

FCC RF Test Report

APPLICANT : Motorola Solutions, Inc.
EQUIPMENT : Enterprise Digital Assistant (EDA)
BRAND NAME : Motorola
MODEL NAME : MC55N0
FCC ID : UZ7MC55N0
STANDARD : FCC Part 15 Subpart E
CLASSIFICATION : Unlicensed National Information Infrastructure (UNII)

The product was received on Apr. 14, 2011 and completely tested on Jul. 28, 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:



Jones Tsai / 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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[illegible]

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 12.2 dB at 0.16 MHz
3.8	15.407(b)	A9.3	Transmitter Radiated Emission	$\leq -17, -27$ dBm (depend on band)&15.209(a)	Pass	Under limit 4.1 dB at 5350 MHz
3.9	15.407(b)	A9.3	Peak Excursion Ratio	≤ 13 dB	Pass	-
3.10	15.407(c)	A9.5	Automatically Discontinue Transmission	Discontinue Transmission	Pass	-
3.11	15.407(g)	A9.5	Frequency Stability	Within Operation Band	Pass	-
3.12	15.203 & 15.407(a)	A9.2	Antenna Requirement	N/A	Pass	-

1 General Description

1.1 Applicant

Motorola Solutions, Inc.

One Motorola Plaza, Holtsville, NY 11742-1300 USA

1.2 Manufacturer

Motorola Solutions, Inc.

One Motorola Plaza, Holtsville, NY 11742-1300 USA

1.3 Feature of Equipment Under Test

Product Feature & Specification	
Equipment	Enterprise Digital Assistant (EDA)
Brand Name	Motorola
Model Name	MC55N0
FCC ID	UZ7MC55N0
Sample 1	EUT with Camera
Sample 2	EUT without Camera
Tx/Rx Frequency Range	5150 MHz ~ 5250 MHz 5250 MHz ~ 5350 MHz 5470 MHz ~ 5725 MHz
Maximum Output Power to Antenna	<5150 MHz ~ 5250 MHz> 802.11a : 13.82 dBm / 0.0241 W 802.11n (BW 20MHz) : 13.73 dBm / 0.0236 W <5250 MHz ~ 5350 MHz> 802.11a : 16.89 dBm / 0.0489 W 802.11n (BW 20MHz) : 16.95 dBm / 0.0495 W <5470 MHz ~ 5725 MHz> 802.11a : 17.26 dBm / 0.0532 W 802.11n (BW 20MHz) : 17.21 dBm / 0.0526 W
Antenna Type	PIFA Antenna with gain 2.94 dBi
HW Version	DV
SW Version	BSP36
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.	Notebook	DELL	Vostro 1510	FCC DoC	N/A	AC I/P: Unshielded, 1.2 m DC O/P: Shielded, 1.8 m
2.	LCD Monitor	Lenovo	6135-AB1	FCC DoC	Shielded, 1.6 m	Unshielded, 1.8 m
3.	iPod	Apple	A1285	FCC DoC	Shielded, 1.0 m	N/A
4.	Bluetooth Earphone	Nokia	BH-102	PYAHS-107W	N/A	N/A
5.	WLAN AP	D-Link	DIR-628	KA2DIR628A2	N/A	Unshielded, 1.8 m

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	13.82	13.81	13.79	13.81	13.77	13.8	13.52	13.18
CH 44	5220 MHz	13.55	13.45	13.58	13.55	13.46	13.3	13.31	13.08
CH 48	5240 MHz	13.52	13.41	13.63	13.41	13.32	13.34	13.26	13.17
CH 52	5260 MHz	16.89	16.55	15.71	15.67	14.6	14.39	12.9	12.83
CH 60	5300 MHz	16.84	16.81	16	16.05	15.09	14.87	13.51	13.29
CH 64	5320 MHz	16.87	16.76	15.97	16.13	15.01	14.79	13.06	13.01
CH 100	5500 MHz	17.01	16.77	15.69	15.77	14.46	14.51	12.92	12.98
CH 116	5580 MHz	17.13	16.72	15.74	15.78	14.47	14.21	12.63	12.45
CH 140	5700 MHz	17.26	16.66	15.93	15.92	14.75	14.6	13.31	13.54

Channel	Frequency	5GHz 802.11n (BW 20MHz) RF Power (dBm)							
		Data Rate							
		6.5 Mbps	13 Mbps	19.5 Mbps	26 Mbps	39 Mbps	52 Mbps	58.5 Mbps	65 Mbps
CH 36	5180 MHz	13.6	13.59	13.59	13.57	13.54	13.59	13.31	12.49
CH 44	5220 MHz	13.69	13.68	13.65	13.67	13.48	13.12	13.33	12.41
CH 48	5240 MHz	13.73	13.71	13.7	13.64	13.72	13.43	13.21	12.38
CH 52	5260 MHz	16.95	16.07	16.06	15.06	14.99	13.41	13.4	12.54
CH 60	5300 MHz	16.9	16.04	16.02	15.13	15.01	13.56	13.36	12.51
CH 64	5320 MHz	16.93	16.06	16.11	15.11	15.03	13.43	13.37	12.55
CH 100	5500 MHz	17.04	15.83	15.88	14.93	14.72	13.25	13.13	12.33
CH 116	5580 MHz	17.11	15.81	15.83	14.98	14.76	13.15	13.08	12.32
CH 140	5700 MHz	17.21	16.25	16.26	15.32	15.17	13.72	13.65	12.81

Remark:

1. The data rates of WLAN 802.11a/n were set in 6Mbps for 802.11a and 6.5Mbps for 802.11n (BW 20MHz) for all the test cases due to the highest RF output power.
2. The EUT is programmed to transmit signal continuously for all testing.
3. The EUT have support 802.11n (BW 20 MHz) function only, not support 802.11n (BW 40 MHz) function.

2.3 Test Mode

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

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	■ 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: 802.11a_CH36_5180 MHz (BW 20M) ■ Mode 11: 802.11a_CH44_5220 MHz (BW 20M) ■ Mode 12: 802.11a_CH48_5240 MHz (BW 20M) ■ Mode 13: 802.11a_CH52_5260 MHz (BW 20M) ■ Mode 14: 802.11a_CH60_5300 MHz (BW 20M) ■ Mode 15: 802.11a_CH64_5320 MHz (BW 20M) ■ Mode 16: 802.11a_CH100_5500 MHz (BW 20M) ■ Mode 17: 802.11a_CH116_5580 MHz (BW 20M) ■ Mode 18: 802.11a_CH140_5700 MHz (BW 20M)

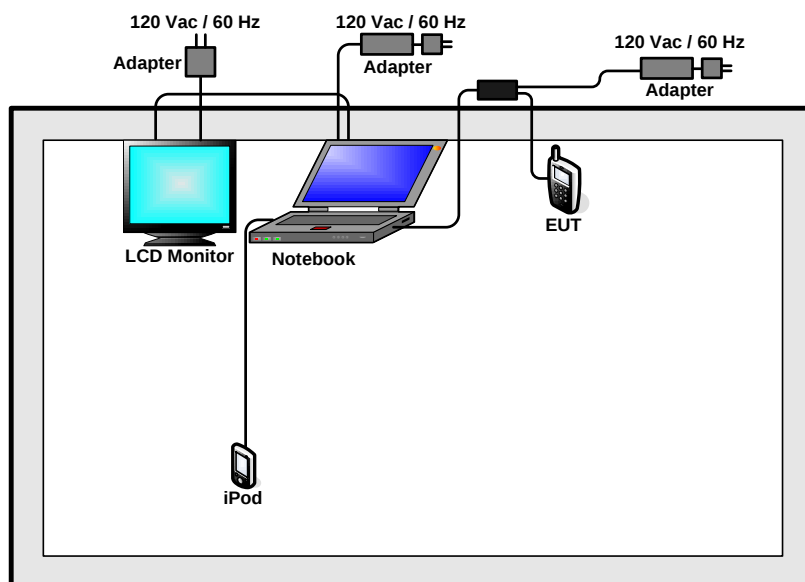


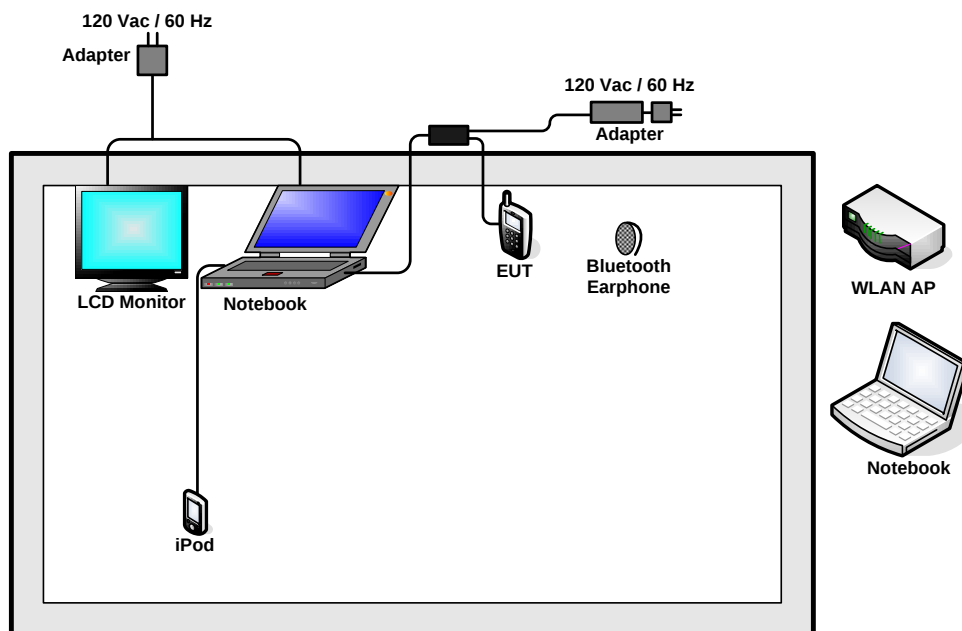
Test Cases	
Test Item	802.11a/n (Modulation : OFDM)
Radiated TCs	■ Mode 1: CH36_5180 MHz + Qwerty Keypad + Battery (3600mAh) + 2D Scanner for Sample 1 ■ Mode 2: CH44_5220 MHz + Qwerty Keypad + Battery (3600mAh) + 2D Scanner for Sample 1 ■ Mode 3: CH48_5240 MHz + Qwerty Keypad + Battery (3600mAh) + 2D Scanner for Sample 1 ■ Mode 4: CH52_5260 MHz + Qwerty Keypad + Battery (3600mAh) + 2D Scanner for Sample 1 ■ Mode 5: CH60_5300 MHz + Qwerty Keypad + Battery (3600mAh) + 2D Scanner for Sample 1 ■ Mode 6: CH64_5320 MHz + Qwerty Keypad + Battery (3600mAh) + 2D Scanner for Sample 1 ■ Mode 7: CH100_5500 MHz + Qwerty Keypad + Battery (3600mAh) + 2D Scanner for Sample 1 ■ Mode 8: CH116_5580 MHz + Qwerty Keypad + Battery (3600mAh) + 2D Scanner for Sample 1 ■ Mode 9: CH140_5700 MHz + Qwerty Keypad + Battery (3600mAh) + 2D Scanner for Sample 1 ■ Mode 10: CH36_5180 MHz (BW 20M) + Qwerty Keypad + Battery (3600mAh) + 2D Scanner for Sample 1 ■ Mode 11: CH44_5220 MHz (BW 20M) + Qwerty Keypad + Battery (3600mAh) + 2D Scanner for Sample 1 ■ Mode 12: CH48_5240 MHz (BW 20M) + Qwerty Keypad + Battery (3600mAh) + 2D Scanner for Sample 1 ■ Mode 13: CH52_5260 MHz (BW 20M) + Qwerty Keypad + Battery (3600mAh) + 2D Scanner for Sample 1 ■ Mode 14: CH60_5300 MHz (BW 20M) + Qwerty Keypad + Battery (3600mAh) + 2D Scanner for Sample 1 ■ Mode 15: CH64_5320 MHz (BW 20M) + Qwerty Keypad + Battery (3600mAh) + 2D Scanner for Sample 1 ■ Mode 16: CH100_5500 MHz (BW 20M) + Qwerty Keypad + Battery (3600mAh) + 2D Scanner for Sample 1 ■ Mode 17: CH116_5580 MHz (BW 20M) + Qwerty Keypad + Battery (3600mAh) + 2D Scanner for Sample 1 ■ Mode 18: CH140_5700 MHz (BW 20M) + Qwerty Keypad + Battery (3600mAh) + 2D Scanner for Sample 1 ■ Mode 19: CH64_5320 MHz + Numeric Keypad + Battery (2400mAh) + 1D Scanner for Sample 2 ■ Mode 20: CH64_5320 MHz (BW 20M) + PIM Keypad + Battery (2400mAh) + 1D Scanner for Sample 2

Test Cases	
Test Item	802.11a/n (Modulation : OFDM)
AC Conducted Emission	Mode 1 : WLAN Link(5G) + Bluetooth Link + USB Charging Cable with AC Power + USB Link + Qwerty Keypad + Battery (3600mAh) + 2D Scanner for Sample 1
	Mode 2 : WLAN Link(5G) + Bluetooth Link + USB Charging Cable with AC Power + USB Link + Numeric Keypad + Battery (3600mAh) + 2D Scanner for Sample 1
	Mode 3 : WLAN Link(5G) + Bluetooth Link + USB Charging Cable with AC Power + USB Link + PIM Keypad + Battery (2400mAh) + 1D Scanner for Sample 1
Remark: - For radiated TCs test was performed together with USB Charging cable with AC power. "Bluetooth Link" stands for terminal linked to headset by Bluetooth function. "WLAN Link" stands for terminal associated with AP at 5GHz band. "USB Link" stands for Activesync RNDIS file transfer.	

2.4 Connection Diagram of Test System

<Radiation Test>



<AC Conducted Emission Mode>


2.5 RF Utility

The programmed RF Utility "shortcut to WifiTool.exe", 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 Bandwidth Measurement

3.1.1 Limit of 26dB Bandwidth

There is no restriction limits for bandwidth. The maximum conducted output power can be limited by measured emission bandwidth (B). For the band 5.15~5.25 GHz, the maximum conducted output power over the frequency band of operation shall not exceed the lesser of 50 mW (17dBm) or 4 dBm + 10log B. For the 5.25-5.35 GHz and 5.47-5.725 GHz bands, the maximum conducted output power over the frequency bands of operation shall not exceed the lesser of 250 mW (24dBm) or 11 dBm + 10log B. For the band 5.725-5.825 GHz, the maximum conducted output power over the frequency band of operation shall not exceed the lesser of 1 W (30dBm) or 17 dBm + 10log B.

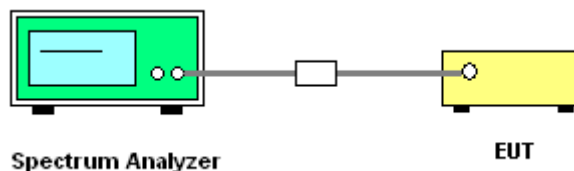
3.1.2 Measuring Instruments

See list of measuring instruments of this test report.

3.1.3 Test Procedures

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

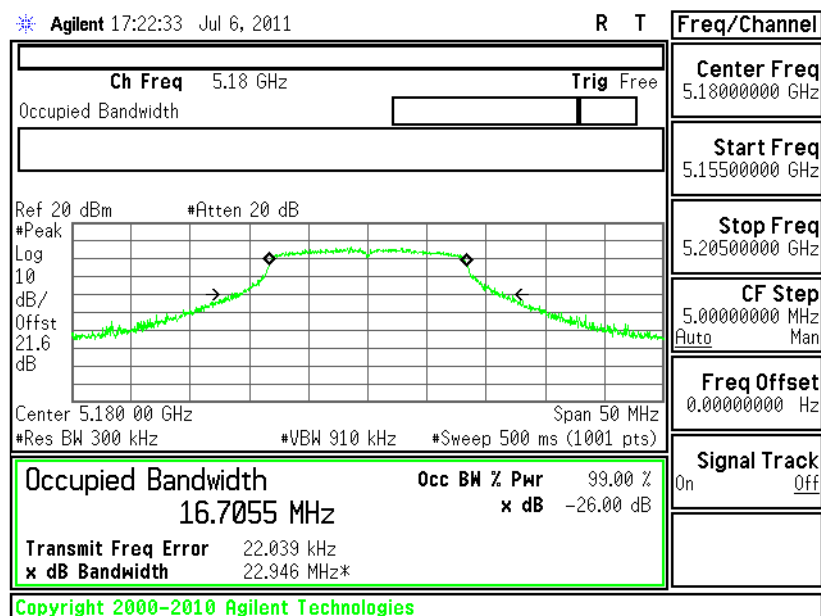
3.1.4 Test Setup



3.1.5 Test Result of 26dB Bandwidth

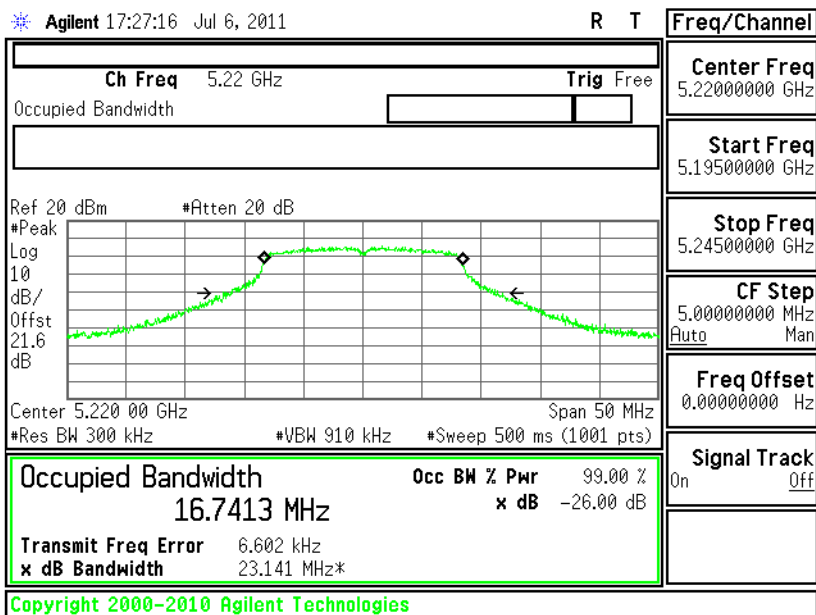
Test Mode :	Mode 1~9	Temperature :	24~26°C
Test Engineer :	Alan Liu	Relative Humidity :	45~49%

Channel	Frequency (MHz)	802.11a 26dB Bandwidth (MHz)	Pass/Fail
36	5180	22.946	N/A
44	5220	23.141	N/A
48	5240	22.717	N/A
52	5260	26.501	N/A
60	5300	26.366	N/A
64	5320	24.423	N/A
100	5500	29.669	N/A
116	5580	28.372	N/A
140	5700	27.251	N/A

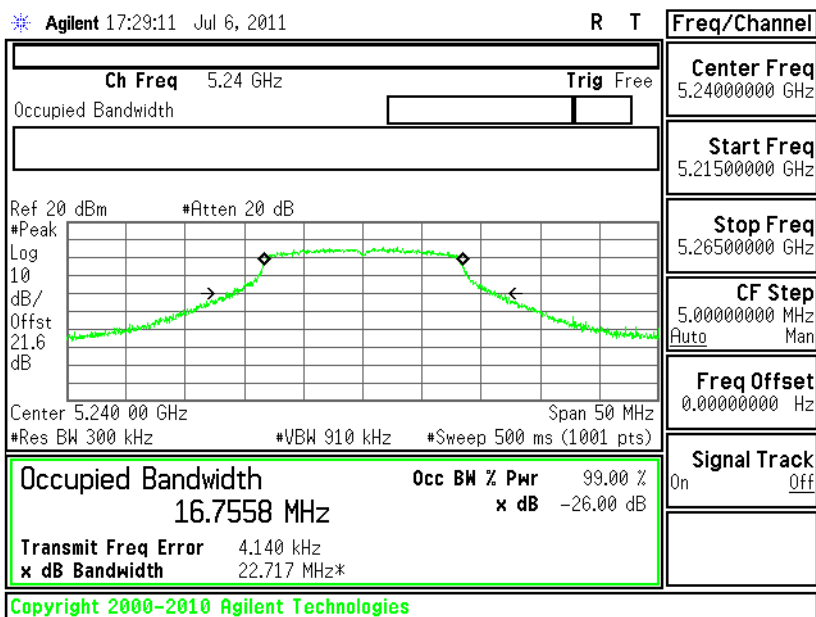
26 dB Bandwidth Plot on 802.11a Channel 36




26 dB Bandwidth Plot on 802.11a Channel 44

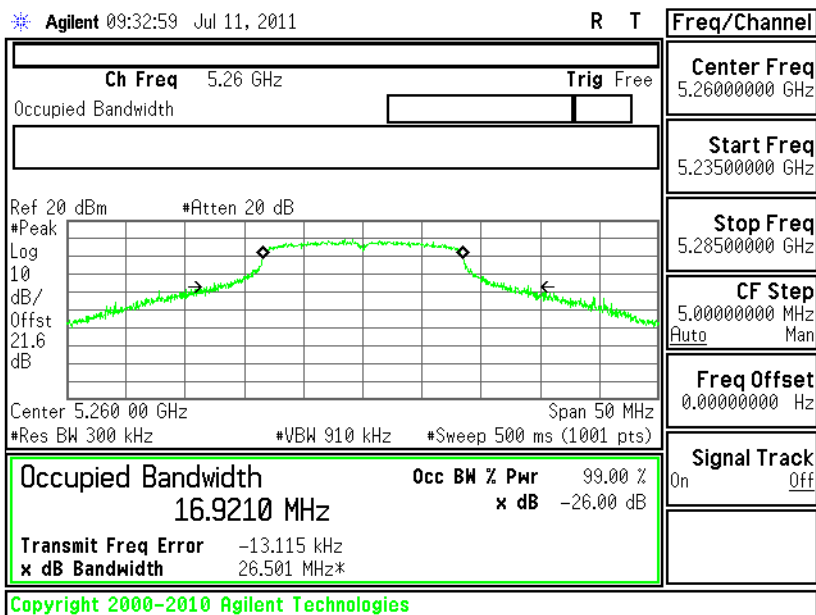


26 dB Bandwidth Plot on 802.11a Channel 48

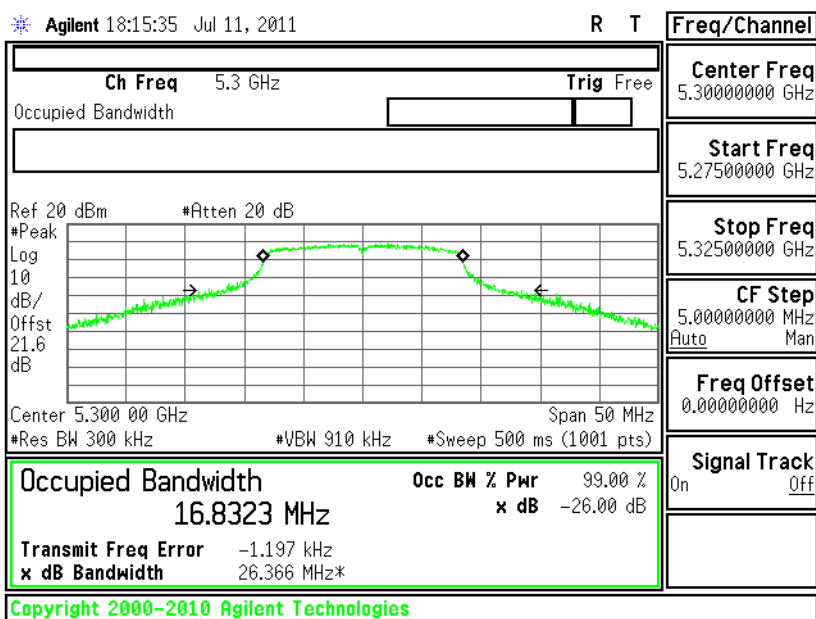




26 dB Bandwidth Plot on 802.11a Channel 52



26 dB Bandwidth Plot on 802.11a Channel 60

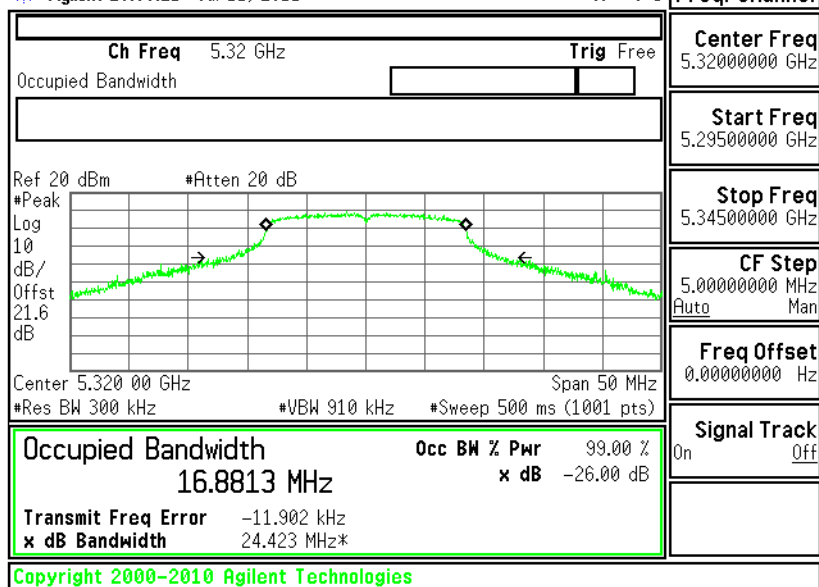




26 dB Bandwidth Plot on 802.11a Channel 64

* Agilent 20:09:21 Jul 11, 2011

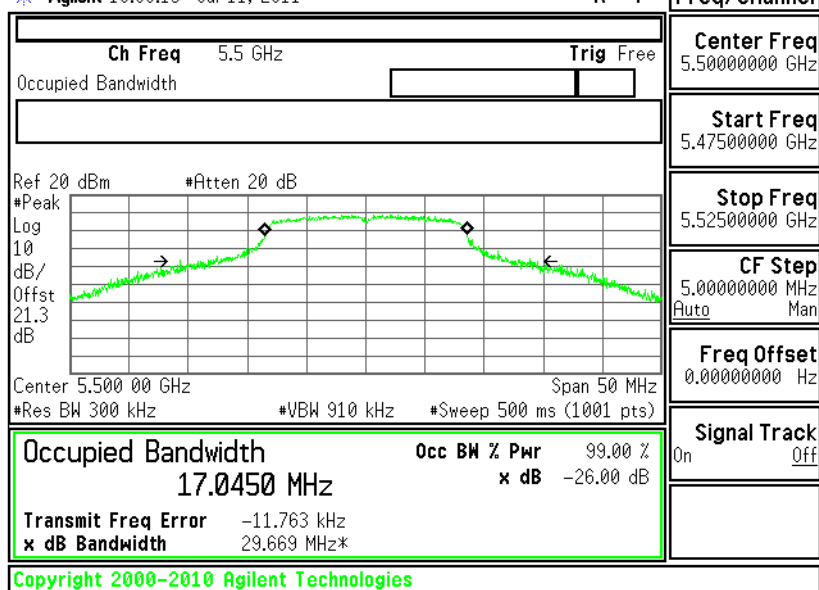
R T S



26 dB Bandwidth Plot on 802.11a Channel 100

* Agilent 18:09:13 Jul 11, 2011

R T

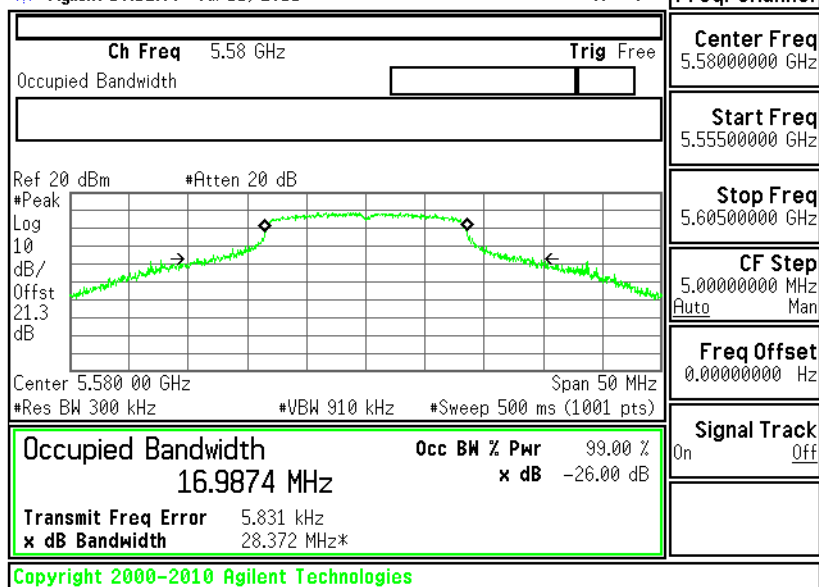




26 dB Bandwidth Plot on 802.11a Channel 116

* Agilent 18:12:06 Jul 11, 2011

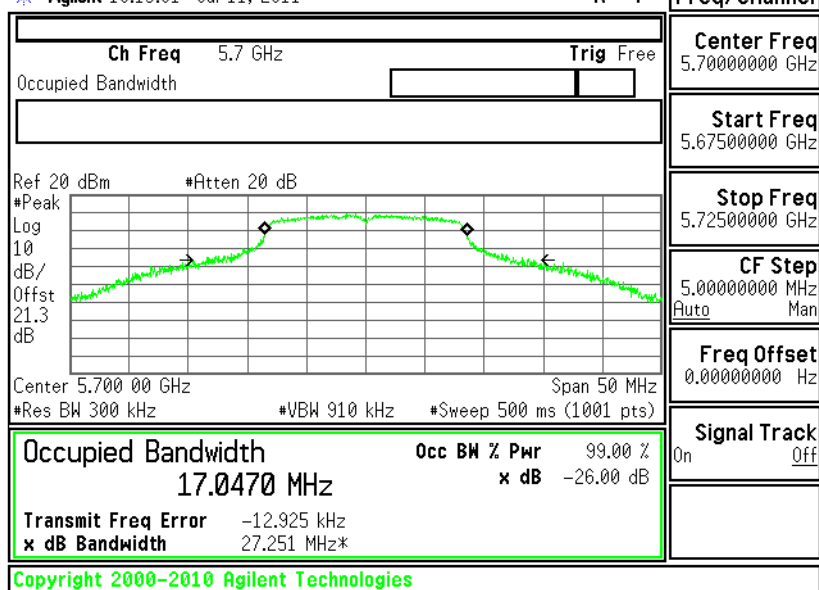
R T



26 dB Bandwidth Plot on 802.11a Channel 140

* Agilent 18:13:01 Jul 11, 2011

R T

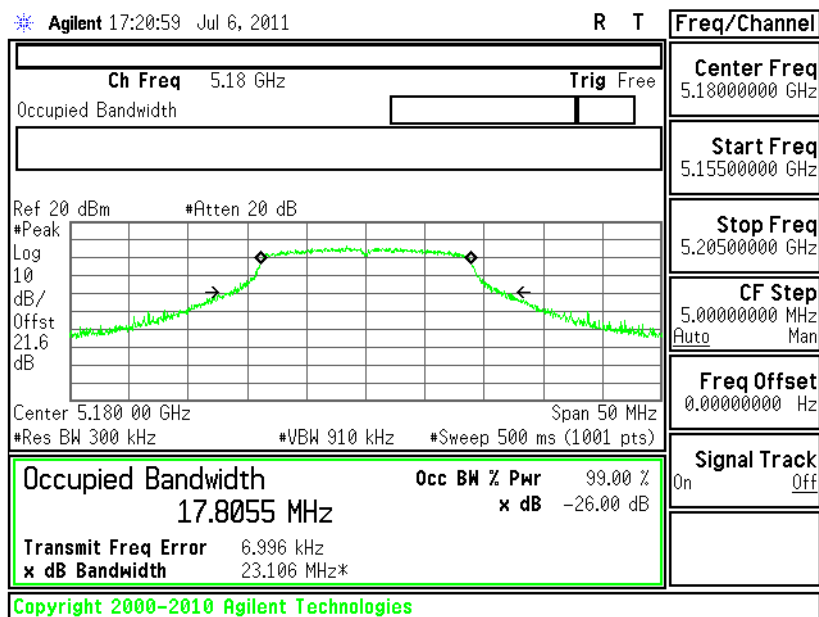




Test Mode :	Mode 10~18	Temperature :	24~26°C
Test Engineer :	Alan Liu	Relative Humidity :	45~49%

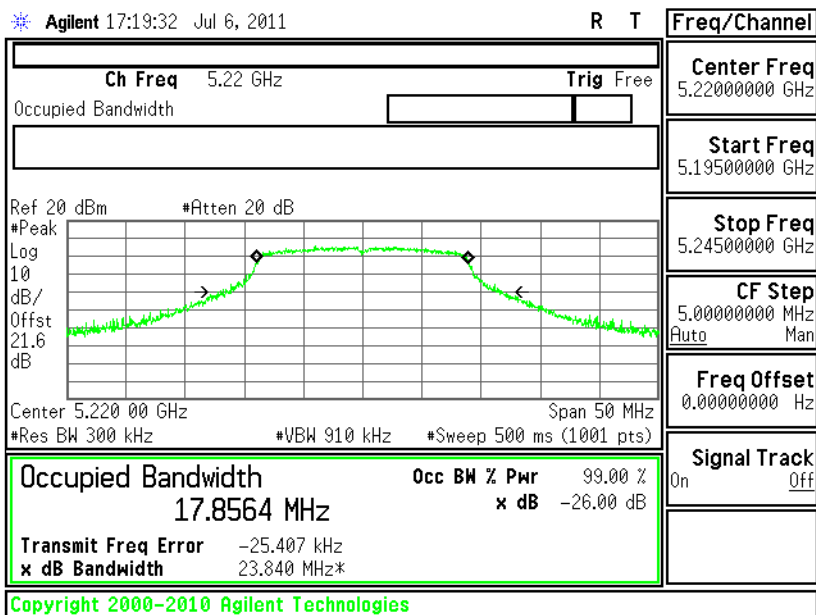
Channel	Frequency (MHz)	802.11n (BW 20MHz) 26dB Bandwidth (MHz)	Pass/Fail
36	5180	23.106	N/A
44	5220	23.840	N/A
48	5240	23.920	N/A
52	5260	26.284	N/A
60	5300	27.705	N/A
64	5320	26.027	N/A
100	5500	29.140	N/A
116	5580	32.340	N/A
140	5700	30.061	N/A

