



FCC RF Test Report

APPLICANT : HTC Corporation
EQUIPMENT : PDA Phone
MODEL NAME : PD15100
FCC ID : NM8PD15100
STANDARD : FCC Part 15 Subpart E
CLASSIFICATION : Unlicensed National Information Infrastructure (UNII)

The product was received on Jul. 16, 2010 and completely tested on Aug. 19, 2010. We, SPORTON INTERNATIONAL INC., would like to declare that the tested sample has been evaluated in accordance with the procedures given in ANSI C63.4-2003 and shown 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.

Reviewed by:

Anderson Chiu / Deputy Manager



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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SUMMARY OF TEST RESULT

Report Section	FCC Rule	IC Rule	Description	Limit	Result	Remark
3.1	15.403(i)	A9.2	26dB Bandwidth	-	Pass	-
3.2	15.407(a)	A9.2	Maximum Conducted Output Power	≤ 17, 24, 30 dBm (depend on band)	Pass	-
3.3	15.407(a)	A9.2	Power Spectral Density	≤ 4, 11, 17 dBm (depend on band)	Pass	-
3.4	15.407(b)	A9.3	Frequency Band Edges	≤ -17, -27 dBm (depend on band)&15.209(a)	Pass	-
3.5	15.407(b)	A9.3	Spurious Emission	< 20 dBc	Pass	-
3.6	15.207	Gen 7.2.2	AC Conducted Emission	15.207(a)	Pass	Under limit 8.1 dB at 0.254 MHz
3.7	15.407(b)	A9.3	Transmitter Radiated Emission	≤ -17, -27 dBm (depend on band)&15.209(a)	Pass	Under limit 3.02 dB at 30.00 MHz
3.8	15.407(b)	A9.3	Peak Excursion Ratio	≤ 13dB	Pass	-
3.9	15.407(c)	A9.5	Automatically Discontinue Transmission	Discontinue Transmission	Pass	-
3.10	15.407(g)	A9.5	Frequency Stability	Within Operation Band	Pass	-
3.11	15.203 & 15.407(a)	A9.2	Antenna Requirement	N/A	Pass	-

1 General Description

1.1 Applicant

HTC Corporation
No. 23, Xinghua Rd., Taoyuan City, Taiwan

1.2 Manufacturer

HTC Corporation
No. 23, Xinghua Rd., Taoyuan City, Taiwan

1.3 Feature of Equipment Under Test

Product Feature & Specification	
Equipment	PDA Phone
Model Name	PD15100
FCC ID	NM8PD15100
Sample 1	EUT with LCM-Main and Camera-Main and Main source PA
Sample 2	EUT with LCM-2 nd and Camera-2 nd and Main source PA
Sample 3	EUT with LCM-Main and Camera-Main and 2 nd source PA
Tx/Rx Frequency Range	5150 MHz ~ 5250 MHz 5250 MHz ~ 5350 MHz 5470 MHz ~ 5725 MHz
Maximum Output Power to Antenna	<5150 MHz ~ 5250 MHz> 802.11a : 10.75 dBm / 0.01 W 802.11n (BW 20MHz) : 9.57 dBm / 0.01 W <5250 MHz ~ 5350 MHz> 802.11a : 10.74 dBm / 0.01 W 802.11n (BW 20MHz) : 9.76 dBm / 0.01 W <5470 MHz ~ 5725 MHz> 802.11a : 10.49 dBm / 0.01 W 802.11n (BW 20MHz) : 10.53 dBm / 0.01 W
Antenna Type	PIFA Antenna with gain 5.0 dBi
Type of Modulation	OFDM (BPSK / QPSK / 16QAM / 64QAM)
EUT Stage	Production Unit

Remark:

1. For other wireless features of this EUT, test report will be issued separately.
2. This test report recorded only product characteristics and test results of Unlicensed National Information Infrastructure (UNII).
3. The above EUT's information was declared by manufacturer. Please refer to the specifications or user's manual for more detailed description.
4. This product has two kinds of PAs, PA-Main and PA-2nd. The difference does not relate RF (WLAN) effect, so only Sample 1 and Sample 2 are used for tests.

1.4 Testing Site

Test Site	SPORTON INTERNATIONAL INC.		
Test Site Location	No. 52, Hwa Ya 1 st 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.
	CO05-HY	03CH07-HY	TW1022/4086B-1

1.5 Applied Standards

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

- ♦ FCC Part 15 Subpart E
- ♦ FCC Public Notice DA 02-2138, (Measurement Guidelines of UNII)
- ♦ ANSI C63.4-2003
- ♦ IC RSS-210 Issued 7

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 (DoC), recorded in a separate test report.

1.6 Ancillary Equipment List

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.	GPS Station	T&E	GS-50	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	Vostro 1510	FCC DoC	N/A	AC I/P: Unshielded, 1.2 m DC O/P: Shielded, 1.8 m
5.	Bluetooth Earphone	Nokia	BH-102	PYAHS-107W	N/A	N/A

2 Test Configuration of Equipment Under Test

2.1 Carrier Frequency Channel

802.11a Carrier Frequency Channel							
Channel	Freq. (MHz)	Channel	Freq. (MHz)	Channel	Freq. (MHz)	Channel	Freq. (MHz)
36	5180	40	5200	44	5220	48	5240
52	5260	56	5280	60	5300	64	5320
100	5500	104	5520	108	5540	112	5560
116	5580	120	5600	124	5620	128	5640
132	5660	136	5680	140	5700	-	-

802.11n (BW 20MHz) Carrier Frequency Channel							
Channel	Freq. (MHz)	Channel	Freq. (MHz)	Channel	Freq. (MHz)	Channel	Freq. (MHz)
36	5180	40	5200	44	5220	48	5240
52	5260	56	5280	60	5300	64	5320
100	5500	104	5520	108	5540	112	5560
116	5580	120	5600	124	5620	128	5640
132	5660	136	5680	140	5700	-	-

2.2 RF Power

Preliminary RF power output tests were performed in different data rate and recorded the in the following table:

Channel	Frequency (MHz)	802.11a RF Power (dBm)							
		Data Rate: 6Mbps	Data Rate: 9Mbps	Data Rate: 12Mbps	Data Rate: 18Mbps	Data Rate: 24Mbps	Data Rate: 36Mbps	Data Rate: 48Mbps	Data Rate: 54Mbps
CH 36	5180 MHz	10.75	9.86	9.81	9.91	9.92	9.96	10.48	9.85
CH 44	5220 MHz	9.66	8.85	8.60	8.81	8.95	8.81	9.39	8.82
CH 48	5240 MHz	9.85	9.01	9.07	9.04	9.14	9.13	9.86	9.06
CH 52	5260 MHz	10.74	10.04	9.96	10.04	9.90	10.09	10.71	9.87
CH 60	5300 MHz	10.03	9.33	9.40	9.61	9.67	9.55	10.25	9.28
CH 64	5320 MHz	9.18	8.52	8.54	8.97	8.88	8.61	9.16	8.60
CH 100	5500 MHz	9.80	9.74	10.22	9.84	10.17	9.76	10.21	10.14
CH 120	5600 MHz	10.15	10.11	10.07	10.08	10.25	10.01	10.03	9.87
CH 140	5700 MHz	10.49	10.41	10.48	10.52	10.50	10.56	10.12	10.31

Channel	Frequency (MHz)	802.11n (BW 20MHz) RF Power (dBm)							
		Data Rate: m0	Data Rate: m1	Data Rate: m2	Data Rate: m3	Data Rate: m4	Data Rate: m5	Data Rate: m6	Data Rate: m7
CH 36	5180 MHz	9.57	9.45	9.41	9.25	8.94	8.40	8.49	8.26
CH 44	5220 MHz	8.31	8.27	7.96	7.94	7.48	7.24	7.08	6.83
CH 48	5240 MHz	8.72	8.37	8.35	8.28	8.03	7.71	7.46	7.29
CH 52	5260 MHz	9.76	9.49	9.26	9.05	8.96	8.30	8.28	8.32
CH 60	5300 MHz	9.57	9.20	9.05	8.35	8.21	7.91	7.88	7.97
CH 64	5320 MHz	8.55	8.19	7.99	7.78	7.54	7.50	7.11	7.13
CH 100	5500 MHz	10.01	9.77	9.31	9.42	8.81	8.82	8.59	8.39
CH 120	5600 MHz	10.24	9.91	9.38	9.24	8.90	8.89	8.46	8.45
CH 140	5700 MHz	10.53	10.41	10.25	9.90	9.57	9.06	8.91	9.04

Remark:

1. The EUT is programmed to transmit signals continuously for all testing.
2. The data rates of WLAN 802.11a/n were set in 6Mbps for 802.11a and m0 for 802.11n (BW 20MHz) due to the highest RF output power.
3. The EUT supports 802.11n (BW 20 MHz) function only, not supports 802.11n (BW 40 MHz) function.

2.3 Test Mode

The EUT has been associated with peripherals pursuant to ANSI C63.4-2003 and configuration operated in a manner tended to maximize its emission characteristics in a typical application. Frequency range investigated: conduction (150 kHz to 30 MHz), radiation (9 kHz to the 10th harmonic of the highest fundamental frequency or to 40 GHz, whichever is lower).

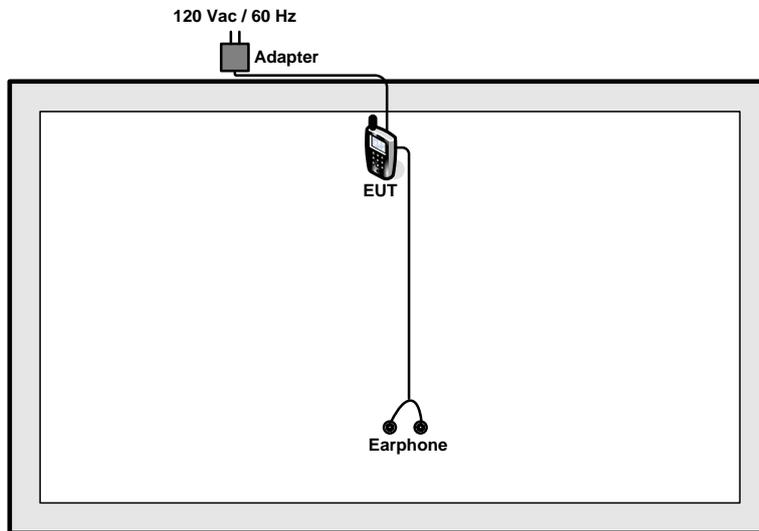
Test Cases	
Test Item	802.11a/n (Modulation : OFDM)
Conducted TCs	<ul style="list-style-type: none"> ■ Mode 1: 802.11a_CH36_5180 MHz ■ Mode 2: 802.11a_CH44_5220 MHz ■ Mode 3: 802.11a_CH48_5240 MHz ■ Mode 4: 802.11a_CH52_5260 MHz ■ Mode 5: 802.11a_CH60_5300 MHz ■ Mode 6: 802.11a_CH64_5320 MHz ■ Mode 7: 802.11a_CH100_5500 MHz ■ Mode 8: 802.11a_CH120_5600 MHz ■ Mode 9: 802.11a_CH140_5700 MHz ■ Mode 10: 802.11n_CH36_5180 MHz (BW 20MHz) ■ Mode 11: 802.11n_CH44_5220 MHz (BW 20MHz) ■ Mode 12: 802.11n_CH48_5240 MHz (BW 20MHz) ■ Mode 13: 802.11n_CH52_5260 MHz (BW 20MHz) ■ Mode 14: 802.11n_CH60_5300 MHz (BW 20MHz) ■ Mode 15: 802.11n_CH64_5320 MHz (BW 20MHz) ■ Mode 16: 802.11n_CH100_5500 MHz (BW 20MHz) ■ Mode 17: 802.11n_CH120_5600 MHz (BW 20MHz) ■ Mode 18: 802.11n_CH140_5700 MHz (BW 20MHz)



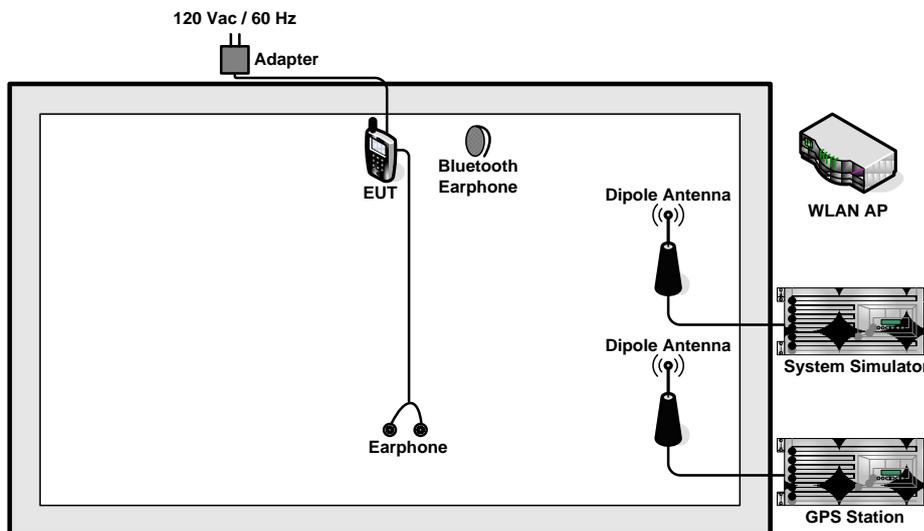
Test Cases	
Test Item	802.11a/n (Modulation : OFDM)
Radiated TCs	<ul style="list-style-type: none"> ■ Mode 1: 802.11a_CH36_5180 MHz + TC for Sample 1 ■ Mode 2: 802.11a_CH44_5220 MHz + TC for Sample 1 ■ Mode 3: 802.11a_CH48_5240 MHz + TC for Sample 1 ■ Mode 4: 802.11a_CH52_5260 MHz + TC for Sample 1 ■ Mode 5: 802.11a_CH60_5300 MHz + TC for Sample 1 ■ Mode 6: 802.11a_CH64_5320 MHz + TC for Sample 1 ■ Mode 7: 802.11a_CH100_5500 MHz + TC for Sample 1 ■ Mode 8: 802.11a_CH120_5600 MHz + TC for Sample 1 ■ Mode 9: 802.11a_CH140_5700 MHz + TC for Sample 1 ■ Mode 10: 802.11n_CH36_5180 MHz (BW 20MHz) + TC for Sample 1 ■ Mode 11: 802.11n_CH44_5220 MHz (BW 20MHz) + TC for Sample 1 ■ Mode 12: 802.11n_CH48_5240 MHz (BW 20MHz) + TC for Sample 1 ■ Mode 13: 802.11n_CH52_5260 MHz (BW 20MHz) + TC for Sample 1 ■ Mode 14: 802.11n_CH60_5300 MHz (BW 20MHz) + TC for Sample 1 ■ Mode 15: 802.11n_CH64_5320 MHz (BW 20MHz) + TC for Sample 1 ■ Mode 16: 802.11n_CH100_5500 MHz (BW 20MHz) + TC for Sample 1 ■ Mode 17: 802.11n_CH120_5600 MHz (BW 20MHz) + TC for Sample 1 ■ Mode 18: 802.11n_CH140_5700 MHz (BW 20MHz) + TC for Sample 1 ■ Mode 19: 802.11a_CH36_5180 MHz + TC for Sample 2
AC Conducted Emission	<p>Mode 1: GSM850 Idle + Bluetooth Link + WLAN Link (5G) + GPS Rx + Earphone + Battery 2 + USB Cable 2 (Charging from Adapter 2) for Sample 1</p> <p>Mode 2: WCDMA Band IV Idle + Bluetooth Link + WLAN Link (5G) + GPS Rx + Earphone + Battery 2 + USB Cable 2 (Charging from Adapter 2) for Sample 1</p> <p>Mode 3: GSM850 Idle + Bluetooth Link + WLAN Link (5G) + GPS Rx + Earphone + Battery 2 + USB Cable 2 (Charging from Adapter 2) for Sample 2</p>
<p>Remark:</p> <ol style="list-style-type: none"> 1. TC stands for Test Configuration, and consists of Battery 1, Earphone, USB Cable 1, and Adapter 3. 2. The worst case of AC is mode 1; only the test data of this mode was reported. 	

2.4 Connection Diagram of Test System

<WLAN Tx Mode>



<AC Conducted Emission>



2.5 RF Utility

The programmed RF Utility "Remote 432X controller(P.163)", is installed in notebook to provide channel selection, power level, data rate and the application type. RF Utility can send transmitting signal for all testing. The RF output power selection is for the setting of RF output power expected by the customer and is going to be fixed on the firmware of the final end product.

3 Test Result

3.1 26dB Bandwidth Measurement

3.1.1 Limit of 26dB Bandwidth

There is no restriction limits for bandwidth. The maximum conducted output power can be limited by measured emission bandwidth (B). For the band 5.15~5.25 GHz, the maximum conducted output power over the frequency band of operation shall not exceed the lesser of 50 mW (17dBm) or 4 dBm + 10log B. For the 5.25-5.35 GHz and 5.47-5.725 GHz bands, the maximum conducted output power over the frequency bands of operation shall not exceed the lesser of 250 mW (24dBm) or 11 dBm + 10log B.

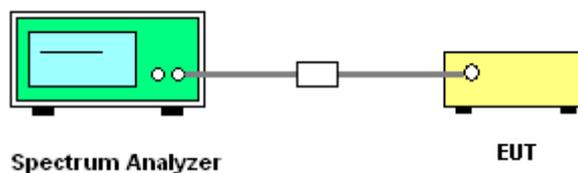
3.1.2 Measuring Instruments

See list of measuring instruments of this test report.

3.1.3 Test Procedures

1. The testing follows FCC Public Notice DA 02-2138 (Measurement Guidelines of UNII).
2. The RF output of EUT was connected to the spectrum analyzer by a low loss cable.
3. Read RBW and repeat measurement as needed until the RBW/BW ratio is approximately 1%.
4. Use a RBW = approximately 1% of the emission bandwidth; Set the VBW > RBW; Use a peak detector.
5. Measure the maximum width of the emission that is 26 dB relative to the peak of the emission and 99% occupied bandwidth.

3.1.4 Test Setup





3.1.5 Test Result of 26dB Bandwidth

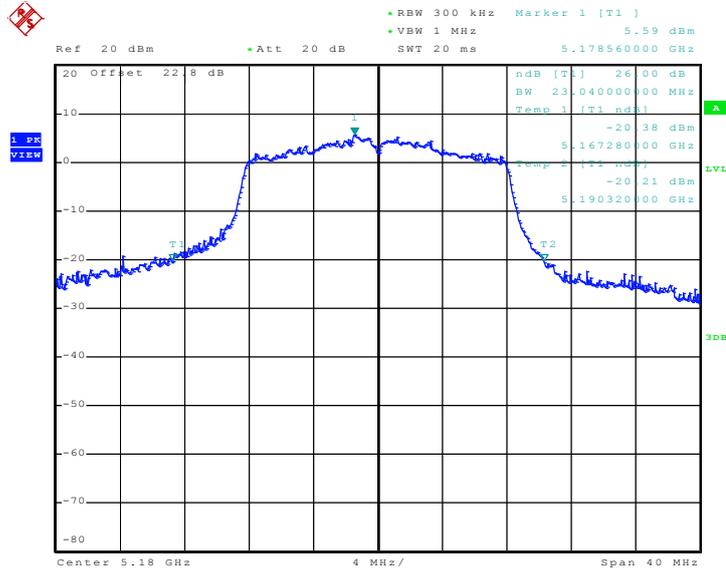
Test Mode :	Mode 1~18	Temperature :	22~24°C
Test Engineer :	Lancelot Chen	Relative Humidity :	61~64%

Channel	Frequency (MHz)	802.11a 26dB Bandwidth (MHz)	802.11n (BW 20MHz) 26dB Bandwidth (MHz)	Pass/Fail
36	5180	23.04	23.12	Pass
44	5220	28.88	23.12	Pass
48	5240	26.24	23.36	Pass
52	5260	21.92	23.36	Pass
60	5300	22.32	23.20	Pass
64	5320	21.12	23.28	Pass
100	5500	21.20	23.20	Pass
120	5600	20.40	22.96	Pass
140	5700	20.88	23.20	Pass



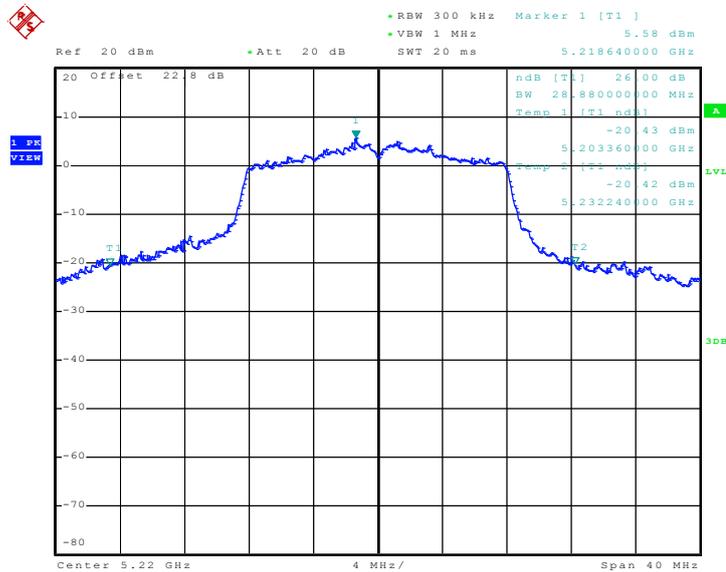
3.1.6 Test Result of 26dB Bandwidth Plots

Mode 01: 26 dB Bandwidth Plot on 802.11a Channel 36



Date: 13.AUG.2010 06:19:04

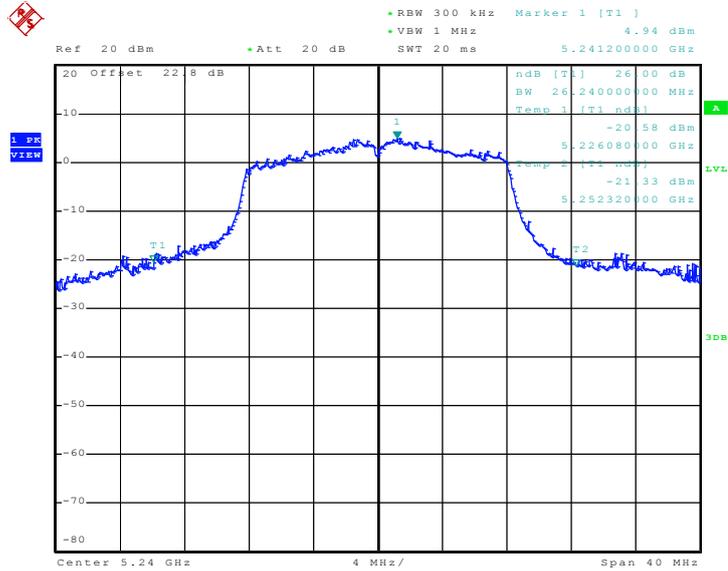
Mode 02: 26 dB Bandwidth Plot on 802.11a Channel 44



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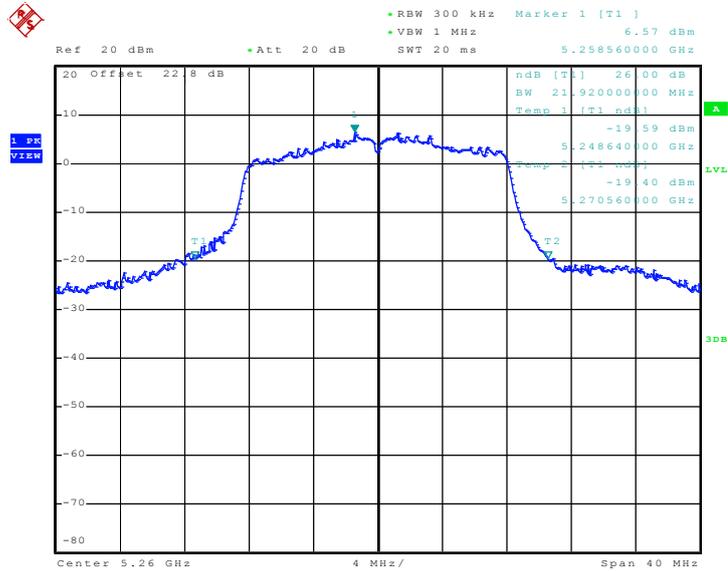


Mode 03: 26 dB Bandwidth Plot on 802.11a Channel 48



Date: 13.AUG.2010 06:21:22

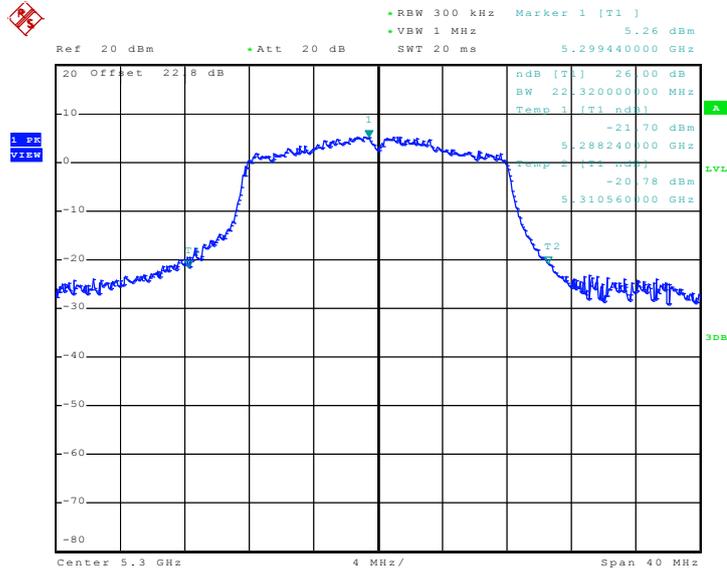
Mode 04: 26 dB Bandwidth Plot on 802.11a Channel 52



Date: 13.AUG.2010 06:22:41

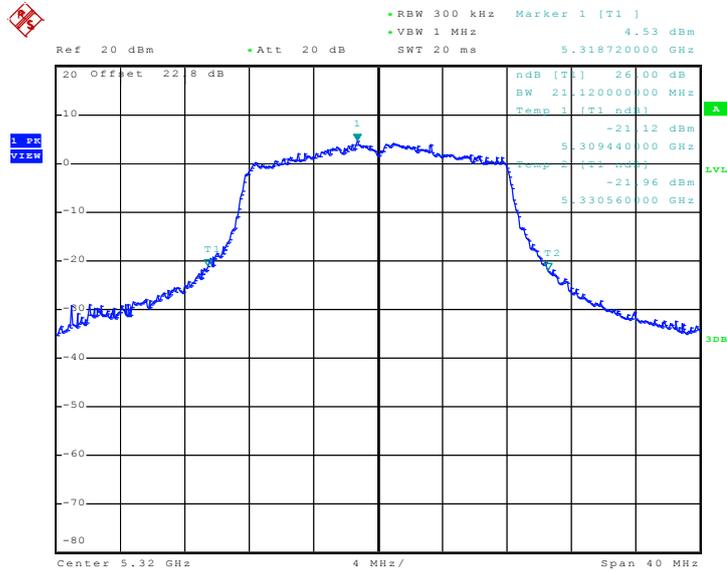


Mode 05: 26 dB Bandwidth Plot on 802.11a Channel 60



Date: 13.AUG.2010 06:23:44

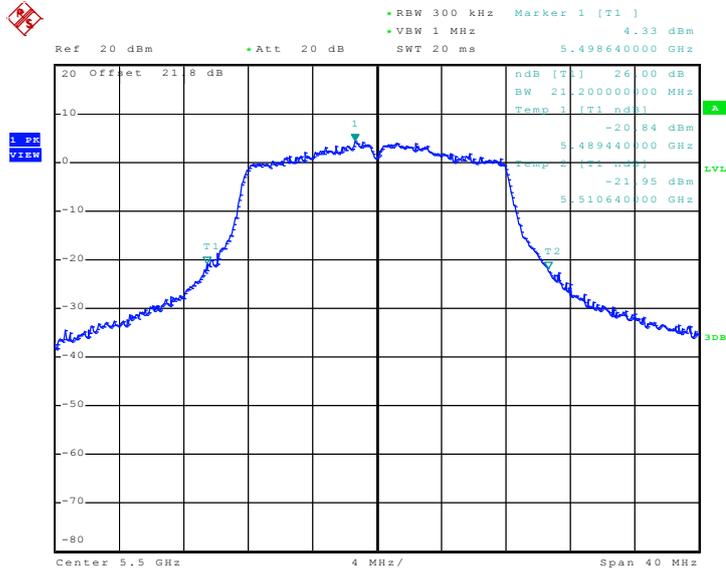
Mode 06: 26 dB Bandwidth Plot on 802.11a Channel 64



Date: 13.AUG.2010 06:24:37

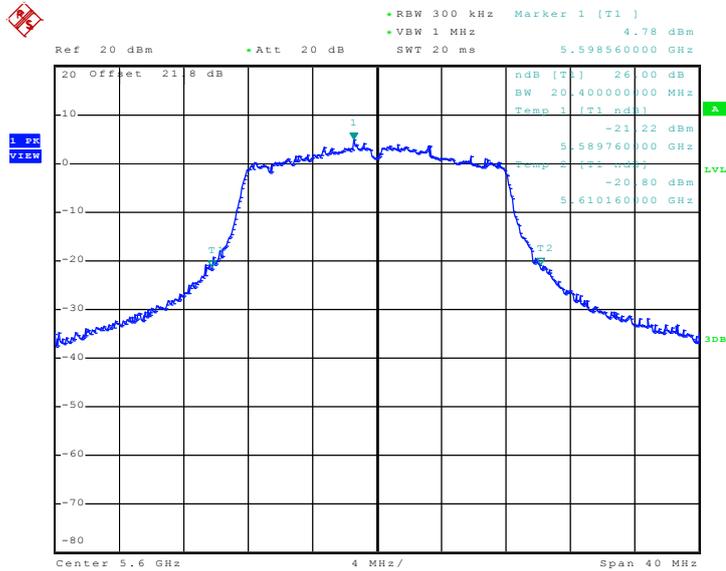


Mode 07: 26 dB Bandwidth Plot on 802.11a Channel 100



Date: 13.AUG.2010 06:25:47

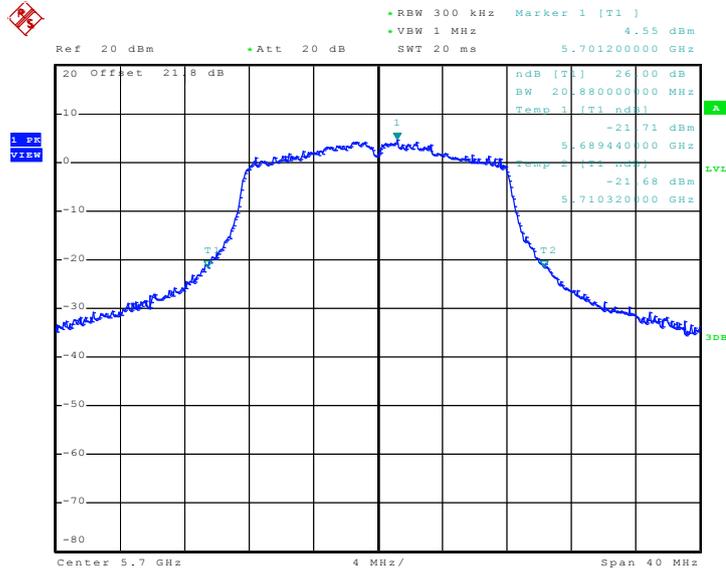
Mode 08: 26 dB Bandwidth Plot on 802.11a Channel 120



Date: 13.AUG.2010 06:26:34

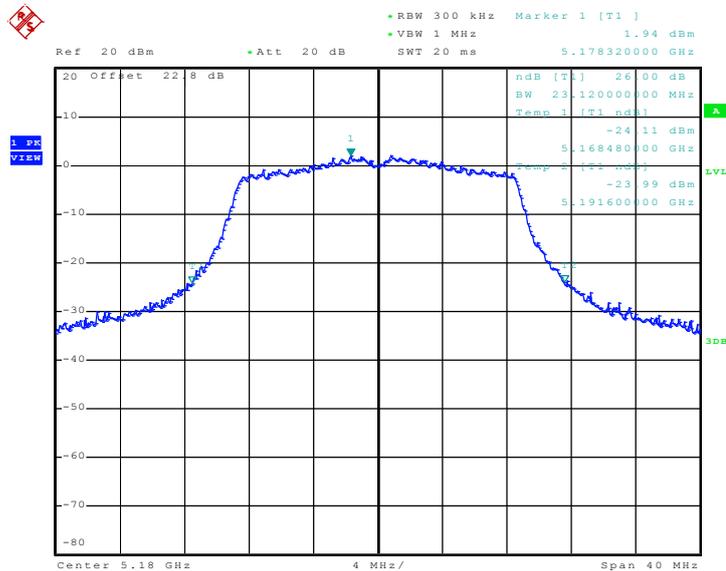


Mode 09: 26 dB Bandwidth Plot on 802.11a Channel 140



Date: 13.AUG.2010 06:27:19

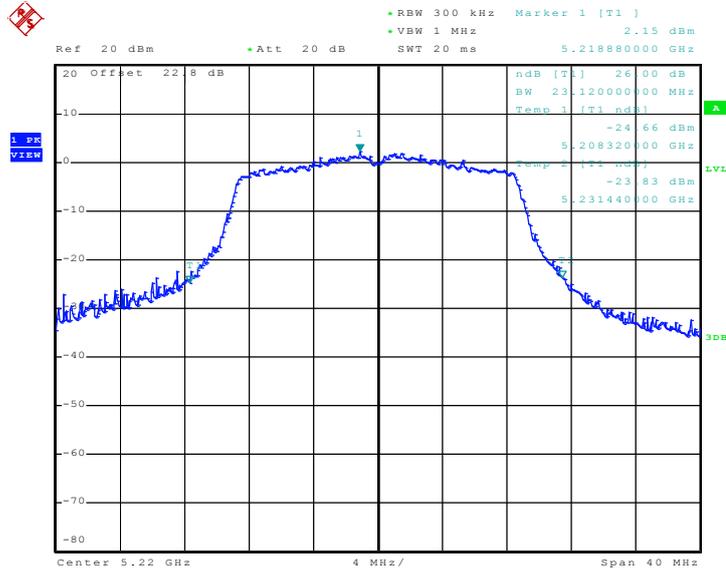
Mode 10: 26 dB Bandwidth Plot on 802.11n (BW 20MHz) Channel 36



Date: 13.AUG.2010 23:39:16

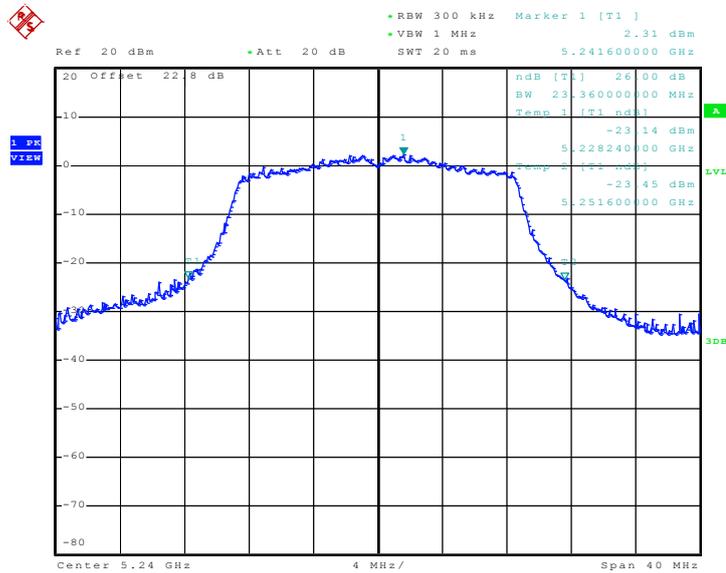


Mode 11: 26 dB Bandwidth Plot on 802.11n (BW 20MHz) Channel 44



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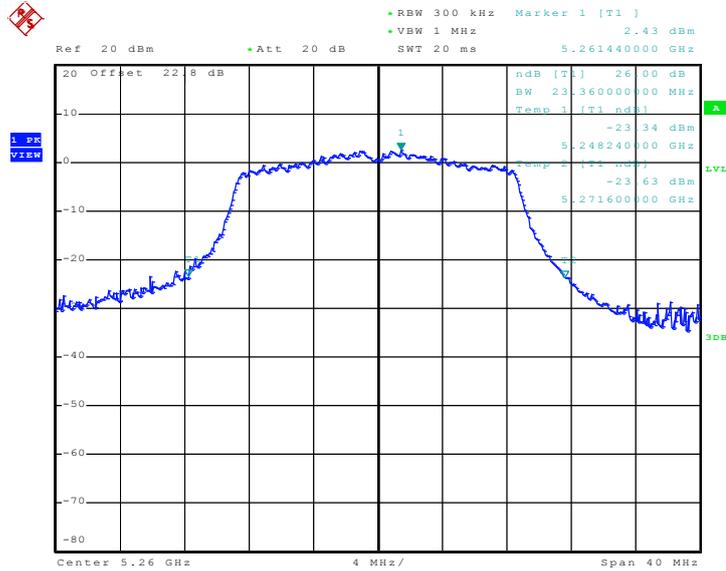
Mode 12: 26 dB Bandwidth Plot on 802.11n (BW 20MHz) Channel 48



