	Off	L1	19.8	5.5	50.0

Test Mode :	Mode 2	Temperature :	20~22℃
Test Engineer :	Slash Huang	Relative Humidity :	45~47%
Test Voltage :	120Vac / 60Hz	Phase :	Neutral
Function Type :	WCDMA band V Idle + Bluetooth Link + WLAN (5G) Link + NFC active + Scanner + Battery 1 + USB Cable (USB File transfer) for Sample 1		



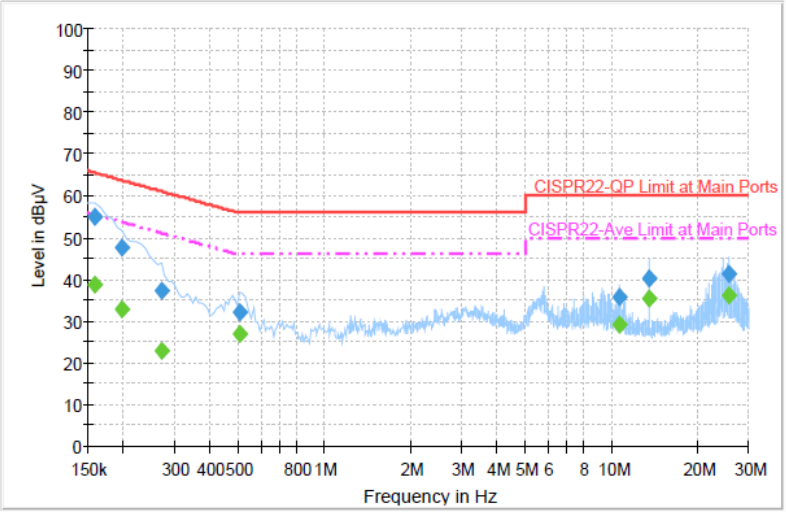
Final Result : Quasi-Peak

Frequency (MHz)	Quasi-Peak (dBµV)	Filter	Line	Corr. (dB)	Margin (dB)	Limit (dBµV)
0.166000	41.3	Off	N	19.4	23.9	65.2
0.326000	38.4	Off	N	19.4	21.2	59.6
0.918000	40.7	Off	N	19.4	15.3	56.0
0.982000	39.0	Off	N	19.5	17.0	56.0
1.038000	41.3	Off	N	19.5	14.7	56.0
1.166000	40.3	Off	N	19.5	15.7	56.0
13.558000	52.5	Off	N	19.9	7.5	60.0

Final Result : Average

Frequency (MHz)	Average (dBµV)	Filter	Line	Corr. (dB)	Margin (dB)	Limit (dBµV)
0.166000	27.8	Off	N	19.4	27.4	55.2
0.326000	28.3	Off	N	19.4	21.3	49.6
0.918000	33.1	Off	N	19.4	12.9	46.0
0.982000	30.2	Off	N	19.5	15.8	46.0
1.038000	34.2	Off	N	19.5	11.8	46.0
1.166000	32.8	Off	N	19.5	13.2	46.0
13.558000	42.2	Off	N	19.9	7.8	50.0

Test Mode :	Mode 3	Temperature :	20~22℃
Test Engineer :	Slash Huang	Relative Humidity :	45~47%
Test Voltage :	120Vac / 60Hz	Phase :	Line
Function Type :	LTE Band 5 Idle + Bluetooth Link + WLAN (5G) Link + NFC active + Battery 1 + USB Cable (USB File transfer) for Sample 2		



