

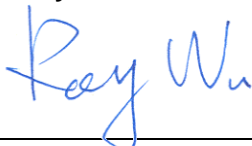
FCC RF Test Report

APPLICANT : Hewlett-Packard Company, Palm GBU
EQUIPMENT : Phone
BRAND NAME : HP
MODEL NAME : HSTNH-F30CN
FCC ID : B94HHF30CN
STANDARD : FCC Part 15 Subpart E
CLASSIFICATION : Unlicensed National Information Infrastructure (UNII)

The product was received on Feb. 14, 2011 and completely tested on Mar. 18, 2011. 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:



Roy Wu / 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	$\leq 17, 24, 30$ dBm (depend on band)	Pass	-
3.3	15.407(a)	A9.2	Power Spectral Density	$\leq 4, 11, 17$ dBm (depend on band)	Pass	-
3.4	15.407(b)	A9.3	Frequency Band Edges	$\leq -17, -27$ dBm (depend on band)&15.209(a)	Pass	-
3.5	15.407(b)	A9.3	Spurious Emission	EIRP < -27 dBm/MHz	Pass	-
3.6	15.207	Gen 7.2.2	AC Conducted Emission	15.207(a)	Pass	Under limit 4.5 dB at 0.62 MHz
3.7	15.407(b)	A9.3	Transmitter Radiated Emission	$\leq -17, -27$ dBm (depend on band)&15.209(a)	Pass	Under limit 0.57 dB at 5725 MHz
3.8	15.407(b)	A9.3	Peak Excursion Ratio	≤ 13 dB	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

Hewlett-Packard Company, Palm GBU
950 W Maude Avenue, Sunnyvale, CA 94085

1.2 Manufacturer

Hewlett-Packard Company, Palm GBU
950 W Maude Avenue, Sunnyvale, CA 94085

1.3 Feature of Equipment Under Test

Product Feature & Specification	
Equipment	Phone
Brand Name	HP
Model Name	HSTNH-F30CN
FCC ID	B94HHF30CN
Tx/Rx Frequency Range	5150 MHz ~ 5250 MHz 5250 MHz ~ 5350 MHz 5470 MHz ~ 5725 MHz
Maximum Output Power to Antenna	<p><5150 MHz ~ 5250 MHz> 802.11a : 14.70 dBm / 0.03 W 802.11n (BW 20MHz) : 14.54 dBm / 0.02 W 802.11n (BW 40MHz) : 15.98 dBm / 0.04 W</p> <p><5250 MHz ~ 5350 MHz> 802.11a : 16.20 dBm / 0.04 W 802.11n (BW 20MHz) : 16.53 dBm / 0.04 W 802.11n (BW 40MHz) : 16.24 dBm / 0.04 W</p> <p><5470 MHz ~ 5725 MHz> 802.11a : 16.26 dBm / 0.04 W 802.11n (BW 20MHz) : 16.49 dBm / 0.04 W 802.11n (BW 40MHz) : 16.54 dBm / 0.04 W</p>
Antenna Type	PIFA Antenna with gain 4.5 dBi
HW Version	D1
SW Version	WebOS 2.3
Type of Modulation	OFDM (BPSK / QPSK / 16QAM / 64QAM)
EUT Stage	Identical Prototype

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.

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	722060/4086B-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 8

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.	WLAN AP	D-Link	DIR-628	KA2DIR628A2	N/A	Unshielded, 1.8 m
3.	Notebook	DELL	Vostro 1510	FCC DoC	N/A	AC I/P: Unshielded, 1.2 m DC O/P: Shielded, 1.8 m
4.	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	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	132	5660	136	5680	140	5700

802.11n (BW 40MHz) Carrier Frequency Channel							
Channel	Freq. (MHz)	Channel	Freq. (MHz)	Channel	Freq. (MHz)	Channel	Freq. (MHz)
38	5190	46	5230	54	5270	62	5310
102	5510	110	5550	118	5590	134	5670

2.2 RF Power

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

Channel	Frequency	5GHz 802.11a RF Power (dBm)							
		Data Rate							
		6 Mbps	9 Mbps	12 Mbps	18 Mbps	24 Mbps	36 Mbps	48 Mbps	54 Mbps
CH 36	5180 MHz	14.56	-	-	-	-	-	-	-
CH 44	5220 MHz	12.88	-	-	-	-	-	-	-
CH 48	5240 MHz	14.70	-	-	-	-	-	-	-
CH 52	5260 MHz	15.89	-	-	-	-	-	-	-
CH 60	5300 MHz	16.20	15.88	15.82	15.83	15.90	15.86	15.85	16.10
CH 64	5320 MHz	15.46	-	-	-	-	-	-	-
CH 100	5500 MHz	15.97	-	-	-	-	-	-	-
CH 104	5520 MHz	16.26	-	-	-	-	-	-	-
CH 116	5580 MHz	15.52	-	-	-	-	-	-	-
CH 124	5620 MHz	15.76	-	-	-	-	-	-	-
CH 136	5680 MHz	15.46	-	-	-	-	-	-	-
CH 140	5700 MHz	15.62	-	-	-	-	-	-	-
CH 161	5805 MHz	15.74	-	-	-	-	-	-	-

Channel	Frequency	5GHz 802.11n (BW 20MHz) RF Power (dBm)							
		Data Rate							
		M0	M1	M2	M3	M4	M5	M6	M7
CH 36	5180 MHz	14.38	-	-	-	-	-	-	-
CH 44	5220 MHz	12.80	-	-	-	-	-	-	-
CH 48	5240 MHz	14.54	-	-	-	-	-	-	-
CH 52	5260 MHz	15.90	-	-	-	-	-	-	-
CH 60	5300 MHz	16.52	-	-	-	-	-	-	-
CH 64	5320 MHz	16.53	16.44	16.44	15.32	15.09	14.72	14.76	14.67
CH 100	5500 MHz	16.49	-	-	-	-	-	-	-
CH 104	5520 MHz	16.08	-	-	-	-	-	-	-
CH 116	5580 MHz	15.90	-	-	-	-	-	-	-
CH 124	5620 MHz	16.28	-	-	-	-	-	-	-
CH 136	5680 MHz	15.52	-	-	-	-	-	-	-
CH 140	5700 MHz	16.36	-	-	-	-	-	-	-
CH 161	5805 MHz	15.71	-	-	-	-	-	-	-



Channel	Frequency	5GHz 802.11n (BW 40MHz) RF Power (dBm)							
		Data Rate							
		M0	M1	M2	M3	M4	M5	M6	M7
CH 38	5190 MHz	14.75	-	-	-	-	-	-	-
CH 46	5230 MHz	15.98	-	-	-	-	-	-	-
CH 54	5270 MHz	16.24	-	-	-	-	-	-	-
CH 62	5310 MHz	13.80	-	-	-	-	-	-	-
CH 102	5510 MHz	15.85	-	-	-	-	-	-	-
CH 110	5550 MHz	16.19	-	-	-	-	-	-	-
CH 118	5590 MHz	16.18	-	-	-	-	-	-	-
CH 134	5670 MHz	16.54	16.19	16.08	16.01	16.03	15.76	15.54	15.45

Remark:

1. The data rates of WLAN 802.11a/n were set in 6Mbps for 802.11a, M0 for 802.11n (BW 20MHz), and M0 for 802.11n (BW 40MHz) for all the test cases due to the highest RF output power.
2. The EUT is programmed to transmit signals continuously for all testing.



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).

Pre-scanned tests were conducted to determine the final configuration from all possible combinations.

The following tables are showing the test modes as the worst cases and recorded in this report.

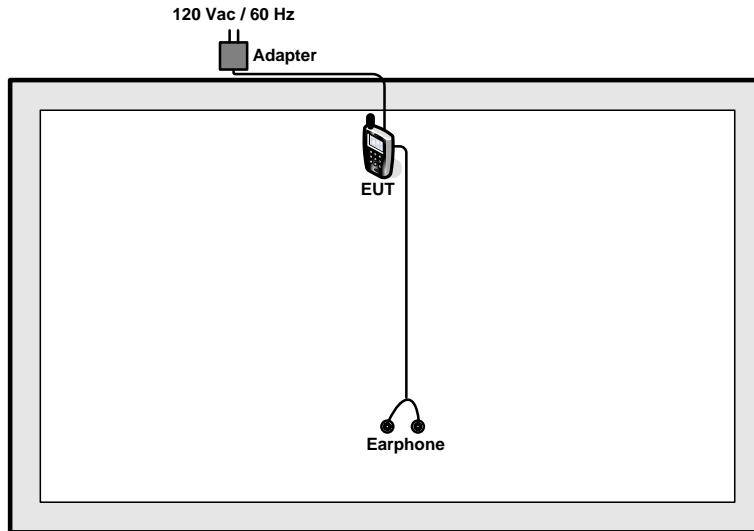
Test Cases	
Test Item	802.11a/n (Modulation : OFDM)
Conducted TCs	<ul style="list-style-type: none"> ■ Mode 1: 802.11a_CH36_5180 MHz ■ Mode 2: 802.11a_CH44_5220 MHz ■ Mode 3: 802.11a_CH48_5240 MHz ■ Mode 4: 802.11a_CH52_5260 MHz ■ Mode 5: 802.11a_CH60_5300 MHz ■ Mode 6: 802.11a_CH64_5320 MHz ■ Mode 7: 802.11a_CH100_5500 MHz ■ Mode 8: 802.11a_CH116_5580 MHz ■ Mode 9: 802.11a_CH140_5700 MHz ■ Mode 10: 802.11n_CH36_5180 MHz (BW 20M) ■ Mode 11: 802.11n_CH44_5220 MHz (BW 20M) ■ Mode 12: 802.11n_CH48_5240 MHz (BW 20M) ■ Mode 13: 802.11n_CH52_5260 MHz (BW 20M) ■ Mode 14: 802.11n_CH60_5300 MHz (BW 20M) ■ Mode 15: 802.11n_CH64_5320 MHz (BW 20M) ■ Mode 16: 802.11n_CH100_5500 MHz (BW 20M) ■ Mode 17: 802.11n_CH116_5580 MHz (BW 20M) ■ Mode 18: 802.11n_CH140_5700 MHz (BW 20M) ■ Mode 19: 802.11n_CH38_5190 MHz (BW 40M) ■ Mode 20: 802.11n_CH46_5230 MHz (BW 40M) ■ Mode 21: 802.11n_CH54_5270 MHz (BW 40M) ■ Mode 22: 802.11n_CH62_5310 MHz (BW 40M) ■ Mode 23: 802.11n_CH102_5510 MHz (BW 40M) ■ Mode 24: 802.11n_CH110_5550 MHz (BW 40M) ■ Mode 25: 802.11n_CH118_5590 MHz (BW 40M) ■ Mode 26: 802.11n_CH134_5670 MHz (BW 40M)



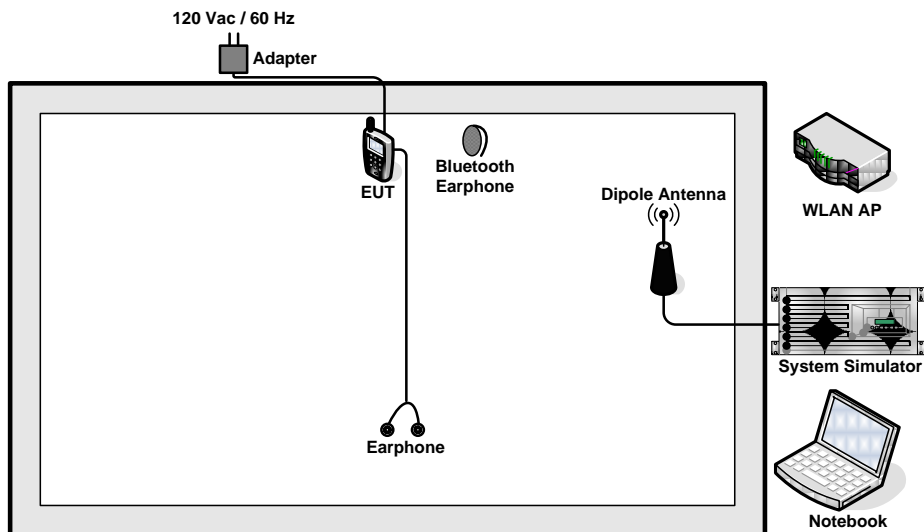
Test Cases	
Test Item	802.11a/n(Modulation : OFDM)
Radiated TCs	<ul style="list-style-type: none"> ■ Mode 1: 802.11a_CH36_5180 MHz + TC ■ Mode 2: 802.11a_CH44_5220 MHz + TC ■ Mode 3: 802.11a_CH48_5240 MHz + TC ■ Mode 4: 802.11a_CH52_5260 MHz + TC ■ Mode 5: 802.11a_CH60_5300 MHz + TC ■ Mode 6: 802.11a_CH64_5320 MHz + TC ■ Mode 7: 802.11a_CH100_5500 MHz + TC ■ Mode 8: 802.11a_CH116_5580 MHz + TC ■ Mode 9: 802.11a_CH140_5700 MHz + TC ■ Mode 10: 802.11n_CH36_5180 MHz (BW 20M) + TC ■ Mode 11: 802.11n_CH44_5220 MHz (BW 20M) + TC ■ Mode 12: 802.11n_CH48_5240 MHz (BW 20M) + TC ■ Mode 13: 802.11n_CH52_5260 MHz (BW 20M) + TC ■ Mode 14: 802.11n_CH60_5300 MHz (BW 20M) + TC ■ Mode 15: 802.11n_CH64_5320 MHz (BW 20M) + TC ■ Mode 16: 802.11n_CH100_5500 MHz (BW 20M) + TC ■ Mode 17: 802.11n_CH116_5580 MHz (BW 20M) + TC ■ Mode 18: 802.11n_CH140_5700 MHz (BW 20M) + TC ■ Mode 19: 802.11n_CH38_5190 MHz (BW 40M) + TC ■ Mode 20: 802.11n_CH46_5230 MHz (BW 40M) + TC ■ Mode 21: 802.11n_CH54_5270 MHz (BW 40M) + TC ■ Mode 22: 802.11n_CH62_5310 MHz (BW 40M) + TC ■ Mode 23: 802.11n_CH102_5510 MHz (BW 40M) + TC ■ Mode 24: 802.11n_CH118_5590 MHz (BW 40M) + TC ■ Mode 25: 802.11n_CH134_5670 MHz (BW 40M) + TC
AC Conducted Emission	GSM850 Idle + WLAN Link + Bluetooth Link + Earphone + USB Cable 2 (Charging with Adapter 2)
<p>Remark: TC stands for Test Configuration, and consists of earphone, USB Cable 2, and adapter.</p>	

2.4 Connection Diagram of Test System

<WLAN Tx Mode>



<AC Conducted Emission Mode>



2.5 RF Utility

The programmed RF Utility "WiFi", is installed in EUT 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 and 99% Bandwidth Measurement

3.1.1 Limit of 26dB and 99% 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.

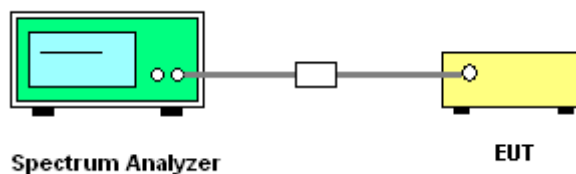
3.1.2 Measuring Instruments

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



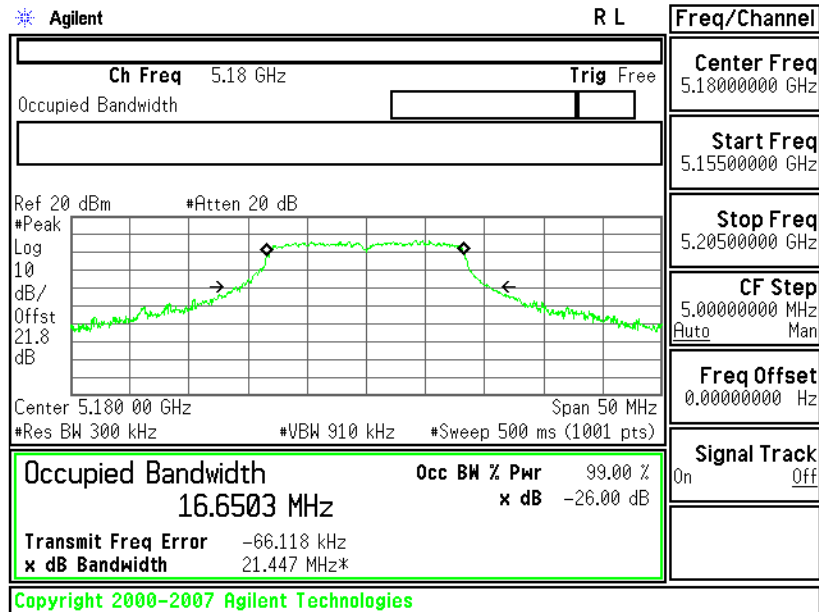


3.1.6 Test Result of 26dB Bandwidth Plots

Test Mode :	Mode 1~9	Temperature :	25~27°C
Test Engineer :	Phoenix Chen	Relative Humidity :	51~54%

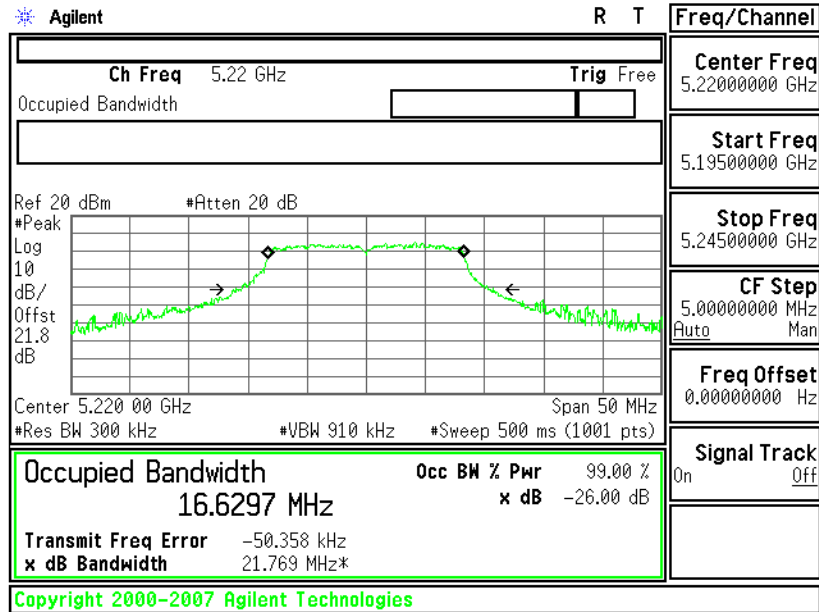
Channel	Frequency (MHz)	802.11a 26dB Bandwidth (MHz)	Pass/Fail
36	5180	21.45	Pass
44	5220	21.77	Pass
48	5240	21.46	Pass
52	5260	21.45	Pass
60	5300	22.37	Pass
64	5320	21.71	Pass
100	5500	21.93	Pass
116	5580	22.54	Pass
140	5700	22.13	Pass

26 dB Bandwidth Plot on 802.11a Channel 36

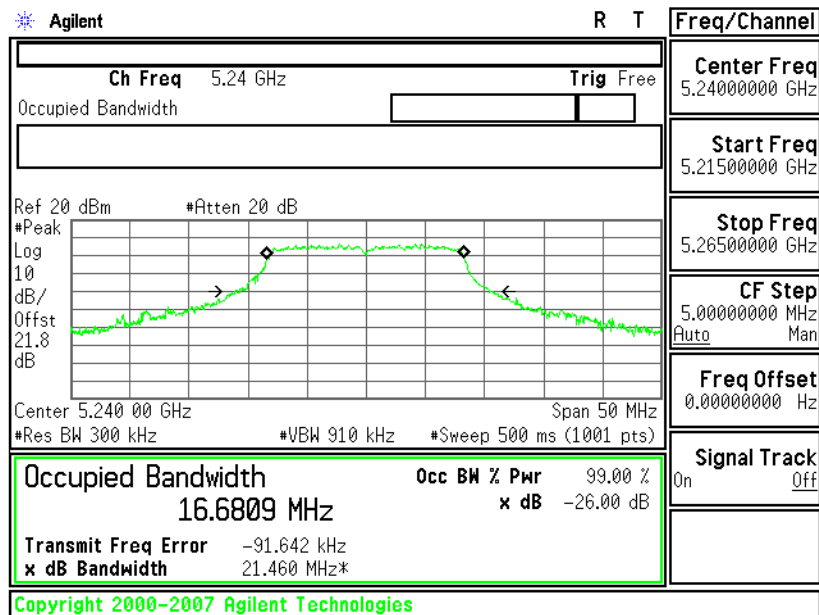




26 dB Bandwidth Plot on 802.11a Channel 44

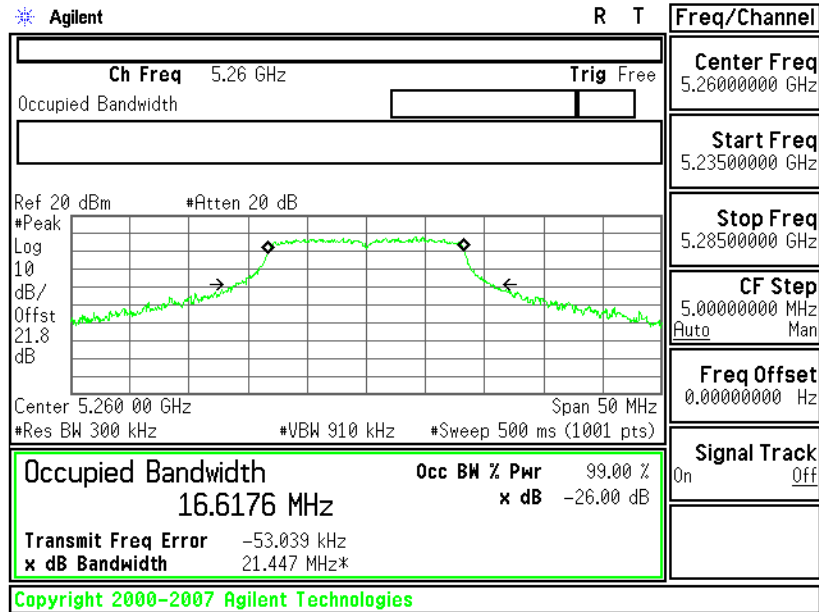


26 dB Bandwidth Plot on 802.11a Channel 48

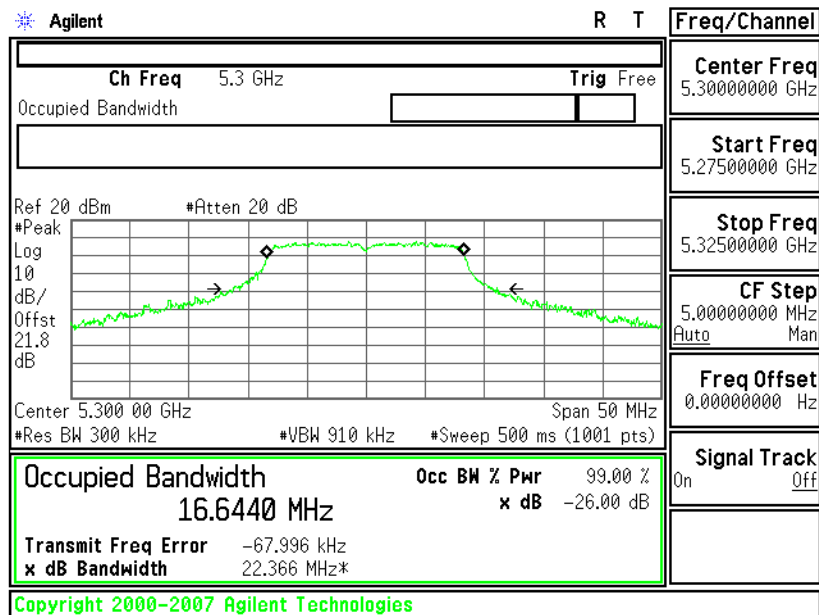




26 dB Bandwidth Plot on 802.11a Channel 52

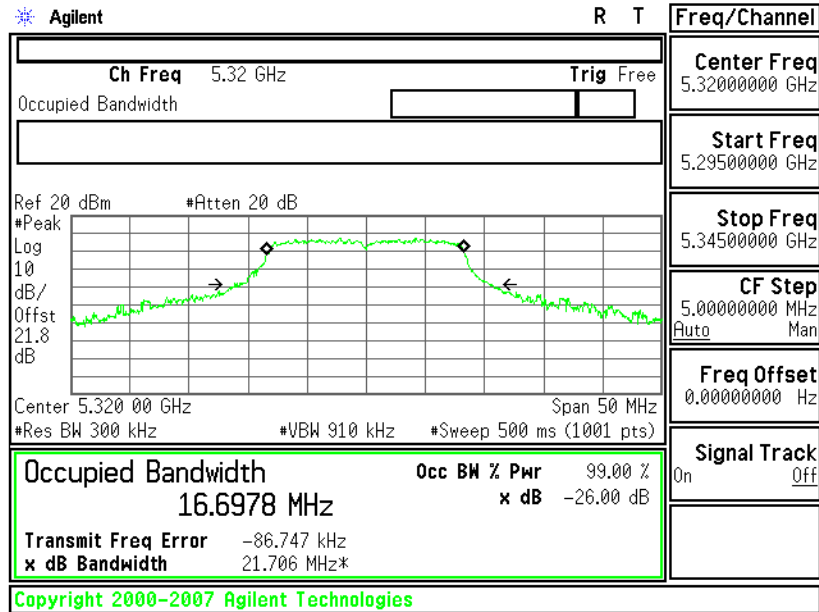


26 dB Bandwidth Plot on 802.11a Channel 60

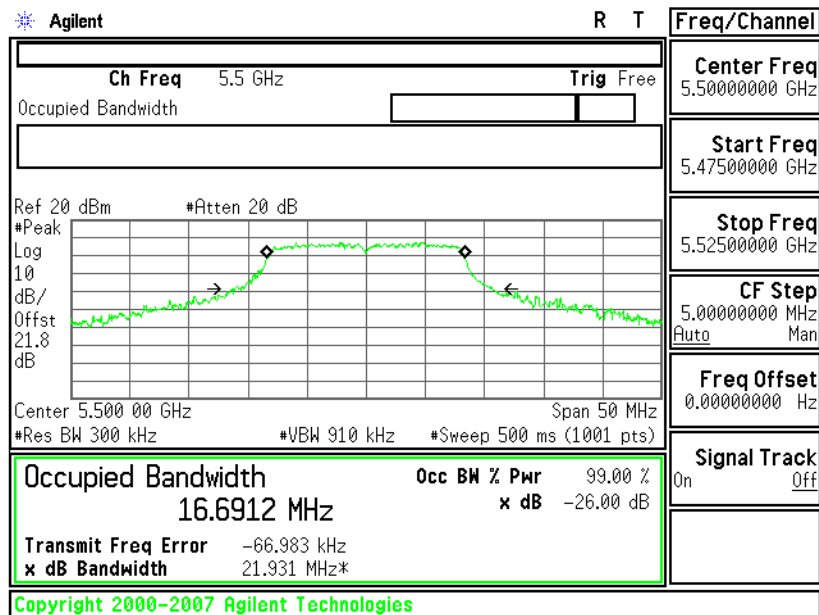




26 dB Bandwidth Plot on 802.11a Channel 64

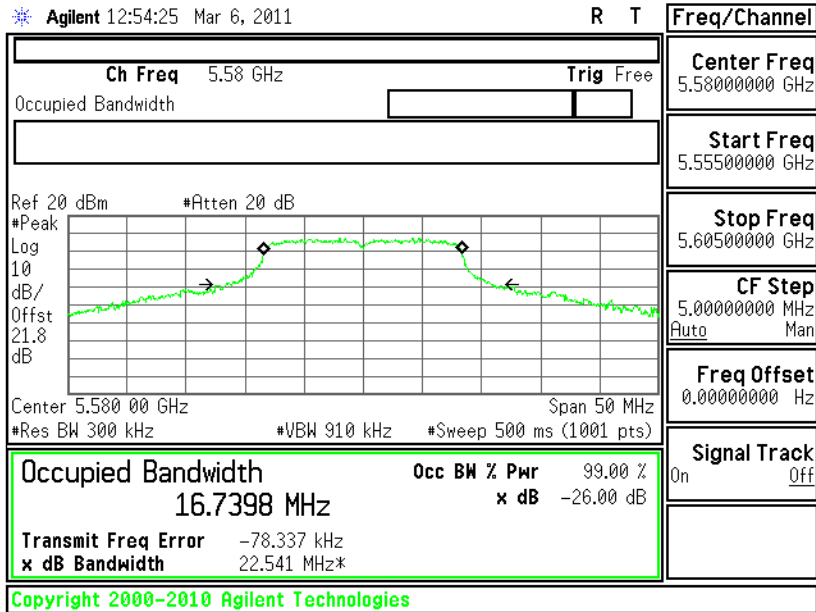


26 dB Bandwidth Plot on 802.11a Channel 100

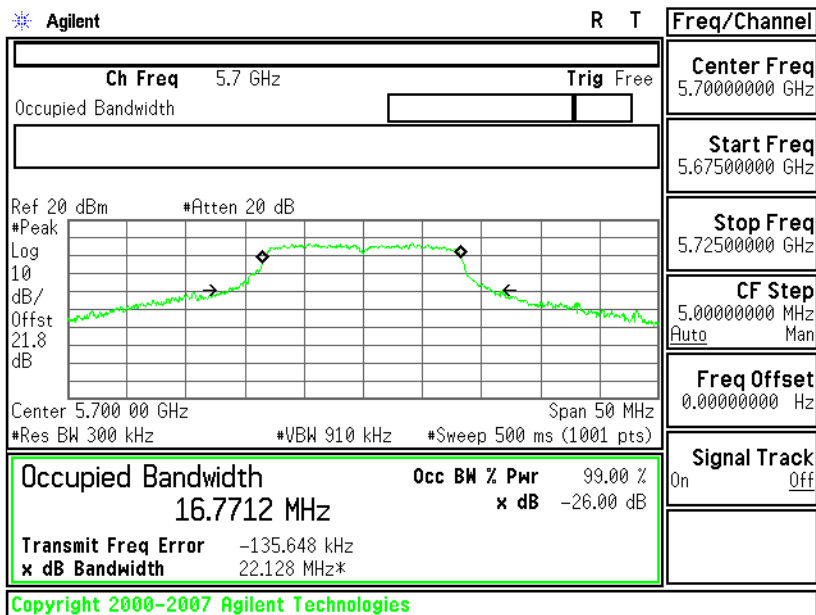




26 dB Bandwidth Plot on 802.11a Channel 116



26 dB Bandwidth Plot on 802.11a Channel 140

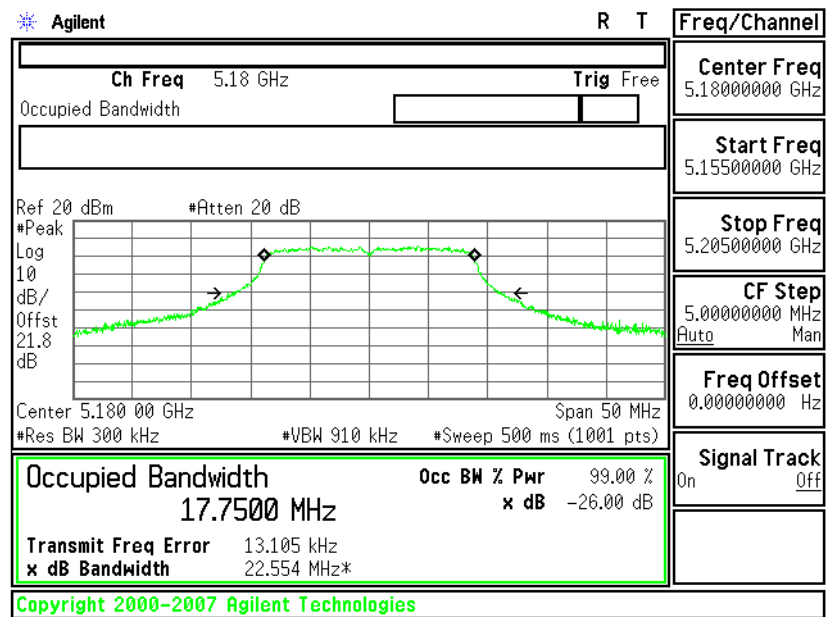




Test Mode :	Mode 10~18	Temperature :	25~27°C
Test Engineer :	Phoenix Chen	Relative Humidity :	51~54%

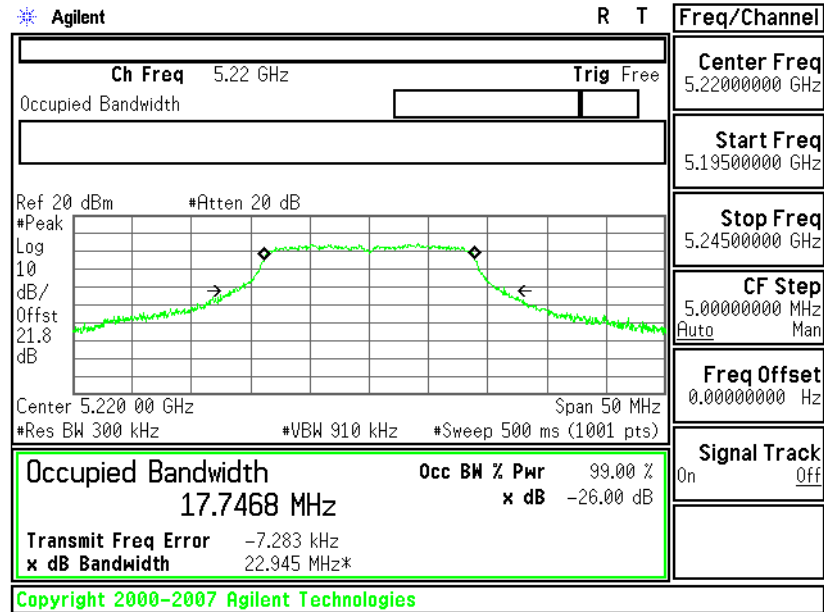
Channel	Frequency (MHz)	802.11n (BW 20MHz) 26dB Bandwidth (MHz)	Pass/Fail
36	5180	22.55	Pass
44	5220	22.95	Pass
48	5240	22.45	Pass
52	5260	22.70	Pass
60	5300	22.81	Pass
64	5320	22.44	Pass
100	5500	22.61	Pass
116	5580	25.32	Pass
140	5700	24.58	Pass

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

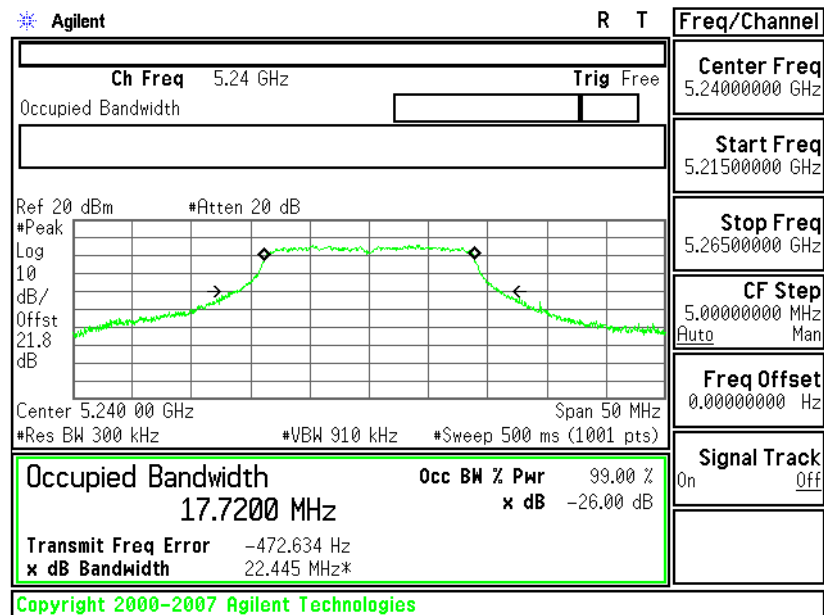




26 dB Bandwidth Plot on 802.11n (BW 20MHz) Channel 44

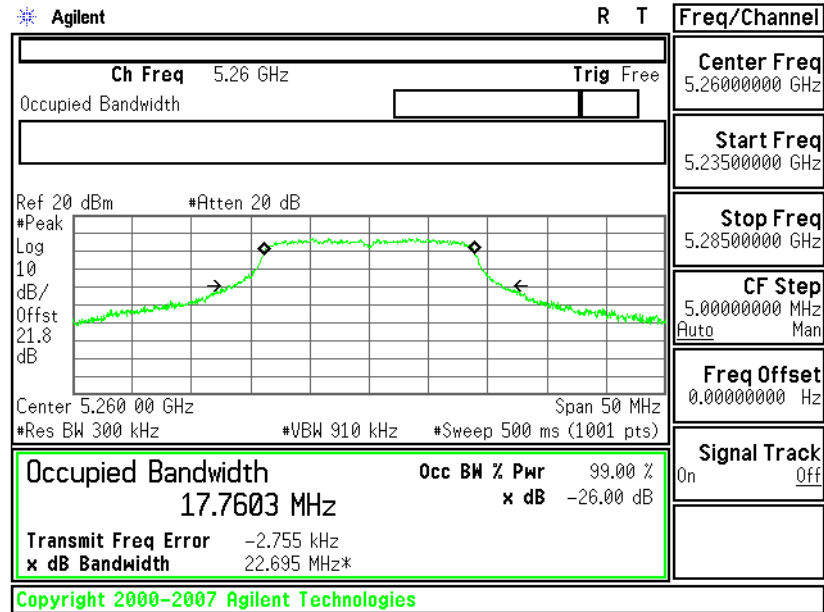


26 dB Bandwidth Plot on 802.11n (BW 20MHz) Channel 48

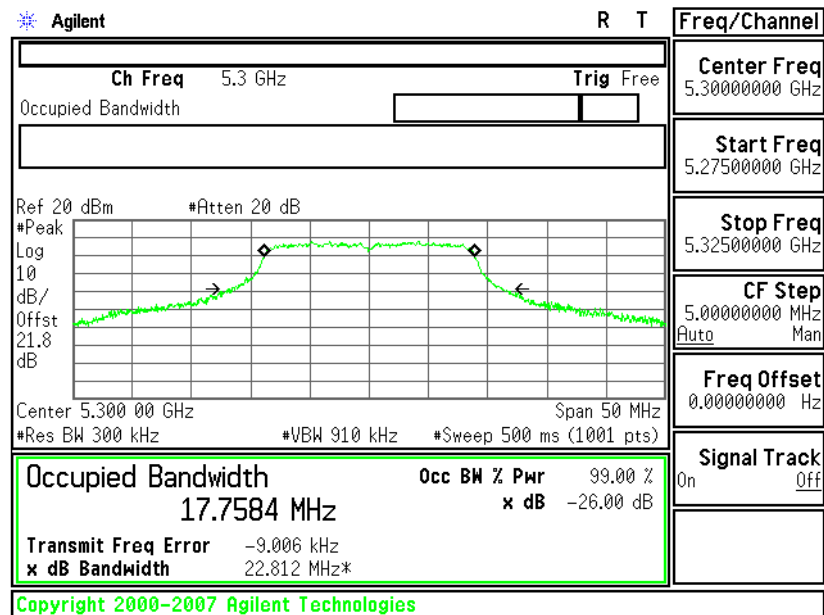




26 dB Bandwidth Plot on 802.11n (BW 20MHz) Channel 52

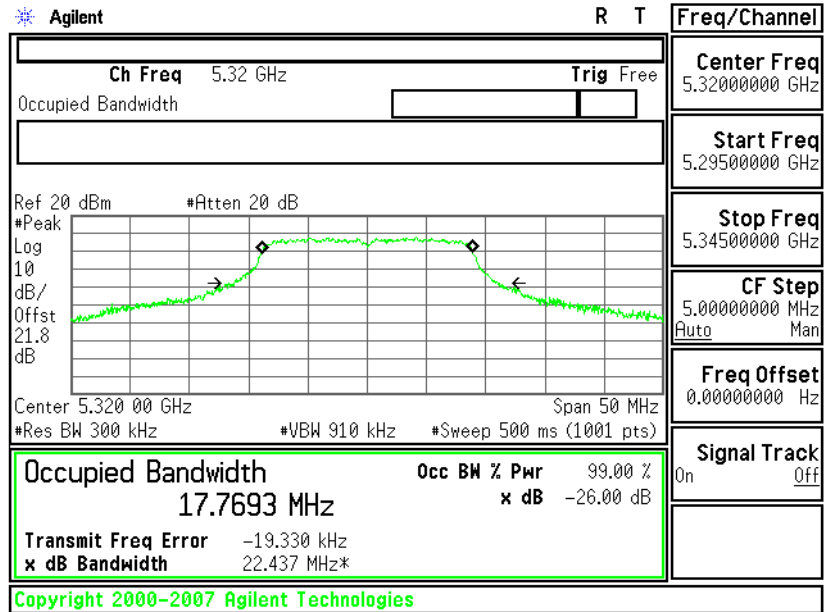


26 dB Bandwidth Plot on 802.11n (BW 20MHz) Channel 60

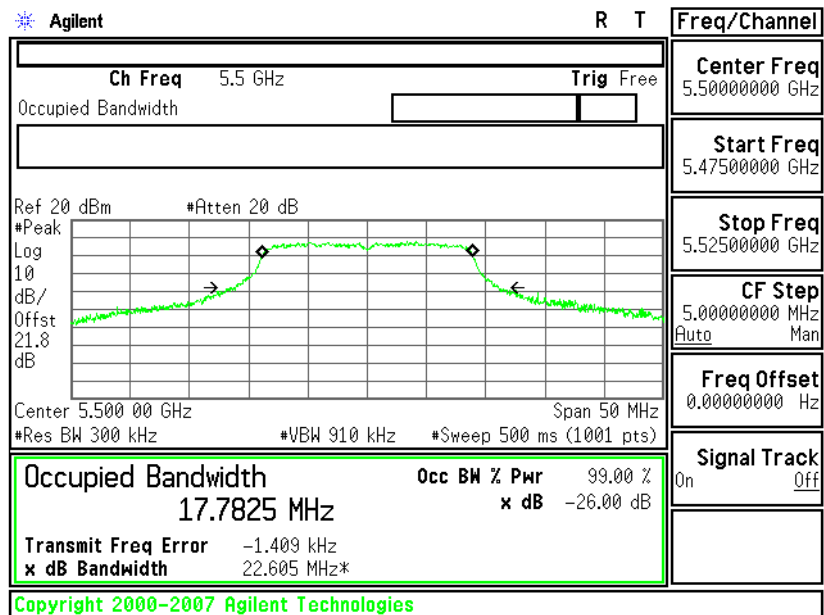




26 dB Bandwidth Plot on 802.11n (BW 20MHz) Channel 64

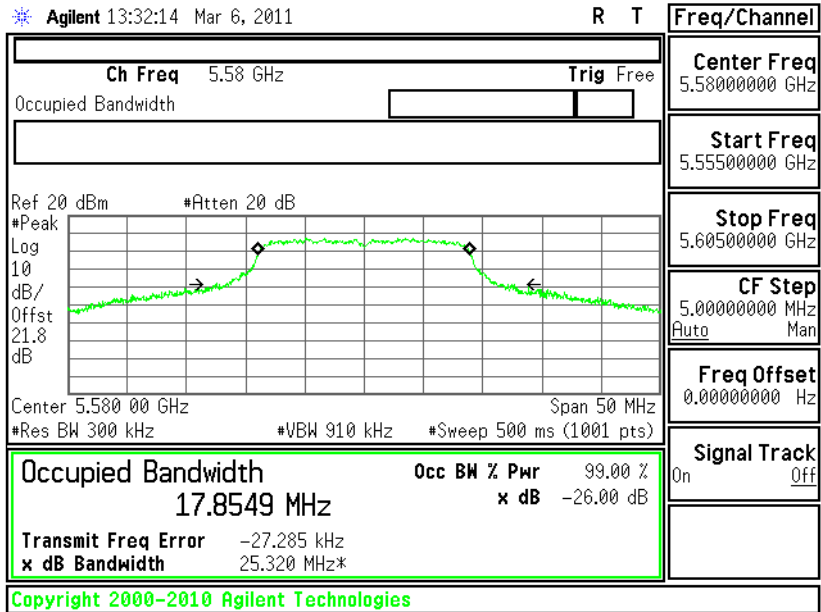


26 dB Bandwidth Plot on 802.11n (BW 20MHz) Channel 100

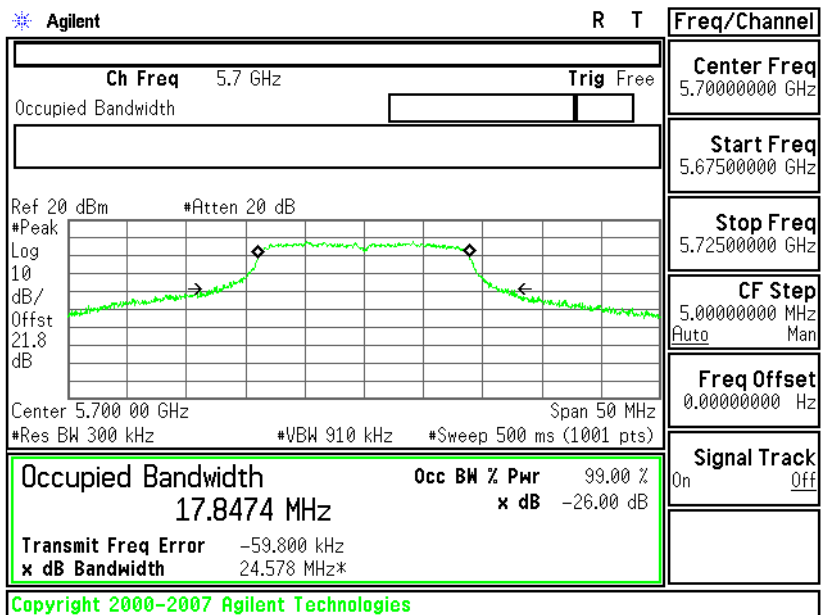




26 dB Bandwidth Plot on 802.11n (BW 20MHz) Channel 116



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

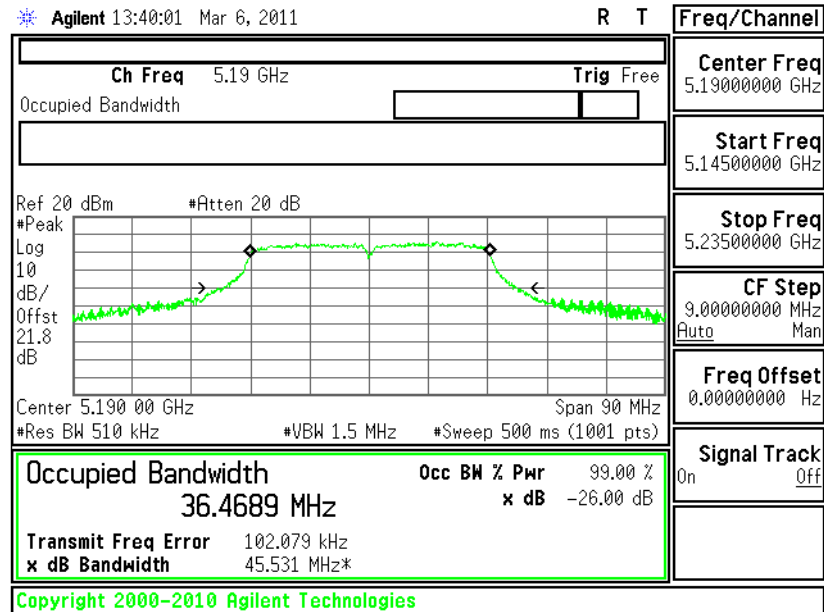




Test Mode :	Mode 19~26	Temperature :	25~27°C
Test Engineer :	Phoenix Chen	Relative Humidity :	51~54%

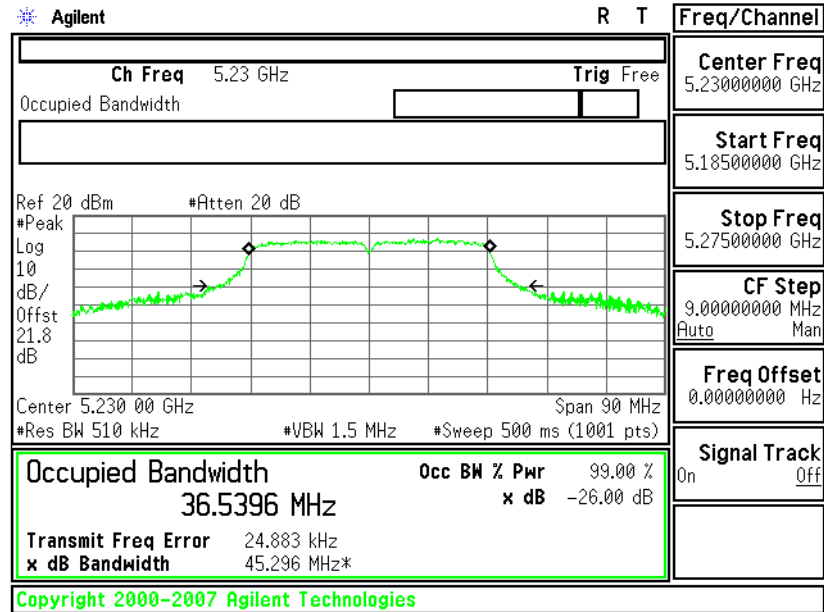
Channel	Frequency (MHz)	802.11n (BW 40MHz) 26dB Bandwidth (MHz)	Pass/Fail
38	5190	45.53	Pass
46	5230	45.30	Pass
54	5270	45.37	Pass
62	5310	45.61	Pass
102	5510	47.22	Pass
110	5550	59.97	Pass
118	5590	48.37	Pass
134	5670	51.45	Pass

26 dB Bandwidth Plot on 802.11n (BW 40MHz) Channel 38

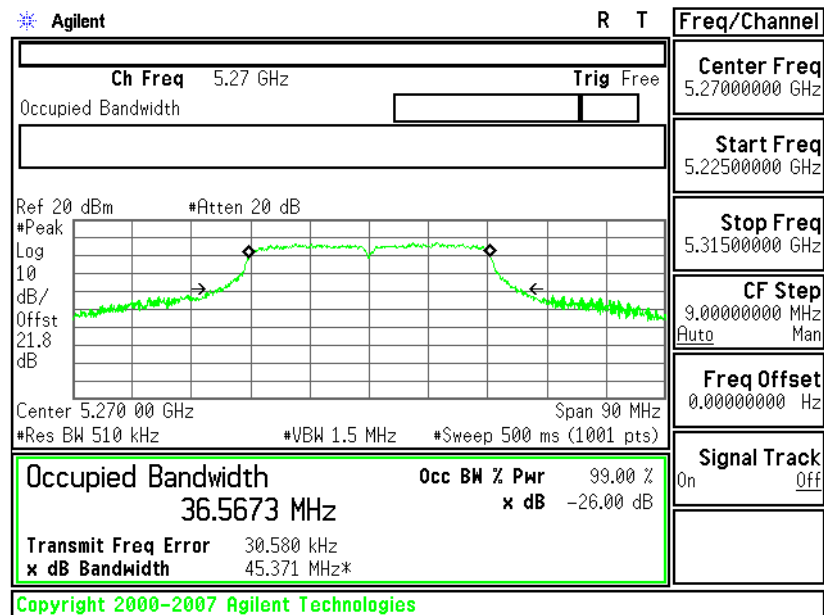




26 dB Bandwidth Plot on 802.11n (BW 40MHz) Channel 46

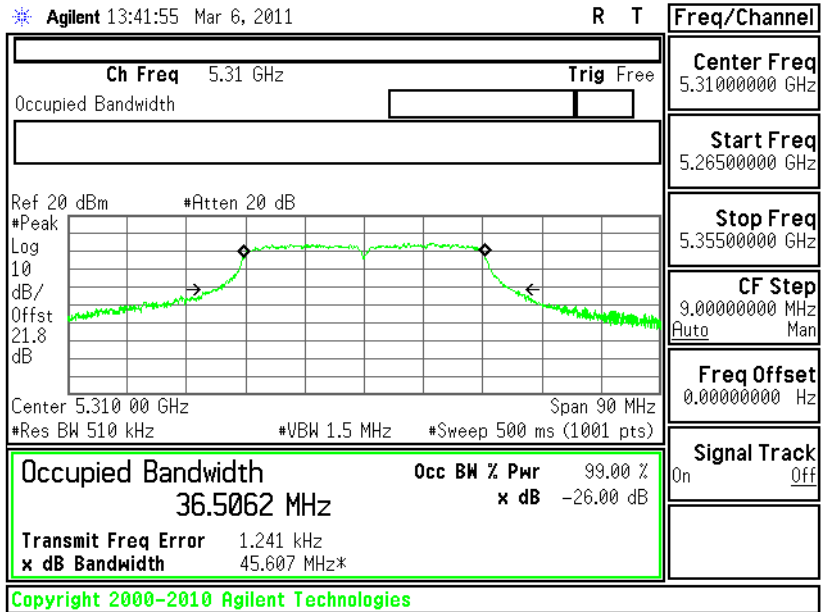


26 dB Bandwidth Plot on 802.11n (BW 40MHz) Channel 54

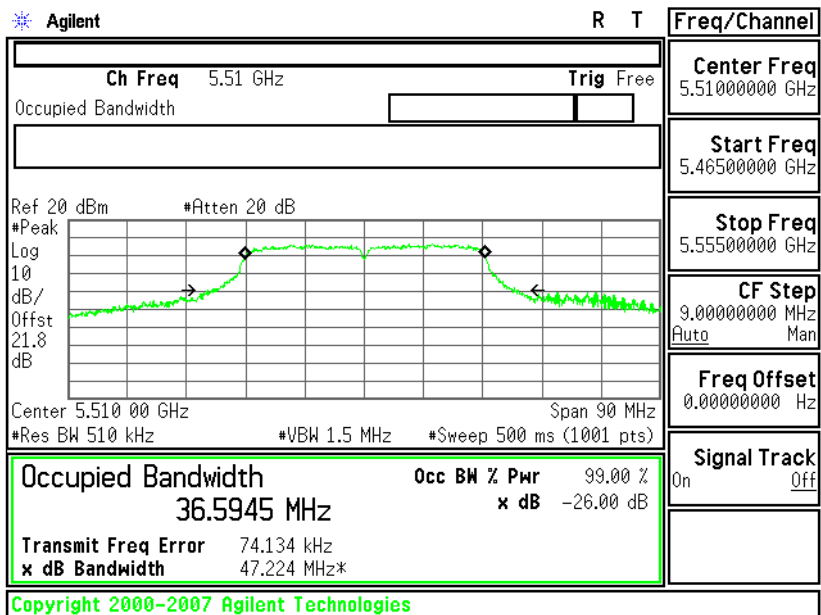




26 dB Bandwidth Plot on 802.11n (BW 40MHz) Channel 62

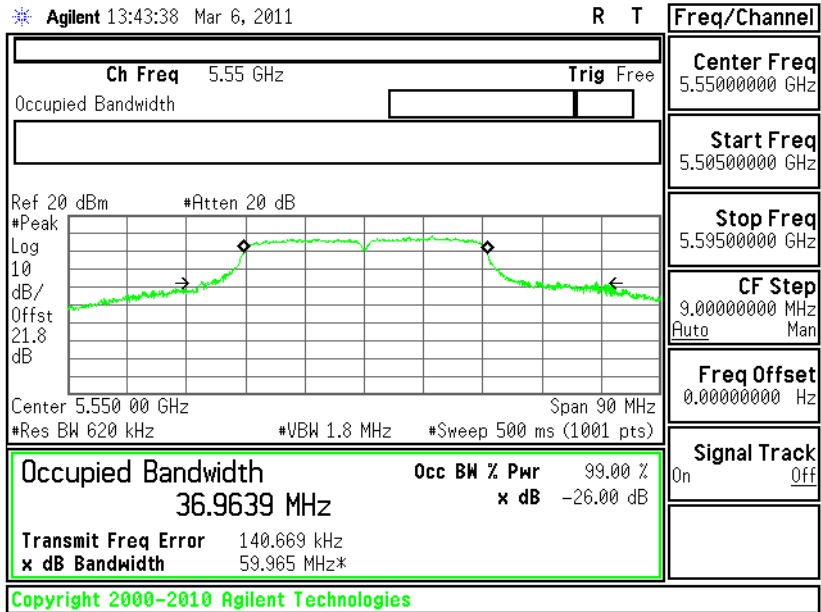


26 dB Bandwidth Plot on 802.11n (BW 40MHz) Channel 102

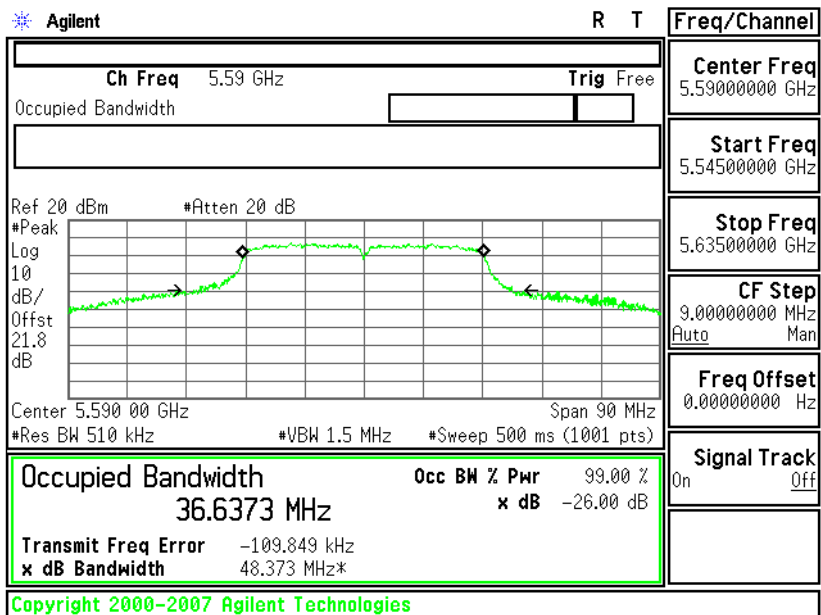




26 dB Bandwidth Plot on 802.11n (BW 40MHz) Channel 110

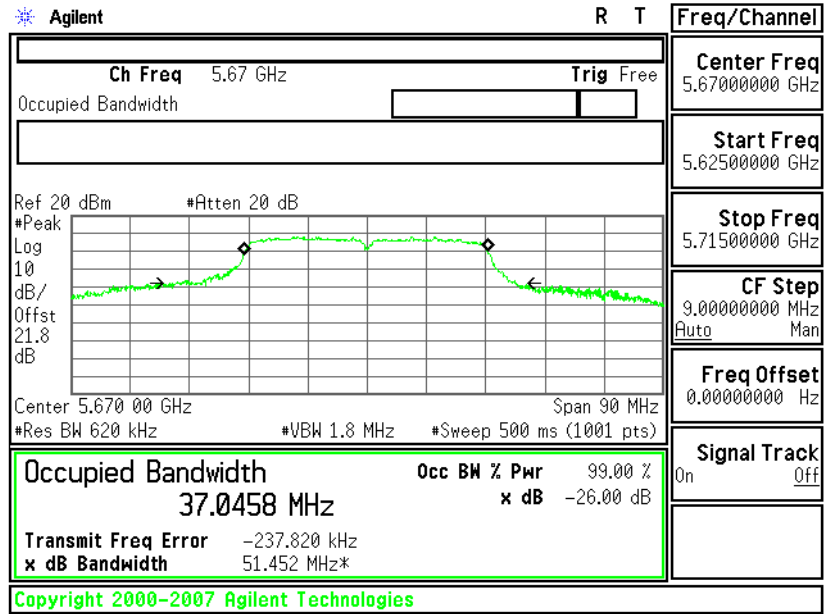


26 dB Bandwidth Plot on 802.11n (BW 40MHz) Channel 118





26 dB Bandwidth Plot on 802.11n (BW 40MHz) Channel 134



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 and 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.