Date: 13.AUG.2010 23:41:01

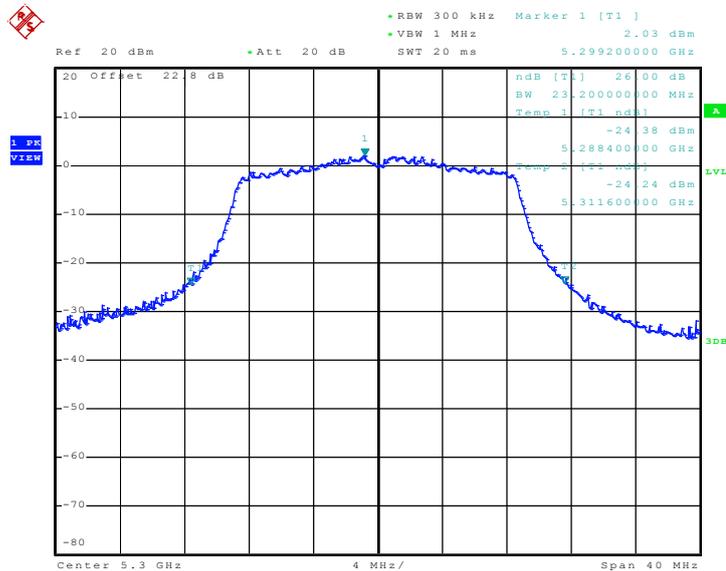


Mode 13: 26 dB Bandwidth Plot on 802.11n (BW 20MHz) Channel 52



Date: 13.AUG.2010 23:42:42

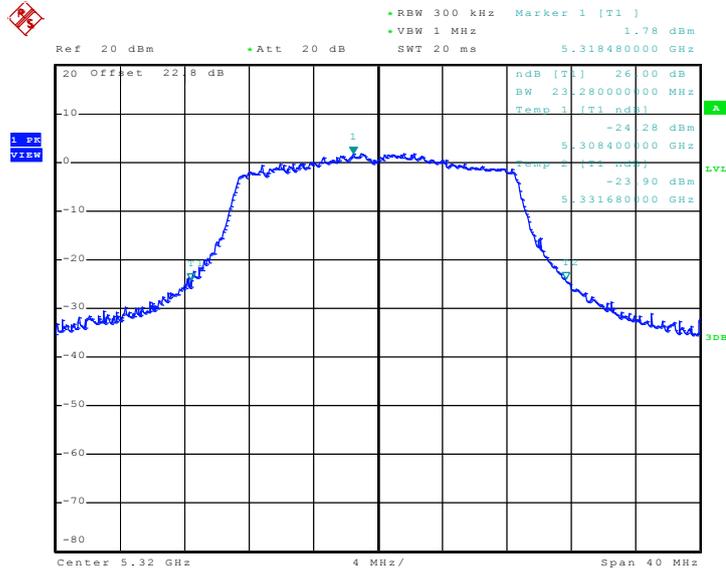
Mode 14: 26 dB Bandwidth Plot on 802.11n (BW 20MHz) Channel 60



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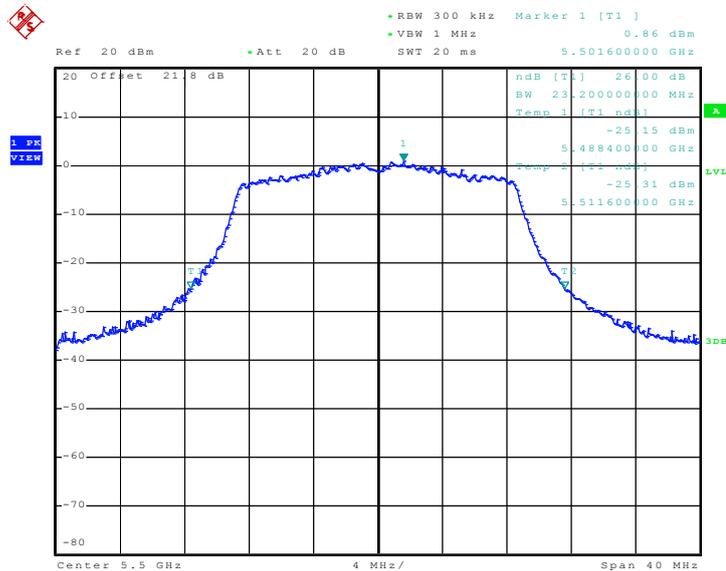


Mode 15: 26 dB Bandwidth Plot on 802.11n (BW 20MHz) Channel 64



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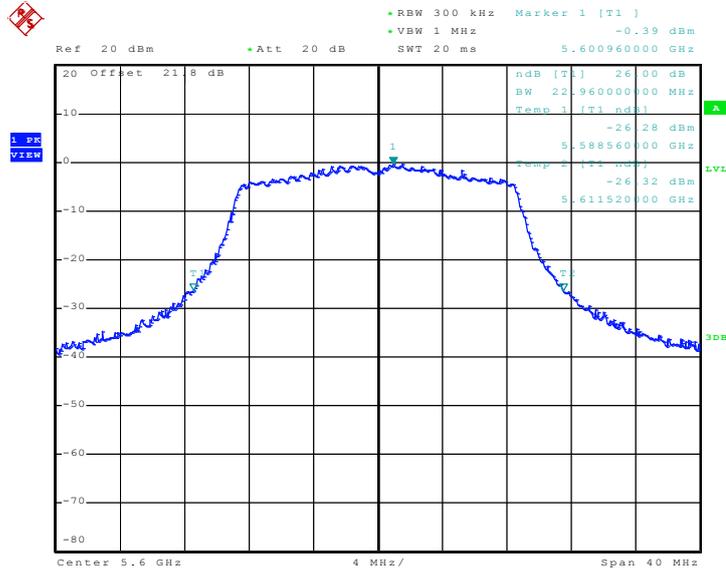
Mode 16: 26 dB Bandwidth Plot on 802.11n (BW 20MHz) Channel 100



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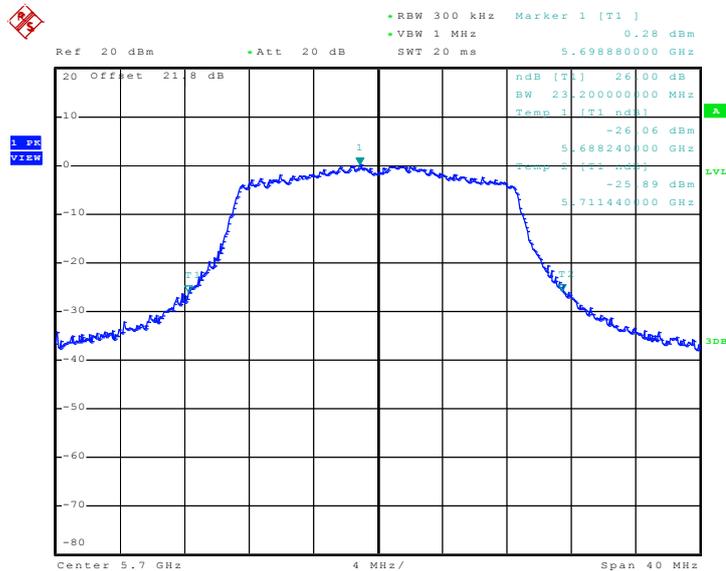


Mode 17: 26 dB Bandwidth Plot on 802.11n (BW 20MHz) Channel 120



Date: 13.AUG.2010 23:47:04

Mode 18: 26 dB Bandwidth Plot on 802.11n (BW 20MHz) Channel 140



Date: 13.AUG.2010 23:47:47

3.2 Maximum Conducted Output Power Measurement

3.2.1 Limit of Maximum Conducted Output Power

For the band 5.15~5.25 GHz, the maximum conducted output power shall not exceed the lesser of 50 mW (17dBm) or $4 \text{ dBm} + 10\log B$, where B is the 26 dB emissions bandwidth in MHz. If transmitting antenna directional gain is greater than 6 dBi, the peak output power and power density shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi.

For the 5.25-5.35 GHz bands, the maximum conducted output power shall not exceed the lesser of 250 mW (24dBm) or $11 \text{ dBm} + 10\log B$. If transmitting antenna directional gain is greater than 6 dBi, the peak output power and power density shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi.

For the 5.47-5.725 GHz bands, the maximum conducted output power shall not exceed the lesser of 250 mW (24dBm) or $11 \text{ dBm} + 10\log B$. If transmitting antenna directional gain is greater than 6 dBi, the peak output power and power density shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi.

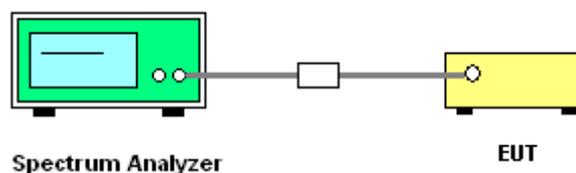
3.2.2 Measuring Instruments

See list of measuring instruments of this test report.

3.2.3 Test Procedures

1. The testing follows FCC Public Notice DA 02-2138 (Measurement Guidelines of UNII).
2. The RF output of EUT was connected to the spectrum analyzer by a low loss cable.
3. Measure the power and record it.

3.2.4 Test Setup





3.2.5 Test Result of Maximum Conducted Output Power

Test Mode :	Mode 1~18	Temperature :	22~24°C
Test Engineer :	Lancelot Chen	Relative Humidity :	61~64%

Channel	Frequency (MHz)	802.11a Measured Output Power (dBm)	802.11n (BW 20MHz) Measured Output Power (dBm)	Max. Limits (dBm)	Pass/Fail
36	5180	10.75	9.57	17	Pass
44	5220	9.66	8.31	17	Pass
48	5240	9.85	8.72	17	Pass
52	5260	10.74	9.76	24	Pass
60	5300	10.03	9.57	24	Pass
64	5320	9.18	8.55	24	Pass
100	5500	9.80	10.01	24	Pass
120	5600	10.15	10.24	24	Pass
140	5700	10.49	10.53	24	Pass

3.3 Power Spectral Density Measurement

3.3.1 Limit of Power Spectral Density

For the band 5.15–5.25 GHz, the peak power spectral density shall not exceed 4 dBm in any 1MHz band. For the 5.25–5.35 GHz and 5.47–5.725 GHz bands, the peak power spectral density shall not exceed 11 dBm in any 1 MHz band. If transmitting antenna directional gain is greater than 6 dBi, both the maximum conducted output power and the peak power spectral density shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi.

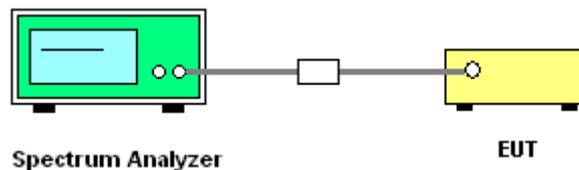
3.3.2 Measuring Instruments

See list of measuring instruments of this test report.

3.3.3 Test Procedures

The transmitter output is connected to the spectrum analyzer. According to the method 3 of DA-02-2138, the resolution bandwidth is set to 1 MHz, video bandwidth is 3MHz, trace average 100 traces in power averaging mode, and sample detection is used, and the analyzer is set for video averaging.

3.3.4 Test Setup





3.3.5 Test Result of Power Spectral Density

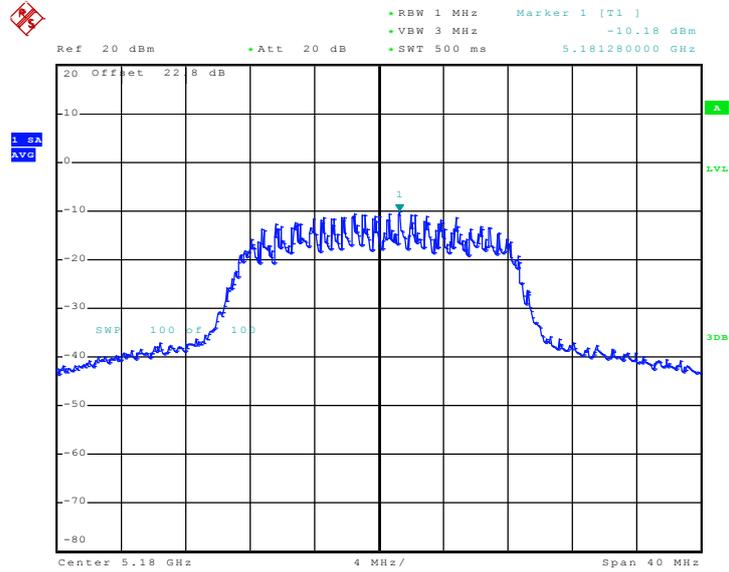
Test Mode :	Mode 1~18	Temperature :	22~24°C
Test Engineer :	Lancelot Chen	Relative Humidity :	61~64%

Channel	Frequency (MHz)	802.11a Measured PSD (dBm)	802.11n (BW 20MHz) Measured PSD (dBm)	Max. Limits (dBm)	Pass/Fail
36	5180	-10.18	-3.63	4	Pass
44	5220	-8.72	-2.89	4	Pass
48	5240	-10.02	-3.14	4	Pass
52	5260	-11.13	-3.31	11	Pass
60	5300	-9.62	-3.35	11	Pass
64	5320	-7.67	-4.62	11	Pass
100	5500	-12.33	-4.56	17	Pass
120	5600	-12.56	-4.63	17	Pass
140	5700	-13.71	-4.68	17	Pass



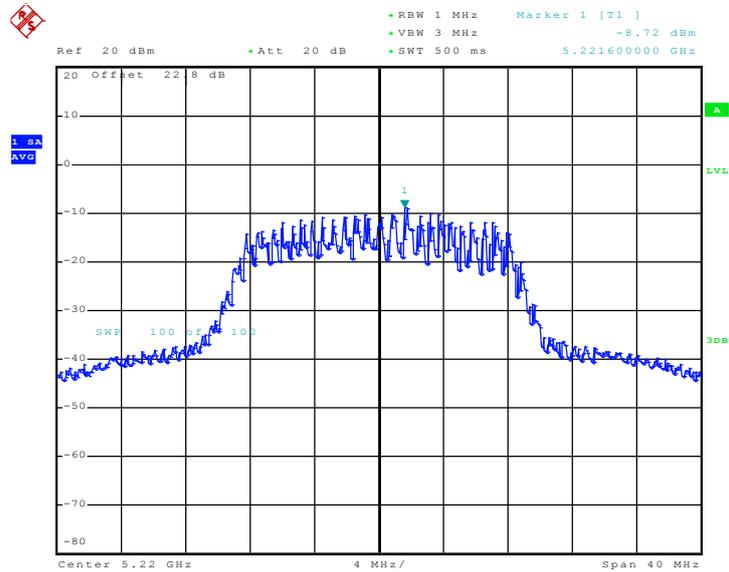
3.3.6 Test Result of Power Spectral Density Plots

Mode 01: PSD Plot on 802.11a Channel 36



Date: 13.AUG.2010 15:39:16

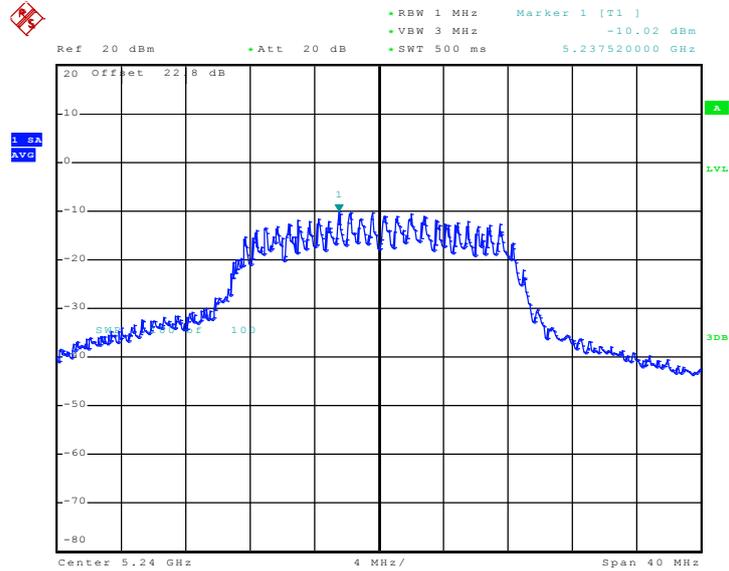
Mode 02: PSD Plot on 802.11a Channel 44



Date: 13.AUG.2010 15:41:01

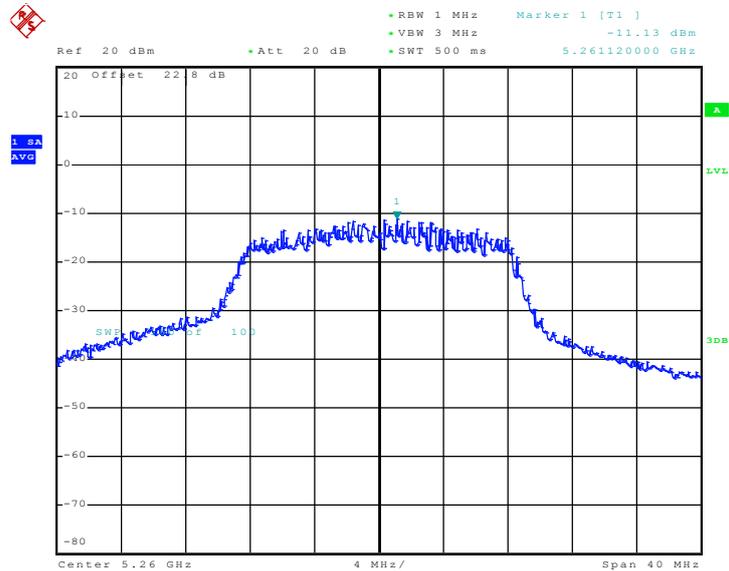


Mode 03: PSD Plot on 802.11a Channel 48



Date: 13.AUG.2010 15:46:07

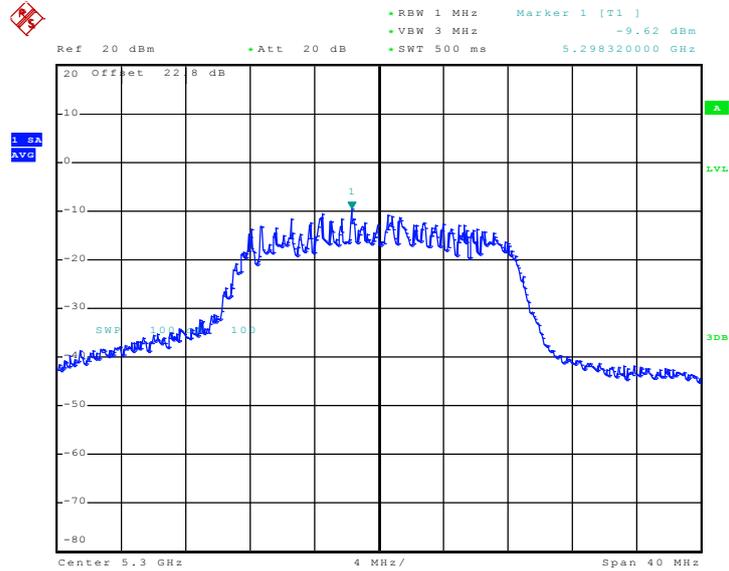
Mode 04: PSD Plot on 802.11a Channel 52



Date: 13.AUG.2010 15:47:54

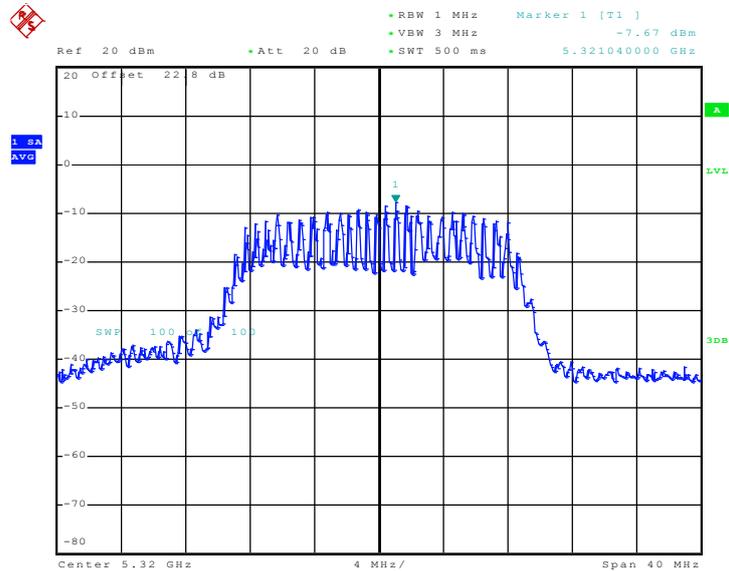


Mode 05: PSD Plot on 802.11a Channel 60



Date: 13.AUG.2010 15:49:16

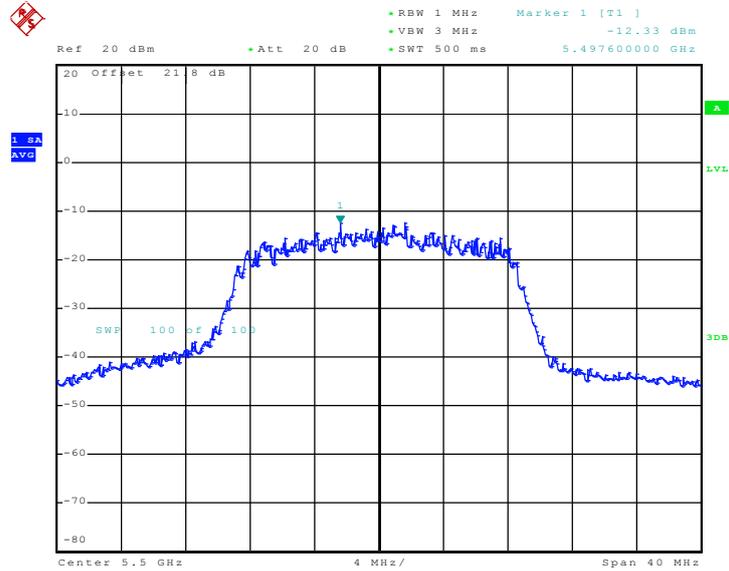
Mode 06: PSD Plot on 802.11a Channel 64



Date: 13.AUG.2010 15:50:37

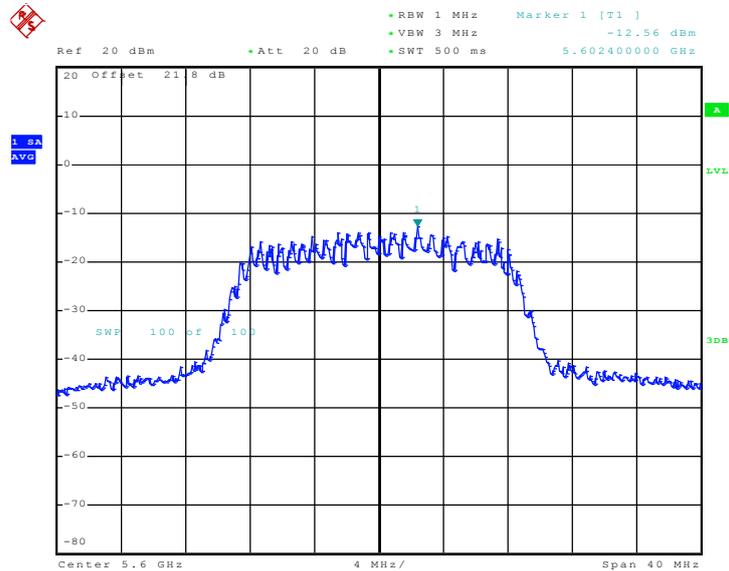


Mode 07: PSD Plot on 802.11a Channel 100



Date: 13.AUG.2010 15:54:36

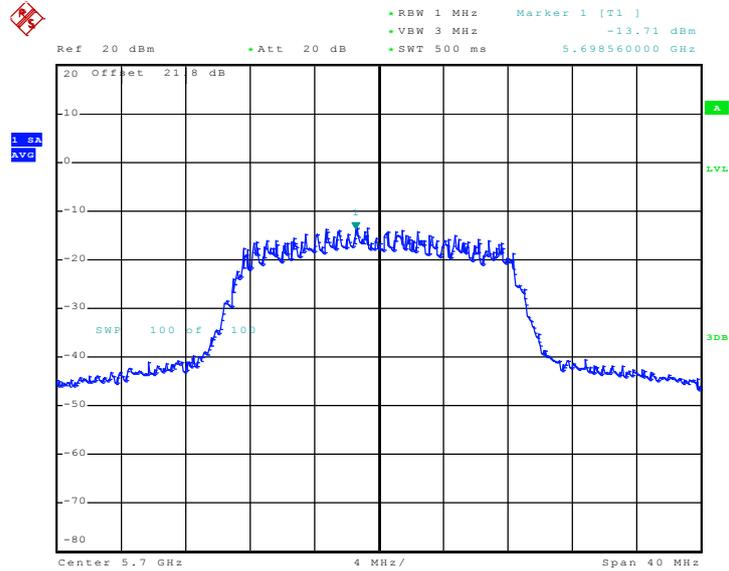
Mode 08: PSD Plot on 802.11a Channel 120



Date: 13.AUG.2010 15:55:58

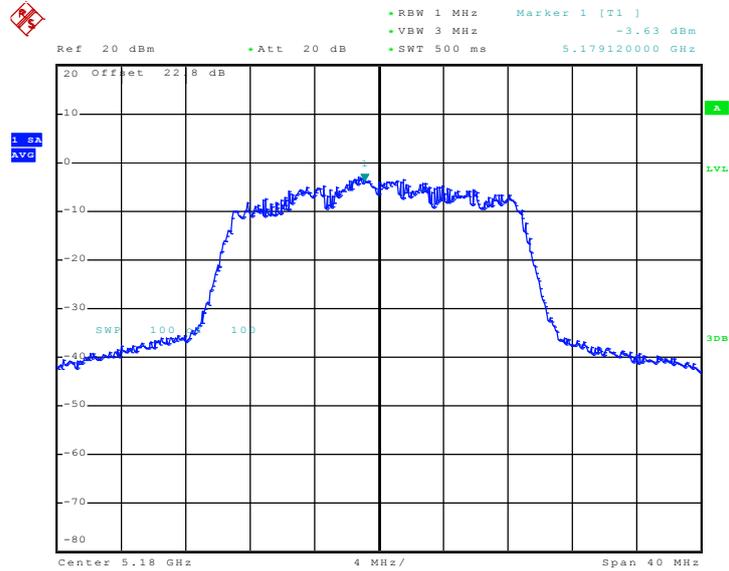


Mode 09: PSD Plot on 802.11a Channel 140



Date: 13.AUG.2010 15:57:16

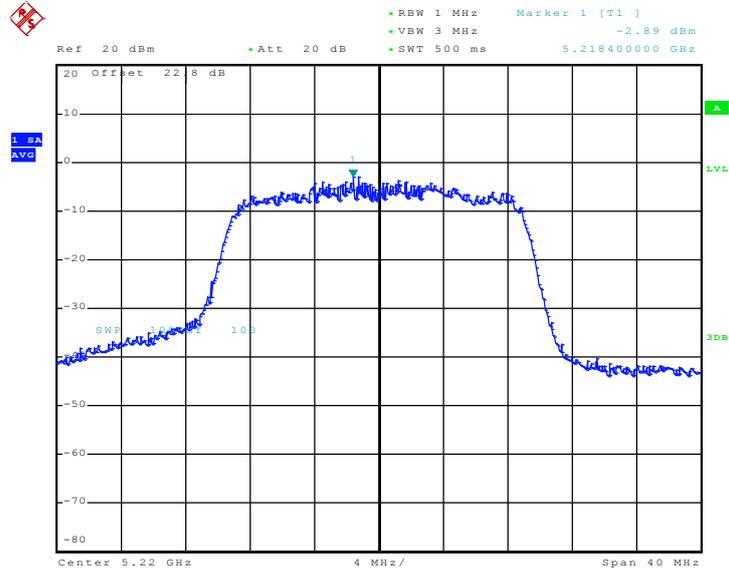
Mode 10: PSD Plot on 802.11n (BW 20MHz) Channel 36



Date: 13.AUG.2010 16:18:25

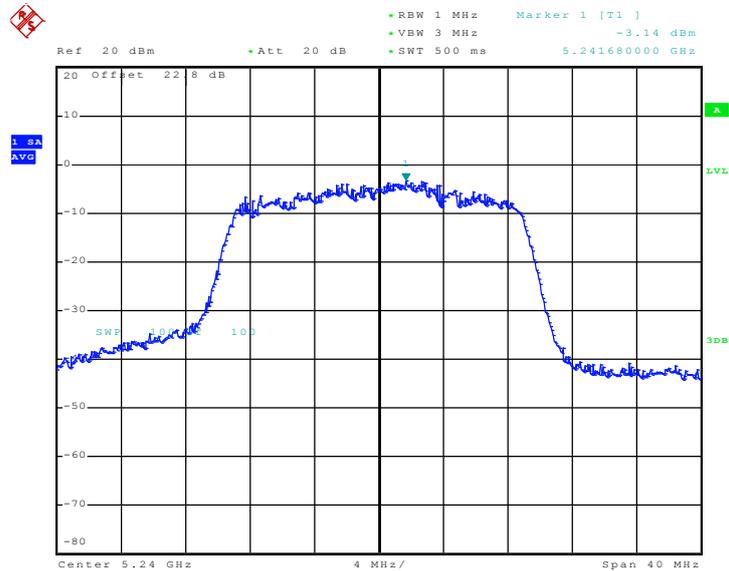


Mode 11: PSD Plot on 802.11n (BW 20MHz) Channel 44



Date: 13.AUG.2010 16:16:43

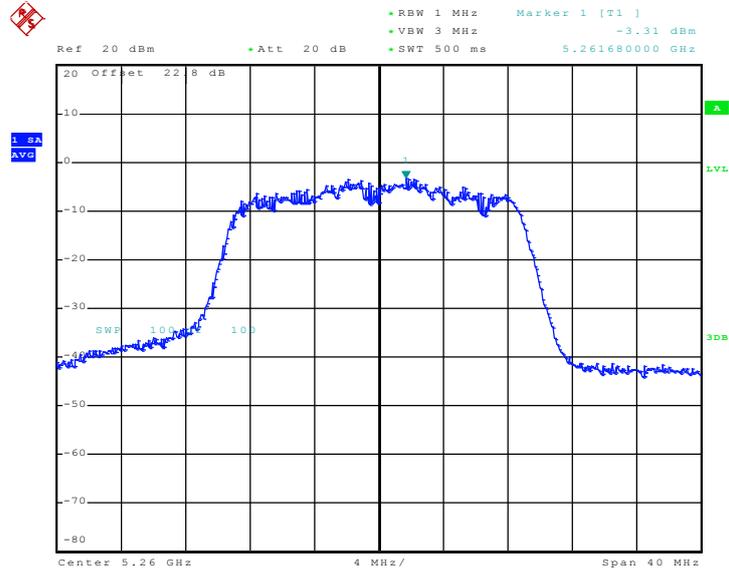
Mode 12: PSD Plot on 802.11n (BW 20MHz) Channel 48



Date: 13.AUG.2010 16:12:53

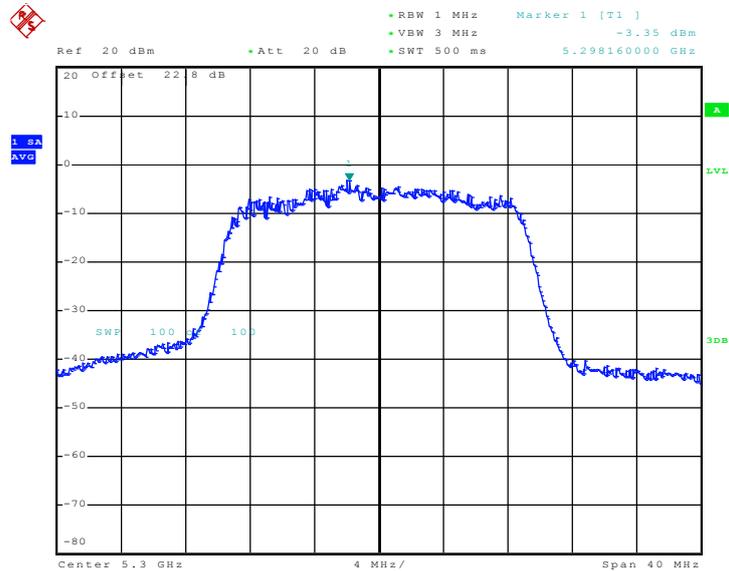


Mode 13: PSD Plot on 802.11n (BW 20MHz) Channel 52



Date: 13.AUG.2010 16:11:36

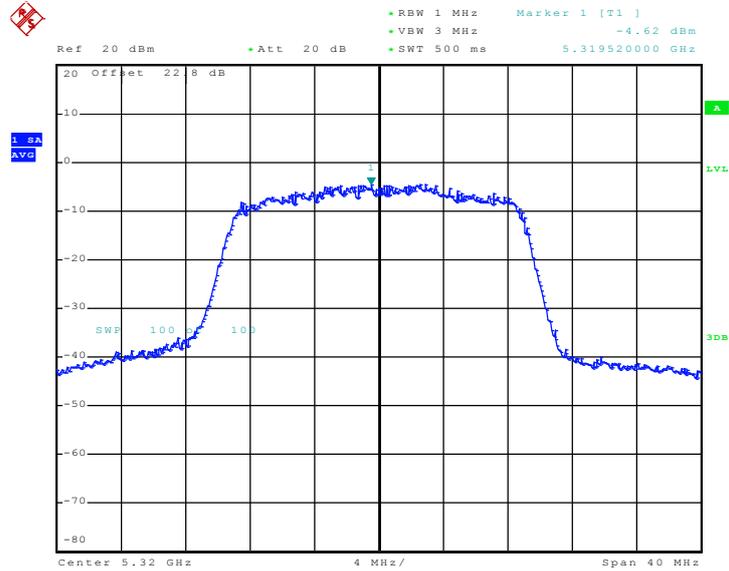
Mode 14: PSD Plot on 802.11n (BW 20MHz) Channel 60



Date: 13.AUG.2010 16:09:48

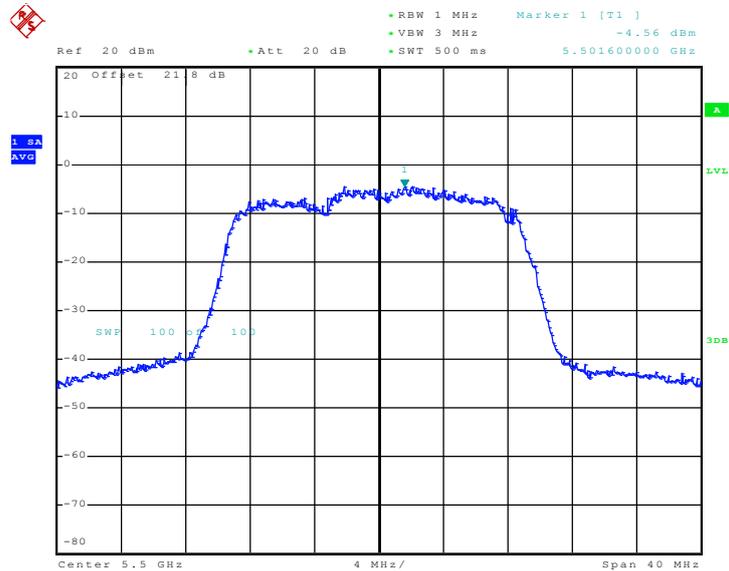


Mode 15: PSD Plot on 802.11n (BW 20MHz) Channel 64



Date: 13.AUG.2010 16:08:09

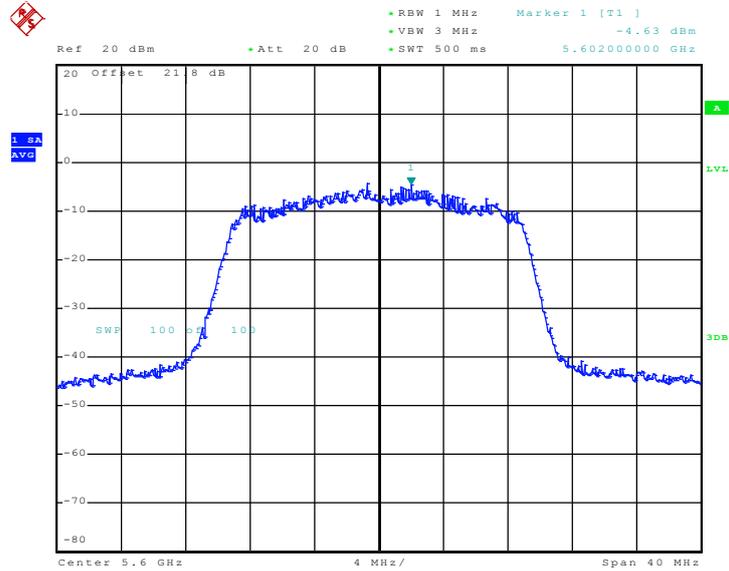
Mode 16: PSD Plot on 802.11n (BW 20MHz) Channel 100



Date: 13.AUG.2010 16:06:03

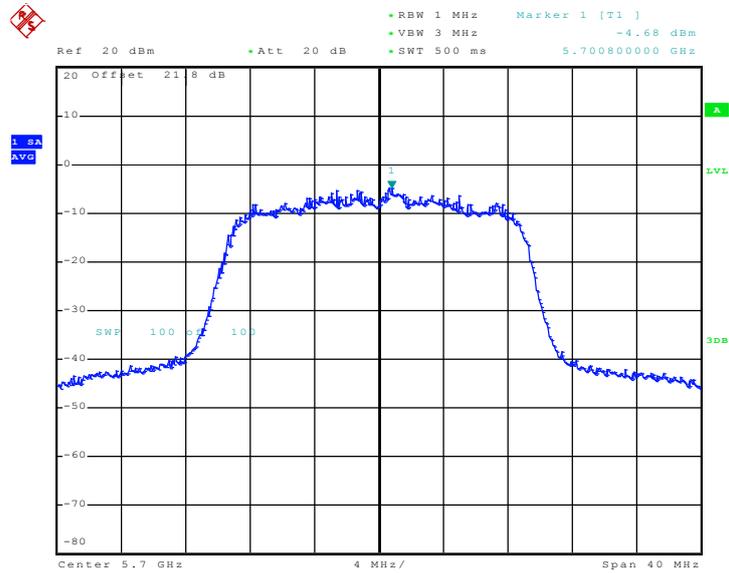


Mode 17: PSD Plot on 802.11n (BW 20MHz) Channel 120



Date: 13.AUG.2010 16:04:34

Mode 18: PSD Plot on 802.11n (BW 20MHz) Channel 140



Date: 13.AUG.2010 16:03:16

3.4 Band Edges Measurement

3.4.1 Limit of Band Edges

- (1) For transmitters operating in the 5.15–5.25 GHz band: all emissions outside of the 5.15–5.35 GHz band shall not exceed an EIRP of -27 dBm/MHz. For transmitters operating in the 5.25–5.35 GHz band: all emissions outside of the 5.15–5.35 GHz band shall not exceed an EIRP of -27 dBm/MHz. Devices operating in the 5.25–5.35 GHz band that generate emissions in the 5.15–5.25 GHz band must meet all applicable technical requirements for operation in the 5.15–5.25 GHz band (including indoor use) or alternatively meet an out-of-band emission EIRP limit of -27 dBm/MHz in the 5.15–5.25 GHz band. For transmitters operating in the 5.47–5.725 GHz band: all emissions outside of the 5.47–5.725 GHz band shall not exceed an EIRP of -27 dBm/MHz.
- (2) The provisions of Section 15.205 Restricted bands of operation of this part apply to intentional radiators operating under this section.