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

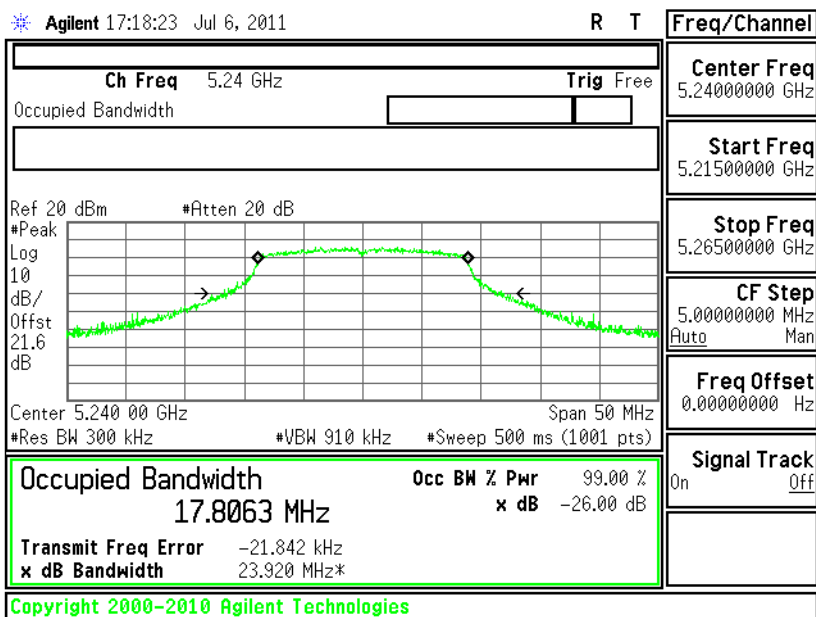




26 dB Bandwidth Plot on 802.11n (BW 20MHz) Channel 44

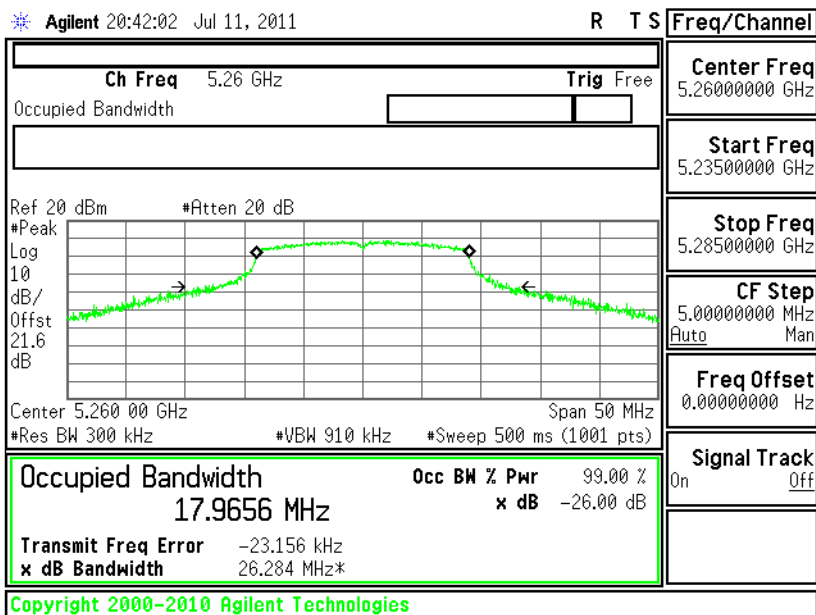


26 dB Bandwidth Plot on 802.11n (BW 20MHz) Channel 48

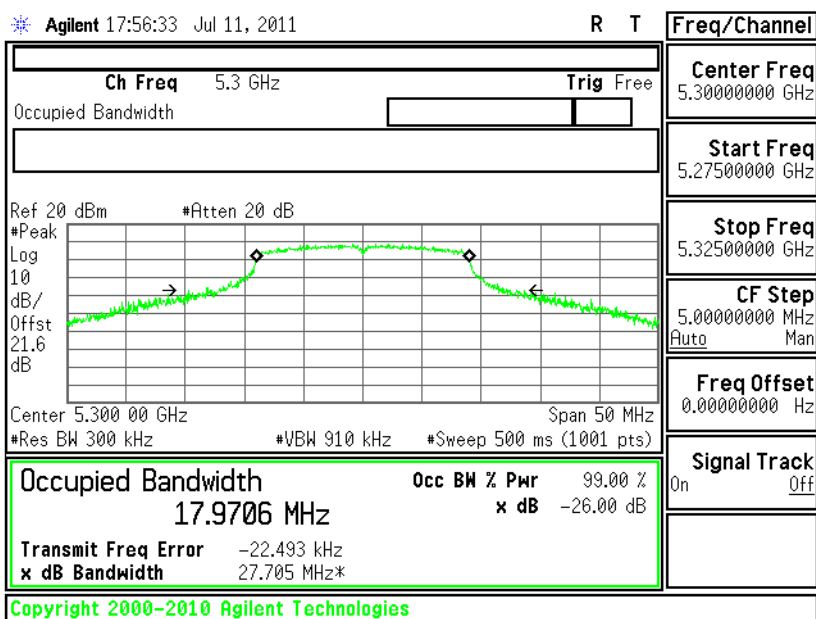




26 dB Bandwidth Plot on 802.11n (BW 20MHz) Channel 52

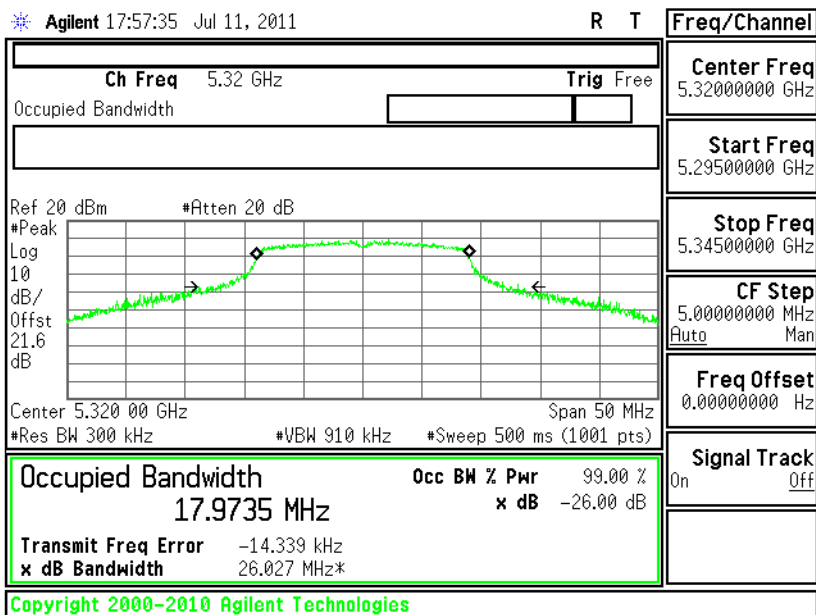


26 dB Bandwidth Plot on 802.11n (BW 20MHz) Channel 60

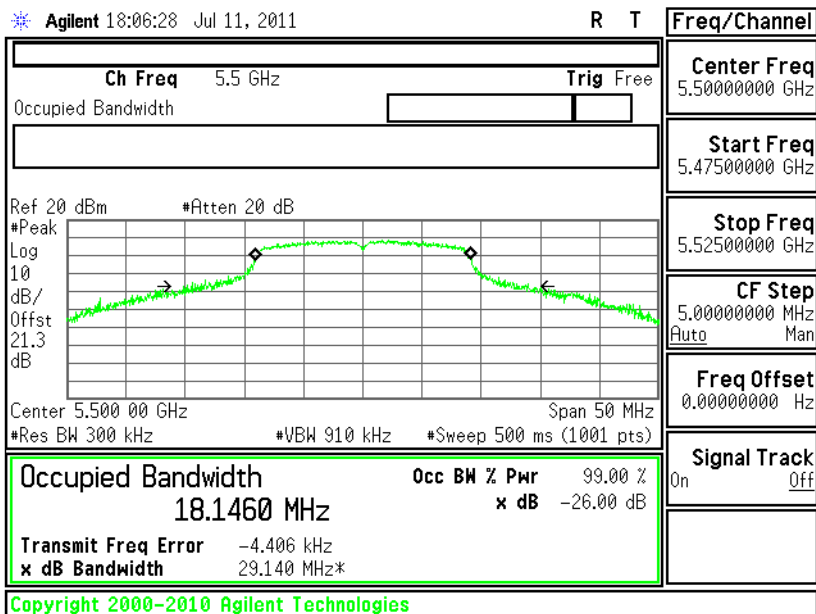




26 dB Bandwidth Plot on 802.11n (BW 20MHz) Channel 64

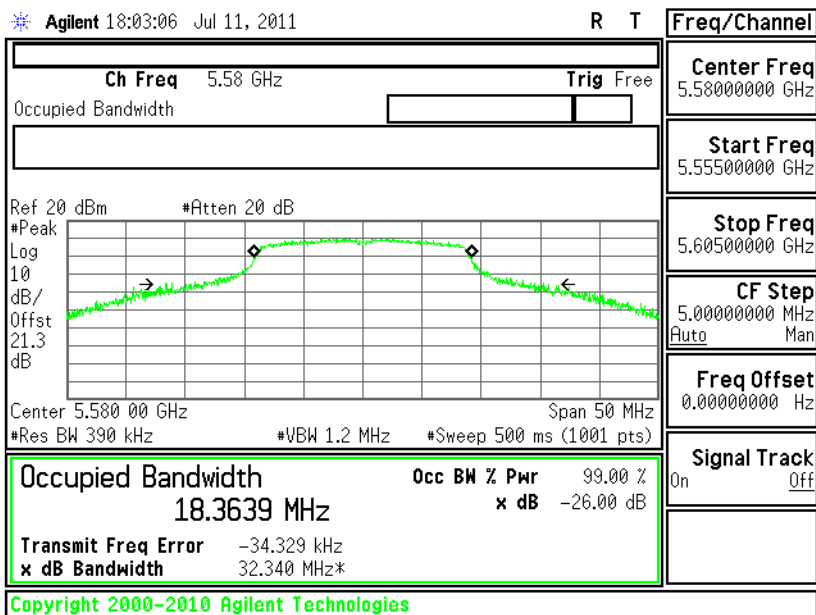


26 dB Bandwidth Plot on 802.11n (BW 20MHz) Channel 100

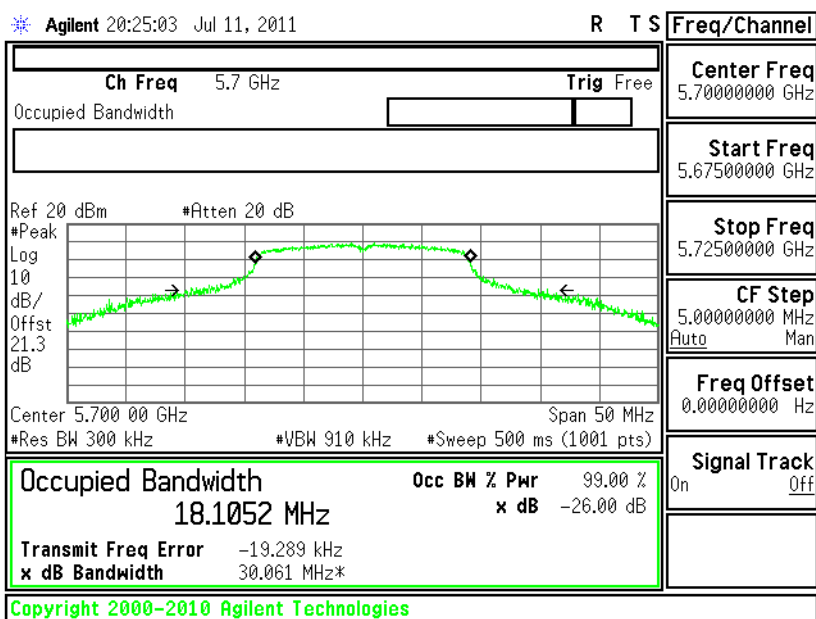




26 dB Bandwidth Plot on 802.11n (BW 20MHz) Channel 116



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



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.

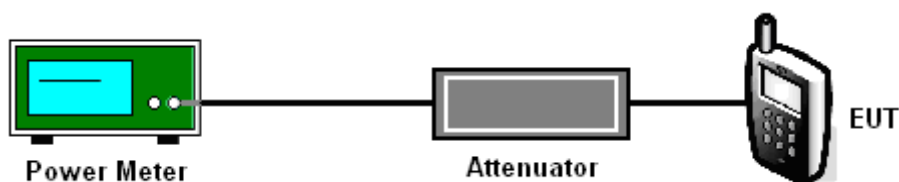
3.2.2 Measuring Instruments

See list of measuring instruments of this test report.

3.2.3 Test Procedures

1. The RF output of EUT was connected to the power meter by a low loss cable.
2. Measure the power and record it.

3.2.4 Test Setup



3.2.5 Test Result of Maximum Conducted Output Power

Test Mode :	Mode 1~9	Temperature :	24~26℃
Test Engineer :	Alan Liu	Relative Humidity :	45~49%

Channel	Frequency (MHz)	802.11a Measured Output Power (dBm)	Max. Limits (dBm)	Pass/Fail
36	5180	13.82	17	Pass
44	5220	13.55	17	Pass
48	5240	13.52	17	Pass
52	5260	16.89	24	Pass
60	5300	16.84	24	Pass
64	5320	16.87	24	Pass
100	5500	17.01	24	Pass
116	5580	17.13	24	Pass
140	5700	17.26	24	Pass

Test Mode :	Mode 10~18	Temperature :	24~26℃
Test Engineer :	Alan Liu	Relative Humidity :	45~49%

Channel	Frequency (MHz)	802.11n (BW 20MHz) Measured Output Power (dBm)	Max. Limits (dBm)	Pass/Fail
36	5180	13.6	17	Pass
44	5220	13.69	17	Pass
48	5240	13.73	17	Pass
52	5260	16.95	24	Pass
60	5300	16.9	24	Pass
64	5320	16.93	24	Pass
100	5500	17.04	24	Pass
116	5580	17.11	24	Pass
140	5700	17.21	24	Pass

3.3 Power Spectral Density Measurement

3.3.1 Limit of Power Spectral Density

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

3.3.2 Measuring Instruments

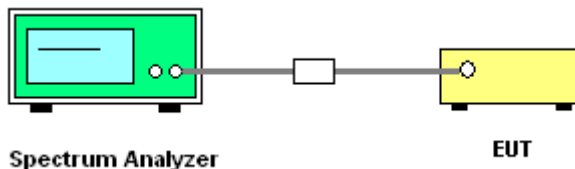
See list of measuring instruments of this test report.

3.3.3 Test Procedures

The transmitter output is connected to the spectrum analyzer. According

- Use sample detector and power averaging (not video averaging) mode. Set RBW= 1 MHz, VBW > 1 MHz. The PPSD is the highest level found across the emission in any 1-MHz band after 100 sweeps of averaging.

3.3.4 Test Setup

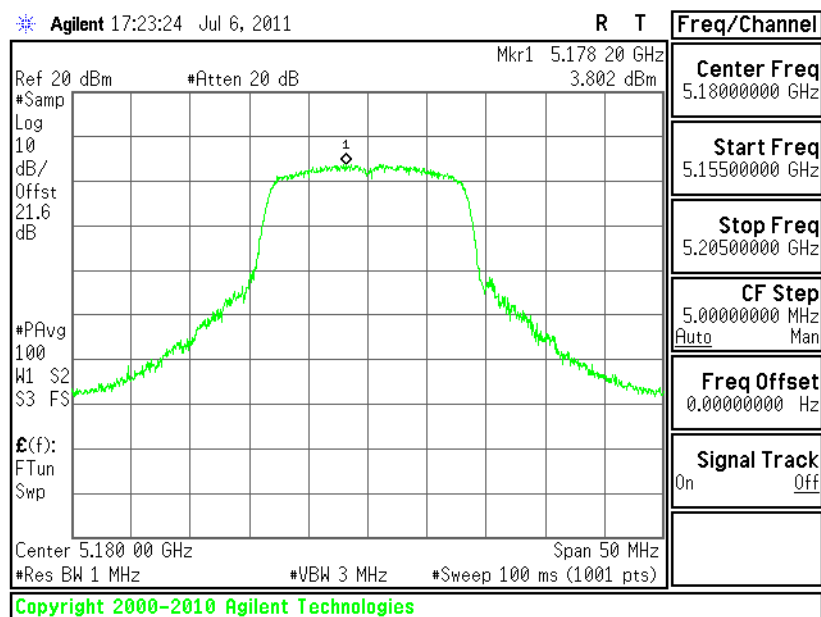


3.3.5 Test Result of Power Spectral Density

Test Mode :	Mode 1~9	Temperature :	24~26°C
Test Engineer :	Alan Liu	Relative Humidity :	45~49%

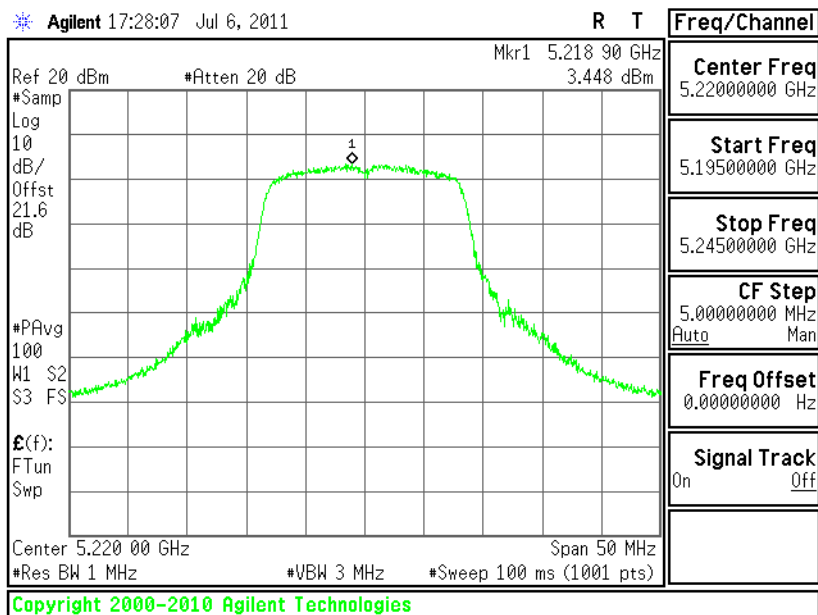
Channel	Frequency (MHz)	802.11a Measured PSD (dBm)	Max. Limits (dBm)	Pass/Fail
36	5180	3.802	4	Pass
44	5220	3.448	4	Pass
48	5240	3.529	4	Pass
52	5260	7.133	11	Pass
60	5300	6.989	11	Pass
64	5320	6.568	11	Pass
100	5500	6.913	11	Pass
116	5580	7.179	11	Pass
140	5700	7.146	11	Pass

PSD Plot on 802.11a Channel 36

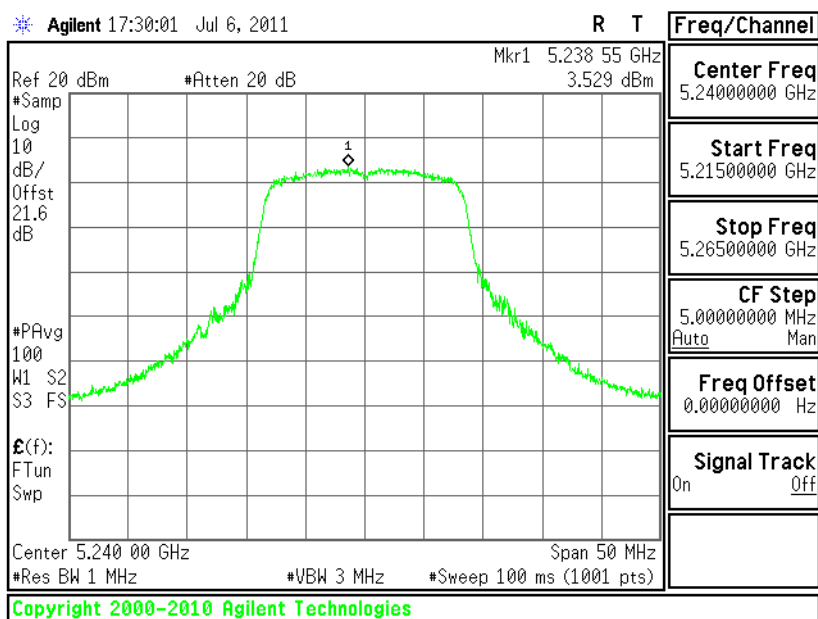




PSD Plot on 802.11a Channel 44

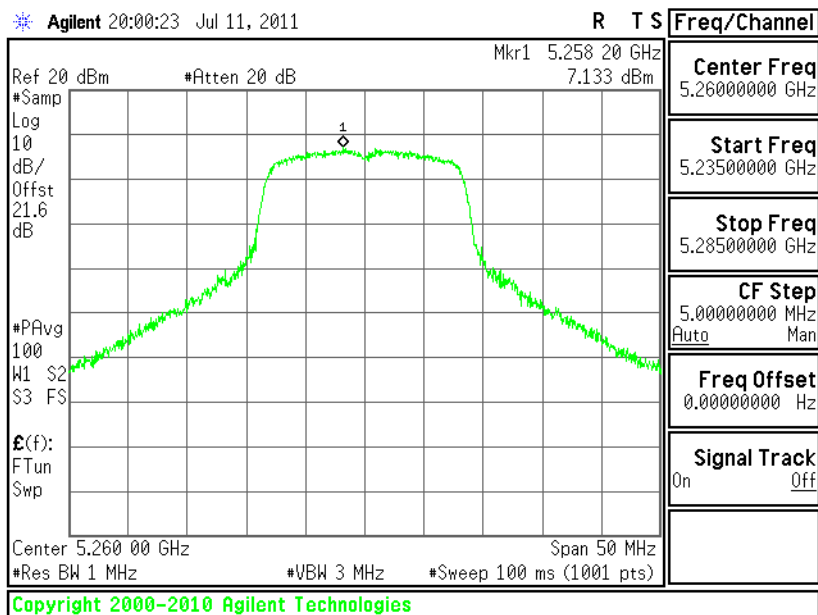


PSD Plot on 802.11a Channel 48

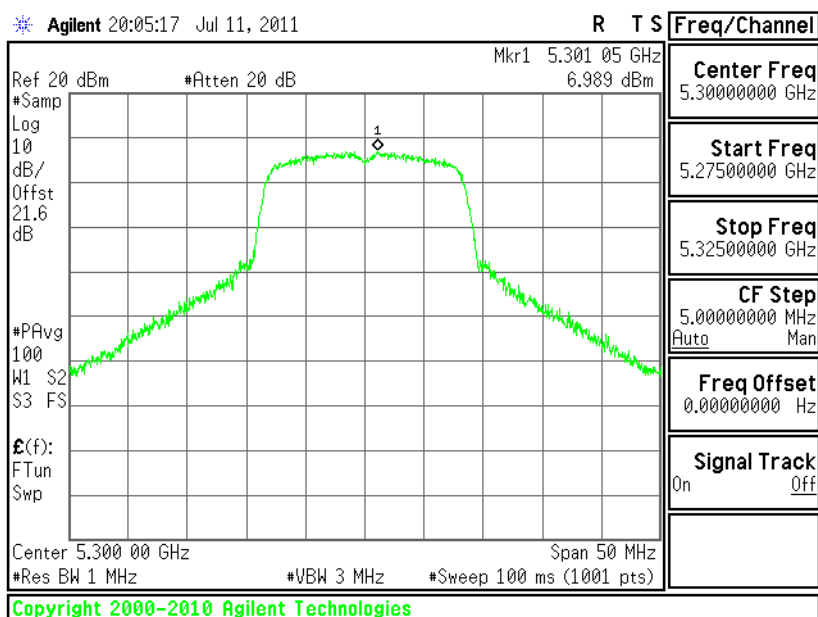




PSD Plot on 802.11a Channel 52

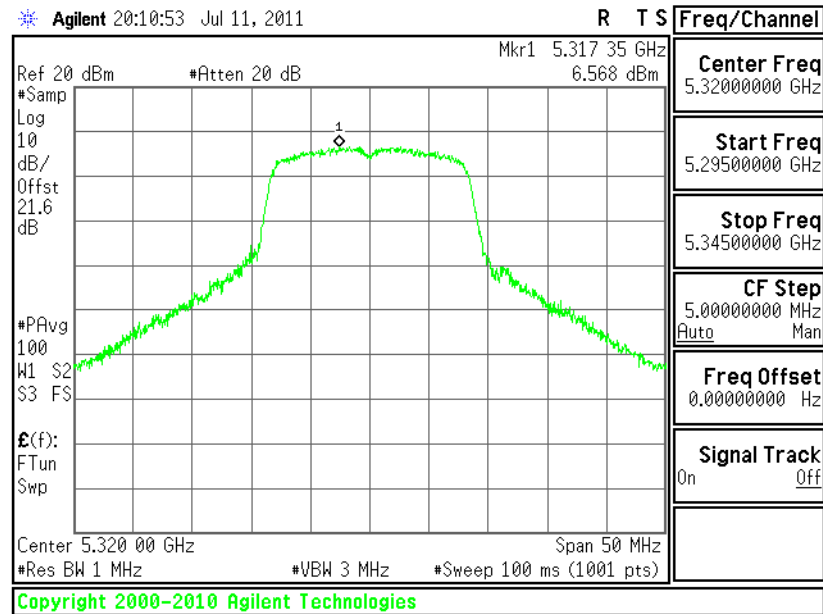


PSD Plot on 802.11a Channel 60

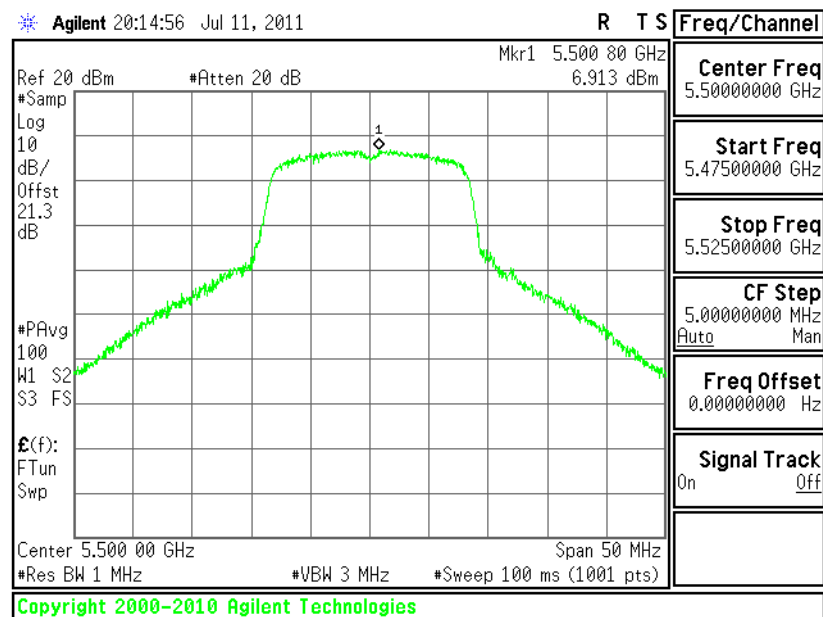




PSD Plot on 802.11a Channel 64

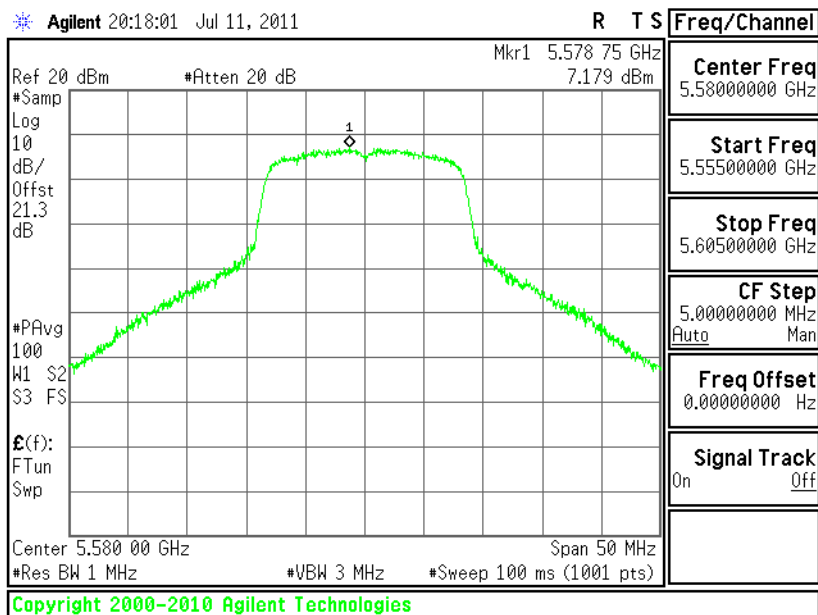


PSD Plot on 802.11a Channel 100

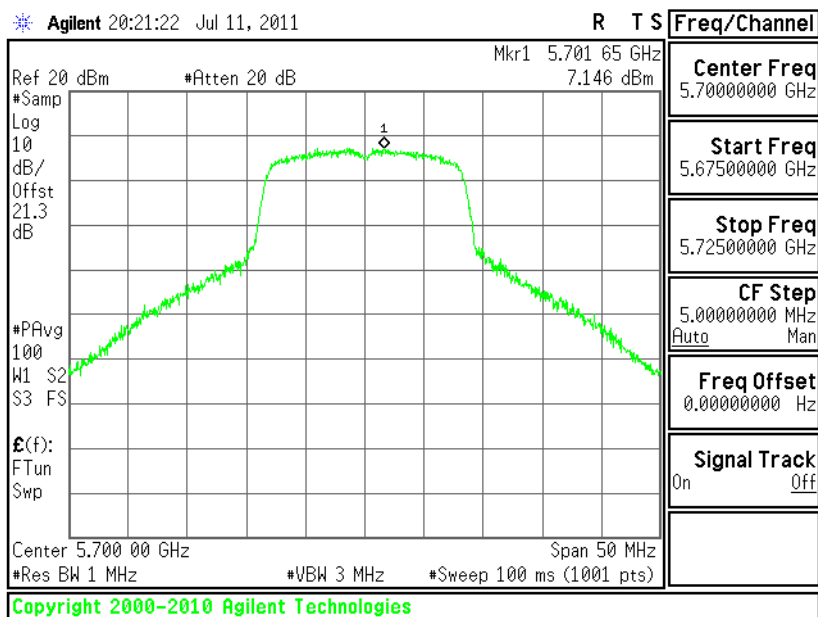




PSD Plot on 802.11a Channel 116

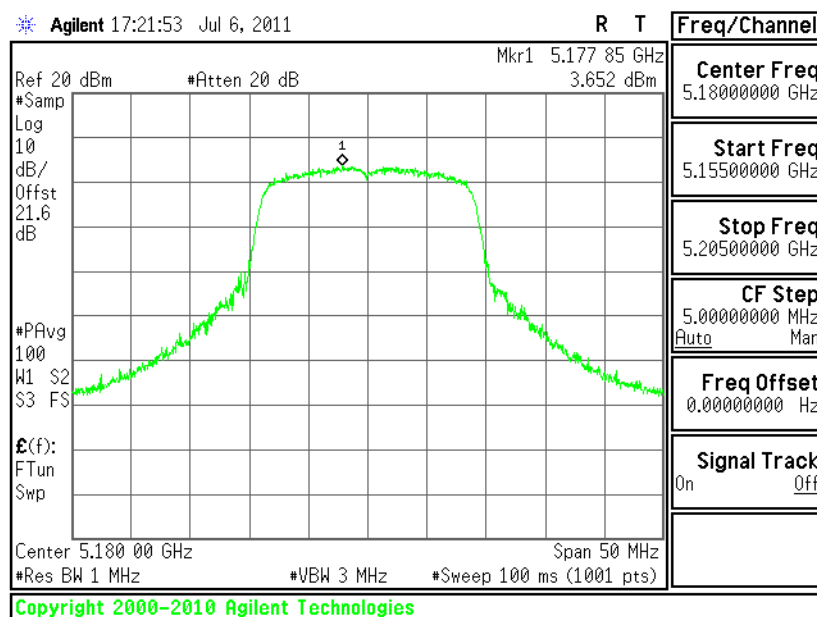


PSD Plot on 802.11a Channel 140



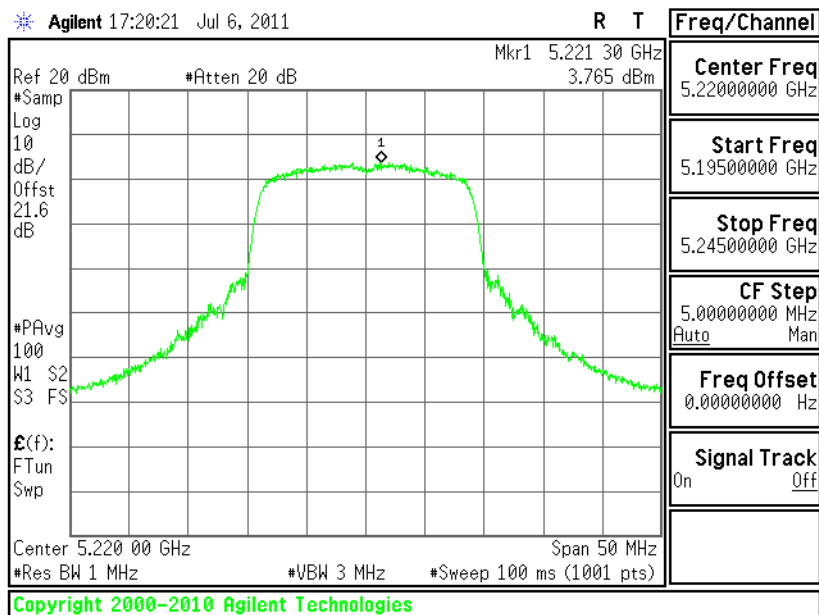
Test Mode :	Mode 10~18	Temperature :	24~26°C
Test Engineer :	Alan Liu	Relative Humidity :	45~49%

Channel	Frequency (MHz)	802.11n (BW 20MHz) Measured PSD (dBm)	Max. Limits (dBm)	Pass/Fail
36	5180	3.652	4	Pass
44	5220	3.765	4	Pass
48	5240	3.562	4	Pass
52	5260	6.915	11	Pass
60	5300	6.769	11	Pass
64	5320	6.664	11	Pass
100	5500	6.691	11	Pass
116	5580	6.747	11	Pass
140	5700	7.026	11	Pass

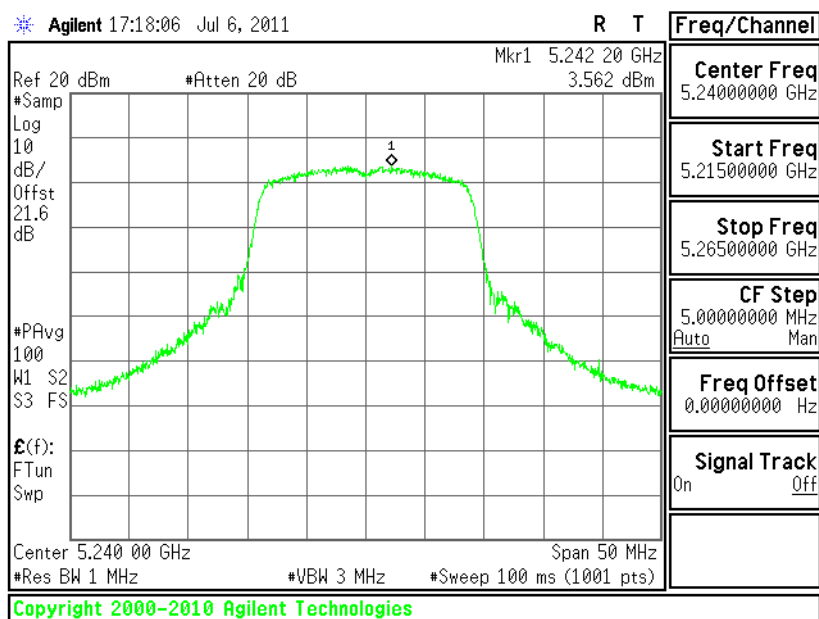
PSD Plot on 802.11n (BW 20MHz) Channel 36