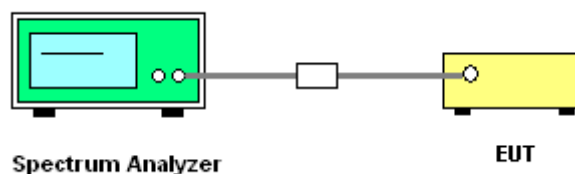
3.2.2 Measuring Instruments

See list of measuring instruments of this test report.

3.2.3 Test Procedures

The transmitter output of EUT is connected to the spectrum analyzer, and the cable loss is offset as shown in the test equipment. According to the method 1 of DA-02-2138A1, using sample detector and power averaging mode, RBW=1MHz, VBW \geq 3 MHz, and 100 sweets of power averaging.

3.2.4 Test Setup





3.2.5 Test Result of Maximum Conducted Output Power

Test Mode :	Mode 1~9	Temperature :	25~27°C
Test Engineer :	Phoenix Chen	Relative Humidity :	51~54%

Channel	Frequency (MHz)	802.11a Measured Output Power (dBm)	Max. Limits (dBm)	Pass/Fail
36	5180	14.56	17.00	Pass
44	5220	12.88	17.00	Pass
48	5240	14.70	17.00	Pass
52	5260	15.89	24.00	Pass
60	5300	16.20	24.00	Pass
64	5320	15.46	24.00	Pass
100	5500	15.97	24.00	Pass
116	5580	15.52	24.00	Pass
140	5700	15.62	24.00	Pass

Test Mode :	Mode 10~18	Temperature :	25~27°C
Test Engineer :	Phoenix Chen	Relative Humidity :	51~54%

Channel	Frequency (MHz)	802.11n (BW 20MHz) Measured Output Power (dBm)	Max. Limits (dBm)	Pass/Fail
36	5180	14.38	17.00	Pass
44	5220	12.80	17.00	Pass
48	5240	14.54	24.00	Pass
52	5260	15.90	24.00	Pass
60	5300	16.52	24.00	Pass
64	5320	16.53	24.00	Pass
100	5500	16.49	24.00	Pass
116	5580	15.90	24.00	Pass
140	5700	16.36	24.00	Pass



Test Mode :	Mode 19~26	Temperature :	25~27°C
Test Engineer :	Phoenix Chen	Relative Humidity :	51~54%

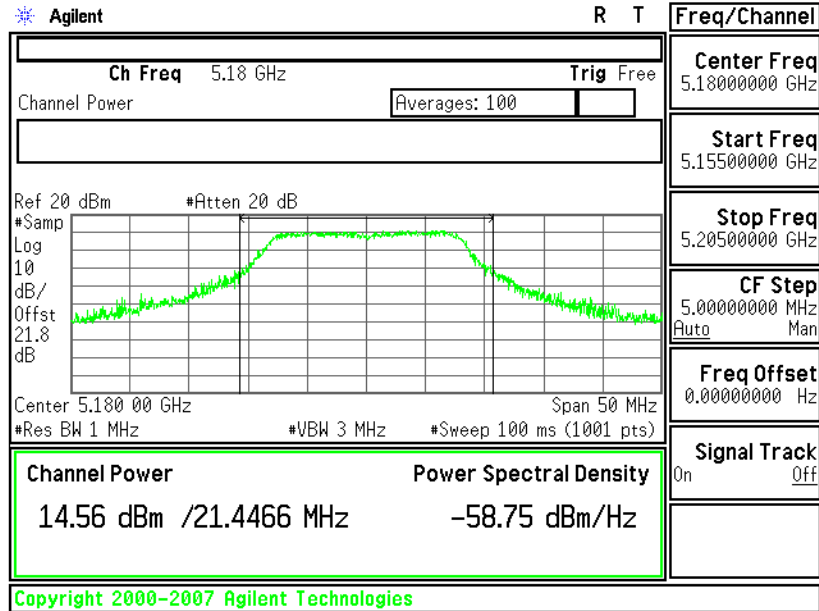
Channel	Frequency (MHz)	802.11n (BW 40MHz) Measured Output Power (dBm)	Max. Limits (dBm)	Pass/Fail
38	5190	14.75	17.00	Pass
46	5230	15.98	17.00	Pass
54	5270	16.24	24.00	Pass
62	5310	13.8	24.00	Pass
102	5510	15.85	24.00	Pass
110	5550	16.19	24.00	Pass
118	5590	16.18	24.00	Pass
134	5670	16.54	24.00	Pass



3.2.6 Test Result of Power Output Plots

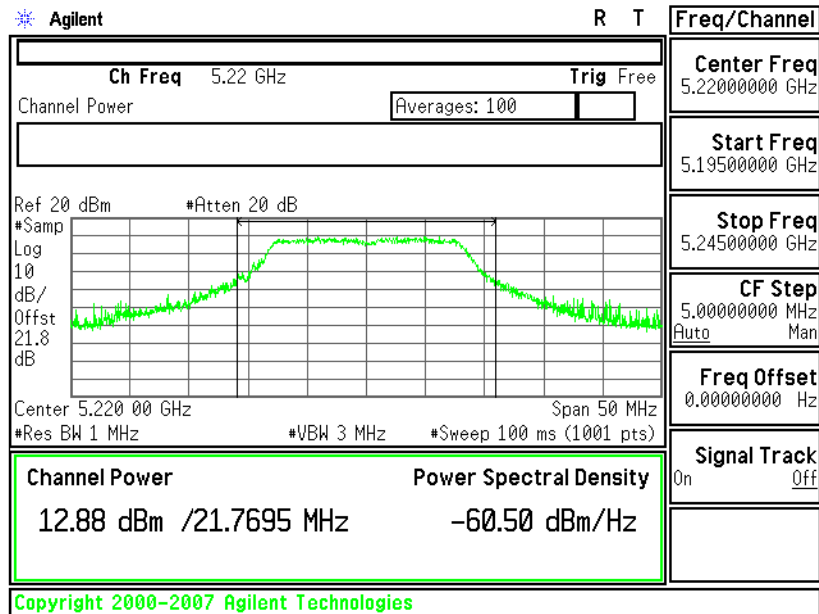
Mode 01:

Output Power Plot on 802.11a Channel 36



Mode 02:

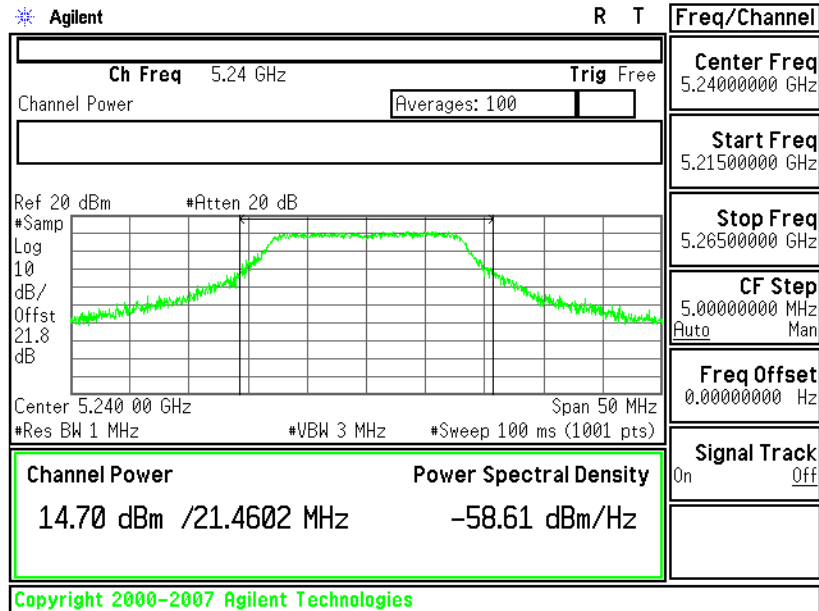
Output Power Plot on 802.11a Channel 44





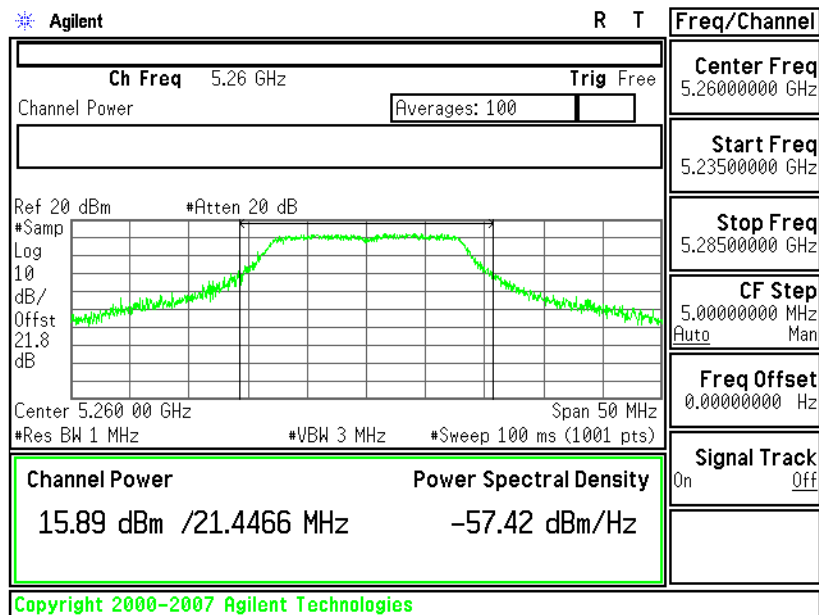
Mode 03:

Output Power Plot on 802.11a Channel 48



Mode 04:

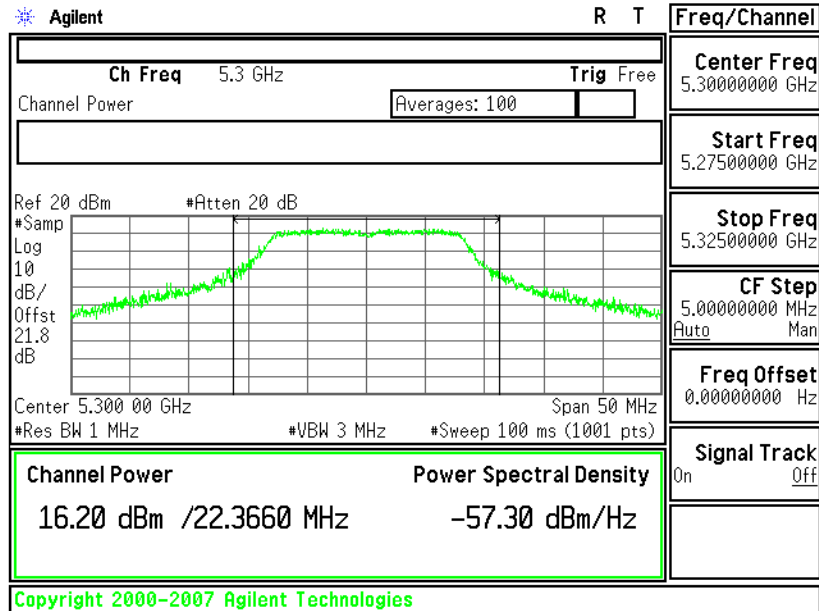
Output Power Plot on 802.11a Channel 52





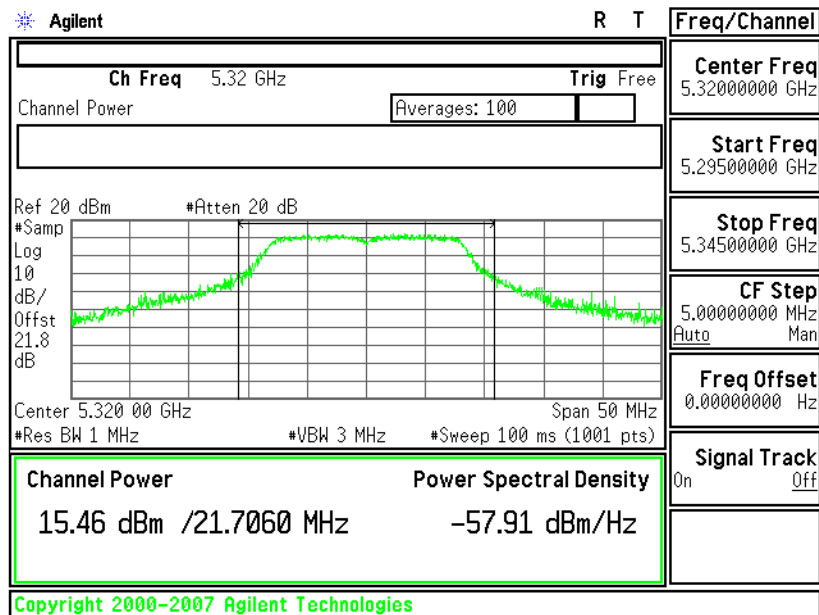
Mode 05:

Output Power Plot on 802.11a Channel 60



Mode 06:

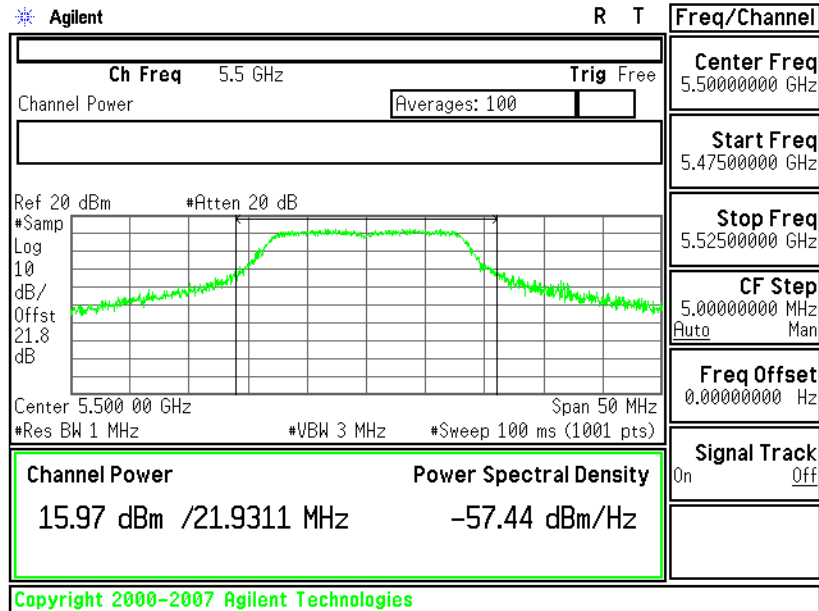
Output Power Plot on 802.11a Channel 64





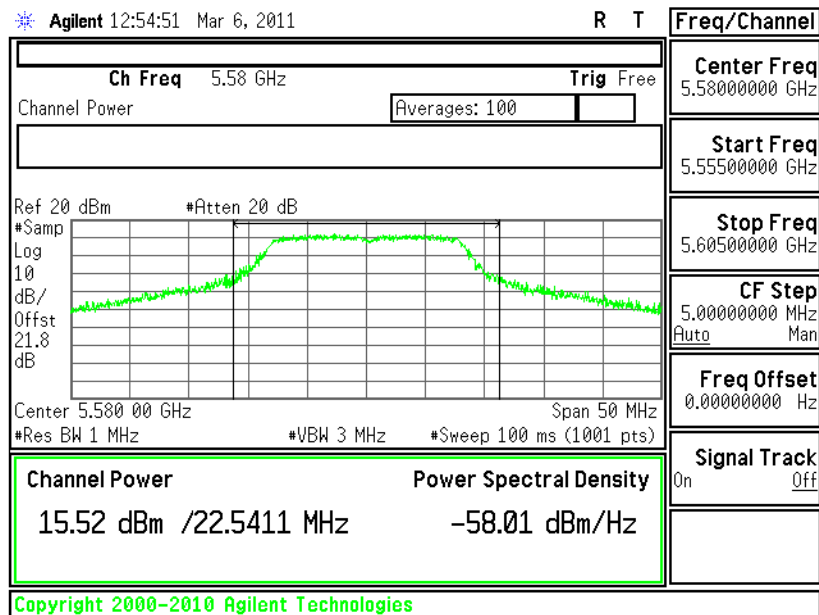
Mode 07:

Output Power Plot on 802.11a Channel 100



Mode 08:

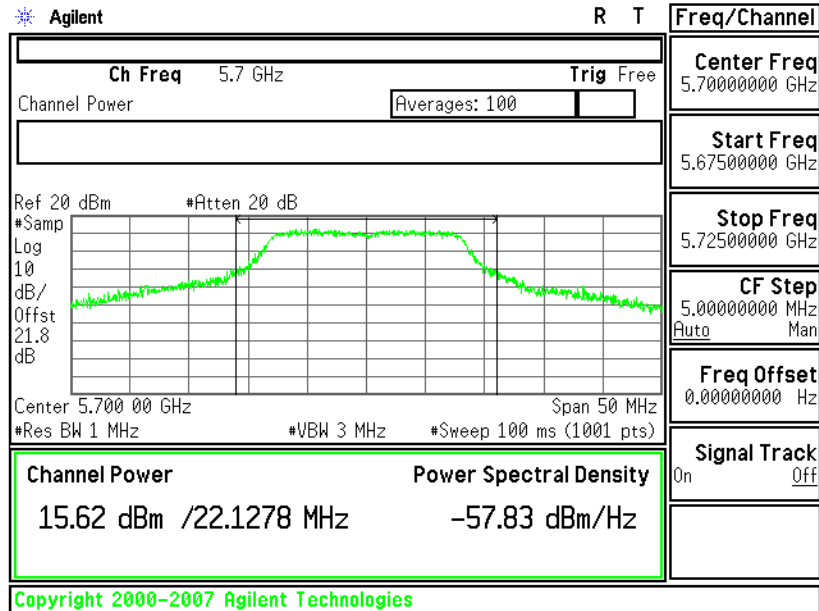
Output Power Plot on 802.11a Channel 116





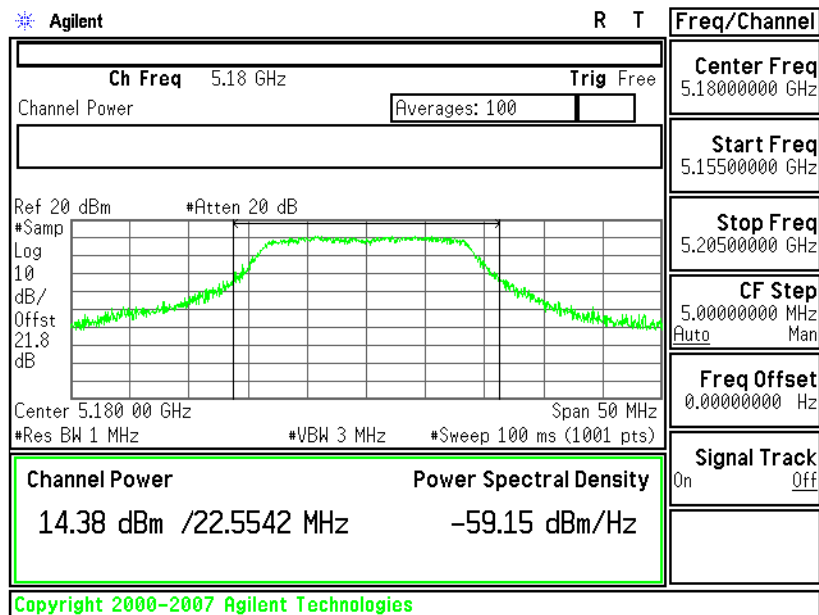
Mode 09:

Output Power Plot on 802.11a Channel 140



Mode 10:

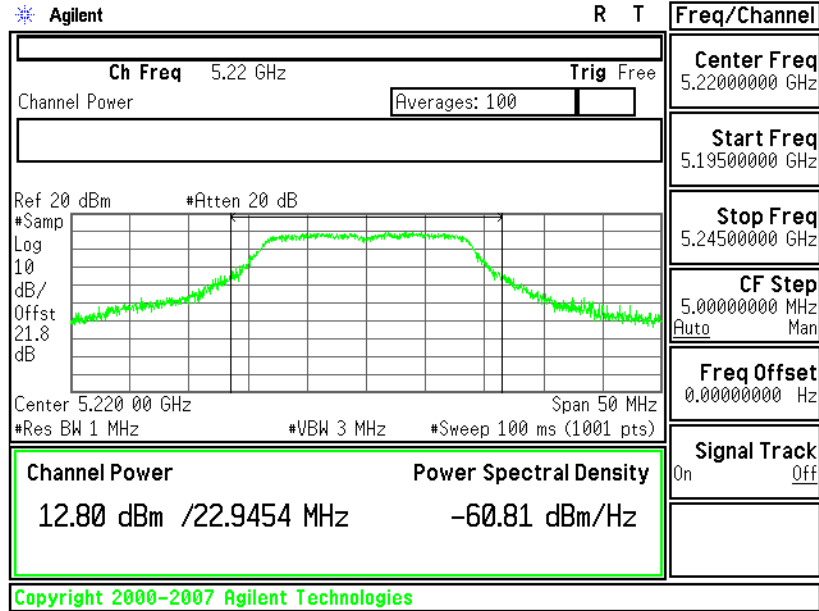
Output Power Plot on 802.11n (BW 20MHz) Channel 36





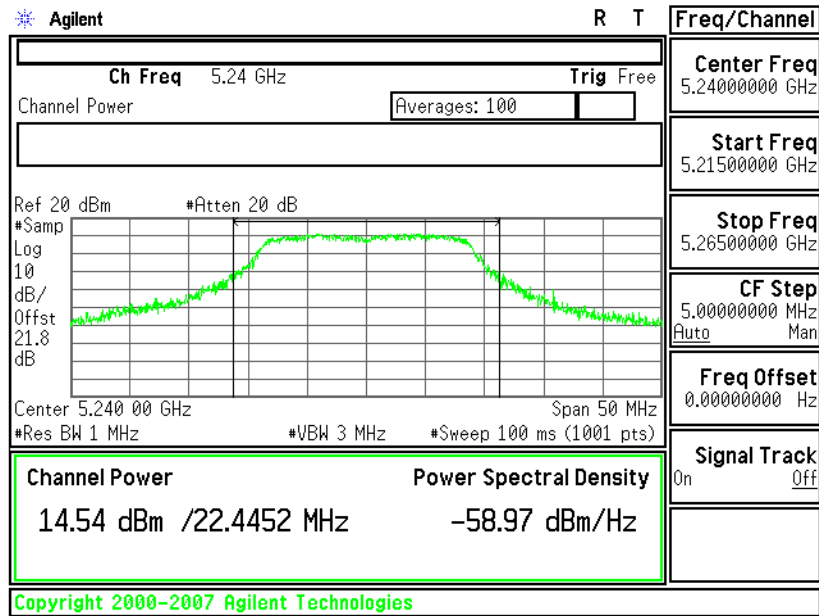
Mode 11:

Output Power Plot on 802.11n (BW 20MHz) Channel 44



Mode 12:

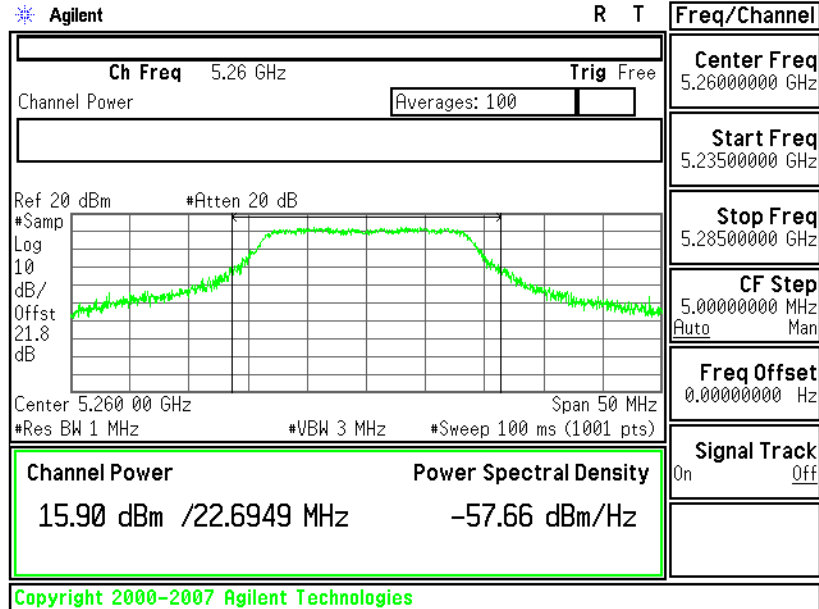
Output Power Plot on 802.11n (BW 20MHz) Channel 48





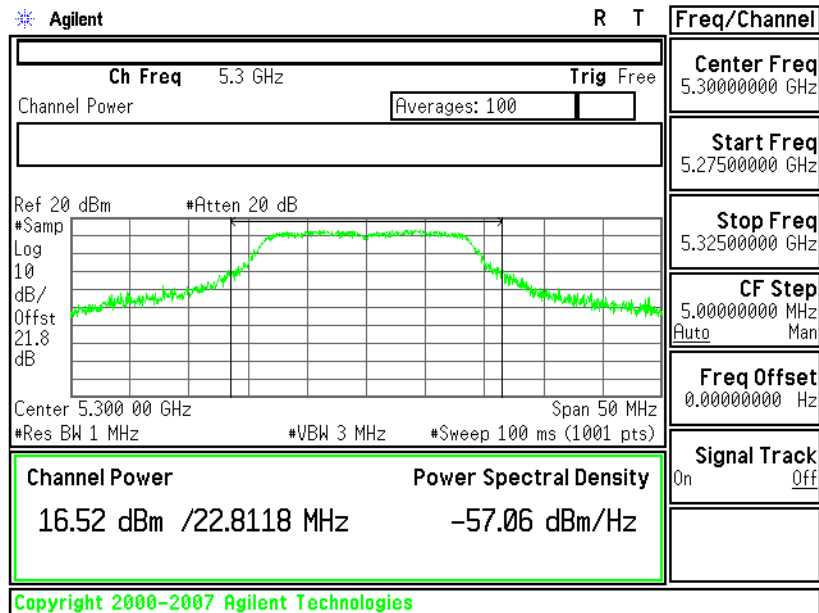
Mode 13:

Output Power Plot on 802.11n (BW 20MHz) Channel 52



Mode 14:

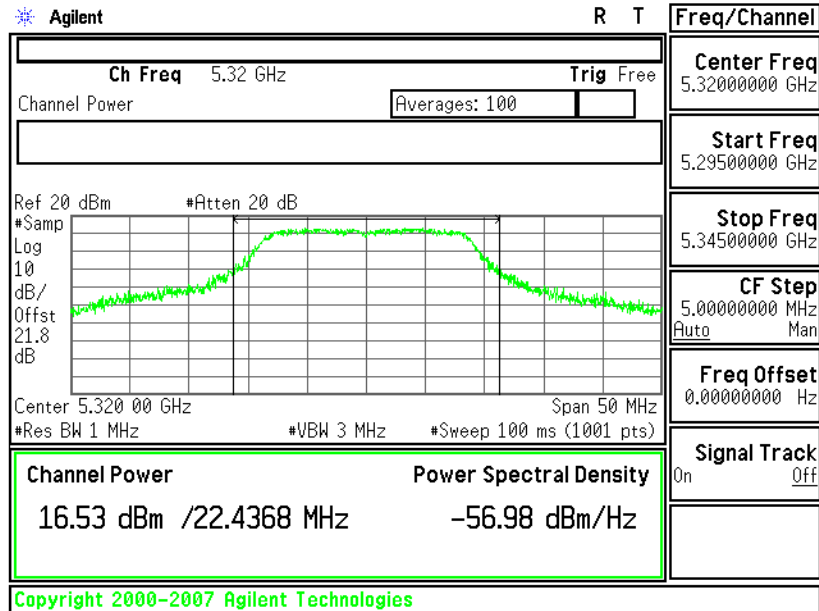
Output Power Plot on 802.11n (BW 20MHz) Channel 60





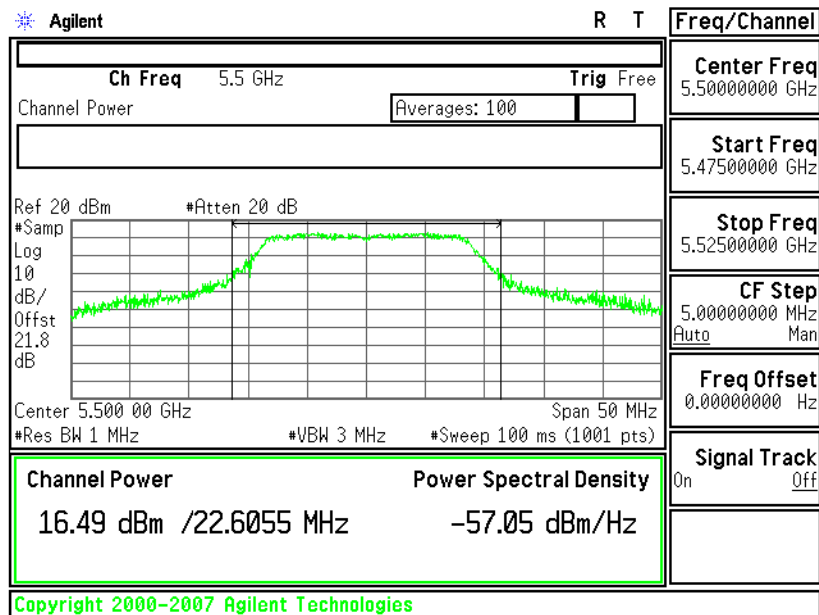
Mode 15:

Output Power Plot on 802.11n (BW 20MHz) Channel 64



Mode 16:

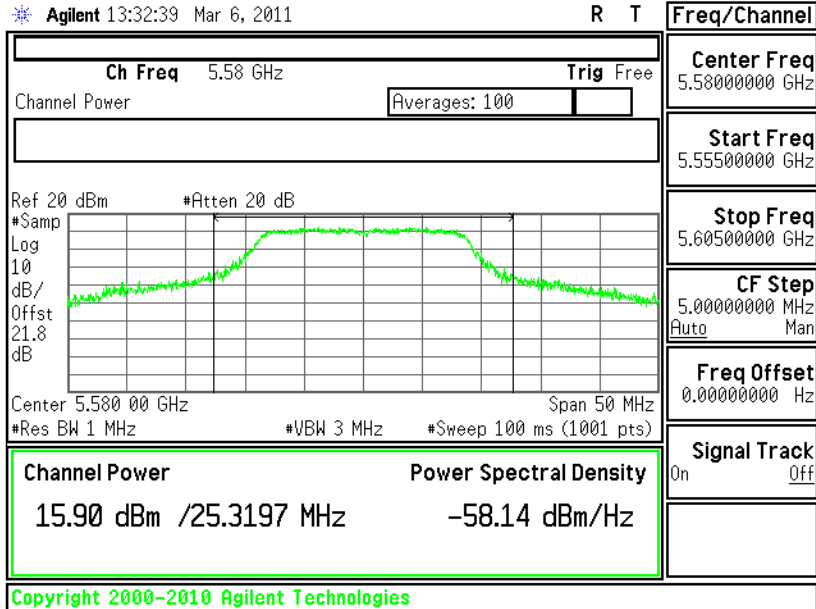
Output Power Plot on 802.11n (BW 20MHz) Channel 100





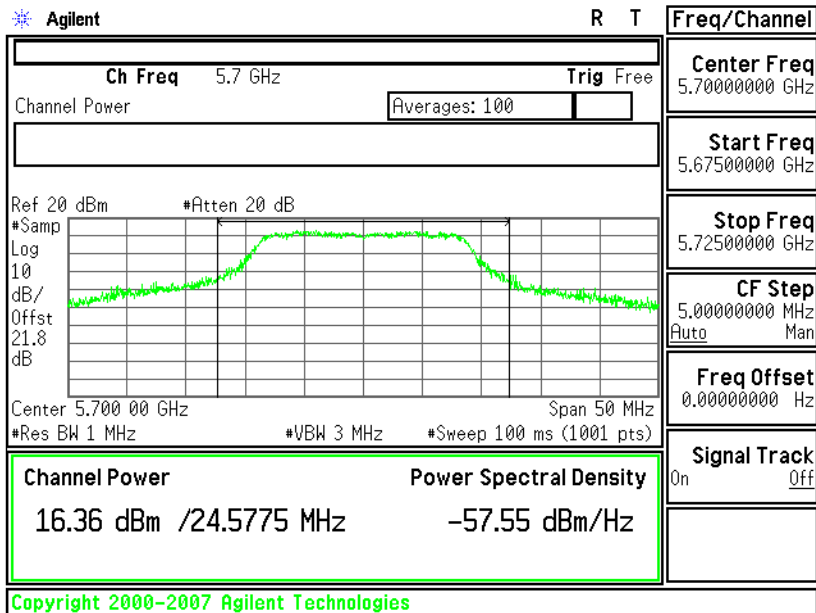
Mode 17:

Output Power Plot on 802.11n (BW 20MHz) Channel 116



Mode 18:

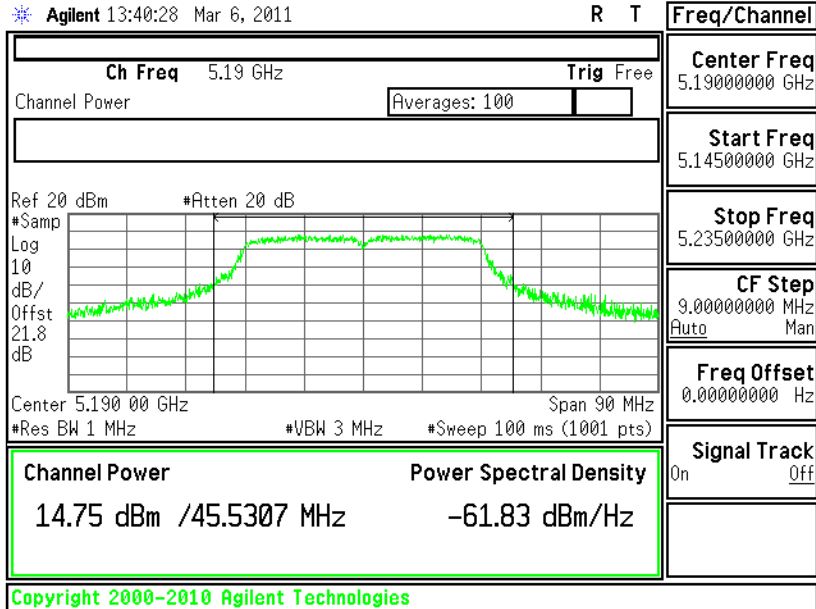
Output Power Plot on 802.11n (BW 20MHz) Channel 140





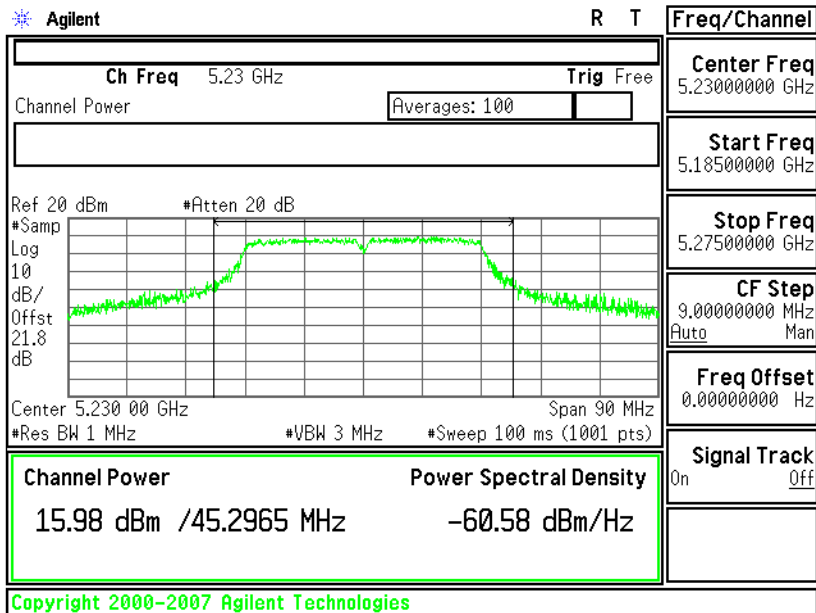
Mode 19:

Output Power Plot on 802.11n (BW 40MHz) Channel 38



Mode 20:

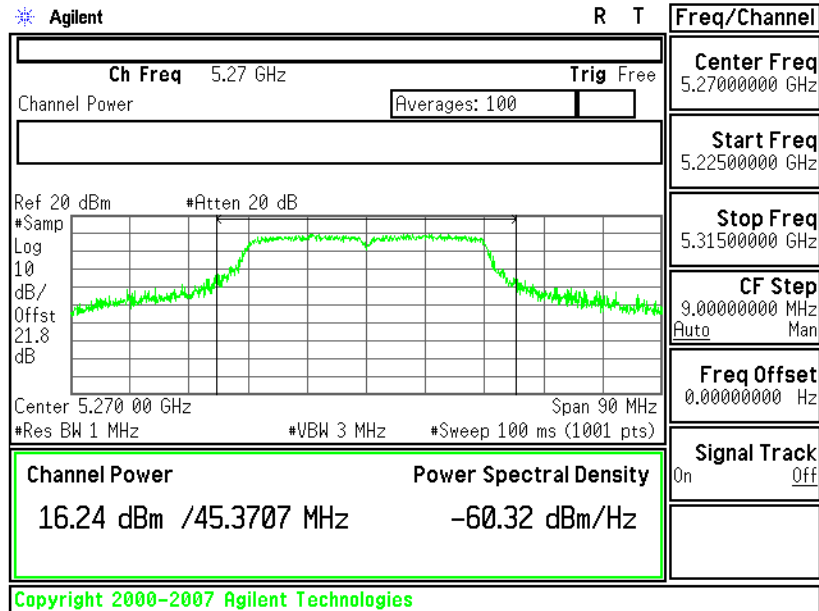
Output Power Plot on 802.11n (BW 40MHz) Channel 46





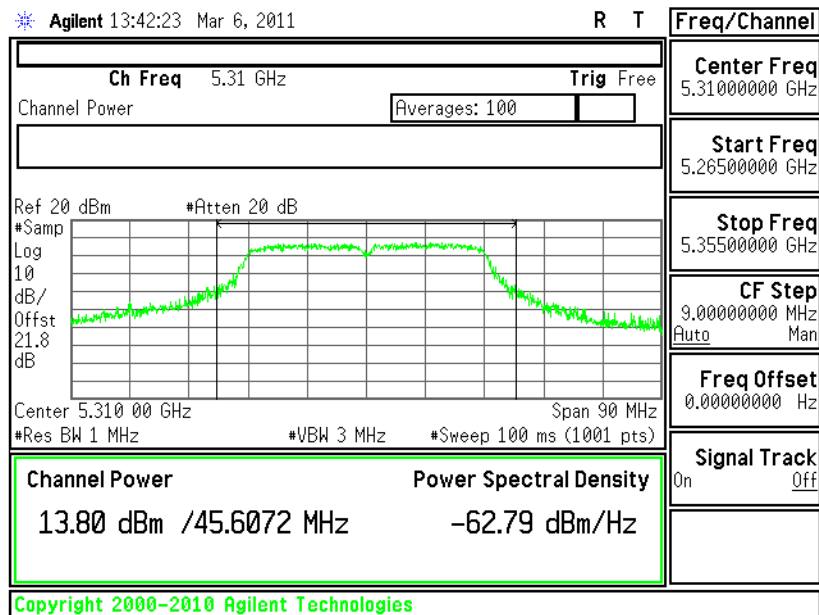
Mode 21:

Output Power Plot on 802.11n (BW 40MHz) Channel 54



Mode 22:

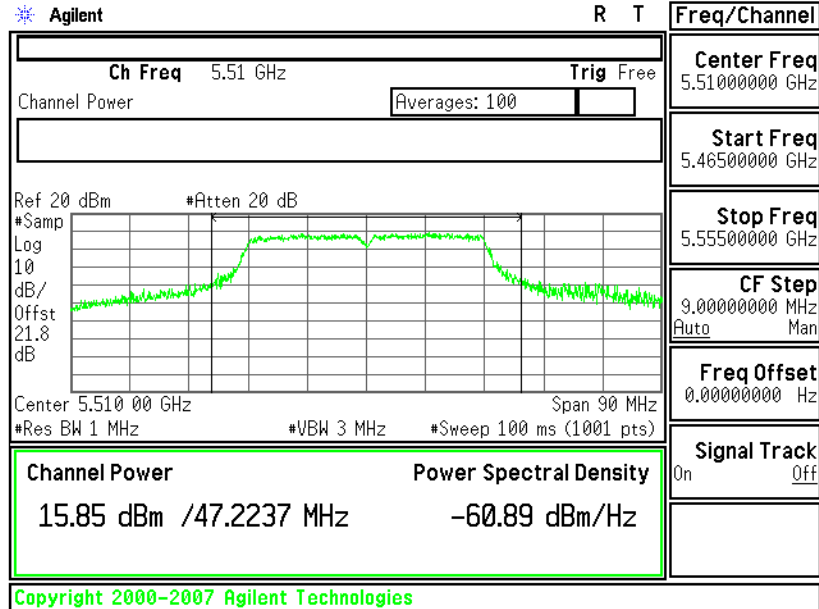
Output Power Plot on 802.11n (BW 40MHz) Channel 62





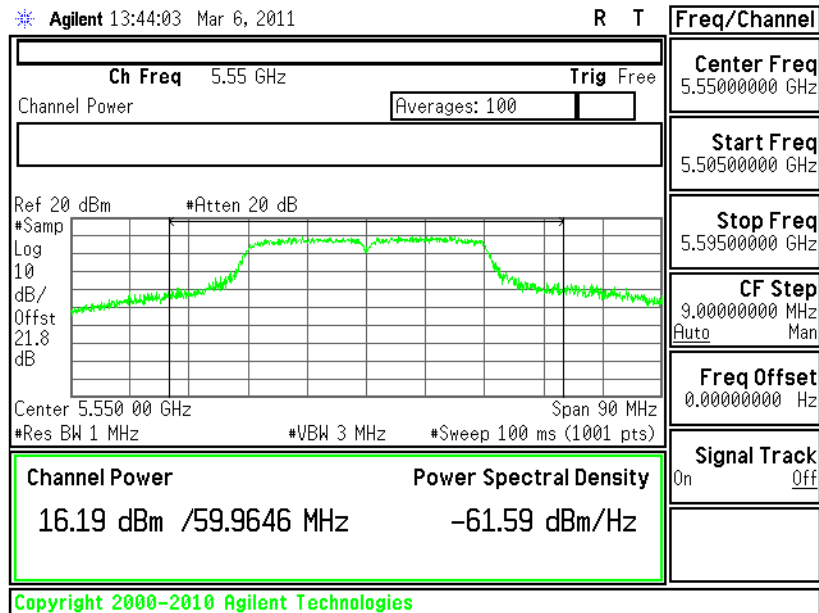
Mode 23:

Output Power Plot on 802.11n (BW 40MHz) Channel 102



Mode 24:

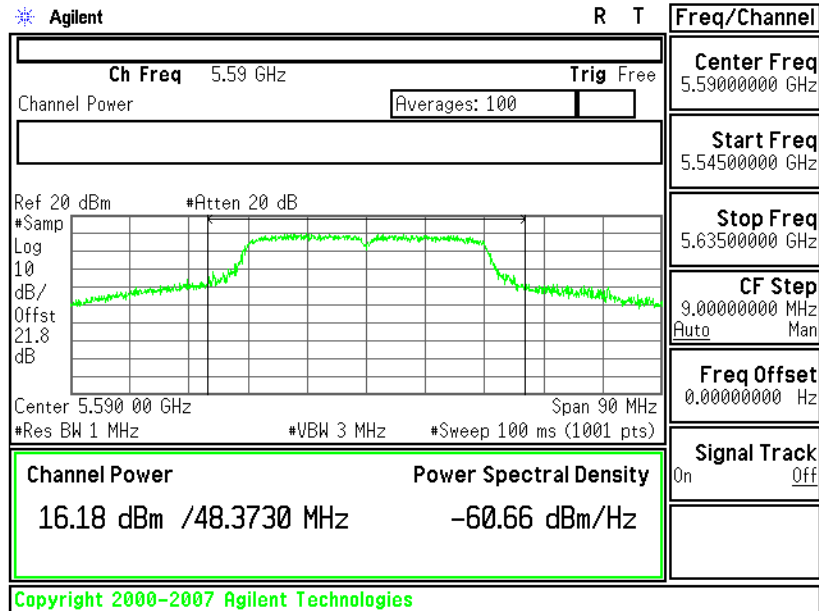
Output Power Plot on 802.11n (BW 40MHz) Channel 110





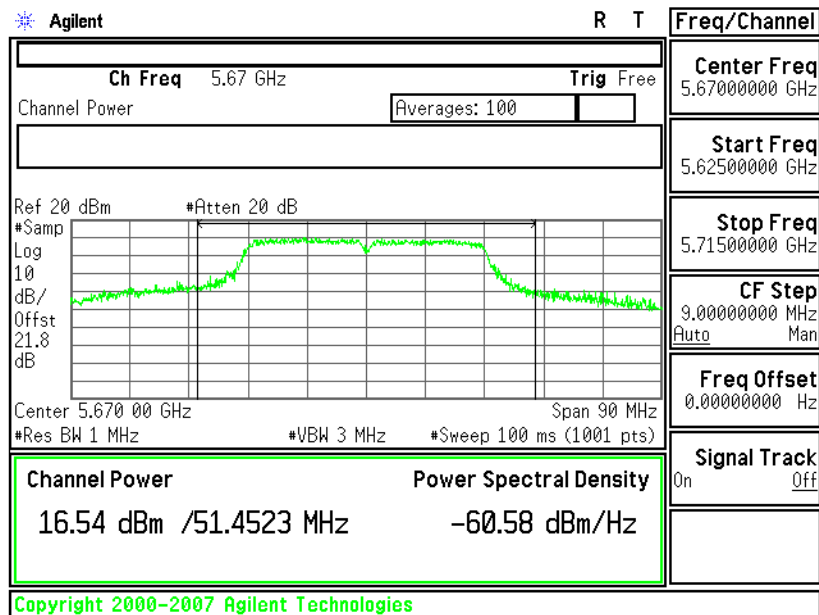
Mode 25:

Output Power Plot on 802.11n (BW 40MHz) Channel 118



Mode 26:

Output Power Plot on 802.11n (BW 40MHz) Channel 134



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 1MHz 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.

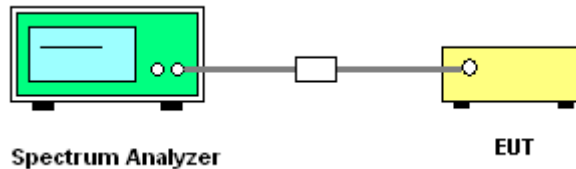
3.3.2 Measuring Instruments

See list of measuring instruments of this test report.

3.3.3 Test Procedures

The transmitter output of EUT is connected to the spectrum analyzer, and the cable loss is offset as shown in the test equipment. According to the method 2 of DA-02-2138A1 PPSD, using sample detector and power averaging mode, RBW=1MHz, VBW>1MHz, and 100 sweets of power averaging.