3.4.2 Measuring Instruments

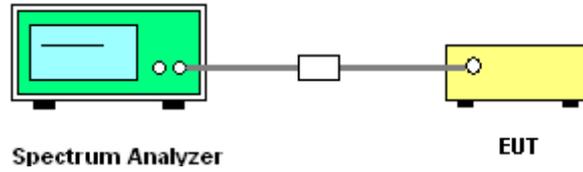
See list of measuring instruments of this test report.

3.4.3 Test Procedures

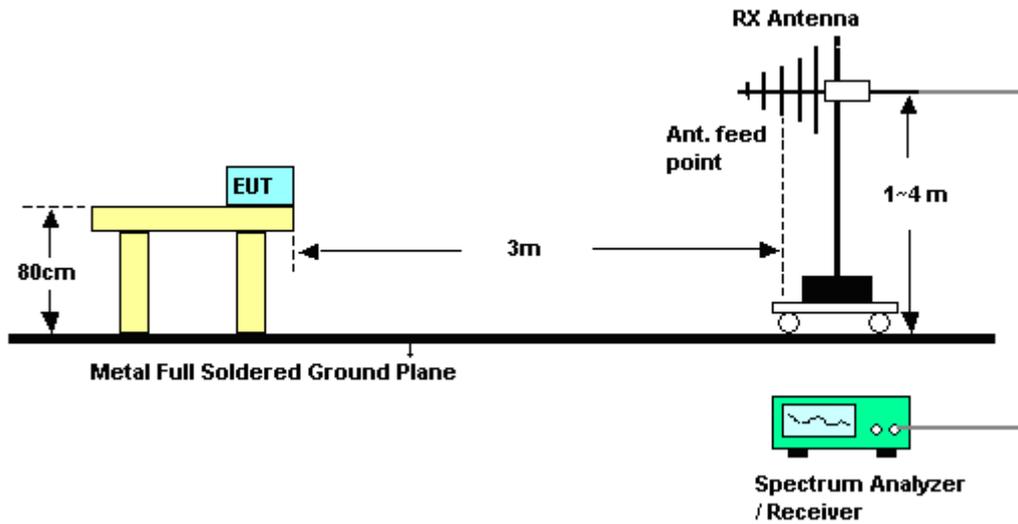
1. Set both RBW and VBW of spectrum analyzer to 1MHz with convenient frequency span including 1MHz bandwidth from band edge.
2. The band edges was measured and recorded.

3.4.4 Test Setup

<Conducted>



<Radiated>





3.4.5 Test Result of Radiated Band Edges

Test Mode :	Mode 1	Temperature :	26~27°C
Test Band :	802.11a	Relative Humidity :	49~53%
Test Channel :	36	Test Engineer :	Cona Huang

ANTENNA POLARITY : HORIZONTAL										
Frequency (MHz)	Level (dBuV/m)	Over Limit (dB)	Limit Line (dBuV/m)	Read Level (dBuV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
5150.00	57.50	-16.50	74.00	48.82	33.92	9.41	34.65	112	164	Peak
5150.00	39.75	-14.25	54.00	31.07	33.92	9.41	34.65	112	164	Average

ANTENNA POLARITY : VERTICAL										
Frequency (MHz)	Level (dBuV/m)	Over Limit (dB)	Limit Line (dBuV/m)	Read Level (dBuV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
5150.00	64.46	-9.54	74.00	55.78	33.92	9.41	34.65	100	50	Peak
5150.00	40.56	-13.44	54.00	31.88	33.92	9.41	34.65	100	50	Average

Test Mode :	Mode 6	Temperature :	26~27°C
Test Band :	802.11a	Relative Humidity :	49~53%
Test Channel :	64	Test Engineer :	Cona Huang

ANTENNA POLARITY : HORIZONTAL										
Frequency (MHz)	Level (dBuV/m)	Over Limit (dB)	Limit Line (dBuV/m)	Read Level (dBuV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
5350.00	51.68	-22.32	74.00	43.26	34.08	9.74	35.40	102	242	Peak
5350.00	39.33	-14.67	54.00	30.91	34.08	9.74	35.40	102	242	Average

ANTENNA POLARITY : VERTICAL										
Frequency (MHz)	Level (dBuV/m)	Over Limit (dB)	Limit Line (dBuV/m)	Read Level (dBuV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
5350.00	51.94	-22.06	74.00	43.52	34.08	9.74	35.40	100	62	Peak
5350.00	39.96	-14.04	54.00	31.54	34.08	9.74	35.40	100	62	Average



Test Mode :	Mode 7	Temperature :	26~27°C
Test Band :	802.11a	Relative Humidity :	49~53%
Test Channel :	100	Test Engineer :	Cona Huang

ANTENNA POLARITY : HORIZONTAL										
Frequency (MHz)	Level (dBuV/m)	Over Limit (dB)	Limit Line (dBuV/m)	Read Level (dBuV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
5470.00	59.38	-28.92	88.30	51.11	34.17	9.94	35.84	181	231	Peak
5470.00	38.78	-29.52	68.30	30.51	34.17	9.94	35.84	181	231	Average

ANTENNA POLARITY : VERTICAL										
Frequency (MHz)	Level (dBuV/m)	Over Limit (dB)	Limit Line (dBuV/m)	Read Level (dBuV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
5470.00	64.72	-23.58	88.30	56.45	34.17	9.94	35.84	132	360	Peak
5470.00	40.26	-28.04	68.30	31.99	34.17	9.94	35.84	132	360	Average

Test Mode :	Mode 9	Temperature :	26~27°C
Test Band :	802.11a	Relative Humidity :	49~53%
Test Channel :	140	Test Engineer :	Cona Huang

ANTENNA POLARITY : HORIZONTAL										
Frequency (MHz)	Level (dBuV/m)	Over Limit (dB)	Limit Line (dBuV/m)	Read Level (dBuV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
5725.00	54.03	-34.27	88.30	45.44	34.51	9.92	35.84	126	100	Peak
5725.00	39.70	-28.60	68.30	31.11	34.51	9.92	35.84	126	100	Average

ANTENNA POLARITY : VERTICAL										
Frequency (MHz)	Level (dBuV/m)	Over Limit (dB)	Limit Line (dBuV/m)	Read Level (dBuV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
5725.00	56.95	-31.35	88.30	48.36	34.51	9.92	35.84	123	48	Peak
5725.00	40.05	-28.25	68.30	31.46	34.51	9.92	35.84	123	48	Average



Test Mode :	Mode 10	Temperature :	26~27°C
Test Band :	802.11n (BW 20MHz)	Relative Humidity :	49~53%
Test Channel :	36	Test Engineer :	Cona Huang

ANTENNA POLARITY : HORIZONTAL										
Frequency (MHz)	Level (dBuV/m)	Over Limit (dB)	Limit Line (dBuV/m)	Read Level (dBuV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
5150.00	57.02	-16.98	74.00	48.34	33.92	9.41	34.65	126	161	Peak
5150.00	39.59	-14.41	54.00	30.91	33.92	9.41	34.65	126	161	Average

ANTENNA POLARITY : VERTICAL										
Frequency (MHz)	Level (dBuV/m)	Over Limit (dB)	Limit Line (dBuV/m)	Read Level (dBuV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
5150.00	60.32	-13.68	74.00	51.64	33.92	9.41	34.65	102	61	Peak
5150.00	40.45	-13.55	54.00	31.77	33.92	9.41	34.65	102	61	Average

Test Mode :	Mode 15	Temperature :	26~27°C
Test Band :	802.11n (BW 20MHz)	Relative Humidity :	49~53%
Test Channel :	64	Test Engineer :	Cona Huang

ANTENNA POLARITY : HORIZONTAL										
Frequency (MHz)	Level (dBuV/m)	Over Limit (dB)	Limit Line (dBuV/m)	Read Level (dBuV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
5350.00	50.33	-23.67	74.00	41.91	34.08	9.74	35.40	102	240	Peak
5350.00	39.46	-14.54	54.00	31.04	34.08	9.74	35.40	102	240	Average

ANTENNA POLARITY : VERTICAL										
Frequency (MHz)	Level (dBuV/m)	Over Limit (dB)	Limit Line (dBuV/m)	Read Level (dBuV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
5350.00	50.99	-23.01	74.00	42.57	34.08	9.74	35.40	100	59	Peak
5350.00	40.20	-13.80	54.00	31.78	34.08	9.74	35.40	100	59	Average



Test Mode :	Mode 16	Temperature :	26~27°C
Test Band :	802.11n (BW 20MHz)	Relative Humidity :	49~53%
Test Channel :	100	Test Engineer :	Cona Huang

ANTENNA POLARITY : HORIZONTAL										
Frequency (MHz)	Level (dBuV/m)	Over Limit (dB)	Limit Line (dBuV/m)	Read Level (dBuV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
5470.00	58.82	-29.48	88.30	50.55	34.17	9.94	35.84	196	220	Peak
5470.00	38.38	-29.92	68.30	30.11	34.17	9.94	35.84	196	220	Average

ANTENNA POLARITY : VERTICAL										
Frequency (MHz)	Level (dBuV/m)	Over Limit (dB)	Limit Line (dBuV/m)	Read Level (dBuV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
5470.00	65.07	-23.23	88.30	56.80	34.17	9.94	35.84	145	352	Peak
5470.00	39.25	-29.05	68.30	30.98	34.17	9.94	35.84	145	352	Average

Test Mode :	Mode 18	Temperature :	26~27°C
Test Band :	802.11n (BW 20MHz)	Relative Humidity :	49~53%
Test Channel :	140	Test Engineer :	Cona Huang

ANTENNA POLARITY : HORIZONTAL										
Frequency (MHz)	Level (dBuV/m)	Over Limit (dB)	Limit Line (dBuV/m)	Read Level (dBuV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
5725.00	56.82	-31.48	88.30	48.23	34.51	9.92	35.84	166	248	Peak
5725.00	41.83	-26.47	68.30	33.24	34.51	9.92	35.84	166	248	Average

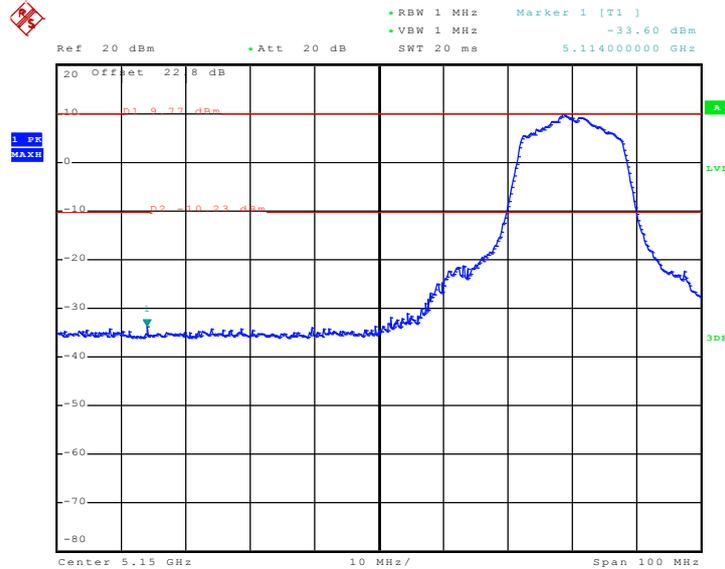
ANTENNA POLARITY : VERTICAL										
Frequency (MHz)	Level (dBuV/m)	Over Limit (dB)	Limit Line (dBuV/m)	Read Level (dBuV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
5725.00	58.71	-29.59	88.30	50.12	34.51	9.92	35.84	111	45	Peak
5725.00	43.13	-25.17	68.30	34.54	34.51	9.92	35.84	111	45	Average



3.4.6 Test Result of Conducted Band Edges

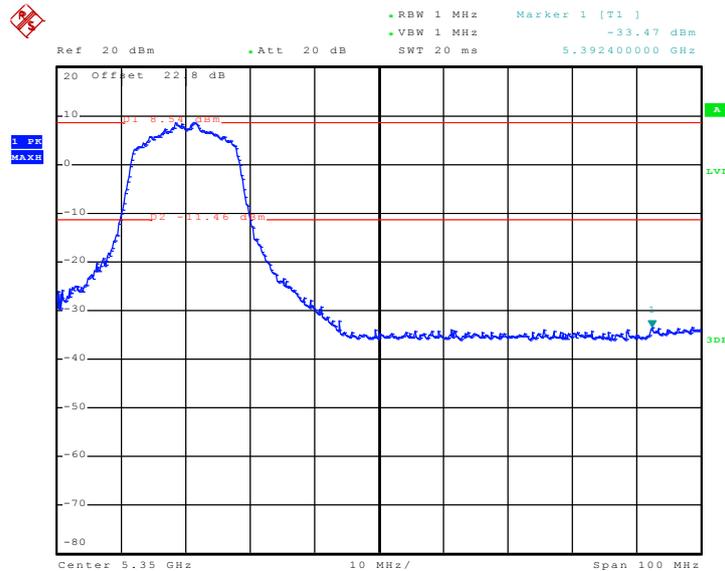
Test Mode :	Mode 1 and Mode 6	Temperature :	22~24°C
Test Band :	802.11a	Relative Humidity :	61~64%
Test Channel :	36 and 64	Test Engineer :	Lancelot Chen

Mode 1 : Low Band Edge Plot on 802.11a Channel 36



Date: 13.AUG.2010 06:32:46

Mode 6 : High Band Edge Plot on 802.11a Channel 64

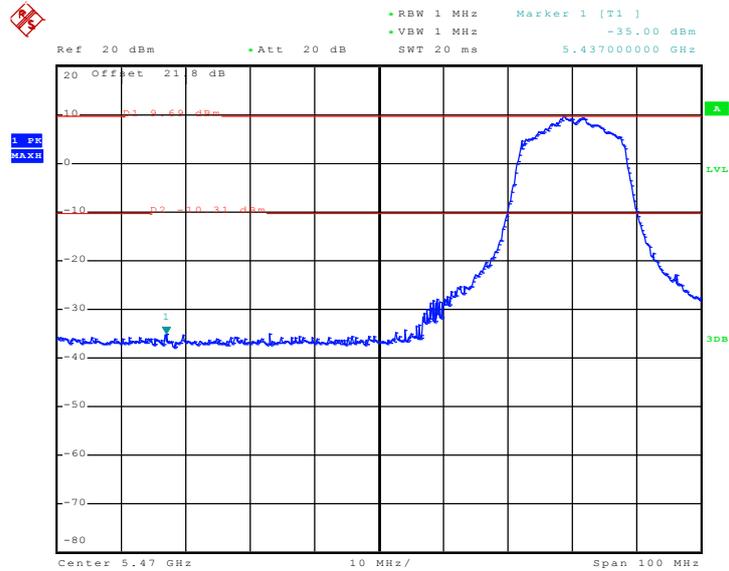


Date: 13.AUG.2010 06:34:51



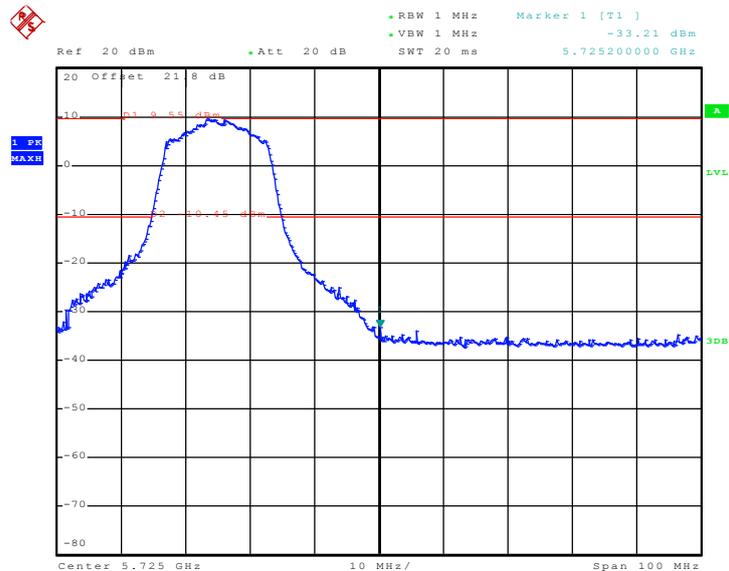
Test Mode :	Mode 7 and Mode 9	Temperature :	22~24°C
Test Band :	802.11a	Relative Humidity :	61~64%
Test Channel :	100 and 140	Test Engineer :	Lancelot Chen

Mode 7 : Low Band Edge Plot on 802.11a Channel 100



Date: 13.AUG.2010 06:36:46

Mode 9 : High Band Edge Plot on 802.11a Channel 140

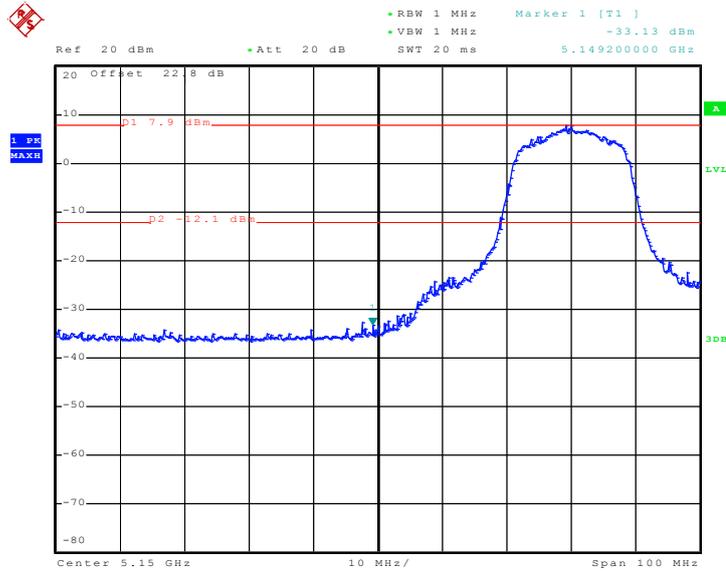


Date: 13.AUG.2010 06:38:13



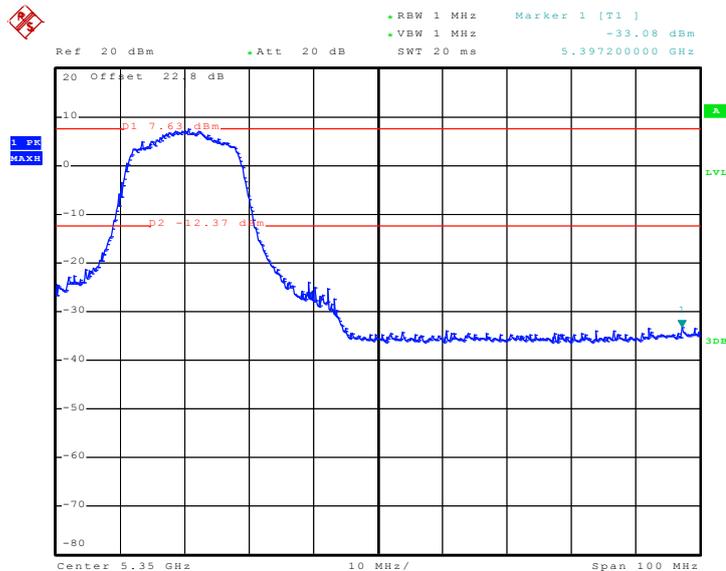
Test Mode :	Mode 10 and Mode 15	Temperature :	22~24°C
Test Band :	802.11n (BW 20MHz)	Relative Humidity :	61~64%
Test Channel :	36 and 64	Test Engineer :	Lancelot Chen

Mode 10 : Low Band Edge Plot on 802.11n (BW 20MHz) Channel 36



Date: 13.AUG.2010 23:55:28

Mode 15 : High Band Edge Plot on 802.11n (BW 20MHz) Channel 64

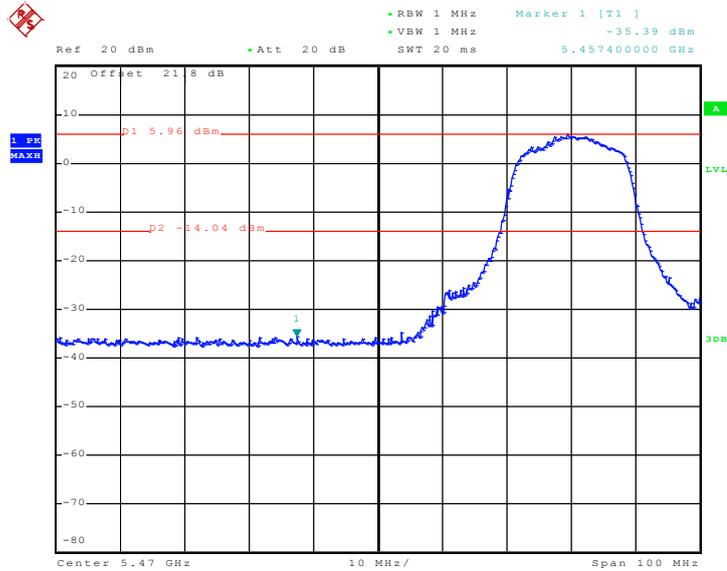


Date: 13.AUG.2010 23:56:57



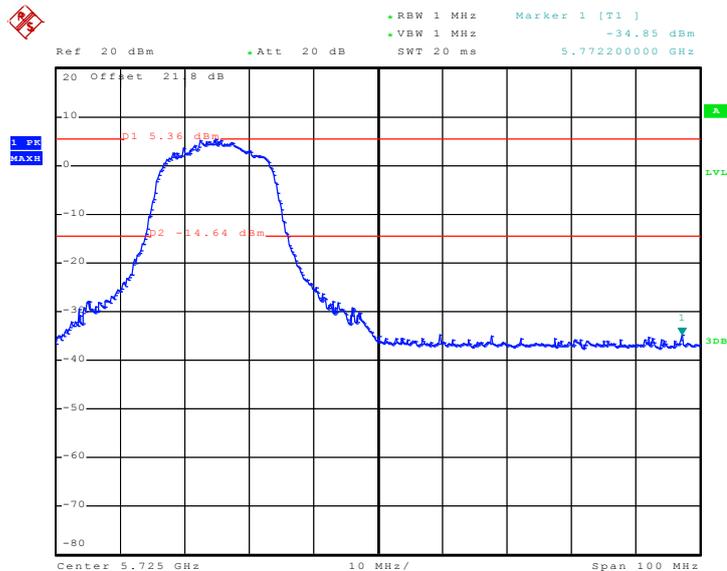
Test Mode :	Mode 16 and Mode 18	Temperature :	22~24°C
Test Band :	802.11n (BW 20MHz)	Relative Humidity :	61~64%
Test Channel :	100 and 140	Test Engineer :	Lancelot Chen

Mode 16 : Low Band Edge Plot on 802.11n (BW 20MHz) Channel 100



Date: 13.AUG.2010 23:53:35

Mode 18 : High Band Edge Plot on 802.11n (BW 20MHz) Channel 140



Date: 13.AUG.2010 23:50:44

3.5 Spurious Emission

3.5.1 Limit of Spurious Emission Measurement

All harmonics/spurs must be at least 20 dB down from the highest emission level within the authorized band.

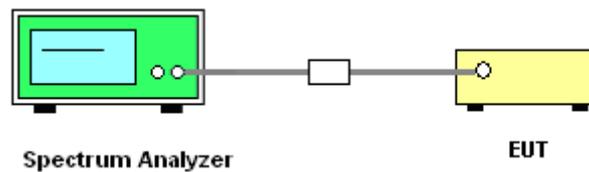
3.5.2 Measuring Instruments

See list of measuring instruments of this test report.

3.5.3 Test Procedure

1. The transmitter output was connected to the spectrum analyzer via a low lose cable.
2. Set RBW = 100 kHz, Video bandwidth (VBW) > RBW, scan up through 10th harmonic. All harmonics/spurs must be at least 20 dB down from the highest emission level within the authorized band as measured with a 100 kHz RBW.

3.5.4 Test Setup

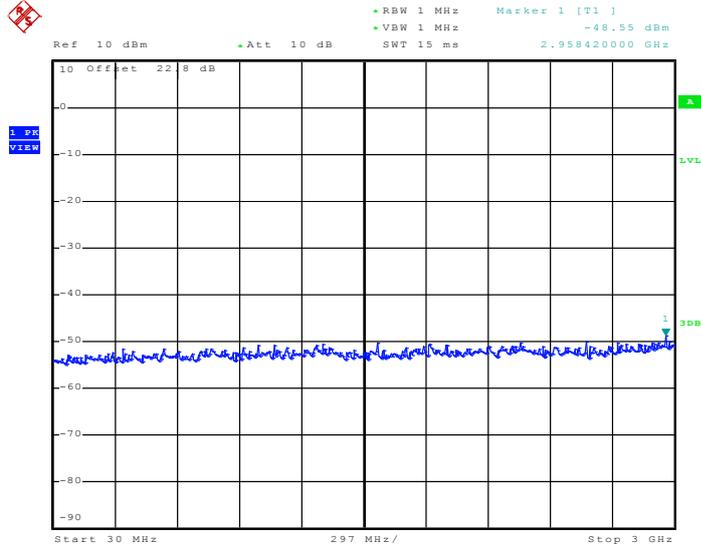




3.5.5 Test Result

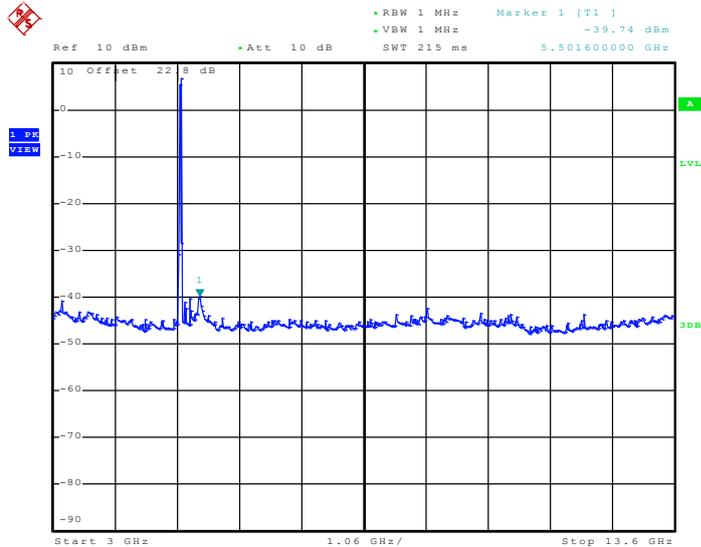
Test Mode :	Mode 1~9	Temperature :	22~24°C
Test Band :	802.11a	Relative Humidity :	61~64%
Test Channel :	36/44/48/52/60/64/100/120/140	Test Engineer :	Lancelot Chen

Mode 1:
 Spurious Emission Plot on 802.11a Channel 36 between 30 MHz~3 GHz



Date: 18.AUG.2010 22:45:52

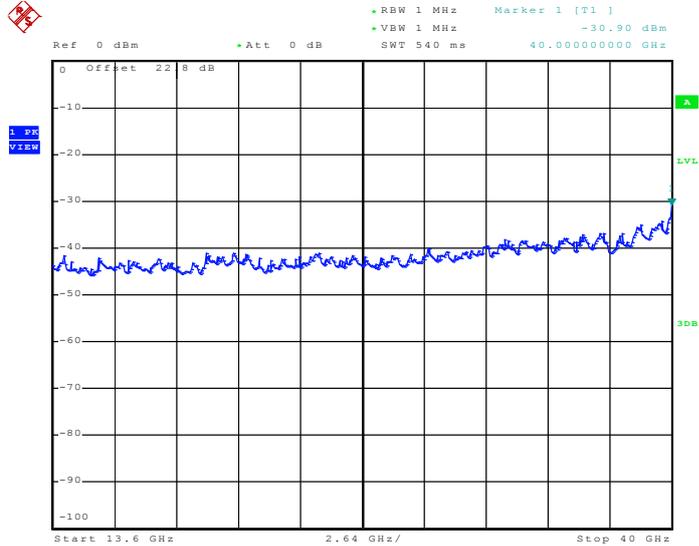
Mode 1:
 Spurious Emission Plot on 802.11a Channel 36 between 3 GHz~13.6 GHz



Date: 18.AUG.2010 22:46:04

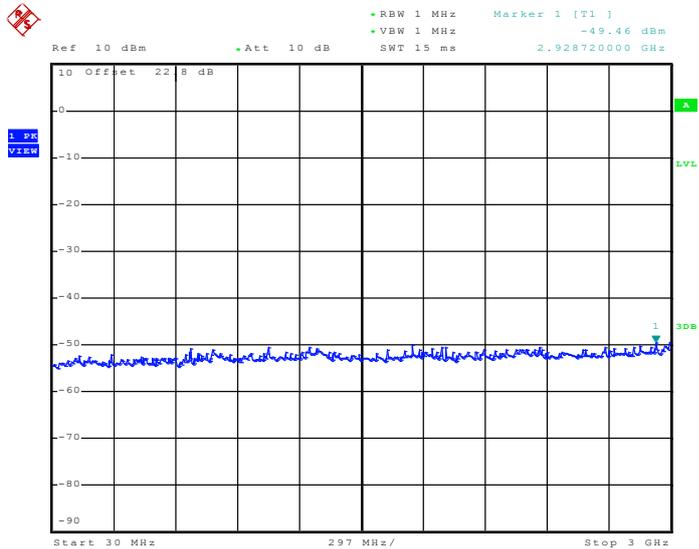


Mode 1:
Spurious Emission Plot on 802.11a Channel 36 between 13.6 GHz~40 GHz



Date: 18.AUG.2010 22:46:17

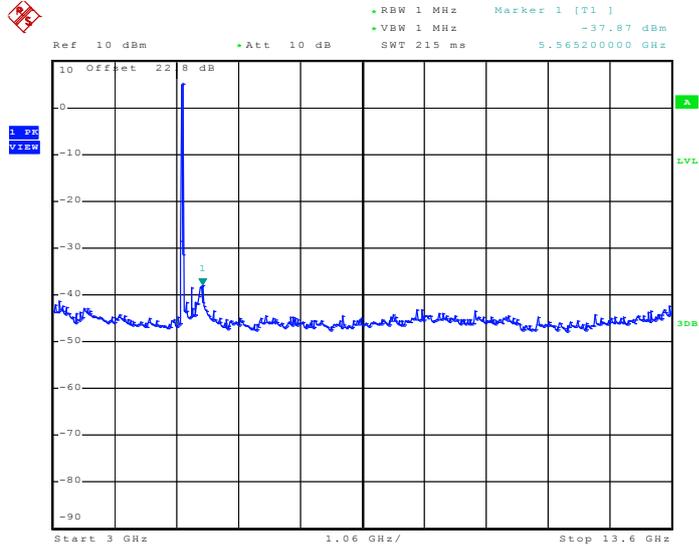
Mode 2:
Spurious Emission Plot on 802.11a Channel 44 between 30 MHz~3 GHz



Date: 18.AUG.2010 22:46:42

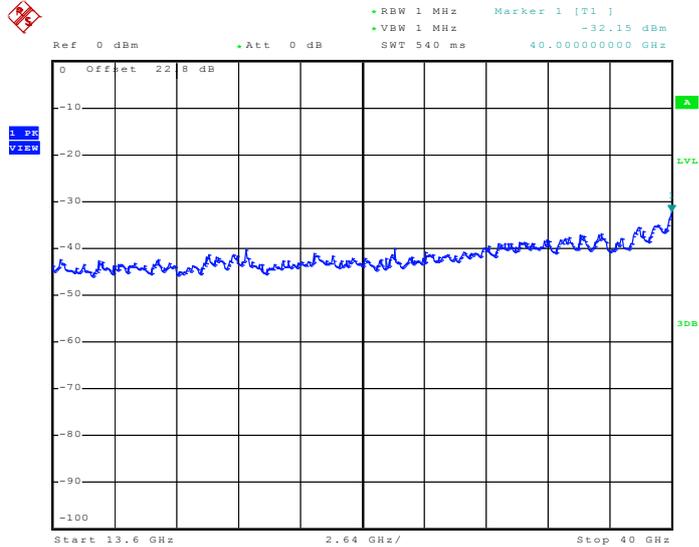


Mode 2:
Spurious Emission Plot on 802.11a Channel 44 between 3 GHz~13.6 GHz



Date: 18.AUG.2010 22:46:54

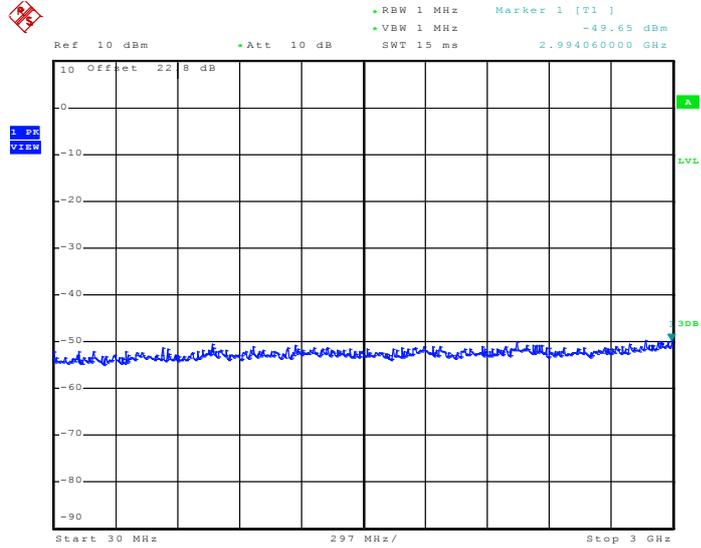
Mode 2:
Spurious Emission Plot on 802.11a Channel 44 between 13.6 GHz~40 GHz