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

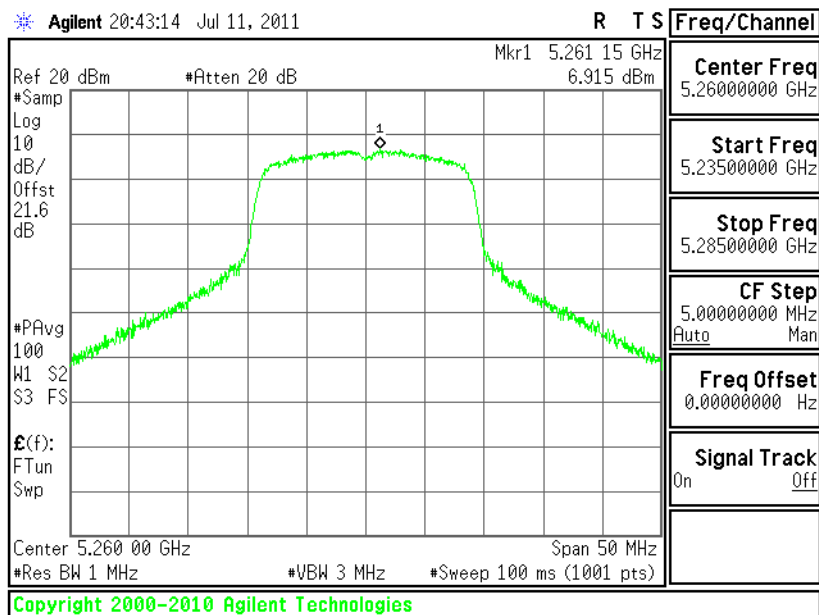


PSD Plot on 802.11n (BW 20MHz) Channel 48

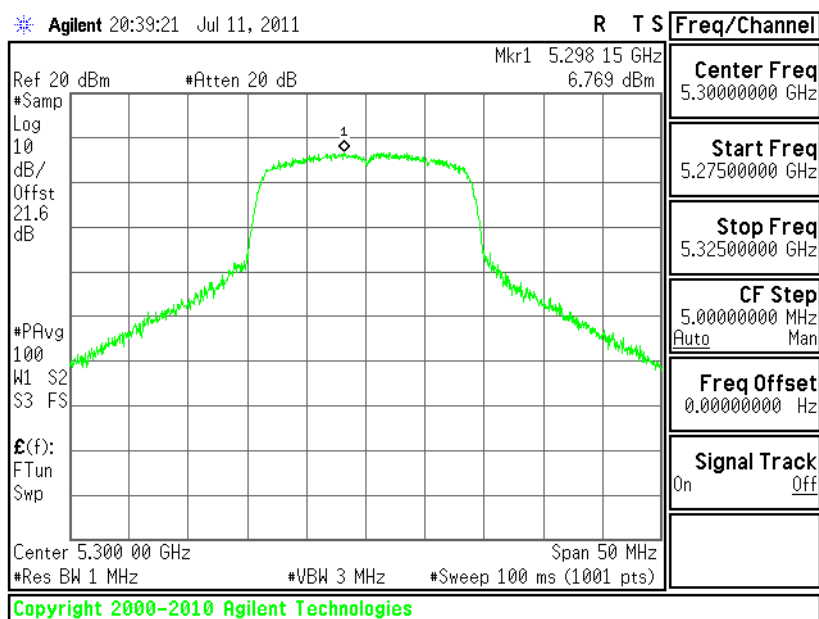




PSD Plot on 802.11n (BW 20MHz) Channel 52

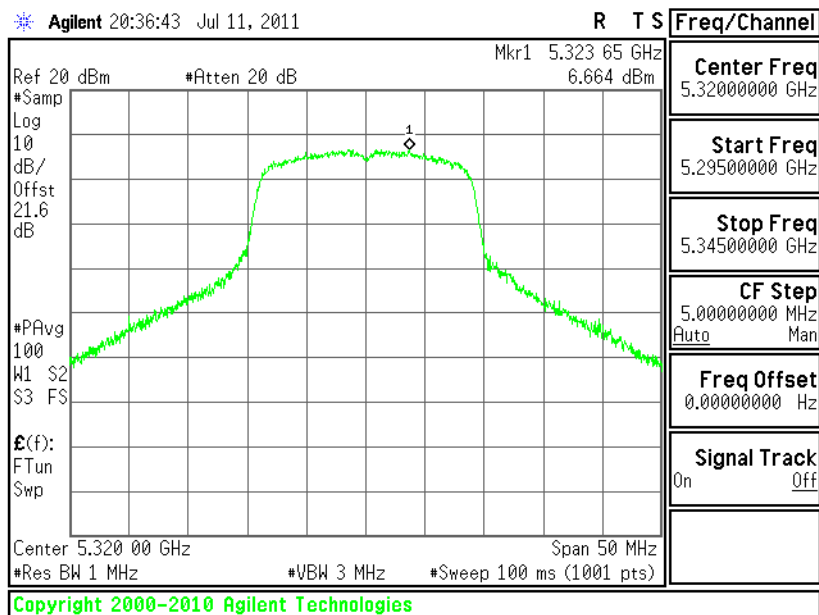


PSD Plot on 802.11n (BW 20MHz) Channel 60

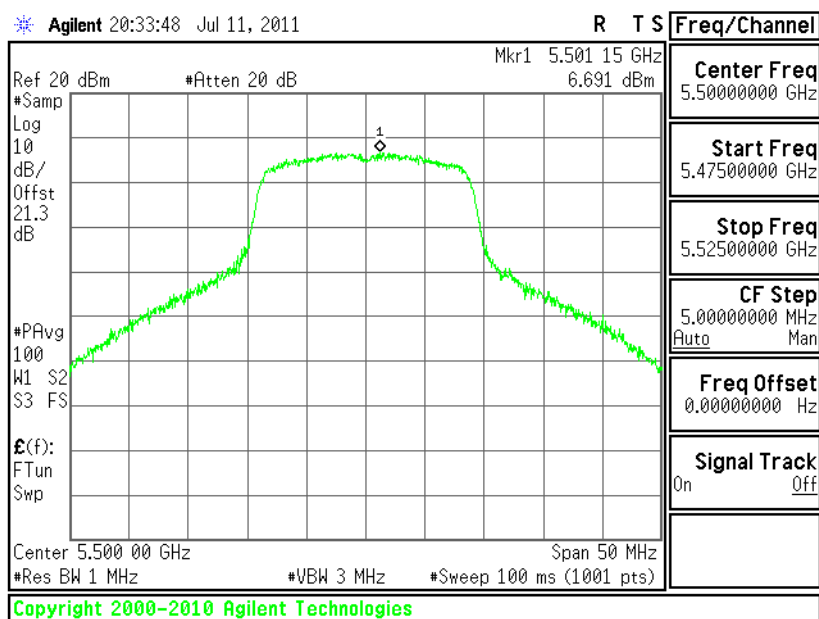




PSD Plot on 802.11n (BW 20MHz) Channel 64

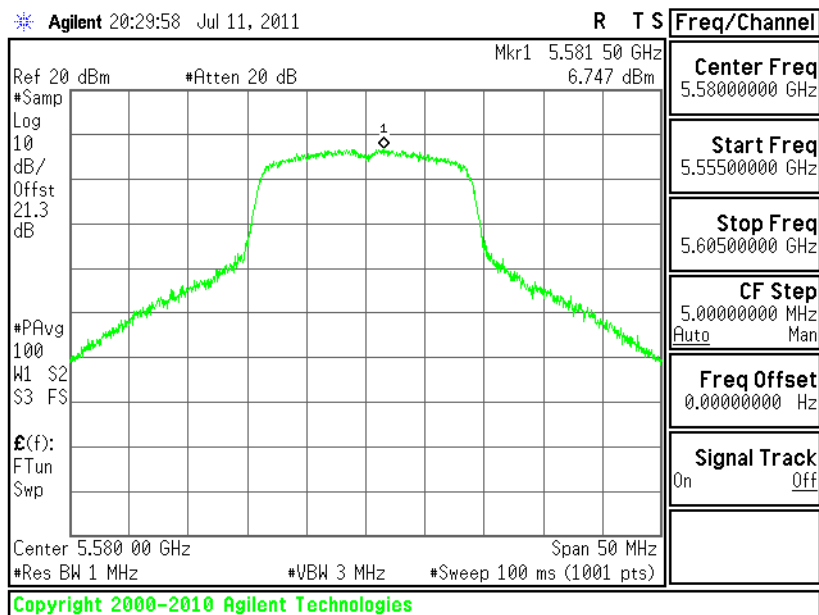


PSD Plot on 802.11n (BW 20MHz) Channel 100

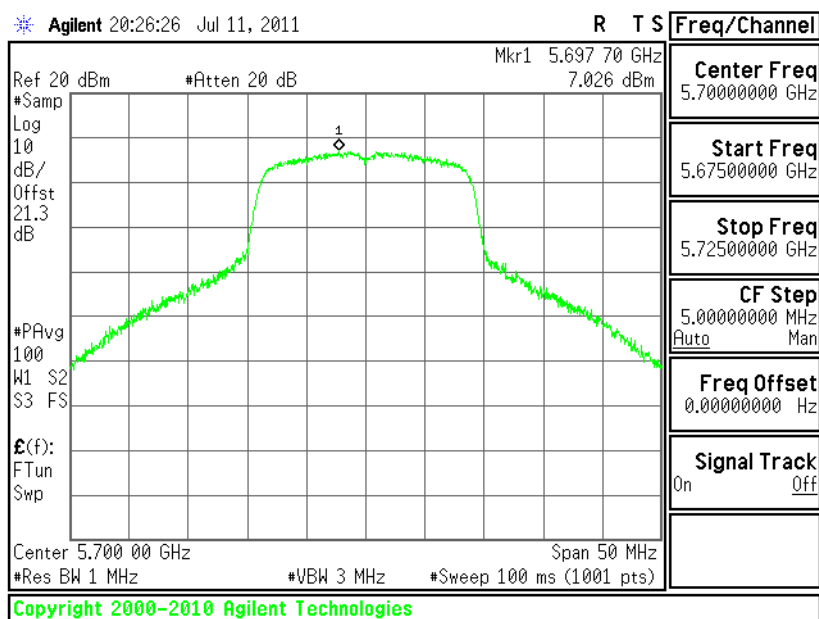




PSD Plot on 802.11n (BW 20MHz) Channel 116



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



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

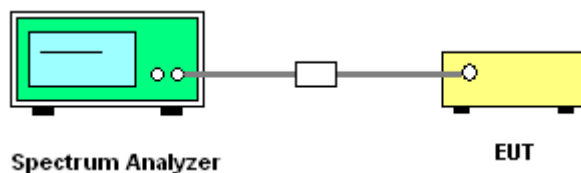
See list of measuring instruments of this test report.

3.4.3 Test Procedures

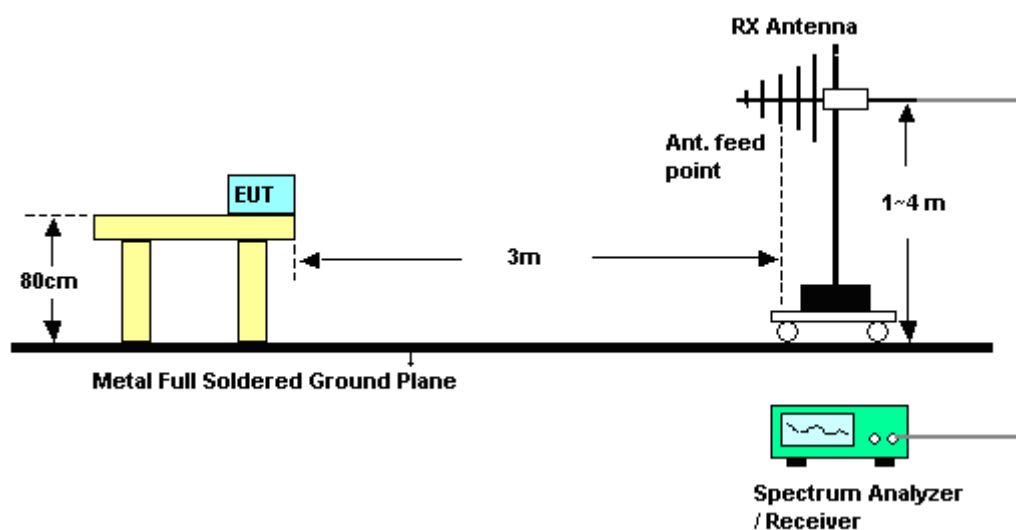
1. Set both RBW / VBW of spectrum analyzer to 1MHz / 3MHz with convenient frequency span including 1MHz bandwidth from band edge.
2. The band edges was measured and recorded.

3.4.4 Test Setup

<Conducted>



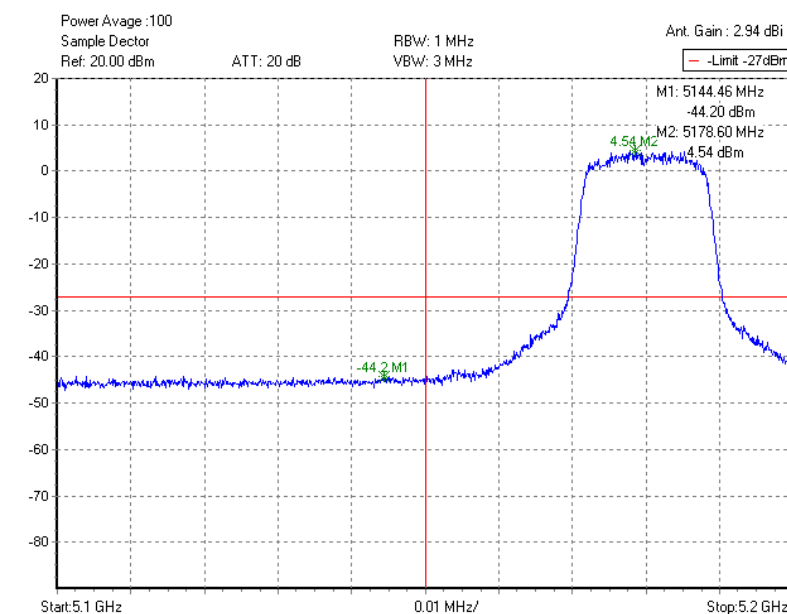
<Radiated>



3.4.5 Test Result of Conducted Band Edges

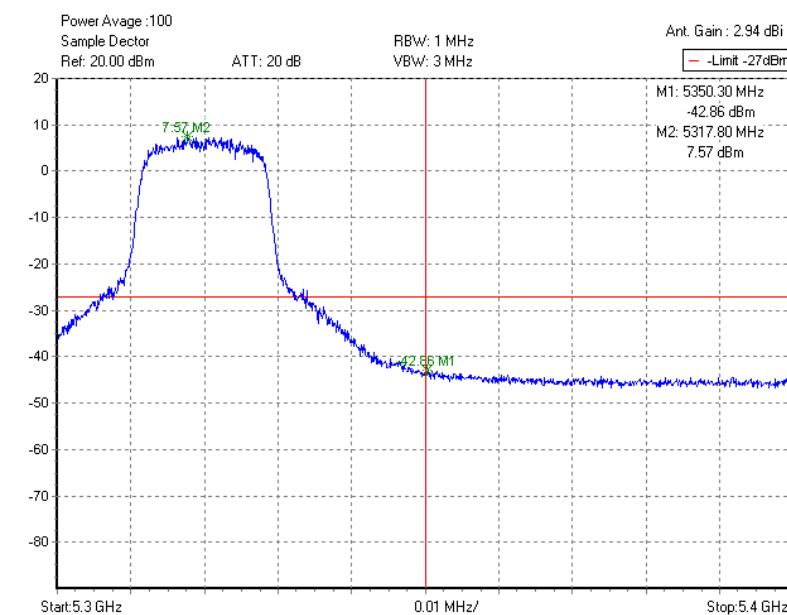
Test Mode :	Mode 1 and 6	Temperature :	24~26°C
Test Engineer :	Alan Liu	Relative Humidity :	45~49%

Low Band Edge Plot on Channel 36



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

High Band Edge Plot on Channel 64

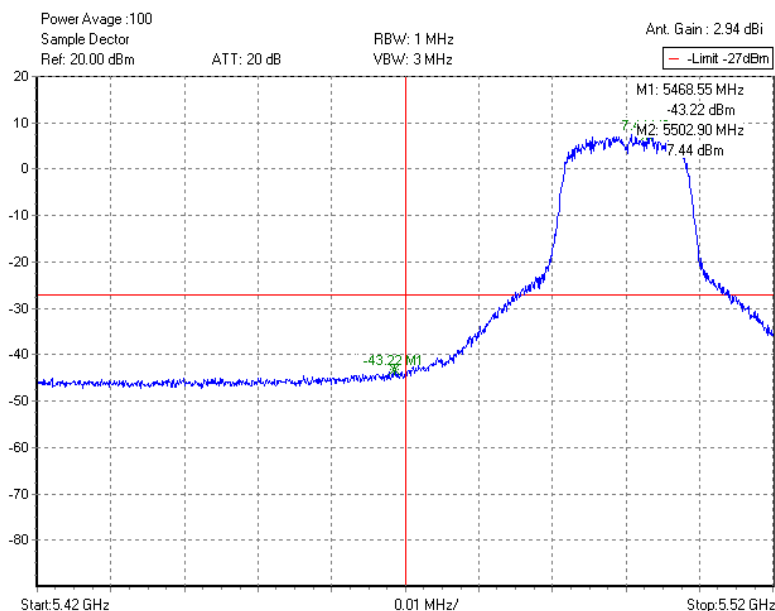


Test result was offsetted with path loss, and antenna gain.

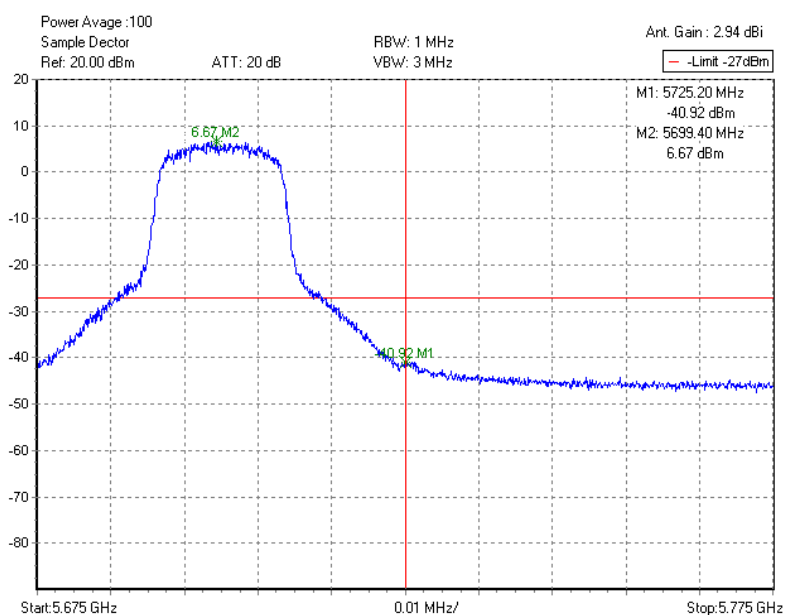


Test Mode :	Mode 7 and 9	Temperature :	24~26°C
Test Engineer :	Alan Liu	Relative Humidity :	45~49%

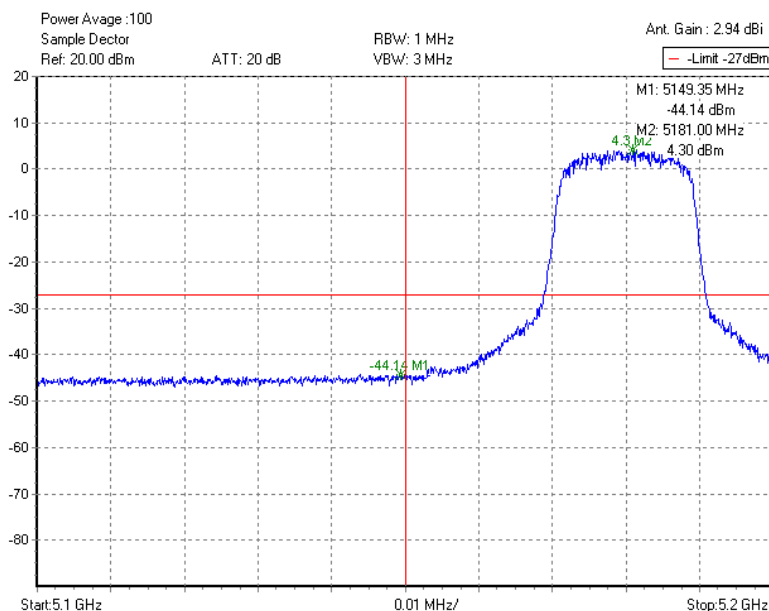
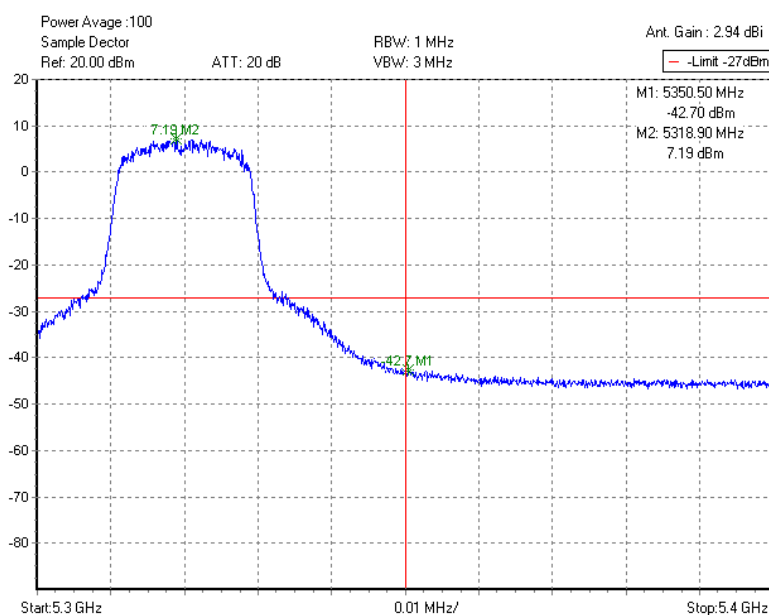
Low Band Edge Plot on Channel 100



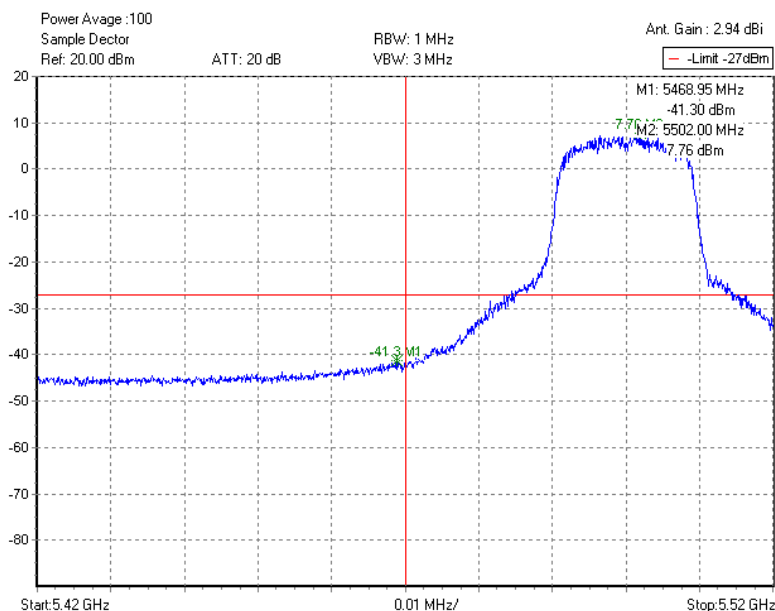
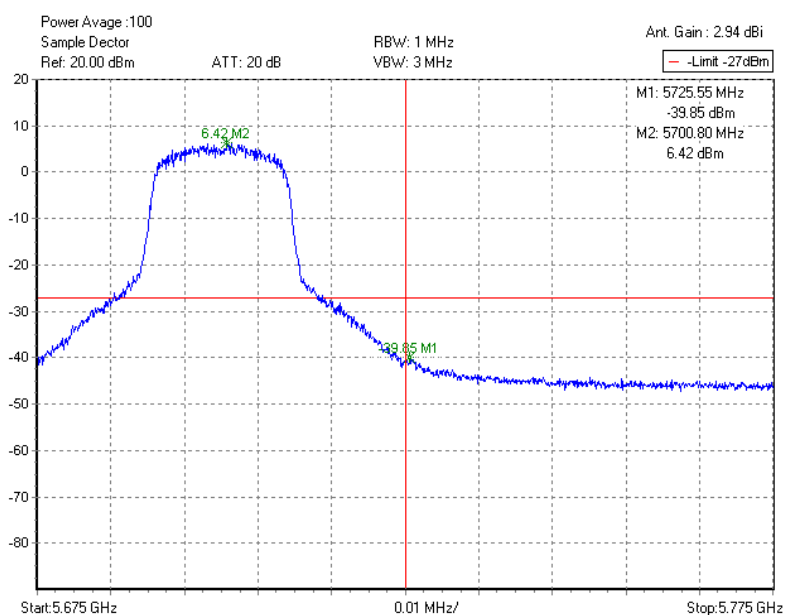
High Band Edge Plot on Channel 140



Test Mode :	Mode 10 and 15	Temperature :	24~26°C
Test Engineer :	Alan Liu	Relative Humidity :	45~49%

Low Band Edge Plot on Channel 36

High Band Edge Plot on Channel 64


Test Mode :	Mode 16 and 18	Temperature :	24~26°C
Test Engineer :	Alan Liu	Relative Humidity :	45~49%

Low Band Edge Plot on Channel 100

High Band Edge Plot on Channel 140


3.4.6 Test Result of Radiated Band Edges

Test Mode :	Mode 1	Temperature :	23~25°C
Test Band :	802.11a	Relative Humidity :	49~51%
Test Channel :	36	Test Engineer :	Ivan Chiang

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	65.63	-8.37	74	55.62	34.25	9.41	33.65	100	322	Peak
5150	47.36	-6.64	54	37.35	34.25	9.41	33.65	100	322	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	57.37	-16.63	74	47.36	34.25	9.41	33.65	100	16	Peak
5150	42.57	-11.43	54	32.56	34.25	9.41	33.65	100	16	Average

Test Mode :	Mode 6	Temperature :	23~25°C
Test Band :	802.11a	Relative Humidity :	49~51%
Test Channel :	64	Test Engineer :	Ivan Chiang

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	69.9	-4.1	74	58.97	34.45	9.74	33.26	100	307	Peak
5350	50.64	-3.36	54	39.71	34.45	9.74	33.26	100	307	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	63.32	-10.68	74	52.39	34.45	9.74	33.26	193	265	Peak
5350	46.23	-7.77	54	35.3	34.45	9.74	33.26	193	265	Average

Test Mode :	Mode 7	Temperature :	23~25°C
Test Band :	802.11a	Relative Humidity :	49~51%
Test Channel :	100	Test Engineer :	Ivan Chiang

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	53.05	-20.95	74	41.55	34.57	9.94	33.01	102	340	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	48.41	-25.59	74	36.91	34.57	9.94	33.01	100	246	Peak

Test Mode :	Mode 9	Temperature :	23~25°C
Test Band :	802.11a	Relative Humidity :	49~51%
Test Channel :	140	Test Engineer :	Ivan Chiang

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	55.89	-18.11	74	44.33	34.82	9.92	33.18	101	319	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	49.21	-24.79	74	37.65	34.82	9.92	33.18	100	231	Peak

Test Mode :	Mode 10	Temperature :	23~25°C
Test Band :	802.11n (BW 20MHz)	Relative Humidity :	49~51%
Test Channel :	36	Test Engineer :	Ivan Chiang

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	66.21	-7.79	74	56.2	34.25	9.41	33.65	100	333	Peak
5150	47.01	-6.99	54	37	34.25	9.41	33.65	100	333	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	59.2	-14.8	74	49.19	34.25	9.41	33.65	100	17	Peak
5150	42.5	-11.5	54	32.49	34.25	9.41	33.65	100	17	Average

Test Mode :	Mode 15	Temperature :	23~25°C
Test Band :	802.11n (BW 20MHz)	Relative Humidity :	49~51%
Test Channel :	64	Test Engineer :	Ivan Chiang

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	68.37	-5.63	74	57.44	34.45	9.74	33.26	100	310	Peak
5350	49.34	-4.66	54	38.41	34.45	9.74	33.26	100	310	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	62.68	-11.32	74	51.75	34.45	9.74	33.26	193	266	Peak
5350	45.67	-8.33	54	34.74	34.45	9.74	33.26	193	266	Average

Test Mode :	Mode 16	Temperature :	23~25°C
Test Band :	802.11n (BW 20MHz)	Relative Humidity :	49~51%
Test Channel :	100	Test Engineer :	Ivan Chiang

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	49.29	-24.71	74	37.79	34.57	9.94	33.01	102	341	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	45.08	-28.92	74	33.58	34.57	9.94	33.01	100	247	Peak

Test Mode :	Mode 18	Temperature :	23~25°C
Test Band :	802.11n (BW 20MHz)	Relative Humidity :	49~51%
Test Channel :	140	Test Engineer :	Ivan Chiang

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	56.68	-17.32	74	45.12	34.82	9.92	33.18	101	315	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	49.18	-24.82	74	37.62	34.82	9.92	33.18	100	232	Peak

Test Mode :	Mode 19	Temperature :	23~25°C
Test Band :	802.11a	Relative Humidity :	49~51%
Test Channel :	64	Test Engineer :	Ivan Chiang

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	58.3	-15.7	74	47.37	34.45	9.74	33.26	100	305	Peak
5350	45.49	-8.51	54	34.56	34.45	9.74	33.26	100	305	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	53.9	-20.1	74	42.97	34.45	9.74	33.26	100	274	Peak
5350	42.5	-11.5	54	31.57	34.45	9.74	33.26	100	274	Average

Test Mode :	Mode 20	Temperature :	23~25°C
Test Band :	802.11n (BW 20MHz)	Relative Humidity :	49~51%
Test Channel :	64	Test Engineer :	Ivan Chiang

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	62.18	-11.82	74	51.25	34.45	9.74	33.26	100	303	Peak
5350	46.34	-7.66	54	35.41	34.45	9.74	33.26	100	303	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	56.36	-17.64	74	45.43	34.45	9.74	33.26	193	268	Peak
5350	42.92	-11.08	54	31.99	34.45	9.74	33.26	193	268	Average

3.5 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.

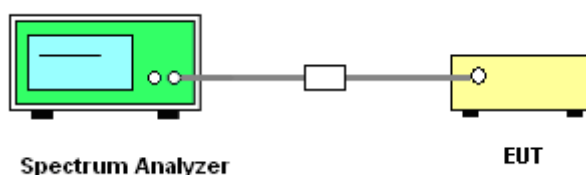
3.5.2 Measuring Instruments

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.

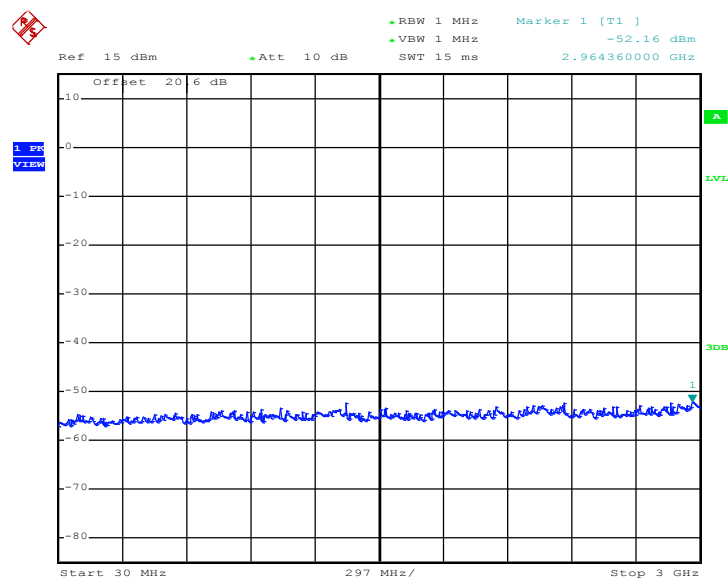
3.5.4 Test Setup



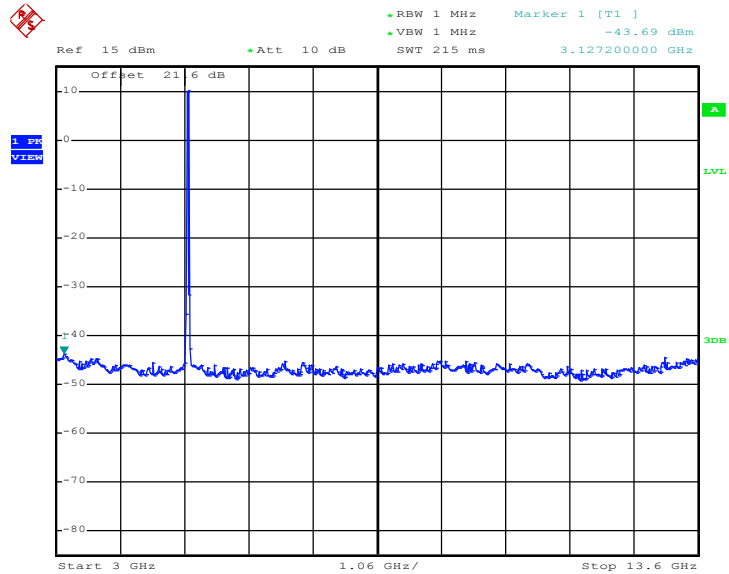
3.5.5 Test Result

Test Mode :	Mode 1~9	Temperature :	24~26°C
Test Band :	802.11a	Relative Humidity :	45~49%
Test Channel :	36, 44, 48, 52, 60, 64, 100, 116, 140	Test Engineer :	Alan Liu

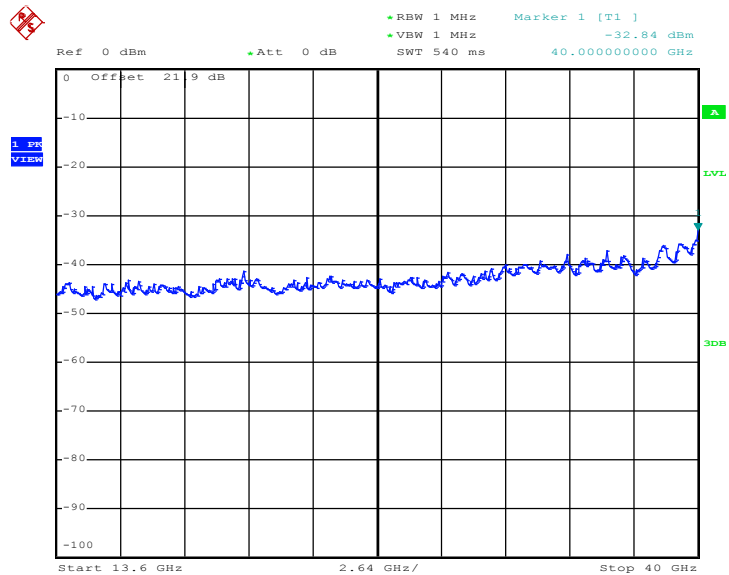
Spurious Emission Plot on Channel 36 between 802.11a 30 MHz ~ 40 GHz



Date: 11.JUL.2011 22:40:58

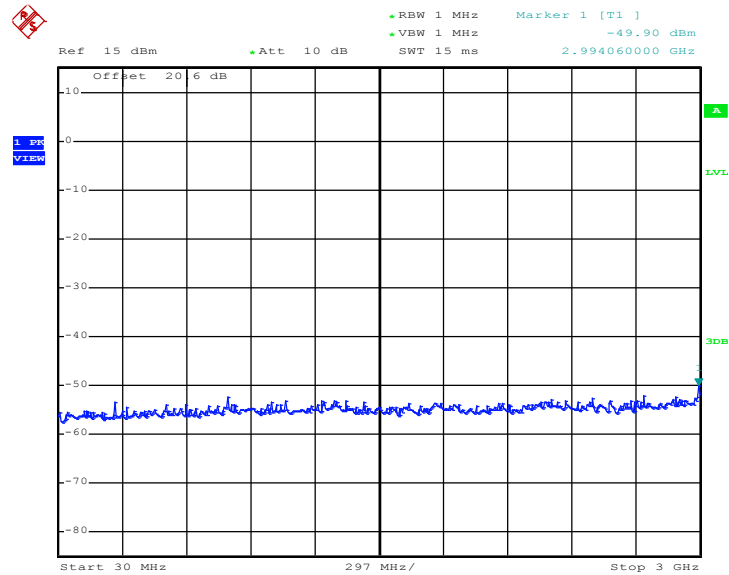


Date: 11.JUL.2011 22:41:10

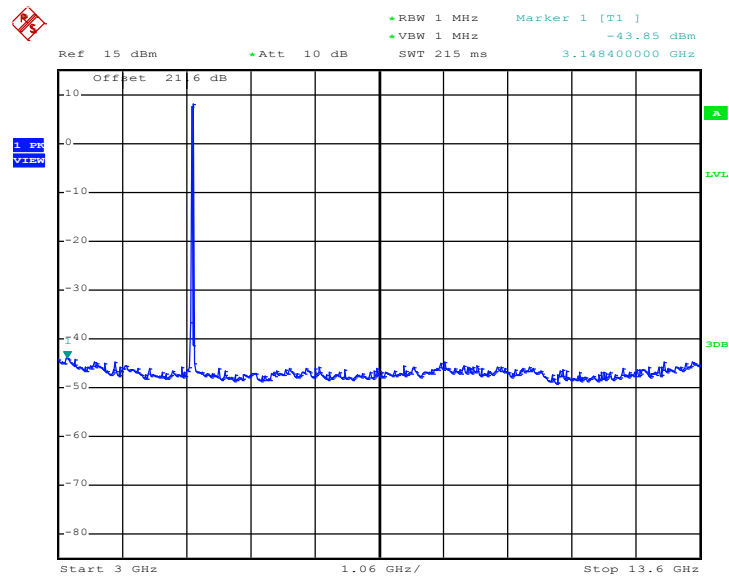


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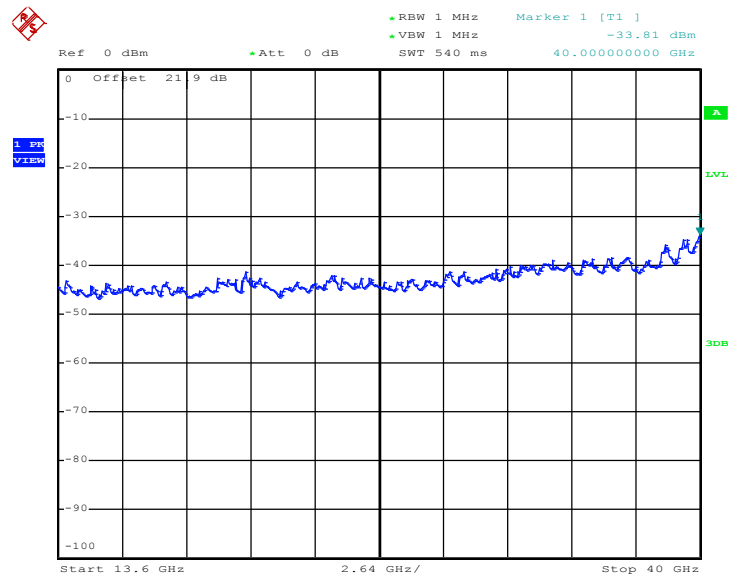
Spurious Emission Plot on Channel 44 between 802.11a 30 MHz ~ 40 GHz



Date: 11.JUL.2011 22:42:23

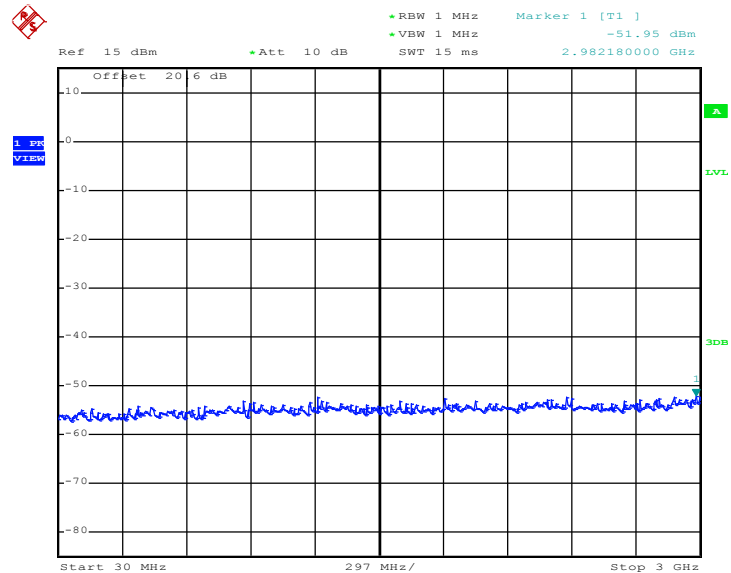


Date: 11.JUL.2011 22:42:35

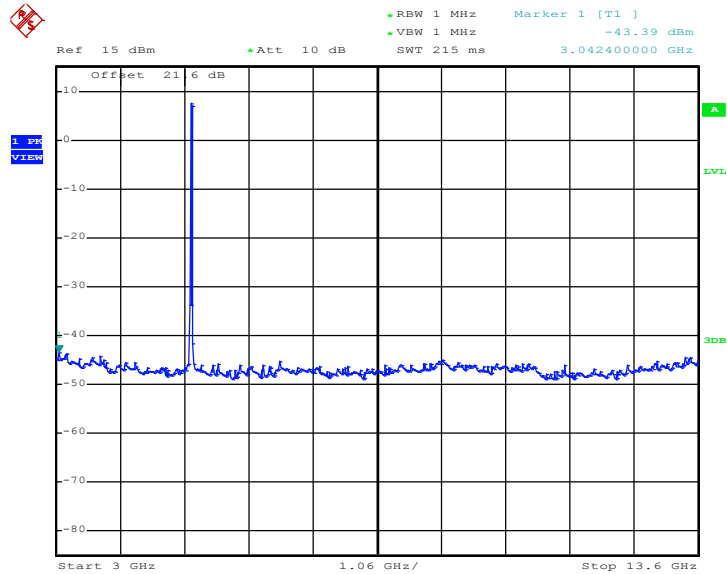


Date: 11.JUL.2011 22:42:46

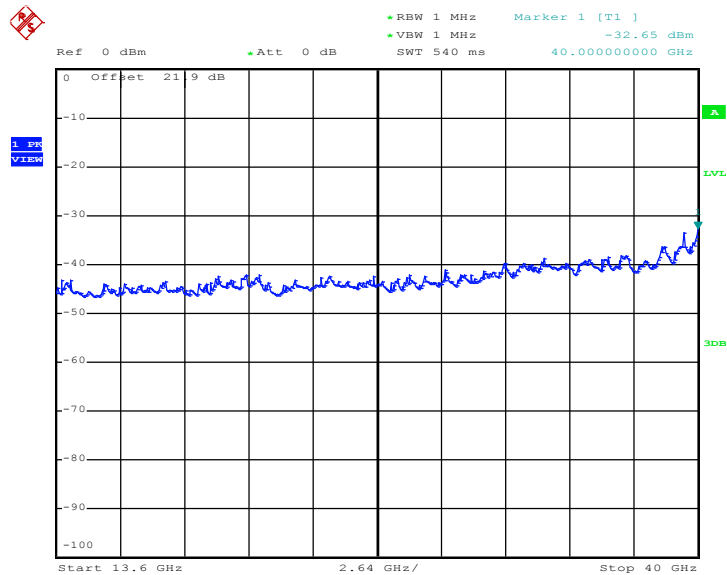
Spurious Emission Plot on Channel 48 between 802.11a 30 MHz ~ 40 GHz - Chain A