3.3.4 Test Setup



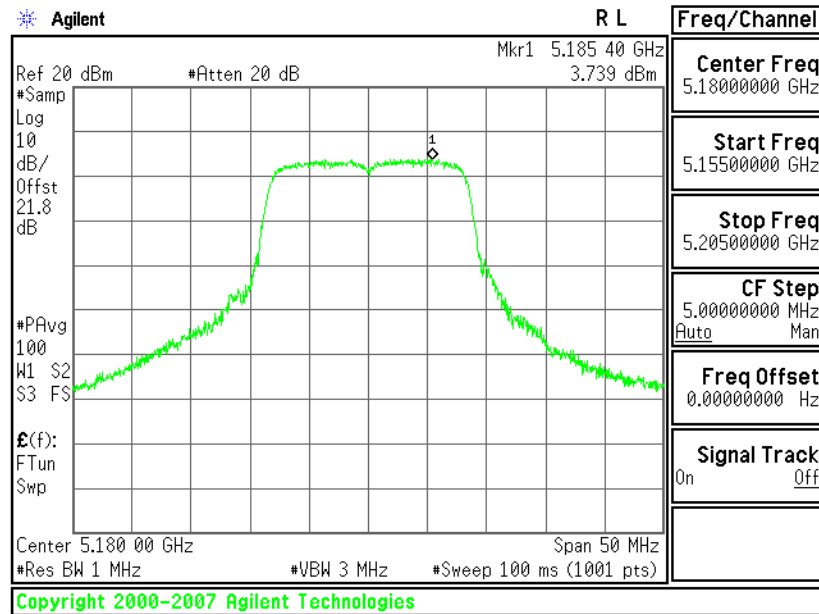


3.3.5 Test Result of Power Spectral Density

Test Mode :	Mode 1~9	Temperature :	25~27°C
Test Engineer :	Phoenix Chen	Relative Humidity :	51~54%

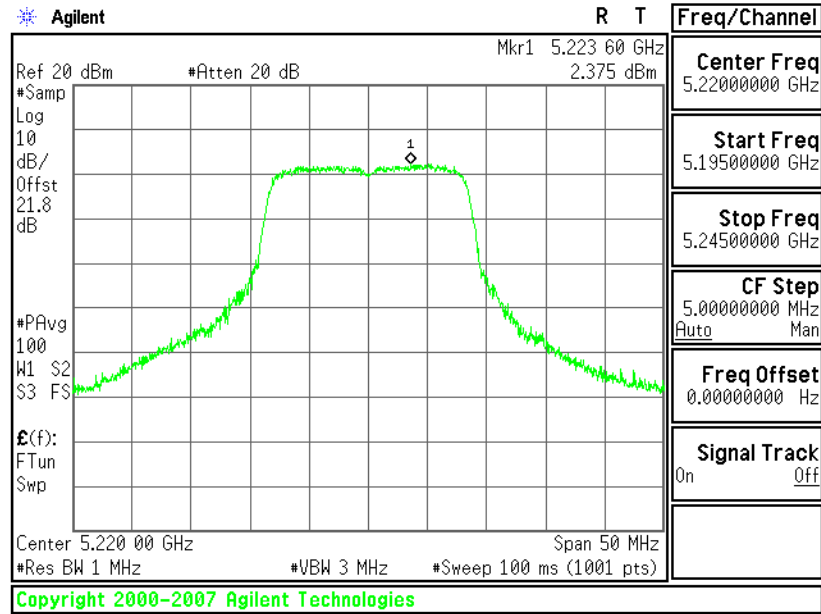
Channel	Frequency (MHz)	802.11a Measured PSD (dBm)	Max. Limits (dBm)	Pass/Fail
36	5180	3.74	4	Pass
44	5220	2.38	4	Pass
48	5240	3.99	4	Pass
52	5260	5.48	11	Pass
60	5300	5.54	11	Pass
64	5320	5.27	11	Pass
100	5500	4.60	11	Pass
116	5580	5.32	11	Pass
140	5700	4.34	11	Pass

PSD Plot on 802.11a Channel 36

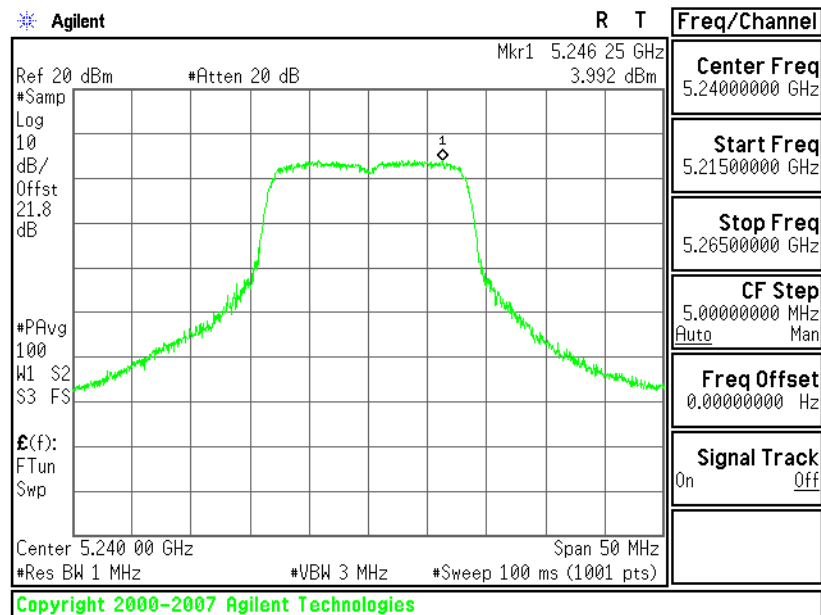




PSD Plot on 802.11a Channel 44



PSD Plot on 802.11a Channel 48

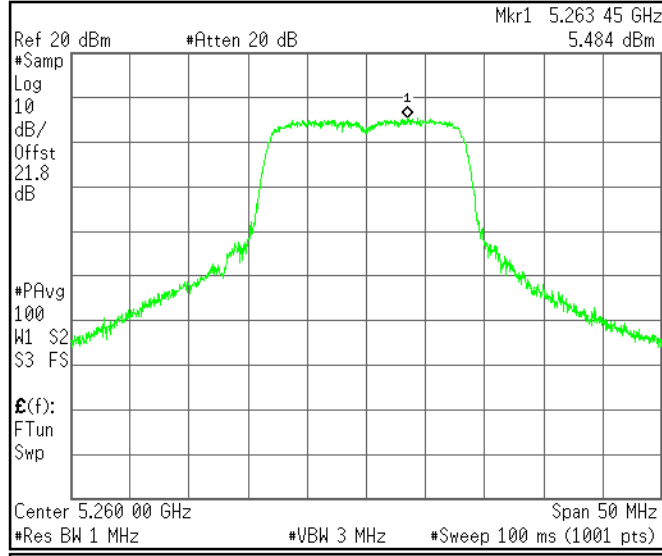




PSD Plot on 802.11a Channel 52

Agilent 13:22:31 Mar 10, 2011

R T



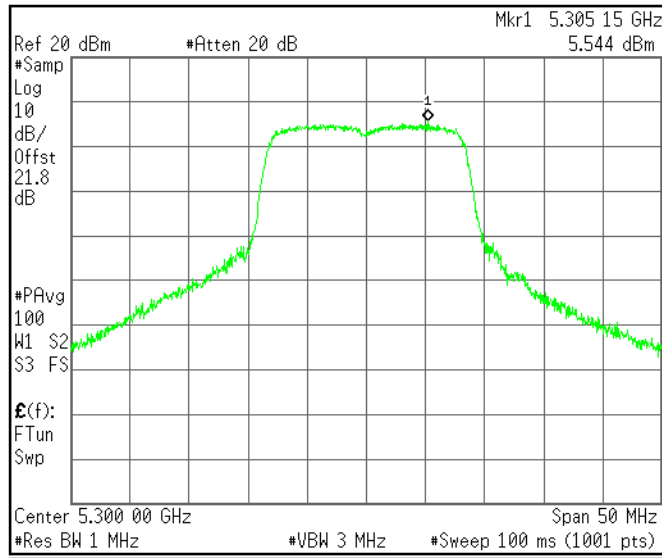
Freq/Channel
Center Freq 5.26000000 GHz
Start Freq 5.23500000 GHz
Stop Freq 5.28500000 GHz
CF Step 5.00000000 MHz Auto Man
Freq Offset 0.00000000 Hz
Signal Track On Off

Copyright 2000-2010 Agilent Technologies

PSD Plot on 802.11a Channel 60

Agilent 13:24:04 Mar 10, 2011

R T

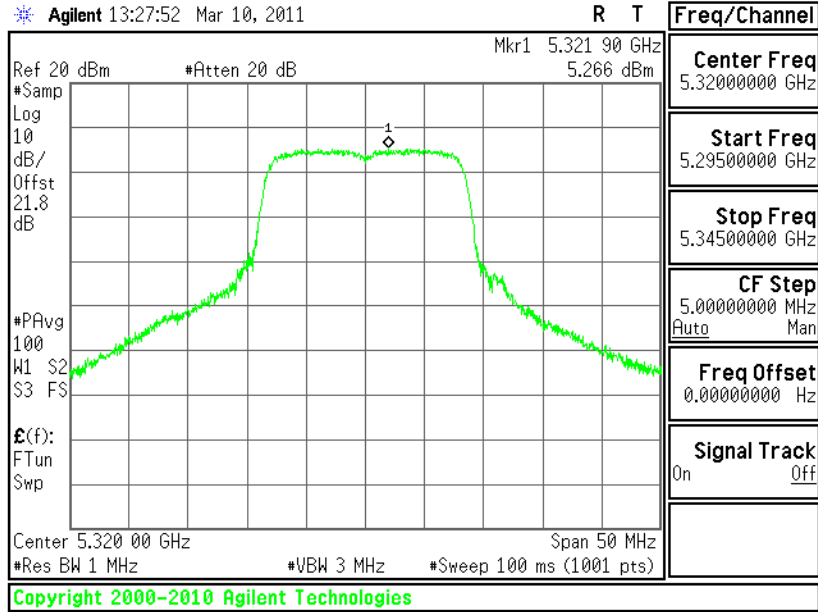


Freq/Channel
Center Freq 5.30000000 GHz
Start Freq 5.27500000 GHz
Stop Freq 5.32500000 GHz
CF Step 5.00000000 MHz Auto Man
Freq Offset 0.00000000 Hz
Signal Track On Off

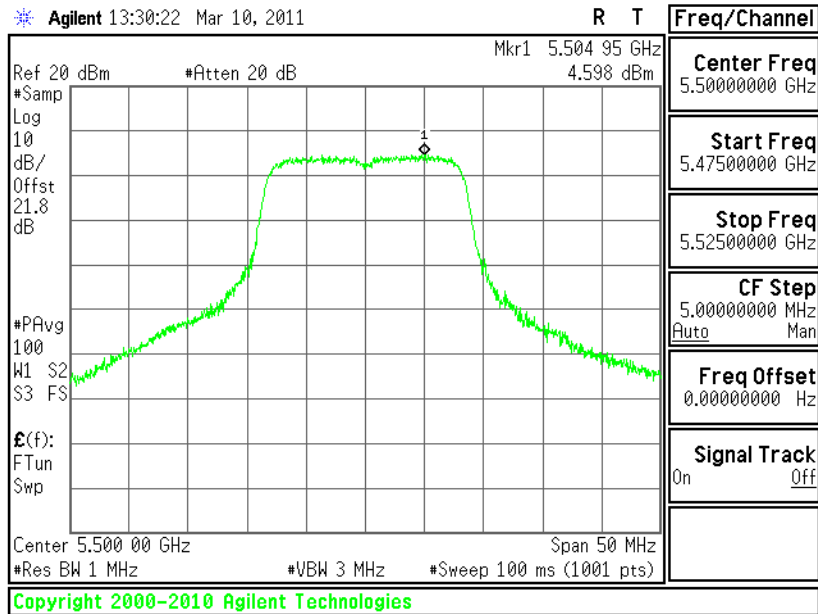
Copyright 2000-2010 Agilent Technologies



PSD Plot on 802.11a Channel 64

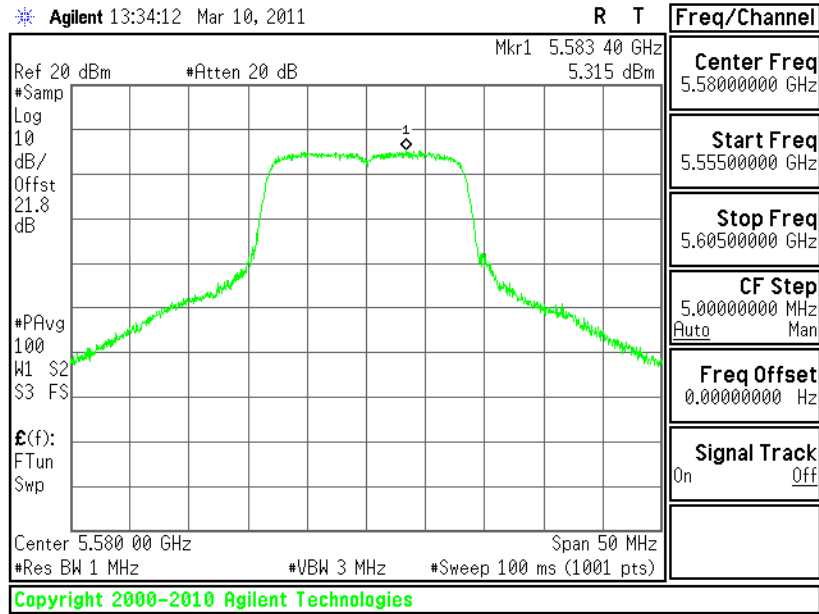


PSD Plot on 802.11a Channel 100

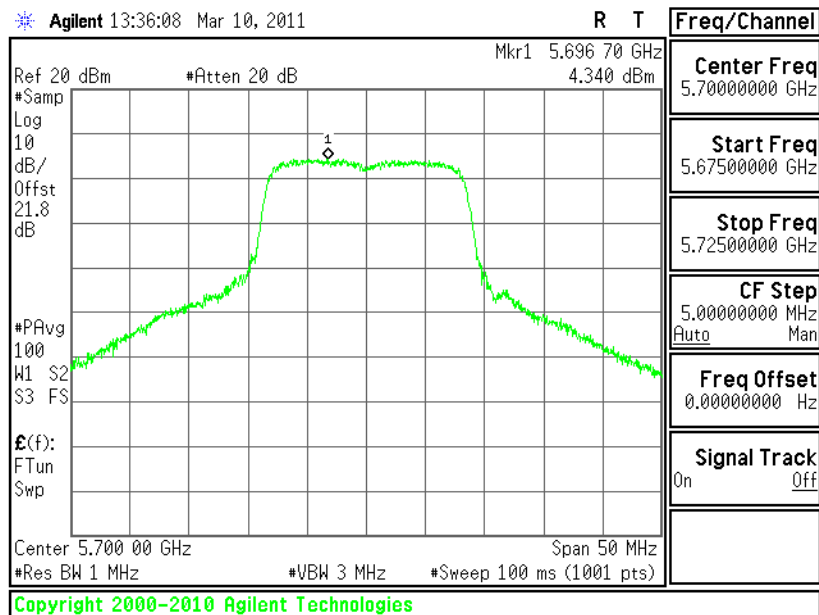




PSD Plot on 802.11a Channel 116



PSD Plot on 802.11a Channel 140

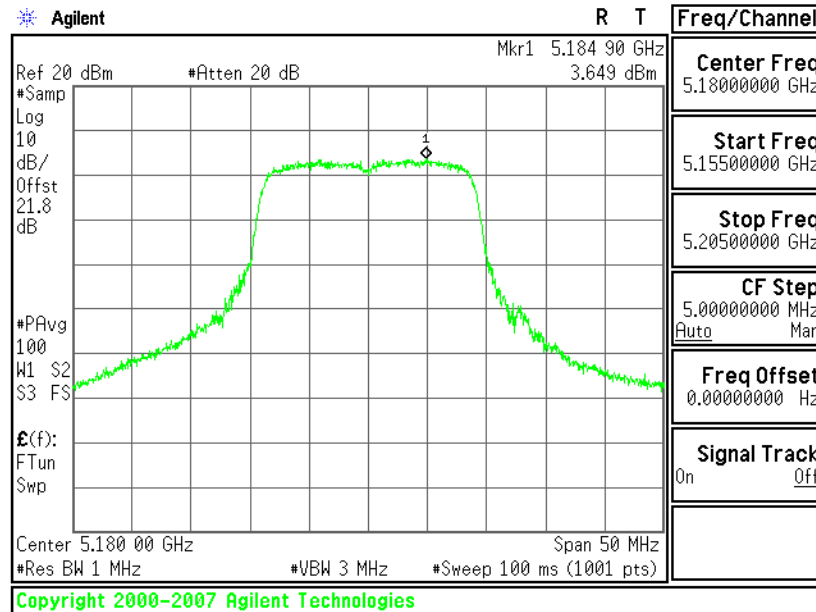




Test Mode :	Mode 10~18	Temperature :	25~27°C
Test Engineer :	Phoenix Chen	Relative Humidity :	51~54%

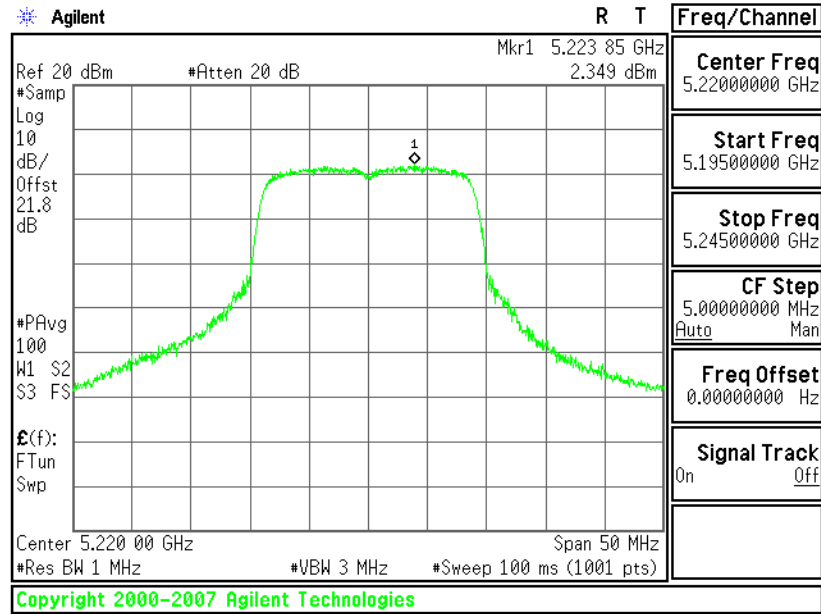
Channel	Frequency (MHz)	802.11n (BW 20MHz) Measured PSD (dBm)	Max. Limits (dBm)	Pass/Fail
36	5180	3.65	4	Pass
44	5220	2.35	4	Pass
48	5240	3.64	4	Pass
52	5260	5.15	11	Pass
60	5300	5.41	11	Pass
64	5320	5.62	11	Pass
100	5500	5.87	11	Pass
116	5580	5.83	11	Pass
140	5700	5.29	11	Pass

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

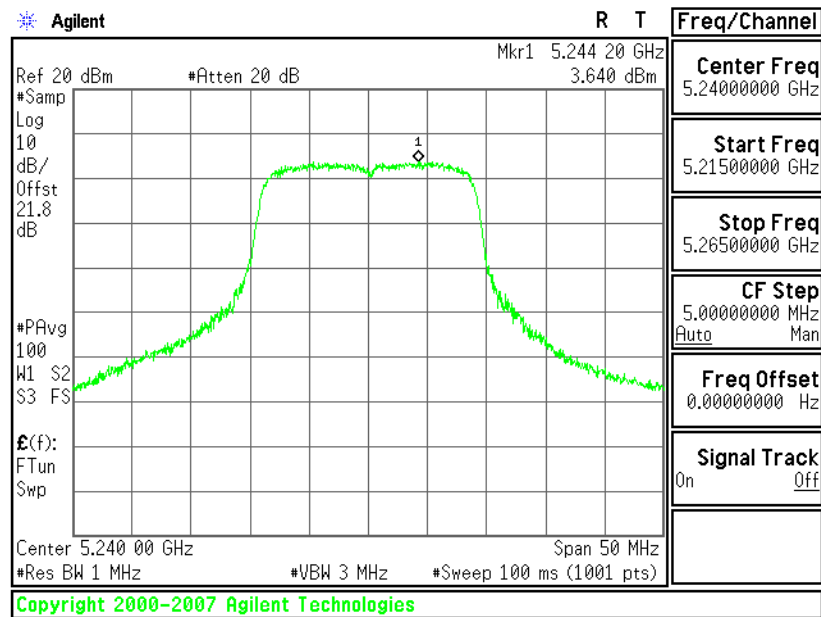




PSD Plot on 802.11n (BW 20MHz) Channel 44

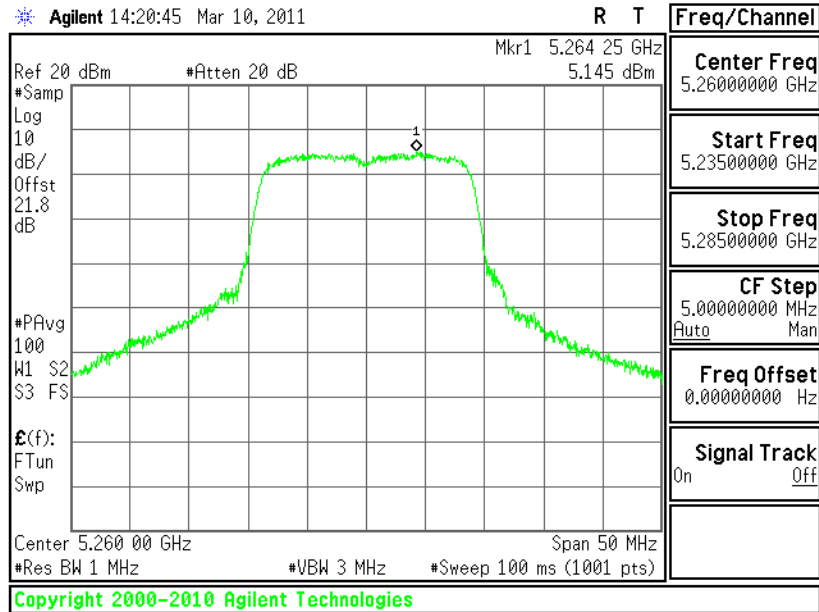


PSD Plot on 802.11n (BW 20MHz) Channel 48

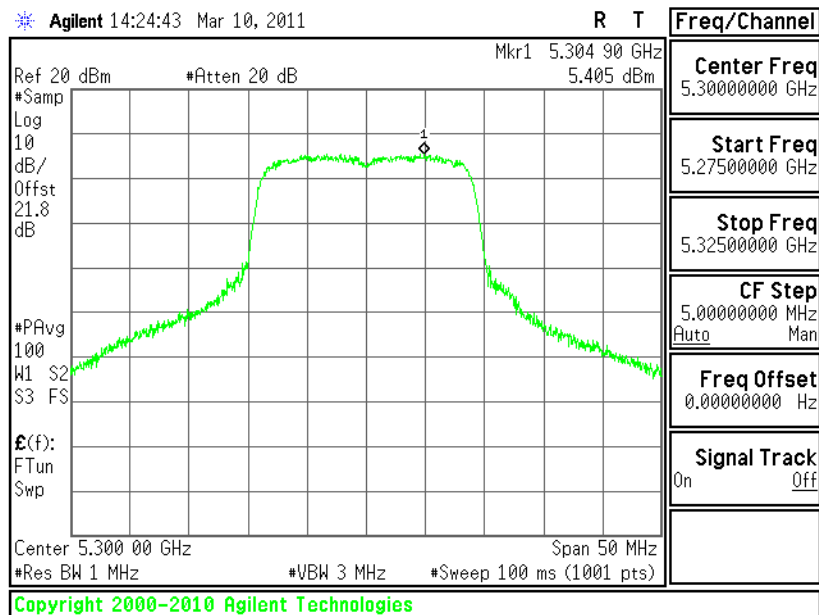




PSD Plot on 802.11n (BW 20MHz) Channel 52

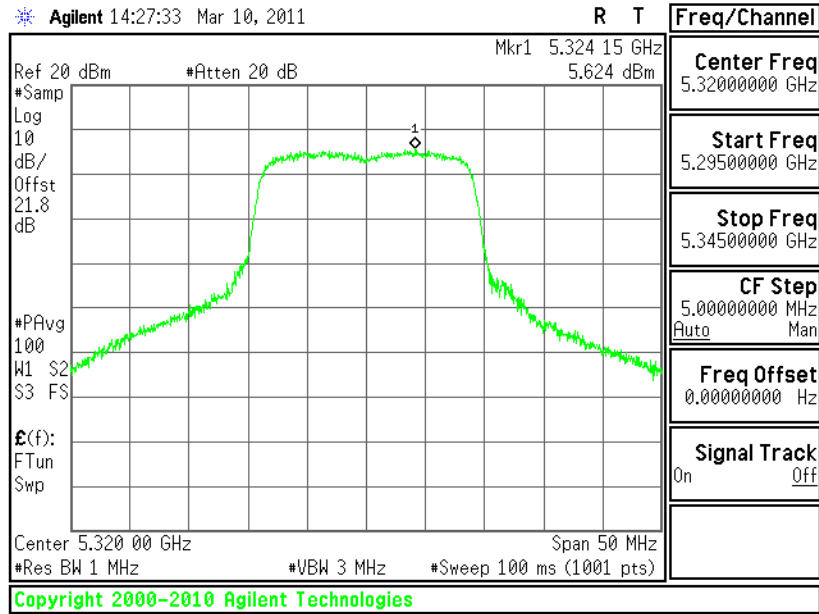


PSD Plot on 802.11n (BW 20MHz) Channel 60

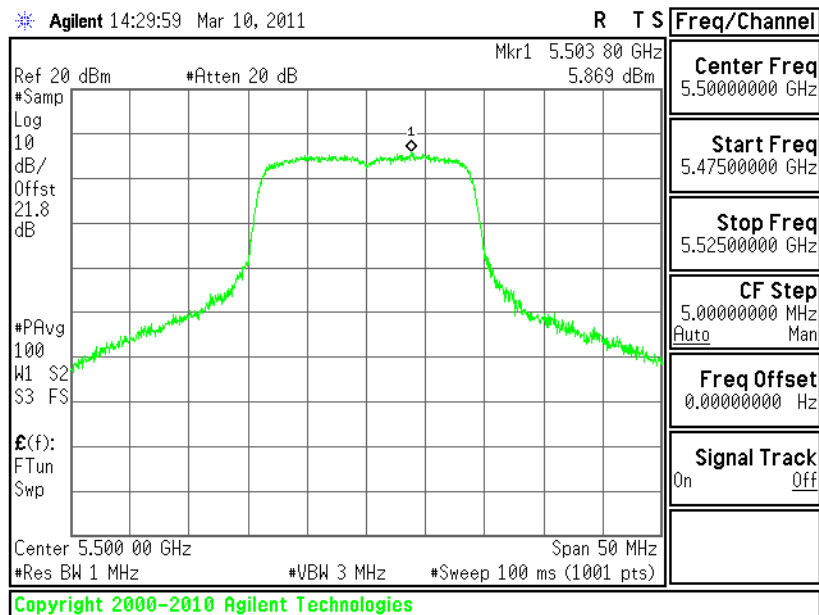




PSD Plot on 802.11n (BW 20MHz) Channel 64

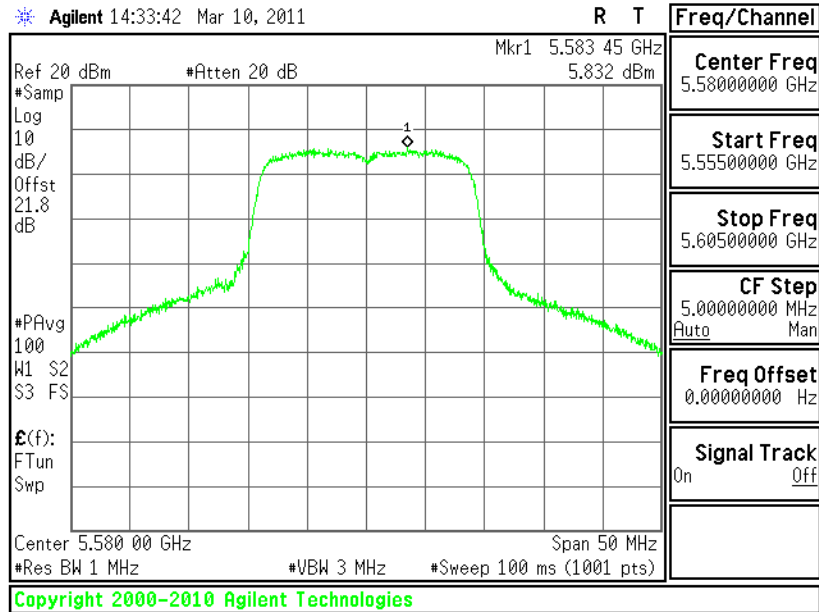


PSD Plot on 802.11n (BW 20MHz) Channel 100

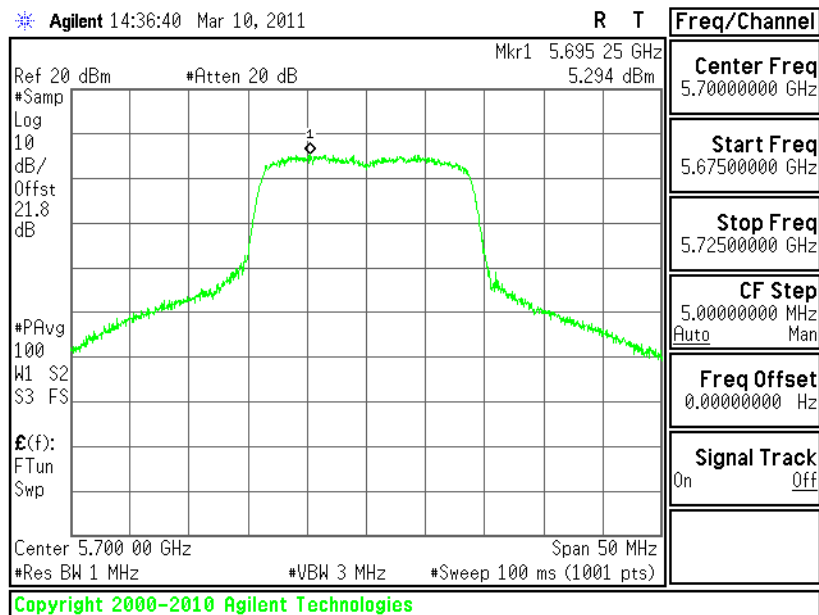




PSD Plot on 802.11n (BW 20MHz) Channel 116



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

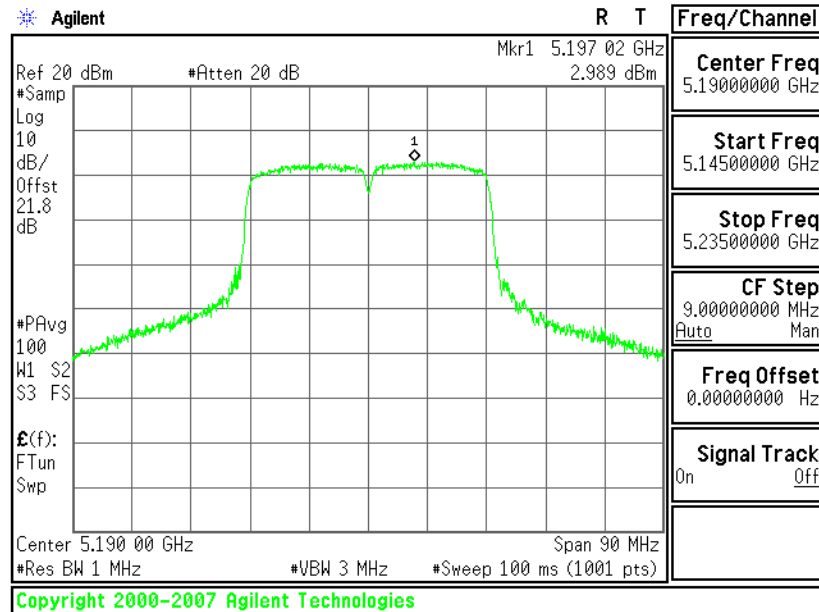




Test Mode :	Mode 19~26	Temperature :	25~27°C
Test Engineer :	Phoenix Chen	Relative Humidity :	51~54%

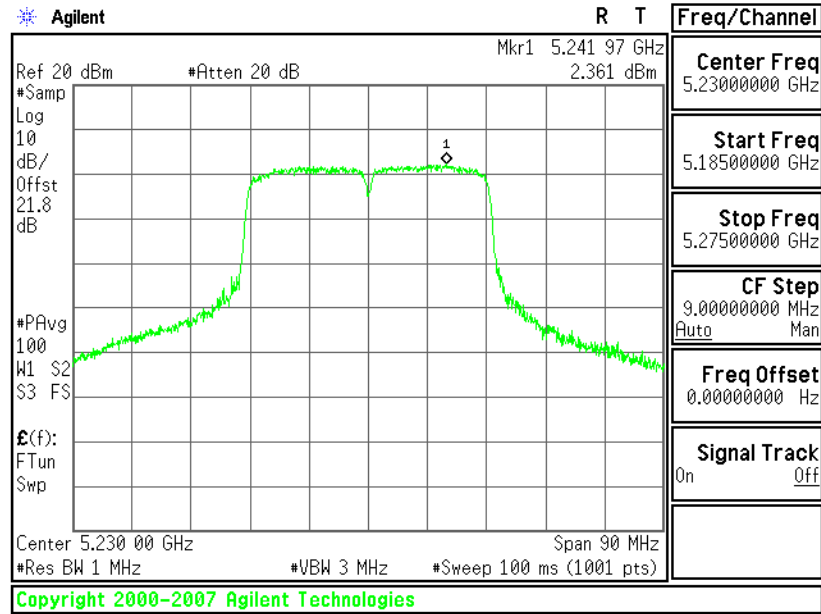
Channel	Frequency (MHz)	802.11n (BW 40MHz, 2Tx) Measured PSD (dBm)	Max. Limits (dBm)	Pass/Fail
38	5190	2.99	4	Pass
46	5230	2.36	4	Pass
54	5270	1.98	11	Pass
62	5310	-0.10	11	Pass
102	5510	1.77	11	Pass
110	5550	2.77	11	Pass
118	5590	2.11	11	Pass
134	5670	2.78	11	Pass

PSD Plot on 802.11n (BW 40MHz) Channel 38

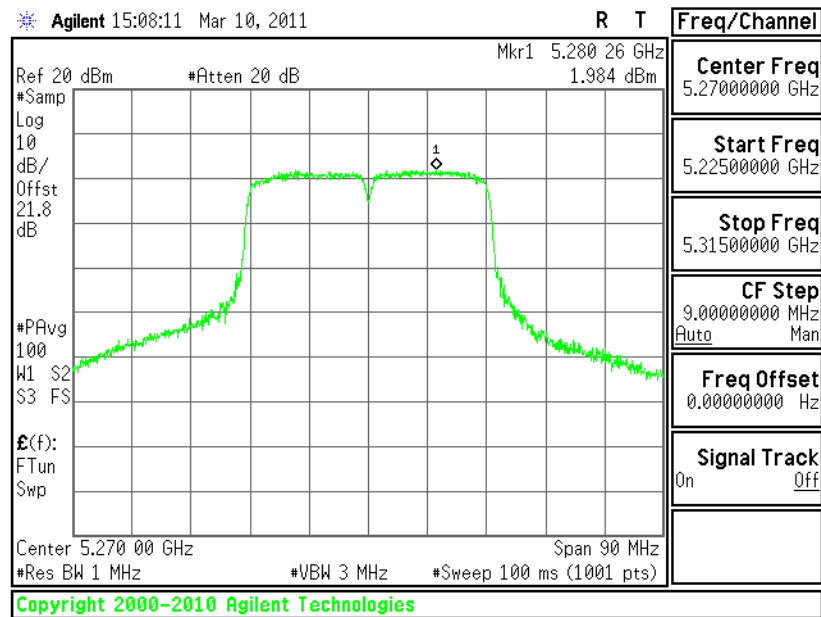




PSD Plot on 802.11n (BW 40MHz) Channel 46

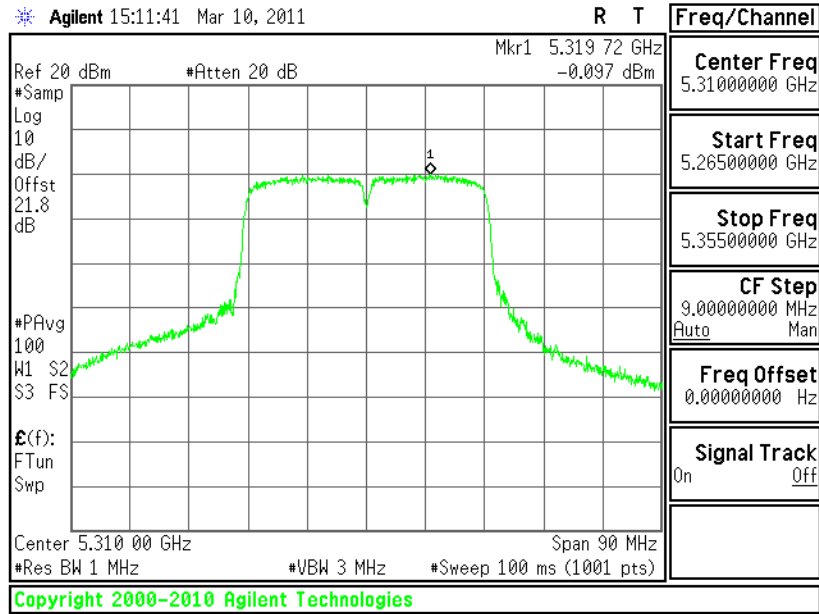


PSD Plot on 802.11n (BW 40MHz) Channel 54

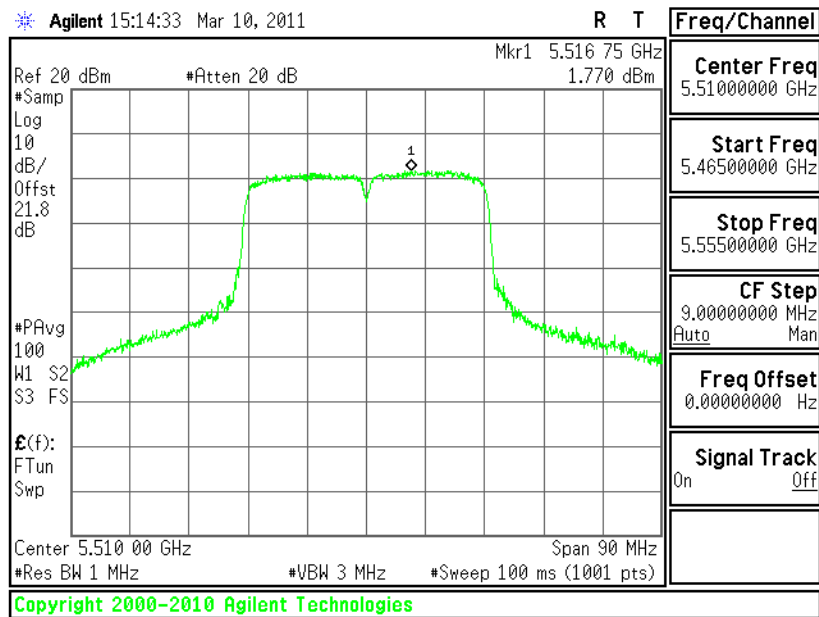




PSD Plot on 802.11n (BW 40MHz) Channel 62

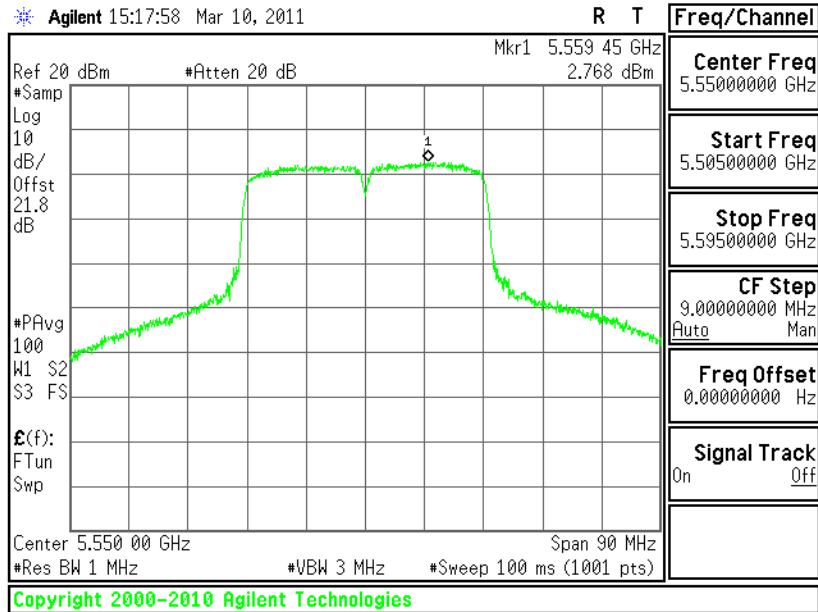


PSD Plot on 802.11n (BW 40MHz) Channel 102

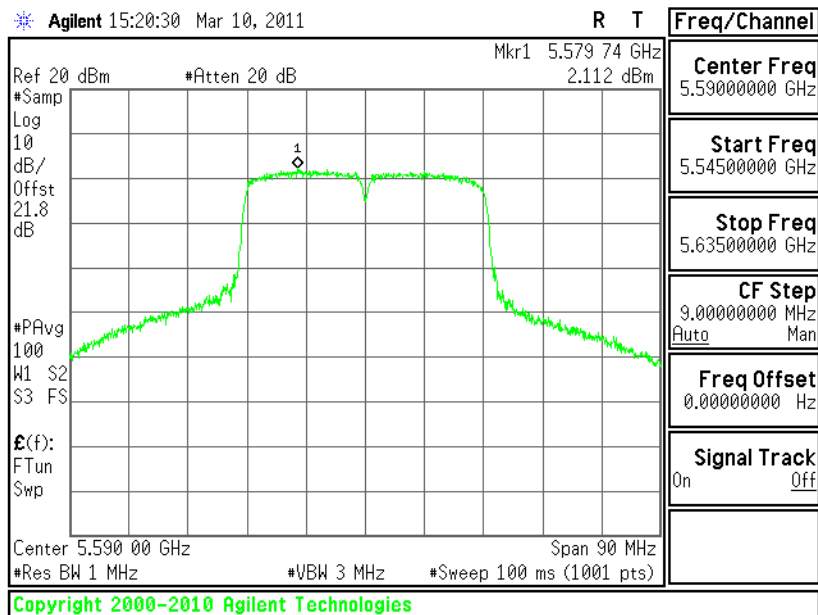




PSD Plot on 802.11n (BW 40MHz) Channel 110

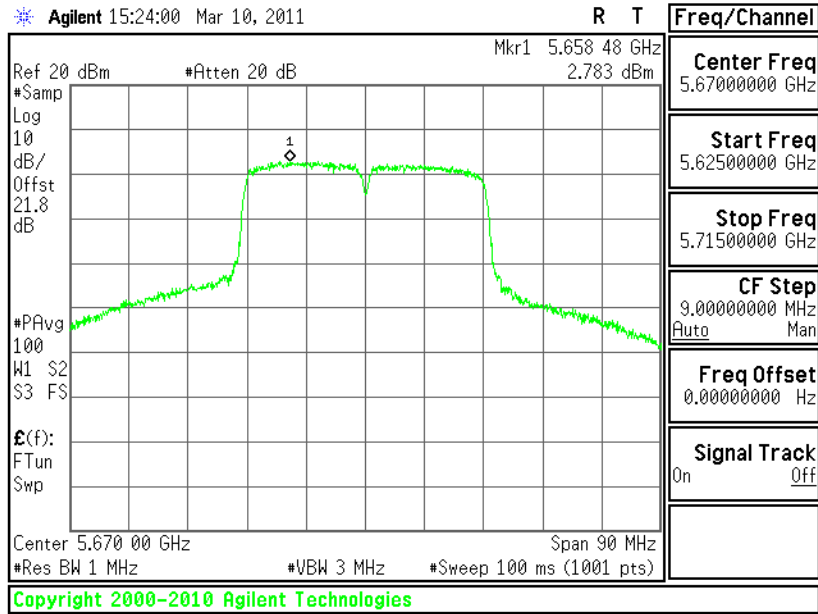


PSD Plot on 802.11n (BW 40MHz) Channel 118





PSD Plot on 802.11n (BW 40MHz) Channel 134



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

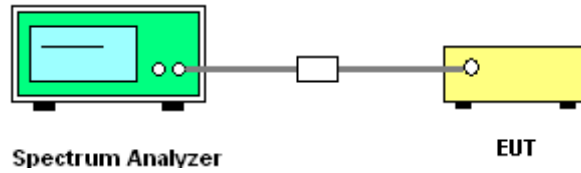
See list of measuring instruments of this test report.

3.4.3 Test Procedures

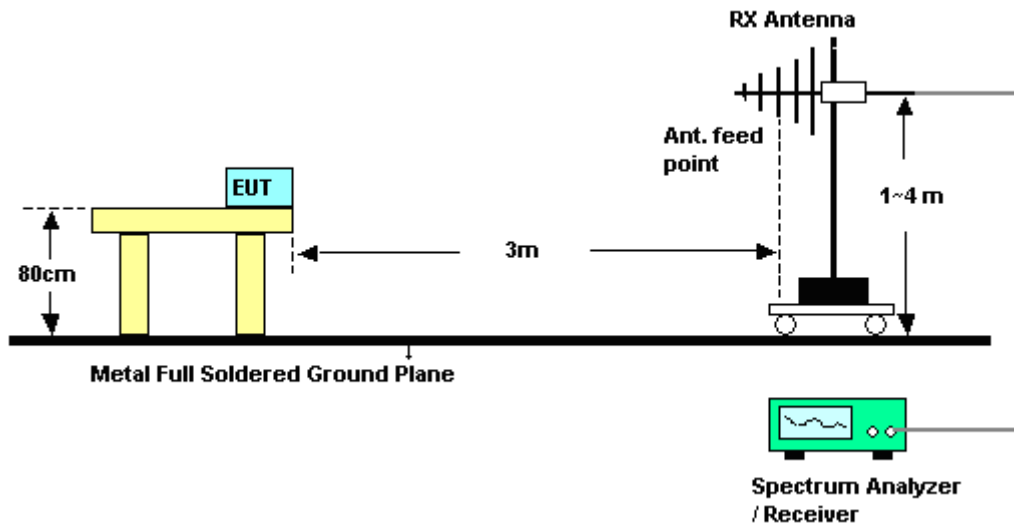
1. Set both RBW and VBW of spectrum analyzer to 1MHz with convenient frequency span including 1MHz bandwidth from band edge.
2. The band edges was measured and recorded.

3.4.4 Test Setup

<Conducted>



<Radiated>

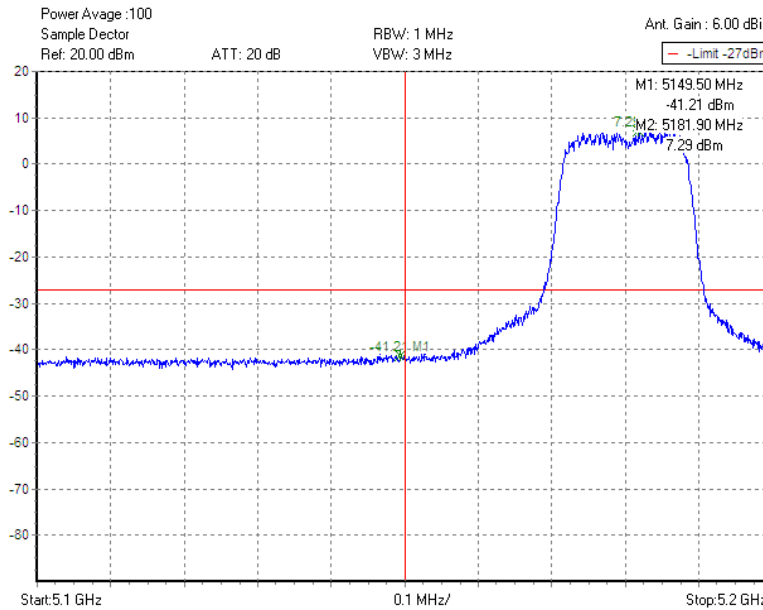




3.4.5 Test Result of Conducted Band Edges

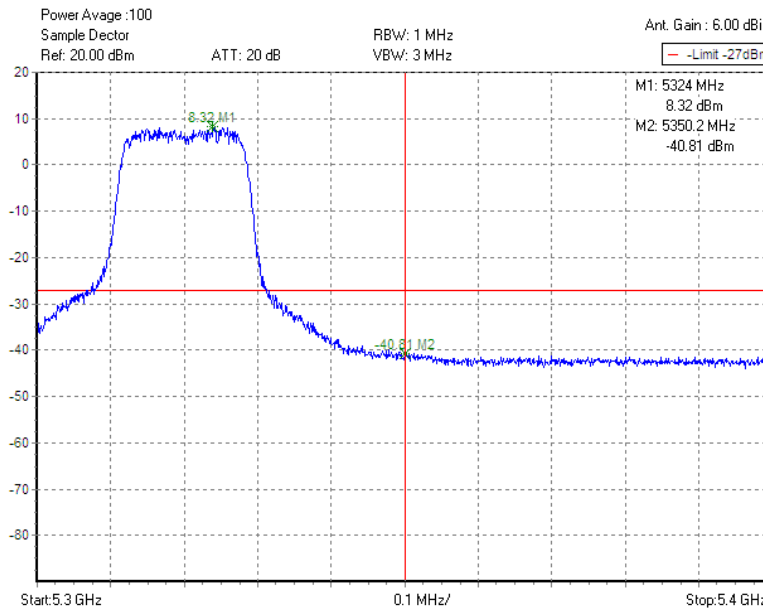
Test Mode :	Mode 1 and 6	Temperature :	25~27°C
Test Engineer :	Phoenix Chen	Relative Humidity :	51~54%

Low Band Edge Plot on Channel 36



Test result was offsetted with path loss, and antenna gain.

High Band Edge Plot on Channel 64

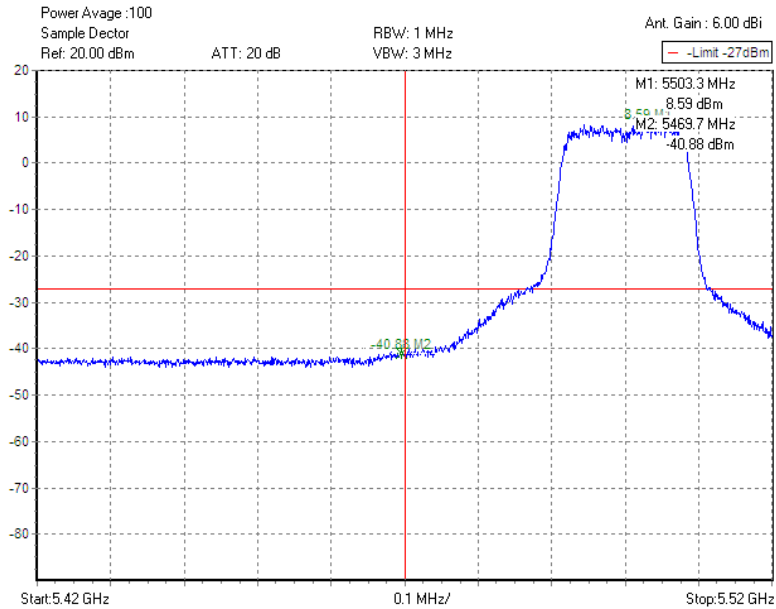


Test result was offsetted with path loss, and antenna gain.



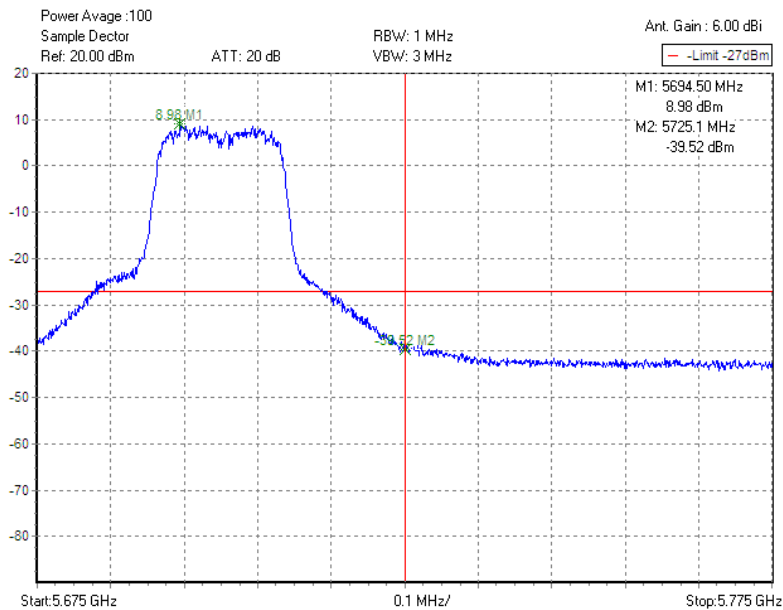
Test Mode :	Mode 7 and 9	Temperature :	25~27°C
Test Engineer :	Phoenix Chen	Relative Humidity :	51~54%

Low Band Edge Plot on Channel 100



Test result was offsetted with path loss, and antenna gain.

High Band Edge Plot on Channel 140

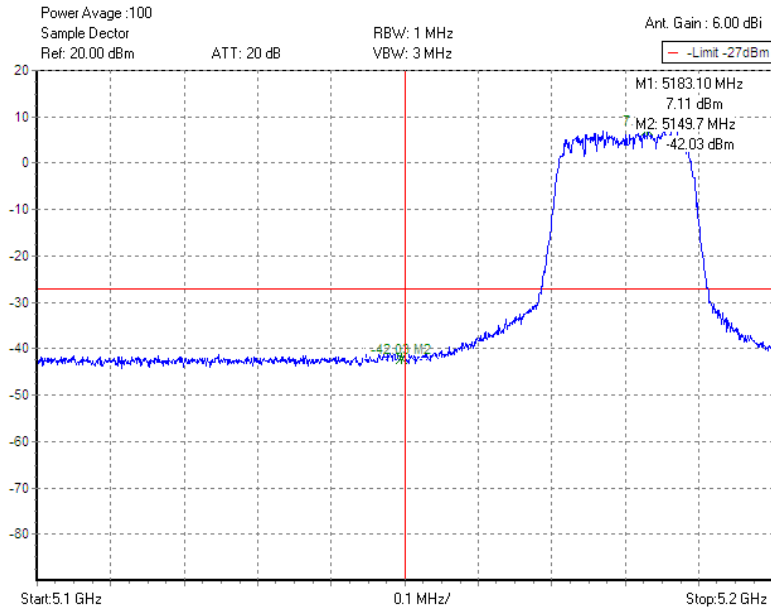


Test result was offsetted with path loss, and antenna gain.



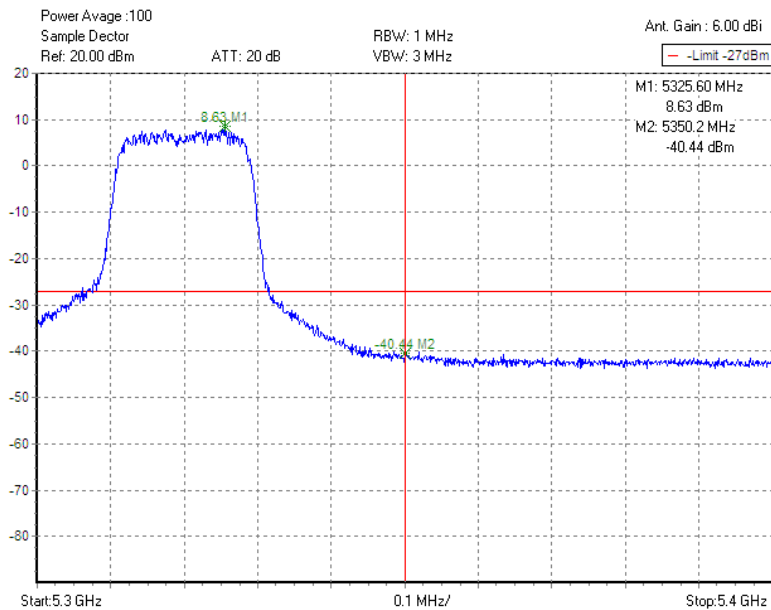
Test Mode :	Mode 10 and 15	Temperature :	25~27°C
Test Engineer :	Phoenix Chen	Relative Humidity :	51~54%

Low Band Edge Plot on Channel 36



Test result was offsetted with path loss, and antenna gain.