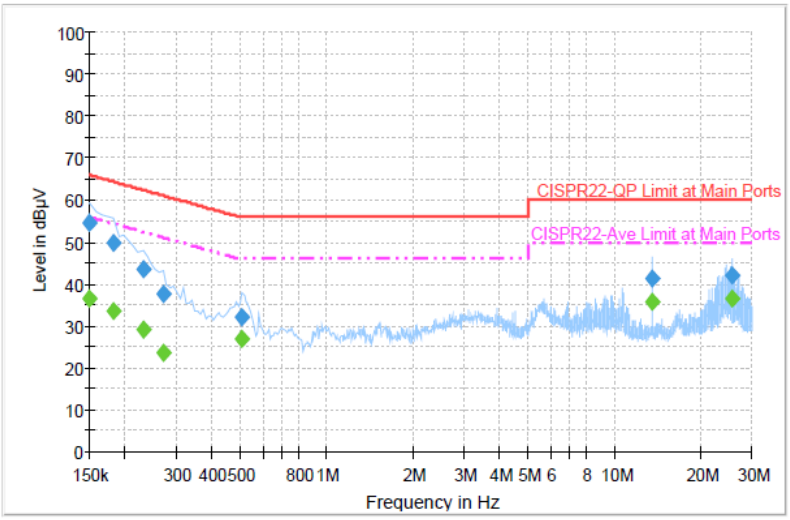
Final Result : Quasi-Peak

Frequency (MHz)	Quasi-Peak (dBµV)	Filter	Line	Corr. (dB)	Margin (dB)	Limit (dBµV)
0.158000	54.9	Off	L1	19.3	10.7	65.6
0.198000	47.8	Off	L1	19.3	15.9	63.7
0.270000	37.1	Off	L1	19.3	24.0	61.1
0.510000	32.1	Off	L1	19.4	23.9	56.0
10.638000	35.8	Off	L1	19.7	24.2	60.0
13.558000	40.4	Off	L1	19.8	19.6	60.0
25.574000	41.5	Off	L1	19.9	18.5	60.0

Final Result : Average

Frequency (MHz)	Average (dBµV)	Filter	Line	Corr. (dB)	Margin (dB)	Limit (dBµV)
0.158000	38.9	Off	L1	19.3	26.7	55.6
0.198000	32.7	Off	L1	19.3	21.0	53.7
0.270000	22.9	Off	L1	19.3	28.2	51.1
0.510000	27.0	Off	L1	19.4	19.0	46.0
10.638000	29.2	Off	L1	19.7	20.8	50.0
13.558000	35.5	Off	L1	19.8	14.5	50.0
25.574000	36.2	Off	L1	19.9	13.8	50.0

Test Mode :	Mode 3	Temperature :	20~22℃
Test Engineer :	Slash Huang	Relative Humidity :	45~47%
Test Voltage :	120Vac / 60Hz	Phase :	Neutral
Function Type :	LTE Band 5 Idle + Bluetooth Link + WLAN (5G) Link + NFC active + Battery 1 + USB Cable (USB File transfer) for Sample 2		



Final Result : Quasi-Peak

Frequency (MHz)	Quasi-Peak (dBµV)	Filter	Line	Corr. (dB)	Margin (dB)	Limit (dBµV)
0.150000	54.5	Off	N	19.4	11.5	66.0
0.182000	49.9	Off	N	19.4	14.5	64.4
0.230000	43.7	Off	N	19.4	18.7	62.4
0.270000	37.6	Off	N	19.4	23.5	61.1
0.510000	32.2	Off	N	19.4	23.8	56.0
13.558000	41.3	Off	N	19.9	18.7	60.0
25.574000	42.0	Off	N	20.0	18.0	60.0

Final Result : Average

Frequency (MHz)	Average (dBµV)	Filter	Line	Corr. (dB)	Margin (dB)	Limit (dBµV)
0.150000	36.7	Off	N	19.4	19.3	56.0
0.182000	33.5	Off	N	19.4	20.9	54.4
0.230000	29.1	Off	N	19.4	23.3	52.4
0.270000	23.5	Off	N	19.4	27.6	51.1
0.510000	27.0	Off	N	19.4	19.0	46.0
13.558000	35.8	Off	N	19.9	14.2	50.0
25.574000	36.6	Off	N	20.0	13.4	50.0

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 Connected Construction

Non-standard connector used.

3.7.3 Antenna Gain

The antenna peak gain of EUT is less than 6 dBi. Therefore, it is not necessary to reduce maximum peak output power limit.