Date: 18.AUG.2010 22:47:07

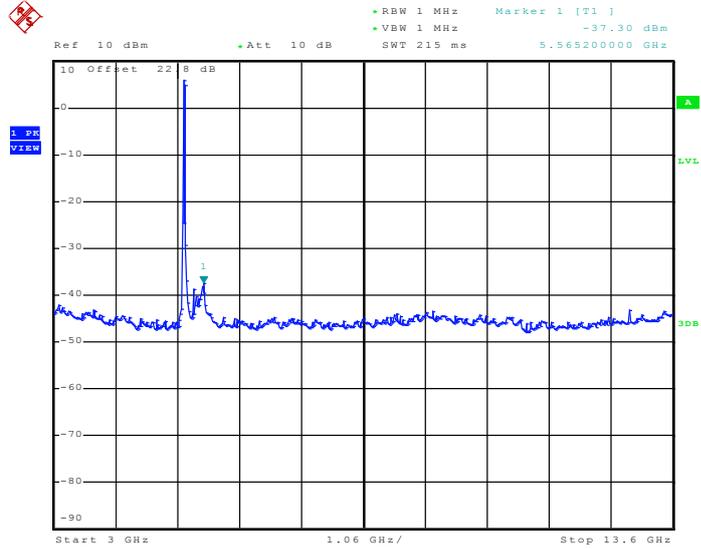


Mode 3:
Spurious Emission Plot on 802.11a Channel 48 between 30 MHz~3 GHz



Date: 18.AUG.2010 22:47:25

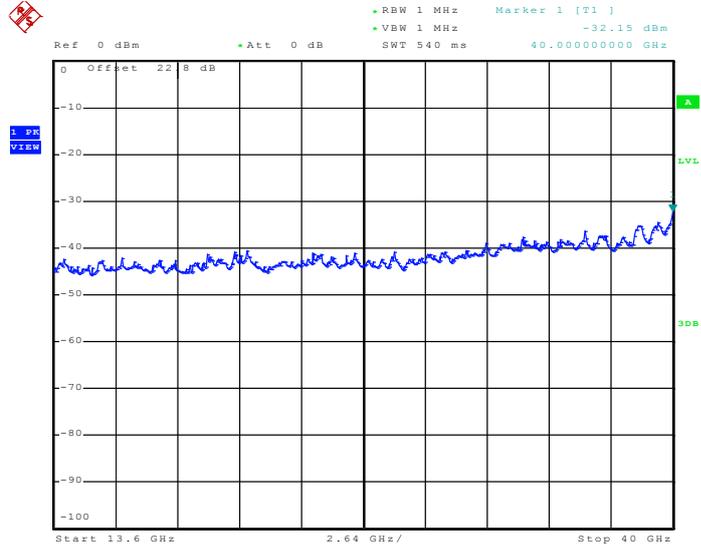
Mode 3:
Spurious Emission Plot on 802.11a Channel 48 between 3 GHz~13.6 GHz



Date: 18.AUG.2010 22:47:37

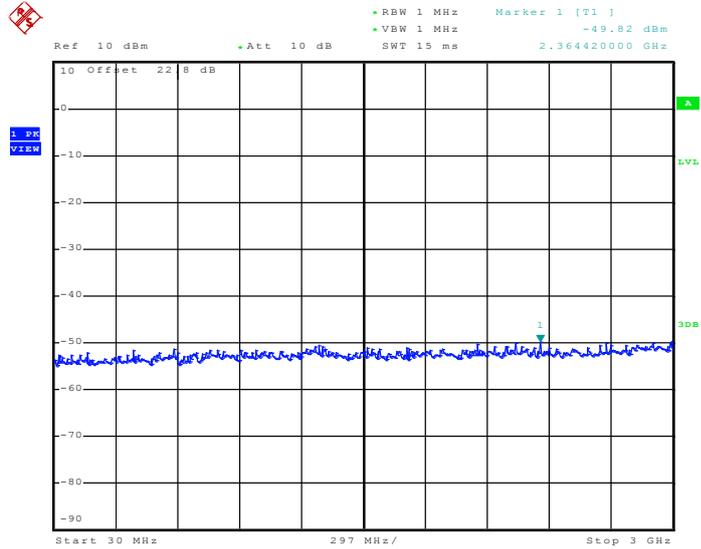


Mode 3:
Spurious Emission Plot on 802.11a Channel 48 between 13.6 GHz~40 GHz



Date: 18.AUG.2010 22:47:50

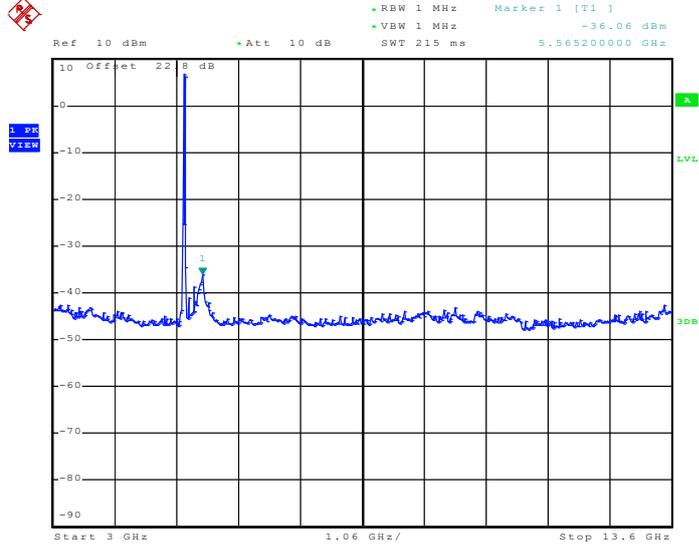
Mode 4:
Spurious Emission Plot on 802.11a Channel 52 between 30 MHz~3 GHz



Date: 18.AUG.2010 22:48:09

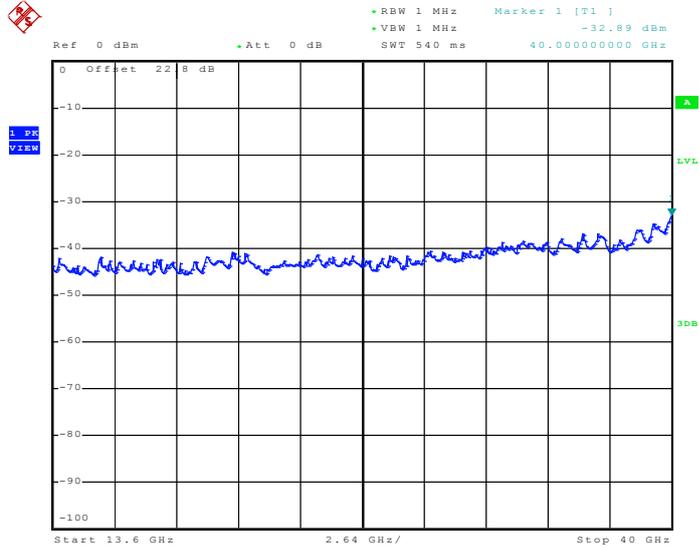


Mode 4:
Spurious Emission Plot on 802.11a Channel 52 between 3 GHz~13.6 GHz



Date: 18.AUG.2010 22:48:22

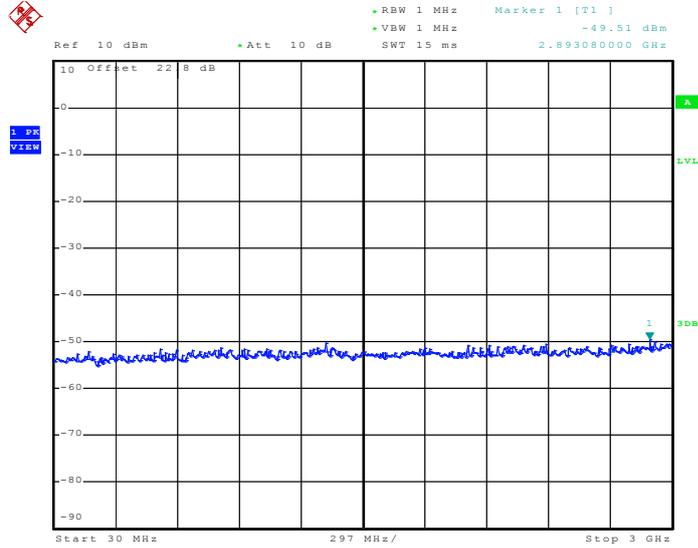
Mode 4:
Spurious Emission Plot on 802.11a Channel 52 between 13.6 GHz~40 GHz



Date: 18.AUG.2010 22:48:34

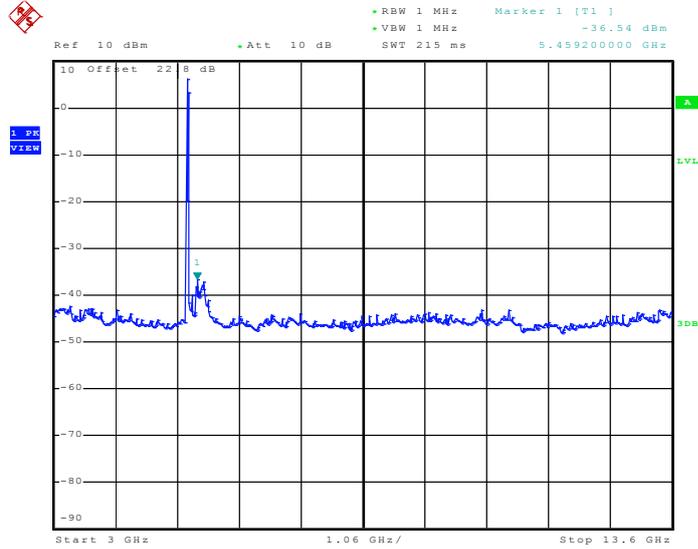


Mode 5:
Spurious Emission Plot on 802.11a Channel 60 between 30 MHz~3 GHz



Date: 18.AUG.2010 22:48:53

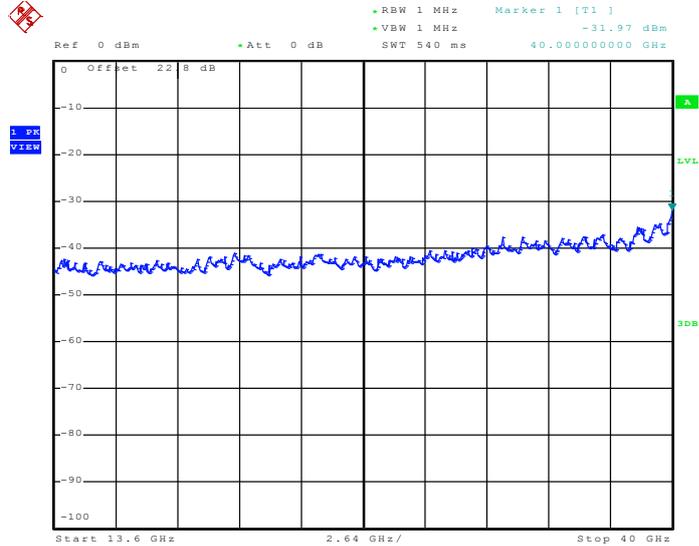
Mode 5:
Spurious Emission Plot on 802.11a Channel 60 between 3 GHz~13.6 GHz



Date: 18.AUG.2010 22:49:05

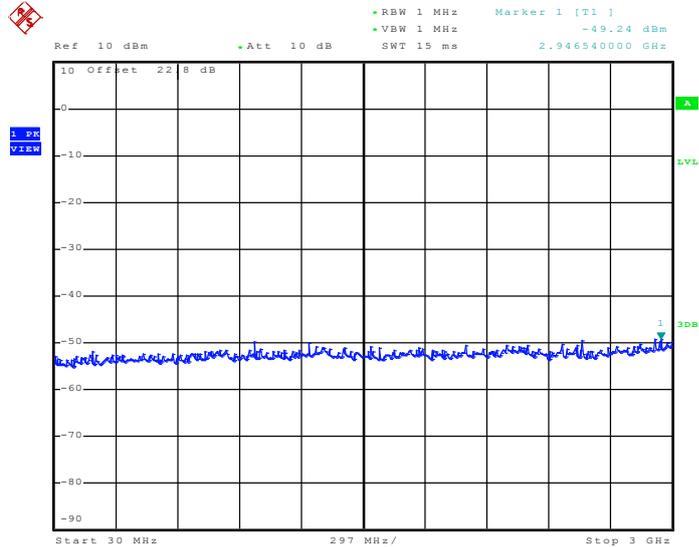


Mode 5:
Spurious Emission Plot on 802.11a Channel 60 between 13.6 GHz~40 GHz



Date: 18.AUG.2010 22:49:18

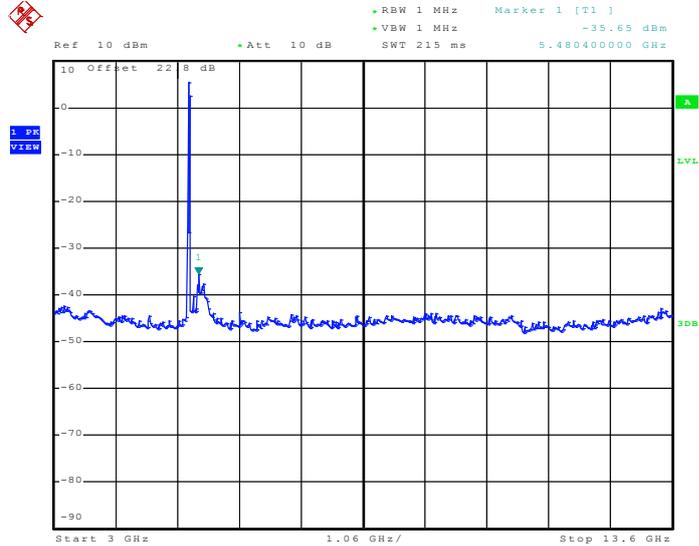
Mode 6:
Spurious Emission Plot on 802.11a Channel 64 between 30 MHz~3 GHz



Date: 18.AUG.2010 22:49:36

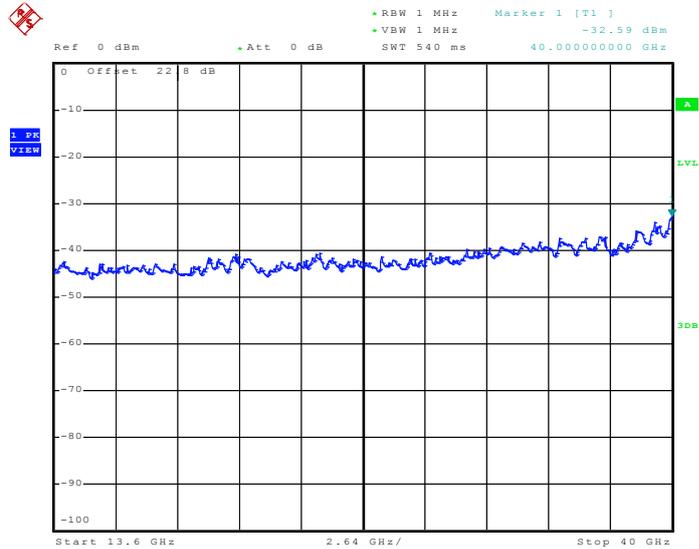


Mode 6:
Spurious Emission Plot on 802.11a Channel 64 between 3 GHz~13.6 GHz



Date: 18.AUG.2010 22:49:48

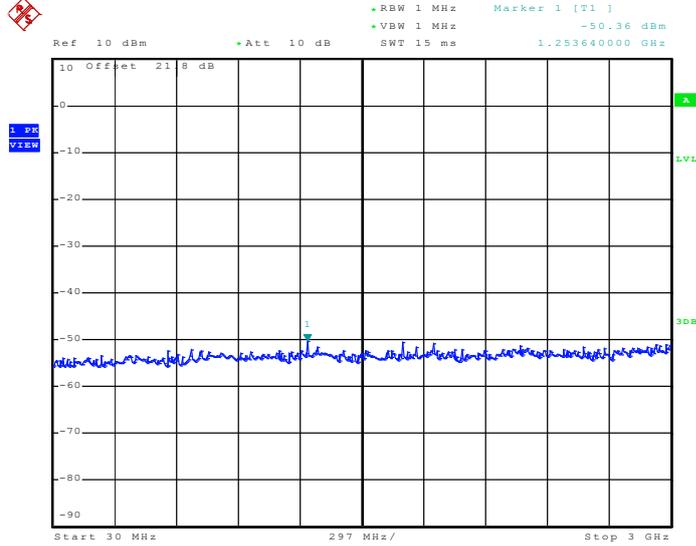
Mode 6:
Spurious Emission Plot on 802.11a Channel 64 between 13.6 GHz~40 GHz



Date: 18.AUG.2010 22:50:00

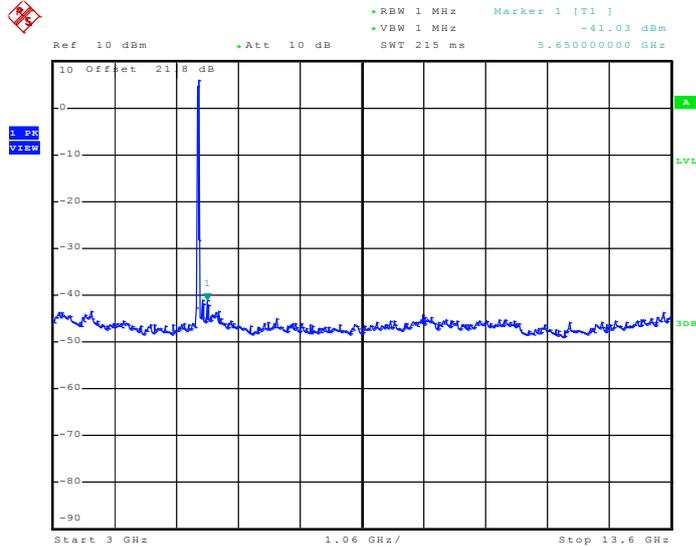


Mode 7:
Spurious Emission Plot on 802.11a Channel 100 between 30 MHz~3 GHz



Date: 18.AUG.2010 22:50:18

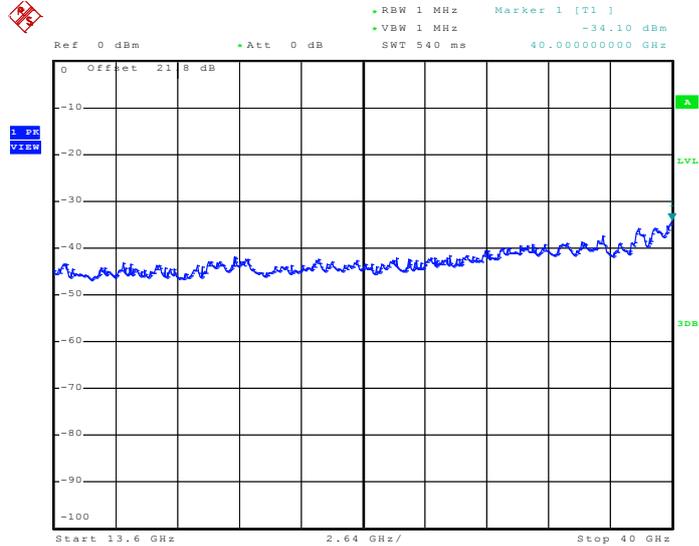
Mode 7:
Spurious Emission Plot on 802.11a Channel 100 between 3 GHz~13.6 GHz



Date: 18.AUG.2010 22:50:30

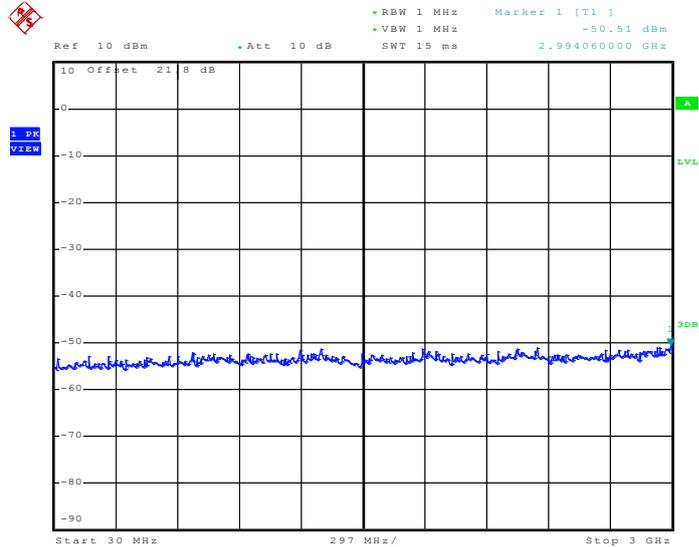


Mode 7:
Spurious Emission Plot on 802.11a Channel 100 between 13.6 GHz~40 GHz



Date: 18.AUG.2010 22:50:42

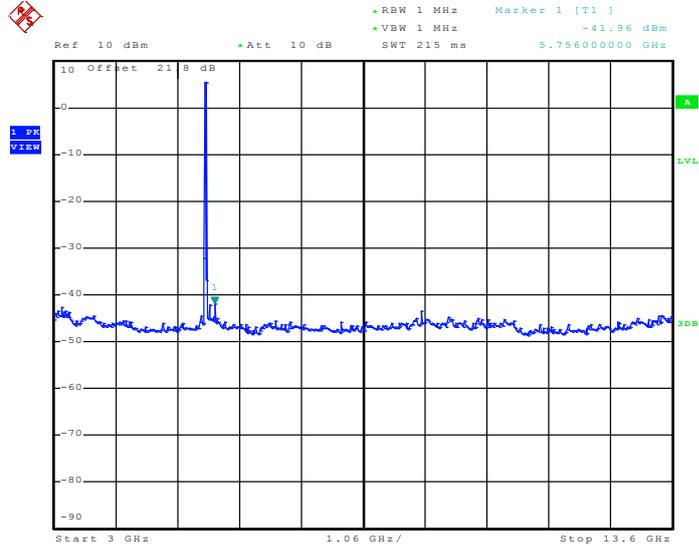
Mode 8:
Spurious Emission Plot on 802.11a Channel 120 between 30 MHz~3 GHz



Date: 18.AUG.2010 22:51:01

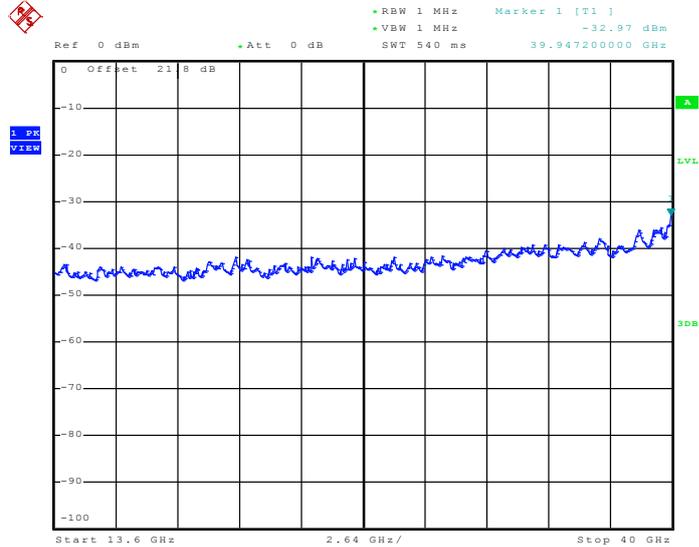


Mode 8:
Spurious Emission Plot on 802.11a Channel 120 between 3 GHz~13.6 GHz



Date: 18.AUG.2010 22:51:13

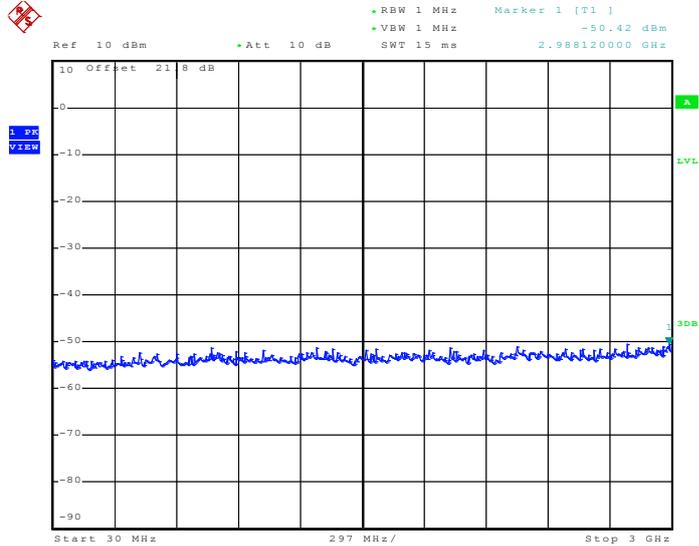
Mode 8:
Spurious Emission Plot on 802.11a Channel 120 between 13.6 GHz~40 GHz



Date: 18.AUG.2010 22:51:26

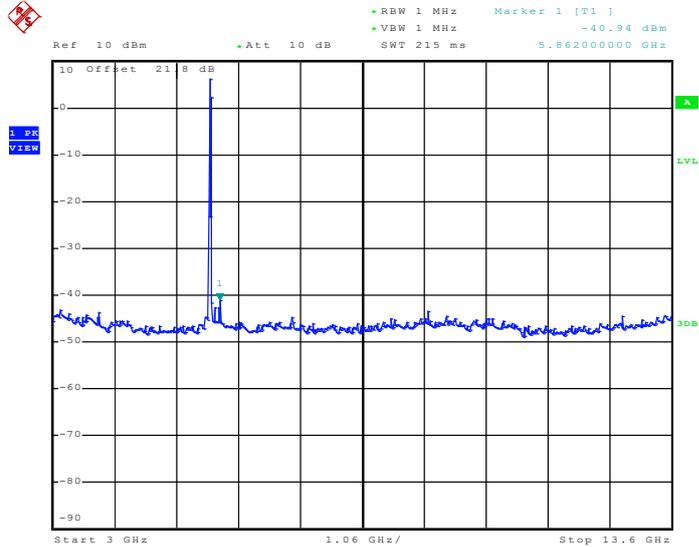


Mode 9:
Spurious Emission Plot on 802.11a Channel 140 between 30 MHz~3 GHz



Date: 18.AUG.2010 22:51:45

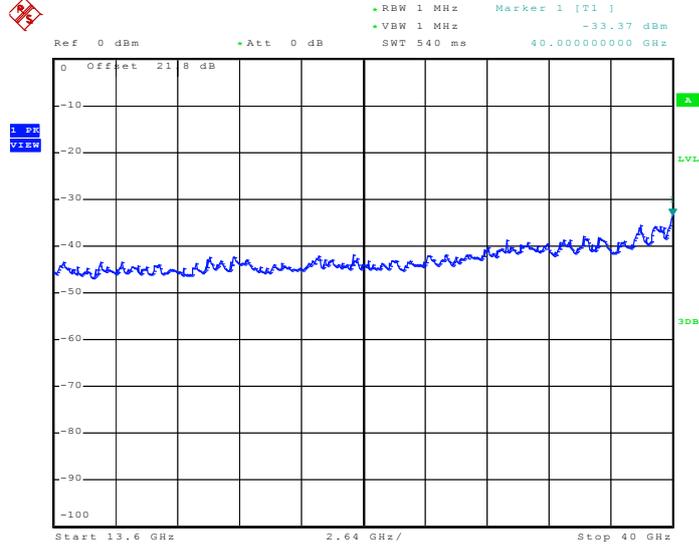
Mode 9:
Spurious Emission Plot on 802.11a Channel 140 between 3 GHz~13.6 GHz



Date: 18.AUG.2010 22:51:57



Mode 9:
Spurious Emission Plot on 802.11a Channel 140 between 13.6 GHz~40 GHz

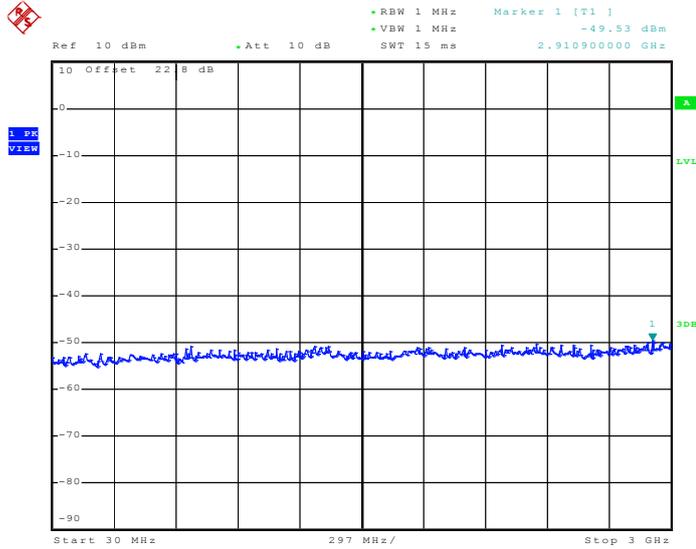


Date: 18.AUG.2010 22:52:09



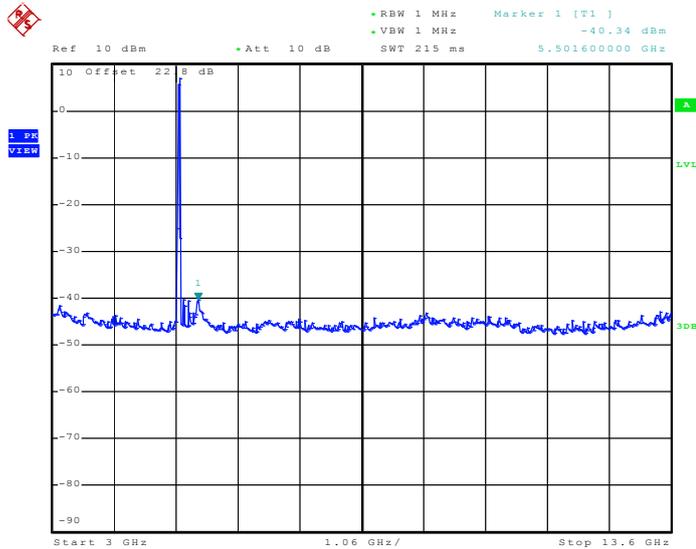
Test Mode :	Mode 10~18	Temperature :	22~24°C
Test Band :	802.11n (BW 20MHz)	Relative Humidity :	61~64%
Test Channel :	36/44/48/52/60/64/100/120/140	Test Engineer :	Lancelot Chen

Mode 10:
Spurious Emission Plot on 802.11n (BW 20MHz) Channel 36 between 30 MHz~3 GHz



Date: 18.AUG.2010 22:20:02

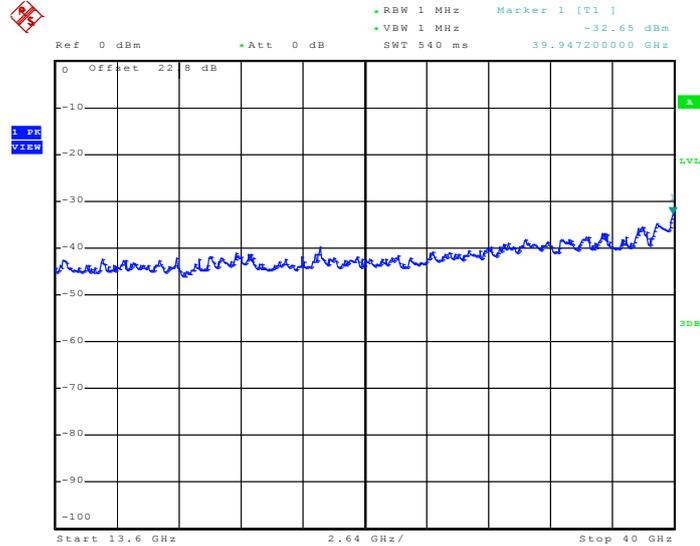
Mode 10:
Spurious Emission Plot on 802.11n (BW 20MHz) Channel 36 between 3 GHz~13.6 GHz



Date: 18.AUG.2010 22:20:14

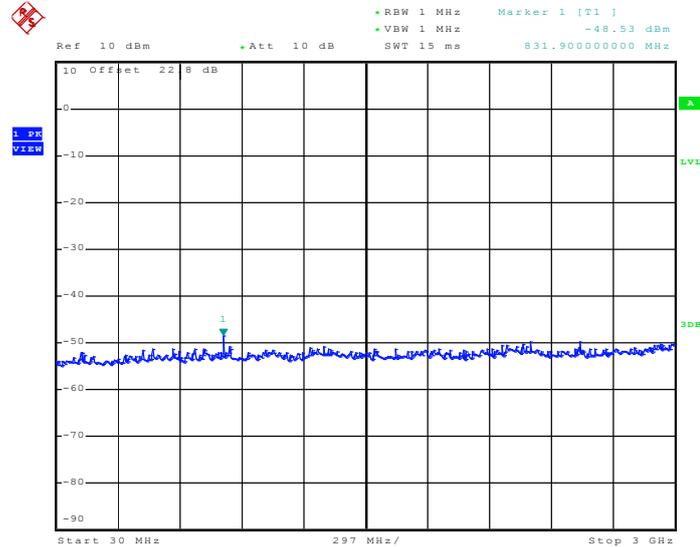


Mode 10:
Spurious Emission Plot on 802.11n (BW 20MHz) Channel 36 between 13.6 GHz~40 GHz



Date: 18.AUG.2010 22:20:27

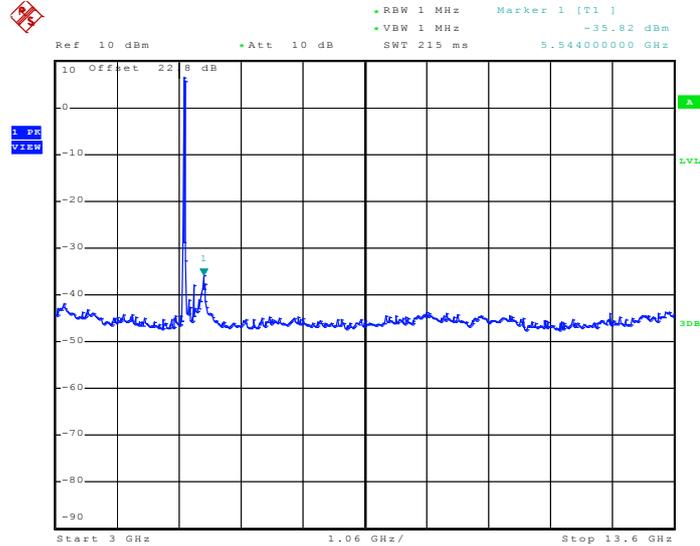
Mode 11:
Spurious Emission Plot on 802.11n (BW 20MHz) Channel 44 between 30 MHz~3 GHz



Date: 18.AUG.2010 22:20:53

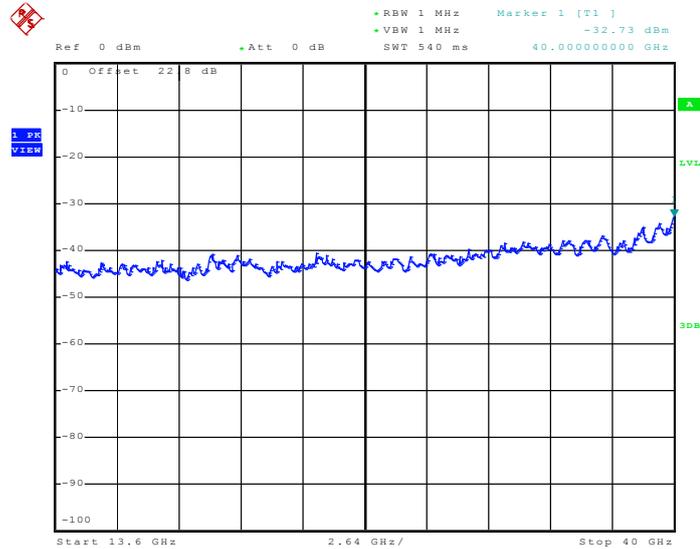


Mode 11:
Spurious Emission Plot on 802.11n (BW 20MHz) Channel 44 between 3 GHz~13.6 GHz



Date: 18.AUG.2010 22:21:05

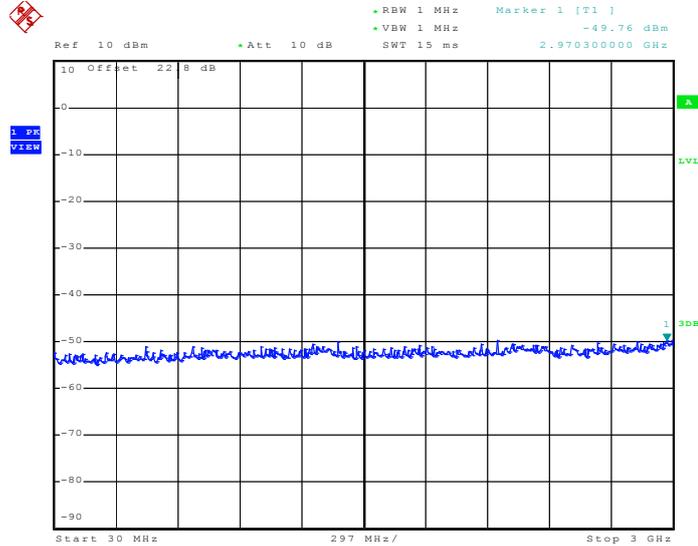
Mode 11:
Spurious Emission Plot on 802.11n (BW 20MHz) Channel 44 between 13.6 GHz~40 GHz



Date: 18.AUG.2010 22:21:17

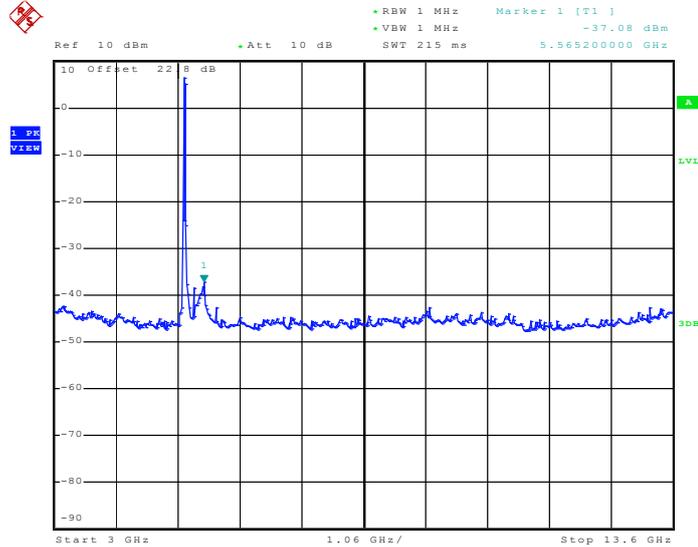


Mode 12:
Spurious Emission Plot on 802.11n (BW 20MHz) Channel 48 between 30 MHz~3 GHz