High Band Edge Plot on Channel 64

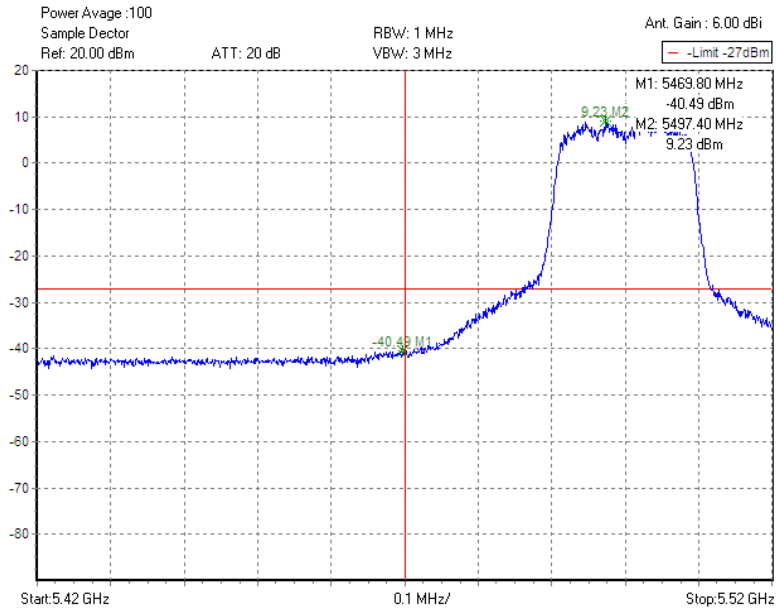


Test result was offsetted with path loss, and antenna gain.



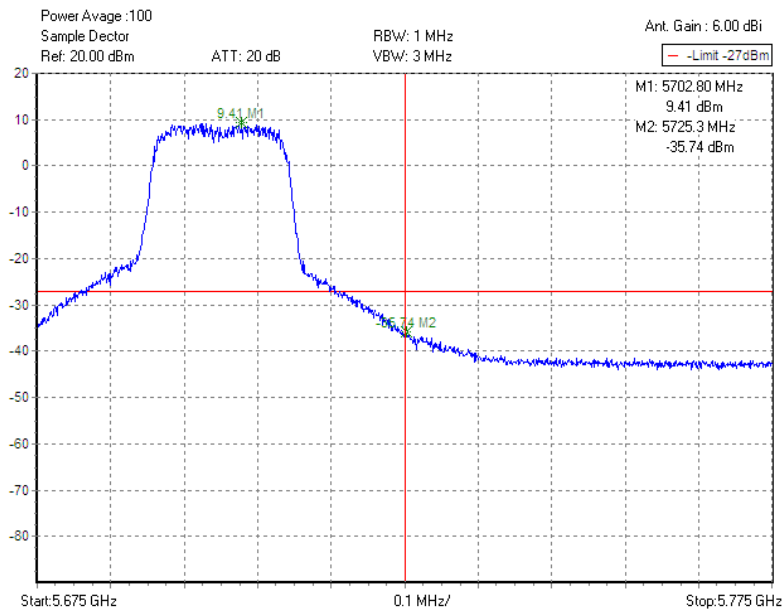
Test Mode :	Mode 16 and 18	Temperature :	25~27°C
Test Engineer :	Phoenix Chen	Relative Humidity :	51~54%

Low Band Edge Plot on Channel 100



Test result was offsetted with path loss, and antenna gain.

High Band Edge Plot on Channel 140

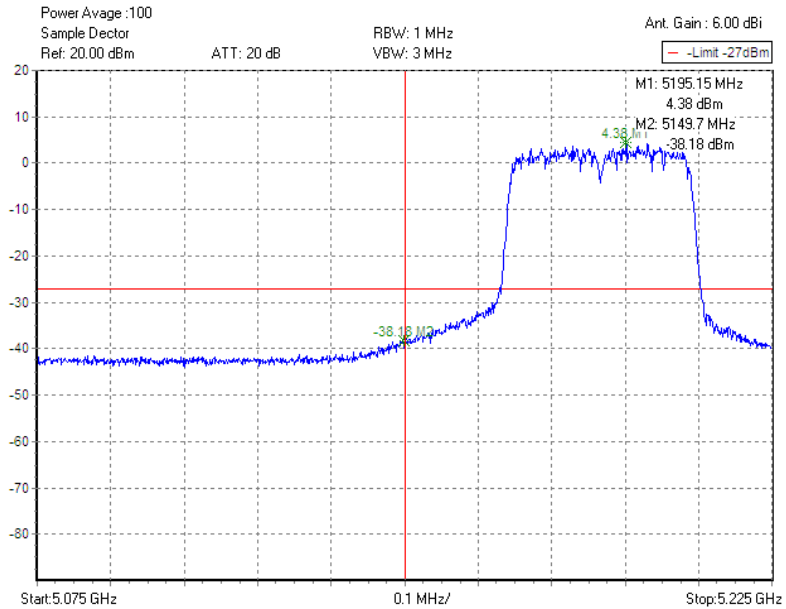


Test result was offsetted with path loss, and antenna gain.



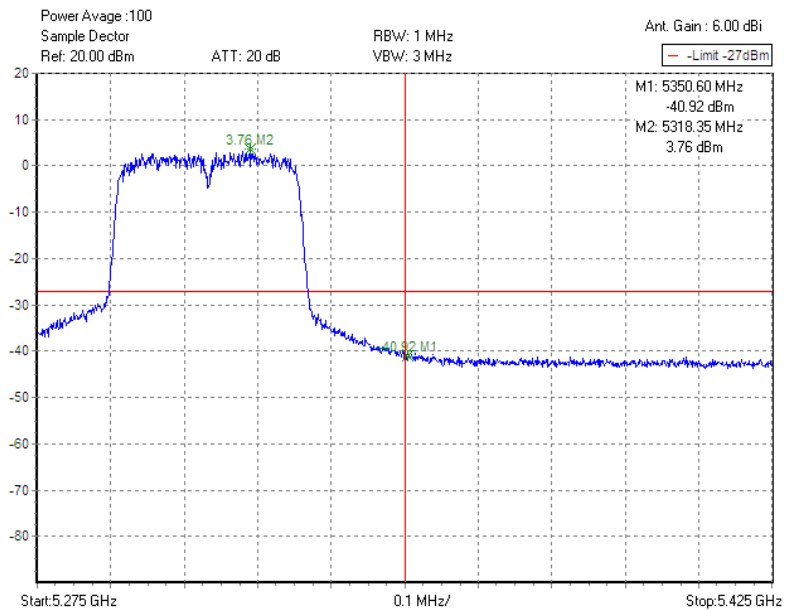
Test Mode :	Mode 19 and 22	Temperature :	25~27°C
Test Engineer :	Phoenix Chen	Relative Humidity :	51~54%

Low Band Edge Plot on Channel 38



Test result was offsetted with path loss, and antenna gain.

High Band Edge Plot on Channel 62

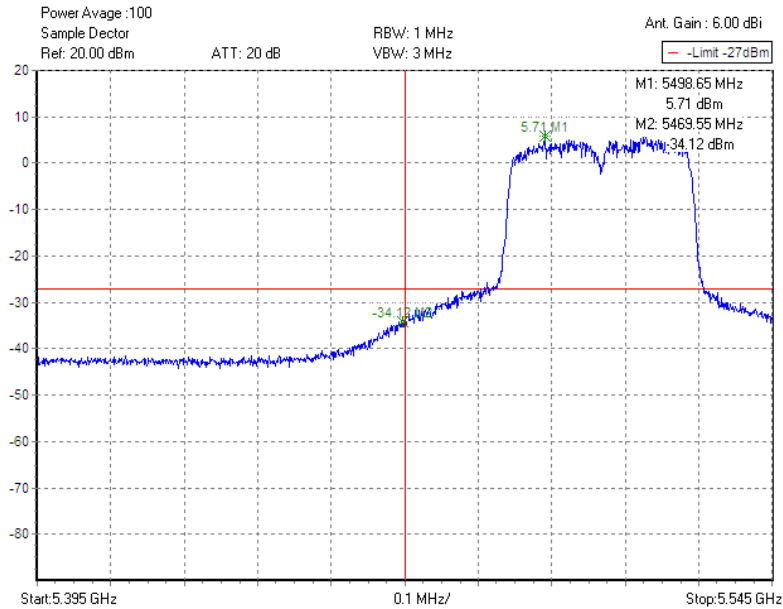


Test result was offsetted with path loss, and antenna gain.



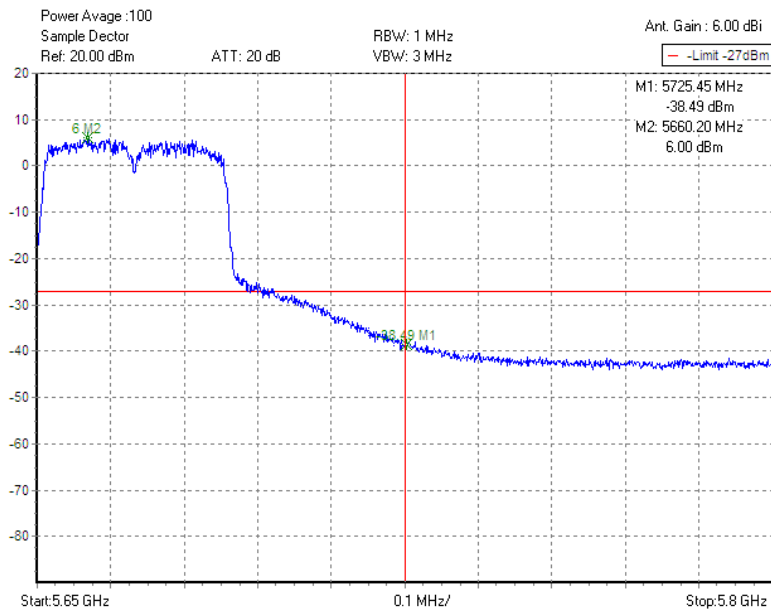
Test Mode :	Mode 23 and 26	Temperature :	25~27°C
Test Engineer :	Phoenix Chen	Relative Humidity :	51~54%

Low Band Edge Plot on Channel 102



Test result was offsetted with path loss, and antenna gain.

High Band Edge Plot on Channel 134



Test result was offsetted with path loss, and antenna gain.



3.4.6 Test Result of Radiated Band Edges

Test Mode :	Mode 1	Temperature :	22~25°C
Test Band :	802.11a	Relative Humidity :	55~60%
Test Channel :	36	Test Engineer :	Wii Chang

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	59.26	-14.74	74	49.25	34.25	9.41	33.65	127	14	Peak
5150	42.7	-11.3	54	32.69	34.25	9.41	33.65	127	14	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	56.79	-17.21	74	46.78	34.25	9.41	33.65	126	37	Peak
5150	40.97	-13.03	54	30.96	34.25	9.41	33.65	126	37	Average

Test Mode :	Mode 6	Temperature :	22~25°C
Test Band :	802.11a	Relative Humidity :	55~60%
Test Channel :	64	Test Engineer :	Wii Chang

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	62.32	-11.68	74	51.39	34.45	9.74	33.26	100	340	Peak
5350	46.5	-7.5	54	35.57	34.45	9.74	33.26	100	340	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	56.26	-17.74	74	45.33	34.45	9.74	33.26	100	295	Peak
5350	42.17	-11.83	54	31.24	34.45	9.74	33.26	100	295	Average



Test Mode :	Mode 7	Temperature :	22~25°C
Test Band :	802.11a	Relative Humidity :	55~60%
Test Channel :	100	Test Engineer :	Wii Chang

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	63.32	-4.98	68.3	51.82	34.57	9.94	33.01	100	54	Peak

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	59.07	-9.23	68.3	47.57	34.57	9.94	33.01	137	4	Peak

Test Mode :	Mode 9	Temperature :	22~25°C
Test Band :	802.11a	Relative Humidity :	55~60%
Test Channel :	140	Test Engineer :	Wii Chang

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	67.73	-0.57	68.3	56.17	34.82	9.92	33.18	101	330	Peak

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	65.19	-3.11	68.3	53.63	34.82	9.92	33.18	114	36	Peak



Test Mode :	Mode 10	Temperature :	22~25°C
Test Band :	802.11n (BW 20MHz)	Relative Humidity :	55~60%
Test Channel :	36	Test Engineer :	Wii Chang

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	57.84	-16.16	74	47.83	34.25	9.41	33.65	102	342	Peak
5150	42.44	-11.56	54	32.43	34.25	9.41	33.65	102	342	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	53.94	-20.06	74	43.93	34.25	9.41	33.65	150	4	Peak
5150	40.04	-13.96	54	30.03	34.25	9.41	33.65	150	4	Average

Test Mode :	Mode 15	Temperature :	22~25°C
Test Band :	802.11n (BW 20MHz)	Relative Humidity :	55~60%
Test Channel :	64	Test Engineer :	Wii Chang

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	60.94	-13.06	74	50.01	34.45	9.74	33.26	100	352	Peak
5350	44.47	-9.53	54	33.54	34.45	9.74	33.26	100	352	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	57.33	-16.67	74	46.4	34.45	9.74	33.26	158	20	Peak
5350	43.05	-10.95	54	32.12	34.45	9.74	33.26	158	20	Average



Test Mode :	Mode 16	Temperature :	22~25°C
Test Band :	802.11n (BW 20MHz)	Relative Humidity :	55~60%
Test Channel :	100	Test Engineer :	Wii Chang

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	63.48	-4.82	68.3	51.98	34.57	9.94	33.01	108	12	Peak

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	61.05	-7.25	68.3	49.55	34.57	9.94	33.01	164	3	Peak

Test Mode :	Mode 18	Temperature :	22~25°C
Test Band :	802.11n (BW 20MHz)	Relative Humidity :	55~60%
Test Channel :	140	Test Engineer :	Wii Chang

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	55.97	-12.33	68.3	44.41	34.82	9.92	33.18	123	346	Peak

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	52.41	-15.89	68.3	40.85	34.82	9.92	33.18	101	304	Peak



Test Mode :	Mode 19	Temperature :	22~25°C
Test Band :	802.11n (BW 40MHz)	Relative Humidity :	55~60%
Test Channel :	38	Test Engineer :	Wii Chang

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	68.39	-5.61	74	58.38	34.25	9.41	33.65	115	26	Peak
5150	52.98	-1.02	54	42.97	34.25	9.41	33.65	115	26	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	60.46	-13.54	74	50.45	34.25	9.41	33.65	100	301	Peak
5150	45.79	-8.21	54	35.78	34.25	9.41	33.65	100	301	Average

Test Mode :	Mode 22	Temperature :	22~25°C
Test Band :	802.11n (BW 40MHz)	Relative Humidity :	55~60%
Test Channel :	62	Test Engineer :	Wii Chang

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	68.9	-5.1	74	57.97	34.45	9.74	33.26	100	341	Peak
5350	52.94	-1.06	54	42.01	34.45	9.74	33.26	100	341	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	64.77	-9.23	74	53.84	34.45	9.74	33.26	186	20	Peak
5350	49.49	-4.51	54	38.56	34.45	9.74	33.26	186	20	Average



Test Mode :	Mode 23	Temperature :	22~25°C
Test Band :	802.11n (BW 40MHz)	Relative Humidity :	55~60%
Test Channel :	102	Test Engineer :	Wii Chang

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	60.25	-8.05	68.3	48.75	34.57	9.94	33.01	109	22	Peak

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	51.42	-16.88	68.3	39.92	34.57	9.94	33.01	137	359	Peak

Test Mode :	Mode 26	Temperature :	22~25°C
Test Band :	802.11n (BW 40MHz)	Relative Humidity :	55~60%
Test Channel :	134	Test Engineer :	Wii Chang

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	60.87	-7.43	68.3	49.31	34.82	9.92	33.18	100	57	Peak

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	60.34	-7.96	68.3	48.78	34.82	9.92	33.18	100	358	Peak

3.5 Conducted Spurious Emission

3.5.1 Limit of Spurious Emission Measurement

- (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.

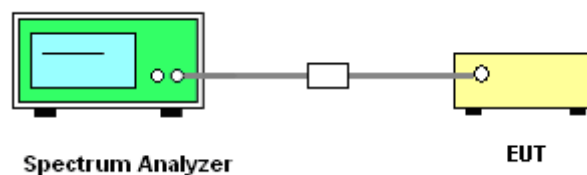
3.5.2 Measuring Instruments

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 loss cable.
2. Set RBW = VBW = 1 MHz, Video bandwidth (VBW), scan from 30 MHz to 40 GHz.

3.5.4 Test Setup





3.5.5 Test Result

Test Mode :	Mode 1~9	Temperature :	25~27°C
Test Band :	802.11a	Relative Humidity :	51~54%
Test Channel :	36, 44, 48, 52, 60, 64, 100, 116, 140	Test Engineer :	Phoenix Chen

<30 MHz ~ 3 GHz>

Channel	Frequency (MHz)	Frequency (MHz)	Level (dBm)	Antenna Gain (dBi)	EIRP Test Result (dBm)	Limit (dBm)
36	5180	2916.84	-60.14	6	-54.14	-27
44	5220	2875.26	-50.58	6	-44.58	-27
48	5240	2435.7	-48.55	6	-42.55	-27
52	5260	2803.98	-49.94	6	-43.94	-27
60	5300	2441.64	-48.64	6	-42.64	-27
64	5320	2441.64	-48.69	6	-42.69	-27
100	5500	2435.7	-48.38	6	-42.38	-27
116	5580	2435.7	-48.60	6	-42.60	-27
140	5700	2441.64	-47.86	6	-41.86	-27

<3 GHz ~ 13.6 GHz>

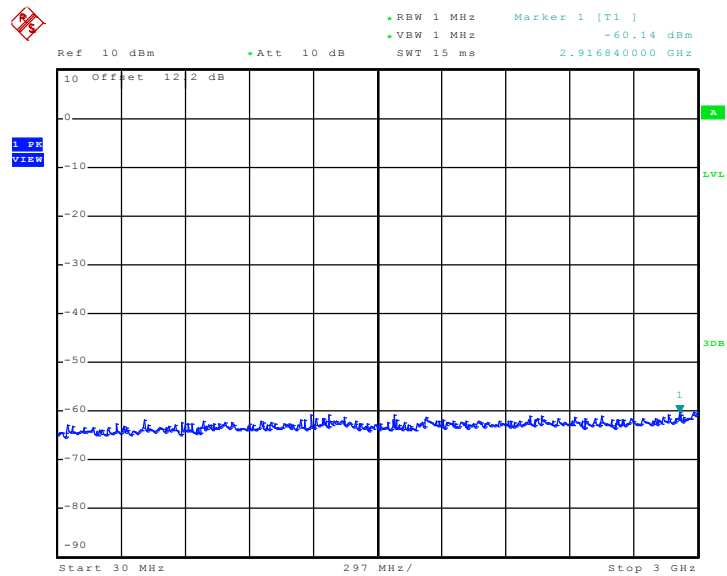
Channel	Frequency (MHz)	Frequency (MHz)	Level (dBm)	Antenna Gain (dBi)	EIRP Test Result (dBm)	Limit (dBm)
36	5180	6900.8	-49.90	6	-43.90	-27
44	5220	6964.4	-40.26	6	-34.26	-27
48	5240	6985.6	-40.85	6	-34.85	-27
52	5260	7006.8	-38.06	6	-32.06	-27
60	5300	7070.4	-39.24	6	-33.24	-27
64	5320	7091.6	-40.33	6	-34.33	-27
100	5500	3106	-43.68	6	-37.68	-27
116	5580	3169.6	-43.92	6	-37.92	-27
140	5700	5586.4	-42.96	6	-36.96	-27



<13.6 GHz ~ 40 GHz>

Channel	Frequency (MHz)	Frequency (MHz)	Level (dBm)	Antenna Gain (dBi)	EIRP Test Result (dBm)	Limit (dBm)
36	5180	40000	-43.28	6	-37.28	-27
44	5220	40000	-33.55	6	-27.55	-27
48	5240	40000	-33.40	6	-27.40	-27
52	5260	40000	-33.31	6	-27.31	-27
60	5300	40000	-33.17	6	-27.17	-27
64	5320	40000	-33.13	6	-27.13	-27
100	5500	40000	-33.32	6	-27.32	-27
116	5580	40000	-33.83	6	-27.83	-27
140	5700	40000	-33.92	6	-27.92	-27

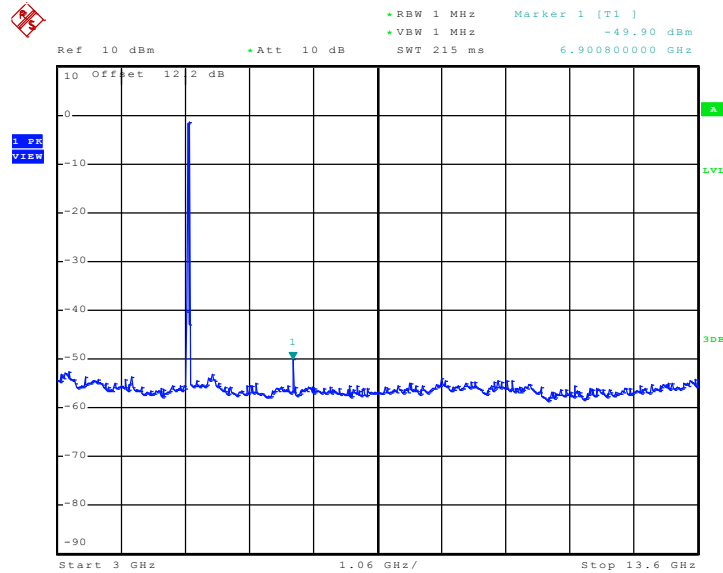
Mode 1 : Conducted Spurious Emission Plot between 802.11a 30 MHz ~ 3 GHz



Date: 10.MAR.2011 16:57:23

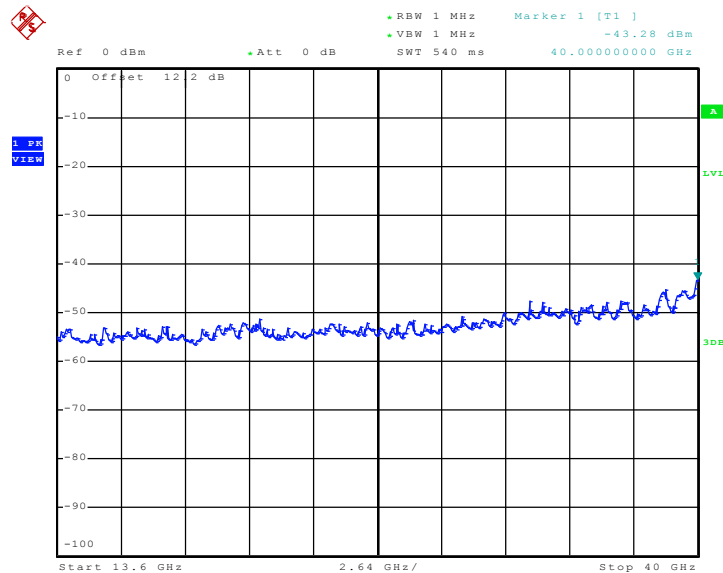


Mode 1 : Conducted Spurious Emission Plot between
802.11a 3 GHz ~ 13.6 GHz



Date: 10.MAR.2011 16:57:35

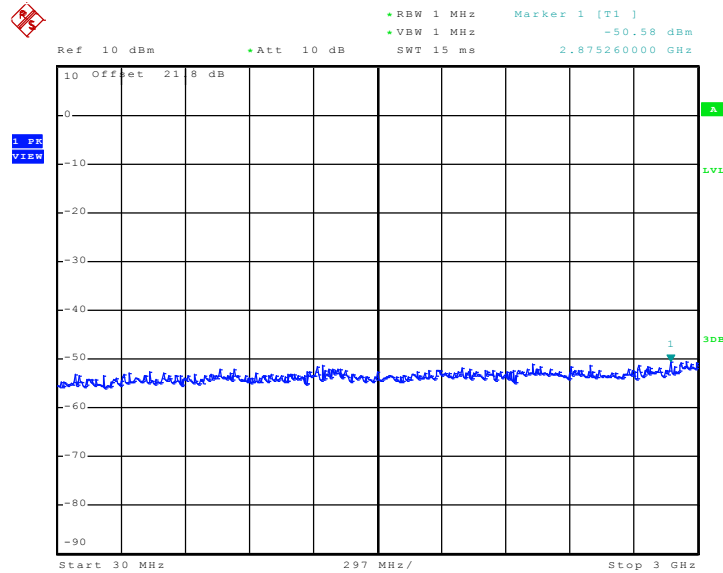
Mode 1 : Conducted Spurious Emission Plot between
802.11a 13.6 GHz ~ 40 GHz



Date: 10.MAR.2011 16:57:47

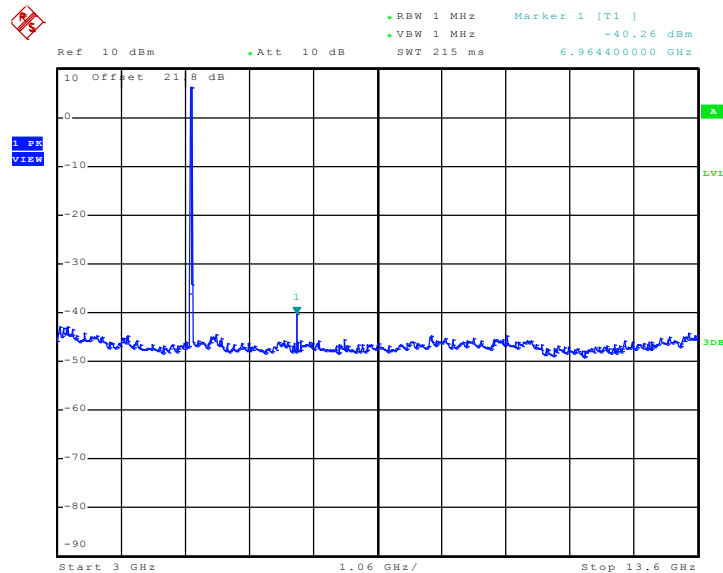


Mode 2 : Conducted Spurious Emission Plot between 802.11a 30 MHz ~ 3 GHz



Date: 10.MAR.2011 16:58:56

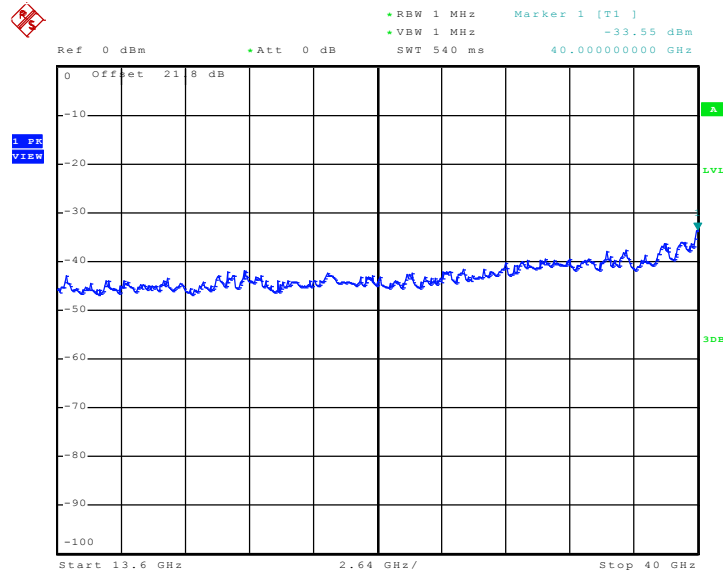
Mode 2 : Conducted Spurious Emission Plot between 802.11a 3 GHz ~ 13.6 GHz



Date: 10.MAR.2011 16:59:08

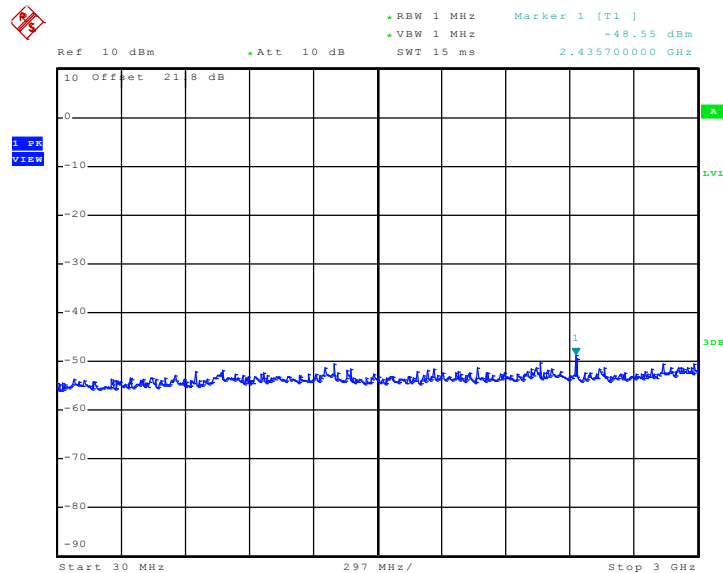


Mode 2 : Conducted Spurious Emission Plot between 802.11a 13.6 GHz ~ 40 GHz



Date: 10.MAR.2011 16:59:20

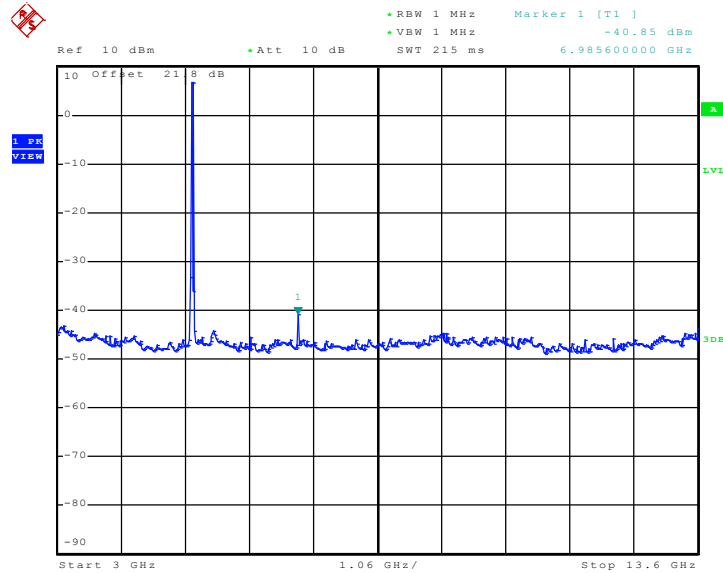
Mode 3 : Conducted Spurious Emission Plot between 802.11a 30 MHz ~ 3 GHz



Date: 10.MAR.2011 17:00:29

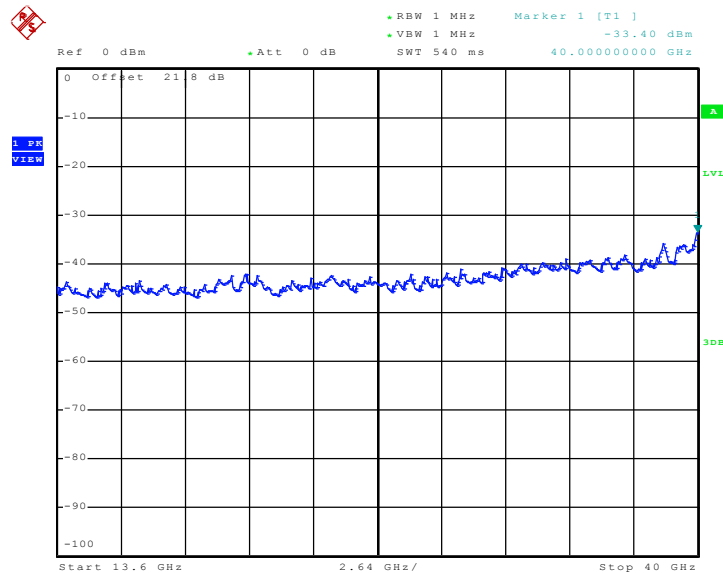


Mode 3 : Conducted Spurious Emission Plot between
802.11a 3 GHz ~ 13.6 GHz



Date: 10.MAR.2011 17:00:41

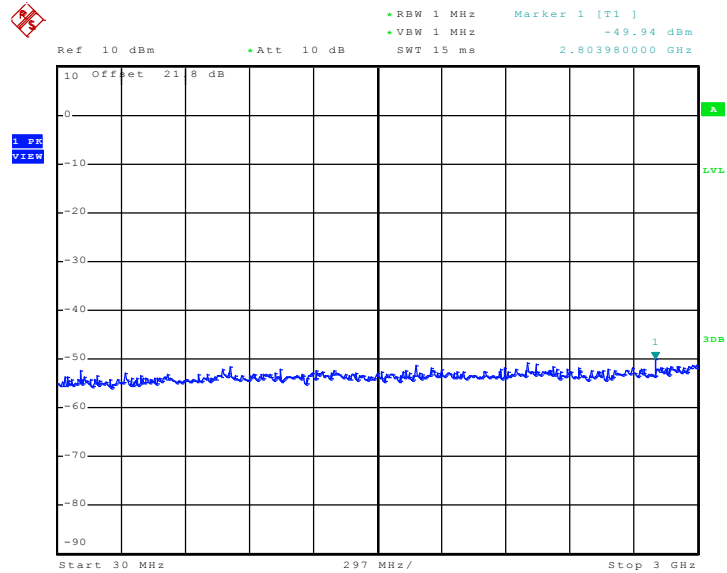
Mode 3 : Conducted Spurious Emission Plot between
802.11a 13.6 GHz ~ 40 GHz



Date: 10.MAR.2011 17:00:53

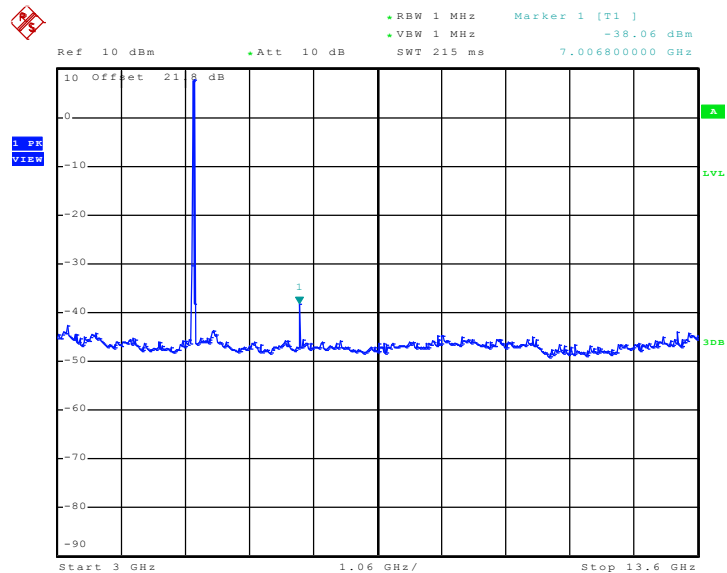


Mode 4 : Conducted Spurious Emission Plot between 802.11a 30 MHz ~ 3 GHz



Date: 10.MAR.2011 17:01:28

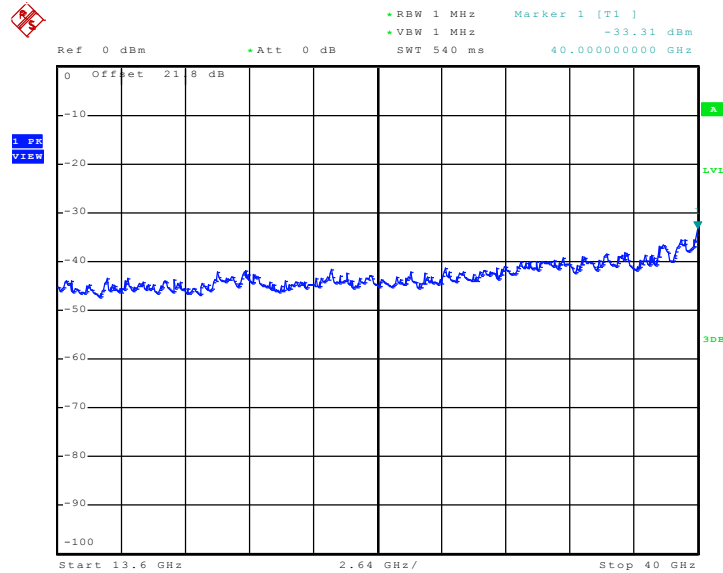
Mode 4 : Conducted Spurious Emission Plot between 802.11a 3 GHz ~ 13.6 GHz



Date: 10.MAR.2011 17:01:40

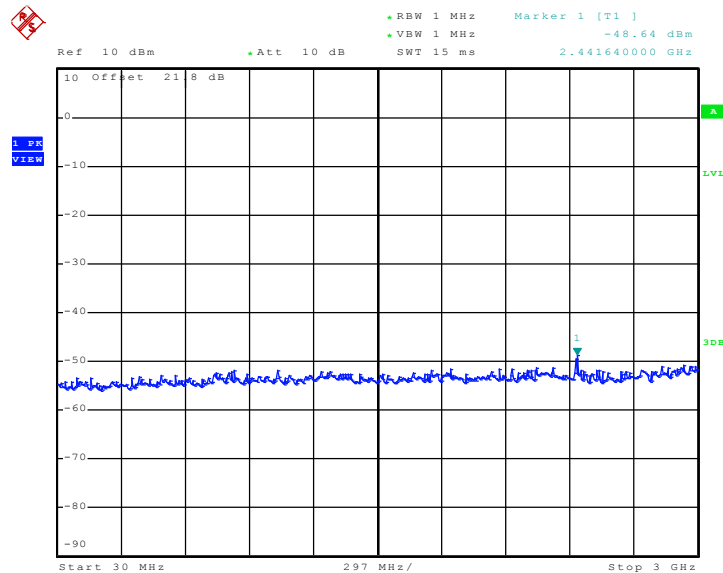


Mode 4 : Conducted Spurious Emission Plot between 802.11a 13.6 GHz ~ 40 GHz



Date: 10.MAR.2011 17:01:52

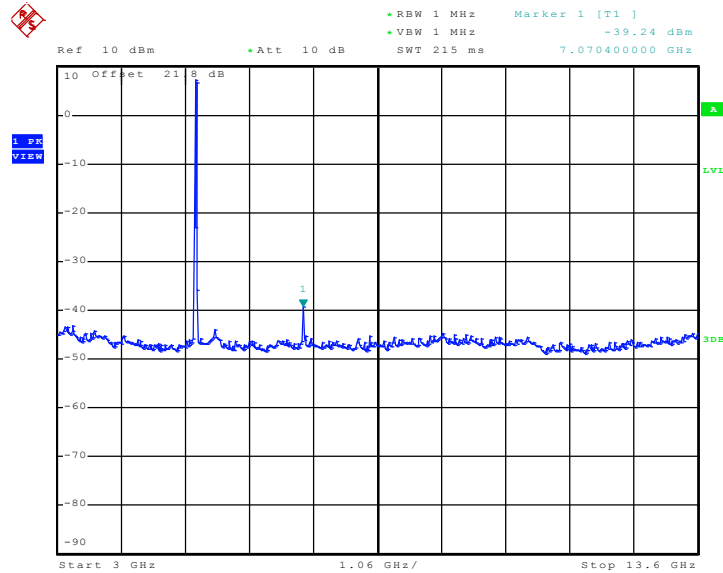
Mode 5 : Conducted Spurious Emission Plot between 802.11a 30 MHz ~ 3 GHz



Date: 10.MAR.2011 17:02:30

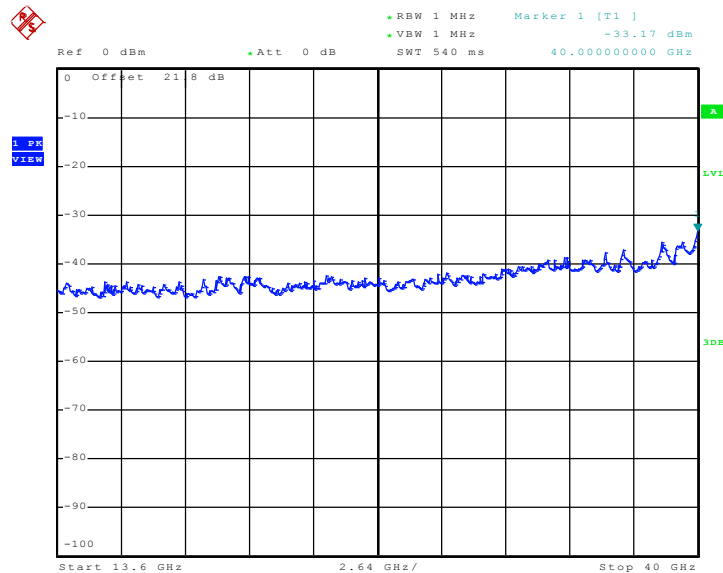


Mode 5 : Conducted Spurious Emission Plot between
802.11a 3 GHz ~ 13.6 GHz



Date: 10.MAR.2011 17:02:42

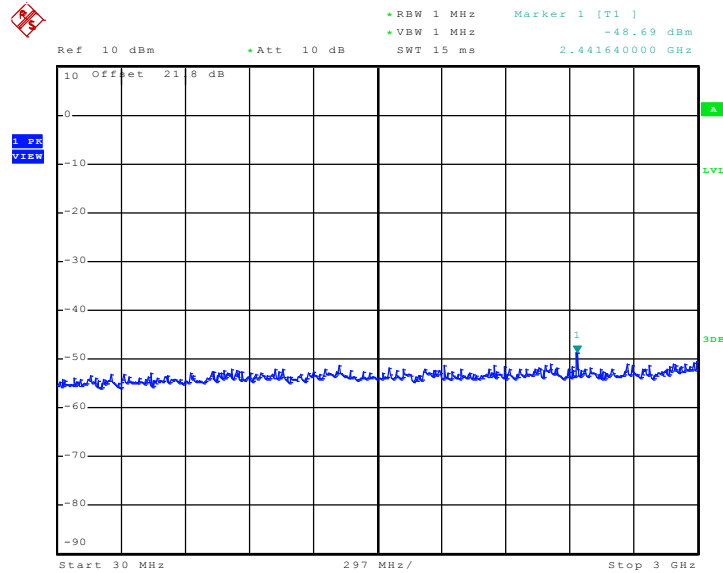
Mode 5 : Conducted Spurious Emission Plot between
802.11a 13.6 GHz ~ 40 GHz



Date: 10.MAR.2011 17:02:54

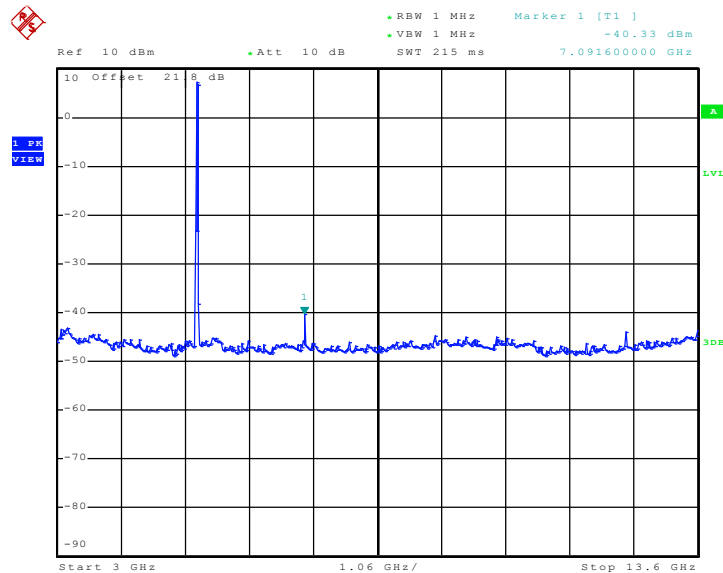


Mode 6 : Conducted Spurious Emission Plot between 802.11a 30 MHz ~ 3 GHz



Date: 10.MAR.2011 17:03:28

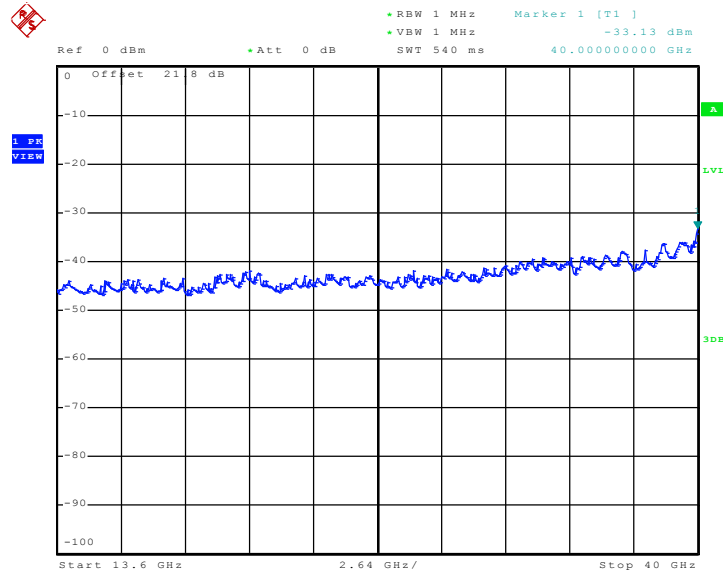
Mode 6 : Conducted Spurious Emission Plot between 802.11a 3 GHz ~ 13.6 GHz



Date: 10.MAR.2011 17:03:40

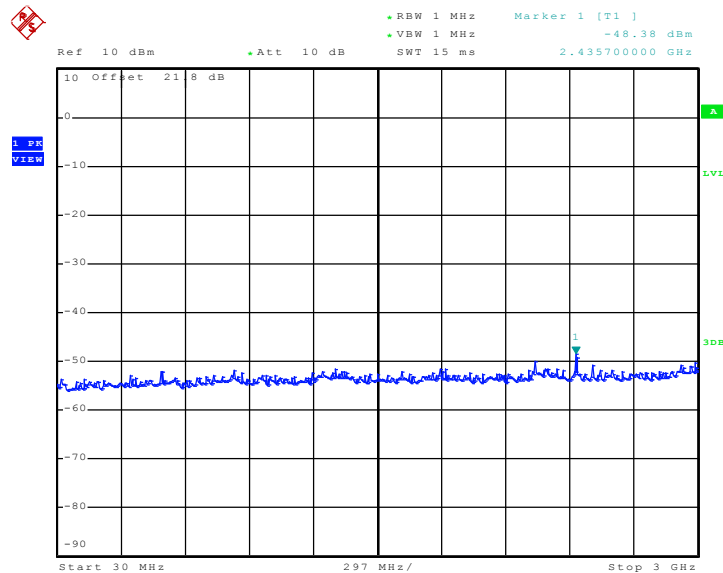


Mode 6 : Conducted Spurious Emission Plot between 802.11a 13.6 GHz ~ 40 GHz



Date: 10.MAR.2011 17:03:52

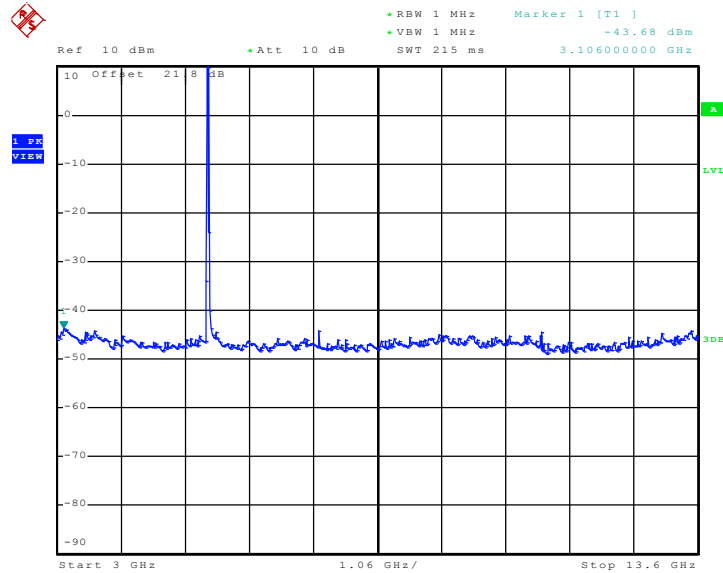
Mode 7 : Conducted Spurious Emission Plot between 802.11a 30 MHz ~ 3 GHz



Date: 10.MAR.2011 17:04:34

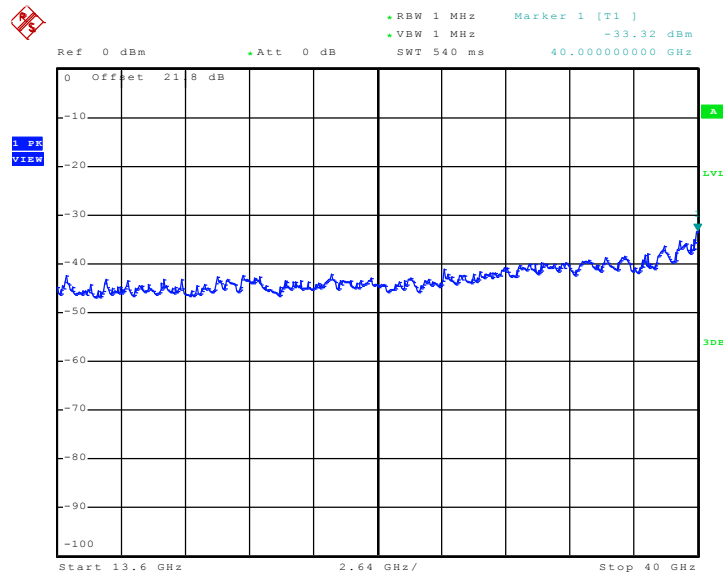


Mode 7 : Conducted Spurious Emission Plot between
802.11a 3 GHz ~ 13.6 GHz



Date: 10.MAR.2011 17:04:46

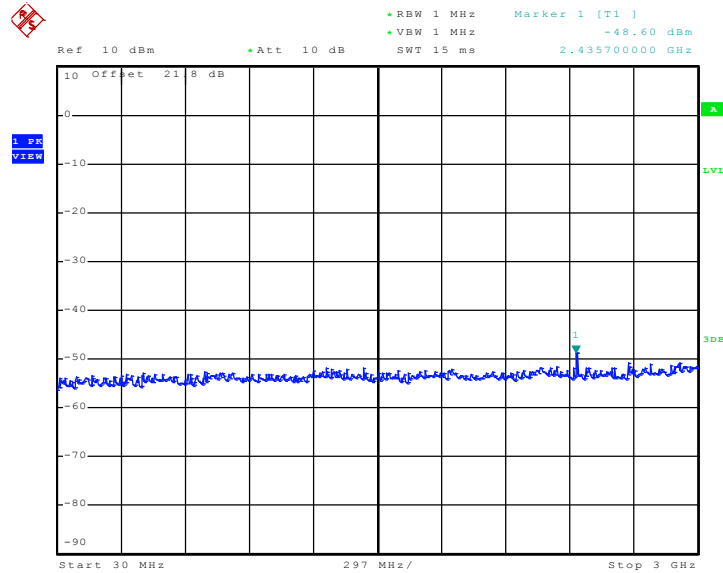
Mode 7 : Conducted Spurious Emission Plot between
802.11a 13.6 GHz ~ 40 GHz



Date: 10.MAR.2011 17:04:58

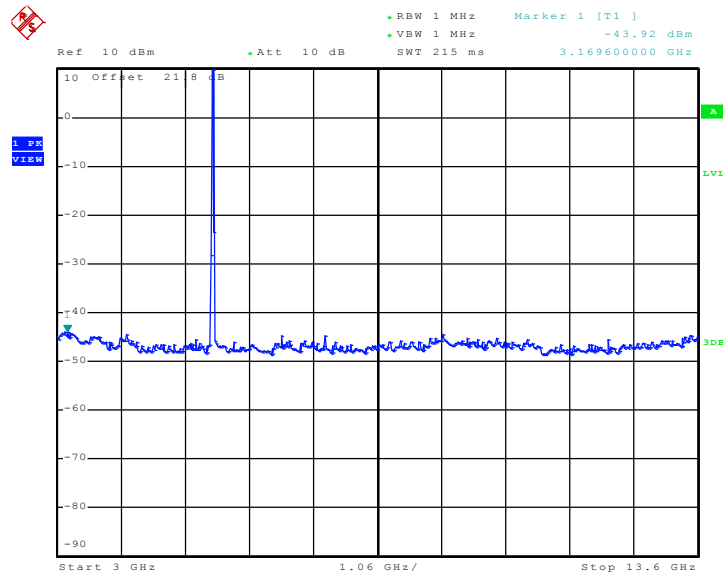


Mode 8 : Conducted Spurious Emission Plot between 802.11a 30 MHz ~ 3 GHz



Date: 10.MAR.2011 17:05:51

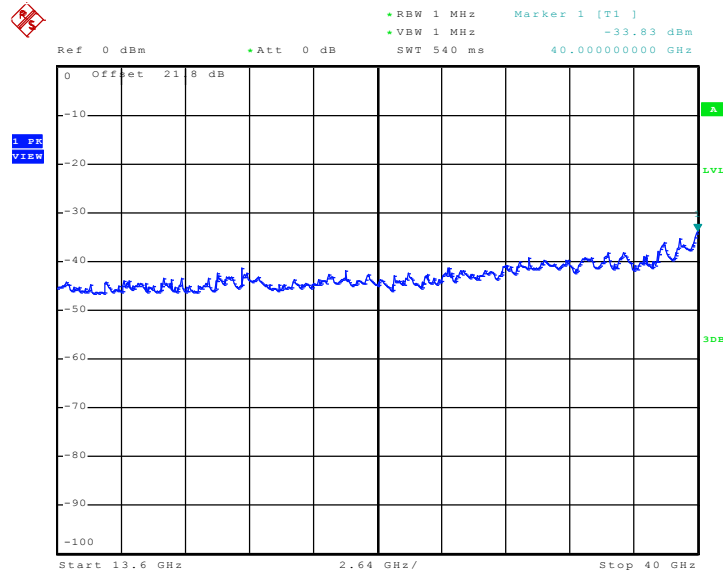
Mode 8 : Conducted Spurious Emission Plot between 802.11a 3 GHz ~ 13.6 GHz