4 List of Measuring Equipment

Instrument	Manufacturer	Model No.	Serial No.	Characteristics	Calibration Date	Test Date	Due Date	Remark
Spectrum Analyzer	Rohde & Schwarz	FSP40	100055	9kHz~40GHz	Jun. 07, 2013	Jun. 26, 2013~ Jul. 21, 2013	Jun. 06, 2014	Conducted (TH02-HY)
Power Meter	Anritsu	ML2495A	1036004	300MHz~40GHz	Sep. 08, 2012	Jun. 26, 2013~ Jul. 21, 2013	Sep. 07, 2013	Conducted (TH02-HY)
Power Sensor	Anritsu	MA2411B	1027253	300MHz~40GHz	Sep. 08, 2012	Jun. 26, 2013~ Jul. 21, 2013	Sep. 07, 2013	Conducted (TH02-HY)
EMI Test Receiver	Rohde & Schwarz	ESCS 30	100356	9kHz ~ 2.75GHz	Nov. 13, 2012	Jun. 13, 2013	Nov. 12, 2013	Conduction (CO05-HY)
Two-LISN (for auxiliary equipment)	Rohde & Schwarz	ENV216	100081	9kHz ~ 30MHz	Dec. 12, 2012	Jun. 13, 2013	Dec. 11, 2013	Conduction (CO05-HY)
Two-LISN	Rohde & Schwarz	ENV216	100080	9kHz ~ 30MHz	Dec. 06, 2012	Jun. 13, 2013	Dec. 05, 2013	Conduction (CO05-HY)
AC Power Source	APC	APC-1000W	N/A	N/A	N/A	Jun. 13, 2013	N/A	Conduction (CO05-HY)
EMI Test Receiver	Rohde & Schwarz	ESCI 7	100724	9k~7G	Sep. 03, 2012	Jul. 04, 2013~ Jul. 09, 2013	Sep. 02, 2013	Radiation (03CH07-HY)
Spectrum Analyzer	Rohde & Schwarz	FSP30	101067	9k~30G	Nov. 30, 2012	Jul. 04, 2013~ Jul. 09, 2013	Nov. 29, 2013	Radiation (03CH07-HY)
Bilog Antenna	Schaffner	CBL6111C	2726	30M~1G	Oct. 06, 2012	Jul. 04, 2013~ Jul. 09, 2013	Oct. 05, 2013	Radiation (03CH07-HY)
Double Ridge Horn Antenna	ESCO	3117	75962	1G~18G	Aug. 22, 2012	Jul. 04, 2013~ Jul. 09, 2013	Aug. 21, 2013	Radiation (03CH07-HY)
SHF-EHF Horn Antenna	SCHWARZBECK	BBHA 9170	BBHA9170251	18G~40G	Sep. 28, 2012	Jul. 04, 2013~ Jul. 09, 2013	Sep. 27, 2013	Radiation (03CH07-HY)
Preamplifier	COM-POWER	PA-103A	161241	30M~1G	Feb. 26, 2013	Jul. 04, 2013~ Jul. 09, 2013	Feb. 25, 2014	Radiation (03CH07-HY)
Preamplifier	Agilent	8449B	3008A02362	1G~26.5G	Dec. 01, 2012	Jul. 04, 2013~ Jul. 09, 2013	Nov. 30, 2013	Radiation (03CH07-HY)
Turn Table	ChainTek	ChainTek 3000	N/A	0 ~ 360 degree	N/A	Jul. 04, 2013~ Jul. 09, 2013	N/A	Radiation (03CH07-HY)
Antenna Mast	ChainTek	ChainTek 3000	N/A	N/A	N/A	Jul. 04, 2013~ Jul. 09, 2013	N/A	Radiation (03CH07-HY)
Loop Antenna	Rohde & Schwarz	HFH2-Z2	860004/0001	9 kHz~30 MHz	Jul. 03, 2012	Jul. 04, 2013~ Jul. 09, 2013	Jul. 02, 2014	Radiation (03CH07-HY)

5 Uncertainty of Evaluation

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

Measuring Uncertainty for a Level of Confidence of 95% (U = 2Uc(y))	**2.26**

Uncertainty of Radiated Emission Measurement (30MHz ~ 1000MHz)

Measuring Uncertainty for a Level of Confidence of 95% (U = 2Uc(y))	**2.54**

Uncertainty of Radiated Emission Measurement (1GHz ~ 40GHz)

Measuring Uncertainty for a Level of Confidence of 95% (U = 2Uc(y))	**4.72**