Date: 11.JUL.2011 22:43:26

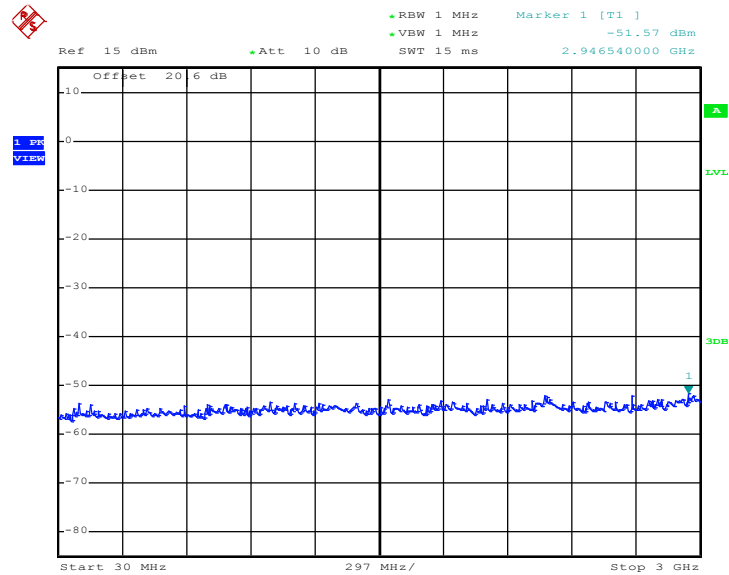


Date: 11.JUL.2011 22:43:37

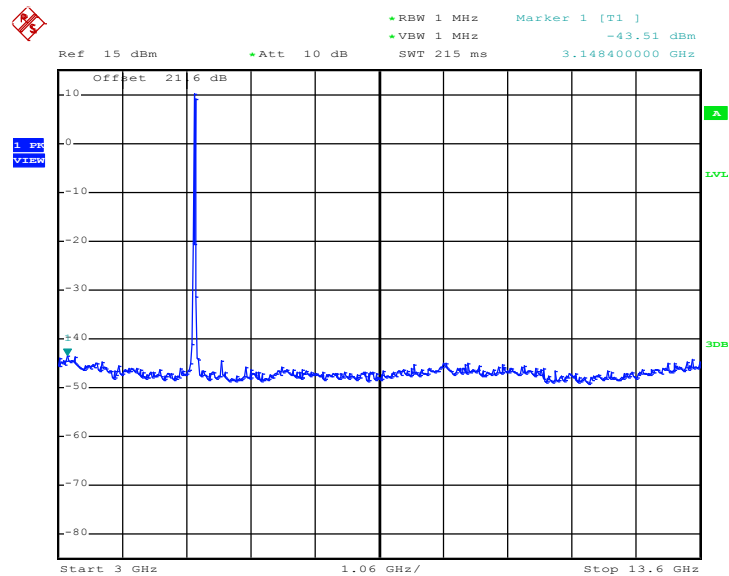


Date: 11.JUL.2011 22:43:48

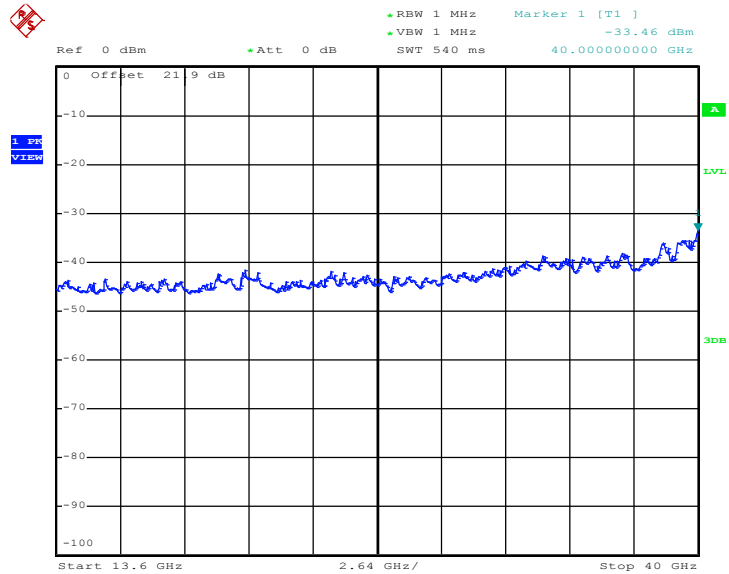
Spurious Emission Plot on Channel 52 between 802.11a 30 MHz ~ 40 GHz



Date: 11.JUL.2011 22:44:31

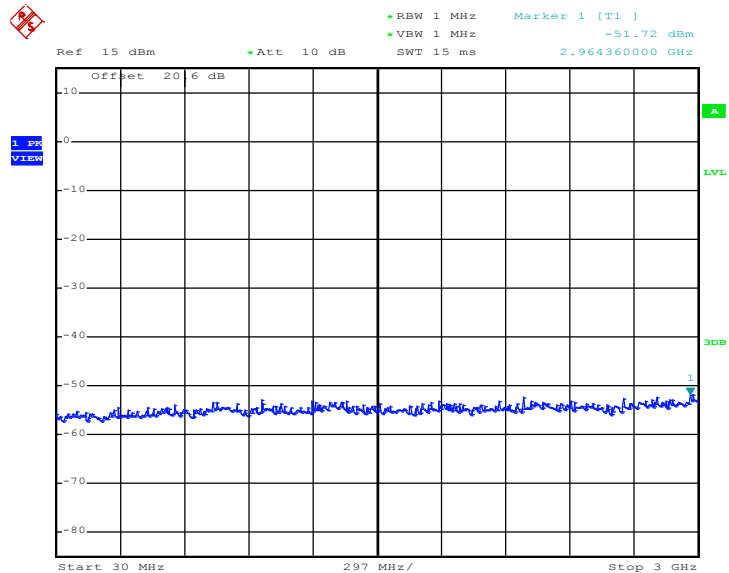


Date: 11.JUL.2011 22:44:43

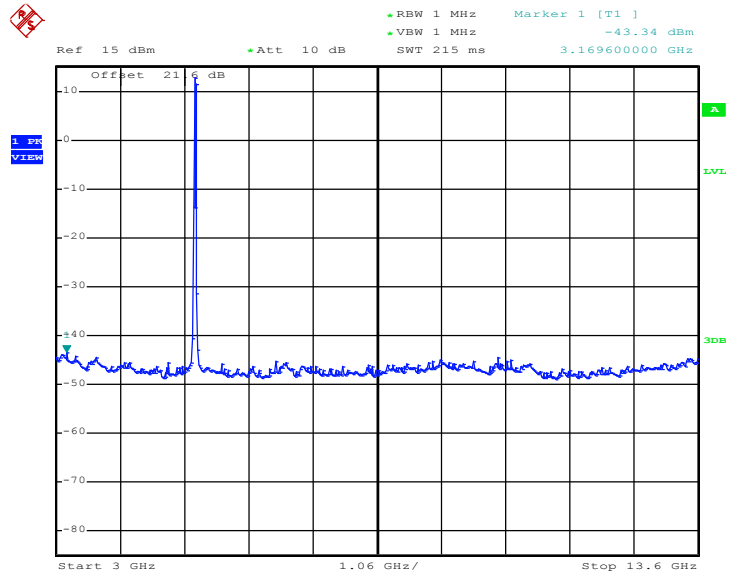


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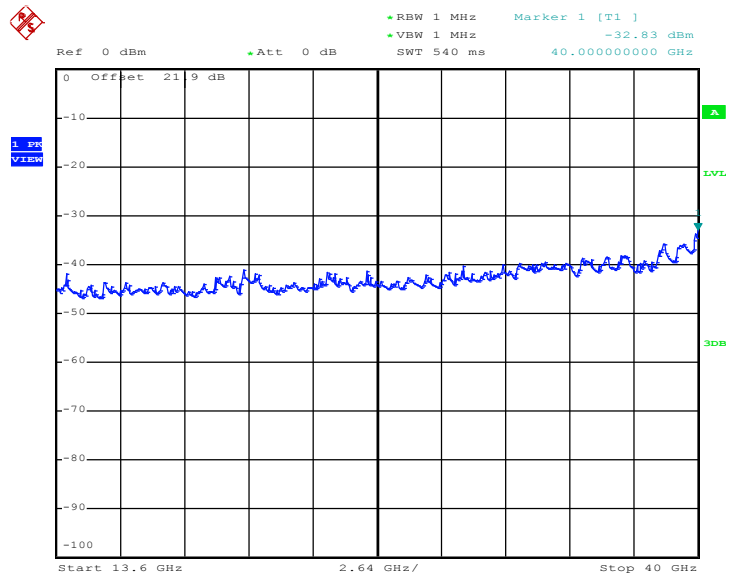
Spurious Emission Plot on Channel 60 between 802.11a 30 MHz ~ 40 GHz - Chain A



Date: 11.JUL.2011 22:45:34



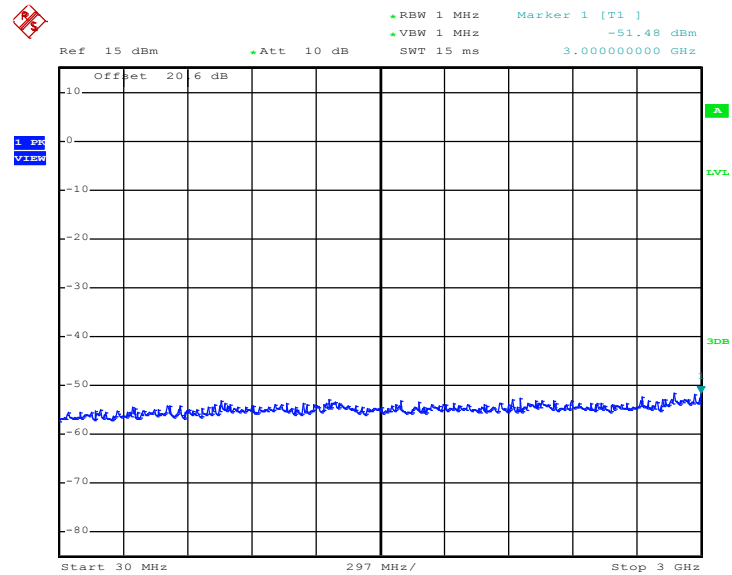
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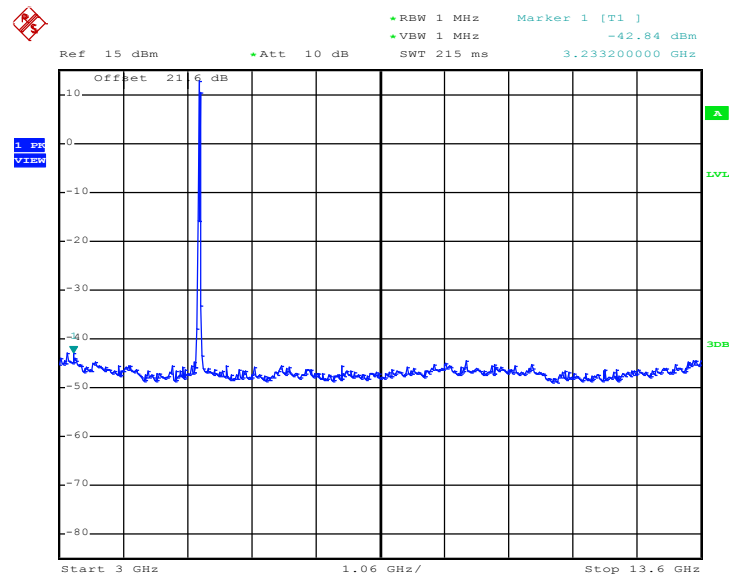
Date: 11.JUL.2011 22:45:56



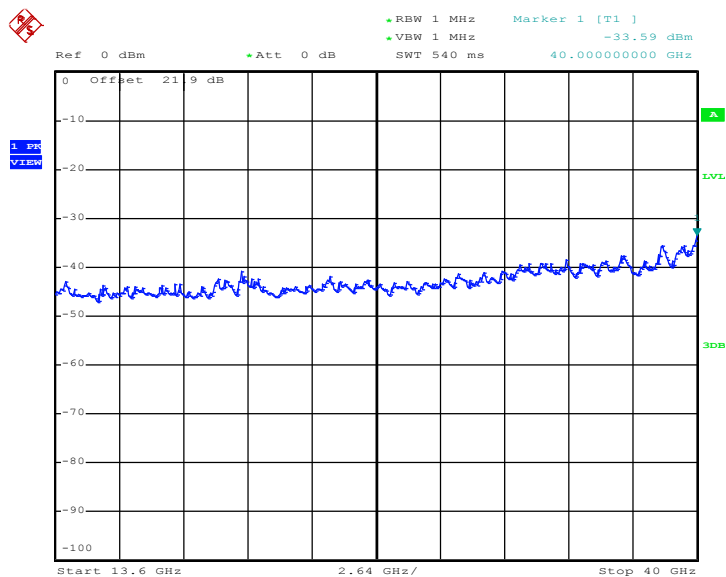
Spurious Emission Plot on Channel 64 between
802.11a 30 MHz ~ 40 GHz



Date: 11.JUL.2011 22:46:37

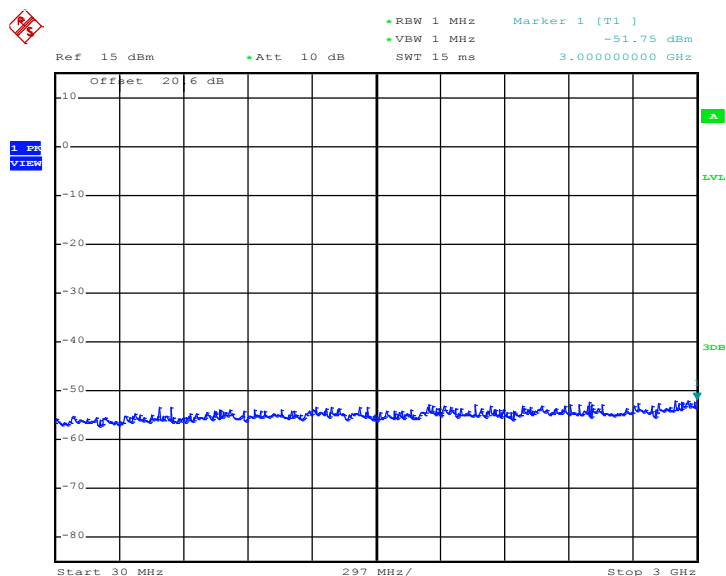


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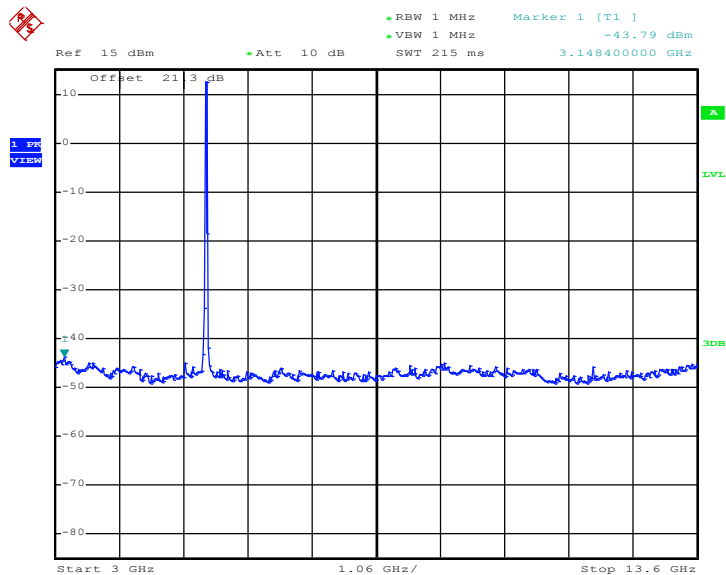


Date: 11.JUL.2011 22:47:00

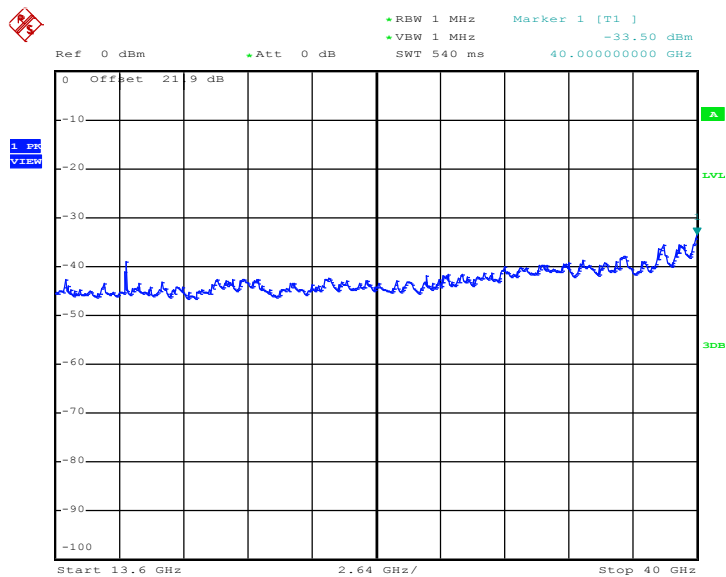
Spurious Emission Plot on Channel 100 between 802.11a 30 MHz ~ 40 GHz



Date: 11.JUL.2011 22:47:40

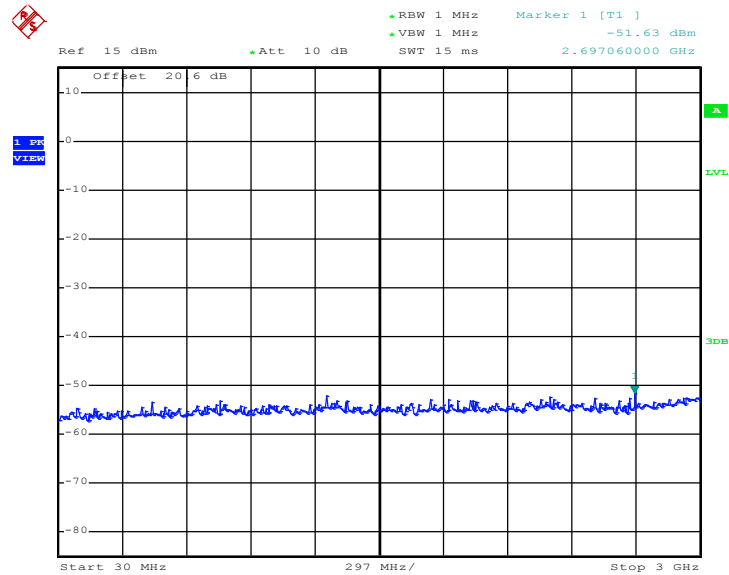


Date: 11.JUL.2011 22:47:51

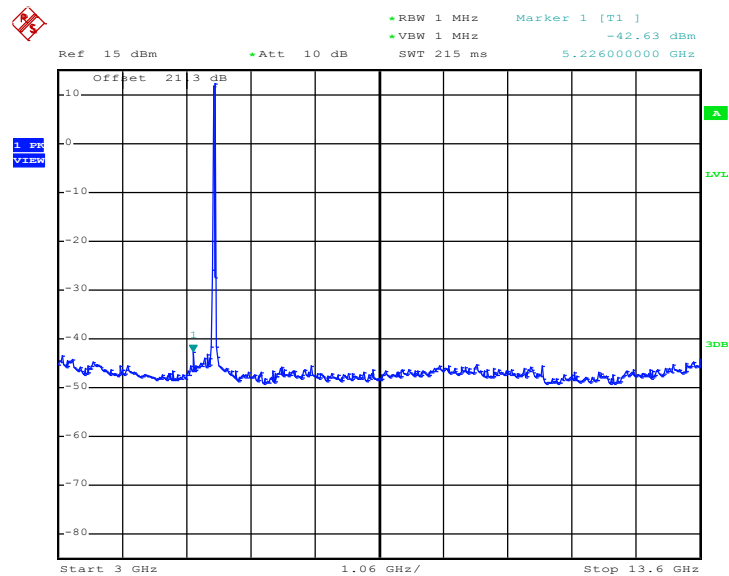


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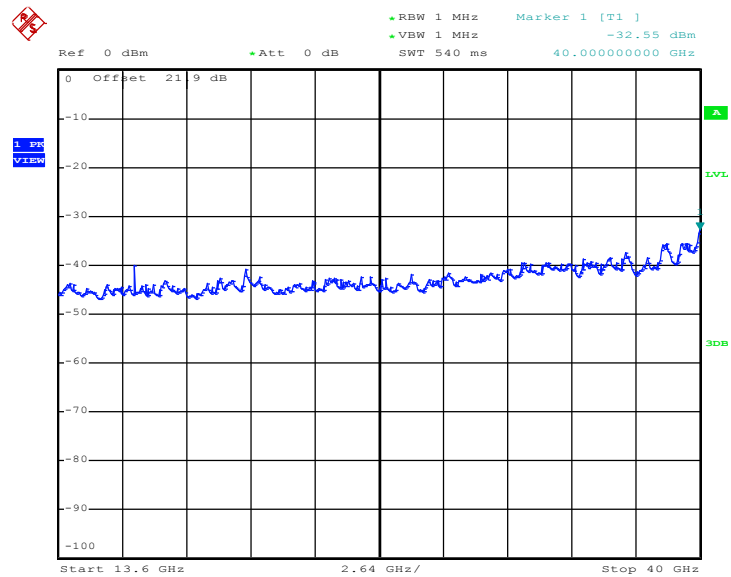
Spurious Emission Plot on Channel 116 between 802.11a 30 MHz ~ 40 GHz



Date: 11.JUL.2011 22:48:54

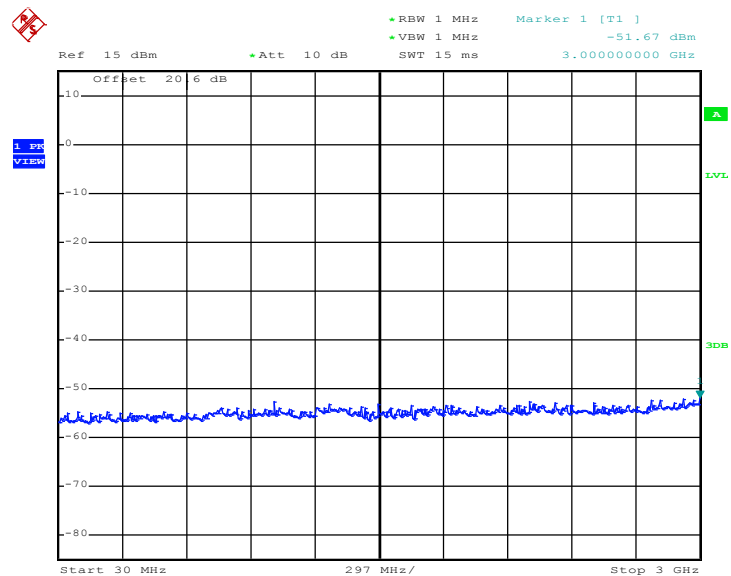


Date: 11.JUL.2011 22:49:05

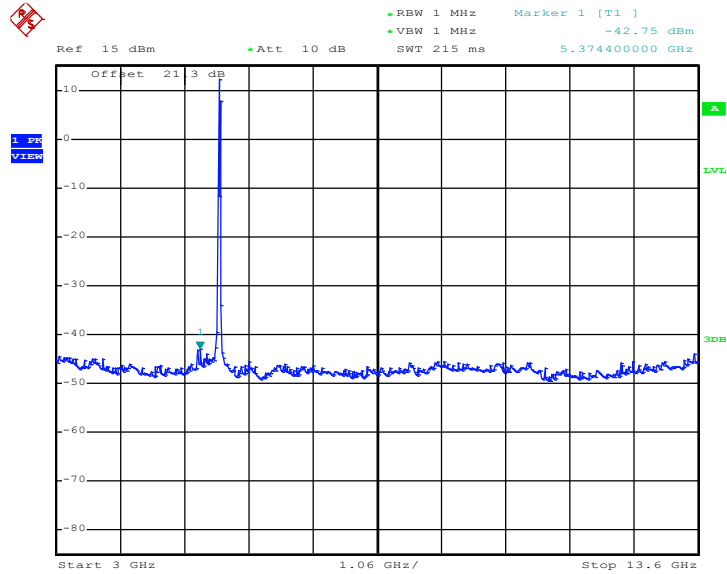


Date: 11.JUL.2011 22:49:17

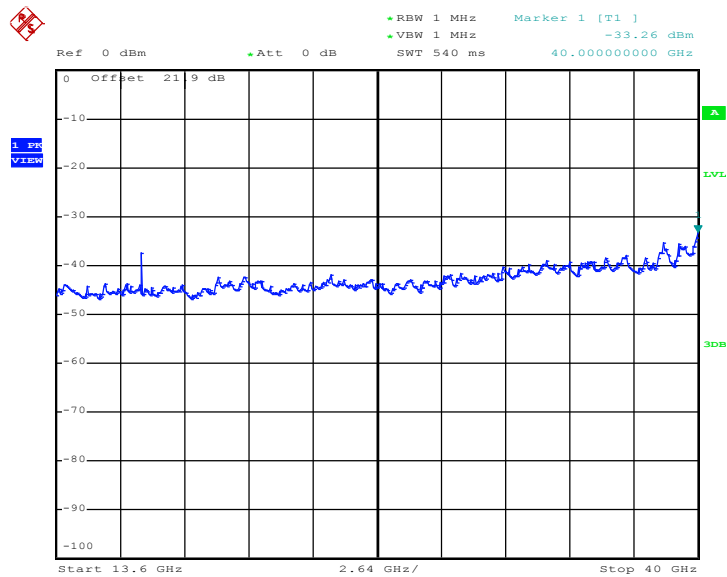
Spurious Emission Plot on Channel 140 between 802.11a 30 MHz ~ 40 GHz



Date: 11.JUL.2011 22:50:13



Date: 11.JUL.2011 22:50:25

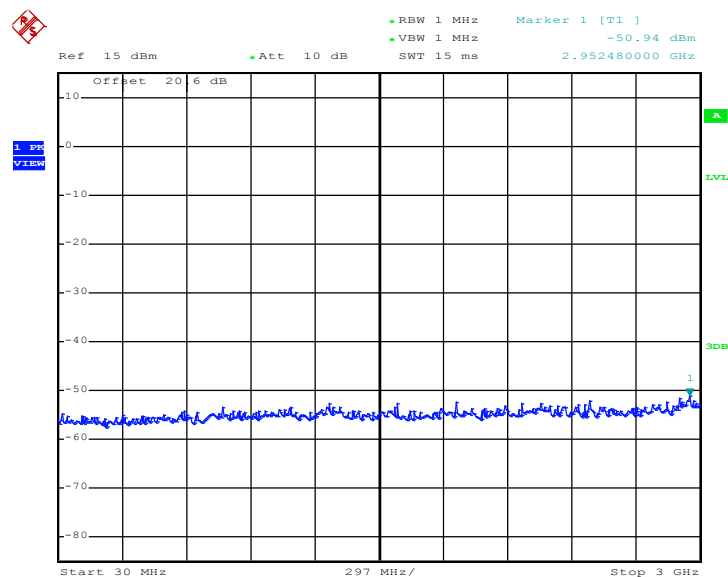


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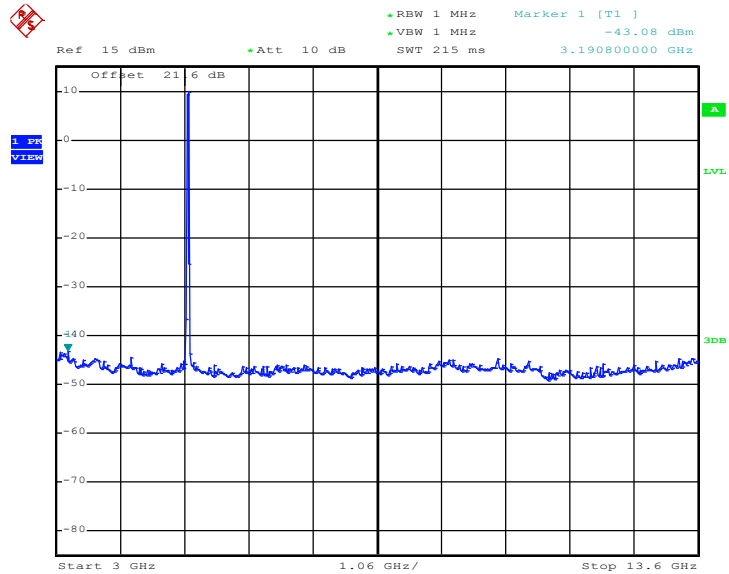


Test Mode :	Mode 10~18	Temperature :	24~26℃
Test Band :	802.11n (BW 20MHz)	Relative Humidity :	45~49%
Test Channel :	36, 44, 48, 52, 60, 64, 100, 116, 140	Test Engineer :	Alan Liu

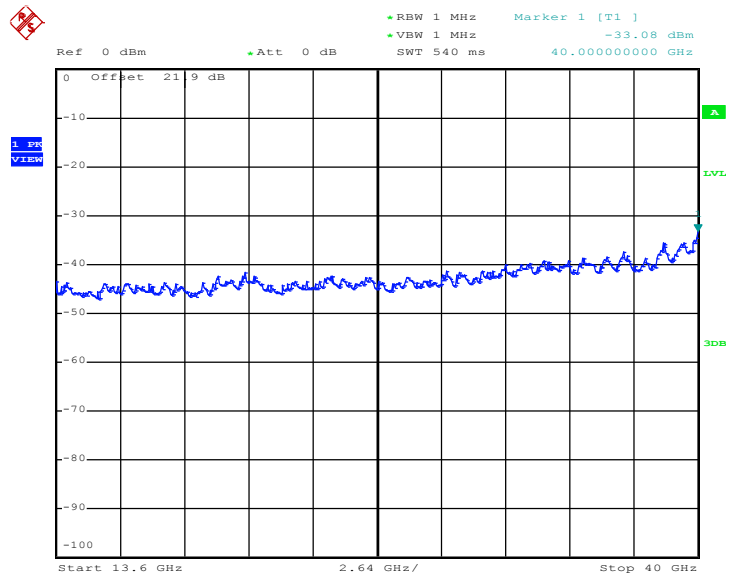
Spurious Emission Plot on Channel 36 between
802.11n (BW 20MHz) 30 MHz ~ 40 GHz



Date: 11.JUL.2011 22:19:36

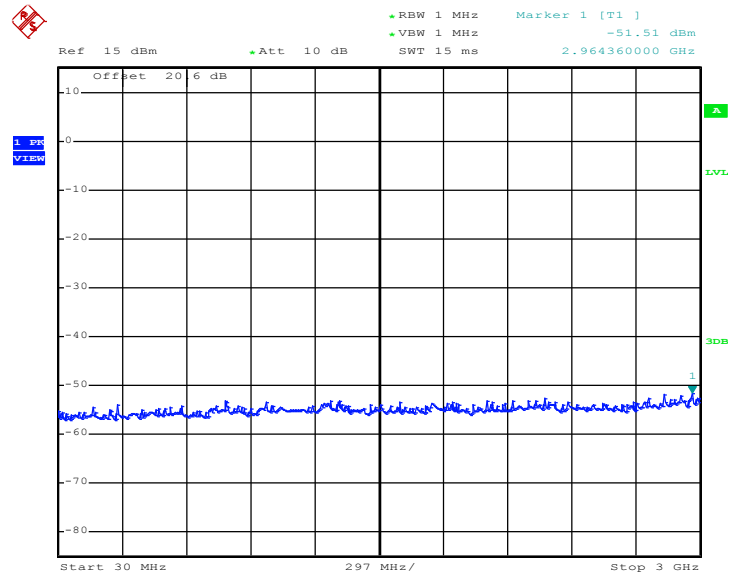


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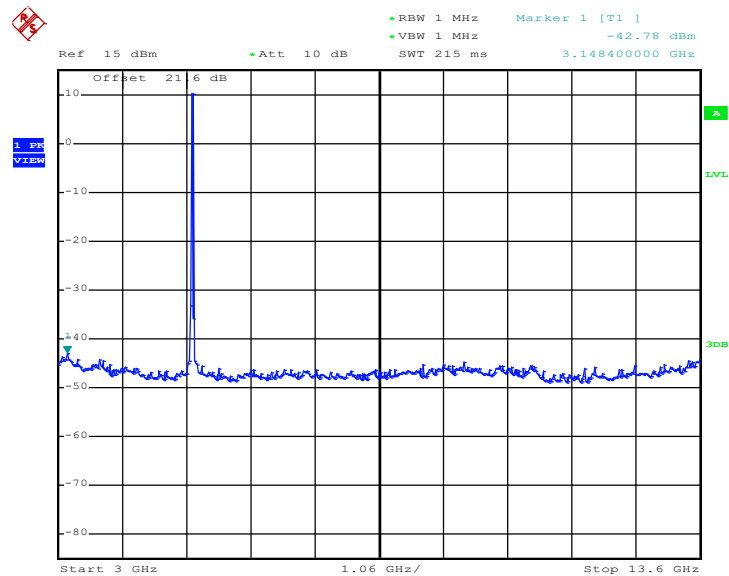


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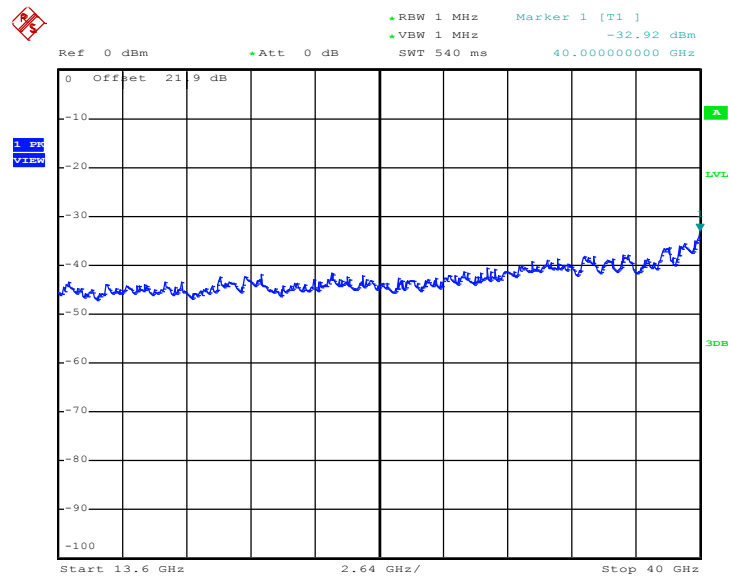
Spurious Emission Plot on Channel 44 between 802.11n (BW 20MHz) 30 MHz ~ 40 GHz