Date: 10.MAR.2011 17:06:03

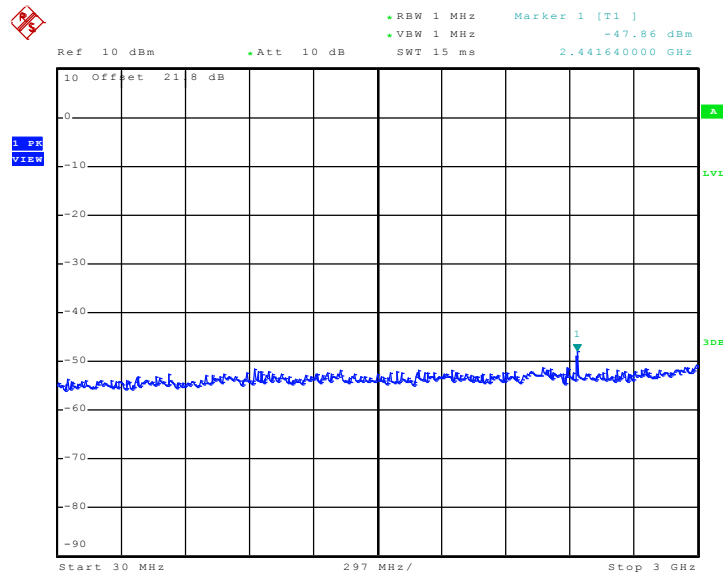


Mode 8 : Conducted Spurious Emission Plot between 802.11a 13.6 GHz ~ 40 GHz



Date: 10.MAR.2011 17:06:15

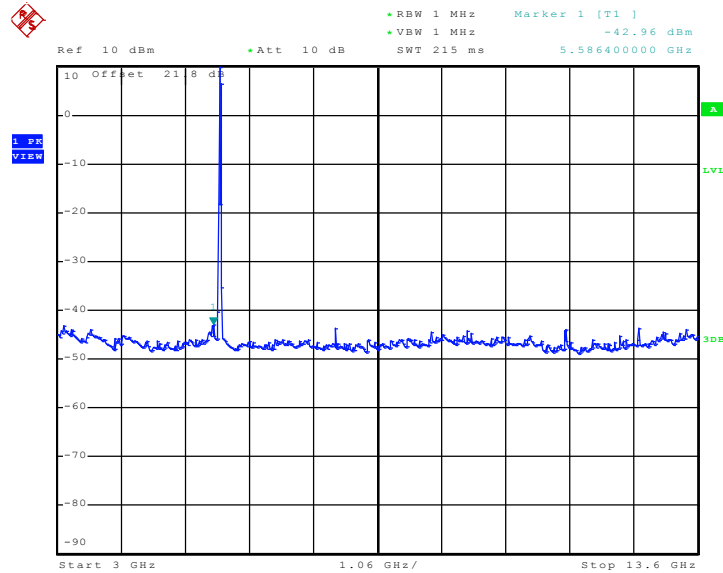
Mode 9 : Conducted Spurious Emission Plot between 802.11a 30 MHz ~ 3 GHz



Date: 10.MAR.2011 17:06:53

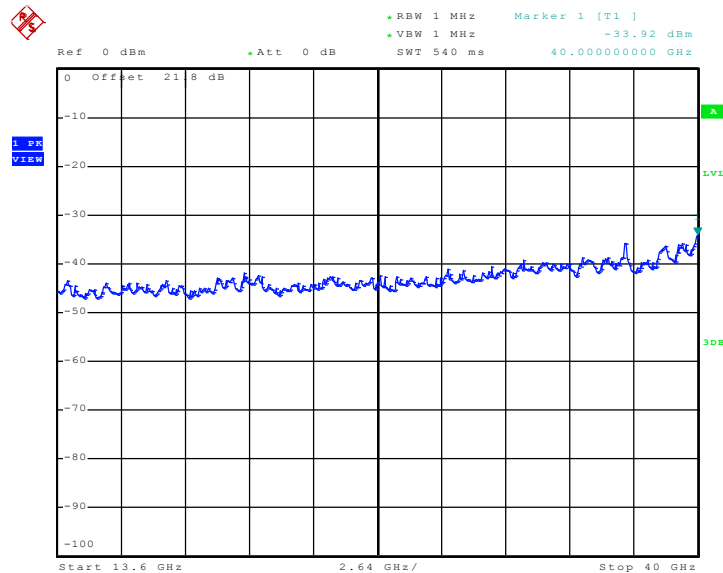


Mode 9 : Conducted Spurious Emission Plot between
802.11a 3 GHz ~ 13.6 GHz



Date: 10.MAR.2011 17:07:05

Mode 9 : Conducted Spurious Emission Plot between
802.11a 13.6 GHz ~ 40 GHz



Date: 10.MAR.2011 17:07:17



Test Mode :	Mode 10~18	Temperature :	25~27°C
Test Band :	802.11n (BW 20MHz)	Relative Humidity :	51~54%
Test Channel :	36, 44, 48, 52, 60, 64, 100, 116, 140	Test Engineer :	Phoenix Chen

<30 MHz ~ 3 GHz>

Channel	Frequency (MHz)	Frequency (MHz)	Level (dBm)	Antenna Gain (dBi)	EIRP Test Result (dBm)	Limit (dBm)
36	5180	2441.64	-59.07	6	-53.07	-27
44	5220	2435.7	-49.42	6	-43.42	-27
48	5240	1734.78	-44.21	6	-38.21	-27
52	5260	2441.64	-50.57	6	-44.57	-27
60	5300	1728.84	-38.81	6	-32.81	-27
64	5320	2857.44	-50.27	6	-44.27	-27
100	5500	2435.7	-49.41	6	-43.41	-27
116	5580	3000	-50.15	6	-44.15	-27
140	5700	2435.7	-50.16	6	-44.16	-27

<3 GHz ~ 13.6 GHz>

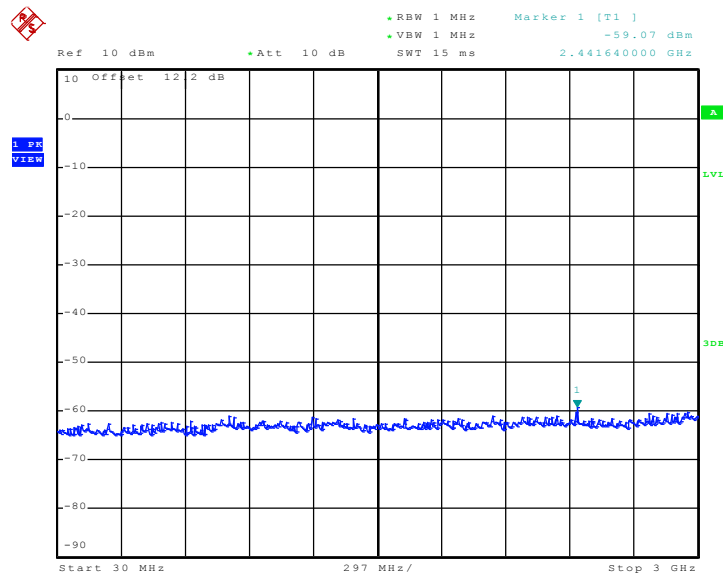
Channel	Frequency (MHz)	Frequency (MHz)	Level (dBm)	Antenna Gain (dBi)	EIRP Test Result (dBm)	Limit (dBm)
36	5180	6900.8	-50.02	6	-44.02	-27
44	5220	6964.4	-40.53	6	-34.53	-27
48	5240	6985.6	-40.87	6	-34.87	-27
52	5260	7006.8	-38.43	6	-32.43	-27
60	5300	7070.4	-39.06	6	-33.06	-27
64	5320	7091.6	-39.96	6	-33.96	-27
100	5500	11013.6	-42.29	6	-36.29	-27
116	5580	3127.2	-43.06	6	-37.06	-27
140	5700	11395.2	-42.81	6	-36.81	-27



<13.6 GHz ~ 40 GHz>

Channel	Frequency (MHz)	Frequency (MHz)	Level (dBm)	Antenna Gain (dBi)	EIRP Test Result (dBm)	Limit (dBm)
36	5180	40000	-43.47	6	-37.47	-27
44	5220	40000	-33.97	6	-27.97	-27
48	5240	40000	-33.60	6	-27.60	-27
52	5260	36937.6	-34.17	6	-28.17	-27
60	5300	40000	-33.49	6	-27.49	-27
64	5320	40000	-34.04	6	-28.04	-27
100	5500	40000	-33.69	6	-27.69	-27
116	5580	40000	-34.14	6	-28.14	-27
140	5700	40000	-33.79	6	-27.79	-27

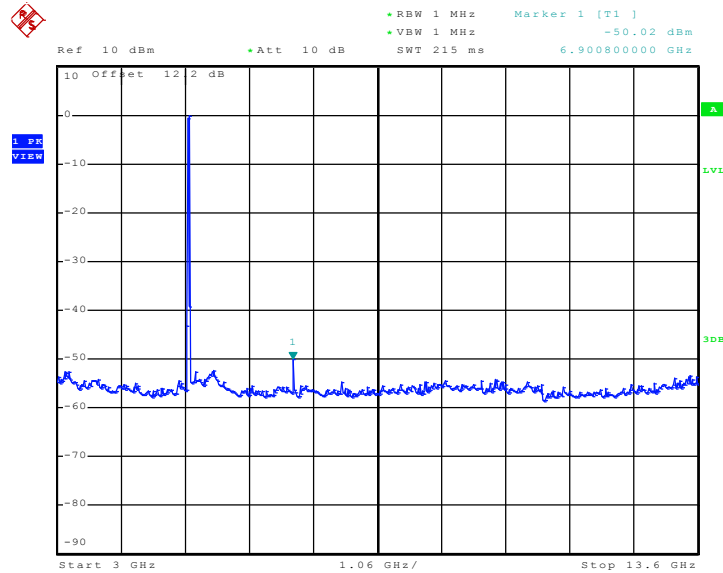
Mode 10 : Conducted Spurious Emission Plot between 802.11n 30 MHz ~ 3 GHz



Date: 10.MAR.2011 17:18:12

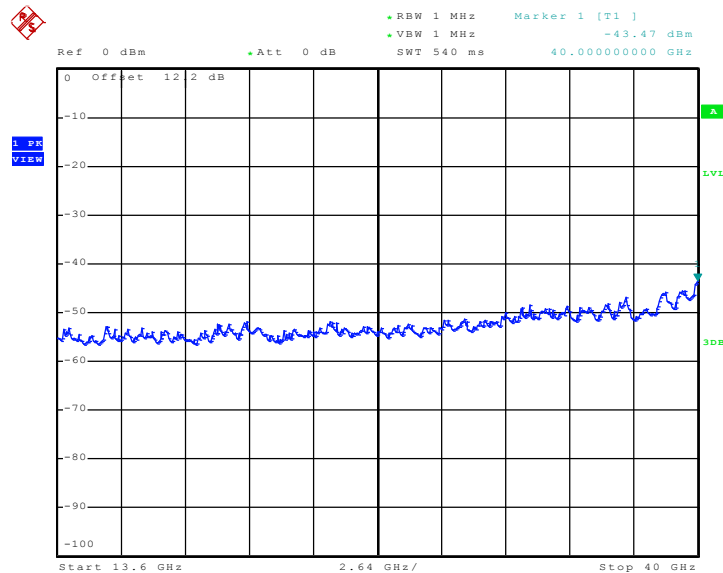


Mode 10 : Conducted Spurious Emission Plot between 802.11n 3 GHz ~ 13.6 GHz



Date: 10.MAR.2011 17:18:24

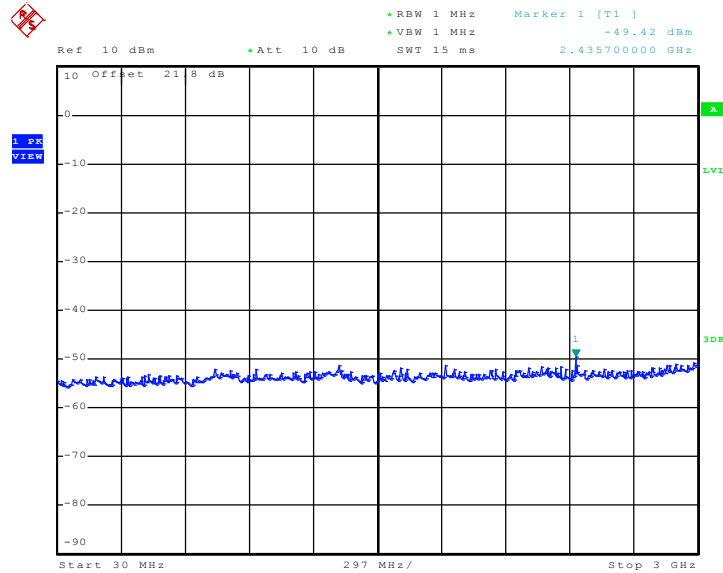
Mode 10 : Conducted Spurious Emission Plot between 802.11n 13.6 GHz ~ 40 GHz



Date: 10.MAR.2011 17:18:36

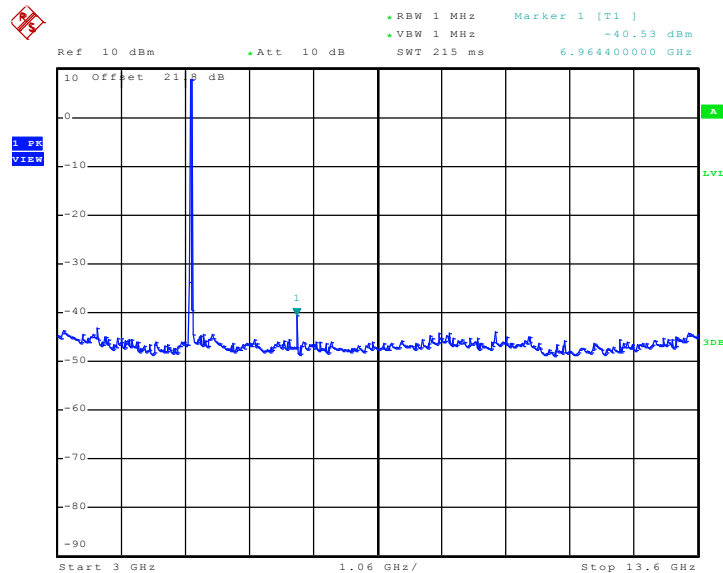


Mode 11 : Conducted Spurious Emission Plot between 802.11n 30 MHz ~ 3 GHz



Date: 10.MAR.2011 17:19:19

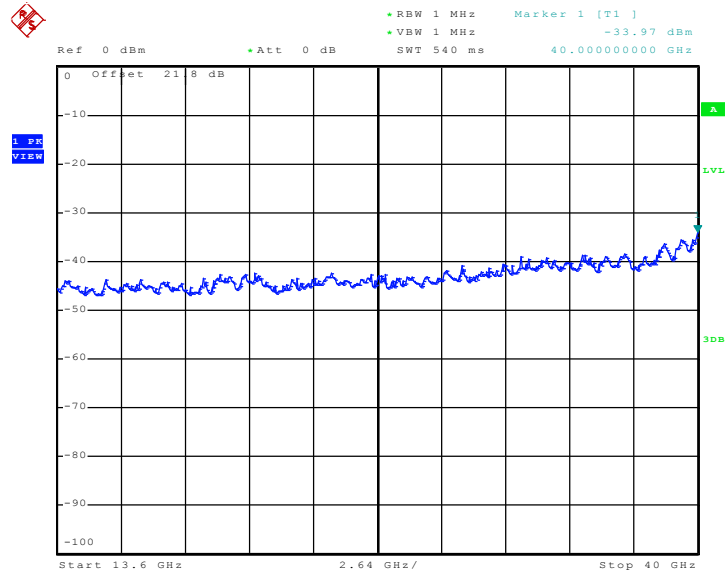
Mode 11 : Conducted Spurious Emission Plot between 802.11n 3 GHz ~ 13.6 GHz



Date: 10.MAR.2011 17:19:31

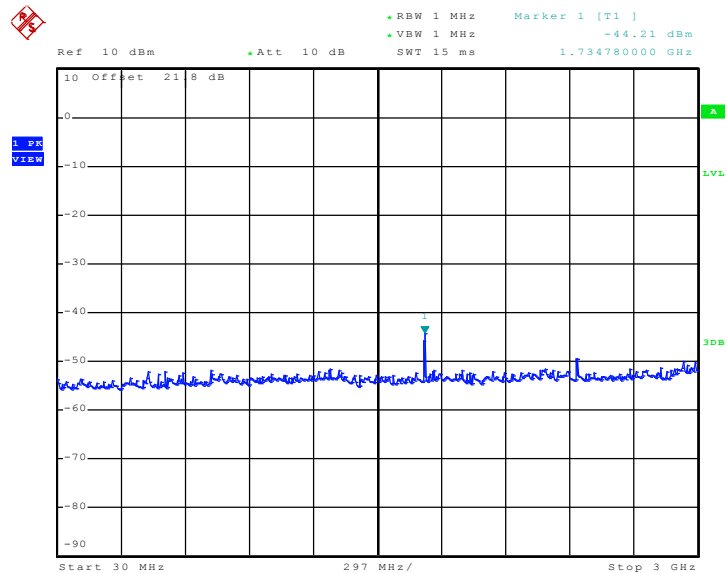


Mode 11 : Conducted Spurious Emission Plot between 802.11n 13.6 GHz ~ 40 GHz



Date: 10.MAR.2011 17:19:43

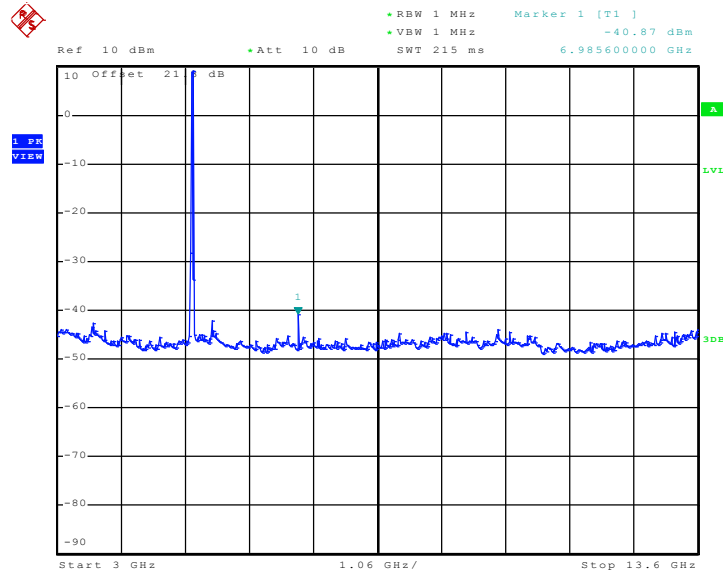
Mode 12 : Conducted Spurious Emission Plot between 802.11n 30 MHz ~ 3 GHz



Date: 10.MAR.2011 17:20:14

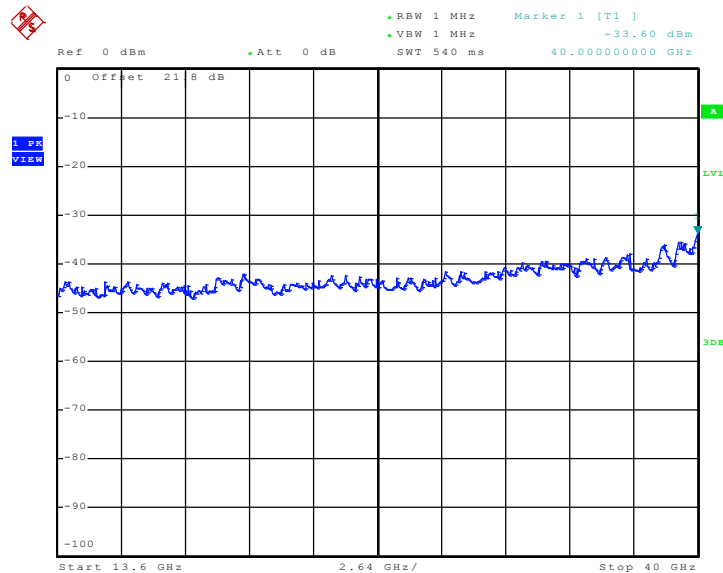


Mode 12 : Conducted Spurious Emission Plot between 802.11n 3 GHz ~ 13.6 GHz



Date: 10.MAR.2011 17:20:26

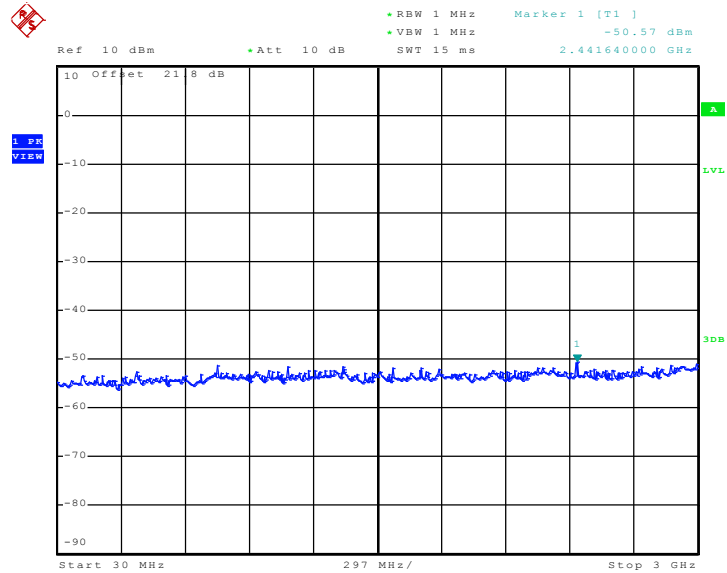
Mode 12 : Conducted Spurious Emission Plot between 802.11n 13.6 GHz ~ 40 GHz



Date: 10.MAR.2011 17:20:38

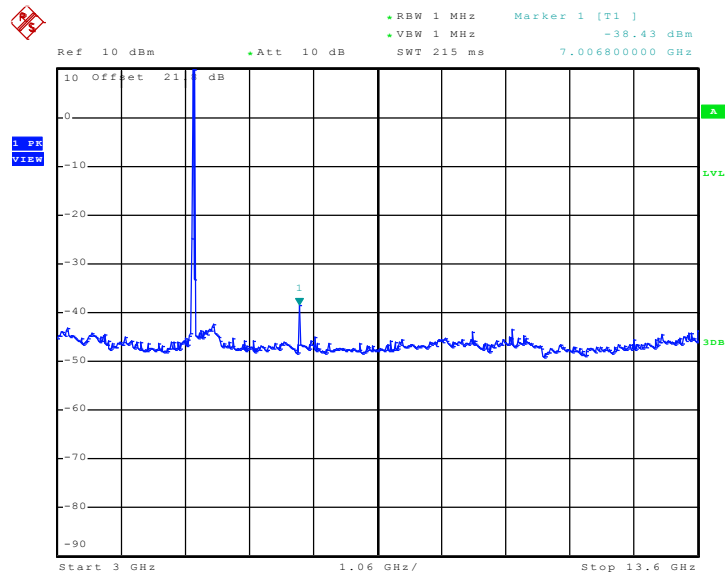


Mode 13 : Conducted Spurious Emission Plot between 802.11n 30 MHz ~ 3 GHz



Date: 10.MAR.2011 17:21:14

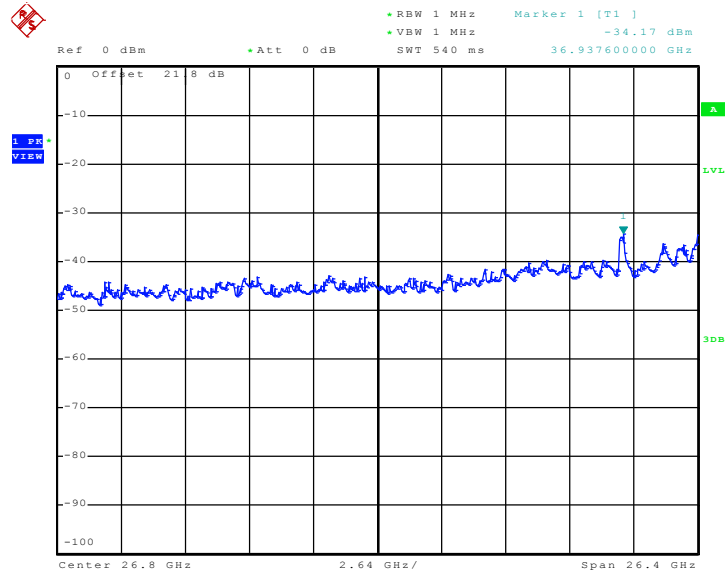
Mode 13 : Conducted Spurious Emission Plot between 802.11n 3 GHz ~ 13.6 GHz



Date: 10.MAR.2011 17:21:26

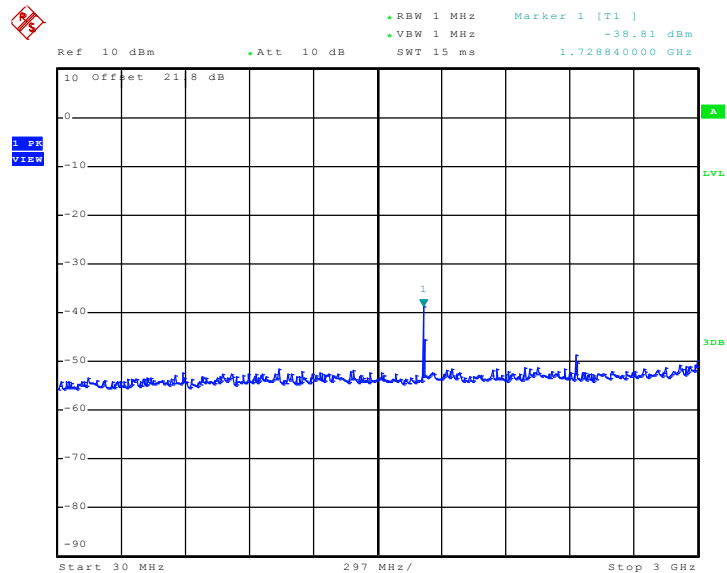


Mode 13 : Conducted Spurious Emission Plot between 802.11n 13.6 GHz ~ 40 GHz



Date: 10.MAR.2011 17:48:09

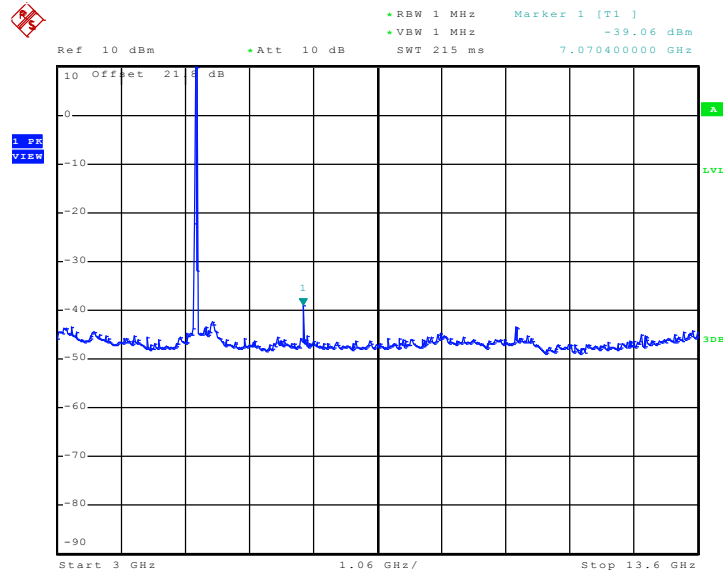
Mode 14 : Conducted Spurious Emission Plot between 802.11n 30 MHz ~ 3 GHz



Date: 10.MAR.2011 17:22:19

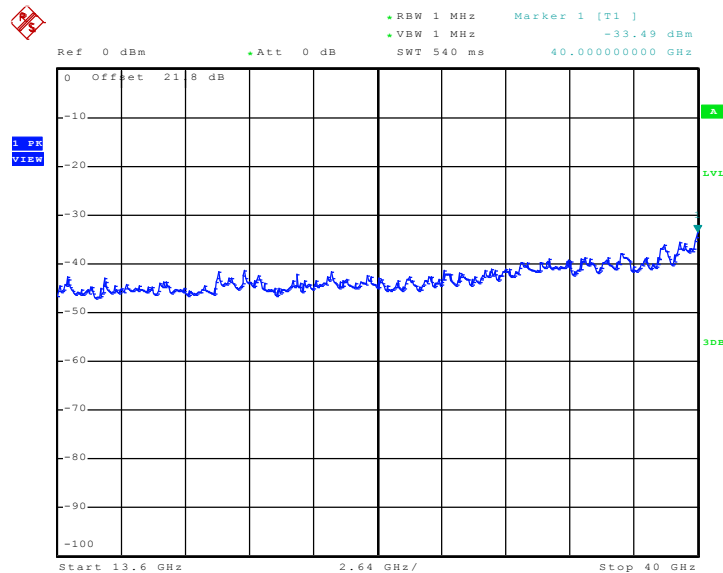


Mode 14 : Conducted Spurious Emission Plot between 802.11n 3 GHz ~ 13.6 GHz



Date: 10.MAR.2011 17:22:31

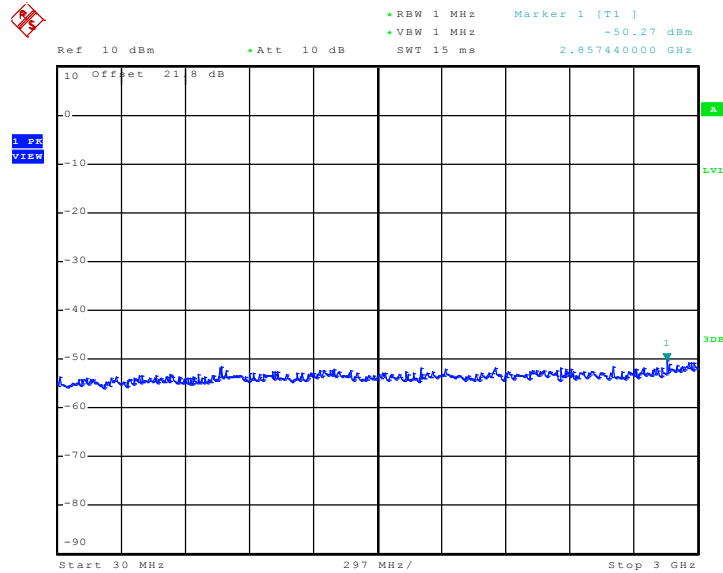
Mode 14 : Conducted Spurious Emission Plot between 802.11n 13.6 GHz ~ 40 GHz



Date: 10.MAR.2011 17:22:43

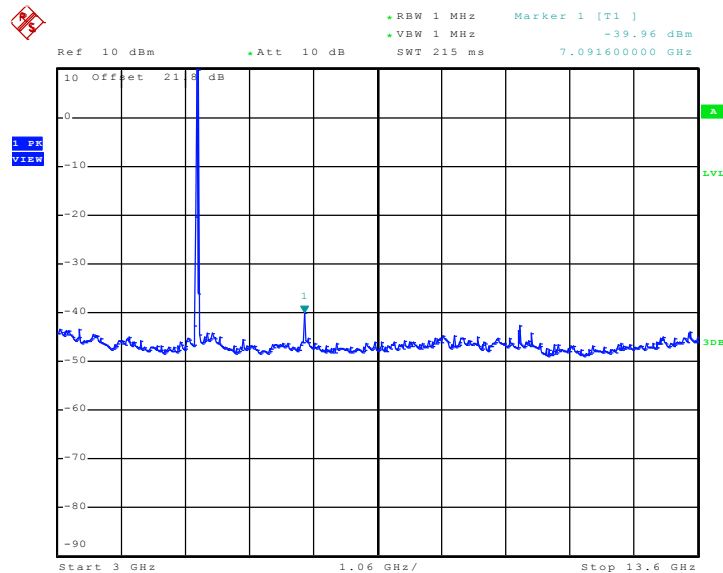


Mode 15 : Conducted Spurious Emission Plot between 802.11n 30 MHz ~ 3 GHz



Date: 10.MAR.2011 17:23:18

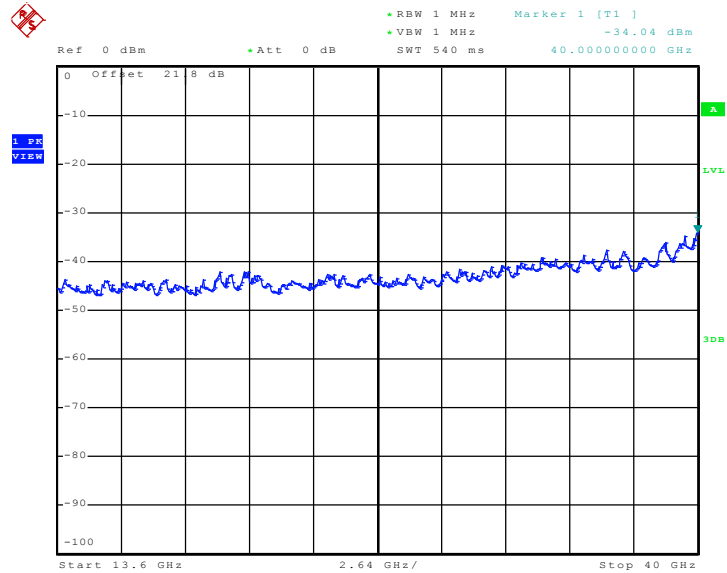
Mode 15 : Conducted Spurious Emission Plot between 802.11n 3 GHz ~ 13.6 GHz



Date: 10.MAR.2011 17:23:30

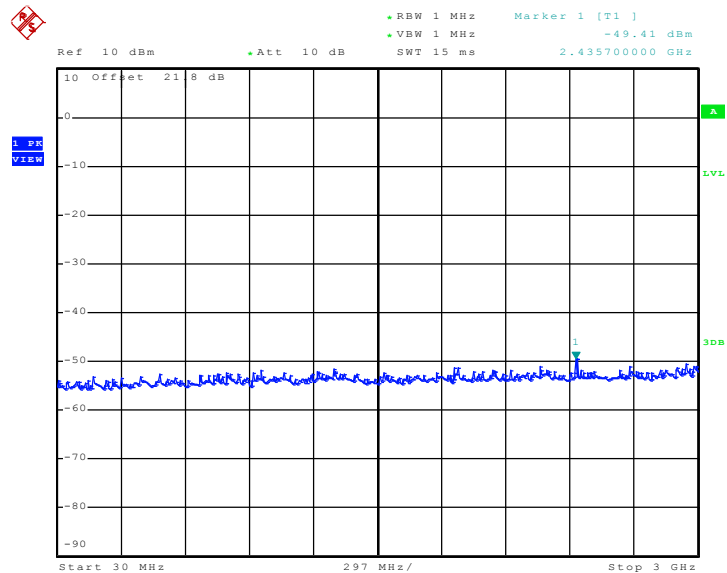


Mode 15 : Conducted Spurious Emission Plot between 802.11n 13.6 GHz ~ 40 GHz



Date: 10.MAR.2011 17:23:42

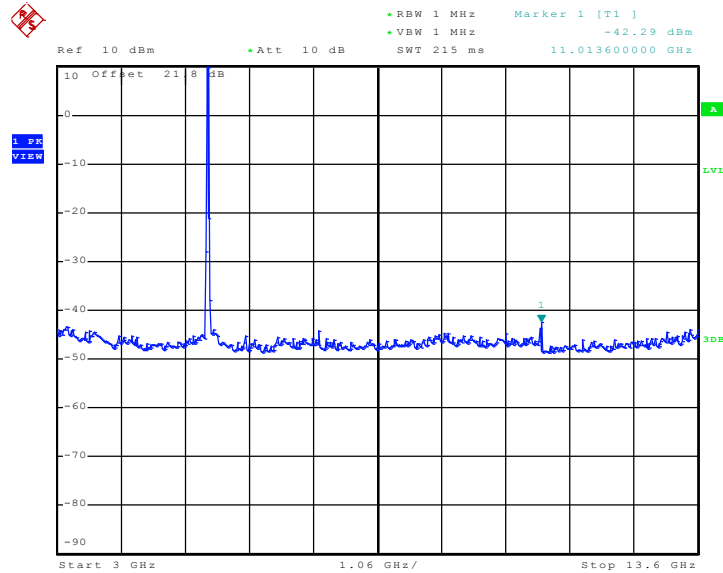
Mode 16 : Conducted Spurious Emission Plot between 802.11n 30 MHz ~ 3 GHz



Date: 10.MAR.2011 17:24:18

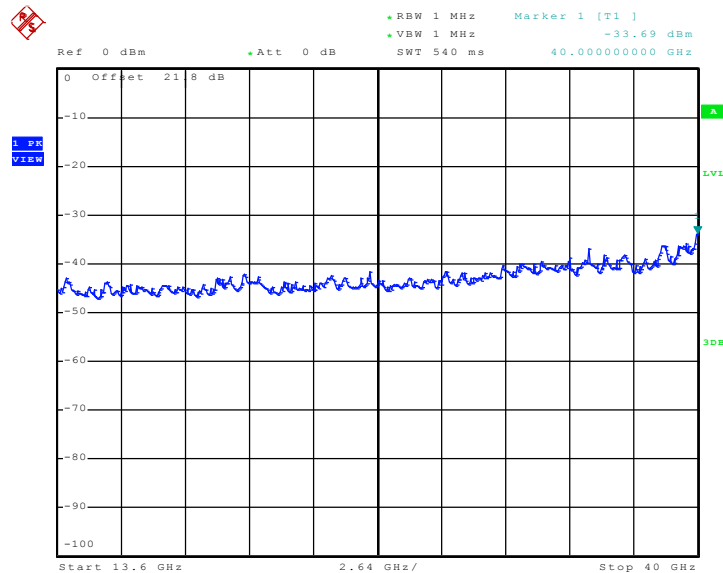


Mode 16 : Conducted Spurious Emission Plot between 802.11n 3 GHz ~ 13.6 GHz



Date: 10.MAR.2011 17:24:30

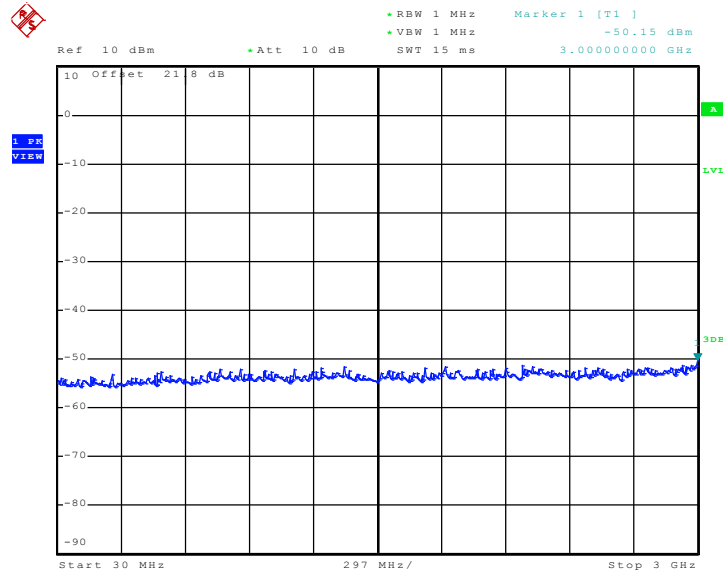
Mode 16 : Conducted Spurious Emission Plot between 802.11n 13.6 GHz ~ 40 GHz



Date: 10.MAR.2011 17:24:42

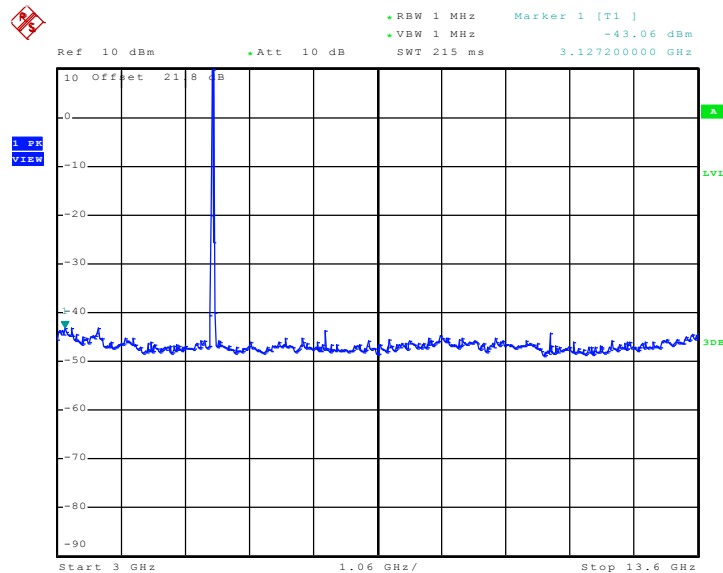


Mode 17 : Conducted Spurious Emission Plot between 802.11n 30 MHz ~ 3 GHz



Date: 10.MAR.2011 17:25:22

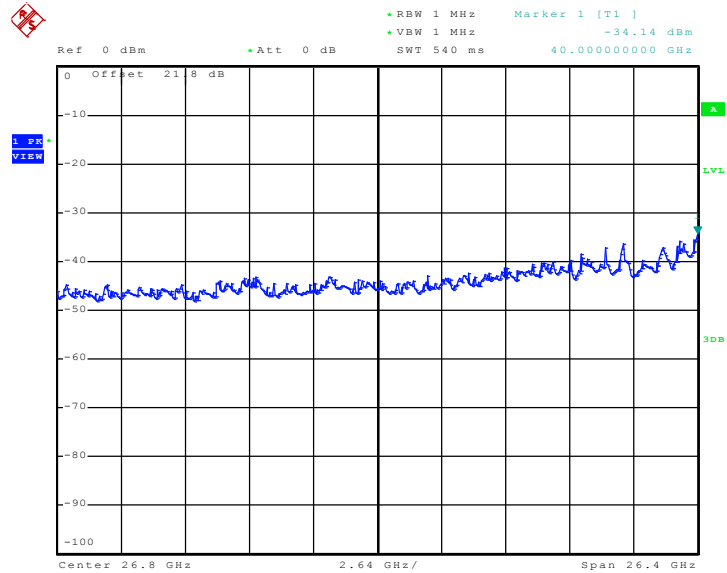
Mode 17 : Conducted Spurious Emission Plot between 802.11n 3 GHz ~ 13.6 GHz



Date: 10.MAR.2011 17:25:34

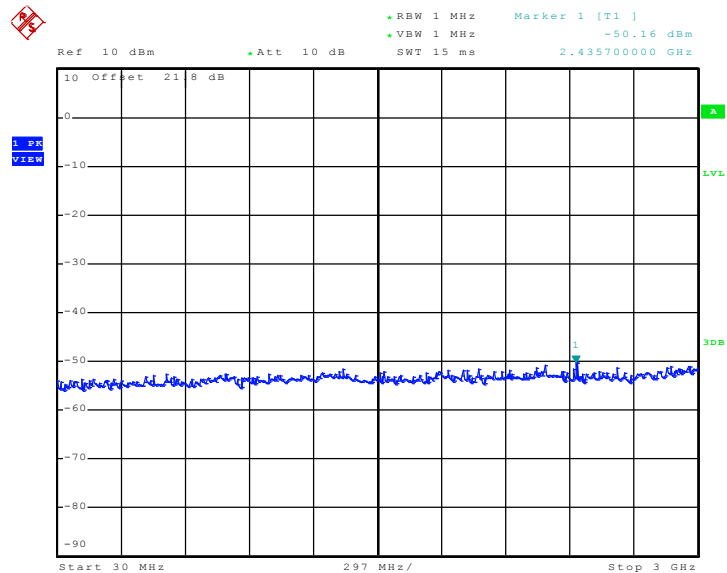


Mode 17 : Conducted Spurious Emission Plot between 802.11n 13.6 GHz ~ 40 GHz



Date: 10.MAR.2011 17:48:31

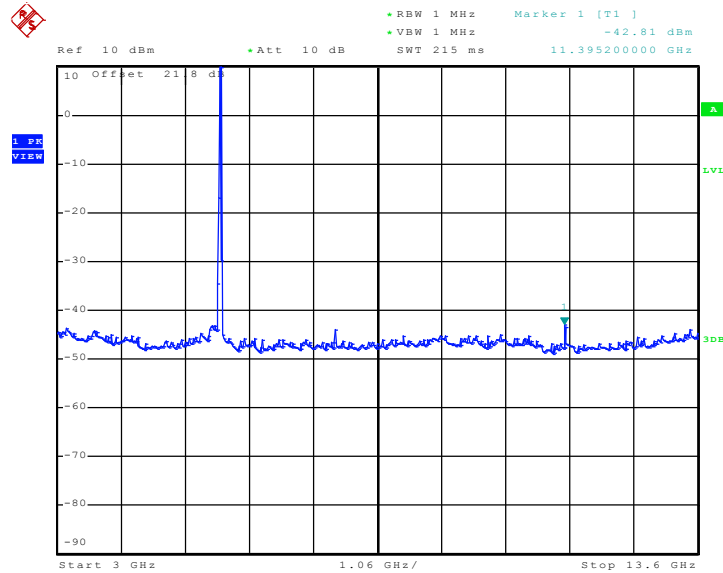
Mode 18 : Conducted Spurious Emission Plot between 802.11n 30 MHz ~ 3 GHz



Date: 10.MAR.2011 17:26:26

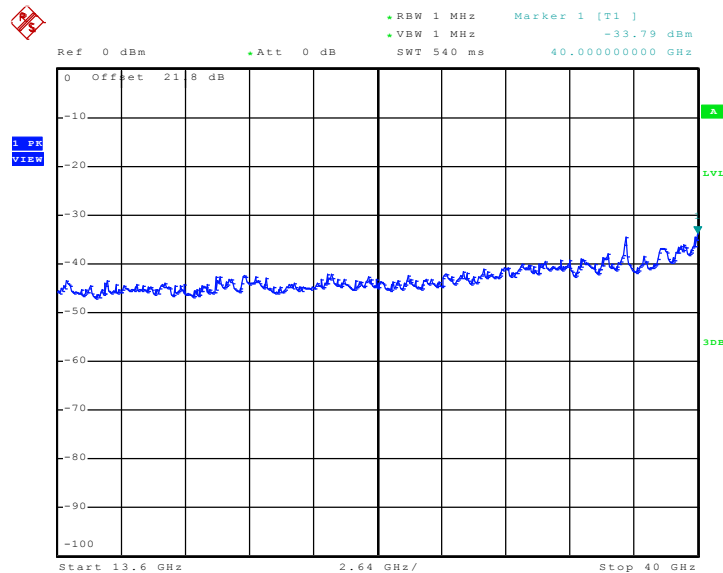


Mode 18 : Conducted Spurious Emission Plot between 802.11n 3 GHz ~ 13.6 GHz



Date: 10.MAR.2011 17:26:38

Mode 18 : Conducted Spurious Emission Plot between 802.11n 13.6 GHz ~ 40 GHz



Date: 10.MAR.2011 17:26:50



Test Mode :	Mode 19~26	Temperature :	25~27°C
Test Band :	802.11n (BW 20MHz)	Relative Humidity :	51~54%
Test Channel :	38, 46, 54, 62, 102, 110, 118, 134	Test Engineer :	Phoenix Chen

<30 MHz ~ 3 GHz>

Channel	Frequency (MHz)	Frequency (MHz)	Level (dBm)	Antenna Gain (dBi)	EIRP Test Result (dBm)	Limit (dBm)
38	5190	2786.16	-60.37	6	-54.37	-27
46	5230	2441.64	-49.15	6	-43.15	-27
54	5270	2441.64	-49.99	6	-43.99	-27
62	5310	2441.64	-50.57	6	-44.57	-27
102	5510	2435.7	-49.92	6	-43.92	-27
110	5550	2922.78	-50.41	6	-44.41	-27
118	5590	2881.2	-50.92	6	-44.92	-27
134	5670	2435.7	-50.13	6	-44.13	-27

<3 GHz ~ 13.6 GHz>

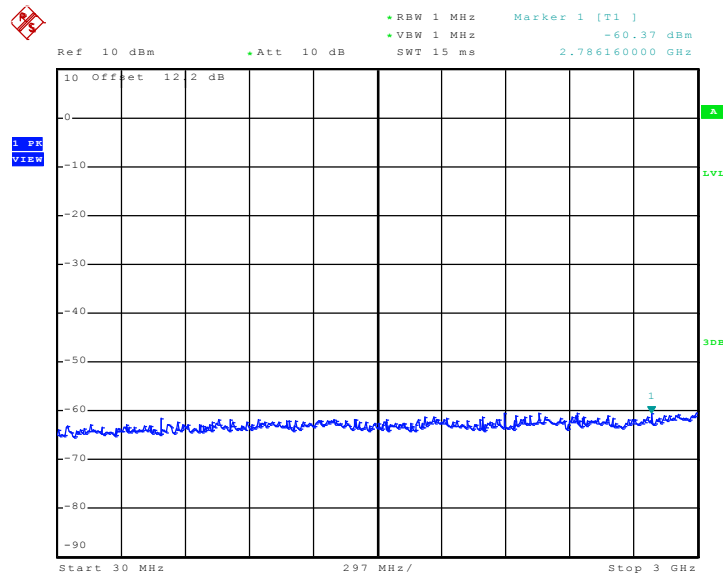
Channel	Frequency (MHz)	Frequency (MHz)	Level (dBm)	Antenna Gain (dBi)	EIRP Test Result (dBm)	Limit (dBm)
38	5190	6922	-49.96	6	-43.96	-27
46	5230	6964.4	-41.32	6	-35.32	-27
54	5270	7028	-38.14	6	-32.14	-27
62	5310	7070.4	-39.92	6	-33.92	-27
102	5510	3148.4	-43.85	6	-37.85	-27
110	5550	3169.6	-52.69	6	-46.69	-27
118	5590	3190.8	-43.43	6	-37.43	-27
134	5670	3021.2	-43.03	6	-37.03	-27



<13.6 GHz ~ 40 GHz>

Channel	Frequency (MHz)	Frequency (MHz)	Level (dBm)	Antenna Gain (dBi)	EIRP Test Result (dBm)	Limit (dBm)
38	5190	40000	-43.82	6	-37.82	-27
46	5230	39947.2	-33.95	6	-27.95	-27
54	5270	40000	-33.42	6	-27.42	-27
62	5310	40000	-33.74	6	-27.74	-27
102	5510	40000	-33.52	6	-27.52	-27
110	5550	40000	-33.89	6	-27.89	-27
118	5590	40000	-35.37	6	-29.37	-27
134	5670	40000	-33.59	6	-27.59	-27

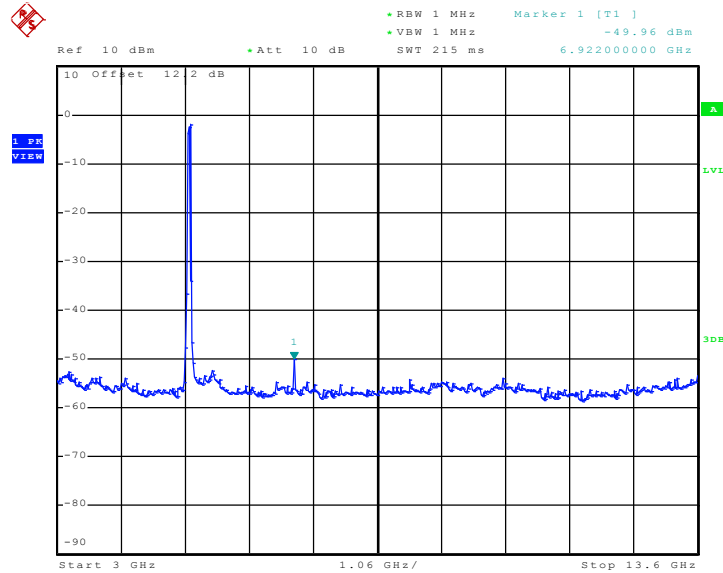
Mode 19 : Conducted Spurious Emission Plot between 802.11n 30 MHz ~ 3 GHz



Date: 10.MAR.2011 17:31:37

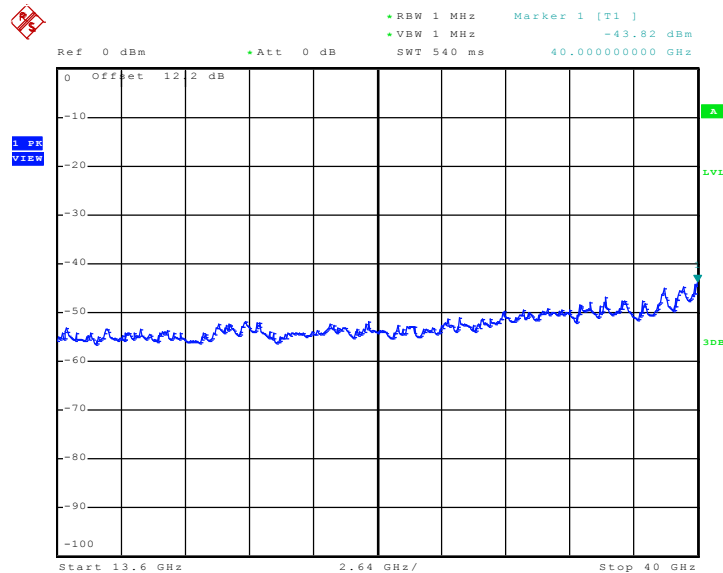


Mode 19 : Conducted Spurious Emission Plot between 802.11n 3 GHz ~ 13.6 GHz



Date: 10.MAR.2011 17:31:50

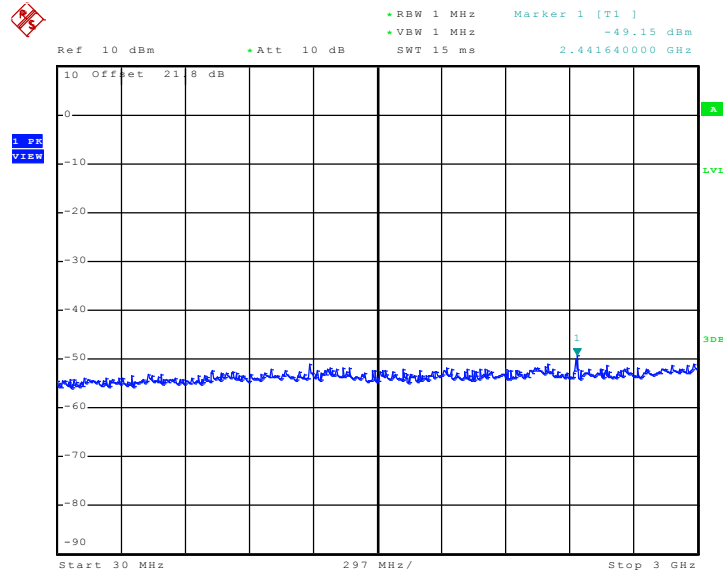
Mode 19 : Conducted Spurious Emission Plot between 802.11n 13.6 GHz ~ 40 GHz