Date: 18.AUG.2010 22:21:48

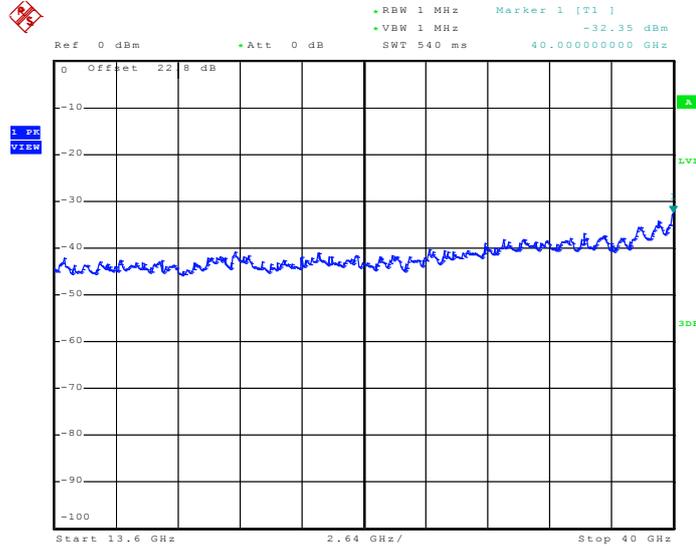
Mode 12:
Spurious Emission Plot on 802.11n (BW 20MHz) Channel 48 between 3 GHz~13.6 GHz



Date: 18.AUG.2010 22:22:00

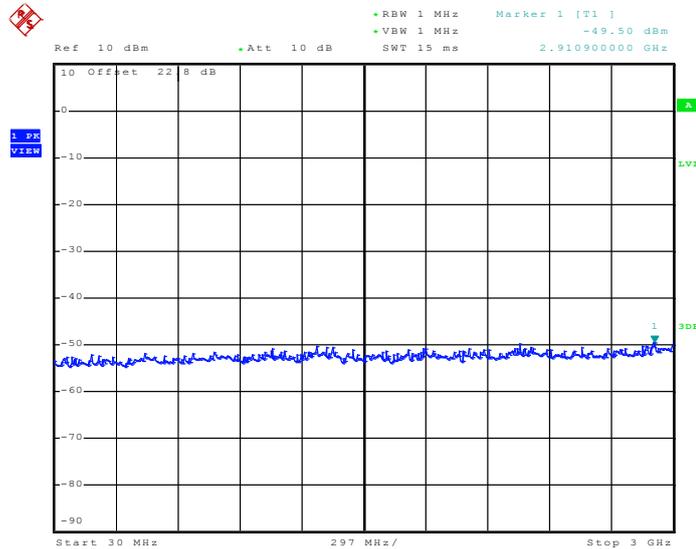


Mode 12:
Spurious Emission Plot on 802.11n (BW 20MHz) Channel 48 between 13.6 GHz~40 GHz



Date: 18.AUG.2010 22:22:12

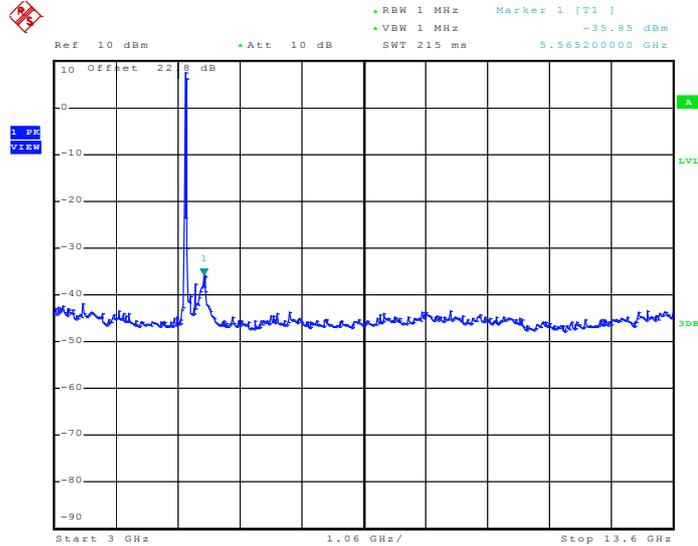
Mode 13:
Spurious Emission Plot on 802.11n (BW 20MHz) Channel 52 between 30 MHz~3 GHz



Date: 18.AUG.2010 22:22:32

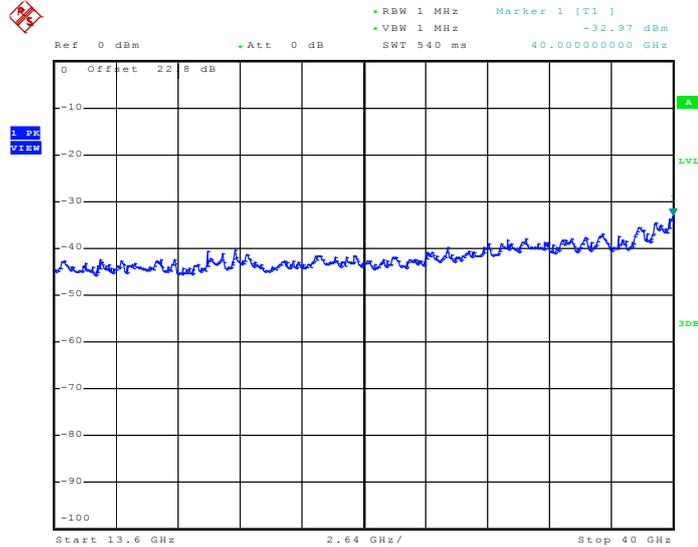


Mode 13:
Spurious Emission Plot on 802.11n (BW 20MHz) Channel 52 between 3 GHz~13.6 GHz



Date: 18.AUG.2010 22:22:44

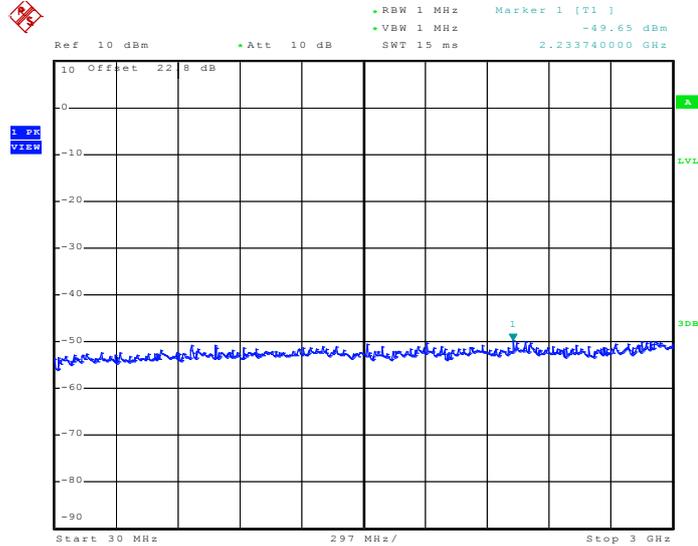
Mode 13:
Spurious Emission Plot on 802.11n (BW 20MHz) Channel 52 between 13.6 GHz~40 GHz



Date: 18.AUG.2010 22:22:56

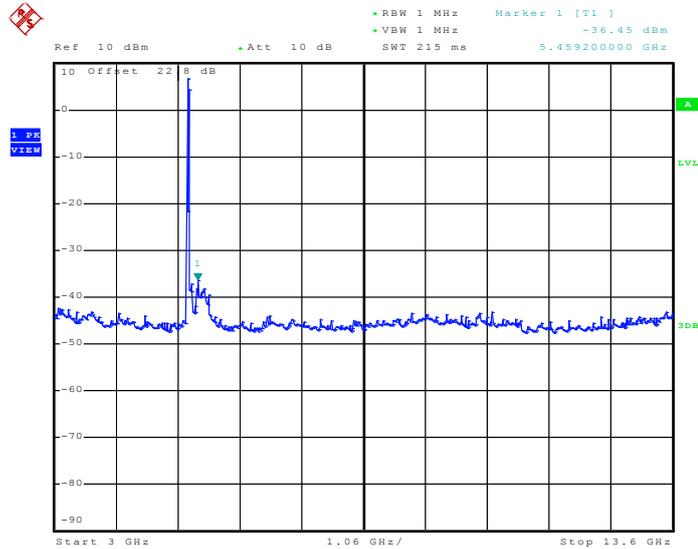


Mode 14:
Spurious Emission Plot on 802.11n (BW 20MHz) Channel 60 between 30 MHz~3 GHz



Date: 18.AUG.2010 22:23:17

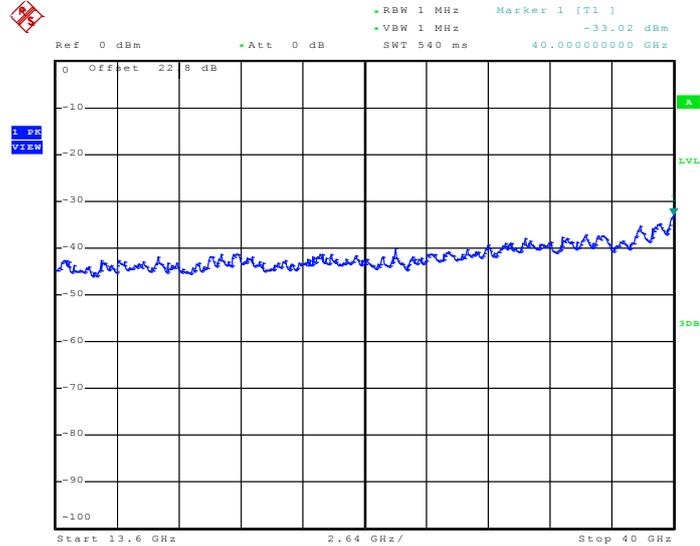
Mode 14:
Spurious Emission Plot on 802.11n (BW 20MHz) Channel 60 between 3 GHz~13.6 GHz



Date: 18.AUG.2010 22:23:28

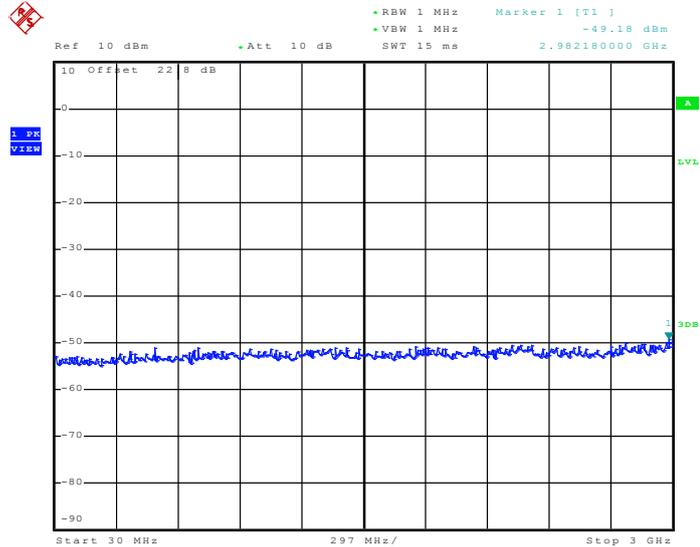


Mode 14:
Spurious Emission Plot on 802.11n (BW 20MHz) Channel 60 between 13.6 GHz~40 GHz



Date: 18.AUG.2010 22:23:39

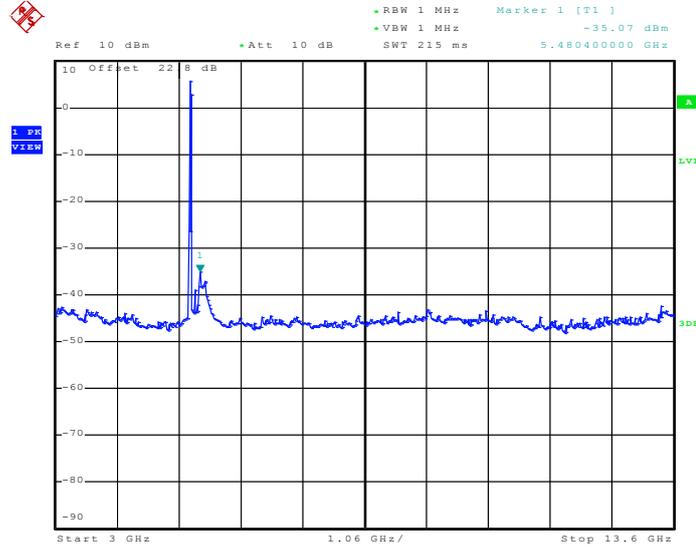
Mode 15:
Spurious Emission Plot on 802.11n (BW 20MHz) Channel 64 between 30 MHz~3 GHz



Date: 18.AUG.2010 22:23:57

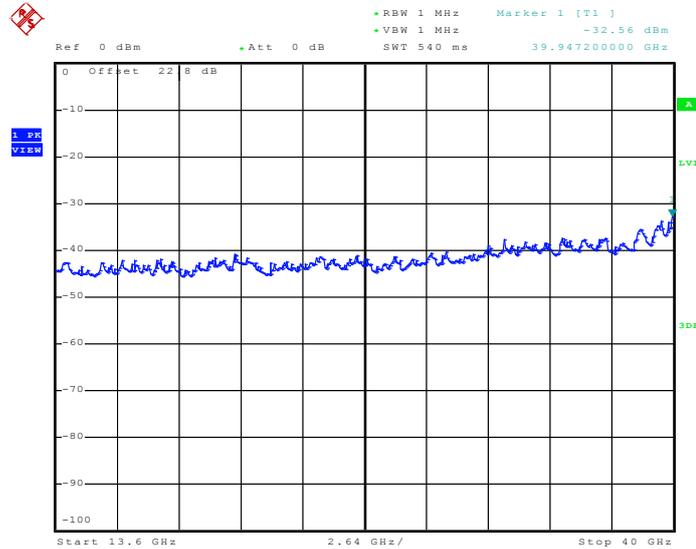


Mode 15:
Spurious Emission Plot on 802.11n (BW 20MHz) Channel 64 between 3 GHz~13.6 GHz



Date: 18.AUG.2010 22:24:08

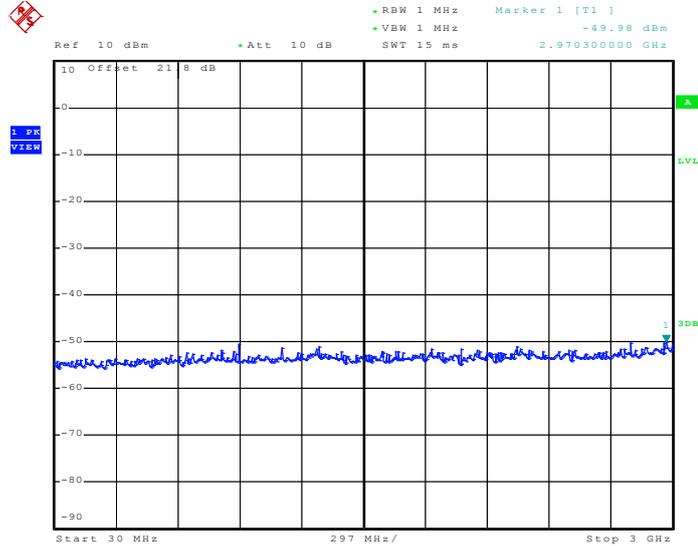
Mode 15:
Spurious Emission Plot on 802.11n (BW 20MHz) Channel 64 between 13.6 GHz~40 GHz



Date: 18.AUG.2010 22:24:20

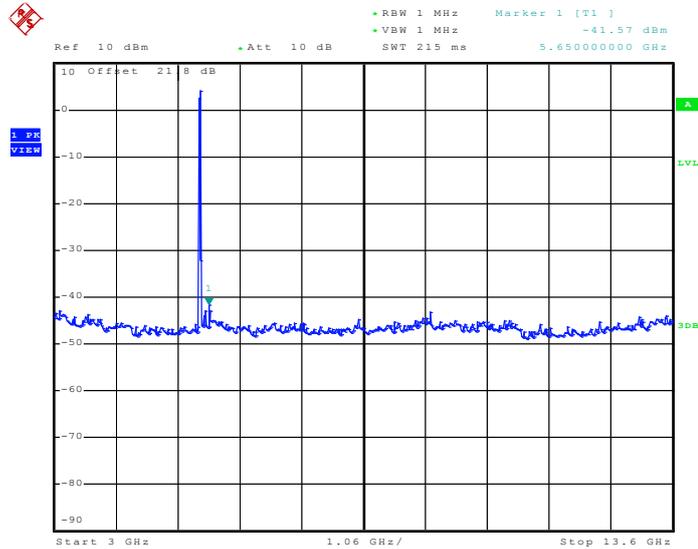


Mode 16:
Spurious Emission Plot on 802.11n (BW 20MHz) Channel 100 between 30 MHz~3 GHz



Date: 18.AUG.2010 22:24:42

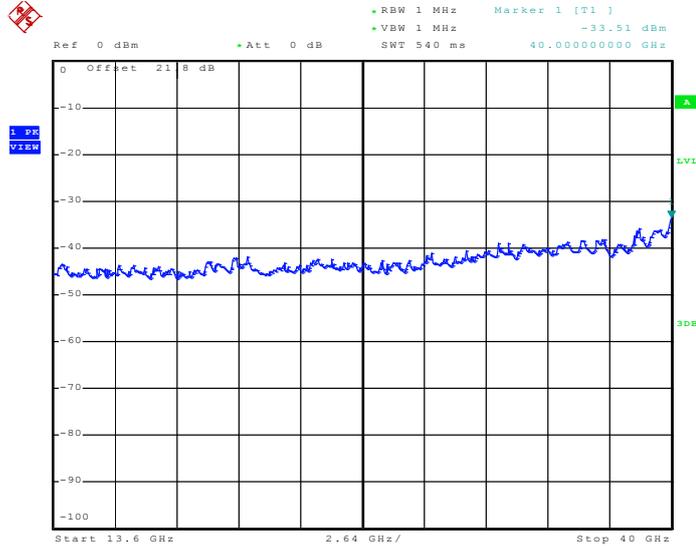
Mode 16:
Spurious Emission Plot on 802.11n (BW 20MHz) Channel 100 between 3 GHz~13.6 GHz



Date: 18.AUG.2010 22:24:53

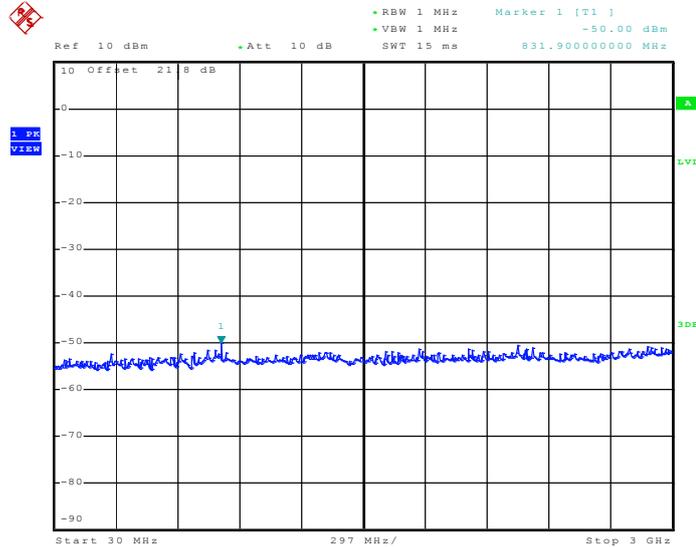


Mode 16:
Spurious Emission Plot on 802.11n (BW 20MHz) Channel 100 between 13.6 GHz~40 GHz



Date: 18.AUG.2010 22:25:05

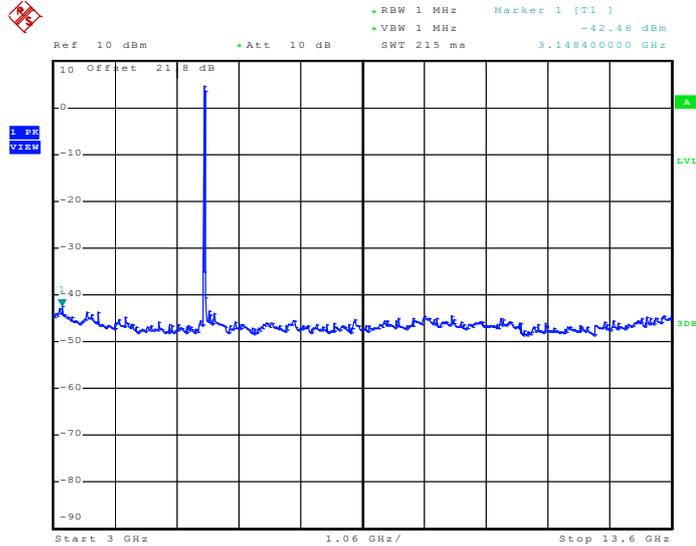
Mode 17:
Spurious Emission Plot on 802.11n (BW 20MHz) Channel 120 between 30 MHz~3 GHz



Date: 18.AUG.2010 22:25:30

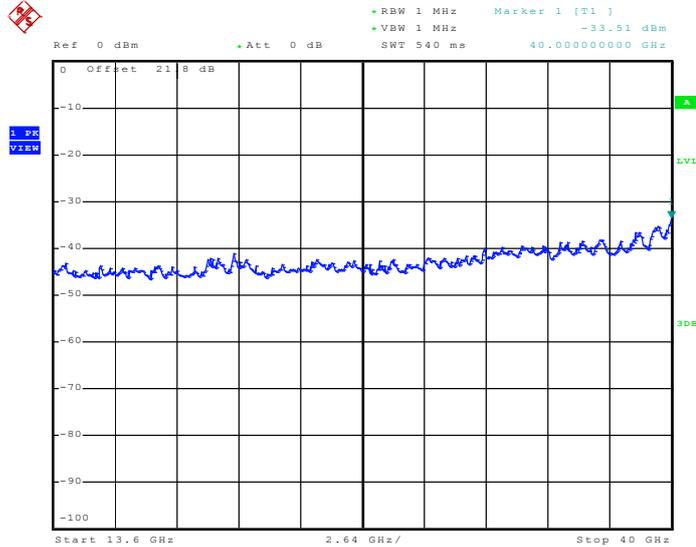


Mode 17:
Spurious Emission Plot on 802.11n (BW 20MHz) Channel 120 between 3 GHz~13.6 GHz



Date: 18.AUG.2010 22:25:41

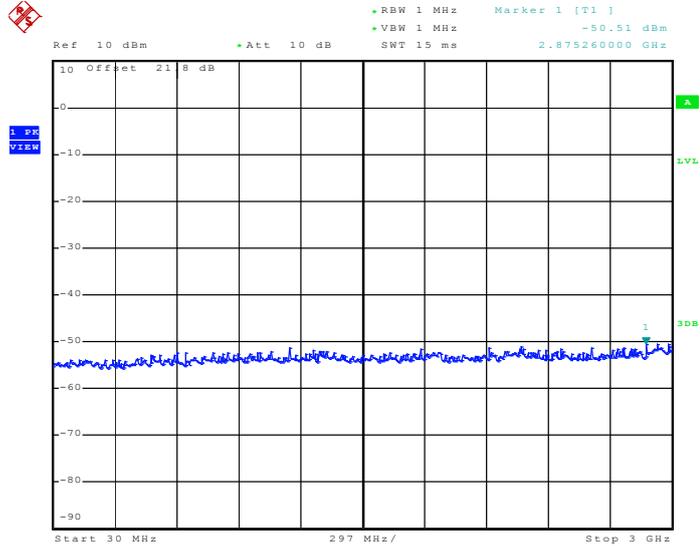
Mode 17:
Spurious Emission Plot on 802.11n (BW 20MHz) Channel 120 between 13.6 GHz~40 GHz



Date: 18.AUG.2010 22:25:53

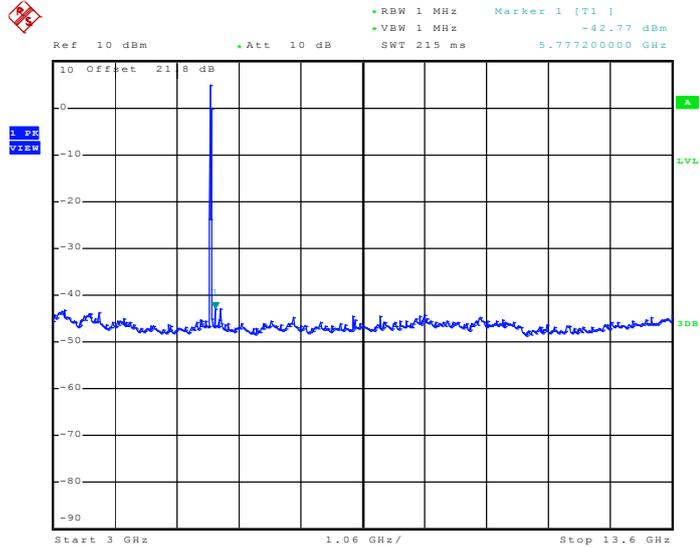


Mode 18:
Spurious Emission Plot on 802.11n (BW 20MHz) Channel 140 between 30 MHz~3 GHz



Date: 18.AUG.2010 22:26:44

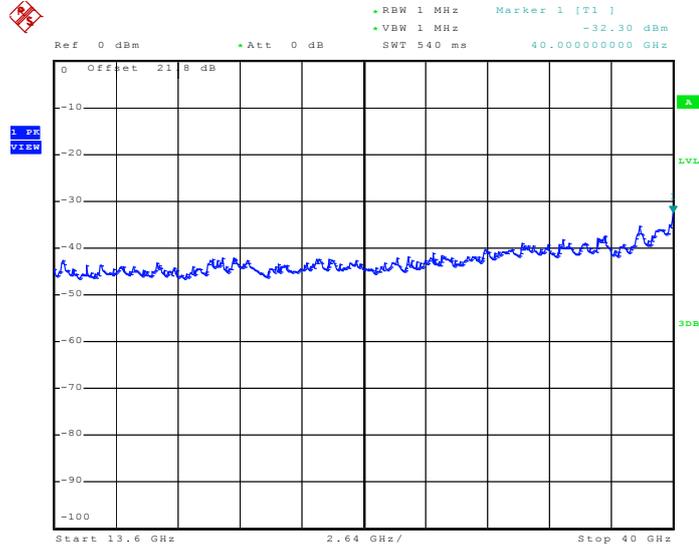
Mode 18:
Spurious Emission Plot on 802.11n (BW 20MHz) Channel 140 between 3 GHz~13.6 GHz



Date: 18.AUG.2010 22:26:56



Mode 18:
Spurious Emission Plot on 802.11n (BW 20MHz) Channel 140 between 13.6 GHz~40 GHz



Date: 18.AUG.2010 22:27:07

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 (dBuV)	
	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.

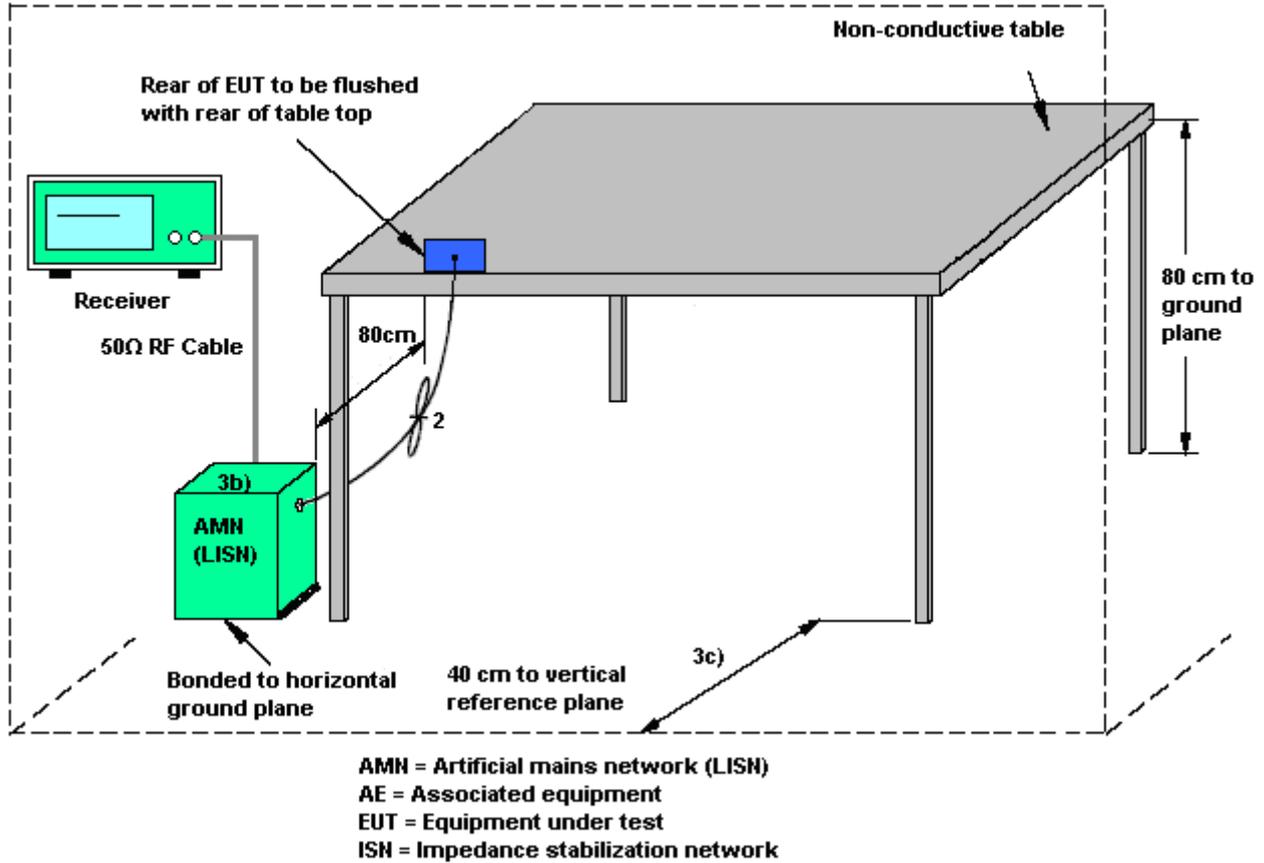
3.6.2 Measuring Instruments

See list of measuring instruments of this test report.

3.6.3 Test Procedures

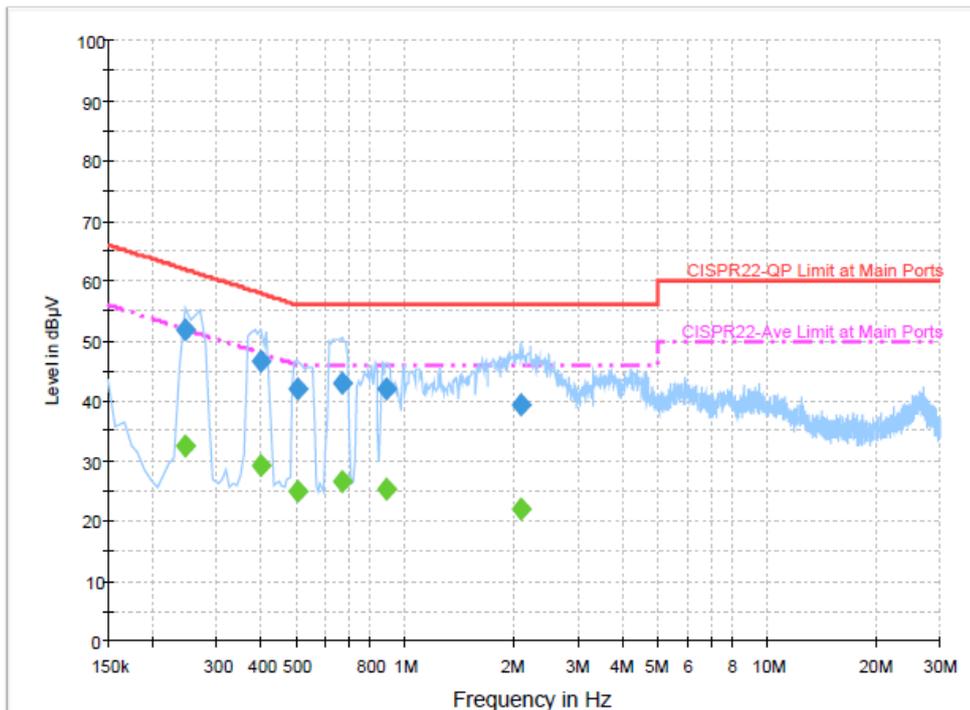
1. Please follow the guidelines in ANSI C63.4-2003.
2. The EUT was placed 0.4 meter from the conducting wall of the shielding room was kept at least 80 centimeters from any other grounded conducting surface.
3. Connect EUT to the power mains through a line impedance stabilization network (LISN).
4. All 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°C
Test Engineer :	Novic Jiang	Relative Humidity :	42~44%
Test Voltage :	120Vac / 60Hz	Phase :	Line
Function Type :	GSM850 Idle + Bluetooth Link + WLAN Link (5G) + GPS Rx + Earphone + Battery 2 + USB Cable 2 (Charging from Adapter 2) for Sample 1		
Remark :	All emissions not reported here are more than 10 dB below the prescribed limit.		



Final Result 1

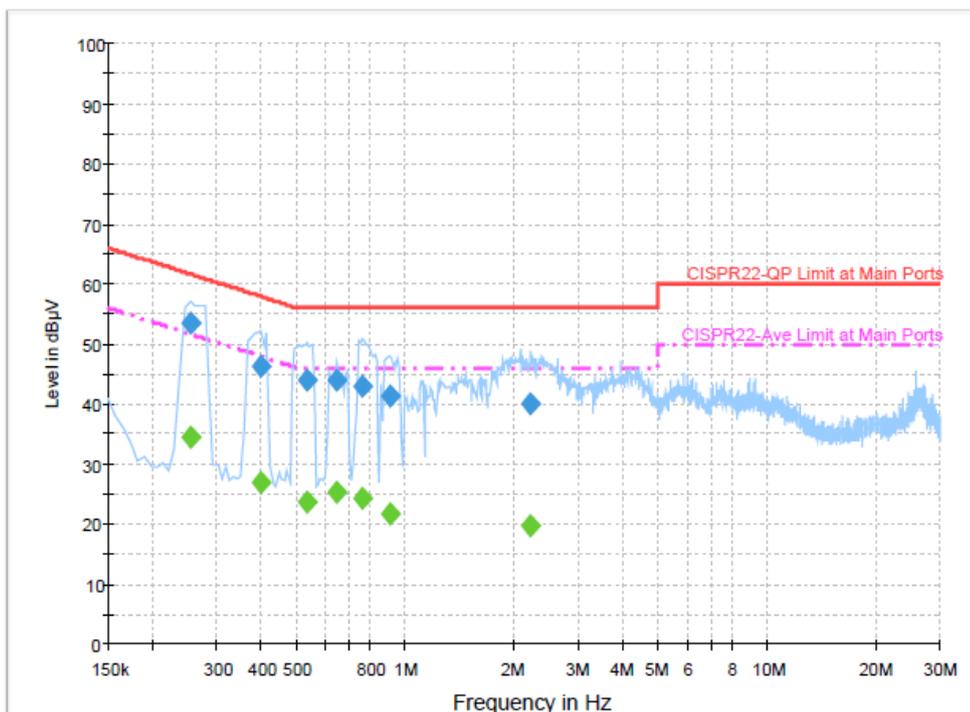
Frequency (MHz)	QuasiPeak (dBμV)	Filter	Line	Corr. (dB)	Margin (dB)	Limit (dBμV)
0.246000	51.9	Off	L1	19.4	10.0	61.9
0.398000	46.4	Off	L1	19.4	11.5	57.9
0.502000	41.9	Off	L1	19.3	14.1	56.0
0.670000	43.1	Off	L1	19.4	12.9	56.0
0.886000	41.9	Off	L1	19.4	14.1	56.0
2.078000	39.4	Off	L1	19.4	16.6	56.0

Final Result 2

Frequency (MHz)	Average (dBμV)	Filter	Line	Corr. (dB)	Margin (dB)	Limit (dBμV)
0.246000	32.4	Off	L1	19.4	19.5	51.9
0.398000	29.3	Off	L1	19.4	18.6	47.9
0.502000	25.0	Off	L1	19.3	21.0	46.0
0.670000	26.5	Off	L1	19.4	19.5	46.0
0.886000	25.3	Off	L1	19.4	20.7	46.0
2.078000	21.8	Off	L1	19.4	24.2	46.0



Test Mode :	Mode 1	Temperature :	20~22°C
Test Engineer :	Novic Jiang	Relative Humidity :	42~44%
Test Voltage :	120Vac / 60Hz	Phase :	Neutral
Function Type :	GSM850 Idle + Bluetooth Link + WLAN Link (5G) + GPS Rx + Earphone + Battery 2 + USB Cable 2 (Charging from Adapter 2) for Sample 1		
Remark :	All emissions not reported here are more than 10 dB below the prescribed limit.		