Date: 11.JUL.2011 22:20:34

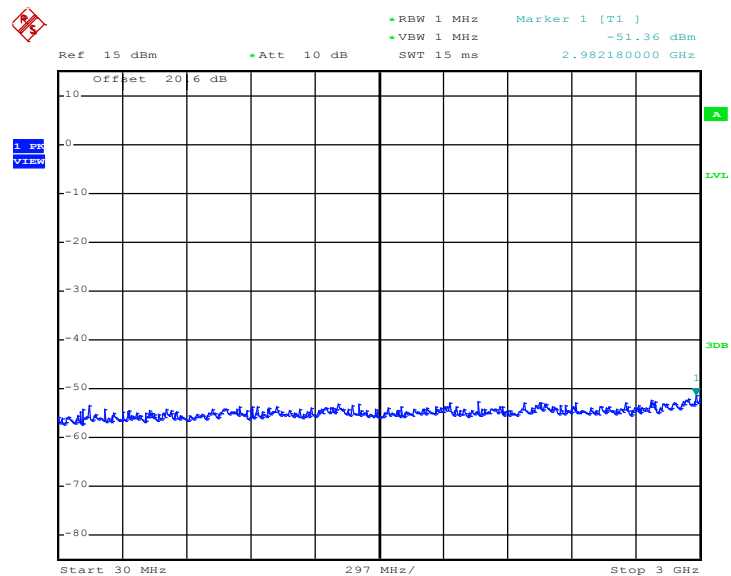


Date: 11.JUL.2011 22:20:46

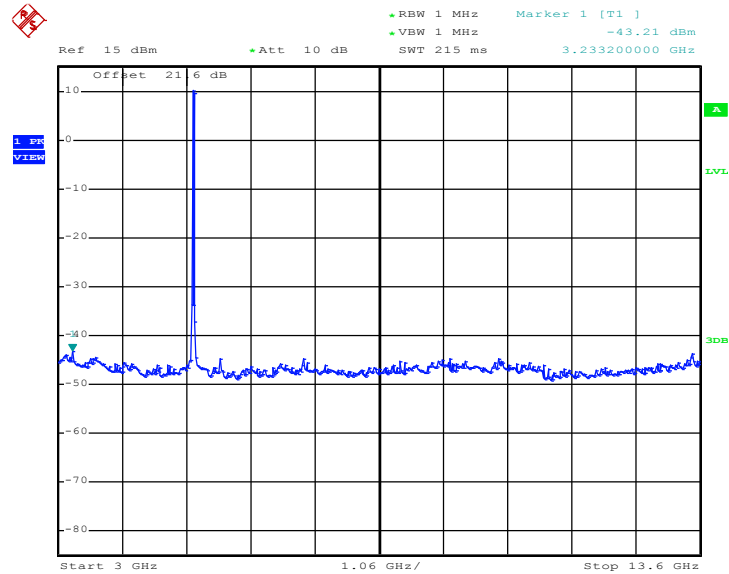


Date: 11.JUL.2011 22:20:57

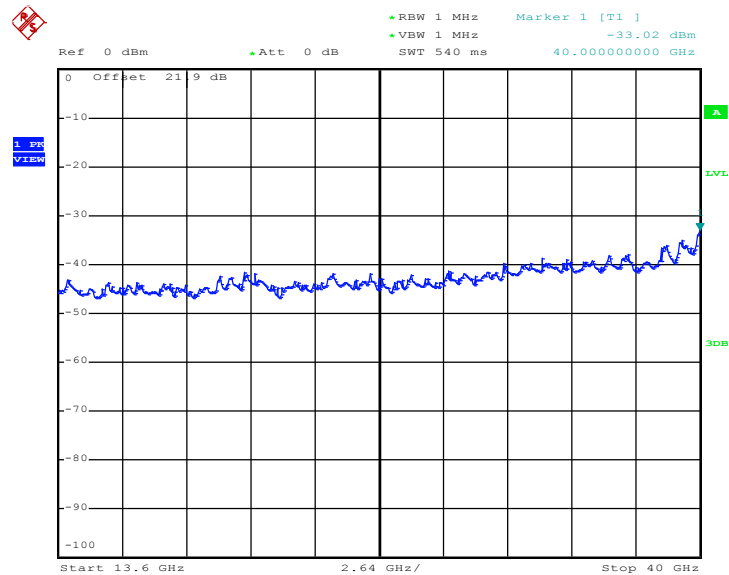
Spurious Emission Plot on Channel 48 between 802.11n (BW 20MHz) 30 MHz ~ 40 GHz



Date: 11.JUL.2011 22:21:46

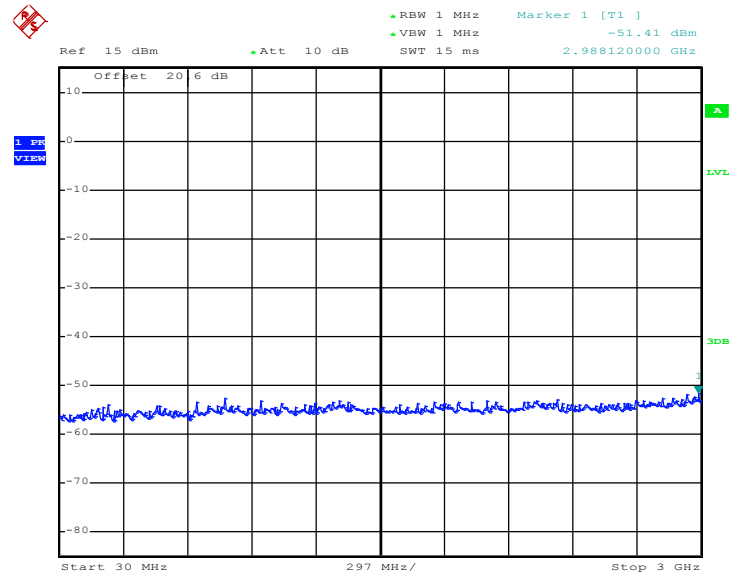


Date: 11.JUL.2011 22:35:52

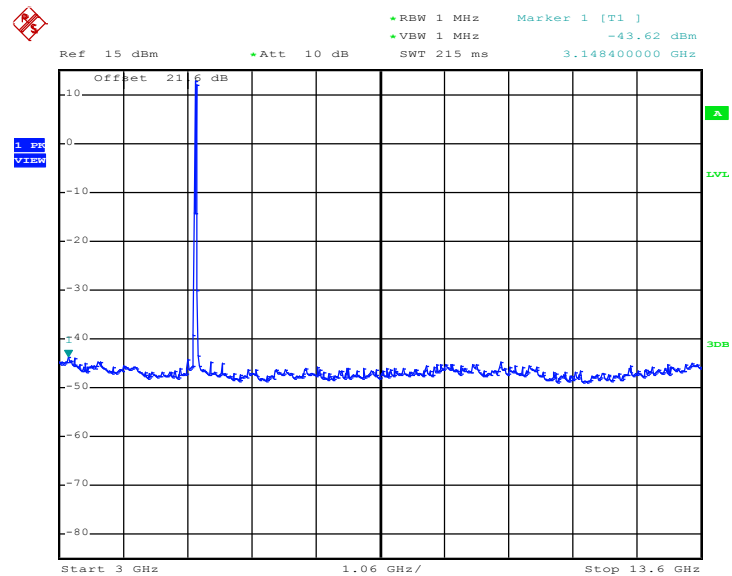


Date: 11.JUL.2011 22:22:08

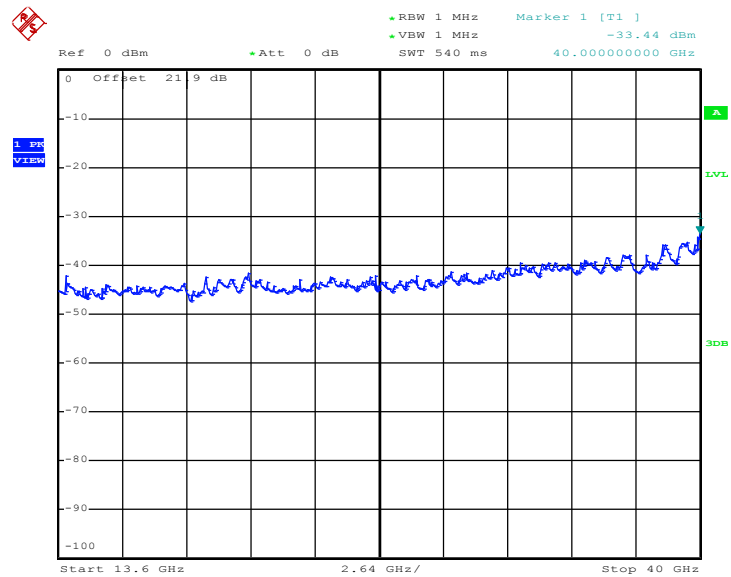
Spurious Emission Plot on Channel 52 between 802.11n (BW 20MHz) 30 MHz ~ 40 GHz



Date: 11.JUL.2011 22:23:11

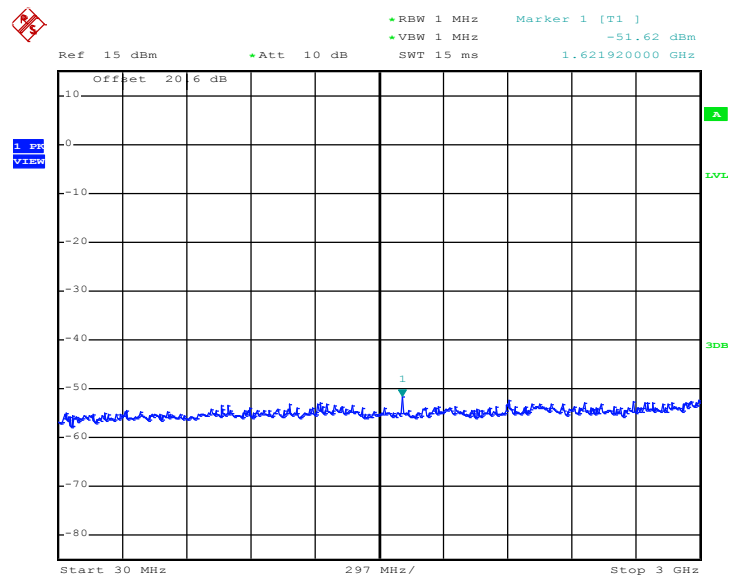


Date: 11.JUL.2011 22:23:22

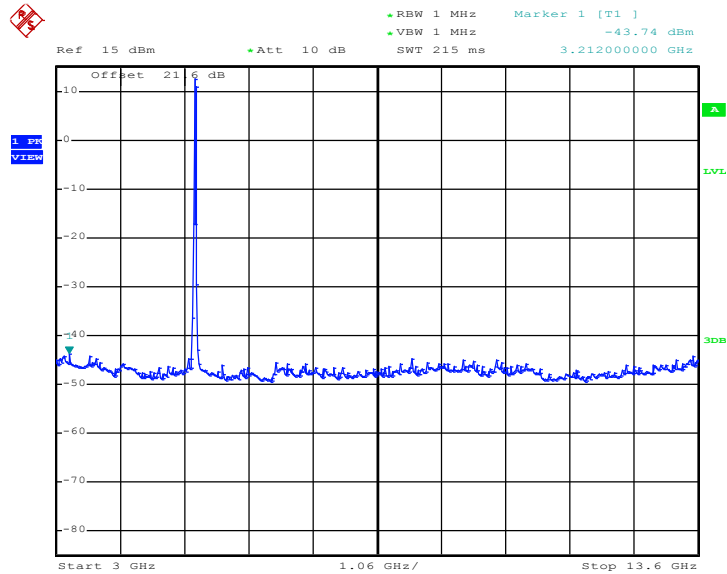


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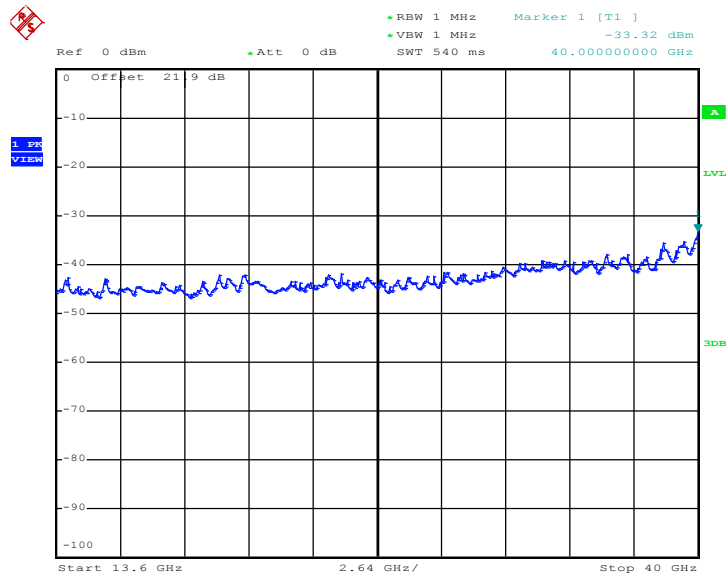
Spurious Emission Plot on Channel 60 between 802.11n (BW 20MHz) 30 MHz ~ 40 GHz



Date: 11.JUL.2011 22:24:23

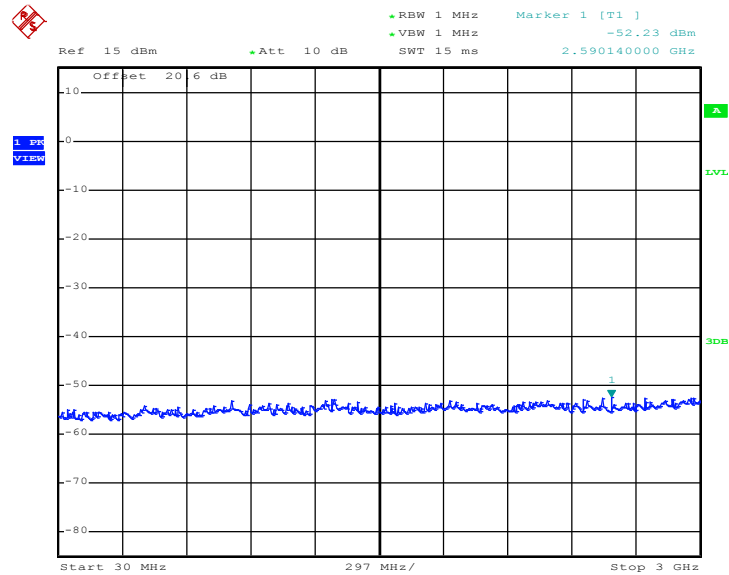


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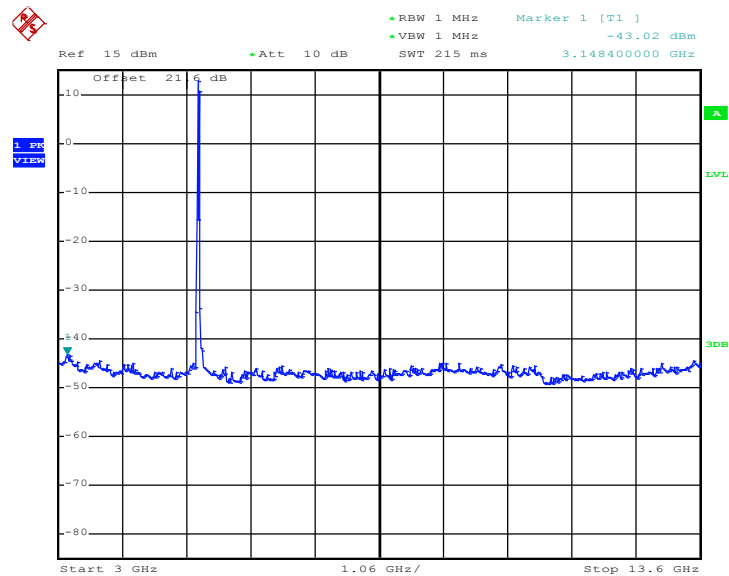


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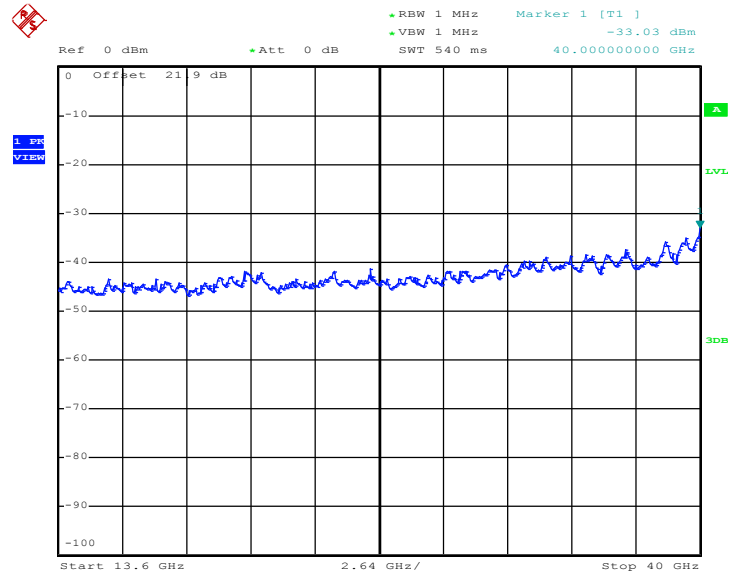
Spurious Emission Plot on Channel 64 between 802.11n (BW 20MHz) 30 MHz ~ 40 GHz



Date: 11.JUL.2011 22:26:07

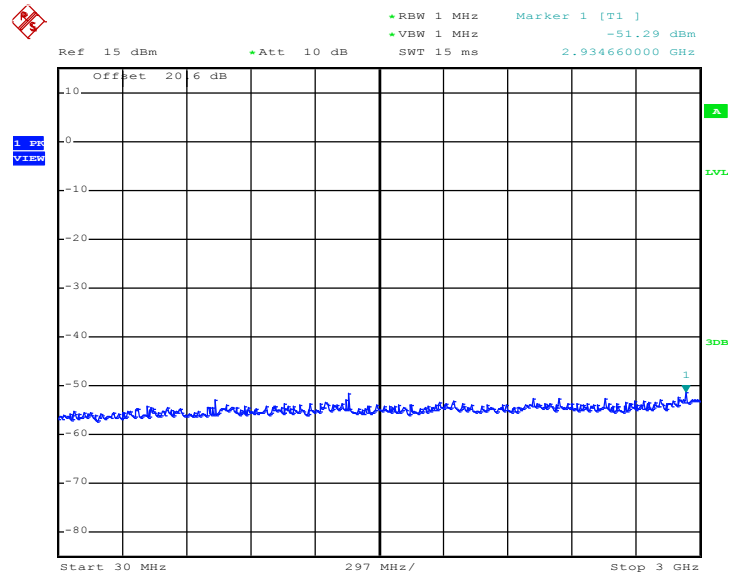


Date: 11.JUL.2011 22:26:18

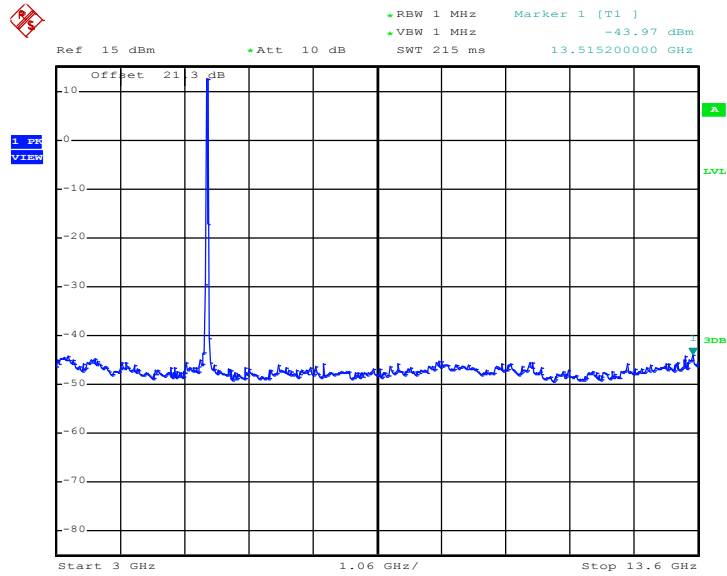


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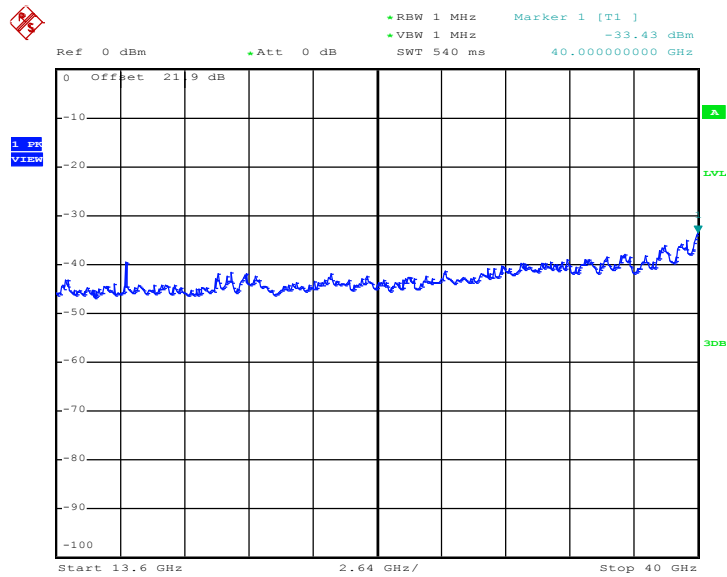
Spurious Emission Plot on Channel 100 between 802.11n (BW 20MHz) 30 MHz ~ 40 GHz



Date: 11.JUL.2011 22:27:18

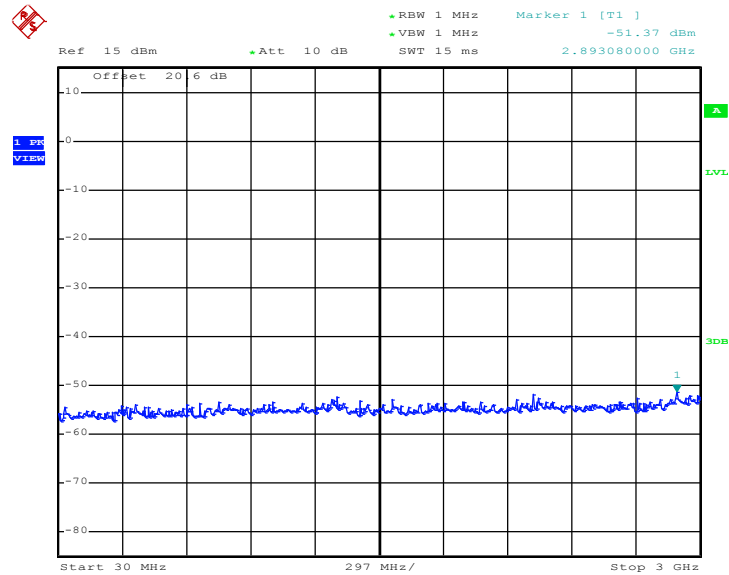


Date: 11.JUL.2011 22:27:29

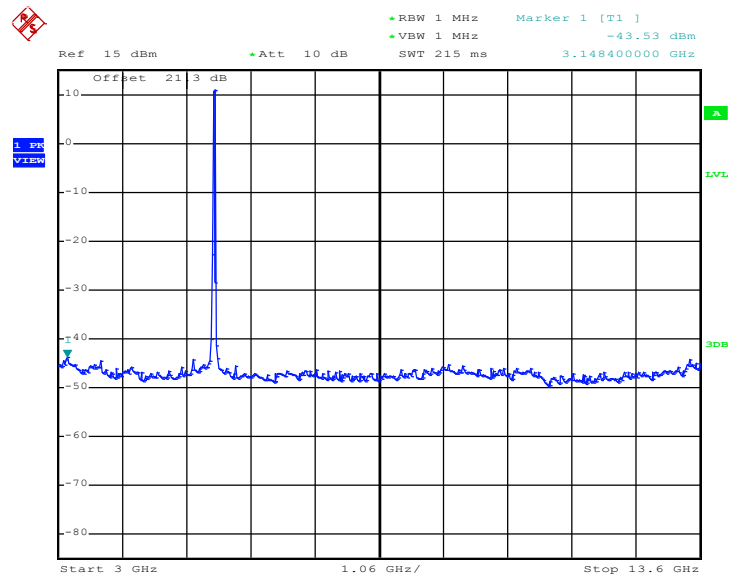


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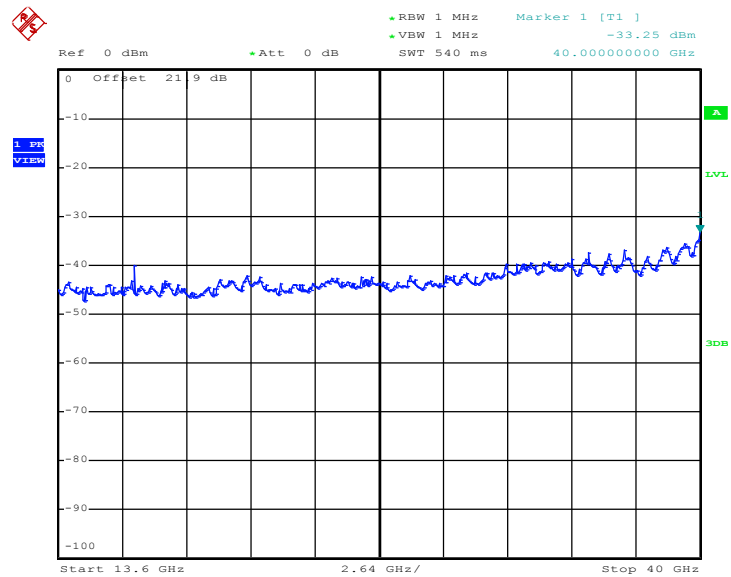
Spurious Emission Plot on Channel 116 between 802.11n (BW 20MHz) 30 MHz ~ 40 GHz



Date: 11.JUL.2011 22:28:18

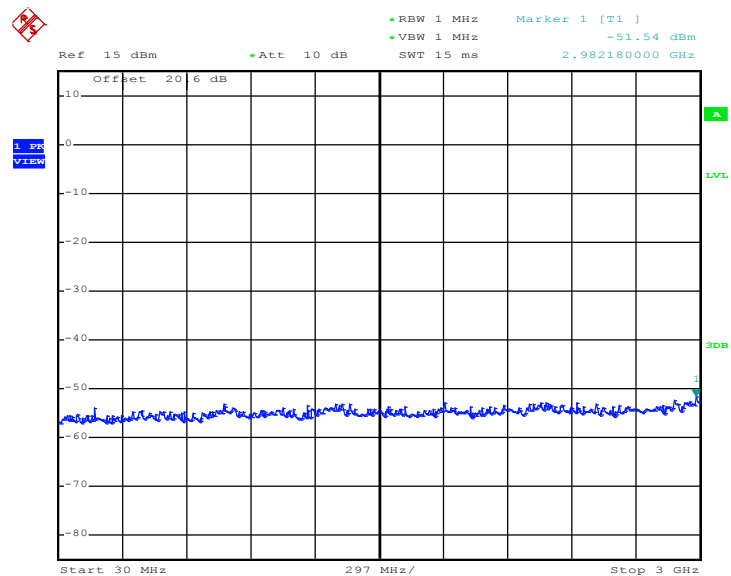


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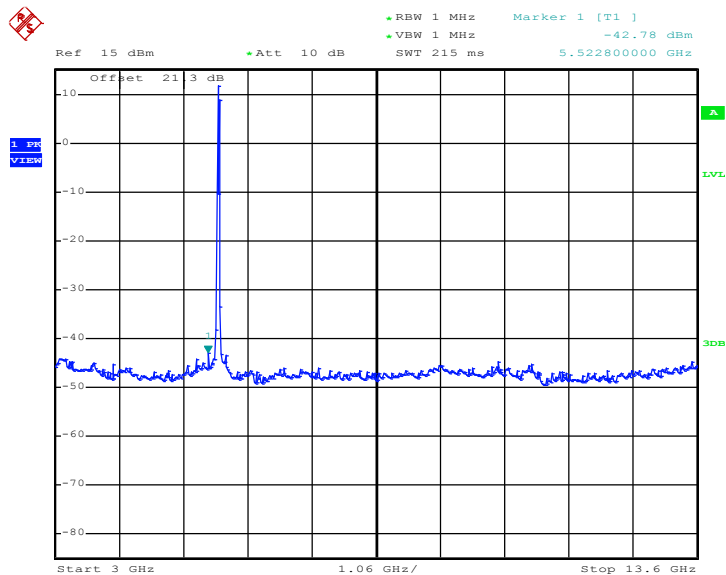


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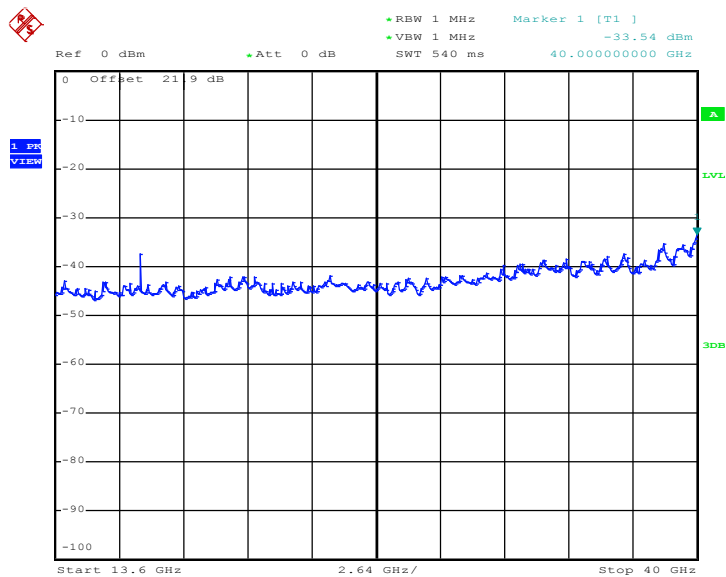
Spurious Emission Plot on Channel 140 between 802.11n (BW 20MHz) 30 MHz ~ 40 GHz



Date: 11.JUL.2011 22:29:29



Date: 11.JUL.2011 22:29:40



Date: 11.JUL.2011 22:29:51

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.

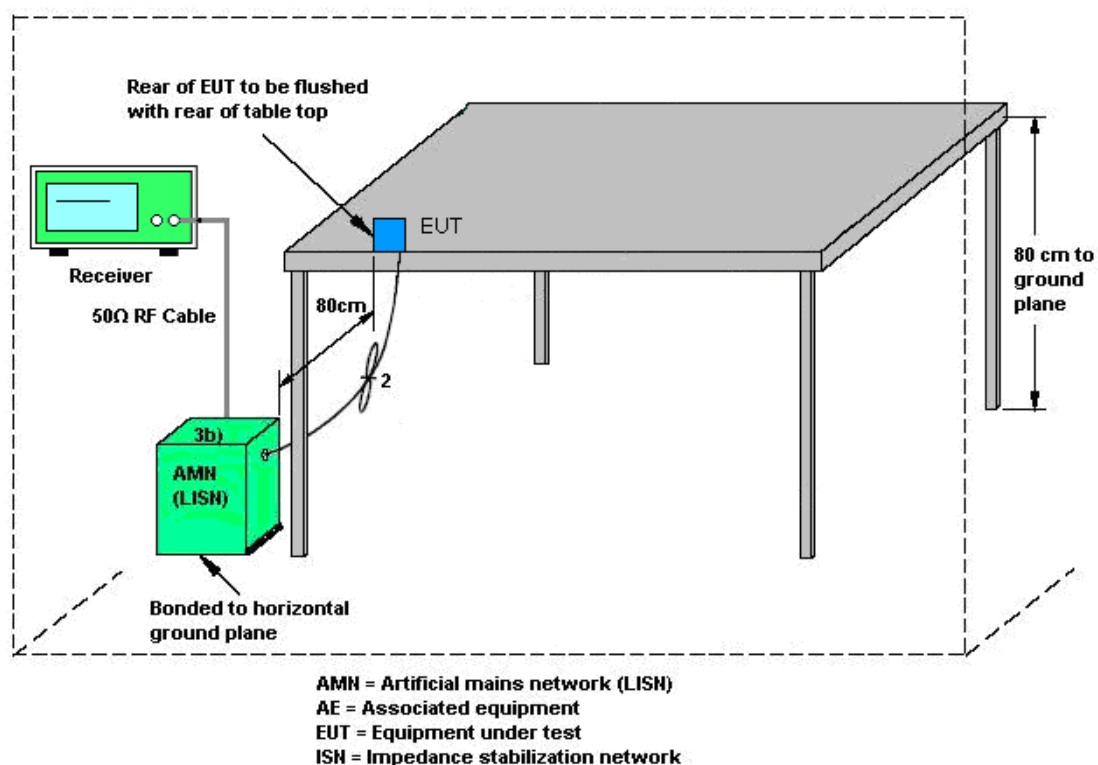
3.6.2 Measuring Instruments

See list of measuring instruments of this test report.

3.6.3 Test Procedures

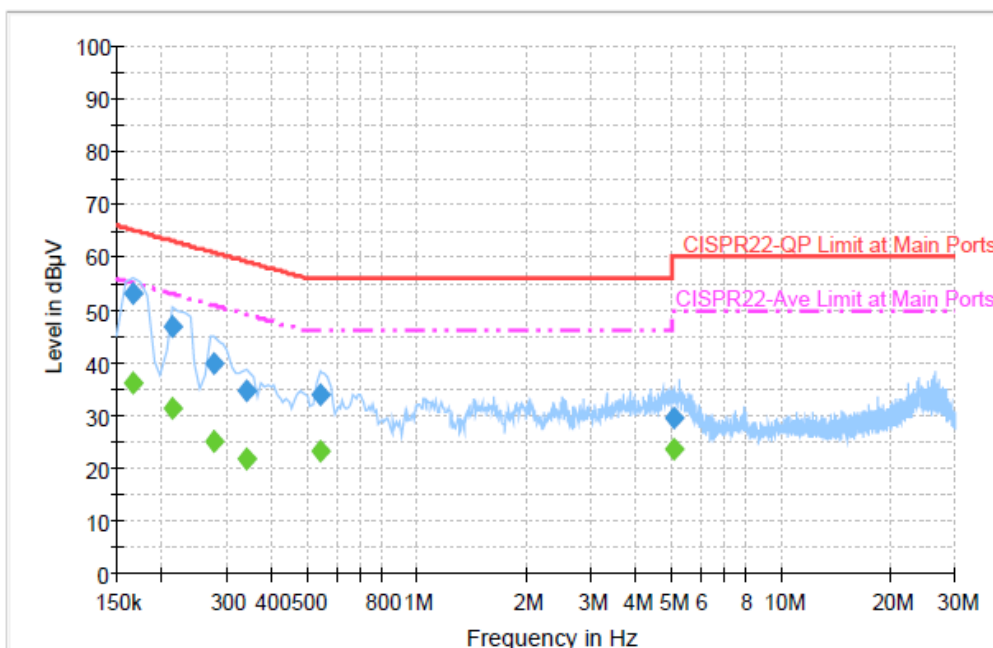
3. Please follow the guidelines in ANSI C63.4-2003.
4. The EUT was placed 0.4 meter from the conducting wall of the shielding room was kept at least 80 centimeters from any other grounded conducting surface.
5. Connect EUT to the power mains through a line impedance stabilization network (LISN).
6. All the support units are connecting to the other LISN.
7. The LISN provides 50 ohm coupling impedance for the measuring instrument.
8. The FCC states that a 50 ohm, 50 microhenry LISN should be used.
9. Both sides of AC line were checked for maximum conducted interference.
10. The frequency range from 150 kHz to 30 MHz was searched.
11. 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 :	22~24℃
Test Engineer :	Novic Chiang	Relative Humidity :	42~44%
Test Voltage :	120Vac / 60Hz	Phase :	Line
Function Type :	WLAN Link(5G) + Bluetooth Link + USB Charging Cable with AC Power + USB Link + Qwerty Keypad + Battery (3600mAh) + 2D Scanner for Sample 1		
Remark :	All emissions not reported here are more than 10 dB below the prescribed limit.		



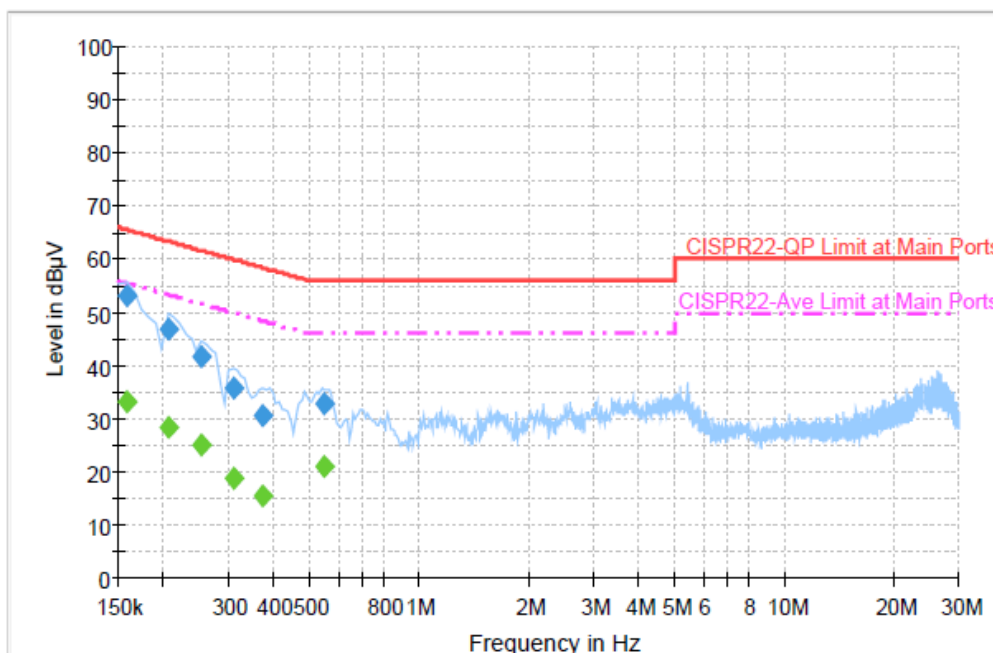
Final Result 1

Frequency (MHz)	QuasiPeak (dBμV)	Filter	Line	Corr. (dB)	Margin (dB)	Limit (dBμV)
0.166000	53.0	Off	L1	19.4	12.2	65.2
0.214000	46.8	Off	L1	19.4	16.2	63.0
0.278000	39.8	Off	L1	19.4	21.1	60.9
0.342000	34.8	Off	L1	19.4	24.4	59.2
0.542000	34.1	Off	L1	19.4	21.9	56.0
5.078000	29.6	Off	L1	19.5	30.4	60.0

Final Result 2

Frequency (MHz)	Average (dBμV)	Filter	Line	Corr. (dB)	Margin (dB)	Limit (dBμV)
0.166000	36.2	Off	L1	19.4	19.0	55.2
0.214000	31.2	Off	L1	19.4	21.8	53.0
0.278000	24.9	Off	L1	19.4	26.0	50.9
0.342000	21.6	Off	L1	19.4	27.6	49.2
0.542000	23.3	Off	L1	19.4	22.7	46.0
5.078000	23.6	Off	L1	19.5	26.4	50.0

Test Mode :	Mode 1	Temperature :	22~24°C
Test Engineer :	Novic Chiang	Relative Humidity :	42~44%
Test Voltage :	120Vac / 60Hz	Phase :	Neutral
Function Type :	WLAN Link(5G) + Bluetooth Link + USB Charging Cable with AC Power + USB Link + Qwerty Keypad + Battery (3600mAh) + 2D Scanner for Sample 1		
Remark :	All emissions not reported here are more than 10 dB below the prescribed limit.		