Date: 10.MAR.2011 17:32:02

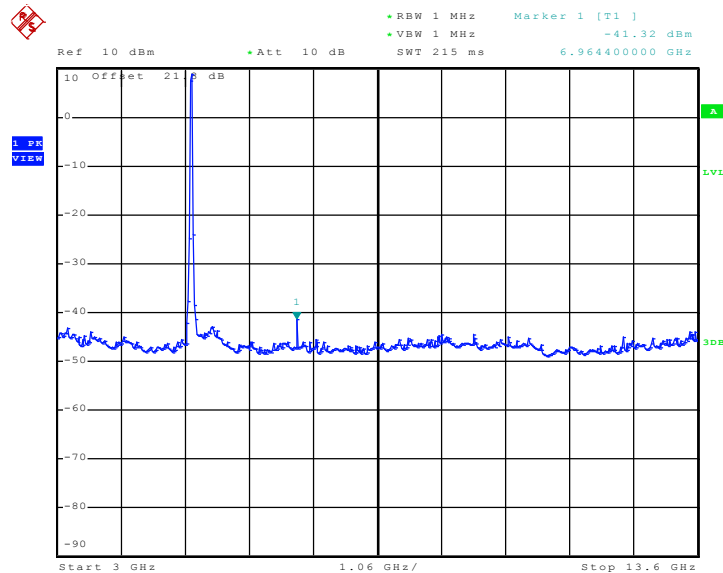


Mode 20 : Conducted Spurious Emission Plot between 802.11n 30 MHz ~ 3 GHz



Date: 10.MAR.2011 17:32:43

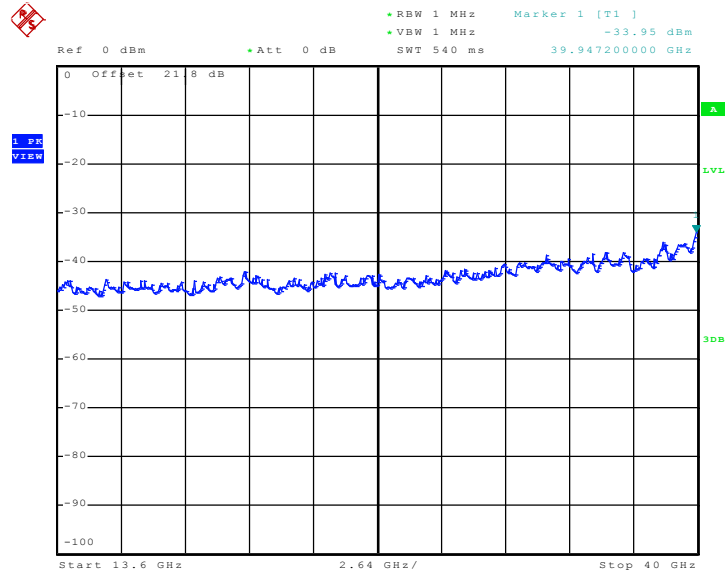
Mode 20 : Conducted Spurious Emission Plot between 802.11n 3 GHz ~ 13.6 GHz



Date: 10.MAR.2011 17:32:55

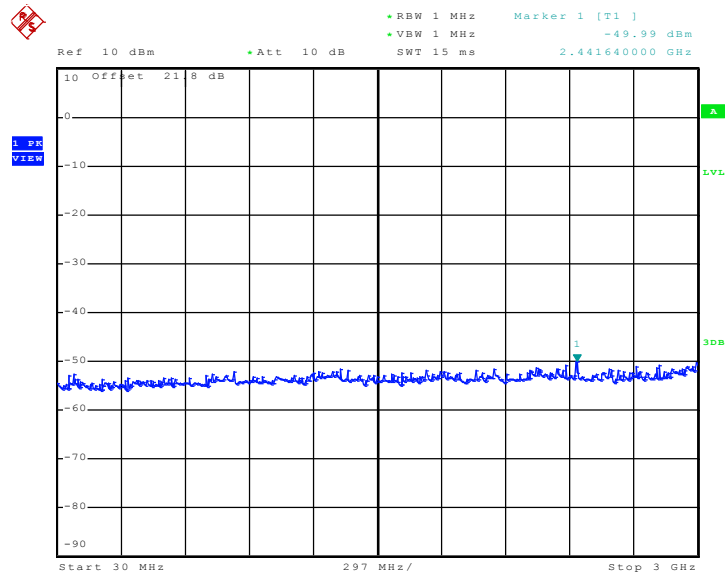


Mode 20 : Conducted Spurious Emission Plot between 802.11n 13.6 GHz ~ 40 GHz



Date: 10.MAR.2011 17:33:07

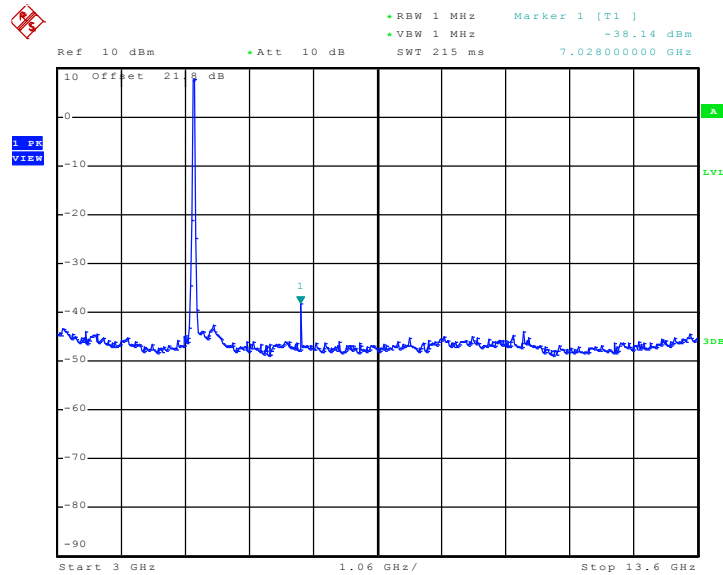
Mode 21 : Conducted Spurious Emission Plot between 802.11n 30 MHz ~ 3 GHz



Date: 10.MAR.2011 17:33:47

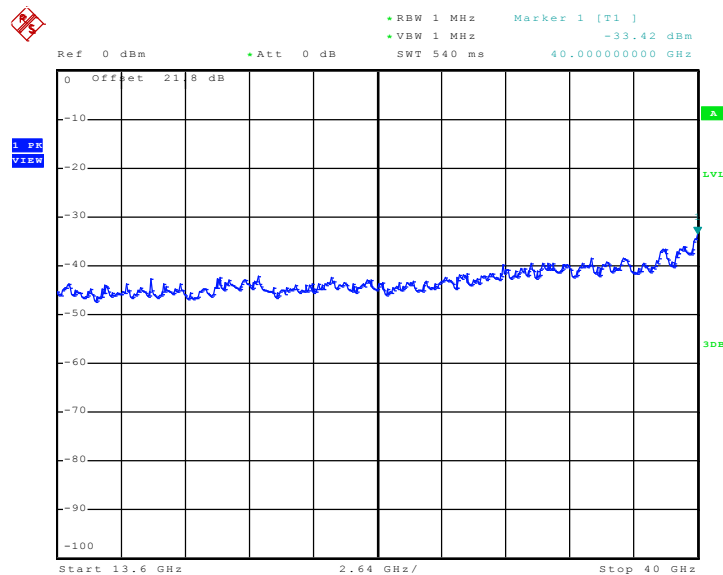


Mode 21 : Conducted Spurious Emission Plot between 802.11n 3 GHz ~ 13.6 GHz



Date: 10.MAR.2011 17:33:59

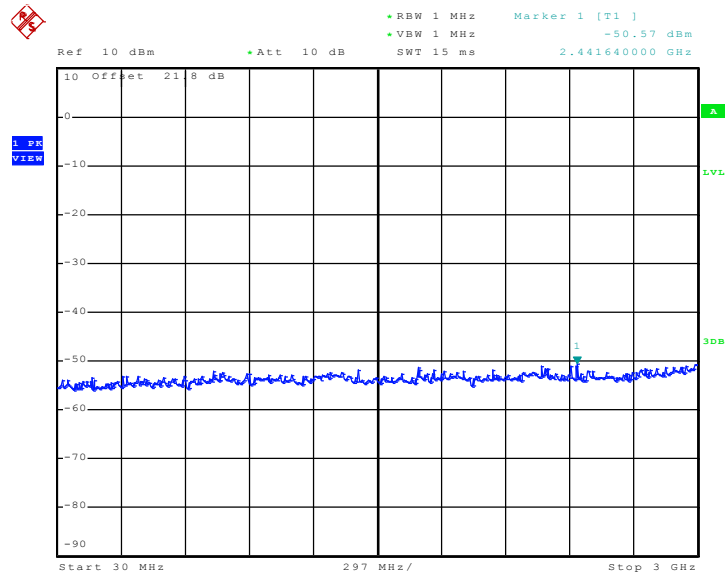
Mode 21 : Conducted Spurious Emission Plot between 802.11n 13.6 GHz ~ 40 GHz



Date: 10.MAR.2011 17:34:11

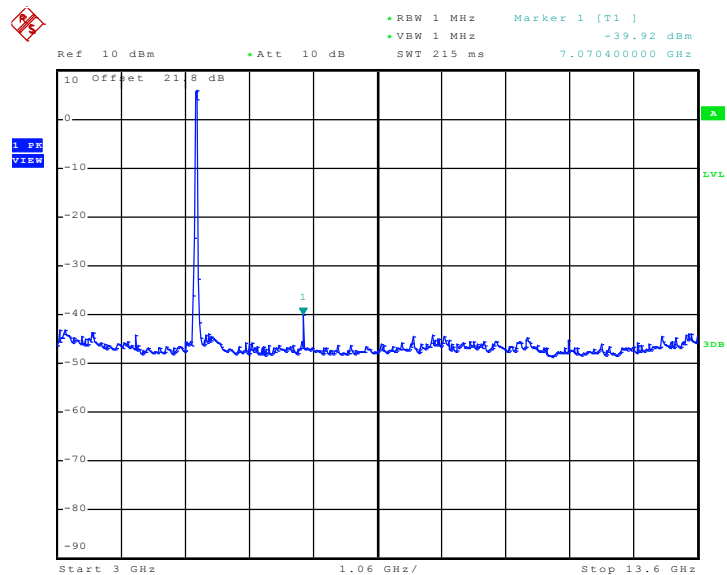


Mode 22 : Conducted Spurious Emission Plot between 802.11n 30 MHz ~ 3 GHz



Date: 10.MAR.2011 17:35:14

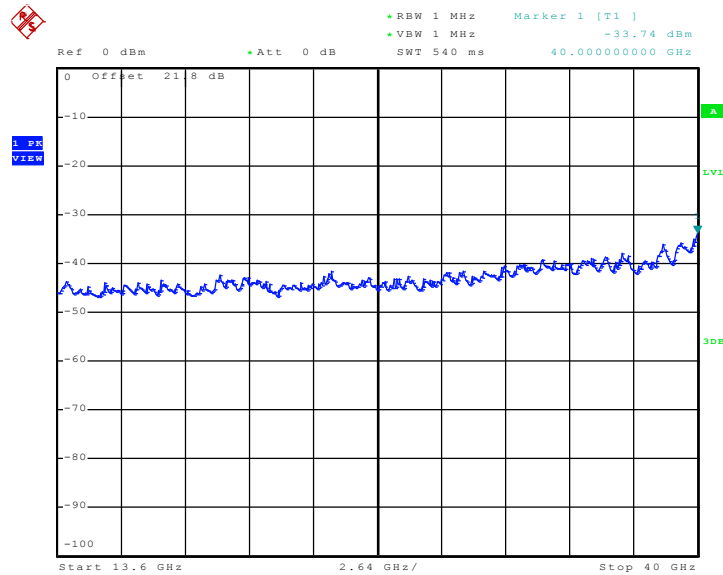
Mode 22 : Conducted Spurious Emission Plot between 802.11n 3 GHz ~ 13.6 GHz



Date: 10.MAR.2011 17:35:26

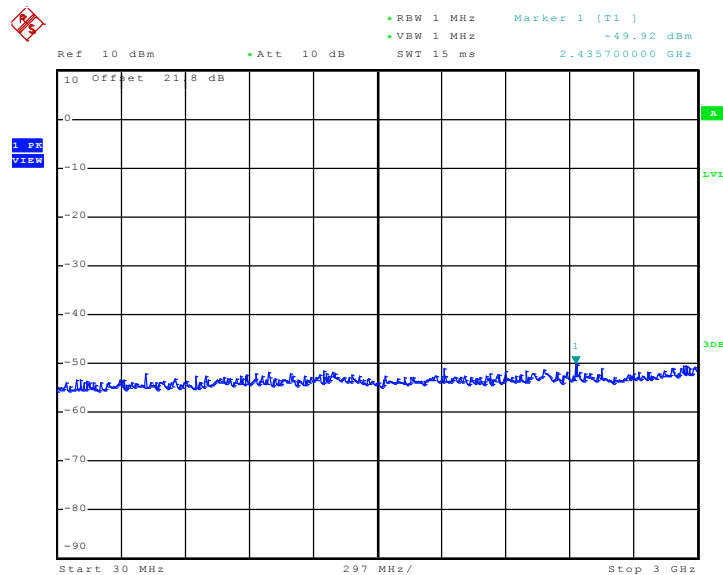


Mode 22 : Conducted Spurious Emission Plot between 802.11n 13.6 GHz ~ 40 GHz



Date: 10.MAR.2011 17:35:38

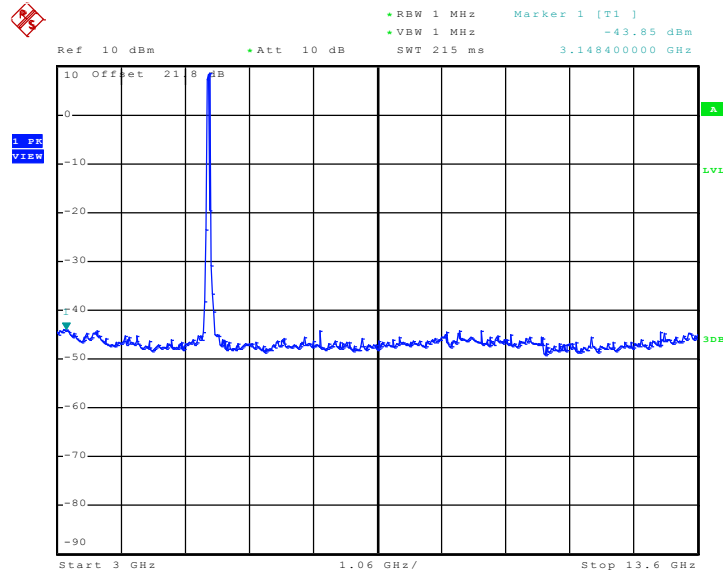
Mode 23 : Conducted Spurious Emission Plot between 802.11n 30 MHz ~ 3 GHz



Date: 10.MAR.2011 17:36:19

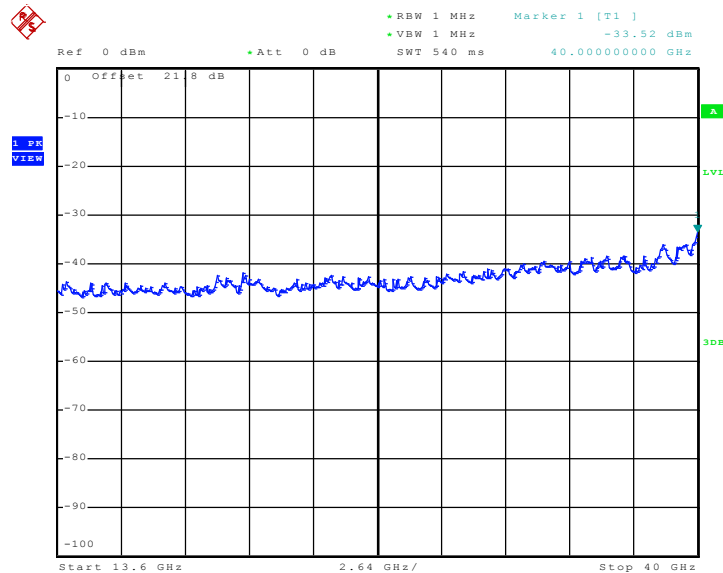


Mode 23 : Conducted Spurious Emission Plot between 802.11n 3 GHz ~ 13.6 GHz



Date: 10.MAR.2011 17:36:31

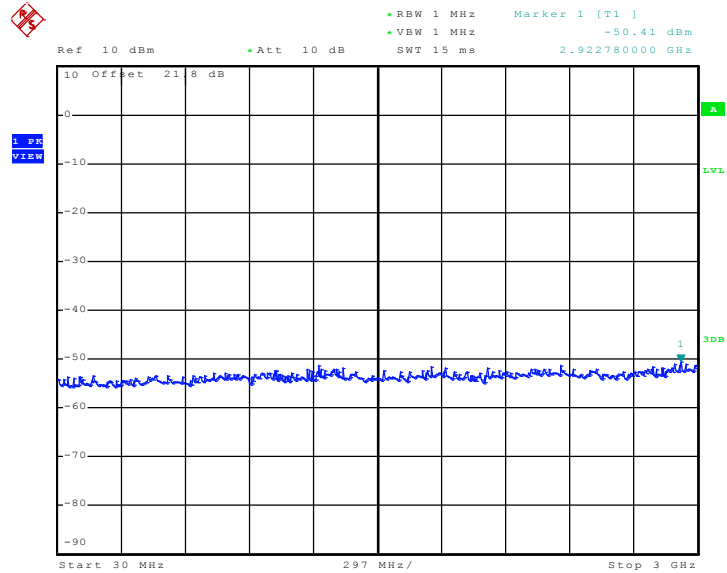
Mode 23 : Conducted Spurious Emission Plot between 802.11n 13.6 GHz ~ 40 GHz



Date: 10.MAR.2011 17:36:43

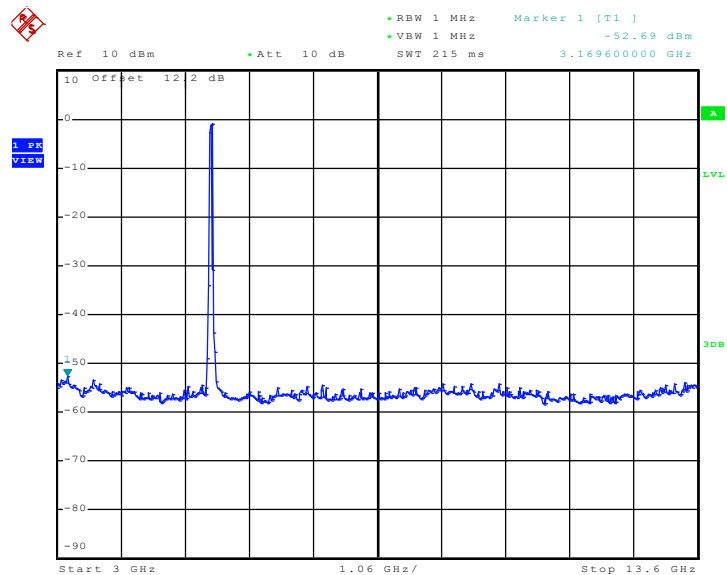


Mode 24 : Conducted Spurious Emission Plot between 802.11n 30 MHz ~ 3 GHz



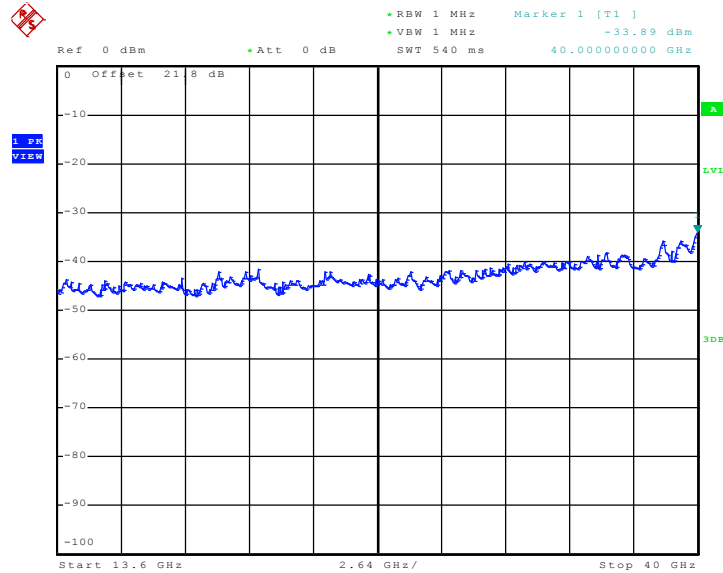
Date: 10.MAR.2011 17:37:32

Mode 24 : Conducted Spurious Emission Plot between 802.11n 3 GHz ~ 13.6 GHz



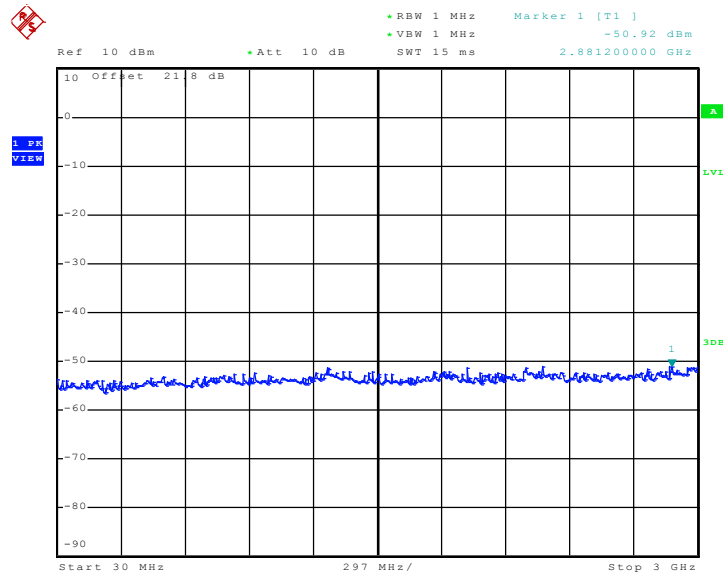
Date: 10.MAR.2011 17:51:07

Mode 24 : Conducted Spurious Emission Plot between 802.11n 13.6 GHz ~ 40 GHz



Date: 10.MAR.2011 17:37:56

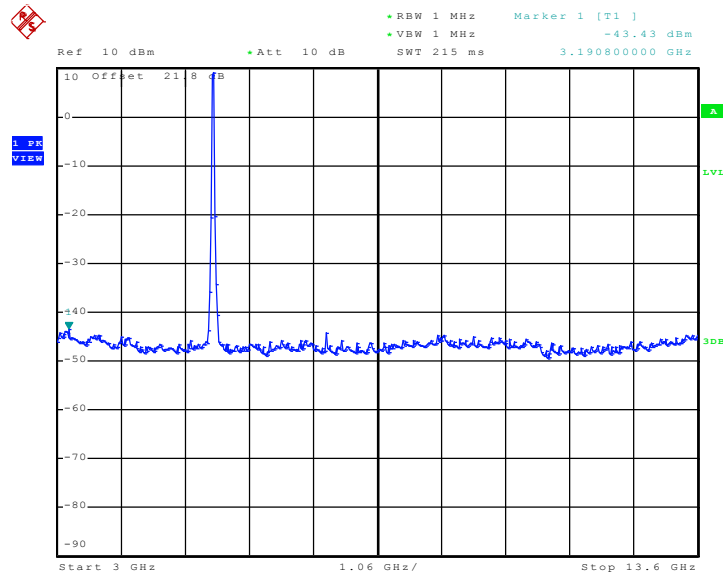
Mode 25 : Conducted Spurious Emission Plot between 802.11n 30 MHz ~ 3 GHz



Date: 10.MAR.2011 17:38:43

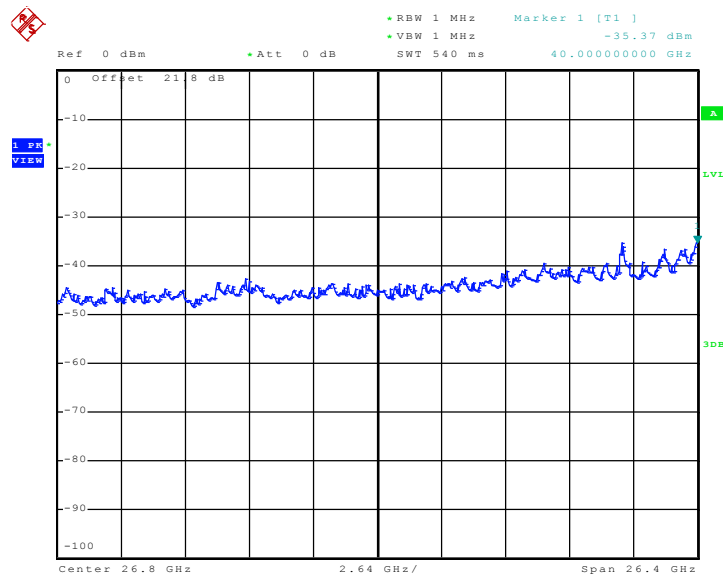


Mode 25 : Conducted Spurious Emission Plot between 802.11n 3 GHz ~ 13.6 GHz



Date: 10.MAR.2011 17:38:55

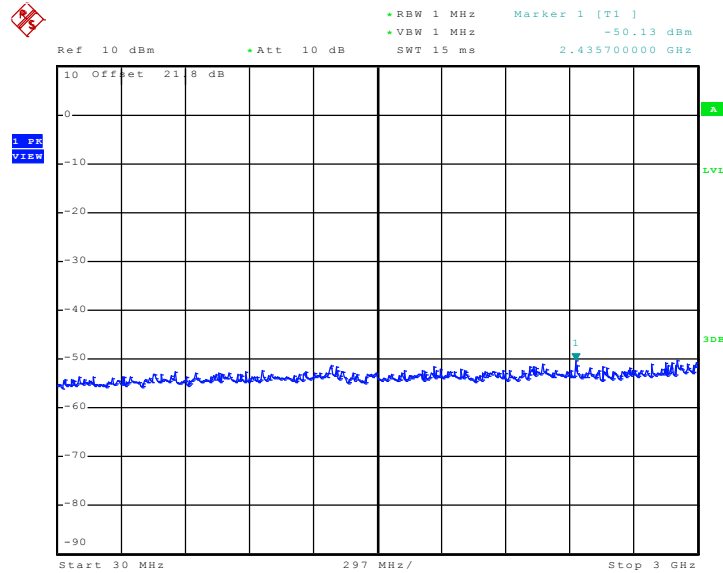
Mode 25 : Conducted Spurious Emission Plot between 802.11n 13.6 GHz ~ 40 GHz



Date: 10.MAR.2011 17:46:39

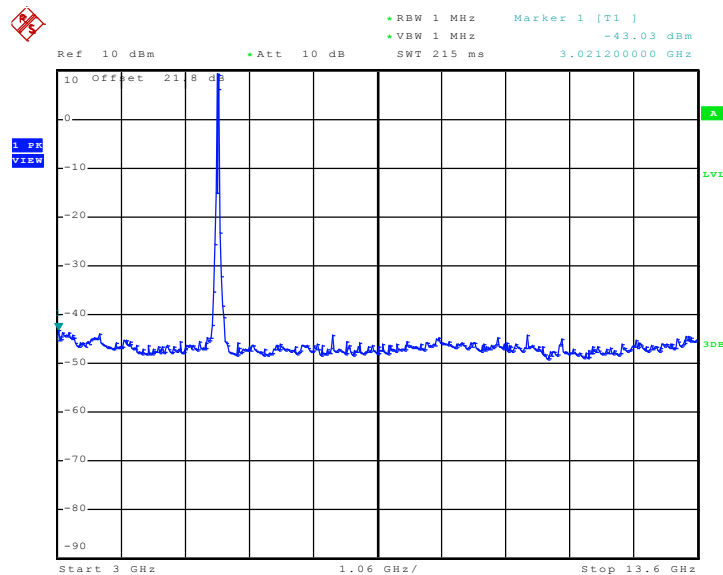


Mode 26 : Conducted Spurious Emission Plot between 802.11n 30 MHz ~ 3 GHz



Date: 10.MAR.2011 17:40:02

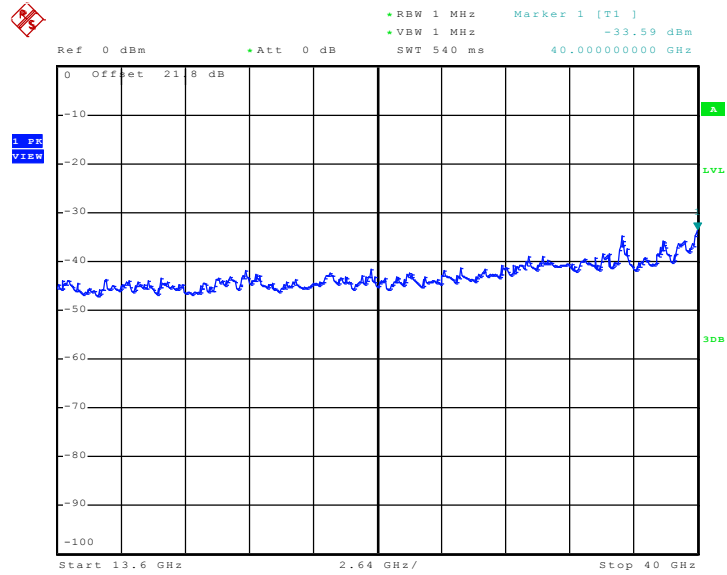
Mode 26 : Conducted Spurious Emission Plot between 802.11n 3 GHz ~ 13.6 GHz



Date: 10.MAR.2011 17:40:14



Mode 26 : Conducted Spurious Emission Plot between
802.11n 13.6 GHz ~ 40 GHz



Date: 10.MAR.2011 17:40:26

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.

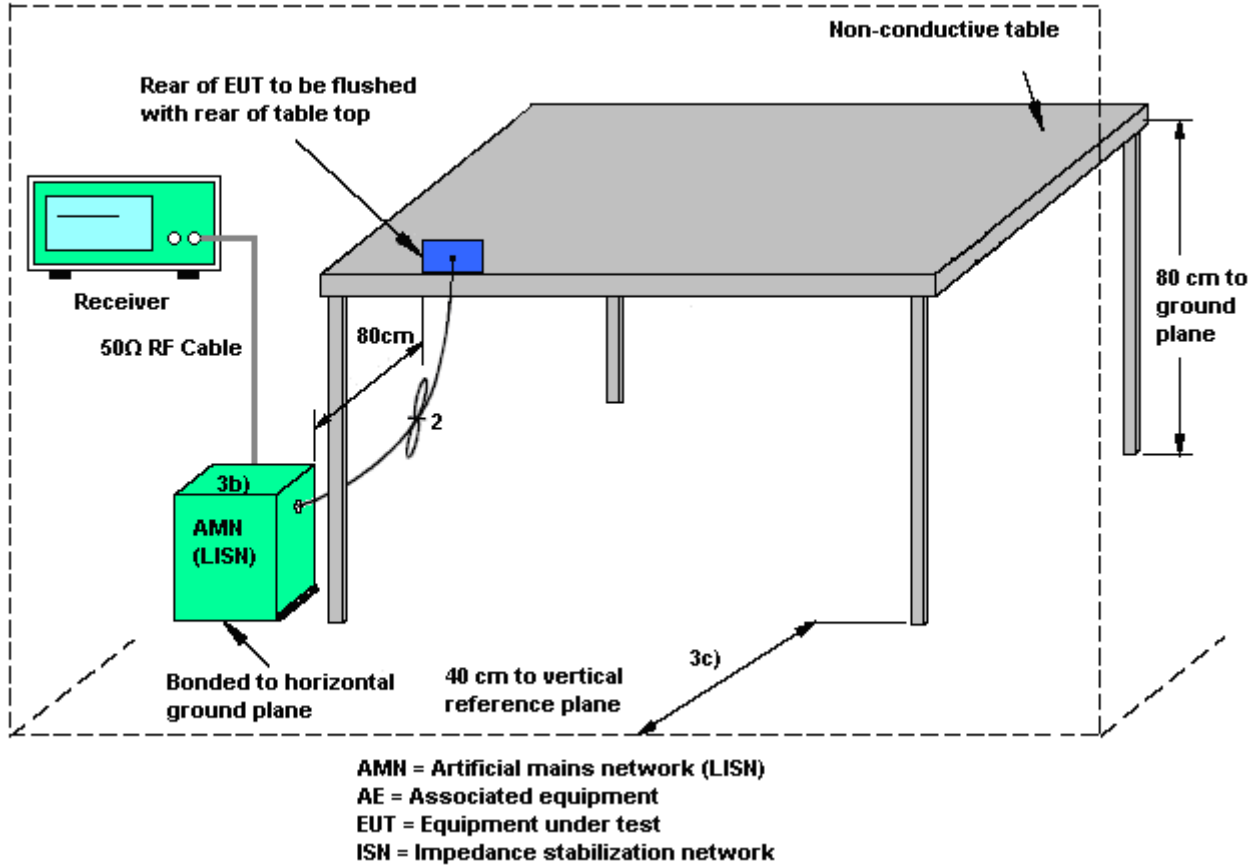
3.6.2 Measuring Instruments

See list of measuring instruments of this test report.

3.6.3 Test Procedures

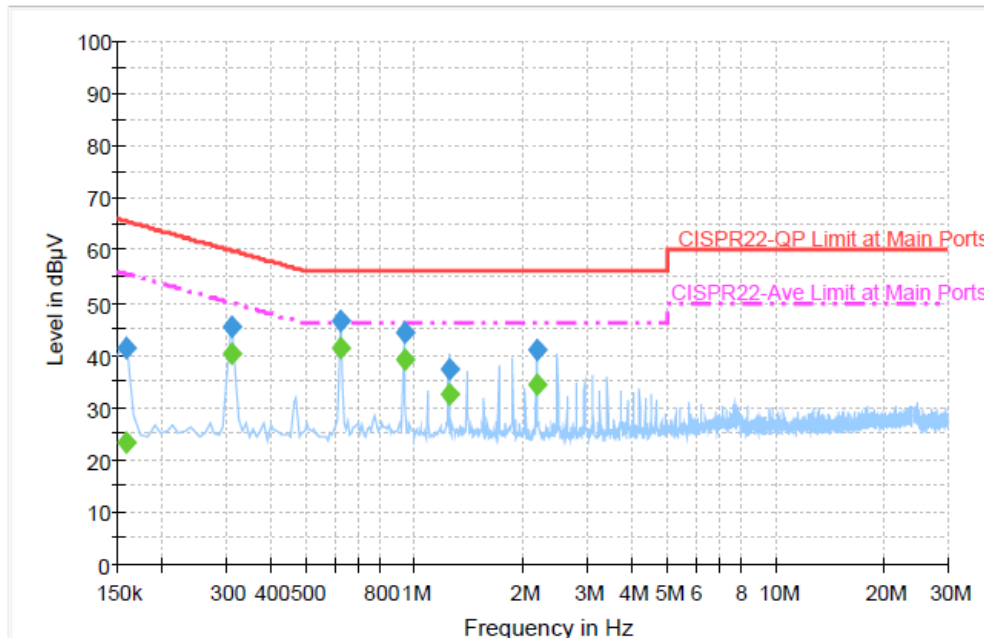
1. Please follow the guidelines in ANSI C63.4-2003.
2. The EUT was placed 0.4 meter from the conducting wall of the shielding room was kept at least 80 centimeters from any other grounded conducting surface.
3. Connect EUT to the power mains through a line impedance stabilization network (LISN).
4. All 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 Chiang	Relative Humidity :	40~42%
Test Voltage :	120Vac / 60Hz	Phase :	Line
Function Type :	GSM850 Idle + WLAN Link + Bluetooth Link + Earphone + USB Cable 2 (Charging with Adapter 2)		
Remark :	All emissions not reported here are more than 10 dB below the prescribed limit.		



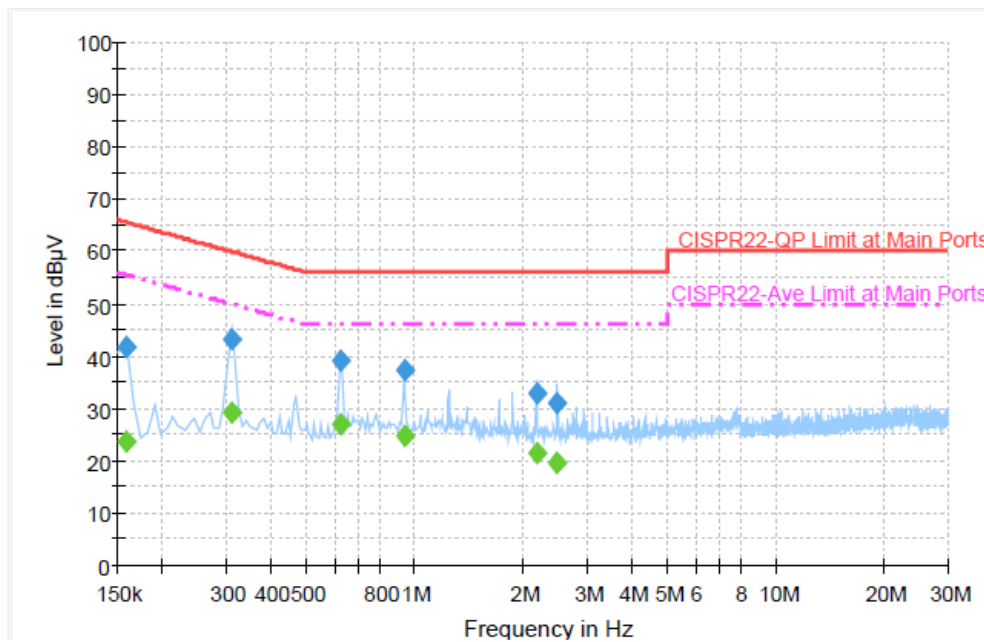
Final Result 1

Frequency (MHz)	QuasiPeak (dBµV)	Filter	Line	Corr. (dB)	Margin (dB)	Limit (dBµV)
0.158000	41.2	Off	L1	19.3	24.4	65.6
0.310000	45.4	Off	L1	19.3	14.6	60.0
0.622000	46.5	Off	L1	19.3	9.5	56.0
0.934000	44.2	Off	L1	19.4	11.8	56.0
1.246000	37.1	Off	L1	19.4	18.9	56.0
2.174000	40.8	Off	L1	19.5	15.2	56.0

Final Result 2

Frequency (MHz)	Average (dBµV)	Filter	Line	Corr. (dB)	Margin (dB)	Limit (dBµV)
0.158000	23.2	Off	L1	19.3	32.4	55.6
0.310000	40.2	Off	L1	19.3	9.8	50.0
0.622000	41.5	Off	L1	19.3	4.5	46.0
0.934000	39.3	Off	L1	19.4	6.7	46.0
1.246000	32.4	Off	L1	19.4	13.6	46.0
2.174000	34.3	Off	L1	19.5	11.7	46.0

Test Mode :	Mode 1	Temperature :	20~22°C
Test Engineer :	Novic Chiang	Relative Humidity :	40~42%
Test Voltage :	120Vac / 60Hz	Phase :	Neutral
Function Type :	GSM850 Idle + WLAN Link + Bluetooth Link + Earphone + USB Cable 2 (Charging with Adapter 2)		
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)
0.158000	41.6	Off	N	19.4	24.0	65.6
0.310000	43.3	Off	N	19.3	16.7	60.0
0.622000	39.1	Off	N	19.3	16.9	56.0
0.934000	37.1	Off	N	19.4	18.9	56.0
2.174000	32.9	Off	N	19.5	23.1	56.0
2.486000	30.9	Off	N	19.5	25.1	56.0

Final Result 2

Frequency (MHz)	Average (dBµV)	Filter	Line	Corr. (dB)	Margin (dB)	Limit (dBµV)
0.158000	23.5	Off	N	19.4	32.1	55.6
0.310000	29.1	Off	N	19.3	20.9	50.0
0.622000	27.1	Off	N	19.3	18.9	46.0
0.934000	24.8	Off	N	19.4	21.2	46.0
2.174000	21.5	Off	N	19.5	24.5	46.0
2.486000	19.4	Off	N	19.5	26.6	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.

Note: The following formula is used to convert the EIRP to field strength.

$$E = \frac{1000000\sqrt{30P}}{3} \mu\text{V/m, where P is the eirp (Watts)}$$

EIRP (dBm)	Field Strength at 3m (dBuV/m)
- 27	68.3

3.7.2 Measuring Instruments

See list of measuring instruments of this test report.

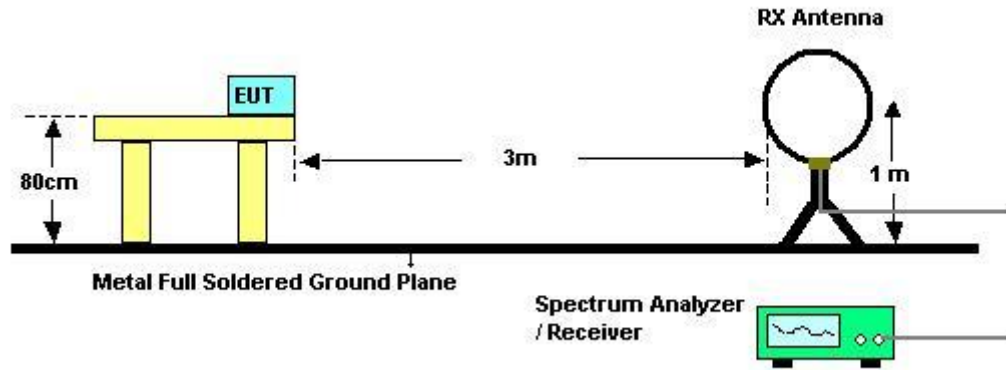


3.7.3 Test Procedures

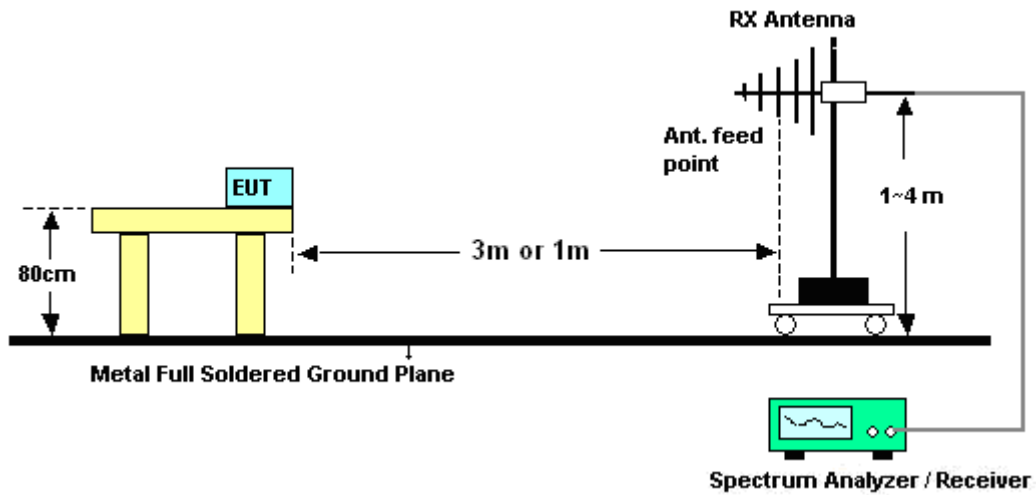
1. The testing follows the guidelines in FCC Public Notice DA 02-2138, (Measurement Guidelines of UNII)
2. The EUT was placed on a rotatable table top 0.8 meter above ground.
3. The EUT was set 3 meters from the interference receiving antenna which was mounted on the top of a variable height antenna 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	22~25°C	Humidity	55~60%
Test Engineer	Wii Chang		

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 :	22~25°C
Test Channel :	36	Relative Humidity :	55~60%
Test Engineer :	Wii Chang	Polarization :	Horizontal
Remark :	1. 5180 MHz is Fundamental Signals which can be ignored. 2. 10360 MHz is 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
47.82	25.12	-14.88	40	46.49	9.48	0.67	31.52	100	231	Peak
128.01	25.11	-18.39	43.5	43.97	11.57	1.14	31.57	-	-	Peak
154.74	27.52	-15.98	43.5	47.1	10.74	1.22	31.54	-	-	Peak
377.7	25.51	-20.49	46	38.79	15.87	2.09	31.24	-	-	Peak
623.4	21.37	-24.63	46	29.48	20.03	2.76	30.9	-	-	Peak
895.7	26.1	-19.9	46	29.9	23.57	3.33	30.7	-	-	Peak
5150	42.7	-11.3	54	32.69	34.25	9.41	33.65	127	14	Average
5150	59.26	-14.74	74	49.25	34.25	9.41	33.65	127	14	Peak
5180	107.26	-	-	97.13	34.28	9.45	33.6	127	14	Peak
5180	96.85	-	-	86.72	34.28	9.45	33.6	127	14	Average
5350	39.8	-14.2	54	28.87	34.45	9.74	33.26	127	14	Average
5350	51.91	-22.09	74	40.98	34.45	9.74	33.26	127	14	Peak
10360	60.67	-7.63	68.3	68.46	37.48	11.31	56.58	100	0	Peak



Test Mode :	Mode 1	Temperature :	22~25°C
Test Channel :	36	Relative Humidity :	55~60%
Test Engineer :	Wii Chang	Polarization :	Vertical
Remark :	1. 5180 MHz is Fundamental Signals which can be ignored. 2. 10360 MHz is 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
128.01	26.29	-17.21	43.5	45.15	11.57	1.14	31.57	-	-	Peak
180.93	26.49	-17.01	43.5	47.73	9.04	1.25	31.53	116	242	Peak
253.29	23.73	-22.27	46	40.87	12.72	1.55	31.41	-	-	Peak
536.6	25.92	-20.08	46	35.62	18.78	2.52	31	-	-	Peak
780.2	23.59	-22.41	46	29.02	22.15	3.11	30.69	-	-	Peak
993.7	26.78	-27.22	54	29.04	24.82	3.5	30.58	-	-	Peak
5150	40.97	-13.03	54	30.96	34.25	9.41	33.65	126	37	Average
5150	56.79	-17.21	74	46.78	34.25	9.41	33.65	126	37	Peak
5180	103.01	-	-	92.88	34.28	9.45	33.6	126	37	Peak
5180	92.91	-	-	82.78	34.28	9.45	33.6	126	37	Average
5350	39.62	-14.38	54	28.69	34.45	9.74	33.26	126	37	Average
5350	51.06	-22.94	74	40.13	34.45	9.74	33.26	126	37	Peak
10360	59.46	-8.84	68.3	67.23	37.49	11.31	56.57	100	0	Peak



Test Mode :	Mode 2	Temperature :	22~25°C
Test Channel :	44	Relative Humidity :	55~60%
Test Engineer :	Wii Chang	Polarization :	Horizontal
Remark :	1. 5220 MHz is Fundamental Signals which can be ignored. 2. 10440 MHz is 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
47.82	24.89	-15.11	40	46.26	9.48	0.67	31.52	100	56	Peak
129.09	23.76	-19.74	43.5	42.62	11.57	1.14	31.57	-	-	Peak
152.85	27.57	-15.93	43.5	47.03	10.88	1.21	31.55	-	-	Peak
374.9	25.15	-20.85	46	38.5	15.81	2.09	31.25	-	-	Peak
654.9	21.76	-24.24	46	29.4	20.38	2.85	30.87	-	-	Peak
898.5	25.67	-20.33	46	29.42	23.61	3.34	30.7	-	-	Peak
5150	50.28	-23.72	74	40.27	34.25	9.41	33.65	100	346	Peak
5150	39.2	-14.8	54	29.19	34.25	9.41	33.65	100	346	Average
5220	105.57	-	-	95.22	34.32	9.53	33.5	100	346	Peak
5220	95.56	-	-	85.21	34.32	9.53	33.5	100	346	Average
5350	52.33	-21.67	74	41.4	34.45	9.74	33.26	100	346	Peak
5350	40.37	-13.63	54	29.44	34.45	9.74	33.26	100	346	Average
10440	60.29	-8.01	68.3	68.04	37.55	11.21	56.51	100	0	Peak



Test Mode :	Mode 2	Temperature :	22~25°C
Test Channel :	44	Relative Humidity :	55~60%
Test Engineer :	Wii Chang	Polarization :	Vertical
Remark :	1. 5220 MHz is Fundamental Signals which can be ignored. 2. 10440 MHz is 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
47.82	24.87	-15.13	40	46.24	9.48	0.67	31.52	100	244	Peak
167.7	26.45	-17.05	43.5	46.85	9.89	1.23	31.52	-	-	Peak
221.97	27	-19	46	46.35	10.68	1.43	31.46	-	-	Peak
346.2	23.71	-22.29	46	38.16	14.9	1.94	31.29	-	-	Peak
528.9	24.44	-21.56	46	34.29	18.66	2.51	31.02	-	-	Peak
847.4	26.23	-19.77	46	30.68	23.02	3.26	30.73	-	-	Peak
5150	50.56	-23.44	74	40.55	34.25	9.41	33.65	100	298	Peak
5150	38.83	-15.17	54	28.82	34.25	9.41	33.65	100	298	Average
5220	100.47	-	-	90.12	34.32	9.53	33.5	100	298	Peak
5220	90.7	-	-	80.35	34.32	9.53	33.5	100	298	Average
5350	52.36	-21.64	74	41.43	34.45	9.74	33.26	100	298	Peak
5350	39.74	-14.26	54	28.81	34.45	9.74	33.26	100	298	Average
10440	60.43	-7.87	68.3	68.18	37.55	11.21	56.51	100	0	Peak



Test Mode :	Mode 3	Temperature :	22~25°C
Test Channel :	48	Relative Humidity :	55~60%
Test Engineer :	Wii Chang	Polarization :	Horizontal
Remark :	1. 5240 MHz is Fundamental Signals which can be ignored. 2. 10480 MHz is 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
31.89	23.19	-16.81	40	38.06	16.04	0.55	31.46	-	-	Peak
47.01	25.49	-14.51	40	46.86	9.48	0.67	31.52	133	160	Peak
159.33	27.72	-15.78	43.5	47.57	10.45	1.22	31.52	-	-	Peak
374.9	25.69	-20.31	46	39.04	15.81	2.09	31.25	-	-	Peak
511.4	22.6	-23.4	46	32.79	18.39	2.47	31.05	-	-	Peak
688.5	22.29	-23.71	46	29.44	20.76	2.92	30.83	-	-	Peak
5150	50.97	-23.03	74	40.96	34.25	9.41	33.65	100	349	Peak
5150	39.13	-14.87	54	29.12	34.25	9.41	33.65	100	349	Average
5240	107.2	-	-	96.75	34.33	9.57	33.45	100	349	Peak
5240	97.14	-	-	86.69	34.33	9.57	33.45	100	349	Average
5350	52.24	-21.76	74	41.31	34.45	9.74	33.26	100	349	Peak
5350	40.55	-13.45	54	29.62	34.45	9.74	33.26	100	349	Average
10480	61.84	-6.46	68.3	69.61	37.57	11.14	56.48	100	0	Peak



Test Mode :	Mode 3	Temperature :	22~25°C
Test Channel :	48	Relative Humidity :	55~60%
Test Engineer :	Wii Chang	Polarization :	Vertical
Remark :	1. 5240 MHz is Fundamental Signals which can be ignored. 2. 10480 MHz is 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
129.09	26.59	-16.91	43.5	45.45	11.57	1.14	31.57	100	11	Peak
167.97	26.42	-17.08	43.5	46.82	9.89	1.23	31.52	-	-	Peak
238.17	24.73	-21.27	46	42.78	11.85	1.52	31.42	-	-	Peak
536.6	26.27	-19.73	46	35.97	18.78	2.52	31	-	-	Peak
699.7	22.47	-23.53	46	29.47	20.88	2.94	30.82	-	-	Peak
845.3	26.21	-19.79	46	30.68	23	3.26	30.73	-	-	Peak
5150	50.66	-23.34	74	40.65	34.25	9.41	33.65	174	22	Peak
5150	38.75	-15.25	54	28.74	34.25	9.41	33.65	174	22	Average
5240	101.62	-	-	91.17	34.33	9.57	33.45	174	22	Peak
5240	91.7	-	-	81.25	34.33	9.57	33.45	174	22	Average
5350	51.29	-22.71	74	40.36	34.45	9.74	33.26	174	22	Peak
5350	39.89	-14.11	54	28.96	34.45	9.74	33.26	174	22	Average
10480	61.22	-7.08	68.3	68.96	37.59	11.14	56.47	100	0	Peak



Test Mode :	Mode 4	Temperature :	22~25°C
Test Channel :	48	Relative Humidity :	55~60%
Test Engineer :	Wii Chang	Polarization :	Horizontal
Remark :	1. 5260 MHz is Fundamental Signals which can be ignored. 2. 10520 MHz is 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
47.82	26.26	-13.74	40	47.63	9.48	0.67	31.52	100	122	Peak
155.82	28.11	-15.39	43.5	47.76	10.67	1.22	31.54	-	-	Peak
196.86	23.19	-20.31	43.5	44.28	9.09	1.31	31.49	-	-	Peak
374.9	26.2	-19.8	46	39.55	15.81	2.09	31.25	-	-	Peak
615	21.45	-24.55	46	29.7	19.93	2.73	30.91	-	-	Peak
943.3	26.88	-19.12	46	29.84	24.18	3.45	30.59	-	-	Peak
5150	50.62	-23.38	74	40.61	34.25	9.41	33.65	113	21	Peak
5150	39.41	-14.59	54	29.4	34.25	9.41	33.65	113	21	Average
5260	110.71	-	-	100.13	34.37	9.62	33.41	113	21	Peak
5260	100.45	-	-	89.87	34.37	9.62	33.41	113	21	Average
5350	52.68	-21.32	74	41.75	34.45	9.74	33.26	113	21	Peak
5350	41.38	-12.62	54	30.45	34.45	9.74	33.26	113	21	Average
10520	61.19	-7.11	68.3	68.79	37.61	11.21	56.42	100	0	Peak



Test Mode :	Mode 4	Temperature :	22~25°C
Test Channel :	48	Relative Humidity :	55~60%
Test Engineer :	Wii Chang	Polarization :	Vertical
Remark :	1. 5260 MHz is Fundamental Signals which can be ignored. 2. 10520 MHz is 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
128.82	25.49	-18.01	43.5	44.35	11.57	1.14	31.57	-	-	Peak
167.7	26.66	-16.84	43.5	47.06	9.89	1.23	31.52	104	188	Peak
250.86	25.67	-20.33	46	42.85	12.69	1.54	31.41	-	-	Peak
531.7	24.6	-21.4	46	34.39	18.71	2.51	31.01	-	-	Peak
646.5	22.87	-23.13	46	30.62	20.29	2.83	30.87	-	-	Peak
995.8	26.32	-27.68	54	28.55	24.84	3.51	30.58	-	-	Peak
5150	50	-24	74	39.99	34.25	9.41	33.65	122	31	Peak
5150	38.85	-15.15	54	28.84	34.25	9.41	33.65	122	31	Average
5260	104.62	-	-	94.04	34.37	9.62	33.41	122	31	Peak
5260	94.58	-	-	84	34.37	9.62	33.41	122	31	Average
5350	51.49	-22.51	74	40.56	34.45	9.74	33.26	122	31	Peak
5350	40.07	-13.93	54	29.14	34.45	9.74	33.26	122	31	Average
10520	62.09	-6.21	68.3	69.69	37.61	11.21	56.42	100	0	Peak