Final Result 1

Frequency (MHz)	QuasiPeak (dBµV)	Filter	Line	Corr. (dB)	Margin (dB)	Limit (dBµV)
0.254000	53.5	Off	N	19.4	8.1	61.6
0.398000	46.2	Off	N	19.4	11.7	57.9
0.534000	44.0	Off	N	19.3	12.0	56.0
0.646000	44.0	Off	N	19.3	12.0	56.0
0.758000	42.9	Off	N	19.4	13.1	56.0
0.910000	41.3	Off	N	19.4	14.7	56.0
2.206000	40.0	Off	N	19.5	16.0	56.0

Final Result 2

Frequency (MHz)	Average (dBµV)	Filter	Line	Corr. (dB)	Margin (dB)	Limit (dBµV)
0.254000	34.4	Off	N	19.4	17.2	51.6
0.398000	26.8	Off	N	19.4	21.1	47.9
0.534000	23.6	Off	N	19.3	22.4	46.0
0.646000	25.4	Off	N	19.3	20.6	46.0
0.758000	24.1	Off	N	19.4	21.9	46.0
0.910000	21.8	Off	N	19.4	24.2	46.0
2.206000	19.8	Off	N	19.5	26.2	46.0

3.7 Radiated Emission Measurement

3.7.1 Limit of Radiated Emission

Unwanted emissions below 1 GHz must comply with the general field strength limits set forth in § 15.209.

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

- (1) For transmitters operating in the 5.15–5.25 GHz band: all emissions outside of the 5.15–5.35 GHz band shall not exceed an EIRP of –27 dBm/MHz.
- (2) For transmitters operating in the 5.25–5.35 GHz band: all emissions outside of the 5.15–5.35 GHz band shall not exceed an EIRP of –27 dBm/MHz. Devices operating in the 5.25–5.35 GHz band that generate emissions in the 5.15–5.25 GHz band must meet all applicable technical requirements for operation in the 5.15–5.25 GHz band (including indoor use) or alternatively meet an out-of-band emission EIRP limit of –27 dBm/MHz in the 5.15–5.25 GHz band.
- (3) For transmitters operating in the 5.47–5.725 GHz band: all emissions outside of the 5.47–5.725 GHz band shall not exceed an EIRP of -27 dBm/MHz.
- (4) The provisions of Section 15.205 Restricted bands of operation of this part apply to intentional radiators operating under this section.

3.7.2 Measuring Instruments

See list of measuring instruments of this test report.

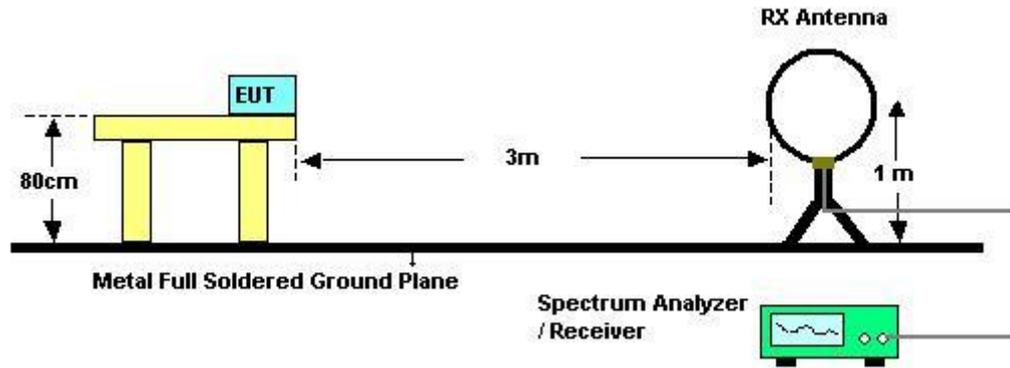


3.7.3 Test Procedures

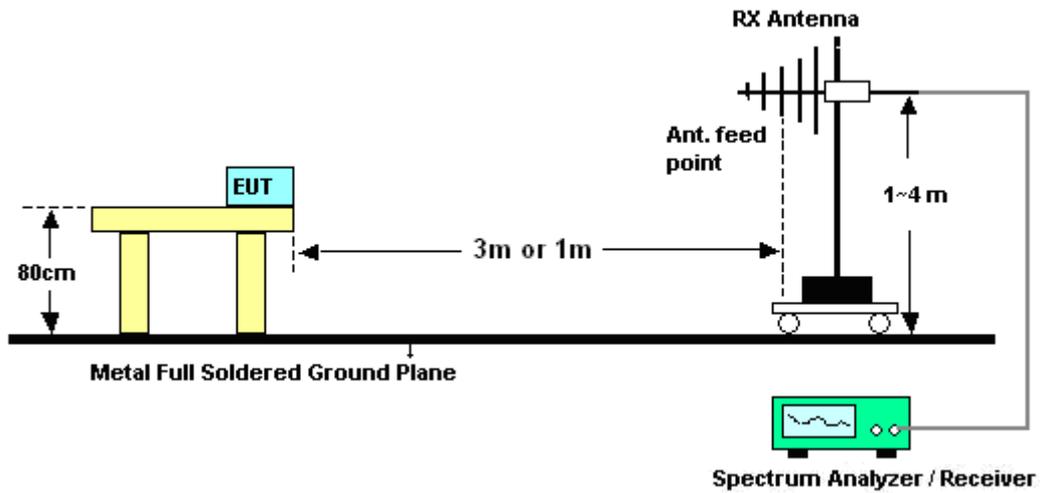
1. The testing follows the guidelines in FCC Public Notice DA 02-2138, (Measurement Guidelines of UNII)
2. The EUT was placed on a rotatable table top 0.8 meter above ground.
3. The EUT was set 3 meters from the interference receiving antenna which was mounted on the top of a variable height antenna tower.
4. The table was rotated 360 degrees to determine the position of the highest radiation.
5. The antenna is a broadband antenna and its height is adjusted between one meter and four meters above ground to find the maximum value of the field strength for both horizontal polarization and vertical polarization of the antenna.
6. For each suspected emission, the EUT was arranged to its worst case and then adjust the antenna tower (from 1 m to 4 m) and turntable (from 0 degree to 360 degrees) to find the maximum reading.
7. Set the test-receiver system to Peak or CISPR quasi-peak Detect Function and specified bandwidth with Maximum Hold Mode.
8. For testing below 1GHz, If the emission level of the EUT in peak mode was 3 dB lower than the limit specified, then testing will be stopped and peak values of EUT will be reported, otherwise, the emissions will be repeated one by one using the quasi-peak method and reported.
9. For testing above 1GHz, the emission level of the EUT in peak mode was 20dB lower than average limit (that means the emission level in average mode also complies with the limit in average mode), then testing will be stopped and peak values of EUT will be reported, otherwise, the emissions will be measured in average mode again and reported.

3.7.4 Test Setup

For radiated emissions below 30MHz



For radiated emissions above 30MHz





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

Temperature	26~27°C	Humidity	49~53%
Test Engineer	Cona Huang		

Freq. (MHz)	Level (dBuV)	Over Limit (dB)	Limit Line (dBuV)	Remark
-	-	-	-	See Note

Note:

The amplitude of spurious emissions that are attenuated by more than 20dB below the permissible value has no need to be reported.

Distance extrapolation factor = $40 \log(\text{specific distance} / \text{test distance})$ (dB);

Limit line = specific limits (dBuV) + distance extrapolation factor.



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

Test Mode :	Mode 1	Temperature :	26~27°C
Test Channel :	36	Relative Humidity :	49~53%
Test Engineer :	Cona Huang	Polarization :	Horizontal
Remark :	5180 MHz is Fundamental Signals which can be ignored.		

Frequency (MHz)	Level (dBuV/m)	Over Limit (dB)	Limit Line (dBuV/m)	Read Level (dBuV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
30.54	32.28	-7.72	40.00	44.25	18.95	0.54	31.46	100	36	Peak
52.41	30.56	-9.44	40.00	53.82	7.57	0.71	31.54	-	-	Peak
96.69	32.82	-10.68	43.50	53.47	9.90	0.98	31.53	-	-	Peak
593.30	22.62	-23.38	46.00	30.94	19.94	2.67	30.93	-	-	Peak
757.80	23.67	-22.33	46.00	29.67	21.63	3.07	30.70	-	-	Peak
956.60	25.87	-20.13	46.00	28.94	24.03	3.47	30.57	-	-	Peak
5150.00	39.75	-14.25	54.00	31.07	33.92	9.41	34.65	112	164	Average
5150.00	57.50	-16.50	74.00	48.82	33.92	9.41	34.65	112	164	Peak
5180.00	76.60	-	-	67.97	33.95	9.45	34.77	112	164	Average
5180.00	101.95	-	-	93.32	33.95	9.45	34.77	112	164	Peak
5350.00	50.72	-23.28	74.00	42.30	34.08	9.74	35.40	112	164	Peak
5350.00	38.94	-15.06	54.00	30.52	34.08	9.74	35.40	112	164	Average
8272.00	53.56	-20.44	74.00	41.50	35.24	10.92	34.10	100	180	Peak
8272.00	40.19	-13.81	54.00	28.13	35.24	10.92	34.10	100	180	Average



Test Mode :	Mode 1	Temperature :	26~27°C
Test Channel :	36	Relative Humidity :	49~53%
Test Engineer :	Cona Huang	Polarization :	Vertical
Remark :	5180 MHz is Fundamental Signals which can be ignored.		

Frequency (MHz)	Level (dBuV/m)	Over Limit (dB)	Limit Line (dBuV/m)	Read Level (dBuV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
30.00	36.91	-3.09	40.00	48.33	19.51	0.53	31.46	100	39	Peak
53.22	34.47	-5.53	40.00	57.94	7.36	0.72	31.55	-	-	Peak
83.73	23.82	-16.18	40.00	46.50	7.96	0.90	31.54	-	-	Peak
498.10	20.16	-25.84	46.00	30.65	18.14	2.44	31.07	-	-	Peak
646.50	22.57	-23.43	46.00	30.18	20.43	2.83	30.87	-	-	Peak
881.70	25.38	-20.62	46.00	29.78	23.00	3.31	30.71	-	-	Peak
5150.00	40.56	-13.44	54.00	31.88	33.92	9.41	34.65	100	50	Average
5150.00	64.46	-9.54	74.00	55.78	33.92	9.41	34.65	100	50	Peak
5180.00	80.40	-	-	71.77	33.95	9.45	34.77	100	50	Average
5180.00	106.08	-	-	97.45	33.95	9.45	34.77	100	50	Peak
5350.00	51.53	-22.47	74.00	43.11	34.08	9.74	35.40	100	50	Peak
5350.00	39.34	-14.66	54.00	30.92	34.08	9.74	35.40	100	50	Average
8188.00	53.24	-20.76	74.00	41.20	35.26	10.89	34.11	100	275	Peak
8188.00	40.37	-13.63	54.00	28.33	35.26	10.89	34.11	100	275	Average



Test Mode :	Mode 2	Temperature :	26~27°C
Test Channel :	44	Relative Humidity :	49~53%
Test Engineer :	Cona Huang	Polarization :	Horizontal
Remark :	5220 MHz is Fundamental Signals which can be ignored.		

Frequency (MHz)	Level (dBuV/m)	Over Limit (dB)	Limit Line (dBuV/m)	Read Level (dBuV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
30.00	32.36	-7.64	40.00	43.78	19.51	0.53	31.46	100	21	Peak
51.06	31.19	-8.81	40.00	54.25	7.77	0.71	31.54	-	-	Peak
99.93	32.45	-11.05	43.50	52.66	10.34	0.99	31.54	-	-	Peak
548.50	21.49	-24.51	46.00	30.82	19.10	2.55	30.98	-	-	Peak
690.60	24.08	-21.92	46.00	31.22	20.77	2.92	30.83	-	-	Peak
831.30	24.68	-21.32	46.00	29.65	22.52	3.22	30.71	-	-	Peak
5150.00	39.13	-14.87	54.00	30.45	33.92	9.41	34.65	104	233	Average
5150.00	51.03	-22.97	74.00	42.35	33.92	9.41	34.65	104	233	Peak
5220.00	76.03	-	-	67.43	33.97	9.53	34.90	104	233	Average
5220.00	100.32	-	-	91.72	33.97	9.53	34.90	104	233	Peak
5350.00	50.84	-23.16	74.00	42.42	34.08	9.74	35.40	104	233	Peak
5350.00	39.24	-14.76	54.00	30.82	34.08	9.74	35.40	104	233	Average
8442.00	53.80	-20.20	74.00	41.70	35.21	10.98	34.09	100	267	Peak
8442.00	40.49	-13.51	54.00	28.39	35.21	10.98	34.09	100	267	Average



Test Mode :	Mode 2	Temperature :	26~27°C
Test Channel :	44	Relative Humidity :	49~53%
Test Engineer :	Cona Huang	Polarization :	Vertical
Remark :	5220 MHz is Fundamental Signals which can be ignored.		

Frequency (MHz)	Level (dBuV/m)	Over Limit (dB)	Limit Line (dBuV/m)	Read Level (dBuV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
31.89	36.50	-3.50	40.00	49.01	18.40	0.55	31.46	100	35	Peak
51.33	33.51	-6.49	40.00	56.57	7.77	0.71	31.54	-	-	Peak
83.73	31.02	-8.98	40.00	53.70	7.96	0.90	31.54	-	-	Peak
447.00	18.55	-27.45	46.00	30.28	17.09	2.29	31.11	-	-	Peak
632.50	22.28	-23.72	46.00	30.06	20.32	2.79	30.89	-	-	Peak
883.80	25.96	-20.04	46.00	30.33	23.02	3.32	30.71	-	-	Peak
5150.00	39.09	-14.91	54.00	30.41	33.92	9.41	34.65	100	54	Average
5150.00	51.17	-22.83	74.00	42.49	33.92	9.41	34.65	100	54	Peak
5220.00	79.81	-	-	71.21	33.97	9.53	34.90	100	54	Average
5220.00	104.74	-	-	96.14	33.97	9.53	34.90	100	54	Peak
5350.00	52.17	-21.83	74.00	43.75	34.08	9.74	35.40	100	54	Peak
5350.00	39.70	-14.30	54.00	31.28	34.08	9.74	35.40	100	54	Average
8360.00	53.76	-20.24	74.00	41.67	35.23	10.95	34.09	100	164	Peak
8360.00	40.28	-13.72	54.00	28.19	35.23	10.95	34.09	100	164	Average



Test Mode :	Mode 3	Temperature :	26~27°C
Test Channel :	48	Relative Humidity :	49~53%
Test Engineer :	Cona Huang	Polarization :	Horizontal
Remark :	5240 MHz is Fundamental Signals which can be ignored.		

Frequency (MHz)	Level (dBuV/m)	Over Limit (dB)	Limit Line (dBuV/m)	Read Level (dBuV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
44.58	28.74	-11.26	40.00	48.67	10.92	0.65	31.50	-	-	Peak
77.25	31.73	-8.27	40.00	55.09	7.30	0.87	31.53	-	-	Peak
86.97	34.00	-6.00	40.00	56.12	8.49	0.92	31.53	100	214	Peak
612.20	22.29	-23.71	46.00	30.31	20.16	2.73	30.91	-	-	Peak
760.60	25.65	-20.35	46.00	31.60	21.67	3.08	30.70	-	-	Peak
869.80	25.67	-20.33	46.00	30.20	22.89	3.30	30.72	-	-	Peak
5150.00	49.84	-24.16	74.00	41.16	33.92	9.41	34.65	103	243	Peak
5150.00	39.05	-14.95	54.00	30.37	33.92	9.41	34.65	103	243	Average
5240.00	100.76	-	-	92.16	33.99	9.57	34.96	103	243	Peak
5240.00	76.36	-	-	67.76	33.99	9.57	34.96	103	243	Average
5350.00	50.05	-23.95	74.00	41.63	34.08	9.74	35.40	103	243	Peak
5350.00	39.15	-14.85	54.00	30.73	34.08	9.74	35.40	103	243	Average
8364.00	53.78	-20.22	74.00	41.69	35.23	10.95	34.09	100	166	Peak
8364.00	40.59	-13.41	54.00	28.50	35.23	10.95	34.09	100	166	Average



Test Mode :	Mode 3	Temperature :	26~27°C
Test Channel :	48	Relative Humidity :	49~53%
Test Engineer :	Cona Huang	Polarization :	Vertical
Remark :	5240 MHz is Fundamental Signals which can be ignored.		

Frequency (MHz)	Level (dBuV/m)	Over Limit (dB)	Limit Line (dBuV/m)	Read Level (dBuV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
30.00	36.98	-3.02	40.00	48.40	19.51	0.53	31.46	100	37	Peak
46.74	36.08	-3.92	40.00	56.98	9.94	0.67	31.51	-	-	Peak
80.49	31.67	-8.33	40.00	54.75	7.57	0.88	31.53	-	-	Peak
421.80	18.99	-27.01	46.00	31.35	16.57	2.22	31.15	-	-	Peak
604.50	25.82	-20.18	46.00	33.94	20.10	2.70	30.92	-	-	Peak
791.40	25.02	-20.98	46.00	30.47	22.10	3.13	30.68	-	-	Peak
5150.00	51.15	-22.85	74.00	42.47	33.92	9.41	34.65	100	61	Peak
5150.00	39.17	-14.83	54.00	30.49	33.92	9.41	34.65	100	61	Average
5240.00	104.51	-	-	95.91	33.99	9.57	34.96	100	61	Peak
5240.00	78.58	-	-	69.98	33.99	9.57	34.96	100	61	Average
5350.00	51.40	-22.60	74.00	42.98	34.08	9.74	35.40	100	61	Peak
5350.00	39.47	-14.53	54.00	31.05	34.08	9.74	35.40	100	61	Average
8238.00	53.33	-20.67	74.00	41.28	35.25	10.91	34.11	100	79	Peak
8238.00	40.37	-13.63	54.00	28.32	35.25	10.91	34.11	100	79	Average



Test Mode :	Mode 4	Temperature :	26~27°C
Test Channel :	52	Relative Humidity :	49~53%
Test Engineer :	Cona Huang	Polarization :	Horizontal
Remark :	5260 MHz is Fundamental Signals which can be ignored.		

Frequency (MHz)	Level (dBuV/m)	Over Limit (dB)	Limit Line (dBuV/m)	Read Level (dBuV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
30.00	30.01	-9.99	40.00	41.43	19.51	0.53	31.46	-	-	Peak
87.78	34.25	-5.75	40.00	56.23	8.62	0.93	31.53	100	169	Peak
132.33	28.49	-15.01	43.50	47.14	11.76	1.16	31.57	-	-	Peak
352.50	21.49	-24.51	46.00	35.93	14.85	1.99	31.28	-	-	Peak
562.50	21.50	-24.50	46.00	30.53	19.35	2.59	30.97	-	-	Peak
769.00	25.05	-20.95	46.00	30.86	21.79	3.09	30.69	-	-	Peak
5150.00	49.92	-24.08	74.00	41.24	33.92	9.41	34.65	104	242	Peak
5150.00	39.07	-14.93	54.00	30.39	33.92	9.41	34.65	104	242	Average
5260.00	100.03	-	-	91.49	34.01	9.62	35.09	104	242	Peak
5260.00	75.62	-	-	67.08	34.01	9.62	35.09	104	242	Average
5350.00	50.37	-23.63	74.00	41.95	34.08	9.74	35.40	104	242	Peak
5350.00	39.06	-14.94	54.00	30.64	34.08	9.74	35.40	104	242	Average
8312.00	53.83	-20.17	74.00	41.75	35.24	10.94	34.10	100	334	Peak
8312.00	40.25	-13.75	54.00	28.17	35.24	10.94	34.10	100	334	Average



Test Mode :	Mode 4	Temperature :	26~27°C
Test Channel :	52	Relative Humidity :	49~53%
Test Engineer :	Cona Huang	Polarization :	Vertical
Remark :	5260 MHz is Fundamental Signals which can be ignored.		

Frequency (MHz)	Level (dBuV/m)	Over Limit (dB)	Limit Line (dBuV/m)	Read Level (dBuV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
30.00	36.48	-3.52	40.00	47.90	19.51	0.53	31.46	101	36	Peak
45.93	35.97	-4.03	40.00	56.39	10.43	0.66	31.51	-	-	Peak
84.54	31.92	-8.08	40.00	54.47	8.09	0.90	31.54	-	-	Peak
369.30	17.62	-28.38	46.00	31.49	15.31	2.08	31.26	-	-	Peak
525.40	20.68	-25.32	46.00	30.54	18.66	2.50	31.02	-	-	Peak
603.80	24.82	-21.18	46.00	32.94	20.10	2.70	30.92	-	-	Peak
5150.00	50.53	-23.47	74.00	41.85	33.92	9.41	34.65	100	61	Peak
5150.00	39.11	-14.89	54.00	30.43	33.92	9.41	34.65	100	61	Average
5260.00	103.99	-	-	95.45	34.01	9.62	35.09	100	61	Peak
5260.00	78.76	-	-	70.22	34.01	9.62	35.09	100	61	Average
5350.00	50.58	-23.42	74.00	42.16	34.08	9.74	35.40	100	61	Peak
5350.00	39.79	-14.21	54.00	31.37	34.08	9.74	35.40	100	61	Average
8222.00	53.30	-20.70	74.00	41.25	35.26	10.90	34.11	100	84	Peak
8222.00	40.16	-13.84	54.00	28.11	35.26	10.90	34.11	100	84	Average



Test Mode :	Mode 5	Temperature :	26~27°C
Test Channel :	60	Relative Humidity :	49~53%
Test Engineer :	Cona Huang	Polarization :	Horizontal
Remark :	5300 MHz is Fundamental Signals which can be ignored.		

Frequency (MHz)	Level (dBuV/m)	Over Limit (dB)	Limit Line (dBuV/m)	Read Level (dBuV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
30.00	30.75	-9.25	40.00	42.17	19.51	0.53	31.46	100	241	Peak
94.26	27.09	-16.41	43.50	48.19	9.46	0.97	31.53	-	-	Peak
148.26	25.21	-18.29	43.50	44.27	11.29	1.21	31.56	-	-	Peak
349.00	21.23	-24.77	46.00	35.78	14.77	1.97	31.29	-	-	Peak
626.90	23.34	-22.66	46.00	31.19	20.27	2.77	30.89	-	-	Peak
806.10	25.09	-20.91	46.00	30.34	22.28	3.16	30.69	-	-	Peak
5150.00	39.03	-14.97	54.00	30.35	33.92	9.41	34.65	102	231	Average
5150.00	50.34	-23.66	74.00	41.66	33.92	9.41	34.65	102	231	Peak
5300.00	75.50	-	-	67.01	34.04	9.66	35.21	102	231	Average
5300.00	99.41	-	-	90.92	34.04	9.66	35.21	102	231	Peak
5350.00	50.14	-23.86	74.00	41.72	34.08	9.74	35.40	102	231	Peak
5350.00	39.07	-14.93	54.00	30.65	34.08	9.74	35.40	102	231	Average
8352.00	53.51	-20.49	74.00	41.43	35.23	10.95	34.10	100	177	Peak
8352.00	40.55	-13.45	54.00	28.47	35.23	10.95	34.10	100	177	Average



Test Mode :	Mode 5	Temperature :	26~27°C
Test Channel :	60	Relative Humidity :	49~53%
Test Engineer :	Cona Huang	Polarization :	Vertical
Remark :	5300 MHz is Fundamental Signals which can be ignored.		

Frequency (MHz)	Level (dBuV/m)	Over Limit (dB)	Limit Line (dBuV/m)	Read Level (dBuV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
30.00	36.04	-3.96	40.00	47.46	19.51	0.53	31.46	100	47	Peak
56.73	35.37	-4.63	40.00	59.64	6.54	0.74	31.55	-	-	Peak
85.89	27.32	-12.68	40.00	49.58	8.36	0.92	31.54	-	-	Peak
475.70	19.69	-26.31	46.00	30.72	17.66	2.37	31.06	-	-	Peak
601.00	24.92	-21.08	46.00	33.07	20.08	2.69	30.92	-	-	Peak
763.40	25.54	-20.46	46.00	31.44	21.71	3.08	30.69	-	-	Peak
5150.00	39.02	-14.98	54.00	30.34	33.92	9.41	34.65	100	62	Average
5150.00	49.84	-24.16	74.00	41.16	33.92	9.41	34.65	100	62	Peak
5300.00	78.18	-	-	69.69	34.04	9.66	35.21	100	62	Average
5300.00	104.04	-	-	95.55	34.04	9.66	35.21	100	62	Peak
5350.00	50.68	-23.32	74.00	42.26	34.08	9.74	35.40	100	62	Peak
5350.00	39.36	-14.64	54.00	30.94	34.08	9.74	35.40	100	62	Average
8286.00	53.35	-20.65	74.00	41.28	35.24	10.93	34.10	100	351	Peak
8286.00	40.82	-13.18	54.00	28.75	35.24	10.93	34.10	100	351	Average



Test Mode :	Mode 6	Temperature :	26~27°C
Test Channel :	64	Relative Humidity :	49~53%
Test Engineer :	Cona Huang	Polarization :	Horizontal
Remark :	5320 MHz is Fundamental Signals which can be ignored.		

Frequency (MHz)	Level (dBuV/m)	Over Limit (dB)	Limit Line (dBuV/m)	Read Level (dBuV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
30.81	27.73	-12.27	40.00	39.70	18.95	0.54	31.46	100	142	Peak
95.34	26.36	-17.14	43.50	47.30	9.61	0.98	31.53	-	-	Peak
129.90	25.05	-18.45	43.50	43.70	11.77	1.15	31.57	-	-	Peak
349.70	21.33	-24.67	46.00	35.84	14.80	1.97	31.28	-	-	Peak
559.00	21.52	-24.48	46.00	30.64	19.28	2.57	30.97	-	-	Peak
752.20	24.32	-21.68	46.00	30.40	21.56	3.06	30.70	-	-	Peak
5150.00	39.06	-14.94	54.00	30.38	33.92	9.41	34.65	102	242	Average
5150.00	50.49	-23.51	74.00	41.81	33.92	9.41	34.65	102	242	Peak
5320.00	75.91	-	-	67.44	34.05	9.70	35.28	102	242	Average
5320.00	100.48	-	-	92.01	34.05	9.70	35.28	102	242	Peak
5350.00	51.68	-22.32	74.00	43.26	34.08	9.74	35.40	102	242	Peak
5350.00	39.33	-14.67	54.00	30.91	34.08	9.74	35.40	102	242	Average
8340.00	53.64	-20.36	74.00	41.56	35.23	10.95	34.10	100	340	Peak
8340.00	40.73	-13.27	54.00	28.65	35.23	10.95	34.10	100	340	Average



Test Mode :	Mode 6	Temperature :	26~27°C
Test Channel :	64	Relative Humidity :	49~53%
Test Engineer :	Cona Huang	Polarization :	Vertical
Remark :	5320 MHz is Fundamental Signals which can be ignored.		

Frequency (MHz)	Level (dBuV/m)	Over Limit (dB)	Limit Line (dBuV/m)	Read Level (dBuV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
30.00	36.51	-3.49	40.00	47.93	19.51	0.53	31.46	101	38	Peak
56.73	34.95	-5.05	40.00	59.22	6.54	0.74	31.55	-	-	Peak
79.41	26.93	-13.07	40.00	50.10	7.48	0.88	31.53	-	-	Peak
449.80	18.62	-27.38	46.00	30.27	17.15	2.30	31.10	-	-	Peak
598.20	24.24	-21.76	46.00	32.45	20.03	2.68	30.92	-	-	Peak
816.60	25.76	-20.24	46.00	30.90	22.38	3.18	30.70	-	-	Peak
5150.00	39.01	-14.99	54.00	30.33	33.92	9.41	34.65	100	62	Average
5150.00	51.08	-22.92	74.00	42.40	33.92	9.41	34.65	100	62	Peak
5320.00	78.56	-	-	70.09	34.05	9.70	35.28	100	62	Average
5320.00	104.60	-	-	96.13	34.05	9.70	35.28	100	62	Peak
5350.00	51.94	-22.06	74.00	43.52	34.08	9.74	35.40	100	62	Peak
5350.00	39.96	-14.04	54.00	31.54	34.08	9.74	35.40	100	62	Average
8268.00	53.99	-20.01	74.00	41.93	35.24	10.92	34.10	100	144	Peak
8268.00	40.65	-13.35	54.00	28.59	35.24	10.92	34.10	100	144	Average



Test Mode :	Mode 7	Temperature :	26~27°C
Test Channel :	100	Relative Humidity :	49~53%
Test Engineer :	Cona Huang	Polarization :	Horizontal
Remark :	1. 5500 MHz is Fundamental Signals which can be ignored. 2. 5470 MHz and 5725 MHz are not within a restricted band.		

Frequency (MHz)	Level (dBuV/m)	Over Limit (dB)	Limit Line (dBuV/m)	Read Level (dBuV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
44.85	31.88	-8.12	40.00	51.81	10.92	0.65	31.50	100	263	Peak
95.61	25.48	-18.02	43.50	46.27	9.76	0.98	31.53	-	-	Peak
148.53	24.79	-18.71	43.50	43.85	11.29	1.21	31.56	-	-	Peak
351.80	21.17	-24.83	46.00	35.61	14.85	1.99	31.28	-	-	Peak
638.10	23.53	-22.47	46.00	31.25	20.36	2.80	30.88	-	-	Peak
780.90	24.01	-21.99	46.00	29.64	21.95	3.11	30.69	-	-	Peak
5470.00	38.78	-29.52	68.30	30.51	34.17	9.94	35.84	181	231	Average
5470.00	59.38	-28.92	88.30	51.11	34.17	9.94	35.84	181	231	Peak
5500.00	74.97	-	-	66.72	34.20	10.02	35.97	181	231	Average
5500.00	100.53	-	-	92.28	34.20	10.02	35.97	181	231	Peak
5725.00	50.59	-37.71	88.30	42.00	34.51	9.92	35.84	181	231	Peak
5725.00	39.26	-29.04	68.30	30.67	34.51	9.92	35.84	181	231	Average
8268.00	53.63	-20.37	74.00	41.57	35.24	10.92	34.10	100	327	Peak
8268.00	40.84	-13.16	54.00	28.78	35.24	10.92	34.10	100	327	Average



Test Mode :	Mode 7	Temperature :	26~27°C
Test Channel :	100	Relative Humidity :	49~53%
Test Engineer :	Cona Huang	Polarization :	Vertical
Remark :	1. 5500 MHz is Fundamental Signals which can be ignored. 2. 5470 MHz and 5725 MHz are not within a restricted band.		

Frequency (MHz)	Level (dBuV/m)	Over Limit (dB)	Limit Line (dBuV/m)	Read Level (dBuV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
30.00	36.39	-3.61	40.00	47.81	19.51	0.53	31.46	101	40	Peak
56.73	33.28	-6.72	40.00	57.55	6.54	0.74	31.55	-	-	Peak
84.81	26.15	-13.85	40.00	48.55	8.23	0.91	31.54	-	-	Peak
458.20	19.53	-26.47	46.00	30.99	17.30	2.32	31.08	-	-	Peak
657.00	23.52	-22.48	46.00	31.03	20.50	2.85	30.86	-	-	Peak
783.70	24.90	-21.10	46.00	30.49	21.99	3.11	30.69	-	-	Peak
5470.00	40.26	-28.04	68.30	31.99	34.17	9.94	35.84	132	360	Average
5470.00	64.72	-23.58	88.30	56.45	34.17	9.94	35.84	132	360	Peak
5500.00	79.37	-	-	71.12	34.20	10.02	35.97	132	360	Average
5500.00	105.05	-	-	96.80	34.20	10.02	35.97	132	360	Peak
5725.00	50.29	-38.01	88.30	41.70	34.51	9.92	35.84	132	360	Peak
5725.00	38.68	-29.62	68.30	30.09	34.51	9.92	35.84	132	360	Average
8354.00	53.52	-20.48	74.00	41.43	35.23	10.95	34.09	100	236	Peak
8354.00	40.88	-13.12	54.00	28.79	35.23	10.95	34.09	100	236	Average



Test Mode :	Mode 8	Temperature :	26~27°C
Test Channel :	120	Relative Humidity :	49~53%
Test Engineer :	Cona Huang	Polarization :	Horizontal
Remark :	1. 5600 MHz is Fundamental Signals which can be ignored. 2. 5470 MHz and 5725 MHz are not within a restricted band.		

Frequency (MHz)	Level (dBuV/m)	Over Limit (dB)	Limit Line (dBuV/m)	Read Level (dBuV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
30.54	27.96	-12.04	40.00	39.93	18.95	0.54	31.46	100	224	Peak
57.81	25.24	-14.76	40.00	49.70	6.33	0.75	31.54	-	-	Peak
95.61	25.12	-18.38	43.50	45.91	9.76	0.98	31.53	-	-	Peak
346.20	20.28	-25.72	46.00	34.94	14.69	1.94	31.29	-	-	Peak
550.60	20.53	-25.47	46.00	29.83	19.13	2.55	30.98	-	-	Peak
771.80	23.77	-22.23	46.00	29.53	21.83	3.10	30.69	-	-	Peak
5470.00	37.73	-30.57	68.30	29.46	34.17	9.94	35.84	140	97	Average
5470.00	49.07	-39.23	88.30	40.80	34.17	9.94	35.84	140	97	Peak
5600.00	74.99	-	-	66.58	34.34	9.98	35.91	140	97	Average
5600.00	100.48	-	-	92.10	34.32	9.98	35.92	140	97	Peak
5725.00	50.63	-37.67	88.30	42.04	34.51	9.92	35.84	140	97	Peak
5725.00	38.85	-29.45	68.30	30.26	34.51	9.92	35.84	140	97	Average
8180.00	53.00	-21.00	74.00	40.96	35.27	10.88	34.11	100	266	Peak
8180.00	40.71	-13.29	54.00	28.67	35.27	10.88	34.11	100	266	Average



Test Mode :	Mode 8	Temperature :	26~27°C
Test Channel :	120	Relative Humidity :	49~53%
Test Engineer :	Cona Huang	Polarization :	Vertical
Remark :	1. 5600 MHz is Fundamental Signals which can be ignored. 2. 5470 MHz and 5725 MHz are not within a restricted band.		

Frequency (MHz)	Level (dBuV/m)	Over Limit (dB)	Limit Line (dBuV/m)	Read Level (dBuV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
30.00	36.24	-3.76	40.00	47.66	19.51	0.53	31.46	100	39	Peak
57.54	34.00	-6.00	40.00	58.27	6.54	0.74	31.55	-	-	Peak
179.58	26.14	-17.36	43.50	47.33	9.09	1.25	31.53	-	-	Peak
481.30	20.17	-25.83	46.00	31.07	17.78	2.38	31.06	-	-	Peak
603.80	26.33	-19.67	46.00	34.45	20.10	2.70	30.92	-	-	Peak
825.70	25.96	-20.04	46.00	31.00	22.46	3.21	30.71	-	-	Peak
5470.00	37.86	-30.44	68.30	29.59	34.17	9.94	35.84	142	347	Average
5470.00	49.60	-38.70	88.30	41.33	34.17	9.94	35.84	142	347	Peak
5600.00	77.98	-	-	69.57	34.34	9.98	35.91	142	347	Average
5600.00	103.80	-	-	95.42	34.32	9.98	35.92	142	347	Peak
5725.00	49.93	-38.37	88.30	41.34	34.51	9.92	35.84	142	347	Peak
5725.00	38.77	-29.53	68.30	30.18	34.51	9.92	35.84	142	347	Average
8210.00	53.27	-20.73	74.00	41.23	35.26	10.89	34.11	100	297	Peak
8210.00	40.90	-13.10	54.00	28.86	35.26	10.89	34.11	100	297	Average



Test Mode :	Mode 9	Temperature :	26~27°C
Test Channel :	140	Relative Humidity :	49~53%
Test Engineer :	Cona Huang	Polarization :	Horizontal
Remark :	1. 5700 MHz is Fundamental Signals which can be ignored. 2. 5470 MHz and 5725 MHz are not within a restricted band.		

Frequency (MHz)	Level (dBuV/m)	Over Limit (dB)	Limit Line (dBuV/m)	Read Level (dBuV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
53.49	26.20	-13.80	40.00	49.67	7.36	0.72	31.55	100	354	Peak
95.34	24.99	-18.51	43.50	45.93	9.61	0.98	31.53	-	-	Peak
133.41	24.24	-19.26	43.50	42.89	11.74	1.17	31.56	-	-	Peak
346.20	21.48	-24.52	46.00	36.14	14.69	1.94	31.29	-	-	Peak
570.90	21.90	-24.10	46.00	30.72	19.52	2.61	30.95	-	-	Peak
747.30	24.29	-21.71	46.00	30.47	21.48	3.05	30.71	-	-	Peak
5470.00	48.92	-39.38	88.30	40.65	34.17	9.94	35.84	126	100	Peak
5470.00	37.71	-30.59	68.30	29.44	34.17	9.94	35.84	126	100	Average
5700.00	101.06	-	-	92.52	34.47	9.93	35.86	126	100	Peak
5700.00	75.34	-	-	66.80	34.47	9.93	35.86	126	100	Average
5725.00	54.03	-34.27	88.30	45.44	34.51	9.92	35.84	126	100	Peak
5725.00	39.70	-28.60	68.30	31.11	34.51	9.92	35.84	126	100	Average
8236.00	53.13	-20.87	74.00	41.08	35.25	10.91	34.11	100	241	Peak
8236.00	40.66	-13.34	54.00	28.61	35.25	10.91	34.11	100	241	Average



Test Mode :	Mode 9	Temperature :	26~27°C
Test Channel :	140	Relative Humidity :	49~53%
Test Engineer :	Cona Huang	Polarization :	Vertical
Remark :	1. 5700 MHz is Fundamental Signals which can be ignored. 2. 5470 MHz and 5725 MHz are not within a restricted band.		