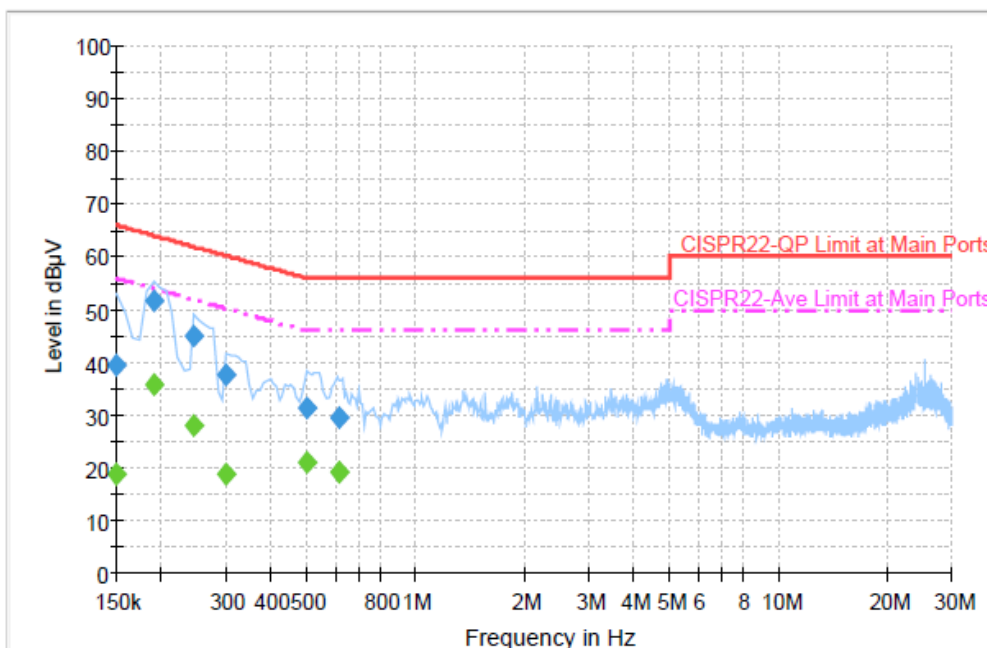

Final Result 1

Frequency (MHz)	QuasiPeak (dBμV)	Filter	Line	Corr. (dB)	Margin (dB)	Limit (dBμV)
0.158000	53.0	Off	N	19.4	12.6	65.6
0.206000	46.9	Off	N	19.4	16.5	63.4
0.254000	41.5	Off	N	19.4	20.1	61.6
0.310000	35.8	Off	N	19.4	24.2	60.0
0.374000	30.6	Off	N	19.4	27.8	58.4
0.550000	32.8	Off	N	19.4	23.2	56.0

Final Result 2

Frequency (MHz)	Average (dBμV)	Filter	Line	Corr. (dB)	Margin (dB)	Limit (dBμV)
0.158000	33.3	Off	N	19.4	22.3	55.6
0.206000	28.3	Off	N	19.4	25.1	53.4
0.254000	25.1	Off	N	19.4	26.5	51.6
0.310000	19.0	Off	N	19.4	31.0	50.0
0.374000	15.4	Off	N	19.4	33.0	48.4
0.550000	21.0	Off	N	19.4	25.0	46.0

Test Mode :	Mode 2	Temperature :	22~24°C
Test Engineer :	Novic Chiang	Relative Humidity :	42~44%
Test Voltage :	120Vac / 60Hz	Phase :	Line
Function Type :	WLAN Link(5G) + Bluetooth Link + USB Charging Cable with AC Power + USB Link + Numeric Keypad + Battery (3600mAh) + 2D Scanner for Sample 1		
Remark :	All emissions not reported here are more than 10 dB below the prescribed limit.		

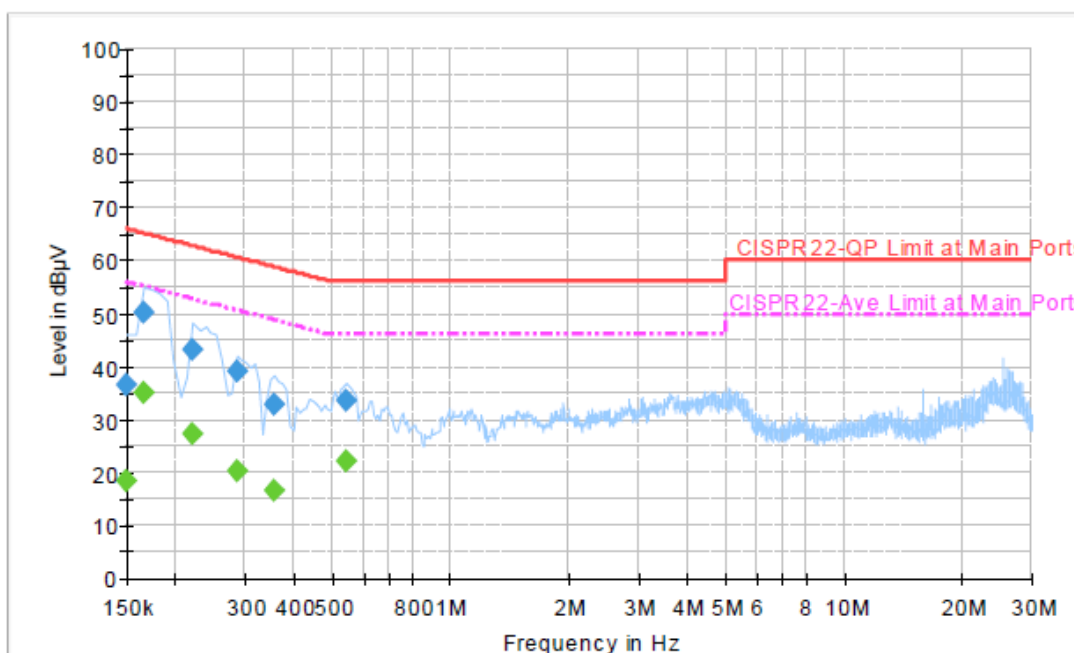

Final Result 1

Frequency (MHz)	QuasiPeak (dBμV)	Filter	Line	Corr. (dB)	Margin (dB)	Limit (dBμV)
0.150000	39.5	Off	L1	19.4	26.5	66.0
0.190000	51.6	Off	L1	19.4	12.4	64.0
0.246000	45.0	Off	L1	19.4	16.9	61.9
0.302000	37.8	Off	L1	19.4	22.4	60.2
0.502000	31.3	Off	L1	19.4	24.7	56.0
0.614000	29.4	Off	L1	19.4	26.6	56.0

Final Result 2

Frequency (MHz)	Average (dBμV)	Filter	Line	Corr. (dB)	Margin (dB)	Limit (dBμV)
0.150000	18.8	Off	L1	19.4	37.2	56.0
0.190000	35.8	Off	L1	19.4	18.2	54.0
0.246000	27.9	Off	L1	19.4	24.0	51.9
0.302000	18.8	Off	L1	19.4	31.4	50.2
0.502000	21.1	Off	L1	19.4	24.9	46.0
0.614000	19.3	Off	L1	19.4	26.7	46.0

Test Mode :	Mode 2	Temperature :	22~24°C
Test Engineer :	Novic Chiang	Relative Humidity :	42~44%
Test Voltage :	120Vac / 60Hz	Phase :	Neutral
Function Type :	WLAN Link(5G) + Bluetooth Link + USB Charging Cable with AC Power + USB Link + Numeric Keypad + Battery (3600mAh) + 2D Scanner for Sample 1		
Remark :	All emissions not reported here are more than 10 dB below the prescribed limit.		

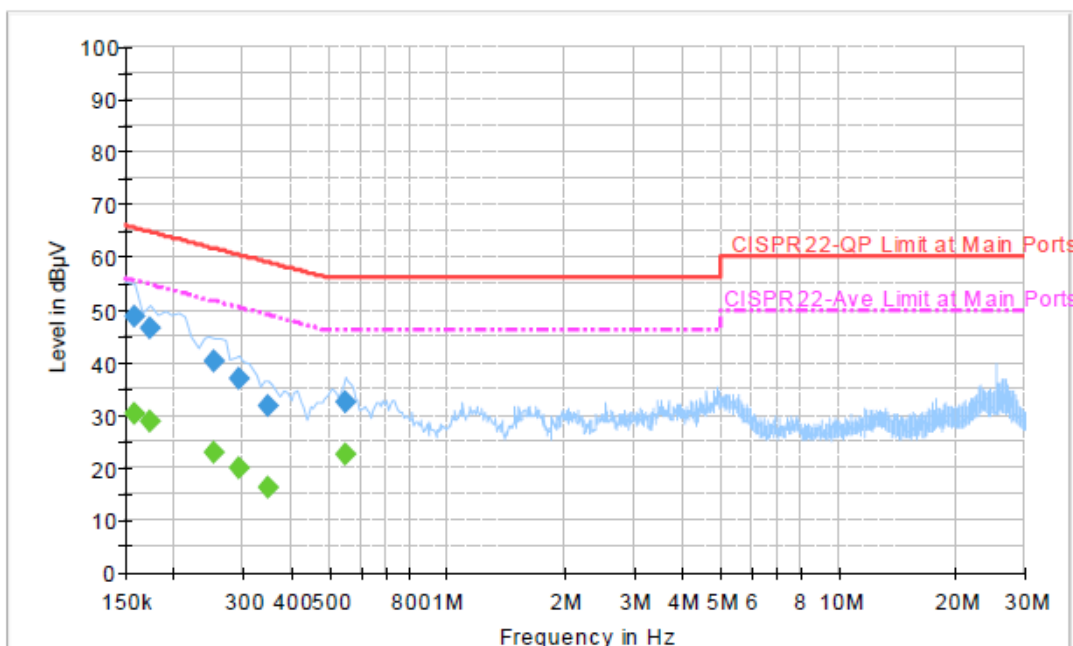

Final Result 1

Frequency (MHz)	QuasiPeak (dBμV)	Filter	Line	Corr. (dB)	Margin (dB)	Limit (dBμV)
0.150000	36.7	Off	N	19.4	29.3	66.0
0.166000	50.3	Off	N	19.4	14.9	65.2
0.222000	43.3	Off	N	19.4	19.4	62.7
0.286000	39.1	Off	N	19.4	21.5	60.6
0.358000	32.8	Off	N	19.4	26.0	58.8
0.542000	33.5	Off	N	19.4	22.5	56.0

Final Result 2

Frequency (MHz)	Average (dBμV)	Filter	Line	Corr. (dB)	Margin (dB)	Limit (dBμV)
0.150000	18.8	Off	N	19.4	37.2	56.0
0.166000	35.0	Off	N	19.4	20.2	55.2
0.222000	27.4	Off	N	19.4	25.3	52.7
0.286000	20.4	Off	N	19.4	30.2	50.6
0.358000	16.6	Off	N	19.4	32.2	48.8
0.542000	22.1	Off	N	19.4	23.9	46.0

Test Mode :	Mode 3	Temperature :	22~24°C
Test Engineer :	Novic Chiang	Relative Humidity :	42~44%
Test Voltage :	120Vac / 60Hz	Phase :	Line
Function Type :	WLAN Link(5G) + Bluetooth Link + USB Charging Cable with AC Power + USB Link + PIM Keypad + Battery (2400mAh) + 1D Scanner for Sample 1		
Remark :	All emissions not reported here are more than 10 dB below the prescribed limit.		

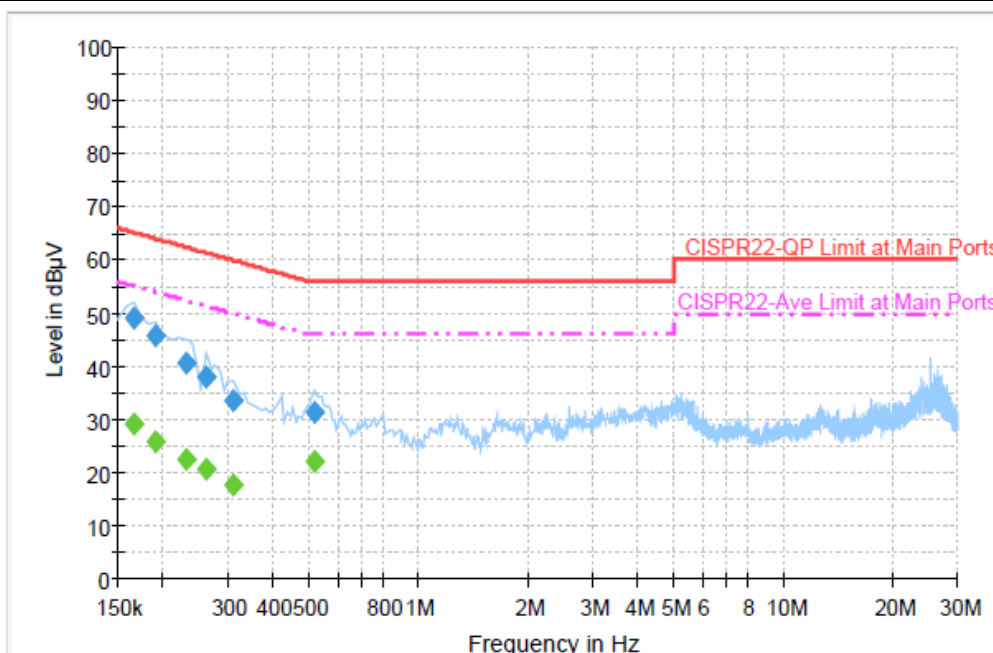

Final Result 1

Frequency (MHz)	QuasiPeak (dBμV)	Filter	Line	Corr. (dB)	Margin (dB)	Limit (dBμV)
0.158000	48.8	Off	L1	19.4	16.8	65.6
0.174000	46.5	Off	L1	19.4	18.3	64.8
0.254000	40.1	Off	L1	19.4	21.5	61.6
0.294000	36.7	Off	L1	19.4	23.7	60.4
0.350000	31.9	Off	L1	19.4	27.1	59.0
0.550000	32.6	Off	L1	19.4	23.4	56.0

Final Result 2

Frequency (MHz)	Average (dBμV)	Filter	Line	Corr. (dB)	Margin (dB)	Limit (dBμV)
0.158000	30.4	Off	L1	19.4	25.2	55.6
0.174000	28.6	Off	L1	19.4	26.2	54.8
0.254000	22.9	Off	L1	19.4	28.7	51.6
0.294000	20.0	Off	L1	19.4	30.4	50.4
0.350000	16.3	Off	L1	19.4	32.7	49.0
0.550000	22.7	Off	L1	19.4	23.3	46.0

Test Mode :	Mode 3	Temperature :	22~24℃
Test Engineer :	Novic Chiang	Relative Humidity :	42~44%
Test Voltage :	120Vac / 60Hz	Phase :	Neutral
Function Type :	WLAN Link(5G) + Bluetooth Link + USB Charging Cable with AC Power + USB Link + PIM Keypad + Battery (2400mAh) + 1D Scanner for Sample 1		
Remark :	All emissions not reported here are more than 10 dB below the prescribed limit.		


Final Result 1

Frequency (MHz)	QuasiPeak (dBμV)	Filter	Line	Corr. (dB)	Margin (dB)	Limit (dBμV)
0.166000	49.2	Off	N	19.4	16.0	65.2
0.190000	45.9	Off	N	19.4	18.1	64.0
0.230000	40.7	Off	N	19.5	21.7	62.4
0.262000	38.1	Off	N	19.4	23.3	61.4
0.310000	33.7	Off	N	19.4	26.3	60.0
0.518000	31.4	Off	N	19.4	24.6	56.0

Final Result 2

Frequency (MHz)	Average (dBμV)	Filter	Line	Corr. (dB)	Margin (dB)	Limit (dBμV)
0.166000	29.1	Off	N	19.4	26.1	55.2
0.190000	26.0	Off	N	19.4	28.0	54.0
0.230000	22.4	Off	N	19.5	30.0	52.4
0.262000	20.6	Off	N	19.4	30.8	51.4
0.310000	17.8	Off	N	19.4	32.2	50.0
0.518000	22.1	Off	N	19.4	23.9	46.0

3.8 Radiated Emission Measurement

3.8.1 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.

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

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

3.8.2 Measuring Instruments

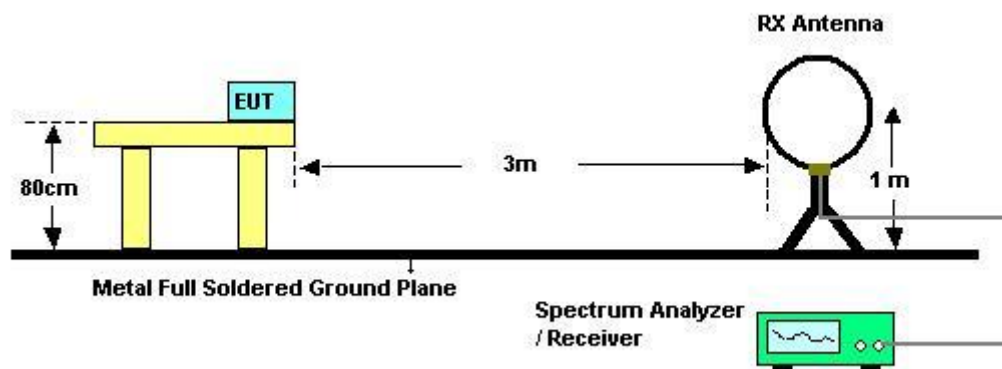
See list of measuring instruments of this test report.

3.8.3 Test Procedures

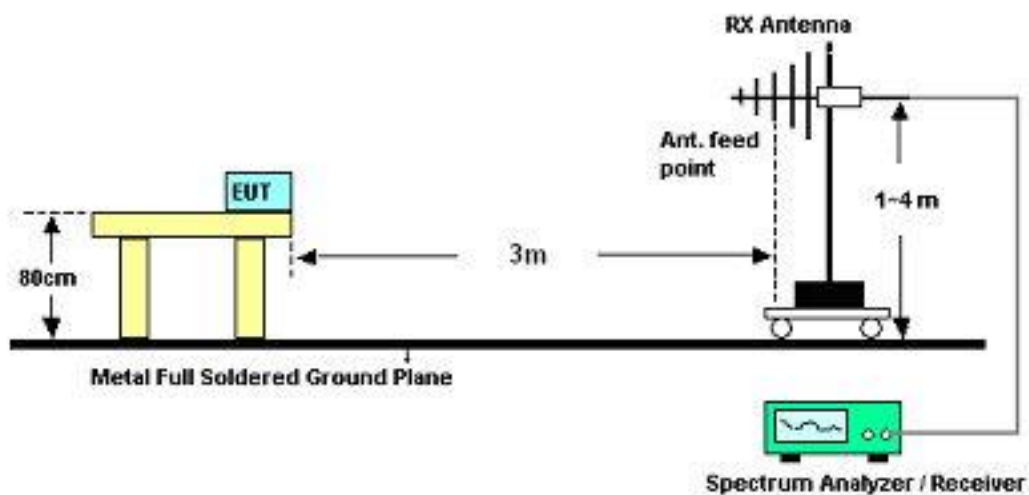
1. The testing follows the guidelines in FCC Public Notice DA 02-2138, (Measurement Guidelines of UNII)
2. The EUT was placed on a rotatable table top 0.8 meter above ground.
3. The EUT was set 3 meters from the interference receiving antenna which was mounted on the top of a variable height antenna 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.

3.8.4 Test Setup

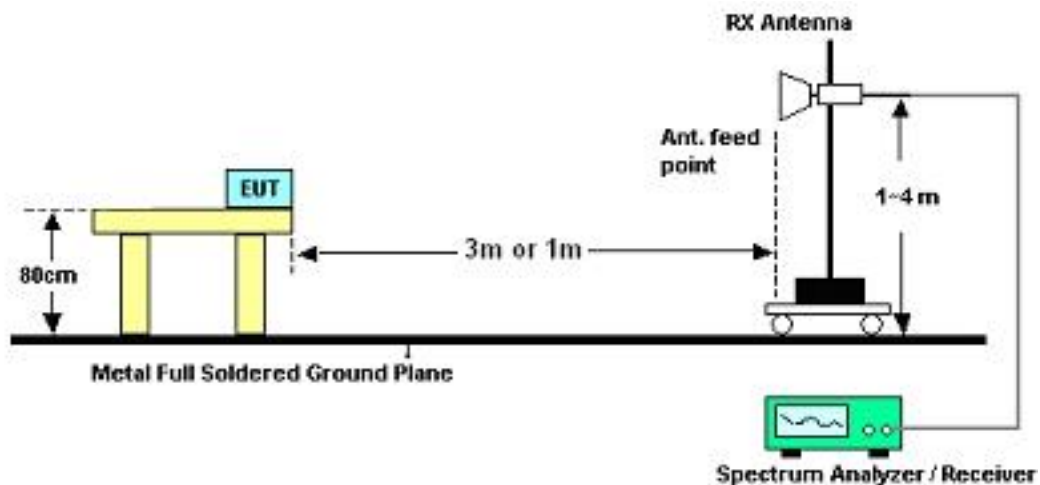
For radiated emissions below 30MHz



For radiated emissions from 30MHz to 1GHz



For radiated emissions above 1GHz



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

Temperature	23~25°C	Humidity	49~51%
Test Engineer	Ivan Chiang		

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.

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

Test Mode :	Mode 1	Temperature :	23~25°C
Test Channel :	36	Relative Humidity :	49~51%
Test Engineer :	Ivan Chiang	Polarization :	Horizontal
Remark :	5180 MHz is Fundamental Signals which can be ignored.		

Frequency (MHz)	Level (dBuV/m)	Over Limit (dB)	Limit Line (dBuV/m)	Read Level (dBuV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
124.77	27.69	-15.81	43.5	46.57	11.56	1.12	31.56	125	174	Peak
197.94	23.56	-19.94	43.5	44.65	9.09	1.31	31.49	-	-	Peak
287.58	21.52	-24.48	46	37.9	13.27	1.68	31.33	-	-	Peak
337.8	22.2	-23.8	46	36.99	14.63	1.88	31.3	-	-	Peak
570.9	21.14	-24.86	46	30.16	19.32	2.61	30.95	-	-	Peak
802.6	23.98	-22.02	46	29.02	22.49	3.15	30.68	-	-	Peak
5150	47.36	-6.64	54	37.35	34.25	9.41	33.65	100	322	Average
5150	65.63	-8.37	74	55.62	34.25	9.41	33.65	100	322	Peak
5180	102.32	-	-	92.19	34.28	9.45	33.6	100	322	Average
5180	112.56	-	-	102.43	34.28	9.45	33.6	100	322	Peak
5350	52.77	-21.23	74	41.84	34.45	9.74	33.26	100	322	Peak
5350	41.34	-12.66	54	30.41	34.45	9.74	33.26	100	322	Average

Test Mode :	Mode 1	Temperature :	23~25°C
Test Channel :	36	Relative Humidity :	49~51%
Test Engineer :	Ivan Chiang	Polarization :	Vertical
Remark :	5180 MHz is Fundamental Signals which can be ignored.		

Frequency (MHz)	Level (dBuV/m)	Over Limit (dB)	Limit Line (dBuV/m)	Read Level (dBuV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
78.33	32.26	-7.74	40	55.87	7.05	0.87	31.53	105	336	Peak
93.45	29.69	-13.81	43.5	51.25	9.01	0.96	31.53	-	-	Peak
121.26	28.62	-14.88	43.5	47.53	11.54	1.11	31.56	-	-	Peak
329.4	18.03	-27.97	46	33.1	14.39	1.85	31.31	-	-	Peak
551.3	20.01	-25.99	46	29.43	19.01	2.55	30.98	-	-	Peak
792.8	23.32	-22.68	46	28.52	22.35	3.13	30.68	-	-	Peak
5150	42.57	-11.43	54	32.56	34.25	9.41	33.65	100	16	Average
5150	57.37	-16.63	74	47.36	34.25	9.41	33.65	100	16	Peak
5180	96.25	-	-	86.12	34.28	9.45	33.6	100	16	Average
5180	106.52	-	-	96.39	34.28	9.45	33.6	100	16	Peak
5350	53.19	-20.81	74	42.26	34.45	9.74	33.26	100	16	Peak
5350	41.08	-12.92	54	30.15	34.45	9.74	33.26	100	16	Average

Test Mode :	Mode 2	Temperature :	23~25°C
Test Channel :	44	Relative Humidity :	49~51%
Test Engineer :	Ivan Chiang	Polarization :	Horizontal
Remark :	5220 MHz is Fundamental Signals which can be ignored.		

Frequency (MHz)	Level (dBuV/m)	Over Limit (dB)	Limit Line (dBuV/m)	Read Level (dBuV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
125.58	28.56	-14.94	43.5	47.44	11.56	1.13	31.57	131	259	Peak
176.61	22.77	-20.73	43.5	43.73	9.33	1.24	31.53	-	-	Peak
225.21	23.44	-22.56	46	42.55	10.89	1.45	31.45	-	-	Peak
338.5	21.93	-24.07	46	36.69	14.66	1.88	31.3	-	-	Peak
492.5	20.37	-25.63	46	30.92	18.1	2.42	31.07	-	-	Peak
752.9	23.71	-22.29	46	29.63	21.72	3.06	30.7	-	-	Peak
5150	42.01	-11.99	54	32	34.25	9.41	33.65	100	318	Average
5150	53.03	-20.97	74	43.02	34.25	9.41	33.65	100	318	Peak
5220	101.99	-	-	91.64	34.32	9.53	33.5	100	318	Average
5220	111.99	-	-	101.64	34.32	9.53	33.5	100	318	Peak
5350	53.99	-20.01	74	43.06	34.45	9.74	33.26	100	318	Peak
5350	41.58	-12.42	54	30.65	34.45	9.74	33.26	100	318	Average

Test Mode :	Mode 2	Temperature :	23~25°C
Test Channel :	44	Relative Humidity :	49~51%
Test Engineer :	Ivan Chiang	Polarization :	Vertical
Remark :	5220 MHz is Fundamental Signals which can be ignored.		

Frequency (MHz)	Level (dBuV/m)	Over Limit (dB)	Limit Line (dBuV/m)	Read Level (dBuV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
76.98	32.11	-7.89	40	55.91	6.88	0.86	31.54	114	316	Peak
89.13	32.1	-11.4	43.5	54.16	8.53	0.93	31.52	-	-	Peak
121.53	28.47	-15.03	43.5	47.38	11.54	1.11	31.56	-	-	Peak
400.1	20.88	-25.12	46	33.34	16.58	2.14	31.18	-	-	Peak
545.7	20.94	-25.06	46	30.46	18.93	2.54	30.99	-	-	Peak
755.7	23.38	-22.62	46	29.25	21.76	3.07	30.7	-	-	Peak
5150	40.59	-13.41	54	30.58	34.25	9.41	33.65	100	13	Average
5150	52.39	-21.61	74	42.38	34.25	9.41	33.65	100	13	Peak
5220	95.26	-	-	84.91	34.32	9.53	33.5	100	13	Average
5220	105.15	-	-	94.8	34.32	9.53	33.5	100	13	Peak
5350	52.18	-21.82	74	41.25	34.45	9.74	33.26	100	13	Peak
5350	41.11	-12.89	54	30.18	34.45	9.74	33.26	100	13	Average

Test Mode :	Mode 3	Temperature :	23~25°C
Test Channel :	48	Relative Humidity :	49~51%
Test Engineer :	Ivan Chiang	Polarization :	Horizontal
Remark :	5240 MHz is Fundamental Signals which can be ignored.		

Frequency (MHz)	Level (dBuV/m)	Over Limit (dB)	Limit Line (dBuV/m)	Read Level (dBuV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
124.77	28.24	-15.26	43.5	47.12	11.56	1.12	31.56	121	157	Peak
160.41	24.44	-19.06	43.5	44.36	10.38	1.22	31.52	-	-	Peak
224.13	24.31	-21.69	46	43.5	10.82	1.44	31.45	-	-	Peak
337.8	22.41	-23.59	46	37.2	14.63	1.88	31.3	-	-	Peak
604.5	21.21	-24.79	46	29.62	19.81	2.7	30.92	-	-	Peak
816.6	25.13	-20.87	46	29.99	22.66	3.18	30.7	-	-	Peak
5150	53.87	-20.13	74	43.86	34.25	9.41	33.65	100	316	Peak
5150	41.55	-12.45	54	31.54	34.25	9.41	33.65	100	316	Average
5240	113.36	-	-	102.91	34.33	9.57	33.45	100	316	Peak
5240	102.83	-	-	92.38	34.33	9.57	33.45	100	316	Average
5350	53.81	-20.19	74	42.88	34.45	9.74	33.26	100	316	Peak
5350	41.65	-12.35	54	30.72	34.45	9.74	33.26	100	316	Average

Test Mode :	Mode 3	Temperature :	23~25°C
Test Channel :	48	Relative Humidity :	49~51%
Test Engineer :	Ivan Chiang	Polarization :	Vertical
Remark :	5240 MHz is Fundamental Signals which can be ignored.		

Frequency (MHz)	Level (dBuV/m)	Over Limit (dB)	Limit Line (dBuV/m)	Read Level (dBuV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
77.25	32.54	-7.46	40	56.23	6.97	0.87	31.53	111	135	Peak
124.77	27.79	-15.71	43.5	46.67	11.56	1.12	31.56	-	-	Peak
186.06	24.04	-19.46	43.5	45.23	9.06	1.27	31.52	-	-	Peak
332.2	18.06	-27.94	46	33.03	14.48	1.86	31.31	-	-	Peak
517	20.03	-25.97	46	30.11	18.48	2.48	31.04	-	-	Peak
699.7	22.67	-23.33	46	29.67	20.88	2.94	30.82	-	-	Peak
5150	40.34	-13.66	54	30.33	34.25	9.41	33.65	100	13	Average
5150	51.59	-22.41	74	41.58	34.25	9.41	33.65	100	13	Peak
5240	105.24	-	-	94.79	34.33	9.57	33.45	100	13	Peak
5240	95.47	-	-	85.02	34.33	9.57	33.45	100	13	Average
5350	52.23	-21.77	74	41.3	34.45	9.74	33.26	100	13	Peak
5350	41.05	-12.95	54	30.12	34.45	9.74	33.26	100	13	Average

Test Mode :	Mode 4	Temperature :	23~25°C
Test Channel :	52	Relative Humidity :	49~51%
Test Engineer :	Ivan Chiang	Polarization :	Horizontal
Remark :	5260 MHz is Fundamental Signals which can be ignored.		

Frequency (MHz)	Level (dBuV/m)	Over Limit (dB)	Limit Line (dBuV/m)	Read Level (dBuV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
124.5	28.66	-14.84	43.5	47.55	11.55	1.12	31.56	144	203	Peak
160.14	23.88	-19.62	43.5	43.8	10.38	1.22	31.52	-	-	Peak
215.22	25.67	-17.83	43.5	45.55	10.2	1.39	31.47	-	-	Peak
337.8	22.64	-23.36	46	37.43	14.63	1.88	31.3	-	-	Peak
568.1	20.83	-25.17	46	29.91	19.28	2.6	30.96	-	-	Peak
767.6	23.58	-22.42	46	29.23	21.95	3.09	30.69	-	-	Peak
5150	40.94	-13.06	54	30.93	34.25	9.41	33.65	100	313	Average
5150	52.46	-21.54	74	42.45	34.25	9.41	33.65	100	313	Peak
5260	114	-	-	103.42	34.37	9.62	33.41	100	313	Peak
5260	103.73	-	-	93.15	34.37	9.62	33.41	100	313	Average
5350	53.59	-20.41	74	42.66	34.45	9.74	33.26	100	313	Peak
5350	42.07	-11.93	54	31.14	34.45	9.74	33.26	100	313	Average

Test Mode :	Mode 4	Temperature :	23~25°C
Test Channel :	52	Relative Humidity :	49~51%
Test Engineer :	Ivan Chiang	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
76.98	32.22	-7.78	40	56.02	6.88	0.86	31.54	100	58	Peak
121.53	28.35	-15.15	43.5	47.26	11.54	1.11	31.56	-	-	Peak
183.9	23.68	-19.82	43.5	44.89	9.05	1.26	31.52	-	-	Peak
412.7	17.05	-28.95	46	29.24	16.78	2.19	31.16	-	-	Peak
631.8	21.18	-24.82	46	29.17	20.12	2.78	30.89	-	-	Peak
794.2	24.92	-21.08	46	30.09	22.38	3.13	30.68	-	-	Peak
5150	40.26	-13.74	54	30.25	34.25	9.41	33.65	100	19	Average
5150	52.85	-21.15	74	42.84	34.25	9.41	33.65	100	19	Peak
5260	108.1	-	-	97.52	34.37	9.62	33.41	100	19	Peak
5260	96.54	-	-	85.96	34.37	9.62	33.41	100	19	Average
5350	54.02	-19.98	74	43.09	34.45	9.74	33.26	100	19	Peak
5350	41.08	-12.92	54	30.15	34.45	9.74	33.26	100	19	Average
10520	46.96	-21.34	68.3	57.55	37.61	11.21	59.41	100	0	Peak

Test Mode :	Mode 5	Temperature :	23~25°C
Test Channel :	60	Relative Humidity :	49~51%
Test Engineer :	Ivan Chiang	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
32.7	18.65	-21.35	40	33.76	15.8	0.56	31.47	-	-	Peak
125.85	28.52	-14.98	43.5	47.4	11.56	1.13	31.57	132	147	Peak
225.21	25.46	-20.54	46	44.57	10.89	1.45	31.45	-	-	Peak
335.7	22.25	-23.75	46	37.11	14.57	1.87	31.3	-	-	Peak
559	20.72	-25.28	46	29.99	19.13	2.57	30.97	-	-	Peak
806.1	25.33	-20.67	46	30.32	22.54	3.16	30.69	-	-	Peak
5150	40.57	-13.43	54	30.56	34.25	9.41	33.65	100	309	Average
5150	51.89	-22.11	74	41.88	34.25	9.41	33.65	100	309	Peak
5300	103.73	-	-	93.03	34.4	9.66	33.36	100	309	Average
5300	113.86	-	-	103.16	34.4	9.66	33.36	100	309	Peak
5350	58.45	-15.55	74	47.52	34.45	9.74	33.26	100	309	Peak
5350	43.71	-10.29	54	32.78	34.45	9.74	33.26	100	309	Average

Test Mode :	Mode 5	Temperature :	23~25°C
Test Channel :	60	Relative Humidity :	49~51%
Test Engineer :	Ivan Chiang	Polarization :	Vertical
Remark :	1. 5300 MHz is Fundamental Signals which can be ignored. 2. 10600 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
76.98	32.34	-7.66	40	56.14	6.88	0.86	31.54	112	99	Peak
120.45	28.09	-15.41	43.5	47.02	11.53	1.1	31.56	-	-	Peak
183.09	23.31	-20.19	43.5	44.52	9.05	1.26	31.52	-	-	Peak
377.7	17.35	-28.65	46	30.63	15.87	2.09	31.24	-	-	Peak
542.9	19.71	-26.29	46	29.27	18.89	2.54	30.99	-	-	Peak
741	23.47	-22.53	46	29.62	21.53	3.04	30.72	-	-	Peak
5150	39.98	-14.02	54	29.97	34.25	9.41	33.65	188	278	Average
5150	51.47	-22.53	74	41.46	34.25	9.41	33.65	188	278	Peak
5300	98.43	-	-	87.73	34.4	9.66	33.36	188	278	Average
5300	108.32	-	-	97.62	34.4	9.66	33.36	188	278	Peak
5350	54.87	-19.13	74	43.94	34.45	9.74	33.26	188	278	Peak
5350	41.95	-12.05	54	31.02	34.45	9.74	33.26	188	278	Average
10600	45.05	-28.95	74	55.17	37.66	11.51	59.29	100	0	Peak

Test Mode :	Mode 6	Temperature :	23~25°C
Test Channel :	64	Relative Humidity :	49~51%
Test Engineer :	Ivan Chiang	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
76.17	19.14	-20.86	40	42.94	6.88	0.86	31.54	-	-	Peak
125.85	28.73	-14.77	43.5	47.61	11.56	1.13	31.57	123	220	Peak
201.45	22.88	-20.62	43.5	43.79	9.24	1.33	31.48	-	-	Peak
340.6	22.59	-23.41	46	37.28	14.72	1.89	31.3	-	-	Peak
565.3	20.48	-25.52	46	29.62	19.23	2.59	30.96	-	-	Peak
752.9	25.38	-20.62	46	31.3	21.72	3.06	30.7	-	-	Peak
5150	40.5	-13.5	54	30.49	34.25	9.41	33.65	100	307	Average
5150	53.18	-20.82	74	43.17	34.25	9.41	33.65	100	307	Peak
5320	104.56	-	-	93.75	34.42	9.7	33.31	100	307	Average
5320	114.53	-	-	103.72	34.42	9.7	33.31	100	307	Peak
5350	69.9	-4.1	74	58.97	34.45	9.74	33.26	100	307	Peak
5350	50.64	-3.36	54	39.71	34.45	9.74	33.26	100	307	Average
10640	44.48	-29.52	74	54.34	37.68	11.71	59.25	100	0	Peak

Test Mode :	Mode 6	Temperature :	23~25°C
Test Channel :	64	Relative Humidity :	49~51%
Test Engineer :	Ivan Chiang	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
89.13	31.84	-11.66	43.5	53.9	8.53	0.93	31.52	109	336	Peak
121.53	28.25	-15.25	43.5	47.16	11.54	1.11	31.56	-	-	Peak
185.25	23.88	-19.62	43.5	45.08	9.06	1.26	31.52	-	-	Peak
396.6	18.12	-27.88	46	30.71	16.47	2.13	31.19	-	-	Peak
623.4	21.28	-24.72	46	29.39	20.03	2.76	30.9	-	-	Peak
803.3	23.68	-22.32	46	28.71	22.5	3.15	30.68	-	-	Peak
5150	40.02	-13.98	54	30.01	34.25	9.41	33.65	193	265	Average
5150	51.76	-22.24	74	41.75	34.25	9.41	33.65	193	265	Peak
5320	99.25	-	-	88.44	34.42	9.7	33.31	193	265	Average
5320	109.35	-	-	98.54	34.42	9.7	33.31	193	265	Peak
5350	63.32	-10.68	74	52.39	34.45	9.74	33.26	193	265	Peak
5350	46.23	-7.77	54	35.3	34.45	9.74	33.26	193	265	Average

Test Mode :	Mode 7	Temperature :	23~25°C
Test Channel :	100	Relative Humidity :	49~51%
Test Engineer :	Ivan Chiang	Polarization :	Horizontal
Remark :	1. 5500 MHz is Fundamental Signals which can be ignored. 2. 5470 MHz, 5725 MHz and 16500 MHz are not within a restricted band.		