Test Mode :	Mode 5	Temperature :	22~25°C
Test Channel :	60	Relative Humidity :	55~60%
Test Engineer :	Wii Chang	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
47.82	25.58	-14.42	40	46.95	9.48	0.67	31.52	-	-	Peak
159.06	29.53	-13.97	43.5	49.38	10.45	1.22	31.52	100	104	Peak
281.37	20.28	-25.72	46	36.82	13.17	1.64	31.35	-	-	Peak
379.8	26.64	-19.36	46	39.82	15.96	2.1	31.24	-	-	Peak
615	21.93	-24.07	46	30.18	19.93	2.73	30.91	-	-	Peak
792.1	23.9	-22.1	46	29.1	22.35	3.13	30.68	-	-	Peak
5150	51.44	-22.56	74	41.43	34.25	9.41	33.65	100	354	Peak
5150	39.3	-14.7	54	29.29	34.25	9.41	33.65	100	354	Average
5300	109.01	-	-	98.31	34.4	9.66	33.36	100	354	Peak
5300	98.93	-	-	88.23	34.4	9.66	33.36	100	354	Average
5350	52.1	-21.9	74	41.17	34.45	9.74	33.26	100	354	Peak
5350	41.03	-12.97	54	30.1	34.45	9.74	33.26	100	354	Average
10600	63.78	-10.22	74	70.89	37.66	11.51	56.28	100	60	Peak
10600	52.2	-1.8	54	59.31	37.66	11.51	56.28	100	60	Average



Test Mode :	Mode 5	Temperature :	22~25°C
Test Channel :	60	Relative Humidity :	55~60%
Test Engineer :	Wii Chang	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
47.01	25.09	-14.91	40	46.46	9.48	0.67	31.52	110	241	Peak
128.82	26.72	-16.78	43.5	45.58	11.57	1.14	31.57	-	-	Peak
167.97	26.22	-17.28	43.5	46.62	9.89	1.23	31.52	-	-	Peak
534.5	24.73	-21.27	46	34.47	18.75	2.52	31.01	-	-	Peak
685	22.56	-23.44	46	29.77	20.72	2.91	30.84	-	-	Peak
827.8	26.72	-19.28	46	31.43	22.79	3.21	30.71	-	-	Peak
5150	50.18	-23.82	74	40.17	34.25	9.41	33.65	143	356	Peak
5150	38.92	-15.08	54	28.91	34.25	9.41	33.65	143	356	Average
5300	106.23	-	-	95.53	34.4	9.66	33.36	143	356	Peak
5300	96.25	-	-	85.55	34.4	9.66	33.36	143	356	Average
5350	51.64	-22.36	74	40.71	34.45	9.74	33.26	143	356	Peak
5350	40.45	-13.55	54	29.52	34.45	9.74	33.26	143	356	Average
10600	63.41	-10.59	74	70.52	37.66	11.51	56.28	100	59	Peak
10600	52.36	-1.64	54	59.47	37.66	11.51	56.28	100	59	Average



Test Mode :	Mode 6	Temperature :	22~25°C
Test Channel :	64	Relative Humidity :	55~60%
Test Engineer :	Wii Chang	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
47.82	25.43	-14.57	40	46.8	9.48	0.67	31.52	100	201	Peak
154.74	27.68	-15.82	43.5	47.26	10.74	1.22	31.54	-	-	Peak
250.05	21.83	-24.17	46	39.04	12.67	1.53	31.41	-	-	Peak
368.6	25.93	-20.07	46	39.51	15.6	2.08	31.26	-	-	Peak
438.6	23.92	-22.08	46	35.57	17.2	2.27	31.12	-	-	Peak
766.9	22.88	-23.12	46	28.53	21.95	3.09	30.69	-	-	Peak
5150	39.29	-14.71	54	29.28	34.25	9.41	33.65	100	340	Average
5150	50.99	-23.01	74	40.98	34.25	9.41	33.65	100	340	Peak
5320	99.5	-	-	88.69	34.42	9.7	33.31	100	340	Average
5320	109.46	-	-	98.65	34.42	9.7	33.31	100	340	Peak
5350	46.5	-7.5	54	35.57	34.45	9.74	33.26	100	340	Average
5350	62.32	-11.68	74	51.39	34.45	9.74	33.26	100	340	Peak
10640	65.01	-8.99	74	71.84	37.68	11.71	56.22	101	40	Peak
10640	53.4	-0.6	54	60.23	37.68	11.71	56.22	101	40	Average



Test Mode :	Mode 6	Temperature :	22~25°C
Test Channel :	64	Relative Humidity :	55~60%
Test Engineer :	Wii Chang	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
43.77	24.73	-15.27	40	44.46	11.13	0.64	31.5	100	155	Peak
169.05	26.49	-17.01	43.5	46.95	9.83	1.23	31.52	-	-	Peak
292.17	28.84	-17.16	46	45.11	13.34	1.71	31.32	-	-	Peak
534.5	24.34	-21.66	46	34.08	18.75	2.52	31.01	-	-	Peak
676.6	22.22	-23.78	46	29.54	20.63	2.89	30.84	-	-	Peak
931.4	25.52	-20.48	46	28.7	24.02	3.42	30.62	-	-	Peak
5150	38.69	-15.31	54	28.68	34.25	9.41	33.65	100	295	Average
5150	50.1	-23.9	74	40.09	34.25	9.41	33.65	100	295	Peak
5320	93.18	-	-	82.37	34.42	9.7	33.31	100	295	Average
5320	103.94	-	-	93.13	34.42	9.7	33.31	100	295	Peak
5350	42.17	-11.83	54	31.24	34.45	9.74	33.26	100	295	Average
5350	56.26	-17.74	74	45.33	34.45	9.74	33.26	100	295	Peak
10640	63.43	-10.57	74	70.26	37.68	11.71	56.22	100	60	Peak
10640	52.28	-1.72	54	59.11	37.68	11.71	56.22	100	60	Average



Test Mode :	Mode 7	Temperature :	22~25°C
Test Channel :	100	Relative Humidity :	55~60%
Test Engineer :	Wii Chang	Polarization :	Horizontal
Remark :	5500 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
47.82	25.37	-14.63	40	46.74	9.48	0.67	31.52	100	71	Peak
151.77	28.06	-15.44	43.5	47.44	10.96	1.21	31.55	-	-	Peak
253.02	22.99	-23.01	46	40.13	12.72	1.55	31.41	-	-	Peak
377.7	26.26	-19.74	46	39.54	15.87	2.09	31.24	-	-	Peak
447	24.64	-21.36	46	36.11	17.35	2.29	31.11	-	-	Peak
743.8	22.73	-23.27	46	28.81	21.58	3.05	30.71	-	-	Peak
5470	63.32	-4.98	68.3	51.82	34.57	9.94	33.01	100	54	Peak
5500	106.86	-	-	95.15	34.6	10.02	32.91	100	54	Peak
5500	96.91	-	-	85.2	34.6	10.02	32.91	100	54	Average
5725	50.87	-17.43	68.3	39.31	34.82	9.92	33.18	100	54	Peak
11000	62.72	-11.28	74	67.22	37.9	13.22	55.62	120	355	Peak
11000	51.14	-2.86	54	55.64	37.9	13.22	55.62	120	355	Average



Test Mode :	Mode 7	Temperature :	22~25°C
Test Channel :	100	Relative Humidity :	55~60%
Test Engineer :	Wii Chang	Polarization :	Vertical
Remark :	5500 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
169.05	26.63	-16.87	43.5	47.09	9.83	1.23	31.52	-	-	Peak
200.37	27.98	-15.52	43.5	48.97	9.17	1.32	31.48	131	108	Peak
233.85	23.73	-22.27	46	42.16	11.5	1.5	31.43	-	-	Peak
536.6	25.17	-20.83	46	34.87	18.78	2.52	31	-	-	Peak
878.2	25.78	-20.22	46	29.81	23.37	3.31	30.71	-	-	Peak
987.4	26.28	-27.72	54	28.63	24.73	3.5	30.58	-	-	Peak
5470	59.07	-9.23	68.3	47.57	34.57	9.94	33.01	137	4	Peak
5500	102.35	-	-	90.64	34.6	10.02	32.91	137	4	Peak
5500	92.28	-	-	80.57	34.6	10.02	32.91	137	4	Average
5725	51.04	-17.26	68.3	39.48	34.82	9.92	33.18	137	4	Peak
11000	64.86	-9.14	74	69.36	37.9	13.22	55.62	100	23	Peak
11000	50.98	-3.02	54	55.48	37.9	13.22	55.62	100	23	Average



Test Mode :	Mode 8	Temperature :	22~25°C
Test Channel :	116	Relative Humidity :	55~60%
Test Engineer :	Wii Chang	Polarization :	Horizontal
Remark :	5580 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
47.82	25.25	-14.75	40	46.62	9.48	0.67	31.52	115	129	Peak
155.82	27.85	-15.65	43.5	47.5	10.67	1.22	31.54	-	-	Peak
269.49	24.31	-21.69	46	41.06	12.98	1.64	31.37	-	-	Peak
380.5	25.49	-20.51	46	38.67	15.96	2.1	31.24	-	-	Peak
444.9	23.93	-22.07	46	35.44	17.31	2.29	31.11	-	-	Peak
769	23.32	-22.68	46	28.94	21.98	3.09	30.69	-	-	Peak
5470	52.82	-15.48	68.3	41.32	34.57	9.94	33.01	100	41	Peak
5580	95.75	-	-	84.09	34.67	9.99	33	100	41	Average
5580	105.97	-	-	94.27	34.67	10	32.97	100	41	Peak
5725	51.73	-16.57	68.3	40.17	34.82	9.92	33.18	100	41	Peak
11160	59.26	-14.74	74	63.69	38.03	13.19	55.65	104	355	Peak
11160	45.44	-8.56	54	49.86	38.03	13.2	55.65	104	355	Average



Test Mode :	Mode 8	Temperature :	22~25°C
Test Channel :	116	Relative Humidity :	55~60%
Test Engineer :	Wii Chang	Polarization :	Vertical
Remark :	5580 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	24.35	-15.65	40	44.53	10.67	0.65	31.5	105	231	Peak
168.78	26.26	-17.24	43.5	46.72	9.83	1.23	31.52	-	-	Peak
212.25	24.79	-18.71	43.5	44.9	9.99	1.37	31.47	-	-	Peak
536.6	25.53	-20.47	46	35.23	18.78	2.52	31	-	-	Peak
682.9	22.73	-23.27	46	29.97	20.69	2.91	30.84	-	-	Peak
869.8	24.86	-21.14	46	29	23.28	3.3	30.72	-	-	Peak
5470	51.19	-17.11	68.3	39.69	34.57	9.94	33.01	122	14	Peak
5580	92.2	-	-	80.54	34.67	9.99	33	122	14	Average
5580	102.31	-	-	90.65	34.67	9.99	33	122	14	Peak
5725	51.99	-16.31	68.3	40.43	34.82	9.92	33.18	122	14	Peak
11160	61.95	-12.05	74	66.38	38.03	13.19	55.65	122	355	Peak
11160	49.01	-4.99	54	53.43	38.03	13.2	55.65	122	355	Average



Test Mode :	Mode 9	Temperature :	22~25°C
Test Channel :	140	Relative Humidity :	55~60%
Test Engineer :	Wii Chang	Polarization :	Horizontal
Remark :	5700 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
47.82	24.98	-15.02	40	46.35	9.48	0.67	31.52	100	193	Peak
150.69	28	-15.5	43.5	47.25	11.1	1.21	31.56	-	-	Peak
298.65	22.35	-23.65	46	38.48	13.44	1.76	31.33	-	-	Peak
372.1	25.34	-20.66	46	38.79	15.72	2.08	31.25	-	-	Peak
503	24.16	-21.84	46	34.49	18.27	2.46	31.06	-	-	Peak
727.7	23.38	-22.62	46	29.8	21.32	3.01	30.75	-	-	Peak
5470	50.48	-17.82	68.3	38.98	34.57	9.94	33.01	101	330	Peak
5700	106.68	-	-	95.11	34.79	9.93	33.15	101	330	Peak
5700	96.6	-	-	85.03	34.79	9.93	33.15	101	330	Average
5725	67.73	-0.57	68.3	56.17	34.82	9.92	33.18	101	330	Peak
11400	51.91	-22.09	74	56.23	38.22	13.16	55.7	101	45	Peak
11400	40.71	-13.29	54	45.03	38.22	13.16	55.7	101	45	Average



Test Mode :	Mode 9	Temperature :	22~25°C
Test Channel :	140	Relative Humidity :	55~60%
Test Engineer :	Wii Chang	Polarization :	Vertical
Remark :	5700 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	24.46	-15.54	40	44.64	10.67	0.65	31.5	111	227	Peak
130.98	26.51	-16.99	43.5	45.35	11.58	1.15	31.57	-	-	Peak
183.09	25.73	-17.77	43.5	46.94	9.05	1.26	31.52	-	-	Peak
537.3	23.87	-22.13	46	33.55	18.8	2.52	31	-	-	Peak
750.1	22.32	-23.68	46	28.29	21.67	3.06	30.7	-	-	Peak
984.6	26.89	-27.11	54	29.29	24.69	3.49	30.58	-	-	Peak
5470	50.07	-18.23	68.3	38.57	34.57	9.94	33.01	114	36	Peak
5700	103.43	-	-	91.86	34.79	9.93	33.15	114	36	Peak
5700	93.47	-	-	81.9	34.79	9.93	33.15	114	36	Average
5725	65.19	-3.11	68.3	53.63	34.82	9.92	33.18	114	36	Peak
11400	52.28	-21.72	74	56.6	38.22	13.16	55.7	101	329	Peak
11400	41.58	-12.42	54	45.9	38.22	13.16	55.7	101	329	Average



Test Mode :	Mode 10	Temperature :	22~25°C
Test Channel :	36	Relative Humidity :	55~60%
Test Engineer :	Wii Chang	Polarization :	Horizontal
Remark :	1. 5180 MHz is Fundamental Signals which can be ignored. 2. 10360 MHz is 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
48.9	26.77	-13.23	40	48.54	9.08	0.68	31.53	112	155	Peak
155.82	27.73	-15.77	43.5	47.38	10.67	1.22	31.54	-	-	Peak
240.33	23.29	-22.71	46	41.2	11.98	1.53	31.42	-	-	Peak
377	25.34	-20.66	46	38.62	15.87	2.09	31.24	-	-	Peak
587	20.74	-25.26	46	29.47	19.56	2.65	30.94	-	-	Peak
741.7	22.63	-23.37	46	28.76	21.55	3.04	30.72	-	-	Peak
5150	42.44	-11.56	54	32.43	34.25	9.41	33.65	102	342	Average
5150	57.84	-16.16	74	47.83	34.25	9.41	33.65	102	342	Peak
5180	105.88	-	-	95.75	34.28	9.45	33.6	102	342	Peak
5180	95.56	-	-	85.43	34.28	9.45	33.6	102	342	Average
5350	39.97	-14.03	54	29.04	34.45	9.74	33.26	102	342	Average
5350	50.69	-23.31	74	39.76	34.45	9.74	33.26	102	342	Peak
10360	62.39	-5.91	68.3	70.18	37.48	11.31	56.58	100	0	Peak



Test Mode :	Mode 10	Temperature :	22~25°C
Test Channel :	36	Relative Humidity :	55~60%
Test Engineer :	Wii Chang	Polarization :	Vertical
Remark :	1. 5180 MHz is Fundamental Signals which can be ignored. 2. 10360 MHz is 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
43.77	24.26	-15.74	40	43.99	11.13	0.64	31.5	100	45	Peak
167.7	26.18	-17.32	43.5	46.58	9.89	1.23	31.52	-	-	Peak
216.57	28.03	-17.97	46	47.82	10.27	1.4	31.46	-	-	Peak
534.5	24.67	-21.33	46	34.41	18.75	2.52	31.01	-	-	Peak
682.9	23.01	-22.99	46	30.25	20.69	2.91	30.84	-	-	Peak
976.2	26.5	-27.5	54	29.01	24.58	3.49	30.58	-	-	Peak
5150	40.04	-13.96	54	30.03	34.25	9.41	33.65	150	4	Average
5150	53.94	-20.06	74	43.93	34.25	9.41	33.65	150	4	Peak
5180	101.56	-	-	91.43	34.28	9.45	33.6	150	4	Peak
5180	91.18	-	-	81.05	34.28	9.45	33.6	150	4	Average
5350	39.92	-14.08	54	28.99	34.45	9.74	33.26	150	4	Average
5350	51.99	-22.01	74	41.06	34.45	9.74	33.26	150	4	Peak
10360	60.11	-8.19	68.3	67.9	37.48	11.31	56.58	100	0	Peak



Test Mode :	Mode 11	Temperature :	22~25°C
Test Channel :	44	Relative Humidity :	55~60%
Test Engineer :	Wii Chang	Polarization :	Horizontal
Remark :	1. 5220 MHz is Fundamental Signals which can be ignored. 2. 10440 MHz is 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
47.82	25.09	-14.91	40	46.46	9.48	0.67	31.52	128	102	Peak
151.77	28.41	-15.09	43.5	47.79	10.96	1.21	31.55	-	-	Peak
250.86	21.87	-24.13	46	39.05	12.69	1.54	31.41	-	-	Peak
377	25.99	-20.01	46	39.27	15.87	2.09	31.24	-	-	Peak
500.9	23.43	-22.57	46	33.82	18.23	2.45	31.07	-	-	Peak
626.2	22.16	-23.84	46	30.22	20.06	2.77	30.89	-	-	Peak
5150	50.3	-23.7	74	40.29	34.25	9.41	33.65	124	360	Peak
5150	38.94	-15.06	54	28.93	34.25	9.41	33.65	124	360	Average
5220	104.71	-	-	94.36	34.32	9.53	33.5	124	360	Peak
5220	94.79	-	-	84.44	34.32	9.53	33.5	124	360	Average
5350	50.88	-23.12	74	39.95	34.45	9.74	33.26	124	360	Peak
5350	40.16	-13.84	54	29.23	34.45	9.74	33.26	124	360	Average
10440	61.05	-7.25	68.3	68.81	37.56	11.18	56.5	100	0	Peak



Test Mode :	Mode 11	Temperature :	22~25°C
Test Channel :	44	Relative Humidity :	55~60%
Test Engineer :	Wii Chang	Polarization :	Vertical
Remark :	1. 5220 MHz is Fundamental Signals which can be ignored. 2. 10440 MHz is 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
47.82	25.43	-14.57	40	46.8	9.48	0.67	31.52	100	336	Peak
166.89	27.04	-16.46	43.5	47.37	9.96	1.23	31.52	-	-	Peak
215.49	28.08	-15.42	43.5	47.96	10.2	1.39	31.47	-	-	Peak
500.2	24.97	-21.03	46	35.36	18.23	2.45	31.07	-	-	Peak
685	23.05	-22.95	46	30.26	20.72	2.91	30.84	-	-	Peak
993.7	26.59	-27.41	54	28.85	24.82	3.5	30.58	-	-	Peak
5150	49.4	-24.6	74	39.39	34.25	9.41	33.65	146	4	Peak
5150	38.77	-15.23	54	28.76	34.25	9.41	33.65	146	4	Average
5220	100.86	-	-	90.51	34.32	9.53	33.5	146	4	Peak
5220	90.54	-	-	80.19	34.32	9.53	33.5	146	4	Average
5350	51.35	-22.65	74	40.42	34.45	9.74	33.26	146	4	Peak
5350	39.84	-14.16	54	28.91	34.45	9.74	33.26	146	4	Average
10440	60.95	-7.35	68.3	68.71	37.56	11.18	56.5	100	0	Peak



Test Mode :	Mode 12	Temperature :	22~25°C
Test Channel :	48	Relative Humidity :	55~60%
Test Engineer :	Wii Chang	Polarization :	Horizontal
Remark :	1. 5240 MHz is Fundamental Signals which can be ignored. 2. 10480 MHz is 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
47.82	25.11	-14.89	40	46.48	9.48	0.67	31.52	100	88	Peak
151.77	27.94	-15.56	43.5	47.32	10.96	1.21	31.55	-	-	Peak
248.7	20.31	-25.69	46	37.66	12.53	1.53	31.41	-	-	Peak
377.7	25.04	-20.96	46	38.32	15.87	2.09	31.24	-	-	Peak
733.3	22.42	-23.58	46	28.73	21.41	3.02	30.74	-	-	Peak
965.7	26.15	-27.85	54	28.78	24.46	3.48	30.57	-	-	Peak
5150	50.63	-23.37	74	40.62	34.25	9.41	33.65	100	353	Peak
5150	38.96	-15.04	54	28.95	34.25	9.41	33.65	100	353	Average
5240	106.01	-	-	95.56	34.33	9.57	33.45	100	353	Peak
5240	95.97	-	-	85.52	34.33	9.57	33.45	100	353	Average
5350	51.55	-22.45	74	40.62	34.45	9.74	33.26	100	353	Peak
5350	40.3	-13.7	54	29.37	34.45	9.74	33.26	100	353	Average
10480	62.63	-5.67	68.3	70.37	37.59	11.14	56.47	100	0	Peak



Test Mode :	Mode 12	Temperature :	22~25°C
Test Channel :	48	Relative Humidity :	55~60%
Test Engineer :	Wii Chang	Polarization :	Vertical
Remark :	1. 5240 MHz is Fundamental Signals which can be ignored. 2. 10480 MHz is 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	24.54	-15.46	40	44.72	10.67	0.65	31.5	115	214	Peak
167.97	26.22	-17.28	43.5	46.62	9.89	1.23	31.52	-	-	Peak
210.9	23.93	-19.57	43.5	44.18	9.86	1.36	31.47	-	-	Peak
533.8	24.83	-21.17	46	34.58	18.74	2.52	31.01	-	-	Peak
646.5	22.24	-23.76	46	29.99	20.29	2.83	30.87	-	-	Peak
816.6	24.6	-21.4	46	29.46	22.66	3.18	30.7	-	-	Peak
5150	49.7	-24.3	74	39.69	34.25	9.41	33.65	175	18	Peak
5150	38.78	-15.22	54	28.77	34.25	9.41	33.65	175	18	Average
5240	101.27	-	-	90.82	34.33	9.57	33.45	175	18	Peak
5240	91.33	-	-	80.88	34.33	9.57	33.45	175	18	Average
5350	50.21	-23.79	74	39.28	34.45	9.74	33.26	175	18	Peak
5350	39.78	-14.22	54	28.85	34.45	9.74	33.26	175	18	Average
10480	61.28	-7.02	68.3	69.02	37.59	11.14	56.47	100	0	Peak



Test Mode :	Mode 13	Temperature :	22~25°C
Test Channel :	52	Relative Humidity :	55~60%
Test Engineer :	Wii Chang	Polarization :	Horizontal
Remark :	1. 5260 MHz is Fundamental Signals which can be ignored. 2. 10520 MHz is 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
47.82	25.5	-14.5	40	46.87	9.48	0.67	31.52	100	68	Peak
151.5	28.05	-15.45	43.5	47.37	11.03	1.21	31.56	-	-	Peak
203.34	23	-20.5	43.5	43.78	9.37	1.33	31.48	-	-	Peak
380.5	25.43	-20.57	46	38.61	15.96	2.1	31.24	-	-	Peak
444.9	23.93	-22.07	46	35.44	17.31	2.29	31.11	-	-	Peak
962.2	26.03	-27.97	54	28.72	24.41	3.47	30.57	-	-	Peak
5150	51.73	-22.27	74	41.72	34.25	9.41	33.65	100	5	Peak
5150	39.8	-14.2	54	29.79	34.25	9.41	33.65	100	5	Average
5260	110.03	-	-	99.45	34.37	9.62	33.41	100	5	Peak
5260	99.97	-	-	89.39	34.37	9.62	33.41	100	5	Average
5350	52.74	-21.26	74	41.81	34.45	9.74	33.26	100	5	Peak
5350	41.65	-12.35	54	30.72	34.45	9.74	33.26	100	5	Average
10520	62.76	-5.54	68.3	70.36	37.61	11.21	56.42	100	0	Peak



Test Mode :	Mode 13	Temperature :	22~25°C
Test Channel :	52	Relative Humidity :	55~60%
Test Engineer :	Wii Chang	Polarization :	Vertical
Remark :	1. 5260 MHz is Fundamental Signals which can be ignored. 2. 10520 MHz is 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
47.01	24.1	-15.9	40	45.47	9.48	0.67	31.52	121	188	Peak
127.74	25.65	-17.85	43.5	44.51	11.57	1.14	31.57	-	-	Peak
168.78	26.74	-16.76	43.5	47.2	9.83	1.23	31.52	-	-	Peak
536.6	24.37	-21.63	46	34.07	18.78	2.52	31	-	-	Peak
772.5	24.67	-21.33	46	30.23	22.03	3.1	30.69	-	-	Peak
934.2	25.61	-20.39	46	28.74	24.06	3.42	30.61	-	-	Peak
5150	51.26	-22.74	74	41.25	34.25	9.41	33.65	125	41	Peak
5150	38.78	-15.22	54	28.77	34.25	9.41	33.65	125	41	Average
5260	105.01	-	-	94.43	34.37	9.62	33.41	125	41	Peak
5260	94.78	-	-	84.2	34.37	9.62	33.41	125	41	Average
5350	51.33	-22.67	74	40.4	34.45	9.74	33.26	125	41	Peak
5350	40.2	-13.8	54	29.27	34.45	9.74	33.26	125	41	Average
10520	63.55	-4.75	68.3	71.15	37.61	11.21	56.42	100	0	Peak



Test Mode :	Mode 14	Temperature :	22~25°C
Test Channel :	60	Relative Humidity :	55~60%
Test Engineer :	Wii Chang	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
47.82	25.19	-14.81	40	46.56	9.48	0.67	31.52	100	45	Peak
158.25	27.95	-15.55	43.5	47.74	10.52	1.22	31.53	-	-	Peak
267.33	20.17	-25.83	46	36.97	12.95	1.63	31.38	-	-	Peak
377.7	25.5	-20.5	46	38.78	15.87	2.09	31.24	-	-	Peak
444.9	23.15	-22.85	46	34.66	17.31	2.29	31.11	-	-	Peak
974.1	26.65	-27.35	54	29.18	24.56	3.48	30.57	-	-	Peak
5150	49.9	-24.1	74	39.89	34.25	9.41	33.65	100	356	Peak
5150	39.23	-14.77	54	29.22	34.25	9.41	33.65	100	356	Average
5300	110.24	-	-	99.54	34.4	9.66	33.36	100	356	Peak
5300	99.33	-	-	88.63	34.4	9.66	33.36	100	356	Average
5350	53.32	-20.68	74	42.39	34.45	9.74	33.26	100	356	Peak
5350	40.78	-13.22	54	29.85	34.45	9.74	33.26	100	356	Average
10600	64.27	-9.73	74	71.42	37.65	11.51	56.31	100	61	Peak
10600	51.68	-2.32	54	58.79	37.66	11.51	56.28	100	61	Average



Test Mode :	Mode 14	Temperature :	22~25°C
Test Channel :	60	Relative Humidity :	55~60%
Test Engineer :	Wii Chang	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
47.82	24.93	-15.07	40	46.3	9.48	0.67	31.52	113	268	Peak
101.82	22.61	-20.89	43.5	43.19	9.96	1	31.54	-	-	Peak
167.97	26.89	-16.61	43.5	47.29	9.89	1.23	31.52	-	-	Peak
441.4	23.01	-22.99	46	34.6	17.25	2.28	31.12	-	-	Peak
528.9	25.7	-20.3	46	35.55	18.66	2.51	31.02	-	-	Peak
811.7	24.36	-21.64	46	29.27	22.61	3.17	30.69	-	-	Peak
5150	50.31	-23.69	74	40.3	34.25	9.41	33.65	199	20	Peak
5150	38.82	-15.18	54	28.81	34.25	9.41	33.65	199	20	Average
5300	103.77	-	-	93.07	34.4	9.66	33.36	199	20	Peak
5300	93.65	-	-	82.95	34.4	9.66	33.36	199	20	Average
5350	51.33	-22.67	74	40.4	34.45	9.74	33.26	199	20	Peak
5350	39.94	-14.06	54	29.01	34.45	9.74	33.26	199	20	Average
10600	64.16	-9.84	74	71.31	37.65	11.51	56.31	101	59	Peak
10600	51.59	-2.41	54	58.7	37.66	11.51	56.28	101	59	Average



Test Mode :	Mode 15	Temperature :	22~25°C
Test Channel :	64	Relative Humidity :	55~60%
Test Engineer :	Wii Chang	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
33.78	22.76	-17.24	40	38.09	15.57	0.57	31.47	-	-	Peak
47.82	26.01	-13.99	40	47.38	9.48	0.67	31.52	100	178	Peak
152.85	28.02	-15.48	43.5	47.48	10.88	1.21	31.55	-	-	Peak
377	26.31	-19.69	46	39.59	15.87	2.09	31.24	-	-	Peak
444.9	23.18	-22.82	46	34.69	17.31	2.29	31.11	-	-	Peak
819.4	24.93	-21.07	46	29.74	22.7	3.19	30.7	-	-	Peak
5150	51.53	-22.47	74	41.52	34.25	9.41	33.65	100	352	Peak
5150	39.14	-14.86	54	29.13	34.25	9.41	33.65	100	352	Average
5320	98.65	-	-	87.84	34.42	9.7	33.31	100	352	Average
5320	109.23	-	-	98.42	34.42	9.7	33.31	100	352	Peak
5350	44.47	-9.53	54	33.54	34.45	9.74	33.26	100	352	Average
5350	60.94	-13.06	74	50.01	34.45	9.74	33.26	100	352	Peak
10640	66.42	-7.58	74	73.25	37.68	11.71	56.22	101	40	Peak
10640	52.48	-1.52	54	59.31	37.68	11.71	56.22	101	40	Average



Test Mode :	Mode 15	Temperature :	22~25°C
Test Channel :	64	Relative Humidity :	55~60%
Test Engineer :	Wii Chang	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
47.82	25.77	-14.23	40	47.14	9.48	0.67	31.52	100	225	Peak
150.42	26.63	-16.87	43.5	45.88	11.1	1.21	31.56	-	-	Peak
227.1	24.83	-21.17	46	43.8	11.02	1.46	31.45	-	-	Peak
528.9	24.84	-21.16	46	34.69	18.66	2.51	31.02	-	-	Peak
688.5	22.07	-23.93	46	29.22	20.76	2.92	30.83	-	-	Peak
956.6	25.55	-20.45	46	28.31	24.34	3.47	30.57	-	-	Peak
5150	38.77	-15.23	54	28.76	34.25	9.41	33.65	158	20	Average
5150	50.65	-23.35	74	40.64	34.25	9.41	33.65	158	20	Peak
5320	95.35	-	-	84.54	34.42	9.7	33.31	158	20	Average
5320	106.4	-	-	95.59	34.42	9.7	33.31	158	20	Peak
5350	43.05	-10.95	54	32.12	34.45	9.74	33.26	158	20	Average
5350	57.33	-16.67	74	46.4	34.45	9.74	33.26	158	20	Peak
10640	66.02	-7.98	74	72.85	37.68	11.71	56.22	101	60	Peak
10640	51.58	-2.42	54	58.41	37.68	11.71	56.22	101	60	Average



Test Mode :	Mode 16	Temperature :	22~25°C
Test Channel :	100	Relative Humidity :	55~60%
Test Engineer :	Wii Chang	Polarization :	Horizontal
Remark :	5500 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
48.9	29.44	-10.56	40	51.21	9.08	0.68	31.53	113	96	Peak
129.09	23.56	-19.94	43.5	42.42	11.57	1.14	31.57	-	-	Peak
152.58	27.53	-15.97	43.5	46.91	10.96	1.21	31.55	-	-	Peak
377.7	25.63	-20.37	46	38.91	15.87	2.09	31.24	-	-	Peak
576.5	21.52	-24.48	46	30.45	19.4	2.62	30.95	-	-	Peak
755.7	23.2	-22.8	46	29.07	21.76	3.07	30.7	-	-	Peak
5470	63.48	-4.82	68.3	51.98	34.57	9.94	33.01	108	12	Peak
5500	108.38	-	-	96.67	34.6	10.02	32.91	108	12	Peak
5500	98.09	-	-	86.38	34.6	10.02	32.91	108	12	Average
5725	51.44	-16.86	68.3	39.88	34.82	9.92	33.18	108	12	Peak
11000	64.7	-9.3	74	69.2	37.9	13.22	55.62	120	346	Peak
11000	51.04	-2.96	54	55.54	37.9	13.22	55.62	120	346	Average



Test Mode :	Mode 16	Temperature :	22~25°C
Test Channel :	100	Relative Humidity :	55~60%
Test Engineer :	Wii Chang	Polarization :	Vertical
Remark :	5500 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
46.74	24.29	-15.71	40	45.26	9.87	0.67	31.51	100	120	Peak
167.43	26.13	-17.37	43.5	46.53	9.89	1.23	31.52	-	-	Peak
234.93	24.76	-21.24	46	43.12	11.57	1.5	31.43	-	-	Peak
539.4	24.08	-21.92	46	33.72	18.83	2.53	31	-	-	Peak
721.4	22.75	-23.25	46	29.3	21.23	2.99	30.77	-	-	Peak
1000	26.82	-27.18	54	29	24.89	3.51	30.58	-	-	Peak
5470	61.05	-7.25	68.3	49.55	34.57	9.94	33.01	164	3	Peak
5500	103.58	-	-	91.87	34.6	10.02	32.91	164	3	Peak
5500	93.42	-	-	81.71	34.6	10.02	32.91	164	3	Average
5725	50.46	-17.84	68.3	38.9	34.82	9.92	33.18	164	3	Peak
11000	64	-10	74	68.5	37.9	13.22	55.62	100	23	Peak
11000	50.27	-3.73	54	54.77	37.9	13.22	55.62	100	23	Average



Test Mode :	Mode 17	Temperature :	22~25°C
Test Channel :	116	Relative Humidity :	55~60%
Test Engineer :	Wii Chang	Polarization :	Horizontal
Remark :	5580 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
47.82	25.39	-14.61	40	46.76	9.48	0.67	31.52	142	251	Peak
153.66	27.86	-15.64	43.5	47.32	10.88	1.21	31.55	-	-	Peak
253.02	20.73	-25.27	46	37.87	12.72	1.55	31.41	-	-	Peak
302.1	25.4	-20.6	46	41.4	13.55	1.78	31.33	-	-	Peak
379.8	26.11	-19.89	46	39.29	15.96	2.1	31.24	-	-	Peak
732.6	21.86	-24.14	46	28.18	21.4	3.02	30.74	-	-	Peak
5470	52.36	-15.94	68.3	40.86	34.57	9.94	33.01	100	42	Peak
5580	95.09	-	-	83.43	34.67	9.99	33	100	42	Average
5580	106.39	-	-	94.73	34.67	9.99	33	100	42	Peak
5725	52.16	-16.14	68.3	40.6	34.82	9.92	33.18	100	42	Peak
11160	58.88	-15.12	74	63.31	38.02	13.2	55.65	100	354	Peak
11160	44.86	-9.14	54	49.28	38.03	13.2	55.65	100	354	Average



Test Mode :	Mode 17	Temperature :	22~25°C
Test Channel :	116	Relative Humidity :	55~60%
Test Engineer :	Wii Chang	Polarization :	Vertical
Remark :	5580 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
47.82	24.24	-15.76	40	45.61	9.48	0.67	31.52	117	153	Peak
101.82	21.92	-21.58	43.5	42.5	9.96	1	31.54	-	-	Peak
181.74	26.53	-16.97	43.5	47.77	9.04	1.25	31.53	-	-	Peak
528.9	24.52	-21.48	46	34.37	18.66	2.51	31.02	-	-	Peak
785.8	24.99	-21.01	46	30.32	22.24	3.12	30.69	-	-	Peak
962.9	26.36	-27.64	54	29.03	24.43	3.47	30.57	-	-	Peak
5470	51.84	-16.46	68.3	40.34	34.57	9.94	33.01	100	351	Peak
5580	91.05	-	-	79.39	34.67	9.99	33	100	351	Average
5580	101.71	-	-	90.05	34.67	9.99	33	100	351	Peak
5725	51.91	-16.39	68.3	40.35	34.82	9.92	33.18	100	351	Peak
11160	62.5	-11.5	74	66.93	38.02	13.2	55.65	134	355	Peak
11160	48.64	-5.36	54	53.06	38.03	13.2	55.65	134	355	Average



Test Mode :	Mode 18	Temperature :	22~25°C
Test Channel :	140	Relative Humidity :	55~60%
Test Engineer :	Wii Chang	Polarization :	Horizontal
Remark :	5700 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
47.82	25.79	-14.21	40	47.16	9.48	0.67	31.52	100	325	Peak
153.93	27.46	-16.04	43.5	46.98	10.81	1.21	31.54	-	-	Peak
253.02	21.08	-24.92	46	38.22	12.72	1.55	31.41	-	-	Peak
377	26.61	-19.39	46	39.89	15.87	2.09	31.24	-	-	Peak
654.2	21.47	-24.53	46	29.11	20.38	2.85	30.87	-	-	Peak
867.7	25.3	-20.7	46	29.46	23.26	3.3	30.72	-	-	Peak
5470	50.24	-18.06	68.3	38.74	34.57	9.94	33.01	123	346	Peak
5700	98.68	-	-	87.11	34.79	9.93	33.15	123	346	Average
5700	108.94	-	-	97.37	34.79	9.93	33.15	123	346	Peak
5725	55.97	-12.33	68.3	44.41	34.82	9.92	33.18	123	346	Peak
11400	53.05	-20.95	74	57.37	38.22	13.16	55.7	100	36	Peak
11400	39.72	-14.28	54	44.04	38.22	13.16	55.7	100	36	Average



Test Mode :	Mode 18	Temperature :	22~25°C
Test Channel :	140	Relative Humidity :	55~60%
Test Engineer :	Wii Chang	Polarization :	Vertical
Remark :	5700 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
65.37	24.04	-15.96	40	48.8	5.98	0.8	31.54	100	236	Peak
128.82	26.4	-17.1	43.5	45.26	11.57	1.14	31.57	-	-	Peak
169.86	26.43	-17.07	43.5	46.95	9.77	1.23	31.52	-	-	Peak
537.3	25.07	-20.93	46	34.75	18.8	2.52	31	-	-	Peak
813.8	23.66	-22.34	46	28.54	22.63	3.18	30.69	-	-	Peak
945.4	26.33	-19.67	46	29.26	24.2	3.45	30.58	-	-	Peak
5470	51.17	-17.13	68.3	39.67	34.57	9.94	33.01	101	304	Peak
5700	103.49	-	-	91.92	34.79	9.93	33.15	101	304	Peak
5700	93.27	-	-	81.7	34.79	9.93	33.15	101	304	Average
5725	52.41	-15.89	68.3	40.85	34.82	9.92	33.18	101	304	Peak
11400	52.77	-21.23	74	57.1	38.21	13.16	55.7	101	329	Peak
11400	40.82	-13.18	54	45.14	38.22	13.16	55.7	101	329	Average



Test Mode :	Mode 19	Temperature :	22~25°C
Test Channel :	38	Relative Humidity :	55~60%
Test Engineer :	Wii Chang	Polarization :	Horizontal
Remark :	1. 5190 MHz is Fundamental Signals which can be ignored. 2. 10380 MHz is 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
47.82	24.89	-15.11	40	46.26	9.48	0.67	31.52	113	258	Peak
152.85	28.03	-15.47	43.5	47.49	10.88	1.21	31.55	-	-	Peak
248.7	21.3	-24.7	46	38.65	12.53	1.53	31.41	-	-	Peak
377	25.93	-20.07	46	39.21	15.87	2.09	31.24	-	-	Peak
447.7	24.12	-21.88	46	35.56	17.36	2.3	31.1	-	-	Peak
758.5	23.04	-22.96	46	28.86	21.81	3.07	30.7	-	-	Peak
5150	52.98	-1.02	54	42.97	34.25	9.41	33.65	115	26	Average
5150	68.39	-5.61	74	58.38	34.25	9.41	33.65	115	26	Peak
5190	94.78	-	-	84.56	34.28	9.49	33.55	115	26	Average
5190	106.13	-	-	95.89	34.3	9.49	33.55	115	26	Peak
5350	52.75	-21.25	74	41.82	34.45	9.74	33.26	115	26	Peak
5350	41.51	-12.49	54	30.58	34.45	9.74	33.26	115	26	Average
10380	59.87	-8.43	68.3	67.65	37.51	11.27	56.56	100	0	Peak



Test Mode :	Mode 19	Temperature :	22~25°C
Test Channel :	38	Relative Humidity :	55~60%
Test Engineer :	Wii Chang	Polarization :	Vertical
Remark :	1. 5190 MHz is Fundamental Signals which can be ignored. 2. 10380 MHz is 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
47.82	25.55	-14.45	40	46.92	9.48	0.67	31.52	100	65	Peak
167.7	26.49	-17.01	43.5	46.89	9.89	1.23	31.52	-	-	Peak
294.33	25.97	-20.03	46	42.19	13.38	1.73	31.33	-	-	Peak
533.8	24.53	-21.47	46	34.28	18.74	2.52	31.01	-	-	Peak
749.4	23.81	-22.19	46	29.78	21.67	3.06	30.7	-	-	Peak
960.1	25.96	-28.04	54	28.67	24.39	3.47	30.57	-	-	Peak
5150	45.79	-8.21	54	35.78	34.25	9.41	33.65	100	301	Average
5150	60.46	-13.54	74	50.45	34.25	9.41	33.65	100	301	Peak
5190	87.63	-	-	77.41	34.28	9.49	33.55	100	301	Average
5190	98.53	-	-	88.29	34.3	9.49	33.55	100	301	Peak
5350	51.53	-22.47	74	40.6	34.45	9.74	33.26	100	301	Peak
5350	39.99	-14.01	54	29.06	34.45	9.74	33.26	100	301	Average
10380	58.32	-9.98	68.3	66.1	37.51	11.27	56.56	100	0	Peak



Test Mode :	Mode 20	Temperature :	22~25°C
Test Channel :	46	Relative Humidity :	55~60%
Test Engineer :	Wii Chang	Polarization :	Horizontal
Remark :	1. 5230 MHz is Fundamental Signals which can be ignored. 2. 10460 MHz is 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
32.97	23.64	-16.36	40	38.75	15.8	0.56	31.47	-	-	Peak
153.66	27.74	-15.76	43.5	47.2	10.88	1.21	31.55	100	174	Peak
195.78	23.31	-20.19	43.5	44.41	9.09	1.3	31.49	-	-	Peak
374.2	25.99	-20.01	46	39.37	15.78	2.09	31.25	-	-	Peak
503.7	22.79	-23.21	46	33.12	18.27	2.46	31.06	-	-	Peak
719.3	22.88	-23.12	46	29.46	21.2	2.99	30.77	-	-	Peak
5150	51.59	-22.41	74	41.58	34.25	9.41	33.65	100	351	Peak
5150	39.79	-14.21	54	29.78	34.25	9.41	33.65	100	351	Average
5230	106.16	-	-	95.8	34.33	9.53	33.5	100	351	Peak
5230	95.31	-	-	84.95	34.33	9.53	33.5	100	351	Average
5350	53.31	-20.69	74	42.38	34.45	9.74	33.26	100	351	Peak
5350	41.32	-12.68	54	30.39	34.45	9.74	33.26	100	351	Average
10460	59.11	-9.19	68.3	66.87	37.56	11.18	56.5	100	0	Peak



Test Mode :	Mode 20	Temperature :	22~25°C
Test Channel :	46	Relative Humidity :	55~60%
Test Engineer :	Wii Chang	Polarization :	Vertical
Remark :	1. 5230 MHz is Fundamental Signals which can be ignored. 2. 10460 MHz is 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
44.58	25.22	-14.78	40	45.4	10.67	0.65	31.5	120	100	Peak
129.09	26.07	-17.43	43.5	44.93	11.57	1.14	31.57	-	-	Peak
206.85	24.25	-19.25	43.5	44.79	9.58	1.35	31.47	-	-	Peak
533.8	24.71	-21.29	46	34.46	18.74	2.52	31.01	-	-	Peak
799.8	24.55	-21.45	46	29.62	22.47	3.14	30.68	-	-	Peak
965.7	25.78	-28.22	54	28.41	24.46	3.48	30.57	-	-	Peak
5150	51.02	-22.98	74	41.01	34.25	9.41	33.65	100	296	Peak
5150	39.06	-14.94	54	29.05	34.25	9.41	33.65	100	296	Average
5230	101.64	-	-	91.28	34.33	9.53	33.5	100	296	Peak
5230	90.99	-	-	80.63	34.33	9.53	33.5	100	296	Average
5350	51.15	-22.85	74	40.22	34.45	9.74	33.26	100	296	Peak
5350	40.13	-13.87	54	29.2	34.45	9.74	33.26	100	296	Average
10460	59.21	-9.09	68.3	66.94	37.57	11.18	56.48	100	0	Peak



Test Mode :	Mode 21	Temperature :	22~25°C
Test Channel :	54	Relative Humidity :	55~60%
Test Engineer :	Wii Chang	Polarization :	Horizontal
Remark :	1. 5270 MHz is Fundamental Signals which can be ignored. 2. 10540 MHz is 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
47.82	25.77	-14.23	40	47.14	9.48	0.67	31.52	100	252	Peak
153.93	27.27	-16.23	43.5	46.79	10.81	1.21	31.54	-	-	Peak
250.86	20.63	-25.37	46	37.81	12.69	1.54	31.41	-	-	Peak
377	25.58	-20.42	46	38.86	15.87	2.09	31.24	-	-	Peak
659.8	21.93	-24.07	46	29.5	20.43	2.86	30.86	-	-	Peak
825	31.2	-14.8	46	35.94	22.76	3.21	30.71	-	-	Peak
5150	39.43	-14.57	54	29.42	34.25	9.41	33.65	100	340	Average
5150	51.86	-22.14	74	41.85	34.25	9.41	33.65	100	340	Peak
5270	96.56	-	-	85.98	34.37	9.62	33.41	100	340	Average
5270	107.39	-	-	96.81	34.37	9.62	33.41	100	340	Peak
5350	42.39	-11.61	54	31.46	34.45	9.74	33.26	100	340	Average
5350	59.15	-14.85	74	48.22	34.45	9.74	33.26	100	340	Peak
10540	58.48	-9.82	68.3	65.94	37.62	11.31	56.39	100	0	Peak



Test Mode :	Mode 21	Temperature :	22~25°C
Test Channel :	54	Relative Humidity :	55~60%
Test Engineer :	Wii Chang	Polarization :	Vertical
Remark :	1. 5270 MHz is Fundamental Signals which can be ignored. 2. 10540 MHz is 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
47.82	24.92	-15.08	40	46.29	9.48	0.67	31.52	100	33	Peak
182.01	26.07	-17.43	43.5	47.29	9.05	1.26	31.53	-	-	Peak
258.42	24.5	-21.5	46	41.55	12.79	1.58	31.42	-	-	Peak
531	24.61	-21.39	46	34.43	18.69	2.51	31.02	-	-	Peak
783.7	24.29	-21.71	46	29.66	22.21	3.11	30.69	-	-	Peak
953.8	26.18	-19.82	46	28.99	24.3	3.46	30.57	-	-	Peak
5150	39.09	-14.91	54	29.08	34.25	9.41	33.65	100	299	Average
5150	51.86	-22.14	74	41.85	34.25	9.41	33.65	100	299	Peak
5270	91.37	-	-	80.79	34.37	9.62	33.41	100	299	Average
5270	102.1	-	-	91.52	34.37	9.62	33.41	100	299	Peak
5350	40.27	-13.73	54	29.34	34.45	9.74	33.26	100	299	Average
5350	53.99	-20.01	74	43.06	34.45	9.74	33.26	100	299	Peak
10540	59.52	-8.78	68.3	66.98	37.62	11.31	56.39	100	0	Peak



Test Mode :	Mode 22	Temperature :	22~25°C
Test Channel :	62	Relative Humidity :	55~60%
Test Engineer :	Wii Chang	Polarization :	Horizontal
Remark :	1. 5310 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
47.82	25.37	-14.63	40	46.74	9.48	0.67	31.52	100	74	Peak
151.5	27.57	-15.93	43.5	46.89	11.03	1.21	31.56	-	-	Peak
202.53	23.4	-20.1	43.5	44.24	9.31	1.33	31.48	-	-	Peak
377	25.76	-20.24	46	39.04	15.87	2.09	31.24	-	-	Peak
501.6	22.38	-23.62	46	32.76	18.24	2.45	31.07	-	-	Peak
727	22.48	-23.52	46	28.9	21.32	3.01	30.75	-	-	Peak
5150	39.2	-14.8	54	29.19	34.25	9.41	33.65	100	341	Average
5150	51.04	-22.96	74	41.03	34.25	9.41	33.65	100	341	Peak
5310	94.46	-	-	83.65	34.42	9.7	33.31	100	341	Average
5310	105.08	-	-	94.27	34.42	9.7	33.31	100	341	Peak
5350	52.94	-1.06	54	42.01	34.45	9.74	33.26	100	341	Average
5350	68.9	-5.1	74	57.97	34.45	9.74	33.26	100	341	Peak
10620	60.81	-13.19	74	67.78	37.67	11.61	56.25	100	62	Peak
10620	49.81	-4.19	54	56.78	37.67	11.61	56.25	100	62	Average



Test Mode :	Mode 22	Temperature :	22~25°C
Test Channel :	62	Relative Humidity :	55~60%
Test Engineer :	Wii Chang	Polarization :	Vertical
Remark :	5310 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
43.77	24.97	-15.03	40	44.7	11.13	0.64	31.5	117	145	Peak
127.74	26.51	-16.99	43.5	45.37	11.57	1.14	31.57	-	-	Peak
205.5	24.08	-19.42	43.5	44.7	9.51	1.34	31.47	-	-	Peak
377.7	20.31	-25.69	46	33.59	15.87	2.09	31.24	-	-	Peak
533.8	24.71	-21.29	46	34.46	18.74	2.52	31.01	-	-	Peak
816.6	24.03	-21.97	46	28.89	22.66	3.18	30.7	-	-	Peak
5150	38.89	-15.11	54	28.88	34.25	9.41	33.65	186	20	Average
5150	50.03	-23.97	74	40.02	34.25	9.41	33.65	186	20	Peak
5310	91.1	-	-	80.29	34.42	9.7	33.31	186	20	Average
5310	101.83	-	-	91.02	34.42	9.7	33.31	186	20	Peak
5350	49.49	-4.51	54	38.56	34.45	9.74	33.26	186	20	Average
5350	64.77	-9.23	74	53.84	34.45	9.74	33.26	186	20	Peak
10620	60.29	-13.71	74	67.26	37.67	11.61	56.25	100	56	Peak
10620	49.82	-4.18	54	56.79	37.67	11.61	56.25	100	56	Average



Test Mode :	Mode 23	Temperature :	22~25°C
Test Channel :	102	Relative Humidity :	55~60%
Test Engineer :	Wii Chang	Polarization :	Horizontal
Remark :	5510 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
47.82	24.75	-15.25	40	46.12	9.48	0.67	31.52	112	100	Peak
159.06	27.5	-16	43.5	47.35	10.45	1.22	31.52	-	-	Peak
295.41	20.83	-25.17	46	37.02	13.4	1.74	31.33	-	-	Peak
377.7	26.28	-19.72	46	39.56	15.87	2.09	31.24	-	-	Peak
839.7	25.14	-20.86	46	29.69	22.93	3.24	30.72	-	-	Peak
996.5	26.97	-27.03	54	29.2	24.84	3.51	30.58	-	-	Peak
5470	60.25	-8.05	68.3	48.75	34.57	9.94	33.01	109	22	Peak
5510	95.08	-	-	83.37	34.6	10.02	32.91	109	22	Average
5510	106.32	-	-	94.61	34.6	10.02	32.91	109	22	Peak
5725	51.13	-17.17	68.3	39.57	34.82	9.92	33.18	109	22	Peak
11020	58.51	-15.49	74	63	37.91	13.22	55.62	128	343	Peak
11020	48.56	-5.44	54	53.05	37.91	13.22	55.62	128	343	Average



Test Mode :	Mode 23	Temperature :	22~25°C
Test Channel :	102	Relative Humidity :	55~60%
Test Engineer :	Wii Chang	Polarization :	Vertical
Remark :	5510 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
43.77	23.48	-16.52	40	43.21	11.13	0.64	31.5	101	211	Peak
127.74	25.96	-17.54	43.5	44.82	11.57	1.14	31.57	-	-	Peak
170.13	26.43	-17.07	43.5	46.95	9.77	1.23	31.52	-	-	Peak
537.3	24.77	-21.23	46	34.45	18.8	2.52	31	-	-	Peak
682.9	22.78	-23.22	46	30.02	20.69	2.91	30.84	-	-	Peak
799.8	24.2	-21.8	46	29.27	22.47	3.14	30.68	-	-	Peak
5470	51.42	-16.88	68.3	39.92	34.57	9.94	33.01	137	359	Peak
5510	101.39	-	-	89.68	34.6	10.02	32.91	137	359	Peak
5510	90.8	-	-	79.09	34.6	10.02	32.91	137	359	Average
5725	52	-16.3	68.3	40.44	34.82	9.92	33.18	137	359	Peak
11020	60.63	-13.37	74	65.12	37.91	13.22	55.62	100	26	Peak
11020	48.29	-5.71	54	52.78	37.91	13.22	55.62	100	26	Average



Test Mode :	Mode 24	Temperature :	22~25°C
Test Channel :	118	Relative Humidity :	55~60%
Test Engineer :	Wii Chang	Polarization :	Horizontal
Remark :	5550 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
46.74	22.54	-17.46	40	43.51	9.87	0.67	31.51	-	-	Peak
151.77	27.43	-16.07	43.5	46.81	10.96	1.21	31.55	145	293	Peak
203.34	22.62	-20.88	43.5	43.4	9.37	1.33	31.48	-	-	Peak
374.2	25.25	-20.75	46	38.63	15.78	2.09	31.25	-	-	Peak
441.4	23.28	-22.72	46	34.87	17.25	2.28	31.12	-	-	Peak
875.4	24.89	-21.11	46	28.94	23.35	3.31	30.71	-	-	Peak
5470	51.25	-22.75	68.3	39.75	34.57	9.94	33.01	100	47	Peak
5590	106.41	-	-	94.73	34.69	9.99	33	100	47	Peak
5590	95.36	-	-	83.68	34.69	9.99	33	100	47	Average
5725	51.08	-22.92	68.3	39.52	34.82	9.92	33.18	100	47	Peak
11180	54.92	-19.08	74	62.18	38.05	13.19	58.5	100	60	Peak
11180	42.16	-11.84	54	49.42	38.05	13.19	58.5	100	60	Average



Test Mode :	Mode 24	Temperature :	22~25°C
Test Channel :	118	Relative Humidity :	55~60%
Test Engineer :	Wii Chang	Polarization :	Vertical
Remark :	5590 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
43.5	23.39	-16.61	40	43.12	11.13	0.64	31.5	-	-	Peak
129.9	26.87	-16.63	43.5	45.72	11.57	1.15	31.57	-	-	Peak
166.89	27.13	-16.37	43.5	47.46	9.96	1.23	31.52	131	241	Peak
441.4	22.46	-23.54	46	34.05	17.25	2.28	31.12	-	-	Peak
531.7	25.73	-20.27	46	35.52	18.71	2.51	31.01	-	-	Peak
962.9	25.98	-28.02	54	28.65	24.43	3.47	30.57	-	-	Peak
5470	50.64	-23.36	68.3	39.14	34.57	9.94	33.01	111	318	Peak
5590	100.39	-	-	88.73	34.67	9.99	33	111	318	Peak
5590	89.3	-	-	77.64	34.67	9.99	33	111	318	Average
5725	51.85	-22.15	68.3	40.29	34.82	9.92	33.18	111	318	Peak
11180	55.39	-18.61	74	62.65	38.05	13.19	58.5	100	56	Peak
11180	42.31	-11.69	54	49.57	38.05	13.19	58.5	100	56	Average



Test Mode :	Mode 25	Temperature :	22~25°C
Test Channel :	134	Relative Humidity :	55~60%
Test Engineer :	Wii Chang	Polarization :	Horizontal
Remark :	5670 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
46.74	25.82	-14.18	40	46.79	9.87	0.67	31.51	100	314	Peak
128.01	24.18	-19.32	43.5	43.04	11.57	1.14	31.57	-	-	Peak
150.69	28.2	-15.3	43.5	47.45	11.1	1.21	31.56	-	-	Peak
374.2	26.07	-19.93	46	39.45	15.78	2.09	31.25	-	-	Peak
444.9	23.34	-22.66	46	34.85	17.31	2.29	31.11	-	-	Peak
915.3	25.52	-20.48	46	28.97	23.83	3.38	30.66	-	-	Peak
5470	51.8	-16.5	68.3	40.3	34.57	9.94	33.01	100	57	Peak
5670	105.01	-	-	93.42	34.77	9.94	33.12	100	57	Peak
5670	94.06	-	-	82.47	34.77	9.94	33.12	100	57	Average
5725	60.87	-7.43	68.3	49.31	34.82	9.92	33.18	100	57	Peak
11340	51.62	-22.38	74	55.97	38.17	13.17	55.69	112	49	Peak
11340	39.95	-14.05	54	44.3	38.17	13.17	55.69	112	49	Average



Test Mode :	Mode 25	Temperature :	22~25°C
Test Channel :	134	Relative Humidity :	55~60%
Test Engineer :	Wii Chang	Polarization :	Vertical
Remark :	1. 5670 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
43.5	24.43	-15.57	40	44.16	11.13	0.64	31.5	100	144	Peak
101.82	22.24	-21.26	43.5	42.82	9.96	1	31.54	-	-	Peak
167.97	25.93	-17.57	43.5	46.33	9.89	1.23	31.52	-	-	Peak
526.1	24.23	-21.77	46	34.13	18.62	2.5	31.02	-	-	Peak
685	22.75	-23.25	46	29.96	20.72	2.91	30.84	-	-	Peak
900.6	25.89	-20.11	46	29.61	23.64	3.34	30.7	-	-	Peak
5470	50.62	-17.68	68.3	39.12	34.57	9.94	33.01	100	358	Peak
5670	102.28	-	-	90.69	34.77	9.94	33.12	100	358	Peak
5670	91.32	-	-	79.73	34.77	9.94	33.12	100	358	Average
5725	60.34	-7.96	68.3	48.78	34.82	9.92	33.18	100	358	Peak
11340	51.94	-22.06	74	56.29	38.17	13.17	55.69	100	18	Peak
11340	40.92	-13.08	54	45.27	38.17	13.17	55.69	100	18	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.