Frequency (MHz)	Level (dBuV/m)	Over Limit (dB)	Limit Line (dBuV/m)	Read Level (dBuV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
30.00	35.61	-4.39	40.00	47.03	19.51	0.53	31.46	102	33	Peak
53.49	33.70	-6.30	40.00	57.17	7.36	0.72	31.55	-	-	Peak
189.57	25.78	-17.72	43.50	47.09	8.92	1.28	31.51	-	-	Peak
464.50	19.00	-27.00	46.00	30.31	17.44	2.33	31.08	-	-	Peak
598.20	23.81	-22.19	46.00	32.02	20.03	2.68	30.92	-	-	Peak
780.90	24.56	-21.44	46.00	30.19	21.95	3.11	30.69	-	-	Peak
5470.00	48.18	-40.12	88.30	39.91	34.17	9.94	35.84	123	48	Peak
5470.00	37.98	-30.32	68.30	29.71	34.17	9.94	35.84	123	48	Average
5700.00	77.85	-	-	69.31	34.47	9.93	35.86	123	48	Average
5700.00	103.04	-	-	94.50	34.47	9.93	35.86	123	48	Peak
5725.00	56.95	-31.35	88.30	48.36	34.51	9.92	35.84	123	48	Peak
5725.00	40.05	-28.25	68.30	31.46	34.51	9.92	35.84	123	48	Average
8252.00	53.61	-20.39	74.00	41.55	35.25	10.91	34.10	100	252	Peak
8252.00	40.59	-13.41	54.00	28.53	35.25	10.91	34.10	100	252	Average



Test Mode :	Mode 10	Temperature :	26~27°C
Test Channel :	36	Relative Humidity :	49~53%
Test Engineer :	Cona Huang	Polarization :	Horizontal
Remark :	5180 MHz is Fundamental Signals which can be ignored.		

Frequency (MHz)	Level (dBuV/m)	Over Limit (dB)	Limit Line (dBuV/m)	Read Level (dBuV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
31.89	24.61	-15.39	40.00	37.12	18.40	0.55	31.46	100	187	Peak
95.34	24.54	-18.96	43.50	45.48	9.61	0.98	31.53	-	-	Peak
149.34	24.65	-18.85	43.50	43.75	11.25	1.21	31.56	-	-	Peak
346.90	20.87	-25.13	46.00	35.49	14.72	1.95	31.29	-	-	Peak
559.00	20.73	-25.27	46.00	29.85	19.28	2.57	30.97	-	-	Peak
769.00	24.74	-21.26	46.00	30.55	21.79	3.09	30.69	-	-	Peak
5150.00	57.02	-16.98	74.00	48.34	33.92	9.41	34.65	126	161	Peak
5150.00	39.59	-14.41	54.00	30.91	33.92	9.41	34.65	126	161	Average
5180.00	86.15	-	-	77.52	33.95	9.45	34.77	126	161	Average
5180.00	98.90	-	-	90.27	33.95	9.45	34.77	126	161	Peak
5350.00	51.26	-22.74	74.00	42.84	34.08	9.74	35.40	126	161	Peak
5350.00	39.65	-14.35	54.00	31.23	34.08	9.74	35.40	126	161	Average
8286.00	53.62	-20.38	74.00	41.55	35.24	10.93	34.10	100	140	Peak
8286.00	40.80	-13.20	54.00	28.73	35.24	10.93	34.10	100	140	Average



Test Mode :	Mode 10	Temperature :	26~27°C
Test Channel :	36	Relative Humidity :	49~53%
Test Engineer :	Cona Huang	Polarization :	Vertical
Remark :	5180 MHz is Fundamental Signals which can be ignored.		

Frequency (MHz)	Level (dBuV/m)	Over Limit (dB)	Limit Line (dBuV/m)	Read Level (dBuV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
30.00	36.86	-3.14	40.00	48.28	19.51	0.53	31.46	102	37	Peak
56.73	33.69	-6.31	40.00	57.96	6.54	0.74	31.55	-	-	Peak
143.94	27.62	-15.88	43.50	46.45	11.52	1.20	31.55	-	-	Peak
495.30	20.07	-25.93	46.00	30.63	18.08	2.43	31.07	-	-	Peak
604.50	23.93	-22.07	46.00	32.05	20.10	2.70	30.92	-	-	Peak
817.30	24.90	-21.10	46.00	30.02	22.39	3.19	30.7	-	-	Peak
5150.00	40.45	-13.55	54.00	31.77	33.92	9.41	34.65	102	61	Average
5150.00	60.32	-13.68	74.00	51.64	33.92	9.41	34.65	102	61	Peak
5180.00	90.91	-	-	82.28	33.95	9.45	34.77	102	61	Average
5180.00	103.75	-	-	95.12	33.95	9.45	34.77	102	61	Peak
5350.00	50.83	-23.17	74.00	42.41	34.08	9.74	35.40	102	61	Peak
5350.00	39.35	-14.65	54.00	30.93	34.08	9.74	35.40	102	61	Average
8338.00	53.79	-20.21	74.00	41.71	35.23	10.95	34.10	100	144	Peak
8338.00	40.25	-13.75	54.00	28.17	35.23	10.95	34.10	100	144	Average



Test Mode :	Mode 11	Temperature :	26~27°C
Test Channel :	44	Relative Humidity :	49~53%
Test Engineer :	Cona Huang	Polarization :	Horizontal
Remark :	5220 MHz is Fundamental Signals which can be ignored.		

Frequency (MHz)	Level (dBuV/m)	Over Limit (dB)	Limit Line (dBuV/m)	Read Level (dBuV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
30.00	27.23	-12.77	40.00	38.65	19.51	0.53	31.46	100	266	Peak
94.53	24.60	-18.90	43.50	45.54	9.61	0.98	31.53	-	-	Peak
148.26	24.61	-18.89	43.50	43.67	11.29	1.21	31.56	-	-	Peak
349.70	20.39	-25.61	46.00	34.90	14.80	1.97	31.28	-	-	Peak
523.30	20.64	-25.36	46.00	30.55	18.62	2.50	31.03	-	-	Peak
707.40	23.36	-22.64	46.00	30.27	20.93	2.96	30.80	-	-	Peak
5150.00	50.43	-23.57	74.00	41.75	33.92	9.41	34.65	103	233	Peak
5150.00	39.10	-14.90	54.00	30.42	33.92	9.41	34.65	103	233	Average
5220.00	99.20	-	-	90.60	33.97	9.53	34.90	103	233	Peak
5220.00	87.91	-	-	79.31	33.97	9.53	34.90	103	233	Average
5350.00	50.43	-23.57	74.00	42.01	34.08	9.74	35.40	103	233	Peak
5350.00	39.22	-14.78	54.00	30.80	34.08	9.74	35.40	103	233	Average
8500.00	53.09	-20.91	74.00	40.97	35.20	11.00	34.08	100	310	Peak
8500.00	40.63	-13.37	54.00	28.51	35.20	11.00	34.08	100	310	Average



Test Mode :	Mode 11	Temperature :	26~27°C
Test Channel :	44	Relative Humidity :	49~53%
Test Engineer :	Cona Huang	Polarization :	Vertical
Remark :	5220 MHz is Fundamental Signals which can be ignored.		

Frequency (MHz)	Level (dBuV/m)	Over Limit (dB)	Limit Line (dBuV/m)	Read Level (dBuV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
30.00	36.62	-3.38	40.00	48.04	19.51	0.53	31.46	101	41	Peak
57.54	33.10	-6.90	40.00	57.37	6.54	0.74	31.55	-	-	Peak
182.82	25.65	-17.85	43.50	46.91	9.00	1.26	31.52	-	-	Peak
439.30	19.30	-26.70	46.00	31.21	16.93	2.28	31.12	-	-	Peak
607.30	25.47	-20.53	46.00	33.55	20.12	2.71	30.91	-	-	Peak
786.50	24.79	-21.21	46.00	30.33	22.03	3.12	30.69	-	-	Peak
5150.00	50.26	-23.74	74.00	41.58	33.92	9.41	34.65	100	54	Peak
5150.00	39.19	-14.81	54.00	30.51	33.92	9.41	34.65	100	54	Average
5220.00	102.68	-	-	94.08	33.97	9.53	34.90	100	54	Peak
5220.00	90.00	-	-	81.40	33.97	9.53	34.90	100	54	Average
5350.00	50.32	-23.68	74.00	41.90	34.08	9.74	35.40	100	54	Peak
5350.00	39.47	-14.53	54.00	31.05	34.08	9.74	35.40	100	54	Average
8266.00	53.58	-20.42	74.00	41.51	35.25	10.92	34.10	100	317	Peak
8266.00	40.39	-13.61	54.00	28.32	35.25	10.92	34.10	100	317	Average



Test Mode :	Mode 12	Temperature :	26~27°C
Test Channel :	48	Relative Humidity :	49~53%
Test Engineer :	Cona Huang	Polarization :	Horizontal
Remark :	5240 MHz is Fundamental Signals which can be ignored.		

Frequency (MHz)	Level (dBuV/m)	Over Limit (dB)	Limit Line (dBuV/m)	Read Level (dBuV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
30.00	27.41	-12.59	40.00	38.83	19.51	0.53	31.46	100	152	Peak
57.81	23.64	-16.36	40.00	48.10	6.33	0.75	31.54	-	-	Peak
149.61	24.84	-18.66	43.50	43.94	11.25	1.21	31.56	-	-	Peak
349.00	21.11	-24.89	46.00	35.66	14.77	1.97	31.29	-	-	Peak
648.60	22.77	-23.23	46.00	30.36	20.44	2.84	30.87	-	-	Peak
758.50	24.67	-21.33	46.00	30.66	21.64	3.07	30.70	-	-	Peak
5150.00	50.97	-23.03	74.00	42.29	33.92	9.41	34.65	102	235	Peak
5150.00	39.06	-14.94	54.00	30.38	33.92	9.41	34.65	102	235	Average
5240.00	97.05	-	-	88.45	33.99	9.57	34.96	102	235	Peak
5240.00	85.24	-	-	76.64	33.99	9.57	34.96	102	235	Average
5350.00	51.43	-22.57	74.00	43.01	34.08	9.74	35.40	102	235	Peak
5350.00	39.39	-14.61	54.00	30.97	34.08	9.74	35.40	102	235	Average
8234.00	53.49	-20.51	74.00	41.45	35.25	10.90	34.11	103	227	Peak
8234.00	40.32	-13.68	54.00	28.28	35.25	10.90	34.11	103	227	Average



Test Mode :	Mode 12	Temperature :	26~27°C
Test Channel :	48	Relative Humidity :	49~53%
Test Engineer :	Cona Huang	Polarization :	Vertical
Remark :	5240 MHz is Fundamental Signals which can be ignored.		

Frequency (MHz)	Level (dBuV/m)	Over Limit (dB)	Limit Line (dBuV/m)	Read Level (dBuV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
30.00	36.87	-3.13	40.00	48.29	19.51	0.53	31.46	103	37	Peak
53.49	32.91	-7.09	40.00	56.38	7.36	0.72	31.55	-	-	Peak
183.90	25.72	-17.78	43.50	46.99	8.99	1.26	31.52	-	-	Peak
427.40	18.75	-27.25	46.00	30.96	16.69	2.24	31.14	-	-	Peak
603.80	25.09	-20.91	46.00	33.21	20.10	2.70	30.92	-	-	Peak
841.80	24.92	-21.08	46.00	29.77	22.62	3.25	30.72	-	-	Peak
5150.00	50.98	-23.02	74.00	42.30	33.92	9.41	34.65	100	54	Peak
5150.00	39.18	-14.82	54.00	30.50	33.92	9.41	34.65	100	54	Average
5240.00	101.78	-	-	93.22	33.99	9.53	34.96	100	54	Peak
5240.00	89.37	-	-	80.77	33.99	9.57	34.96	100	54	Average
5350.00	51.05	-22.95	74.00	42.63	34.08	9.74	35.40	100	54	Peak
5350.00	39.45	-14.55	54.00	31.03	34.08	9.74	35.40	100	54	Average
8230.00	53.84	-20.16	74.00	41.79	35.26	10.90	34.11	100	187	Peak
8230.00	40.50	-13.50	54.00	28.45	35.26	10.90	34.11	100	187	Average



Test Mode :	Mode 13	Temperature :	26~27°C
Test Channel :	52	Relative Humidity :	49~53%
Test Engineer :	Cona Huang	Polarization :	Horizontal
Remark :	5260 MHz is Fundamental Signals which can be ignored.		

Frequency (MHz)	Level (dBuV/m)	Over Limit (dB)	Limit Line (dBuV/m)	Read Level (dBuV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
57.81	23.13	-16.87	40.00	47.59	6.33	0.75	31.54	100	222	Peak
93.18	22.28	-21.22	43.50	43.53	9.32	0.96	31.53	-	-	Peak
149.61	24.48	-19.02	43.50	43.58	11.25	1.21	31.56	-	-	Peak
357.40	20.59	-25.41	46.00	34.82	15.00	2.04	31.27	-	-	Peak
587.70	22.21	-23.79	46.00	30.66	19.83	2.65	30.93	-	-	Peak
780.90	24.15	-21.85	46.00	29.78	21.95	3.11	30.69	-	-	Peak
5150.00	50.46	-23.54	74.00	41.78	33.92	9.41	34.65	102	232	Peak
5150.00	39.06	-14.94	54.00	30.38	33.92	9.41	34.65	102	232	Average
5260.00	97.04	-	-	88.50	34.01	9.62	35.09	102	232	Peak
5260.00	84.75	-	-	76.21	34.01	9.62	35.09	102	232	Average
5350.00	51.02	-22.98	74.00	42.60	34.08	9.74	35.40	102	232	Peak
5350.00	39.24	-14.76	54.00	30.82	34.08	9.74	35.40	102	232	Average
8220.00	53.10	-20.90	74.00	41.05	35.26	10.90	34.11	100	119	Peak
8220.00	40.14	-13.86	54.00	28.09	35.26	10.90	34.11	100	119	Average



Test Mode :	Mode 13	Temperature :	26~27°C
Test Channel :	52	Relative Humidity :	49~53%
Test Engineer :	Cona Huang	Polarization :	Vertical
Remark :	5260 MHz is Fundamental Signals which can be ignored.		

Frequency (MHz)	Level (dBuV/m)	Over Limit (dB)	Limit Line (dBuV/m)	Read Level (dBuV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
30.00	36.52	-3.48	40.00	47.94	19.51	0.53	31.46	102	34	Peak
56.73	33.26	-6.74	40.00	57.53	6.54	0.74	31.55	-	-	Peak
187.41	25.85	-17.65	43.50	47.14	8.96	1.27	31.52	-	-	Peak
469.40	20.36	-25.64	46.00	31.54	17.54	2.35	31.07	-	-	Peak
598.20	23.86	-22.14	46.00	32.07	20.03	2.68	30.92	-	-	Peak
775.30	24.88	-21.12	46.00	30.60	21.87	3.10	30.69	-	-	Peak
5150.00	50.59	-23.41	74.00	41.91	33.92	9.41	34.65	100	61	Peak
5150.00	39.11	-14.89	54.00	30.43	33.92	9.41	34.65	100	61	Average
5260.00	101.89	-	-	93.35	34.01	9.62	35.09	100	61	Peak
5260.00	89.39	-	-	80.85	34.01	9.62	35.09	100	61	Average
5350.00	51.79	-22.21	74.00	43.37	34.08	9.74	35.40	100	61	Peak
5350.00	39.87	-14.13	54.00	31.45	34.08	9.74	35.40	100	61	Average
8232.00	53.16	-20.84	74.00	41.11	35.26	10.90	34.11	100	162	Peak
8232.00	40.70	-13.30	54.00	28.65	35.26	10.90	34.11	100	162	Average



Test Mode :	Mode 14	Temperature :	26~27°C
Test Channel :	60	Relative Humidity :	49~53%
Test Engineer :	Cona Huang	Polarization :	Horizontal
Remark :	5300 MHz is Fundamental Signals which can be ignored.		

Frequency (MHz)	Level (dBuV/m)	Over Limit (dB)	Limit Line (dBuV/m)	Read Level (dBuV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
30.54	27.62	-12.38	40.00	39.59	18.95	0.54	31.46	100	314	Peak
53.49	23.44	-16.56	40.00	46.91	7.36	0.72	31.55	-	-	Peak
148.53	23.98	-19.52	43.50	43.04	11.29	1.21	31.56	-	-	Peak
354.60	20.75	-25.25	46.00	35.08	14.93	2.02	31.28	-	-	Peak
525.40	20.52	-25.48	46.00	30.38	18.66	2.50	31.02	-	-	Peak
710.90	22.92	-23.08	46.00	29.75	20.99	2.97	30.79	-	-	Peak
5150.00	39.04	-14.96	54.00	30.36	33.92	9.41	34.65	200	233	Average
5150.00	50.93	-23.07	74.00	42.25	33.92	9.41	34.65	200	233	Peak
5300.00	85.96	-	-	77.47	34.04	9.66	35.21	200	233	Average
5300.00	98.79	-	-	90.30	34.04	9.66	35.21	200	233	Peak
5350.00	49.87	-24.13	74.00	41.45	34.08	9.74	35.40	200	233	Peak
5350.00	39.10	-14.90	54.00	30.68	34.08	9.74	35.40	200	233	Average
8220.00	53.59	-20.41	74.00	41.54	35.26	10.90	34.11	100	124	Peak
8220.00	40.25	-13.75	54.00	28.20	35.26	10.90	34.11	100	124	Average



Test Mode :	Mode 14	Temperature :	26~27°C
Test Channel :	60	Relative Humidity :	49~53%
Test Engineer :	Cona Huang	Polarization :	Vertical
Remark :	5300 MHz is Fundamental Signals which can be ignored.		

Frequency (MHz)	Level (dBuV/m)	Over Limit (dB)	Limit Line (dBuV/m)	Read Level (dBuV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
30.00	36.72	-3.28	40.00	48.14	19.51	0.53	31.46	104	31	Peak
54.57	33.09	-6.91	40.00	56.76	7.16	0.72	31.55	-	-	Peak
181.74	25.27	-18.23	43.50	46.52	9.03	1.25	31.53	-	-	Peak
304.20	17.35	-28.65	46.00	33.31	13.59	1.78	31.33	-	-	Peak
606.60	24.60	-21.40	46.00	32.69	20.11	2.71	30.91	-	-	Peak
794.90	24.20	-21.80	46.00	29.60	22.15	3.13	30.68	-	-	Peak
5150.00	39.10	-14.90	54.00	30.42	33.92	9.41	34.65	100	62	Average
5150.00	50.33	-23.67	74.00	41.65	33.92	9.41	34.65	100	62	Peak
5300.00	89.40	-	-	80.91	34.04	9.66	35.21	100	62	Average
5300.00	102.77	-	-	94.28	34.04	9.66	35.21	100	62	Peak
5350.00	51.08	-22.92	74.00	42.66	34.08	9.74	35.40	100	62	Peak
5350.00	39.47	-14.53	54.00	31.05	34.08	9.74	35.40	100	62	Average
8292.00	54.39	-19.61	74.00	42.32	35.24	10.93	34.10	100	150	Peak
8292.00	40.32	-13.68	54.00	28.25	35.24	10.93	34.10	100	150	Average



Test Mode :	Mode 15	Temperature :	26~27°C
Test Channel :	64	Relative Humidity :	49~53%
Test Engineer :	Cona Huang	Polarization :	Horizontal
Remark :	5320 MHz is Fundamental Signals which can be ignored.		

Frequency (MHz)	Level (dBuV/m)	Over Limit (dB)	Limit Line (dBuV/m)	Read Level (dBuV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
44.85	30.93	-9.07	40.00	50.86	10.92	0.65	31.50	100	135	Peak
95.34	22.35	-21.15	43.50	43.29	9.61	0.98	31.53	-	-	Peak
149.34	24.28	-19.22	43.50	43.38	11.25	1.21	31.56	-	-	Peak
349.70	20.35	-25.65	46.00	34.86	14.80	1.97	31.28	-	-	Peak
575.80	21.69	-24.31	46.00	30.41	19.61	2.62	30.95	-	-	Peak
690.60	24.20	-21.80	46.00	31.34	20.77	2.92	30.83	-	-	Peak
5150.00	38.98	-15.02	54.00	30.30	33.92	9.41	34.65	102	240	Average
5150.00	49.44	-24.56	74.00	40.76	33.92	9.41	34.65	102	240	Peak
5320.00	85.34	-	-	76.87	34.05	9.70	35.28	102	240	Average
5320.00	97.76	-	-	89.29	34.05	9.70	35.28	102	240	Peak
5350.00	39.46	-14.54	54.00	31.04	34.08	9.74	35.40	102	240	Average
5350.00	50.33	-23.67	74.00	41.91	34.08	9.74	35.40	102	240	Peak
8238.00	53.80	-20.20	74.00	41.75	35.25	10.91	34.11	100	112	Peak
8238.00	40.41	-13.59	54.00	28.36	35.25	10.91	34.11	100	112	Average



Test Mode :	Mode 15	Temperature :	26~27°C
Test Channel :	64	Relative Humidity :	49~53%
Test Engineer :	Cona Huang	Polarization :	Vertical
Remark :	5320 MHz is Fundamental Signals which can be ignored.		

Frequency (MHz)	Level (dBuV/m)	Over Limit (dB)	Limit Line (dBuV/m)	Read Level (dBuV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
30.00	36.25	-3.75	40.00	47.67	19.51	0.53	31.46	104	36	Peak
54.30	33.35	-6.65	40.00	57.02	7.16	0.72	31.55	-	-	Peak
140.97	31.28	-12.22	43.50	49.98	11.65	1.20	31.55	-	-	Peak
396.60	18.72	-27.28	46.00	31.75	16.03	2.13	31.19	-	-	Peak
601.00	24.44	-21.56	46.00	32.59	20.08	2.69	30.92	-	-	Peak
808.90	25.03	-20.97	46.00	30.26	22.30	3.16	30.69	-	-	Peak
5150.00	48.88	-25.12	74.00	40.20	33.92	9.41	34.65	100	59	Peak
5150.00	38.99	-15.01	54.00	30.31	33.92	9.41	34.65	100	59	Average
5320.00	102.34	-	-	93.87	34.05	9.70	35.28	100	59	Peak
5320.00	90.35	-	-	81.88	34.05	9.70	35.28	100	59	Average
5350.00	40.20	-13.80	54.00	31.78	34.08	9.74	35.40	100	59	Average
5350.00	50.99	-23.01	74.00	42.57	34.08	9.74	35.40	100	59	Peak
8232.00	53.70	-20.30	74.00	41.65	35.26	10.90	34.11	100	146	Peak
8232.00	40.18	-13.82	54.00	28.13	35.26	10.90	34.11	100	146	Average



Test Mode :	Mode 16	Temperature :	26~27°C
Test Channel :	100	Relative Humidity :	49~53%
Test Engineer :	Cona Huang	Polarization :	Horizontal
Remark :	1. 5500 MHz is Fundamental Signals which can be ignored. 2. 5470 MHz and 5725 MHz are not within a restricted band.		

Frequency (MHz)	Level (dBuV/m)	Over Limit (dB)	Limit Line (dBuV/m)	Read Level (dBuV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
30.81	26.48	-13.52	40.00	38.45	18.95	0.54	31.46	100	109	Peak
55.38	23.51	-16.49	40.00	47.38	6.95	0.73	31.55	-	-	Peak
149.61	24.11	-19.39	43.50	43.21	11.25	1.21	31.56	-	-	Peak
351.80	20.12	-25.88	46.00	34.56	14.85	1.99	31.28	-	-	Peak
646.50	23.06	-22.94	46.00	30.67	20.43	2.83	30.87	-	-	Peak
785.80	24.17	-21.83	46.00	29.72	22.02	3.12	30.69	-	-	Peak
5470.00	58.82	-29.48	88.30	50.55	34.17	9.94	35.84	196	220	Peak
5470.00	38.38	-29.92	68.30	30.11	34.17	9.94	35.84	196	220	Average
5500.00	97.69	-	-	89.44	34.20	10.02	35.97	196	220	Peak
5500.00	86.18	-	-	77.93	34.20	10.02	35.97	196	220	Average
5725.00	39.04	-29.26	68.30	30.45	34.51	9.92	35.84	196	220	Average
5725.00	50.35	-37.95	88.30	41.76	34.51	9.92	35.84	196	220	Peak
8354.00	54.28	-19.72	74.00	42.19	35.23	10.95	34.09	100	145	Peak
8354.00	40.52	-13.48	54.00	28.43	35.23	10.95	34.09	100	145	Average



Test Mode :	Mode 16	Temperature :	26~27°C
Test Channel :	100	Relative Humidity :	49~53%
Test Engineer :	Cona Huang	Polarization :	Vertical
Remark :	1. 5500 MHz is Fundamental Signals which can be ignored. 2. 5470 MHz and 5725 MHz are not within a restricted band.		

Frequency (MHz)	Level (dBuV/m)	Over Limit (dB)	Limit Line (dBuV/m)	Read Level (dBuV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
30.00	35.67	-4.33	40.00	47.09	19.51	0.53	31.46	103	32	Peak
56.46	32.78	-7.22	40.00	56.85	6.74	0.74	31.55	-	-	Peak
186.33	26.56	-16.94	43.50	47.84	8.97	1.27	31.52	-	-	Peak
450.50	20.18	-25.82	46.00	31.82	17.16	2.30	31.10	-	-	Peak
615.00	23.11	-22.89	46.00	31.11	20.18	2.73	30.91	-	-	Peak
783.70	24.61	-21.39	46.00	30.20	21.99	3.11	30.69	-	-	Peak
5470.00	65.07	-23.23	88.30	56.80	34.17	9.94	35.84	145	352	Peak
5470.00	39.25	-29.05	68.30	30.98	34.17	9.94	35.84	145	352	Average
5500.00	101.22	-	-	92.97	34.20	10.02	35.97	145	352	Peak
5500.00	88.87	-	-	80.62	34.20	10.02	35.97	145	352	Average
5725.00	38.41	-29.89	68.30	29.82	34.51	9.92	35.84	145	352	Average
5725.00	49.98	-38.32	88.30	41.39	34.51	9.92	35.84	145	352	Peak
8208.00	53.97	-20.03	74.00	41.93	35.26	10.89	34.11	100	152	Peak
8208.00	40.33	-13.67	54.00	28.29	35.26	10.89	34.11	100	152	Average



Test Mode :	Mode 17	Temperature :	26~27°C
Test Channel :	120	Relative Humidity :	49~53%
Test Engineer :	Cona Huang	Polarization :	Horizontal
Remark :	1. 5600 MHz is Fundamental Signals which can be ignored. 2. 5470 MHz and 5725 MHz are not within a restricted band.		

Frequency (MHz)	Level (dBuV/m)	Over Limit (dB)	Limit Line (dBuV/m)	Read Level (dBuV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
30.00	23.84	-16.16	40.00	35.26	19.51	0.53	31.46	100	304	Peak
55.65	23.55	-16.45	40.00	47.42	6.95	0.73	31.55	-	-	Peak
149.61	23.69	-19.81	43.50	42.79	11.25	1.21	31.56	-	-	Peak
349.00	20.40	-25.60	46.00	34.95	14.77	1.97	31.29	-	-	Peak
573.70	21.23	-24.77	46.00	29.99	19.57	2.62	30.95	-	-	Peak
741.00	23.30	-22.70	46.00	29.58	21.40	3.04	30.72	-	-	Peak
5470.00	49.05	-39.25	88.30	40.78	34.17	9.94	35.84	168	349	Peak
5470.00	37.68	-30.62	68.30	29.41	34.17	9.94	35.84	168	349	Average
5600.00	97.31	-	-	88.93	34.32	9.98	35.92	168	349	Peak
5600.00	84.82	-	-	76.41	34.34	9.98	35.91	168	349	Average
5725.00	49.74	-38.56	88.30	41.15	34.51	9.92	35.84	168	349	Peak
5725.00	38.75	-29.55	68.30	30.16	34.51	9.92	35.84	168	349	Average
8230.00	53.72	-20.28	74.00	41.67	35.26	10.90	34.11	100	170	Peak
8230.00	40.28	-13.72	54.00	28.23	35.26	10.90	34.11	100	170	Average



Test Mode :	Mode 17	Temperature :	26~27°C
Test Channel :	120	Relative Humidity :	49~53%
Test Engineer :	Cona Huang	Polarization :	Vertical
Remark :	1. 5600 MHz is Fundamental Signals which can be ignored. 2. 5470 MHz and 5725 MHz are not within a restricted band.		

Frequency (MHz)	Level (dBuV/m)	Over Limit (dB)	Limit Line (dBuV/m)	Read Level (dBuV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
30.00	36.47	-3.53	40.00	47.89	19.51	0.53	31.46	103	27	Peak
55.65	32.71	-7.29	40.00	56.58	6.95	0.73	31.55	-	-	Peak
186.33	25.76	-17.74	43.50	47.04	8.97	1.27	31.52	-	-	Peak
307.70	18.19	-27.81	46.00	34.06	13.67	1.79	31.33	-	-	Peak
612.20	23.95	-22.05	46.00	31.97	20.16	2.73	30.91	-	-	Peak
749.40	24.30	-21.70	46.00	30.42	21.52	3.06	30.70	-	-	Peak
5470.00	48.84	-39.46	88.30	40.57	34.17	9.94	35.84	112	46	Peak
5470.00	37.64	-30.66	68.30	29.37	34.17	9.94	35.84	112	46	Average
5600.00	100.00	-	-	91.62	34.32	9.98	35.92	112	46	Peak
5600.00	88.21	-	-	79.80	34.34	9.98	35.91	112	46	Average
5725.00	50.51	-37.79	88.30	41.92	34.51	9.92	35.84	112	46	Peak
5725.00	39.62	-28.68	68.30	31.03	34.51	9.92	35.84	112	46	Average
8230.00	53.54	-20.46	74.00	41.49	35.26	10.90	34.11	103	116	Peak
8230.00	40.26	-13.74	54.00	28.21	35.26	10.90	34.11	103	116	Average



Test Mode :	Mode 18	Temperature :	26~27°C
Test Channel :	140	Relative Humidity :	49~53%
Test Engineer :	Cona Huang	Polarization :	Horizontal
Remark :	1. 5700 MHz is Fundamental Signals which can be ignored. 2. 5470 MHz and 5725 MHz are not within a restricted band.		

Frequency (MHz)	Level (dBuV/m)	Over Limit (dB)	Limit Line (dBuV/m)	Read Level (dBuV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
53.49	27.30	-12.70	40.00	50.77	7.36	0.72	31.55	100	199	Peak
96.42	22.52	-20.98	43.50	43.31	9.76	0.98	31.53	-	-	Peak
150.42	23.92	-19.58	43.50	43.07	11.20	1.21	31.56	-	-	Peak
340.60	20.31	-25.69	46.00	35.18	14.54	1.89	31.30	-	-	Peak
634.60	22.74	-23.26	46.00	30.51	20.33	2.79	30.89	-	-	Peak
797.70	25.55	-20.45	46.00	30.91	22.18	3.14	30.68	-	-	Peak
5470.00	48.22	-40.08	88.30	39.95	34.17	9.94	35.84	166	248	Peak
5470.00	37.64	-30.66	68.30	29.37	34.17	9.94	35.84	166	248	Average
5700.00	97.18	-	-	88.64	34.47	9.93	35.86	166	248	Peak
5700.00	85.05	-	-	76.51	34.47	9.93	35.86	166	248	Average
5725.00	41.83	-26.47	68.30	33.24	34.51	9.92	35.84	166	248	Average
5725.00	56.82	-31.48	88.30	48.23	34.51	9.92	35.84	166	248	Peak
8264.00	53.98	-20.02	74.00	41.91	35.25	10.92	34.10	100	126	Peak
8264.00	40.21	-13.79	54.00	28.14	35.25	10.92	34.10	100	126	Average



Test Mode :	Mode 18	Temperature :	26~27°C
Test Channel :	140	Relative Humidity :	49~53%
Test Engineer :	Cona Huang	Polarization :	Vertical
Remark :	1. 5700 MHz is Fundamental Signals which can be ignored. 2. 5470 MHz and 5725 MHz are not within a restricted band.		

Frequency (MHz)	Level (dBuV/m)	Over Limit (dB)	Limit Line (dBuV/m)	Read Level (dBuV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
30.00	36.06	-3.94	40.00	47.48	19.51	0.53	31.46	102	31	Peak
55.38	32.83	-7.17	40.00	56.70	6.95	0.73	31.55	-	-	Peak
185.25	26.55	-16.95	43.50	47.83	8.98	1.26	31.52	-	-	Peak
438.60	18.92	-27.08	46.00	30.86	16.91	2.27	31.12	-	-	Peak
603.80	24.33	-21.67	46.00	32.45	20.10	2.70	30.92	-	-	Peak
858.60	26.41	-19.59	46.00	31.07	22.78	3.28	30.72	-	-	Peak
5470.00	49.20	-39.10	88.30	40.93	34.17	9.94	35.84	111	45	Peak
5470.00	37.61	-30.69	68.30	29.34	34.17	9.94	35.84	111	45	Average
5700.00	100.38	-	-	91.84	34.47	9.93	35.86	111	45	Peak
5700.00	87.99	-	-	79.45	34.47	9.93	35.86	111	45	Average
5725.00	43.13	-25.17	68.30	34.54	34.51	9.92	35.84	111	45	Average
5725.00	58.71	-29.59	88.30	50.12	34.51	9.92	35.84	111	45	Peak
8378.00	54.27	-19.73	74.00	42.19	35.22	10.95	34.09	100	182	Peak
8378.00	40.11	-13.89	54.00	28.03	35.22	10.95	34.09	100	182	Average



Test Mode :	Mode 19	Temperature :	26~27°C
Test Channel :	36	Relative Humidity :	49~53%
Test Engineer :	Cona Huang	Polarization :	Horizontal
Remark :	5180 MHz is Fundamental Signals which can be ignored.		

Frequency (MHz)	Level (dBuV/m)	Over Limit (dB)	Limit Line (dBuV/m)	Read Level (dBuV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
30.00	24.34	-15.66	40.00	35.76	19.51	0.53	31.46	108	224	Peak
94.26	22.36	-21.14	43.50	43.46	9.46	0.97	31.53	-	-	Peak
148.53	23.97	-19.53	43.50	43.03	11.29	1.21	31.56	-	-	Peak
349.00	21.67	-24.33	46.00	36.22	14.77	1.97	31.29	-	-	Peak
626.90	23.13	-22.87	46.00	30.98	20.27	2.77	30.89	-	-	Peak
794.90	24.99	-21.01	46.00	30.39	22.15	3.13	30.68	-	-	Peak
5150.00	39.14	-14.86	54.00	30.46	33.92	9.41	34.65	100	11	Average
5150.00	52.27	-21.73	74.00	43.59	33.92	9.41	34.65	100	11	Peak
5180.00	75.59	-	-	66.96	33.95	9.45	34.77	100	11	Average
5180.00	99.18	-	-	90.55	33.95	9.45	34.77	100	11	Peak
5350.00	50.14	-23.86	74.00	41.72	34.08	9.74	35.40	100	11	Peak
5350.00	38.51	-15.49	54.00	30.09	34.08	9.74	35.40	100	11	Average
8224.00	53.86	-20.14	74.00	41.81	35.26	10.90	34.11	100	130	Peak
8224.00	40.10	-13.90	54.00	28.05	35.26	10.90	34.11	100	130	Average



Test Mode :	Mode 19	Temperature :	26~27°C
Test Channel :	36	Relative Humidity :	49~53%
Test Engineer :	Cona Huang	Polarization :	Vertical
Remark :	5180 MHz is Fundamental Signals which can be ignored.		

Frequency (MHz)	Level (dBuV/m)	Over Limit (dB)	Limit Line (dBuV/m)	Read Level (dBuV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
30.00	36.24	-3.76	40.00	47.66	19.51	0.53	31.46	100	164	Peak
55.65	32.41	-7.59	40.00	56.28	6.95	0.73	31.55	-	-	Peak
185.25	25.44	-18.06	43.50	46.72	8.98	1.26	31.52	-	-	Peak
447.70	19.43	-26.57	46.00	31.12	17.11	2.30	31.10	-	-	Peak
640.20	23.29	-22.71	46.00	30.98	20.38	2.81	30.88	-	-	Peak
817.30	25.09	-20.91	46.00	30.21	22.39	3.19	30.70	-	-	Peak
5150.00	40.14	-13.86	54.00	31.46	33.92	9.41	34.65	100	50	Average
5150.00	58.92	-15.08	74.00	50.24	33.92	9.41	34.65	100	50	Peak
5180.00	79.63	-	-	71.00	33.95	9.45	34.77	100	50	Average
5180.00	105.62	-	-	96.99	33.95	9.45	34.77	100	50	Peak
5350.00	51.62	-22.38	74.00	43.20	34.08	9.74	35.40	100	50	Peak
5350.00	39.08	-14.92	54.00	30.66	34.08	9.74	35.40	100	50	Average
8166.00	52.75	-21.25	74.00	40.71	35.27	10.88	34.11	100	134	Peak
8166.00	40.30	-13.70	54.00	28.26	35.27	10.88	34.11	100	134	Average

3.8 Peak Excursion Ratio Measurement

3.8.1 Limit of Peak Excursion Ratio

The ratio of the peak excursion of the modulation envelope (measured using a peak hold function) to the maximum conducted output power (measured as specified above) shall not exceed 13 dB across any 1 MHz bandwidth or the emission bandwidth whichever is less.