Frequency (MHz)	Level (dBuV/m)	Over Limit (dB)	Limit Line (dBuV/m)	Read Level (dBuV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
125.58	27.74	-15.76	43.5	46.62	11.56	1.13	31.57	150	218	Peak
160.41	24.43	-19.07	43.5	44.35	10.38	1.22	31.52	-	-	Peak
212.25	25.48	-18.02	43.5	45.59	9.99	1.37	31.47	-	-	Peak
337.8	21.87	-24.13	46	36.66	14.63	1.88	31.3	-	-	Peak
522.6	19.99	-26.01	46	29.95	18.57	2.5	31.03	-	-	Peak
713	22.56	-23.44	46	29.29	21.09	2.97	30.79	-	-	Peak
5470	53.05	-15.25	68.3	41.55	34.57	9.94	33.01	102	340	Peak
5500	103.33	-	-	91.62	34.6	10.02	32.91	102	340	Average
5500	113.51	-	-	101.8	34.6	10.02	32.91	102	340	Peak
5725	52.57	-15.73	68.3	41.01	34.82	9.92	33.18	102	340	Peak
11000	48.05	-25.95	74	55.7	37.9	13.22	58.77	100	0	Peak
16500	56.41	-11.89	68.3	58.15	41.6	14.06	57.4	100	0	Peak

Test Mode :	Mode 7	Temperature :	23~25°C
Test Channel :	100	Relative Humidity :	49~51%
Test Engineer :	Ivan Chiang	Polarization :	Vertical
Remark :	1. 5500 MHz is Fundamental Signals which can be ignored. 2. 5470 MHz, 5725 MHz and 16500 MHz are not within a restricted band.		

Frequency (MHz)	Level (dBuV/m)	Over Limit (dB)	Limit Line (dBuV/m)	Read Level (dBuV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
73.74	31.79	-8.21	40	55.85	6.63	0.85	31.54	115	203	Peak
88.86	32.18	-11.32	43.5	54.25	8.53	0.93	31.53	-	-	Peak
120.45	27.87	-15.63	43.5	46.8	11.53	1.1	31.56	-	-	Peak
329.4	18.68	-27.32	46	33.75	14.39	1.85	31.31	-	-	Peak
503.7	19.73	-26.27	46	30.06	18.27	2.46	31.06	-	-	Peak
730.5	23.31	-22.69	46	29.68	21.37	3.01	30.75	-	-	Peak
5470	48.41	-19.89	68.3	36.91	34.57	9.94	33.01	100	246	Peak
5500	97.8	-	-	86.09	34.6	10.02	32.91	100	246	Average
5500	107.98	-	-	96.27	34.6	10.02	32.91	100	246	Peak
5725	52.3	-16	68.3	40.74	34.82	9.92	33.18	100	246	Peak
11000	48.62	-25.38	74	56.27	37.9	13.22	58.77	100	0	Peak
16500	58.93	-9.37	68.3	60.67	41.6	14.06	57.4	100	0	Peak

Test Mode :	Mode 8	Temperature :	23~25°C
Test Channel :	116	Relative Humidity :	49~51%
Test Engineer :	Ivan Chiang	Polarization :	Horizontal
Remark :	1. 5580 MHz is Fundamental Signals which can be ignored. 2. 5470 MHz, 5725 MHz, and 16740 MHz are not within a restricted band.		

Frequency (MHz)	Level (dBuV/m)	Over Limit (dB)	Limit Line (dBuV/m)	Read Level (dBuV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
74.01	20.64	-19.36	40	44.7	6.63	0.85	31.54	-	-	Peak
124.77	28.36	-15.14	43.5	47.24	11.56	1.12	31.56	141	228	Peak
214.14	24.95	-18.55	43.5	44.91	10.13	1.38	31.47	-	-	Peak
337.8	22.01	-23.99	46	36.8	14.63	1.88	31.3	-	-	Peak
556.2	20.29	-25.71	46	29.61	19.08	2.57	30.97	-	-	Peak
806.1	24.63	-21.37	46	29.62	22.54	3.16	30.69	-	-	Peak
5470	54.88	-13.42	68.3	43.38	34.57	9.94	33.01	101	340	Peak
5580	114.33	-	-	102.67	34.67	9.99	33	101	340	Peak
5580	103.59	-	-	91.93	34.67	9.99	33	101	340	Average
5725	52.68	-15.62	68.3	41.12	34.82	9.92	33.18	101	340	Peak
16740	54.64	-13.66	68.3	56.28	41.84	14.17	57.65	100	0	Peak

Test Mode :	Mode 8	Temperature :	23~25°C
Test Channel :	116	Relative Humidity :	49~51%
Test Engineer :	Ivan Chiang	Polarization :	Vertical
Remark :	1. 5580 MHz is Fundamental Signals which can be ignored. 2. 5470 MHz, 5725 MHz, and 16740 MHz are not within a restricted band.		

Frequency (MHz)	Level (dBuV/m)	Over Limit (dB)	Limit Line (dBuV/m)	Read Level (dBuV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
39.45	23.37	-16.63	40	41.3	12.96	0.62	31.51	-	-	Peak
89.13	32.19	-11.31	43.5	54.25	8.53	0.93	31.52	109	84	Peak
121.26	28.81	-14.69	43.5	47.72	11.54	1.11	31.56	-	-	Peak
421.8	18.43	-27.57	46	30.43	16.93	2.22	31.15	-	-	Peak
638.1	21.91	-24.09	46	29.8	20.19	2.8	30.88	-	-	Peak
839.7	24.42	-21.58	46	28.97	22.93	3.24	30.72	-	-	Peak
5470	52.29	-16.01	68.3	40.79	34.57	9.94	33.01	100	239	Peak
5580	108.63	-	-	96.97	34.67	9.99	33	100	239	Peak
5580	98.55	-	-	86.89	34.67	9.99	33	100	239	Average
5725	52.9	-15.4	68.3	41.34	34.82	9.92	33.18	100	239	Peak
16740	56.72	-11.58	68.3	58.36	41.84	14.17	57.65	100	0	Peak

Test Mode :	Mode 9	Temperature :	23~25°C
Test Channel :	140	Relative Humidity :	49~51%
Test Engineer :	Ivan Chiang	Polarization :	Horizontal
Remark :	1. 5700 MHz is Fundamental Signals which can be ignored. 2. 5470 MHz and 5725 MHz are not within a restricted band.		

Frequency (MHz)	Level (dBuV/m)	Over Limit (dB)	Limit Line (dBuV/m)	Read Level (dBuV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
124.77	28.31	-15.19	43.5	47.19	11.56	1.12	31.56	136	119	Peak
161.22	23.96	-19.54	43.5	43.94	10.32	1.22	31.52	-	-	Peak
225.21	25.89	-20.11	46	45	10.89	1.45	31.45	-	-	Peak
337.8	23.39	-22.61	46	38.18	14.63	1.88	31.3	-	-	Peak
497.4	19.46	-26.54	46	29.91	18.18	2.44	31.07	-	-	Peak
699	22.49	-23.51	46	29.49	20.88	2.94	30.82	-	-	Peak
5470	51.78	-16.52	68.3	40.28	34.57	9.94	33.01	101	319	Peak
5700	104.56	-	-	92.99	34.79	9.93	33.15	101	319	Average
5700	114.7	-	-	103.13	34.79	9.93	33.15	101	319	Peak
5725	55.89	-12.41	68.3	44.33	34.82	9.92	33.18	101	319	Peak

Test Mode :	Mode 9	Temperature :	23~25°C
Test Channel :	140	Relative Humidity :	49~51%
Test Engineer :	Ivan Chiang	Polarization :	Vertical
Remark :	1. 5700 MHz is Fundamental Signals which can be ignored. 2. 5470 MHz, 5725 MHz and 17100 MHz are not within a restricted band.		

Frequency (MHz)	Level (dBuV/m)	Over Limit (dB)	Limit Line (dBuV/m)	Read Level (dBuV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
88.86	32.32	-11.18	43.5	54.39	8.53	0.93	31.53	124	185	Peak
121.26	28.66	-14.84	43.5	47.57	11.54	1.11	31.56	-	-	Peak
195.78	22.75	-20.75	43.5	43.85	9.09	1.3	31.49	-	-	Peak
458.2	18.58	-27.42	46	29.82	17.52	2.32	31.08	-	-	Peak
645.8	21.21	-24.79	46	28.97	20.28	2.83	30.87	-	-	Peak
842.5	25.11	-20.89	46	29.61	22.97	3.25	30.72	-	-	Peak
5470	51.93	-16.37	68.3	40.43	34.57	9.94	33.01	100	231	Peak
5700	98.78	-	-	87.21	34.79	9.93	33.15	100	231	Average
5700	108.88	-	-	97.29	34.81	9.93	33.15	100	231	Peak
5725	49.21	-19.09	68.3	37.65	34.82	9.92	33.18	100	231	Peak
17100	53.35	-14.95	68.3	54.74	42	14.33	57.72	100	0	Peak

Test Mode :	Mode 10	Temperature :	23~25°C
Test Channel :	36	Relative Humidity :	49~51%
Test Engineer :	Ivan Chiang	Polarization :	Horizontal
Remark :	5180 MHz is Fundamental Signals which can be ignored.		

Frequency (MHz)	Level (dBuV/m)	Over Limit (dB)	Limit Line (dBuV/m)	Read Level (dBuV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
69.69	19.44	-20.56	40	43.87	6.29	0.84	31.56	-	-	Peak
125.58	28.67	-14.83	43.5	47.55	11.56	1.13	31.57	166	320	Peak
200.1	24.54	-18.96	43.5	45.6	9.1	1.32	31.48	-	-	Peak
340.6	22.2	-23.8	46	36.89	14.72	1.89	31.3	-	-	Peak
514.9	20.09	-25.91	46	30.2	18.45	2.48	31.04	-	-	Peak
752.9	22.82	-23.18	46	28.74	21.72	3.06	30.7	-	-	Peak
5150	47.01	-6.99	54	37	34.25	9.41	33.65	100	333	Average
5150	66.21	-7.79	74	56.2	34.25	9.41	33.65	100	333	Peak
5180	100.87	-	-	90.74	34.28	9.45	33.6	100	333	Average
5180	110.74	-	-	100.61	34.28	9.45	33.6	100	333	Peak
5350	53.27	-20.73	74	42.34	34.45	9.74	33.26	100	333	Peak
5350	40.91	-13.09	54	29.98	34.45	9.74	33.26	100	333	Average

Test Mode :	Mode 10	Temperature :	23~25°C
Test Channel :	36	Relative Humidity :	49~51%
Test Engineer :	Ivan Chiang	Polarization :	Vertical
Remark :	5180 MHz is Fundamental Signals which can be ignored.		

Frequency (MHz)	Level (dBuV/m)	Over Limit (dB)	Limit Line (dBuV/m)	Read Level (dBuV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
39.45	23.81	-16.19	40	41.74	12.96	0.62	31.51	-	-	Peak
78.33	32.07	-7.93	40	55.68	7.05	0.87	31.53	112	87	Peak
119.37	28.21	-15.29	43.5	47.22	11.45	1.1	31.56	-	-	Peak
335	18.46	-27.54	46	33.36	14.54	1.87	31.31	-	-	Peak
575.8	20.98	-25.02	46	29.91	19.4	2.62	30.95	-	-	Peak
771.8	23.85	-22.15	46	29.41	22.03	3.1	30.69	-	-	Peak
5150	42.5	-11.5	54	32.49	34.25	9.41	33.65	100	17	Average
5150	59.2	-14.8	74	49.19	34.25	9.41	33.65	100	17	Peak
5180	94.96	-	-	84.83	34.28	9.45	33.6	100	17	Average
5180	104.91	-	-	94.78	34.28	9.45	33.6	100	17	Peak
5350	53.1	-20.9	74	42.17	34.45	9.74	33.26	100	17	Peak
5350	40.95	-13.05	54	30.02	34.45	9.74	33.26	100	17	Average

Test Mode :	Mode 11	Temperature :	23~25°C
Test Channel :	44	Relative Humidity :	49~51%
Test Engineer :	Ivan Chiang	Polarization :	Horizontal
Remark :	5220 MHz is Fundamental Signals which can be ignored.		

Frequency (MHz)	Level (dBuV/m)	Over Limit (dB)	Limit Line (dBuV/m)	Read Level (dBuV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
77.25	21.6	-18.4	40	45.29	6.97	0.87	31.53	-	-	Peak
124.5	27.92	-15.58	43.5	46.81	11.55	1.12	31.56	131	165	Peak
212.25	25.41	-18.09	43.5	45.52	9.99	1.37	31.47	-	-	Peak
340.6	22.2	-23.8	46	36.89	14.72	1.89	31.3	-	-	Peak
550.6	20.33	-25.67	46	29.75	19.01	2.55	30.98	-	-	Peak
752.9	23.62	-22.38	46	29.54	21.72	3.06	30.7	-	-	Peak
5150	41.67	-12.33	54	31.66	34.25	9.41	33.65	100	317	Average
5150	52.54	-21.46	74	42.53	34.25	9.41	33.65	100	317	Peak
5220	101.18	-	-	90.83	34.32	9.53	33.5	100	317	Average
5220	111.45	-	-	101.1	34.32	9.53	33.5	100	317	Peak
5350	53.39	-20.61	74	42.46	34.45	9.74	33.26	100	317	Peak
5350	41.54	-12.46	54	30.61	34.45	9.74	33.26	100	317	Average

Test Mode :	Mode 11	Temperature :	23~25°C
Test Channel :	44	Relative Humidity :	49~51%
Test Engineer :	Ivan Chiang	Polarization :	Vertical
Remark :	5220 MHz is Fundamental Signals which can be ignored.		

Frequency (MHz)	Level (dBuV/m)	Over Limit (dB)	Limit Line (dBuV/m)	Read Level (dBuV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
39.45	24.23	-15.77	40	42.16	12.96	0.62	31.51	-	-	Peak
76.98	32.22	-7.78	40	56.02	6.88	0.86	31.54	117	100	Peak
184.17	23.31	-20.19	43.5	44.52	9.05	1.26	31.52	-	-	Peak
444.2	18.15	-27.85	46	29.67	17.3	2.29	31.11	-	-	Peak
606.6	21.18	-24.82	46	29.54	19.84	2.71	30.91	-	-	Peak
800.5	24.58	-21.42	46	29.65	22.47	3.14	30.68	-	-	Peak
5150	40.35	-13.65	54	30.34	34.25	9.41	33.65	100	19	Average
5150	51.92	-22.08	74	41.91	34.25	9.41	33.65	100	19	Peak
5220	94.71	-	-	84.36	34.32	9.53	33.5	100	19	Average
5220	104.95	-	-	94.6	34.32	9.53	33.5	100	19	Peak
5350	52.71	-21.29	74	41.78	34.45	9.74	33.26	100	19	Peak
5350	41.16	-12.84	54	30.23	34.45	9.74	33.26	100	19	Average

Test Mode :	Mode 12	Temperature :	23~25°C
Test Channel :	48	Relative Humidity :	49~51%
Test Engineer :	Ivan Chiang	Polarization :	Horizontal
Remark :	5240 MHz is Fundamental Signals which can be ignored.		

Frequency (MHz)	Level (dBuV/m)	Over Limit (dB)	Limit Line (dBuV/m)	Read Level (dBuV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
72.66	19.8	-20.2	40	43.96	6.54	0.85	31.55	-	-	Peak
124.77	27.95	-15.55	43.5	46.83	11.56	1.12	31.56	136	254	Peak
212.25	25.36	-18.14	43.5	45.47	9.99	1.37	31.47	-	-	Peak
337.8	22.19	-23.81	46	36.98	14.63	1.88	31.3	-	-	Peak
517.7	20.03	-25.97	46	30.08	18.5	2.49	31.04	-	-	Peak
752.9	23.82	-22.18	46	29.74	21.72	3.06	30.7	-	-	Peak
5150	54.67	-19.33	74	44.66	34.25	9.41	33.65	100	315	Peak
5150	41.12	-12.88	54	31.11	34.25	9.41	33.65	100	315	Average
5240	111.56	-	-	101.11	34.33	9.57	33.45	100	315	Peak
5240	100.72	-	-	90.27	34.33	9.57	33.45	100	315	Average
5350	55.57	-18.43	74	44.64	34.45	9.74	33.26	100	315	Peak
5350	41.62	-12.38	54	30.69	34.45	9.74	33.26	100	315	Average



Test Mode :	Mode 12	Temperature :	23~25°C
Test Channel :	48	Relative Humidity :	49~51%
Test Engineer :	Ivan Chiang	Polarization :	Vertical
Remark :	5240 MHz is Fundamental Signals which can be ignored.		

Frequency (MHz)	Level (dBuV/m)	Over Limit (dB)	Limit Line (dBuV/m)	Read Level (dBuV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
72.93	32.16	-7.84	40	56.32	6.54	0.85	31.55	107	351	Peak
120.45	28.73	-14.77	43.5	47.66	11.53	1.1	31.56	-	-	Peak
184.98	23.66	-19.84	43.5	44.86	9.06	1.26	31.52	-	-	Peak
435.8	19.05	-26.95	46	30.77	17.15	2.26	31.13	-	-	Peak
685	22.18	-23.82	46	29.38	20.72	2.91	30.83	-	-	Peak
791.4	23.69	-22.31	46	28.91	22.33	3.13	30.68	-	-	Peak
5150	52.53	-21.47	74	42.52	34.25	9.41	33.65	100	14	Peak
5150	40.81	-13.19	54	30.36	34.33	9.57	33.45	100	14	Average
5240	105.21	-	-	94.76	34.33	9.57	33.45	100	14	Peak
5240	94.3	-	-	83.85	34.33	9.57	33.45	100	14	Average
5350	52.09	-21.91	74	41.16	34.45	9.74	33.26	100	14	Peak
5350	41.08	-12.92	54	30.15	34.45	9.74	33.26	100	14	Average

Test Mode :	Mode 13	Temperature :	23~25°C
Test Channel :	52	Relative Humidity :	49~51%
Test Engineer :	Ivan Chiang	Polarization :	Horizontal
Remark :	5260 MHz is Fundamental Signals which can be ignored.		

Frequency (MHz)	Level (dBuV/m)	Over Limit (dB)	Limit Line (dBuV/m)	Read Level (dBuV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
125.58	28.56	-14.94	43.5	47.44	11.56	1.13	31.57	138	216	Peak
160.14	23.6	-19.9	43.5	43.52	10.38	1.22	31.52	-	-	Peak
212.25	24.27	-19.23	43.5	44.38	9.99	1.37	31.47	-	-	Peak
337.8	22.39	-23.61	46	37.18	14.63	1.88	31.3	-	-	Peak
592.6	21.07	-24.93	46	29.68	19.65	2.67	30.93	-	-	Peak
806.1	25.54	-20.46	46	30.53	22.54	3.16	30.69	-	-	Peak
5150	52.43	-21.57	74	42.42	34.25	9.41	33.65	100	309	Peak
5150	40.76	-13.24	54	30.75	34.25	9.41	33.65	100	309	Average
5260	113.94	-	-	103.36	34.37	9.62	33.41	100	309	Peak
5260	103.76	-	-	93.18	34.37	9.62	33.41	100	309	Average
5350	53.73	-20.27	74	42.8	34.45	9.74	33.26	100	309	Peak
5350	42.28	-11.72	54	31.35	34.45	9.74	33.26	100	309	Average

Test Mode :	Mode 13	Temperature :	23~25°C
Test Channel :	52	Relative Humidity :	49~51%
Test Engineer :	Ivan Chiang	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
88.86	32.1	-11.4	43.5	54.17	8.53	0.93	31.53	103	71	Peak
121.26	29.03	-14.47	43.5	47.94	11.54	1.11	31.56	-	-	Peak
184.17	23.19	-20.31	43.5	44.4	9.05	1.26	31.52	-	-	Peak
439.3	18.06	-27.94	46	29.68	17.22	2.28	31.12	-	-	Peak
635.3	21.9	-24.1	46	29.82	20.16	2.8	30.88	-	-	Peak
825	24.27	-21.73	46	29.01	22.76	3.21	30.71	-	-	Peak
5150	52.77	-21.23	74	42.76	34.25	9.41	33.65	100	12	Peak
5150	40.35	-13.65	54	30.34	34.25	9.41	33.65	100	12	Average
5260	106.14	-	-	95.56	34.37	9.62	33.41	100	12	Peak
5260	95.3	-	-	84.72	34.37	9.62	33.41	100	12	Average
5350	53.27	-20.73	74	42.34	34.45	9.74	33.26	100	12	Peak
5350	41.11	-12.89	54	30.18	34.45	9.74	33.26	100	12	Average
10520	47.17	-21.13	68.3	57.76	37.61	11.21	59.41	100	0	Peak

Test Mode :	Mode 14	Temperature :	23~25°C
Test Channel :	60	Relative Humidity :	49~51%
Test Engineer :	Ivan Chiang	Polarization :	Horizontal
Remark :	1. 5300 MHz is Fundamental Signals which can be ignored. 2. 10600 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
72.93	20.48	-19.52	40	44.64	6.54	0.85	31.55	-	-	Peak
125.58	27.58	-15.92	43.5	46.46	11.56	1.13	31.57	136	210	Peak
212.25	24.54	-18.96	43.5	44.65	9.99	1.37	31.47	-	-	Peak
335	22.07	-23.93	46	36.97	14.54	1.87	31.31	-	-	Peak
643.7	21.72	-24.28	46	29.52	20.26	2.82	30.88	-	-	Peak
858.6	25.5	-20.5	46	29.79	23.15	3.28	30.72	-	-	Peak
5150	40.58	-13.42	54	30.57	34.25	9.41	33.65	100	308	Average
5150	52.3	-21.7	74	42.29	34.25	9.41	33.65	100	308	Peak
5300	103.7	-	-	93	34.4	9.66	33.36	100	308	Average
5300	113.99	-	-	103.29	34.4	9.66	33.36	100	308	Peak
5350	60.02	-13.98	74	49.09	34.45	9.74	33.26	100	308	Peak
5350	44.06	-9.94	54	33.13	34.45	9.74	33.26	100	308	Average
10600	45.06	-28.94	74	55.18	37.66	11.51	59.29	100	0	Peak

Test Mode :	Mode 14	Temperature :	23~25°C
Test Channel :	60	Relative Humidity :	49~51%
Test Engineer :	Ivan Chiang	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
88.86	31.93	-11.57	43.5	54	8.53	0.93	31.53	121	193	Peak
121.53	27.99	-15.51	43.5	46.9	11.54	1.11	31.56	-	-	Peak
184.17	23.38	-20.12	43.5	44.59	9.05	1.26	31.52	-	-	Peak
461	19.3	-26.7	46	30.49	17.57	2.32	31.08	-	-	Peak
693.4	22.31	-23.69	46	29.4	20.81	2.93	30.83	-	-	Peak
827.8	24.94	-21.06	46	29.65	22.79	3.21	30.71	-	-	Peak
5150	40.19	-13.81	54	30.18	34.25	9.41	33.65	100	278	Average
5150	51.32	-22.68	74	41.31	34.25	9.41	33.65	100	278	Peak
5300	96.41	-	-	85.71	34.4	9.66	33.36	100	278	Average
5300	106.87	-	-	96.17	34.4	9.66	33.36	100	278	Peak
5350	53.72	-20.28	74	42.79	34.45	9.74	33.26	100	278	Peak
5350	41.63	-12.37	54	30.7	34.45	9.74	33.26	100	278	Average

Test Mode :	Mode 15	Temperature :	23~25°C
Test Channel :	64	Relative Humidity :	49~51%
Test Engineer :	Ivan Chiang	Polarization :	Horizontal
Remark :	1. 5320 MHz is Fundamental Signals which can be ignored. 2. 10640 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
32.7	19.71	-20.29	40	34.82	15.8	0.56	31.47	-	-	Peak
125.58	28.18	-15.32	43.5	47.06	11.56	1.13	31.57	128	101	Peak
211.98	26.03	-17.47	43.5	46.14	9.99	1.37	31.47	-	-	Peak
340.6	22.37	-23.63	46	37.06	14.72	1.89	31.3	-	-	Peak
503.7	20.47	-25.53	46	30.8	18.27	2.46	31.06	-	-	Peak
750.1	23.06	-22.94	46	29.03	21.67	3.06	30.7	-	-	Peak
5150	40.89	-13.11	54	30.88	34.25	9.41	33.65	100	310	Average
5150	52.56	-21.44	74	42.55	34.25	9.41	33.65	100	310	Peak
5320	103.49	-	-	92.68	34.42	9.7	33.31	100	310	Average
5320	113.63	-	-	102.82	34.42	9.7	33.31	100	310	Peak
5350	68.37	-5.63	74	57.44	34.45	9.74	33.26	100	310	Peak
5350	49.34	-4.66	54	38.41	34.45	9.74	33.26	100	310	Average
10640	45.58	-28.42	74	55.44	37.68	11.71	59.25	100	0	Peak

Test Mode :	Mode 15	Temperature :	23~25°C
Test Channel :	64	Relative Humidity :	49~51%
Test Engineer :	Ivan Chiang	Polarization :	Vertical
Remark :	1. 5320 MHz is Fundamental Signals which can be ignored. 2. 10640 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
88.86	32.39	-11.11	43.5	54.46	8.53	0.93	31.53	100	23	Peak
121.26	27.85	-15.65	43.5	46.76	11.54	1.11	31.56	-	-	Peak
184.98	23.31	-20.19	43.5	44.51	9.06	1.26	31.52	-	-	Peak
335	18.13	-27.87	46	33.03	14.54	1.87	31.31	-	-	Peak
539.4	20.03	-25.97	46	29.67	18.83	2.53	31	-	-	Peak
778.1	23.69	-22.31	46	29.16	22.12	3.1	30.69	-	-	Peak
5150	40.22	-13.78	54	30.21	34.25	9.41	33.65	193	266	Average
5150	51.58	-22.42	74	41.57	34.25	9.41	33.65	193	266	Peak
5320	98.06	-	-	87.25	34.42	9.7	33.31	193	266	Average
5320	107.94	-	-	97.13	34.42	9.7	33.31	193	266	Peak
5350	62.68	-11.32	74	51.75	34.45	9.74	33.26	193	266	Peak
5350	45.67	-8.33	54	34.74	34.45	9.74	33.26	193	266	Average
10640	45	-29	74	54.86	37.68	11.71	59.25	100	0	Peak

Test Mode :	Mode 16	Temperature :	23~25°C
Test Channel :	100	Relative Humidity :	49~51%
Test Engineer :	Ivan Chiang	Polarization :	Horizontal
Remark :	1. 5500 MHz is Fundamental Signals which can be ignored. 2. 5470 MHz, 5725 MHz, and 16500 MHz are not within a restricted band.		

Frequency (MHz)	Level (dBuV/m)	Over Limit (dB)	Limit Line (dBuV/m)	Read Level (dBuV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
77.25	20.5	-19.5	40	44.19	6.97	0.87	31.53	-	-	Peak
124.5	28.14	-15.36	43.5	47.03	11.55	1.12	31.56	124	235	Peak
199.02	23.48	-20.02	43.5	44.54	9.1	1.32	31.48	-	-	Peak
388.9	21.49	-24.51	46	34.35	16.23	2.12	31.21	-	-	Peak
575.8	20.54	-25.46	46	29.47	19.4	2.62	30.95	-	-	Peak
791.4	24.78	-21.22	46	30	22.33	3.13	30.68	-	-	Peak
5470	49.29	-19.01	68.3	37.79	34.57	9.94	33.01	102	341	Peak
5500	113.48	-	-	101.77	34.6	10.02	32.91	102	341	Peak
5500	103.3	-	-	91.59	34.6	10.02	32.91	102	341	Average
5725	53.11	-15.19	68.3	41.55	34.82	9.92	33.18	102	341	Peak
11000	47.41	-26.59	74	55.06	37.9	13.22	58.77	100	0	Peak
16500	54.72	-13.58	68.3	56.46	41.6	14.06	57.4	100	0	Peak

Test Mode :	Mode 16	Temperature :	23~25°C
Test Channel :	100	Relative Humidity :	49~51%
Test Engineer :	Ivan Chiang	Polarization :	Vertical
Remark :	1. 5500 MHz is Fundamental Signals which can be ignored. 2. 5470 MHz, 5725 MHz and 16500 MHz are not within a restricted band.		

Frequency (MHz)	Level (dBuV/m)	Over Limit (dB)	Limit Line (dBuV/m)	Read Level (dBuV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
39.45	23.75	-16.25	40	41.68	12.96	0.62	31.51	-	-	Peak
78.06	31.85	-8.15	40	55.46	7.05	0.87	31.53	110	81	Peak
121.53	27.57	-15.93	43.5	46.48	11.54	1.11	31.56	-	-	Peak
338.5	19.42	-26.58	46	34.18	14.66	1.88	31.3	-	-	Peak
545	22.56	-23.44	46	32.09	18.92	2.54	30.99	-	-	Peak
794.2	24.49	-21.51	46	29.66	22.38	3.13	30.68	-	-	Peak
5470	45.08	-22.5	68.3	33.58	34.57	9.94	33.01	100	247	Peak
5500	106.82	-	-	95.11	34.6	10.02	32.91	100	247	Peak
5500	96.4	-	-	84.69	34.6	10.02	32.91	100	247	Average
5725	51.9	-16.4	68.3	40.34	34.82	9.92	33.18	100	247	Peak
16500	58.66	-9.64	68.3	60.4	41.6	14.06	57.4	100	0	Peak

Test Mode :	Mode 17	Temperature :	23~25°C
Test Channel :	116	Relative Humidity :	49~51%
Test Engineer :	Ivan Chiang	Polarization :	Horizontal
Remark :	1. 5580 MHz is Fundamental Signals which can be ignored. 2. 5470 MHz, 5725 MHz and 16740 MHz are not within a restricted band.		

Frequency (MHz)	Level (dBuV/m)	Over Limit (dB)	Limit Line (dBuV/m)	Read Level (dBuV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
31.89	18.73	-21.27	40	33.6	16.04	0.55	31.46	-	-	Peak
124.77	28.62	-14.88	43.5	47.5	11.56	1.12	31.56	151	325	Peak
212.25	24.87	-18.63	43.5	44.98	9.99	1.37	31.47	-	-	Peak
340.6	22.19	-23.81	46	36.88	14.72	1.89	31.3	-	-	Peak
584.2	21.38	-24.62	46	30.16	19.52	2.64	30.94	-	-	Peak
771.8	23.64	-22.36	46	29.2	22.03	3.1	30.69	-	-	Peak
5470	52.99	-15.31	68.3	41.49	34.57	9.94	33.01	101	340	Peak
5580	113.09	-	-	101.43	34.67	9.99	33	101	340	Peak
5580	103.08	-	-	91.42	34.67	9.99	33	101	340	Average
5725	52.51	-15.79	68.3	40.95	34.82	9.92	33.18	101	340	Peak
16740	53.84	-14.46	68.3	55.48	41.84	14.17	57.65	100	0	Peak

Test Mode :	Mode 17	Temperature :	23~25°C
Test Channel :	116	Relative Humidity :	49~51%
Test Engineer :	Ivan Chiang	Polarization :	Vertical
Remark :	1. 5580 MHz is Fundamental Signals which can be ignored. 2. 5470 MHz, 5725 MHz and 16740 MHz are not within a restricted band.		

Frequency (MHz)	Level (dBuV/m)	Over Limit (dB)	Limit Line (dBuV/m)	Read Level (dBuV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
88.86	31.84	-11.66	43.5	53.91	8.53	0.93	31.53	101	87	Peak
120.45	28.04	-15.46	43.5	46.97	11.53	1.1	31.56	-	-	Peak
184.98	23.41	-20.09	43.5	44.61	9.06	1.26	31.52	-	-	Peak
377	18.71	-27.29	46	31.99	15.87	2.09	31.24	-	-	Peak
623.4	21.61	-24.39	46	29.72	20.03	2.76	30.9	-	-	Peak
786.5	23.76	-22.24	46	29.07	22.26	3.12	30.69	-	-	Peak
5470	52.47	-15.83	68.3	40.97	34.57	9.94	33.01	100	239	Peak
5580	107.91	-	-	96.25	34.67	9.99	33	100	239	Peak
5580	97.94	-	-	86.28	34.67	9.99	33	100	239	Average
5725	52.33	-15.97	68.3	40.77	34.82	9.92	33.18	100	239	Peak
16740	55.6	-12.7	68.3	57.25	41.82	14.16	57.63	100	0	Peak

Test Mode :	Mode 18	Temperature :	23~25°C
Test Channel :	140	Relative Humidity :	49~51%
Test Engineer :	Ivan Chiang	Polarization :	Horizontal
Remark :	1. 5700 MHz is Fundamental Signals which can be ignored. 2. 5470 MHz and 5725 MHz are not within a restricted band.		

Frequency (MHz)	Level (dBuV/m)	Over Limit (dB)	Limit Line (dBuV/m)	Read Level (dBuV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
124.77	31.05	-12.45	43.5	49.93	11.56	1.12	31.56	134	226	Peak
160.41	27.29	-16.21	43.5	47.21	10.38	1.22	31.52	-	-	Peak
212.25	26.17	-17.33	43.5	46.28	9.99	1.37	31.47	-	-	Peak
337.8	22.07	-23.93	46	36.86	14.63	1.88	31.3	-	-	Peak
537.3	20.81	-25.19	46	30.49	18.8	2.52	31	-	-	Peak
791.4	24.05	-21.95	46	29.27	22.33	3.13	30.68	-	-	Peak
5470	52.02	-16.28	68.3	40.52	34.57	9.94	33.01	101	315	Peak
5700	103.56	-	-	91.99	34.79	9.93	33.15	101	315	Average
5700	113.65	-	-	102.08	34.79	9.93	33.15	101	315	Peak
5725	56.68	-11.62	68.3	45.12	34.82	9.92	33.18	101	315	Peak

Test Mode :	Mode 18	Temperature :	23~25°C
Test Channel :	140	Relative Humidity :	49~51%
Test Engineer :	Ivan Chiang	Polarization :	Vertical
Remark :	1. 5700 MHz is Fundamental Signals which can be ignored. 2. 5470 MHz and 5725 MHz are not within a restricted band.		