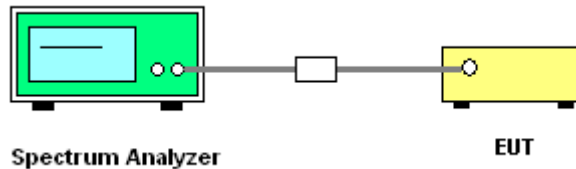
3.8.3 Test Procedures.

The transmitter output of EUT is connected to the spectrum analyzer, and the cable loss is offset as shown in the test equipment.

1st Trace: Set RBW = 1 MHz, VBW \geq 3 MHz with peak detector and max-hold settings.

2nd Trace: Set RBW = 1 MHz, VBW \geq 3 MHz, sample detector mode, and 100 sweets of power.

3.8.4 Test Setup

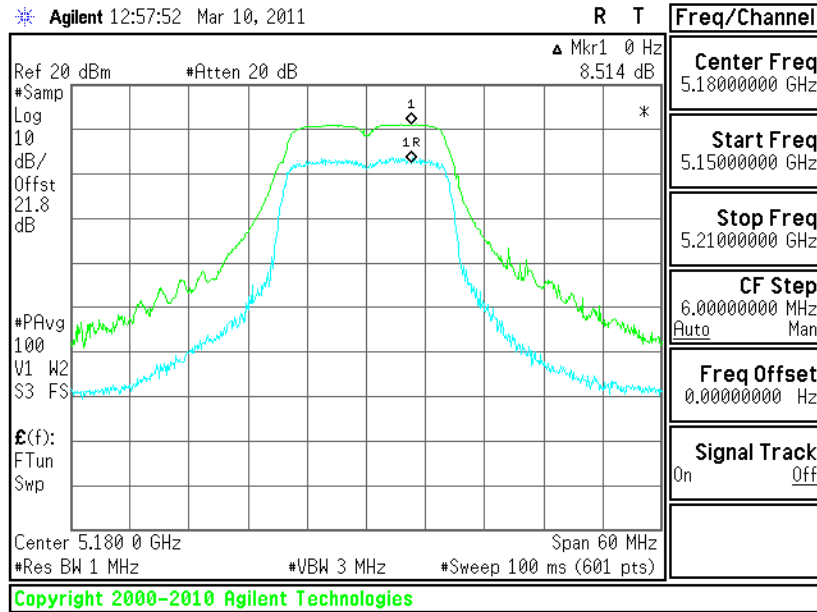




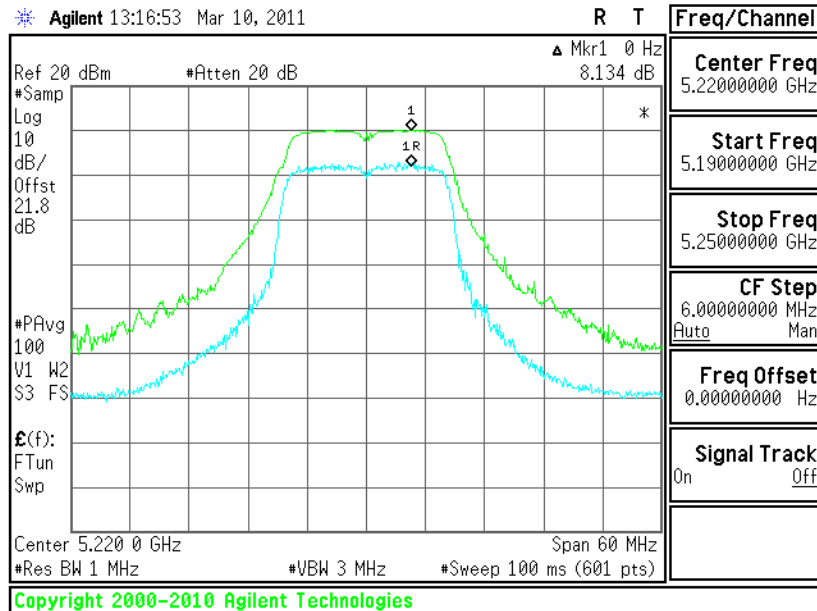
3.8.5 Test Result of Peak Excursion Ratio

Test Mode :	Mode 1~9	Temperature :	25~27°C
Test Engineer :	Phoenix Chen	Relative Humidity :	51~54%

Peak Excursion Ratio Plot on 802.11a Channel 36

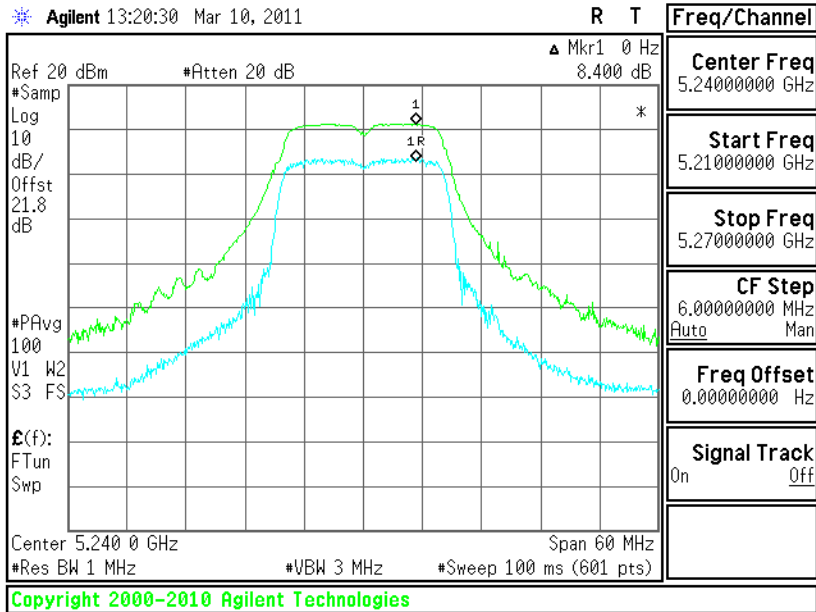


Peak Excursion Ratio Plot on 802.11a Channel 44

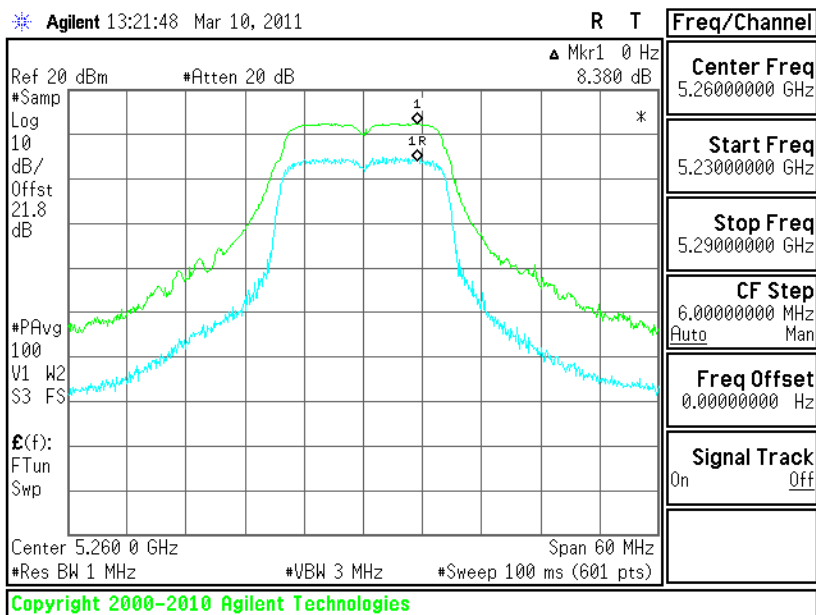




Peak Excursion Ratio Plot on 802.11a Channel 48



Peak Excursion Ratio Plot on 802.11a Channel 52

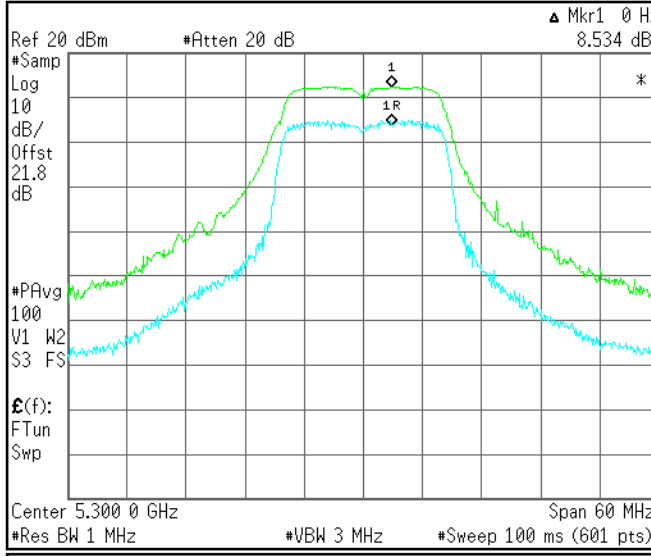




Peak Excursion Ratio Plot on 802.11a Channel 60

Agilent 13:24:47 Mar 10, 2011

R T



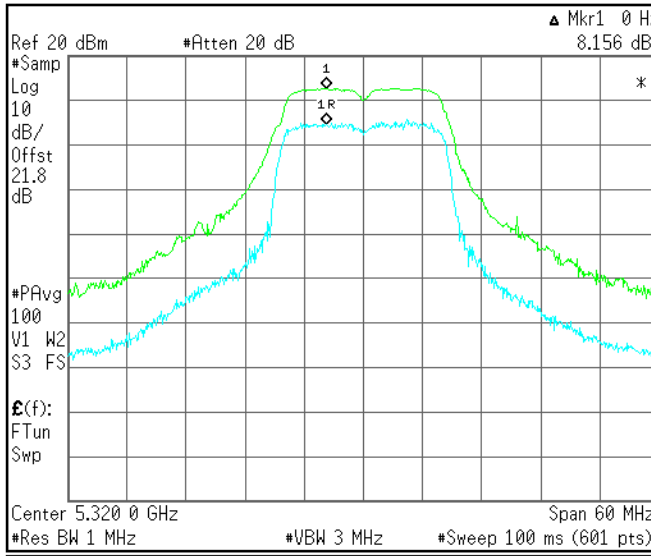
Freq/Channel	Center Freq 5.30000000 GHz
Start Freq	5.27000000 GHz
Stop Freq	5.33000000 GHz
CF Step	6.00000000 MHz Auto Man
Freq Offset	0.00000000 Hz
Signal Track	On Off

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Peak Excursion Ratio Plot on 802.11a Channel 64

Agilent 13:27:13 Mar 10, 2011

R T

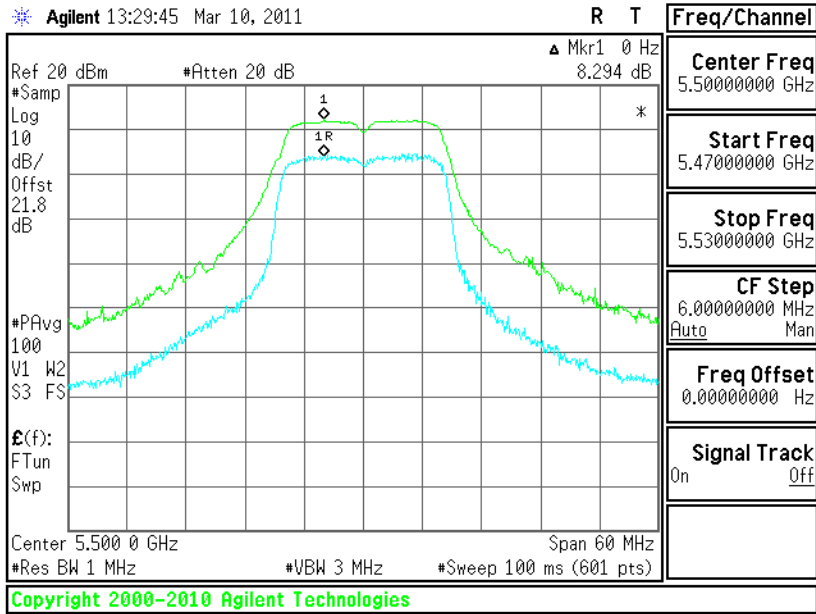


Freq/Channel	Center Freq 5.32000000 GHz
Start Freq	5.29000000 GHz
Stop Freq	5.35000000 GHz
CF Step	6.00000000 MHz Auto Man
Freq Offset	0.00000000 Hz
Signal Track	On Off

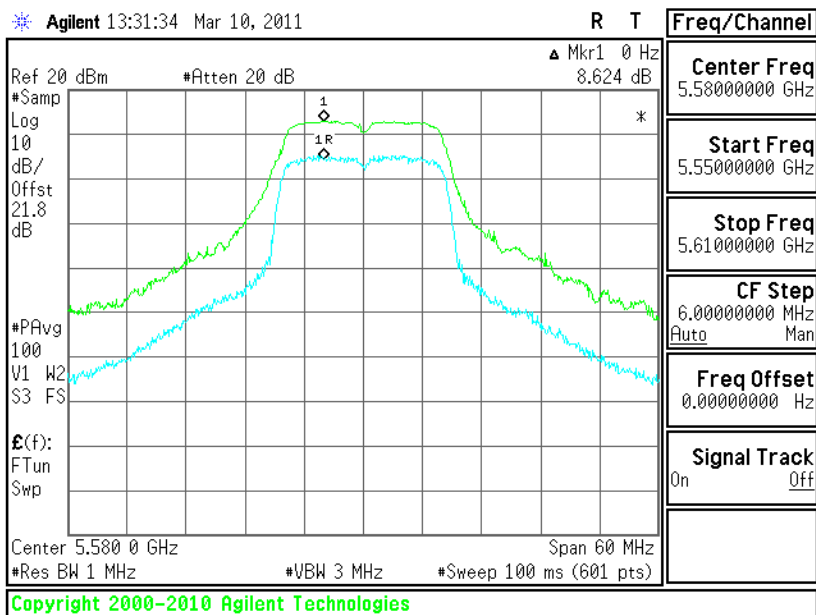
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Peak Excursion Ratio Plot on 802.11a Channel 100



Peak Excursion Ratio Plot on 802.11a Channel 116

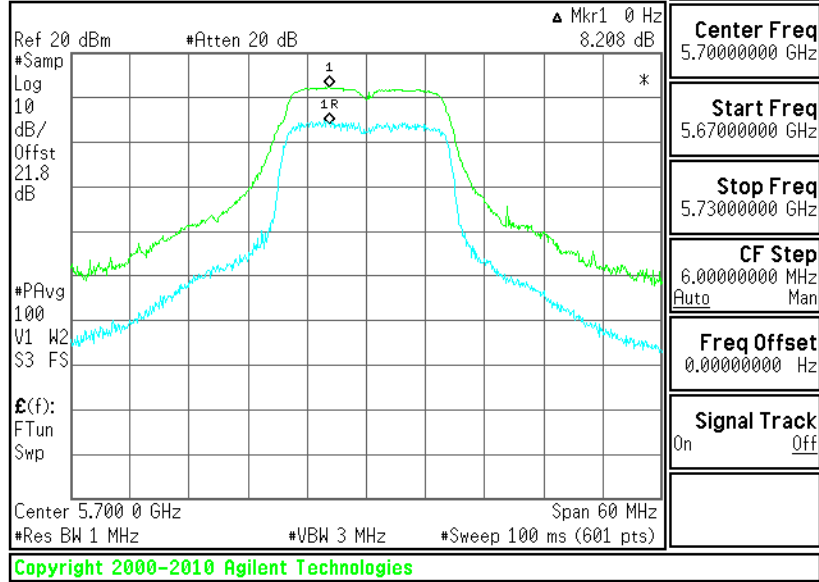




Peak Excursion Ratio Plot on 802.11a Channel 140

Agilent 13:35:21 Mar 10, 2011

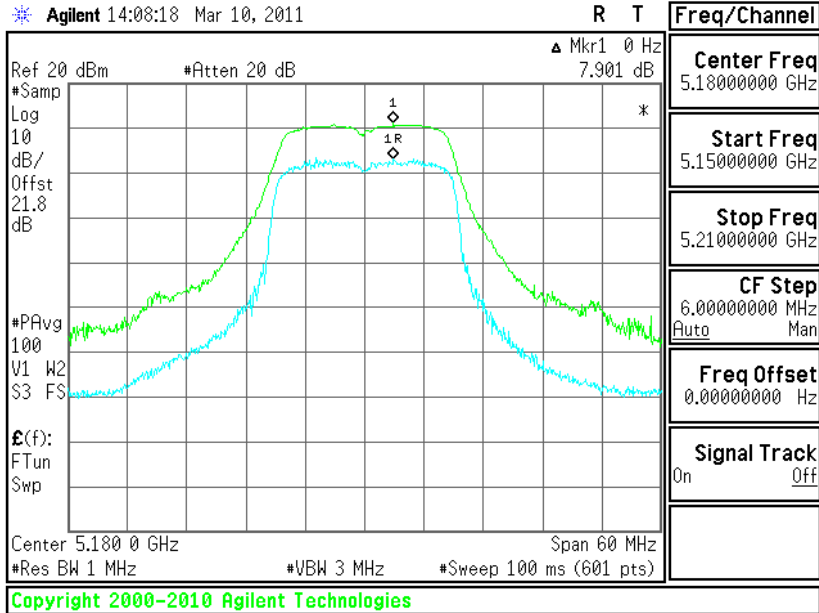
R T



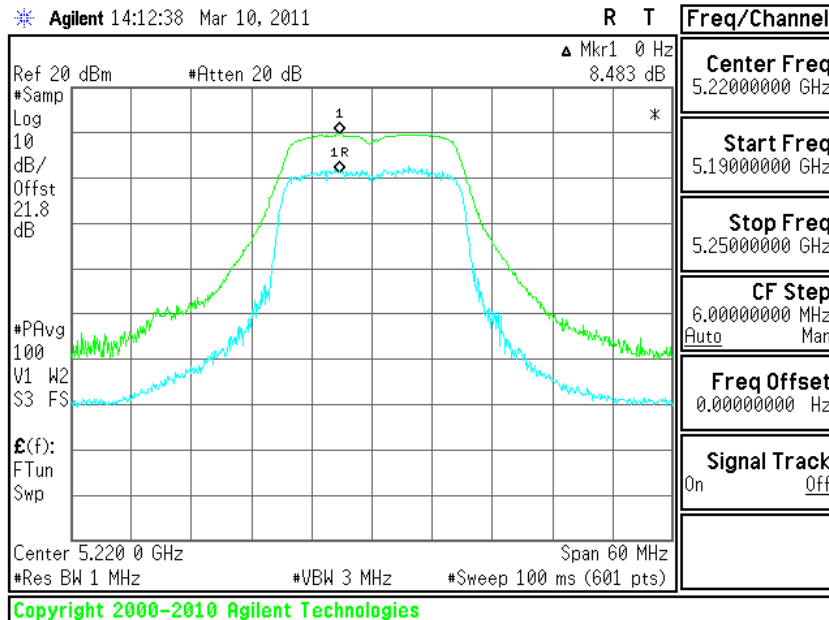


Test Mode :	Mode 10~18	Temperature :	25~27°C
Test Engineer :	Phoenix Chen	Relative Humidity :	51~54%

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

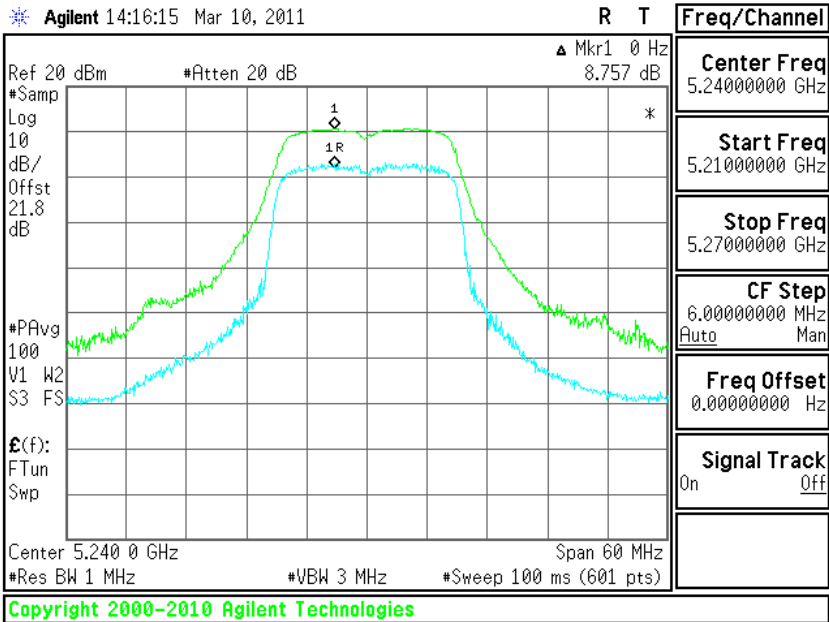


Peak Excursion Ratio Plot on 802.11n (BW 20MHz) Channel 44

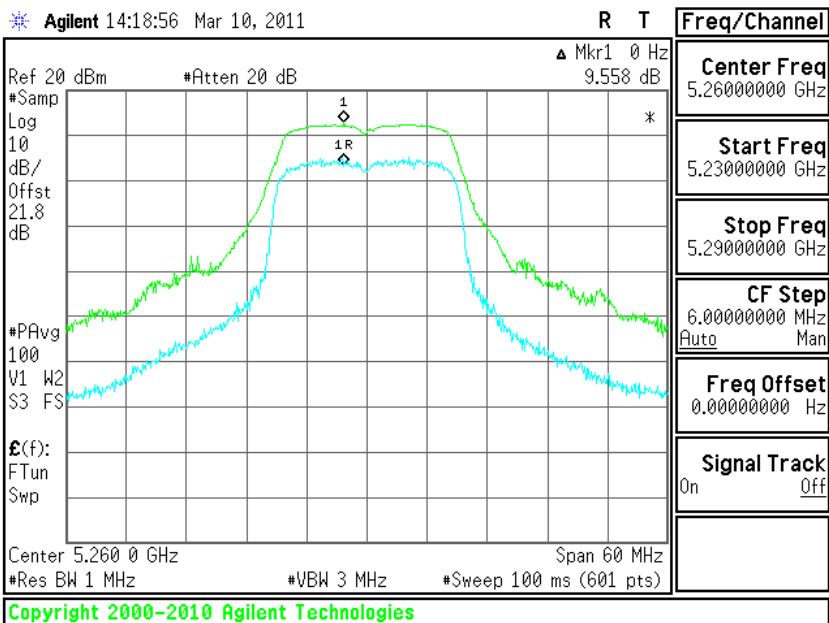




Peak Excursion Ratio Plot on 802.11n (BW 20MHz) Channel 48



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

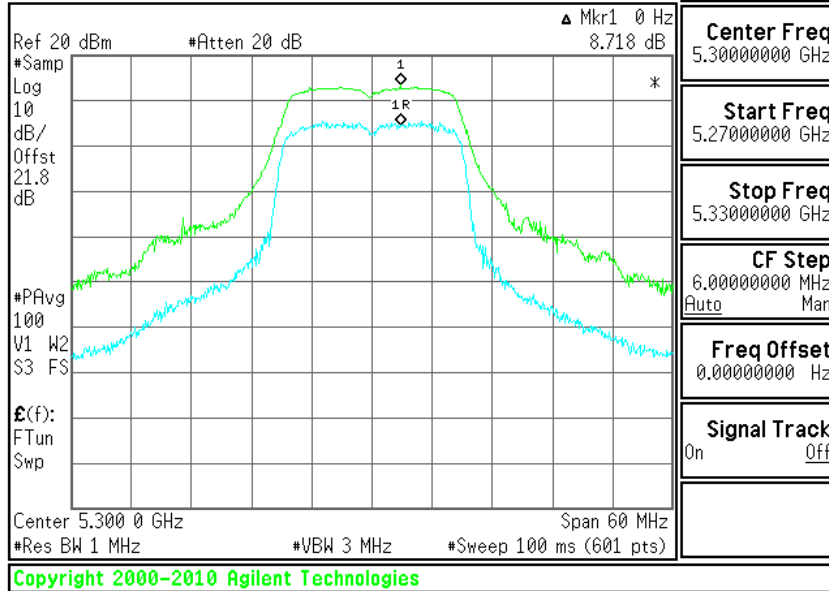




Peak Excursion Ratio Plot on 802.11n (BW 20MHz) Channel 60

Agilent 14:23:51 Mar 10, 2011

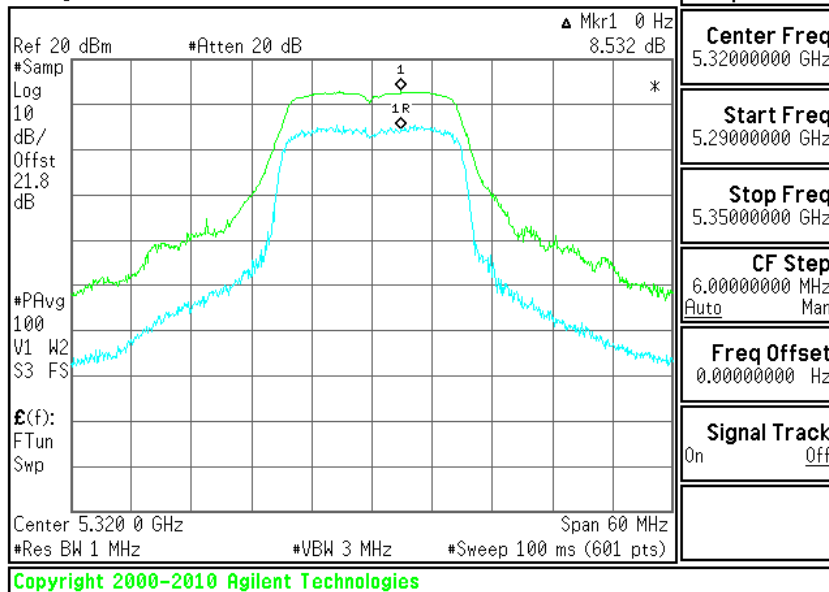
R T S



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

Agilent 14:26:43 Mar 10, 2011

R T S

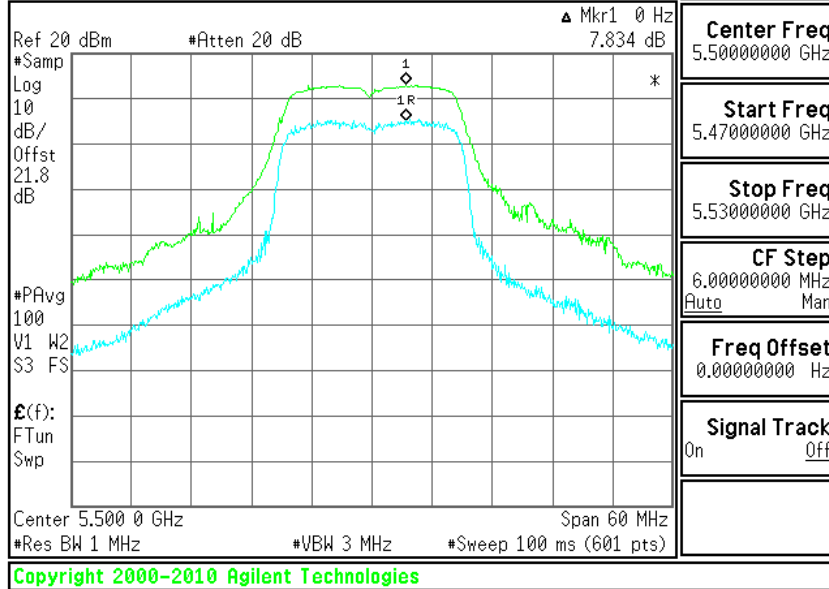




Peak Excursion Ratio Plot on 802.11n (BW 20MHz) Channel 100

Agilent 14:30:59 Mar 10, 2011

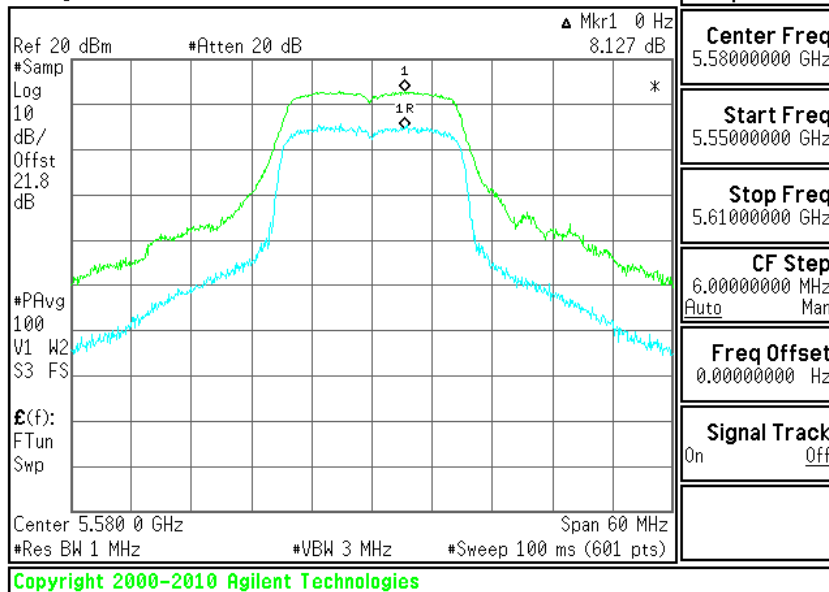
R T



Peak Excursion Ratio Plot on 802.11n (BW 20MHz) Channel 116

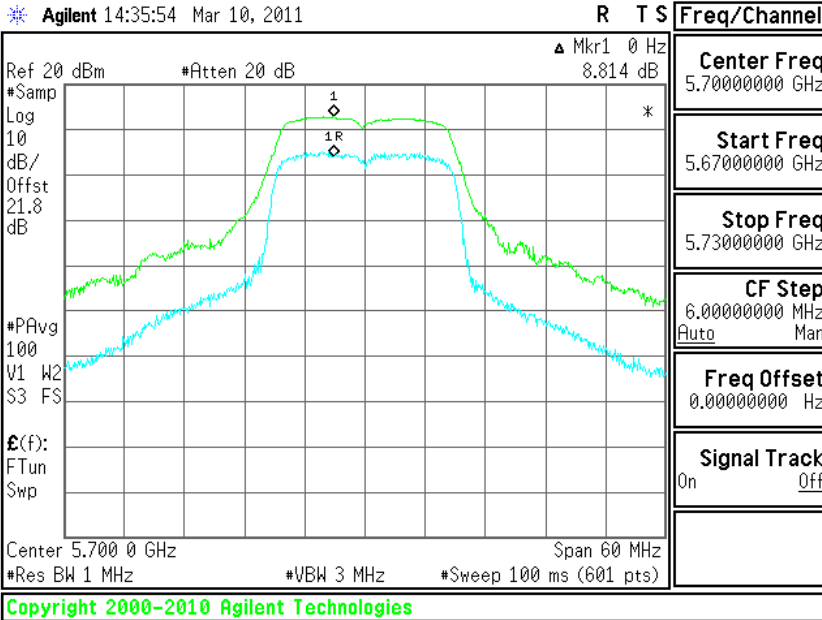
Agilent 14:33:00 Mar 10, 2011

R T S





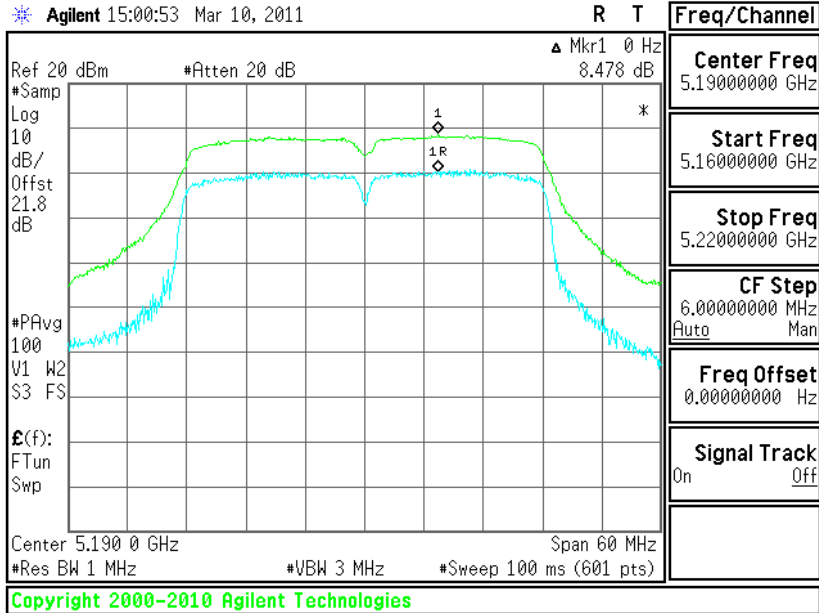
Peak Excursion Ratio Plot on 802.11n (BW 20MHz) Channel 140



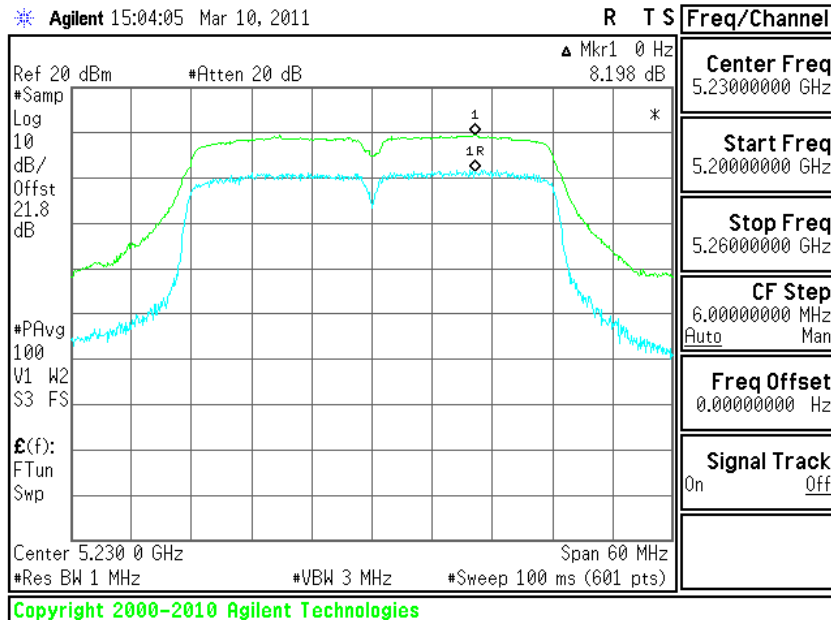


Test Mode :	Mode 19~26	Temperature :	25~27°C
Test Engineer :	Phoenix Chen	Relative Humidity :	51~54%

Peak Excursion Ratio Plot on 802.11n (BW 40MHz) Channel 38



Peak Excursion Ratio Plot on 802.11n (BW 40MHz) Channel 46

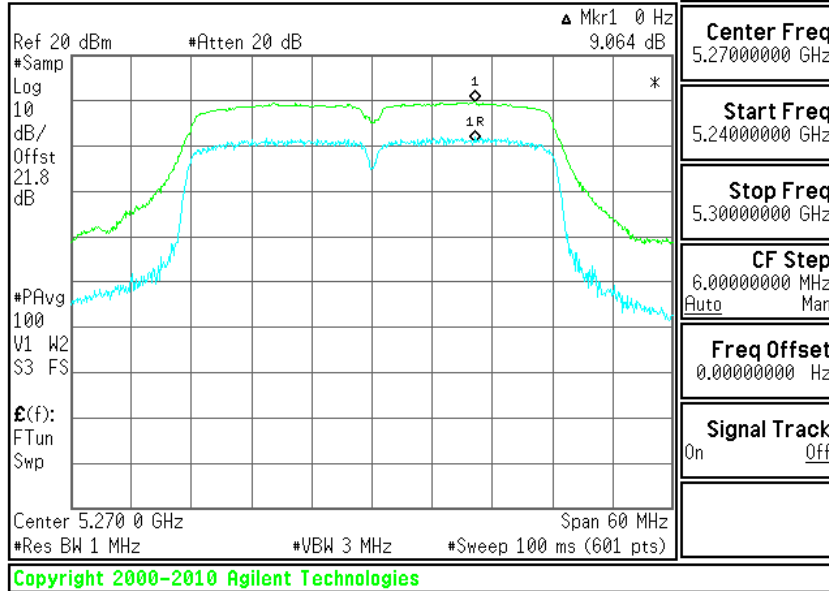




Peak Excursion Ratio Plot on 802.11n (BW 40MHz) Channel 54

Agilent 15:07:24 Mar 10, 2011

R T S

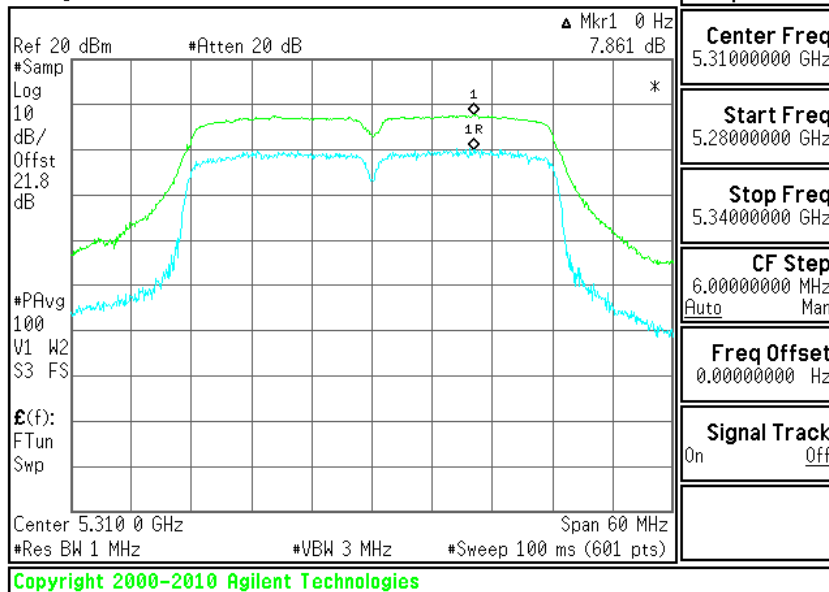


Freq/Channel
Center Freq 5.27000000 GHz
Start Freq 5.24000000 GHz
Stop Freq 5.30000000 GHz
CF Step 6.00000000 MHz Auto Man
Freq Offset 0.00000000 Hz
Signal Track On Off

Peak Excursion Ratio Plot on 802.11n (BW 40MHz) Channel 62

Agilent 15:10:15 Mar 10, 2011

R T S



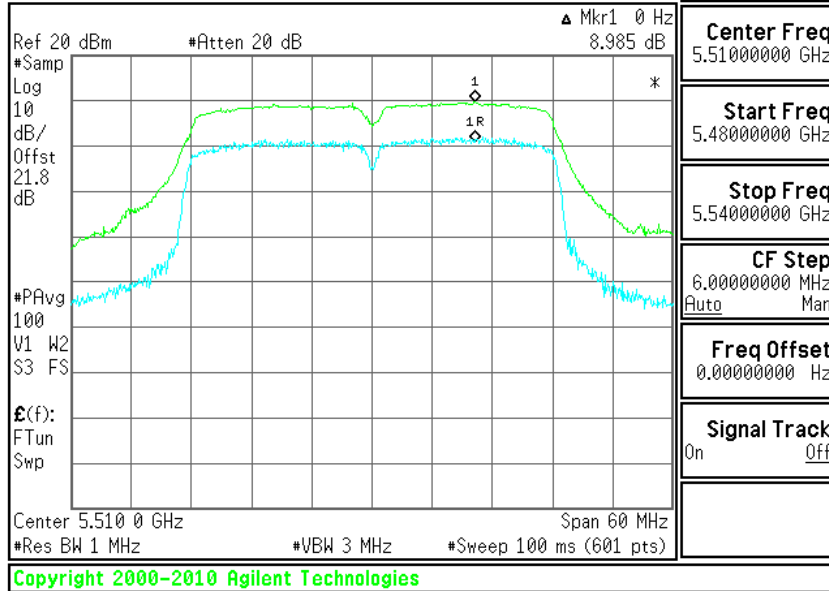
Freq/Channel
Center Freq 5.31000000 GHz
Start Freq 5.28000000 GHz
Stop Freq 5.34000000 GHz
CF Step 6.00000000 MHz Auto Man
Freq Offset 0.00000000 Hz
Signal Track On Off



Peak Excursion Ratio Plot on 802.11n (BW 40MHz) Channel 102

Agilent 15:13:47 Mar 10, 2011

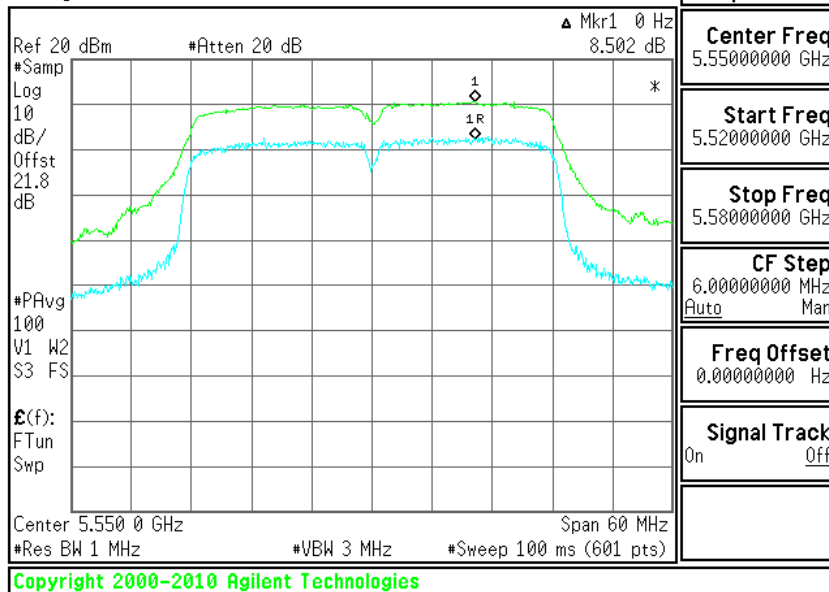
R T S



Peak Excursion Ratio Plot on 802.11n (BW 40MHz) Channel 110

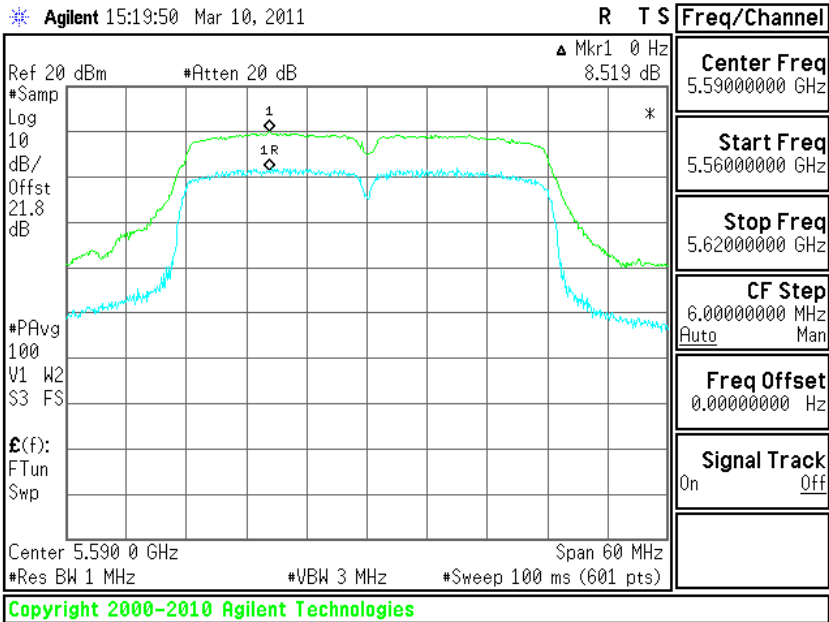
Agilent 15:17:17 Mar 10, 2011

R T S

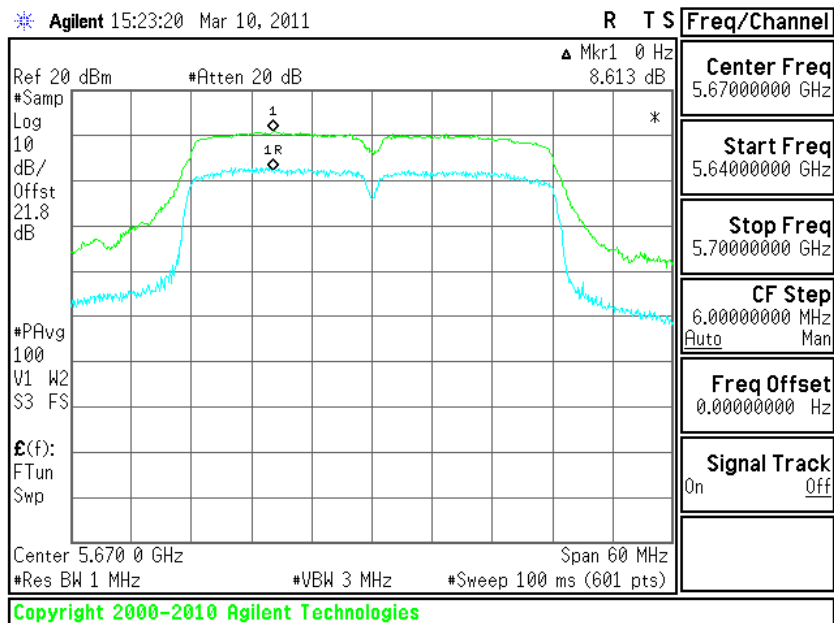




Peak Excursion Ratio Plot on 802.11n (BW 40MHz) Channel 118



Peak Excursion Ratio Plot on 802.11n (BW 40MHz) Channel 134





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.

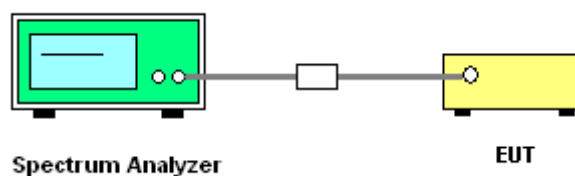
3.10.2 Measuring Instruments

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 :	25~27°C
Test Engineer :	Phoenix Chen	Relative Humidity :	51~54%

Channel	Frequency (MHz)	Low Frequency	High Frequency	Frequency Stability (ppm)
36	5180	5171.71	5188.29	0.00
44	5220	5211.71	5228.29	0.00
48	5240	5231.71	5248.29	0.00
52	5260	5251.71	5268.29	0.00
60	5300	5291.71	5308.29	0.00
64	5320	5311.71	5328.29	0.00
100	5500	5491.71	5508.29	0.00
116	5580	5571.71	5588.29	0.00
140	5700	5691.71	5708.29	0.00

Test Mode :	Mode 10~18	Temperature :	25~27°C
Test Engineer :	Phoenix Chen	Relative Humidity :	51~54%

Channel	Frequency (MHz)	Low Frequency	High Frequency	Frequency Stability (ppm)
36	5180	5171.12	5188.92	3.86
44	5220	5211.12	5228.92	3.83
48	5240	5231.12	5248.92	3.82
52	5260	5251.12	5268.92	3.80
60	5300	5291.08	5308.92	0.00
64	5320	5311.12	5328.92	3.76
100	5500	5491.08	5508.92	0.00
116	5580	5571.08	5588.92	0.00
140	5700	5691.08	5708.92	0.00



Test Mode :	Mode 19~26	Temperature :	25~27°C
Test Engineer :	Phoenix Chen	Relative Humidity :	51~54%

Channel	Frequency (MHz)	Low Frequency	High Frequency	Frequency Stability (ppm)
38	5190	5171.75	5208.25	0.00
46	5230	5211.75	5248.25	0.00
54	5270	5251.75	5288.25	0.00
62	5310	5291.75	5328.25	0.00
102	5510	5491.83	5528.25	7.26
110	5550	5531.75	5568.25	0.00
118	5590	5571.75	5608.25	0.00
134	5670	5651.75	5688.17	-7.05



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 antennas 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
System Simulator	R&S	CMU200	117995	N/A	Jun. 08, 2009	Jun. 07, 2011	Conducted (TH02-HY)
Spectrum Analyzer	R&S	FSP40	100055	9kHz~40GHz	Jun. 11, 2010	Jun. 10, 2011	Conducted (TH02-HY)
Power Meter	Anritsu	ML2495A	0932001	N/A	Sep. 13, 2010	Sep. 12, 2011	Conducted (TH02-HY)
Power Sensor	Anritsu	MA2411B	0846202	N/A	Sep. 14, 2010	Sep. 13, 2011	Conducted (TH02-HY)
Power Meter	Agilent	E4416A	GB41292344	N/A	Feb. 18, 2011	Feb. 17, 2012	Conducted (TH02-HY)
Power Sensor	Agilent	E9327A	US40441548	N/A	Feb. 18, 2011	Feb. 17, 2012	Conducted (TH02-HY)
Thermal Chamber	Ten Billion	TTH-D35P	TBN-930701	N/A	Jul. 30,2010	Jul. 29, 2011	Conducted (TH02-HY)
EMI Test Receive	R&S	ESCS 30	100356	9KHz – 2.75GHz	Aug. 16, 2010	Aug. 15, 2011	Conduction (CO05-HY)
Two-LISN	R&S	ENV216	11-100081	9KHz – 30MHz	Dec. 03, 2010	Dec. 02, 2011	Conduction (CO05-HY)
Two-LISN	R&S	ENV216	11-100080	9KHz – 30MHz	Dec. 01, 2010	Nov. 30, 2011	Conduction (CO05-HY)
AC Power Source	APC	APC-1000W	N/A	N/A	N/A	N/A	Conduction (CO05-HY)
ISN	Teseq GmbH	ISN T400A	25696	N/A	Jun. 19, 2010	Jun. 18, 2011	Conduction (CO05-HY)
ISN	Teseq GmbH	ISN T800	27134	N/A	Jun. 19, 2010	Jun. 18, 2011	Conduction (CO05-HY)
DC- LISN	R&S	ESH3-26	1000485	0.1MHz~200MHz	Jun. 17, 2010	Jun. 16, 2011	Conduction (CO05-HY)
DC- LISN	R&S	ESH3-26	1000484	0.1MHz~200MHz	Jun. 17, 2010	Jun. 16, 2011	Conduction (CO05-HY)
System Simulator	R&S	CMU200	116457	N/A	Jun. 08, 2009	Jun. 07, 2011	Conduction (CO05-HY)
Bilog Antenna	SCHAFFNER	CBL6111C	2726	30MHz ~ 1GHz	Oct. 31, 2010	Oct. 30, 2011	Radiation (03CH07-HY)
Spectrum Analyzer	R&S	FSP	101067	9KHz ~ 30GHz	Dec. 03, 2010	Dec. 02, 2011	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. 18, 2010	Oct. 17, 2011	Radiation (03CH07-HY)
Pre Amplifier	Agilent	8449B	3008A02362	1GHz~ 26.5GHz	Dec. 06, 2010	Dec. 05, 2011	Radiation (03CH07-HY)
Pre Amplifier	COM-POWER	PA-103A	161241	10-1000MHz.32dB.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				