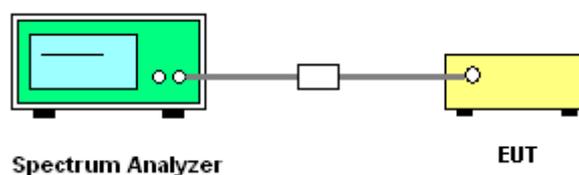
3.8.2 Measuring Instruments

See list of measuring instruments of this test report.

3.8.3 Test Procedures

1. The transmitter output is connected to the spectrum analyzer.
2. The resolution bandwidth is set to and maintained at 1 MHz. The video bandwidth is set to 3 MHz.
3. Trace A is set peak detector and to Max Hold, then to View. Then the detector is readjusted to sample detector, max hold to run for 60 seconds, and the signal under this measurement condition is captured in Trace B in Accordance with the method 3 of DA-02-2138.
4. The difference between the traces is investigated. The marker is placed at the frequency, which shows the largest difference. The amplitude delta between the traces at this frequency is the peak excursion.

3.8.4 Test Setup

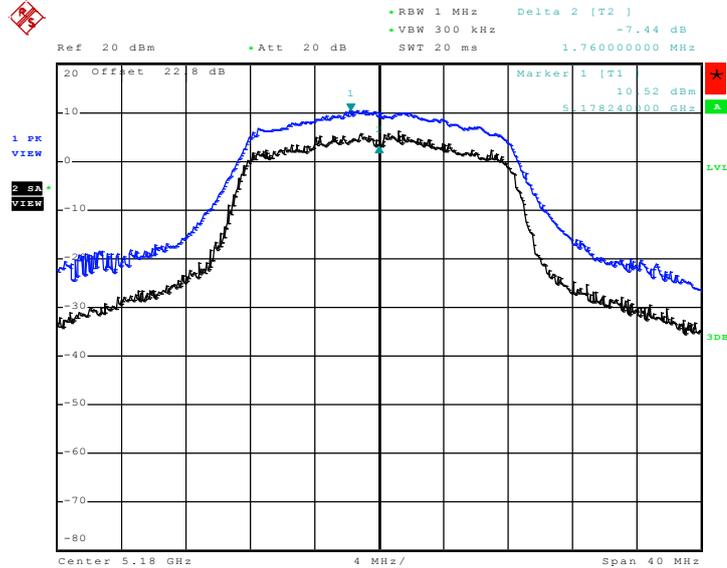




3.8.5 Test Result of Peak Excursion Ratio

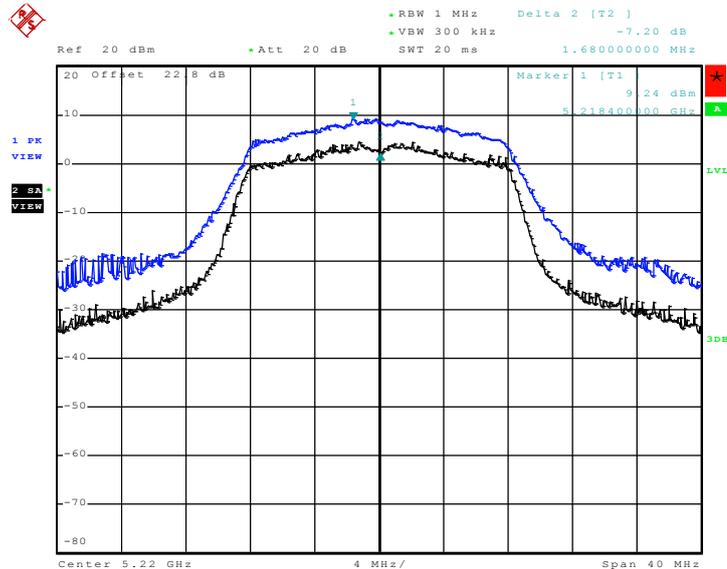
Test Mode :	Mode 1~18	Temperature :	22~24°C
Test Engineer :	Lancelot Chen	Relative Humidity :	61~64%

Mode 1 : Peak Excursion Ratio Plot on 802.11a Channel 36



Date: 13.AUG.2010 07:31:00

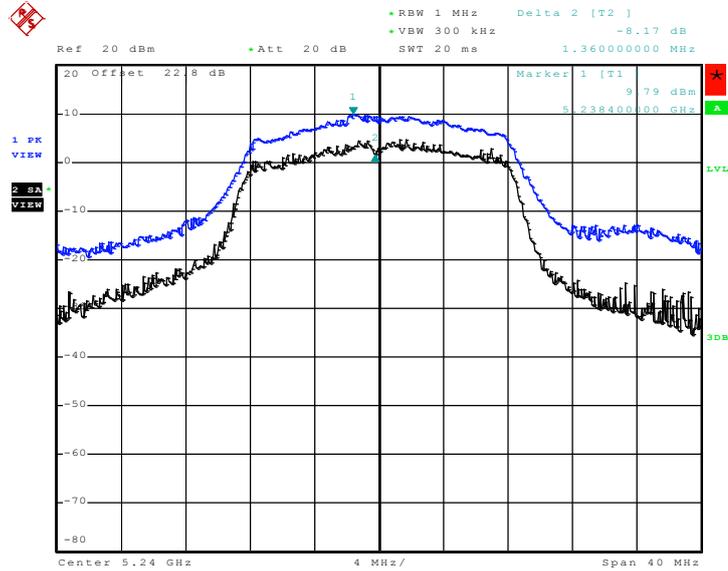
Mode 2 : Peak Excursion Ratio Plot on 802.11a Channel 44



Date: 13.AUG.2010 07:28:46

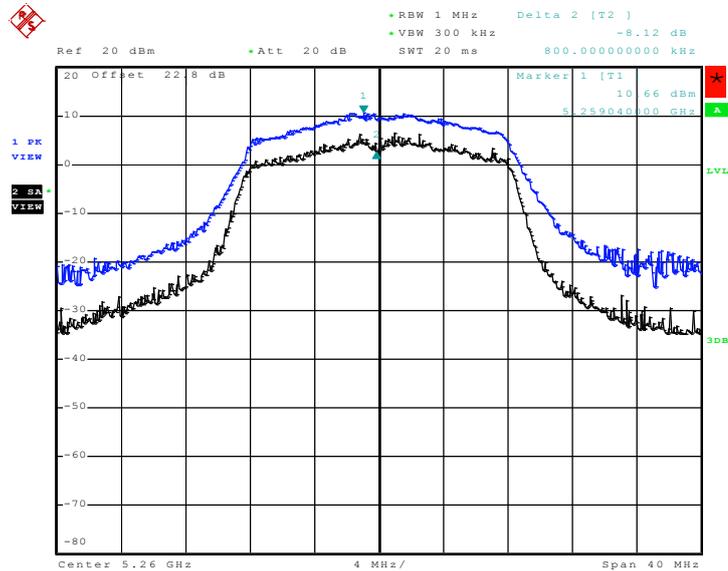


Mode 3 : Peak Excursion Ratio Plot on 802.11a Channel 48



Date: 13.AUG.2010 07:26:19

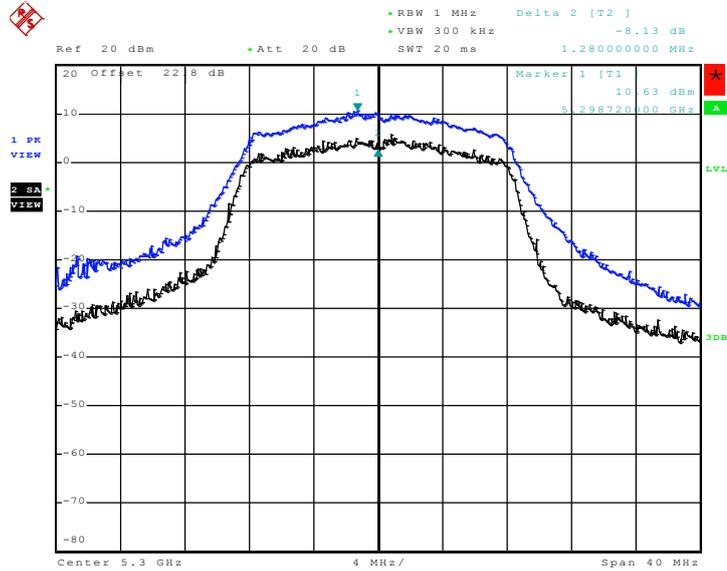
Mode 4 : Peak Excursion Ratio Plot on 802.11a Channel 52



Date: 13.AUG.2010 07:24:04

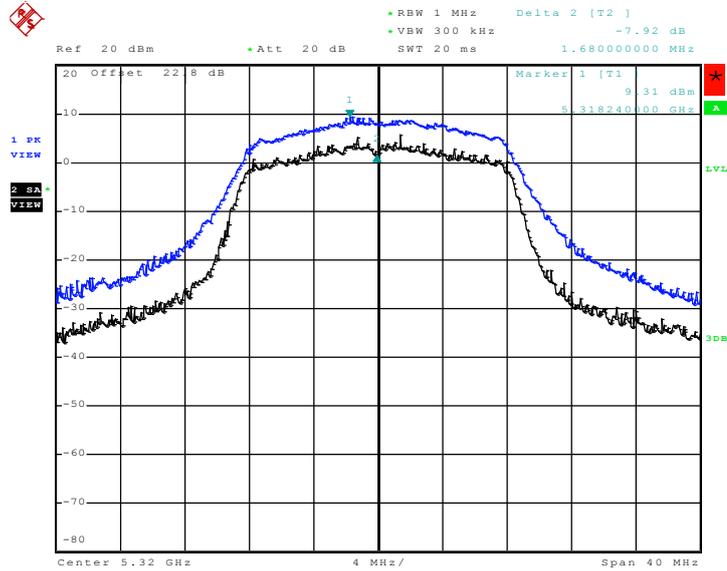


Mode 5 : Peak Excursion Ratio Plot on 802.11a Channel 60



Date: 13.AUG.2010 07:21:49

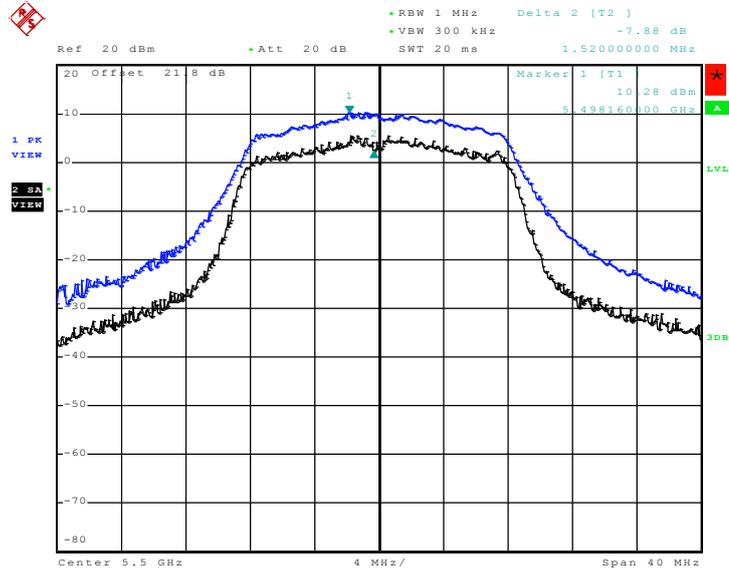
Mode 6 : Peak Excursion Ratio Plot on 802.11a Channel 64



Date: 13.AUG.2010 07:20:05

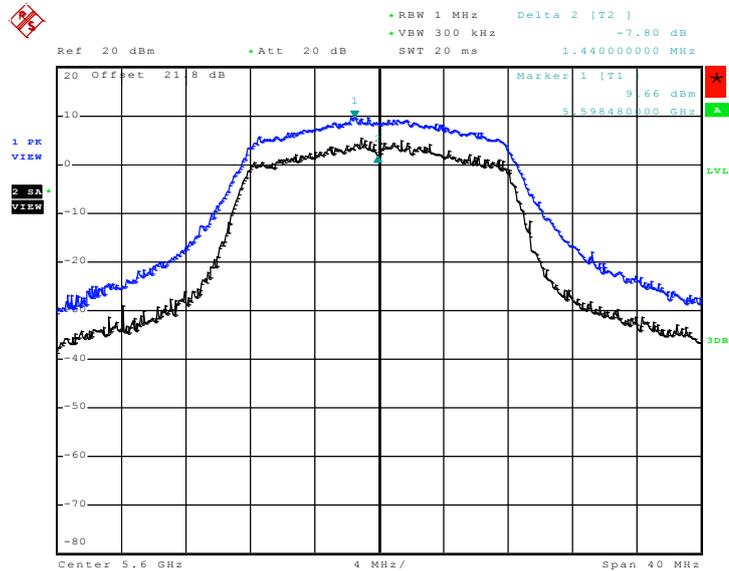


Mode 7 : Peak Excursion Ratio Plot on 802.11a Channel 100



Date: 13.AUG.2010 07:17:45

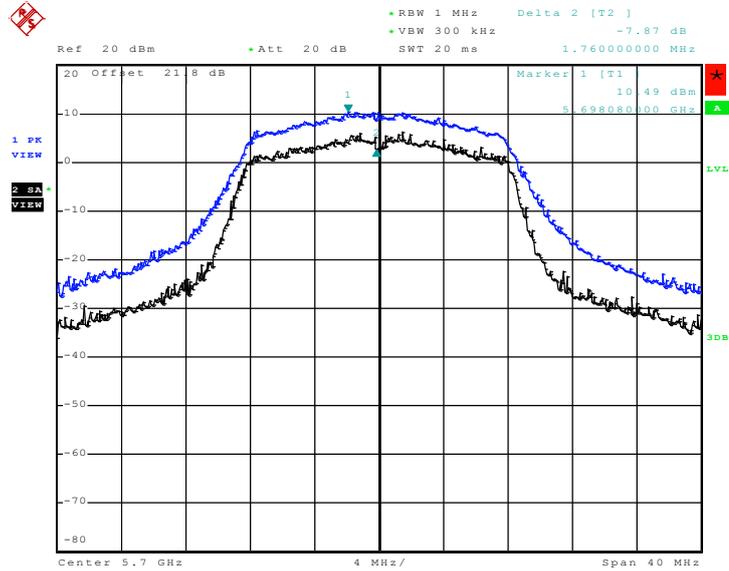
Mode 8 : Peak Excursion Ratio Plot on 802.11a Channel 120



Date: 13.AUG.2010 07:15:29

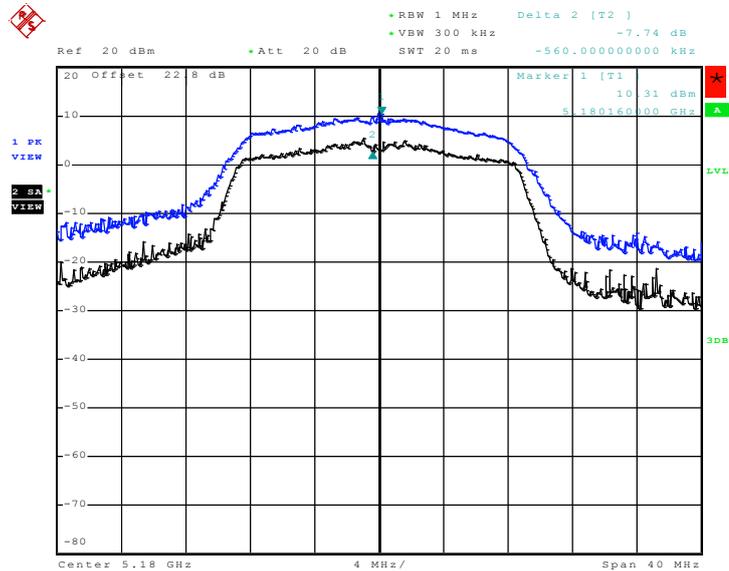


Mode 9 : Peak Excursion Ratio Plot on 802.11a Channel 140



Date: 13.AUG.2010 07:13:01

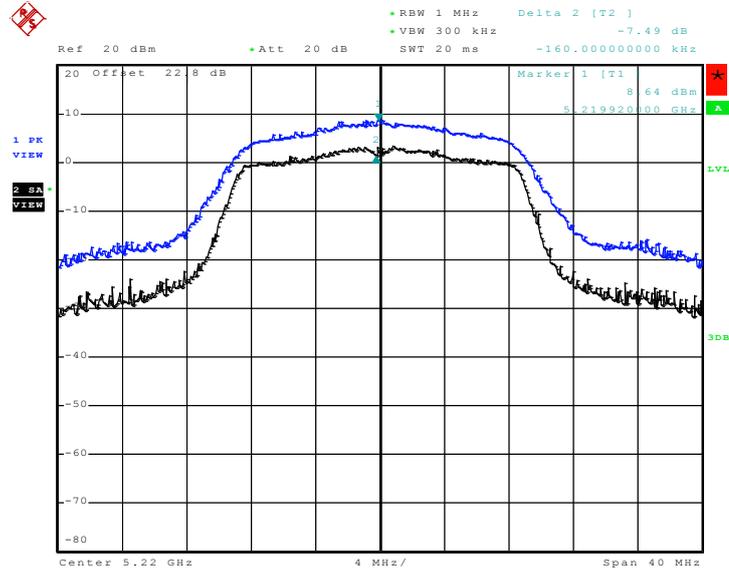
Mode 10 : Peak Excursion Ratio Plot on 802.11n (BW 20MHz) Channel 36



Date: 18.AUG.2010 17:55:16

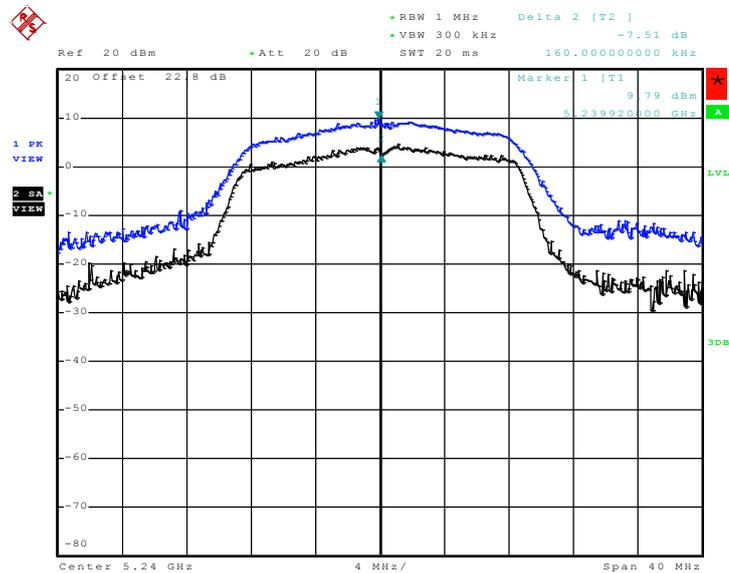


Mode 11 : Peak Excursion Ratio Plot on 802.11n (BW 20MHz) Channel 44



Date: 18.AUG.2010 22:14:48

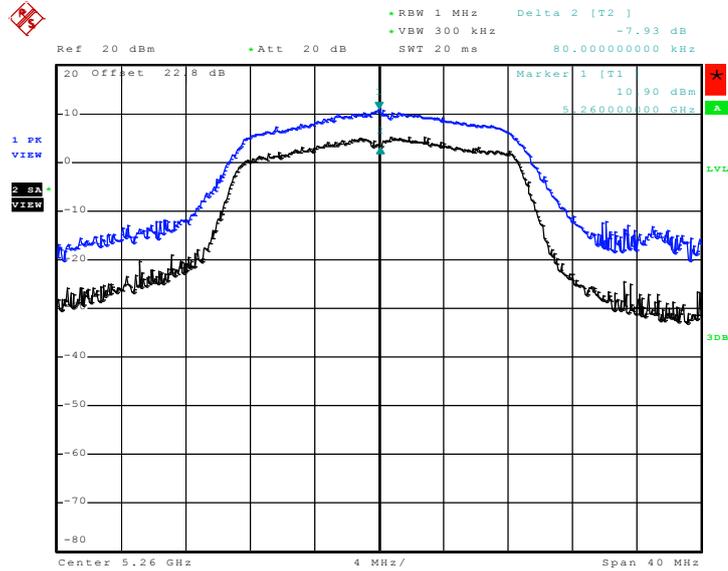
Mode 12 : Peak Excursion Ratio Plot on 802.11n (BW 20MHz) Channel 48



Date: 18.AUG.2010 17:59:35

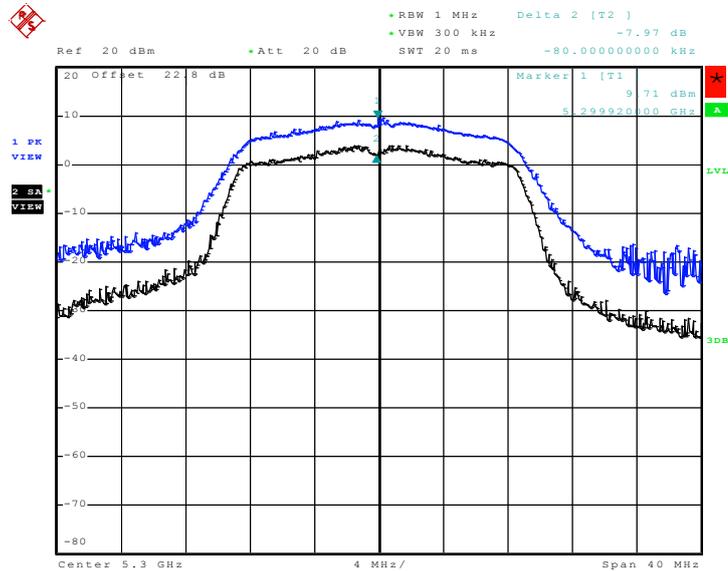


Mode 13 : Peak Excursion Ratio Plot on 802.11n (BW 20MHz) Channel 52



Date: 18.AUG.2010 18:04:04

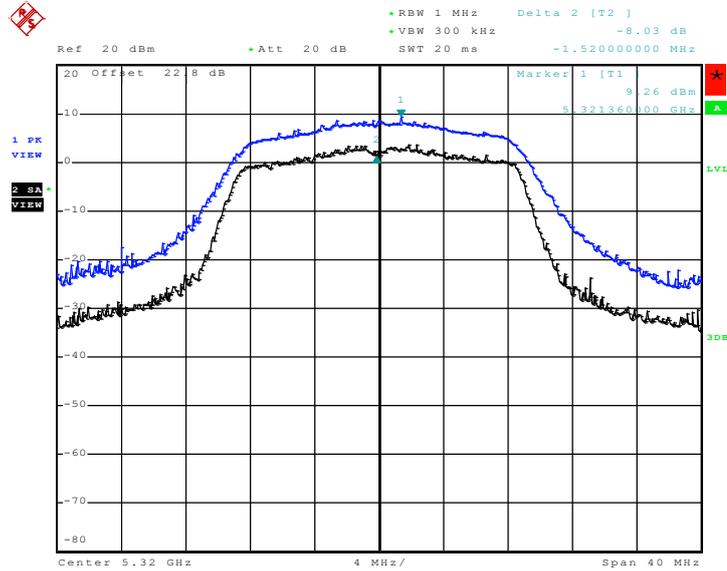
Mode 14 : Peak Excursion Ratio Plot on 802.11n (BW 20MHz) Channel 60



Date: 18.AUG.2010 22:03:47

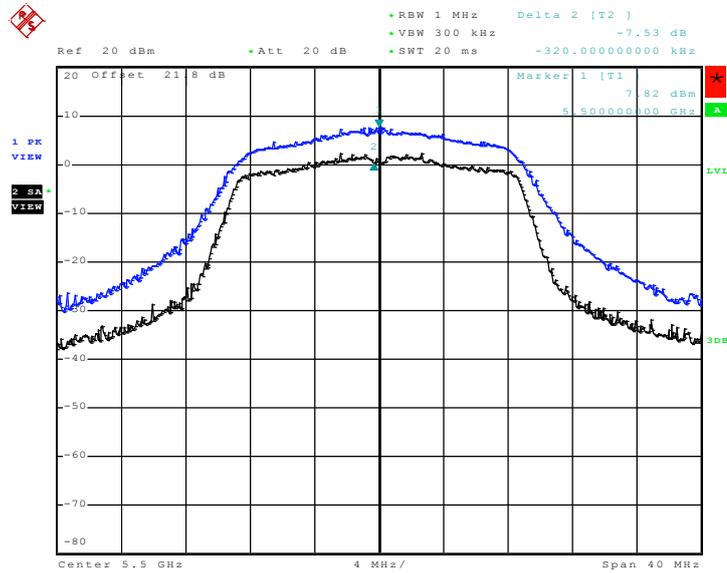


Mode 15 : Peak Excursion Ratio Plot on 802.11n (BW 20MHz) Channel 64



Date: 18.AUG.2010 18:06:34

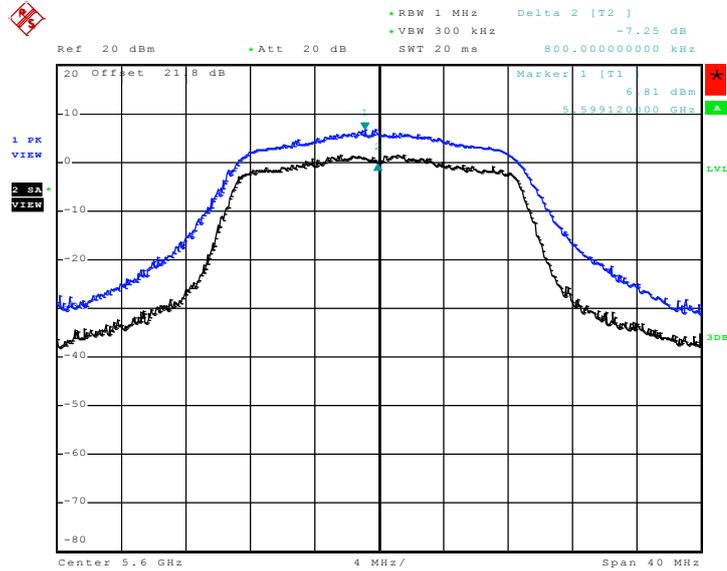
Mode 16 : Peak Excursion Ratio Plot on 802.11n (BW 20MHz) Channel 100



Date: 18.AUG.2010 18:13:42

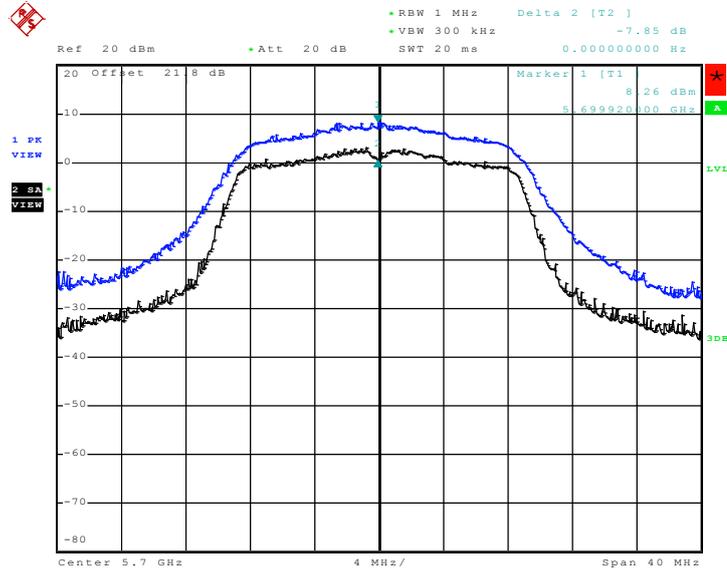


Mode 17 : Peak Excursion Ratio Plot on 802.11n (BW 20MHz) Channel 120



Date: 18.AUG.2010 23:33:36

Mode 18 : Peak Excursion Ratio Plot on 802.11n (BW 20MHz) Channel 140



Date: 18.AUG.2010 18:23:05



3.9 Automatically Discontinue Transmission

3.9.1 Limit of Automatically Discontinue Transmission

The device shall automatically discontinue transmission in case of either absence of information to transmit or operational failure. These provisions are not intended to preclude the transmission of control or signaling information or the use of repetitive codes used by certain digital technologies to complete frame or burst intervals. Applicants shall include in their application for equipment authorization to describe how this requirement is met.

3.9.2 Measuring Instruments

See list of measuring instruments of this test report.

3.9.3 Test Result of Automatically Discontinue Transmission

During no any information transmission, the EUT can automatically discontinue transmission and become standby mode for power saving. The EUT can detect the controlling signal of ACK message transmitting from remote device and verify whether it shall resend or discontinue transmission.

3.10 Frequency Stability Measurement

3.10.1 Limit of Frequency Stability

Manufacturers of U-NII devices are responsible for ensuring frequency stability such that an emission is maintained within the band of operation under all conditions of normal operation as specified in the user's manual.

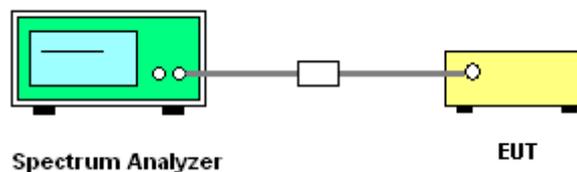
3.10.2 Measuring Instruments

See list of measuring instruments of this test report.

3.10.3 Test Procedures

1. To ensure emission at the band edge is maintained within the authorized band, those values shall be measured by radiation emissions at upper and lower frequency points, and finally compensated by frequency deviation as procedures below.
2. The EUT was operated at the maximum output power, and connected to the spectrum analyzer, which is set to maximum hold function and peak detector. The peak value of the power envelope was measured and noted. The upper and lower frequency points were respectively measured relatively 10dB lower than the measured peak value.
3. The frequency deviation was calculated by adding the upper frequency point and the lower frequency point divided by two. Those detailed values of frequency deviation are provided in table below.

3.10.4 Test Setup





3.10.5 Test Result of Frequency Stability

Test Mode :	Mode 1~9	Temperature :	22~24°C
Test Engineer :	Lancelot Chen	Relative Humidity :	61~64%

Channel	Frequency (MHz)	802.11a		
		Low Frequency (Fl)	High Frequency (Fh)	Frequency Stability (ppm)
36	5180	5171.68	5188.20	-11.58
44	5220	5211.72	5228.24	-3.83
48	5240	5231.72	5248.24	-3.82
52	5260	5251.72	5268.24	-3.80
60	5300	5291.68	5308.24	-7.55
64	5320	5311.68	5328.24	-7.52
100	5500	5491.72	5508.20	-7.27
120	5600	5591.72	5608.24	-3.57
140	5700	5691.68	5708.20	-10.53

Test Mode :	Mode 10~18	Temperature :	22~24°C
Test Engineer :	Lancelot Chen	Relative Humidity :	61~64%

Channel	Frequency (MHz)	802.11n (BW 20MHz)		
		Low Frequency (Fl)	High Frequency (Fh)	Frequency Stability (ppm)
36	5180	5171.16	5188.76	-7.72
44	5220	5211.16	5228.76	-7.66
48	5240	5231.16	5248.76	-7.63
52	5260	5251.16	5268.76	-7.60
60	5300	5291.16	5308.76	-7.55
64	5320	5311.16	5328.76	-7.52
100	5500	5491.16	5508.76	-7.27
120	5600	5591.16	5608.76	-7.14
140	5700	5691.16	5708.76	-7.02



3.11 Antenna Requirements

3.11.1 Standard Applicable

According to FCC 47 CFR Section 15.407(a)(1)(2), if transmitting antenna directional gain is greater than 6 dBi, both the peak transmit power and the peak power spectral density shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi.

3.11.2 Antenna Connected Construction

The antenna type used in this product is PIFA Antenna and it is considered to meet antenna requirement of FCC.

3.11.3 Antenna Gain

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

4 List of Measuring Equipments

Instrument	Manufacturer	Model No.	Serial No.	Characteristics	Calibration Date	Due Date	Remark
Spectrum Analyzer	R&S	FSP30	101329	9kHz~30GHz	Apr. 26, 2010	Apr. 25, 2011	Conducted (TH02-HY)
Power Meter	Anritsu	ML2495A	0932001	N/A	Sep. 17, 2009	Sep. 16, 2010	Conducted (TH02-HY)
Power Sensor	Anritsu	MA2411B	0846202	N/A	Sep. 10, 2009	Sep. 09, 2010	Conducted (TH02-HY)
EMI Test Receive	R&S	ESU	100211	9KHz – 2.75GHz	May 28, 2010	May 27, 2011	Conduction (CO05-HY)
Two-LISN	R&S	ENV216	11-100081	9kHz~30MHz	Nov. 30, 2009	Nov. 29, 2010	Conduction (CO05-HY)
Two-LISN	R&S	ENV216	11-100080	9kHz~30MHz	Nov. 23, 2009	Nov. 22, 2010	Conduction (CO05-HY)
AC Power Source	APC	APC-1000W	N/A	N/A	N/A	N/A	Conduction (CO05-HY)
System Simulator	R&S	CMU200	105934	N/A	Nov. 11, 2008	Nov. 10, 2010	Conduction (CO05-HY)
GPS Station	T&E	GS-50	N/A	N/A	N/A	N/A	Conduction (CO05-HY)
Bilog Antenna	SCHAFFNER	CBL6111C	2726	30MHz ~ 1GHz	Oct. 31, 2009	Oct. 30, 2010	Radiation (03CH07-HY)
Spectrum Analyzer	R&S	FSP	101067	9KHz ~ 30GHz	Dec. 04, 2009	Dec. 03, 2010	Radiation (03CH07-HY)
Double Ridge Horn Antenna	ESCO	3117	00075962	1GHz ~ 18GHz	Aug. 19, 2010	Aug. 18, 2011	Radiation (03CH07-HY)
SHF-EHF Horn Antenna	SCHWARZBECK	BBHA 9170	BBHA9170251	15GHz- 40GHz	Oct. 14, 2009	Oct. 13, 2010	Radiation (03CH07-HY)
Pre Amplifier	Agilent	8449B	3008A02362	1GHz~ 26.5GHz	Dec.09,2009	Dec. 08, 2010	Radiation (03CH07-HY)
Pre Amplifier	COM-POWER	PA-103A	161241	10-1000MHz.32 dB.GAIN	Mar. 27, 2010	Mar. 26, 2011	Radiation (03CH07-HY)
Loop Antenna	R&S	HFH2-Z2	860004/001	9 kHz~30 MHz	Jul. 29, 2010	Jul. 28, 2011	Radiation (03CH07-HY)

5 Uncertainty of Evaluation

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

Contribution	Uncertainty of X_i		$u(X_i)$
	dB	Probability Distribution	
Receiver Reading	0.10	Normal (k=2)	0.05
Cable Loss	0.10	Normal (k=2)	0.05
AMN Insertion Loss	2.50	Rectangular	0.63
Receiver Specification	1.50	Rectangular	0.43
Site Imperfection	1.39	Rectangular	0.80
Mismatch	+0.34 / -0.35	U-Shape	0.24
Combined Standard Uncertainty $U_c(y)$	1.13		
Measuring Uncertainty for a Level of Confidence of 95% ($U = 2U_c(y)$)	2.26		

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

Contribution	Uncertainty of X_i		$u(X_i)$
	dB	Probability Distribution	
Receiver Reading	0.41	Normal (k=2)	0.21
Antenna Factor Calibration	0.83	Normal (k=2)	0.42
Cable Loss Calibration	0.25	Normal (k=2)	0.13
Pre-Amplifier Gain Calibration	0.27	Normal (k=2)	0.14
RCV/SPA Specification	2.50	Rectangular	0.72
Antenna Factor Interpolation for Frequency	1.00	Rectangular	0.29
Site Imperfection	1.43	Rectangular	0.83
Mismatch	+0.39 / -0.41	U-Shape	0.28
Combined Standard Uncertainty $U_c(y)$	1.27		
Measuring Uncertainty for a Level of Confidence of 95% ($U = 2U_c(y)$)	2.54		



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

Contribution	Uncertainty of X_i		$u(X_i)$	C_i	$C_i * u(X_i)$
	dB	Probability Distribution			
Receiver Reading	±0.10	Normal (k=2)	0.10	1	0.10
Antenna Factor Calibration	±1.70	Normal (k=2)	0.85	1	0.85
Cable Loss Calibration	±0.50	Normal (k=2)	0.25	1	0.25
Receiver Correction	±2.00	Rectangular	1.15	1	1.15
Antenna Factor Directional	±1.50	Rectangular	0.87	1	0.87
Site Imperfection	±2.80	Triangular	1.14	1	1.14
Mismatch Receiver VSWR $\Gamma_1 = 0.197$ Antenna VSWR $\Gamma_2 = 0.194$ Uncertainty = $20\text{Log}(1-\Gamma_1*\Gamma_2)$	+0.34 / -0.35	U-Shape	0.244	1	0.244
Combined Standard Uncertainty $U_c(y)$	2.36				
Measuring Uncertainty for a Level of Confidence of 95% ($U = 2U_c(y)$)	4.72				