Frequency (MHz)	Level (dBuV/m)	Over Limit (dB)	Limit Line (dBuV/m)	Read Level (dBuV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
51.33	25.62	-14.38	40	48.43	8.02	0.71	31.54	-	-	Peak
88.86	32.3	-11.2	43.5	54.37	8.53	0.93	31.53	121	177	Peak
184.17	23.85	-19.65	43.5	45.06	9.05	1.26	31.52	-	-	Peak
422.5	17.77	-28.23	46	29.75	16.95	2.22	31.15	-	-	Peak
638.1	22.3	-23.7	46	30.19	20.19	2.8	30.88	-	-	Peak
825.7	25.38	-20.62	46	30.12	22.76	3.21	30.71	-	-	Peak
5470	52.57	-15.73	68.3	41.07	34.57	9.94	33.01	100	232	Peak
5700	98.56	-	-	86.99	34.79	9.93	33.15	100	232	Average
5700	108.69	-	-	97.12	34.79	9.93	33.15	100	232	Peak
5725	49.18	-19.12	68.3	37.62	34.82	9.92	33.18	100	232	Peak

Test Mode :	Mode 19	Temperature :	23~25°C
Test Channel :	64	Relative Humidity :	49~51%
Test Engineer :	Ivan Chiang	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
107.49	22.97	-20.53	43.5	43.03	10.45	1.04	31.55	-	-	Peak
120.45	26.95	-16.55	43.5	45.88	11.53	1.1	31.56	100	115	Peak
201.45	22.88	-20.62	43.5	43.79	9.24	1.33	31.48	-	-	Peak
587	20.68	-25.32	46	29.41	19.56	2.65	30.94	-	-	Peak
699.7	22.8	-23.2	46	29.8	20.88	2.94	30.82	-	-	Peak
892.9	26.3	-19.7	46	30.12	23.55	3.33	30.7	-	-	Peak
5150	40.32	-13.68	54	30.31	34.25	9.41	33.65	100	305	Average
5150	51.49	-22.51	74	41.48	34.25	9.41	33.65	100	305	Peak
5320	99.87	-	-	89.06	34.42	9.7	33.31	100	305	Average
5320	110.03	-	-	99.22	34.42	9.7	33.31	100	305	Peak
5350	58.3	-15.7	74	47.37	34.45	9.74	33.26	100	305	Peak
5350	45.49	-8.51	54	34.56	34.45	9.74	33.26	100	305	Average

Test Mode :	Mode 19	Temperature :	23~25°C
Test Channel :	64	Relative Humidity :	49~51%
Test Engineer :	Ivan Chiang	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
78.06	31.68	-8.32	40	55.29	7.05	0.87	31.53	106	294	Peak
106.41	27.45	-16.05	43.5	47.6	10.37	1.03	31.55	-	-	Peak
295.41	25.5	-20.5	46	41.69	13.4	1.74	31.33	-	-	Peak
570.2	20.31	-25.69	46	29.35	19.31	2.61	30.96	-	-	Peak
766.9	23.45	-22.55	46	29.1	21.95	3.09	30.69	-	-	Peak
985.3	27.13	-26.87	54	29.5	24.71	3.5	30.58	-	-	Peak
5150	39.95	-14.05	54	29.94	34.25	9.41	33.65	100	274	Average
5150	51.75	-22.25	74	41.74	34.25	9.41	33.65	100	274	Peak
5320	93.45	-	-	82.64	34.42	9.7	33.31	100	274	Average
5320	103.48	-	-	92.67	34.42	9.7	33.31	100	274	Peak
5350	53.9	-20.1	74	42.97	34.45	9.74	33.26	100	274	Peak
5350	42.5	-11.5	54	31.57	34.45	9.74	33.26	100	274	Average

Test Mode :	Mode 20	Temperature :	23~25°C
Test Channel :	64	Relative Humidity :	49~51%
Test Engineer :	Ivan Chiang	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
161.22	24.35	-19.15	43.5	44.33	10.32	1.22	31.52	102	110	Peak
225.21	23.63	-22.37	46	42.74	10.89	1.45	31.45	-	-	Peak
286.5	21.64	-24.36	46	38.06	13.24	1.67	31.33	-	-	Peak
464.5	18.81	-27.19	46	29.92	17.64	2.33	31.08	-	-	Peak
679.4	22.93	-23.07	46	30.22	20.65	2.9	30.84	-	-	Peak
895	25.92	-20.08	46	29.72	23.57	3.33	30.7	-	-	Peak
5150	40.42	-13.58	54	30.41	34.25	9.41	33.65	100	303	Average
5150	51.58	-22.42	74	41.57	34.25	9.41	33.65	100	303	Peak
5320	100.12	-	-	89.31	34.42	9.7	33.31	100	303	Average
5320	110.54	-	-	99.73	34.42	9.7	33.31	100	303	Peak
5350	62.18	-11.82	74	51.25	34.45	9.74	33.26	100	303	Peak
5350	46.34	-7.66	54	35.41	34.45	9.74	33.26	100	303	Average

Test Mode :	Mode 20	Temperature :	23~25°C
Test Channel :	64	Relative Humidity :	49~51%
Test Engineer :	Ivan Chiang	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
73.74	31.68	-8.32	40	55.74	6.63	0.85	31.54	100	306	Peak
128.82	26.77	-16.73	43.5	45.63	11.57	1.14	31.57	-	-	Peak
241.41	25.12	-20.88	46	42.96	12.05	1.53	31.42	-	-	Peak
539.4	20.03	-25.97	46	29.67	18.83	2.53	31	-	-	Peak
671.7	21.55	-24.45	46	28.95	20.57	2.88	30.85	-	-	Peak
799.8	24.23	-21.77	46	29.3	22.47	3.14	30.68	-	-	Peak
5150	40.05	-13.95	54	30.04	34.25	9.41	33.65	193	268	Average
5150	52.32	-21.68	74	42.31	34.25	9.41	33.65	193	268	Peak
5320	94.67	-	-	83.86	34.42	9.7	33.31	193	268	Average
5320	104.68	-	-	93.87	34.42	9.7	33.31	193	268	Peak
5350	56.36	-17.64	74	45.43	34.45	9.74	33.26	193	268	Peak
5350	42.92	-11.08	54	31.99	34.45	9.74	33.26	193	268	Average

3.9 Peak Excursion Ratio Measurement

3.9.1 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.

3.9.2 Measuring Instruments

See list of measuring instruments of this test report.

3.9.3 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.

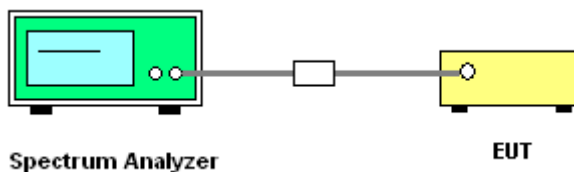
1st Trace :

- Set RBW = 1 MHz, VBW $\geq$ 3 MHz with peak detector and max-hold settings

2nd Trace:

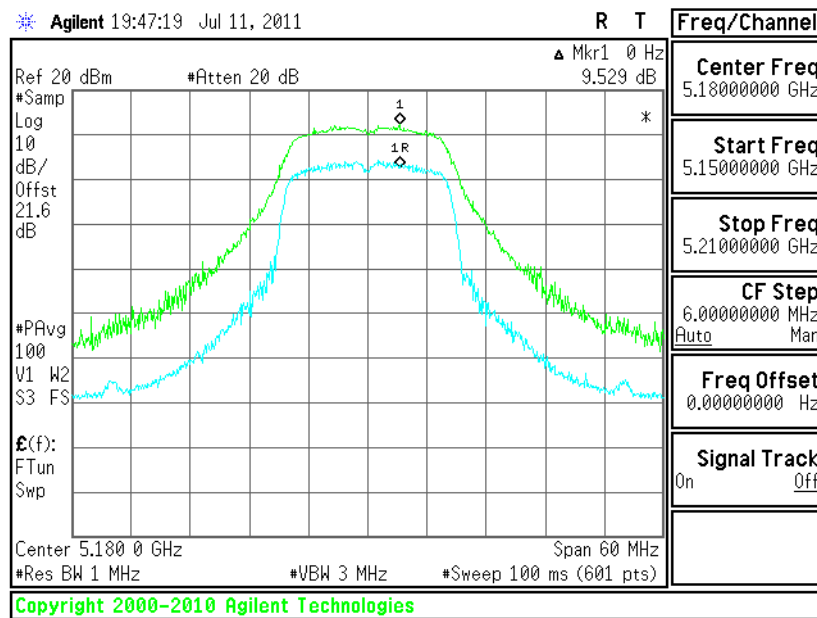
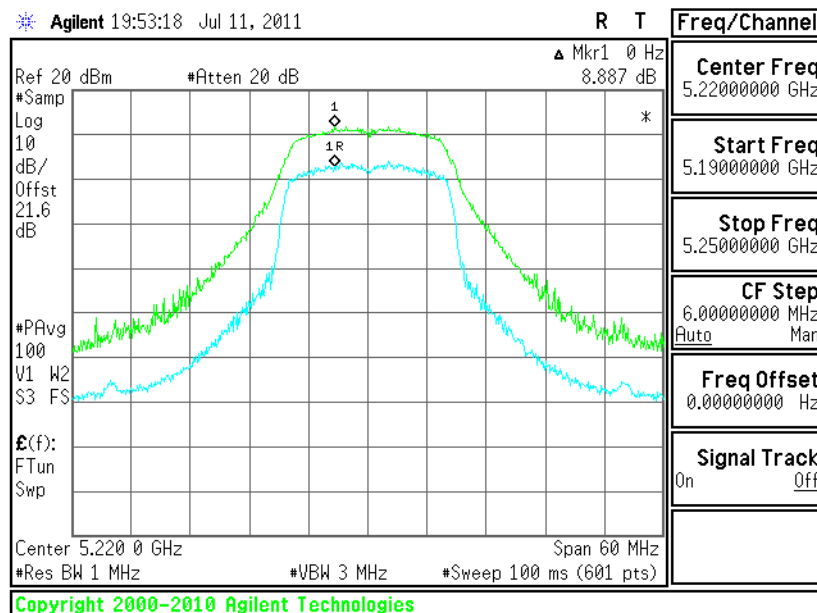
- Set RBW = 1 MHz, VBW $\geq$ 3 MHz, sample detector mode, and 100 sweets of power averaging as same as method 1 of conducted power measurement.

3.9.4 Test Setup



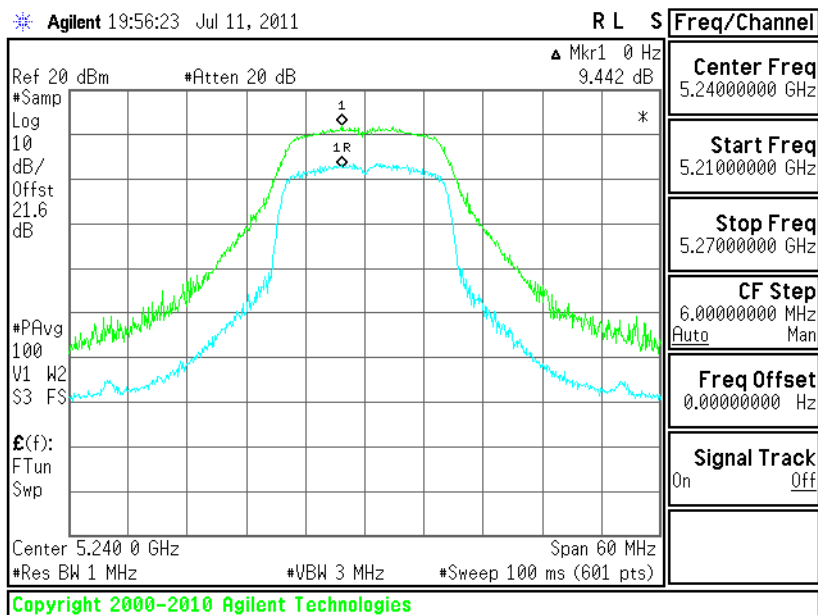
3.9.5 Test Result of Peak Excursion Ratio

Test Mode :	Mode 1~9	Temperature :	24~26℃
Test Engineer :	Alan Liu	Relative Humidity :	45~49%

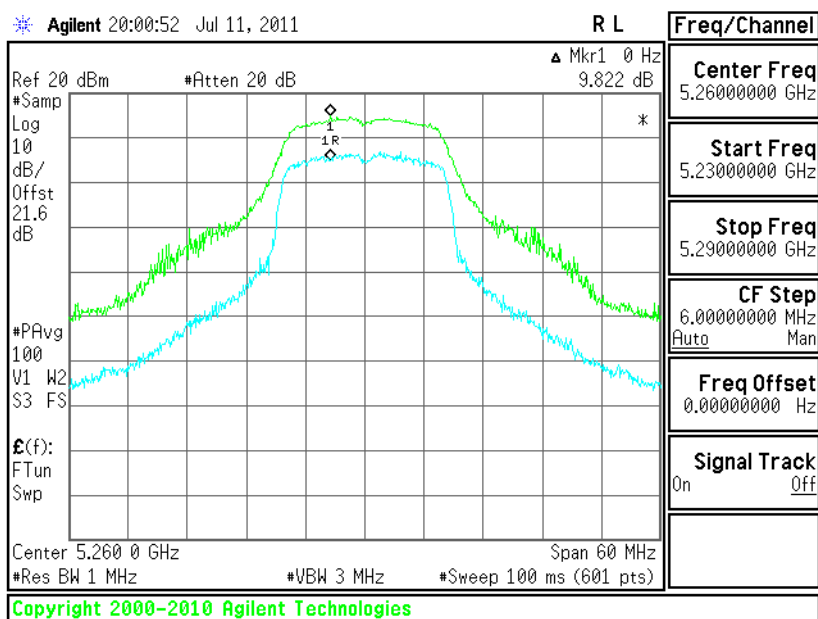
Peak Excursion Ratio Plot on 802.11a Channel 36

Peak Excursion Ratio Plot on 802.11a Channel 44




Peak Excursion Ratio Plot on 802.11a Channel 48

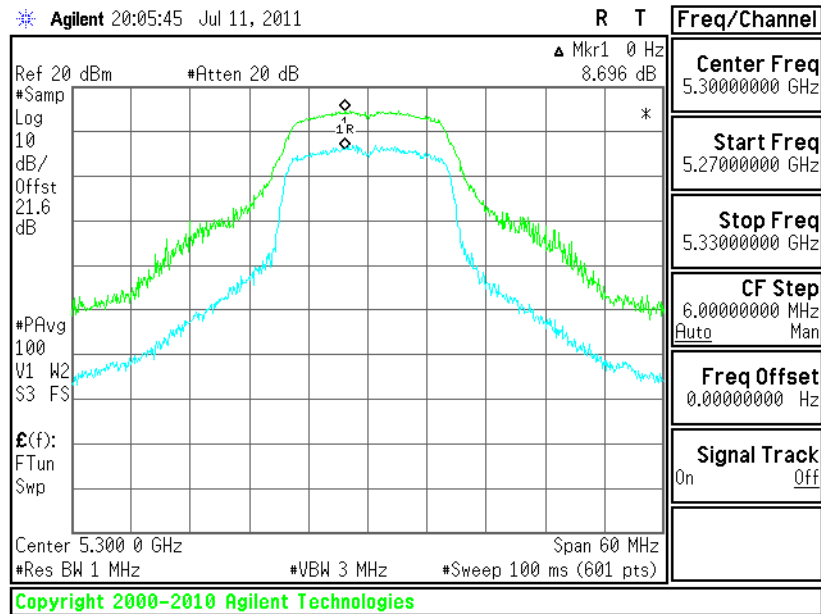


Peak Excursion Ratio Plot on 802.11a Channel 52

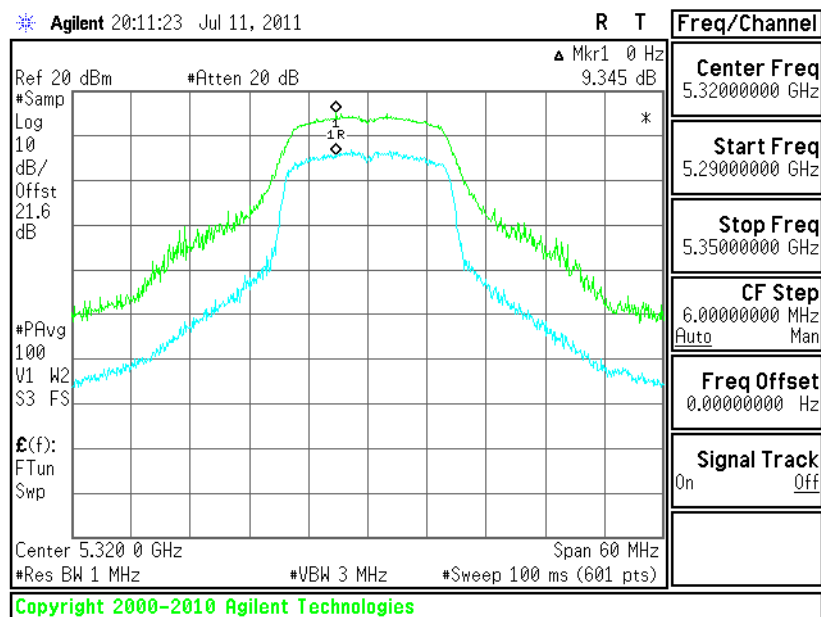




Peak Excursion Ratio Plot on 802.11a Channel 60

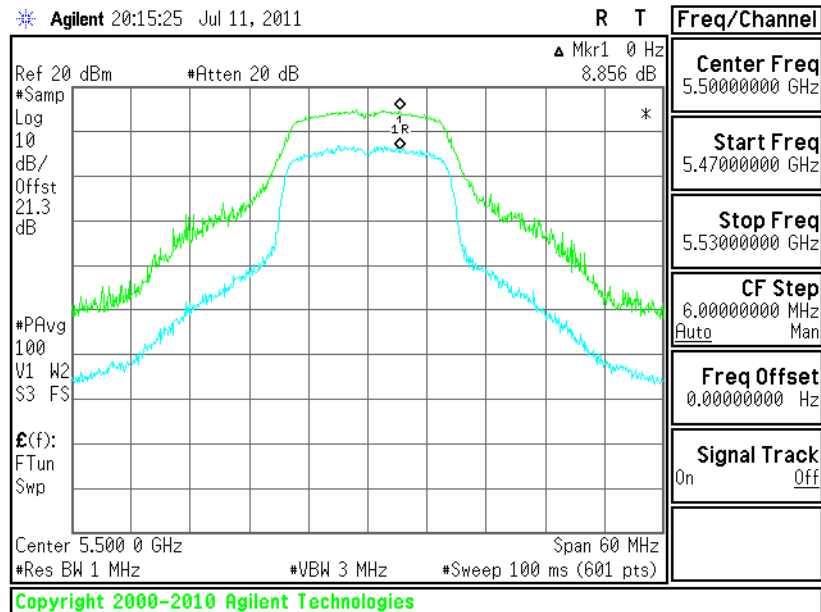


Peak Excursion Ratio Plot on 802.11a Channel 64

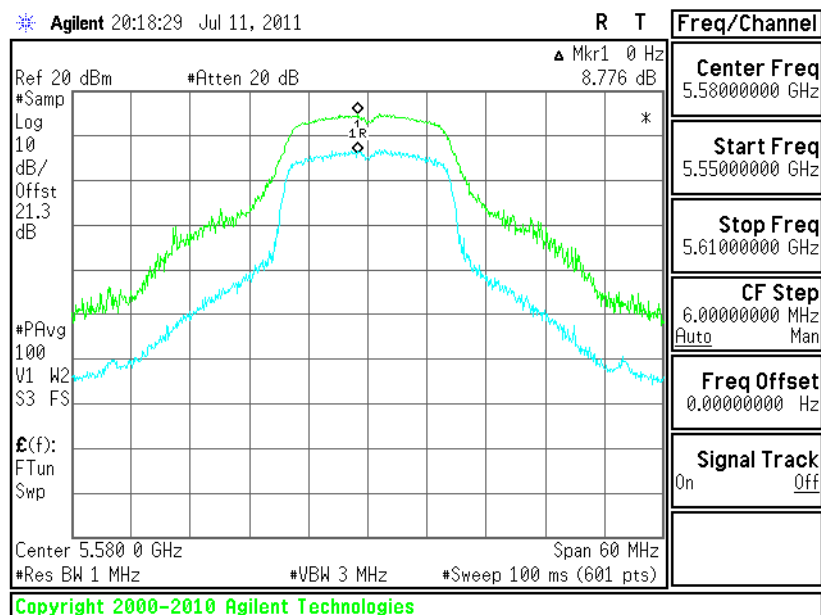




Peak Excursion Ratio Plot on 802.11a Channel 100

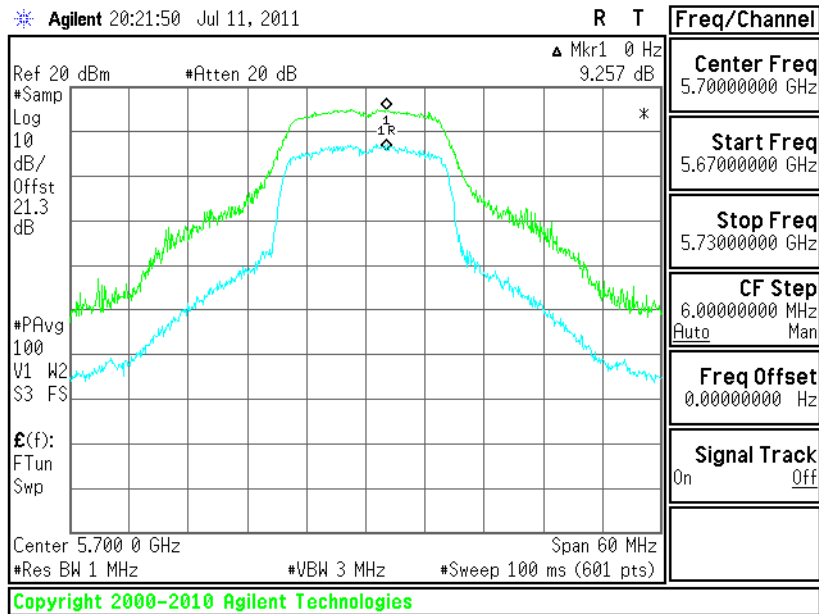


Peak Excursion Ratio Plot on 802.11a Channel 116





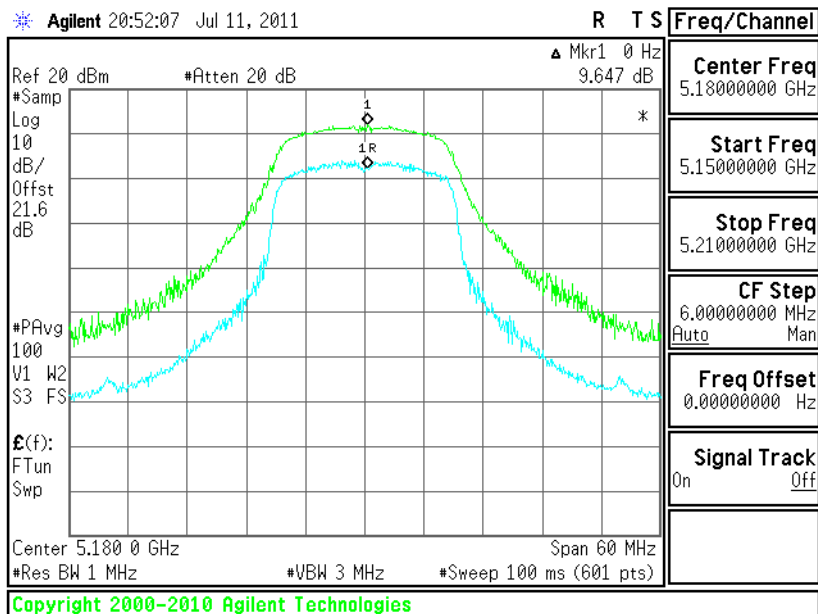
Peak Excursion Ratio Plot on 802.11a Channel 140



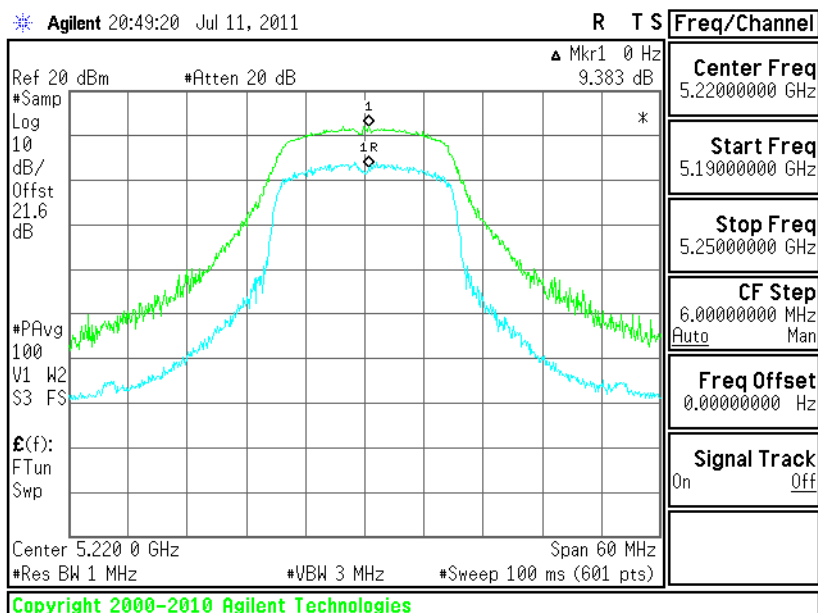


Test Mode :	Mode 10~18	Temperature :	24~26°C
Test Engineer :	Alan Liu	Relative Humidity :	45~49%

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

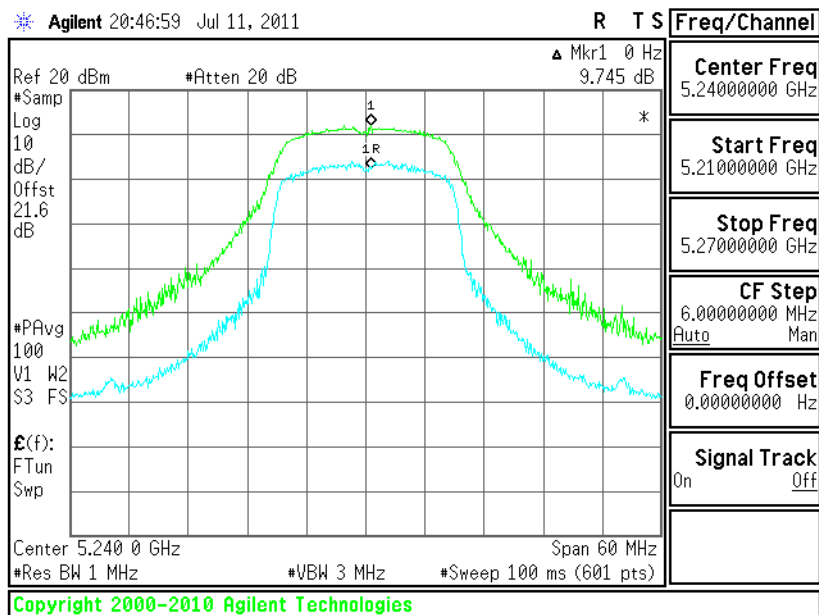


Peak Excursion Ratio Plot on 802.11n (BW 20MHz) Channel 44

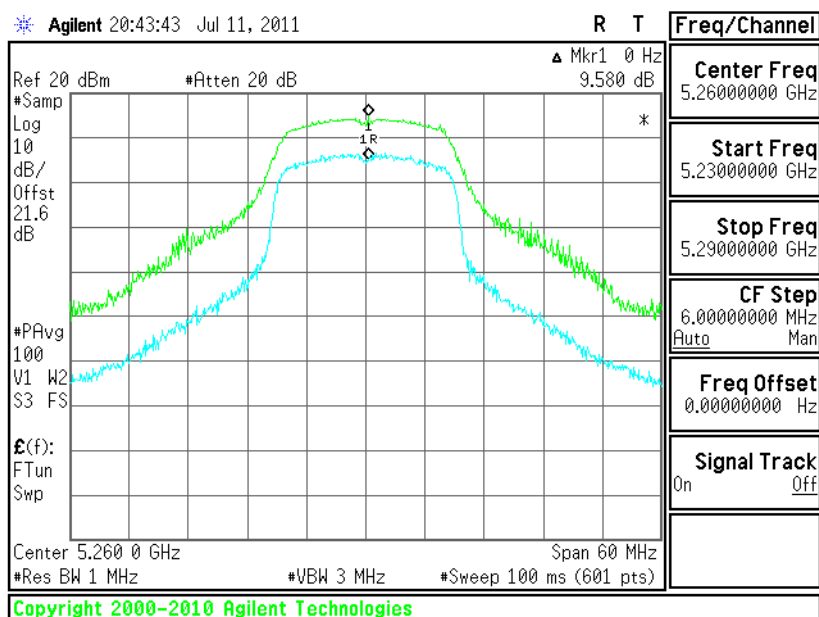




Peak Excursion Ratio Plot on 802.11n (BW 20MHz) Channel 48

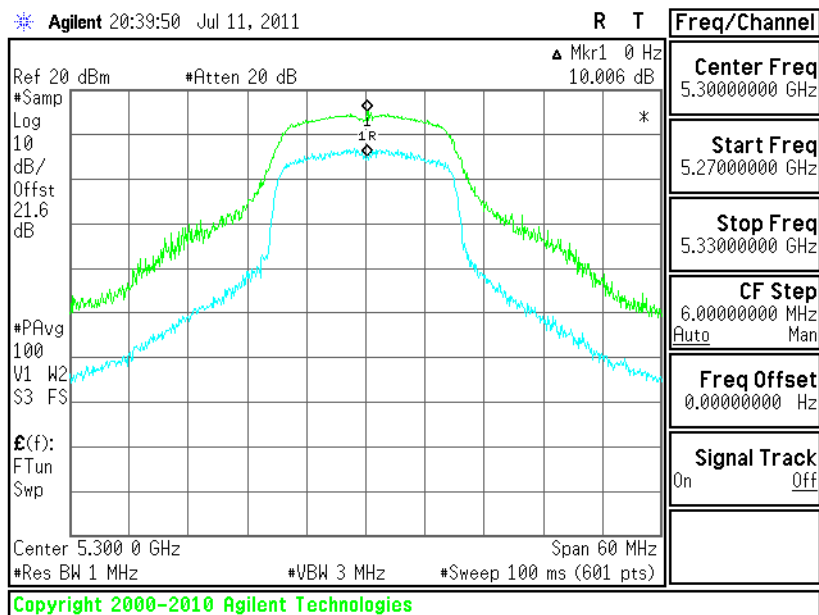


Peak Excursion Ratio Plot on 802.11n (BW 20MHz) Channel 52

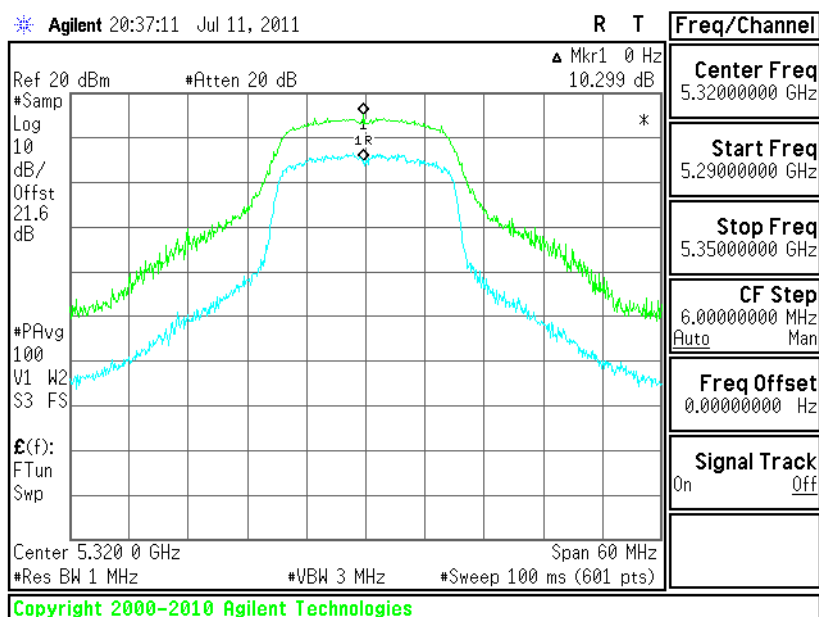




Peak Excursion Ratio Plot on 802.11n (BW 20MHz) Channel 60

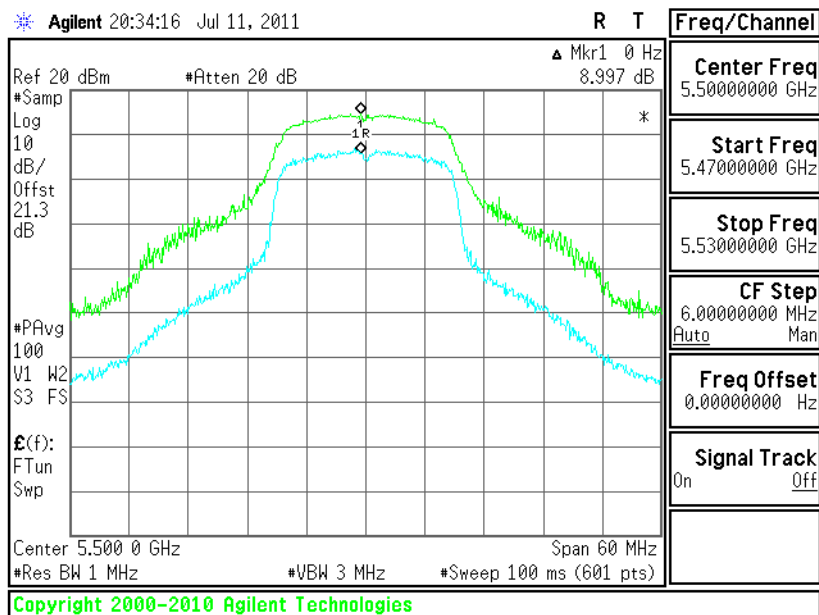


Peak Excursion Ratio Plot on 802.11n (BW 20MHz) Channel 64

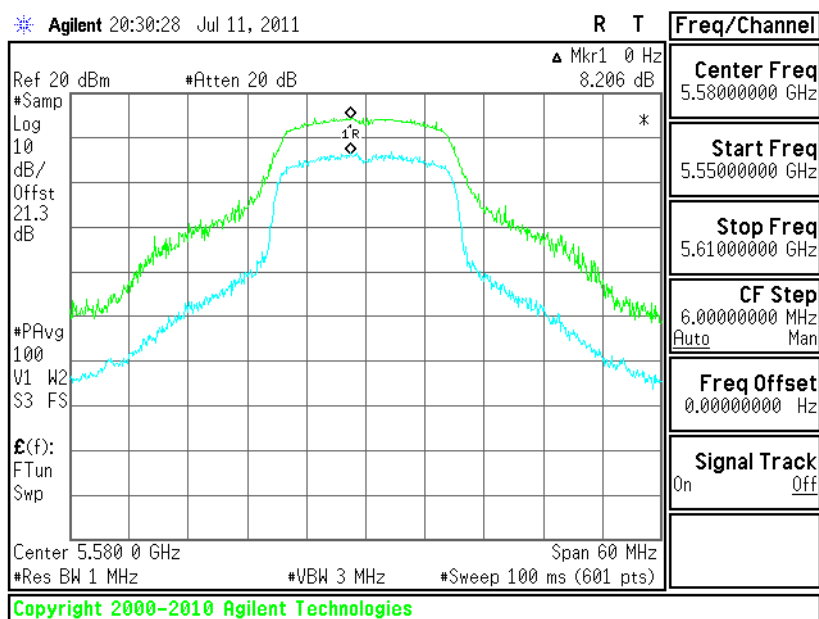




Peak Excursion Ratio Plot on 802.11n (BW 20MHz) Channel 100

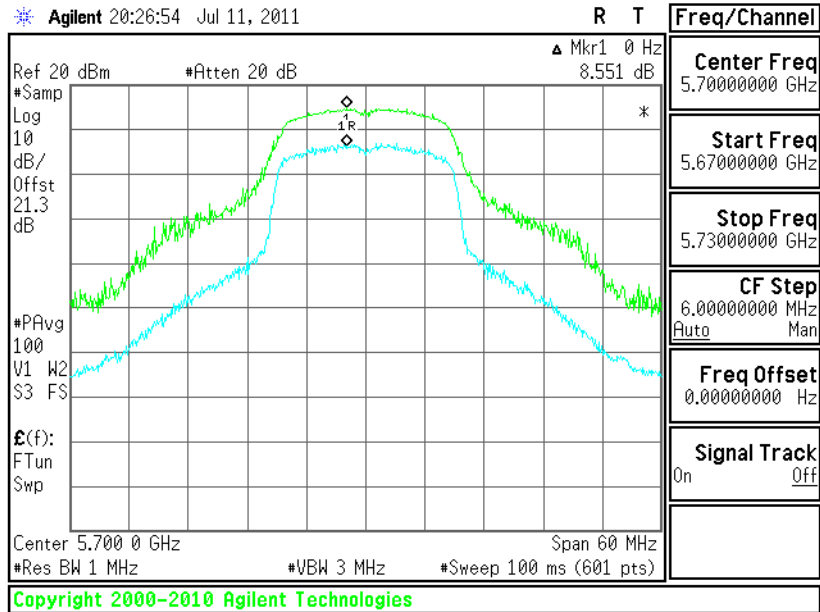


Peak Excursion Ratio Plot on 802.11n (BW 20MHz) Channel 116





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



3.10 Automatically Discontinue Transmission

3.10.1 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.

3.10.2 Measuring Instruments

See list of measuring instruments of this test report.

3.10.3 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.

3.11 Frequency Stability Measurement

3.11.1 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.

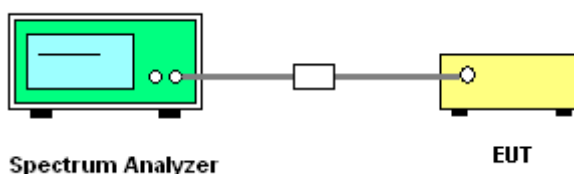
3.11.2 Measuring Instruments

See list of measuring instruments of this test report.

3.11.3 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.

3.11.4 Test Setup



3.11.5 Test Result of Frequency Stability

Test Mode :	Mode 1~9	Temperature :	24~26℃
Test Engineer :	Alan Liu	Relative Humidity :	45~49%

Channel	Frequency (MHz)	Low Frequency (Fl)	High Frequency (Fh)	Frequency Stability (ppm)
36	5180	5171.75	5188.29	3.86
44	5220	5211.75	5228.29	3.83
48	5240	5231.71	5248.29	0.00
52	5260	5251.71	5268.25	-3.80
60	5300	5291.75	5308.29	3.77
64	5320	5311.75	5328.25	0.00
100	5500	5491.71	5508.29	0.00
116	5580	5571.75	5588.29	3.58
140	5700	5691.75	5708.29	3.51

Test Mode :	Mode 10~18	Temperature :	24~26℃
Test Engineer :	Alan Liu	Relative Humidity :	45~49%

Channel	Frequency (MHz)	Low Frequency (Fl)	High Frequency (Fh)	Frequency Stability (ppm)
36	5180	5171.17	5188.83	0.00
44	5220	5211.17	5228.83	0.00
48	5240	5231.12	5248.83	-4.77
52	5260	5251.12	5268.83	-4.75
60	5300	5291.17	5308.83	0.00
64	5320	5311.17	5328.83	0.00
100	5500	5491.17	5508.83	0.00
116	5580	5571.17	5588.83	0.00
140	5700	5691.17	5708.83	0.00

3.12 Antenna Requirements

3.12.1 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.

3.12.2 Antenna Connected Construction

The antenna type used in this product is PIFA Antenna without connector and it is considered to meet antenna requirement of FCC.

3.12.3 Antenna Gain

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

4 List of Measuring Equipments

Instrument	Manufacturer	Model No.	Serial No.	Characteristics	Calibration Date	Due Date	Remark
Spectrum Analyzer	R&S	FSP40	100055	9kHz~40GHz	Jun. 13, 2011	Jun. 12, 2012	Conducted (TH02-HY)
Power Meter	Agilent	E4416A	GB41292344	N/A	Feb. 18, 2011	Feb. 17, 2012	Conducted (TH02-HY)
Power Meter	Anritsu	ML2495A	0932001	N/A	Sep. 13, 2010	Sep. 12, 2011	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)
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.32 dB.GAIN	Mar. 29, 2011	Mar. 28, 2012	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				



Appendix A. Photographs of EUT

Please refer to Sporton report number EP141402 as below.